

# TEST REPORT ADDENDUM - CONDUCTED



Test of: Actiontec Electronics Inc T3200BV, C2300A

To: FCC CFR 47 Part 15 Subpart C 15.247 (DTS)

Test Report Serial No.: ATEC23-U4 Conducted Rev A

This report supersedes: NONE

Note: this report is one of a set of reports that together address the requirements of the standard for certification purposes.

Master Document Number	Addendum Reports
ATEC23-U4_Master	ATEC23-U4_Conducted
	ATEC23-U4_Radiated
	ATEC23-U2 (FCC Part 15B & ICES-003)

Applicant: Actiontec Electronics Inc  
760 N Mary Avenue  
Sunnyvale, California 94085  
USA

Bonded VDSL2/G.fast Wireless AC  
Gateway Router

Issue Date: 30th March 2017

## **This Test Report is Issued Under the Authority of:**

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**Title:** Actiontec Electronics Inc T3200BV, C2300A  
**To:** FCC CFR 47 Part 15 Subpart C 15.247 (DTS)  
**Serial #:** ATEC23-U4 Conducted 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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## 1. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft		
Rev A	30 <sup>th</sup> March 2017	Initial release.
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In the above table the latest report revision will replace all earlier versions.

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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><b>Limits for 6 dB and 99% Bandwidth</b></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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#### Equipment Configuration for 6 dB & 99% Bandwidth

<b>Variant:</b>	802.11b	<b>Duty Cycle (%):</b>	99
<b>Data Rate:</b>	1.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### 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
2412.0	<a href="#">8.577</a>	<a href="#">8.577</a>	<a href="#">8.978</a>	--	8.978	8.577	≥500.0	-8.08
2437.0	<a href="#">8.497</a>	<a href="#">8.497</a>	<a href="#">8.577</a>	--	8.577	8.497	≥500.0	-8.00
2462.0	<a href="#">8.497</a>	<a href="#">9.058</a>	<a href="#">8.978</a>	--	9.058	8.497	≥500.0	-8.00

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	<a href="#">11.944</a>	<a href="#">11.864</a>	<a href="#">11.944</a>	--	11.944		
2437.0	<a href="#">11.864</a>	<a href="#">11.944</a>	<a href="#">11.944</a>	--	11.944		
2462.0	<a href="#">11.784</a>	<a href="#">11.864</a>	<a href="#">11.784</a>	--	11.864		

#### Traceability to Industry Recognized Test Methodologies

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

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

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#### Equipment Configuration for 6 dB & 99% Bandwidth

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	97
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### 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
2412.0	<a href="#">16.353</a>	<a href="#">16.353</a>	<a href="#">16.433</a>	--	16.433	16.353	≥500.0	-15.85
2437.0	<a href="#">16.353</a>	<a href="#">16.353</a>	<a href="#">16.433</a>	--	16.433	16.353	≥500.0	-15.85
2462.0	<a href="#">16.353</a>	<a href="#">16.353</a>	<a href="#">16.353</a>	--	16.353	16.353	≥500.0	-15.85

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	<a href="#">16.513</a>	<a href="#">16.513</a>	<a href="#">16.513</a>	--	16.513		
2437.0	<a href="#">16.593</a>	<a href="#">16.513</a>	<a href="#">16.593</a>	--	16.593		
2462.0	<a href="#">16.513</a>	<a href="#">16.433</a>	<a href="#">16.513</a>	--	16.513		

#### Traceability to Industry Recognized Test Methodologies

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

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

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#### Equipment Configuration for 6 dB & 99% Bandwidth

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	97
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### 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
2412.0	<a href="#">16.353</a>	<a href="#">16.273</a>	<a href="#">16.433</a>	--	16.433	16.273	≥500.0	-15.77
2437.0	<a href="#">16.353</a>	<a href="#">16.353</a>	<a href="#">16.433</a>	--	16.433	16.353	≥500.0	-15.85
2462.0	<a href="#">16.353</a>	<a href="#">16.353</a>	<a href="#">16.353</a>	--	16.353	16.353	≥500.0	-15.85

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	<a href="#">16.513</a>	<a href="#">16.513</a>	<a href="#">16.513</a>	--	16.513		
2437.0	<a href="#">16.593</a>	<a href="#">16.513</a>	<a href="#">16.593</a>	--	16.593		
2462.0	<a href="#">16.433</a>	<a href="#">16.433</a>	<a href="#">16.513</a>	--	16.513		

#### Traceability to Industry Recognized Test Methodologies

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

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

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#### Equipment Configuration for 6 dB & 99% Bandwidth

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	92
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### 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	<a href="#">35.431</a>	<a href="#">35.752</a>	<a href="#">35.431</a>	--	35.752	35.431	≥500.0	-34.93
2437.0	<a href="#">36.393</a>	<a href="#">36.393</a>	<a href="#">36.393</a>	--	36.393	36.393	≥500.0	-35.89
2452.0	<a href="#">36.232</a>	<a href="#">36.393</a>	<a href="#">36.072</a>	--	36.393	36.072	≥500.0	-35.57

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2422.0	<a href="#">36.072</a>	<a href="#">36.072</a>	<a href="#">36.072</a>	--	36.072		
2437.0	<a href="#">36.393</a>	<a href="#">36.393</a>	<a href="#">36.393</a>	--	36.393		
2452.0	<a href="#">36.232</a>	<a href="#">36.232</a>	<a href="#">36.072</a>	--	36.232		

#### Traceability to Industry Recognized Test Methodologies

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

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

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## 2.2. Conducted Output Power

Conducted Test Conditions for Fundamental Emission Output Power			
<b>Standard:</b>	FCC CFR 47:15.247	<b>Ambient Temp. (°C):</b>	24.0 - 27.5
<b>Test Heading:</b>	Output Power	<b>Rel. Humidity (%):</b>	32 - 45
<b>Standard Section(s):</b>	15.247 (b) & (c)	<b>Pressure (mBars):</b>	999 - 1001
<b>Reference Document(s):</b>	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<sup>a/10</sup> + 10<sup>b/10</sup> + 10<sup>c/10</sup> + 10<sup>d/10</sup>)]  
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 instructions informing the operator and the installer of this responsibility.

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(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 stave 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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#### Equipment Configuration for Average Output Power

<b>Variant:</b>	802.11b	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	1.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b> Channel 11 is restricted by radiated band edge.			

#### Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	22.63	23.65	22.65	--	27.77	30.00	-2.23	24.00
2437.0	23.66	24.63	23.64	--	28.77	30.00	-1.23	24.00
2462.0	23.15	24.64	23.64	--	28.63	30.00	-1.37	23.00

#### Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	$\pm 1.33$ dB

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

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#### Equipment Configuration for Average Output Power

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b> Channel 1, 11 is restricted by radiated band edge.			

#### Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power $\Sigma$ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	19.66	20.87	19.74	--	24.90	30.00	-5.10	22.00
2437.0	24.21	25.64	24.20	--	29.51	30.00	-0.49	25.00
2462.0	19.36	20.59	19.76	--	24.71	30.00	-5.29	20.00

#### Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	$\pm 1.33$ dB

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

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#### Equipment Configuration for Average Output Power

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b> Channel 1, 11 is restricted by radiated band edge.			

#### Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	23.37	20.79	19.93	--	26.39	30.00	-3.61	22.00
2437.0	24.27	25.64	24.36	--	29.57	30.00	-0.43	25.00
2462.0	19.26	20.62	20.06	--	24.79	30.00	-5.21	20.00

#### Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	$\pm 1.33$ dB

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

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#### Equipment Configuration for Average Output Power

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	92.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b> Channel 3, 9 is restricted by radiated band edge.			

#### Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power $\Sigma$ Port(s)	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2422.0	18.67	20.04	19.17	--	24.10	30.00	-5.90	20.00
2437.0	24.61	26.13	24.46	--	29.91	30.00	-0.09	25.00
2452.0	15.66	16.70	16.11	--	20.95	30.00	-9.05	16.00

#### Traceability to Industry Recognized Test Methodologies

Work Instruction:	WI-01 MEASURING RF OUTPUT POWER
Measurement Uncertainty:	$\pm 1.33$ dB

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

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## 2.3. 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<sup>a/10</sup> + 10<sup>b/10</sup> + 10<sup>c/10</sup> + 10<sup>d/10</sup>)]

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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#### Equipment Configuration for Power Spectral Density - Average

<b>Variant:</b>	802.11b	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	1.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### 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	<a href="#">-8.645</a>	<a href="#">-8.848</a>	<a href="#">-9.965</a>		<a href="#">-4.622</a>	8.0	-12.6
2437.0	<a href="#">-8.568</a>	<a href="#">-8.676</a>	<a href="#">-9.846</a>		<a href="#">-4.500</a>	8.0	-12.5
2462.0	<a href="#">-9.680</a>	<a href="#">-9.800</a>	<a href="#">-11.013</a>		<a href="#">-5.346</a>	8.0	-13.3

#### 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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#### Equipment Configuration for Power Spectral Density - Average

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

Test Frequency	Measured Power Spectral Density				Amplitude Summation + DCCF (+0.13 dB)	Limit	Margin
	Port(s) (dBm/3KHz)						
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
2412.0	<a href="#">-13.260</a>	<a href="#">-14.153</a>	<a href="#">-14.944</a>		<a href="#">-9.643</a>	8.0	-17.6
2437.0	<a href="#">-9.594</a>	<a href="#">-10.349</a>	<a href="#">-11.901</a>		<a href="#">-6.108</a>	8.0	-14.1
2462.0	<a href="#">-15.342</a>	<a href="#">-16.483</a>	<a href="#">-17.170</a>		<a href="#">-12.030</a>	8.0	-20.0

#### 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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#### Equipment Configuration for Power Spectral Density - Average

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

Test Frequency	Measured Power Spectral Density				Amplitude Summation + DCCF (+0.13 dB)	Limit	Margin
	Port(s) (dBm/3KHz)						
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
2412.0	<a href="#">-13.145</a>	<a href="#">-14.169</a>	<a href="#">-15.033</a>		<a href="#">-9.706</a>	8.0	-17.7
2437.0	<a href="#">-9.331</a>	<a href="#">-10.484</a>	<a href="#">-11.655</a>		<a href="#">-6.076</a>	8.0	-14.0
2462.0	<a href="#">-15.159</a>	<a href="#">-16.380</a>	<a href="#">-17.011</a>		<a href="#">-11.827</a>	8.0	-19.8

#### Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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#### Equipment Configuration for Power Spectral Density - Average

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	92.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

Test Frequency	Measured Power Spectral Density				Amplitude Summation + DCCF (+0.36 dB)	Limit	Margin
	Port(s) (dBm/3KHz)						
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
2422.0	<a href="#">-19.340</a>	<a href="#">-18.574</a>	<a href="#">-20.074</a>		<a href="#">-14.334</a>	8.0	-22.3
2437.0	<a href="#">-13.786</a>	<a href="#">-13.824</a>	<a href="#">-14.563</a>		<a href="#">-9.235</a>	8.0	-17.2
2452.0	<a href="#">-23.708</a>	<a href="#">-23.154</a>	<a href="#">-23.806</a>		<a href="#">-18.566</a>	8.0	-26.5

#### Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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## **2.4. Emissions**

### **2.4.1. Conducted Emissions**

#### **2.4.1.1. Conducted Spurious Emissions**

Conducted Test Conditions for Transmitter Conducted Spurious and Band-Edge Emissions			
<b>Standard:</b>	FCC CFR 47:15.247	<b>Ambient Temp. (°C):</b>	24.0 - 27.5
<b>Test Heading:</b>	Max Unwanted Emission Levels	<b>Rel. Humidity (%):</b>	32 - 45
<b>Standard Section(s):</b>	15.247 (d)	<b>Pressure (mBars):</b>	999 - 1001
<b>Reference Document(s):</b>	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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#### Equipment Configuration for Conducted Spurious Emissions - Average

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

#### Test Measurement Results

Test Frequency	Frequency Range	Conducted Spurious Emissions - Average (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	<a href="#">-56.724</a>	-40.12	<a href="#">-56.824</a>	-40.27	<a href="#">-56.724</a>	-41.06	--	--
2437.0	30.0 - 26000.0	<a href="#">-56.724</a>	-40.16	<a href="#">-56.824</a>	-39.88	<a href="#">-56.724</a>	-41.10	--	--
2462.0	30.0 - 26000.0	<a href="#">-56.724</a>	-41.73	<a href="#">-56.824</a>	-41.24	<a href="#">-56.724</a>	-42.15	--	--

#### Traceability to Industry Recognized Test Methodologies

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

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

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#### Equipment Configuration for Conducted Spurious Emissions - Average

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

Test Frequency	Frequency Range	Conducted Spurious Emissions - Average (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	<a href="#">-56.724</a>	-41.75	<a href="#">-56.824</a>	-41.68	<a href="#">-56.724</a>	-42.72	--	--
2437.0	30.0 - 26000.0	<a href="#">-56.724</a>	-37.37	<a href="#">-56.824</a>	-36.98	<a href="#">-56.724</a>	-38.40	--	--
2462.0	30.0 - 26000.0	<a href="#">-56.724</a>	-43.20	<a href="#">-56.824</a>	-43.02	<a href="#">-56.724</a>	-43.79	--	--

#### Traceability to Industry Recognized Test Methodologies

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

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#### Equipment Configuration for Conducted Spurious Emissions - Average

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

Test Frequency	Frequency Range	Conducted Spurious Emissions - Average (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	<a href="#">-56.724</a>	-41.72	<a href="#">-56.824</a>	-41.59	<a href="#">-56.724</a>	-42.74	--	--
2437.0	30.0 - 26000.0	<a href="#">-56.724</a>	-37.29	<a href="#">-56.824</a>	-37.24	<a href="#">-56.724</a>	-38.43	--	--
2462.0	30.0 - 26000.0	<a href="#">-56.724</a>	-43.50	<a href="#">-56.824</a>	-43.05	<a href="#">-56.724</a>	-43.69	--	--

#### Traceability to Industry Recognized Test Methodologies

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

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

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#### Equipment Configuration for Conducted Spurious Emissions - Average

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	92.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

Test Frequency	Frequency Range	Conducted Spurious Emissions - Average (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	<a href="#">-56.724</a>	-44.50	<a href="#">-56.824</a>	-44.30	<a href="#">-56.724</a>	-45.53	--	--
2437.0	30.0 - 26000.0	<a href="#">-56.724</a>	-34.46	<a href="#">-56.824</a>	-34.17	<a href="#">-56.724</a>	-35.38	--	--
2452.0	30.0 - 26000.0	<a href="#">-56.724</a>	-44.10	<a href="#">-56.824</a>	-44.17	<a href="#">-56.724</a>	-44.60	--	--

#### Traceability to Industry Recognized Test Methodologies

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

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

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## 2.4.1.2. Conducted Band-Edge Emissions

### Conducted Low Band-Edge Emissions

#### Equipment Configuration for Conducted Low Band-Edge Emissions - Average

<b>Variant:</b>	802.11b	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	1.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

<b>Channel Frequency:</b>	2412.0 MHz					
<b>Band-Edge Frequency:</b>	2400.0 MHz					
<b>Test Frequency Range:</b>	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)	(MHz)
<b>a</b>	<a href="#">-47.94</a>	-23.83	2404.30	--	--	-4.300
<b>b</b>	<a href="#">-46.59</a>	-23.69	2404.30	--	--	-4.300
<b>c</b>	<a href="#">-49.68</a>	-24.84	2404.30	--	--	-4.300

#### Traceability to Industry Recognized Test Methodologies

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

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

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#### Equipment Configuration for Conducted Low Band-Edge Emissions - Average

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

<b>Channel Frequency:</b>	2412.0 MHz					
<b>Band-Edge Frequency:</b>	2400.0 MHz					
<b>Test Frequency Range:</b>	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)	(MHz)
<b>a</b>	<a href="#">-37.64</a>	-26.83	2402.10	--	--	-2.100
<b>b</b>	<a href="#">-37.98</a>	-29.90	2401.80	--	--	-1.800
<b>c</b>	<a href="#">-38.40</a>	-30.86	2401.80	--	--	-1.800

#### Traceability to Industry Recognized Test Methodologies

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

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

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**Title:** Actiontec Electronics Inc T3200BV, C2300A  
**To:** FCC CFR 47 Part 15 Subpart C 15.247 (DTS)  
**Serial #:** ATEC23-U4 Conducted Rev A  
**Issue Date:** 30th March 2017  
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#### Equipment Configuration for Conducted Low Band-Edge Emissions - Average

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

<b>Channel Frequency:</b>	2412.0 MHz					
<b>Band-Edge Frequency:</b>	2400.0 MHz					
<b>Test Frequency Range:</b>	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)	(MHz)
a	<a href="#">-37.64</a>	-26.61	2402.10	--	--	-2.100
b	<a href="#">-38.50</a>	-30.20	2401.80	--	--	-1.800
c	<a href="#">-38.40</a>	-30.77	2401.80	--	--	-1.800

#### Traceability to Industry Recognized Test Methodologies

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

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#### Equipment Configuration for Conducted Low Band-Edge Emissions - Average

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	92.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

<b>Channel Frequency:</b>	2422.0 MHz					
<b>Band-Edge Frequency:</b>	2400.0 MHz					
<b>Test Frequency Range:</b>	2292.0 - 2442.0 MHz					
Port(s)	Band-Edge Markers and Limit			Revised Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
<b>a</b>	<a href="#">-45.24</a>	-35.11	2402.30	--	--	-2.300
<b>b</b>	<a href="#">-44.78</a>	-35.33	2402.30	--	--	-2.300
<b>c</b>	<a href="#">-44.68</a>	-36.24	2402.30	--	--	-2.300

#### Traceability to Industry Recognized Test Methodologies

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

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### Conducted High Band-Edge Emissions

#### Equipment Configuration for Conducted High Band-Edge Emissions - Average

<b>Variant:</b>	802.11b	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	1.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

<b>Channel Frequency:</b>	2462.0 MHz					
<b>Band-Edge Frequency:</b>	2483.5 MHz					
<b>Test Frequency Range:</b>	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	<a href="#">-59.22</a>	-24.97	2469.50	--	--	-14.000
b	<a href="#">-59.32</a>	-24.79	2469.50	--	--	-14.000
c	<a href="#">-56.72</a>	-25.95	2469.50	--	--	-14.000

#### Traceability to Industry Recognized Test Methodologies

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

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#### Equipment Configuration for Conducted High Band-Edge Emissions - Average

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	2	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

<b>Channel Frequency:</b>	2462.0 MHz					
<b>Band-Edge Frequency:</b>	2483.5 MHz					
<b>Test Frequency Range:</b>	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	<a href="#">-54.79</a>	-28.56	2471.60	--	--	-11.900
b	<a href="#">-56.82</a>	-32.03	2471.90	--	--	-11.600
c	<a href="#">-53.20</a>	-32.69	2471.90	--	--	-11.600

#### Traceability to Industry Recognized Test Methodologies

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

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#### Equipment Configuration for Conducted High Band-Edge Emissions - Average

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	97.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	2	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

<b>Channel Frequency:</b>	2462.0 MHz					
<b>Band-Edge Frequency:</b>	2483.5 MHz					
<b>Test Frequency Range:</b>	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	<a href="#">-56.72</a>	-28.43	2471.60	--	--	-11.900
b	<a href="#">-56.82</a>	-32.06	2471.90	--	--	-11.600
c	<a href="#">-53.20</a>	-32.62	2471.90	--	--	-11.600

#### Traceability to Industry Recognized Test Methodologies

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

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**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### Equipment Configuration for Conducted High Band-Edge Emissions - Average

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	92.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	2.7
<b>Modulation:</b>	2	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	OC
<b>Engineering Test Notes:</b>			

#### Test Measurement Results

<b>Channel Frequency:</b>	2452.0 MHz					
<b>Band-Edge Frequency:</b>	2483.5 MHz					
<b>Test Frequency Range:</b>	2432.0 - 2582.0 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)
<b>a</b>	<a href="#">-56.72</a>	-35.40	2470.80	--	--	-12.700
<b>b</b>	<a href="#">-56.82</a>	-39.82	2471.40	--	--	-12.100
<b>c</b>	<a href="#">-54.79</a>	-39.92	2471.40	--	--	-12.100

#### Traceability to Industry Recognized Test Methodologies

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

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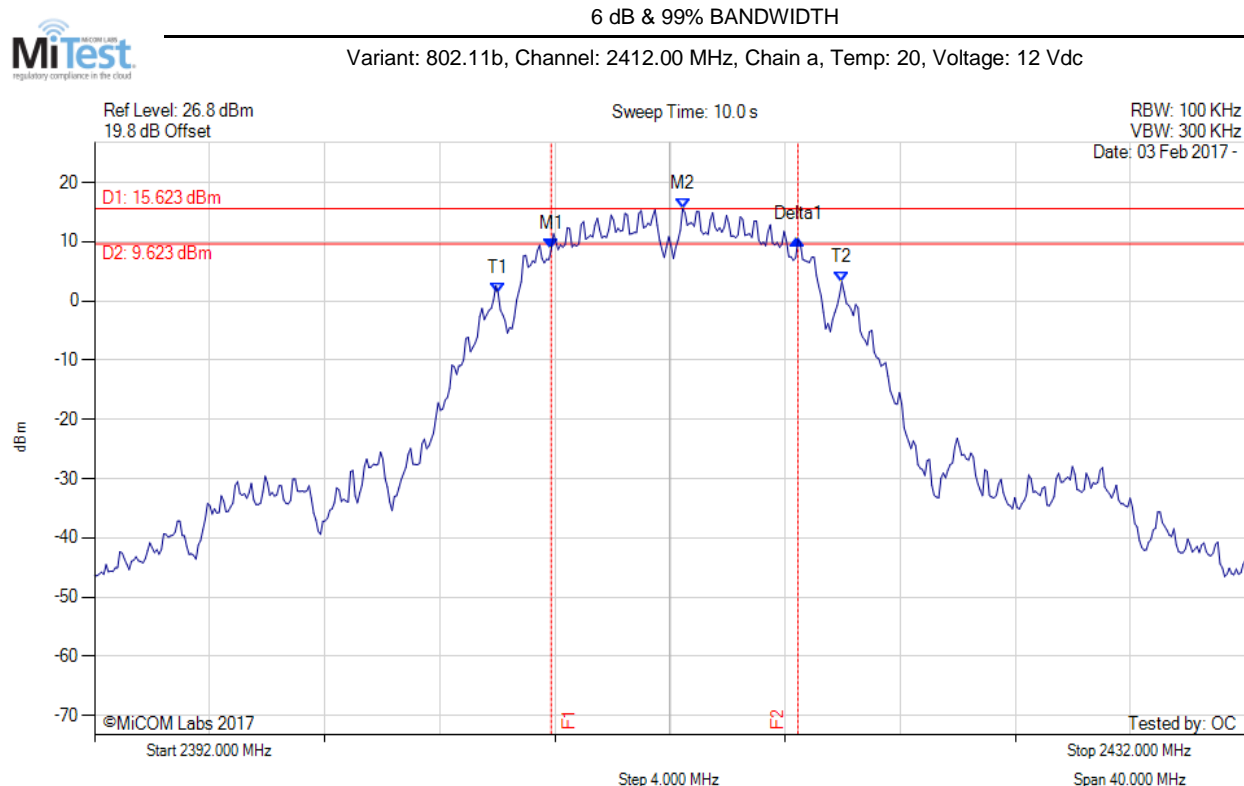
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## **A. APPENDIX - GRAPHICAL IMAGES**

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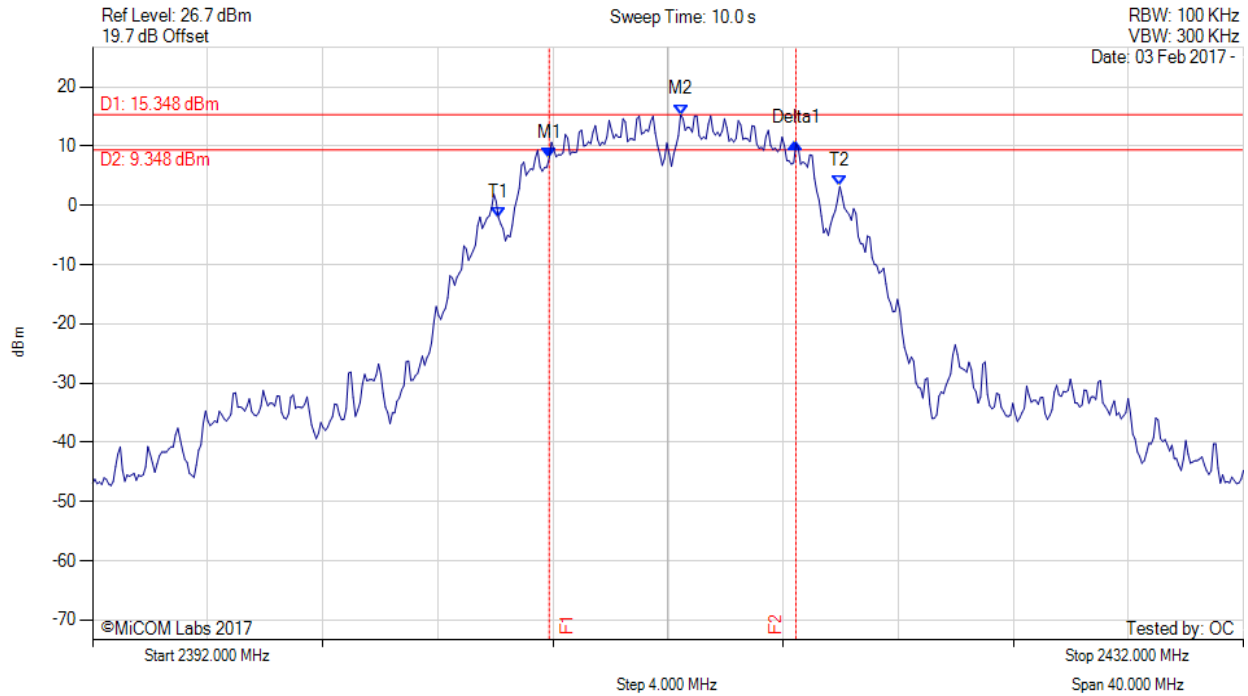
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## A.1. 6 dB & 99% Bandwidth



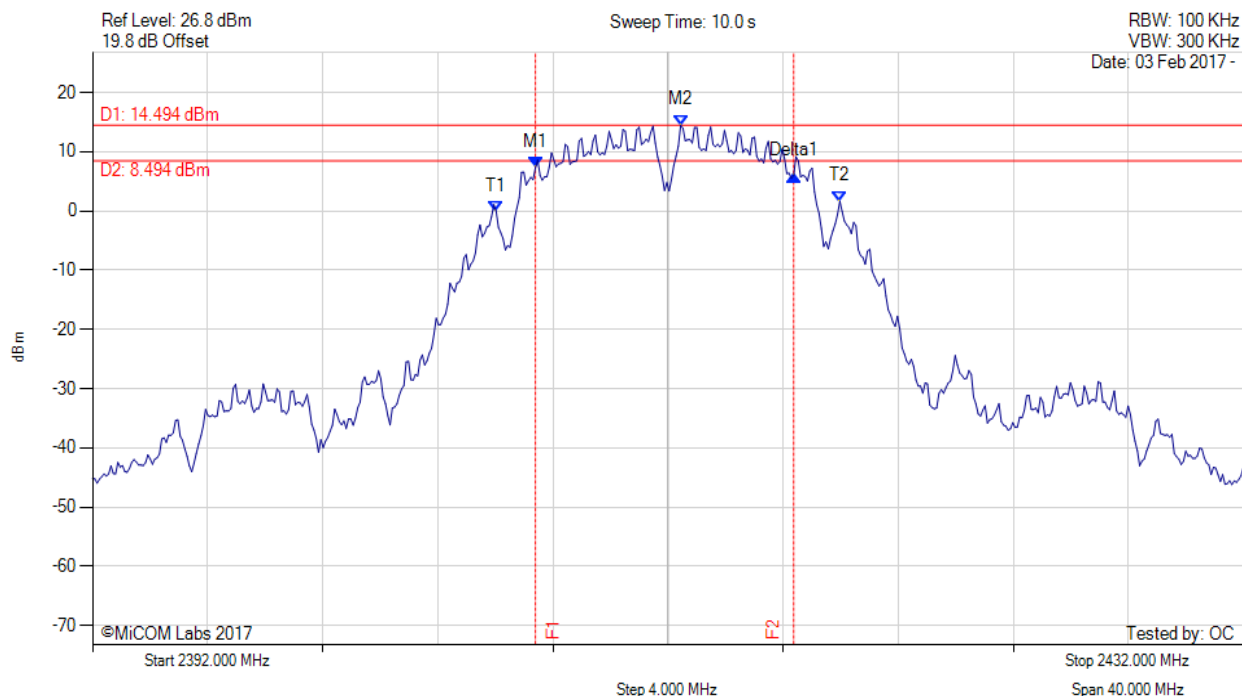
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2407.872 MHz : 8.689 dBm M2 : 2412.441 MHz : 15.623 dBm Delta1 : 8.577 MHz : 1.706 dB T1 : 2406.028 MHz : 1.268 dBm T2 : 2417.972 MHz : 3.215 dBm OBW : 11.944 MHz	Measured 6 dB Bandwidth: 8.577 MHz Limit: $\geq 500.0$ kHz Margin: -8.08 MHz

[back to matrix](#)



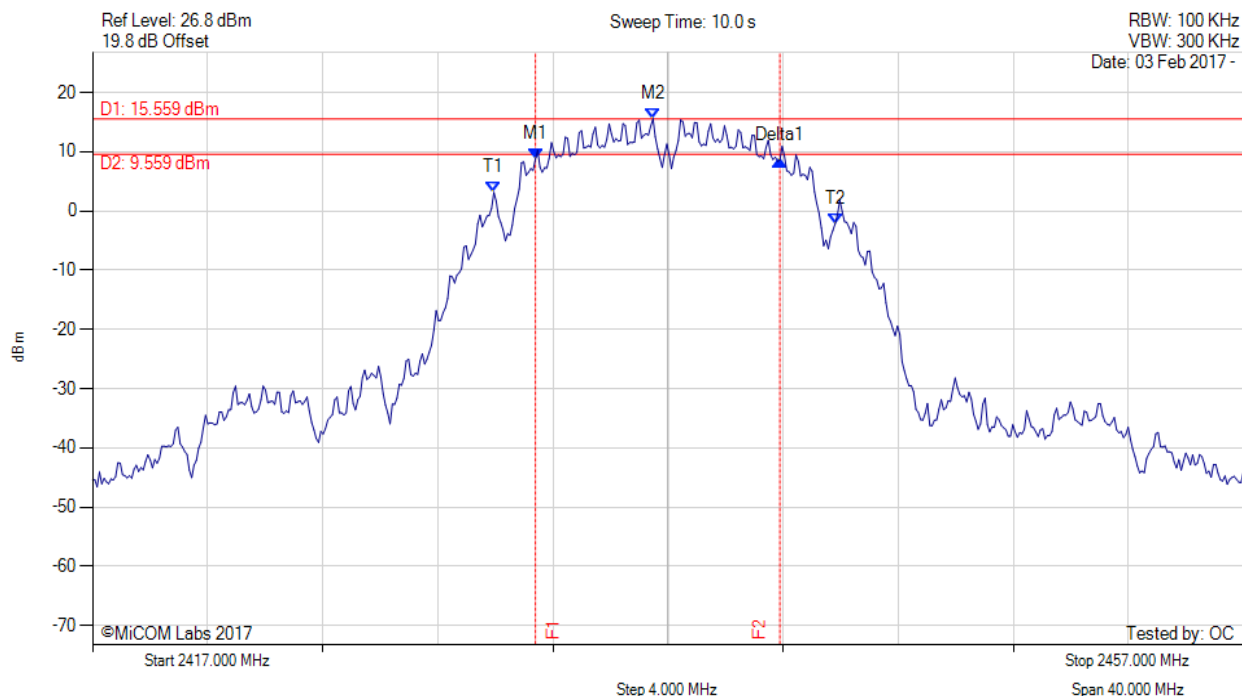
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2407.872 MHz : 7.990 dBm M2 : 2412.441 MHz : 15.348 dBm Delta1 : 8.577 MHz : 2.455 dB T1 : 2406.108 MHz : -2.067 dBm T2 : 2417.972 MHz : 3.212 dBm OBW : 11.864 MHz	Measured 6 dB Bandwidth: 8.577 MHz Limit: ≥500.0 kHz Margin: -8.08 MHz

[back to matrix](#)



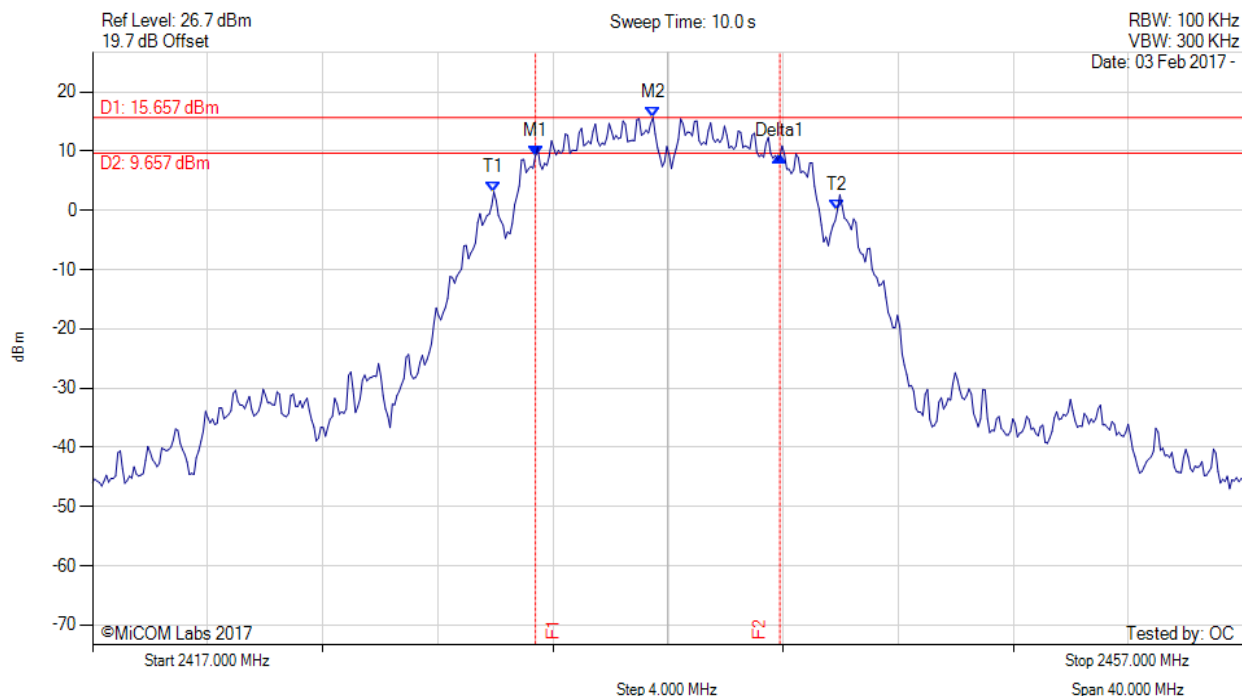
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2407.391 MHz : 7.274 dBm M2 : 2412.441 MHz : 14.494 dBm Delta1 : 8.978 MHz : -1.273 dB T1 : 2406.028 MHz : -0.047 dBm T2 : 2417.972 MHz : 1.636 dBm OBW : 11.944 MHz	Measured 6 dB Bandwidth: 8.978 MHz Limit: $\geq 500.0$ kHz Margin: -8.48 MHz

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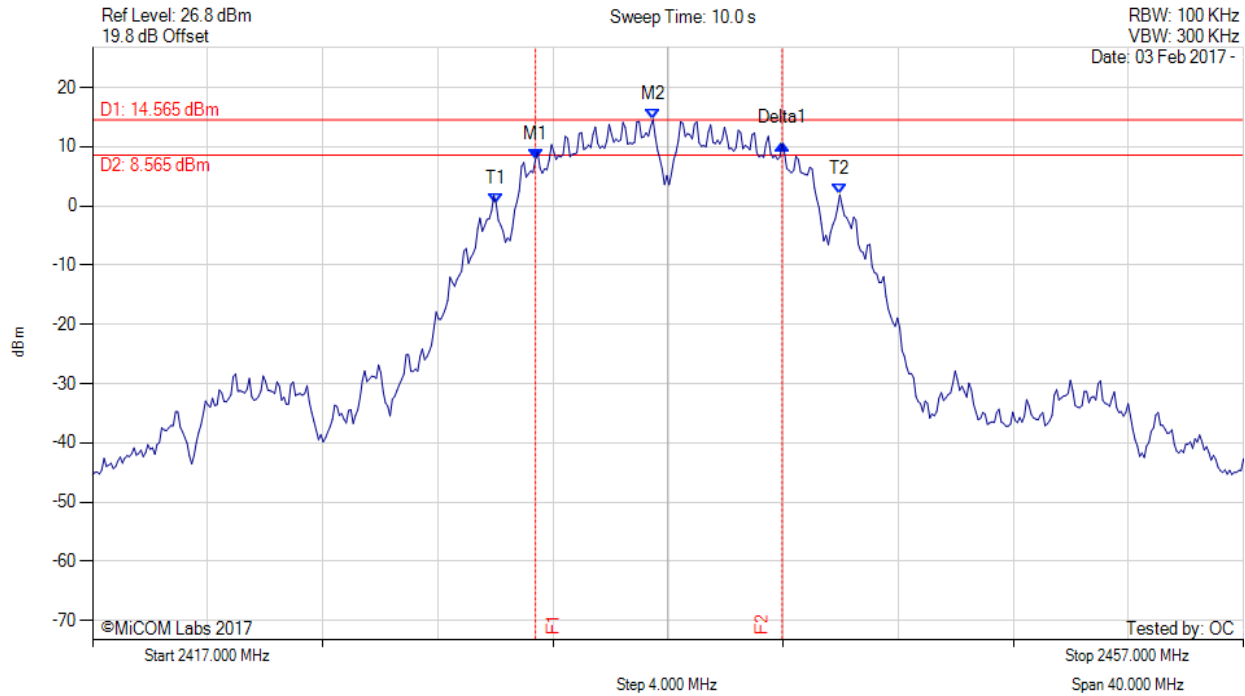
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2432.391 MHz : 8.787 dBm M2 : 2436.479 MHz : 15.559 dBm Delta1 : 8.497 MHz : -0.191 dB T1 : 2430.948 MHz : 3.150 dBm T2 : 2442.812 MHz : -2.120 dBm OBW : 11.864 MHz	Measured 6 dB Bandwidth: 8.497 MHz Limit: ≥500.0 kHz Margin: -8.00 MHz

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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2432.391 MHz : 9.238 dBm M2 : 2436.479 MHz : 15.657 dBm Delta1 : 8.497 MHz : -0.167 dB T1 : 2430.948 MHz : 3.102 dBm T2 : 2442.892 MHz : 0.090 dBm OBW : 11.944 MHz	Measured 6 dB Bandwidth: 8.497 MHz Limit: ≥500.0 kHz Margin: -8.00 MHz

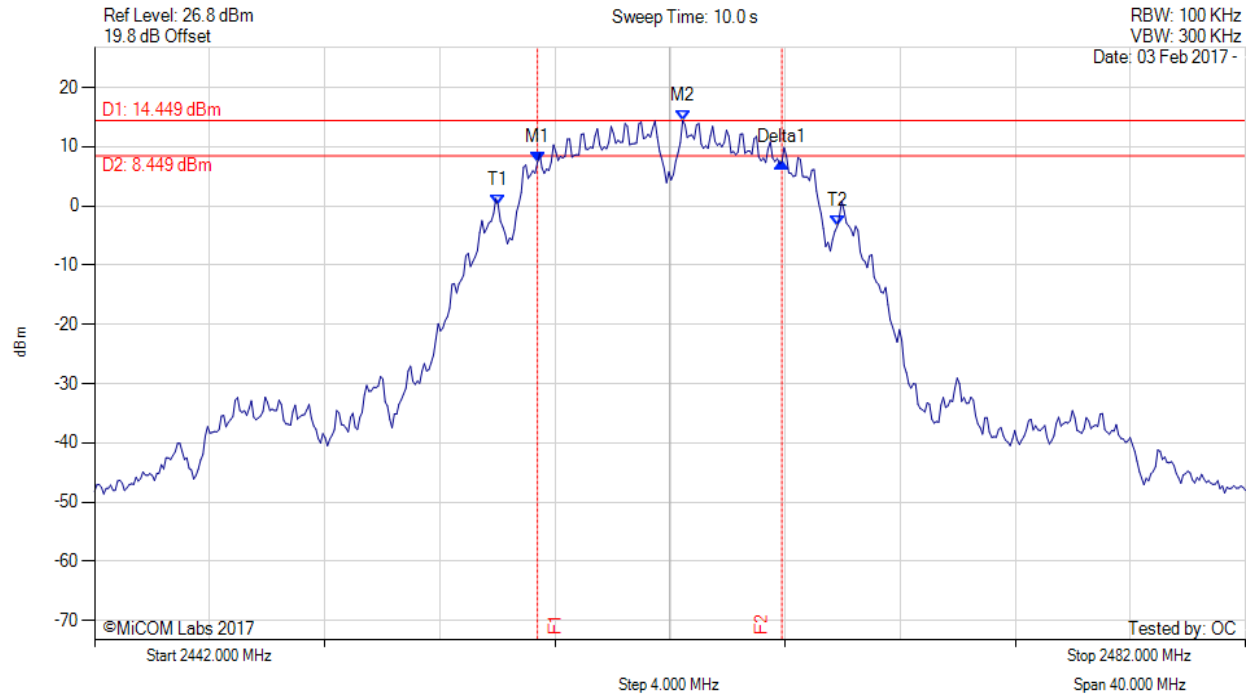
[back to matrix](#)



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2432.391 MHz : 7.841 dBm M2 : 2436.479 MHz : 14.565 dBm Delta1 : 8.577 MHz : 2.674 dB T1 : 2431.028 MHz : 0.298 dBm T2 : 2442.972 MHz : 1.903 dBm OBW : 11.944 MHz	Measured 6 dB Bandwidth: 8.577 MHz Limit: ≥500.0 kHz Margin: -8.08 MHz

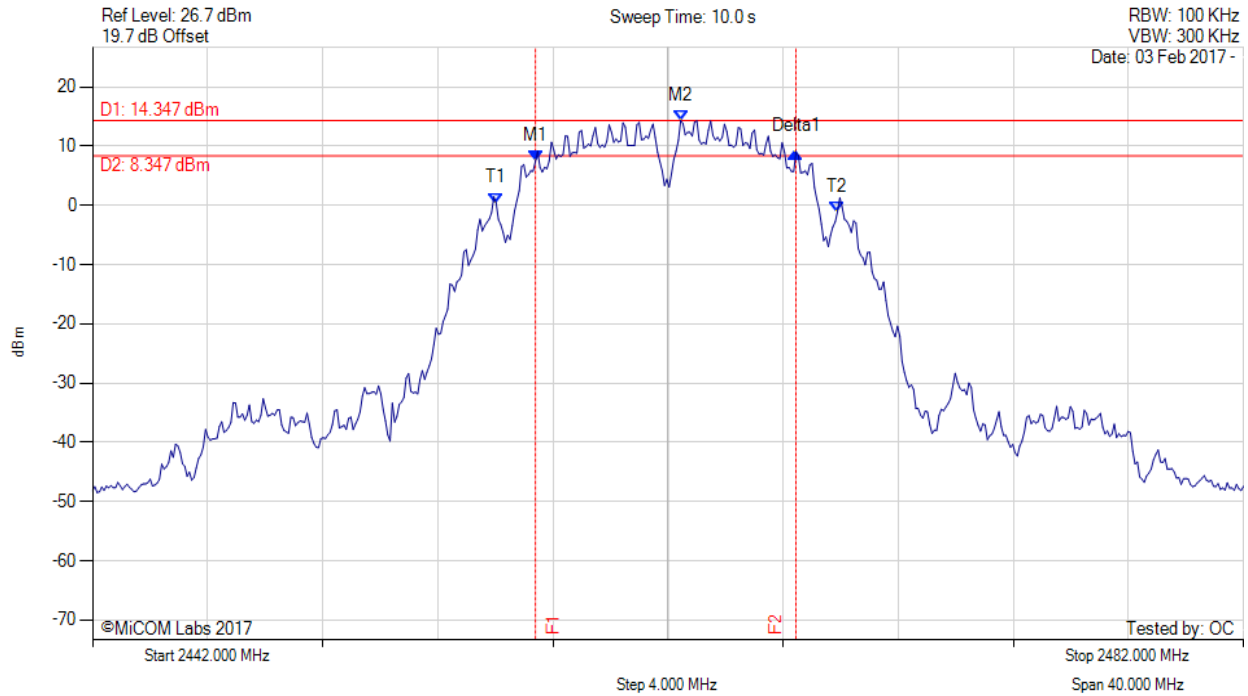
[back to matrix](#)





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 : 7.355 dBm M2 : 2462.441 MHz : 14.449 dBm Delta1 : 8.497 MHz : 0.026 dB T1 : 2456.028 MHz : 0.150 dBm T2 : 2467.812 MHz : -3.448 dBm OBW : 11.784 MHz	Measured 6 dB Bandwidth: 8.497 MHz Limit: $\geq 500.0$ kHz Margin: -8.00 MHz

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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 : 7.453 dBm M2 : 2462.441 MHz : 14.347 dBm Delta1 : 9.058 MHz : 1.580 dB T1 : 2456.028 MHz : 0.371 dBm T2 : 2467.892 MHz : -1.075 dBm OBW : 11.864 MHz	Measured 6 dB Bandwidth: 9.058 MHz Limit: ≥500.0 kHz Margin: -8.56 MHz

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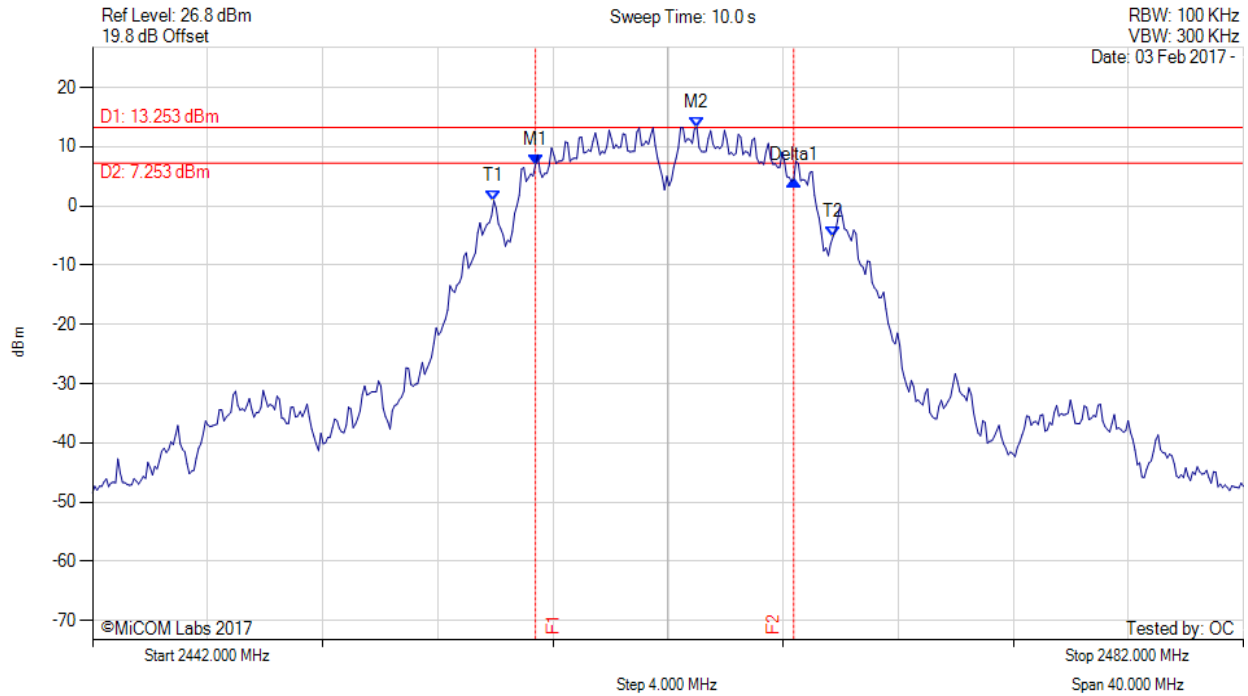


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6 dB & 99% BANDWIDTH

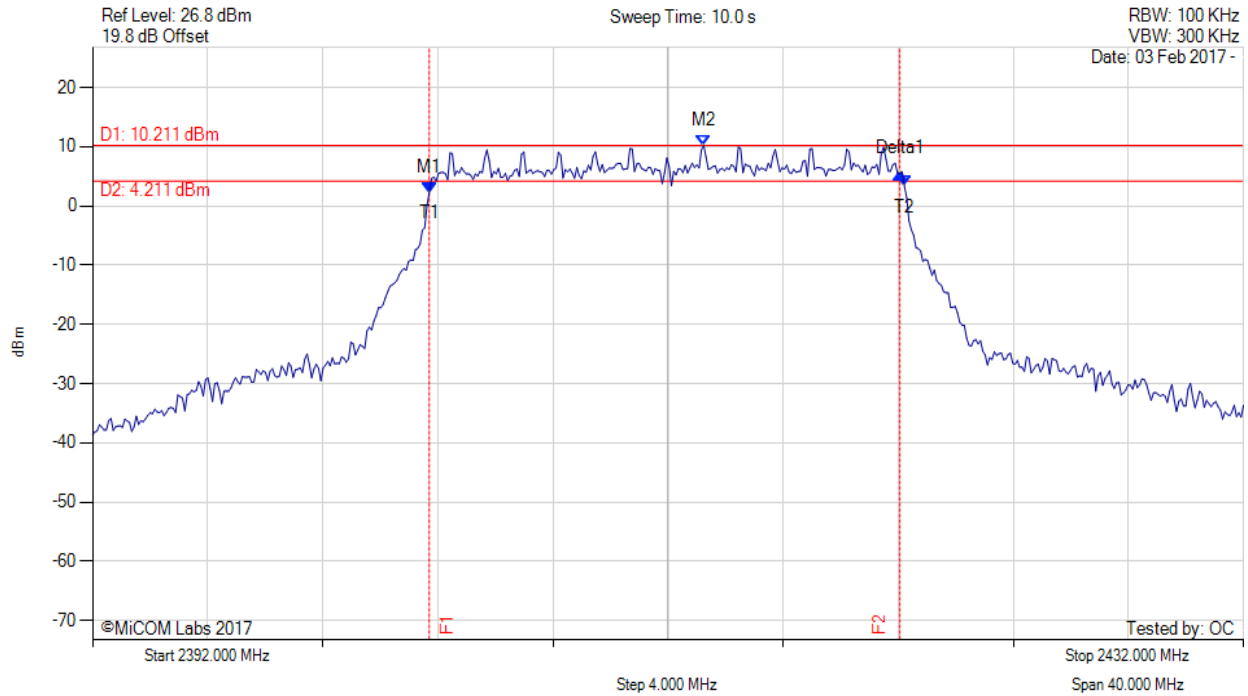
Variant: 802.11b, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



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 : 6.975 dBm M2 : 2463.002 MHz : 13.253 dBm Delta1 : 8.978 MHz : -2.540 dB T1 : 2455.948 MHz : 0.874 dBm T2 : 2467.731 MHz : -5.270 dBm OBW : 11.784 MHz	Measured 6 dB Bandwidth: 8.978 MHz Limit: $\geq 500.0$ kHz Margin: -8.48 MHz

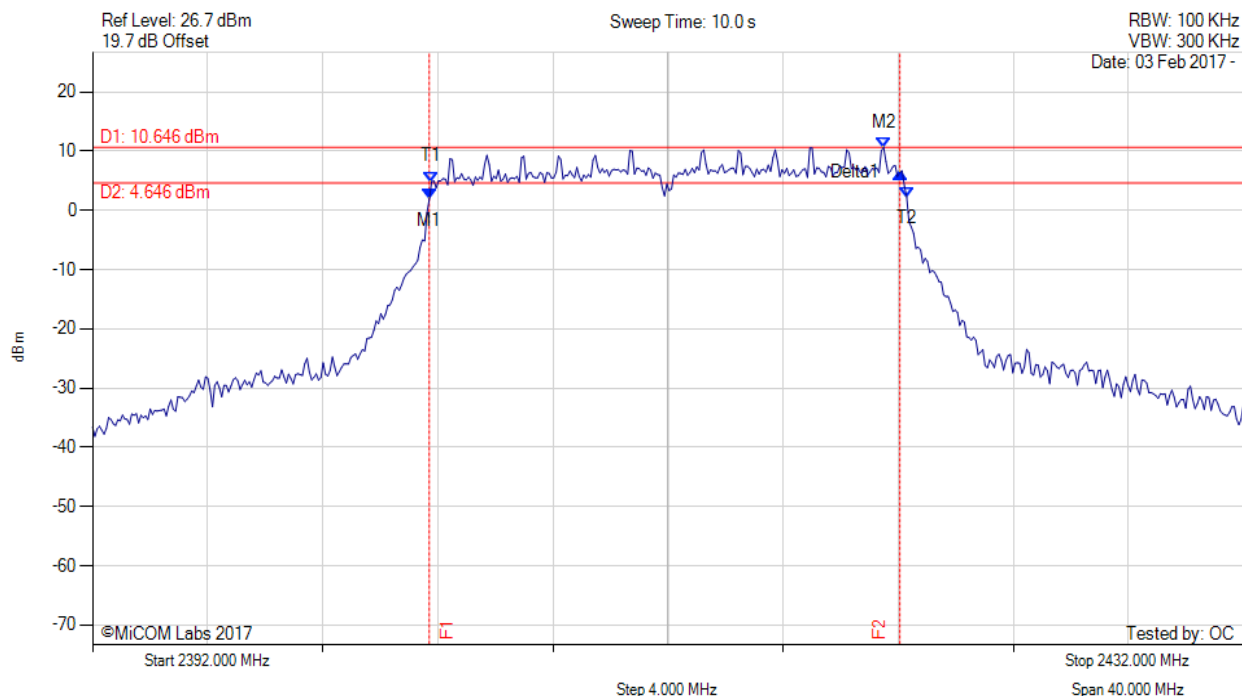
[back to matrix](#)

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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.703 MHz : 2.326 dBm M2 : 2413.242 MHz : 10.211 dBm Delta1 : 16.353 MHz : 3.148 dB T1 : 2403.703 MHz : 2.326 dBm T2 : 2420.216 MHz : 3.322 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

[back to matrix](#)



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.703 MHz : 1.860 dBm M2 : 2419.495 MHz : 10.646 dBm Delta1 : 16.353 MHz : 4.531 dB T1 : 2403.784 MHz : 4.831 dBm T2 : 2420.297 MHz : 2.228 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

[back to matrix](#)

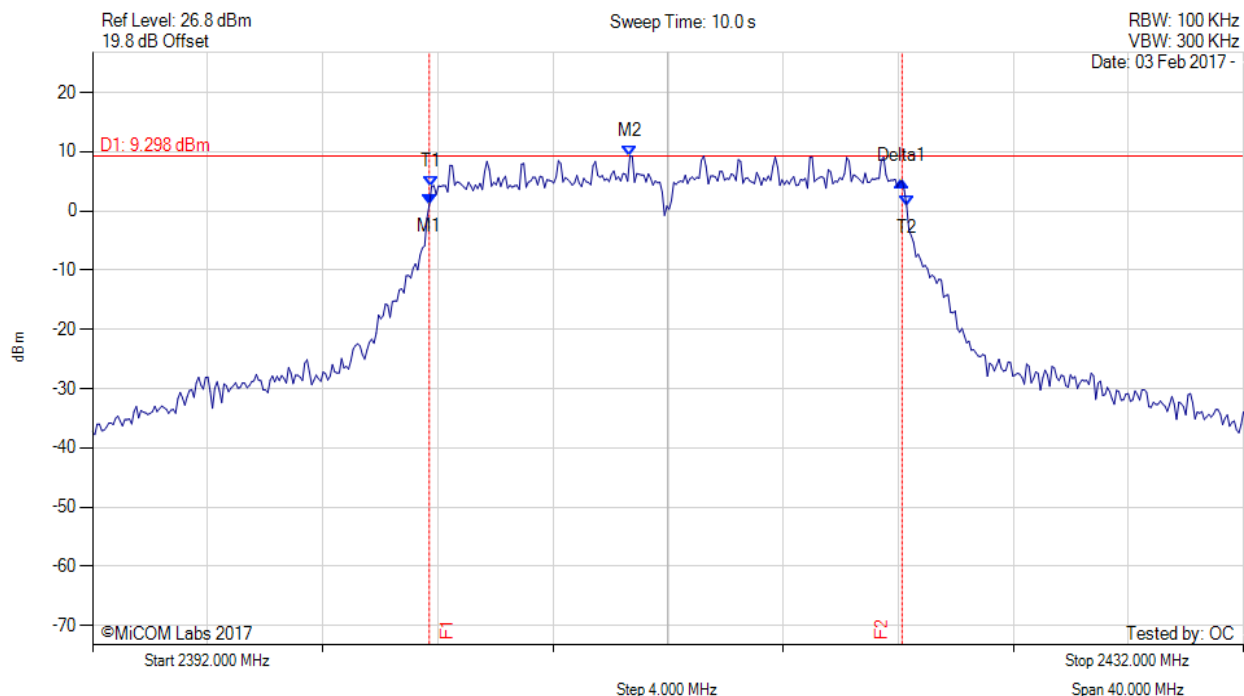


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6 dB & 99% BANDWIDTH

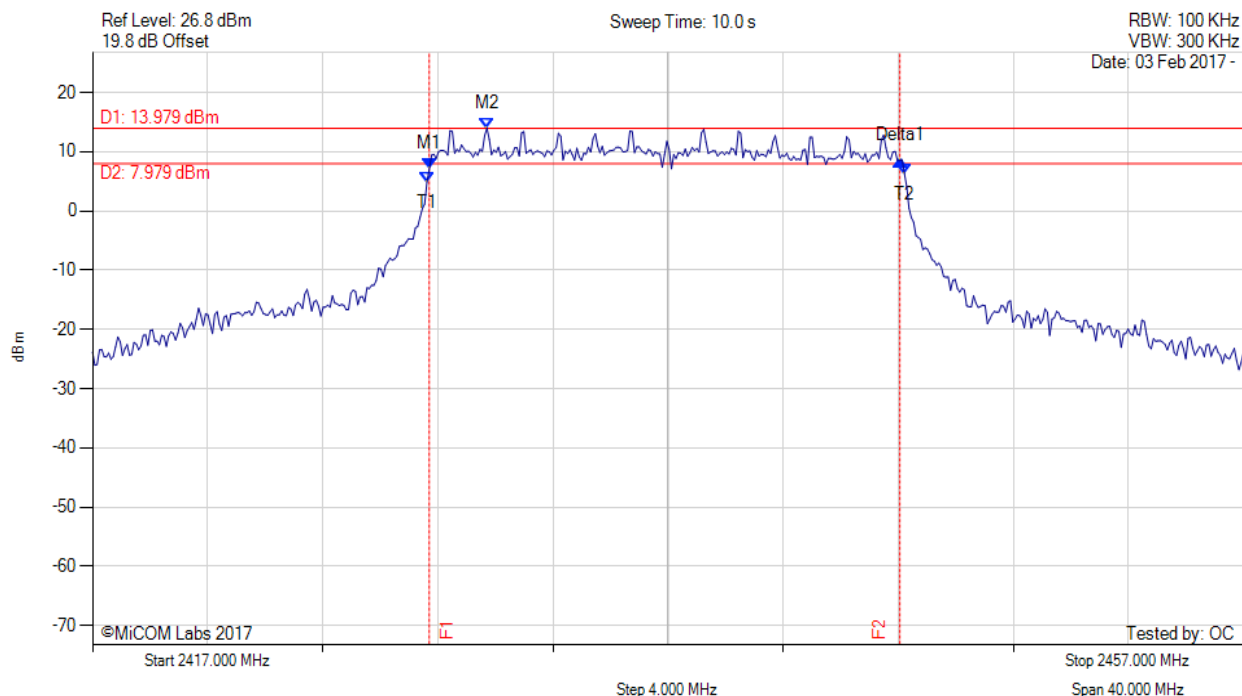
Variant: 802.11g, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.703 MHz : 1.010 dBm M2 : 2410.677 MHz : 9.298 dBm Delta1 : 16.433 MHz : 4.116 dB T1 : 2403.784 MHz : 4.162 dBm T2 : 2420.297 MHz : 0.768 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: $\geq 500.0$ kHz Margin: -15.93 MHz

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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 : 7.065 dBm M2 : 2430.707 MHz : 13.979 dBm Delta1 : 16.353 MHz : 1.446 dB T1 : 2428.623 MHz : 4.876 dBm T2 : 2445.216 MHz : 6.296 dBm OBW : 16.593 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

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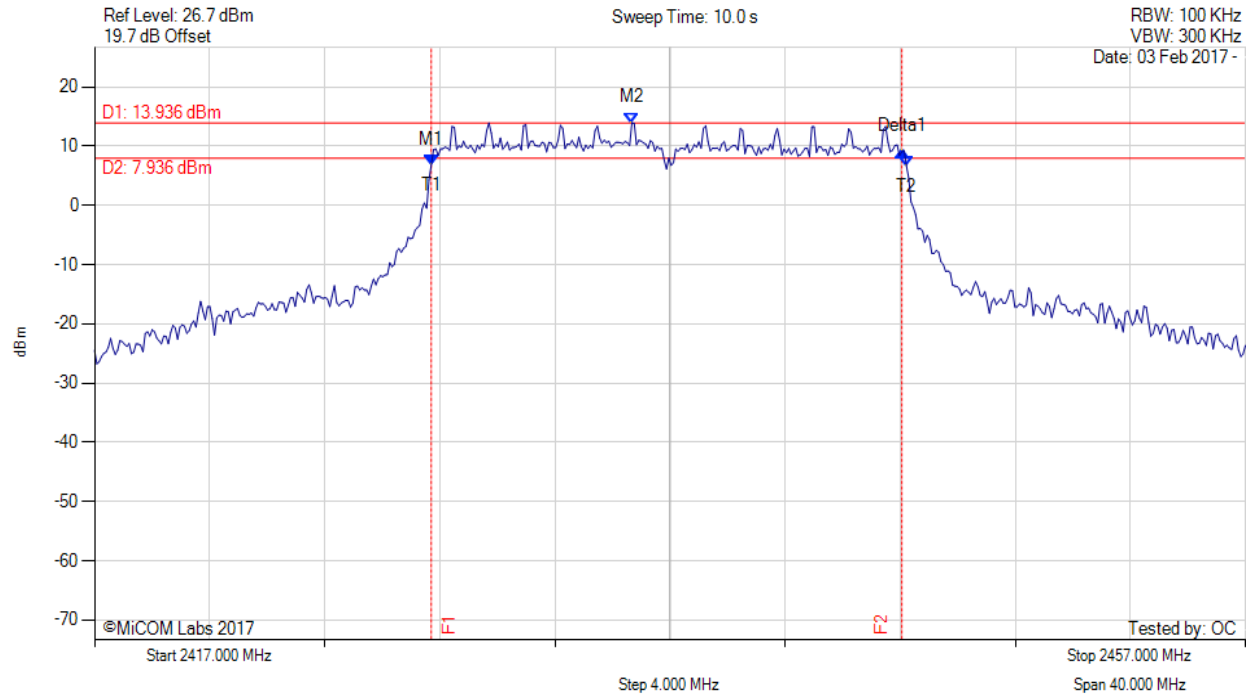


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6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

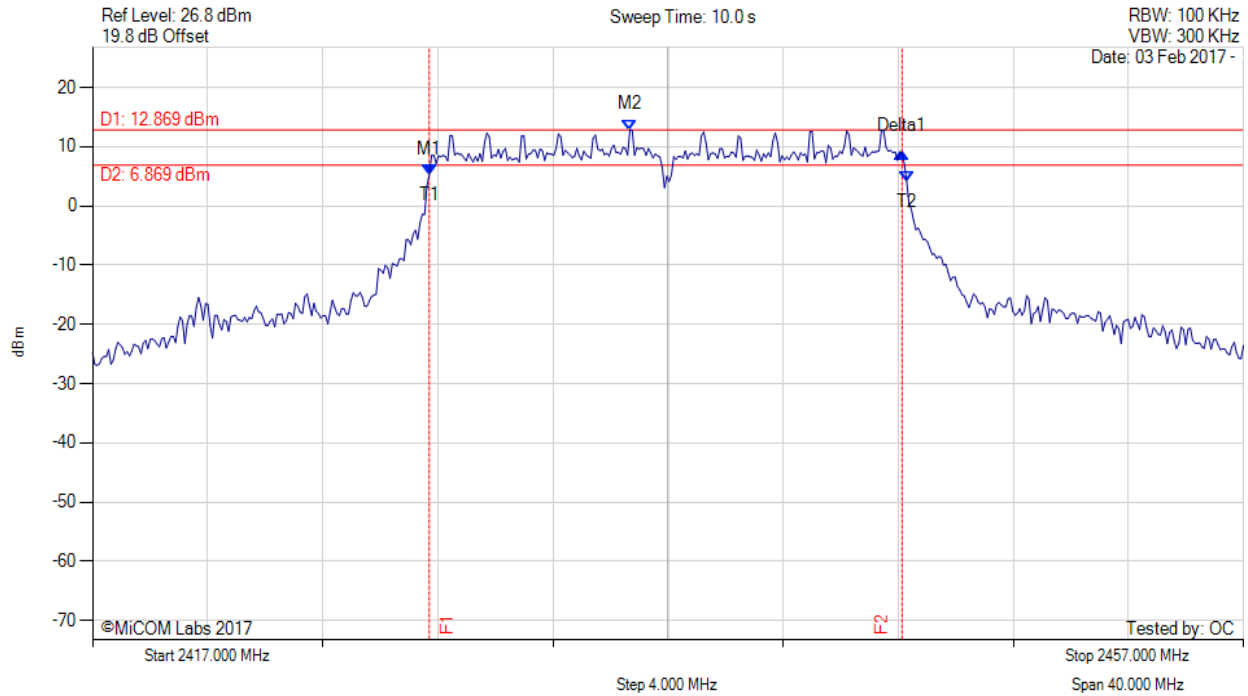


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.703 MHz : 6.881 dBm M2 : 2435.677 MHz : 13.936 dBm Delta1 : 16.353 MHz : 2.180 dB T1 : 2428.703 MHz : 6.881 dBm T2 : 2445.216 MHz : 6.680 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

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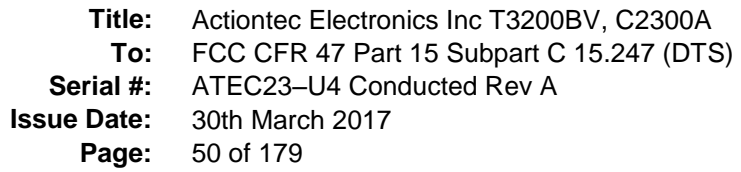
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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.703 MHz : 5.340 dBm M2 : 2435.677 MHz : 12.869 dBm Delta1 : 16.433 MHz : 3.775 dB T1 : 2428.703 MHz : 5.340 dBm T2 : 2445.297 MHz : 4.140 dBm OBW : 16.593 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: $\geq 500.0$ kHz Margin: -15.93 MHz

[back to matrix](#)



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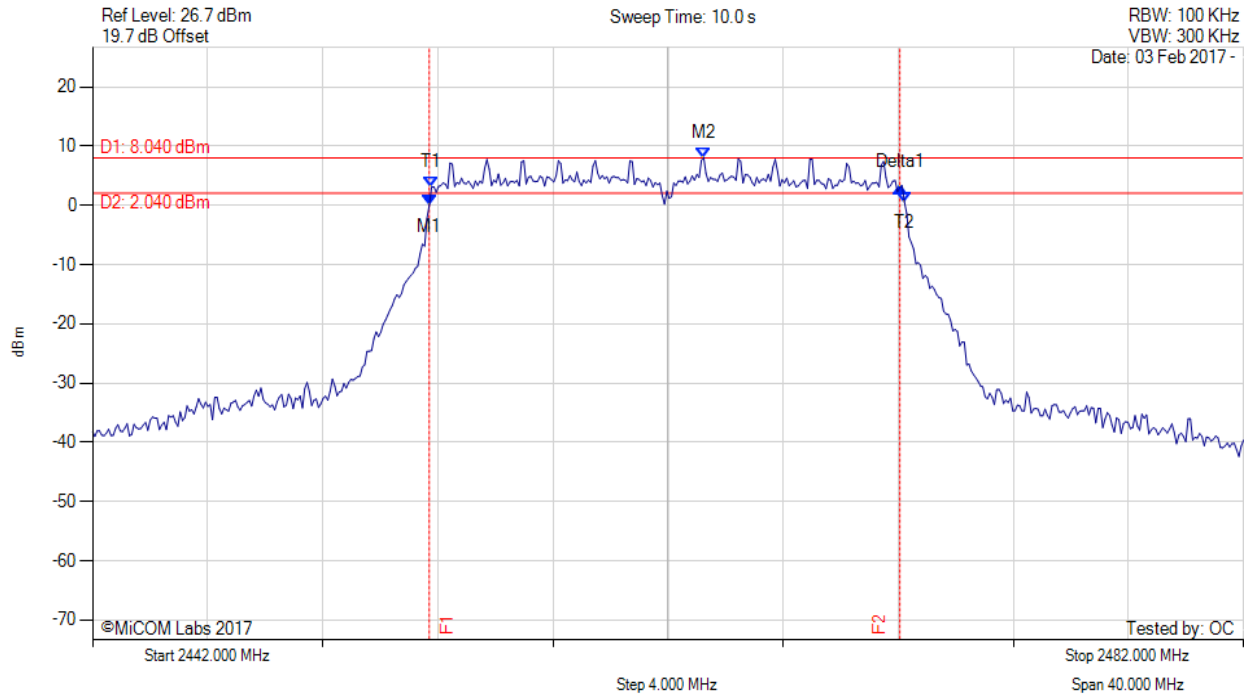


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
**To:** FCC CFR 47 Part 15 Subpart C 15.247 (DTS)  
**Serial #:** ATEC23-U4 Conducted Rev A  
**Issue Date:** 30th March 2017  
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6 dB & 99% BANDWIDTH

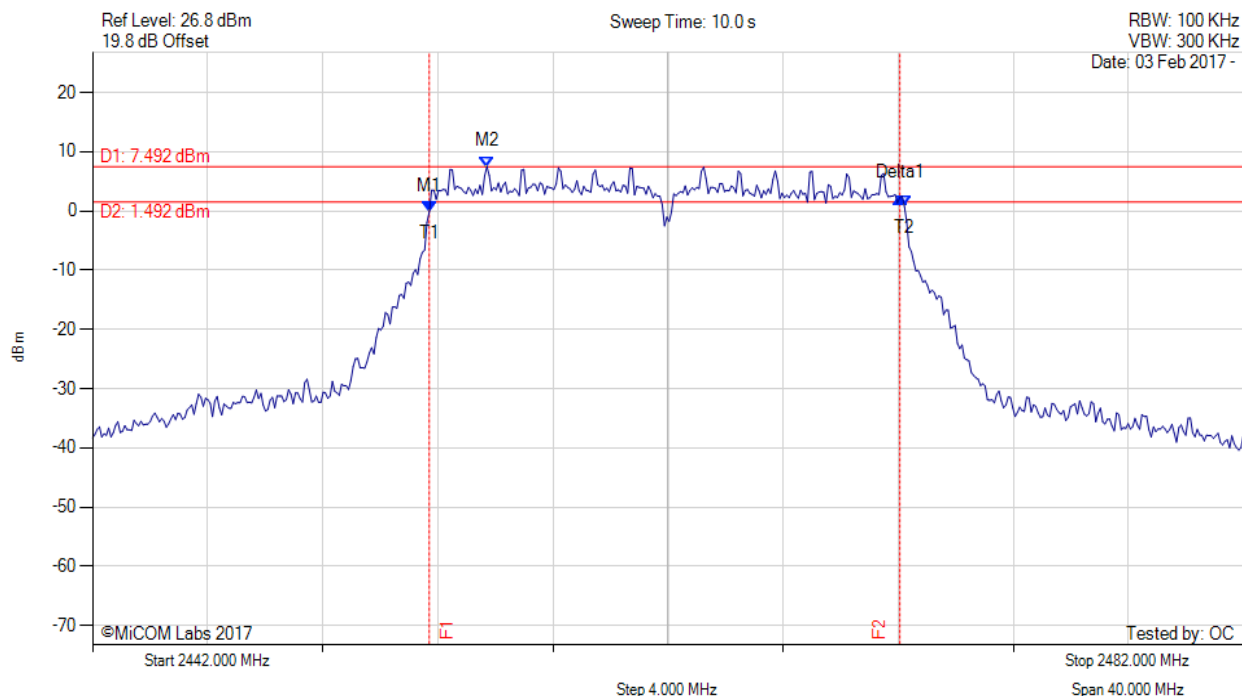
Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.703 MHz : 0.017 dBm M2 : 2463.242 MHz : 8.040 dBm Delta1 : 16.353 MHz : 3.022 dB T1 : 2453.784 MHz : 3.074 dBm T2 : 2470.216 MHz : 0.575 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

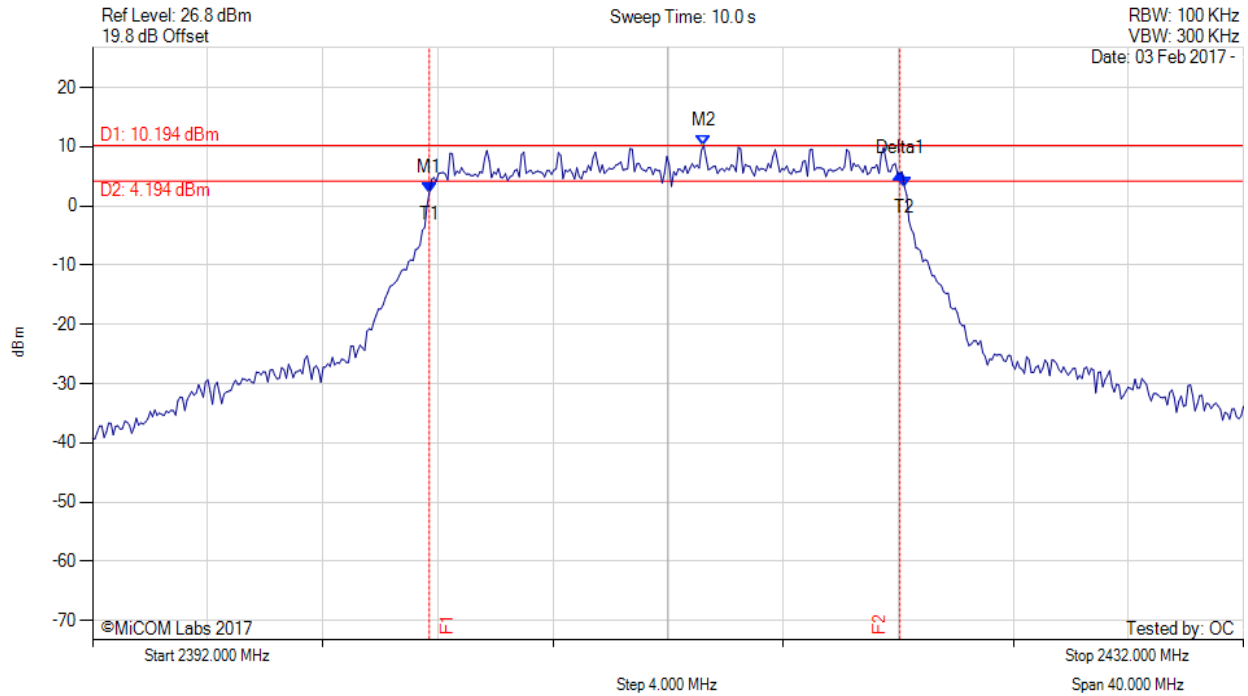
[back to matrix](#)

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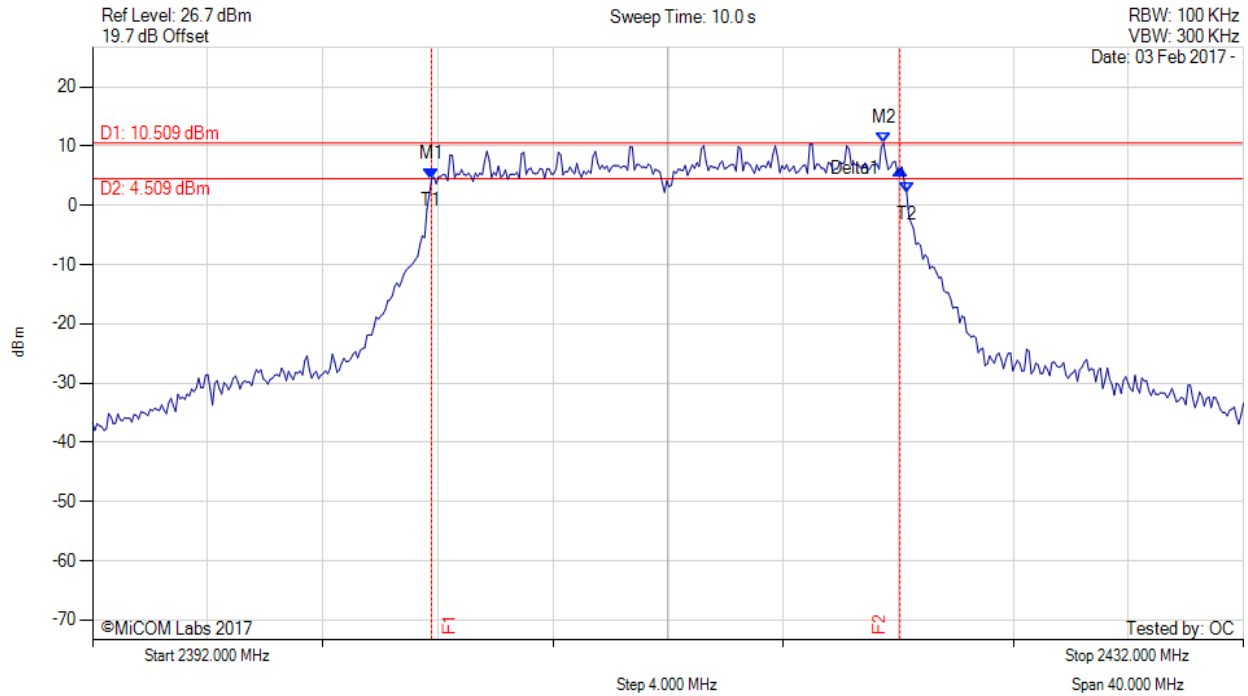
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.703 MHz : -0.155 dBm M2 : 2455.707 MHz : 7.492 dBm Delta1 : 16.353 MHz : 2.434 dB T1 : 2453.703 MHz : -0.155 dBm T2 : 2470.216 MHz : 0.766 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

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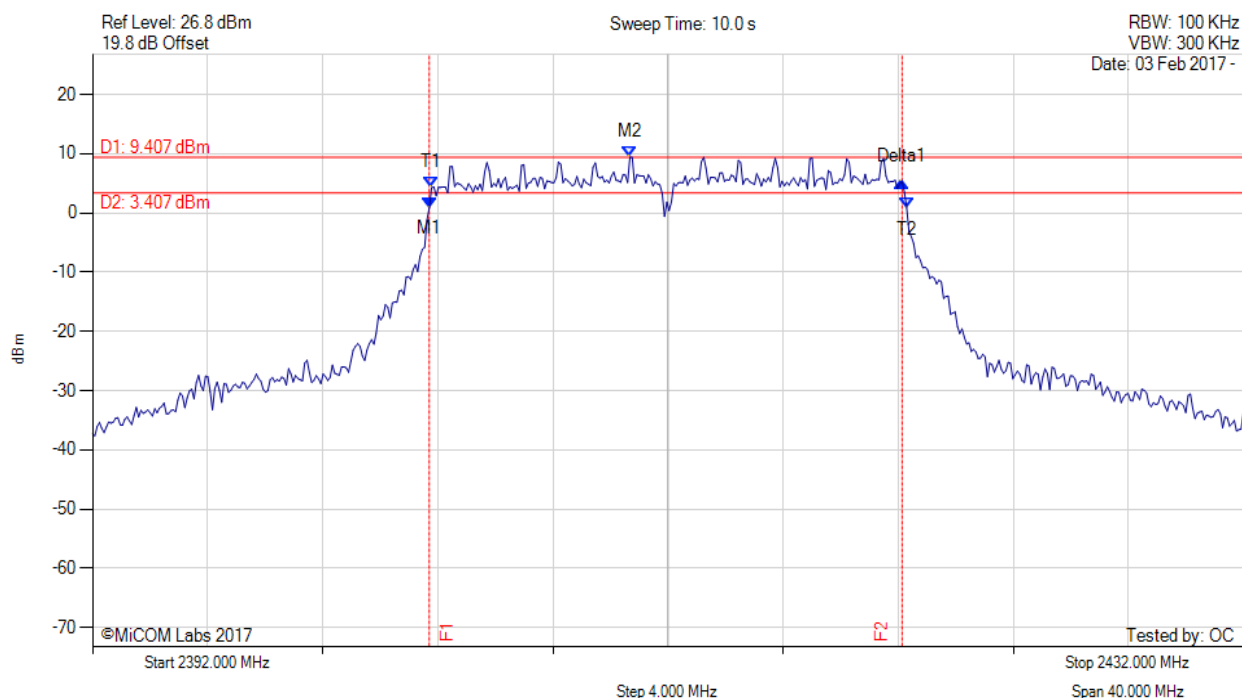
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.703 MHz : 2.253 dBm M2 : 2413.242 MHz : 10.194 dBm Delta1 : 16.353 MHz : 3.173 dB T1 : 2403.703 MHz : 2.253 dBm T2 : 2420.216 MHz : 3.233 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

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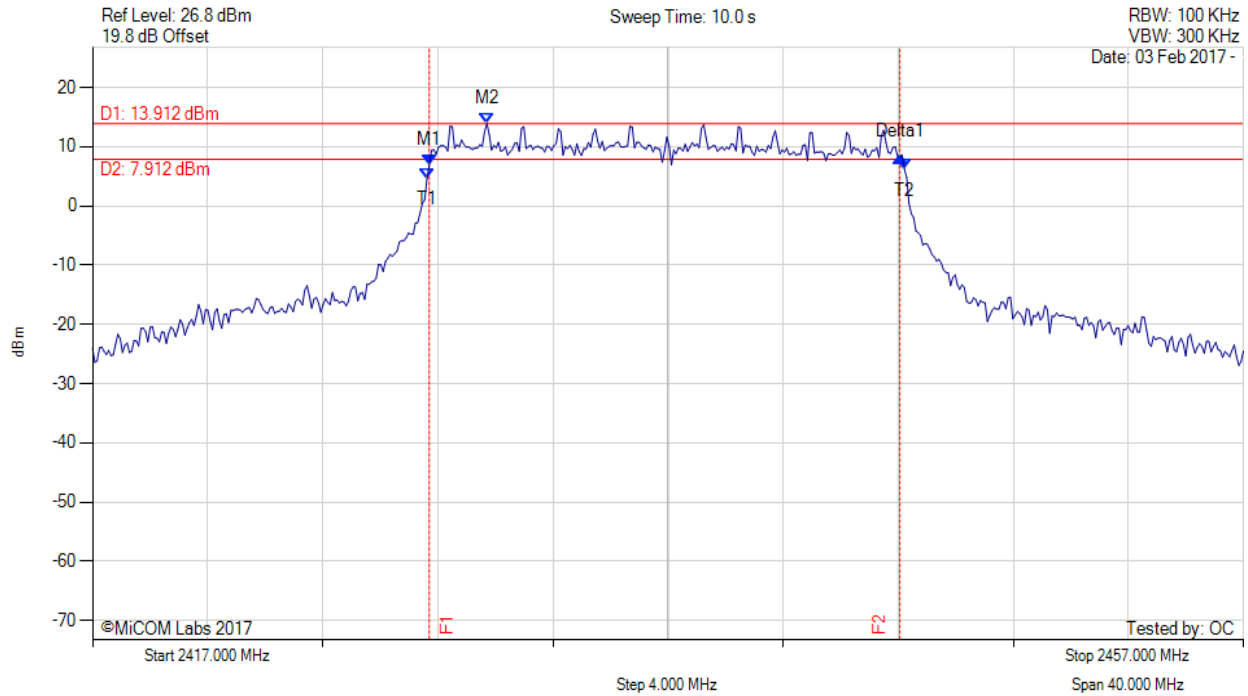
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.784 MHz : 4.489 dBm M2 : 2419.495 MHz : 10.509 dBm Delta1 : 16.273 MHz : 1.700 dB T1 : 2403.784 MHz : 4.489 dBm T2 : 2420.297 MHz : 2.090 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.273 MHz Limit: $\geq 500.0$ kHz Margin: -15.77 MHz

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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.703 MHz : 0.872 dBm M2 : 2410.677 MHz : 9.407 dBm Delta1 : 16.433 MHz : 4.411 dB T1 : 2403.784 MHz : 4.274 dBm T2 : 2420.297 MHz : 0.829 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: $\geq 500.0$ kHz Margin: -15.93 MHz

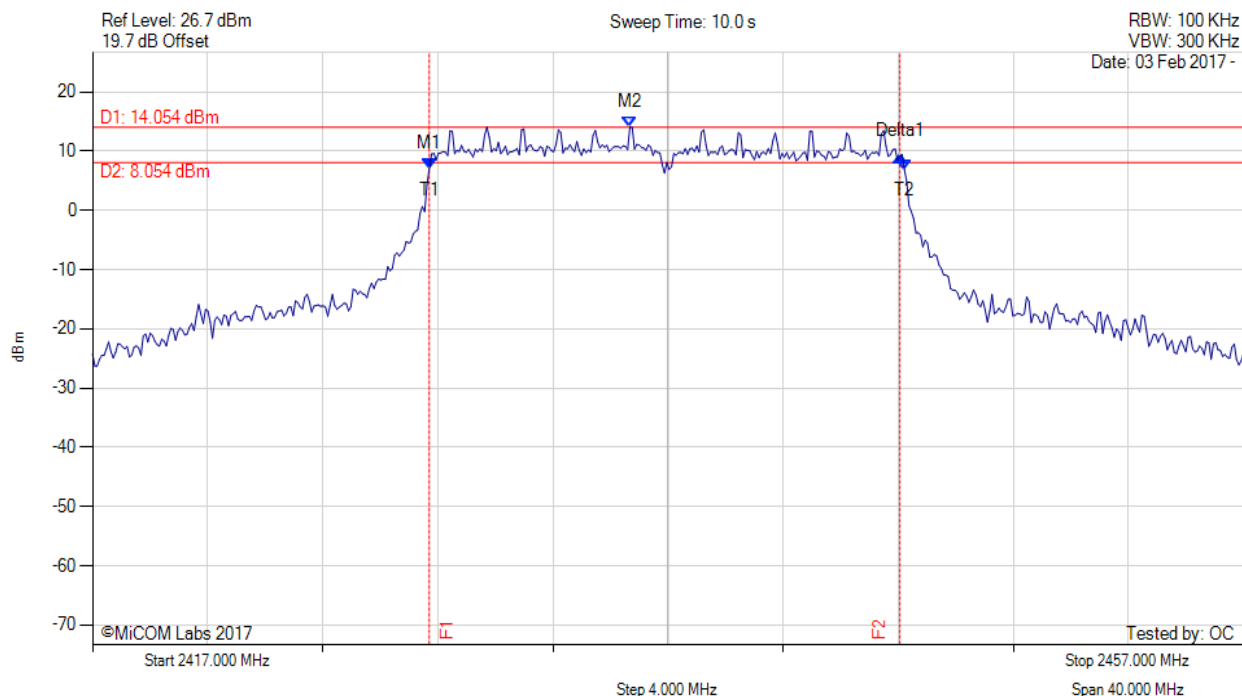
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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.703 MHz : 6.922 dBm M2 : 2430.707 MHz : 13.912 dBm Delta1 : 16.353 MHz : 1.474 dB T1 : 2428.623 MHz : 4.620 dBm T2 : 2445.216 MHz : 6.233 dBm OBW : 16.593 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

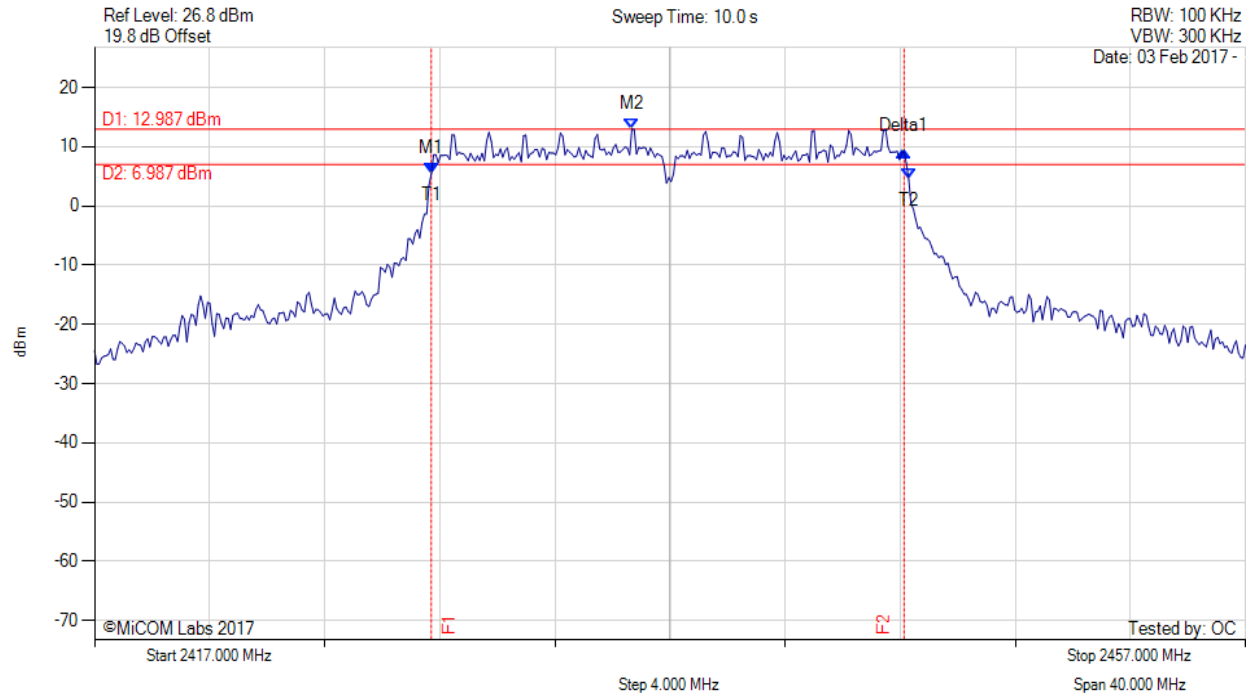
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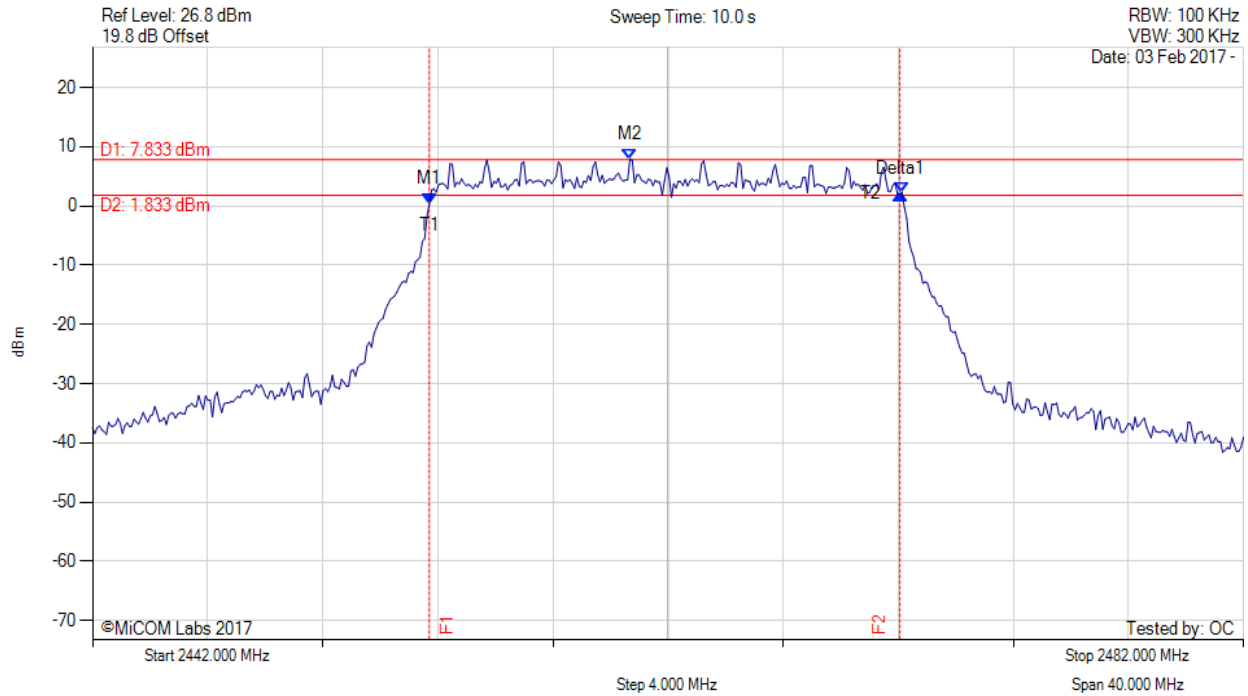
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.703 MHz : 7.040 dBm M2 : 2435.677 MHz : 14.054 dBm Delta1 : 16.353 MHz : 2.160 dB T1 : 2428.703 MHz : 7.040 dBm T2 : 2445.216 MHz : 6.853 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

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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 : 5.407 dBm M2 : 2435.677 MHz : 12.987 dBm Delta1 : 16.433 MHz : 3.779 dB T1 : 2428.703 MHz : 5.407 dBm T2 : 2445.297 MHz : 4.492 dBm OBW : 16.593 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: $\geq 500.0$ kHz Margin: -15.93 MHz

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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.703 MHz : 0.345 dBm M2 : 2460.677 MHz : 7.833 dBm Delta1 : 16.353 MHz : 1.698 dB T1 : 2453.703 MHz : 0.345 dBm T2 : 2470.136 MHz : 2.273 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

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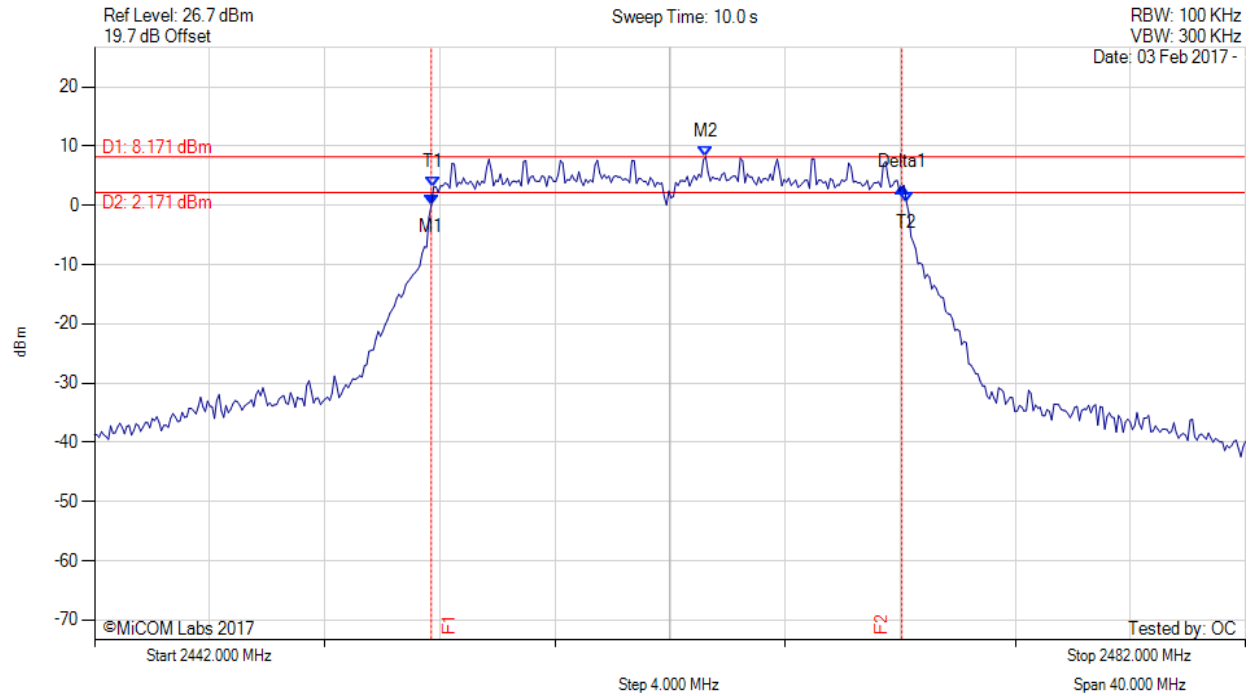


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
**To:** FCC CFR 47 Part 15 Subpart C 15.247 (DTS)  
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6 dB & 99% BANDWIDTH

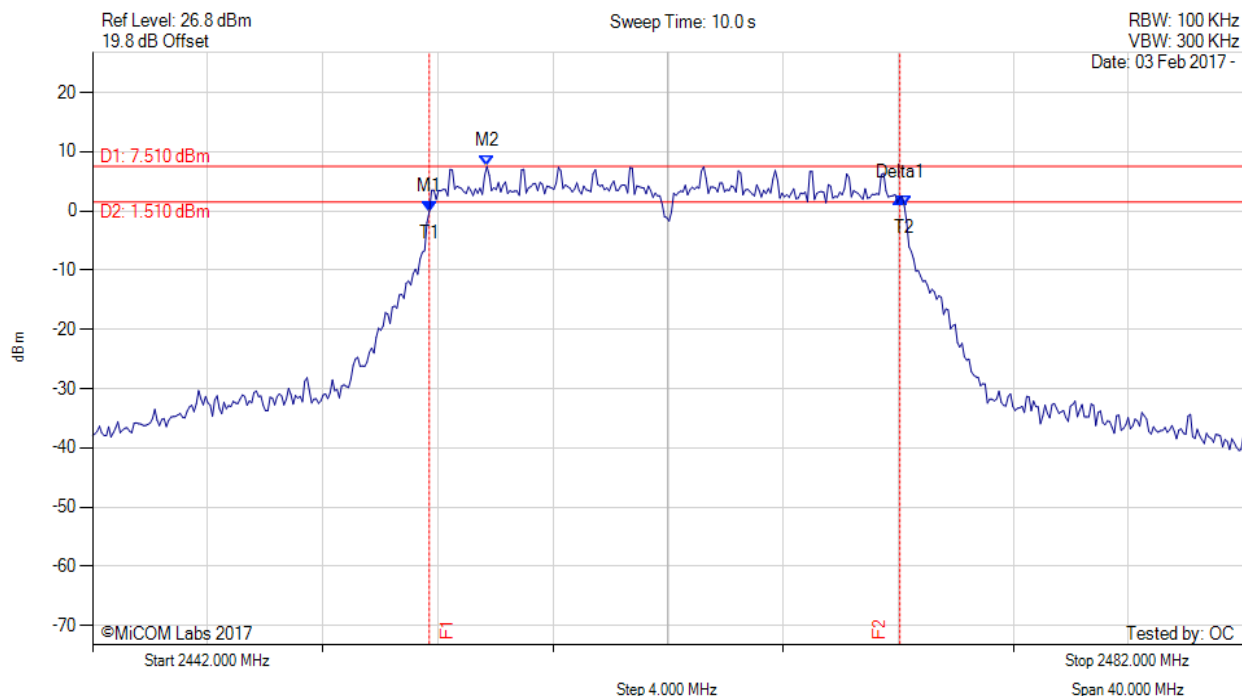
Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.703 MHz : 0.034 dBm M2 : 2463.242 MHz : 8.171 dBm Delta1 : 16.353 MHz : 3.077 dB T1 : 2453.784 MHz : 3.048 dBm T2 : 2470.216 MHz : 0.556 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

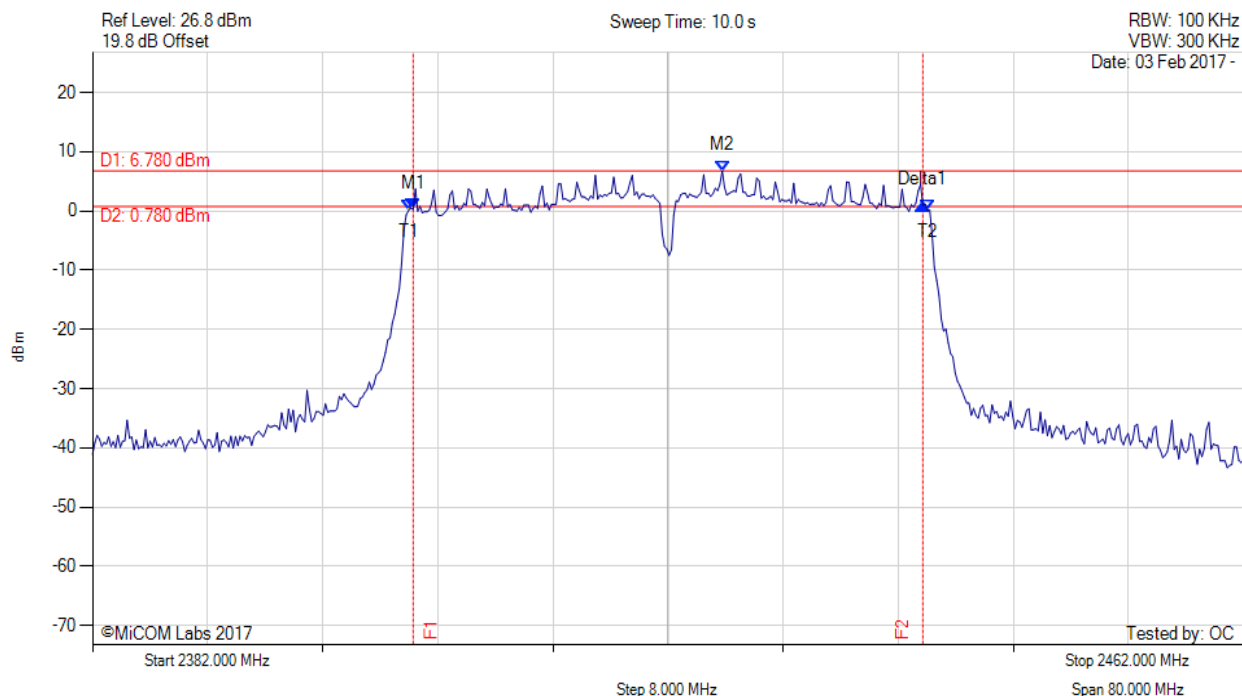
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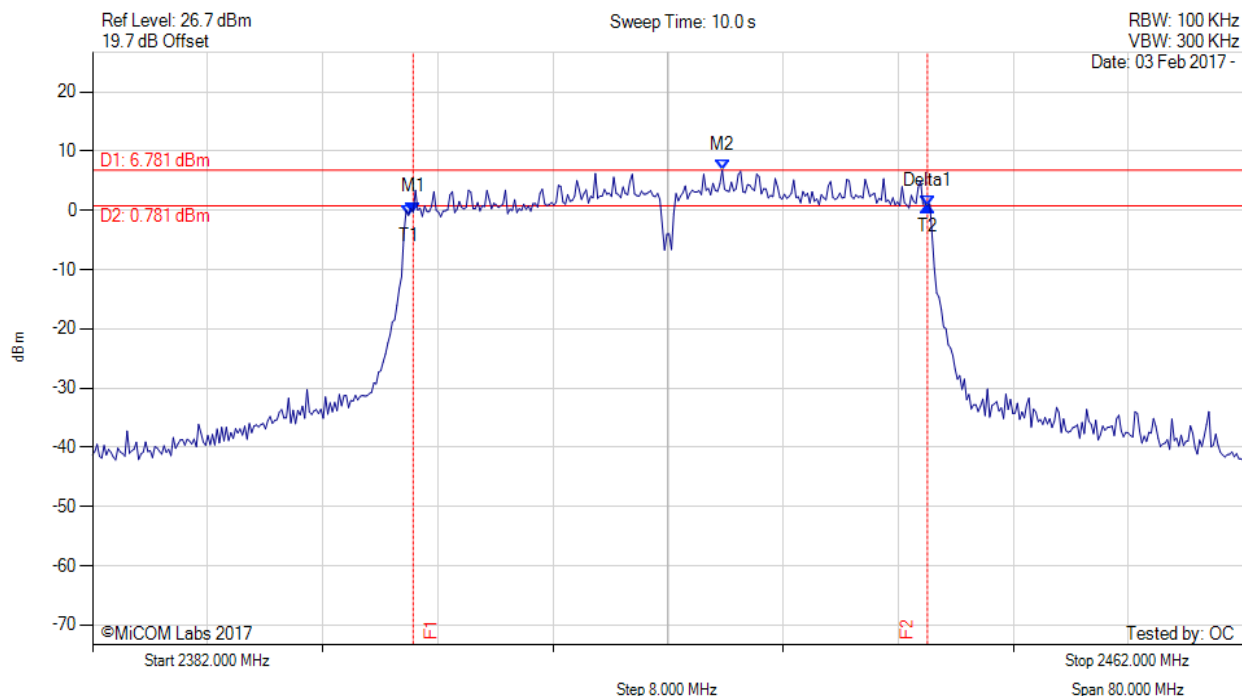
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.703 MHz : -0.135 dBm M2 : 2455.707 MHz : 7.510 dBm Delta1 : 16.353 MHz : 2.418 dB T1 : 2453.703 MHz : -0.135 dBm T2 : 2470.216 MHz : 0.766 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: $\geq 500.0$ kHz Margin: -15.85 MHz

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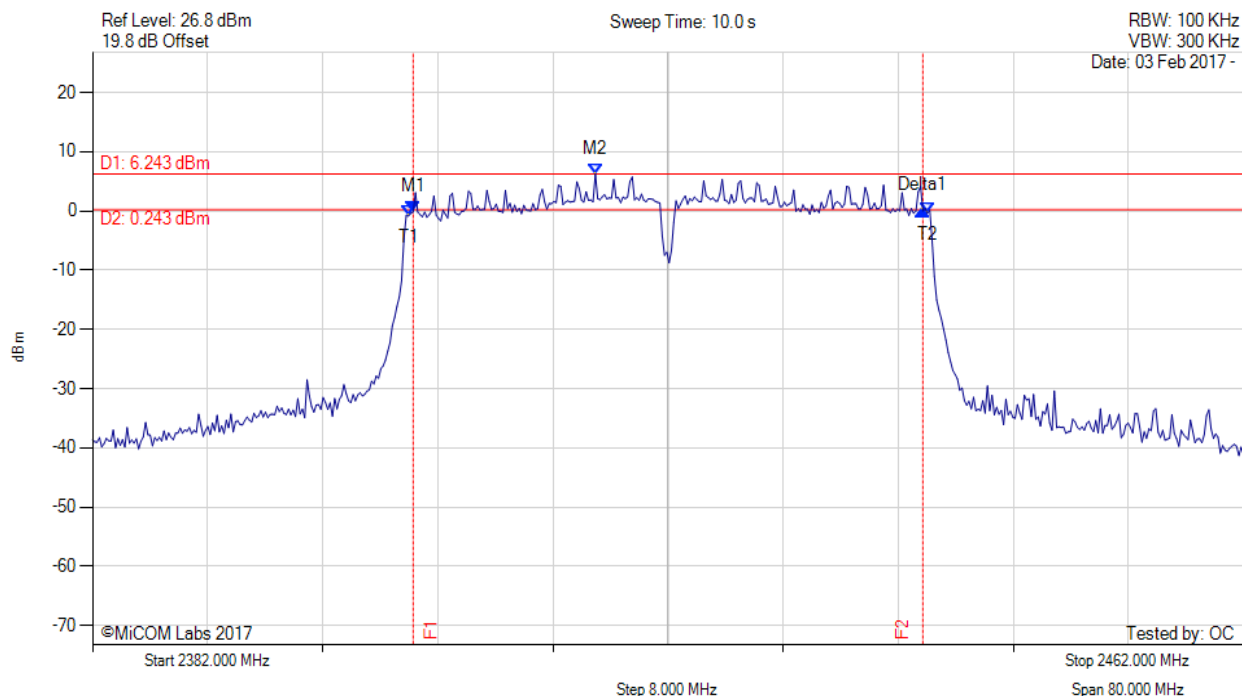
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2404.285 MHz : 0.302 dBm M2 : 2425.768 MHz : 6.780 dBm Delta1 : 35.431 MHz : 0.663 dB T1 : 2403.964 MHz : 0.095 dBm T2 : 2440.036 MHz : 0.129 dBm OBW : 36.072 MHz	Measured 6 dB Bandwidth: 35.431 MHz Limit: $\geq 500.0$ kHz Margin: -34.93 MHz

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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 : -0.316 dBm M2 : 2425.768 MHz : 6.781 dBm Delta1 : 35.752 MHz : 1.145 dB T1 : 2403.964 MHz : -0.847 dBm T2 : 2440.036 MHz : 0.829 dBm OBW : 36.072 MHz	Measured 6 dB Bandwidth: 35.752 MHz Limit: ≥500.0 kHz Margin: -35.25 MHz

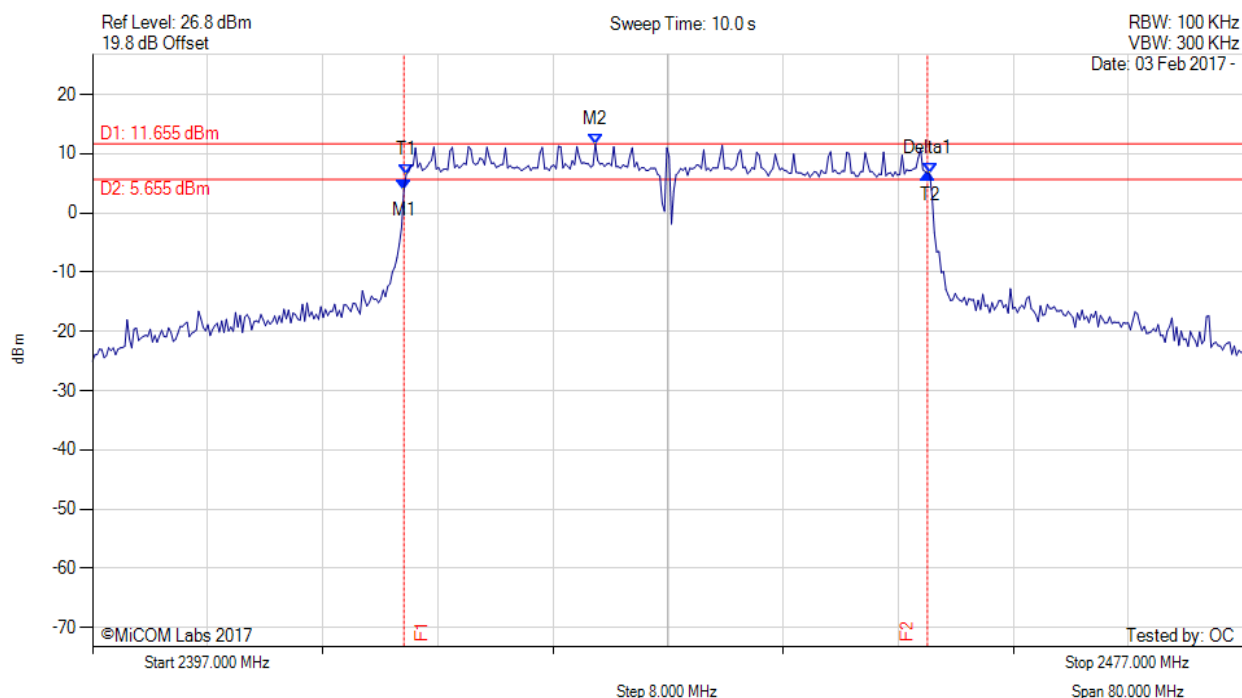
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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2404.285 MHz : -0.139 dBm M2 : 2416.950 MHz : 6.243 dBm Delta1 : 35.431 MHz : 0.193 dB T1 : 2403.964 MHz : -0.847 dBm T2 : 2440.036 MHz : -0.412 dBm OBW : 36.072 MHz	Measured 6 dB Bandwidth: 35.431 MHz Limit: ≥500.0 kHz Margin: -34.93 MHz

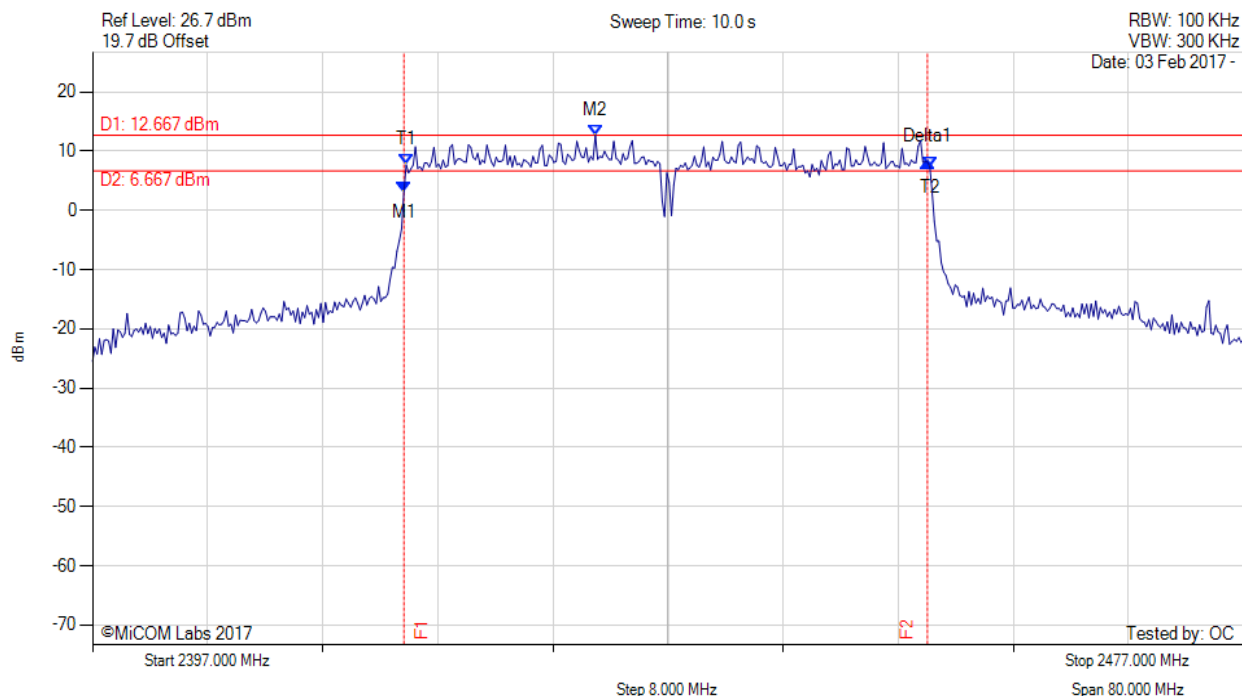
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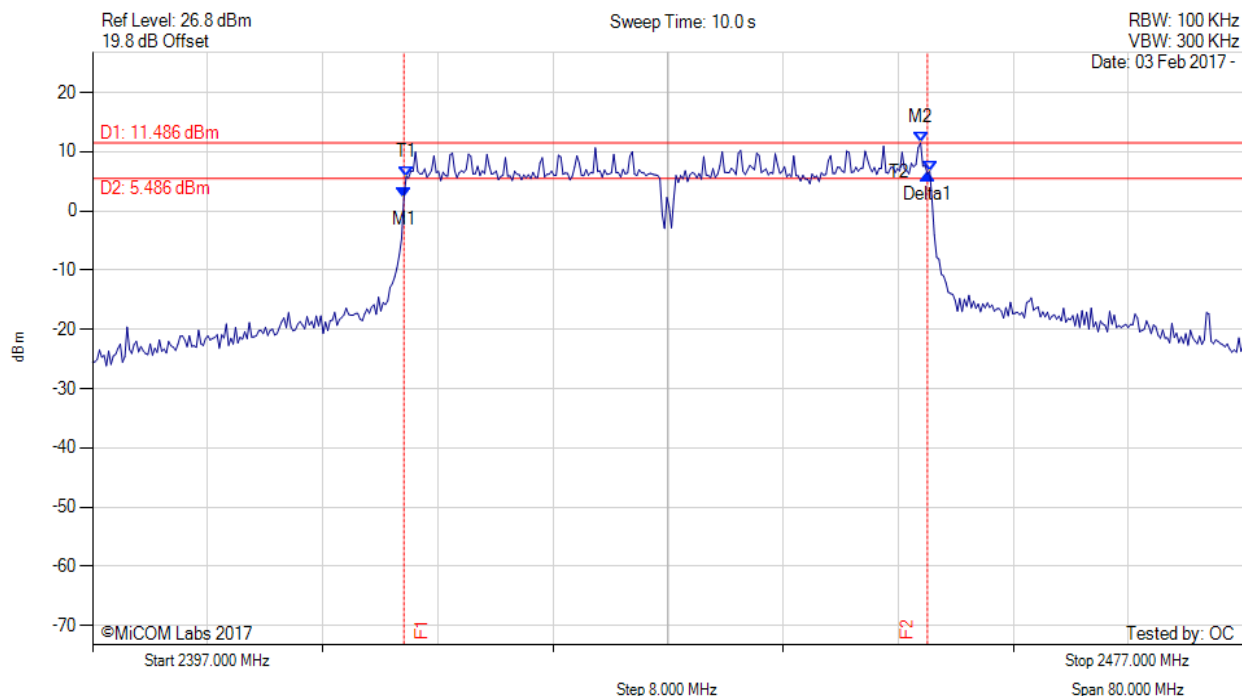
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2418.643 MHz : 3.957 dBm M2 : 2431.950 MHz : 11.655 dBm Delta1 : 36.393 MHz : 2.817 dB T1 : 2418.804 MHz : 6.503 dBm T2 : 2455.196 MHz : 6.572 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.393 MHz Limit: ≥500.0 kHz Margin: -35.89 MHz

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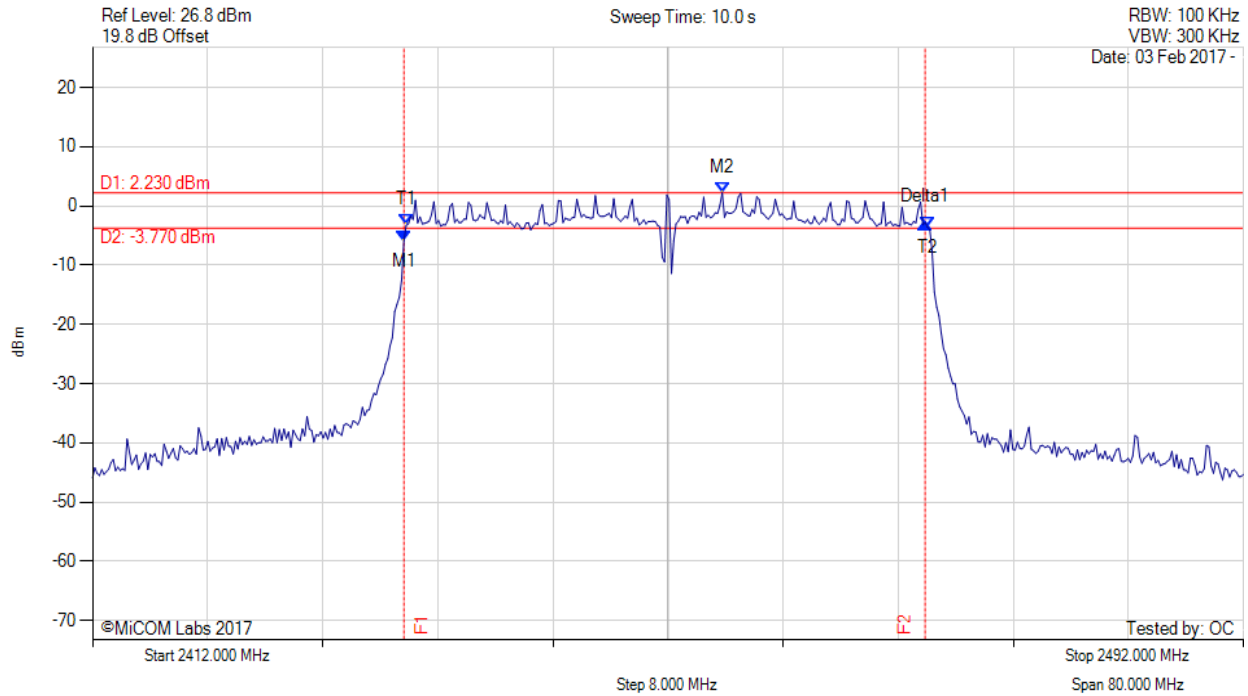
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2418.643 MHz : 3.186 dBm M2 : 2431.950 MHz : 12.667 dBm Delta1 : 36.393 MHz : 4.987 dB T1 : 2418.804 MHz : 7.703 dBm T2 : 2455.196 MHz : 7.379 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.393 MHz Limit: ≥500.0 kHz Margin: -35.89 MHz

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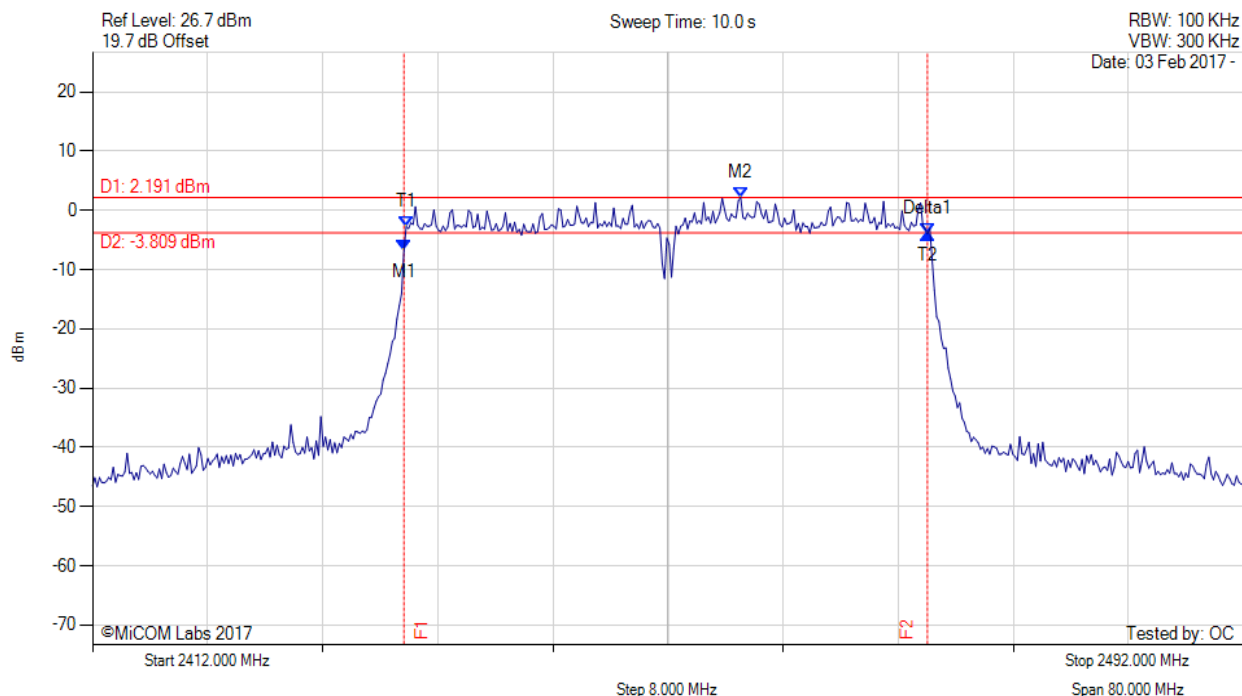
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2418.643 MHz : 2.259 dBm M2 : 2454.555 MHz : 11.486 dBm Delta1 : 36.393 MHz : 4.009 dB T1 : 2418.804 MHz : 5.773 dBm T2 : 2455.196 MHz : 6.700 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.393 MHz Limit: ≥500.0 kHz Margin: -35.89 MHz

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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2433.643 MHz : -5.848 dBm M2 : 2455.768 MHz : 2.230 dBm Delta1 : 36.232 MHz : 3.065 dB T1 : 2433.804 MHz : -3.240 dBm T2 : 2470.036 MHz : -3.548 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.232 MHz Limit: ≥500.0 kHz Margin: -35.73 MHz

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Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2433.643 MHz : -6.818 dBm M2 : 2457.050 MHz : 2.191 dBm Delta1 : 36.393 MHz : 2.839 dB T1 : 2433.804 MHz : -2.747 dBm T2 : 2470.036 MHz : -3.979 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.393 MHz Limit: ≥500.0 kHz Margin: -35.89 MHz

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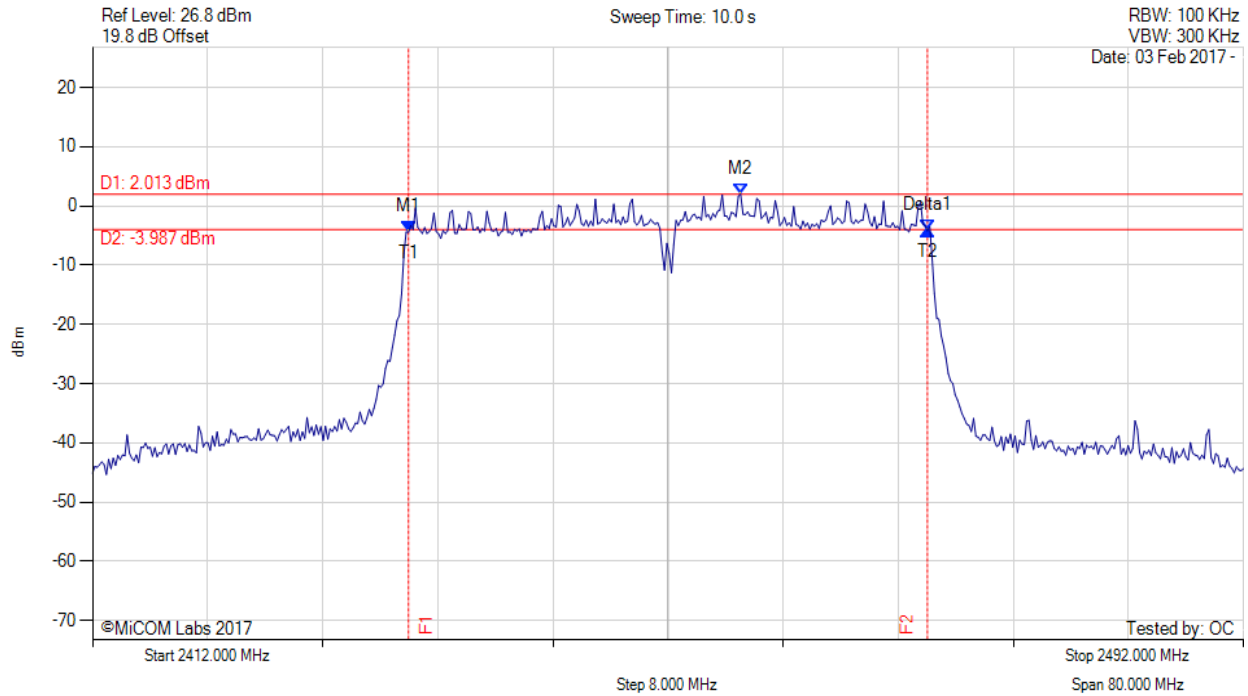


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2433.964 MHz : -4.414 dBm M2 : 2457.050 MHz : 2.013 dBm Delta1 : 36.072 MHz : 0.238 dB T1 : 2433.964 MHz : -4.414 dBm T2 : 2470.036 MHz : -4.176 dBm OBW : 36.072 MHz	Measured 6 dB Bandwidth: 36.072 MHz Limit: $\geq 500.0$ kHz Margin: -35.57 MHz

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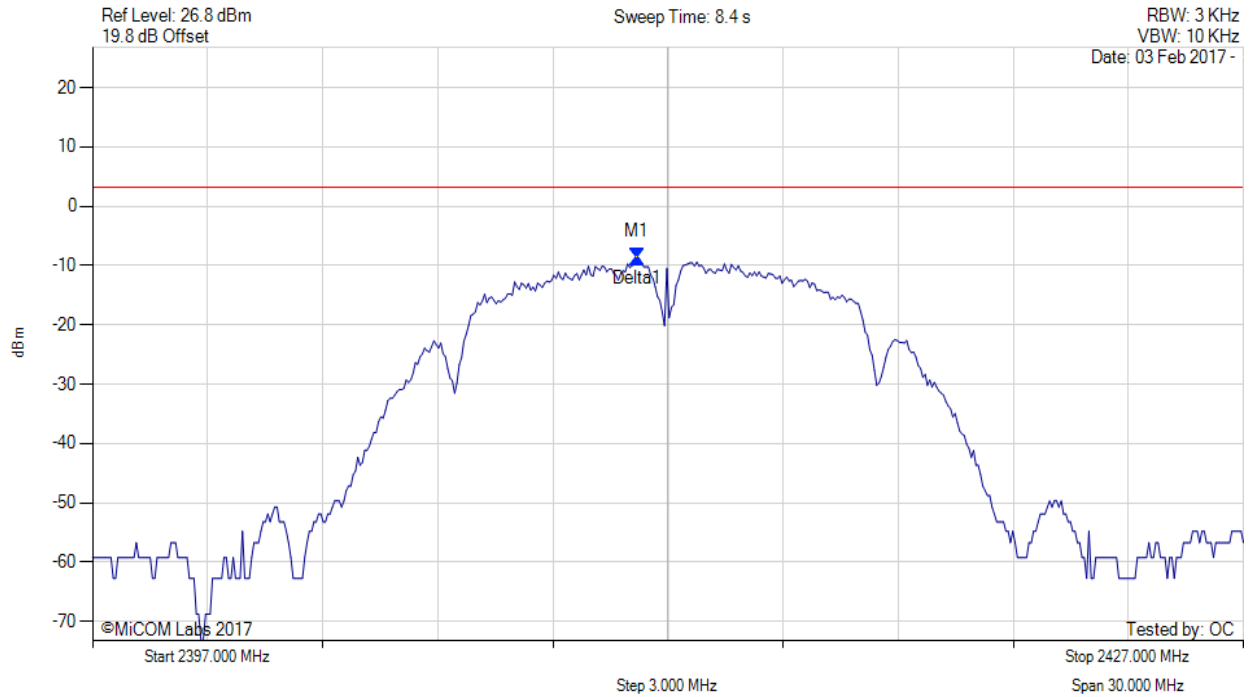
**Title:** Actiontec Electronics Inc T3200BV, C2300A  
**To:** FCC CFR 47 Part 15 Subpart C 15.247 (DTS)  
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## A.2. Power Spectral Density



### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



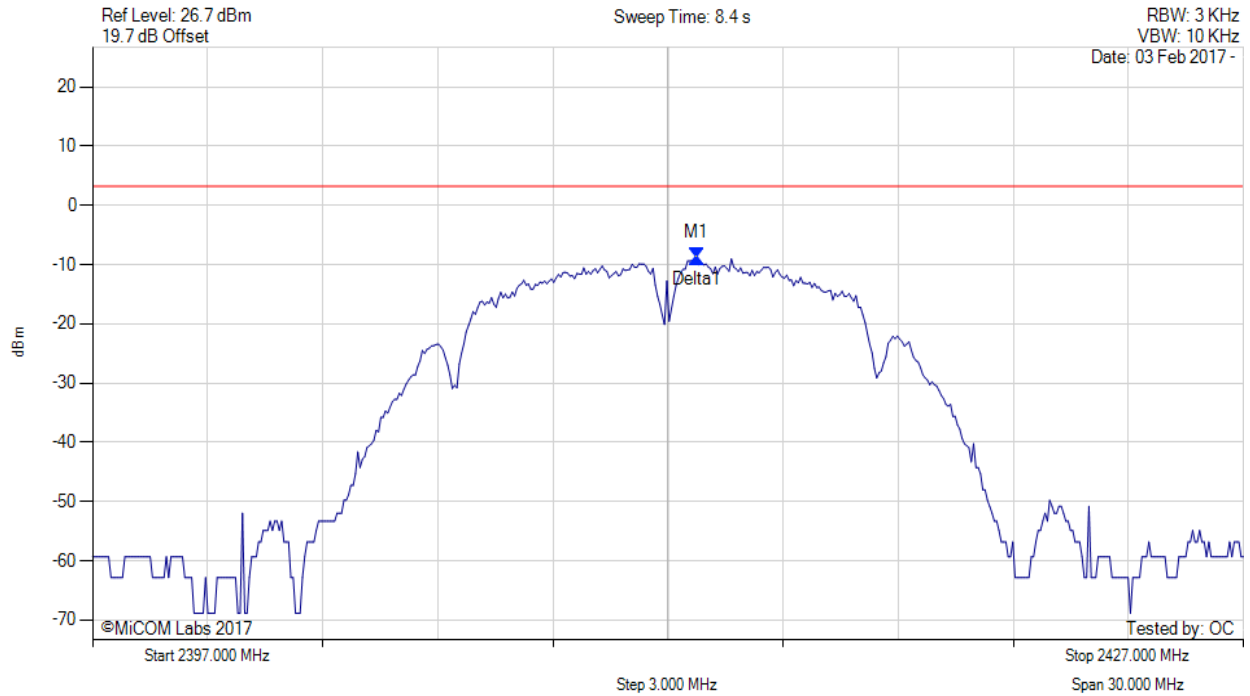
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2411.188 MHz : -8.645 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



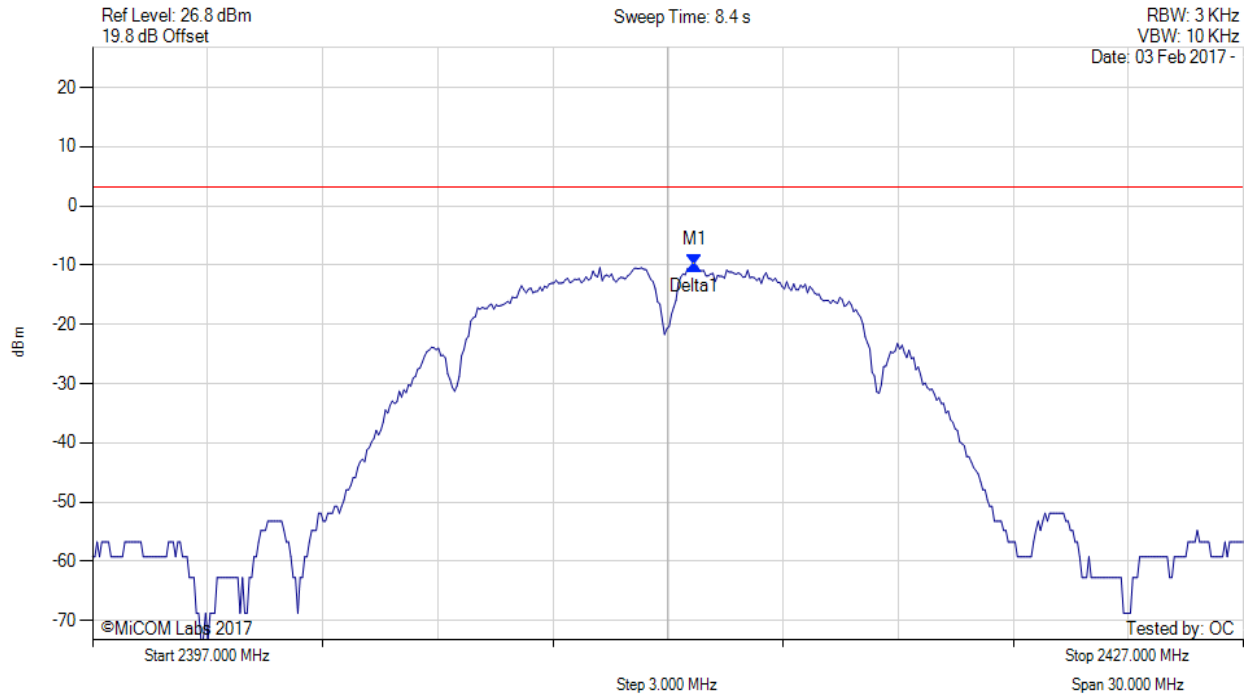
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.752 MHz : -8.848 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



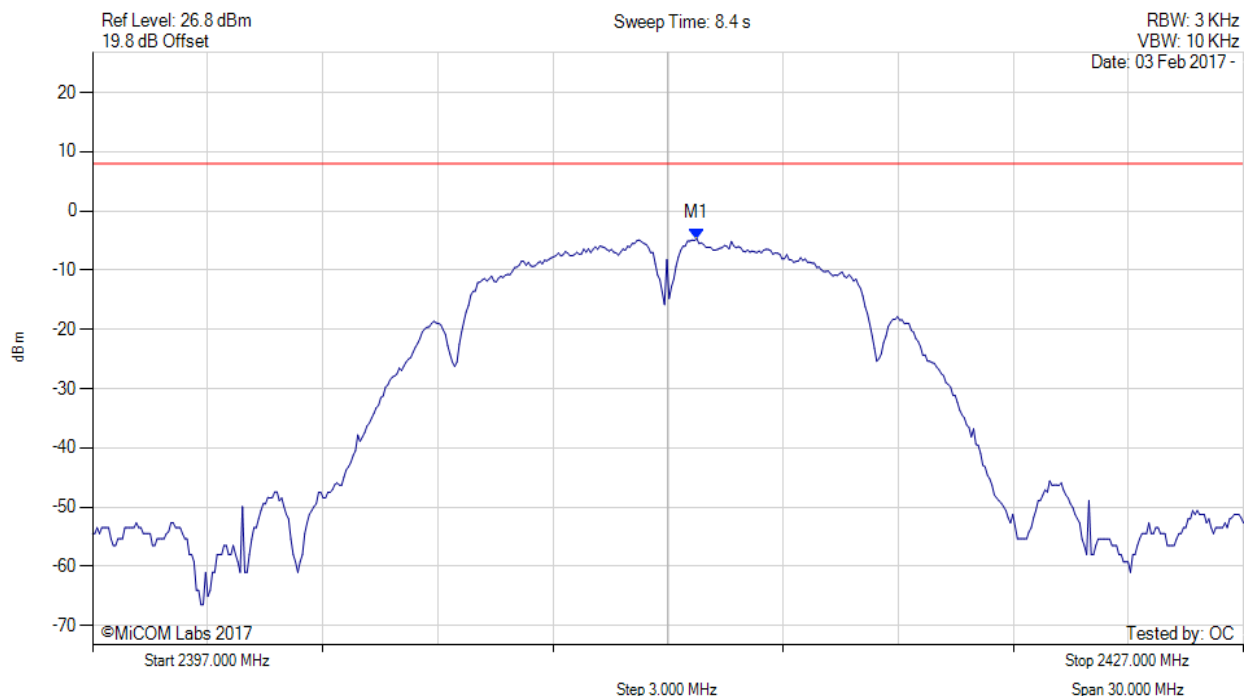
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.691 MHz : -9.965 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc

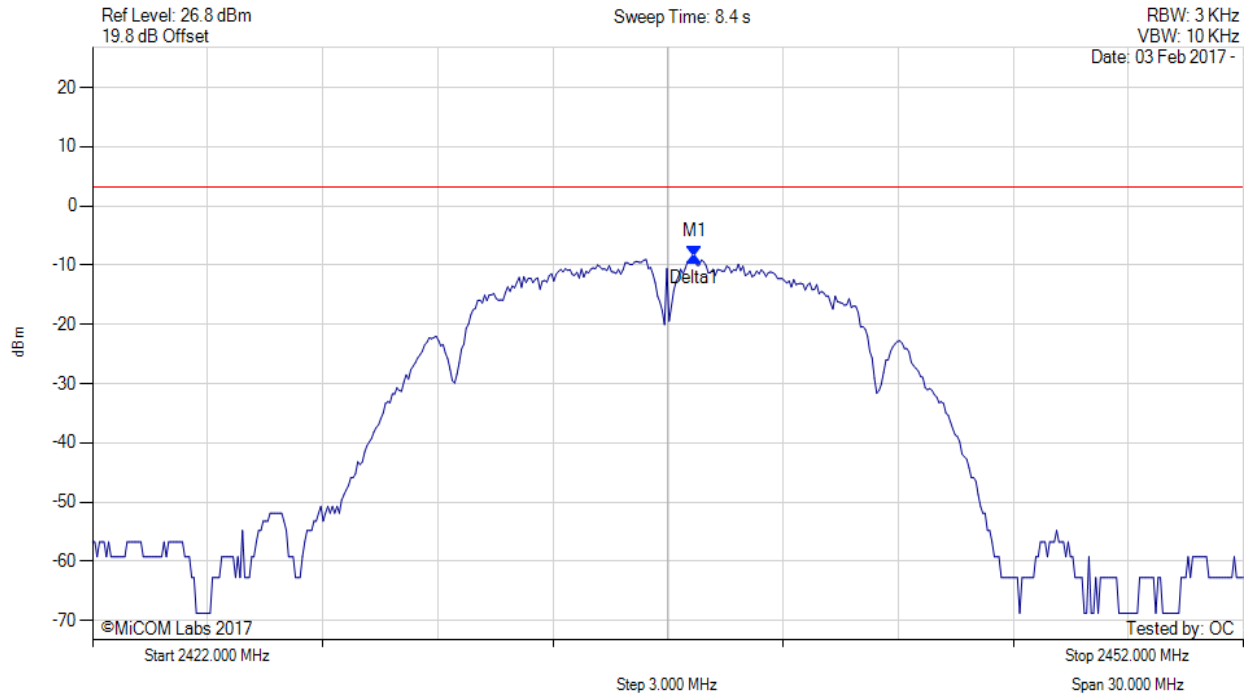


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.800 MHz : -4.666 dBm M1 + DCCF : 2412.800 MHz : -4.622 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -12.6 dB

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

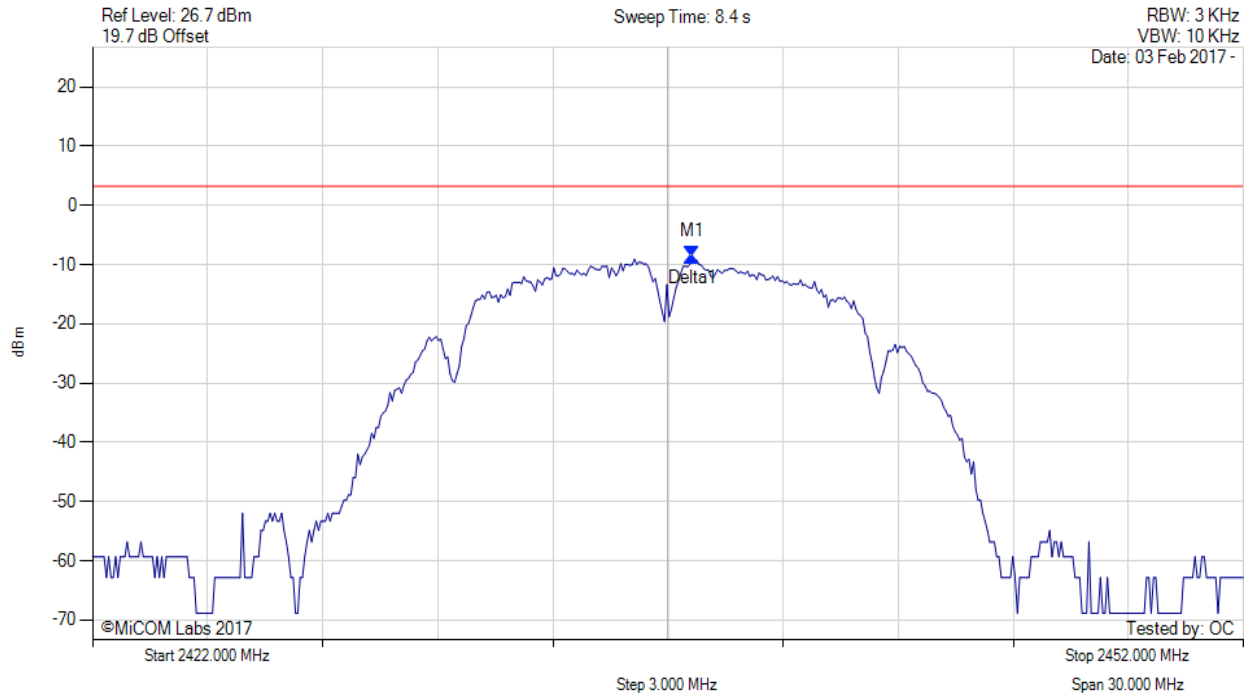


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.691 MHz : -8.568 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.631 MHz : -8.676 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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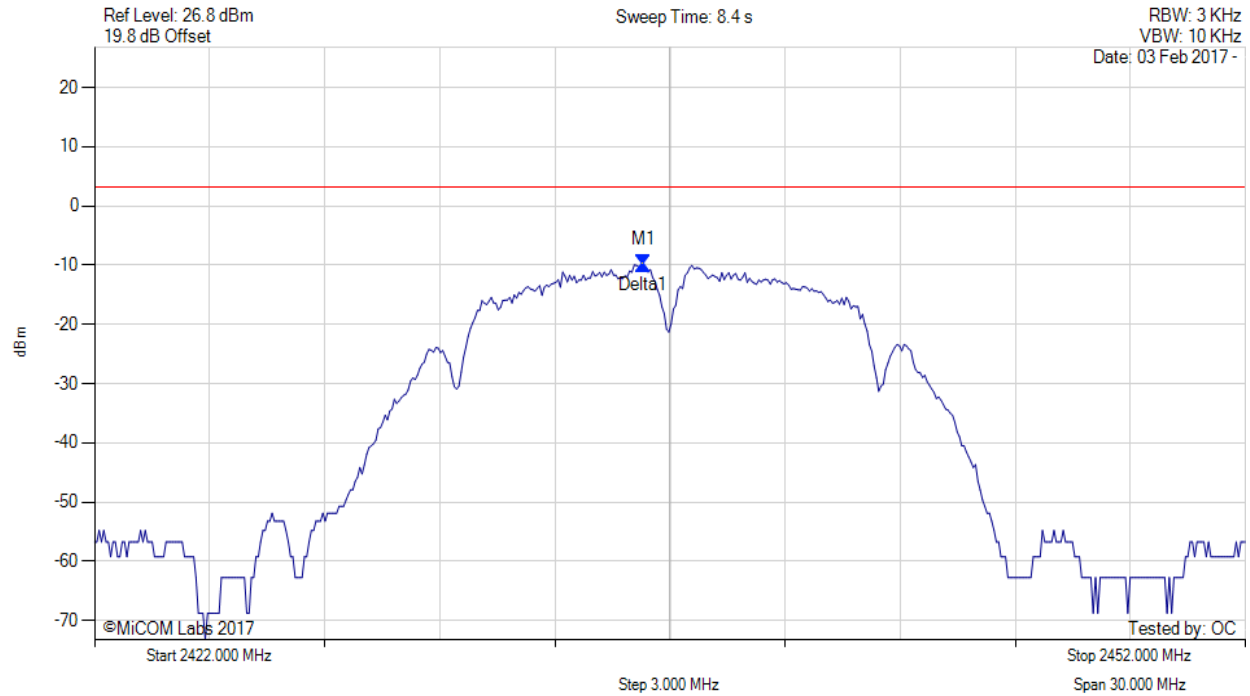


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



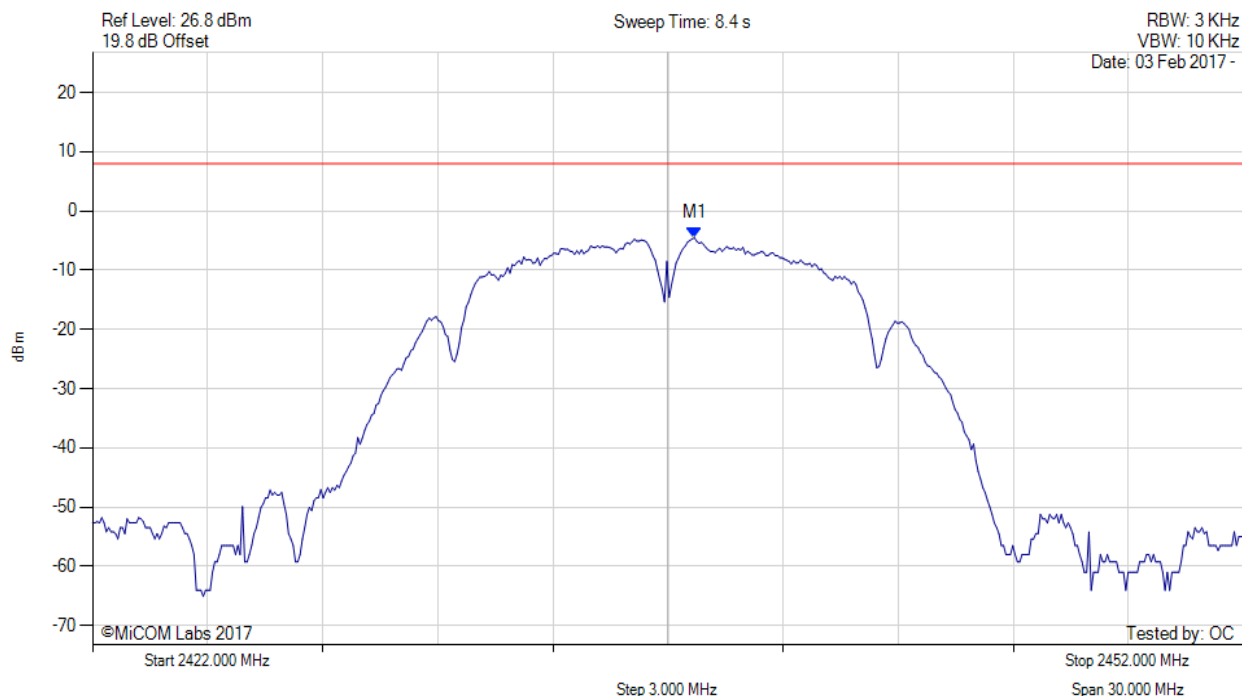
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.309 MHz : -9.846 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc

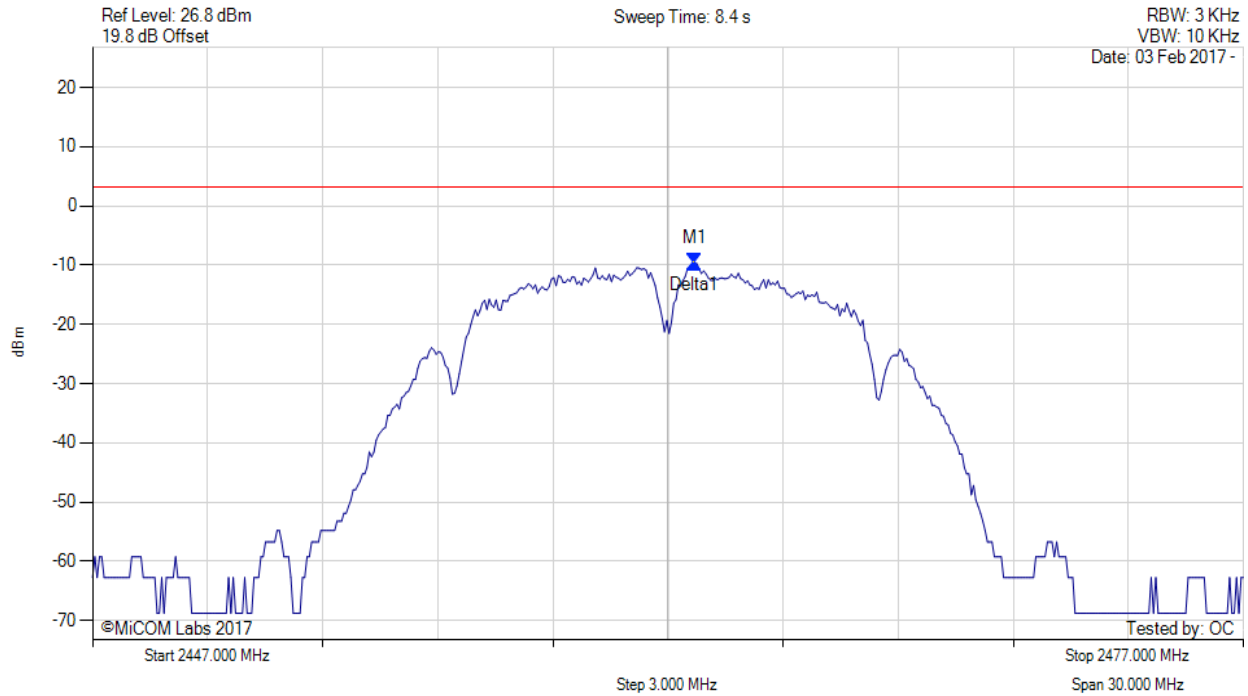


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.700 MHz : -4.544 dBm M1 + DCCF : 2437.700 MHz : -4.500 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -12.5 dB

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



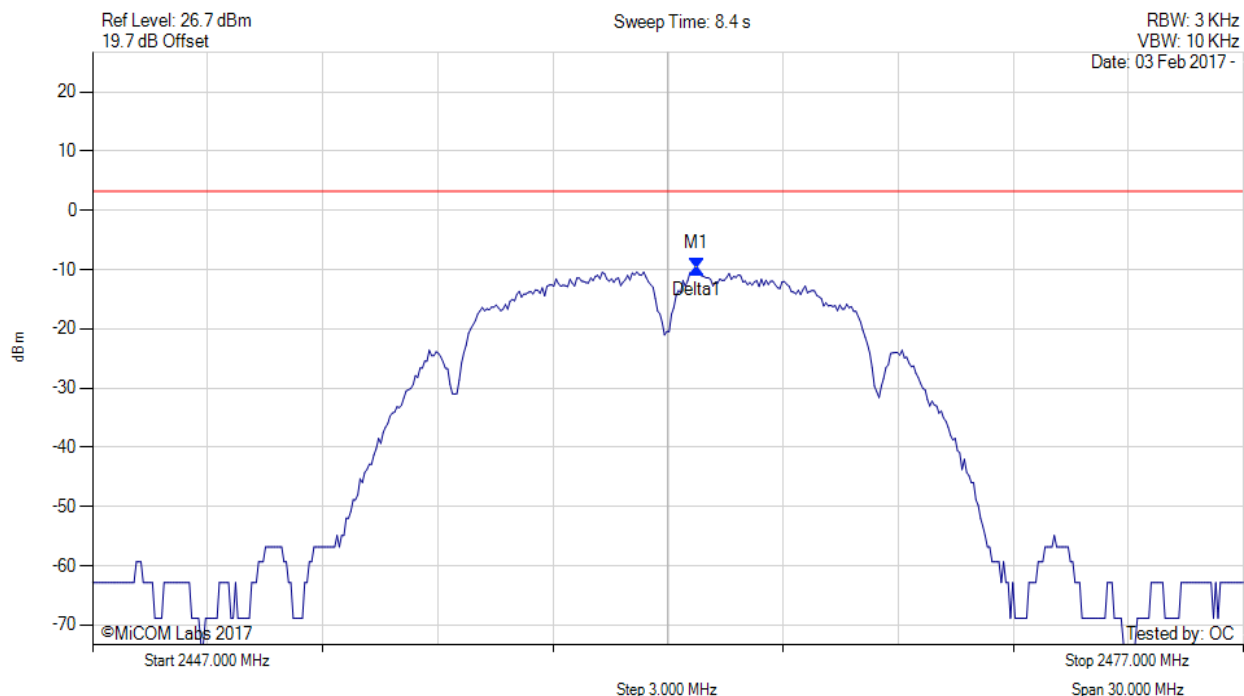
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.691 MHz : -9.680 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



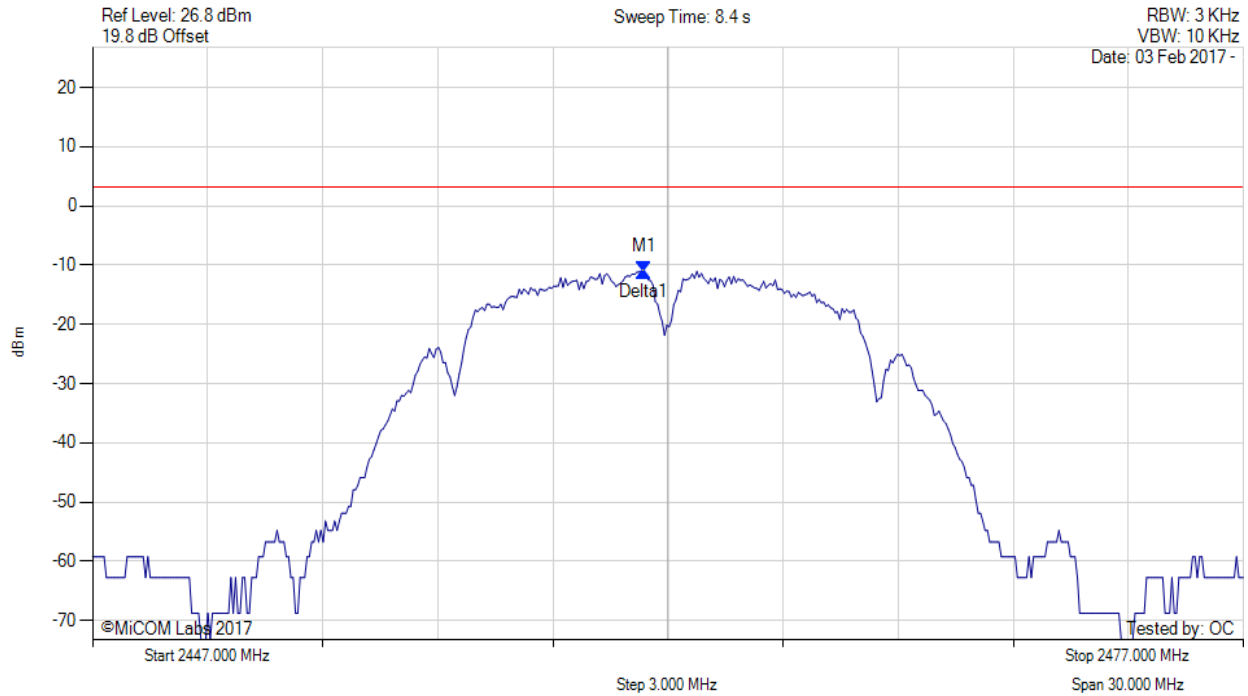
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.752 MHz : -9.800 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

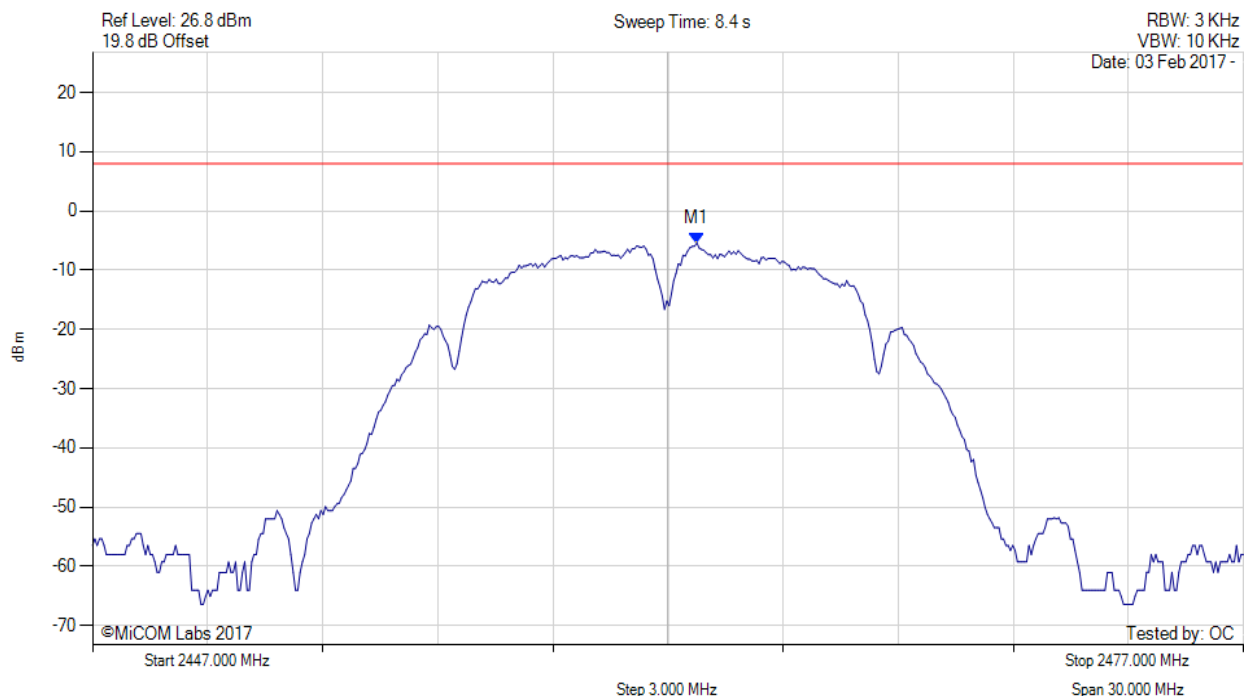


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.369 MHz : -11.013 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc

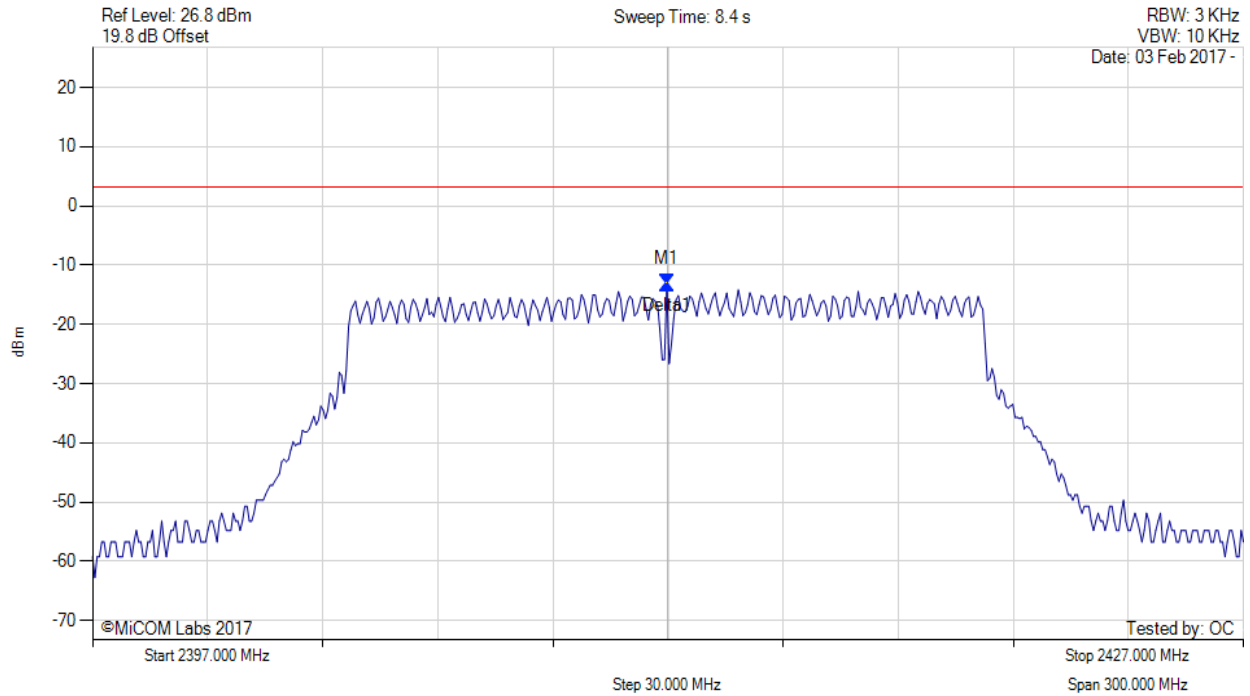


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.800 MHz : -5.390 dBm M1 + DCCF : 2462.800 MHz : -5.346 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -13.3 dB

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

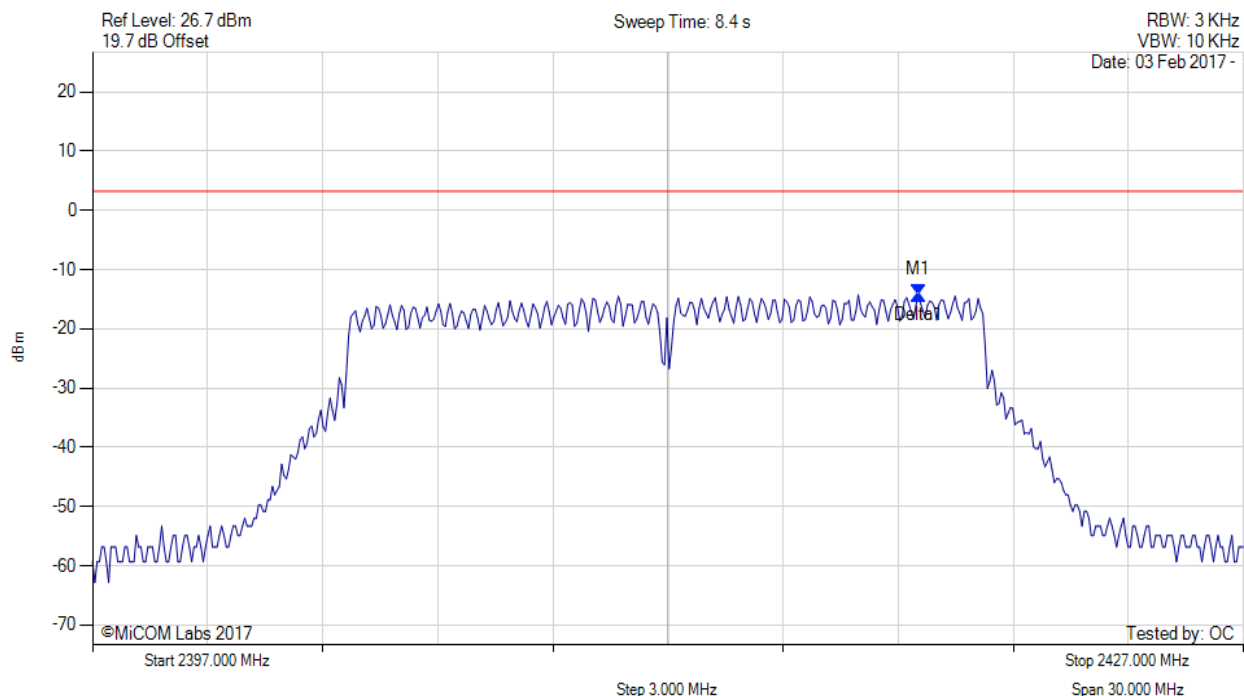


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2411.970 MHz : -13.260 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

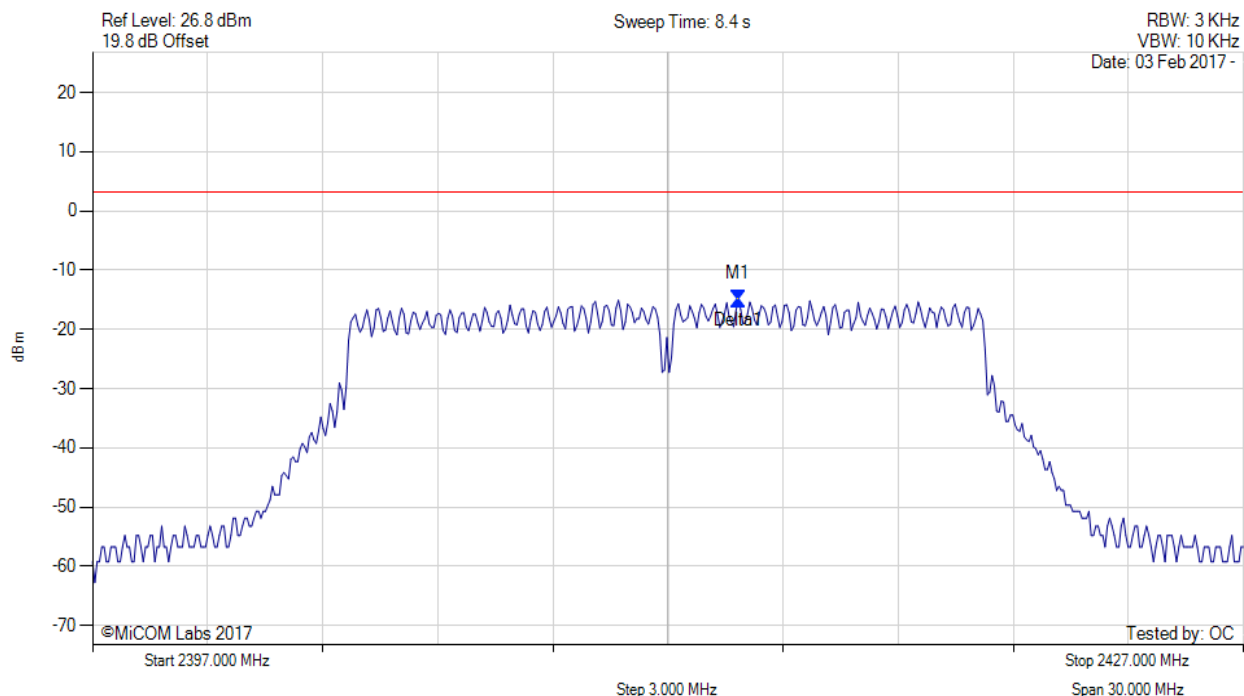


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2418.523 MHz : -14.153 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

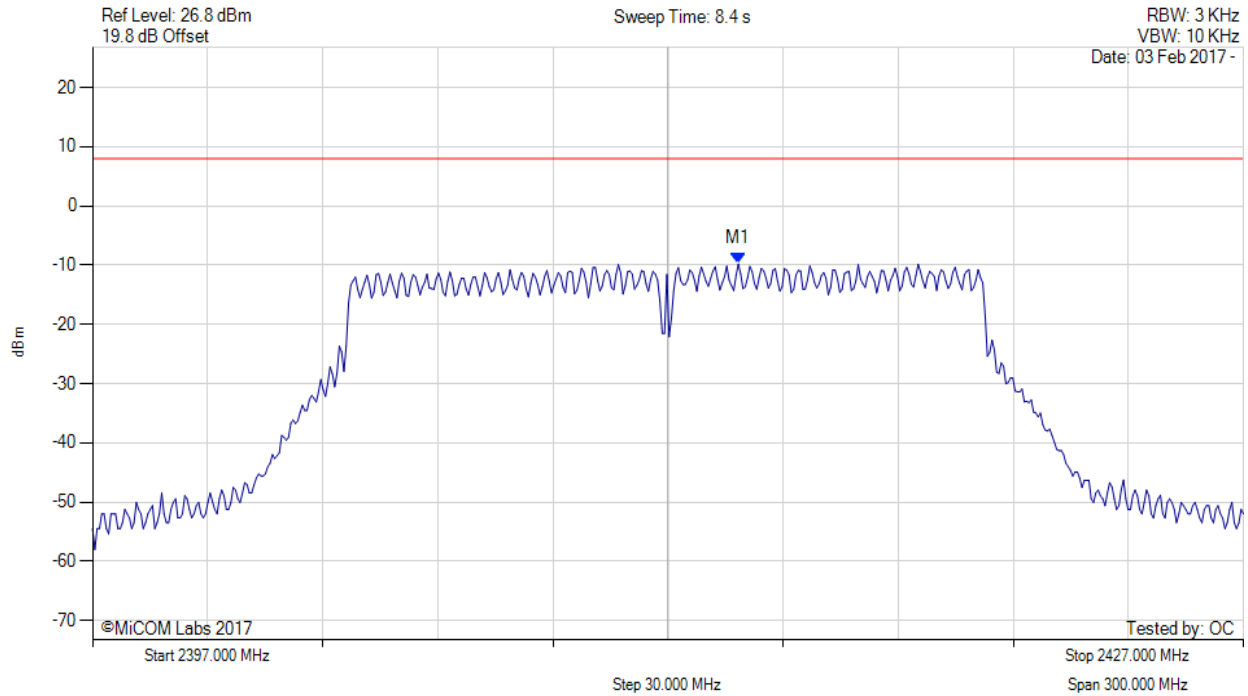


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2413.834 MHz : -14.944 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc

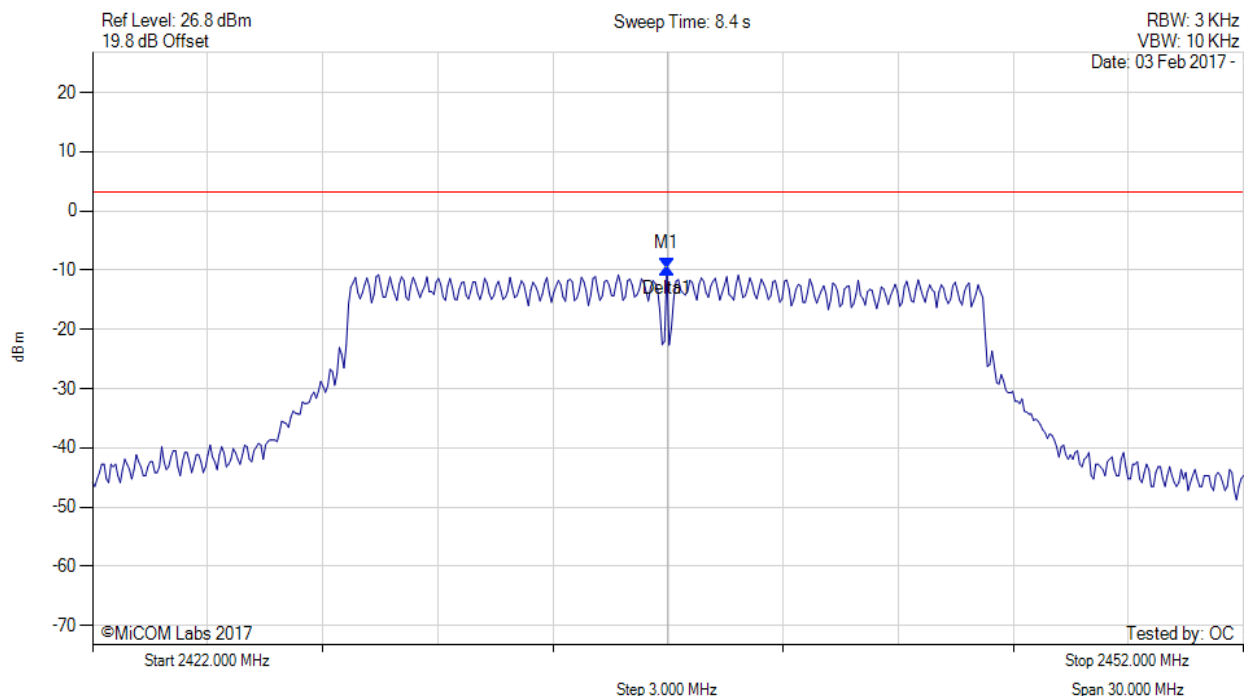


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2413.800 MHz : -9.775 dBm M1 + DCCF : 2413.800 MHz : -9.643 dBm Duty Cycle Correction Factor : +0.13 dB	Limit: $\leq 8.0$ dBm Margin: -17.6 dB

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# POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

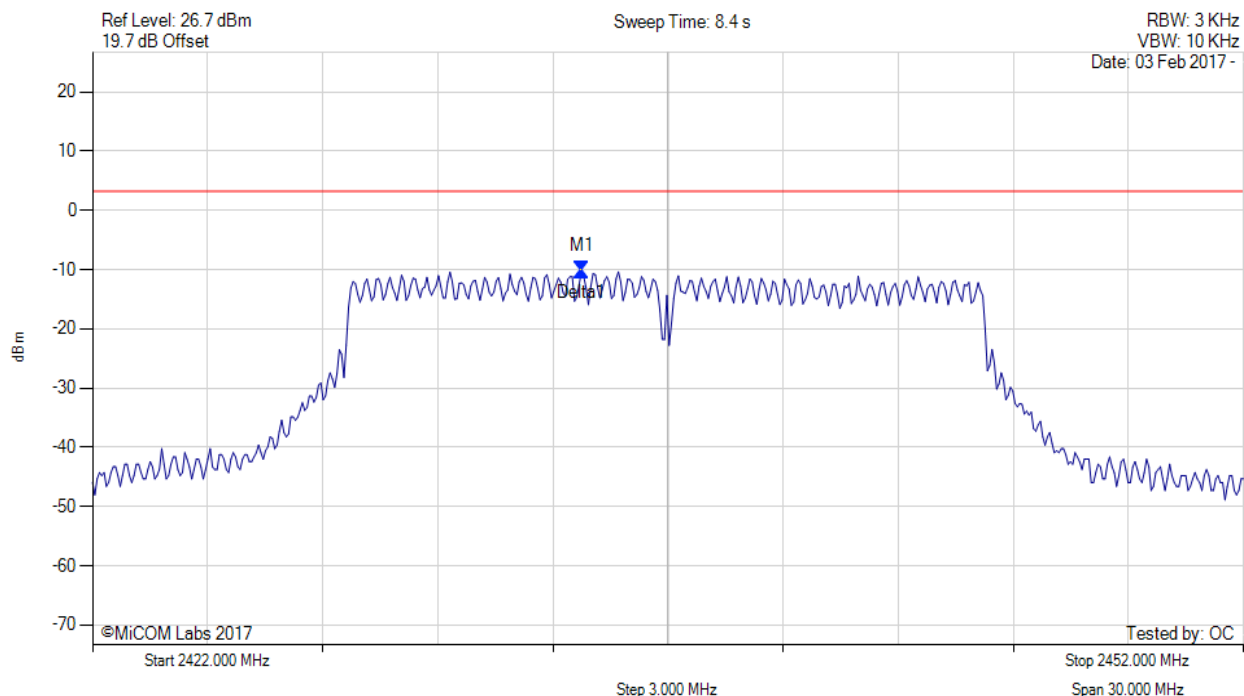


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.970 MHz : -9.594 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



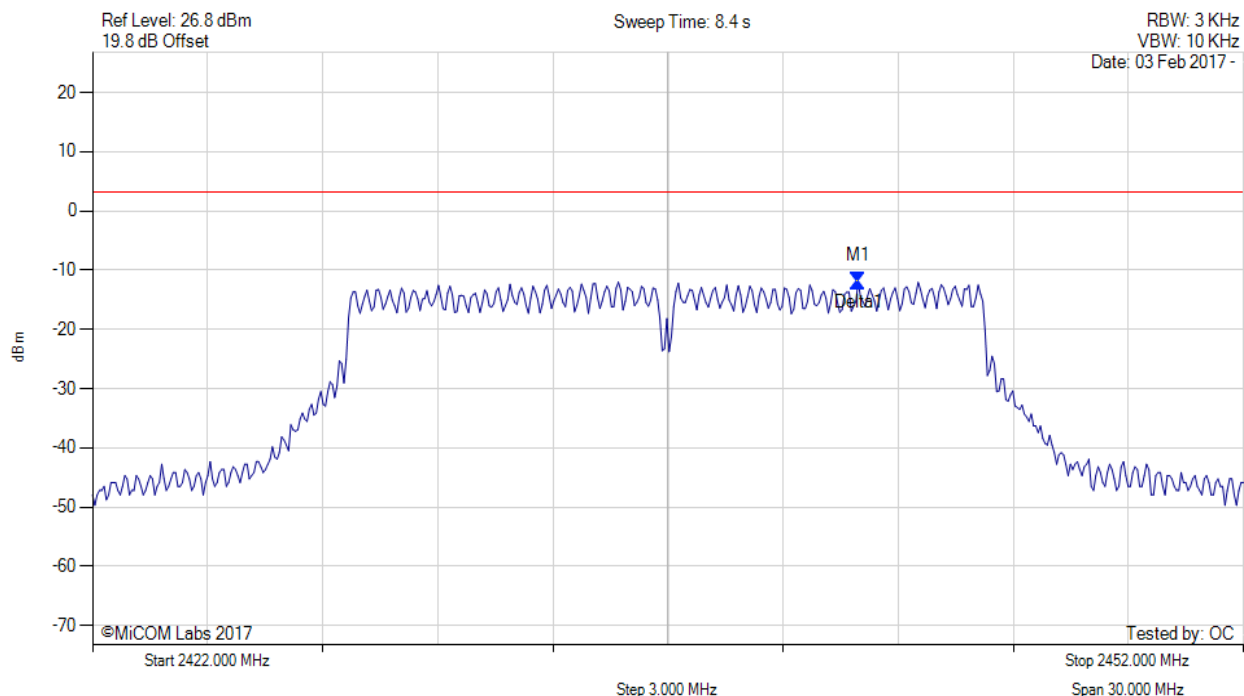
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2434.745 MHz : -10.349 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

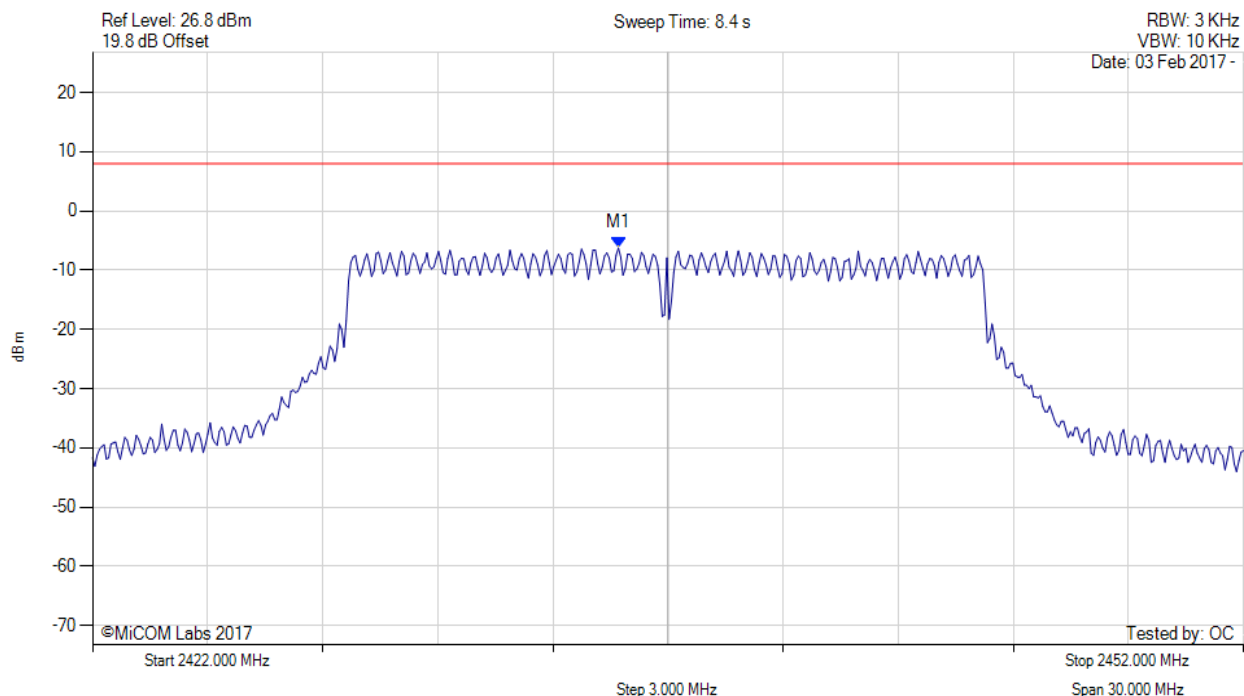


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2441.960 MHz : -11.901 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc

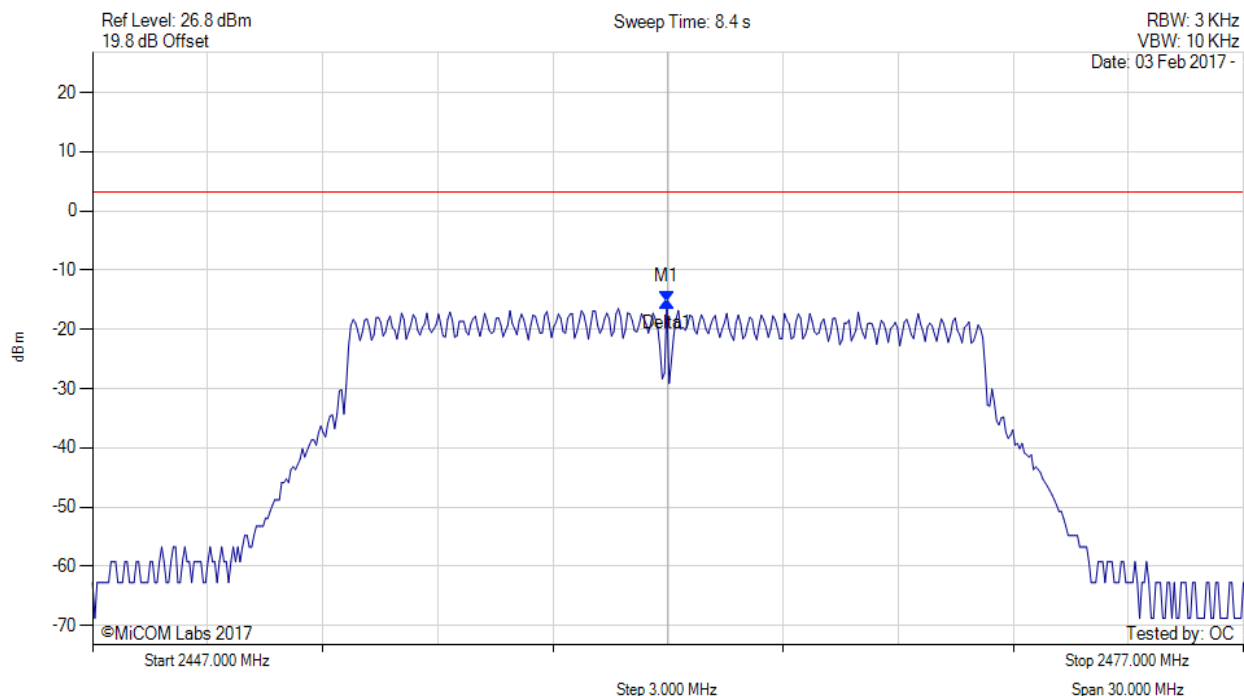


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2435.700 MHz : -6.240 dBm M1 + DCCF : 2435.700 MHz : -6.108 dBm Duty Cycle Correction Factor : +0.13 dB	Limit: $\leq 8.0$ dBm Margin: -14.1 dB

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# POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.970 MHz : -15.342 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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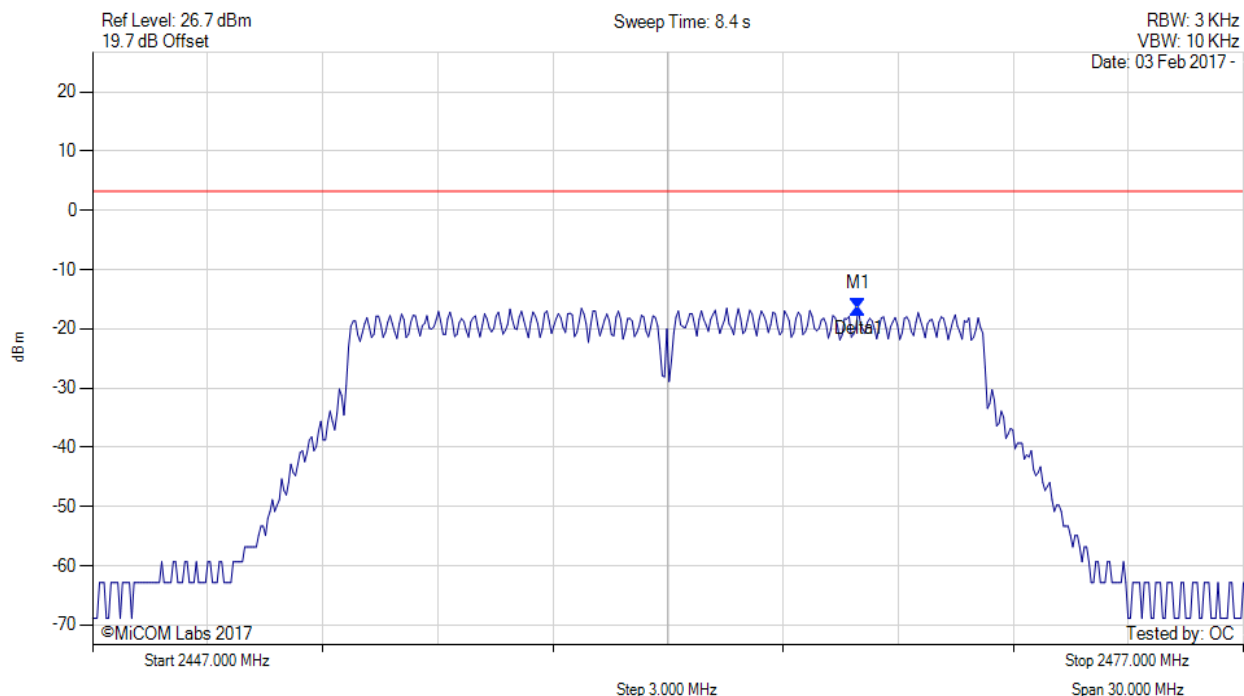


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



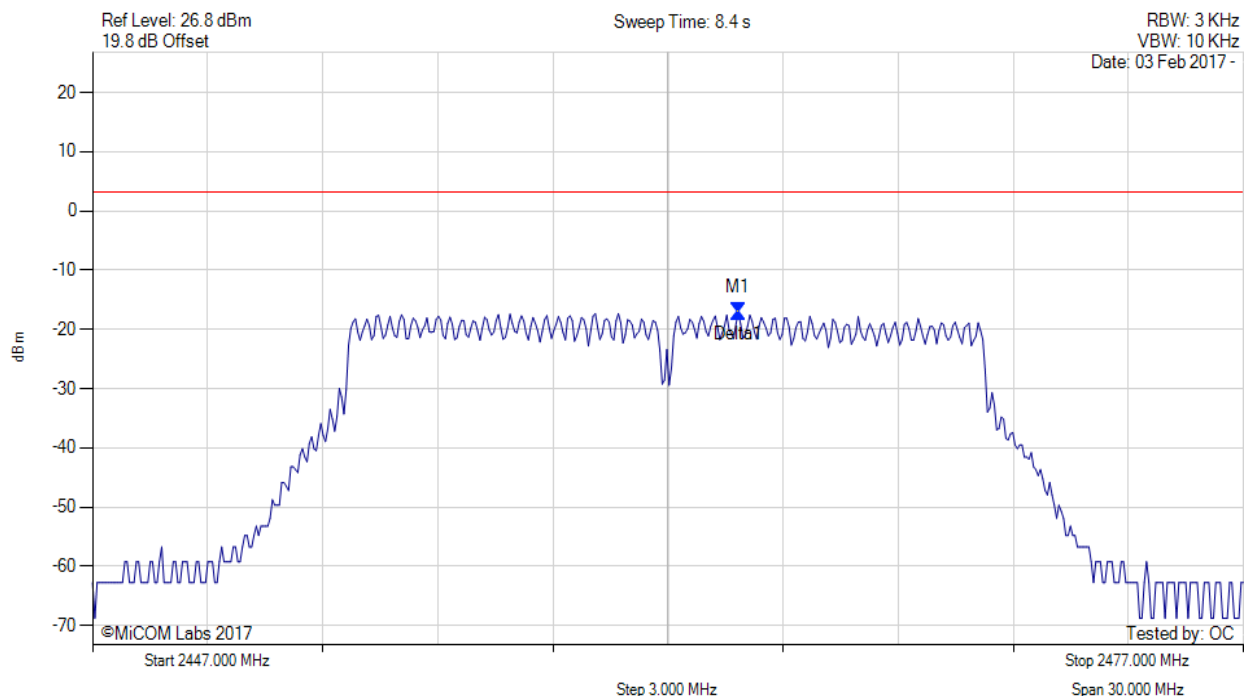
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2466.960 MHz : -16.483 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2463.834 MHz : -17.170 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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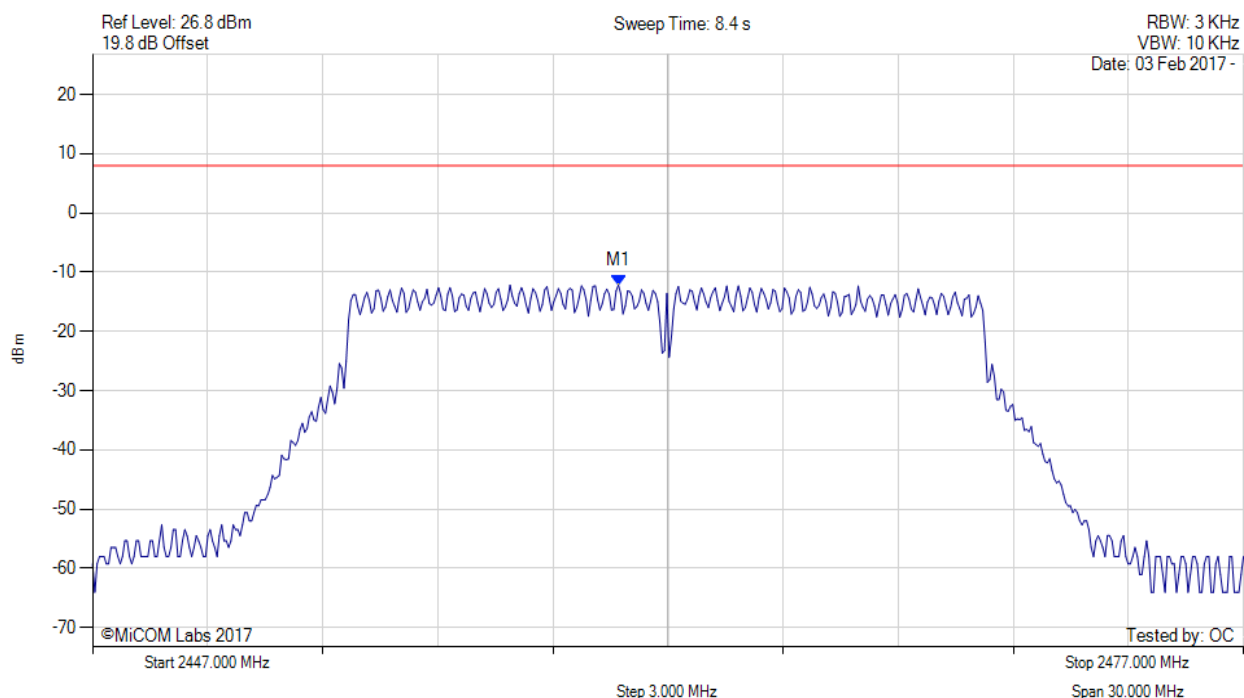


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc



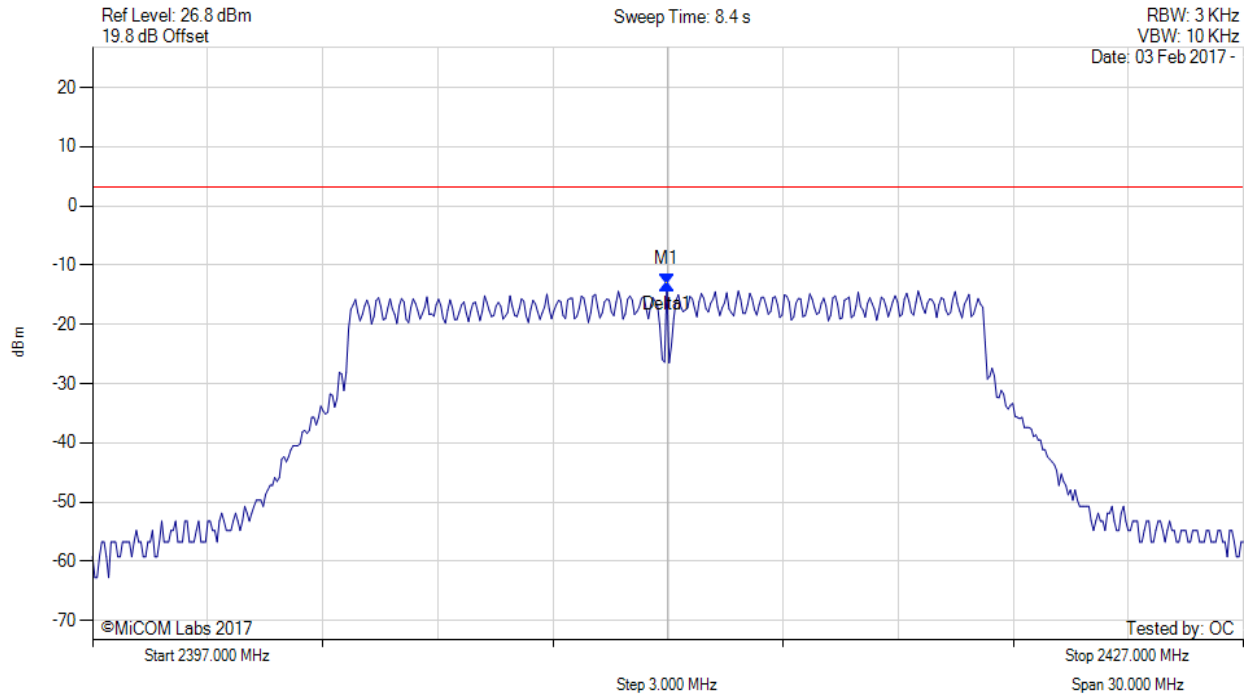
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.700 MHz : -12.162 dBm M1 + DCCF : 2460.700 MHz : -12.030 dBm Duty Cycle Correction Factor : +0.13 dB	Limit: $\leq 8.0$ dBm Margin: -20.0 dB

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



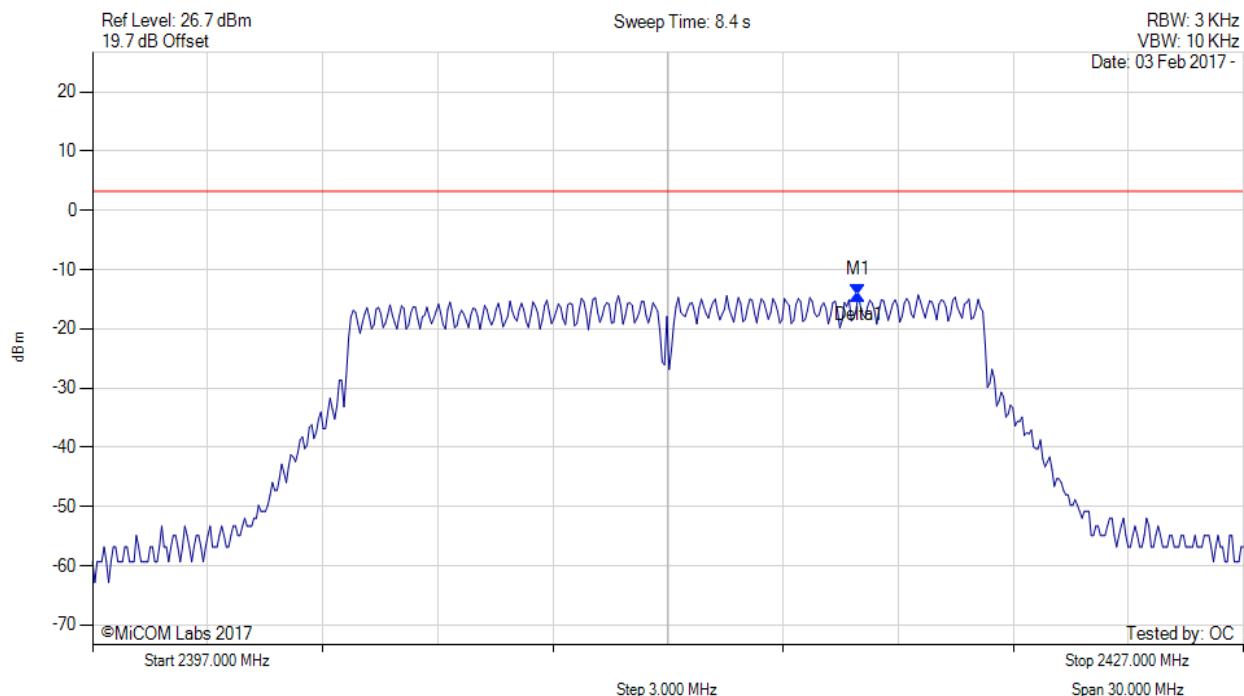
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2411.970 MHz : -13.145 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



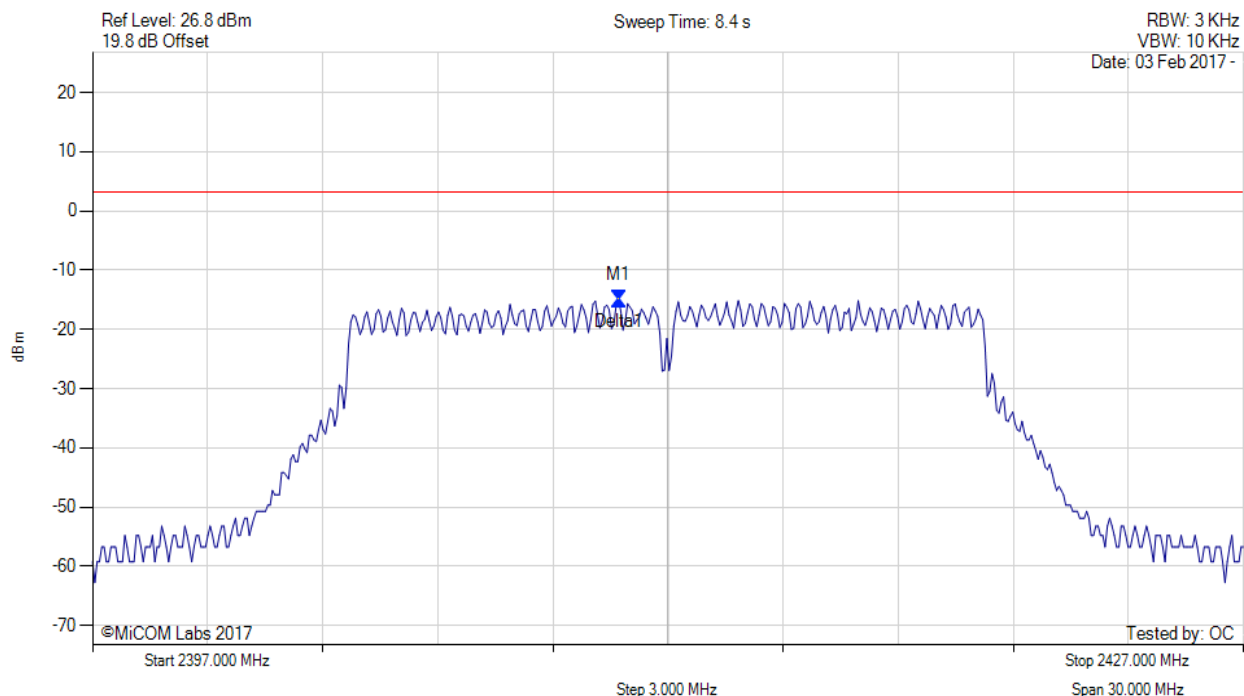
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2416.960 MHz : -14.169 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

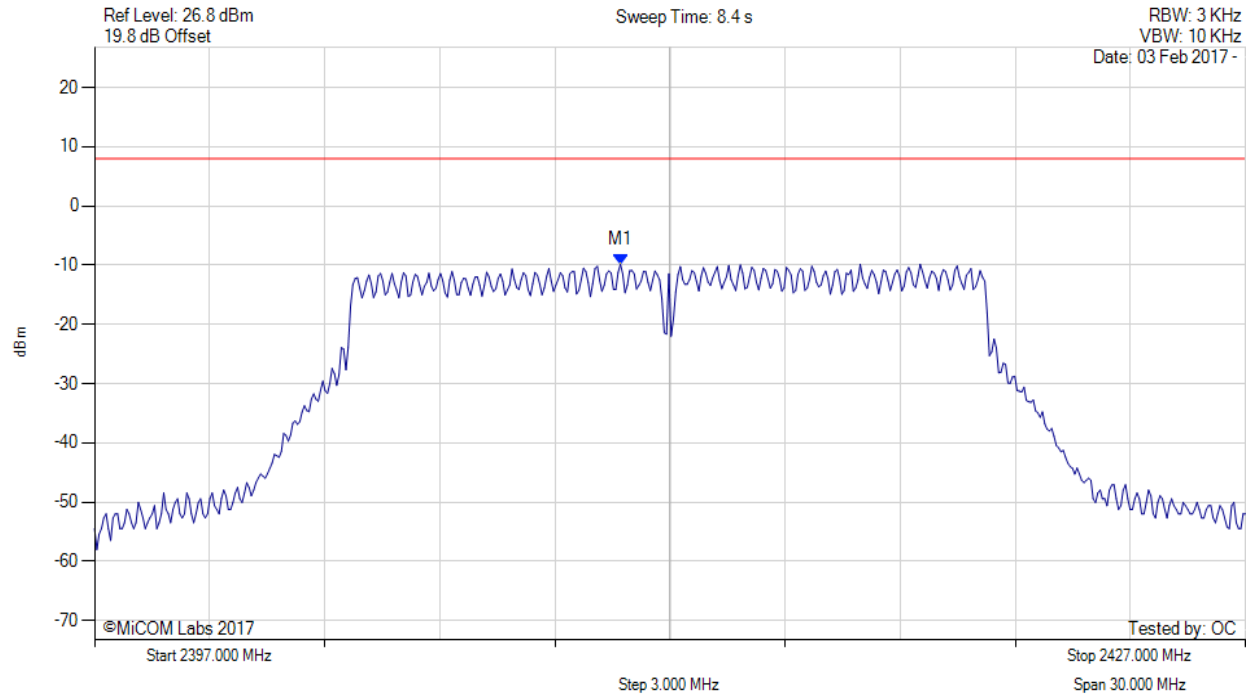


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2410.707 MHz : -15.033 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc

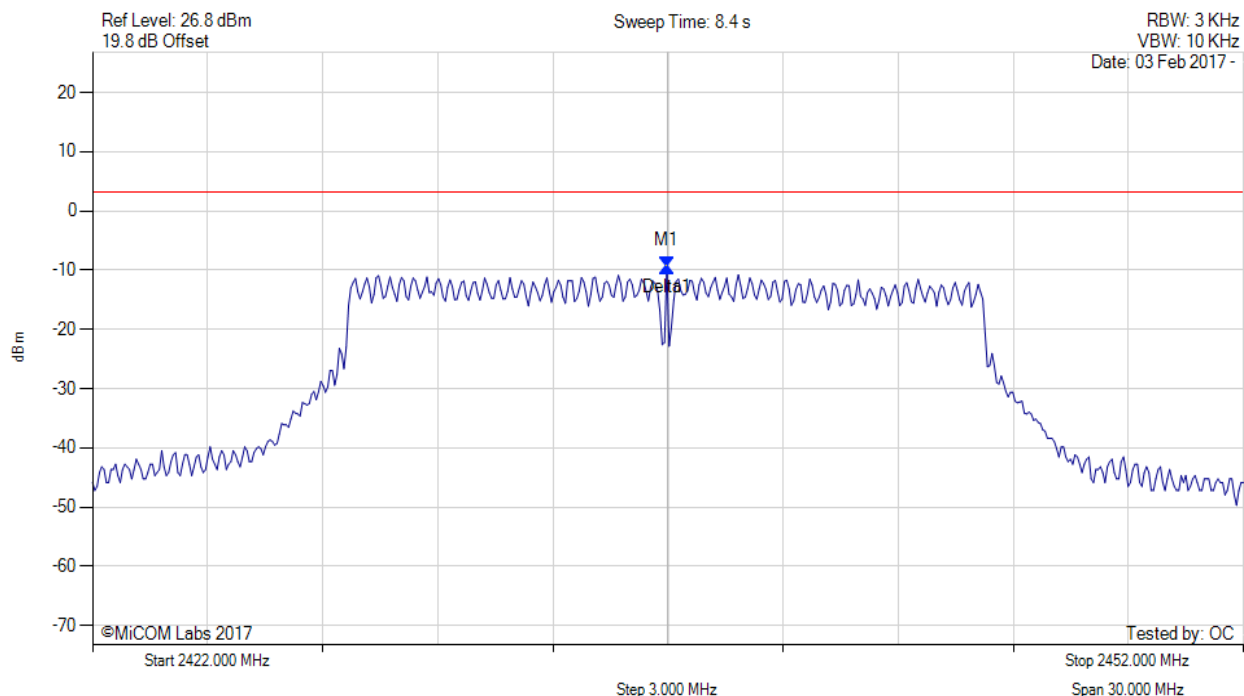


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2410.700 MHz : -9.838 dBm M1 + DCCF : 2410.700 MHz : -9.706 dBm Duty Cycle Correction Factor : +0.13 dB	Limit: $\leq 8.0$ dBm Margin: -17.7 dB

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

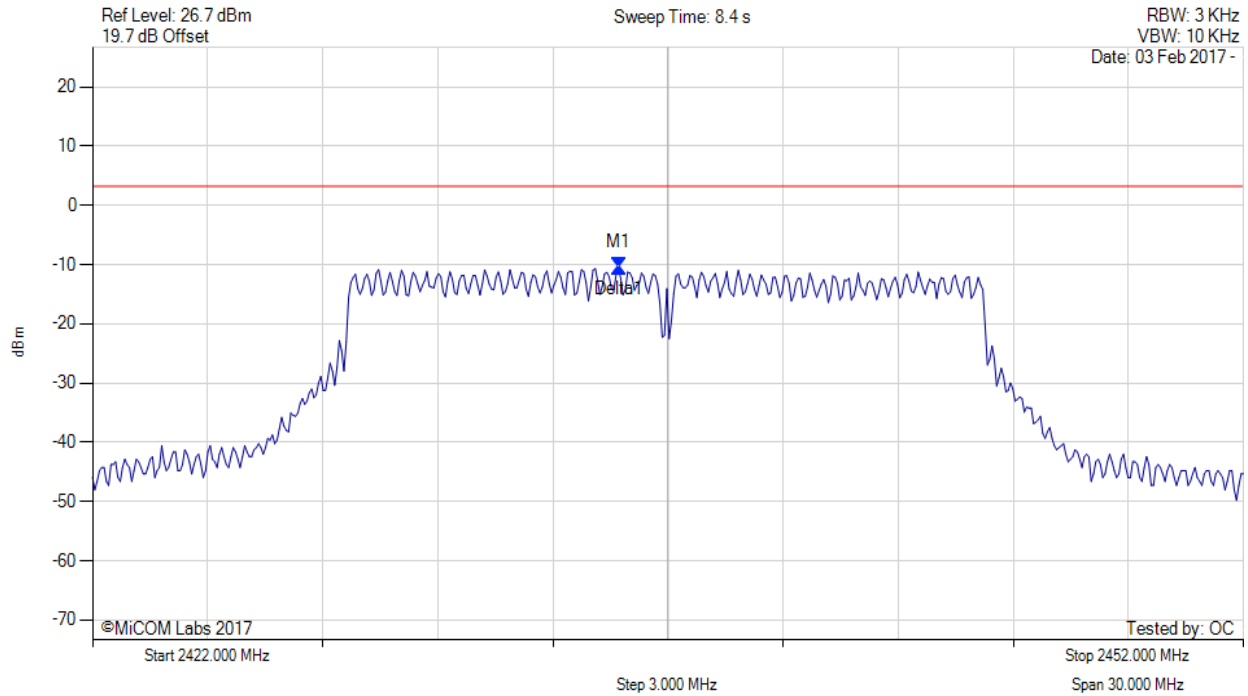


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.970 MHz : -9.331 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

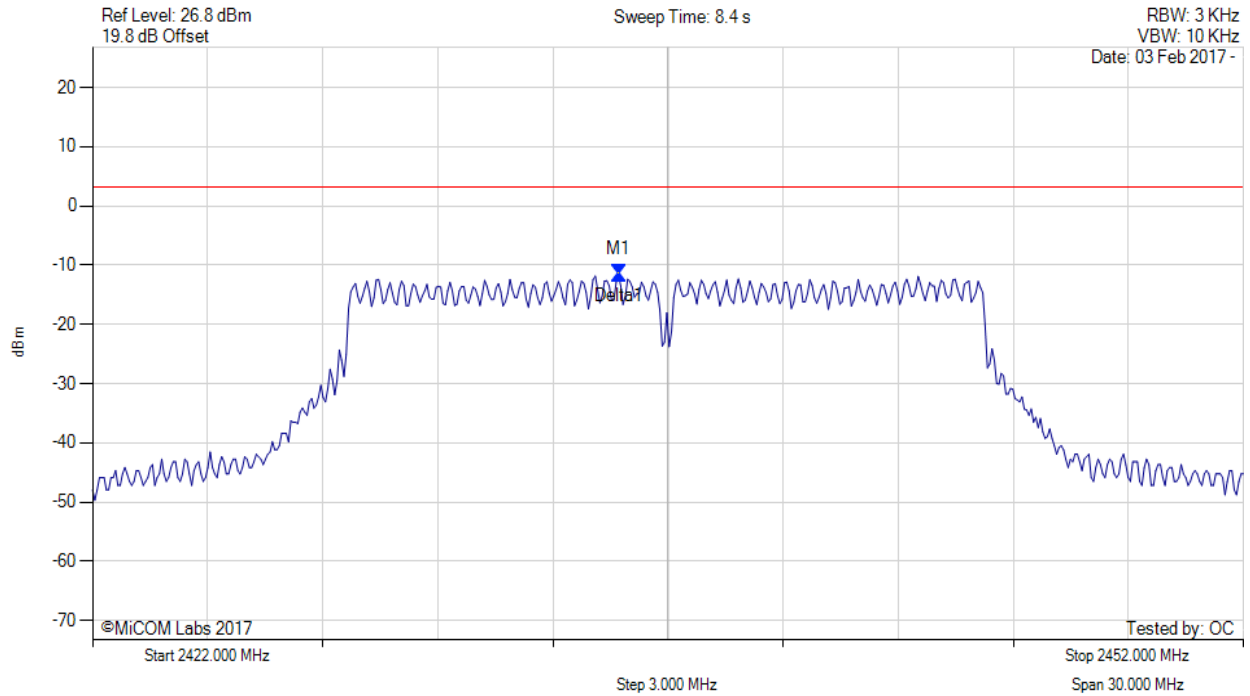


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2435.707 MHz : -10.484 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

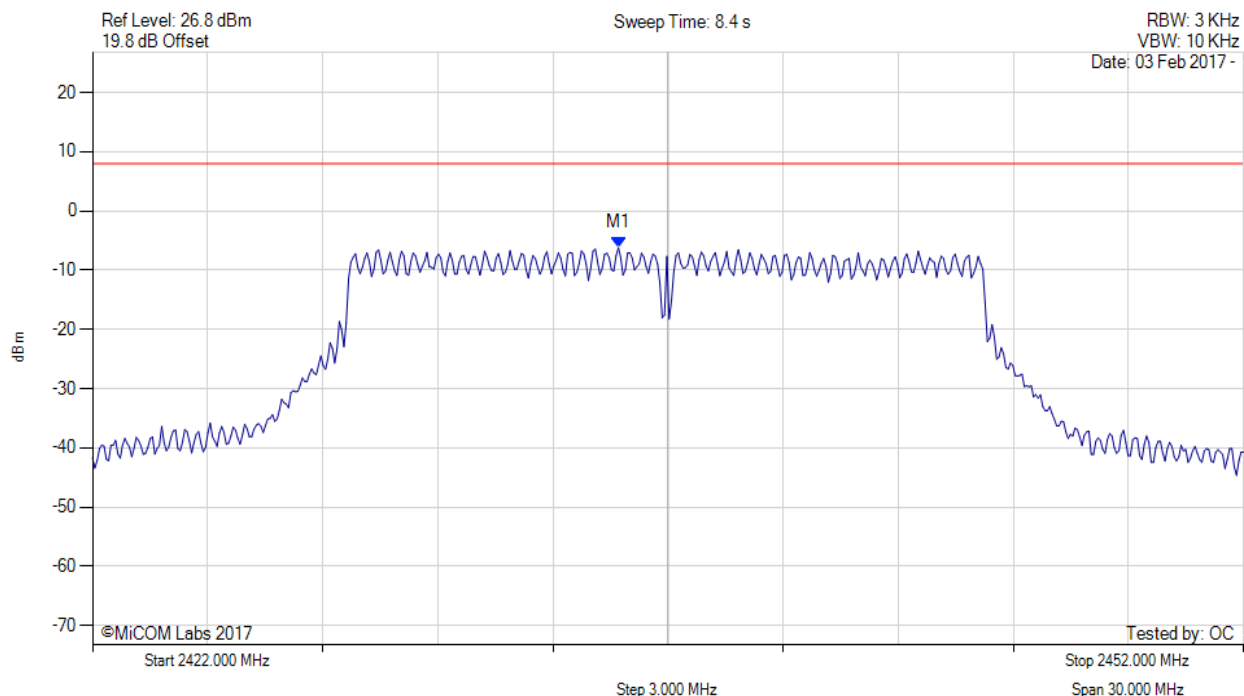


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2435.707 MHz : -11.655 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc

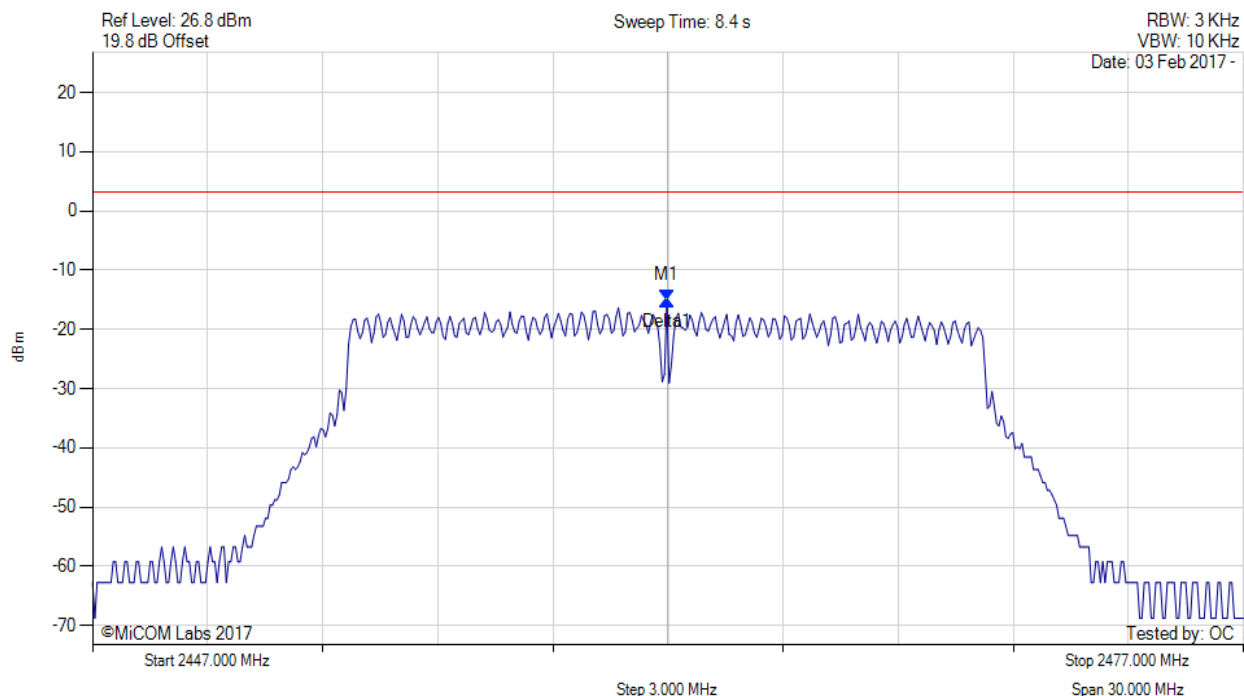


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2435.700 MHz : -6.208 dBm M1 + DCCF : 2435.700 MHz : -6.076 dBm Duty Cycle Correction Factor : +0.13 dB	Limit: $\leq 8.0$ dBm Margin: -14.0 dB

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

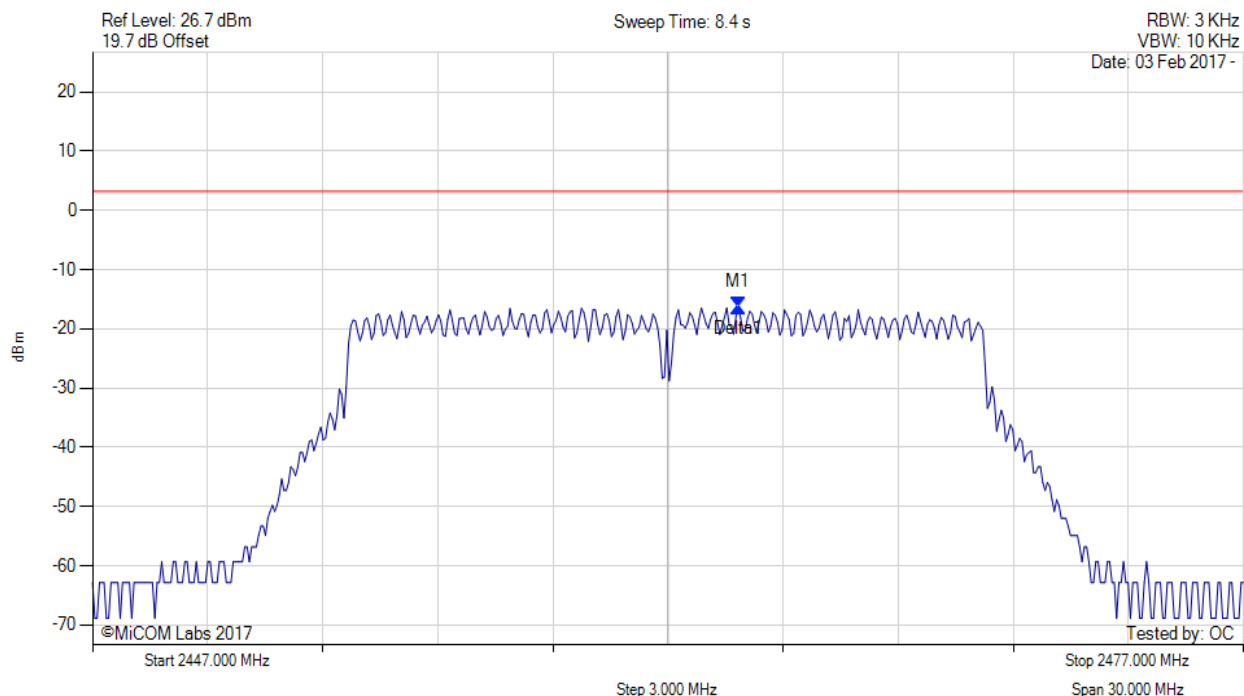


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.970 MHz : -15.159 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



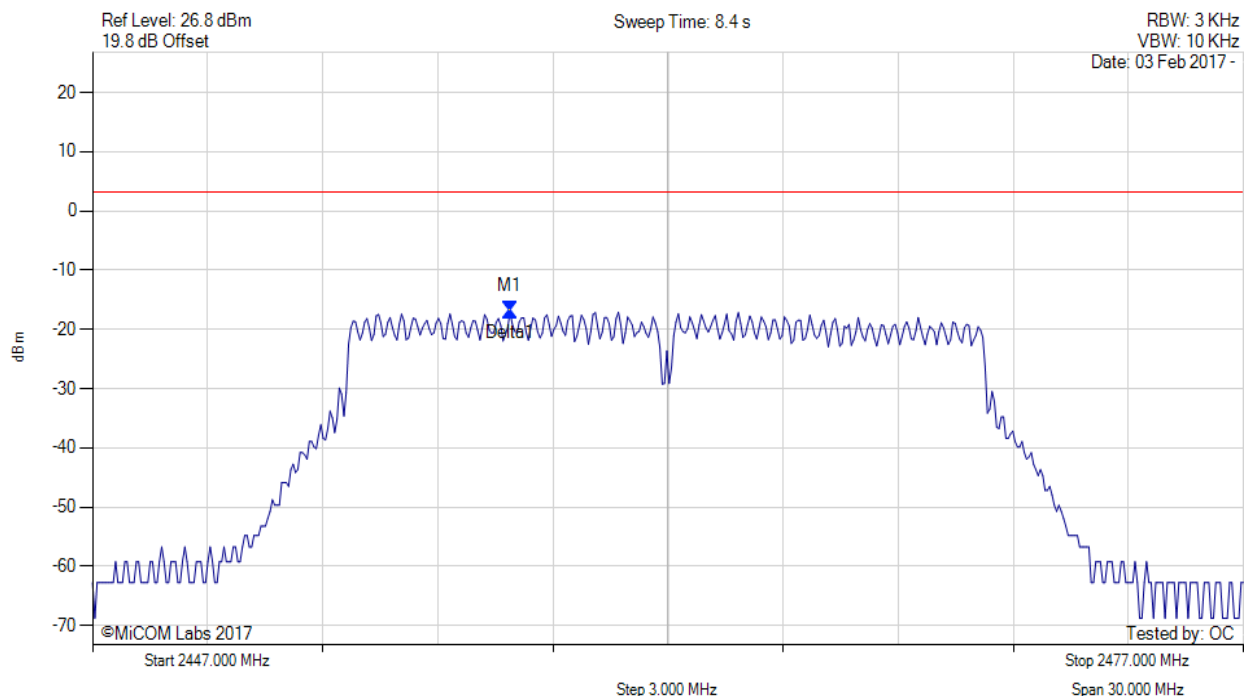
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2463.834 MHz : -16.380 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

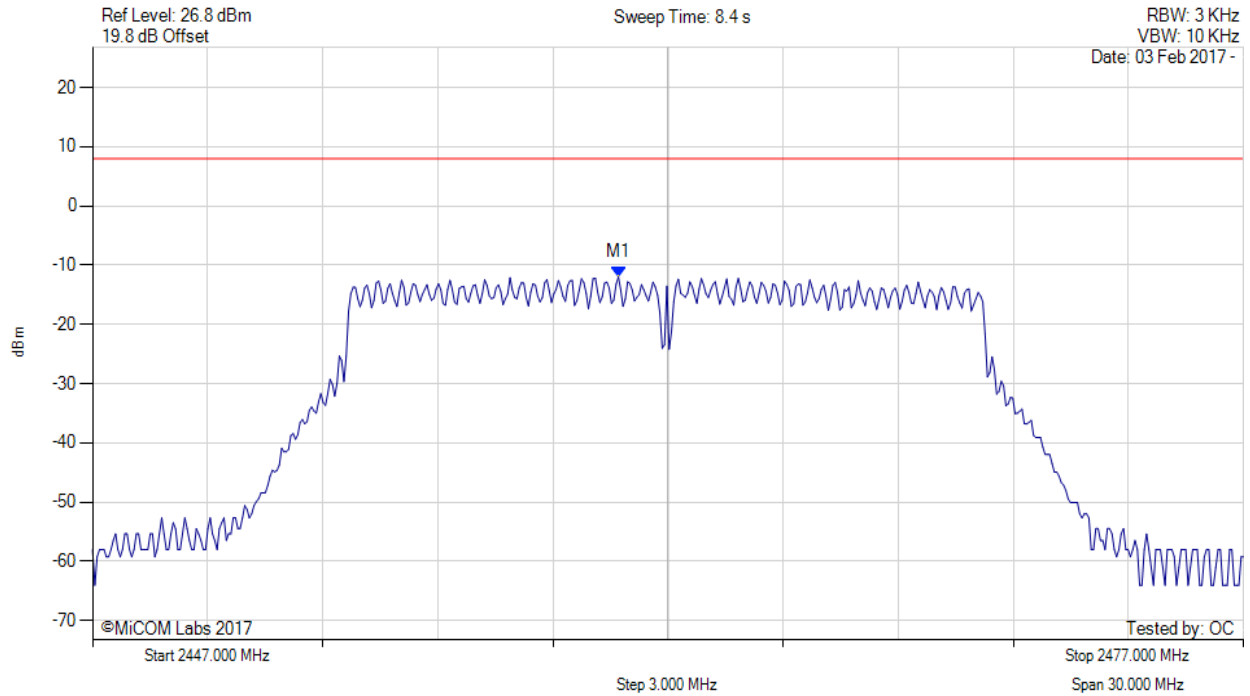


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2457.882 MHz : -17.011 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.700 MHz : -11.959 dBm M1 + DCCF : 2460.700 MHz : -11.827 dBm Duty Cycle Correction Factor : +0.13 dB	Limit: $\leq 8.0$ dBm Margin: -19.8 dB

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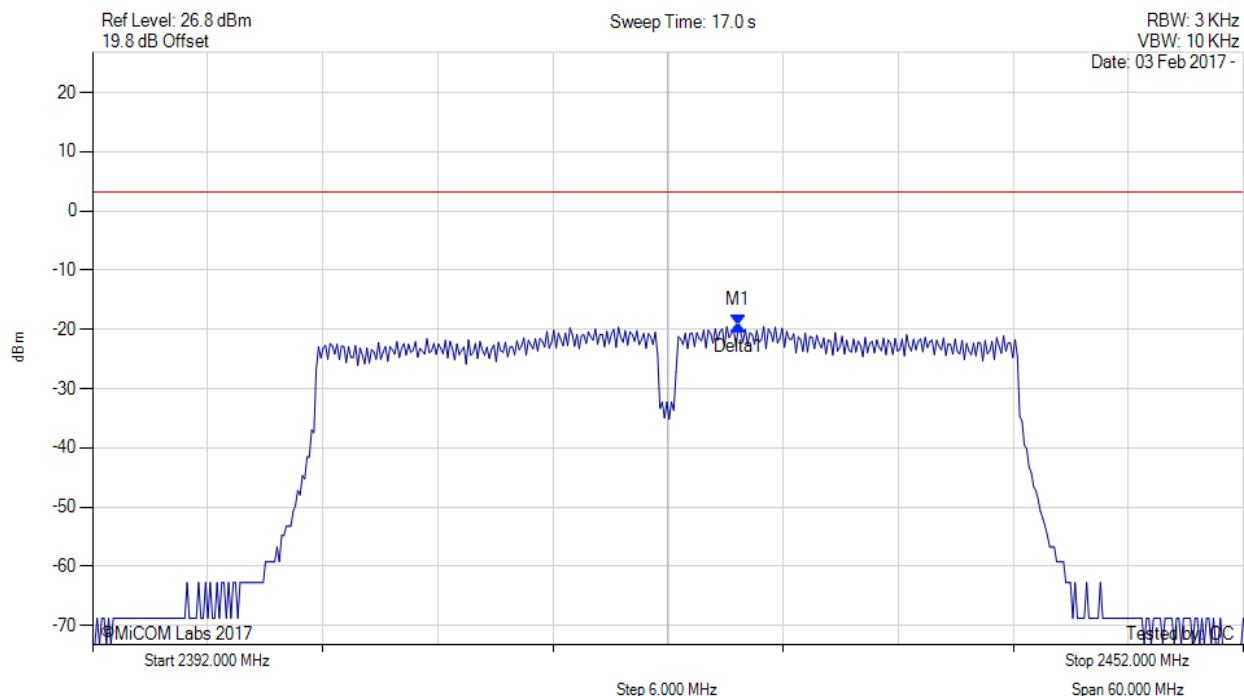


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2425.667 MHz : -19.340 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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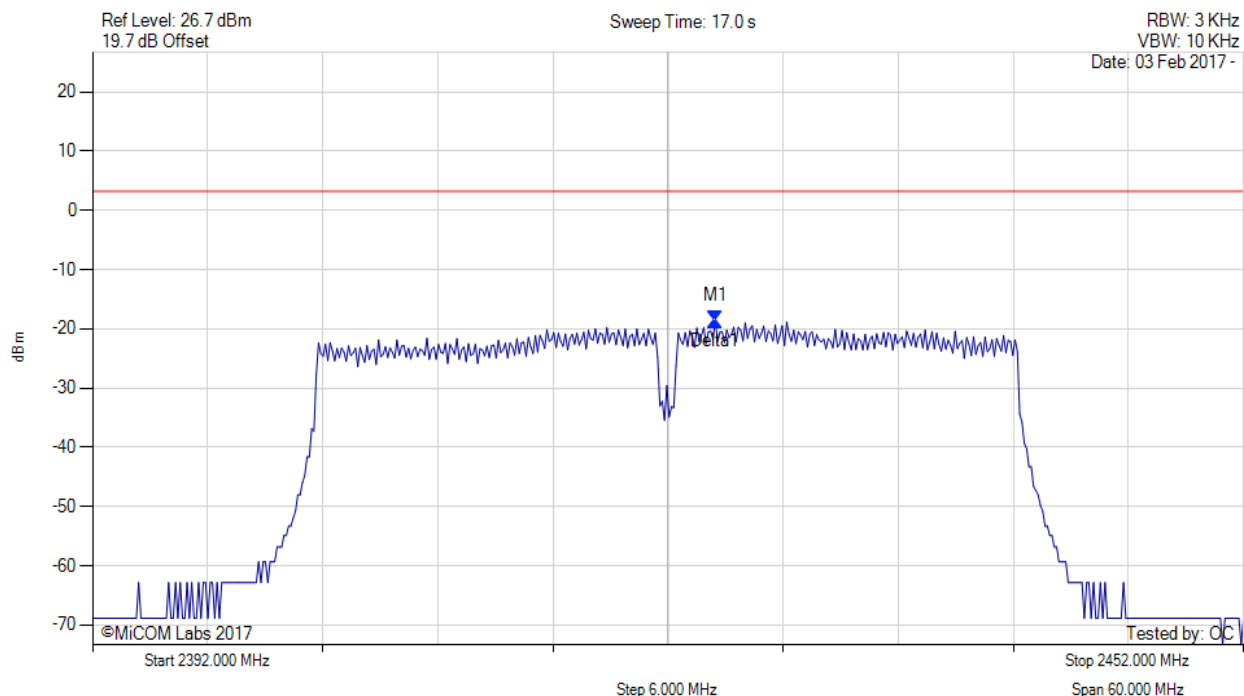


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



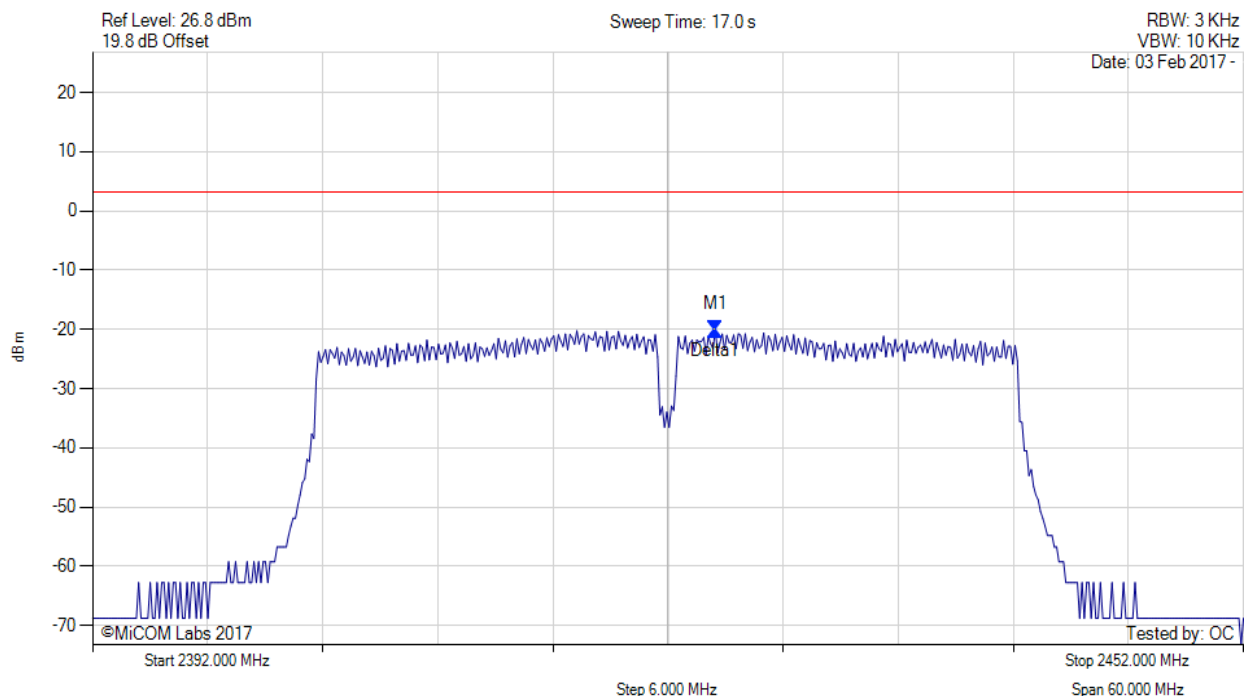
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.465 MHz : -18.574 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

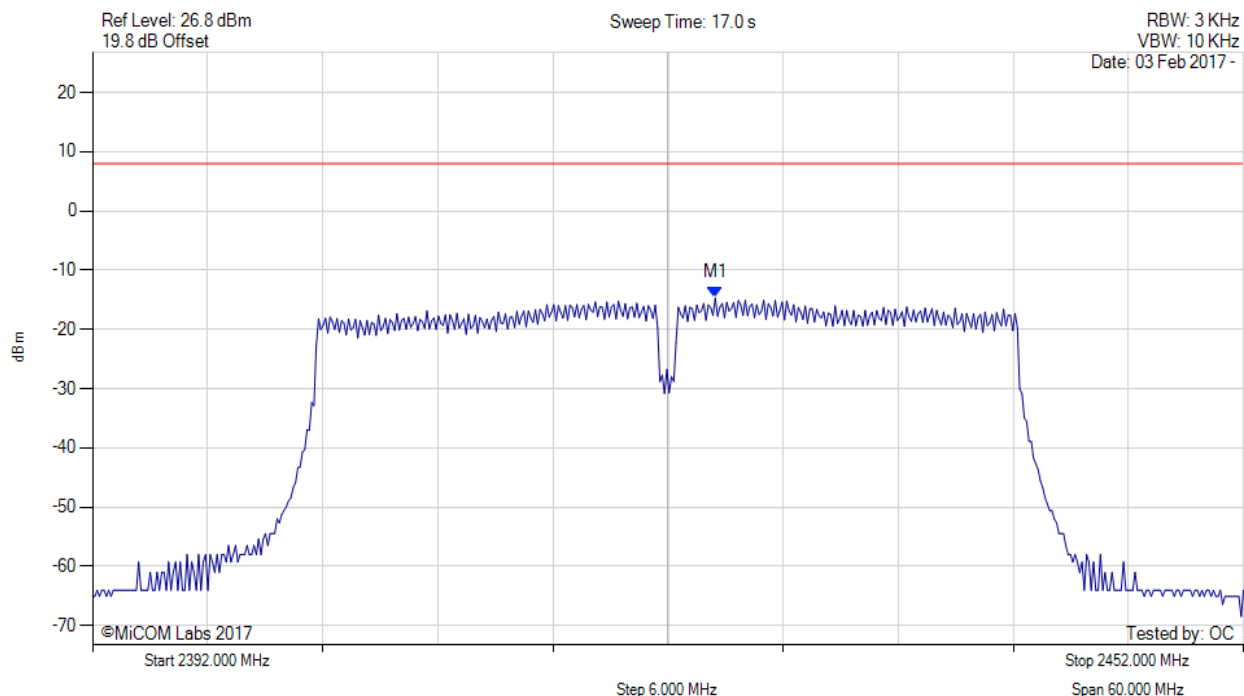


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.465 MHz : -20.074 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.500 MHz : -14.696 dBm M1 + DCCF : 2424.500 MHz : -14.334 dBm Duty Cycle Correction Factor : +0.36 dB	Limit: $\leq 8.0$ dBm Margin: -22.3 dB

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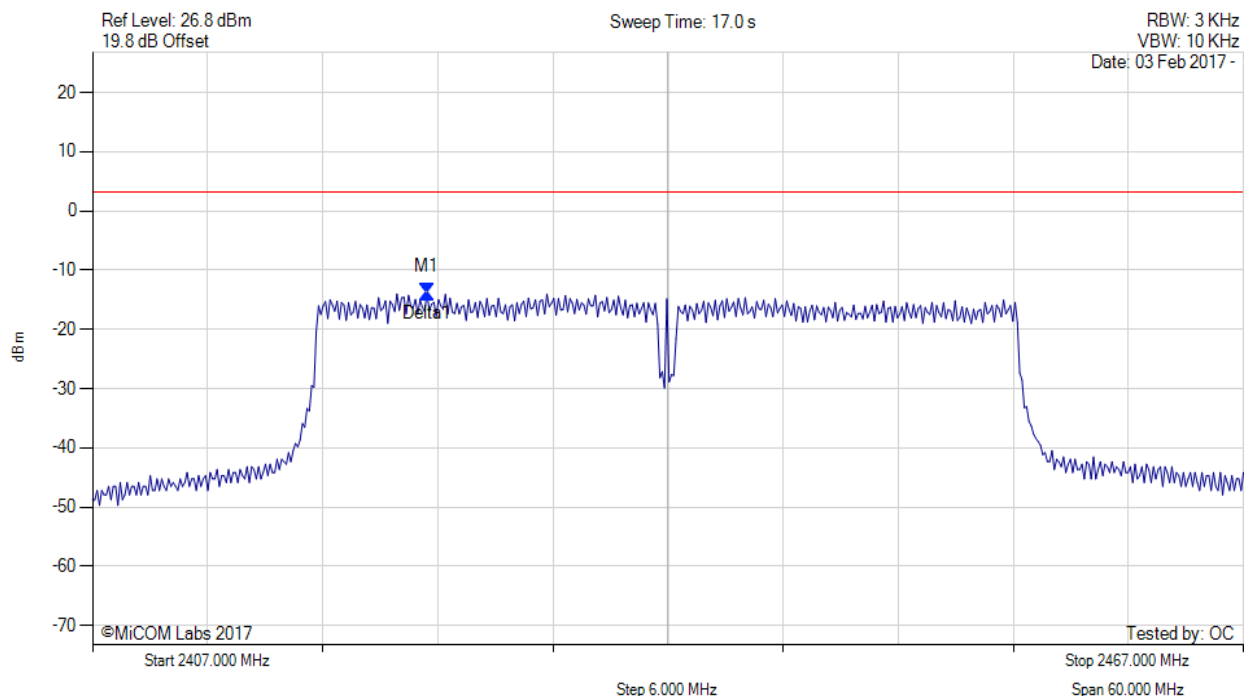


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.435 MHz : -13.786 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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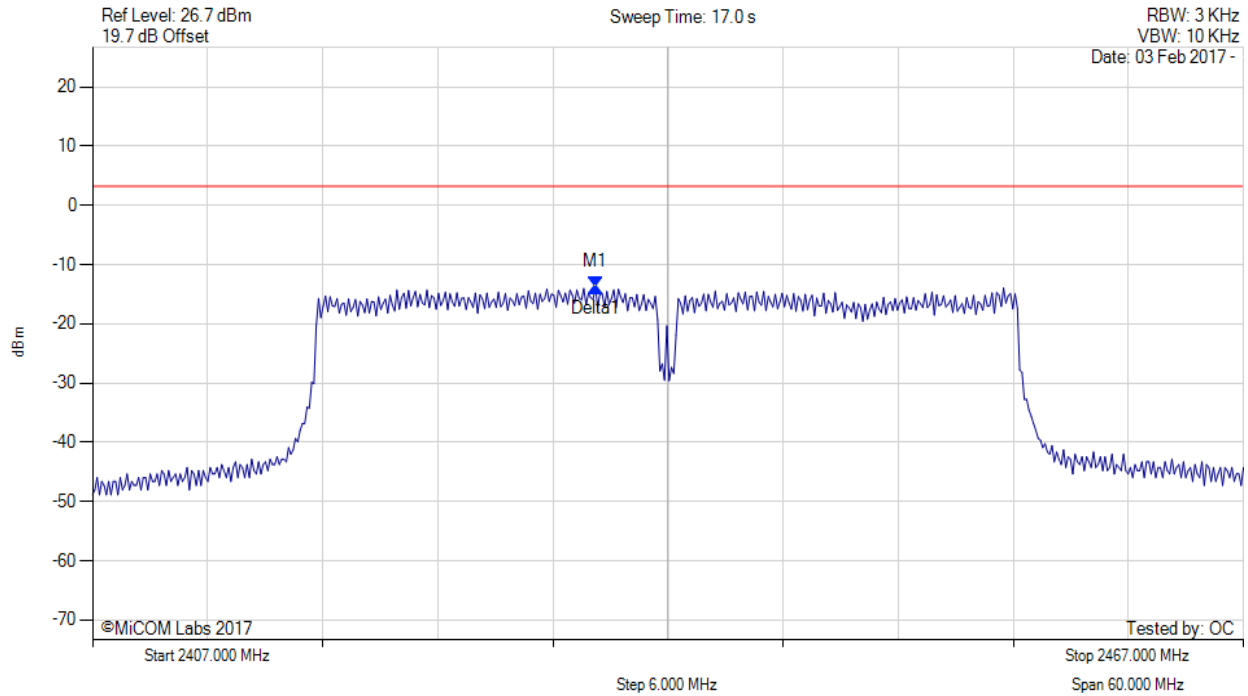


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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2433.212 MHz : -13.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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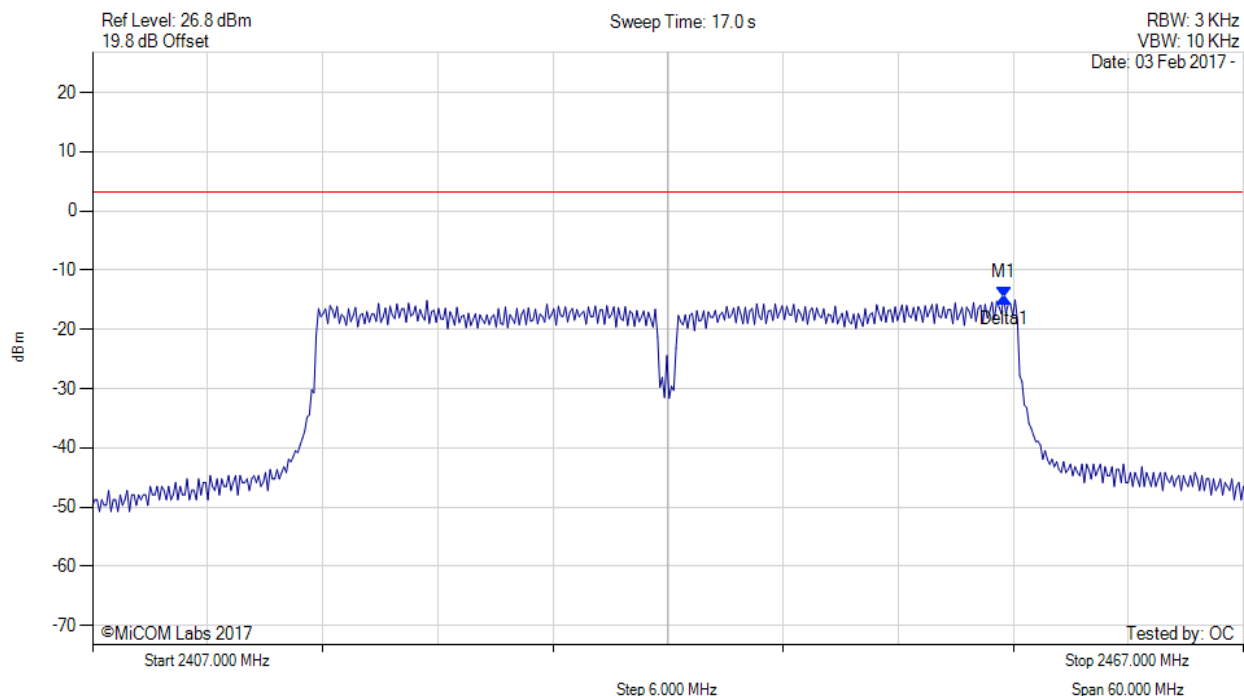


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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2454.495 MHz : -14.563 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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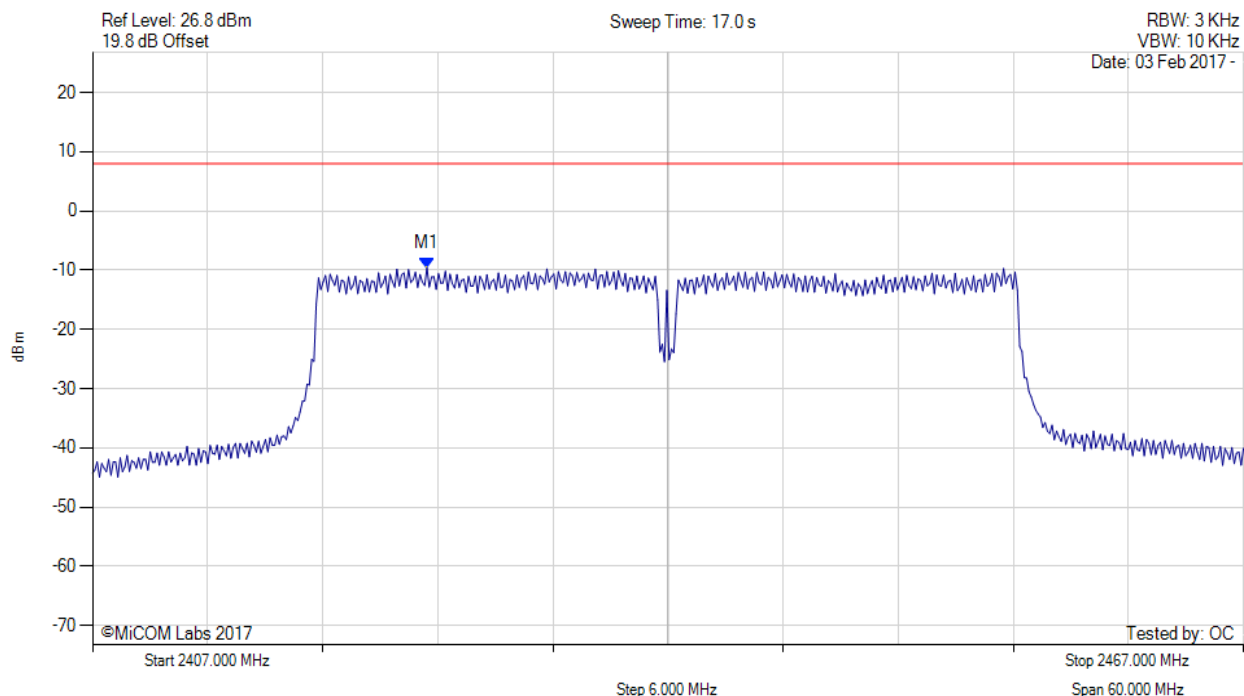


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc



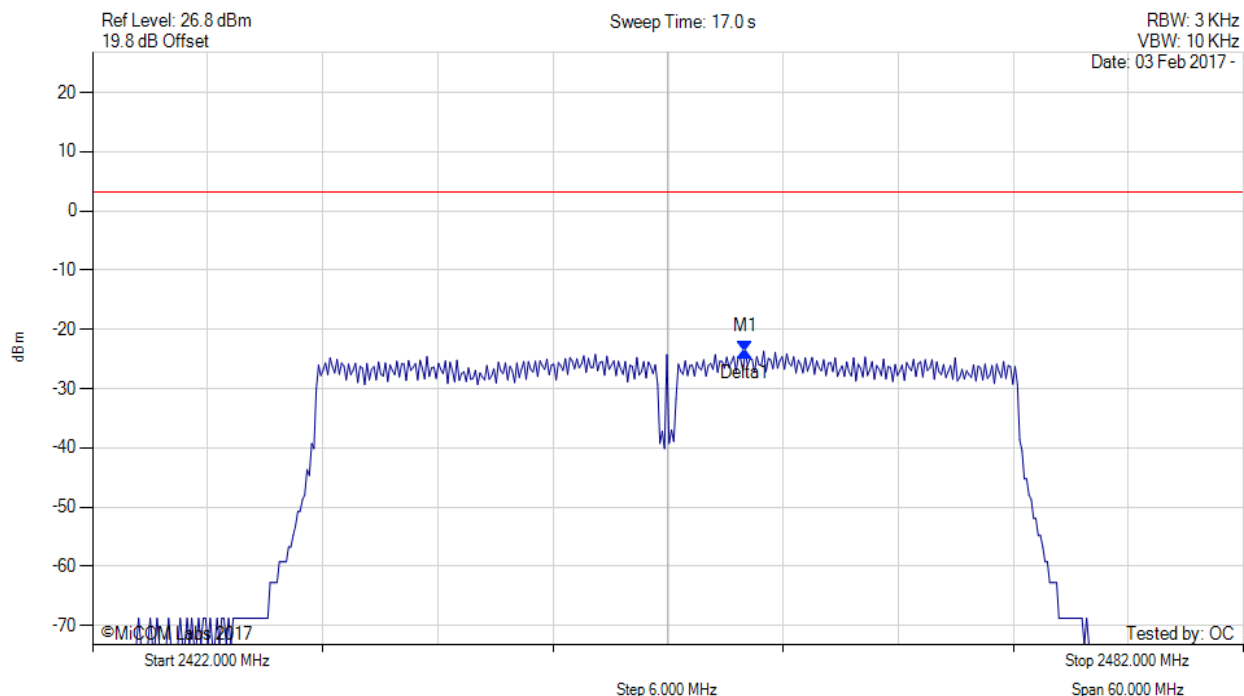
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.400 MHz : -9.597 dBm M1 + DCCF : 2424.400 MHz : -9.235 dBm Duty Cycle Correction Factor : +0.36 dB	Limit: $\leq 8.0$ dBm Margin: -17.2 dB

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

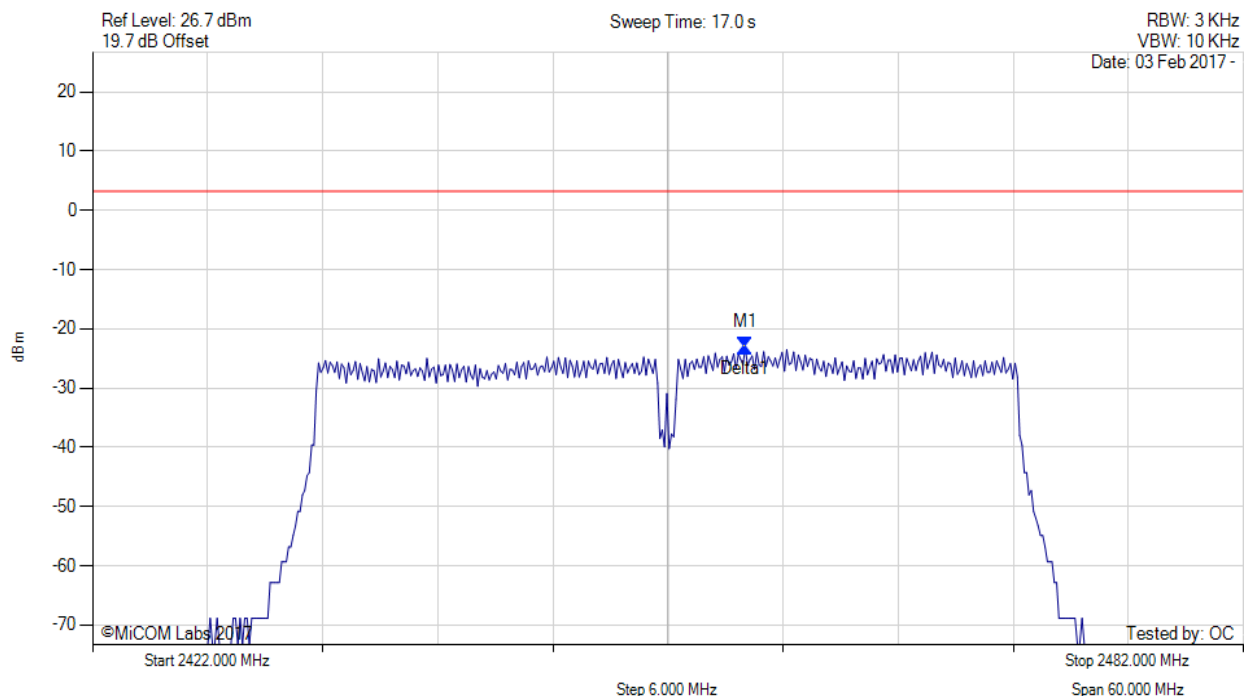


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2456.028 MHz : -23.708 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

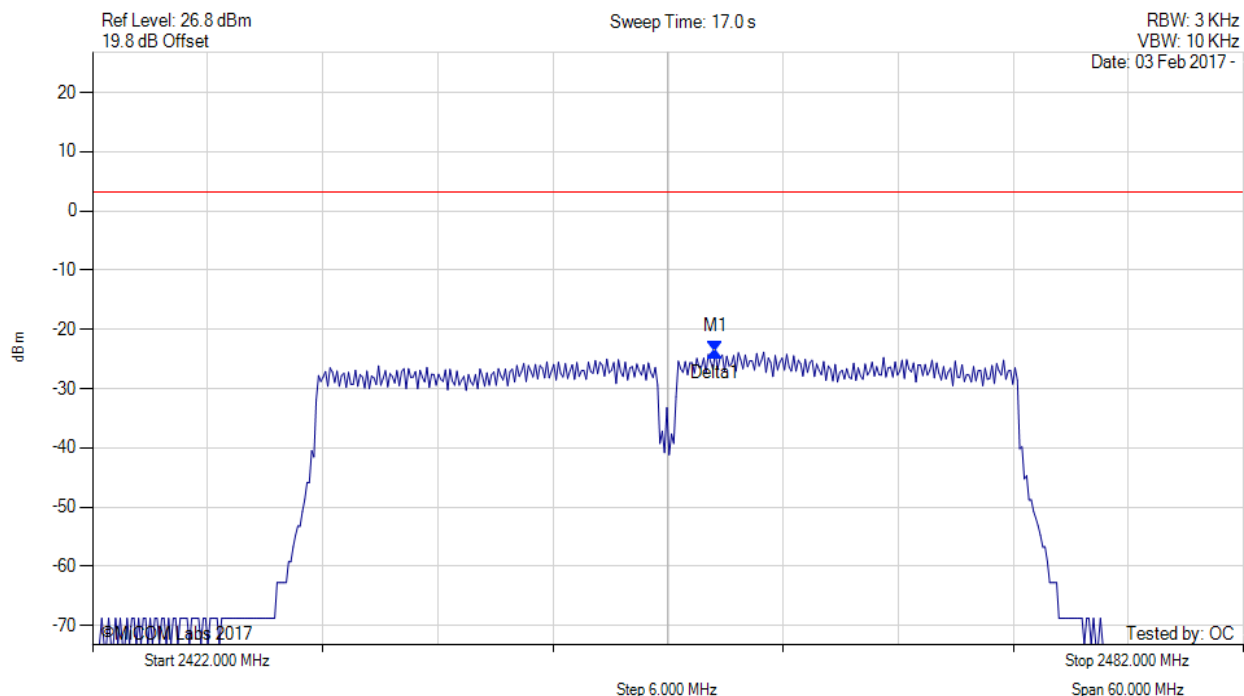


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2456.028 MHz : -23.154 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

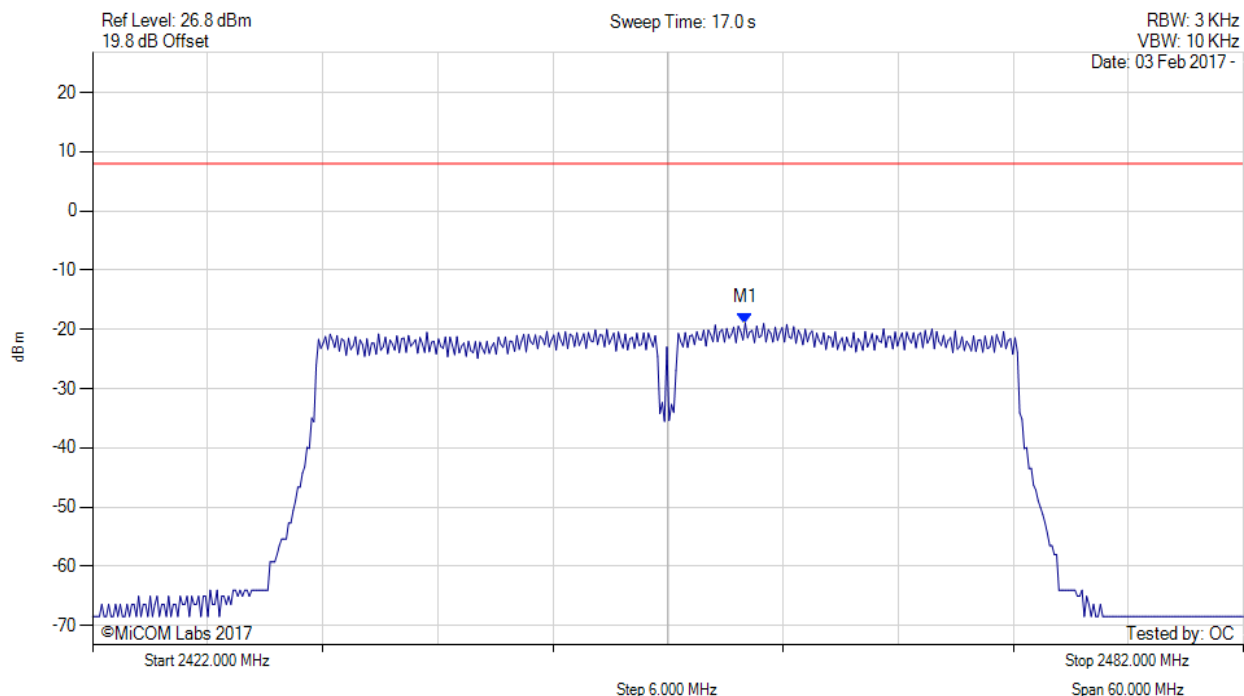


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2454.465 MHz : -23.806 dBm Delta1 : 0 Hz : 0.000 dB	Limit: $\leq 3.230$ dBm

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, SUM, Temp: 20, Voltage: 12 Vdc



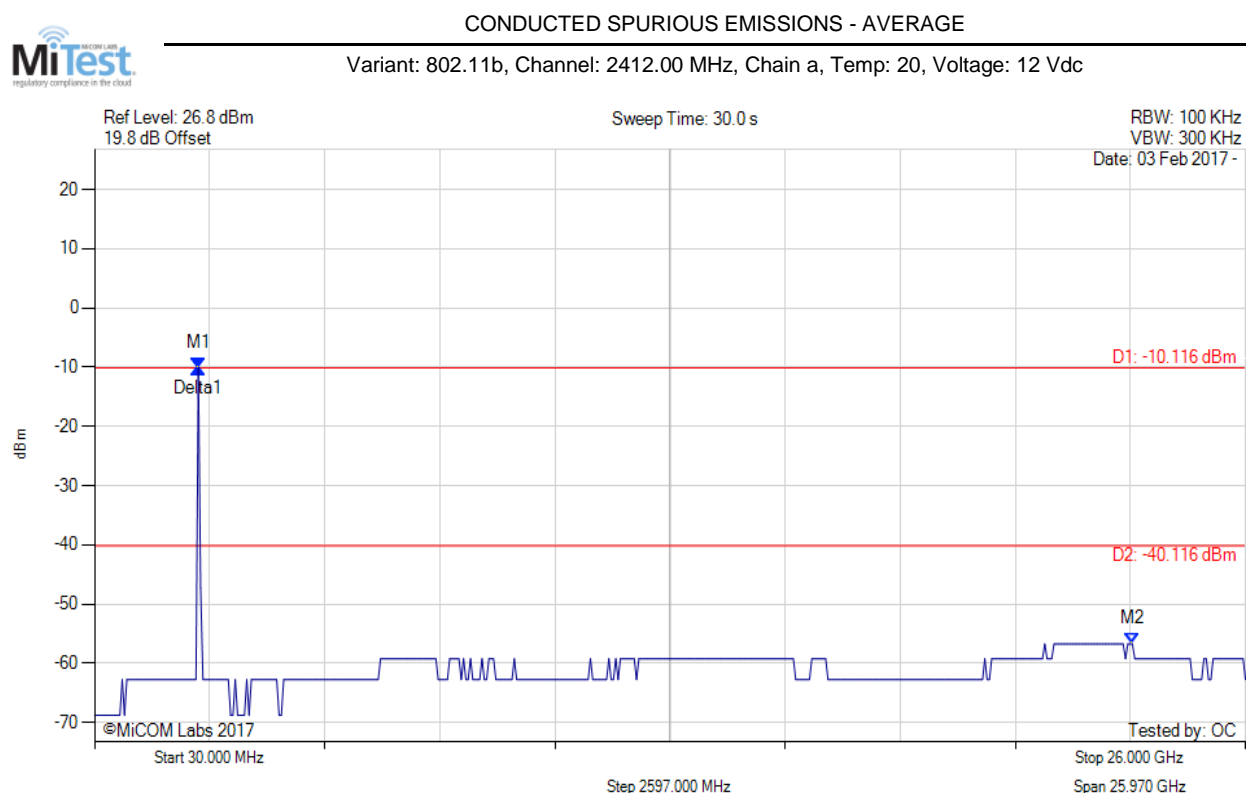
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2456.000 MHz : -18.928 dBm M1 + DCCF : 2456.000 MHz : -18.566 dBm Duty Cycle Correction Factor : +0.36 dB	Limit: $\leq 8.0$ dBm Margin: -26.5 dB

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### A.3. Emissions

#### A.3.1. Conducted Emissions

##### A.3.1.1. Conducted Spurious Emissions



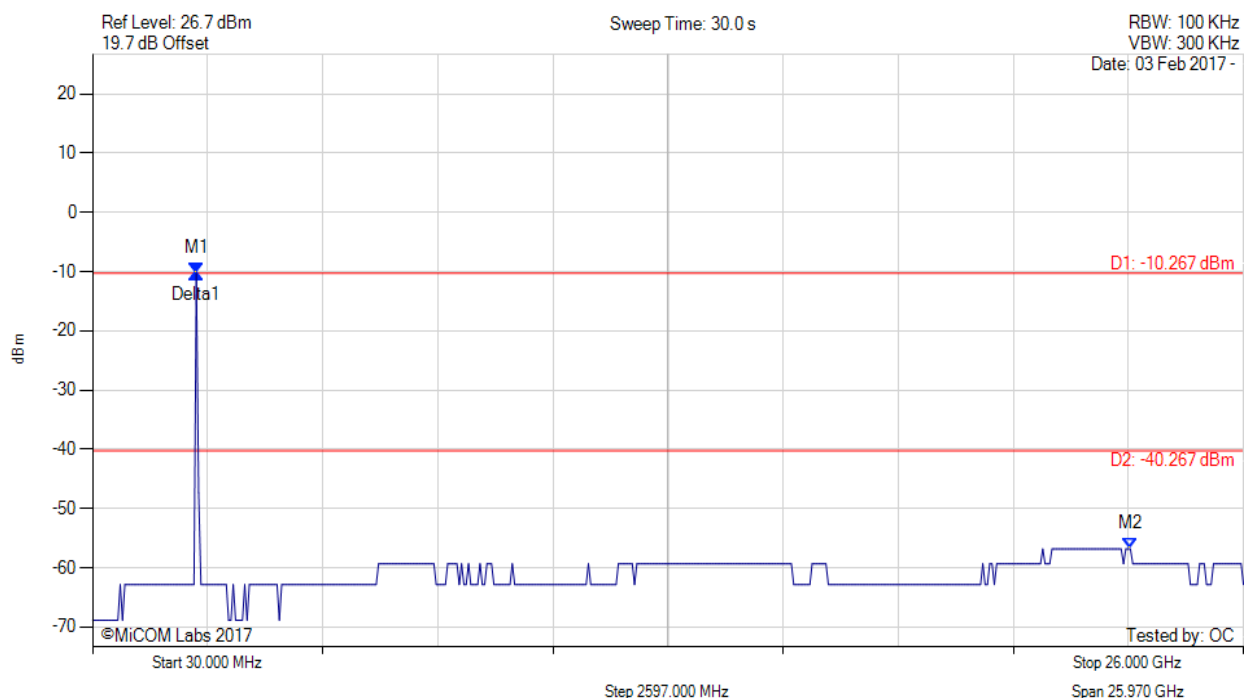
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -10.116 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -40.12 dBm Margin: -16.60 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



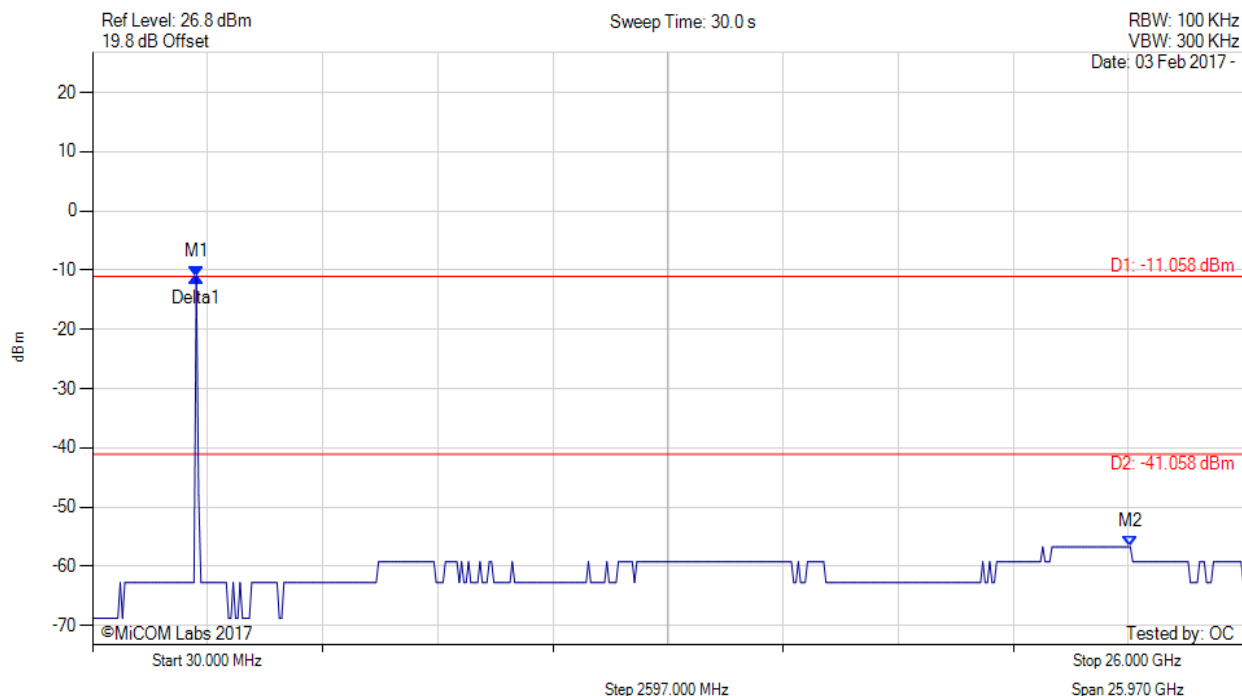
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -10.267 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -40.27 dBm Margin: -16.55 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

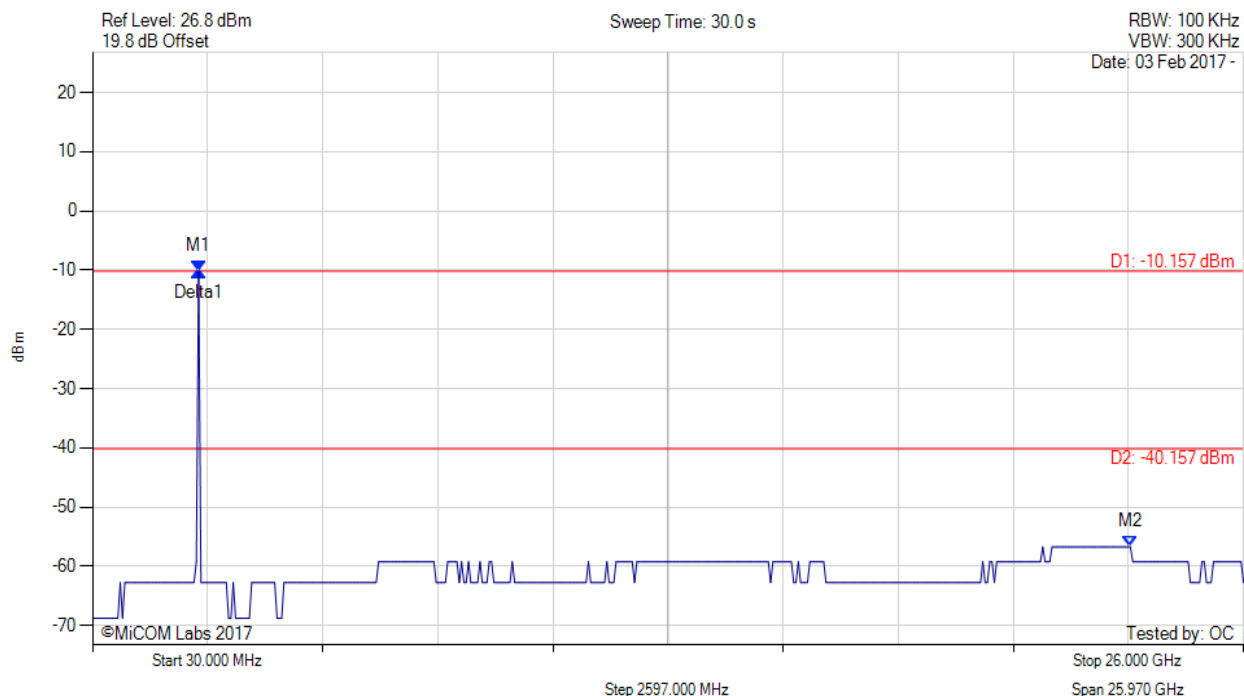


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -11.058 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -41.06 dBm Margin: -15.66 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

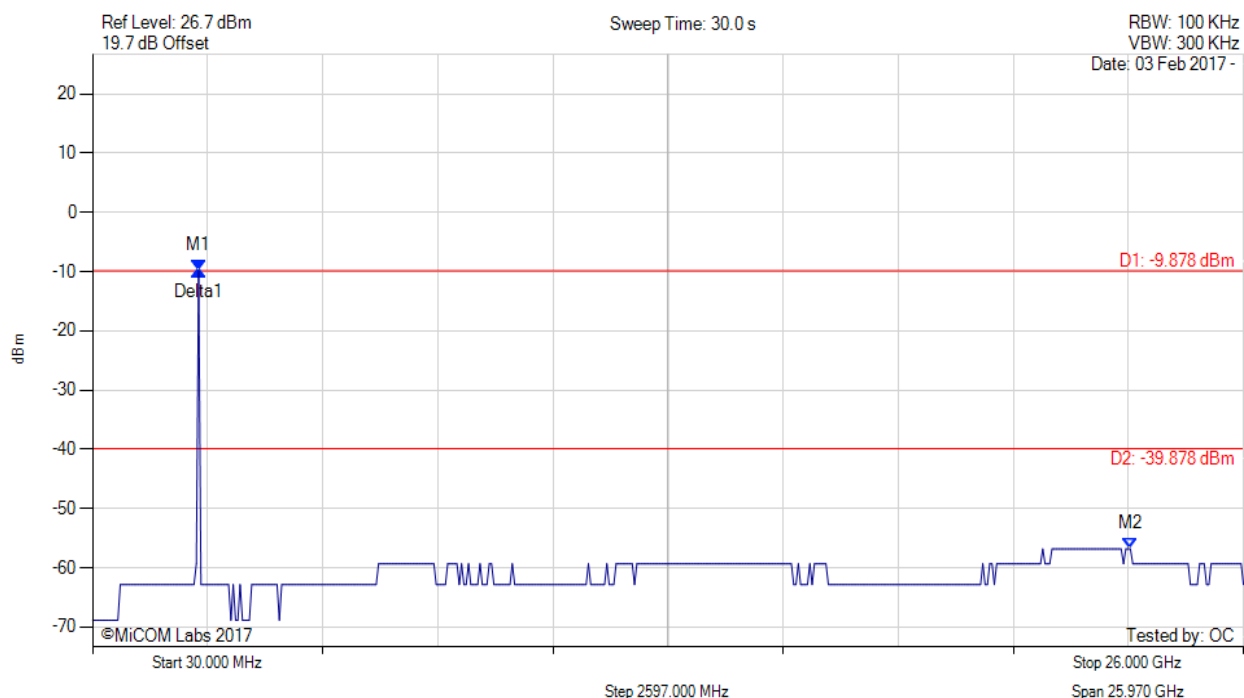


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -10.157 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -40.16 dBm Margin: -16.56 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

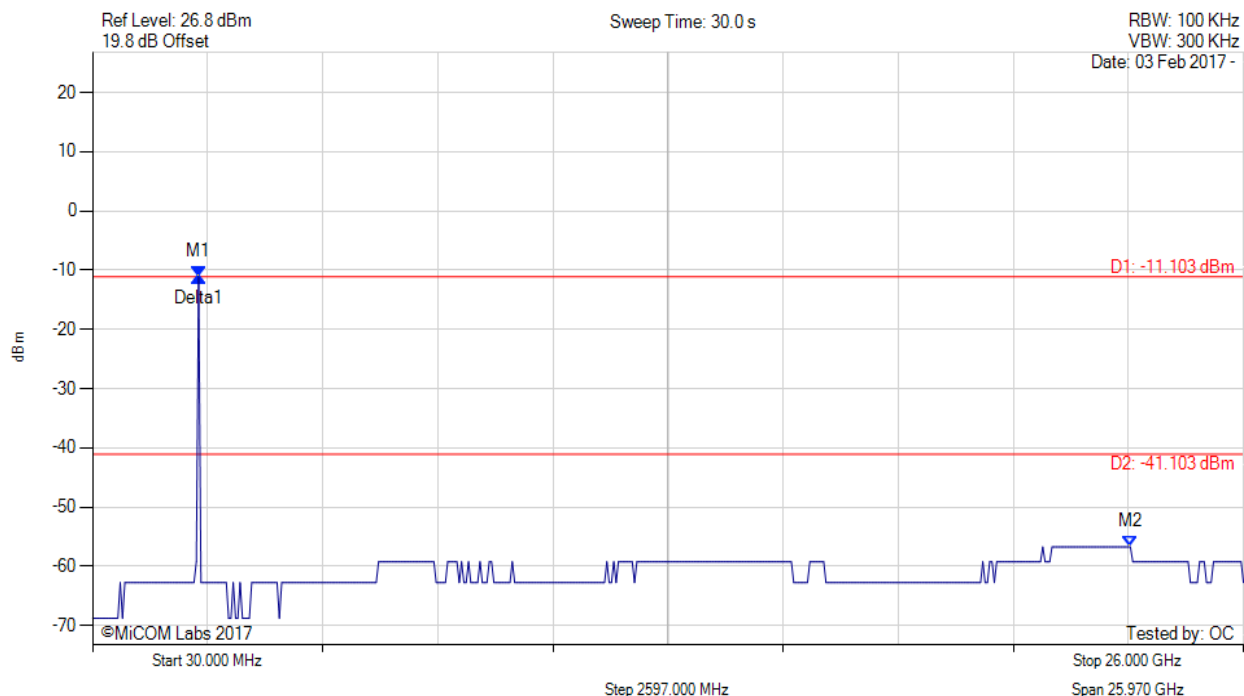


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -9.878 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -39.88 dBm Margin: -16.94 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2437.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.103 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -41.10 dBm Margin: -15.62 dB

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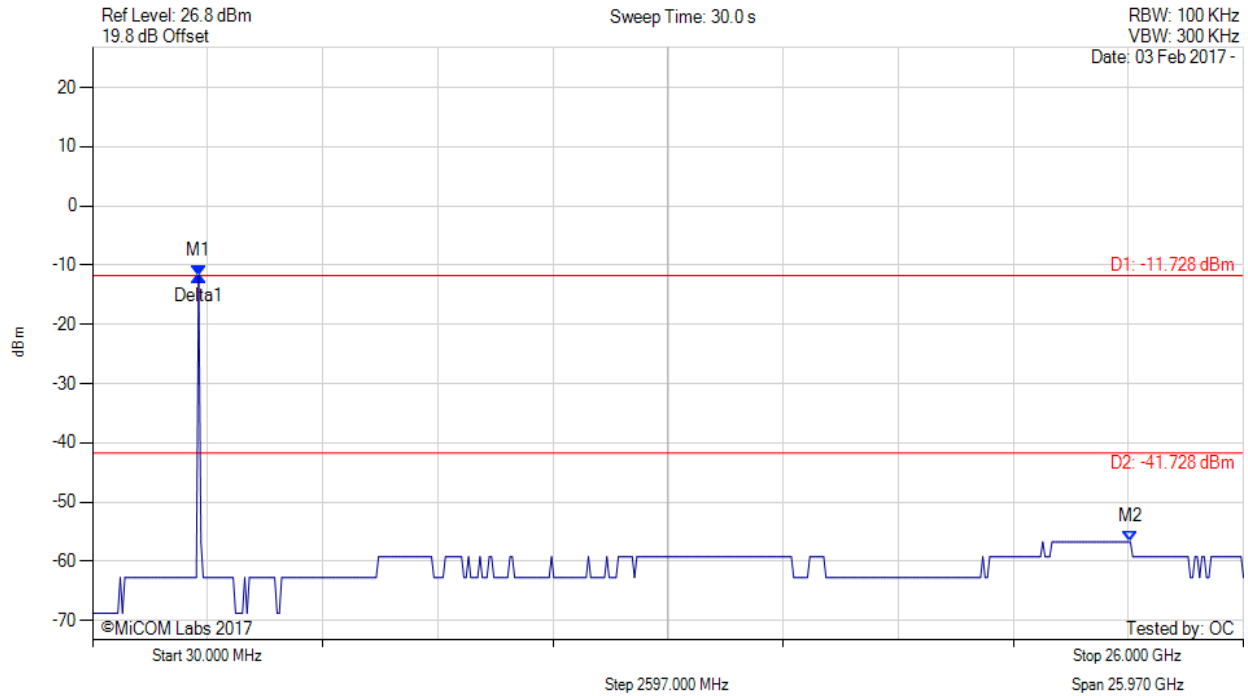


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



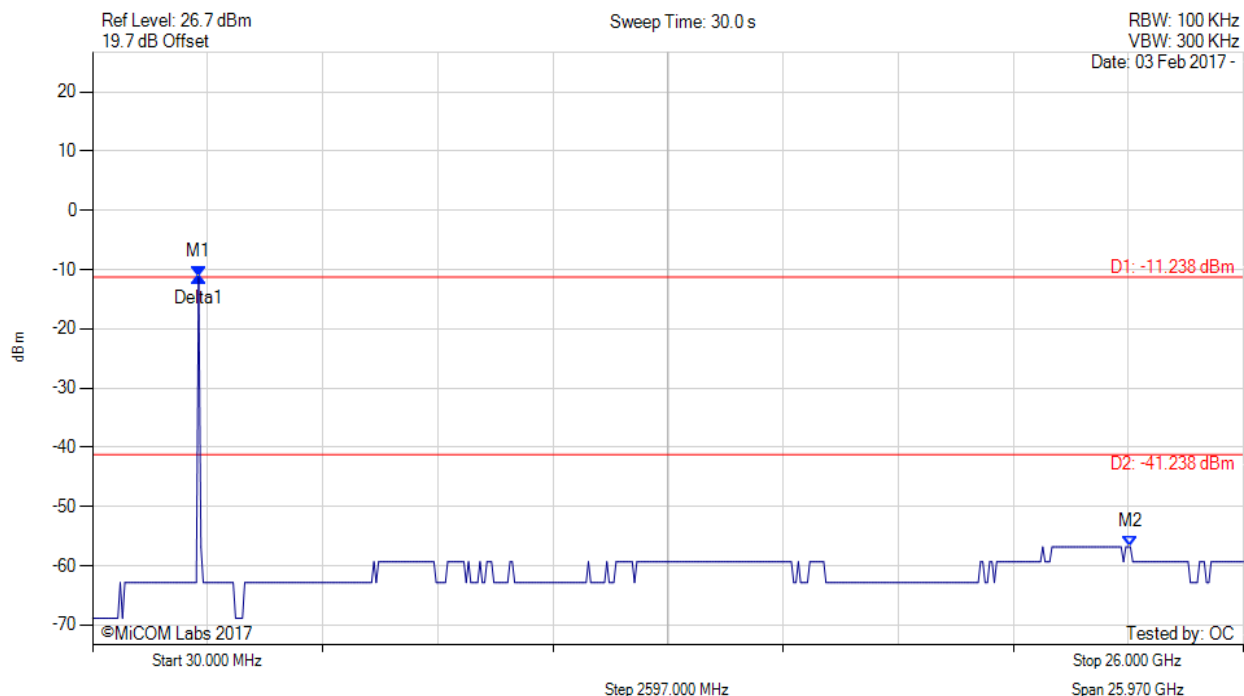
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.728 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -41.73 dBm Margin: -14.99 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

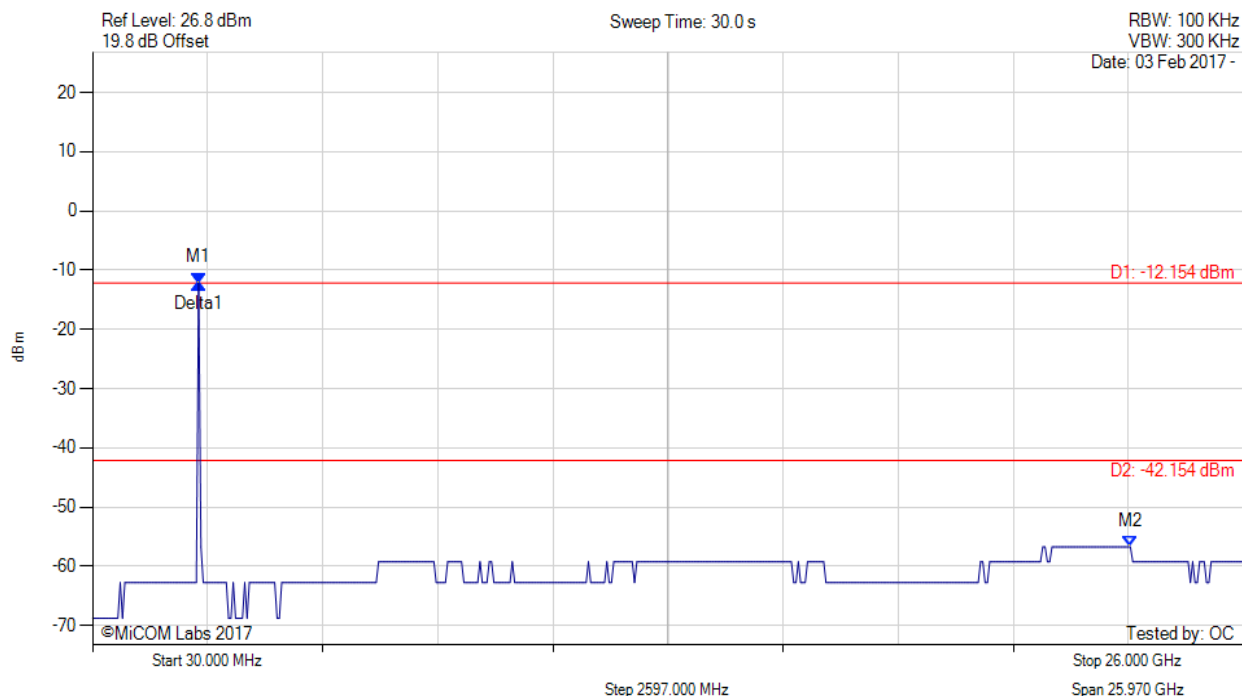


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -11.238 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -41.24 dBm Margin: -15.58 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -12.154 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -42.15 dBm Margin: -14.57 dB

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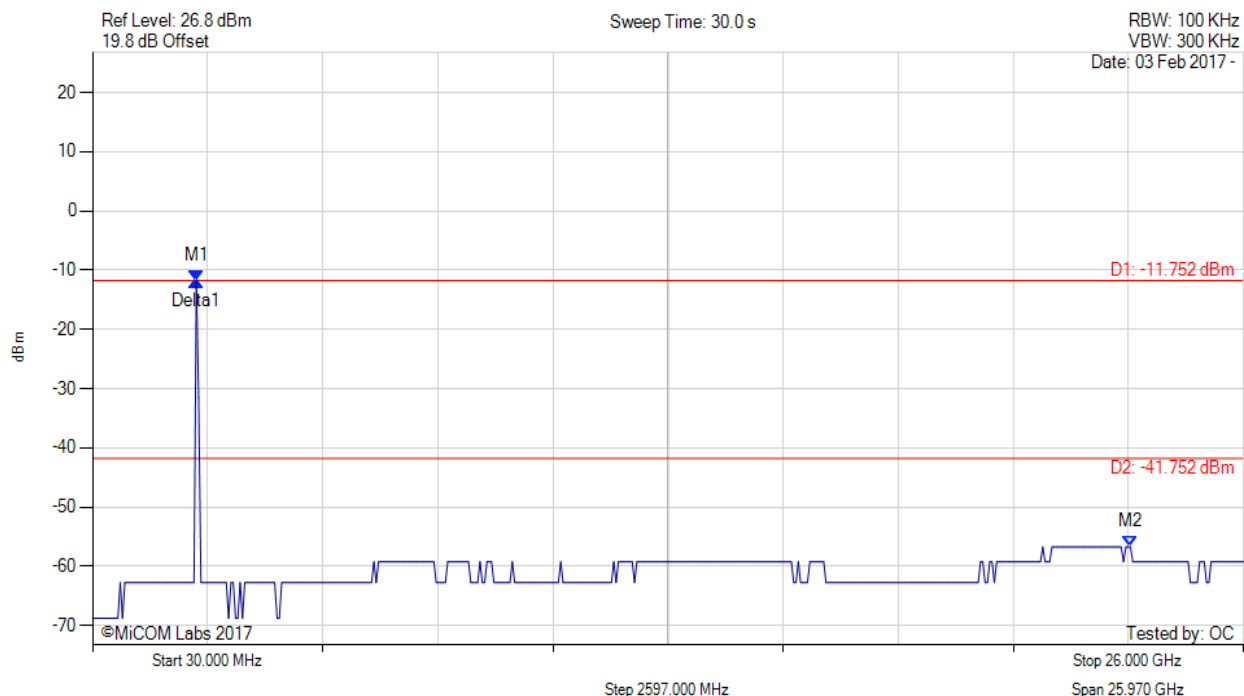


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -11.752 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -41.75 dBm Margin: -14.97 dB

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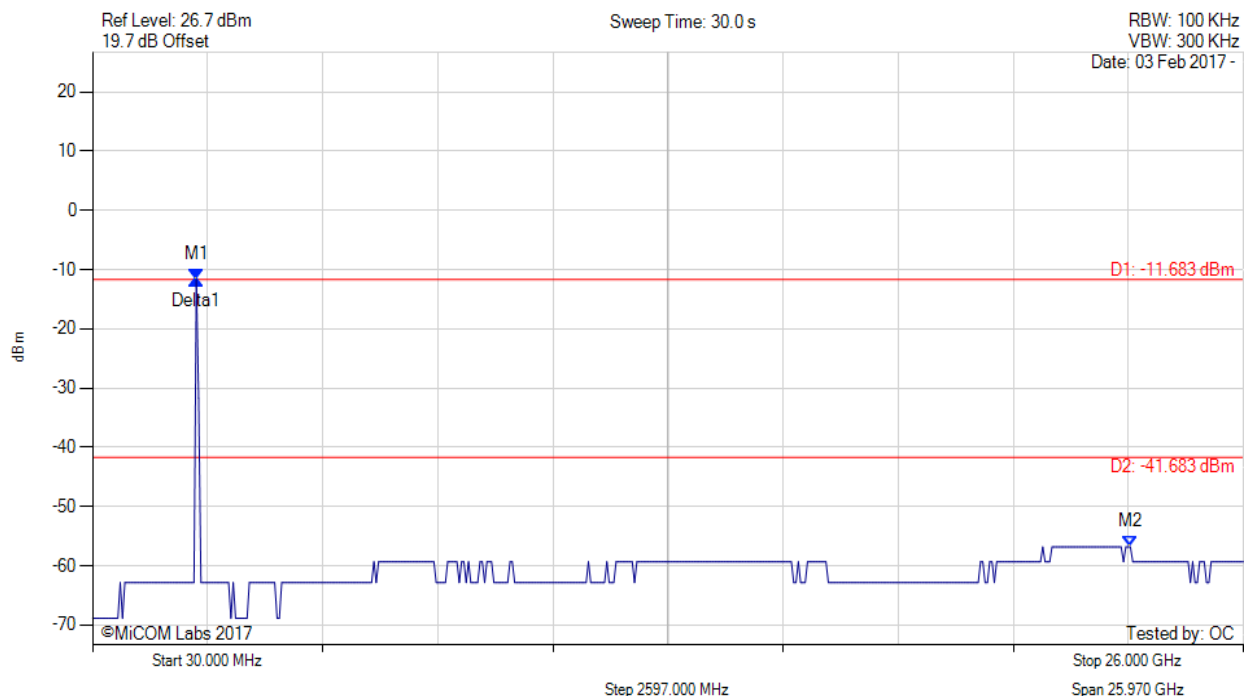


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -11.683 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -41.68 dBm Margin: -15.14 dB

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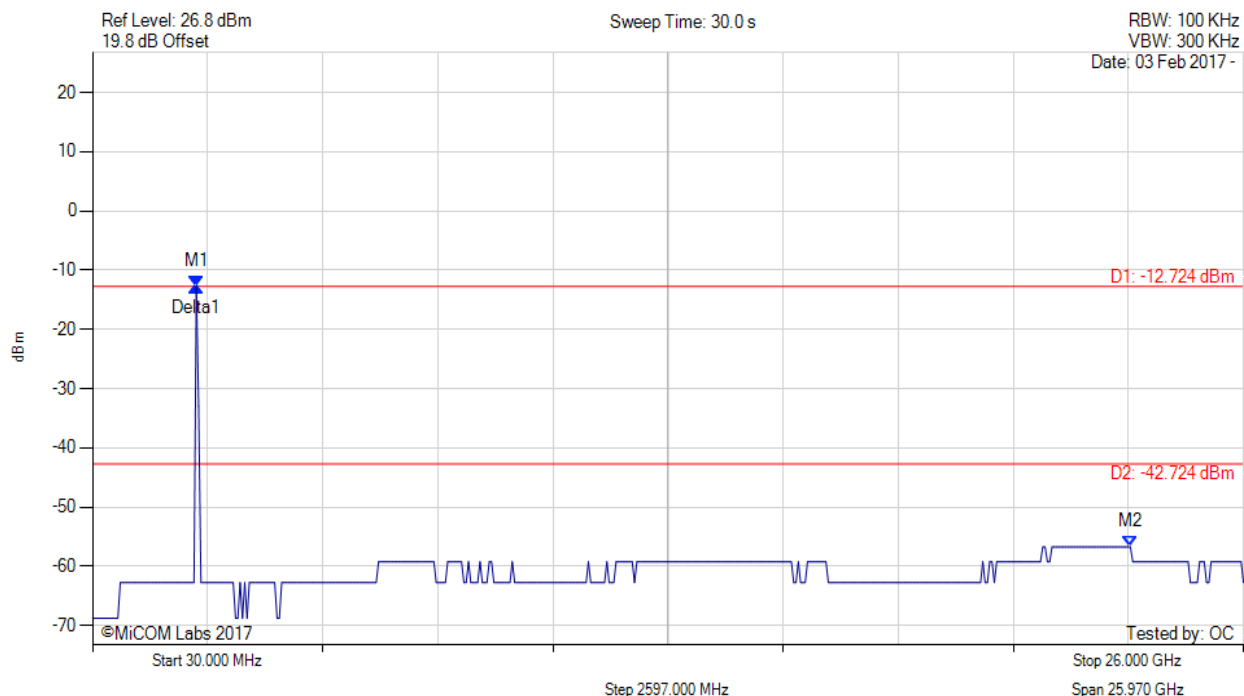


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -12.724 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -42.72 dBm Margin: -14.00 dB

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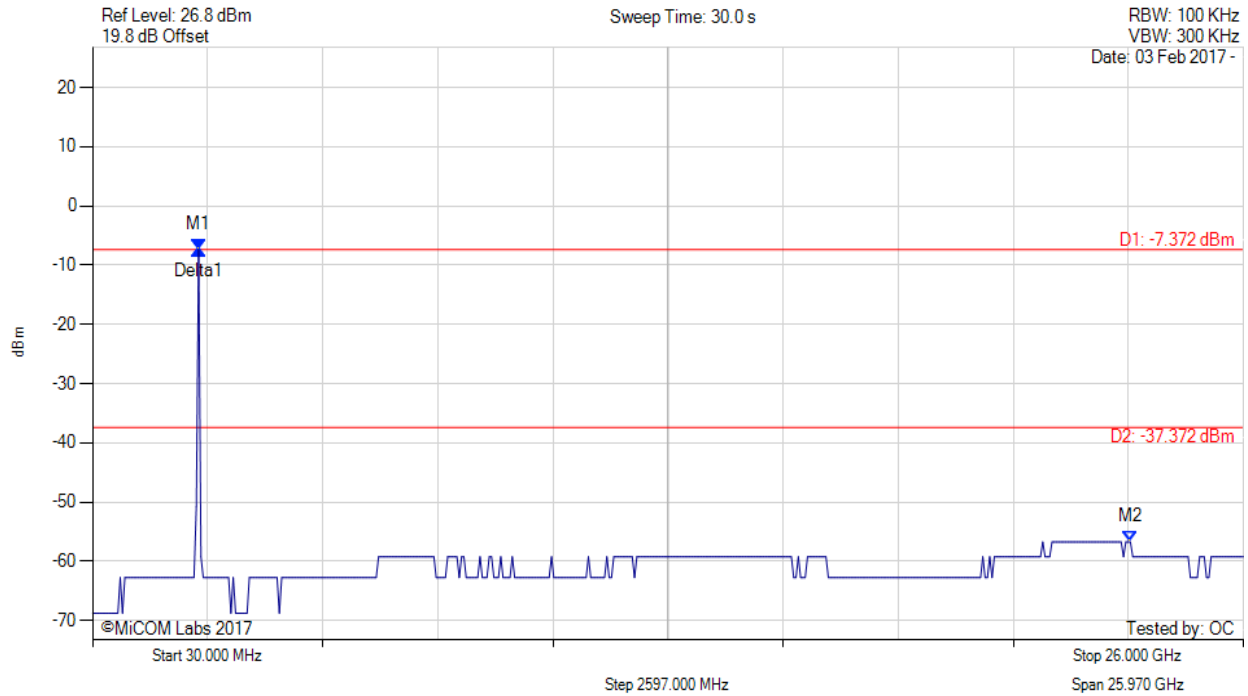


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -7.372 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -37.37 dBm Margin: -19.35 dB

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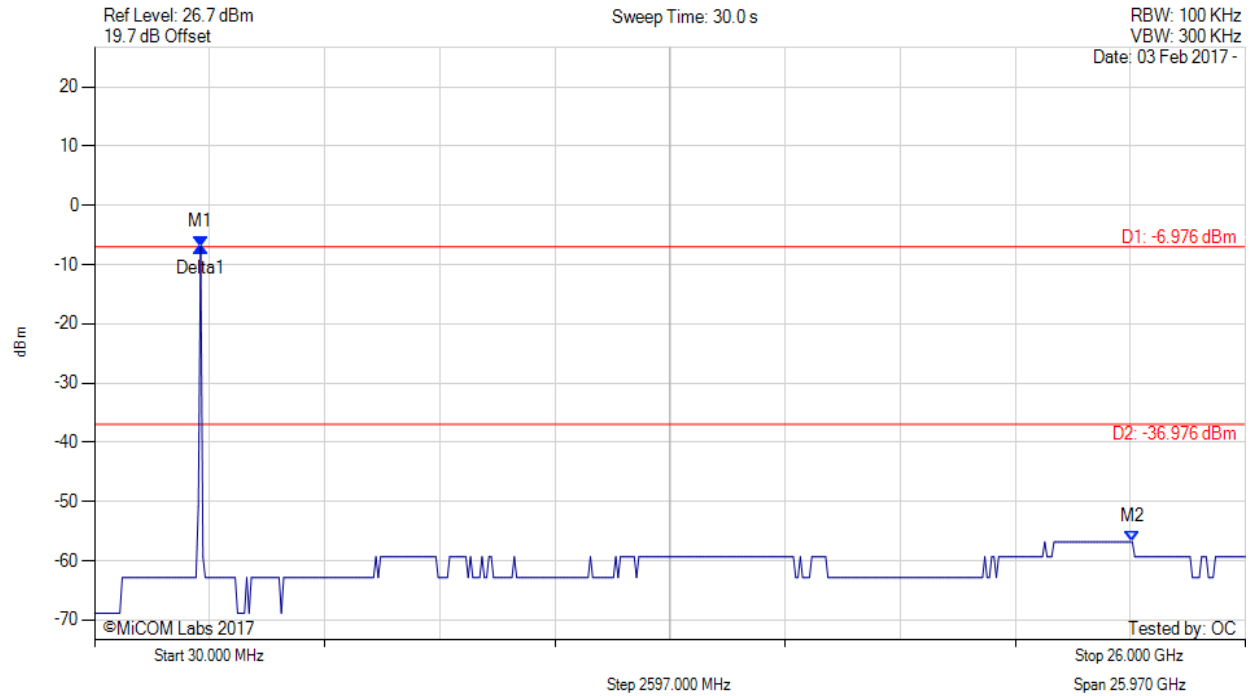


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



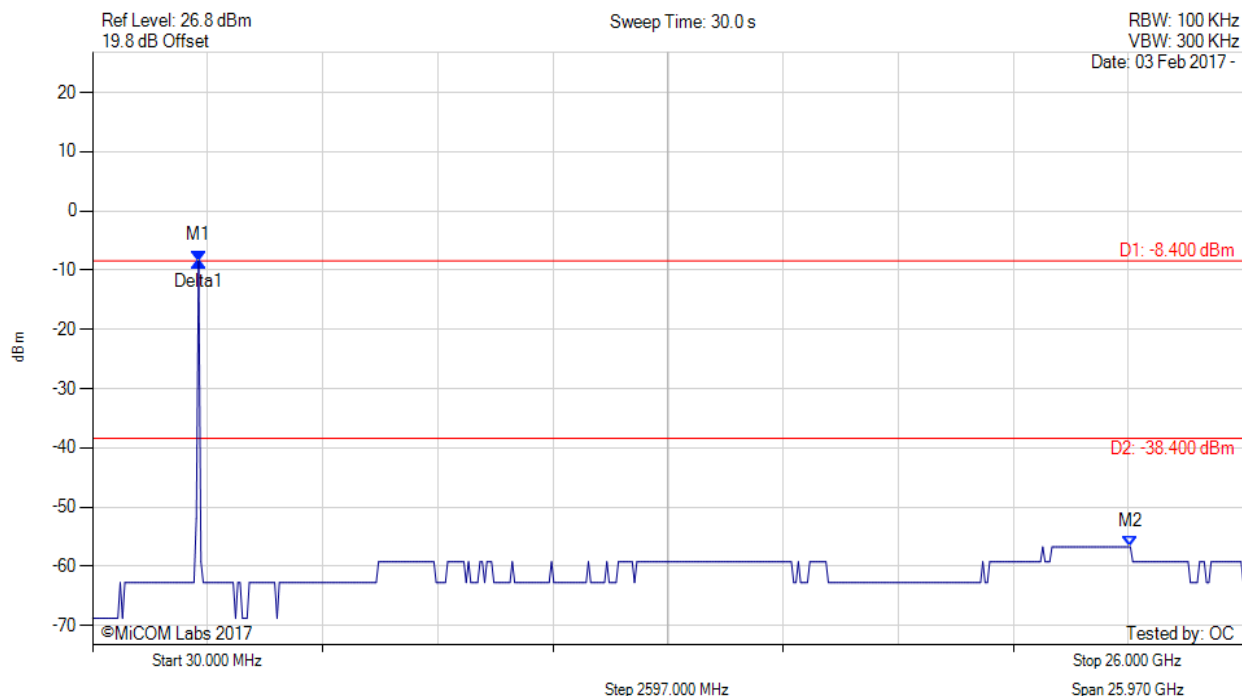
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -6.976 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -36.98 dBm Margin: -19.84 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2437.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

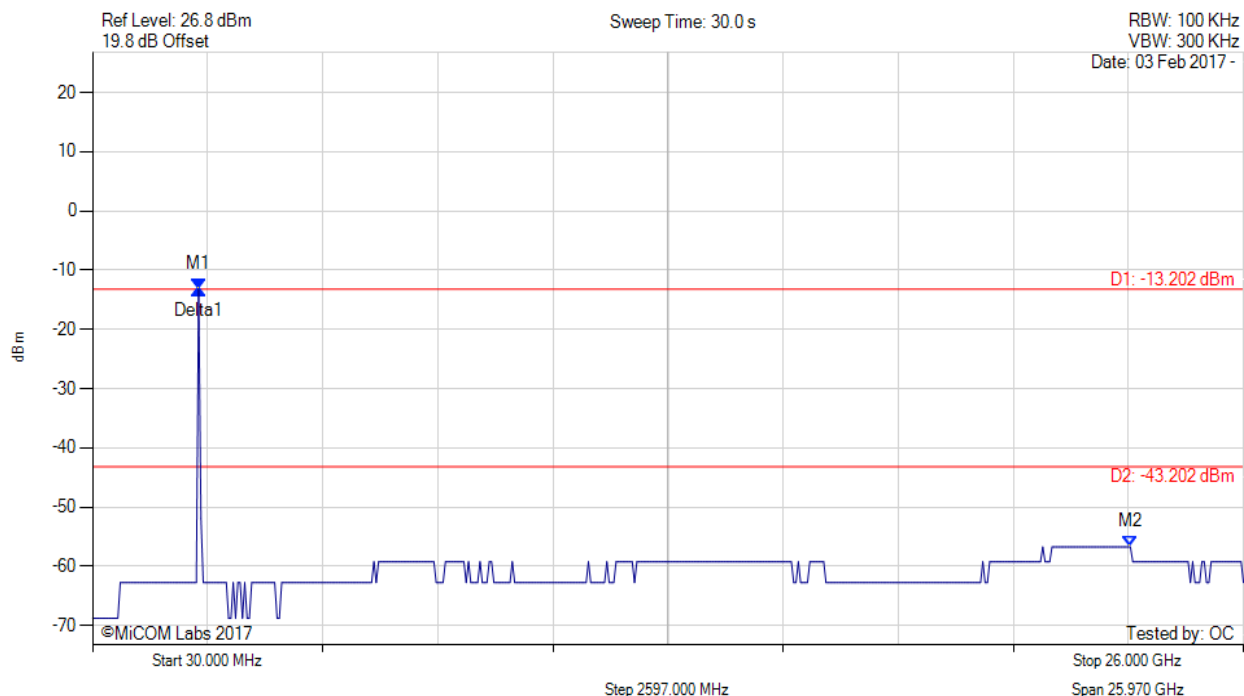


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -8.400 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -38.40 dBm Margin: -18.32 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.202 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -43.20 dBm Margin: -13.52 dB

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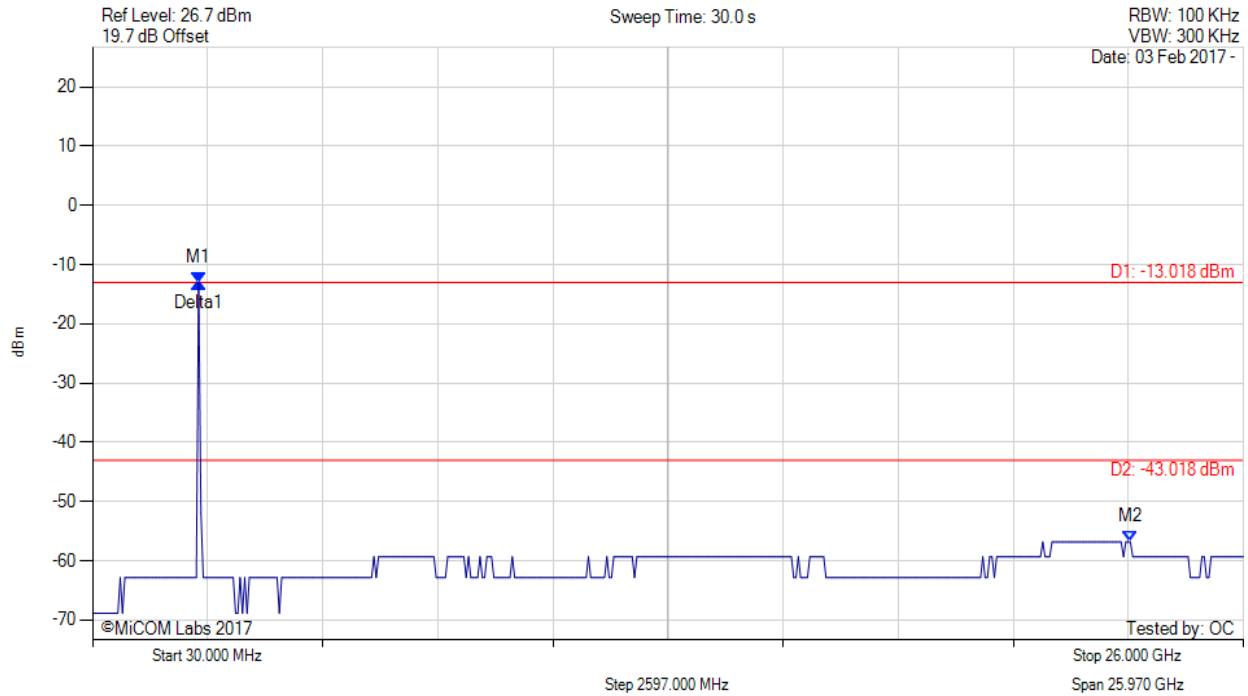


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.018 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -43.02 dBm Margin: -13.80 dB

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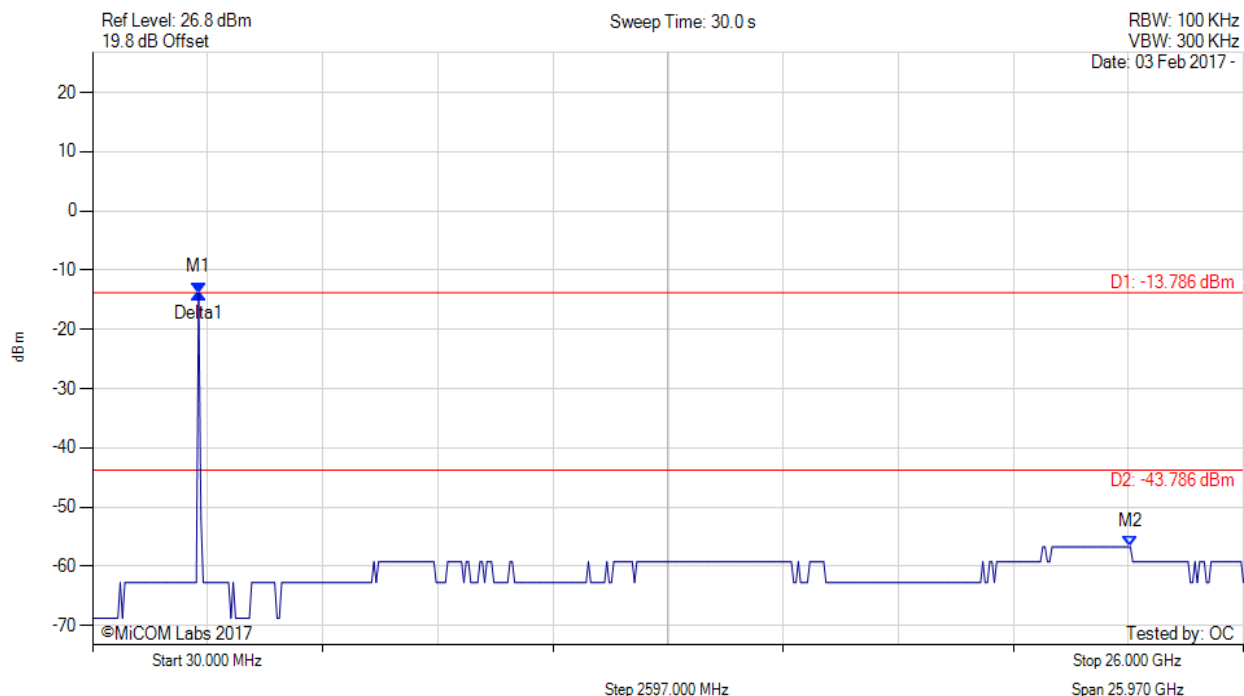


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.786 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -43.79 dBm Margin: -12.93 dB

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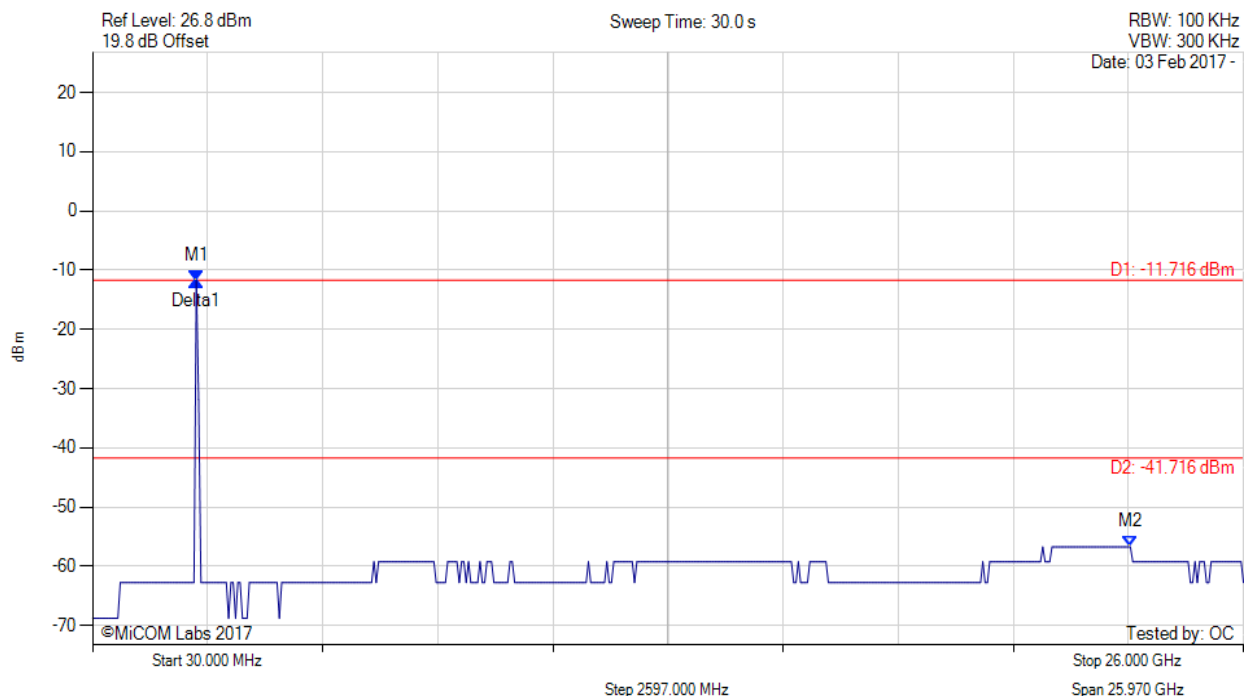


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



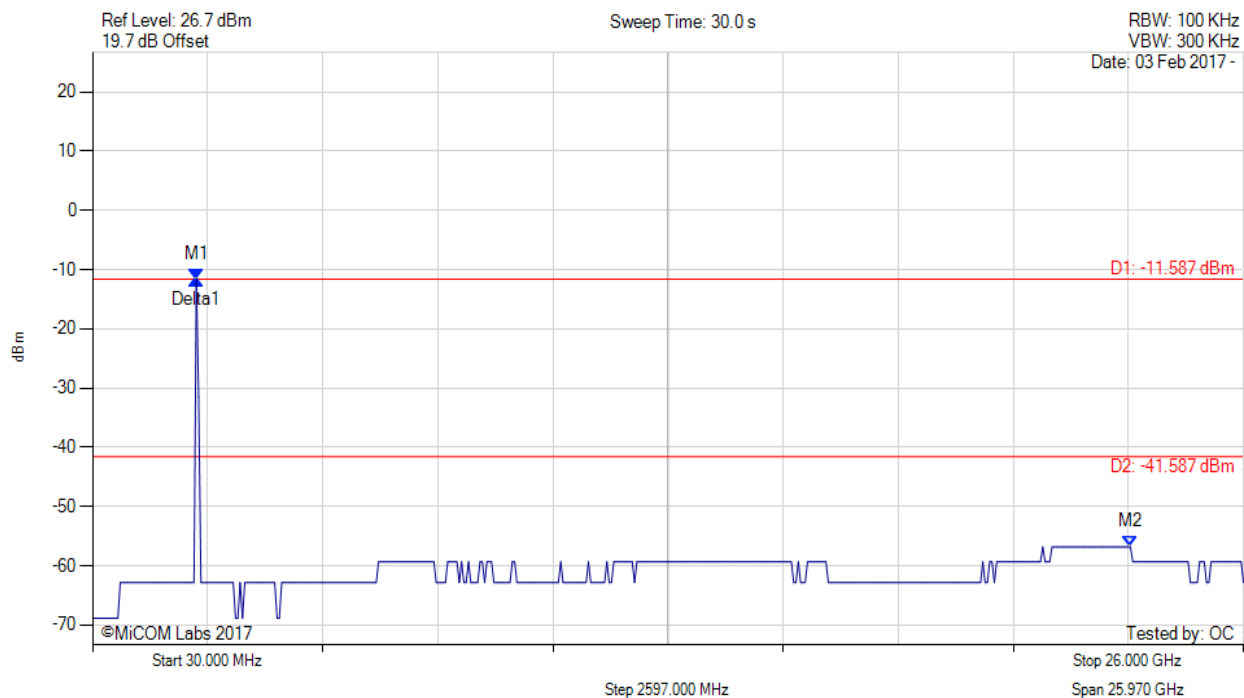
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -11.716 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -41.72 dBm Margin: -15.00 dB

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### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

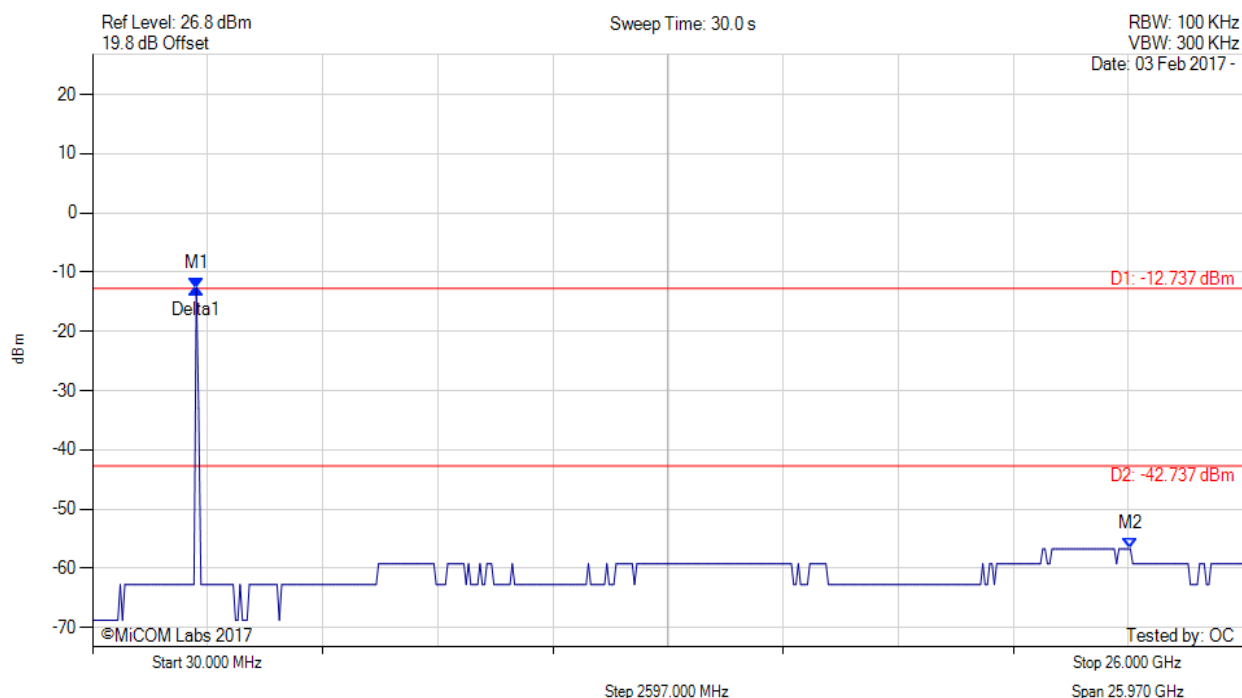


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -11.587 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -41.59 dBm Margin: -15.23 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -12.737 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -42.74 dBm Margin: -13.98 dB

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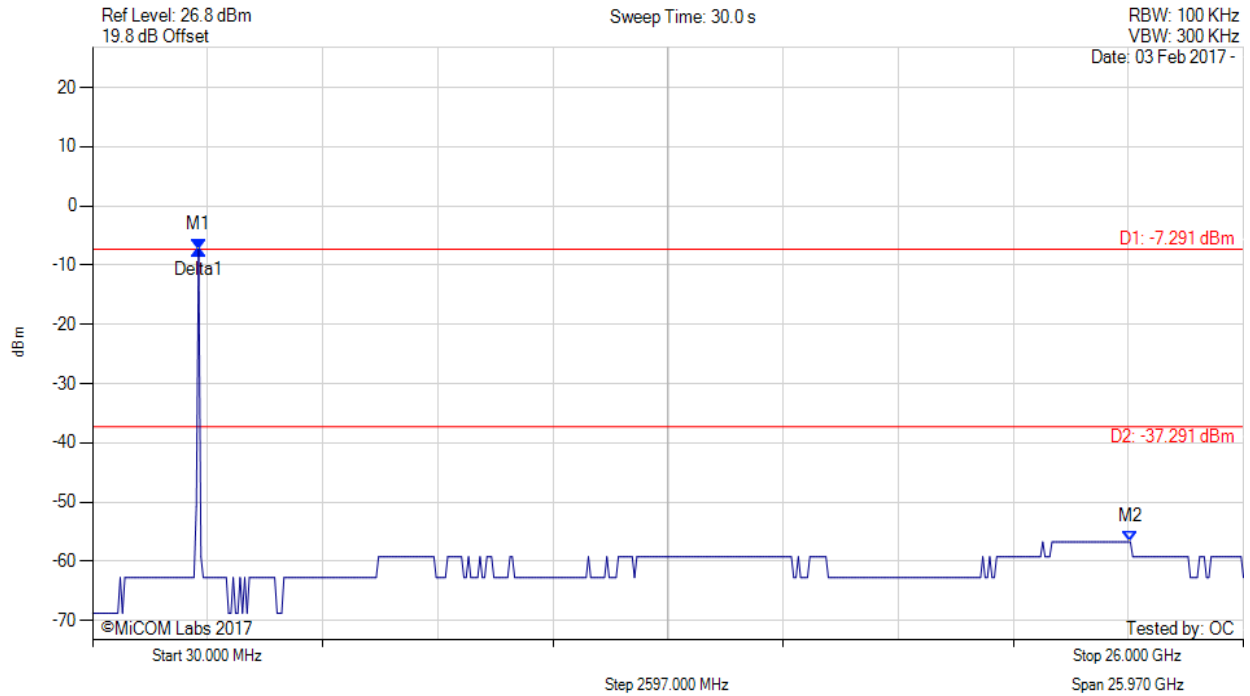


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -7.291 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -37.29 dBm Margin: -19.43 dB

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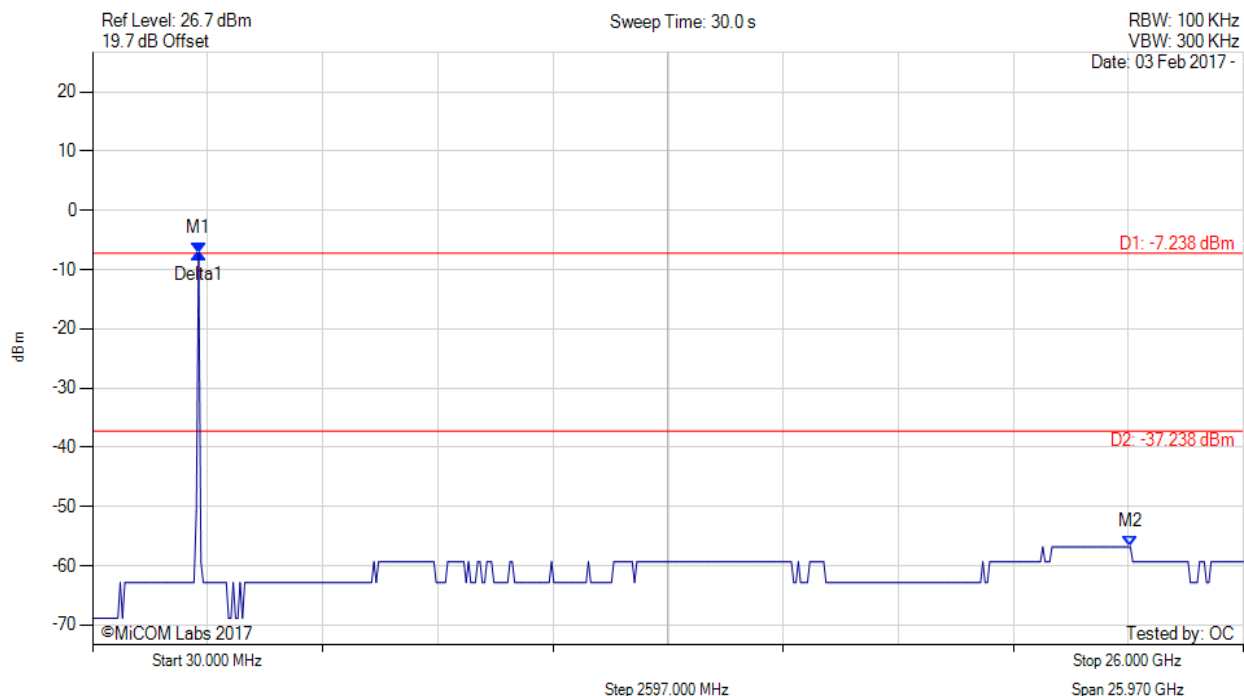


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



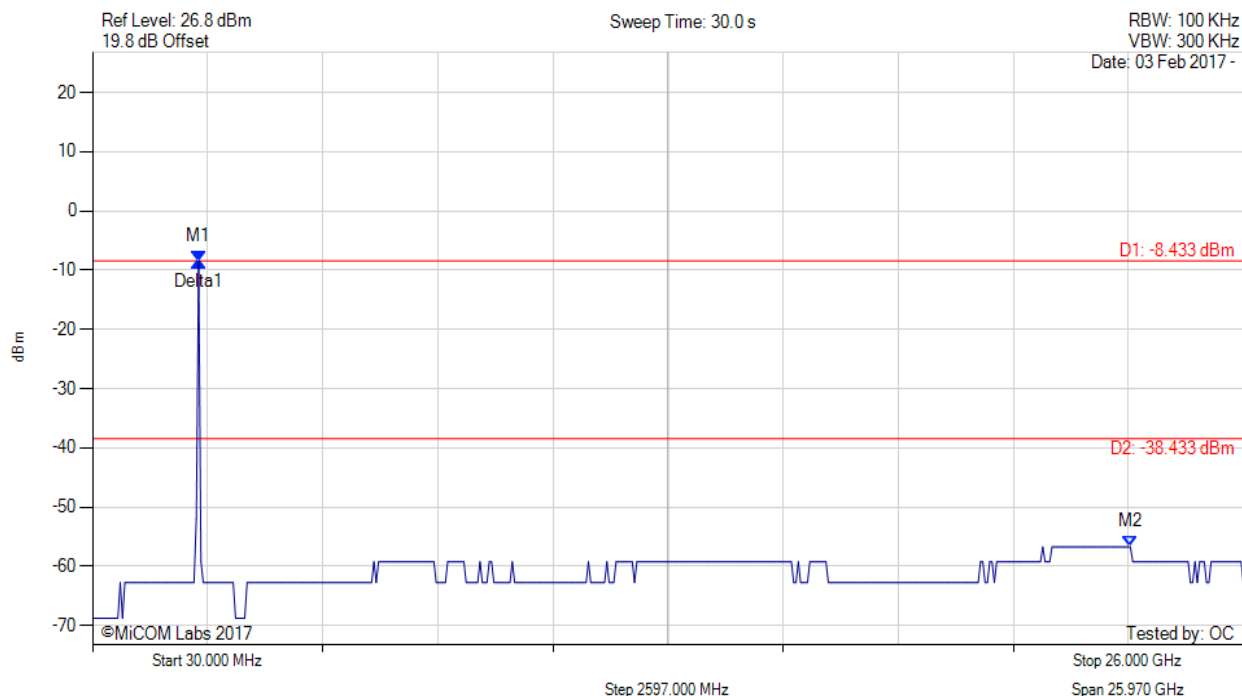
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -7.238 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -37.24 dBm Margin: -19.58 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

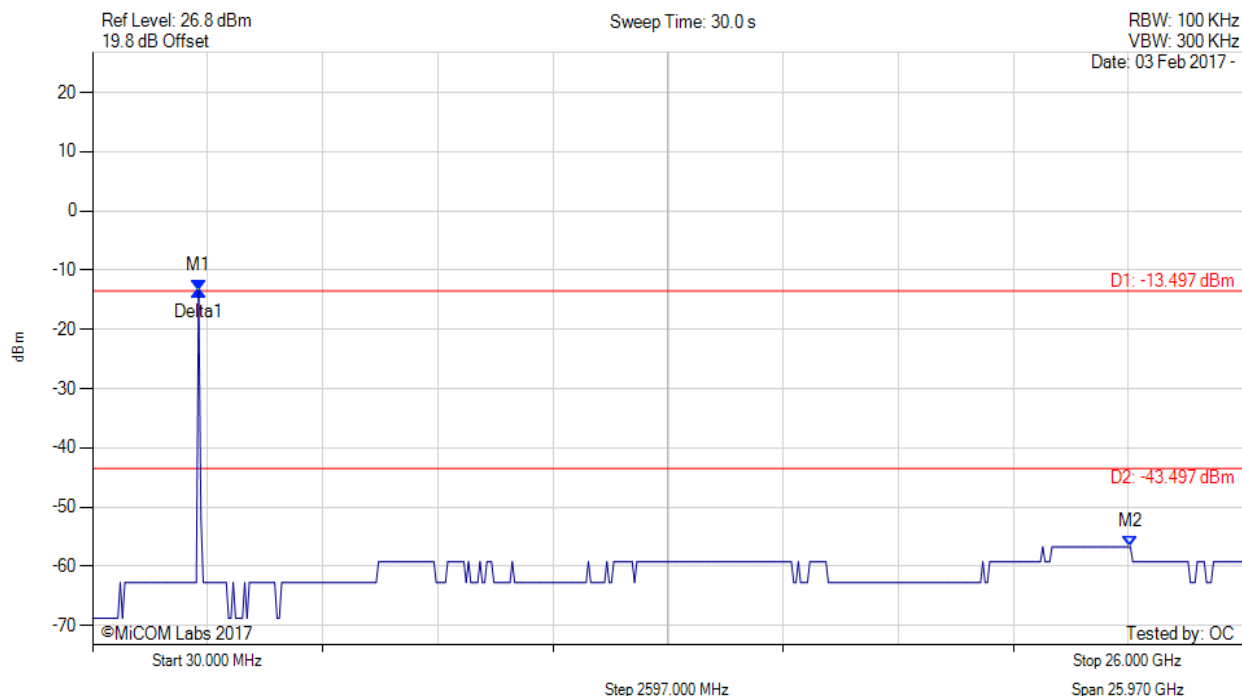


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -8.433 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -38.43 dBm Margin: -18.29 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

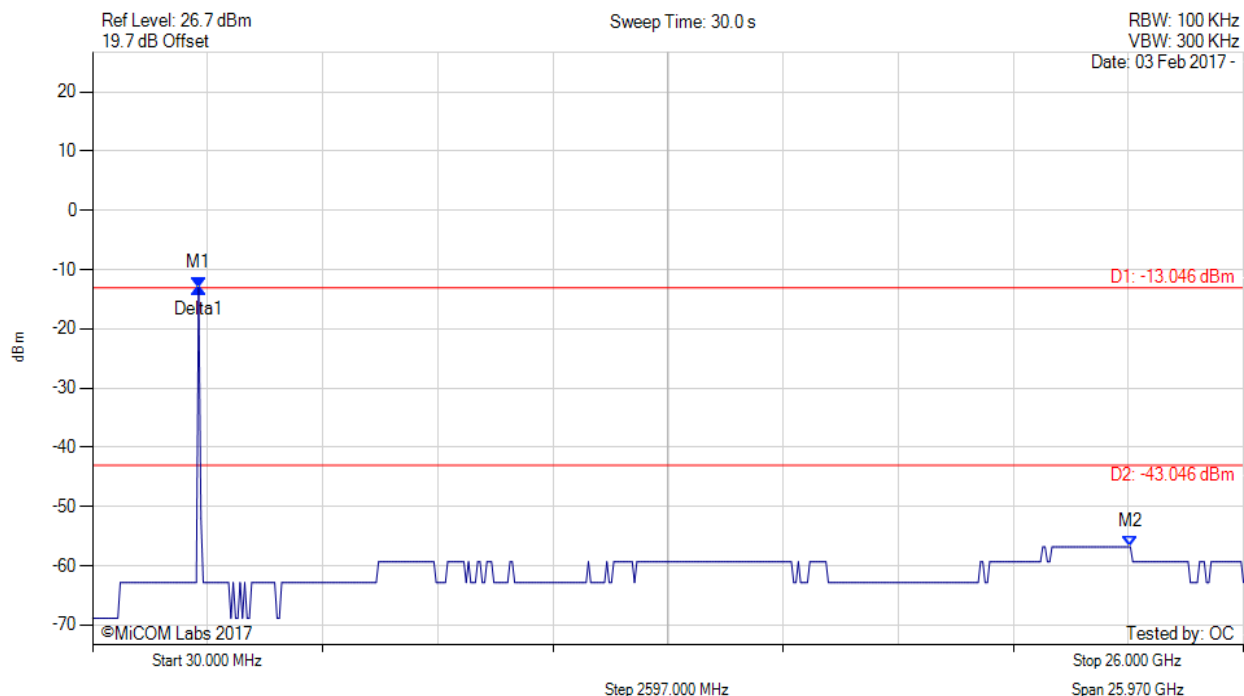


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.497 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -43.50 dBm Margin: -13.22 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.046 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -43.05 dBm Margin: -13.77 dB

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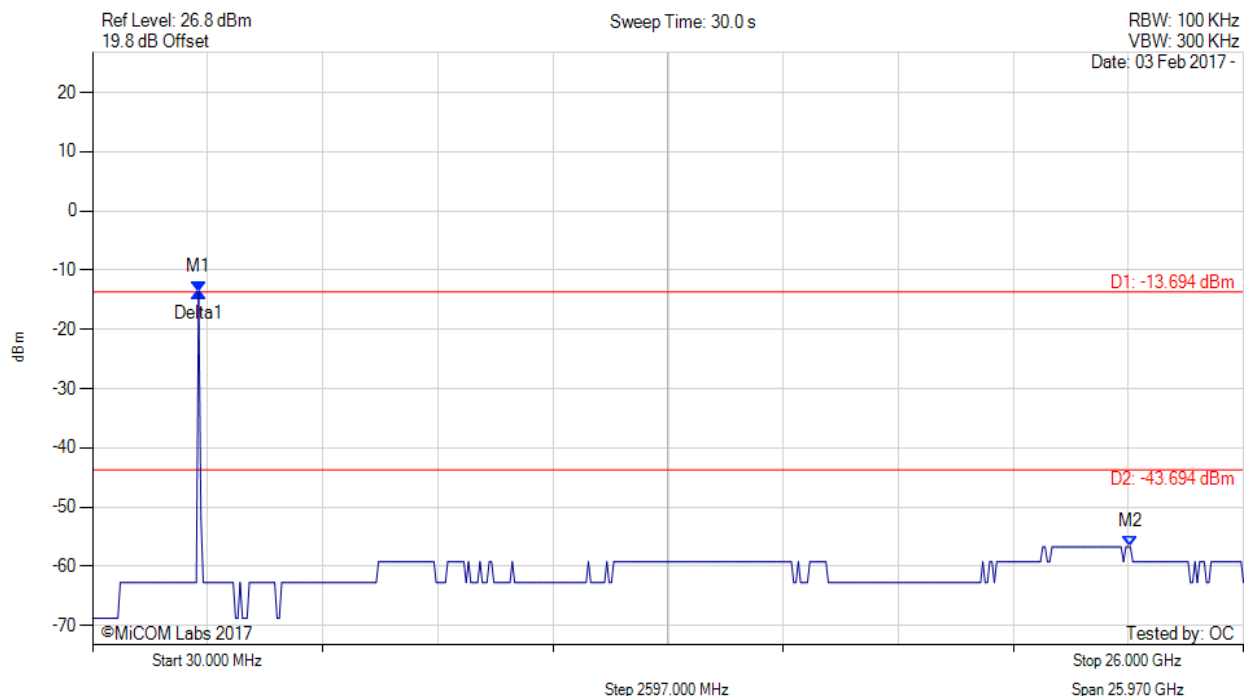


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



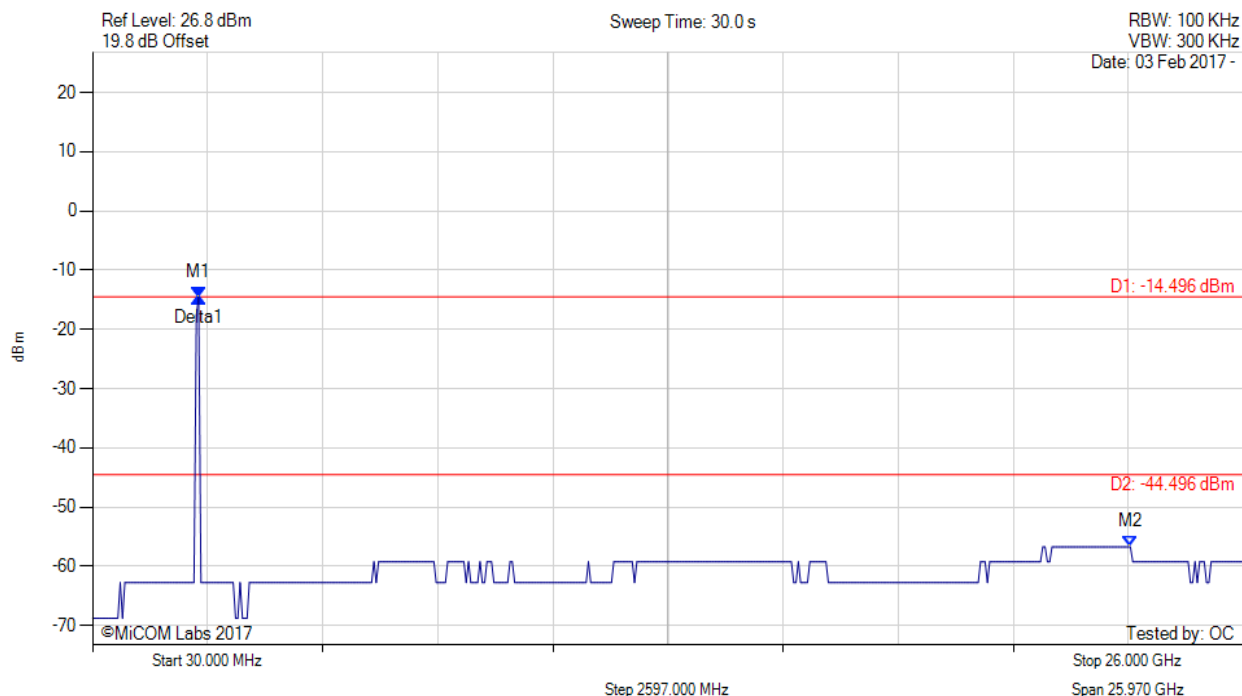
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -13.694 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -43.69 dBm Margin: -13.03 dB

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# CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

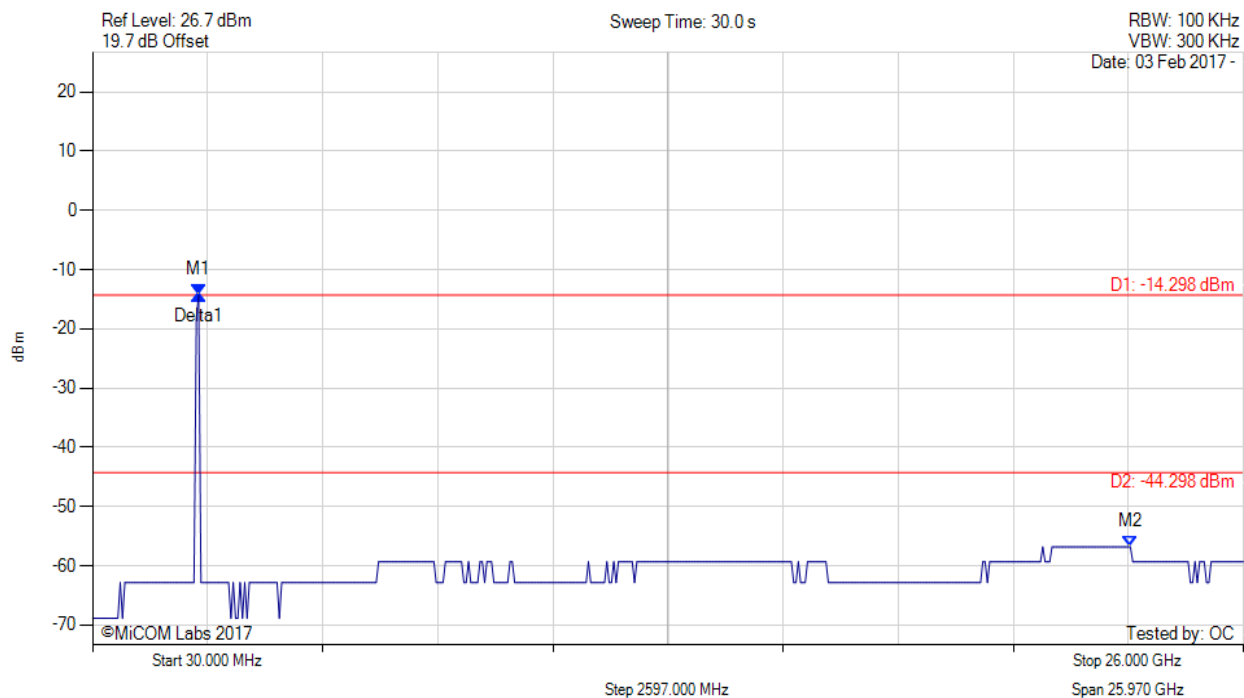


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -14.496 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -44.50 dBm Margin: -12.22 dB

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### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -14.298 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -44.30 dBm Margin: -12.52 dB

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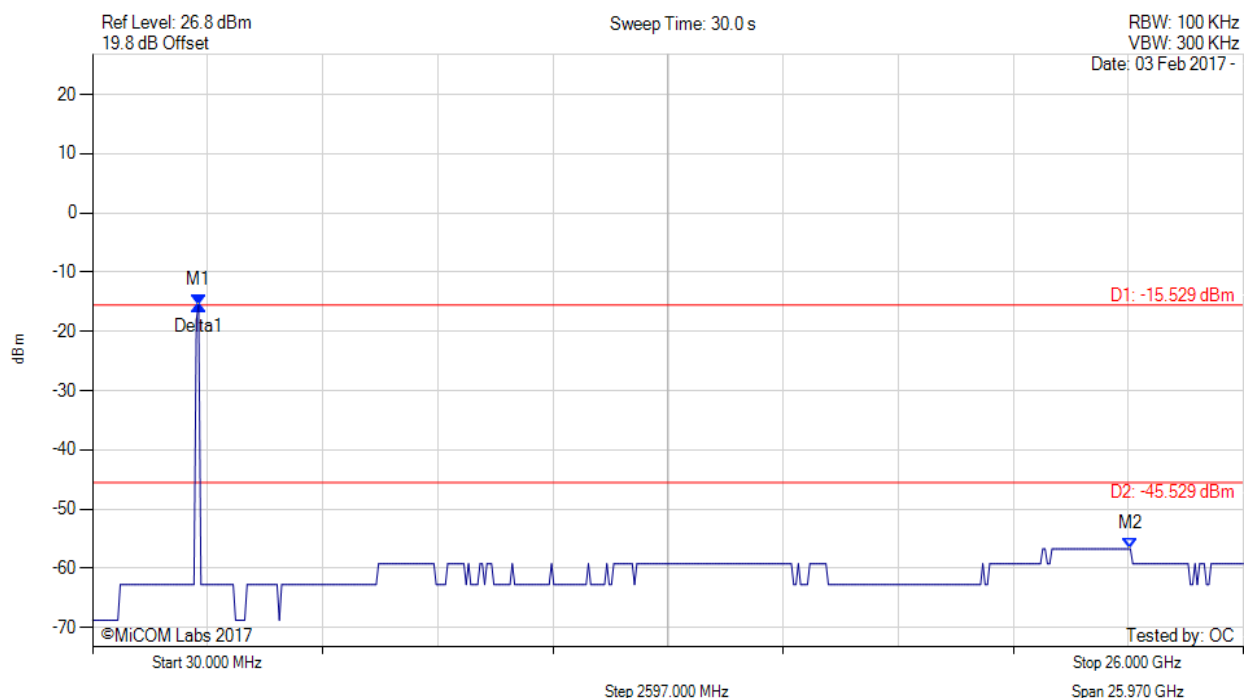


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -15.529 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -45.53 dBm Margin: -11.19 dB

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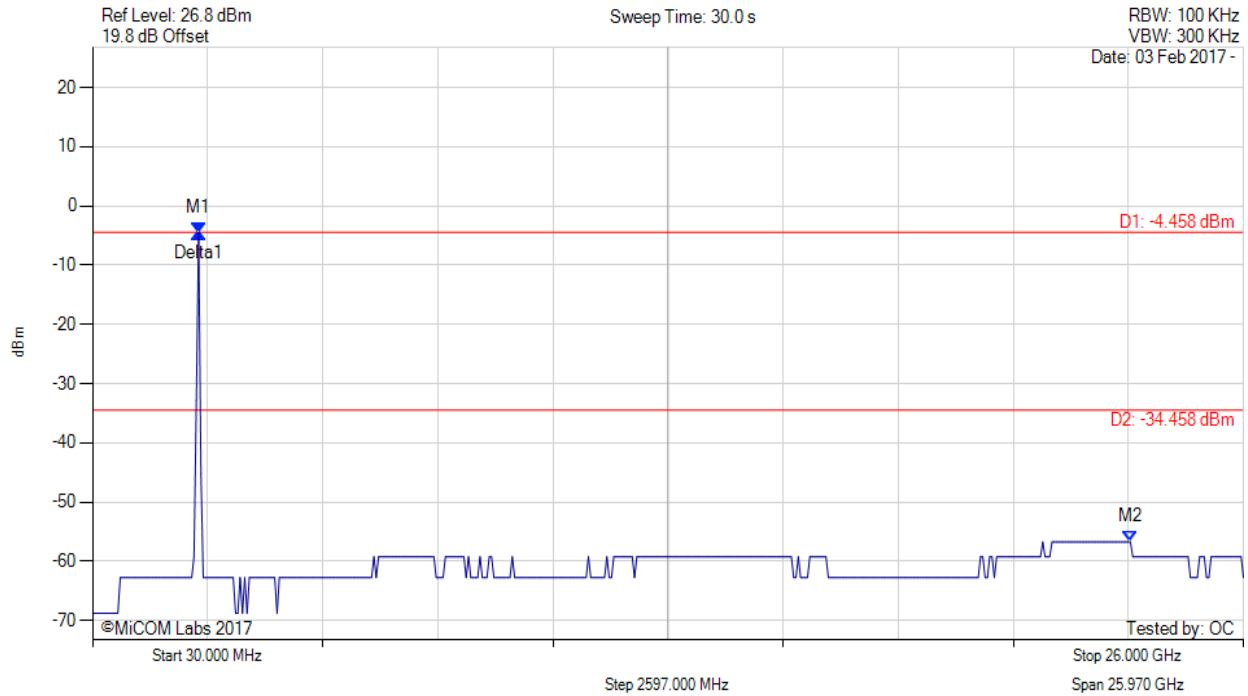


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -4.458 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -34.46 dBm Margin: -22.26 dB

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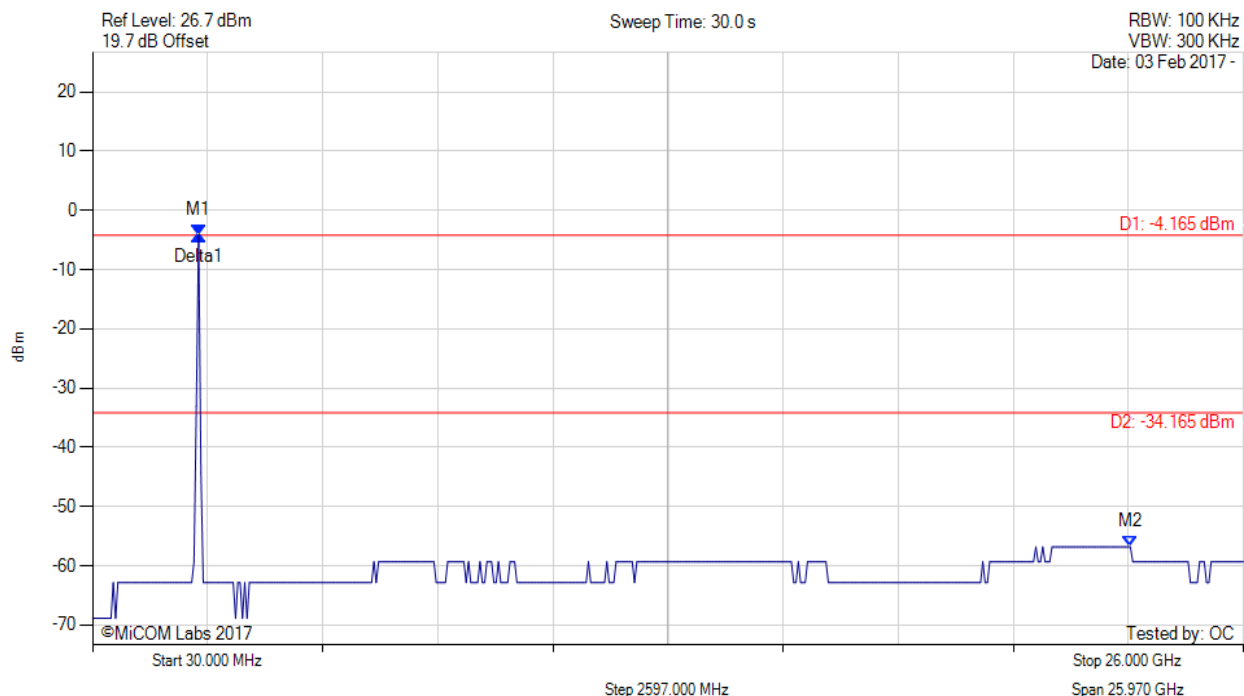


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -4.165 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -34.17 dBm Margin: -22.65 dB

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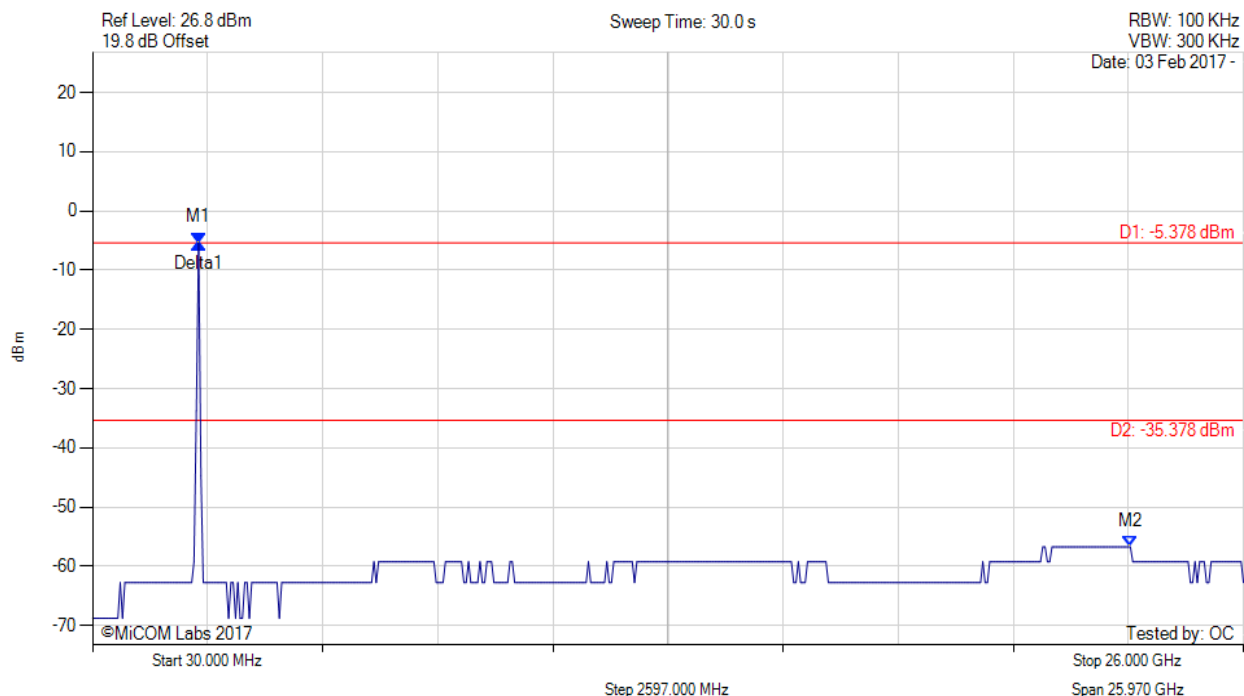


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



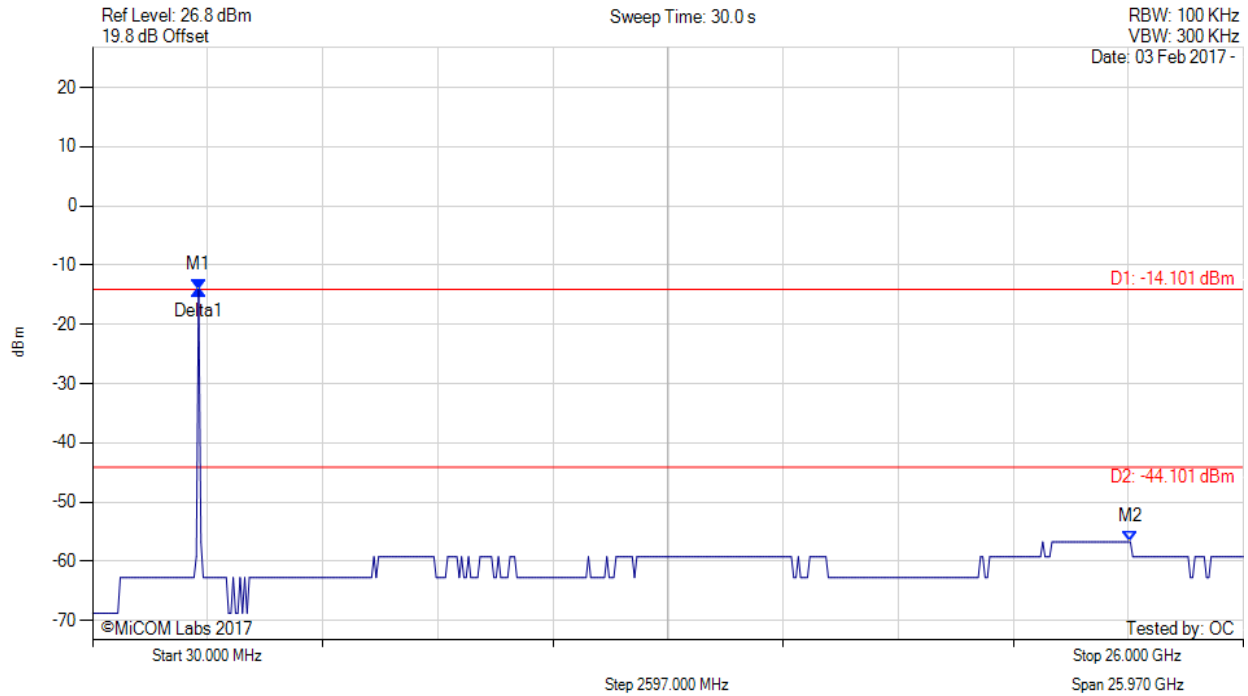
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -5.378 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -35.38 dBm Margin: -21.34 dB

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### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -14.101 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -44.10 dBm Margin: -12.62 dB

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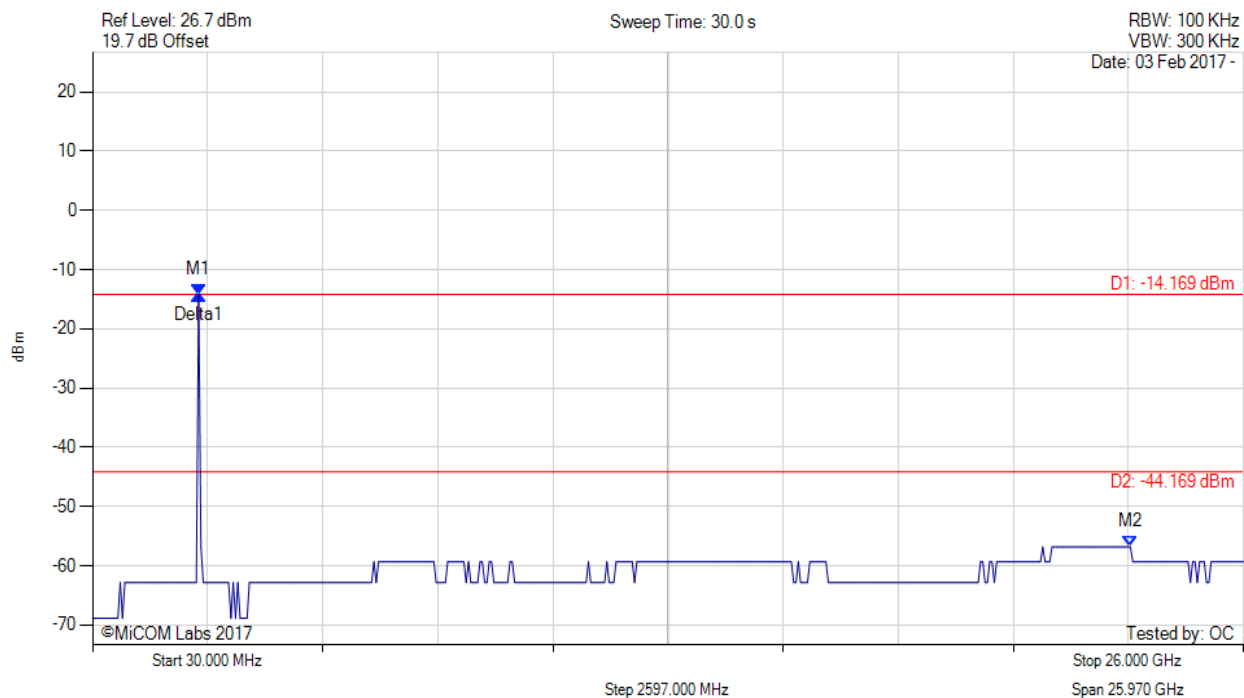


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -14.169 dBm M2 : 23.450 GHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -44.17 dBm Margin: -12.65 dB

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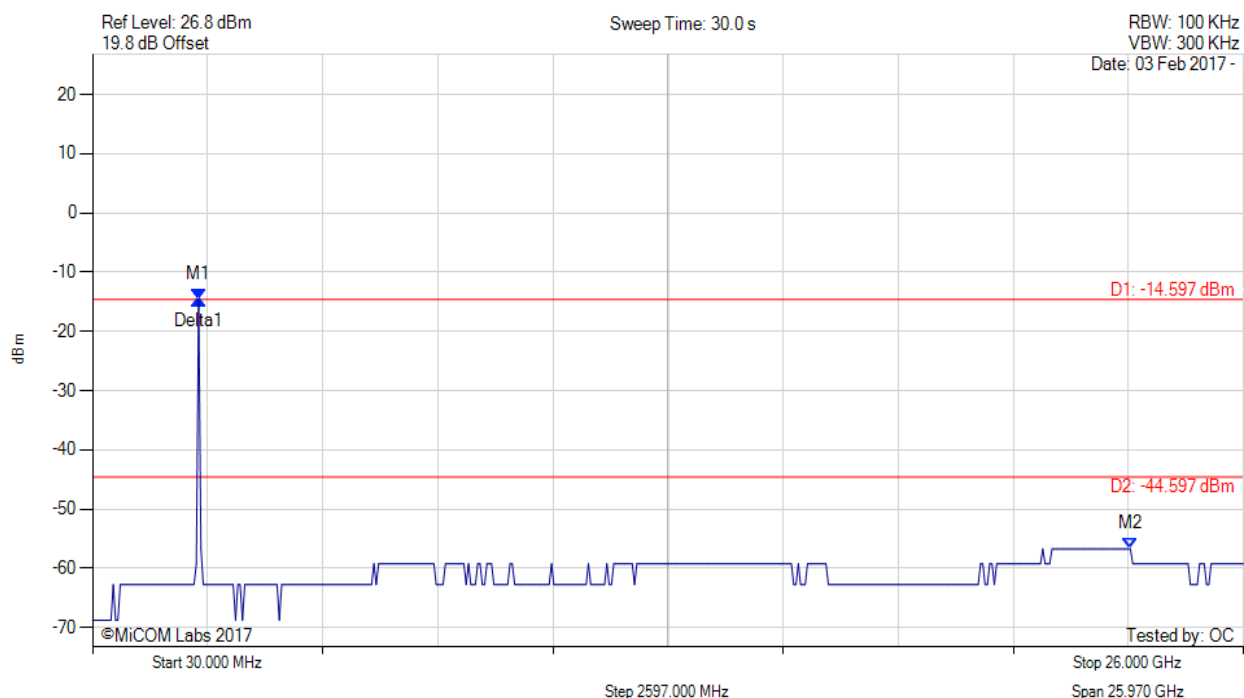


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED SPURIOUS EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

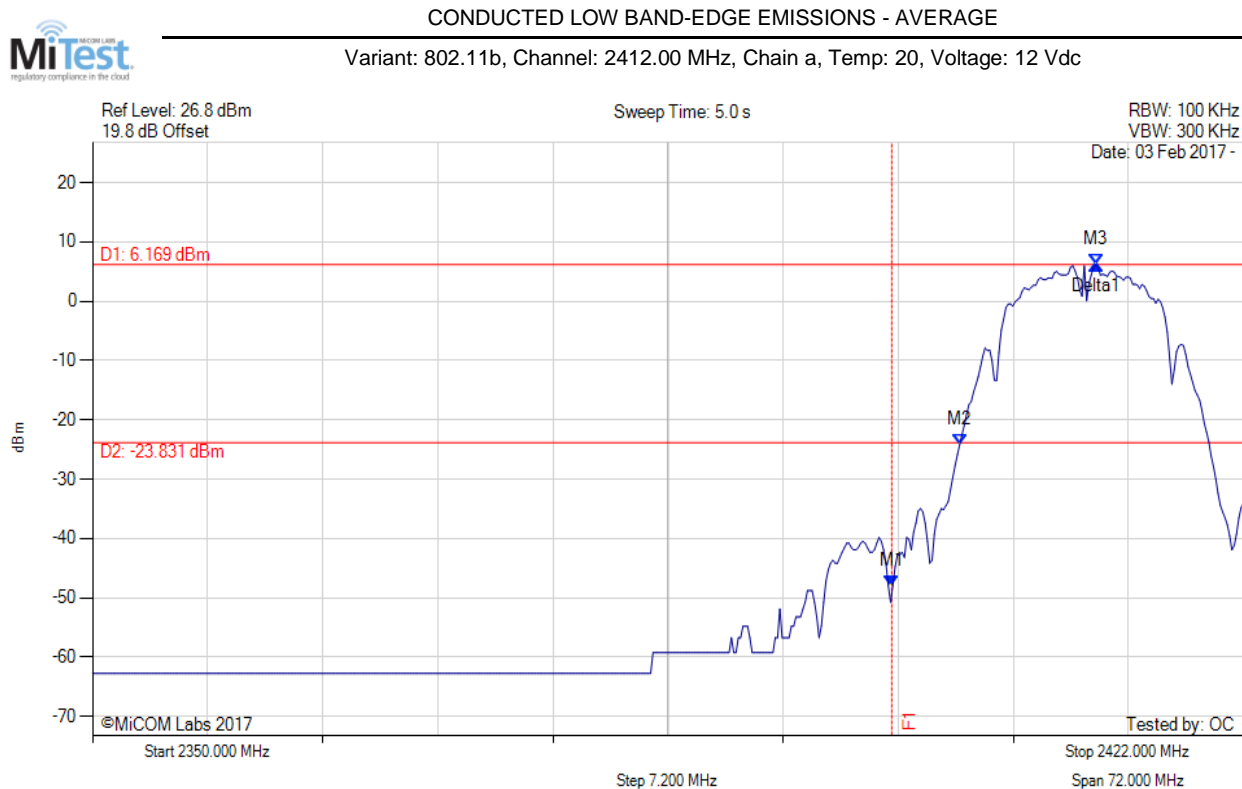


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -14.597 dBm M2 : 23.450 GHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Limit: -44.60 dBm Margin: -12.12 dB

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### A.3.1.2. Conducted Band-Edge Emissions



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -47.937 dBm M2 : 2404.253 MHz : -24.156 dBm M3 : 2412.766 MHz : 6.169 dBm Delta1 : 12.766 MHz : 54.106 dB	Channel Frequency: 2412.00 MHz

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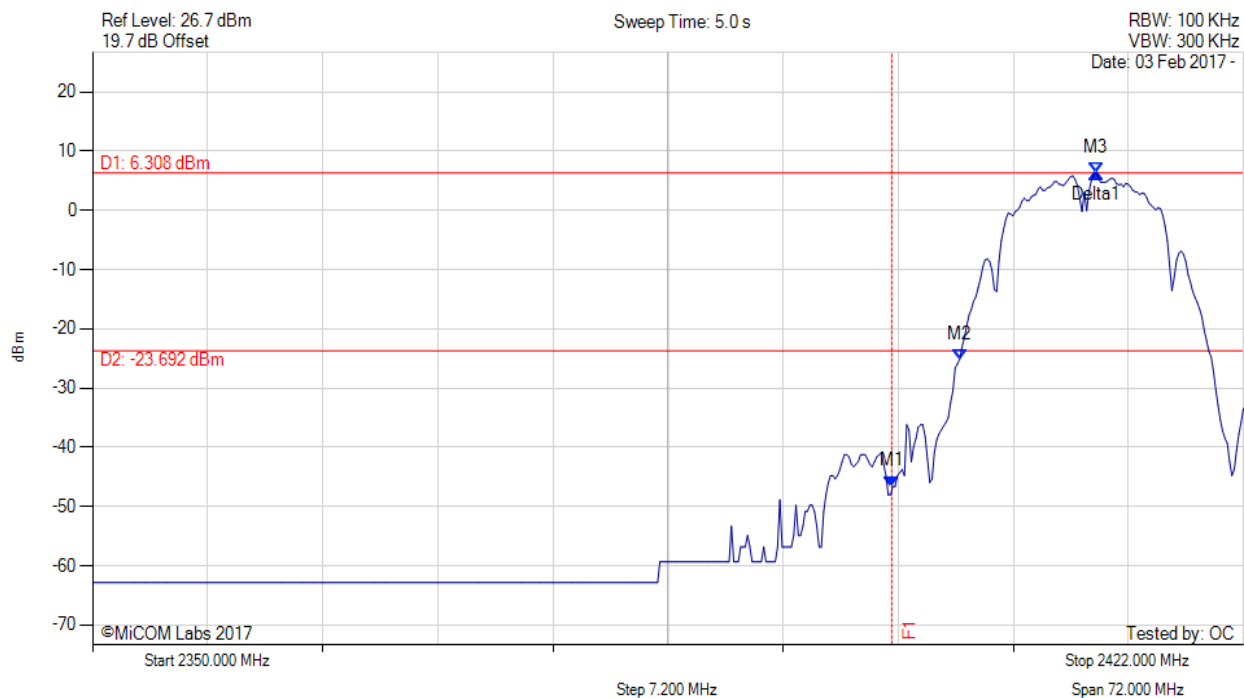


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



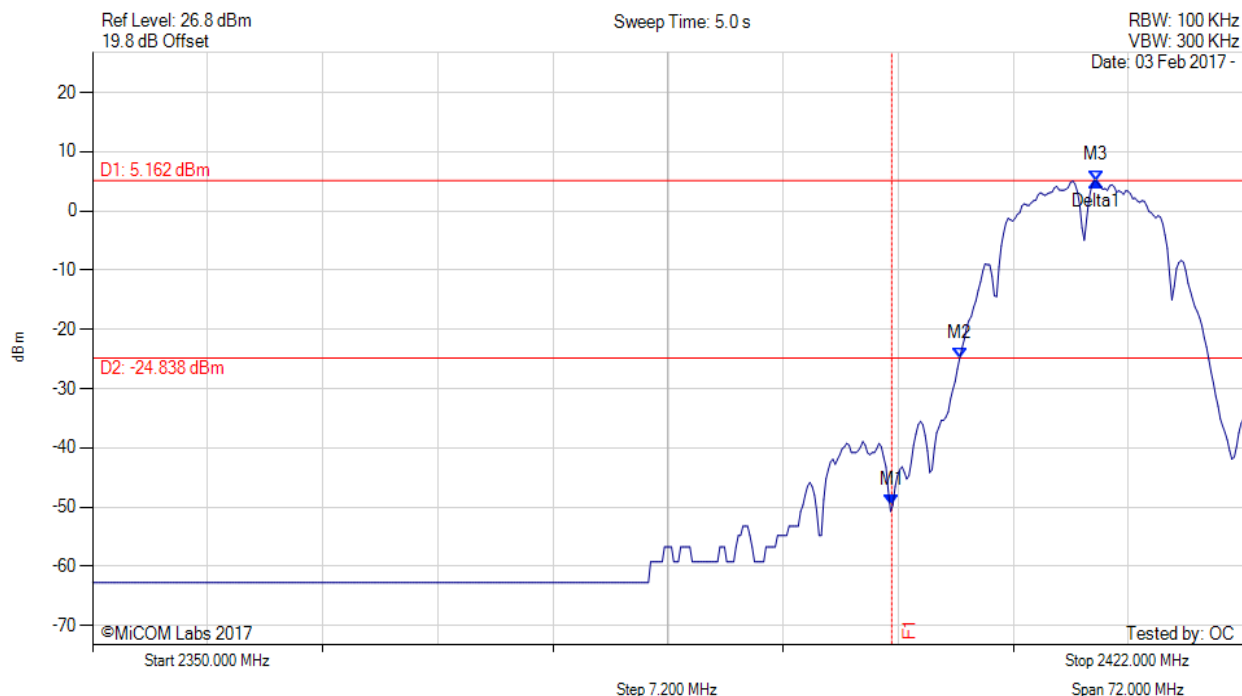
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -46.586 dBm M2 : 2404.253 MHz : -25.115 dBm M3 : 2412.766 MHz : 6.308 dBm Delta1 : 12.766 MHz : 52.895 dB	Channel Frequency: 2412.00 MHz

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# CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -49.680 dBm M2 : 2404.253 MHz : -24.847 dBm M3 : 2412.766 MHz : 5.162 dBm Delta1 : 12.766 MHz : 54.842 dB	Channel Frequency: 2412.00 MHz

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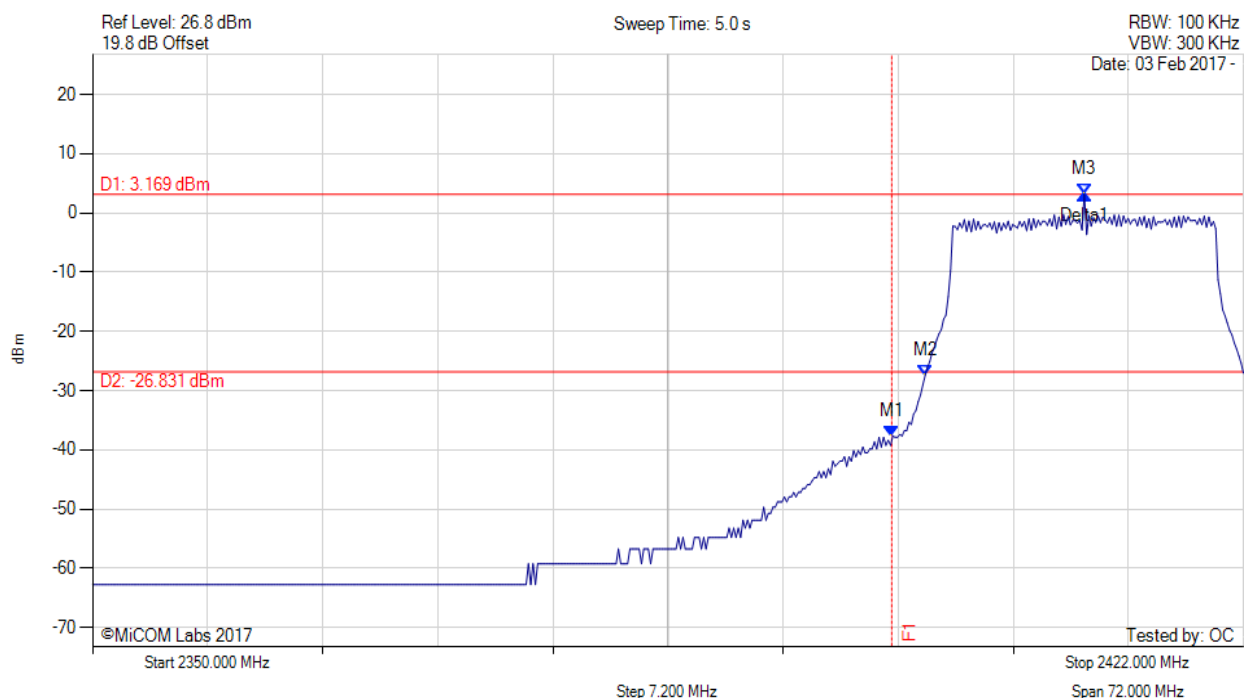


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -37.639 dBm M2 : 2402.088 MHz : -27.402 dBm M3 : 2412.044 MHz : 3.169 dBm Delta1 : 12.044 MHz : 40.808 dB	Channel Frequency: 2412.00 MHz

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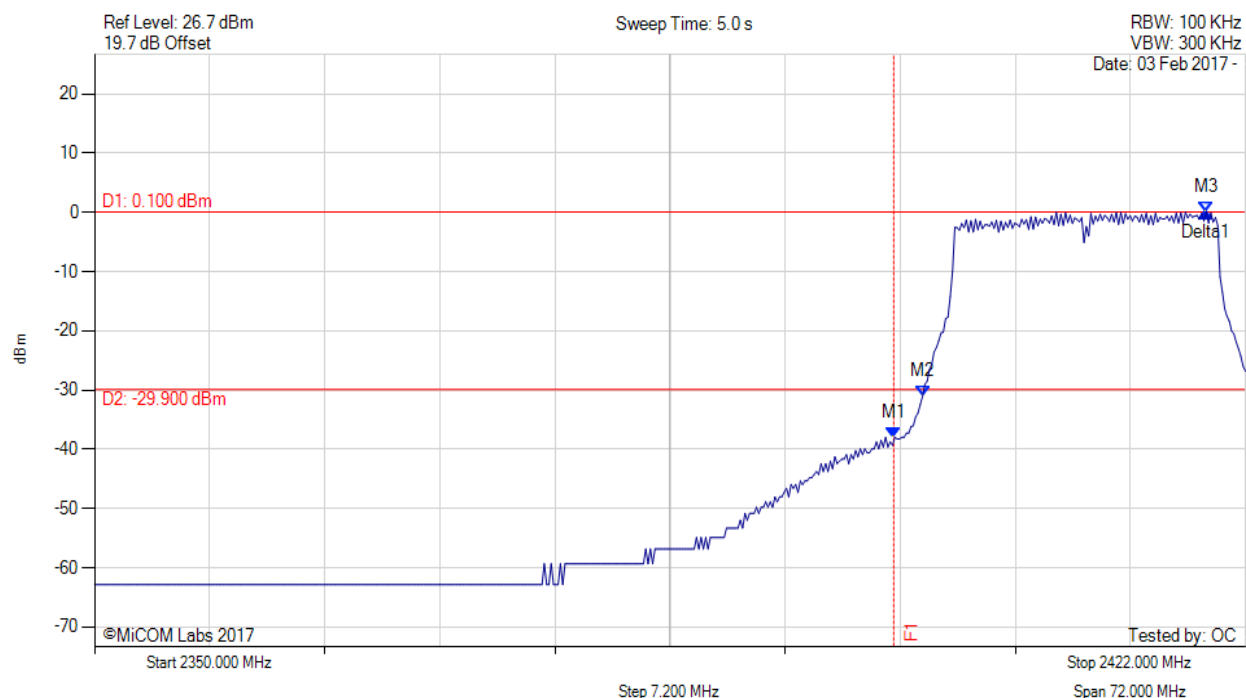


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -37.984 dBm M2 : 2401.800 MHz : -31.023 dBm M3 : 2419.547 MHz : 0.100 dBm Delta1 : 19.547 MHz : 38.083 dB	Channel Frequency: 2412.00 MHz

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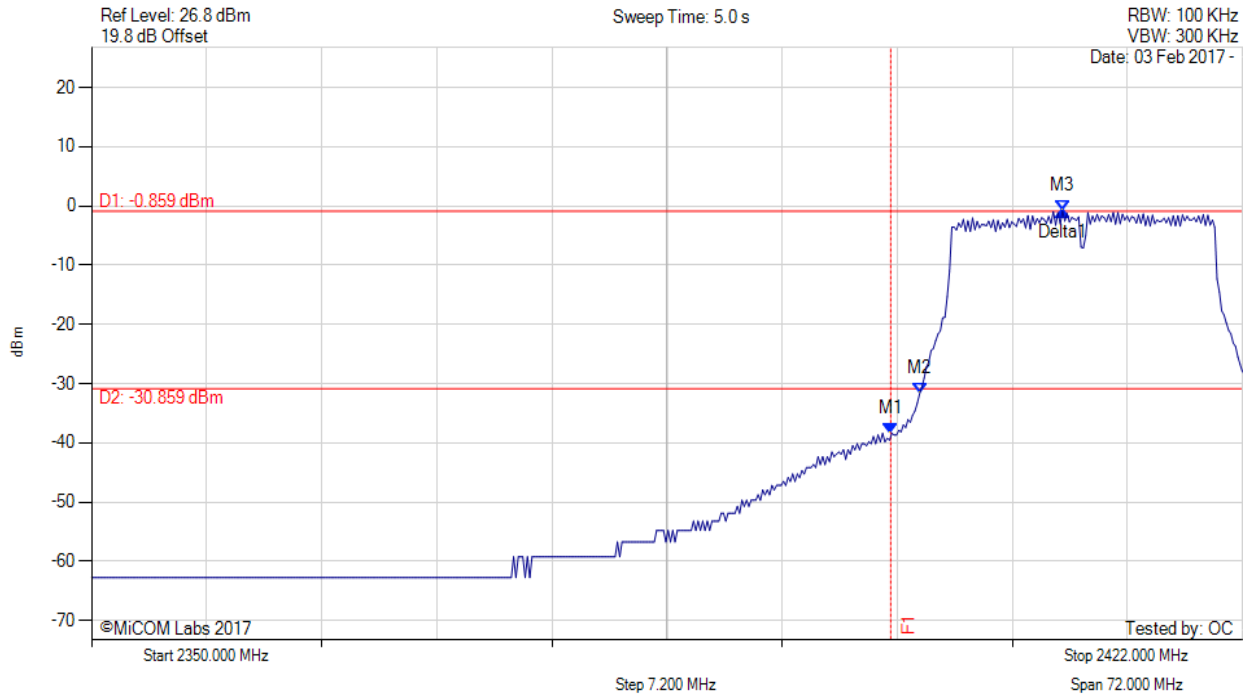


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -38.395 dBm M2 : 2401.800 MHz : -31.740 dBm M3 : 2410.745 MHz : -0.859 dBm Delta1 : 10.745 MHz : 37.536 dB	Channel Frequency: 2412.00 MHz

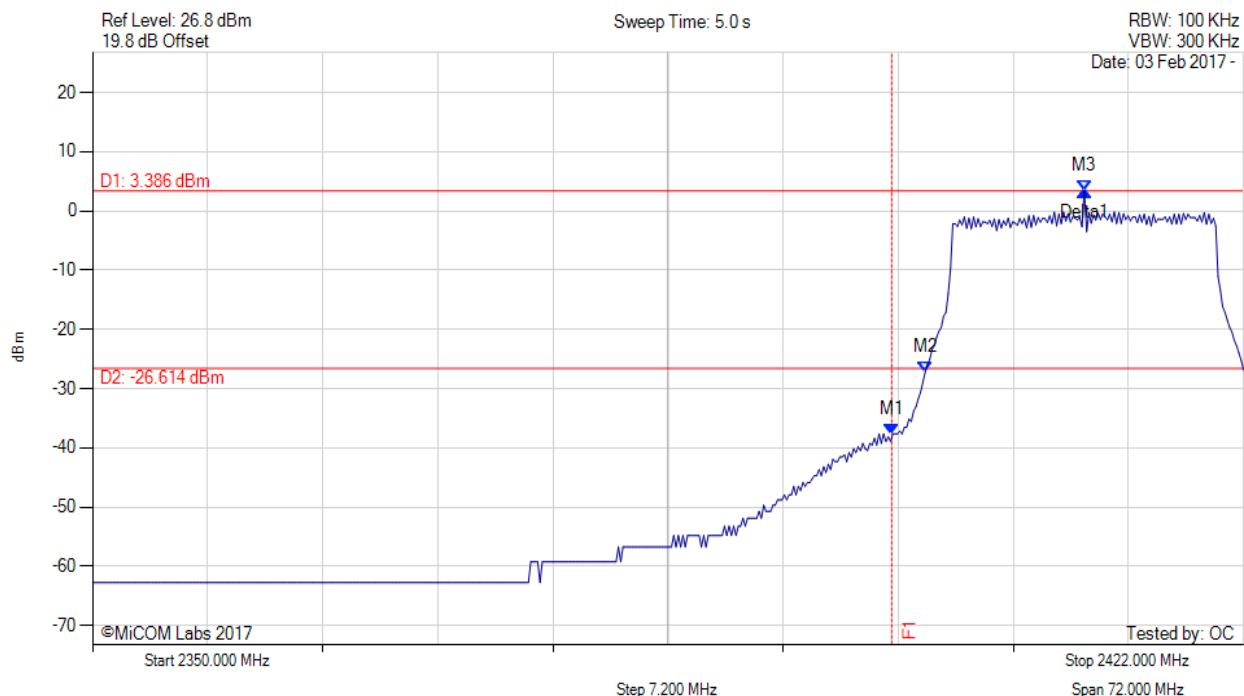
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# CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -37.639 dBm M2 : 2402.088 MHz : -27.254 dBm M3 : 2412.044 MHz : 3.386 dBm Delta1 : 12.044 MHz : 41.025 dB	Channel Frequency: 2412.00 MHz

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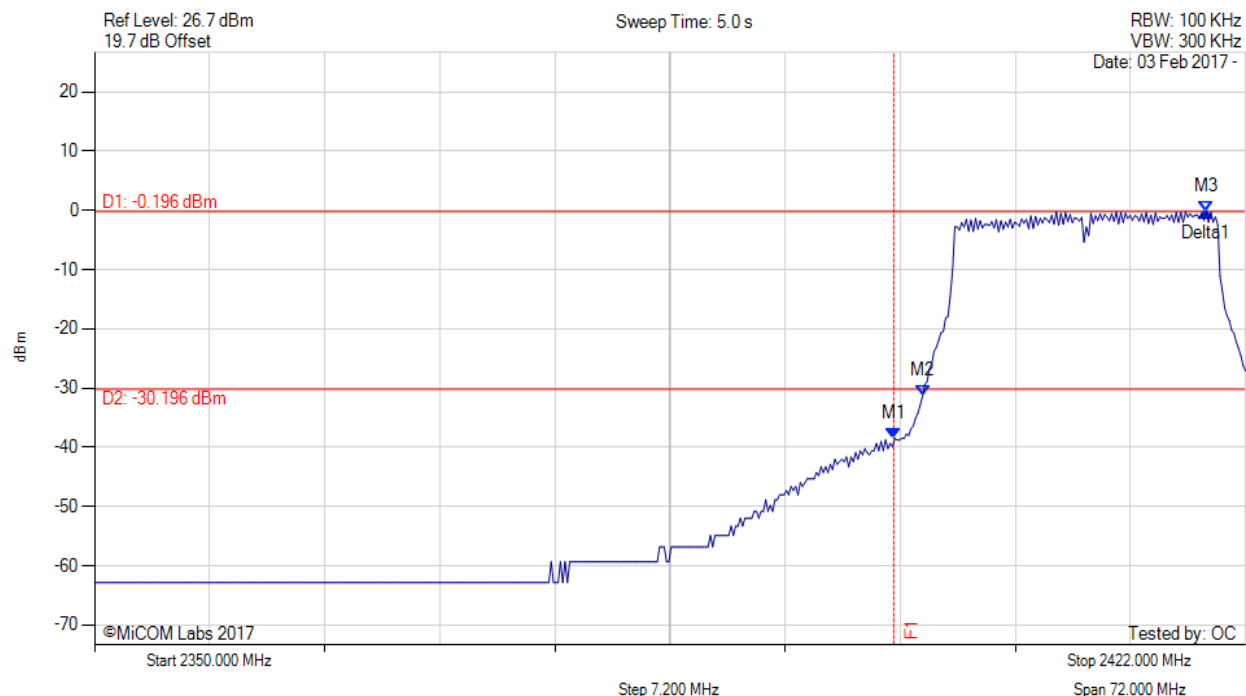


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -38.495 dBm M2 : 2401.800 MHz : -31.364 dBm M3 : 2419.547 MHz : -0.196 dBm Delta1 : 19.547 MHz : 38.299 dB	Channel Frequency: 2412.00 MHz

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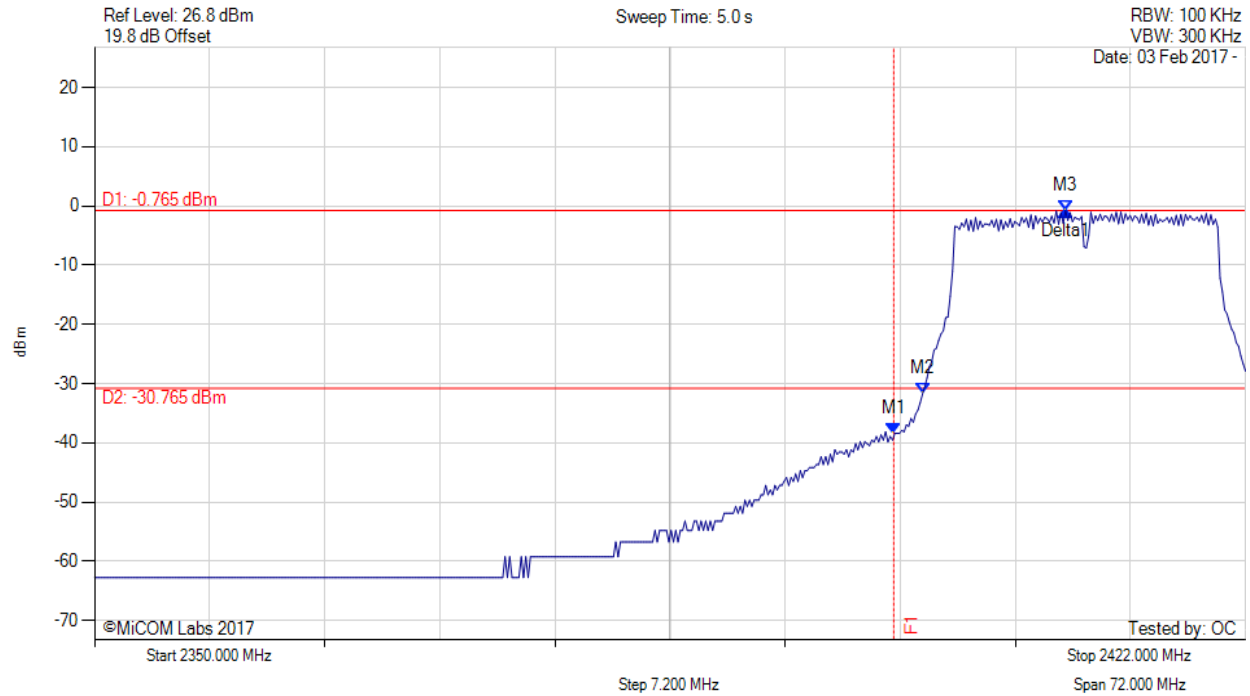


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2412.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -38.395 dBm M2 : 2401.800 MHz : -31.740 dBm M3 : 2410.745 MHz : -0.765 dBm Delta1 : 10.745 MHz : 37.630 dB	Channel Frequency: 2412.00 MHz

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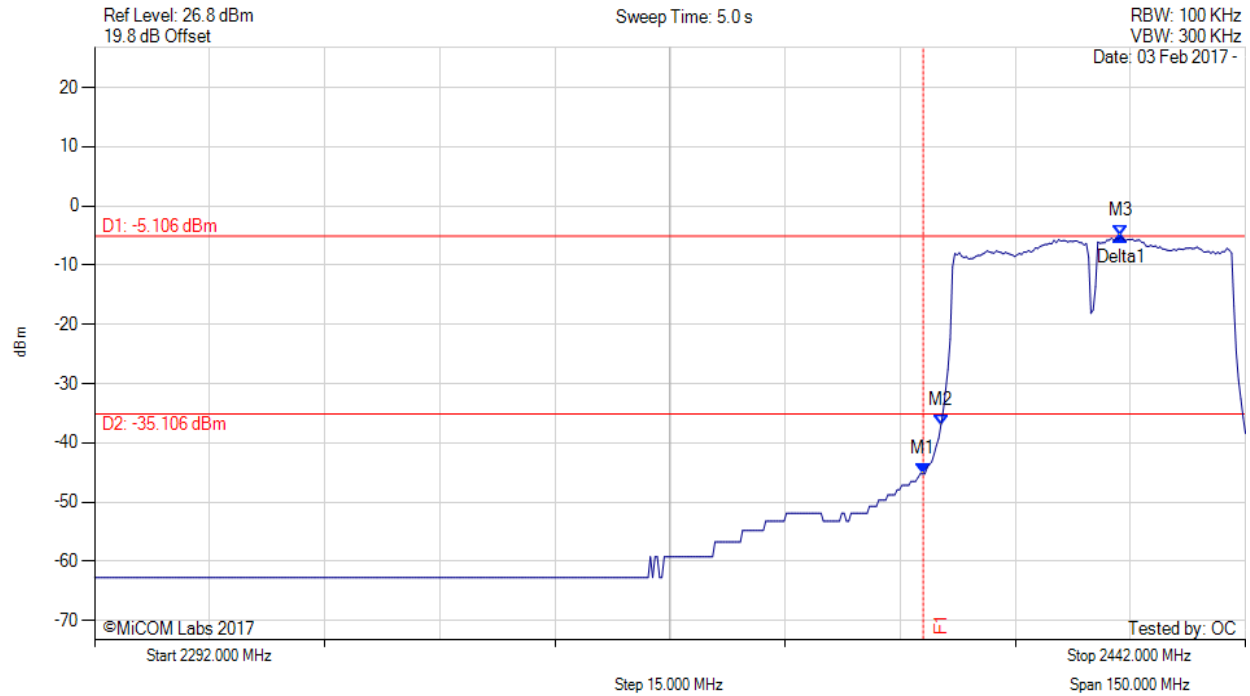


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -45.244 dBm M2 : 2402.321 MHz : -36.944 dBm M3 : 2425.768 MHz : -5.106 dBm Delta1 : 25.768 MHz : 40.138 dB	Channel Frequency: 2422.00 MHz

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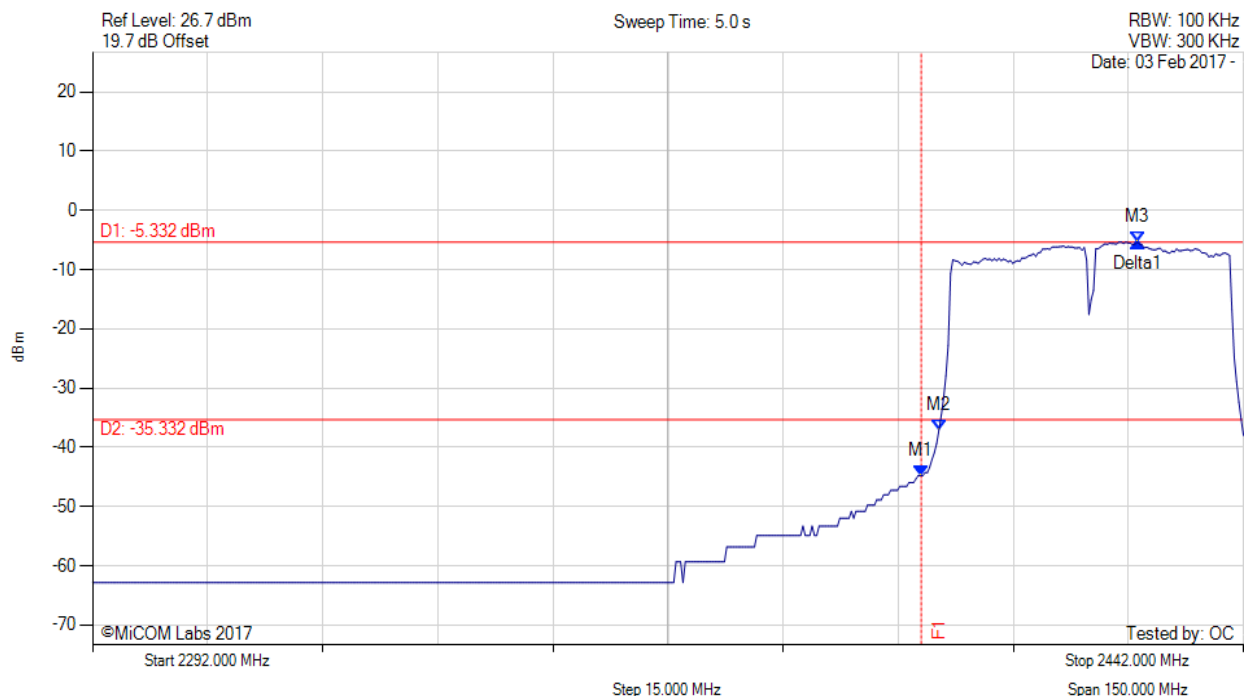


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -44.783 dBm M2 : 2402.321 MHz : -37.044 dBm M3 : 2428.172 MHz : -5.332 dBm Delta1 : 28.172 MHz : 39.451 dB	Channel Frequency: 2422.00 MHz

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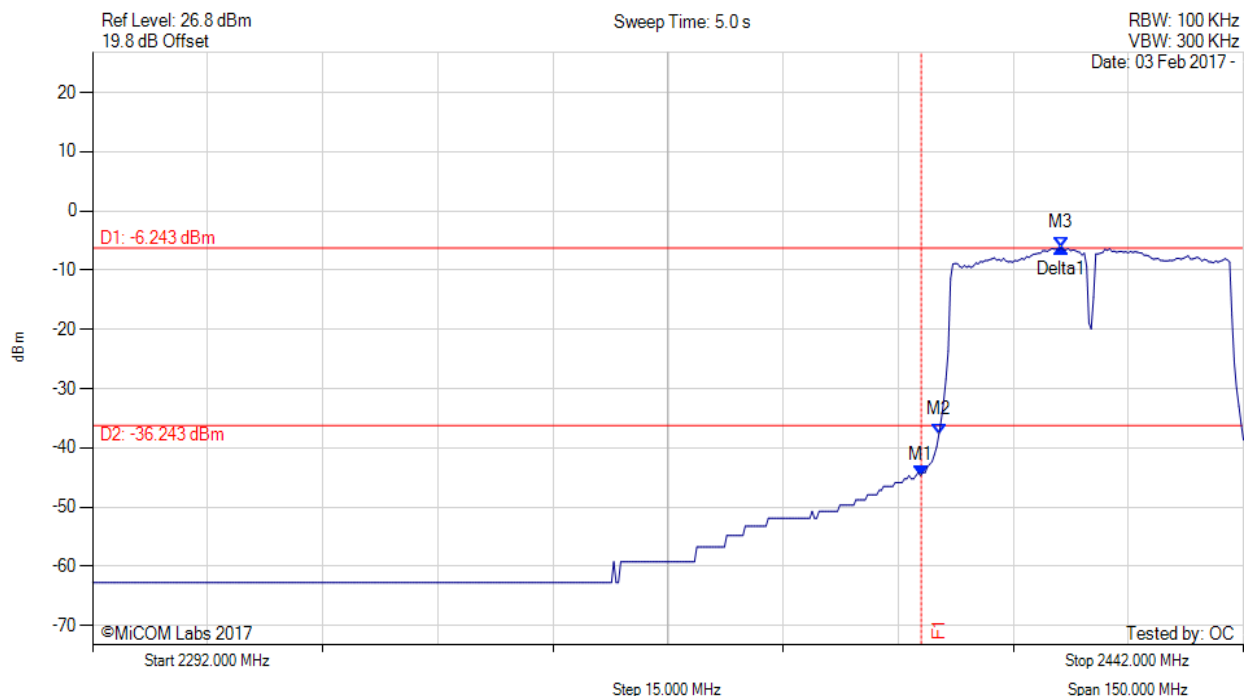


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
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#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



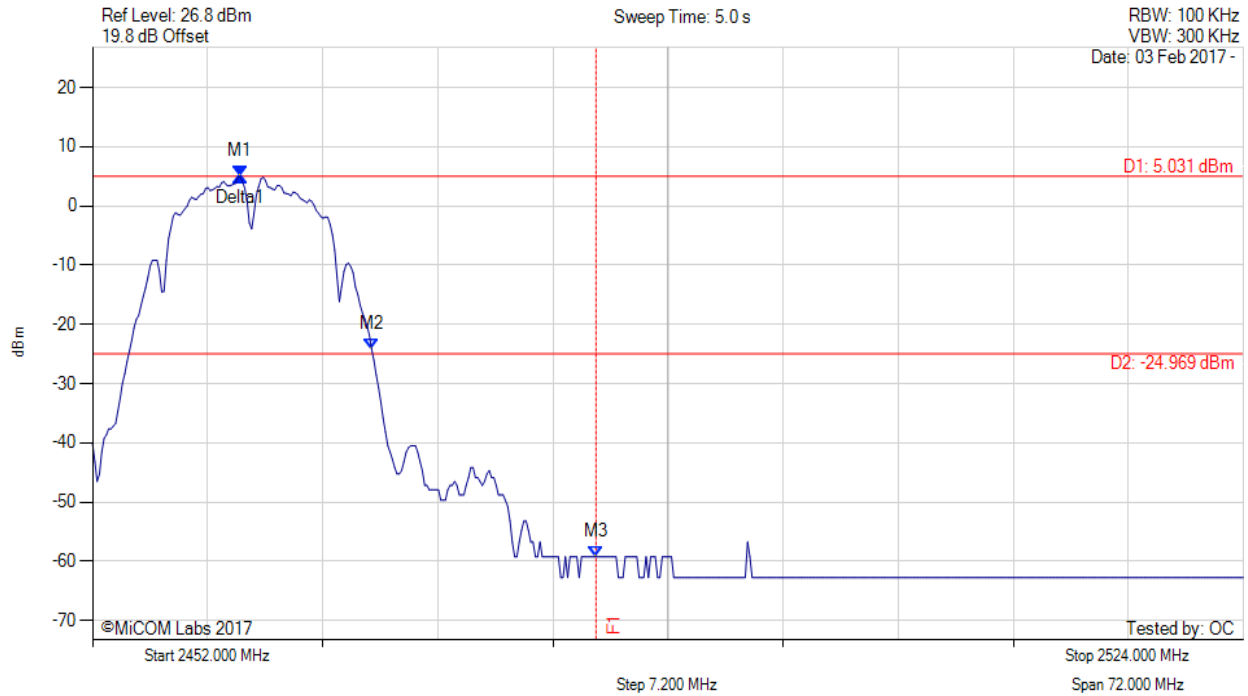
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -44.683 dBm M2 : 2402.321 MHz : -37.639 dBm M3 : 2418.253 MHz : -6.243 dBm Delta1 : 18.253 MHz : 38.440 dB	Channel Frequency: 2422.00 MHz

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### CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

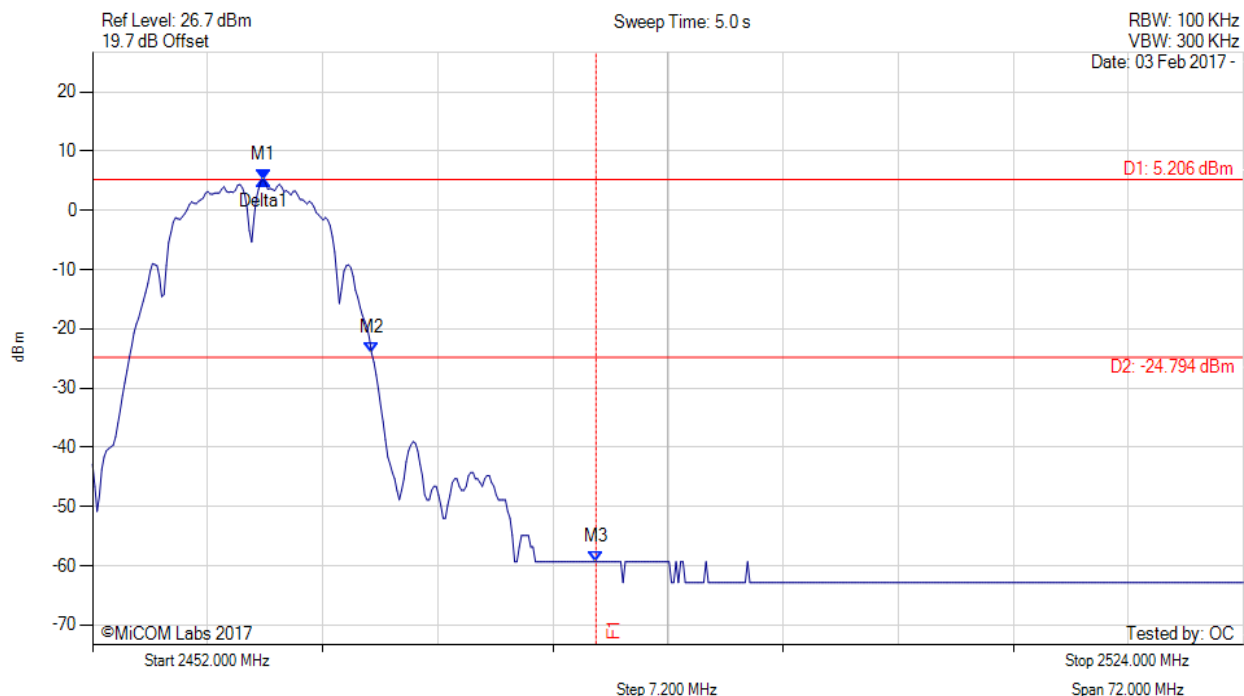


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.234 MHz : 5.031 dBm M2 : 2469.459 MHz : -24.156 dBm M3 : 2483.500 MHz : -59.223 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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# CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



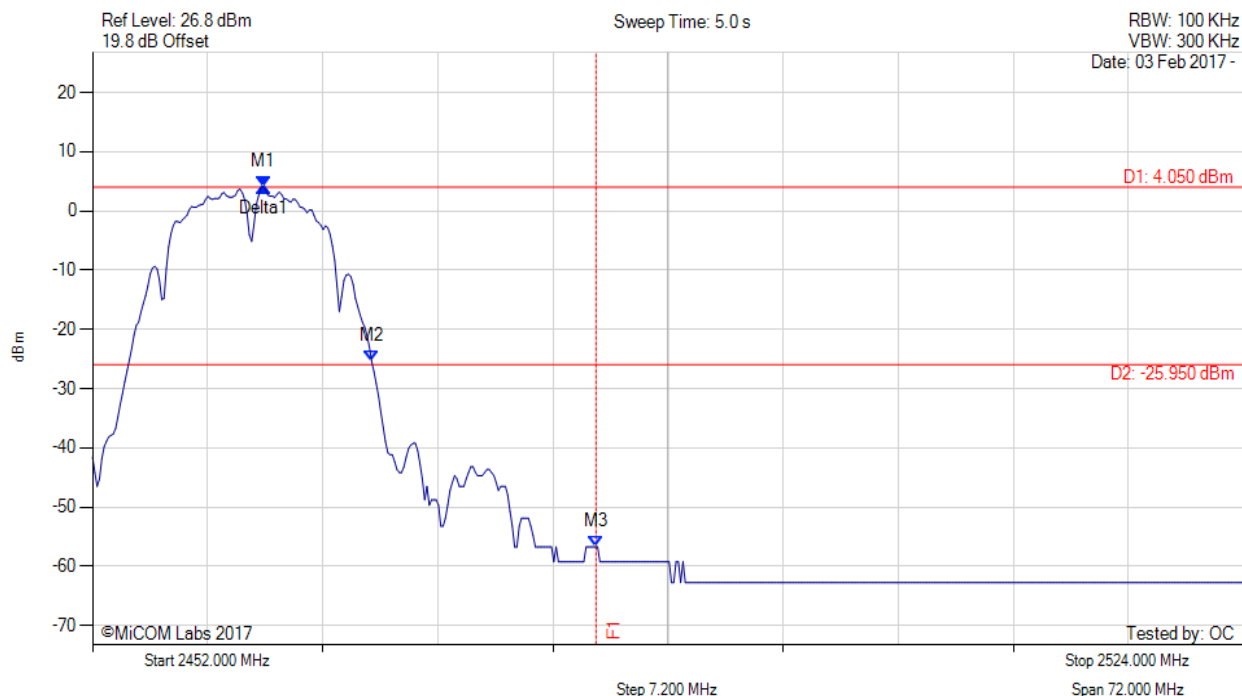
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.677 MHz : 5.206 dBm M2 : 2469.459 MHz : -24.104 dBm M3 : 2483.500 MHz : -59.323 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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# CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc

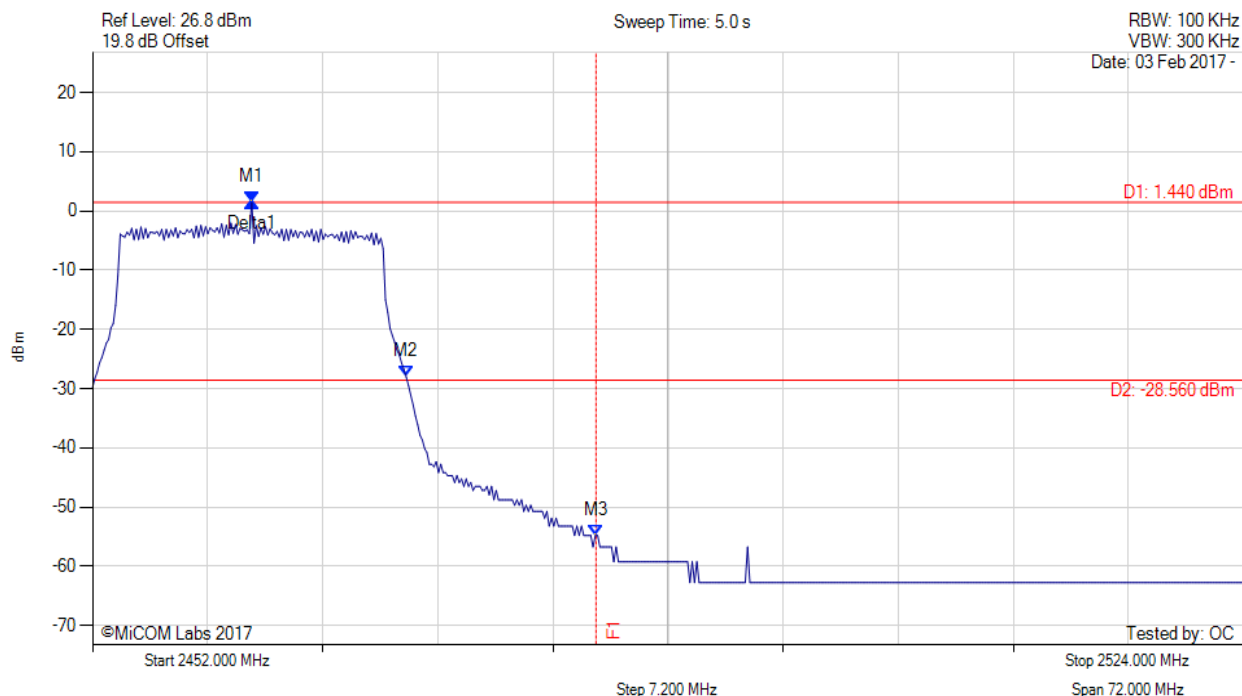


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.677 MHz : 4.050 dBm M2 : 2469.459 MHz : -25.360 dBm M3 : 2483.500 MHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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# CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc

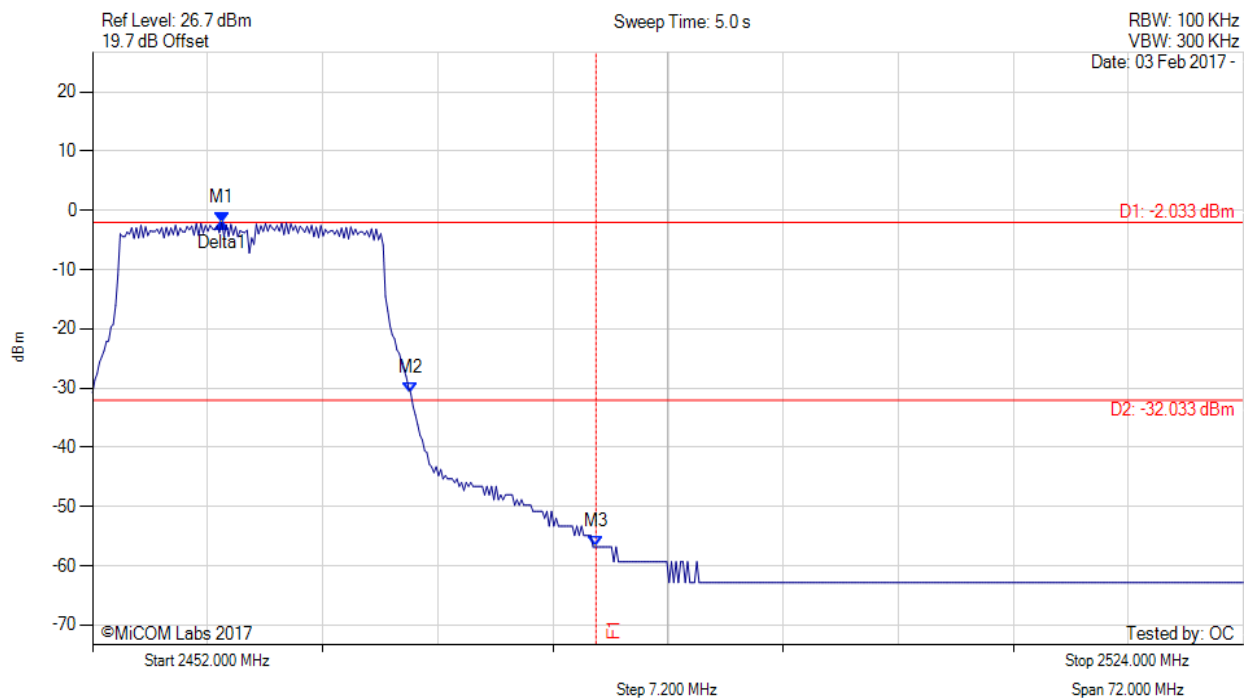


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.956 MHz : 1.440 dBm M2 : 2471.623 MHz : -28.017 dBm M3 : 2483.500 MHz : -54.786 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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### CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

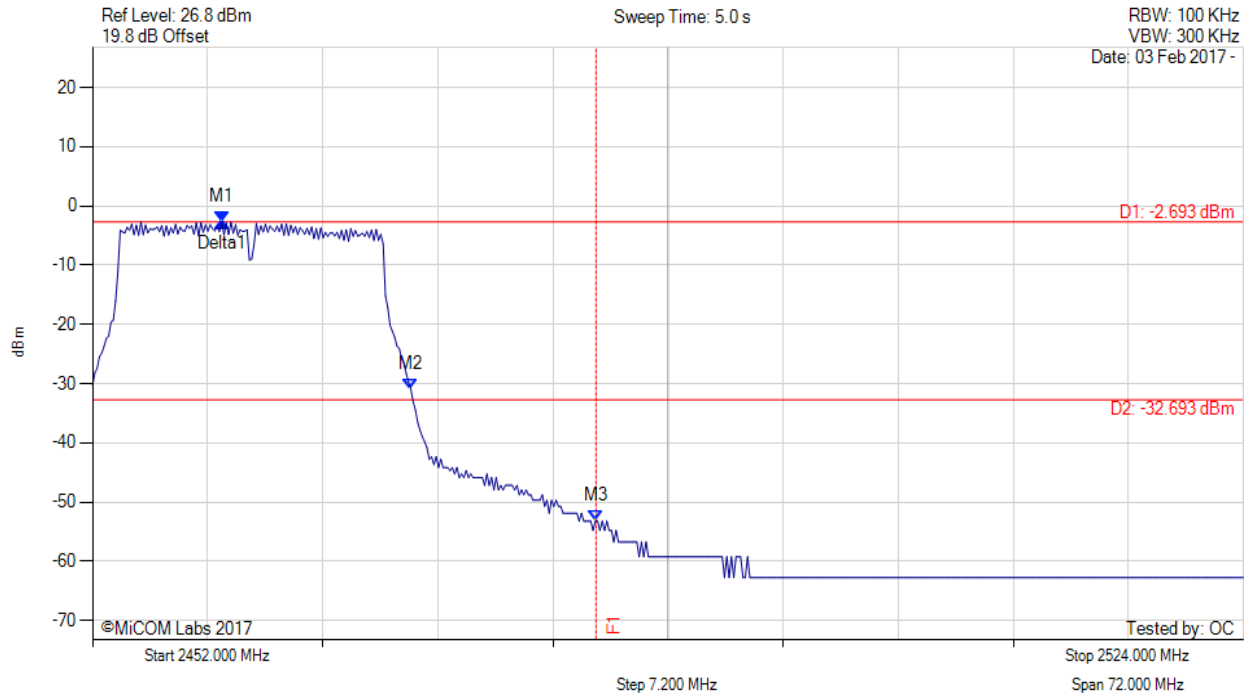


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.080 MHz : -2.033 dBm M2 : 2471.912 MHz : -30.913 dBm M3 : 2483.500 MHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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### CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.080 MHz : -2.693 dBm M2 : 2471.912 MHz : -30.923 dBm M3 : 2483.500 MHz : -53.202 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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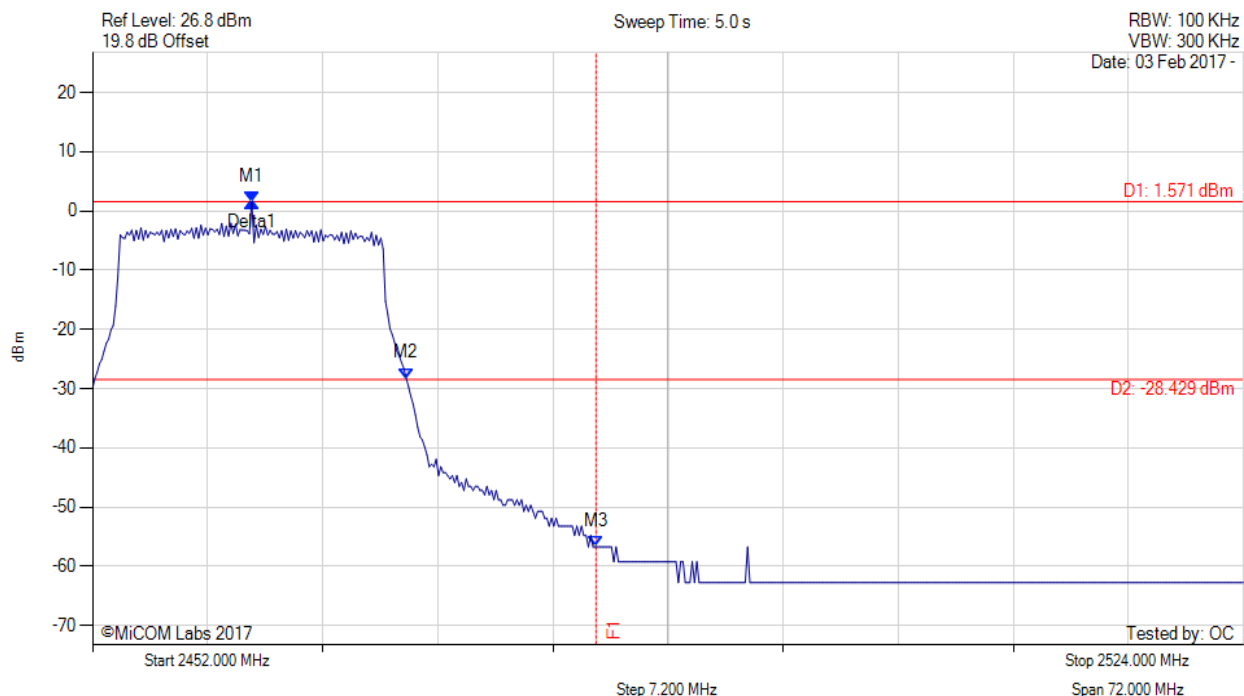


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
**To:** FCC CFR 47 Part 15 Subpart C 15.247 (DTS)  
**Serial #:** ATEC23-U4 Conducted Rev A  
**Issue Date:** 30th March 2017  
**Page:** 173 of 179



#### CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.956 MHz : 1.571 dBm M2 : 2471.623 MHz : -28.259 dBm M3 : 2483.500 MHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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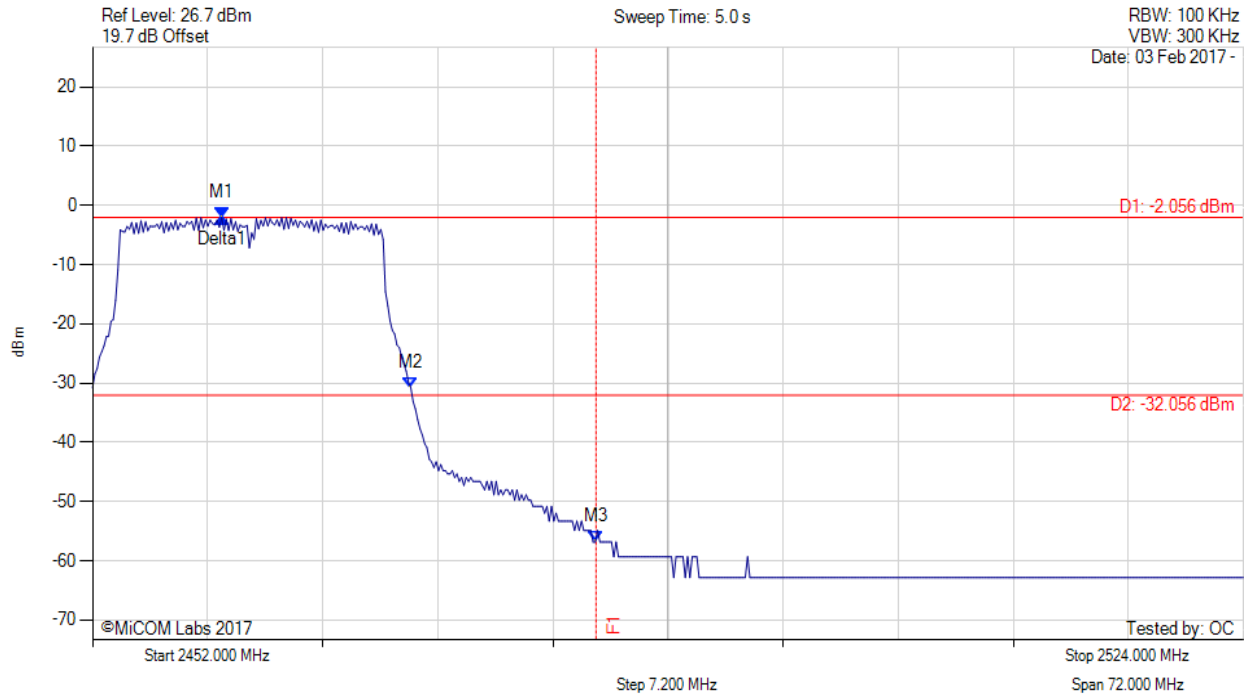


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
**To:** FCC CFR 47 Part 15 Subpart C 15.247 (DTS)  
**Serial #:** ATEC23-U4 Conducted Rev A  
**Issue Date:** 30th March 2017  
**Page:** 174 of 179



#### CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.080 MHz : -2.056 dBm M2 : 2471.912 MHz : -30.804 dBm M3 : 2483.500 MHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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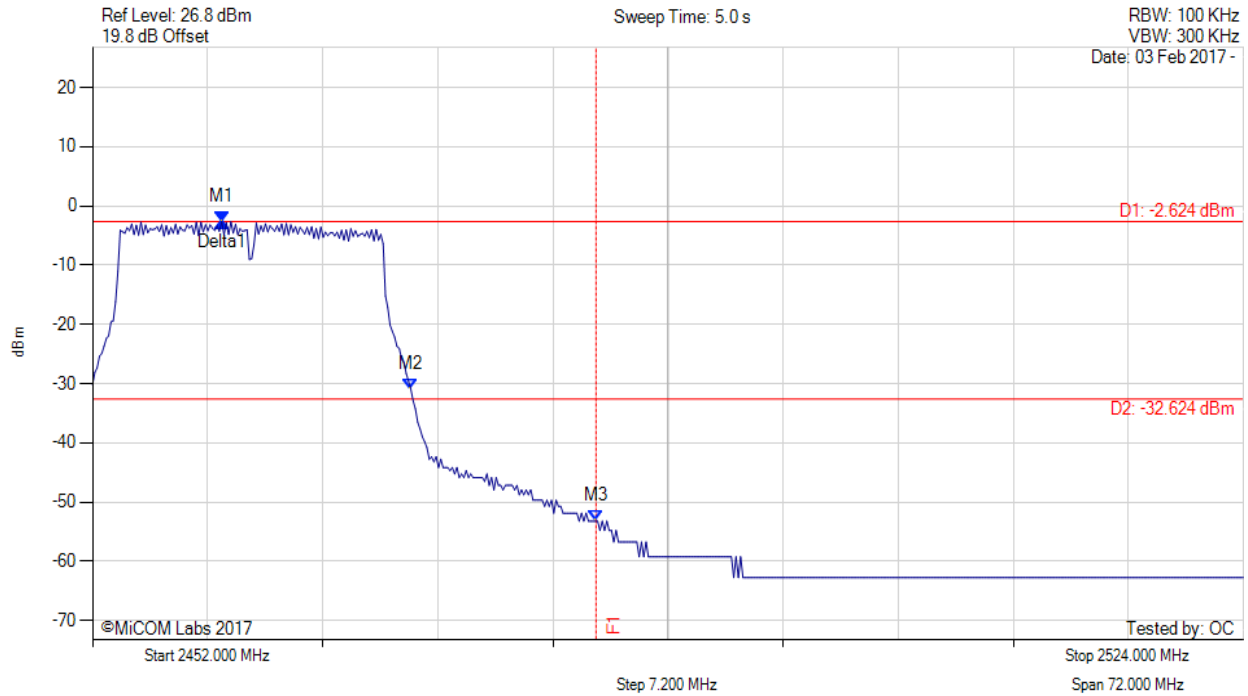


**Title:** Actiontec Electronics Inc T3200BV, C2300A  
**To:** FCC CFR 47 Part 15 Subpart C 15.247 (DTS)  
**Serial #:** ATEC23-U4 Conducted Rev A  
**Issue Date:** 30th March 2017  
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#### CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



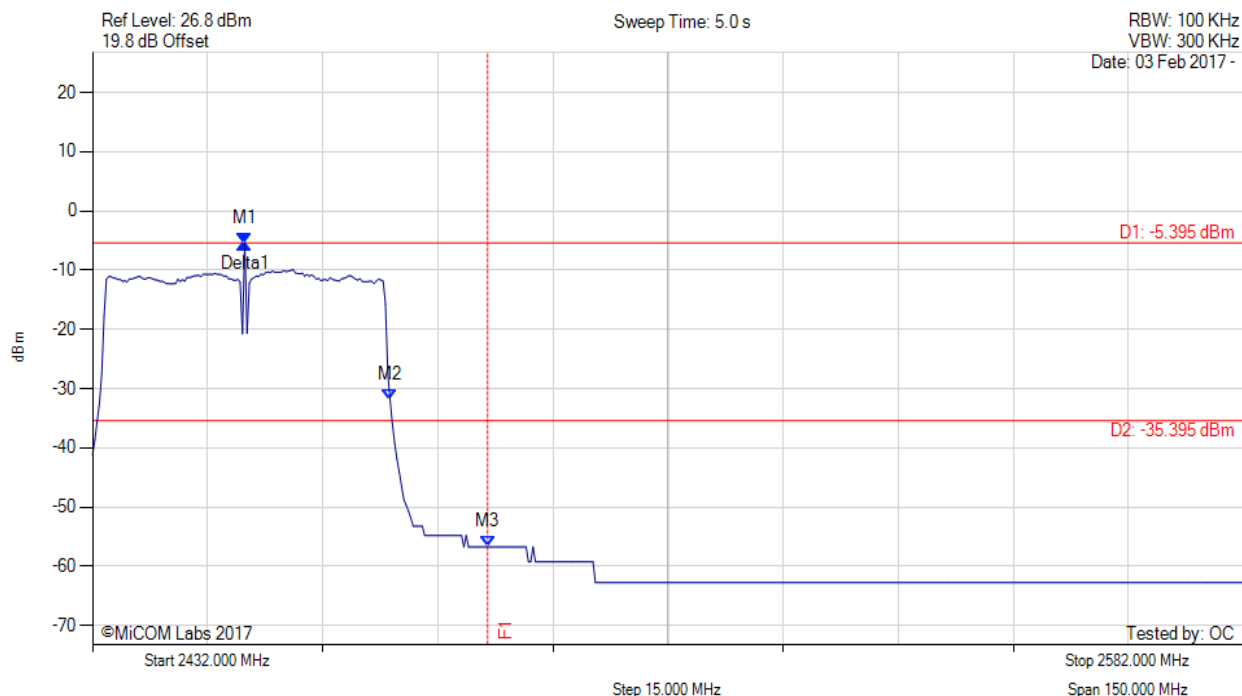
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.080 MHz : -2.624 dBm M2 : 2471.912 MHz : -30.923 dBm M3 : 2483.500 MHz : -53.202 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2462.00 MHz

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# CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: 20, Voltage: 12 Vdc



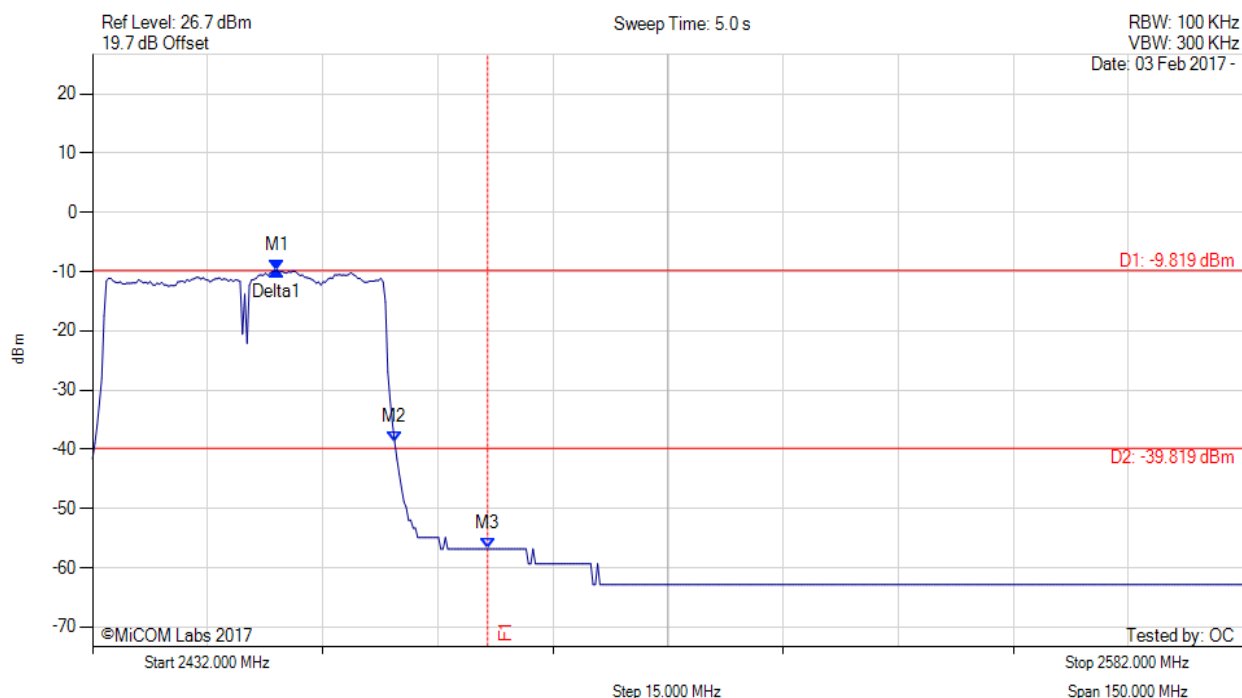
Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2451.840 MHz : -5.395 dBm M2 : 2470.778 MHz : -31.863 dBm M3 : 2483.500 MHz : -56.724 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2452.00 MHz

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# CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: 20, Voltage: 12 Vdc

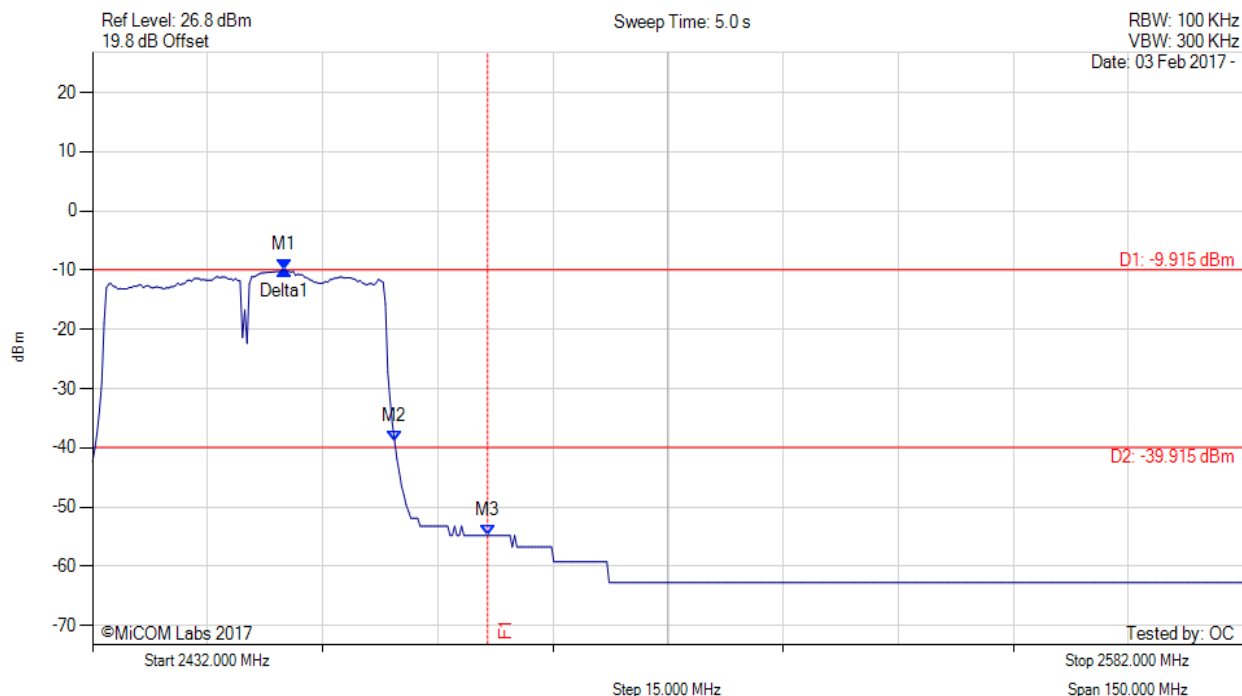


Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2456.048 MHz : -9.819 dBm M2 : 2471.379 MHz : -38.762 dBm M3 : 2483.500 MHz : -56.824 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2452.00 MHz

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# CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain c, Temp: 20, Voltage: 12 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2456.950 MHz : -9.915 dBm M2 : 2471.379 MHz : -38.938 dBm M3 : 2483.500 MHz : -54.786 dBm Delta1 : 0 Hz : 0.000 dB	Channel Frequency: 2452.00 MHz

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