

TEST REPORT ADDENDUM – CONDUCTED

FROM



Test of: Hewlett Packard Enterprise APIN0344 & APIN0345

To: FCC Subpart E 15.407 & ISED RSS-247

Test Report Serial No.: HPEN111-U8_Conducted non-DFS Bands Rev A

Issue Date: 22nd August 2017

Master Document Number	Addendum Reports
HPEN111-U8_Master WiFi (non-DFS Bands)	HPEN111-U8_Conducted WiFi
	HPEN111-U8_Radiated_Radio 1 WiFi
	HPEN111-U8_Radiated_Radio 0 WiFi

This report is only valid in conjunction with the reports listed in the above table. Together these reports address the requirements for the type of device operating under the standard as listed.

This Test Report is Issued Under the Authority of:

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1. TEST RESULTS

1.1. Peak Transmit Power

Conducted Test Conditions for Maximum Conducted Output Power			
Standard:	FCC CFR 47:15.407	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	Maximum Conducted Output Power	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.407 (a)	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Maximum Conducted Output Power Measurement

Method PM (Measurement using an RF average power meter). KDB 789033 defines a methodology using an average wideband power meter. Measurements were made while the EUT was operating in a continuous transmission mode (100% duty cycle) at the appropriate center frequency. All operational modes and frequency bands were measured independently and the resultant calculated. Where the device operated with multiple antenna ports i.e. MIMO device, each port was measured and reported separately. A summation (Σ) of each antenna port output power is provided which includes any offset due to Duty Cycle Correction Factor (DCCF). Testing was performed under ambient conditions at nominal voltage.

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

Supporting Information

Calculated Power = $A + G + Y + 10 \log(1/x)$ dBm

A = Total Power [$10 \cdot \log_{10}(10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})$]

G = Antenna Gain

Y = Beamforming Gain

x = Duty Cycle (average power measurements only)

Limits Maximum Conducted Output Power

Operating Frequency Band 5150-5250 MHz

15.407 (a)(1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.



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(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Operating Frequency Band 5250-5350 and 5470 – 5725 MHz

15. 407 (a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Operating Frequency Band 5725 – 5850 MHz

15. 407 (a)(3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.



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Equipment Configuration for Peak Transmit Power

Variant:	802.11a	Duty Cycle (%):	99.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5180.0	15.61	14.13	14.11	14.67	20.69	--	30.00	-9.31	
5200.0	21.40	21.18	20.43	20.19	26.85	--	30.00	-3.15	
5240.0	22.07	21.51	20.69	21.25	27.43	--	30.00	-2.57	

Traceability to Industry Recognized Test Methodologies

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

Equipment Configuration for Peak Transmit Power

Variant:	802.11ac-80	Duty Cycle (%):	92.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5210.0	12.25	10.91	11.00	11.44	17.45	--	28.00	-10.55	

Traceability to Industry Recognized Test Methodologies

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

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

NOTE: Power restrictions may be due to radiated emission measurements namely spurious or band-edge measurements

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Equipment Configuration for Peak Transmit Power

Variant:	802.11ac-80+80	Duty Cycle (%):	92.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5210.0	12.01	10.81	--	--	14.46	--	28.00	-13.52	

Traceability to Industry Recognized Test Methodologies

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

Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5180.0	14.50	13.22	13.25	13.72	19.72	--	28.00	-8.28	
5200.0	20.30	19.48	18.78	19.89	25.67	--	28.00	-2.33	
5240.0	20.26	19.42	18.57	19.71	25.55	--	28.00	-2.45	

Traceability to Industry Recognized Test Methodologies

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

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

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Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-40	Duty Cycle (%):	98.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes: Mode 1: Radio 1 Disabled; Radio 0 Enabled			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5190.0	11.39	10.33	10.49	10.87	16.81	--	28.00	-11.19	
5230.0	22.21	21.65	20.83	21.40	27.57	--	28.00	-0.43	

Traceability to Industry Recognized Test Methodologies

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

Equipment Configuration for Peak Transmit Power

Variant:	802.11a	Duty Cycle (%):	99.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes: Mode 1: Radio 1 Disabled; Radio 0 Enabled			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5745.0	19.02	18.20	17.90	18.04	24.33	--	30.00	-5.67	
5785.0	17.93	17.14	16.88	17.06	23.29	--	30.00	-6.71	
5825.0	16.19	15.15	15.00	15.28	21.45	--	30.00	-8.55	

Traceability to Industry Recognized Test Methodologies

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

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

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Equipment Configuration for Peak Transmit Power

Variant:	802.11ac-80	Duty Cycle (%):	99.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes: Mode 1: Radio 1 Disabled; Radio 0 Enabled			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5775.0	16.50	15.70	15.37	15.38	21.78	---	28.00	-6.22	

Traceability to Industry Recognized Test Methodologies

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

Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes: Mode 1: Radio 1 Disabled; Radio 0 Enabled			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5745.0	18.55	18.99	18.81	18.50	24.74	--	28.00	-3.26	
5785.0	21.52	20.04	19.82	20.97	26.66	--	28.00	-1.34	
5825.0	20.51	19.49	19.15	20.36	25.94	--	28.00	-2.06	

Traceability to Industry Recognized Test Methodologies

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

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

NOTE: Power restrictions may be due to radiated emission measurements namely spurious or band-edge measurements

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Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dB	
5755.0	19.07	18.19	17.98	18.07	24.37	--	28.00	-3.63	85.00
5795.0	20.71	19.83	19.53	19.81	26.01	--	28.00	-1.99	92.00

Traceability to Industry Recognized Test Methodologies

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

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

NOTE: Power restrictions may be due to radiated emission measurements namely spurious or band-edge measurements

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1.2. 26 dB & 99% Bandwidth

Conducted Test Conditions for 26 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.407	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	26 dB and 99 % Bandwidth	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.407 (a)	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		
Test Procedure for 26 dB and 99% Bandwidth Measurement The bandwidth at 26 dB and 99 % is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency. The Resolution Bandwidth was set to approximately 1% of the emission bandwidth. 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 section specified in this document.			

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Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11a	Duty Cycle (%):	99.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz)				26 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5180.0	55.670	56.000	59.500	52.500	59.500	52.500		
5200.0	44.830	51.170	53.330	43.670	53.330	43.670		
5240.0	58.170	58.170	62.830	51.170	62.830	51.170		

Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5180.0	41.179	41.283	43.092	37.986	43.092	37.986		
5200.0	34.580	37.697	39.256	31.150	39.256	31.150		
5240.0	42.035	42.734	43.273	38.180	43.273	38.180		

Traceability to Industry Recognized Test Methodologies

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

Each graphic displays MARKERS M1 + M2 at 10dBc. Center Frequency is calculated by using the following formula: $(M1 + M2) / 2$

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

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Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11ac-80	Duty Cycle (%):	92.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz)				26 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5210.0	202.700	220.700	212.700	193.300	220.700	193.300		
Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5210.0	147.825	152.778	156.183	135.671	156.183	135.671		

Traceability to Industry Recognized Test Methodologies

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

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Equipment Configuration for 26 dB & 99% Occupied Bandwidth
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Variant:	802.11ac-80+80	Duty Cycle (%):	92.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results								
Test Frequency	Measured 26 dB Bandwidth (MHz)				26 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5210.0	253.300	267.300	--	--	267.300	253.300		
Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5210.0	179.256	189.248	--	--	189.248	179.256		

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 26 dB & 99% Occupied Bandwidth

Variant:	802.11n HT-20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz)				26 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5180.0	45.330	42.670	42.170	42.670	45.330	42.170		
5200.0	42.670	42.000	43.170	43.500	43.500	42.000		
5240.0	43.170	42.500	42.500	43.670	43.670	42.500		
Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5180.0	29.312	26.123	27.129	28.707	29.312	26.123		
5200.0	26.688	26.981	26.695	28.426	28.426	26.688		
5240.0	27.155	26.665	26.906	27.544	27.544	26.665		

Traceability to Industry Recognized Test Methodologies

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

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To: FCC Subpart E 15.407 & IC RSS-247
Serial #: HPEN111-U8_Conducted non-DFS Bands Rev A
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Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11n HT-40	Duty Cycle (%):	98.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz)				26 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5190.0	131.700	135.300	147.000	114.700	147.000	114.700		
5230.0	146.000	137.000	139.700	126.700	146.000	126.700		
Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5190.0	89.767	90.427	95.103	81.755	95.103	81.755		
5230.0	96.557	95.256	97.752	87.061	97.752	87.061		

Traceability to Industry Recognized Test Methodologies

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

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1.3. 6 dB & 99% Bandwidth

Conducted Test Conditions for 6 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.407	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	6 dB and 99 % Bandwidth	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.407 (a)	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		
Test Procedure for 6 dB and 99% Bandwidth Measurement The bandwidth at 6 dB and 99 % is measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency. The Resolution Bandwidth was set to 100 kHz. 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 section specified in this document.			

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Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11a	Duty Cycle (%):	99.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5745.0	16.170	16.170	16.000	16.000	16.170	16.000		
5785.0	16.330	16.000	16.000	16.000	16.330	16.000		
5825.0	16.170	16.000	16.170	16.170	16.170	16.000		
Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5745.0	51.165	50.372	52.295	46.276	52.295	46.276		
5785.0	51.630	50.503	52.726	47.029	52.726	47.029		
5825.0	49.597	48.760	51.415	45.633	51.415	45.633		

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

Variant:	802.11ac-80	Duty Cycle (%):	99.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results								
Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5775.0	74.000	74.700	74.000	74.000	74.700	74.000		
Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5775.0	206.955	207.260	210.838	198.579	210.838	198.579		

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

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Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11n HT-20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5745.0	17.330	17.330	17.330	17.330	17.330	17.330		
5785.0	17.330	17.330	17.330	17.330	17.330	17.330		
5825.0	17.330	17.330	17.330	17.330	17.330	17.330		
Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5745.0	54.108	53.378	55.386	50.721	55.386	50.721		
5785.0	55.440	54.733	56.005	51.465	56.005	51.465		
5825.0	52.967	52.264	54.246	50.912	54.246	50.912		

Traceability to Industry Recognized Test Methodologies

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

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Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11n HT-40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Measured Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5755.0	36.000	36.000	36.000	36.000	36.000	36.000		
5795.0	36.000	36.000	36.000	36.000	36.000	36.000		

Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)			
	Port(s)							
MHz	a	b	c	d	Highest	Lowest		
5755.0	117.248	116.326	117.853	111.991	117.853	111.991		
5795.0	116.372	114.303	117.518	111.877	117.518	111.877		

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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1.4. Power Spectral Density

Conducted Test Conditions for Power Spectral Density			
Standard:	FCC CFR 47:15.407	Ambient Temp. (°C):	24.0 - 27.5
Test Heading:	Power Spectral Density	Rel. Humidity (%):	32 - 45
Standard Section(s):	15.407 (a)	Pressure (mBars):	999 - 1001
Reference Document(s):	See Normative References		

Test Procedure for Power Spectral Density

The in-band power spectral density was measured using the test technique specified in KDB 789033. A 1 MHz measurement bandwidth was implemented for the analyzer sweep. Once the sweep is complete the analyzer trace data is downloaded and used 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 (Σ) and a link to this additional graphic is provided.

Test configuration and setup used for the measurement was per the Conducted Test Set-up section 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 spectrum in some 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 [$10 \cdot \log_{10}(10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})$]

x = Duty Cycle

Limits Power Spectral Density

Operating Frequency Band 5150-5250 MHz

15.407 (a)(1)

(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).

(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.



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(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Operating Frequency Band 5250-5350 and 5470 – 5725 MHz

15. 407 (a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Operating Frequency Band 5725 – 5850 MHz

15. 407 (a)(3)

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.



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Equipment Configuration for Power Spectral Density

Variant:	802.11a	Duty Cycle (%):	99.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.04 dB)	Limit	Margin
	Port(s) (dBm/MHz)						
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
5180.0	10.648	10.060	9.745	9.405	15.959	17.0	-1.1
5200.0	9.653	9.539	9.393	8.433	15.249	17.0	-1.8
5240.0	10.213	9.707	9.466	9.313	15.638	17.0	-1.4

Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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

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Equipment Configuration for Power Spectral Density

Variant:	802.11ac-80	Duty Cycle (%):	92.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.36 dB)	Limit	Margin
	Port(s) (dBm/MHz)						
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
5210.0	4.445	4.155	3.629	3.364	10.274	15.0	-4.7

Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Power Spectral Density

Variant:	802.11ac-80+80	Duty Cycle (%):	92.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.36 dB)	Limit	Margin
	Port(s) (dBm/MHz)						
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
5210.0	4.030	3.945	--	--	7.291	15.0	-7.7

Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Power Spectral Density

Variant:	802.11n HT-20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.04 dB)	Limit	Margin
	Port(s) (dBm/MHz)						
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
5180.0	8.711	8.084	7.922	8.049	14.192	15.0	-0.8
5200.0	8.476	7.885	7.637	7.999	13.980	15.0	-1.0
5240.0	8.511	7.738	7.528	7.879	13.917	15.0	-1.1

Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Power Spectral Density

Variant:	802.11n HT-40	Duty Cycle (%):	98.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.09 dB)	Limit	Margin
	Port(s) (dBm/MHz)						
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
5190.0	7.159	6.752	6.452	6.114	12.679	15.0	-2.3
5230.0	7.227	6.656	6.406	6.192	12.614	15.0	-2.4

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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Equipment Configuration for Power Spectral Density

Variant:	802.11a	Duty Cycle (%):	99.0
Data Rate:	6.00 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.04 dB)	Limit	Margin
	Port(s) (dBm/500 KHz)						
MHz	a	b	c	d	dBm/500 KHz	dBm/500 KHz	dB
5745.0	7.030	5.807	6.044	6.435	12.318	30.0	-17.7
5785.0	6.490	5.150	5.530	6.037	11.787	30.0	-18.2
5825.0	6.305	5.074	5.428	6.115	11.708	30.0	-18.3

Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Power Spectral Density

Variant:	802.11ac-80	Duty Cycle (%):	99.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.04 dB)	Limit	Margin
	Port(s) (dBm/500 KHz)						
MHz	a	b	c	d	dBm/500 KHz	dBm/500 KHz	dB
5775.0	0.793	-0.720	-0.418	-0.068	5.885	28.0	-22.1

Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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Equipment Configuration for Power Spectral Density

Variant:	802.11n HT-20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.04 dB)	Limit	Margin
	Port(s) (dBm/500 KHz)						
MHz	a	b	c	d	dBm/500 KHz	dBm/500 KHz	dB
5745.0	6.487	5.091	5.497	5.935	11.744	28.0	-16.3
5785.0	6.435	4.899	5.315	5.951	11.579	28.0	-16.4
5825.0	6.176	4.790	5.160	5.784	11.508	28.0	-16.5

Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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

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Title: Hewlett Packard Enterprise APIN0344 & APIN0345
To: FCC Subpart E 15.407 & IC RSS-247
Serial #: HPEN111-U8_Conducted non-DFS Bands Rev A
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Equipment Configuration for Power Spectral Density

Variant:	802.11n HT-40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	2.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	6.00
TPC:	Not Applicable	Tested By:	CC
Engineering Test Notes:	Mode 1: Radio 1 Disabled; Radio 0 Enabled		

Test Measurement Results

Test Frequency	Measured Power Spectral Density				Summation Peak Marker + DCCF (+0.04 dB)	Limit	Margin
	Port(s) (dBm/500 KHz)						
MHz	a	b	c	d	dBm/500 KHz	dBm/500 KHz	dB
5755.0	3.312	1.902	2.272	2.648	8.471	28.0	-19.5
5795.0	2.968	1.498	1.882	2.638	8.247	28.0	-19.8

Traceability to Industry Recognized Test Methodologies

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

DCCF - Duty Cycle Correction Factor

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

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A. APPENDIX - GRAPHICAL IMAGES

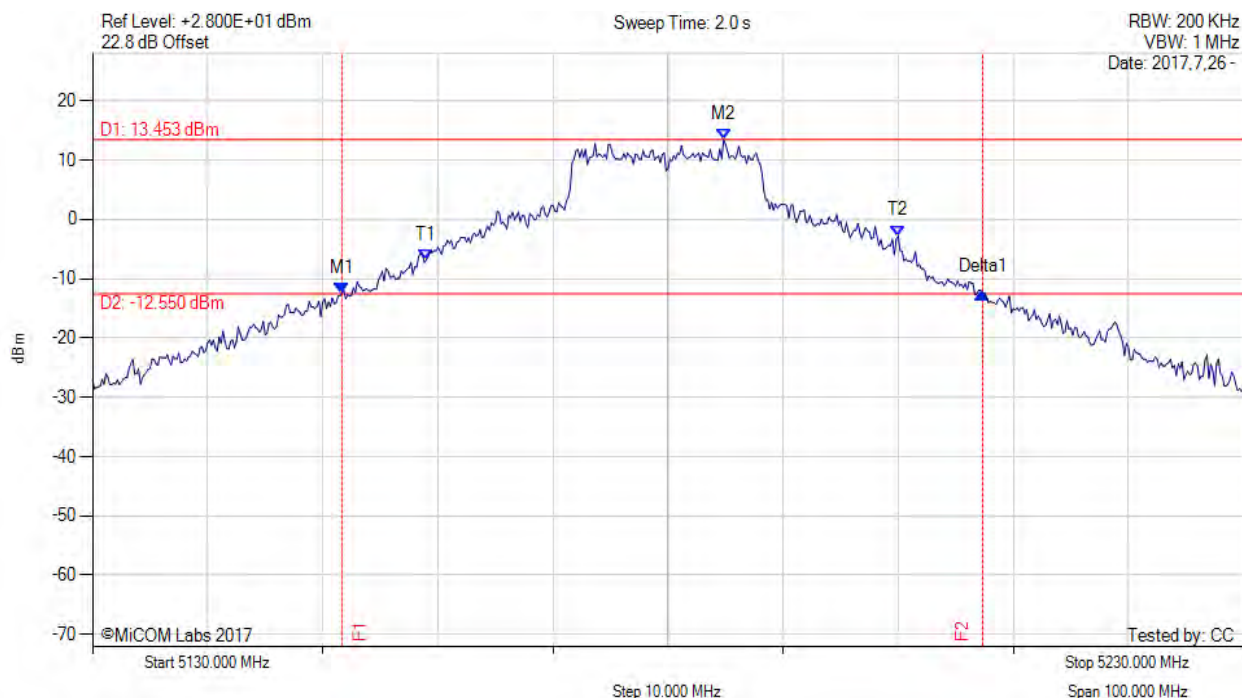
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A.1. 26 dB & 99% Bandwidth



26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5151.670 MHz : -12.372 dBm M2 : 5184.830 MHz : 13.453 dBm Delta1 : 55.670 MHz : 0.040 dB T1 : 5159.000 MHz : -6.794 dBm T2 : 5200.000 MHz : -2.771 dBm OBW : 41.179 MHz	Measured 26 dB Bandwidth: 55.670 MHz Measured 99% Bandwidth: 41.179 MHz

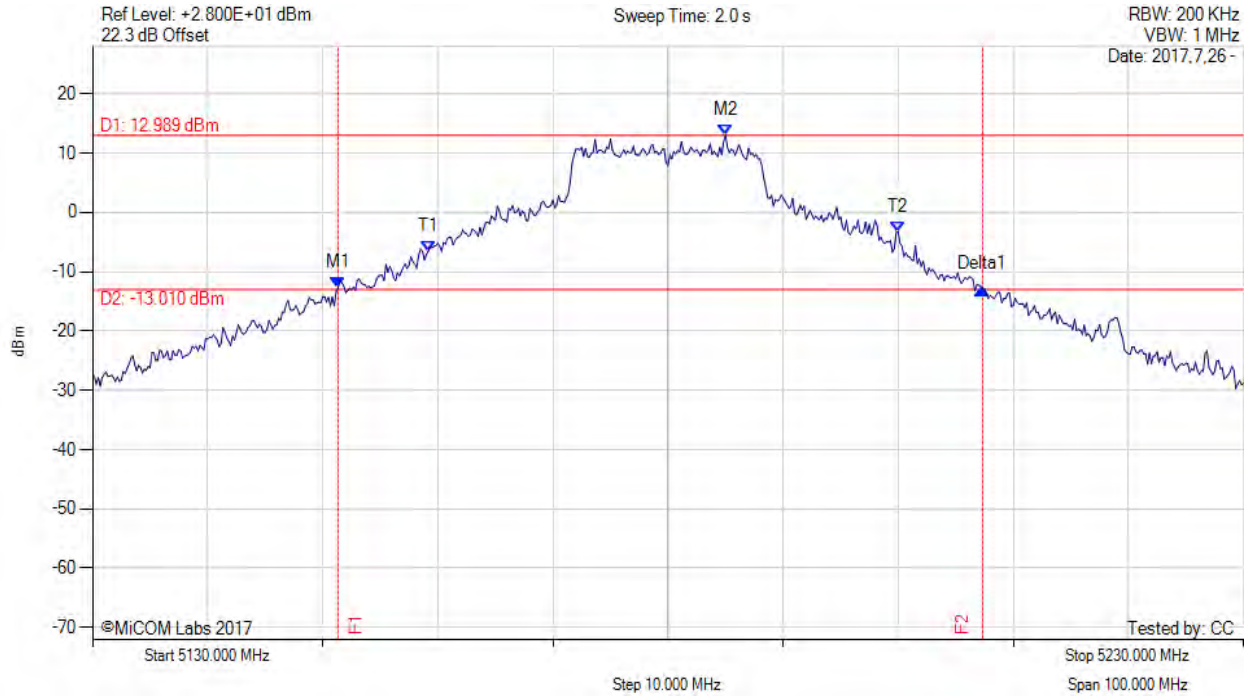
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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5151.330 MHz : -12.734 dBm M2 : 5185.000 MHz : 12.989 dBm Delta1 : 56.000 MHz : -0.213 dB T1 : 5159.167 MHz : -6.542 dBm T2 : 5200.000 MHz : -3.307 dBm OBW : 41.283 MHz	Measured 26 dB Bandwidth: 56.000 MHz Measured 99% Bandwidth: 41.283 MHz

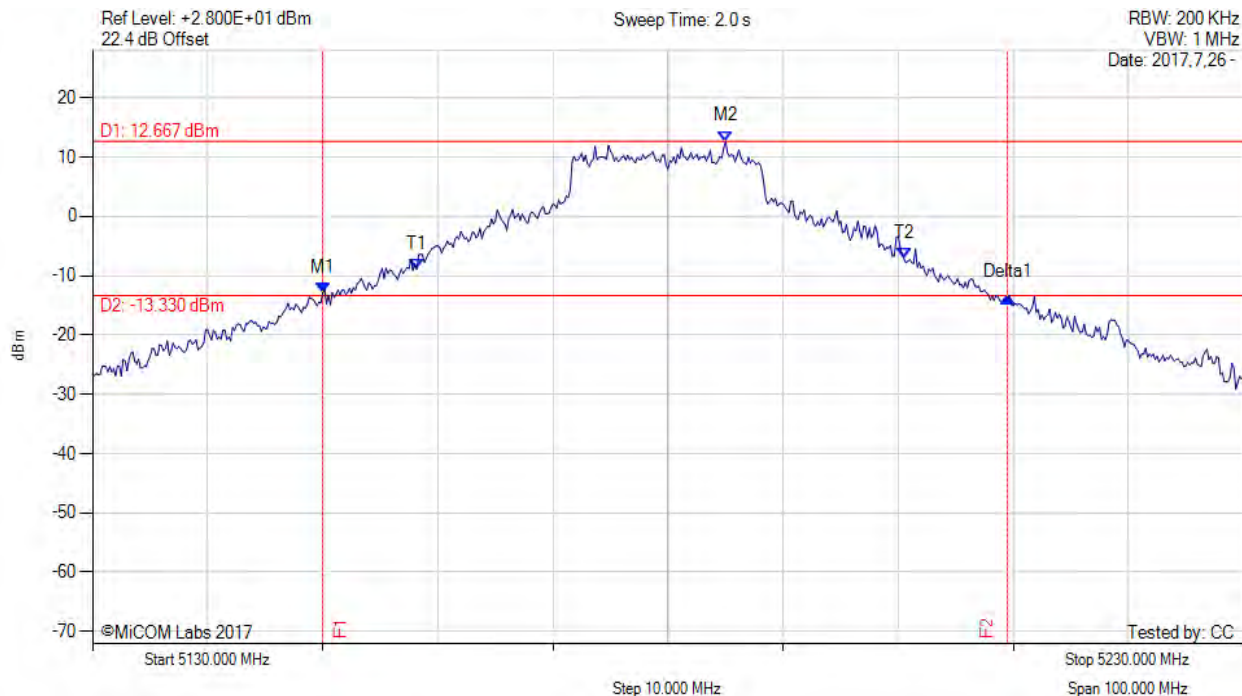
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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5150.000 MHz : -12.905 dBm M2 : 5185.000 MHz : 12.667 dBm Delta1 : 59.500 MHz : -0.800 dB T1 : 5158.167 MHz : -8.916 dBm T2 : 5200.500 MHz : -7.123 dBm OBW : 43.092 MHz	Measured 26 dB Bandwidth: 59.500 MHz Measured 99% Bandwidth: 43.092 MHz

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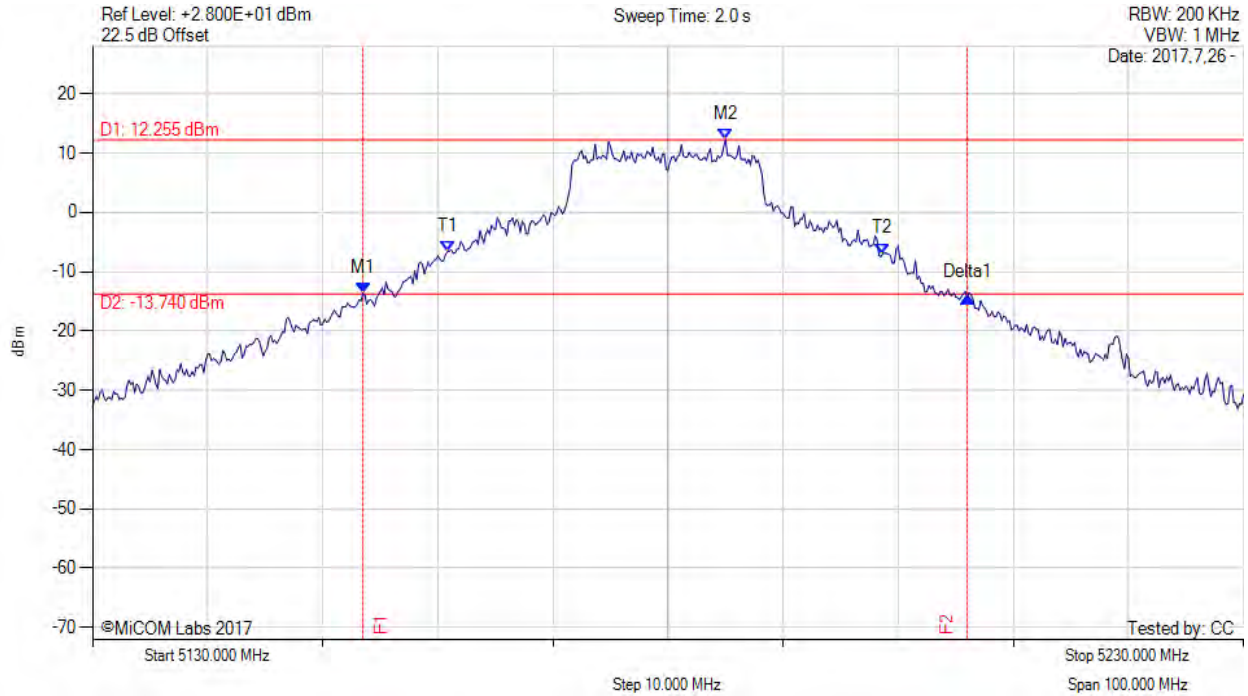


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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5153.500 MHz : -13.634 dBm M2 : 5185.000 MHz : 12.255 dBm Delta1 : 52.500 MHz : -0.650 dB T1 : 5160.833 MHz : -6.639 dBm T2 : 5198.667 MHz : -6.955 dBm OBW : 37.986 MHz	Measured 26 dB Bandwidth: 52.500 MHz Measured 99% Bandwidth: 37.986 MHz

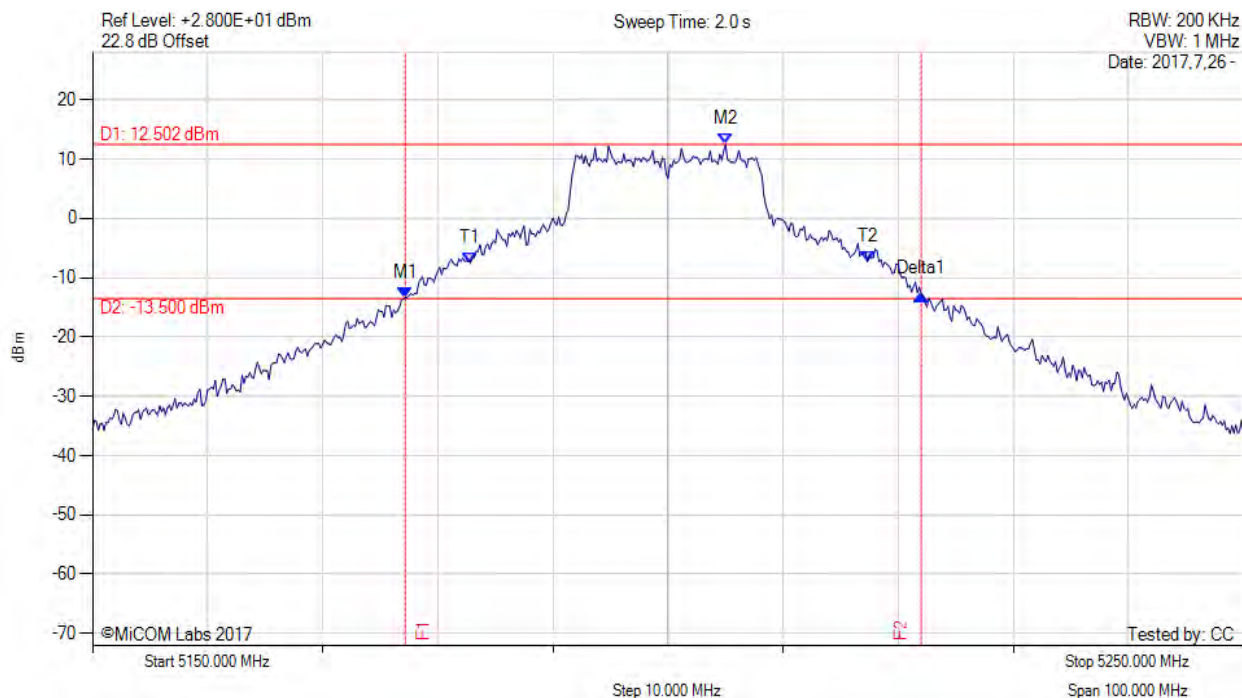
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26 dB & 99% BANDWIDTH



Variant: 802.11a, Channel: 5200.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5177.170 MHz : -13.356 dBm M2 : 5205.000 MHz : 12.502 dBm Delta1 : 44.830 MHz : 0.559 dB T1 : 5182.833 MHz : -7.474 dBm T2 : 5217.333 MHz : -7.270 dBm OBW : 34.580 MHz	Measured 26 dB Bandwidth: 44.830 MHz Measured 99% Bandwidth: 34.580 MHz

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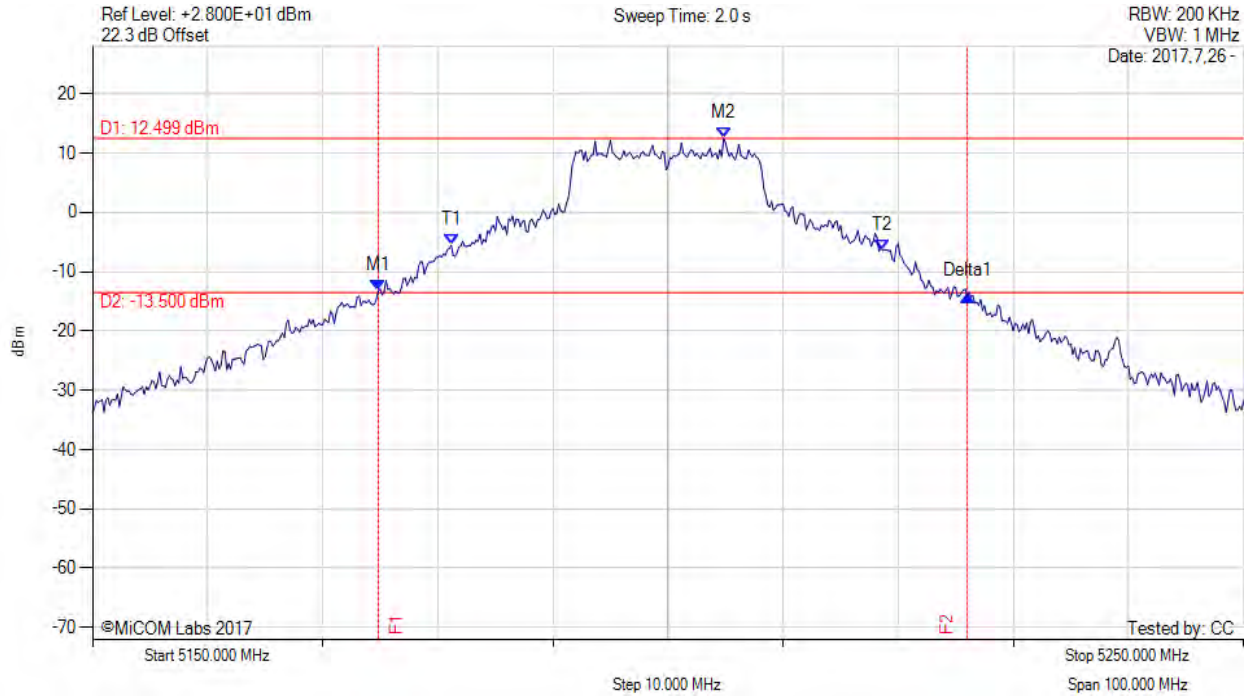


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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5174.830 MHz : -13.262 dBm M2 : 5204.830 MHz : 12.499 dBm Delta1 : 51.170 MHz : -0.810 dB T1 : 5181.167 MHz : -5.538 dBm T2 : 5218.667 MHz : -6.434 dBm OBW : 37.697 MHz	Measured 26 dB Bandwidth: 51.170 MHz Measured 99% Bandwidth: 37.697 MHz

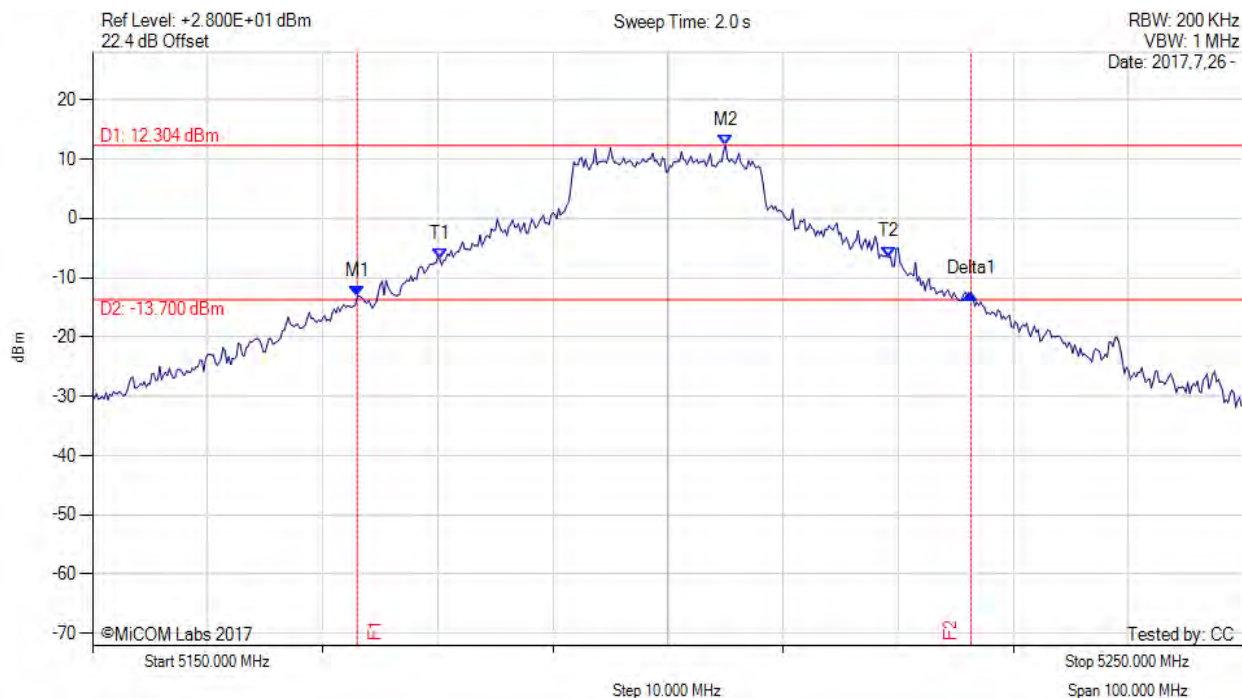
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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5173.000 MHz : -13.205 dBm M2 : 5205.000 MHz : 12.304 dBm Delta1 : 53.330 MHz : 0.517 dB T1 : 5180.167 MHz : -6.834 dBm T2 : 5219.167 MHz : -6.506 dBm OBW : 39.256 MHz	Measured 26 dB Bandwidth: 53.330 MHz Measured 99% Bandwidth: 39.256 MHz

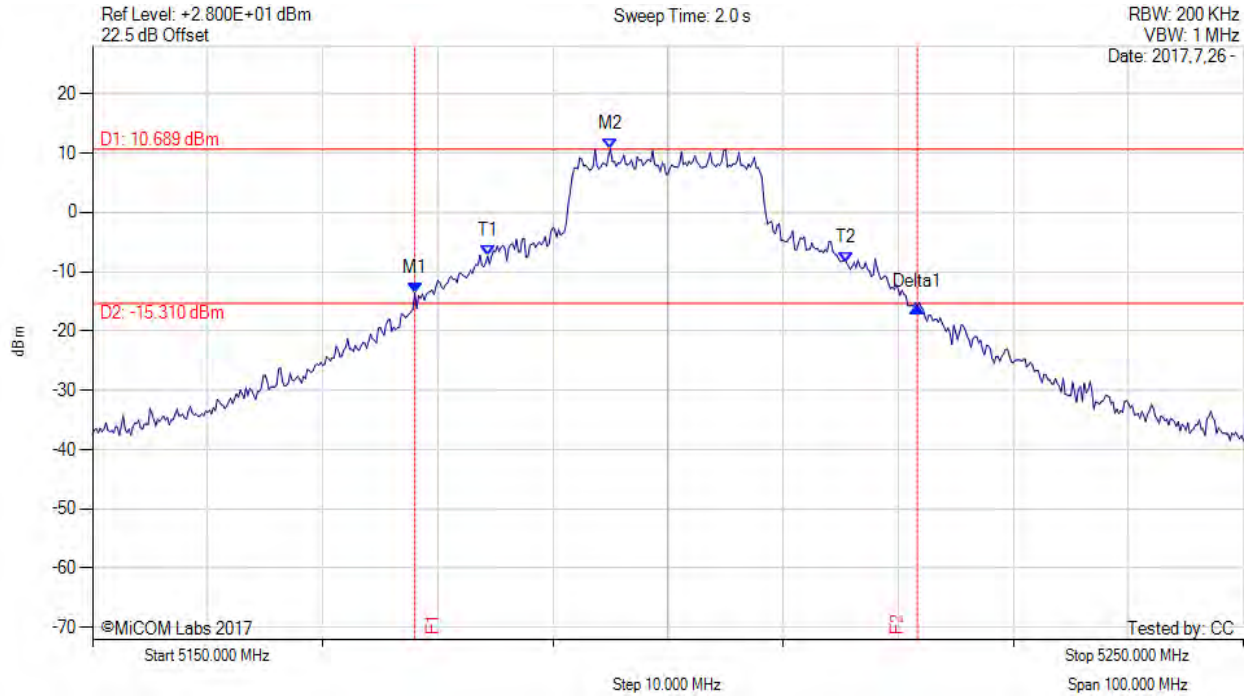
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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5178.000 MHz : -13.616 dBm M2 : 5195.000 MHz : 10.689 dBm Delta1 : 43.670 MHz : -2.379 dB T1 : 5184.333 MHz : -7.387 dBm T2 : 5215.500 MHz : -8.441 dBm OBW : 31.150 MHz	Measured 26 dB Bandwidth: 43.670 MHz Measured 99% Bandwidth: 31.150 MHz

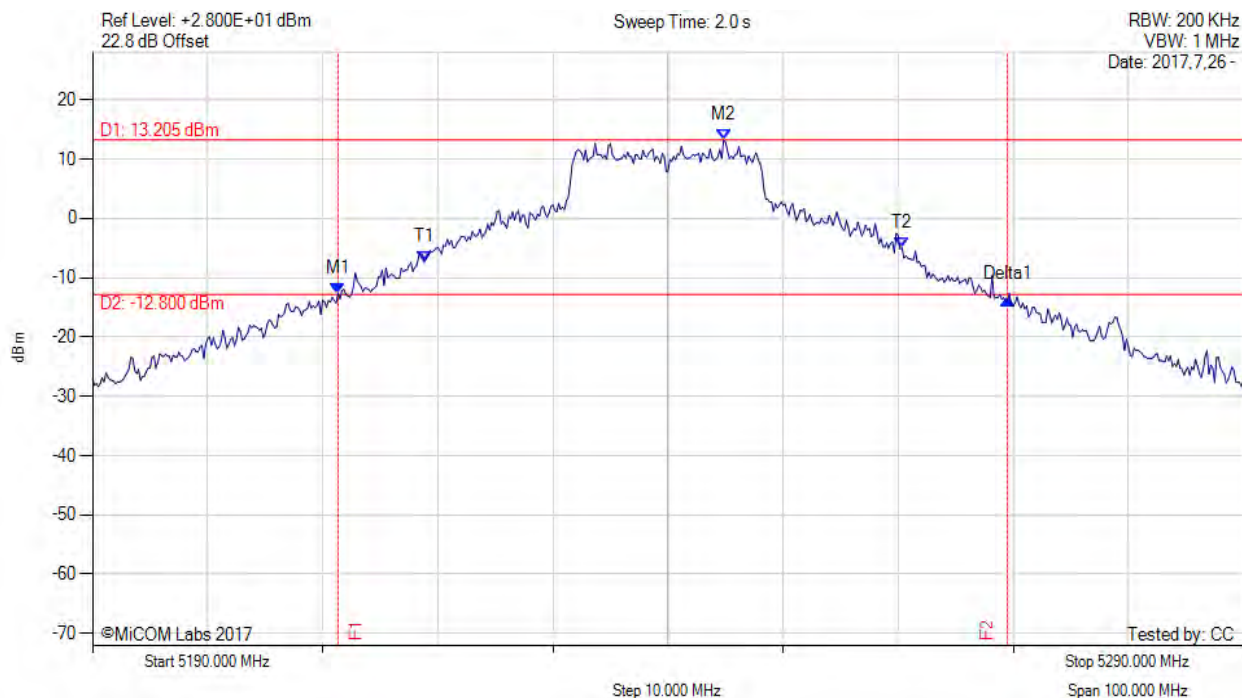
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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5211.330 MHz : -12.668 dBm M2 : 5244.830 MHz : 13.205 dBm Delta1 : 58.170 MHz : -0.998 dB T1 : 5218.833 MHz : -7.366 dBm T2 : 5260.333 MHz : -4.988 dBm OBW : 42.035 MHz	Measured 26 dB Bandwidth: 58.170 MHz Measured 99% Bandwidth: 42.035 MHz

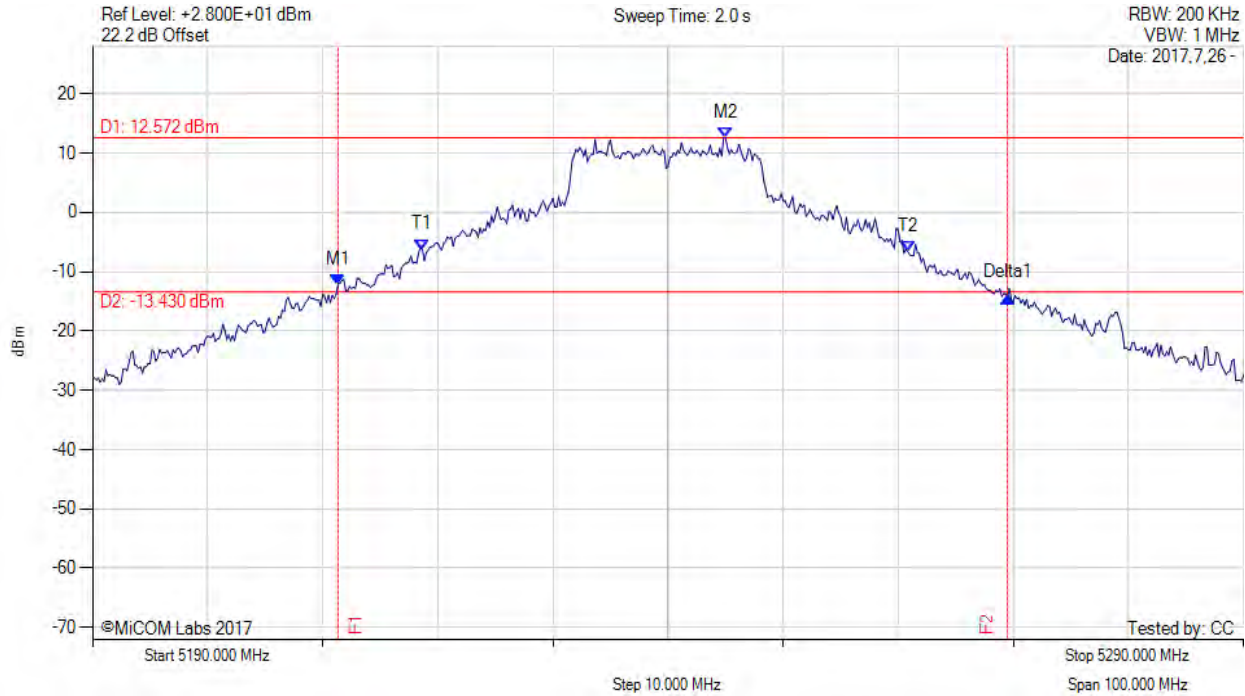
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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5211.330 MHz : -12.128 dBm M2 : 5245.000 MHz : 12.572 dBm Delta1 : 58.170 MHz : -2.142 dB T1 : 5218.667 MHz : -6.254 dBm T2 : 5260.833 MHz : -6.574 dBm OBW : 42.734 MHz	Measured 26 dB Bandwidth: 58.170 MHz Measured 99% Bandwidth: 42.734 MHz

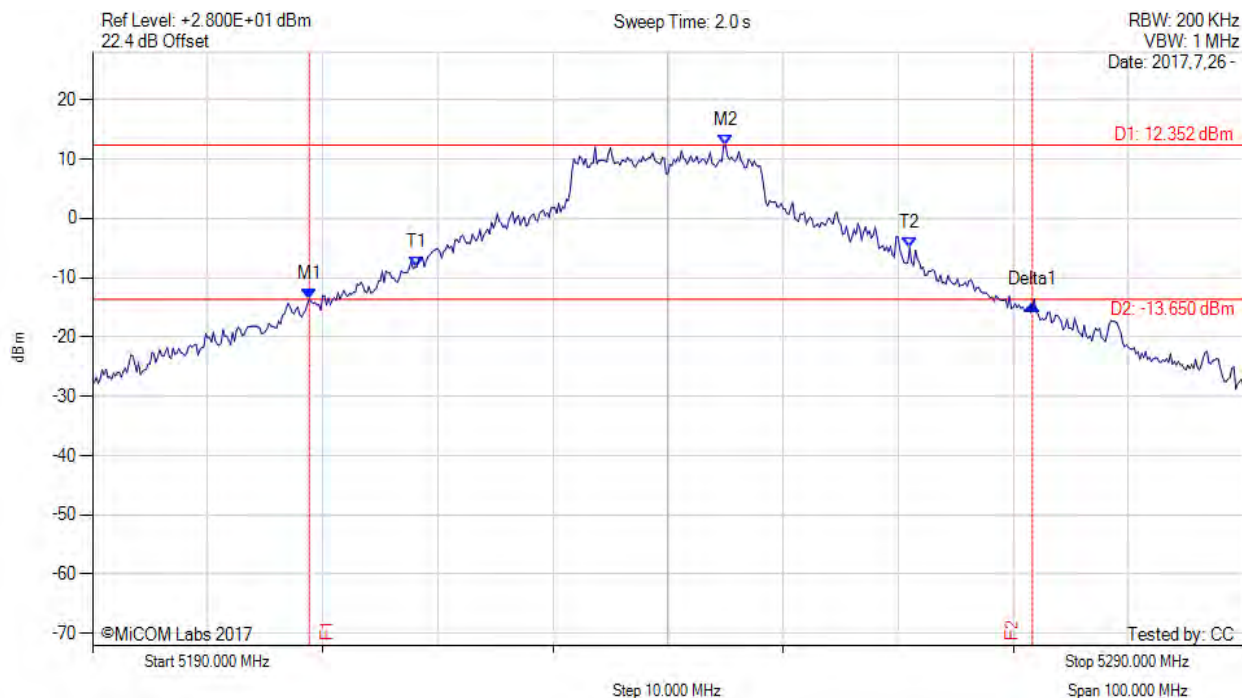
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26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5208.830 MHz : -13.573 dBm M2 : 5245.000 MHz : 12.352 dBm Delta1 : 62.830 MHz : -1.005 dB T1 : 5218.167 MHz : -8.228 dBm T2 : 5261.000 MHz : -5.028 dBm OBW : 43.273 MHz	Measured 26 dB Bandwidth: 62.830 MHz Measured 99% Bandwidth: 43.273 MHz

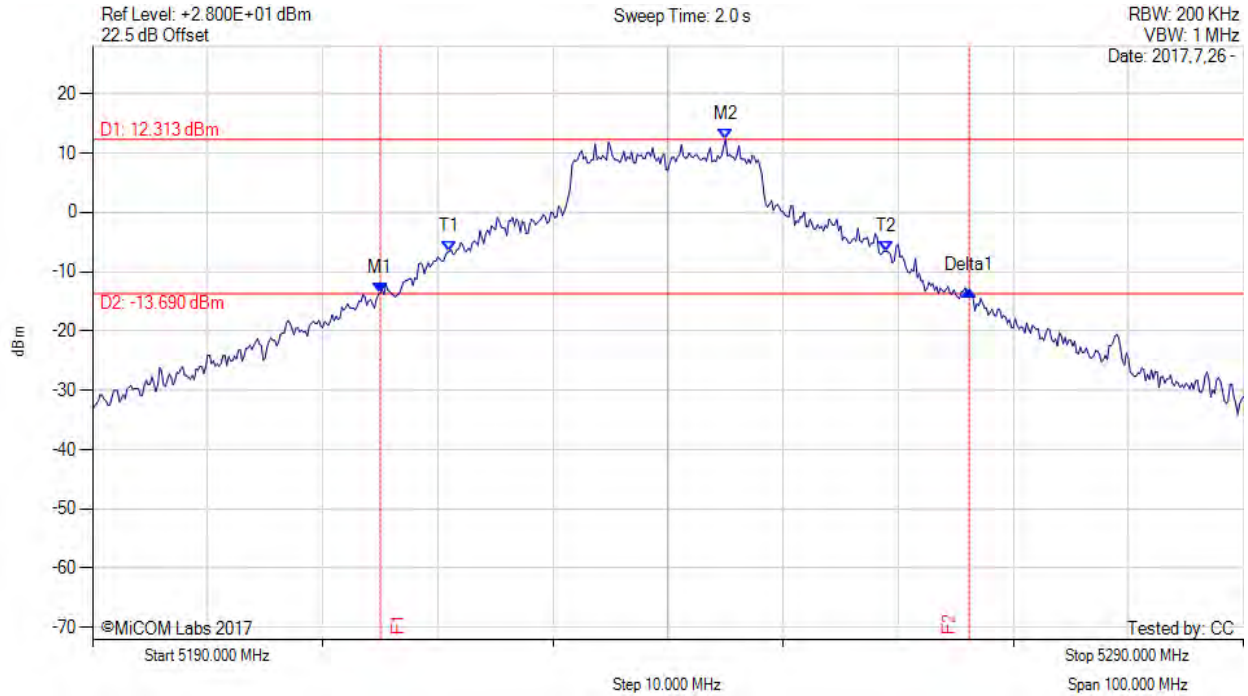
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26 dB & 99% BANDWIDTH



Variant: 802.11a, Channel: 5240.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5215.000 MHz : -13.576 dBm M2 : 5245.000 MHz : 12.313 dBm Delta1 : 51.170 MHz : 0.422 dB T1 : 5221.000 MHz : -6.578 dBm T2 : 5259.000 MHz : -6.599 dBm OBW : 38.180 MHz	Measured 26 dB Bandwidth: 51.170 MHz Measured 99% Bandwidth: 38.180 MHz

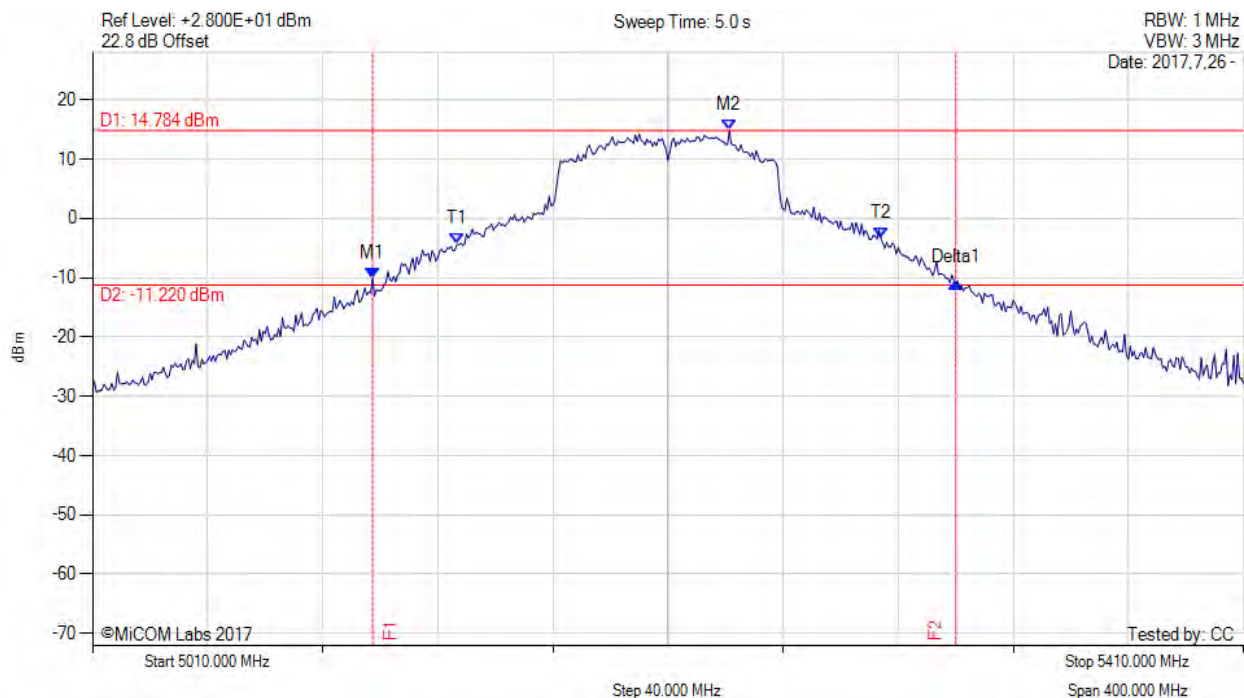
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26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5107.300 MHz : -10.210 dBm M2 : 5231.300 MHz : 14.784 dBm Delta1 : 202.700 MHz : -0.658 dB T1 : 5136.667 MHz : -4.327 dBm T2 : 5284.000 MHz : -3.382 dBm OBW : 147.825 MHz	Measured 26 dB Bandwidth: 202.700 MHz Measured 99% Bandwidth: 147.825 MHz

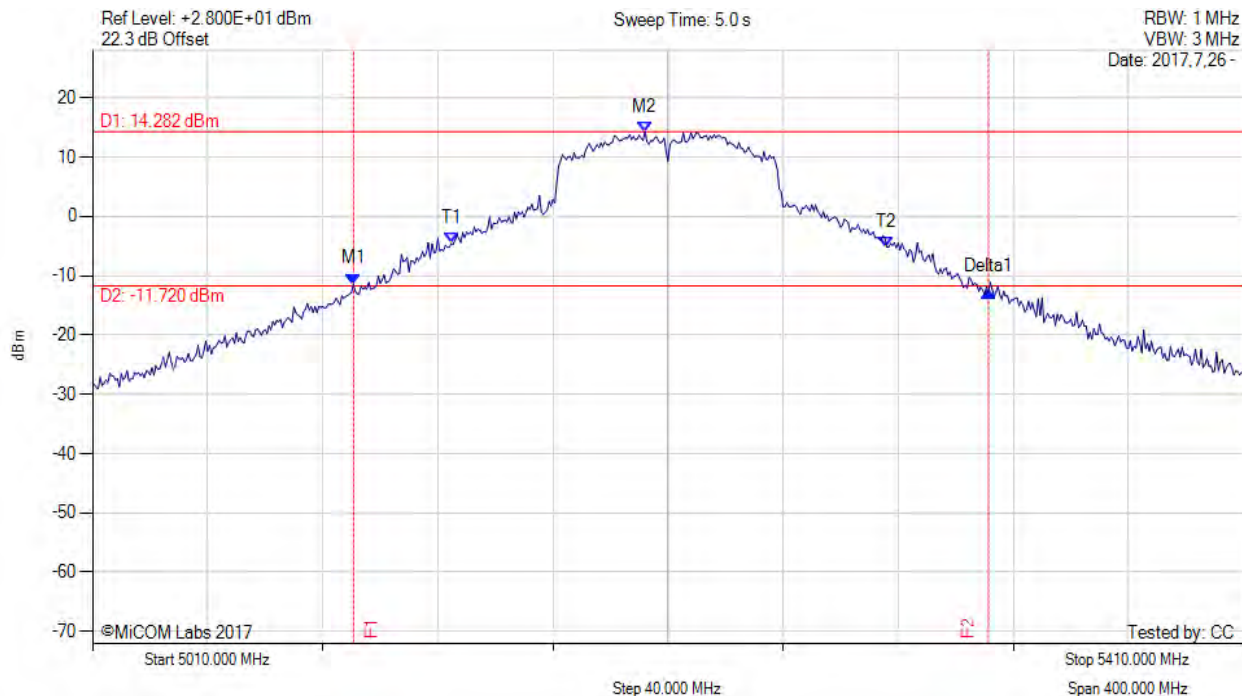
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26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5100.700 MHz : -11.421 dBm M2 : 5202.000 MHz : 14.282 dBm Delta1 : 220.700 MHz : -1.314 dB T1 : 5134.667 MHz : -4.562 dBm T2 : 5286.000 MHz : -5.119 dBm OBW : 152.778 MHz	Measured 26 dB Bandwidth: 220.700 MHz Measured 99% Bandwidth: 152.778 MHz

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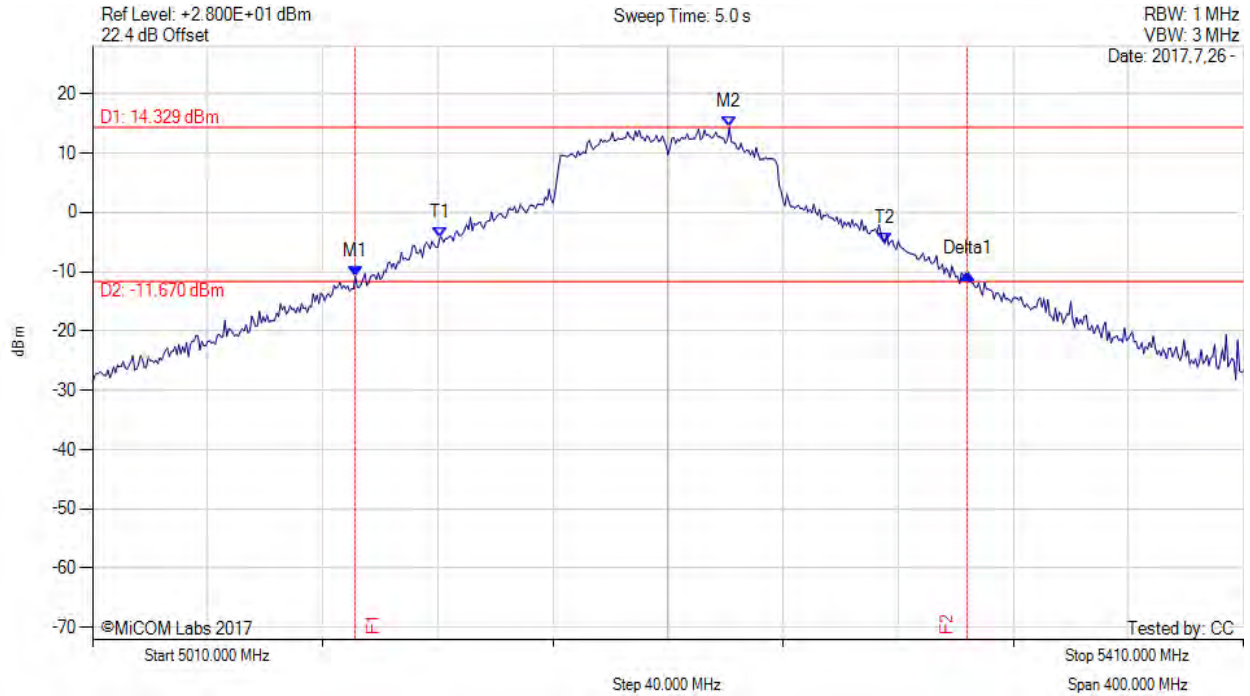


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26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5101.300 MHz : -10.773 dBm M2 : 5231.300 MHz : 14.329 dBm Delta1 : 212.700 MHz : 0.348 dB T1 : 5130.667 MHz : -4.325 dBm T2 : 5285.333 MHz : -5.237 dBm OBW : 156.183 MHz	Measured 26 dB Bandwidth: 212.700 MHz Measured 99% Bandwidth: 156.183 MHz

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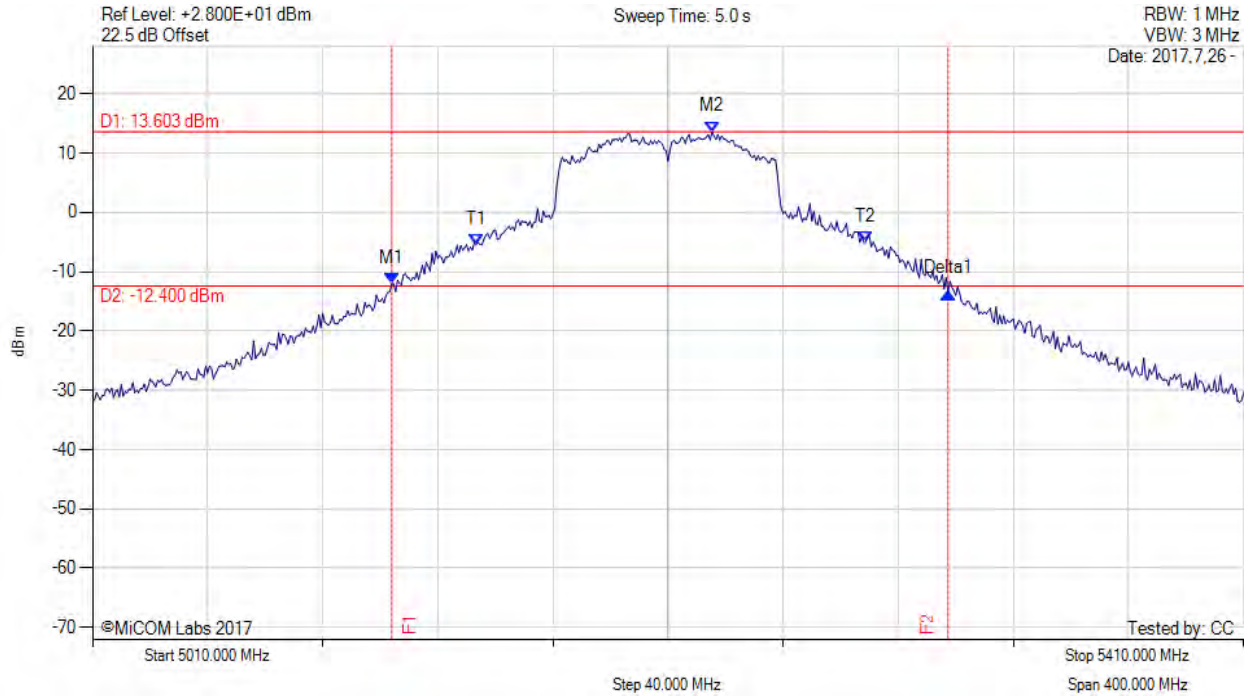


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26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5114.000 MHz : -12.045 dBm M2 : 5225.300 MHz : 13.603 dBm Delta1 : 193.300 MHz : -1.583 dB T1 : 5143.333 MHz : -5.450 dBm T2 : 5278.667 MHz : -5.027 dBm OBW : 135.671 MHz	Measured 26 dB Bandwidth: 193.300 MHz Measured 99% Bandwidth: 135.671 MHz

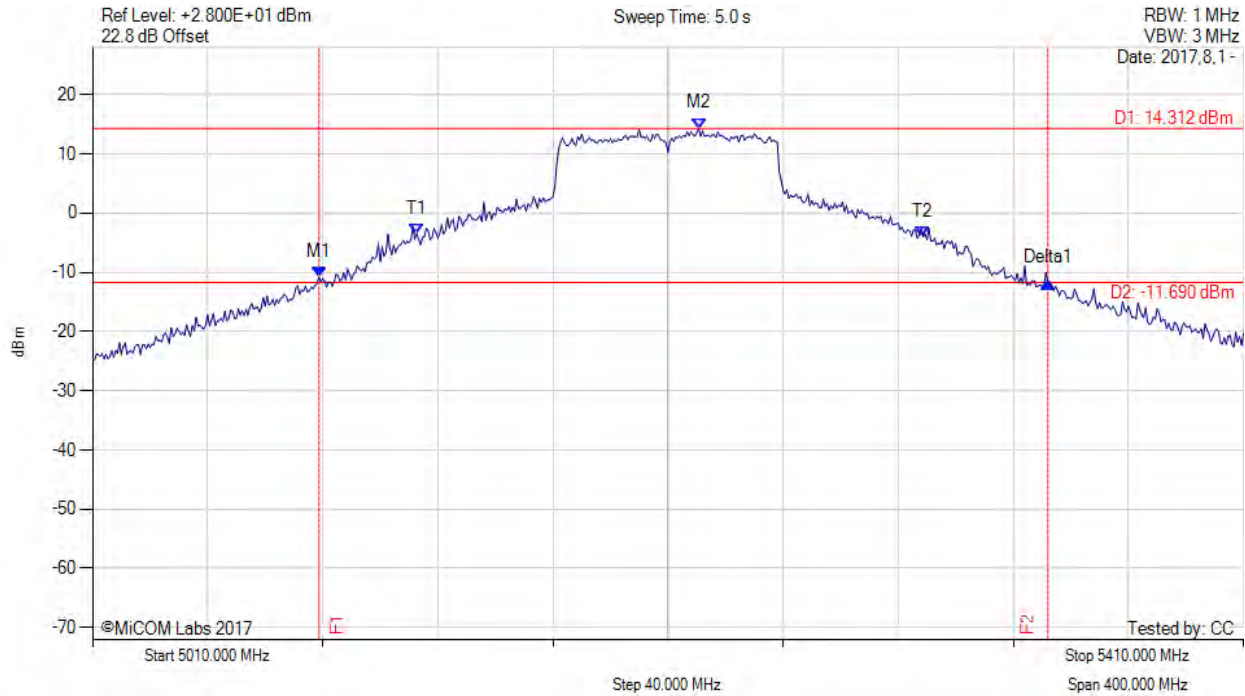
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26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5088.700 MHz : -10.862 dBm M2 : 5220.700 MHz : 14.312 dBm Delta1 : 253.300 MHz : -0.882 dB T1 : 5122.667 MHz : -3.590 dBm T2 : 5298.667 MHz : -3.978 dBm OBW : 179.256 MHz	Measured 26 dB Bandwidth: 253.300 MHz Measured 99% Bandwidth: 179.256 MHz

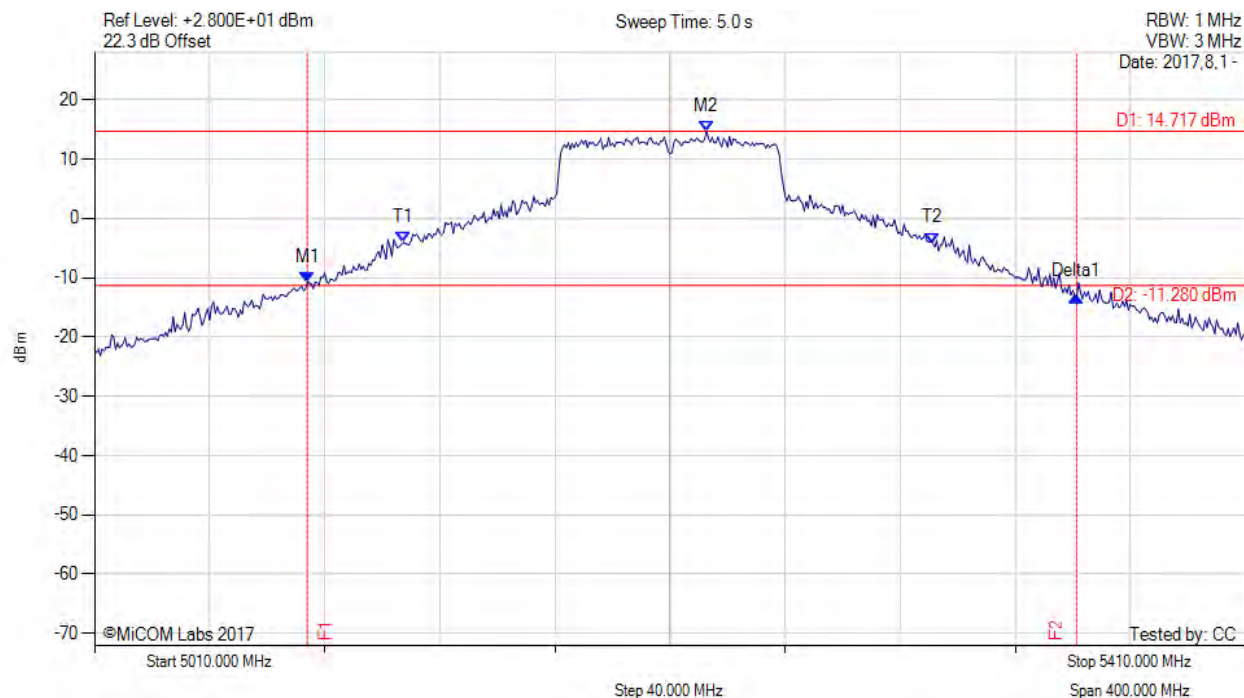
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26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5084.000 MHz : -10.748 dBm M2 : 5222.700 MHz : 14.717 dBm Delta1 : 267.300 MHz : -2.424 dB T1 : 5117.333 MHz : -4.086 dBm T2 : 5301.333 MHz : -4.170 dBm OBW : 189.248 MHz	Measured 26 dB Bandwidth: 267.300 MHz Measured 99% Bandwidth: 189.248 MHz

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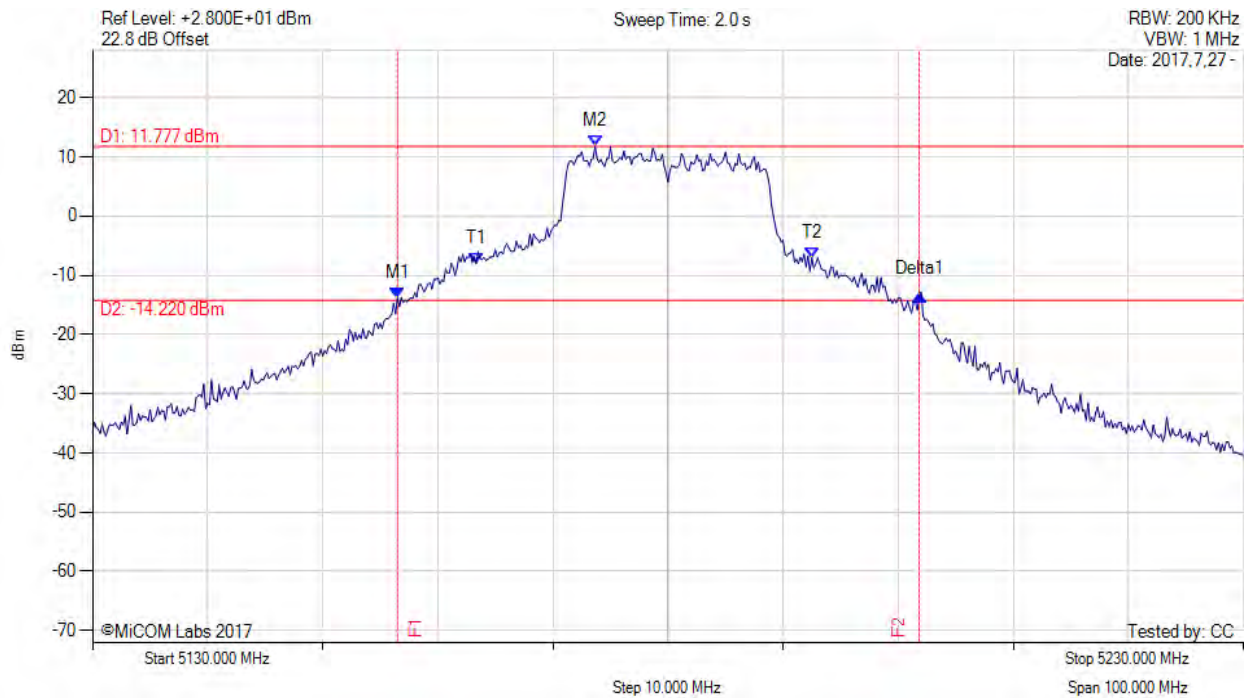


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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5156.500 MHz : -13.883 dBm M2 : 5173.670 MHz : 11.777 dBm Delta1 : 45.330 MHz : 0.604 dB T1 : 5163.333 MHz : -8.026 dBm T2 : 5192.500 MHz : -7.031 dBm OBW : 29.312 MHz	Measured 26 dB Bandwidth: 45.330 MHz Measured 99% Bandwidth: 29.312 MHz

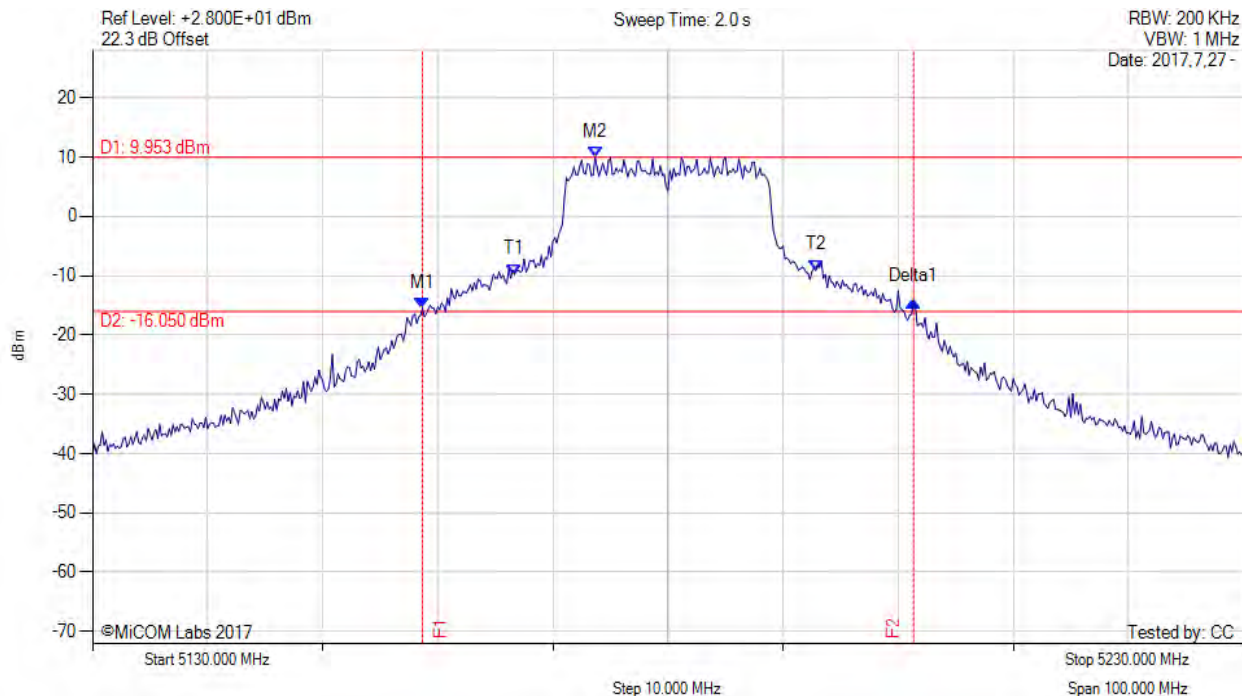
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5158.670 MHz : -15.456 dBm M2 : 5173.670 MHz : 9.953 dBm Delta1 : 42.670 MHz : 1.113 dB T1 : 5166.667 MHz : -9.766 dBm T2 : 5192.833 MHz : -9.084 dBm OBW : 26.123 MHz	Measured 26 dB Bandwidth: 42.670 MHz Measured 99% Bandwidth: 26.123 MHz

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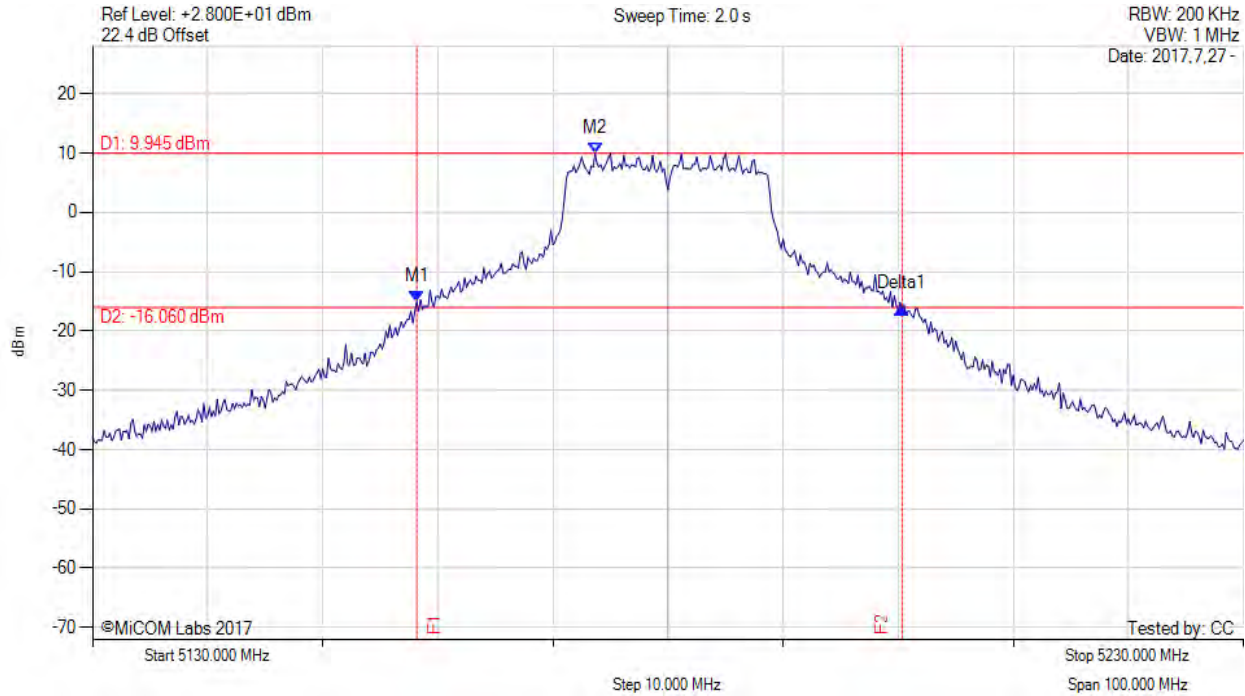


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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5158.170 MHz : -14.991 dBm M2 : 5173.670 MHz : 9.945 dBm Delta1 : 42.170 MHz : -1.208 dB T1 : 0 Hz : 0.000 dBm T2 : 0 Hz : 0.000 dBm OBW : 27.129 MHz	Measured 26 dB Bandwidth: 42.170 MHz Measured 99% Bandwidth: 27.129 MHz

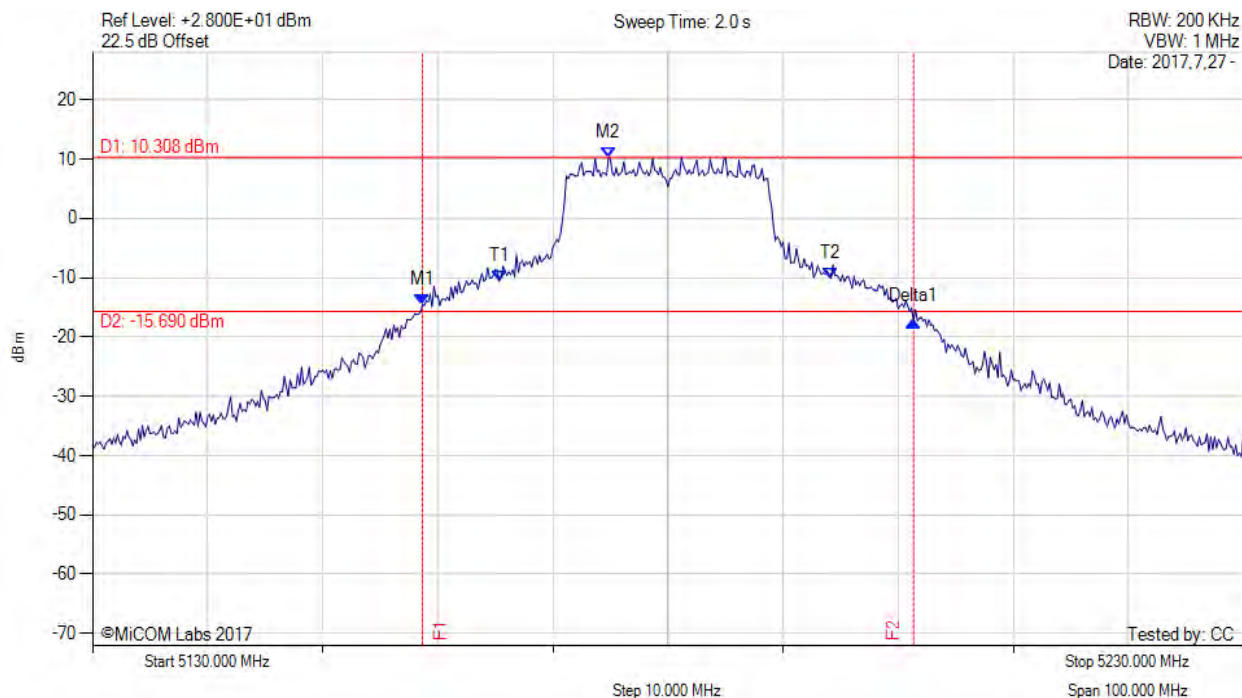
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5158.670 MHz : -14.483 dBm M2 : 5174.830 MHz : 10.308 dBm Delta1 : 42.670 MHz : -2.815 dB T1 : 5165.333 MHz : -10.601 dBm T2 : 5194.167 MHz : -10.114 dBm OBW : 28.707 MHz	Measured 26 dB Bandwidth: 42.670 MHz Measured 99% Bandwidth: 28.707 MHz

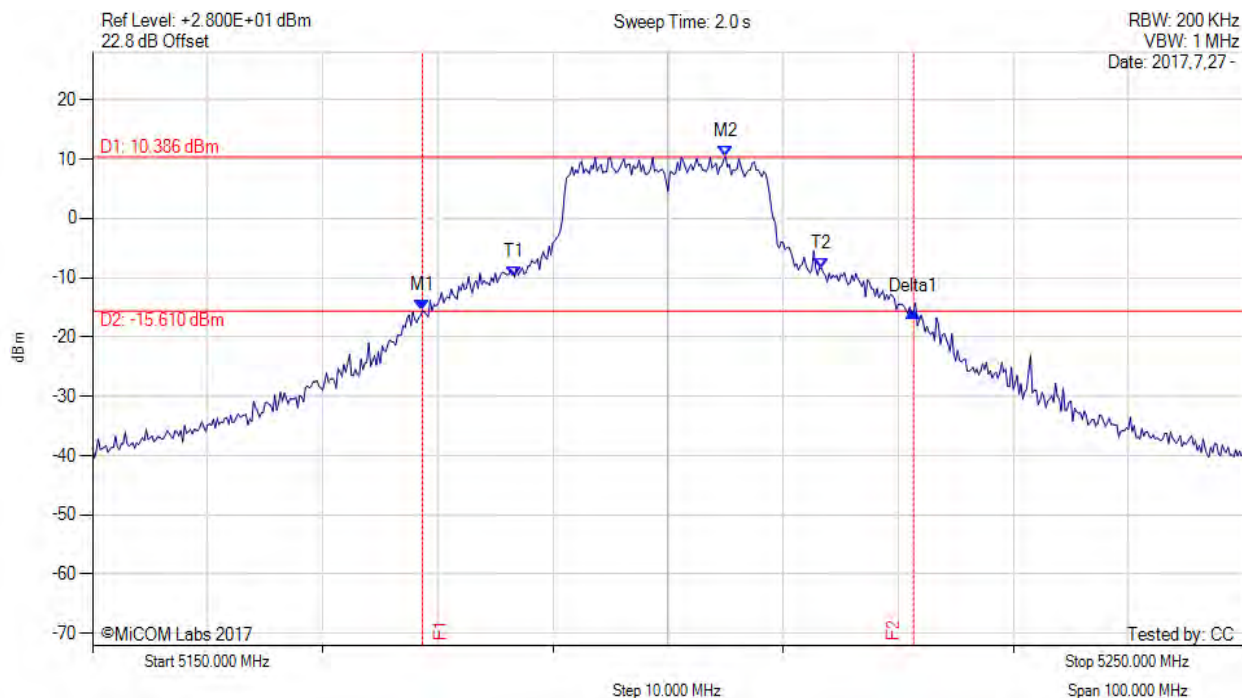
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5178.670 MHz : -15.599 dBm M2 : 5205.000 MHz : 10.386 dBm Delta1 : 42.670 MHz : -0.108 dB T1 : 5186.667 MHz : -9.812 dBm T2 : 5213.333 MHz : -8.412 dBm OBW : 26.688 MHz	Measured 26 dB Bandwidth: 42.670 MHz Measured 99% Bandwidth: 26.688 MHz

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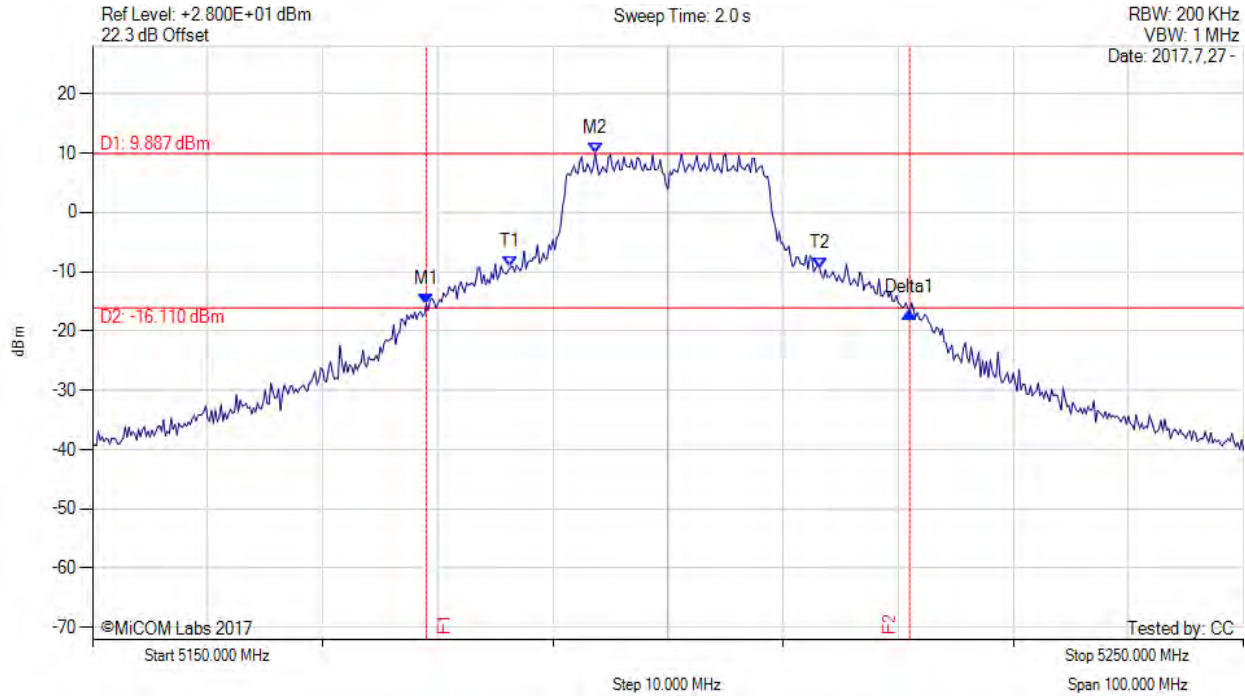


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
To: FCC Subpart E 15.407 & IC RSS-247
Serial #: HPEN111-U8_Conducted non-DFS Bands Rev A
Issue Date: 22nd August 2017
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5179.000 MHz : -15.444 dBm M2 : 5193.670 MHz : 9.887 dBm Delta1 : 42.000 MHz : -1.559 dB T1 : 5186.333 MHz : -9.288 dBm T2 : 5213.167 MHz : -9.355 dBm OBW : 26.981 MHz	Measured 26 dB Bandwidth: 42.000 MHz Measured 99% Bandwidth: 26.981 MHz

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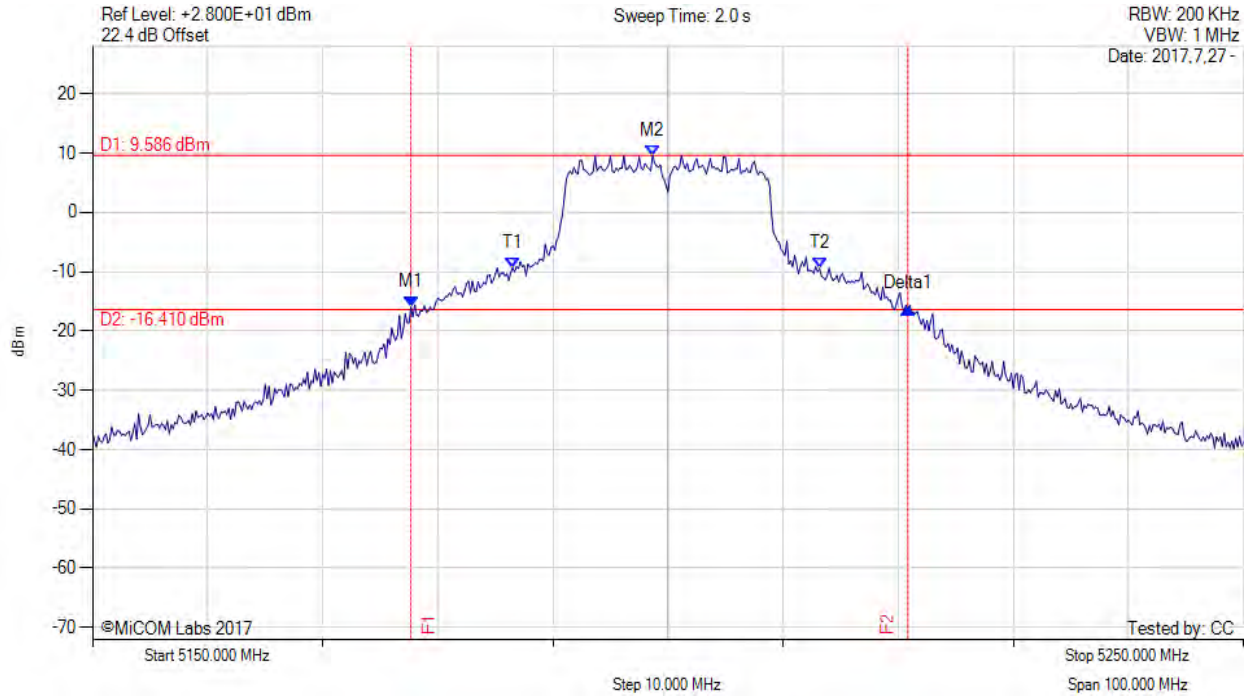


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
To: FCC Subpart E 15.407 & IC RSS-247
Serial #: HPEN111-U8_Conducted non-DFS Bands Rev A
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5177.670 MHz : -15.967 dBm M2 : 5198.670 MHz : 9.586 dBm Delta1 : 43.170 MHz : -0.170 dB T1 : 5186.500 MHz : -9.371 dBm T2 : 5213.167 MHz : -9.459 dBm OBW : 26.695 MHz	Measured 26 dB Bandwidth: 43.170 MHz Measured 99% Bandwidth: 26.695 MHz

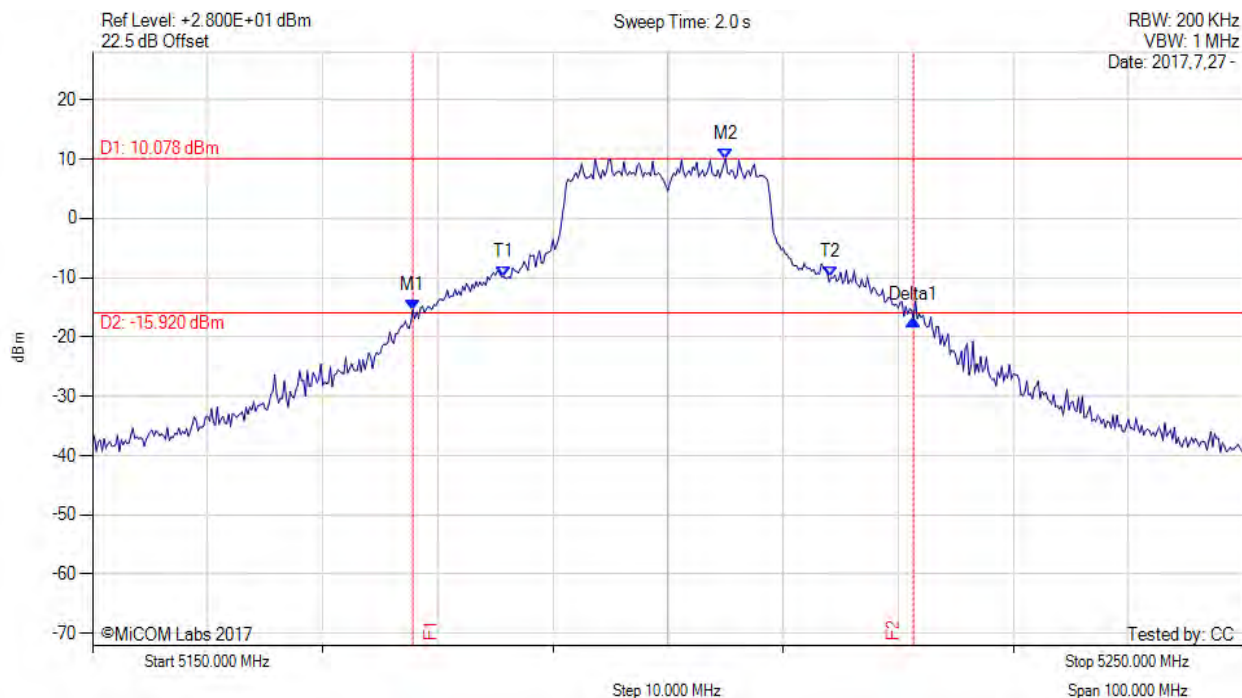
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5177.830 MHz : -15.418 dBm M2 : 5205.000 MHz : 10.078 dBm Delta1 : 43.500 MHz : -1.752 dB T1 : 5185.667 MHz : -9.787 dBm T2 : 5214.167 MHz : -9.983 dBm OBW : 28.426 MHz	Measured 26 dB Bandwidth: 43.500 MHz Measured 99% Bandwidth: 28.426 MHz

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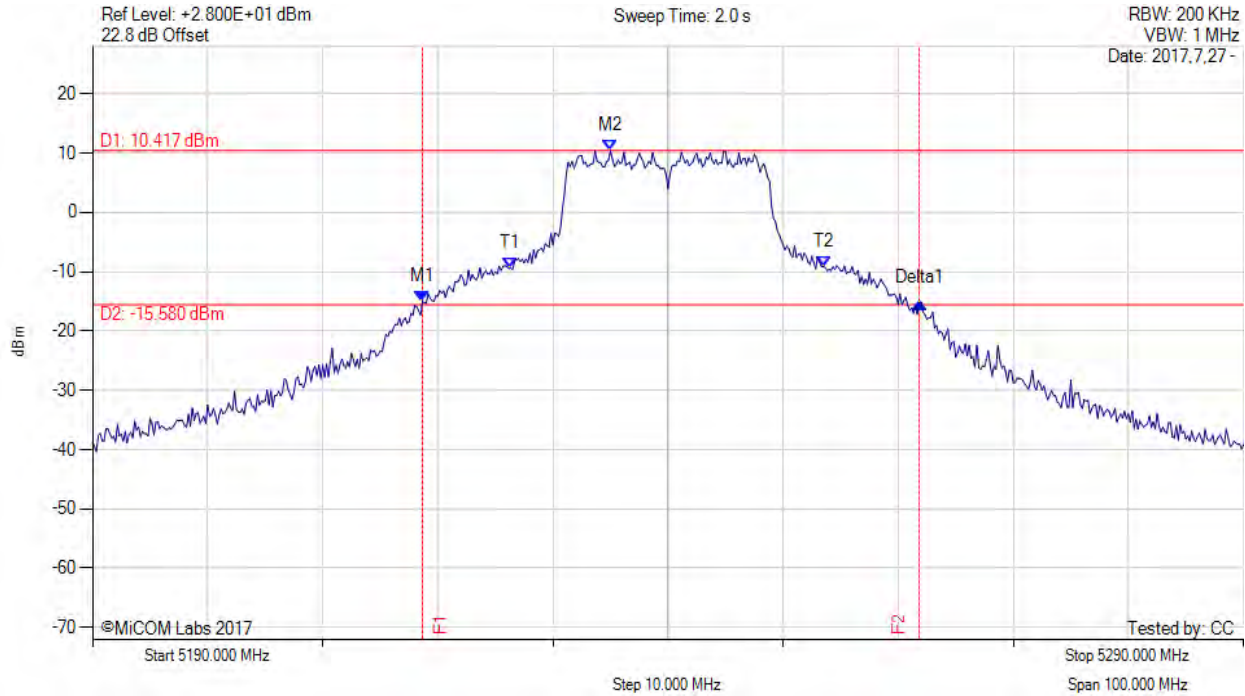


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
To: FCC Subpart E 15.407 & IC RSS-247
Serial #: HPEN111-U8_Conducted non-DFS Bands Rev A
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5218.670 MHz : -14.950 dBm M2 : 5235.000 MHz : 10.417 dBm Delta1 : 43.170 MHz : -0.292 dB T1 : 5226.333 MHz : -9.390 dBm T2 : 5253.500 MHz : -9.134 dBm OBW : 27.155 MHz	Measured 26 dB Bandwidth: 43.170 MHz Measured 99% Bandwidth: 27.155 MHz

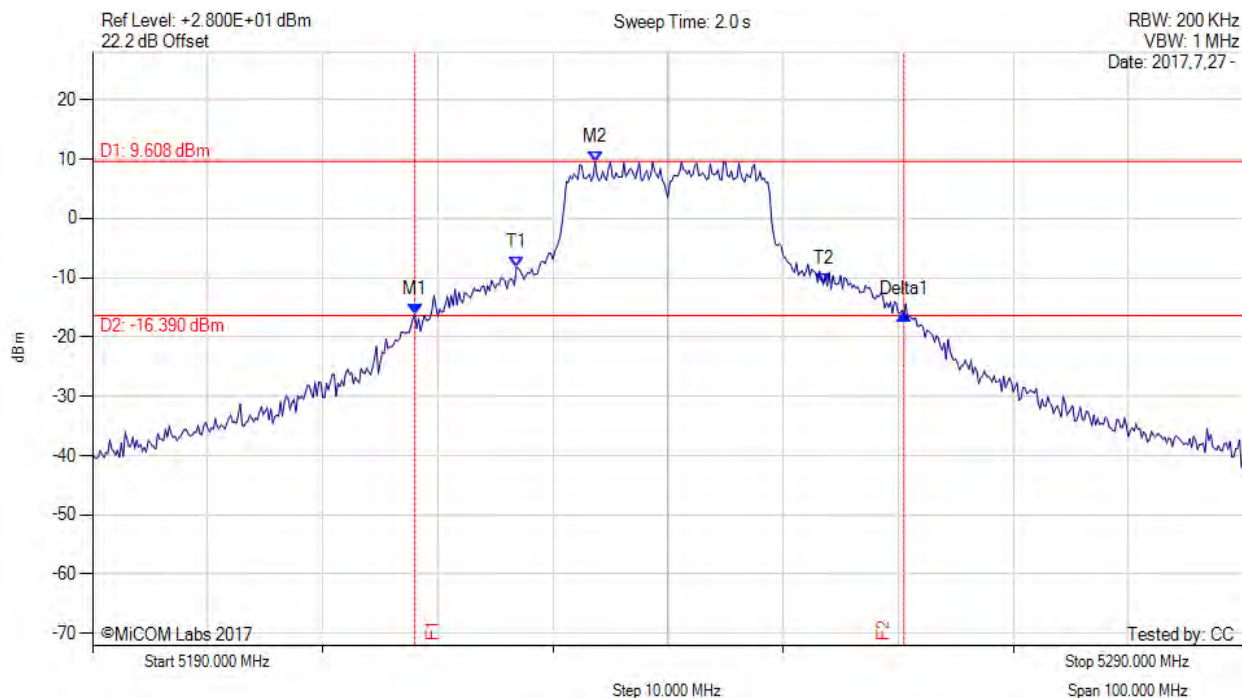
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5218.000 MHz : -16.149 dBm M2 : 5233.670 MHz : 9.608 dBm Delta1 : 42.500 MHz : -0.049 dB T1 : 5226.833 MHz : -8.157 dBm T2 : 5253.500 MHz : -11.144 dBm OBW : 26.665 MHz	Measured 26 dB Bandwidth: 42.500 MHz Measured 99% Bandwidth: 26.665 MHz

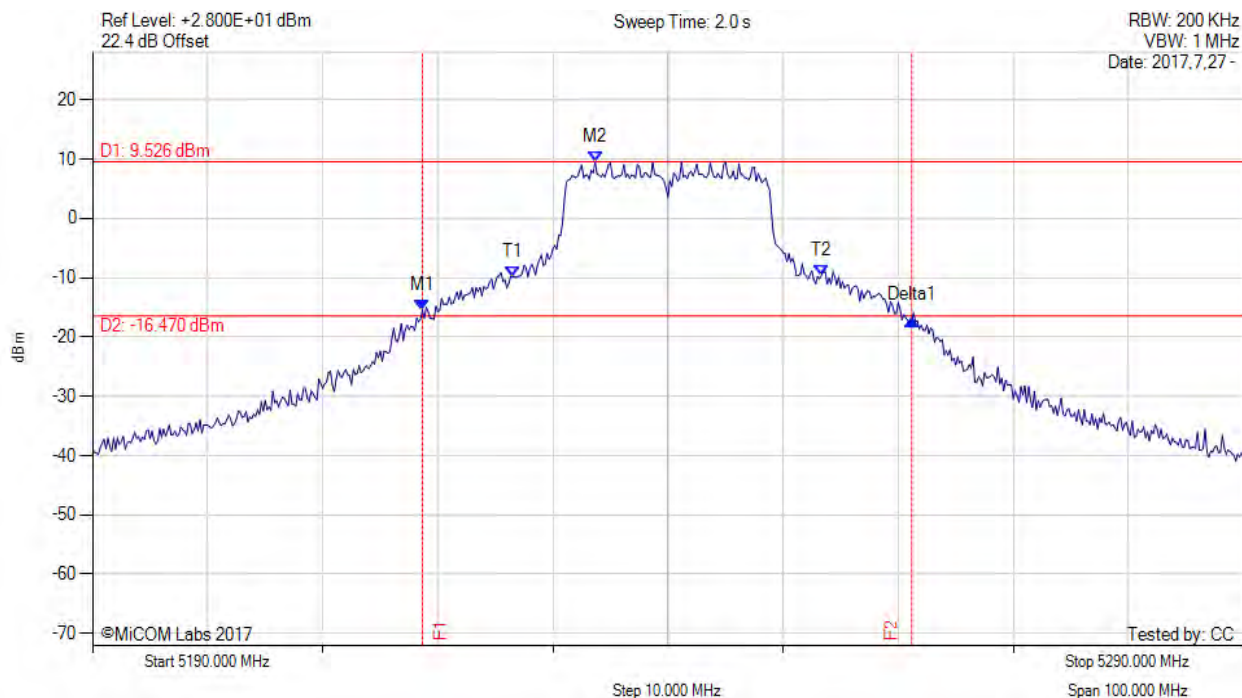
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5218.670 MHz : -15.429 dBm M2 : 5233.670 MHz : 9.526 dBm Delta1 : 42.500 MHz : -1.646 dB T1 : 5226.500 MHz : -9.924 dBm T2 : 5253.333 MHz : -9.592 dBm OBW : 26.906 MHz	Measured 26 dB Bandwidth: 42.500 MHz Measured 99% Bandwidth: 26.906 MHz

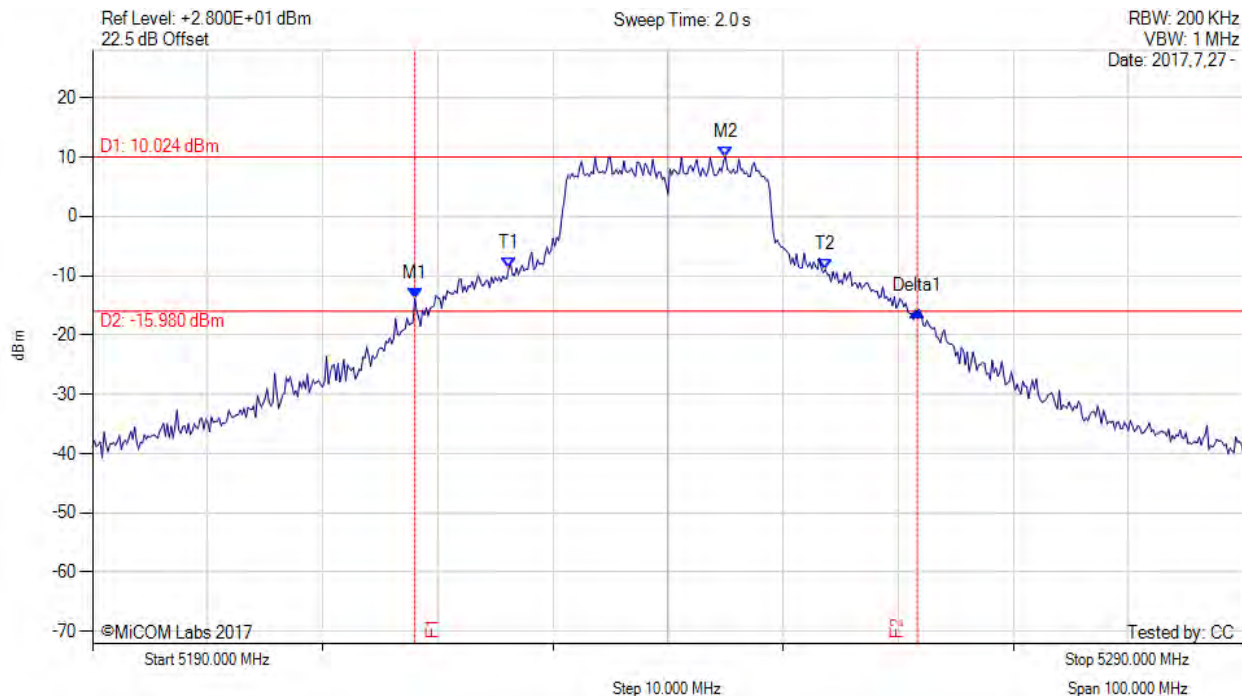
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5218.000 MHz : -13.790 dBm M2 : 5245.000 MHz : 10.024 dBm Delta1 : 43.670 MHz : -2.173 dB T1 : 5226.167 MHz : -8.670 dBm T2 : 5253.667 MHz : -8.967 dBm OBW : 27.544 MHz	Measured 26 dB Bandwidth: 43.670 MHz Measured 99% Bandwidth: 27.544 MHz

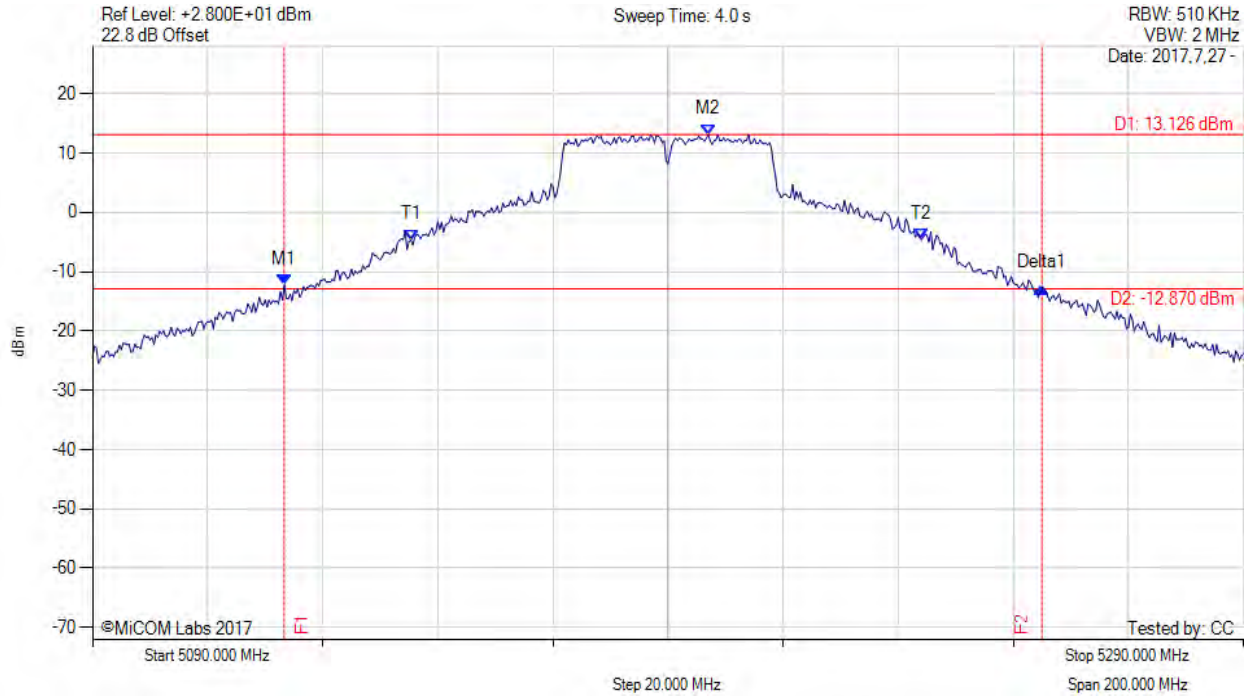
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5123.300 MHz : -12.254 dBm M2 : 5197.000 MHz : 13.126 dBm Delta1 : 131.700 MHz : -0.491 dB T1 : 5145.333 MHz : -4.621 dBm T2 : 5234.000 MHz : -4.602 dBm OBW : 89.767 MHz	Measured 26 dB Bandwidth: 131.700 MHz Measured 99% Bandwidth: 89.767 MHz

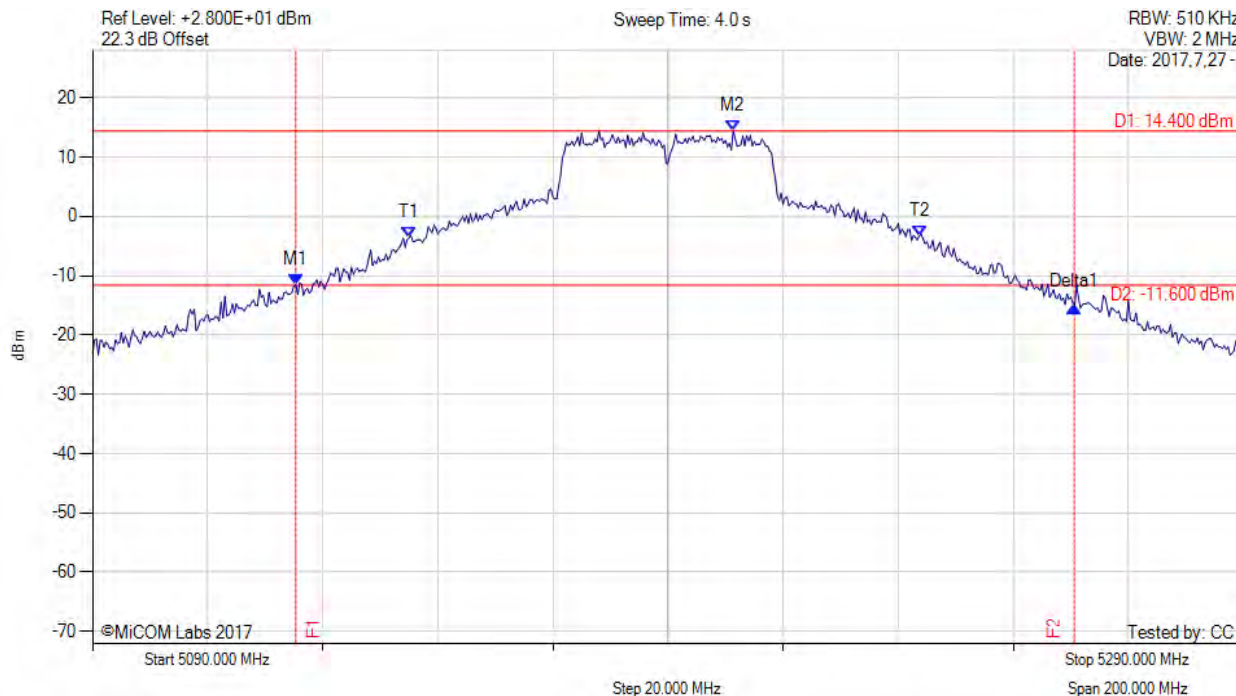
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5125.300 MHz : -11.506 dBm M2 : 5201.300 MHz : 14.400 dBm Delta1 : 135.300 MHz : -3.749 dB T1 : 5145.000 MHz : -3.600 dBm T2 : 5233.667 MHz : -3.315 dBm OBW : 90.427 MHz	Measured 26 dB Bandwidth: 135.300 MHz Measured 99% Bandwidth: 90.427 MHz

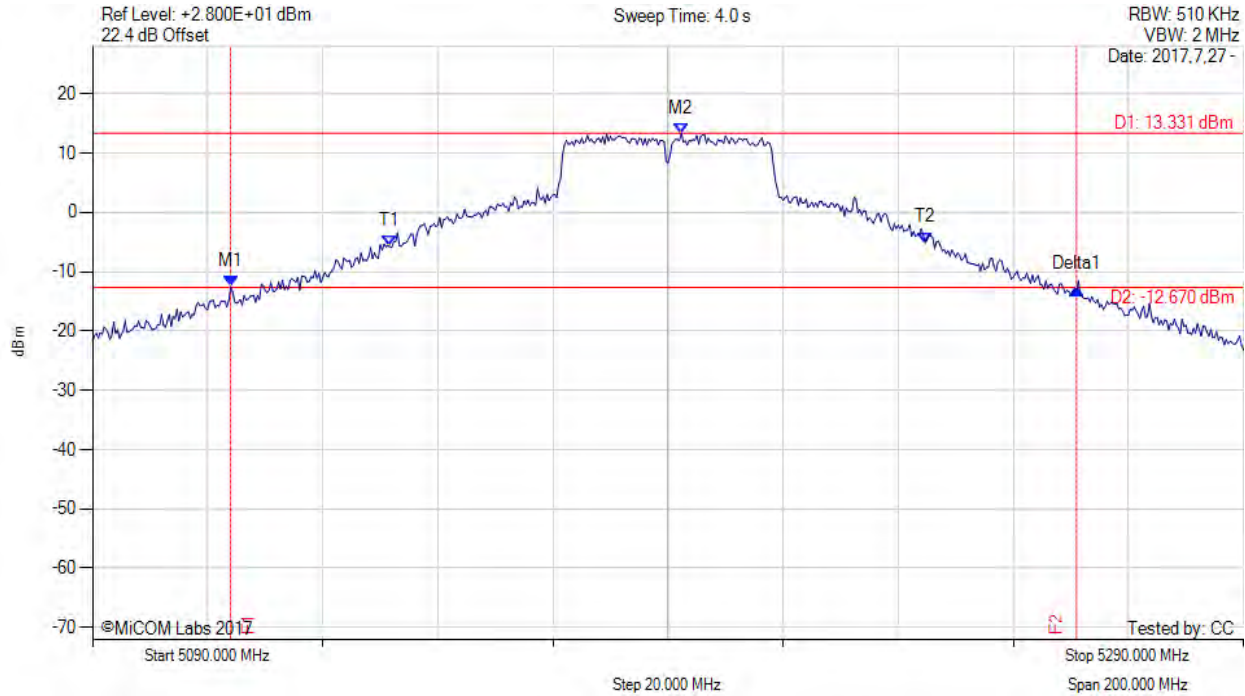
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5114.000 MHz : -12.546 dBm M2 : 5192.300 MHz : 13.331 dBm Delta1 : 147.000 MHz : -0.374 dB T1 : 5141.667 MHz : -5.777 dBm T2 : 5234.667 MHz : -5.091 dBm OBW : 95.103 MHz	Measured 26 dB Bandwidth: 147.000 MHz Measured 99% Bandwidth: 95.103 MHz

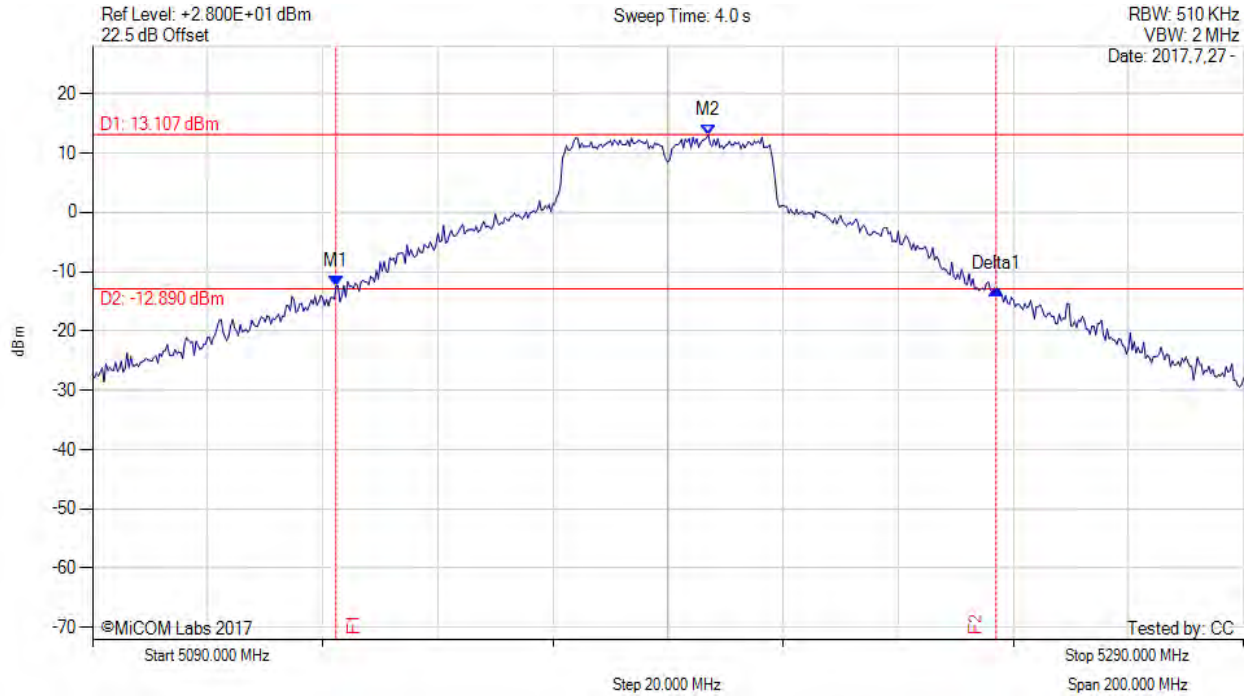
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5132.300 MHz : -12.425 dBm M2 : 5197.000 MHz : 13.107 dBm Delta1 : 114.700 MHz : -0.547 dB T1 : 0 Hz : 0.000 dBm T2 : 0 Hz : 0.000 dBm OBW : 81.755 MHz	Measured 26 dB Bandwidth: 114.700 MHz Measured 99% Bandwidth: 81.755 MHz

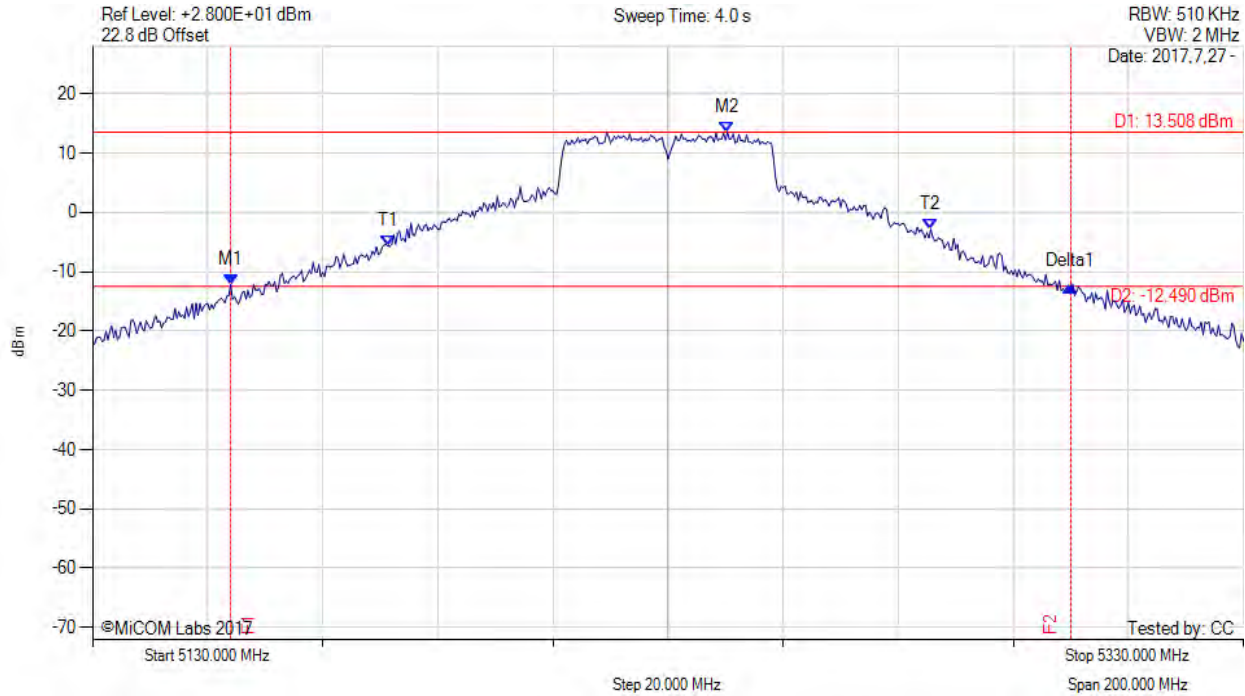
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5154.000 MHz : -12.206 dBm M2 : 5240.300 MHz : 13.508 dBm Delta1 : 146.000 MHz : -0.245 dB T1 : 5181.333 MHz : -5.651 dBm T2 : 5275.667 MHz : -2.901 dBm OBW : 96.557 MHz	Measured 26 dB Bandwidth: 146.000 MHz Measured 99% Bandwidth: 96.557 MHz

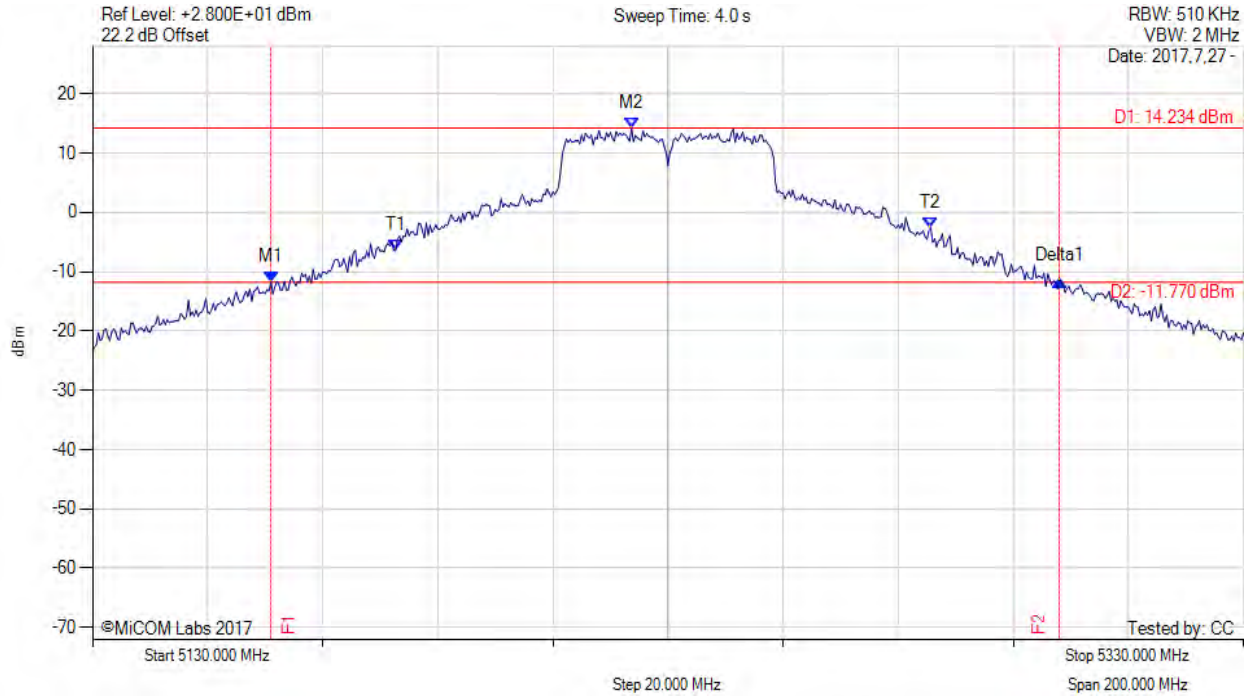
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5161.000 MHz : -11.664 dBm M2 : 5223.700 MHz : 14.234 dBm Delta1 : 137.000 MHz : 0.135 dB T1 : 5182.667 MHz : -6.415 dBm T2 : 5275.667 MHz : -2.666 dBm OBW : 95.256 MHz	Measured 26 dB Bandwidth: 137.000 MHz Measured 99% Bandwidth: 95.256 MHz

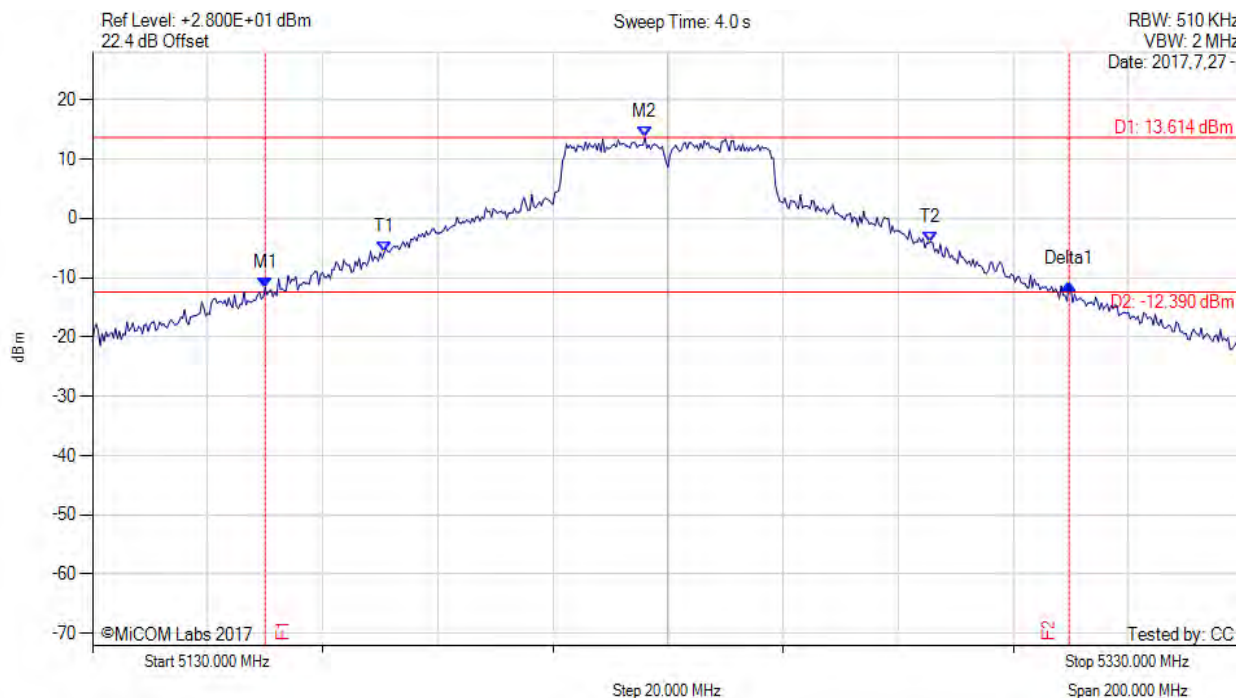
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5160.000 MHz : -11.731 dBm M2 : 5226.000 MHz : 13.614 dBm Delta1 : 139.700 MHz : 0.661 dB T1 : 5180.667 MHz : -5.777 dBm T2 : 5275.667 MHz : -3.984 dBm OBW : 97.752 MHz	Measured 26 dB Bandwidth: 139.700 MHz Measured 99% Bandwidth: 97.752 MHz

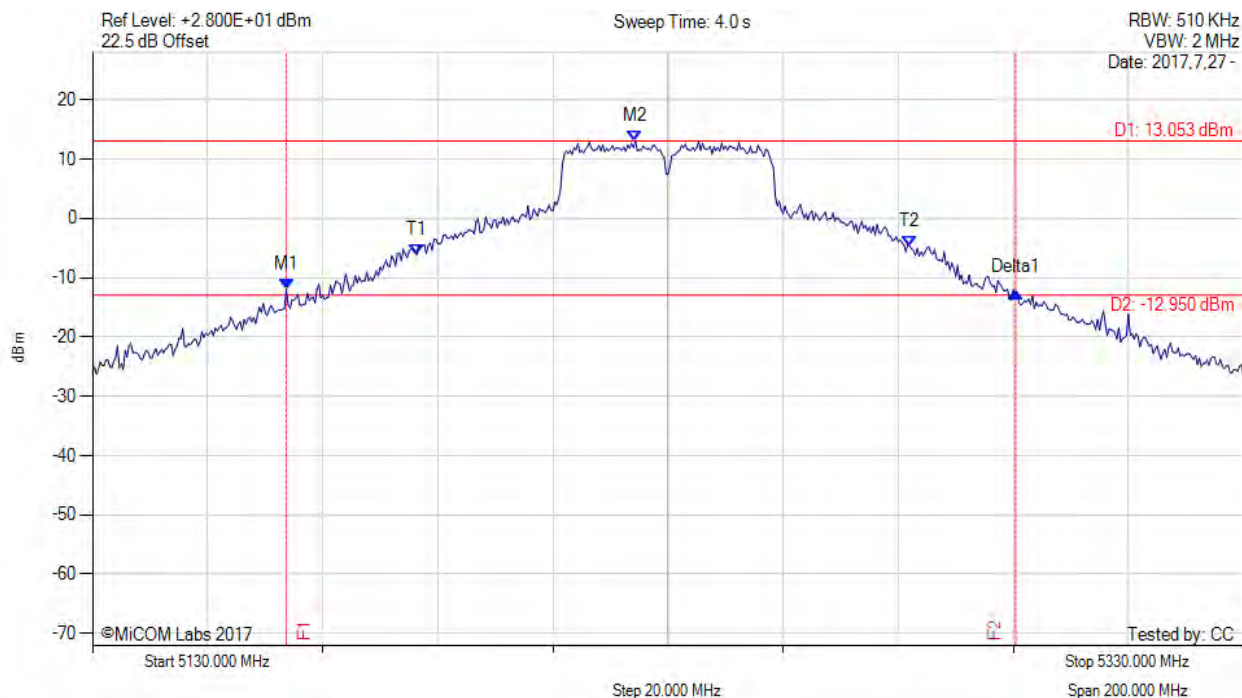
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26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5163.700 MHz : -12.045 dBm M2 : 5224.300 MHz : 13.053 dBm Delta1 : 126.700 MHz : -0.321 dB T1 : 5186.333 MHz : -6.110 dBm T2 : 5272.000 MHz : -4.662 dBm OBW : 87.061 MHz	Measured 26 dB Bandwidth: 126.700 MHz Measured 99% Bandwidth: 87.061 MHz

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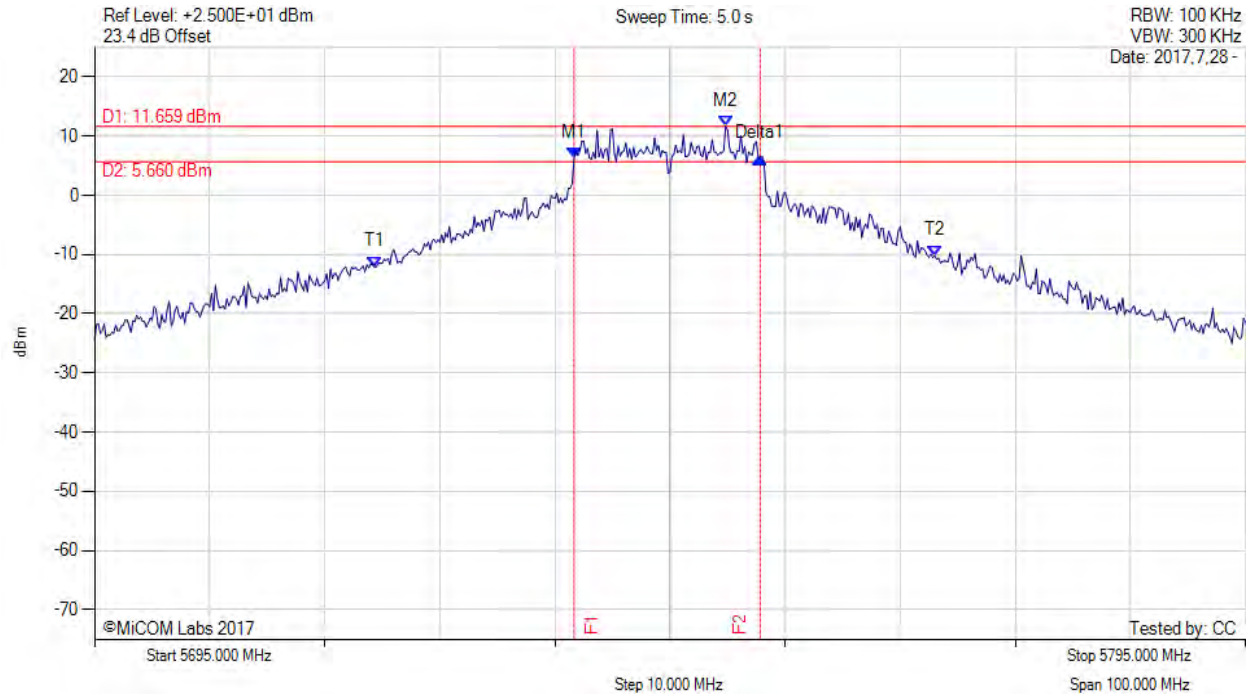
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A.2. 6 dB & 99% Bandwidth



6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.670 MHz : 6.318 dBm M2 : 5749.830 MHz : 11.659 dBm Delta1 : 16.170 MHz : -0.010 dB T1 : 5719.333 MHz : -12.076 dBm T2 : 5768.000 MHz : -10.209 dBm OBW : 51.165 MHz	Measured 6 dB Bandwidth: 16.170 MHz Measured 99% Bandwidth: 51.165 MHz

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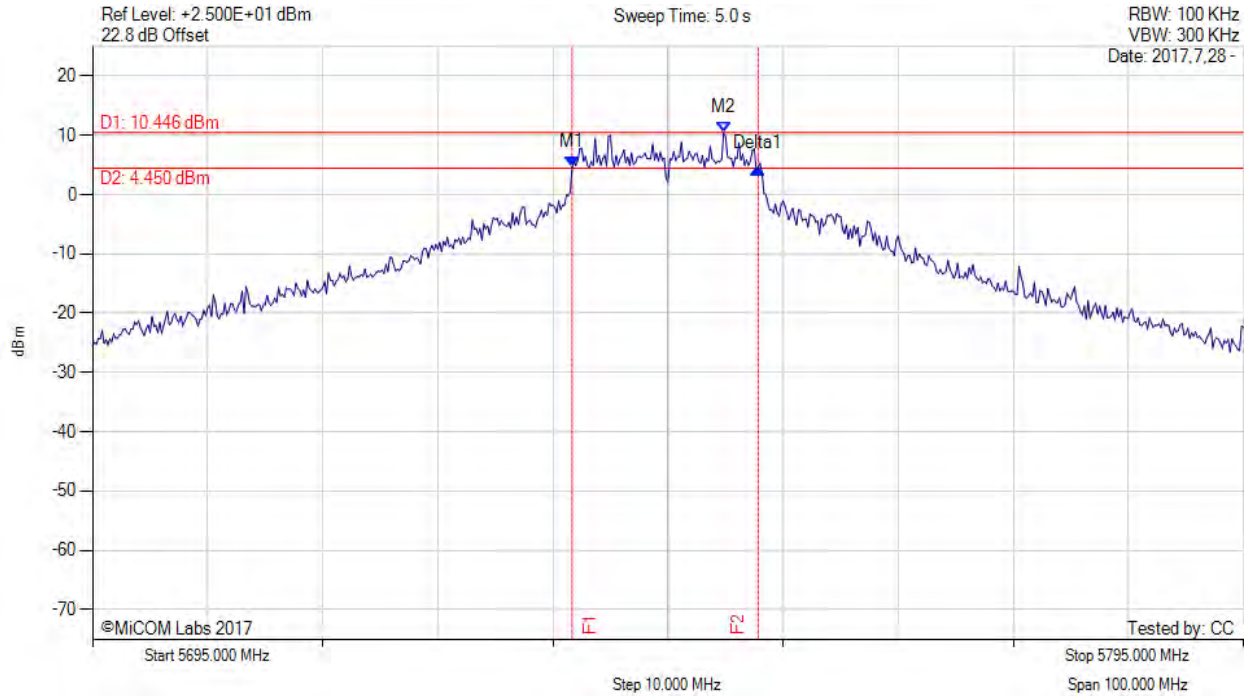


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
To: FCC Subpart E 15.407 & IC RSS-247
Serial #: HPEN111-U8_Conducted non-DFS Bands Rev A
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.670 MHz : 4.567 dBm M2 : 5749.830 MHz : 10.446 dBm Delta1 : 16.170 MHz : -0.119 dB T1 : 0 Hz : 0.000 dBm T2 : 0 Hz : 0.000 dBm OBW : 50.372 MHz	Measured 6 dB Bandwidth: 16.170 MHz Measured 99% Bandwidth: 50.372 MHz

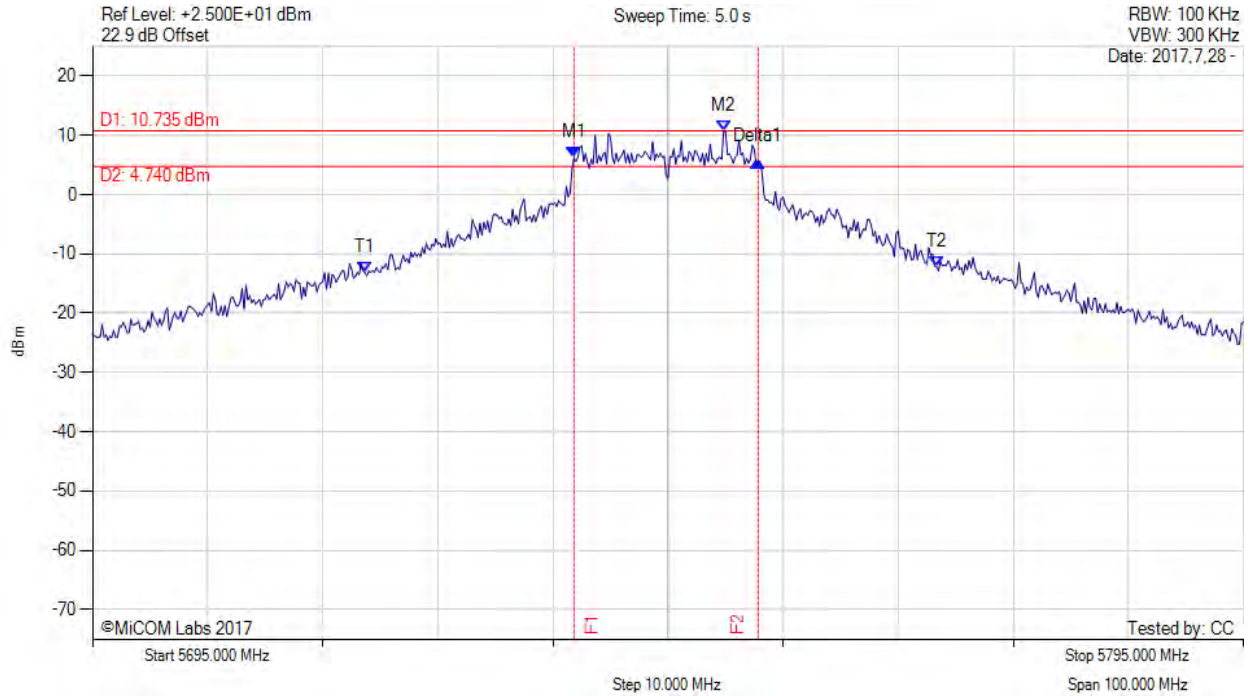
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.830 MHz : 6.217 dBm M2 : 5749.830 MHz : 10.735 dBm Delta1 : 16.000 MHz : -0.732 dB T1 : 5718.667 MHz : -13.166 dBm T2 : 5768.333 MHz : -12.171 dBm OBW : 52.295 MHz	Measured 6 dB Bandwidth: 16.000 MHz Measured 99% Bandwidth: 52.295 MHz

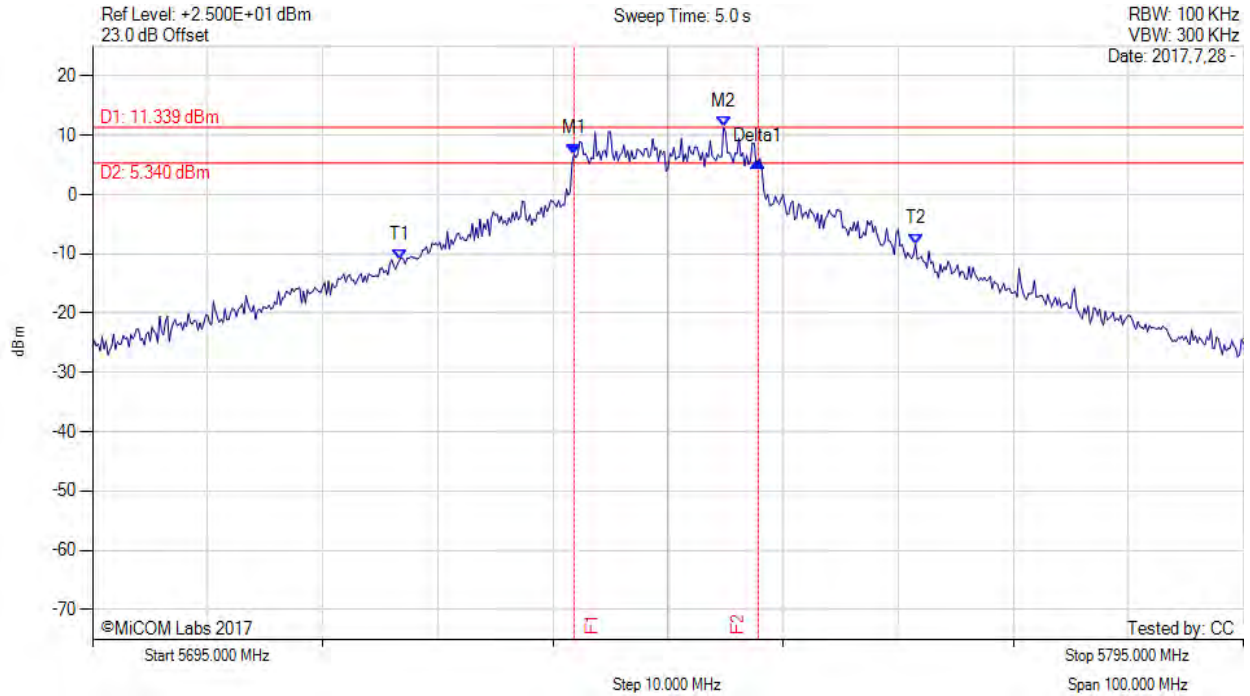
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.830 MHz : 6.868 dBm M2 : 5749.830 MHz : 11.339 dBm Delta1 : 16.000 MHz : -1.337 dB T1 : 5721.667 MHz : -11.082 dBm T2 : 5766.500 MHz : -8.344 dBm OBW : 46.276 MHz	Measured 6 dB Bandwidth: 16.000 MHz Measured 99% Bandwidth: 46.276 MHz

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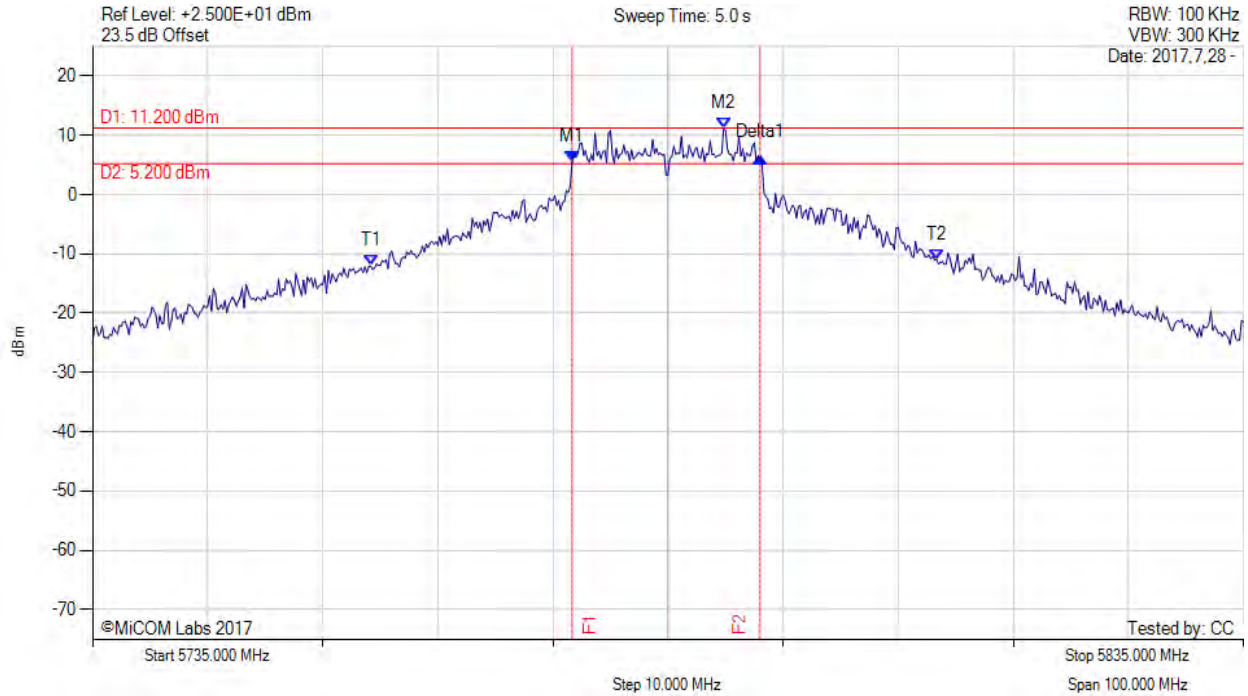


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
To: FCC Subpart E 15.407 & IC RSS-247
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.670 MHz : 5.578 dBm M2 : 5789.830 MHz : 11.200 dBm Delta1 : 16.330 MHz : 0.664 dB T1 : 5759.167 MHz : -12.055 dBm T2 : 5808.333 MHz : -10.955 dBm OBW : 51.630 MHz	Measured 6 dB Bandwidth: 16.330 MHz Measured 99% Bandwidth: 51.630 MHz

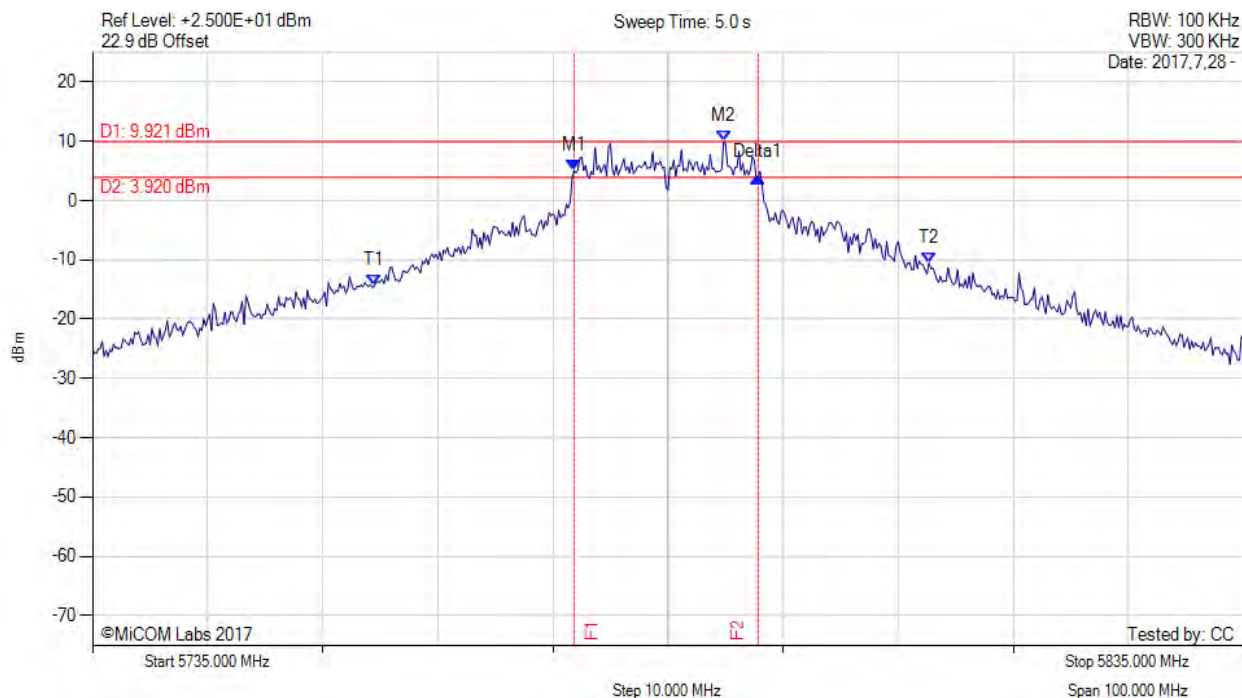
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.830 MHz : 5.048 dBm M2 : 5789.830 MHz : 9.921 dBm Delta1 : 16.000 MHz : -1.071 dB T1 : 5759.500 MHz : -14.312 dBm T2 : 5807.667 MHz : -10.564 dBm OBW : 50.503 MHz	Measured 6 dB Bandwidth: 16.000 MHz Measured 99% Bandwidth: 50.503 MHz

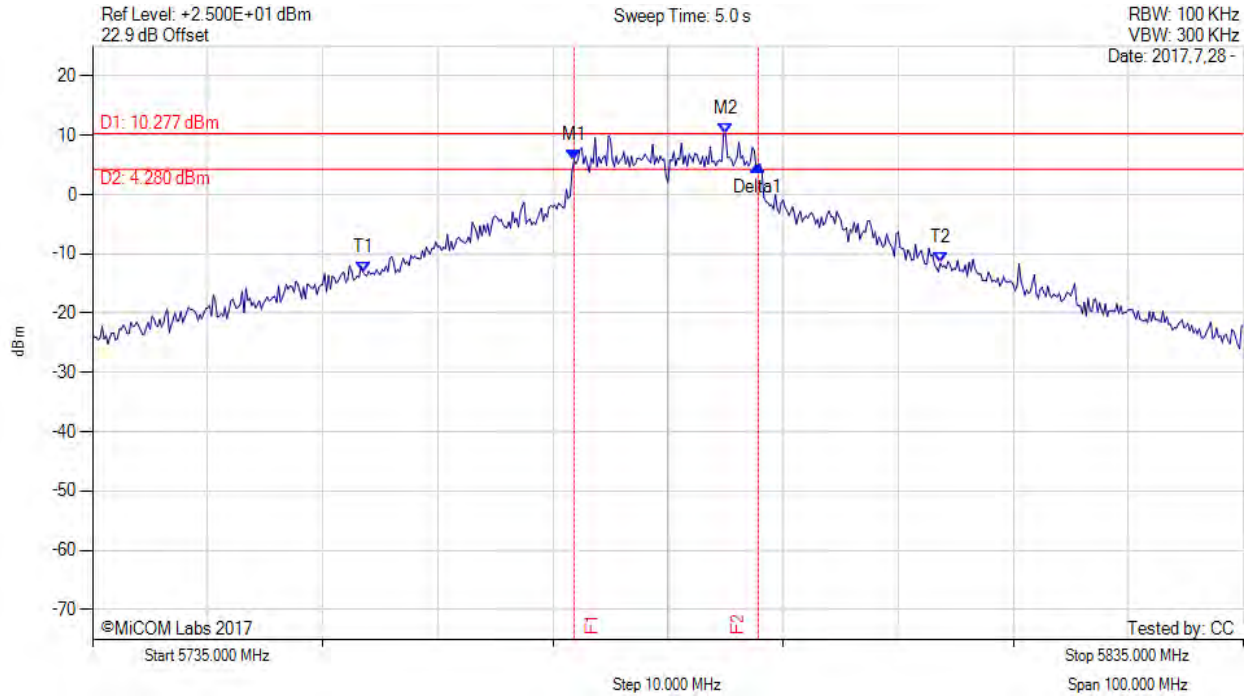
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.830 MHz : 5.845 dBm M2 : 5790.000 MHz : 10.277 dBm Delta1 : 16.000 MHz : -1.036 dB T1 : 5758.500 MHz : -13.044 dBm T2 : 5808.667 MHz : -11.523 dBm OBW : 52.726 MHz	Measured 6 dB Bandwidth: 16.000 MHz Measured 99% Bandwidth: 52.726 MHz

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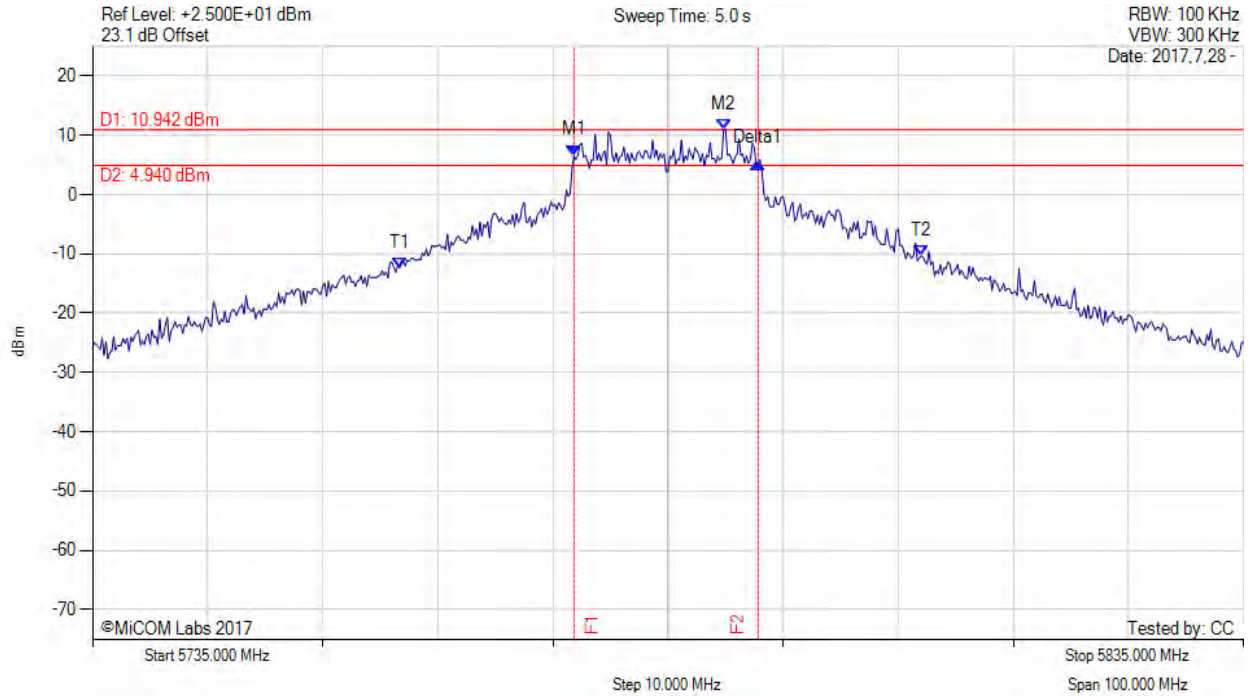


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.830 MHz : 6.613 dBm M2 : 5789.830 MHz : 10.942 dBm Delta1 : 16.000 MHz : -1.231 dB T1 : 5761.667 MHz : -12.321 dBm T2 : 5807.000 MHz : -10.307 dBm OBW : 47.029 MHz	Measured 6 dB Bandwidth: 16.000 MHz Measured 99% Bandwidth: 47.029 MHz

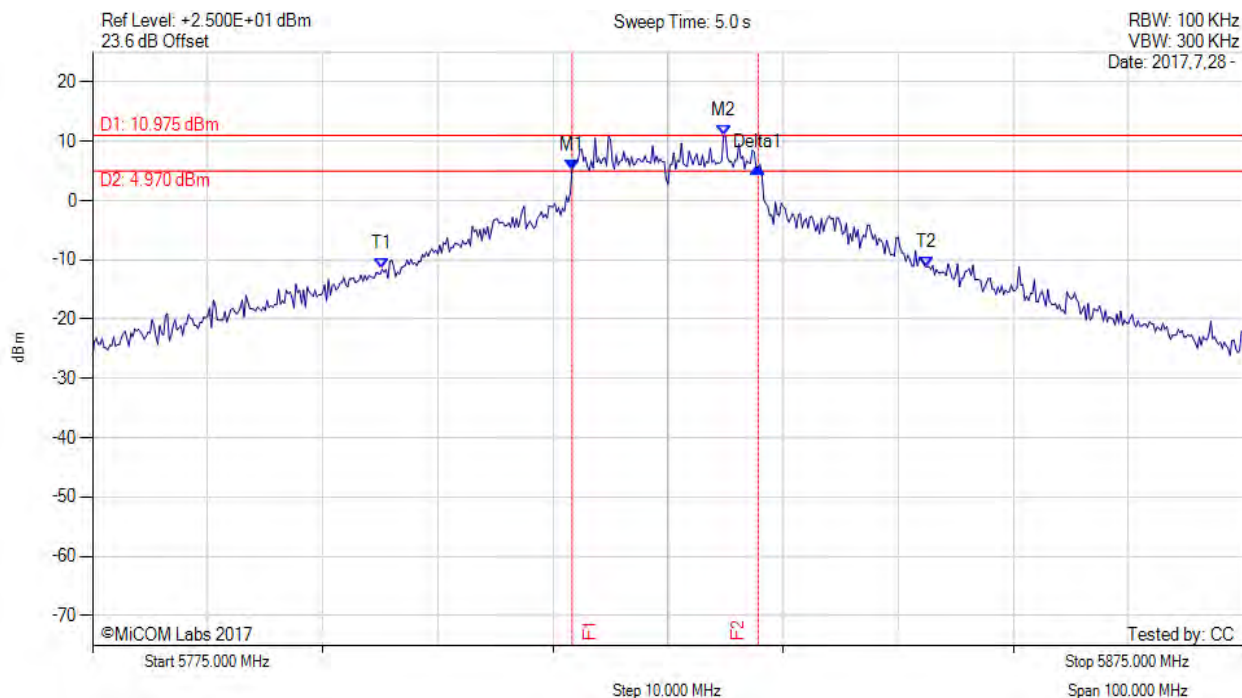
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5816.670 MHz : 5.178 dBm M2 : 5829.830 MHz : 10.975 dBm Delta1 : 16.170 MHz : 0.493 dB T1 : 5800.167 MHz : -11.571 dBm T2 : 5847.500 MHz : -11.210 dBm OBW : 49.597 MHz	Measured 6 dB Bandwidth: 16.170 MHz Measured 99% Bandwidth: 49.597 MHz

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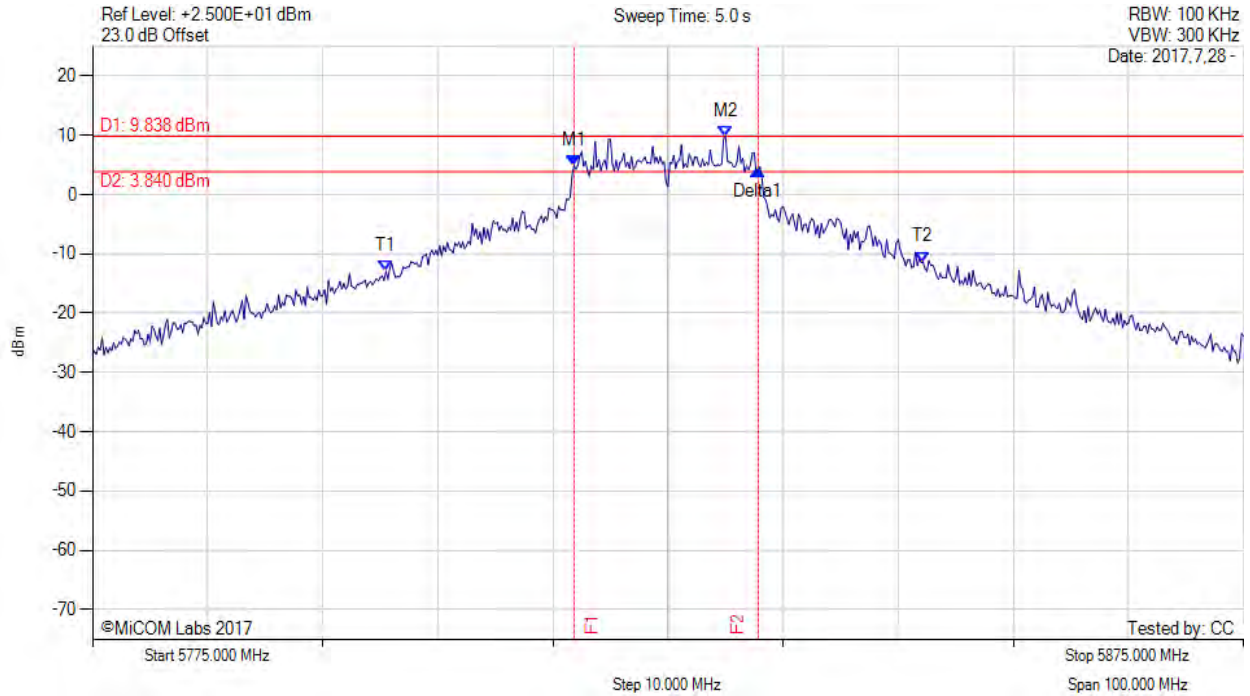


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5816.830 MHz : 4.805 dBm M2 : 5830.000 MHz : 9.838 dBm Delta1 : 16.000 MHz : -0.660 dB T1 : 5800.500 MHz : -12.961 dBm T2 : 5847.167 MHz : -11.377 dBm OBW : 48.760 MHz	Measured 6 dB Bandwidth: 16.000 MHz Measured 99% Bandwidth: 48.760 MHz

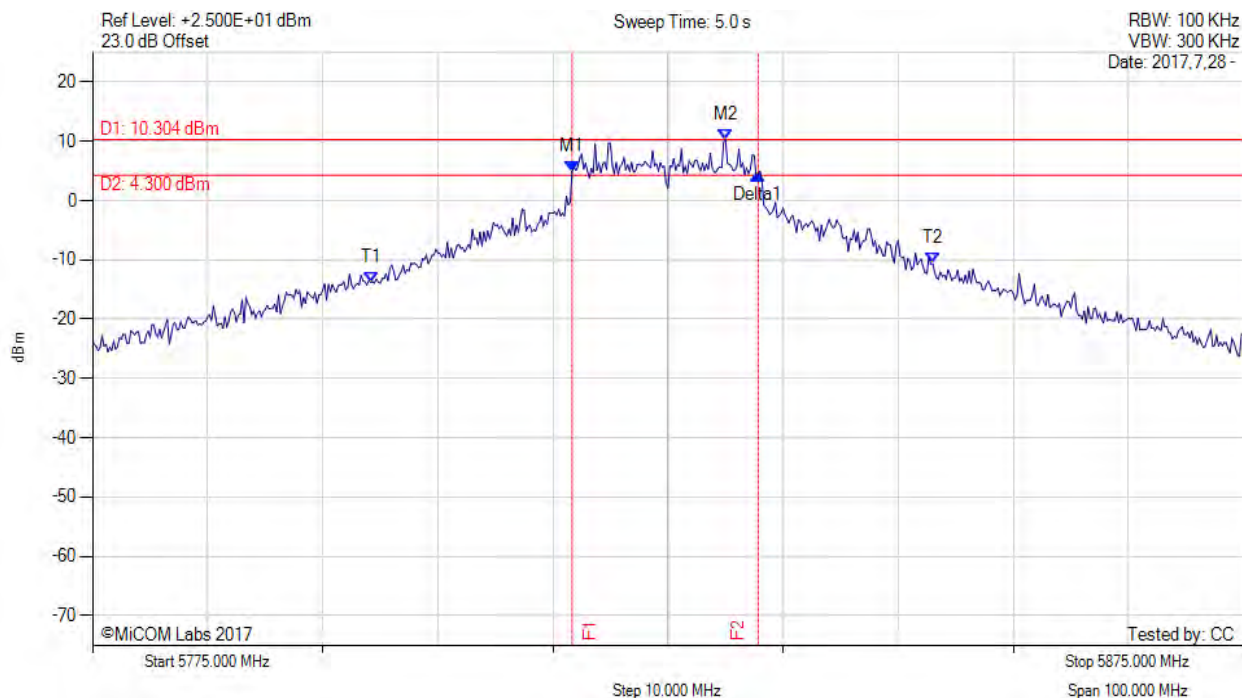
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5816.670 MHz : 4.946 dBm M2 : 5830.000 MHz : 10.304 dBm Delta1 : 16.170 MHz : -0.495 dB T1 : 5799.167 MHz : -13.814 dBm T2 : 5848.000 MHz : -10.645 dBm OBW : 51.415 MHz	Measured 6 dB Bandwidth: 16.170 MHz Measured 99% Bandwidth: 51.415 MHz

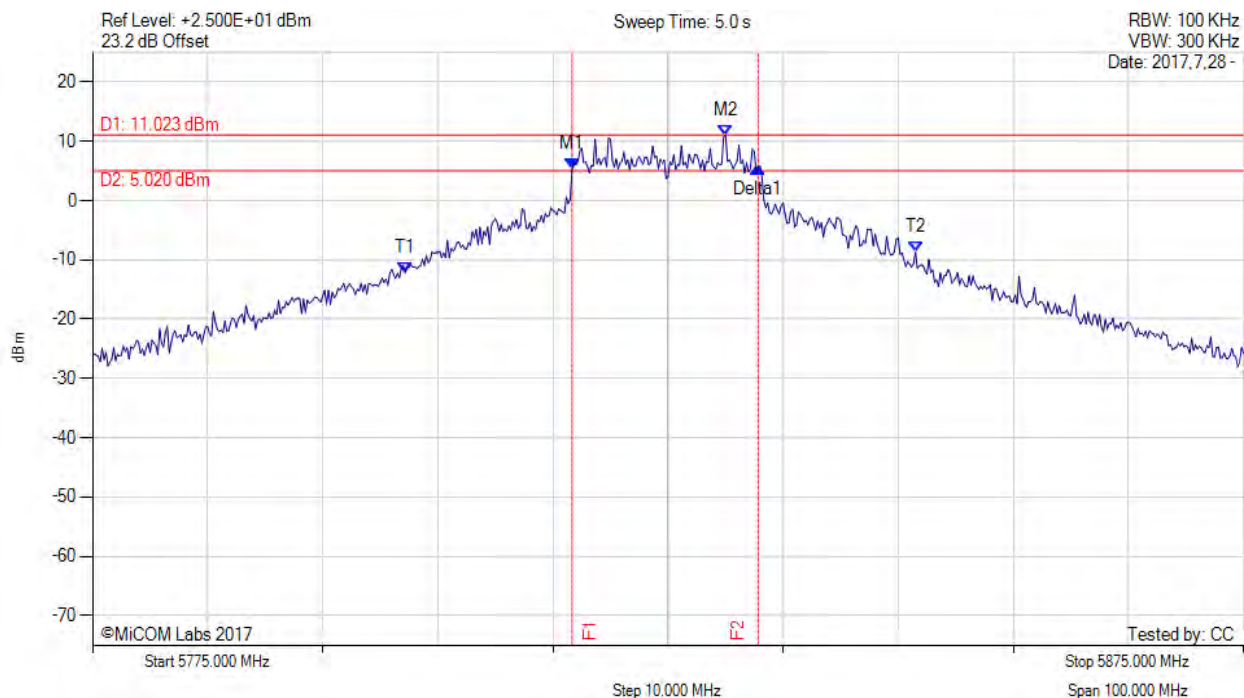
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6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5816.670 MHz : 5.312 dBm M2 : 5830.000 MHz : 11.023 dBm Delta1 : 16.170 MHz : 0.202 dB T1 : 5802.167 MHz : -12.181 dBm T2 : 5846.500 MHz : -8.692 dBm OBW : 45.633 MHz	Measured 6 dB Bandwidth: 16.170 MHz Measured 99% Bandwidth: 45.633 MHz

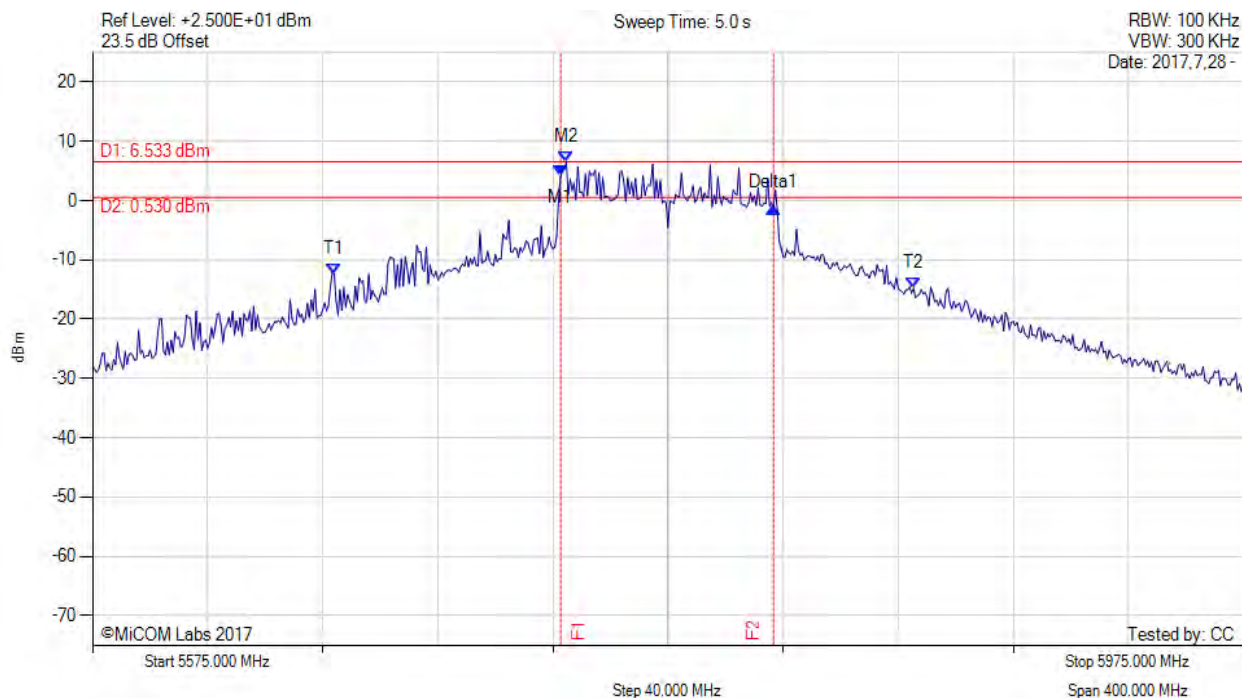
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6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5737.700 MHz : 4.166 dBm M2 : 5739.700 MHz : 6.533 dBm Delta1 : 74.000 MHz : -5.338 dB T1 : 5659.000 MHz : -12.368 dBm T2 : 5860.333 MHz : -14.786 dBm OBW : 206.955 MHz	Measured 6 dB Bandwidth: 74.000 MHz Measured 99% Bandwidth: 206.955 MHz

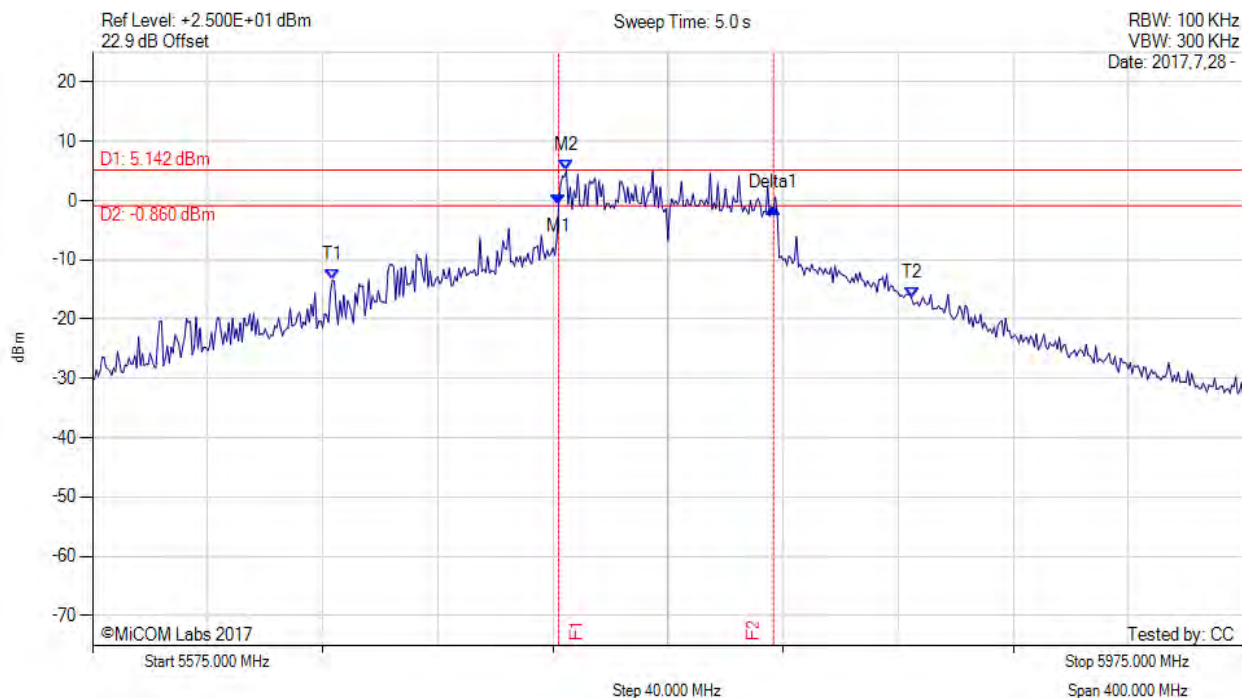
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6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5737.000 MHz : -0.834 dBm M2 : 5739.700 MHz : 5.142 dBm Delta1 : 74.700 MHz : -0.337 dB T1 : 5658.333 MHz : -13.410 dBm T2 : 5859.667 MHz : -16.439 dBm OBW : 207.260 MHz	Measured 6 dB Bandwidth: 74.700 MHz Measured 99% Bandwidth: 207.260 MHz

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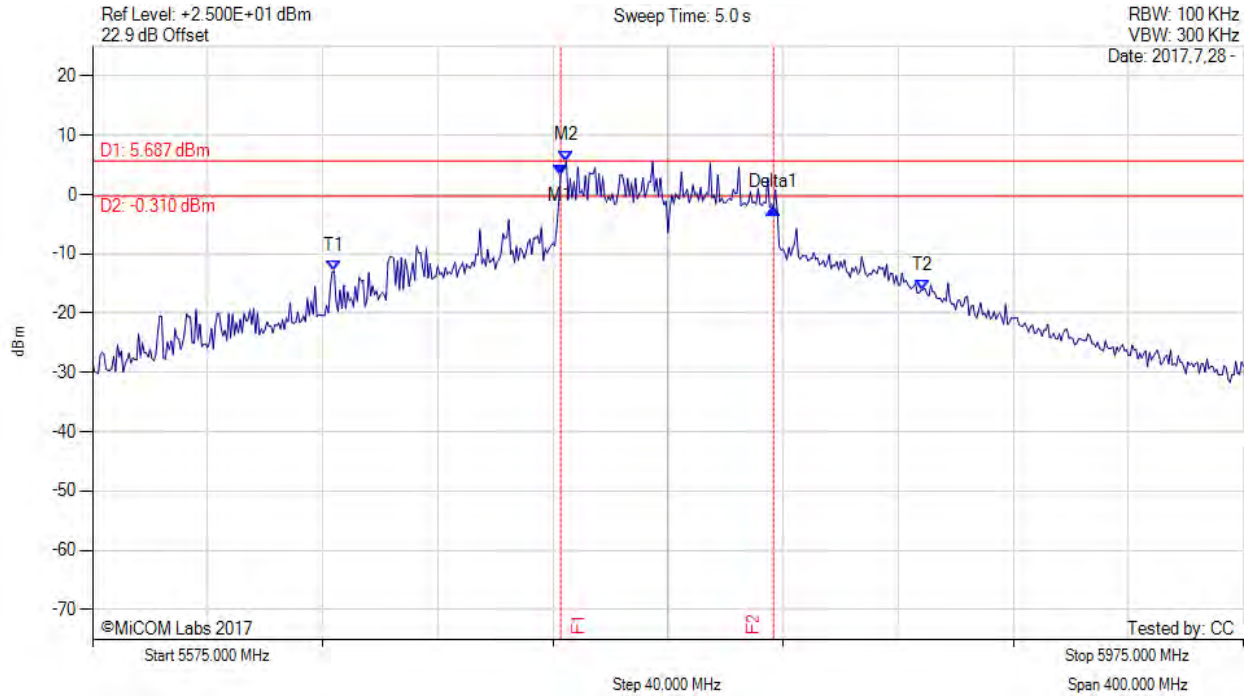


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5737.700 MHz : 3.284 dBm M2 : 5739.700 MHz : 5.687 dBm Delta1 : 74.000 MHz : -5.533 dB T1 : 5659.000 MHz : -12.937 dBm T2 : 5863.667 MHz : -16.065 dBm OBW : 210.838 MHz	Measured 6 dB Bandwidth: 74.000 MHz Measured 99% Bandwidth: 210.838 MHz

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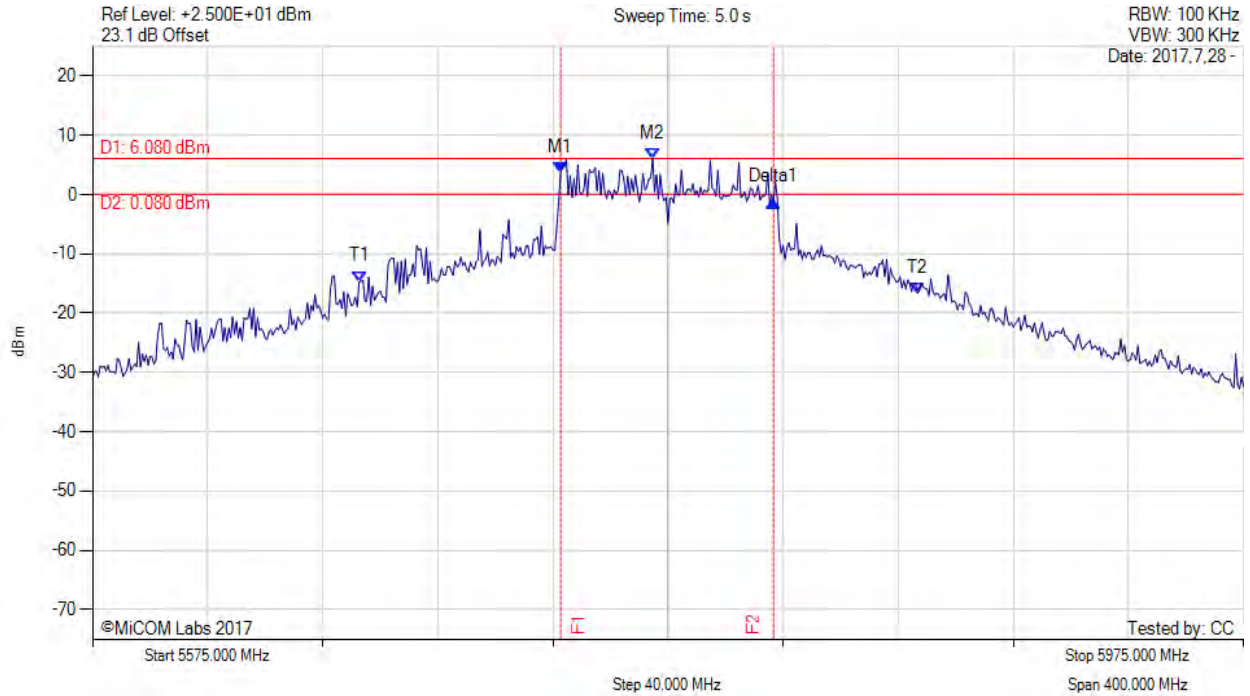


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5737.700 MHz : 3.618 dBm M2 : 5769.700 MHz : 6.080 dBm Delta1 : 74.000 MHz : -4.835 dB T1 : 5667.667 MHz : -14.650 dBm T2 : 5861.667 MHz : -16.628 dBm OBW : 198.579 MHz	Measured 6 dB Bandwidth: 74.000 MHz Measured 99% Bandwidth: 198.579 MHz

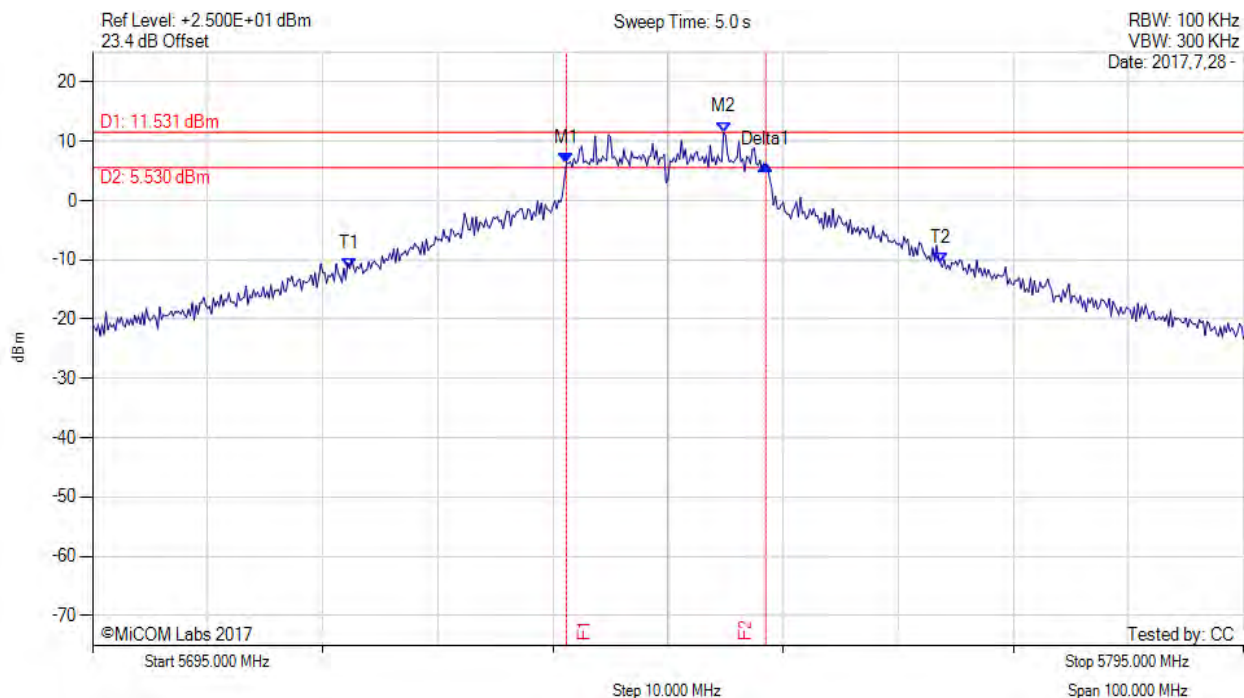
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.170 MHz : 6.271 dBm M2 : 5749.830 MHz : 11.531 dBm Delta1 : 17.330 MHz : -0.181 dB T1 : 5717.333 MHz : -11.451 dBm T2 : 5768.667 MHz : -10.519 dBm OBW : 54.108 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 54.108 MHz

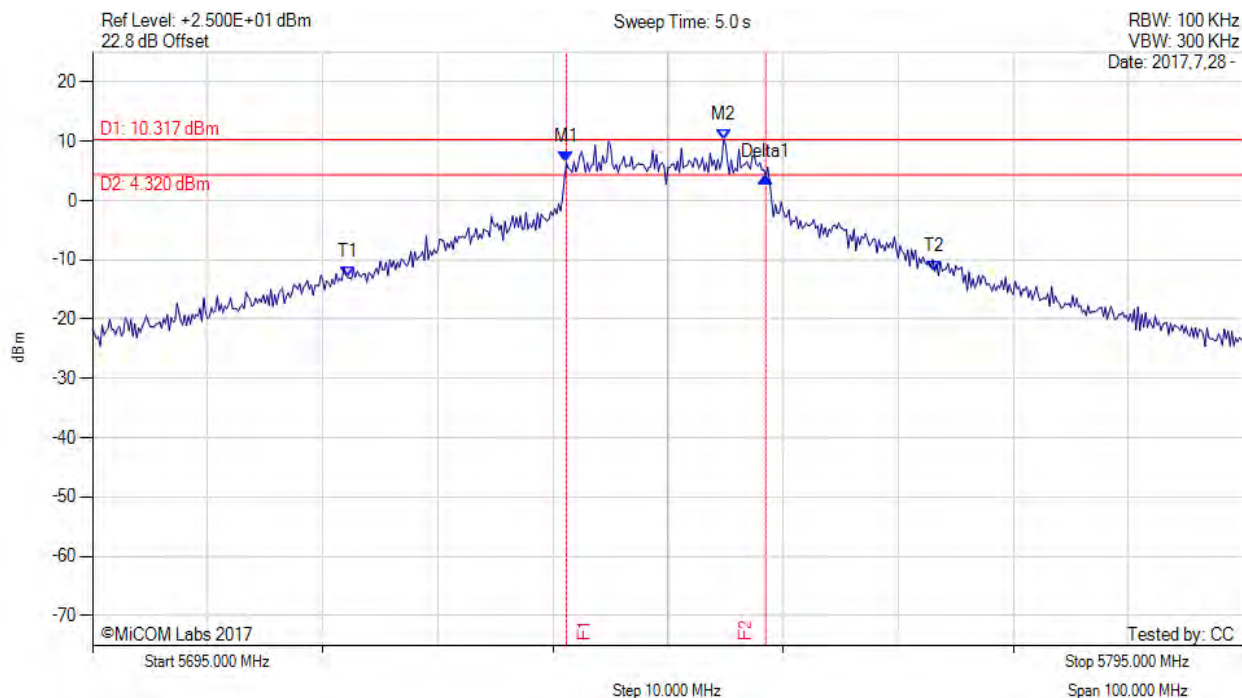
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.170 MHz : 6.424 dBm M2 : 5749.830 MHz : 10.317 dBm Delta1 : 17.330 MHz : -2.419 dB T1 : 5717.167 MHz : -12.912 dBm T2 : 5768.167 MHz : -11.891 dBm OBW : 53.378 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 53.378 MHz

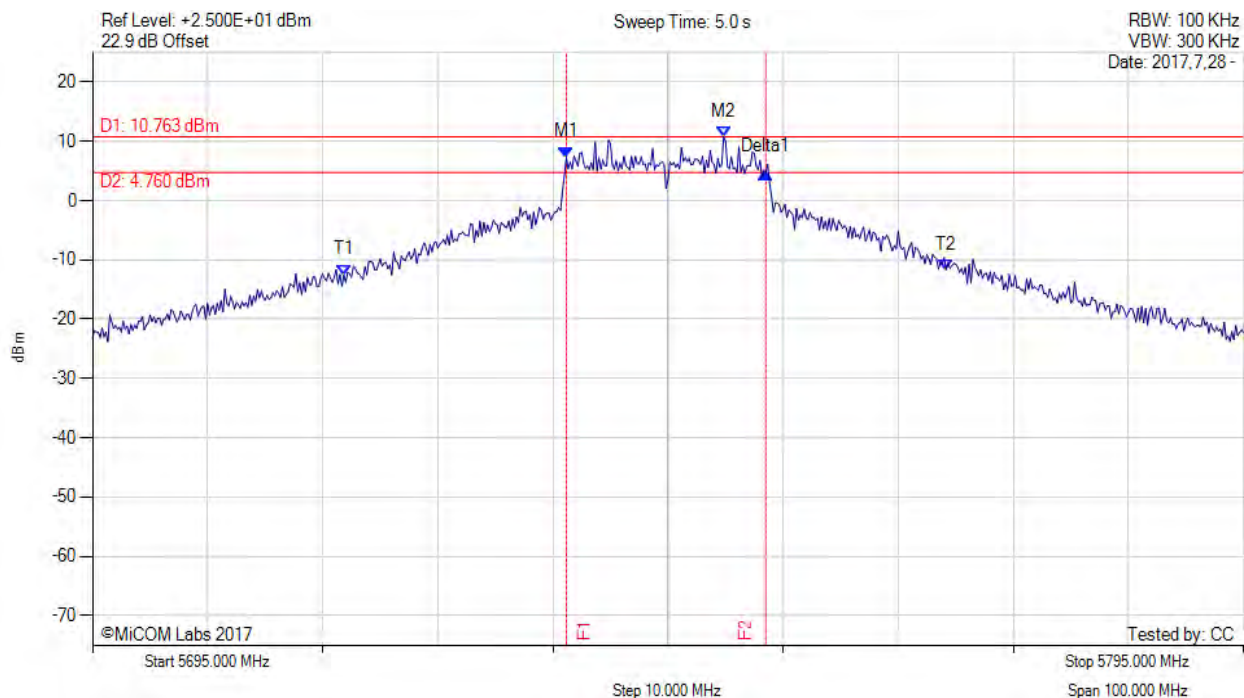
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.170 MHz : 7.331 dBm M2 : 5749.830 MHz : 10.763 dBm Delta1 : 17.330 MHz : -2.579 dB T1 : 5716.833 MHz : -12.536 dBm T2 : 5769.167 MHz : -11.653 dBm OBW : 55.386 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 55.386 MHz

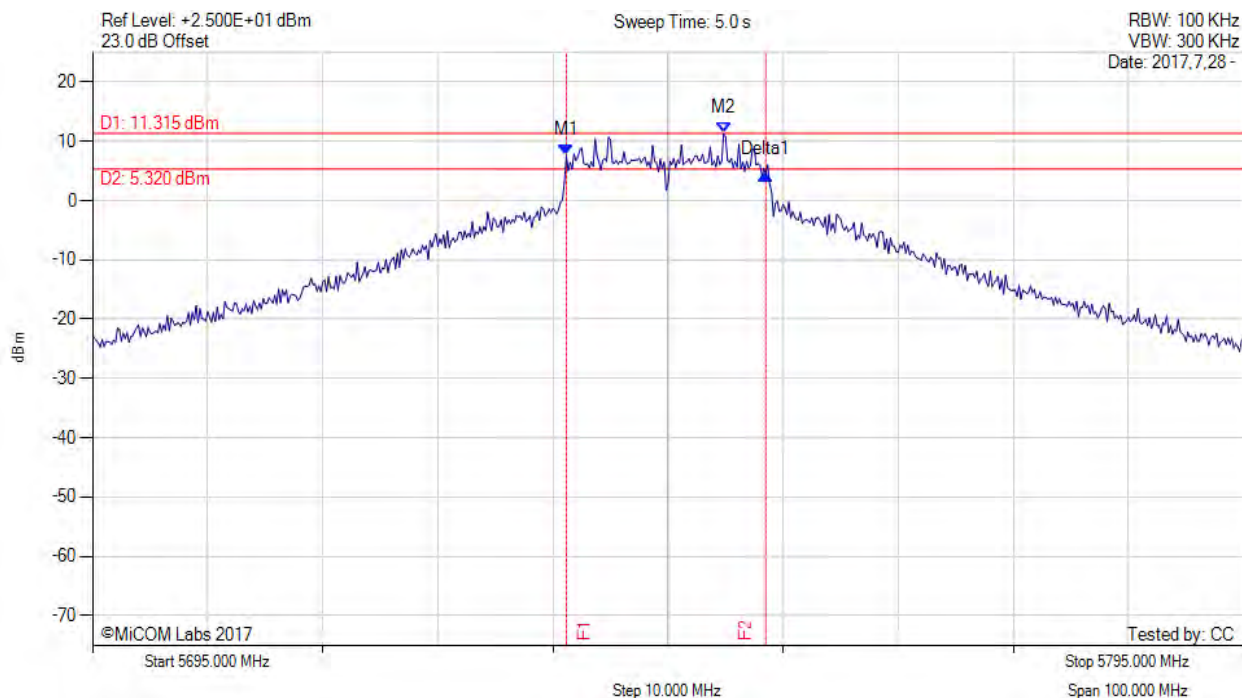
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.170 MHz : 7.594 dBm M2 : 5749.830 MHz : 11.315 dBm Delta1 : 17.330 MHz : -3.174 dB T1 : 0 Hz : 0.000 dBm T2 : 0 Hz : 0.000 dBm OBW : 50.721 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 50.721 MHz

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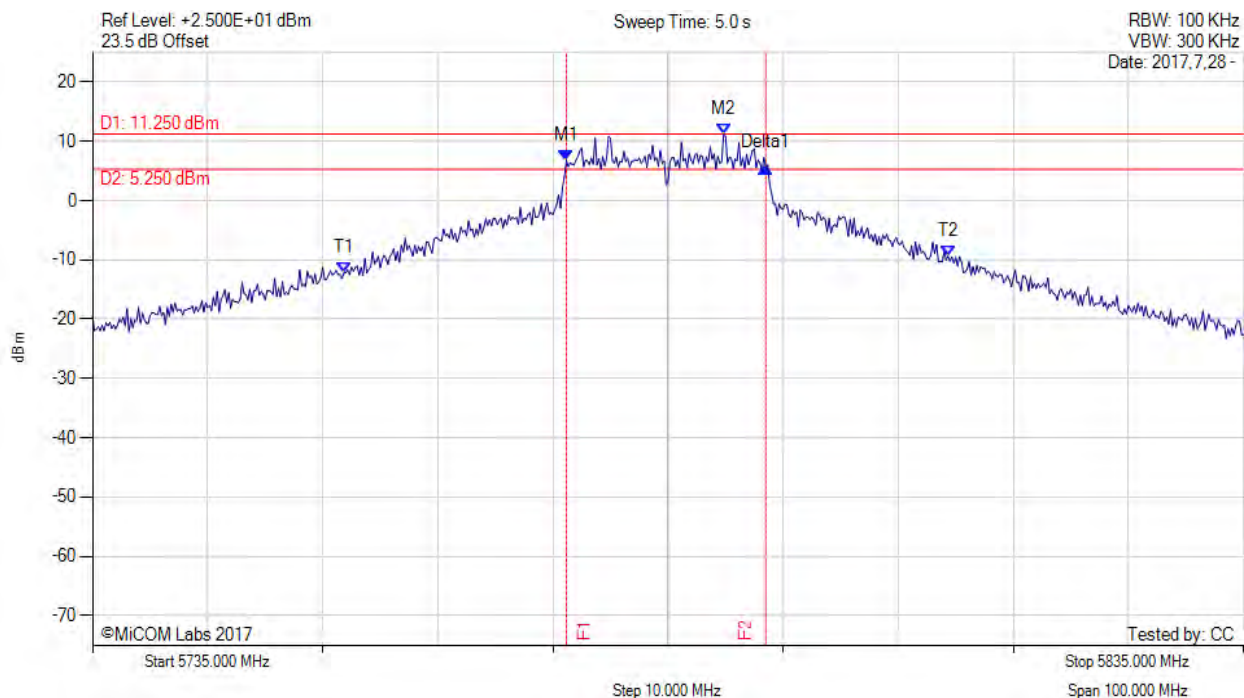


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.170 MHz : 6.734 dBm M2 : 5789.830 MHz : 11.250 dBm Delta1 : 17.330 MHz : -1.150 dB T1 : 5756.833 MHz : -12.241 dBm T2 : 5809.333 MHz : -9.395 dBm OBW : 55.440 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 55.440 MHz

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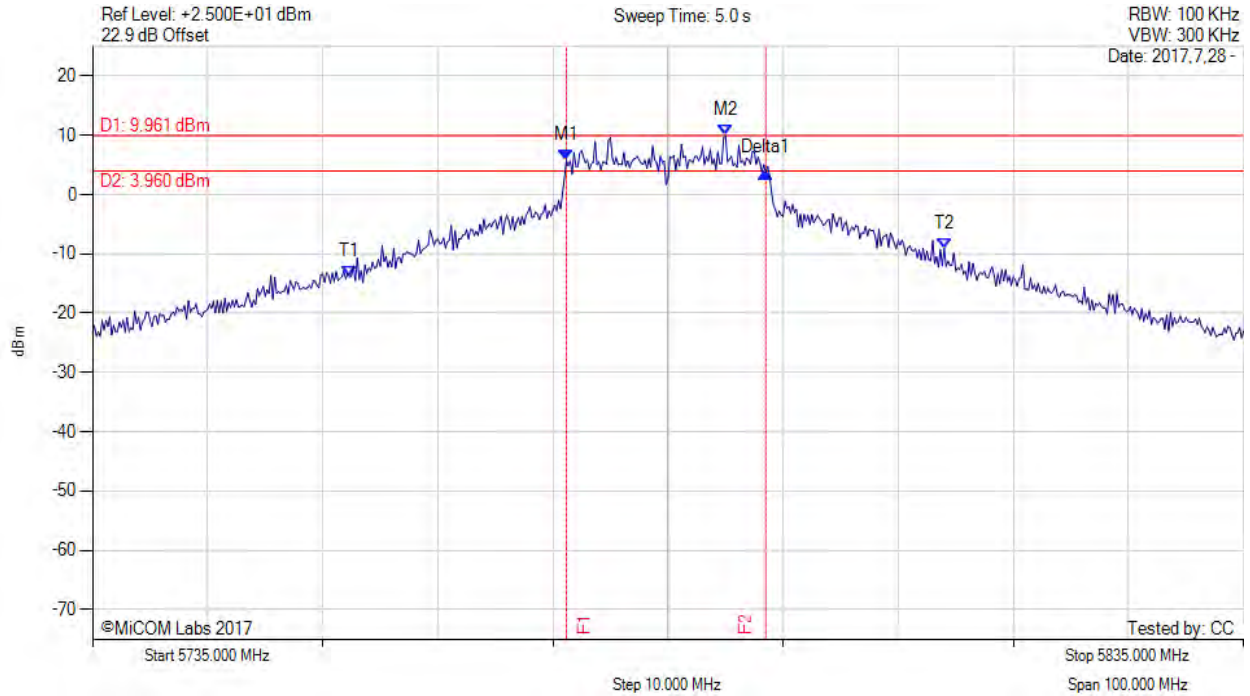


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.170 MHz : 5.771 dBm M2 : 5790.000 MHz : 9.961 dBm Delta1 : 17.330 MHz : -2.012 dB T1 : 5757.333 MHz : -13.870 dBm T2 : 5809.000 MHz : -9.072 dBm OBW : 54.733 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 54.733 MHz

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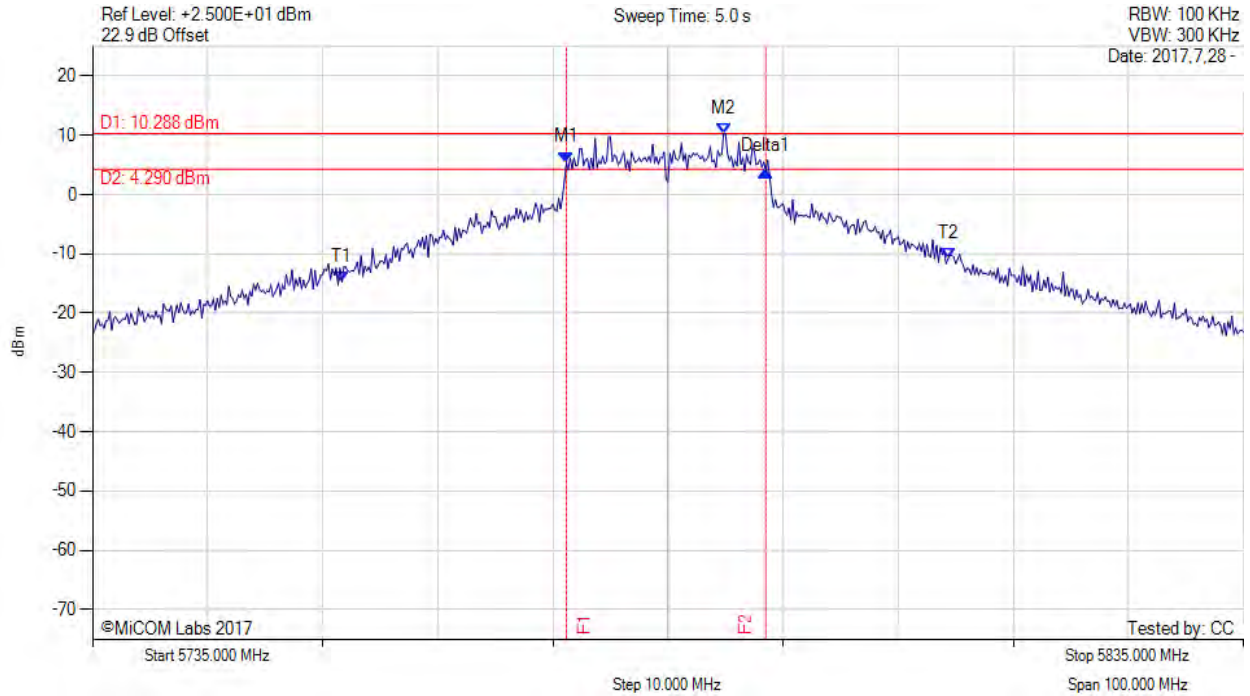


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.170 MHz : 5.446 dBm M2 : 5789.830 MHz : 10.288 dBm Delta1 : 17.330 MHz : -1.469 dB T1 : 5756.667 MHz : -14.712 dBm T2 : 5809.333 MHz : -10.866 dBm OBW : 56.005 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 56.005 MHz

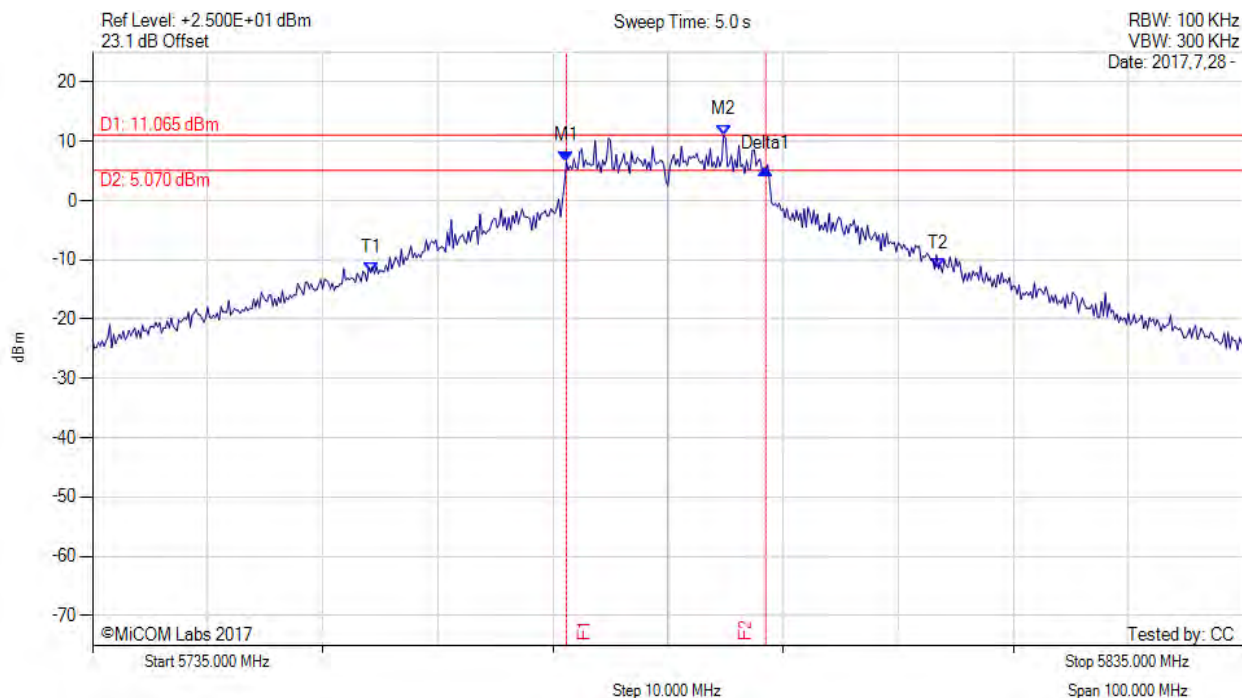
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.170 MHz : 6.626 dBm M2 : 5789.830 MHz : 11.065 dBm Delta1 : 17.330 MHz : -1.313 dB T1 : 5759.167 MHz : -12.105 dBm T2 : 5808.500 MHz : -11.507 dBm OBW : 51.465 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 51.465 MHz

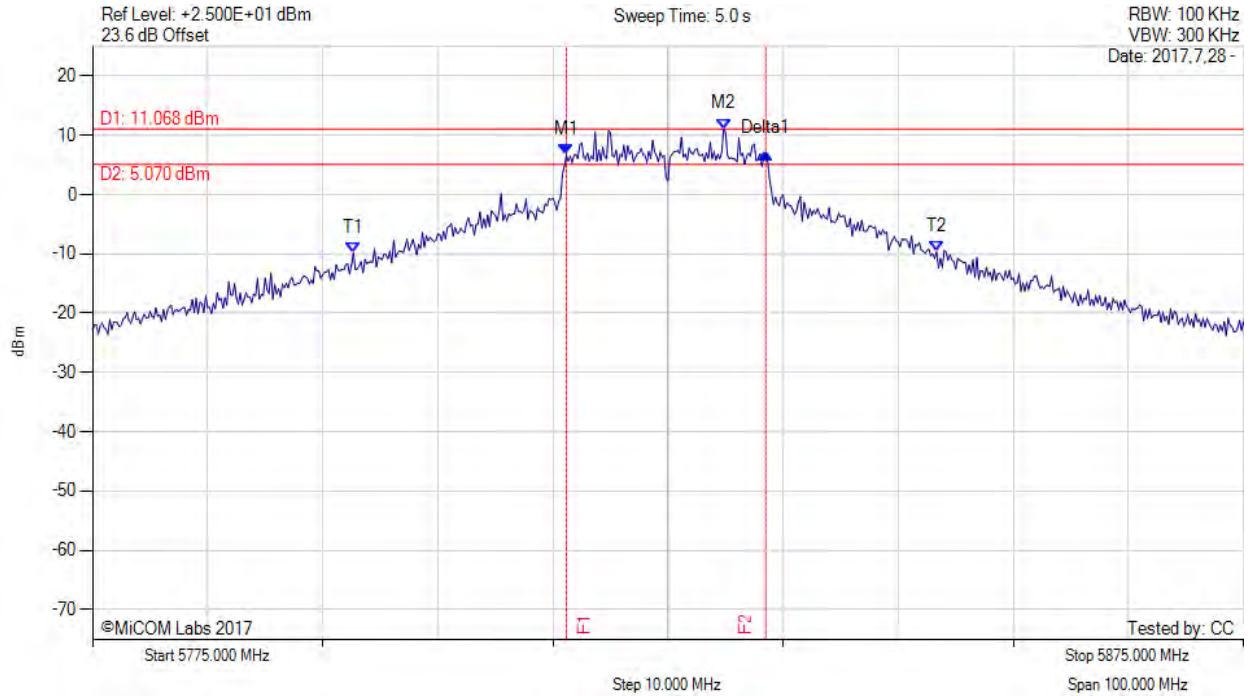
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5816.170 MHz : 6.682 dBm M2 : 5829.830 MHz : 11.068 dBm Delta1 : 17.330 MHz : 0.224 dB T1 : 5797.667 MHz : -9.815 dBm T2 : 5848.333 MHz : -9.646 dBm OBW : 52.967 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 52.967 MHz

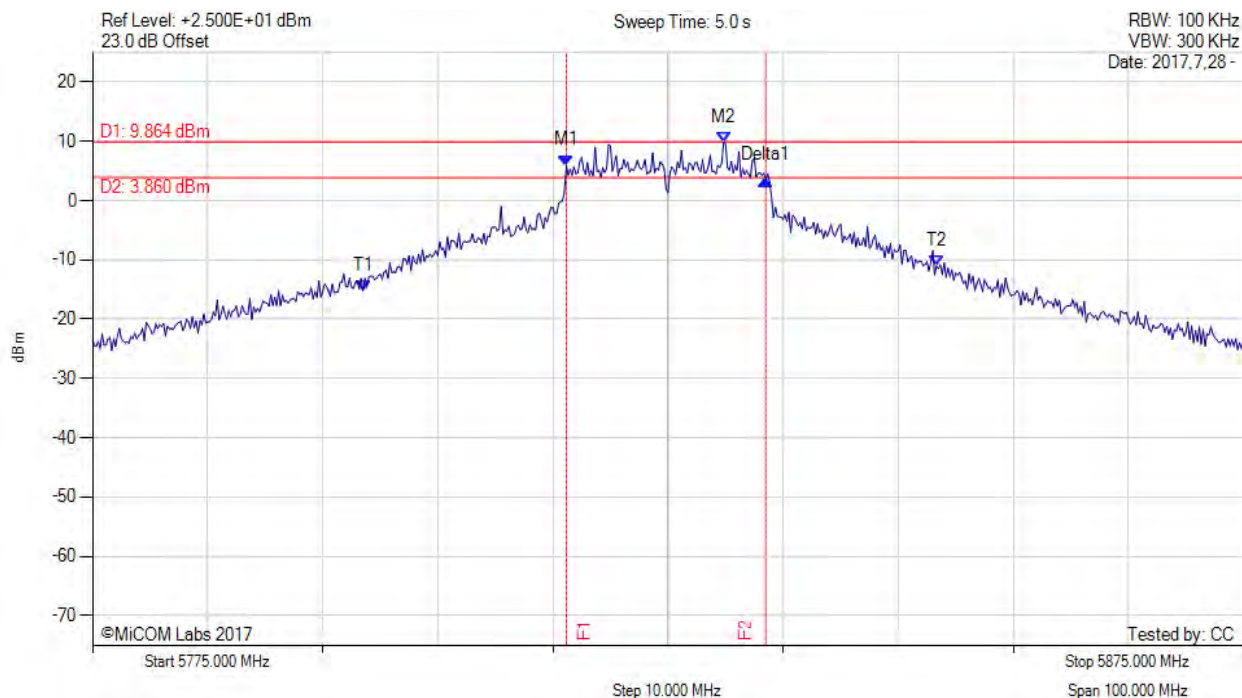
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5816.170 MHz : 5.926 dBm M2 : 5829.830 MHz : 9.864 dBm Delta1 : 17.330 MHz : -2.424 dB T1 : 5798.500 MHz : -15.150 dBm T2 : 5848.333 MHz : -11.032 dBm OBW : 52.264 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 52.264 MHz

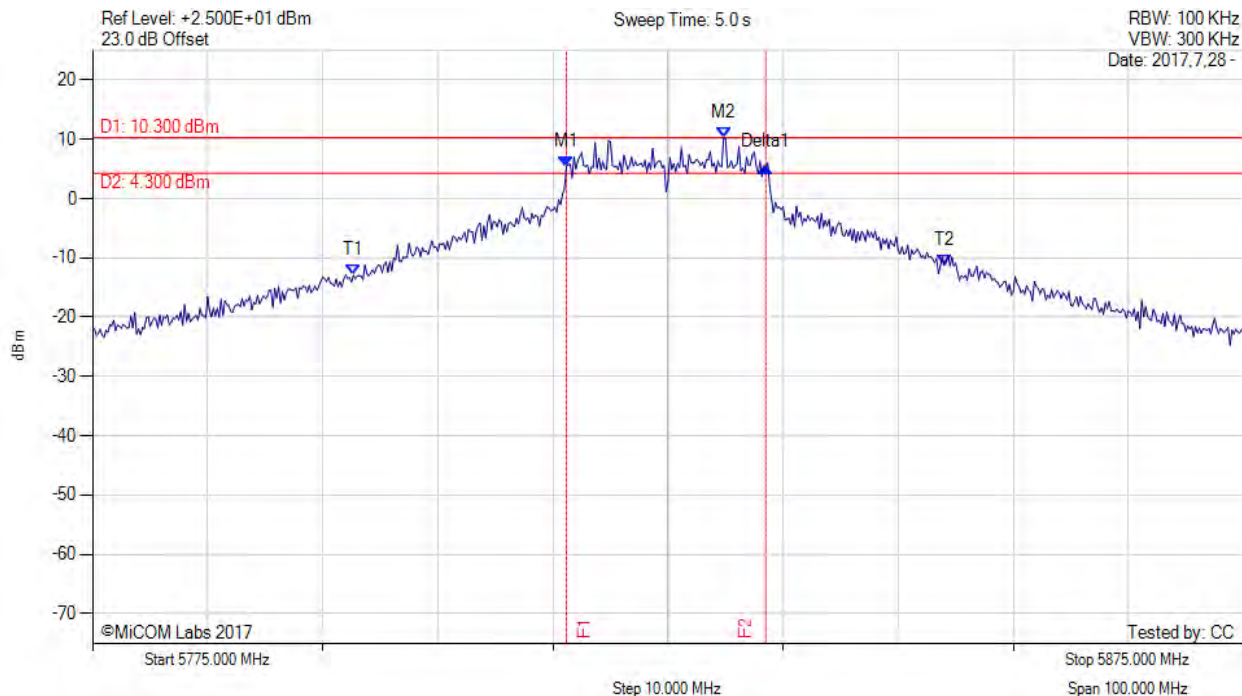
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5816.170 MHz : 5.402 dBm M2 : 5829.830 MHz : 10.300 dBm Delta1 : 17.330 MHz : 0.026 dB T1 : 5797.667 MHz : -12.950 dBm T2 : 5849.000 MHz : -11.219 dBm OBW : 54.246 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 54.246 MHz

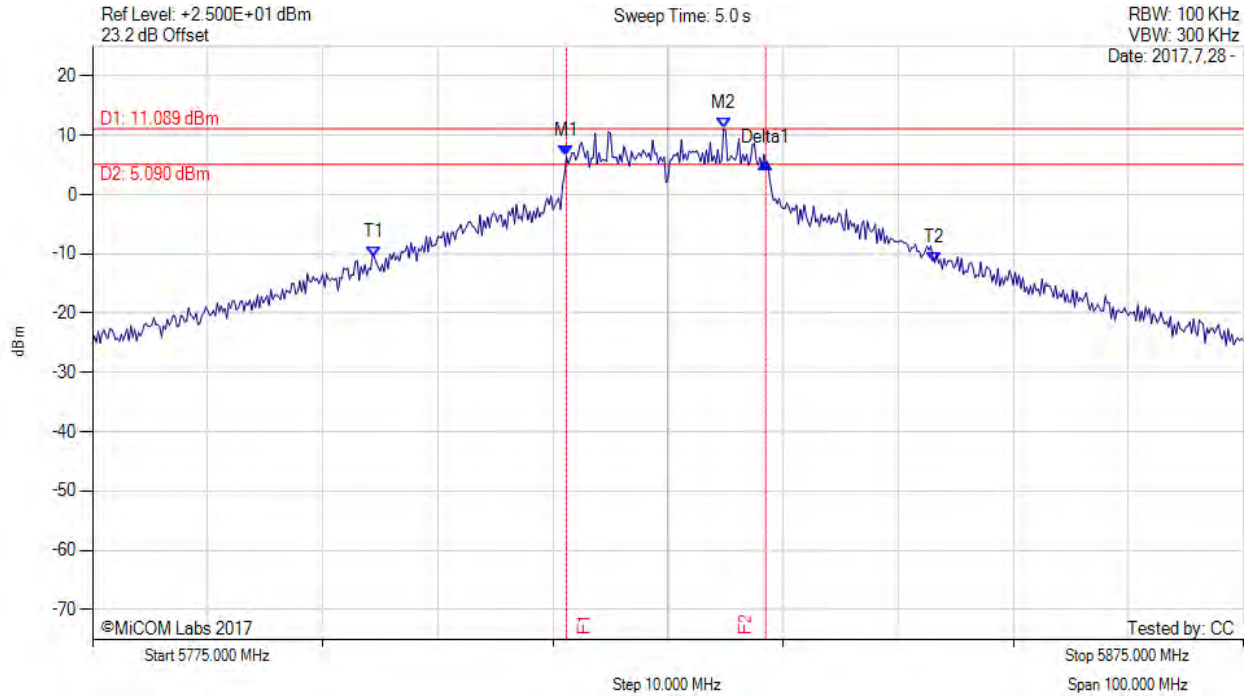
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5816.170 MHz : 6.406 dBm M2 : 5829.830 MHz : 11.089 dBm Delta1 : 17.330 MHz : -1.127 dB T1 : 5799.500 MHz : -10.611 dBm T2 : 5848.167 MHz : -11.449 dBm OBW : 50.912 MHz	Measured 6 dB Bandwidth: 17.330 MHz Measured 99% Bandwidth: 50.912 MHz

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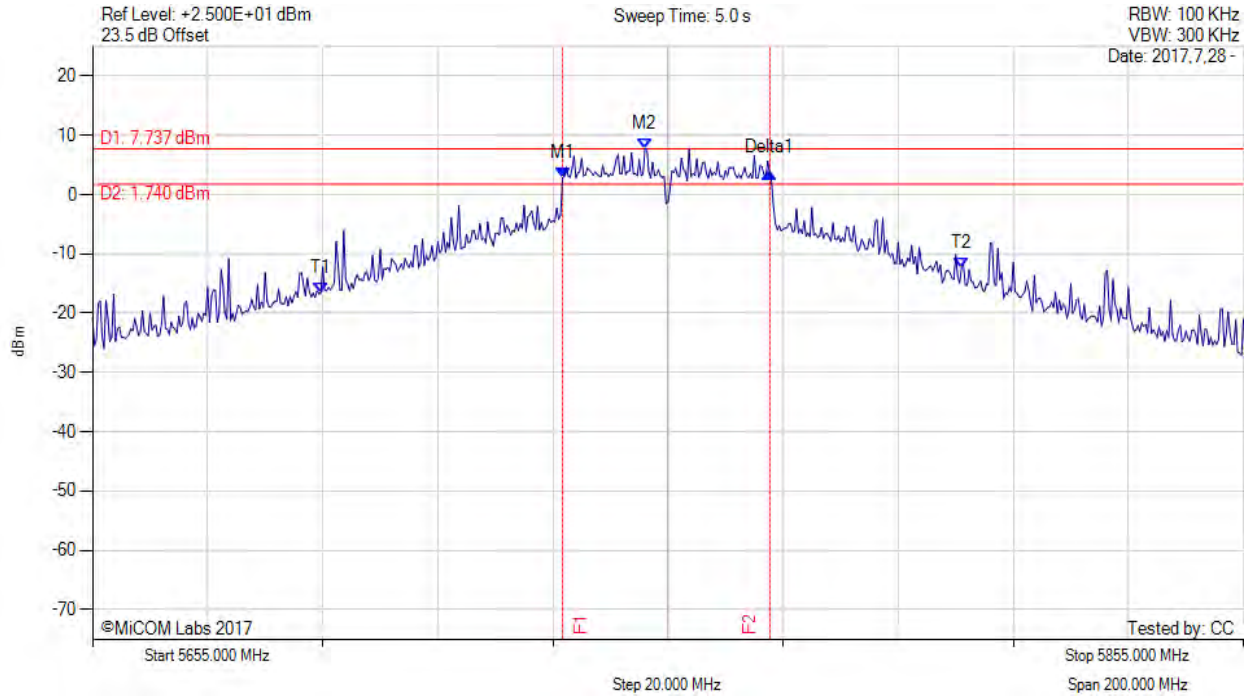


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.700 MHz : 2.810 dBm M2 : 5751.000 MHz : 7.737 dBm Delta1 : 36.000 MHz : 0.839 dB T1 : 5694.667 MHz : -16.657 dBm T2 : 5806.000 MHz : -12.360 dBm OBW : 117.248 MHz	Measured 6 dB Bandwidth: 36.000 MHz Measured 99% Bandwidth: 117.248 MHz

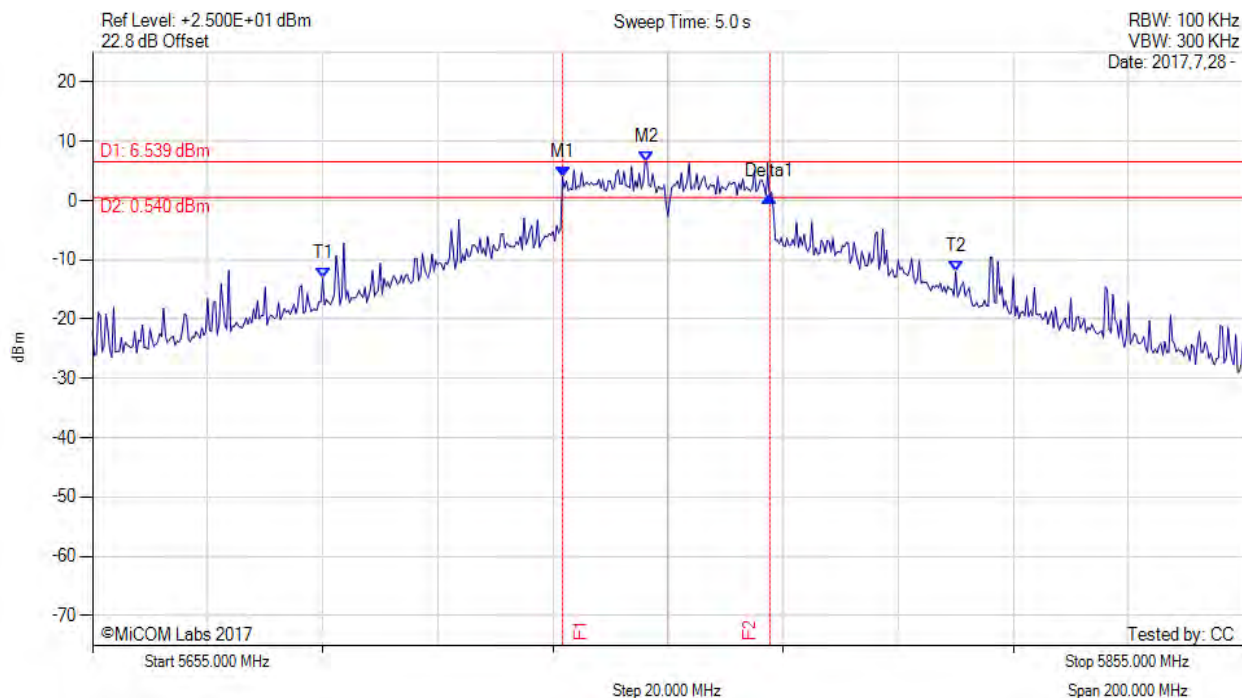
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.700 MHz : 3.924 dBm M2 : 5751.300 MHz : 6.539 dBm Delta1 : 36.000 MHz : -3.177 dB T1 : 5695.000 MHz : -13.162 dBm T2 : 5805.000 MHz : -11.985 dBm OBW : 116.326 MHz	Measured 6 dB Bandwidth: 36.000 MHz Measured 99% Bandwidth: 116.326 MHz

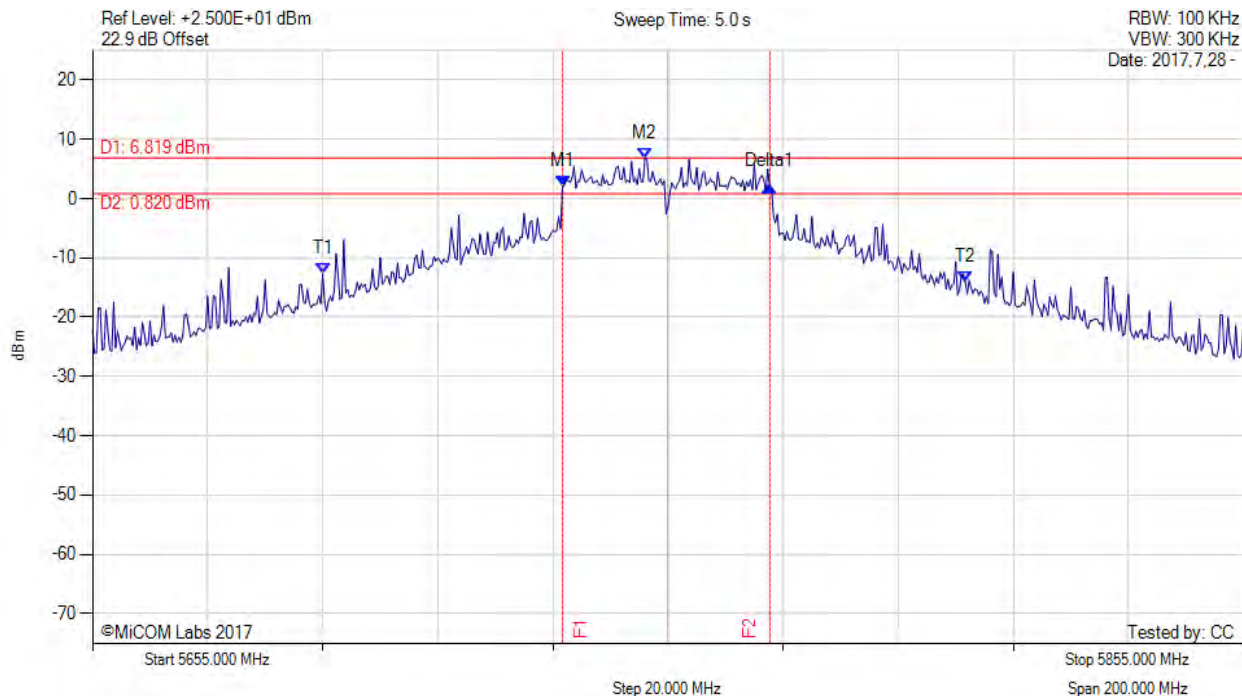
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.700 MHz : 2.028 dBm M2 : 5751.000 MHz : 6.819 dBm Delta1 : 36.000 MHz : 0.030 dB T1 : 5695.000 MHz : -12.707 dBm T2 : 5806.667 MHz : -14.123 dBm OBW : 117.853 MHz	Measured 6 dB Bandwidth: 36.000 MHz Measured 99% Bandwidth: 117.853 MHz

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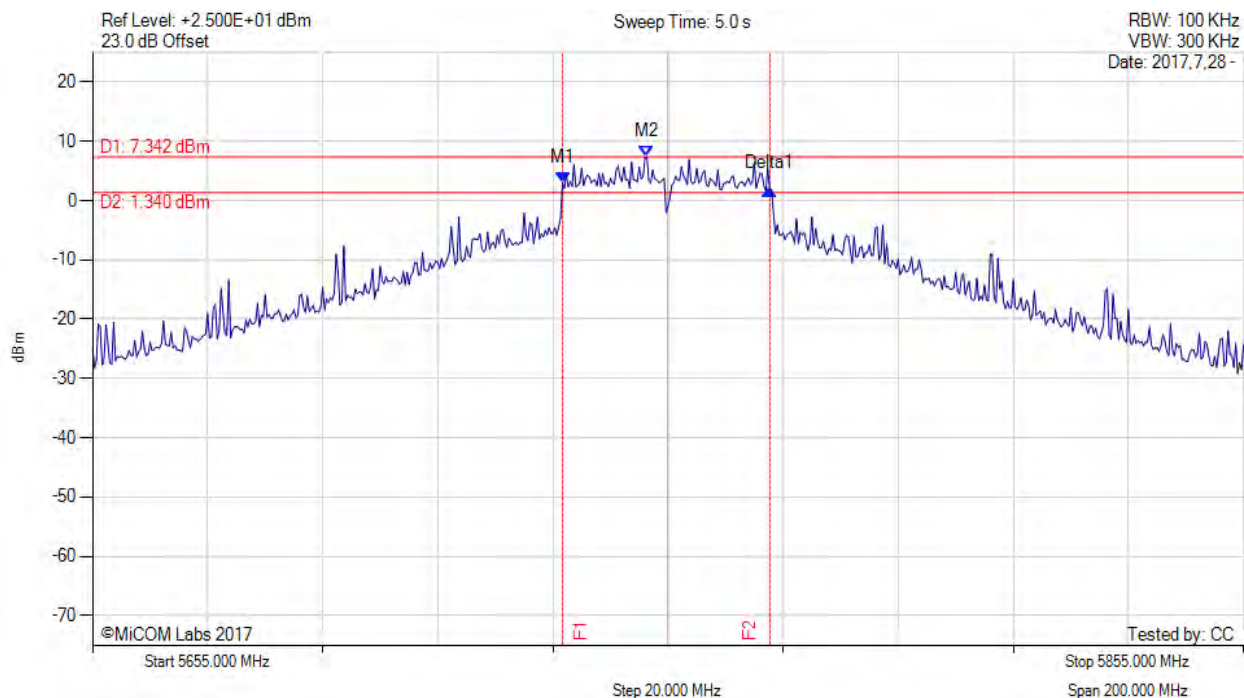


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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5736.700 MHz : 2.968 dBm M2 : 5751.300 MHz : 7.342 dBm Delta1 : 36.000 MHz : -1.013 dB T1 : 0 Hz : 0.000 dBm T2 : 0 Hz : 0.000 dBm OBW : 111.991 MHz	Measured 6 dB Bandwidth: 36.000 MHz Measured 99% Bandwidth: 111.991 MHz

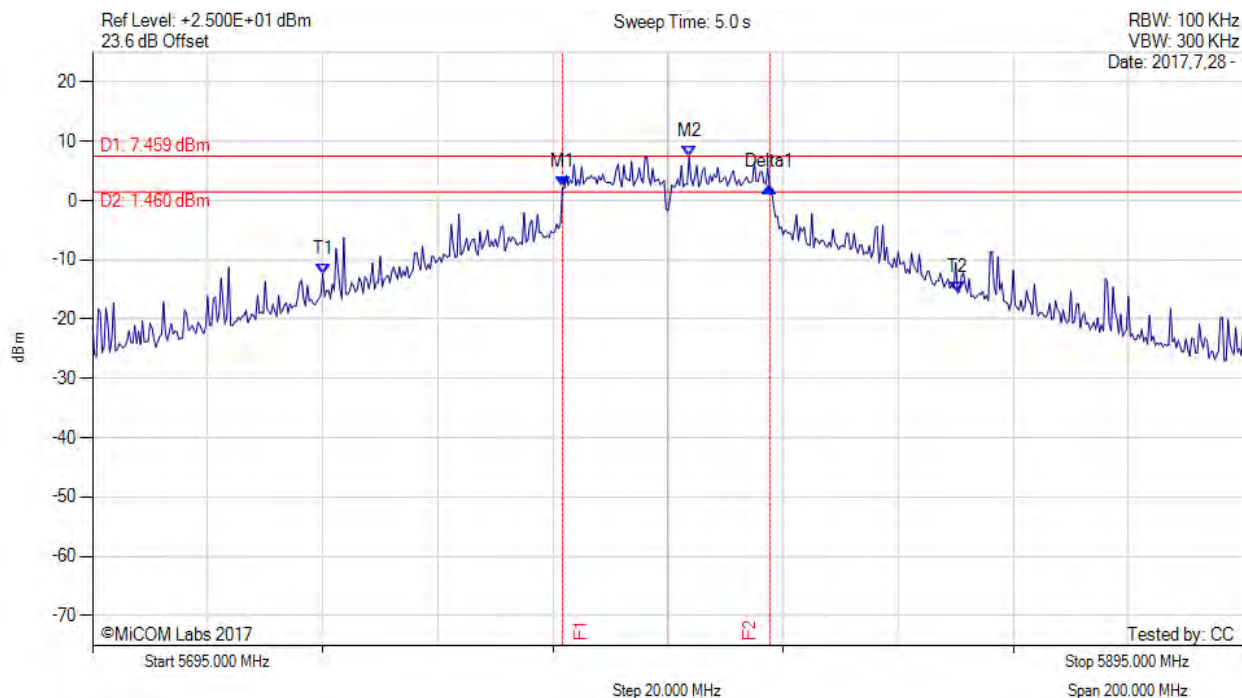
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.700 MHz : 2.227 dBm M2 : 5798.700 MHz : 7.459 dBm Delta1 : 36.000 MHz : 0.024 dB T1 : 5735.000 MHz : -12.334 dBm T2 : 5845.333 MHz : -15.534 dBm OBW : 116.372 MHz	Measured 6 dB Bandwidth: 36.000 MHz Measured 99% Bandwidth: 116.372 MHz

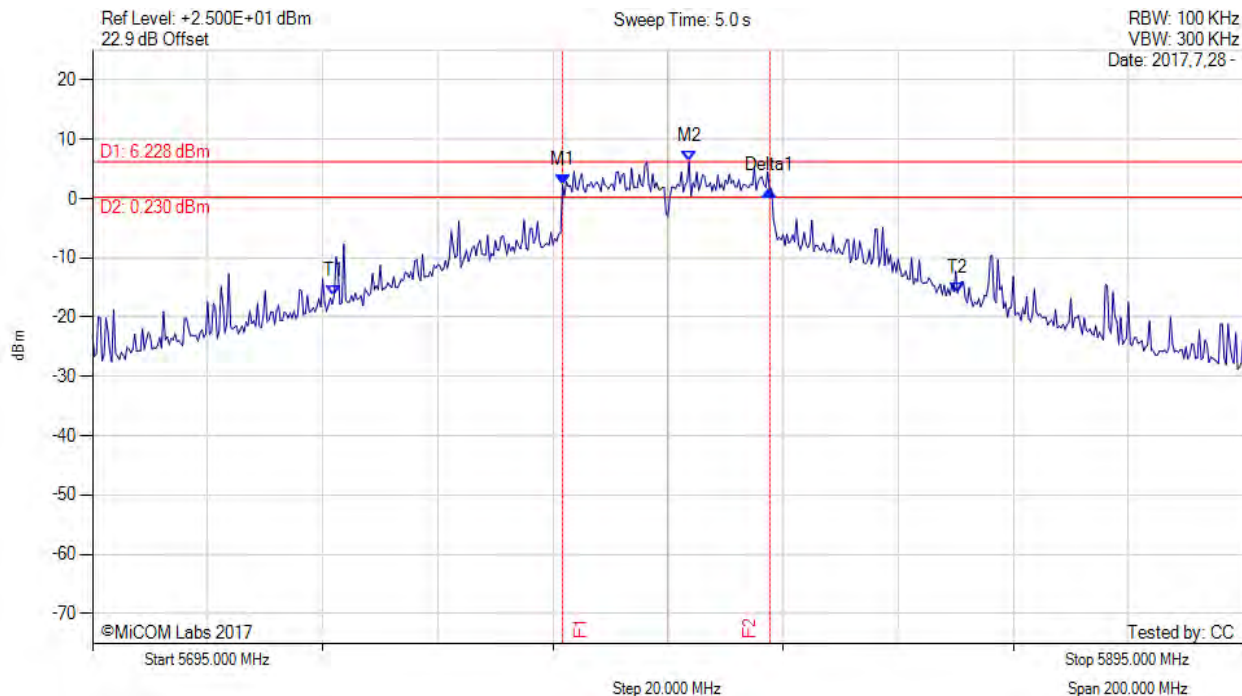
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.700 MHz : 2.370 dBm M2 : 5798.700 MHz : 6.228 dBm Delta1 : 36.000 MHz : -0.929 dB T1 : 5737.000 MHz : -16.323 dBm T2 : 5845.333 MHz : -15.914 dBm OBW : 114.303 MHz	Measured 6 dB Bandwidth: 36.000 MHz Measured 99% Bandwidth: 114.303 MHz

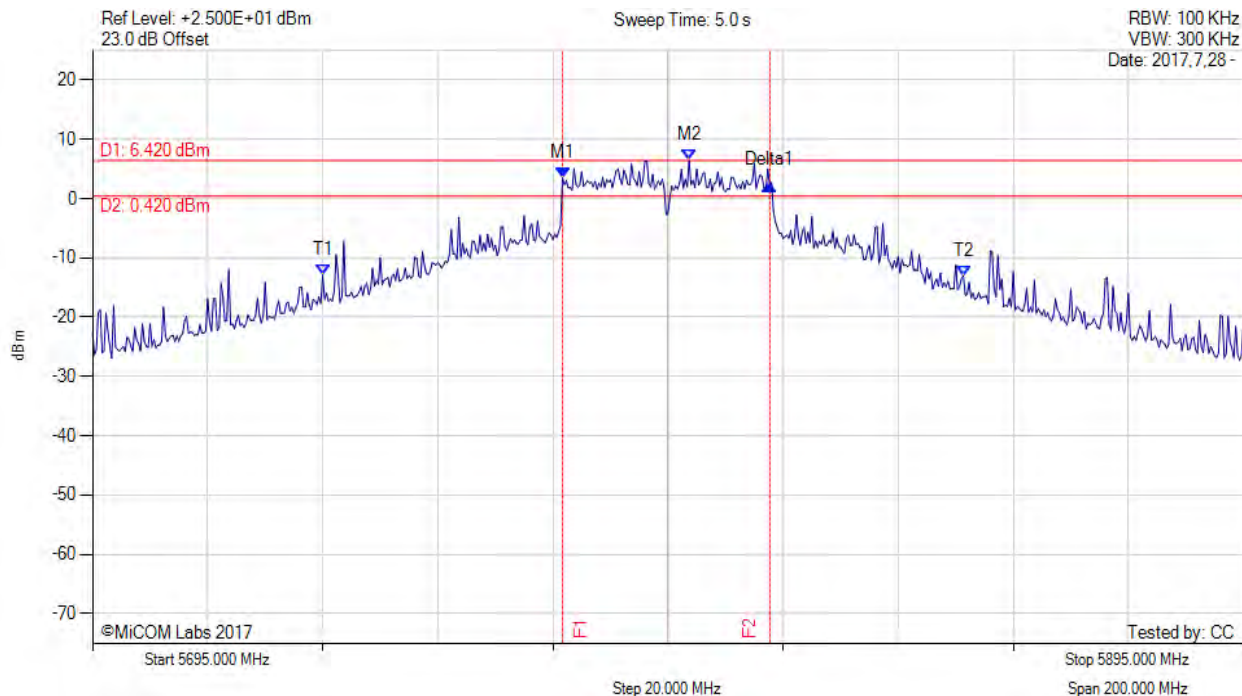
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.700 MHz : 3.455 dBm M2 : 5798.700 MHz : 6.420 dBm Delta1 : 36.000 MHz : -1.145 dB T1 : 5735.000 MHz : -12.901 dBm T2 : 5846.333 MHz : -13.052 dBm OBW : 117.518 MHz	Measured 6 dB Bandwidth: 36.000 MHz Measured 99% Bandwidth: 117.518 MHz

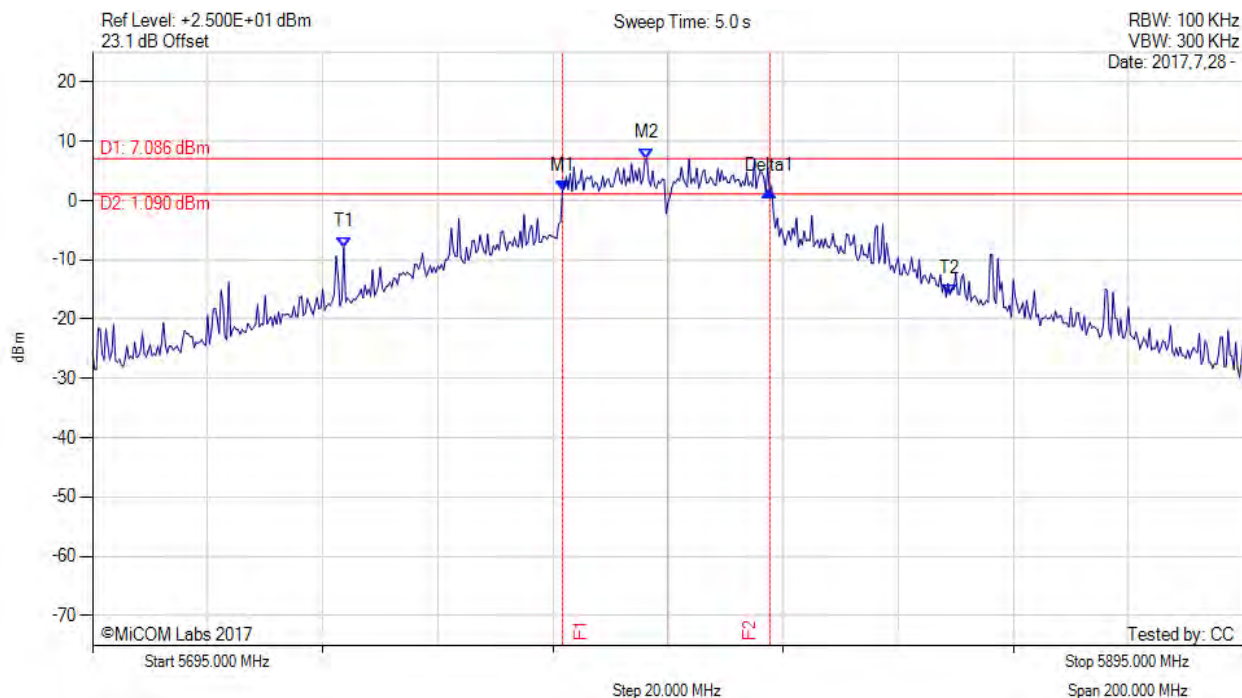
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6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = POS Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAXH	M1 : 5776.700 MHz : 1.684 dBm M2 : 5791.300 MHz : 7.086 dBm Delta1 : 36.000 MHz : -0.051 dB T1 : 5738.667 MHz : -7.854 dBm T2 : 5844.000 MHz : -15.816 dBm OBW : 111.877 MHz	Measured 6 dB Bandwidth: 36.000 MHz Measured 99% Bandwidth: 111.877 MHz

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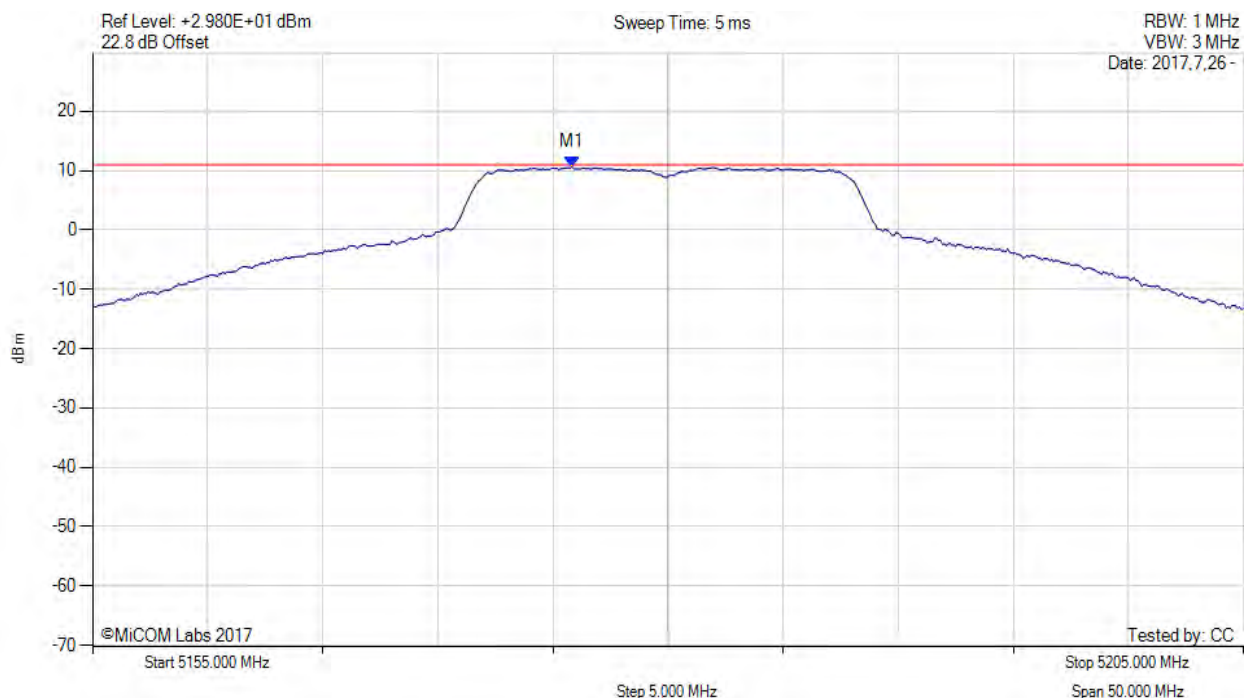
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A.3. Power Spectral Density



POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5180.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5175.830 MHz : 10.648 dBm	Limit: ≤ 10.980 dBm

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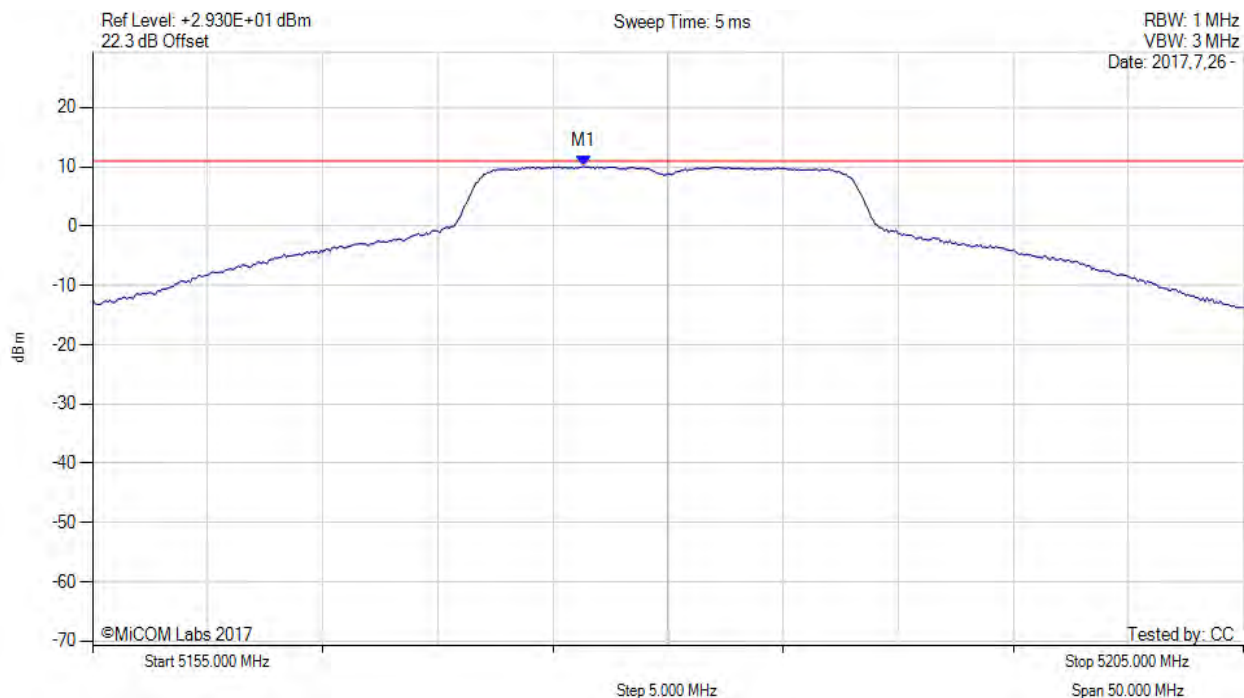


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5180.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5176.330 MHz : 10.060 dBm	Limit: ≤ 10.980 dBm

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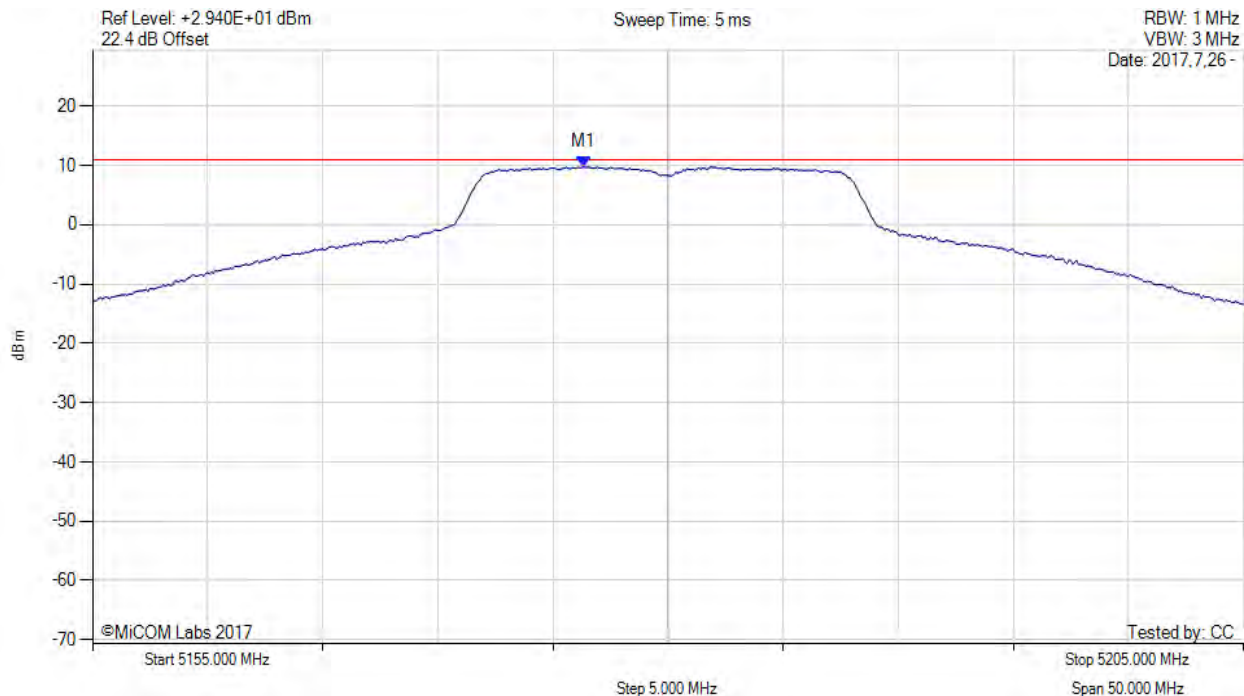


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5180.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5176.330 MHz : 9.745 dBm	Limit: ≤ 10.980 dBm

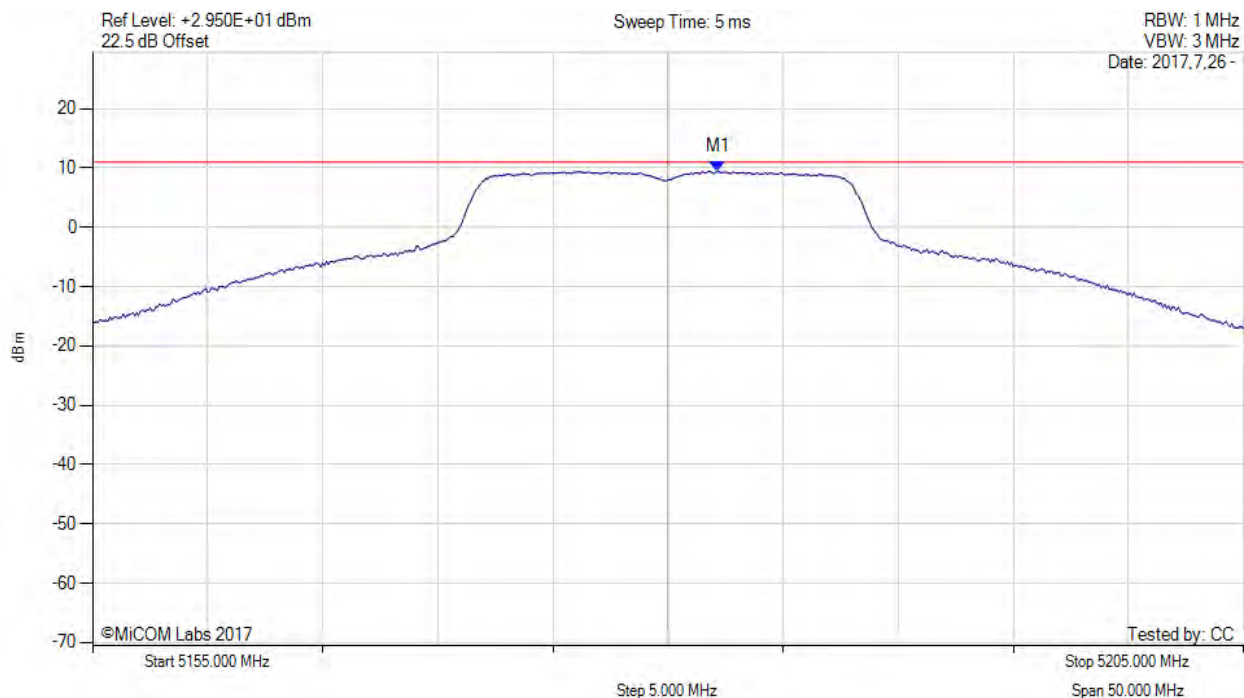
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5180.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5182.170 MHz : 9.405 dBm	Limit: ≤ 10.980 dBm

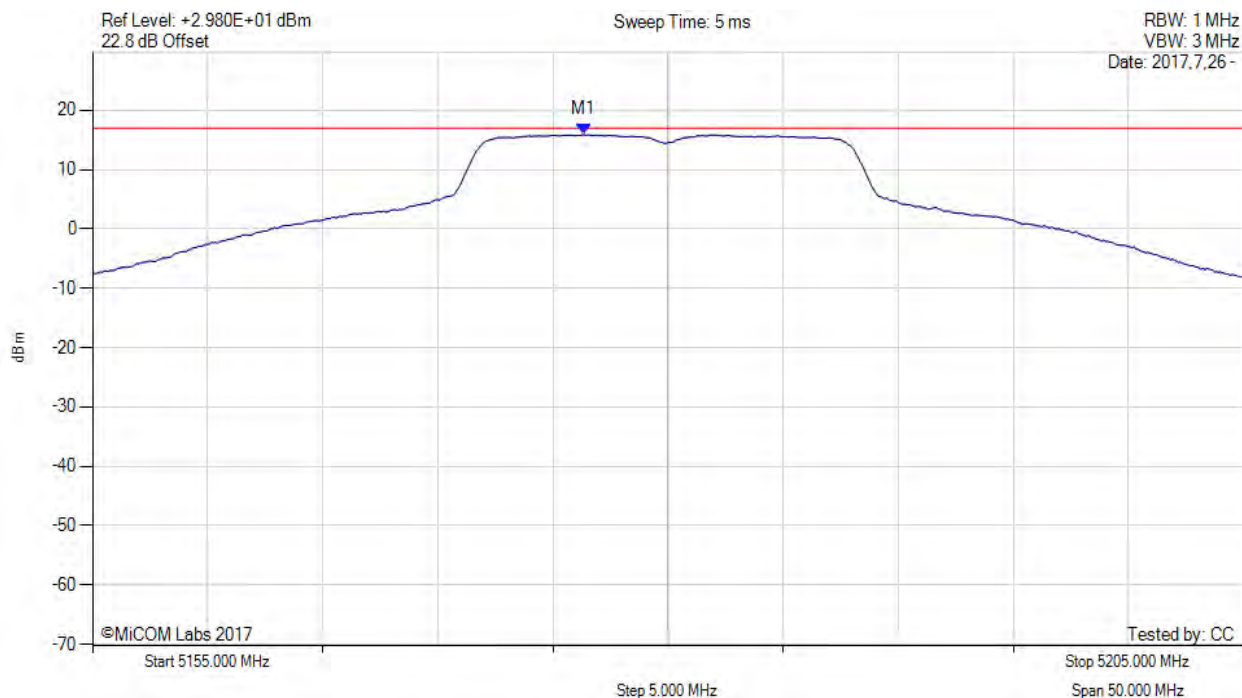
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5180.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5176.300 MHz : 15.915 dBm M1 + DCCF : 5176.300 MHz : 15.959 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 17.0 dBm Margin: -1.1 dB

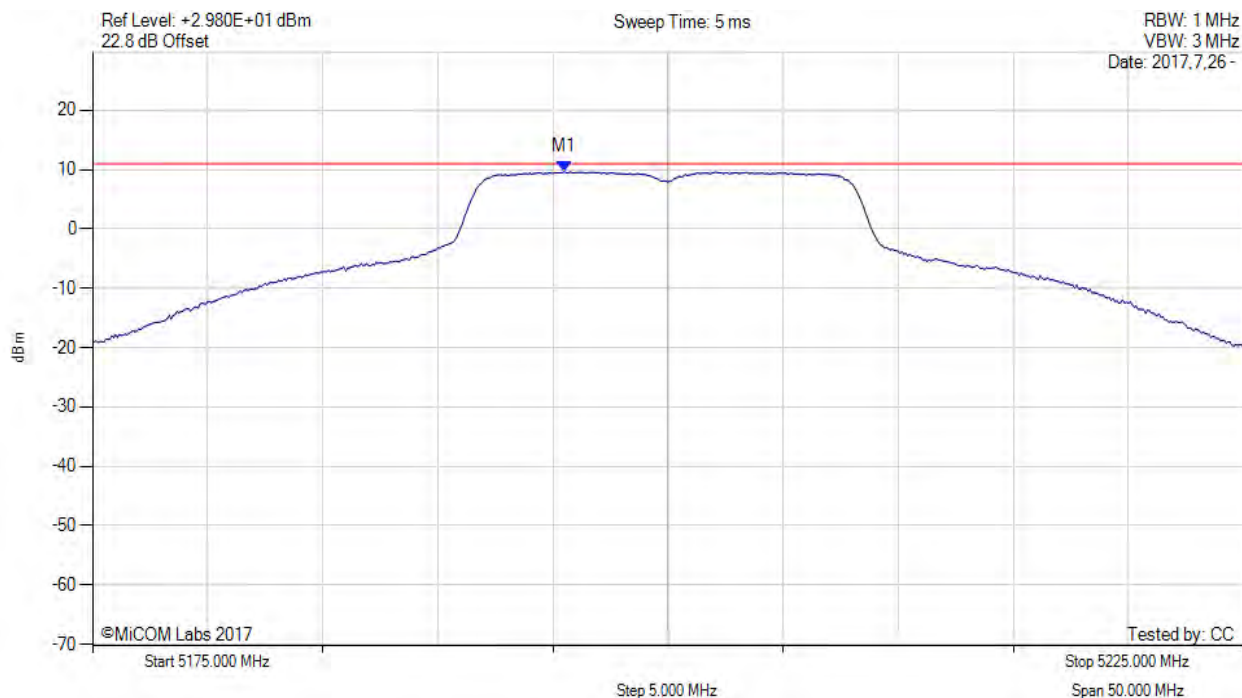
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5195.500 MHz : 9.653 dBm	Limit: ≤ 10.980 dBm

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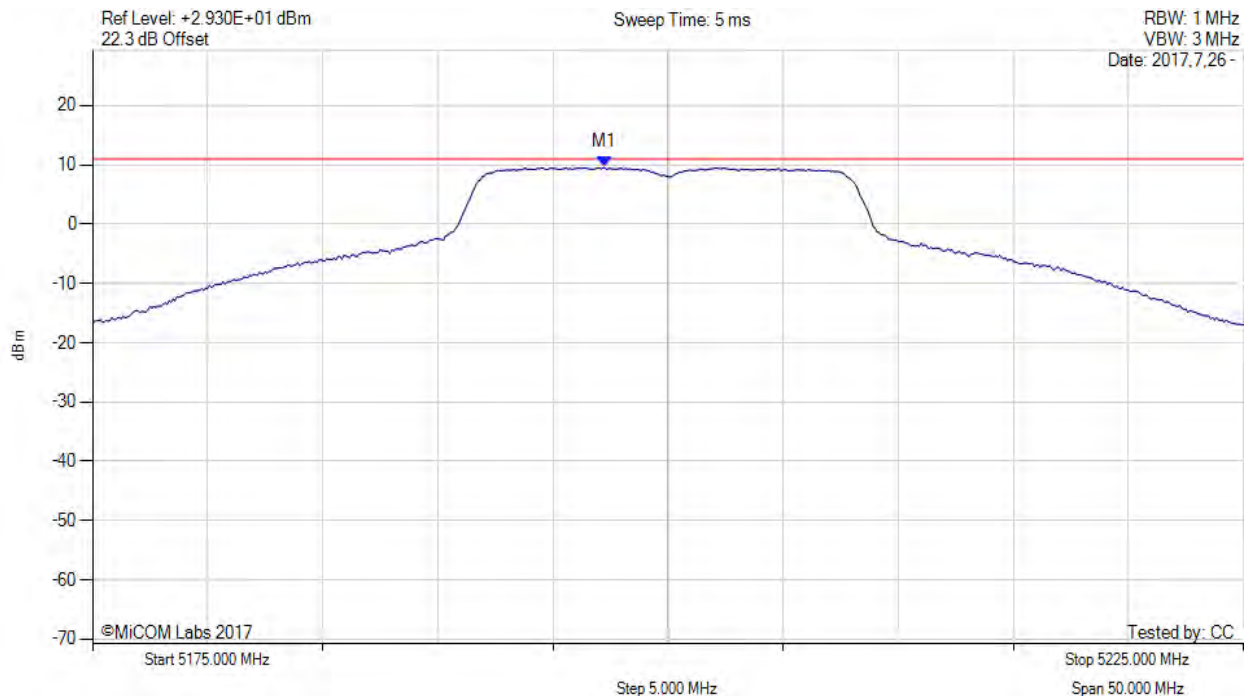


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5197.250 MHz : 9.539 dBm	Channel Frequency: 5200.00 MHz

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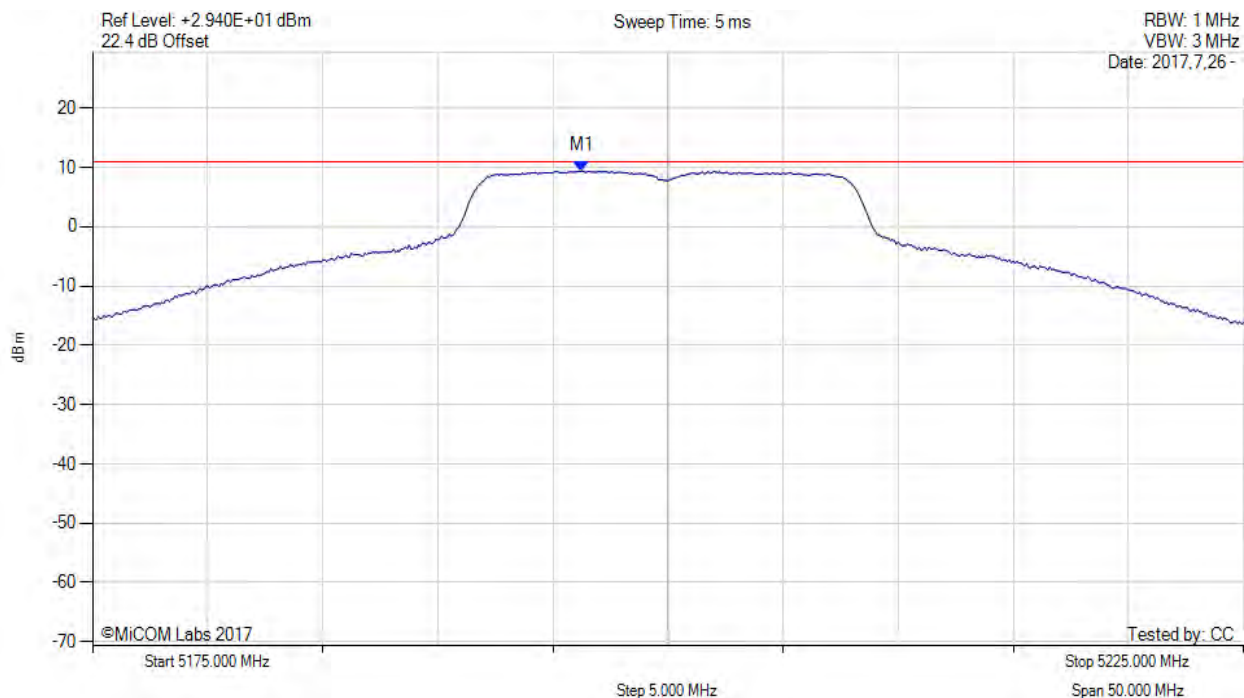


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5196.250 MHz : 9.393 dBm	Limit: ≤ 10.980 dBm

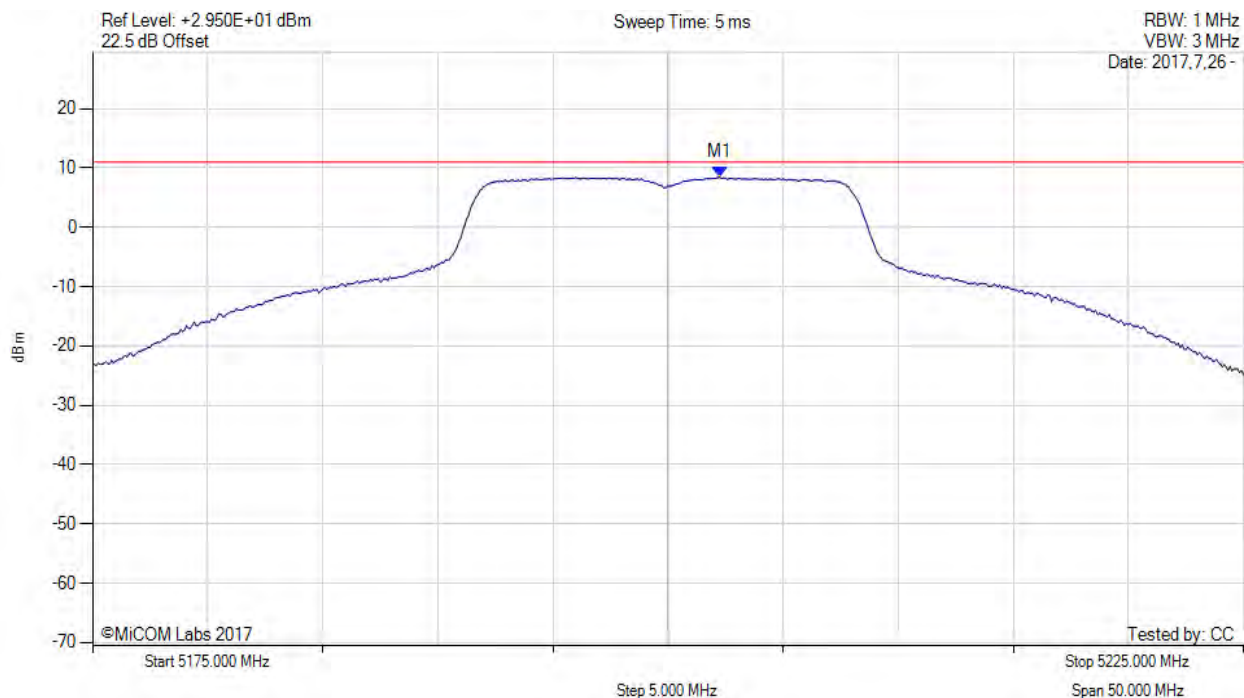
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5202.250 MHz : 8.433 dBm	Limit: ≤ 10.980 dBm

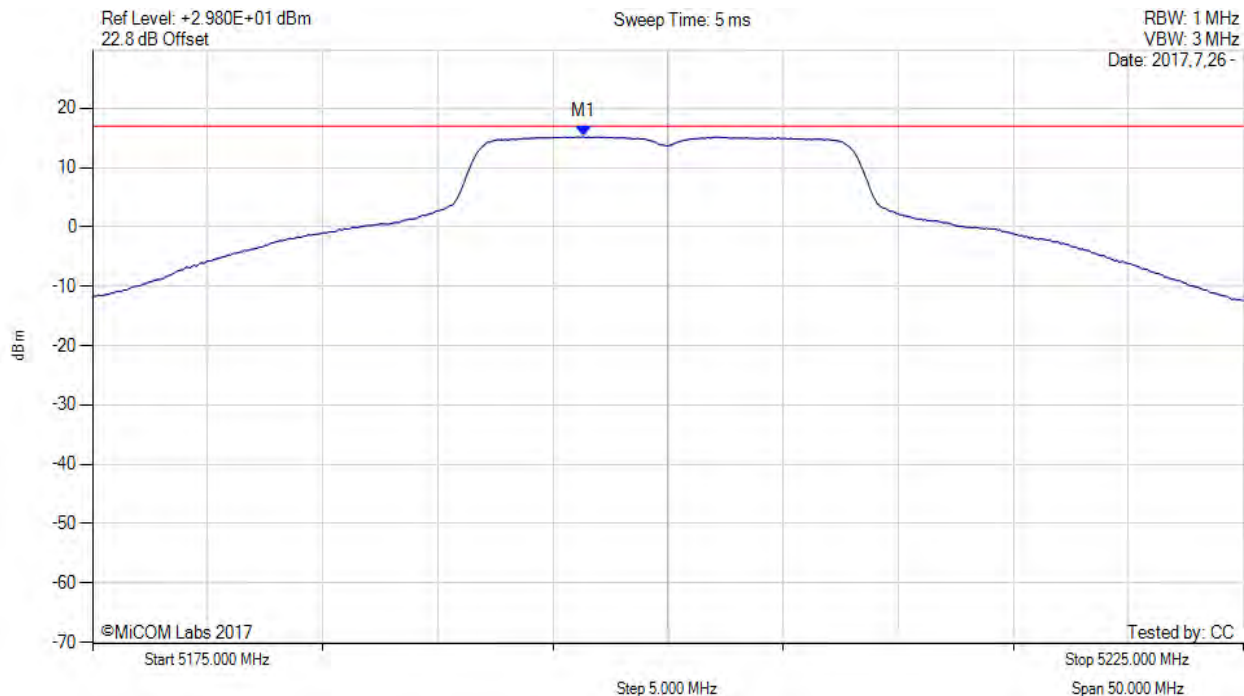
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5196.300 MHz : 15.205 dBm M1 + DCCF : 5196.300 MHz : 15.249 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 17.0 dBm Margin: -1.8 dB

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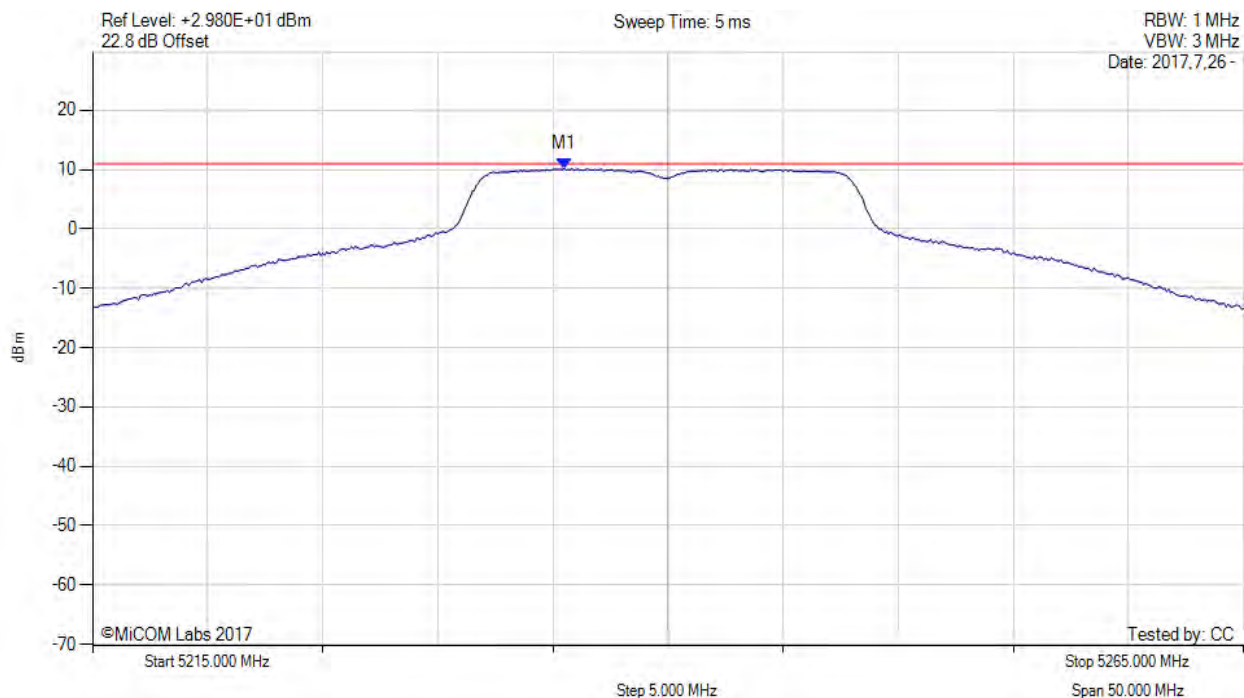


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5235.500 MHz : 10.213 dBm	Limit: ≤ 10.980 dBm

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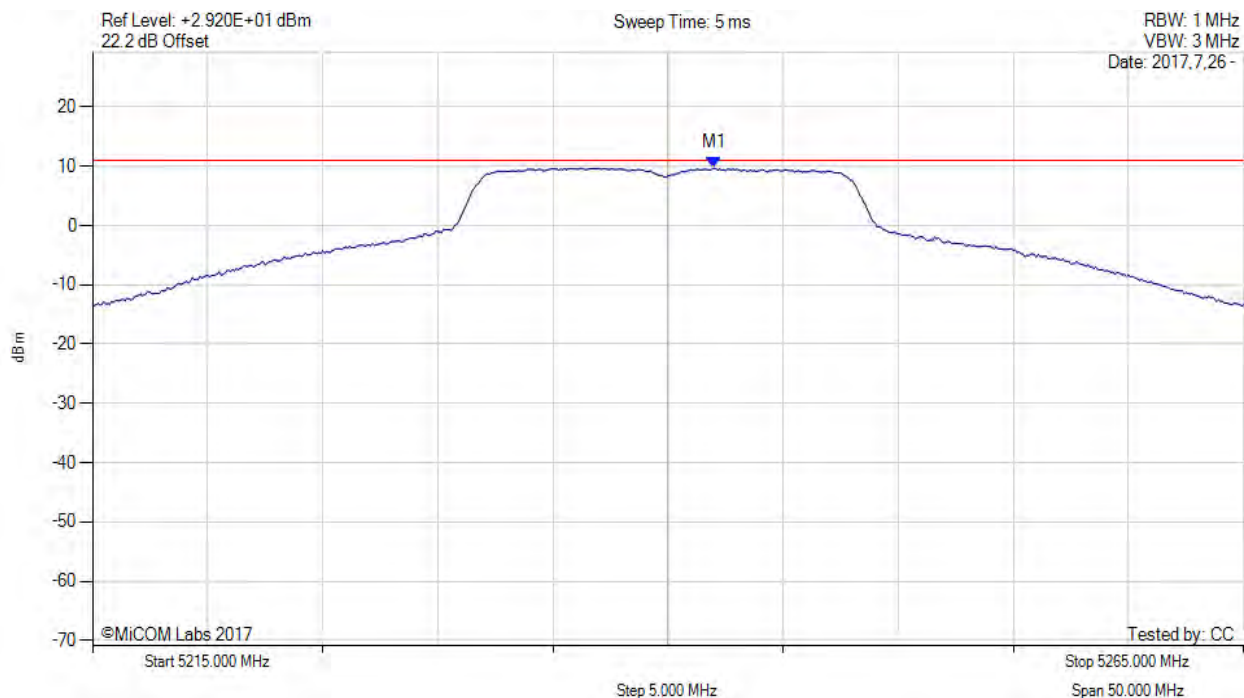


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5242.000 MHz : 9.707 dBm	Limit: ≤ 10.980 dBm

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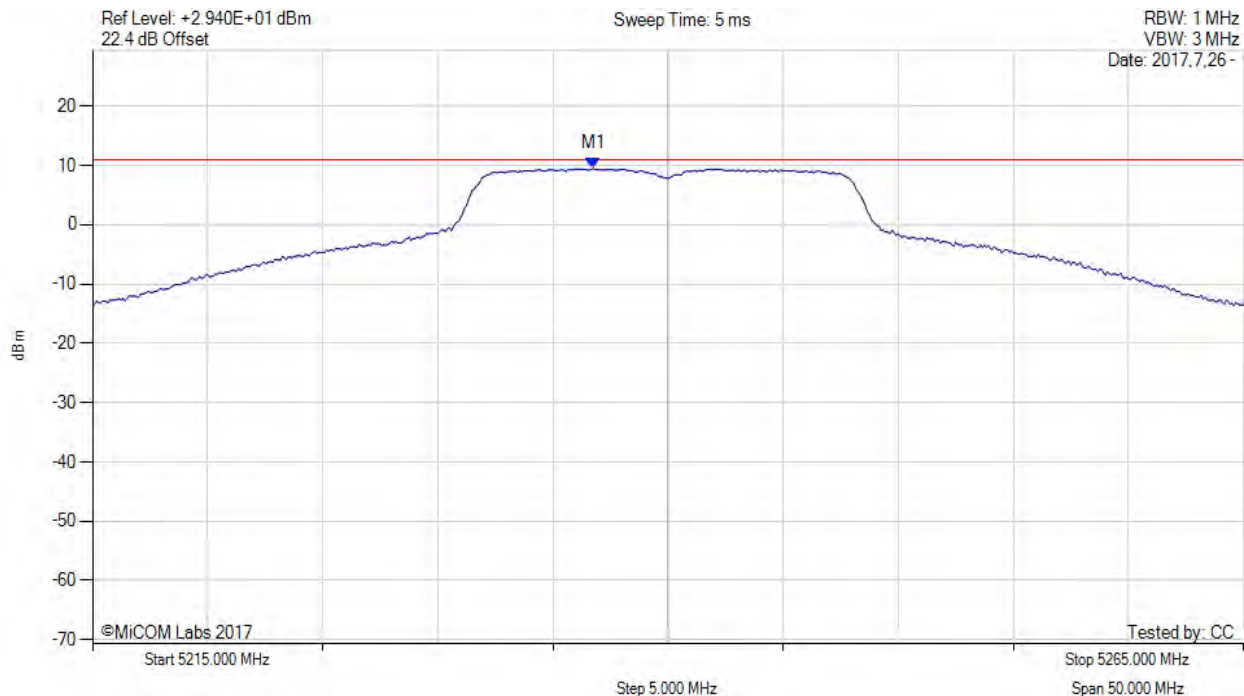


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5236.750 MHz : 9.466 dBm	Limit: ≤ 10.980 dBm

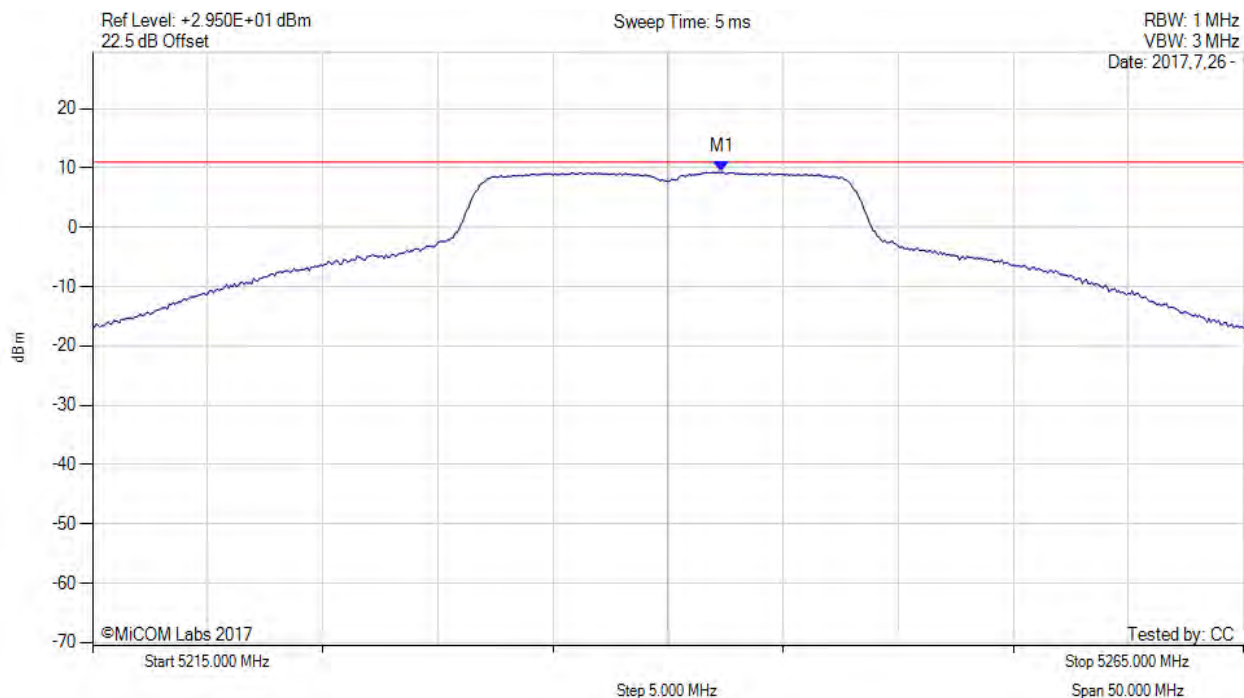
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5242.330 MHz : 9.313 dBm	Limit: ≤ 10.980 dBm

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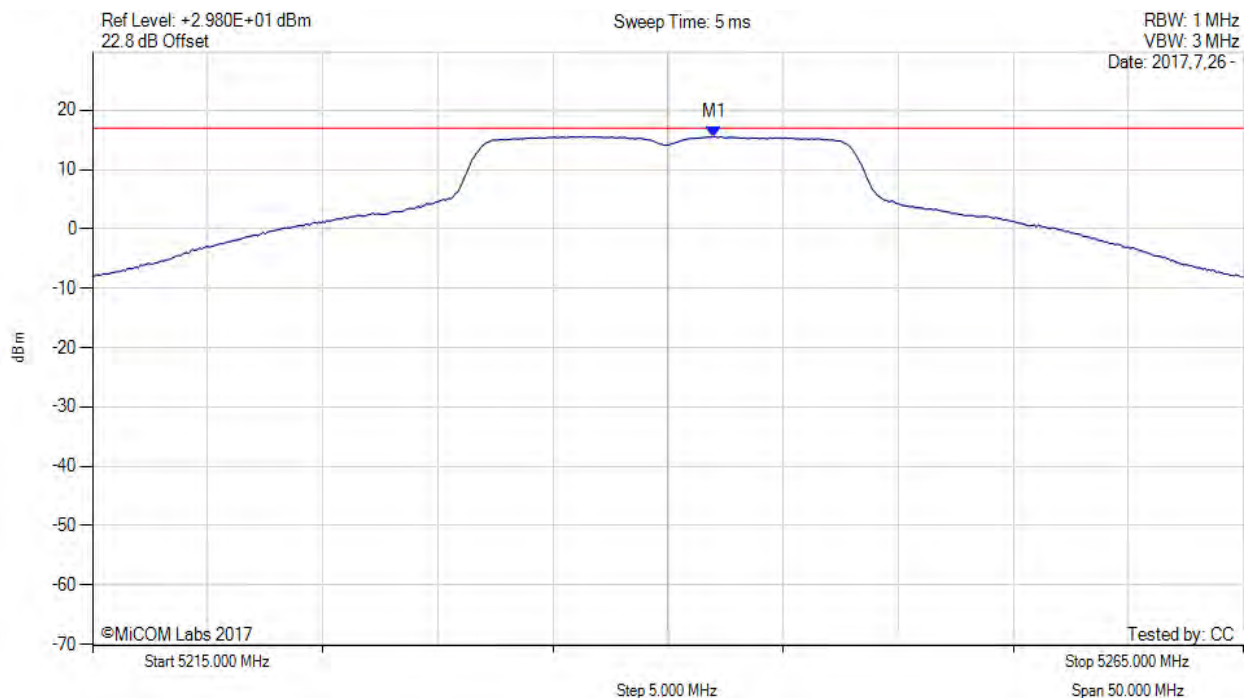


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5242.000 MHz : 15.594 dBm M1 + DCCF : 5242.000 MHz : 15.638 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 17.0 dBm Margin: -1.4 dB

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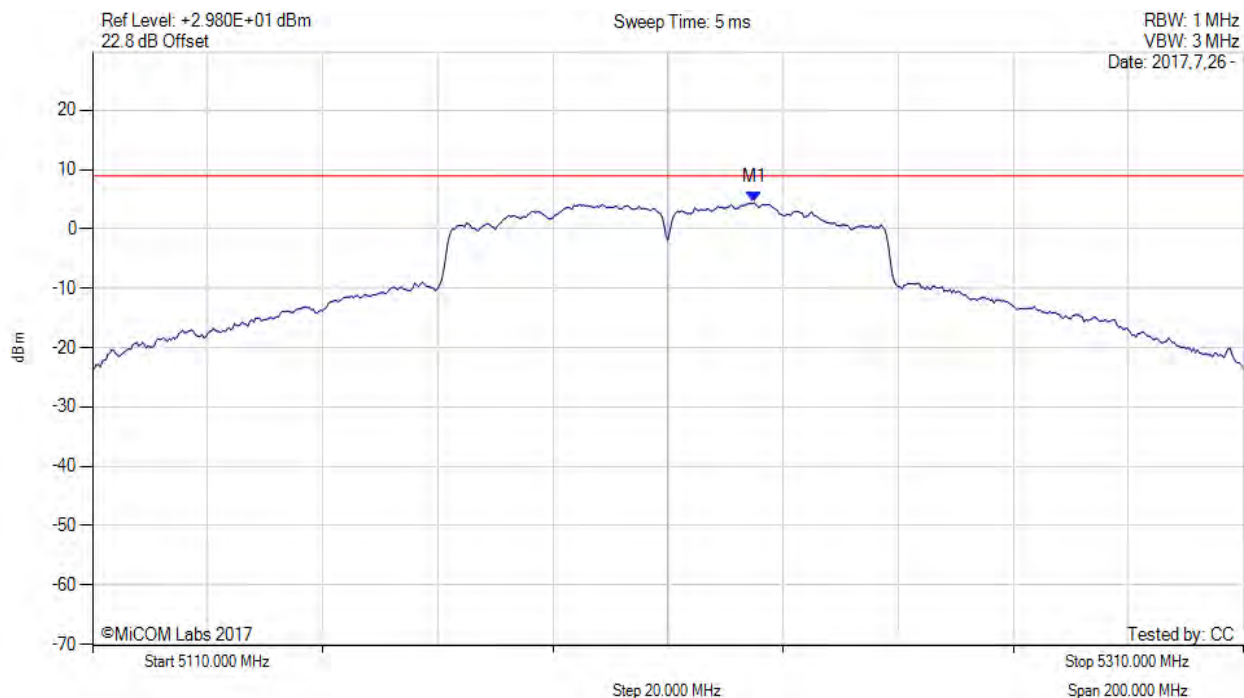


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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5225.000 MHz : 4.445 dBm	Limit: ≤ 8.980 dBm

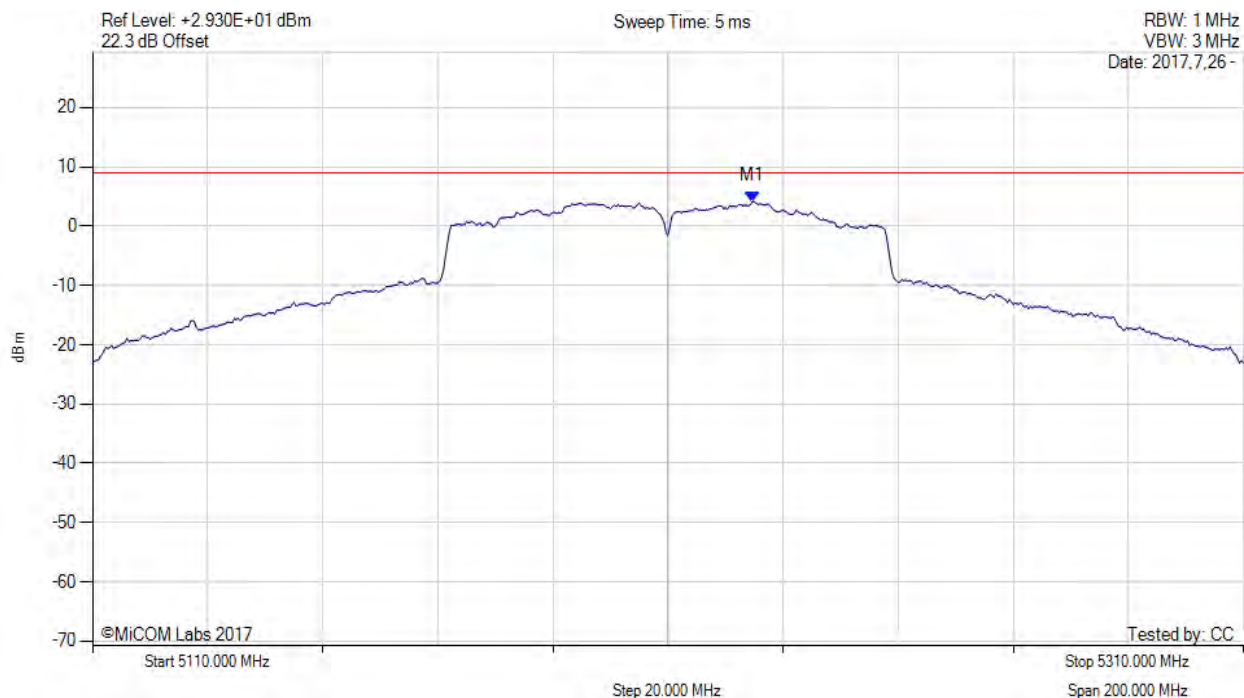
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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5224.700 MHz : 4.155 dBm	Limit: ≤ 8.980 dBm

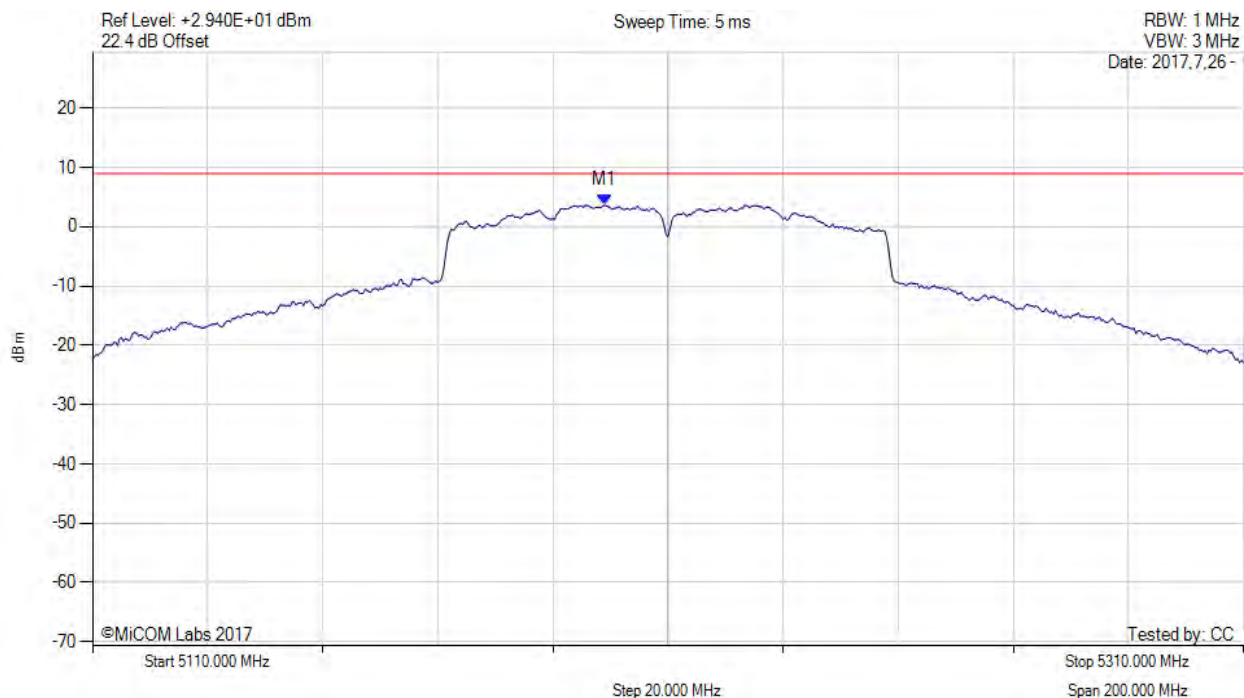
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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5199.000 MHz : 3.629 dBm	Limit: ≤ 8.980 dBm

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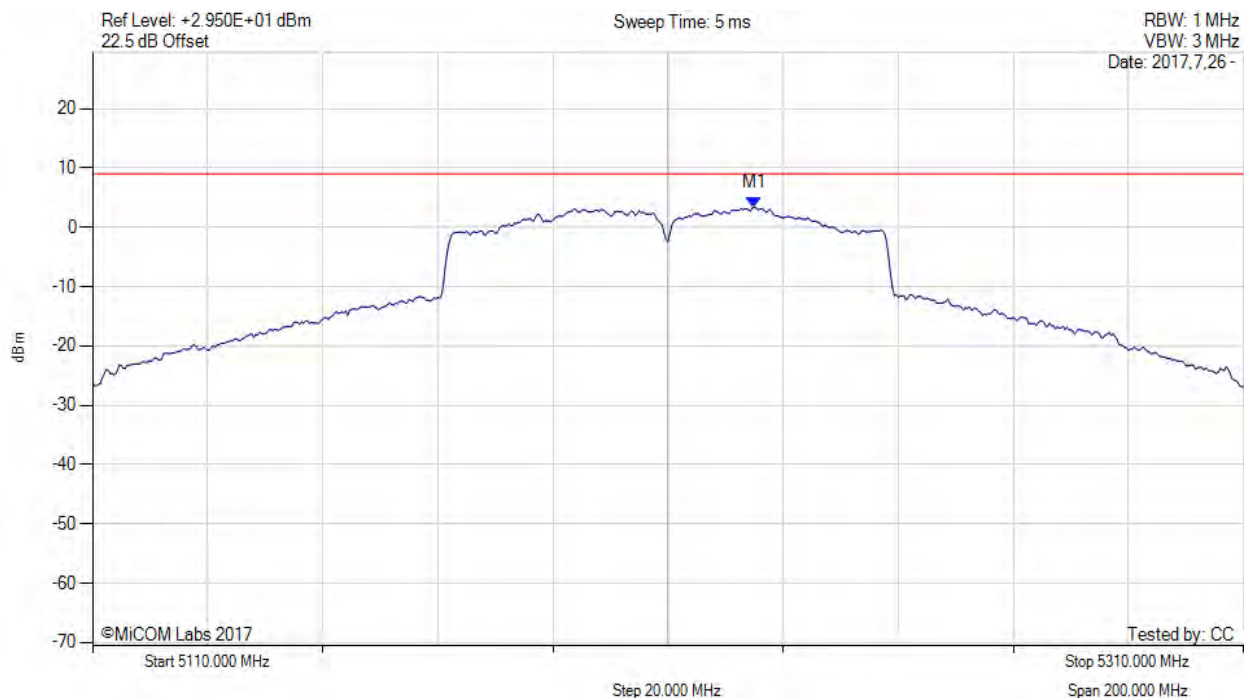


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5225.000 MHz : 3.364 dBm	Limit: ≤ 8.980 dBm

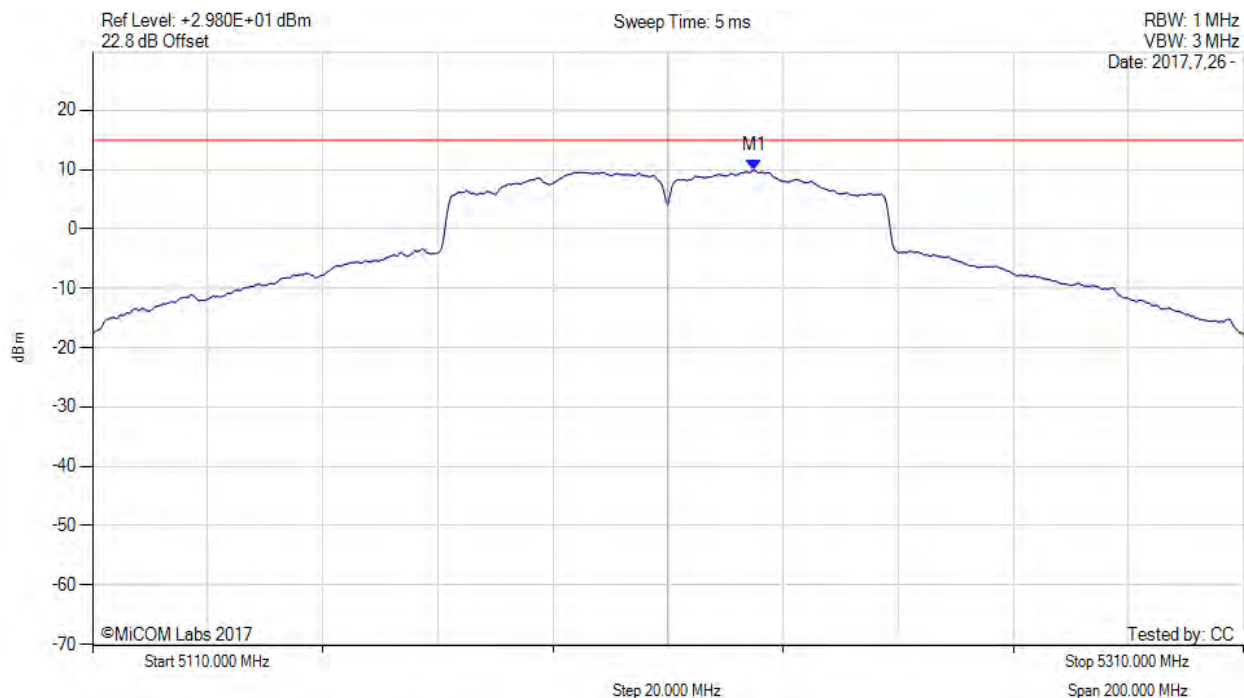
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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5225.000 MHz : 9.912 dBm M1 + DCCF : 5225.000 MHz : 10.274 dBm Duty Cycle Correction Factor : +0.36 dB	Limit: ≤ 15.0 dBm Margin: -4.7 dB

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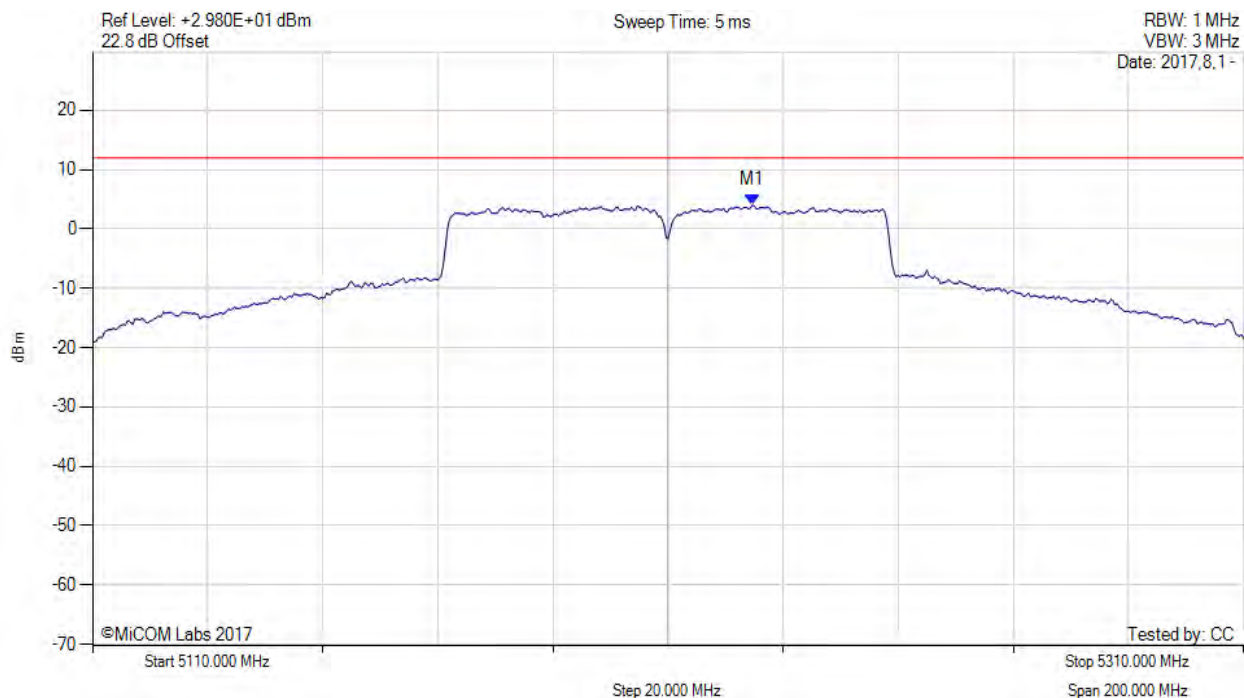


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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5224.700 MHz : 4.030 dBm	Limit: ≤ 11.990 dBm

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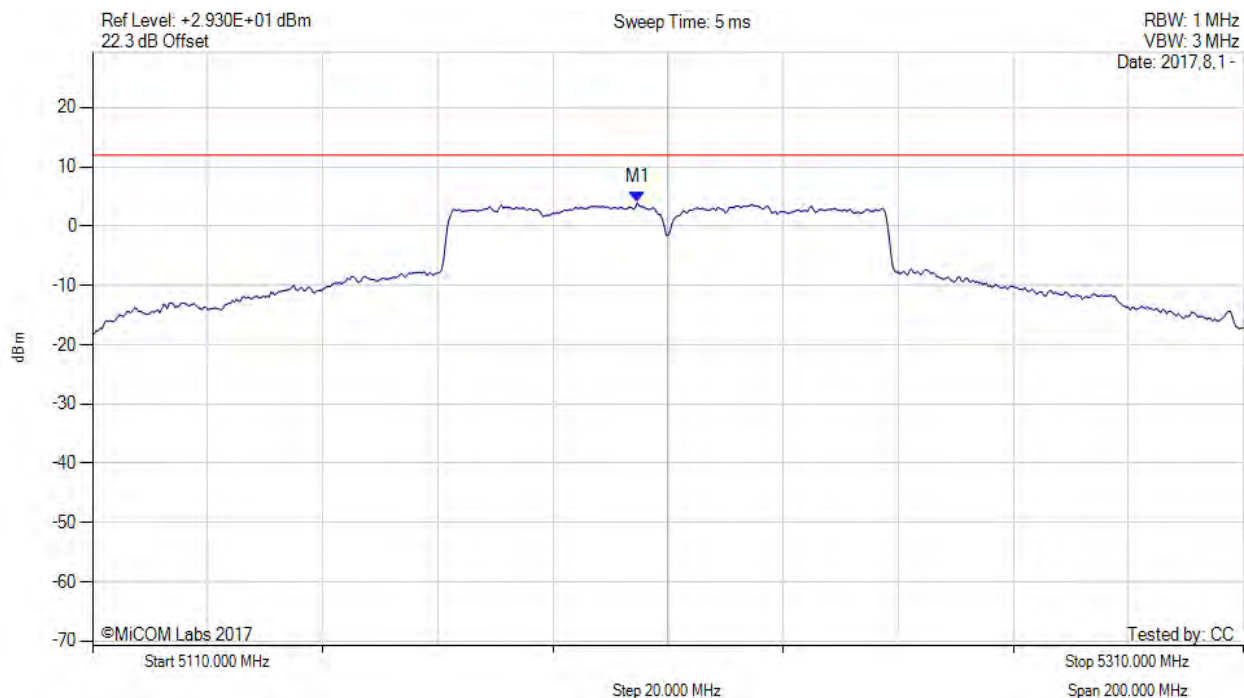


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5204.700 MHz : 3.945 dBm	Limit: ≤ 11.990 dBm

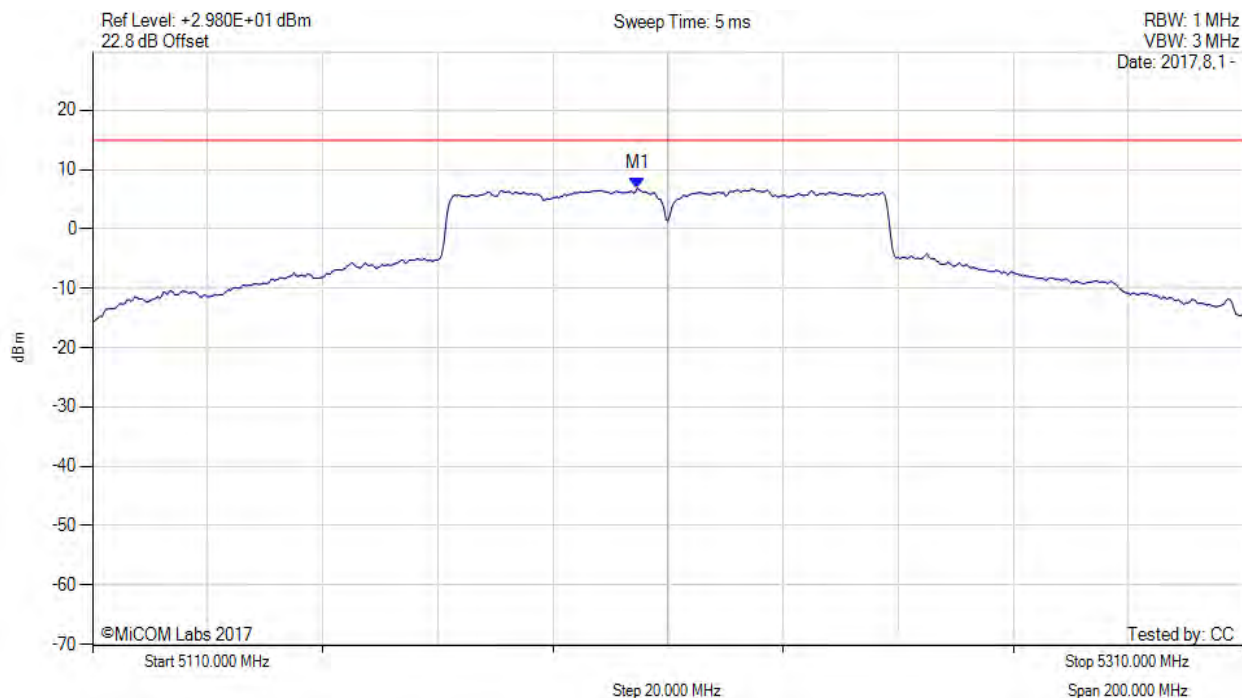
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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5204.700 MHz : 6.929 dBm M1 + DCCF : 5204.700 MHz : 7.291 dBm Duty Cycle Correction Factor : +0.36 dB	Limit: ≤ 15.0 dBm Margin: -7.7 dB

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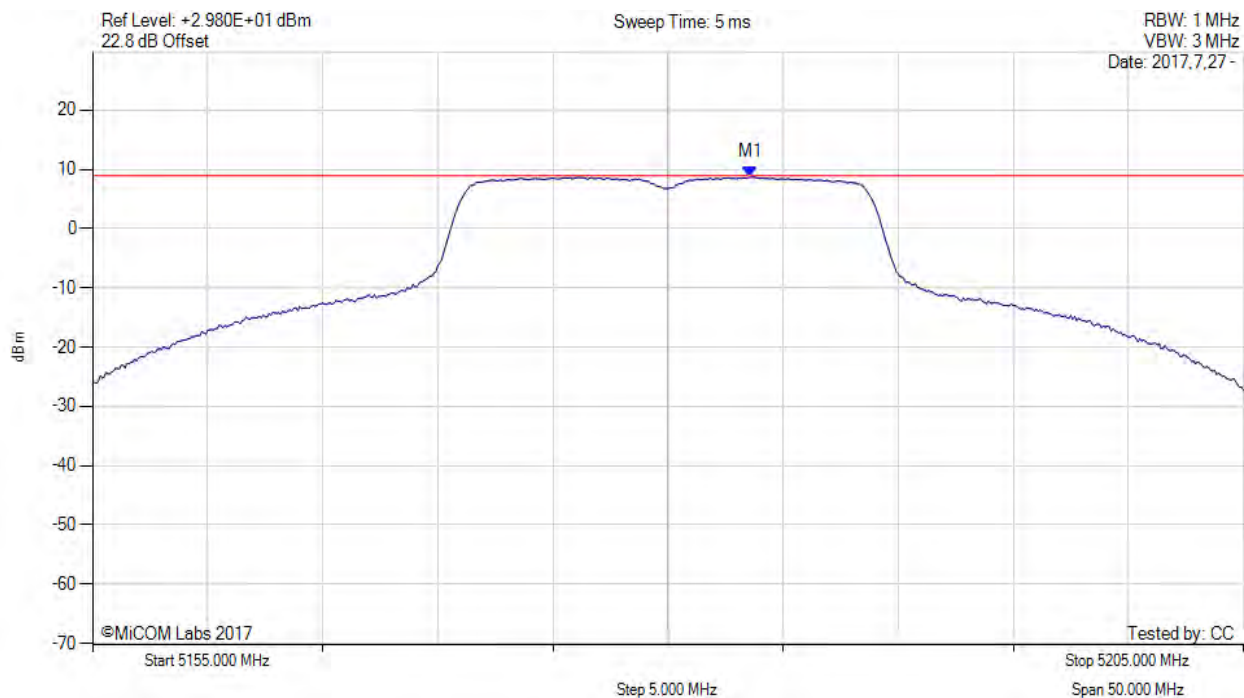


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5183.580 MHz : 8.711 dBm	Limit: ≤ 8.980 dBm

[back to matrix](#)

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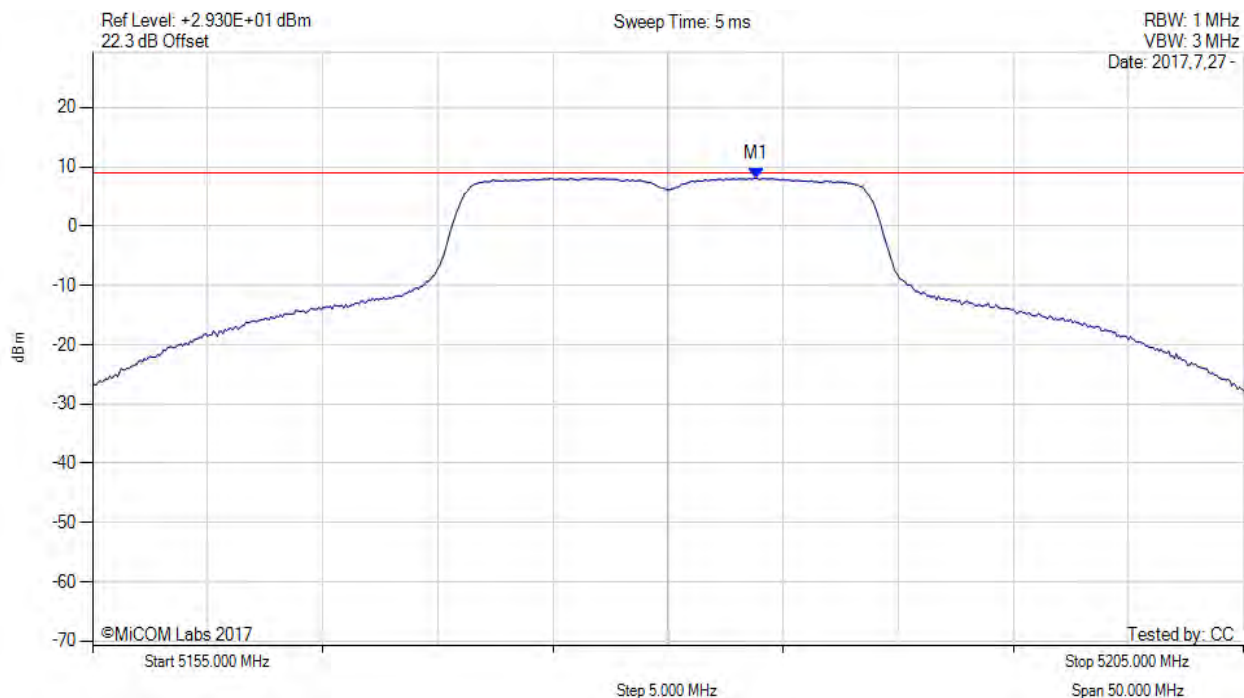


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5183.830 MHz : 8.084 dBm	Limit: ≤ 8.980 dBm

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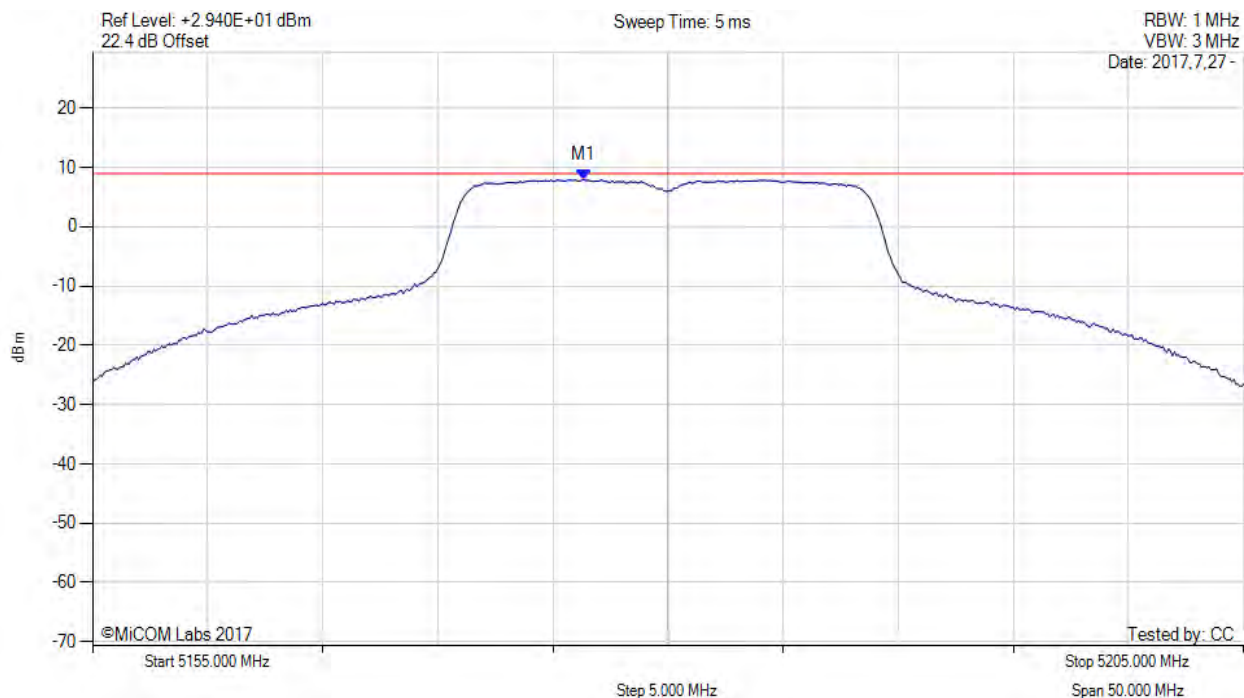


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5176.330 MHz : 7.922 dBm	Limit: ≤ 8.980 dBm

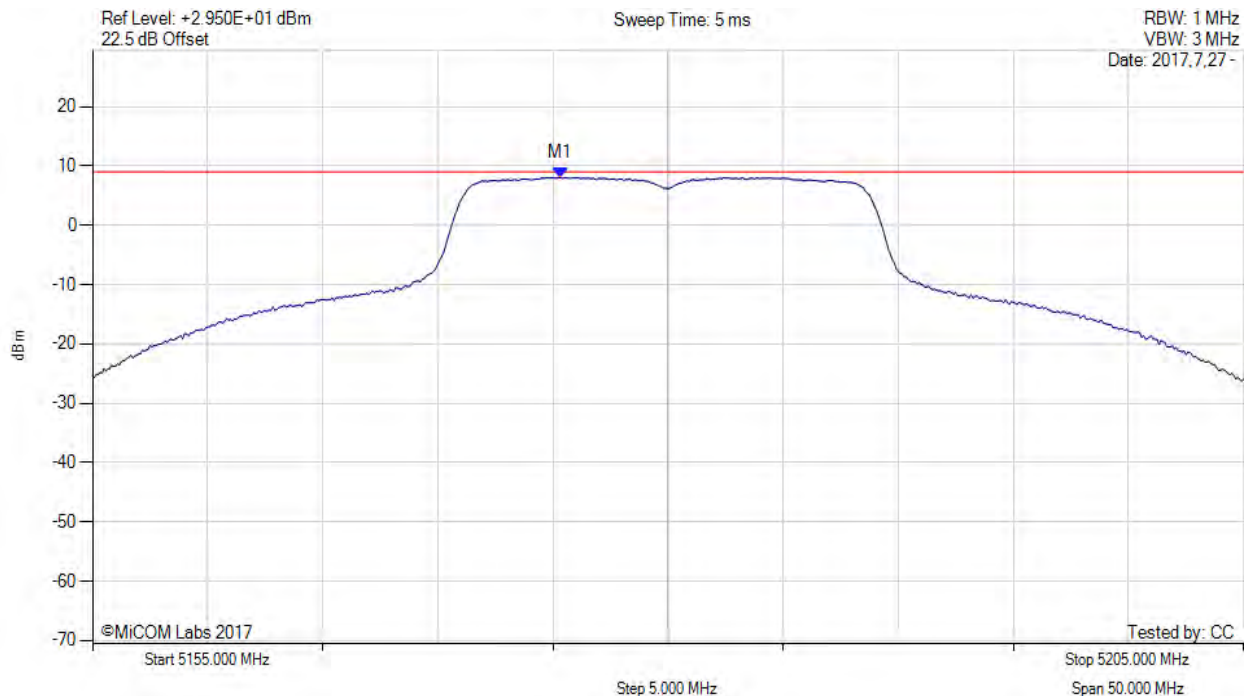
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5175.330 MHz : 8.049 dBm	Limit: ≤ 8.980 dBm

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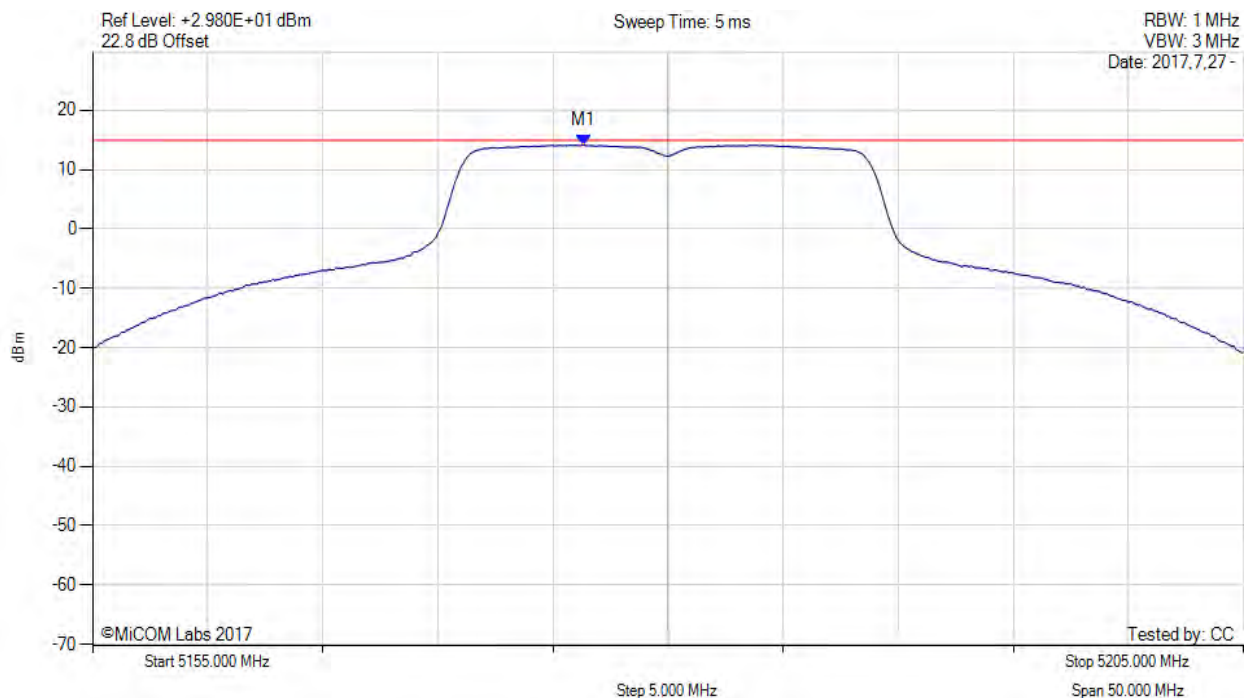


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5176.300 MHz : 14.148 dBm M1 + DCCF : 5176.300 MHz : 14.192 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 15.0 dBm Margin: -0.8 dB

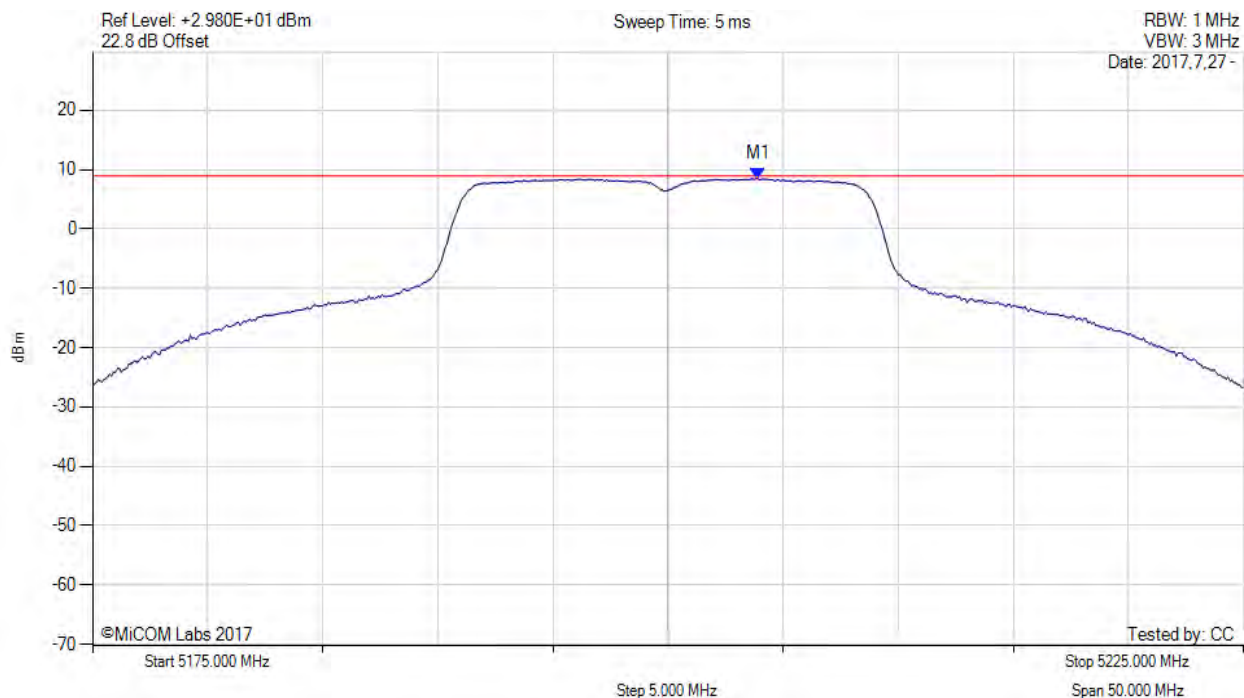
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5203.920 MHz : 8.476 dBm	Limit: ≤ 8.980 dBm

[back to matrix](#)

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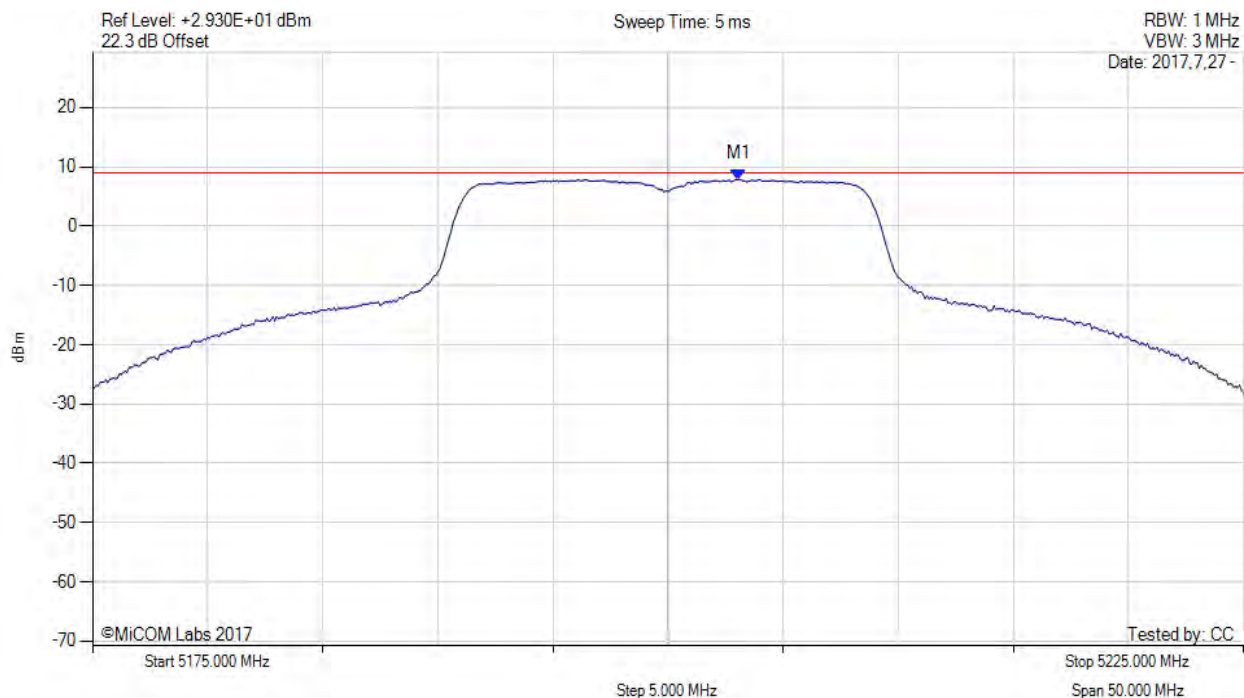


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5203.080 MHz : 7.885 dBm	Channel Frequency: 5200.00 MHz

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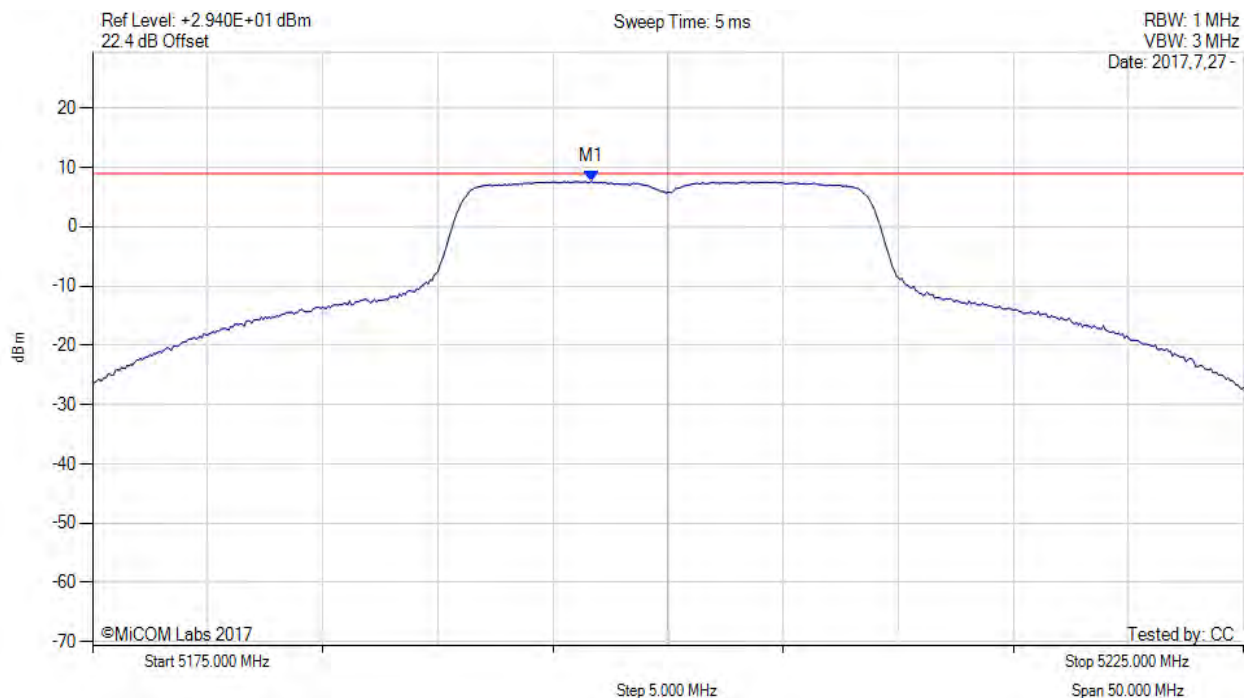


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5196.670 MHz : 7.637 dBm	Limit: ≤ 8.980 dBm

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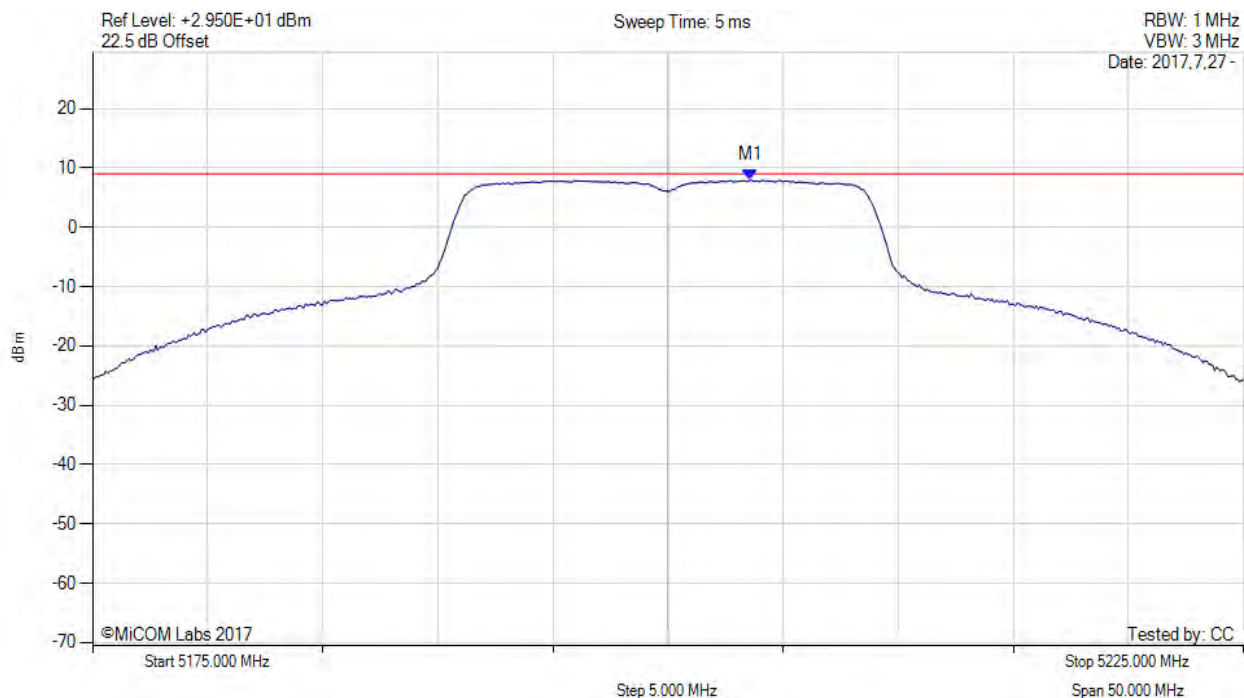


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5203.580 MHz : 7.999 dBm	Limit: ≤ 8.980 dBm

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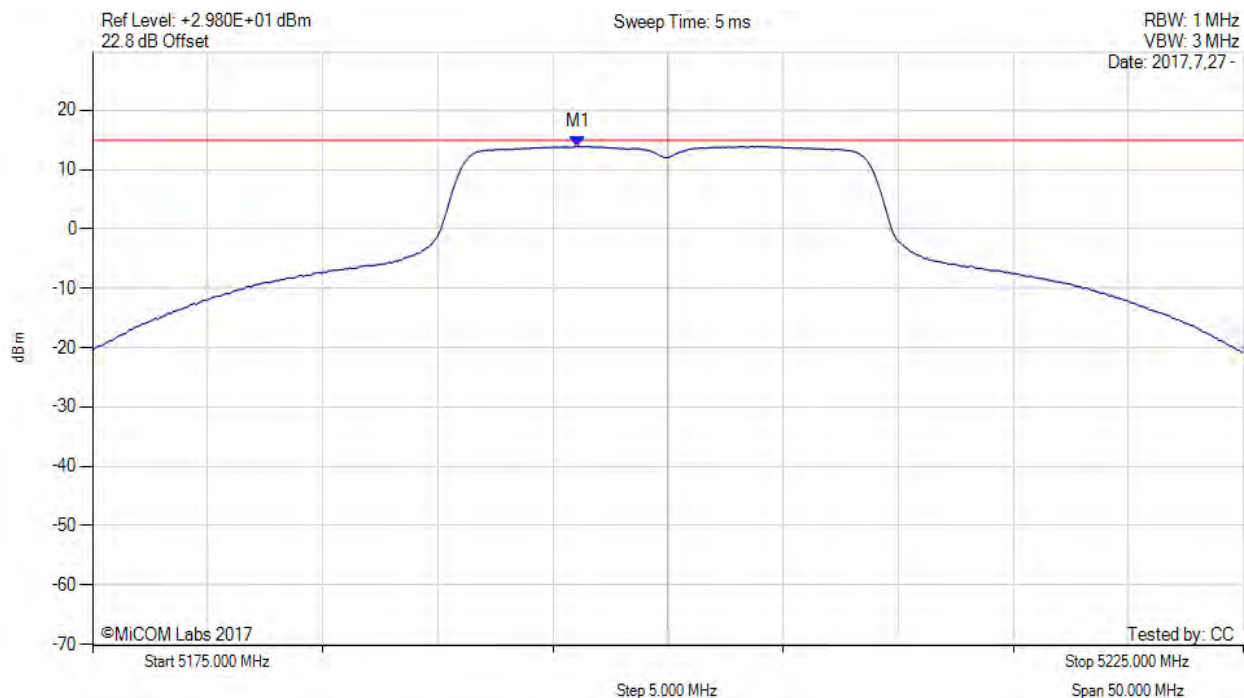


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5196.100 MHz : 13.936 dBm M1 + DCCF : 5196.100 MHz : 13.980 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 15.0 dBm Margin: -1.0 dB

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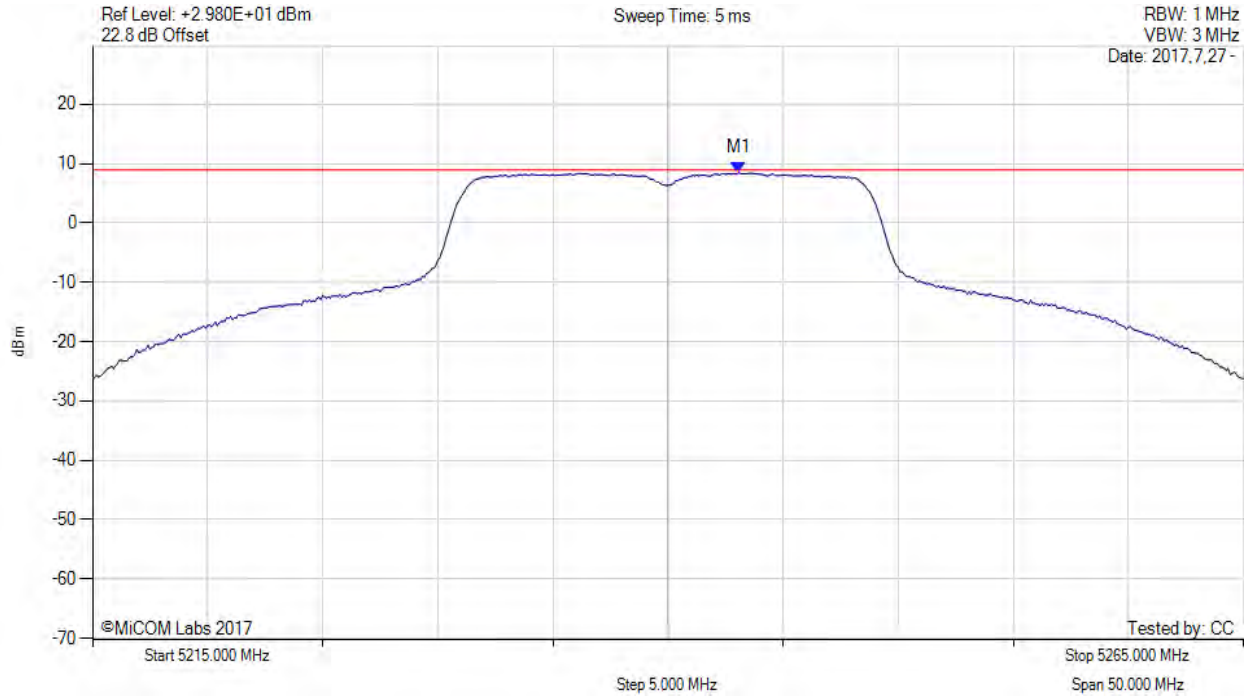


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5243.080 MHz : 8.511 dBm	Limit: ≤ 8.980 dBm

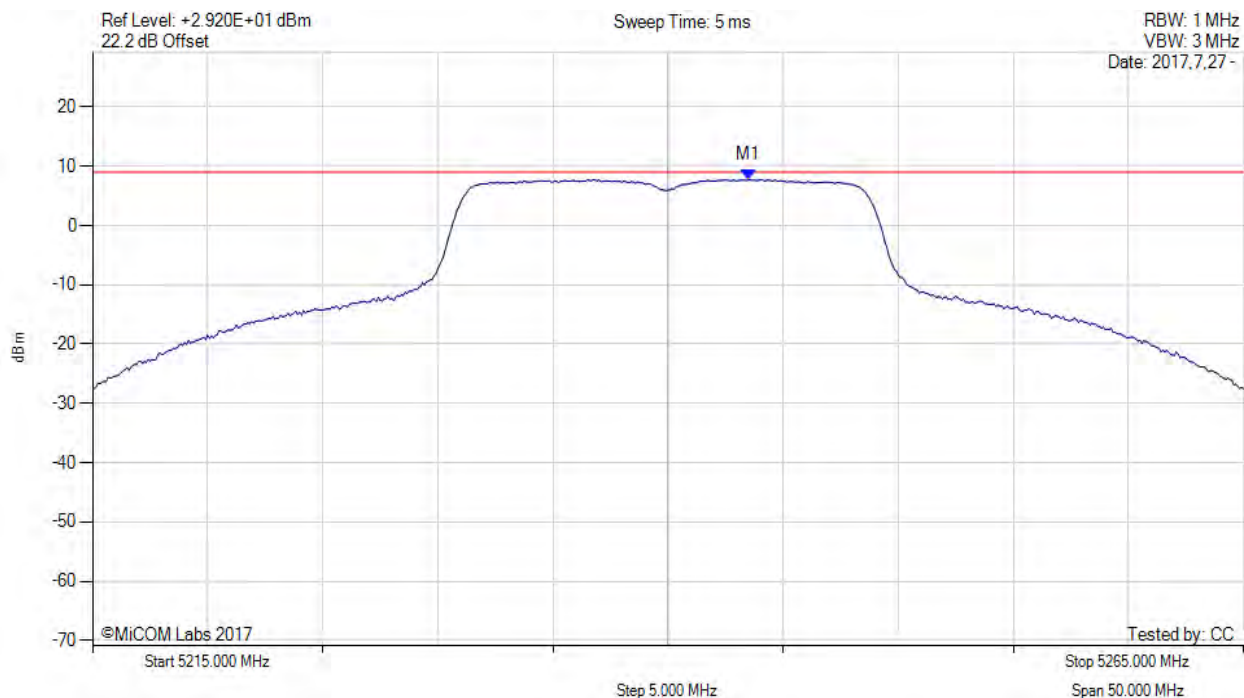
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5243.500 MHz : 7.738 dBm	Limit: ≤ 8.980 dBm

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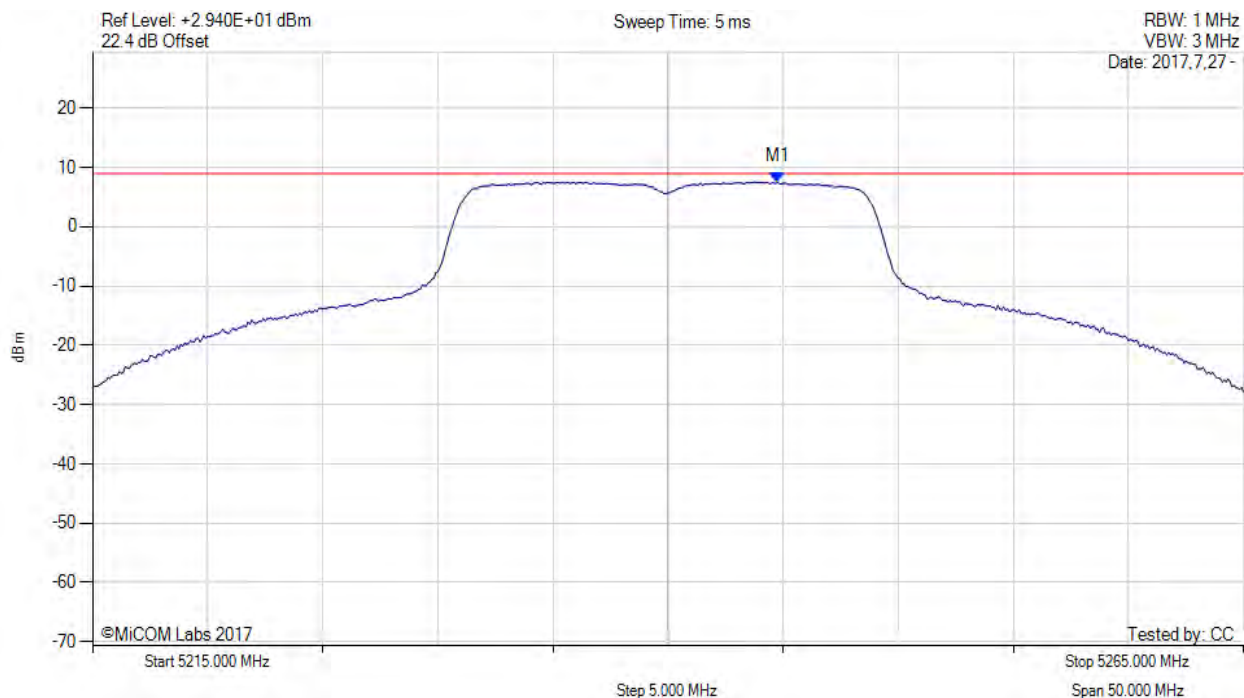


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5244.750 MHz : 7.528 dBm	Limit: ≤ 8.980 dBm

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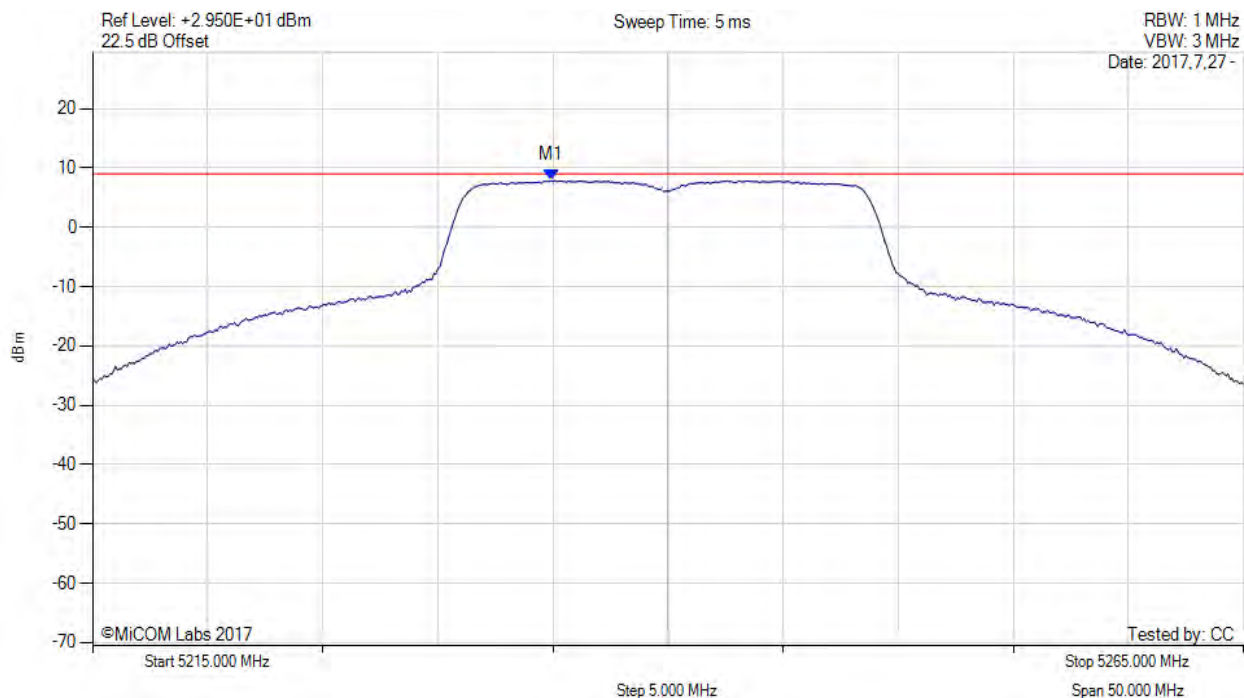


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5234.920 MHz : 7.879 dBm	Limit: ≤ 8.980 dBm

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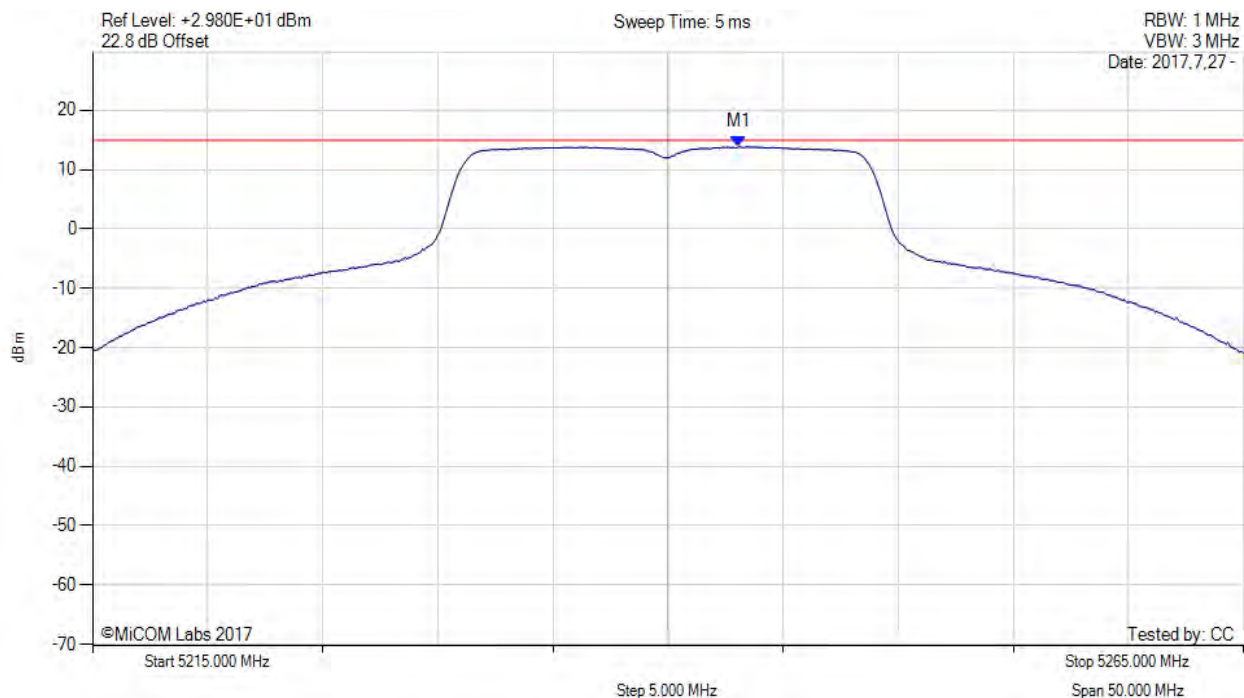


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5243.100 MHz : 13.873 dBm M1 + DCCF : 5243.100 MHz : 13.917 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 15.0 dBm Margin: -1.1 dB

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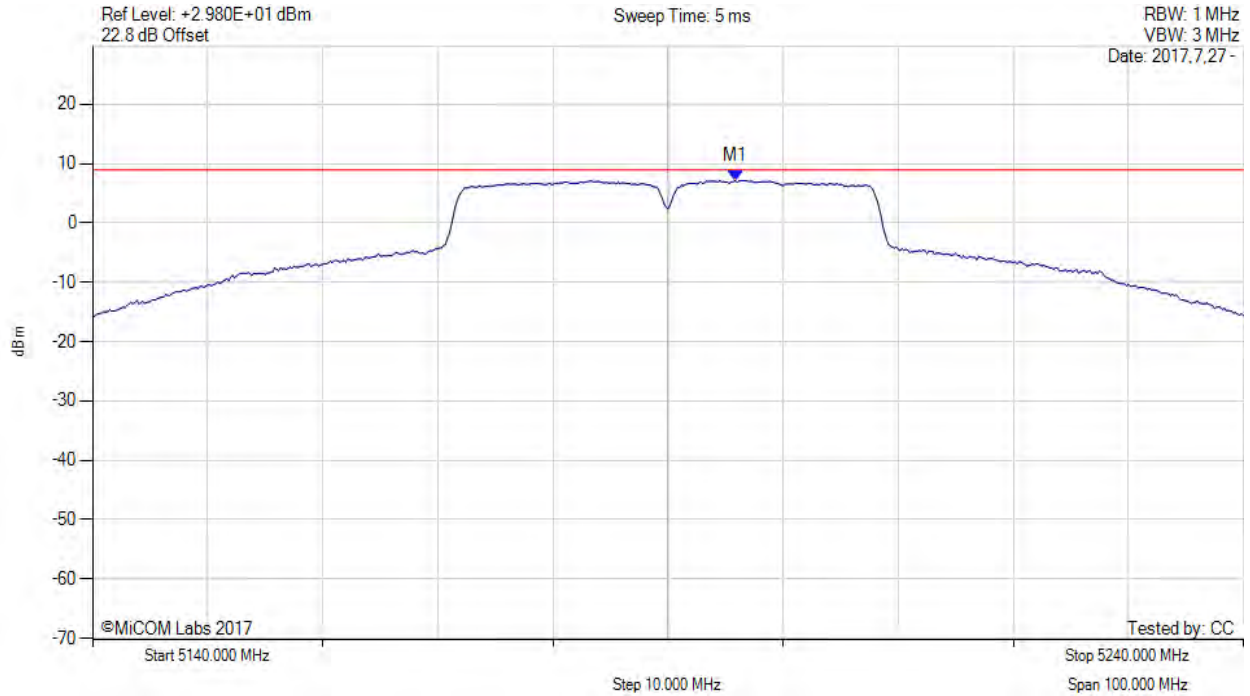


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5195.830 MHz : 7.159 dBm	Limit: ≤ 8.980 dBm

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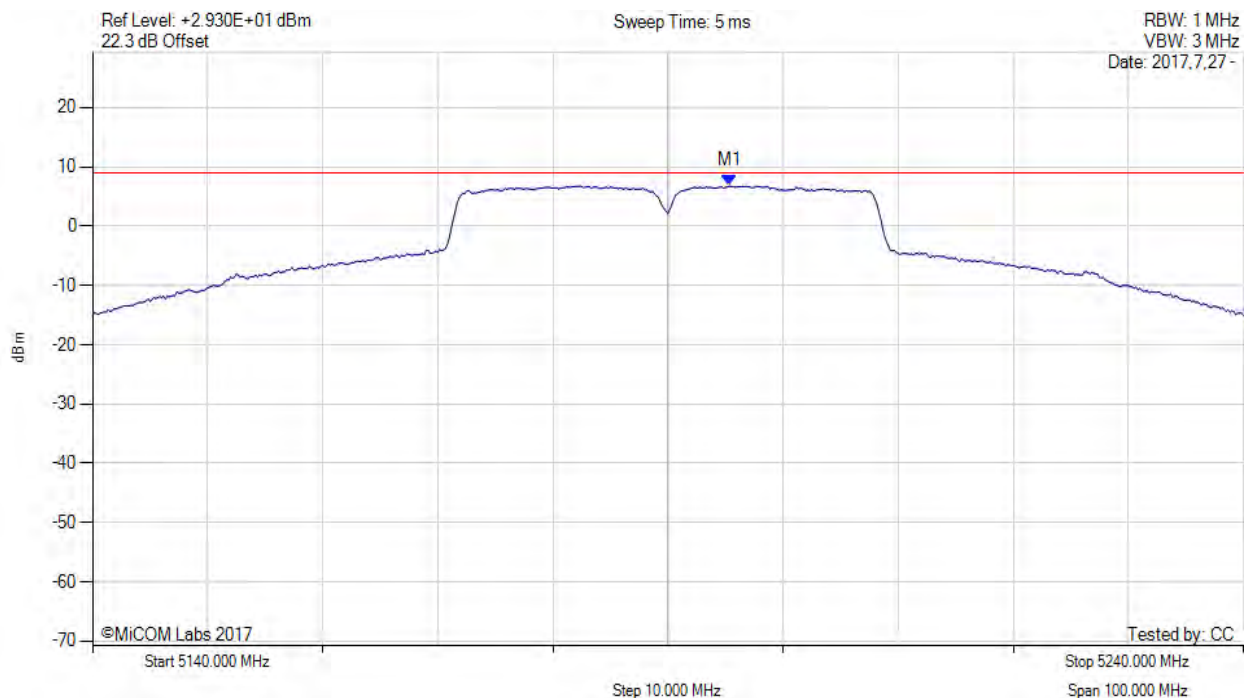


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5195.330 MHz : 6.752 dBm	Limit: ≤ 8.980 dBm

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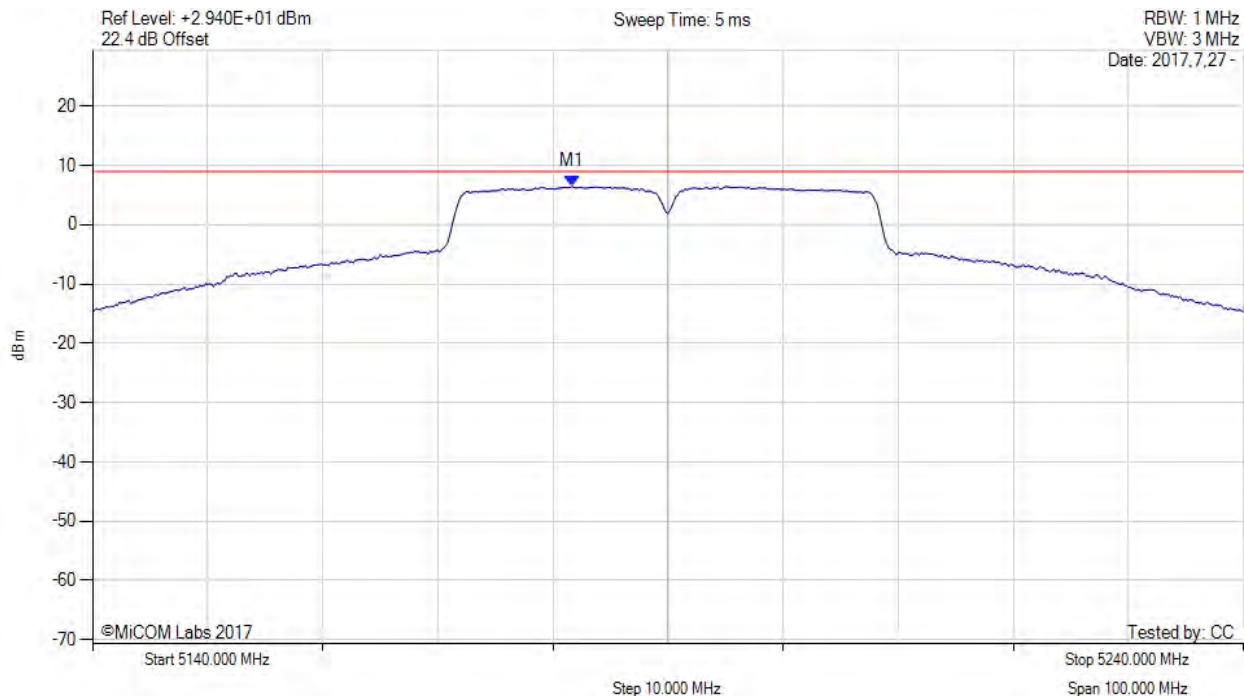


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5181.670 MHz : 6.452 dBm	Limit: ≤ 8.980 dBm

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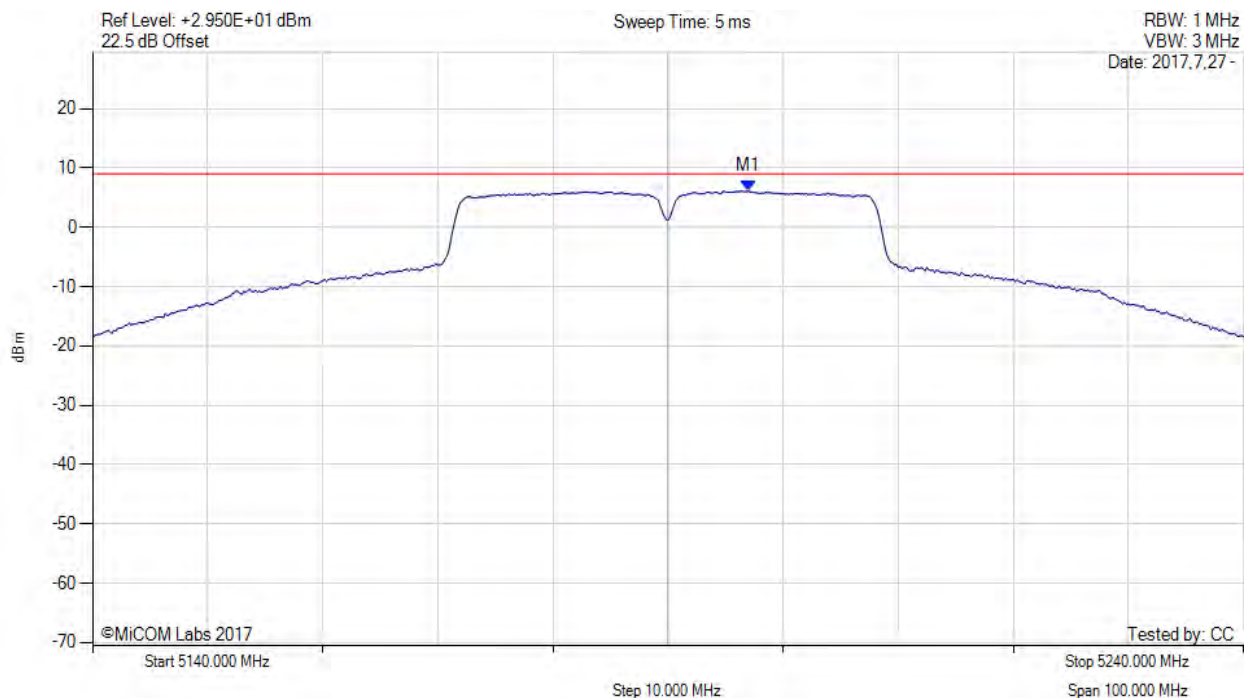


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5197.000 MHz : 6.114 dBm	Limit: ≤ 8.980 dBm

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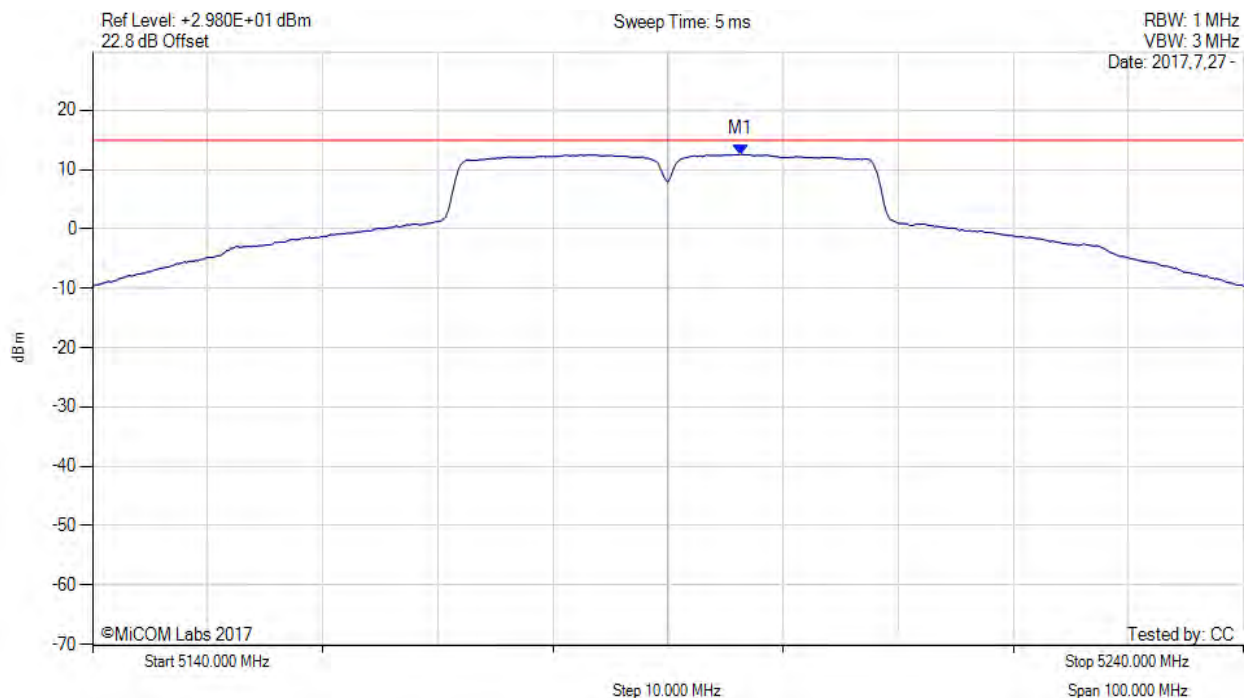


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5196.300 MHz : 12.591 dBm M1 + DCCF : 5196.300 MHz : 12.679 dBm Duty Cycle Correction Factor : +0.09 dB	Limit: ≤ 15.0 dBm Margin: -2.3 dB

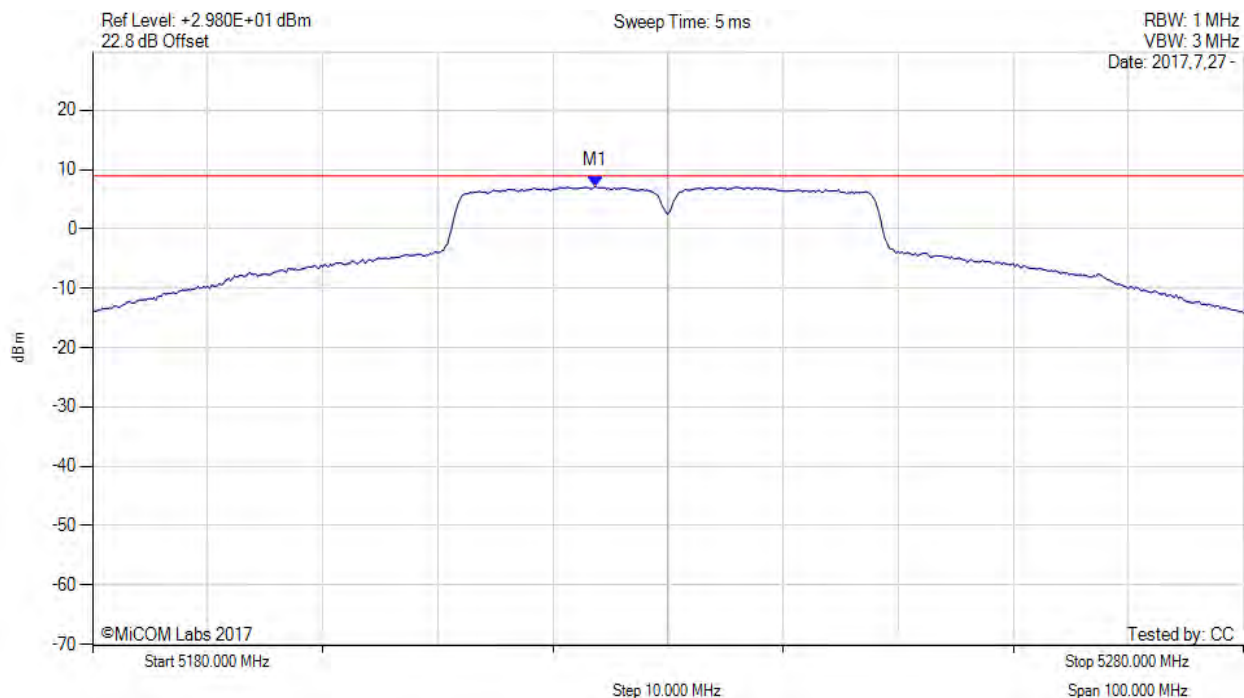
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5223.670 MHz : 7.227 dBm	Limit: ≤ 8.980 dBm

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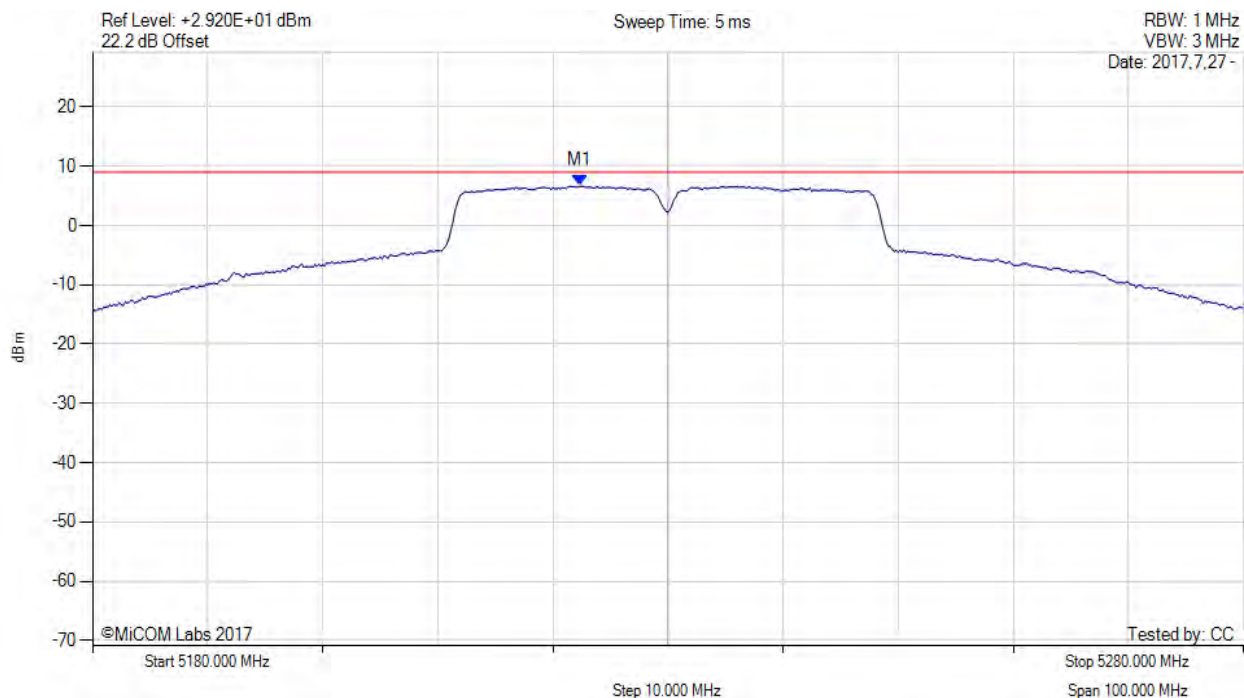


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5222.330 MHz : 6.656 dBm	Limit: ≤ 8.980 dBm

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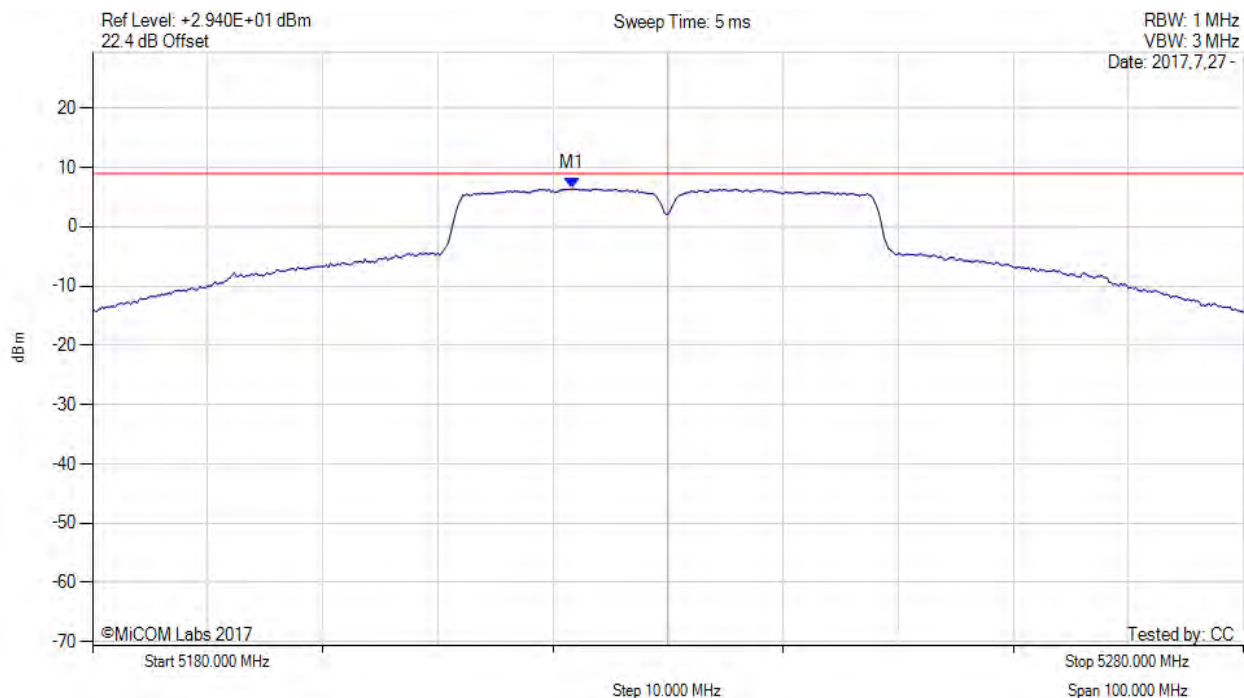


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5221.670 MHz : 6.406 dBm	Limit: ≤ 8.980 dBm

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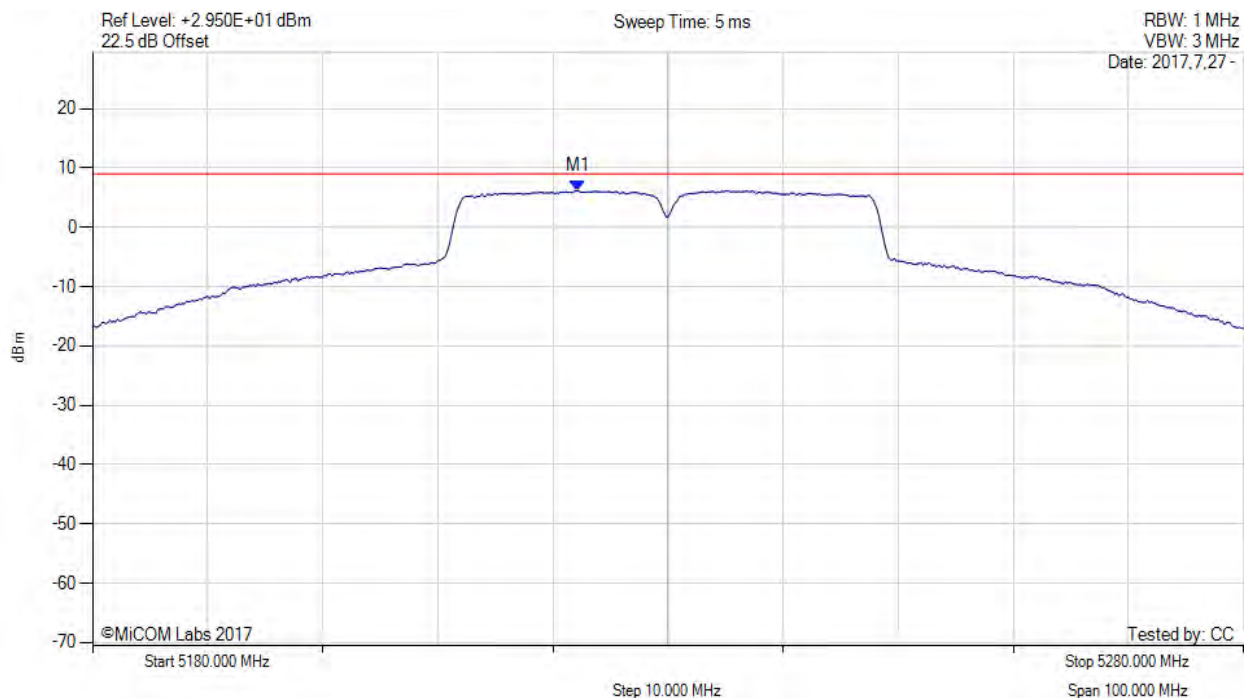


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5222.170 MHz : 6.192 dBm	Limit: ≤ 8.980 dBm

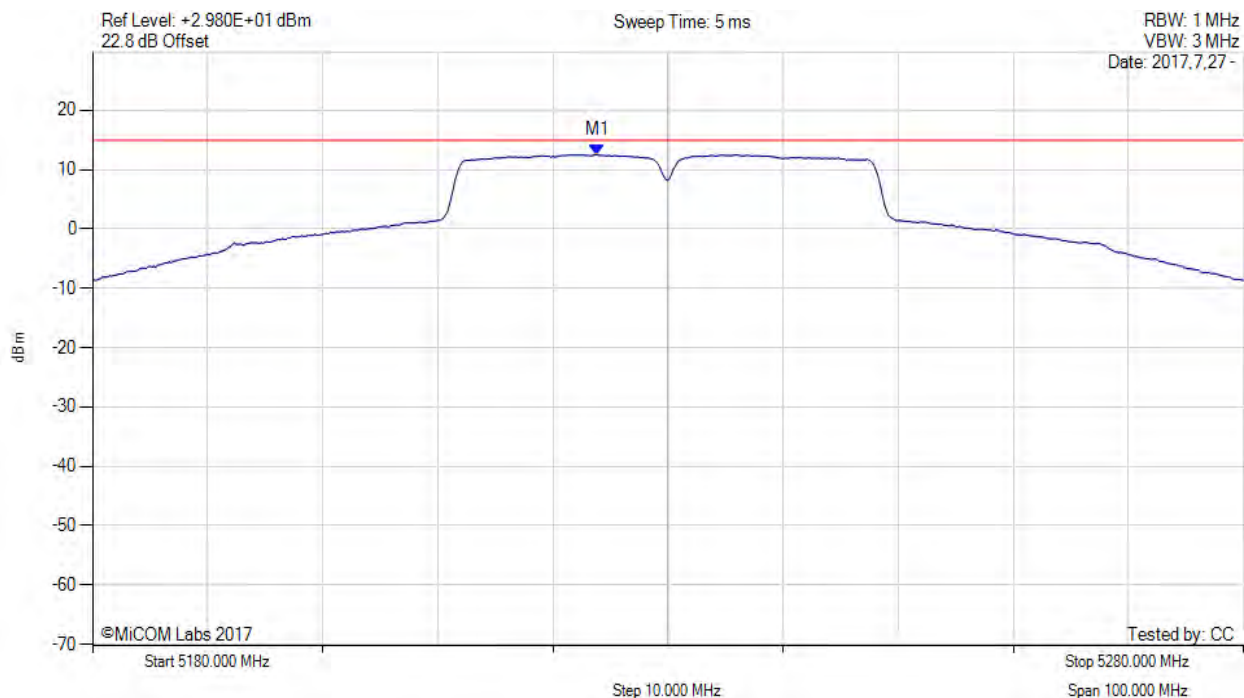
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5223.800 MHz : 12.526 dBm M1 + DCCF : 5223.800 MHz : 12.614 dBm Duty Cycle Correction Factor : +0.09 dB	Limit: ≤ 15.0 dBm Margin: -2.4 dB

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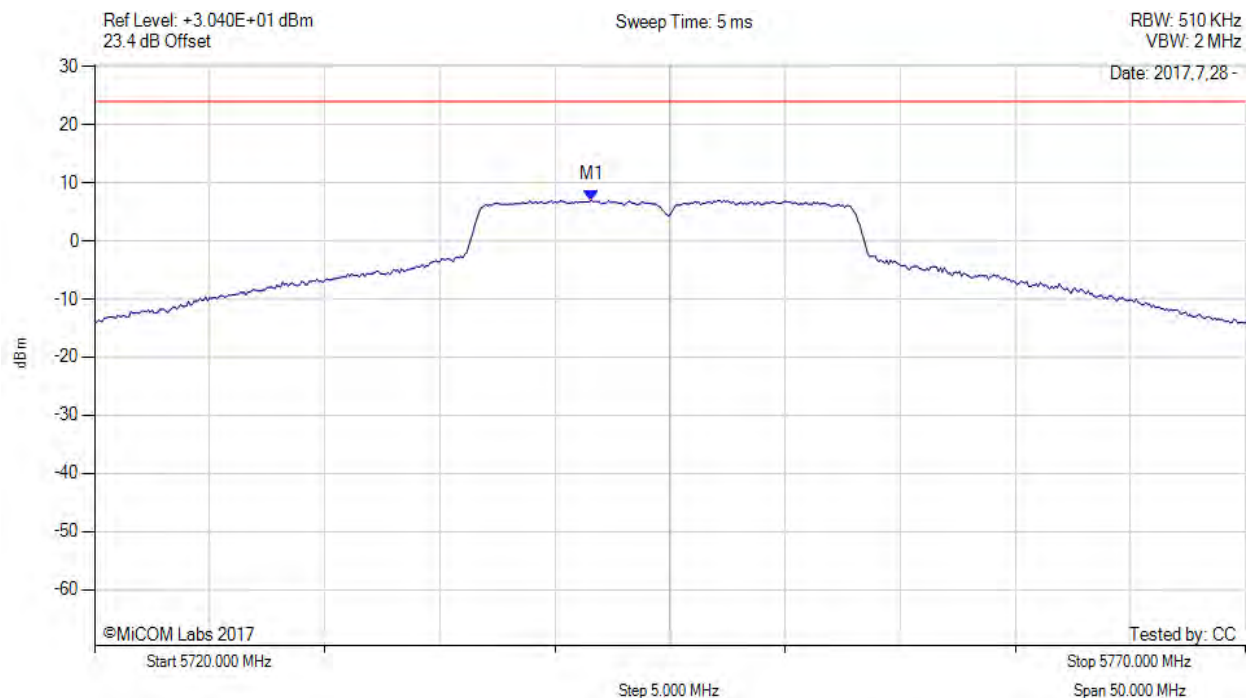


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5741.580 MHz : 7.030 dBm	Limit: ≤ 23.980 dBm

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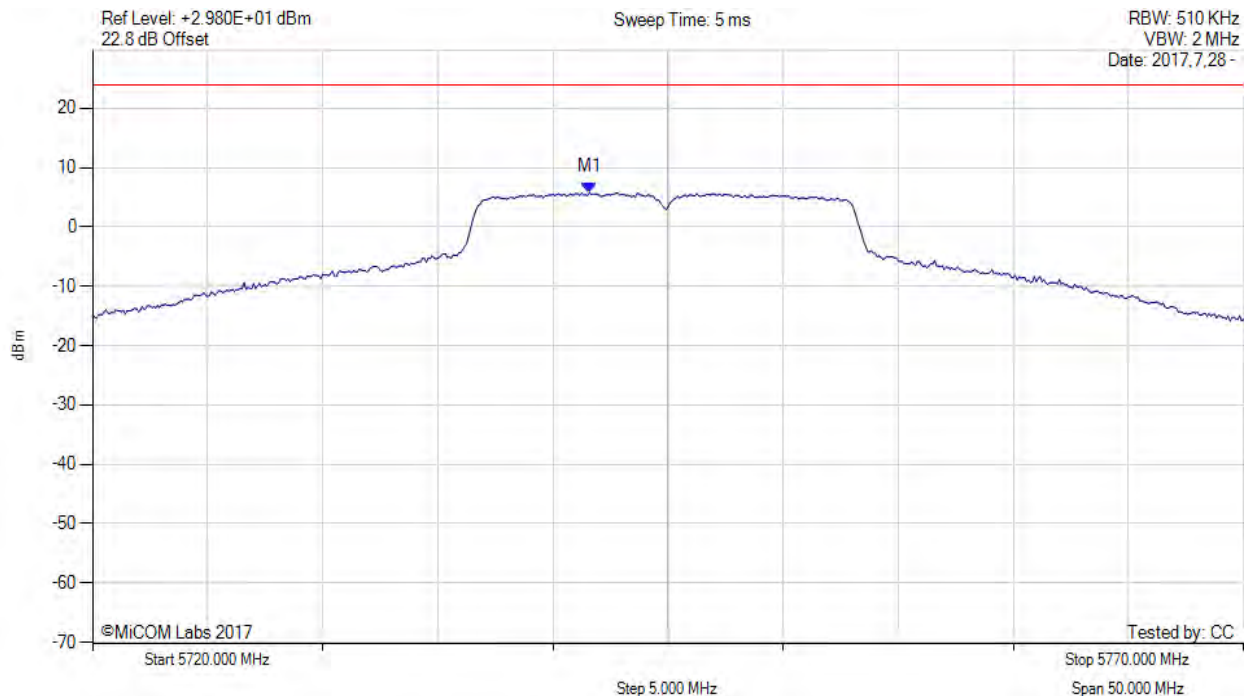


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5741.580 MHz : 5.807 dBm	Limit: ≤ 23.980 dBm

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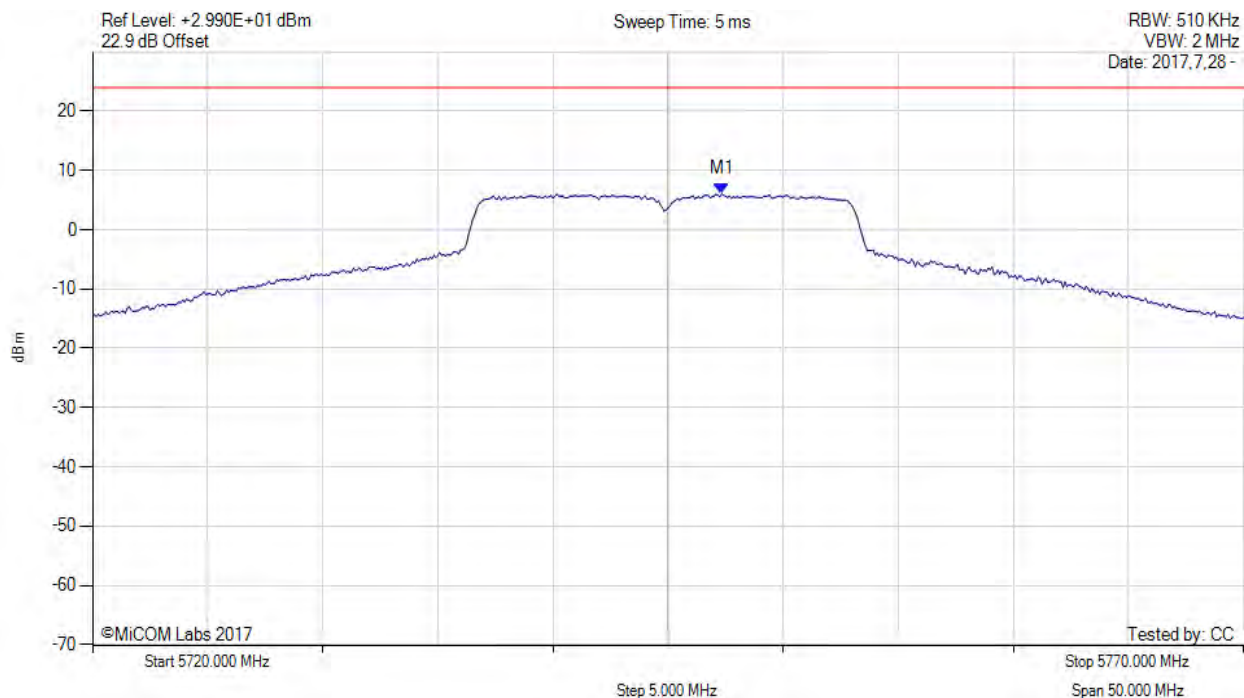


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Serial #: HPEN111-U8_Conducted non-DFS Bands Rev A
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5747.330 MHz : 6.044 dBm	Limit: ≤ 23.980 dBm

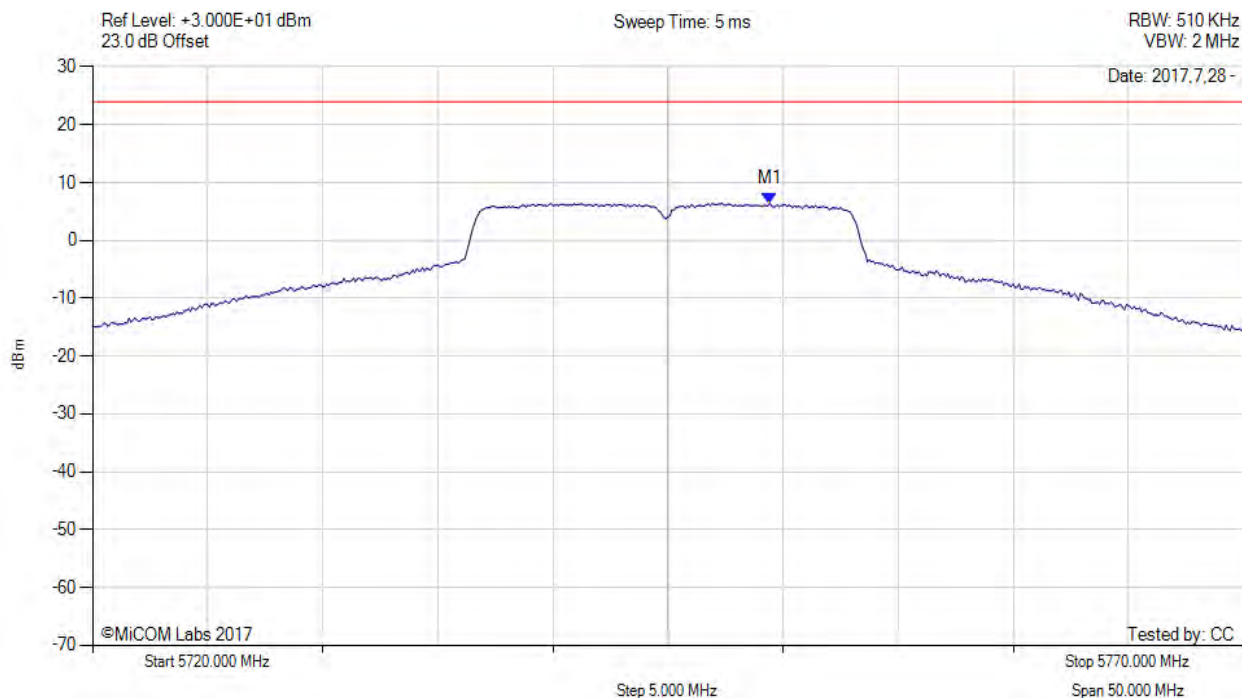
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5749.420 MHz : 6.435 dBm	Limit: ≤ 23.980 dBm

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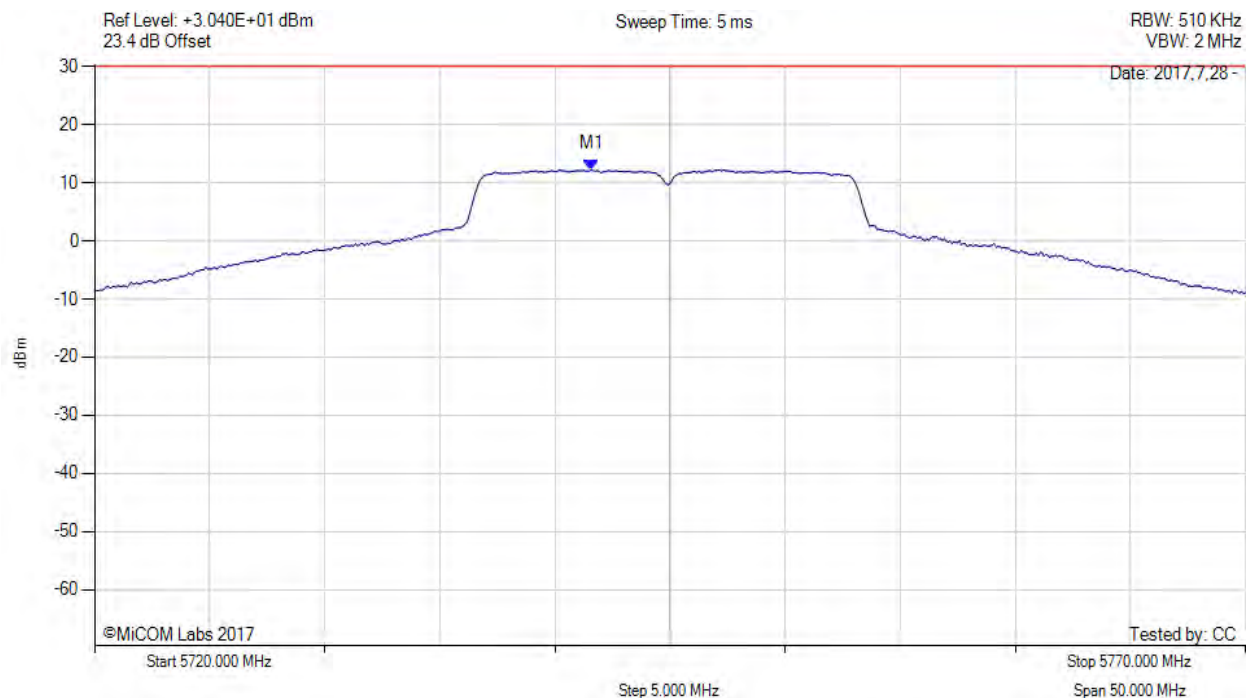


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5741.600 MHz : 12.274 dBm M1 + DCCF : 5741.600 MHz : 12.318 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 30.0 dBm Margin: -17.7 dB

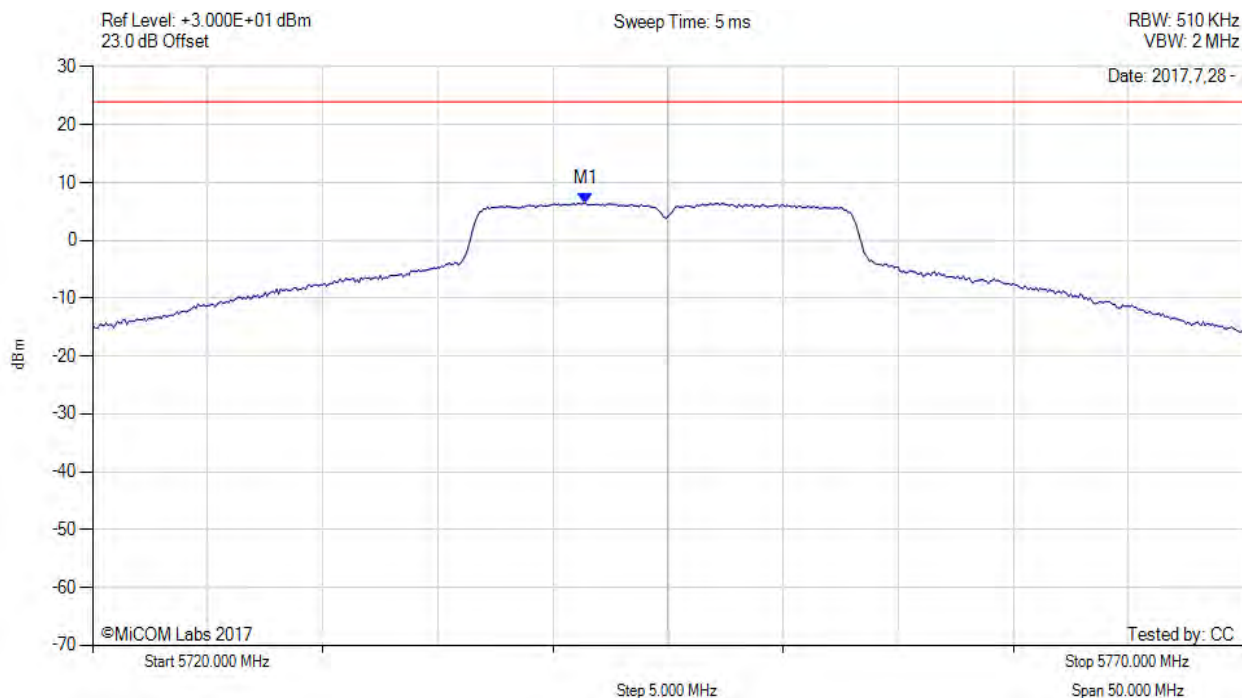
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5741.420 MHz : 6.411 dBm	Limit: ≤ 30.000 dBm

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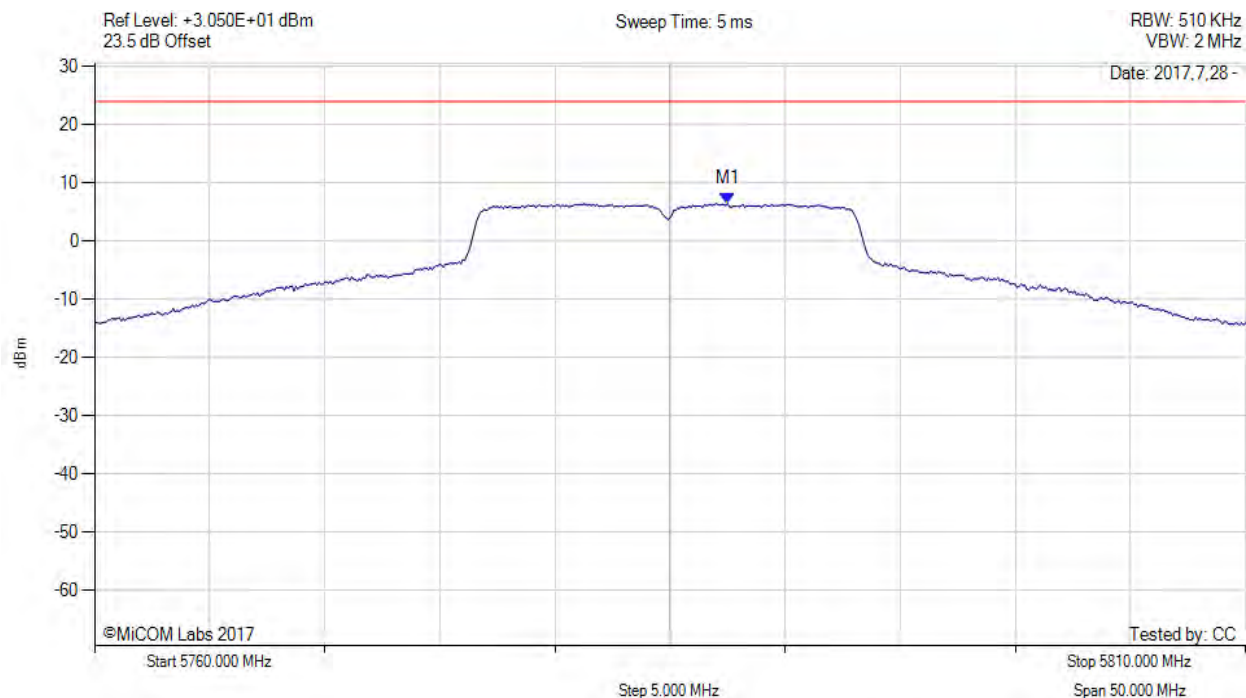


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5787.500 MHz : 6.490 dBm	Limit: ≤ 23.980 dBm

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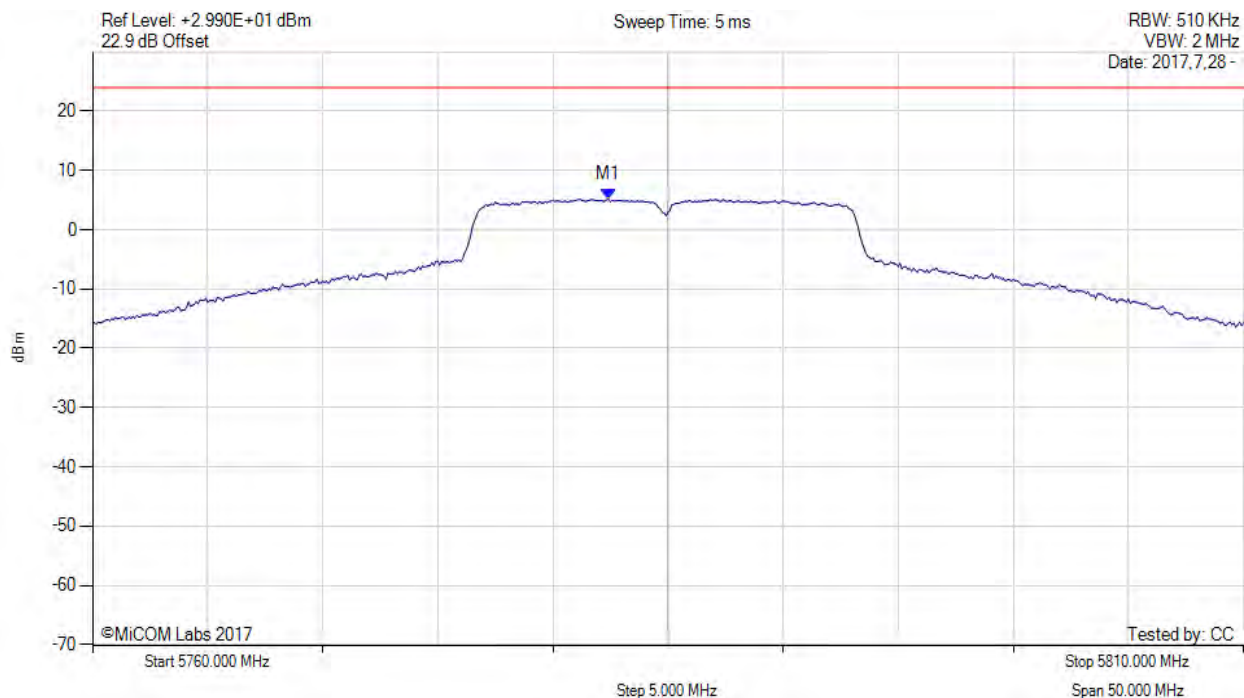


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5782.420 MHz : 5.150 dBm	Channel Frequency: 5785.00 MHz

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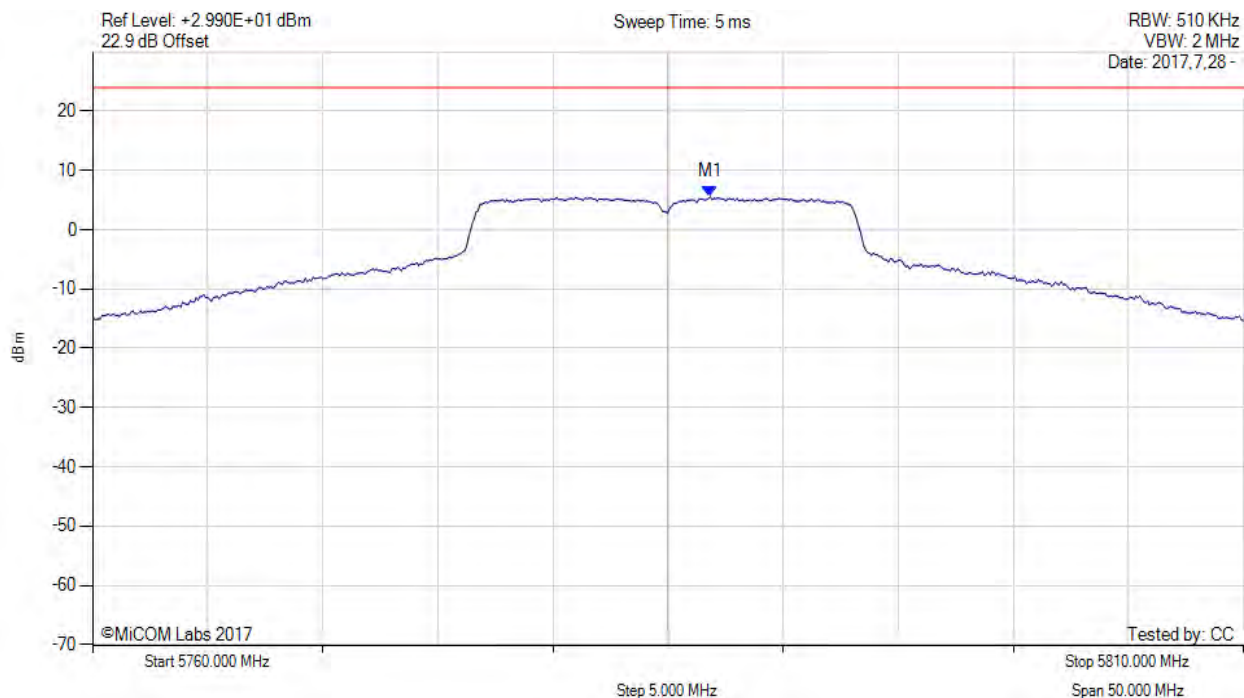


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5786.830 MHz : 5.530 dBm	Limit: ≤ 23.980 dBm

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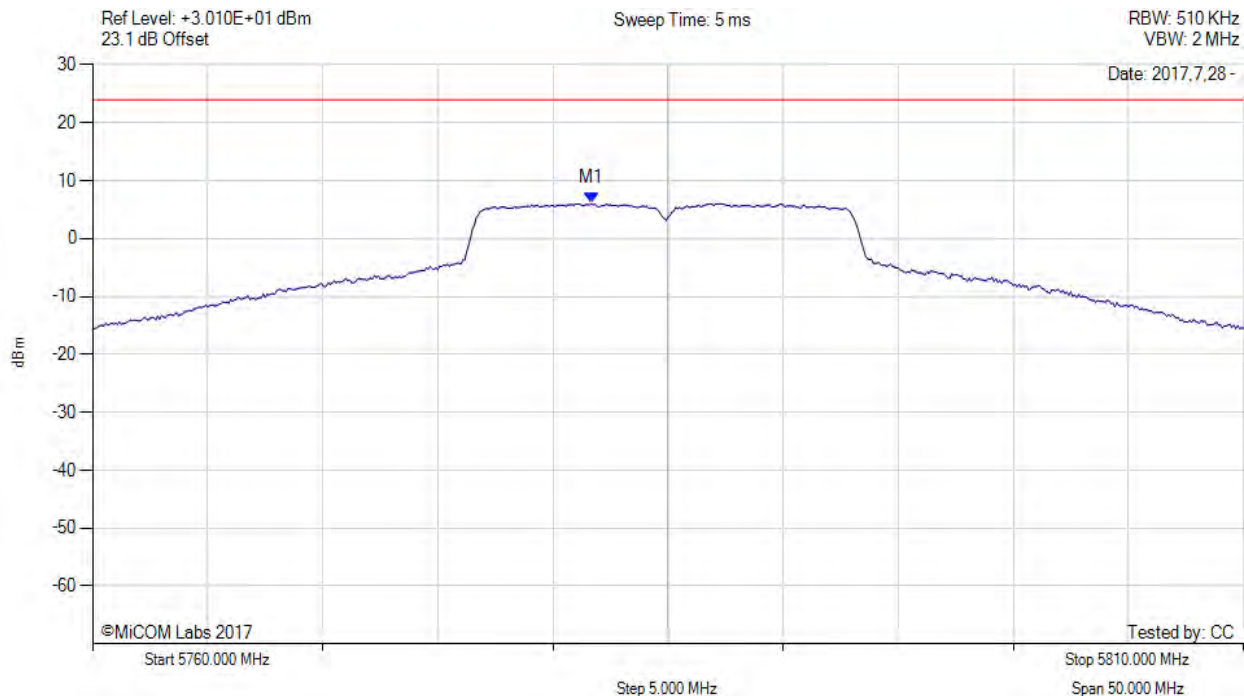


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5781.670 MHz : 6.037 dBm	Limit: ≤ 23.980 dBm

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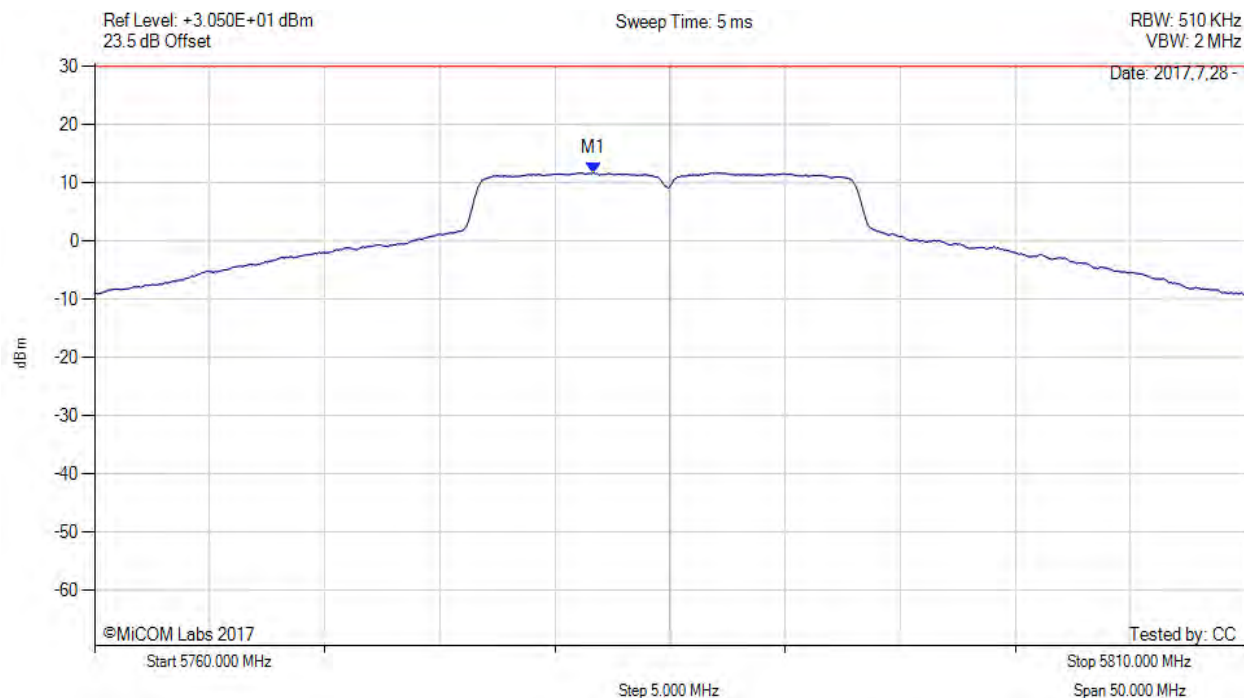


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5781.700 MHz : 11.743 dBm M1 + DCCF : 5781.700 MHz : 11.787 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 30.0 dBm Margin: -18.2 dB

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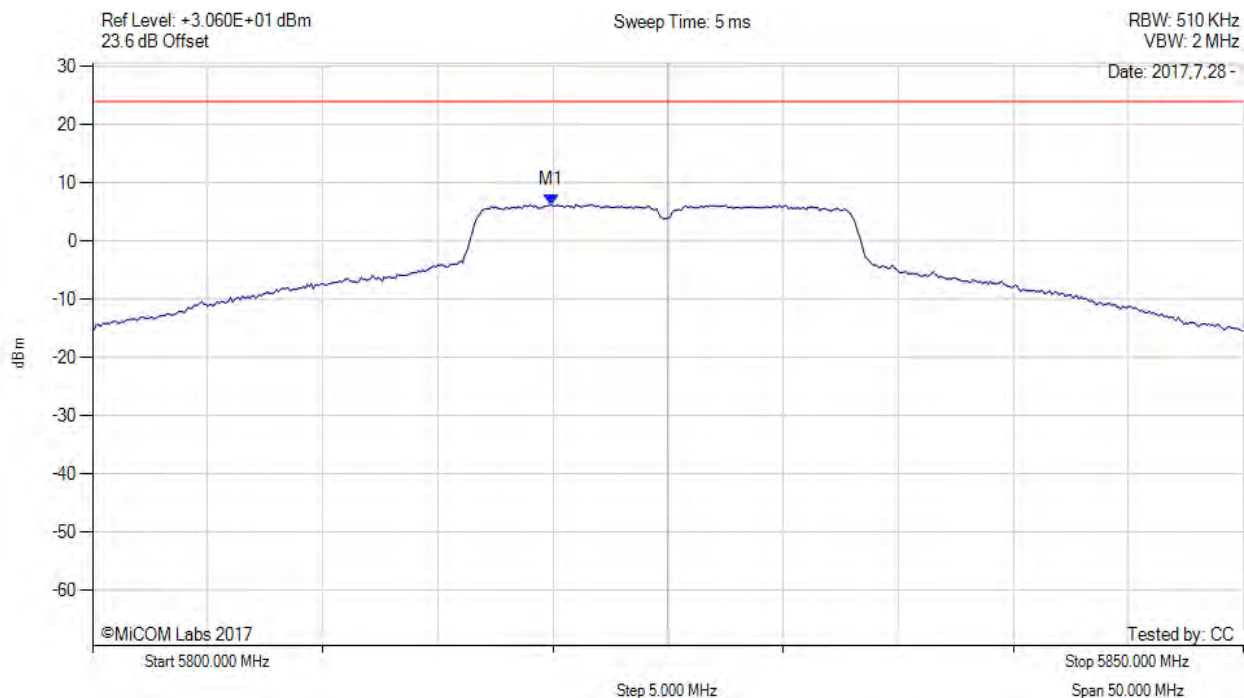


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5819.920 MHz : 6.305 dBm	Limit: ≤ 23.980 dBm

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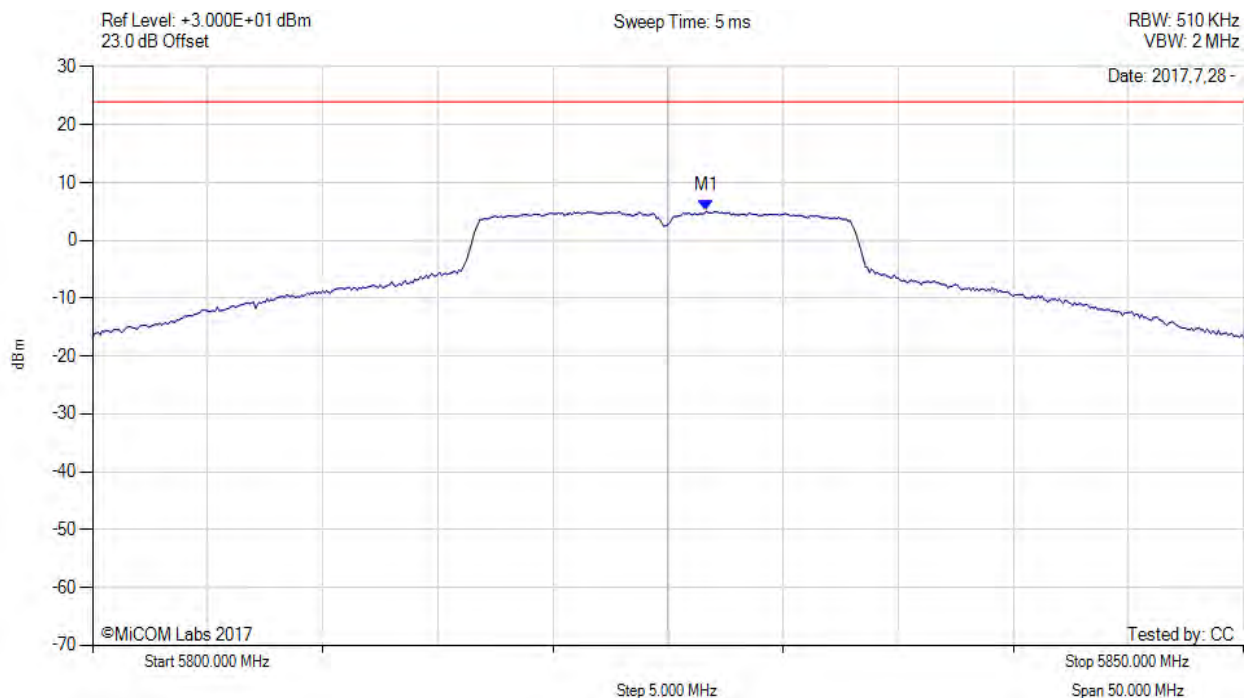


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5826.670 MHz : 5.074 dBm	Limit: ≤ 23.980 dBm

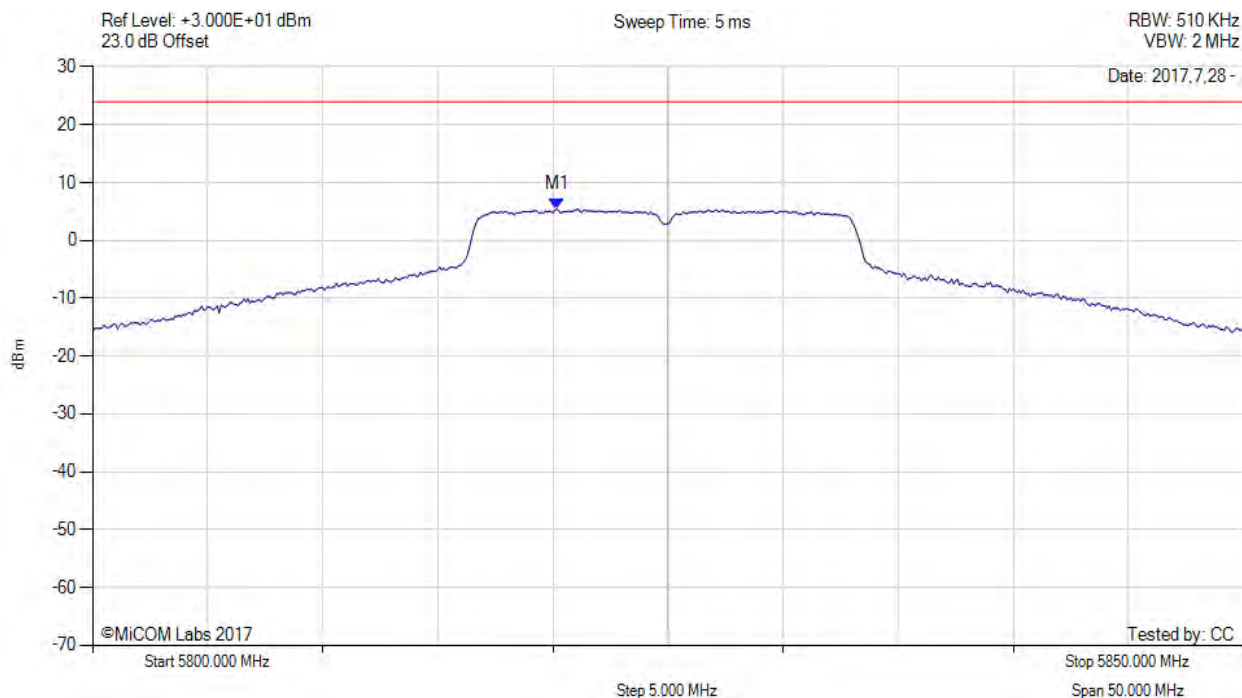
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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5820.170 MHz : 5.428 dBm	Limit: ≤ 23.980 dBm

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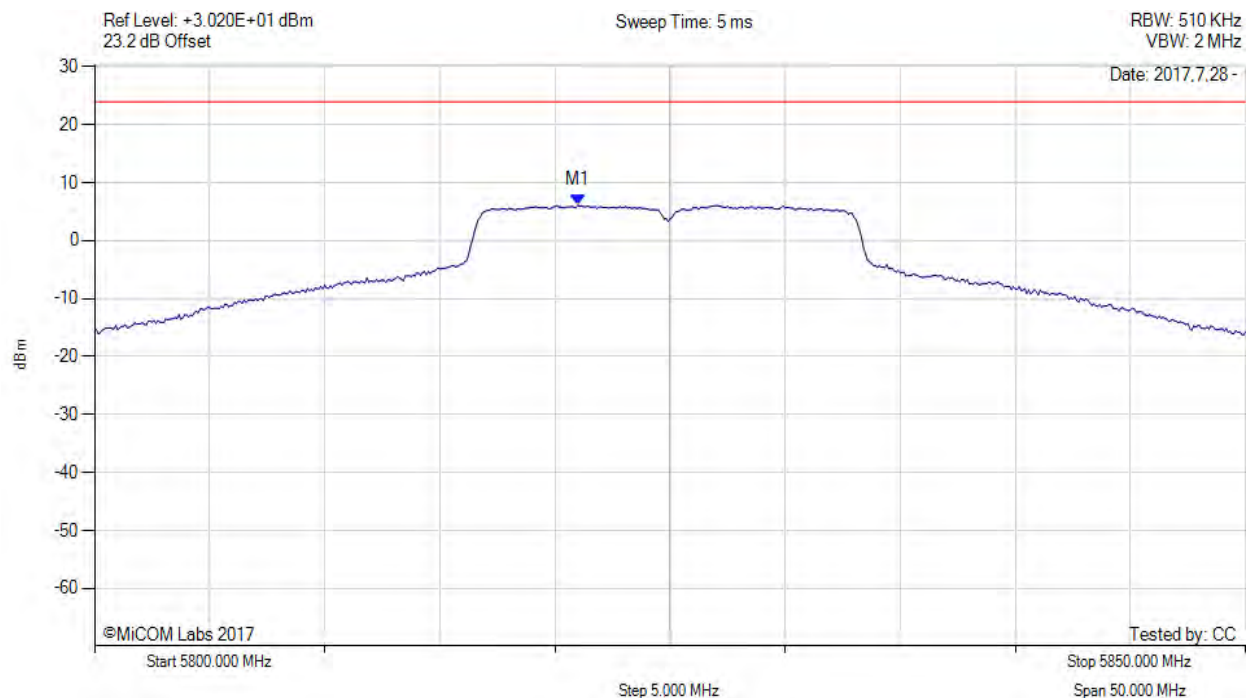


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5821.000 MHz : 6.115 dBm	Limit: ≤ 23.980 dBm

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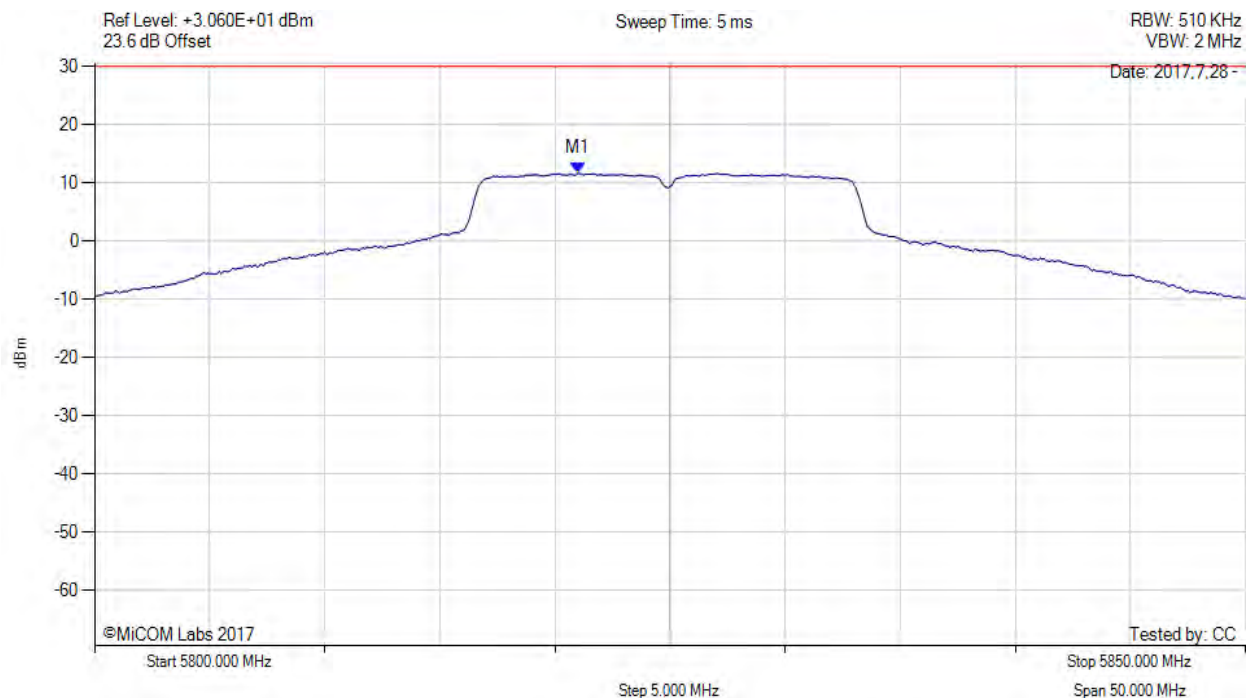


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POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5821.000 MHz : 11.664 dBm M1 + DCCF : 5821.000 MHz : 11.708 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 30.0 dBm Margin: -18.3 dB

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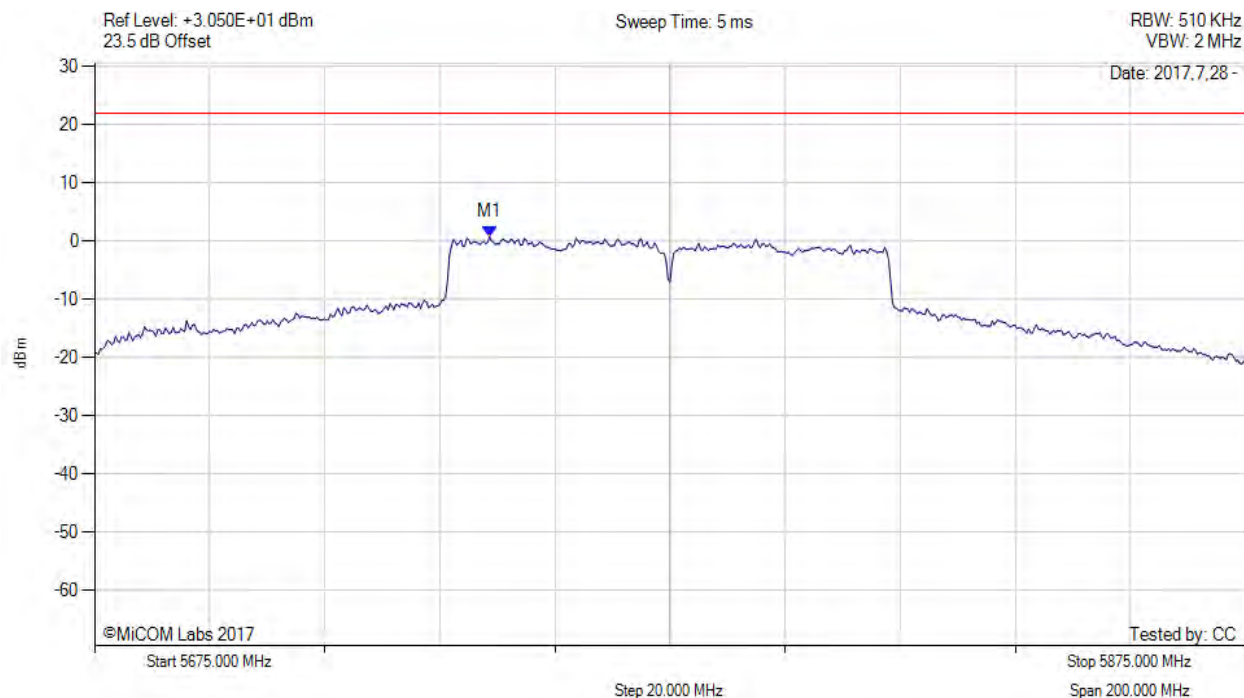


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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5743.700 MHz : 0.793 dBm	Limit: ≤ 21.980 dBm

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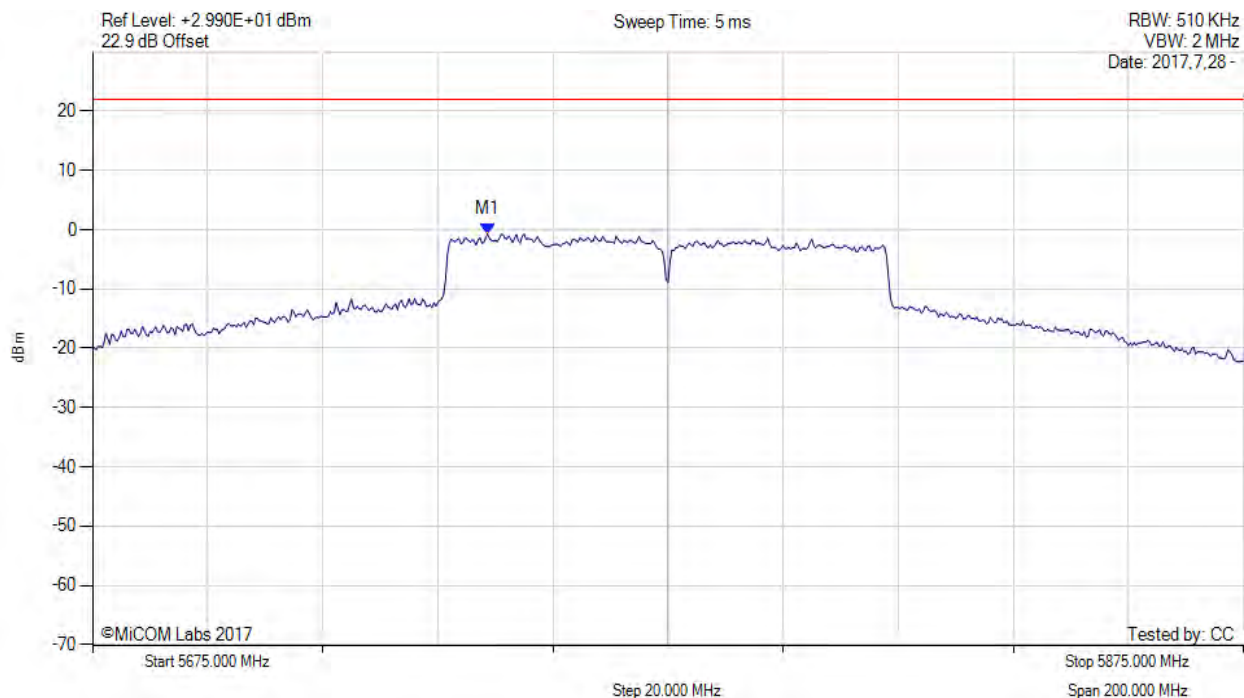


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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5743.700 MHz : -0.720 dBm	Limit: ≤ 21.980 dBm

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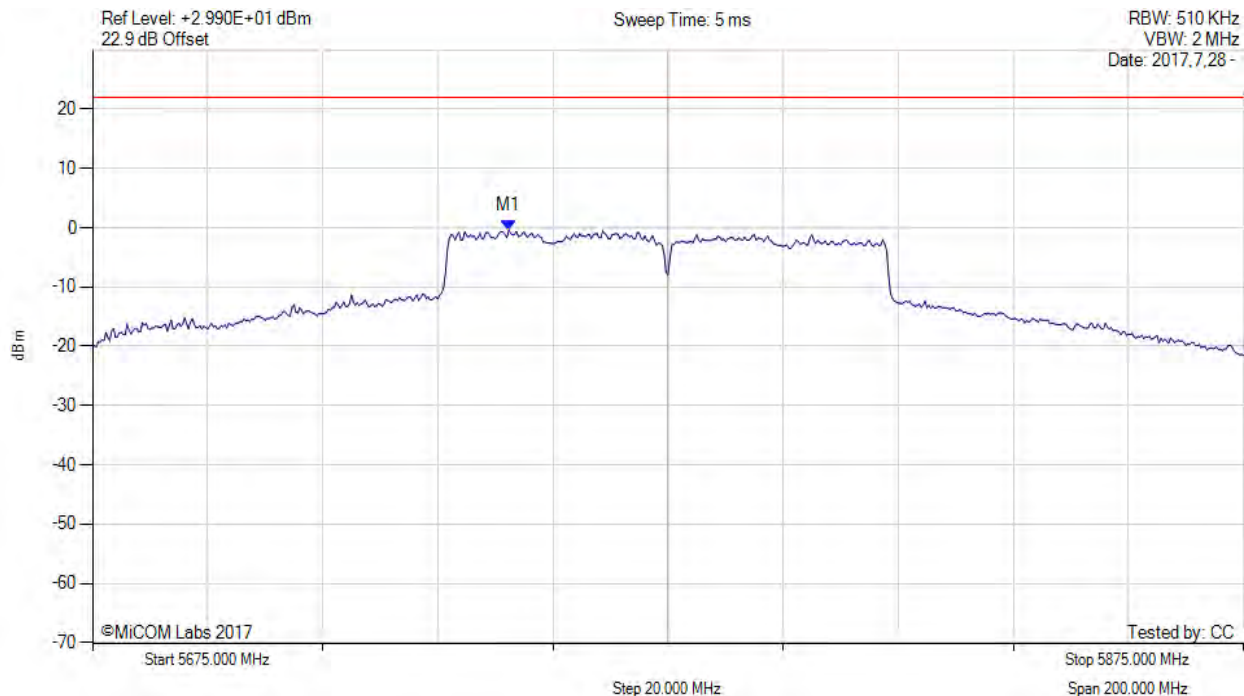


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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5747.300 MHz : -0.418 dBm	Limit: ≤ 21.980 dBm

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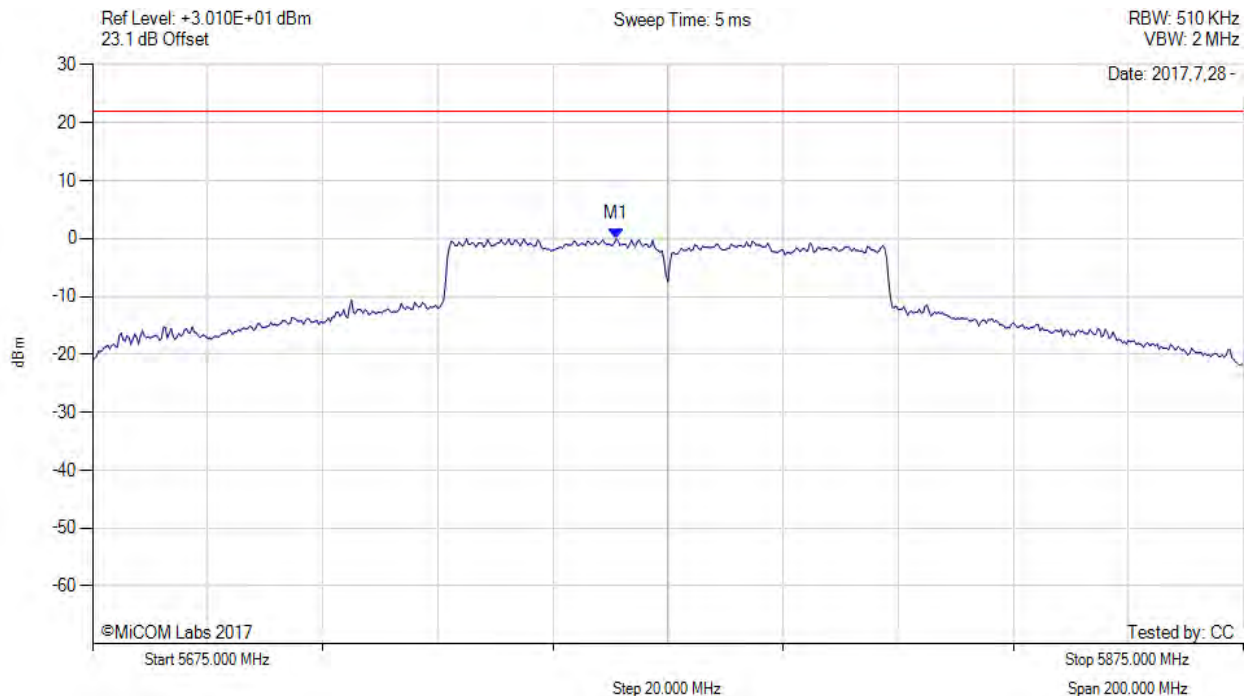


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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5766.000 MHz : -0.068 dBm	Limit: ≤ 21.980 dBm

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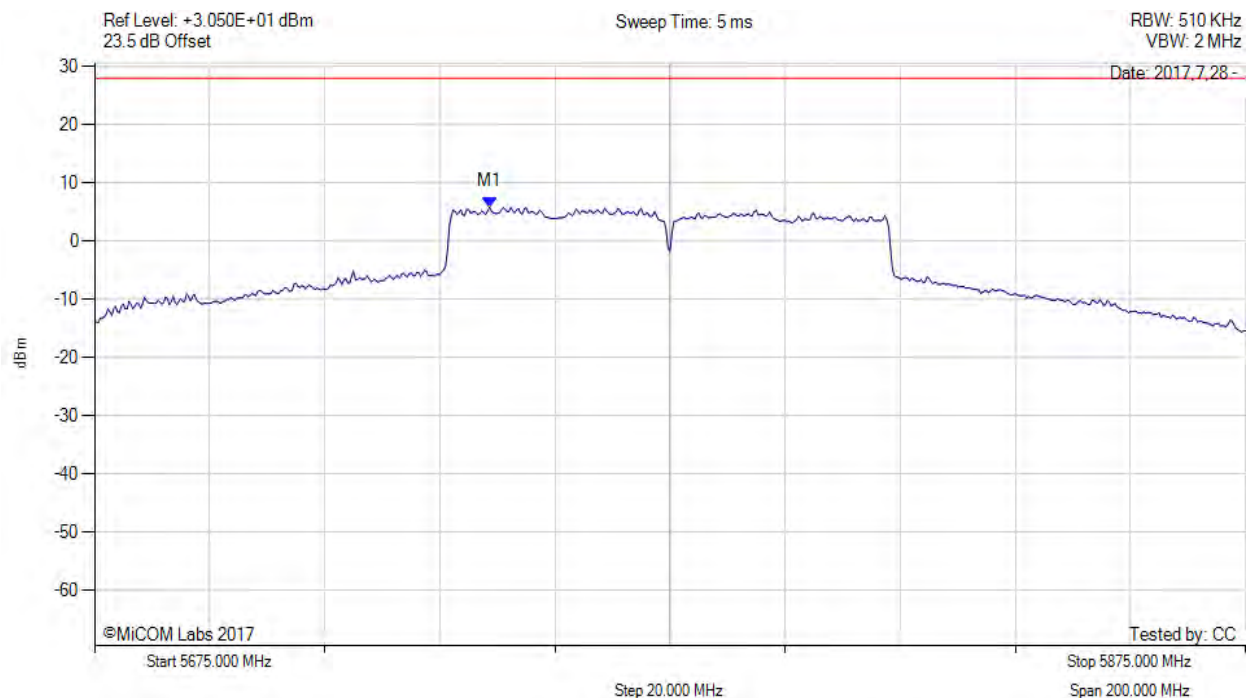


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POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5743.700 MHz : 5.841 dBm M1 + DCCF : 5743.700 MHz : 5.885 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 28.0 dBm Margin: -22.1 dB

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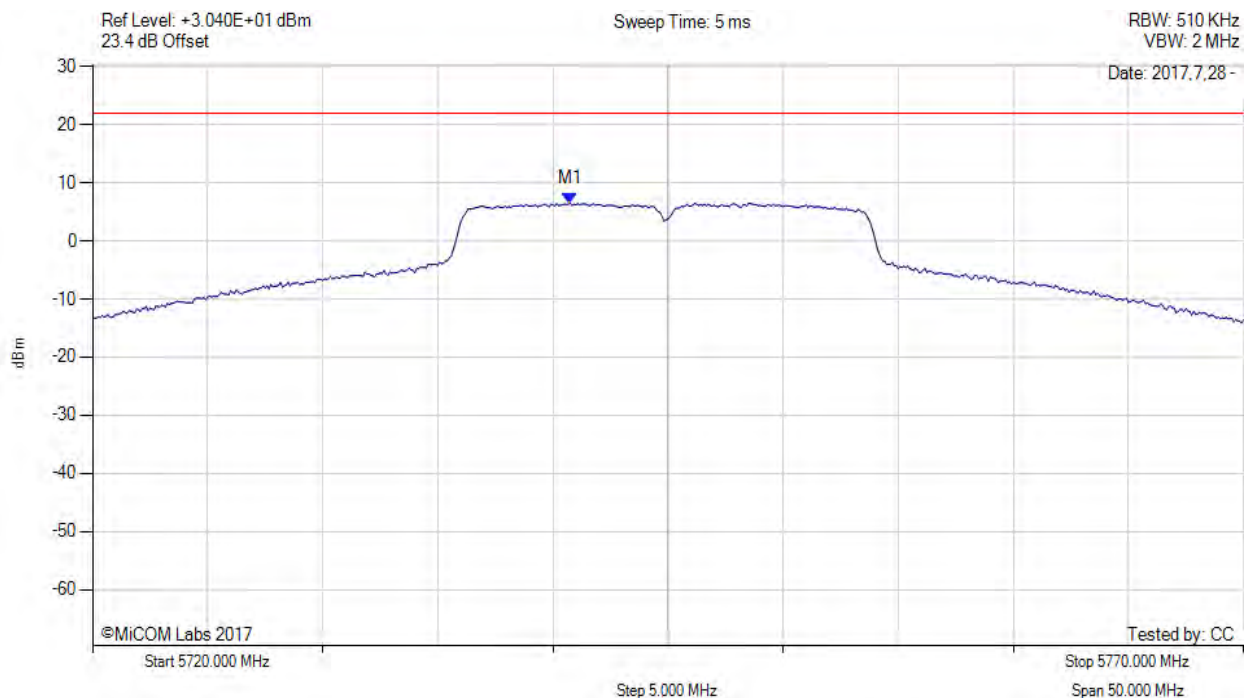


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5740.750 MHz : 6.487 dBm	Limit: ≤ 21.980 dBm

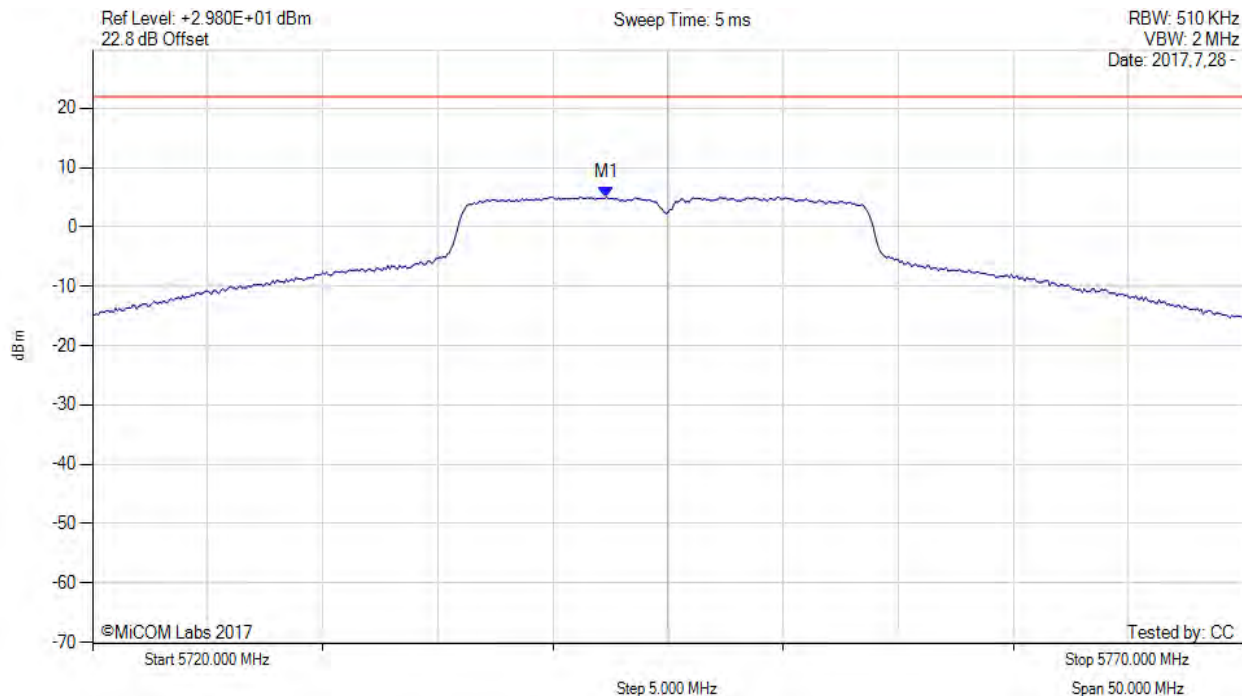
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5742.330 MHz : 5.091 dBm	Limit: ≤ 21.980 dBm

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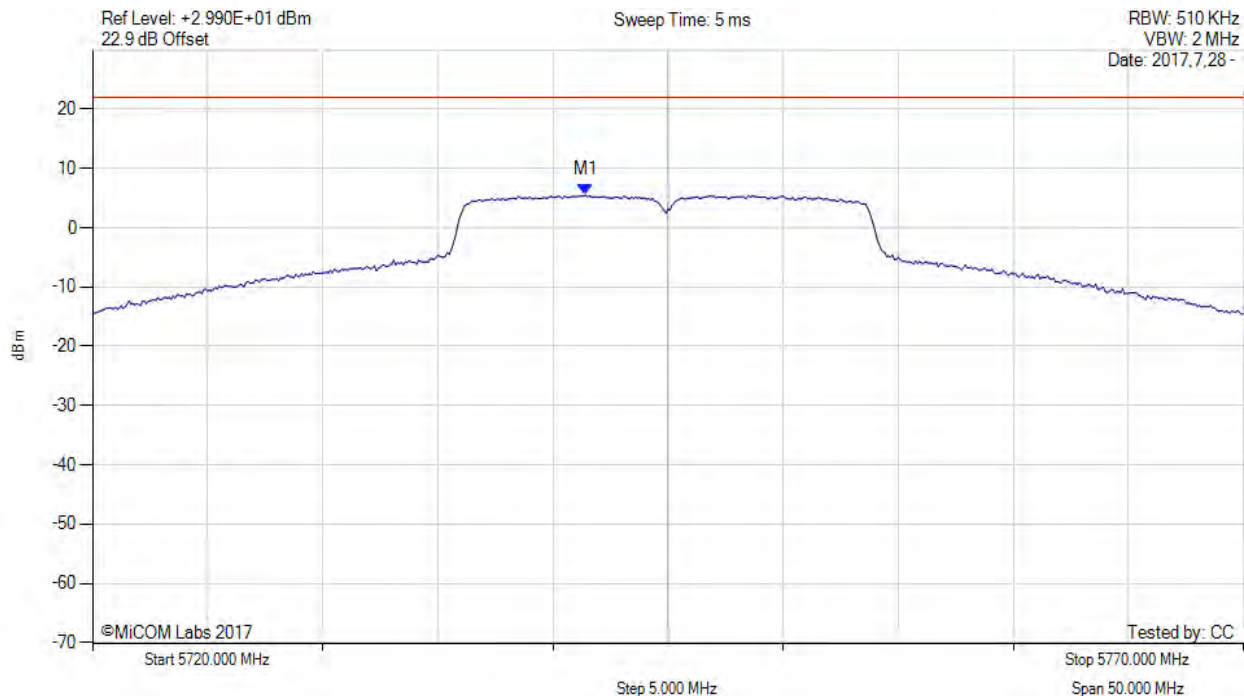


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5741.420 MHz : 5.497 dBm	Limit: ≤ 21.980 dBm

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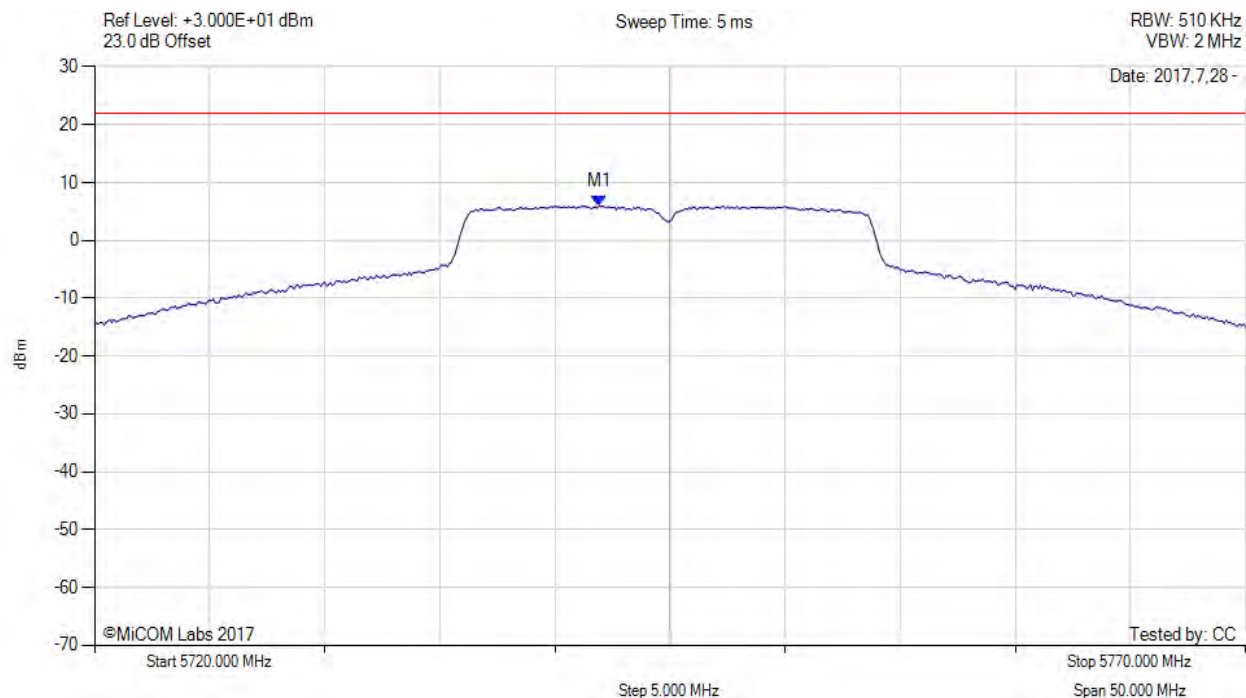


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5741.920 MHz : 5.935 dBm	Limit: ≤ 21.980 dBm

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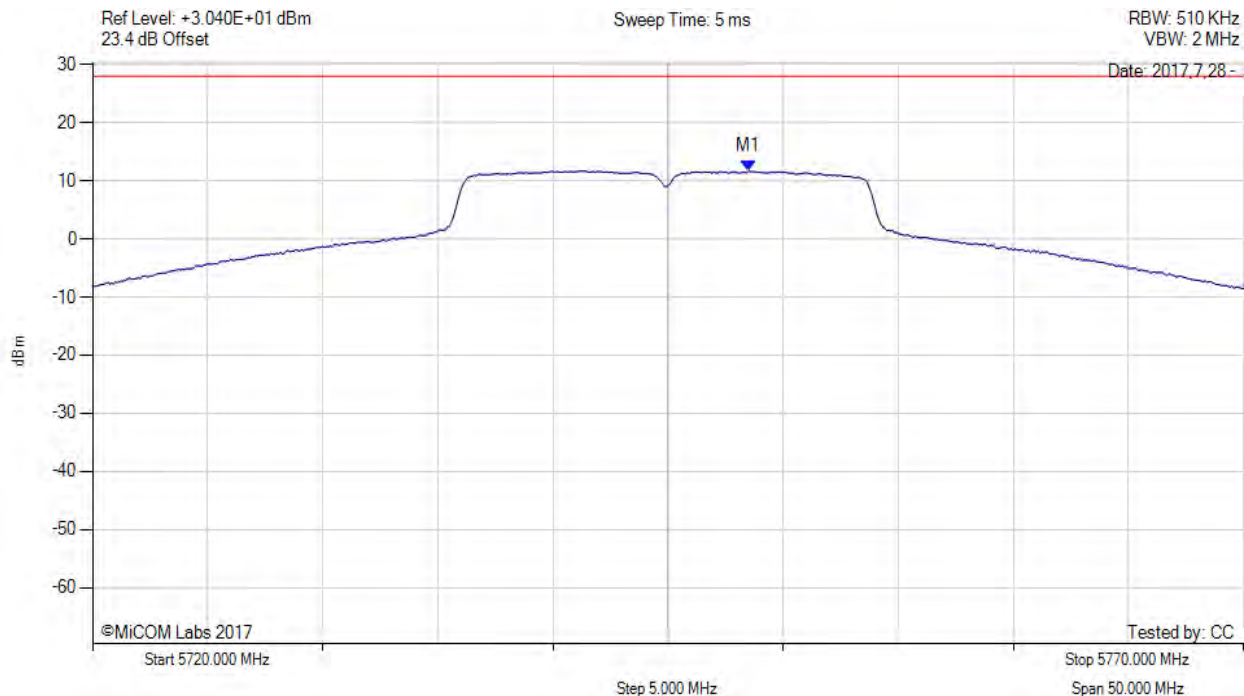


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5748.500 MHz : 11.700 dBm M1 + DCCF : 5748.500 MHz : 11.744 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 28.0 dBm Margin: -16.3 dB

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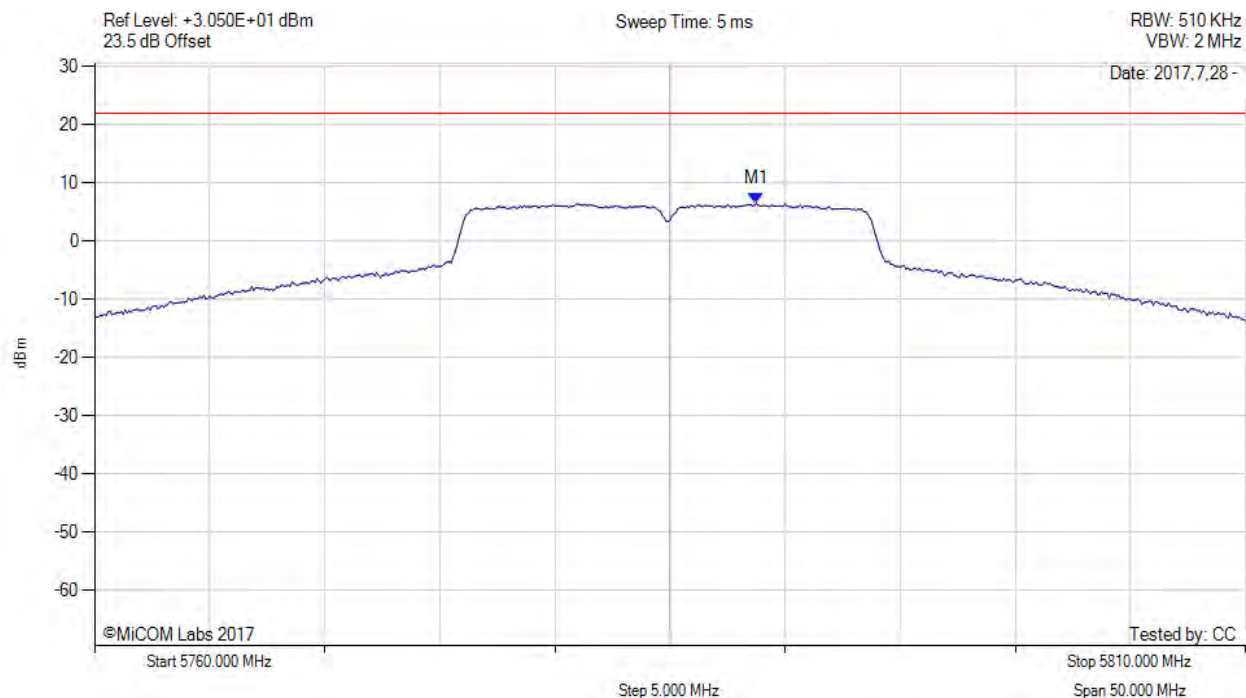


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5788.750 MHz : 6.435 dBm	Limit: ≤ 21.980 dBm

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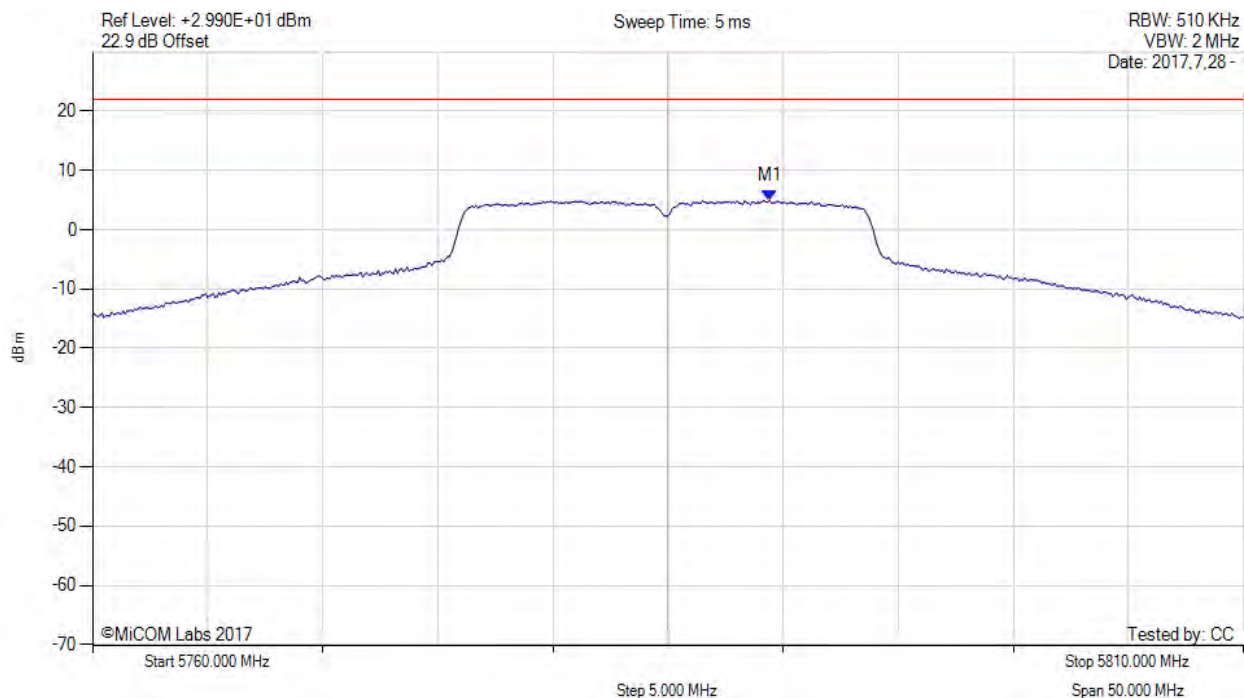


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5789.420 MHz : 4.899 dBm	Channel Frequency: 5785.00 MHz

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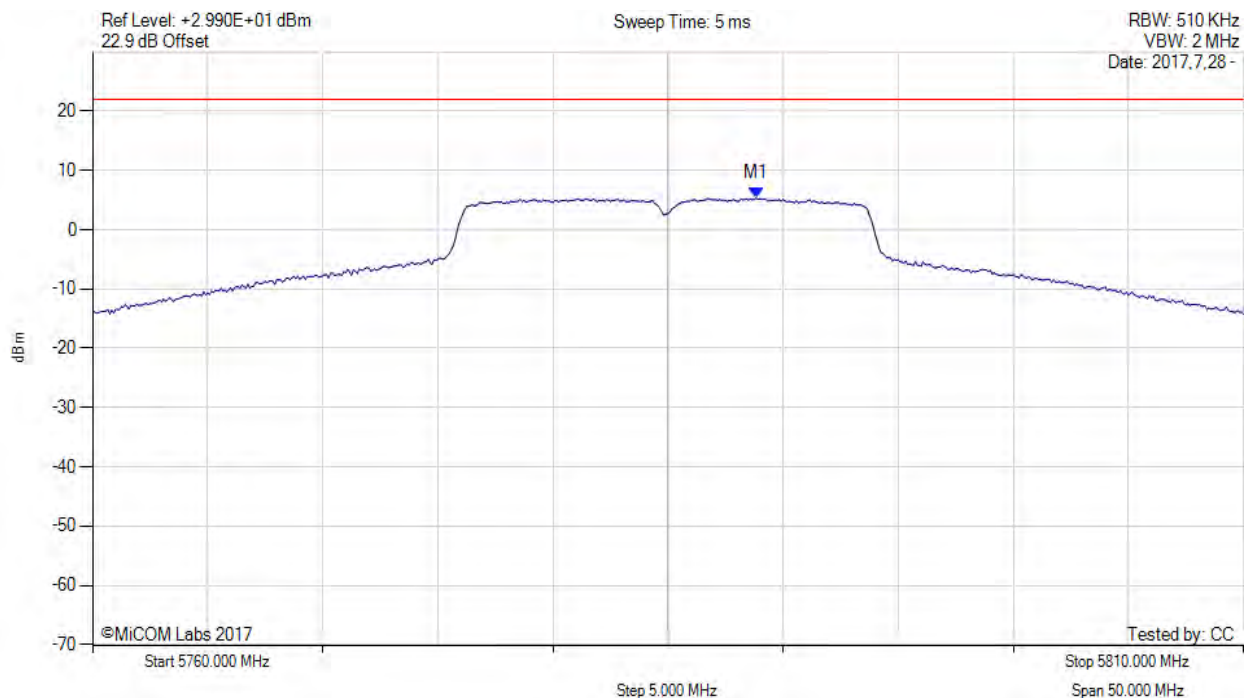


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5788.830 MHz : 5.315 dBm	Limit: ≤ 21.980 dBm

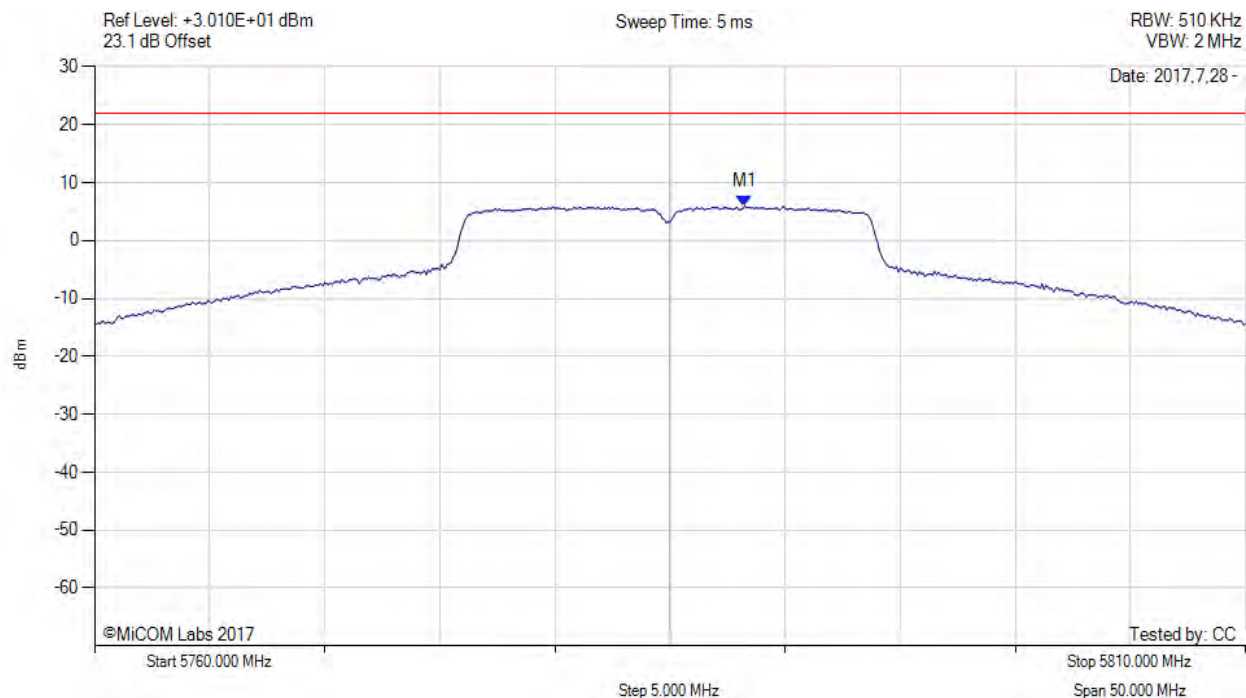
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5788.250 MHz : 5.951 dBm	Limit: ≤ 21.980 dBm

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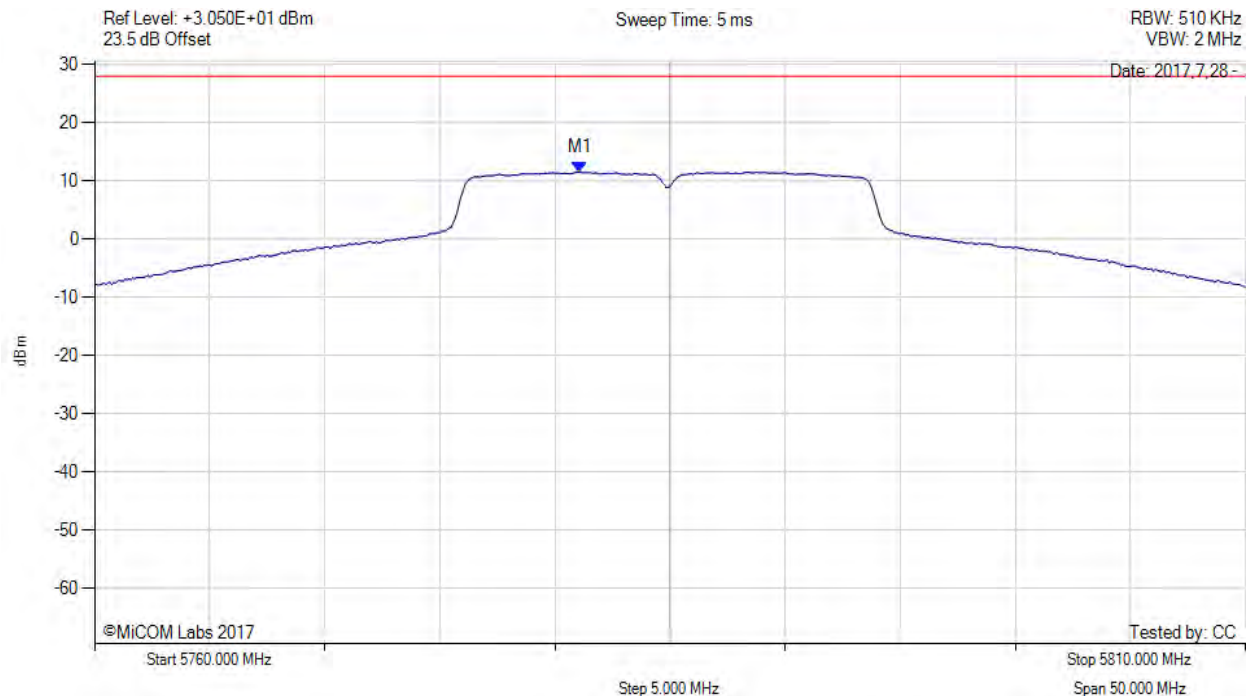


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5781.100 MHz : 11.535 dBm M1 + DCCF : 5781.100 MHz : 11.579 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 28.0 dBm Margin: -16.4 dB

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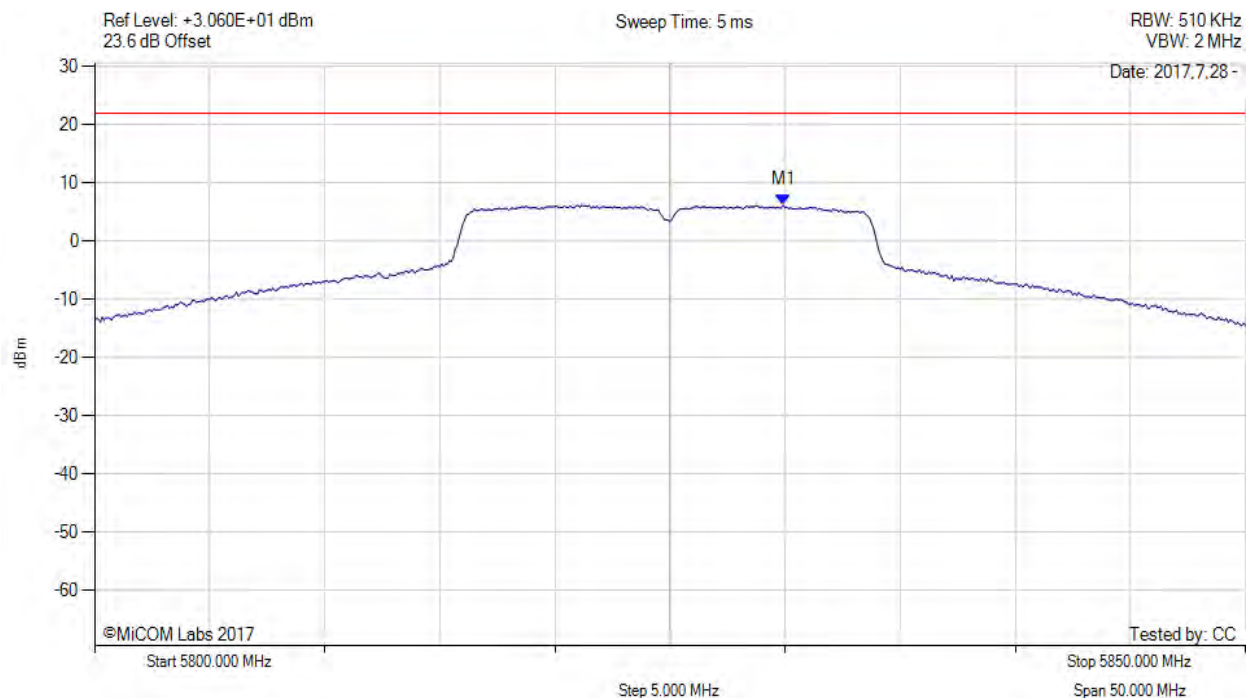


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5829.920 MHz : 6.176 dBm	Limit: ≤ 21.980 dBm

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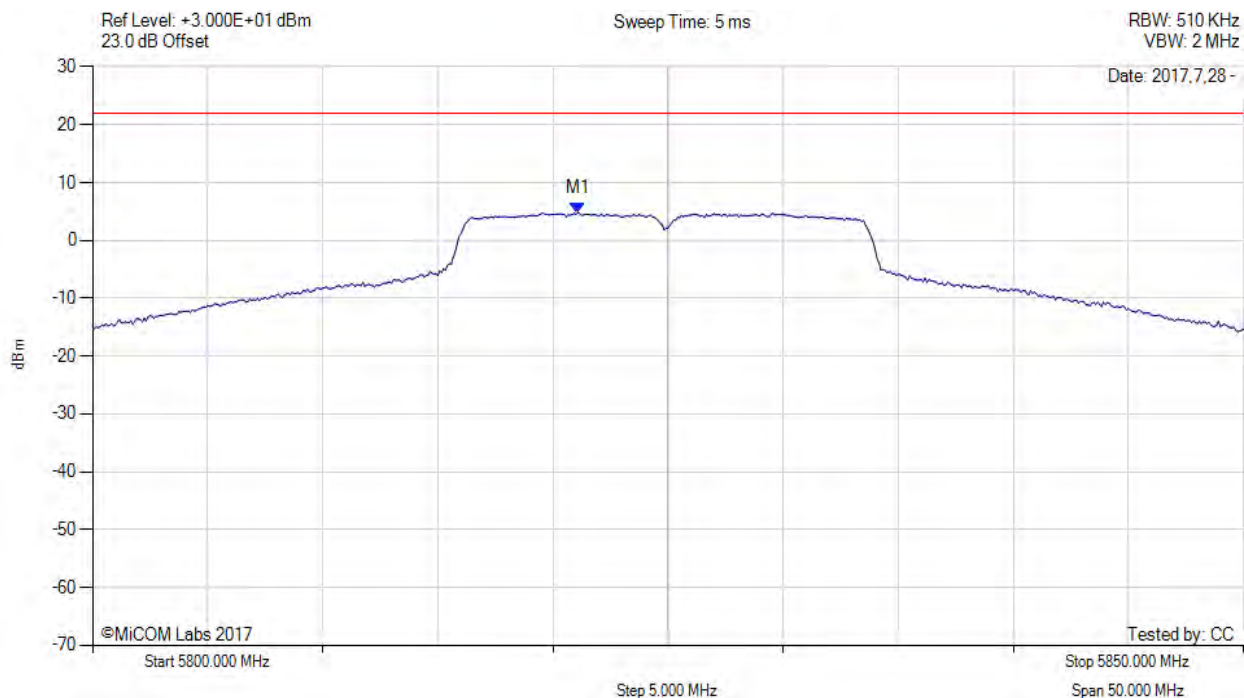


Title: Hewlett Packard Enterprise APIN0344 & APIN0345
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5821.080 MHz : 4.790 dBm	Limit: ≤ 21.980 dBm

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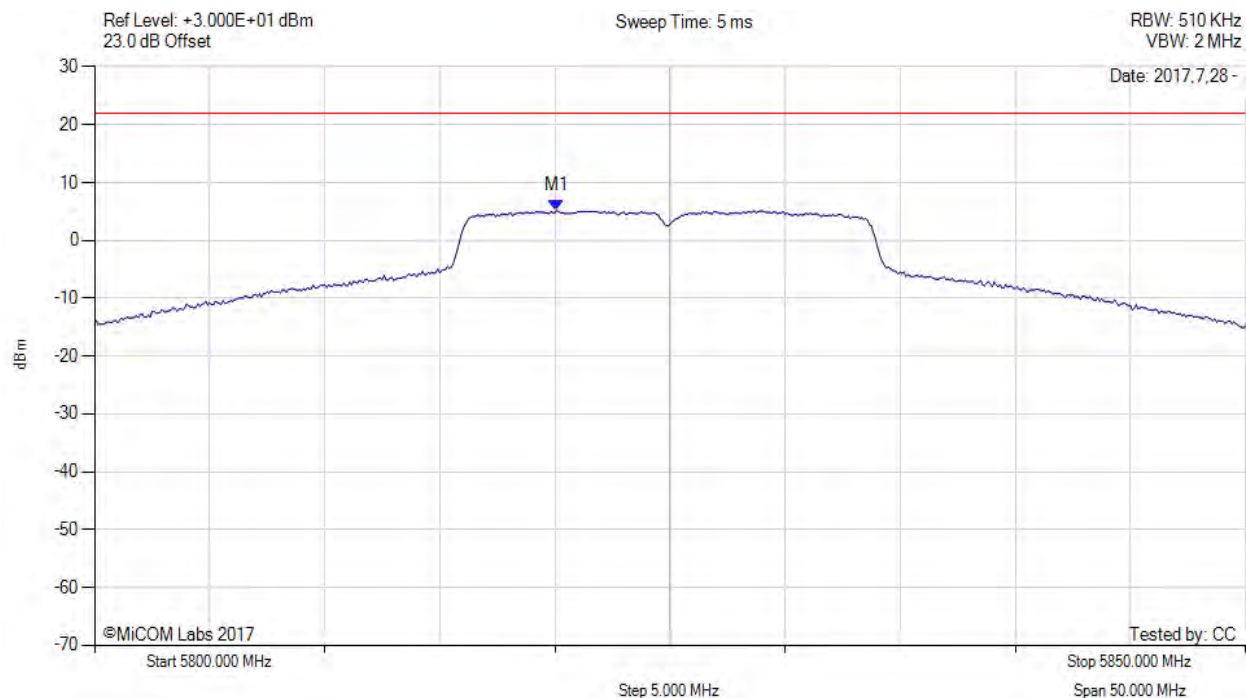


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5820.080 MHz : 5.160 dBm	Limit: ≤ 21.980 dBm

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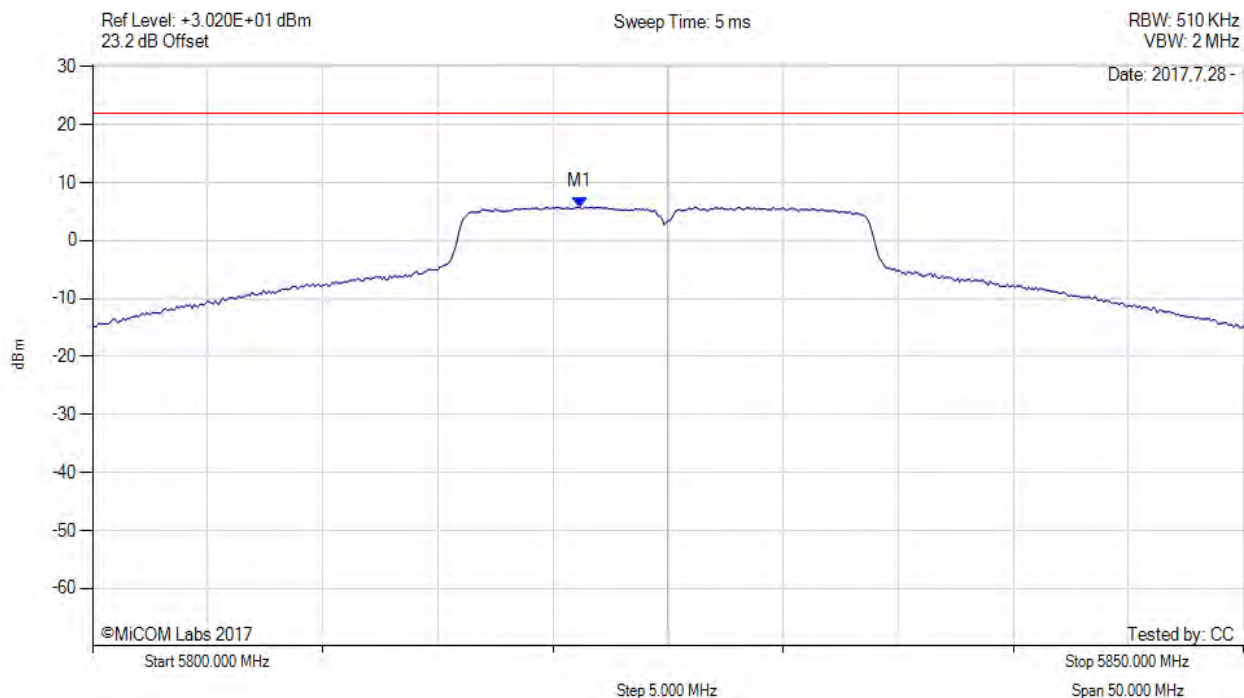


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5821.170 MHz : 5.784 dBm	Limit: ≤ 21.980 dBm

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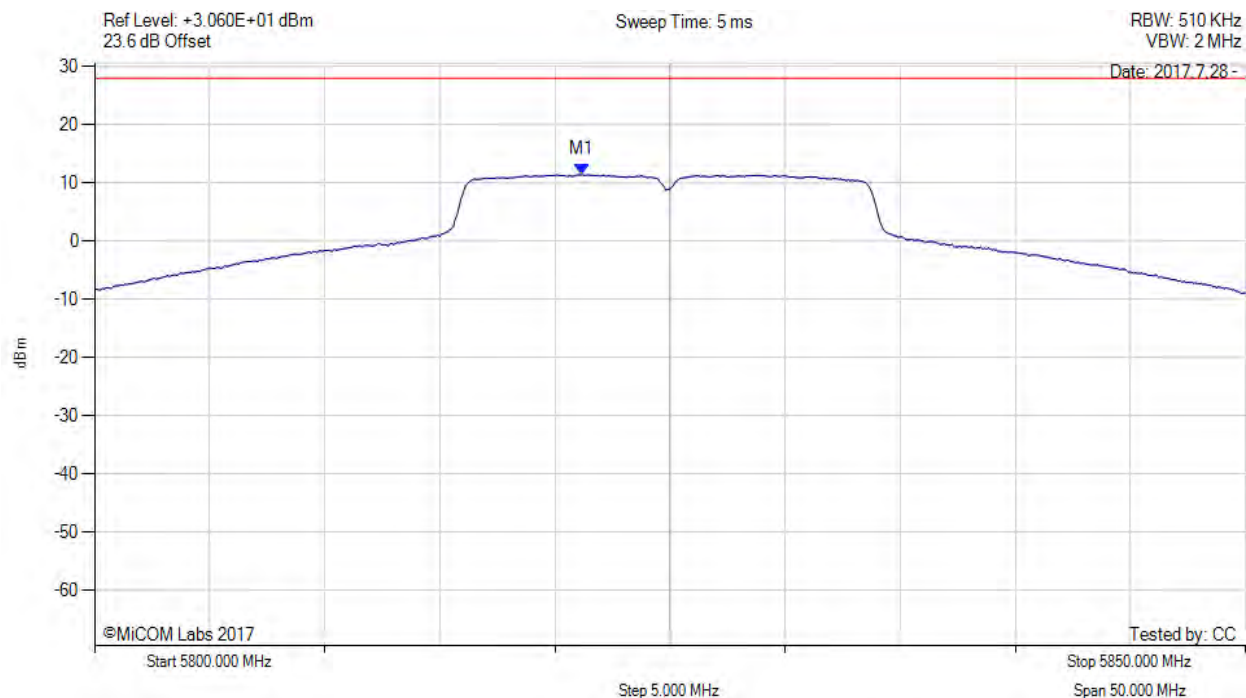


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5821.200 MHz : 11.464 dBm M1 + DCCF : 5821.200 MHz : 11.508 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 28.0 dBm Margin: -16.5 dB

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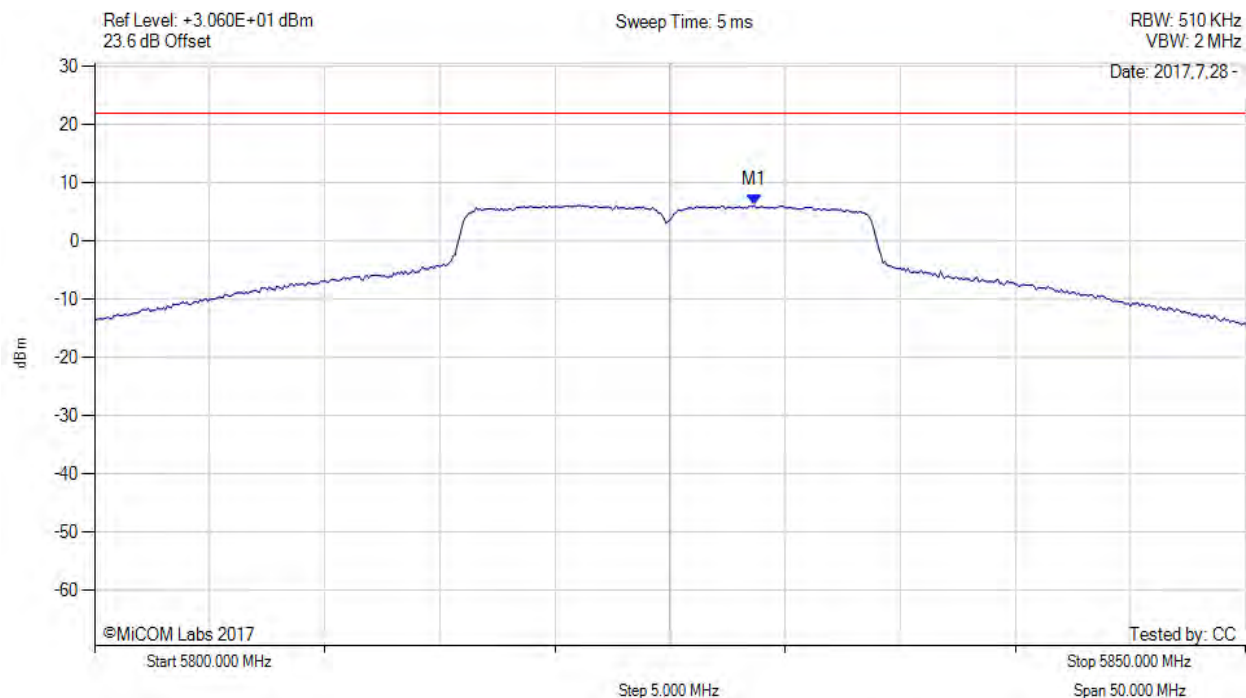


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5828.670 MHz : 6.155 dBm	Channel Frequency: 5825.00 MHz

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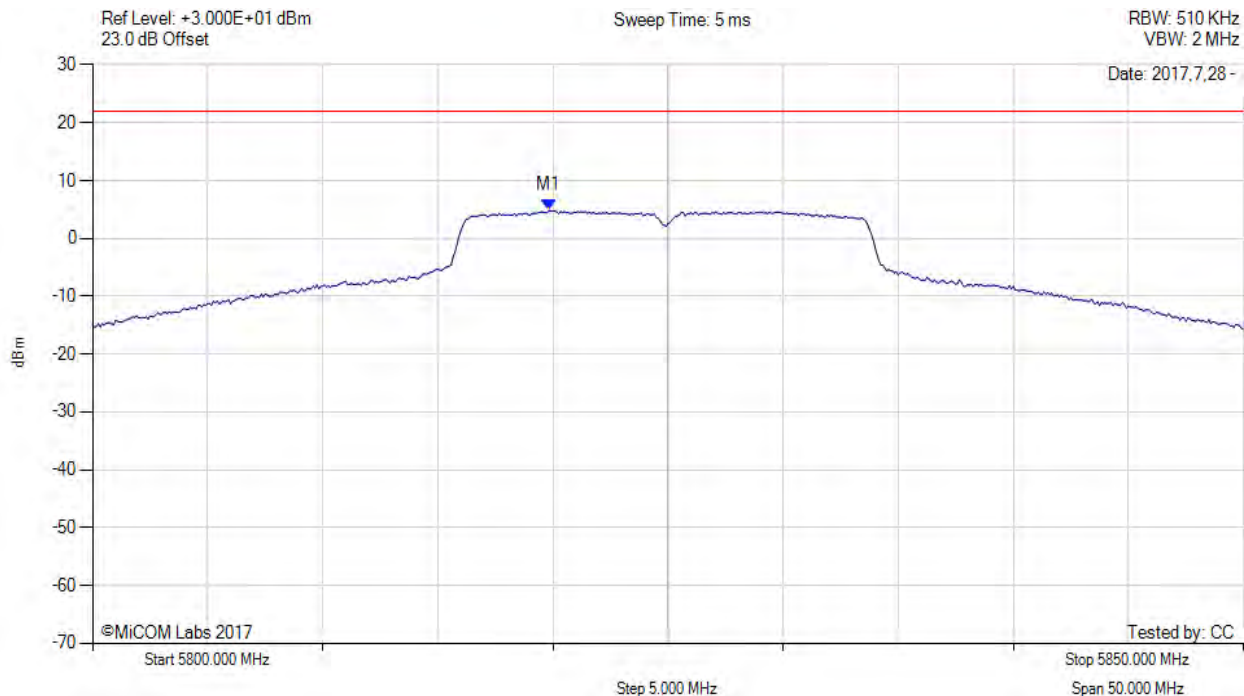


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5819.830 MHz : 4.839 dBm	Limit: ≤ 21.980 dBm

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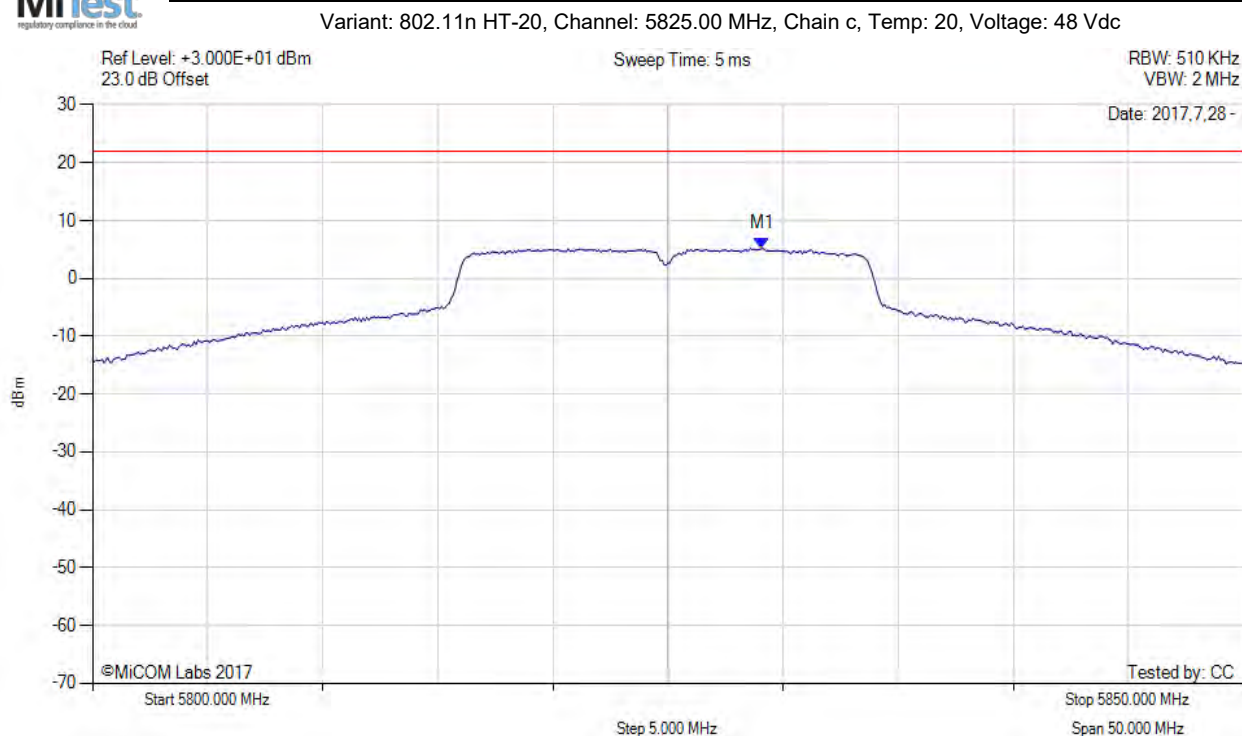
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POWER SPECTRAL DENSITY



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5829.080 MHz : 5.197 dBm	Limit: ≤ 21.980 dBm

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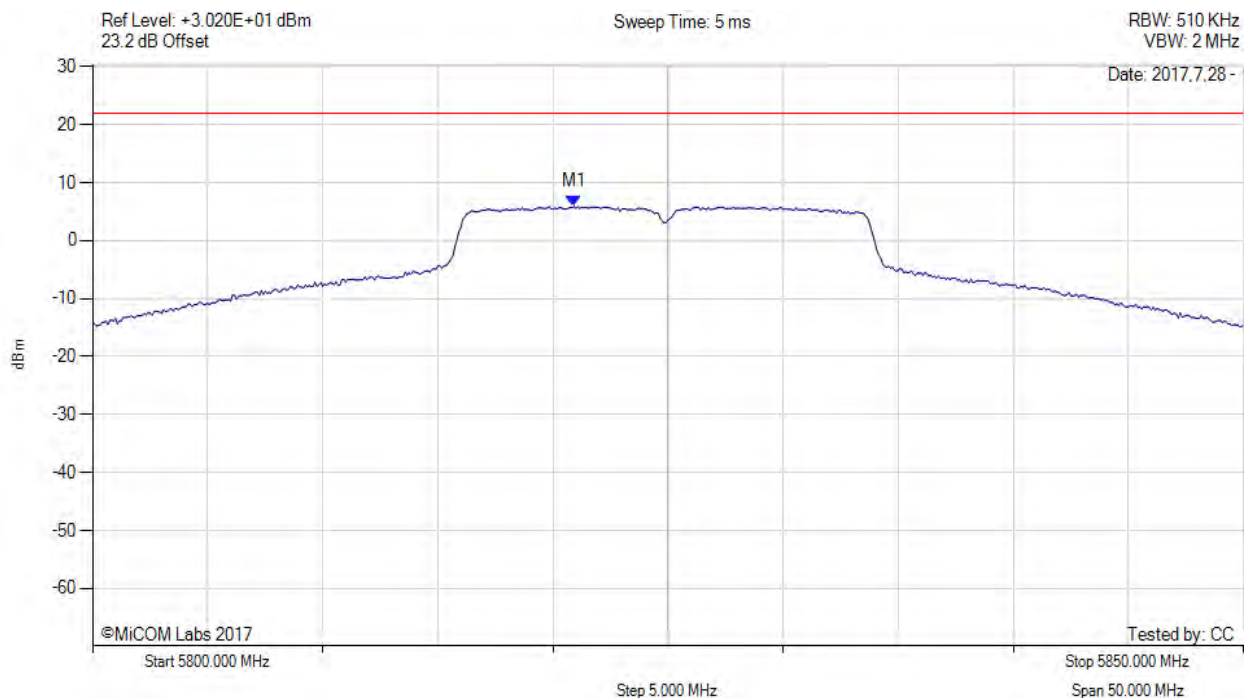


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5820.920 MHz : 5.914 dBm	Limit: ≤ 21.980 dBm

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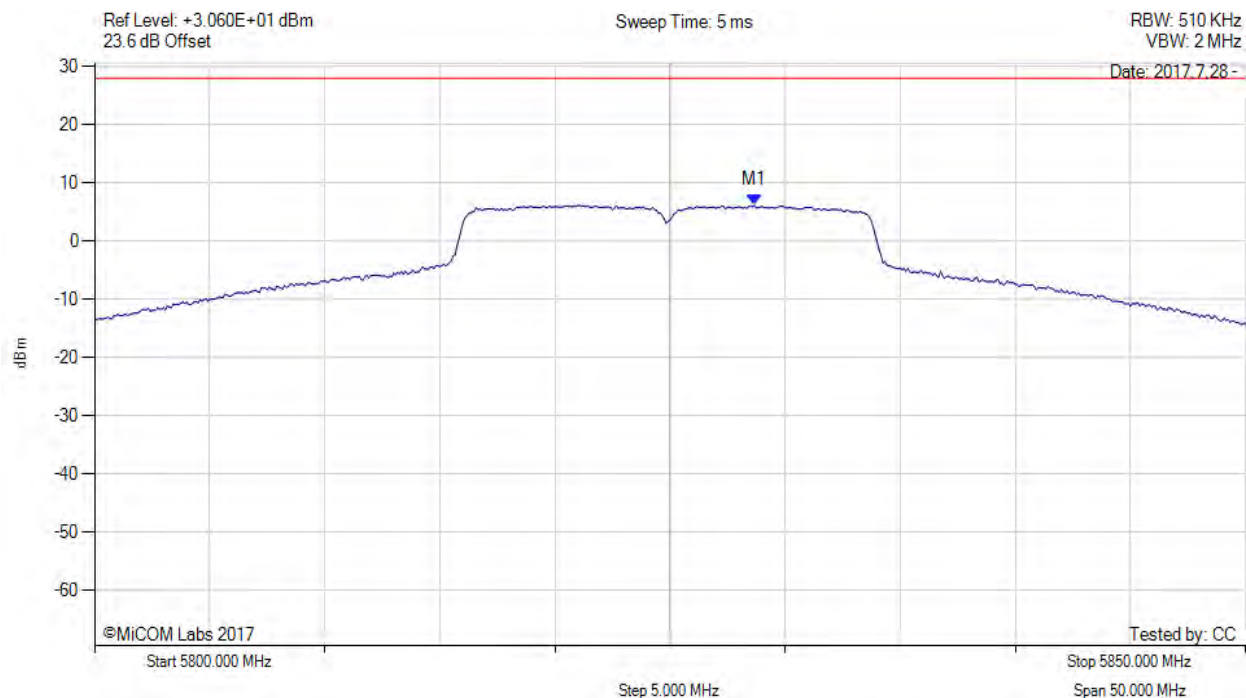


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5828.700 MHz : 6.155 dBm M1 + DCCF : 5828.700 MHz : 6.199 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 28.0 dBm Margin: -21.8 dB

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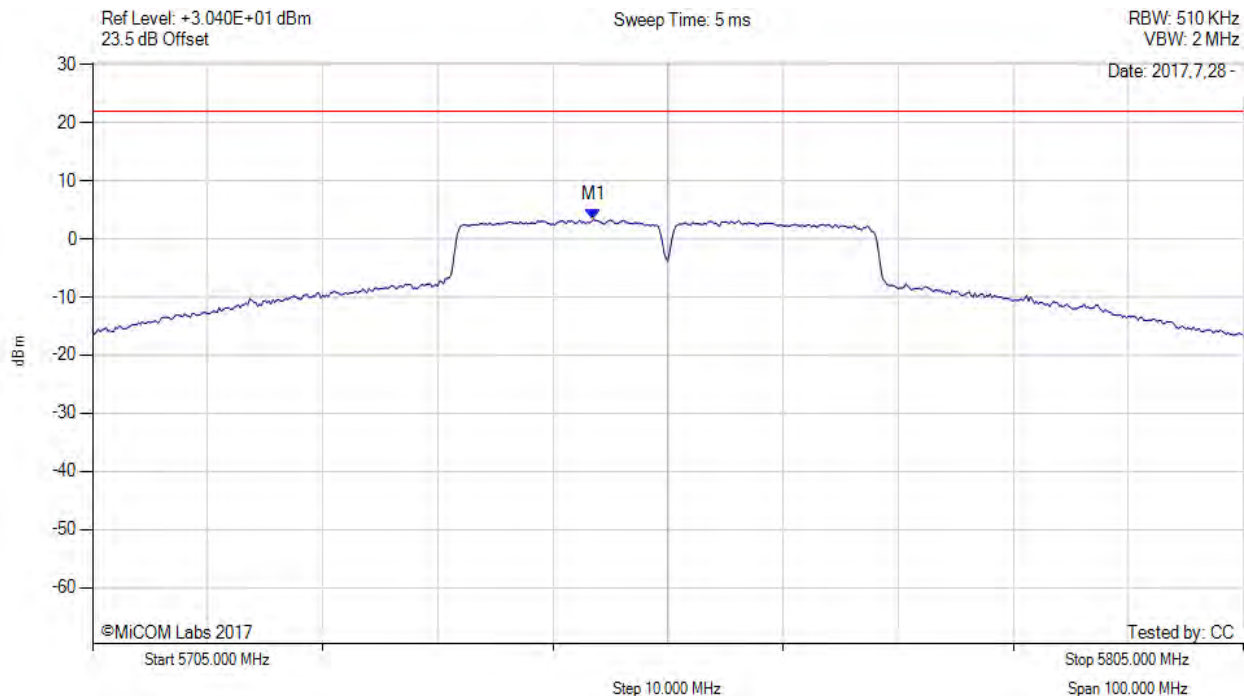


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5748.500 MHz : 3.312 dBm	Limit: ≤ 21.980 dBm

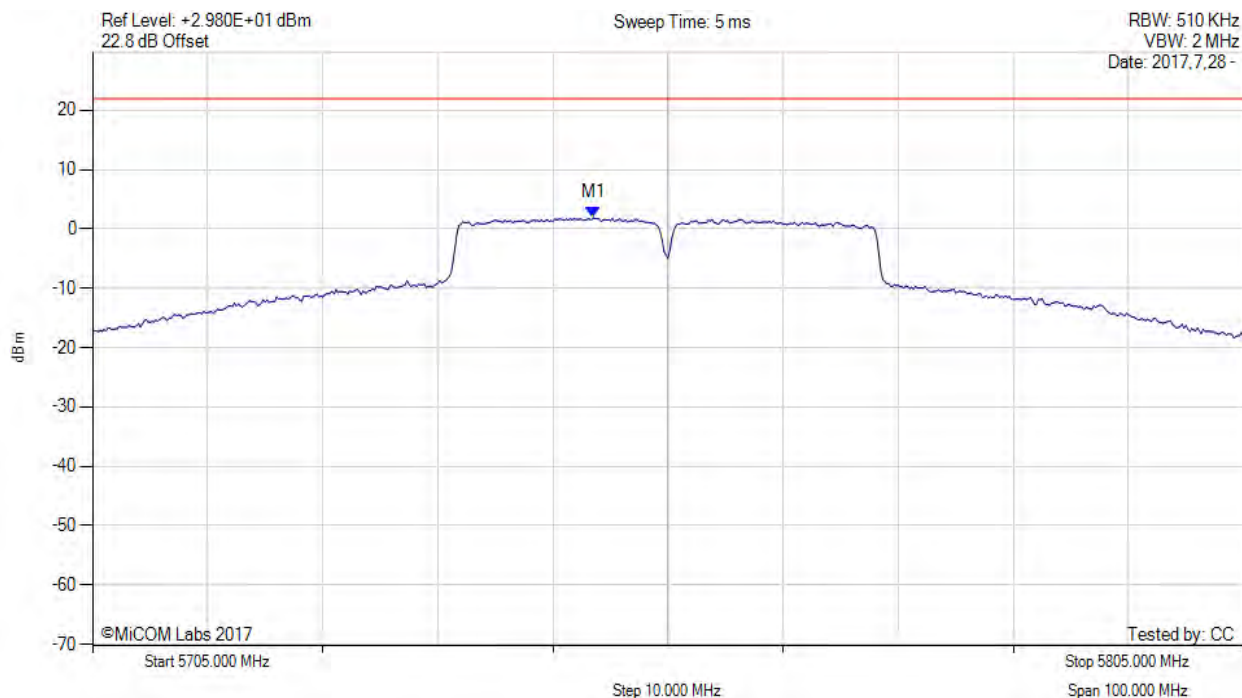
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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5748.500 MHz : 1.902 dBm	Limit: ≤ 21.980 dBm

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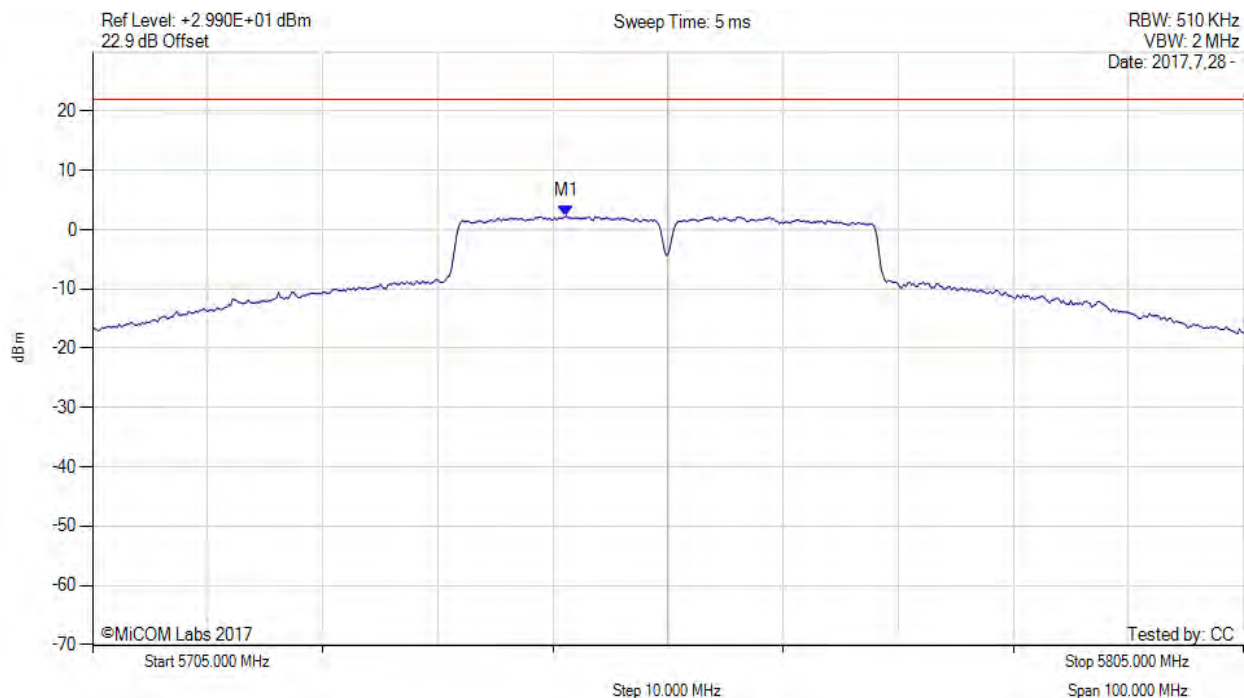


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5746.170 MHz : 2.272 dBm	Limit: ≤ 21.980 dBm

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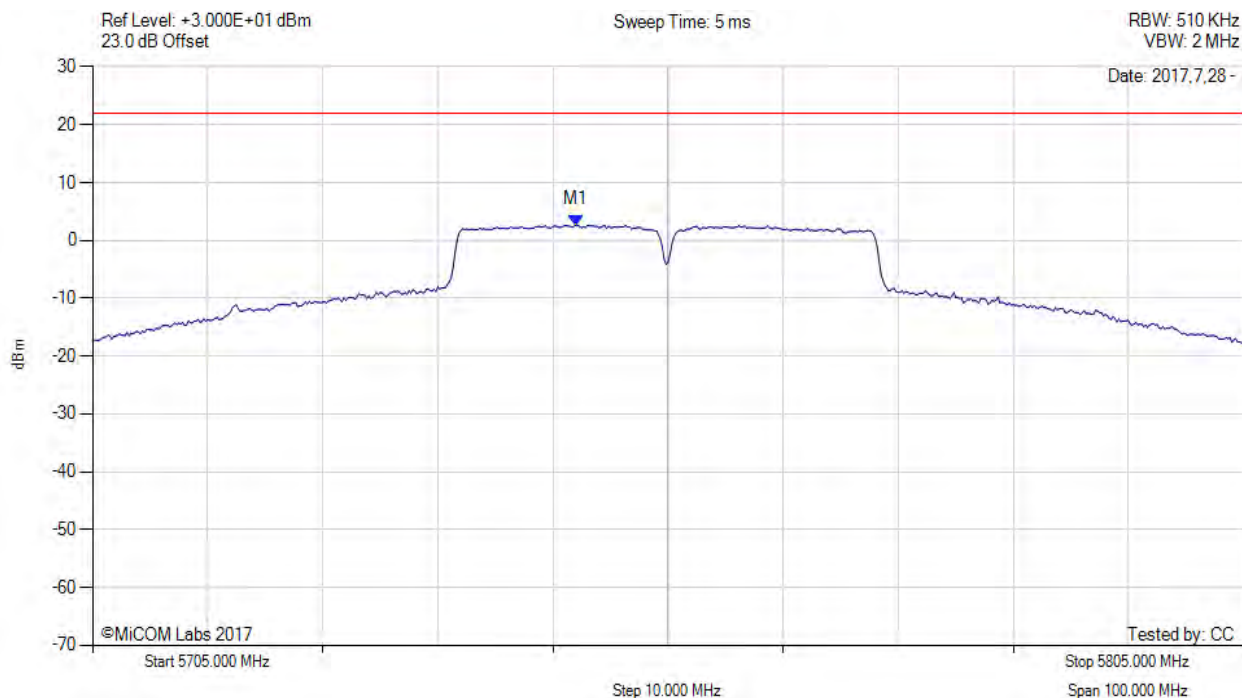


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5747.000 MHz : 2.648 dBm	Limit: ≤ 21.980 dBm

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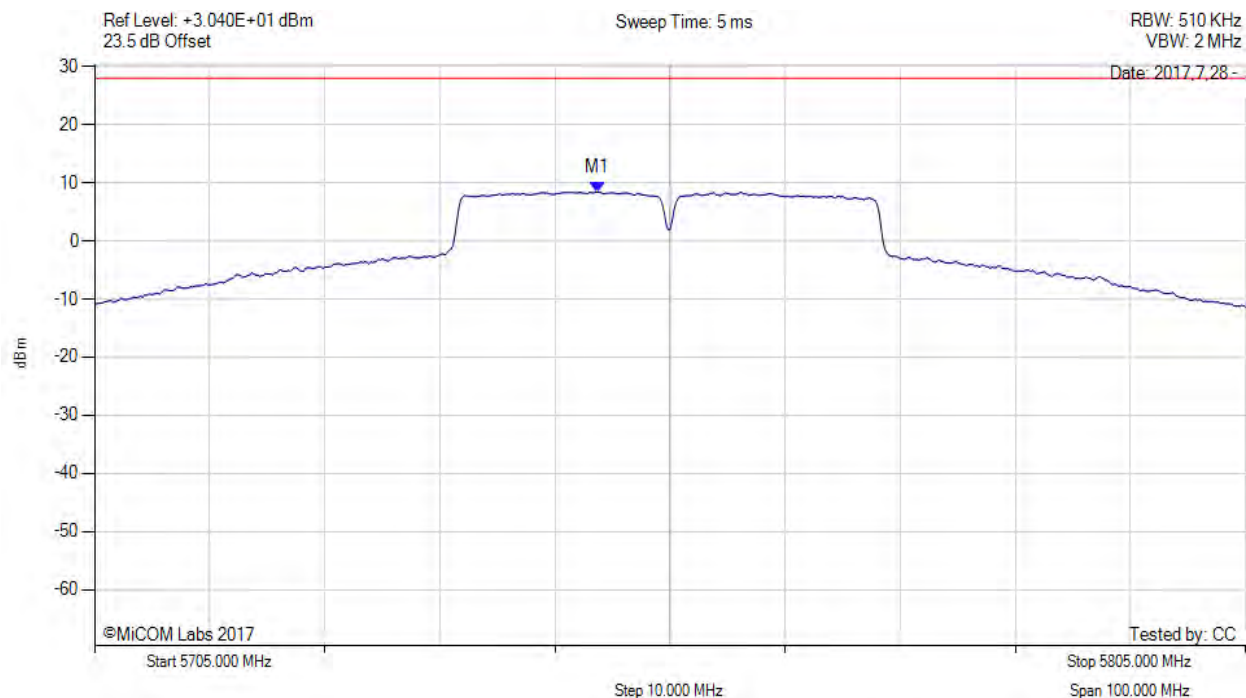


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5748.700 MHz : 8.427 dBm M1 + DCCF : 5748.700 MHz : 8.471 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 28.0 dBm Margin: -19.5 dB

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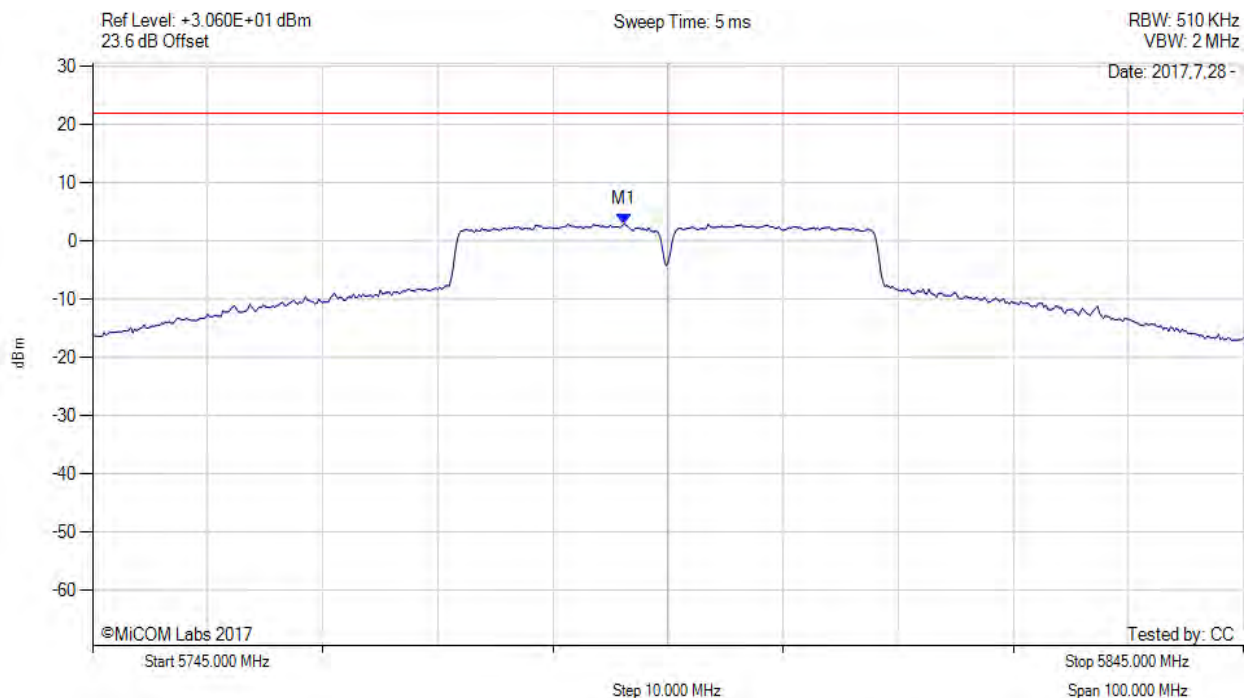


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5791.170 MHz : 2.968 dBm	Limit: ≤ 21.980 dBm

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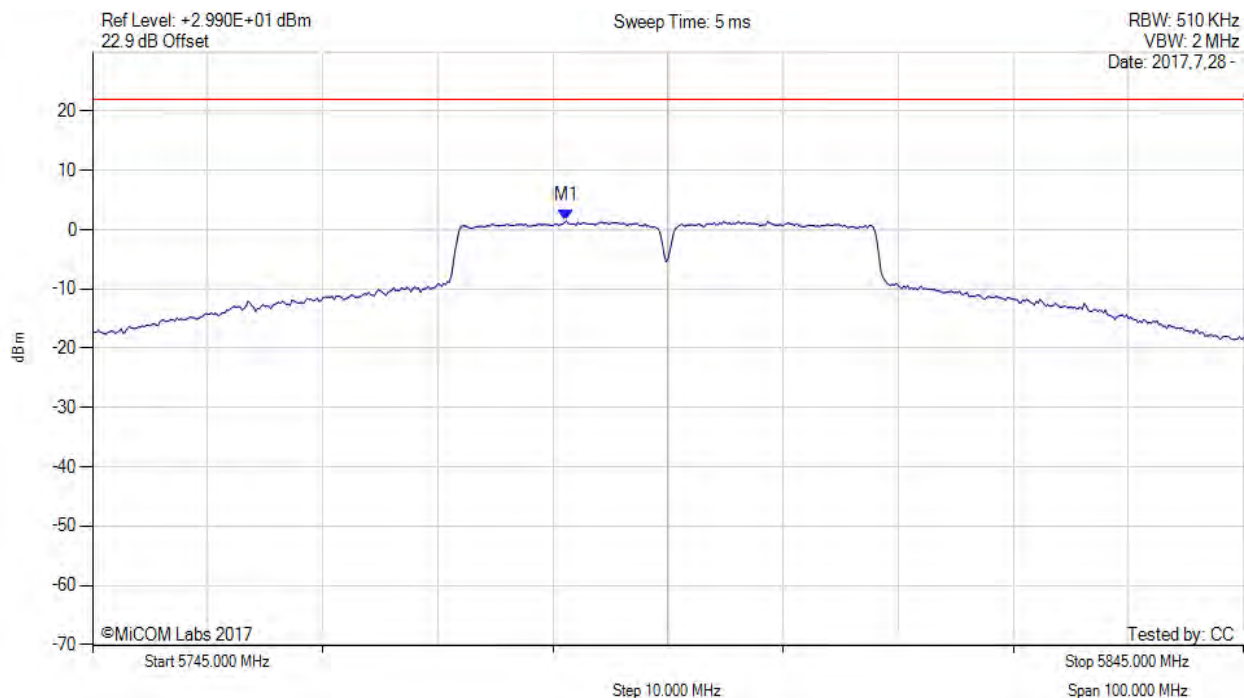


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5786.170 MHz : 1.498 dBm	Limit: ≤ 21.980 dBm

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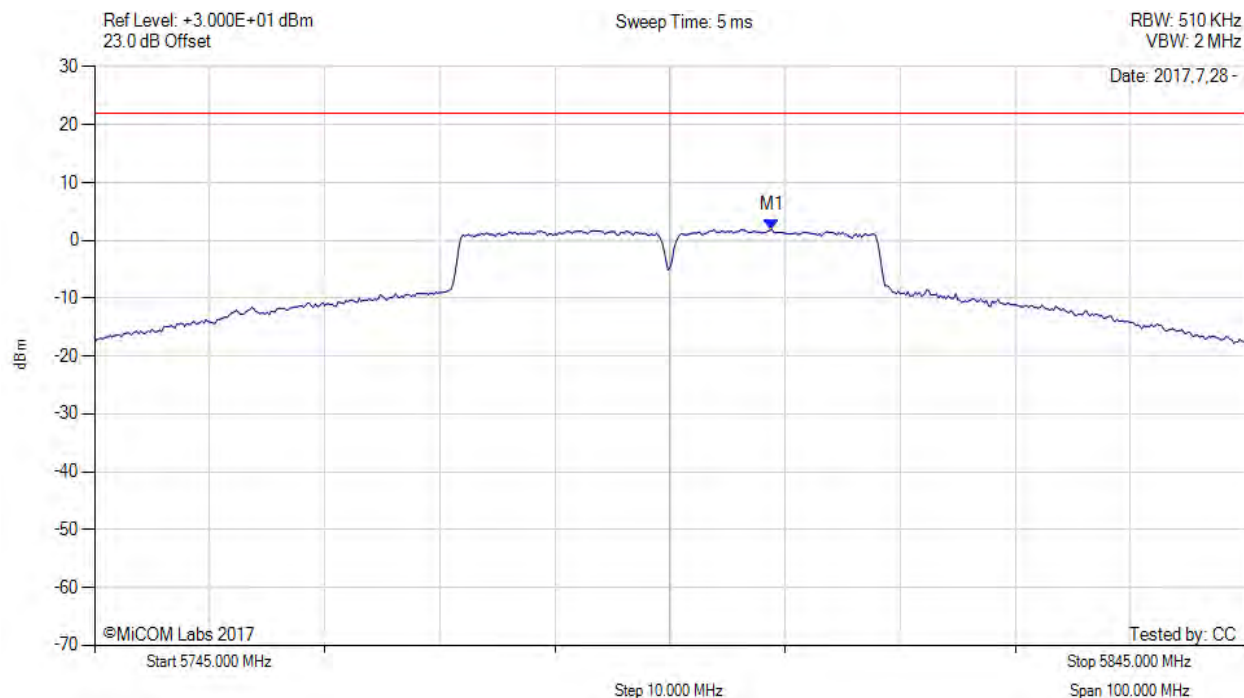


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5803.830 MHz : 1.882 dBm	Limit: ≤ 21.980 dBm

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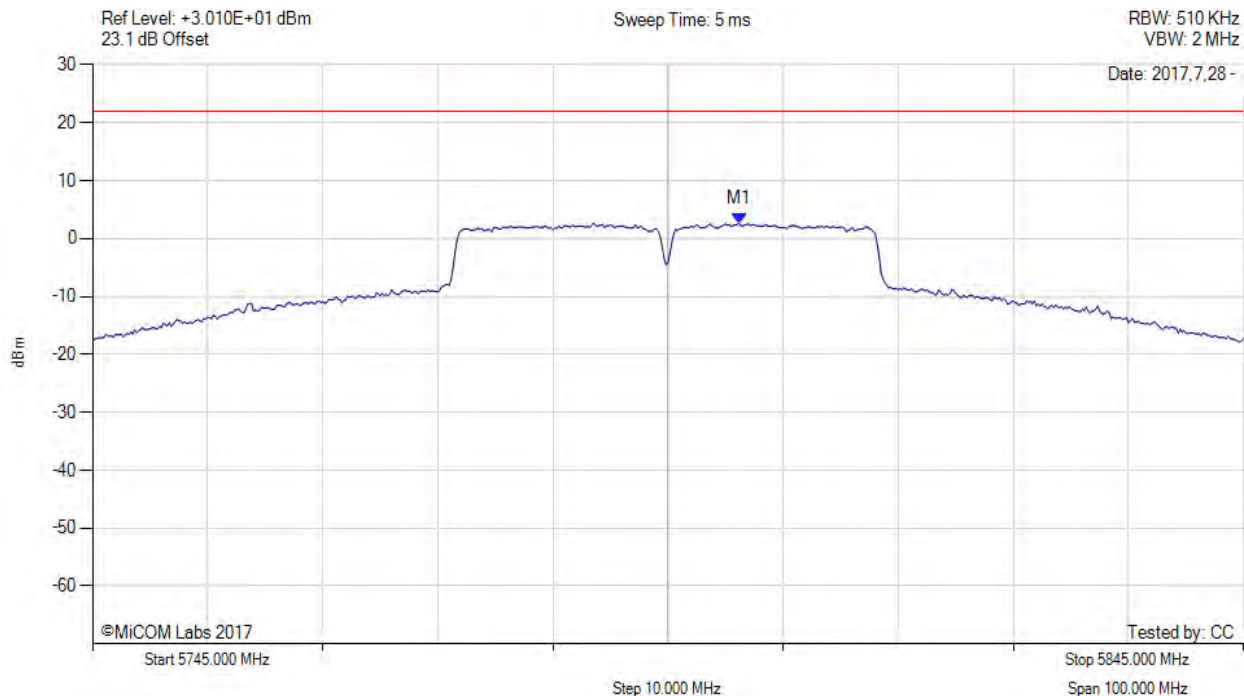


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5801.170 MHz : 2.638 dBm	Limit: ≤ 21.980 dBm

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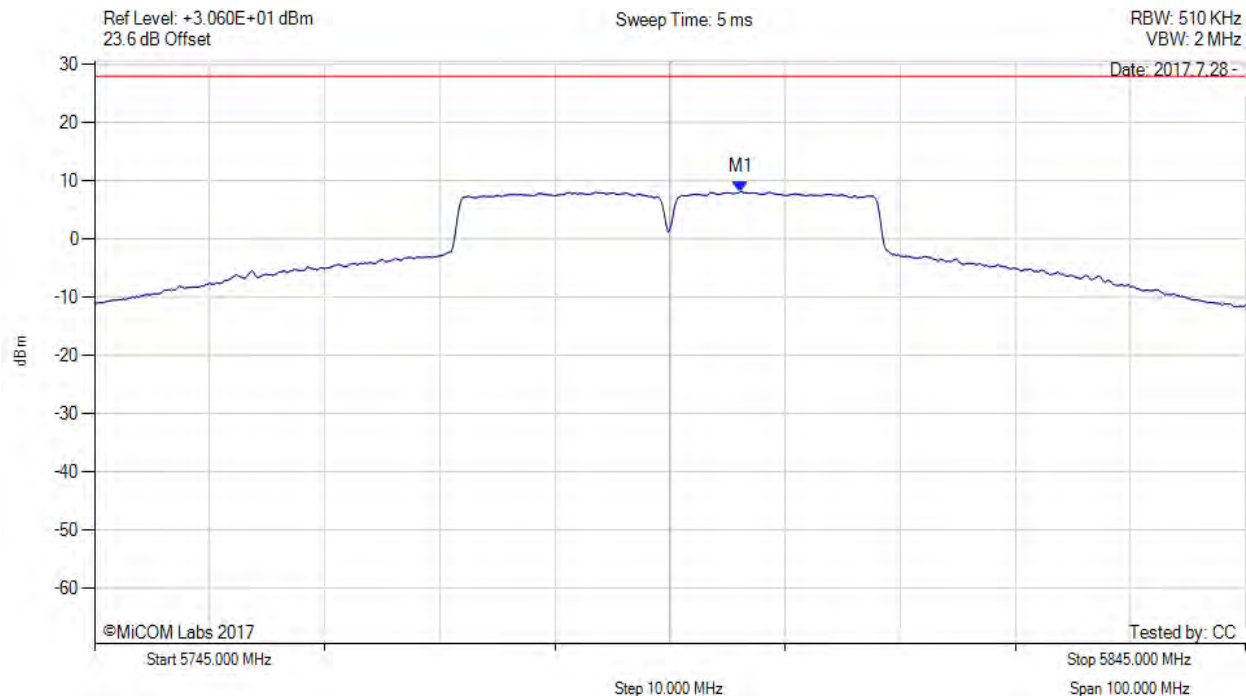


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POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = AVER Sweep Count = +100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5801.200 MHz : 8.203 dBm M1 + DCCF : 5801.200 MHz : 8.247 dBm Duty Cycle Correction Factor : +0.04 dB	Limit: ≤ 28.0 dBm Margin: -19.8 dB

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