

Company: Hewlett Packard Enterprise

Test of: APINH303  
To: FCC CFR 47 Part 15.247 (DTS) & IC RSS-247

Report No.: HWPD85-U5\_Conducted Rev A

**TEST REPORT ADDENDUM - CONDUCTED**



Issue Date: 1st December 2016

Master Document Number	Addendum Reports
HWPD85-U5_Master	HWPD85-U5_Conducted
	HWPD85-U5_Radiated
	HWPD85-G4 (FCC Part 15B & ICES-003)



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**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
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## **2. TEST SUMMARY**

List of Measurements

Test Header	Result	Data Link
6 dB & 99% Bandwidth	Complies	<a href="#">View Data</a>
Conducted Output Power	Complies	<a href="#">View Data</a>
Emissions		
Conducted Spurious Emissions	Complies	<a href="#">View Data</a>
Conducted Band-Edge Emissions	Complies	<a href="#">View Data</a>
Power Spectral Density	Complies	<a href="#">View Data</a>

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### 3. TEST RESULTS

#### 3.1. 6 dB & 99% Bandwidth

Conducted Test Conditions for 6 dB and 99% Bandwidth			
<b>Standard:</b>	FCC CFR 47:15.247	<b>Ambient Temp. (°C):</b>	24.0 - 27.5
<b>Test Heading:</b>	6 dB and 99 % Bandwidth	<b>Rel. Humidity (%):</b>	32 - 45
<b>Standard Section(s):</b>	15.247 (a)(2)	<b>Pressure (mBars):</b>	999 - 1001
<b>Reference Document(s):</b>	See Normative References		

Test Procedure for 6 dB and 99% Bandwidth Measurement  
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.

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

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

**Limits for 6 dB and 99% Bandwidth**

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

(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.

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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>	Not Applicable
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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="#">8.096</a>	<a href="#">8.577</a>	--	--	8.577	8.096	≥500.0	-7.60
2437.0	<a href="#">8.096</a>	<a href="#">8.096</a>	--	--	8.096	8.096	≥500.0	-7.60
2462.0	<a href="#">8.096</a>	<a href="#">9.058</a>	--	--	9.058	8.096	≥500.0	-7.60

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	<a href="#">12.986</a>	<a href="#">13.547</a>	--	--	13.547		
2437.0	<a href="#">13.066</a>	<a href="#">13.387</a>	--	--	13.387		
2462.0	<a href="#">13.066</a>	<a href="#">13.707</a>	--	--	13.707		

**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>	99
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

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

**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>	99
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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				
2412.0	<a href="#">17.555</a>	<a href="#">17.555</a>	--	--	17.555	17.555	≥500.0	-17.06
2437.0	<a href="#">17.555</a>	<a href="#">17.555</a>	--	--	17.555	17.555	≥500.0	-17.06
2462.0	<a href="#">17.555</a>	<a href="#">17.555</a>	--	--	17.555	17.555	≥500.0	-17.06

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	<a href="#">17.555</a>	<a href="#">17.635</a>	--	--	17.635		
2437.0	<a href="#">17.635</a>	<a href="#">17.555</a>	--	--	17.635		
2462.0	<a href="#">17.555</a>	<a href="#">17.635</a>	--	--	17.635		

**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>	99
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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				
2422.0	<a href="#">35.110</a>	<a href="#">35.431</a>	--	--	35.431	35.110	≥500.0	-34.61
2437.0	<a href="#">36.072</a>	<a href="#">35.110</a>	--	--	36.072	35.110	≥500.0	-34.61
2452.0	<a href="#">35.110</a>	<a href="#">35.110</a>	--	--	35.110	35.110	≥500.0	-34.61

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2422.0	<a href="#">35.912</a>	<a href="#">36.072</a>	--	--	36.072		
2437.0	<a href="#">35.912</a>	<a href="#">35.912</a>	--	--	35.912		
2452.0	<a href="#">35.912</a>	<a href="#">35.912</a>	--	--	35.912		

**Traceability to Industry Recognized Test Methodologies**

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

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### 3.2. 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 ( $\Sigma$ ) 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 [ $10 \cdot \text{Log}_{10} (10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})$ ]  
 $G$  = Antenna Gain  
 $Y$  = Beamforming Gain  
 $x$  = Duty Cycle (average power measurements only)

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

(3) For systems using digital modulation in the 902-928 MHz and 2400-2483.5 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

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

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

(1) Fixed point-to-point operation:

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

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

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instructions informing the operator and the installer of this responsibility.

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

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

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

(A) The directional gain shall be calculated as the sum of 10 log (number of array elements or staves) plus the directional gain of the element or 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>	3.20
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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	15.16	16.62	--	--	18.96	30.00	-11.04	17.50
2437.0	16.15	17.39	--	--	19.82	30.00	-10.18	18.50
2462.0	16.00	17.59	--	--	19.88	30.00	-10.12	18.50

**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.

**Equipment Configuration for Average Output Power**

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	3.20
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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	11.38	12.73	--	--	15.12	30.00	-14.88	13.50
2437.0	11.30	12.66	--	--	15.04	30.00	-14.96	13.50
2462.0	10.63	12.20	--	--	14.50	30.00	-15.50	13.00

**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>	99.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	3.20
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	3.00
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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	10.86	12.33	--	--	14.67	29.80	-15.13	13.00
2437.0	11.38	12.70	--	--	15.10	29.80	-14.70	13.50
2462.0	11.20	12.74	--	--	15.05	29.80	-14.75	13.50

**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.

**Equipment Configuration for Average Output Power**

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	3.20
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	3.00
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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	10.74	11.97	--	--	14.41	29.80	-15.39	12.50
2437.0	10.54	11.84	--	--	14.25	29.80	-15.55	12.50
2452.0	8.31	9.85	--	--	12.16	29.80	-17.64	10.50

**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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### 3.3. Emissions

#### 3.3.1. Conducted Emissions

##### 3.3.1.1. 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 Transmitter Conducted Spurious Emissions**

<b>Variant:</b>	802.11b	<b>Duty Cycle (%):</b>	99
<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>	CC
<b>Engineering Test Notes:</b>	None		

**Test Measurement Results**

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30.0 - 26000.0	<a href="#">-66.480</a>	-47.00	<a href="#">-67.504</a>	-46.00	--	--	--	--
2437.0	30.0 - 26000.0	<a href="#">-56.023</a>	-46.00	<a href="#">-56.023</a>	-46.00	--	--	--	--
2462.0	30.0 - 26000.0	<a href="#">-56.023</a>	-46.00	<a href="#">-56.023</a>	-45.00	--	--	--	--

**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 Transmitter Conducted Spurious Emissions**

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	99
<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>	CC
<b>Engineering Test Notes:</b>	None		

**Test Measurement Results**

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
<a href="#">2412.0</a>	30.0 - 26000.0	<a href="#">-56.023</a>	-50.00	<a href="#">-56.317</a>	-50.00	--	--	--	--
<a href="#">2437.0</a>	30.0 - 26000.0	<a href="#">-56.023</a>	-49.00	<a href="#">-56.023</a>	-49.00	--	--	--	--
<a href="#">2462.0</a>	30.0 - 26000.0	<a href="#">-56.023</a>	-50.00	<a href="#">-56.023</a>	-50.00	--	--	--	--

**Traceability to Industry Recognized Test Methodologies**

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

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

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**Equipment Configuration for Transmitter Conducted Spurious Emissions**

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	99
<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>	CC
<b>Engineering Test Notes:</b>	None		

**Test Measurement Results**

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30.0 - 26000.0	<a href="#">-56.023</a>	-51.00	<a href="#">-56.023</a>	-50.00	--	--	--	--
2437.0	30.0 - 26000.0	<a href="#">-56.023</a>	-49.00	<a href="#">-56.317</a>	-49.00	--	--	--	--
2462.0	30.0 - 26000.0	<a href="#">-56.023</a>	-49.00	<a href="#">-56.317</a>	-49.00	--	--	--	--

**Traceability to Industry Recognized Test Methodologies**

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

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

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**Equipment Configuration for Transmitter Conducted Spurious Emissions**

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	99
<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>	CC
<b>Engineering Test Notes:</b>	None		

**Test Measurement Results**

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2422.0	30.0 - 26000.0	<a href="#">-56.023</a>	-52.00	<a href="#">-56.317</a>	-52.00	--	--	--	--
2437.0	30.0 - 26000.0	<a href="#">-56.023</a>	-47.00	<a href="#">-56.317</a>	-47.00	--	--	--	--
2452.0	30.0 - 26000.0	<a href="#">-56.023</a>	-49.00	<a href="#">-56.317</a>	-49.00	--	--	--	--

**Traceability to Industry Recognized Test Methodologies**

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

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### 3.3.1.2. Conducted Band-Edge Emissions

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>	Not Applicable
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

#### 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					
<b>Port(s)</b>	<b>Band-Edge Markers and Limit</b>			<b>Revised Limit</b>		<b>Margin</b>
	<b>M1 Amplitude (dBm)</b>	<b>Plot Limit (dBm)</b>	<b>M2 Frequency (MHz)</b>	<b>Amplitude (dBm)</b>	<b>M2A Frequency (MHz)</b>	<b>(MHz)</b>
<b>a</b>	<a href="#">-57.22</a>	-31.00	2403.20	--	--	-3.200
<b>b</b>	<a href="#">-54.82</a>	-30.00	2402.80	--	--	-2.800

#### Traceability to Industry Recognized Test Methodologies

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

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

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

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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="#">-52.79</a>	-39.00	2402.40	--	--	-2.400
b	<a href="#">-46.87</a>	-38.00	2402.20	--	--	-2.200

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

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

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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="#">-52.79</a>	-40.00	2401.80	--	--	-1.800
b	<a href="#">-49.96</a>	-39.00	2401.80	--	--	-1.800

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

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

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

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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)
a	<a href="#">-54.72</a>	-43.00	2402.60	--	--	-2.600
b	<a href="#">-52.89</a>	-43.00	2402.30	--	--	-2.300

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

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### High Band-Edge Emissions

<b>Equipment Configuration for Conducted High Band-Edge Emissions - Average</b>
---

<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)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

<b>Test Measurement Results</b>
---------------------------------

<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="#">-66.77</a>	-30.00	2470.80	--	--	-12.700
b	<a href="#">-60.85</a>	-30.00	2471.20	--	--	-12.300

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

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

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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					
<b>Port(s)</b>	<b>Band-Edge Markers and Limit</b>			<b>Revised Limit</b>		<b>Margin</b>
	<b>M3 Amplitude (dBm)</b>	<b>Plot Limit (dBm)</b>	<b>M2 Frequency (MHz)</b>	<b>Amplitude (dBm)</b>	<b>M2A Frequency (MHz)</b>	<b>(MHz)</b>
<b>a</b>	<a href="#">-60.75</a>	-39.00	2471.30	--	--	-12.200
<b>b</b>	<a href="#">-60.85</a>	-39.00	2471.50	--	--	-12.000

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

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

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

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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="#">-60.75</a>	-39.00	2471.90	--	--	-11.600
b	<a href="#">-57.32</a>	-38.00	2471.90	--	--	-11.600

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

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

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

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	Not Applicable
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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)
a	<a href="#">-60.75</a>	-45.00	2471.10	--	--	-12.400
b	<a href="#">-60.85</a>	-45.00	2471.10	--	--	-12.400

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

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

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### 3.4. Power Spectral Density

Conducted Test Conditions for Power Spectral Density			
<b>Standard:</b>	FCC CFR 47:15.247	<b>Ambient Temp. (°C):</b>	24.0 - 27.5
<b>Test Heading:</b>	Power Spectral Density	<b>Rel. Humidity (%):</b>	32 - 45
<b>Standard Section(s):</b>	15.247 (e)	<b>Pressure (mBars):</b>	999 - 1001
<b>Reference Document(s):</b>	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 ( $\hat{a}$ ) 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 [ $10 \log_{10} (10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})$ ]

x = Duty Cycle

#### Limits Power Spectral Density

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



**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
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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>	3.20
<b>Modulation:</b>	CCK	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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="#">-15.950</a>	<a href="#">-15.885</a>	--	--	<a href="#">-13.001</a>	8.0	-21.0
2437.0	<a href="#">-15.104</a>	<a href="#">-14.579</a>	--	--	<a href="#">-12.094</a>	8.0	-20.1
2462.0	<a href="#">-15.586</a>	<a href="#">-14.704</a>	--	--	<a href="#">-12.331</a>	8.0	-20.3

**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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**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
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**Equipment Configuration for Power Spectral Density - Average**

<b>Variant:</b>	802.11g	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	6.00 MBit/s	<b>Antenna Gain (dBi):</b>	3.20
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	Not Applicable
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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="#">-23.107</a>	<a href="#">-22.676</a>	--	--	<a href="#">-19.832</a>	8.0	-27.8
2437.0	<a href="#">-23.181</a>	<a href="#">-22.607</a>	--	--	<a href="#">-19.899</a>	8.0	-27.9
2462.0	<a href="#">-23.756</a>	<a href="#">-22.889</a>	--	--	<a href="#">-20.567</a>	8.0	-28.6

**Traceability to Industry Recognized Test Methodologies**

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

DCCF - Duty Cycle Correction Factor

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

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

<b>Variant:</b>	802.11n HT-20	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	6.50 MBit/s	<b>Antenna Gain (dBi):</b>	3.20
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	3.00
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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="#">-23.876</a>	<a href="#">-23.677</a>	--	--	<a href="#">-21.166</a>	8.0	-29.2
2437.0	<a href="#">-23.522</a>	<a href="#">-22.853</a>	--	--	<a href="#">-20.592</a>	8.0	-28.6
2462.0	<a href="#">-23.331</a>	<a href="#">-23.070</a>	--	--	<a href="#">-20.640</a>	8.0	-28.7

**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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**Title:** Hewlett Packard Enterprise APINH303  
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**Equipment Configuration for Power Spectral Density - Average**

<b>Variant:</b>	802.11n HT-40	<b>Duty Cycle (%):</b>	99.0
<b>Data Rate:</b>	13.50 MBit/s	<b>Antenna Gain (dBi):</b>	3.20
<b>Modulation:</b>	OFDM	<b>Beam Forming Gain (Y)(dB):</b>	3.00
<b>TPC:</b>	Not Applicable	<b>Tested By:</b>	CC
<b>Engineering Test Notes:</b>	None		

**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
2422.0	<a href="#">-27.278</a>	<a href="#">-27.219</a>	--	--	<a href="#">-24.284</a>	8.0	-32.3
2437.0	<a href="#">-27.581</a>	<a href="#">-27.219</a>	--	--	<a href="#">-24.462</a>	8.0	-32.5
2452.0	<a href="#">-29.504</a>	<a href="#">-29.054</a>	--	--	<a href="#">-26.411</a>	8.0	-34.4

**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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**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
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## **A. APPENDIX - GRAPHICAL IMAGES**

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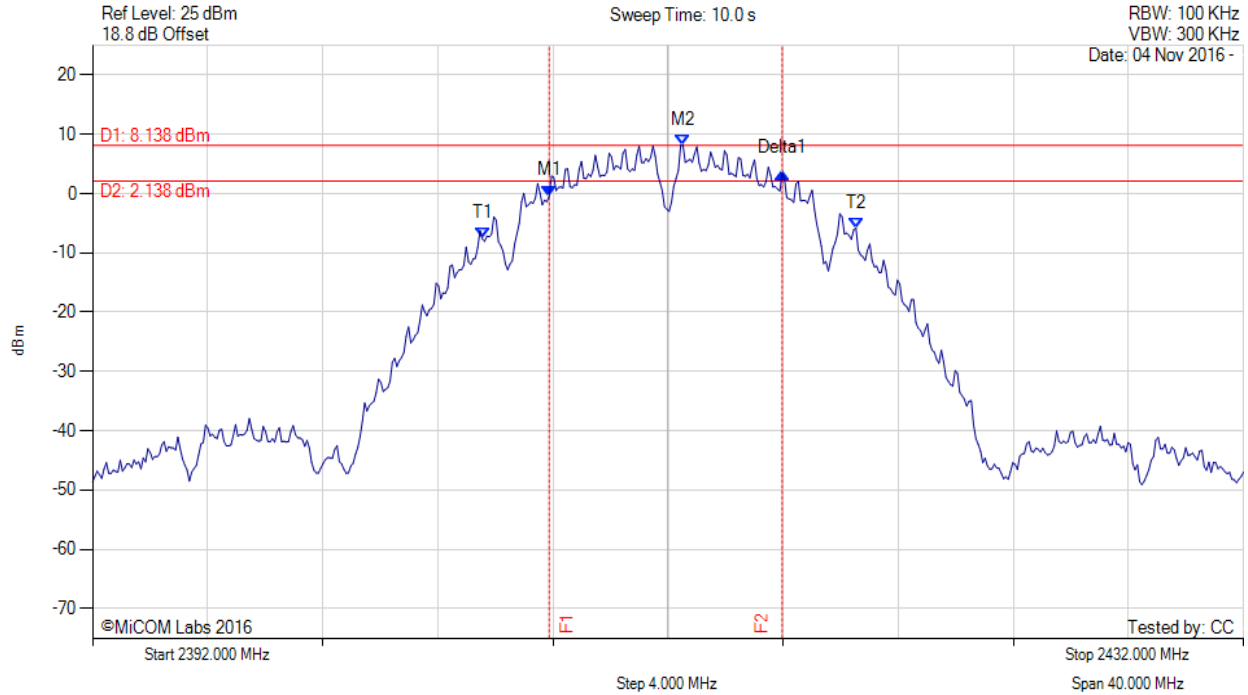


### A.1. 6 dB & 99% Bandwidth



#### 6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2407.872 MHz : -0.391 dBm M2 : 2412.521 MHz : 8.138 dBm Delta1 : 8.096 MHz : 3.771 dB T1 : 2405.547 MHz : -7.581 dBm T2 : 2418.533 MHz : -5.805 dBm OBW : 12.986 MHz	Measured 6 dB Bandwidth: 8.096 MHz Limit: ≥500.0 kHz Margin: -7.60 MHz

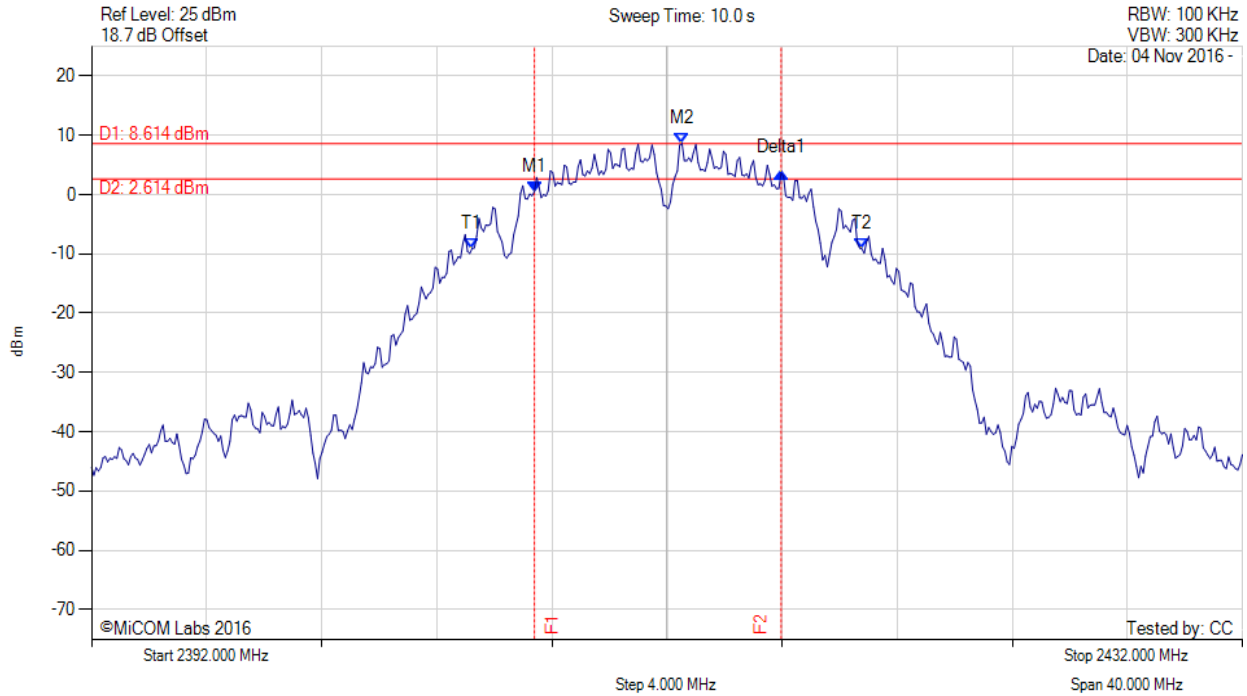
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6 dB & 99% BANDWIDTH

Variante: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2407.391 MHz : 0.534 dBm M2 : 2412.521 MHz : 8.614 dBm Delta1 : 8.577 MHz : 3.091 dB T1 : 2405.226 MHz : -9.100 dBm T2 : 2418.774 MHz : -9.145 dBm OBW : 13.547 MHz	Measured 6 dB Bandwidth: 8.577 MHz Limit: ≥500.0 kHz Margin: -8.08 MHz

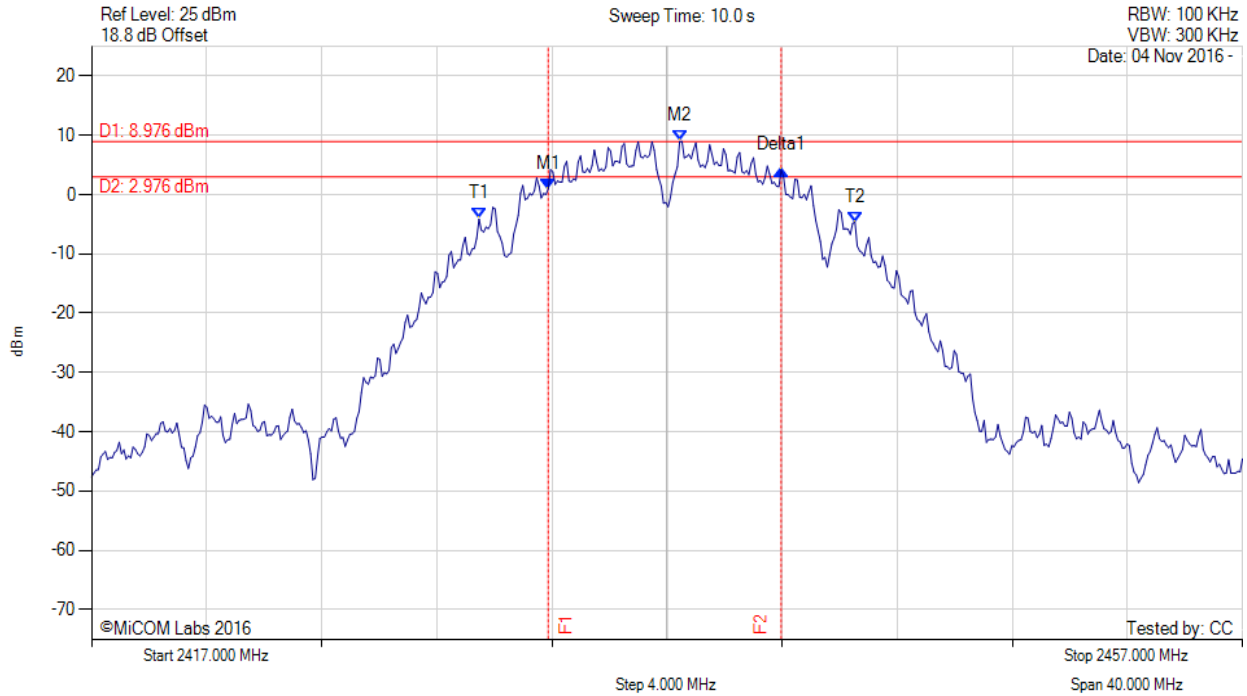
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6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2432.872 MHz : 0.918 dBm M2 : 2437.441 MHz : 8.976 dBm Delta1 : 8.096 MHz : 3.232 dB T1 : 2430.467 MHz : -4.111 dBm T2 : 2443.533 MHz : -4.642 dBm OBW : 13.066 MHz	Measured 6 dB Bandwidth: 8.096 MHz Limit: ≥500.0 kHz Margin: -7.60 MHz

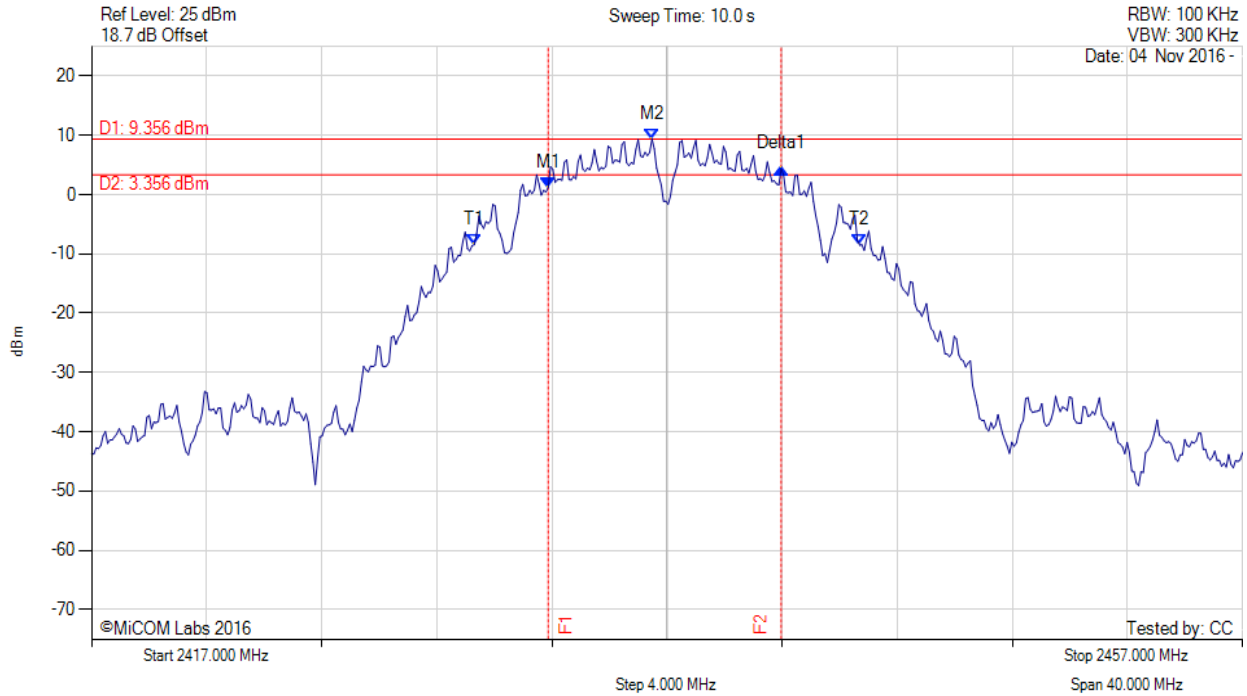
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6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2432.872 MHz : 1.205 dBm M2 : 2436.479 MHz : 9.356 dBm Delta1 : 8.096 MHz : 3.154 dB T1 : 2430.307 MHz : -8.423 dBm T2 : 2443.693 MHz : -8.512 dBm OBW : 13.387 MHz	Measured 6 dB Bandwidth: 8.096 MHz Limit: ≥500.0 kHz Margin: -7.60 MHz

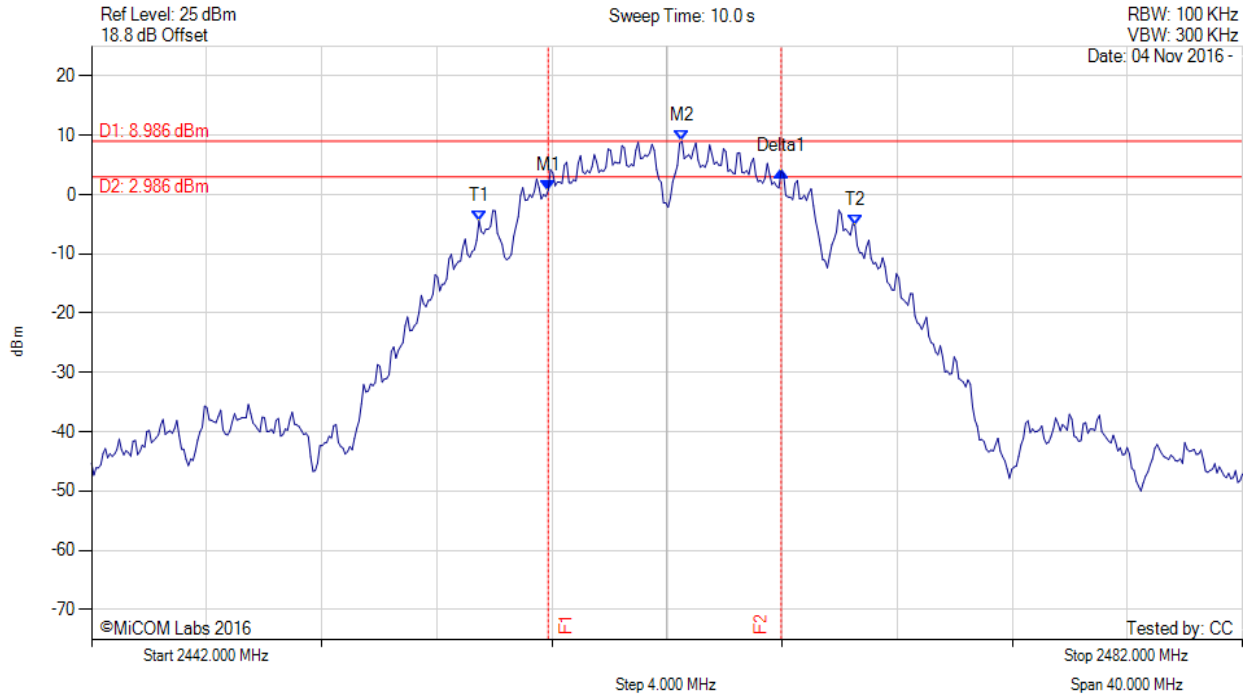
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6 dB & 99% BANDWIDTH

Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2457.872 MHz : 0.723 dBm M2 : 2462.521 MHz : 8.986 dBm Delta1 : 8.096 MHz : 3.201 dB T1 : 2455.467 MHz : -4.420 dBm T2 : 2468.533 MHz : -5.185 dBm OBW : 13.066 MHz	Measured 6 dB Bandwidth: 8.096 MHz Limit: ≥500.0 kHz Margin: -7.60 MHz

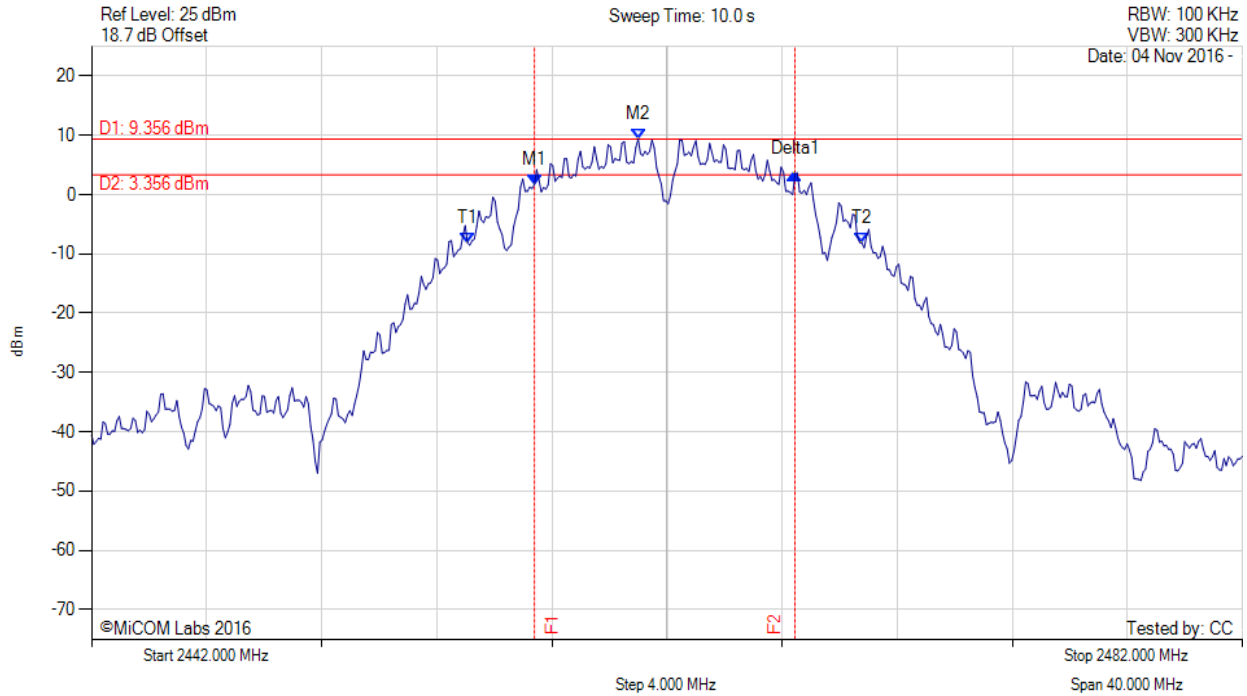
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6 dB & 99% BANDWIDTH

Variat: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2457.391 MHz : 1.693 dBm M2 : 2460.998 MHz : 9.356 dBm Delta1 : 9.058 MHz : 1.741 dB T1 : 2455.066 MHz : -8.113 dBm T2 : 2468.774 MHz : -8.158 dBm OBW : 13.707 MHz	Measured 6 dB Bandwidth: 9.058 MHz Limit: ≥500.0 kHz Margin: -8.56 MHz

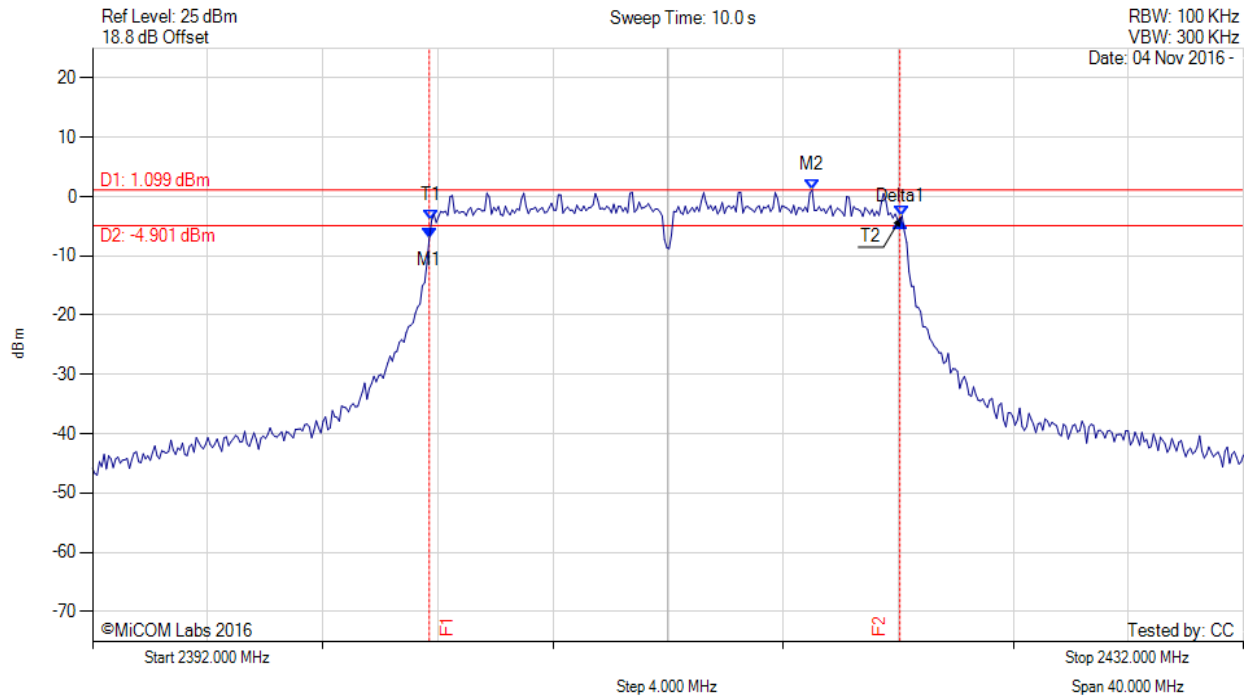
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6 dB & 99% BANDWIDTH

Variat: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.703 MHz : -7.015 dBm M2 : 2417.010 MHz : 1.099 dBm Delta1 : 16.353 MHz : 2.750 dB T1 : 2403.784 MHz : -4.060 dBm T2 : 2420.136 MHz : -3.245 dBm OBW : 16.353 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

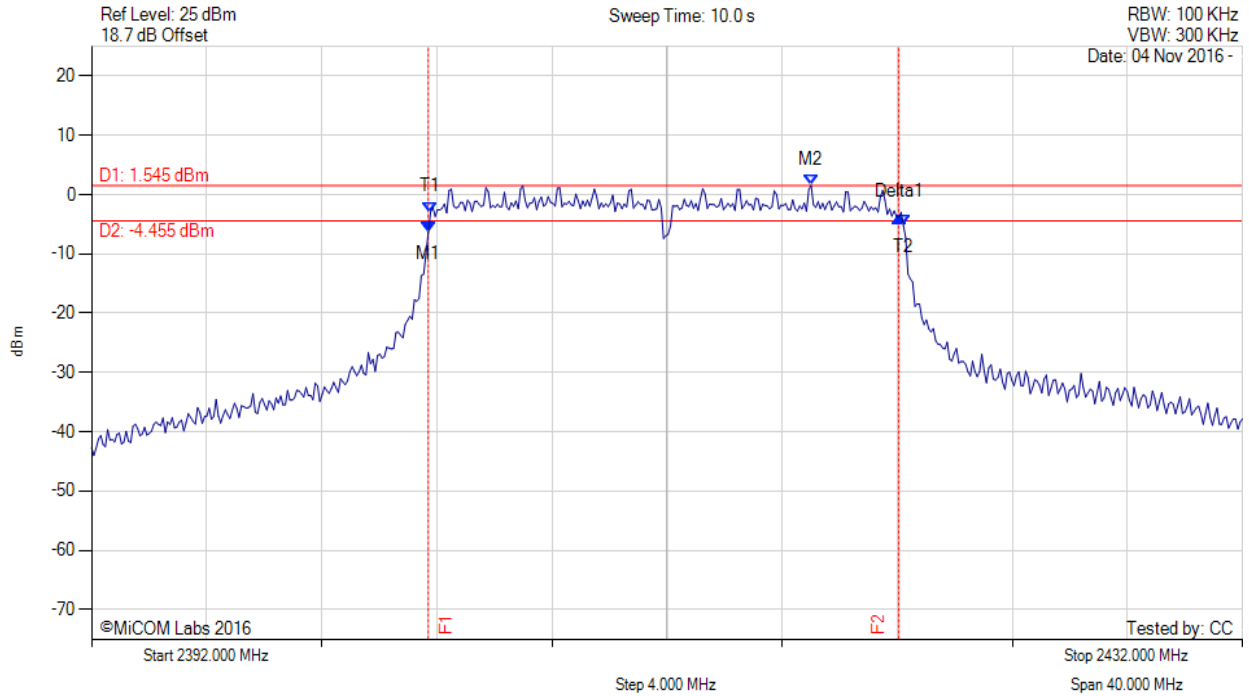
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6 dB & 99% BANDWIDTH

Variat: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.703 MHz : -6.368 dBm M2 : 2417.010 MHz : 1.545 dBm Delta1 : 16.353 MHz : 2.565 dB T1 : 2403.784 MHz : -2.952 dBm T2 : 2420.216 MHz : -5.219 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

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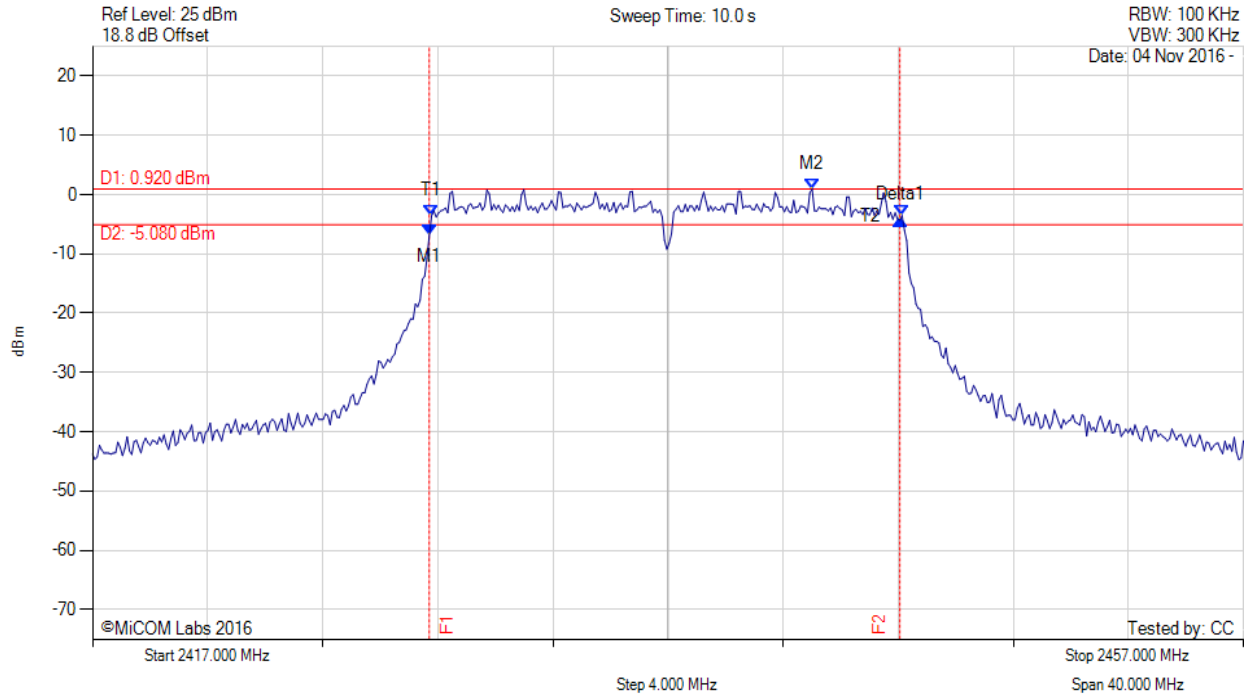
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6 dB & 99% BANDWIDTH

Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.703 MHz : -6.903 dBm M2 : 2442.010 MHz : 0.920 dBm Delta1 : 16.353 MHz : 2.567 dB T1 : 2428.784 MHz : -3.574 dBm T2 : 2445.136 MHz : -3.519 dBm OBW : 16.353 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

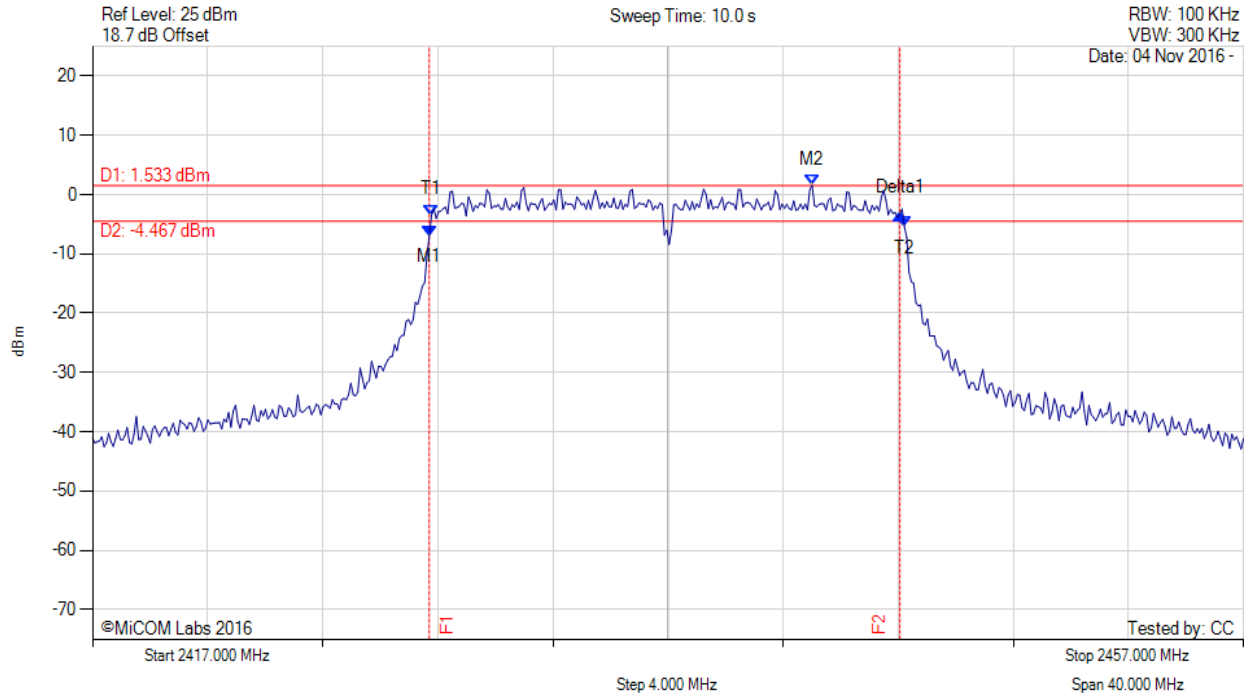
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6 dB & 99% BANDWIDTH

Variat: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.703 MHz : -6.936 dBm M2 : 2442.010 MHz : 1.533 dBm Delta1 : 16.353 MHz : 3.746 dB T1 : 2428.784 MHz : -3.430 dBm T2 : 2445.216 MHz : -5.453 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

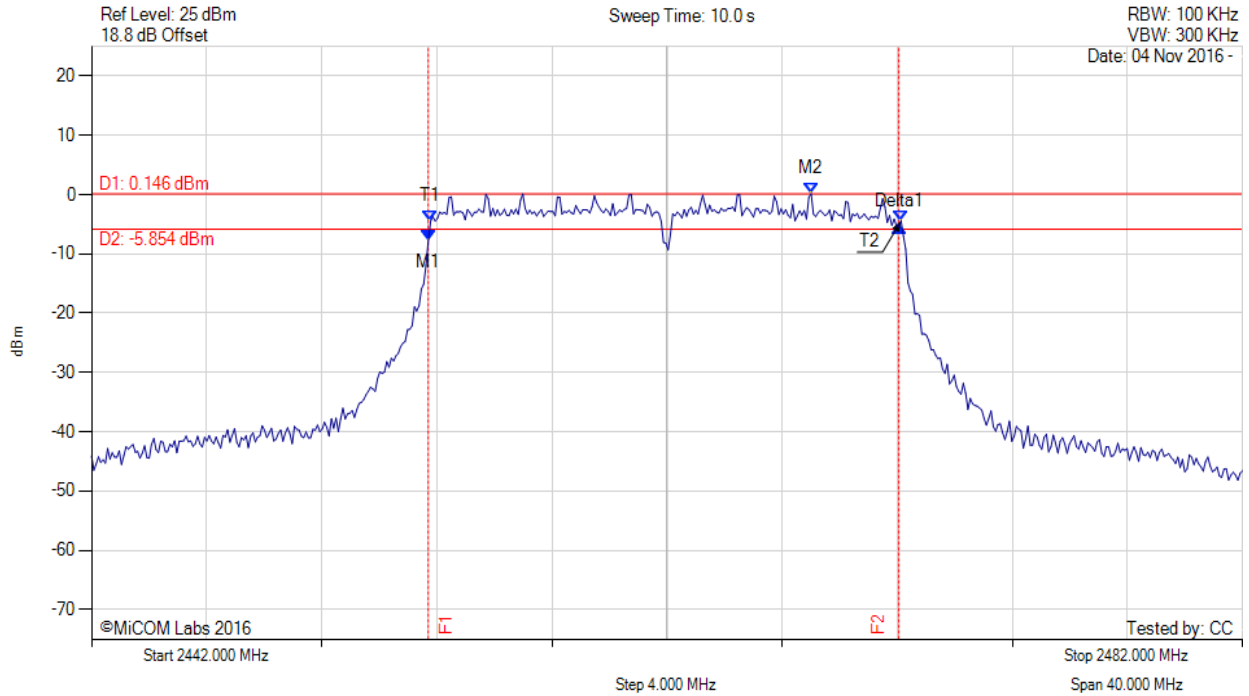
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6 dB & 99% BANDWIDTH

Variat: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.703 MHz : -7.760 dBm M2 : 2467.010 MHz : 0.146 dBm Delta1 : 16.353 MHz : 2.422 dB T1 : 2453.784 MHz : -4.548 dBm T2 : 2470.136 MHz : -4.430 dBm OBW : 16.353 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

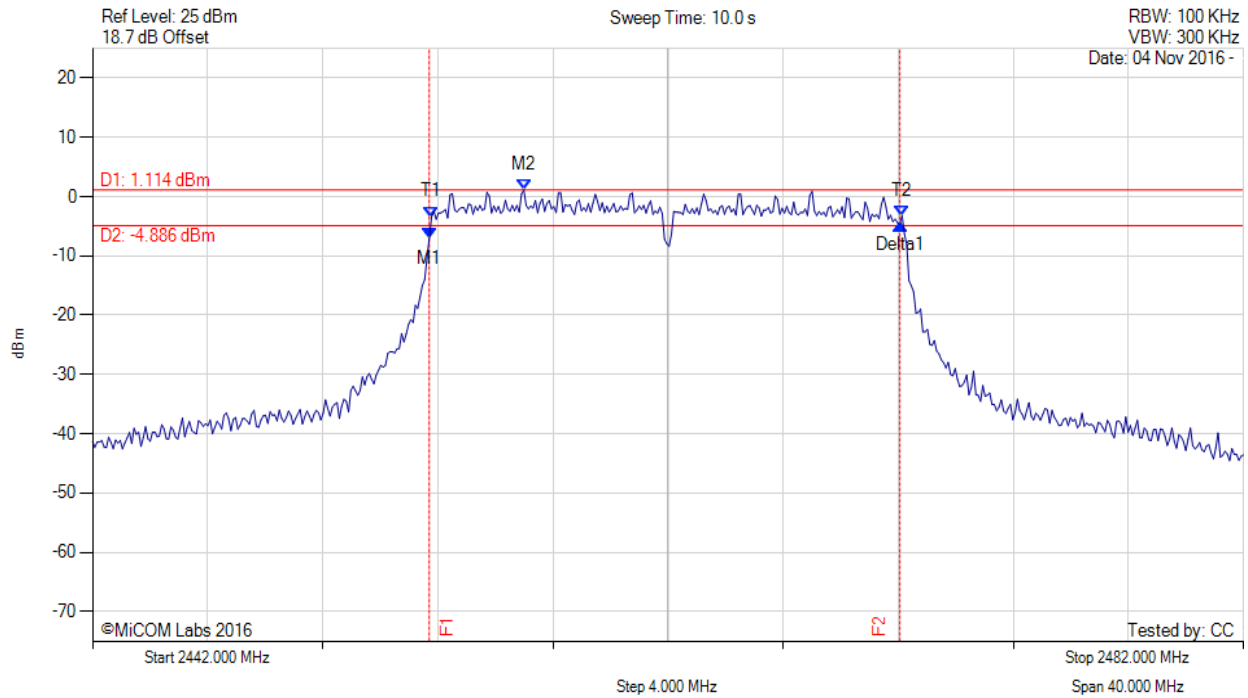
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6 dB & 99% BANDWIDTH

Variat: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.703 MHz : -7.001 dBm M2 : 2456.990 MHz : 1.114 dBm Delta1 : 16.353 MHz : 2.373 dB T1 : 2453.784 MHz : -3.422 dBm T2 : 2470.136 MHz : -3.216 dBm OBW : 16.353 MHz	Measured 6 dB Bandwidth: 16.353 MHz Limit: ≥500.0 kHz Margin: -15.85 MHz

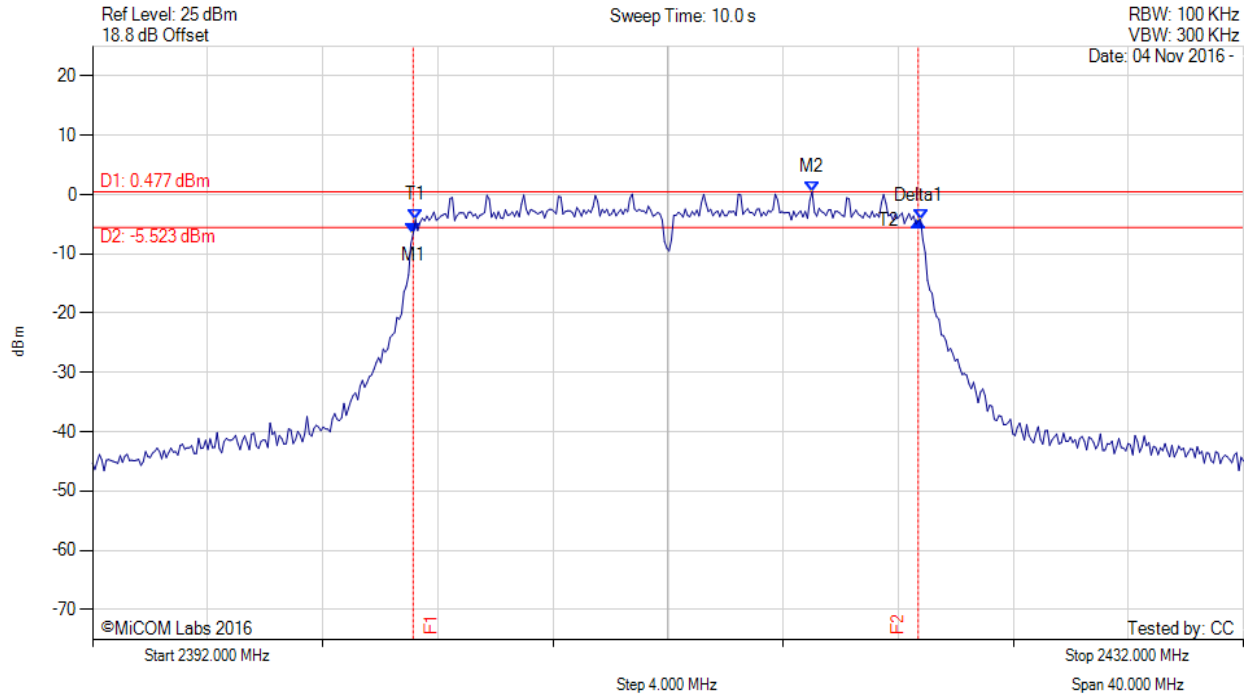
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6 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.142 MHz : -6.606 dBm M2 : 2417.010 MHz : 0.477 dBm Delta1 : 17.555 MHz : 2.176 dB T1 : 2403.222 MHz : -4.194 dBm T2 : 2420.778 MHz : -4.213 dBm OBW : 17.555 MHz	Measured 6 dB Bandwidth: 17.555 MHz Limit: ≥500.0 kHz Margin: -17.06 MHz

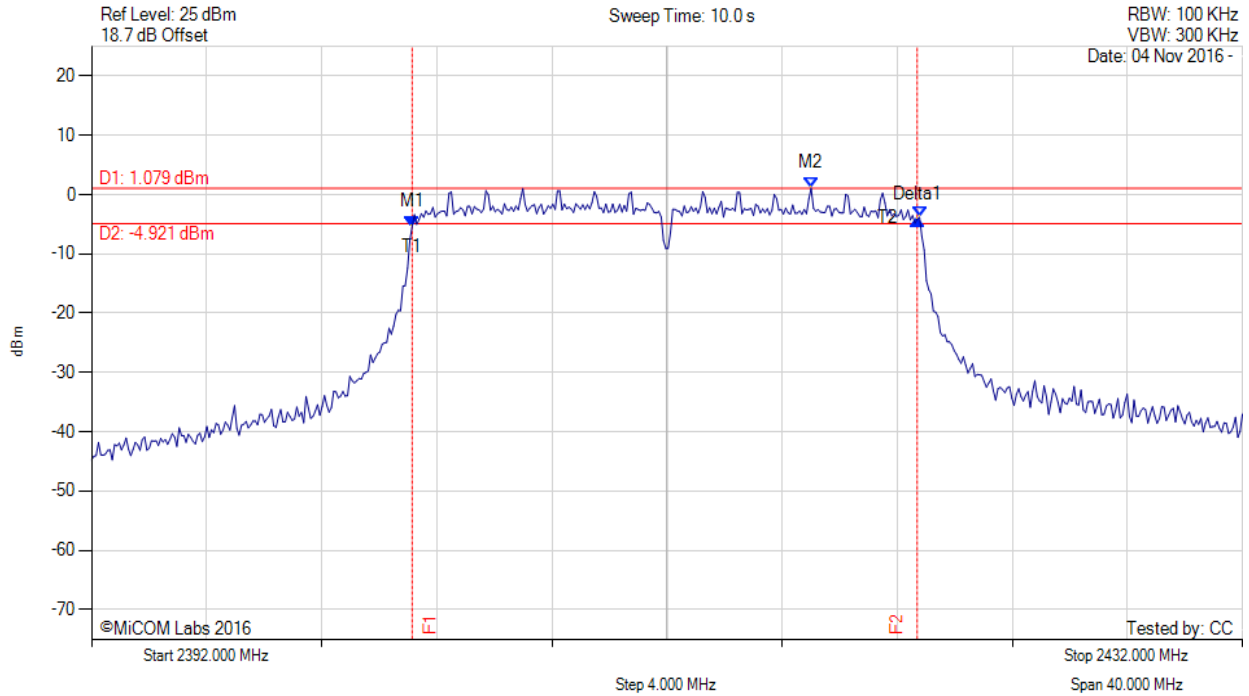
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6 dB & 99% BANDWIDTH

Variants: 802.11n HT-20, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.142 MHz : -5.364 dBm M2 : 2417.010 MHz : 1.079 dBm Delta1 : 17.555 MHz : 1.176 dB T1 : 2403.142 MHz : -5.364 dBm T2 : 2420.778 MHz : -3.830 dBm OBW : 17.635 MHz	Measured 6 dB Bandwidth: 17.555 MHz Limit: ≥500.0 kHz Margin: -17.06 MHz

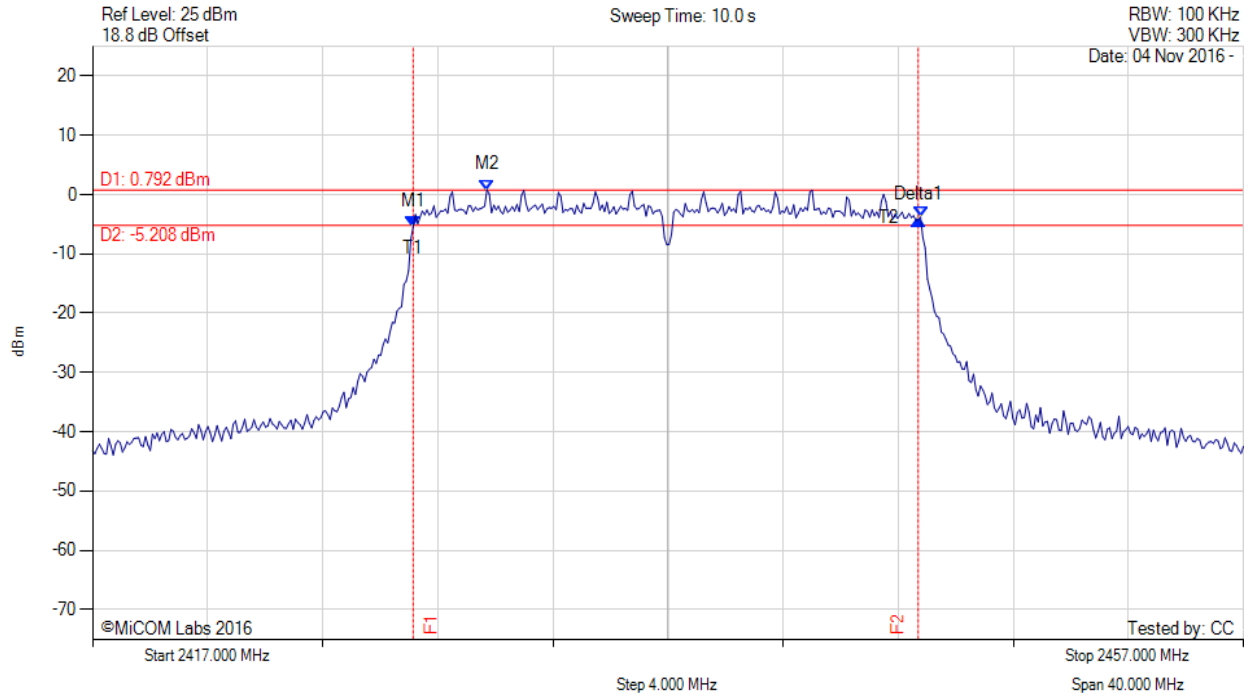
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6 dB & 99% BANDWIDTH

Variants: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.142 MHz : -5.457 dBm M2 : 2430.707 MHz : 0.792 dBm Delta1 : 17.555 MHz : 1.214 dB T1 : 2428.142 MHz : -5.457 dBm T2 : 2445.778 MHz : -3.802 dBm OBW : 17.635 MHz	Measured 6 dB Bandwidth: 17.555 MHz Limit: ≥500.0 kHz Margin: -17.06 MHz

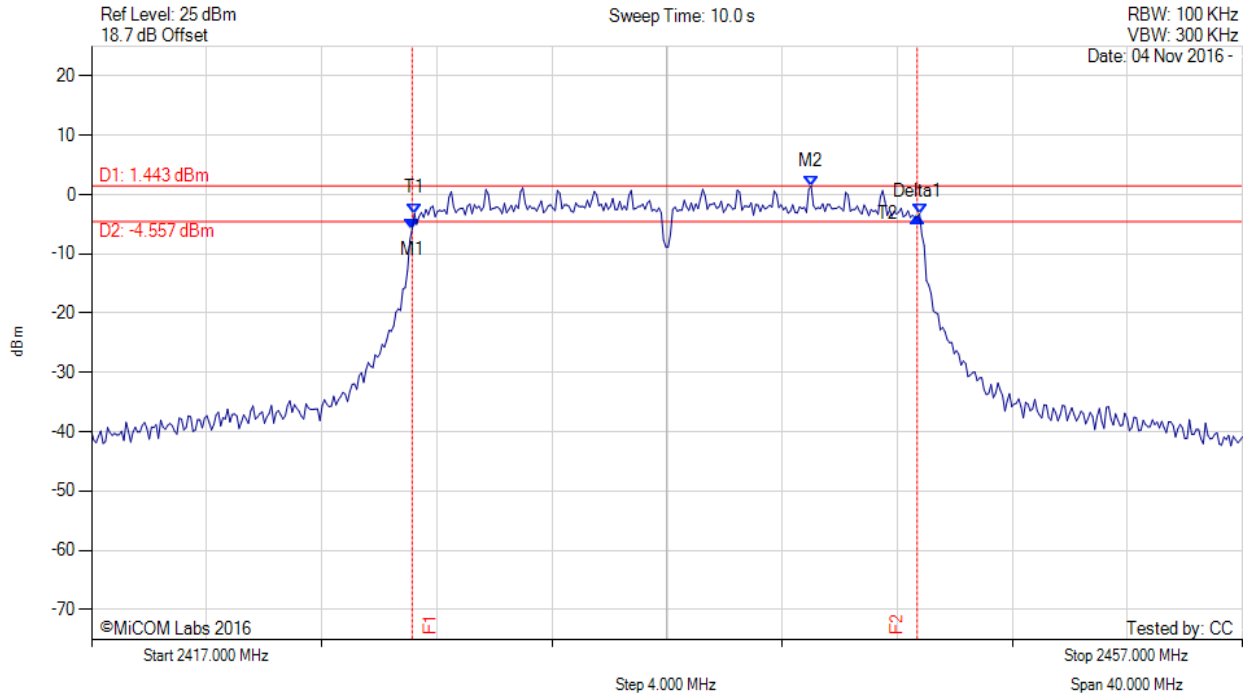
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6 dB & 99% BANDWIDTH

Variants: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2428.142 MHz : -5.762 dBm M2 : 2442.010 MHz : 1.443 dBm Delta1 : 17.555 MHz : 2.003 dB T1 : 2428.222 MHz : -3.200 dBm T2 : 2445.778 MHz : -3.228 dBm OBW : 17.555 MHz	Measured 6 dB Bandwidth: 17.555 MHz Limit: ≥500.0 kHz Margin: -17.06 MHz

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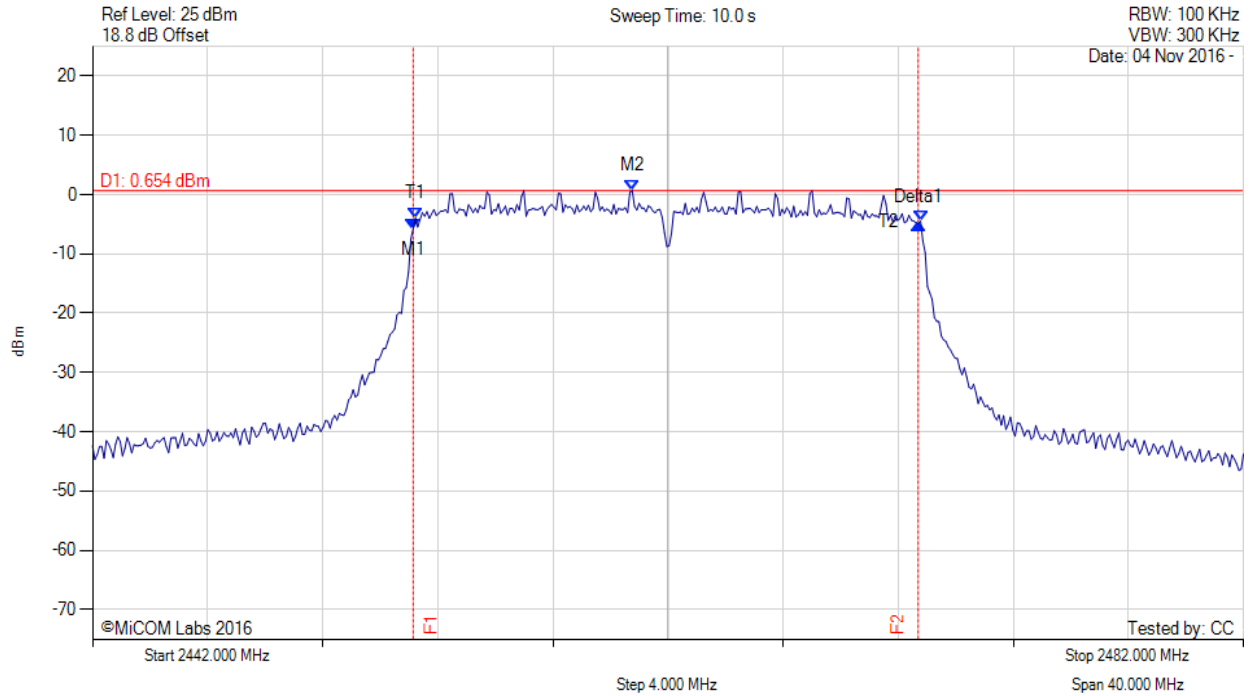
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.142 MHz : -5.762 dBm M2 : 2460.758 MHz : 0.654 dBm Delta1 : 17.555 MHz : 0.925 dB T1 : 2453.222 MHz : -3.975 dBm T2 : 2470.778 MHz : -4.479 dBm OBW : 17.555 MHz	Measured 6 dB Bandwidth: 17.555 MHz Limit: ≥500.0 kHz Margin: -17.06 MHz

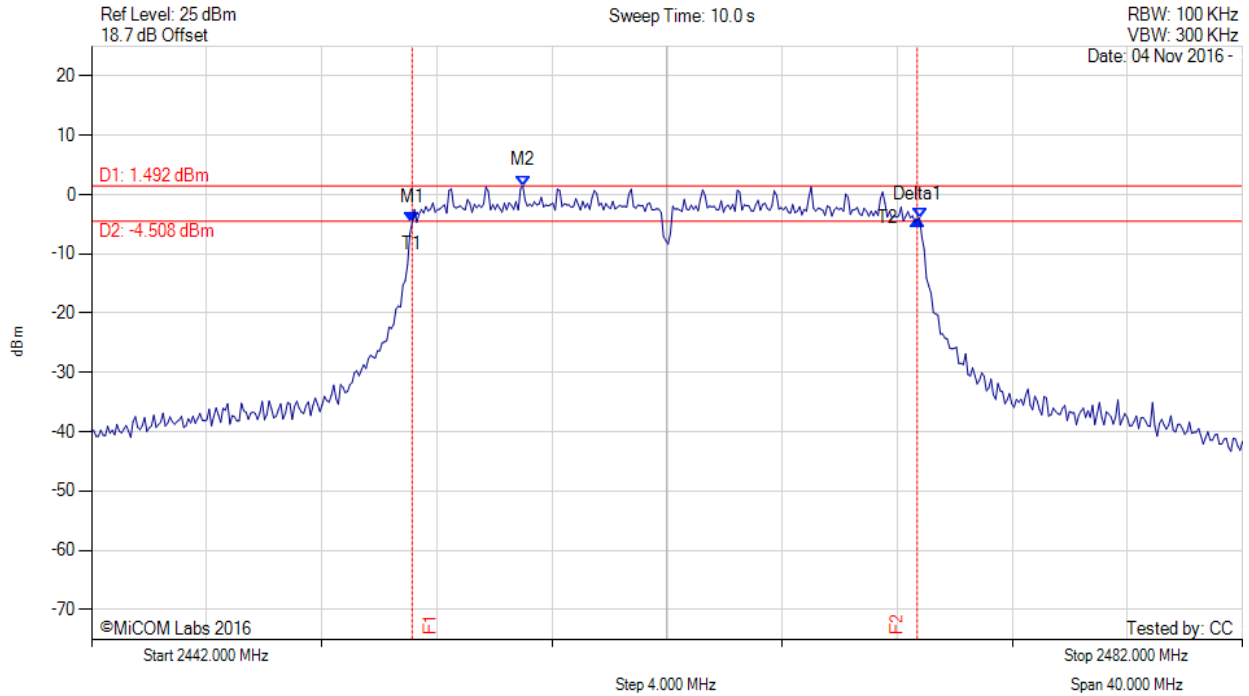
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6 dB & 99% BANDWIDTH

Variants: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2453.142 MHz : -4.711 dBm M2 : 2456.990 MHz : 1.492 dBm Delta1 : 17.555 MHz : 0.537 dB T1 : 2453.142 MHz : -4.711 dBm T2 : 2470.778 MHz : -3.914 dBm OBW : 17.635 MHz	Measured 6 dB Bandwidth: 17.555 MHz Limit: ≥500.0 kHz Margin: -17.06 MHz

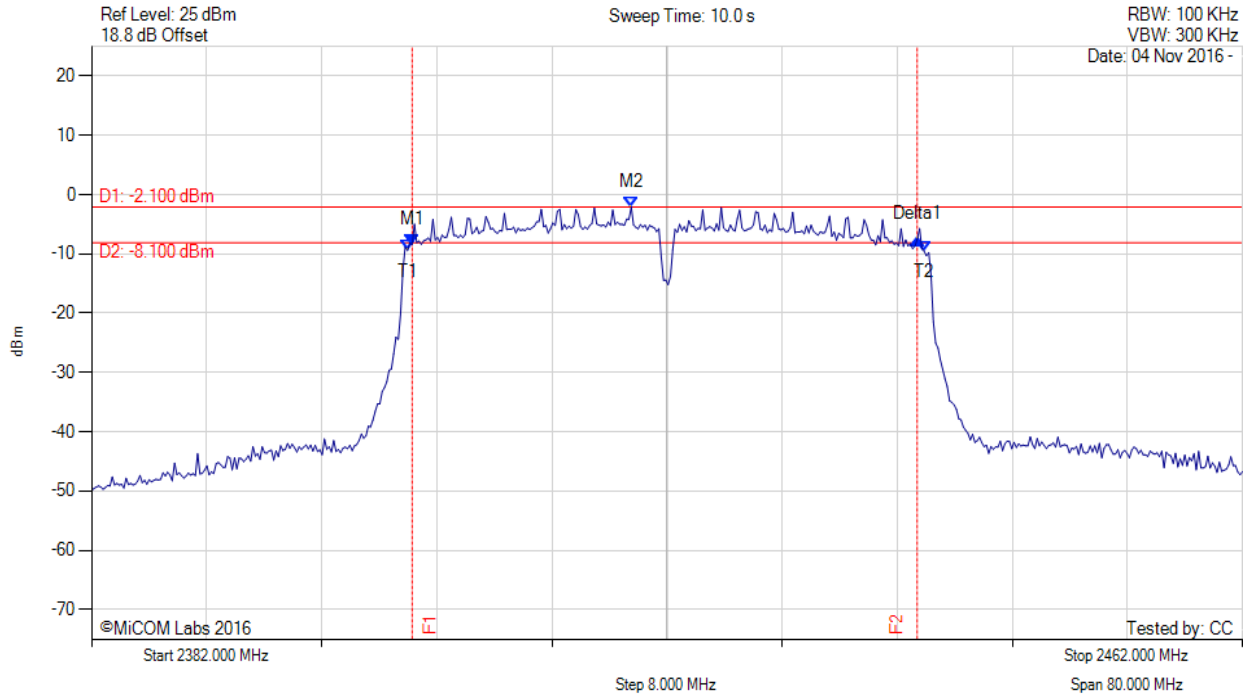
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6 dB & 99% BANDWIDTH

Variante: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2404.285 MHz : -8.406 dBm M2 : 2419.515 MHz : -2.100 dBm Delta1 : 35.110 MHz : 0.889 dB T1 : 2403.964 MHz : -9.441 dBm T2 : 2439.876 MHz : -9.566 dBm OBW : 35.912 MHz	Measured 6 dB Bandwidth: 35.110 MHz Limit: ≥500.0 kHz Margin: -34.61 MHz

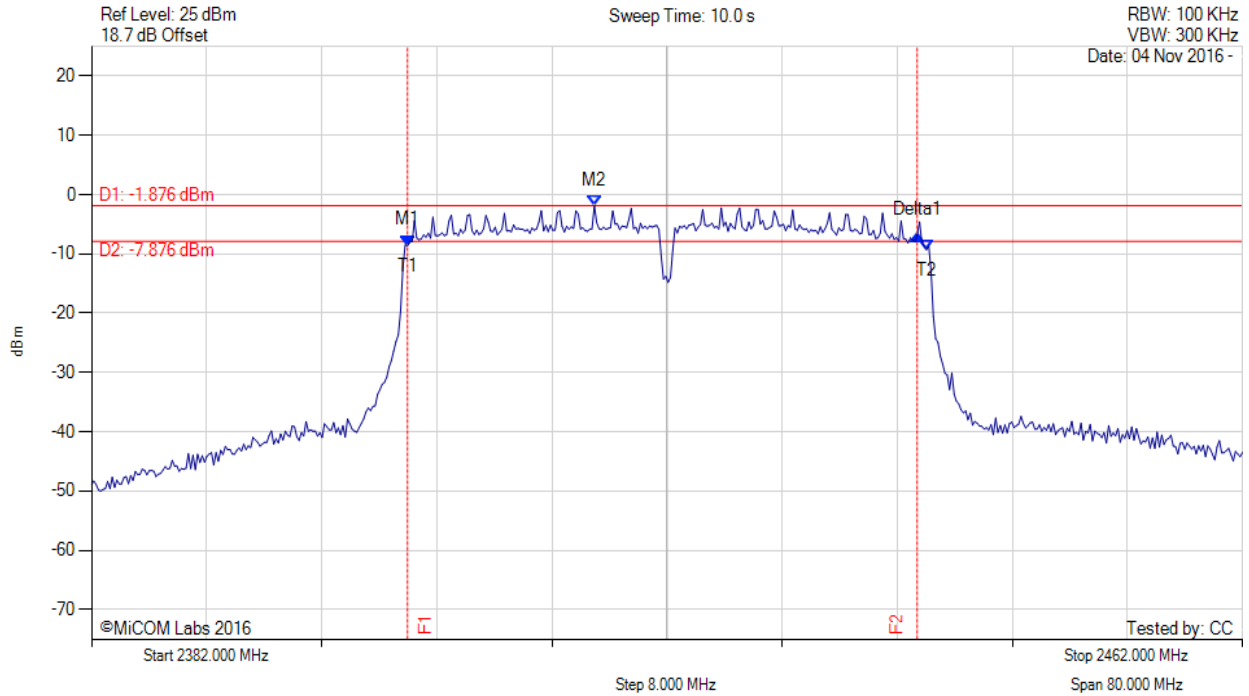
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6 dB & 99% BANDWIDTH

Variante: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2403.964 MHz : -8.575 dBm M2 : 2416.950 MHz : -1.876 dBm Delta1 : 35.431 MHz : 1.834 dB T1 : 2403.964 MHz : -8.575 dBm T2 : 2440.036 MHz : -9.301 dBm OBW : 36.072 MHz	Measured 6 dB Bandwidth: 35.431 MHz Limit: ≥500.0 kHz Margin: -34.93 MHz

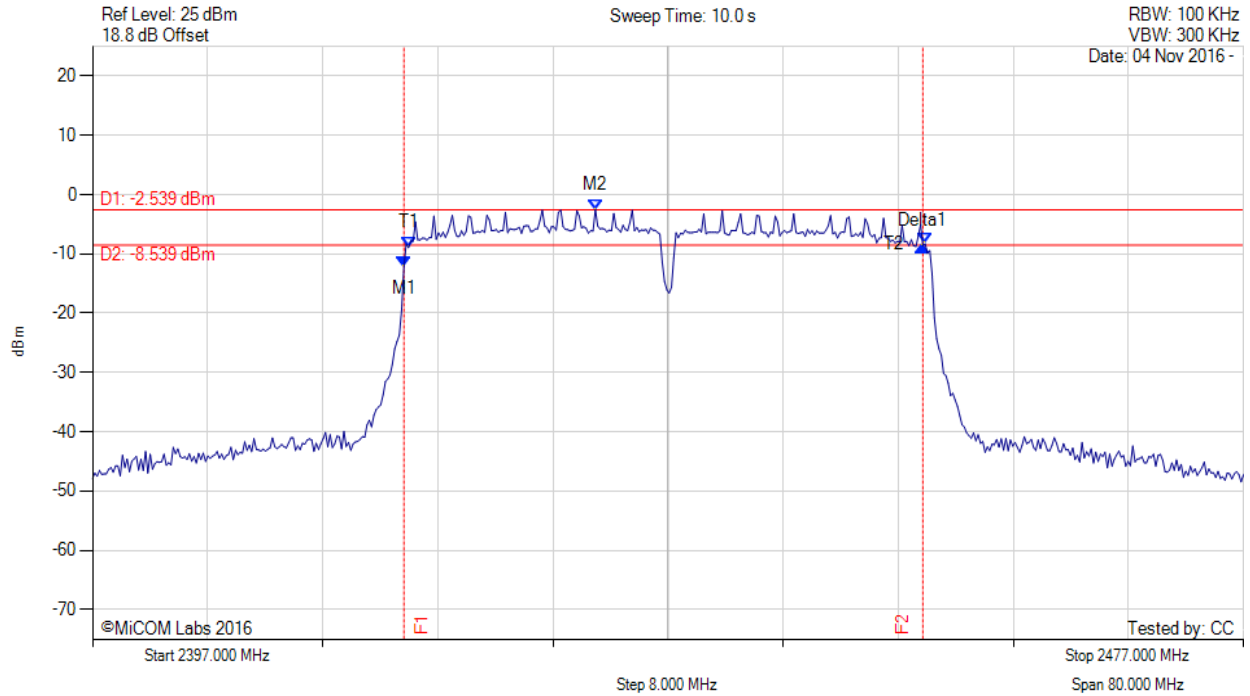
[back to matrix](#)

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6 dB & 99% BANDWIDTH

Variante: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2418.643 MHz : -12.161 dBm M2 : 2431.950 MHz : -2.539 dBm Delta1 : 36.072 MHz : 3.579 dB T1 : 2418.964 MHz : -8.941 dBm T2 : 2454.876 MHz : -8.276 dBm OBW : 35.912 MHz	Measured 6 dB Bandwidth: 36.072 MHz Limit: ≥500.0 kHz Margin: -35.57 MHz

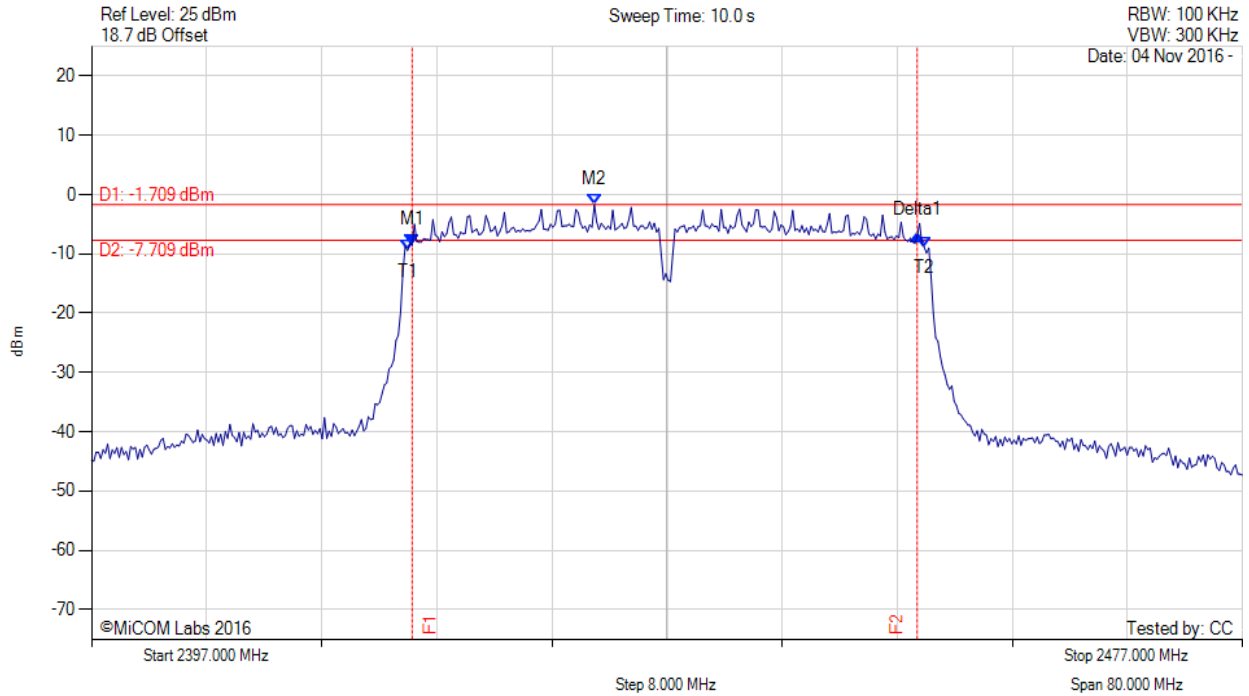
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6 dB & 99% BANDWIDTH

Variante: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2419.285 MHz : -8.541 dBm M2 : 2431.950 MHz : -1.709 dBm Delta1 : 35.110 MHz : 1.641 dB T1 : 2418.964 MHz : -9.437 dBm T2 : 2454.876 MHz : -8.872 dBm OBW : 35.912 MHz	Measured 6 dB Bandwidth: 35.110 MHz Limit: ≥500.0 kHz Margin: -34.61 MHz

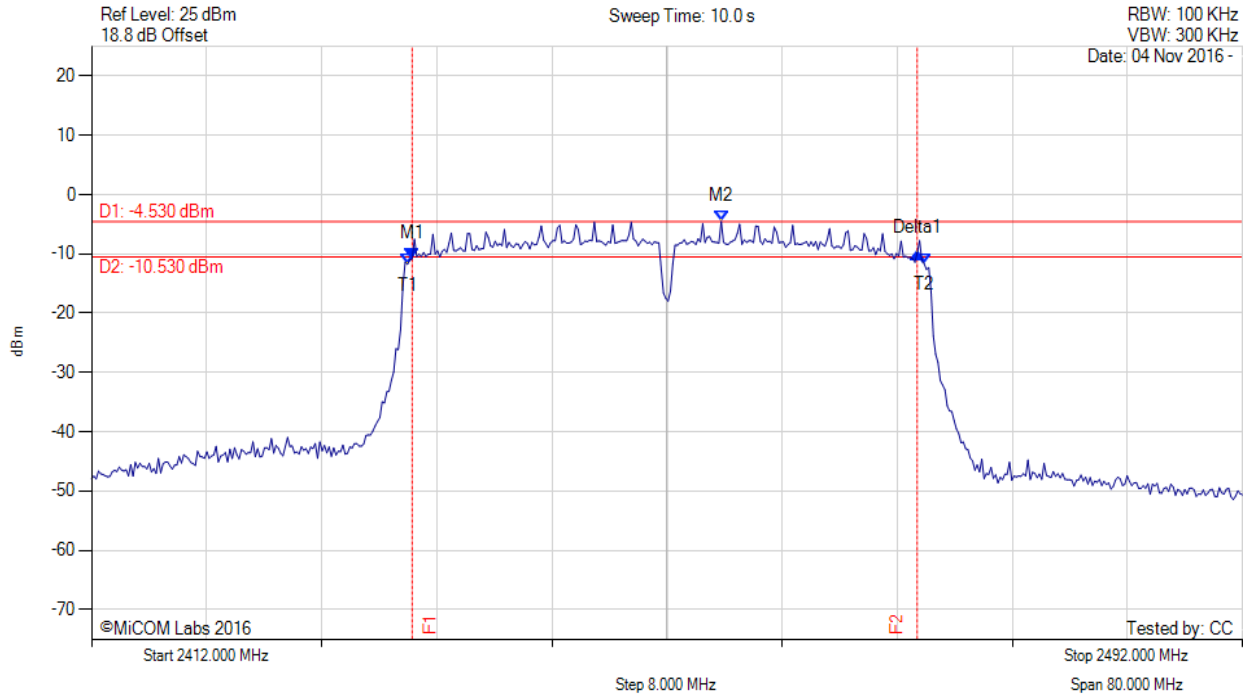
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6 dB & 99% BANDWIDTH

Variants: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2434.285 MHz : -10.829 dBm M2 : 2455.768 MHz : -4.530 dBm Delta1 : 35.110 MHz : 1.005 dB T1 : 2433.964 MHz : -11.738 dBm T2 : 2469.876 MHz : -11.664 dBm OBW : 35.912 MHz	Measured 6 dB Bandwidth: 35.110 MHz Limit: ≥500.0 kHz Margin: -34.61 MHz

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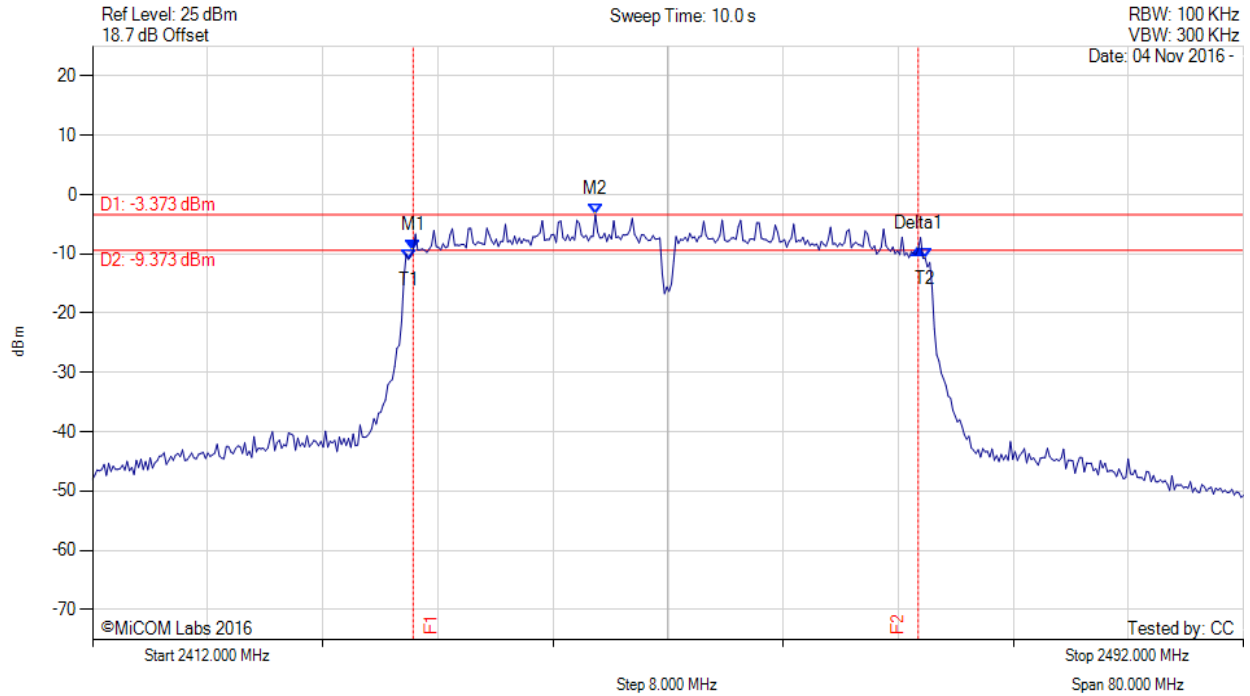


**Title:** Hewlett Packard Enterprise APINH303  
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6 dB & 99% BANDWIDTH

Variants: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 2434.285 MHz : -9.441 dBm M2 : 2446.950 MHz : -3.373 dBm Delta1 : 35.110 MHz : 0.319 dB T1 : 2433.964 MHz : -10.916 dBm T2 : 2469.876 MHz : -10.725 dBm OBW : 35.912 MHz	Measured 6 dB Bandwidth: 35.110 MHz Limit: ≥500.0 kHz Margin: -34.61 MHz

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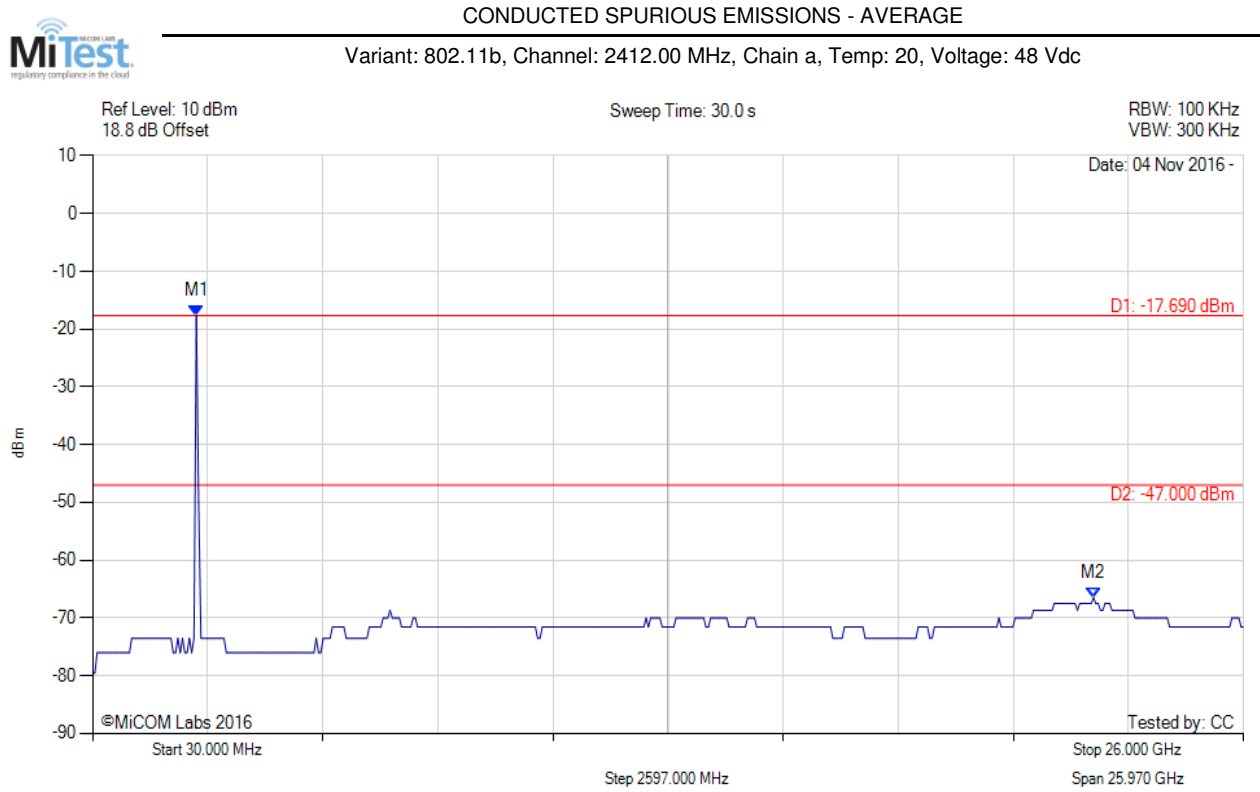




## A.2. Emissions

### A.2.1. Conducted Emissions

#### A.2.1.1. Conducted Spurious Emissions



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -17.690 dBm M2 : 22.617 GHz : -66.480 dBm	Limit: -47.00 dBm Margin: -19.48 dB

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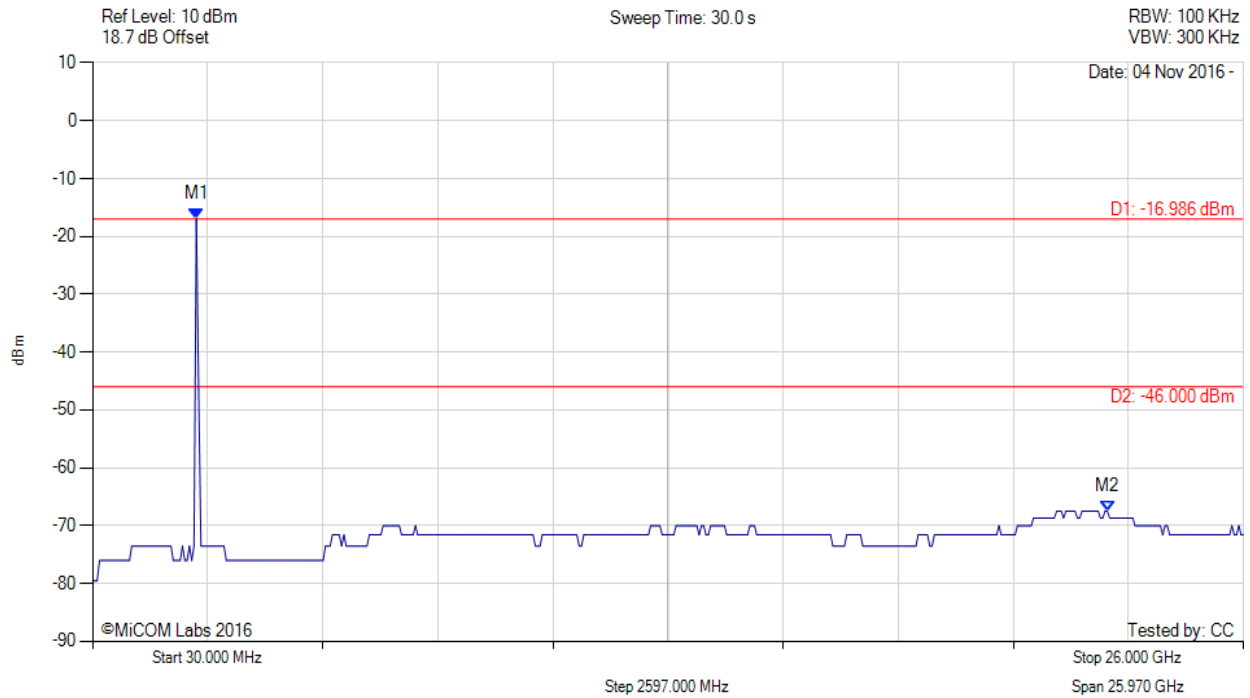


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2371.984 MHz : -16.986 dBm M2 : 22.929 GHz : -67.504 dBm	Limit: -46.00 dBm Margin: -21.50 dB

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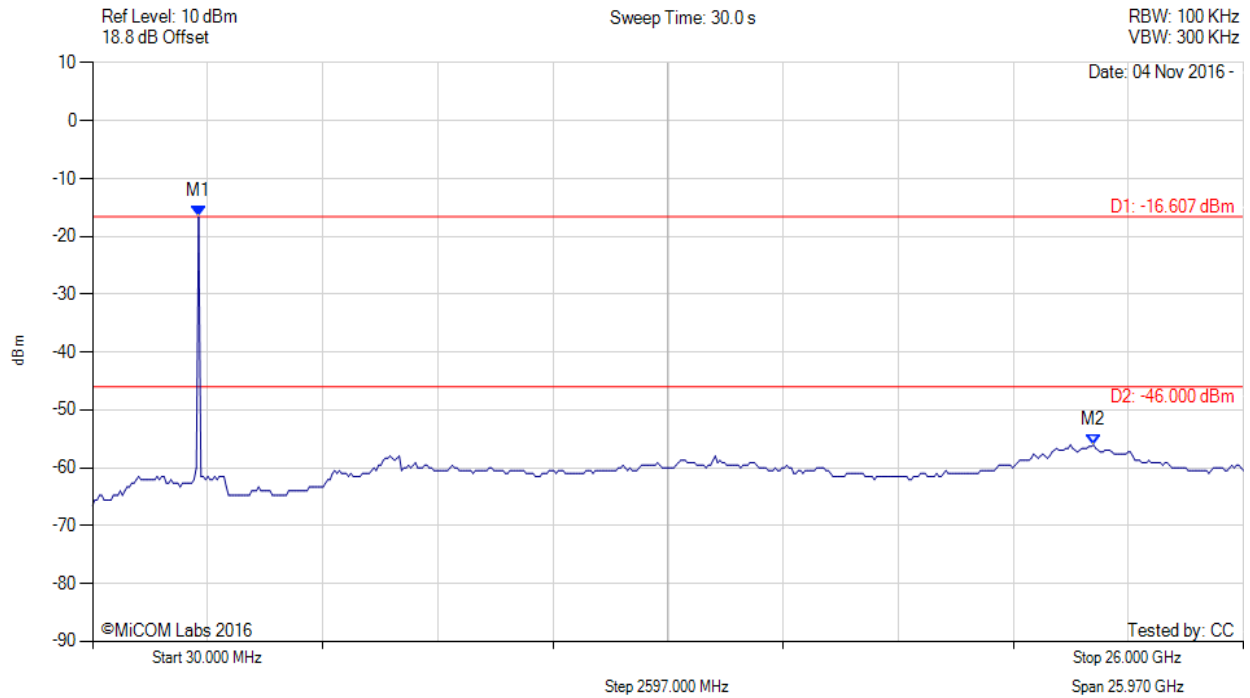


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.607 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -46.00 dBm Margin: -10.02 dB

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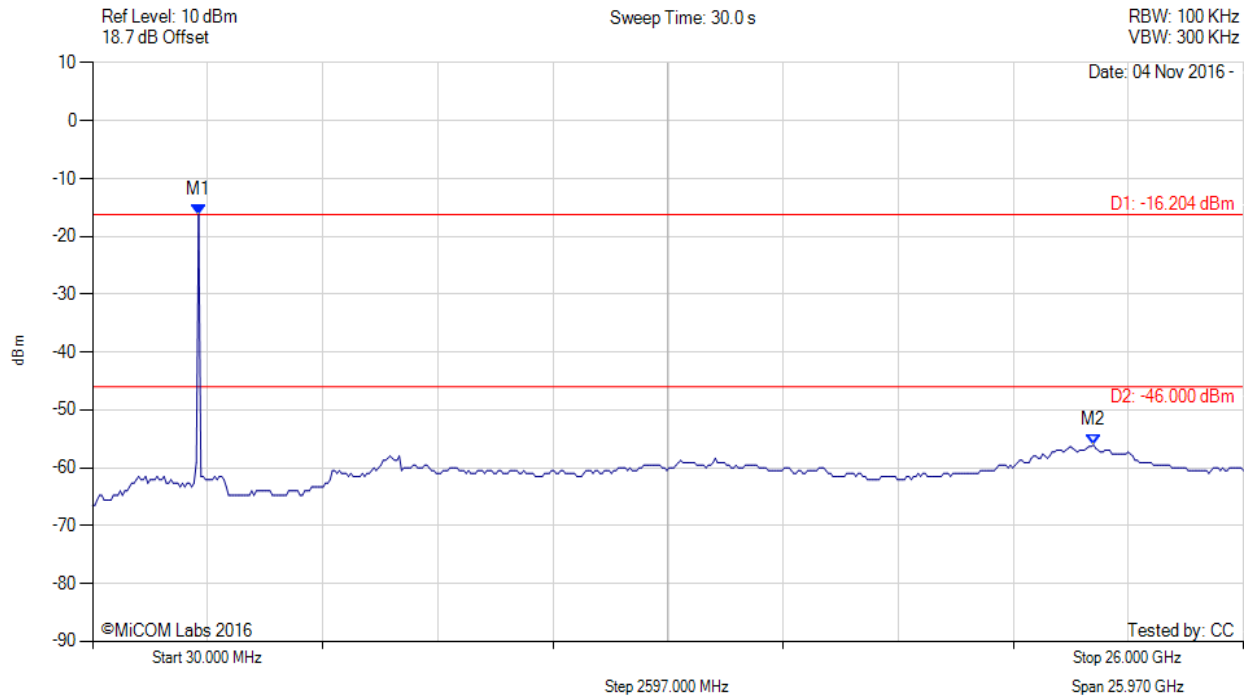


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.204 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -46.00 dBm Margin: -10.02 dB

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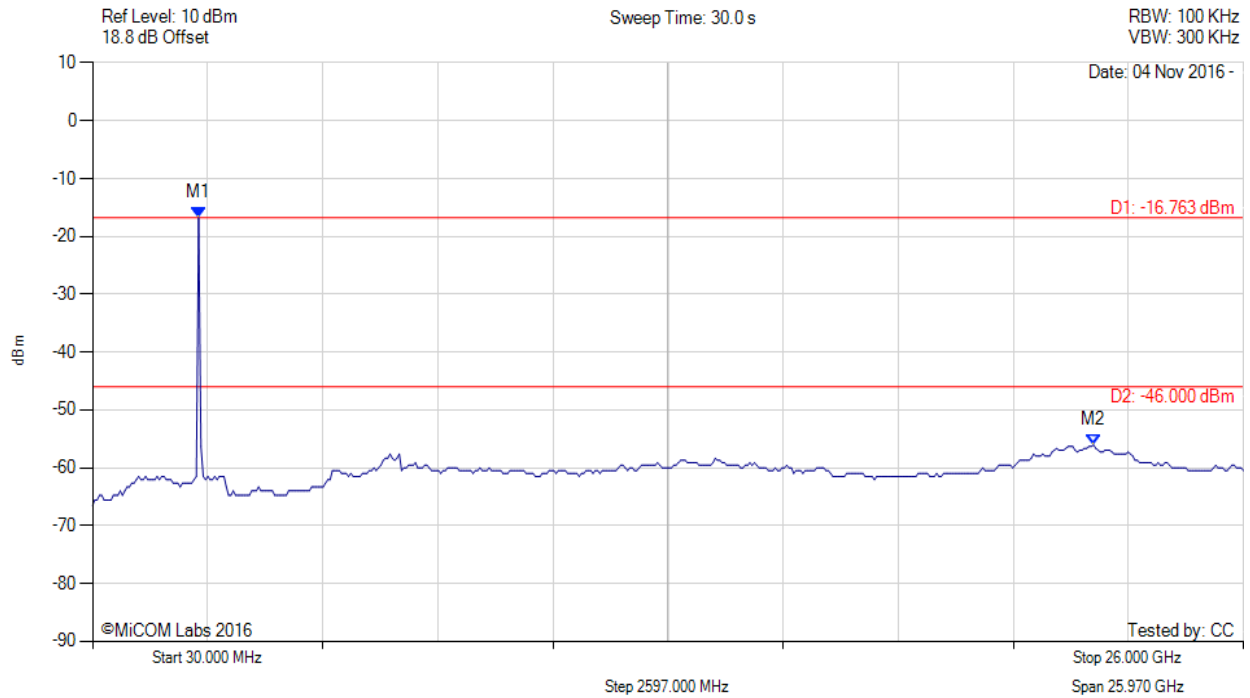


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -16.763 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -46.00 dBm Margin: -10.02 dB

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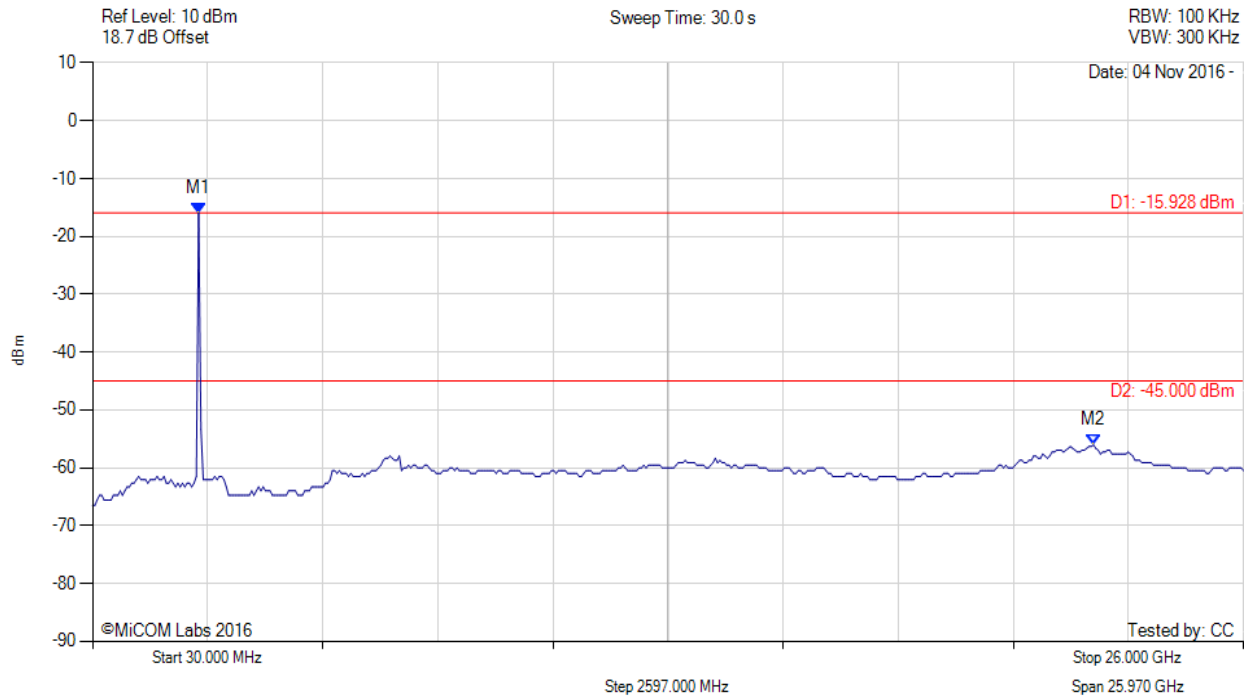


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -15.928 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -45.00 dBm Margin: -11.02 dB

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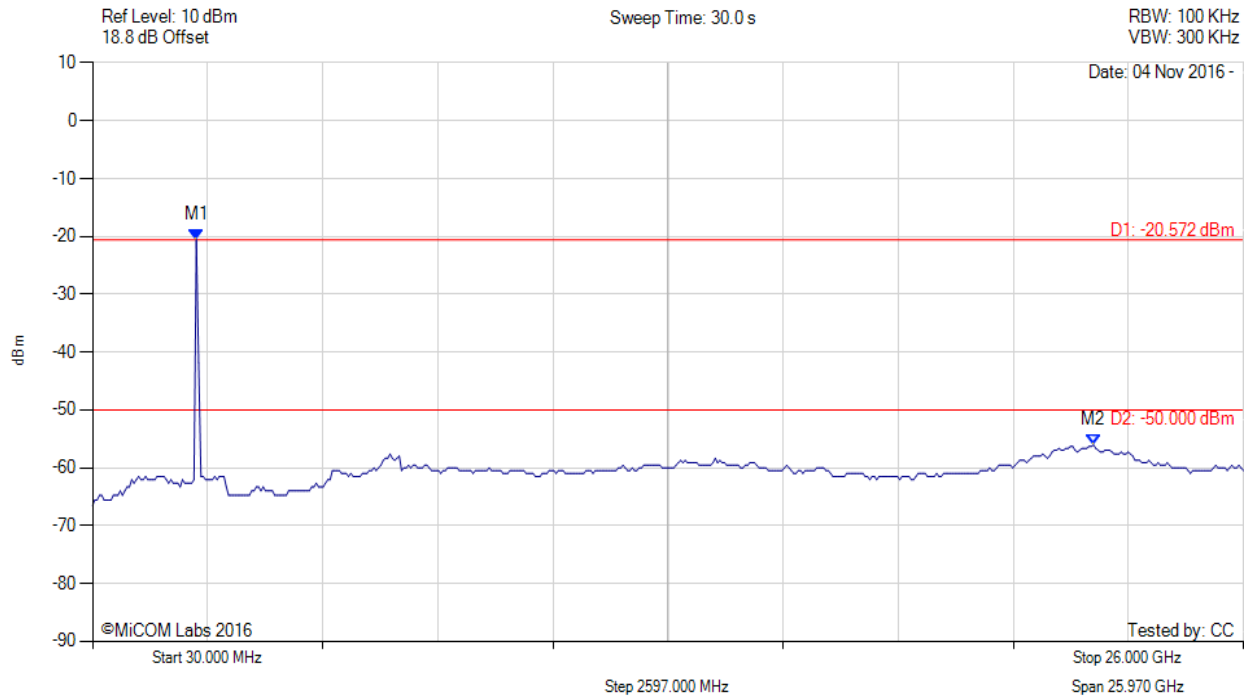


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -20.572 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -50.00 dBm Margin: -6.02 dB

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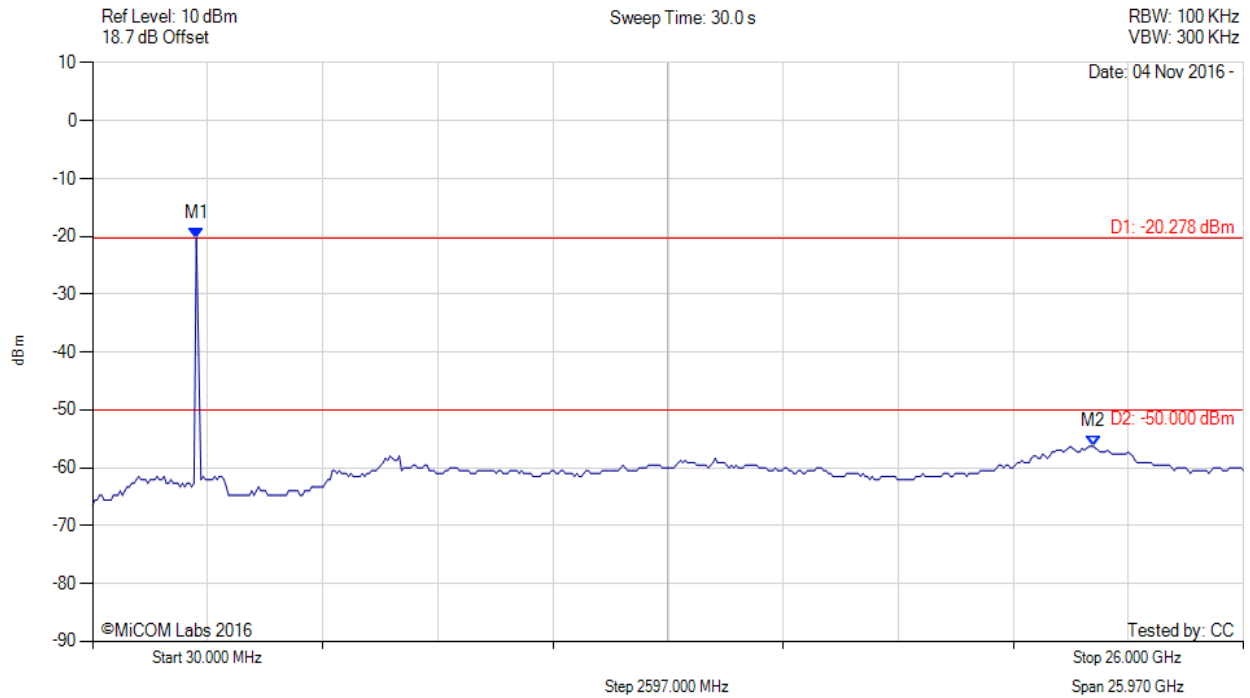


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -20.278 dBm M2 : 22.617 GHz : -56.317 dBm	Limit: -50.00 dBm Margin: -6.32 dB

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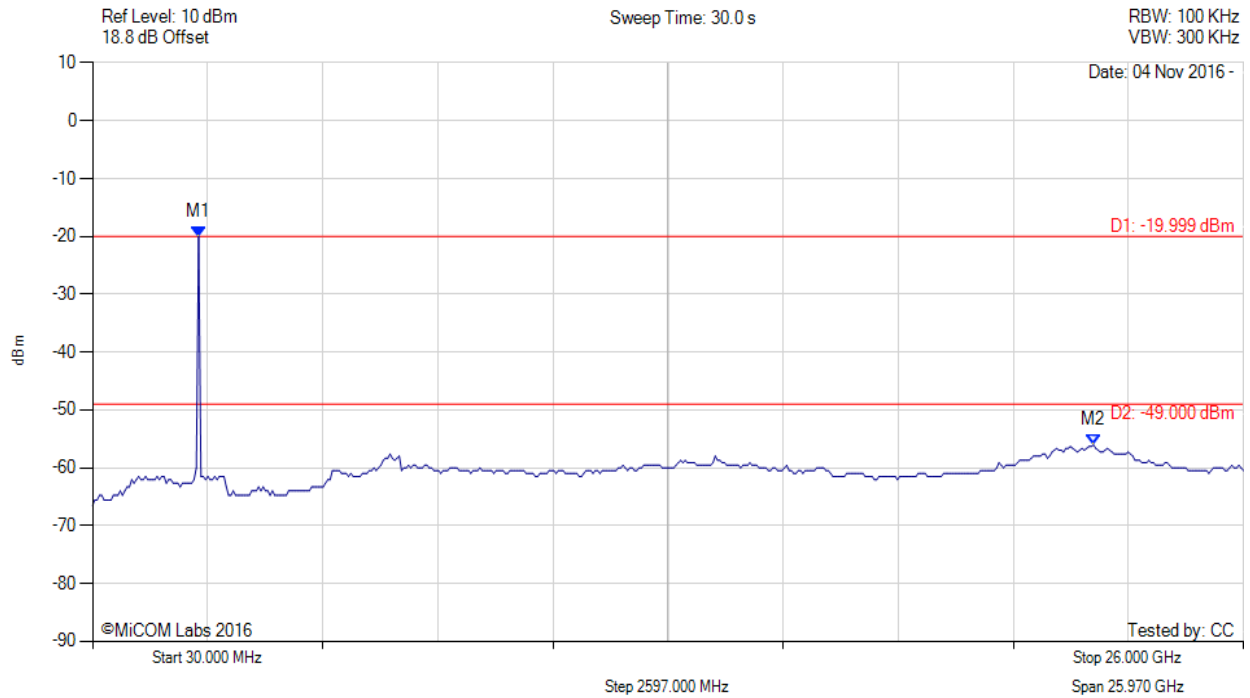


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWPDP85-U5\_Conducted Rev A  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -19.999 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -49.00 dBm Margin: -7.02 dB

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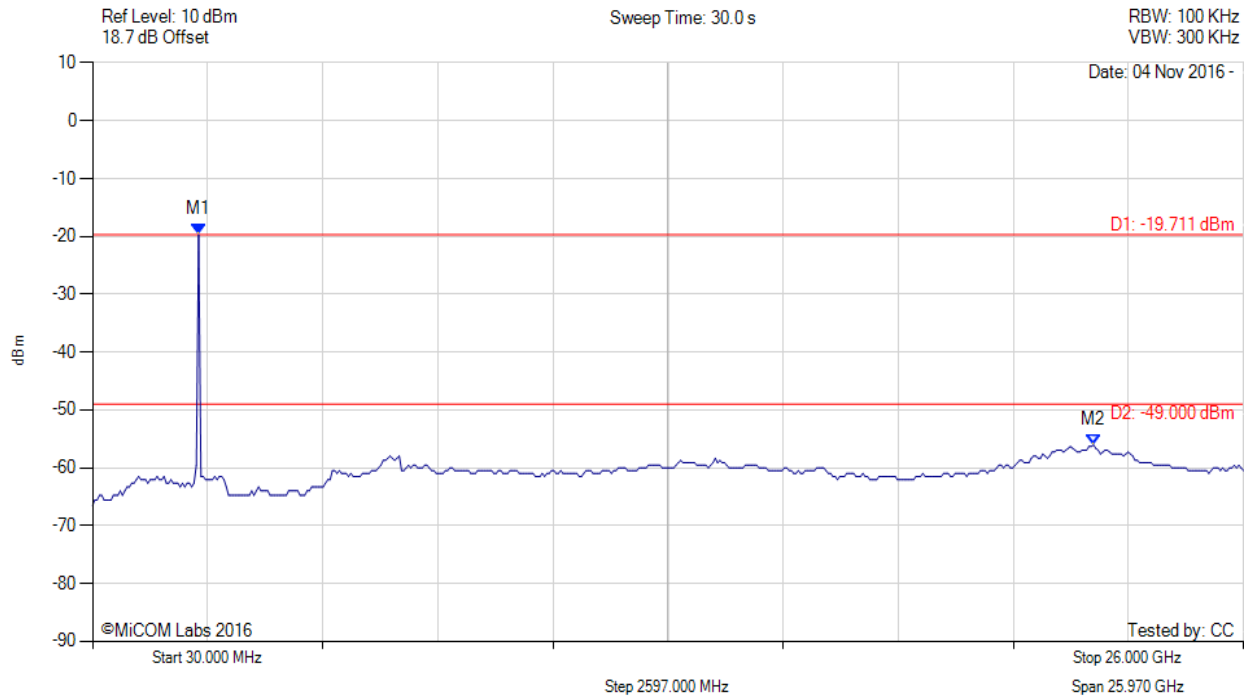


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -19.711 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -49.00 dBm Margin: -7.02 dB

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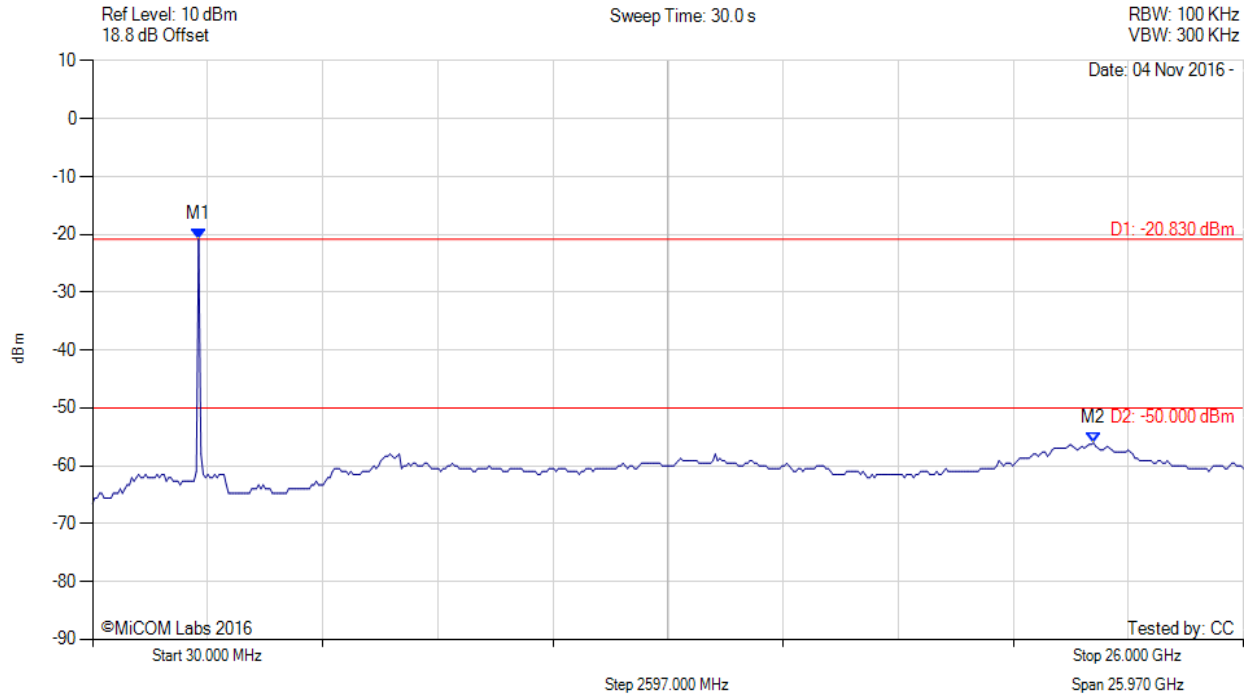


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -20.830 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -50.00 dBm Margin: -6.02 dB

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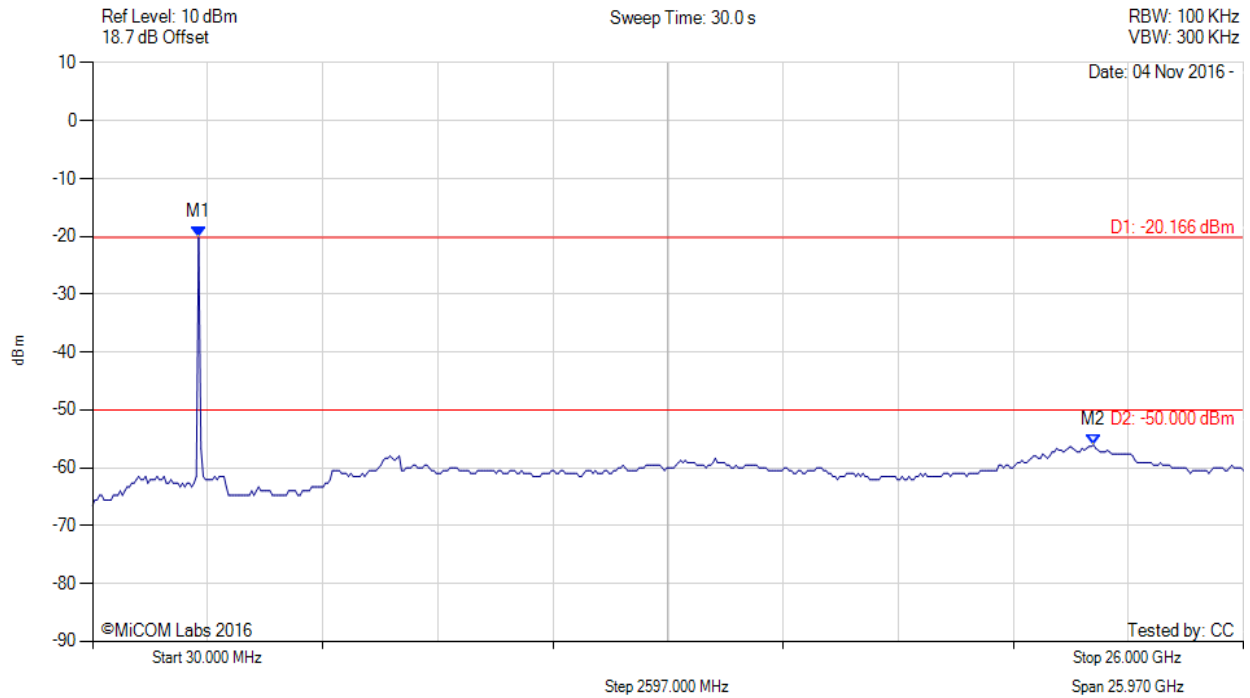


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -20.166 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -50.00 dBm Margin: -6.02 dB

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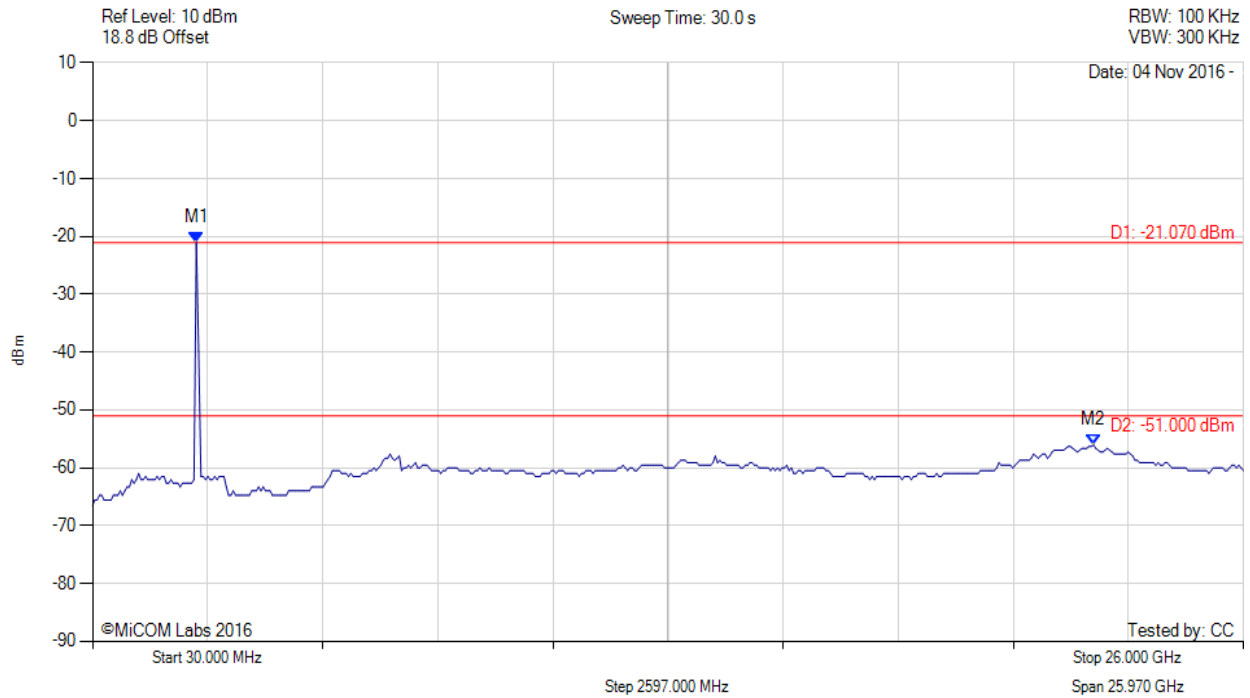


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -21.070 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -51.00 dBm Margin: -5.02 dB

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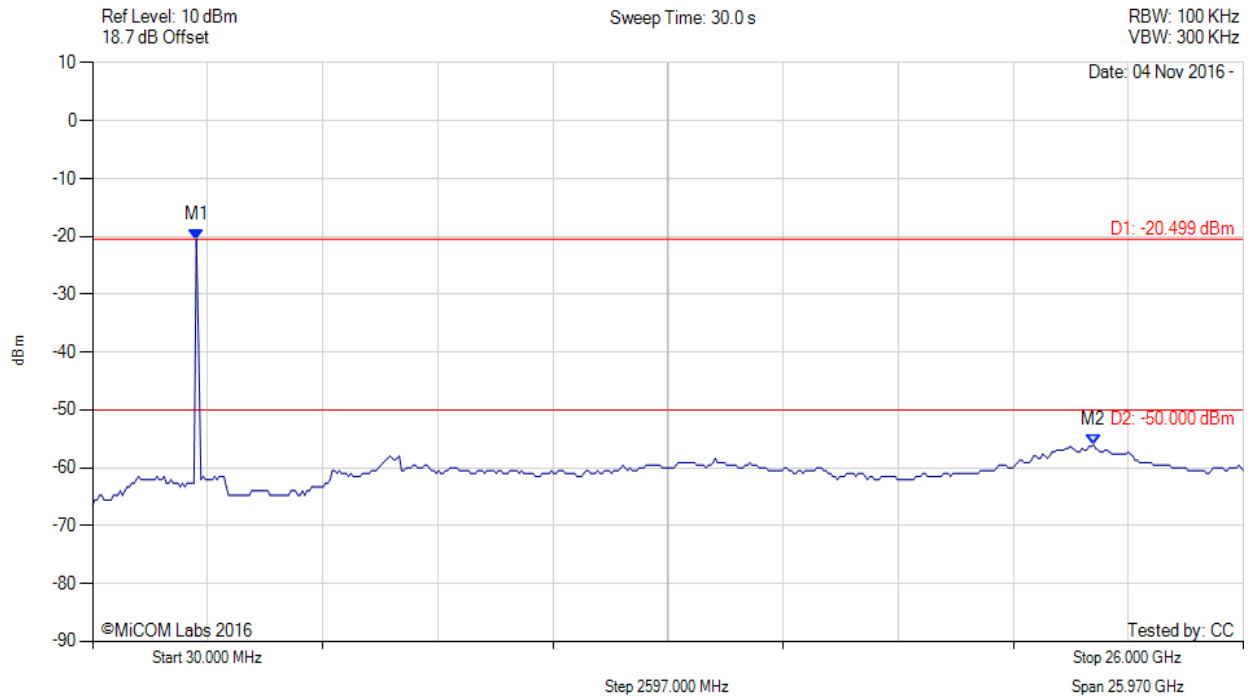


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2371.984 MHz : -20.499 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -50.00 dBm Margin: -6.02 dB

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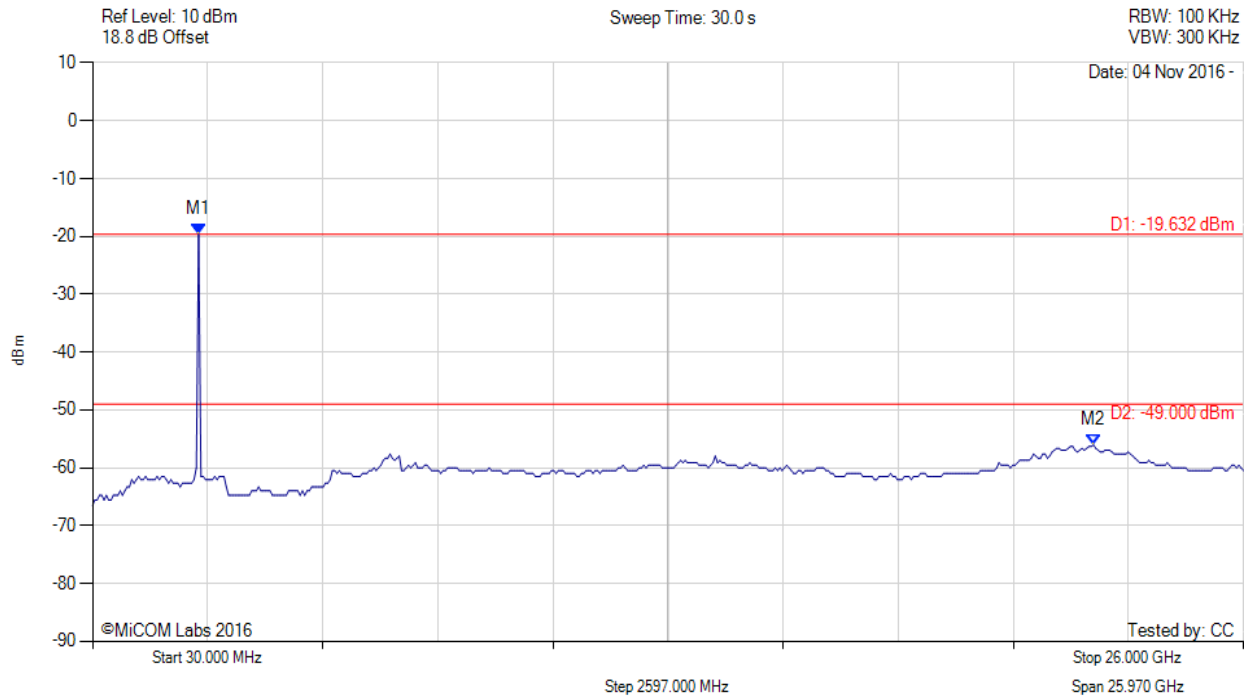


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -19.632 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -49.00 dBm Margin: -7.02 dB

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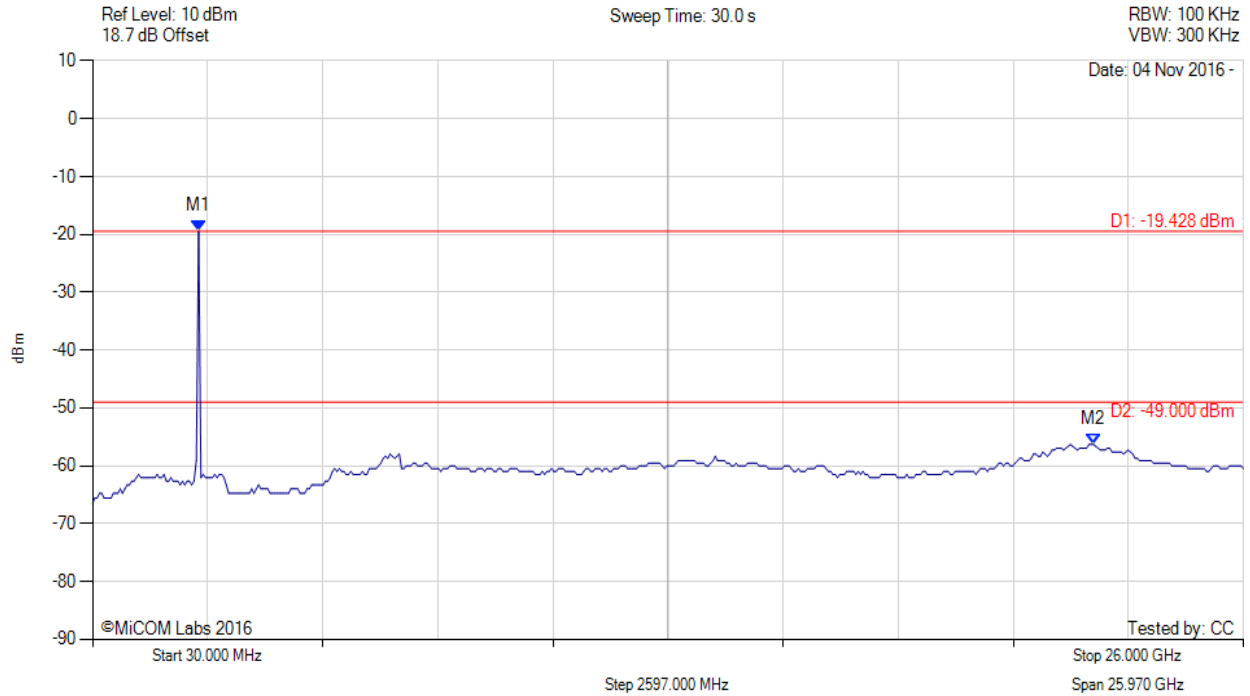


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -19.428 dBm M2 : 22.617 GHz : -56.317 dBm	Limit: -49.00 dBm Margin: -7.32 dB

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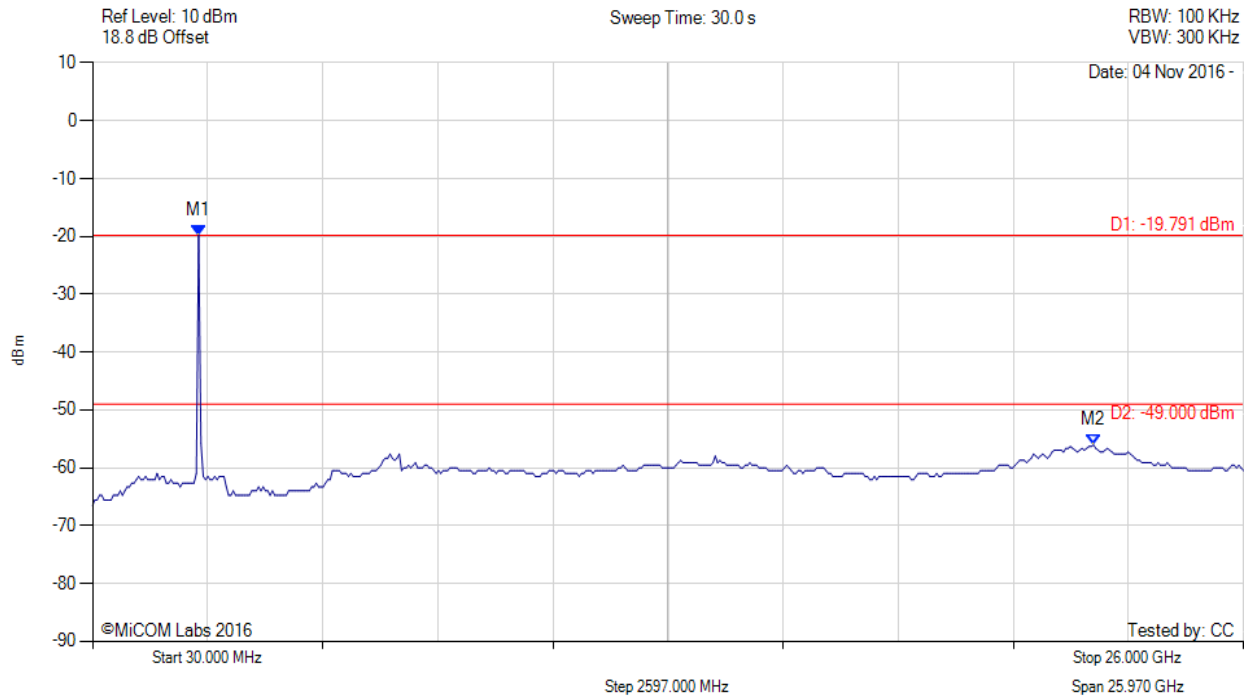


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -19.791 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -49.00 dBm Margin: -7.02 dB

[back to matrix](#)

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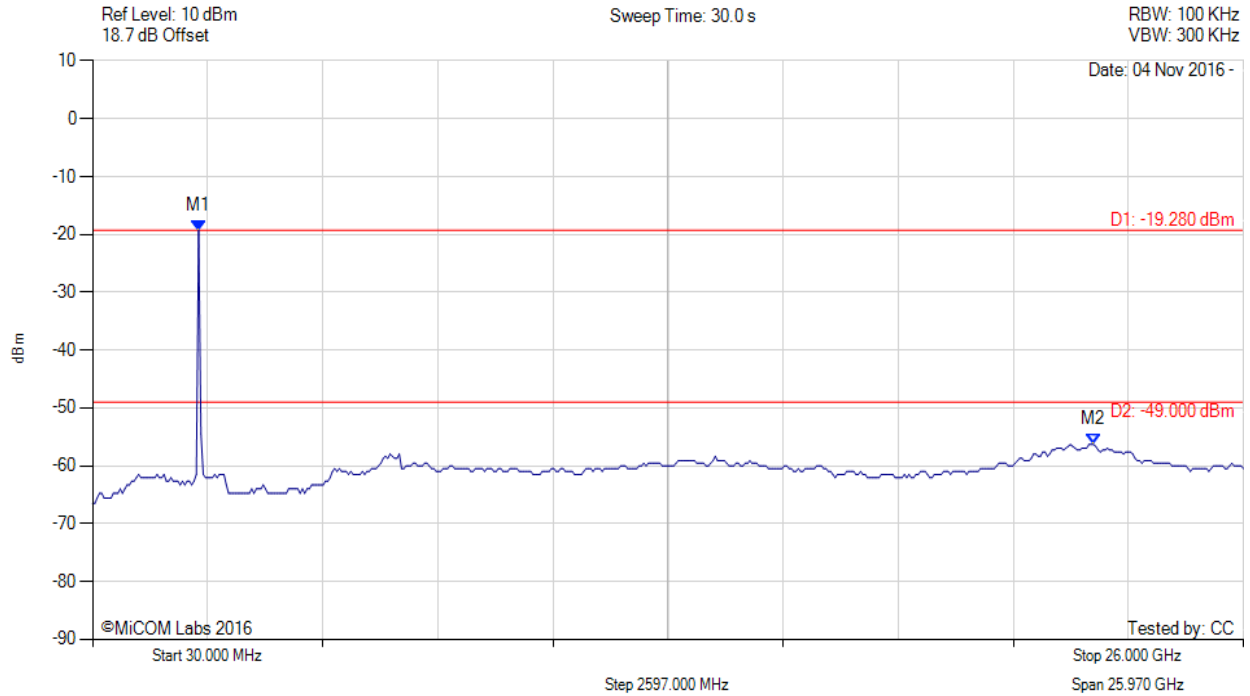


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
**Page:** 74 of 133

CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -19.280 dBm M2 : 22.617 GHz : -56.317 dBm	Limit: -49.00 dBm Margin: -7.32 dB

[back to matrix](#)

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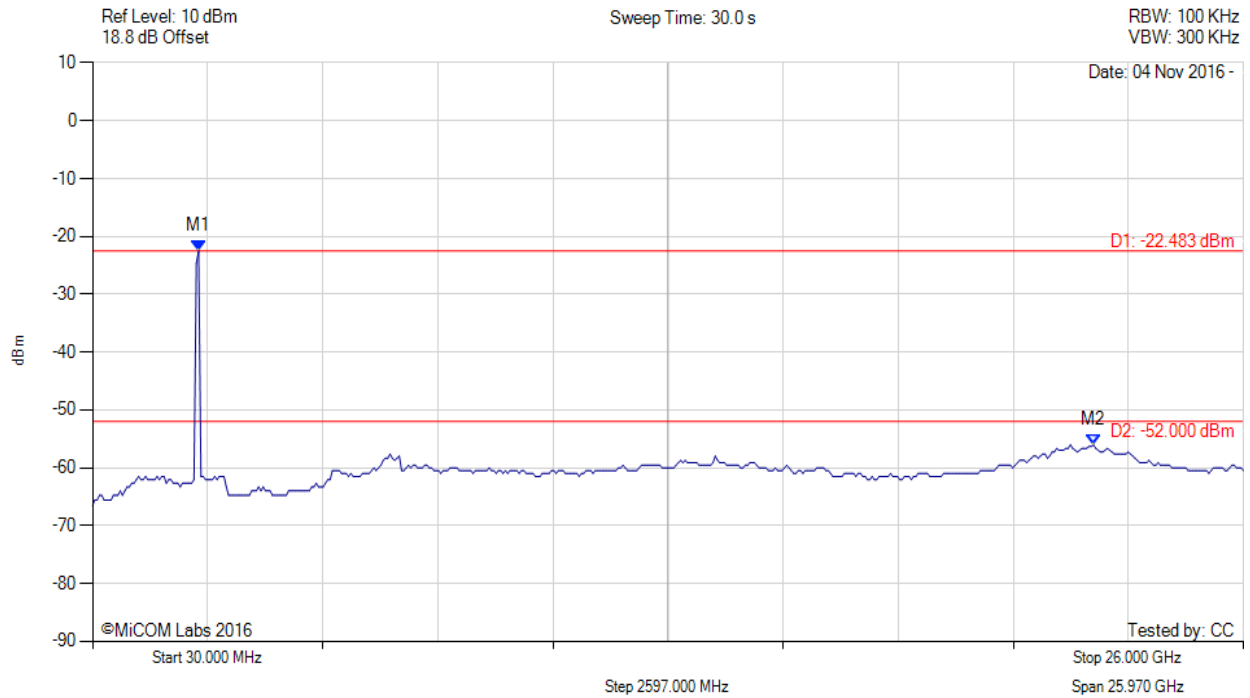


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
**Page:** 75 of 133

CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -22.483 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -52.00 dBm Margin: -4.02 dB

[back to matrix](#)

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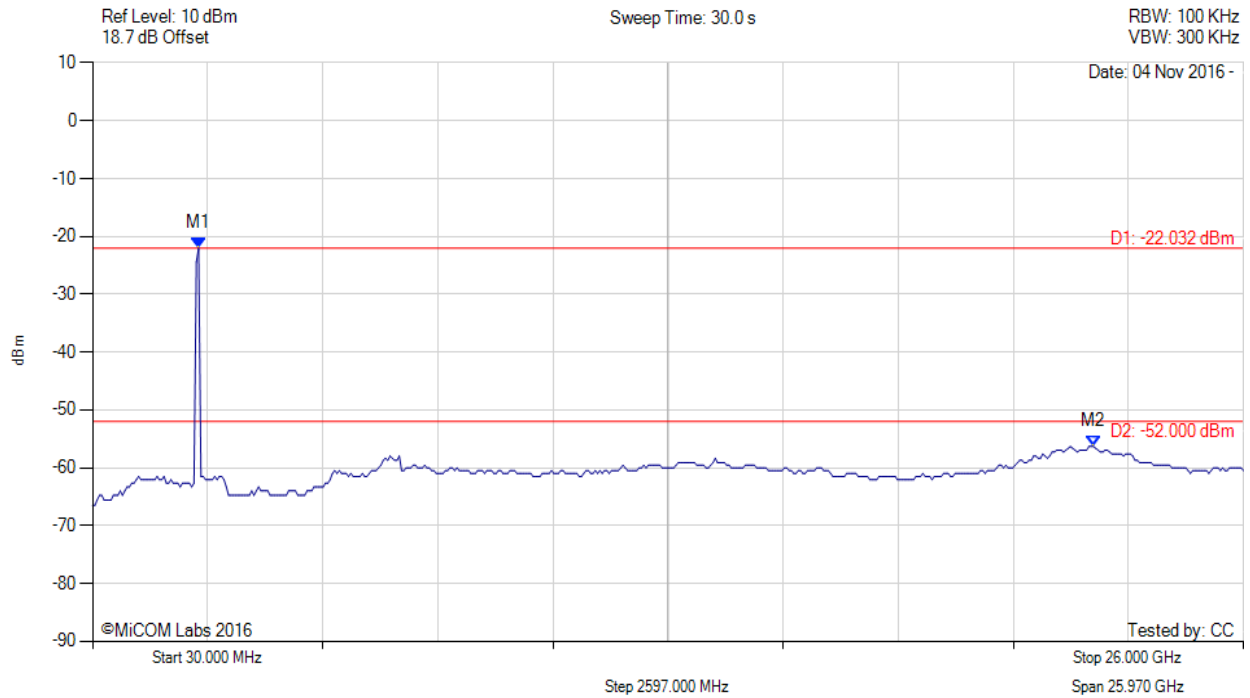


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -22.032 dBm M2 : 22.617 GHz : -56.317 dBm	Limit: -52.00 dBm Margin: -4.32 dB

[back to matrix](#)

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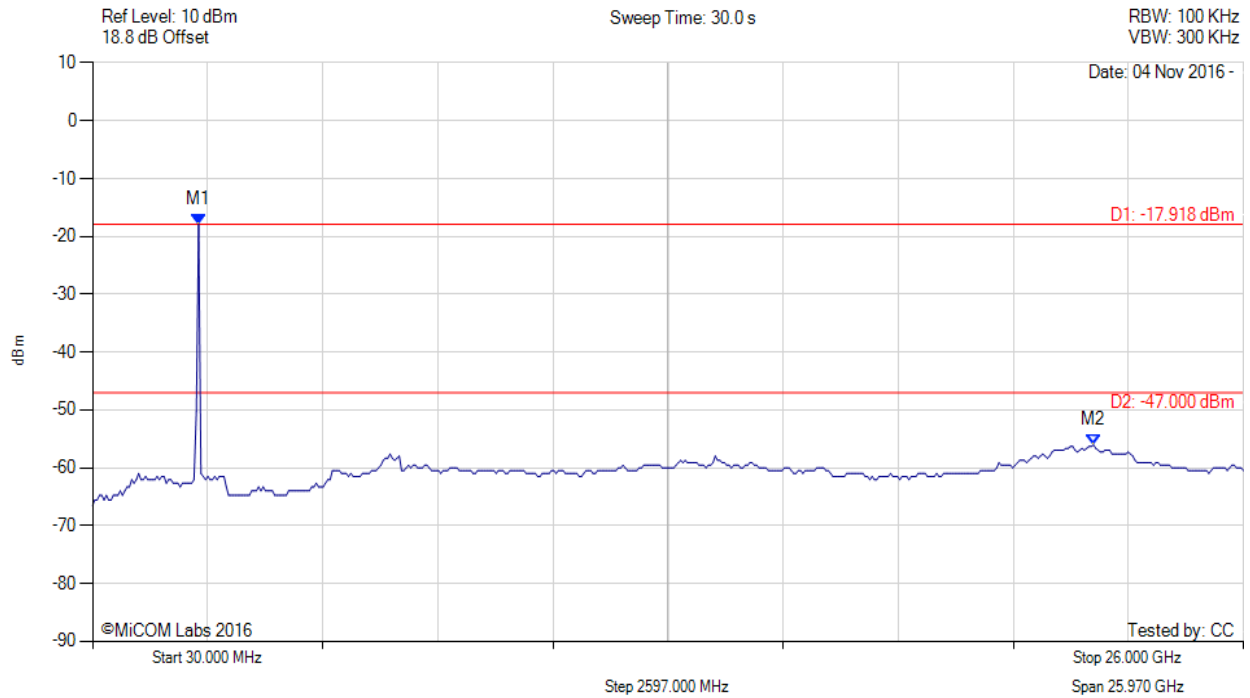


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -17.918 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -47.00 dBm Margin: -9.02 dB

[back to matrix](#)

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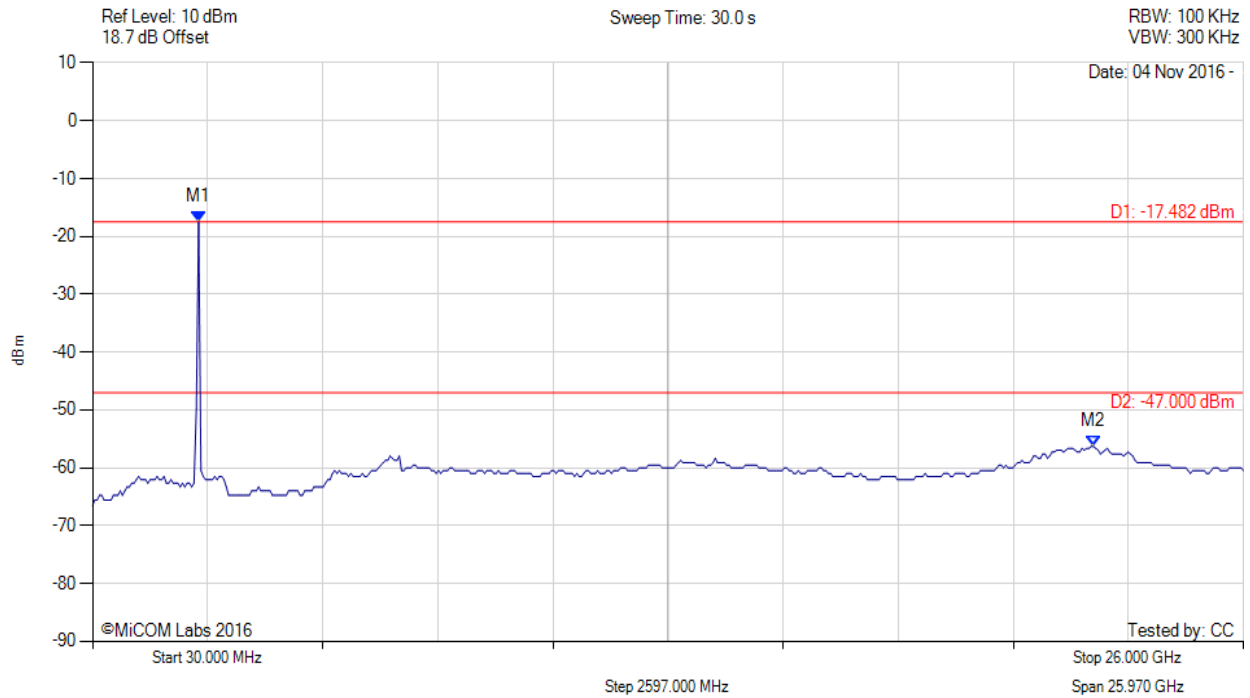


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variants: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -17.482 dBm M2 : 22.617 GHz : -56.317 dBm	Limit: -47.00 dBm Margin: -9.32 dB

[back to matrix](#)

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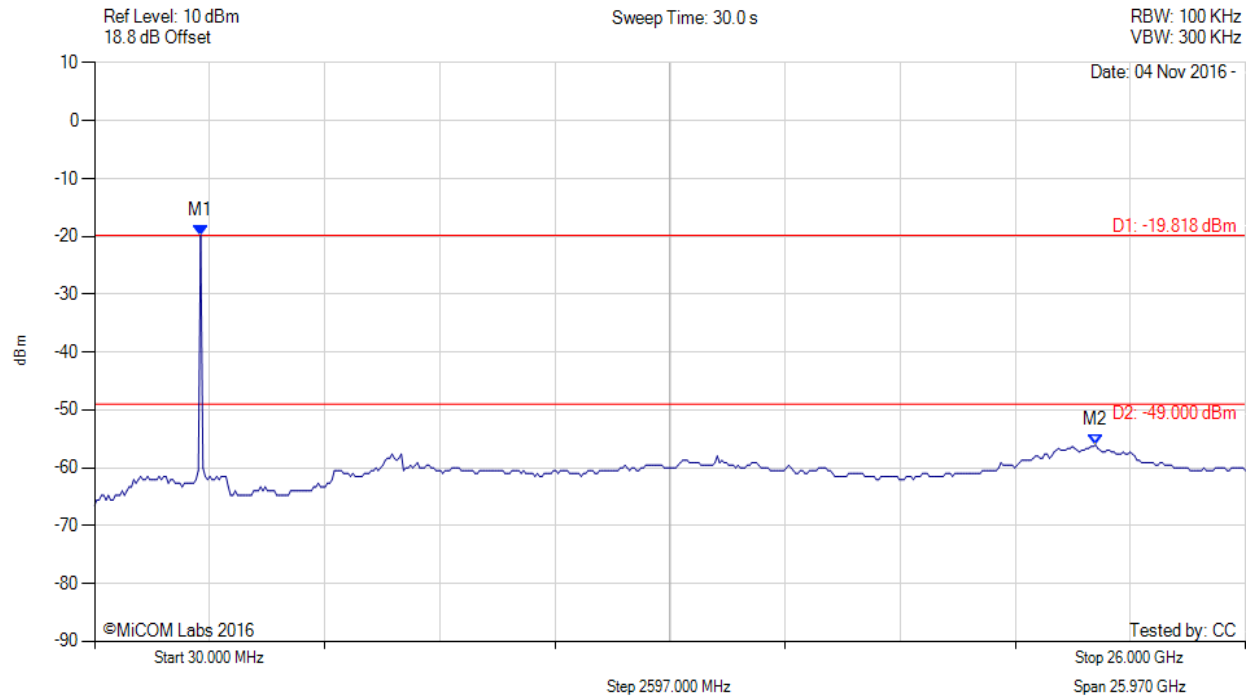


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWPDP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -19.818 dBm M2 : 22.617 GHz : -56.023 dBm	Limit: -49.00 dBm Margin: -7.02 dB

[back to matrix](#)

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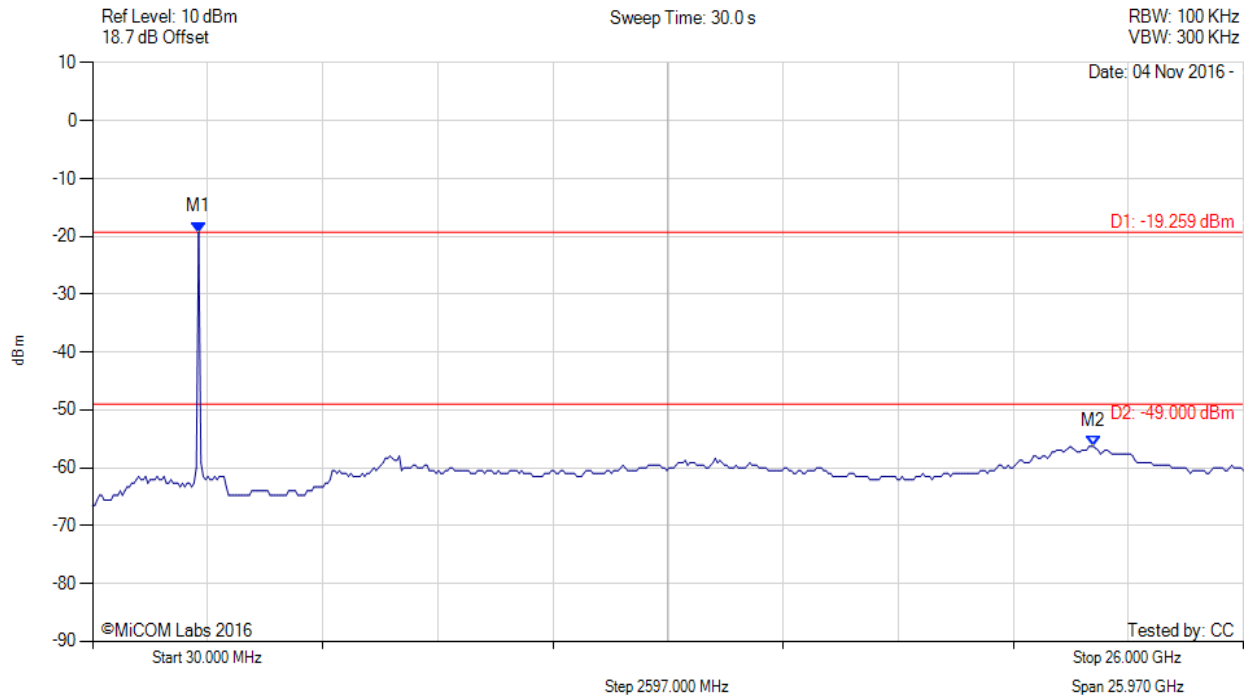


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
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CONDUCTED SPURIOUS EMISSIONS - AVERAGE



Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2424.028 MHz : -19.259 dBm M2 : 22.617 GHz : -56.317 dBm	Limit: -49.00 dBm Margin: -7.32 dB

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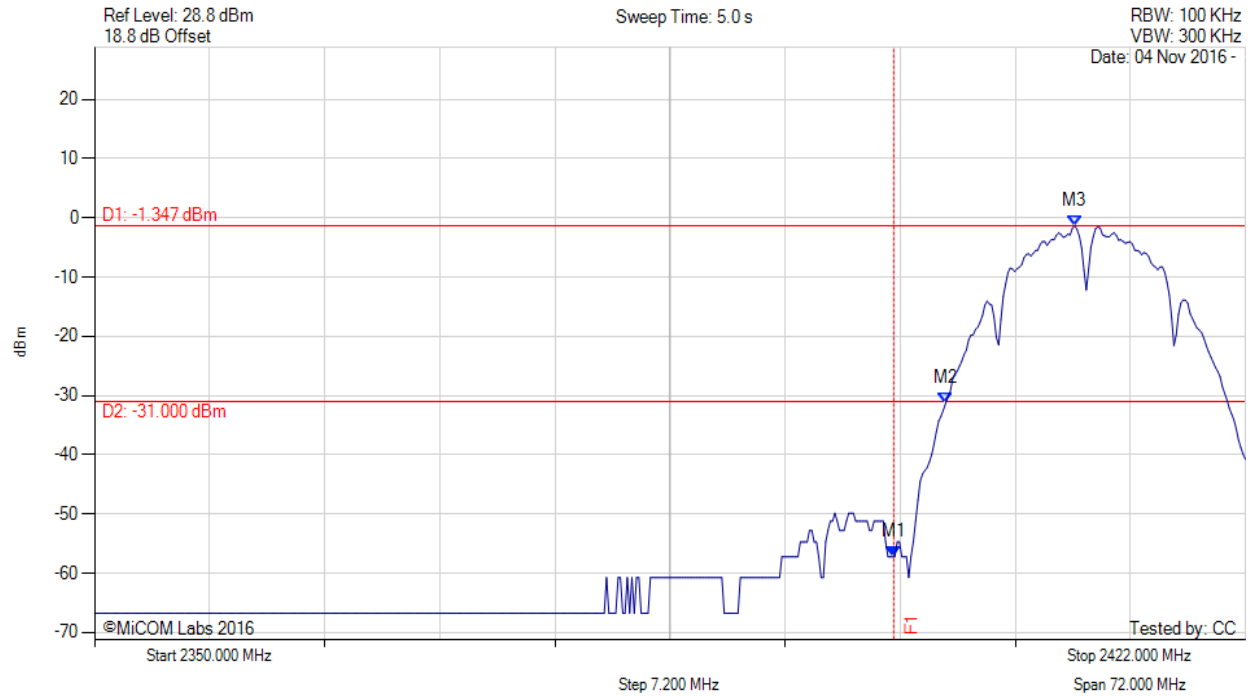
### A.2.1.2. Conducted Band-Edge Emissions

#### A.2.1.3. Low Band-Edge Emissions

#### CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE



Variant: 802.11b, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -57.223 dBm M2 : 2403.242 MHz : -31.348 dBm M3 : 2411.323 MHz : -1.347 dBm	Channel Frequency: 2412.00 MHz

[back to matrix](#)

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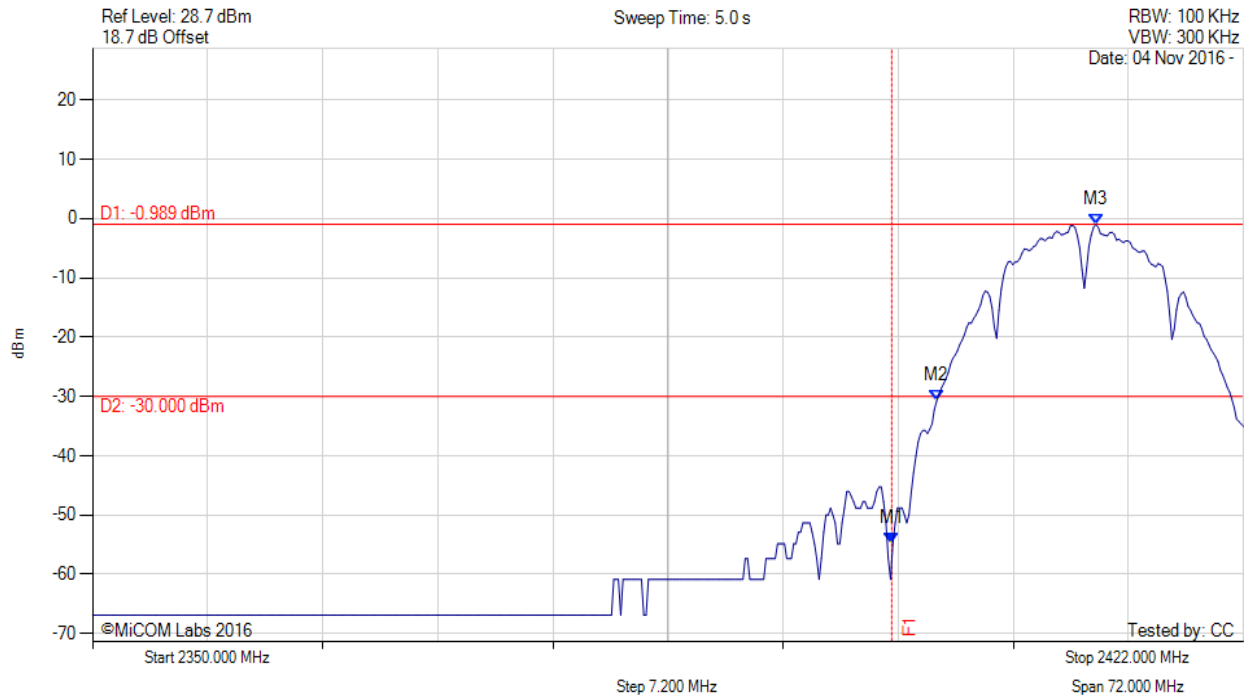


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**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -54.824 dBm M2 : 2402.810 MHz : -30.742 dBm M3 : 2412.766 MHz : -0.989 dBm	Channel Frequency: 2412.00 MHz

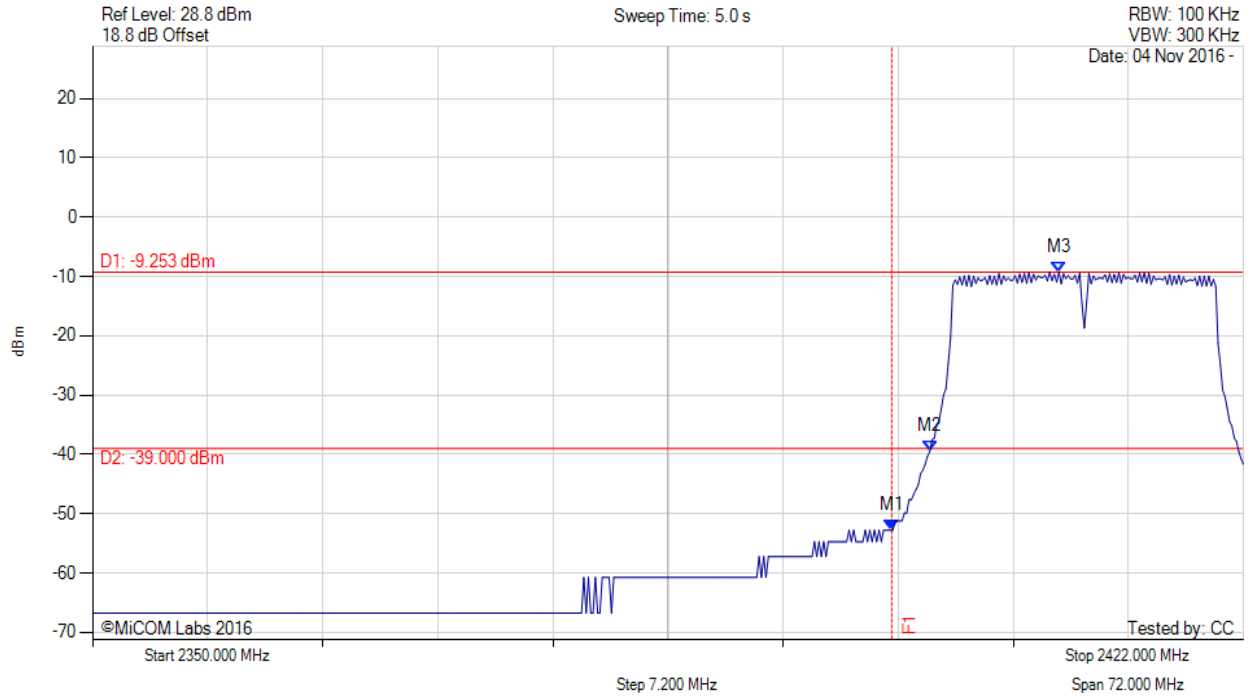
[back to matrix](#)

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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -52.786 dBm M2 : 2402.377 MHz : -39.531 dBm M3 : 2410.457 MHz : -9.253 dBm	Channel Frequency: 2412.00 MHz

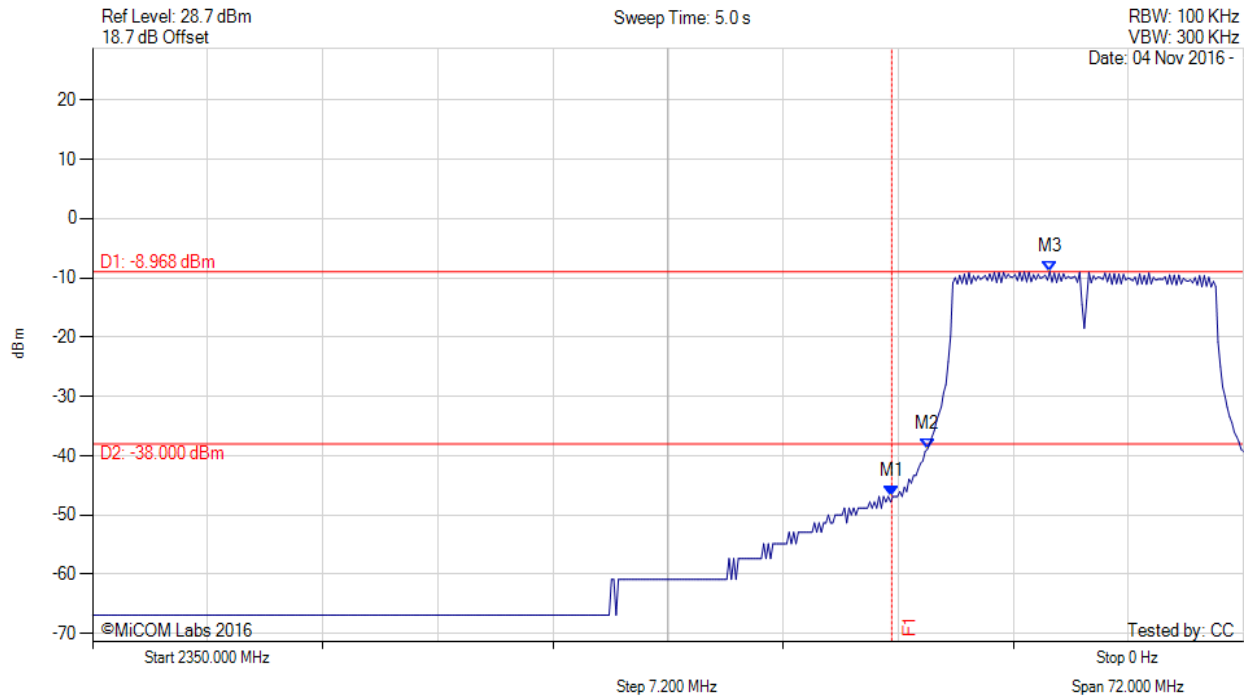
[back to matrix](#)

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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -46.865 dBm M2 : 2402.232 MHz : -38.907 dBm M3 : 2409.880 MHz : -8.968 dBm	Channel Frequency: 2412.00 MHz

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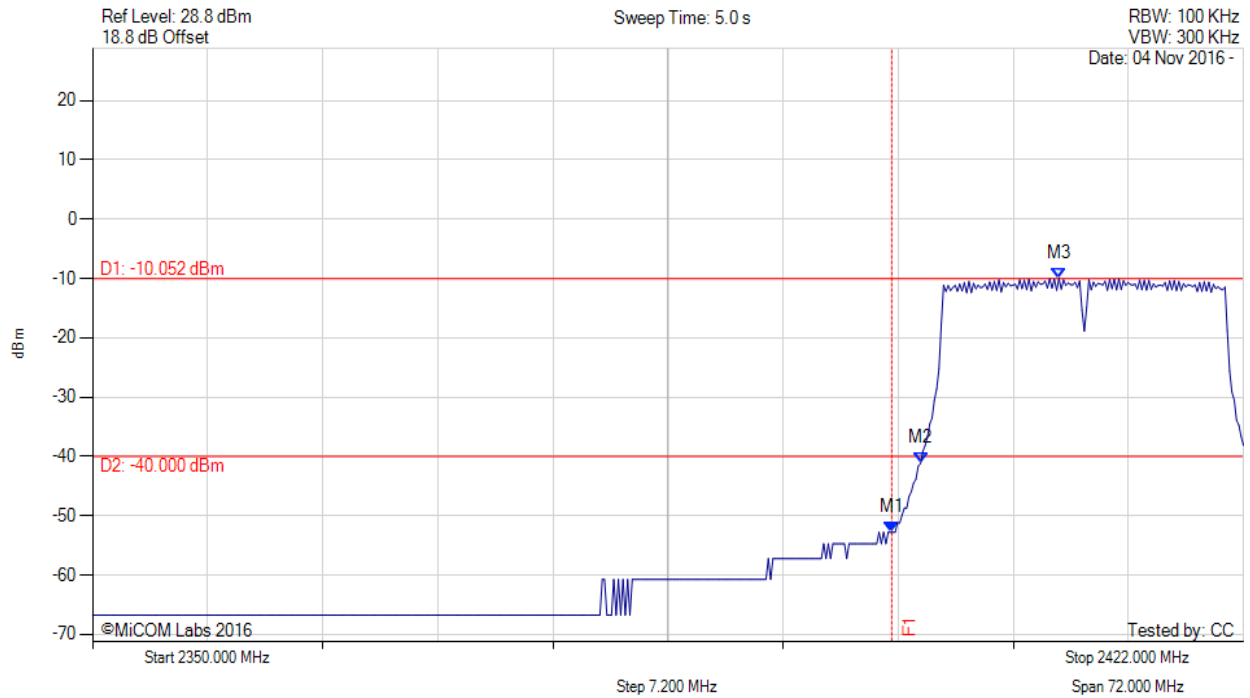
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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -52.786 dBm M2 : 2401.800 MHz : -41.190 dBm M3 : 2410.457 MHz : -10.052 dBm	Channel Frequency: 2412.00 MHz

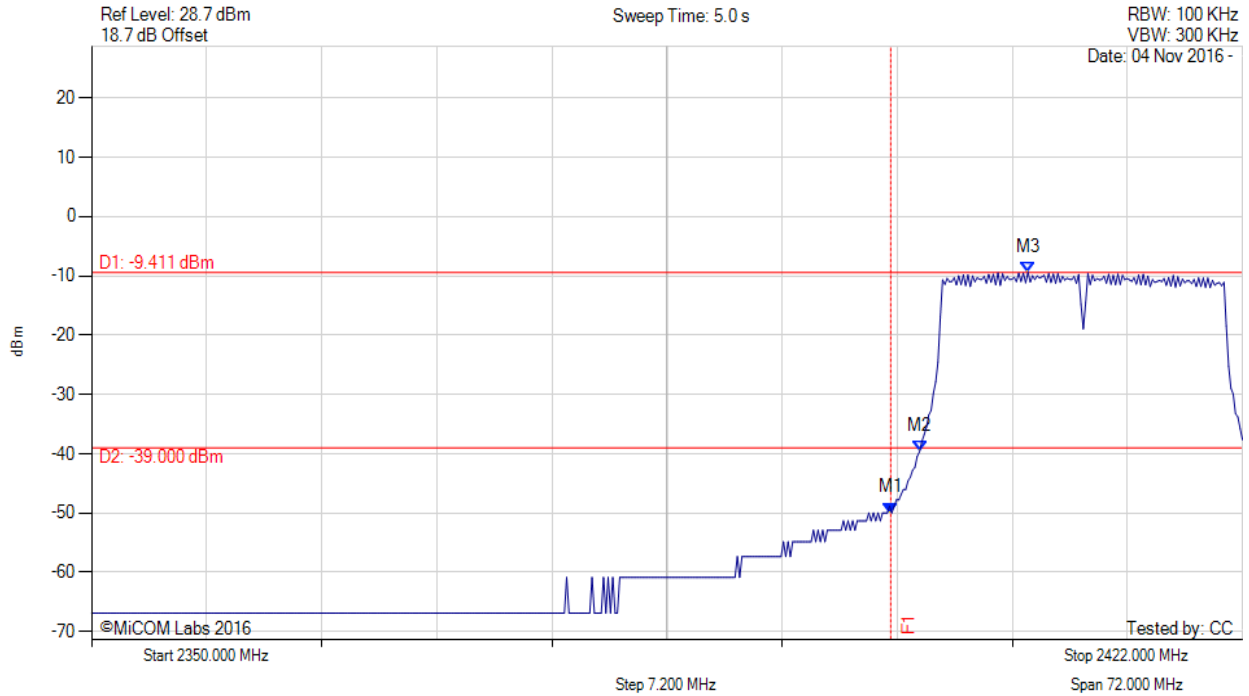
[back to matrix](#)

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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -49.963 dBm M2 : 2401.800 MHz : -39.631 dBm M3 : 2408.581 MHz : -9.411 dBm	Channel Frequency: 2412.00 MHz

[back to matrix](#)

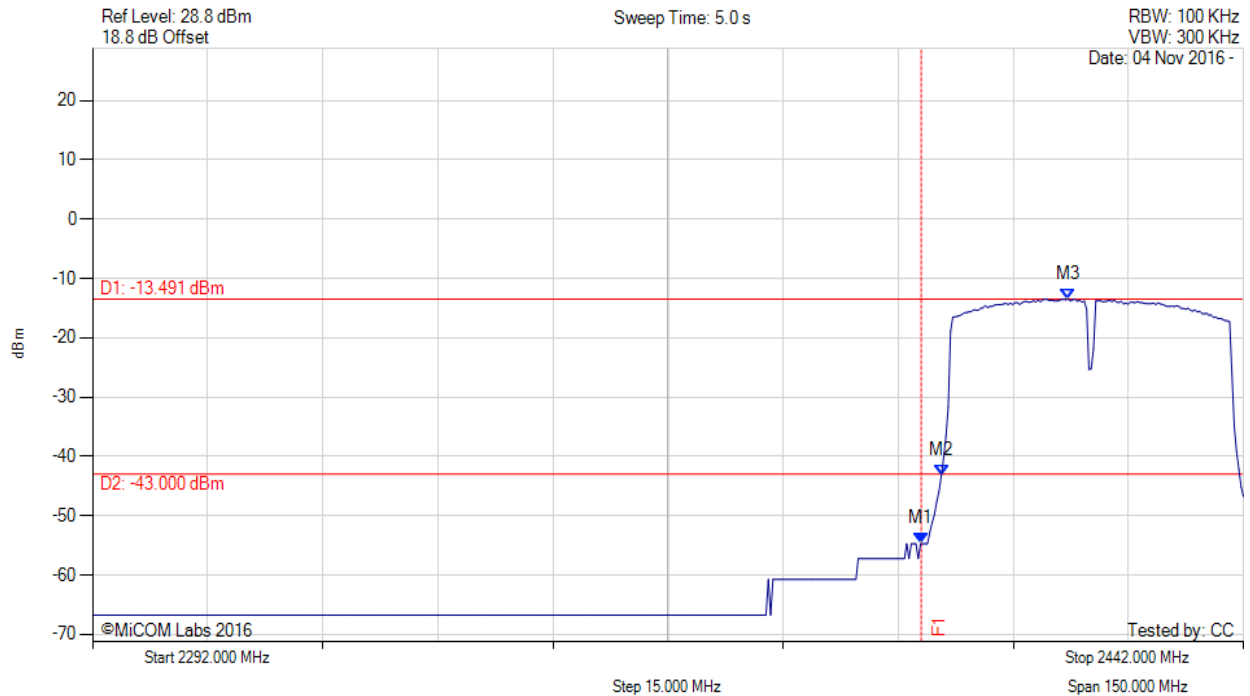
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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE



Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -54.724 dBm M2 : 2402.621 MHz : -43.244 dBm M3 : 2419.154 MHz : -13.491 dBm	Channel Frequency: 2422.00 MHz

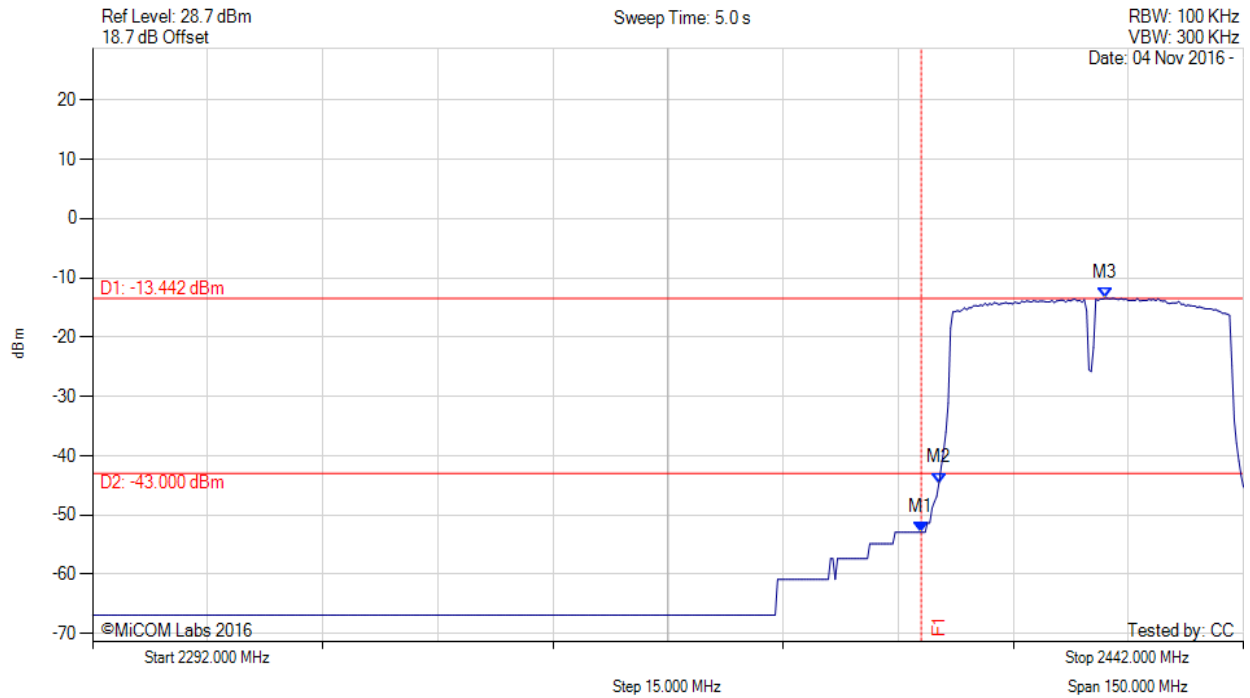
[back to matrix](#)

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CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -52.886 dBm M2 : 2402.321 MHz : -44.586 dBm M3 : 2423.964 MHz : -13.442 dBm	Channel Frequency: 2422.00 MHz

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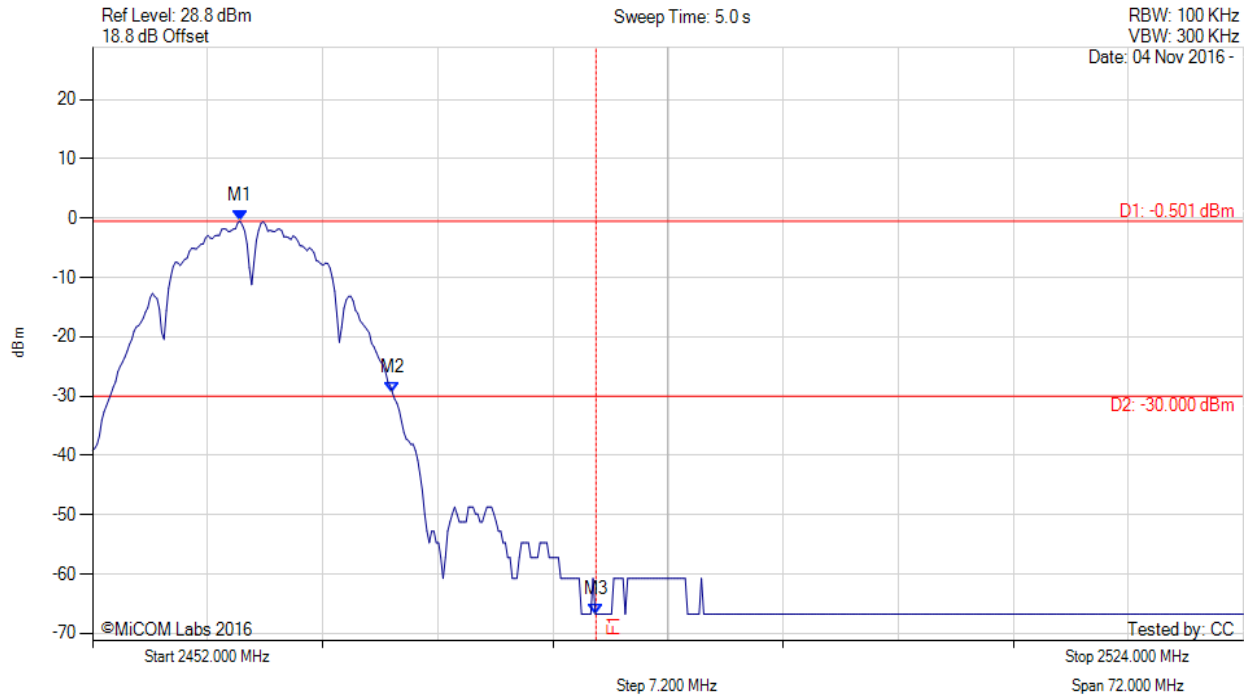


A.2.1.4. High Band-Edge Emissions



CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variat: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.234 MHz : -0.501 dBm M2 : 2470.758 MHz : -29.381 dBm M3 : 2483.500 MHz : -66.765 dBm	Channel Frequency: 2462.00 MHz

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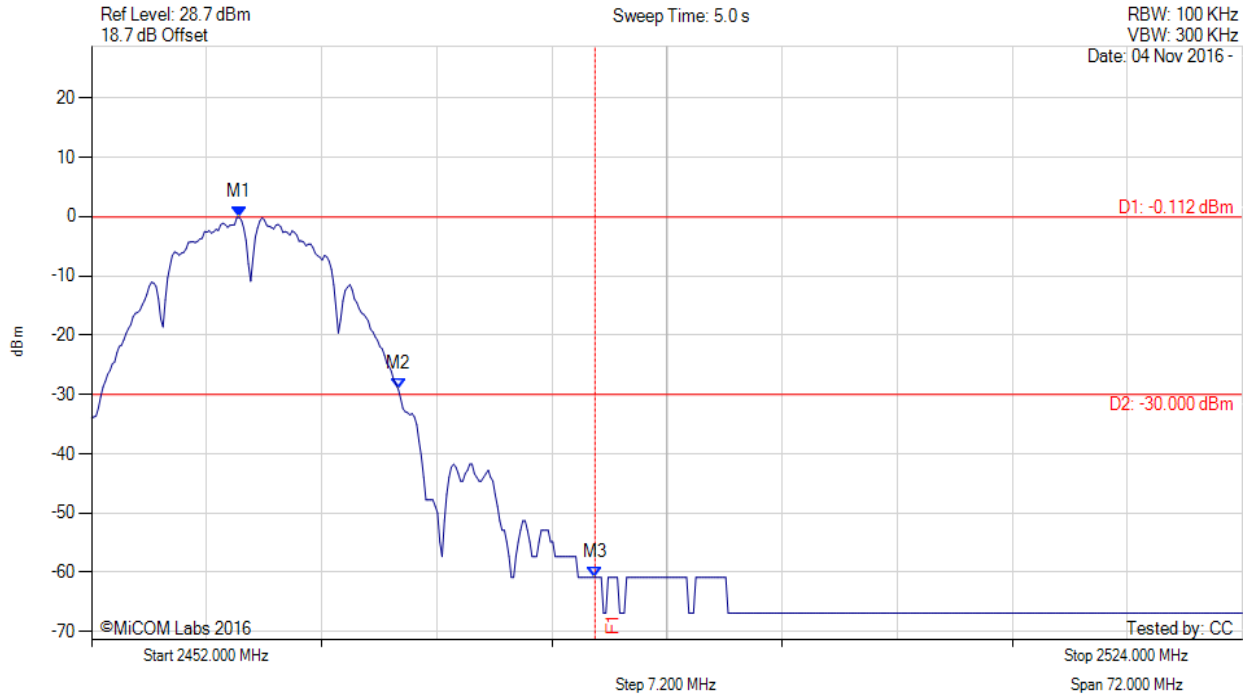


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variante: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.234 MHz : -0.112 dBm M2 : 2471.190 MHz : -29.136 dBm M3 : 2483.500 MHz : -60.845 dBm	Channel Frequency: 2462.00 MHz

[back to matrix](#)

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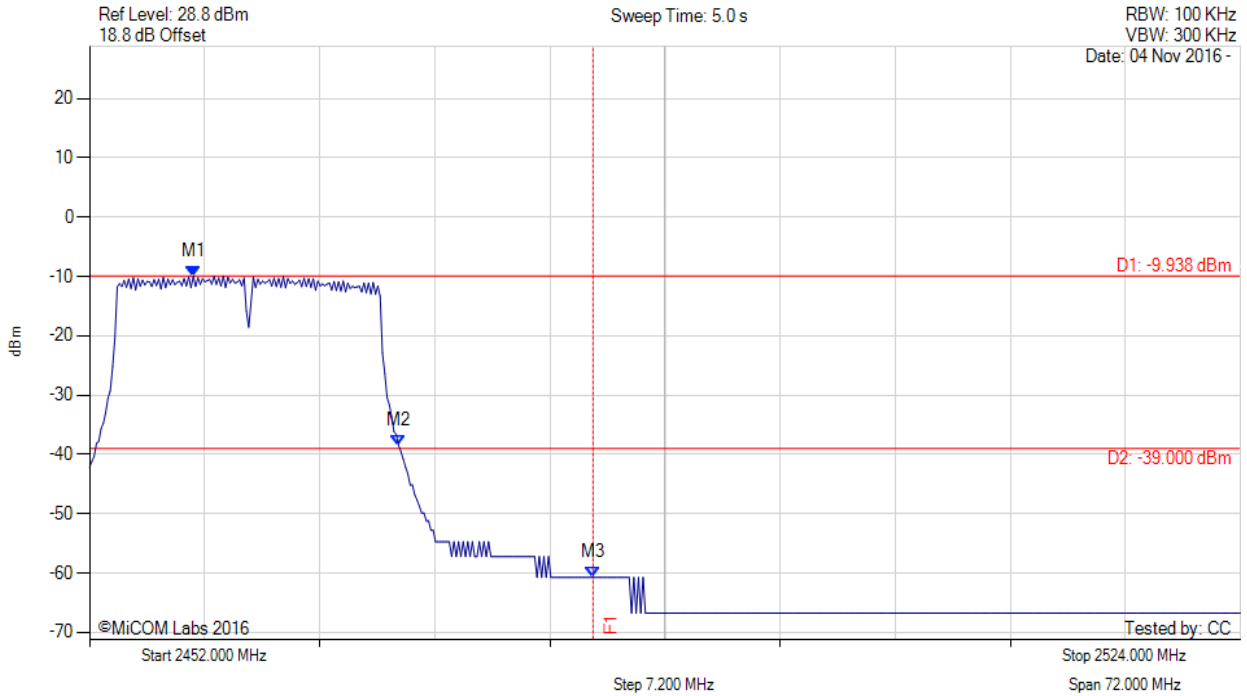


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE



Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2458.493 MHz : -9.938 dBm M2 : 2471.335 MHz : -38.466 dBm M3 : 2483.500 MHz : -60.745 dBm	Channel Frequency: 2462.00 MHz

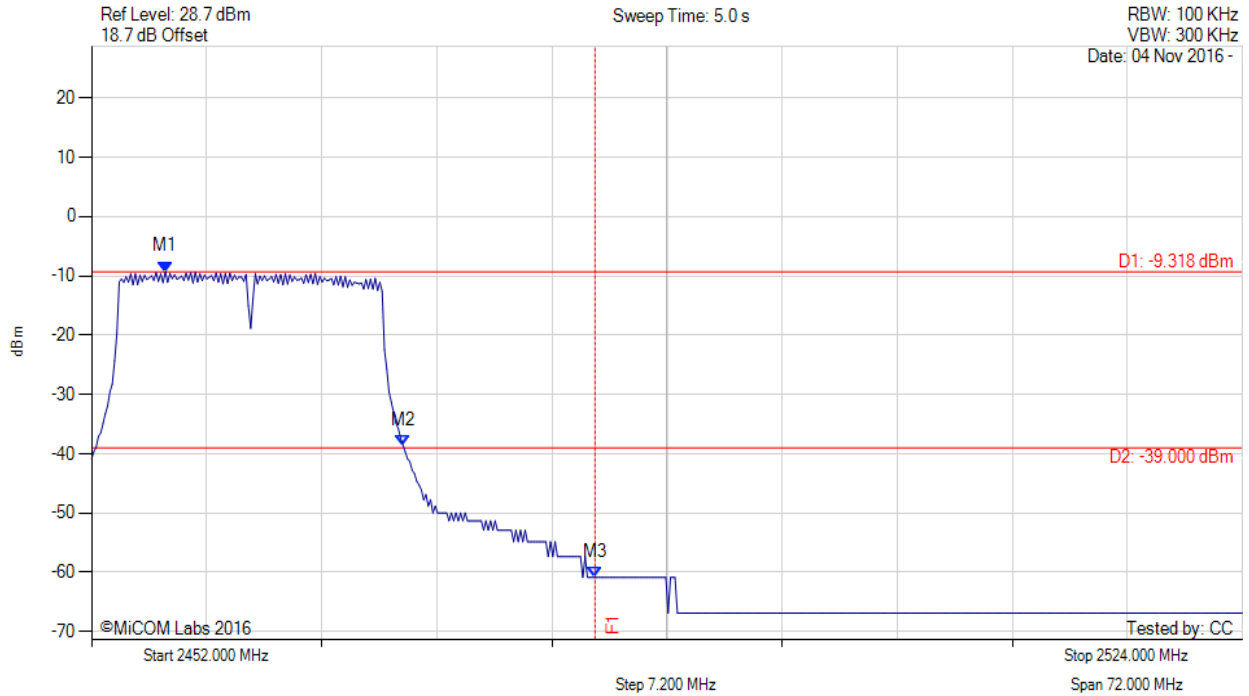
[back to matrix](#)

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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2456.617 MHz : -9.318 dBm M2 : 2471.479 MHz : -38.566 dBm M3 : 2483.500 MHz : -60.845 dBm	Channel Frequency: 2462.00 MHz

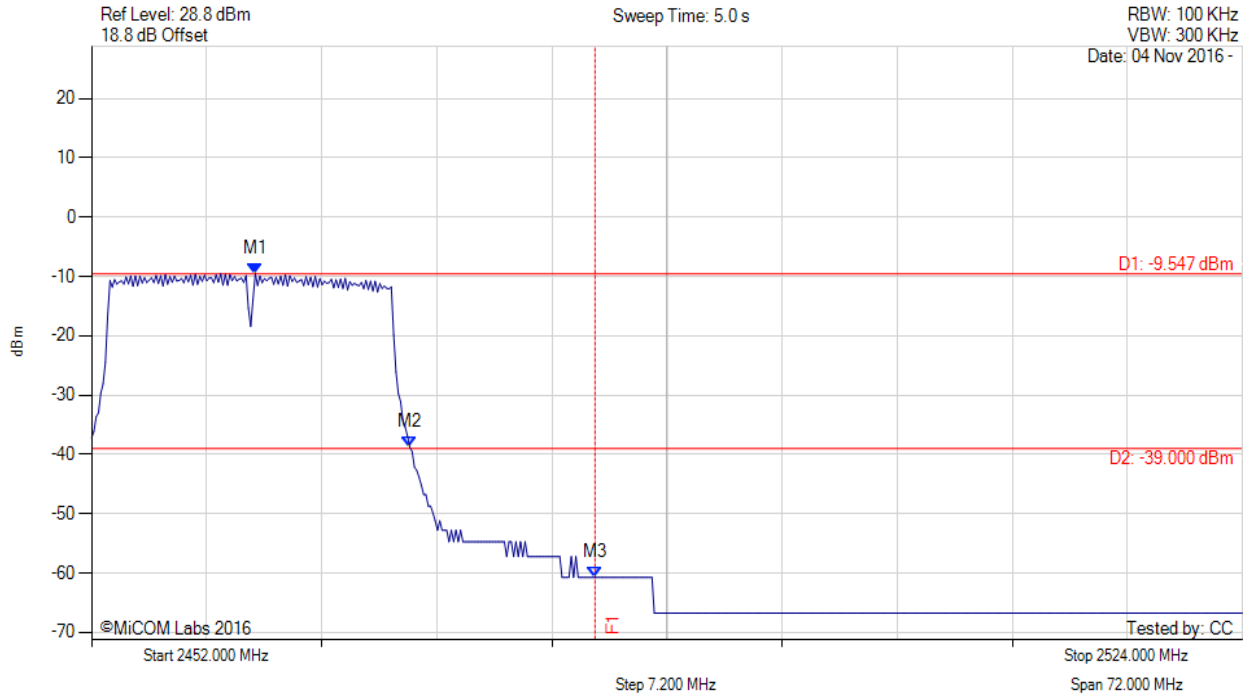
[back to matrix](#)

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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variante: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.244 MHz : -9.547 dBm M2 : 2471.912 MHz : -38.807 dBm M3 : 2483.500 MHz : -60.745 dBm	Channel Frequency: 2462.00 MHz

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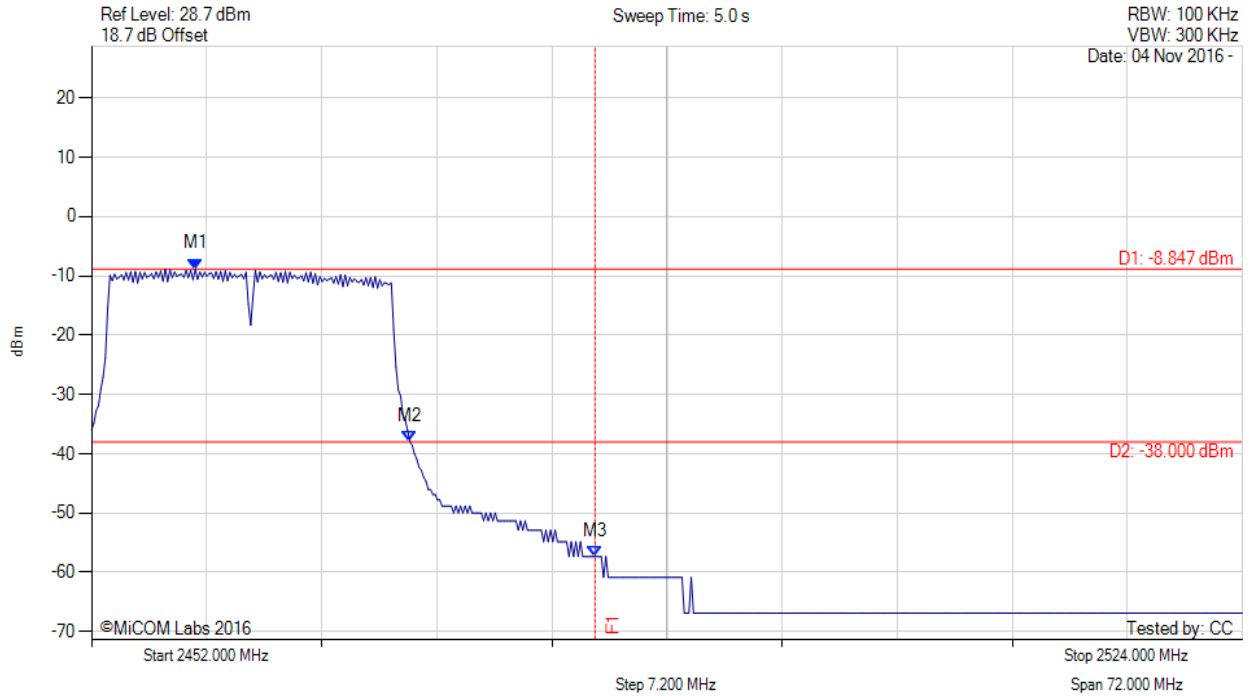


**Title:** Hewlett Packard Enterprise APINH303  
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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2458.493 MHz : -8.847 dBm M2 : 2471.912 MHz : -37.922 dBm M3 : 2483.500 MHz : -57.323 dBm	Channel Frequency: 2462.00 MHz

[back to matrix](#)

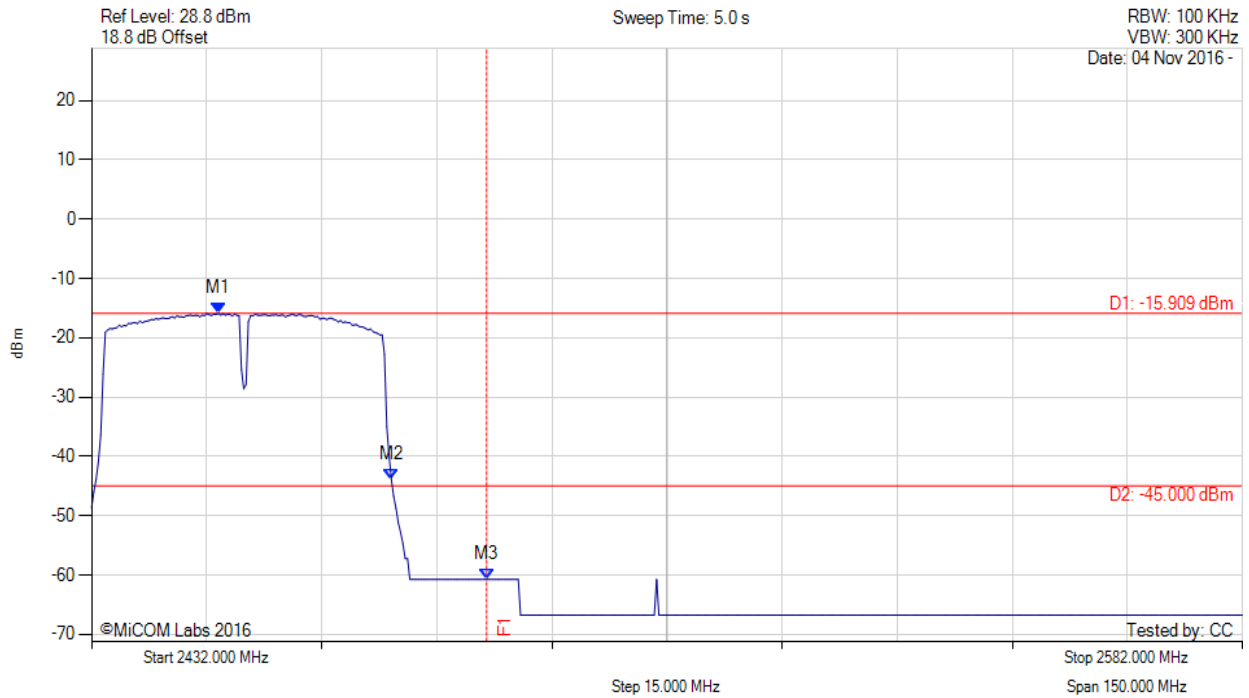
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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE



Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2448.533 MHz : -15.909 dBm M2 : 2471.078 MHz : -43.843 dBm M3 : 2483.500 MHz : -60.745 dBm	Channel Frequency: 2452.00 MHz

[back to matrix](#)

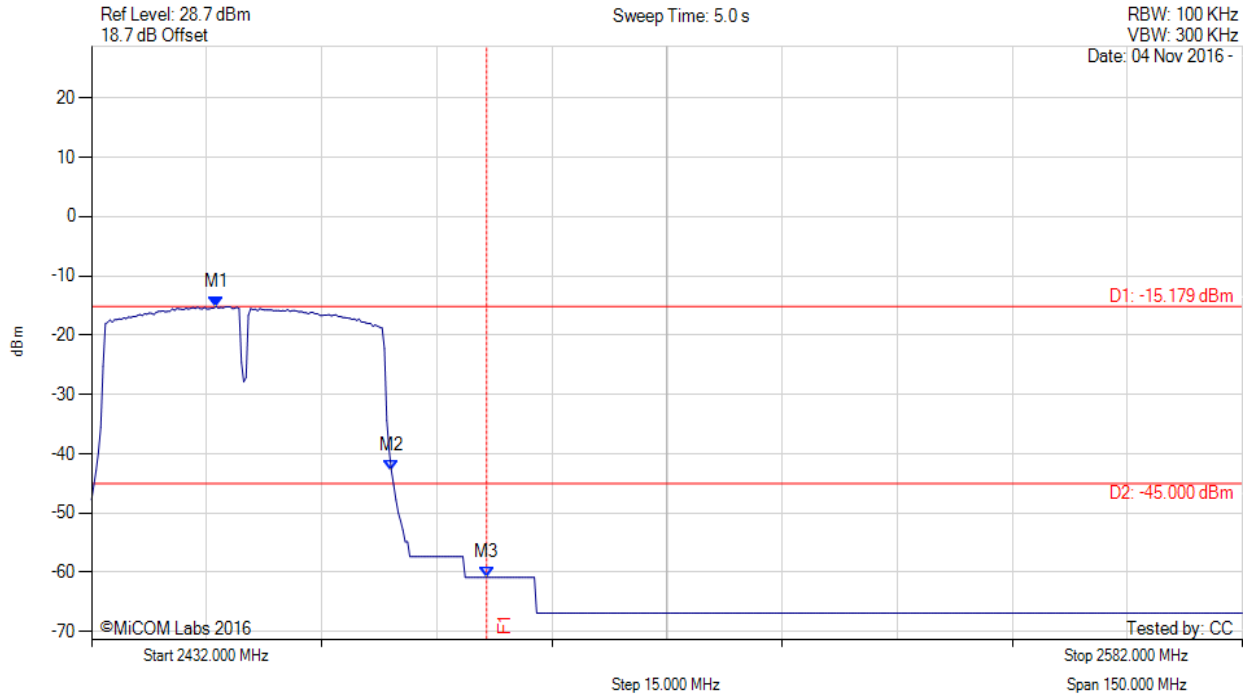
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CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE



Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2448.232 MHz : -15.179 dBm M2 : 2471.078 MHz : -42.783 dBm M3 : 2483.500 MHz : -60.845 dBm	Channel Frequency: 2452.00 MHz

[back to matrix](#)

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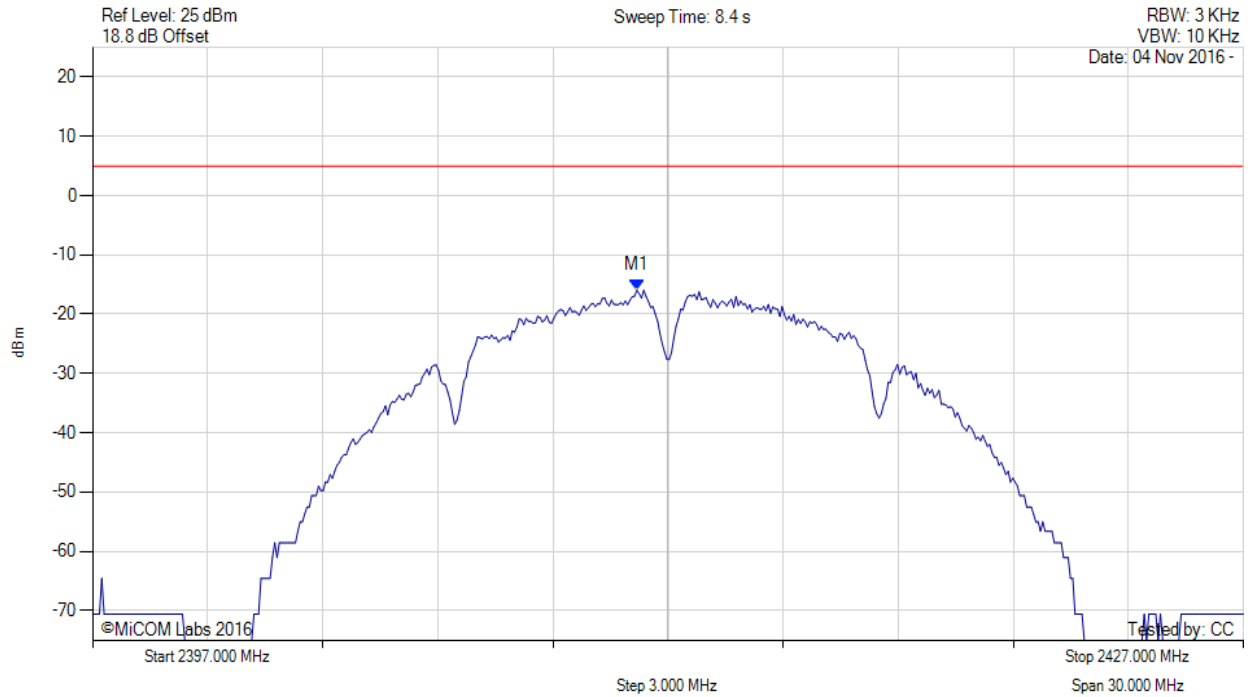


### A.3. Power Spectral Density



#### POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2411.188 MHz : -15.950 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

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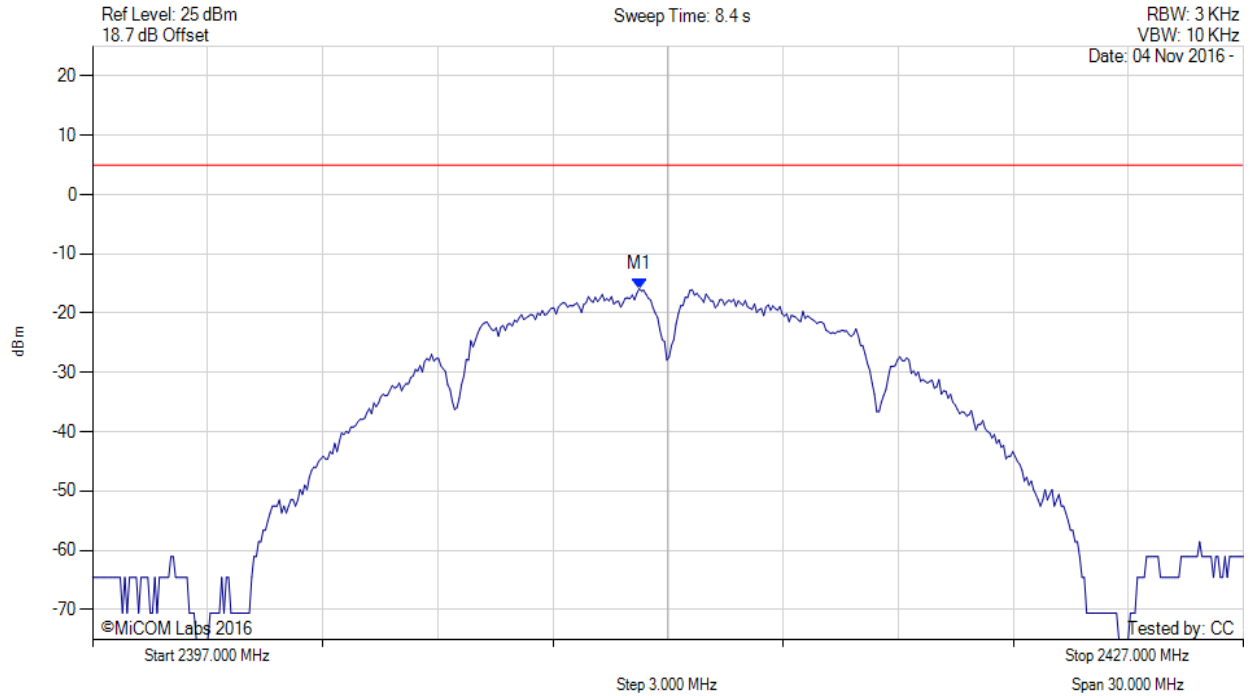


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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11b, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2411.248 MHz : -15.885 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

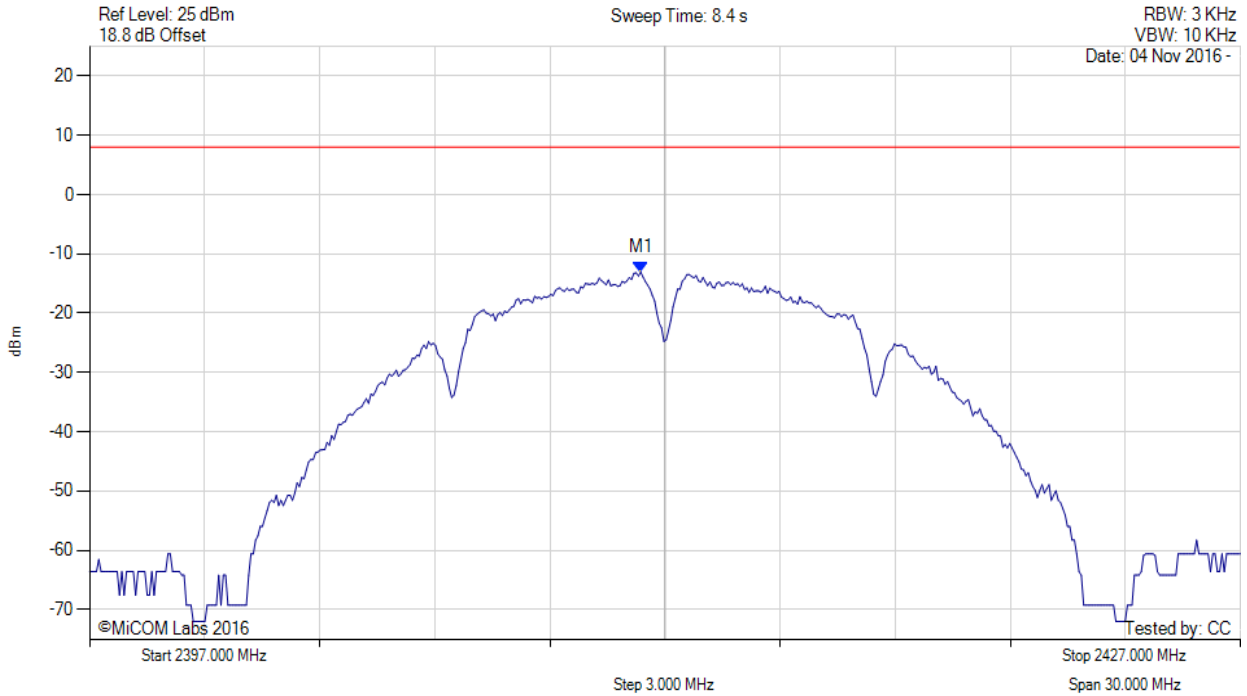
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11b, Channel: 2412.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2411.400 MHz : -13.045 dBm M1 + DCCF : 2411.400 MHz : -13.001 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -21.0 dB

[back to matrix](#)

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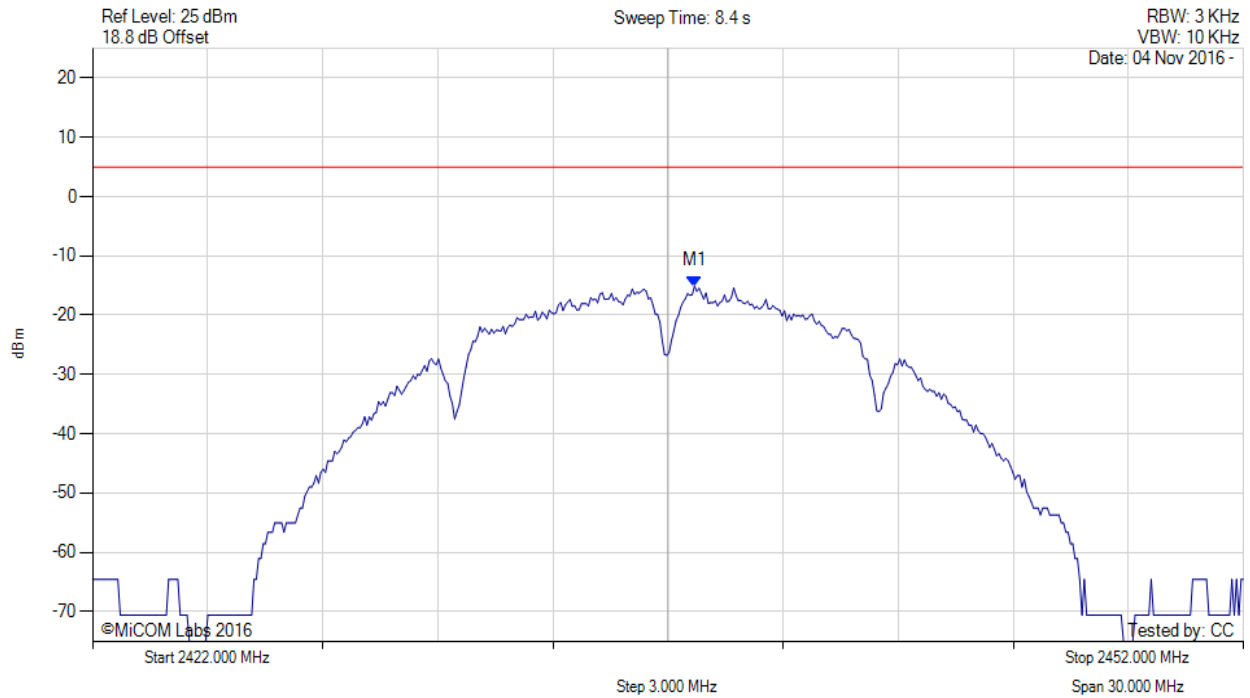


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11b, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.691 MHz : -15.104 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

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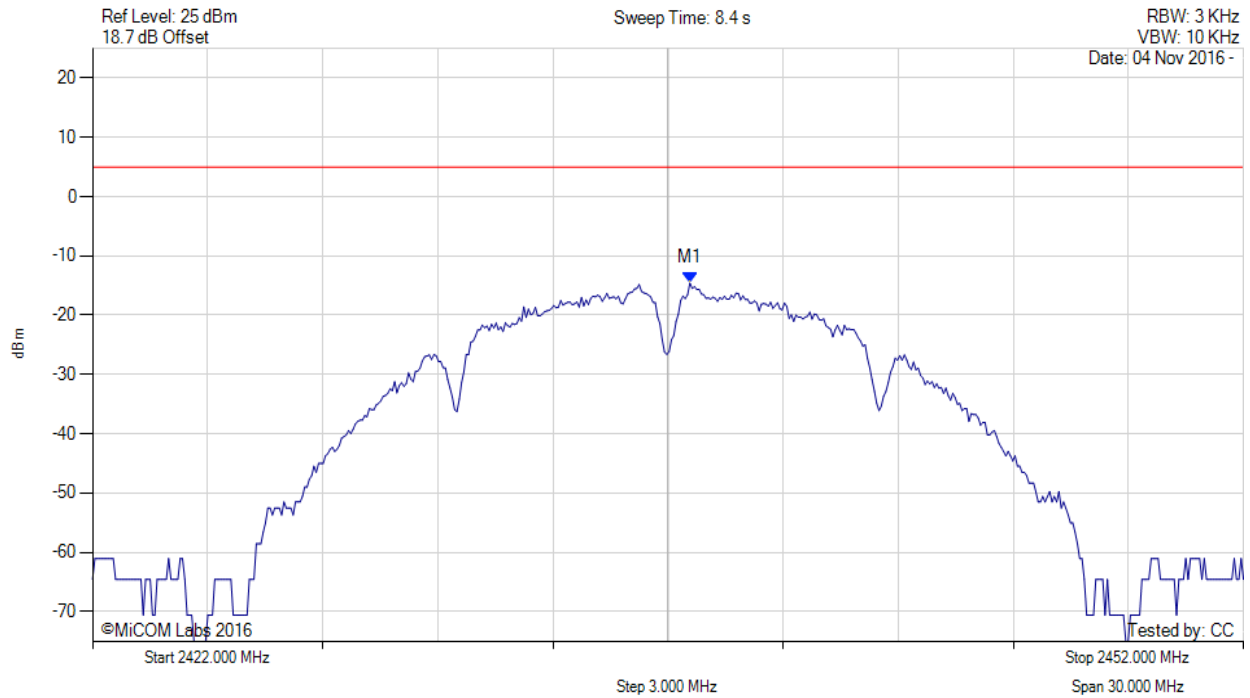


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11b, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.571 MHz : -14.579 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

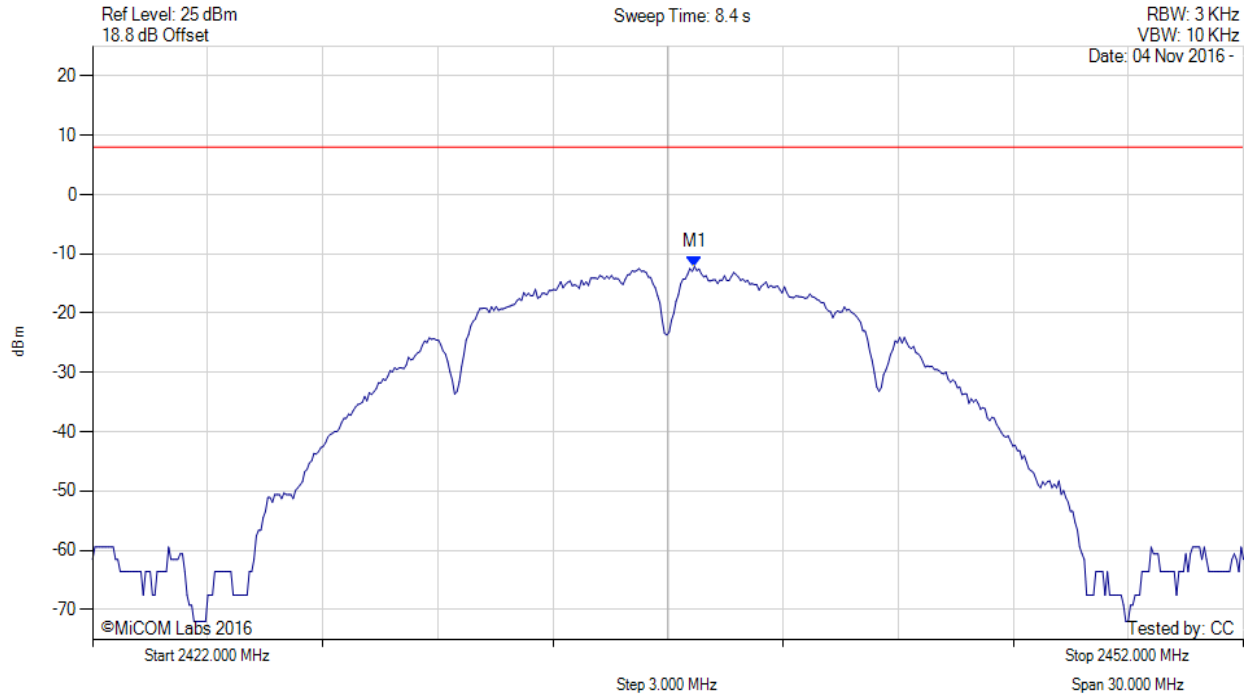
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11b, Channel: 2437.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.700 MHz : -12.138 dBm M1 + DCCF : 2437.700 MHz : -12.094 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -20.1 dB

[back to matrix](#)

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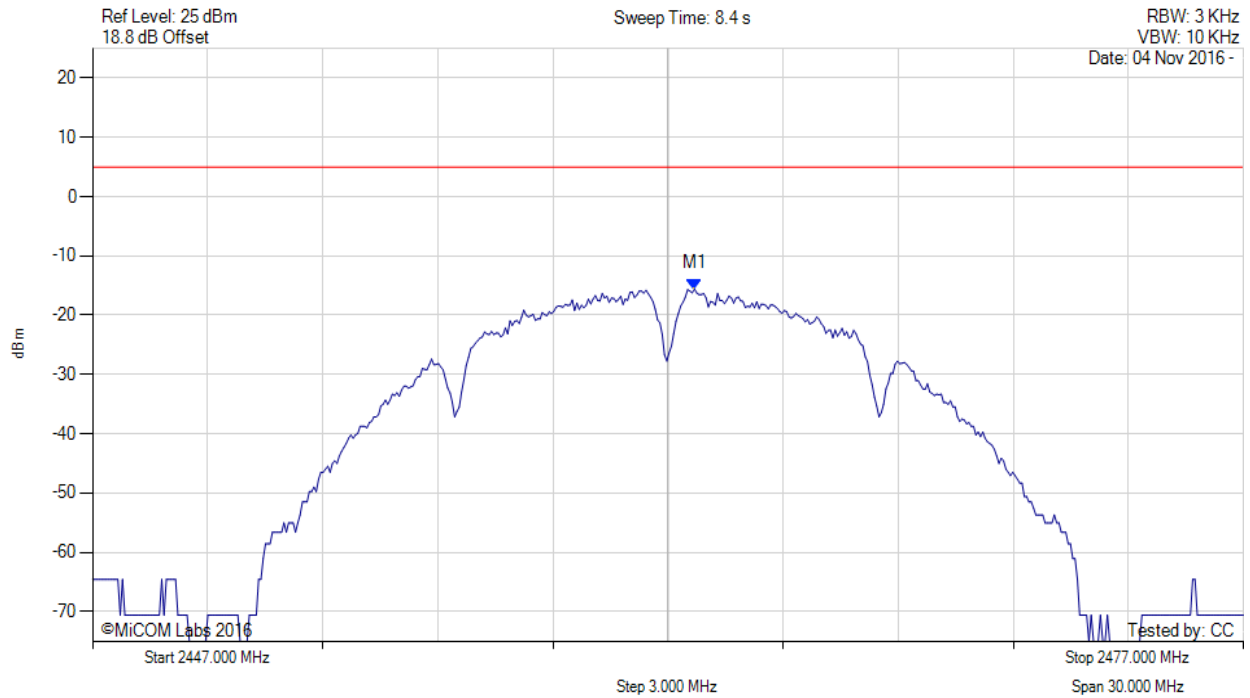


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11b, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.691 MHz : -15.586 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

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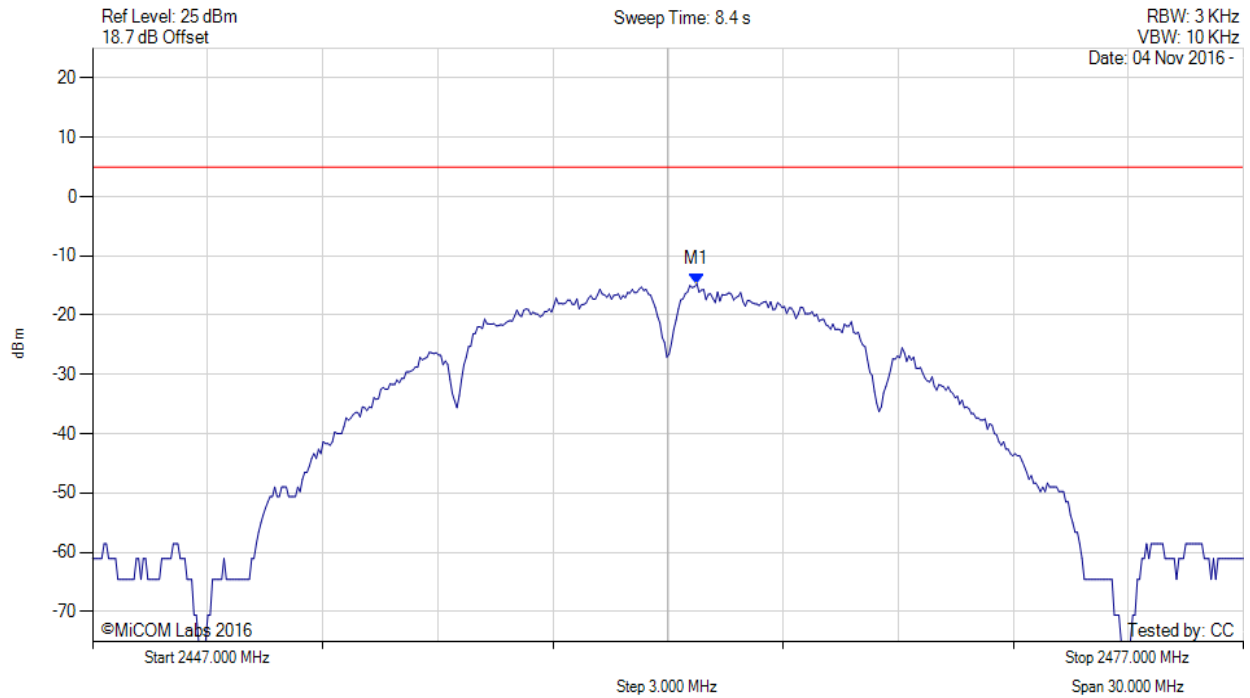


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11b, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.752 MHz : -14.704 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

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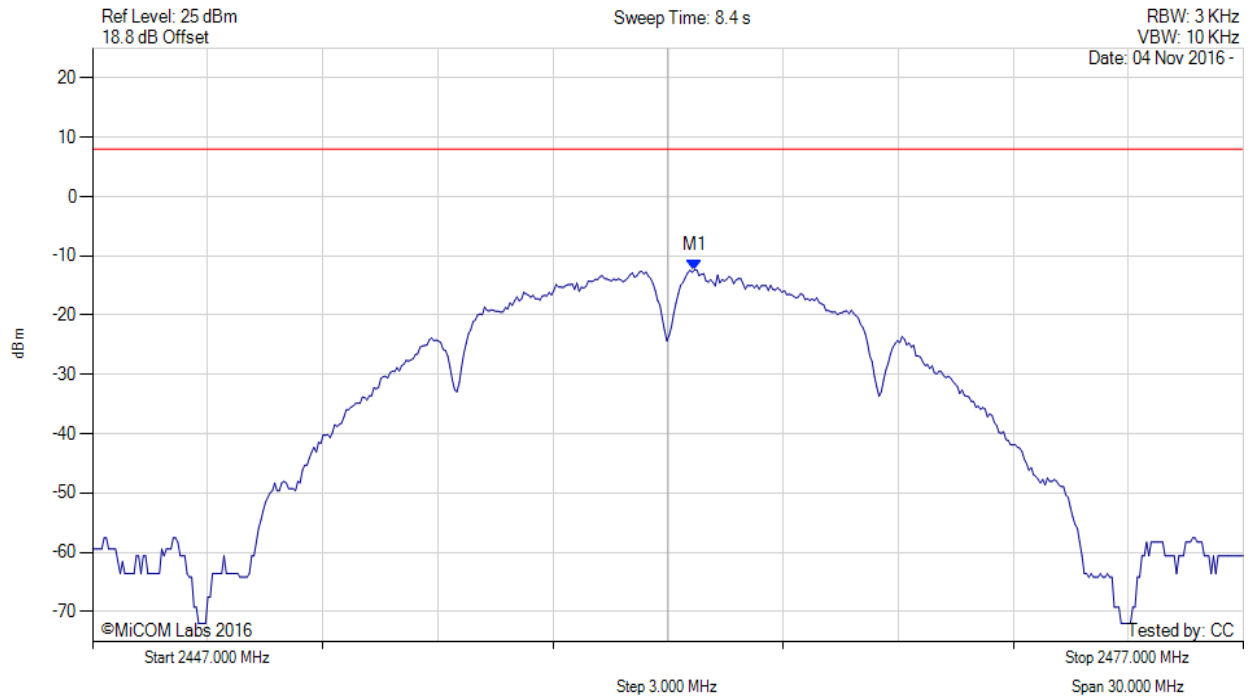




POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11b, Channel: 2462.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.700 MHz : -12.375 dBm M1 + DCCF : 2462.700 MHz : -12.331 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -20.3 dB

[back to matrix](#)

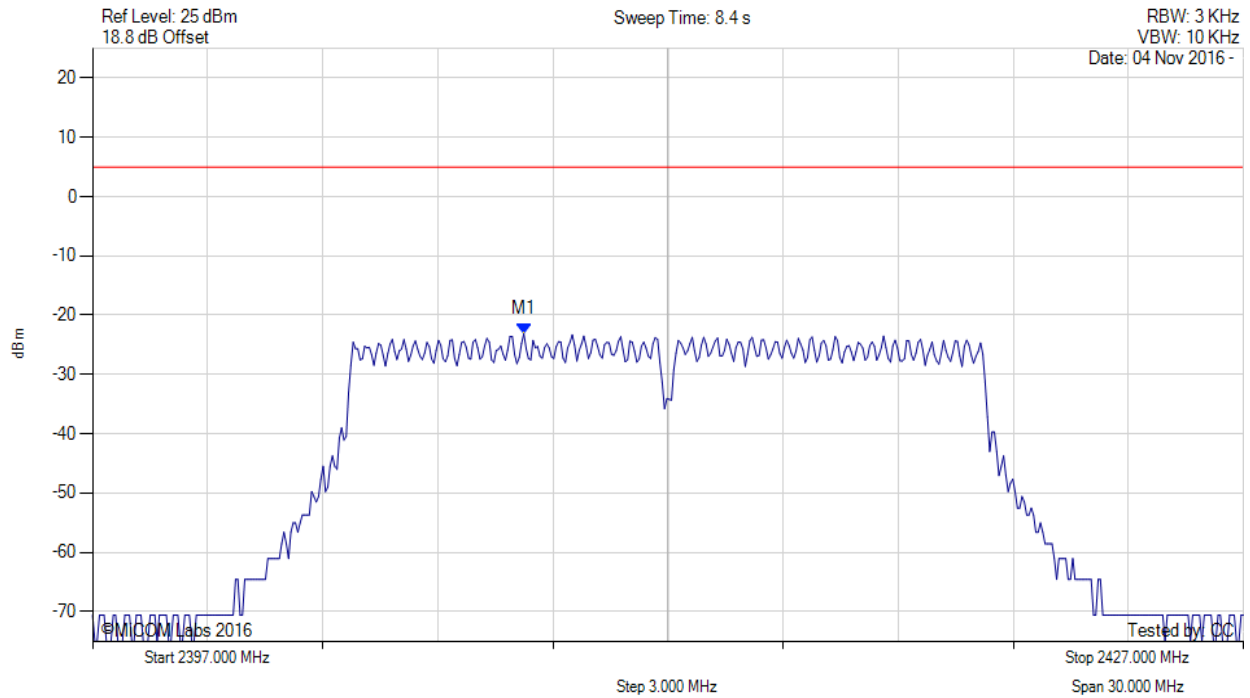
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11g, Channel: 2412.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2408.242 MHz : -23.107 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

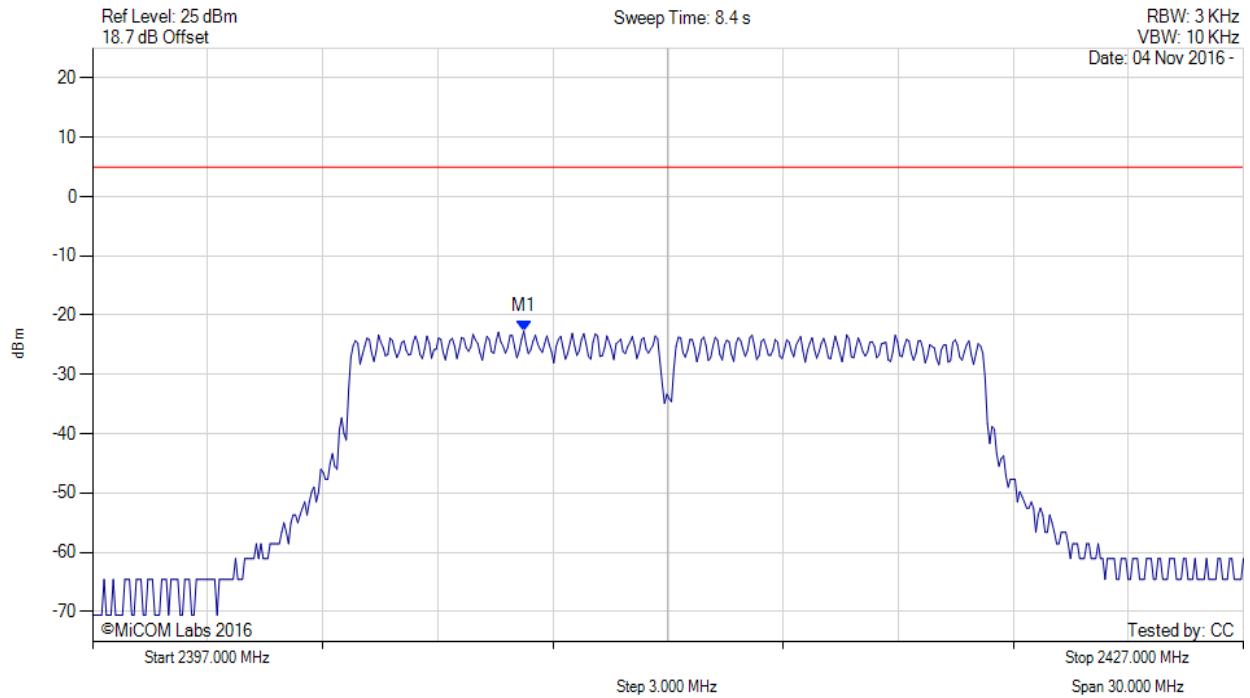
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11g, Channel: 2412.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2408.242 MHz : -22.676 dBm	Limit: $\leq 4.990$ dBm

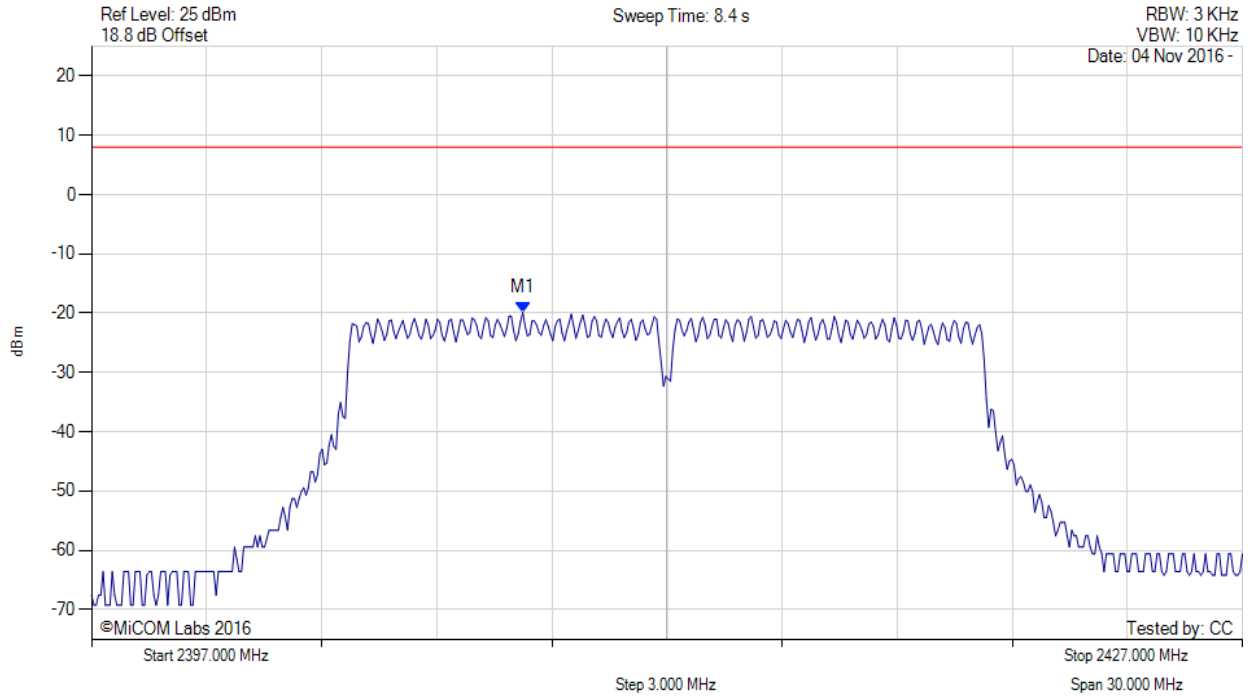
[back to matrix](#)

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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11g, Channel: 2412.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2408.200 MHz : -19.876 dBm M1 + DCCF : 2408.200 MHz : -19.832 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -27.8 dB

[back to matrix](#)

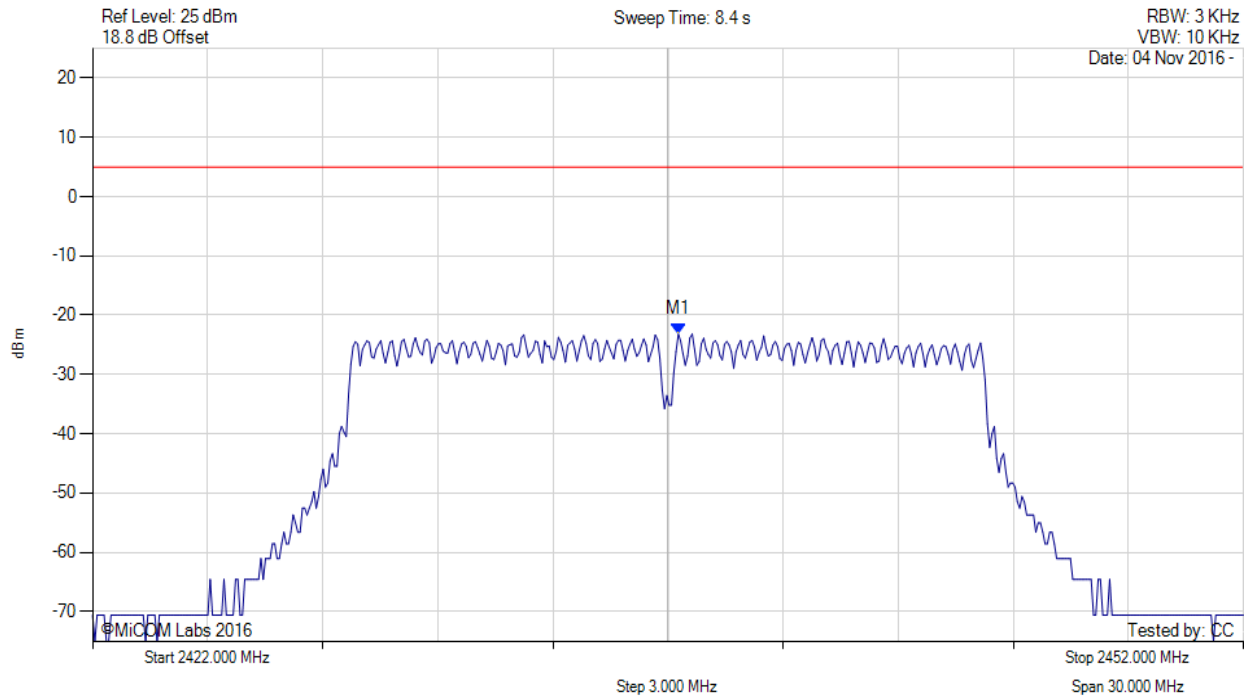
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11g, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.271 MHz : -23.181 dBm	Limit: $\leq 4.990$ dBm

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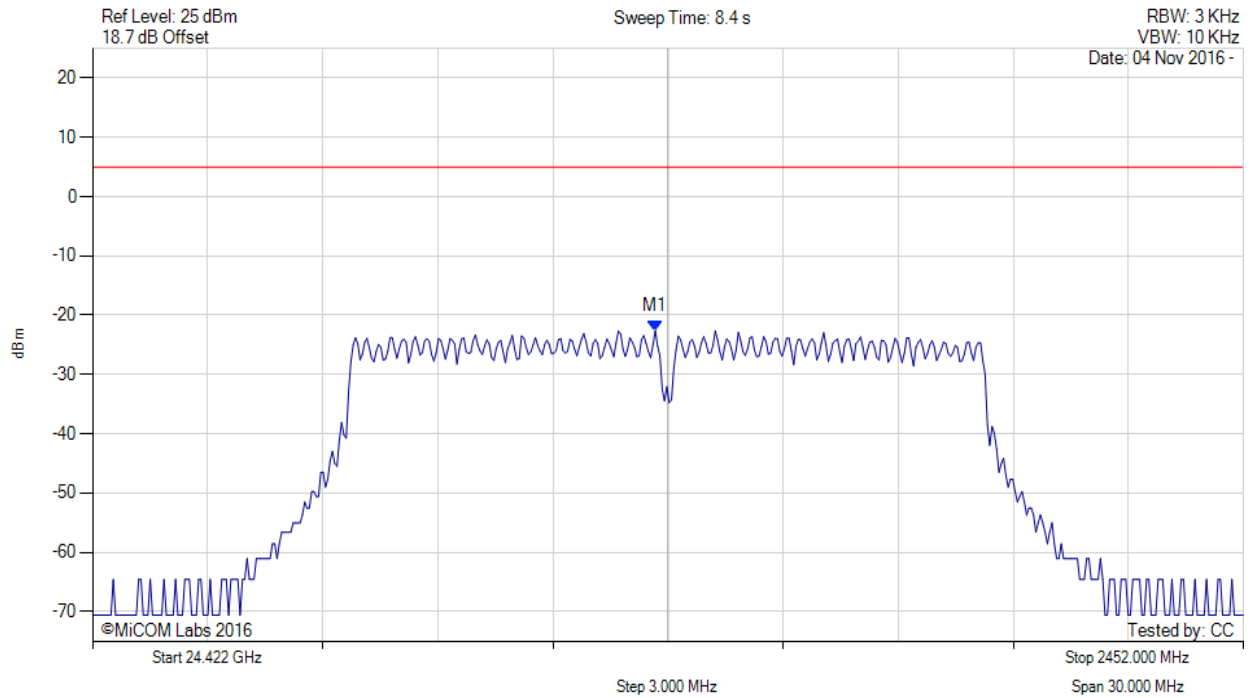


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11g, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.669 MHz : -22.607 dBm	Limit: $\leq 4.990$ dBm

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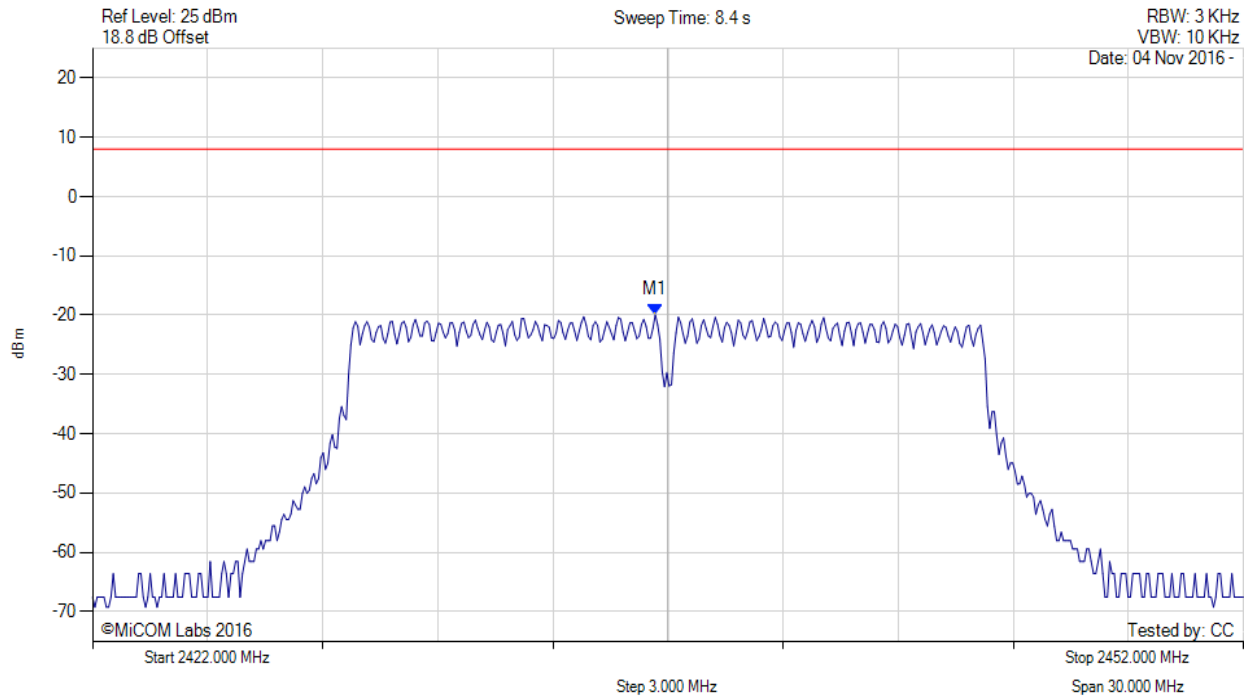


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11g, Channel: 2437.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2436.700 MHz : -19.943 dBm M1 + DCCF : 2436.700 MHz : -19.899 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -27.9 dB

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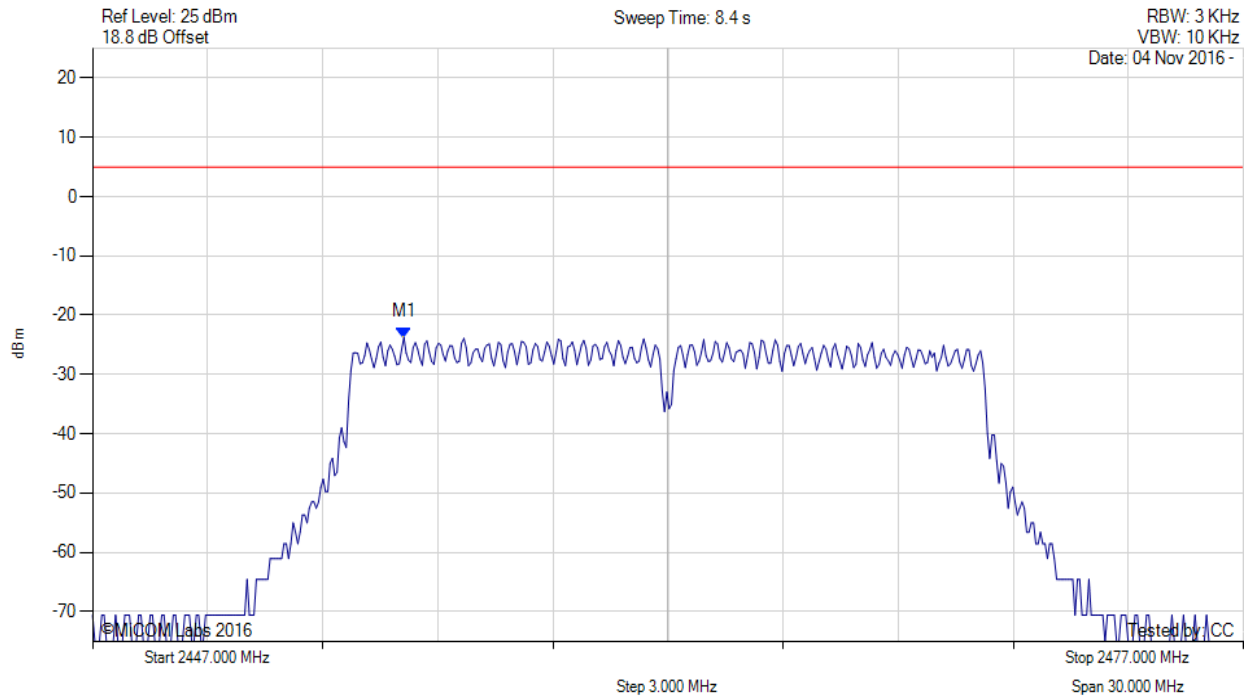
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11g, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2455.116 MHz : -23.756 dBm	Limit: $\leq 4.990$ dBm

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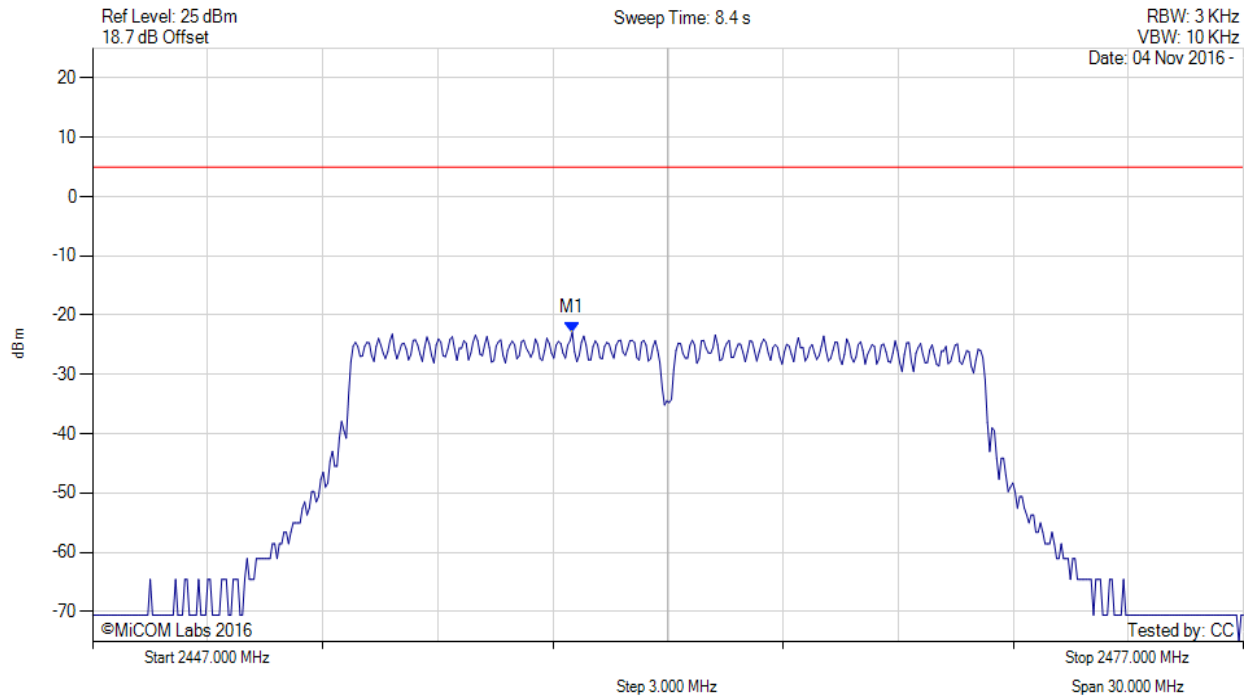


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWPD85-U5\_Conducted Rev A  
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11g, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2459.505 MHz : -22.889 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

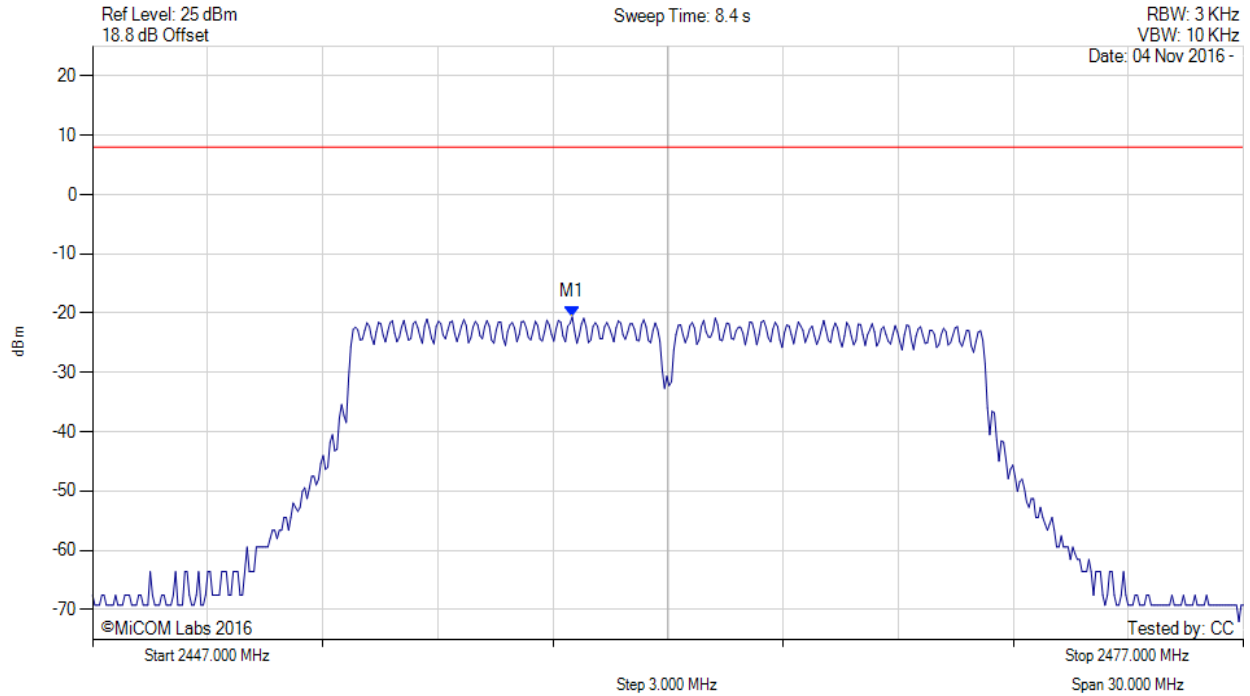
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11g, Channel: 2462.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2459.500 MHz : -20.611 dBm M1 + DCCF : 2459.500 MHz : -20.567 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -28.6 dB

[back to matrix](#)

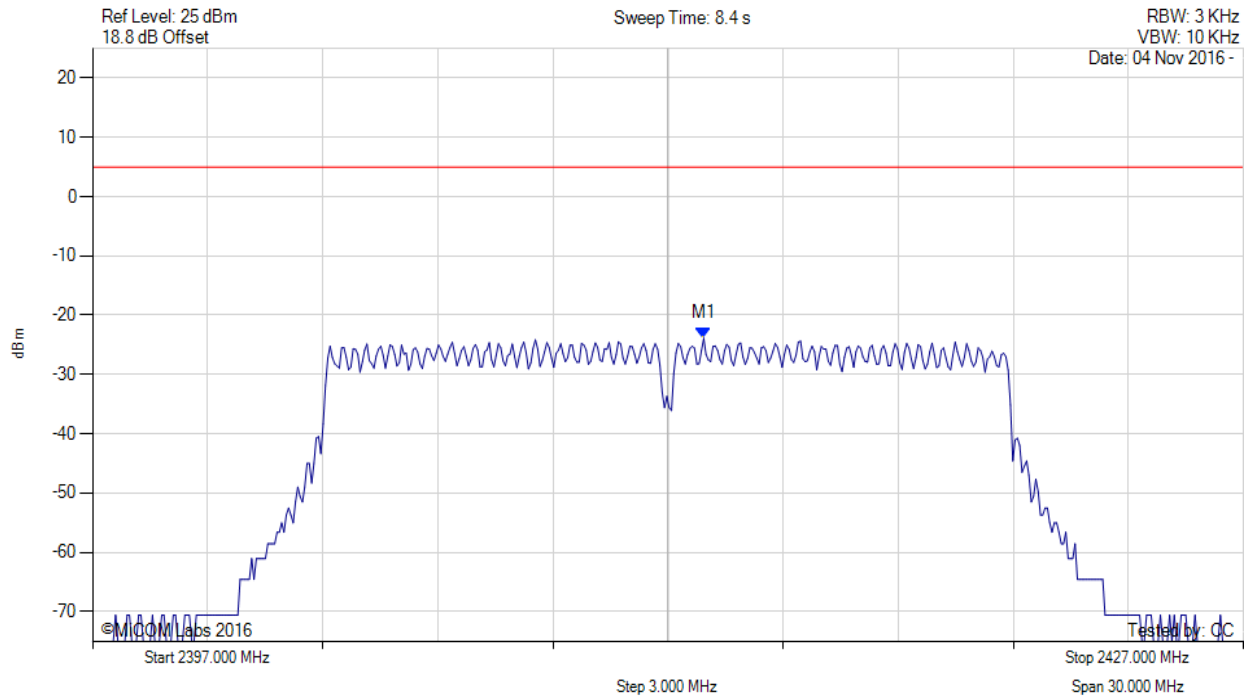
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POWER SPECTRAL DENSITY - AVERAGE



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.932 MHz : -23.876 dBm	Limit: $\leq 4.990$ dBm

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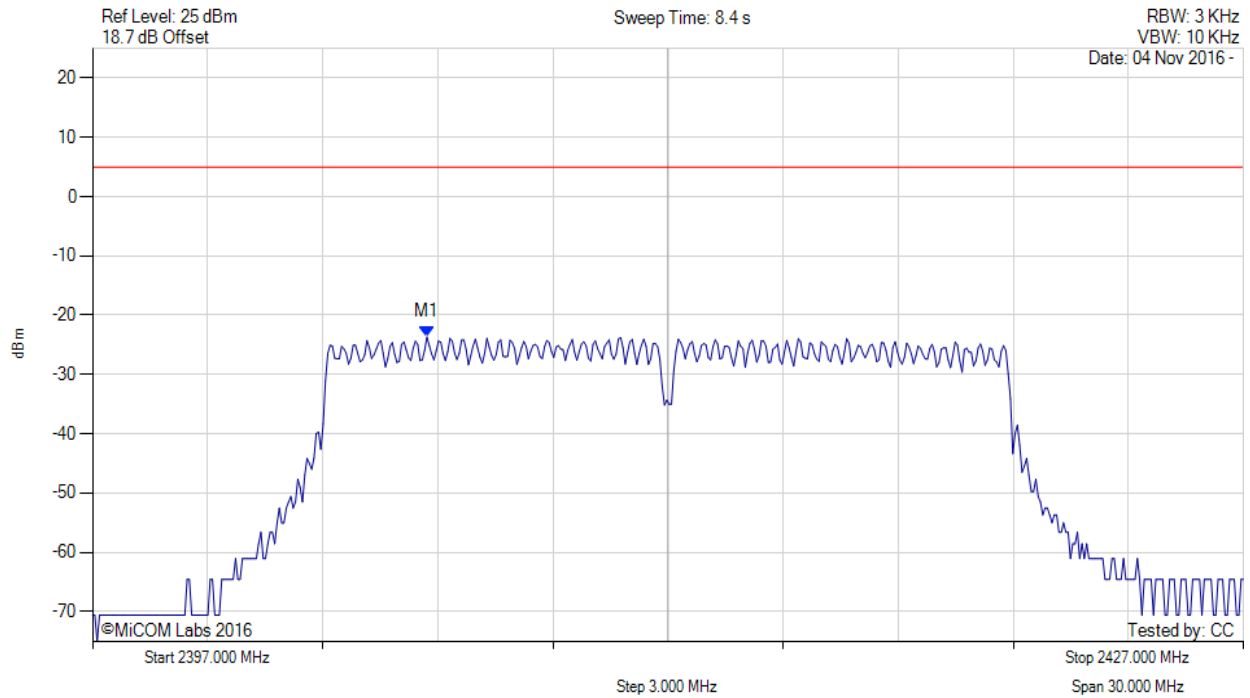


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
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POWER SPECTRAL DENSITY - AVERAGE

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2405.717 MHz : -23.677 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

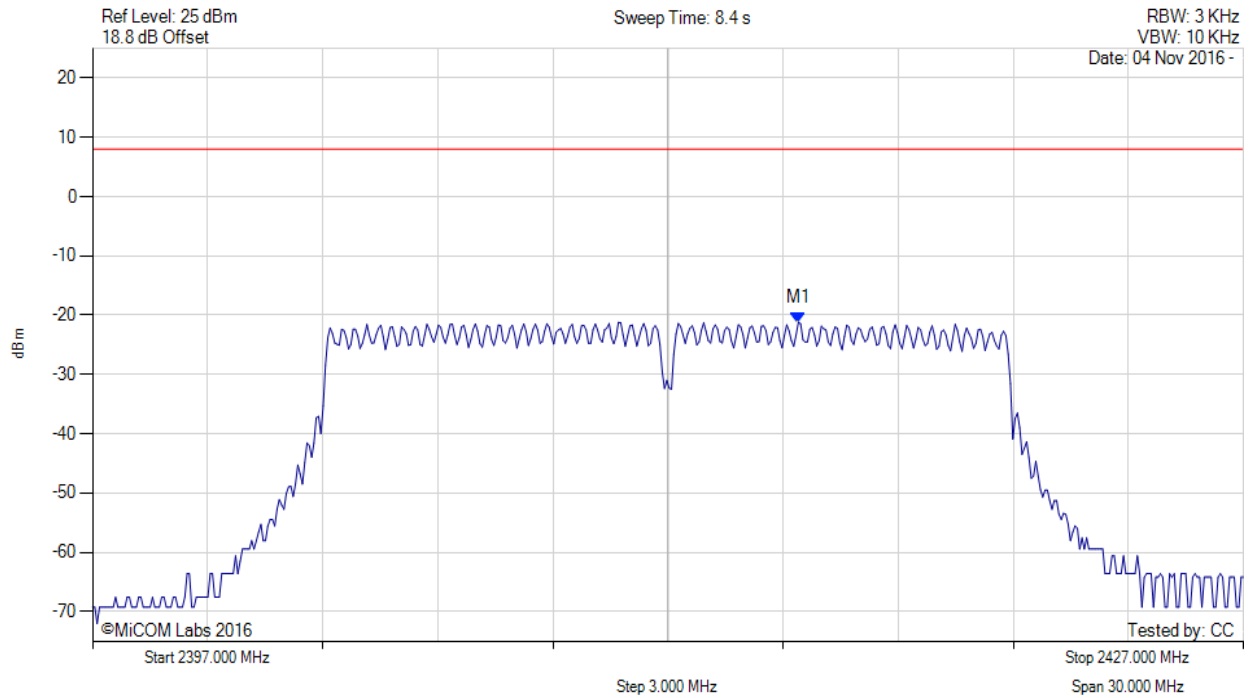
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-20, Channel: 2412.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2415.400 MHz : -21.210 dBm M1 + DCCF : 2415.400 MHz : -21.166 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -29.2 dB

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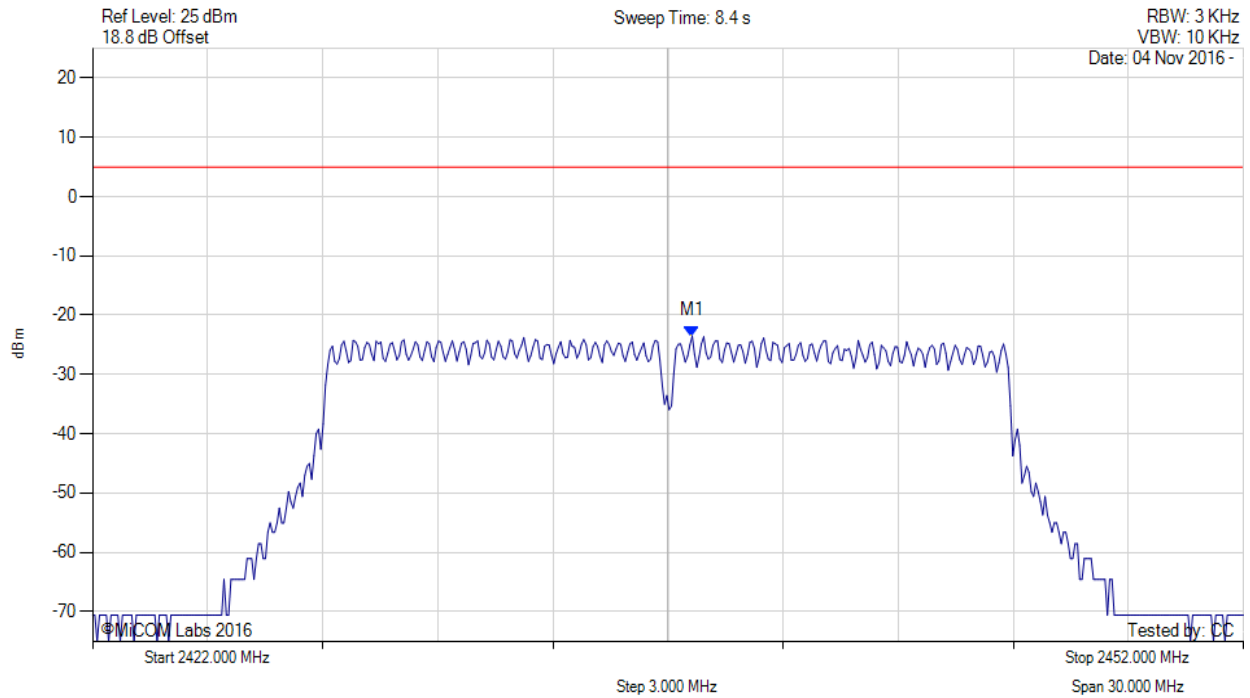


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-20, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2437.631 MHz : -23.522 dBm	Limit: $\leq 4.990$ dBm

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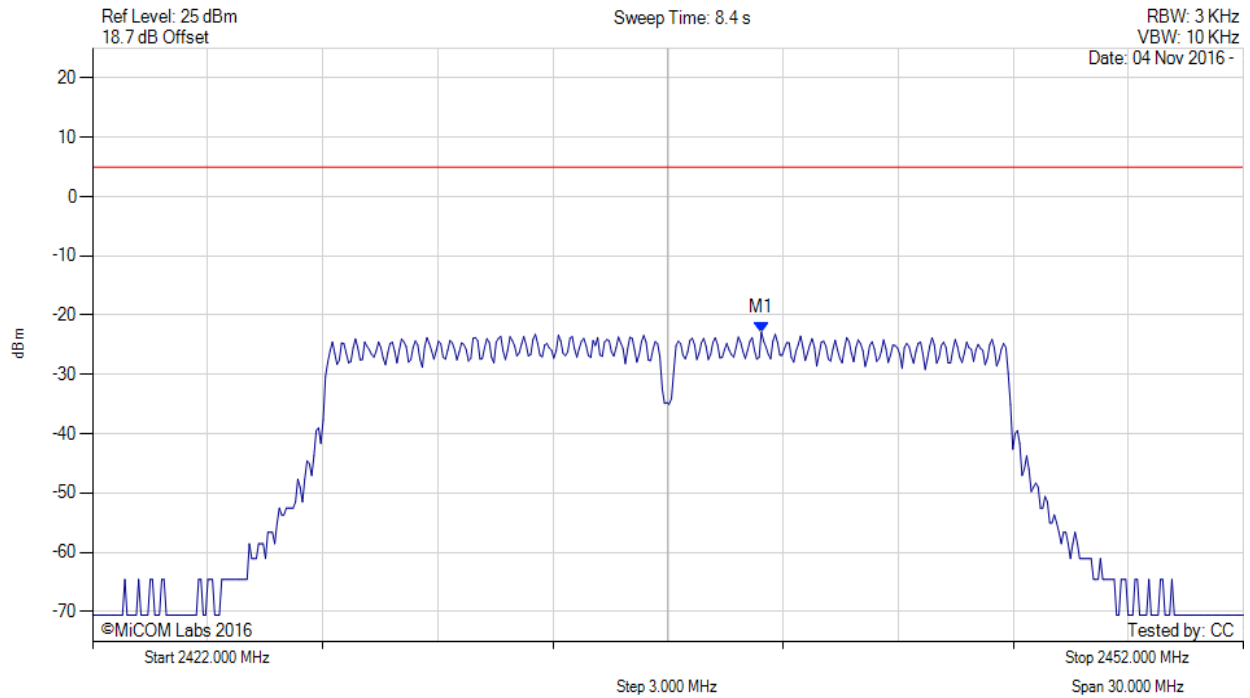


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POWER SPECTRAL DENSITY - AVERAGE



Variante: 802.11n HT-20, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2439.435 MHz : -22.853 dBm	Limit: $\leq 4.990$ dBm

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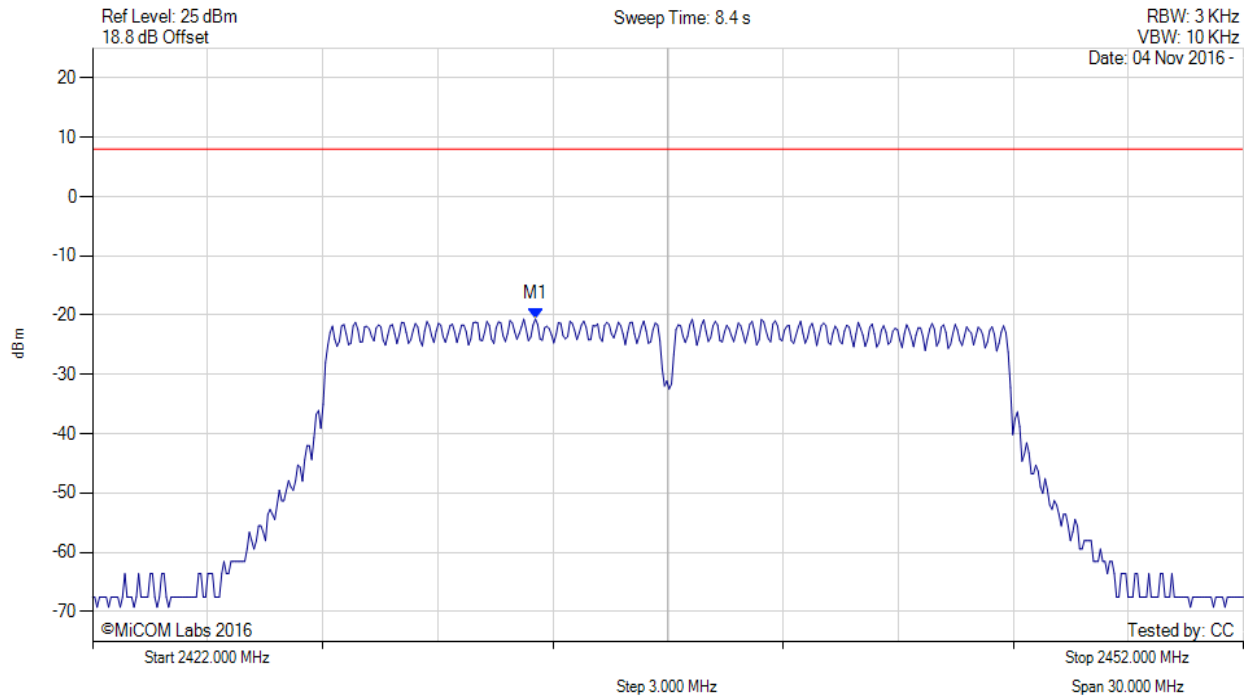
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-20, Channel: 2437.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2433.500 MHz : -20.636 dBm M1 + DCCF : 2433.500 MHz : -20.592 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -28.6 dB

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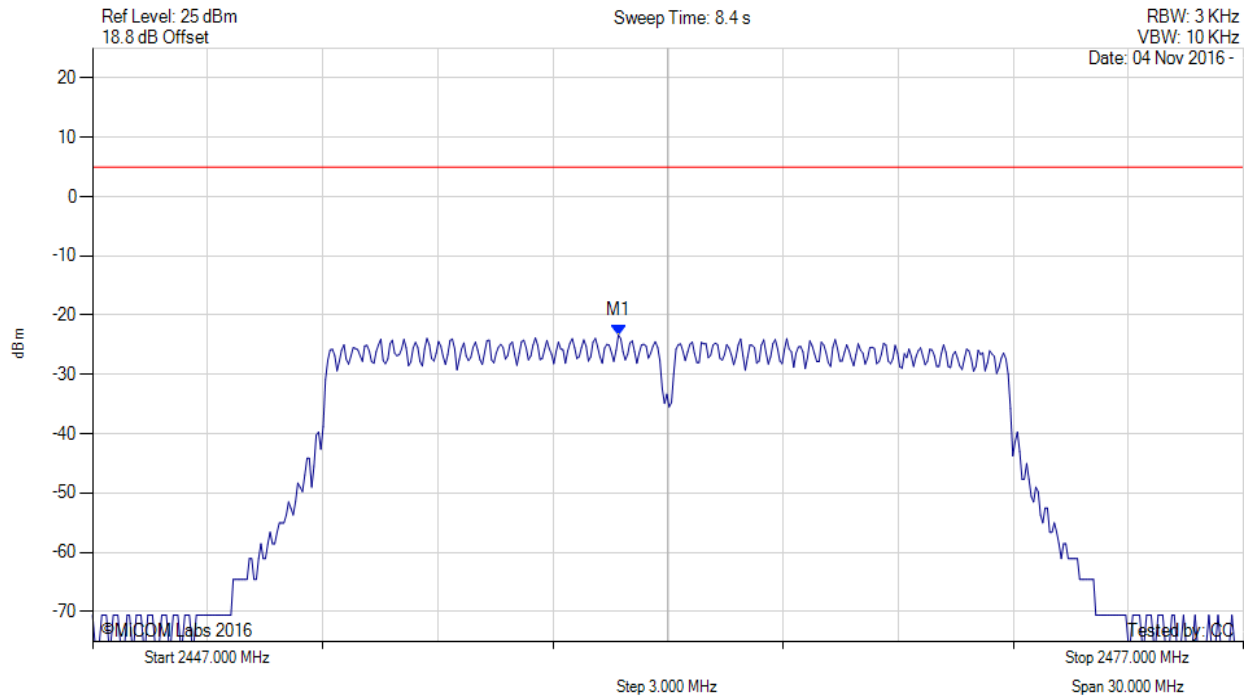




POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-20, Channel: 2462.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.707 MHz : -23.331 dBm	Limit: $\leq 4.990$ dBm

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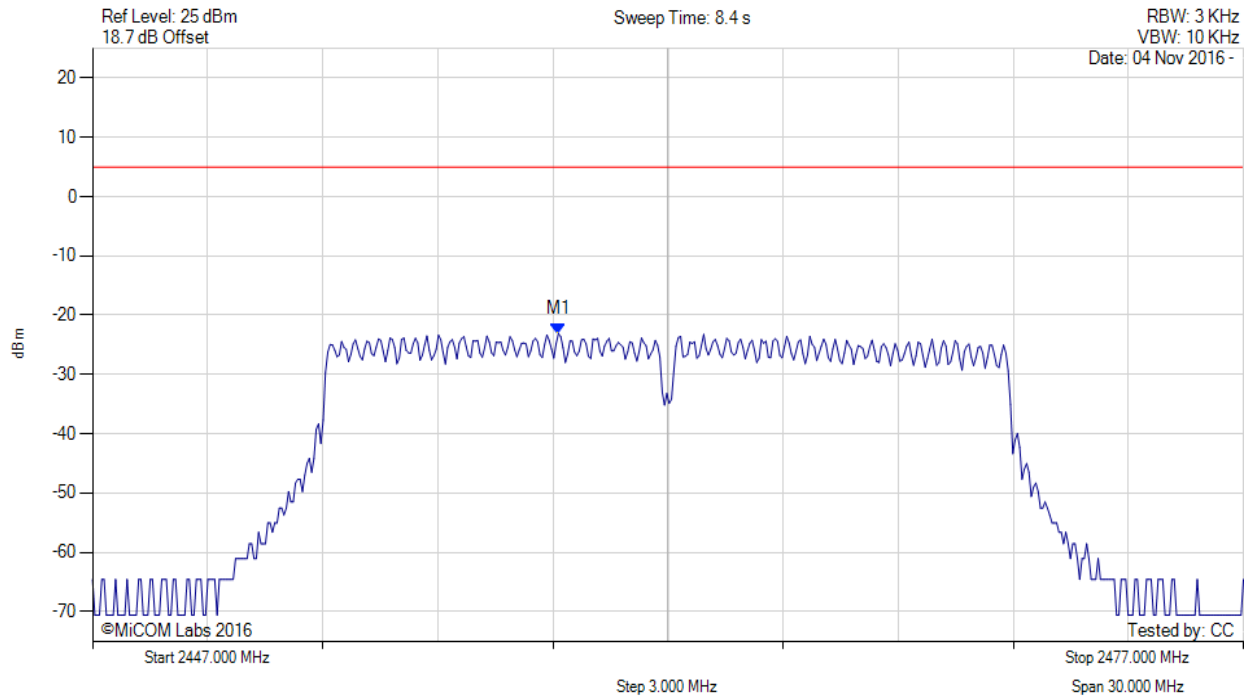
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POWER SPECTRAL DENSITY - AVERAGE



Variante: 802.11n HT-20, Channel: 2462.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2459.144 MHz : -23.070 dBm	Limit: $\leq 4.990$ dBm

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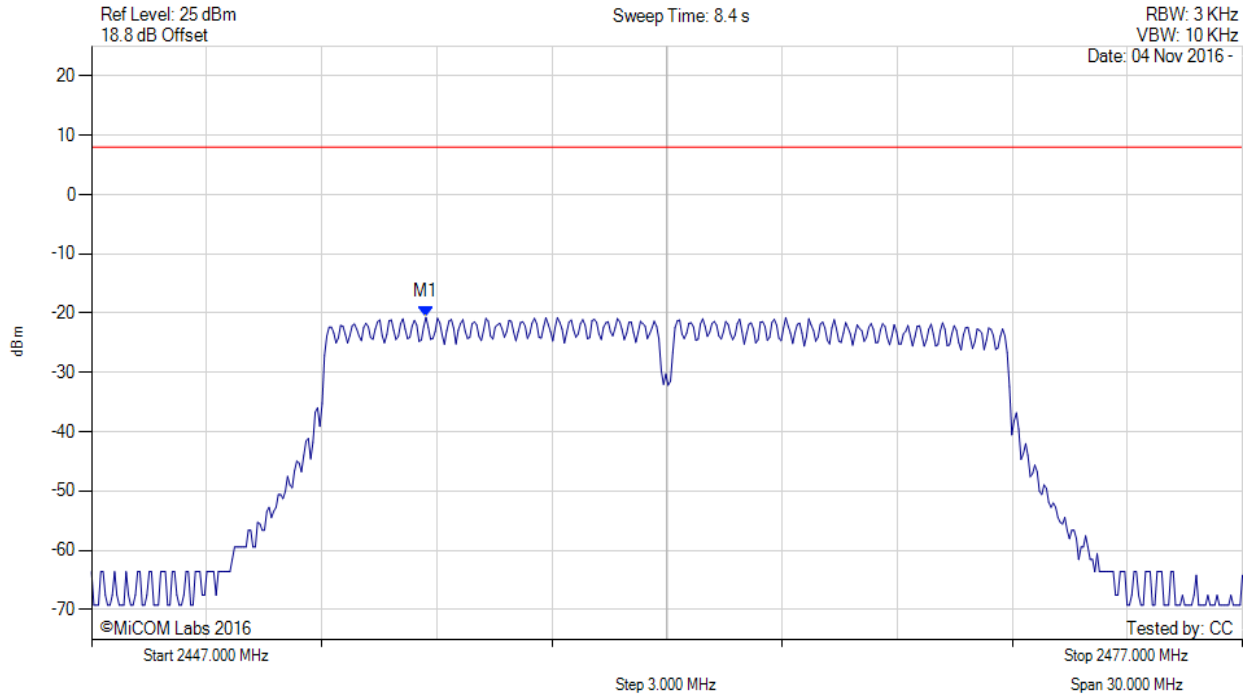
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-20, Channel: 2462.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2455.700 MHz : -20.684 dBm M1 + DCCF : 2455.700 MHz : -20.640 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -28.7 dB

[back to matrix](#)

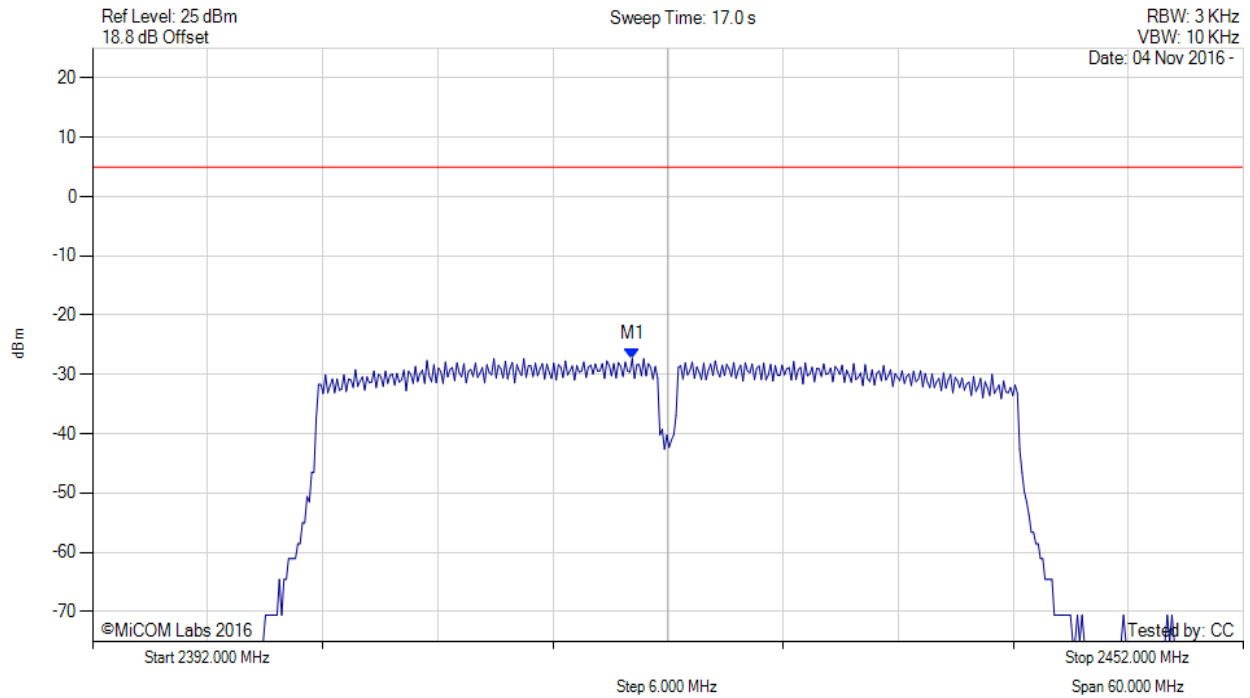
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2420.136 MHz : -27.278 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

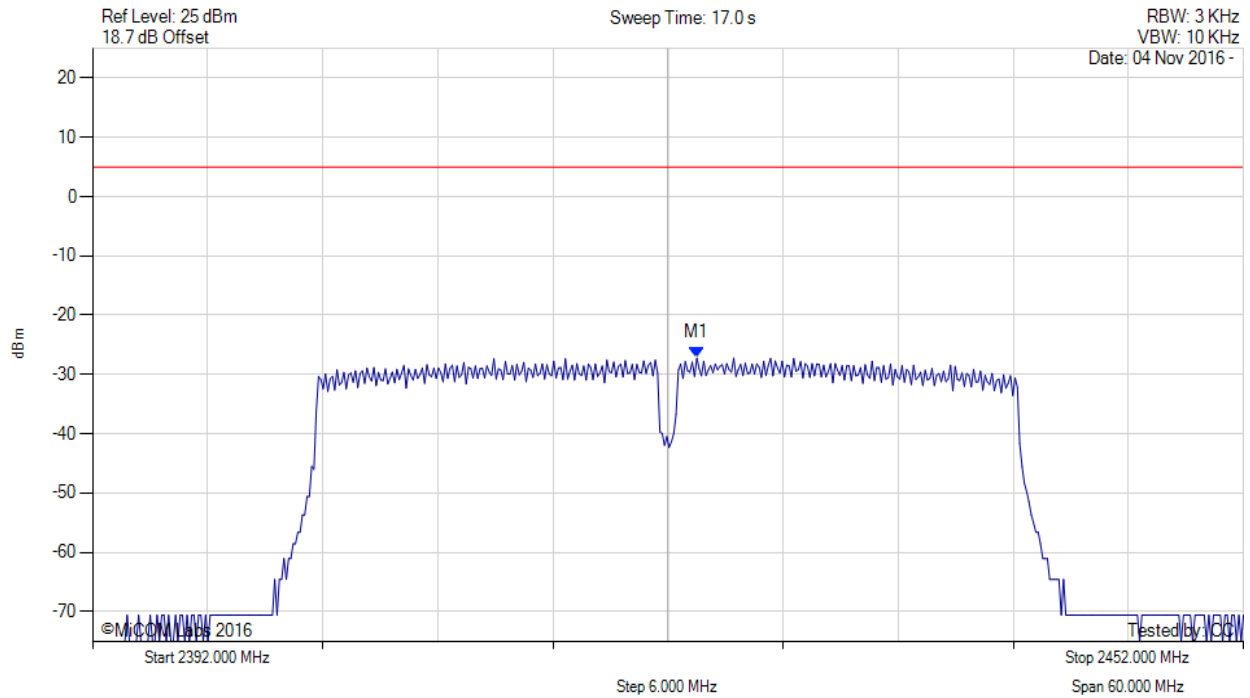
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-40, Channel: 2422.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2423.503 MHz : -27.219 dBm	Limit: $\leq 4.990$ dBm

[back to matrix](#)

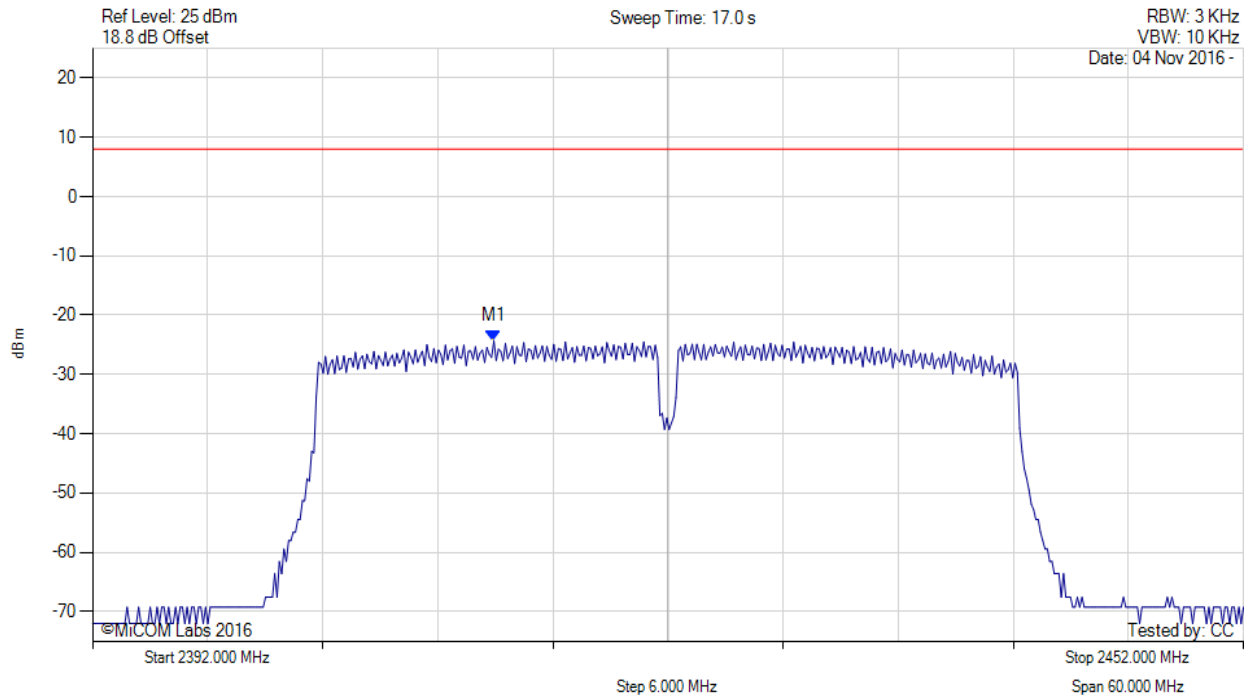
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-40, Channel: 2422.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2412.900 MHz : -24.328 dBm M1 + DCCF : 2412.900 MHz : -24.284 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -32.3 dB

[back to matrix](#)

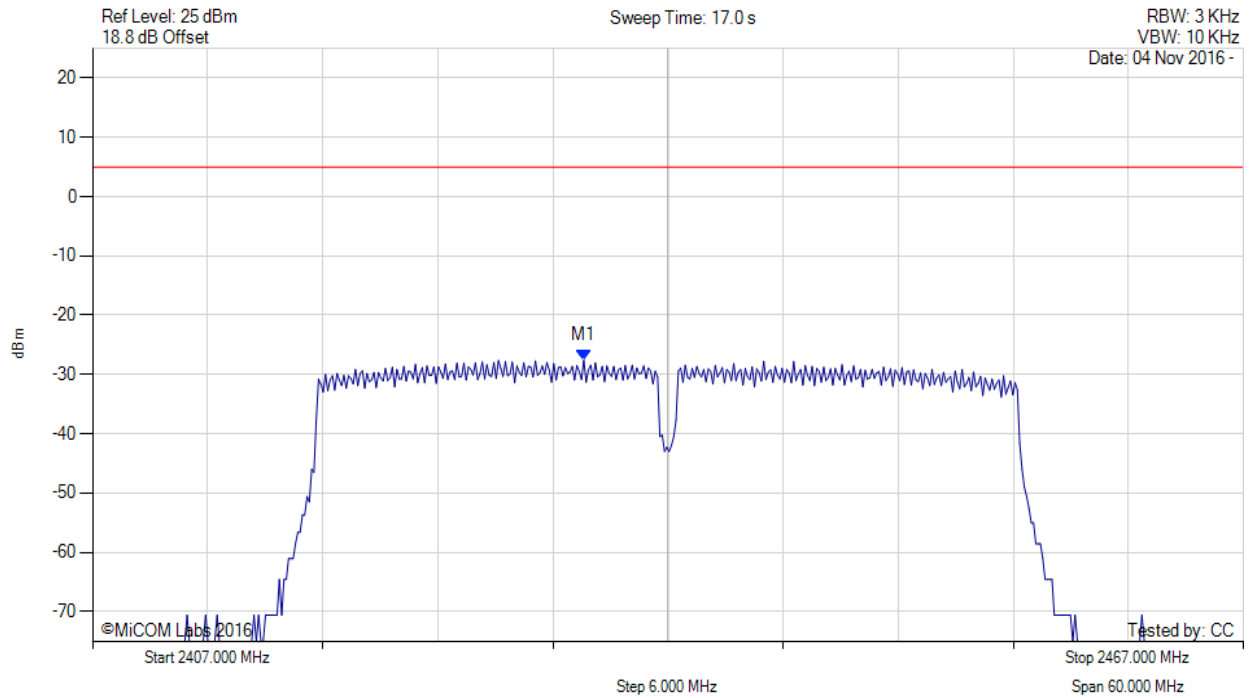
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2432.611 MHz : -27.581 dBm	Limit: $\leq 4.990$ dBm

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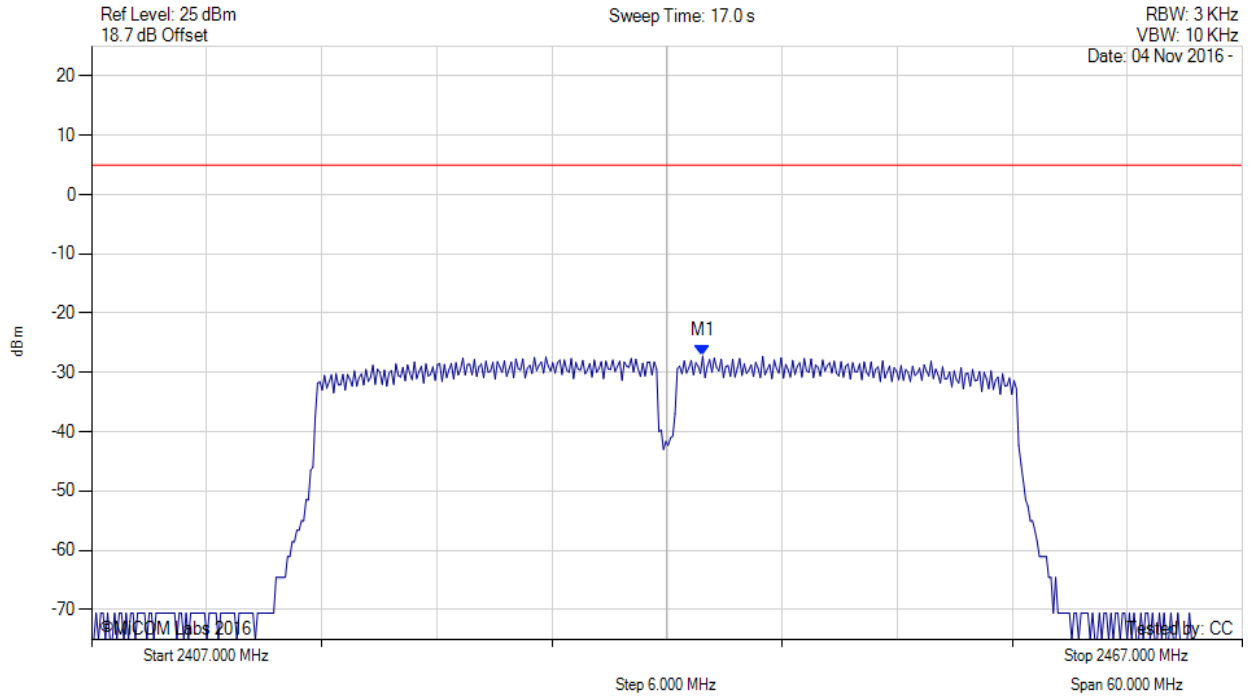
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-40, Channel: 2437.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2438.864 MHz : -27.219 dBm	Limit: $\leq 4.990$ dBm

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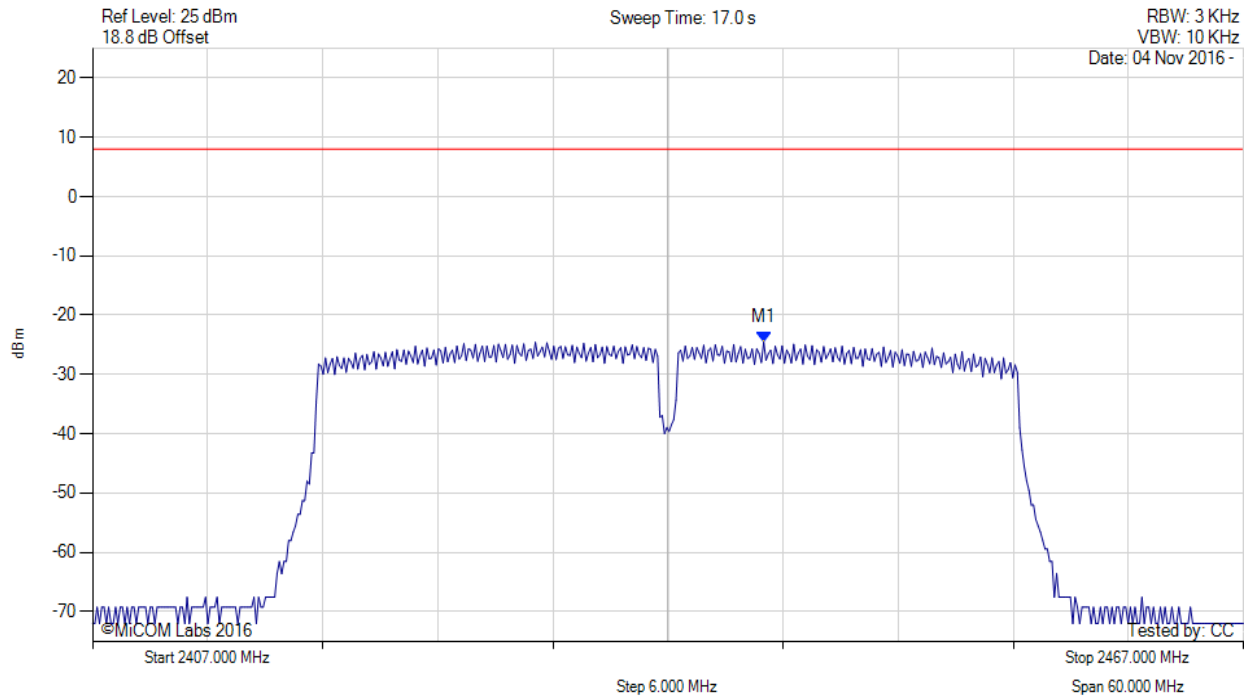




POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-40, Channel: 2437.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2442.000 MHz : -24.506 dBm M1 + DCCF : 2442.000 MHz : -24.462 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -32.5 dB

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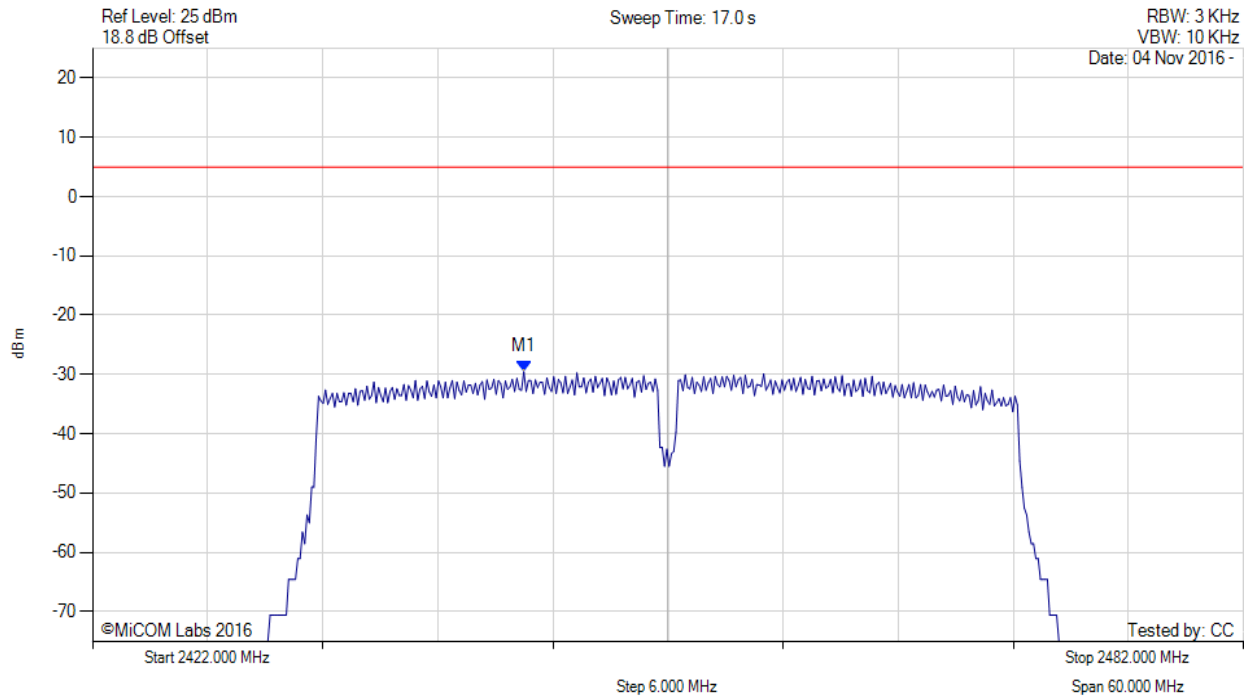


**Title:** Hewlett Packard Enterprise APINH303  
**To:** FCC CFR 47 Part 15.247 (DTS) & IC RSS-247  
**Serial #:** HWP85-U5\_Conducted Rev A  
**Issue Date:** 1<sup>st</sup> December 2016  
**Page:** 130 of 133

POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2444.485 MHz : -29.504 dBm	Limit: $\leq 4.990$ dBm

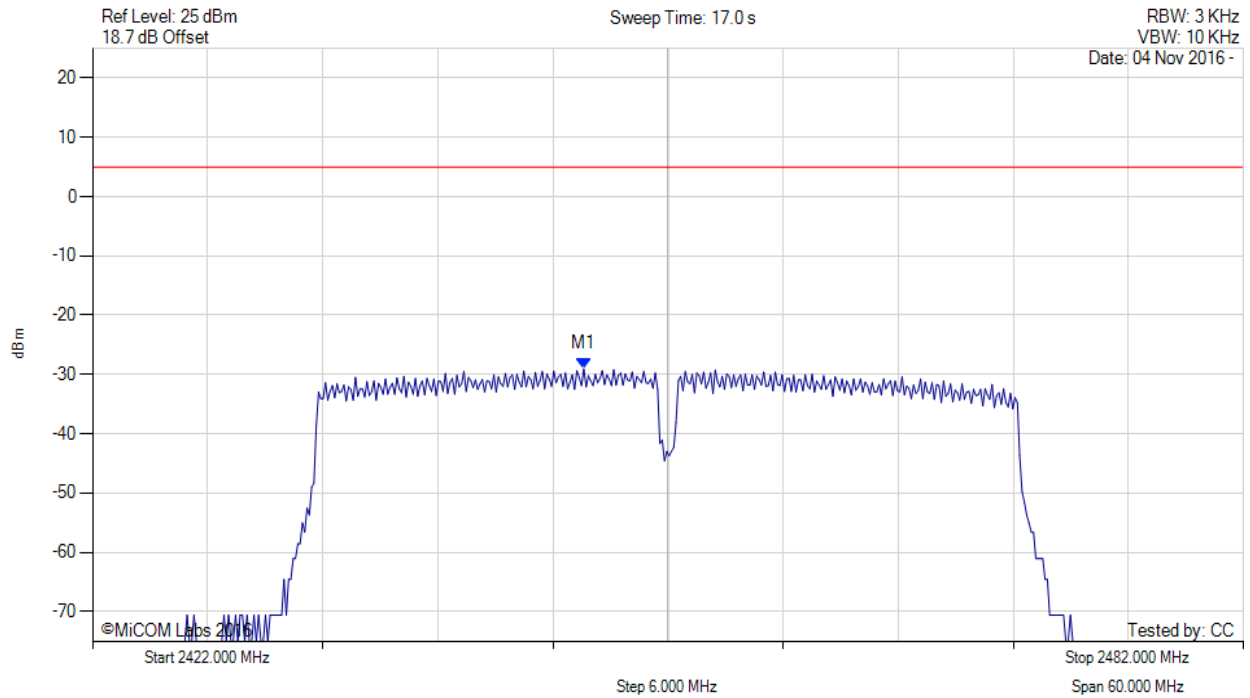
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POWER SPECTRAL DENSITY - AVERAGE

Variant: 802.11n HT-40, Channel: 2452.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2447.611 MHz : -29.054 dBm	Limit: $\leq 4.990$ dBm

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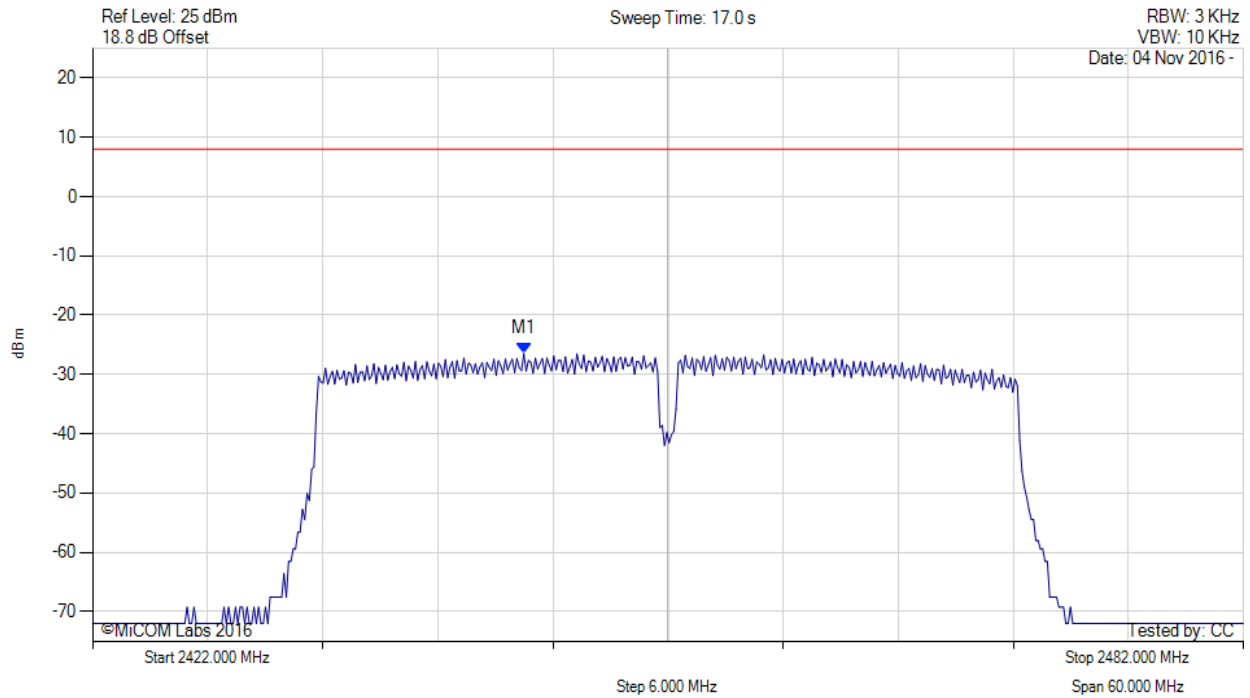
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POWER SPECTRAL DENSITY - AVERAGE



Variant: 802.11n HT-40, Channel: 2452.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2444.500 MHz : -26.455 dBm M1 + DCCF : 2444.500 MHz : -26.411 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: $\leq 8.0$ dBm Margin: -34.4 dB

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