REGULATORY COMPLIANCE TEST REPORT

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

Report No.: DIGI135–U4-FHSS Rev A
Limited to Test Results

Company: Digi International Inc

Model Name: XBSG

Part Numbers: XB-WSB-9S-001
XB-WSB-UT-001
XB-WSB-UM-001
XB-WSB-US-001

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1. TEST SUMMARY

List of Measurements

Test Header	Result	Data Link
FHSS		
20 dB & 99% Bandwidth	Complies	View Data
Output Power	Complies	View Data
Frequency Hopping Tests	Complies	-
Number of Hopping Channels	Complies	View Data
Channel Separation	Complies	View Data
Channel Occupancy& Dwell Time	Complies	View Data
Emissions	Complies	-
(1) Conducted Emissions	Complies	-
(i) Conducted Unwanted Emissions Peak	Complies	View Data
(ii) Conducted Band-Edge Emissions	Complies	View Data
(2) Radiated Emissions	Complies	-
(i) TX Spurious & Restricted Band Emissions	Complies	View Data

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2. TEST RESULTS

2.1. FHSS

2.1.1. 20 dB & 99% Bandwidth

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

Test Procedure for 20 dB and 99% Bandwidth Measurement

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

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

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

Limits for 20 dB and 99% Bandwidth

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

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

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

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

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Equipment Configuration for 20 dB & 99% Bandwidth

Variant:	FSK-150k	**Duty Cycle (%):**	99
Data Rate:	150.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.4	0.220	--	--	--	0.220	0.220	≤ 0.500	-0.28
914.8	0.207	--	--	--	0.207	0.207	≤ 0.500	-0.29
927.6	0.223	--	--	--	0.223	0.223	≤ 0.500	-0.28

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)
	Port(s)				
MHz	a	b	c	d	
902.4	0.210	--	--	--	0.210
914.8	0.200	--	--	--	0.200
927.6	0.206	--	--	--	0.206

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

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

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Equipment Configuration for 20 dB & 99% Bandwidth			
Variant:	FSK-300k	**Duty Cycle (%):**	99
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.6	0.400	--	--	--	0.400	0.400	≤ 500	-0.10
914.6	0.392	--	--	--	0.392	0.392	≤ 500	-0.11
927.2	0.392	--	--	--	0.392	0.392	≤ 500	-0.11

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)
	Port(s)				
MHz	a	b	c	d	
902.6	0.373	--	--	--	0.373
914.6	0.371	--	--	--	0.371
927.2	0.368	--	--	--	0.368

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

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

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Equipment Configuration for 20 dB & 99% Bandwidth			
Variant:	FSK-50k	**Duty Cycle (%):**	99
Data Rate:	50.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.2	0.147	--	--	--	0.147	0.147	≤ 500	-0.35
915.0	0.133	--	--	--	0.133	0.133	≤ 500	-0.37
927.8	0.137	--	--	--	0.137	0.137	≤ 500	-0.36

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)
	Port(s)				
MHz	a	b	c	d	
902.2	0.128	--	--	--	0.128
915.0	0.125	--	--	--	0.125
927.8	0.127	--	--	--	0.127

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

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Equipment Configuration for 20 dB 99% Bandwidth			
Variant:	MCS4-OFDM-opt4	**Duty Cycle (%):**	99
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.2	0.278	--	--	--	0.278	0.278	≤ 500	-0.22
915.0	0.288	--	--	--	0.288	0.288	≤ 500	-0.21
927.8	0.277	--	--	--	0.277	0.277	≤ 500	-0.22

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)
	Port(s)				
MHz	a	b	c	d	
902.2	0.243	--	--	--	0.243
915.0	0.243	--	--	--	0.243
927.8	0.237	--	--	--	0.237

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

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

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Equipment Configuration for 20 dB 99% Bandwidth			
Variant:	MCS6-OFDM-opt4	**Duty Cycle (%):**	99
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.2	0.313	--	--	--	0.313	0.313	≤ 500	-0.19
915.0	0.318	--	--	--	0.318	0.318	≤ 500	-0.18
927.8	0.237	--	--	--	0.237	0.237	≤ 500	-0.26

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)
	Port(s)				
MHz	a	b	c	d	
902.2	0.261	--	--	--	0.261
915.0	0.263	--	--	--	0.263
927.8	0.251	--	--	--	0.251

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

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

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2.1.2. Output Power

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

Test Procedure for Fundamental Emission Output Power Measurement

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

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

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

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

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

Limits for Fundamental Emission Output Power

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

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

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

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

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

(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power

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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.

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Equipment Configuration for Output Power Peak

Variant:	FSK-150k	**Duty Cycle (%):**	99.0
Data Rate:	150.00 kbps	**Antenna Gain (dBi):**	0.80
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s)	FCC Limit	ISED EIRP Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	dBm	dBm	dBm	dB	
902.4	15.37	--	--	--	15.37	30.00	36.00	-14.63	PL4
914.8	15.23	--	--	--	15.23	30.00	36.00	-14.77	PL4
927.6	14.90	--	--	--	14.90	30.00	36.00	-15.10	PL4

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.

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Equipment Configuration for Output Power Peak			
Variant:	FSK-300k	**Duty Cycle (%):**	99.0
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	0.80
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	FCC Limit	ISED EIRP Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dBm	dB	
902.6	15.30	--	--	--	15.30	30.00	30.00	-14.70	PL4
914.6	15.20	--	--	--	15.20	30.00	30.00	-14.80	PL4
927.2	14.80	--	--	--	14.80	30.00	30.00	-15.20	PL4

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.

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Equipment Configuration for Output Power Peak

Variant:	FSK-50k	**Duty Cycle (%):**	99.0
Data Rate:	50.00 kbps	**Antenna Gain (dBi):**	0.80
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s)	FCC Limit	ISED EIRP Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	dBm	dBm	dBm	dB	
902.2	15.40	--	--	--	15.40	30.00	36.00	-14.60	PL4
915.0	15.60	--	--	--	15.60	30.00	36.00	-14.40	PL4
927.8	15.10	--	--	--	15.10	30.00	36.00	-14.90	PL4

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.

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Equipment Configuration for Output Power Peak			
Variant:	MCS4-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	0.80
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	FCC Limit	ISED EIRP Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dBm	dB	
902.2	17.55	--	--	--	17.55	30.00	36.00	-12.45	PL4
915.0	17.36	--	--	--	17.36	30.00	36.00	-12.64	PL4
927.8	16.93	--	--	--	16.93	30.00	36.00	-13.10	PL4

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.

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Equipment Configuration for Output Power Peak			
Variant:	MCS6-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	0.80
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	FCC Limit	ISED EIRP Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dBm	dB	
902.2	17.60	--	--	--	17.60	30.00	36.00	-12.40	PL4
915.0	17.30	--	--	--	17.30	30.00	36.00	-12.70	PL4
927.8	16.90	--	--	--	16.90	30.00	36.00	-13.10	PL4

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.

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2.1.3. Frequency Hopping Tests

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

Test Procedure for Frequency Hopping Measurements

These tests cover the following measurements:

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

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

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

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

Limits for Frequency Hopping Measurements

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

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

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

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

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

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2.1.3.1. Number of Hopping Channels

Equipment Configuration for Number of Hopping Channels			
Variant:	FSK-50k	**Antenna:**	Not Applicable
Data Rate:	50.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-50k	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	40	--	--
910.0-920.0	50	--	--
920.0-928.0	39	--	--
Total number of Hops	**129**	**≥ 50**	**Pass**

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

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

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Equipment Configuration for Number of Hopping Channels			
Variant:	FSK-150k	**Antenna:**	Not Applicable
Data Rate:	150.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-150k	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	20	--	--
910.0-920.0	24	--	--
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

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Equipment Configuration for Number of Hopping Channels			
Variant:	FSK-300k	**Antenna:**	Not Applicable
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-300k	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	13	--	--
910.0-920.0	17	--	--
920.0-928.0	12	--	--
Total number of Hops	**42**	**≥ 25**	**Pass**

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

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Equipment Configuration for Number of Hopping Channels			
Variant:	MCS4-OFDM-opt4	**Antenna:**	Not Applicable
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	40	--	--
910.0-920.0	50	--	--
920.0-928.0	39	--	--
Total number of Hops	**129**	**≥ 50**	**Pass**

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

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

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Equipment Configuration for Number of Hopping Channels			
Variant:	MCS6-OFDM-opt4	**Antenna:**	Not Applicable
Data Rate:	300 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	40	--	--
910.0-920.0	50	--	--
920.0-928.0	39	--	--
Total number of Hops	**129**	**≥ 50**	**Pass**

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

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2.1.3.2. Channel Separation

Equipment Configuration for Channel Separation			
Variant:	FSK-50k	**Antenna:**	Not Applicable
Data Rate:	50.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
915.0	0.215	0.500	Pass

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

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Equipment Configuration for Channel Separation			
Variant:	FSK-150k	**Antenna:**	Not Applicable
Data Rate:	150.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
914.8	0.400	0.500	Pass

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

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Equipment Configuration for Channel Separation			
Variant:	FSK-300k	**Antenna:**	Not Applicable
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
914.6	0.600	0.600	Pass

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

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Equipment Configuration for Channel Separation			
Variant:	MCS4-OFDM-opt4	**Antenna:**	Not Applicable
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
915.0	0.201	0.500	Pass

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

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Equipment Configuration for Channel Separation			
Variant:	MCS6-OFDM-opt4	**Antenna:**	Not Applicable
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
915.0	0.200	0.500	Pass

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

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2.1.3.3. Channel Occupancy & Dwell Time

Equipment Configuration for Channel Occupancy			
Variant:	FSK-50k	**Antenna:**	Not Applicable
Data Rate:	50.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
915.00	0.023	92.000	20.00	400.000	Pass

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

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Equipment Configuration for Channel Occupancy & Dwell Time			
Variant:	FSK-150k	**Antenna:**	Not Applicable
Data Rate:	150.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-150k	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
914.80	5.83	5.830	20.00	400.000	Pass

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

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Equipment Configuration for Channel Occupancy & Dwell Time			
Variant:	FSK-300k	**Antenna:**	Not Applicable
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
914.60	4.33	4.330	10.00	400.000	Pass

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

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Equipment Configuration for Channel Occupancy			
Variant:	MCS4-OFDM-opt4	**Antenna:**	Not Applicable
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
915.00	6.00	18.000	10.00	400.000	Pass

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

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Equipment Configuration for Channel Occupancy			
Variant:	MCS6-OFDM-opt4	**Antenna:**	Not Applicable
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
915.00	5.83	11.670	10.00	400.000	Pass

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

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2.1.4. Emissions

9.2.3.1. Conducted Emissions

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

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

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

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

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

Limits Transmitter Conducted Spurious and Band-Edge Emissions

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

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2.1.4.3.1. Unwanted Emissions Peak

Equipment Configuration for Unwanted Emissions Peak			
Variant:	FSK-150k	**Duty Cycle (%):**	99
Data Rate:	150.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	-40.594	-4.31	--	--	--	--	--	--
914.8	30.0 - 10000.0	-40.569	-4.54	--	--	--	--	--	--
927.6	30.0 - 10000.0	-40.060	-4.73	--	--	--	--	--	--

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

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

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Equipment Configuration for Unwanted Emissions Peak			
Variant:	FSK-300k	**Duty Cycle (%):**	99
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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
902.6	30.0 - 10000.0	-40.978	-4.76	--	--	--	--	--	--
914.6	30.0 - 10000.0	-40.930	-4.54	--	--	--	--	--	--
927.2	30.0 - 10000.0	-39.718	-4.74	--	--	--	--	--	--

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

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

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Equipment Configuration for Unwanted Emissions Peak			
Variant:	FSK-50k	**Duty Cycle (%):**	99
Data Rate:	50.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	-41.086	-4.30	--	--	--	--	--	--
915.0	30.0 - 10000.0	-40.716	-4.54	--	--	--	--	--	--
927.8	30.0 - 10000.0	-40.053	-4.73	--	--	--	--	--	--

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

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

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Equipment Configuration for Unwanted Emissions Peak			
Variant:	MCS4-OFDM-opt4	**Duty Cycle (%):**	99
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	-41.776	0.30	--	--	--	--	--	--
915.0	30.0 - 10000.0	-40.516	-0.37	--	--	--	--	--	--
927.8	30.0 - 10000.0	-40.642	-0.59	--	--	--	--	--	--

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

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

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Equipment Configuration for Unwanted Emissions Peak			
Variant:	MCS6-OFDM-opt4	**Duty Cycle (%):**	99
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	-42.413	0.14	--	--	--	--	--	--
915.0	30.0 - 10000.0	-39.898	0.28	--	--	--	--	--	--
927.8	30.0 - 10000.0	-40.395	-1.33	--	--	--	--	--	--

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

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2.1.4.3.2. Conducted Low Band-Edge Emissions (Static) Peak

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	FSK-150k	**Duty Cycle (%):**	99.0
Data Rate:	150.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	902.4 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	850.0 - 915.0 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	-23.82	-4.66	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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	FSK-300k	**Duty Cycle (%):**	99.0
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	902.6 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	-25.20	-4.68	902.30	--	--	-0.300

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	FSK-50k	**Duty Cycle (%):**	99.0
Data Rate:	50.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	-9.96	-4.66	902.00	--	--	-0.000

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	MCS4-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	0.343	0.45	902.00	--	--	-0.000

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Peak			
Variant:	MCS6-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	902.2 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	850.0 - 915.0 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..34	0.17	902.00	--	--	-0.000

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

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2.1.4.3.3. Conducted Upper Band-Edge Emissions (Static) Peak

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	FSK-150k	**Duty Cycle (%):**	99.0
Data Rate:	150.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	-26.65	-4.72	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

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	FSK-300k	**Duty Cycle (%):**	99.0
Data Rate:	300.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	927.2 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	-35.58	-4.73	927.50	--	--	-0.500

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

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	FSK-50k	**Duty Cycle (%):**	99.0
Data Rate:	50.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	-8.20	-4.71	928.00	--	--	-0.000

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

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	MCS4-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	927.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	915.0 - 978.0 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	-1.40	-0.21	928.00	--	--	-0.000

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

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Peak			
Variant:	MCS6-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	100.00 kbps	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FHSS	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	927.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	915.0 - 978.0 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	-0.17	0.18	928.00	--	--	-0.000

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

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2.1.4.3.4. Conducted Low Band-Edge Emissions (Hopping) Peak

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	FSK-50k	**Duty Cycle (%):**	99.0
Data Rate:	50.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-50k	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

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	-43.99	-21.10	902.10	--	--	-0.100

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

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	FSK-150k	**Duty Cycle (%):**	99.0
Data Rate:	150.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-150k	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	902.4 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	850.0 - 915.0 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	-46.06	-21.21	902.10	--	--	-0.100

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

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	FSK-300k	**Duty Cycle (%):**	99.0
Data Rate:	300.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-300k	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	902.6 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	-43.56	-21.60	902.40	--	--	-0.400

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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	MCS4-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	1.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	MCS4-OFDM-opt4	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	902.2 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	850.0 - 915.0 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	-44.24	-16.17	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

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Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Peak			
Variant:	MCS6-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	1.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	MCS6-OFDM-opt4	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	902.2 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	850.0 - 915.0 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	-45.56	-16.78	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

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2.1.4.3.5. Conducted Upper Band-Edge Emissions (Hopping) Peak

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	FSK-50k	**Duty Cycle (%):**	99.0
Data Rate:	50.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-50k	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

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	-22.54	-21.27	928.00	--	--	-0.000

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).

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	FSK-150k	**Duty Cycle (%):**	99.0
Data Rate:	150.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-150k	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

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	-37.55	-21.43	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).

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	FSK-300k	**Duty Cycle (%):**	99.0
Data Rate:	300.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	FSK-300k	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	927.2 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	-45.08	-21.65	927.60	--	--	-0.400

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

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

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	MCS4-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	1.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	MCS4-OFDM-opt4	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	HA
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	927.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	915.0 - 978.0 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	-33.51	-16.89	928.00	--	--	-0.000

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).

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Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Peak			
Variant:	MCS6-OFDM-opt4	**Duty Cycle (%):**	99.0
Data Rate:	1.00 MBit/s	**Antenna Gain (dBi):**	See 5.4 Antenna Details
Modulation:	MCS6-OFDM-opt4	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	927.8 MHz					
Band-Edge Frequency:	928.0 MHz					
Test Frequency Range:	915.0 - 978.0 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	-49.18	-16.68	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).

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9.2.3.2. 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.

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(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).

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2.1.4.3.6. TX Spurious & Restricted Band Emissions

2.1.4.3.6.1. Maritek AT503008915 (30MHz – 1GHz)

FSK DR 50k

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	30.97	31.70	3.52	-4.10	31.13	MaxP	Horizontal	199	150	40.0	-8.9	Pass
#2	124.09	32.88	4.21	-11.28	25.80	MaxP	Vertical	101	0	43.5	-17.7	Pass
#3	148.34	35.00	4.34	-12.79	26.55	MaxP	Horizontal	199	240	43.5	-16.9	Pass
#4	276.38	35.22	4.90	-11.27	28.85	MaxP	Vertical	149	209	46.0	-17.1	Pass
#5	653.71	31.66	6.20	-4.62	33.24	MaxP	Horizontal	199	120	46.0	-12.8	Pass
#6	698.33	28.24	6.31	-4.20	30.35	MaxP	Vertical	149	29	46.0	-15.7	Pass
#7	903.00	56.00	6.93	-1.83	61.10	Fundamental	Vertical	99	330	--	--	Pass
Test Notes: 3.3Vdc, 902.2 MHz, FSK, DR 50k Ceramic Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	30.00	35.85	3.52	28.41	35.99	MaxP	Vertical	100	239	40.0	-4.0	Pass
#2	63.95	39.70	3.84	-17.26	26.29	MaxP	Vertical	199	0	40.0	-13.7	Pass
#3	191.02	33.90	4.55	-13.60	24.85	MaxP	Vertical	100	0	43.5	-18.7	Pass
#4	276.38	37.29	4.90	-11.27	30.92	MaxP	Horizontal	100	300	46.0	-15.1	Pass
#5	647.89	31.58	6.16	-4.54	33.19	MaxP	Vertical	100	149	46.0	-12.8	Pass
#6	838.01	31.18	6.73	-2.44	35.47	MaxP	Horizontal	100	150	46.0	-10.5	Pass
#7	915.61	39.83	6.98	-1.75	45.06	Fundamental	Vertical	199	119	--	--	Pass
Test Notes: 3.3Vdc, 915.0 MHz, FSK, DR 50k Ceramic Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	33.88	32.93	3.56	-6.39	30.10	MaxP	Vertical	149	239	40.0	-9.9	Pass
#2	148.34	33.54	4.34	-12.79	25.09	MaxP	Horizontal	199	0	43.5	-18.4	Pass
#3	276.38	38.15	4.90	-11.27	31.78	MaxP	Horizontal	100	300	46.0	-14.2	Pass
#4	652.74	31.01	6.19	-4.58	32.62	MaxP	Horizontal	149	58	46.0	-13.4	Pass
#5	852.56	31.96	6.80	-2.37	36.39	MaxP	Vertical	199	119	46.0	-9.6	Pass
#6	928.22	37.60	7.00	-1.56	43.05	Fundamental	Vertical	199	119	--	--	Pass
#7	972.84	30.51	7.14	-1.07	36.58	MaxP	Vertical	199	269	54.0	-17.4	Pass
Test Notes: 3.3Vdc, 927.8 MHz, FSK, DR 50k Ceramic Antenna												

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FSK DR 300k

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	31.94	31.68	3.53	-4.85	30.37	MaxP	Vertical	101	209	40.0	-9.6	Pass
#2	148.34	35.15	4.34	-12.79	26.70	MaxP	Horizontal	199	210	43.5	-16.8	Pass
#3	276.38	37.51	4.90	-11.27	31.14	MaxP	Horizontal	101	300	46.0	-14.9	Pass
#4	276.38	35.52	4.90	-11.27	29.15	MaxP	Vertical	101	179	46.0	-16.8	Pass
#5	805.03	31.26	6.64	-2.98	34.93	MaxP	Vertical	101	89	46.0	-11.1	Pass
#6	903.00	53.35	6.93	-1.85	58.34	Fundamental	Vertical	101	119	--	--	Pass
#7	978.66	30.91	7.22	-1.08	37.05	MaxP	Horizontal	149	30	54.0	-17.0	Pass
Test Notes: 3.3Vdc, 902.6 MHz, FSK, DR 300k Ceramic Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	63.95	42.08	3.84	-17.26	28.67	MaxP	Vertical	100	209	40.0	-11.3	Pass
#2	148.34	34.64	4.34	-12.79	26.19	MaxP	Vertical	199	239	43.5	-17.3	Pass
#3	276.38	36.87	4.90	-11.27	30.50	MaxP	Horizontal	149	270	46.0	-15.5	Pass
#4	716.76	31.18	6.37	-3.94	33.61	MaxP	Vertical	149	179	46.0	-12.4	Pass
#5	855.47	31.70	6.78	-2.36	36.13	MaxP	Horizontal	149	180	46.0	-9.9	Pass
#6	914.64	39.20	6.98	-1.74	44.44	Fundamental	Vertical	199	119	--	--	Pass
#7	974.78	30.01	7.16	-1.09	36.08	MaxP	Horizontal	149	240	54.0	-17.9	Pass
Test Notes: 3.3Vdc, 914.6 MHz, FSK, DR 300k Ceramic Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	31.94	32.39	3.53	-4.85	31.07	MaxP	Vertical	199	299	40.0	-8.9	Pass
#2	148.34	33.93	4.34	-12.79	25.48	MaxP	Vertical	99	239	43.5	-18.0	Pass
#3	276.38	37.38	4.90	-11.27	31.01	MaxP	Horizontal	99	270	46.0	-15.0	Pass
#4	431.58	31.35	5.45	-8.02	28.79	MaxP	Horizontal	99	270	46.0	-17.2	Pass
#5	647.89	30.97	6.16	-4.54	32.59	MaxP	Horizontal	199	270	46.0	-13.4	Pass
#6	870.99	31.26	6.87	-2.17	35.96	MaxP	Vertical	199	330	46.0	-10.0	Pass
#7	927.25	36.20	7.00	-1.55	41.65	Fundamental	Horizontal	149	330	--	--	Pass
Test Notes: 3.3Vdc, 927.2 MHz, FSK, DR 300k Ceramic Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	148.34	33.84	4.34	-12.79	25.39	MaxP	Horizontal	199	240	43.5	-18.1	Pass
#2	276.38	37.93	4.90	-11.27	31.56	MaxP	Horizontal	100	300	46.0	-14.4	Pass
#3	428.67	31.77	5.44	-8.06	29.16	MaxP	Vertical	100	299	46.0	-16.8	Pass
#4	559.62	31.09	5.89	-6.24	30.74	MaxP	Horizontal	100	300	46.0	-15.3	Pass
#5	748.77	30.93	6.46	-3.57	33.82	MaxP	Vertical	101	0	46.0	-12.2	Pass
#6	903.00	60.54	6.93	-1.85	65.62	Fundamental	Vertical	149	59	--	--	Pass
#7	981.57	30.67	7.18	-1.09	36.76	MaxP	Vertical	100	149	54.0	-17.2	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 Ceramic Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	117.30	33.26	4.18	-11.61	25.83	MaxP	Horizontal	100	178	43.5	-17.7	Pass
#2	276.38	37.69	4.90	-11.27	31.32	MaxP	Horizontal	100	270	46.0	-14.7	Pass
#3	292.87	32.01	4.96	-11.36	25.61	MaxP	Vertical	100	59	46.0	-20.4	Pass
#4	574.17	31.85	5.93	-5.92	31.87	MaxP	Vertical	149	89	46.0	-14.1	Pass
#5	859.35	31.37	6.80	-2.31	35.86	MaxP	Horizontal	199	150	46.0	-10.1	Pass
#6	915.61	40.56	6.98	-1.75	45.79	Fundamental	Vertical	149	29	--	--	Pass
#7	973.81	31.20	7.14	-1.08	37.26	MaxP	Vertical	149	0	54.0	-16.7	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 Ceramic Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	37.76	34.00	3.60	-9.35	28.25	MaxP	Vertical	199	150	40.0	-11.7	Pass
#2	148.34	34.32	4.34	-12.79	25.87	MaxP	Horizontal	149	240	43.5	-17.6	Pass
#3	276.38	36.75	4.90	-11.27	30.39	MaxP	Horizontal	100	269	46.0	-15.6	Pass
#4	637.22	29.58	6.13	-4.76	30.95	MaxP	Vertical	149	59	46.0	-15.1	Pass
#5	857.41	31.66	6.79	-2.33	36.12	MaxP	Horizontal	199	240	46.0	-9.9	Pass
#6	928.22	41.58	7.00	-1.56	47.02	Fundamental	Vertical	199	119	--	--	Pass
#7	986.42	29.94	7.17	-1.02	36.09	MaxP	Vertical	199	330	54.0	-17.9	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 Ceramic Antenna												

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2.1.4.3.6.2. Maritek AT503008915 (1GHz – 18GHz)

FSK DR 50k

Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz			
Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5063.00	53.68	2.95	34.06	44.71	MaxP	Vertical	199	149	74.0	-29.3	Pass
#2	6270.00	51.55	3.32	35.54	45.99	MaxP	Horizontal	149	270	74.0	-28.0	Pass
#3	11506.00	50.95	4.95	38.22	50.07	MaxP	Horizontal	199	180	74.0	-23.9	Pass
#4	16453.00	47.28	6.22	40.98	52.81	MaxP	Vertical	199	119	74.0	-21.2	Pass
#5	17728.00	49.04	6.37	41.67	55.81	MaxP	Vertical	199	90	74.0	-18.2	Pass
#6	17915.00	48.07	6.67	41.55	56.02	MaxP	Horizontal	149	300	74.0	-18.0	Pass
Test Notes: 3.3Vdc, 902.2MHz Ceramic Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	4893.00	54.17	2.88	34.01	44.79	MaxP	Horizontal	149	30	74.0	-29.2	Pass
#2	5505.00	51.21	3.11	34.53	42.74	MaxP	Vertical	199	299	74.0	-31.3	Pass
#3	13240.00	49.58	5.22	39.02	48.26	MaxP	Horizontal	149	30	74.0	-25.7	Pass
#4	13767.00	52.48	5.10	39.09	50.82	MaxP	Vertical	199	150	74.0	-23.2	Pass
#5	17099.00	49.27	6.69	41.45	54.99	MaxP	Horizontal	149	300	74.0	-19.0	Pass
#6	17915.00	46.65	6.67	41.55	54.60	MaxP	Vertical	149	239	74.0	-19.4	Pass
Test Notes: 3.3Vdc, 915.0 MHz Ceramic Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5437.00	54.26	3.04	34.51	46.02	MaxP	Horizontal	150	150	74.0	-28.0	Pass
#2	9891.00	50.89	4.28	37.20	49.80	MaxP	Vertical	150	60	74.0	-24.2	Pass
#3	14974.00	51.18	5.60	39.70	52.29	MaxP	Vertical	199	209	74.0	-21.7	Pass
#4	16572.00	47.38	6.15	41.29	52.98	MaxP	Horizontal	199	150	74.0	-21.0	Pass
#5	16589.00	47.12	6.18	41.35	52.67	MaxP	Horizontal	199	120	74.0	-21.3	Pass
#6	17541.00	49.00	6.50	41.55	54.80	MaxP	Vertical	150	0	74.0	-19.2	Pass
Test Notes: 3.3Vdc, 927.8 MHz Ceramic Antenna												

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FSK DR 300k

Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	3856.00	50.79	2.53	33.48	41.43	MaxP	Horizontal	199	300	74.0	-32.6	Pass
#2	9534.00	48.58	4.49	36.58	46.36	MaxP	Vertical	199	209	74.0	-27.6	Pass
#3	10452.00	47.99	4.40	37.59	47.95	MaxP	Horizontal	199	240	74.0	-26.0	Pass
#4	12662.00	53.26	5.44	39.05	51.57	MaxP	Vertical	199	150	74.0	-22.4	Pass
#5	17813.00	48.38	6.27	41.66	55.52	MaxP	Vertical	199	209	74.0	-18.5	Pass
#6	17915.00	47.95	6.67	41.55	55.90	MaxP	Horizontal	199	90	74.0	-18.1	Pass
Test Notes: 3.3Vdc, 902.6 MHz DR 300k Ceramic Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	3550.00	49.72	2.41	33.04	40.36	MaxP	Horizontal	150	240	74.0	-33.6	Pass
#2	6780.00	48.67	3.51	35.80	43.90	MaxP	Vertical	150	269	74.0	-30.1	Pass
#3	10384.00	48.89	4.82	37.53	49.10	MaxP	Vertical	150	59	74.0	-24.9	Pass
#4	15705.00	49.49	5.61	40.43	53.53	MaxP	Horizontal	199	30	74.0	-20.5	Pass
#5	15705.00	49.49	5.61	40.43	53.53	MaxP	Horizontal	199	30	74.0	-20.5	Pass
#6	17915.00	47.93	6.67	41.55	55.89	MaxP	Vertical	150	239	74.0	-18.1	Pass
Test Notes: 3.3Vdc, 914.6 MHz DR 300k Ceramic Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	5896.00	50.31	3.22	35.04	43.50	MaxP	Horizontal	199	300	74.0	-30.5	Pass
#2	7154.00	49.96	3.65	35.94	45.73	MaxP	Vertical	199	299	74.0	-28.3	Pass
#3	13563.00	53.65	5.35	39.12	51.28	MaxP	Vertical	150	239	74.0	-22.7	Pass
#4	14345.00	52.05	5.37	39.45	50.86	MaxP	Horizontal	150	240	74.0	-23.1	Pass
#5	17150.00	47.96	6.67	41.37	54.51	MaxP	Vertical	150	59	74.0	-19.5	Pass
#6	17830.00	48.08	6.29	41.64	55.31	MaxP	Horizontal	150	180	74.0	-18.7	Pass
Test Notes: 3.3Vdc, 927.2 MHz DR 300k Ceramic Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	3176.00	49.76	2.27	33.05	40.61	MaxP	Vertical	150	89	74.0	-33.4	Pass
#2	7817.00	50.01	3.77	35.87	45.69	MaxP	Horizontal	150	150	74.0	-28.3	Pass
#3	9619.00	49.56	4.59	36.69	47.69	MaxP	Horizontal	150	90	74.0	-26.3	Pass
#4	12696.00	52.37	5.26	39.09	50.68	MaxP	Vertical	150	299	74.0	-23.3	Pass
#5	17541.00	49.37	6.50	41.55	55.16	MaxP	Vertical	199	269	74.0	-18.8	Pass
#6	17898.00	48.48	6.28	41.57	55.66	MaxP	Horizontal	150	180	74.0	-18.3	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4, Ceramic Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	4621.00	52.96	2.77	34.00	43.57	MaxP	Horizontal	199	330	74.0	-30.4	Pass
#2	6100.00	50.01	3.26	35.41	43.81	MaxP	Vertical	199	330	74.0	-30.2	Pass
#3	10384.00	48.83	4.82	37.53	49.04	MaxP	Vertical	199	89	74.0	-25.0	Pass
#4	12764.00	54.21	5.26	39.12	51.41	MaxP	Horizontal	150	60	74.0	-22.6	Pass
#5	17133.00	48.30	6.91	41.39	54.65	MaxP	Horizontal	150	240	74.0	-19.4	Pass
#6	17898.00	48.56	6.28	41.57	55.74	MaxP	Vertical	199	89	74.0	-18.3	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4, Ceramic Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Ceramic Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	3618.00	52.32	2.43	33.13	42.90	MaxP	Horizontal	149	180	74.0	-31.1	Pass
#2	4638.00	53.55	2.82	34.00	44.04	MaxP	Vertical	149	179	74.0	-30.0	Pass
#3	11404.00	50.99	4.76	38.11	49.73	MaxP	Horizontal	199	180	74.0	-24.3	Pass
#4	12781.00	53.88	5.29	39.13	51.38	MaxP	Vertical	149	179	74.0	-22.6	Pass
#5	16691.00	49.23	6.22	41.59	54.88	MaxP	Horizontal	199	270	74.0	-19.1	Pass
#6	17932.00	48.76	6.50	41.53	56.17	MaxP	Vertical	149	59	74.0	-17.8	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4, Ceramic Antenna												

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2.1.4.3.6.3. FG9026 Antenna (30MHz – 1GHz)

FSK DR 50k

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	241.46	33.41	4.76	-13.00	25.17	MaxP	Vertical	100	119	46.0	-20.8	Pass
#2	416.06	33.79	5.40	-8.43	30.76	MaxP	Horizontal	149	30	46.0	-15.2	Pass
#3	476.20	32.84	5.61	-6.98	31.47	MaxP	Vertical	100	149	46.0	-14.5	Pass
#4	770.11	29.03	6.54	-3.65	31.92	MaxP	Horizontal	149	120	46.0	-14.1	Pass
#5	879.72	33.50	6.87	-2.20	38.17	MaxP	Vertical	149	30	46.0	-7.8	Pass
#6	903.00	62.02	6.93	-1.85	67.10	Fundamental	Vertical	149	119	--	--	Pass
#7	974.78	30.76	7.16	-1.09	36.83	MaxP	Horizontal	149	0	54.0	-17.2	Pass
Test Notes: 3.3Vdc, 902.2 FSK DR 50k FG9026 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	138.64	32.33	4.29	-12.13	24.49	MaxP	Horizontal	100	180	43.5	-19.0	Pass
#2	191.02	33.16	4.55	-13.60	24.11	MaxP	Vertical	100	0	43.5	-19.4	Pass
#3	408.30	34.55	5.38	-8.77	31.16	MaxP	Vertical	199	239	46.0	-14.8	Pass
#4	564.47	32.10	5.91	-6.07	31.94	MaxP	Horizontal	100	330	46.0	-14.1	Pass
#5	838.01	32.75	6.73	-2.44	37.04	MaxP	Vertical	100	59	46.0	-9.0	Pass
#6	915.61	41.69	6.98	-1.75	46.92	Fundamental	Horizontal	100	330	--	--	Pass
#7	977.69	31.16	7.21	-1.09	37.29	MaxP	Horizontal	149	210	54.0	-16.7	Pass
Test Notes: 3.3Vdc, 915.0 FSK DR 50k FG9026 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	414.12	34.77	5.40	-8.53	31.63	MaxP	Vertical	199	239	46.0	-14.4	Pass
#2	418.97	31.07	5.41	-8.32	28.16	MaxP	Horizontal	199	180	46.0	-17.8	Pass
#3	714.82	31.54	6.37	-3.97	33.93	MaxP	Horizontal	199	60	46.0	-12.1	Pass
#4	830.25	32.72	6.72	-2.58	36.86	MaxP	Vertical	99	119	46.0	-9.1	Pass
#5	928.22	46.48	7.00	-1.56	51.92	Fundamental	Vertical	149	239	--	--	Pass
#6	946.65	32.19	7.09	-1.52	37.76	MaxP	Horizontal	199	30	46.0	-8.2	Pass
#7	971.87	32.77	7.14	-1.08	38.83	MaxP	Vertical	149	179	54.0	-15.2	Pass
Test Notes: 3.3Vdc, 927.8 FSK DR 50k FG9026 Antenna												

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FSK DR 300k

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	353.01	32.35	5.20	-10.03	27.52	MaxP	Vertical	149	0	46.0	-18.5	Pass
#2	410.24	34.32	5.38	-8.69	31.02	MaxP	Vertical	199	239	46.0	-15.0	Pass
#3	451.95	31.75	5.54	-7.75	29.53	MaxP	Horizontal	199	210	46.0	-16.5	Pass
#4	665.35	32.01	6.21	-4.73	33.48	MaxP	Horizontal	149	60	46.0	-12.5	Pass
#5	864.20	30.34	6.81	-2.23	34.92	MaxP	Vertical	100	59	46.0	-11.1	Pass
#6	903.00	59.64	6.93	-1.85	64.72	Fundamental	Vertical	149	239	--	--	Pass
#7	930.16	30.79	7.01	-1.51	36.28	MaxP	Horizontal	149	240	46.0	-9.7	Pass
Test Notes: 3.3Vdc, 902.6 FSK DR 300k FG9026 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	123.12	32.11	4.20	-11.32	25.00	MaxP	Vertical	100	89	43.5	-18.5	Pass
#2	164.83	34.22	4.42	-13.06	25.58	MaxP	Horizontal	199	330	43.5	-17.9	Pass
#3	408.30	36.57	5.38	-8.77	33.18	MaxP	Vertical	199	239	46.0	-12.8	Pass
#4	417.03	34.37	5.40	-8.41	31.36	MaxP	Horizontal	149	0	46.0	-14.6	Pass
#5	874.87	35.20	6.86	-2.19	39.87	MaxP	Vertical	100	59	46.0	-6.1	Pass
#6	914.64	42.29	6.98	-1.74	47.53	Fundamental	Vertical	149	269	--	--	Pass
Test Notes: 3.3Vdc, 914.6 FSK DR 300k FG9026 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	466.50	33.05	5.57	-7.19	31.43	MaxP	Horizontal	199	120	46.0	-14.6	Pass
#2	467.47	33.54	5.57	-7.16	31.95	MaxP	Horizontal	199	120	46.0	-14.1	Pass
#3	488.81	33.92	5.65	-6.92	32.65	MaxP	Vertical	100	0	46.0	-13.4	Pass
#4	489.78	34.07	5.65	-6.95	32.78	MaxP	Vertical	100	0	46.0	-13.2	Pass
#5	523.73	33.14	5.76	-6.66	32.24	MaxP	Horizontal	199	0	46.0	-13.8	Pass
#6	927.25	42.50	7.00	-1.55	47.96	Fundamental	Vertical	149	239	--	--	Pass
#7	967.99	33.82	7.15	-1.10	39.87	MaxP	Vertical	149	299	54.0	-14.1	Pass
Test Notes: 3.3Vdc, 927.2 FSK DR 300k FG9026 Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	410.24	36.84	5.38	-8.69	33.53	MaxP	Vertical	199	270	46.0	-12.5	Pass
#2	500.45	38.66	5.69	-7.01	37.34	MaxP	Vertical	99	149	46.0	-8.7	Pass
#3	519.85	35.63	5.76	-6.73	34.66	MaxP	Horizontal	199	330	46.0	-11.3	Pass
#4	839.95	36.00	6.74	-2.41	40.33	MaxP	Vertical	99	270	46.0	-5.7	Pass
#5	903.00	65.72	6.93	-1.85	70.80	Fundamental	Vertical	99	270	--	--	Pass
#6	904.94	28.37	6.93	-1.82	33.48	MaxP	Horizontal	199	60	46.0	-12.5	Pass
#7	939.86	31.75	7.05	-1.52	37.28	MaxP	Horizontal	199	240	46.0	-8.7	Pass
Test Notes: 3.3Vdc, 902.2 OFDM Opt4 MCS4 FG9026 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	320.03	35.74	5.11	-10.93	29.91	MaxP	Vertical	149	119	46.0	-16.1	Pass
#2	410.24	34.84	5.38	-8.69	31.54	MaxP	Horizontal	149	0	46.0	-14.5	Pass
#3	489.78	36.23	5.65	-6.95	34.94	MaxP	Vertical	99	180	46.0	-11.1	Pass
#4	510.15	37.36	5.72	-6.98	36.10	MaxP	Horizontal	199	330	46.0	-9.9	Pass
#5	877.78	35.37	6.86	-2.19	40.03	MaxP	Vertical	99	59	46.0	-6.0	Pass
#6	915.61	46.30	6.98	-1.75	51.53	Fundamental	Vertical	149	239	--	--	Pass
#7	999.03	30.61	7.23	-0.94	36.90	MaxP	Horizontal	149	330	54.0	-17.1	Pass
Test Notes: 3.3Vdc, 915.0 OFDM Opt4 MCS4 FG9026 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	199.75	37.99	4.59	-12.16	30.42	MaxP	Vertical	99	0	43.5	-13.1	Pass
#2	200.01	27.78	4.59	-12.15	20.22	MaxP	Horizontal	100	241	43.5	-23.3	Pass
#3	410.24	34.84	5.38	-8.69	31.54	MaxP	Horizontal	149	0	46.0	-14.5	Pass
#4	489.78	37.59	5.65	-6.95	36.30	MaxP	Vertical	99	149	46.0	-9.7	Pass
#5	490.00	31.86	5.65	-6.95	30.56	MaxP	Horizontal	149	205	46.0	-15.4	Pass
#6	839.95	37.71	6.74	-2.41	42.04	MaxP	Vertical	99	29	46.0	-4.0	Pass
#7	928.22	46.75	7.00	-1.56	52.19	Fundamental	Vertical	149	269	--	--	Pass
Test Notes: 3.3Vdc, 927.8 OFDM Opt4 MCS4 FG9026 Antenna												

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2.1.4.3.6.4. FG9026 Antenna (1GHz – 18GHz)

FSK DR 50k

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz			
Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2700.00	57.93	2.06	32.43	48.24	MaxP	Vertical	199	330	74.0	-25.8	Pass
#2	2700.00	57.99	2.06	32.43	48.30	MaxP	Horizontal	199	330	74.0	-25.7	Pass
#3	12526.00	51.37	5.47	38.93	50.46	MaxP	Vertical	199	0	74.0	-23.5	Pass
#4	17150.00	48.46	6.67	41.37	55.00	MaxP	Horizontal	199	60	74.0	-19.0	Pass
#5	17728.00	48.93	6.37	41.67	55.69	MaxP	Horizontal	149	210	74.0	-18.3	Pass
#6	17915.00	48.44	6.67	41.55	56.40	MaxP	Vertical	149	300	74.0	-17.6	Pass
Test Notes: 3.3Vdc, 902.2 MHz FSK DR 50k FG9026 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	59.07	2.11	32.44	49.44	MaxP	Horizontal	149	210	74.0	-24.6	Pass
#2	2734.00	56.26	2.11	32.44	46.62	MaxP	Vertical	149	209	74.0	-27.4	Pass
#3	6831.00	51.51	3.48	35.84	46.75	MaxP	Horizontal	199	30	74.0	-27.3	Pass
#4	10282.00	49.54	4.29	37.47	48.92	MaxP	Vertical	149	90	74.0	-25.1	Pass
#5	15365.00	50.50	5.59	40.01	52.59	MaxP	Horizontal	149	240	74.0	-21.4	Pass
#6	17898.00	48.37	6.28	41.57	55.55	MaxP	Vertical	199	239	74.0	-18.5	Pass
Test Notes: 3.3Vdc, 915.0 MHz FSK DR 50k FG9026 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2768.00	55.49	2.16	32.47	45.90	MaxP	Horizontal	150	30	74.0	-28.1	Pass
#2	2768.00	55.22	2.16	32.47	45.64	MaxP	Vertical	150	209	74.0	-28.4	Pass
#3	13563.00	53.87	5.35	39.12	51.50	MaxP	Horizontal	199	120	74.0	-22.5	Pass
#4	14243.00	53.56	5.21	39.37	51.49	MaxP	Vertical	150	269	74.0	-22.5	Pass
#5	17609.00	49.36	6.37	41.62	55.00	MaxP	Horizontal	199	330	74.0	-19.0	Pass
#6	17915.00	47.31	6.67	41.55	55.27	MaxP	Vertical	150	119	74.0	-18.7	Pass
Test Notes: 3.3Vdc, 927.8 MHz FSK DR 50k FG9026 Antenna												

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FSK DR 300k

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2700.00	55.40	2.06	32.43	45.71	MaxP	Horizontal	199	330	74.0	-28.3	Pass
#2	2700.00	57.71	2.06	32.43	48.01	MaxP	Vertical	199	330	74.0	-26.0	Pass
#3	12696.00	53.28	5.26	39.09	51.59	MaxP	Vertical	150	149	74.0	-22.4	Pass
#4	12968.00	53.80	5.15	39.09	51.32	MaxP	Horizontal	199	30	74.0	-22.7	Pass
#5	16640.00	49.81	6.08	41.49	55.24	MaxP	Horizontal	150	210	74.0	-18.8	Pass
#6	17150.00	48.29	6.67	41.37	54.83	MaxP	Vertical	199	239	74.0	-19.2	Pass
Test Notes: 3.3Vdc, 902.6 MHz FSK DR 300k FG9026 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	58.09	2.11	32.44	48.46	MaxP	Horizontal	150	210	74.0	-25.5	Pass
#2	2734.00	56.97	2.11	32.44	47.34	MaxP	Vertical	150	209	74.0	-26.7	Pass
#3	9534.00	50.81	4.49	36.58	48.59	MaxP	Horizontal	150	330	74.0	-25.4	Pass
#4	10809.00	49.81	4.70	37.76	49.85	MaxP	Vertical	199	29	74.0	-24.1	Pass
#5	17133.00	49.39	6.91	41.39	55.73	MaxP	Vertical	150	269	74.0	-18.3	Pass
#6	17932.00	47.10	6.50	41.53	54.51	MaxP	Horizontal	199	90	74.0	-19.5	Pass
Test Notes: 3.3Vdc, 914.6 MHz FSK DR 300k FG9026 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2768.00	56.23	2.16	32.47	46.65	MaxP	Horizontal	150	240	74.0	-27.4	Pass
#2	2768.00	55.47	2.16	32.47	45.89	MaxP	Vertical	150	210	74.0	-28.1	Pass
#3	13223.00	53.96	5.07	39.00	52.20	MaxP	Vertical	199	210	74.0	-21.8	Pass
#4	13716.00	51.64	5.47	39.08	50.62	MaxP	Horizontal	150	240	74.0	-23.4	Pass
#5	13750.00	52.01	5.14	39.10	50.61	MaxP	Horizontal	150	180	74.0	-23.4	Pass
#6	17133.00	48.88	6.91	41.39	55.23	MaxP	Vertical	150	239	74.0	-18.8	Pass
Test Notes: 3.3Vdc, 927.2 MHz FSK DR 300k FG9026 Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2700.00	61.29	2.06	32.43	51.60	MaxP	Vertical	199	330	74.0	-22.4	Pass
#2	2700.00	55.85	2.06	32.43	46.16	MaxP	Horizontal	149	210	74.0	-27.8	Pass
#3	13529.00	54.57	5.28	39.13	52.19	MaxP	Horizontal	149	300	74.0	-21.8	Pass
#4	13648.00	54.11	5.17	39.09	52.42	MaxP	Vertical	149	149	74.0	-21.6	Pass
#5	17796.00	47.84	6.55	41.67	54.68	MaxP	Vertical	199	59	74.0	-19.3	Pass
#6	17915.00	46.96	6.67	41.55	54.91	MaxP	Horizontal	199	300	74.0	-19.1	Pass
Test Notes: 3.3Vdc, 902.2 OFDM Opt4 MCS4 FG9026 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	58.36	2.11	32.44	48.73	MaxP	Horizontal	199	330	74.0	-25.3	Pass
#2	2734.00	55.13	2.11	32.44	45.50	MaxP	Vertical	150	179	74.0	-28.5	Pass
#3	3652.00	55.39	2.43	33.22	46.09	MaxP	Horizontal	150	90	74.0	-27.9	Pass
#4	15246.00	48.63	5.59	39.89	50.64	MaxP	Vertical	150	299	74.0	-23.4	Pass
#5	17184.00	46.44	6.40	41.35	52.47	MaxP	Horizontal	150	240	74.0	-21.5	Pass
#6	17915.00	47.60	6.67	41.55	55.56	MaxP	Vertical	199	0	74.0	-18.4	Pass
Test Notes: 3.3Vdc, 915.0 OFDM Opt4 MCS4 FG9026 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	FG9026 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2768.00	54.62	2.16	32.47	45.04	MaxP	Vertical	199	330	74.0	-29.0	Pass
#2	2785.00	59.27	2.12	32.48	49.61	MaxP	Horizontal	150	30	74.0	-24.4	Pass
#3	10792.00	50.07	4.56	37.76	49.59	MaxP	Horizontal	150	270	74.0	-24.4	Pass
#4	11540.00	49.70	4.83	38.27	48.94	MaxP	Vertical	150	59	74.0	-25.1	Pass
#5	13733.00	53.37	5.58	39.09	52.46	MaxP	Vertical	150	59	74.0	-21.5	Pass
#6	15892.00	48.73	5.82	40.63	53.21	MaxP	Horizontal	199	330	74.0	-20.8	Pass
Test Notes: 3.3Vdc, 927.8 OFDM Opt4 MCS4 FG9026 Antenna												

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2.1.4.3.6.5. Phantom TRA9023P (30MHz – 1GHz)

FSK DR 50k

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	120.21	31.93	4.19	-11.45	24.67	MaxP	Horizontal	199	300	43.5	-18.8	Pass
#2	276.38	36.68	4.90	-11.27	30.31	MaxP	Horizontal	100	300	46.0	-15.7	Pass
#3	276.38	36.07	4.90	-11.27	29.70	MaxP	Vertical	100	330	46.0	-16.3	Pass
#4	702.21	31.63	6.32	-4.12	33.83	MaxP	Vertical	149	29	46.0	-12.2	Pass
#5	786.60	29.91	6.58	-3.22	33.27	MaxP	Horizontal	199	270	46.0	-12.7	Pass
#6	849.65	31.55	6.81	-2.39	35.98	MaxP	Vertical	100	209	46.0	-10.0	Pass
#7	903.00	60.09	6.93	-1.85	65.17	Fundamental	Vertical	149	59	--	--	Pass
Test Notes: 3.3Vdc, 902.2 MHz FSK DR 50k Laird Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	276.38	37.20	4.90	-11.27	30.84	MaxP	Vertical	99	59	46.0	-15.2	Pass
#2	276.38	37.07	4.90	-11.27	30.71	MaxP	Horizontal	99	150	46.0	-15.3	Pass
#3	667.29	28.69	6.21	-4.74	30.16	MaxP	Vertical	199	0	46.0	-15.8	Pass
#4	772.05	31.51	6.57	-3.62	34.46	MaxP	Horizontal	199	150	46.0	-11.5	Pass
#5	892.33	31.52	6.90	-2.05	36.37	MaxP	Vertical	99	209	46.0	-9.6	Pass
#6	915.61	41.56	6.98	-1.75	46.79	Fundamental	Vertical	99	209	--	--	Pass
#7	915.61	37.07	6.98	-1.75	42.30	Fundamental	Horizontal	149	90	--	--	Pass
Test Notes: 3.3Vdc, 915.0 MHz FSK DR 50k Laird Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	98.87	29.43	4.08	-15.50	18.02	MaxP	Vertical	149	179	43.5	-25.5	Pass
#2	276.38	33.30	4.90	-11.27	26.93	MaxP	Vertical	149	59	46.0	-19.1	Pass
#3	276.38	38.69	4.90	-11.27	32.32	MaxP	Horizontal	149	300	46.0	-13.7	Pass
#4	467.47	43.59	5.57	-7.16	42.01	MaxP	Vertical	199	179	46.0	-4.0	Pass
#5	885.54	30.84	6.87	-2.25	35.46	MaxP	Horizontal	100	180	46.0	-10.5	Pass
#6	928.22	42.42	7.00	-1.56	47.86	Fundamental	Vertical	149	299	--	--	Pass
#7	940.83	30.82	7.06	-1.51	36.37	MaxP	Horizontal	149	270	46.0	-9.6	Pass
Test Notes: 3.3Vdc, 927.8 MHz FSK DR 50k Laird Antenna												

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FSK DR 300k

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	275.41	30.05	4.90	-11.27	23.68	MaxP	Vertical	199	269	46.0	-22.3	Pass
#2	276.38	36.62	4.90	-11.27	30.26	MaxP	Horizontal	100	300	46.0	-15.7	Pass
#3	756.53	32.19	6.50	-3.69	35.00	MaxP	Vertical	149	119	46.0	-11.0	Pass
#4	835.10	31.48	6.72	-2.49	35.71	MaxP	Horizontal	199	90	46.0	-10.3	Pass
#5	903.00	58.54	6.93	28.70	63.62	Fundamental	Vertical	100	179	--	--	Pass
#6	969.93	30.72	7.15	-1.09	36.77	MaxP	Horizontal	199	0	54.0	-17.2	Pass
#7	985.45	28.19	7.16	-1.04	34.31	MaxP	Vertical	100	239	54.0	-19.7	Pass
Test Notes: 3.3Vdc, 902.6 MHz FSK DR 300k Laird Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	276.38	36.45	4.90	-11.27	30.09	MaxP	Horizontal	149	300	46.0	-15.9	Pass
#2	276.38	33.92	4.90	-11.27	27.56	MaxP	Vertical	149	330	46.0	-18.4	Pass
#3	833.16	31.81	6.72	-2.55	35.99	MaxP	Vertical	100	119	46.0	-10.0	Pass
#4	859.35	32.17	6.80	-2.31	36.65	MaxP	Horizontal	199	210	46.0	-9.3	Pass
#5	914.64	42.65	6.98	-1.74	47.89	Fundamental	Vertical	100	209	--	--	Pass
#6	914.64	39.57	6.98	-1.74	44.80	Fundamental	Horizontal	100	90	--	--	Pass
#7	980.60	30.61	7.19	-1.09	36.71	MaxP	Vertical	100	89	54.0	-17.3	Pass
Test Notes: 3.3Vdc, 914.6 MHz FSK DR 300k Laird Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	276.38	36.06	4.90	-11.27	29.69	MaxP	Horizontal	100	300	46.0	-16.3	Pass
#2	452.92	32.69	5.54	-7.70	30.53	MaxP	Vertical	149	149	46.0	-15.5	Pass
#3	757.50	31.78	6.49	-3.71	34.57	MaxP	Horizontal	100	120	46.0	-11.4	Pass
#4	853.53	30.21	6.79	-2.36	34.65	MaxP	Vertical	199	59	46.0	-11.4	Pass
#5	927.25	43.60	7.00	-1.55	49.06	Fundamental	Vertical	149	299	--	--	Pass
#6	928.22	38.89	7.00	-1.56	44.33	MaxP	Horizontal	100	300	46.0	-1.7	Pass
#7	967.99	34.23	7.15	-1.10	40.28	MaxP	Vertical	100	149	54.0	-13.7	Pass
Test Notes: 3.3Vdc, 927.2 MHz FSK DR 300k Laird Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	277.35	29.05	4.90	-11.27	22.69	MaxP	Horizontal	149	240	46.0	-23.3	Pass
#2	628.49	31.32	6.10	-5.07	32.35	MaxP	Horizontal	100	90	46.0	-13.7	Pass
#3	670.20	31.54	6.23	-4.78	32.99	MaxP	Vertical	149	179	46.0	-13.0	Pass
#4	880.69	35.06	6.88	-2.21	39.73	MaxP	Vertical	100	149	46.0	-6.3	Pass
#5	903.00	63.64	6.93	28.70	68.72	Fundamental	Vertical	100	149	--	--	Pass
#6	946.65	31.10	7.09	-1.52	36.67	MaxP	Horizontal	149	120	46.0	-9.3	Pass
#7	985.45	31.44	7.16	-1.04	37.56	MaxP	Vertical	100	179	54.0	-16.4	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 Laird Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	32.91	32.19	3.55	-5.69	30.05	MaxP	Horizontal	149	210	40.0	-10.0	Pass
#2	276.38	36.02	4.90	-11.27	29.66	MaxP	Vertical	149	330	46.0	-16.3	Pass
#3	276.38	35.59	4.90	-11.27	29.22	MaxP	Horizontal	149	330	46.0	-16.8	Pass
#4	820.55	32.15	6.69	-2.66	36.18	MaxP	Vertical	100	149	46.0	-9.8	Pass
#5	874.87	33.66	6.86	-2.19	38.32	MaxP	Vertical	100	179	46.0	-7.7	Pass
#6	915.61	46.51	6.98	-1.75	51.74	Fundamental	Vertical	100	239	--	--	Pass
#7	933.07	31.36	7.01	-1.53	36.84	MaxP	Horizontal	199	180	46.0	-9.2	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 Laird Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	30.97	32.11	3.52	-4.10	31.53	MaxP	Horizontal	199	180	40.0	-8.5	Pass
#2	276.38	36.21	4.90	-11.27	29.85	MaxP	Horizontal	100	300	46.0	-16.2	Pass
#3	276.38	35.54	4.90	-11.27	29.17	MaxP	Vertical	100	330	46.0	-16.8	Pass
#4	359.80	34.14	5.23	-9.77	29.60	MaxP	Vertical	100	330	46.0	-16.4	Pass
#5	814.73	29.19	6.68	-2.76	33.11	MaxP	Horizontal	199	270	46.0	-12.9	Pass
#6	855.47	33.29	6.78	-2.36	37.71	MaxP	Vertical	149	0	46.0	-8.3	Pass
#7	928.22	47.30	7.00	-1.56	52.75	Fundamental	Vertical	100	209	--	--	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 Laird Antenna												

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2.1.4.3.6.6. Phantom TRA9023P (1GHz – 18GHz)

FSK DR 50k

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz			
Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2700.00	57.38	2.06	32.43	47.69	MaxP	Horizontal	149	30	74.0	-26.3	Pass
#2	2700.00	54.37	2.06	32.43	44.68	MaxP	Vertical	199	90	74.0	-29.3	Pass
#3	14464.00	52.97	5.43	39.51	52.01	MaxP	Vertical	199	330	74.0	-22.0	Pass
#4	15059.00	51.04	5.73	39.71	52.53	MaxP	Horizontal	199	180	74.0	-21.5	Pass
#5	17541.00	50.03	6.50	41.55	55.82	MaxP	Horizontal	199	270	74.0	-18.2	Pass
#6	17813.00	49.01	6.27	41.66	56.15	MaxP	Vertical	149	59	74.0	-17.9	Pass
Test Notes: 3.3Vdc, 902.2 MHz, FSK, DR 50K Laird Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	58.77	2.11	32.44	49.13	MaxP	Horizontal	150	90	74.0	-24.9	Pass
#2	2734.00	55.46	2.11	32.44	45.83	MaxP	Vertical	199	89	74.0	-28.2	Pass
#3	12356.00	50.39	4.76	38.87	48.28	MaxP	Horizontal	150	150	74.0	-25.7	Pass
#4	14260.00	53.87	5.36	39.38	52.11	MaxP	Vertical	150	60	74.0	-21.9	Pass
#5	17915.00	47.89	6.67	41.55	55.85	MaxP	Horizontal	150	180	74.0	-18.2	Pass
#6	17932.00	48.27	6.50	41.53	55.68	MaxP	Vertical	150	299	74.0	-18.3	Pass
Test Notes: 3.3Vdc, 915.0 MHz, FSK, DR 50K Laird Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2785.00	57.21	2.12	32.48	47.56	MaxP	Horizontal	150	90	74.0	-26.4	Pass
#2	2785.00	53.45	2.12	32.48	43.79	MaxP	Vertical	199	30	74.0	-30.2	Pass
#3	11982.00	51.60	4.69	38.87	50.47	MaxP	Horizontal	199	240	74.0	-23.5	Pass
#4	13240.00	53.06	5.22	39.02	51.74	MaxP	Vertical	199	269	74.0	-22.3	Pass
#5	17881.00	49.19	6.35	41.59	55.72	MaxP	Vertical	150	0	74.0	-18.3	Pass
#6	17983.00	48.81	6.34	41.48	55.42	MaxP	Horizontal	199	0	74.0	-18.6	Pass
Test Notes: 3.3Vdc, 927.8 MHz, FSK, DR 50K Laird Antenna												

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FSK DR 300k

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2700.00	58.53	2.06	32.43	48.84	MaxP	Horizontal	149	30	74.0	-25.2	Pass
#2	2700.00	54.84	2.06	32.43	45.14	MaxP	Vertical	199	59	74.0	-28.9	Pass
#3	4910.00	54.70	2.95	34.01	45.19	MaxP	Horizontal	149	240	74.0	-28.8	Pass
#4	13784.00	53.19	5.11	39.09	51.43	MaxP	Vertical	149	120	74.0	-22.6	Pass
#5	17915.00	48.88	6.67	41.55	56.83	MaxP	Horizontal	149	90	74.0	-17.2	Pass
#6	17915.00	47.58	6.67	41.55	55.53	MaxP	Vertical	149	0	74.0	-18.5	Pass
Test Notes: 3.3Vdc, 902.6 MHz, FSK, DR 300K Laird Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	57.17	2.11	32.44	47.54	MaxP	Horizontal	149	120	74.0	-26.5	Pass
#2	2734.00	54.37	2.11	32.44	44.73	MaxP	Vertical	199	89	74.0	-29.3	Pass
#3	10486.00	49.33	4.43	37.63	49.08	MaxP	Vertical	199	89	74.0	-24.9	Pass
#4	11557.00	50.47	4.79	38.30	49.61	MaxP	Horizontal	199	330	74.0	-24.4	Pass
#5	16640.00	49.47	6.08	41.49	54.90	MaxP	Vertical	199	0	74.0	-19.1	Pass
#6	17915.00	47.96	6.67	41.55	55.91	MaxP	Horizontal	199	150	74.0	-18.1	Pass
Test Notes: 3.3Vdc, 914.6 MHz, FSK, DR 300K Laird Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2768.00	56.29	2.16	32.47	46.71	MaxP	Horizontal	149	30	74.0	-27.3	Pass
#2	2768.00	53.97	2.16	32.47	44.39	MaxP	Vertical	149	330	74.0	-29.6	Pass
#3	13886.00	54.01	5.25	39.13	51.98	MaxP	Horizontal	200	330	74.0	-22.0	Pass
#4	14447.00	52.08	5.46	39.49	51.31	MaxP	Vertical	200	119	74.0	-22.7	Pass
#5	17643.00	49.27	6.27	41.66	55.23	MaxP	Horizontal	200	300	74.0	-18.8	Pass
#6	17813.00	48.04	6.27	41.66	55.18	MaxP	Vertical	149	209	74.0	-18.8	Pass
Test Notes: 3.3Vdc, 927.2 MHz, FSK, DR 300K Laird Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz			
Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1799.00	56.85	1.73	30.39	44.01	MaxP	Vertical	150	89	74.0	-30.0	Pass
#2	2700.00	59.20	2.06	32.43	49.51	MaxP	Horizontal	150	30	74.0	-24.5	Pass
#3	3601.00	54.85	2.41	33.09	45.44	MaxP	Horizontal	150	60	74.0	-28.6	Pass
#4	13801.00	53.17	5.30	39.08	51.61	MaxP	Vertical	150	239	74.0	-22.4	Pass
#5	16861.00	47.27	6.18	41.70	52.84	MaxP	Vertical	199	239	74.0	-21.2	Pass
#6	17524.00	47.86	6.76	41.52	53.57	MaxP	Horizontal	199	300	74.0	-20.4	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 Laird Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1816.00	56.25	1.73	30.49	43.52	MaxP	Vertical	199	90	74.0	-30.5	Pass
#2	2734.00	57.72	2.11	32.44	48.08	MaxP	Horizontal	150	30	74.0	-25.9	Pass
#3	11353.00	50.77	4.91	38.06	49.93	MaxP	Vertical	199	239	74.0	-24.1	Pass
#4	14243.00	53.29	5.21	39.37	51.23	MaxP	Horizontal	199	60	74.0	-22.8	Pass
#5	15977.00	49.22	6.02	40.70	53.64	MaxP	Vertical	150	119	74.0	-20.4	Pass
#6	17915.00	49.04	6.67	41.55	56.99	MaxP	Horizontal	199	210	74.0	-17.0	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 Laird Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Laird Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2785.00	57.63	2.12	32.48	47.97	MaxP	Horizontal	199	30	74.0	-26.0	Pass
#2	2785.00	56.18	2.12	32.48	46.52	MaxP	Vertical	199	89	74.0	-27.5	Pass
#3	3703.00	54.81	2.47	33.35	45.48	MaxP	Horizontal	199	180	74.0	-28.5	Pass
#4	8548.00	51.95	3.93	35.80	47.77	MaxP	Vertical	199	0	74.0	-26.2	Pass
#5	13648.00	54.60	5.17	39.09	52.91	MaxP	Horizontal	150	300	74.0	-21.1	Pass
#6	17830.00	48.06	6.29	41.64	55.29	MaxP	Vertical	150	29	74.0	-18.7	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 Laird Antenna												

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2.1.4.3.6.7. Molex 2111400100 (30MHz – 1GHz)

FSK DR 50k

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	163.86	29.85	4.42	-13.01	21.26	MaxP	Vertical	149	240	43.5	-22.2	Pass
#2	273.47	29.45	4.89	-11.28	23.06	MaxP	Horizontal	149	60	46.0	-22.9	Pass
#3	668.26	31.81	6.22	-4.76	33.27	MaxP	Horizontal	199	300	46.0	-12.7	Pass
#4	846.74	28.82	6.77	-2.39	33.21	MaxP	Vertical	199	209	46.0	-12.8	Pass
#5	903.00	60.98	6.93	28.70	66.06	Fundamental	Horizontal	99	330	--	--	Pass
#6	948.59	29.76	7.09	-1.45	35.40	MaxP	Vertical	99	209	46.0	-10.6	Pass
#7	968.96	30.54	7.15	-1.08	36.61	MaxP	Horizontal	99	270	54.0	-17.4	Pass
Test Notes: 3.3Vdc, 902.2 MHz, FSK, DR 50k Molex Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	121.18	31.98	4.20	-11.39	24.79	MaxP	Horizontal	199	180	43.5	-18.7	Pass
#2	275.41	29.76	4.90	-11.27	23.39	MaxP	Horizontal	199	210	46.0	-22.6	Pass
#3	275.41	29.29	4.90	-11.27	22.92	MaxP	Vertical	100	300	46.0	-23.1	Pass
#4	540.22	29.40	5.83	-6.29	28.94	MaxP	Vertical	149	270	46.0	-17.1	Pass
#5	866.14	31.69	6.82	-2.19	36.32	MaxP	Horizontal	199	330	46.0	-9.7	Pass
#6	915.61	41.87	6.98	-1.75	47.10	Fundamental	Horizontal	100	330	--	--	Pass
#7	977.69	30.11	7.21	-1.09	36.24	MaxP	Vertical	149	240	54.0	-17.8	Pass
Test Notes: 3.3Vdc, 915.0 MHz, FSK, DR 50k Molex Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	276.38	37.27	4.90	-11.27	30.90	MaxP	Horizontal	100	240	46.0	-15.1	Pass
#2	277.35	29.79	4.90	-11.27	23.43	MaxP	Vertical	199	239	46.0	-22.6	Pass
#3	539.25	32.68	5.83	-6.30	32.21	MaxP	Horizontal	100	150	46.0	-13.8	Pass
#4	793.39	30.31	6.61	-3.16	33.76	MaxP	Vertical	199	59	46.0	-12.2	Pass
#5	928.22	40.76	7.00	-1.56	46.20	Fundamental	Vertical	100	330	--	--	Pass
#6	954.41	31.31	7.07	-1.24	37.14	MaxP	Vertical	149	89	46.0	-8.9	Pass
#7	972.84	30.99	7.14	-1.07	37.06	MaxP	Horizontal	149	270	54.0	-16.9	Pass
Test Notes: 3.3Vdc, 927.8 MHz, FSK, DR 50k Molex Antenna												

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FSK DR 300k

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	36.79	32.35	3.59	-8.62	27.32	MaxP	Horizontal	149	180	40.0	-12.7	Pass
#2	120.21	29.75	4.19	-11.45	22.49	MaxP	Vertical	199	179	43.5	-21.0	Pass
#3	276.38	38.34	4.90	-11.27	31.98	MaxP	Vertical	149	239	46.0	-14.0	Pass
#4	528.58	30.45	5.78	-6.54	29.69	MaxP	Horizontal	99	328	46.0	-16.3	Pass
#5	863.23	33.10	6.81	-2.22	37.68	MaxP	Horizontal	99	328	46.0	-8.3	Pass
#6	903.00	59.63	6.93	28.70	64.71	Fundamental	Vertical	99	328	--	--	Pass
#7	939.86	31.38	7.05	-1.52	36.91	MaxP	Vertical	149	59	46.0	-9.1	Pass
Test Notes: 3.3Vdc, 902.6 MHz, FSK, DR 300k Molex Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	127.97	29.90	4.24	-11.31	22.83	MaxP	Vertical	149	270	43.5	-20.7	Pass
#2	277.35	30.60	4.90	-11.27	24.23	MaxP	Vertical	149	239	46.0	-21.8	Pass
#3	277.35	29.59	4.90	-11.27	23.23	MaxP	Horizontal	199	120	46.0	-22.8	Pass
#4	426.73	29.18	5.43	-8.08	26.53	MaxP	Horizontal	149	270	46.0	-19.5	Pass
#5	874.87	31.63	6.86	-2.19	36.30	MaxP	Horizontal	100	330	46.0	-9.7	Pass
#6	914.64	41.41	6.98	-1.74	46.65	Fundamental	Vertical	100	330	--	--	Pass
#7	915.61	35.40	6.98	-1.75	40.63	MaxP	Horizontal	100	330	46.0	-5.4	Pass
#8	931.13	32.27	7.01	-1.52	37.76	MaxP	Vertical	100	149	46.0	-8.2	Pass
Test Notes: 3.3Vdc, 914.6 MHz, FSK, DR 300k Molex Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	276.38	38.14	4.90	-11.27	31.77	MaxP	Vertical	149	239	46.0	-14.2	Pass
#2	663.41	28.70	6.21	-4.70	30.21	MaxP	Horizontal	200	210	46.0	-15.8	Pass
#3	927.25	38.18	7.00	-1.55	43.64	Fundamental	Horizontal	100	330	--	--	Pass
#4	927.25	37.47	7.00	-1.55	42.92	Fundamental	Vertical	100	330	--	--	Pass
#5	928.22	35.46	7.00	-1.56	40.90	MaxP	Horizontal	100	330	46.0	-5.1	Pass
#6	928.22	34.81	7.00	-1.56	40.25	MaxP	Vertical	100	330	46.0	-5.7	Pass
Test Notes: 3.3Vdc, 927.2 MHz, FSK, DR 300k Molex Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	96.93	36.27	4.08	-16.05	24.30	MaxP	Vertical	149	270	43.5	-19.2	Pass
#2	97.90	41.97	4.08	-15.79	30.26	MaxP	Horizontal	149	0	43.5	-13.2	Pass
#3	276.38	38.73	4.90	-11.27	32.36	MaxP	Horizontal	99	240	46.0	-13.6	Pass
#4	277.35	29.63	4.90	-11.27	23.26	MaxP	Vertical	149	29	46.0	-22.7	Pass
#5	880.69	32.40	6.88	-2.21	37.07	MaxP	Horizontal	99	330	46.0	-8.9	Pass
#6	903.00	62.33	6.93	28.7	67.41	Fundamental	Vertical	99	330	--	--	Pass
#7	936.95	31.01	7.02	-1.49	36.54	MaxP	Vertical	199	209	46.0	-9.5	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 Molex Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	133.79	33.43	4.27	-11.63	26.07	MaxP	Horizontal	149	330	43.5	-17.4	Pass
#2	276.38	38.45	4.90	-11.27	32.08	MaxP	Horizontal	100	240	46.0	-13.9	Pass
#3	276.38	35.53	4.90	-11.27	29.17	MaxP	Vertical	100	269	46.0	-16.8	Pass
#4	665.35	31.96	6.21	-4.73	33.43	MaxP	Vertical	100	269	46.0	-12.6	Pass
#5	863.23	32.64	6.81	-2.22	37.22	MaxP	Horizontal	100	300	46.0	-8.8	Pass
#6	880.69	32.35	6.88	-2.2	37.03	MaxP	Vertical	100	330	46.0	-9.0	Pass
#7	915.61	44.01	6.98	-1.75	49.24	Fundamental	Horizontal	100	330	--	--	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 Molex Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	116.33	31.48	4.18	-11.63	24.03	MaxP	Vertical	199	119	43.5	-19.5	Pass
#2	274.44	29.50	4.89	-11.28	23.12	MaxP	Vertical	100	209	46.0	-22.9	Pass
#3	276.38	38.01	4.90	-11.27	31.64	MaxP	Horizontal	100	240	46.0	-14.4	Pass
#4	783.69	31.06	6.58	-3.24	34.40	MaxP	Vertical	149	179	46.0	-11.6	Pass
#5	881.66	32.55	6.88	-2.23	37.20	MaxP	Horizontal	100	300	46.0	-8.8	Pass
#6	928.22	43.67	7.00	-1.56	49.11	Fundamental	Horizontal	149	330	--	--	Pass
#7	953.44	31.62	7.07	-1.29	37.41	MaxP	Horizontal	100	270	46.0	-8.6	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 Molex Antenna												

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2.1.4.3.6.8. Molex Antenna (1GHz – 18GHz)

FSK DR 50k

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz			
Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1799.00	56.45	1.73	30.39	43.62	MaxP	Horizontal	149	30	74.0	-30.4	Pass
#2	2700.00	55.13	2.06	32.43	45.44	MaxP	Vertical	149	269	74.0	-28.6	Pass
#3	6984.00	50.91	3.50	35.95	46.31	MaxP	Vertical	149	210	74.0	-27.7	Pass
#4	12611.00	53.17	5.26	39.00	51.87	MaxP	Horizontal	199	330	74.0	-22.1	Pass
#5	17915.00	48.52	6.67	41.55	56.48	MaxP	Horizontal	199	0	74.0	-17.5	Pass
#6	17932.00	47.69	6.50	41.53	55.10	MaxP	Vertical	150	0	74.0	-18.9	Pass
Test Notes: 3.3Vdc, 902.2 MHz, FSK, DR 50k Molex Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1816.00	56.85	1.73	30.49	44.13	MaxP	Horizontal	149	180	74.0	-29.9	Pass
#2	2734.00	54.86	2.11	32.44	45.22	MaxP	Vertical	149	269	74.0	-28.8	Pass
#3	11965.00	52.06	4.80	38.86	50.96	MaxP	Vertical	150	0	74.0	-23.0	Pass
#4	14498.00	52.90	5.39	39.54	52.25	MaxP	Horizontal	199	120	74.0	-21.7	Pass
#5	16878.00	49.57	6.59	41.70	55.61	MaxP	Horizontal	149	120	74.0	-18.4	Pass
#6	16895.00	49.46	6.49	41.69	55.37	MaxP	Vertical	199	239	74.0	-18.6	Pass
Test Notes: 3.3Vdc, 915.0 MHz, FSK, DR 50k Molex Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1850.00	57.55	1.70	30.70	45.06	MaxP	Horizontal	150	30	74.0	-28.9	Pass
#2	1850.00	54.36	1.70	30.70	41.87	MaxP	Vertical	199	269	74.0	-32.1	Pass
#3	2785.00	55.77	2.12	32.48	46.12	MaxP	Vertical	199	269	74.0	-27.9	Pass
#4	9211.00	51.04	4.25	36.29	48.14	MaxP	Horizontal	150	60	74.0	-25.9	Pass
#5	12509.00	50.18	5.14	38.91	48.98	MaxP	Horizontal	150	150	74.0	-25.0	Pass
#6	17728.00	49.33	6.37	41.67	56.09	MaxP	Vertical	150	209	74.0	-17.9	Pass
Test Notes: 3.3Vdc, 927.8 MHz, FSK, DR 50k Molex Antenna												

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FSK DR 300k

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz			
Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2700.00	54.19	2.06	32.43	44.50	MaxP	Vertical	199	269	74.0	-29.5	Pass
#2	4485.00	53.98	2.72	33.88	44.39	MaxP	Horizontal	199	90	74.0	-29.6	Pass
#3	12526.00	51.74	5.47	38.93	50.83	MaxP	Horizontal	150	90	74.0	-23.2	Pass
#4	13869.00	53.71	5.36	39.12	51.87	MaxP	Vertical	150	149	74.0	-22.1	Pass
#5	17167.00	50.13	6.10	41.36	56.09	MaxP	Vertical	199	330	74.0	-17.9	Pass
#6	17898.00	49.04	6.28	41.57	56.22	MaxP	Horizontal	150	210	74.0	-17.8	Pass
Test Notes: 3.3Vdc, 902.6 MHz, FSK, DR 300k Molex Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	54.86	2.11	32.44	45.23	MaxP	Vertical	199	0	74.0	-28.8	Pass
#2	13172.00	53.36	5.30	38.97	52.03	MaxP	Vertical	150	89	74.0	-22.0	Pass
#3	13240.00	53.47	5.22	39.02	52.15	MaxP	Horizontal	199	60	74.0	-21.8	Pass
#4	13240.00	53.47	5.22	39.02	52.15	MaxP	Horizontal	199	60	74.0	-21.8	Pass
#5	17133.00	48.90	6.91	41.39	55.24	MaxP	Horizontal	150	330	74.0	-18.8	Pass
#6	17932.00	49.15	6.50	41.53	56.56	MaxP	Vertical	150	0	74.0	-17.4	Pass
Test Notes: 3.3Vdc, 914.6 MHz, FSK, DR 300k Molex Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2768.00	54.51	2.16	32.47	44.92	MaxP	Vertical	149	269	74.0	-29.1	Pass
#2	7035.00	49.03	3.60	35.96	44.71	MaxP	Horizontal	199	150	74.0	-29.3	Pass
#3	10265.00	49.61	4.76	37.46	49.39	MaxP	Horizontal	149	330	74.0	-24.6	Pass
#4	11999.00	52.01	4.75	38.88	51.01	MaxP	Vertical	199	59	74.0	-23.0	Pass
#5	17133.00	48.98	6.91	41.39	55.32	MaxP	Vertical	149	209	74.0	-18.7	Pass
#6	17507.00	50.67	6.35	41.49	55.77	MaxP	Horizontal	199	240	74.0	-18.2	Pass
Test Notes: 3.3Vdc, 927.2 MHz, FSK, DR 300k Molex Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1799.00	58.48	1.73	30.39	45.65	MaxP	Vertical	150	269	74.0	-28.4	Pass
#2	1799.00	58.54	1.73	30.39	45.71	MaxP	Horizontal	199	150	74.0	-28.3	Pass
#3	2700.00	56.22	2.06	32.43	46.53	MaxP	Vertical	199	60	74.0	-27.5	Pass
#4	12730.00	51.97	5.22	39.11	49.15	MaxP	Horizontal	150	60	74.0	-24.9	Pass
#5	16640.00	49.18	6.08	41.49	54.62	MaxP	Horizontal	199	180	74.0	-19.4	Pass
#6	17541.00	50.07	6.50	41.55	55.87	MaxP	Vertical	150	59	74.0	-18.1	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 Molex Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	55.56	2.11	32.44	45.93	MaxP	Vertical	150	0	74.0	-28.1	Pass
#2	2734.00	55.74	2.11	32.44	46.11	MaxP	Horizontal	199	150	74.0	-27.9	Pass
#3	5488.00	54.20	3.10	34.53	45.46	MaxP	Horizontal	199	270	74.0	-28.5	Pass
#4	12611.00	52.94	5.26	39.00	51.64	MaxP	Horizontal	199	330	74.0	-22.4	Pass
#5	14872.00	51.93	5.49	39.68	52.28	MaxP	Vertical	199	300	74.0	-21.7	Pass
#6	17796.00	48.35	6.55	41.67	55.18	MaxP	Vertical	150	59	74.0	-18.8	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 Molex Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	Molex Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1850.00	54.95	1.70	30.70	42.47	MaxP	Vertical	199	269	74.0	-31.5	Pass
#2	2785.00	54.35	2.12	32.48	44.69	MaxP	Horizontal	150	210	74.0	-29.3	Pass
#3	12679.00	51.48	5.16	39.07	49.74	MaxP	Vertical	199	90	74.0	-24.3	Pass
#4	13223.00	53.32	5.07	39.00	51.55	MaxP	Horizontal	150	60	74.0	-22.4	Pass
#5	17915.00	48.40	6.67	41.55	56.36	MaxP	Vertical	150	119	74.0	-17.6	Pass
#6	18000.00	48.39	6.43	41.46	55.71	MaxP	Horizontal	150	90	74.0	-18.3	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 Molex Antenna												

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2.1.4.3.6.9. ACE-915NF (30MHz – 1GHz)

FSK DR 50k

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	32.91	32.56	3.55	-5.69	30.42	MaxP	Vertical	149	179	40.0	-9.6	Pass
#2	139.61	32.73	4.29	-12.21	24.82	MaxP	Vertical	199	179	43.5	-18.7	Pass
#3	276.38	35.05	4.90	-11.27	28.69	MaxP	Horizontal	99	299	46.0	-17.3	Pass
#4	480.08	32.34	5.63	-6.92	31.05	MaxP	Horizontal	149	330	46.0	-15.0	Pass
#5	903.00	60.60	6.93	28.70	65.58	Fundamental	Vertical	99	179	--	--	Pass
#6	987.39	32.58	7.18	-0.98	38.78	MaxP	Vertical	99	179	54.0	-15.2	Pass
Test Notes: 3.3Vdc, 902.2 MHz, FSK, DR 50k MPD Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	118.27	28.87	4.18	-11.57	21.48	MaxP	Vertical	100	59	43.5	-22.0	Pass
#2	249.22	34.07	4.79	-12.99	25.87	MaxP	Horizontal	100	240	46.0	-20.1	Pass
#3	416.06	32.89	5.40	-8.43	29.86	MaxP	Horizontal	100	300	46.0	-16.1	Pass
#4	499.48	31.63	5.69	-7.01	30.31	MaxP	Vertical	100	209	46.0	-15.7	Pass
#5	668.26	30.45	6.22	-4.76	31.91	MaxP	Horizontal	149	300	46.0	-14.1	Pass
#6	915.61	43.76	6.98	-1.75	48.99	Fundamental	Vertical	100	209	--	--	Pass
#7	977.69	29.86	7.21	-1.09	35.99	MaxP	Vertical	100	119	54.0	-18.0	Pass
Test Notes: 3.3Vdc, 915.0 MHz, FSK, DR 50k MPD Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	247.28	36.03	4.79	-12.98	27.83	MaxP	Horizontal	100	240	46.0	-18.2	Pass
#2	276.38	33.95	4.90	-11.27	27.59	MaxP	Vertical	100	209	46.0	-18.4	Pass
#3	795.33	29.44	6.61	-3.13	32.92	MaxP	Horizontal	199	30	46.0	-13.1	Pass
#4	875.84	31.90	6.85	-2.20	36.55	MaxP	Vertical	199	119	46.0	-9.5	Pass
#5	928.22	44.75	7.00	-1.56	50.19	Fundamental	Vertical	199	89	--	--	Pass
#6	953.44	31.32	7.07	-1.29	37.10	MaxP	Horizontal	100	240	46.0	-8.9	Pass
#7	977.69	31.40	7.21	-1.09	37.53	MaxP	Vertical	100	239	54.0	-16.5	Pass
Test Notes: 3.3Vdc, 927.8 MHz, FSK, DR 50k MPD Antenna												

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FSK DR 300k

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	139.61	32.09	4.29	-12.21	24.17	MaxP	Horizontal	199	210	43.5	-19.3	Pass
#2	249.22	34.97	4.79	-12.99	26.77	MaxP	Horizontal	100	240	46.0	-19.2	Pass
#3	277.35	30.60	4.90	-11.27	24.24	MaxP	Vertical	149	0	46.0	-21.8	Pass
#4	544.10	29.16	5.84	-6.26	28.74	MaxP	Vertical	101	0	46.0	-17.3	Pass
#5	669.23	31.14	6.22	-4.77	32.59	MaxP	Horizontal	100	240	46.0	-13.4	Pass
#6	903.00	58.59	6.93	28.70	63.67	Fundamental	Vertical	100	149	--	--	Pass
#7	949.56	29.84	7.09	-1.43	35.50	MaxP	Vertical	149	89	46.0	-10.5	Pass
Test Notes: 3.3Vdc, 902.6 MHz, FSK, DR 300k MPD Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	31.94	31.37	3.53	-4.85	30.05	MaxP	Vertical	149	89	40.0	-9.9	Pass
#2	289.96	34.21	4.96	-11.36	27.81	MaxP	Horizontal	149	300	46.0	-18.2	Pass
#3	678.93	33.16	6.26	-4.59	34.83	MaxP	Horizontal	149	300	46.0	-11.2	Pass
#4	806.00	31.28	6.65	27.74	34.96	MaxP	Vertical	100	179	46.0	-11.0	Pass
#5	874.87	32.24	6.86	-2.19	36.91	MaxP	Vertical	149	119	46.0	-9.1	Pass
#6	914.64	42.88	6.98	-1.74	48.12	Fundamental	Vertical	199	89	--	--	Pass
#7	973.81	31.21	7.14	-1.08	37.27	MaxP	Horizontal	149	60	54.0	-16.7	Pass
Test Notes: 3.3Vdc, 914.6 MHz, FSK, DR 300k MPD Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	36.79	32.63	3.59	-8.62	27.60	MaxP	Horizontal	149	180	40.0	-12.4	Pass
#2	302.57	35.26	5.01	-11.19	29.08	MaxP	Horizontal	100	300	46.0	-16.9	Pass
#3	469.41	32.50	5.58	-7.12	30.97	MaxP	Vertical	100	59	46.0	-15.0	Pass
#4	673.11	30.07	6.24	-4.72	31.59	MaxP	Horizontal	149	300	46.0	-14.4	Pass
#5	886.51	29.04	6.87	-2.24	33.67	MaxP	Vertical	199	59	46.0	-12.3	Pass
#6	927.25	42.59	7.00	-1.55	48.04	Fundamental	Vertical	199	119	--	--	Pass
#7	967.02	29.99	7.14	-1.10	36.03	MaxP	Vertical	100	149	54.0	-18.0	Pass
Test Notes: 3.3Vdc, 927.2 MHz, FSK, DR 300k MPD Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	32.91	32.97	3.55	-5.69	30.83	MaxP	Horizontal	199	240	40.0	-9.2	Pass
#2	199.75	35.75	4.59	-12.16	28.18	MaxP	Vertical	100	330	43.5	-15.3	Pass
#3	318.09	30.29	5.10	-10.95	24.45	MaxP	Horizontal	100	120	46.0	-21.6	Pass
#4	489.78	33.42	5.65	-6.95	32.12	MaxP	Vertical	100	179	46.0	-13.9	Pass
#5	669.23	28.97	6.22	-4.77	30.42	MaxP	Horizontal	100	240	46.0	-15.6	Pass
#6	869.05	32.52	6.85	-2.18	37.18	MaxP	Vertical	100	210	46.0	-8.8	Pass
#7	903.00	64.09	6.93	28.70	69.17	Fundamental	Vertical	100	179	--	--	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 MPD Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	199.75	37.40	4.59	-12.16	29.83	MaxP	Vertical	149	330	43.5	-13.7	Pass
#2	240.49	29.55	4.76	-13.02	21.29	MaxP	Horizontal	199	150	46.0	-24.7	Pass
#3	319.06	32.04	5.10	-10.93	26.21	MaxP	Vertical	101	119	46.0	-19.8	Pass
#4	465.53	29.31	5.57	-7.23	27.65	MaxP	Horizontal	199	270	46.0	-18.3	Pass
#5	670.20	35.17	6.23	-4.78	36.62	MaxP	Vertical	101	59	46.0	-9.4	Pass
#6	838.98	31.70	6.73	-2.42	36.01	MaxP	Horizontal	149	210	46.0	-10.0	Pass
#7	915.61	45.92	6.98	-1.75	51.15	Fundamental	Vertical	101	179	--	--	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 MPD Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	199.75	33.57	4.59	-12.16	25.99	MaxP	Vertical	149	330	43.5	-17.5	Pass
#2	424.79	33.41	5.43	-8.15	30.69	MaxP	Horizontal	100	300	46.0	-15.3	Pass
#3	650.80	28.78	6.17	-4.52	30.43	MaxP	Horizontal	100	270	46.0	-15.6	Pass
#4	671.17	29.94	6.23	-4.76	31.41	MaxP	Vertical	100	59	46.0	-14.6	Pass
#5	882.63	33.35	6.88	-2.23	38.00	MaxP	Vertical	100	149	46.0	-8.0	Pass
#6	928.22	47.54	7.00	-1.56	52.99	MaxP	Vertical	199	89	--	--	Pass
#7	981.57	28.74	7.18	-1.09	34.83	MaxP	Horizontal	199	90	54.0	-19.2	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 MPD Antenna												

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2.1.4.3.6.10. ACE-915NF (1GHz – 18GHz)

FSK DR 50k

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz			
Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	No Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2700.00	57.38	2.06	32.43	47.69	MaxP	Horizontal	150	30	74.0	-26.3	Pass
#2	2700.00	56.23	2.06	32.43	46.54	MaxP	Vertical	150	330	74.0	-27.5	Pass
#3	9228.00	51.67	4.27	36.30	48.70	MaxP	Horizontal	199	0	74.0	-25.3	Pass
#4	12084.00	51.55	4.85	38.92	50.73	MaxP	Vertical	150	89	74.0	-23.3	Pass
#5	17881.00	48.04	6.35	41.59	54.57	MaxP	Vertical	150	239	74.0	-19.4	Pass
#6	17915.00	47.59	6.67	41.55	55.54	MaxP	Horizontal	199	330	74.0	-18.5	Pass
Test Notes: 3.3Vdc, 902.2 MHz, FSK, DR 50K MPD Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	56.78	2.11	32.44	47.15	MaxP	Vertical	150	330	74.0	-26.8	Pass
#2	2734.00	56.96	2.11	32.44	47.33	MaxP	Horizontal	199	330	74.0	-26.7	Pass
#3	12696.00	53.32	5.26	39.09	51.63	MaxP	Horizontal	199	90	74.0	-22.4	Pass
#4	13223.00	53.57	5.07	39.00	51.81	MaxP	Vertical	199	119	74.0	-22.2	Pass
#5	17728.00	48.13	6.37	41.67	54.89	MaxP	Vertical	150	330	74.0	-19.1	Pass
#6	17728.00	46.74	6.37	41.67	53.50	MaxP	Horizontal	150	90	74.0	-20.5	Pass
Test Notes: 3.3Vdc, 915.0 MHz, FSK, DR 50K MPD Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2785.00	56.24	2.12	32.48	46.59	MaxP	Horizontal	199	270	74.0	-27.4	Pass
#2	2785.00	55.02	2.12	32.48	45.37	MaxP	Vertical	150	330	74.0	-28.6	Pass
#3	11438.00	50.96	4.77	38.14	49.95	MaxP	Horizontal	199	330	74.0	-24.0	Pass
#4	12696.00	53.56	5.26	39.09	51.88	MaxP	Vertical	150	239	74.0	-22.1	Pass
#5	17150.00	49.05	6.67	41.37	55.59	MaxP	Horizontal	150	60	74.0	-18.4	Pass
#6	17541.00	49.50	6.50	41.55	55.30	MaxP	Vertical	150	0	74.0	-18.7	Pass
Test Notes: 3.3Vdc, 927.8 MHz, FSK, DR 50K MPD Antenna												

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FSK DR 300k

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1799.00	55.49	1.73	30.39	42.66	MaxP	Horizontal	149	60	74.0	-31.3	Pass
#2	2700.00	56.43	2.06	32.43	46.73	MaxP	Horizontal	149	60	74.0	-27.3	Pass
#3	2700.00	56.23	2.06	32.43	46.53	MaxP	Vertical	149	330	74.0	-27.5	Pass
#4	5420.00	54.92	3.08	34.50	46.44	MaxP	Vertical	149	330	74.0	-27.6	Pass
#5	12968.00	52.83	5.15	39.09	50.35	MaxP	Horizontal	199	0	74.0	-23.6	Pass
#6	17592.00	49.85	6.22	41.60	55.21	MaxP	Vertical	149	29	74.0	-18.8	Pass
Test Notes: 3.3Vdc, 902.6 MHz, FSK, DR 300K MPD Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1816.00	54.37	1.73	30.49	41.65	MaxP	Horizontal	199	180	74.0	-32.4	Pass
#2	2734.00	56.80	2.11	32.44	47.16	MaxP	Horizontal	199	60	74.0	-26.8	Pass
#3	2734.00	56.61	2.11	32.44	46.97	MaxP	Vertical	150	330	74.0	-27.0	Pass
#4	13206.00	51.77	4.88	38.98	49.60	MaxP	Horizontal	150	240	74.0	-24.4	Pass
#5	16895.00	48.96	6.49	41.69	54.87	MaxP	Vertical	199	330	74.0	-19.1	Pass
#6	17915.00	49.24	6.67	41.55	57.19	MaxP	Vertical	150	89	74.0	-16.8	Pass
Test Notes: 3.3Vdc, 914.6 MHz, FSK, DR 300K MPD Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2768.00	55.94	2.16	32.47	46.36	MaxP	Horizontal	199	270	74.0	-27.6	Pass
#2	2768.00	55.74	2.16	32.47	46.16	MaxP	Vertical	199	330	74.0	-27.8	Pass
#3	5556.00	52.79	3.17	34.54	44.65	MaxP	Horizontal	150	30	74.0	-29.3	Pass
#4	9194.00	51.11	4.19	36.27	48.26	MaxP	Vertical	150	239	74.0	-25.7	Pass
#5	16793.00	49.23	6.11	41.71	54.82	MaxP	Horizontal	199	0	74.0	-19.2	Pass
#6	16895.00	49.35	6.49	41.69	55.27	MaxP	Vertical	150	0	74.0	-18.7	Pass
Test Notes: 3.3Vdc, 927.2 MHz, FSK, DR 300K MPD Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1799.00	57.52	1.73	30.39	44.69	MaxP	Horizontal	199	180	74.0	-29.3	Pass
#2	1799.00	56.24	1.73	30.39	43.40	MaxP	Vertical	199	29	74.0	-30.6	Pass
#3	2700.00	58.99	2.06	32.43	49.30	MaxP	Horizontal	150	30	74.0	-24.7	Pass
#4	12084.00	52.15	4.85	38.92	51.33	MaxP	Vertical	150	179	74.0	-22.7	Pass
#5	15076.00	49.24	5.55	39.73	50.24	MaxP	Horizontal	199	60	74.0	-23.8	Pass
#6	17983.00	48.77	6.34	41.48	55.37	MaxP	Vertical	150	209	74.0	-18.6	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 MPD Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2734.00	60.24	2.11	32.44	50.60	MaxP	Horizontal	199	270	74.0	-23.4	Pass
#2	2734.00	58.18	2.11	32.44	48.54	MaxP	Vertical	150	330	74.0	-25.5	Pass
#3	13682.00	53.90	5.36	39.08	52.47	MaxP	Vertical	199	209	74.0	-21.5	Pass
#4	14277.00	53.12	5.47	39.39	51.65	MaxP	Horizontal	199	300	74.0	-22.4	Pass
#5	17915.00	47.51	6.67	41.55	55.46	MaxP	Horizontal	150	300	74.0	-18.5	Pass
#6	17915.00	47.73	6.67	41.55	55.68	MaxP	Vertical	199	59	74.0	-18.3	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 MPD Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz - 18 GHz

Antenna:	MPD Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	2785.00	55.59	2.12	32.48	45.94	MaxP	Horizontal	150	330	74.0	-28.1	Pass
#2	2785.00	53.68	2.12	32.48	44.03	MaxP	Vertical	150	149	74.0	-30.0	Pass
#3	12543.00	50.85	5.07	38.94	49.52	MaxP	Horizontal	150	120	74.0	-24.5	Pass
#4	13903.00	53.76	5.25	39.14	51.47	MaxP	Vertical	199	150	74.0	-22.5	Pass
#5	17915.00	47.47	6.67	41.55	55.42	MaxP	Vertical	199	150	74.0	-18.6	Pass
#6	18000.00	49.08	6.43	41.46	56.40	MaxP	Horizontal	150	90	74.0	-17.6	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 MPD Antenna												

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2.1.4.3.6.11. Taoglas FXUB65 Antenna (30MHz – 1GHz)

FSK DR 50k

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	130.88	32.57	4.25	-11.42	25.41	MaxP	Horizontal	149	150	43.5	-18.1	Pass
#2	148.34	33.97	4.34	-12.79	25.52	MaxP	Vertical	100	239	43.5	-18.0	Pass
#3	276.38	36.49	4.90	-11.27	30.12	MaxP	Vertical	100	330	46.0	-15.9	Pass
#4	276.38	37.01	4.90	-11.27	30.64	MaxP	Horizontal	149	0	46.0	-15.4	Pass
#5	674.08	35.45	6.25	-4.71	36.99	MaxP	Horizontal	149	300	46.0	-9.0	Pass
#6	903.00	60.97	6.93	28.70	66.05	Fundamental	Horizontal	100	300	--	--	Pass
#7	987.39	30.84	7.18	-0.98	37.05	MaxP	Vertical	100	209	54.0	-17.0	Pass
Test Notes: 3.3Vdc, 902.2 MHz, FSK, DR 50k Taoglas FXUB65 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	201.69	33.90	4.61	-12.18	26.33	MaxP	Vertical	99	330	43.5	-17.2	Pass
#2	222.06	39.36	4.68	-13.50	30.54	MaxP	Horizontal	149	210	46.0	-15.5	Pass
#3	276.38	38.87	4.90	-11.27	32.51	MaxP	Horizontal	99	180	46.0	-13.5	Pass
#4	835.10	31.87	6.72	-2.49	36.10	MaxP	Vertical	99	330	46.0	-9.9	Pass
#5	915.61	39.97	6.98	-1.75	45.20	MaxP	Horizontal	99	300	--	--	Pass
#6	915.61	39.78	6.98	-1.75	45.01	MaxP	Vertical	199	89	--	--	Pass
#7	984.48	30.85	7.15	-1.06	36.95	MaxP	Vertical	149	119	54.0	-17.1	Pass
Test Notes: 3.3Vdc, 915.0 MHz, FSK, DR 50k Taoglas FXUB65 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	219.15	38.71	4.67	-13.59	29.78	MaxP	Horizontal	100	210	46.0	-16.2	Pass
#2	275.41	30.47	4.90	-11.27	24.10	MaxP	Vertical	100	330	46.0	-21.9	Pass
#3	276.38	39.05	4.90	-11.27	32.68	MaxP	Horizontal	100	270	46.0	-13.3	Pass
#4	488.81	31.51	5.65	-6.92	30.23	MaxP	Horizontal	149	210	46.0	-15.8	Pass
#5	642.07	32.85	6.14	-4.65	34.34	MaxP	Vertical	100	209	46.0	-11.7	Pass
#6	859.35	29.24	6.80	-2.31	33.73	MaxP	Vertical	100	149	46.0	-12.3	Pass
#7	928.22	41.51	7.00	-1.56	46.95	Fundamental	Vertical	199	119	--	--	Pass
Test Notes: 3.3Vdc, 927.8 MHz, FSK, DR 50k Taoglas FXUB65 Antenna												

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FSK DR 300k

Equipment Configuration for 30 MHz TO 1 GHz			
Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	148.34	34.59	4.34	-12.79	26.14	MaxP	Vertical	100	270	43.5	-17.4	Pass
#2	221.09	36.01	4.67	-13.54	27.14	MaxP	Horizontal	149	210	46.0	-18.9	Pass
#3	276.38	37.52	4.90	-11.27	31.15	MaxP	Horizontal	149	270	46.0	-14.8	Pass
#4	276.38	36.23	4.90	-11.27	29.87	MaxP	Vertical	149	269	46.0	-16.1	Pass
#5	860.32	32.25	6.80	-2.30	36.76	MaxP	Vertical	149	59	46.0	-9.2	Pass
#6	863.23	35.09	6.81	-2.22	39.67	MaxP	Horizontal	100	300	46.0	-6.3	Pass
#7	903.00	58.14	6.93	28.70	63.22	Fundamental	Horizontal	100	300	--	--	Pass
Test Notes: 3.3Vdc, 902.6 MHz, FSK, DR 300k Taoglas FXUB65 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	30.00	33.92	3.52	28.41	34.06	MaxP	Vertical	149	239	40.0	-5.9	Pass
#2	221.09	37.13	4.67	-13.54	28.26	MaxP	Horizontal	100	210	46.0	-17.7	Pass
#3	276.38	35.46	4.90	-11.27	29.10	MaxP	Vertical	149	179	46.0	-16.9	Pass
#4	869.05	32.23	6.85	-2.18	36.90	MaxP	Vertical	100	89	46.0	-9.1	Pass
#5	914.64	39.87	6.98	-1.74	45.11	Fundamental	Horizontal	100	300	--	--	Pass
#6	915.61	36.93	6.98	-1.75	42.16	MaxP	Horizontal	100	300	46.0	-3.8	Pass
Test Notes: 3.3Vdc, 914.6 MHz, FSK, DR 300k Taoglas FXUB65 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	148.34	34.15	4.34	-12.79	25.70	MaxP	Vertical	100	209	43.5	-17.8	Pass
#2	224.00	39.38	4.69	17.86	30.64	MaxP	Horizontal	149	210	46.0	-15.4	Pass
#3	276.38	35.93	4.90	-11.27	29.56	MaxP	Vertical	149	270	46.0	-16.4	Pass
#4	681.84	31.15	6.27	-4.54	32.88	MaxP	Horizontal	199	180	46.0	-13.1	Pass
#5	927.25	39.36	7.00	-1.55	44.82	Fundamental	Vertical	199	59	--	--	Pass
#6	967.99	34.58	7.15	-1.10	40.63	MaxP	Horizontal	149	300	54.0	-13.4	Pass
#7	987.39	31.79	7.18	-0.98	37.99	MaxP	Vertical	100	209	54.0	-16.0	Pass
Test Notes: 3.3Vdc, 927.2 MHz, FSK, DR 300k Taoglas FXUB65 Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	199.75	41.67	4.59	-12.16	34.10	MaxP	Horizontal	149	210	43.5	-9.4	Pass
#2	199.75	41.17	4.59	-12.16	33.60	MaxP	Vertical	100	330	43.5	-9.9	Pass
#3	220.12	40.67	4.67	-13.57	31.77	MaxP	Horizontal	149	0	46.0	-14.2	Pass
#4	440.31	33.53	5.49	-8.05	30.97	MaxP	Vertical	199	239	46.0	-15.0	Pass
#5	850.62	35.96	6.82	-2.38	40.41	MaxP	Horizontal	100	300	46.0	-5.6	Pass
#6	861.29	30.57	6.80	-2.26	35.10	MaxP	Vertical	149	59	46.0	-10.9	Pass
#7	903.00	63.42	6.93	28.70	68.50	Fundamental	Horizontal	149	180	--	--	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 Taoglas FXUB65 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	199.75	39.61	4.59	-12.16	32.04	MaxP	Horizontal	149	180	43.5	-11.5	Pass
#2	276.38	35.62	4.90	-11.27	29.26	MaxP	Vertical	149	270	46.0	-16.7	Pass
#3	380.17	35.25	5.28	-9.44	31.09	MaxP	Vertical	99	330	46.0	-14.9	Pass
#4	670.20	36.16	6.23	-4.78	37.61	MaxP	Horizontal	149	300	46.0	-8.4	Pass
#5	821.52	33.20	6.69	-2.65	37.23	MaxP	Horizontal	99	300	46.0	-8.8	Pass
#6	915.61	43.30	6.98	-1.75	48.53	Fundamental	Vertical	149	270	--	--	Pass
#7	964.11	31.23	7.11	-1.09	37.25	MaxP	Vertical	99	89	54.0	-16.8	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 Taoglas FXUB65 Antenna												

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Equipment Configuration for 30 MHz TO 1 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

30.00 - 1000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	98.87	29.59	4.08	-15.50	18.18	MaxP	Vertical	199	59	43.5	-25.3	Pass
#2	220.12	39.17	4.67	-13.57	30.27	MaxP	Horizontal	101	210	46.0	-15.7	Pass
#3	420.91	30.12	5.41	-8.28	27.24	MaxP	Horizontal	149	0	46.0	-18.8	Pass
#4	540.22	34.23	5.83	-6.29	33.78	MaxP	Vertical	149	270	46.0	-12.2	Pass
#5	839.95	36.53	6.74	-2.41	40.86	MaxP	Horizontal	101	300	46.0	-5.1	Pass
#6	928.22	43.19	7.00	-1.56	48.63	Fundamental	Horizontal	199	180	--	--	Pass
#7	985.45	30.69	7.16	-1.04	36.82	MaxP	Vertical	101	119	54.0	-17.2	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 Taoglas FXUB65 Antenna												

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2.1.4.3.6.12. Taoglas FXU65 Antenna (1GHz – 18GHz)

FSK DR 50k

Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz			
Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1816.00	49.75	1.73	30.49	37.03	MaxP	Vertical	149	149	74.0	-37.0	Pass
#2	2700.00	55.67	2.06	32.43	45.98	MaxP	Horizontal	149	120	74.0	-28.0	Pass
#3	5386.00	51.85	3.16	34.48	42.98	MaxP	Vertical	149	149	74.0	-31.0	Pass
#4	9993.00	50.72	4.66	37.35	50.06	MaxP	Horizontal	199	330	74.0	-23.9	Pass
#5	17745.00	48.89	6.45	41.66	55.38	MaxP	Vertical	199	179	74.0	-18.6	Pass
#6	17813.00	47.99	6.27	41.66	55.13	MaxP	Horizontal	149	90	74.0	-18.9	Pass
Test Notes: 3.3Vdc, 902.2 MHz, FSK, DR 50k Taoglas FXUB65 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1816.00	55.81	1.73	30.49	43.09	MaxP	Vertical	199	299	74.0	-30.9	Pass
#2	1816.00	55.14	1.73	30.49	42.42	MaxP	Horizontal	150	210	74.0	-31.6	Pass
#3	2734.00	57.78	2.11	32.44	48.15	MaxP	Vertical	199	209	74.0	-25.8	Pass
#4	2734.00	53.92	2.11	32.44	44.29	MaxP	Horizontal	199	0	74.0	-29.7	Pass
#5	17592.00	51.23	6.22	41.60	56.59	MaxP	Vertical	199	299	74.0	-17.4	Pass
#6	17915.00	48.03	6.67	41.55	55.98	MaxP	Horizontal	199	210	74.0	-18.0	Pass
Test Notes: 3.3Vdc, 915.0 MHz, FSK, DR 50k Taoglas FXUB65 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1850.00	53.69	1.70	30.70	41.21	MaxP	Horizontal	150	210	74.0	-32.8	Pass
#2	2785.00	57.57	2.12	32.48	47.91	MaxP	Vertical	199	209	74.0	-26.1	Pass
#3	12696.00	52.75	5.26	39.09	51.06	MaxP	Horizontal	199	60	74.0	-22.9	Pass
#4	14311.00	52.37	5.24	39.43	51.10	MaxP	Vertical	150	179	74.0	-22.9	Pass
#5	17898.00	47.42	6.28	41.57	54.60	MaxP	Vertical	150	299	74.0	-19.4	Pass
#6	17915.00	48.47	6.67	41.55	56.43	MaxP	Horizontal	199	90	74.0	-17.6	Pass
Test Notes: 3.3Vdc, 927.8 MHz, FSK, DR 50k Taoglas FXUB65 Antenna												

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FSK DR 300k

Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1799.00	55.72	1.73	30.39	42.89	MaxP	Vertical	150	299	74.0	-31.1	Pass
#2	2700.00	54.79	2.06	32.43	45.09	MaxP	Vertical	150	209	74.0	-28.9	Pass
#3	2700.00	55.78	2.06	32.43	46.08	MaxP	Horizontal	199	0	74.0	-27.9	Pass
#4	12696.00	52.93	5.26	39.09	51.24	MaxP	Horizontal	199	330	74.0	-22.8	Pass
#5	16878.00	49.05	6.59	41.70	55.09	MaxP	Vertical	150	29	74.0	-18.9	Pass
#6	17915.00	47.91	6.67	41.55	55.86	MaxP	Horizontal	199	30	74.0	-18.1	Pass
Test Notes: 3.3Vdc, 902.6 MHz, FSK, DR 300k Taoglas FXUB65 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	914.6	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1816.00	56.02	1.73	30.49	43.30	MaxP	Vertical	199	299	74.0	-30.7	Pass
#2	2717.00	49.09	2.07	32.44	39.39	MaxP	Vertical	150	269	74.0	-34.6	Pass
#3	2734.00	52.82	2.11	32.44	43.19	MaxP	Horizontal	199	0	74.0	-30.8	Pass
#4	2734.00	57.44	2.11	32.44	47.80	MaxP	Vertical	199	209	74.0	-26.2	Pass
#5	9636.00	49.04	4.23	36.72	47.02	MaxP	Horizontal	199	300	74.0	-27.0	Pass
#6	17133.00	49.62	6.91	41.39	55.96	MaxP	Horizontal	199	90	74.0	-18.0	Pass
#7	17813.00	48.39	6.27	41.66	55.53	MaxP	Vertical	150	59	74.0	-18.5	Pass
Test Notes: 3.3Vdc, 914.6 MHz, FSK, DR 300k Taoglas FXUB65 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	FSK
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.2	**Data Rate:**	Not Applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1833.00	50.48	1.75	30.60	37.89	MaxP	Horizontal	150	300	74.0	-36.1	Pass
#2	2768.00	56.95	2.16	32.47	47.37	MaxP	Vertical	199	209	74.0	-26.6	Pass
#3	12781.00	54.24	5.29	39.13	51.73	MaxP	Horizontal	199	240	74.0	-22.3	Pass
#4	13903.00	54.94	5.25	39.14	52.65	MaxP	Vertical	199	239	74.0	-21.3	Pass
#5	17167.00	49.65	6.10	41.36	55.62	MaxP	Horizontal	150	240	74.0	-18.4	Pass
#6	17915.00	48.20	6.67	41.55	56.15	MaxP	Vertical	150	0	74.0	-17.9	Pass
Test Notes: 3.3Vdc, 927.2 MHz, FSK, DR 300k Taoglas FXUB65 Antenna												

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OFDM OPT4 MCS4

Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	902.2	**Data Rate:**	Not applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1799.00	61.56	1.73	30.39	48.72	MaxP	Horizontal	199	210	74.0	-25.3	Pass
#2	1799.00	57.10	1.73	30.39	44.26	MaxP	Vertical	150	150	74.0	-29.7	Pass
#3	2700.00	58.09	2.06	32.43	48.39	MaxP	Vertical	150	239	74.0	-25.6	Pass
#4	2700.00	56.18	2.06	32.43	46.49	MaxP	Horizontal	199	0	74.0	-27.5	Pass
#5	17677.00	50.00	6.39	41.68	55.66	MaxP	Vertical	199	330	74.0	-18.3	Pass
#6	17932.00	48.42	6.50	41.53	55.83	MaxP	Horizontal	199	0	74.0	-18.2	Pass
Test Notes: 3.3Vdc, 902.2 MHz, OFDM, Opt4, MCS4 Taoglas FXUB65 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	915.0	**Data Rate:**	Not applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1816.00	56.42	1.73	30.49	43.70	MaxP	Horizontal	199	0	74.0	-30.3	Pass
#2	2734.00	54.56	2.11	32.44	44.92	MaxP	Vertical	150	210	74.0	-29.1	Pass
#3	12713.00	54.17	5.43	39.10	52.15	MaxP	Horizontal	199	60	74.0	-21.9	Pass
#4	13648.00	53.21	5.17	39.09	51.52	MaxP	Vertical	151	0	74.0	-22.5	Pass
#5	17167.00	49.76	6.10	41.36	55.72	MaxP	Vertical	199	179	74.0	-18.3	Pass
#6	17915.00	48.39	6.67	41.55	56.34	MaxP	Horizontal	199	0	74.0	-17.7	Pass
Test Notes: 3.3Vdc, 915.0 MHz, OFDM, Opt4, MCS4 Taoglas FXUB65 Antenna												

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Equipment Configuration for FCC SPURIOUS 1 GHz -18 GHz

Antenna:	Taoglas FXUB65 Antenna	**Variant:**	FHSS
Antenna Gain (dBi):	See 5.4 Antenna Details	**Modulation:**	OFDM
Beam Forming Gain (Y):	Not Applicable	**Duty Cycle (%):**	99
Channel Frequency (MHz):	927.8	**Data Rate:**	Not applicable
Power Setting:	PL4	**Tested By:**	HA

Test Measurement Results

1000.00 - 18000.00 MHz												
Num	**Frequency MHz**	**Raw dBµV**	**Cable Loss dB**	**AF dB/m**	**Level dBµV/m**	**Measurement Type**	**Pol**	**Hgt cm**	**Azt Deg**	**Limit dBµV/m**	**Margin dB**	**Pass /Fail**
#1	1850.00	54.85	1.70	30.70	42.37	MaxP	Vertical	199	330	74.0	-31.6	Pass
#2	2785.00	54.51	2.12	32.48	44.85	MaxP	Horizontal	150	60	74.0	-29.1	Pass
#3	12781.00	52.81	5.29	39.13	50.30	MaxP	Vertical	199	330	74.0	-23.7	Pass
#4	13733.00	52.32	5.58	39.09	51.41	MaxP	Horizontal	150	60	74.0	-22.6	Pass
#5	17558.00	50.17	6.26	41.57	55.86	MaxP	Vertical	199	59	74.0	-18.1	Pass
#6	17915.00	48.10	6.67	41.55	56.05	MaxP	Horizontal	150	330	74.0	-17.9	Pass
Test Notes: 3.3Vdc, 927.8 MHz, OFDM, Opt4, MCS4 Taoglas FXUB65 Antenna												

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APPENDIX A - GRAPHICAL IMAGES

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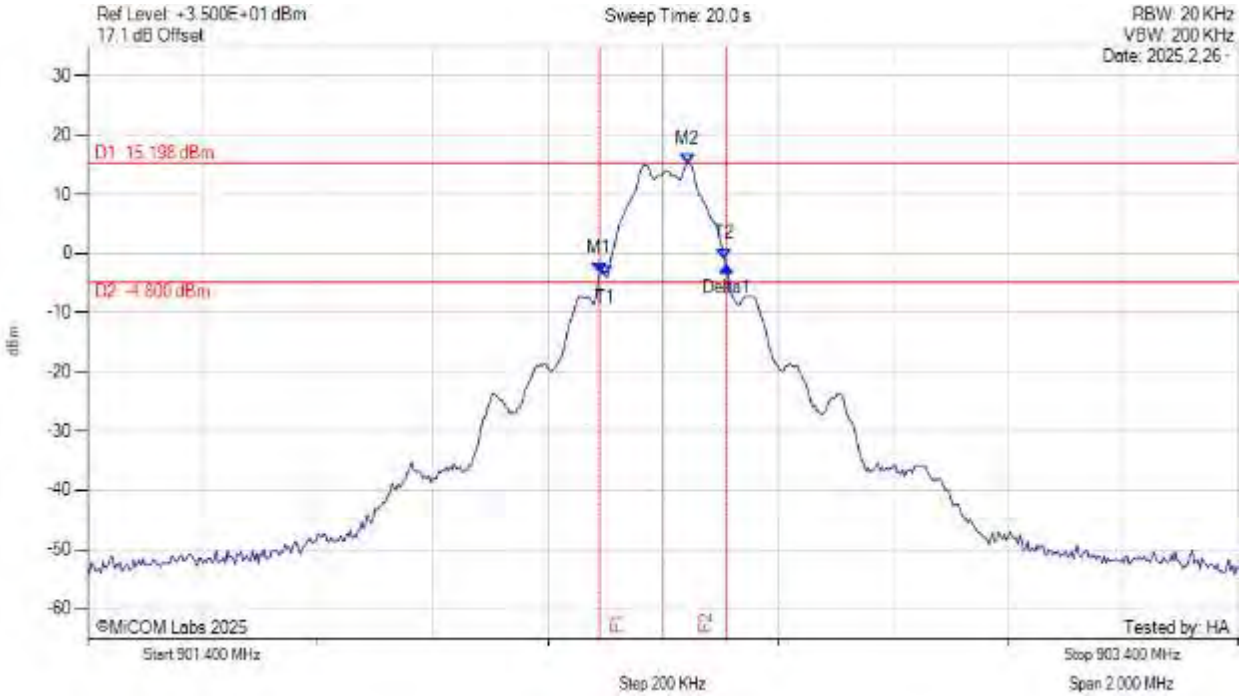
A.1. FHSS

A.1.1. 20 dB & 99% Bandwidth

20 dB 99% BANDWIDTH

Variant: FSK-150k, Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 902.290 MHz : -3.377 dBm M2 : 902.443 MHz : 15.198 dBm Delta1 : 220 KHz : 1.186 dB T1 : 902.300 MHz : -3.799 dBm T2 : 902.507 MHz : -0.894 dBm OBW : 210 KHz	Measured 20 dB Bandwidth: 0.220 MHz

back to matrix

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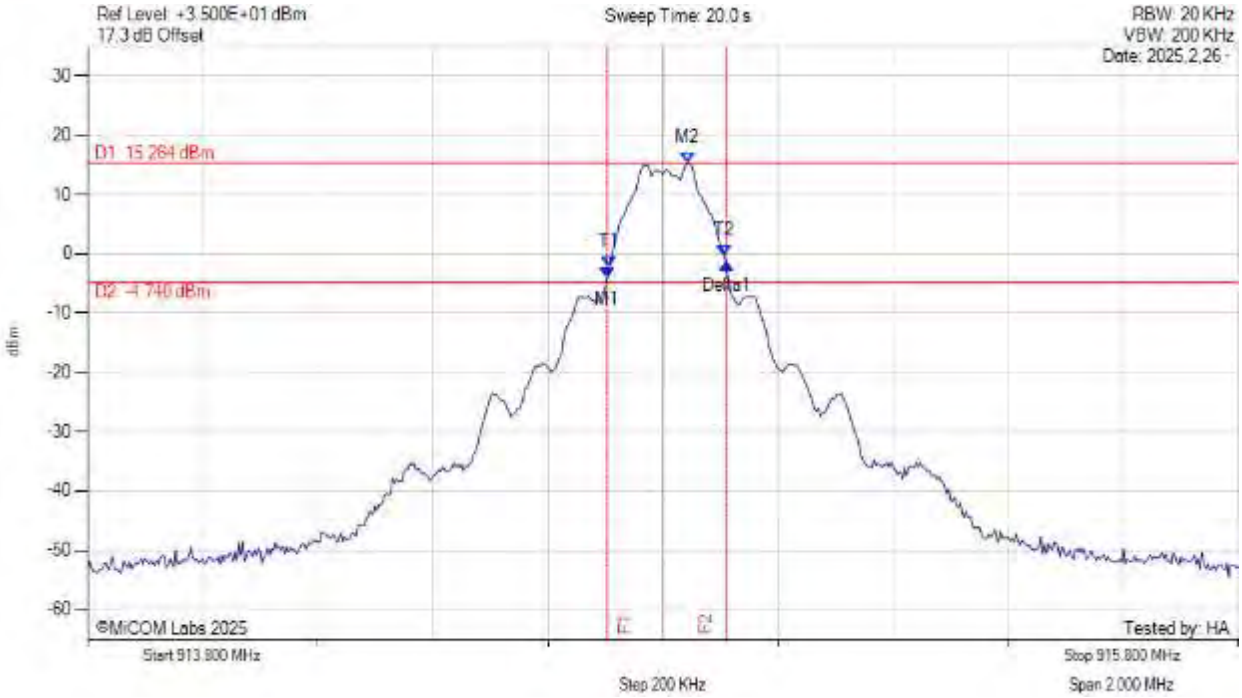
20 dB 99% BANDWIDTH

Variant: FSK-150k, Channel: 914.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 914.703 MHz : -4.110 dBm M2 : 914.843 MHz : 15.264 dBm Delta1 : 207 KHz : 2.381 dB T1 : 914.707 MHz : -2.276 dBm T2 : 914.907 MHz : -0.242 dBm OBW : 200 KHz	Measured 20 dB Bandwidth: 0.207 MHz

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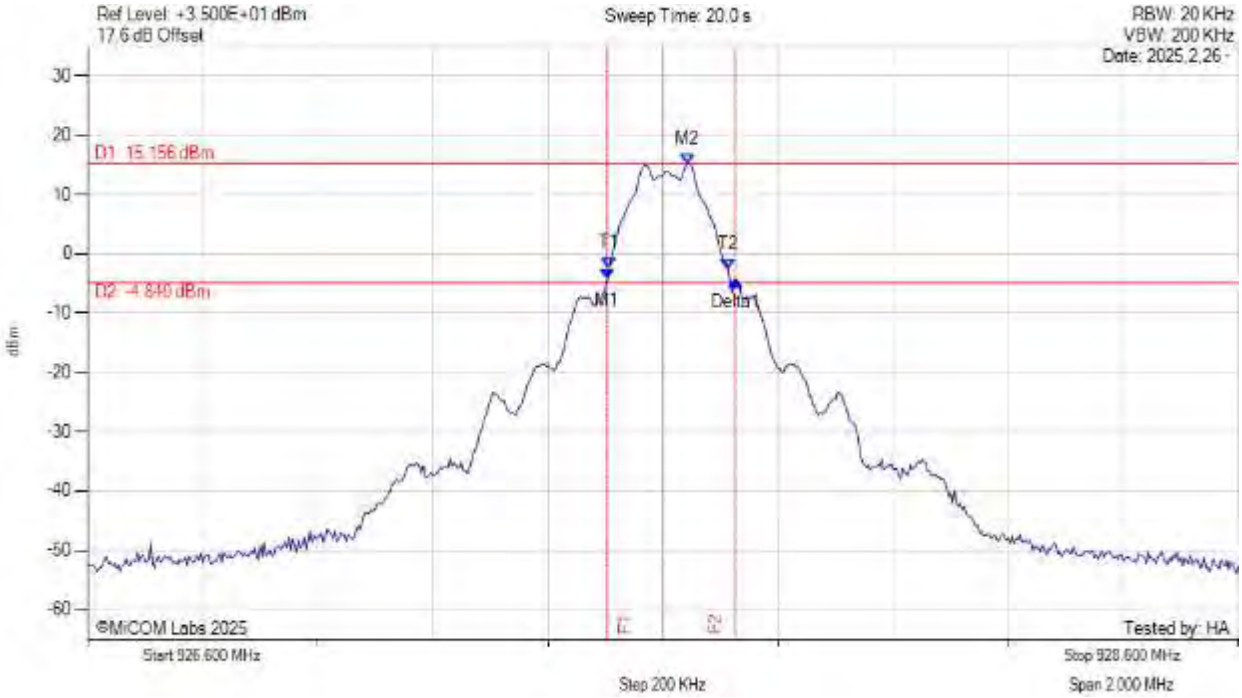
20 dB 99% BANDWIDTH

Variant: FSK-150k, Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 927.503 MHz : -4.359 dBm M2 : 927.643 MHz : 15.156 dBm Delta1 : 223 KHz : -0.197 dB T1 : 927.507 MHz : -2.420 dBm T2 : 927.713 MHz : -2.576 dBm OBW : 206 KHz	Measured 20 dB Bandwidth: 0.223 MHz

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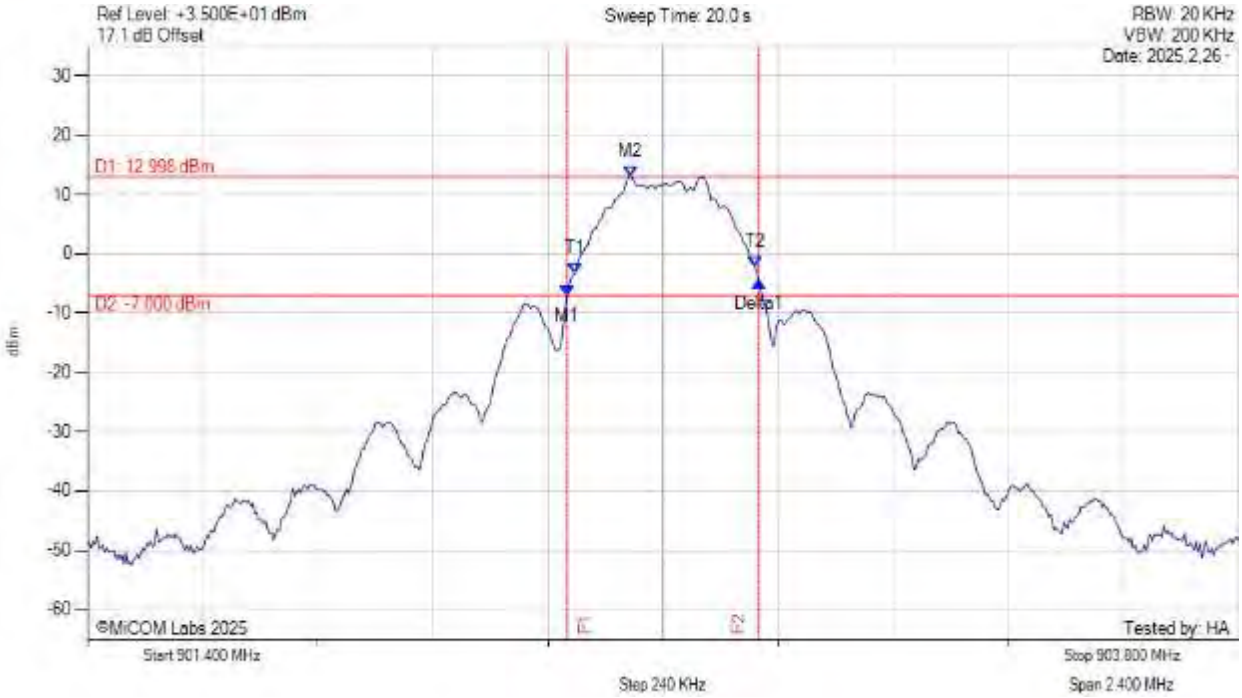
20 dB 99% BANDWIDTH

Variant: FSK, Channel: 902.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 902.400 MHz : -6.984 dBm M2 : 902.532 MHz : 12.998 dBm Delta1 : 400 KHz : 2.161 dB T1 : 902.416 MHz : -3.429 dBm T2 : 902.792 MHz : -2.177 dBm OBW : 373 KHz	Measured 20 dB Bandwidth: 0.400 MHz

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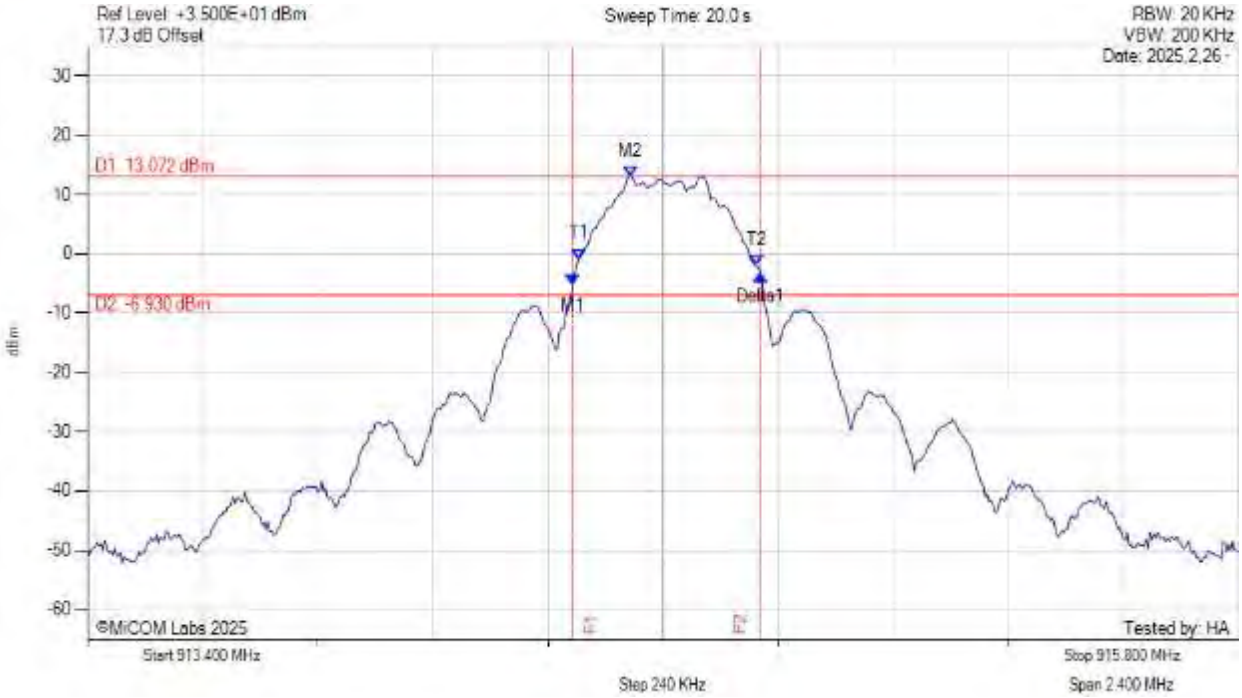
20 dB 99% BANDWIDTH

Variant: FSK-300k, Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 914.412 MHz : -5.215 dBm M2 : 914.532 MHz : 13.072 dBm Delta1 : 392 KHz : 1.531 dB T1 : 914.424 MHz : -0.891 dBm T2 : 914.796 MHz : -1.989 dBm OBW : 371 KHz	Measured 20 dB Bandwidth: 0.392 MHz

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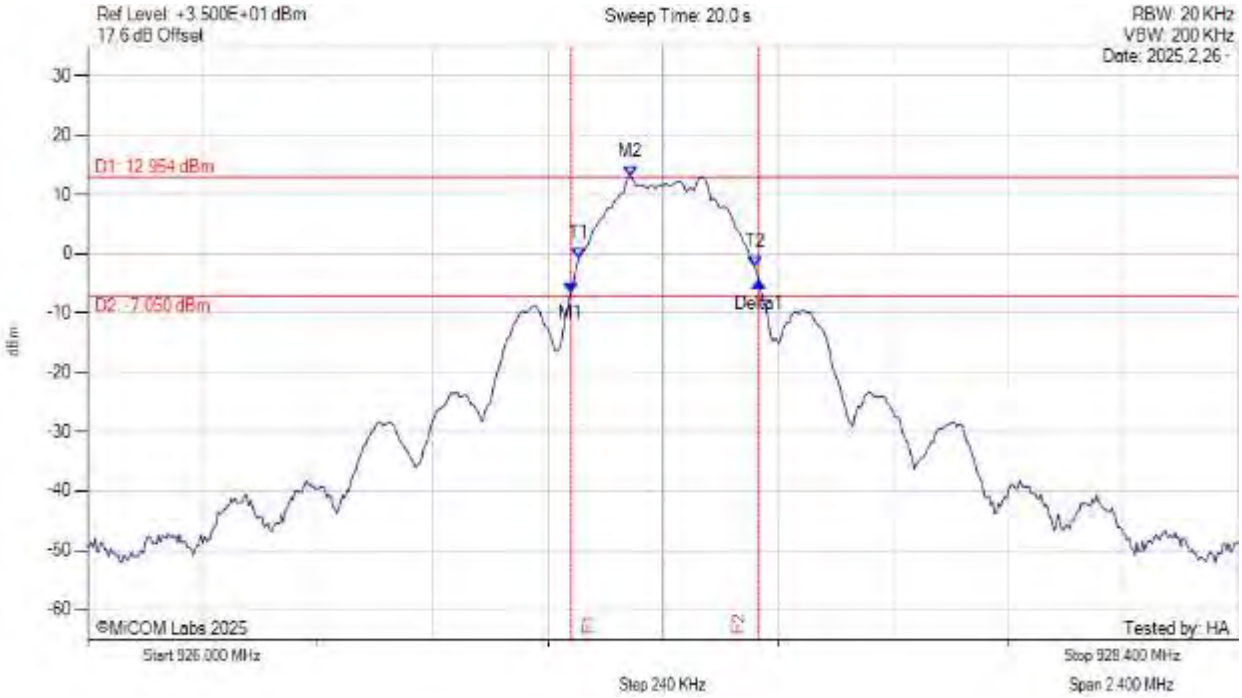
20 dB 99% BANDWIDTH

Variant: FSK-300k, Channel: 927.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 927.008 MHz : -6.586 dBm M2 : 927.132 MHz : 12.954 dBm Delta1 : 392 KHz : 1.805 dB T1 : 927.024 MHz : -0.820 dBm T2 : 927.392 MHz : -2.246 dBm OBW : 368 KHz	Measured 20 dB Bandwidth: 0.392 MHz

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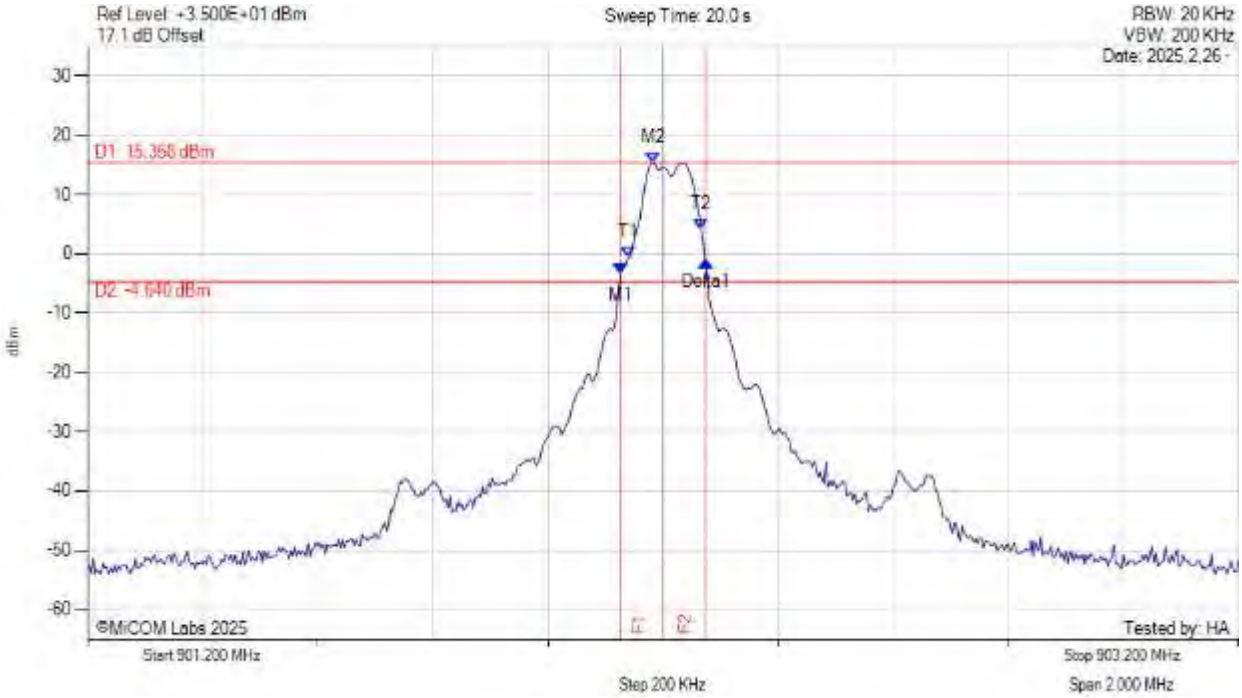
20 dB 99% BANDWIDTH

Variant: FSK-50k, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 902.127 MHz : -3.364 dBm M2 : 902.183 MHz : 15.358 dBm Delta1 : 147 KHz : 2.201 dB T1 : 902.140 MHz : -0.655 dBm T2 : 902.267 MHz : 4.033 dBm OBW : 128 KHz	Measured 20 dB Bandwidth: 0.147 MHz Limit: kHz Margin: #VALUE! MHz

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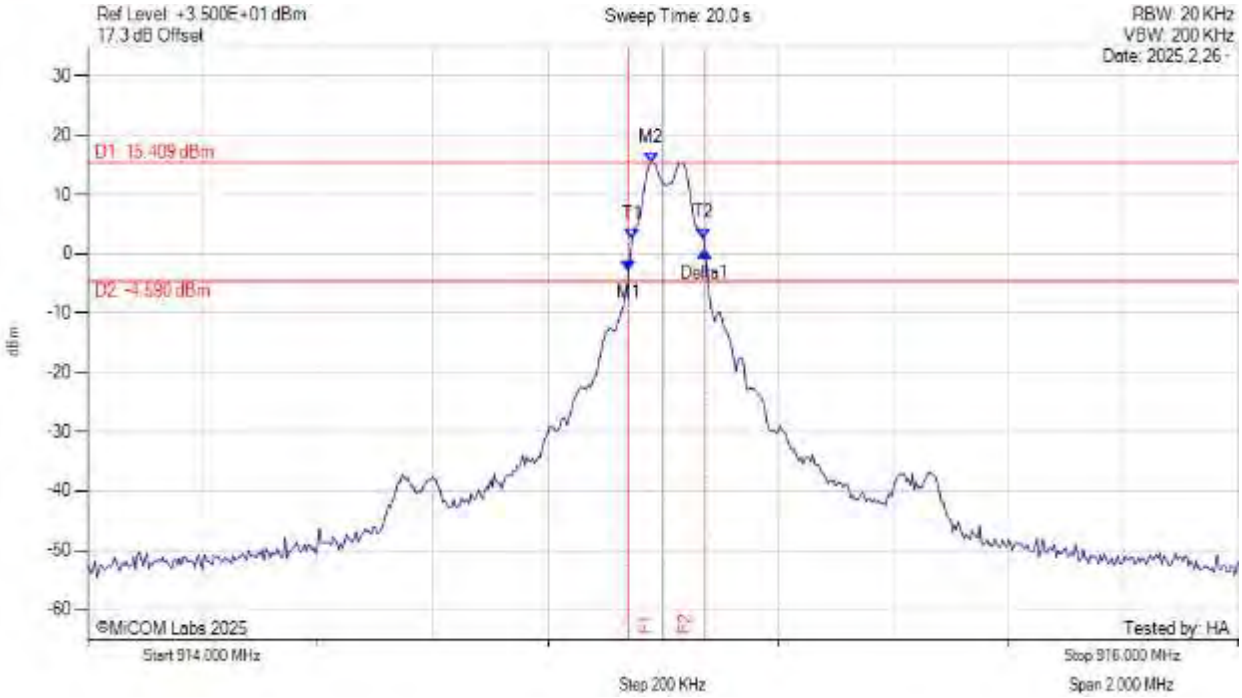
20 dB 99% BANDWIDTH

Variant: FSK-50k, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 914.940 MHz : -2.889 dBm M2 : 914.980 MHz : 15.409 dBm Delta1 : 133 KHz : 3.188 dB T1 : 914.947 MHz : 2.459 dBm T2 : 915.070 MHz : 2.611 dBm OBW : 125 KHz	Measured 20 dB Bandwidth: 0.133 MHz

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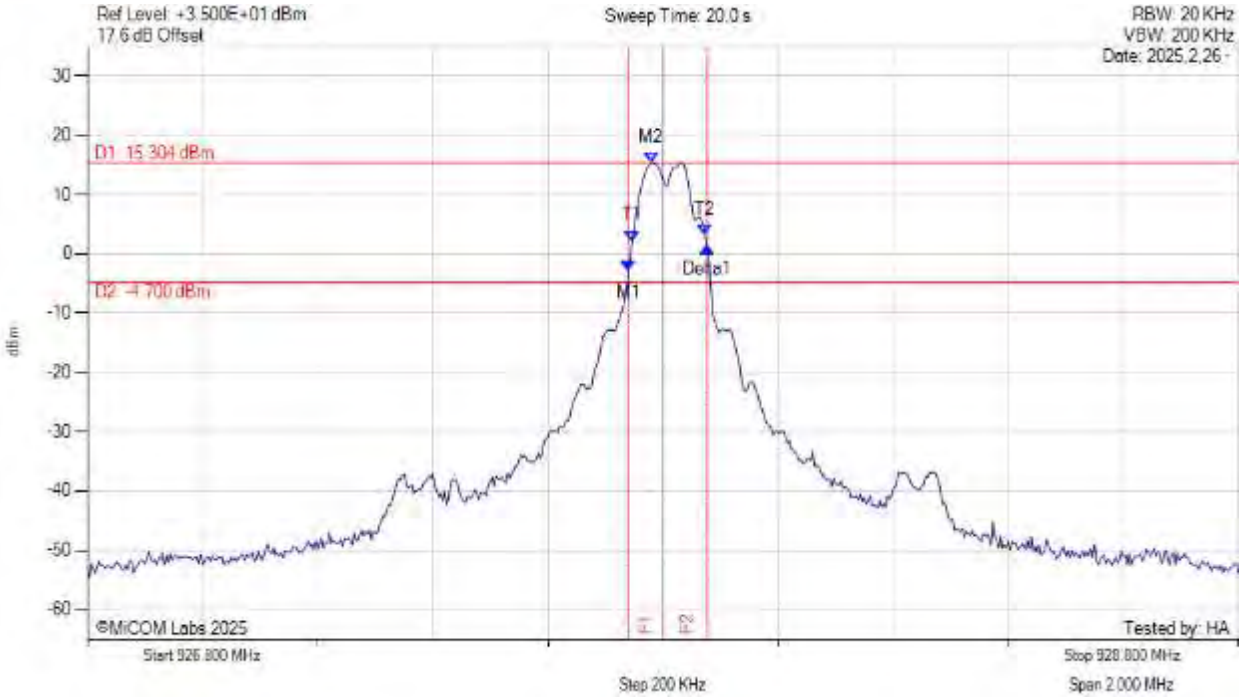
20 dB 99% BANDWIDTH

Variant: FSK-50k, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 927.740 MHz : -2.896 dBm M2 : 927.780 MHz : 15.304 dBm Delta1 : 137 KHz : 3.939 dB T1 : 927.747 MHz : 2.136 dBm T2 : 927.873 MHz : 3.277 dBm OBW : 127 KHz	Measured 20 dB Bandwidth: 0.137 MHz

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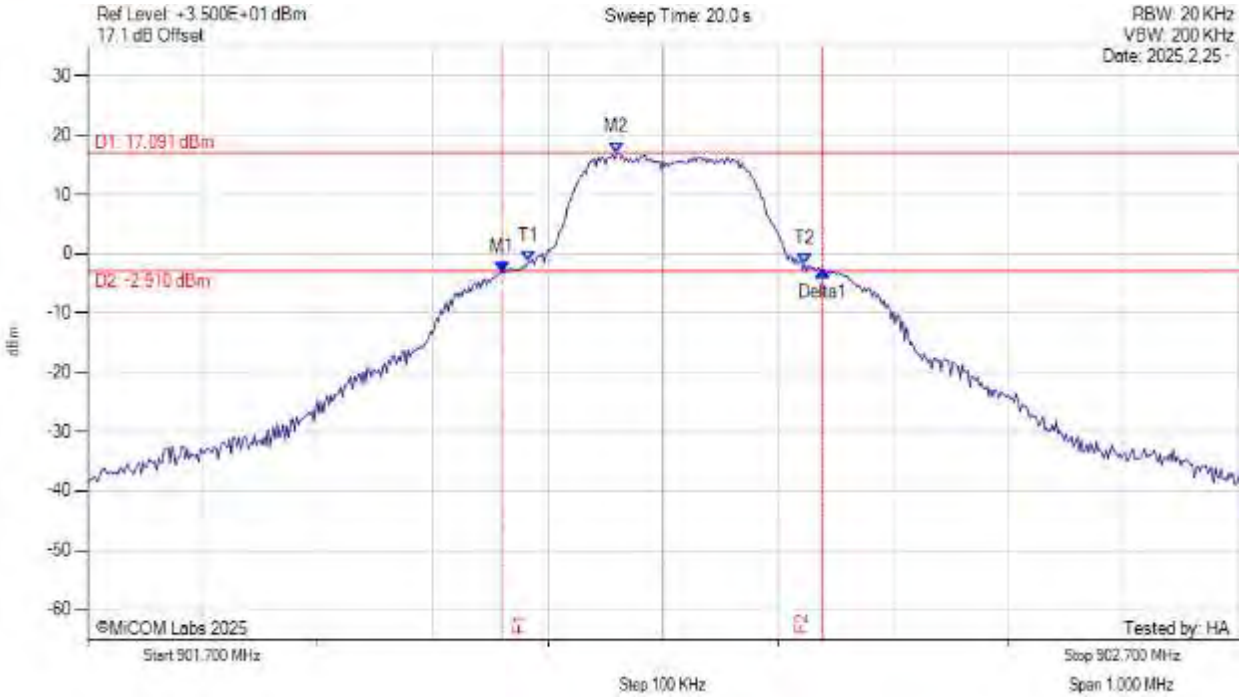
20 dB 99% BANDWIDTH

Variant: MCS4-OFDM-opt4, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 902.060 MHz : -3.179 dBm M2 : 902.160 MHz : 17.091 dBm Delta1 : 278 KHz : 0.286 dB T1 : 902.083 MHz : -1.265 dBm T2 : 902.323 MHz : -1.674 dBm OBW : 243 KHz	Measured 20 dB Bandwidth: 0.278 MHz

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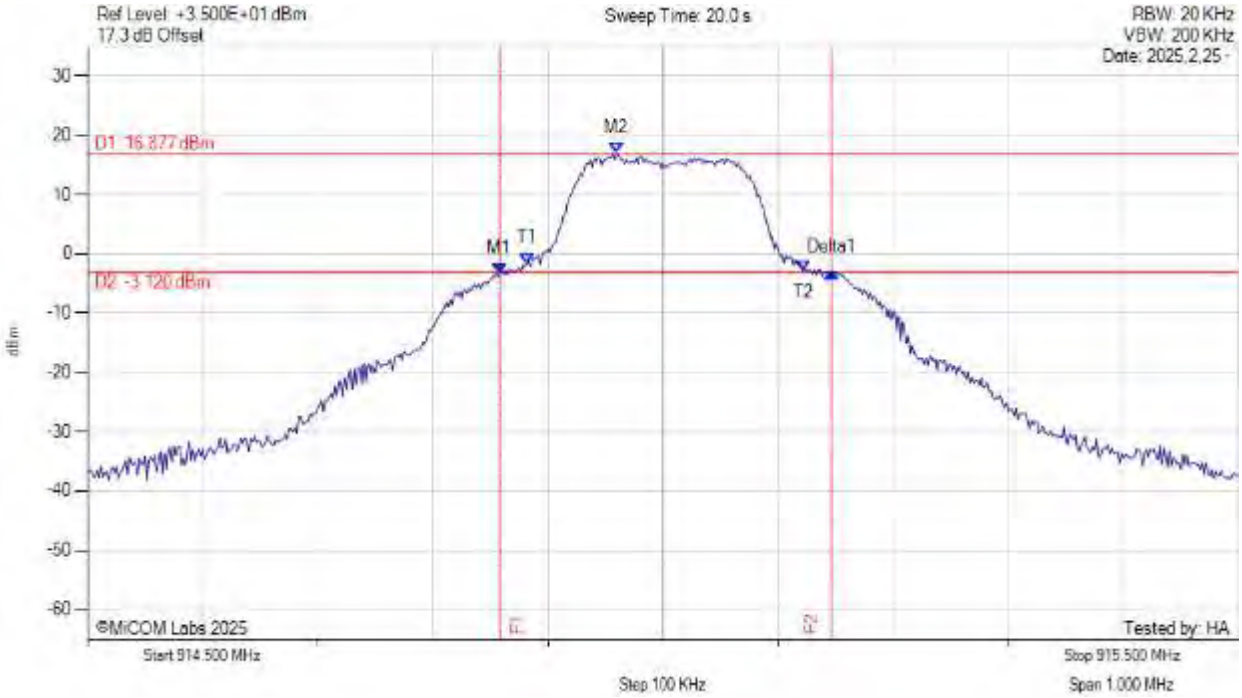
20 dB 99% BANDWIDTH

Variant: MCS4-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 914.858 MHz : -3.412 dBm M2 : 914.959 MHz : 16.877 dBm Delta1 : 288 KHz : 0.356 dB T1 : 914.882 MHz : -1.606 dBm T2 : 915.122 MHz : -2.948 dBm OBW : 243 KHz	Measured 20 dB Bandwidth: 0.288 MHz

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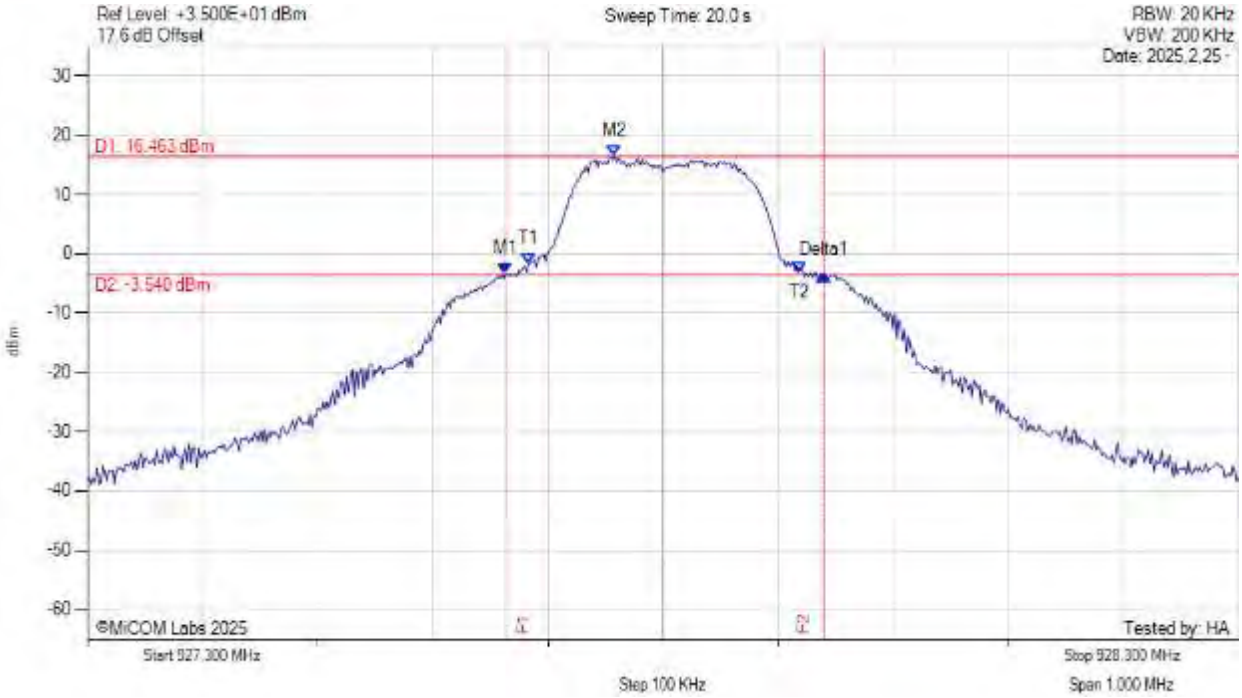
20 dB 99% BANDWIDTH

Variant: MCS4-OFDM-opt4, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 927.663 MHz : -3.429 dBm M2 : 927.758 MHz : 16.463 dBm Delta1 : 277 KHz : -0.079 dB T1 : 927.683 MHz : -1.740 dBm T2 : 927.918 MHz : -3.028 dBm OBW : 237 KHz	Measured 20 dB Bandwidth: 0.277 MHz

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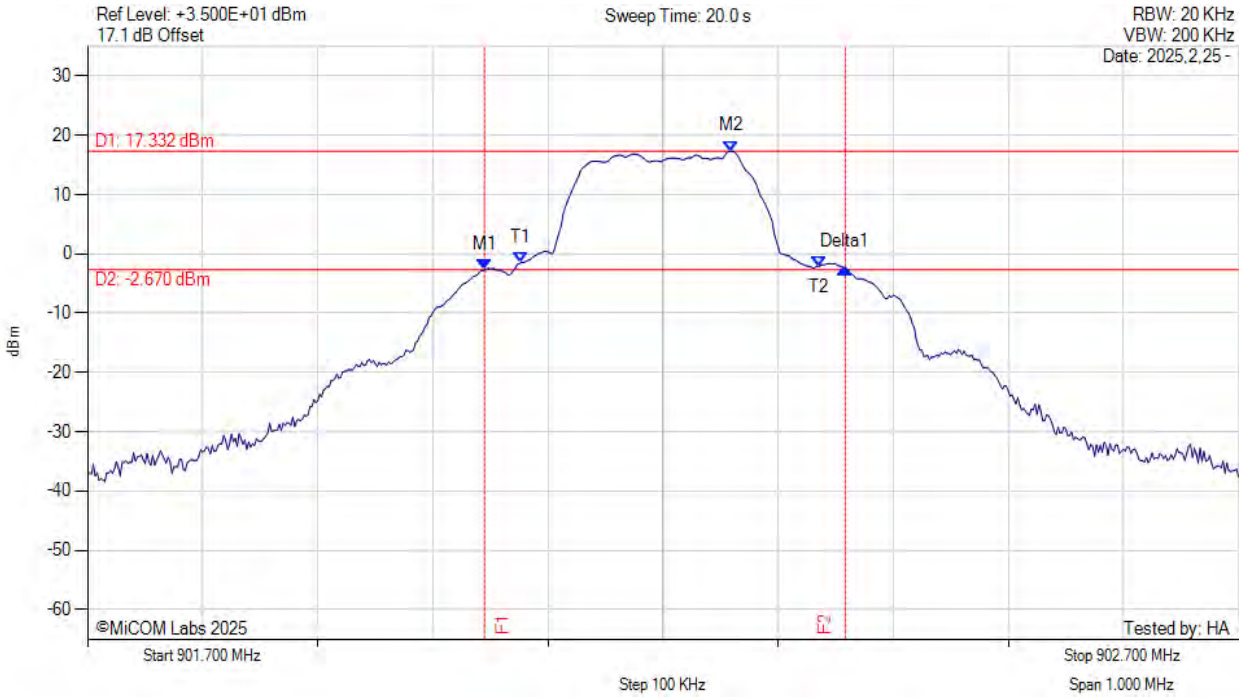
20 dB 99% BANDWIDTH

Variant: MCS6-OFDM-opt4, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 902.045 MHz : -2.557 dBm M2 : 902.259 MHz : 17.332 dBm Delta1 : 313 KHz : 0.258 dB T1 : 902.077 MHz : -1.453 dBm T2 : 902.335 MHz : -2.094 dBm OBW : 261 KHz	Measured 20 dB Bandwidth: 0.313 MHz

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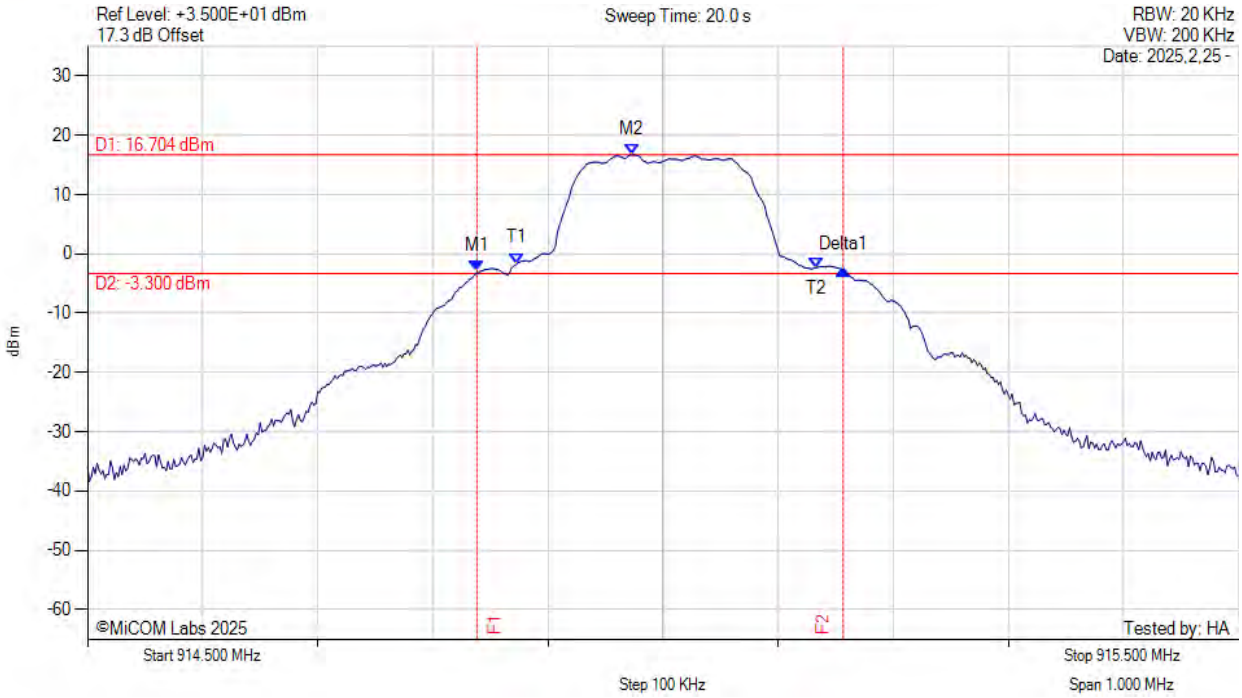
20 dB 99% BANDWIDTH

Variant: MCS6-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 914.838 MHz : -2.884 dBm M2 : 914.973 MHz : 16.704 dBm Delta1 : 318 KHz : 0.142 dB T1 : 914.873 MHz : -1.602 dBm T2 : 915.133 MHz : -2.323 dBm OBW : 263 KHz	Measured 20 dB Bandwidth: 0.318 MHz

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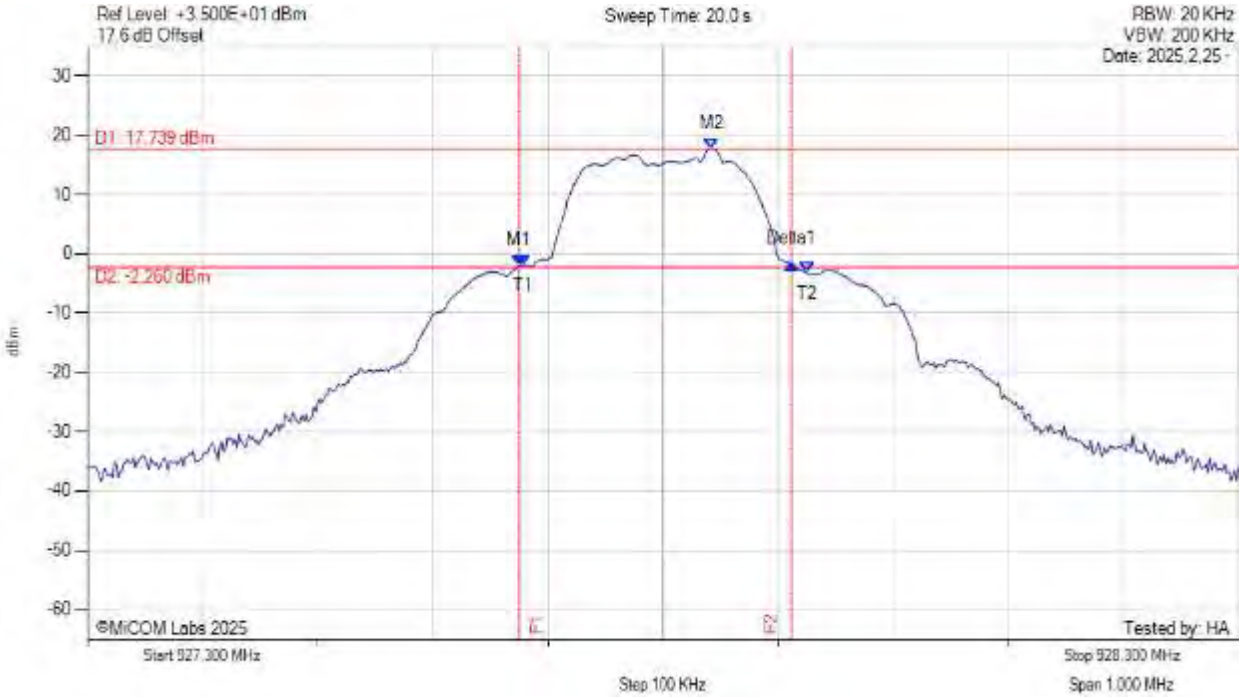
20 dB 99% BANDWIDTH

Variant: MCS6-OFDM-opt4, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 927.675 MHz : -1.986 dBm M2 : 927.842 MHz : 17.739 dBm Delta1 : 237 KHz : 0.326 dB T1 : 927.678 MHz : -1.917 dBm T2 : 927.925 MHz : -3.198 dBm OBW : 251 KHz	Measured 20 dB Bandwidth: 0.237 MHz

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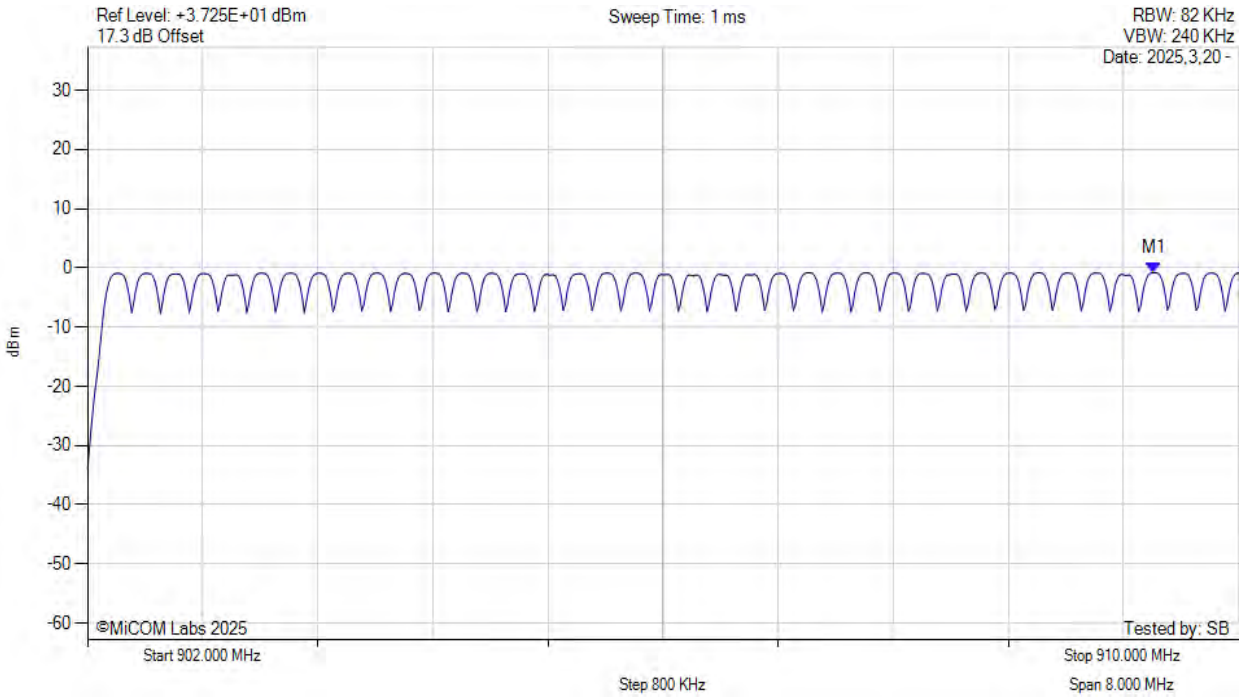
A.1.2. Frequency Hopping Tests

Number of Hopping Channels

NUMBER OF HOPPING CHANNELS

Variant: FSK-50k, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.413 MHz : -0.818 dBm	Channel Frequency: 915.00 MHz

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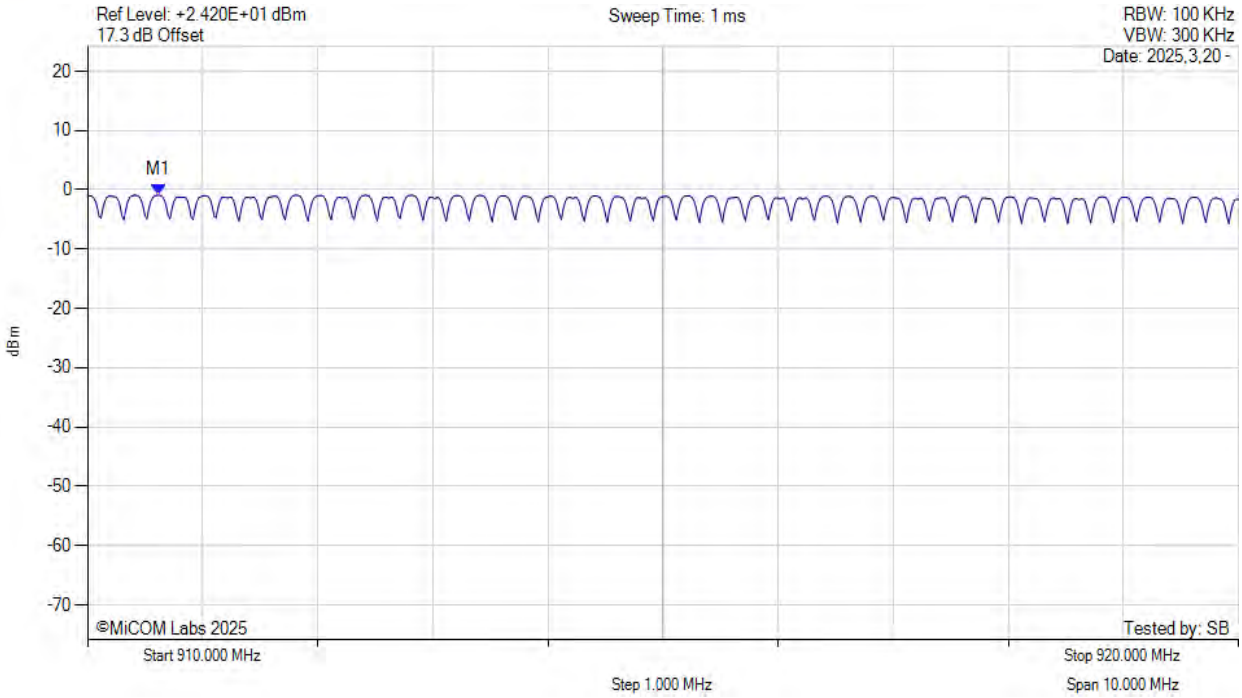
NUMBER OF HOPPING CHANNELS

Variant: FSK-50k, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 910.617 MHz : -0.890 dBm	Channel Frequency: 915.00 MHz

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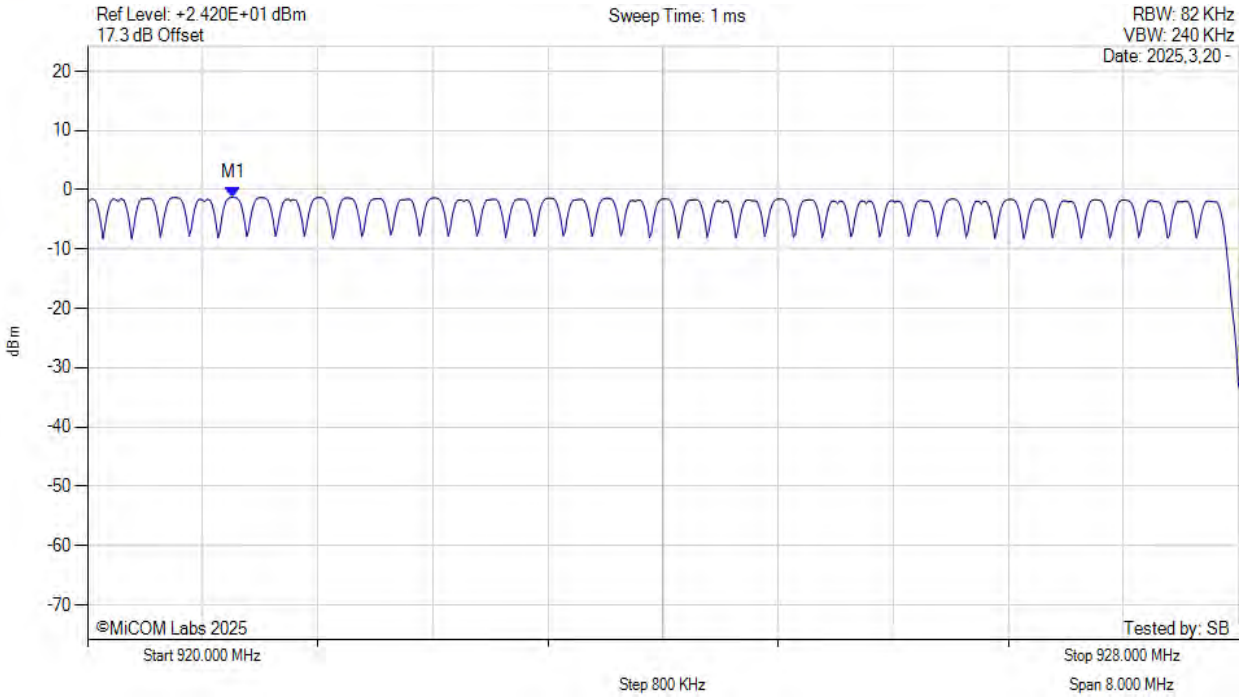
NUMBER OF HOPPING CHANNELS

Variant: FSK-50k, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 921.013 MHz : -1.283 dBm	Channel Frequency: 915.00 MHz

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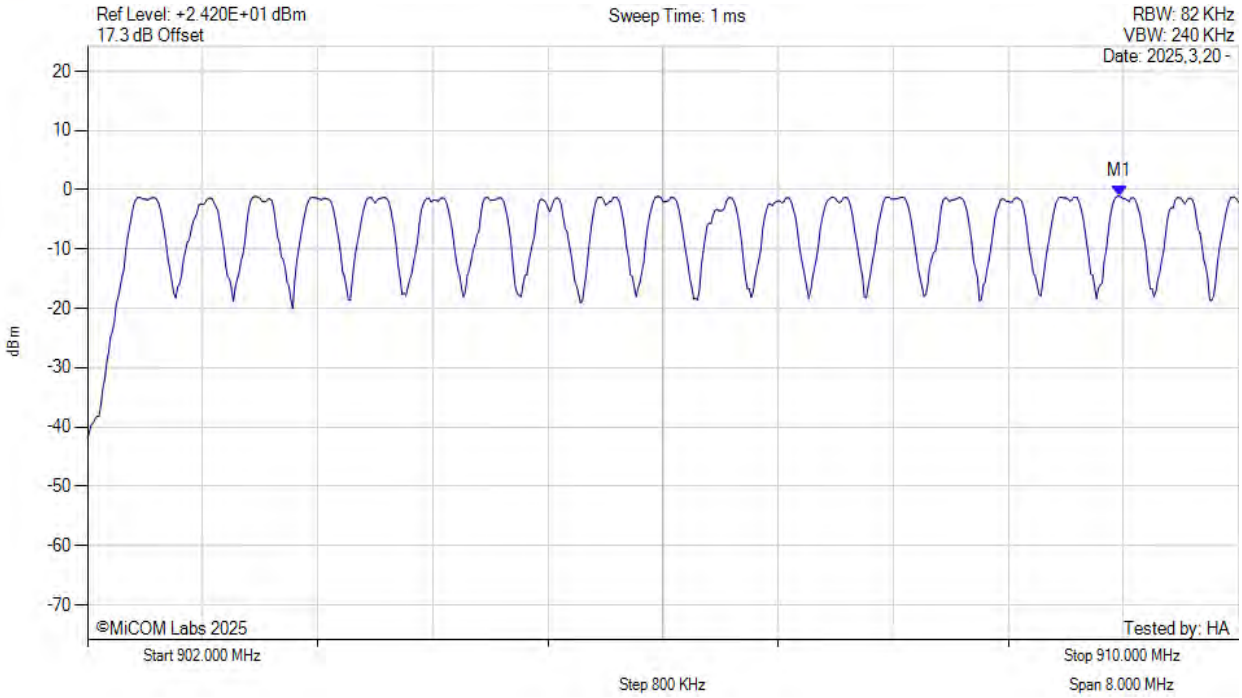
NUMBER OF HOPPING CHANNELS

Variant: FSK-150k, Channel: 914.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.173 MHz : -1.070 dBm	Channel Frequency: 914.80 MHz

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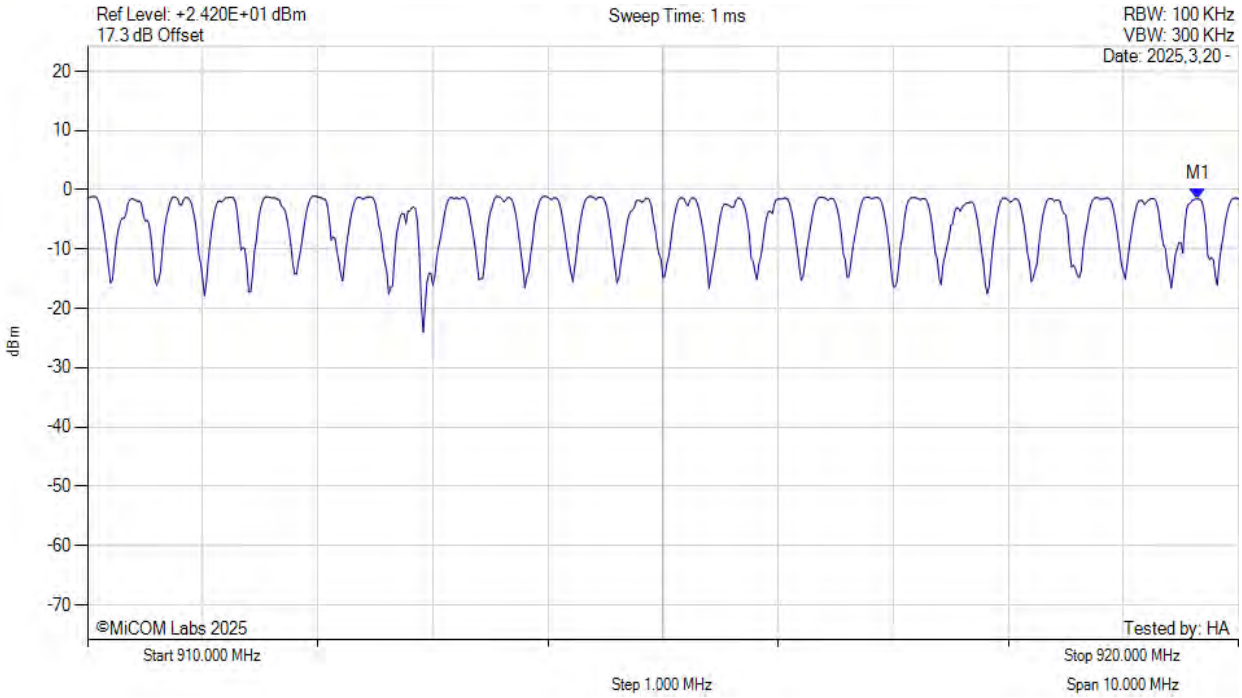
NUMBER OF HOPPING CHANNELS

Variant: FSK-150k, Channel: 914.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 919.650 MHz : -1.547 dBm	Channel Frequency: 914.80 MHz

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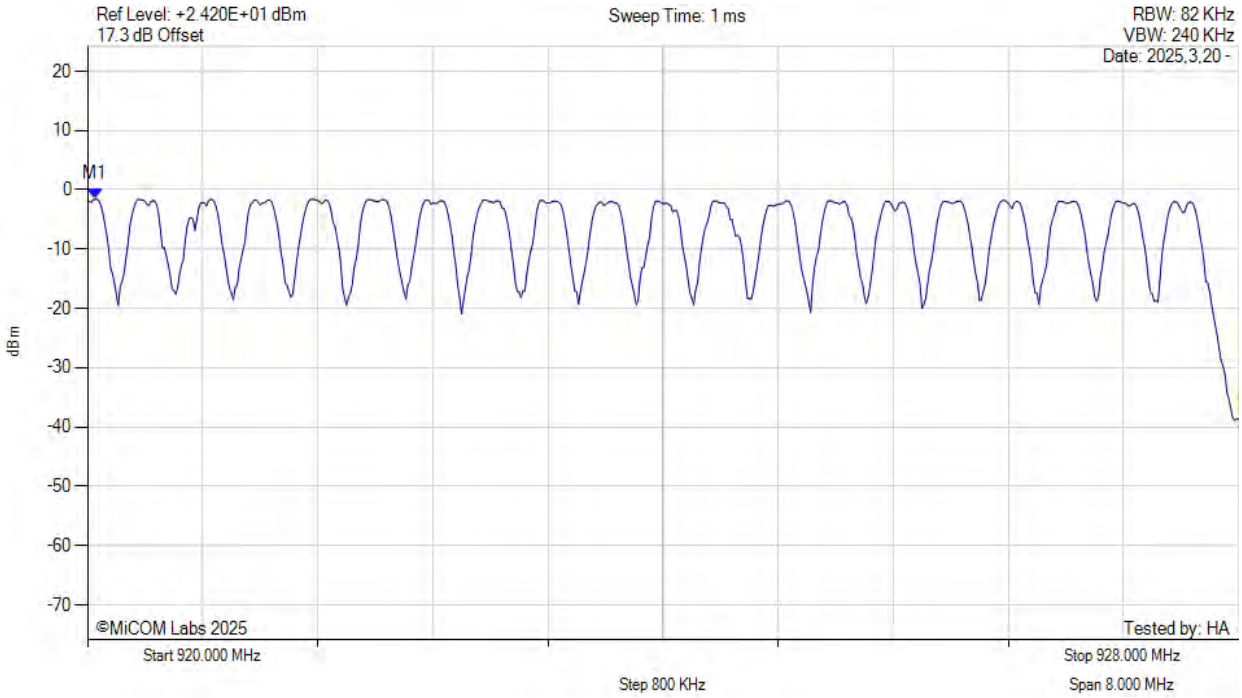
NUMBER OF HOPPING CHANNELS

Variant: FSK-150k, Channel: 914.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 920.053 MHz : -1.551 dBm	Channel Frequency: 914.80 MHz

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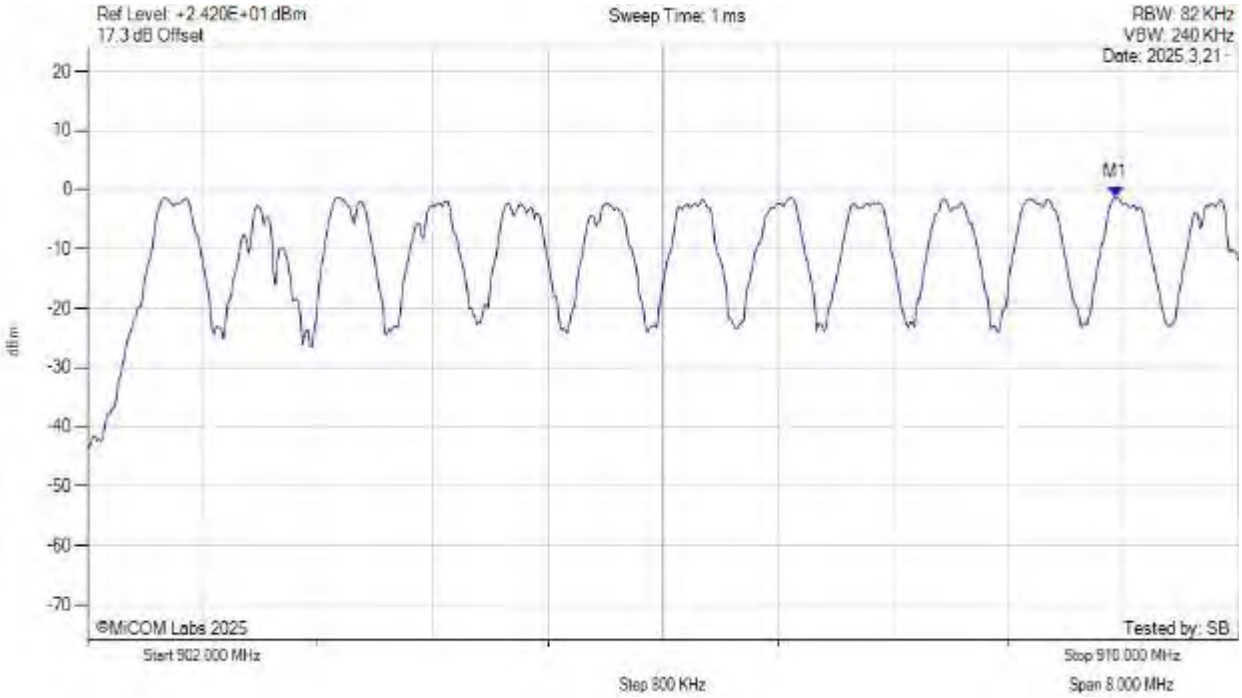
NUMBER OF HOPPING CHANNELS

Variant: FSK-300k, Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.147 MHz : -1.285 dBm	Channel Frequency: 914.60 MHz

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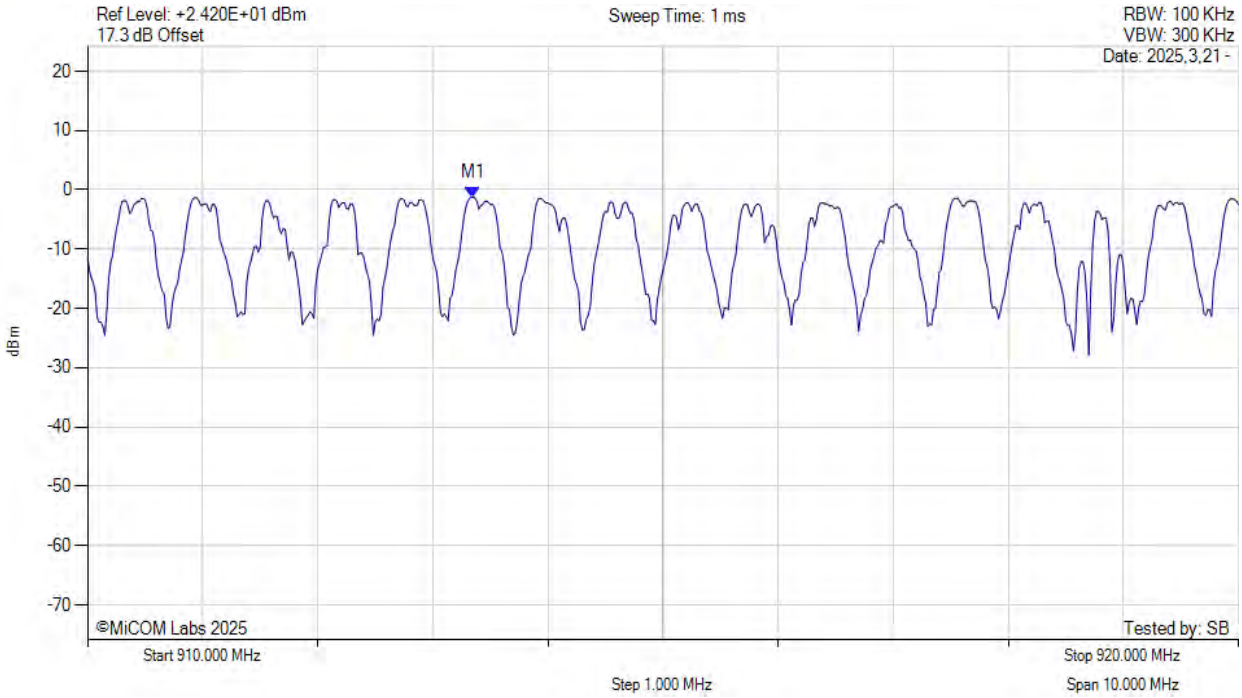
NUMBER OF HOPPING CHANNELS

Variant: FSK-300k, Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 913.350 MHz : -1.226 dBm	Channel Frequency: 914.60 MHz

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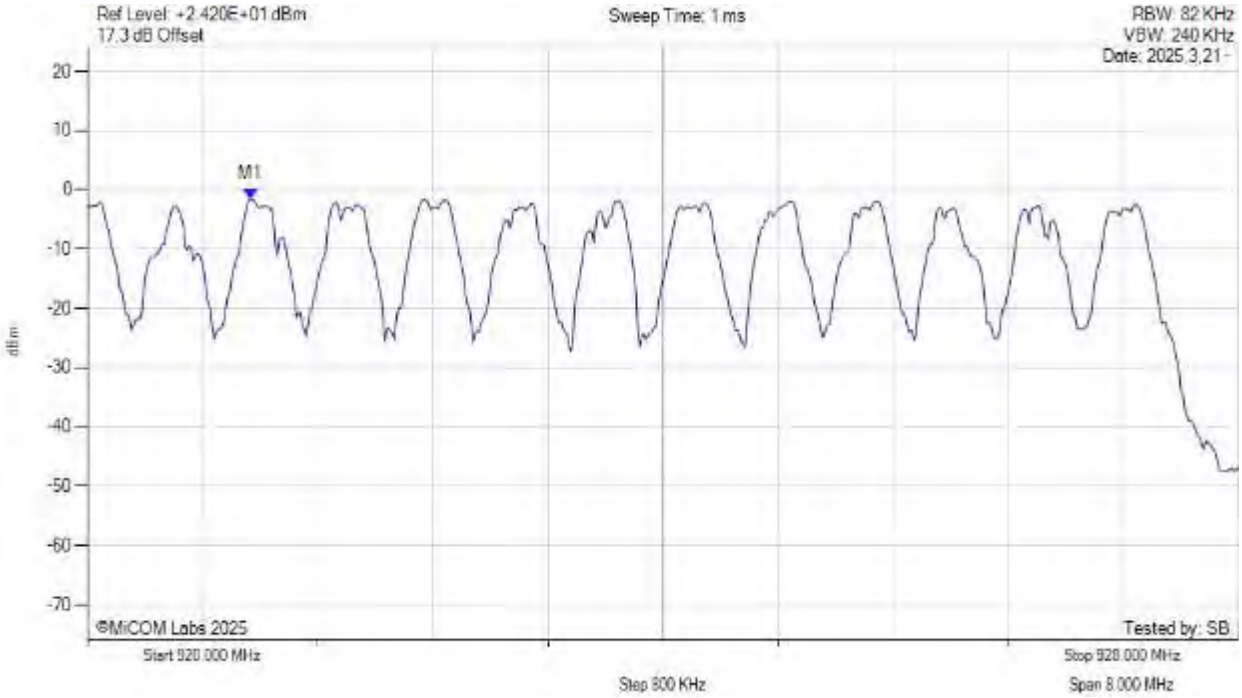
NUMBER OF HOPPING CHANNELS

Variant: FSK-300k, Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 921.133 MHz : -1.593 dBm	Channel Frequency: 914.60 MHz

back to matrix

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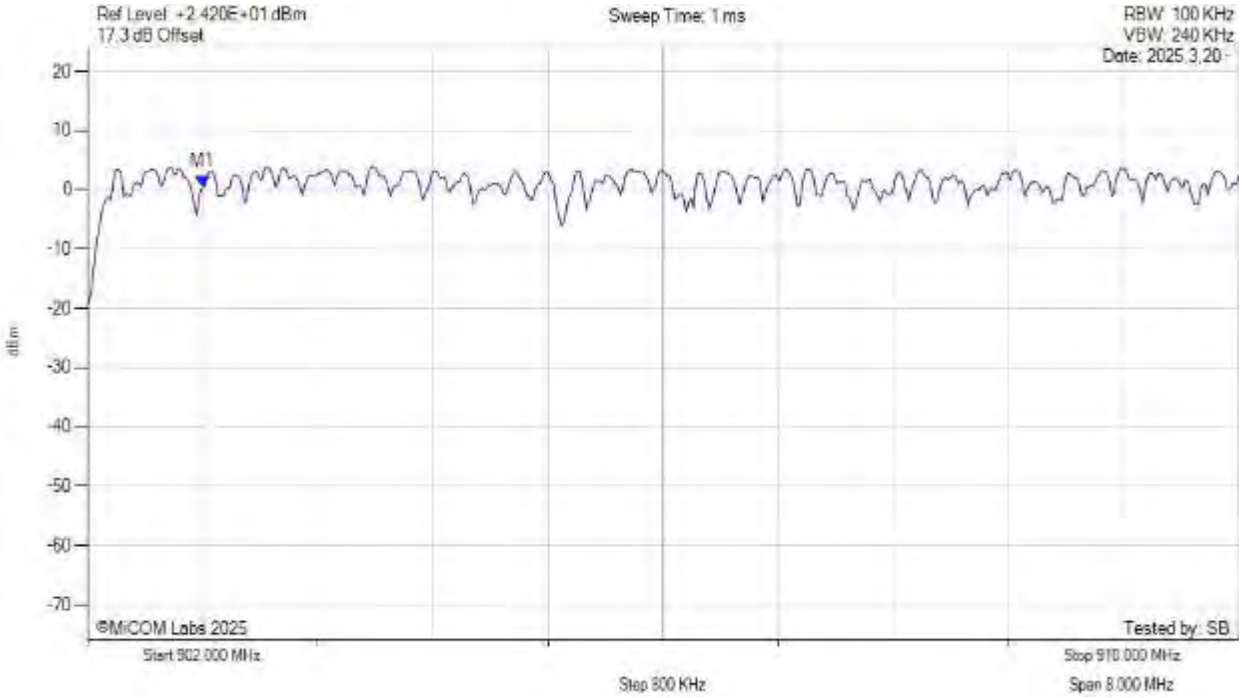
NUMBER OF HOPPING CHANNELS

Variant: MCS4-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.800 MHz : 0.564 dBm	Channel Frequency: 915.00 MHz

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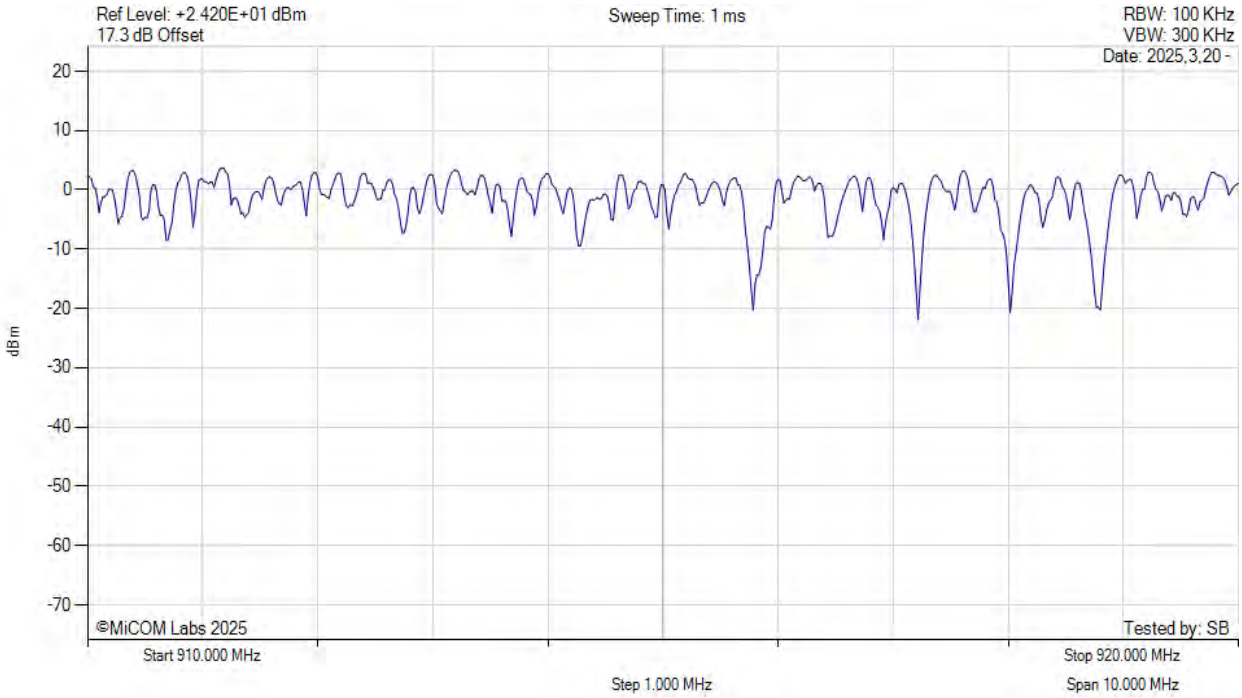
NUMBER OF HOPPING CHANNELS

Variant: MCS4-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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

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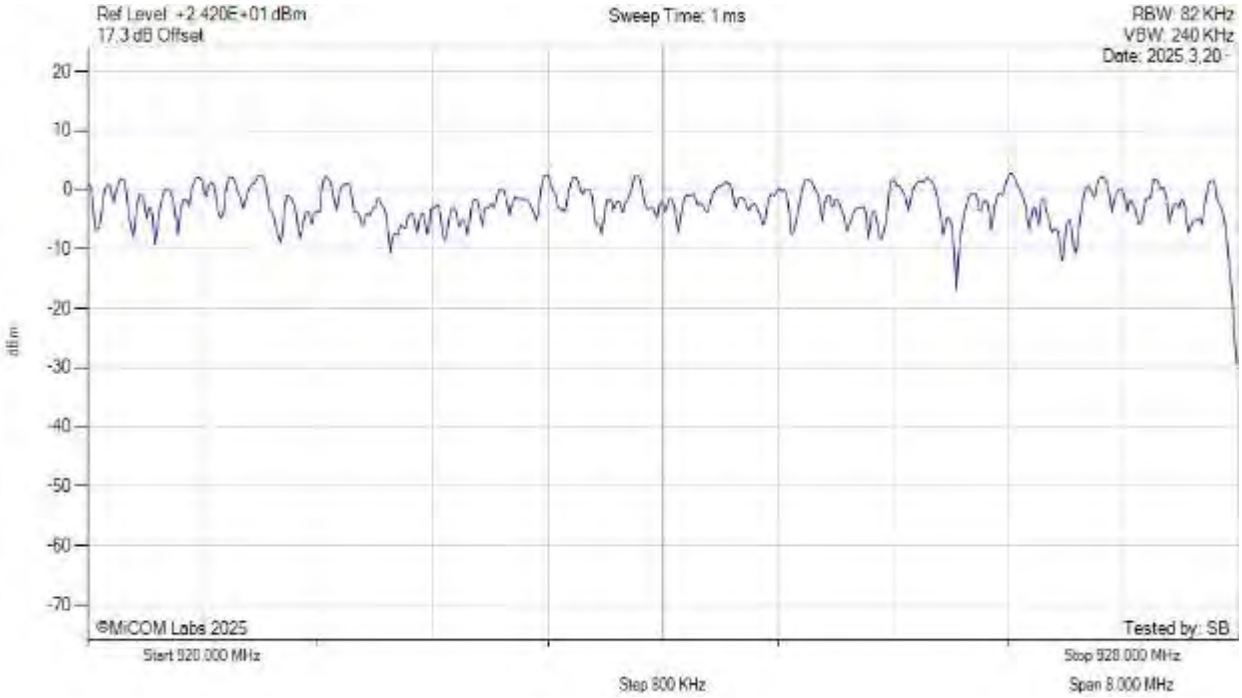
NUMBER OF HOPPING CHANNELS

Variant: MCS4-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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

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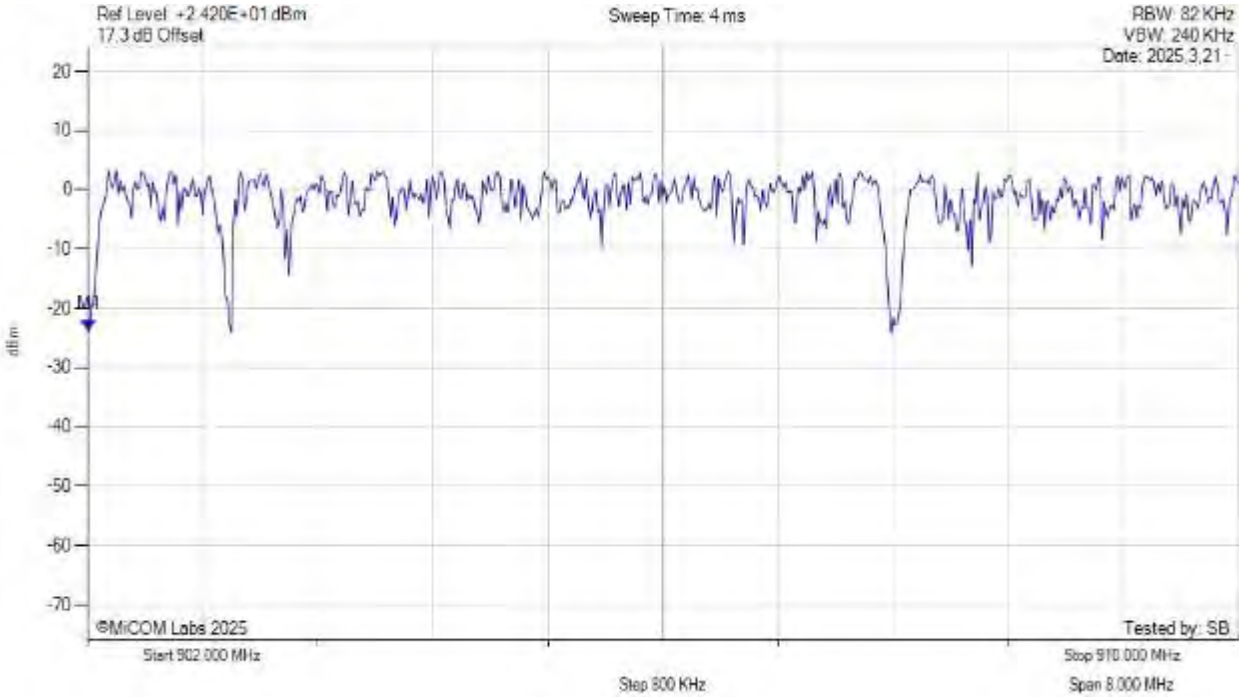
NUMBER OF HOPPING CHANNELS

Variant: MCS6-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = SAMP Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.013 MHz : -23.623 dBm	Channel Frequency: 915.00 MHz

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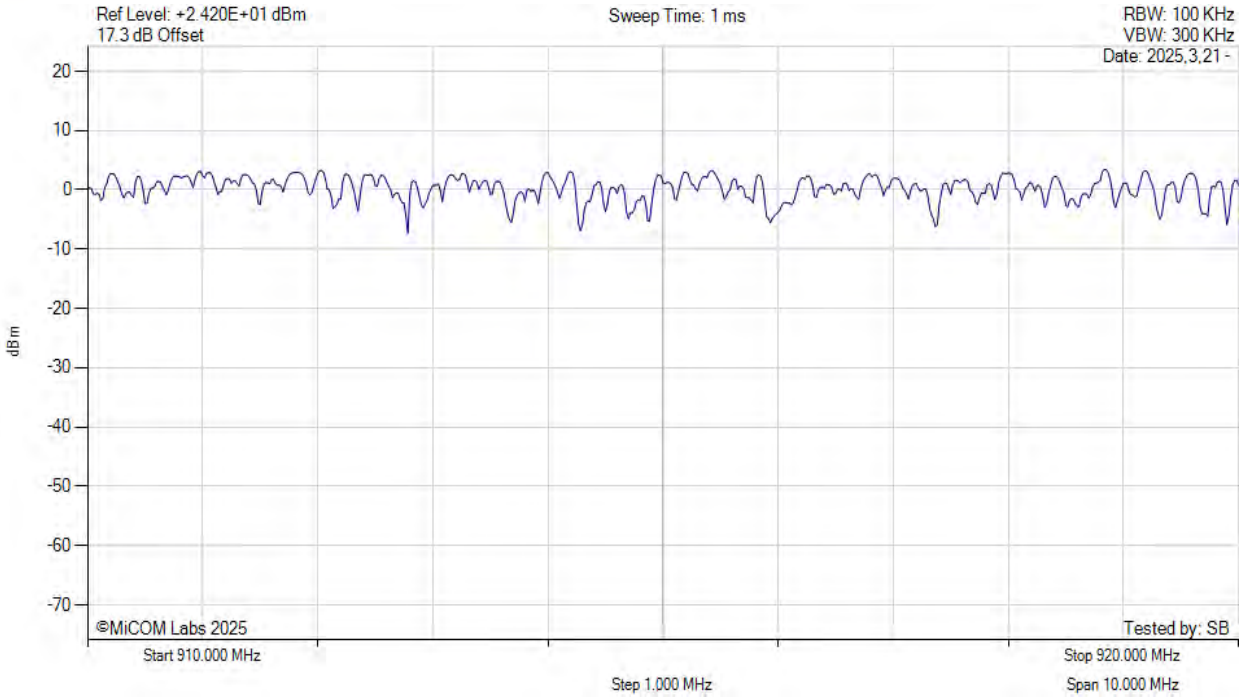
NUMBER OF HOPPING CHANNELS

Variant: MCS6-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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

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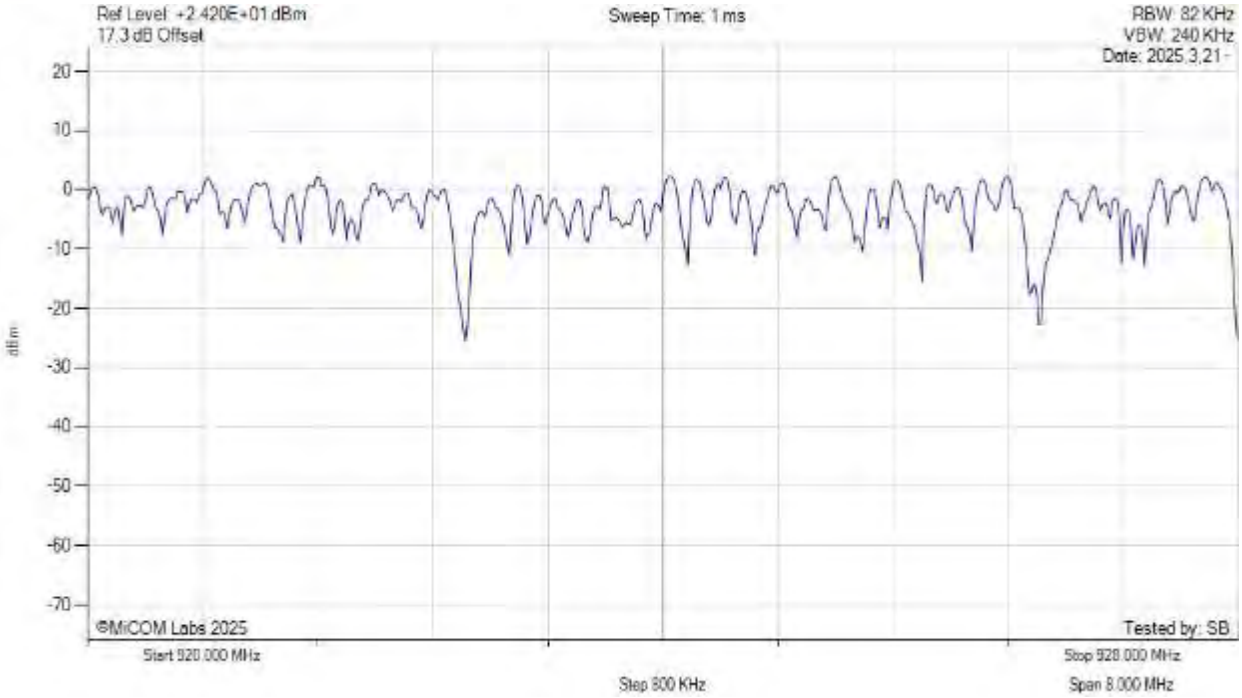
NUMBER OF HOPPING CHANNELS

Variant: MCS6-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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

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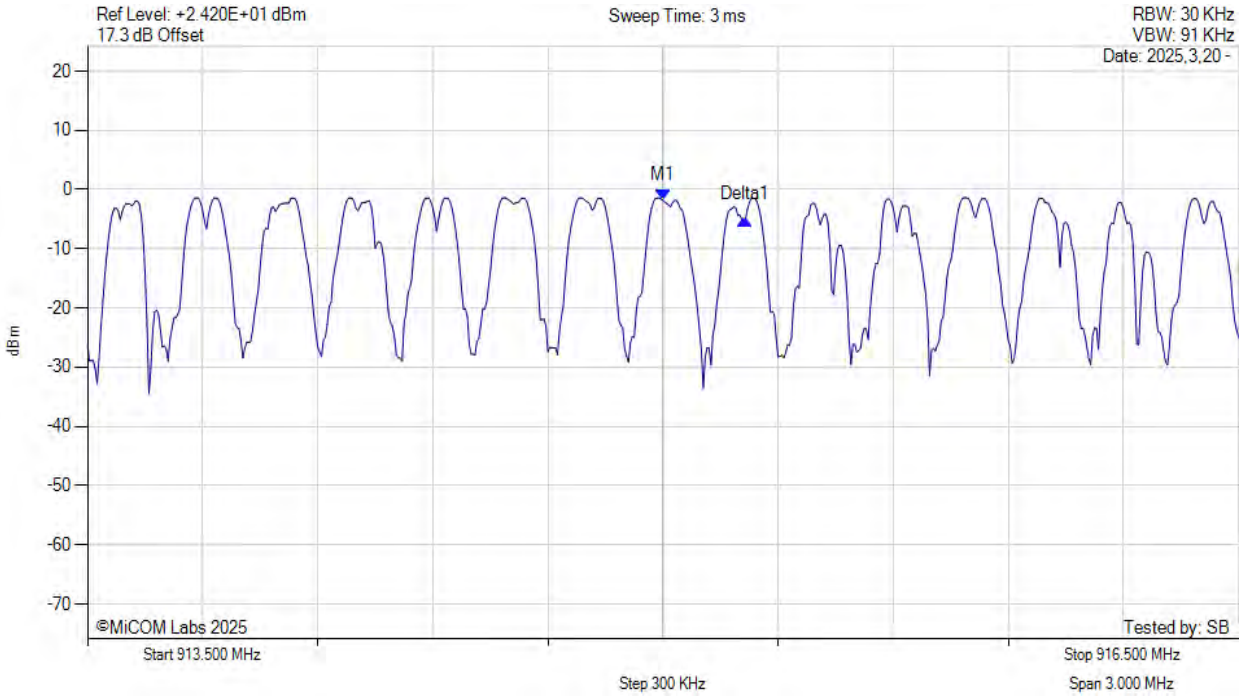
Channel Separation

CHANNEL SEPARATION

Variant: FSK-50k, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.000 MHz : -1.798 dBm Delta1 : 215 KHz : -3.299 dB	Channel Frequency: 915.00 MHz

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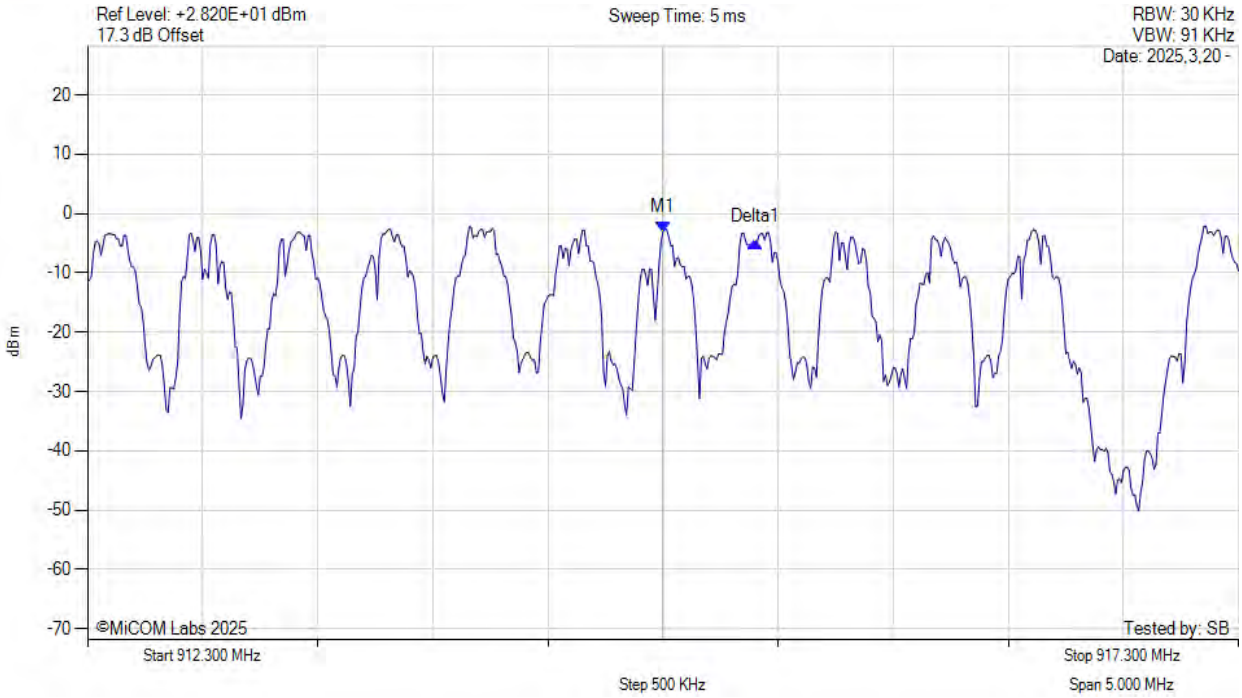
CHANNEL SEPARATION

Variant: FSK-150k, Channel: 914.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 914.800 MHz : -3.051 dBm Delta1 : 400 KHz : -1.677 dB	Channel Frequency: 914.80 MHz

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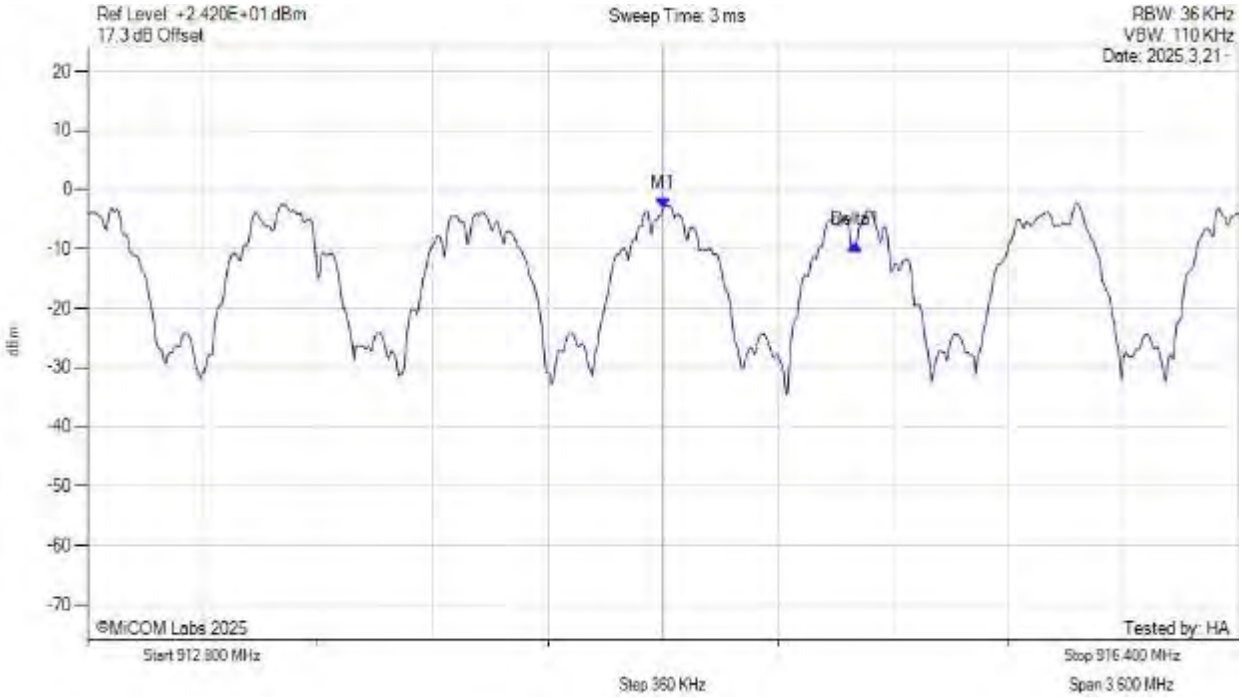
CHANNEL SEPARATION

Variant: FSK-300k, Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 914.600 MHz : -3.217 dBm Delta1 : 600 KHz : -6.113 dB	Channel Frequency: 914.60 MHz

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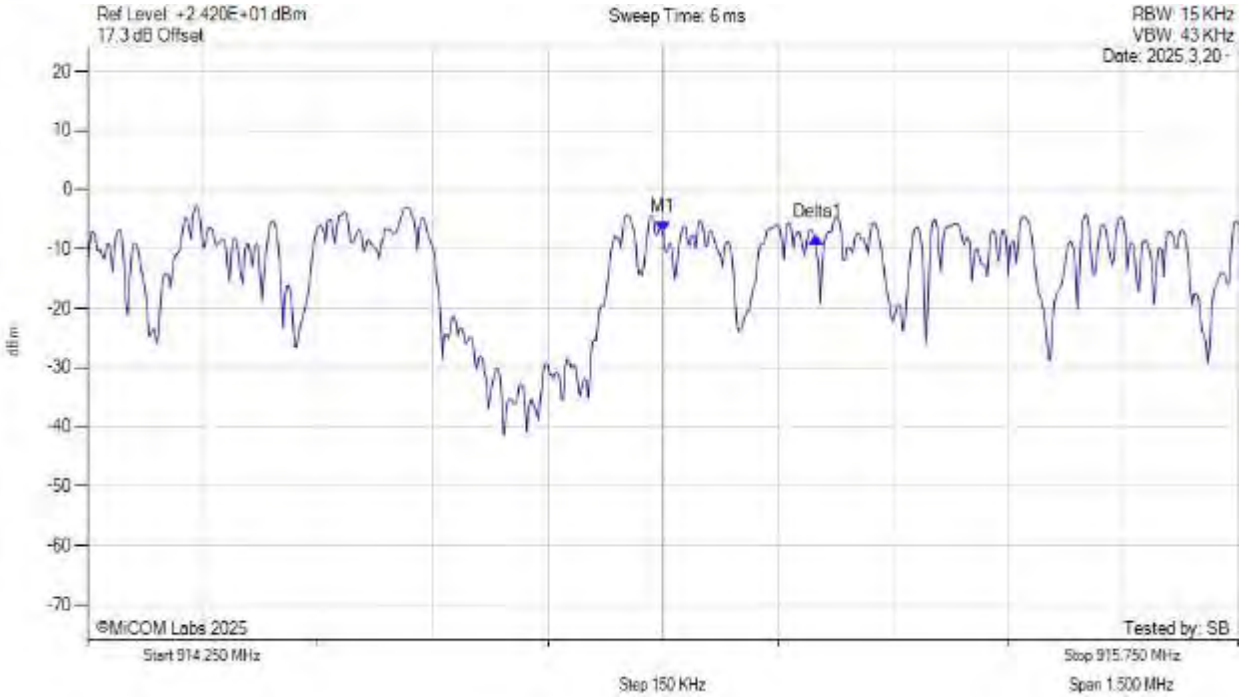
CHANNEL SEPARATION

Variant: MCS4-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.000 MHz : -7.130 dBm Delta1 : 201 KHz : -1.038 dB	Channel Frequency: 915.00 MHz

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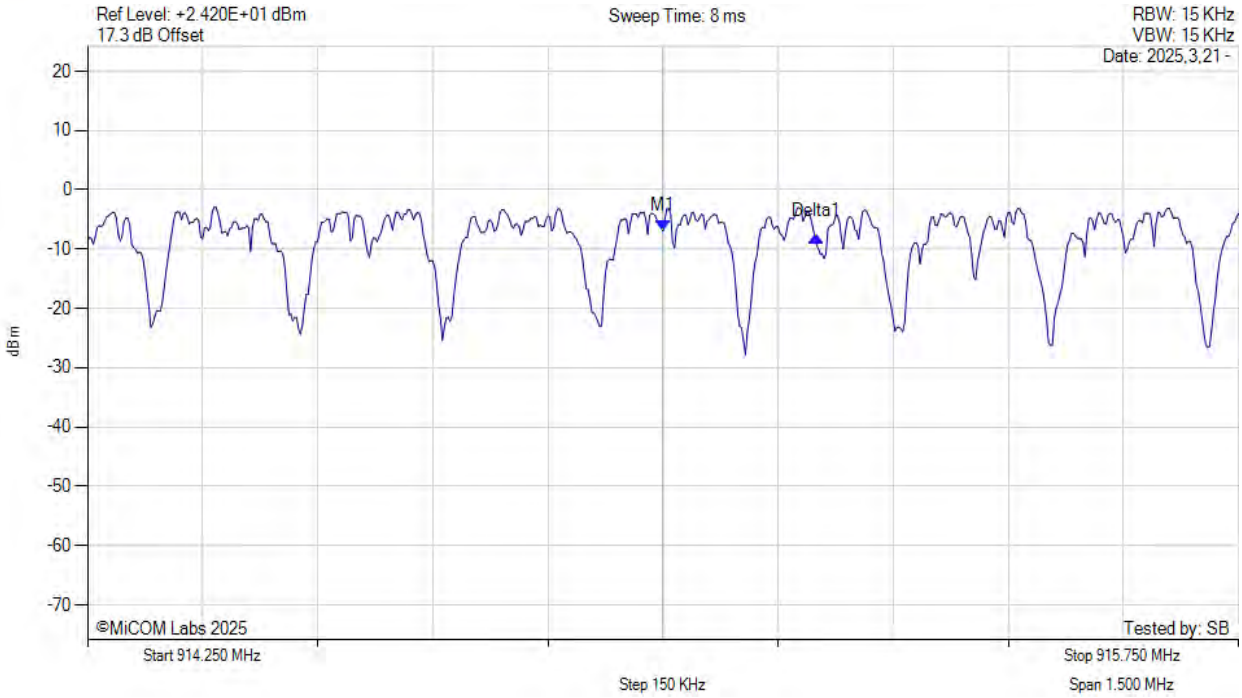
CHANNEL SEPARATION

Variant: MCS6-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.000 MHz : -6.925 dBm Delta1 : 200 KHz : -0.835 dB	Channel Frequency: 915.00 MHz

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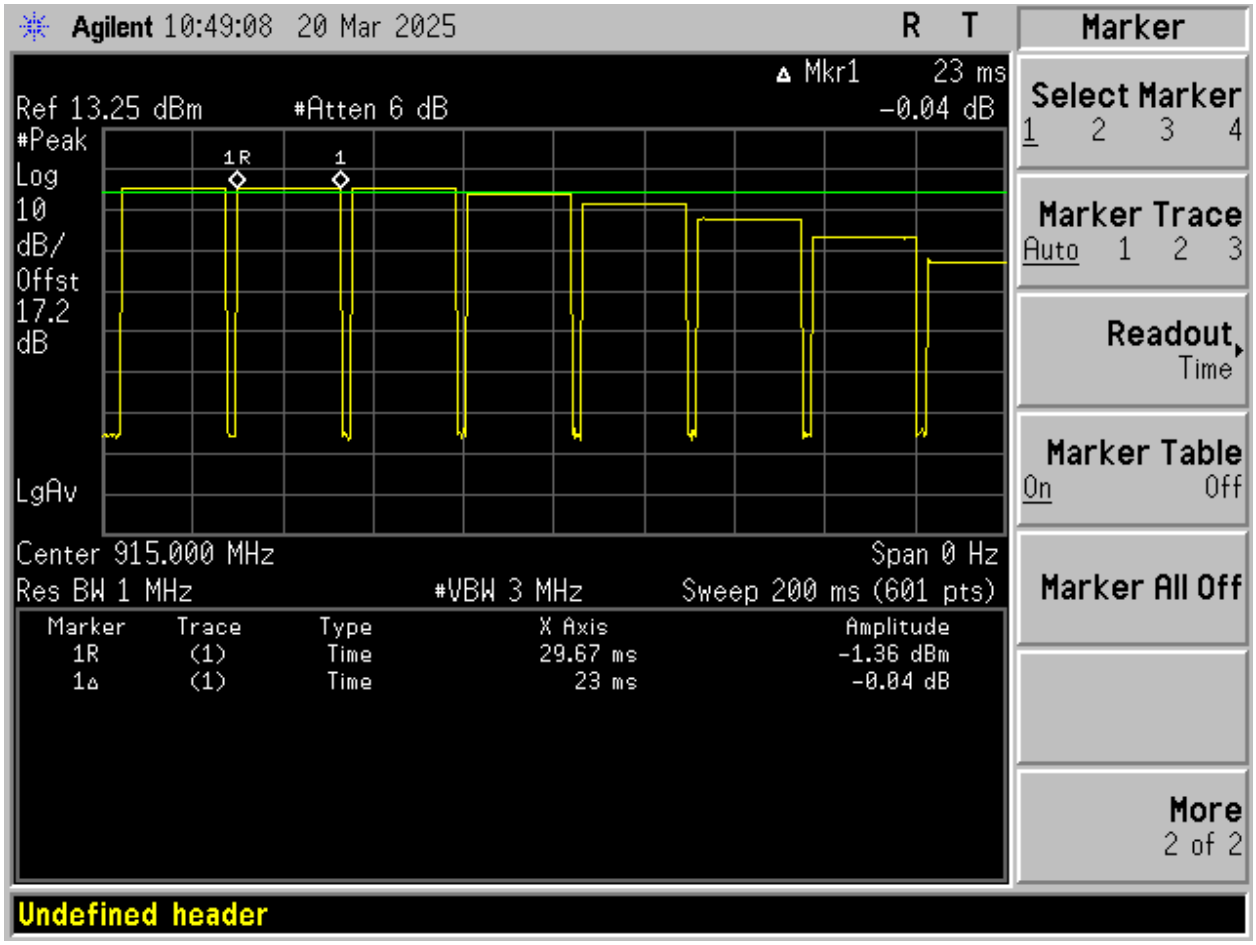
Channel Occupancy & Dwell Time

DWELL TIME

Variant: FSK, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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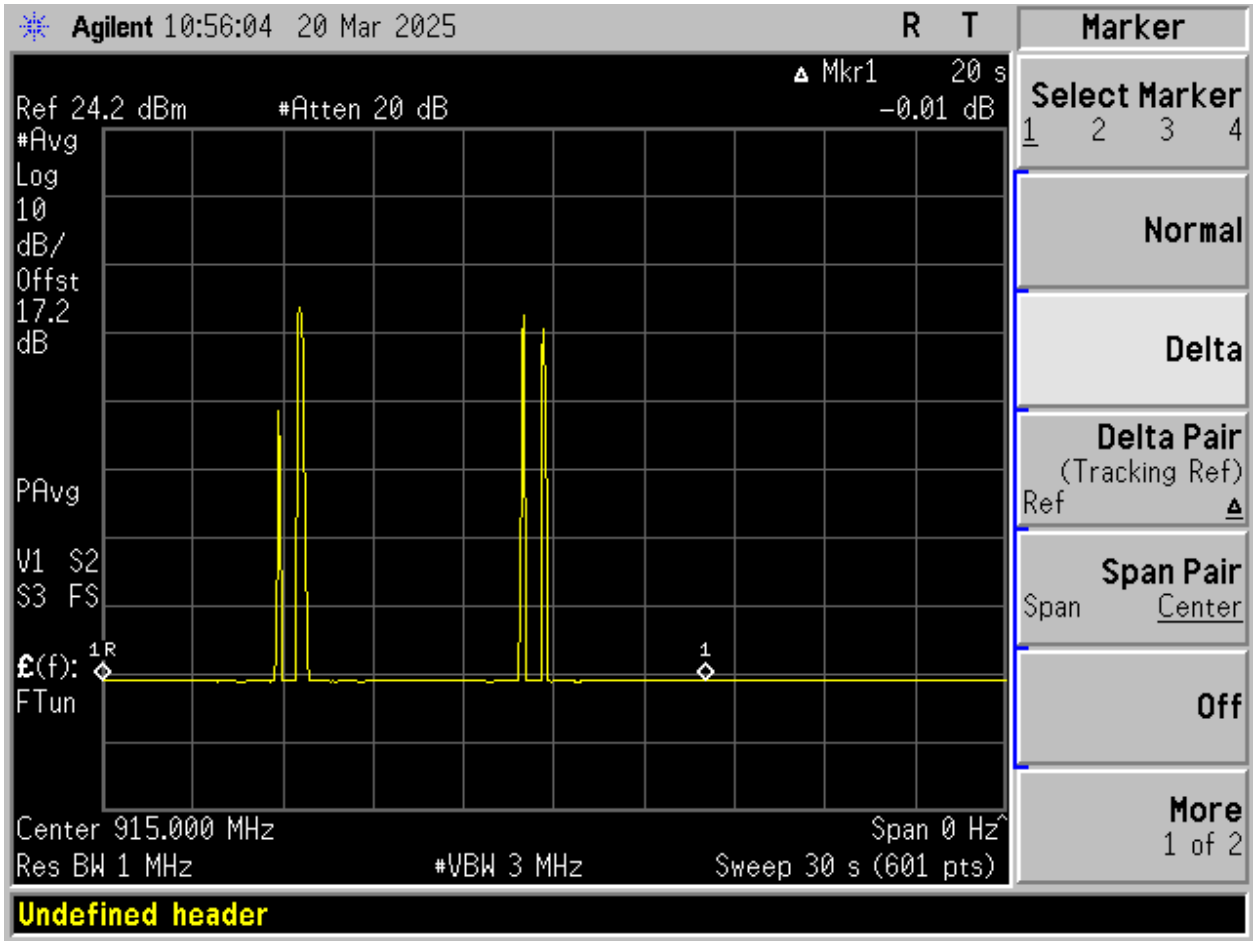
CHANNEL OCCUPANCY

Variant: FSK, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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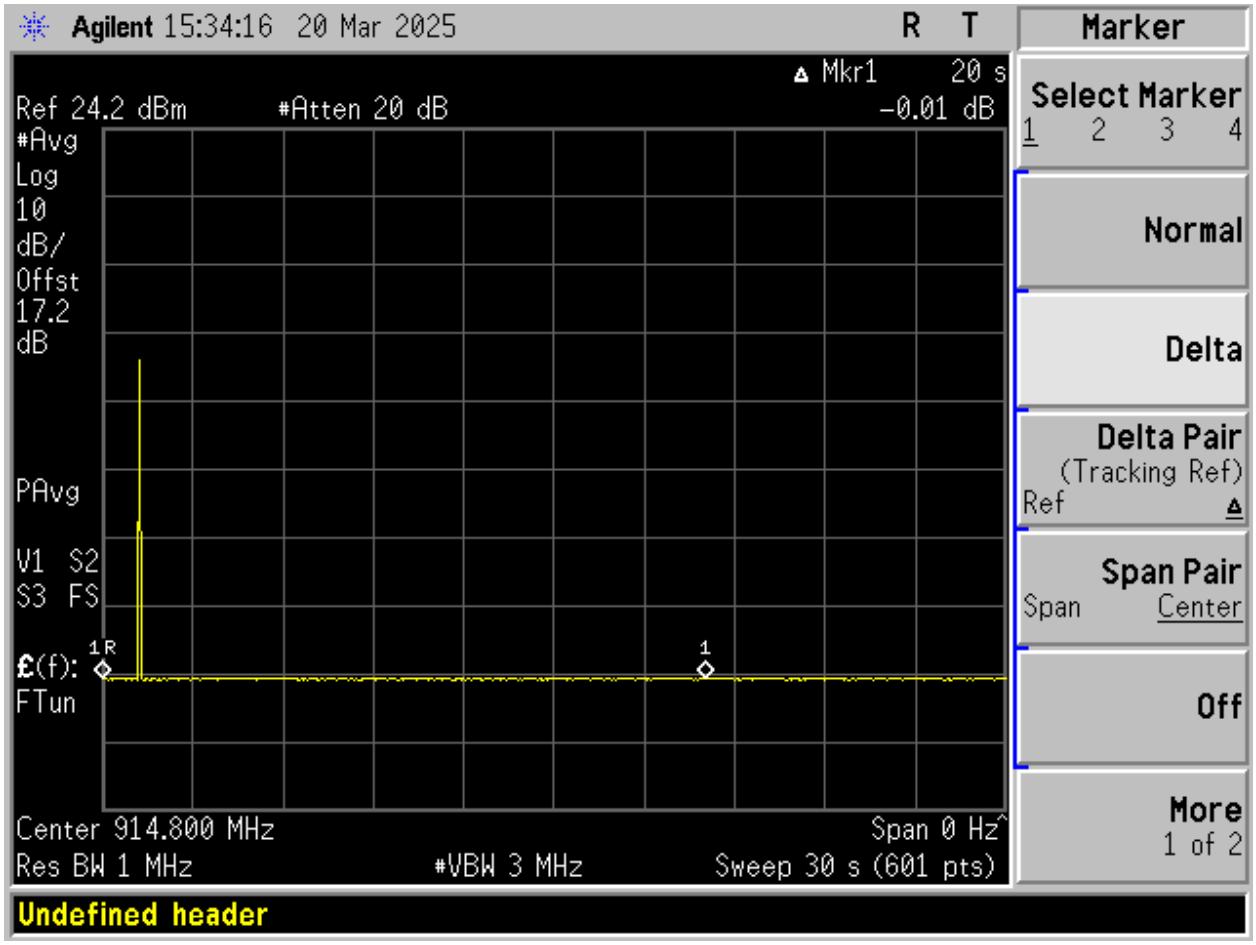
CHANNEL OCCUPANCY

Variant: FSK-150k, Channel: 914.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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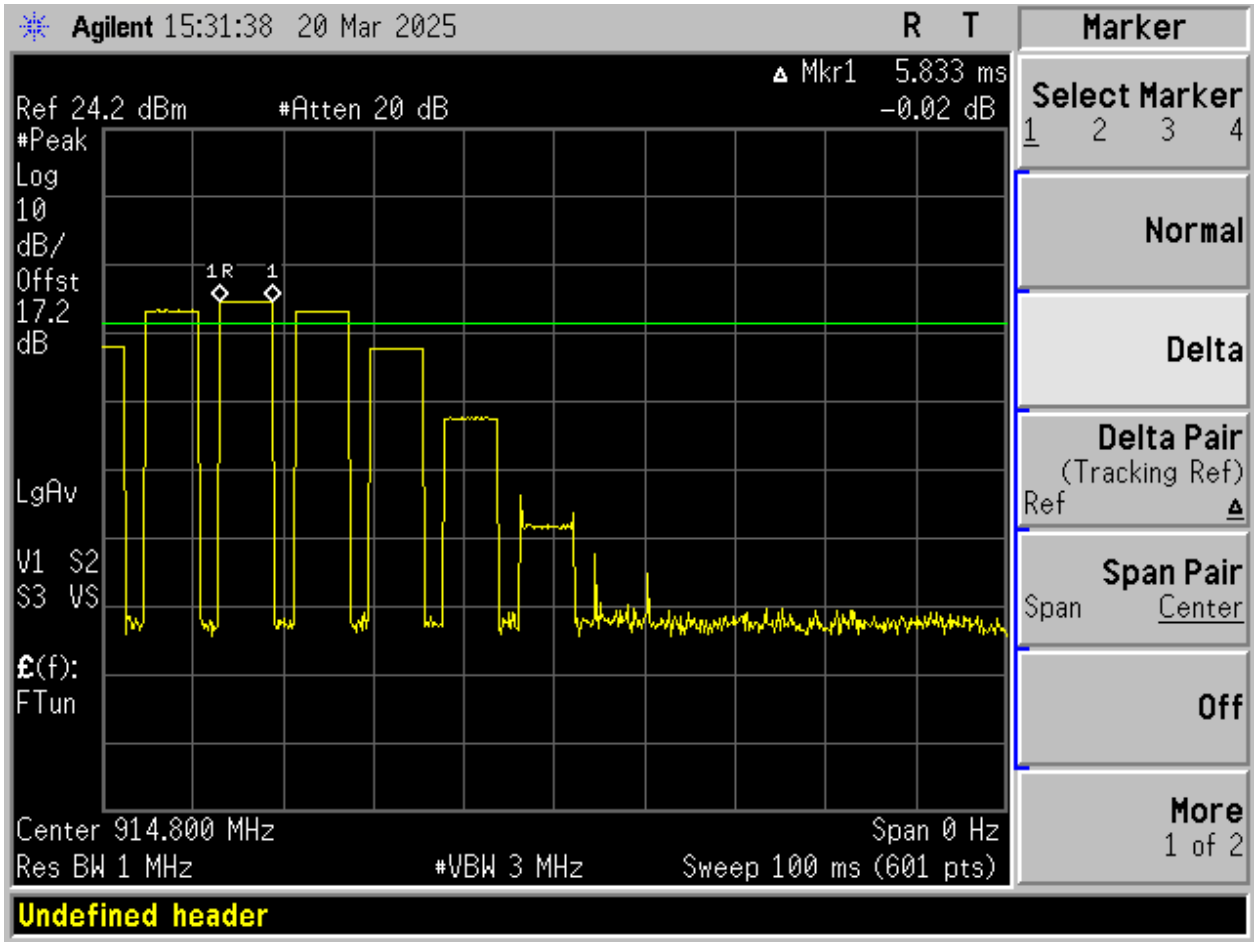
Dwell Time

Variant: FSK-150k, Channel: 914.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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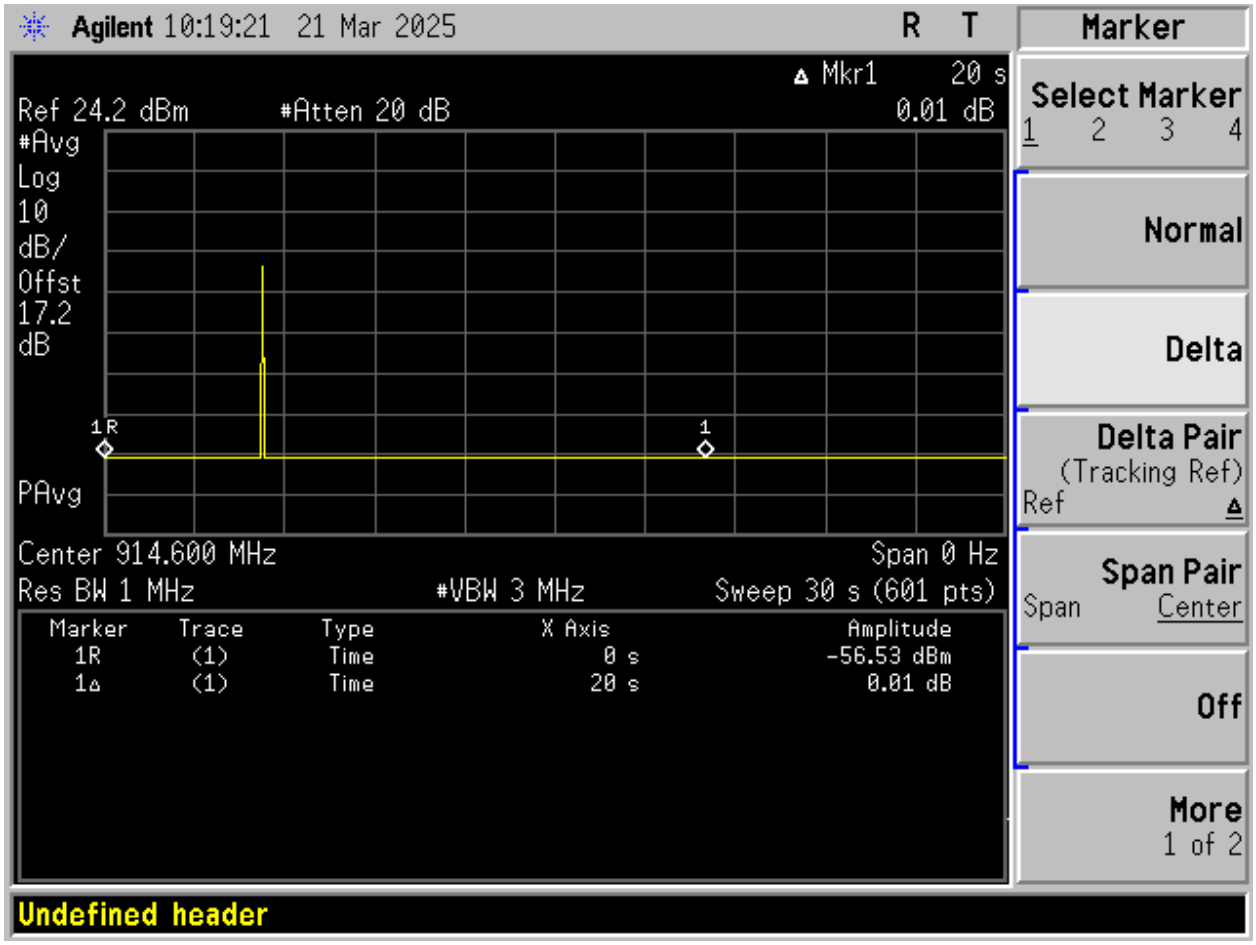
CHANNEL OCCUPANCY

Variant: FSK-300k, Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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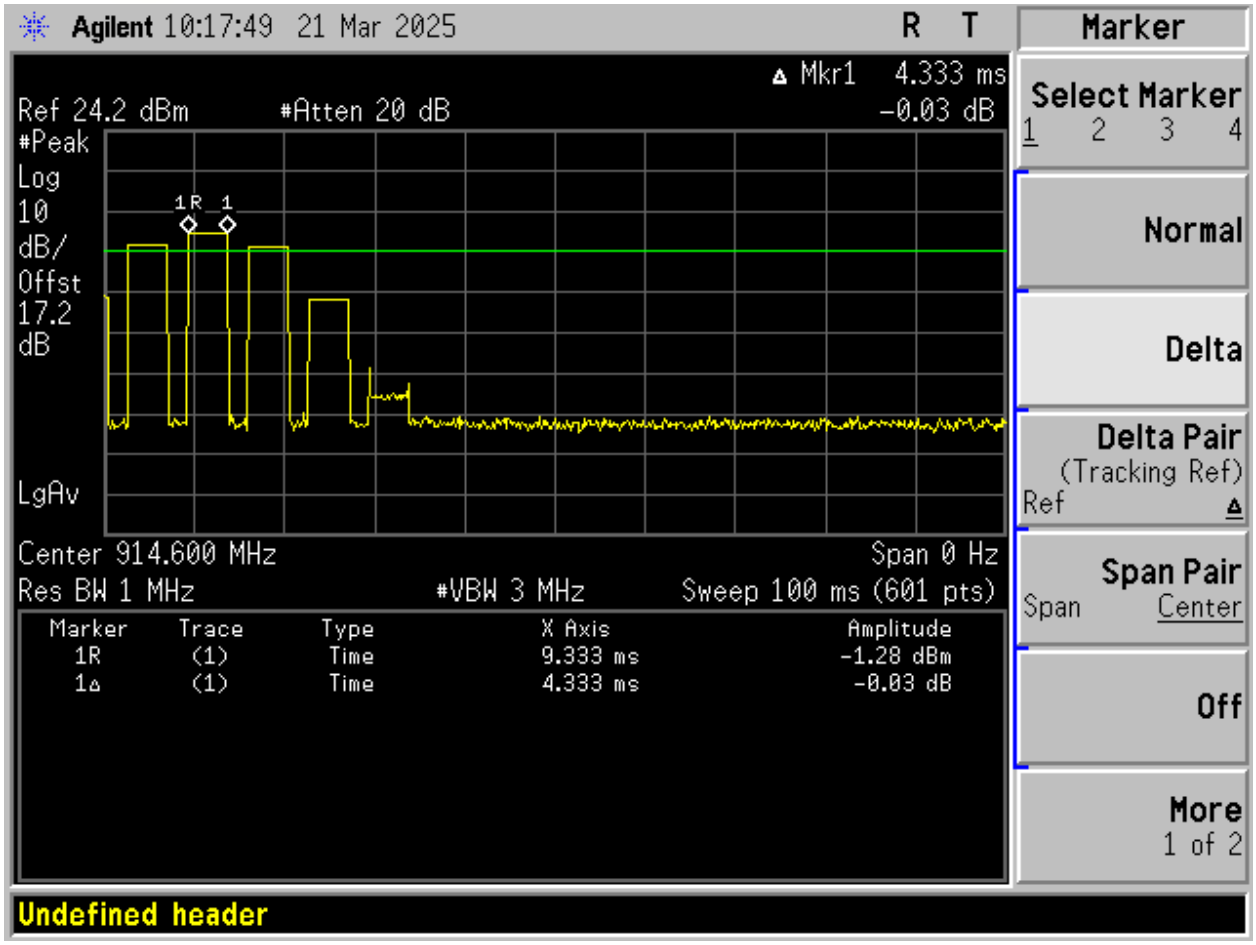
Dwell Time

Variant: FSK-300k, Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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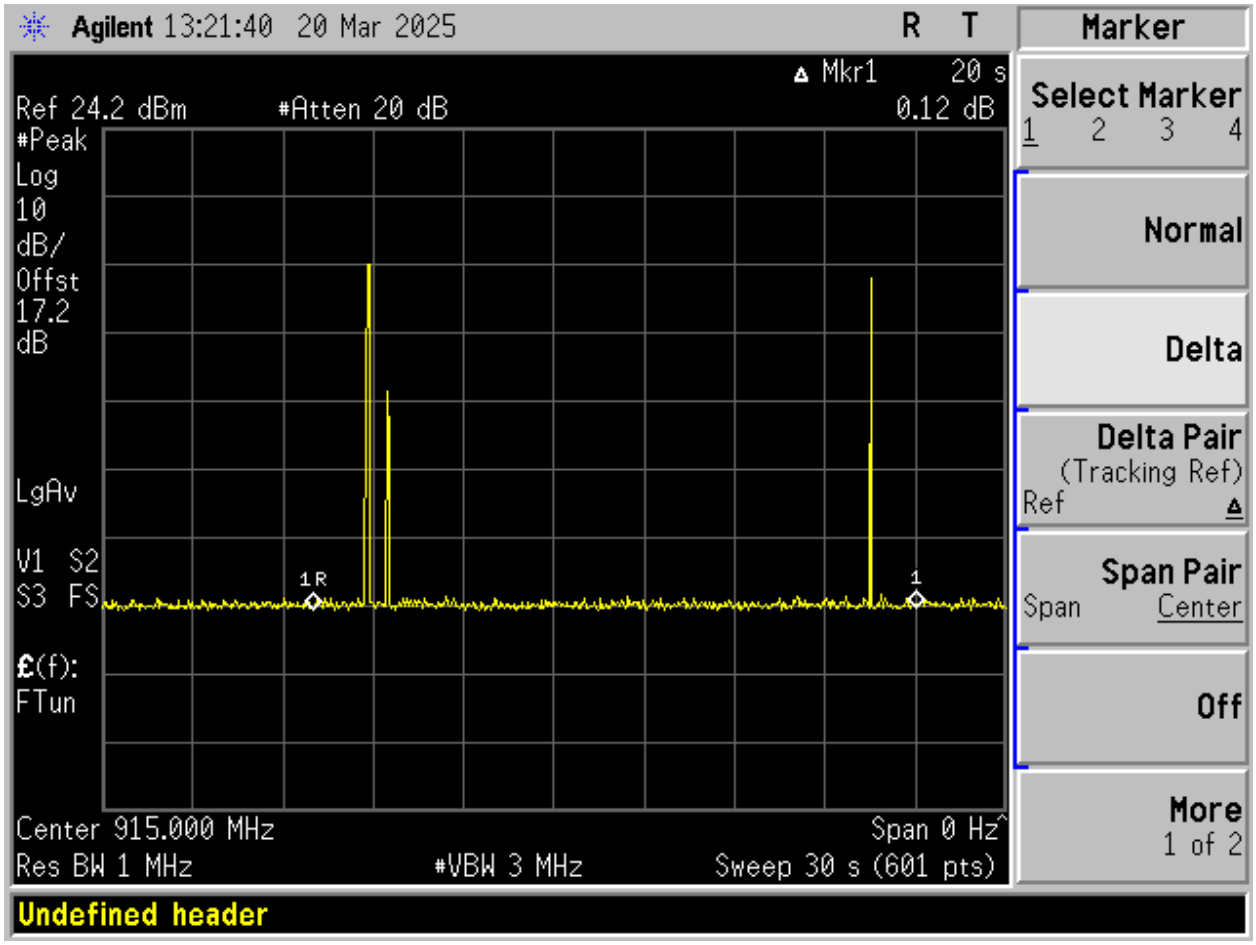
CHANNEL OCCUPANCY

Variant: MCS4-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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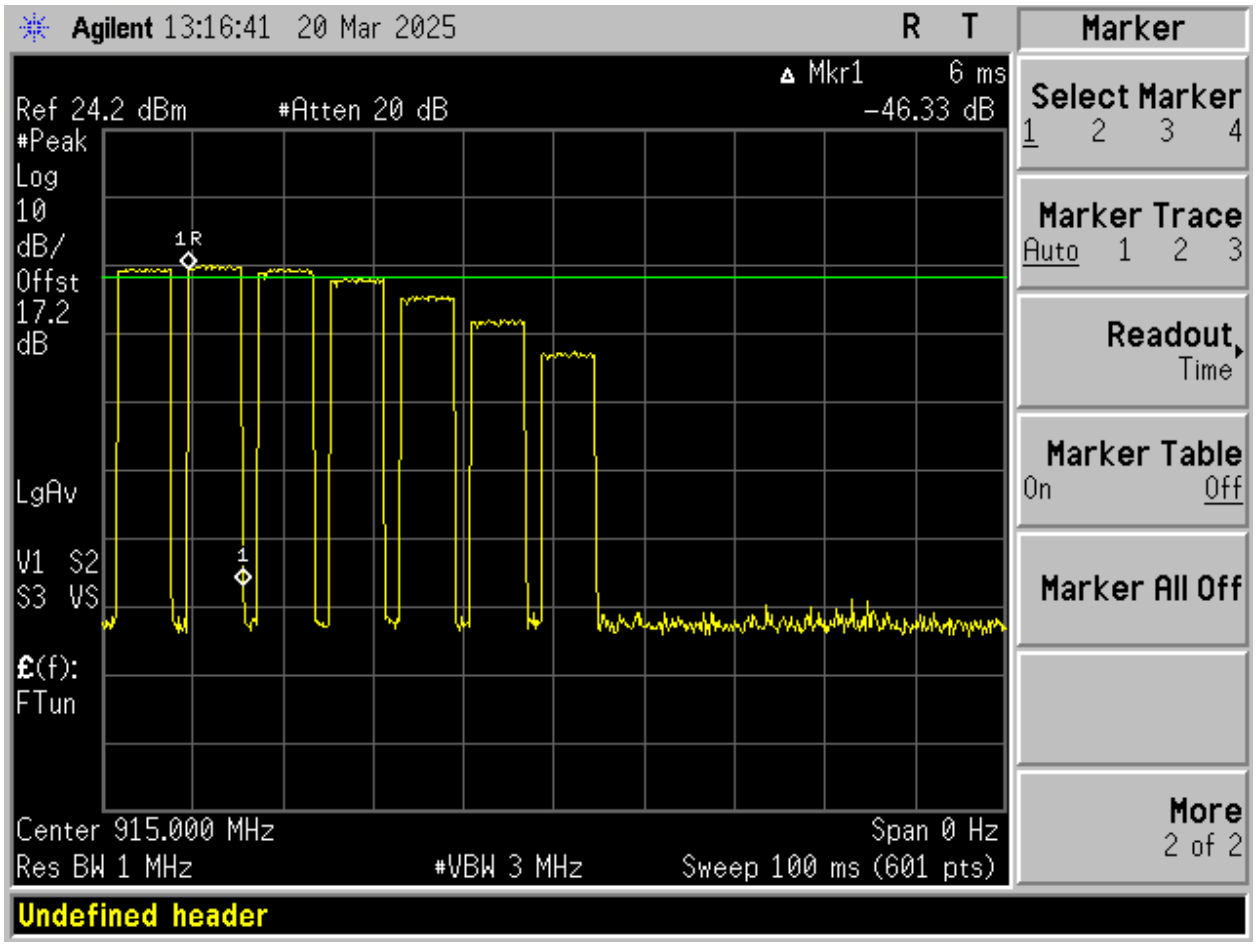
Dwell Time

Variant: MCS4-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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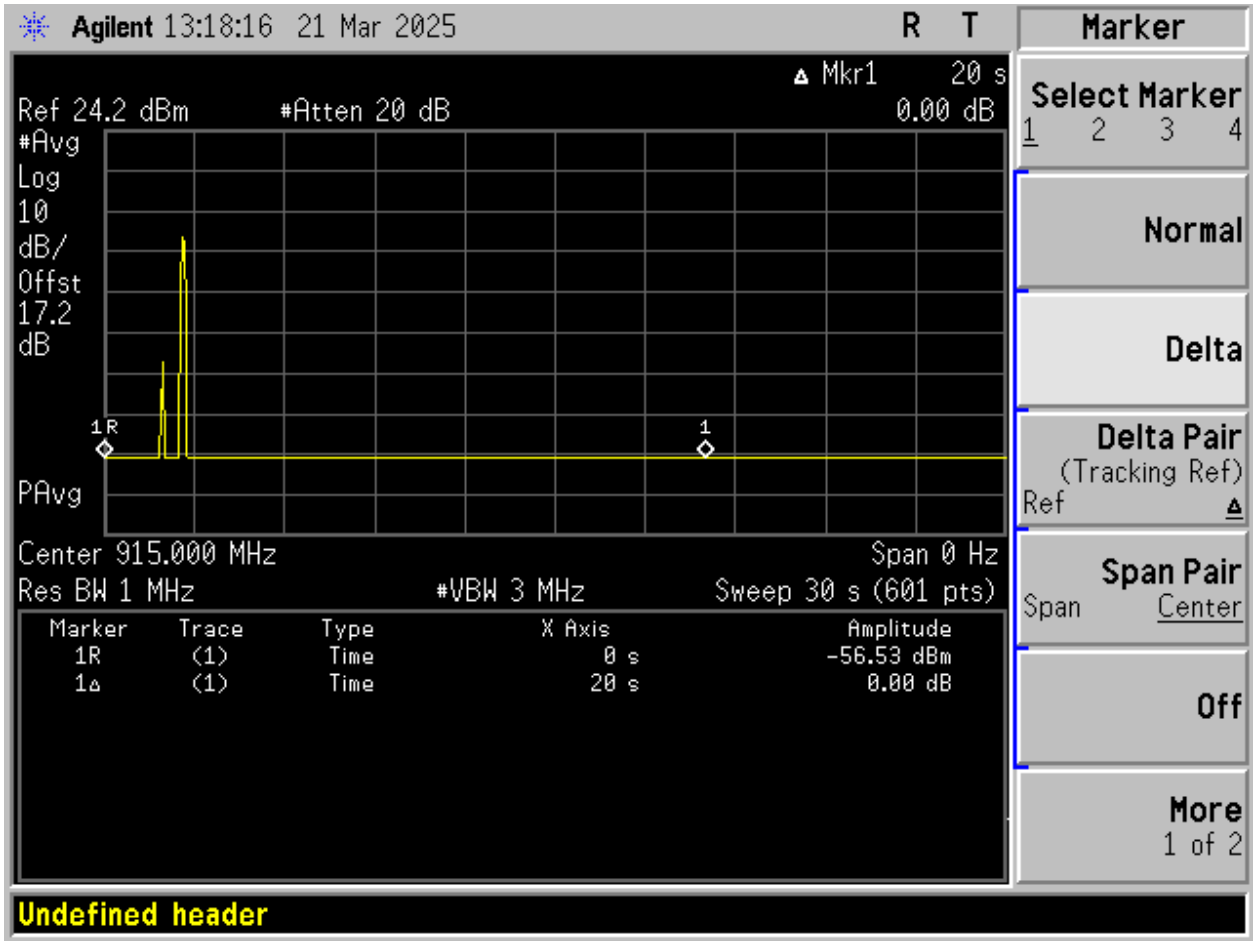
CHANNEL OCCUPANCY

Variant: MCS6-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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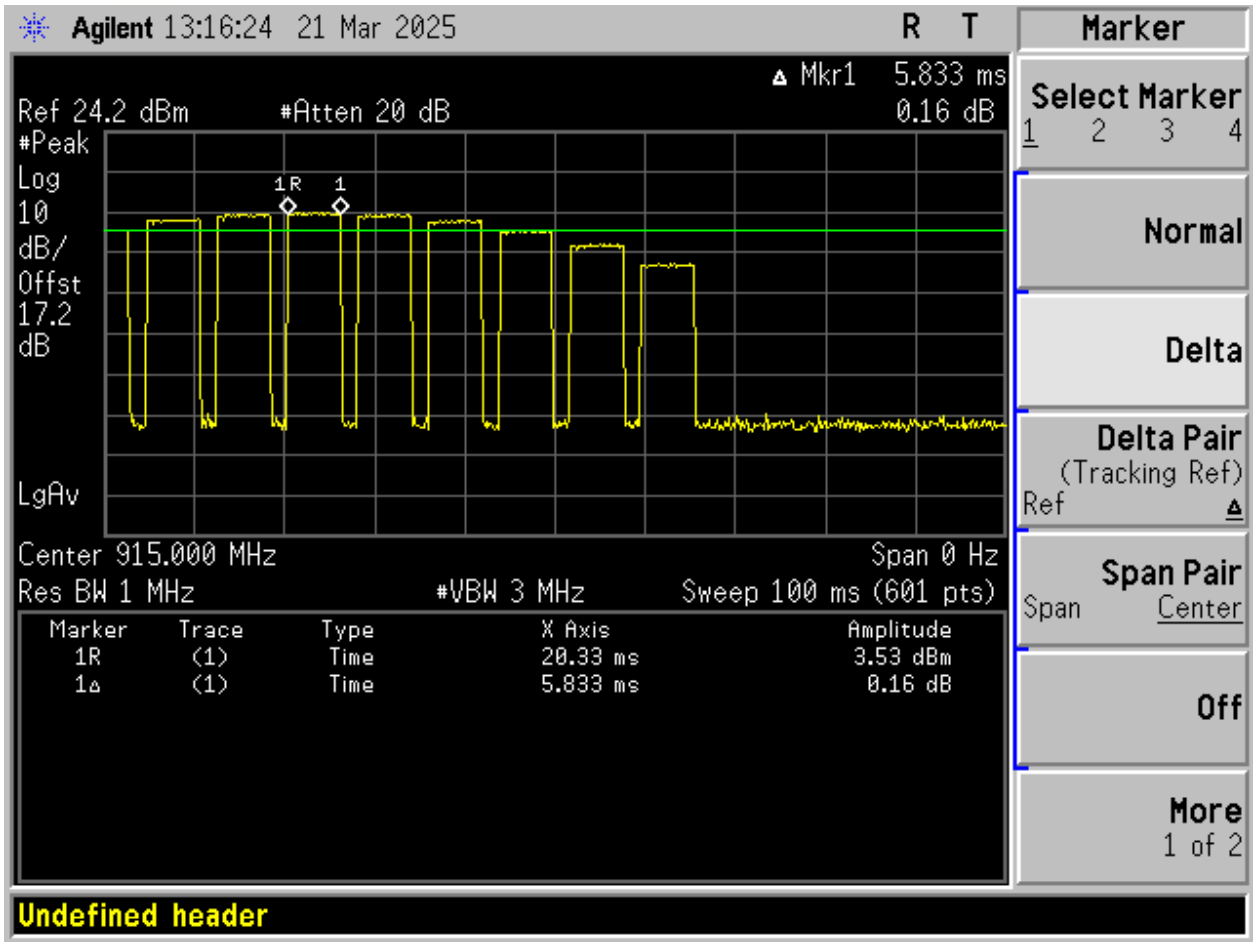
Dwell Time

Variant: MCS6-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



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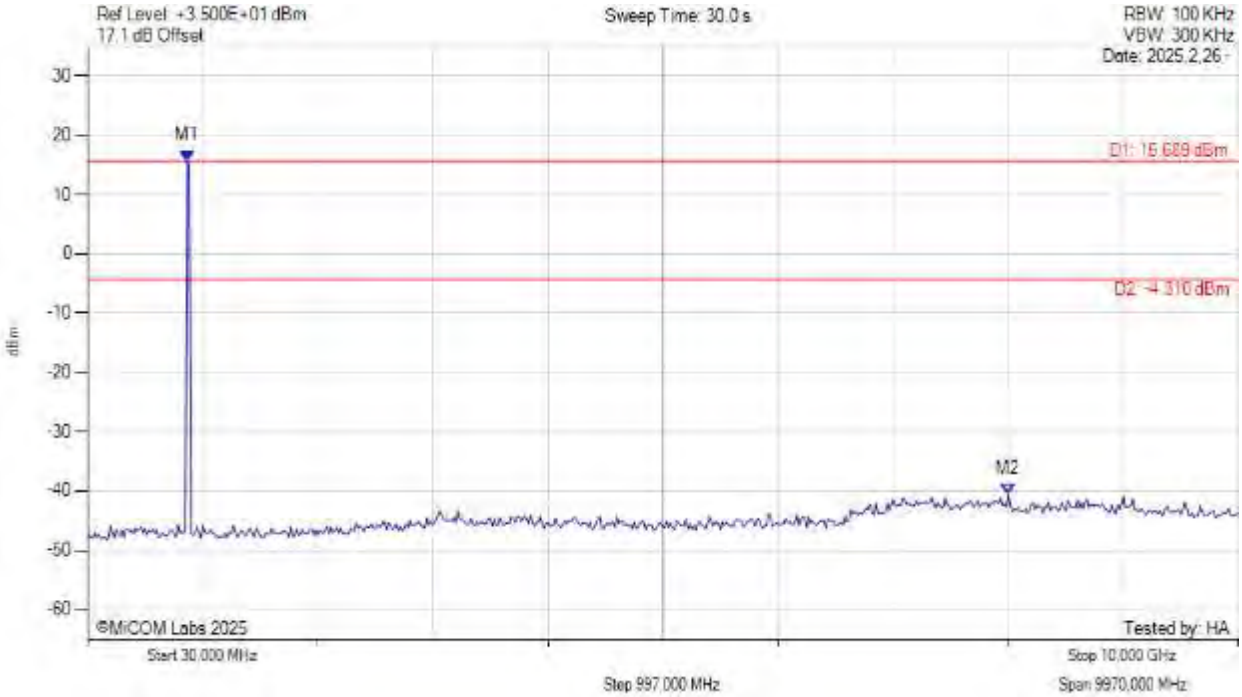
A.1.3. Emissions

A.2.2.1. Conducted Emissions

Unwanted Emissions Peak

UNWANTED EMISSIONS PEAK

Variant: FSK-150k, Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 894.000 MHz : 15.689 dBm M2 : 8006.000 MHz : -40.594 dBm	Limit: -4.31 dBm Margin: -36.28 dB

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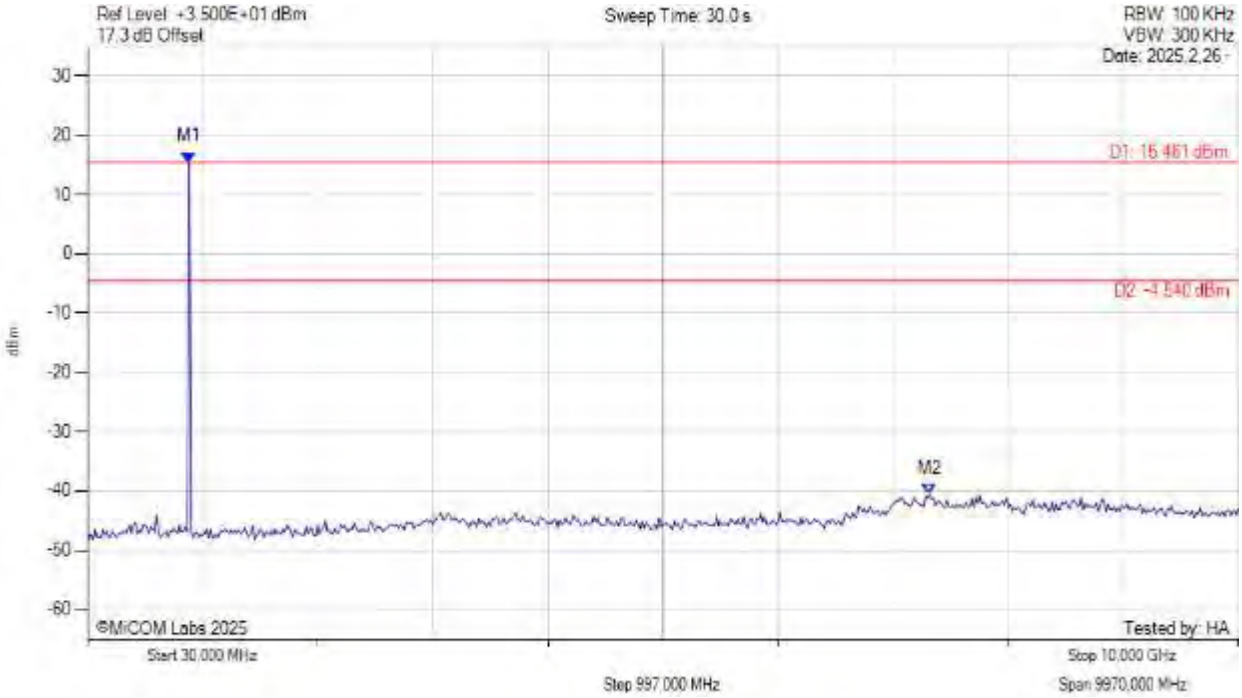
UNWANTED EMISSIONS PEAK

Variant: FSK-150k, Channel: 914.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 911.000 MHz : 15.461 dBm M2 : 7325.000 MHz : -40.569 dBm	Limit: -4.54 dBm Margin: -36.03 dB

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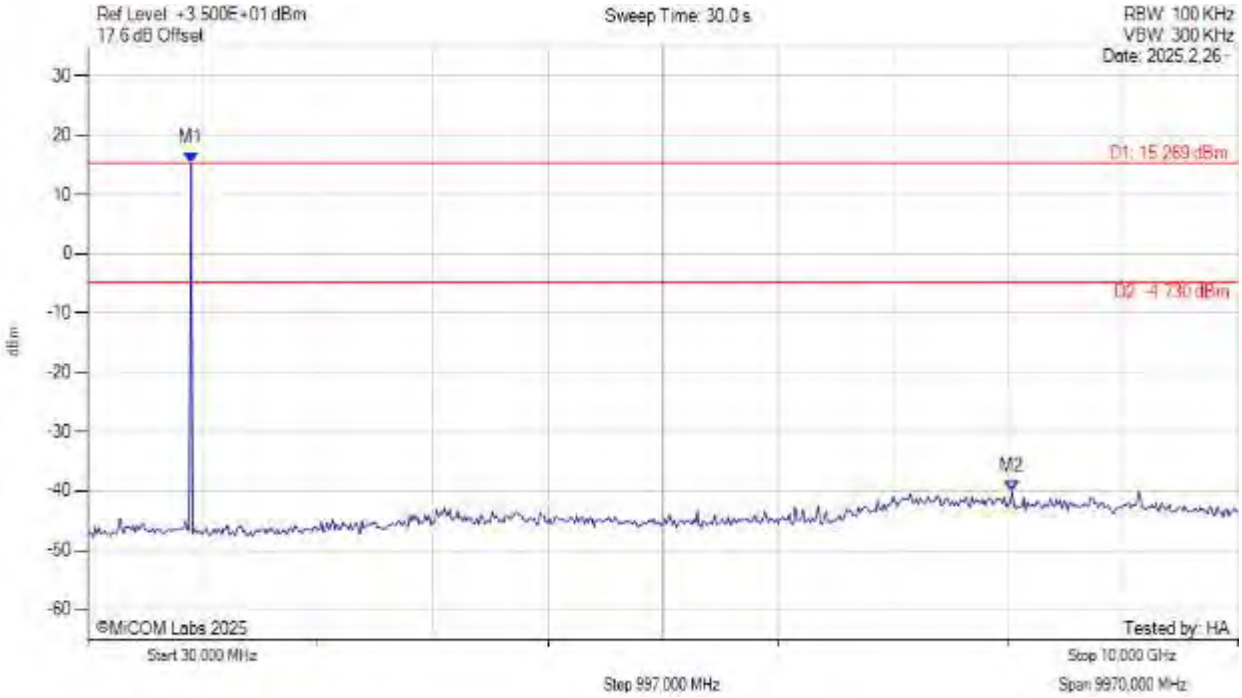
UNWANTED EMISSIONS PEAK

Variant: FSK-150k, Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.000 MHz : 15.269 dBm M2 : 8039.000 MHz : -40.060 dBm	Limit: -4.73 dBm Margin: -35.33 dB

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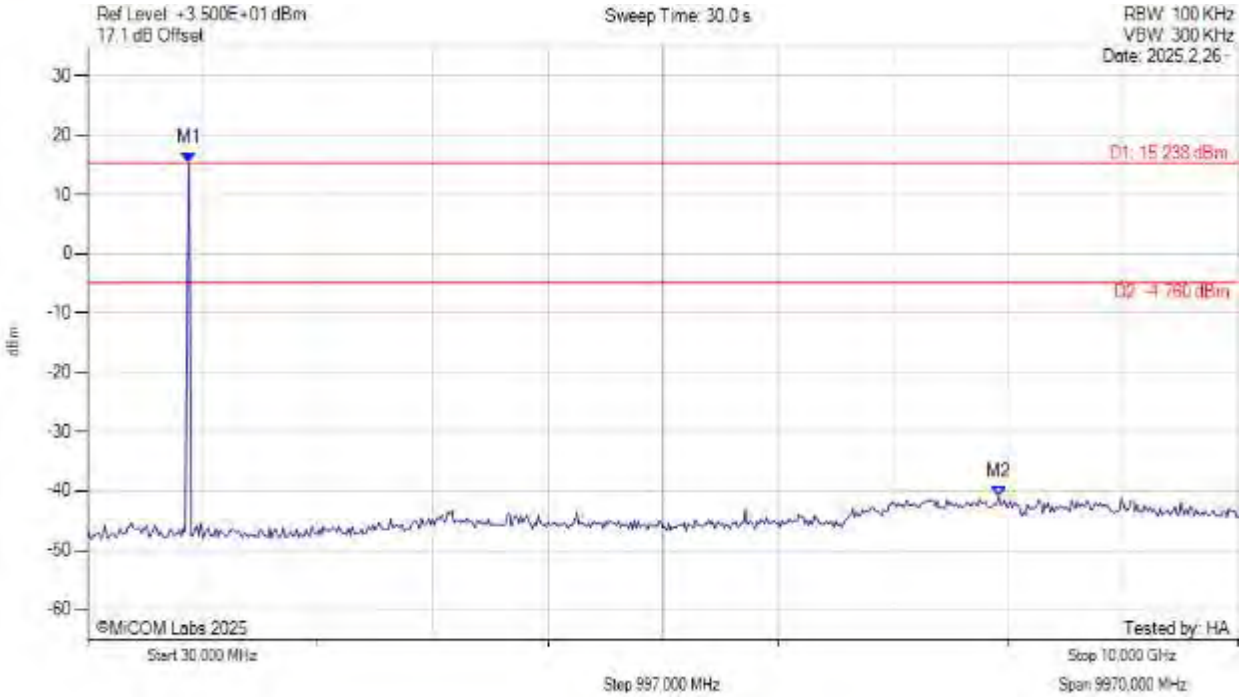
UNWANTED EMISSIONS PEAK

Variant: FSK-300k, Channel: 902.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 911.000 MHz : 15.238 dBm M2 : 7923.000 MHz : -40.978 dBm	Limit: -4.76 dBm Margin: -36.22 dB

back to matrix

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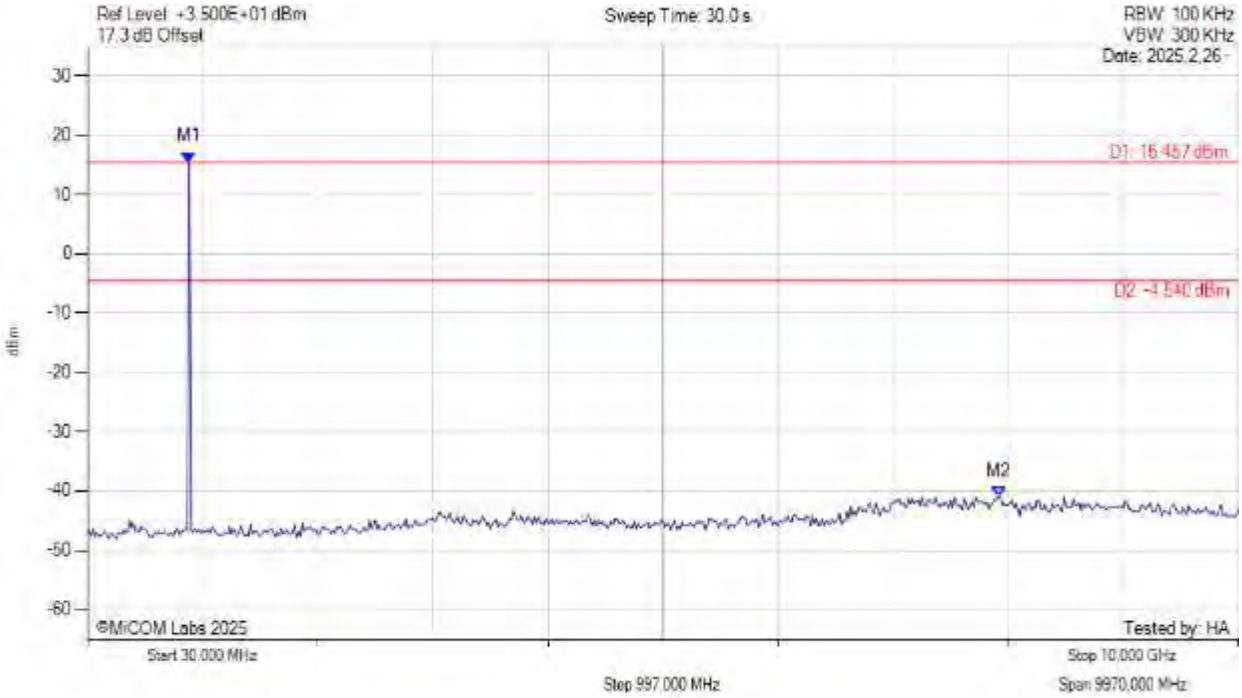
UNWANTED EMISSIONS PEAK

Variant: FSK-300k, Channel: 914.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 911.000 MHz : 15.457 dBm M2 : 7923.000 MHz : -40.930 dBm	Limit: -4.54 dBm Margin: -36.39 dB

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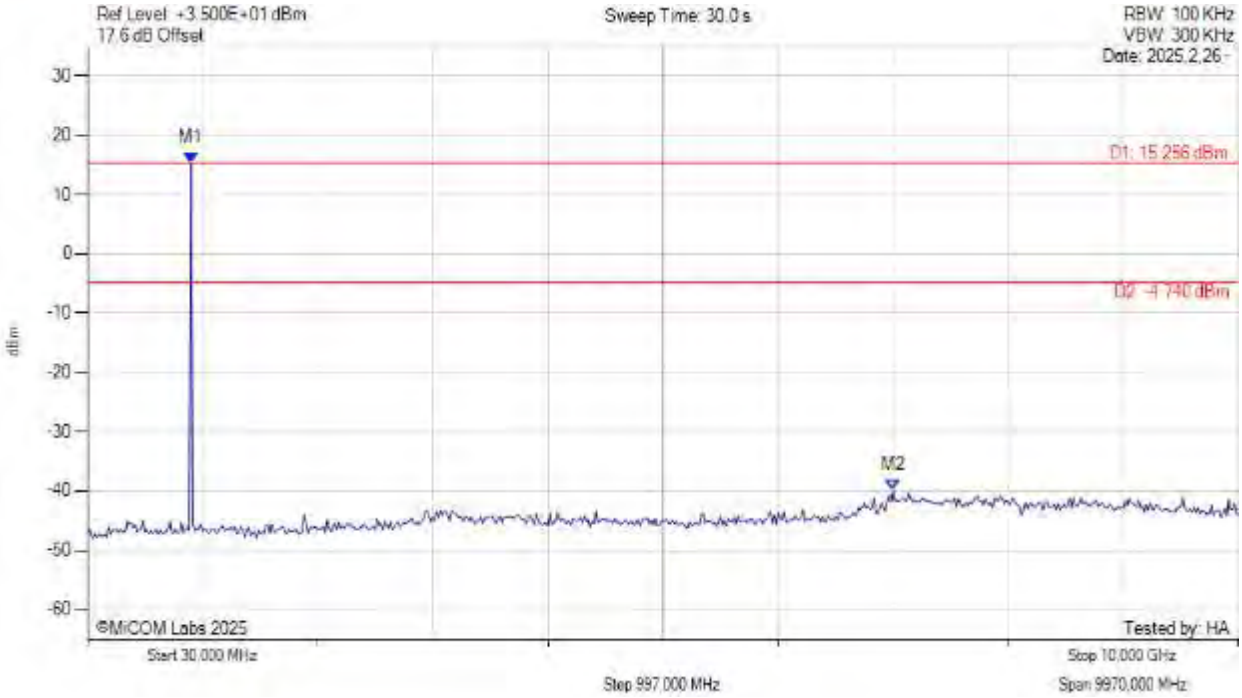
UNWANTED EMISSIONS PEAK

Variant: FSK-300k, Channel: 927.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.000 MHz : 15.256 dBm M2 : 7009.000 MHz : -39.718 dBm	Limit: -4.74 dBm Margin: -34.98 dB

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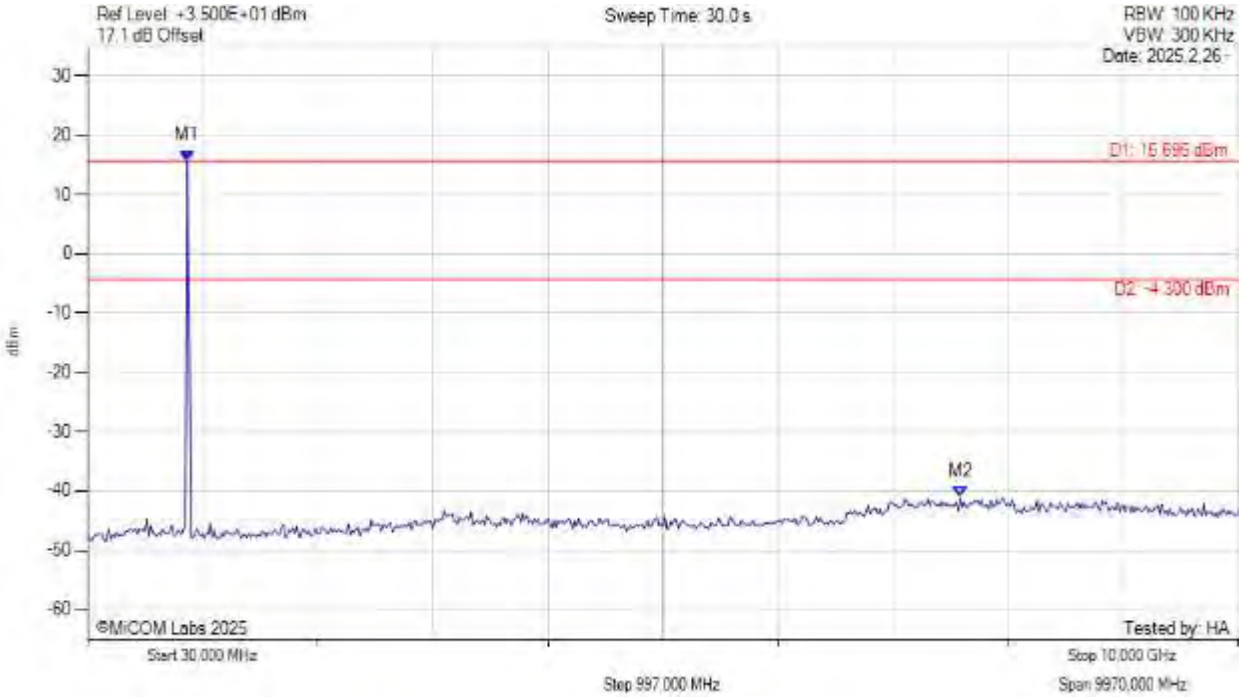
UNWANTED EMISSIONS PEAK

Variant: FSK-50k, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 894.000 MHz : 15.695 dBm M2 : 7591.000 MHz : -41.086 dBm	Limit: -4.30 dBm Margin: -36.79 dB

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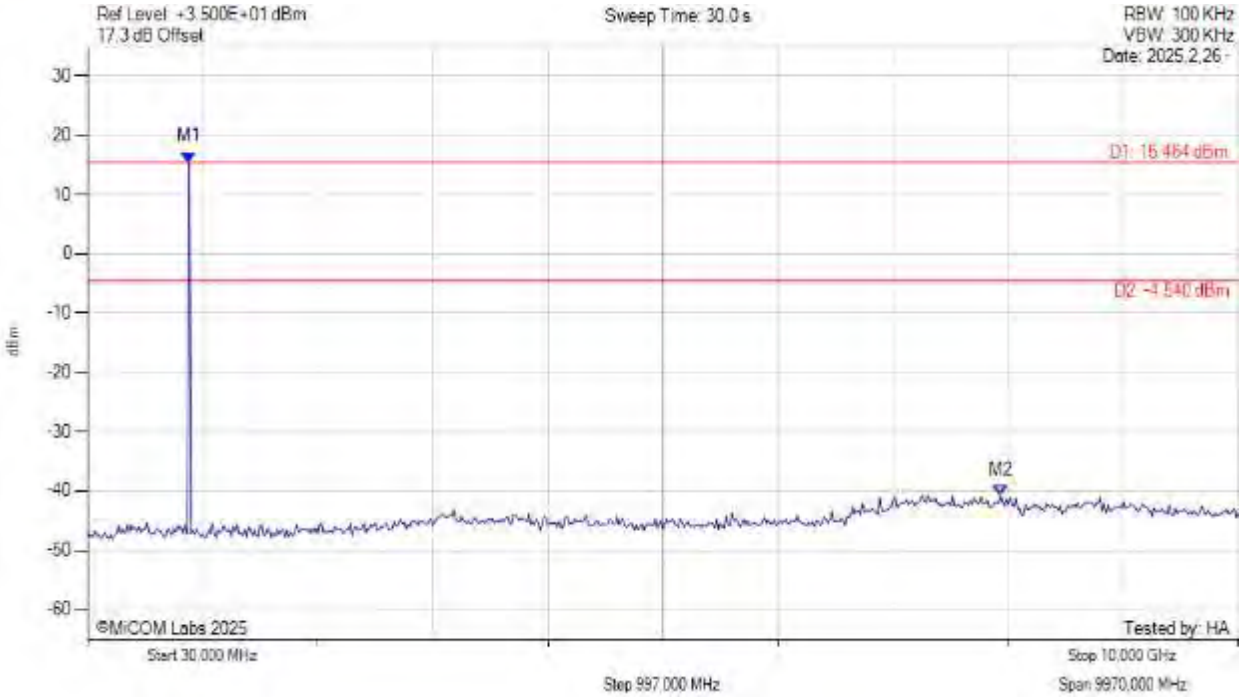
UNWANTED EMISSIONS PEAK

Variant: FSK-50k, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 911.000 MHz : 15.464 dBm M2 : 7940.000 MHz : -40.716 dBm	Limit: -4.54 dBm Margin: -36.18 dB

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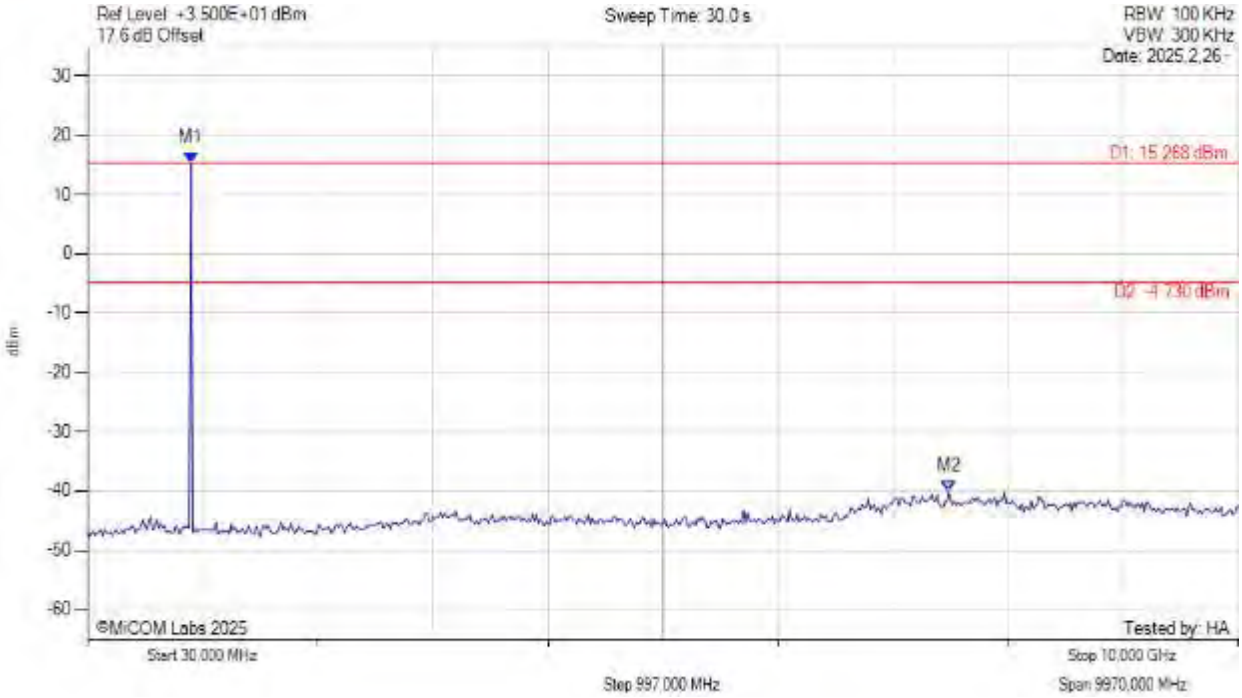
UNWANTED EMISSIONS PEAK

Variant: FSK-50k, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.000 MHz : 15.268 dBm M2 : 7491.000 MHz : -40.053 dBm	Limit: -4.73 dBm Margin: -35.32 dB

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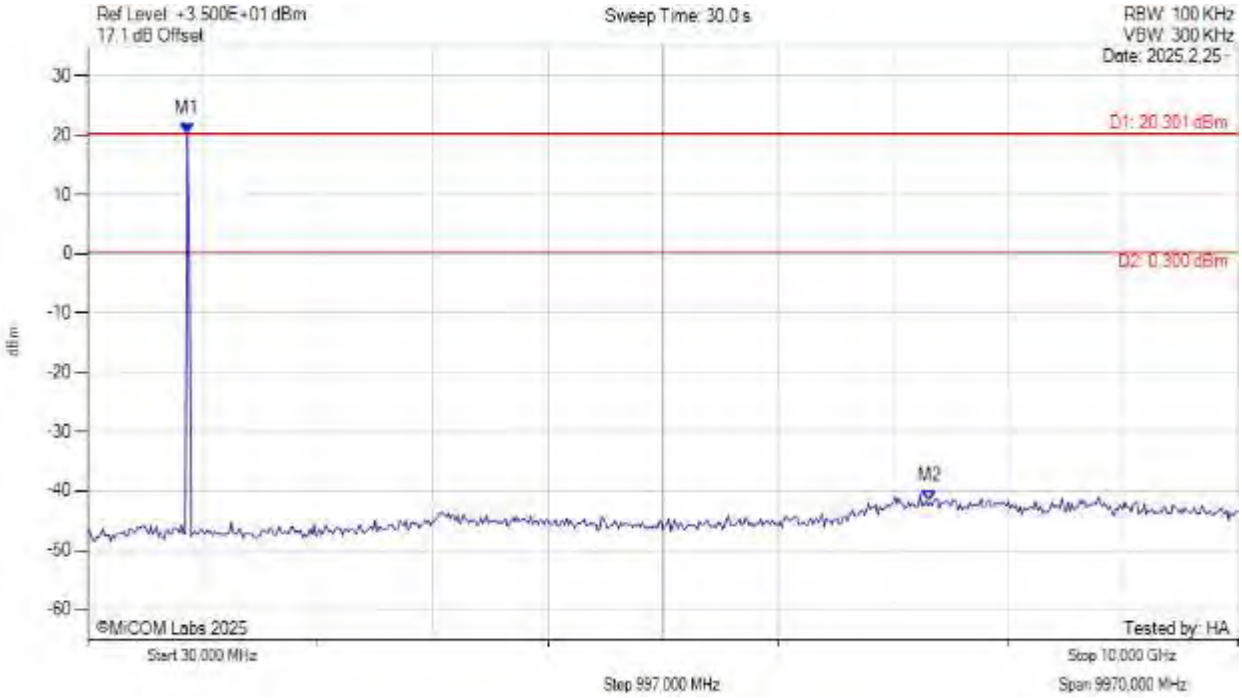
UNWANTED EMISSIONS PEAK

Variant: MCS4-OFDM-opt4, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 894.000 MHz : 20.301 dBm M2 : 7324.717 MHz : -41.776 dBm	Limit: 0.30 dBm Margin: -42.08 dB

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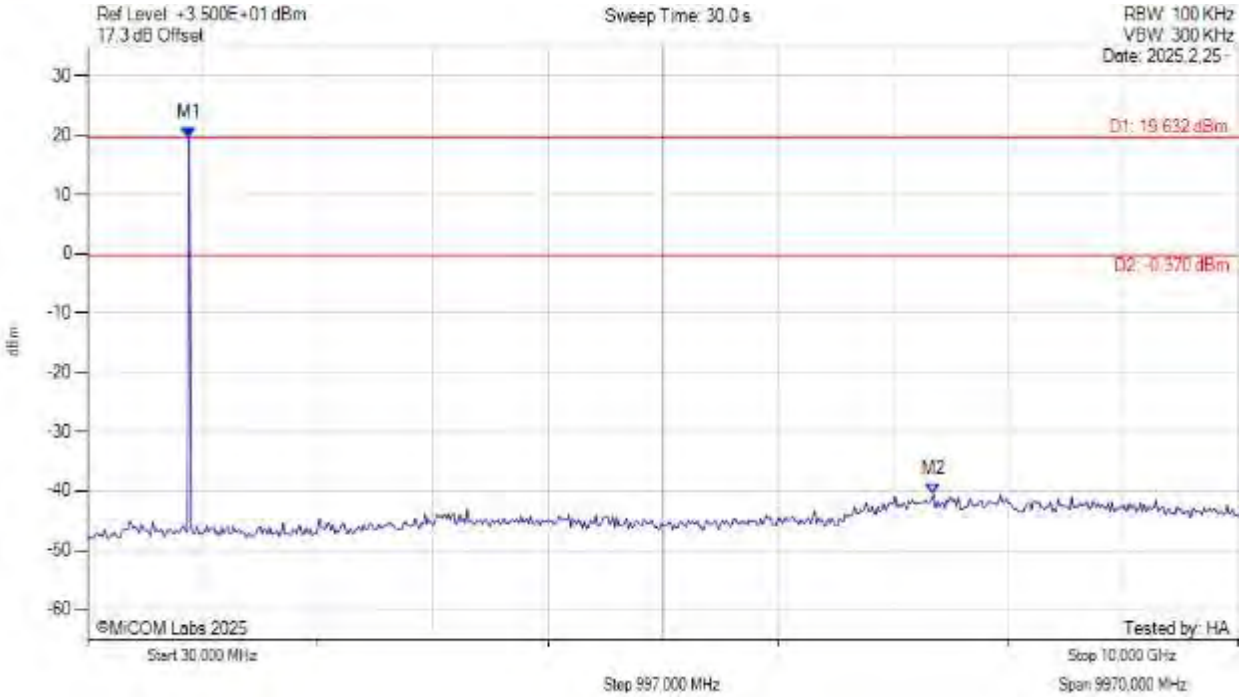
UNWANTED EMISSIONS PEAK

Variant: MCS4-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 911.000 MHz : 19.632 dBm M2 : 7358.000 MHz : -40.516 dBm	Limit: -0.37 dBm Margin: -40.15 dB

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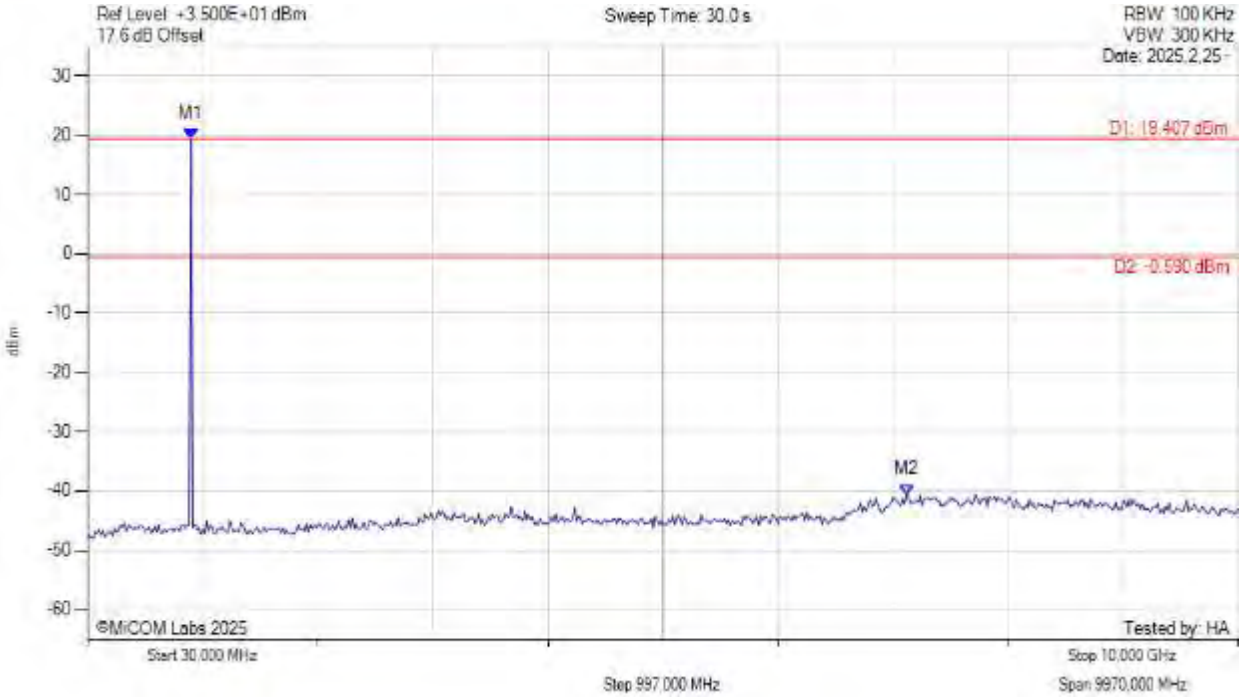
UNWANTED EMISSIONS PEAK

Variant: MCS4-OFDM-opt4, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.000 MHz : 19.407 dBm M2 : 7125.000 MHz : -40.642 dBm	Limit: -0.59 dBm Margin: -40.05 dB

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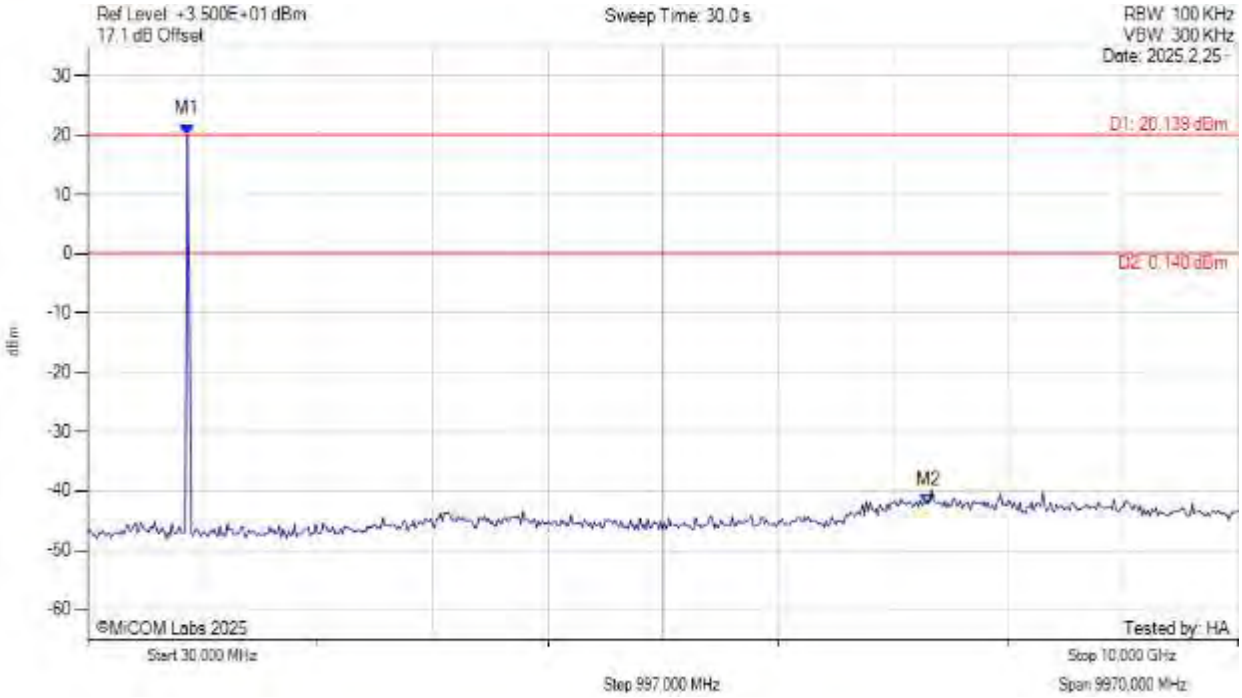
UNWANTED EMISSIONS PEAK

Variant: MCS6-OFDM-opt4, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 894.000 MHz : 20.139 dBm M2 : 7315.000 MHz : -42.413 dBm	Limit: 0.14 dBm Margin: -42.55 dB

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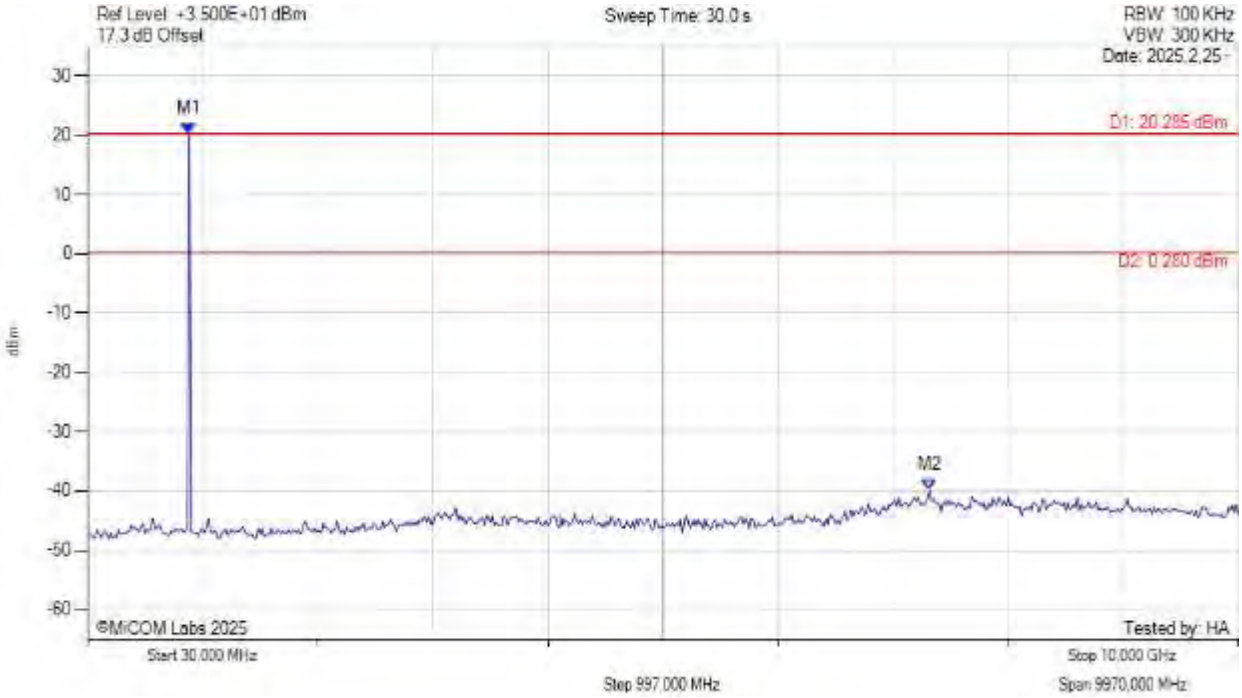
UNWANTED EMISSIONS PEAK

Variant: MCS6-OFDM-opt4, Channel: 915.00 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 911.000 MHz : 20.285 dBm M2 : 7325.000 MHz : -39.898 dBm	Limit: 0.28 dBm Margin: -40.18 dB

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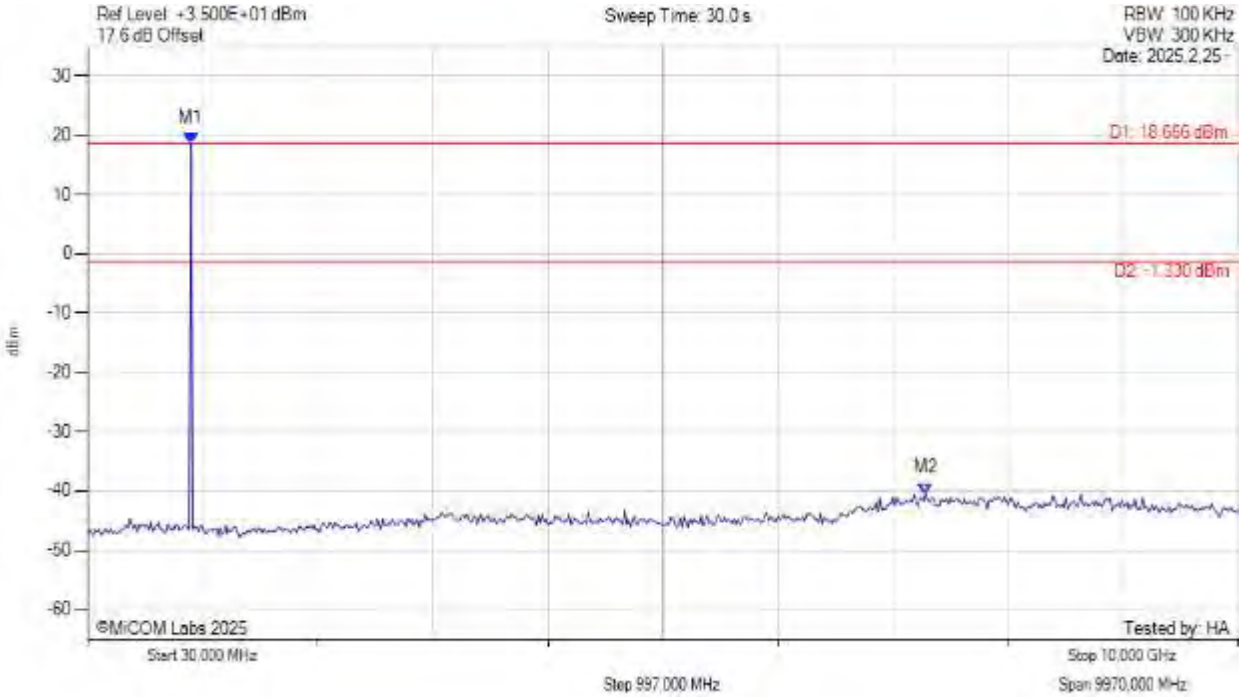
UNWANTED EMISSIONS PEAK

Variant: MCS6-OFDM-opt4, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.000 MHz : 18.666 dBm M2 : 7291.000 MHz : -40.395 dBm	Limit: -1.33 dBm Margin: -39.07 dB

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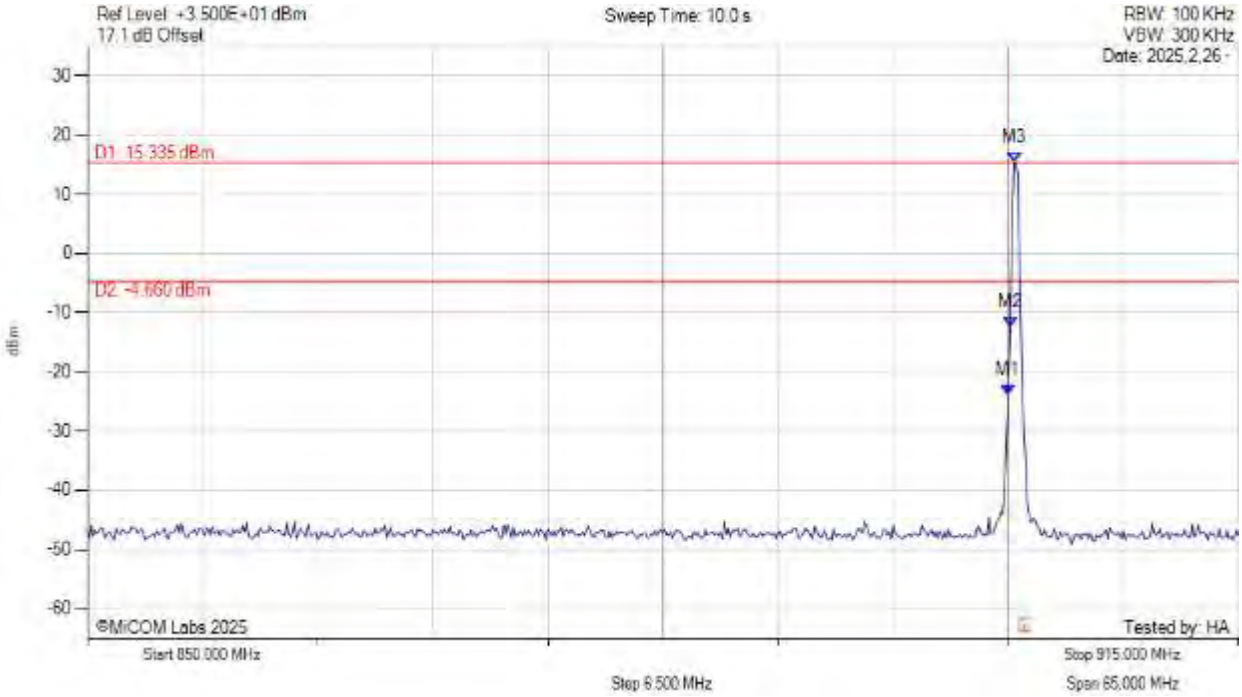
Conducted Low Band-Edge Emissions (Static) Peak

CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: FSK-150k, Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -23.821 dBm M2 : 902.110 MHz : -12.444 dBm M3 : 902.330 MHz : 15.335 dBm	Channel Frequency: 902.40 MHz

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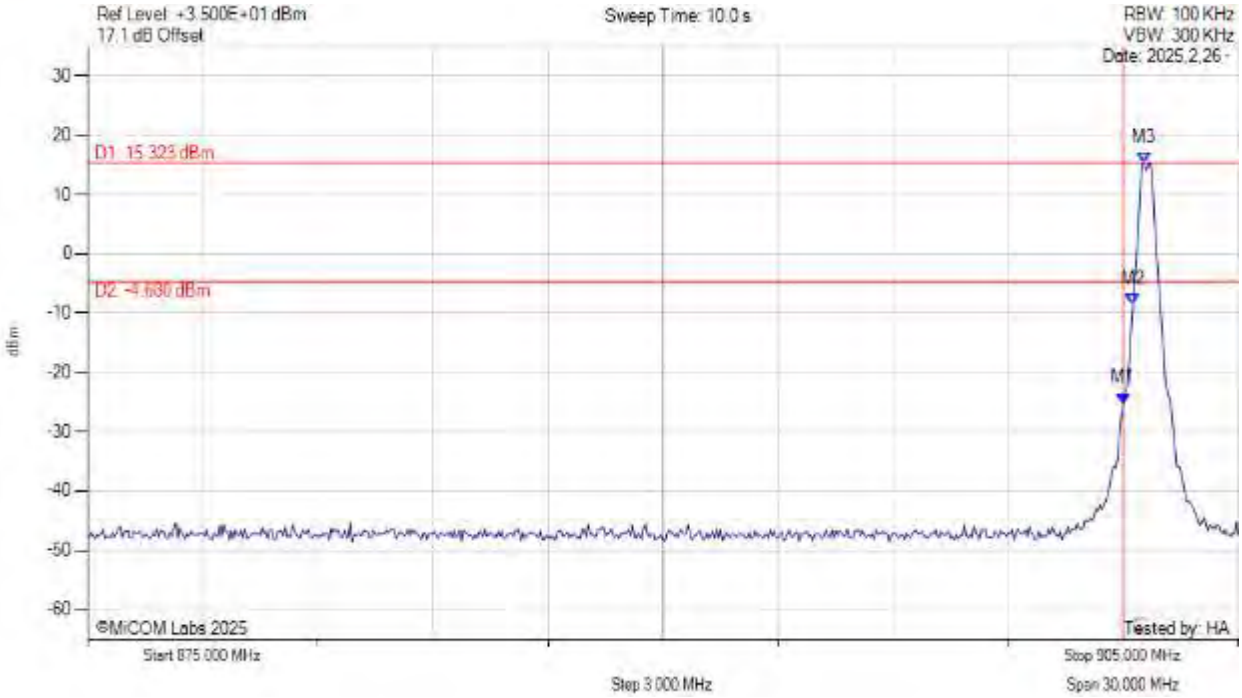
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: FSK-300k, Channel: 902.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -25.197 dBm M2 : 902.250 MHz : -8.527 dBm M3 : 902.550 MHz : 15.323 dBm	Channel Frequency: 902.60 MHz

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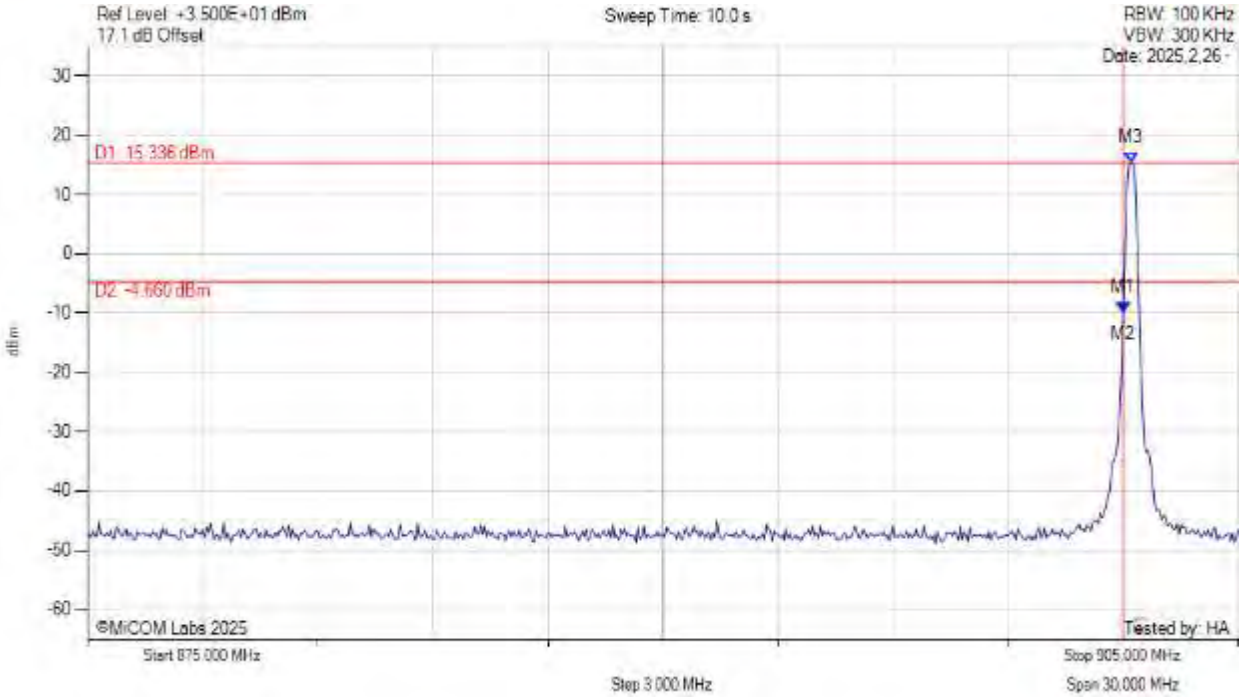
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: FSK-50k, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -9.962 dBm M2 : 902.000 MHz : -9.962 dBm M3 : 902.200 MHz : 15.336 dBm	Channel Frequency: 902.20 MHz

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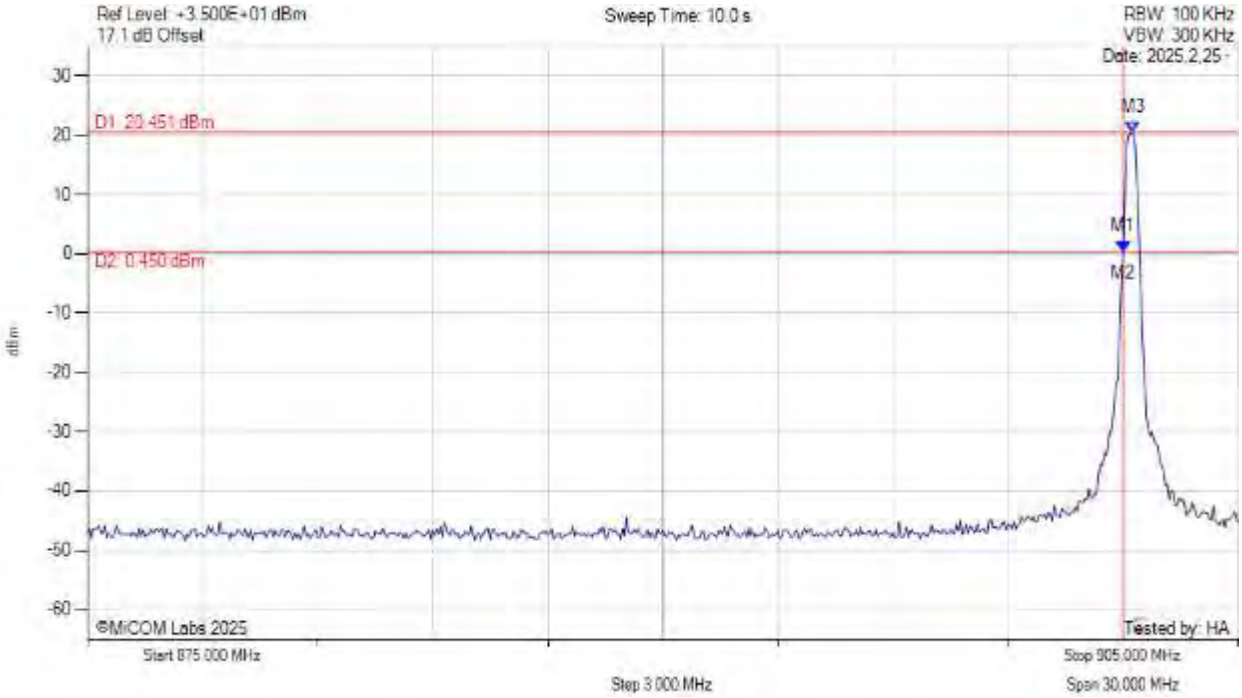
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: MCS4-OFDM-opt4, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : 0.343 dBm M2 : 902.000 MHz : 0.343 dBm M3 : 902.250 MHz : 20.451 dBm	Channel Frequency: 902.20 MHz

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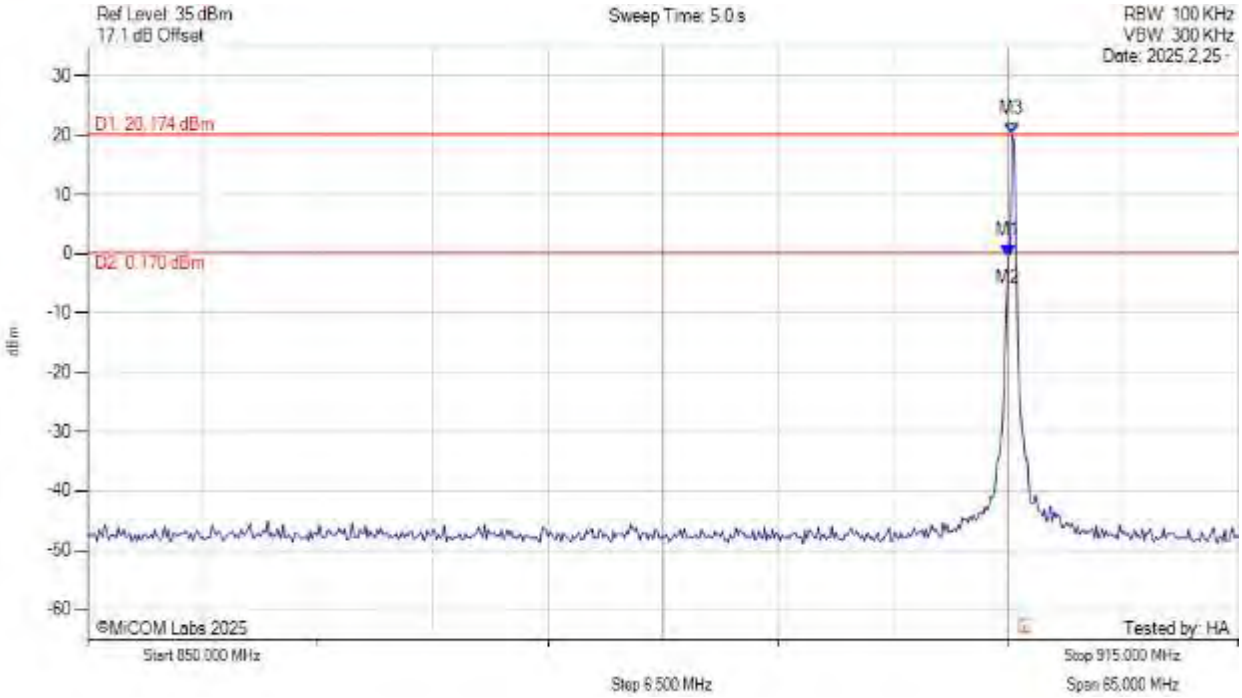
CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: MCS6-OFDM-opt4, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -0.341 dBm M2 : 902.000 MHz : -0.341 dBm M3 : 902.220 MHz : 20.174 dBm	Channel Frequency: 902.20 MHz

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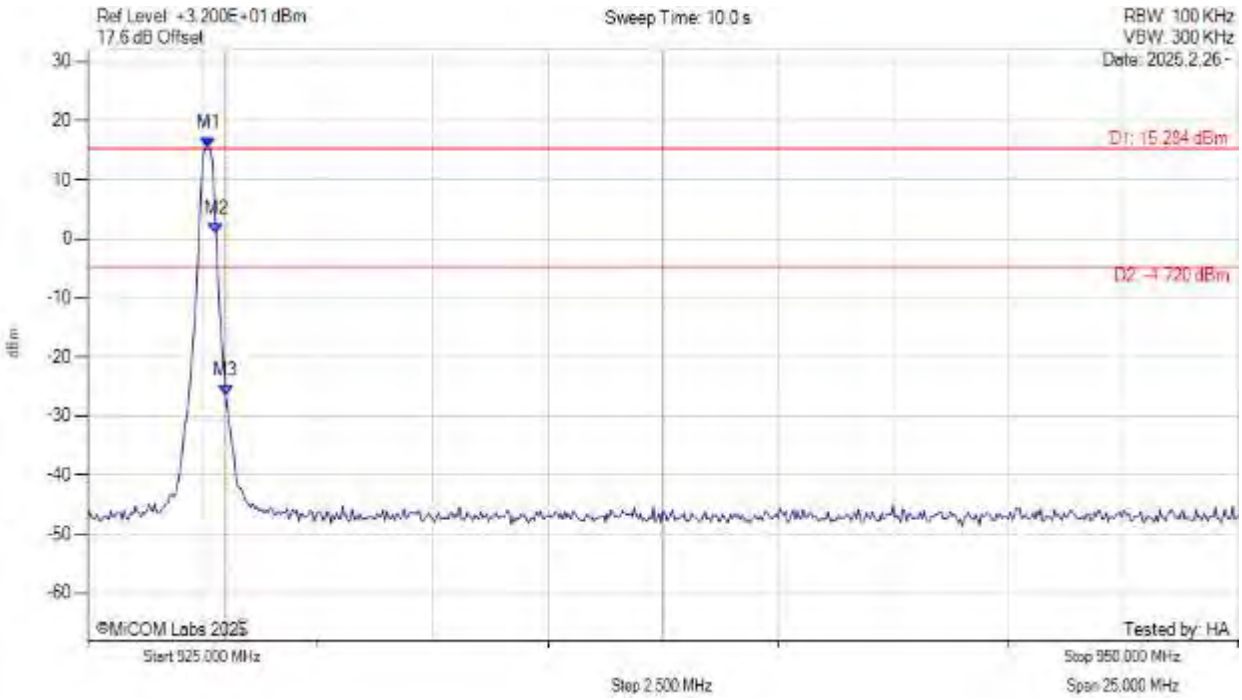
Conducted Upper Band-Edge Emissions (Static) Peak

CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: FSK-150k, Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.620 MHz : 15.284 dBm M2 : 927.790 MHz : 0.772 dBm M3 : 928.000 MHz : -26.652 dBm	Channel Frequency: 927.60 MHz

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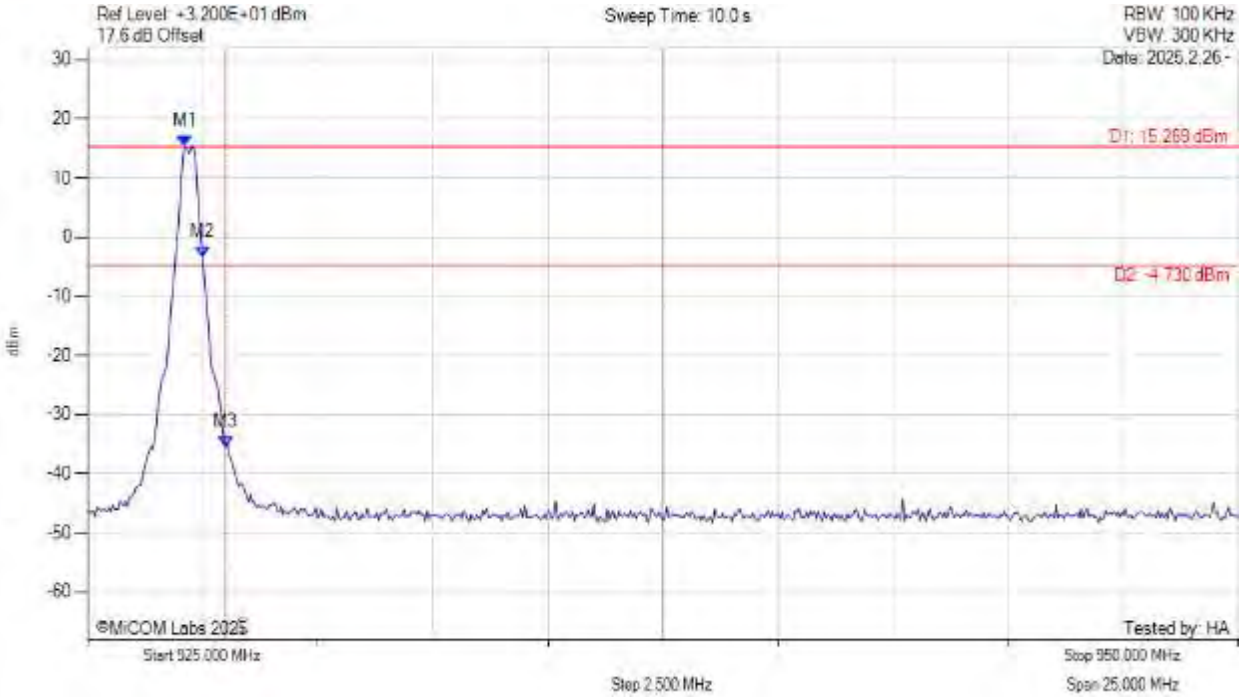
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: FSK-300k, Channel: 927.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.120 MHz : 15.269 dBm M2 : 927.500 MHz : -3.370 dBm M3 : 928.000 MHz : -35.575 dBm	Channel Frequency: 927.20 MHz

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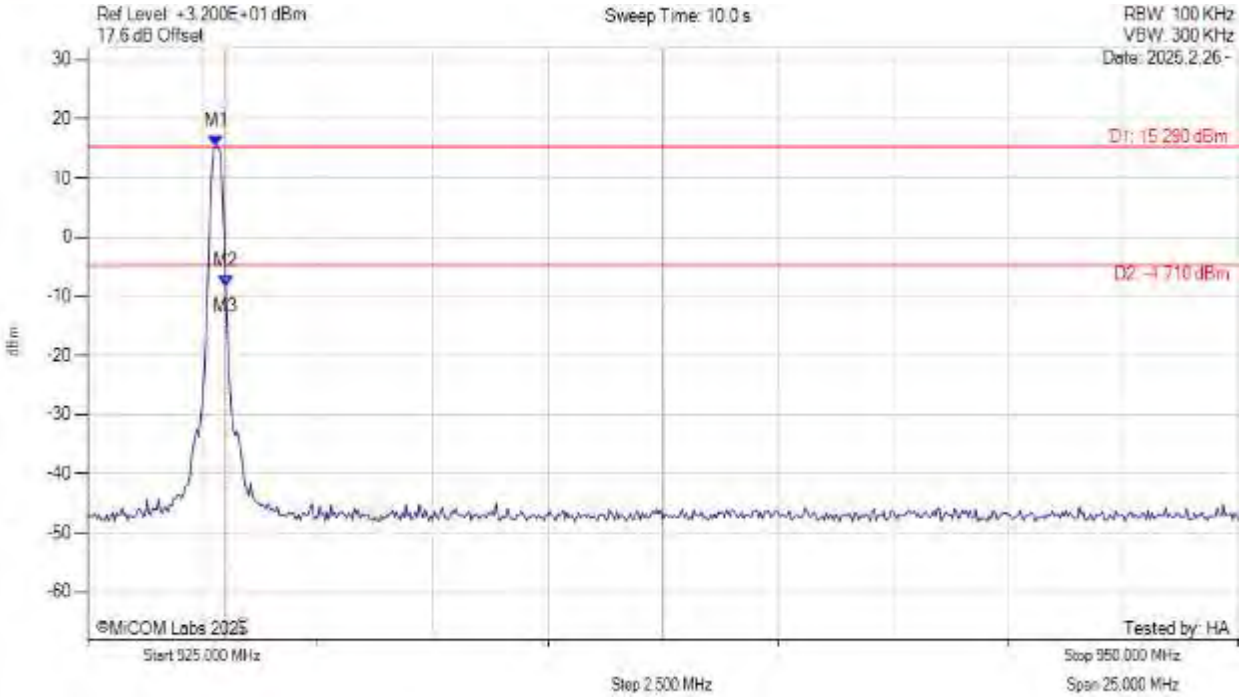
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: FSK-50k, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.790 MHz : 15.290 dBm M2 : 928.000 MHz : -8.204 dBm M3 : 928.000 MHz : -8.204 dBm	Channel Frequency: 927.80 MHz

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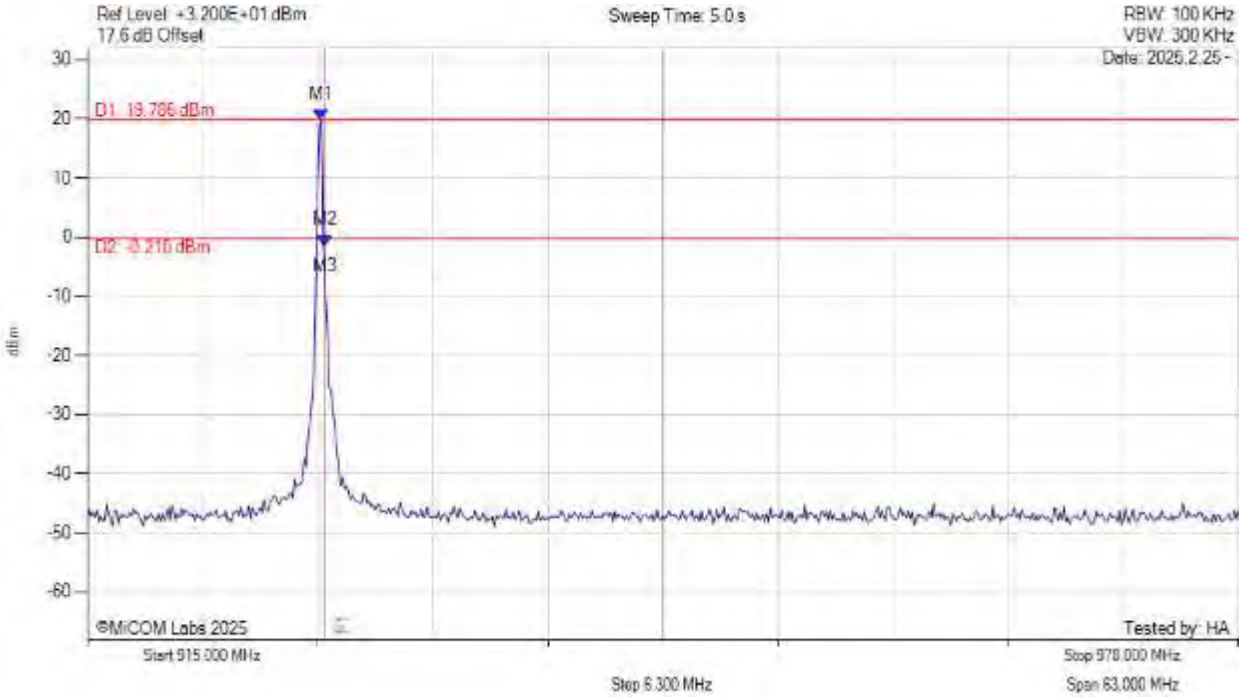
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: MCS4-OFDM-opt4, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.810 MHz : 19.786 dBm M2 : 928.000 MHz : -1.397 dBm M3 : 928.000 MHz : -1.397 dBm	Channel Frequency: 927.80 MHz

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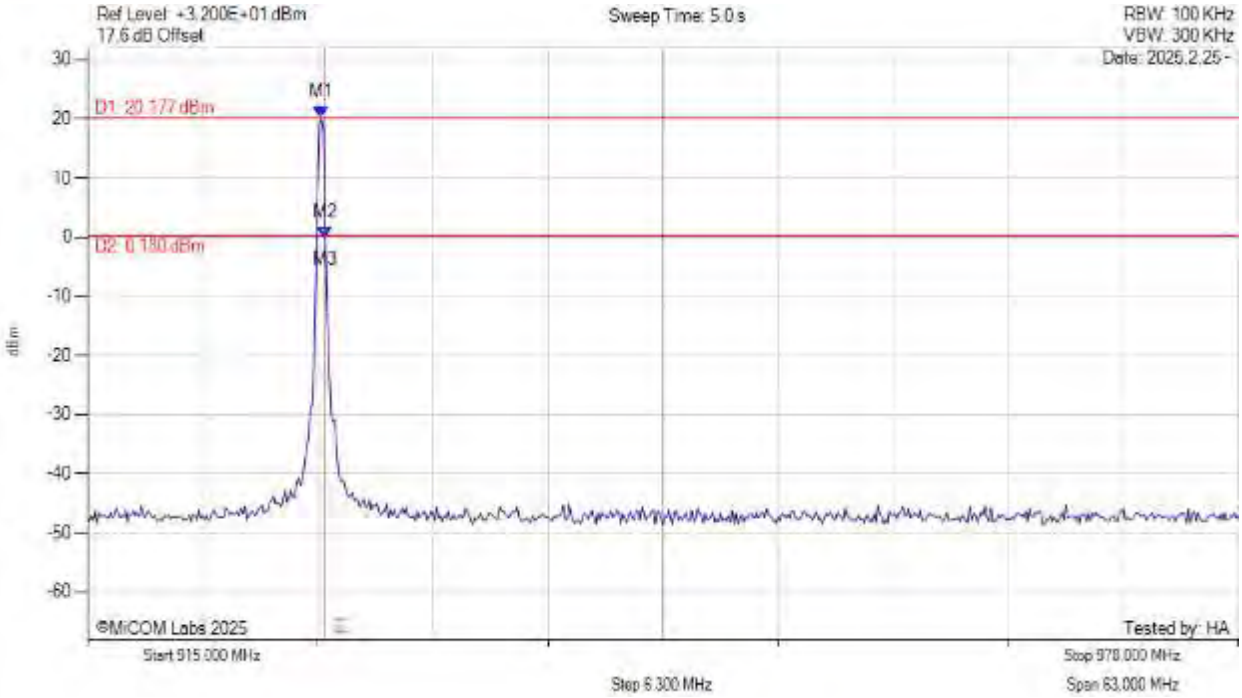
CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) PEAK

Variant: MCS6-OFDM-opt4, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.810 MHz : 20.177 dBm M2 : 928.000 MHz : -0.167 dBm M3 : 928.000 MHz : -0.167 dBm	Channel Frequency: 927.80 MHz

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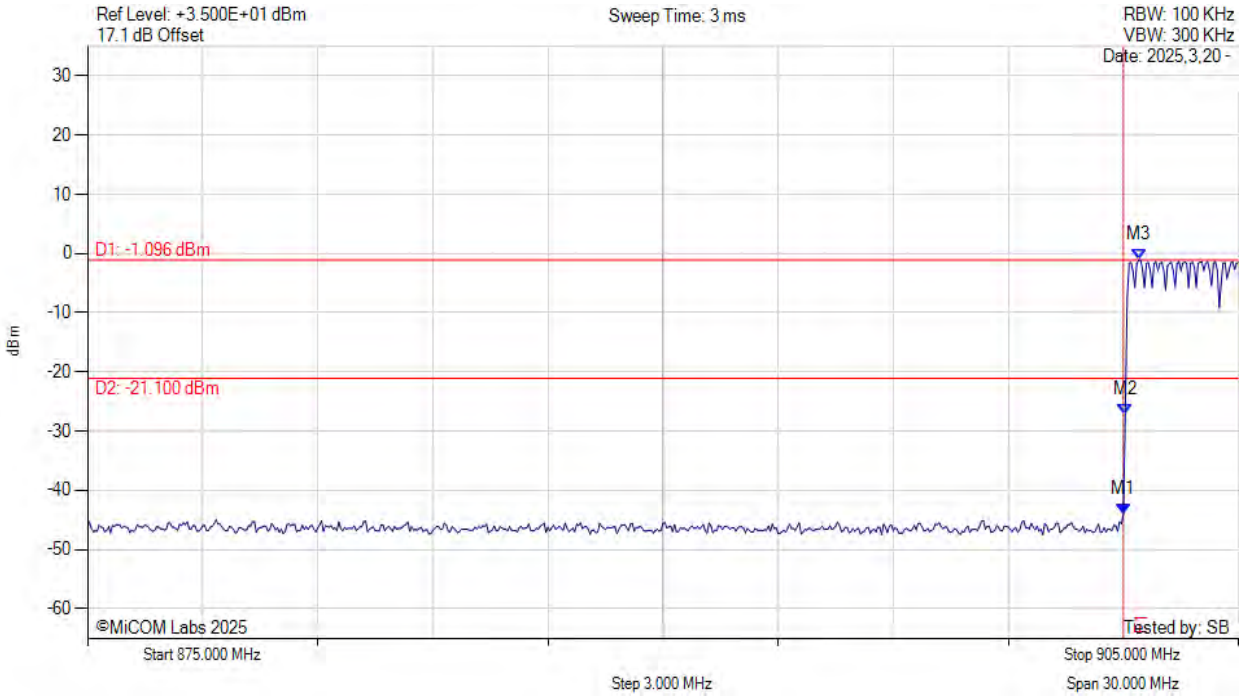
Conducted Low Band-Edge Emissions (Hopping) Peak

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: FSK-50k, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -43.991 dBm M2 : 902.050 MHz : -27.289 dBm M3 : 902.400 MHz : -1.096 dBm	Channel Frequency: 902.20 MHz

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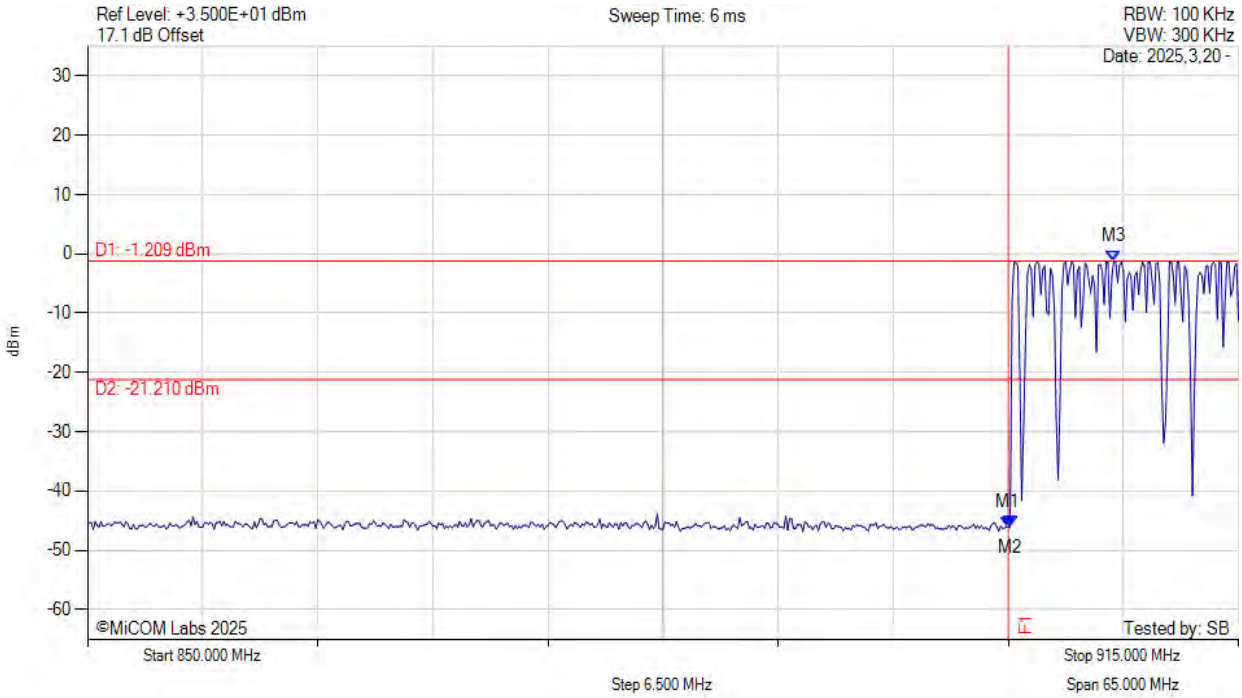
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: FSK-150k, Channel: 902.40 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -46.061 dBm M2 : 902.110 MHz : -45.992 dBm M3 : 907.960 MHz : -1.209 dBm	Channel Frequency: 902.40 MHz

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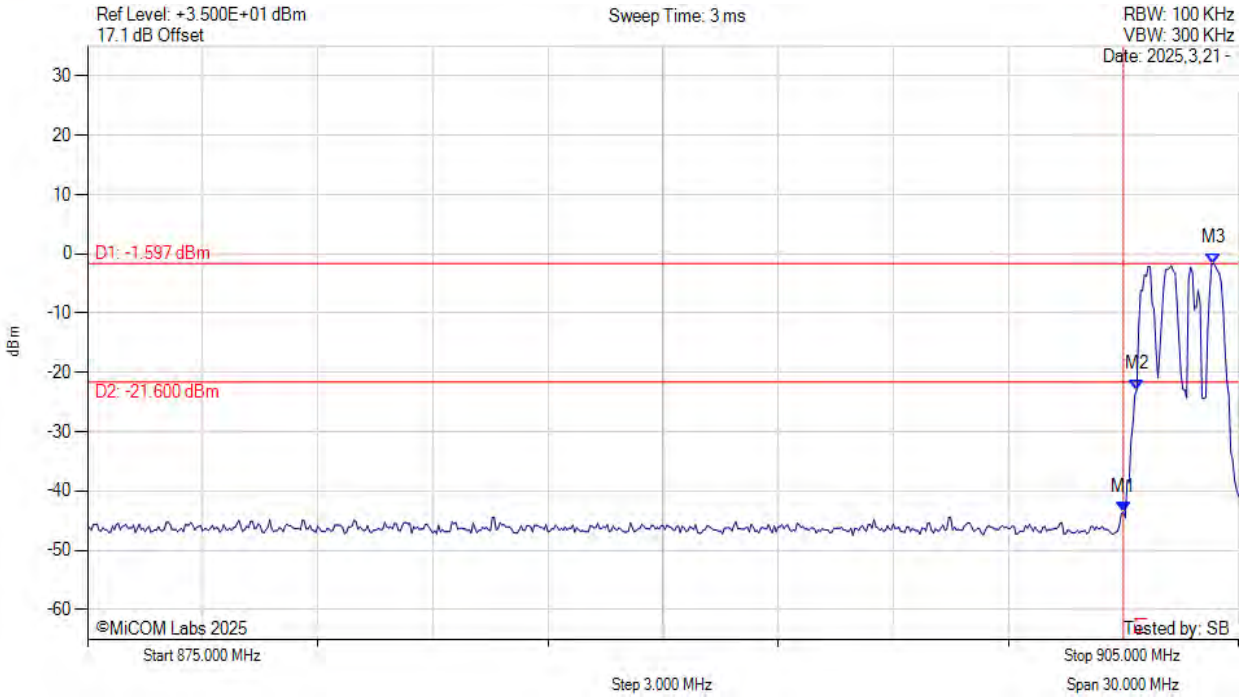
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: FSK-300k, Channel: 902.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -43.562 dBm M2 : 902.350 MHz : -22.865 dBm M3 : 904.350 MHz : -1.597 dBm	Channel Frequency: 902.60 MHz

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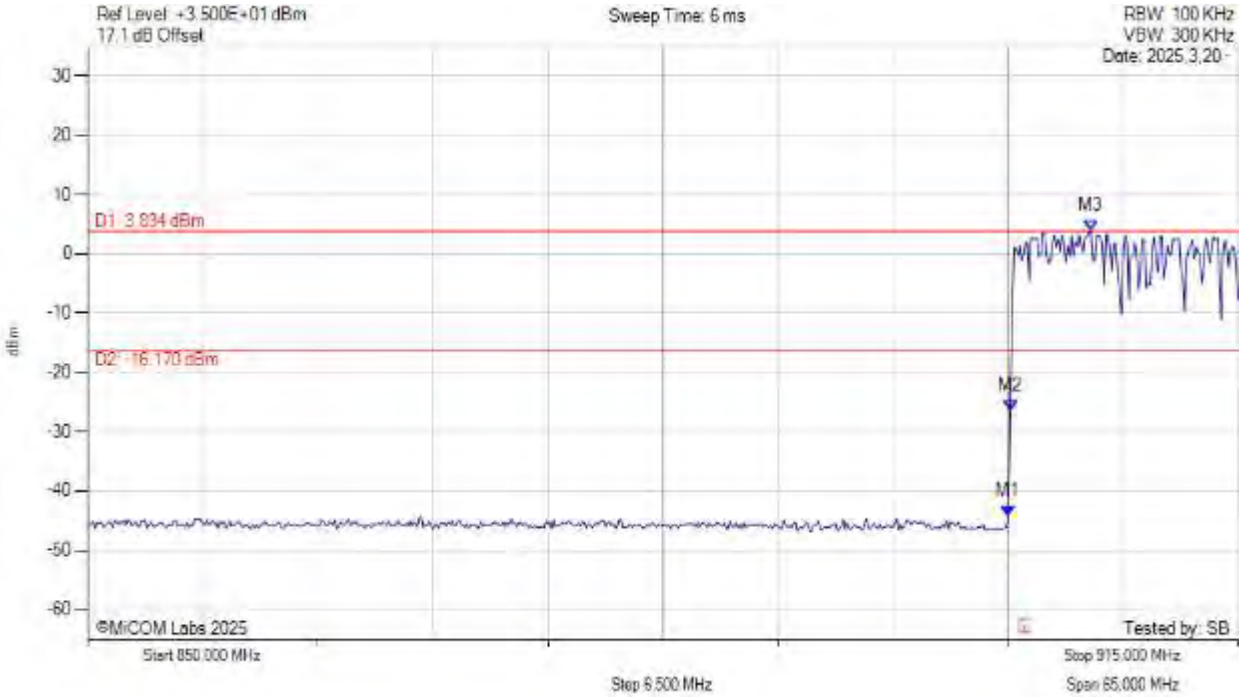
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: MCS4-OFDM-opt4, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -44.244 dBm M2 : 902.110 MHz : -26.564 dBm M3 : 906.660 MHz : 3.834 dBm	Channel Frequency: 902.20 MHz

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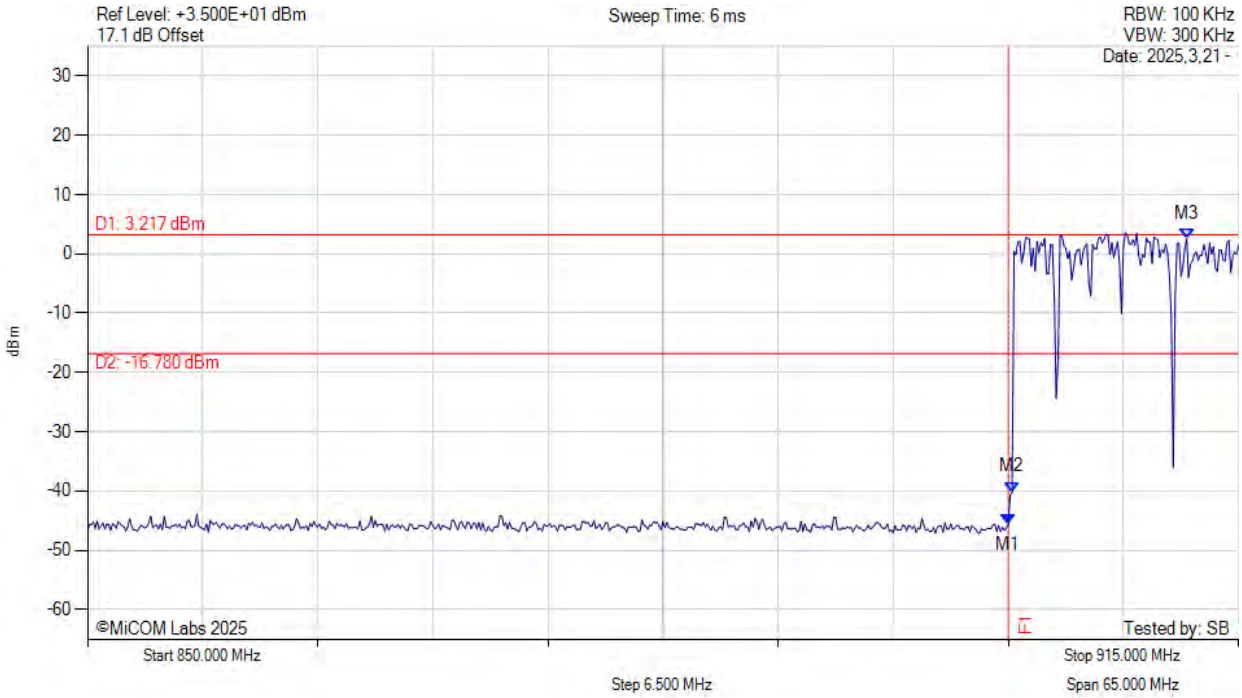
CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: MCS6-OFDM-opt4, Channel: 902.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAXH	M1 : 902.000 MHz : -45.555 dBm M2 : 902.210 MHz : -40.177 dBm M3 : 912.080 MHz : 2.492 dBm	Channel Frequency: 902.20 MHz

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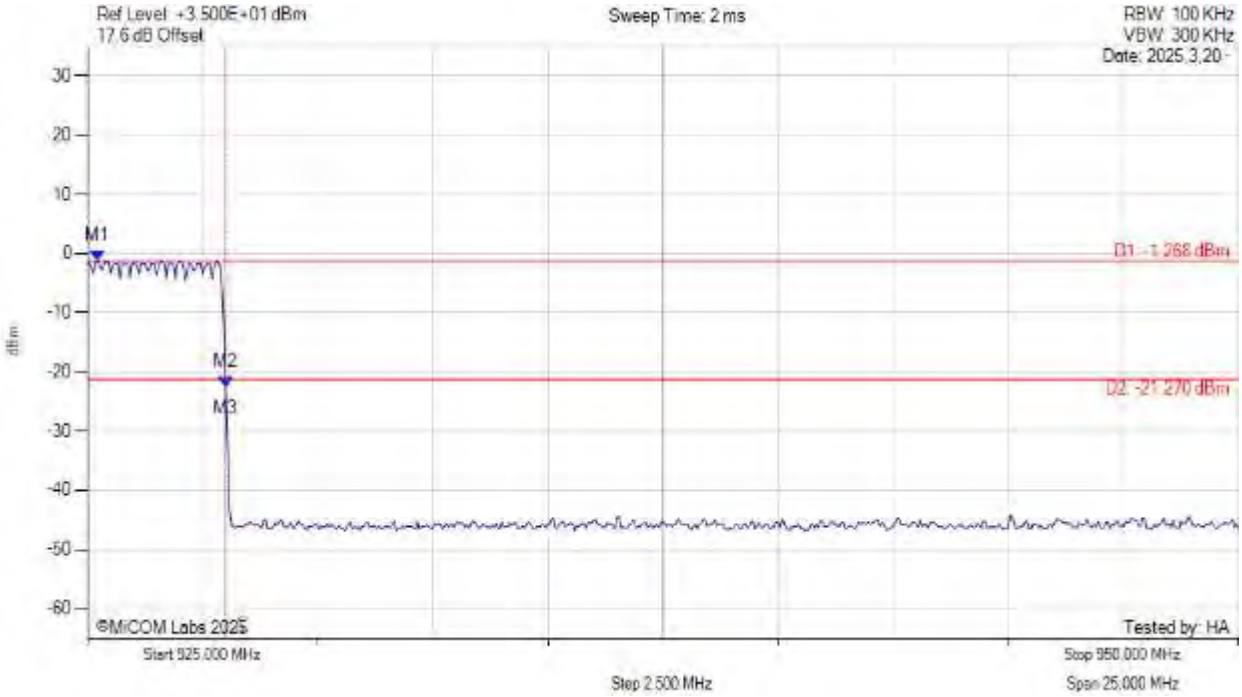
Conducted Upper Band-Edge Emissions (Hopping) Peak

CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: FSK-50k, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.210 MHz : -1.268 dBm M2 : 927.999 MHz : -22.543 dBm M3 : 928.000 MHz : -22.543 dBm	Channel Frequency: 927.80 MHz

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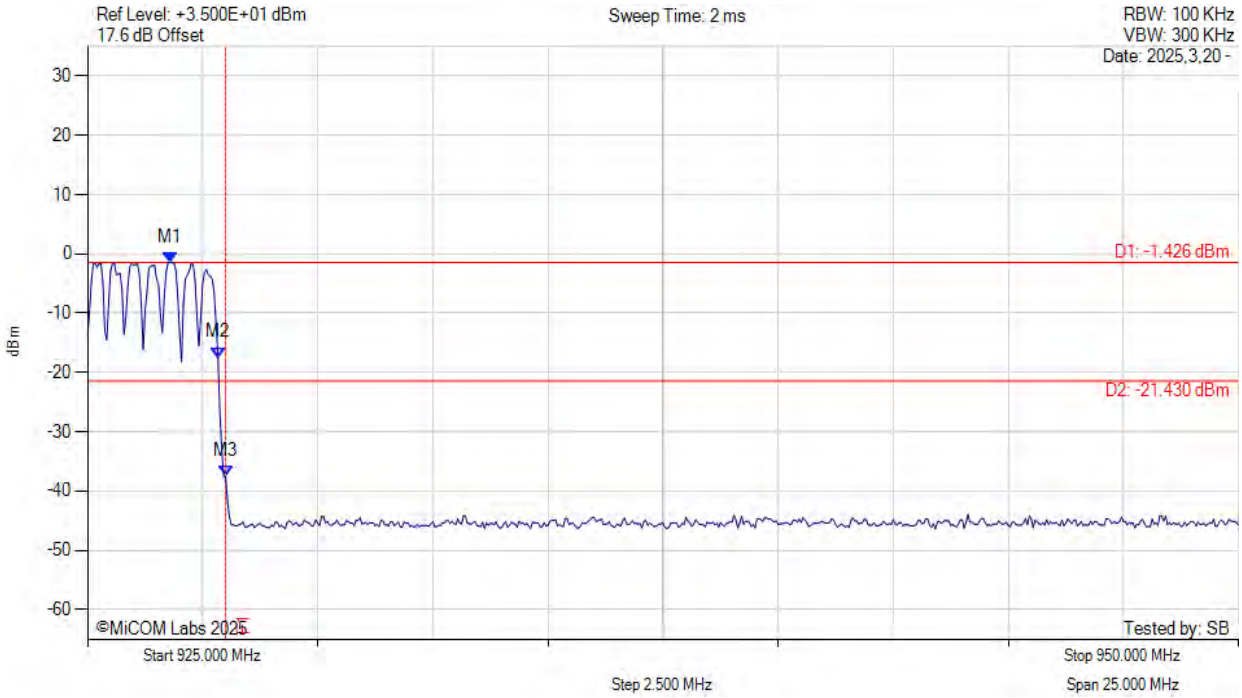
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: FSK-150k, Channel: 927.60 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 926.790 MHz : -1.426 dBm M2 : 927.830 MHz : -17.503 dBm M3 : 928.000 MHz : -37.551 dBm	Channel Frequency: 927.60 MHz

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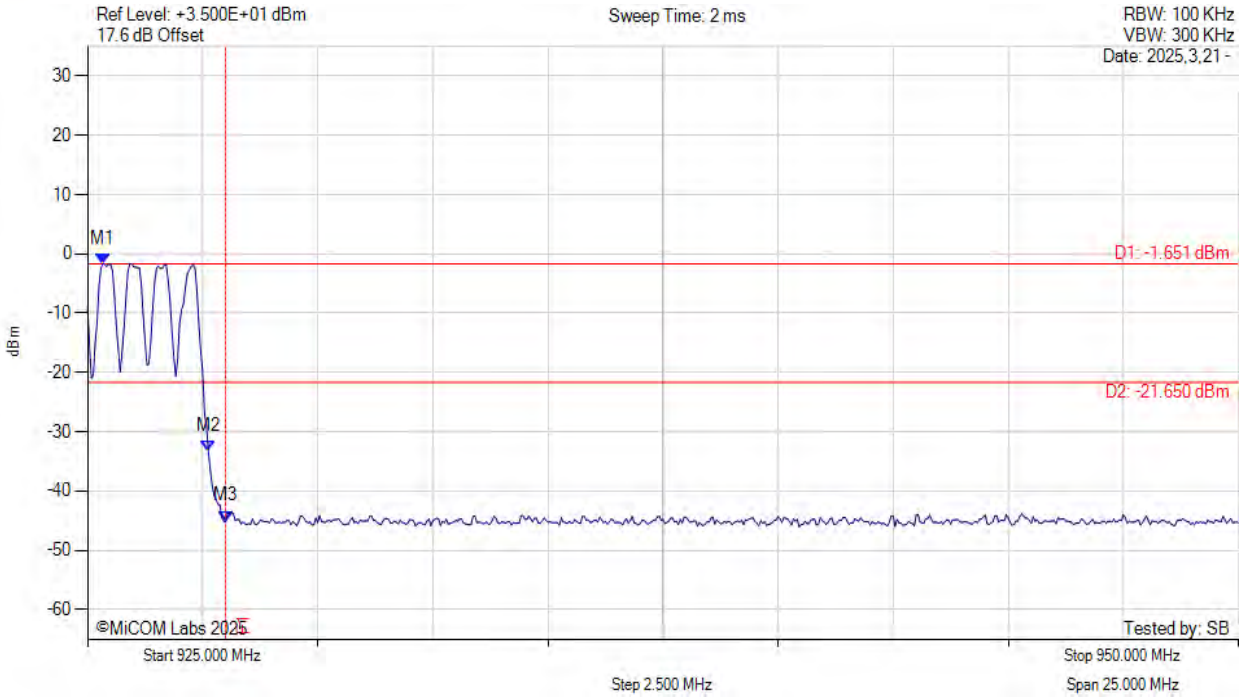
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: FSK-300k, Channel: 927.20 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.330 MHz : -1.651 dBm M2 : 927.625 MHz : -33.331 dBm M3 : 928.000 MHz : -45.083 dBm	Channel Frequency: 927.20 MHz

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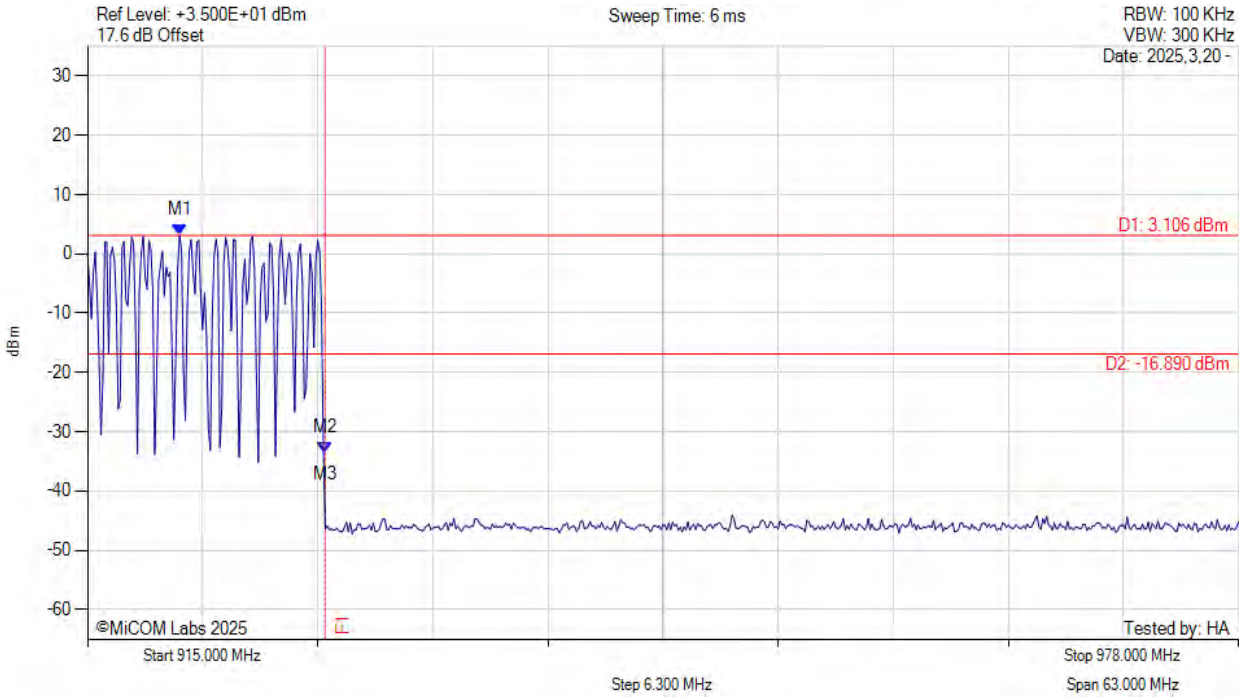
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: MCS4-OFDM-opt4, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 920.040 MHz : 3.106 dBm M2 : 928.000 MHz : -33.510 dBm M3 : 928.000 MHz : -33.510 dBm	Channel Frequency: 927.80 MHz

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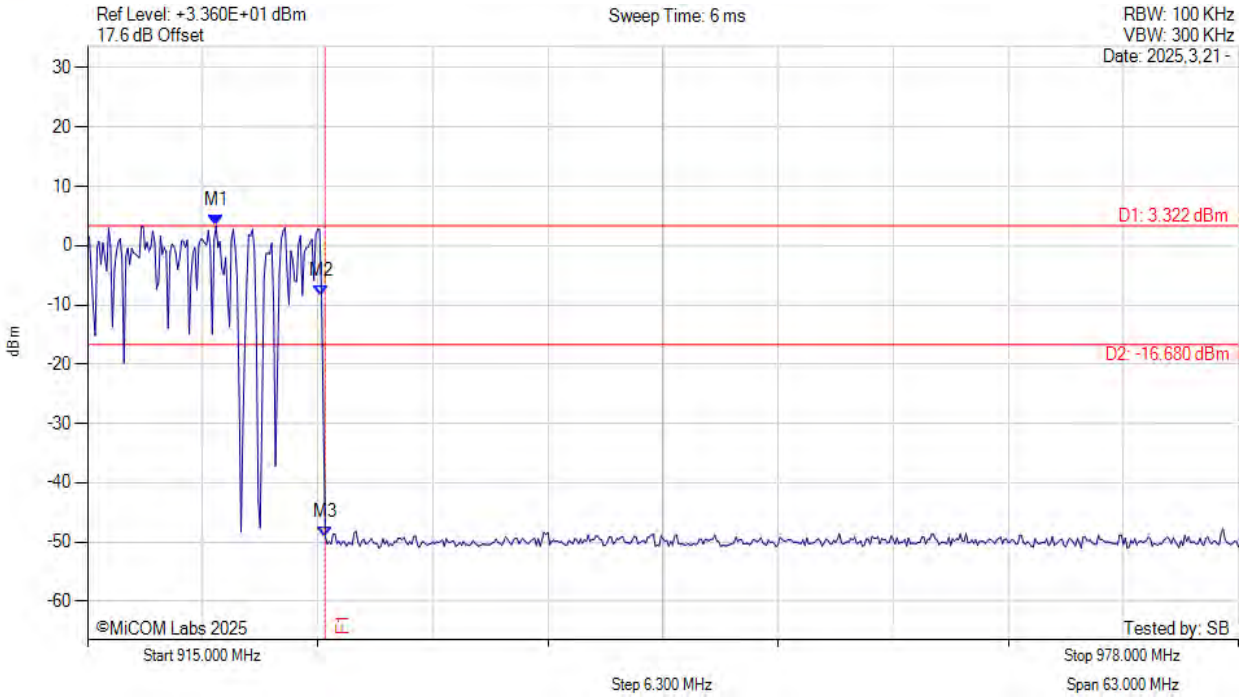
CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) PEAK

Variant: MCS6-OFDM-opt4, Channel: 927.80 MHz, Chain a, Temp: 20, Voltage: 3.3 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 26 Trace Mode = VIEW	M1 : 922.030 MHz : 3.322 dBm M2 : 927.810 MHz : -8.535 dBm M3 : 928.000 MHz : -49.182 dBm	Channel Frequency: 927.80 MHz

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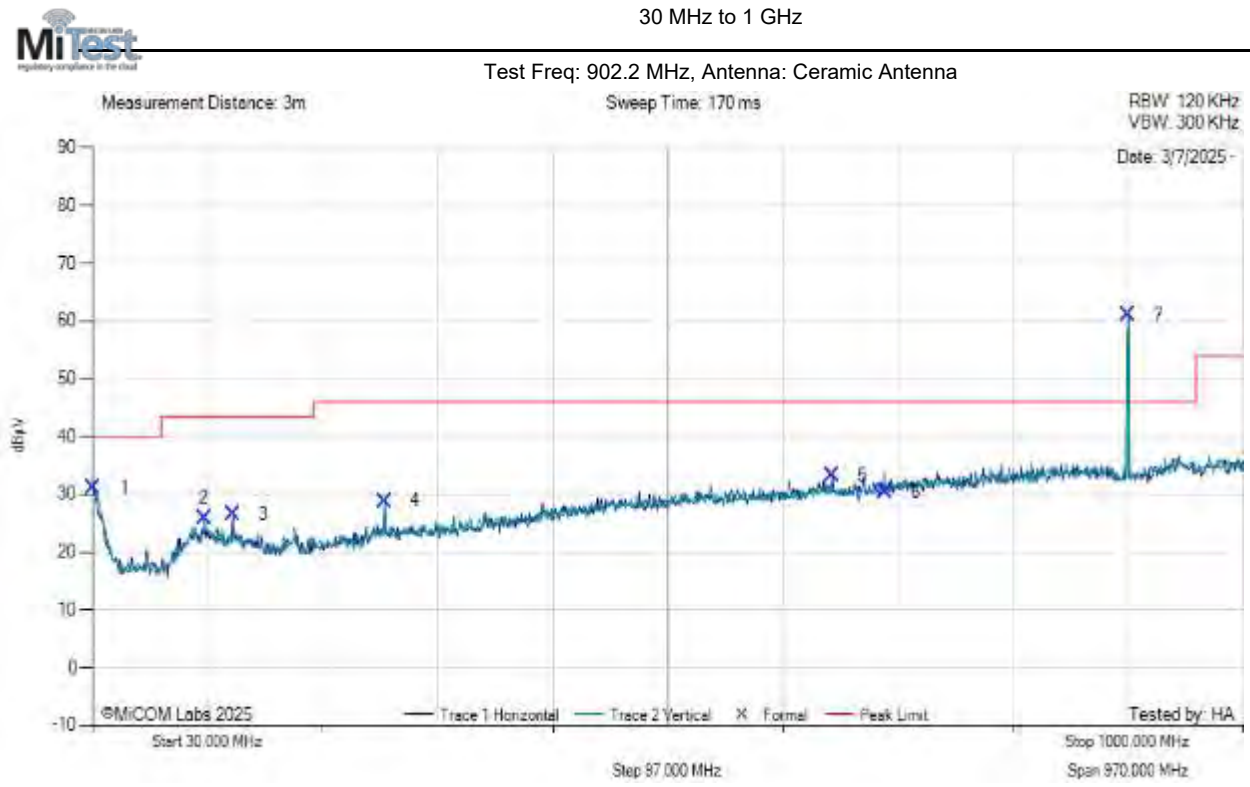
A.2.2.2. Radiated Emissions

TX Spurious & Restricted Band Emissions

Ceramic Antenna (30MHz – 1GHz)

FSK DR 50k



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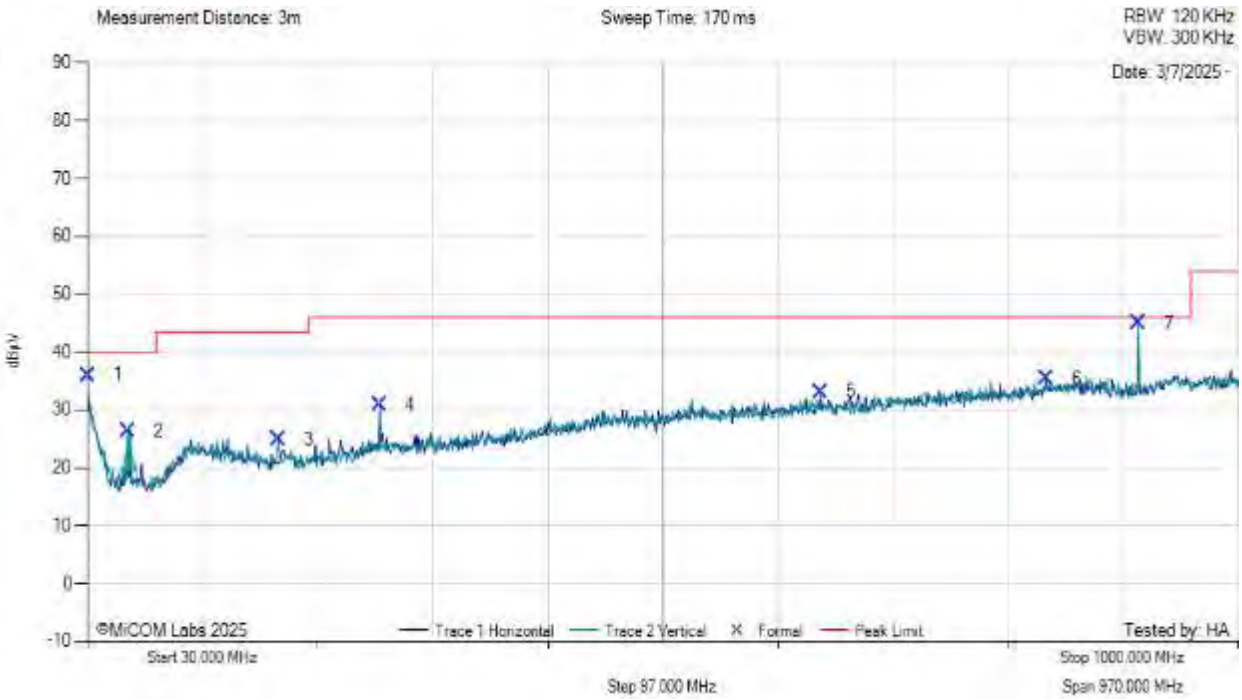
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: Ceramic Antenna



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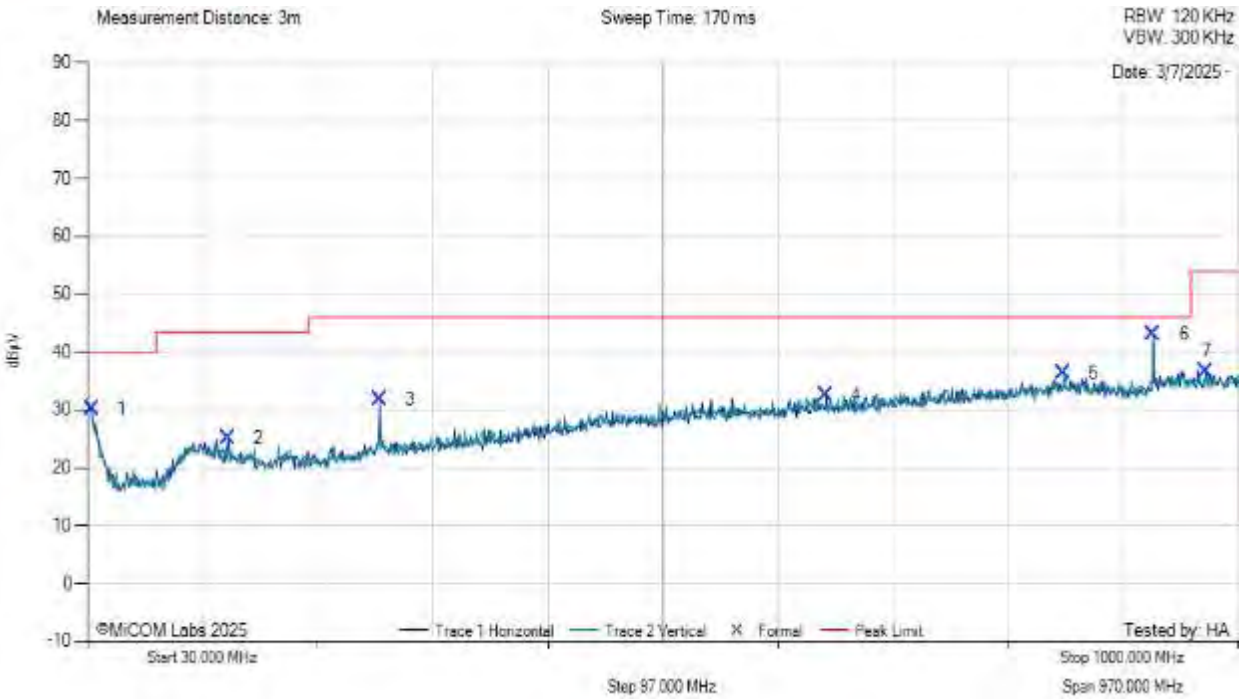
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: Ceramic Antenna



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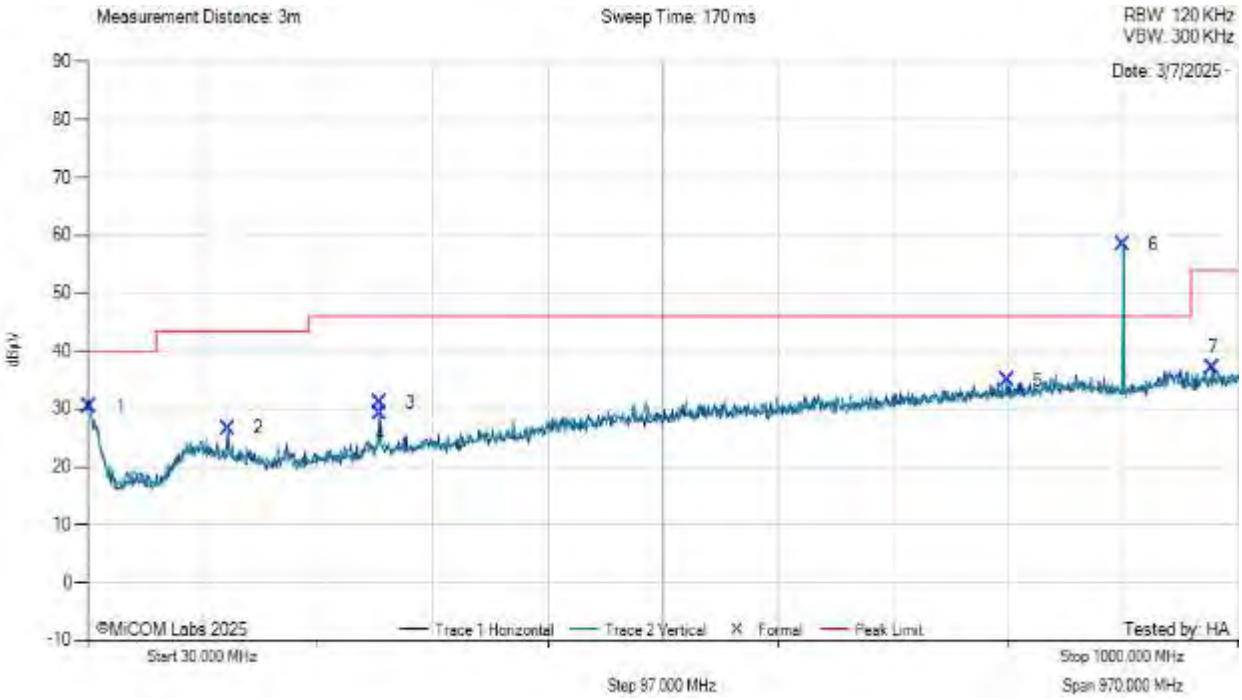
FSK DR 300k

30 MHz to 1 GHz

Test Freq: 902.6 MHz, Antenna: Ceramic Antenna



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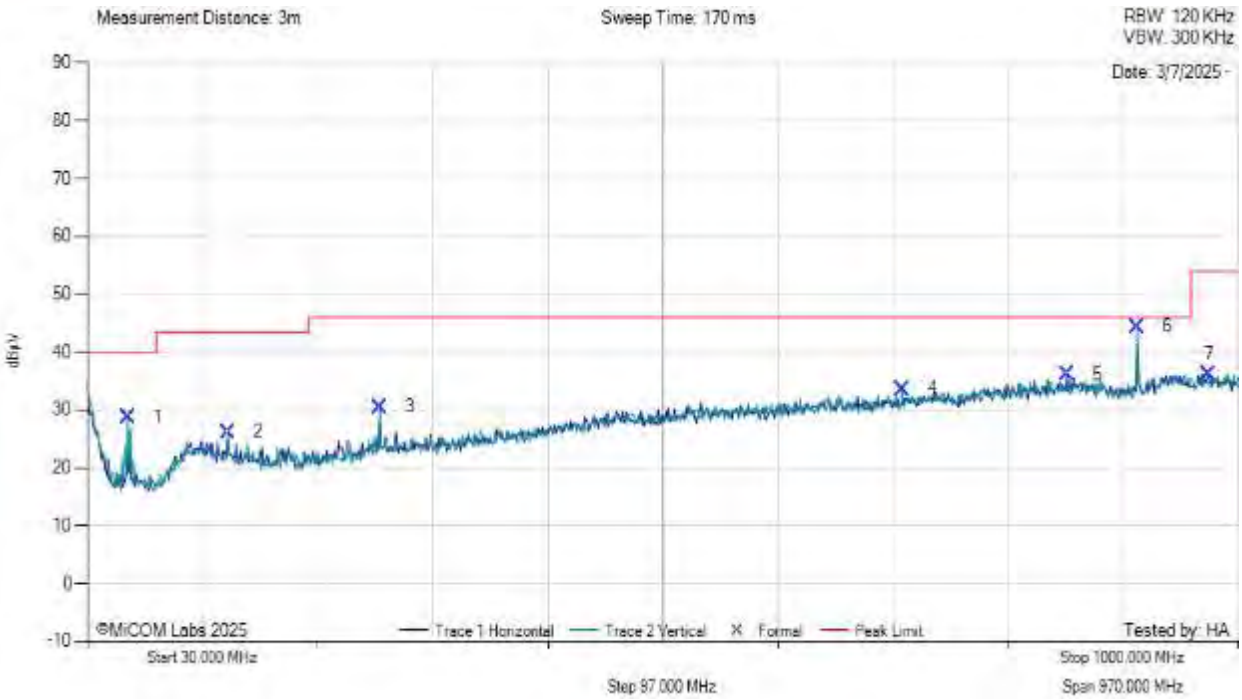
30 MHz to 1 GHz

Test Freq: 914.6 MHz, Antenna: Ceramic Antenna



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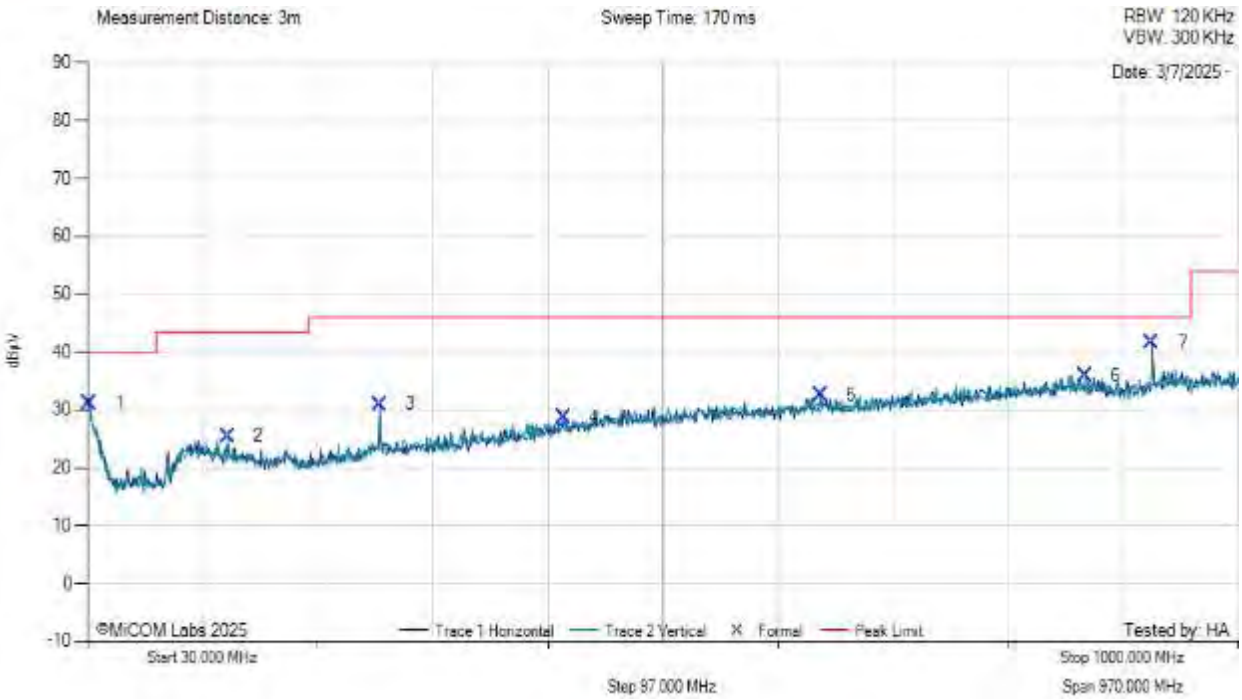
30 MHz to 1 GHz

Test Freq: 927.2 MHz, Antenna: Ceramic Antenna



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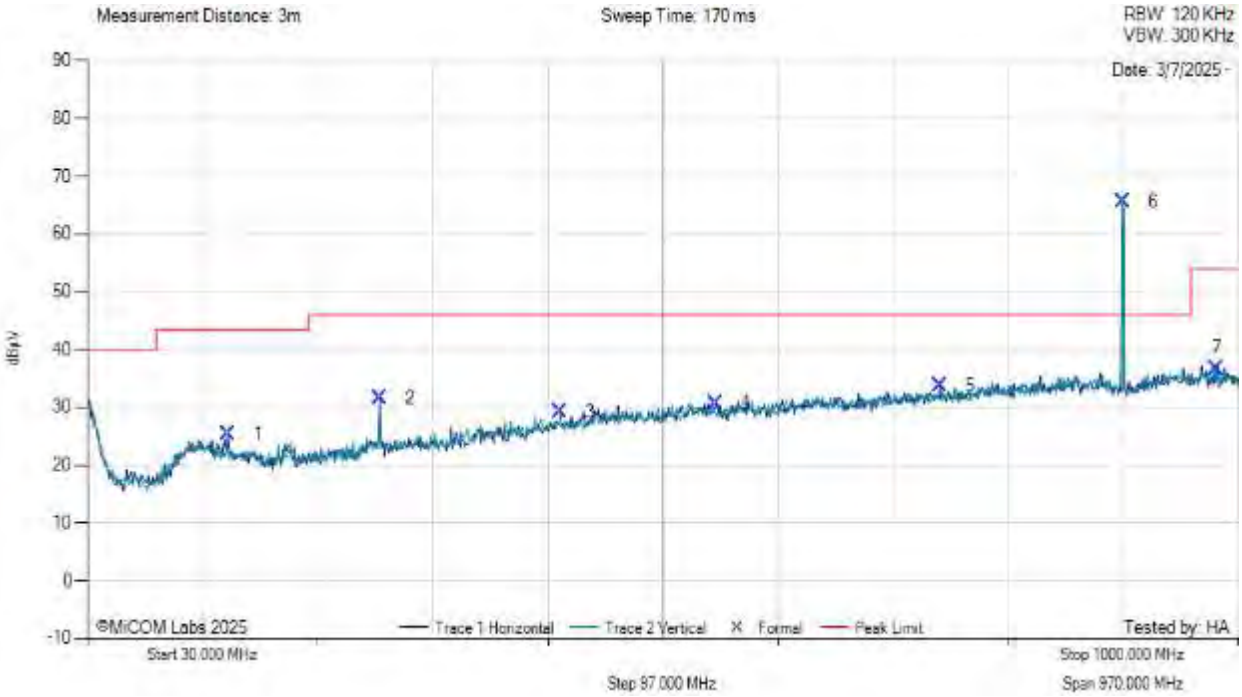
OFDM OPT4 MCS4

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: Ceramic Antenna



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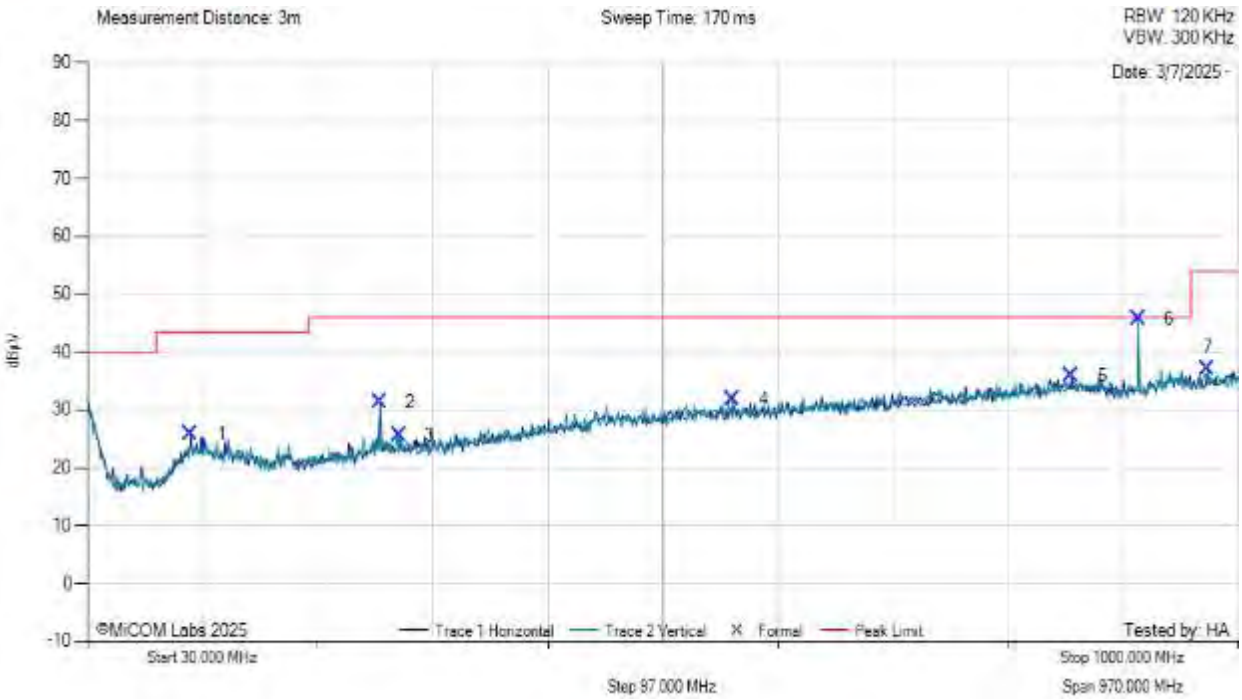
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: Ceramic Antenna



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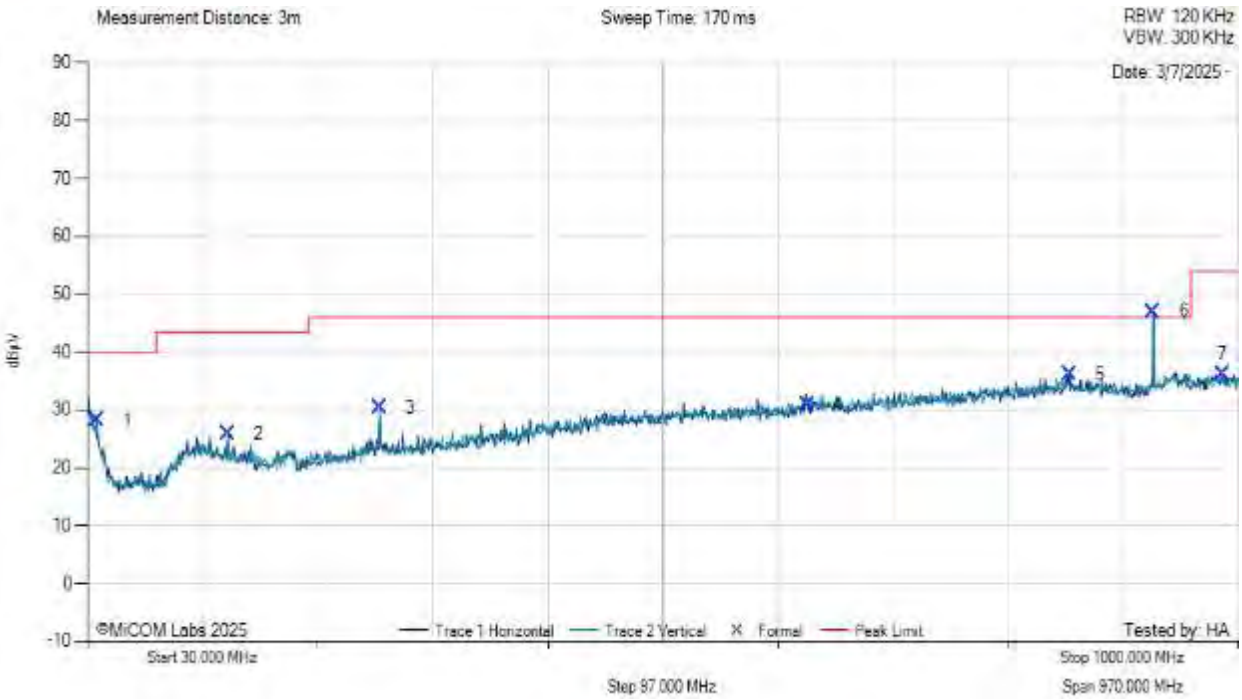
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: Ceramic Antenna



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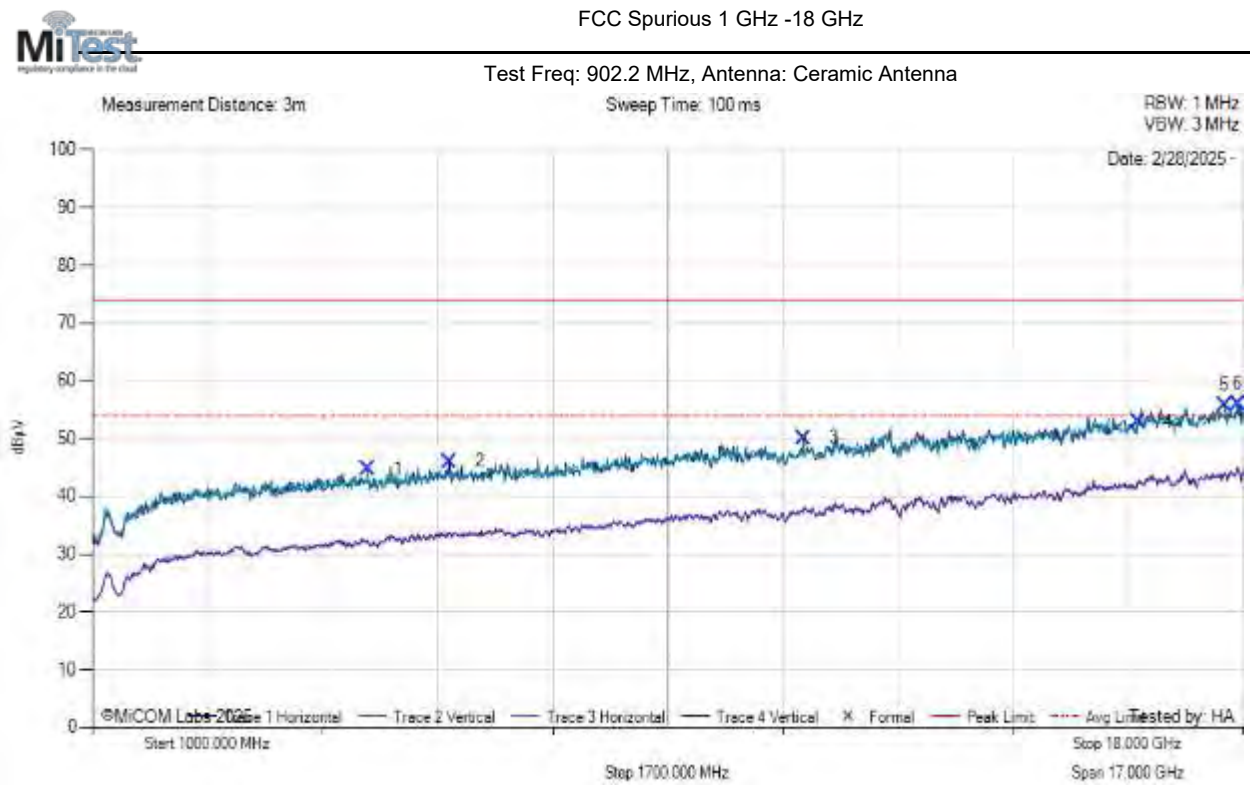
Ceramic Antenna (1GHz – 18GHz)

FSK DR 50k



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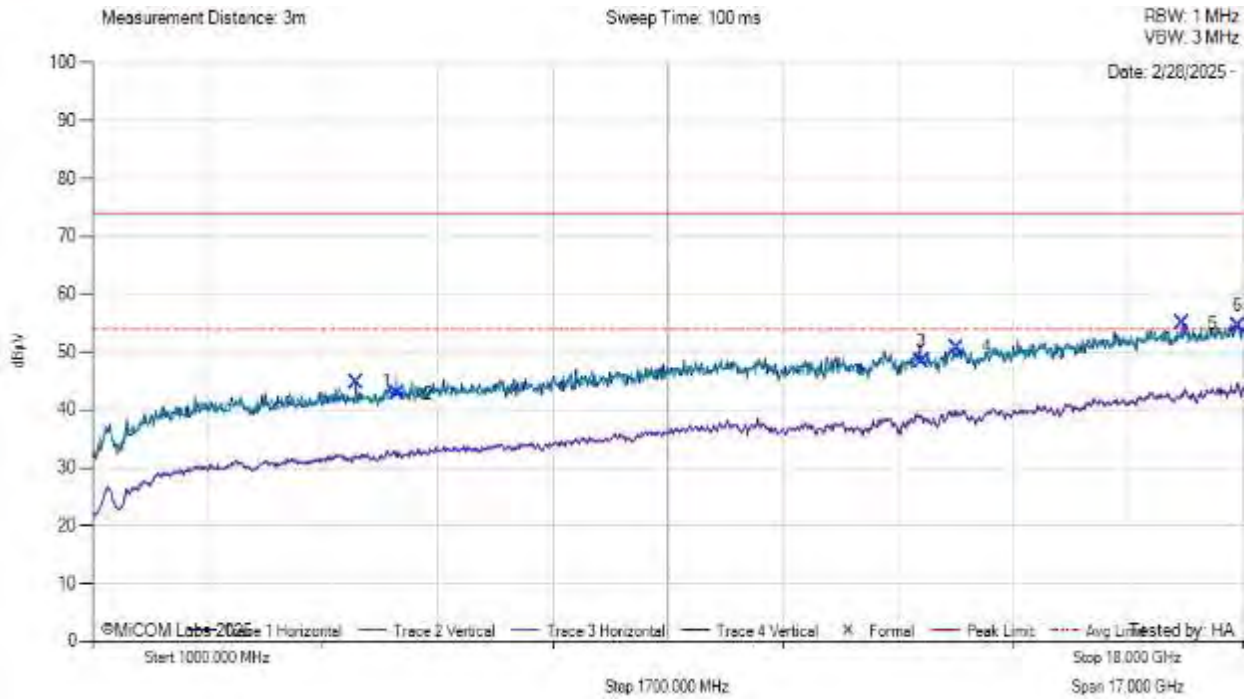
FCC Spurious 1 GHz -18 GHz

Test Freq: 915.0 MHz, Antenna: Ceramic Antenna



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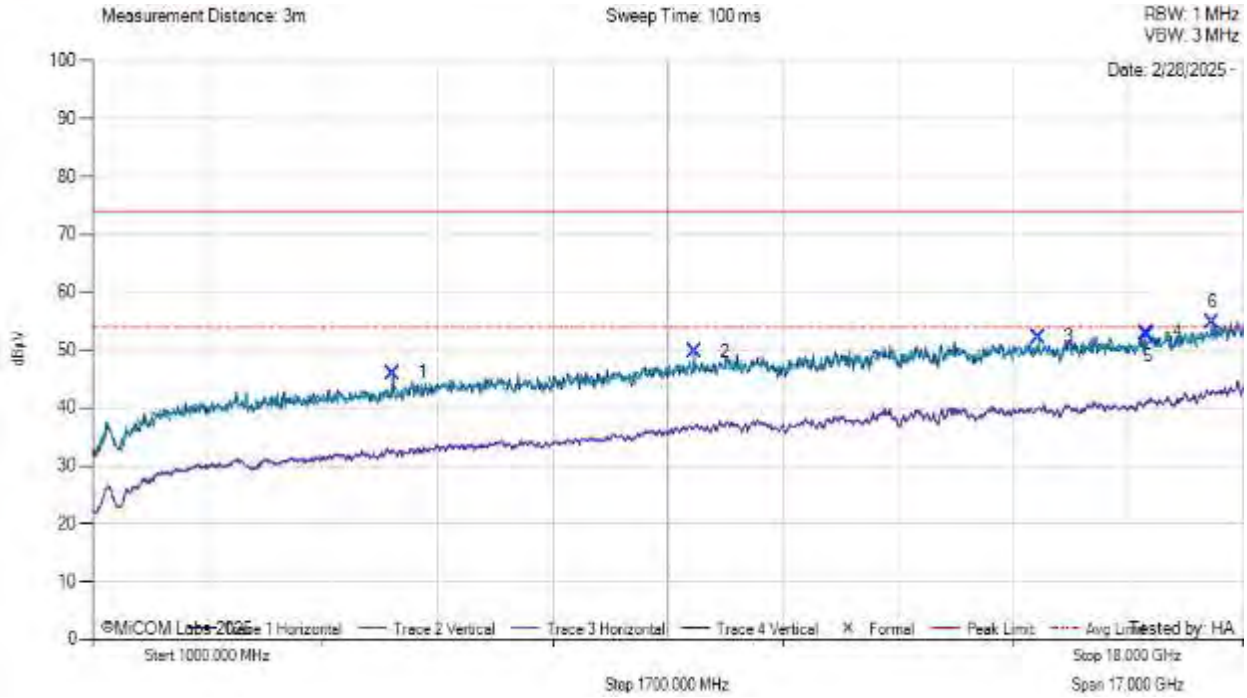
FCC Spurious 1 GHz -18 GHz

Test Freq: 927.8 MHz, Antenna: Ceramic Antenna



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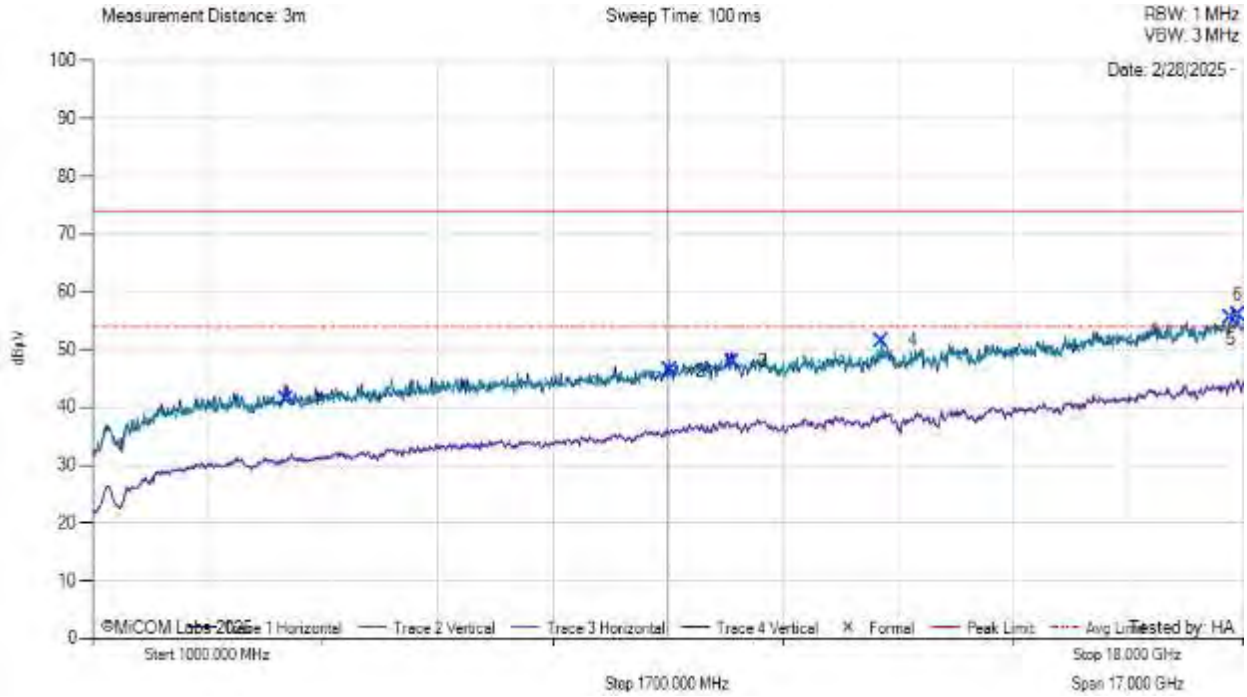
FSK DR 300k

FCC Spurious 1 GHz -18 GHz

Test Freq: 902.6 MHz, Antenna: Ceramic Antenna



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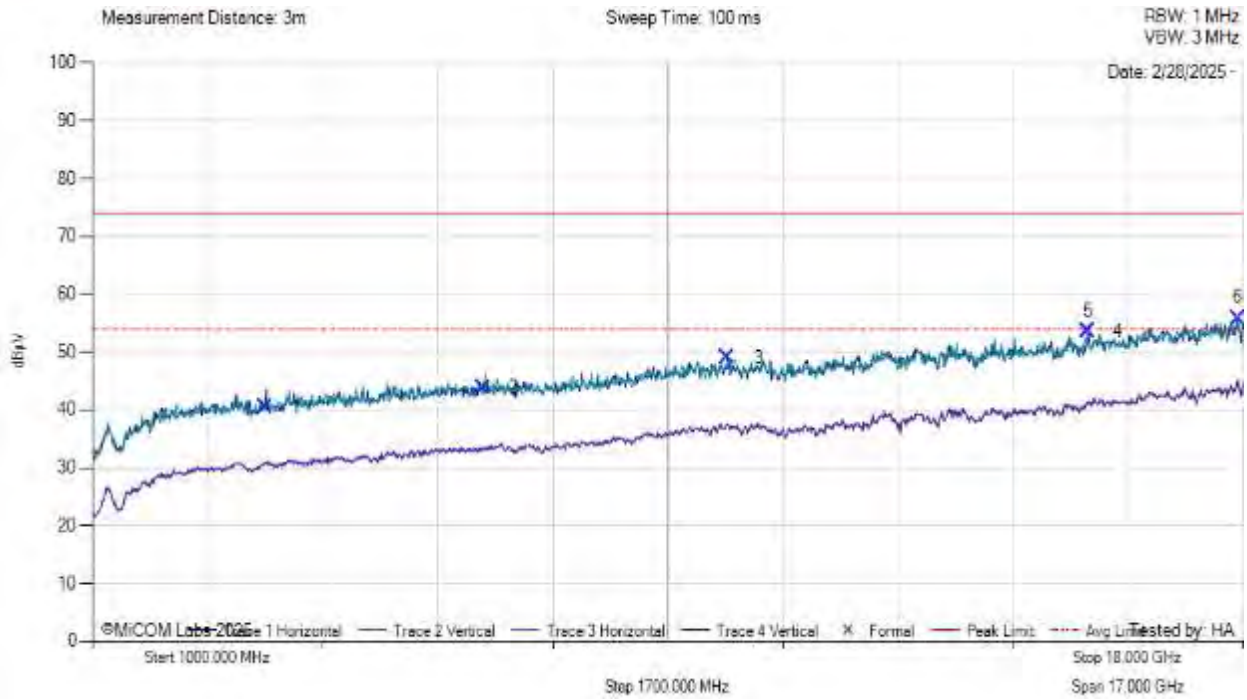
FCC Spurious 1 GHz -18 GHz

Test Freq: 914.6 MHz, Antenna: Ceramic Antenna



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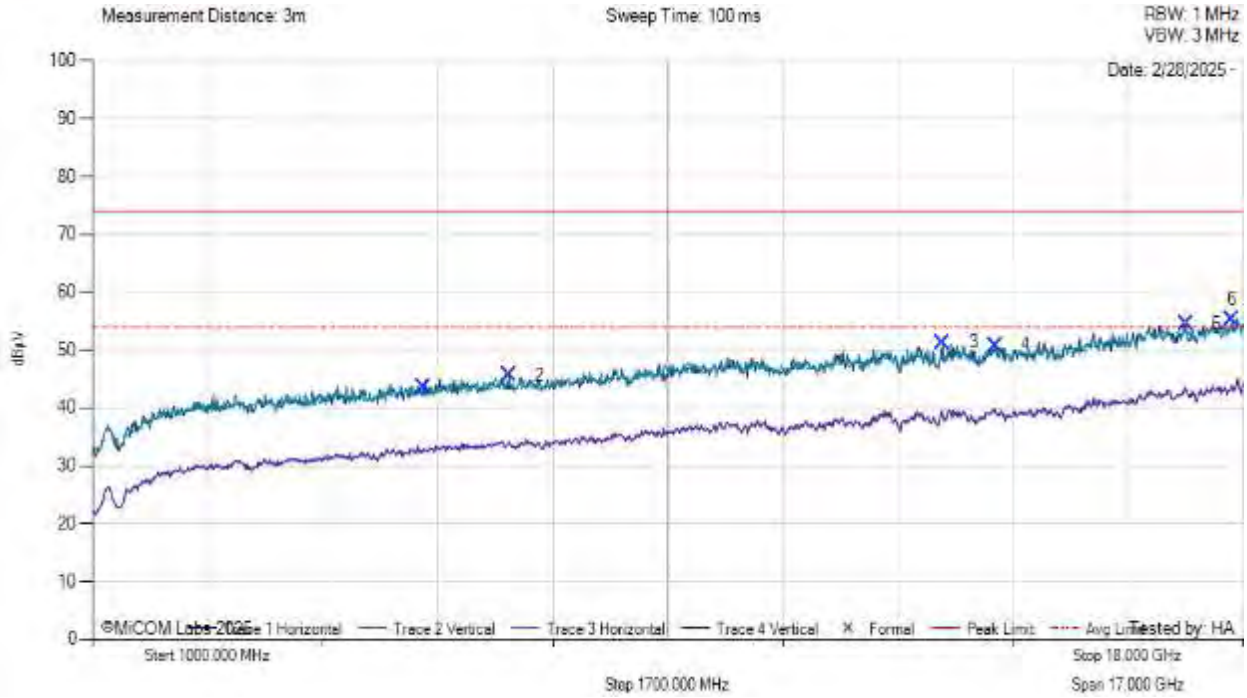
FCC Spurious 1 GHz -18 GHz

Test Freq: 927.2 MHz, Antenna: Ceramic Antenna



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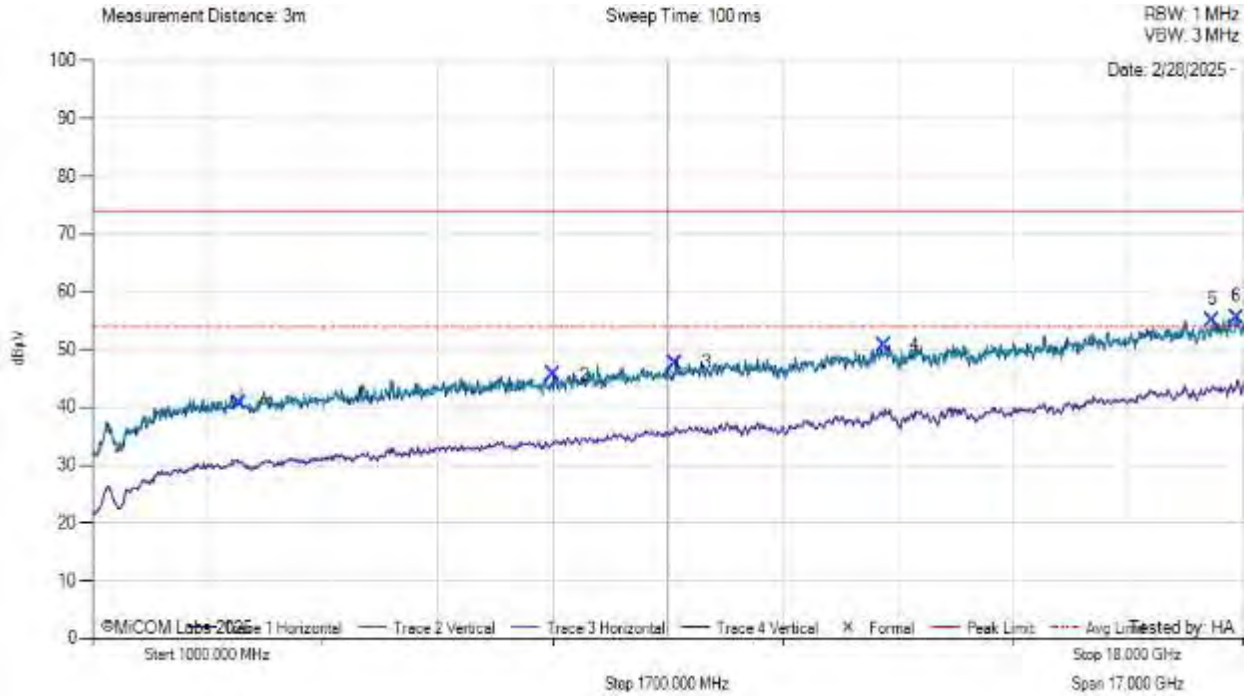
OFDM OPT4 MCS4

FCC Spurious 1 GHz -18 GHz

Test Freq: 902.2 MHz, Antenna: Ceramic Antenna



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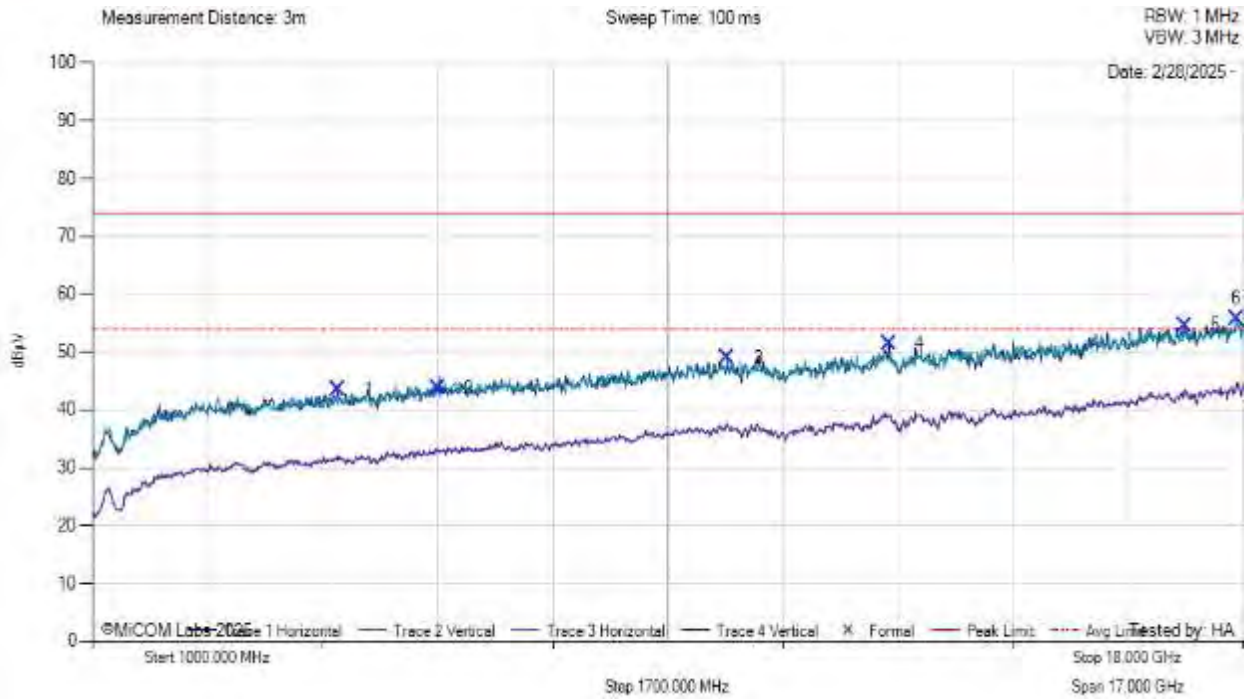
FCC Spurious 1 GHz -18 GHz

Test Freq: 915.0 MHz, Antenna: Ceramic Antenna



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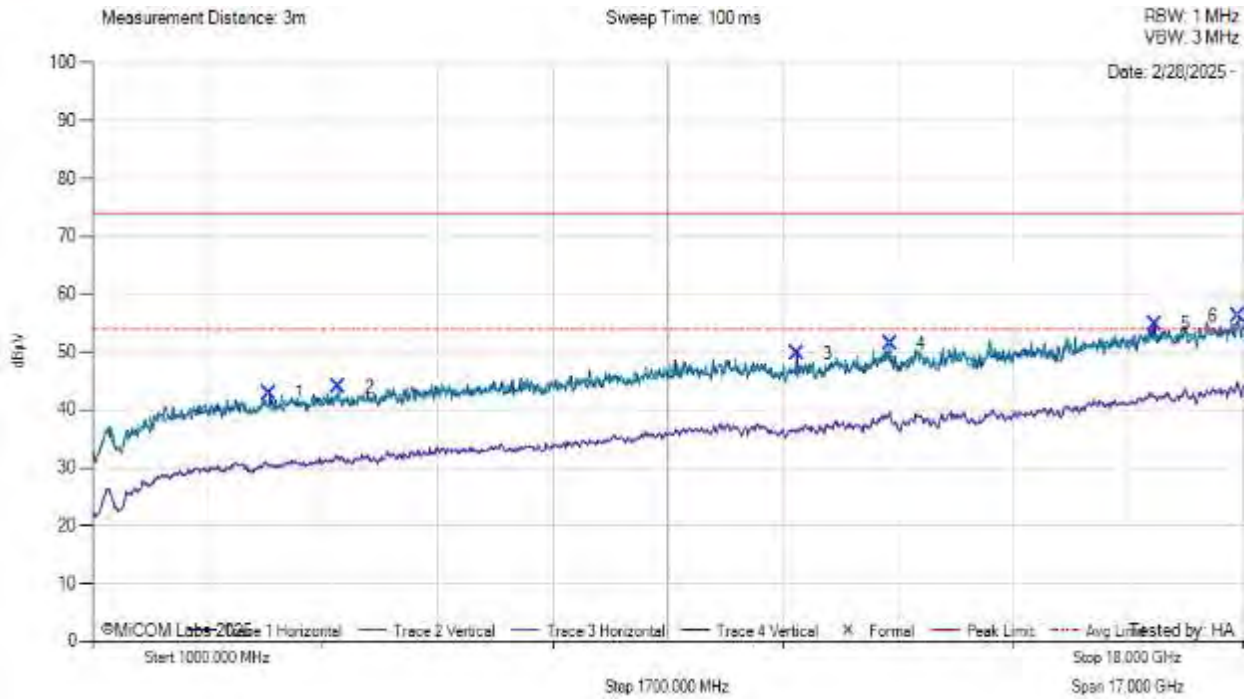
FCC Spurious 1 GHz -18 GHz

Test Freq: 927.8 MHz, Antenna: Ceramic Antenna



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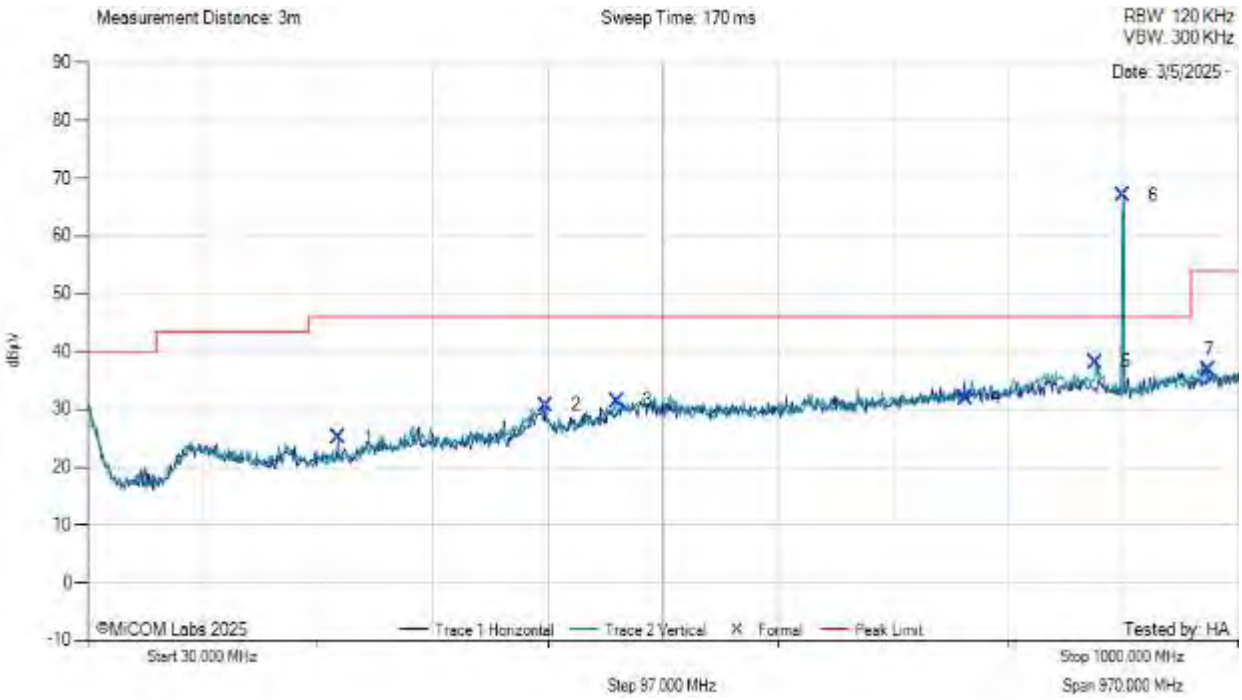
FG9026 Antenna (30MHz – 1GHz)

FSK DR 50k

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: FG9026 Antenna



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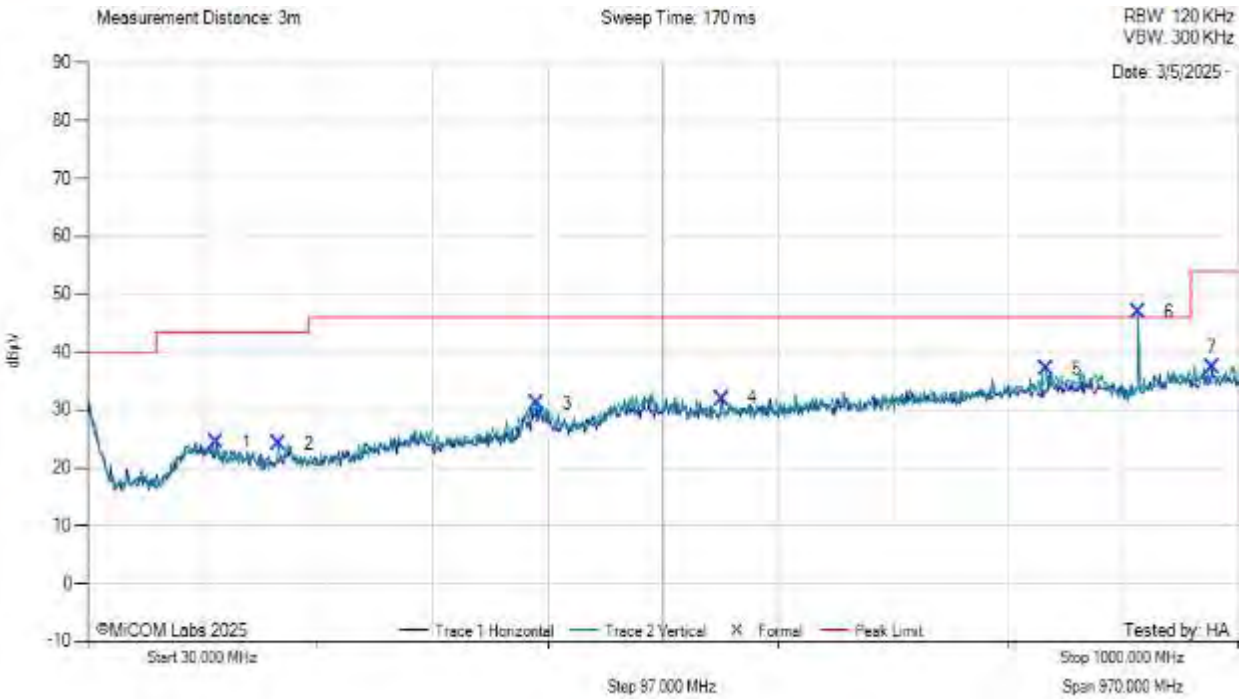
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: FG9026 Antenna



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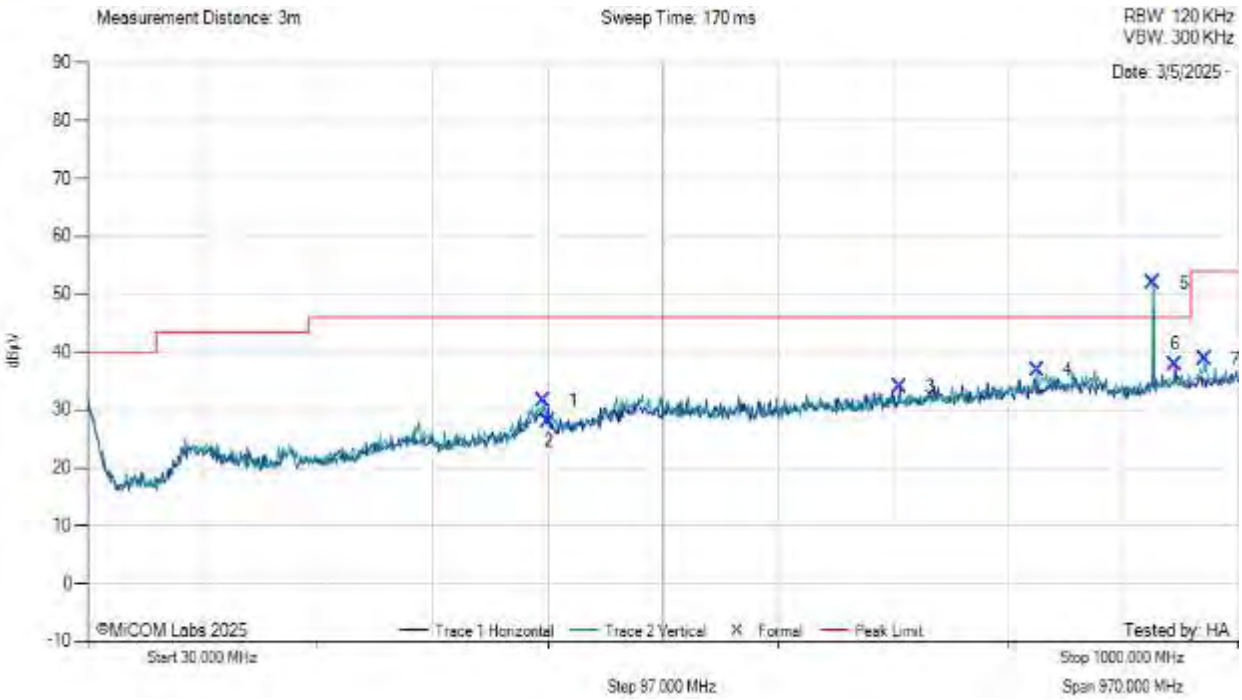
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: FG9026 Antenna



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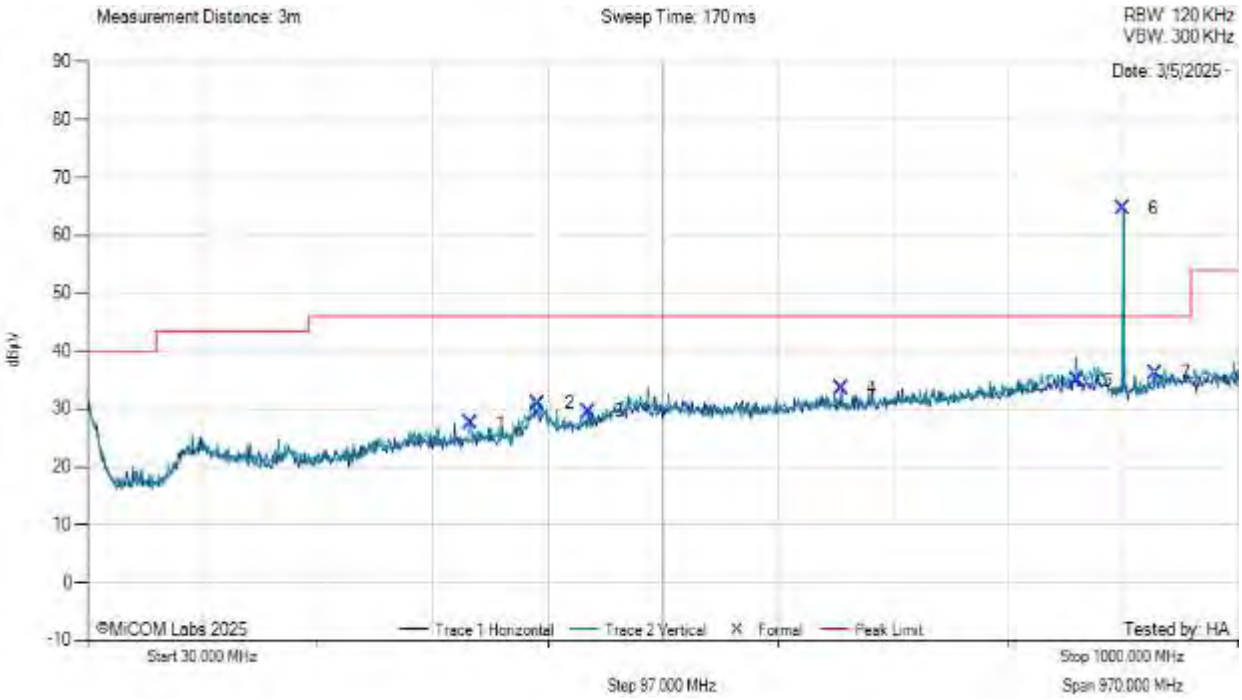
FSK DR 300k

30 MHz to 1 GHz

Test Freq: 902.6 MHz, Antenna: FG9026 Antenna



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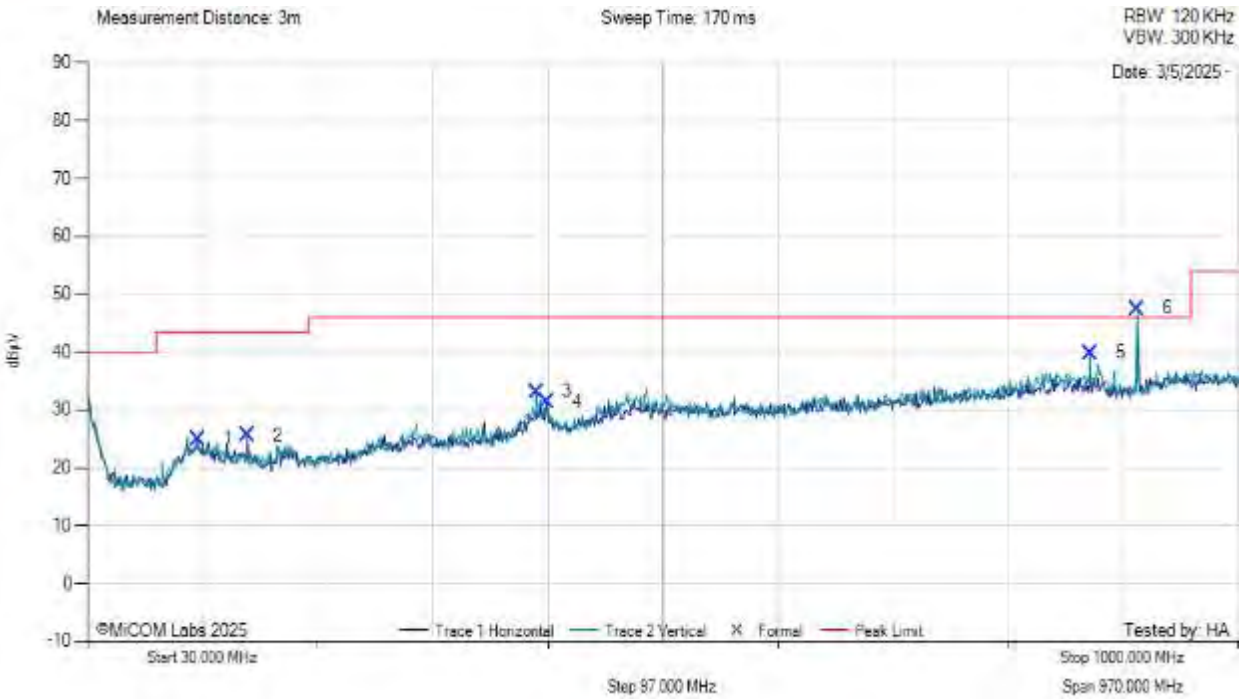
30 MHz to 1 GHz

Test Freq: 914.6 MHz, Antenna: FG9026 Antenna



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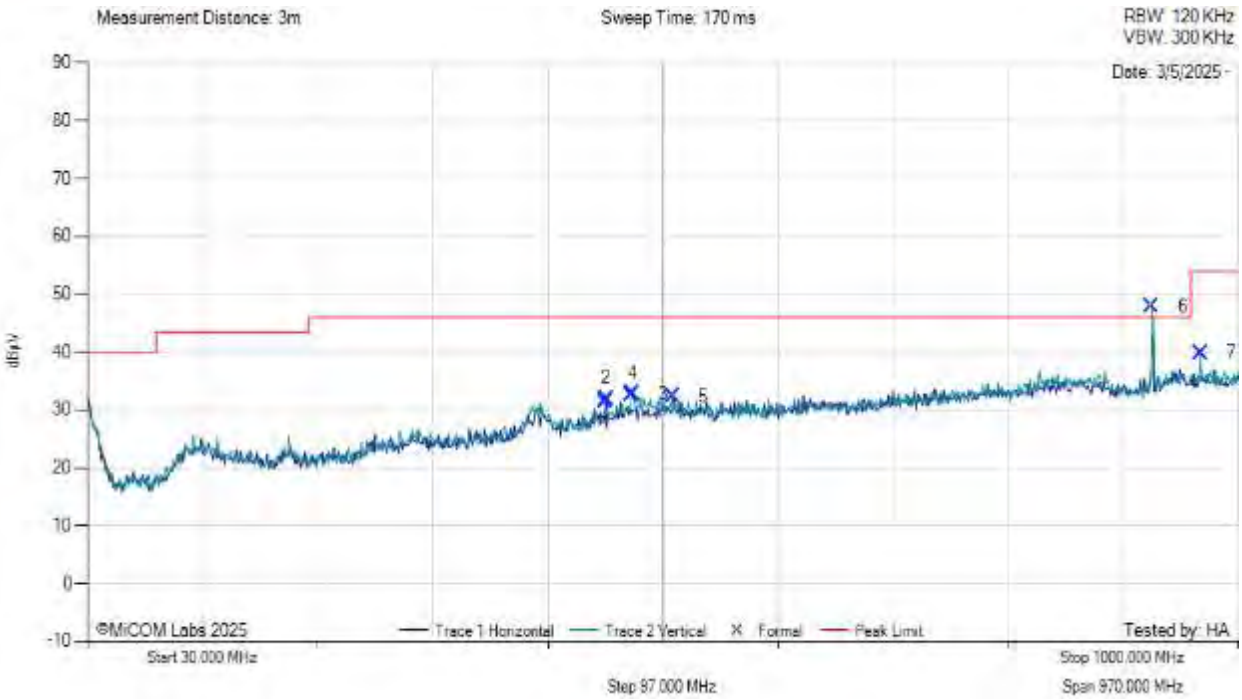
30 MHz to 1 GHz

Test Freq: 927.2 MHz, Antenna: FG9026 Antenna



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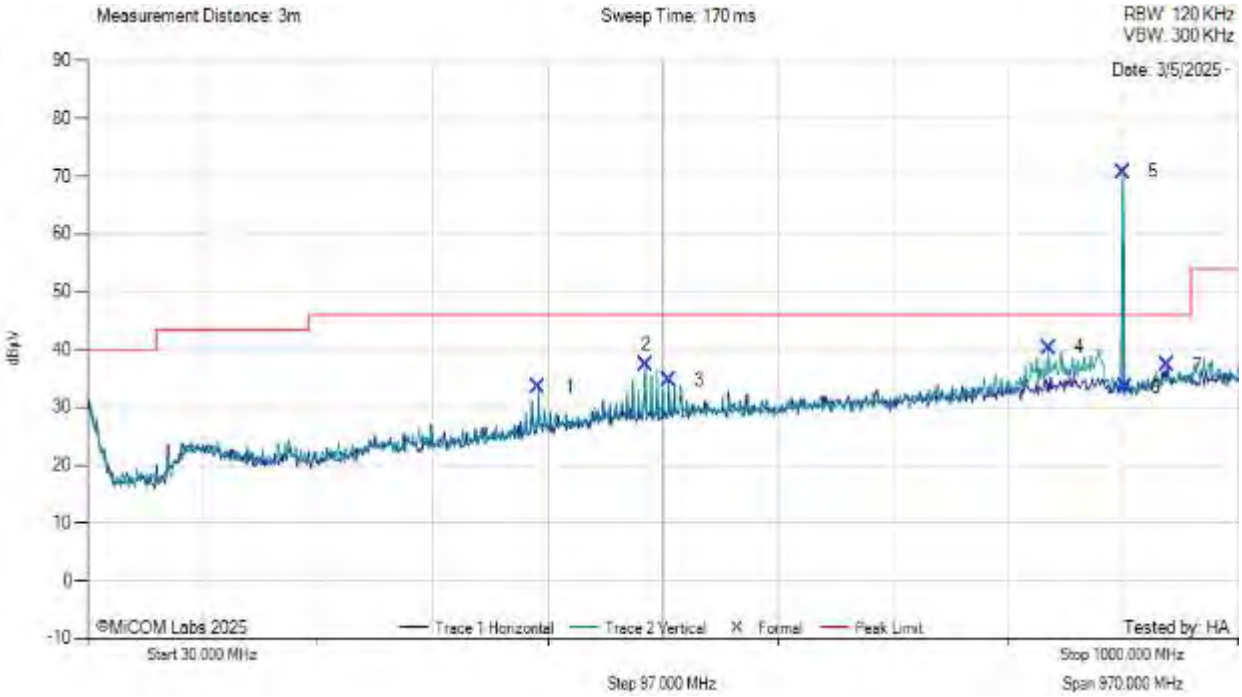
OFDM OPT4 MCS4

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: FG9026 Antenna



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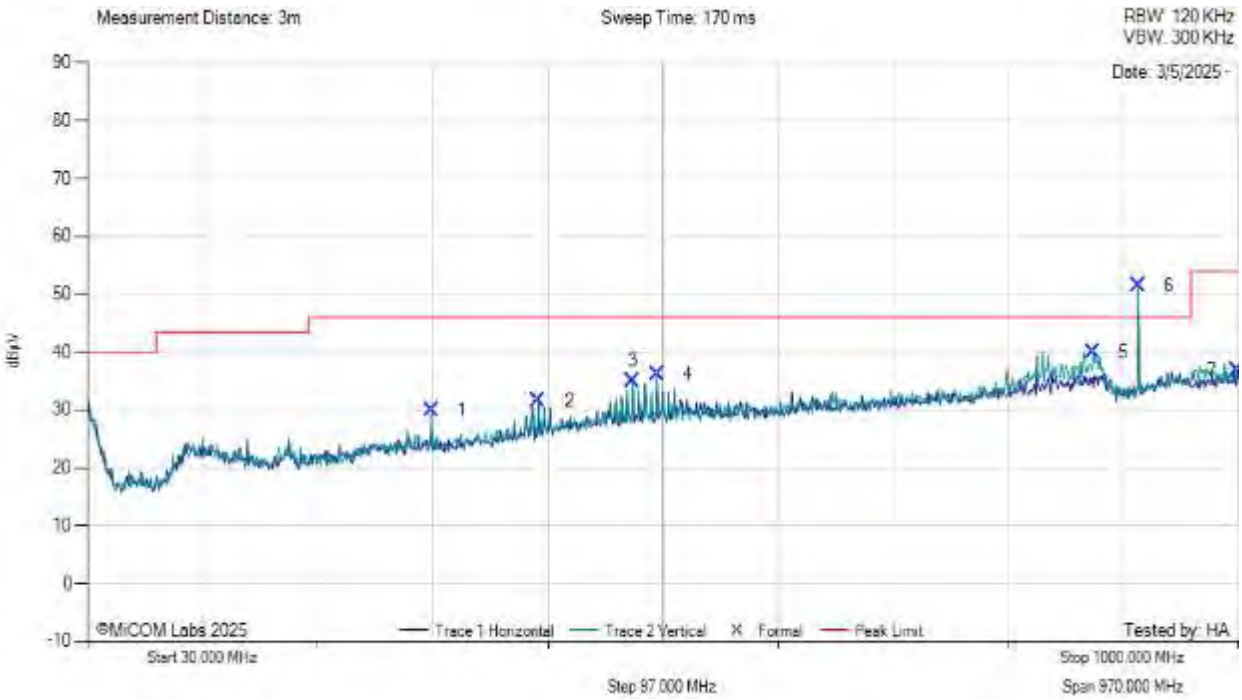
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: FG9026 Antenna



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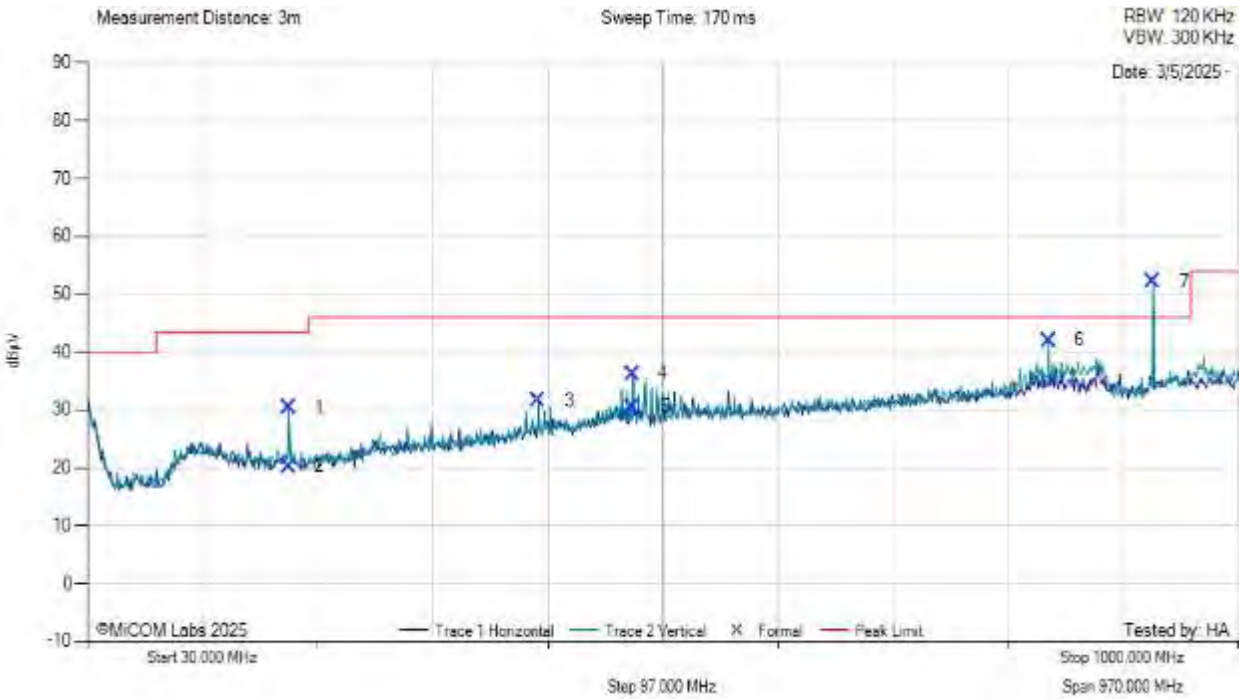
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: FG9026 Antenna



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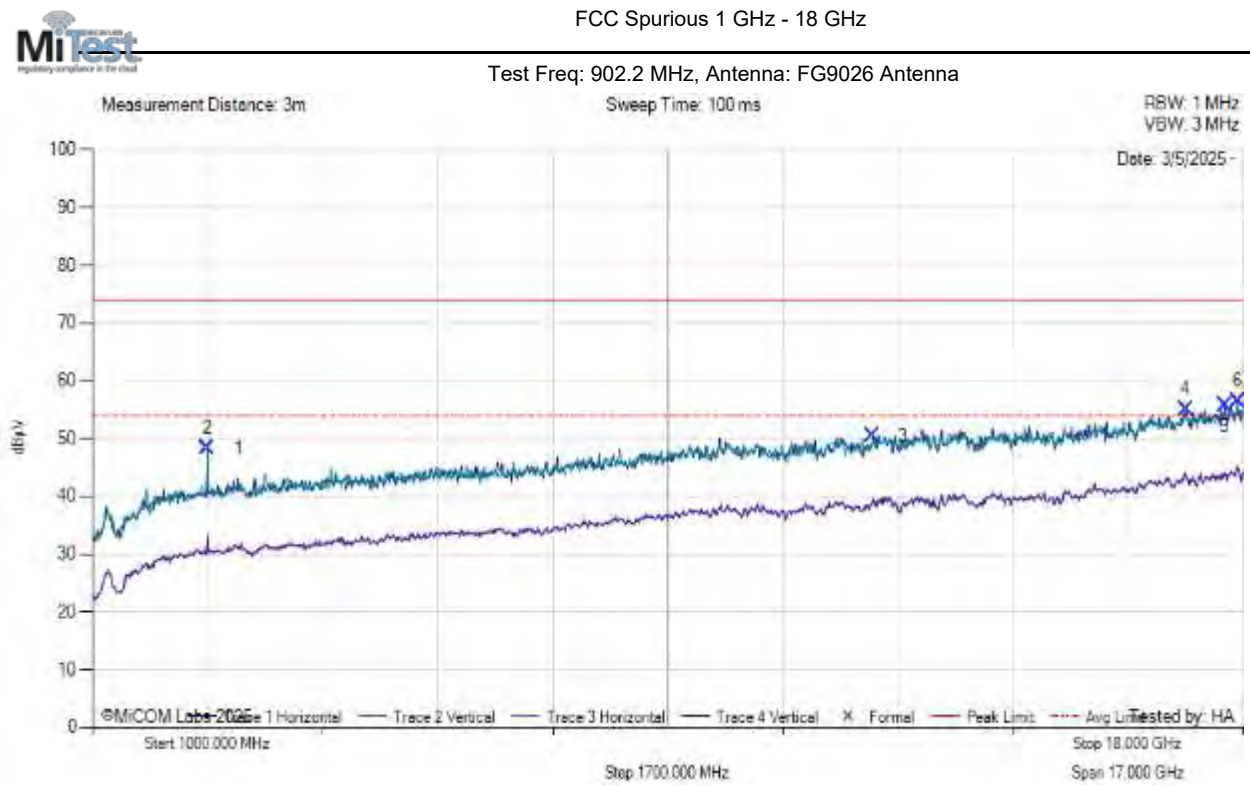
FG9026 Antenna (1GHz – 18GHz)

FSK DR 50k



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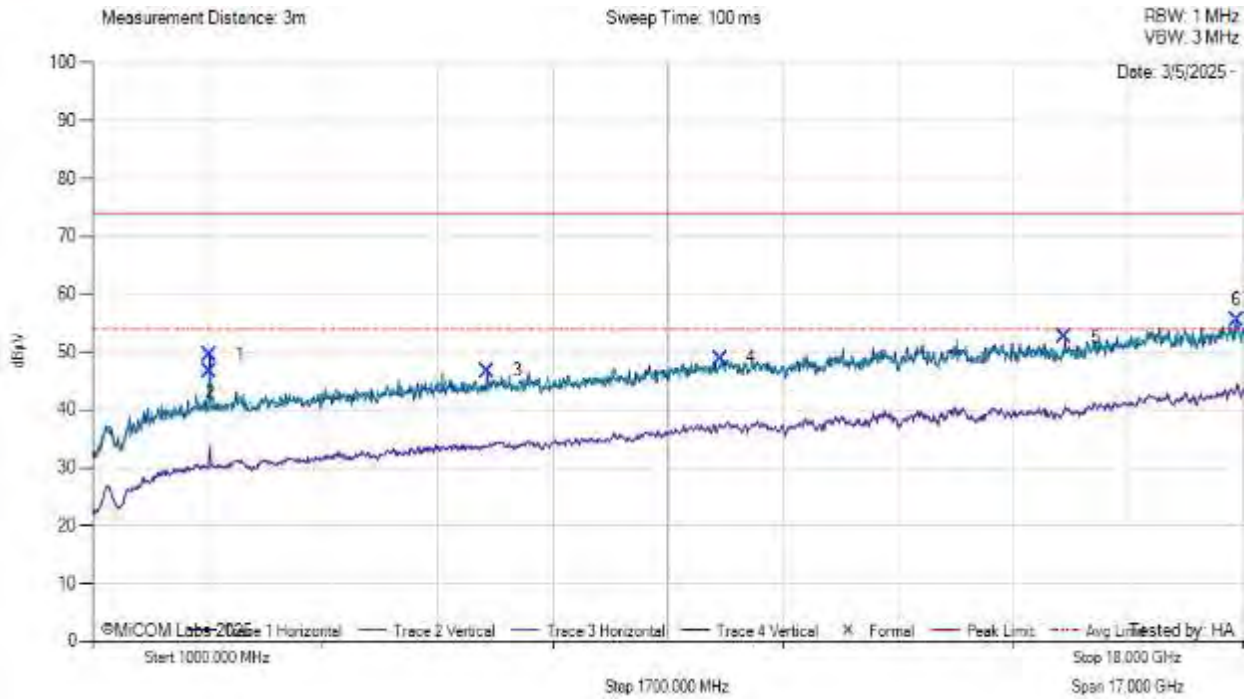
FCC Spurious 1 GHz - 18 GHz

Test Freq: 915.0 MHz, Antenna: FG9026 Antenna



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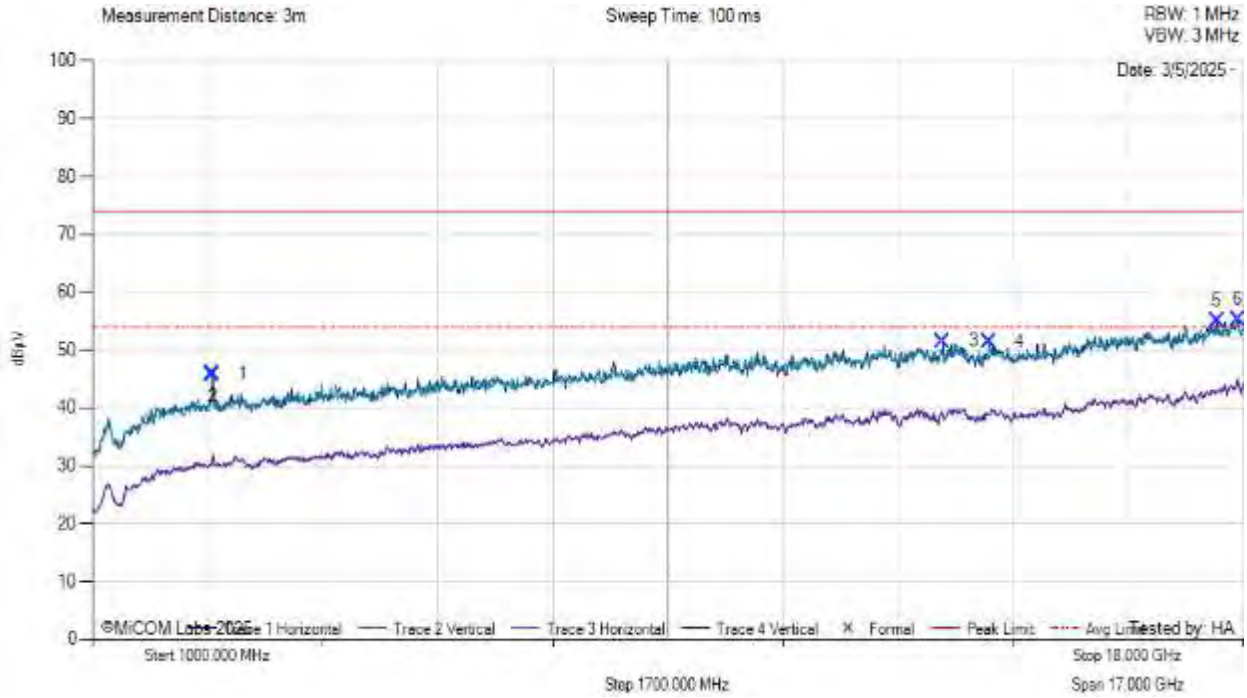
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.8 MHz, Antenna: FG9026 Antenna



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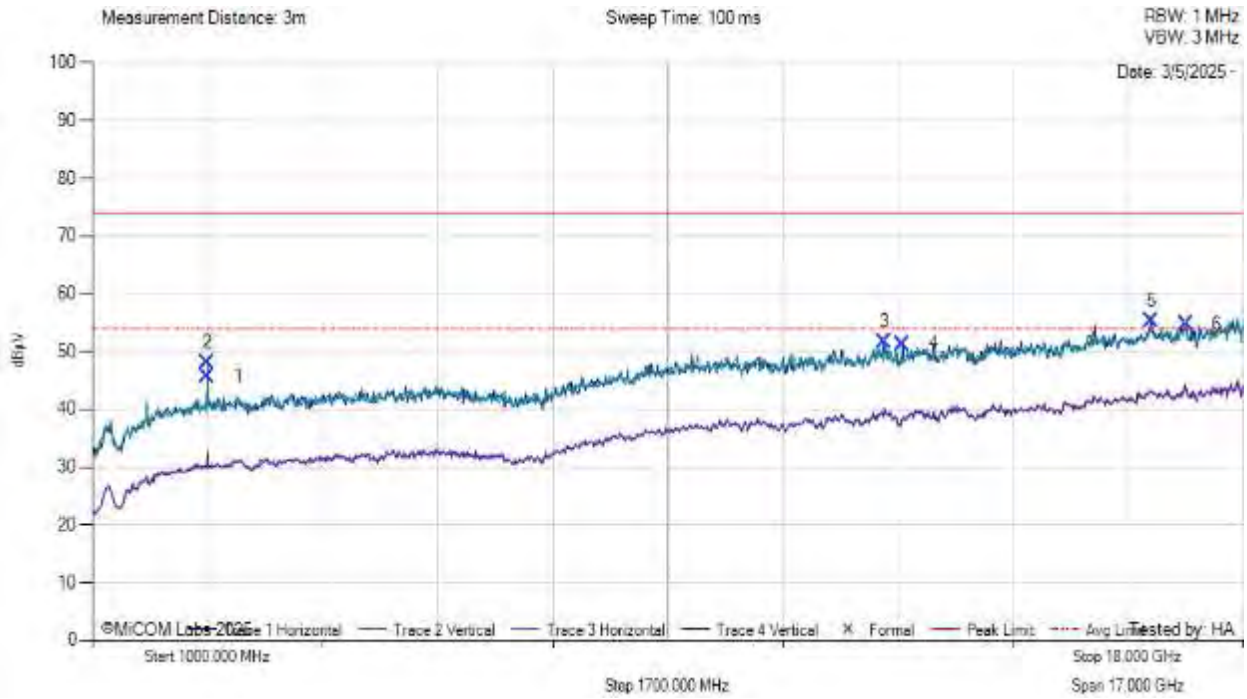
FSK DR 300k

FCC Spurious 1 GHz - 18 GHz

Test Freq: 902.6 MHz, Antenna: FG9026 Antenna



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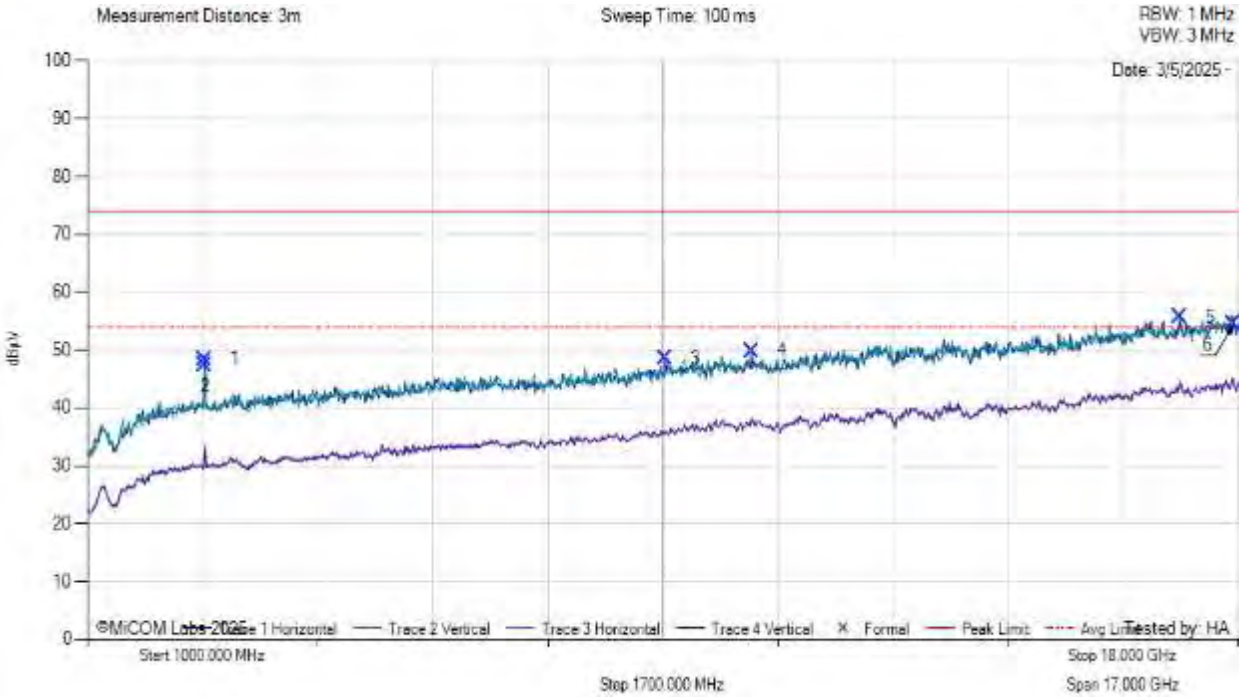
FCC Spurious 1 GHz - 18 GHz

Test Freq: 914.6 MHz, Antenna: FG9026 Antenna



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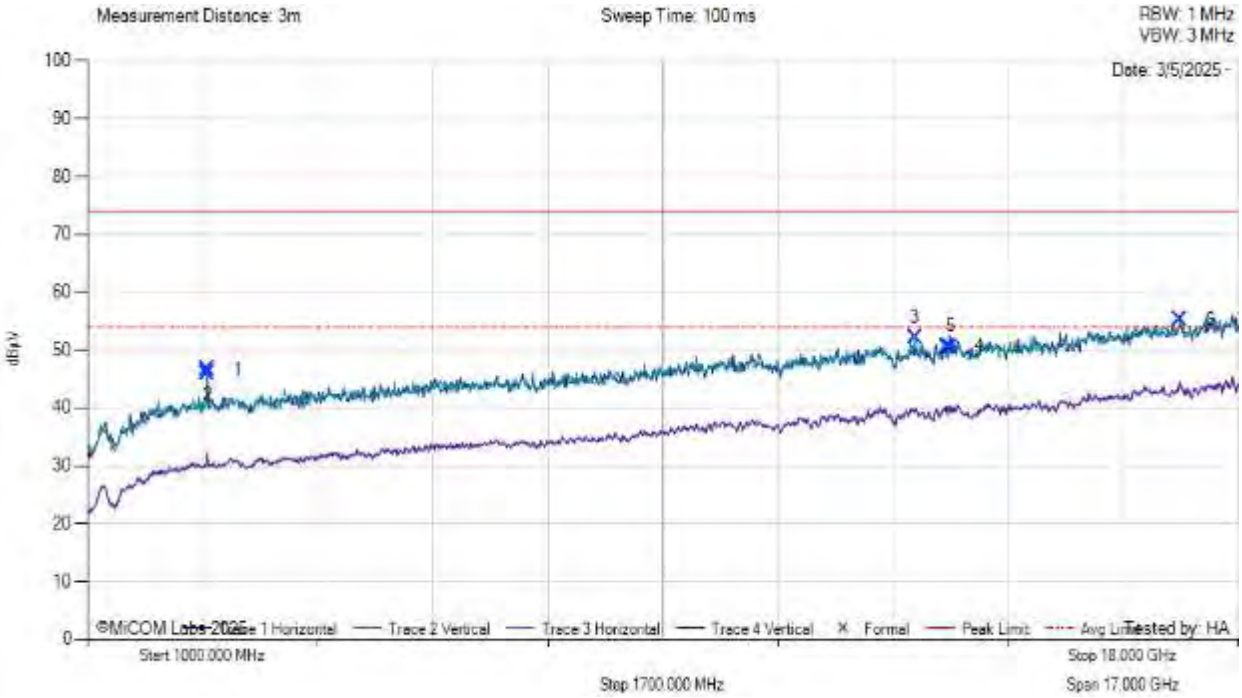
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.2 MHz, Antenna: FG9026 Antenna



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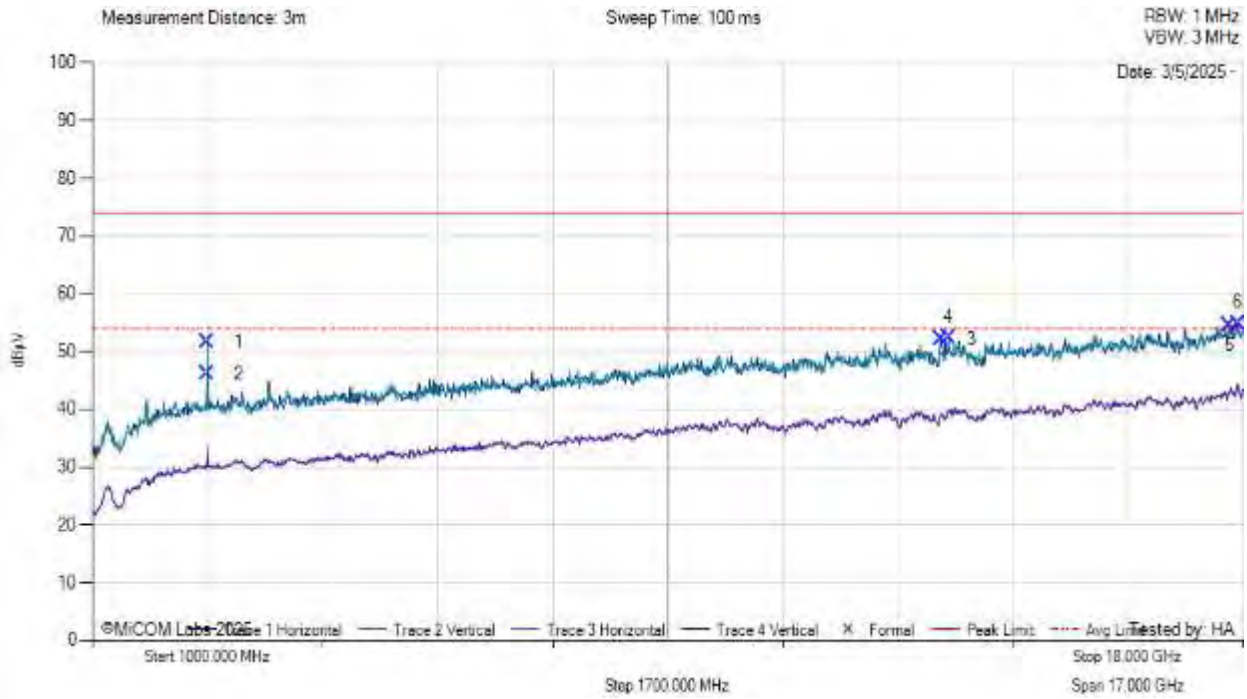
OFDM OPT4 MCS4

FCC Spurious 1 GHz - 18 GHz

Test Freq: 902.2 MHz, Antenna: FG9026 Antenna



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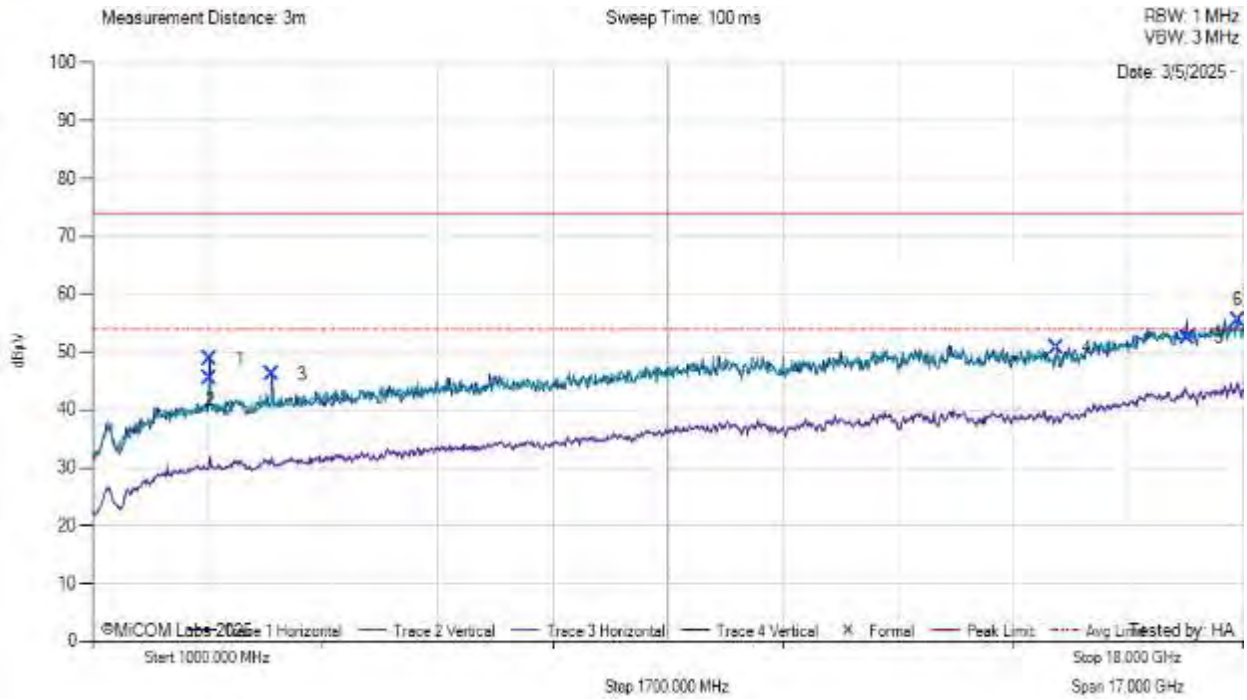
FCC Spurious 1 GHz - 18 GHz

Test Freq: 915.0 MHz, Antenna: FG9026 Antenna



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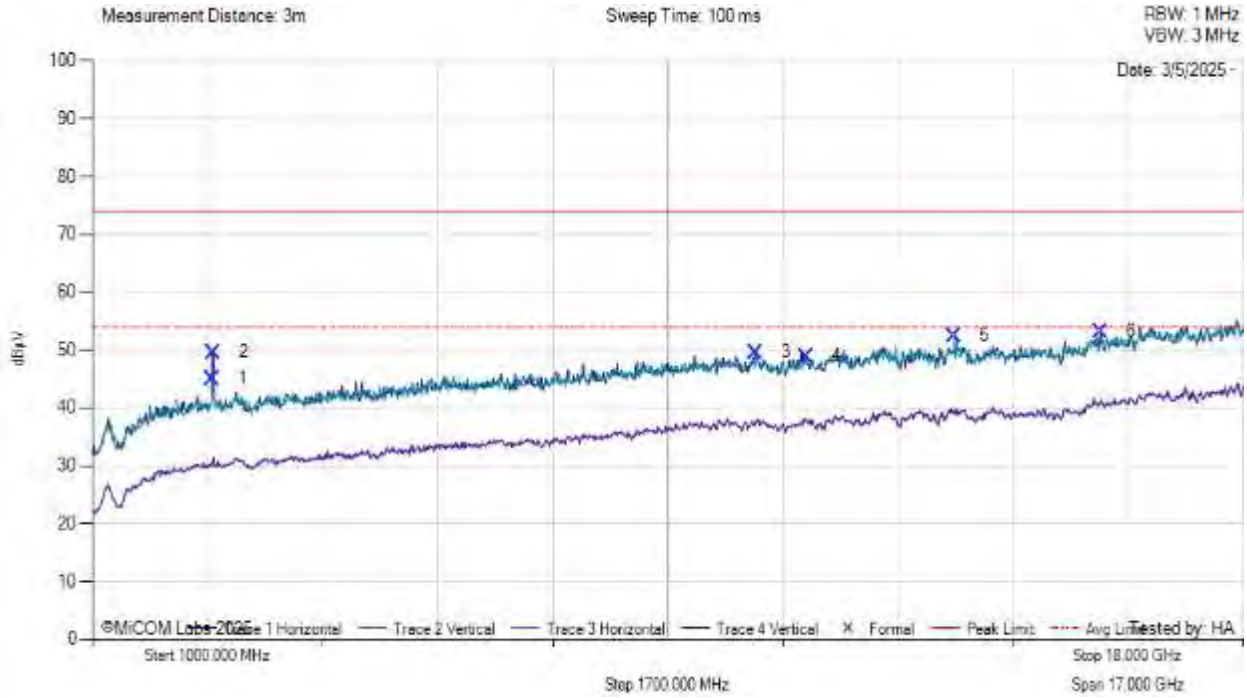
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.8 MHz, Antenna: FG9026 Antenna



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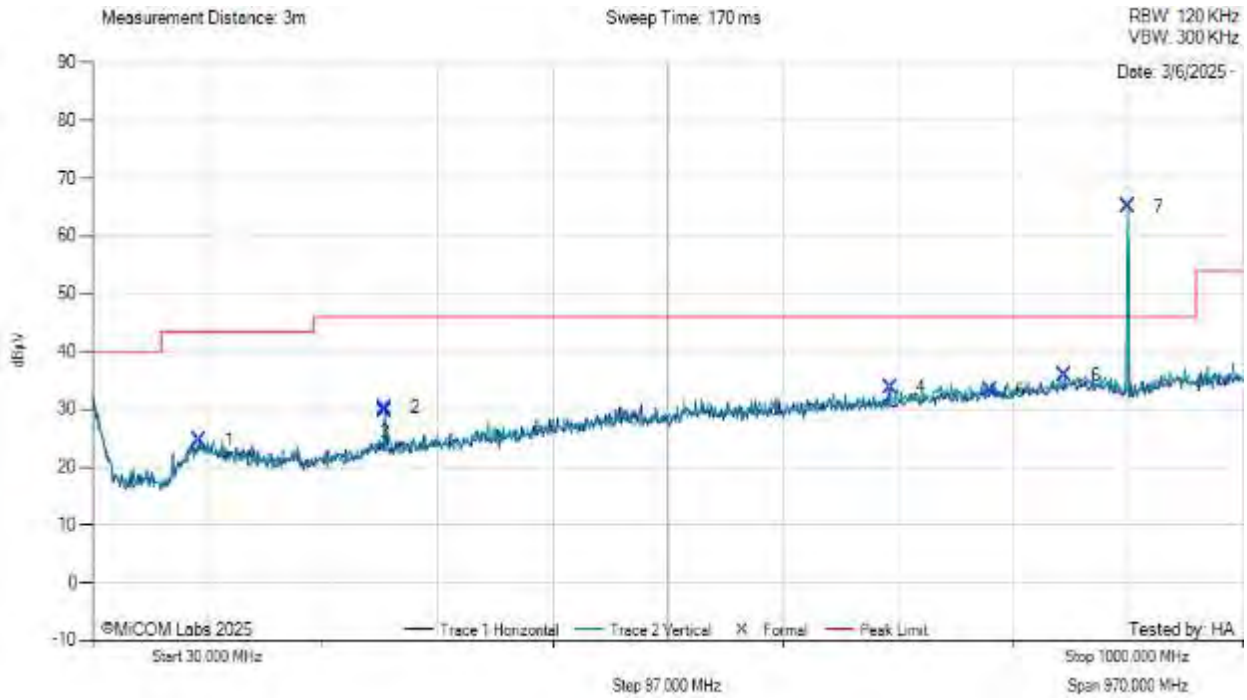
Laird Antenna (30MHz – 1GHz)

FSK DR 50k

30 MHz to 1 GHz

Test Freq: 903.0 MHz, Antenna: Laird Antenna



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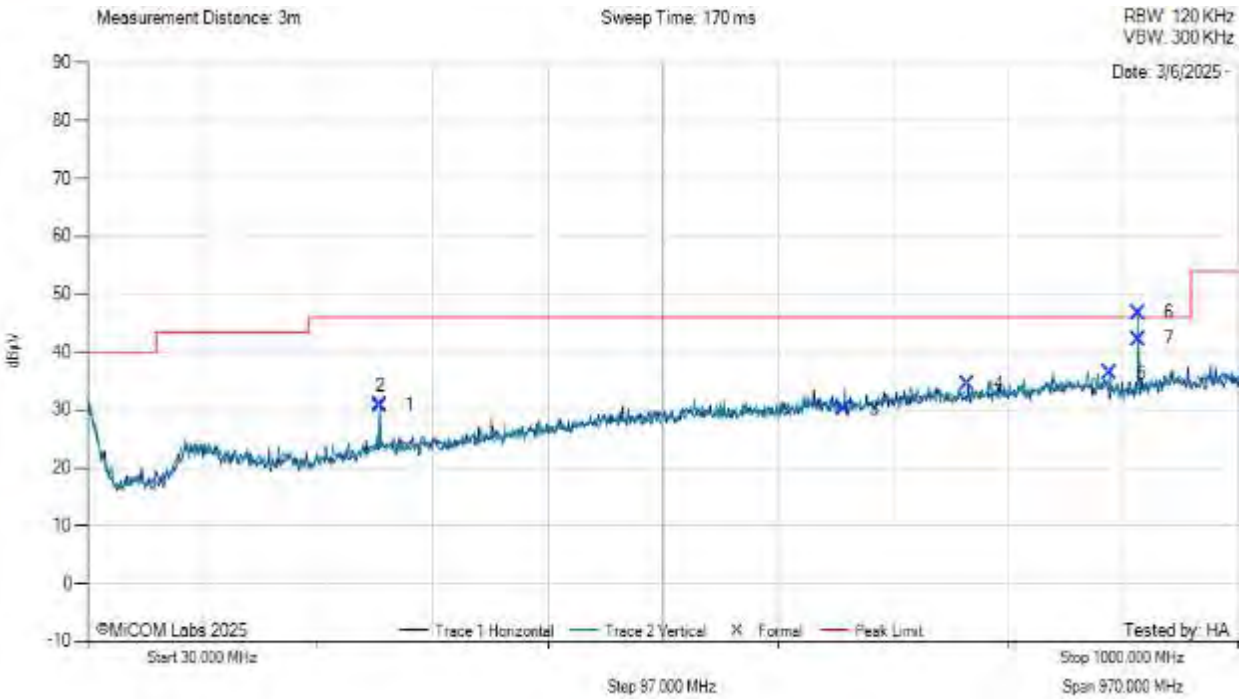
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: Laird Antenna



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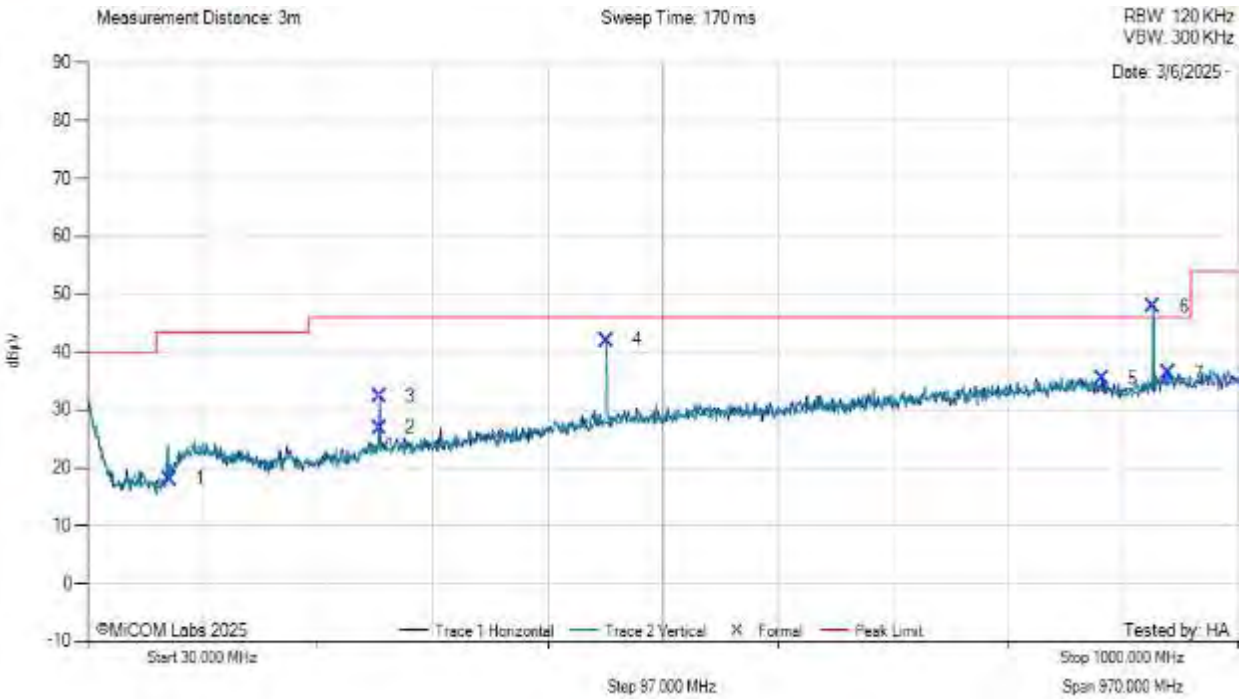
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: Laird Antenna



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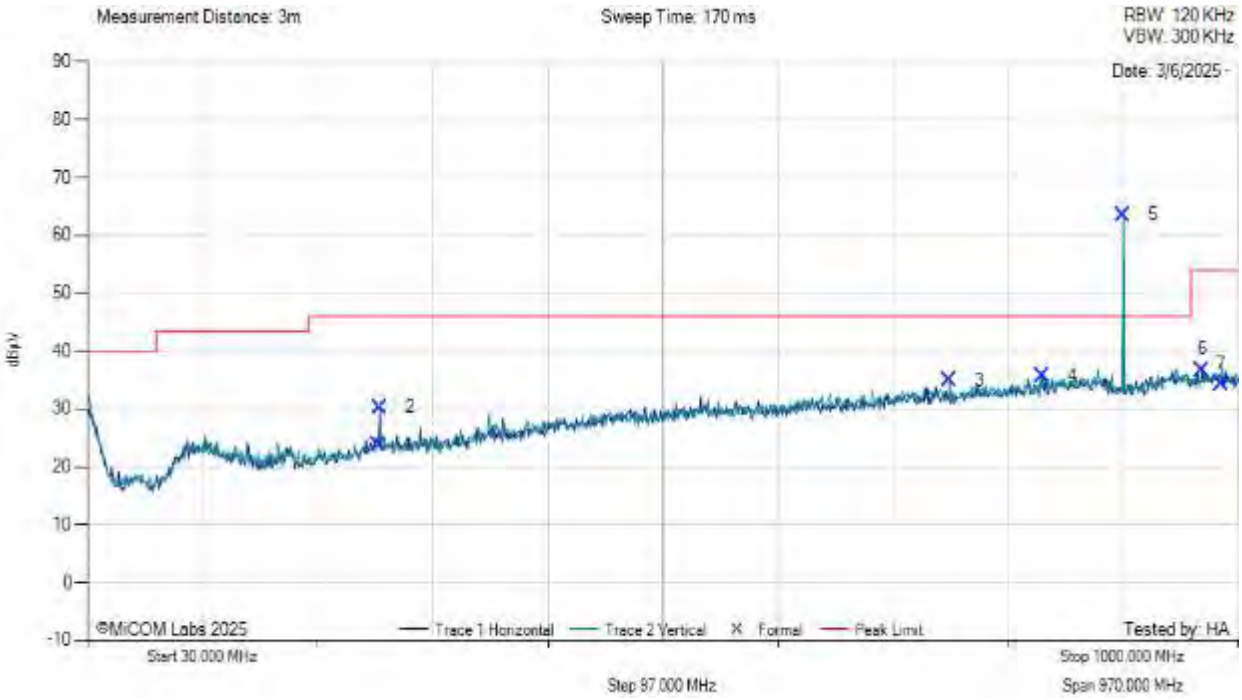
FSK DR 300k

30 MHz to 1 GHz

Test Freq: 902.6 MHz, Antenna: Laird Antenna



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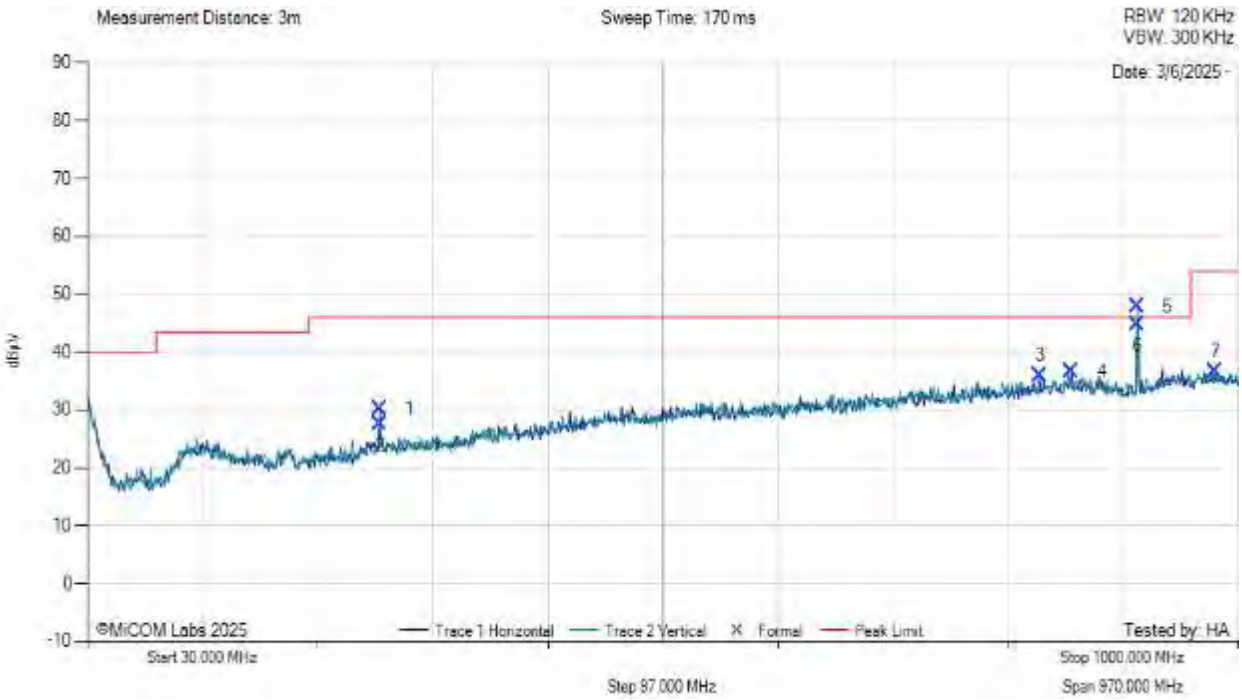
30 MHz to 1 GHz

Test Freq: 914.6 MHz, Antenna: Laird Antenna



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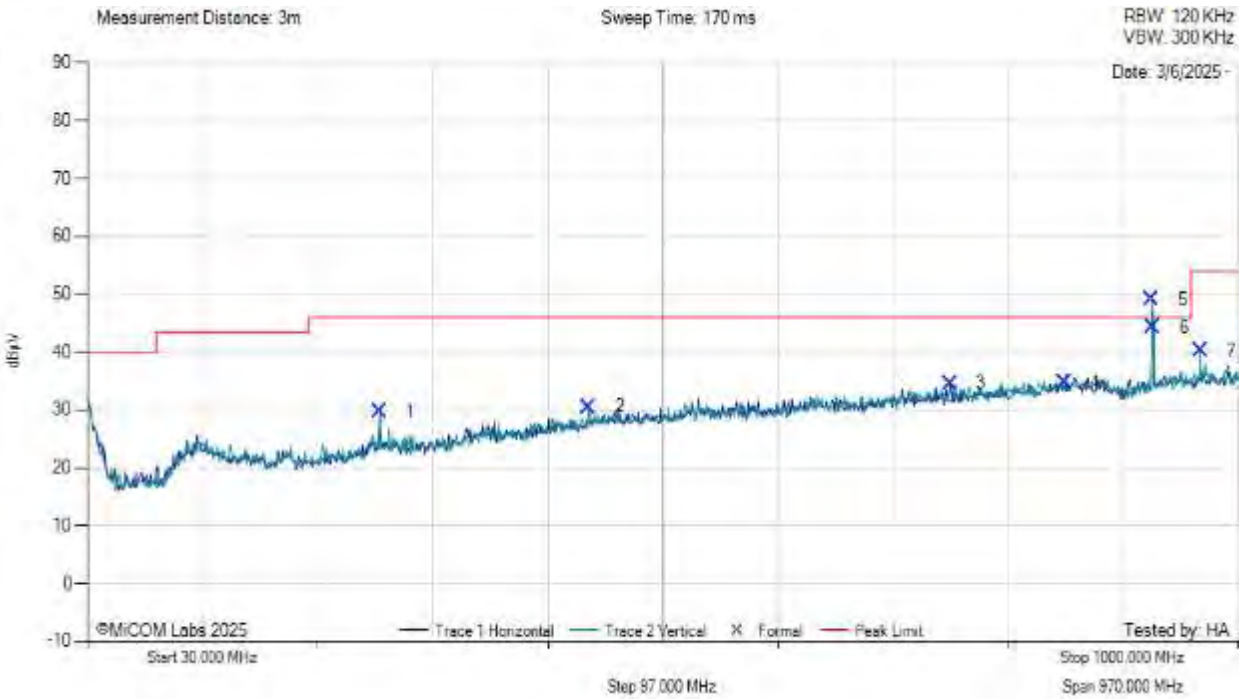
30 MHz to 1 GHz

Test Freq: 927.2 MHz, Antenna: Laird Antenna



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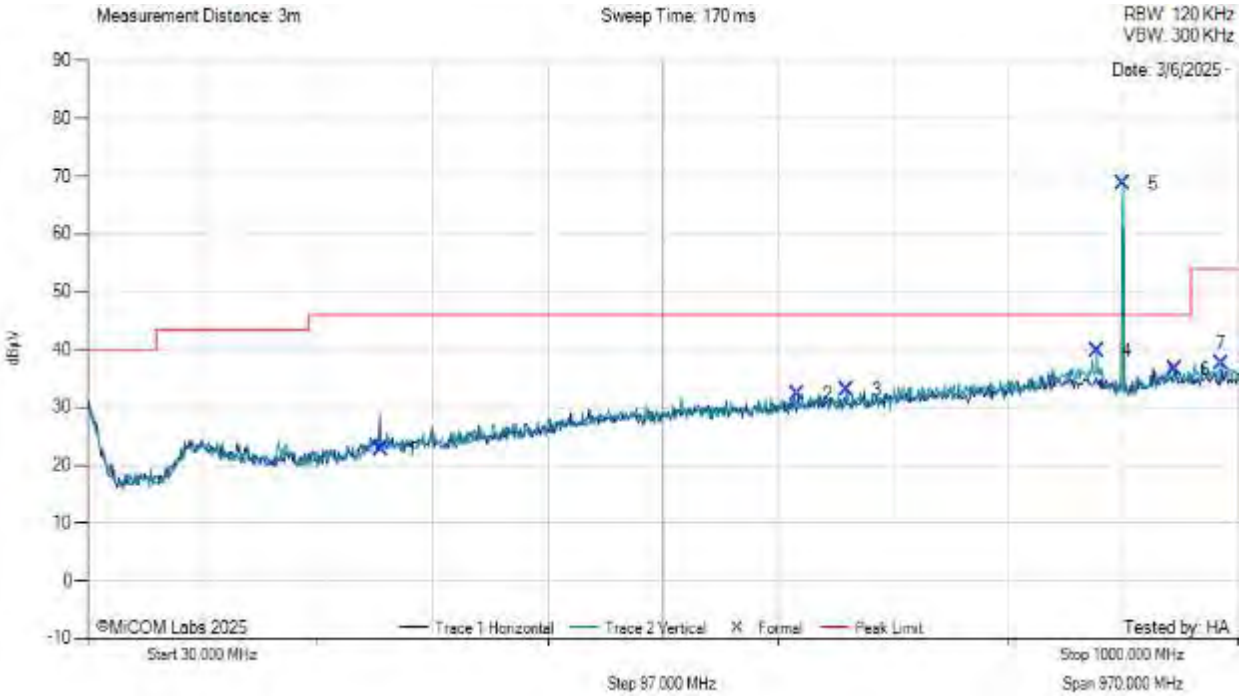
OFDM OPT4 MCS4

30 MHz to 1 GHz

Test Freq: 903.2 MHz, Antenna: Laird Antenna



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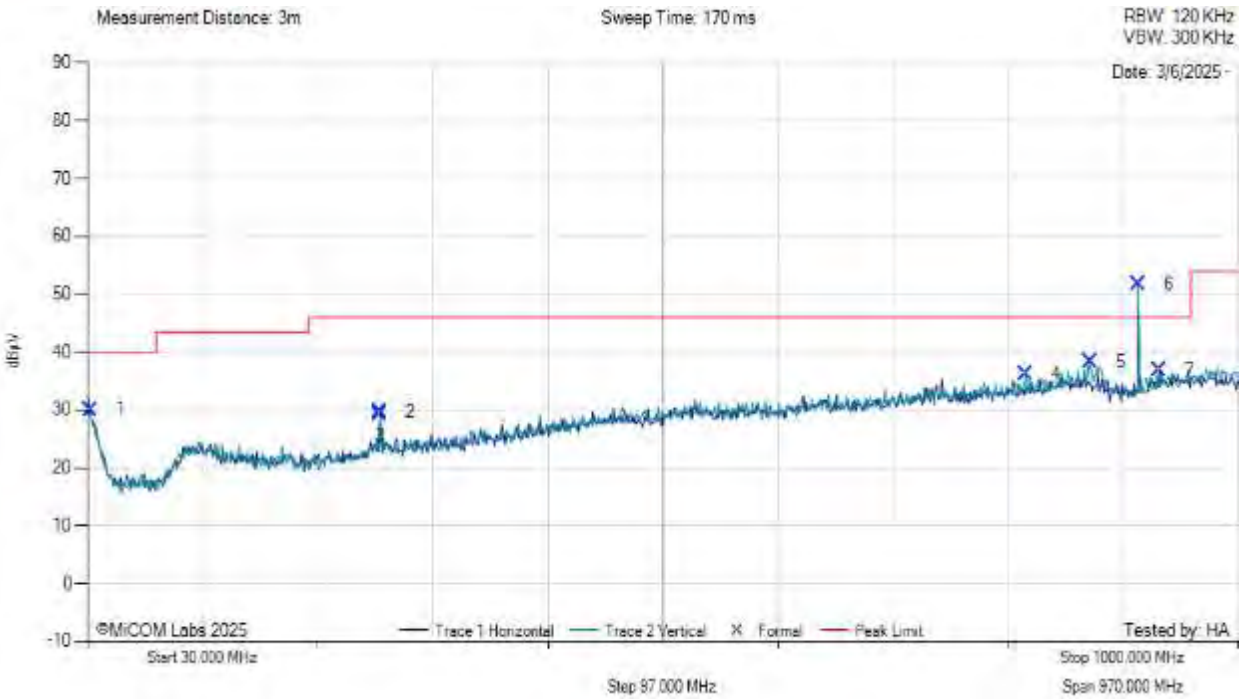
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: Laird Antenna



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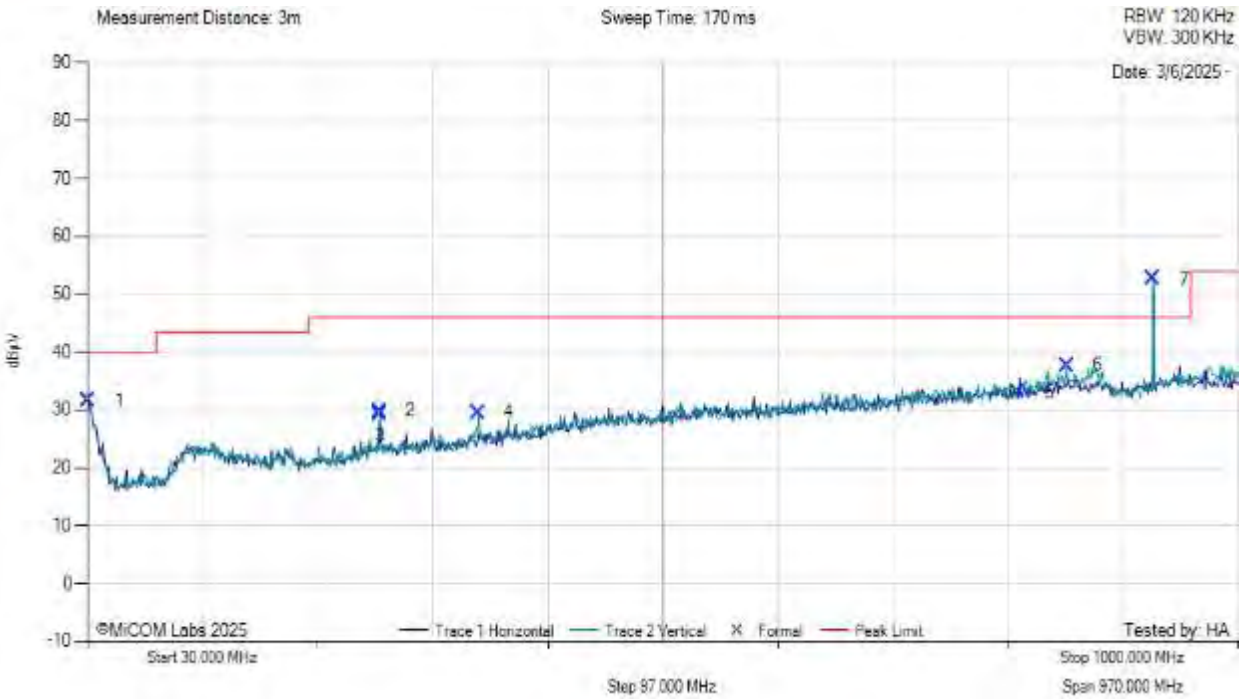
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: Laird Antenna



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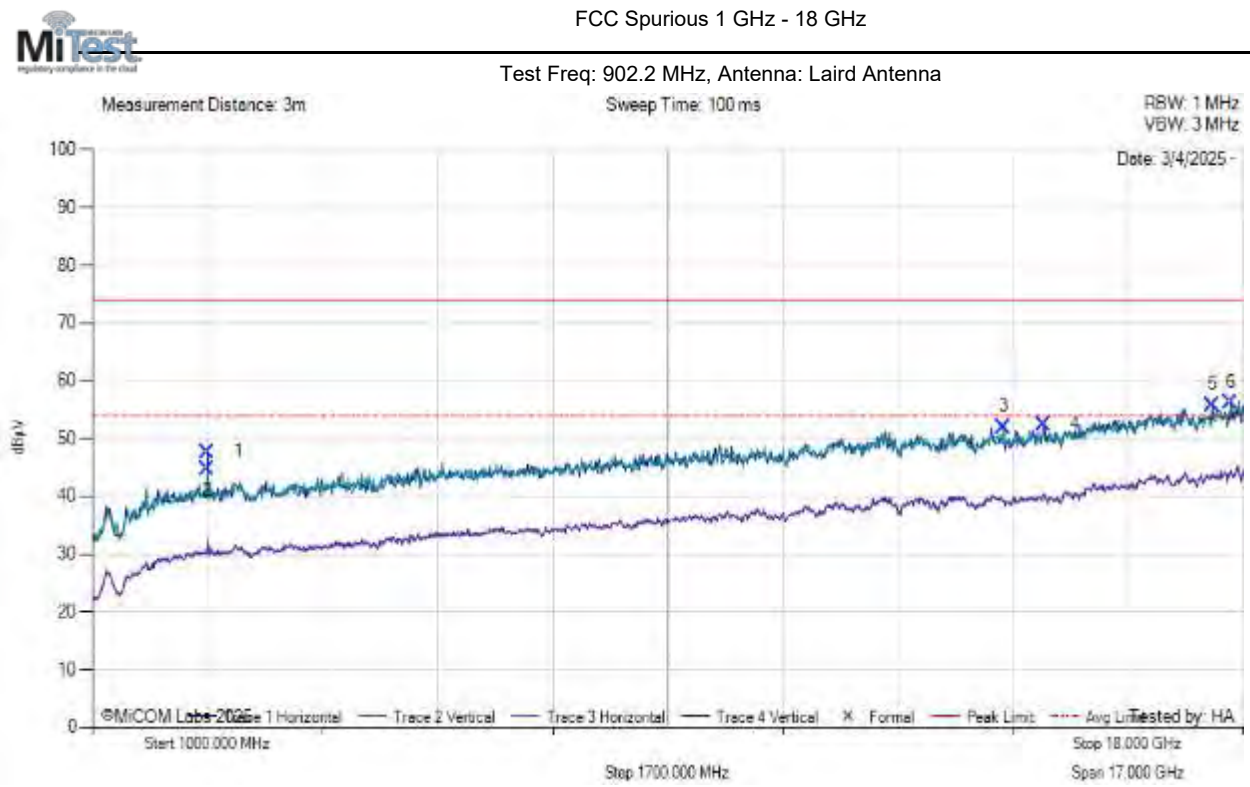
Laird Antenna (1GHz – 18GHz)

FSK DR 50k



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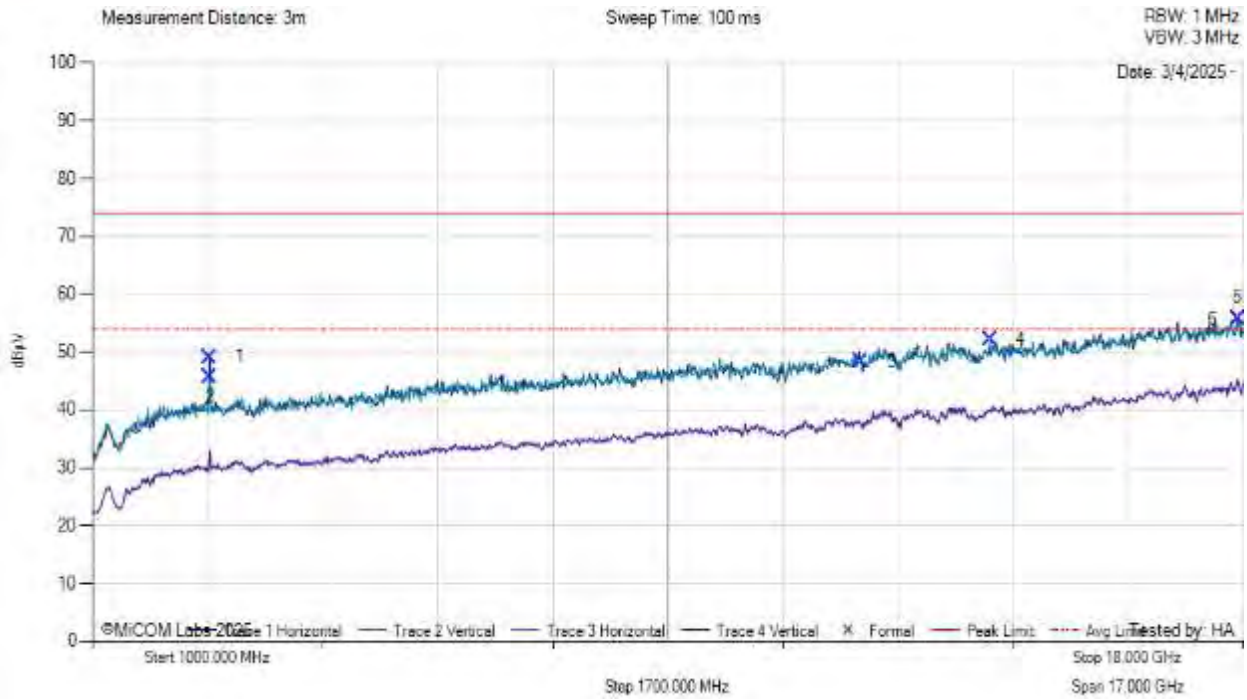
FCC Spurious 1 GHz - 18 GHz

Test Freq: 915.0 MHz, Antenna: Laird Antenna



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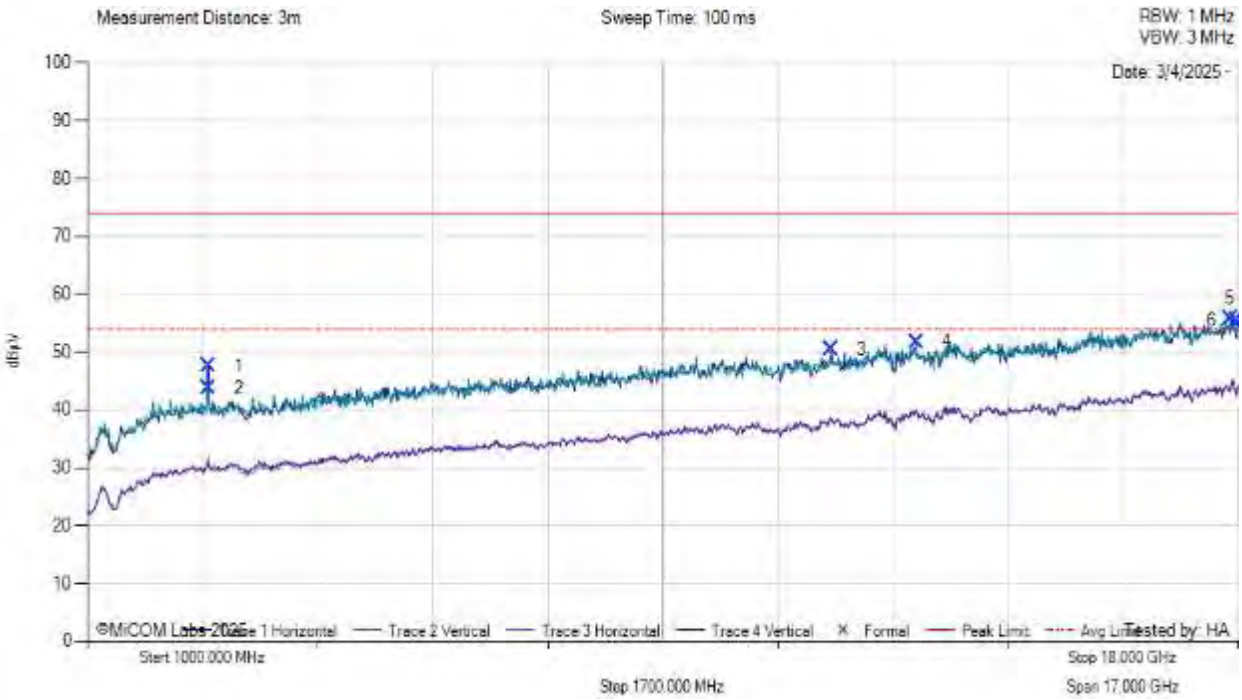
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.8 MHz, Antenna: Laird Antenna



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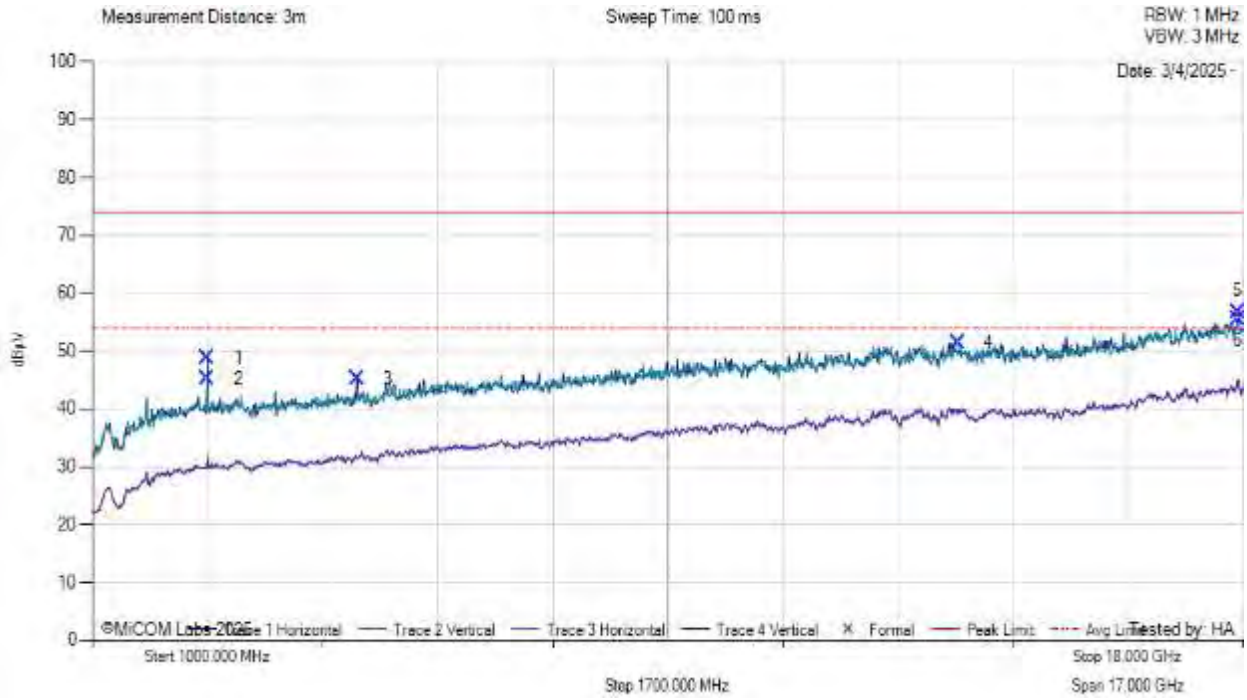
FSK DR 300k

FCC Spurious 1 GHz - 18 GHz

Test Freq: 902.6 MHz, Antenna: Laird Antenna



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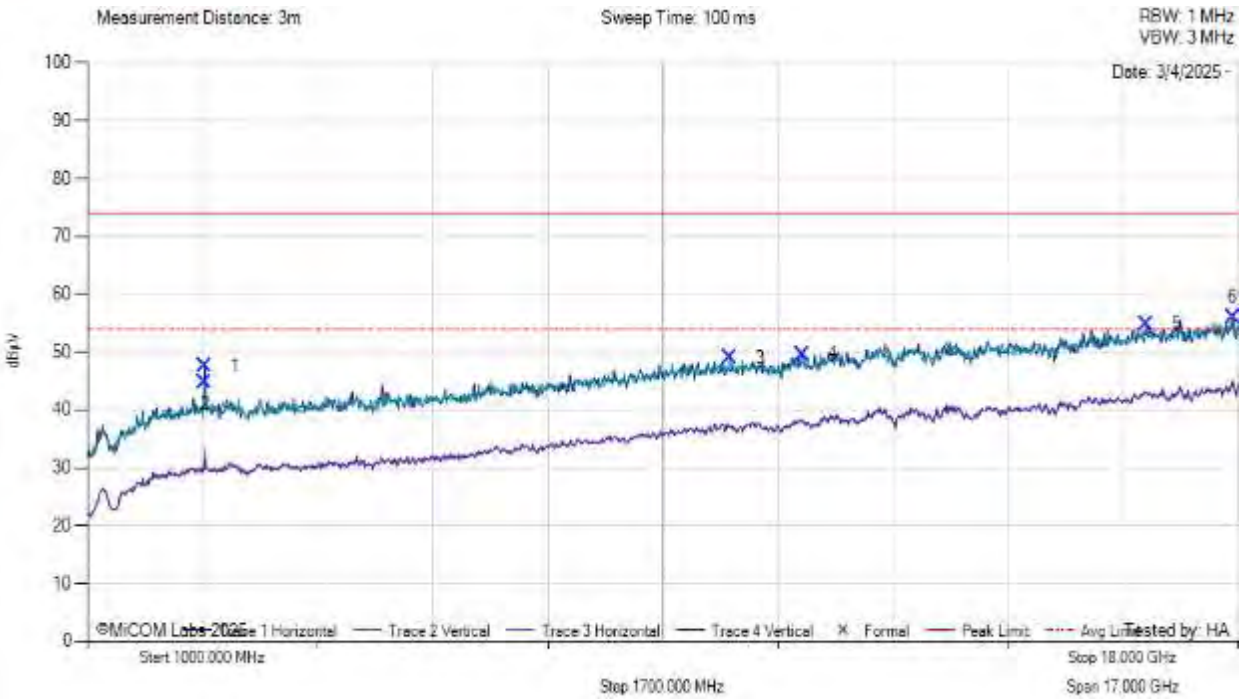
FCC Spurious 1 GHz - 18 GHz

Test Freq: 914.6 MHz, Antenna: Laird Antenna



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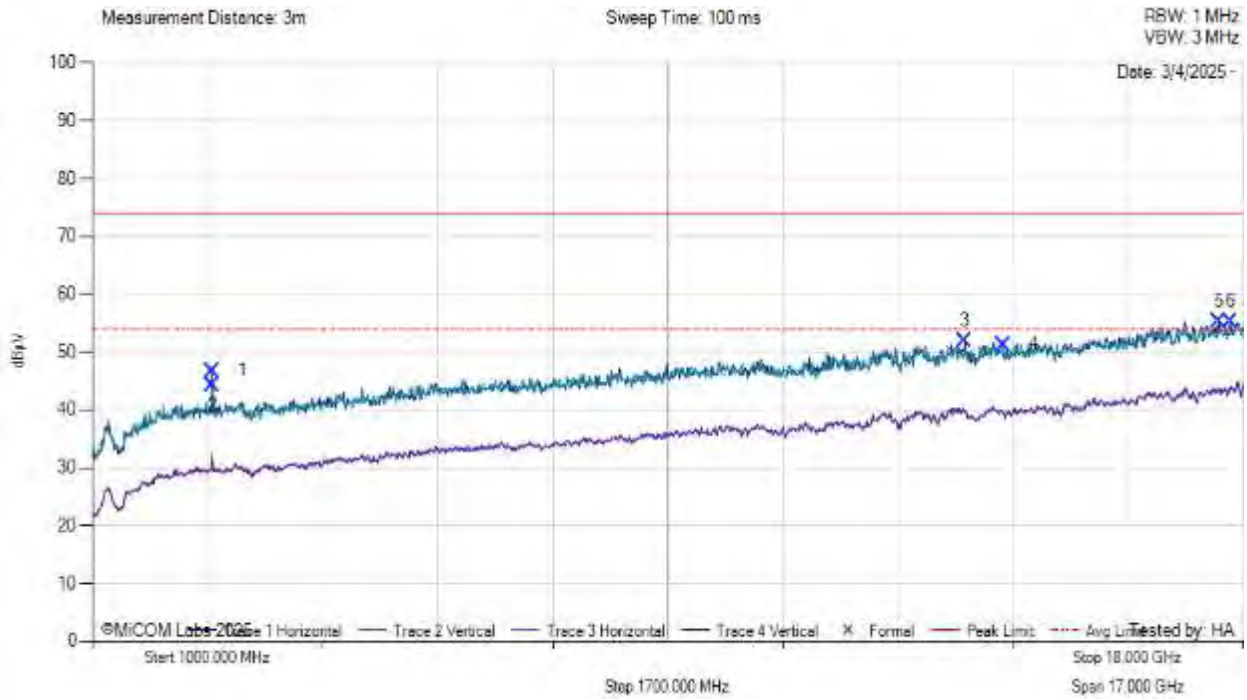
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.2 MHz, Antenna: Laird Antenna



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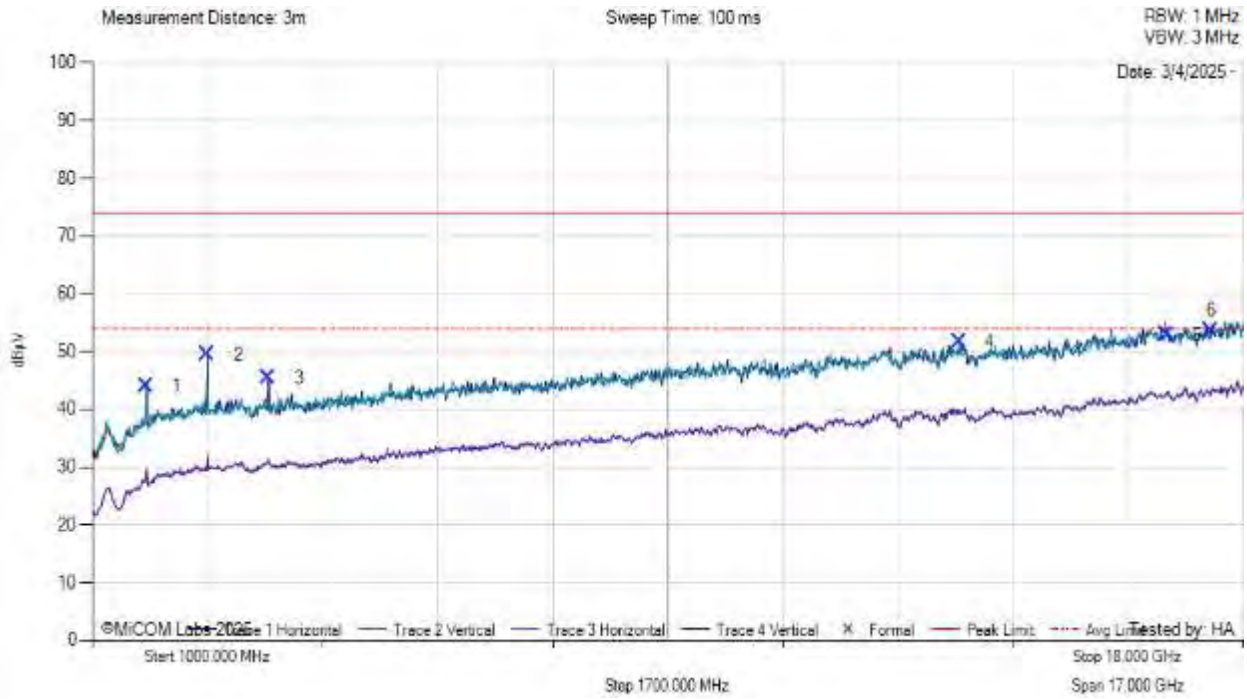
OFDM OPT4 MCS4

FCC Spurious 1 GHz - 18 GHz

Test Freq: 902.2 MHz, Antenna: Laird Antenna



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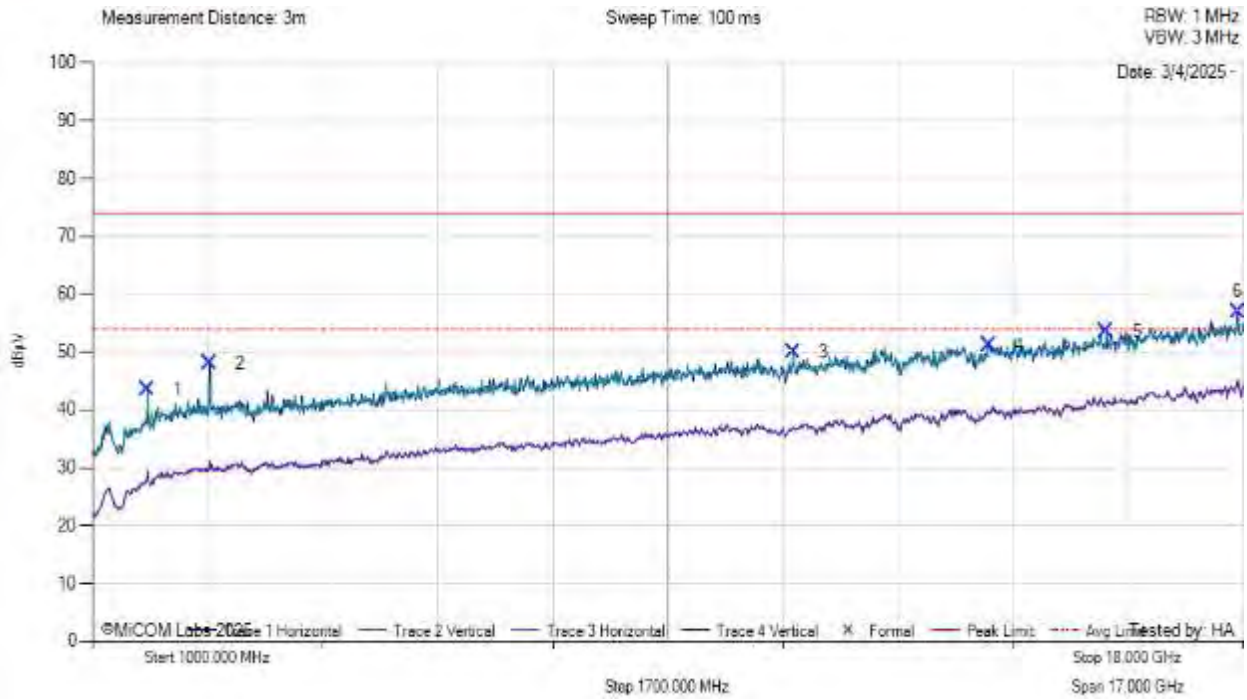
FCC Spurious 1 GHz - 18 GHz

Test Freq: 915.0 MHz, Antenna: Laird Antenna



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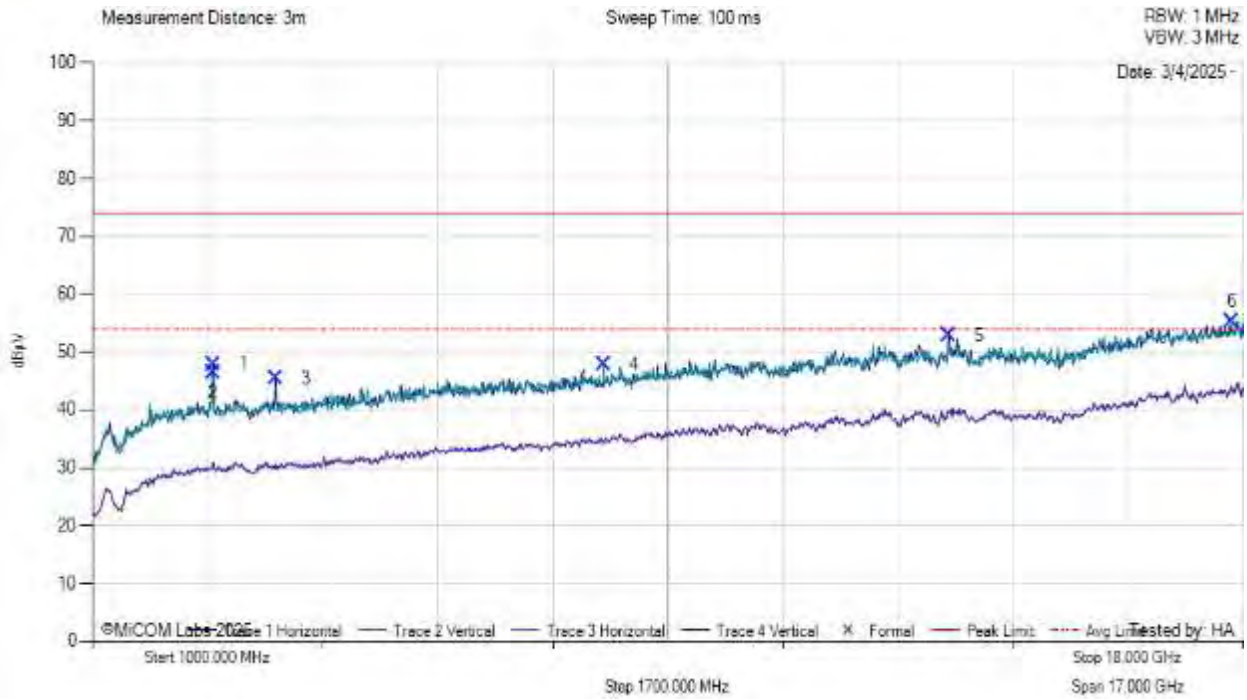
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.8 MHz, Antenna: Laird Antenna



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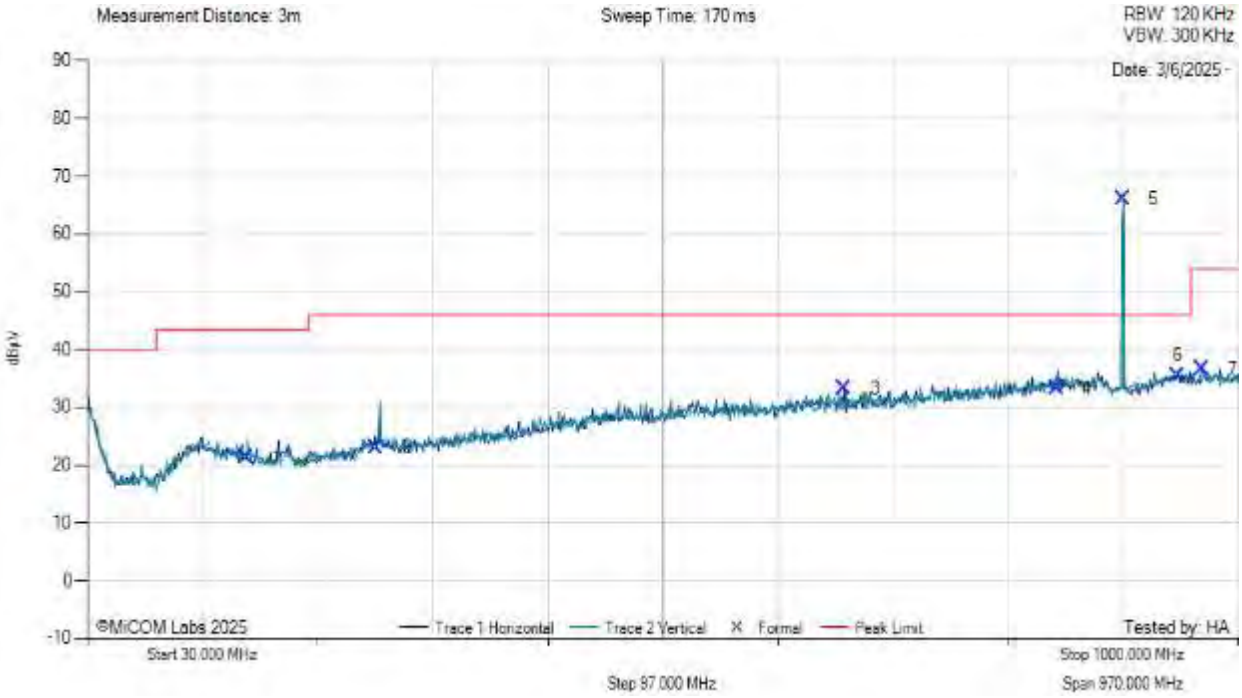
Molex Antenna (30MHz – 1GHz)

FSK DR 50k

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: Molex Antenna



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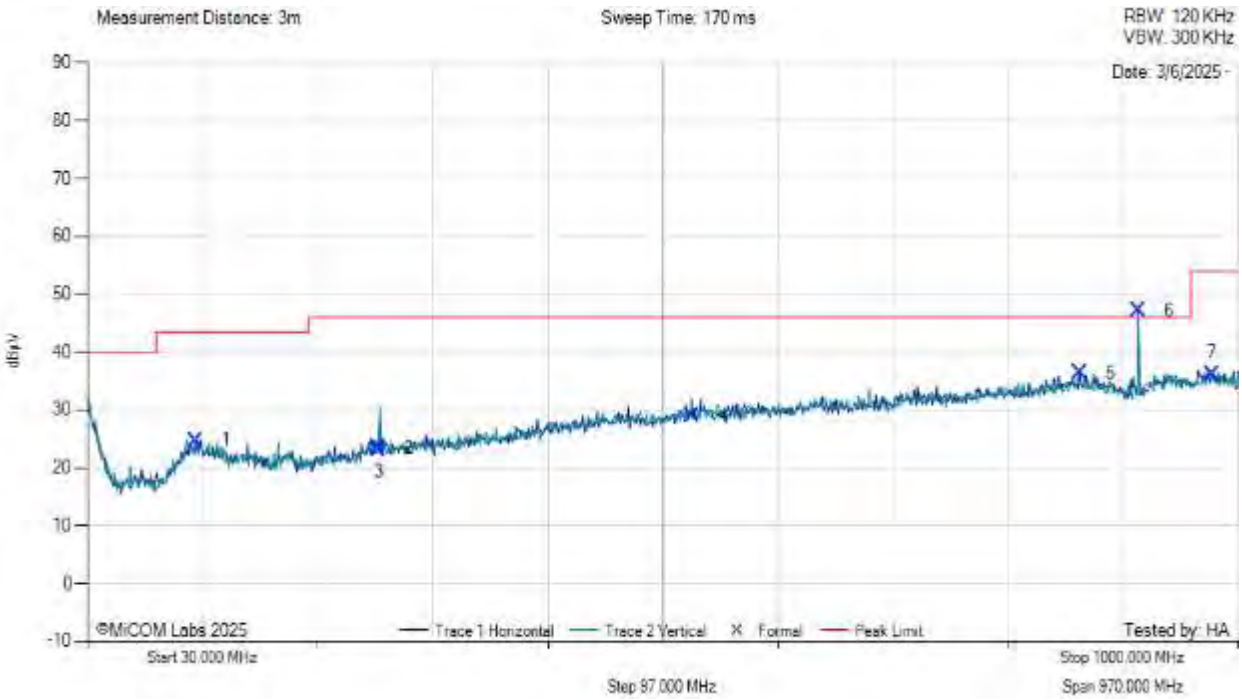
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: Molex Antenna



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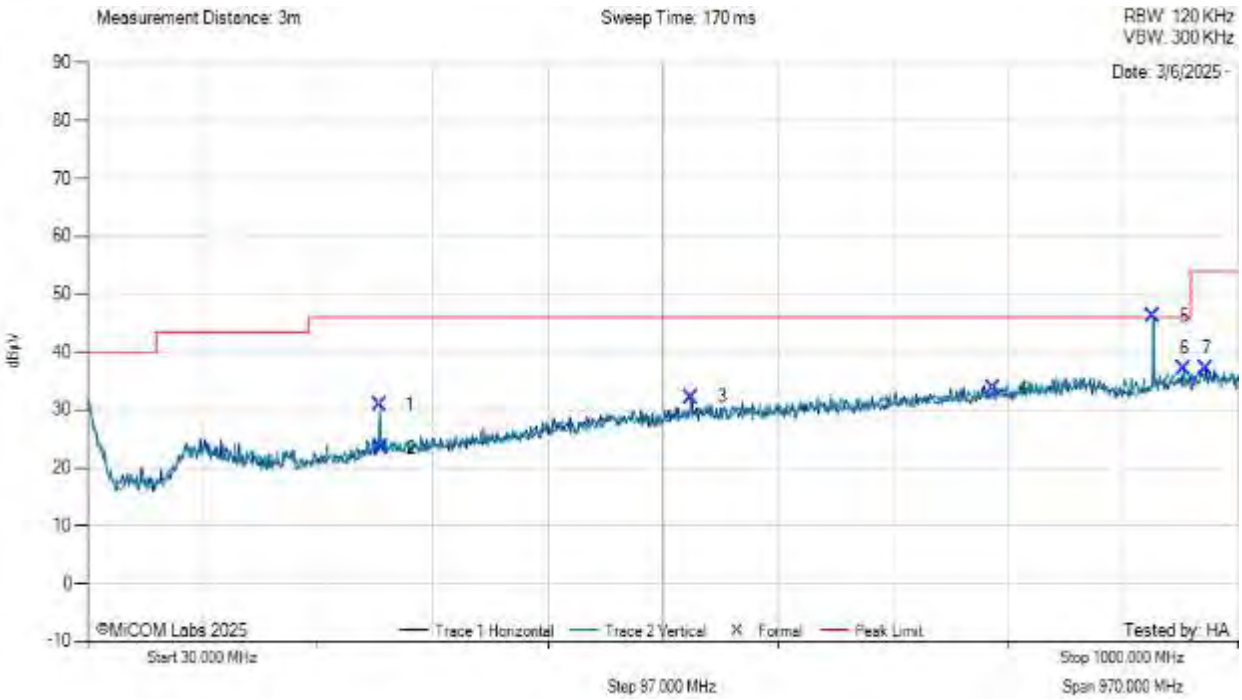
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: Molex Antenna



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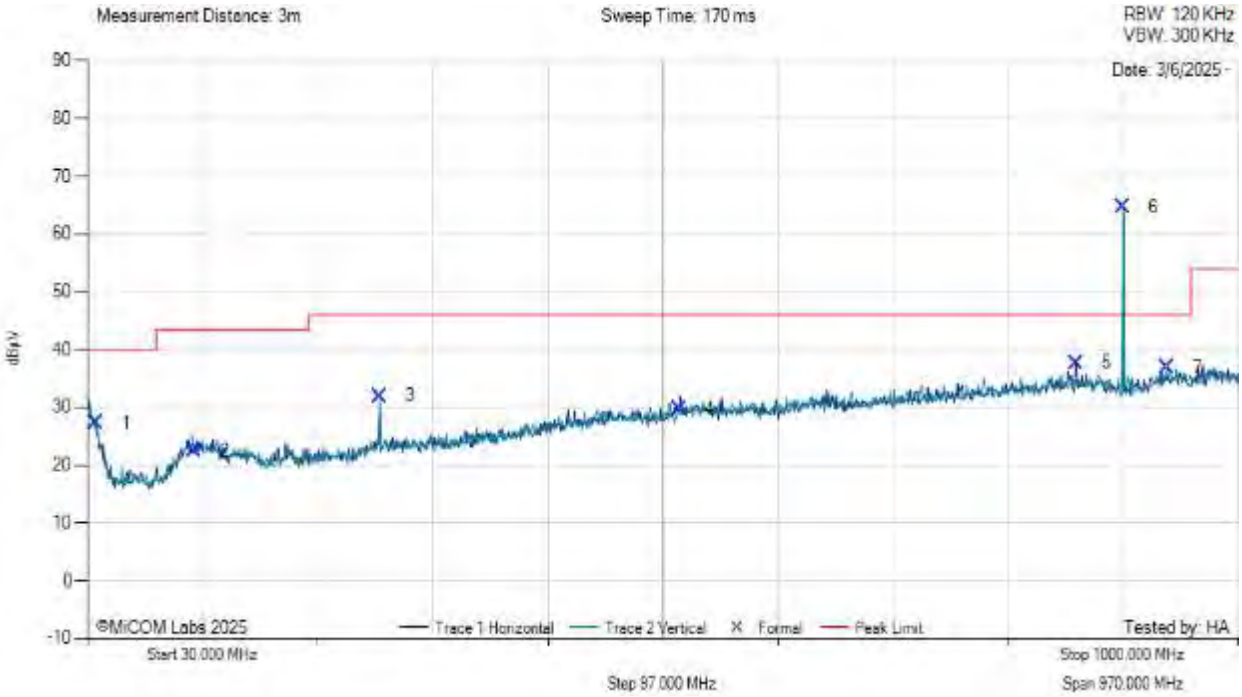
FSK DR 300k

30 MHz to 1 GHz

Test Freq: 902.6 MHz, Antenna: Molex Antenna



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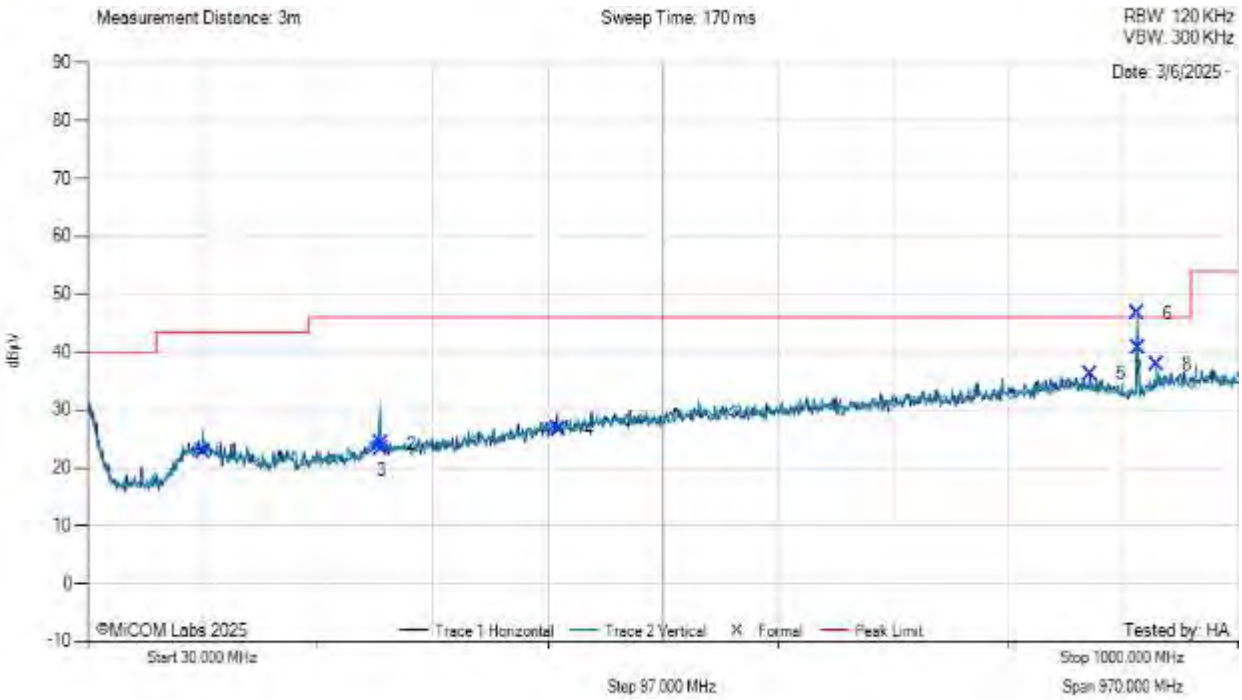
30 MHz to 1 GHz

Test Freq: 914.6 MHz, Antenna: Molex Antenna



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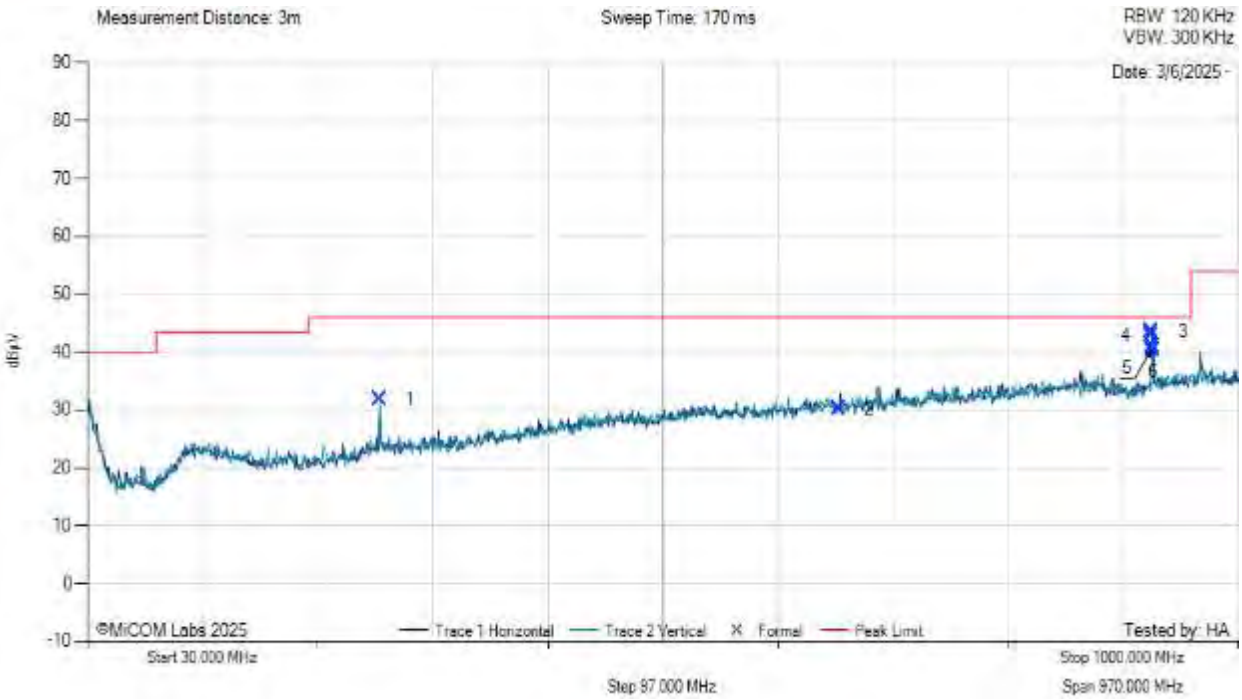
30 MHz to 1 GHz

Test Freq: 927.2 MHz, Antenna: Molex Antenna



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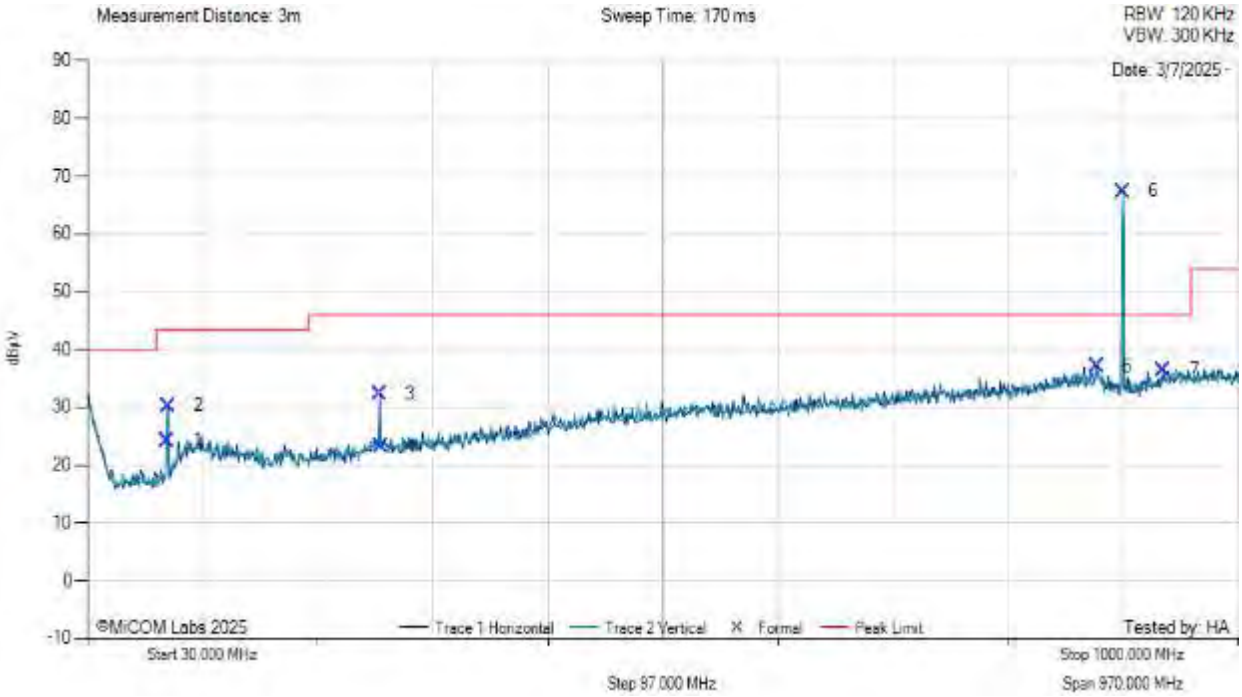
OFDM OPT4 MCS4

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: Molex Antenna



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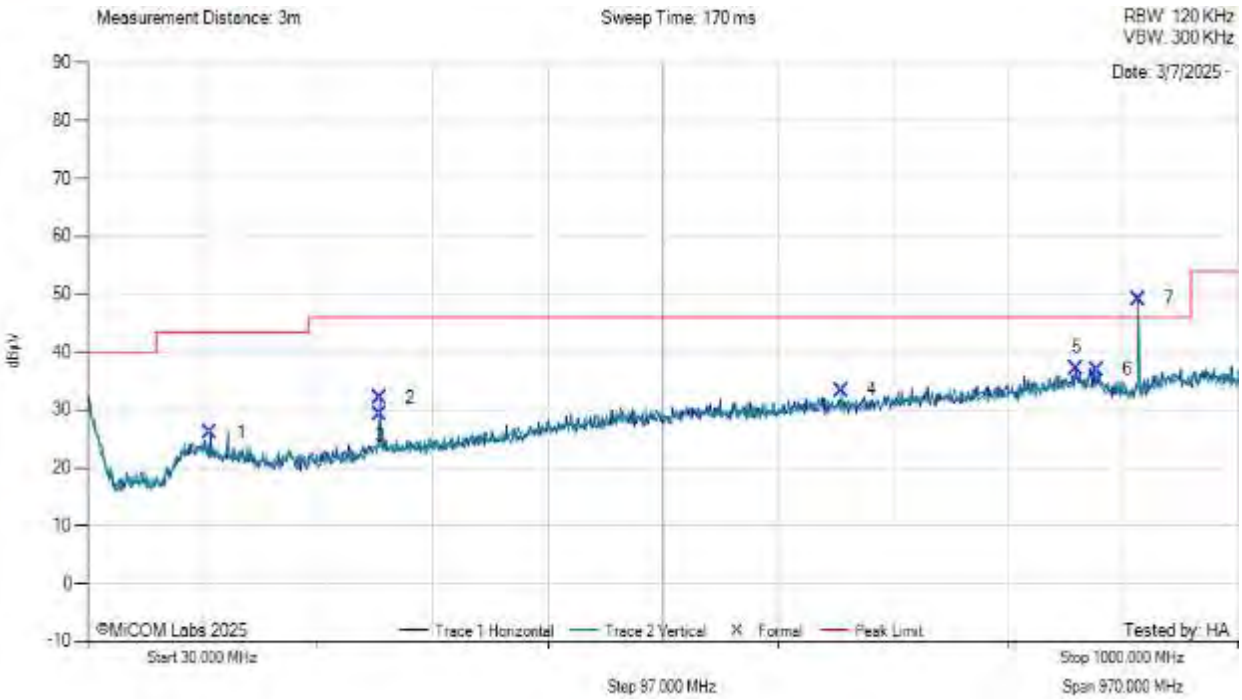
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: Molex Antenna



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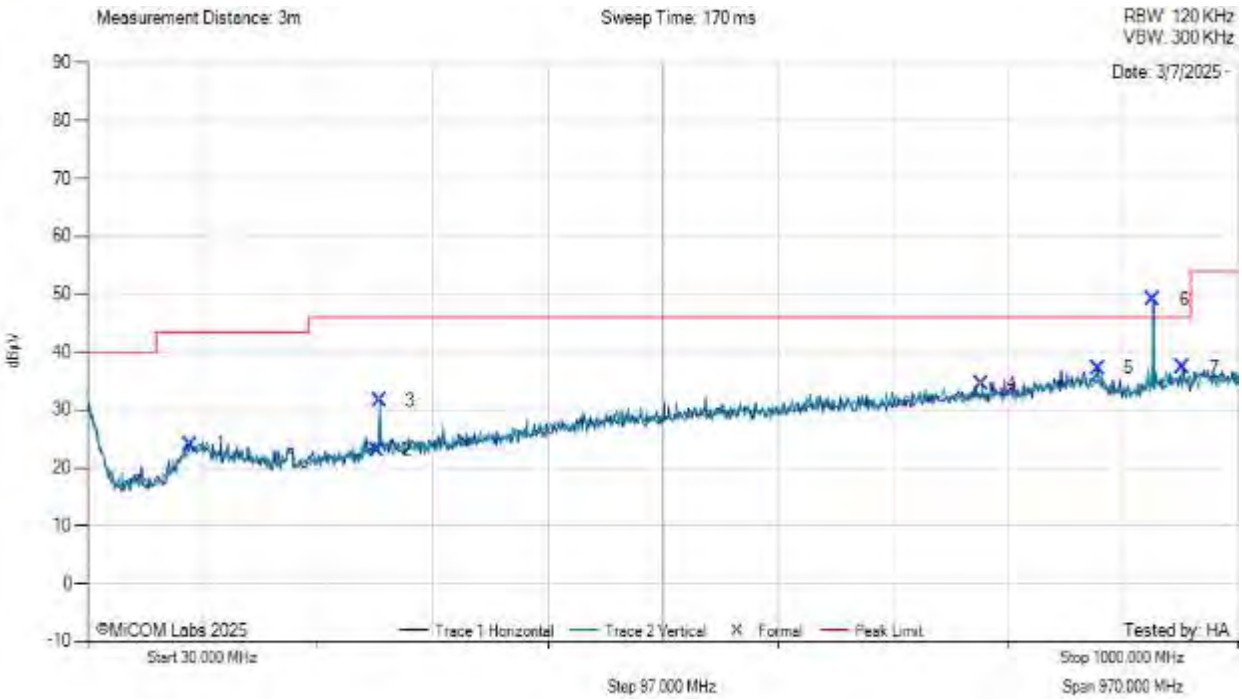
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: Molex Antenna



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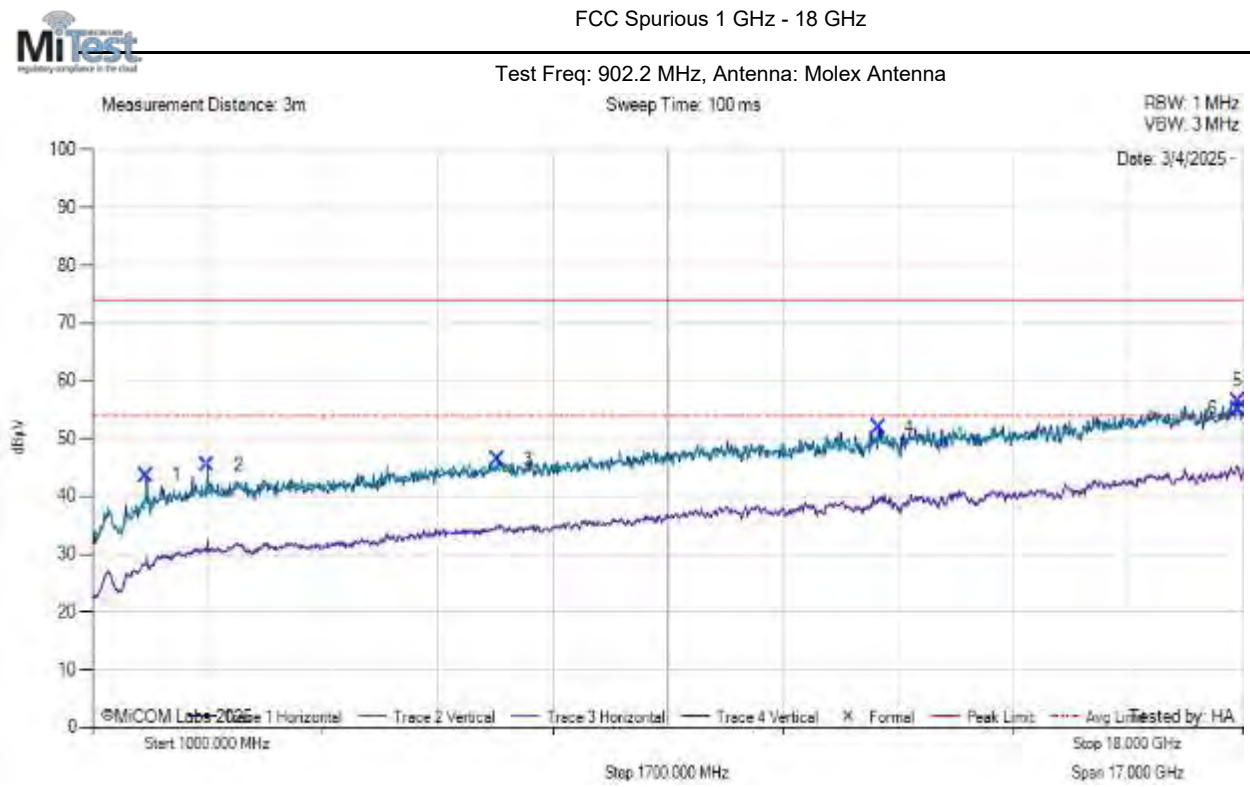
Molex Antenna (1GHz – 18GHz)

FSK DR 50k



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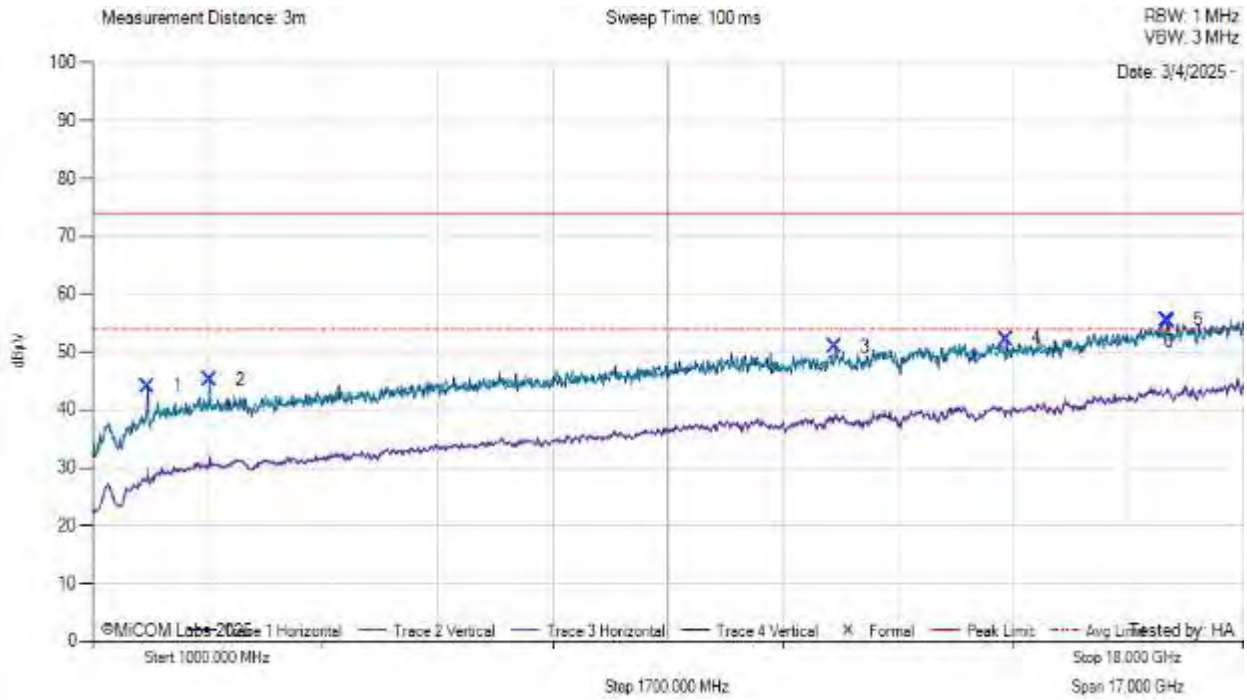
FCC Spurious 1 GHz - 18 GHz

Test Freq: 915.0 MHz, Antenna: Molex Antenna



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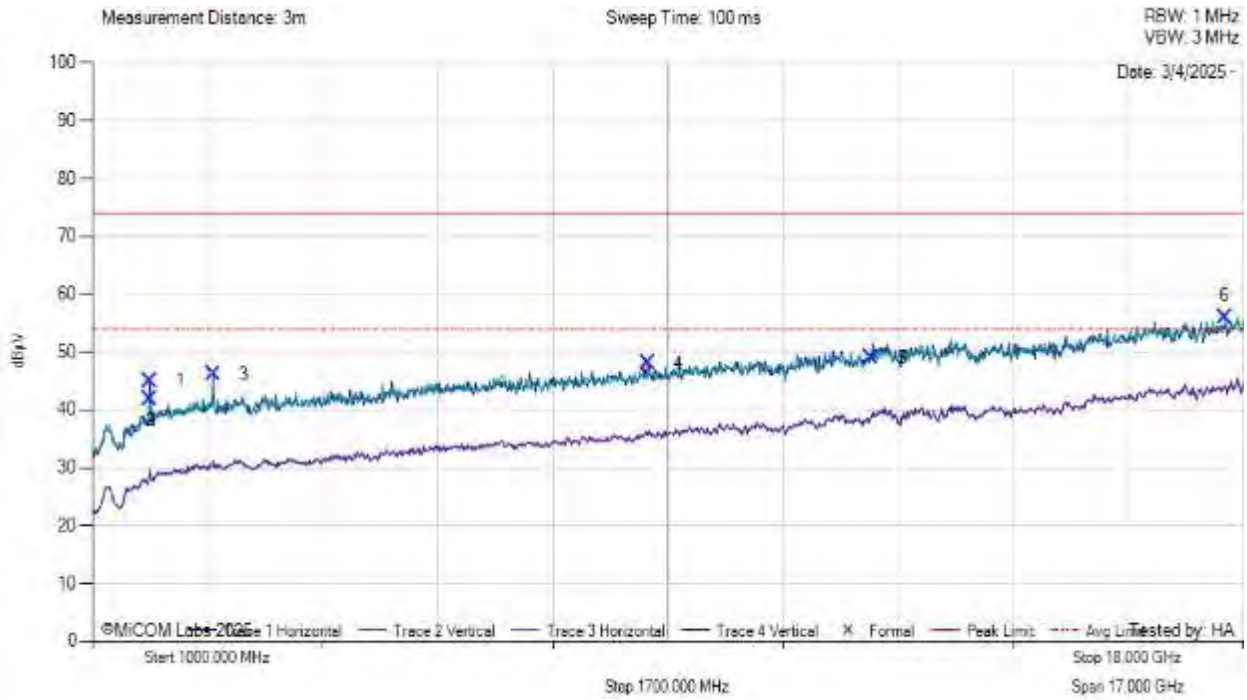
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.8 MHz, Antenna: Molex Antenna



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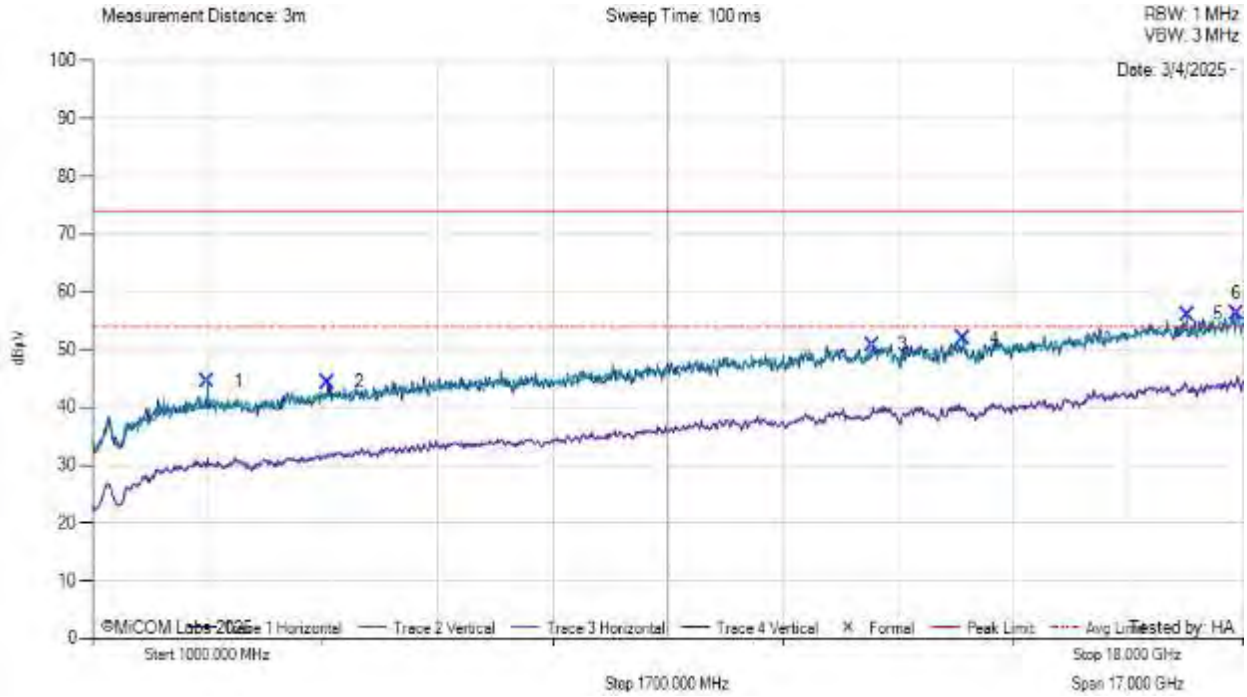
FSK DR 300k

FCC Spurious 1 GHz - 18 GHz

Test Freq: 902.6 MHz, Antenna: Molex Antenna



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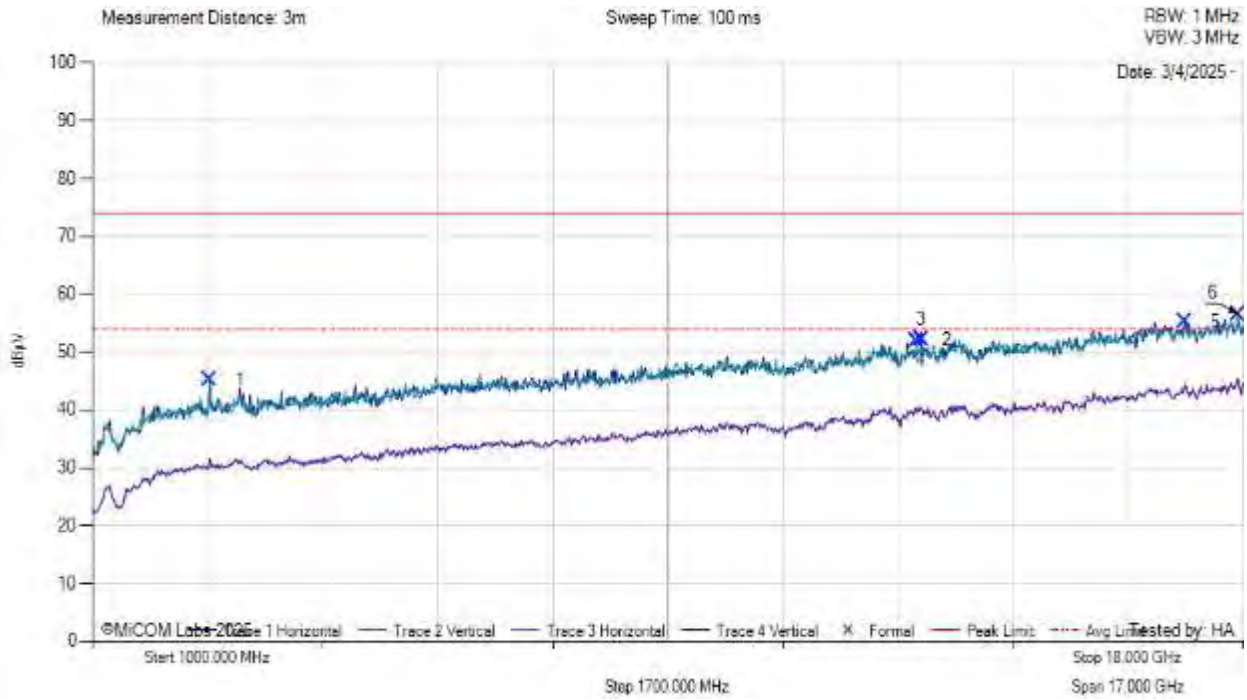
FCC Spurious 1 GHz - 18 GHz

Test Freq: 914.6 MHz, Antenna: Molex Antenna



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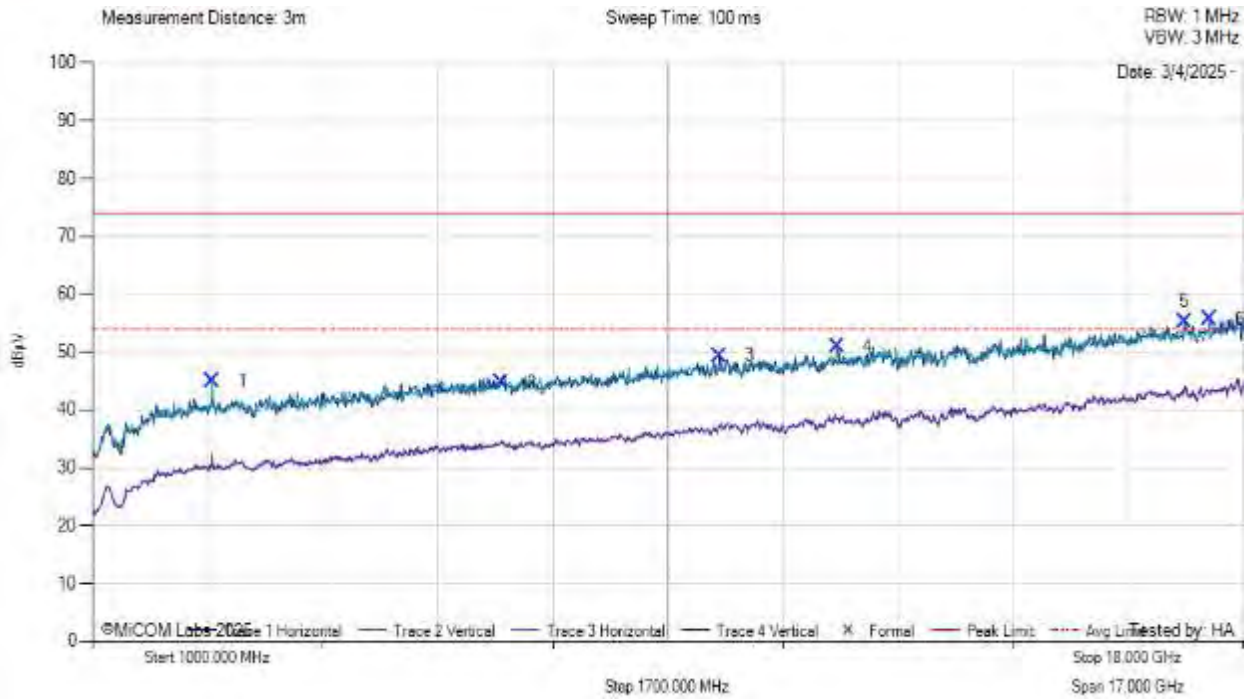
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.2 MHz, Antenna: Molex Antenna



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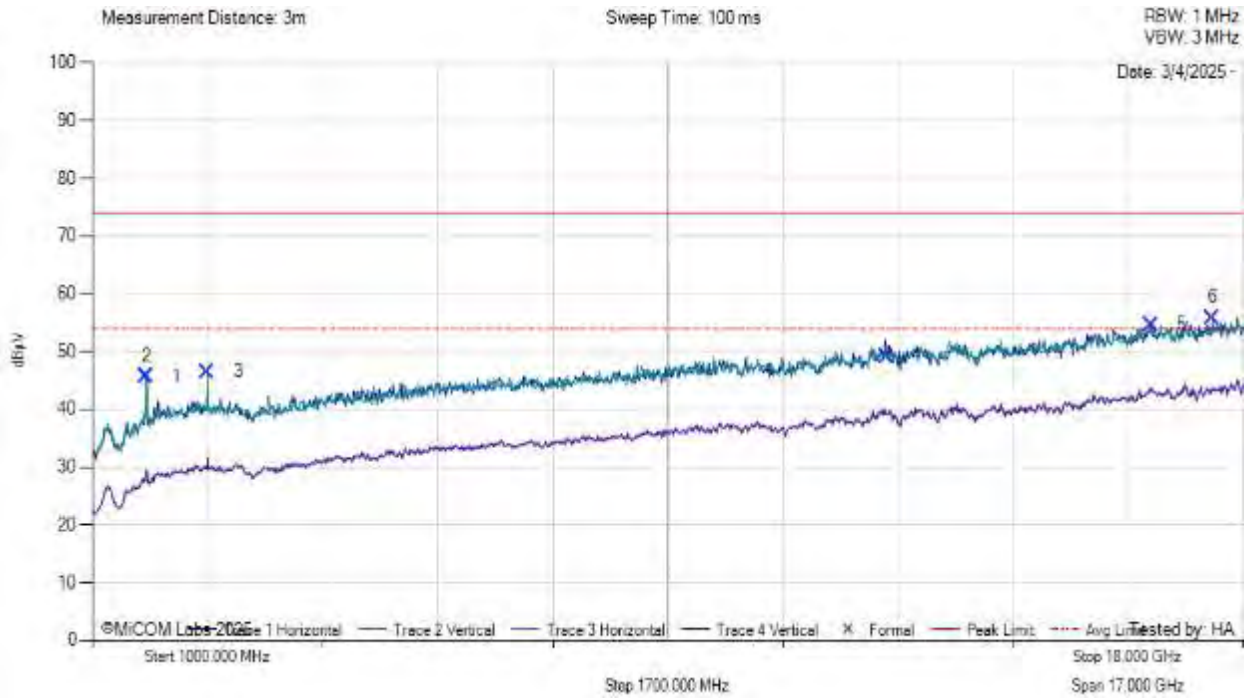
OFDM OPT4 MCS4

FCC Spurious 1 GHz - 18 GHz

Test Freq: 902.2 MHz, Antenna: Molex Antenna



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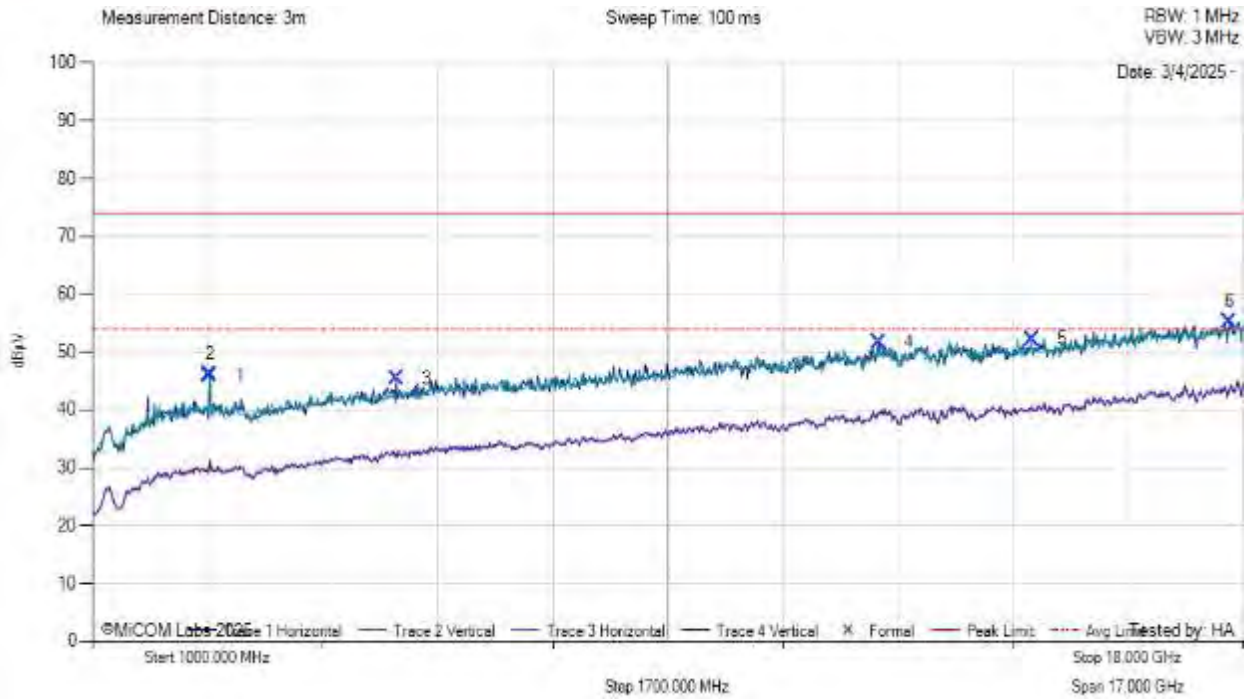
FCC Spurious 1 GHz - 18 GHz

Test Freq: 915.0 MHz, Antenna: Molex Antenna



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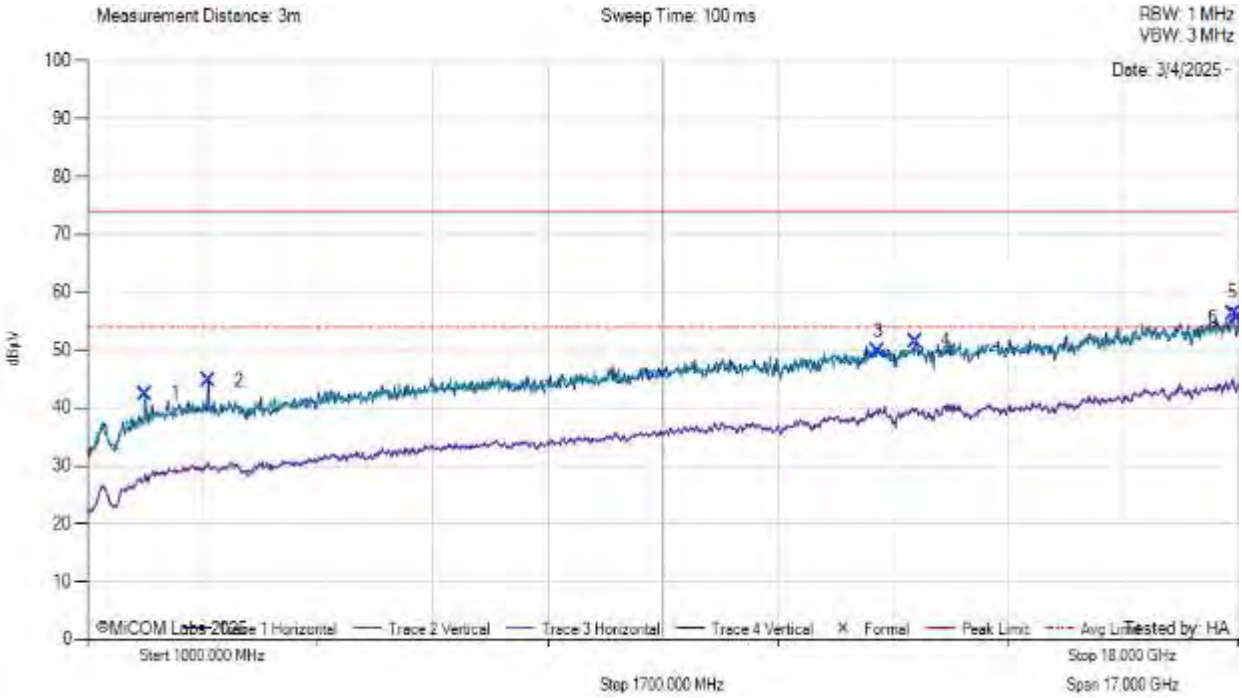
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.8 MHz, Antenna: Molex Antenna



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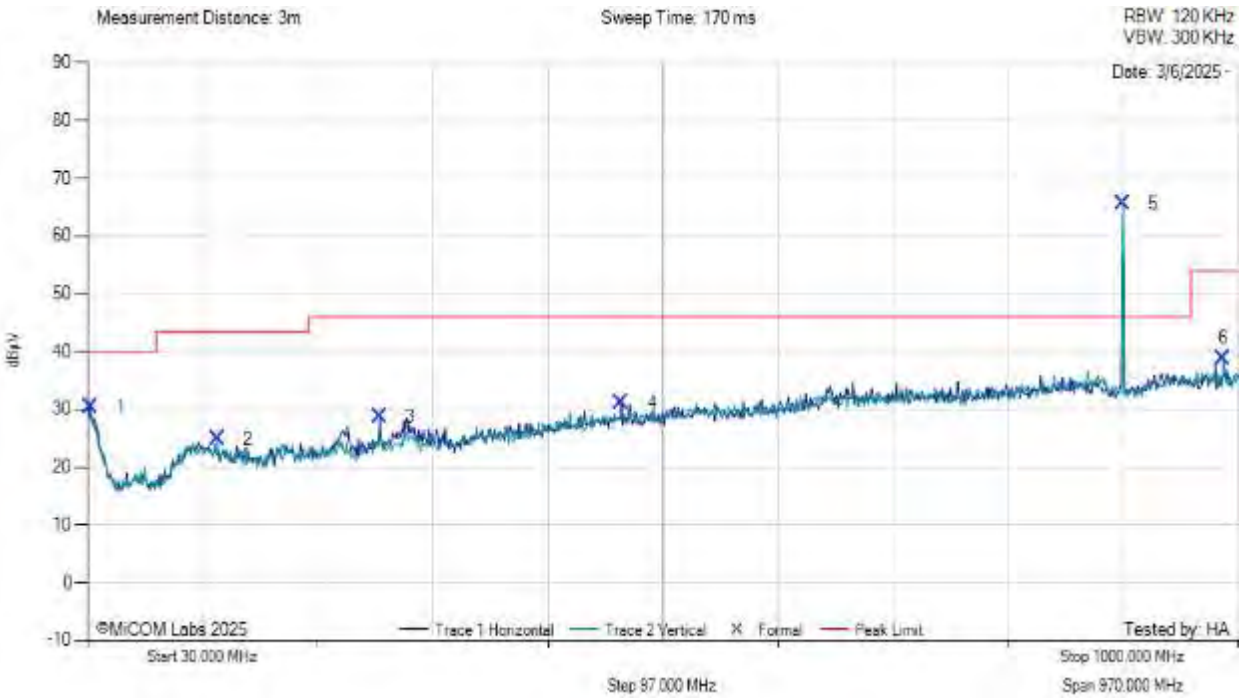
MPD Antenna (30MHz – 1GHz)

FSK DR 50k

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: MPD Antenna



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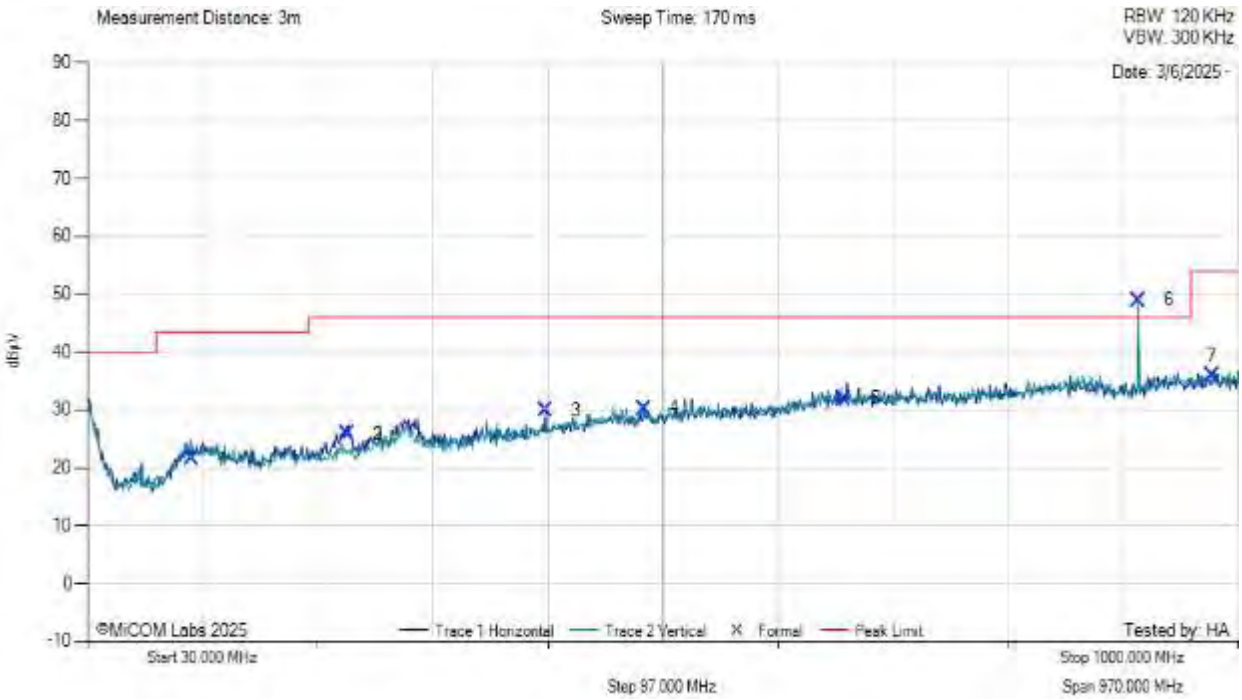
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: MPD Antenna



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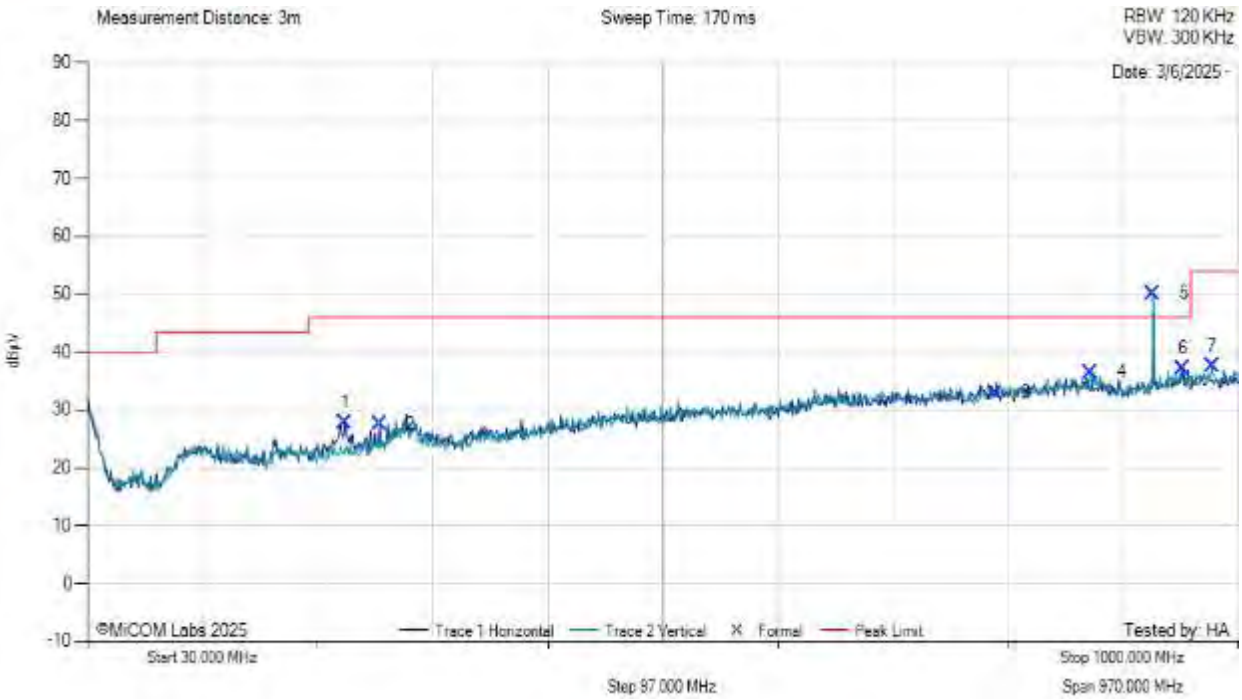
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: MPD Antenna



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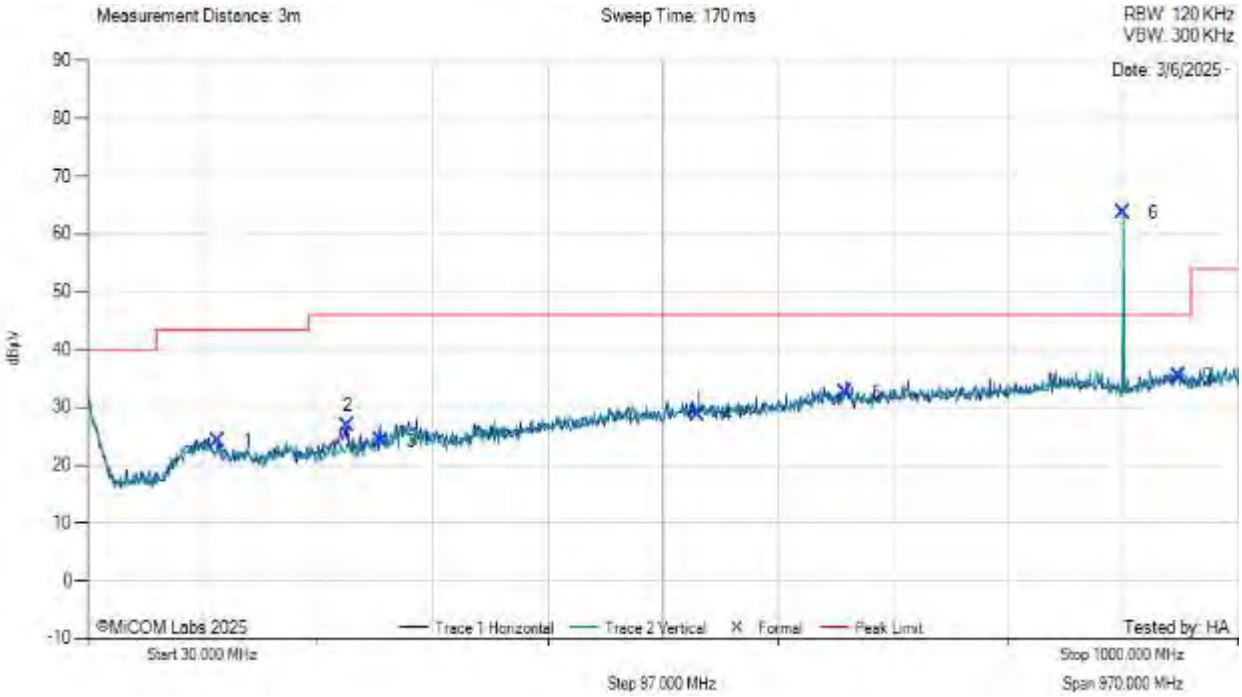
FSK DR 300k

30 MHz to 1 GHz

Test Freq: 902.6 MHz, Antenna: MPD Antenna



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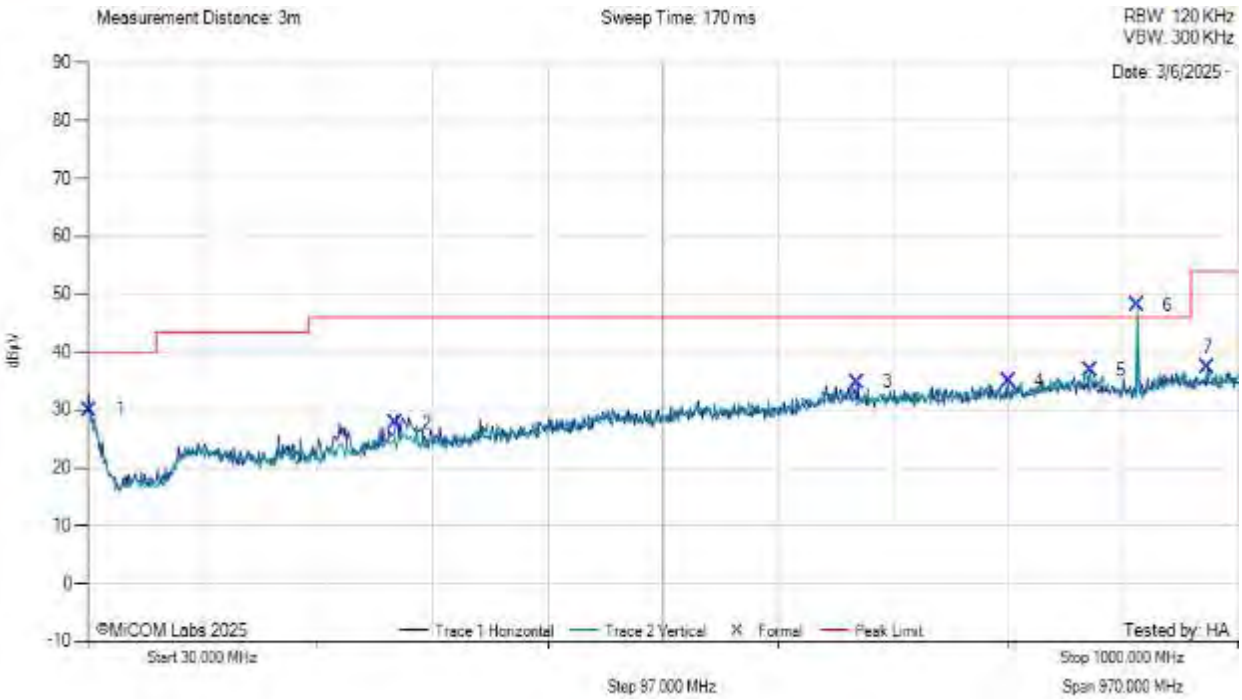
30 MHz to 1 GHz

Test Freq: 914.6 MHz, Antenna: MPD Antenna



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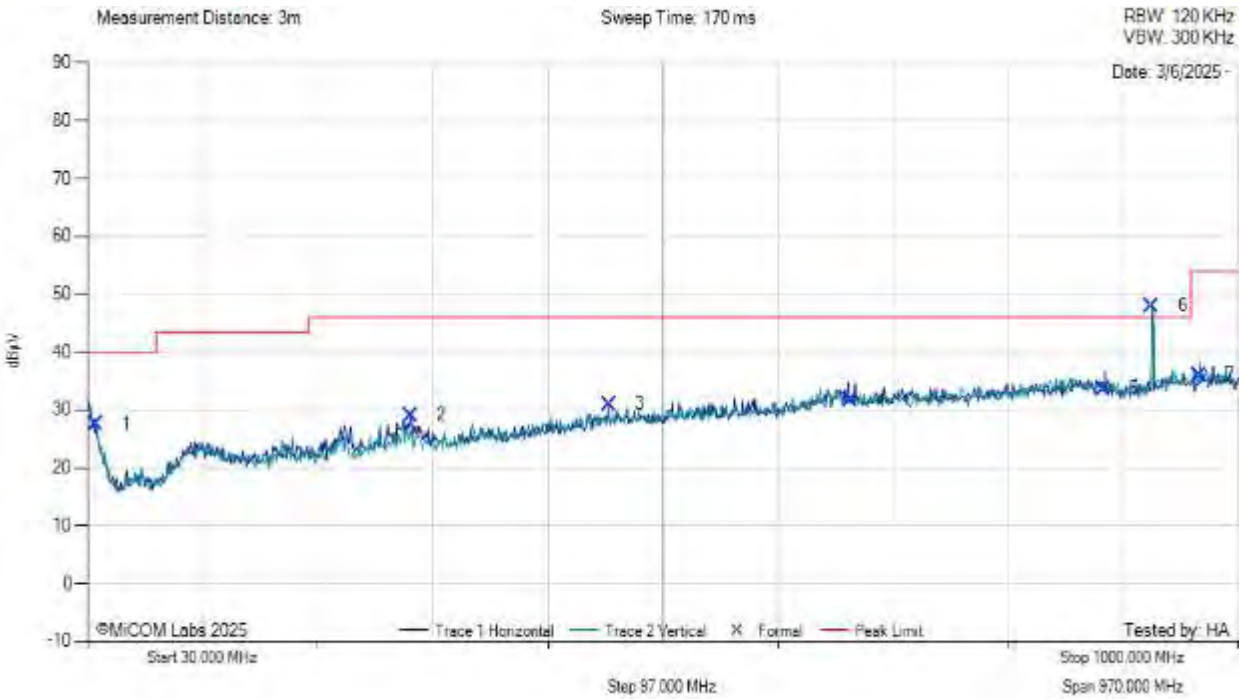
30 MHz to 1 GHz

Test Freq: 927.2 MHz, Antenna: MPD Antenna



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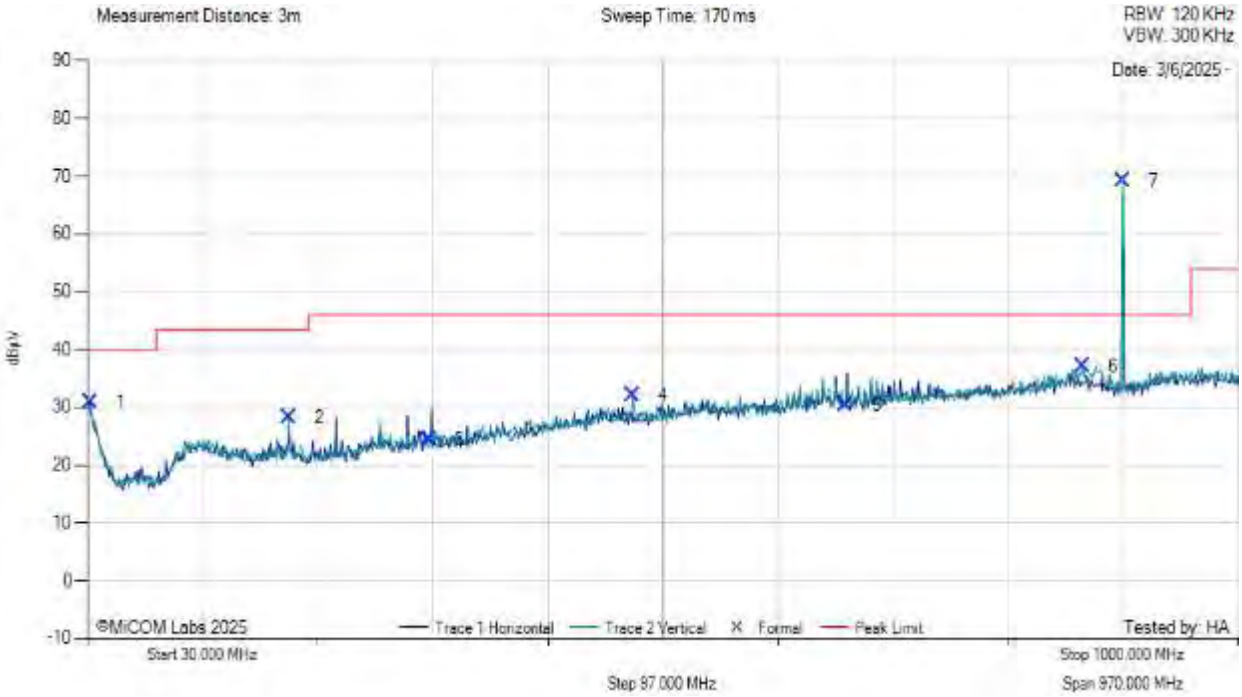
OFDM OPT4 MCS4

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: MPD Antenna



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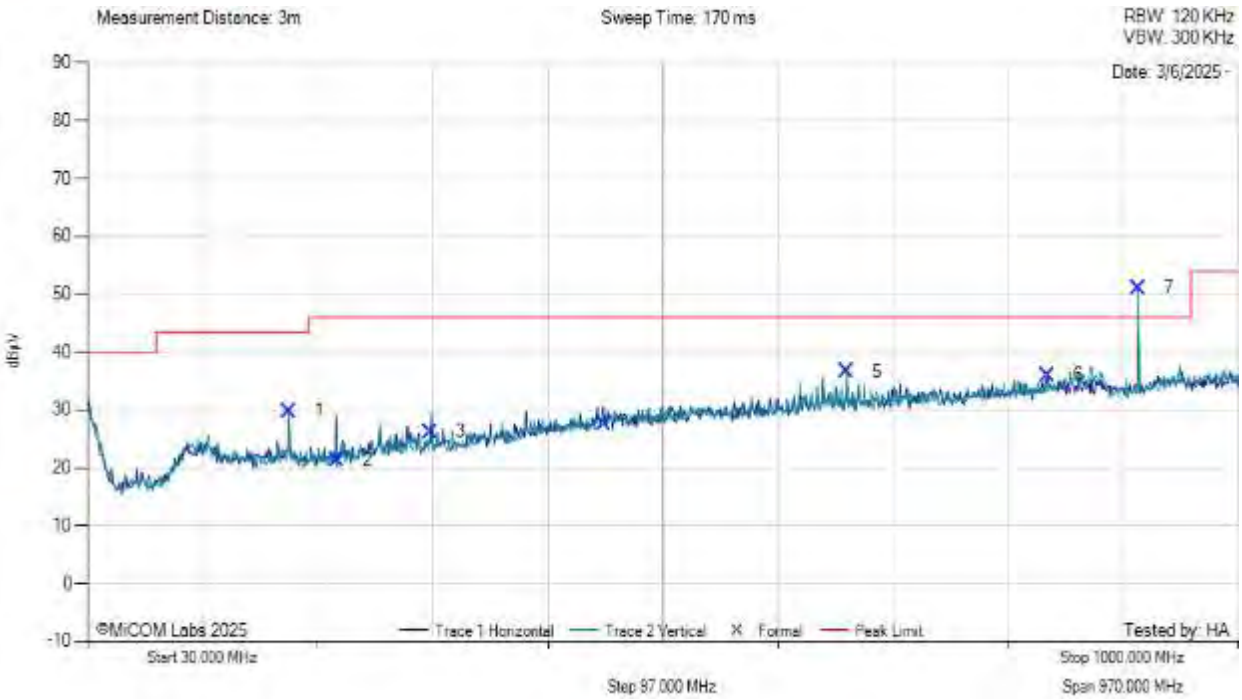
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: MPD Antenna



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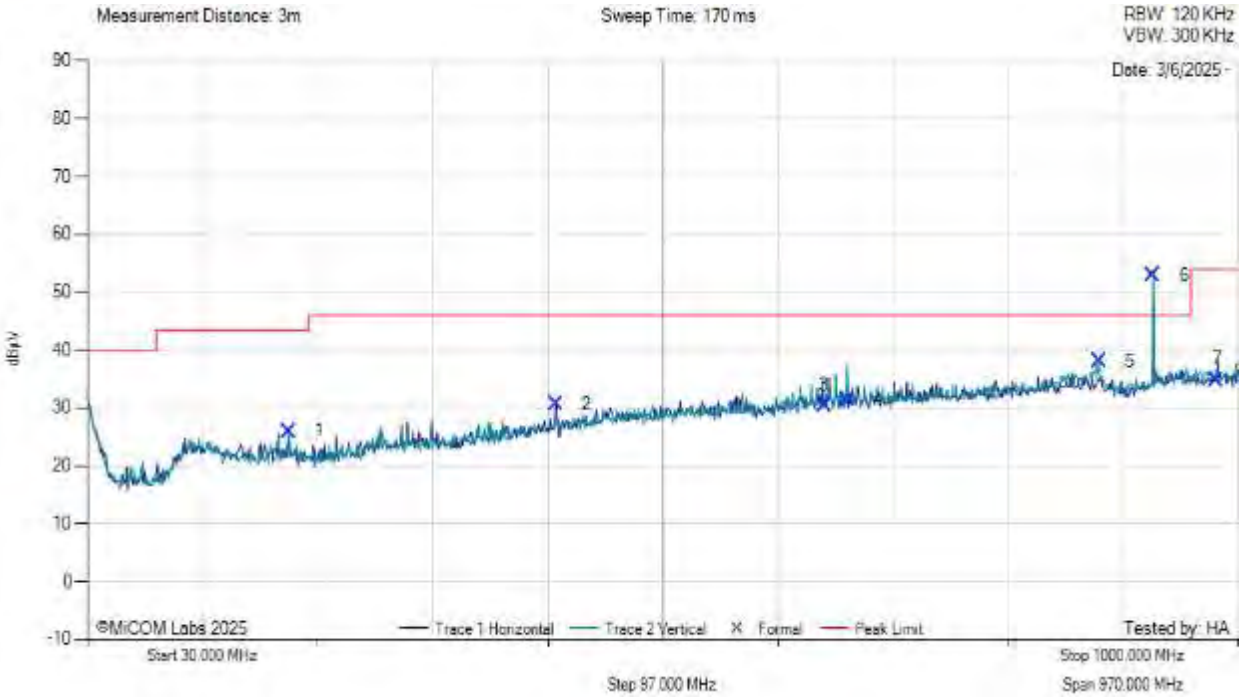
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: MPD Antenna



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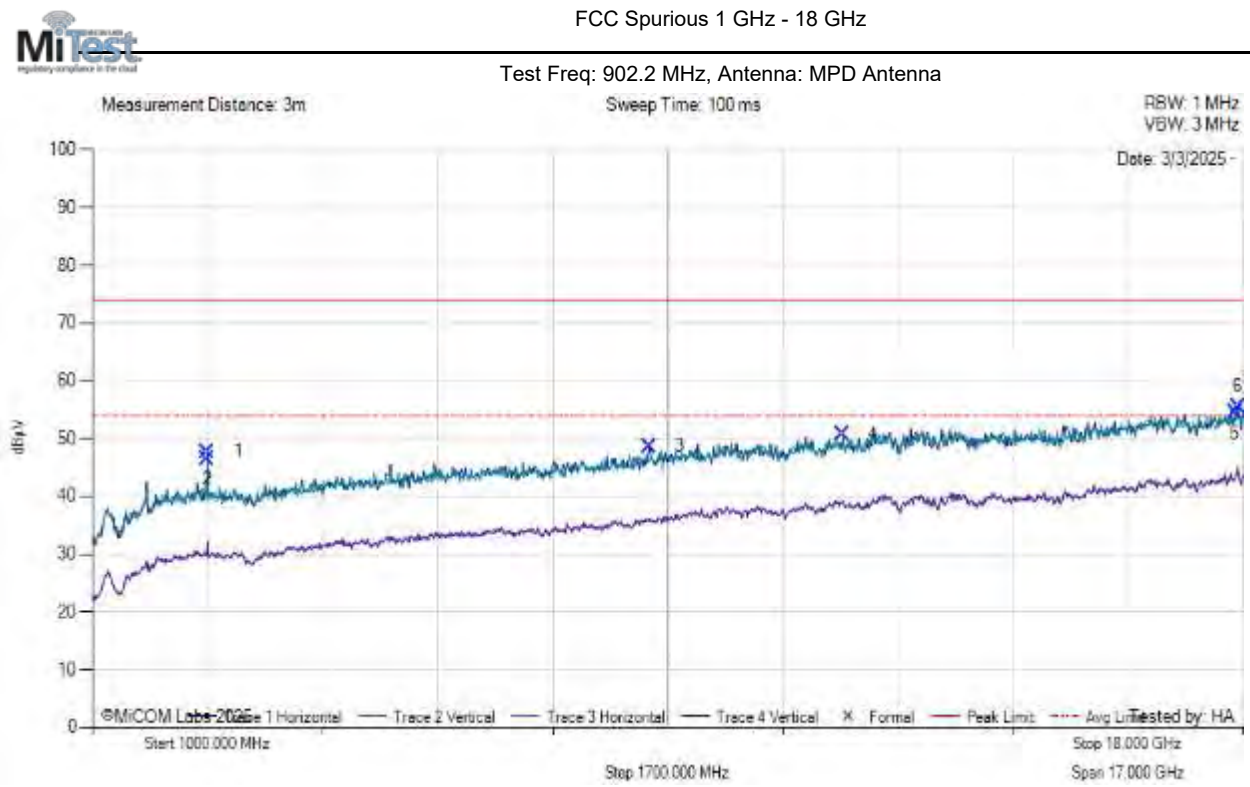
MPD Antenna (1GHz – 18GHz)

FSK DR 50k



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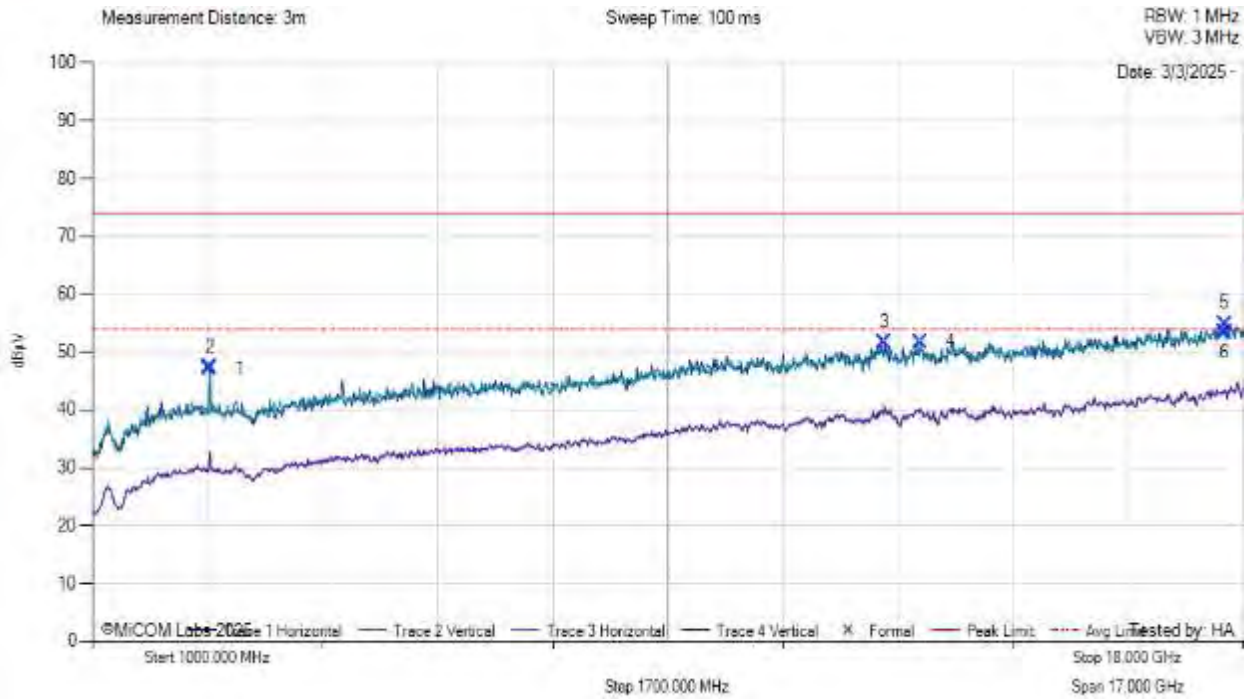
FCC Spurious 1 GHz - 18 GHz

Test Freq: 915.0 MHz, Antenna: MPD Antenna



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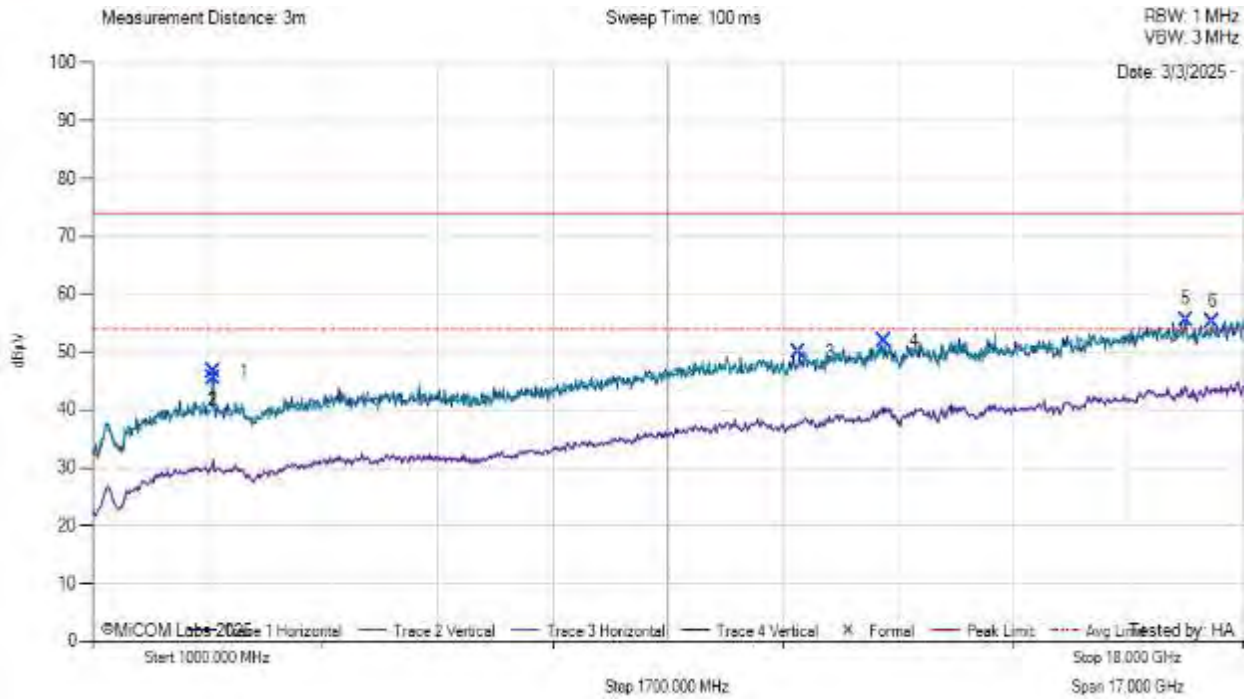
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.8 MHz, Antenna: MPD Antenna



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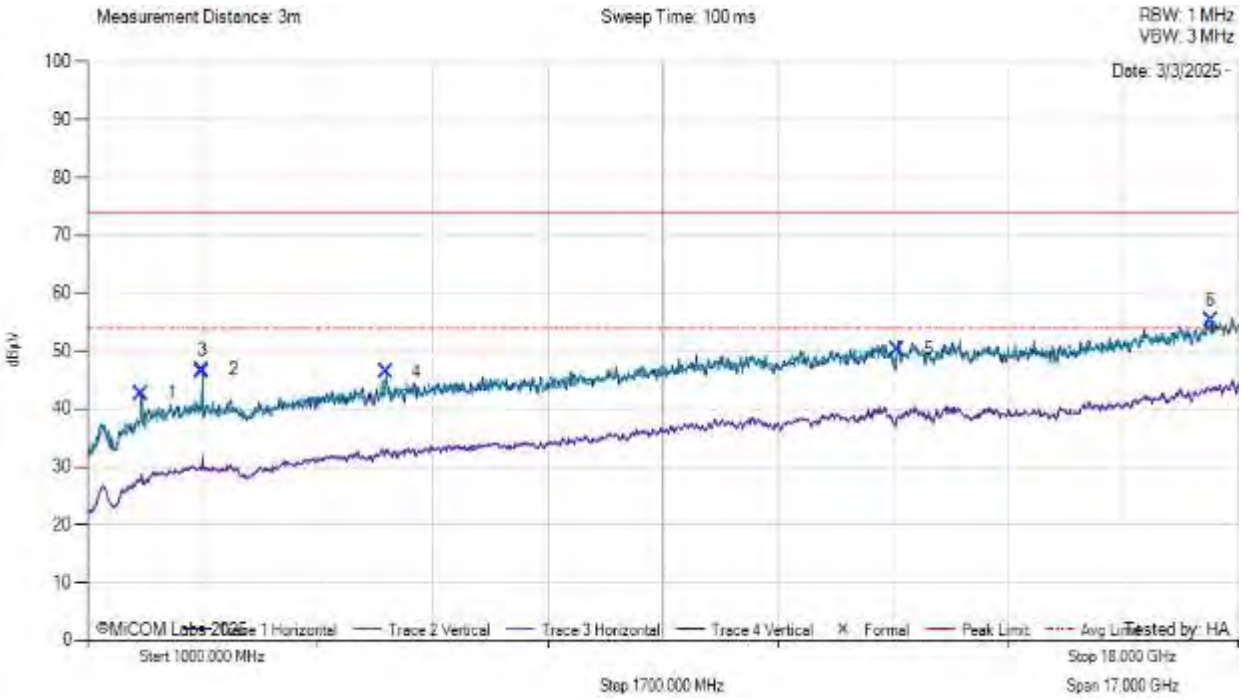
FSK DR 300k

FCC Spurious 1 GHz - 18 GHz

Test Freq: 902.6 MHz, Antenna: MPD Antenna



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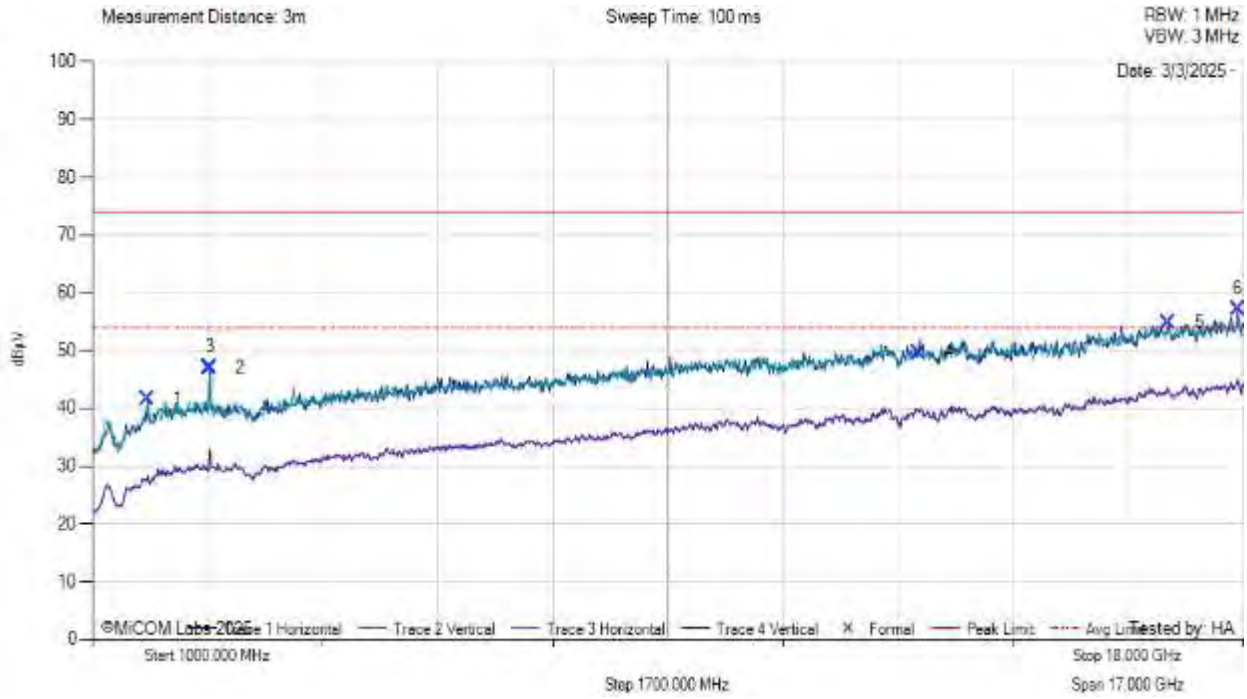
FCC Spurious 1 GHz - 18 GHz

Test Freq: 914.6 MHz, Antenna: MPD Antenna



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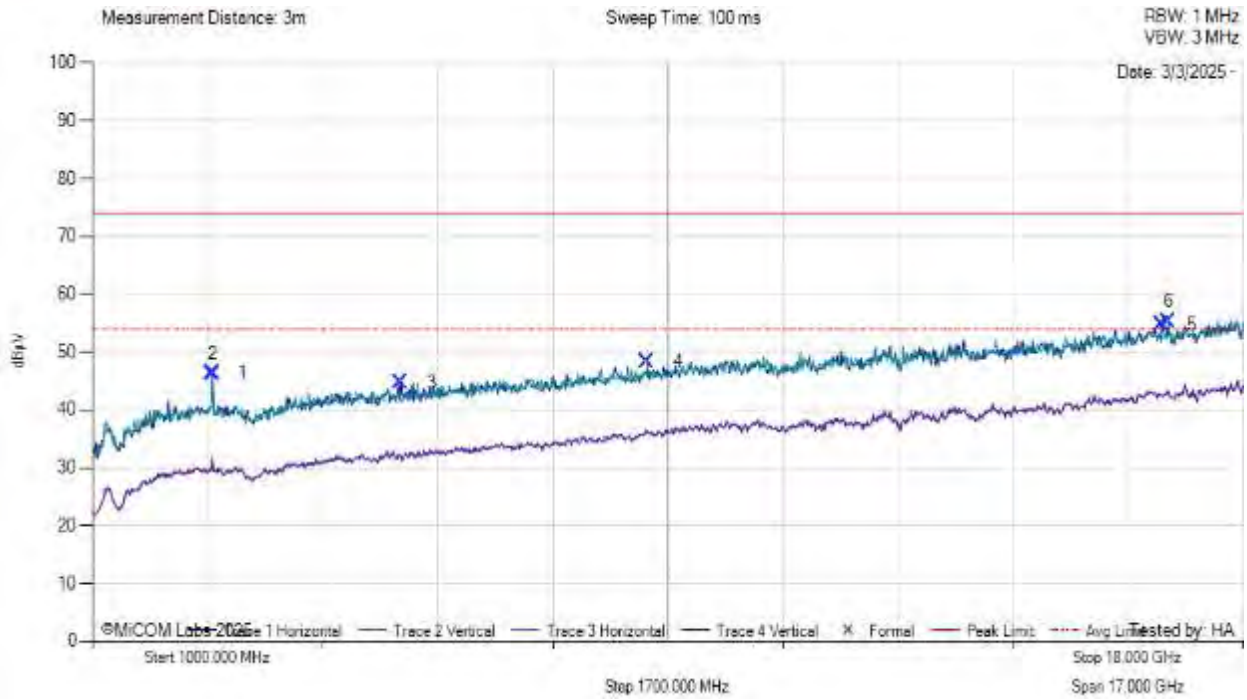
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.2 MHz, Antenna: MPD Antenna



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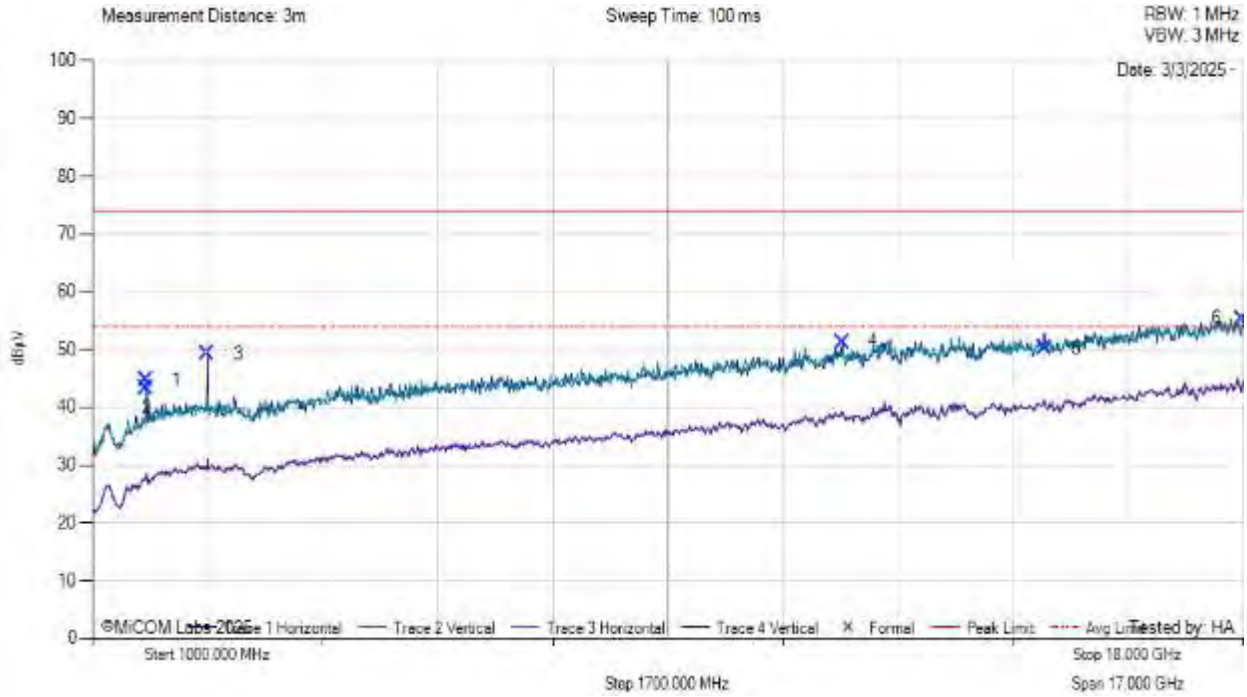
OFDM OPT4 MCS4

FCC Spurious 1 GHz - 18 GHz

Test Freq: 902.2 MHz, Antenna: MPD Antenna



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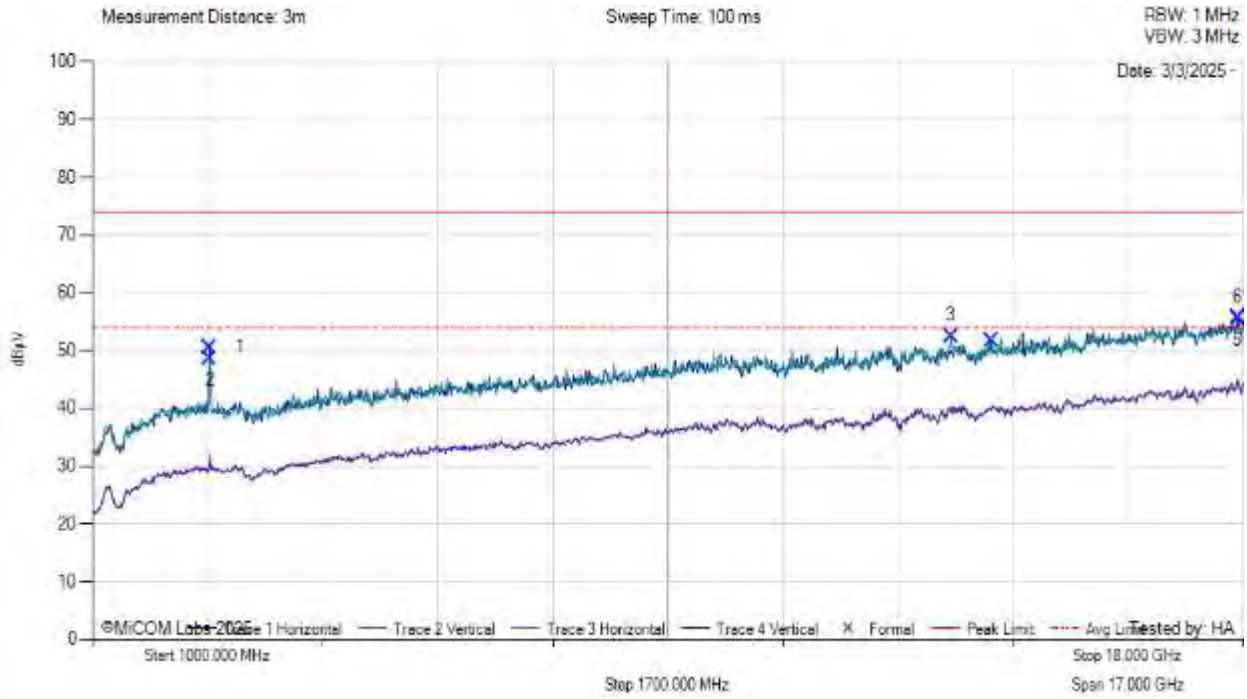
FCC Spurious 1 GHz - 18 GHz

Test Freq: 915.0 MHz, Antenna: MPD Antenna



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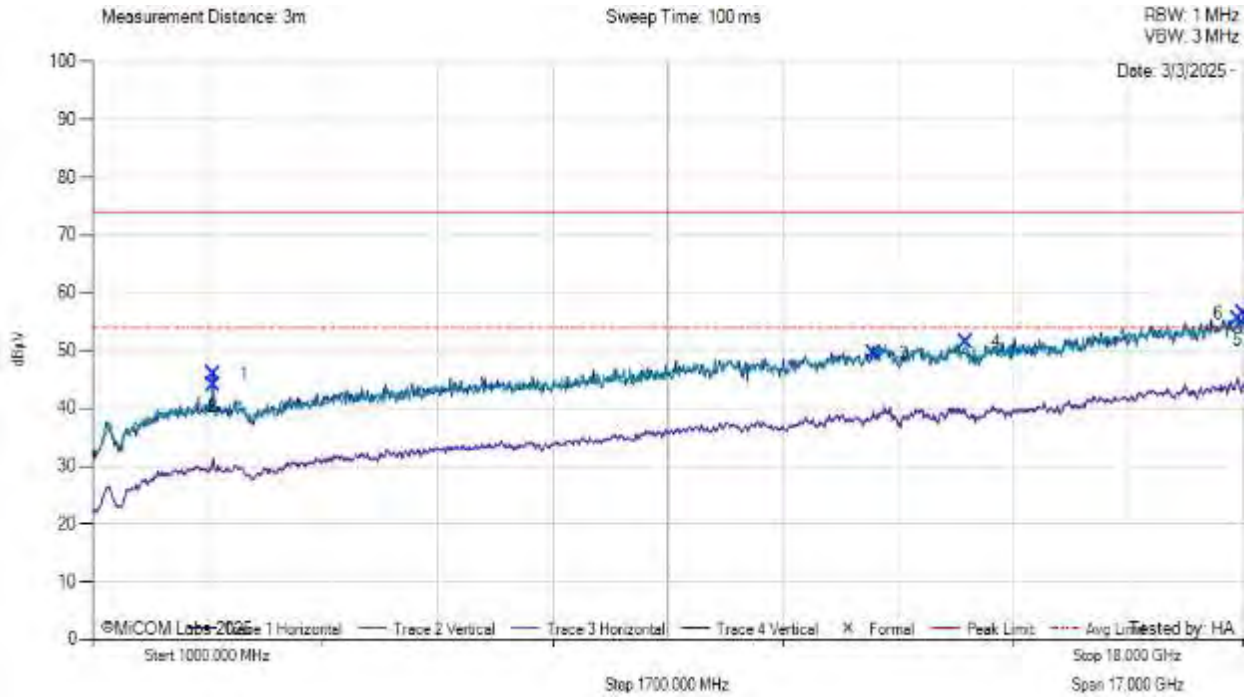
FCC Spurious 1 GHz - 18 GHz

Test Freq: 927.8 MHz, Antenna: MPD Antenna



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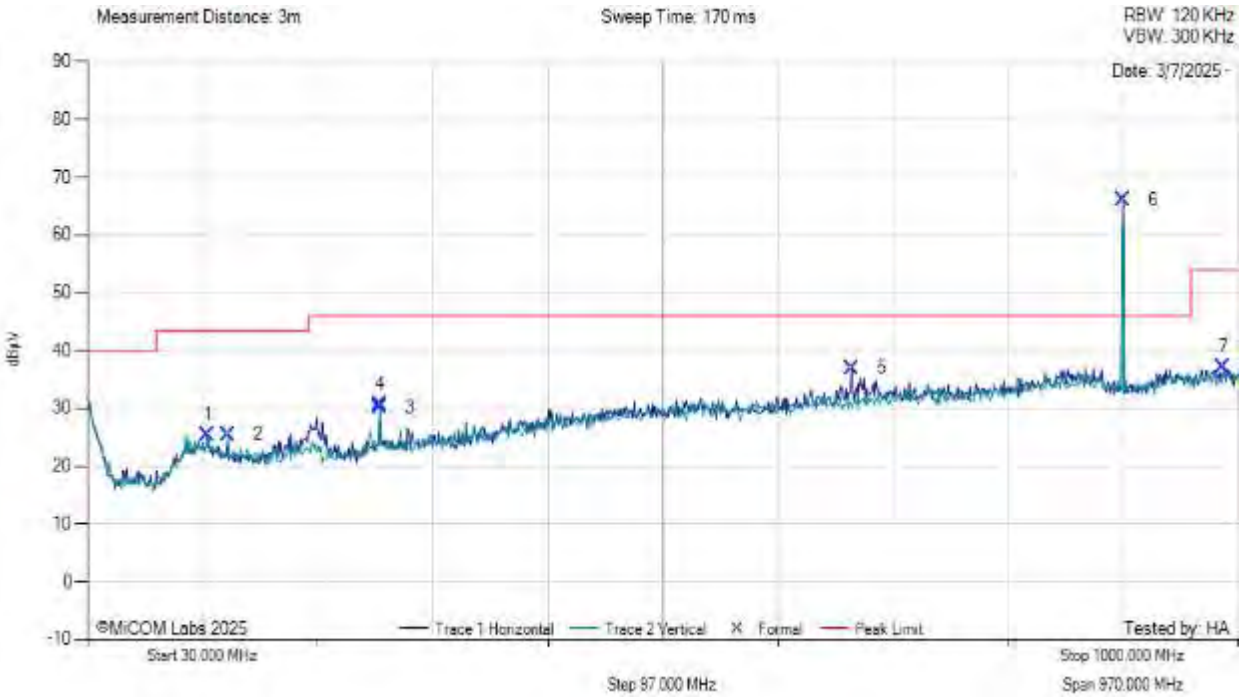
Taoglas FXUB65 Antenna (30MHz – 1GHz)

FSK DR 50k

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: Taoglas FXUB65 Antenna



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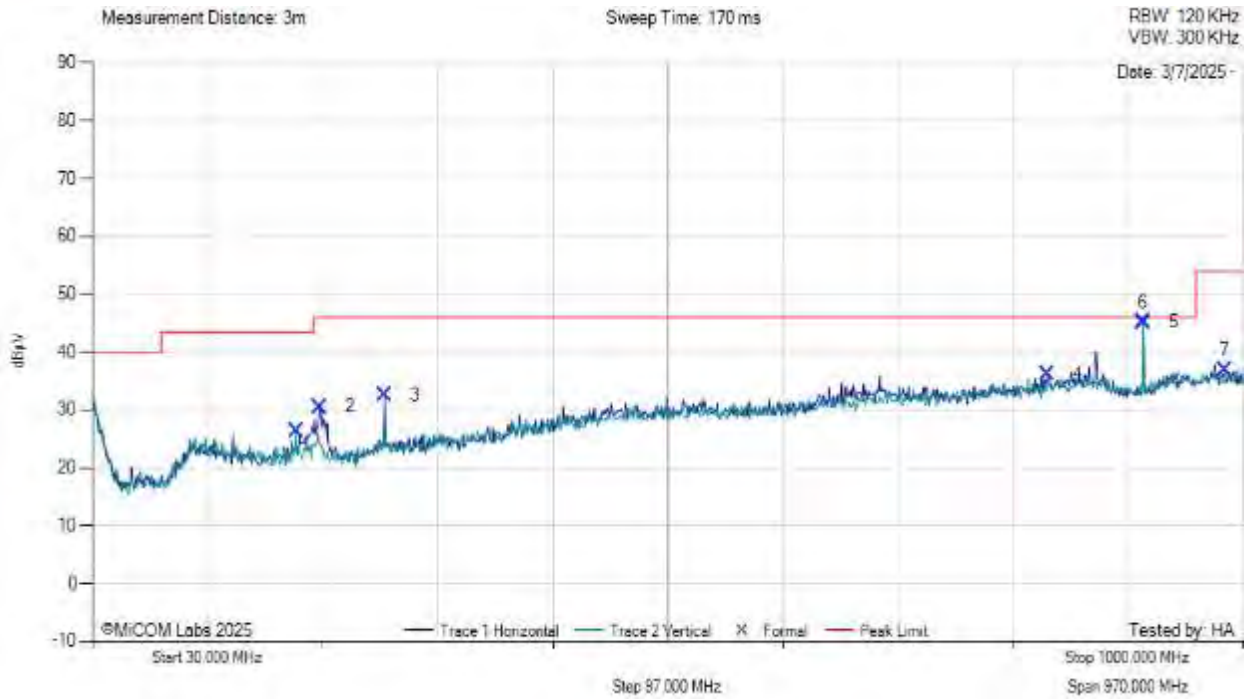
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: Taoglas FXUB65 Antenna



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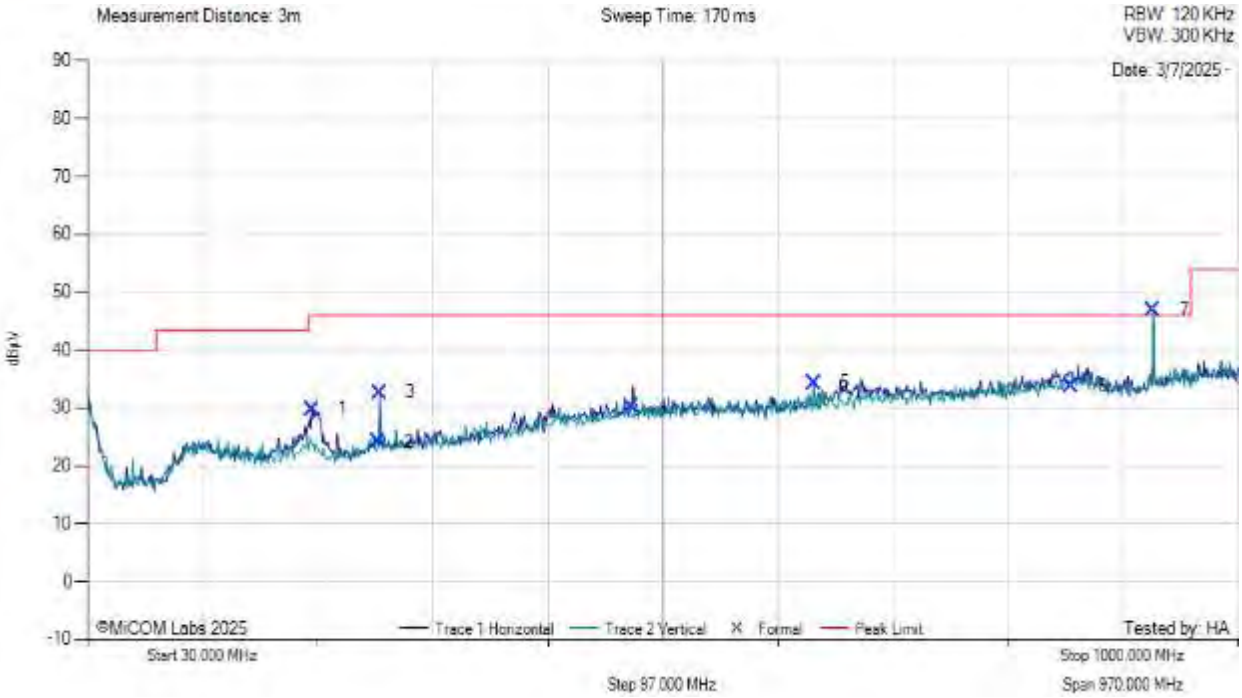
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: Taoglas FXUB65 Antenna



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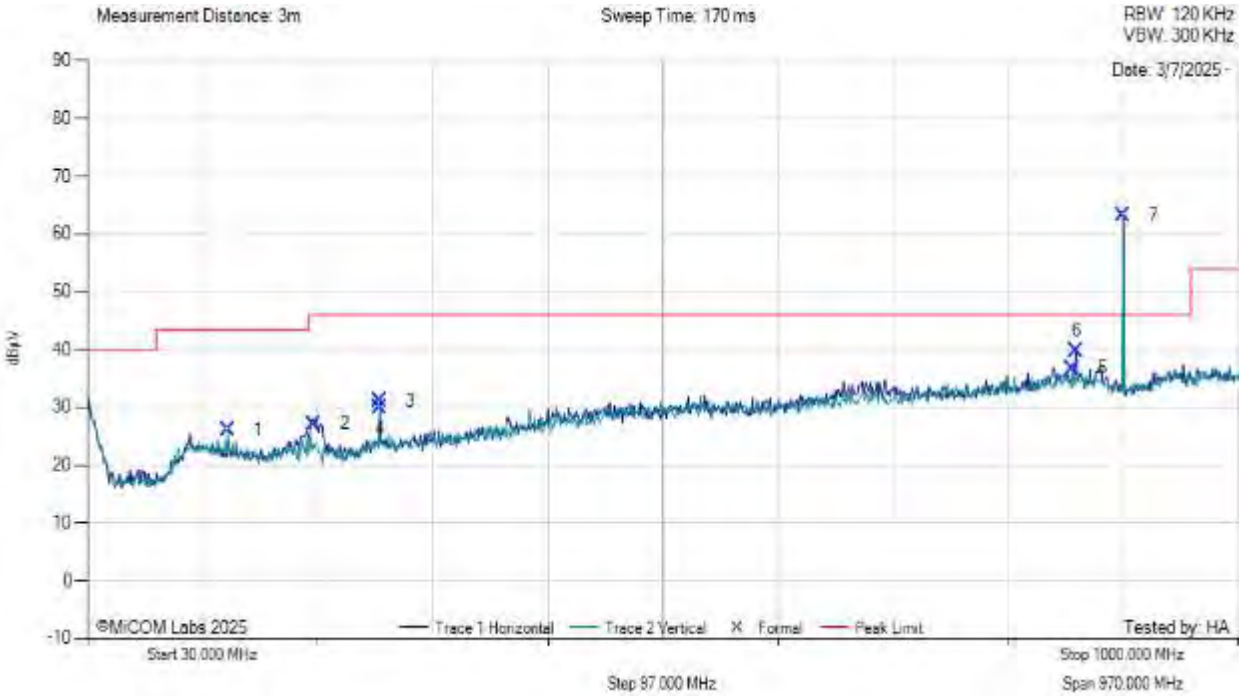
FSK DR 300k

30 MHz to 1 GHz

Test Freq: 902.6 MHz, Antenna: Taoglas FXUB65 Antenna



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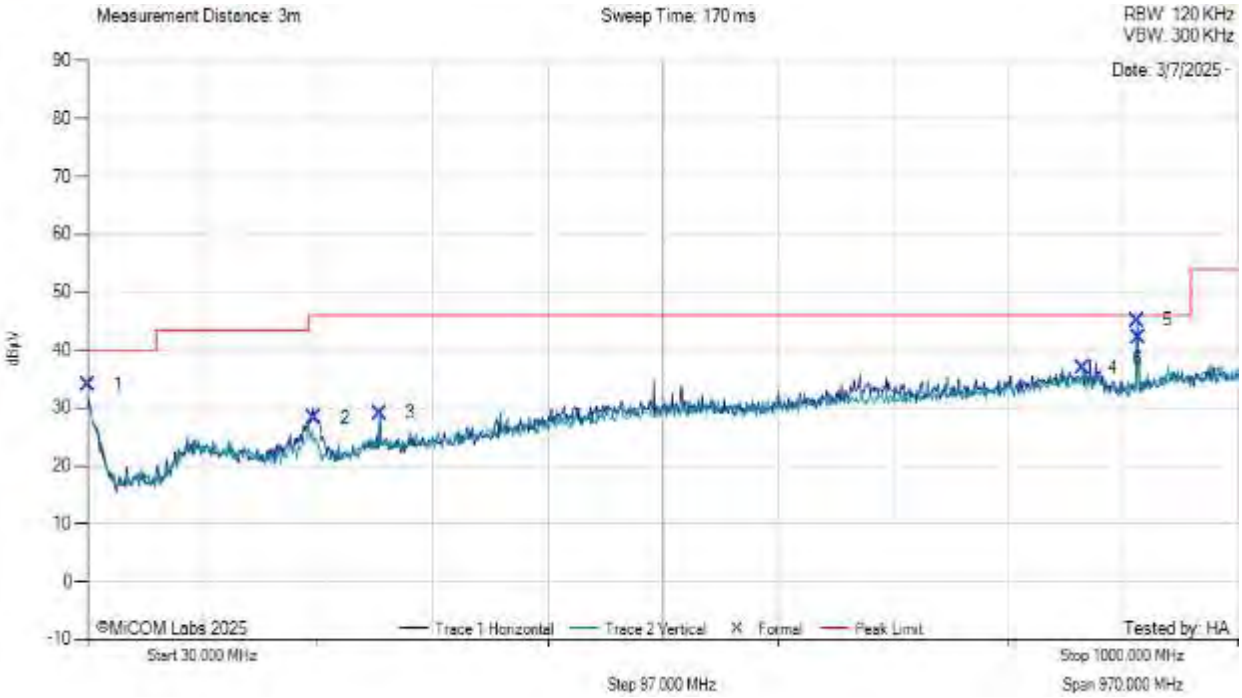
30 MHz to 1 GHz

Test Freq: 914.6 MHz, Antenna: Taoglas FXUB65 Antenna



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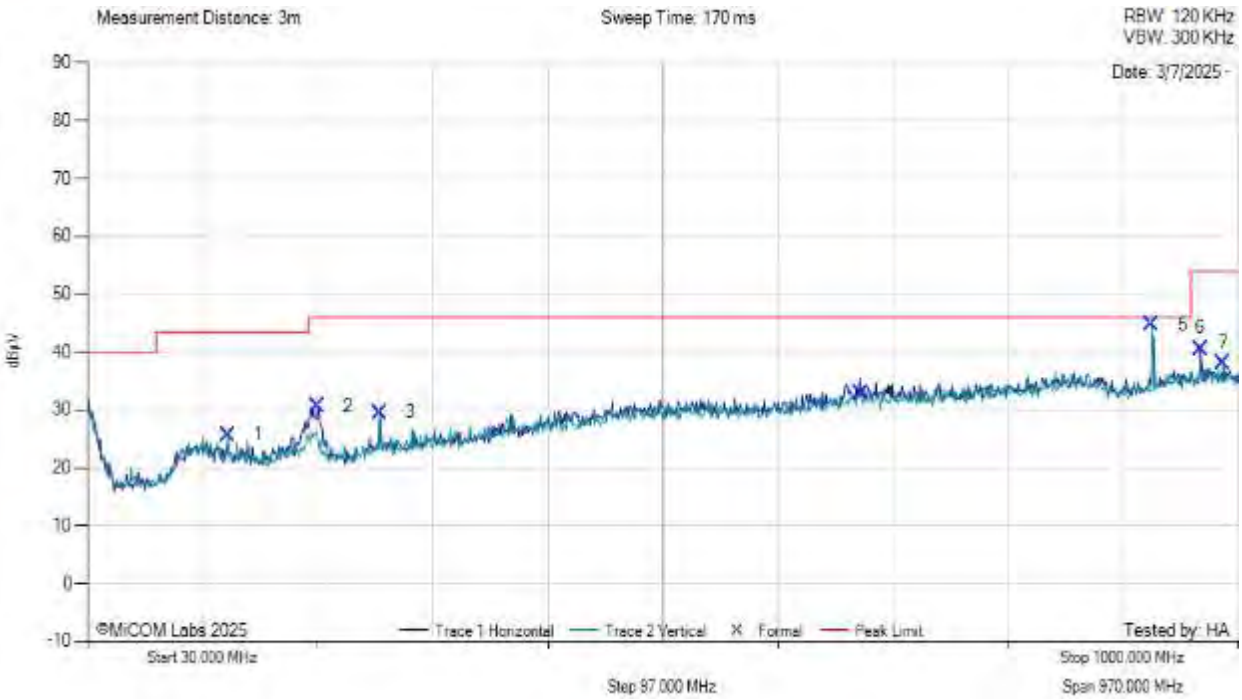
30 MHz to 1 GHz

Test Freq: 927.2 MHz, Antenna: Taoglas FXUB65 Antenna



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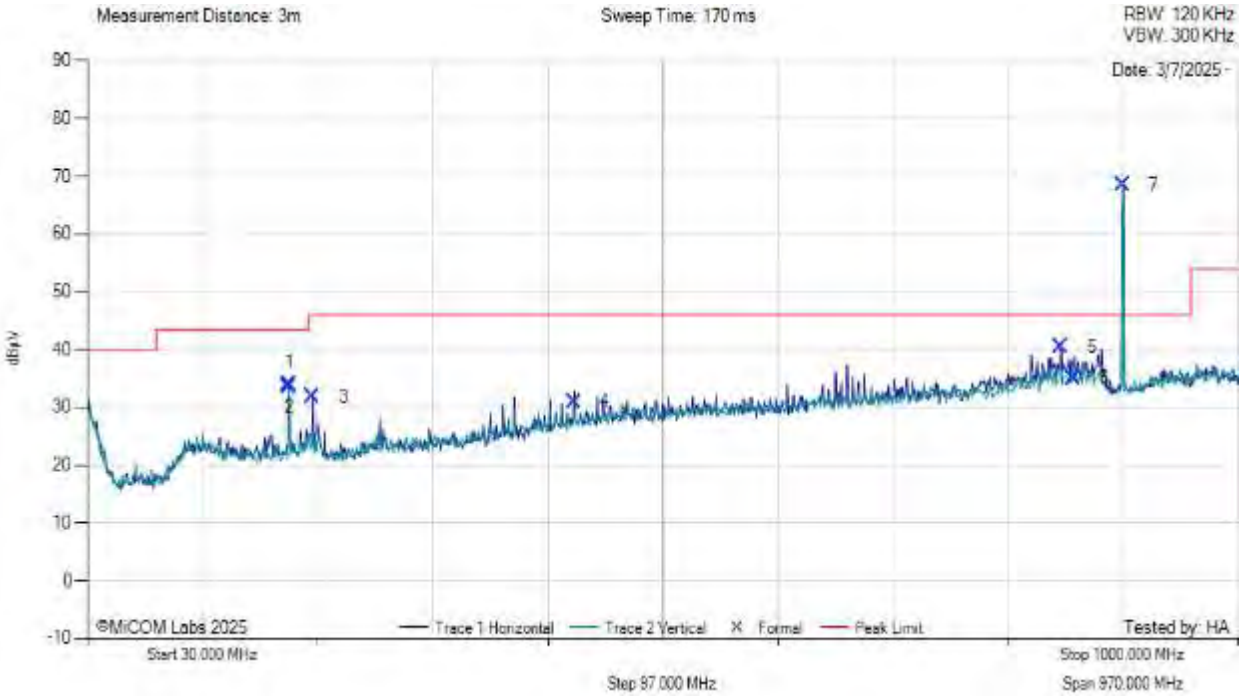
OFDM OPT4 MCS4

30 MHz to 1 GHz

Test Freq: 902.2 MHz, Antenna: Taoglas FXUB65 Antenna



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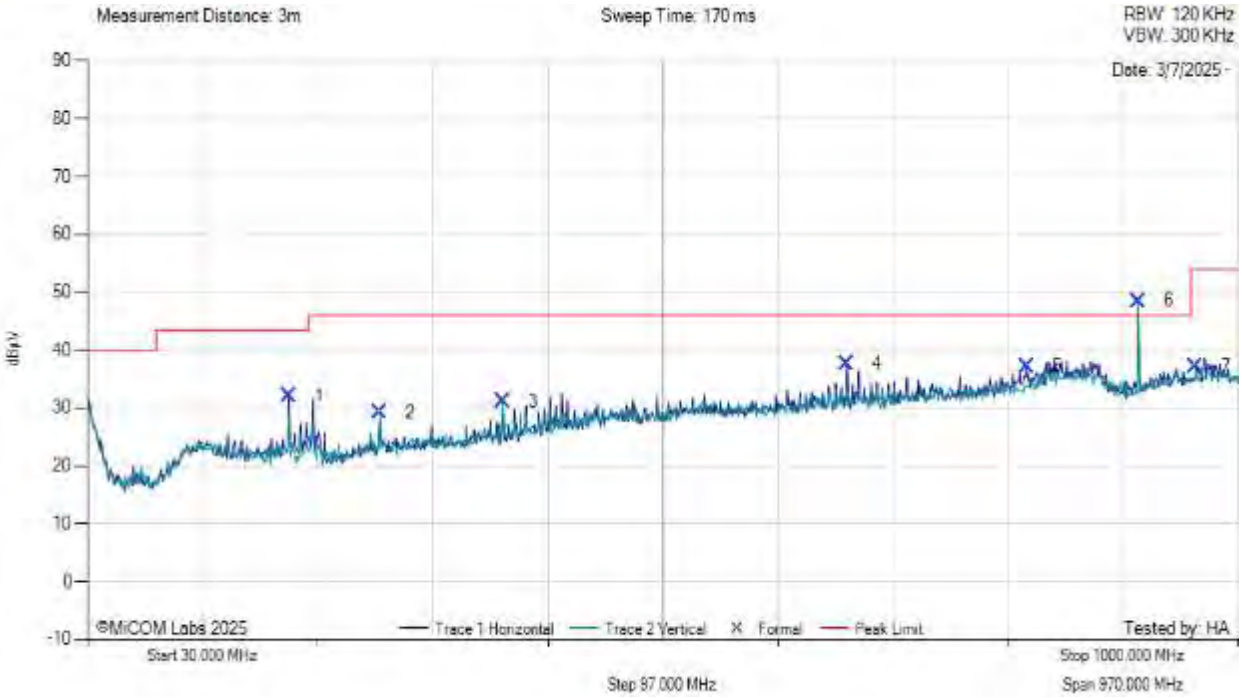
30 MHz to 1 GHz

Test Freq: 915.0 MHz, Antenna: Taoglas FXUB65 Antenna



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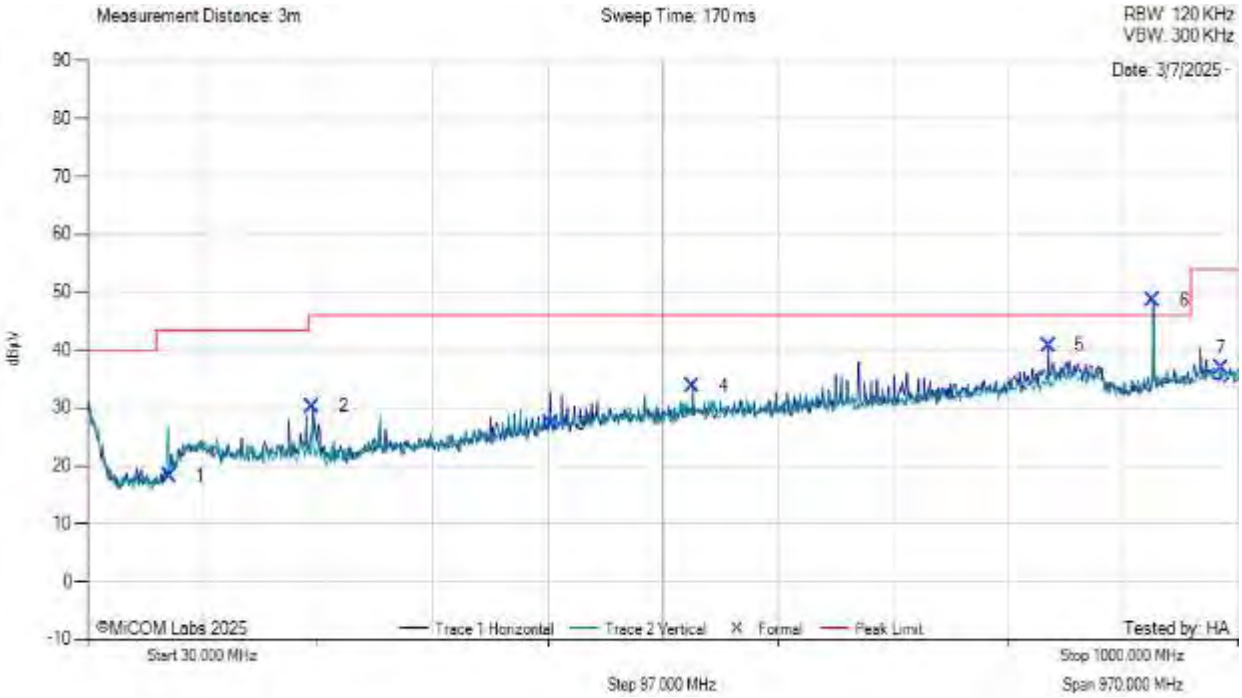
30 MHz to 1 GHz

Test Freq: 927.8 MHz, Antenna: Taoglas FXUB65 Antenna



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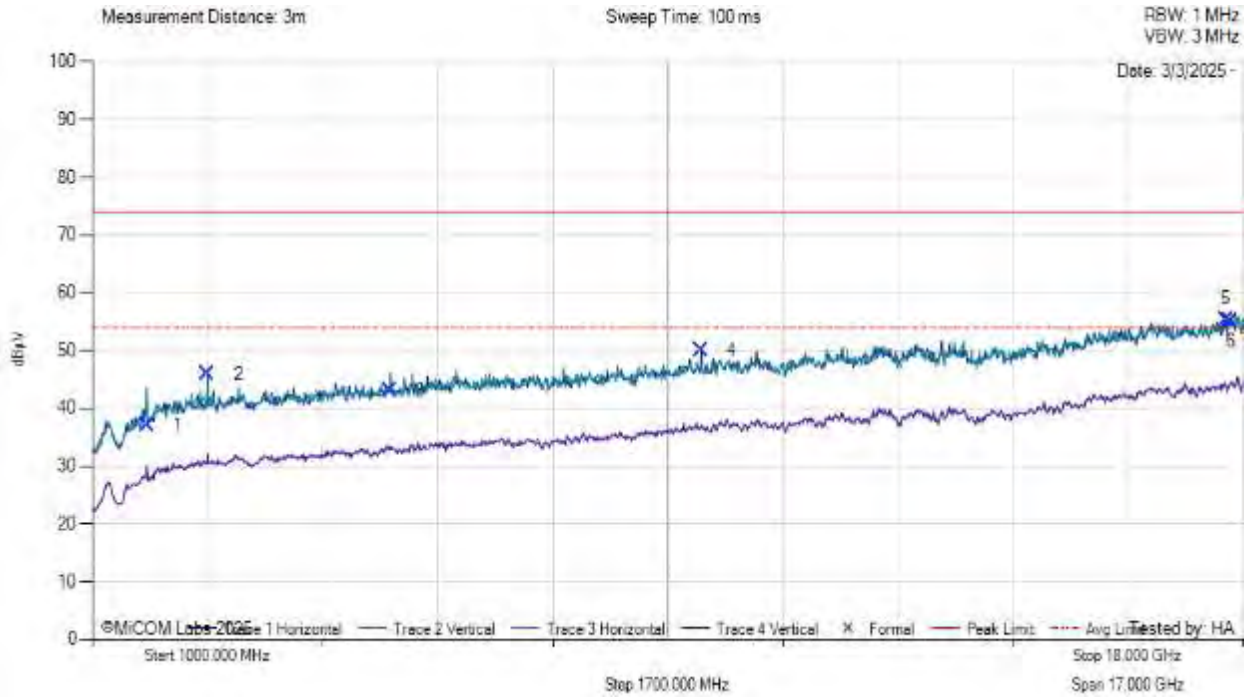
Taoglas FXU65 Antenna (1GHz – 18GHz)

FSK DR 50k

FCC Spurious 1 GHz -18 GHz

Test Freq: 902.2 MHz, Antenna: Taoglas FXUB65 Antenna



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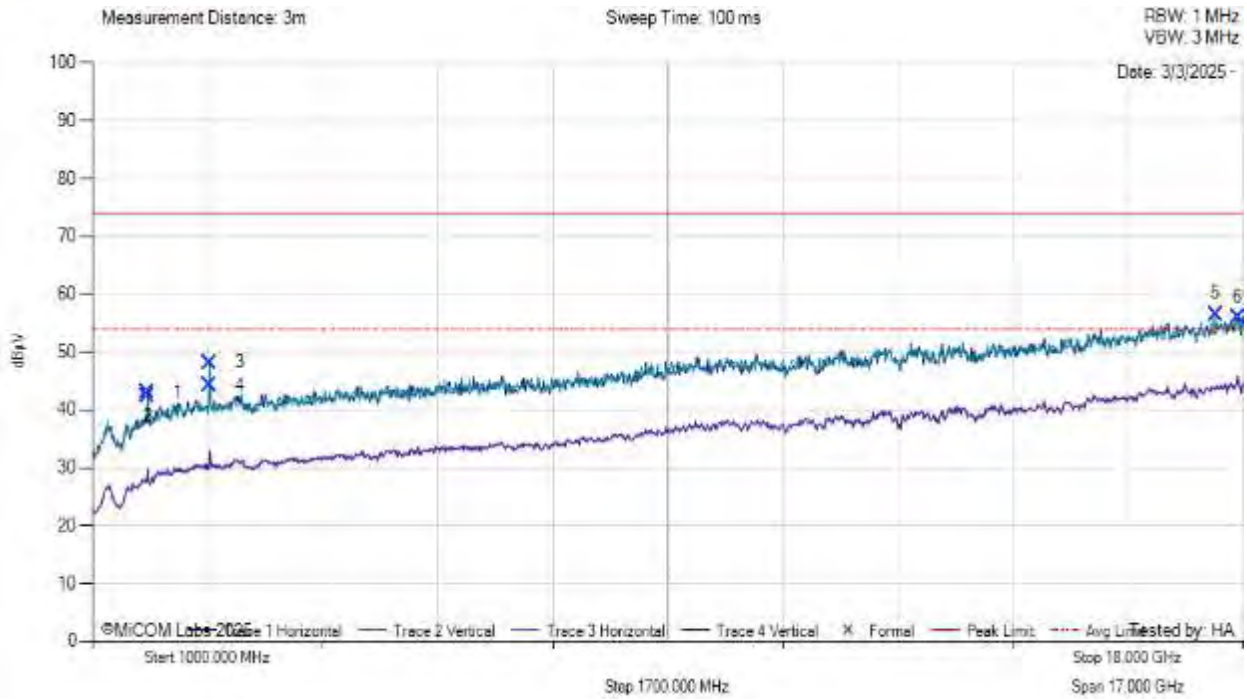
FCC Spurious 1 GHz -18 GHz

Test Freq: 915.0 MHz, Antenna: Taoglas FXUB65 Antenna



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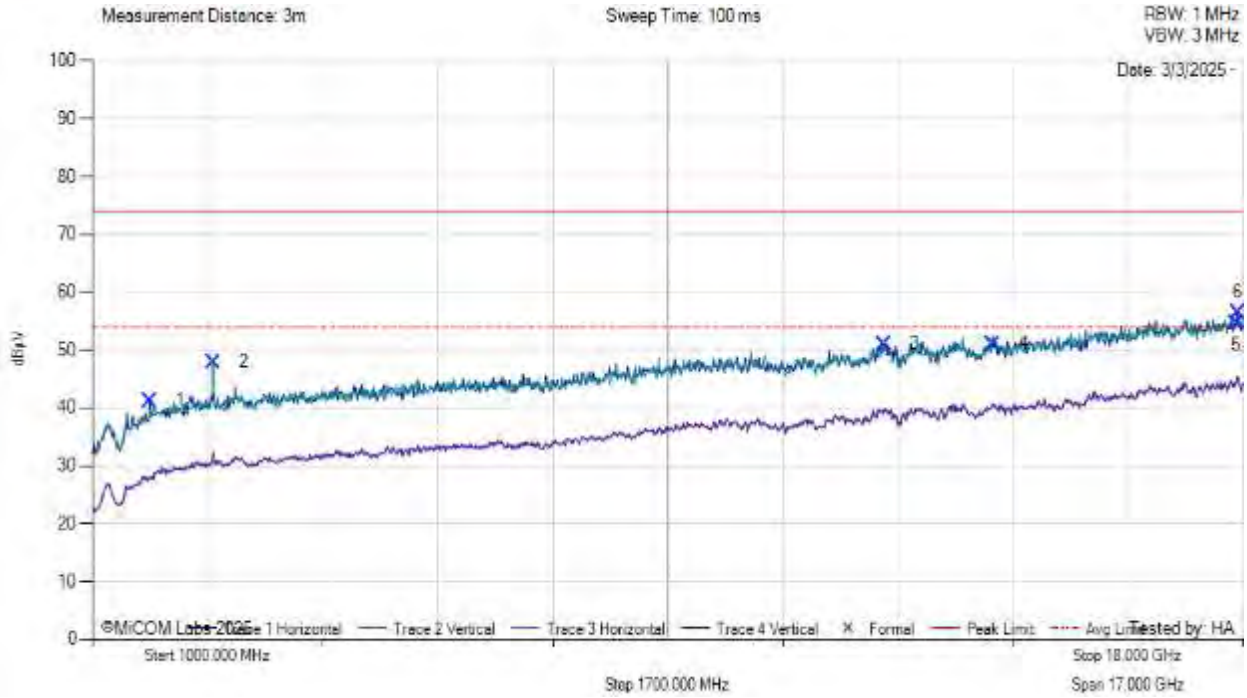
FCC Spurious 1 GHz -18 GHz

Test Freq: 927.8 MHz, Antenna: Taoglas FXUB65 Antenna



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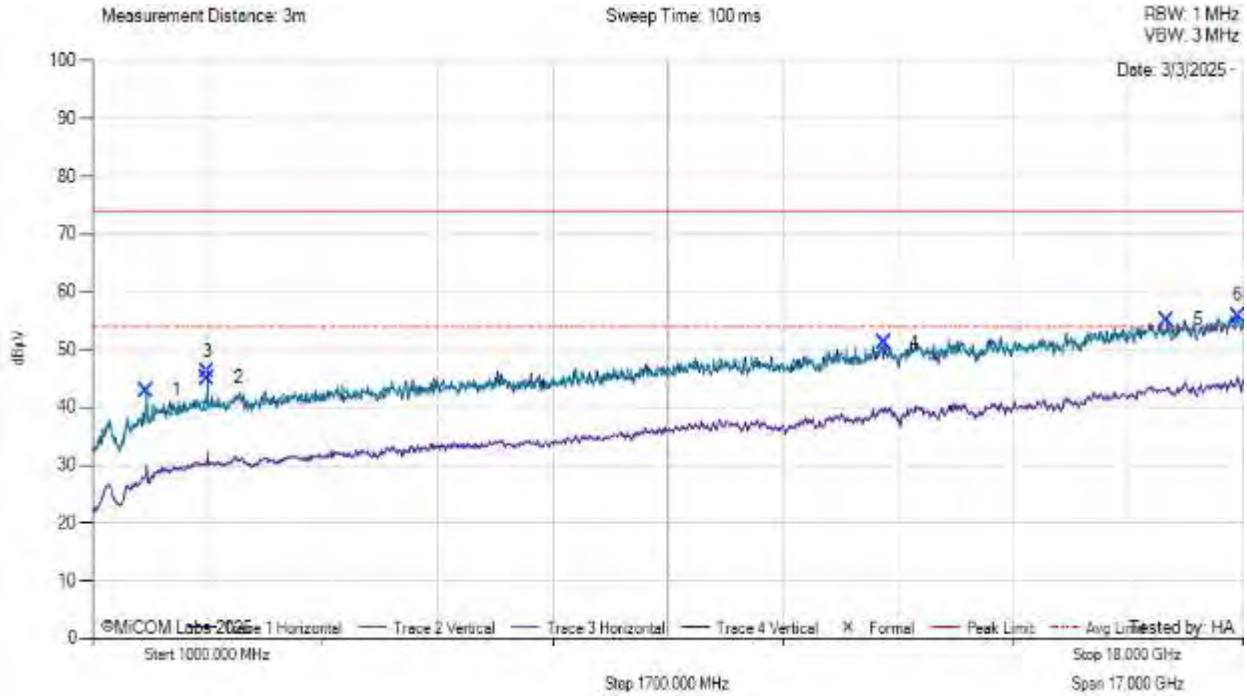
FSK DR 300k

FCC Spurious 1 GHz -18 GHz

Test Freq: 902.6 MHz, Antenna: Taoglas FXUB65 Antenna



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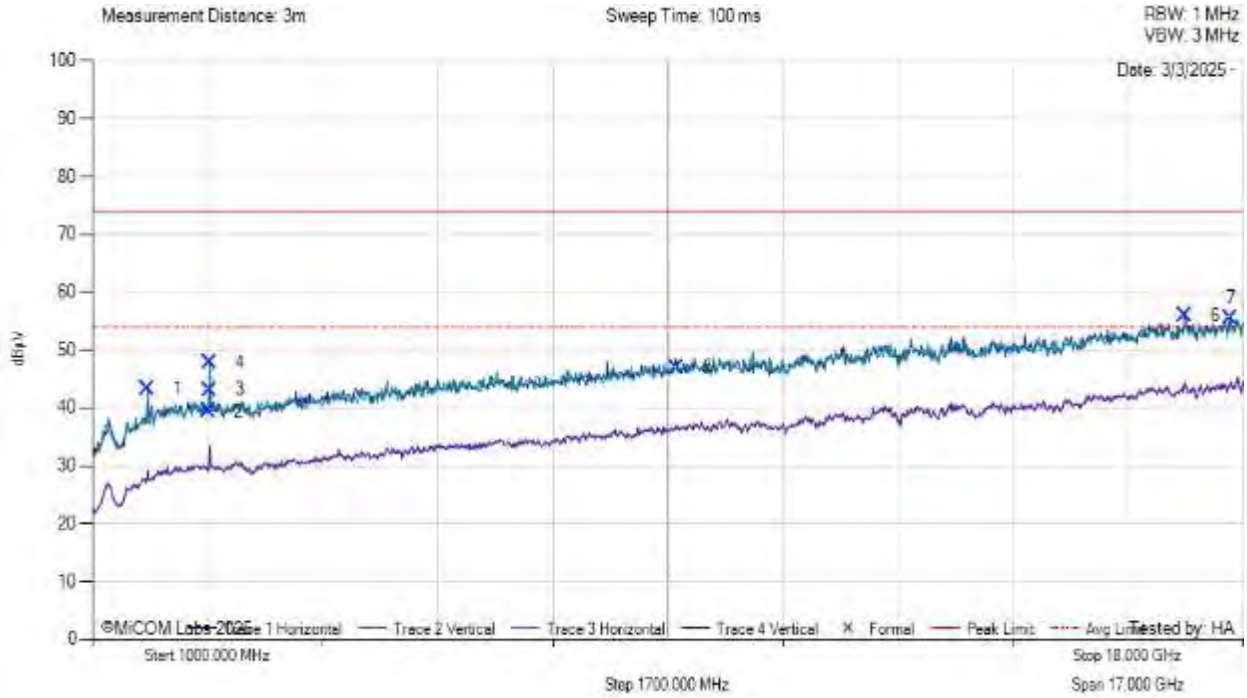
FCC Spurious 1 GHz - 18 GHz

Test Freq: 914.6 MHz, Antenna: Taoglas FXUB65 Antenna



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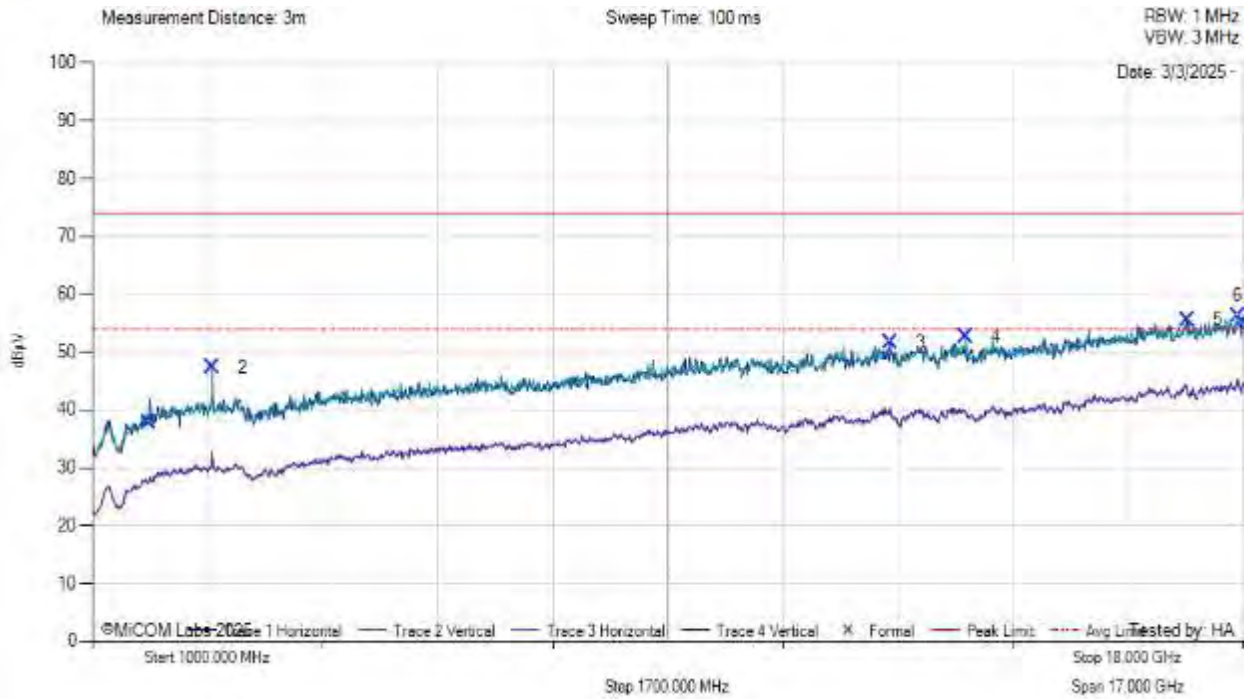
FCC Spurious 1 GHz -18 GHz

Test Freq: 927.2 MHz, Antenna: Taoglas FXUB65 Antenna



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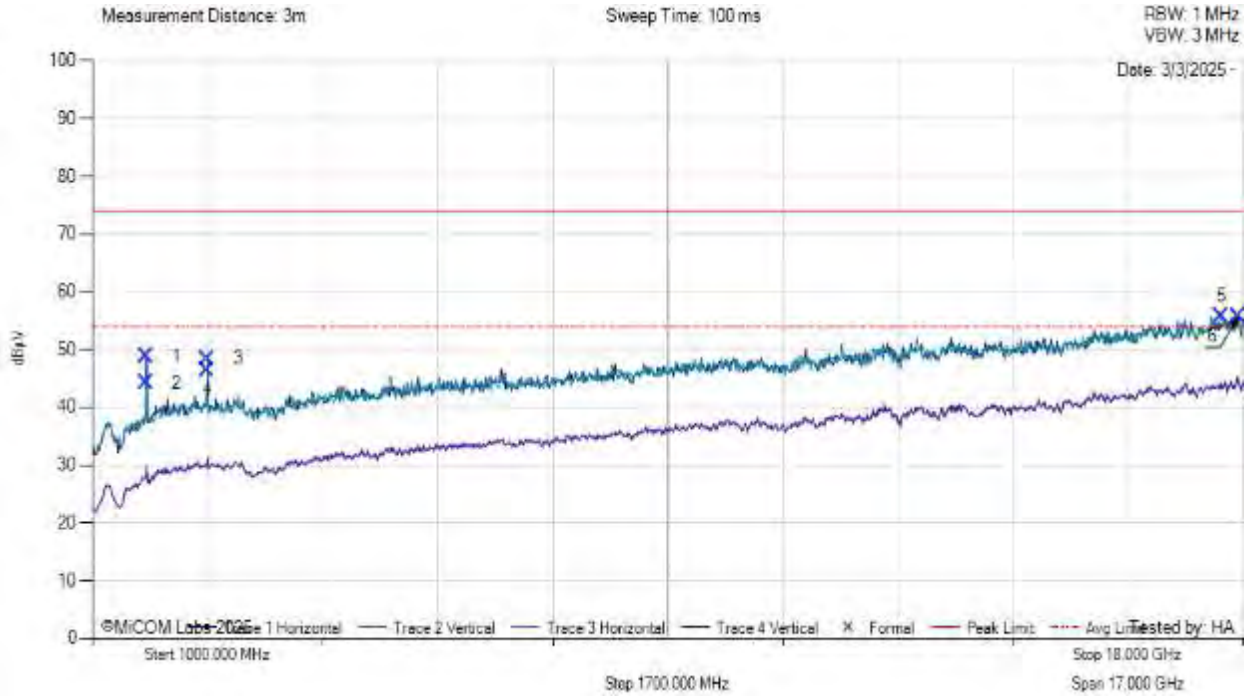
OFDM OPT4 MCS4

FCC Spurious 1 GHz -18 GHz

Test Freq: 902.2 MHz, Antenna: Taoglas FXUB65 Antenna



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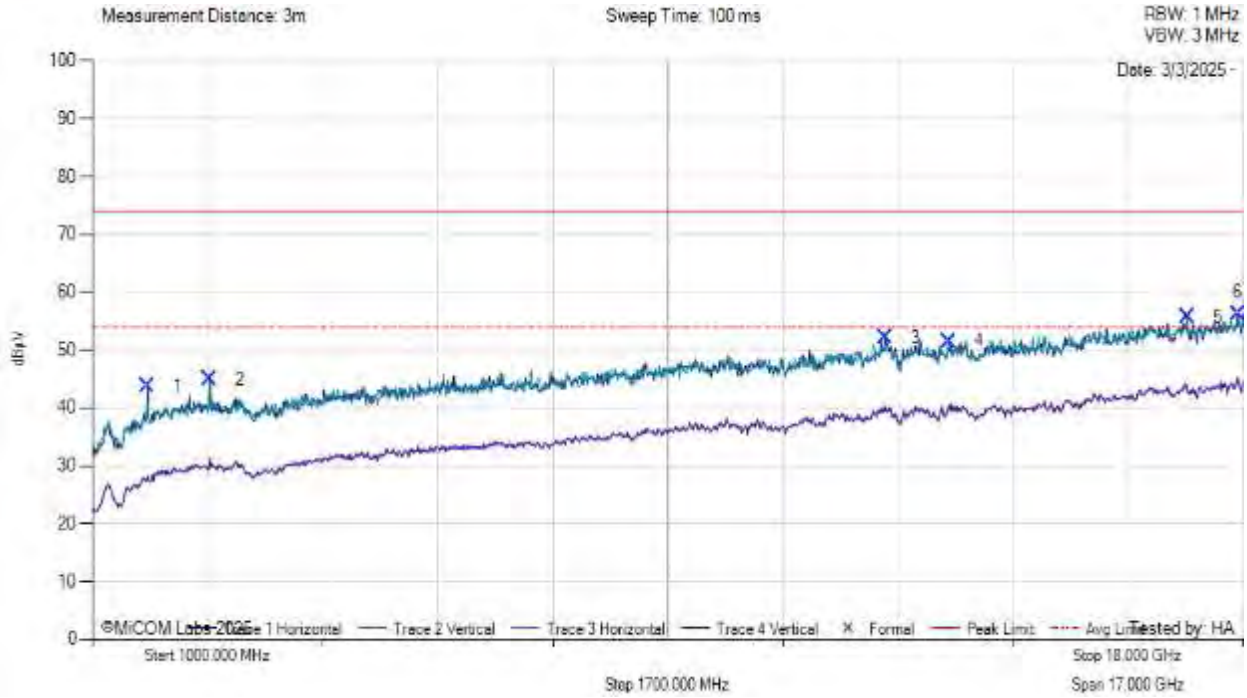
FCC Spurious 1 GHz -18 GHz

Test Freq: 915.0 MHz, Antenna: Taoglas FXUB65 Antenna



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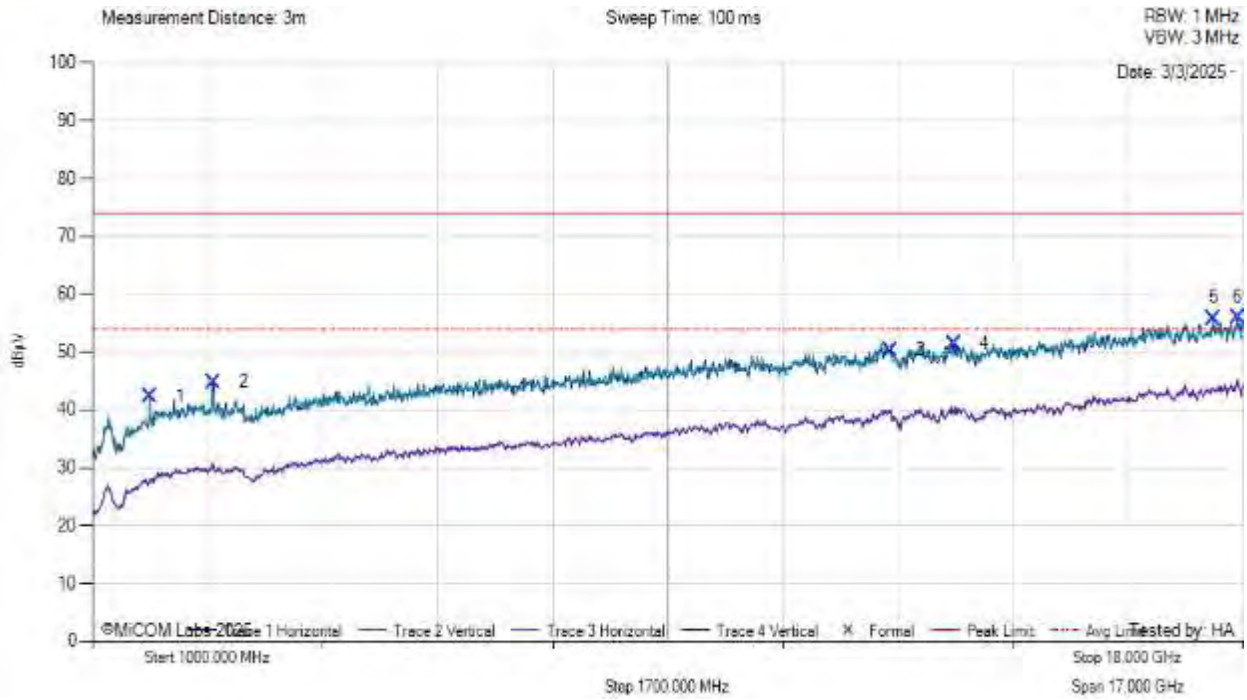
FCC Spurious 1 GHz -18 GHz

Test Freq: 927.8 MHz, Antenna: Taoglas FXUB65 Antenna



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