TEST REPORT ADDENDUM – CONDUCTED

FROM

Test of: SensThys, Inc. SensArray+

To: FCC Subpart C 15.247 (FHSS), ISED RSS-247

Test Report Serial No.: TIME01-U2_Conducted Rev A

As a result of the 6 Mbyte FCC file size limitation potentially large test reports require to be split into smaller components. This document is the Master document controlling Addendum reports as listed below. This Master document combined with the Addendums demonstrate compliance with the standard

Master Document Number	Addendum Reports
TIME01-U2_Master	TIME01-U2_Conducted
	TIME01-U2_Radiated

Issue Date: 13th October 2017

This Test Report is Issued Under the Authority of:

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

ACCREDITED
TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

Table of Contents

1. TEST RESULTS 3
1.1. 20 dB & 99% Bandwidth 3
1.2. Frequency Hopping Tests 8
1.2.1. Number of Hopping Channels 9
1.2.2. Channel Separation 13
1.2.3. Dwell Time & Channel Occupancy 15
1.3. Output Power 17
1.4. Emissions 23
1.4.1. Conducted Emissions 23
1.4.2. AC Mains Power Input/ Output Ports 44

A. APPENDIX - GRAPHICAL IMAGES 49
A.1. 20 dB & 99% Bandwidth 50
A.2. Frequency Hopping Tests 62
A.2.1. Number of Hopping Channels 62
A.2.2. Channel Separation 74
A.2.3. Dwell Time 78
A.2.4. Channel Occupancy 82
A.3. Emissions 86
A.3.1. Conducted Emissions 86

1. TEST RESULTS

1.1. 20 dB & 99% Bandwidth

Conducted Test Conditions for 20 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.247	**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)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for 20 dB and 99% Bandwidth Measurement

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

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

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

Limits for 20 dB and 99% Bandwidth

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

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

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

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

Equipment Configuration for 20 dB 99% Bandwidth			
Variant:	250 PR-ASK	**Duty Cycle (%):**	99
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.8	0.043	--	--	--	0.043	0.043	0.5	-0.46
915.3	0.045	--	--	--	0.045	0.045	0.5	-0.46
927.3	0.044	--	--	--	0.044	0.044	0.5	-0.46

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.8	0.063	--	--	--	0.063		
915.3	0.064	--	--	--	0.064		
927.3	0.061	--	--	--	0.061		

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

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

Equipment Configuration for 20 dB 99% Bandwidth

Variant:	300 PR-ASK	**Duty Cycle (%):**	99
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.8	0.044	--	--	--	0.044	0.044	0.5	-0.46
915.3	0.046	--	--	--	0.046	0.046	0.5	-0.45
927.3	0.044	--	--	--	0.044	0.044	0.5	-0.46

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.8	0.065	--	--	--	0.065		
915.3	0.064	--	--	--	0.064		
927.3	0.060	--	--	--	0.060		

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

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

Equipment Configuration for 20 dB 99% Bandwidth			
Variant:	40 DSB-AFK	**Duty Cycle (%):**	99
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.8	0.082	--	--	--	0.082	0.082	0.5	-0.42
915.3	0.082	--	--	--	0.082	0.082	0.5	-0.42
927.3	0.082	--	--	--	0.082	0.082	0.5	-0.42

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.8	0.083	--	--	--	0.083		
915.3	0.083	--	--	--	0.083		
927.3	0.083	--	--	--	0.083		

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

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

Equipment Configuration for 20 dB 99% Bandwidth

Variant:	400 DSB-AFK	**Duty Cycle (%):**	99
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured 20 dB Bandwidth (MHz) Port(s)				20 dB Bandwidth (MHz)		Limit	Lowest Margin
MHz	a	b	c	d	Highest	Lowest	MHz	MHz
902.8	0.281	--	--	--	0.281	0.281	0.5	-0.22
915.3	0.280	--	--	--	0.280	0.280	0.5	-0.22
927.3	0.281	--	--	--	0.281	0.281	0.5	-0.22

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				Maximum 99% Bandwidth (MHz)		
MHz	a	b	c	d			
902.8	0.391	--	--	--	0.391		
915.3	0.390	--	--	--	0.390		
927.3	0.390	--	--	--	0.390		

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

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

1.2. Frequency Hopping Tests

Conducted Test Conditions for Frequency Hopping Measurements			
Standard:	FCC CFR 47:15.247	**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)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References, FCC Public Notice DA 00-705		

Test Procedure for Frequency Hopping Measurements

These tests cover the following measurements:

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

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

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

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

Limits for Frequency Hopping Measurements

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

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

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

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

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

1.2.1. Number of Hopping Channels

Equipment Configuration for Number of Hopping Channels			
Variant:	250 PR-ASK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results			
Frequency Range (MHz)	**Number of Hopping Channels**	**Limit**	**Pass / Fail**
902.0-910.0	15	--	--
910.0-920.0	20	--	--
920.0-928.0	15	--	--
Total number of Hops	**50**	**50**	**Pass**

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

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

Equipment Configuration for Number of Hopping Channels			
Variant:	300 PR-ASK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	15	--	--
910.0-920.0	20	--	--
920.0-928.0	15	--	--
Total number of Hops	**50**	**50**	**Pass**

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

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

Equipment Configuration for Number of Hopping Channels			
Variant:	40 DSB-AFK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	15	--	--
910.0-920.0	20	--	--
920.0-928.0	15	--	--
Total number of Hops	**50**	**50**	**Pass**

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

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

Equipment Configuration for Number of Hopping Channels			
Variant:	400 DSB-AFK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Frequency Range (MHz)	Number of Hopping Channels	Limit	Pass / Fail
902.0-910.0	15	--	--
910.0-920.0	20	--	--
920.0-928.0	15	--	--
Total number of Hops	**50**	**50**	**Pass**

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

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

1.2.2. Channel Separation

Equipment Configuration for Channel Separation			
Variant:	250 PR-ASK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
915.3	0.507	0.044	Pass

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

Equipment Configuration for Channel Separation			
Variant:	300 PR-ASK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
915.3	0.507	0.046	Pass

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

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

Equipment Configuration for Channel Separation			
Variant:	40 DSB-AFK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
915.3	0.500	0.082	Pass

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

Equipment Configuration for Channel Separation			
Variant:	400 DSB-AFK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Center Frequency (MHz)	Chan Separation (MHz)	Limit (MHz)	Pass / Fail
915.3	0.503	0.281	Pass

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

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

1.2.3. Dwell Time & Channel Occupancy

Equipment Configuration for Dwell Time and Channel Occupancy			
Variant:	250 PR-ASK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
915.30	0.399	398.800	20.00	400.000	Pass

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

Observed over 20 seconds duration - worst case scenario

Equipment Configuration for Dwell Time and Channel Occupancy			
Variant:	300 PR-ASK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
915.30	0.398	398.000	20.00	400.000	Pass

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

Observed over 20 seconds duration - worst case scenario

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

Equipment Configuration for Dwell Time and Channel Occupancy			
Variant:	40 DSB-AFK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
915.30	0.400	400.000	20.00	400.000	Fail

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

Observed over 20 seconds duration - worst case scenario

Equipment Configuration for Dwell Time and Channel Occupancy			
Variant:	400 DSB-AFK	**Antenna:**	Not Applicable
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
Duty Cycle (%):	99.0	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency(MHz)	Dwell Time (Single Burst) (S)	Channel Occupancy (mS)	Observation Period (S)	Channel Occupancy Limit (mS)	Pass / Fail
915.30	0.398	398.000	10.00	400.000	Pass

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

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

1.3. Output Power

Conducted Test Conditions for Fundamental Emission Output Power			
Standard:	FCC CFR 47:15.247	**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)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Fundamental Emission Output Power Measurement

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

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

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

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

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

Limits for Fundamental Emission Output Power

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

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

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

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

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

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

antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

Equipment Configuration for Output Power Average

Variant:	250 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	3.00
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.8	29.28	--	--	--	29.28	30.00	-0.72	30.00
915.3	29.19	--	--	--	29.19	30.00	-0.81	30.00
927.3	28.77	--	--	--	28.77	30.00	-0.23	30.00

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

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

Equipment Configuration for Output Power Average

Variant:	300 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	3.00
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.8	29.33	--	--	--	29.33	30.00	-0.67	30.00
915.3	29.21	--	--	--	29.21	30.00	-0.79	30.00
927.3	28.70	--	--	--	28.70	30.00	-0.30	30.00

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

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

Equipment Configuration for Output Power Average

Variant:	40 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	3.00
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.8	29.20	--	--	--	29.20	30.00	-0.80	30.00
915.3	29.16	--	--	--	29.16	30.00	-0.84	30.00
927.3	28.97	--	--	--	28.97	30.00	-0.03	30.00

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

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

Equipment Configuration for Output Power Average

Variant:	400 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	3.00
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.8	29.34	--	--	--	29.34	30.00	-0.64	30.00
915.3	29.27	--	--	--	29.27	30.00	-0.73	30.00
927.3	28.06	--	--	--	28.06	30.00	-0.94	30.00

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

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

Equipment Configuration for Output Power Average

Variant:	250 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	8.00
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.8	27.18	--	--	--	27.18	28.00	-0.82	28.00
915.3	27.09	--	--	--	27.09	28.00	-0.91	28.00
927.3	26.67	--	--	--	26.67	28.00	-1.33	28.00

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

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

Equipment Configuration for Output Power Average

Variant:	300 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	8.00
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.8	27.23	--	--	--	27.23	28.00	-0.77	28.00
915.3	27.11	--	--	--	27.11	28.00	-0.89	28.00
927.3	26.60	--	--	--	26.60	28.00	-1.40	28.00

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

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

Equipment Configuration for Output Power Average

Variant:	40 DSB-AFK	**Duty Cycle (%):**	99.0

Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	8.00
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.8	27.10	--	--	--	27.10	28.00	-0.90	28.00
915.3	27.06	--	--	--	27.06	28.00	-0.94	28.00
927.3	26.87	--	--	--	26.87	28.00	-1.13	28.00

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

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

Equipment Configuration for Output Power Average

Variant:	400 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	8.00
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Measured Output Power (dBm) Port(s)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	dBm	dBm	dB	
902.8	27.24	--	--	--	27.24	28.00	-0.76	28.00
915.3	27.17	--	--	--	27.17	28.00	-0.83	28.00
927.3	25.96	--	--	--	25.96	28.00	-2.04	28.00

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

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

1.4. Emissions

1.4.1. Conducted Emissions

Conducted Test Conditions for Transmitter Conducted Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47:15.247	**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)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Normative References		

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

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

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

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

Limits Transmitter Conducted Spurious and Band-Edge Emissions

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

1.4.1.1. Conducted Unwanted Spurious Emissions

Equipment Configuration for Unwanted Emissions Average			
Variant:	250 PR-ASK	**Duty Cycle (%):**	99
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Average (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.8	30.0 - 10000.0	-45.504	-42.34	--	--	--	--	--	--
915.3	30.0 - 10000.0	-45.504	-43.57	--	--	--	--	--	--
927.3	30.0 - 10000.0	-54.786	-47.50	--	--	--	--	--	--

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

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

Equipment Configuration for Unwanted Emissions Average			
Variant:	300 PR-ASK	**Duty Cycle (%):**	99
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Average (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.8	30.0 - 10000.0	-45.504	-43.85	--	--	--	--	--	--
915.3	30.0 - 10000.0	-45.504	-43.57	--	--	--	--	--	--
927.3	30.0 - 10000.0	-54.786	-45.84	--	--	--	--	--	--

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

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

Equipment Configuration for Unwanted Emissions Average			
Variant:	40 DSB-AFK	**Duty Cycle (%):**	99
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Average (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.8	30.0 - 10000.0	-45.504	-42.46	--	--	--	--	--	--
915.3	30.0 - 10000.0	-45.504	-42.49	--	--	--	--	--	--
927.3	30.0 - 10000.0	-54.786	-45.84	--	--	--	--	--	--

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

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

Equipment Configuration for Unwanted Emissions Average			
Variant:	400 DSB-AFK	**Duty Cycle (%):**	99
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Test Frequency	Frequency Range	Unwanted Emissions Average (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
902.8	30.0 - 10000.0	-45.504	-42.68	--	--	--	--	--	--
915.3	30.0 - 10000.0	-45.504	-42.91	--	--	--	--	--	--
927.3	30.0 - 10000.0	-54.786	-46.12	--	--	--	--	--	--

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

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

1.4.1.2. Conducted Band-Edge Emissions

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Average

Variant:	250 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	927.3 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	-42.74	-2.34	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

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Average

Variant:	300 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	927.3 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	-42.74	-2.46	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

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Average			
Variant:	40 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	927.3 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	-28.15	-2.07	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

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Static) Average			
Variant:	400 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	927.3 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	-37.12	-3.04	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

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Average			
Variant:	250 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	902.8 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	-29.59	-0.96	902.50	--	--	-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

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Average			
Variant:	300 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	902.8 MHz					
Band-Edge Frequency:	902.0 MHz					
Test Frequency Range:	875.0 - 905.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Revised Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-31.97	-1.01	902.50	--	--	-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

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Average			
Variant:	40 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	902.8 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	-24.01	-1.03	902.50	--	--	-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

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Hopping) Average			
Variant:	400 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	902.8 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	-29.76	-1.05	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

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Average			
Variant:	250 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	902.8 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	-41.98	-1.92	902.60	--	--	-0.600

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Average

Variant:	300 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	902.8 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	-40.04	-2.20	902.60	--	--	-0.600

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Average			
Variant:	40 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	902.8 MHz
Band-Edge Frequency:	902.0 MHz
Test Frequency Range:	875.0 - 905.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-32.20	-1.96	902.60	--	--	-0.600

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions (Static) Average

Variant:	400 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	902.8 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	-39.48	-2.76	902.50	--	--	-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

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Average			
Variant:	250 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	927.3 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	-29.82	-1.16	927.40	--	--	-0.600

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

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Average			
Variant:	300 PR-ASK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	PR-ASK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	927.3 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	-30.70	-1.31	927.40	--	--	-0.600

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

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Average			
Variant:	40 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	927.3 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	-23.65	-1.33	927.40	--		-0.600

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

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

Equipment Configuration for Conducted Upper Band-Edge Emissions (Hopping) Average			
Variant:	400 DSB-AFK	**Duty Cycle (%):**	99.0
Data Rate:	0.00 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	DSB-AFK	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	CC
Engineering Test Notes:	None		

Test Measurement Results

Channel Frequency:	927.3 MHz
Band-Edge Frequency:	928.0 MHz
Test Frequency Range:	925.0 - 950.0 MHz

Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-33.74	-1.27	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

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

1.4.2. AC Mains Power Input/ Output Ports

Scope

This test assesses the ability of the EUT to limit its internal noise from being present on the AC mains power input/output ports.

Test Method

The test method shall be in accordance with §15.207 and the Artificial Mains Networks (AMNs) shall be connected to the AC mains power source.

The measurement frequency range extends from 150 kHz to 30 MHz. When the EUT is a transmitter operating at frequencies below 30 MHz, then the exclusion band for transmitters applies for measurements in the transmit mode of operation.

Test Procedure

The conducted emissions are measured in a shielded room with a spectrum analyzer in peak hold in the first instance. Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation. The highest emissions relative to the limit are listed.

Limits

The equipment shall meet the class B limits given in §15.207. Alternatively, for equipment intended to be used in telecommunication centres only, the class A limits given in §15.207 may be used.

Class B Emissions

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency

Class A Emissions

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	79	66
0.5-30	73	60

Traceability

All conducted emission measurements are traceable to national standards. The uncertainty of measurement at a confidence level of not less than 95 %, with a coverage factor of k=2, in the range 9 kHz – 30 MHz (Average & Quasi-peak) is ±2.64 dB.

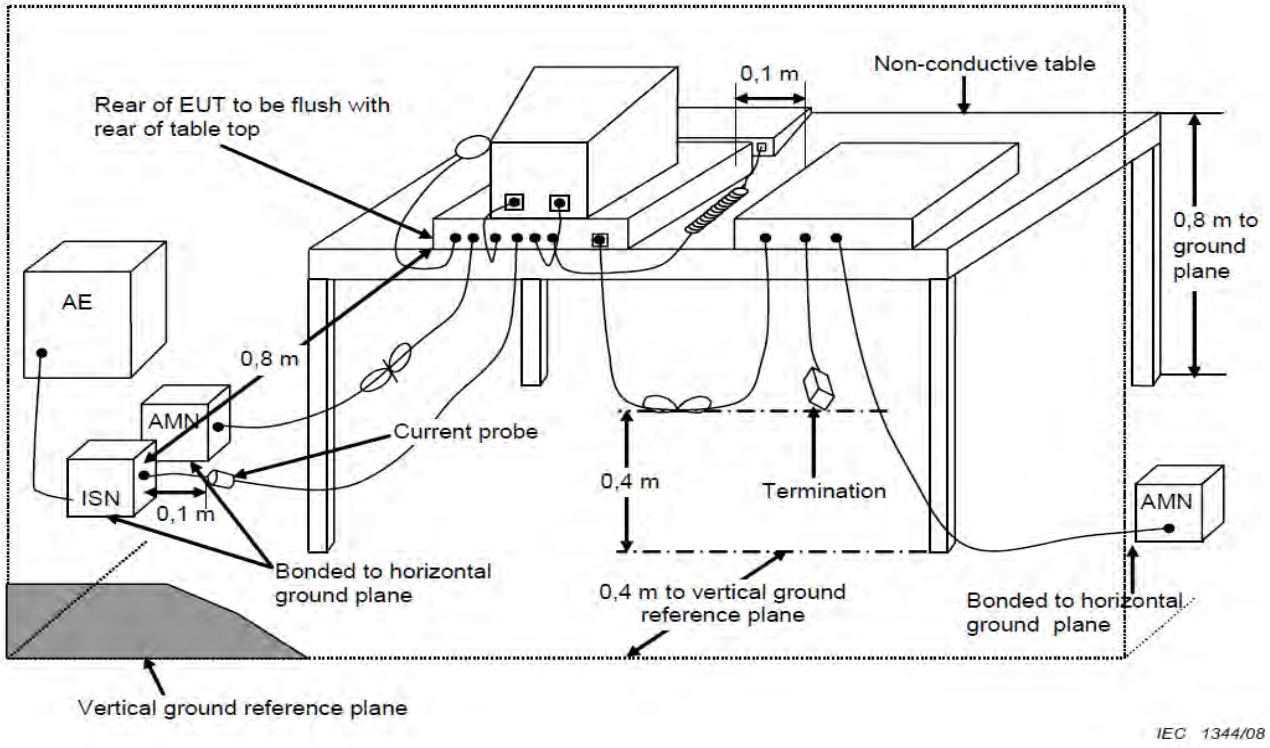
Laboratory Measurement Uncertainty	
Measurement uncertainty	±2.64 dB

Method
Measurements were made per work instruction WI-EMC-01 'Measurement of Conducted Emissions'

Test Equipment Utilized

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
158	Barometer/Thermometer	Control Company	4196	E2846	30 Nov 2017
184	Pulse Limiter	Rhode & Schwarz	ESH3Z2	357.8810.52	6 Oct 2018
190	LISN (two-line V-network)	Rhode & Schwarz	ESH3Z5	836679/006	29 Oct 2017
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	2 May 2018
307	BNC-CABLE	Megaphase	1689 1GVT4	15F50B002	6 Oct 2018
316	Dell desktop computer workstation	Dell	Desktop	WS04	Not Required
372	AC Variable PS	California Instruments	1251P	L06951	Cal when used
378	Rohde & Schwarz 40 GHz Receiver with Generator	Rhode & Schwarz	ESIB40	100107/040	4 Nov 2017
388	LISN (3 Phase) 9kHz - 30MHz	Rohde & Schwarz	ESH2-Z5	892107/022	30 Oct 2017
496	MiTest Conducted Emissions test software.	MiCOM	Conducted Emissions Test Software Version 1.0	496	Not Required
CCEMC01	Confidence Check.	MiCOM	CCEMC01	None	16 Oct 2017

Test Setup – Power Input / Output Port



Measurement Results

PoE powered configuration

Model:	SensArray+	Configuration tested:	PoE Powered
Input power:	120V_{AC}/60Hz	Standard:	FCC 15C

Num	Frequency MHz	Raw dBµV	Cable Loss dB	Factor dB	Total Correction dBµV	Corrected Value dBµV	Measurement Type	Line	Limit dBµV/m	Margin dB	Pass /Fail
1	4.718	35.28	0.26	10.08	10.34	45.62	Max Avg	Neutral	46.0	-0.4	Pass
2	4.718	35.60	0.26	10.08	10.34	45.94	Max Qp	Neutral	56.0	-10.1	Pass
3	4.585	34.15	0.25	10.07	10.32	44.47	Max Avg	Live	46.0	-1.5	Pass
4	4.585	35.31	0.25	10.07	10.32	45.63	Max Qp	Live	56.0	-10.4	Pass
5	4.782	34.88	0.26	10.08	10.34	45.22	Max Avg	Live	46.0	-0.8	Pass
6	4.782	35.59	0.26	10.08	10.34	45.93	Max Qp	Live	56.0	-10.1	Pass
7	3.323	33.28	0.24	10.02	10.26	43.54	Max Avg	Neutral	46.0	-2.5	Pass
8	3.323	34.17	0.24	10.02	10.26	44.43	Max Qp	Neutral	56.0	-11.6	Pass
9	1.795	32.00	0.16	9.96	10.12	42.12	Max Avg	Neutral	46.0	-3.9	Pass
10	1.795	33.38	0.16	9.96	10.12	43.50	Max Qp	Neutral	56.0	-12.5	Pass
11	1.728	33.93	0.16	9.96	10.12	44.05	Max Avg	Live	46.0	-2.0	Pass
12	1.728	33.93	0.16	9.96	10.12	44.05	Max Qp	Live	56.0	-12.0	Pass

Test Notes: Model: SensArray+. PoE powered configuration. AC Wireline testing. 120Vac, 60Hz

ac/dc powered configuration

Model:	SensArray+	Configuration tested:	ac/dc Powered
Input power:	120V_{AC}/60Hz	Standard:	FCC 15C

Num	Frequency MHz	Raw dBµV	Cable Loss dB	Factor dB	Total Correction dBµV	Corrected Value dBµV	Measurement Type	Line	Limit dBµV/m	Margin dB	Pass /Fail
1	0.151	19.97	0.05	9.92	9.97	29.94	Max Avg	Live	56.0	-26.0	Pass
2	0.151	37.11	0.05	9.92	9.97	47.08	Max Qp	Live	66.0	-18.9	Pass
3	0.151	19.70	0.05	9.92	9.97	29.67	Max Avg	Neutral	56.0	-26.3	Pass
4	0.151	37.25	0.05	9.92	9.97	47.22	Max Qp	Neutral	66.0	-18.8	Pass
5	1.155	30.25	0.09	9.94	10.03	40.28	Max Avg	Live	46.0	-5.7	Pass
6	1.155	30.08	0.09	9.94	10.03	40.11	Max Qp	Live	56.0	-15.9	Pass
7	0.384	31.79	0.03	9.92	9.95	41.74	Max Avg	Neutral	49.3	-7.6	Pass
8	0.384	31.68	0.03	9.92	9.95	41.63	Max Qp	Neutral	59.3	-17.7	Pass
9	0.223	13.11	0.06	9.92	9.98	23.09	Max Avg	Neutral	53.9	-30.8	Pass
10	0.223	28.79	0.06	9.92	9.98	38.77	Max Qp	Neutral	63.9	-25.1	Pass
11	0.770	25.13	0.12	9.93	10.05	35.18	Max Avg	Live	46.0	-10.8	Pass
12	0.770	26.23	0.12	9.93	10.05	36.28	Max Qp	Live	56.0	-19.7	Pass

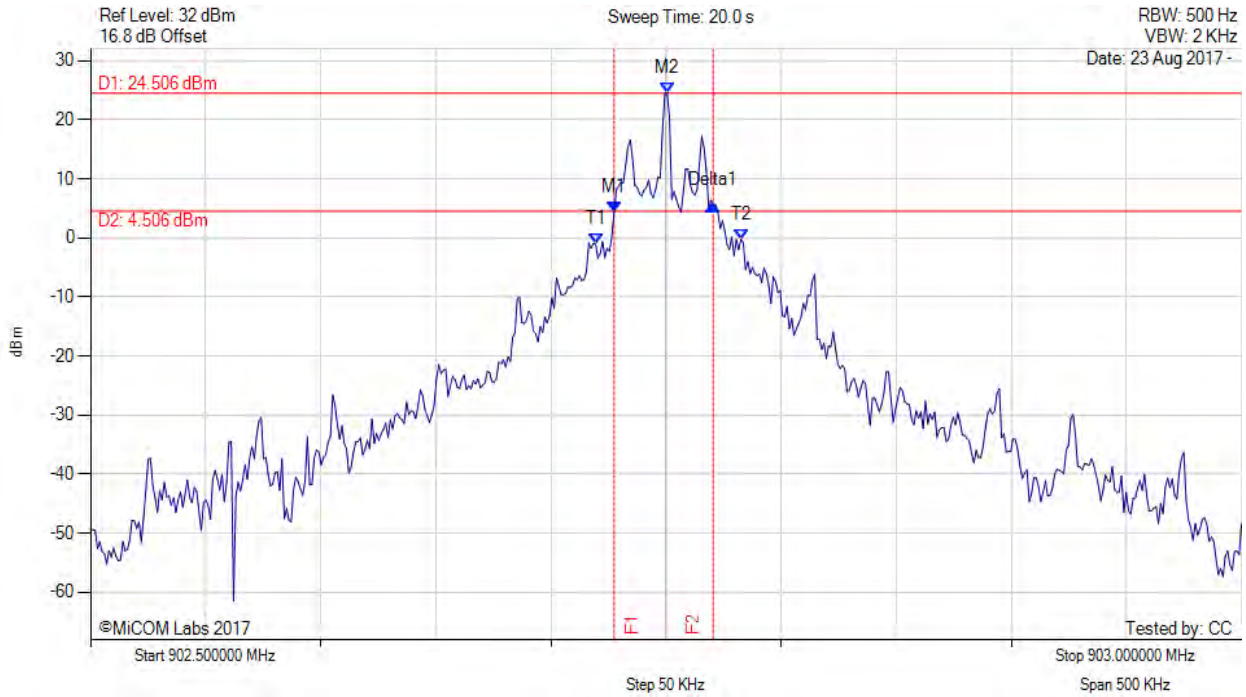
Test Notes: Model: SensArray+. AC/DC powered configuration. AC Wireline testing. 120Vac, 60Hz

A. APPENDIX - GRAPHICAL IMAGES

A.1. 20 dB & 99% Bandwidth

20 dB 99% BANDWIDTH

Variant: 250 PR-ASK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

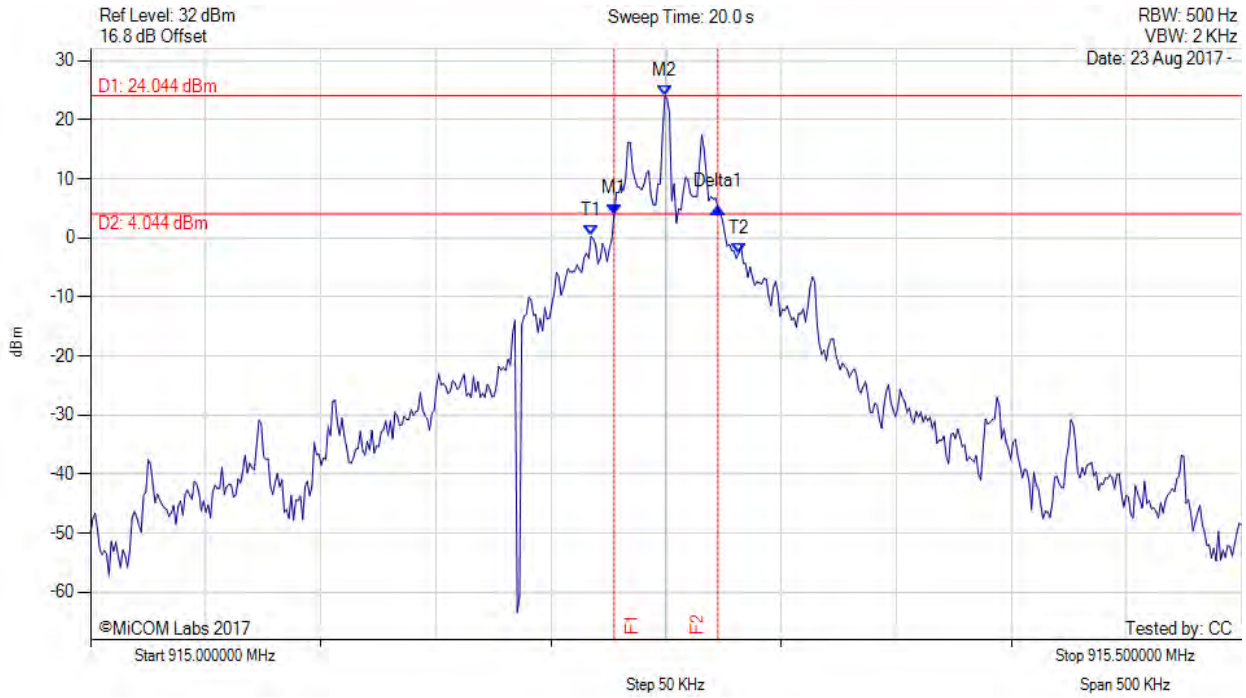


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.727 MHz : 4.402 dBm M2 : 902.751 MHz : 24.506 dBm Delta1 : 43 KHz : 1.198 dB T1 : 902.719 MHz : -1.059 dBm T2 : 902.783 MHz : -0.274 dBm OBW : 63 KHz	Measured 20 dB Bandwidth: 0.043 MHz Limit: 0.5 kHz Margin: 0.46 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 250 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

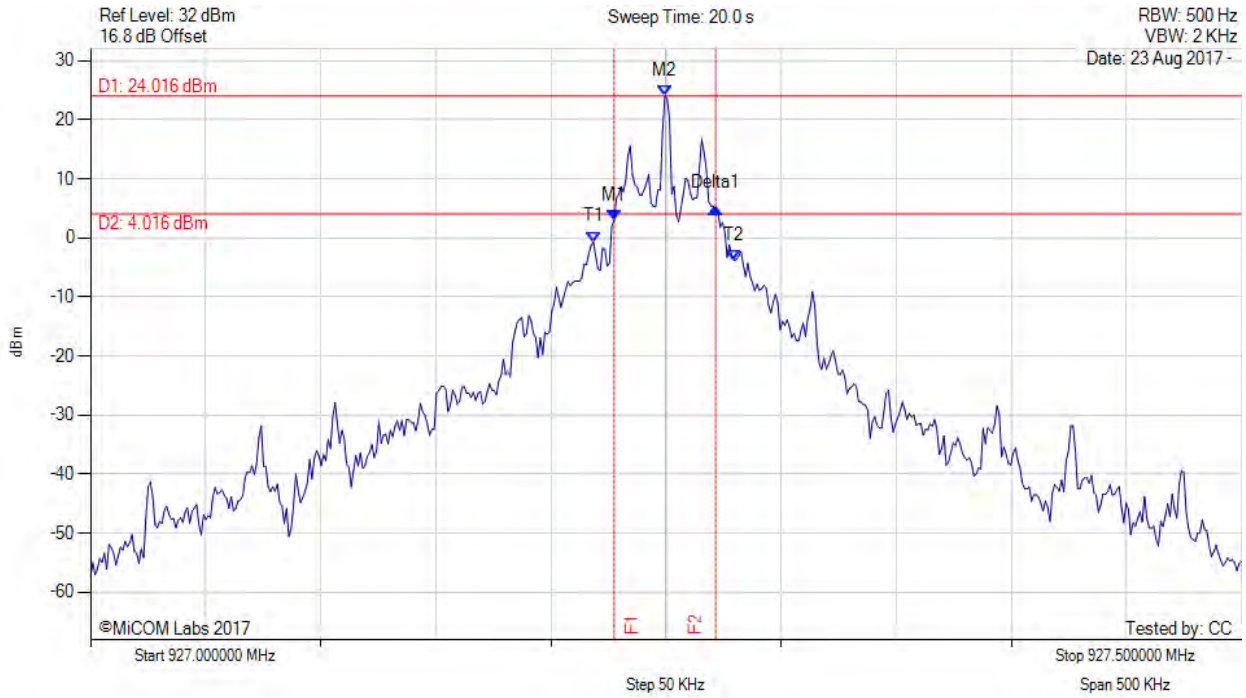


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.227 MHz : 3.991 dBm M2 : 915.249 MHz : 24.044 dBm Delta1 : 45 KHz : 1.165 dB T1 : 915.217 MHz : 0.278 dBm T2 : 915.282 MHz : -2.596 dBm OBW : 64 KHz	Measured 20 dB Bandwidth: 0.045 MHz Limit: 0.5 kHz Margin: 0.46 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 250 PR-ASK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

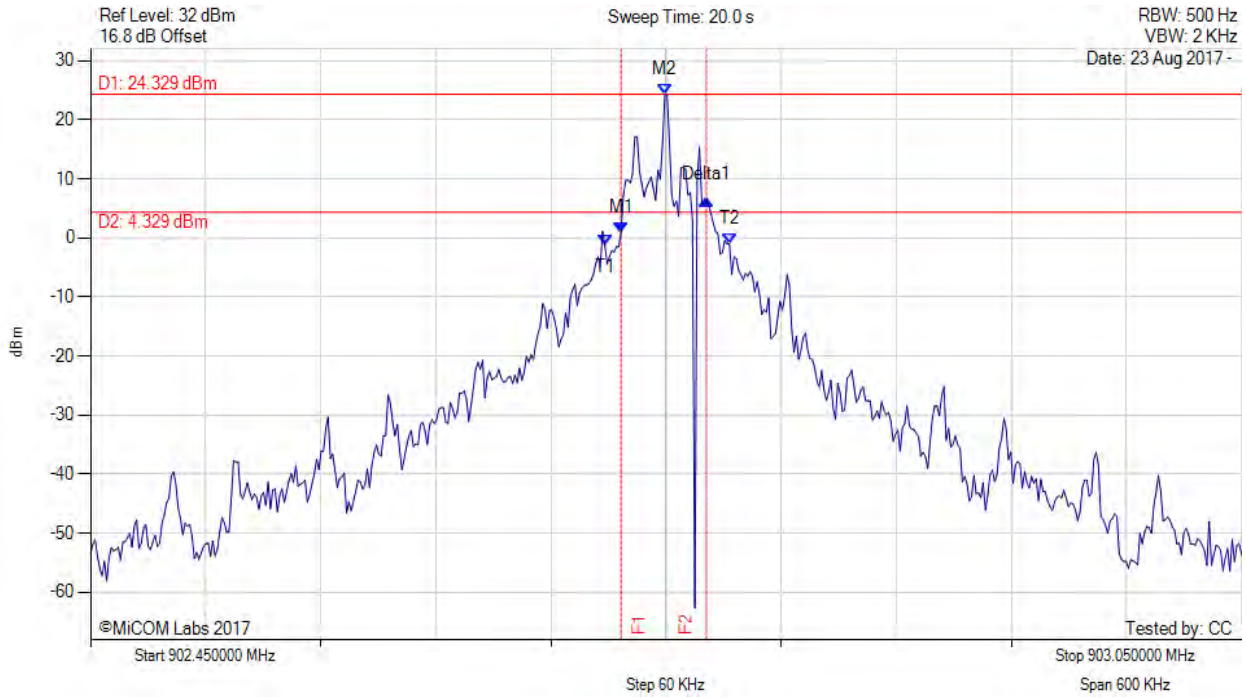


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.227 MHz : 3.013 dBm M2 : 927.249 MHz : 24.016 dBm Delta1 : 44 KHz : 1.946 dB T1 : 927.218 MHz : -0.686 dBm T2 : 927.280 MHz : -3.812 dBm OBW : 61 KHz	Measured 20 dB Bandwidth: 0.044 MHz Limit: 0.5 kHz Margin: 0.46 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 300 PR-ASK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

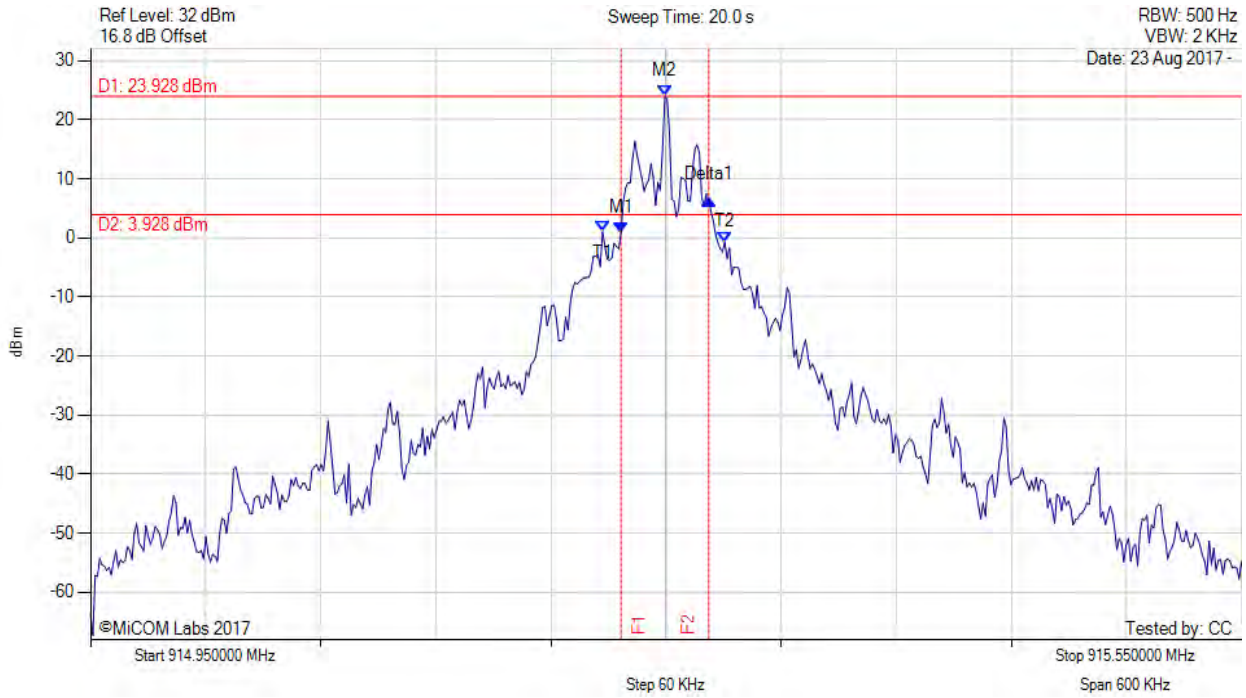


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 902.727 MHz : 0.823 dBm M2 : 902.749 MHz : 24.329 dBm Delta1 : 44 KHz : 5.707 dB T1 : 902.718 MHz : -1.305 dBm T2 : 902.783 MHz : -1.012 dBm OBW : 65 KHz	Measured 20 dB Bandwidth: 0.044 MHz Limit: 0.5 kHz Margin: 0.46 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 300 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

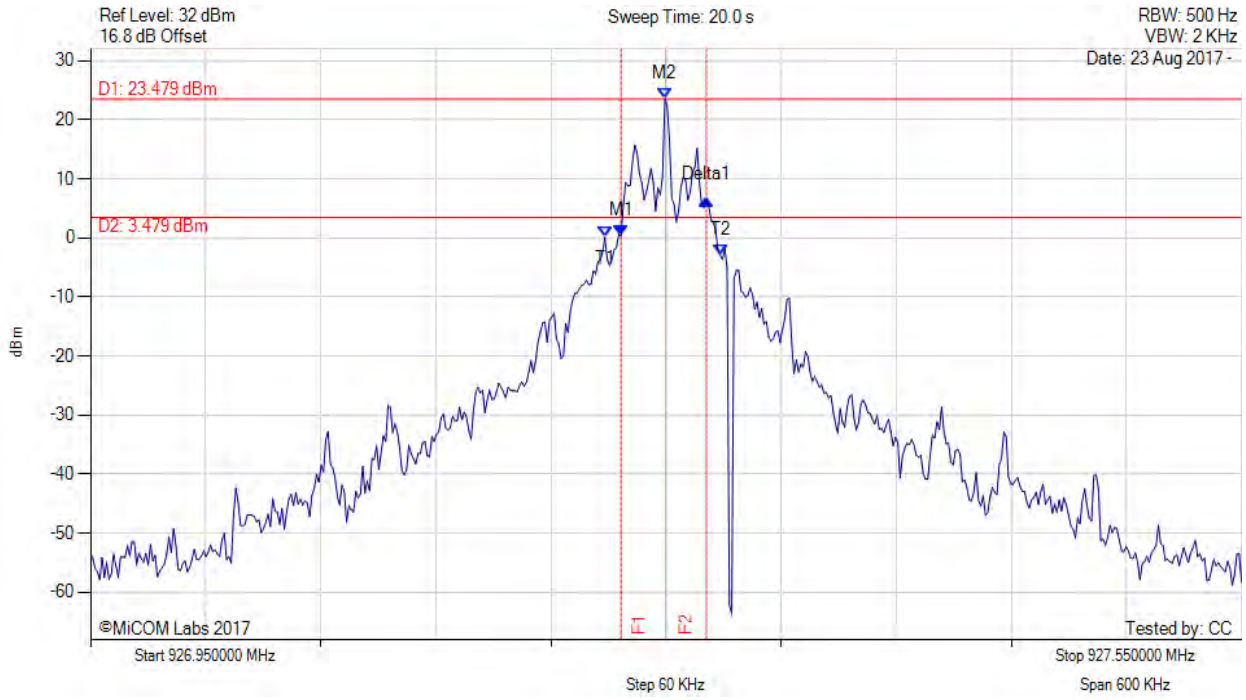


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.227 MHz : 0.890 dBm M2 : 915.249 MHz : 23.928 dBm Delta1 : 46 KHz : 5.658 dB T1 : 915.217 MHz : 1.040 dBm T2 : 915.281 MHz : -0.690 dBm OBW : 64 KHz	Measured 20 dB Bandwidth: 0.046 MHz Limit: 0.5 kHz Margin: 0.45 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 300 PR-ASK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

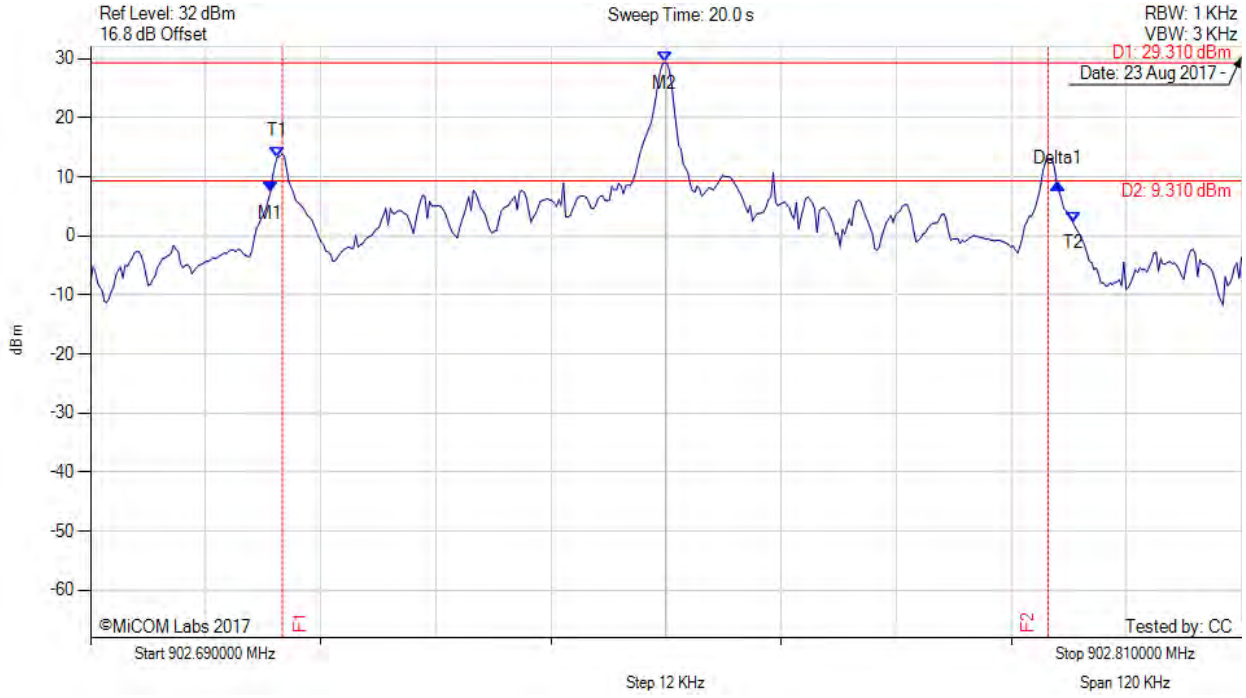


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 927.227 MHz : 0.298 dBm M2 : 927.249 MHz : 23.479 dBm Delta1 : 44 KHz : 6.211 dB T1 : 927.218 MHz : 0.111 dBm T2 : 927.278 MHz : -2.869 dBm OBW : 60 KHz	Measured 20 dB Bandwidth: 0.044 MHz Limit: 0.5 kHz Margin: 0.46 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 40 DSB-AFK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

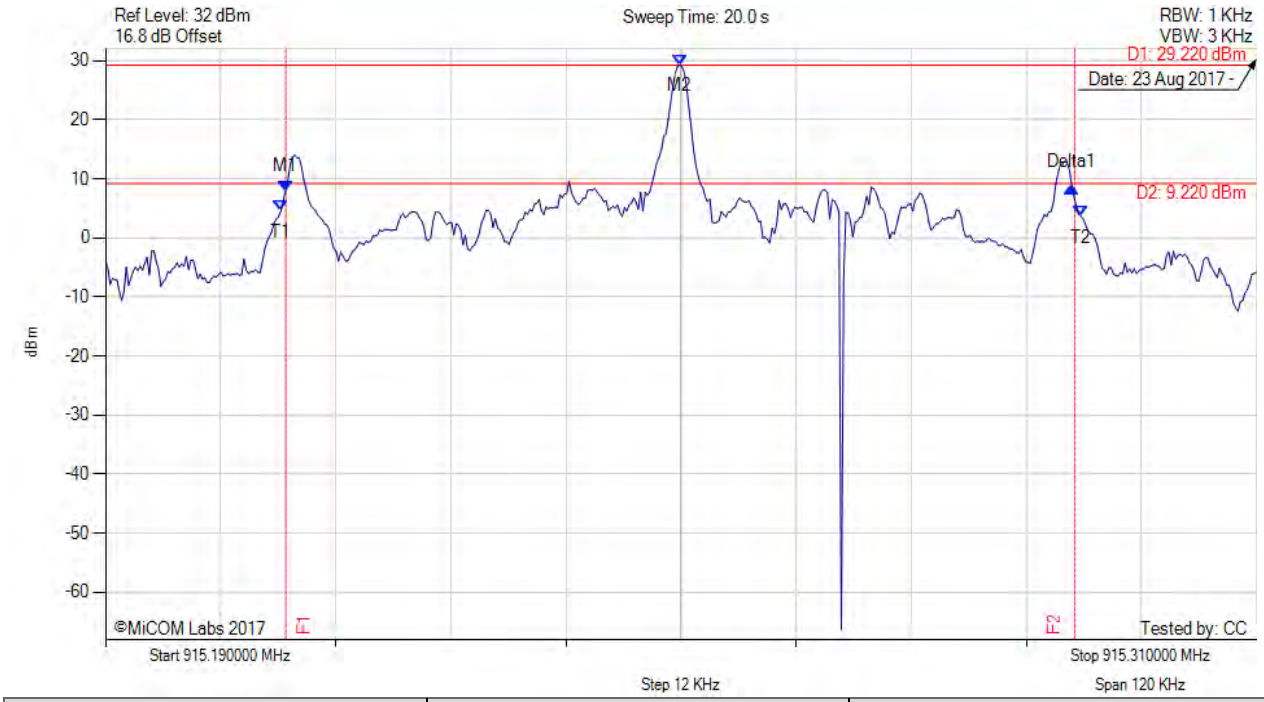


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.709 MHz : 7.420 dBm M2 : 902.750 MHz : 29.313 dBm Delta1 : 82 KHz : 1.348 dB T1 : 902.709 MHz : 13.365 dBm T2 : 902.792 MHz : 2.275 dBm OBW : 83 KHz	Measured 20 dB Bandwidth: 0.082 MHz Limit: 0.5 kHz Margin: 0.42 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 40 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

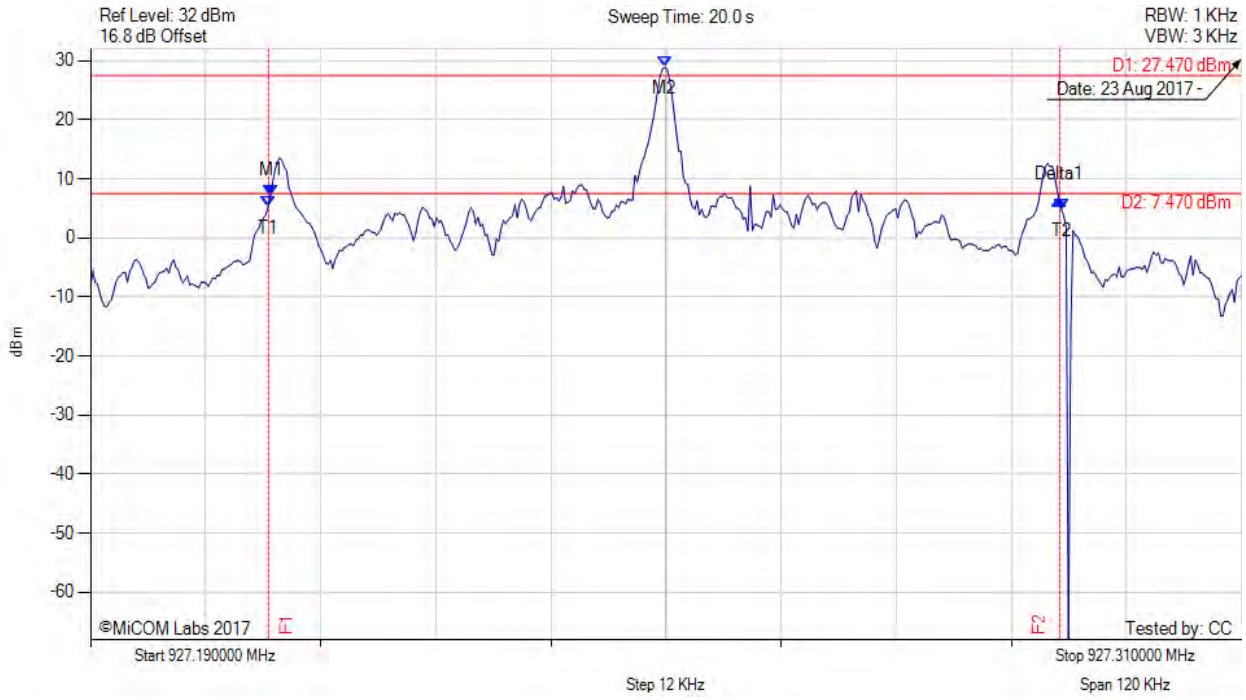


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.209 MHz : 7.927 dBm M2 : 915.250 MHz : 29.220 dBm Delta1 : 82 KHz : 0.592 dB T1 : 915.208 MHz : 4.502 dBm T2 : 915.292 MHz : 3.583 dBm OBW : 83 KHz	Measured 20 dB Bandwidth: 0.082 MHz Limit: 0.5 kHz Margin: 0.42 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 40 DSB-AFK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

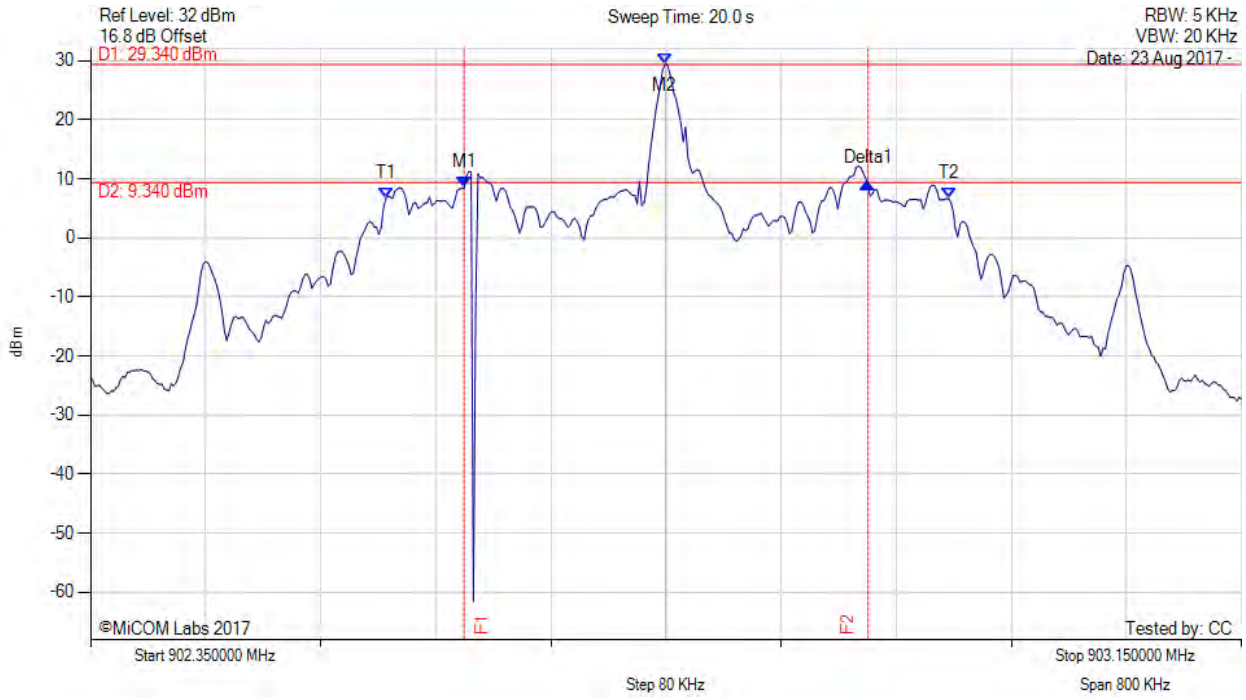


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.209 MHz : 7.125 dBm M2 : 927.250 MHz : 28.850 dBm Delta1 : 82 KHz : -0.765 dB T1 : 927.209 MHz : 5.290 dBm T2 : 927.291 MHz : 4.760 dBm OBW : 83 KHz	Measured 20 dB Bandwidth: 0.082 MHz Limit: 0.5 kHz Margin: 0.42 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 400 DSB-AFK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

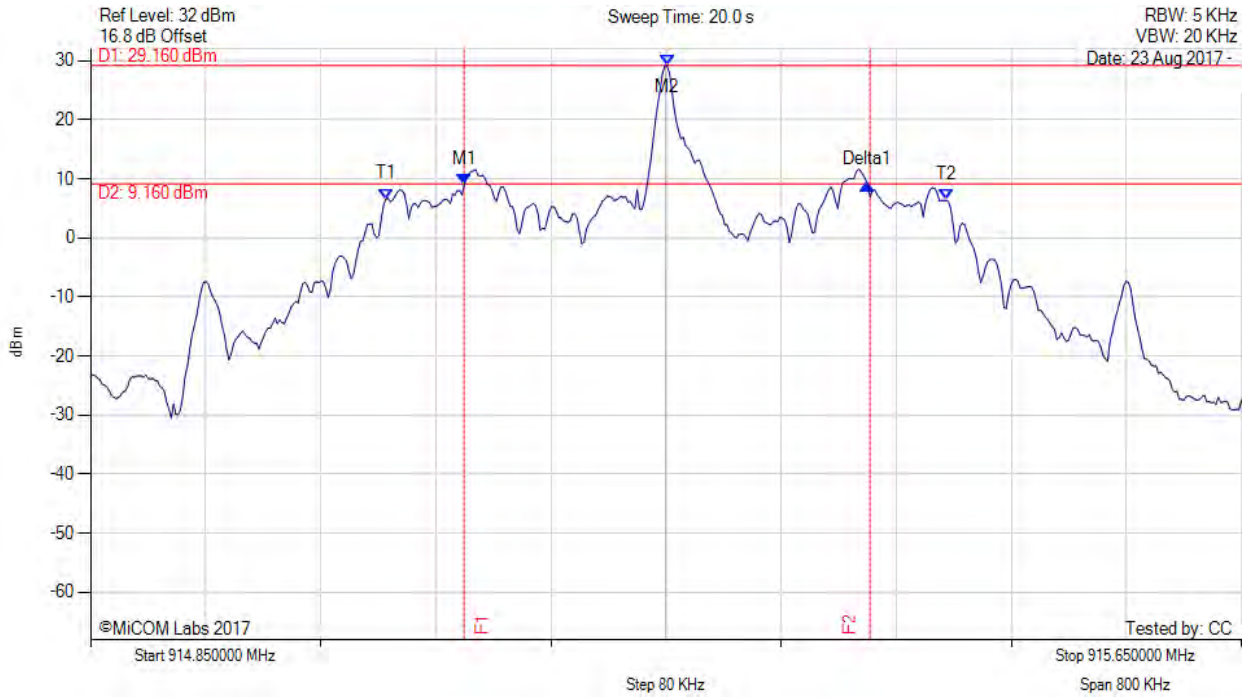


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.610 MHz : 8.531 dBm M2 : 902.749 MHz : 29.340 dBm Delta1 : 281 KHz : 0.667 dB T1 : 902.555 MHz : 6.643 dBm T2 : 902.946 MHz : 6.662 dBm OBW : 391 KHz	Measured 20 dB Bandwidth: 0.281 MHz Limit: 0.5 kHz Margin: 0.22 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 400 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

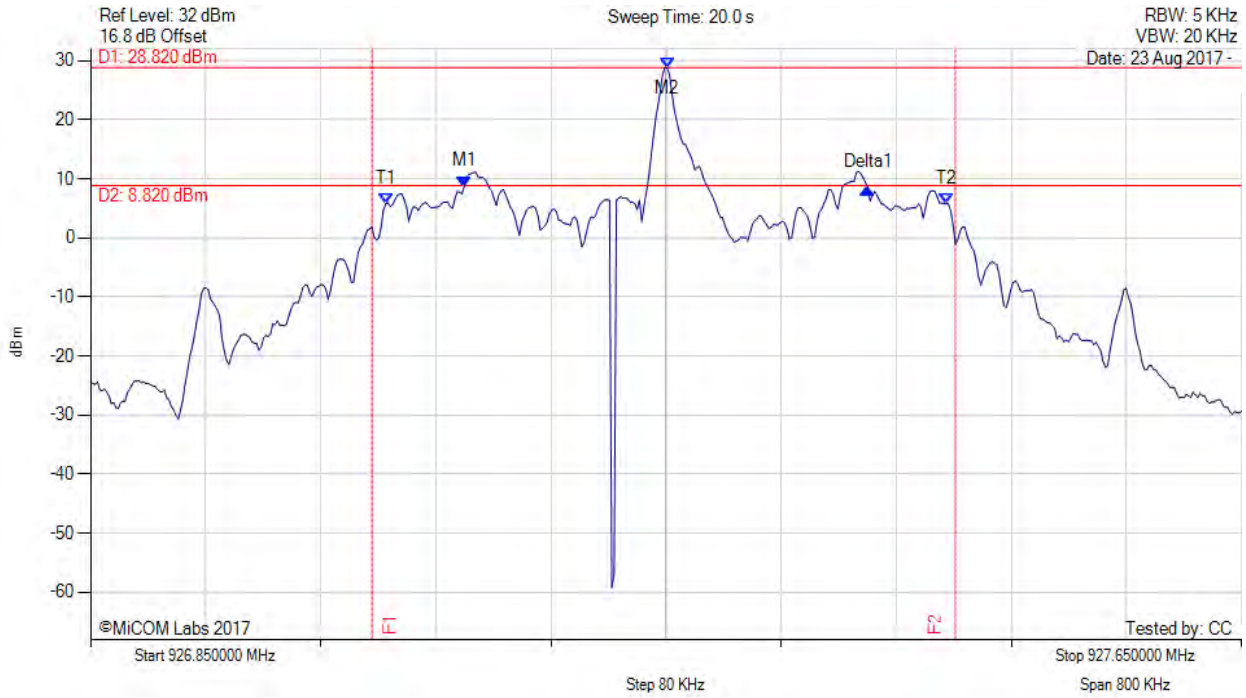


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = MAX HOLD	M1 : 915.110 MHz : 8.972 dBm M2 : 915.251 MHz : 29.157 dBm Delta1 : 280 KHz : -0.031 dB T1 : 915.055 MHz : 6.581 dBm T2 : 915.445 MHz : 6.369 dBm OBW : 390 KHz	Measured 20 dB Bandwidth: 0.280 MHz Limit: 0.5 kHz Margin: 0.22 MHz

back to matrix

20 dB 99% BANDWIDTH

Variant: 400 DSB-AFK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.110 MHz : 8.667 dBm M2 : 927.251 MHz : 28.821 dBm Delta1 : 281 KHz : -0.224 dB T1 : 927.055 MHz : 5.761 dBm T2 : 927.445 MHz : 5.752 dBm OBW : 390 KHz	Measured 20 dB Bandwidth: 0.281 MHz Limit: 0.5 kHz Margin: 0.22 MHz

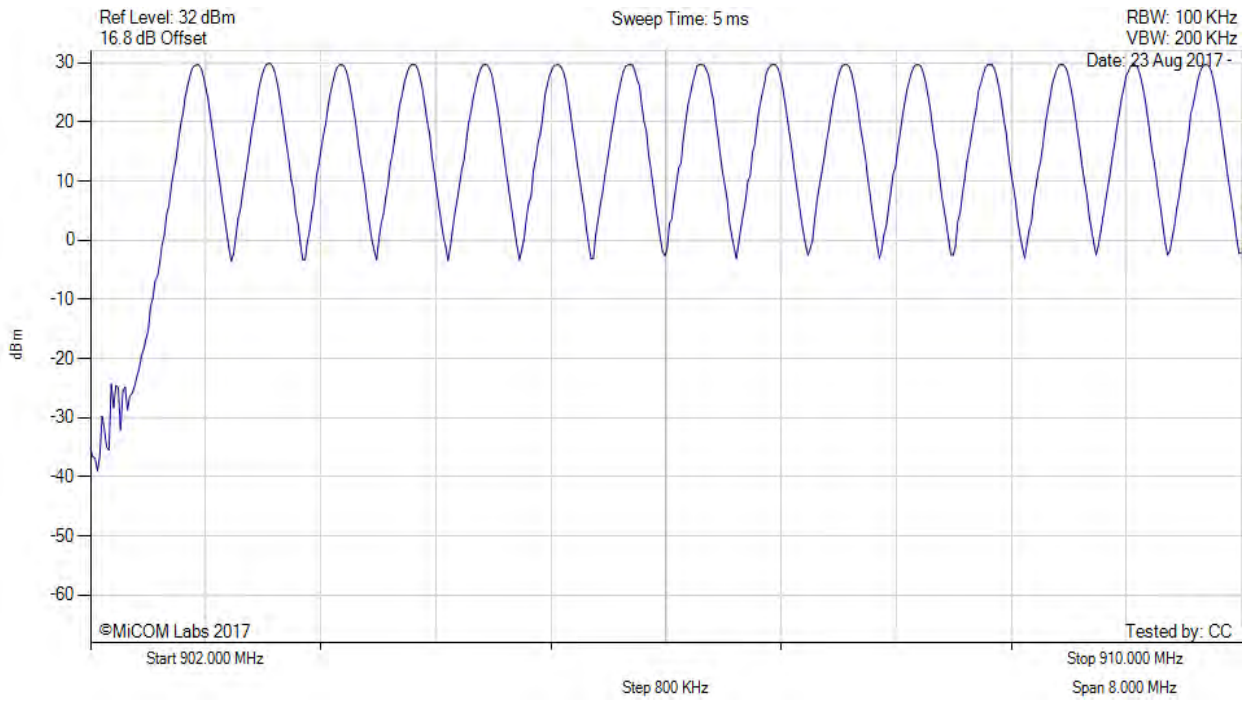
back to matrix

A.2. Frequency Hopping Tests

A.2.1. Number of Hopping Channels

NUMBER OF HOPPING CHANNELS

Variant: 250 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

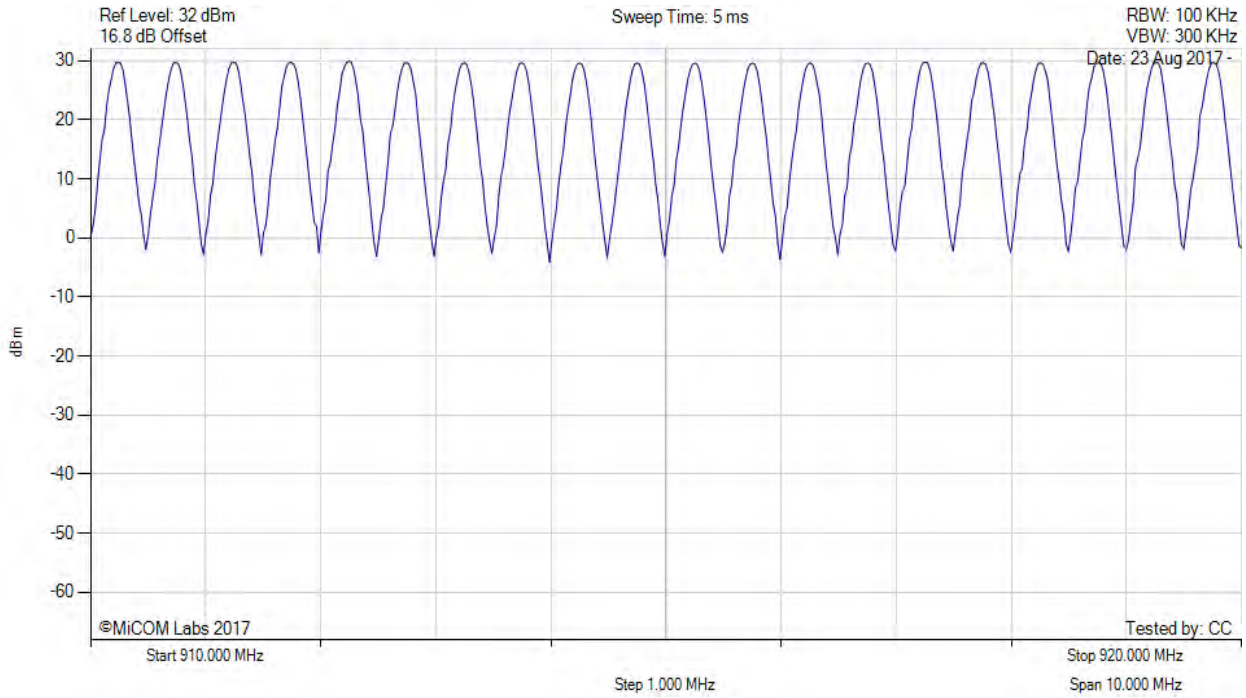


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 250 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

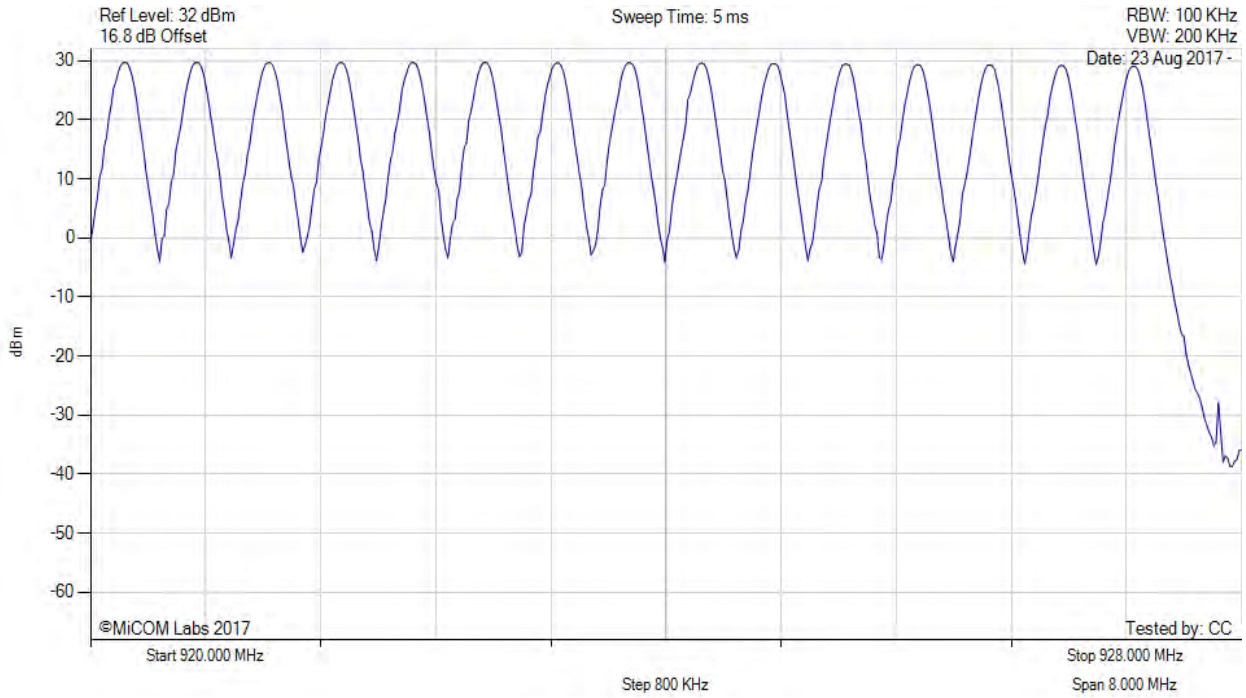


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 250 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

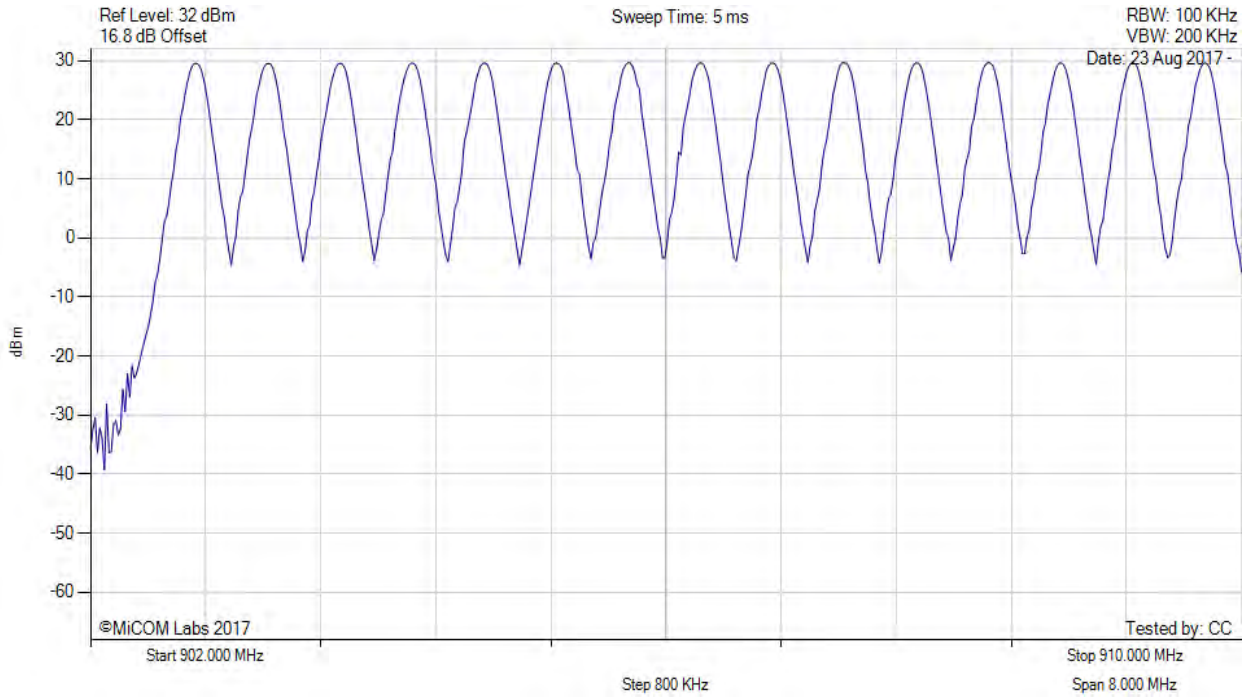


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 300 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

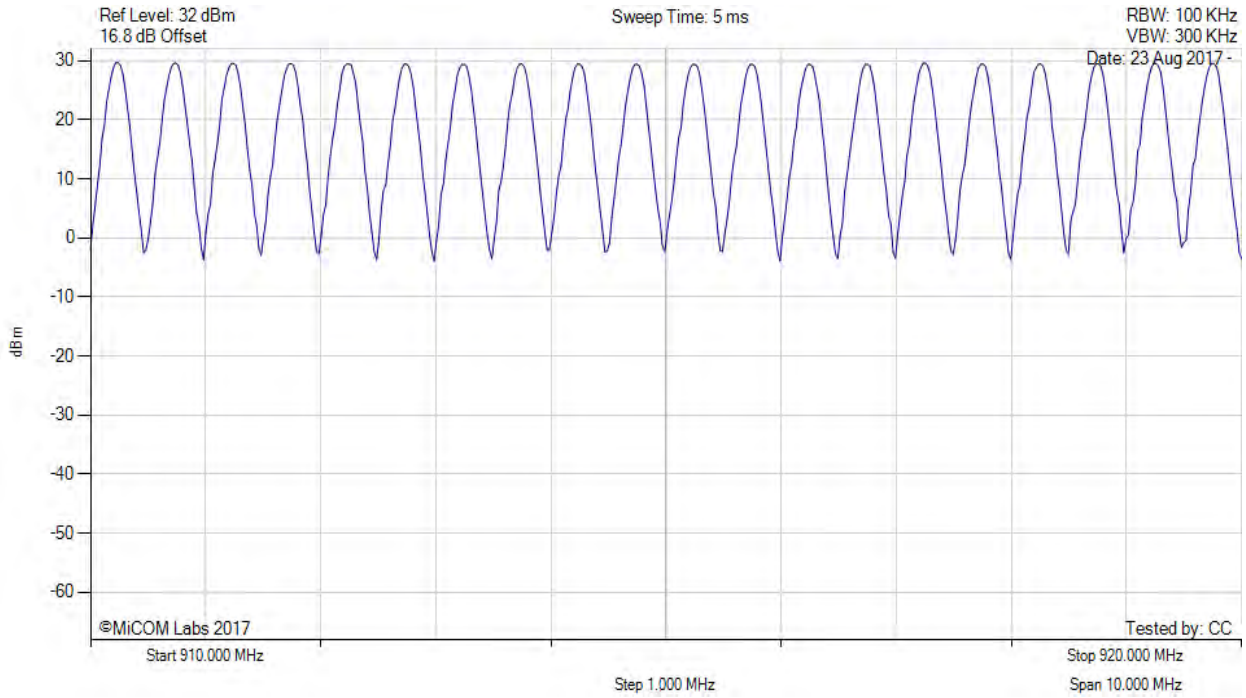


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 300 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

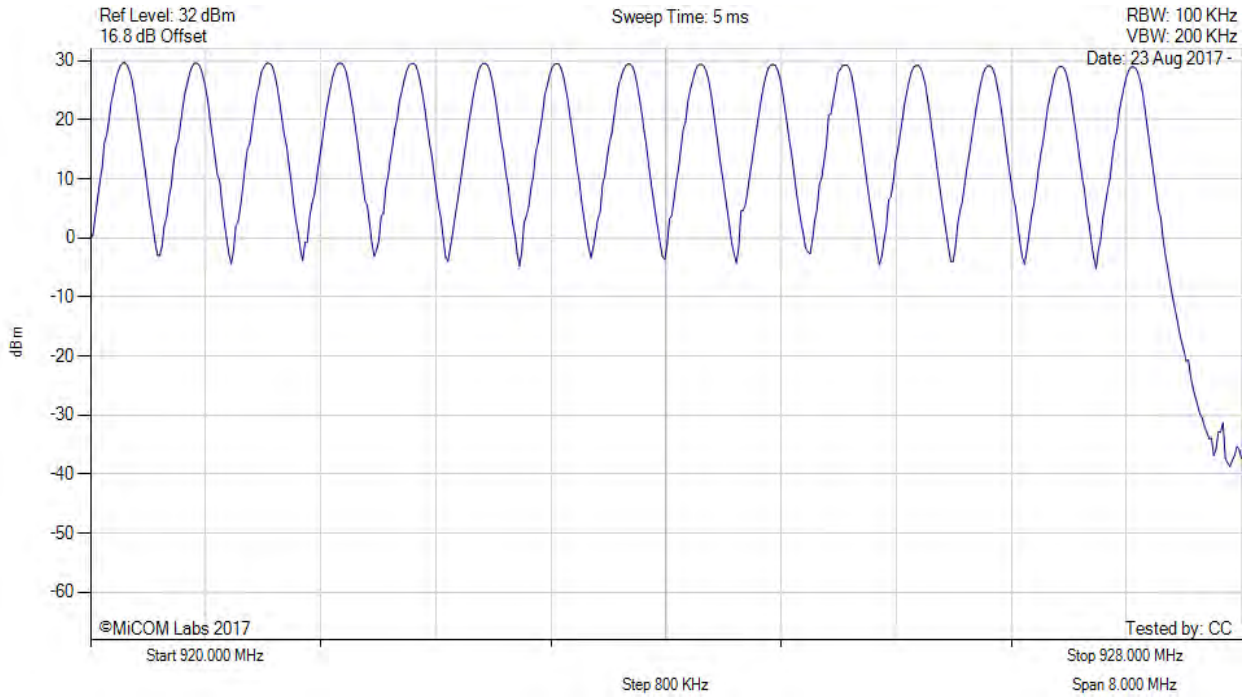


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 300 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

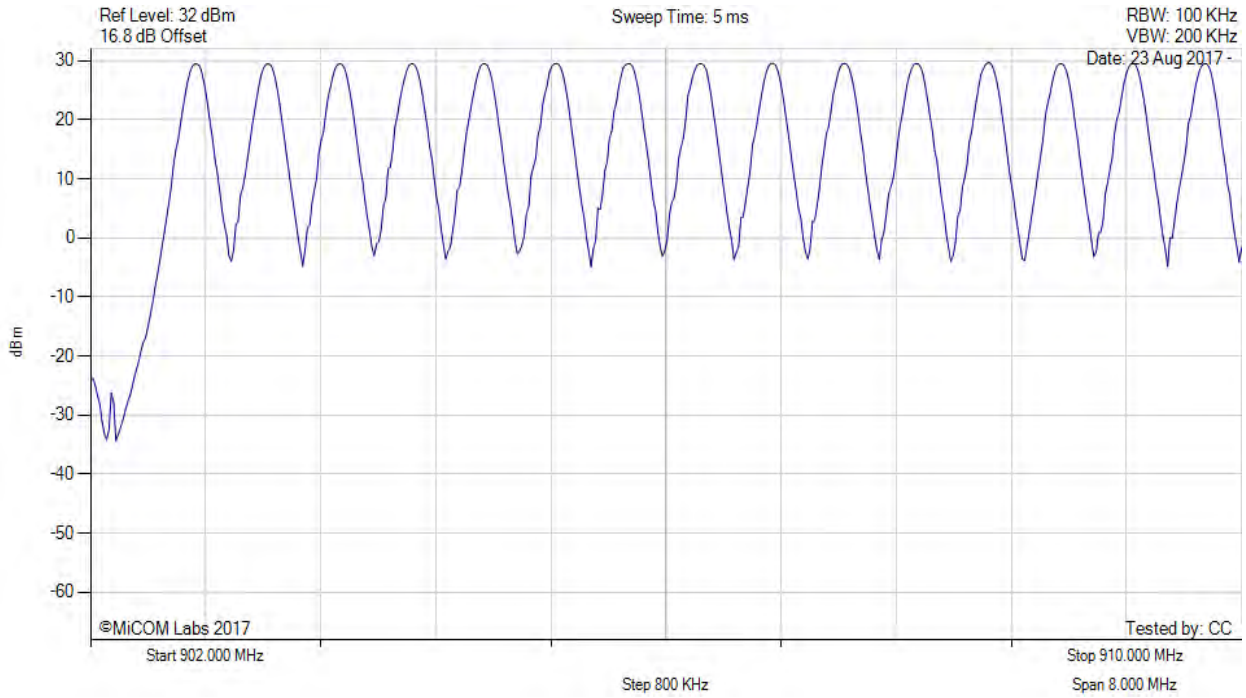


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 40 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

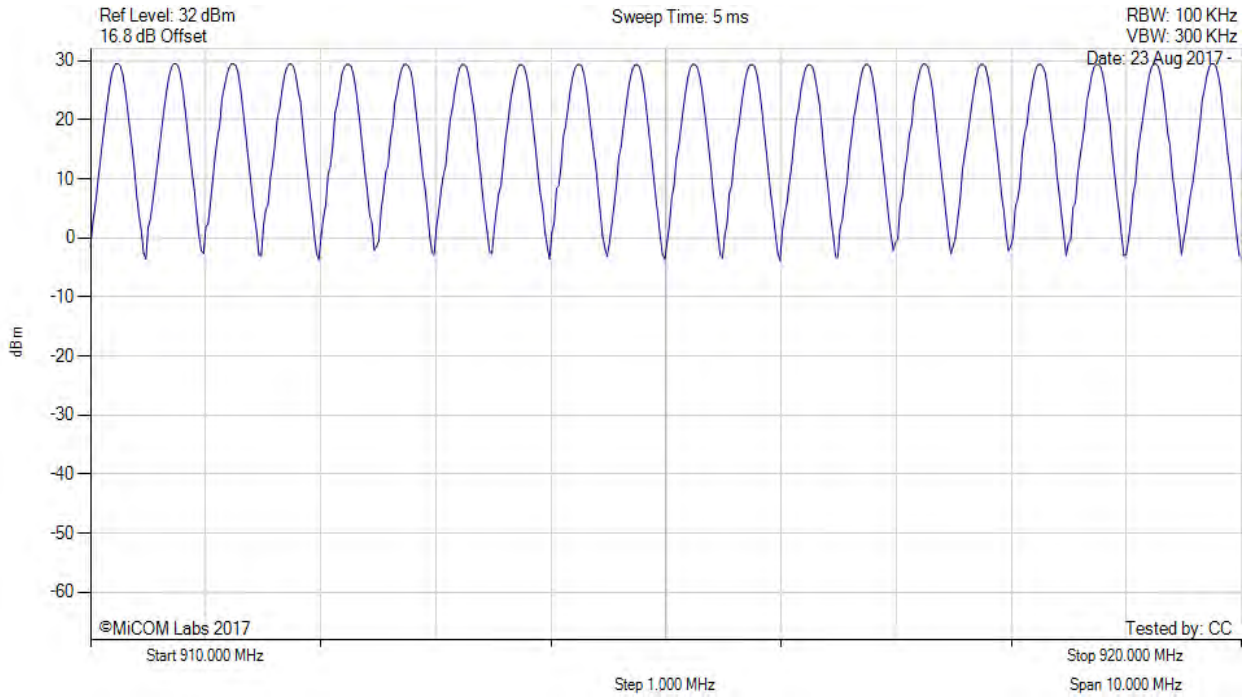


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 40 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

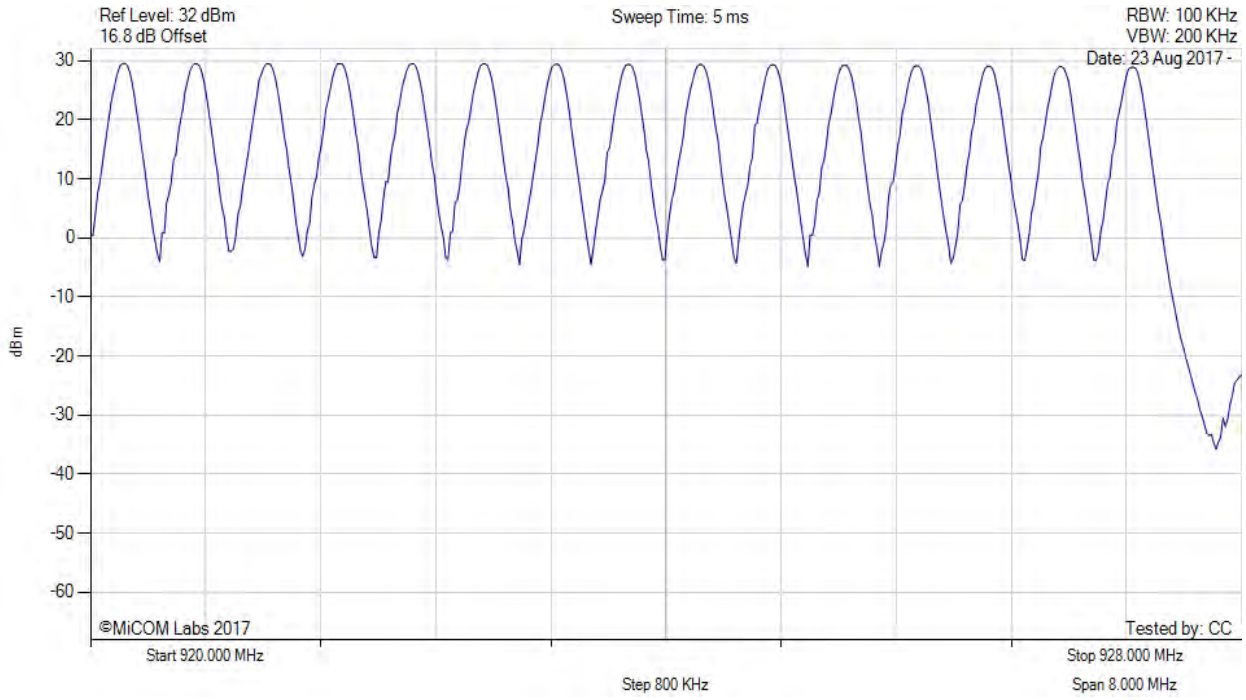


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 40 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

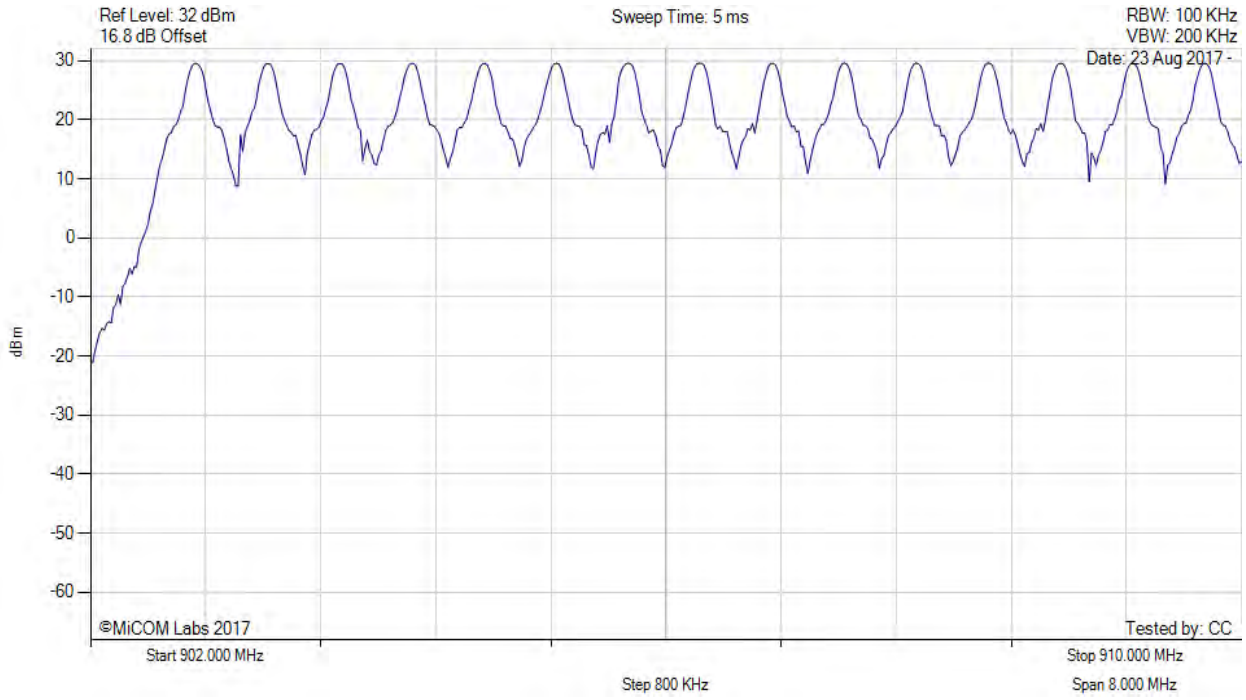


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 400 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

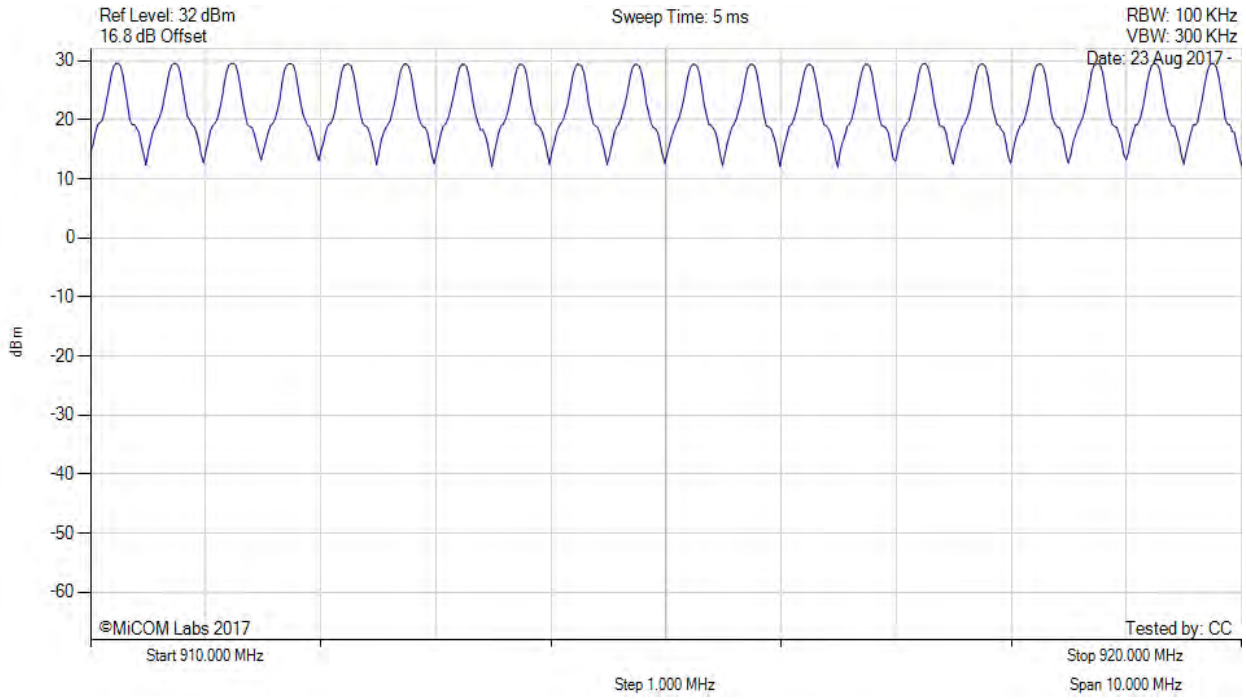


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 400 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

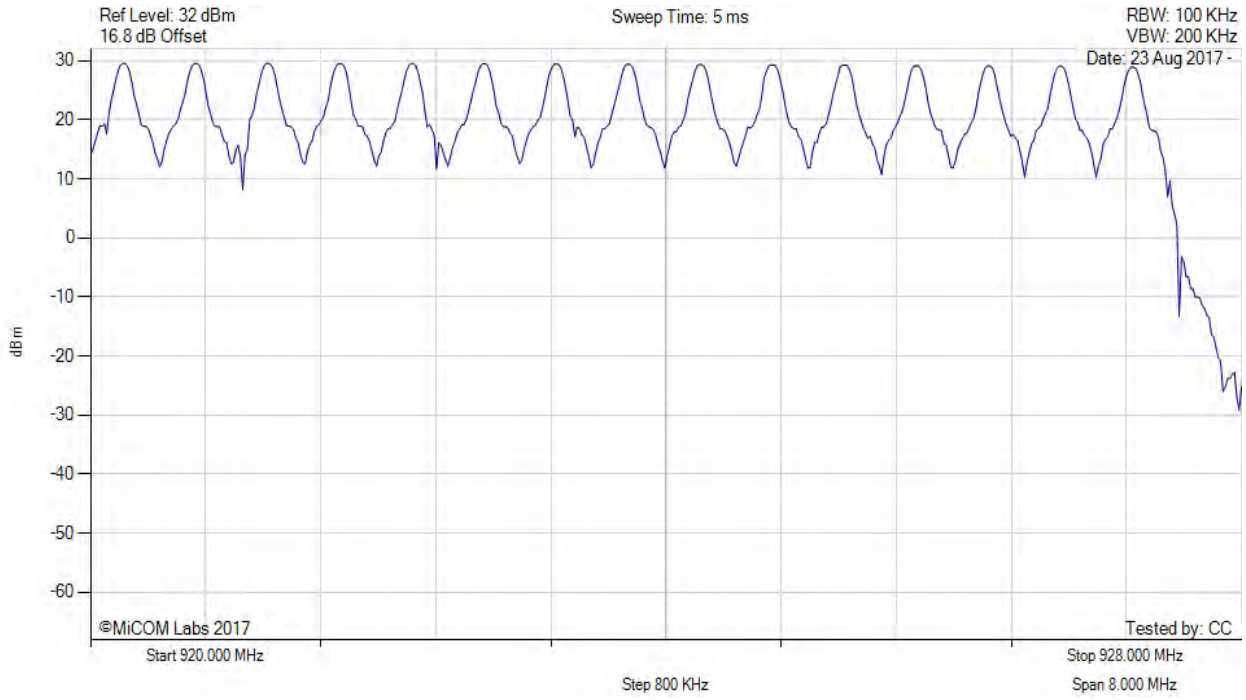


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

NUMBER OF HOPPING CHANNELS

Variant: 400 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



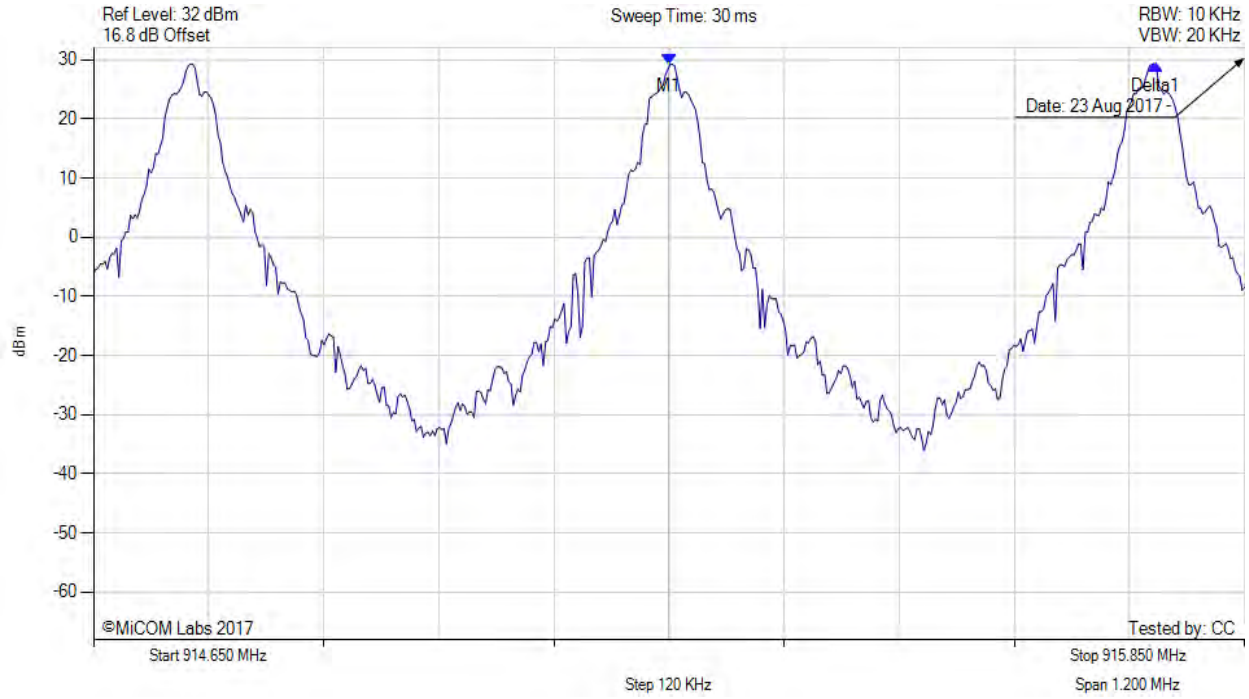
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW		Channel Frequency: 915.25 MHz

back to matrix

A.2.2. Channel Separation

CHANNEL SEPARATION

Variant: 250 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

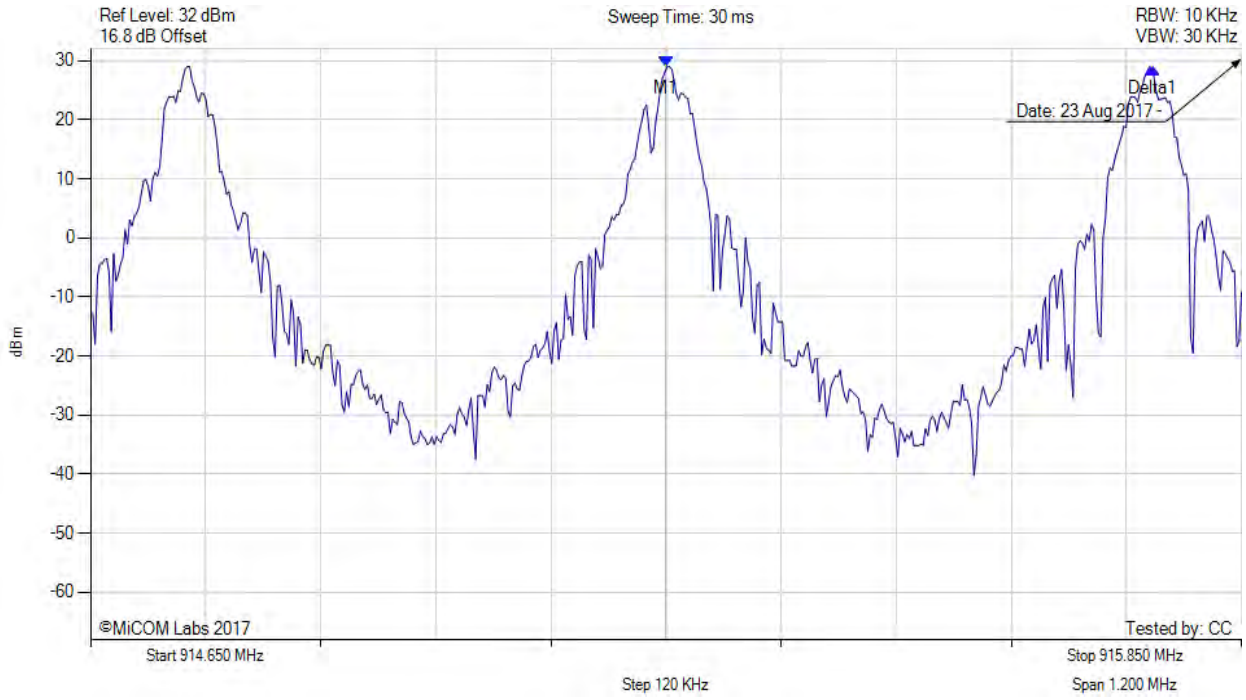


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.250 MHz : 29.195 dBm Delta1 : 507 KHz : -0.012 dB	Channel Frequency: 915.25 MHz

back to matrix

CHANNEL SEPARATION

Variant: 300 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

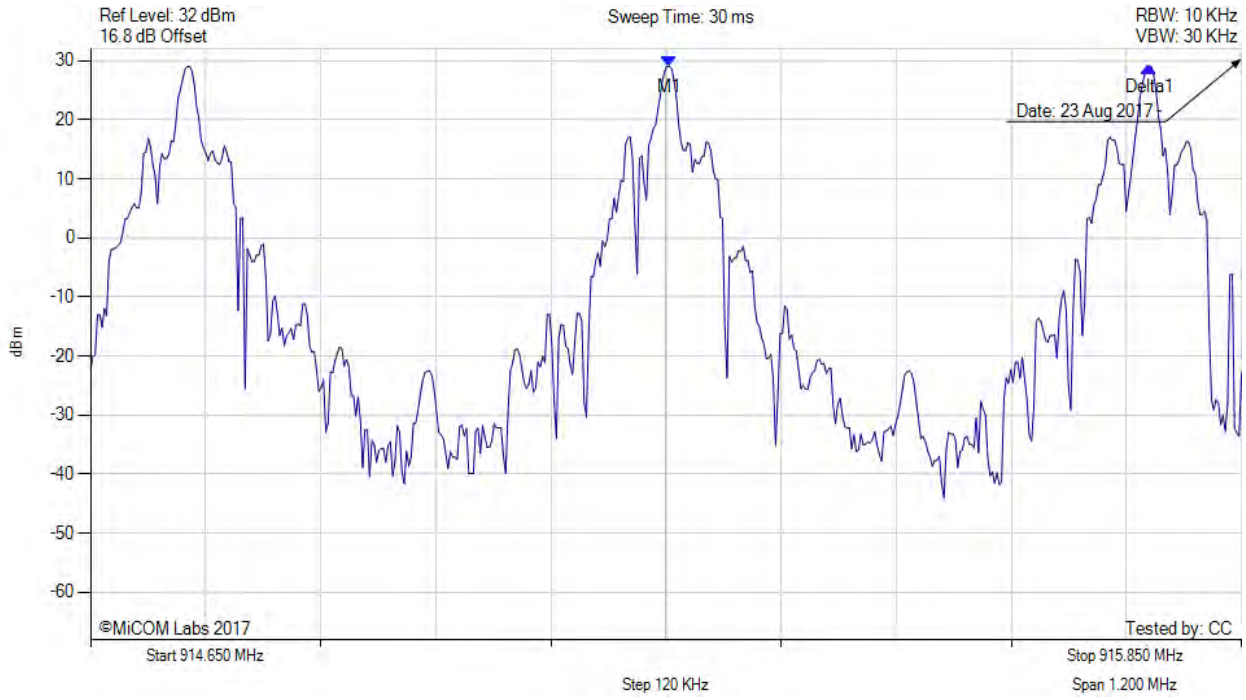


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.250 MHz : 28.949 dBm Delta1 : 507 KHz : -0.114 dB	Channel Frequency: 915.25 MHz

back to matrix

CHANNEL SEPARATION

Variant: 40 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

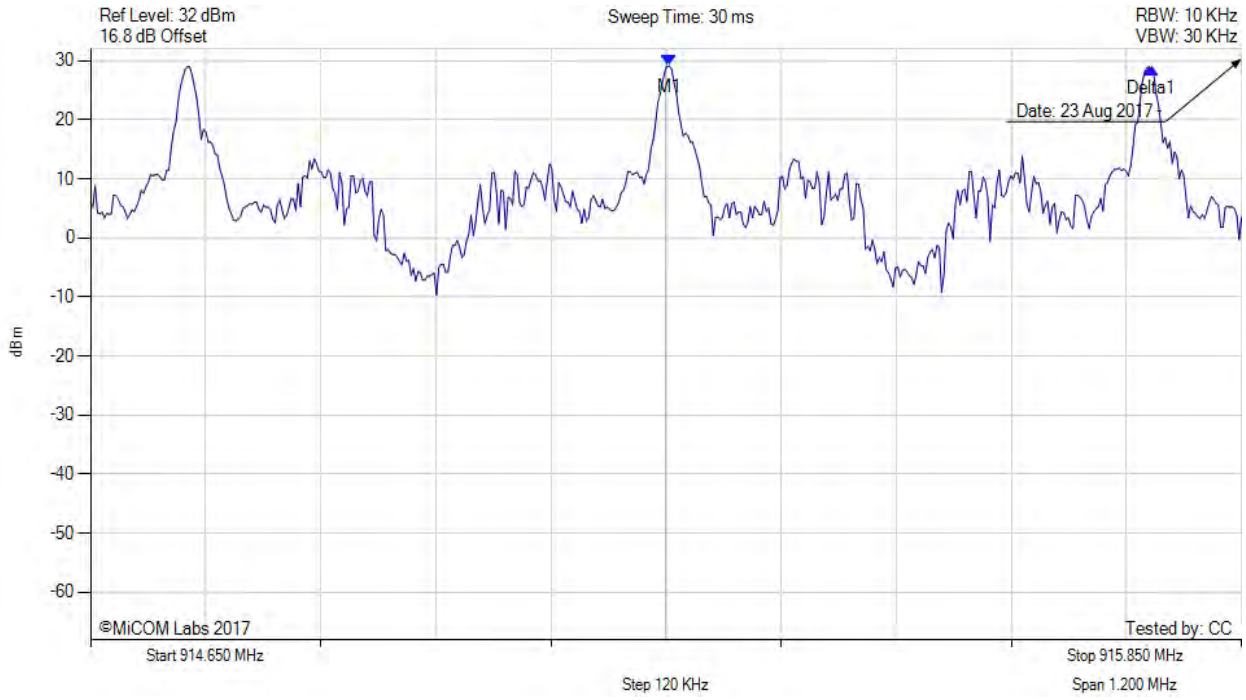


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.254 MHz : 29.039 dBm Delta1 : 500 KHz : -0.028 dB	Channel Frequency: 915.25 MHz

back to matrix

CHANNEL SEPARATION

Variant: 400 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



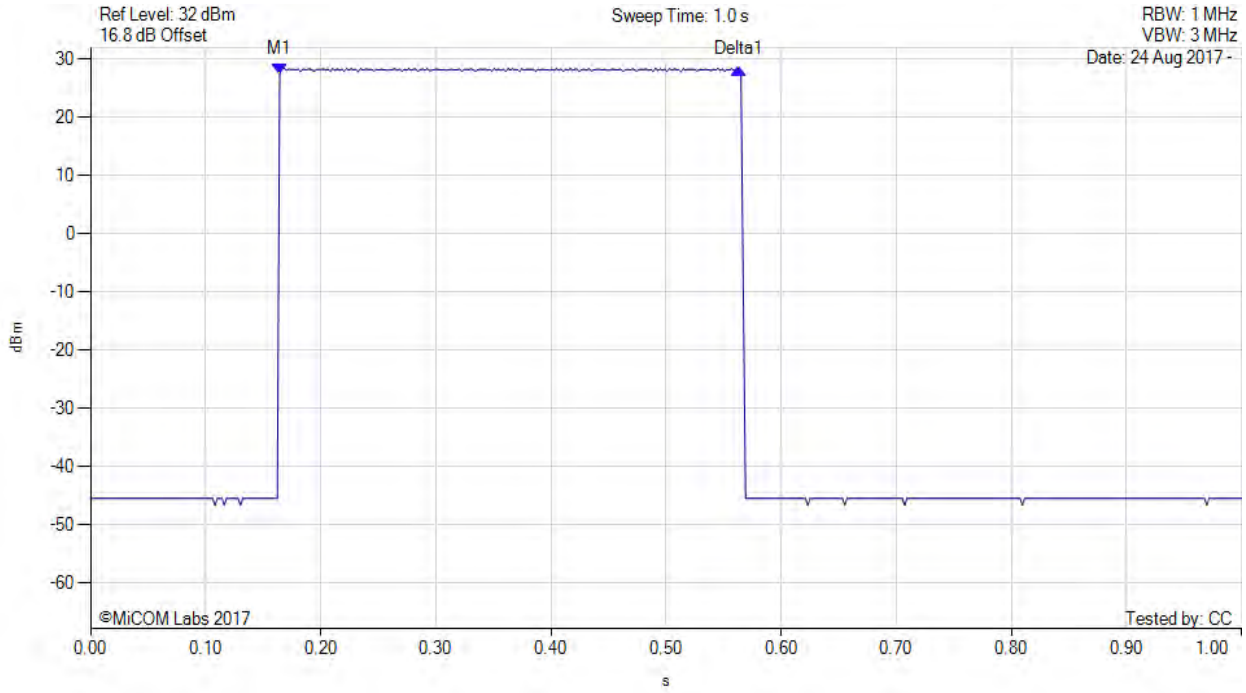
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 915.254 MHz : 29.094 dBm Delta1 : 503 KHz : -0.252 dB	Channel Frequency: 915.25 MHz

back to matrix

A.2.3. Dwell Time

DWELL TIME

Variant: 250 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

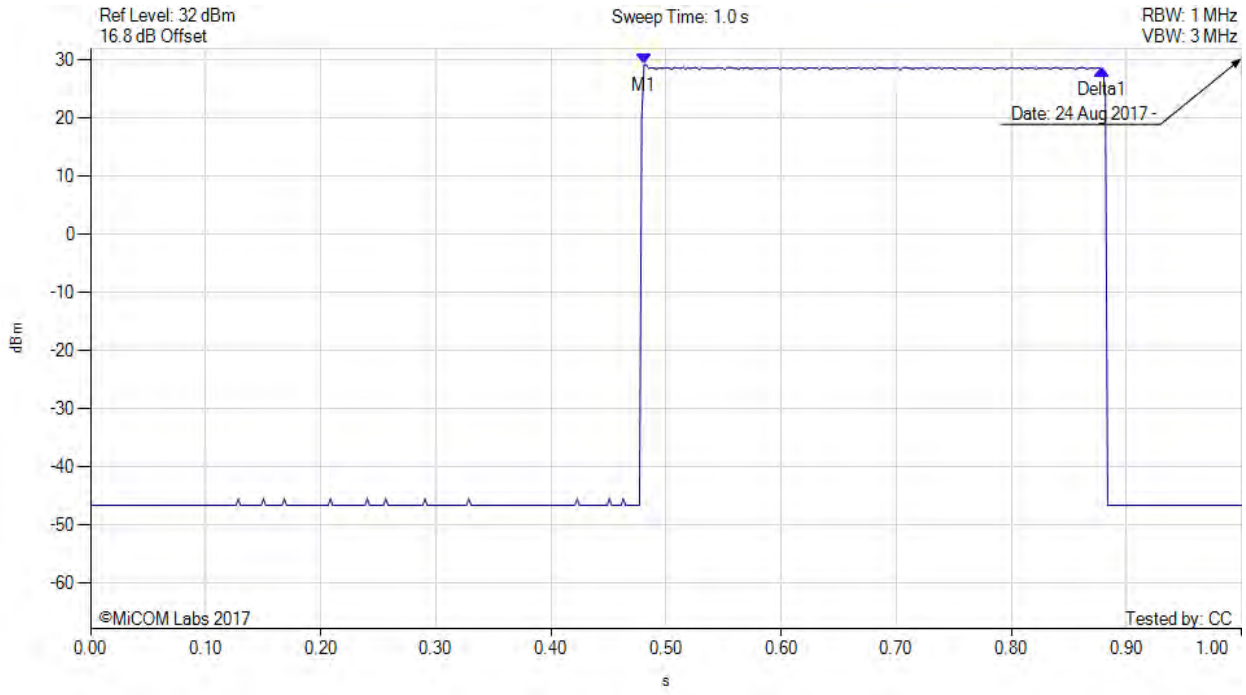


Analyzer Setup	Marker:Time:Amplitude	Test Results
Detector = RMS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1(915.25 MHz) : 0.164 s : 27.386 dBm Delta1(915.25 MHz) : 0.399 s : 0.947 dB	Channel Frequency: 915.25 MHz

back to matrix

DWELL TIME

Variant: 300 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

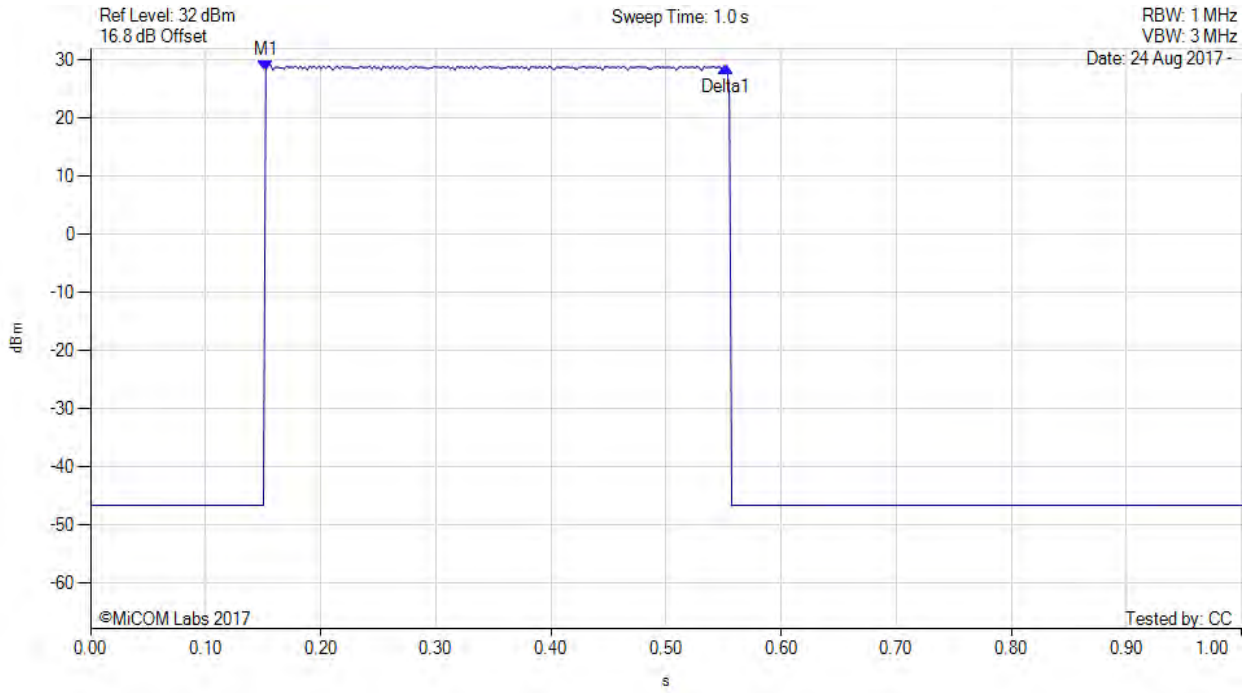


Analyzer Setup	Marker:Time:Amplitude	Test Results
Detector = RMS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1(915.25 MHz) : 0.481 s : 29.269 dBm Delta1(915.25 MHz) : 0.398 s : -0.807 dB	Channel Frequency: 915.25 MHz

back to matrix

DWELL TIME

Variant: 40 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

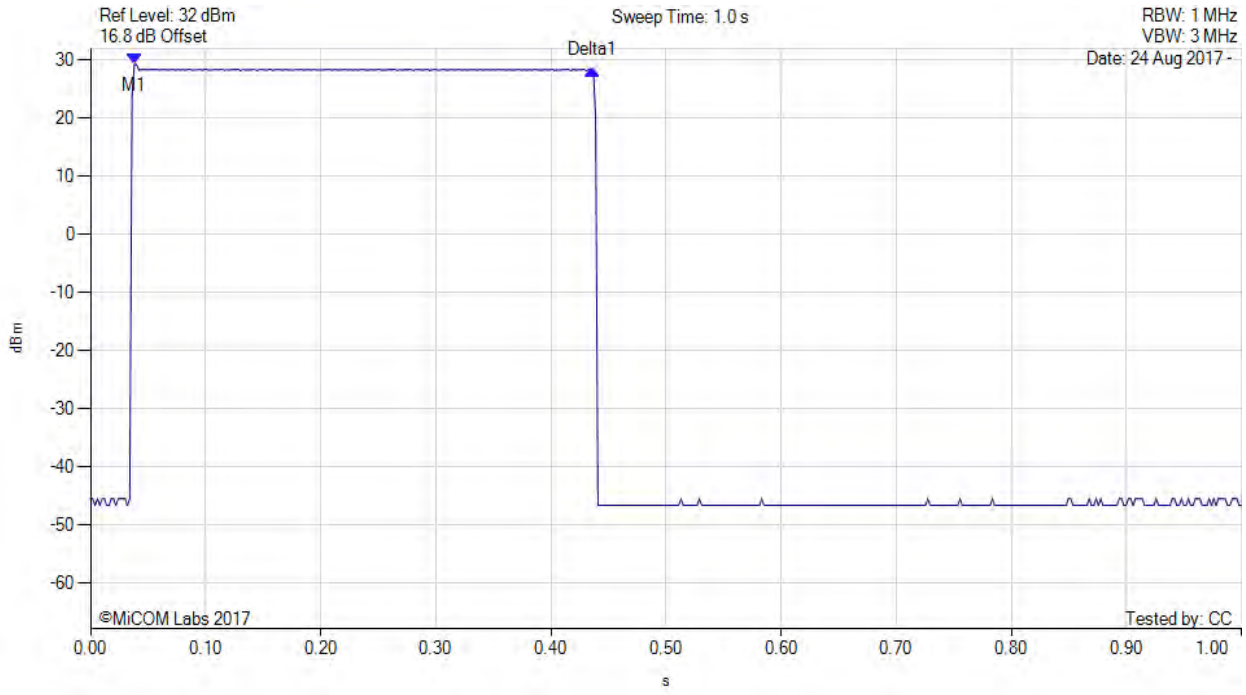


Analyzer Setup	Marker:Time:Amplitude	Test Results
Detector = RMS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1(915.25 MHz) : 0.152 s : 28.290 dBm Delta1(915.25 MHz) : 0.400 s : 0.644 dB	Channel Frequency: 915.25 MHz

back to matrix

DWELL TIME

Variant: 400 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



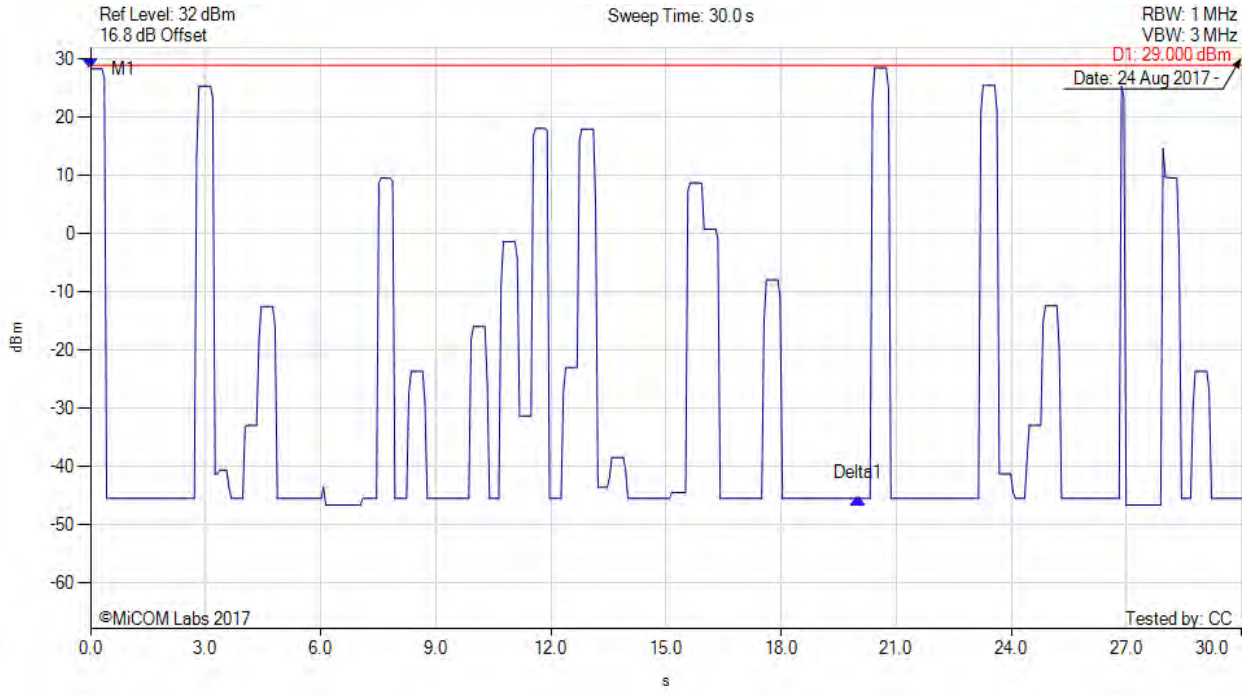
Analyzer Setup	Marker:Time:Amplitude	Test Results
Detector = RMS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1(915.25 MHz) : 0.038 s : 29.283 dBm Delta1(915.25 MHz) : 0.398 s : -0.911 dB	Channel Frequency: 915.25 MHz

back to matrix

A.2.4. Channel Occupancy

CHANNEL OCCUPANCY

Variant: 250 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

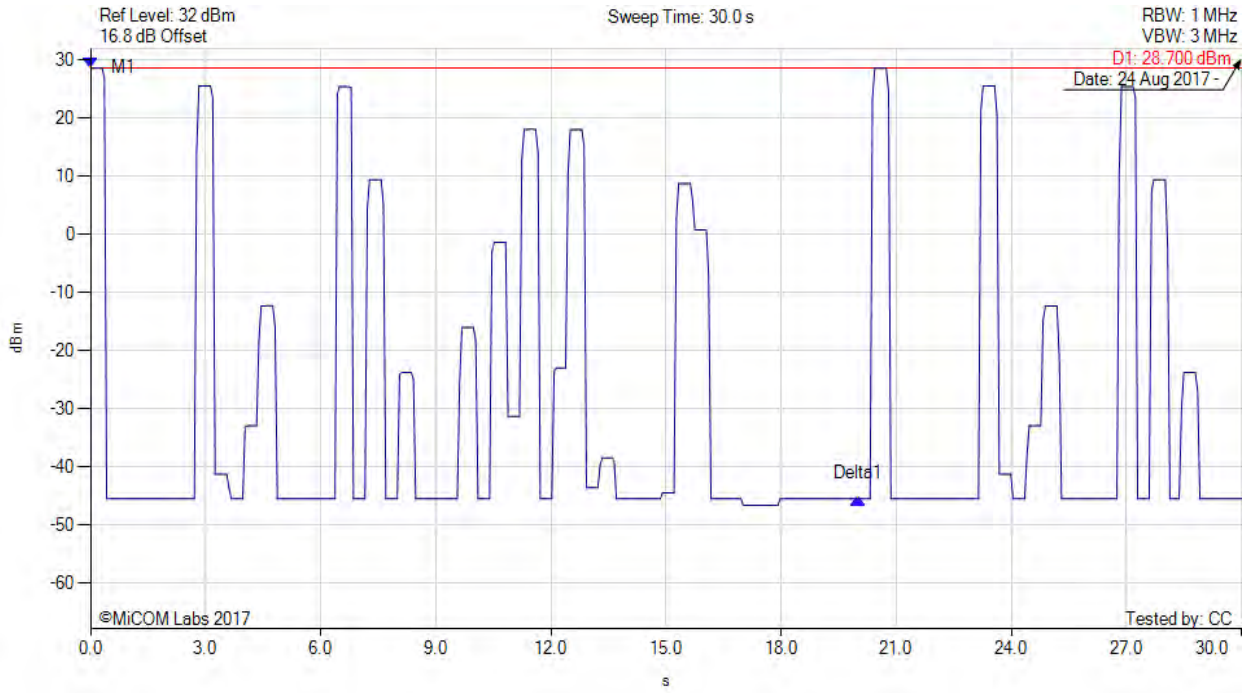


Analyzer Setup	Marker:Time:Amplitude	Test Results
Detector = RMS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1(915.25 MHz) : 0.000 s : 28.442 dBm Delta1(915.25 MHz) : 20.000 s : -73.945 dB	Channel Frequency: 915.25 MHz

back to matrix

CHANNEL OCCUPANCY

Variant: 300 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

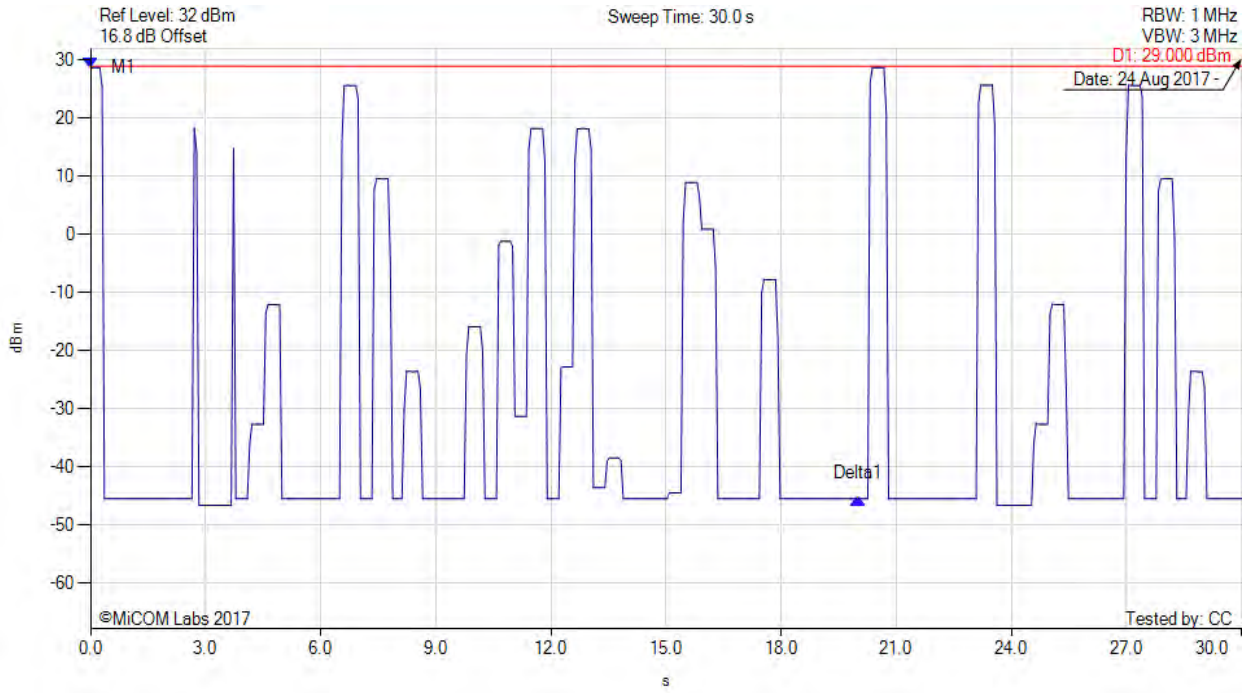


Analyzer Setup	Marker:Time:Amplitude	Test Results
Detector = RMS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1(915.25 MHz) : 0.000 s : 28.708 dBm Delta1(915.25 MHz) : 20.000 s : -74.211 dB	Channel Frequency: 915.25 MHz

back to matrix

CHANNEL OCCUPANCY

Variant: 40 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

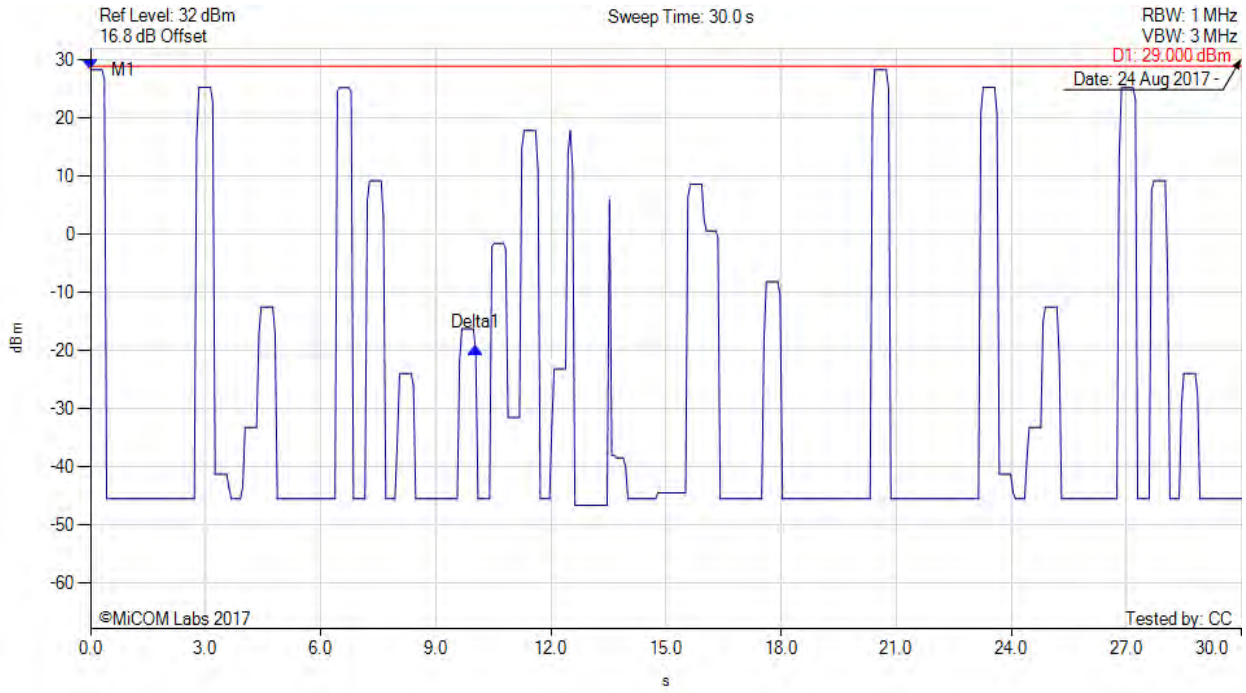


Analyzer Setup	Marker:Time:Amplitude	Test Results
Detector = RMS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1(915.25 MHz) : 0.000 s : 28.779 dBm Delta1(915.25 MHz) : 20.000 s : -74.282 dB	Channel Frequency: 915.25 MHz

back to matrix

CHANNEL OCCUPANCY

Variant: 400 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Time:Amplitude	Test Results
Detector = RMS Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1(915.25 MHz) : 0.000 s : 28.461 dBm Delta1(915.25 MHz) : 10.000 s : -48.044 dB	Channel Frequency: 915.25 MHz

back to matrix

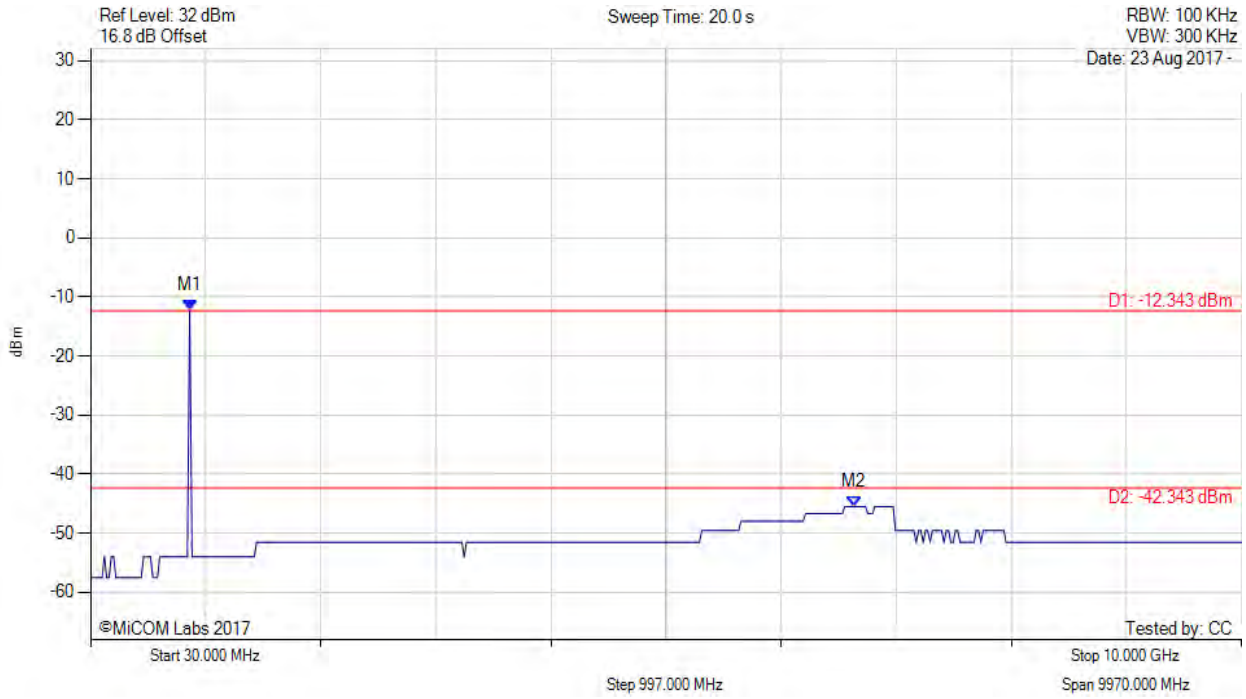
A.3. Emissions

A.3.1. Conducted Emissions

A.3.1.1. Conducted Unwanted Spurious Emissions

UNWANTED EMISSIONS AVERAGE

Variant: 250 PR-ASK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

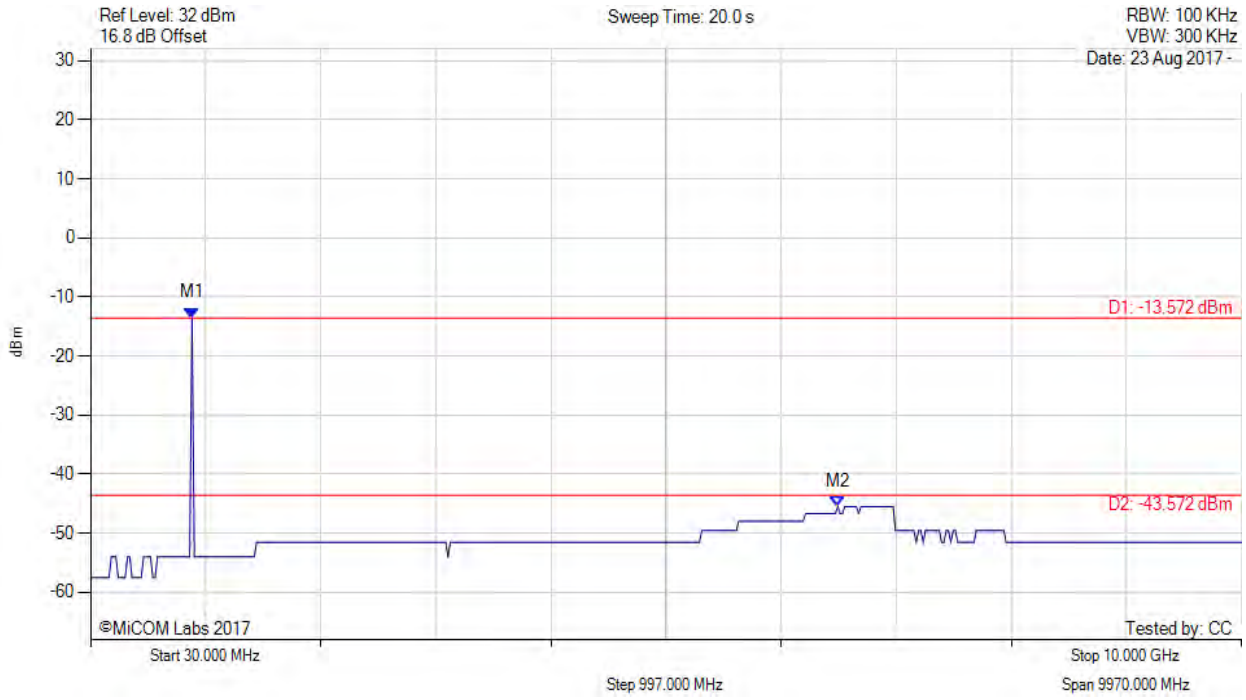


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : -12.343 dBm M2 : 6643.367 MHz : -45.504 dBm	Limit: -42.34 dBm Margin: -3.16 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 250 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

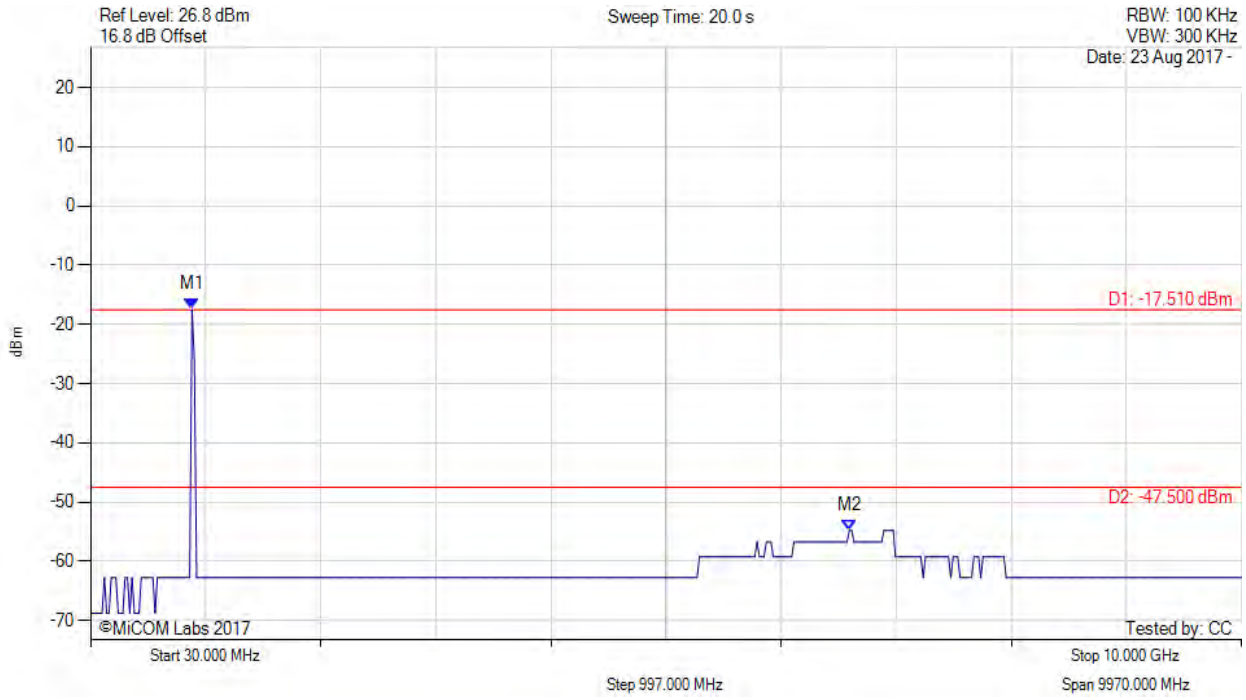


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : -13.572 dBm M2 : 6503.507 MHz : -45.504 dBm	Limit: -43.57 dBm Margin: -1.93 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 250 PR-ASK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

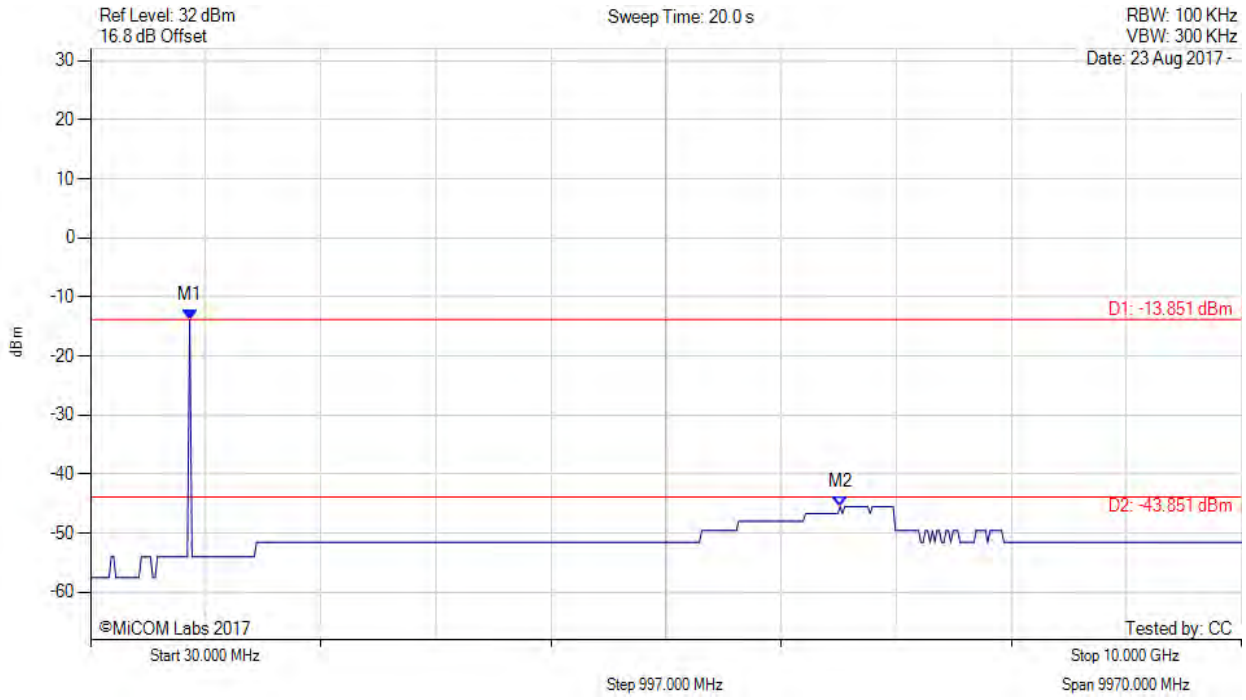


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 909.118 MHz : -17.496 dBm M2 : 6603.407 MHz : -54.786 dBm	Limit: -47.50 dBm Margin: -7.29 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 300 PR-ASK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

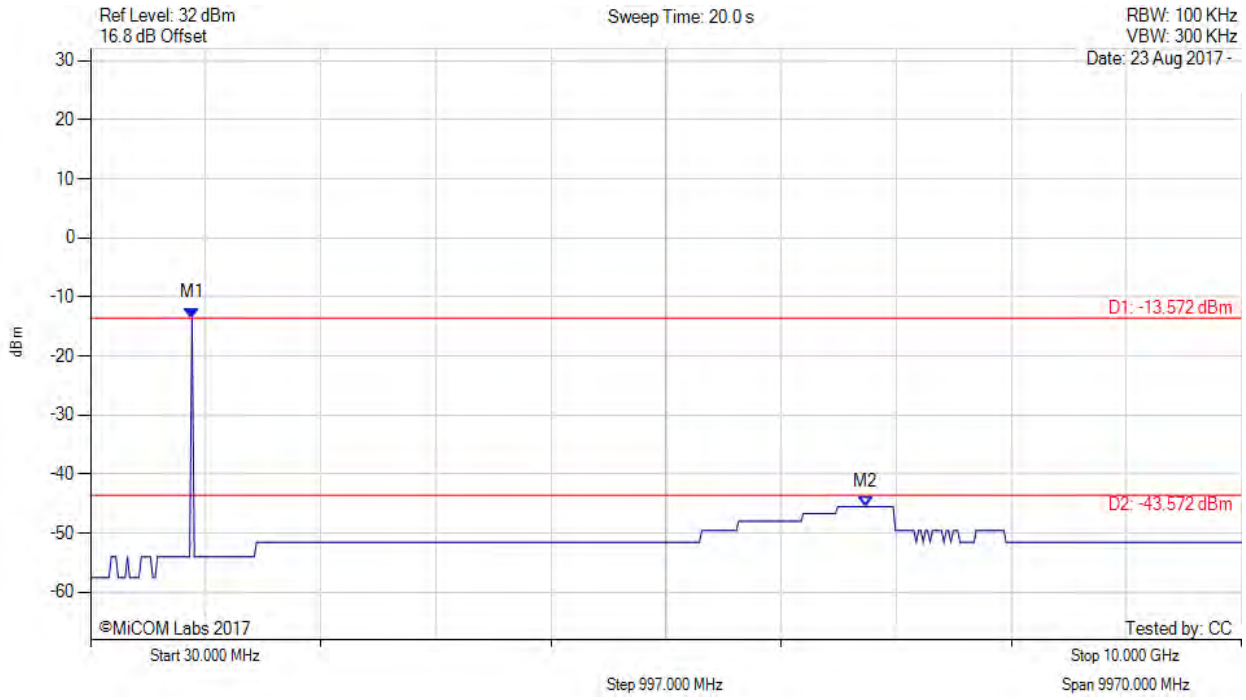


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : -13.851 dBm M2 : 6523.487 MHz : -45.504 dBm	Limit: -43.85 dBm Margin: -1.65 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 300 PR-ASK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

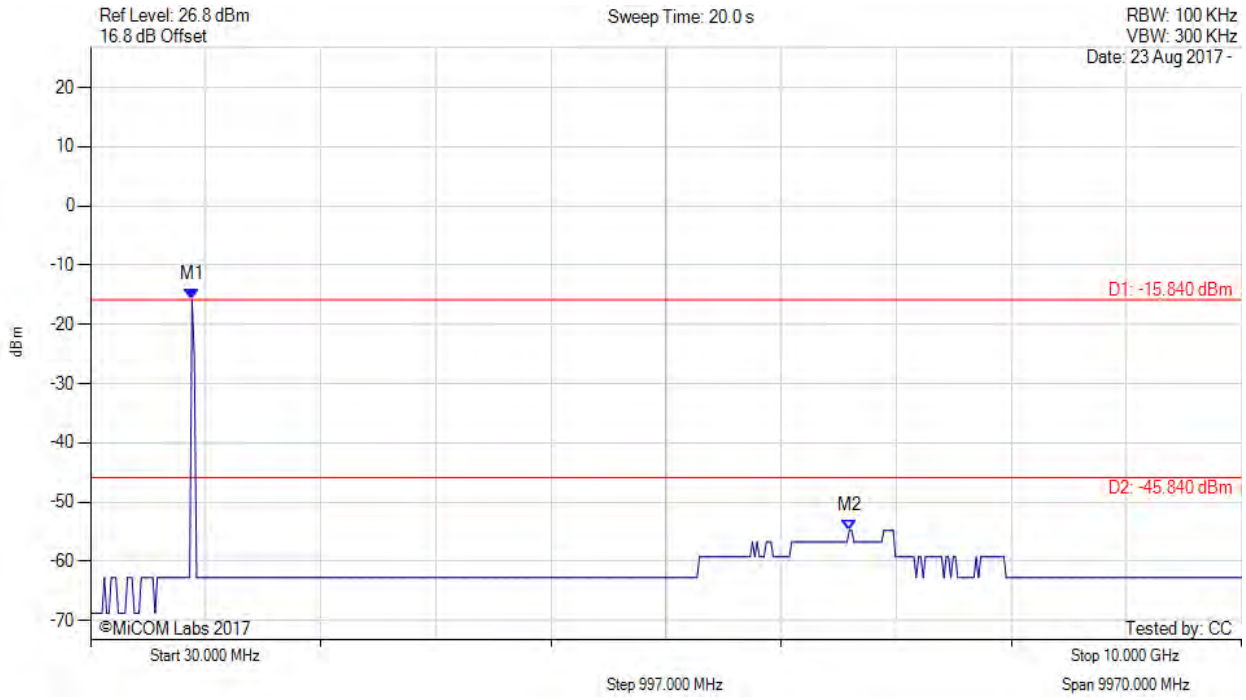


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : -13.572 dBm M2 : 6743.267 MHz : -45.504 dBm	Limit: -43.57 dBm Margin: -1.93 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 300 PR-ASK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : -15.837 dBm M2 : 6603.407 MHz : -54.786 dBm	Limit: -45.84 dBm Margin: -8.95 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

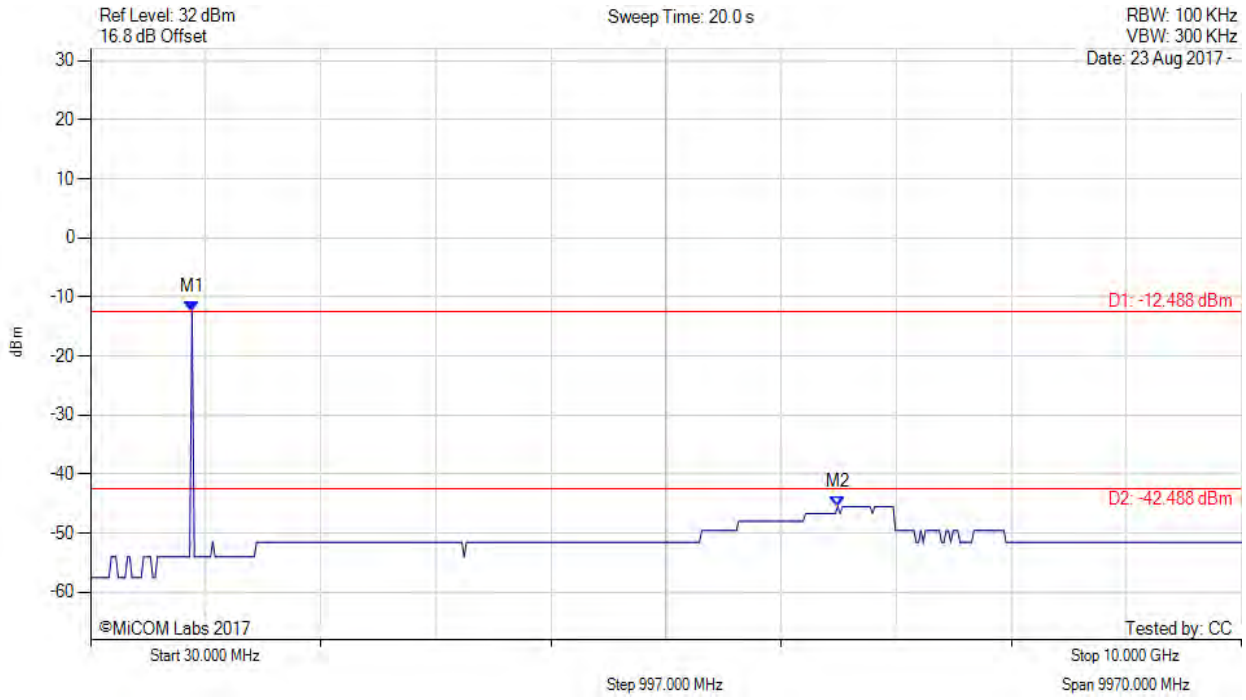
Variant: 40 DSB-AFK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : -12.463 dBm M2 : 6643.367 MHz : -45.504 dBm	Limit: -42.46 dBm Margin: -3.04 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 40 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

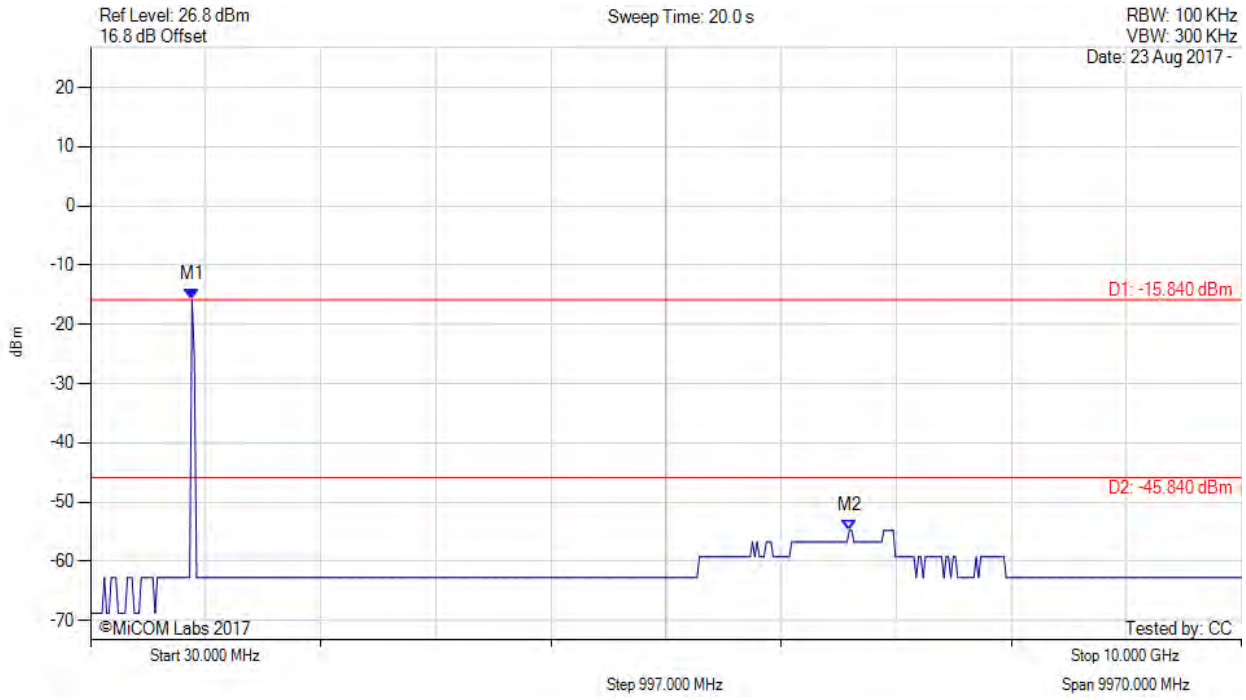


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : -12.488 dBm M2 : 6503.507 MHz : -45.504 dBm	Limit: -42.49 dBm Margin: -3.01 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 40 DSB-AFK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

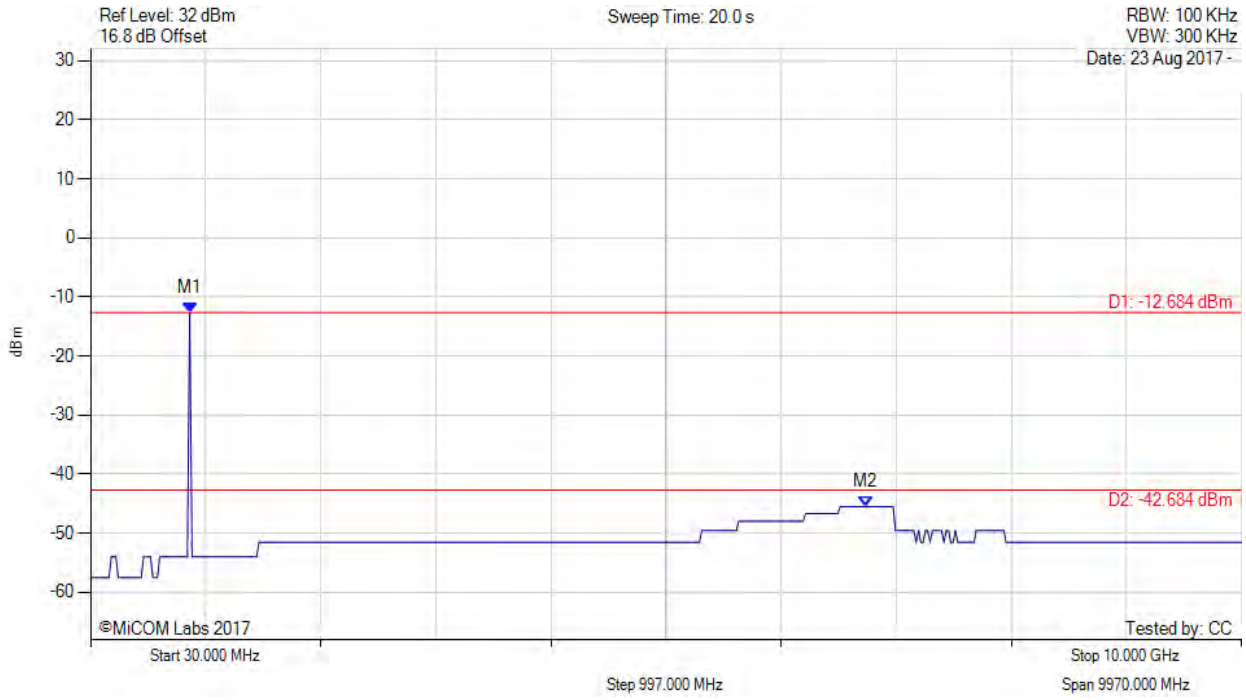


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 909.118 MHz : -15.837 dBm M2 : 6603.407 MHz : -54.786 dBm	Limit: -45.84 dBm Margin: -8.95 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 400 DSB-AFK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 889.138 MHz : -12.684 dBm M2 : 6743.267 MHz : -45.504 dBm	Limit: -42.68 dBm Margin: -2.82 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

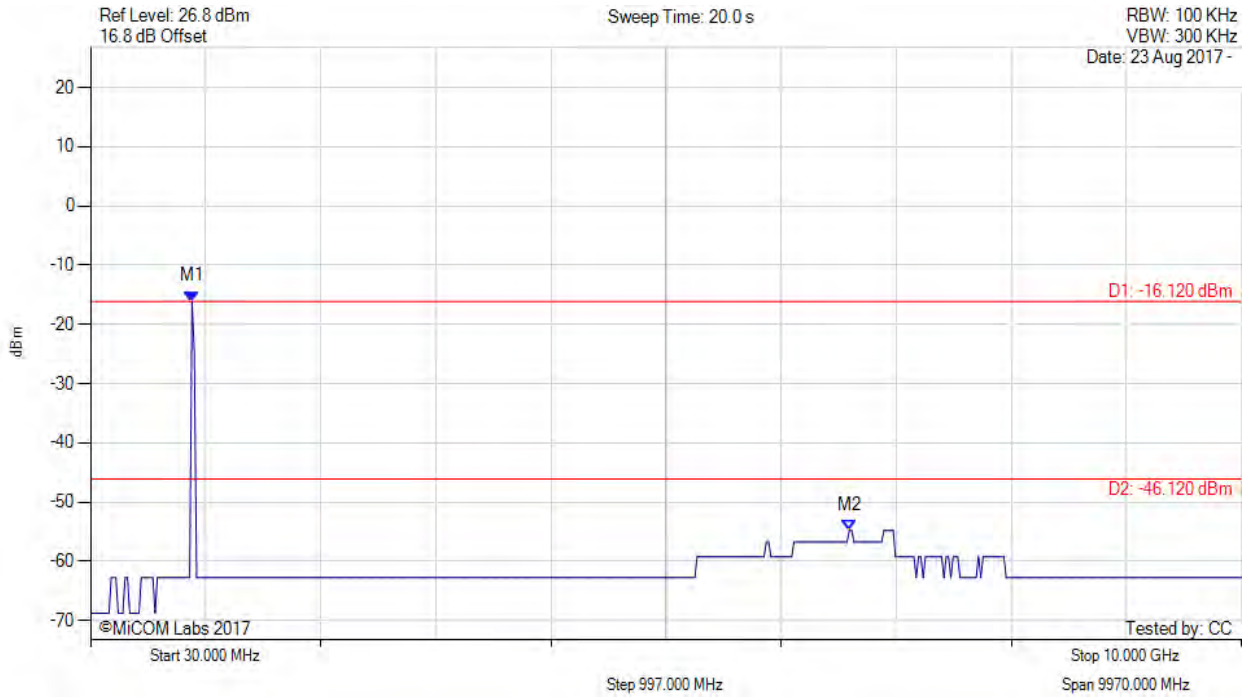
Variant: 400 DSB-AFK, Channel: 915.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 909.118 MHz : -12.910 dBm M2 : 6603.407 MHz : -45.504 dBm	Limit: -42.91 dBm Margin: -2.59 dB

back to matrix

UNWANTED EMISSIONS AVERAGE

Variant: 400 DSB-AFK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



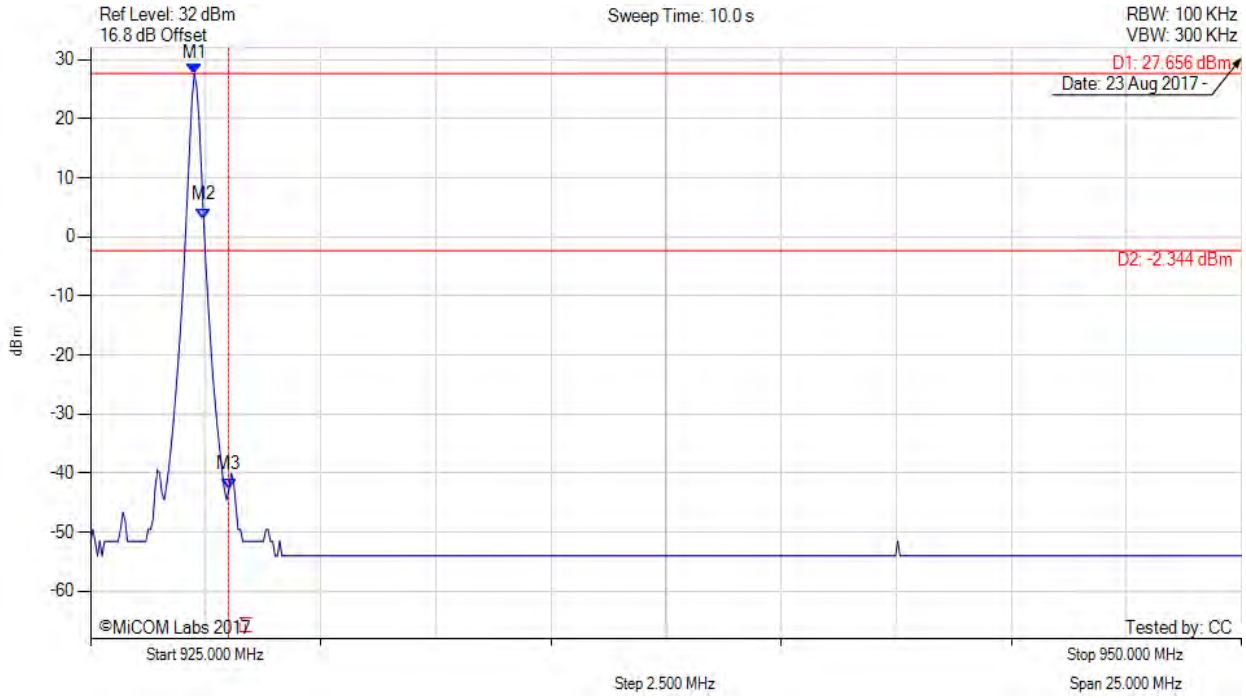
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 909.118 MHz : -16.116 dBm M2 : 6603.407 MHz : -54.786 dBm	Limit: -46.12 dBm Margin: -8.67 dB

back to matrix

A.3.1.2. Conducted Band-Edge Emissions

CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) AVERAGE

Variant: 250 PR-ASK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

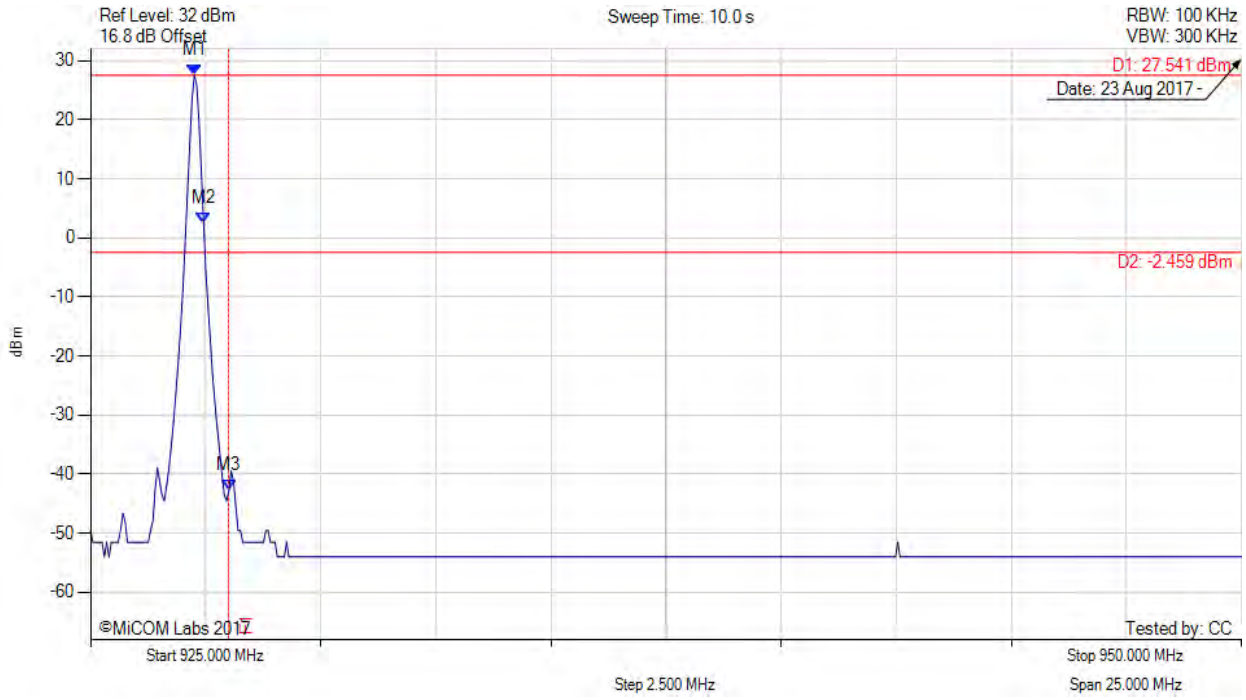


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.255 MHz : 27.656 dBm M2 : 927.455 MHz : 2.941 dBm M3 : 928.000 MHz : -42.737 dBm	Channel Frequency: 927.25 MHz

back to matrix

CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) AVERAGE

Variant: 300 PR-ASK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

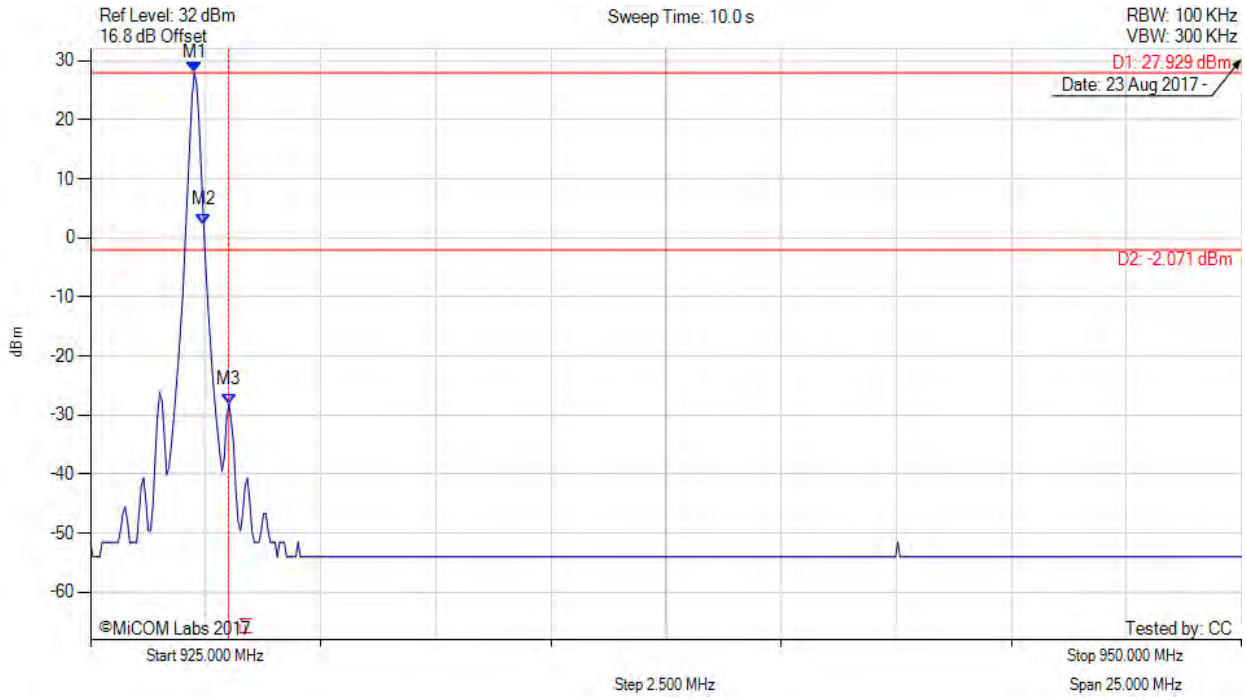


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.255 MHz : 27.541 dBm M2 : 927.455 MHz : 2.563 dBm M3 : 928.000 MHz : -42.737 dBm	Channel Frequency: 927.25 MHz

back to matrix

CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) AVERAGE

Variant: 40 DSB-AFK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

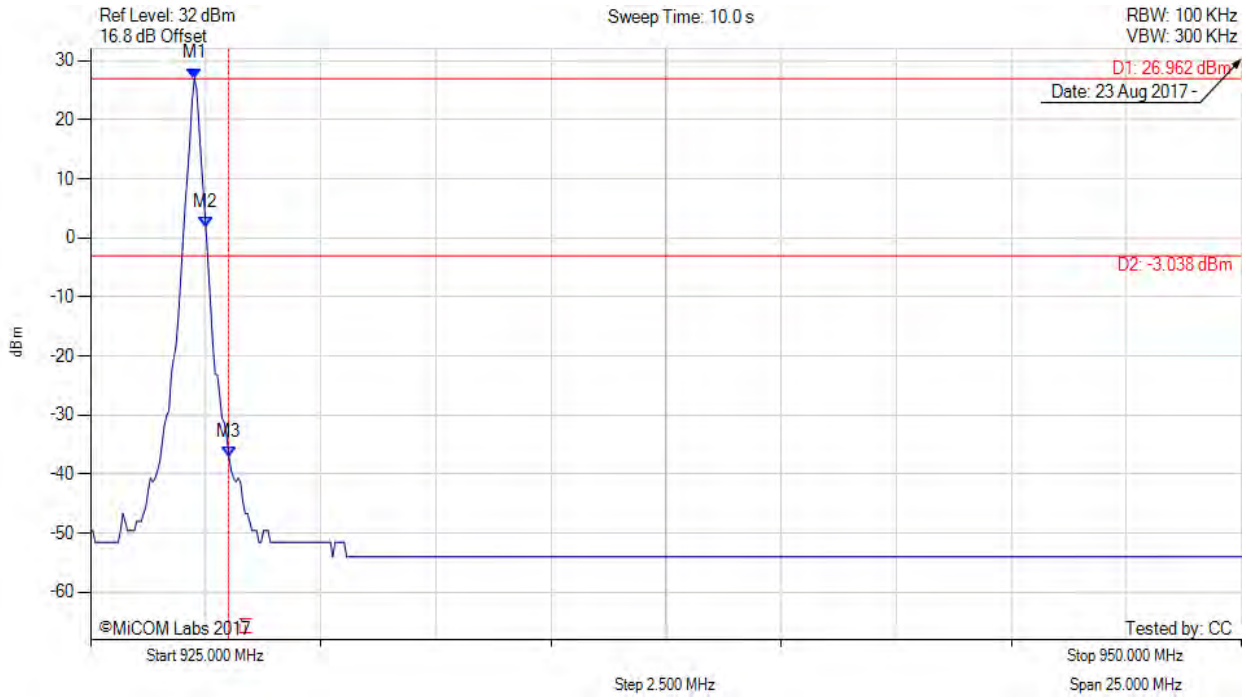


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.255 MHz : 27.929 dBm M2 : 927.455 MHz : 2.328 dBm M3 : 928.000 MHz : -28.148 dBm	Channel Frequency: 927.25 MHz

back to matrix

CONDUCTED UPPER BAND-EDGE EMISSIONS (STATIC) AVERAGE

Variant: 400 DSB-AFK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

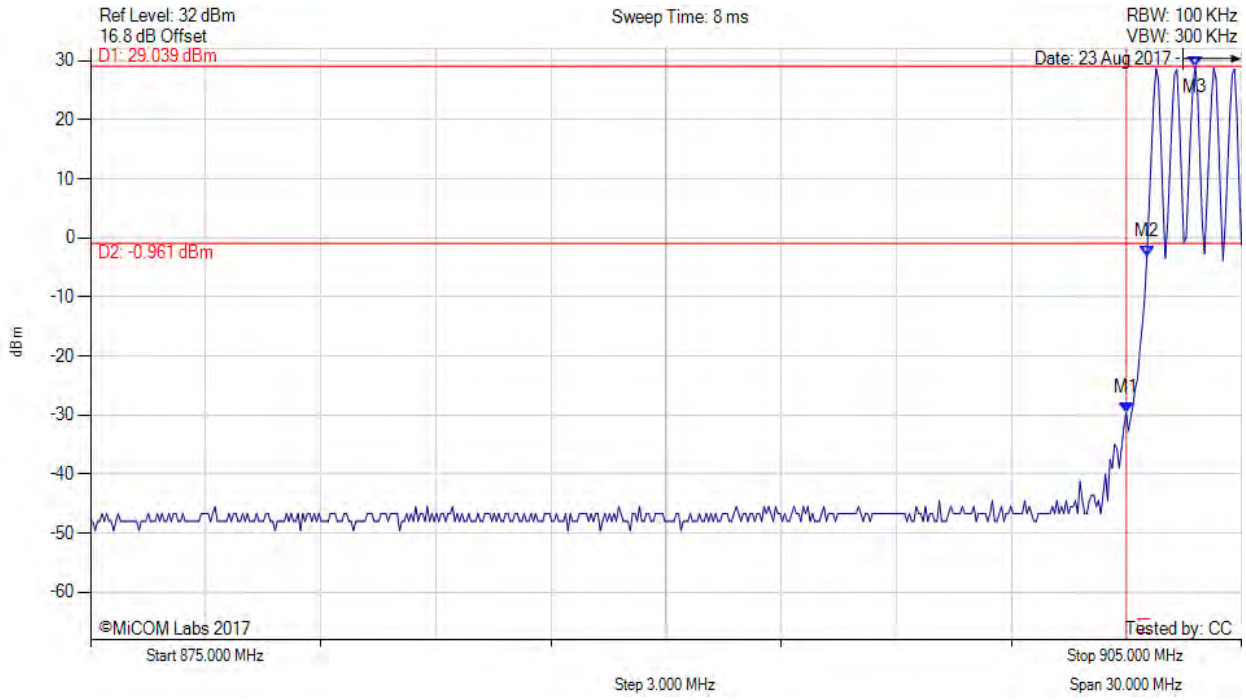


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 927.255 MHz : 26.962 dBm M2 : 927.505 MHz : 1.834 dBm M3 : 928.000 MHz : -37.121 dBm	Channel Frequency: 927.25 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) AVERAGE

Variant: 250 PR-ASK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

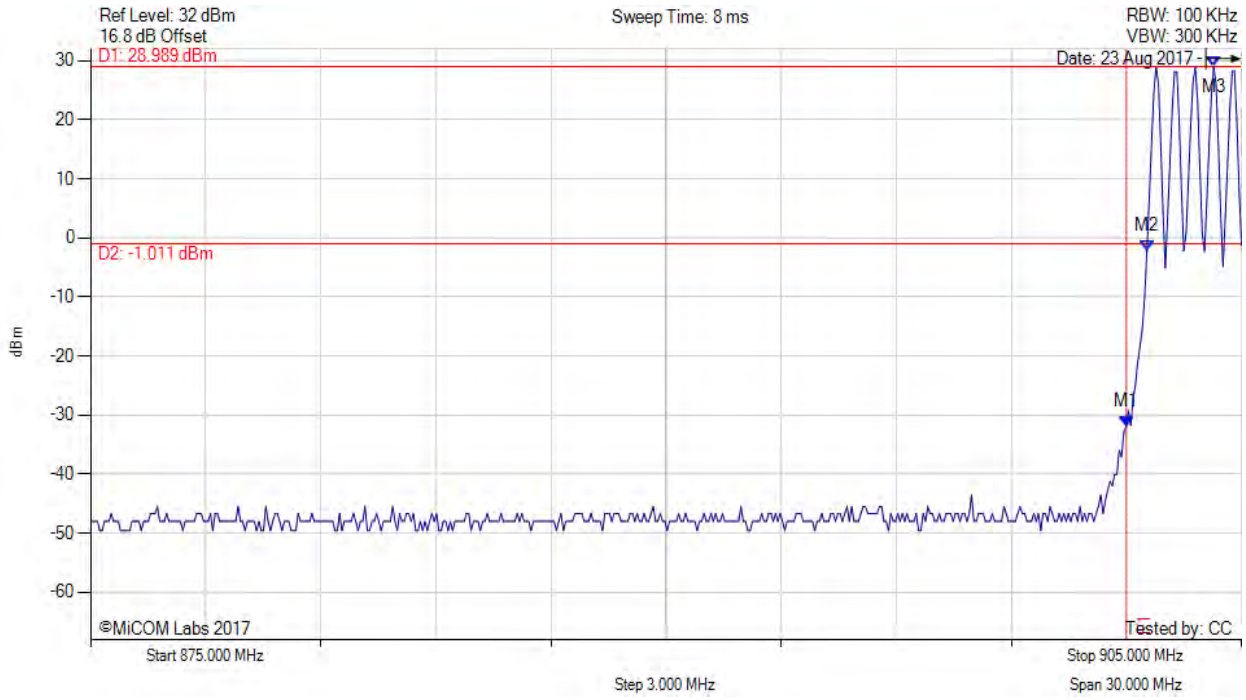


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -29.586 dBm M2 : 902.535 MHz : -3.200 dBm M3 : 903.798 MHz : 29.039 dBm	Channel Frequency: 902.75 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) AVERAGE

Variant: 300 PR-ASK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

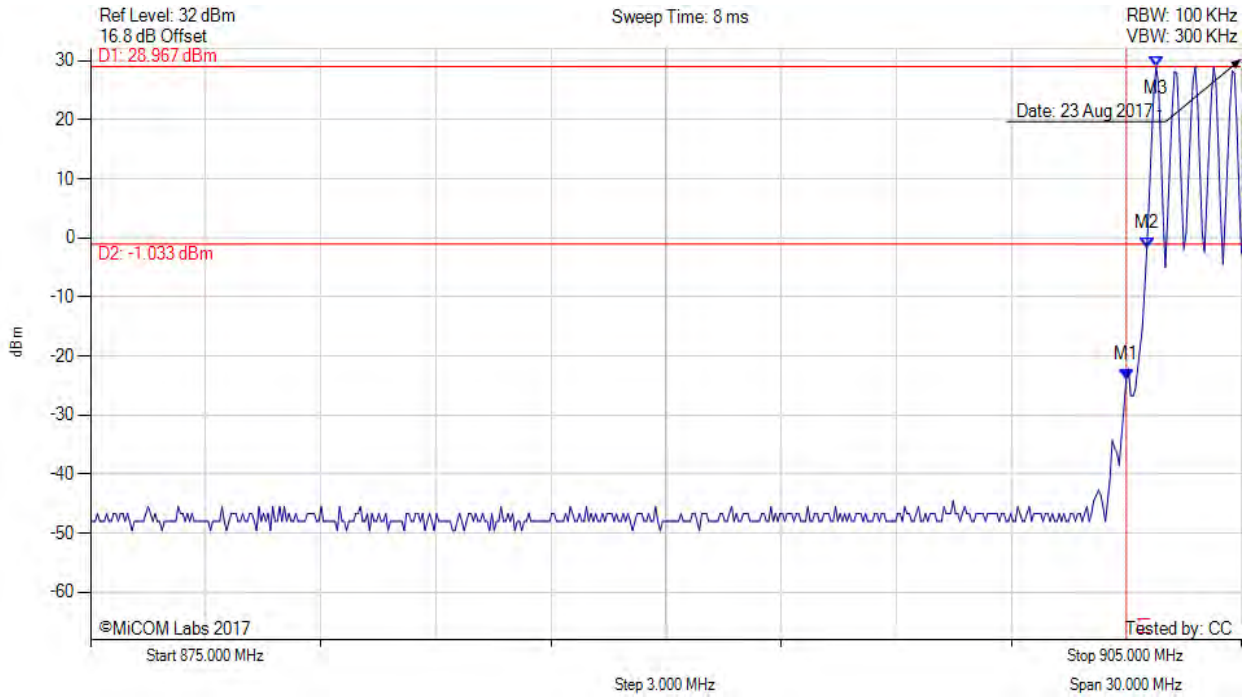


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -31.970 dBm M2 : 902.535 MHz : -2.209 dBm M3 : 904.279 MHz : 28.989 dBm	Channel Frequency: 902.75 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) AVERAGE

Variant: 40 DSB-AFK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

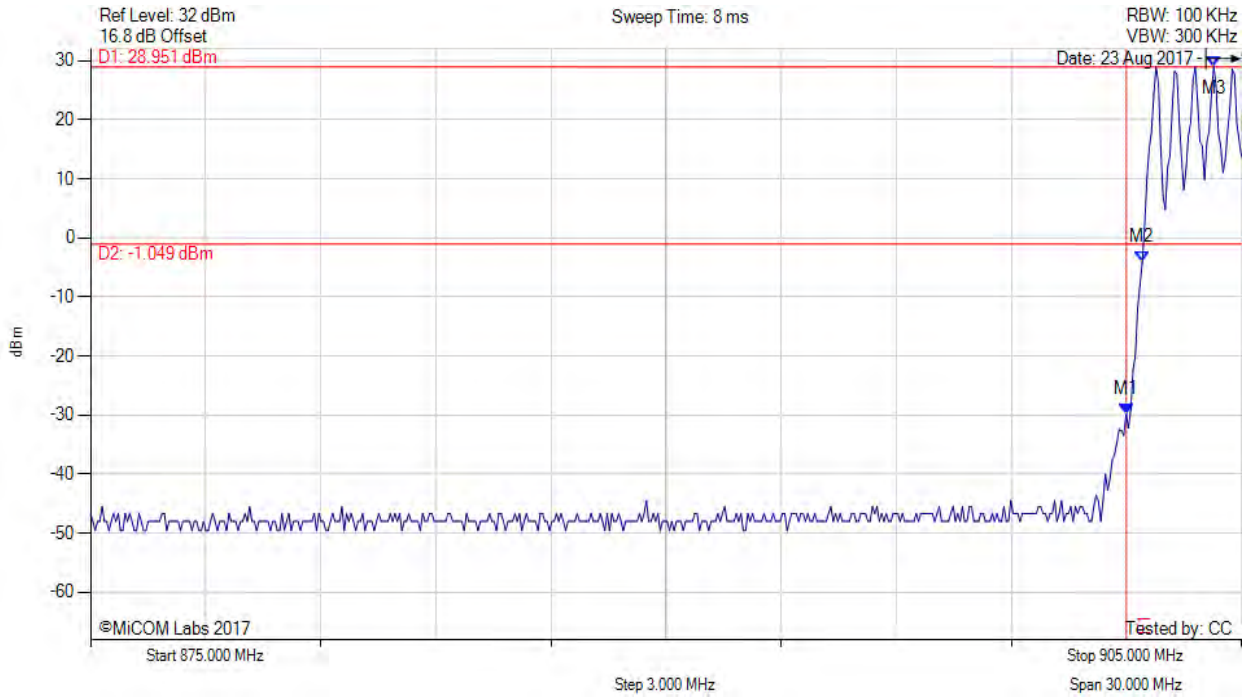


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -24.011 dBm M2 : 902.535 MHz : -1.711 dBm M3 : 902.776 MHz : 28.967 dBm	Channel Frequency: 902.75 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (HOPPING) AVERAGE

Variant: 400 DSB-AFK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

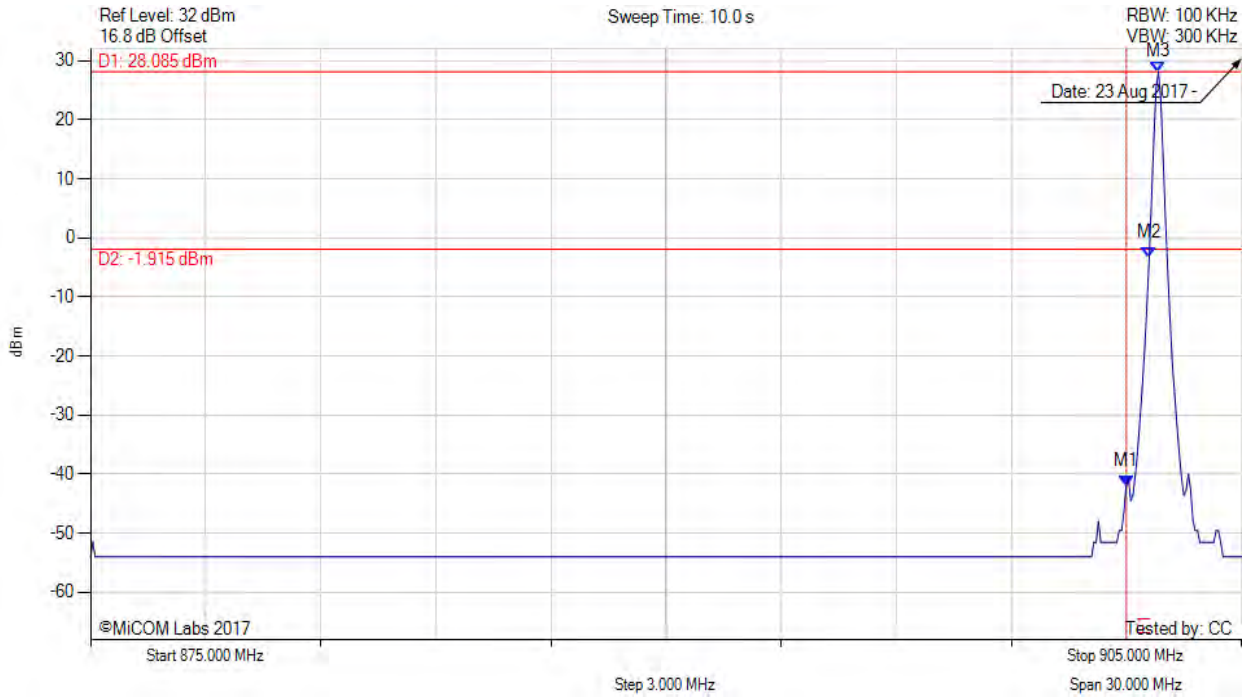


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -29.761 dBm M2 : 902.415 MHz : -4.149 dBm M3 : 904.279 MHz : 28.951 dBm	Channel Frequency: 902.75 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) AVERAGE

Variant: 250 PR-ASK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

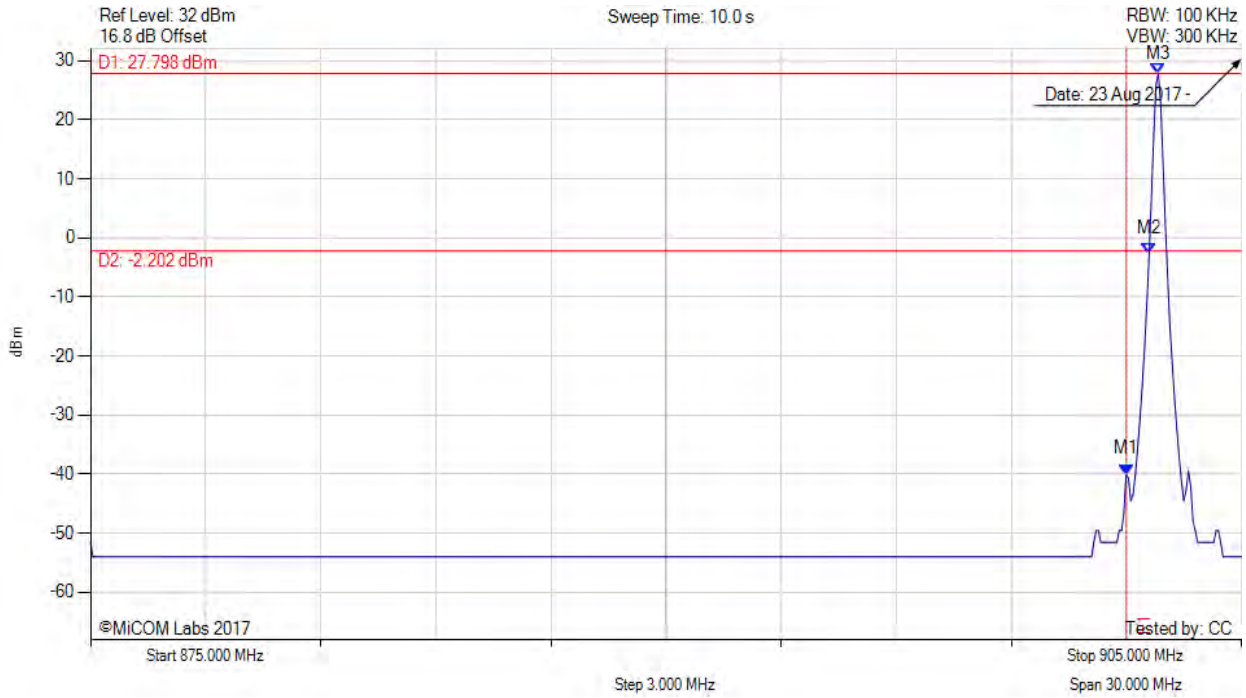


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -41.982 dBm M2 : 902.595 MHz : -3.385 dBm M3 : 902.836 MHz : 28.085 dBm	Channel Frequency: 902.75 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) AVERAGE

Variant: 300 PR-ASK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

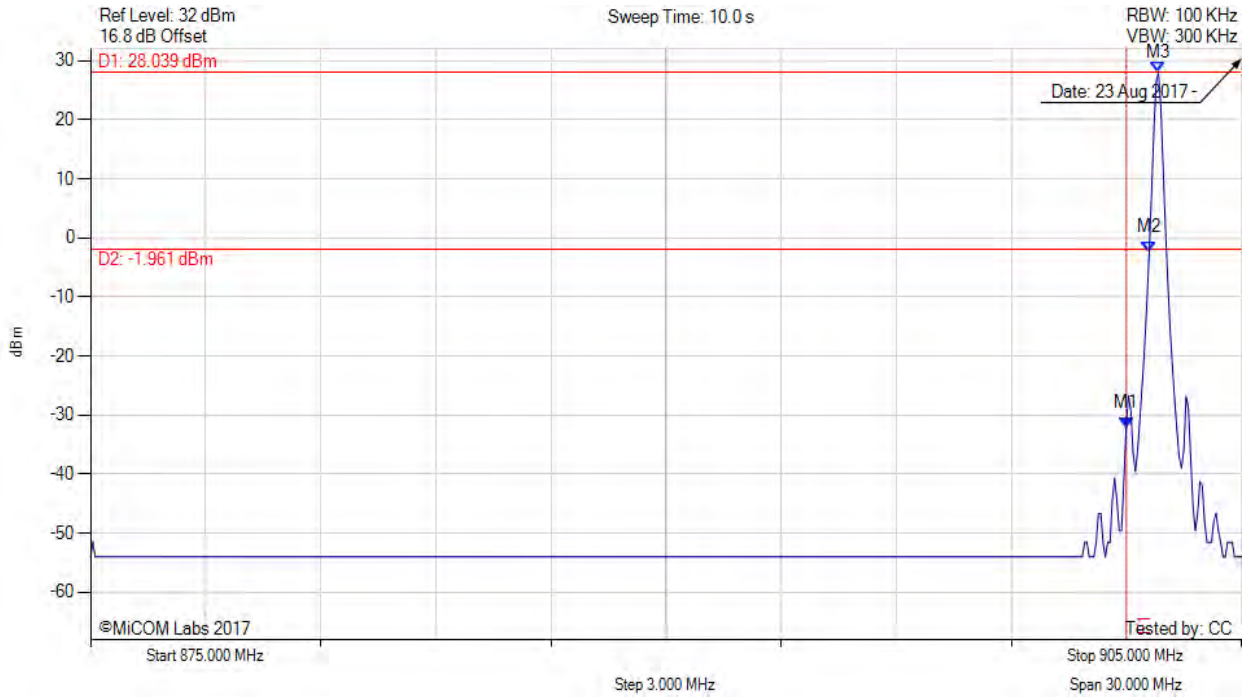


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -40.044 dBm M2 : 902.595 MHz : -2.612 dBm M3 : 902.836 MHz : 27.798 dBm	Channel Frequency: 902.75 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) AVERAGE

Variant: 40 DSB-AFK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

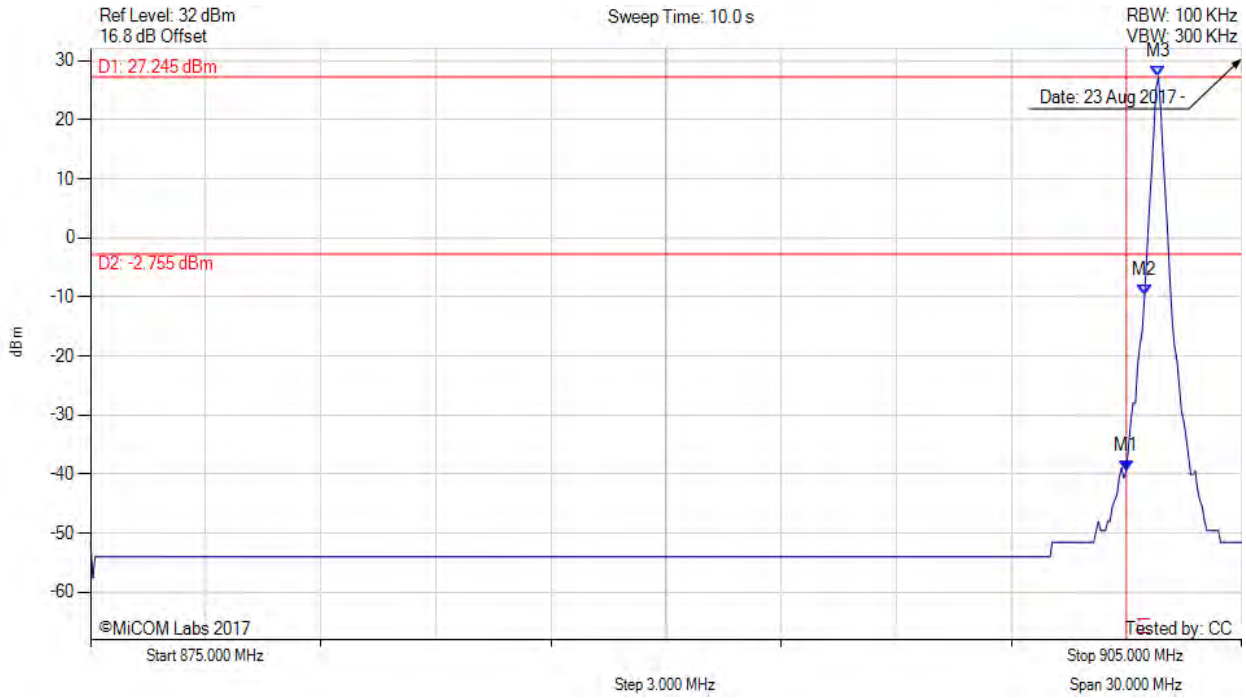


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -32.201 dBm M2 : 902.595 MHz : -2.535 dBm M3 : 902.836 MHz : 28.039 dBm	Channel Frequency: 902.75 MHz

back to matrix

CONDUCTED LOW BAND-EDGE EMISSIONS (STATIC) AVERAGE

Variant: 400 DSB-AFK, Channel: 902.75 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

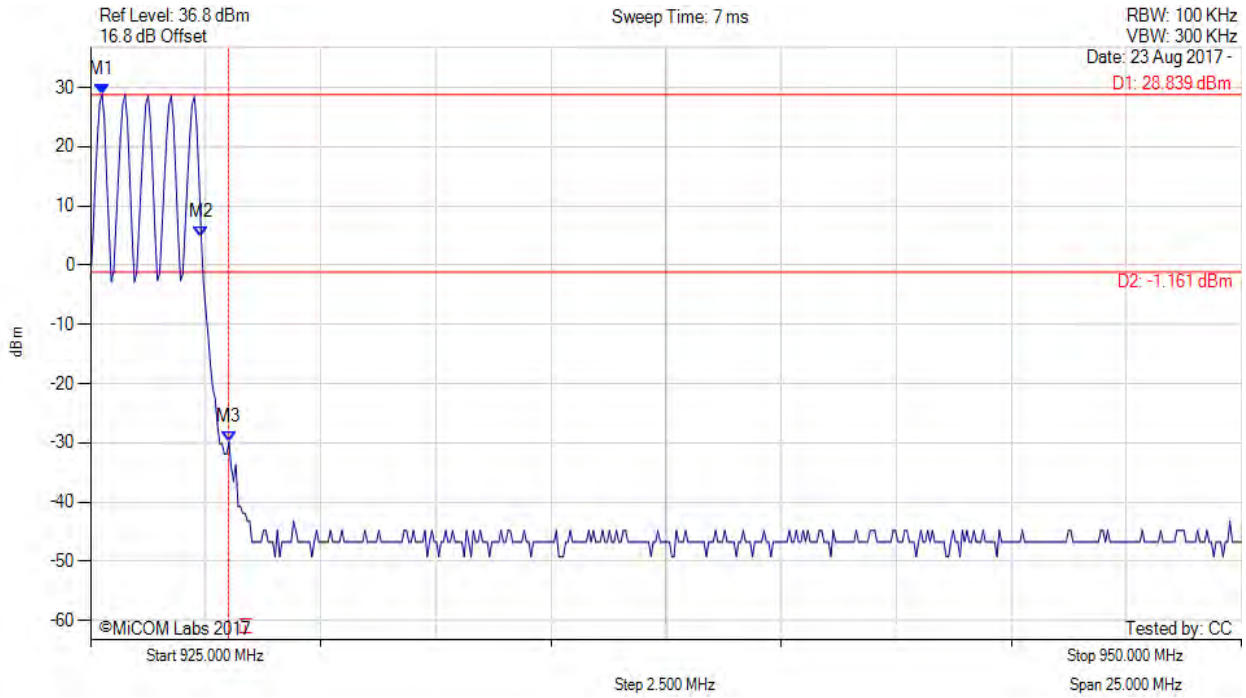


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 902.000 MHz : -39.483 dBm M2 : 902.475 MHz : -9.726 dBm M3 : 902.836 MHz : 27.245 dBm	Channel Frequency: 902.75 MHz

back to matrix

CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) AVERAGE

Variant: 250 PR-ASK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

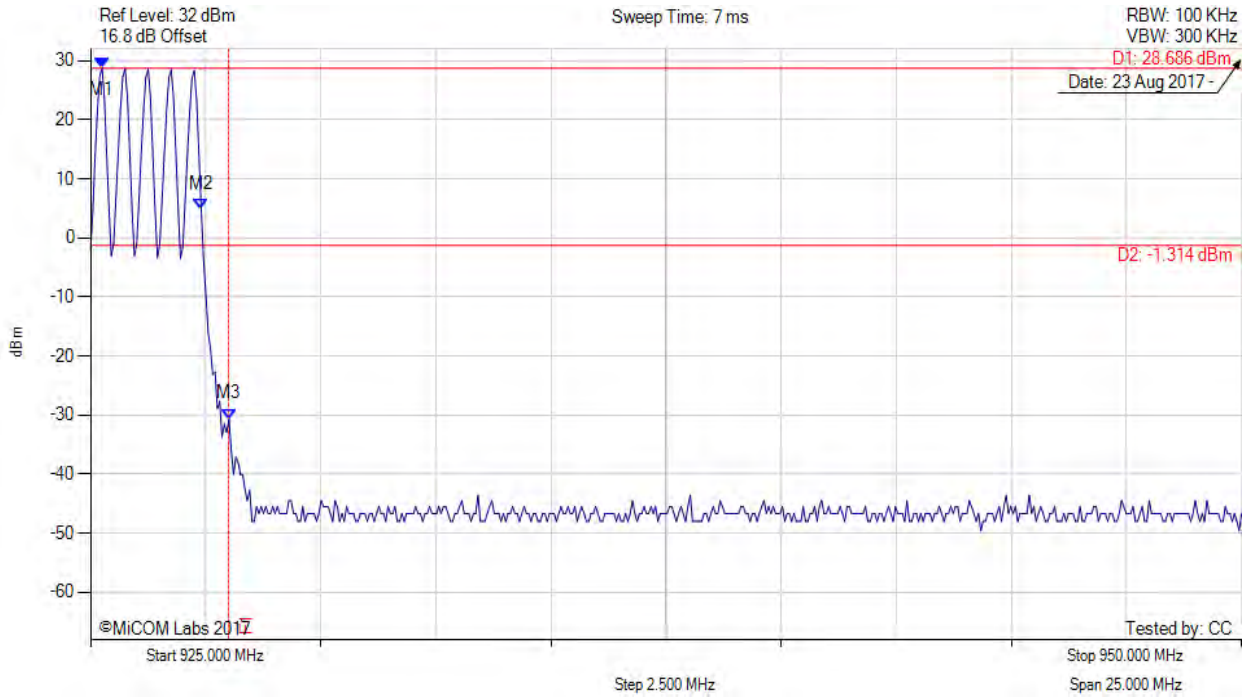


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.251 MHz : 28.839 dBm M2 : 927.405 MHz : 4.803 dBm M3 : 928.000 MHz : -29.822 dBm	Channel Frequency: 927.25 MHz

back to matrix

CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) AVERAGE

Variant: 300 PR-ASK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

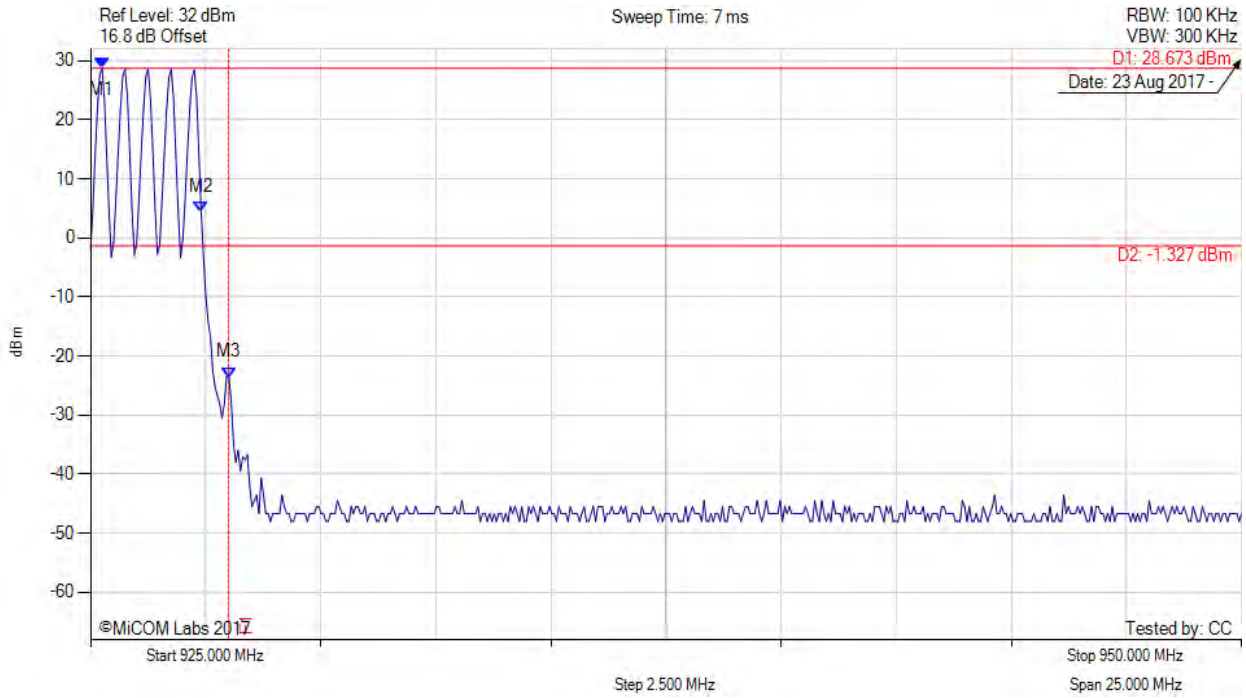


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.251 MHz : 28.686 dBm M2 : 927.405 MHz : 4.761 dBm M3 : 928.000 MHz : -30.696 dBm	Channel Frequency: 927.25 MHz

back to matrix

CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) AVERAGE

Variant: 40 DSB-AFK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc

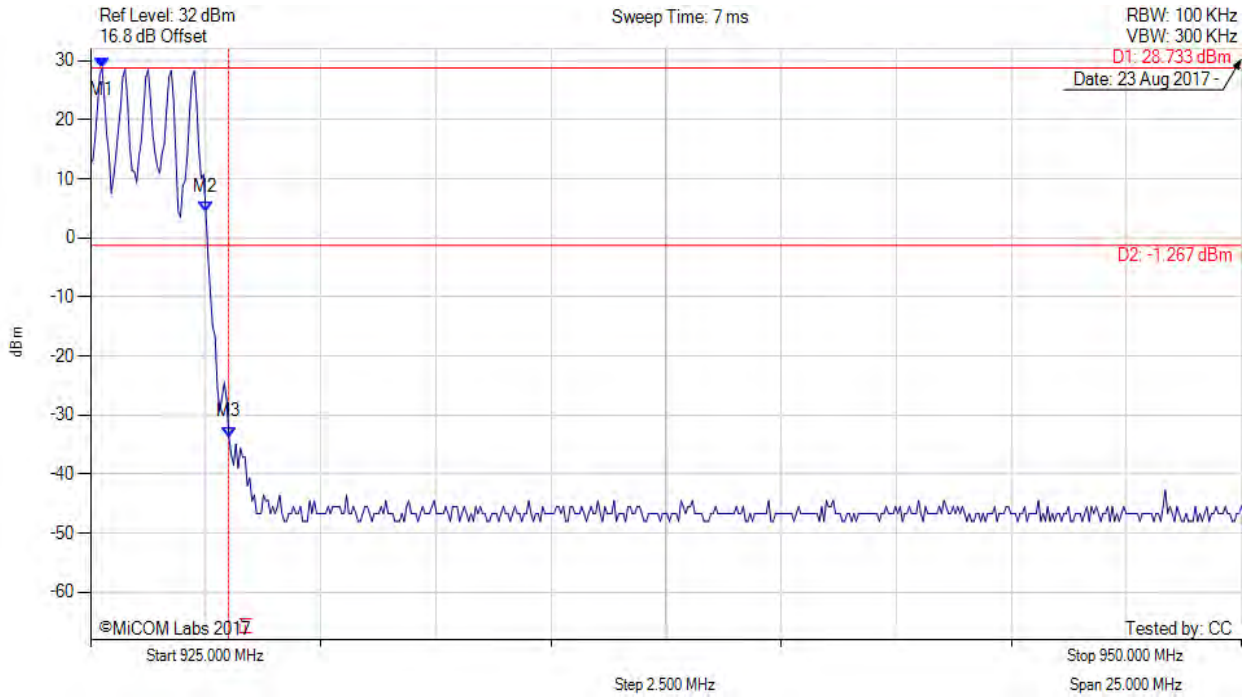


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.251 MHz : 28.673 dBm M2 : 927.405 MHz : 4.331 dBm M3 : 928.000 MHz : -23.653 dBm	Channel Frequency: 927.25 MHz

back to matrix

CONDUCTED UPPER BAND-EDGE EMISSIONS (HOPPING) AVERAGE

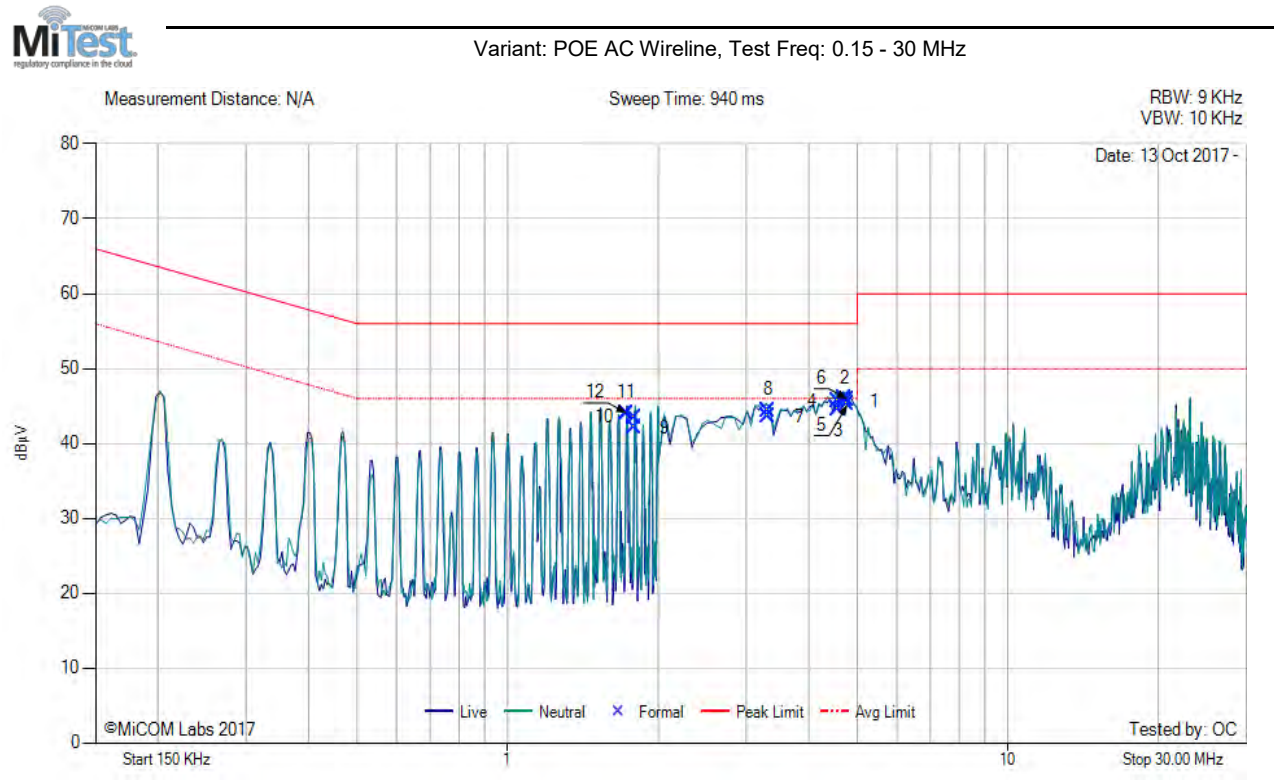
Variant: 400 DSB-AFK, Channel: 927.25 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 30 Trace Mode = VIEW	M1 : 925.251 MHz : 28.733 dBm M2 : 927.505 MHz : 4.253 dBm M3 : 928.000 MHz : -33.738 dBm	Channel Frequency: 927.25 MHz

back to matrix

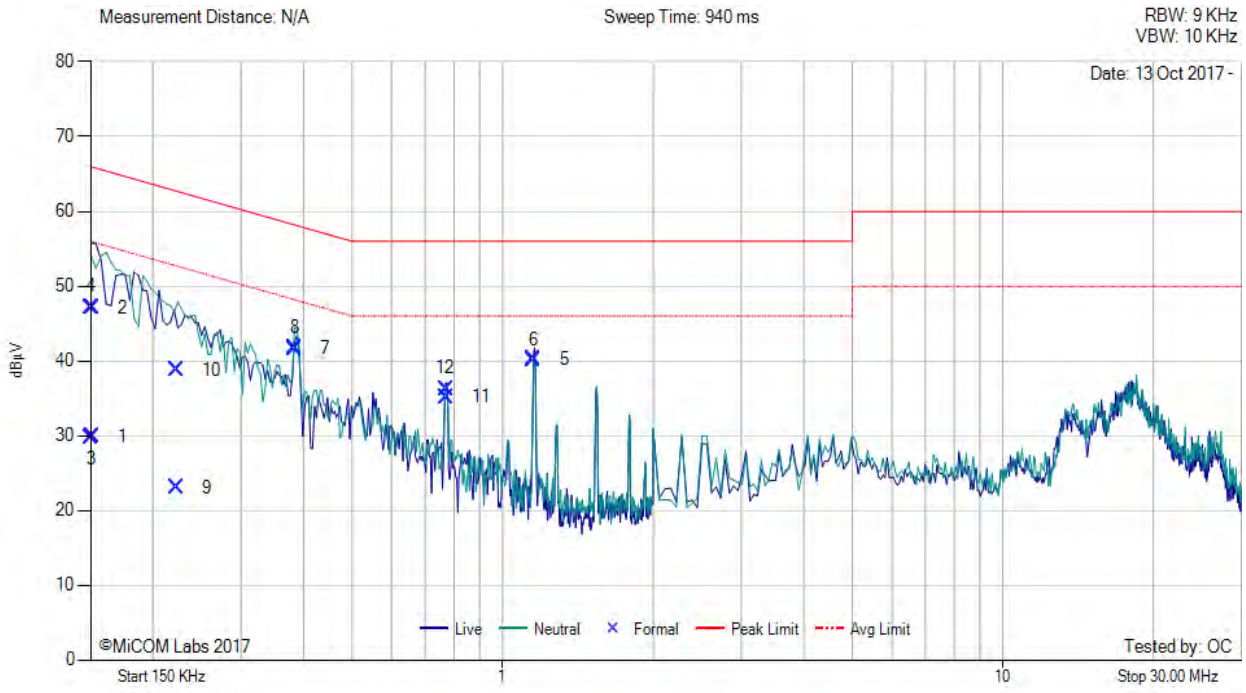
A.3.1.3. AC Mains Power Input/ Output Ports



Test Notes: Model: SensArray+. PoE powered configuration. AC Wireline testing. 120Vac, 60Hz

back to matrix

Variant: AC/DC AC Wireline, Test Freq: 0.15 - 30 MHz



Test Notes: Model: SensArray+. AC/DC powered configuration. AC Wireline testing. 120Vac, 60Hz

back to matrix

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