

TEST REPORT ADDENDUM – CONDUCTED

FROM



Test of: Aruba Networks, Inc. APIN0314, APIN0315

to

To: FCC Subpart C 15.247 (DTS) & IC RSS-247

Test Report Serial No.: ARUB204-U5_Conducted Rev A

Issue Date: 8th April 2016

Master Document Number	Addendum Reports
ARUB204-U5_Master	ARUB204-U5_Conducted
	ARUB204-U5_Radiated
	ARUB204-U17 (FCC Part 15B & ICES-003)



Title: Aruba Networks, Inc. APIN0314 & APIN0315
To: FCC CFR 47 Part 15.247 (DTS) & IC RSS-247
Serial #: ARUB204-U5 Rev A
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1. MEASUREMENT AND PRESENTATION OF TEST DATA

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

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

Testing and report automation was performed by [MiTest](#). [MiTest](#) is an automated test system developed by MiCOM Labs. [MiTest](#) is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for regulatory compliance.



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

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2. TEST RESULTS

2.1. 6 dB & 99% Bandwidth

Conducted Test Conditions for 6 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	6 dB and 99 % Bandwidth	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.247 (a)(2)	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		
<p>Test Procedure for 6 dB and 99% Bandwidth Measurement</p> <p>The bandwidth at 6 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.</p> <p>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.</p> <p>Test configuration and setup used for the measurement was per the Conducted Test Set-up specified in this document.</p> <p>Limits for 6 dB and 99% Bandwidth</p> <p>(a) Operation under the provisions of this Section is limited to frequency hopping and digitally modulated intentional radiators that comply with the following provisions:</p> <p>(2) Systems using digital modulation techniques may operate in the 902-928 MHz and 2400-2483.5 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.</p>			

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802.11b

Equipment Configuration for 6 dB & 99% Bandwidth			
Variant:	802.11b	Duty Cycle (%):	99
Data Rate:	1.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	CCK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest	KHz	MHz
MHz	a	b	c	d				
2412.0	9.058	8.096	--	--	9.058	8.096	≥500.0	-7.60
2437.0	9.539	9.058	--	--	9.539	9.058	≥500.0	-8.56
2462.0	9.058	8.096	--	--	9.058	8.096	≥500.0	-7.60

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	14.028	13.547	--	--	14.028		
2437.0	14.749	14.589	--	--	14.749		
2462.0	13.547	13.066	--	--	13.547		

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

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

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802.11g

Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11g	Duty Cycle (%):	96
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest	KHz	MHz
MHz	a	b	c	d				
2412.0	16.273	15.711	--	--	16.273	15.711	≥500.0	-15.21
2437.0	16.112	15.711	--	--	16.112	15.711	≥500.0	-15.21
2462.0	16.273	15.150	--	--	16.273	15.150	≥500.0	-14.65

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	MHz	a	b	c		d	
2412.0	16.994	16.754	--	--	16.994		
2437.0	18.036	17.315	--	--	18.036		
2462.0	16.673	16.513	--	--	16.673		

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

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802.11n HT-20

Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11n HT-20	Duty Cycle (%):	98
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest	KHz	MHz
MHz	a	b	c	d				
2412.0	17.555	17.154	--	--	17.555	17.154	≥500.0	-16.65
2437.0	16.673	17.154	--	--	17.154	16.673	≥500.0	-16.17
2462.0	17.154	16.914	--	--	17.154	16.914	≥500.0	-16.41

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
	MHz	a	b	c		d	
2412.0	17.876	17.796	--	--	17.876		
2437.0	17.635	17.635	--	--	17.635		
2462.0	17.555	17.635	--	--	17.635		

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

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802.11n HT-40

Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11n HT-40	Duty Cycle (%):	95
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)				Highest	Lowest		
MHz	a	b	c	d			KHz	MHz
2422.0	33.828	33.828	--	--	33.828	33.828	≥500.0	-33.33
2437.0	32.545	33.828	--	--	33.828	32.545	≥500.0	-32.05
2452.0	33.828	33.828	--	--	33.828	33.828	≥500.0	-33.33

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2422.0	41.683	39.760	--	--	41.683		
2437.0	36.713	36.553	--	--	36.713		
2452.0	36.553	36.874	--	--	36.874		

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-03 MEASURING RF SPECTRUM MASK
Measurement Uncertainty:	±2.81 dB

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2.2. Conducted Output Power

Conducted Test Conditions for Fundamental Emission Output Power			
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	Output Power	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.247 (b) & (c)	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 at nominal voltage only. 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

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

(3) For systems using digital modulation in the 902-928 MHz and 2400-2483.5 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.

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(c) Operation with directional antenna gains greater than 6 dBi.

(1) Fixed point-to-point operation:

(i) Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

(iii) Fixed, point-to-point operation, as used in paragraphs (c)(1)(i) and (c)(1)(ii) of this section, excludes the use of point-to-multipoint systems, omnidirectional applications, and multiple co-located intentional radiators transmitting the same information. The operator of the spread spectrum or digitally modulated intentional radiator or, if the equipment is professionally installed, the installer is responsible for ensuring that the system is used exclusively for fixed, point-to-point operations. The instruction manual furnished with the intentional radiator shall contain language in the installation

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instructions informing the operator and the installer of this responsibility.

(2) In addition to the provisions in paragraphs (b)(3), (b)(4) and (c)(1)(i) of this section, transmitters operating in the 2400-2483.5 MHz band that emit multiple directional beams, simultaneously or sequentially, for the purpose of directing signals to individual receivers or to groups of receivers provided the emissions comply with the following:

(i) Different information must be transmitted to each receiver.

(ii) If the transmitter employs an antenna system that emits multiple directional beams but does not do emit multiple directional beams simultaneously, the total output power conducted to the array or arrays that comprise the device, i.e., the sum of the power supplied to all antennas, antenna elements, staves, etc. and summed across all carriers or frequency channels, shall not exceed the limit specified in paragraph (b)(1) or (b)(3) of this section, as applicable. However, the total conducted output power shall be reduced by 1 dB below the specified limits for each 3 dB that the directional gain of the antenna/antenna array exceeds 6 dBi. The directional antenna gain shall be computed as follows:

(A) The directional gain shall be calculated as the sum of 10 log (number of array elements or staves) plus the directional gain of the element or staff having the highest gain.

(B) A lower value for the directional gain than that calculated in paragraph (c)(2)(ii)(A) of this section will be accepted if sufficient evidence is presented, e.g., due to shading of the array or coherence loss in the beamforming.

(iii) If a transmitter employs an antenna that operates simultaneously on multiple directional beams using the same or different frequency channels, the power supplied to each emission beam is subject to the power limit specified in paragraph (c)(2)(ii) of this section. If transmitted beams overlap, the power shall be reduced to ensure that their aggregate power does not exceed the limit specified in paragraph (c)(2)(ii) of this section. In addition, the aggregate power transmitted simultaneously on all beams shall not exceed the limit specified in paragraph (c)(2)(ii) of this section by more than 8 dB.

(iv) Transmitters that emit a single directional beam shall operate under the provisions of paragraph (c)(1) of this section.

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802.11b

Equipment Configuration for Average Output Power			
Variant:	802.11b	Duty Cycle (%):	99.0
Data Rate:	1.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	CCK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power + DCCF (+0.04 dB) (dBm)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	19.67	20.11	--	--	22.91	30.00	-7.09	20.00
2437.0	21.16	21.10	--	--	24.14	30.00	-5.86	21.00
2462.0	19.38	20.07	--	--	22.75	30.00	-7.25	20.00

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	± 1.33 dB

DCCF - Duty Cycle Correction Factor

The above final power settings have been modified to take into account any necessary power reduction as a result of radiated spurious emissions and/or radiated restricted band-edge emissions, see MiCOM Labs test report addendum ARUB204-U5_Radiated

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802.11g

Equipment Configuration for Average Output Power

Variant:	802.11g	Duty Cycle (%):	96.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power + DCCF (+0.18 dB) (dBm)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	18.04	19.29	--	--	21.17	30.00	-8.83	19.00
2437.0	20.08	20.18	--	--	23.14	30.00	-6.86	21.00
2462.0	18.70	19.18	--	--	21.95	30.00	-8.05	20.00

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	± 1.33 dB

DCCF - Duty Cycle Correction Factor

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802.11n HT-20

Equipment Configuration for Average Output Power			
Variant:	802.11n HT-20	Duty Cycle (%):	98.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power + DCCF (+0.09 dB) (dBm)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	17.29	17.41	--	--	20.36	30.00	-9.64	18.50
2437.0	19.92	20.01	--	--	22.97	30.00	-7.03	21.00
2462.0	18.52	18.80	--	--	21.67	30.00	-8.33	20.00

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	± 1.33 dB

DCCF - Duty Cycle Correction Factor

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802.11n HT-40

Equipment Configuration for Average Output Power			
Variant:	802.11n HT-40	Duty Cycle (%):	98.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Output Power + DCCF (+0.09 dB) (dBm)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2422.0	15.21	15.52	--	--	18.38	30.00	-11.62	
2437.0	20.05	20.36	--	--	23.22	30.00	-6.78	
2452.0	14.00	14.58	--	--	17.31	30.00	-12.69	

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	± 1.33 dB

DCCF - Duty Cycle Correction Factor

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2.3. Emissions

2.3.1. Conducted Emissions

2.3.1.1. Conducted Spurious Emissions

Conducted Test Conditions for Transmitter Conducted Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47:15.247	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	Max Unwanted Emission Levels	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)).

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802.11b

Equipment Configuration for Transmitter Conducted Spurious Emissions			
Variant:	802.11b	Duty Cycle (%):	99
Data Rate:	1.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	CCK	Beam Forming Gain (Y):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30.0 - 26000.0	-64.737	-43.00	-65.565	-43.00	--	--	--	--
2437.0	30.0 - 26000.0	-65.565	-42.00	-65.565	-42.00	--	--	--	--
2462.0	30.0 - 26000.0	-65.565	-43.00	-65.565	-42.00	--	--	--	--

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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

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802.11g

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11g	Duty Cycle (%):	96
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30.0 - 26000.0	-64.737	-42.00	-65.565	-42.00	--	--	--	--
2437.0	30.0 - 26000.0	-65.565	-42.00	-65.565	-41.00	--	--	--	--
2462.0	30.0 - 26000.0	-64.737	-42.00	-64.737	-42.00	--	--	--	--

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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

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802.11n HT-20

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11n HT-20	Duty Cycle (%):	98
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30.0 - 26000.0	-64.737	-42.00	-64.737	-43.00	--	--	--	--
2437.0	30.0 - 26000.0	-64.737	-41.00	-65.565	-41.00	--	--	--	--
2462.0	30.0 - 26000.0	-65.565	-42.00	-64.737	-42.00	--	--	--	--

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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

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802.11n HT-40

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11n HT-40	Duty Cycle (%):	98
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2422.0	30.0 - 26000.0	-64.737	-43.00	-64.737	-43.00	--	--	--	--
2437.0	30.0 - 26000.0	-65.565	-39.00	-64.737	-38.00	--	--	--	--
2452.0	30.0 - 26000.0	-64.737	-39.00	-65.565	-38.00	--	--	--	--

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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

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2.3.1.2. Conducted Band-Edge Emissions

2.3.1.2.1. Conducted Low Band-Edge Emissions

802.11b

Equipment Configuration for Conducted Low Band-Edge Emissions - Average			
Variant:	802.11b	Duty Cycle (%):	99.0
Data Rate:	1.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	CCK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	2412.0 MHz					
Band-Edge Frequency:	2400.0 MHz					
Test Frequency Range:	2350.0 - 2422.0 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)	
a	-49.45	-28.00	2402.40	--	--	-2.400
b	-54.74	-27.00	2402.70	--	--	-2.700

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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

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802.11g

Equipment Configuration for Conducted Low Band-Edge Emissions - Average			
Variant:	802.11g	Duty Cycle (%):	96.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Revised Limit comes from operational mode 802.11b, frequency 2412 MHz.		

Test Measurement Results

Channel Frequency:	2412.0 MHz						
Band-Edge Frequency:	2400.0 MHz						
Test Frequency Range:	2350.0 - 2422.0 MHz						
Port(s)	Band-Edge Markers and Limit			Revised Limit			Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	
a	-27.86	-31.00	2396.30	-27.86	-27.00	2400.357	-0.357
b	-28.03	-30.00	2397.80	-28.03	-27.00	2400.212	-0.212

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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802.11n HT-20

Equipment Configuration for Conducted Low Band-Edge Emissions - Average			
Variant:	802.11n HT-20	Duty Cycle (%):	98.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Revised Limit comes from operational mode 802.11b, frequency 2412 MHz.		

Test Measurement Results

Channel Frequency:	2412.0 MHz						
Band-Edge Frequency:	2400.0 MHz						
Test Frequency Range:	2350.0 - 2422.0 MHz						
Port(s)	Band-Edge Markers and Limit			Revised Limit			Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	
a	-28.19	-31.00	2396.90	-28.19	-27.00	2400.357	-0.357
b	-29.99	-31.00	2399.30	-29.99	-27.00	2400.790	-0.790

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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802.11n HT-40

Equipment Configuration for Conducted Low Band-Edge Emissions - Average			
Variant:	802.11n HT-40	Duty Cycle (%):	98.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Revised Limit comes from operational mode 802.11b, frequency 2412 MHz.		

Test Measurement Results

Channel Frequency:	2422.0 MHz						
Band-Edge Frequency:	2400.0 MHz						
Test Frequency Range:	2292.0 - 2442.0 MHz						
Port(s)	Band-Edge Markers and Limit			Revised Limit			Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	(MHz)
a	-29.62	-34.00	2390.00	-29.62	-27.00	2402.321	-2.321
b	-29.68	-33.00	2392.10	-29.68	-27.00	2402.621	-2.621

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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2.3.1.2.2. Conducted High Band-Edge Emissions

802.11b

Equipment Configuration for Conducted High Band-Edge Emissions - Average

Variant:	802.11b	Duty Cycle (%):	99.0
Data Rate:	1.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	CCK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	2462.0 MHz					
Band-Edge Frequency:	2483.5 MHz					
Test Frequency Range:	2452.0 - 2524.0 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	-55.57	-28.00	2471.20	--	--	-12.300
b	-54.74	-27.00	2471.00	--	--	-12.500

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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802.11g

Equipment Configuration for Conducted High Band-Edge Emissions - Average

Variant:	802.11g	Duty Cycle (%):	96.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	2462.0 MHz					
Band-Edge Frequency:	2483.5 MHz					
Test Frequency Range:	2452.0 - 2524.0 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	-41.94	-31.00	2475.10	--	--	-8.400
b	-42.90	-30.00	2475.40	--	--	-8.100

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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802.11n HT-20

Equipment Configuration for Conducted High Band-Edge Emissions - Average			
Variant:	802.11n HT-20	Duty Cycle (%):	98.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results

Channel Frequency:	2462.0 MHz					
Band-Edge Frequency:	2483.5 MHz					
Test Frequency Range:	2452.0 - 2524.0 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	-41.59	-31.00	2474.20	--	--	-9.300
b	-40.92	-31.00	2474.80	--	--	-8.700

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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802.11n HT-40

Equipment Configuration for Conducted High Band-Edge Emissions - Average			
Variant:	802.11n HT-40	Duty Cycle (%):	98.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Revised Limit comes from operational mode 802.11b, frequency 2462 MHz.		

Test Measurement Results

Channel Frequency:	2452.0 MHz						
Band-Edge Frequency:	2483.5 MHz						
Test Frequency Range:	2432.0 - 2582.0 MHz						
Port(s)	Band-Edge Markers and Limit			Revised Limit			Margin
	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	(MHz)
a	-35.74	-35.00	2481.90	--	--	--	-1.600
b	-29.50	-33.00	2486.10	-29.50	-27.00	2473.483	-10.017

Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-05 MEASUREMENT OF SPURIOUS EMISSIONS
Measurement Uncertainty:	<=40 GHz ± 2.37 dB, > 40 GHz ± 4.6 dB

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2.4. Power Spectral Density

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

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

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

Testing was performed under ambient conditions at nominal voltage only.

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

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

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

Supporting Information
Calculated Power = A + 10 log (1/x) dBm
A = Total Power Spectral Density [10 Log10 (10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})]
x = Duty Cycle

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

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802.11b

Equipment Configuration for Power Spectral Density - Average			
Variant:	802.11b	Duty Cycle (%):	99.0
Data Rate:	1.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	CCK	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results							
Test Frequency	Measured Power Spectral Density				Amplitude Summation + DCCF (+0.04 dB)	Limit	Margin
	Port(s) (dBm/3KHz)						
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
2412.0	-12.059	-11.815	--	--	-8.974	8.0	-17.0
2437.0	-11.705	-11.805	--	--	-9.125	8.0	-17.1
2462.0	-11.875	-10.334	--	--	-7.982	8.0	-16.0

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

DCCF - Duty Cycle Correction Factor

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

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802.11g

Equipment Configuration for Power Spectral Density - Average			
Variant:	802.11g	Duty Cycle (%):	96.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	1.9
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results							
Test Frequency	Measured Power Spectral Density				Amplitude Summation + DCCF (+0.18 dB)	Limit	Margin
	Port(s) (dBm/3KHz)						
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
2412.0	-15.509	-14.845	--	--	-12.306	8.0	-20.3
2437.0	-15.387	-14.044	--	--	-12.000	8.0	-20.0
2462.0	-15.387	-14.634	--	--	-12.041	8.0	-20.1

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

DCCF - Duty Cycle Correction Factor

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

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802.11n HT-20

Equipment Configuration for Power Spectral Density - Average			
Variant:	802.11n HT-20	Duty Cycle (%):	98.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	1.90
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results							
Test Frequency	Measured Power Spectral Density				Amplitude Summation + DCCF (+0.09 dB)	Limit	Margin
	Port(s) (dBm/3KHz)						
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
2412.0	-15.950	-15.478	--	--	-12.982	8.0	-21.0
2437.0	-15.664	-14.988	--	--	-12.430	8.0	-20.4
2462.0	-16.245	-15.002	--	--	-12.981	8.0	-21.0

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

DCCF - Duty Cycle Correction Factor

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

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802.11n HT-40

Equipment Configuration for Power Spectral Density - Average			
Variant:	802.11n HT-40	Duty Cycle (%):	98.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	1.90
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	2.0
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:			

Test Measurement Results							
Test Frequency	Measured Power Spectral Density				Amplitude Summation + DCCF (+0.09 dB)	Limit	Margin
	Port(s) (dBm/3KHz)						
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
2422.0	-18.744	-18.018	--	--	-15.349	8.0	-23.4
2437.0	-18.267	-17.579	--	--	-14.990	8.0	-23.0
2452.0	-19.039	-18.225	--	--	-15.610	8.0	-23.6

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

DCCF - Duty Cycle Correction Factor

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

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APPENDIX A - GRAPHICAL IMAGES

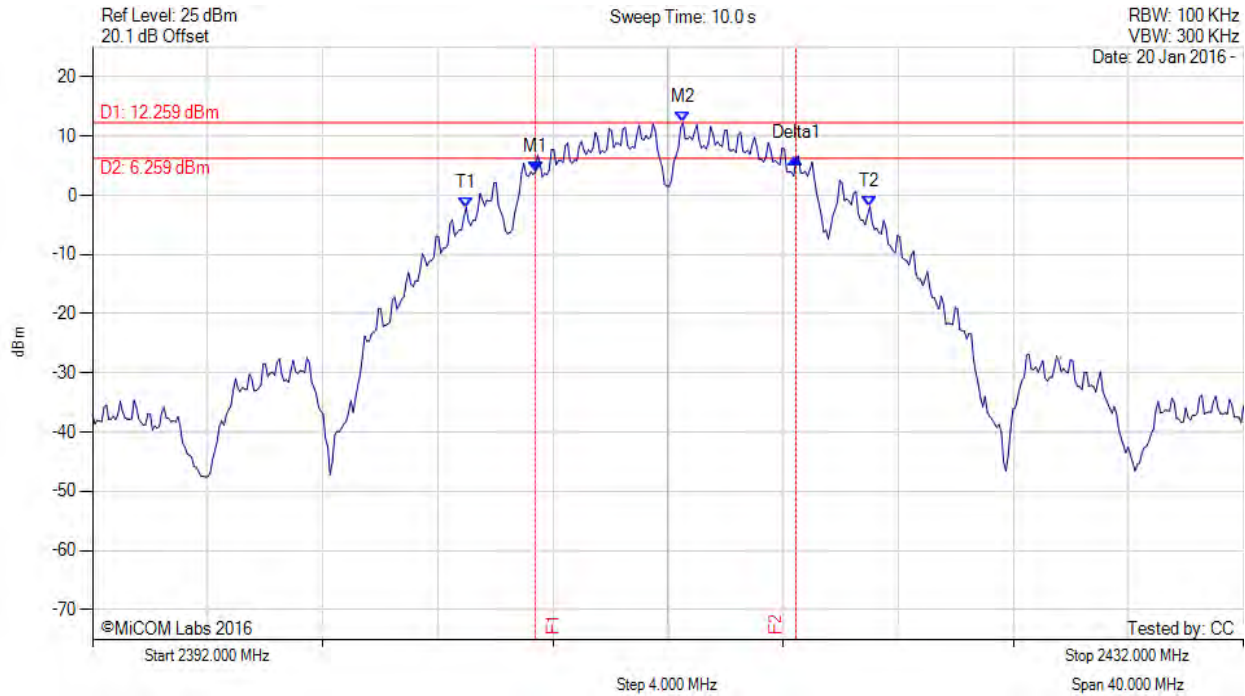
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A.1. 6 dB & 99% Bandwidth



6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2407.391 MHz : 3.943 dBm M2 : 2412.521 MHz : 12.259 dBm Delta1 : 9.058 MHz : 2.339 dB T1 : 2404.986 MHz : -2.037 dBm T2 : 2419.014 MHz : -1.874 dBm OBW : 14.028 MHz	Measured 6 dB Bandwidth: 9.058 MHz Limit: ≥ 500.0 kHz Margin: -8.56 MHz

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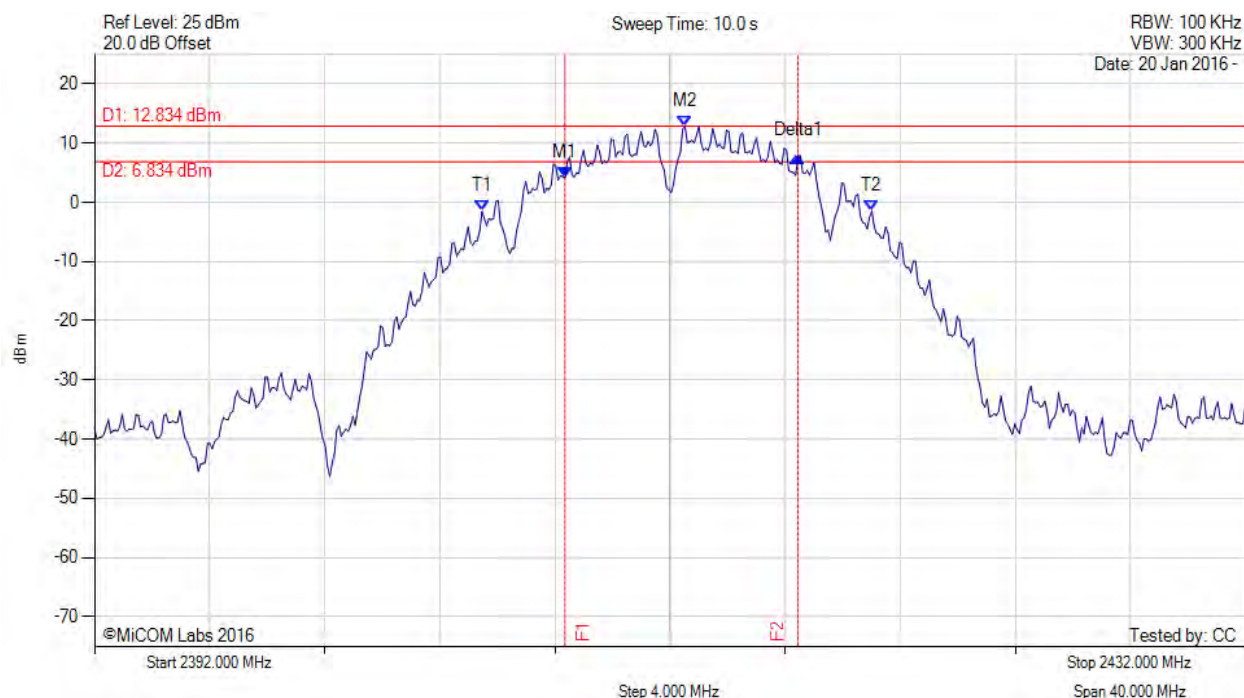


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6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2408.353 MHz : 4.242 dBm M2 : 2412.521 MHz : 12.834 dBm Delta1 : 8.096 MHz : 3.557 dB T1 : 2405.467 MHz : -1.528 dBm T2 : 2419.014 MHz : -1.469 dBm OBW : 13.547 MHz	Measured 6 dB Bandwidth: 8.096 MHz Limit: ≥500.0 kHz Margin: -7.60 MHz

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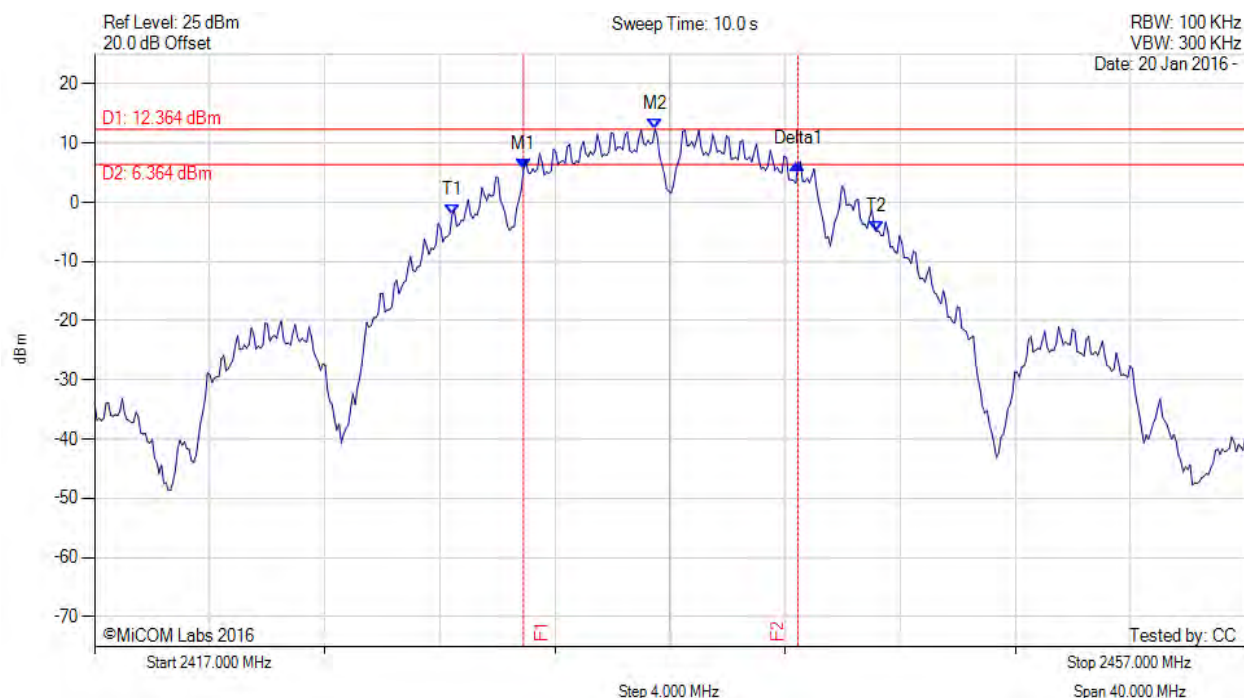


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6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2431.910 MHz : 5.606 dBm M2 : 2436.479 MHz : 12.364 dBm Delta1 : 9.539 MHz : 0.828 dB T1 : 2429.425 MHz : -2.087 dBm T2 : 2444.174 MHz : -4.920 dBm OBW : 14.749 MHz	Measured 6 dB Bandwidth: 9.539 MHz Limit: ≥500.0 kHz Margin: -9.04 MHz

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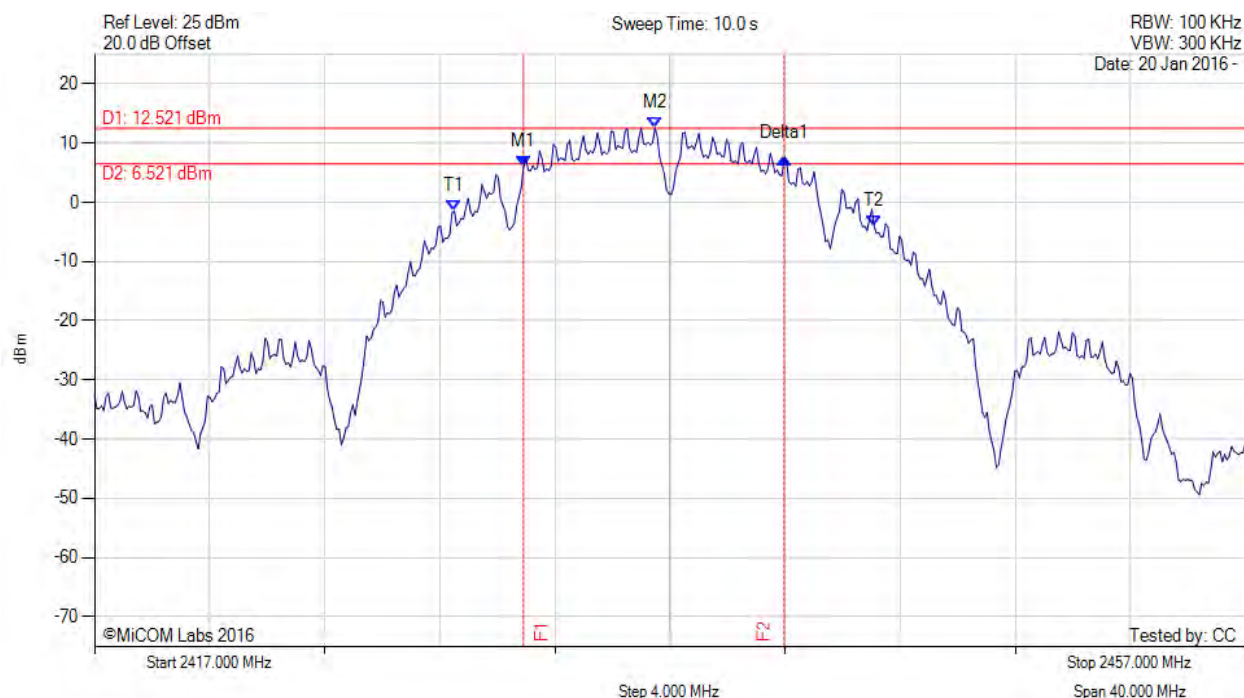


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2431.910 MHz : 5.982 dBm M2 : 2436.479 MHz : 12.521 dBm Delta1 : 9.058 MHz : 1.481 dB T1 : 2429.505 MHz : -1.433 dBm T2 : 2444.094 MHz : -4.081 dBm OBW : 14.589 MHz	Measured 6 dB Bandwidth: 9.058 MHz Limit: ≥500.0 kHz Margin: -8.56 MHz

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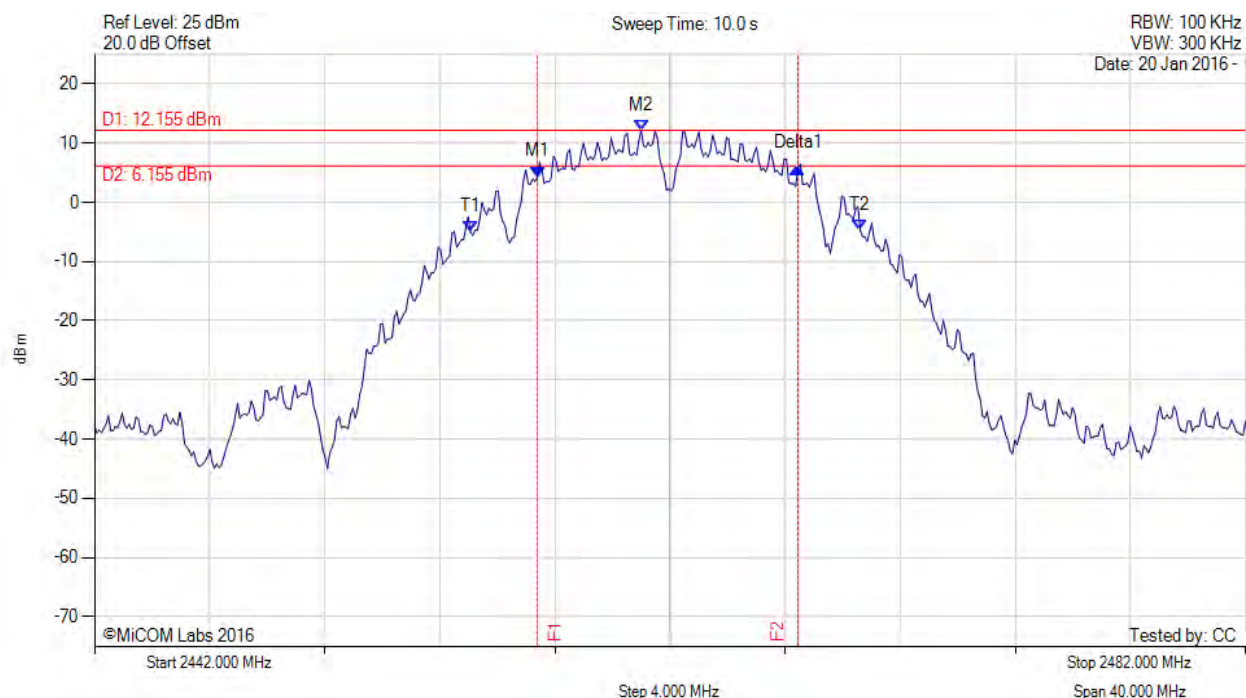


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6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2457.391 MHz : 4.294 dBm M2 : 2460.998 MHz : 12.155 dBm Delta1 : 9.058 MHz : 1.590 dB T1 : 2455.066 MHz : -5.032 dBm T2 : 2468.613 MHz : -4.746 dBm OBW : 13.547 MHz	Measured 6 dB Bandwidth: 9.058 MHz Limit: ≥500.0 kHz Margin: -8.56 MHz

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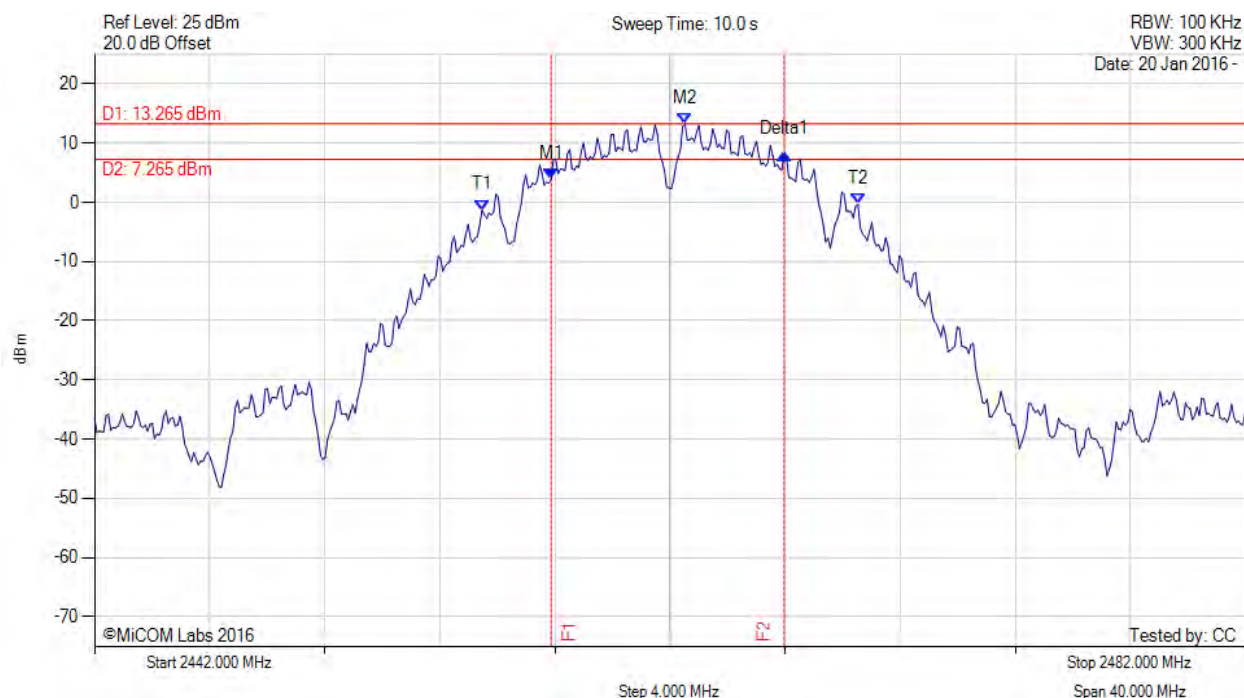


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6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2457.872 MHz : 3.884 dBm M2 : 2462.521 MHz : 13.265 dBm Delta1 : 8.096 MHz : 4.348 dB T1 : 2455.467 MHz : -1.313 dBm T2 : 2468.533 MHz : -0.345 dBm OBW : 13.066 MHz	Measured 6 dB Bandwidth: 8.096 MHz Limit: ≥500.0 kHz Margin: -7.60 MHz

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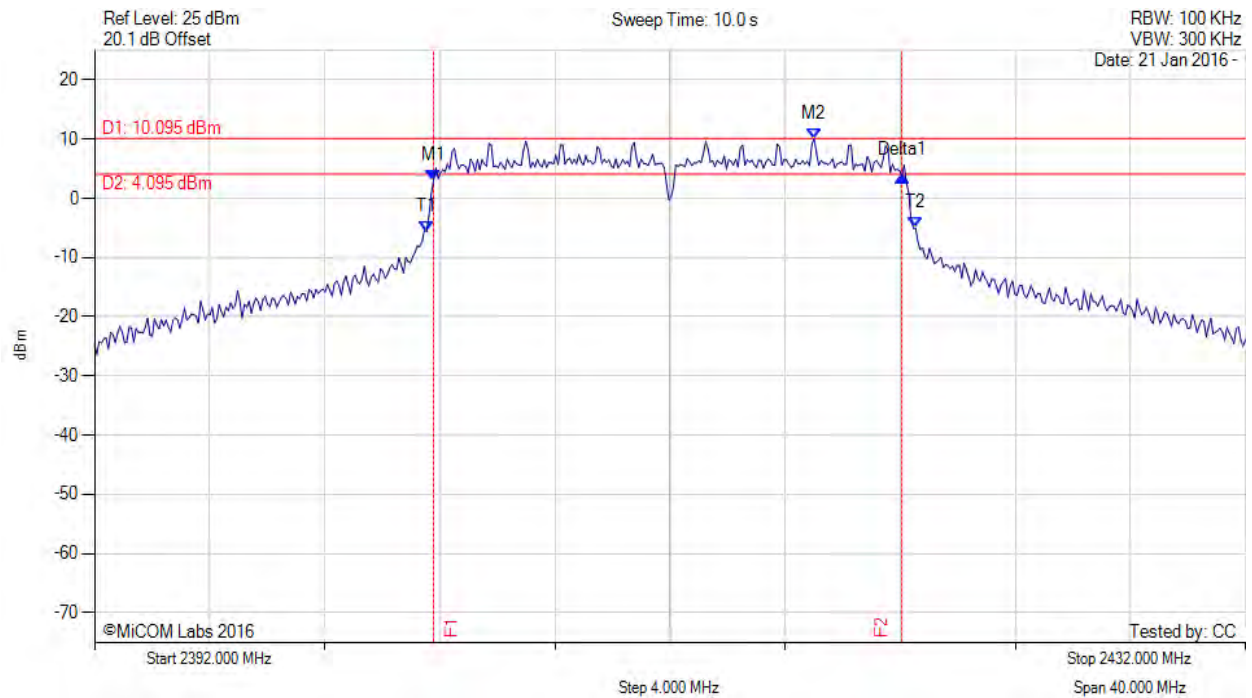


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6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.784 MHz : 3.005 dBm M2 : 2417.010 MHz : 10.095 dBm Delta1 : 16.273 MHz : 0.811 dB T1 : 2403.543 MHz : -5.588 dBm T2 : 2420.537 MHz : -5.024 dBm OBW : 16.994 MHz	Measured 6 dB Bandwidth: 16.273 MHz Limit: ≥500.0 kHz Margin: -15.77 MHz

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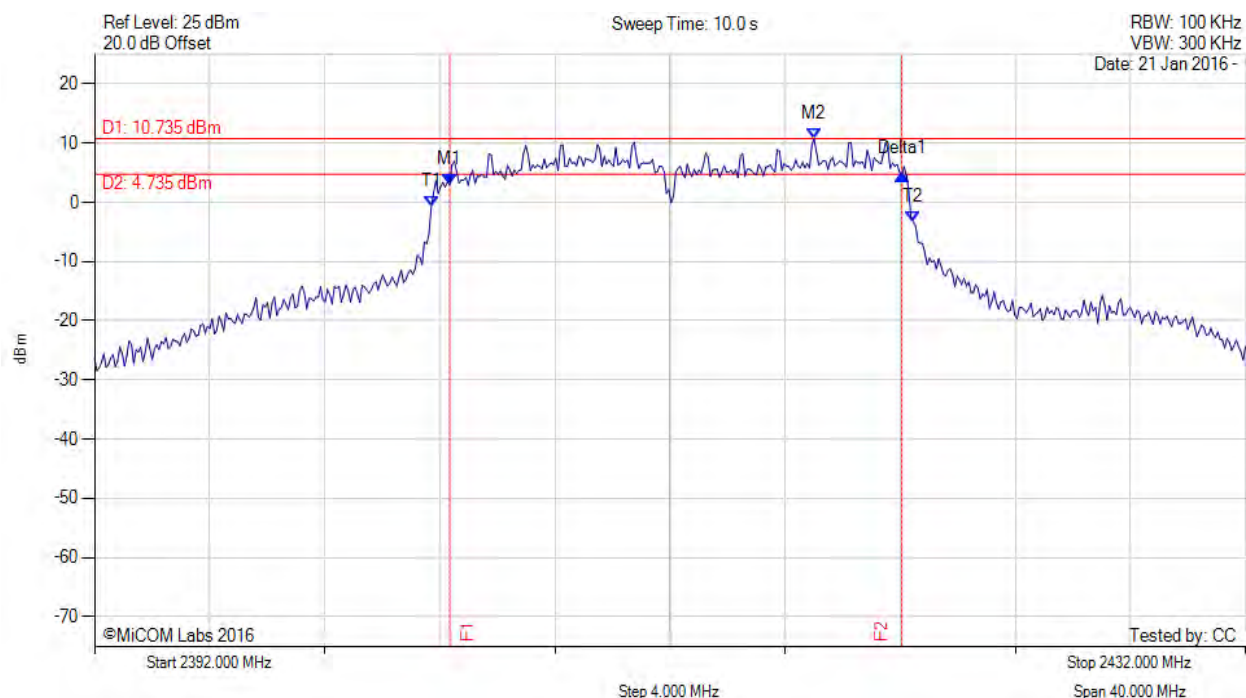


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6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2404.345 MHz : 2.985 dBm M2 : 2417.010 MHz : 10.735 dBm Delta1 : 15.711 MHz : 1.782 dB T1 : 2403.703 MHz : -0.719 dBm T2 : 2420.457 MHz : -3.316 dBm OBW : 16.754 MHz	Measured 6 dB Bandwidth: 15.711 MHz Limit: ≥500.0 kHz Margin: -15.21 MHz

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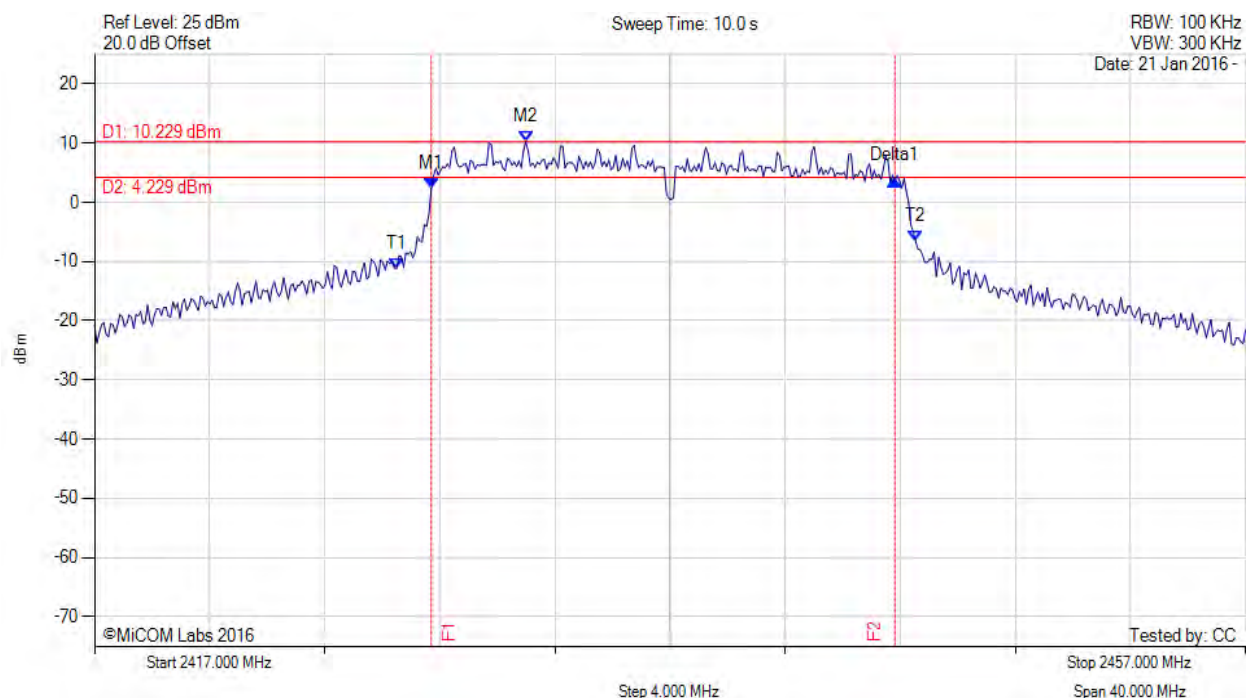


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6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.703 MHz : 2.295 dBm M2 : 2431.990 MHz : 10.229 dBm Delta1 : 16.112 MHz : 1.373 dB T1 : 2427.501 MHz : -11.154 dBm T2 : 2445.537 MHz : -6.651 dBm OBW : 18.036 MHz	Measured 6 dB Bandwidth: 16.112 MHz Limit: ≥500.0 kHz Margin: -15.61 MHz

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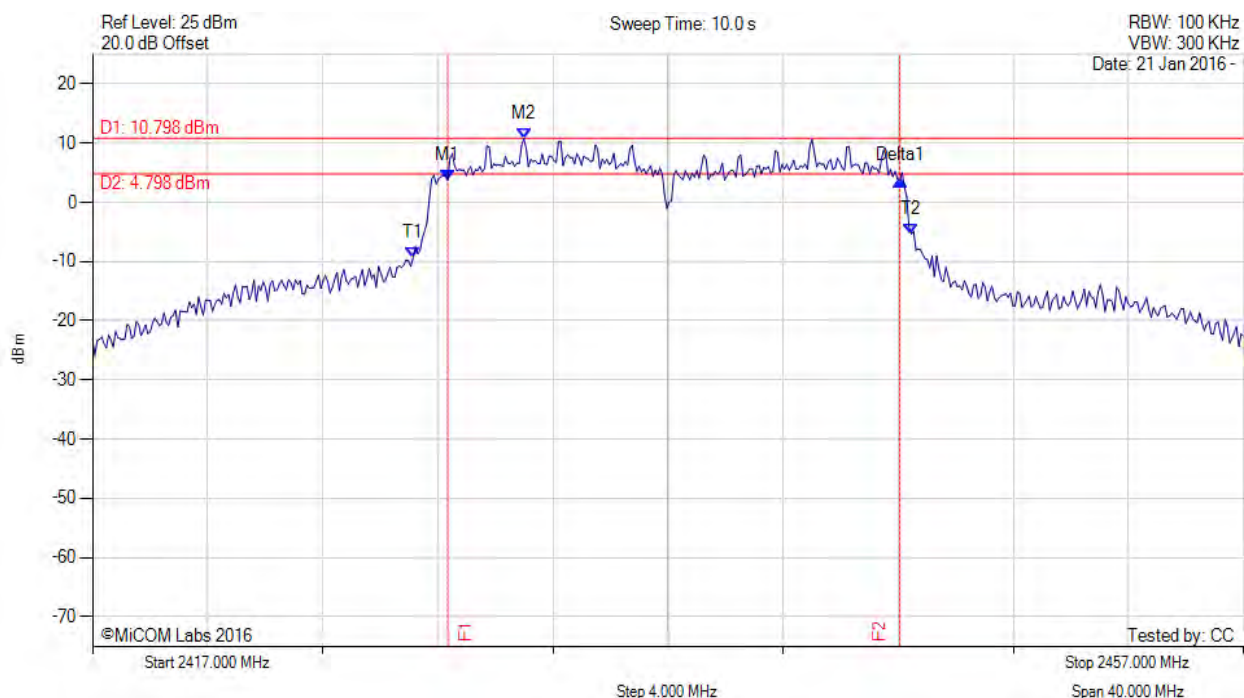


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6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2429.345 MHz : 3.770 dBm M2 : 2431.990 MHz : 10.798 dBm Delta1 : 15.711 MHz : -0.047 dB T1 : 2428.142 MHz : -9.378 dBm T2 : 2445.457 MHz : -5.368 dBm OBW : 17.315 MHz	Measured 6 dB Bandwidth: 15.711 MHz Limit: ≥500.0 kHz Margin: -15.21 MHz

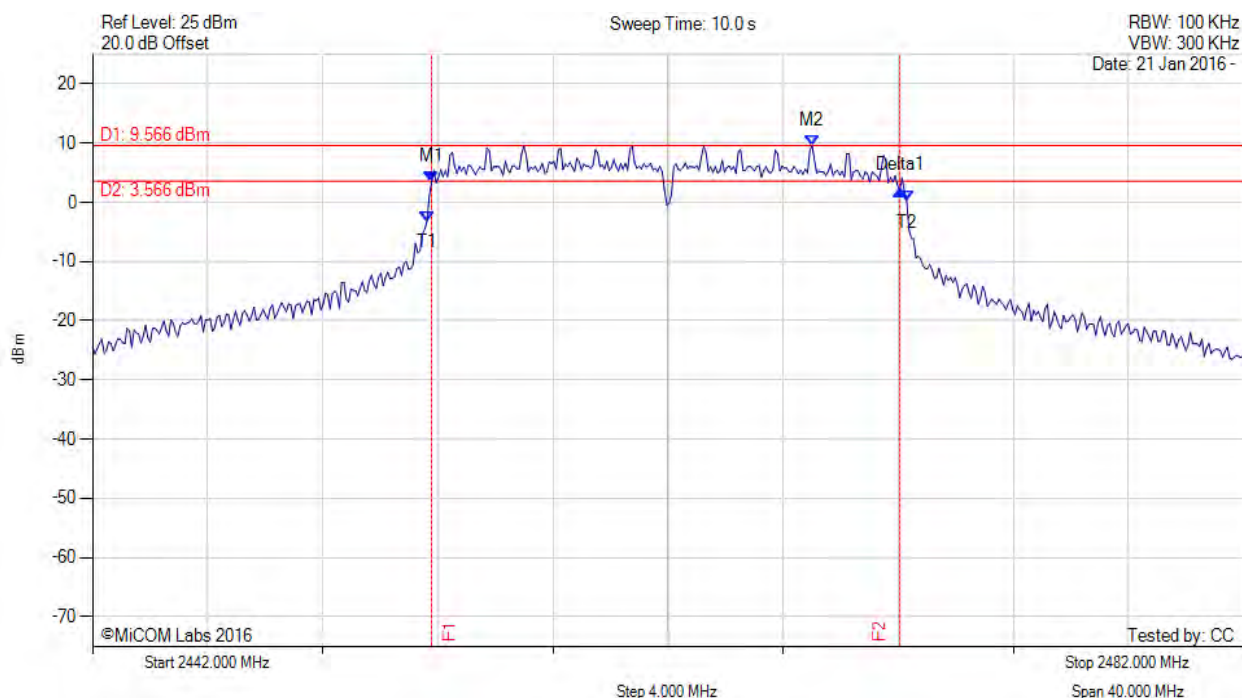
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6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.784 MHz : 3.404 dBm M2 : 2467.010 MHz : 9.566 dBm Delta1 : 16.273 MHz : -1.314 dB T1 : 2453.623 MHz : -3.259 dBm T2 : 2470.297 MHz : 0.182 dBm OBW : 16.673 MHz	Measured 6 dB Bandwidth: 16.273 MHz Limit: ≥500.0 kHz Margin: -15.77 MHz

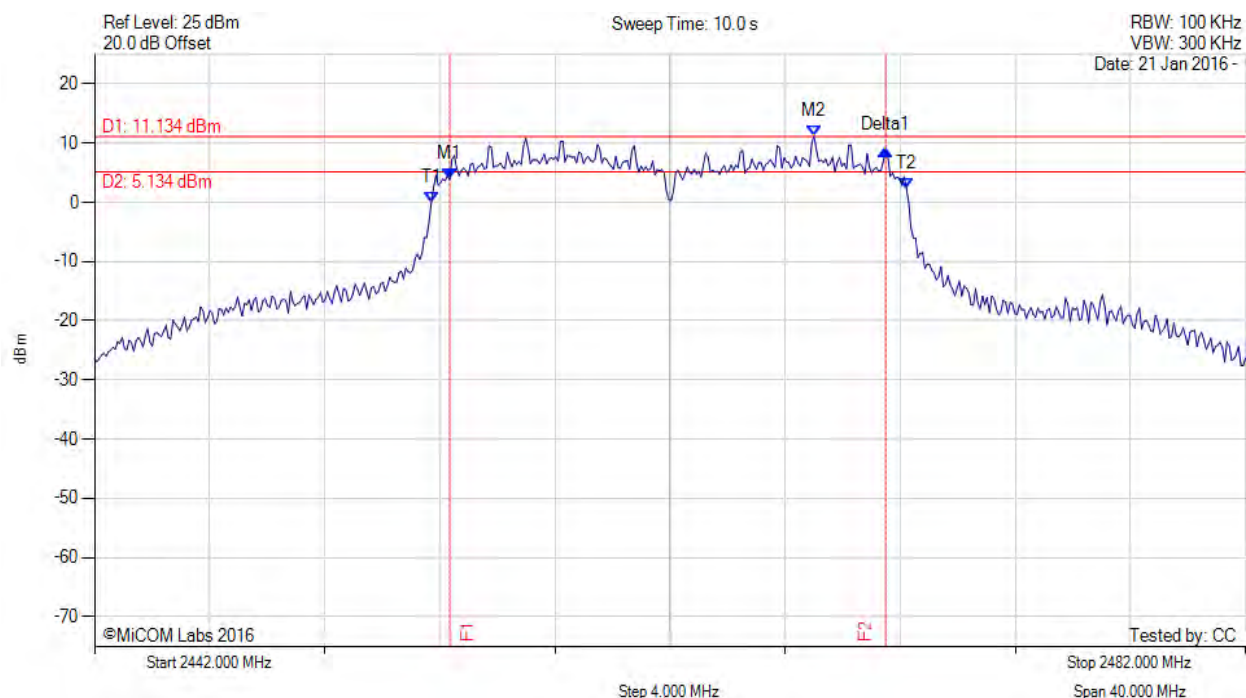
[back to matrix](#)

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6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2454.345 MHz : 3.882 dBm M2 : 2467.010 MHz : 11.134 dBm Delta1 : 15.150 MHz : 4.871 dB T1 : 2453.703 MHz : -0.056 dBm T2 : 2470.216 MHz : 2.326 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 15.150 MHz Limit: ≥500.0 kHz Margin: -14.65 MHz

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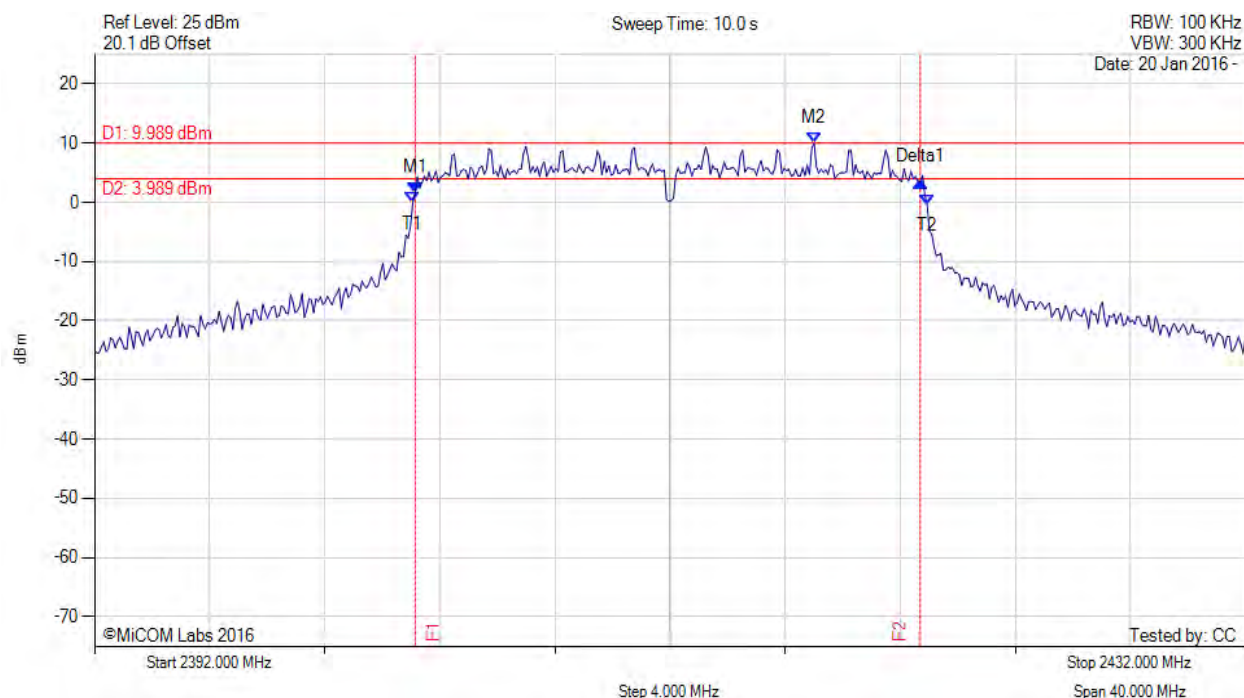


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.142 MHz : 1.551 dBm M2 : 2417.010 MHz : 9.989 dBm Delta1 : 17.555 MHz : 1.942 dB T1 : 2403.062 MHz : -0.001 dBm T2 : 2420.938 MHz : -0.422 dBm OBW : 17.876 MHz	Measured 6 dB Bandwidth: 17.555 MHz Limit: ≥500.0 kHz Margin: -17.06 MHz

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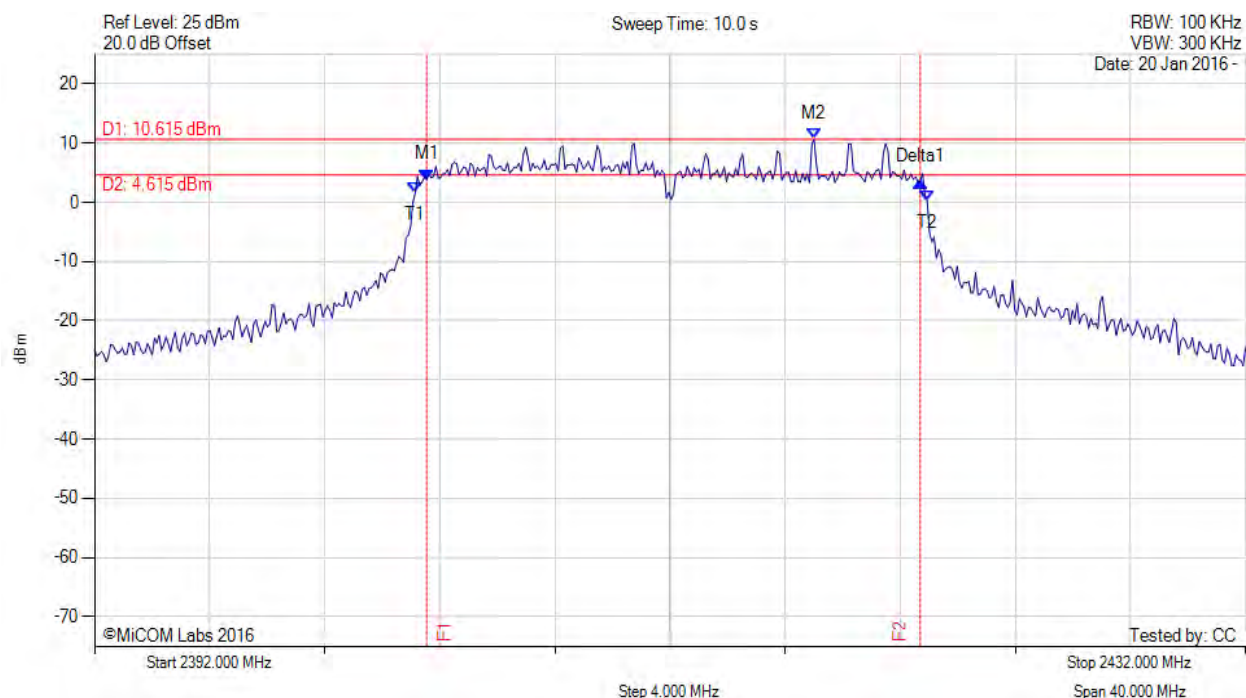


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.543 MHz : 3.825 dBm M2 : 2417.010 MHz : 10.615 dBm Delta1 : 17.154 MHz : -0.275 dB T1 : 2403.142 MHz : 1.571 dBm T2 : 2420.938 MHz : 0.184 dBm OBW : 17.796 MHz	Measured 6 dB Bandwidth: 17.154 MHz Limit: ≥500.0 kHz Margin: -16.65 MHz

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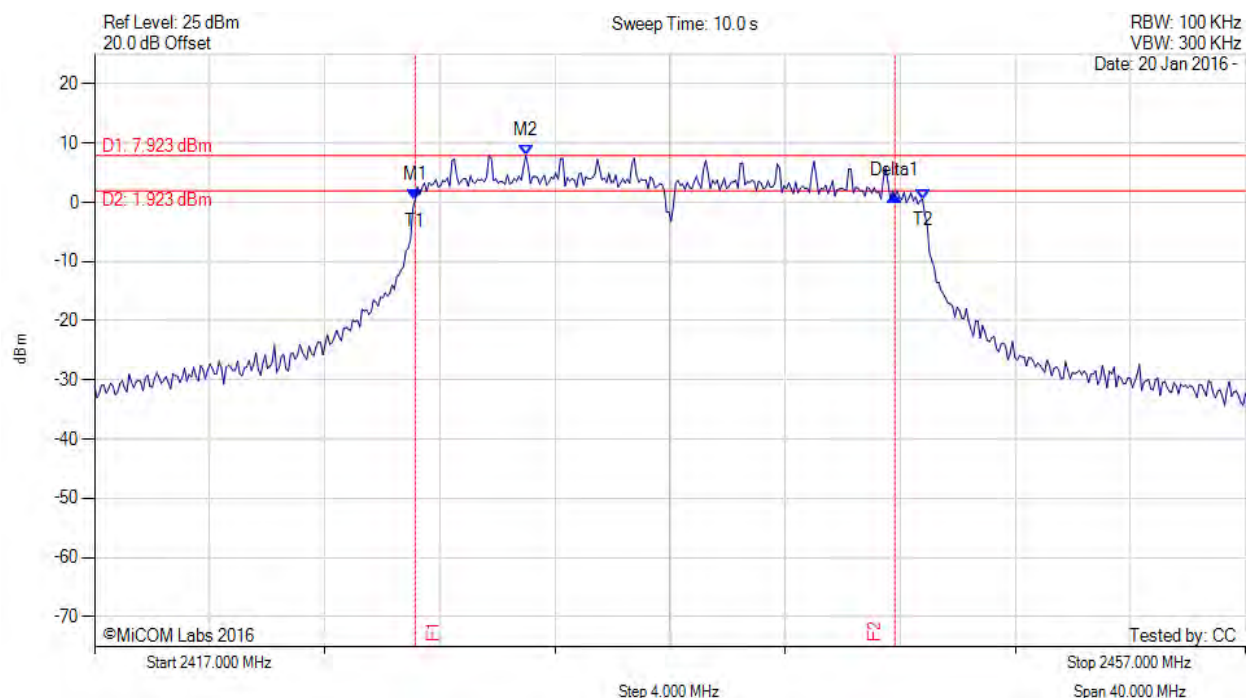


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.142 MHz : 0.418 dBm M2 : 2431.990 MHz : 7.923 dBm Delta1 : 16.673 MHz : 0.683 dB T1 : 2428.142 MHz : 0.418 dBm T2 : 2445.778 MHz : 0.528 dBm OBW : 17.635 MHz	Measured 6 dB Bandwidth: 16.673 MHz Limit: ≥500.0 kHz Margin: -16.17 MHz

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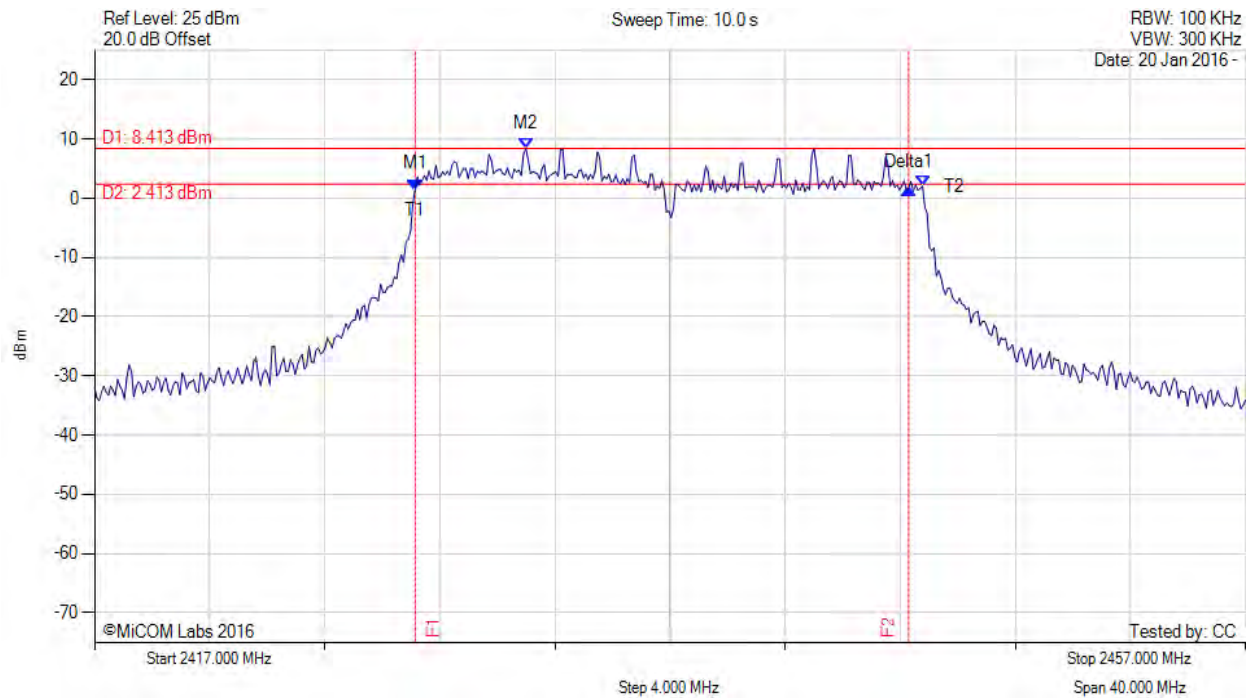


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.142 MHz : 1.496 dBm M2 : 2431.990 MHz : 8.413 dBm Delta1 : 17.154 MHz : 0.218 dB T1 : 2428.142 MHz : 1.496 dBm T2 : 2445.778 MHz : 2.051 dBm OBW : 17.635 MHz	Measured 6 dB Bandwidth: 17.154 MHz Limit: ≥500.0 kHz Margin: -16.65 MHz

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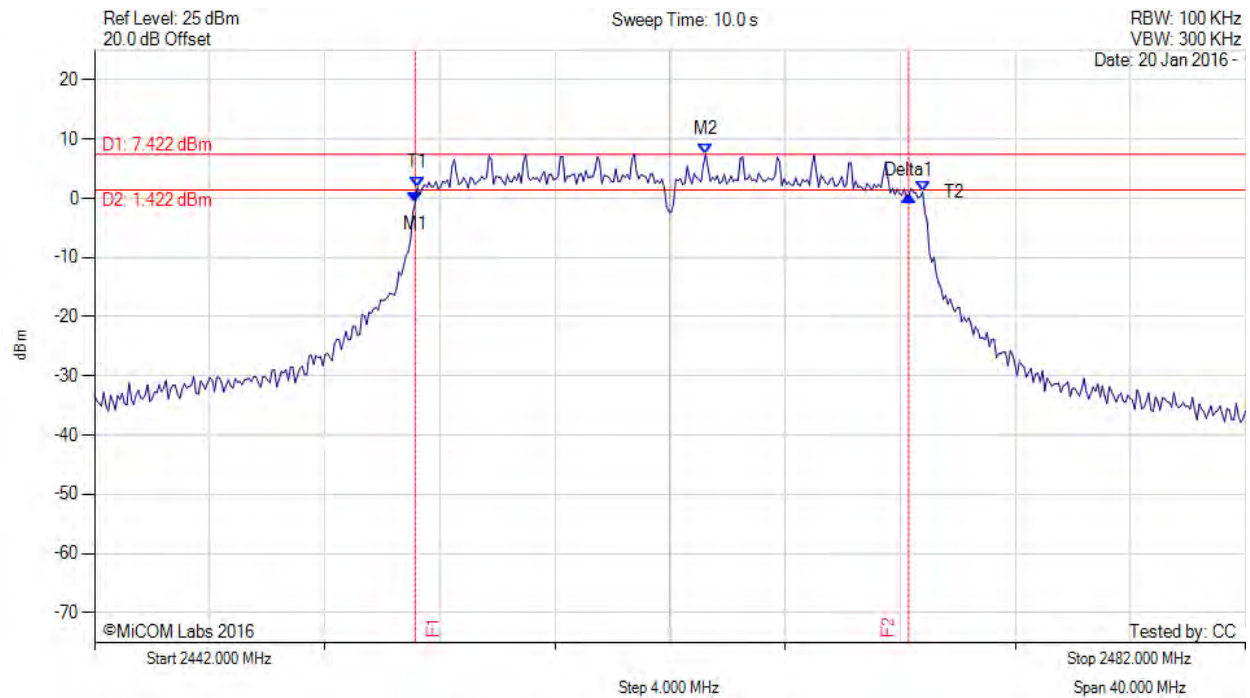


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.142 MHz : -0.725 dBm M2 : 2463.242 MHz : 7.422 dBm Delta1 : 17.154 MHz : 1.194 dB T1 : 2453.222 MHz : 1.807 dBm T2 : 2470.778 MHz : 1.112 dBm OBW : 17.555 MHz	Measured 6 dB Bandwidth: 17.154 MHz Limit: ≥500.0 kHz Margin: -16.65 MHz

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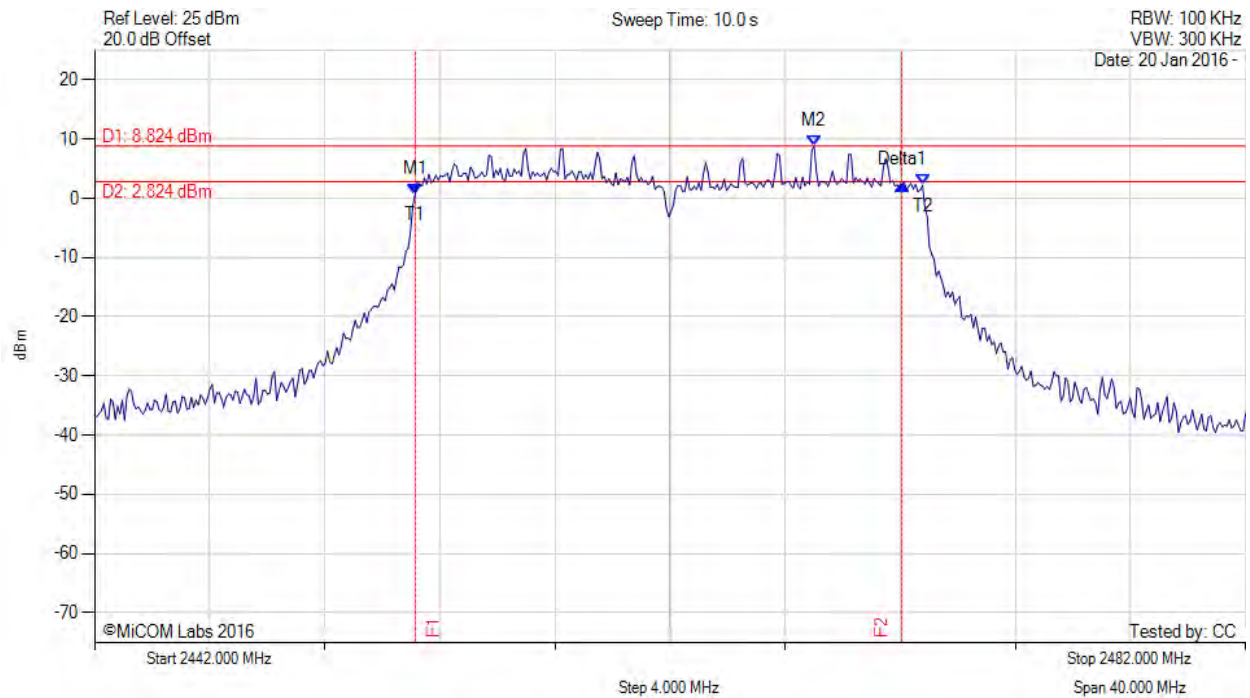


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.142 MHz : 0.717 dBm M2 : 2467.010 MHz : 8.824 dBm Delta1 : 16.914 MHz : 1.511 dB T1 : 2453.142 MHz : 0.717 dBm T2 : 2470.778 MHz : 2.218 dBm OBW : 17.635 MHz	Measured 6 dB Bandwidth: 16.914 MHz Limit: ≥500.0 kHz Margin: -16.41 MHz

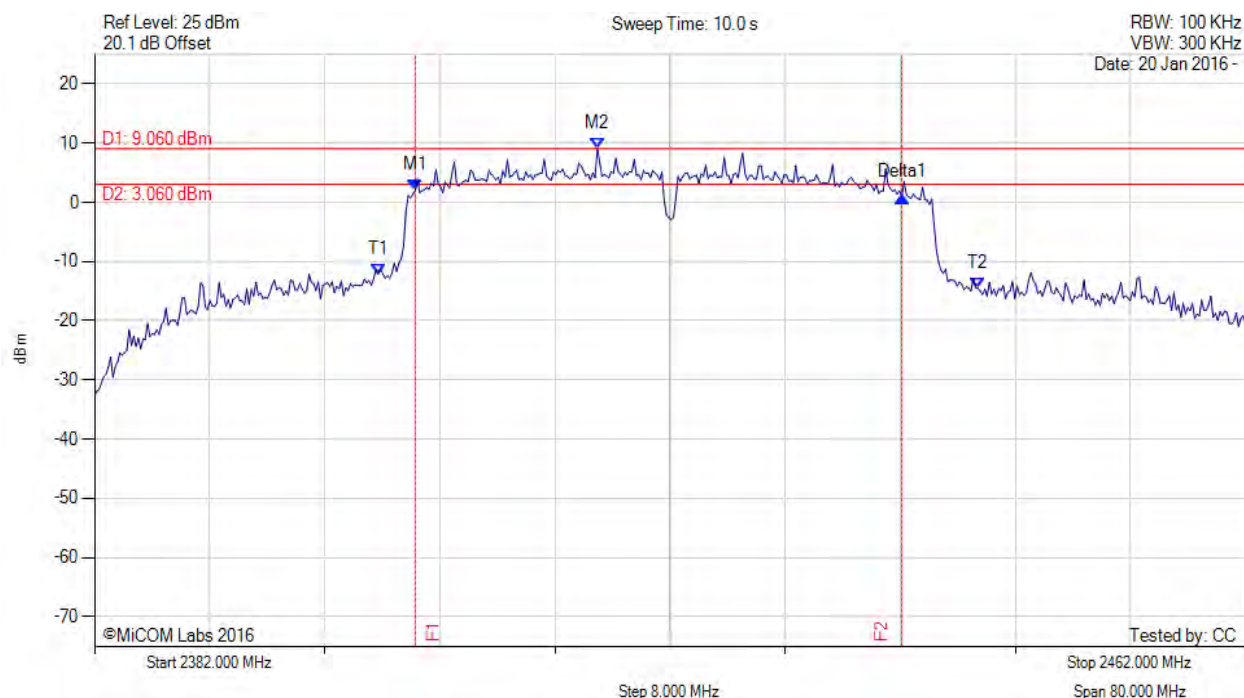
[back to matrix](#)

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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2404.285 MHz : 1.990 dBm M2 : 2416.950 MHz : 9.060 dBm Delta1 : 33.828 MHz : -0.997 dB T1 : 2401.719 MHz : -12.118 dBm T2 : 2443.403 MHz : -14.534 dBm OBW : 41.683 MHz	Measured 6 dB Bandwidth: 33.828 MHz Limit: ≥500.0 kHz Margin: -33.33 MHz

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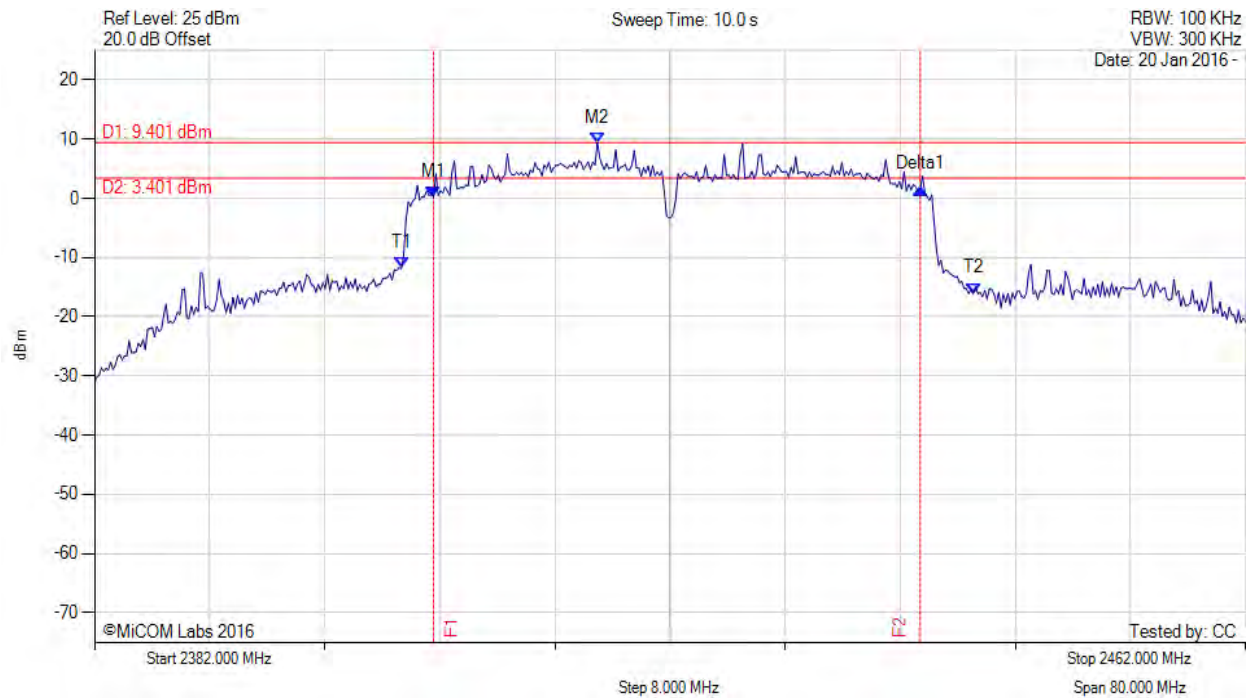


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2405.567 MHz : 0.164 dBm M2 : 2416.950 MHz : 9.401 dBm Delta1 : 33.828 MHz : 1.430 dB T1 : 2403.323 MHz : -11.823 dBm T2 : 2443.082 MHz : -16.055 dBm OBW : 39.760 MHz	Measured 6 dB Bandwidth: 33.828 MHz Limit: ≥500.0 kHz Margin: -33.33 MHz

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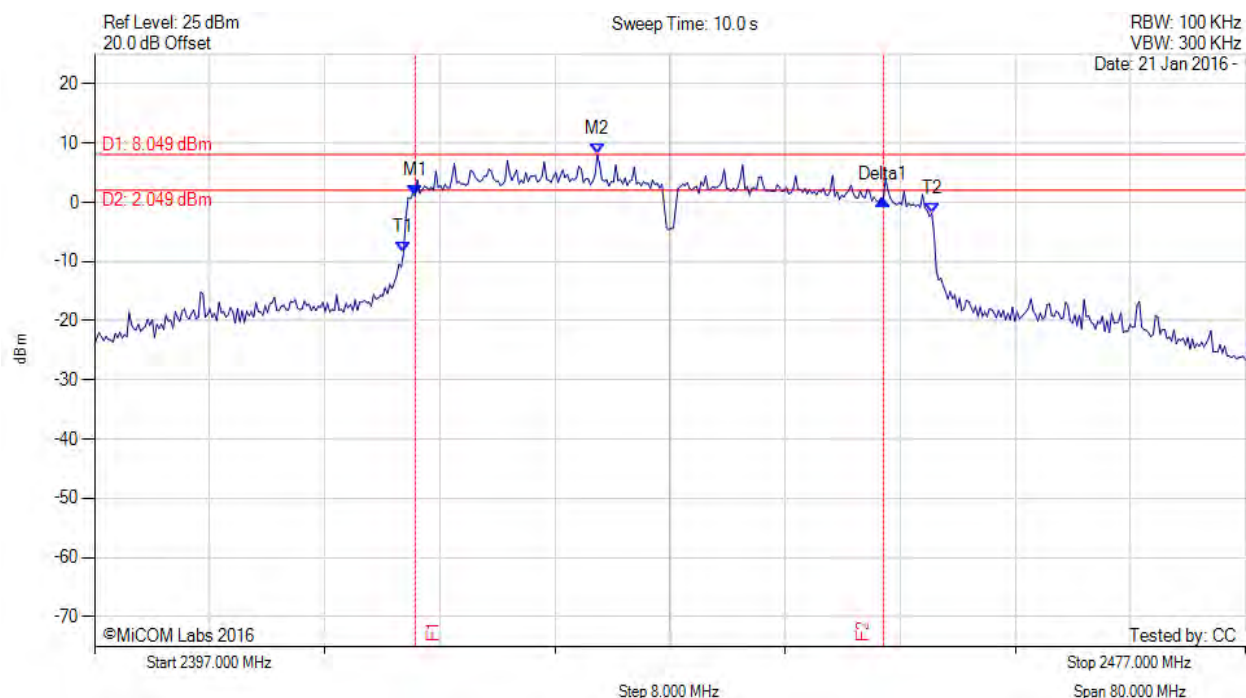


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2419.285 MHz : 1.047 dBm M2 : 2431.950 MHz : 8.049 dBm Delta1 : 32.545 MHz : -0.567 dB T1 : 2418.483 MHz : -8.528 dBm T2 : 2455.196 MHz : -1.894 dBm OBW : 36.713 MHz	Measured 6 dB Bandwidth: 32.545 MHz Limit: ≥500.0 kHz Margin: -32.05 MHz

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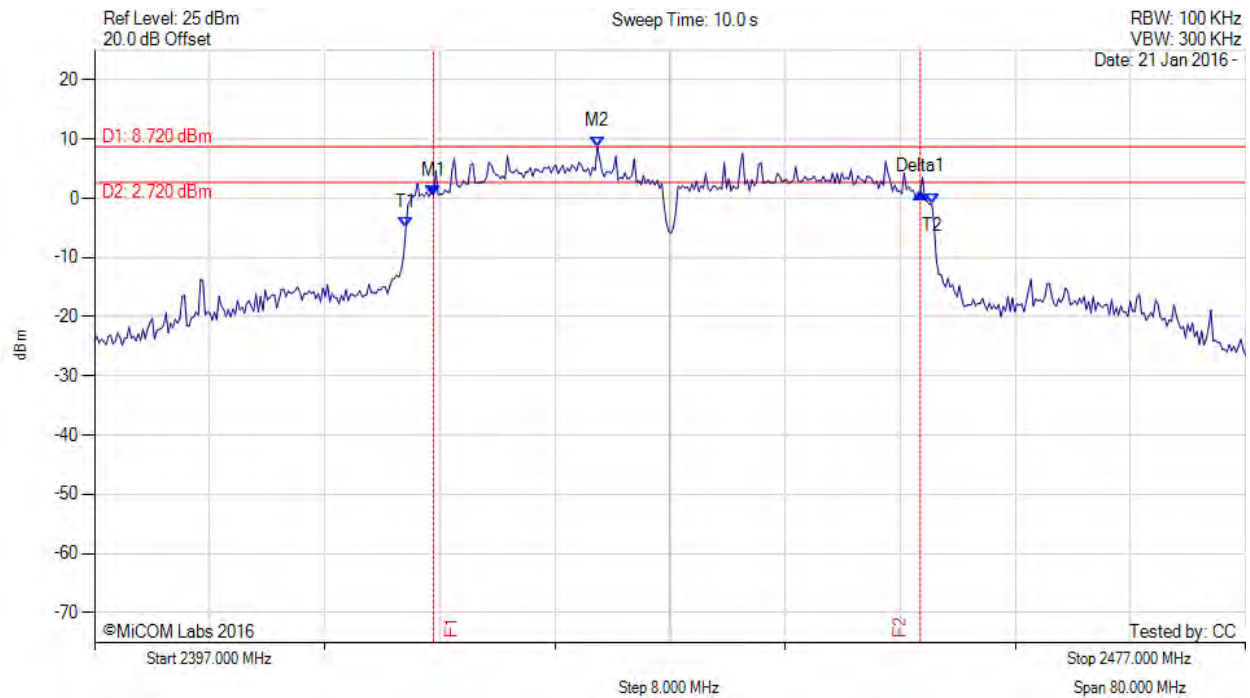


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2420.567 MHz : 0.479 dBm M2 : 2431.950 MHz : 8.720 dBm Delta1 : 33.828 MHz : 0.535 dB T1 : 2418.643 MHz : -4.843 dBm T2 : 2455.196 MHz : -0.973 dBm OBW : 36.553 MHz	Measured 6 dB Bandwidth: 33.828 MHz Limit: ≥500.0 kHz Margin: -33.33 MHz

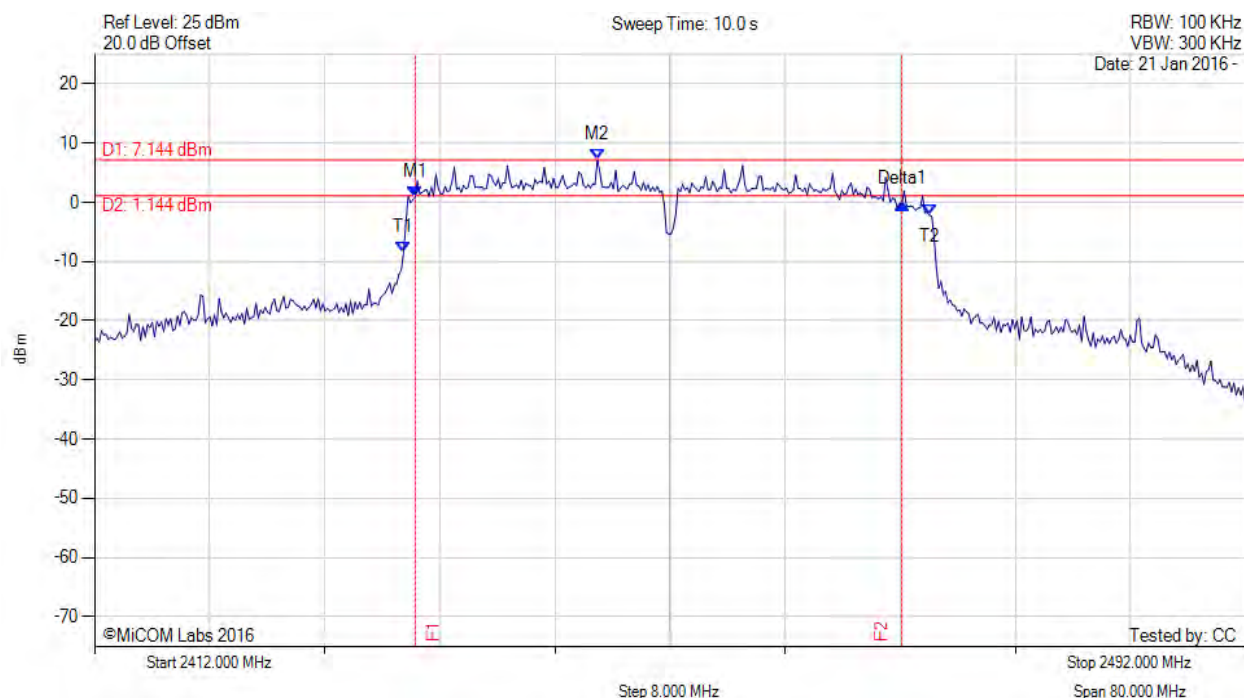
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2434.285 MHz : 0.847 dBm M2 : 2446.950 MHz : 7.144 dBm Delta1 : 33.828 MHz : -1.196 dB T1 : 2433.483 MHz : -8.484 dBm T2 : 2470.036 MHz : -2.140 dBm OBW : 36.553 MHz	Measured 6 dB Bandwidth: 33.828 MHz Limit: ≥500.0 kHz Margin: -33.33 MHz

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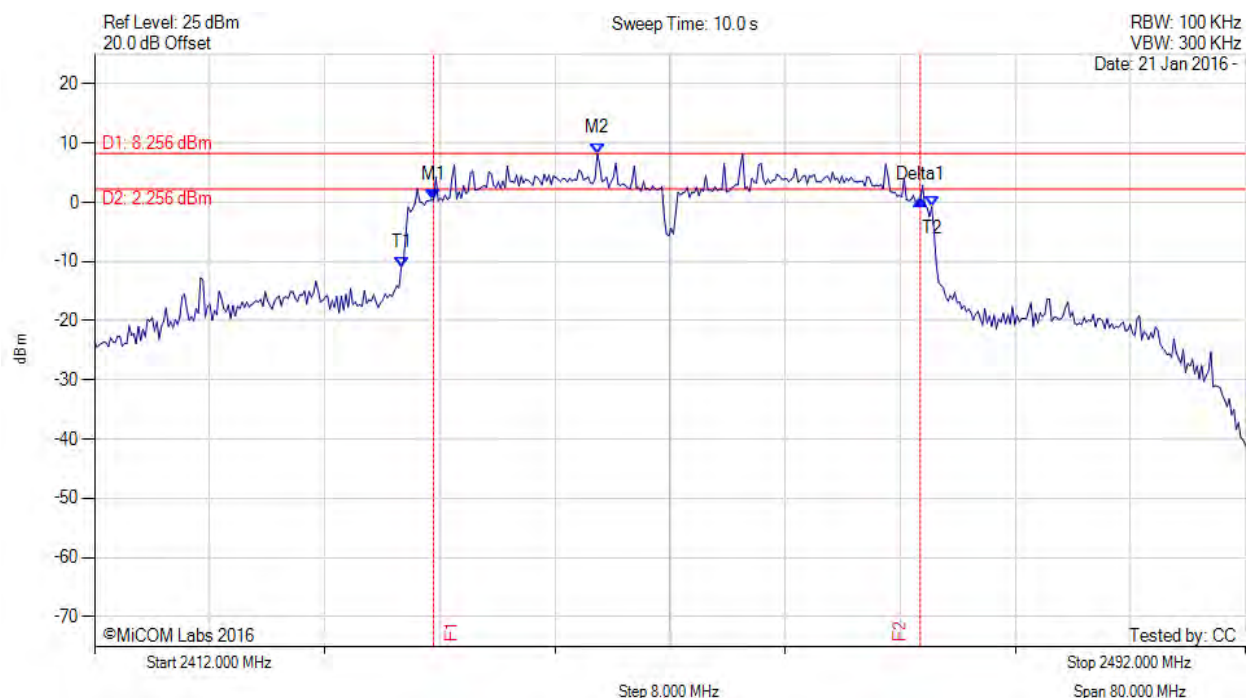


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2435.567 MHz : 0.371 dBm M2 : 2446.950 MHz : 8.256 dBm Delta1 : 33.828 MHz : 0.047 dB T1 : 2433.323 MHz : -10.922 dBm T2 : 2470.196 MHz : -0.770 dBm OBW : 36.874 MHz	Measured 6 dB Bandwidth: 33.828 MHz Limit: ≥500.0 kHz Margin: -33.33 MHz

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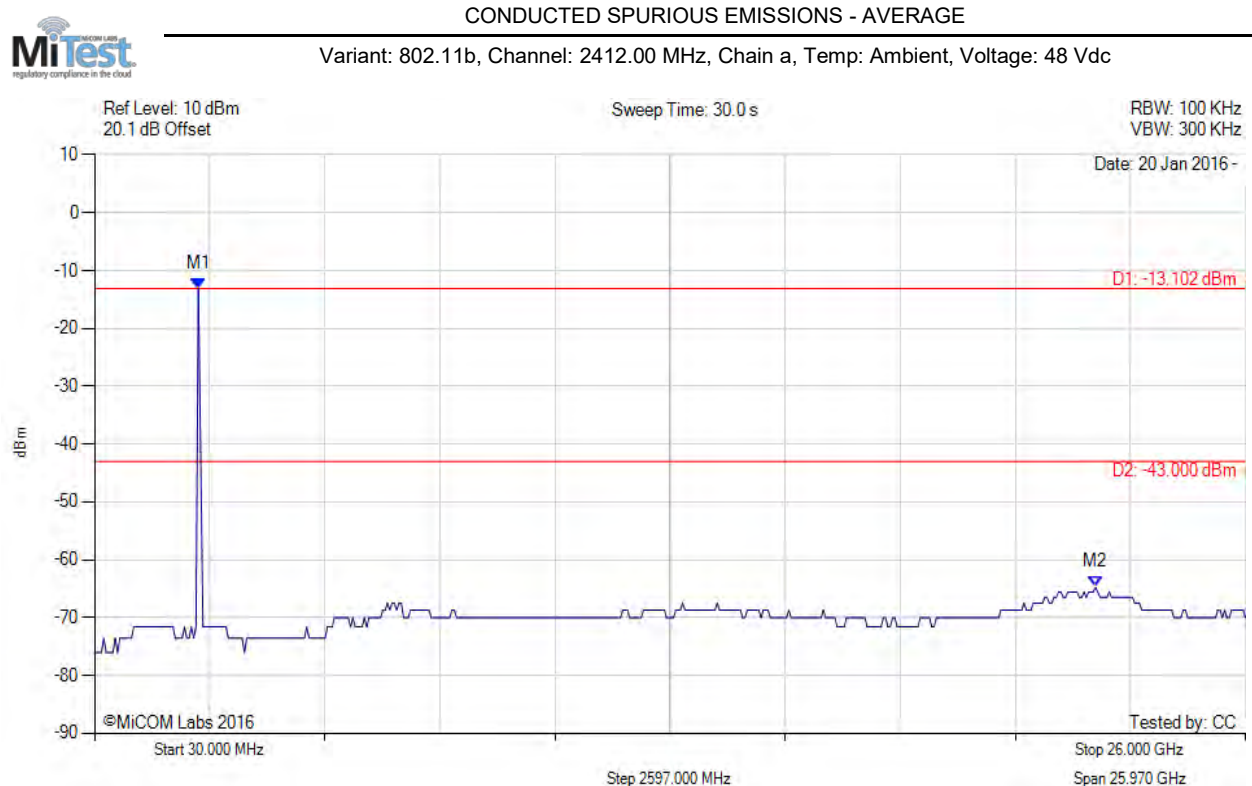


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A.2. Emissions

A.2.1. Conducted Emissions

A.2.1.1. Conducted Spurious Emissions



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -13.102 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -43.00 dBm Margin: -21.74 dB

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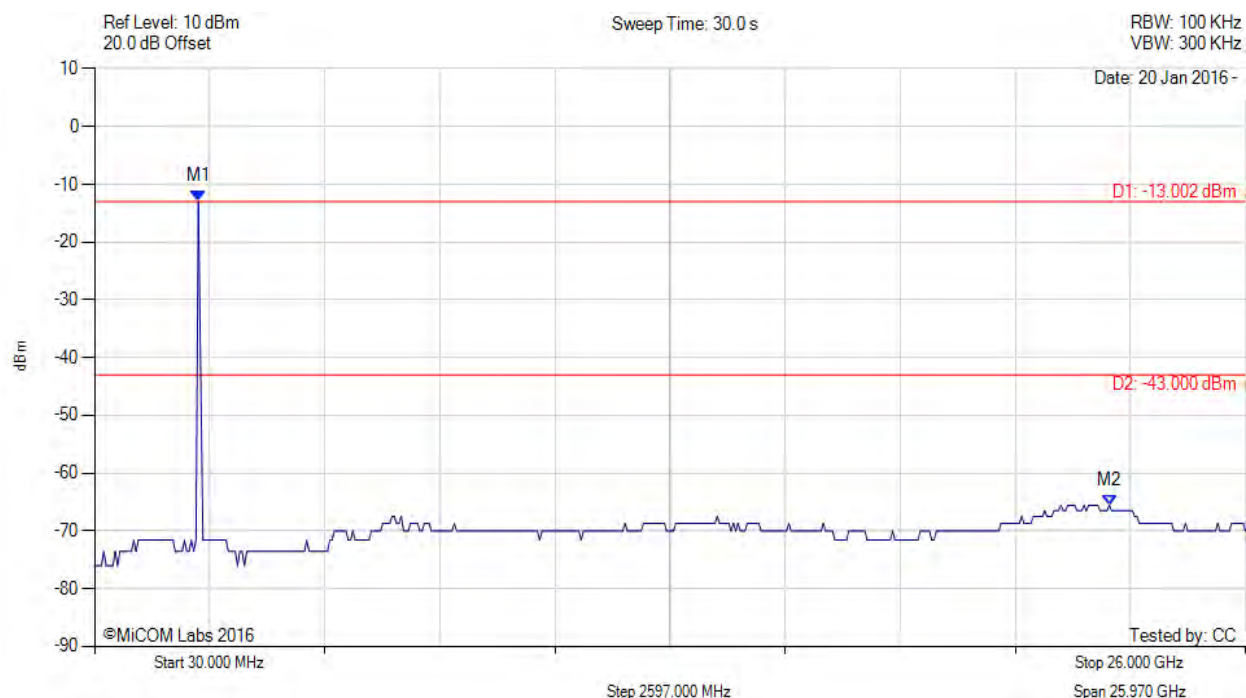


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -13.002 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -43.00 dBm Margin: -22.56 dB

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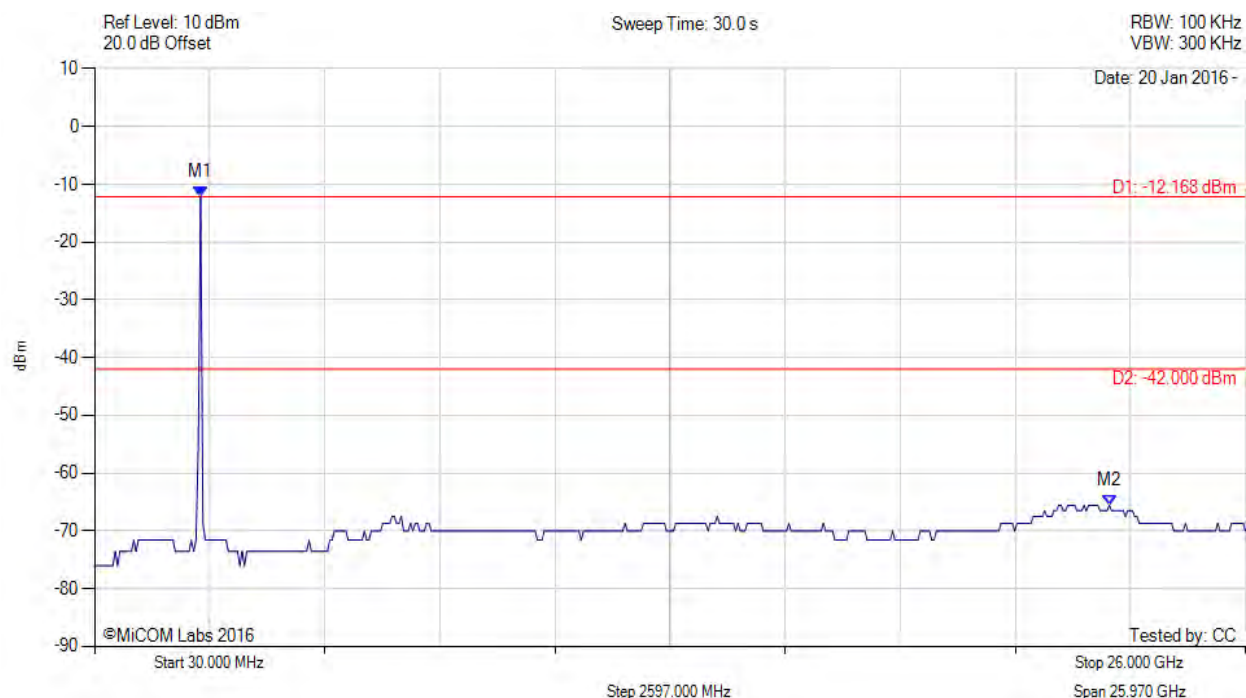


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.168 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -42.00 dBm Margin: -23.56 dB

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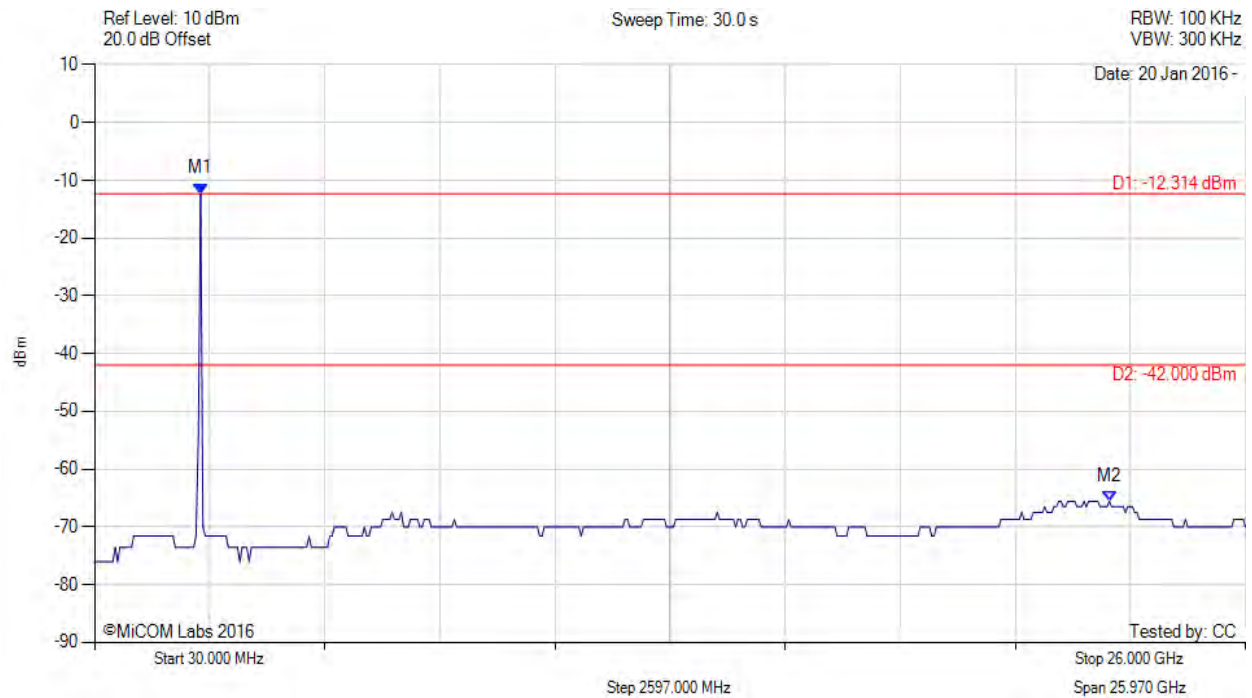


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.314 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -42.00 dBm Margin: -23.56 dB

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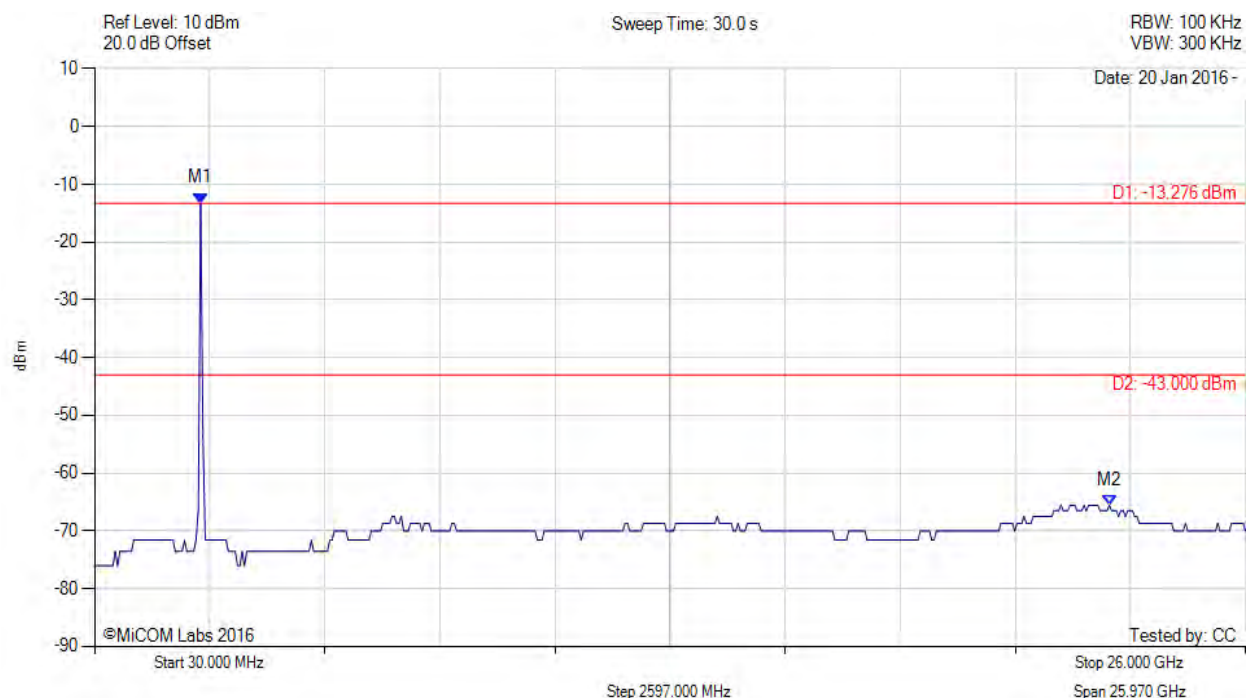


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.276 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -43.00 dBm Margin: -22.56 dB

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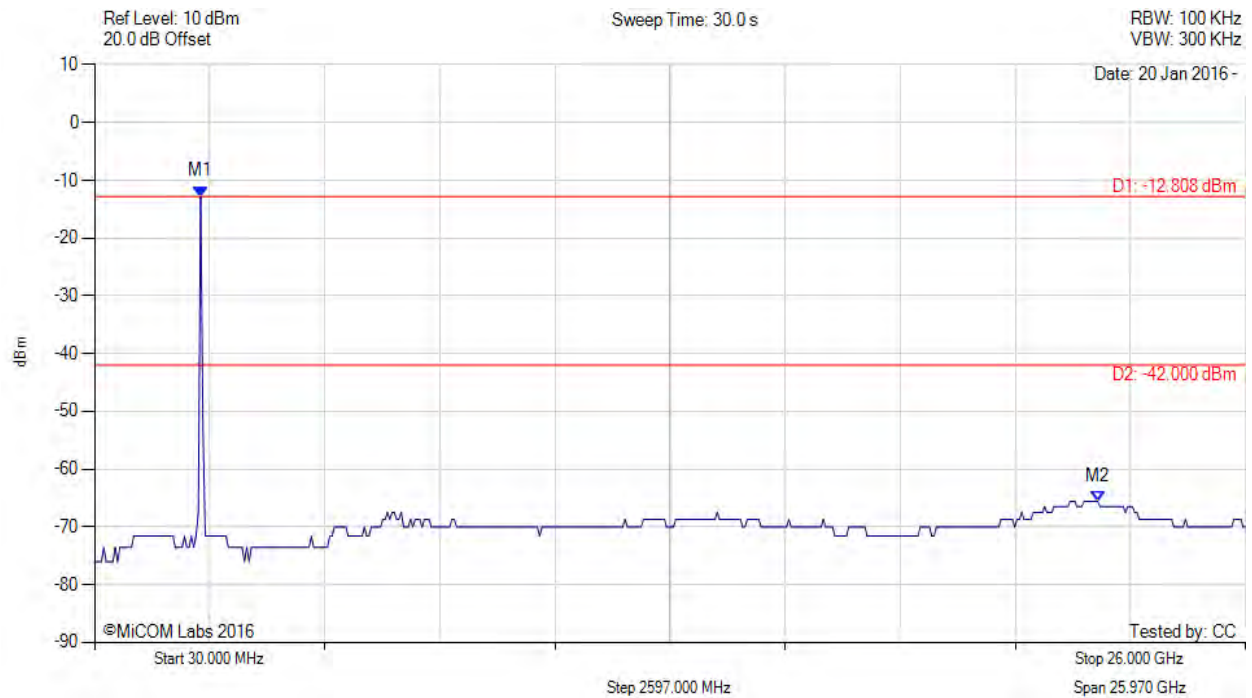


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.808 dBm M2 : 22.669 GHz : -65.565 dBm	Limit: -42.00 dBm Margin: -23.56 dB

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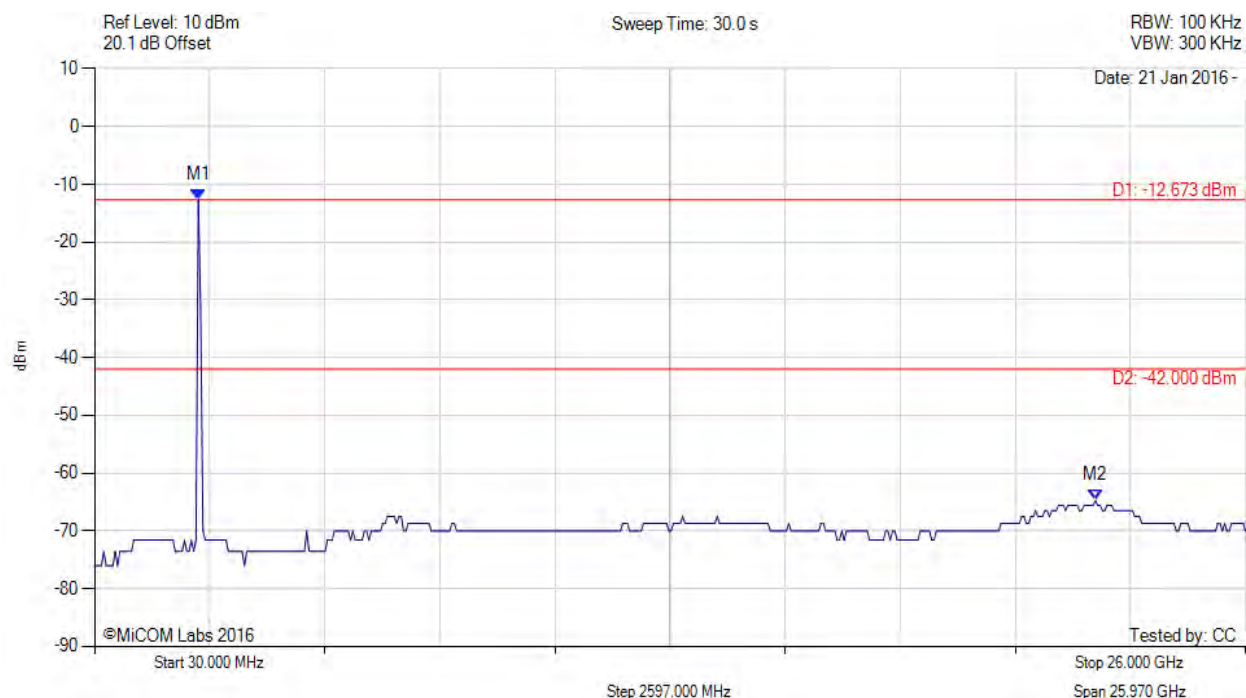


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -12.673 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -42.00 dBm Margin: -22.74 dB

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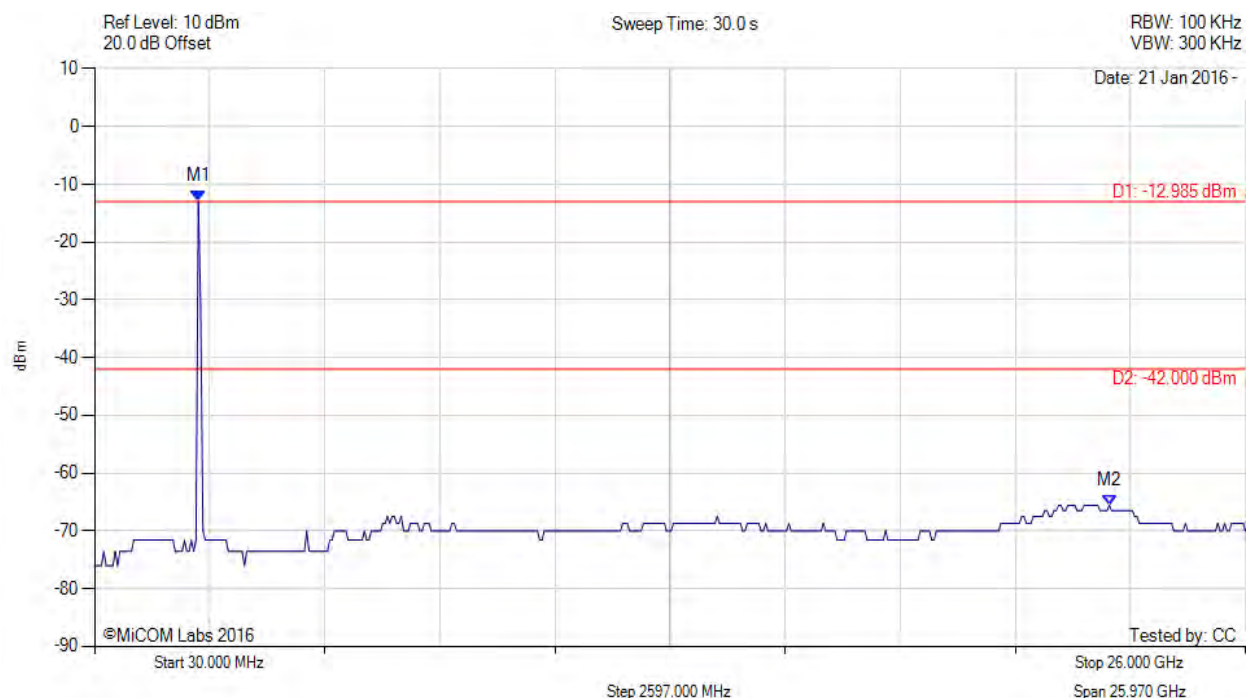


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -12.985 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -42.00 dBm Margin: -23.56 dB

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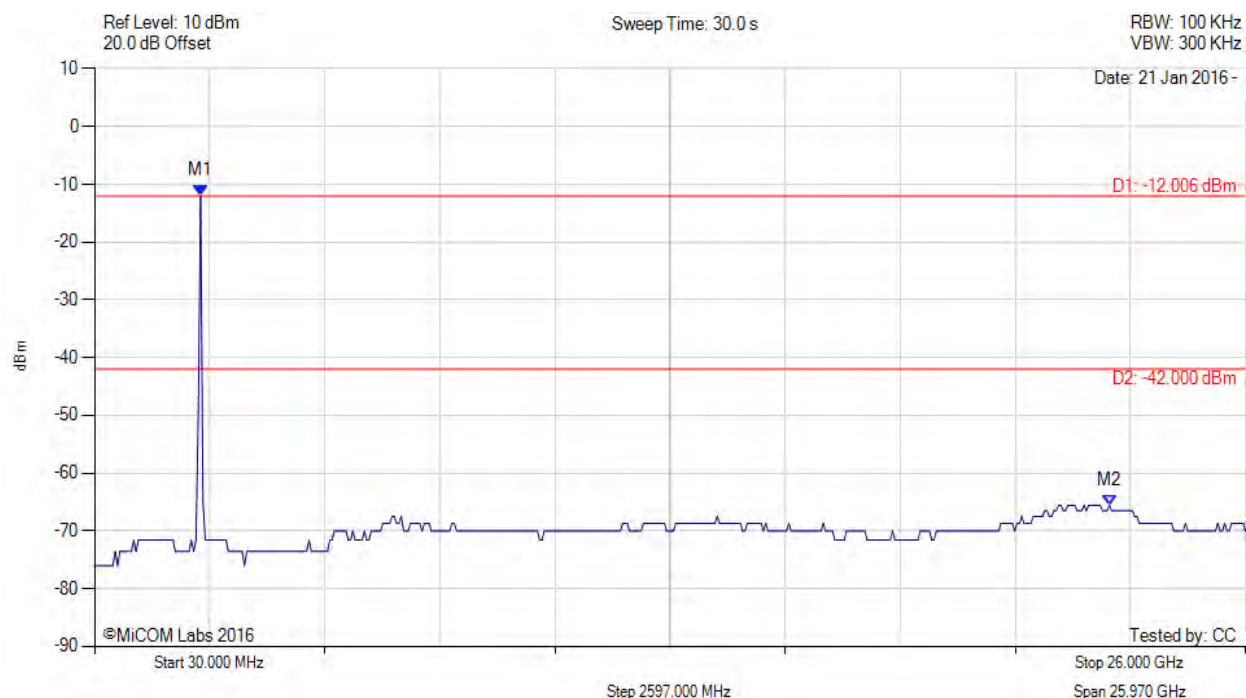


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.006 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -42.00 dBm Margin: -23.56 dB

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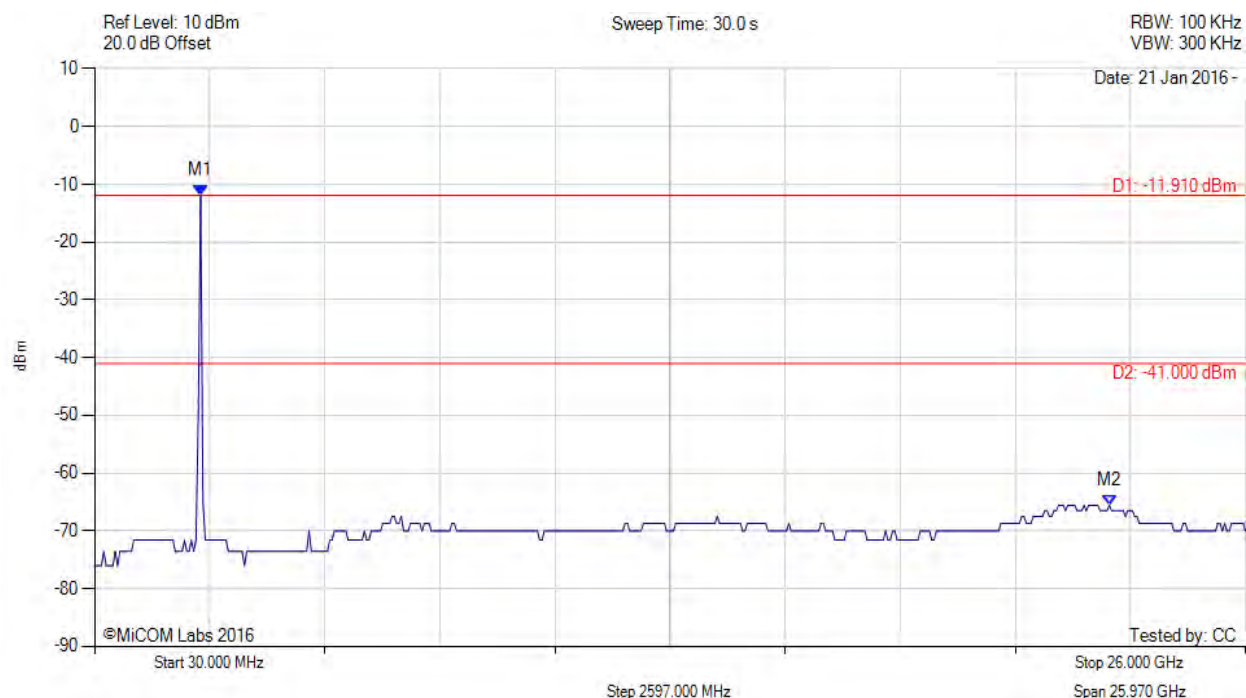


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.910 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -41.00 dBm Margin: -24.56 dB

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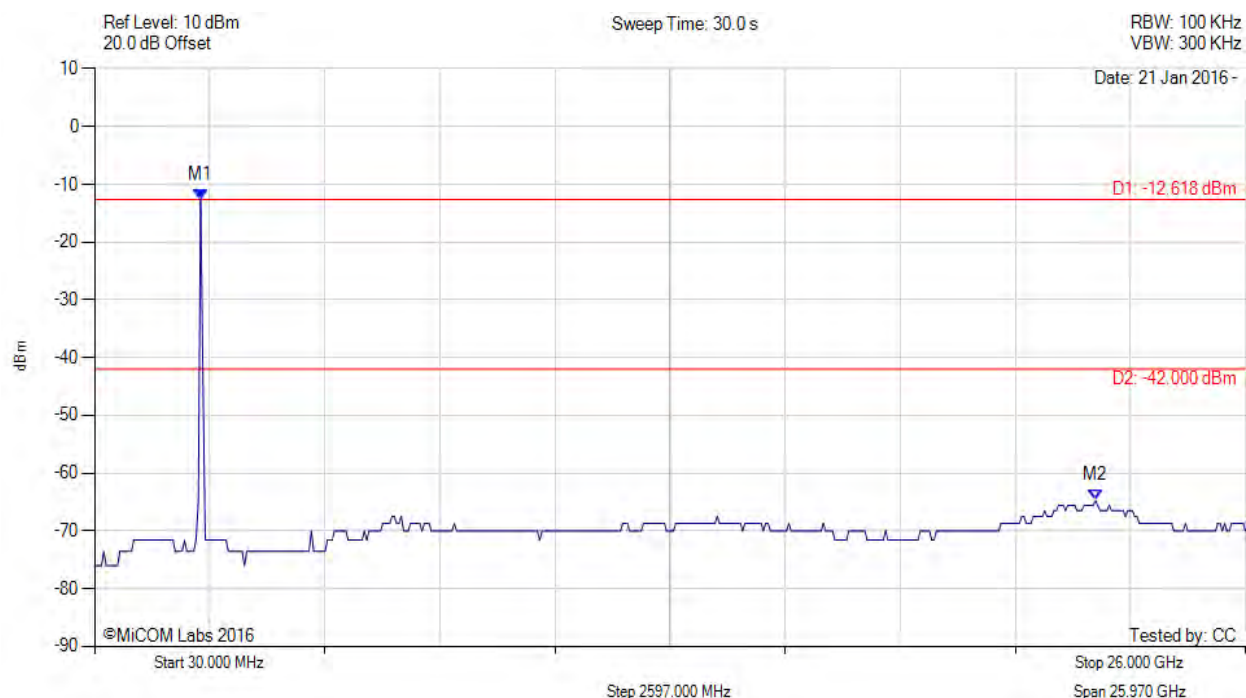


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.618 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -42.00 dBm Margin: -22.74 dB

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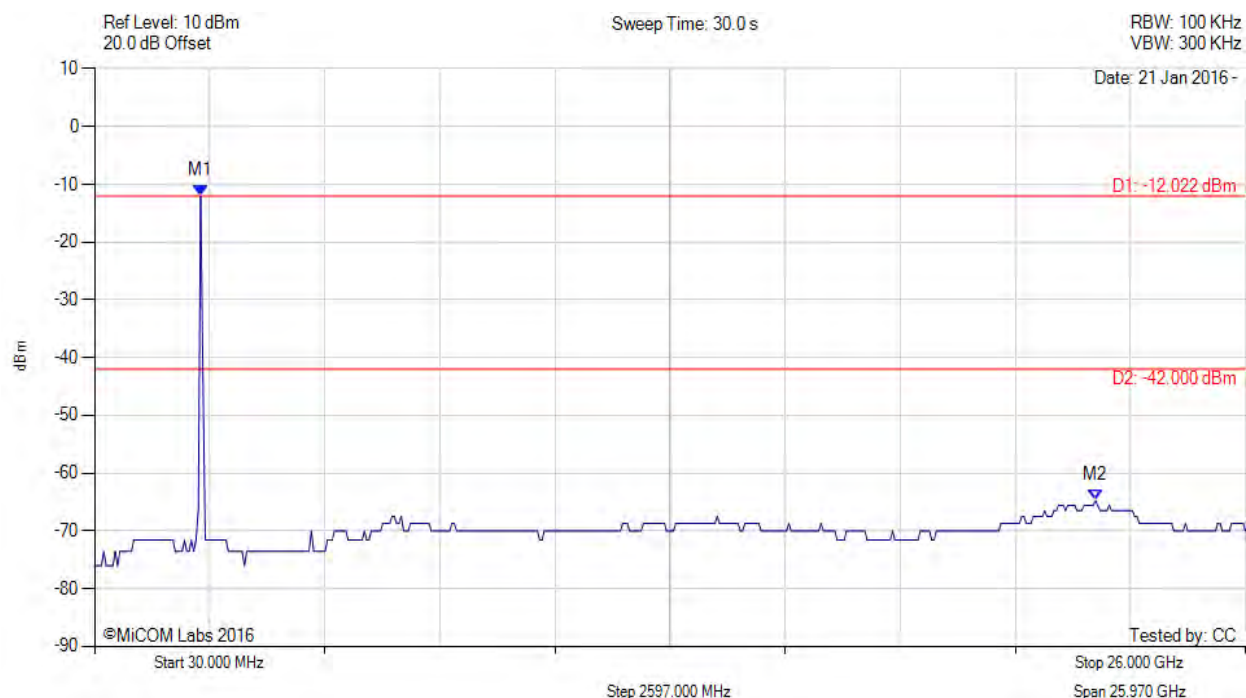


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.022 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -42.00 dBm Margin: -22.74 dB

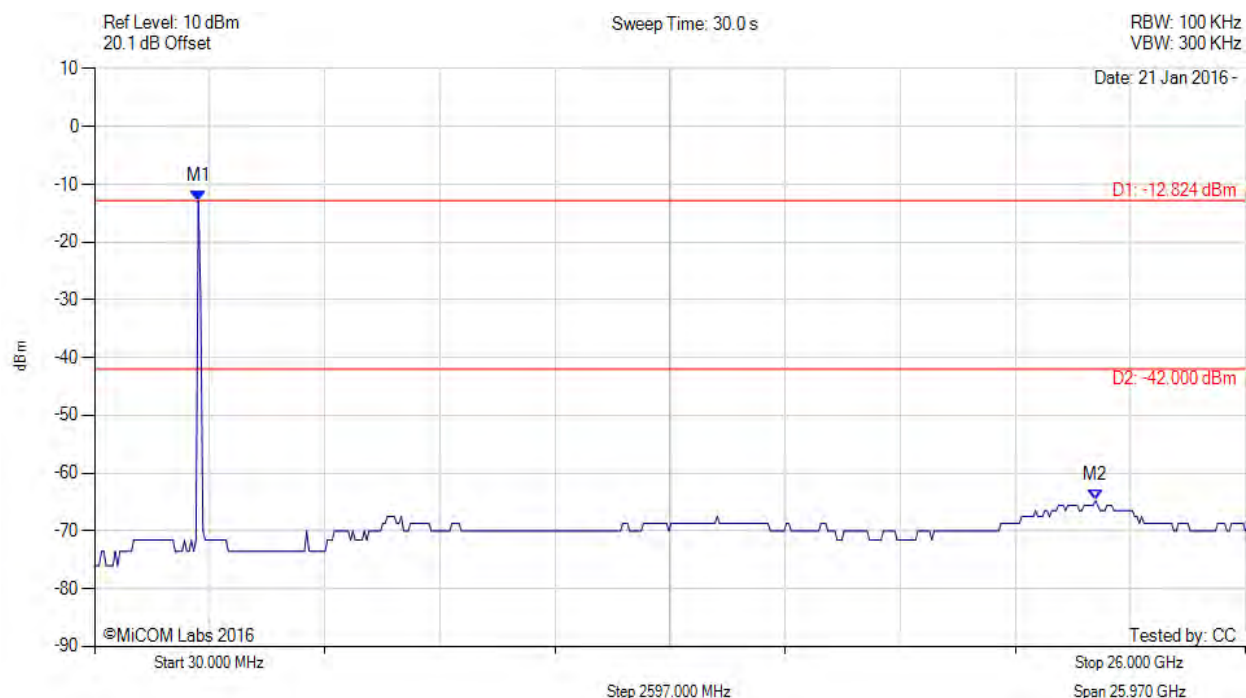
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -12.824 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -42.00 dBm Margin: -22.74 dB

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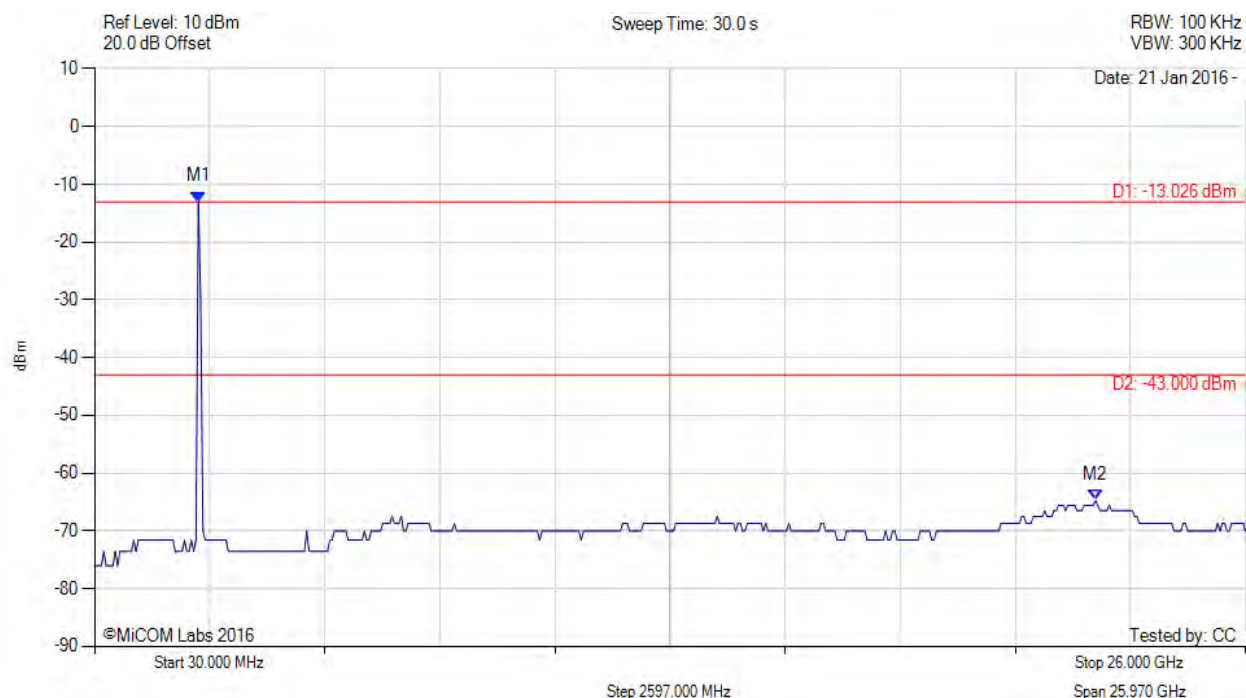


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -13.026 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -43.00 dBm Margin: -21.74 dB

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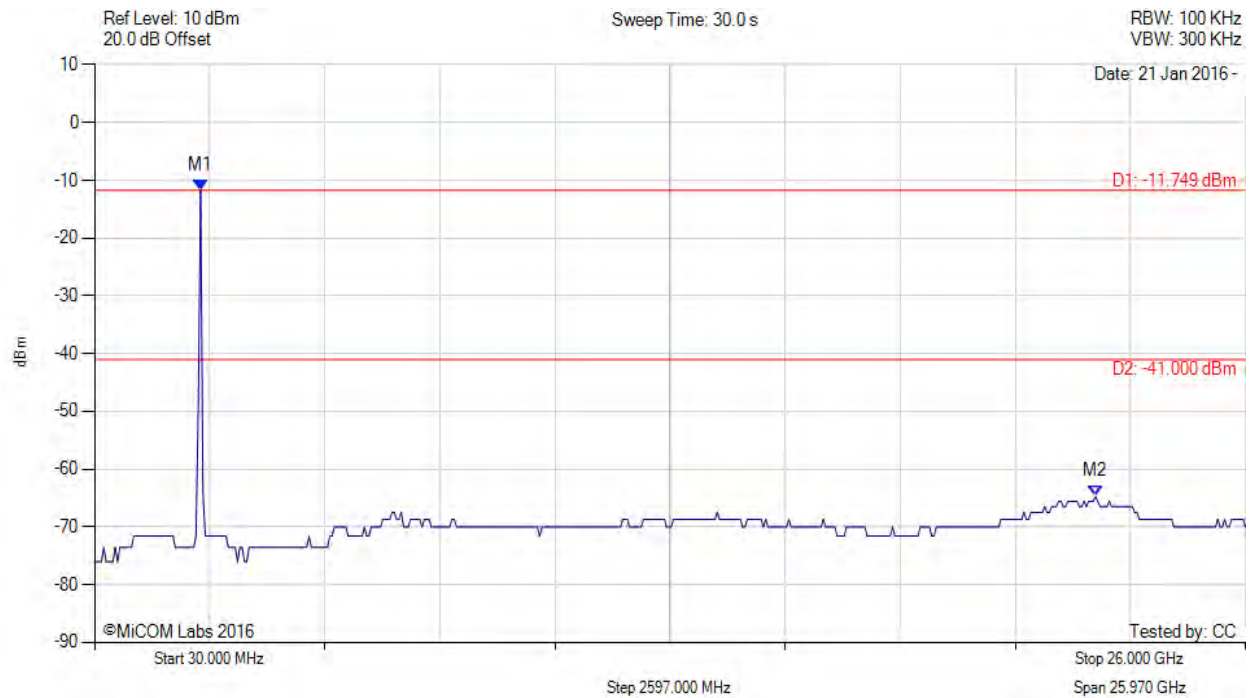


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.749 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -41.00 dBm Margin: -23.74 dB

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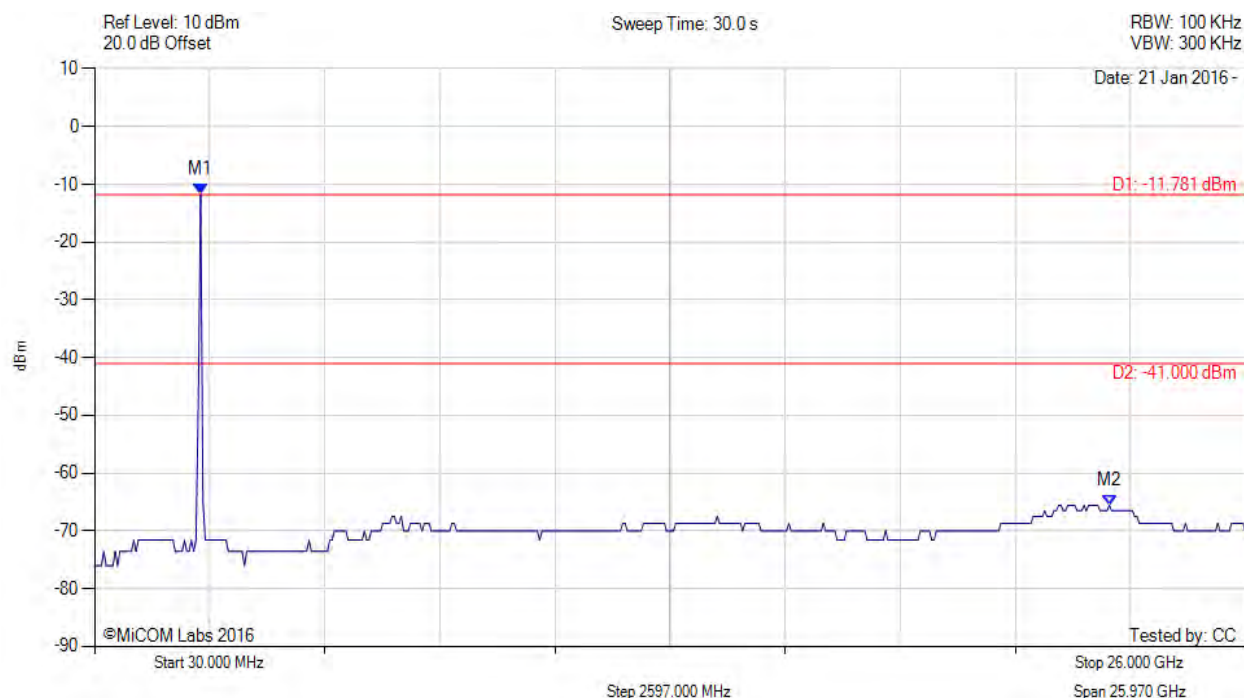


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.781 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -41.00 dBm Margin: -24.56 dB

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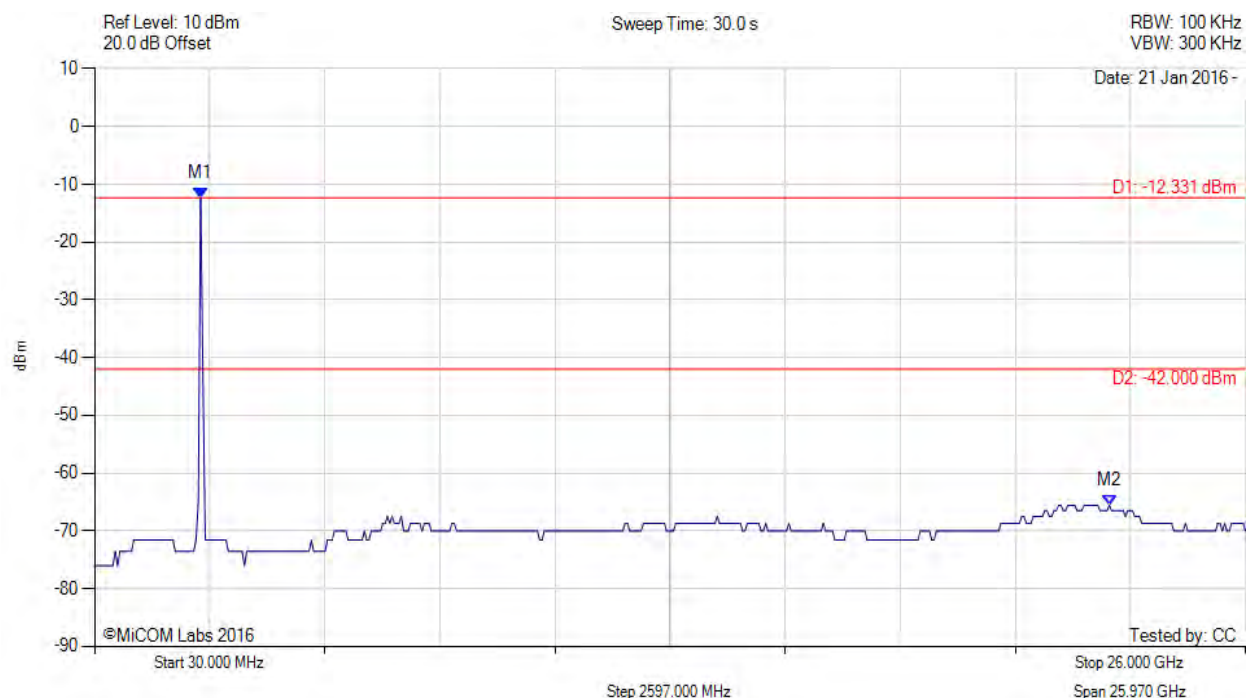


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.331 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -42.00 dBm Margin: -23.56 dB

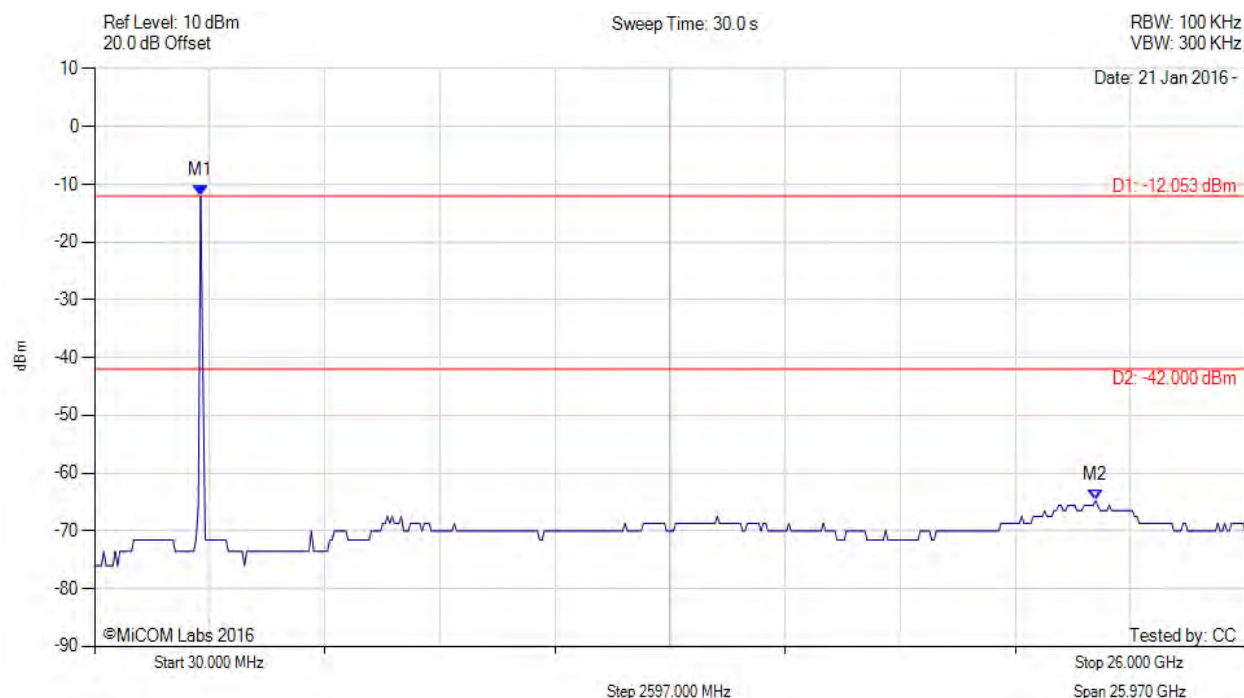
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.053 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -42.00 dBm Margin: -22.74 dB

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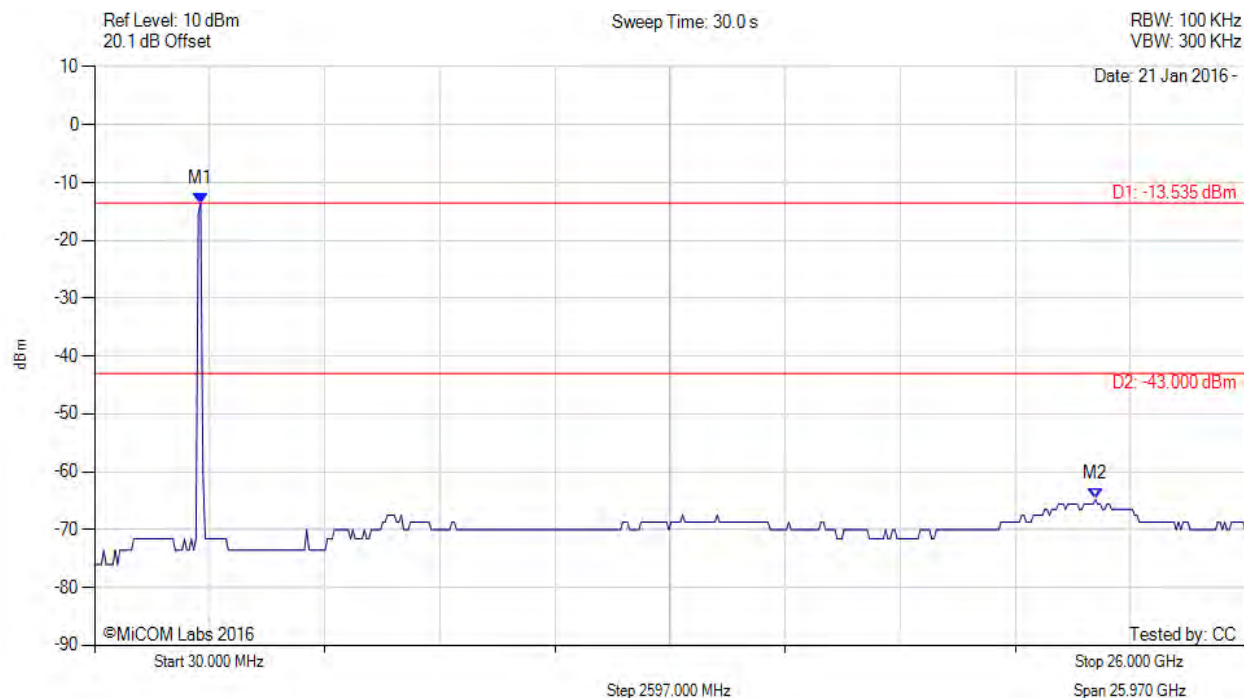


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.535 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -43.00 dBm Margin: -21.74 dB

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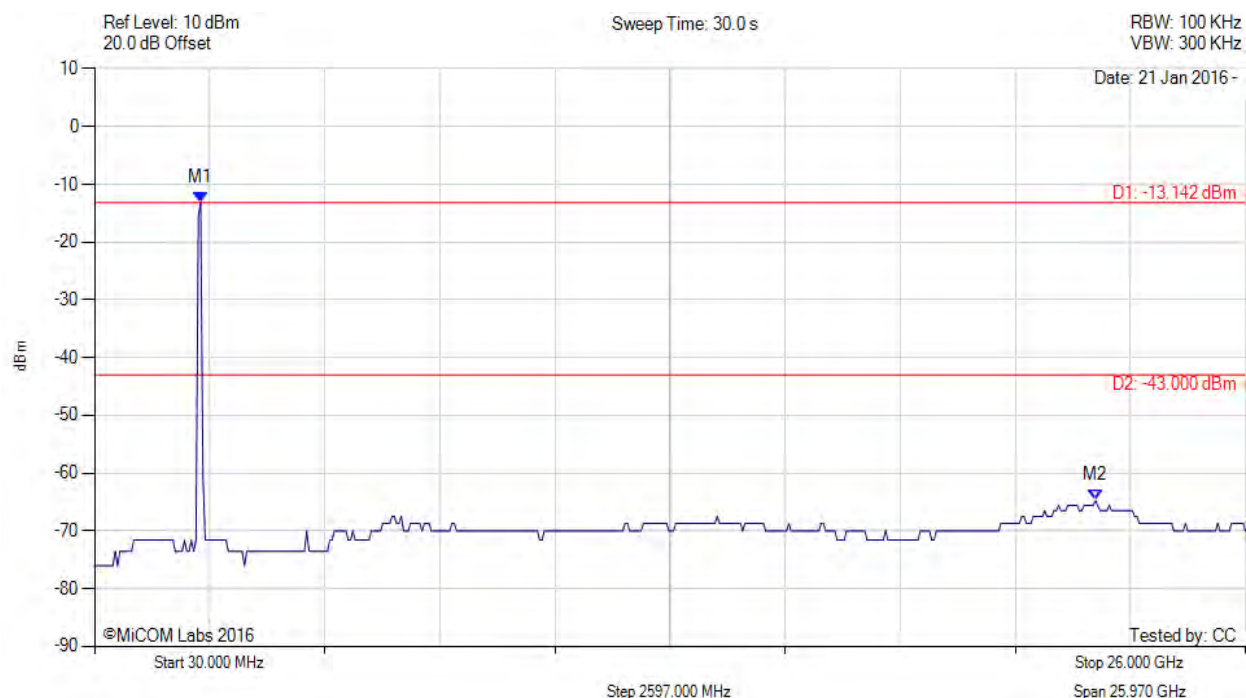


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.142 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -43.00 dBm Margin: -21.74 dB

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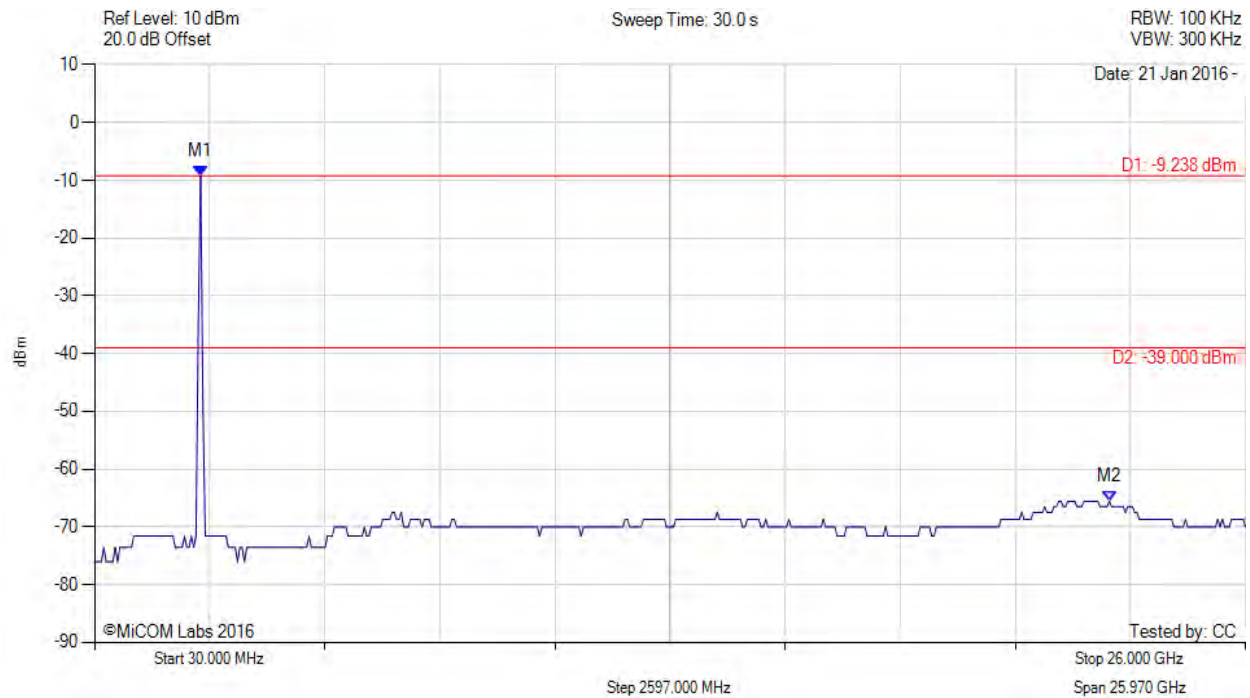


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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -9.238 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -39.00 dBm Margin: -26.56 dB

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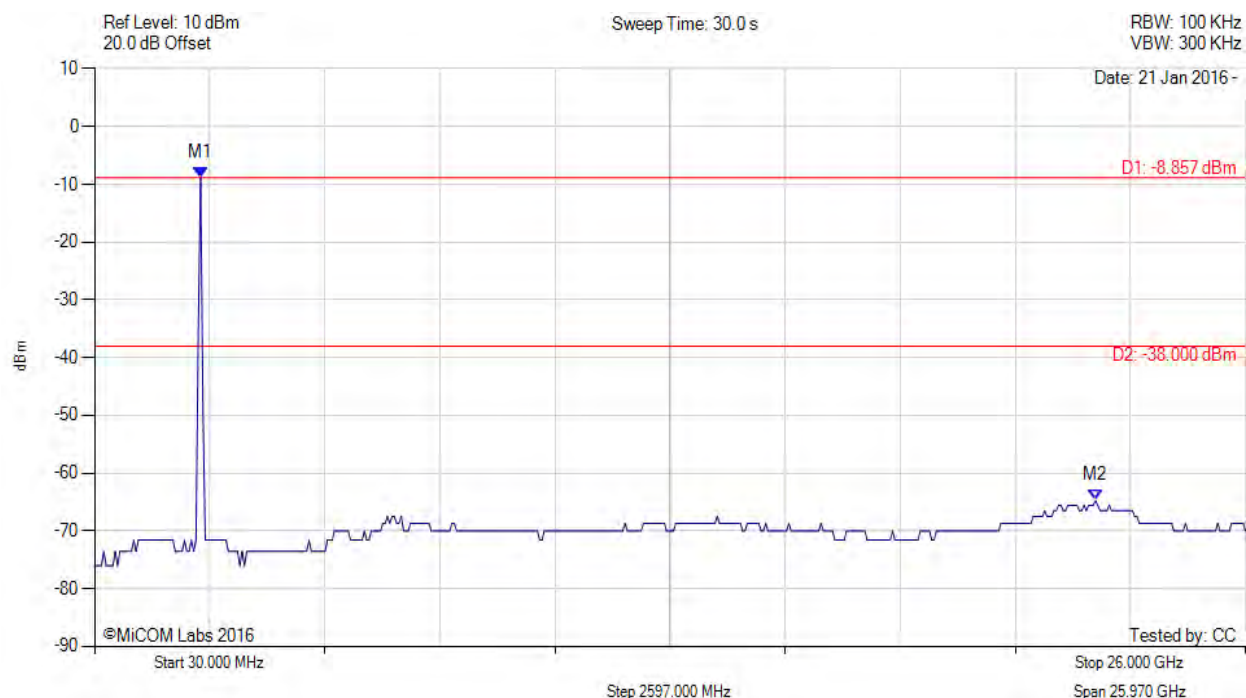


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -8.857 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -38.00 dBm Margin: -26.74 dB

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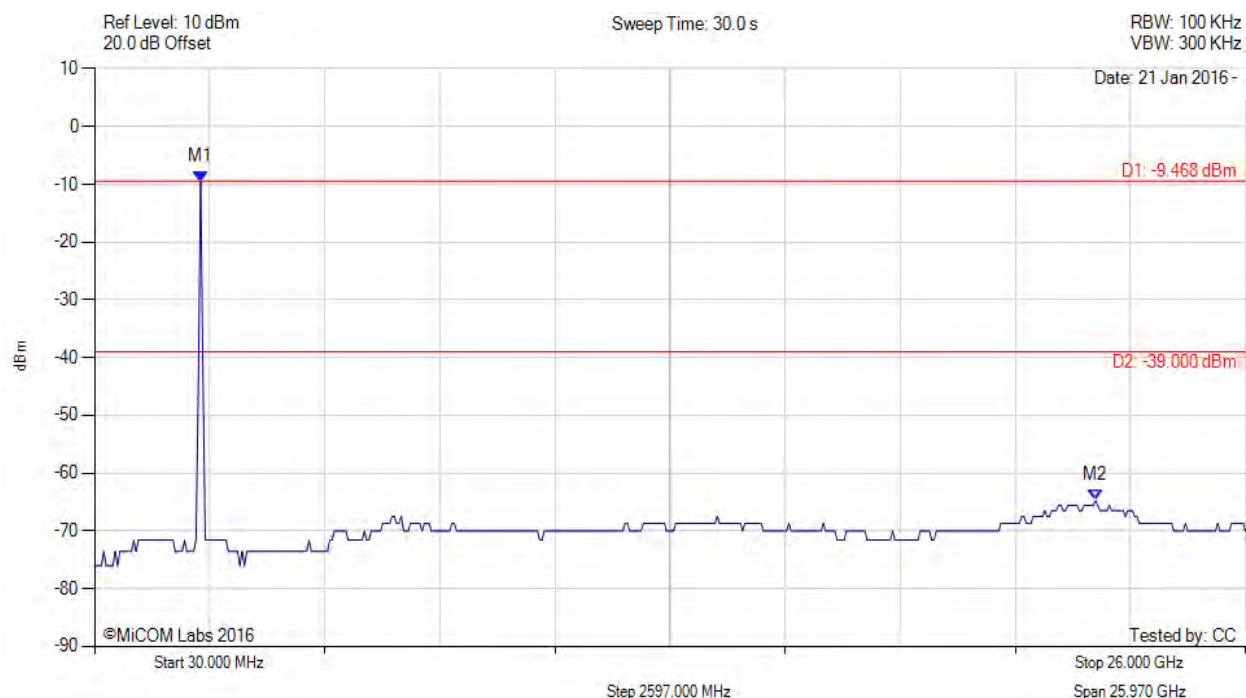


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -9.468 dBm M2 : 22.617 GHz : -64.737 dBm	Limit: -39.00 dBm Margin: -25.74 dB

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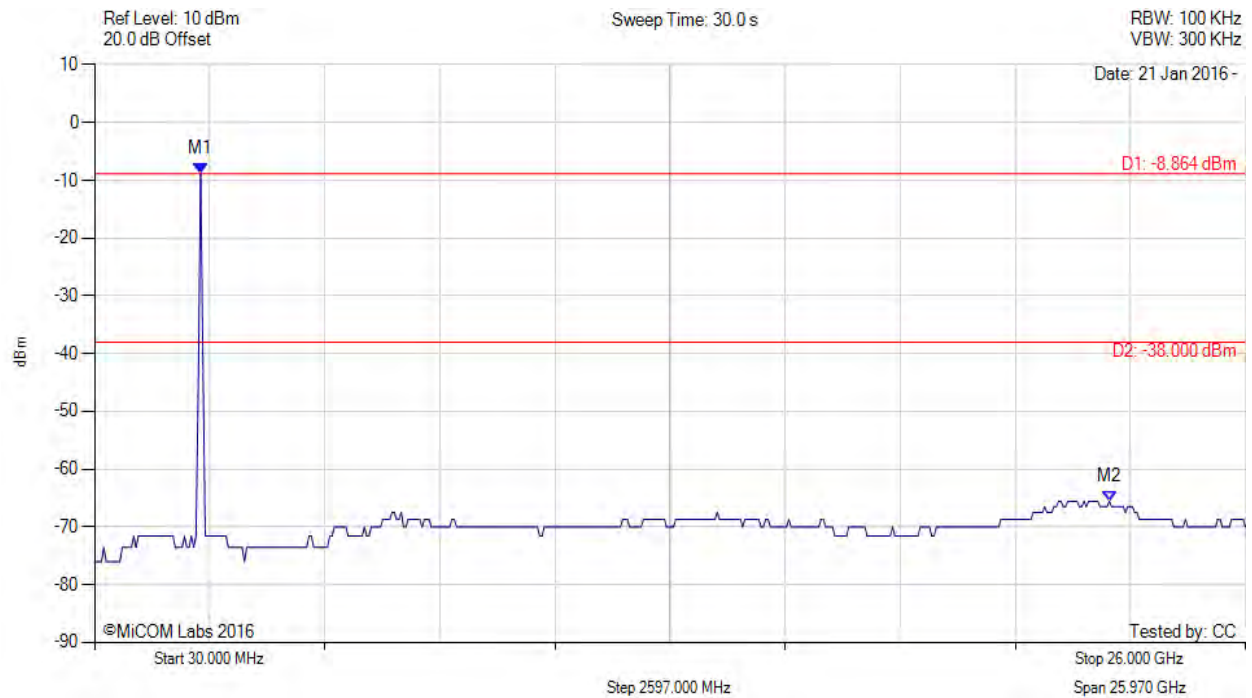


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2424.028 MHz : -8.864 dBm M2 : 22.929 GHz : -65.565 dBm	Limit: -38.00 dBm Margin: -27.56 dB

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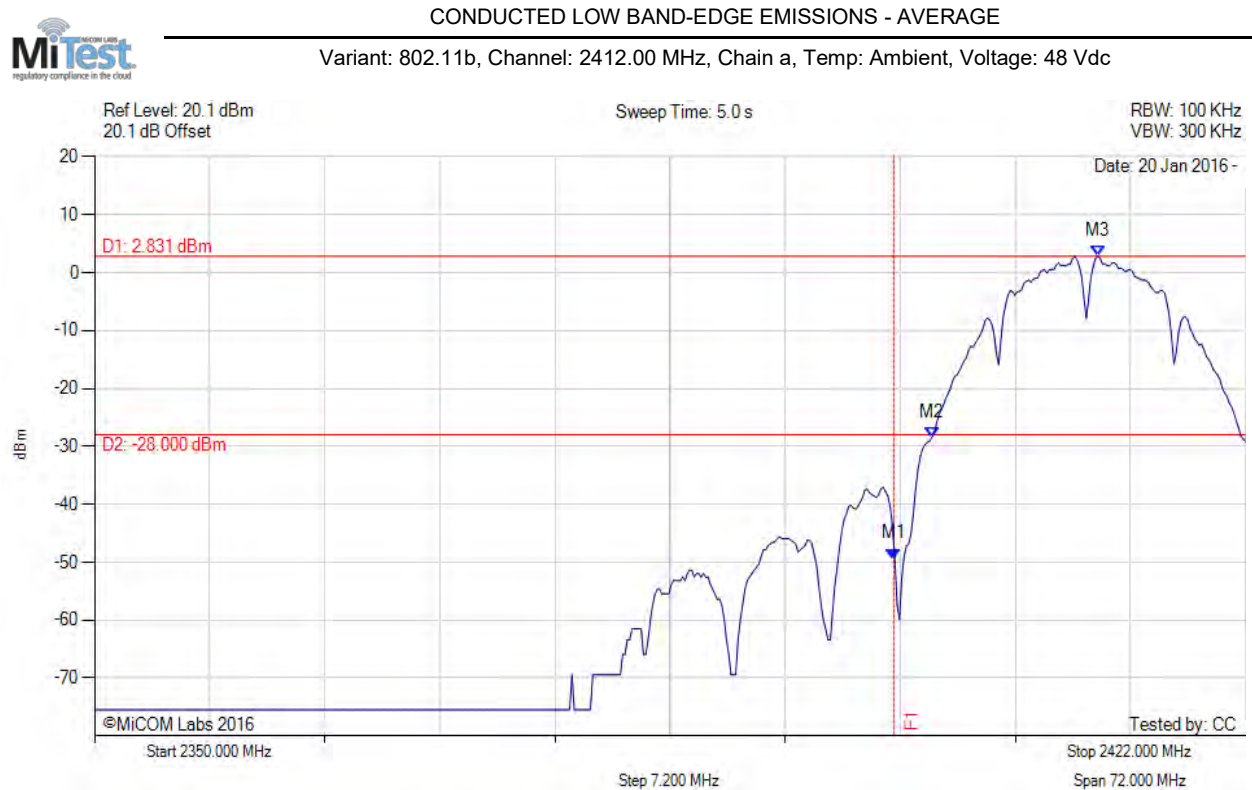
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A.2.1.2. Conducted Band-Edge Emissions

A.2.1.2.1. Conducted Low Band-Edge Emissions



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -49.445 dBm M2 : 2402.377 MHz : -28.499 dBm M3 : 2412.766 MHz : 2.831 dBm	Channel Frequency: 2412.00 MHz

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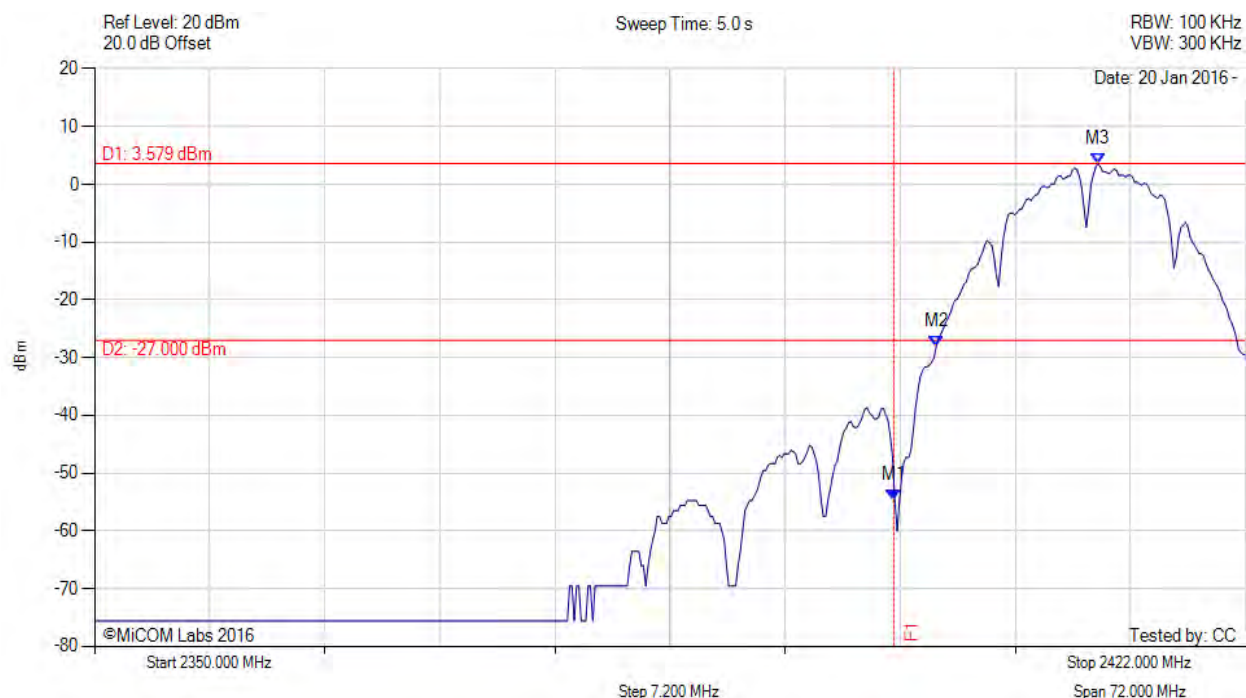


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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -54.737 dBm M2 : 2402.665 MHz : -27.997 dBm M3 : 2412.766 MHz : 3.579 dBm	Channel Frequency: 2412.00 MHz

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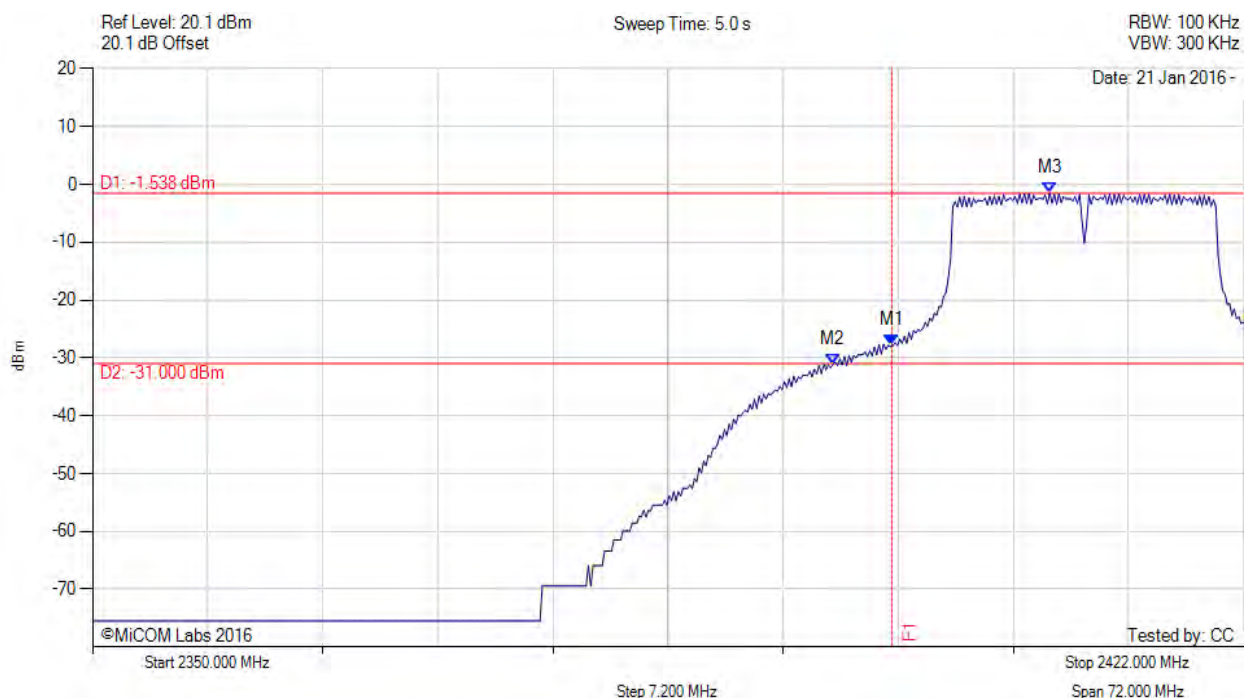


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -27.861 dBm M2 : 2396.317 MHz : -31.168 dBm M3 : 2409.880 MHz : -1.538 dBm	Channel Frequency: 2412.00 MHz

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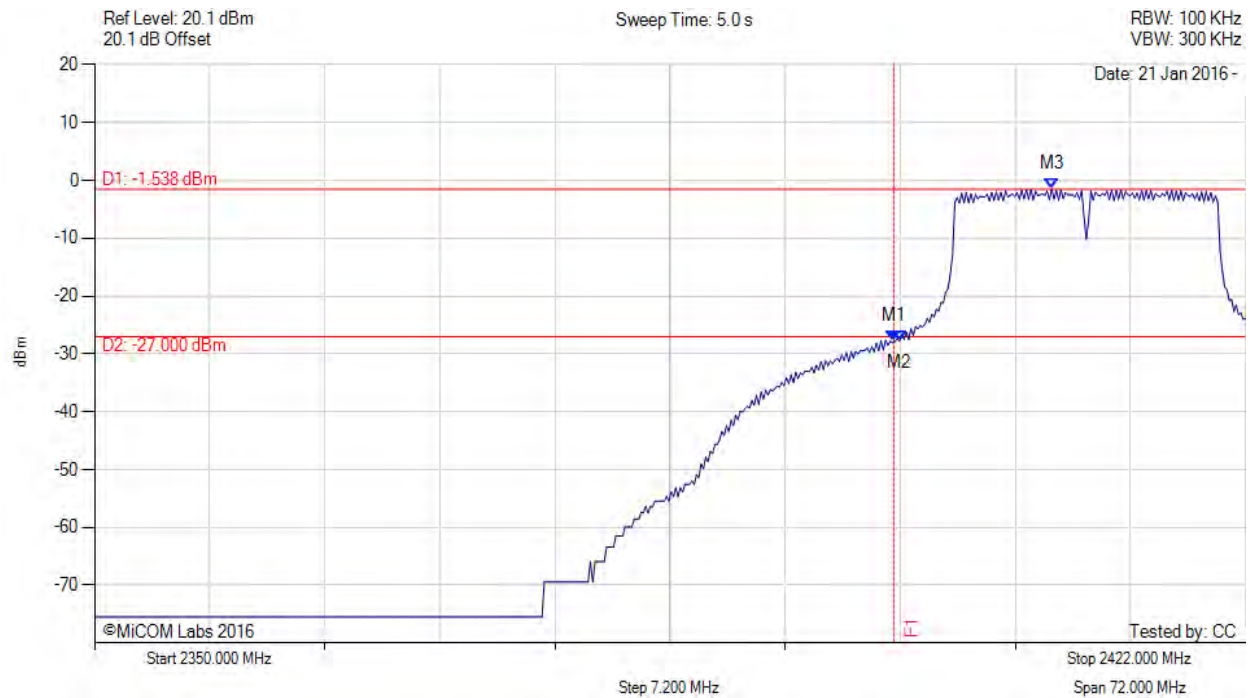


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Revised Conducted Low Band-Edge Emissions - Average

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -27.861 dBm M2 : 2400.357 MHz : -27.825 dBm M3 : 2409.880 MHz : -1.538 dBm	Channel Frequency: 2412.00 MHz

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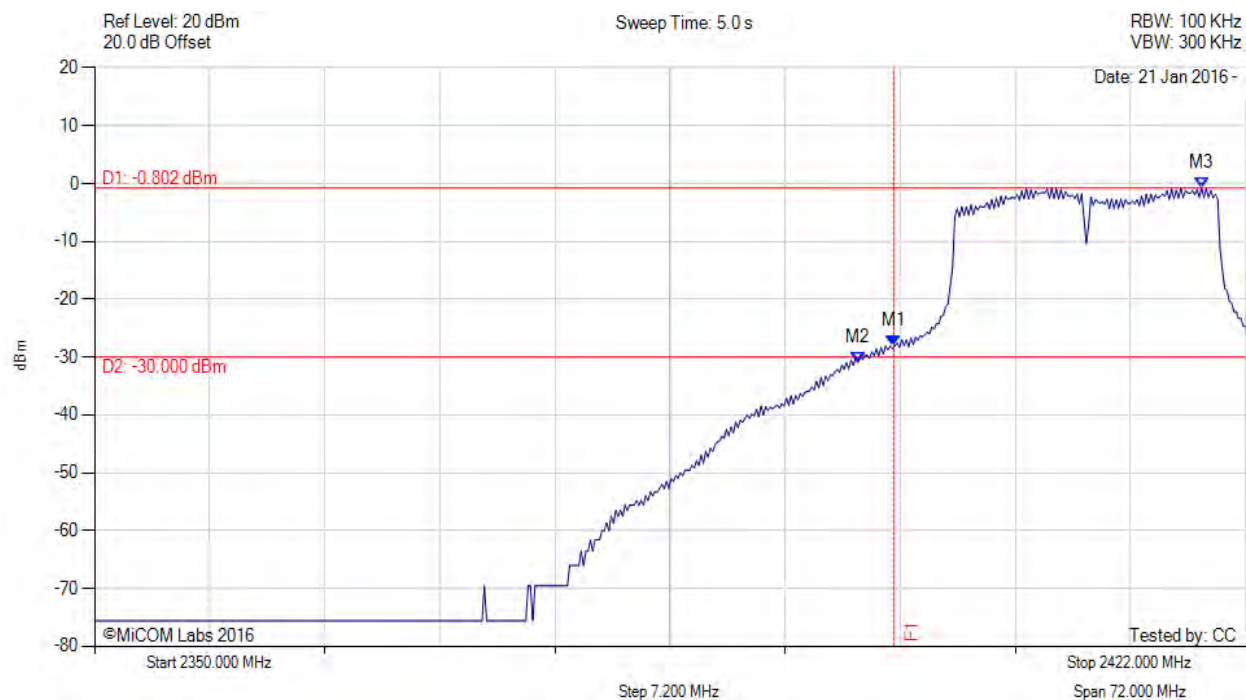


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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -28.034 dBm M2 : 2397.760 MHz : -30.855 dBm M3 : 2419.259 MHz : -0.802 dBm	Channel Frequency: 2412.00 MHz

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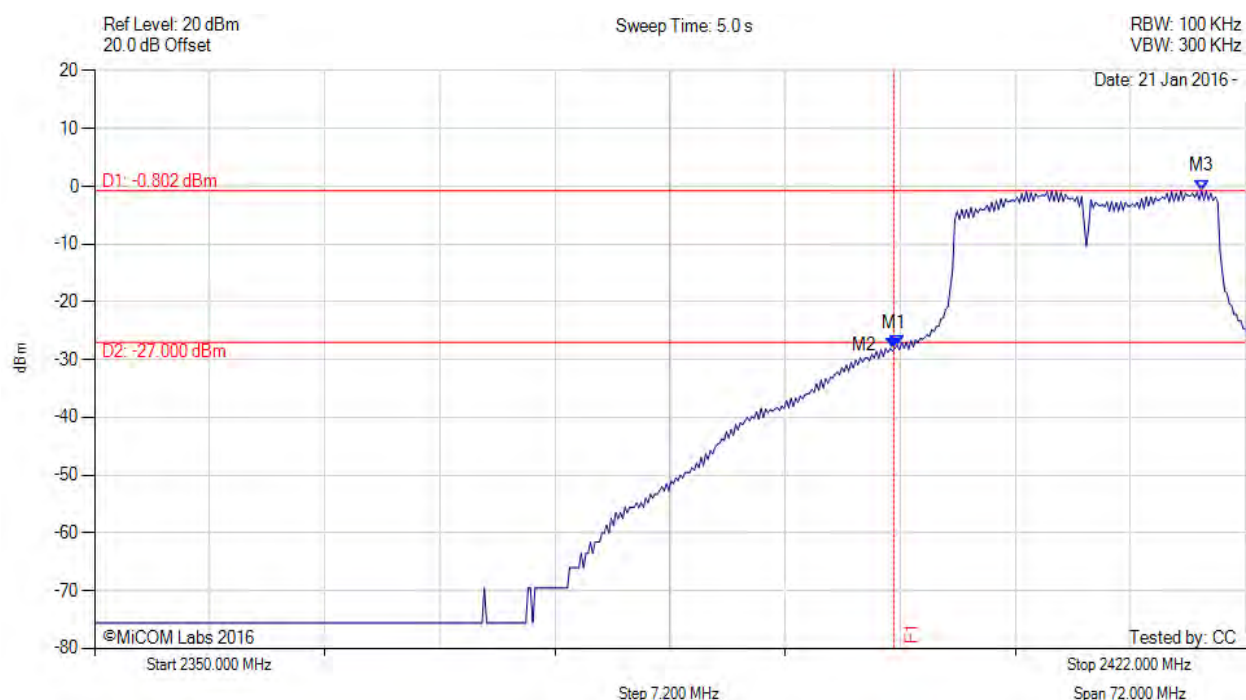


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Revised Conducted Low Band-Edge Emissions - Average

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -28.034 dBm M2 : 2400.212 MHz : -27.537 dBm M3 : 2419.259 MHz : -0.802 dBm	Channel Frequency: 2412.00 MHz

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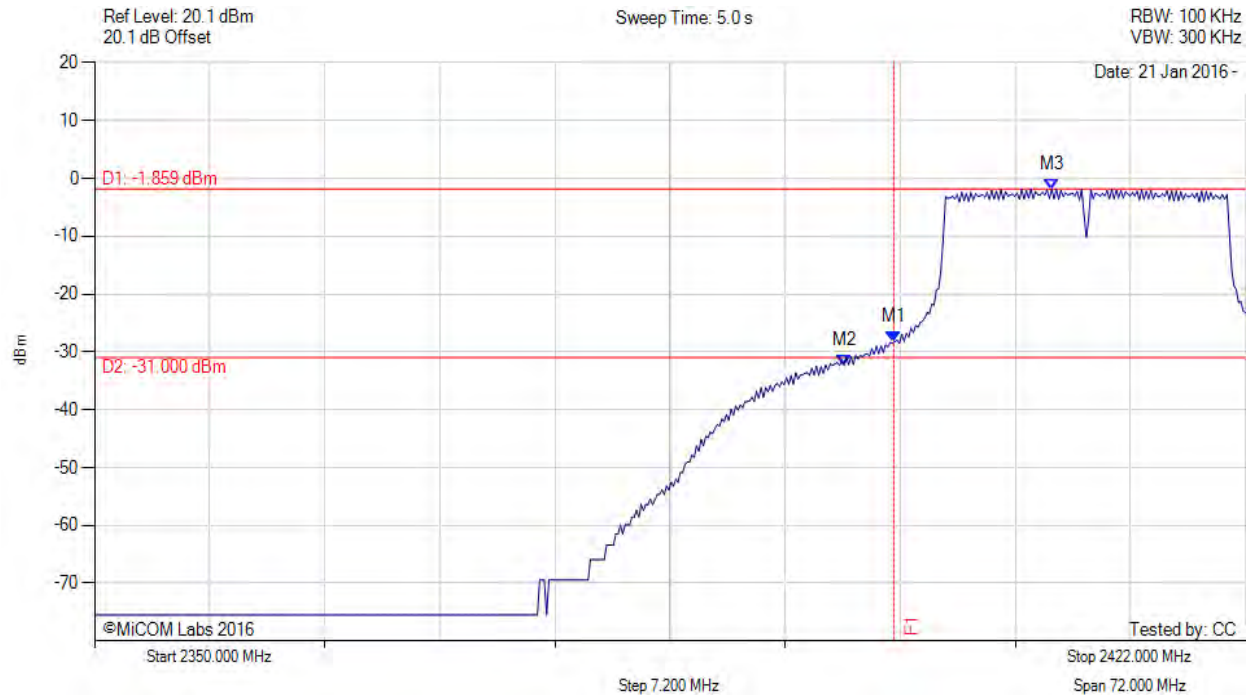


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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -28.193 dBm M2 : 2396.894 MHz : -32.298 dBm M3 : 2409.880 MHz : -1.859 dBm	Channel Frequency: 2412.00 MHz

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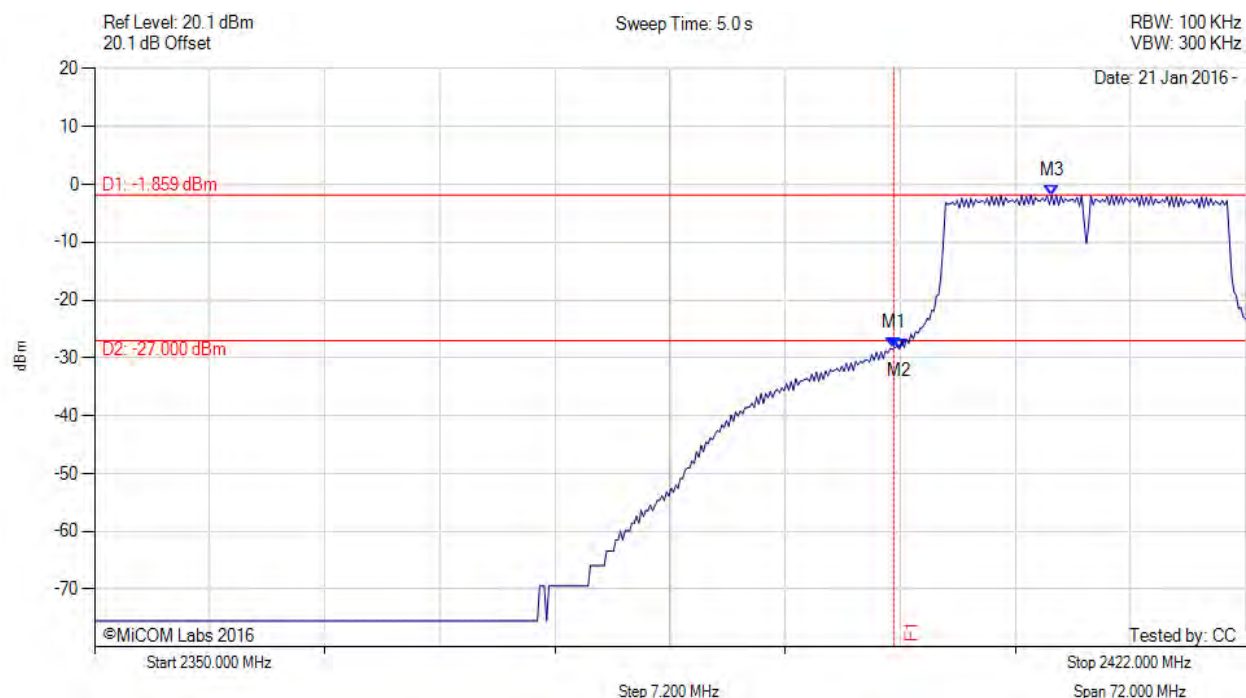


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Revised Conducted Low Band-Edge Emissions - Average

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -28.193 dBm M2 : 2400.357 MHz : -28.499 dBm M3 : 2409.880 MHz : -1.859 dBm	Channel Frequency: 2412.00 MHz

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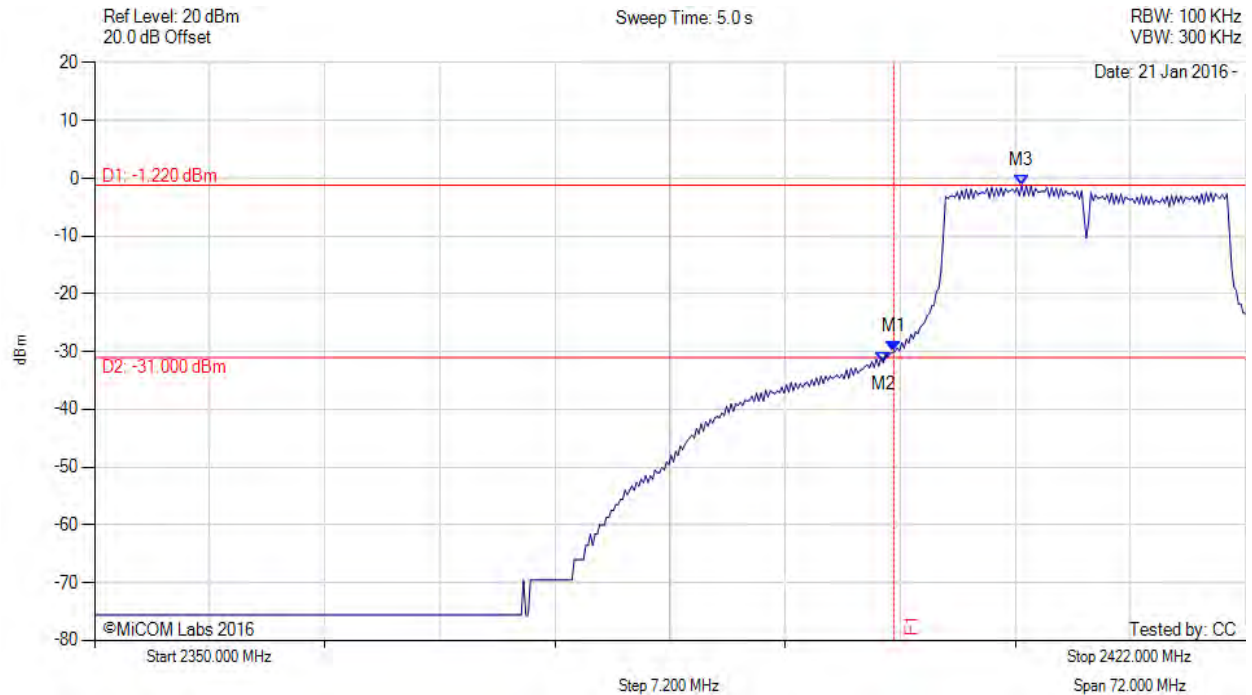


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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -29.990 dBm M2 : 2399.347 MHz : -31.928 dBm M3 : 2408.004 MHz : -1.220 dBm	Channel Frequency: 2412.00 MHz

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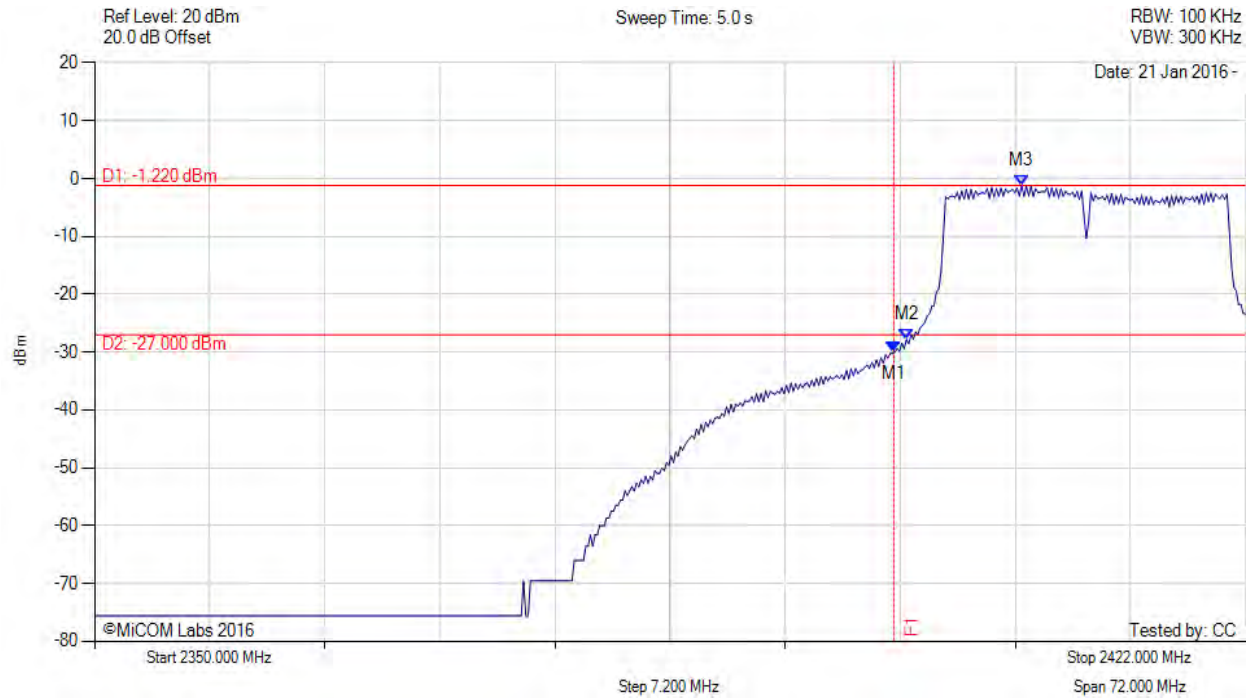


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Revised Conducted Low Band-Edge Emissions - Average

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -29.990 dBm M2 : 2400.790 MHz : -27.818 dBm M3 : 2408.004 MHz : -1.220 dBm	Channel Frequency: 2412.00 MHz

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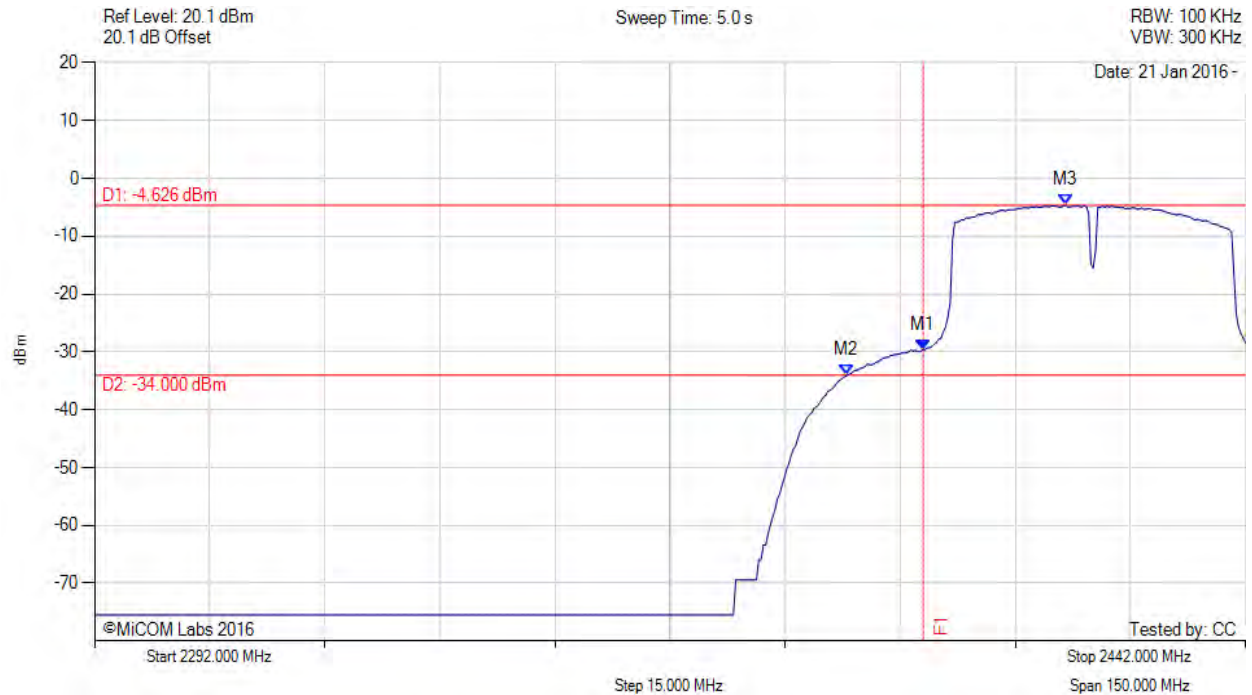


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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -29.620 dBm M2 : 2389.996 MHz : -34.102 dBm M3 : 2418.553 MHz : -4.626 dBm	Channel Frequency: 2422.00 MHz

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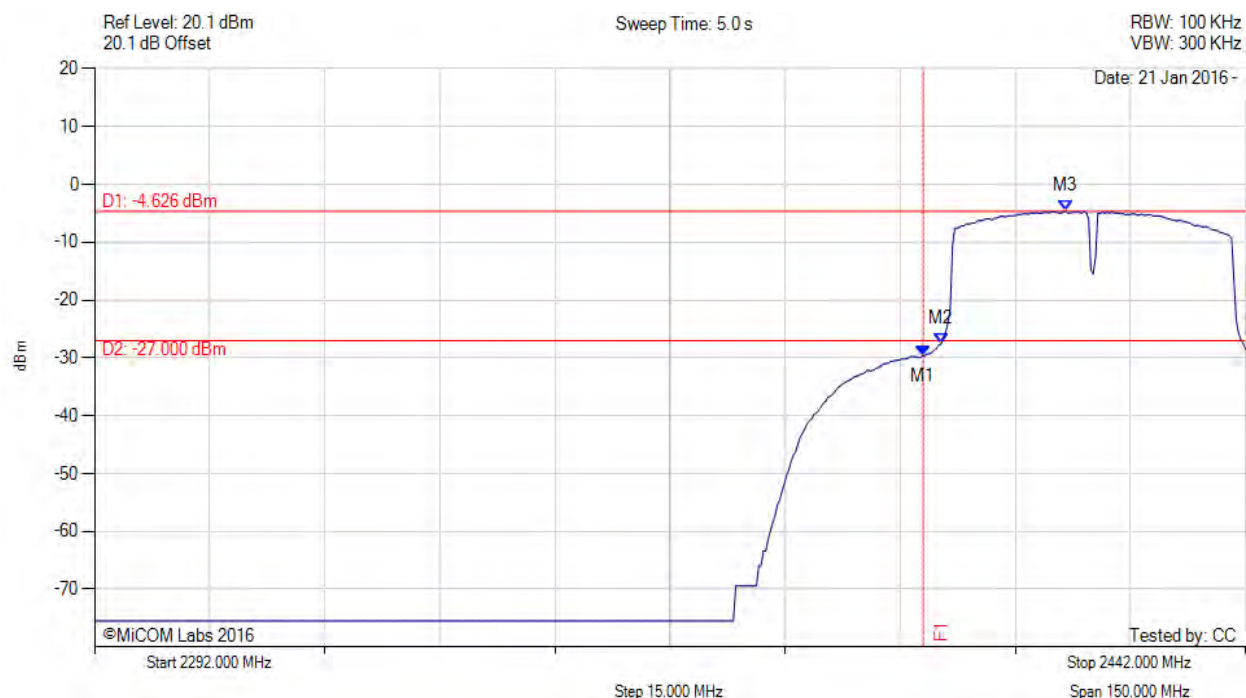


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Revised Conducted Low Band-Edge Emissions - Average

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -29.620 dBm M2 : 2402.321 MHz : -27.611 dBm M3 : 2418.553 MHz : -4.626 dBm	Channel Frequency: 2422.00 MHz

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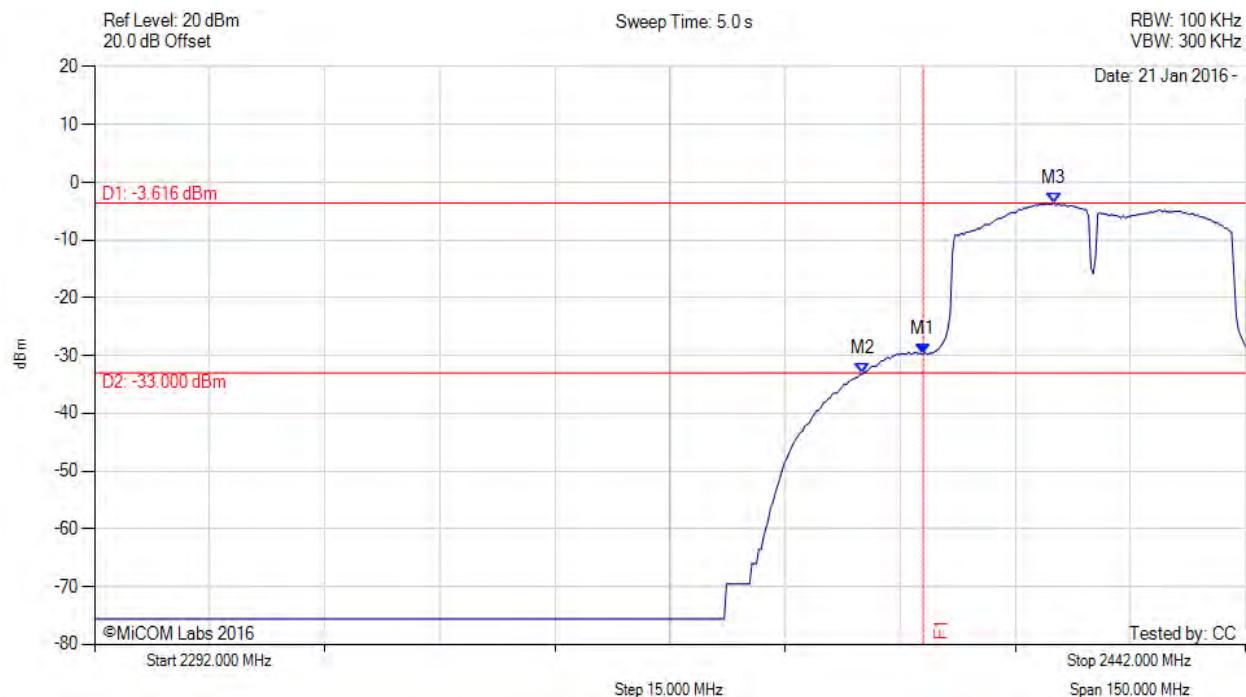


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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -29.676 dBm M2 : 2392.100 MHz : -33.154 dBm M3 : 2417.050 MHz : -3.616 dBm	Channel Frequency: 2422.00 MHz

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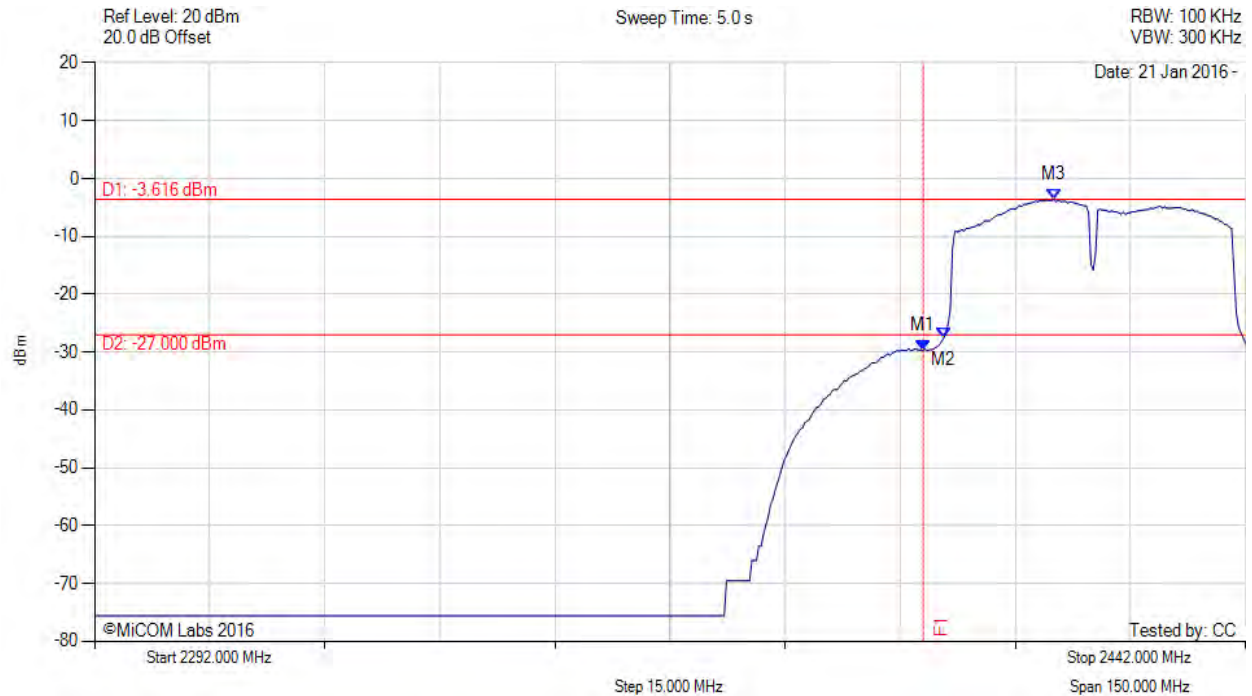


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Revised Conducted Low Band-Edge Emissions - Average

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -29.676 dBm M2 : 2402.621 MHz : -27.676 dBm M3 : 2417.050 MHz : -3.616 dBm	Channel Frequency: 2422.00 MHz

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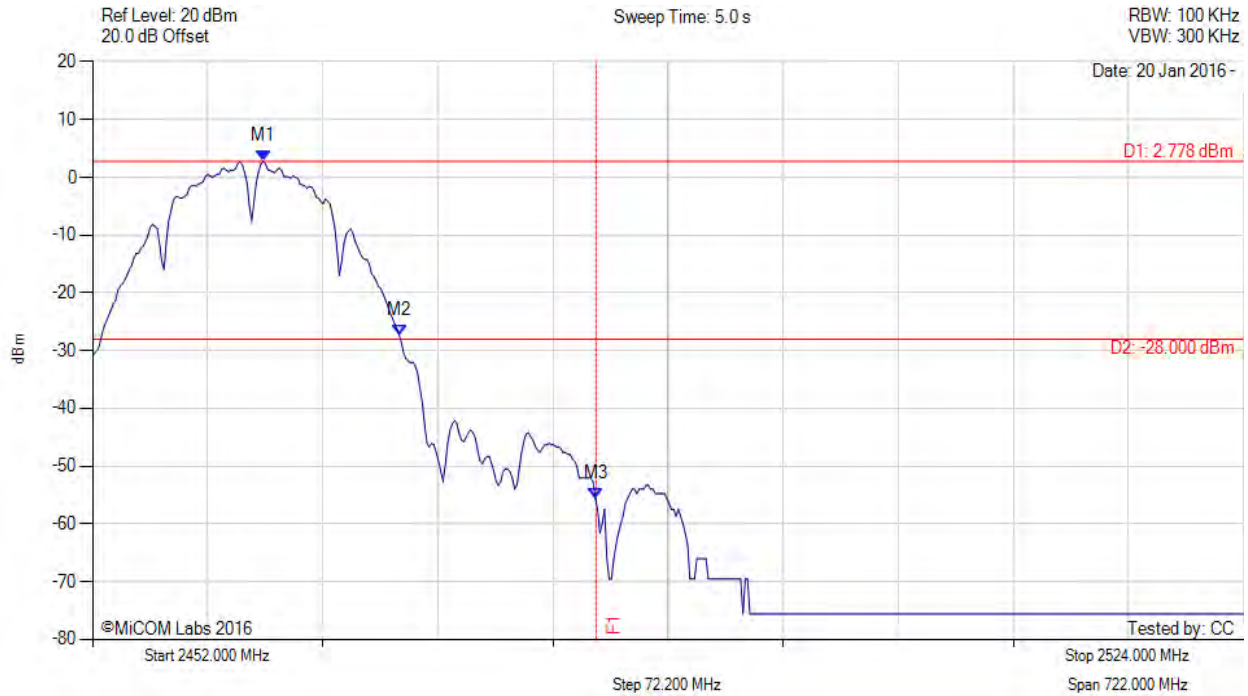
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A.2.1.2.2. Conducted High Band-Edge Emissions



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2462.677 MHz : 2.778 dBm M2 : 2471.190 MHz : -27.299 dBm M3 : 2483.500 MHz : -55.565 dBm	Channel Frequency: 2462.00 MHz

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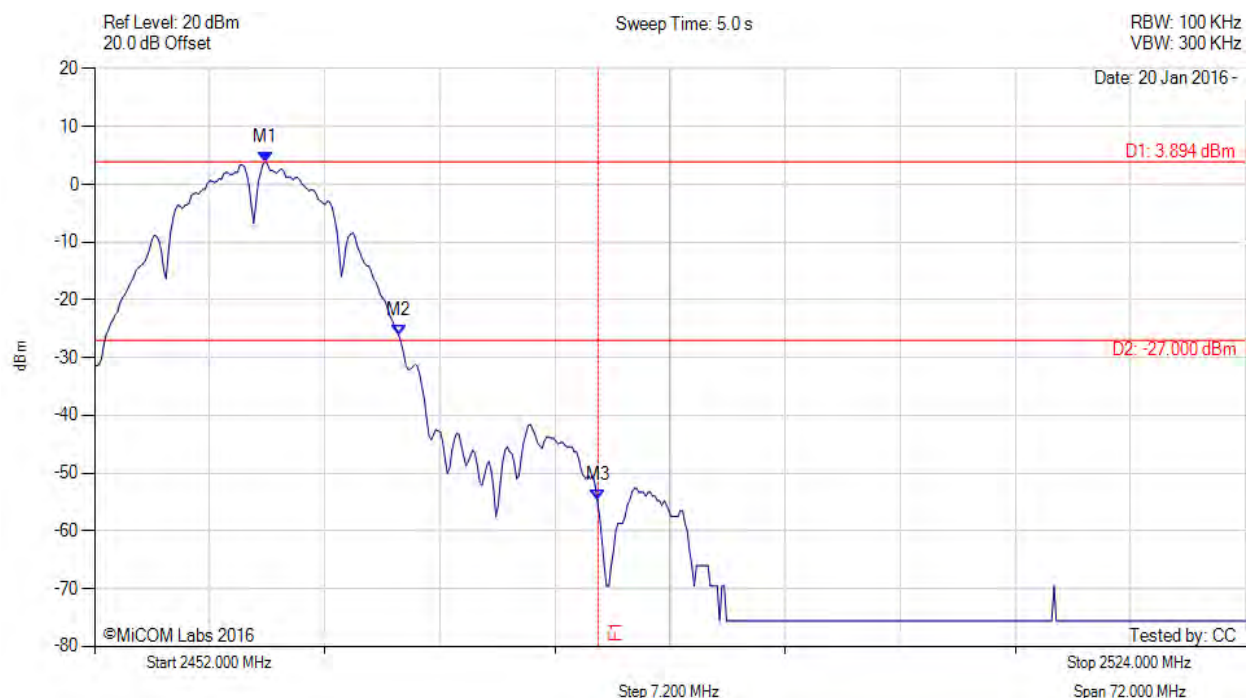


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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2462.677 MHz : 3.894 dBm M2 : 2471.046 MHz : -26.228 dBm M3 : 2483.500 MHz : -54.737 dBm	Channel Frequency: 2462.00 MHz

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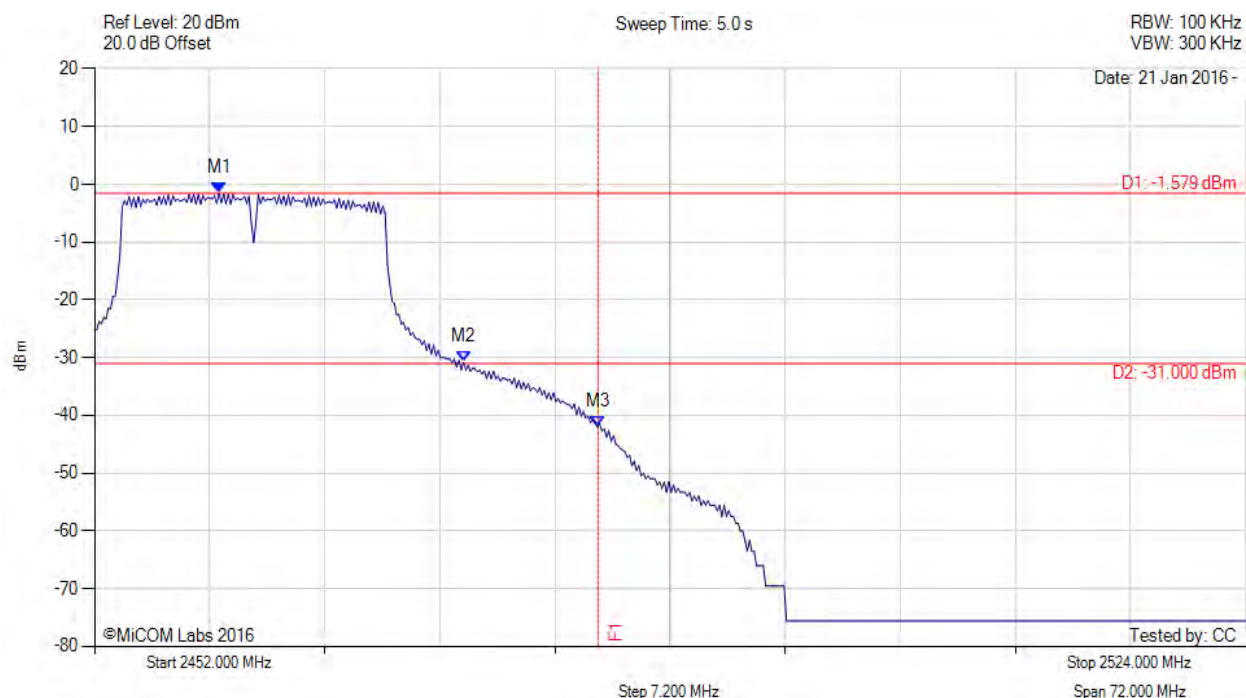


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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2459.792 MHz : -1.579 dBm M2 : 2475.086 MHz : -30.804 dBm M3 : 2483.500 MHz : -41.941 dBm	Channel Frequency: 2462.00 MHz

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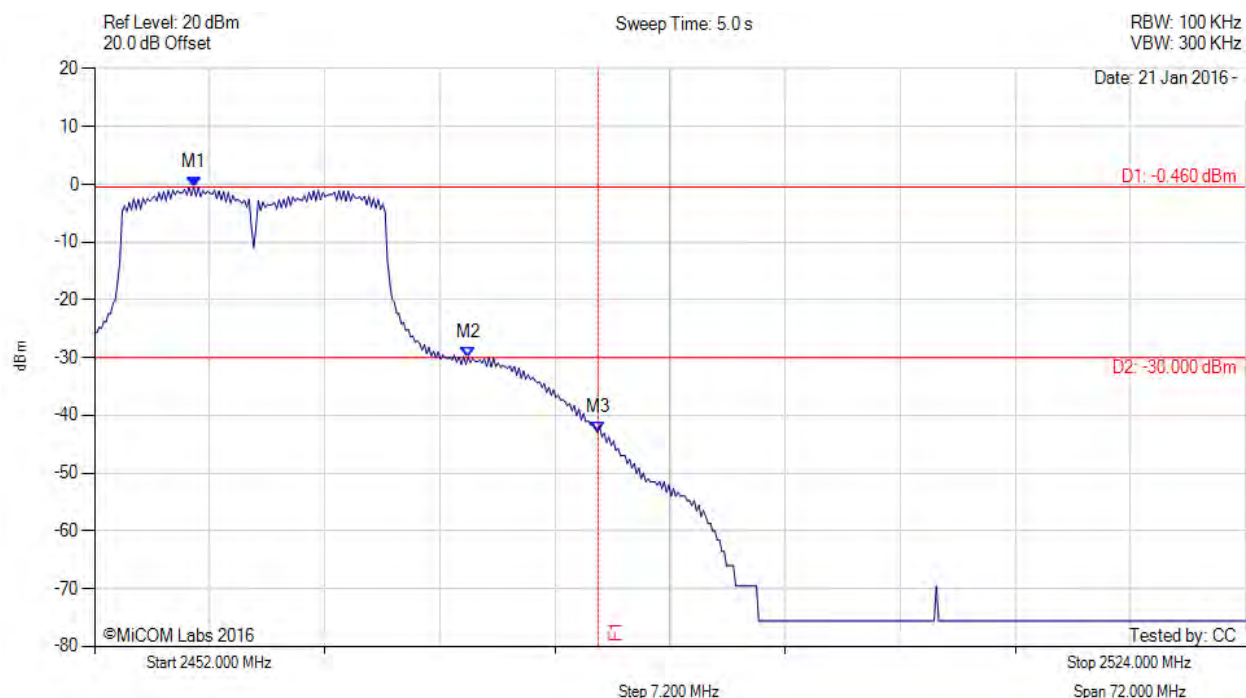


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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2458.204 MHz : -0.460 dBm M2 : 2475.375 MHz : -29.990 dBm M3 : 2483.500 MHz : -42.896 dBm	Channel Frequency: 2462.00 MHz

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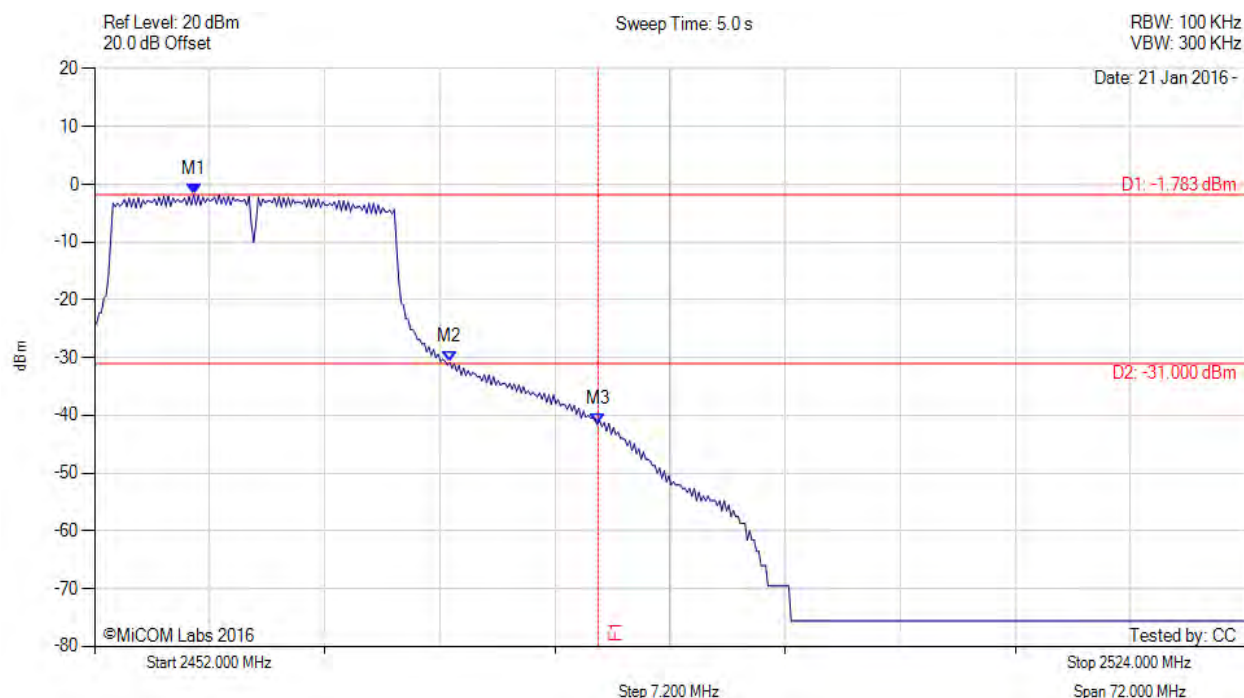


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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2458.204 MHz : -1.783 dBm M2 : 2474.220 MHz : -30.804 dBm M3 : 2483.500 MHz : -41.586 dBm	Channel Frequency: 2462.00 MHz

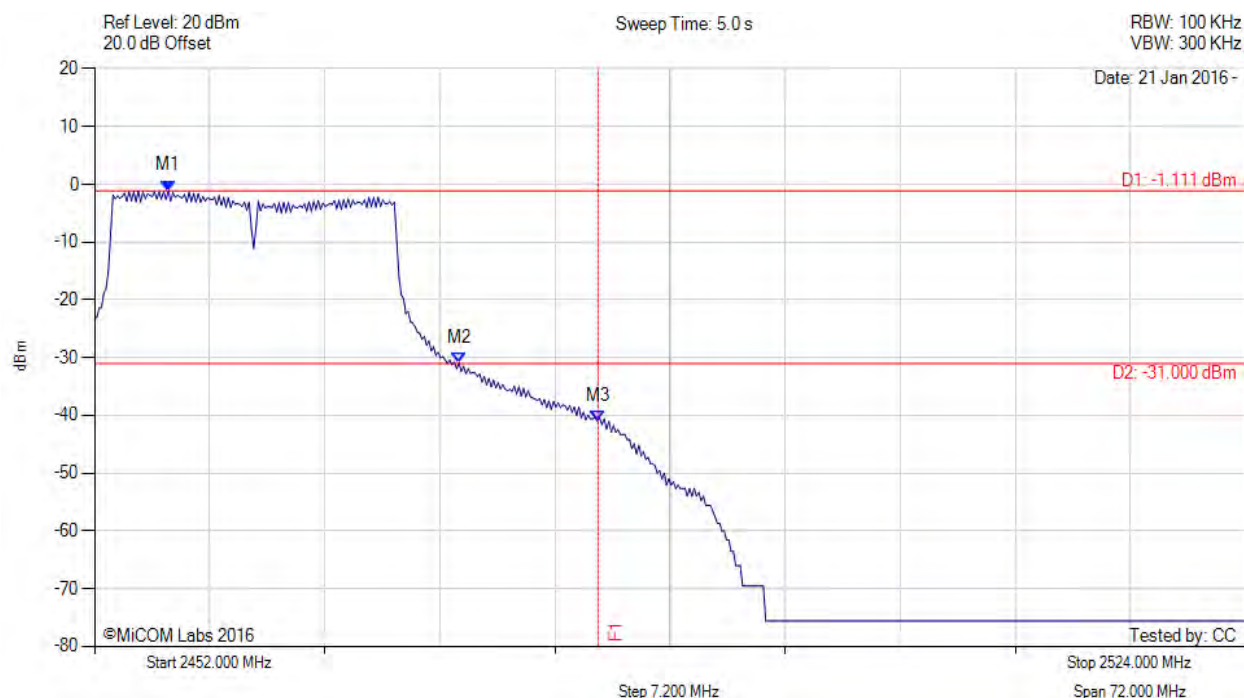
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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2456.617 MHz : -1.111 dBm M2 : 2474.798 MHz : -30.956 dBm M3 : 2483.500 MHz : -40.917 dBm	Channel Frequency: 2462.00 MHz

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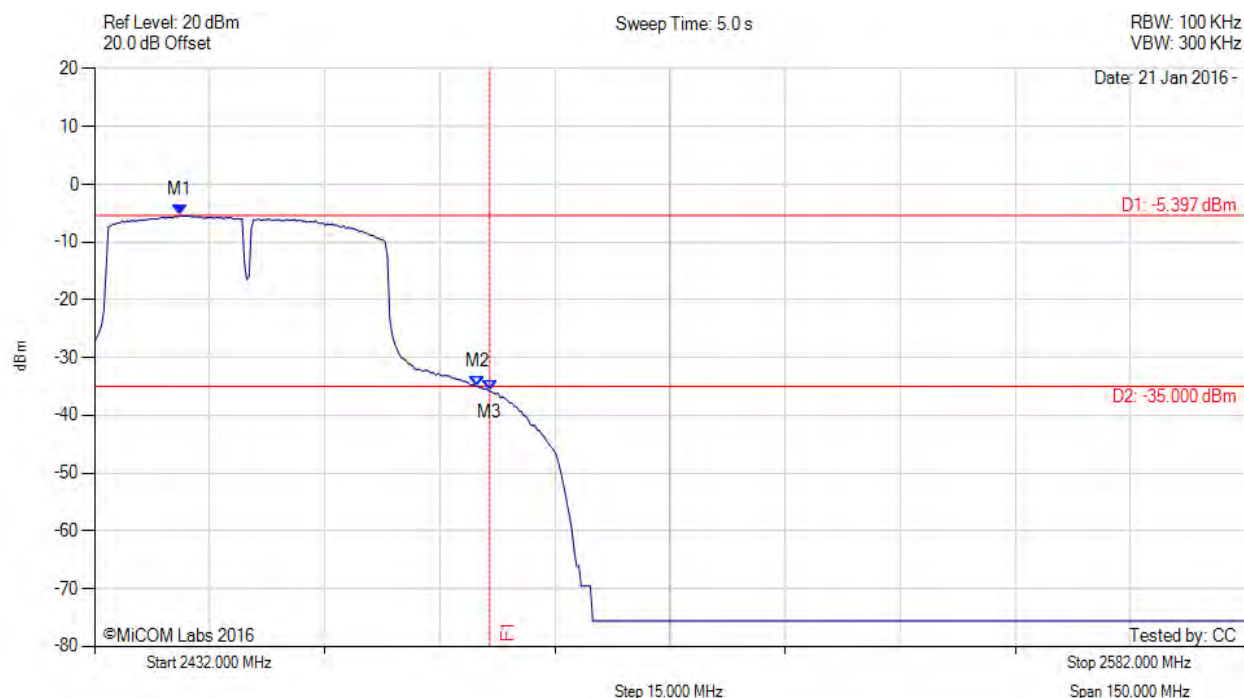


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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2443.122 MHz : -5.397 dBm M2 : 2481.900 MHz : -34.978 dBm M3 : 2483.500 MHz : -35.741 dBm	Channel Frequency: 2452.00 MHz

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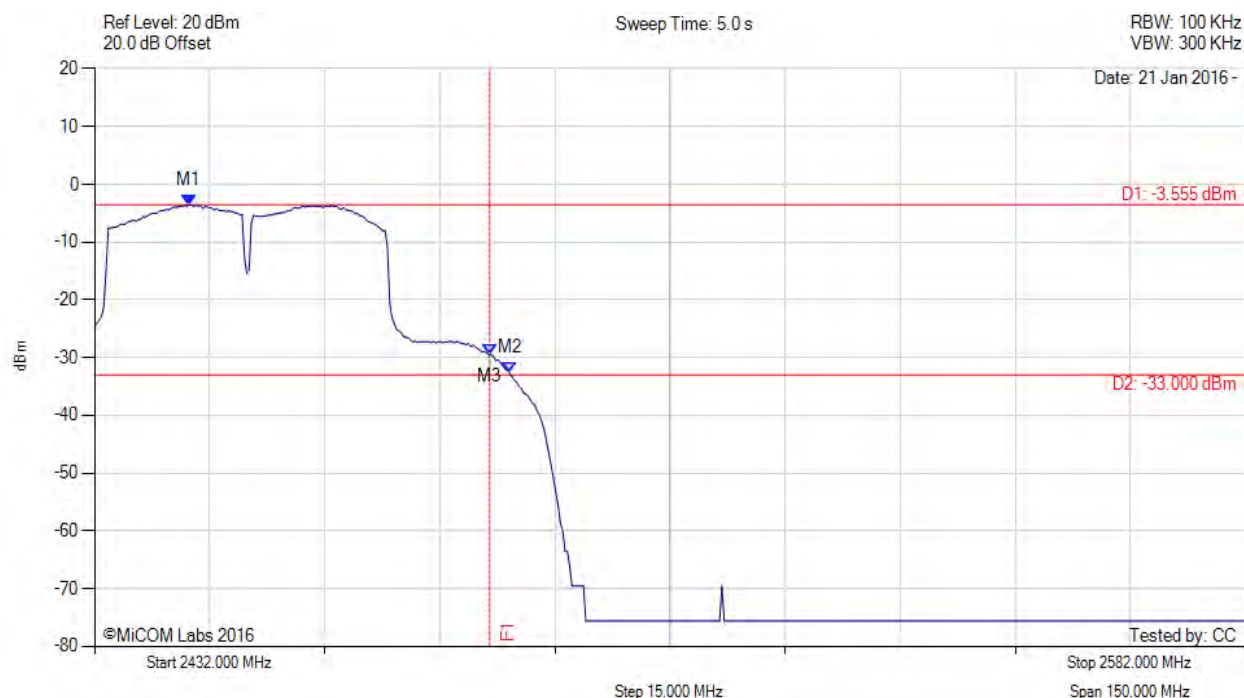


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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2444.325 MHz : -3.555 dBm M2 : 2486.108 MHz : -32.705 dBm M3 : 2483.500 MHz : -29.501 dBm	Channel Frequency: 2452.00 MHz

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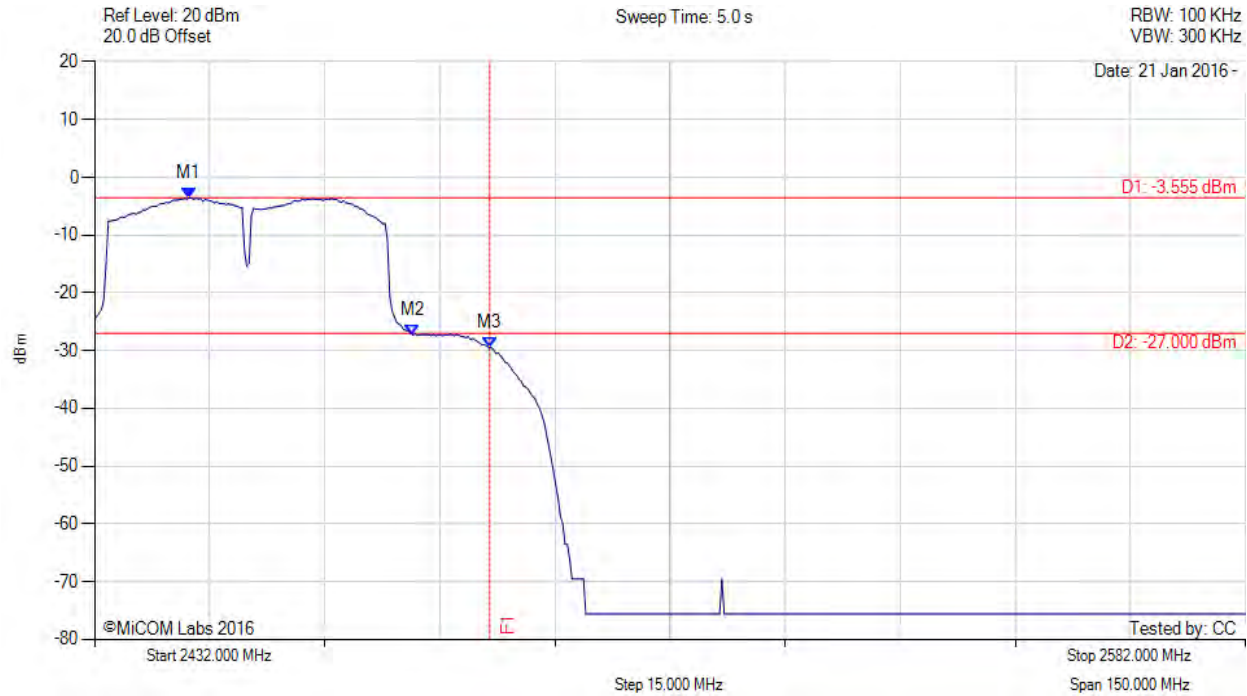


Title: Aruba Networks, Inc. APIN0314 & APIN0315
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Revised Conducted High Band-Edge Emissions - Average

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2444.325 MHz : -3.555 dBm M2 : 2473.483 MHz : -27.333 dBm M3 : 2483.500 MHz : -29.501 dBm	Channel Frequency: 2452.00 MHz

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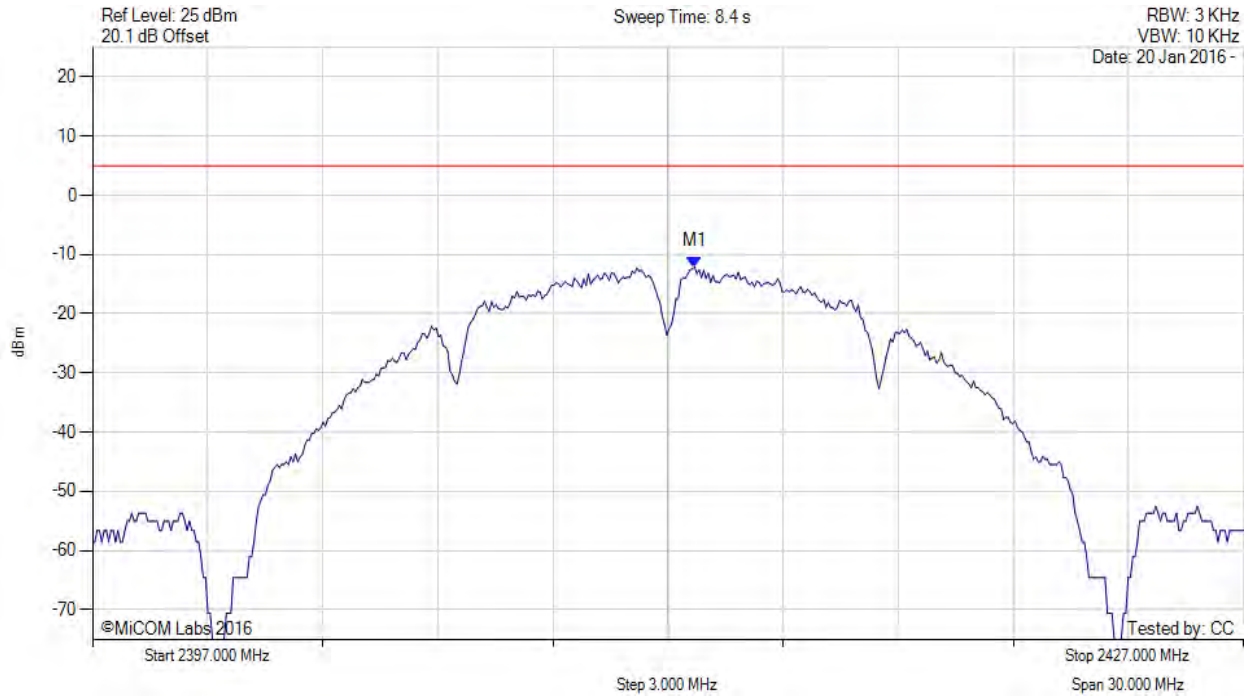
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A.3. Power Spectral Density



POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.691 MHz : -12.059 dBm	Limit: ≤ 4.990 dBm

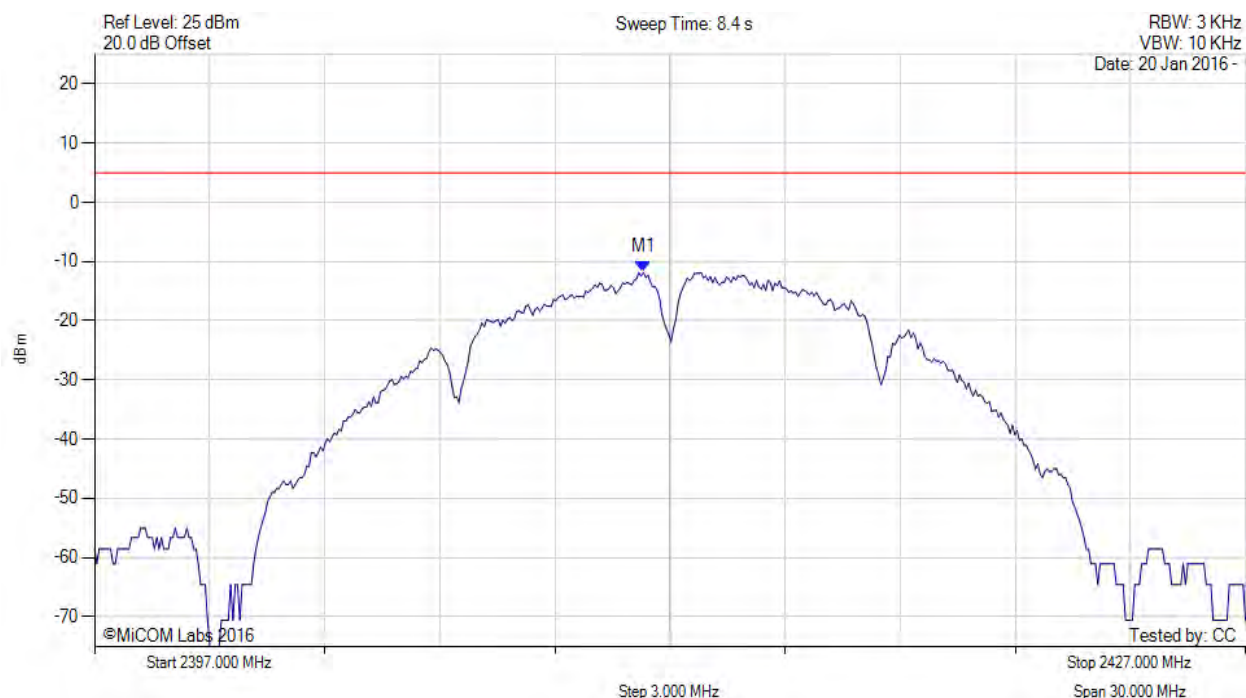
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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2411.309 MHz : -11.815 dBm	Limit: ≤ 4.990 dBm

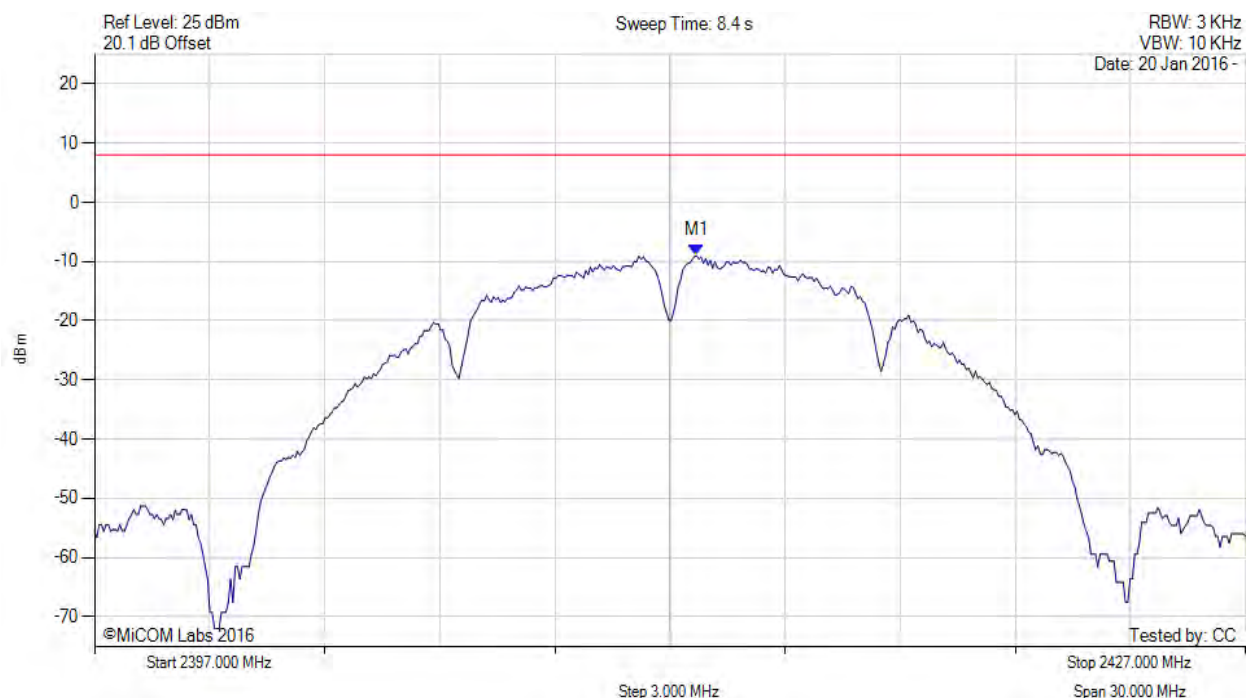
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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, SUM, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.700 MHz : -9.018 dBm M1 + DCCF : 2412.700 MHz : -8.974 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 8.0 dBm Margin: -17.0 dB

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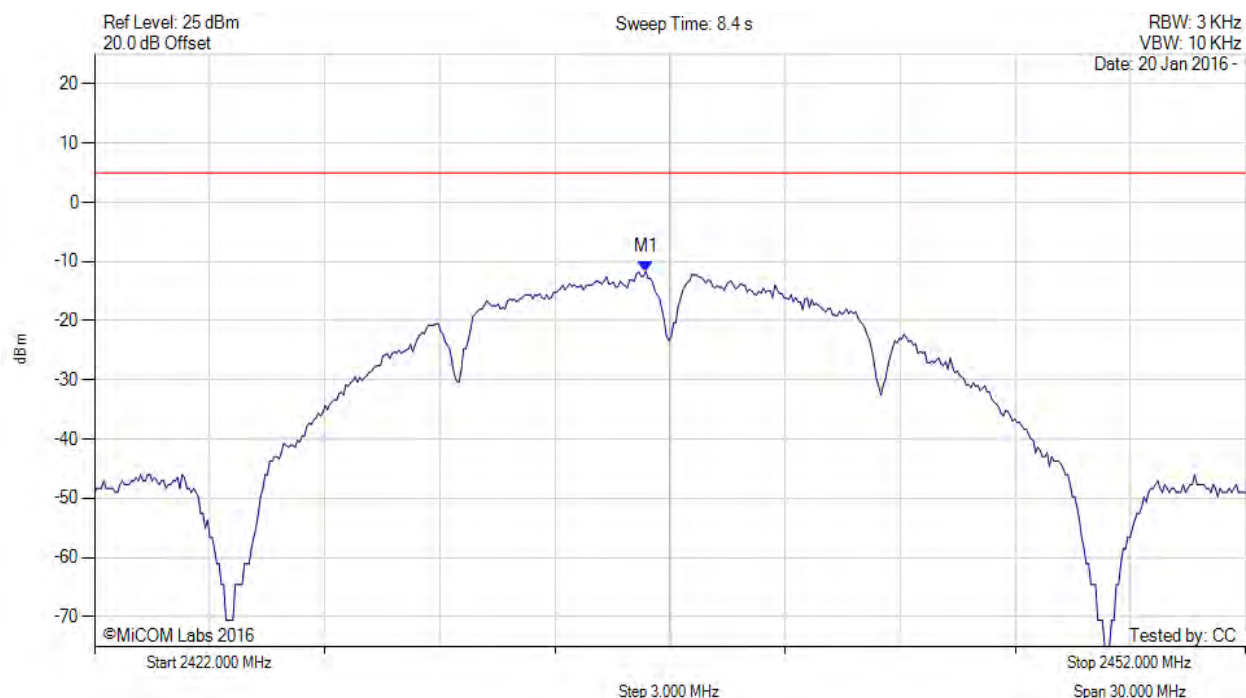


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.369 MHz : -11.705 dBm	Limit: ≤ 4.990 dBm

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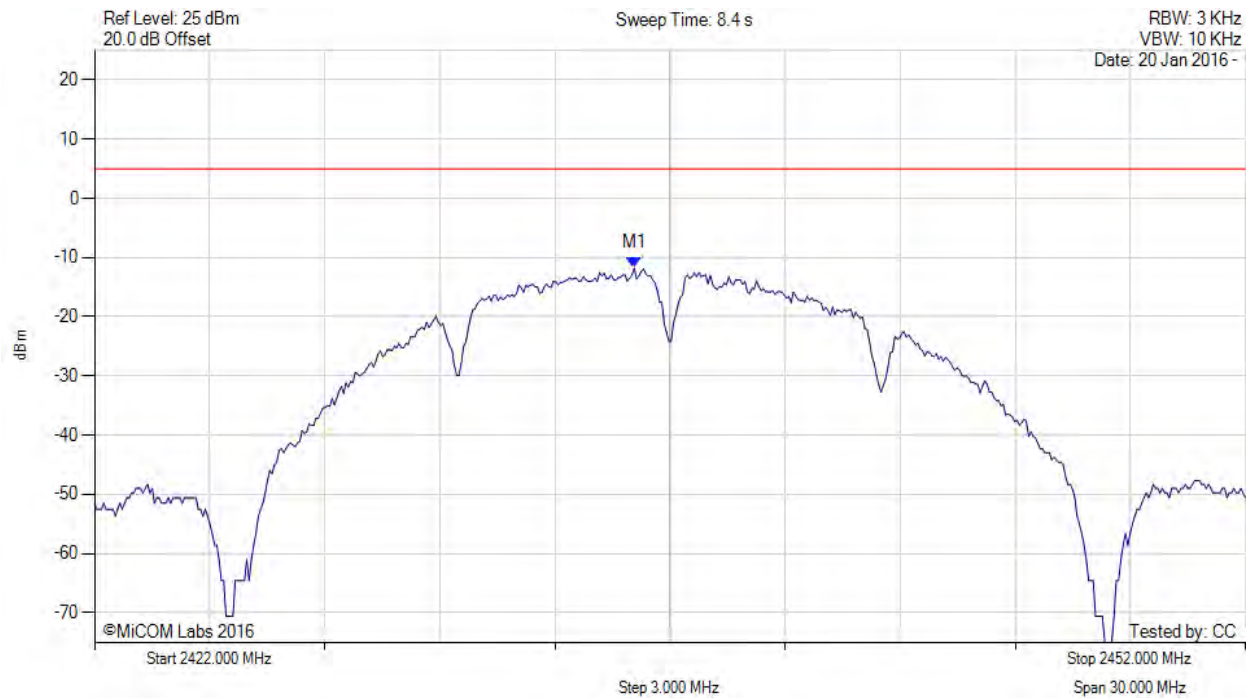


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.068 MHz : -11.805 dBm	Limit: ≤ 4.990 dBm

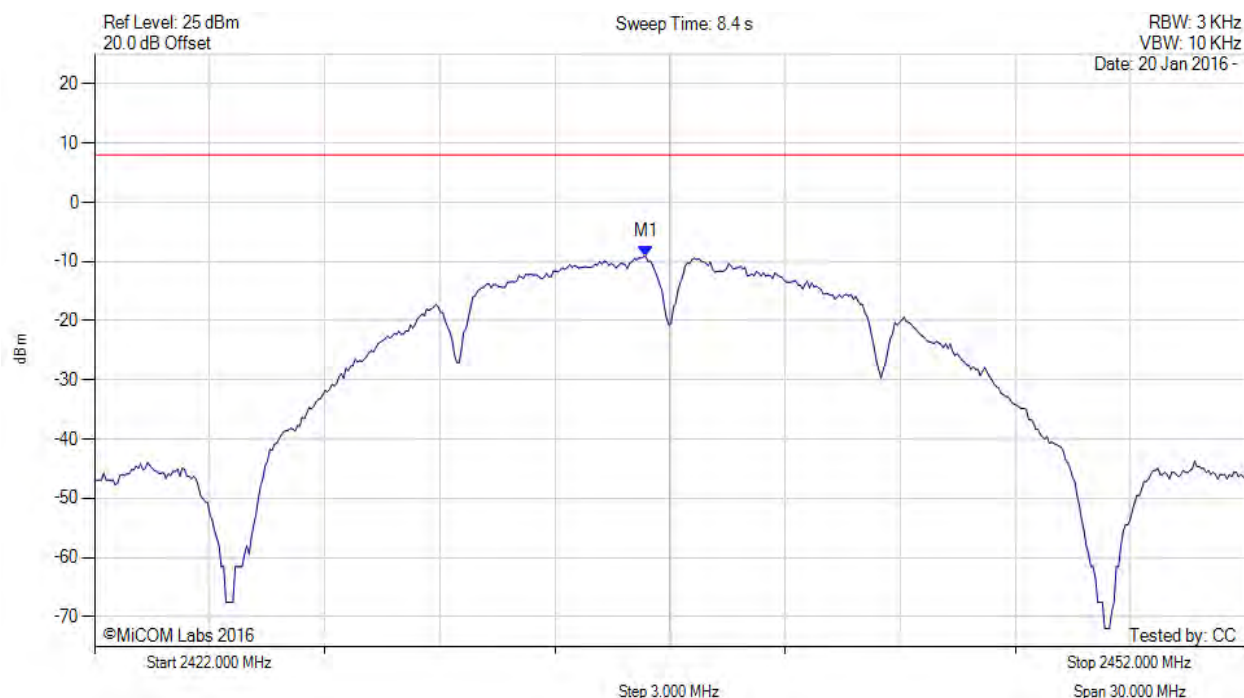
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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, SUM, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.400 MHz : -9.169 dBm M1 + DCCF : 2436.400 MHz : -9.125 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 8.0 dBm Margin: -17.1 dB

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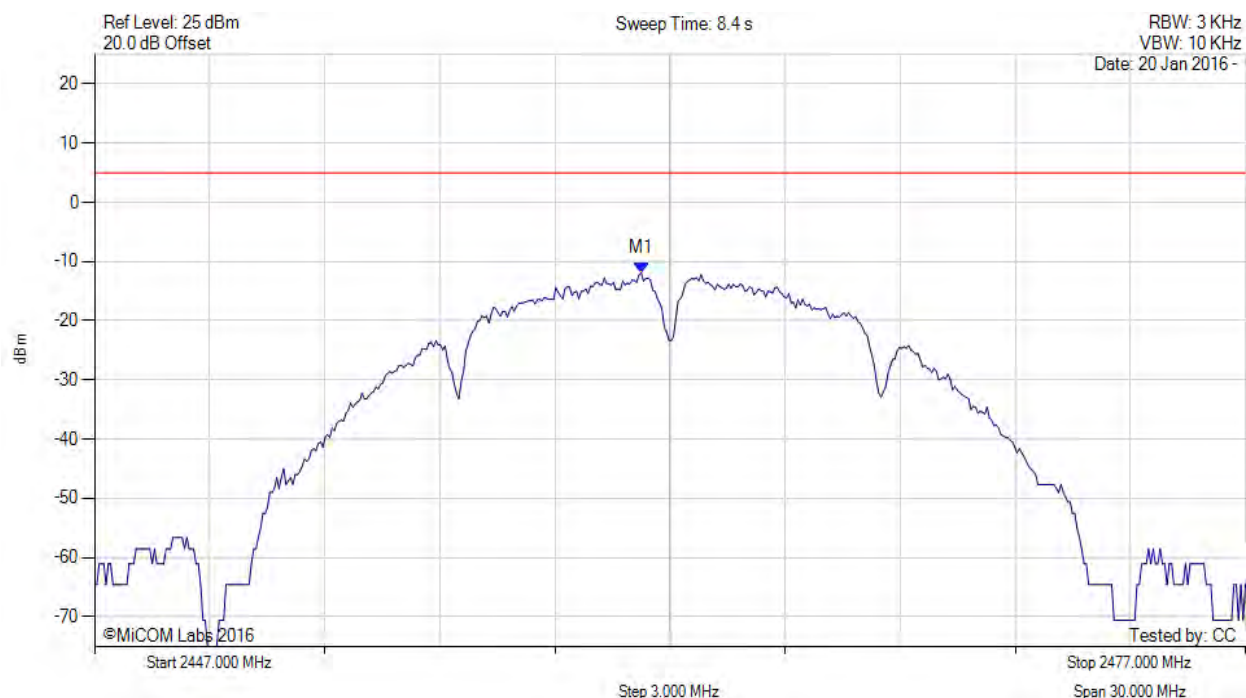


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.248 MHz : -11.875 dBm	Limit: ≤ 4.990 dBm

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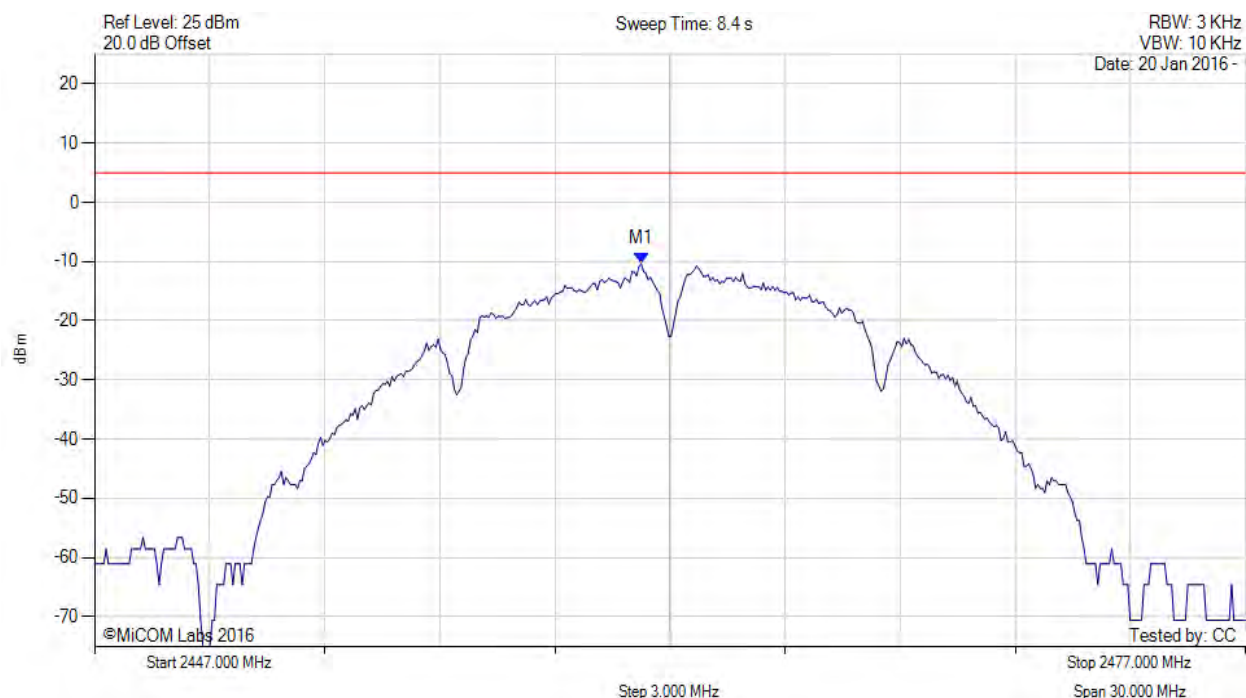


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.248 MHz : -10.334 dBm	Limit: ≤ 4.990 dBm

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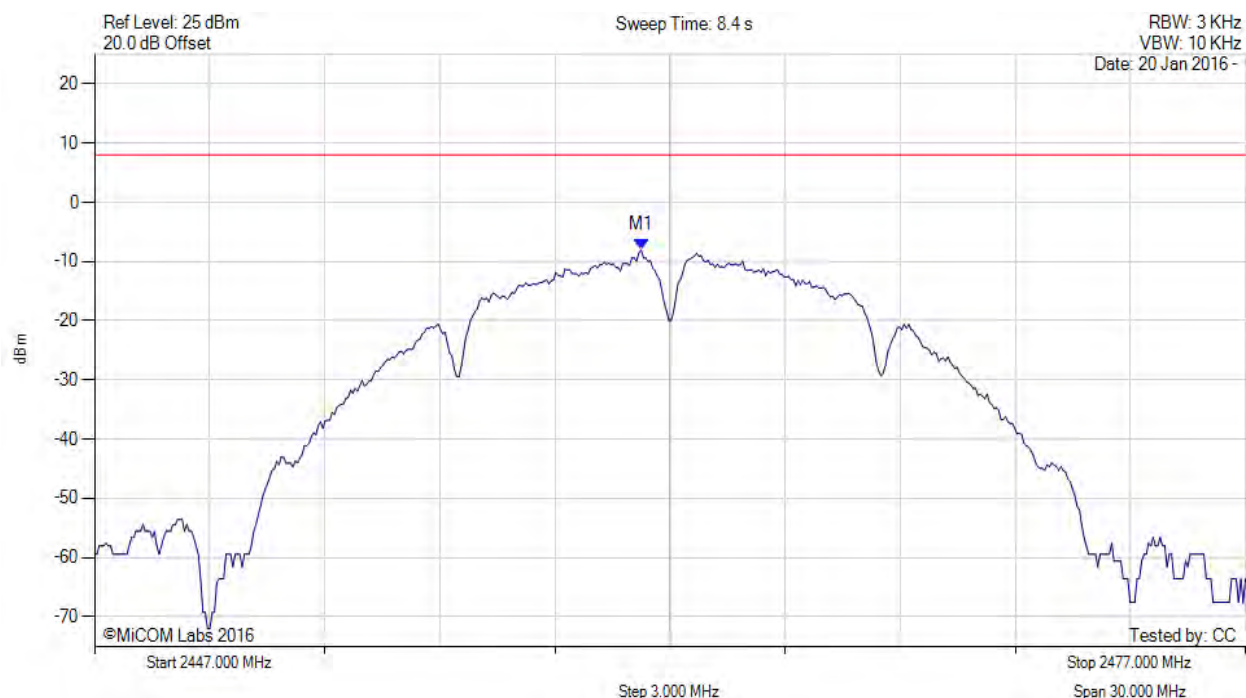


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, SUM, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.200 MHz : -8.026 dBm M1 + DCCF : 2461.200 MHz : -7.982 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 8.0 dBm Margin: -16.0 dB

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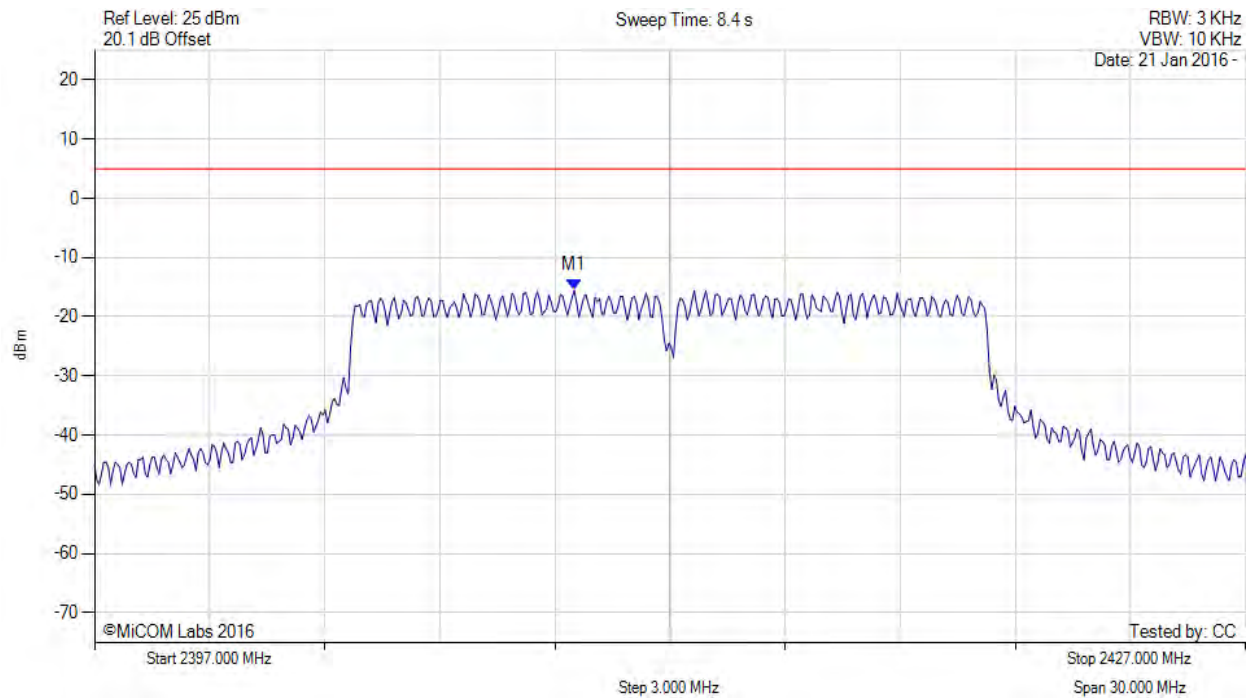


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2409.505 MHz : -15.509 dBm	Limit: ≤ 4.990 dBm

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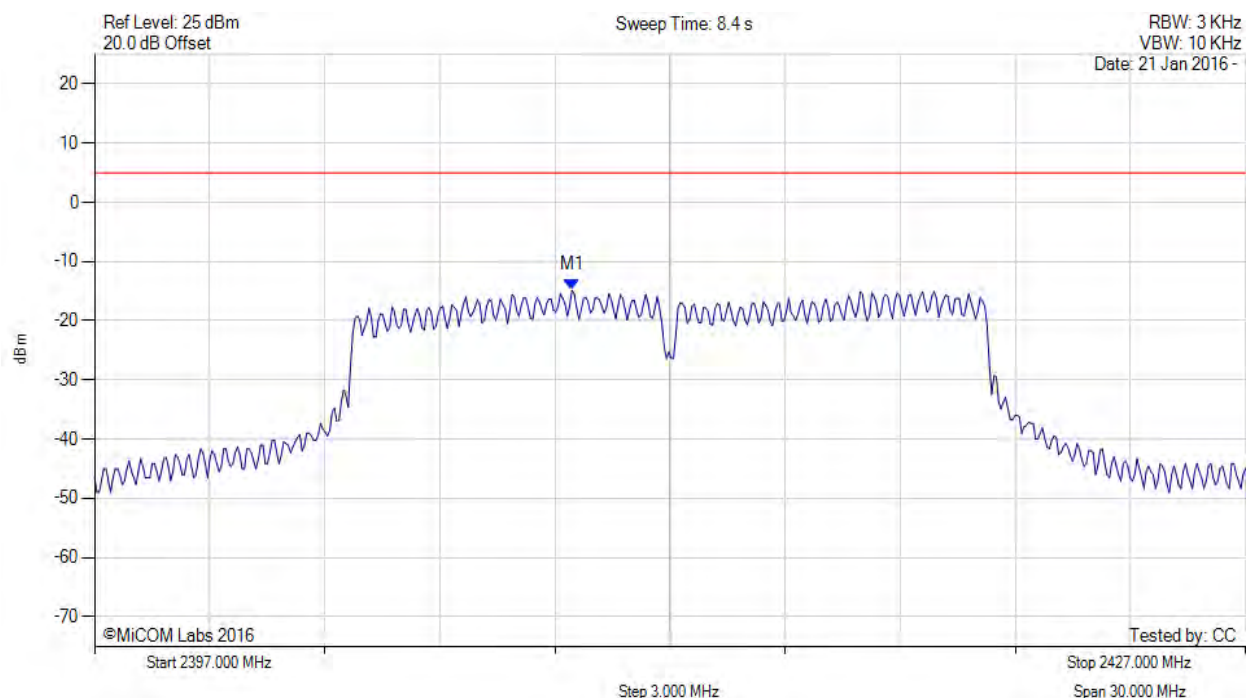


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2409.445 MHz : -14.845 dBm	Limit: ≤ 4.990 dBm

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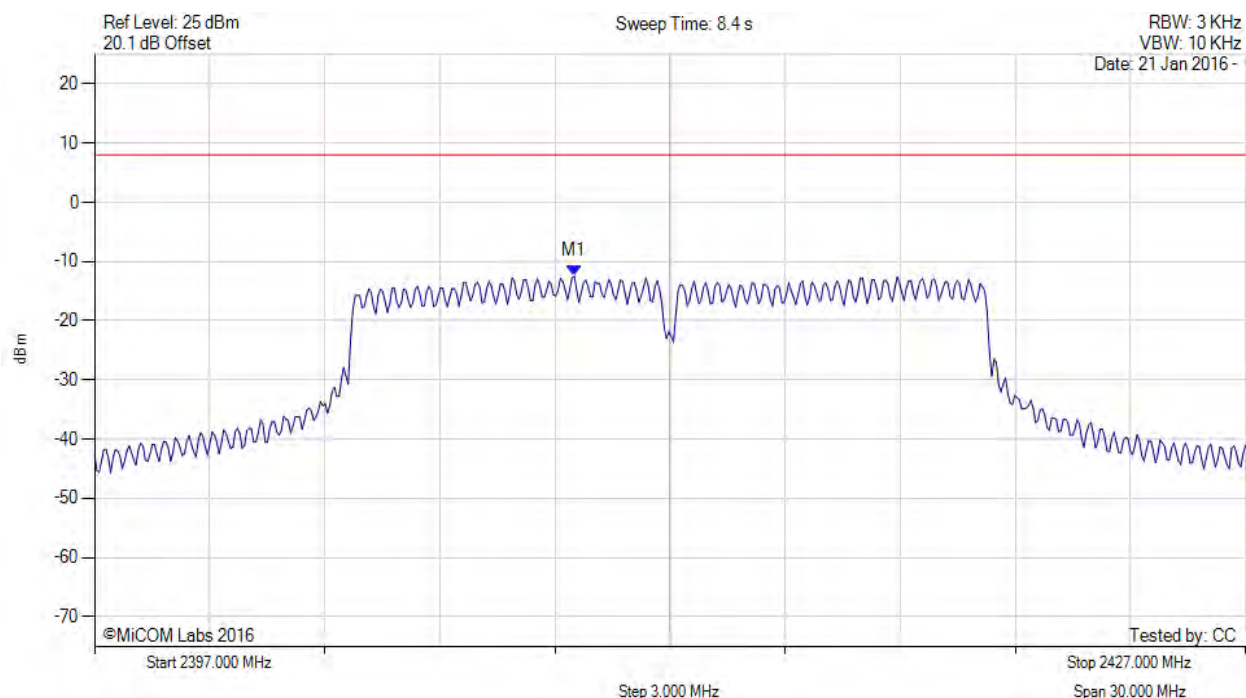


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, SUM, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2409.500 MHz : -12.483 dBm M1 + DCCF : 2409.500 MHz : -12.306 dBm Duty Cycle Correction Factor : +0.18 dB	Limit: ≤ 8.0 dBm Margin: -20.3 dB

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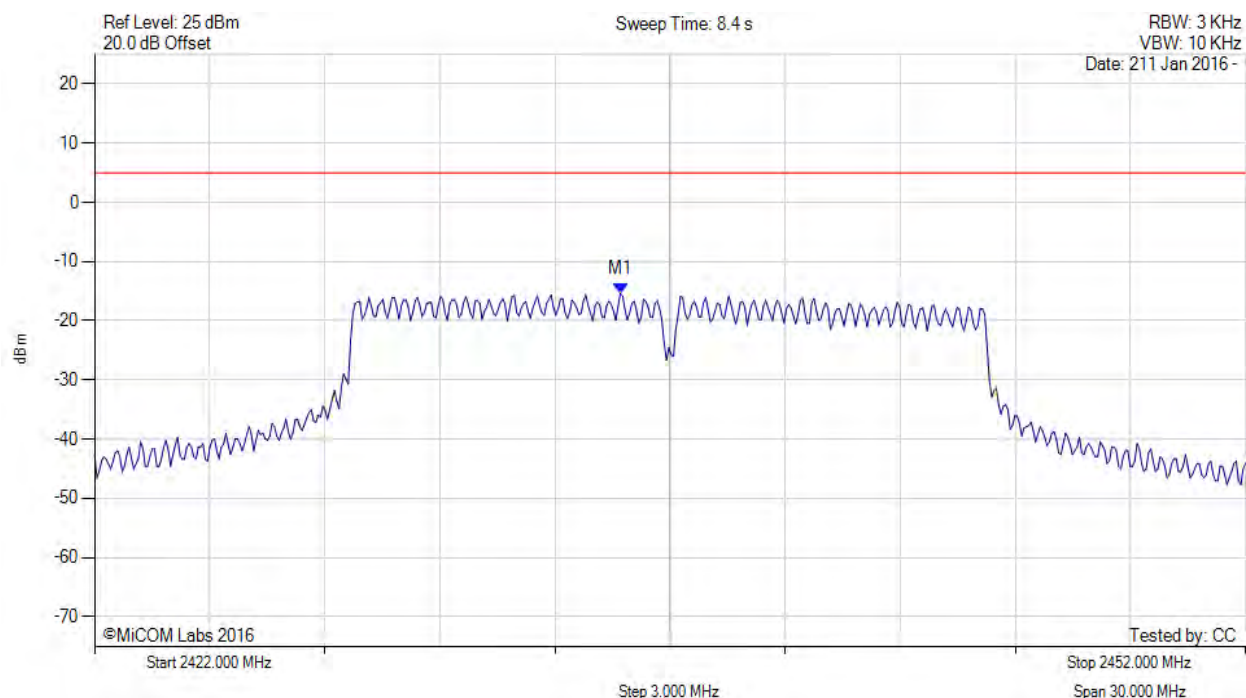


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2435.707 MHz : -15.387 dBm	Limit: ≤ 4.990 dBm

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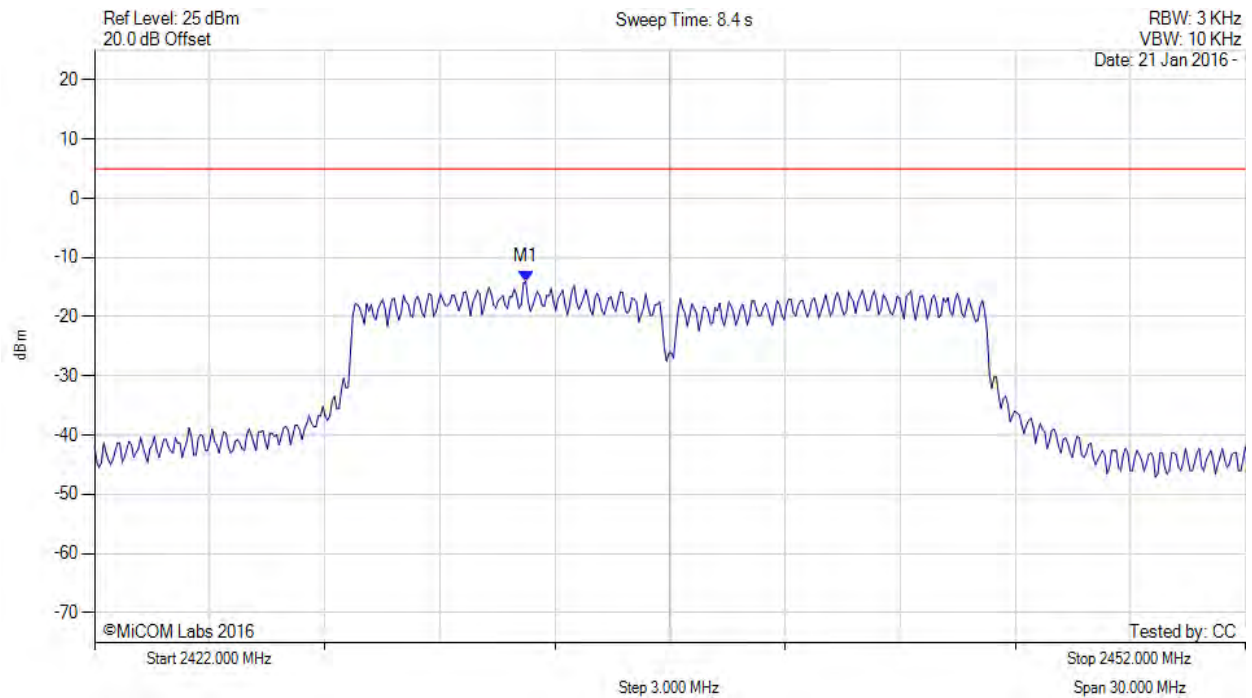


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2433.242 MHz : -14.044 dBm	Limit: ≤ 4.990 dBm

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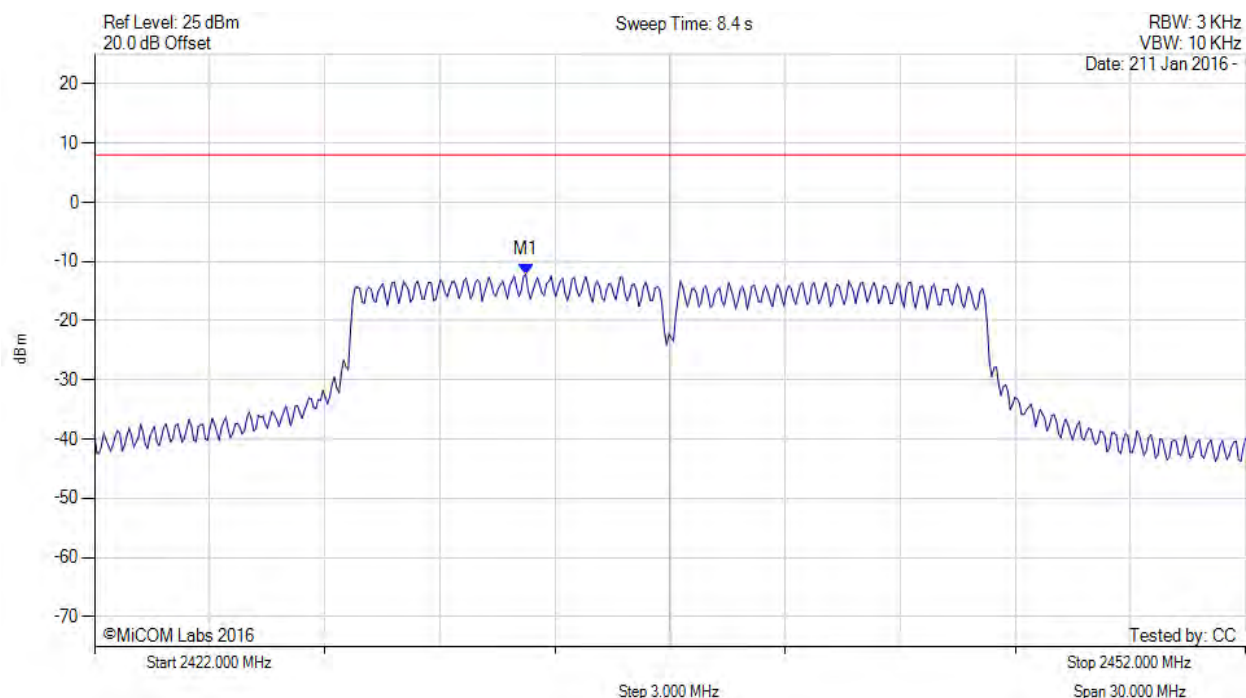


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, SUM, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2433.200 MHz : -12.177 dBm M1 + DCCF : 2433.200 MHz : -12.000 dBm Duty Cycle Correction Factor : +0.18 dB	Limit: ≤ 8.0 dBm Margin: -20.0 dB

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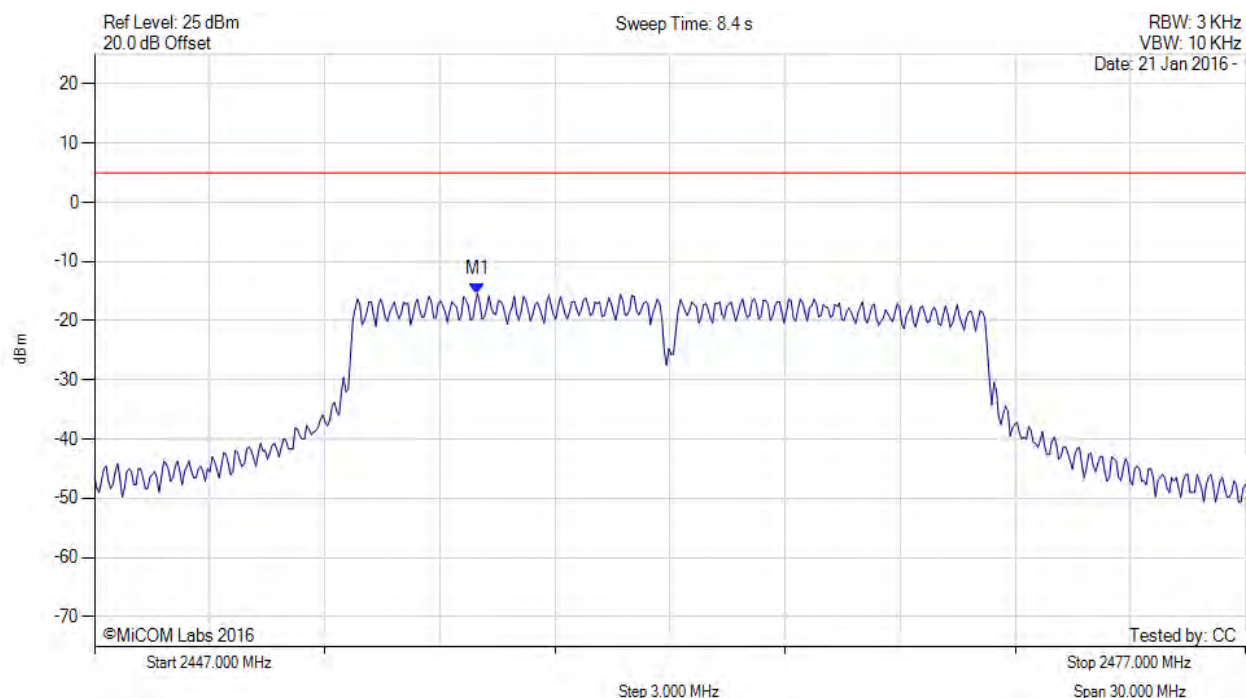


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2456.980 MHz : -15.387 dBm	Limit: ≤ 4.990 dBm

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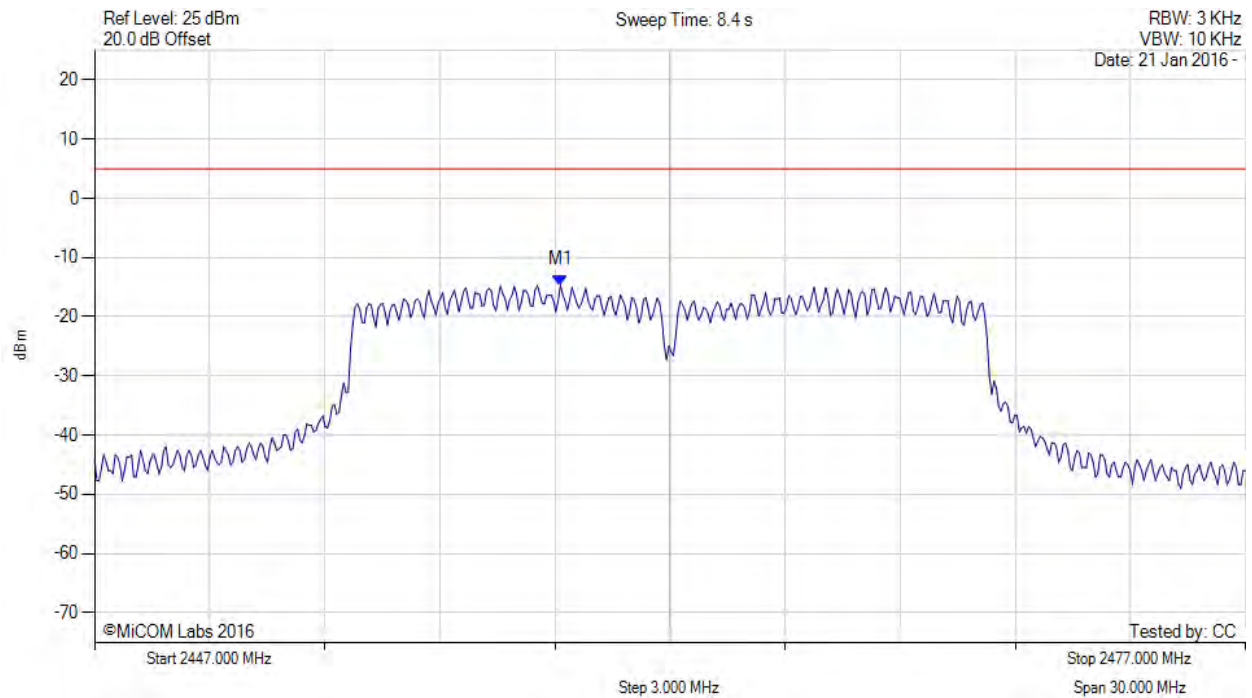


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2459.144 MHz : -14.634 dBm	Limit: ≤ 4.990 dBm

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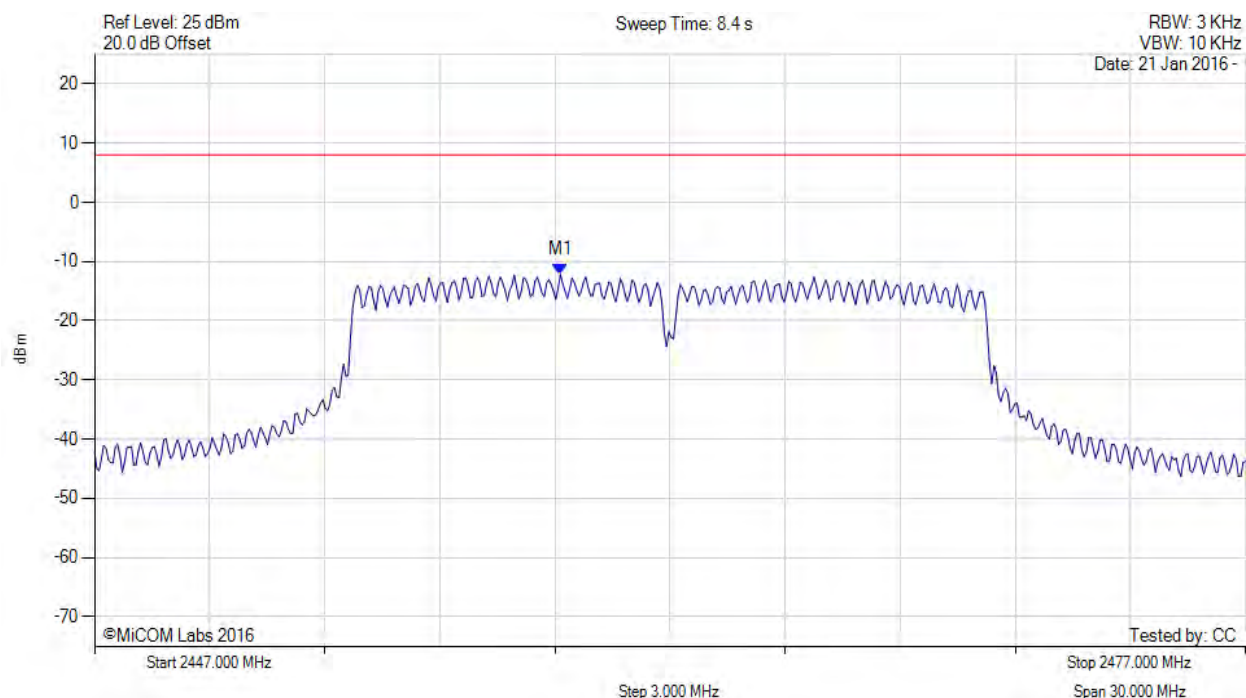


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, SUM, Temp: Ambient, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2459.100 MHz : -12.218 dBm M1 + DCCF : 2459.100 MHz : -12.041 dBm Duty Cycle Correction Factor : +0.18 dB	Limit: ≤ 8.0 dBm Margin: -20.1 dB

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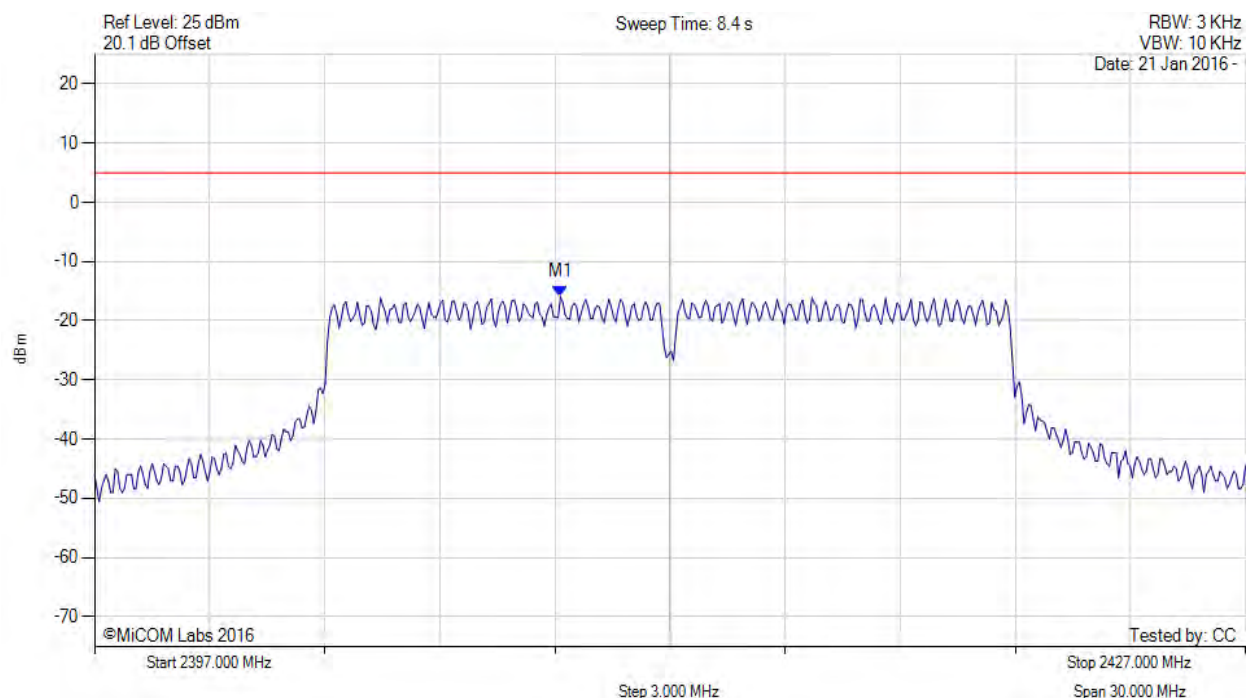


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2409.144 MHz : -15.950 dBm	Limit: ≤ 4.990 dBm

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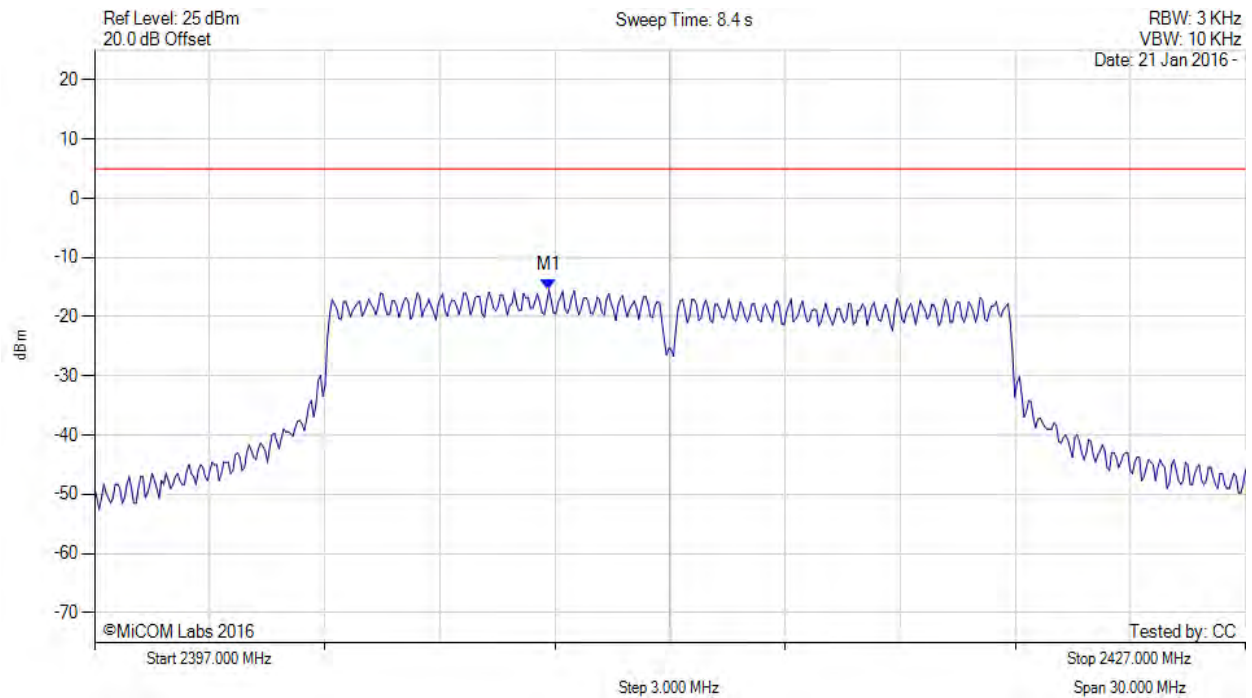


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2408.844 MHz : -15.478 dBm	Limit: ≤ 4.990 dBm

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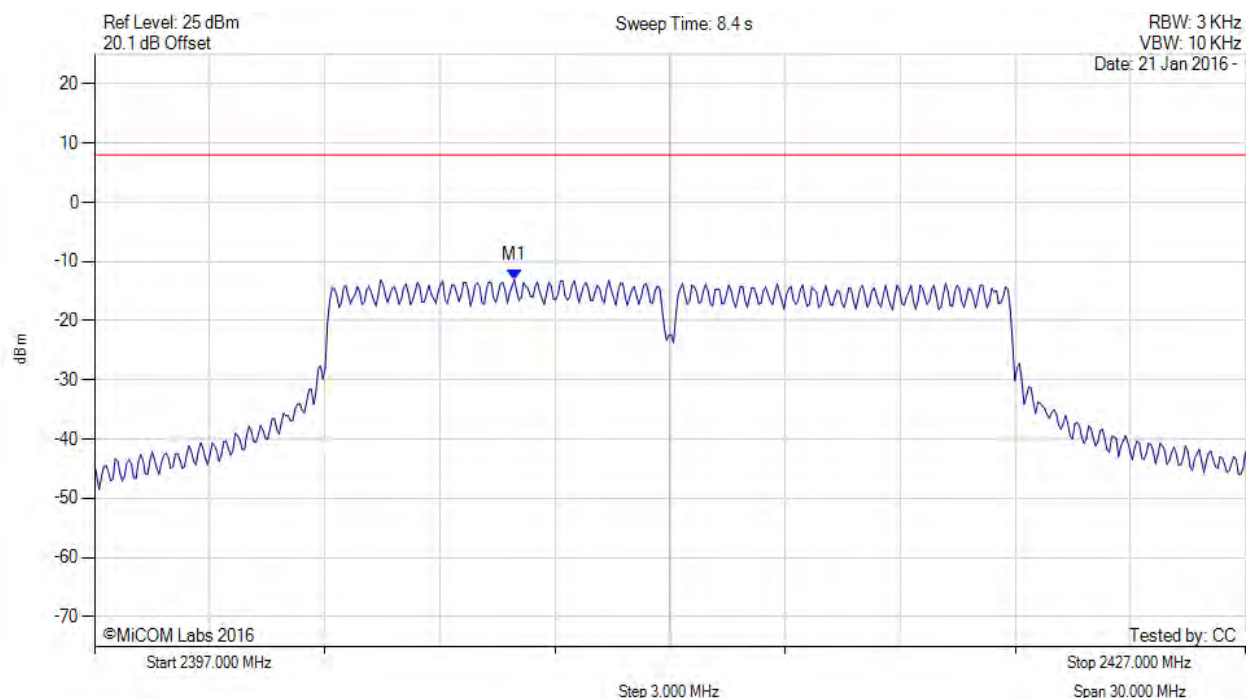


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, SUM, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2407.900 MHz : -13.070 dBm M1 + DCCF : 2407.900 MHz : -12.982 dBm Duty Cycle Correction Factor : +0.09 dB	Limit: ≤ 8.0 dBm Margin: -21.0 dB

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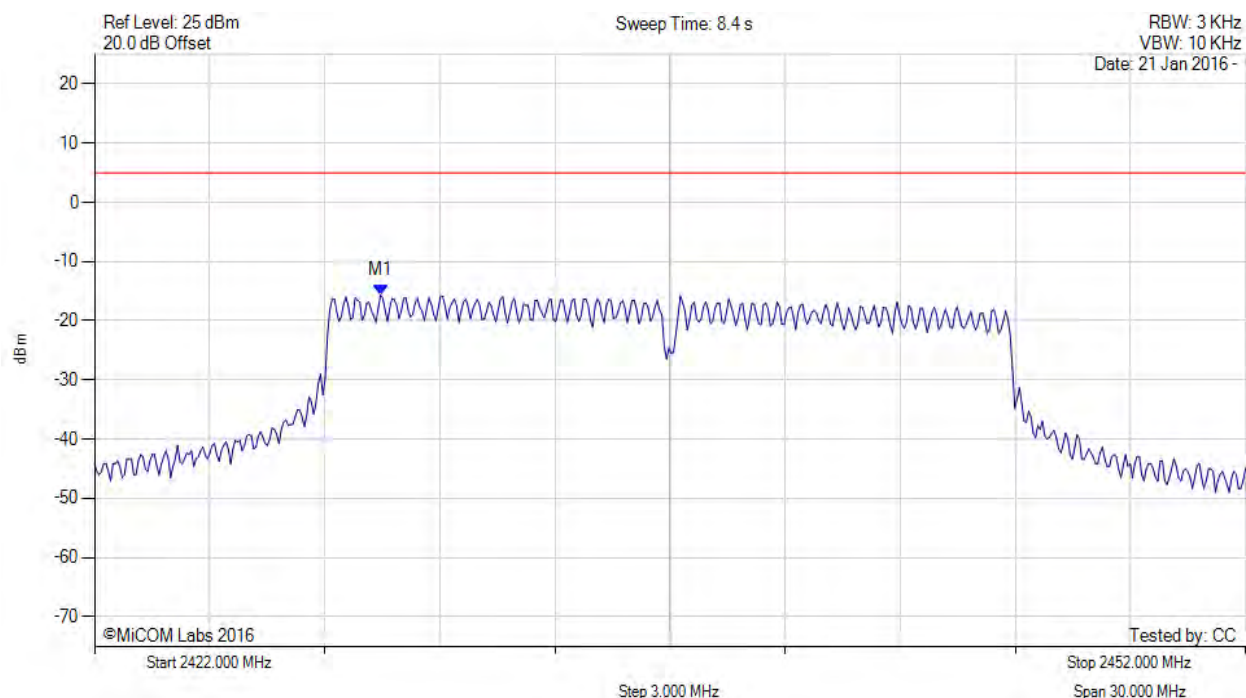


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2429.455 MHz : -15.664 dBm	Limit: ≤ 4.990 dBm

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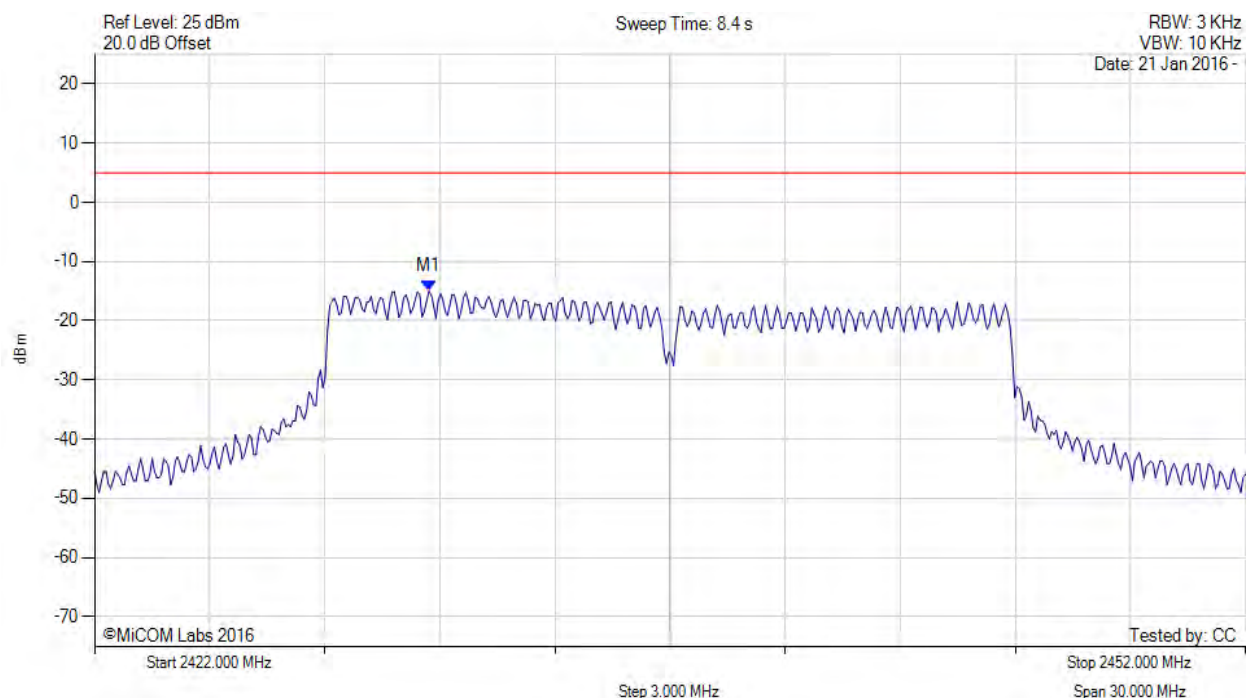


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2430.717 MHz : -14.988 dBm	Limit: ≤ 4.990 dBm

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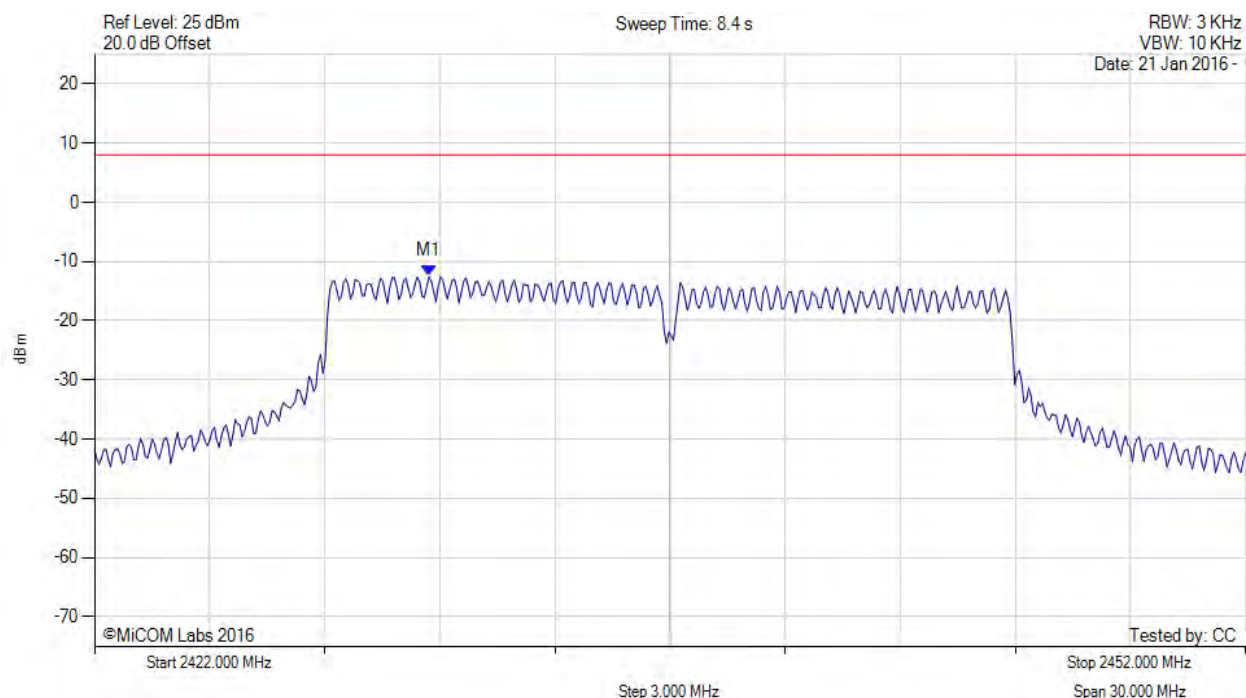


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, SUM, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2430.700 MHz : -12.518 dBm M1 + DCCF : 2430.700 MHz : -12.430 dBm Duty Cycle Correction Factor : +0.09 dB	Limit: ≤ 8.0 dBm Margin: -20.4 dB

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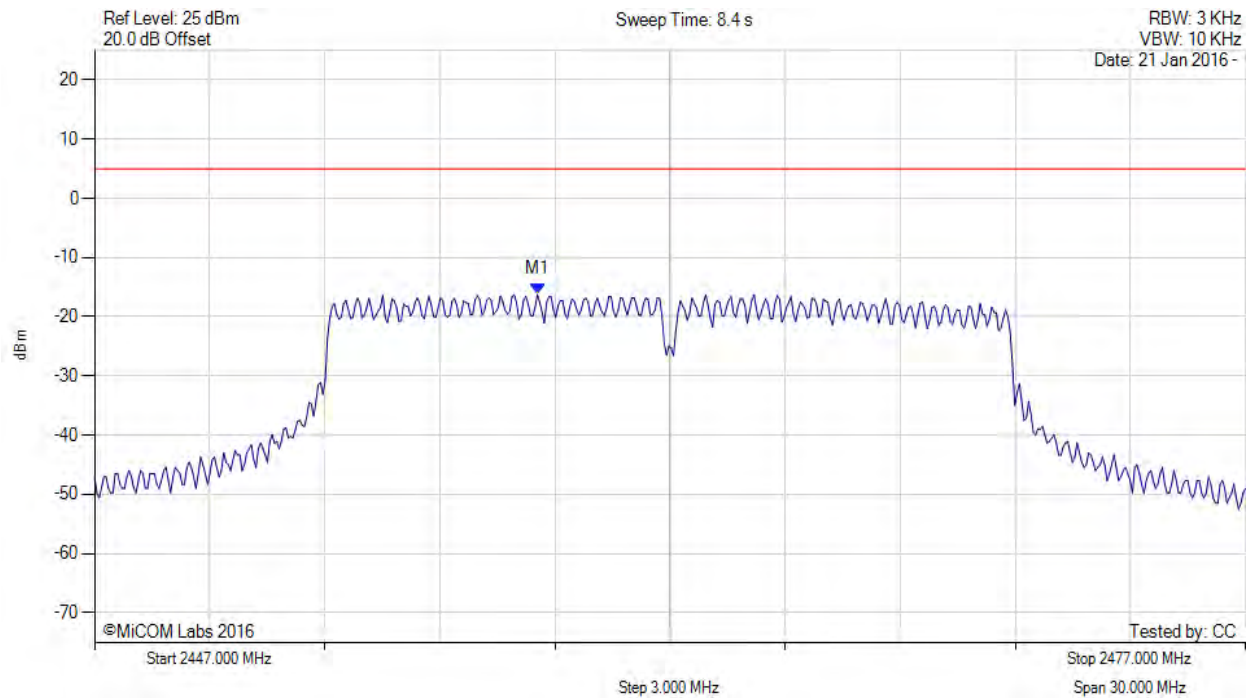


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2458.543 MHz : -16.245 dBm	Limit: ≤ 4.990 dBm

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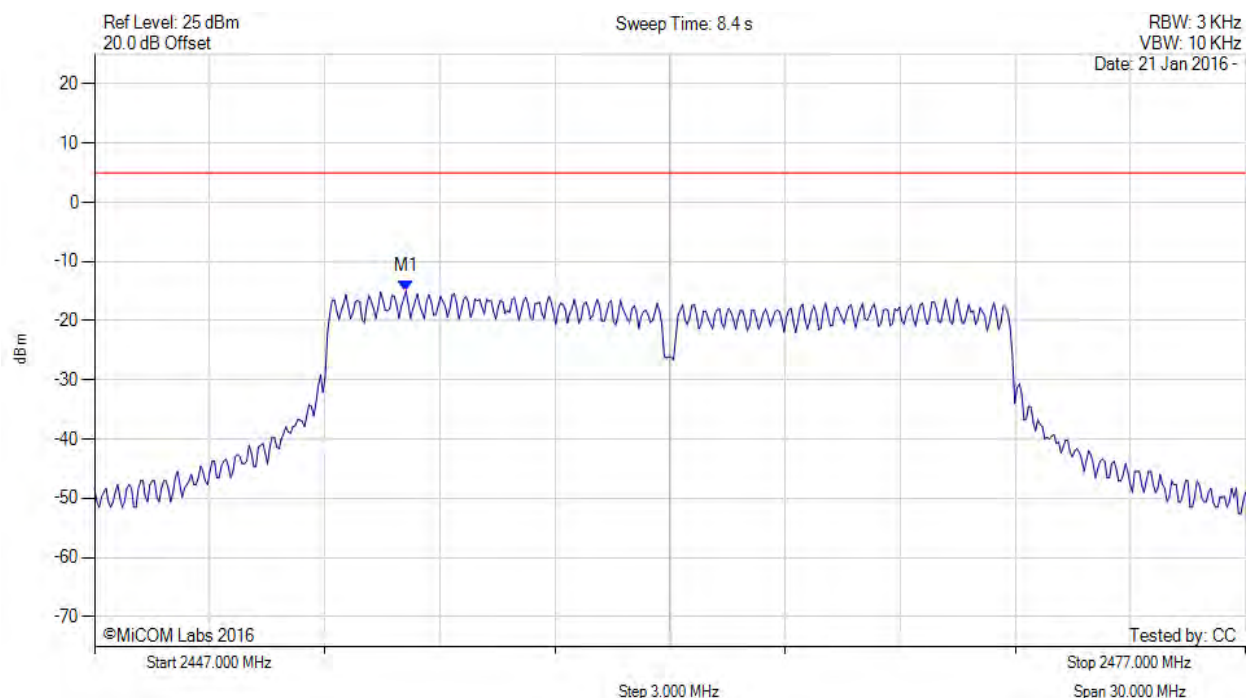


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2455.116 MHz : -15.002 dBm	Limit: ≤ 4.990 dBm

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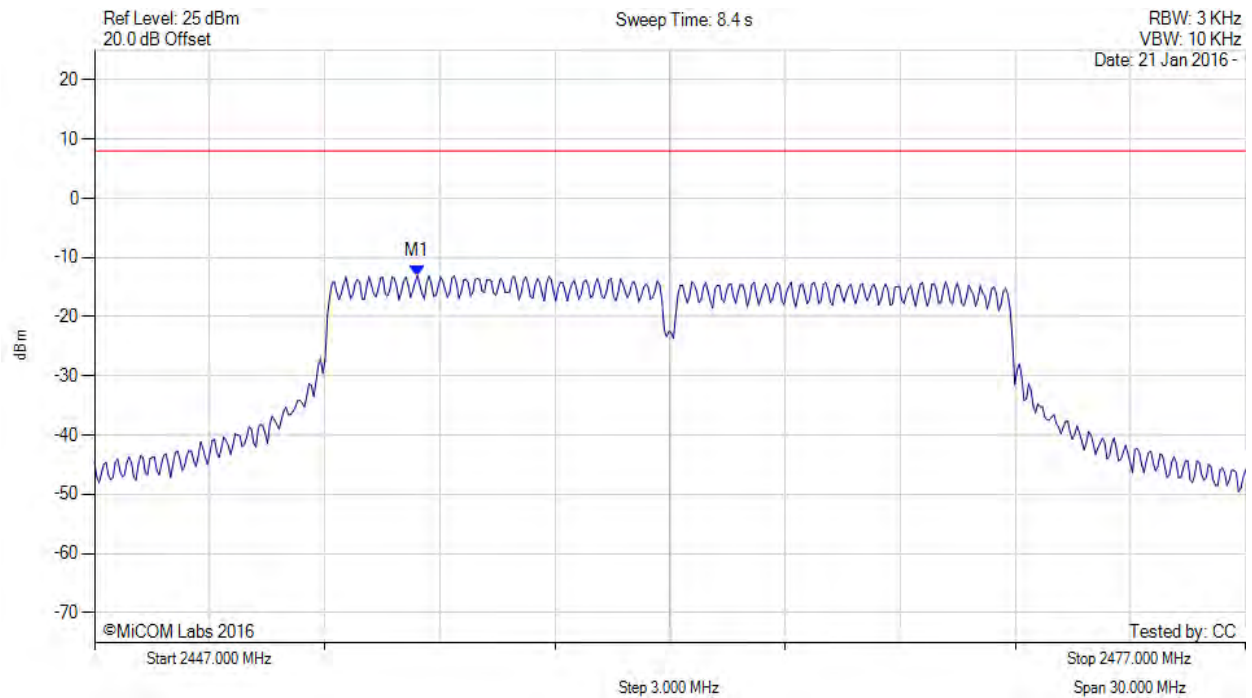


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, SUM, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2455.400 MHz : -13.069 dBm M1 + DCCF : 2455.400 MHz : -12.981 dBm Duty Cycle Correction Factor : +0.09 dB	Limit: ≤ 8.0 dBm Margin: -21.0 dB

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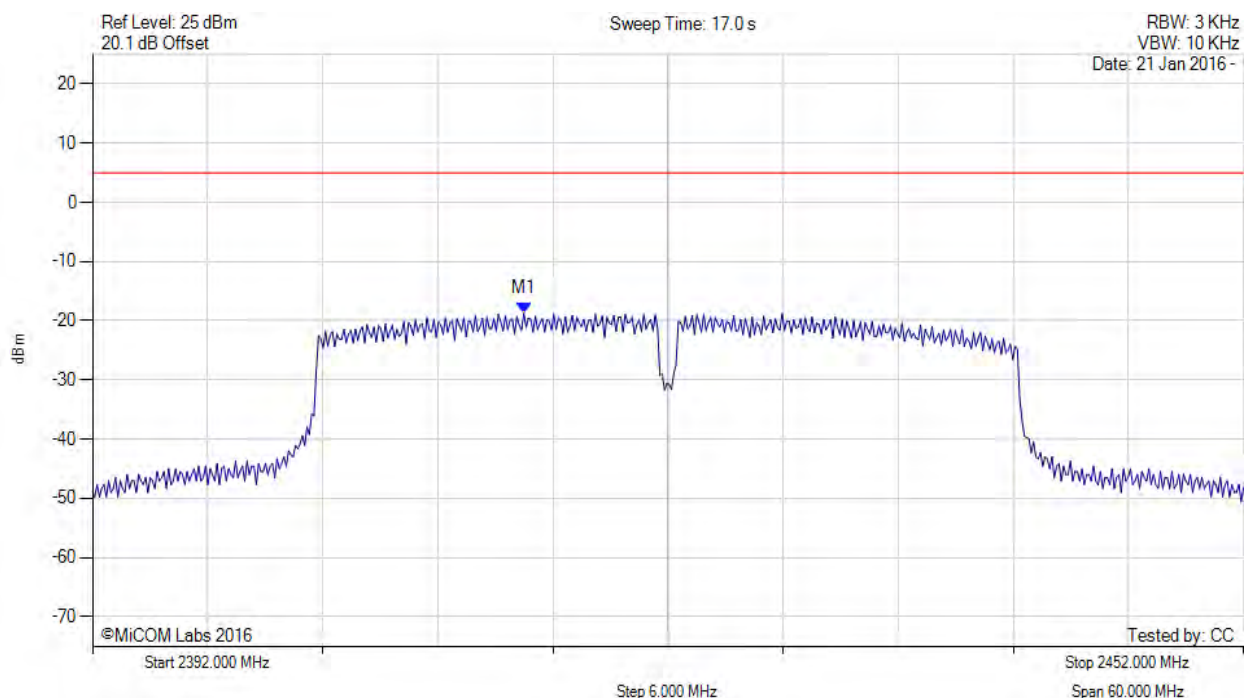


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2414.485 MHz : -18.744 dBm	Limit: ≤ 4.990 dBm

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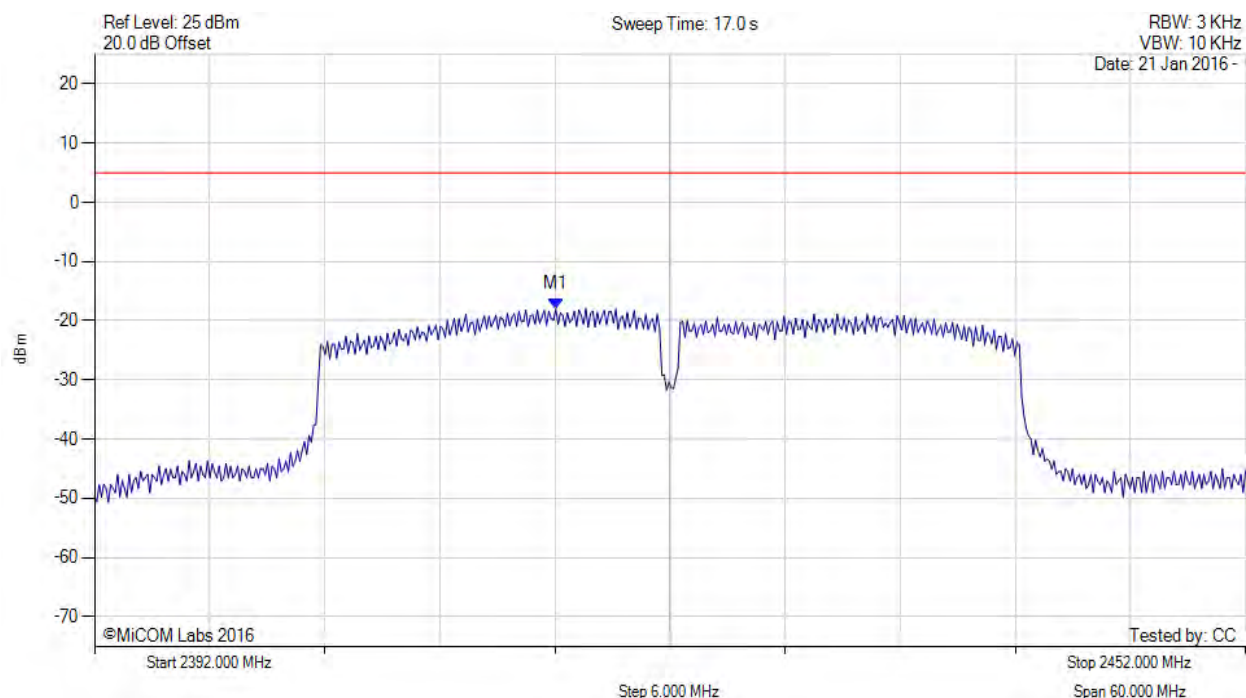


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2416.048 MHz : -18.018 dBm	Limit: ≤ 4.990 dBm

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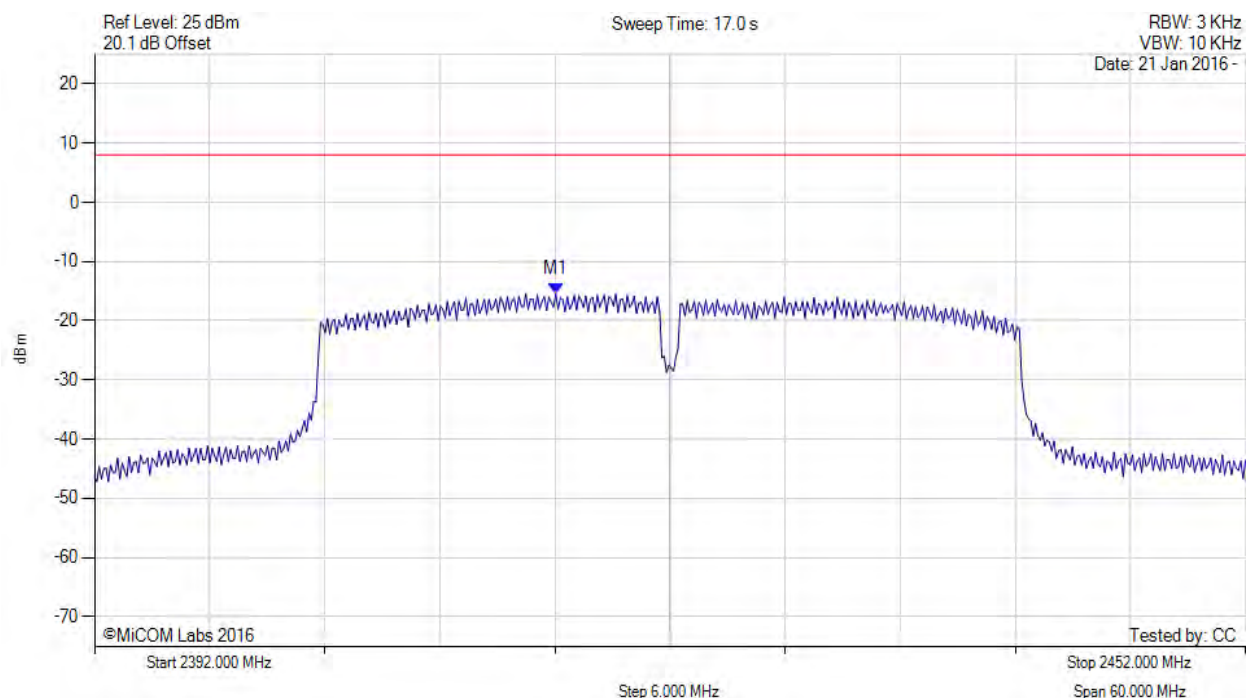


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, SUM, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2416.000 MHz : -15.437 dBm M1 + DCCF : 2416.000 MHz : -15.349 dBm Duty Cycle Correction Factor : +0.09 dB	Limit: ≤ 8.0 dBm Margin: -23.4 dB

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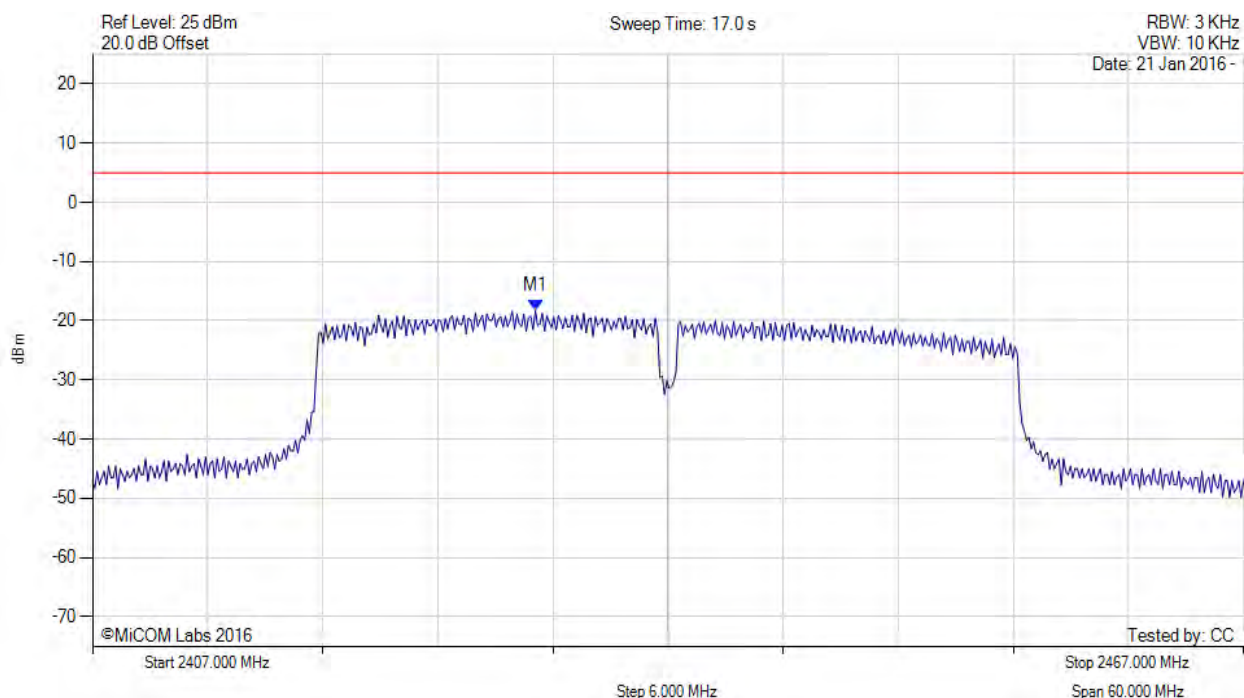


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2430.086 MHz : -18.267 dBm	Limit: ≤ 4.990 dBm

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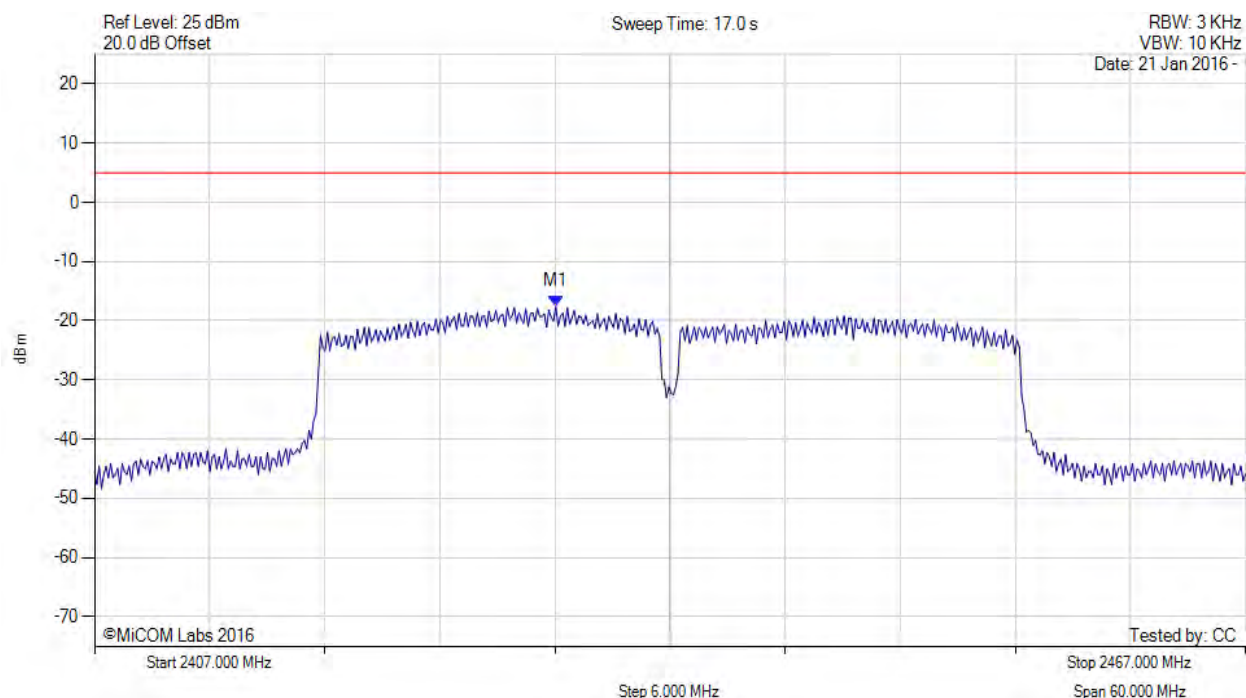


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2431.048 MHz : -17.579 dBm	Limit: ≤ 4.990 dBm

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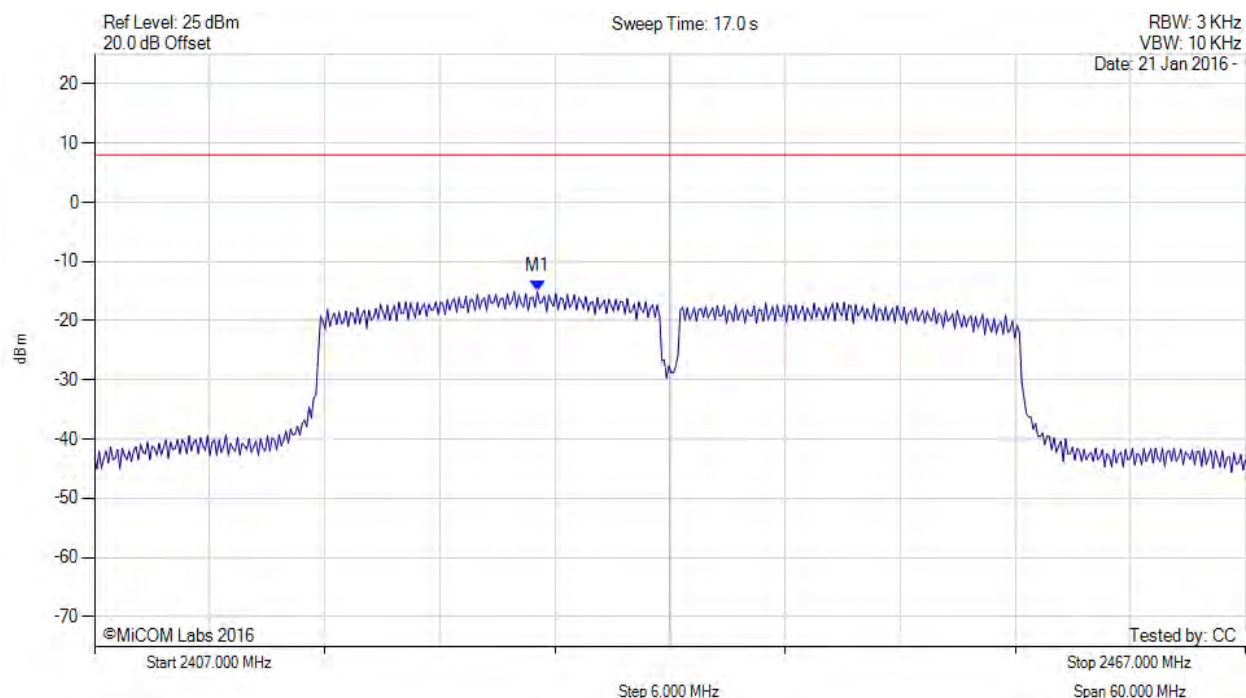


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, SUM, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2430.100 MHz : -15.078 dBm M1 + DCCF : 2430.100 MHz : -14.990 dBm Duty Cycle Correction Factor : +0.09 dB	Limit: ≤ 8.0 dBm Margin: -23.0 dB

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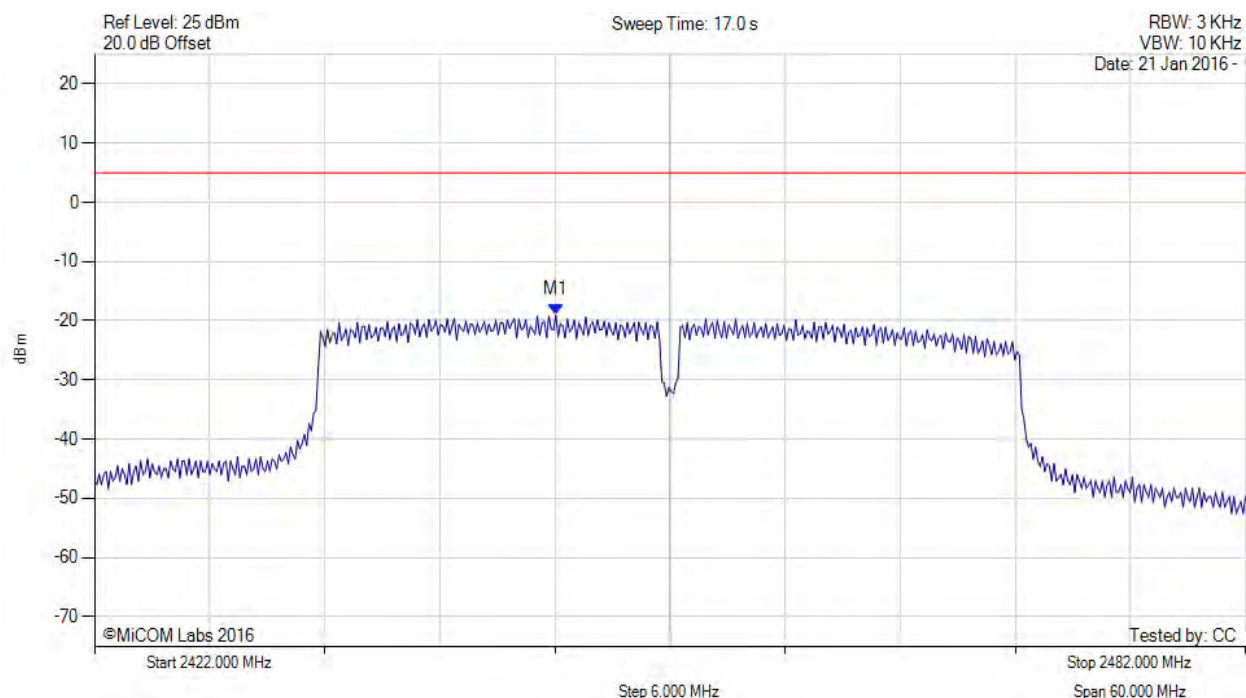


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2446.048 MHz : -19.039 dBm	Limit: ≤ 4.990 dBm

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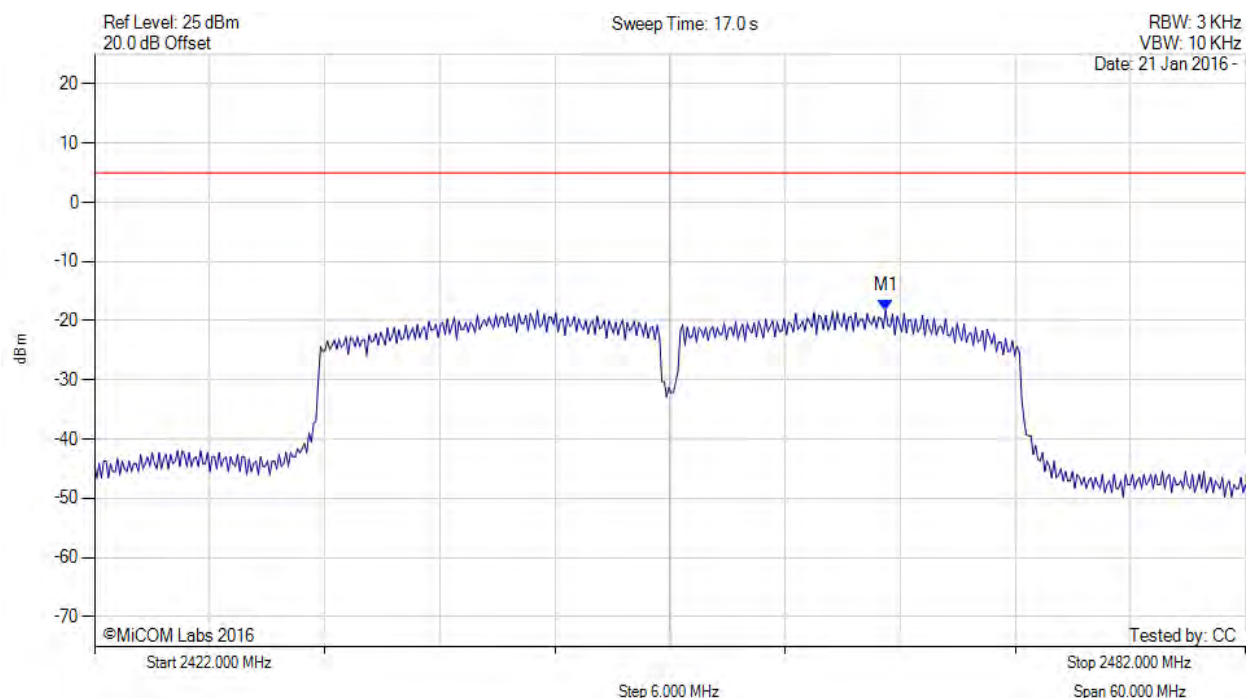


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2463.242 MHz : -18.225 dBm	Limit: ≤ 4.990 dBm

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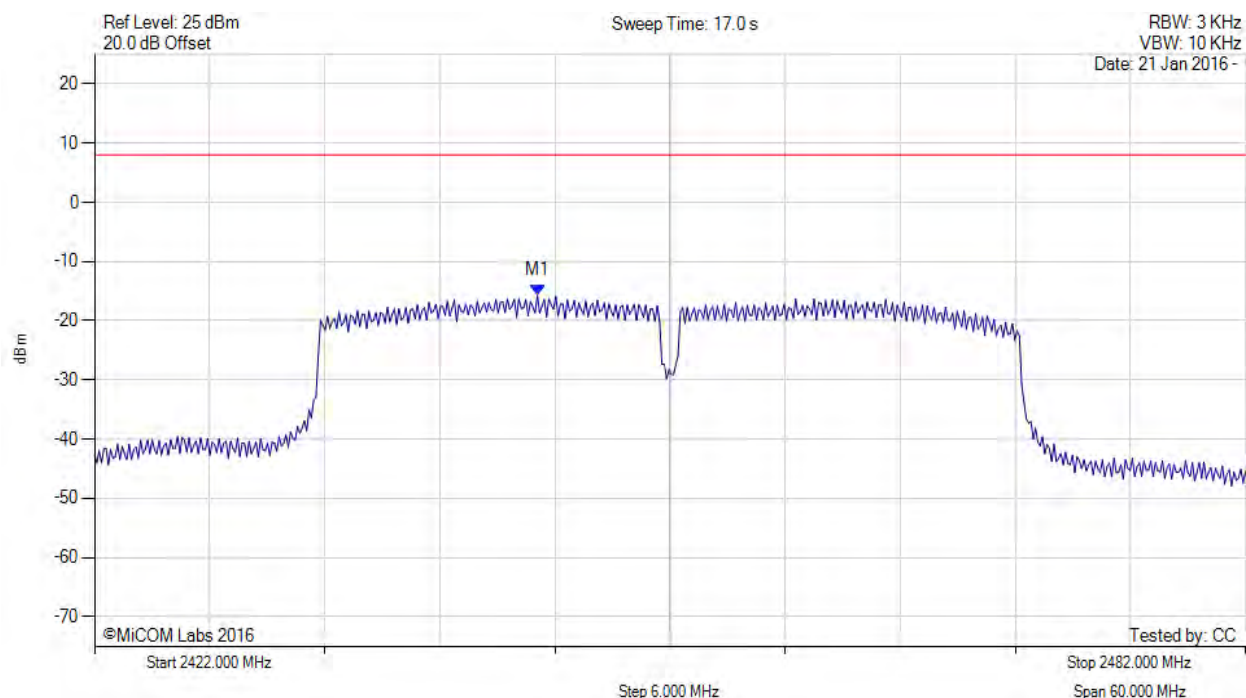


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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, SUM, Temp: Ambient, Voltage: 55 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2445.100 MHz : -15.698 dBm M1 + DCCF : 2445.100 MHz : -15.610 dBm Duty Cycle Correction Factor : +0.09 dB	Limit: ≤ 8.0 dBm Margin: -23.6 dB

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