# **TEST REPORT ADDENDUM - CONDUCTED**

**FROM** 



Test of: Mimosa Networks A5c, A5-14, A5-18

To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS Bands)

Test Report Serial No.: MIMO09-U5\_Conducted Addendum Rev A

Issue Date: 2<sup>nd</sup> August 2016

Master Document Number	Addendum Reports
	MIMO09-U5_Conducted Addendum
MIMOOO LIE Maatar	MIMO09-U5_Radiated Addendum
MIMO09-U5_Master	MIMO09-U2_(FCC Part15B & ICES-003) A5c
	MIMO09-U3_(FCC Part15B & ICES-003) A5-14, A5-18



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# 1. MEASUREMENT AND PRESENTATION OF TEST DATA

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

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

Test and report automation was performed by <u>MiTest</u>. <u>MiTest</u> is an automated test system developed by MiCOM Labs. <u>MiTest</u> is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.





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



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# 2. TEST SUMMARY

List of Measurements

Test Header	Result	Data Link
(a) Peak Transmit Power	Complies	View Data
(a) 26 dB & 99% Bandwidth	Complies	View Data
(a)(5) Power Spectral Density	Complies	View Data



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# 3. TEST RESULTS

## 3.1. 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)	5.407 (a) <b>Pressure (mBars):</b> 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 ( $\Sigma$ ) 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 [ $10*Log10 (10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})$ ]

G = Antenna Gain

Y = Beamforming Gain

x = Duty Cycle (average power measurements only)

## **Limits 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.
- (iv) For mobile and portable client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band



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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:	802.11ac 20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measur	Test Measurement Results									
Test Frequency	Measured	Measured Conducted Output Power + DCCF (+0.04 dB) (dBm)			Minimum 26 dB	Limit	Margin	EUT Power		
Trequency		Por	t(s)		Power	Bandwidth			Setting	
MHz	а	b	С	d	Σ Port(s) dBm	MHz	dBm	dB		
5165.0	21.84	22.22	22.70	22.70	28.40		30.00	-1.60	0x18	
5200.0	22.05	22.03	22.56	22.92	28.43		30.00	-1.57	0x18	
5240.0	22.35	22.63	22.79	23.42	28.84		30.00	-1.16	0x18	

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



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### **Equipment Configuration for Peak Transmit Power**

Variant:	802.11ac 40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measur	Test Measurement Results								
Test Frequency	Measured Conducted Output Power + DCCF (+0.04 dB) (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power
MHz	а	b	С	d	Σ Port(s) dBm	MHz	dBm	dB	Setting
5175.0	22.90	23.15	23.29	23.35	29.20		30.00	-0.80	0x17
5230.0	23.26	23.53	23.70	24.00	29.66		30.00	-0.34	0x17

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



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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):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measur	Test Measurement Results								
Test Frequency Measured Conducted Output Power + DCCF (+0.04 dB) (dBm)  Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power	
MHz	а	b	С	d	Σ Port(s) dBm	MHz	dBm	dB	Cetting
5210.0	22.54	22.37	22.94	23.00	28.74		30.00	-1.26	0x18

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



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### **Equipment Configuration for Peak Transmit Power**

Variant:	802.11ac 20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measurement Results									
Test	Measured	Measured Conducted Output Power + DCCF (+0.04 dB) (dBm)			Calculated Minimum Total 26 dB	Limit	Margin	FUT Dawer	
Frequency		Por	t(s)		Power	Bandwidth		_	EUT Power Setting
MHz	а	b	С	d	Σ Port(s) dBm	MHz	dBm	dB	
5745.0	22.23	22.29	23.56	21.99	28.59		30.00	-1.41	0x18
5785.0	23.06	22.56	22.23	22.12	28.53		30.00	-1.47	0x17
5825.0	22.94	23.18	22.61	24.32	29.34		30.00	-0.66	0x17

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



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## **Equipment Configuration for Peak Transmit Power**

Variant:	802.11ac 40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measurement Results									
Test	Measured	Measured Conducted Output Power + DCCF (+0.04 dB) (dBm)				culated Minimum otal 26 dB	Limit	Margin	FUT D
Frequency		Por	t(s)		Power	Bandwidth			EUT Power Setting
MHz	а	b	С	d	Σ Port(s) dBm	MHz	dBm	dB	Journa
5755.0	23.13	23.67	23.88	23.49	29.58		30.00	-0.42	0x17
5795.0	22.86	23.71	24.01	23.97	29.69		30.00	-0.31	0x17

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



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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):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measur	Test Measurement Results											
Test Frequency	Measured	Measured Conducted Output Power + DCCF (+0.04 dB) (dBm)				Total 26 dB Limit			Total 26 dB Limit Margin			EUT Power
Trequency		Por	t(s)		Power	Bandwidth			Setting			
MHz	а	b	C	d	Σ Port(s) dBm	MHz	dBm	dB	g			
5775.0	22.77	22.25	22.17	21.63	28.25		30.00	-1.75	0x17			

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



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# 3.2. 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	32 - 45				
Standard Section(s):	15.407 (a) <b>Pressure (mBars):</b> 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:	802.11ac 20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test	Me	asured 26 dB	Bandwidth (M	Hz)	26 dB Band	width (MHz)	
Frequency		Poi	rt(s)	26 dB Bandwidth (MHz)			
MHz	а	b	С	d	Highest	Lowest	
5165.0	26.253	<u>25.651</u>	<u>29.459</u>	<u>32.665</u>	32.665	25.651	
5200.0	<u>25.451</u>	<u>25.651</u>	<u>25.150</u>	<u>26.353</u>	26.353	25.150	
5240.0	24.248	<u>25.651</u>	24.449	<u>25.050</u>	25.651	24.248	

Test	M	easured 99% E	Bandwidth (MF	lz)	99% Randy	vidth (MHz)	
Frequency		Por	rt(s)		3370 Baria	vidir (Wiriz)	
MHz	а	b	С	d	Highest	Lowest	
5165.0	<u>18.236</u>	<u>18.136</u>	<u>18.236</u>	<u>18.236</u>	18.236	18.136	
5200.0	<u>18.136</u>	<u>18.136</u>	<u>18.136</u>	<u>18.136</u>	18.136	18.136	
5240.0	<u>18.036</u>	<u>18.136</u>	<u>18.136</u>	<u>18.136</u>	18.136	18.036	

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

Variant:	802.11ac 40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test	Measured 26 dB Bandwidth (MHz)				26 dB Bond	OO dD Doordoddk (MILE)		
Frequency		Poi	rt(s)	s)		26 dB Bandwidth (MHz)		
MHz	а	b	С	d	Highest	Lowest		
5175.0	<u>72.345</u>	<u>81.964</u>	74.349	<u>80.361</u>	81.964	72.345		
5230.0	<u>72.144</u>	<u>74.950</u>	<u>72.144</u>	<u>68.938</u>	74.950	68.938		

Test Frequency	Mo	Measured 99% Bandwidth (MHz) Port(s)			99% Bandwidth (MHz)		
MHz	а	b	С	d	Highest	Lowest	
5175.0	<u>37.475</u>	<u>37.675</u>	<u>37.675</u>	<u>37.275</u>	37.675	37.275	
5230.0	<u>37.275</u>	<u>37.475</u>	<u>37.275</u>	37.074	37.475	37.074	

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

Variant:	802.11ac 80	Duty Cycle (%):	99.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measure	ment Results						
Test	Measured 26 dB Bandwidth (MHz)				26 dB Bond	width (MILL=)	
Frequency	Port(s)			26 GB Band	width (MHz)		
MHz	а	b	С	d	Highest	Lowest	
5210.0	113.427	<u>151.503</u>	116.232	<u>153.908</u>	153.908	113.427	
Test	M	easured 99% E	Bandwidth (MF	lz)	00% Bandu	vidth (MU=)	
Frequency	Port(s)				99% Bandy	vidth (MHz)	
MHz	а	b	С	d	Highest	Lowest	
5210.0	<u>76.954</u>	<u>76.553</u>	<u>76.954</u>	<u>76.954</u>	76.954	76.553	

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

Variant:	802.11ac 20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test	Me	asured 26 dB	Bandwidth (M	26 dP Pand	00 dB B == 4=4d4 (MU=)			
Frequency		Port(s)	26 dB Bandwidth (MHz)					
MHz	а	b	С	d	Highest	Lowest		
5745.0	<u>42.786</u>	<u>38.076</u>	43.988	<u>39.679</u>	43.988	38.076		
5785.0	42.886	42.986	<u>49.800</u>	46.192	49.800	42.886		
5825.0	<u>37.976</u>	42.786	<u>45.391</u>	<u>45.491</u>	45.491	37.976		

Test	Me	easured 99% E	Bandwidth (MF	lz)	99% Bandwidth (MHz)		
Frequency		Por	t(s)				
MHz	а	b	С	d	Highest Lowest		
5745.0	23.848	20.842	<u>28.858</u>	20.942	28.858	20.842	
5785.0	<u>25.451</u>	<u>25.351</u>	<u>34.068</u>	<u>31.663</u>	34.068	25.351	
5825.0	<u>20.441</u>	<u>21.944</u>	<u>31.062</u>	<u>30.361</u>	31.062	20.441	

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

Variant:	802.11ac 40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test	Measured 26 dB Bandwidth (MHz)				26 dB Bond	26 dB Bandwidth (MHz)		
Frequency		Port(s)		20 ub band	widti (MHZ)			
MHz	а	b	С	d	Highest	Lowest		
5755.0	99.399	<u>97.595</u>	98.397	<u>81.162</u>	99.399	81.162		
5795.0	<u>95.190</u>	96.393	<u>95.591</u>	<u>96.593</u>	96.593	95.190		

Test Frequency	Measured 99% Bandwidth (MHz)				99% Bandwidth (MHz)		
•		Port(s)		T			
MHz	а	b	С	d	Highest	Lowest	
5755.0	<u>63.327</u>	<u>61.523</u>	<u>62.325</u>	<u>60.120</u>	63.327	60.120	
5795.0	<u>51.303</u>	<u>53.707</u>	<u>58.317</u>	<u>61.323</u>	61.323	51.303	

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

Variant:	802.11ac 80	Duty Cycle (%):	99.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measure	Test Measurement Results								
Test	Me	asured 26 dB	Bandwidth (M	Hz)	26 dB Bond	26 dB Bandwidth (MHz)			
Frequency		Port(s)			26 GB Band	wiath (MHZ)			
MHz	а	b	С	d	Highest	Lowest			
5775.0	<u>95.992</u>	<u>190.381</u>	<u>172.745</u>	<u>175.952</u>	190.381	95.992			
Test	M	Measured 99% Bandwidth (MHz)				vidth (MU=)			
Frequency		Port(s)			99% Bandv	viain (IVIAZ)			
MHz	а	b	С	d	Highest	Lowest			
5775.0	<u>113.026</u>	<u>89.780</u>	86.974	<u>81.363</u>	113.026	81.363			

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



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## 3.3. 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 (å) 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 [ $10*Log10 (10^{a/10} + 10^{b/10} + 10^{c/10} + 10^{d/10})$ ] 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.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the



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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:	802.11ac 20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measurem	nent Results						
Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Summation Peak Marker + DCCF (+0.04 dB)	Limit	Margin
MHz	а	b	С	d	dBm/MHz	dBm/MHz	dB
5165.0	<u>9.796</u>	<u>9.860</u>	<u>10.368</u>	<u>10.105</u>	<u>16.087</u>	17.0	-0.9
5200.0	<u>9.566</u>	10.058	<u>10.235</u>	10.362	<u>16.034</u>	17.0	-1.0
5240.0	<u>9.816</u>	<u>10.104</u>	<u>10.283</u>	<u>10.949</u>	<u>16.230</u>	17.0	-0.8

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

DCCF - Duty Cycle Correction Factor



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### **Equipment Configuration for Power Spectral Density**

Variant:	802.11ac 40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measurem	Test Measurement Results								
Measured Power Spectral Density				Summation					
Test Frequency	Port(s) (dBm/MHz)			Peak Marker + DCCF (+0.04 dB)	Limit	Margin			
MHz	а	a b c d			dBm/MHz	dBm/MHz	dB		
5175.0	<u>7.730</u>	<u>7.547</u>	<u>8.199</u>	<u>13.709</u>	17.0	-3.3			
5230.0	<u>7.969</u>	<u>8.086</u>	<u>8.426</u>	<u>8.616</u>	<u>14.161</u>	17.0	-2.9		

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):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measurem	ent Results						
Measured Power Spectral Density				Summation			
Test Frequency	Port(s) (dBm/MHz)			Peak Marker + DCCF (+0.04 dB)	Limit	Margin	
MHz	а	a b c d				dBm/MHz	dB
5210.0	<u>5.283</u>	<u>4.553</u>	<u>5.960</u>	<u>5.098</u>	<u>11.232</u>	17.0	-5.8

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

DCCF - Duty Cycle Correction Factor



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### **Equipment Configuration for Power Spectral Density**

Variant:	802.11ac 20	Duty Cycle (%):	99.0
Data Rate:	6.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measurement Results								
Test	N	leasured Power	Spectral Densit	Summation Peak Marker +	Limit	Margin		
Frequency		Port(s) (dBm/500 KHz)			DCCF (+0.04 dB)	Lillit	Margin	
MHz	a b c d				dBm/500 KHz	dBm/500 KHz	dB	
5745.0	6.842	<u>7.065</u>	<u>8.599</u>	6.797	<u>13.384</u>	30.0	-16.6	
5785.0	<u>7.778</u>	<u>8.396</u>	<u>9.921</u>	<u>9.145</u>	<u>14.795</u>	30.0	-15.2	
5825.0	<u>7.514</u>	<u>8.231</u>	9.865	<u>9.410</u>	<u>14.785</u>	30.0	-15.2	

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 40	Duty Cycle (%):	99.0
Data Rate:	13.50 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measurement Results								
T4	N	Measured Power Spectral Density						
Test Frequency		Port(s) (dBm/500 KHz)			Peak Marker + DCCF (+0.04 dB)	Limit	Margin	
MHz	а	a b c d				dBm/500 KHz	dB	
5755.0	<u>4.873</u>	<u>5.202</u>	<u>5.712</u>	<u>11.181</u>	30.0	-18.8		
5795.0	4.459	<u>5.302</u>	<u>5.908</u>	<u>5.805</u>	<u>11.344</u>	30.0	-18.7	

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	Duty Cycle (%):	99.0
Data Rate:	29.30 MBit/s	Antenna Gain (dBi):	5.00
Modulation:	OFDM	Beam Forming Gain (Y)(dB):	Not Applicable
TPC:	Not Applicable	Tested By:	SB
Engineering Test Notes:			

Test Measurement Results							
_ Measured Power Spectral Density				y	Summation		
Frequency Port(s) (dBm/500 KHz)			Peak Marker + DCCF (+0.04 dB)	Limit	Margin		
MHz	a b c d			dBm/500 KHz	dBm/500 KHz	dB	
5775.0	<u>1.786</u>	<u>1.138</u>	<u>1.460</u>	0.367	7.048	30.0	-23.0

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

DCCF - Duty Cycle Correction Factor



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# A. APPENDIX - GRAPHICAL IMAGES



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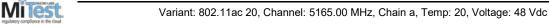
Serial #: MIMO09-U5\_Conducted Addendum Rev A

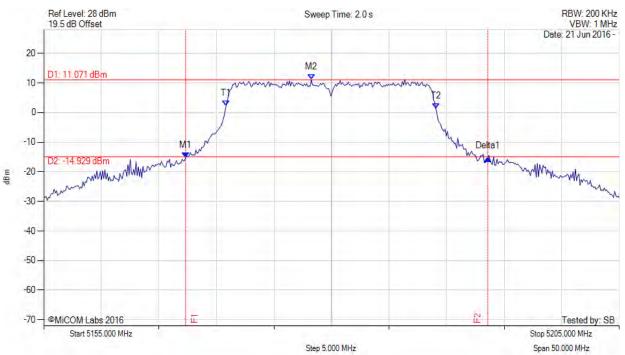
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# A.1. 26 dB & 99% Bandwidth

### 26 dB & 99% BANDWIDTH





Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1: 5167.325 MHz: -15.233 dBm M2: 5178.246 MHz: 11.071 dBm Delta1: 26.253 MHz: -0.338 dB T1: 5170.832 MHz: 2.198 dBm T2: 5189.068 MHz: 1.325 dBm OBW: 18.236 MHz	Measured 26 dB Bandwidth: 26.253 MHz Measured 99% Bandwidth: 18.236 MHz



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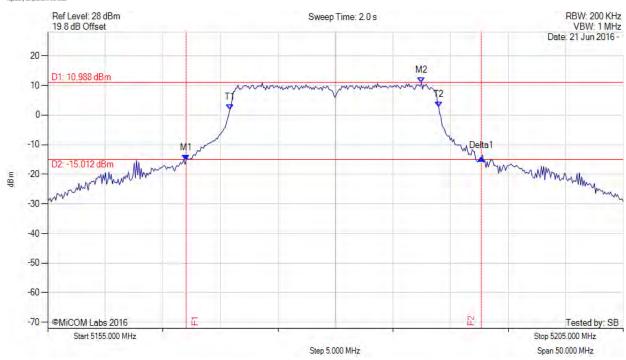
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### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 20, Channel: 5165.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1 : 5167.024 MHz : -15.180 dBm M2 : 5187.465 MHz : 10.988 dBm Delta1 : 25.651 MHz : 0.700 dB T1 : 5170.832 MHz : 1.860 dBm T2 : 5188.968 MHz : 2.660 dBm OBW : 18.136 MHz	Measured 26 dB Bandwidth: 25.651 MHz Measured 99% Bandwidth: 18.136 MHz



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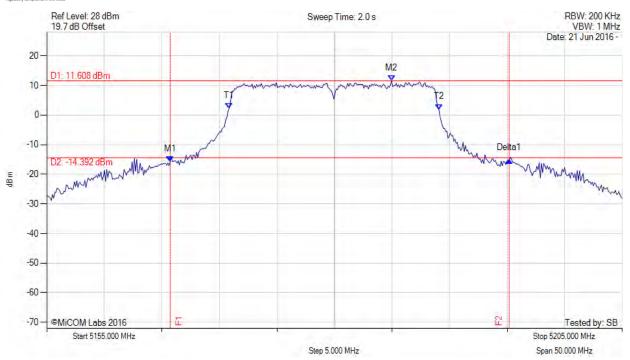
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### 26 dB & 99% BANDWIDTH

MiTest.

Variant: 802.11ac 20, Channel: 5165.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20		Measured 26 dB Bandwidth: 29.459 MHz Measured 99% Bandwidth: 18.236 MHz



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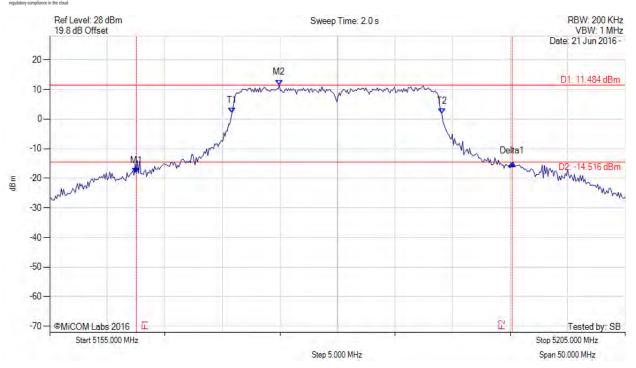
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# MiTest

### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 20, Channel: 5165.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1 : 5162.515 MHz : -18.363 dBm M2 : 5174.940 MHz : 11.484 dBm Delta1 : 32.665 MHz : 3.319 dB T1 : 5170.832 MHz : 2.029 dBm T2 : 5189.068 MHz : 1.765 dBm OBW : 18.236 MHz	Measured 26 dB Bandwidth: 32.665 MHz Measured 99% Bandwidth: 18.236 MHz



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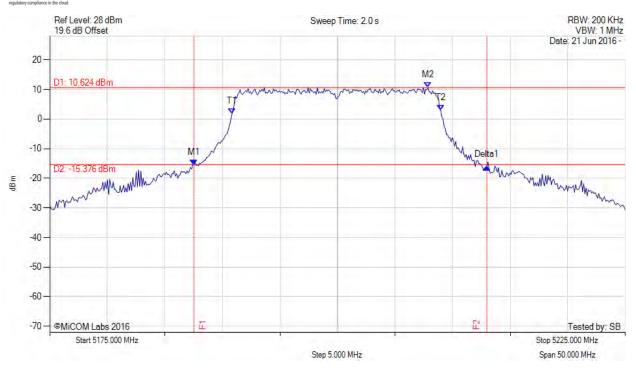
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## 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20		Measured 26 dB Bandwidth: 25.451 MHz Measured 99% Bandwidth: 18.136 MHz



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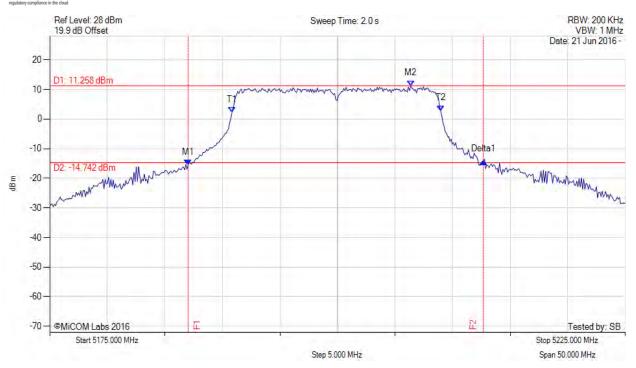
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# Variant:

### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
	M1 : 5187.024 MHz : -15.423 dBm M2 : 5206.363 MHz : 11.258 dBm Delta1 : 25.651 MHz : 1.147 dB T1 : 5190.832 MHz : 2.255 dBm T2 : 5208.968 MHz : 2.849 dBm OBW : 18.136 MHz	Measured 26 dB Bandwidth: 25.651 MHz Measured 99% Bandwidth: 18.136 MHz



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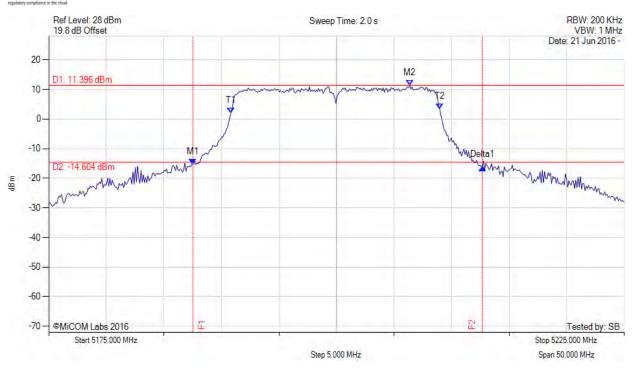
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# **WiTest**

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD		Measured 26 dB Bandwidth: 25.150 MHz Measured 99% Bandwidth: 18.136 MHz



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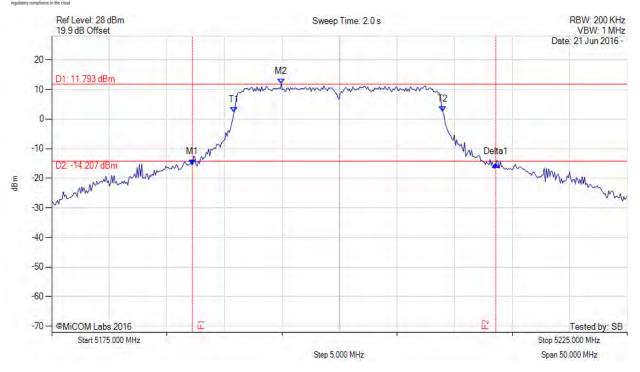
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# ATOCT VI

### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1 : 5187.224 MHz : -15.374 dBm M2 : 5194.940 MHz : 11.793 dBm Delta1 : 26.353 MHz : 0.106 dB T1 : 5190.832 MHz : 2.178 dBm T2 : 5208.968 MHz : 2.485 dBm OBW : 18.136 MHz	Measured 26 dB Bandwidth: 26.353 MHz Measured 99% Bandwidth: 18.136 MHz



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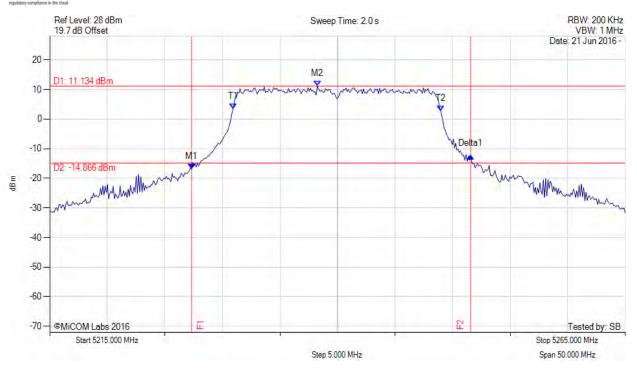
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### ViTest

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
		Measured 26 dB Bandwidth: 24.248 MHz Measured 99% Bandwidth: 18.036 MHz
	0511 : 10:000 Hill I	



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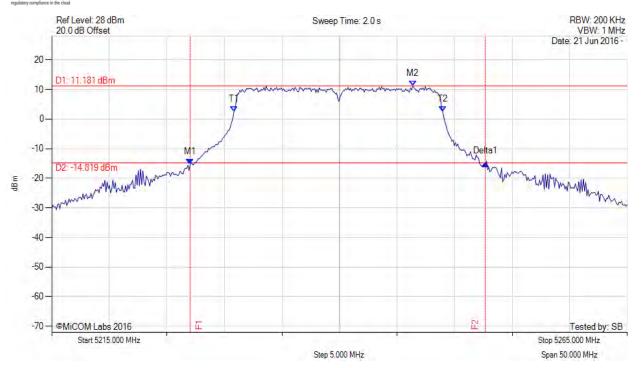
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### MCON LUB

#### 26 dB & 99% BANDWIDTH





Analyzer Setup	Marker:Frequency:Amplitude	Test Results
I	M1 : 5227.024 MHz : -15.329 dBm M2 : 5246.363 MHz : 11.181 dBm Delta1 : 25.651 MHz : 0.336 dB T1 : 5230.832 MHz : 2.493 dBm T2 : 5248.968 MHz : 2.418 dBm OBW : 18.136 MHz	Measured 26 dB Bandwidth: 25.651 MHz Measured 99% Bandwidth: 18.136 MHz



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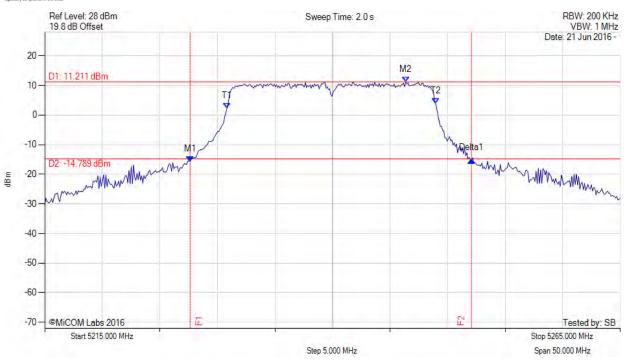
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#### 26 dB & 99% BANDWIDTH



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
I	M1: 5227.625 MHz: -15.642 dBm M2: 5246.363 MHz: 11.211 dBm Delta1: 24.449 MHz: 0.388 dB T1: 5230.832 MHz: 2.302 dBm T2: 5248.968 MHz: 3.821 dBm OBW: 18.136 MHz	Measured 26 dB Bandwidth: 24.449 MHz Measured 99% Bandwidth: 18.136 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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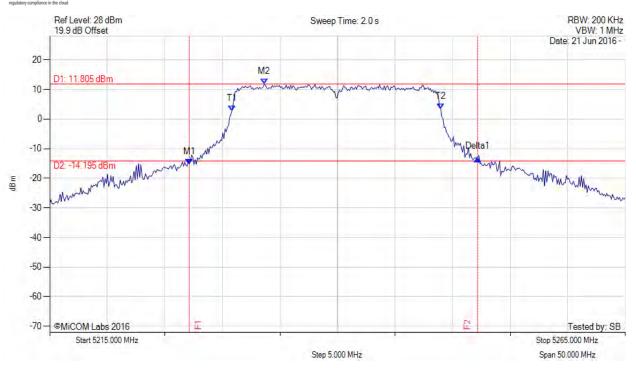
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# MiTest.

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
I	M1 : 5227.124 MHz : -15.187 dBm M2 : 5233.637 MHz : 11.805 dBm Delta1 : 25.050 MHz : 1.849 dB T1 : 5230.832 MHz : 2.769 dBm T2 : 5248.968 MHz : 3.489 dBm OBW : 18.136 MHz	Measured 26 dB Bandwidth: 25.050 MHz Measured 99% Bandwidth: 18.136 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

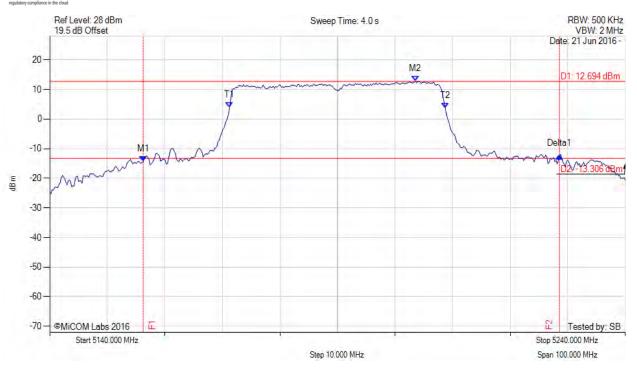
**Issue Date:** 2<sup>nd</sup> August 2016

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# MiTest.

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5175.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
I	M1: 5156.232 MHz: -14.389 dBm M2: 5203.527 MHz: 12.694 dBm Delta1: 72.345 MHz: 1.969 dB T1: 5171.263 MHz: 3.845 dBm T2: 5208.737 MHz: 3.703 dBm OBW: 37.475 MHz	Measured 26 dB Bandwidth: 72.345 MHz Measured 99% Bandwidth: 37.475 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

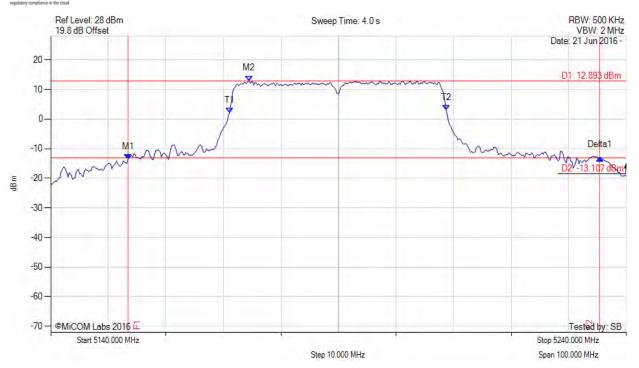
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# MiTest.

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5175.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
		Measured 26 dB Bandwidth: 81.964 MHz
Sweep Count = 0 RF Atten (dB) = 20	M2 : 5174.469 MHz : 12.893 dBm Delta1 : 81.964 MHz : 0.480 dB	Measured 99% Bandwidth: 37.675 MHz
Trace Mode = MAX HOLD	T1 : 5171.062 MHz : 2.070 dBm T2 : 5208.737 MHz : 2.981 dBm OBW : 37.675 MHz	
	OBW : 37.073 WH IZ	



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

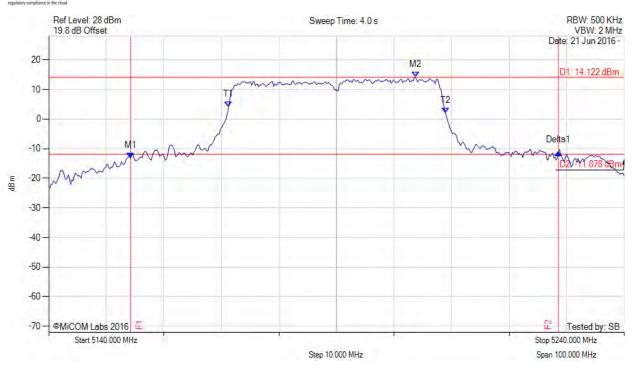
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## 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5175.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1 : 5154.228 MHz : -13.206 dBm M2 : 5203.727 MHz : 14.122 dBm Delta1 : 74.349 MHz : 1.995 dB T1 : 5171.263 MHz : 4.106 dBm T2 : 5208.938 MHz : 2.009 dBm OBW : 37.675 MHz	Measured 26 dB Bandwidth: 74.349 MHz Measured 99% Bandwidth: 37.675 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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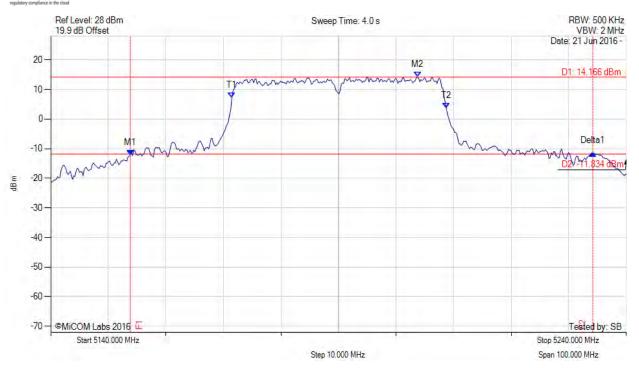
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# MiTest.

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5175.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1 : 5153.828 MHz : -12.160 dBm M2 : 5203.727 MHz : 14.166 dBm Delta1 : 80.361 MHz : 0.628 dB T1 : 5171.463 MHz : 7.191 dBm T2 : 5208.737 MHz : 3.632 dBm OBW : 37.275 MHz	Measured 26 dB Bandwidth: 80.361 MHz Measured 99% Bandwidth: 37.275 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

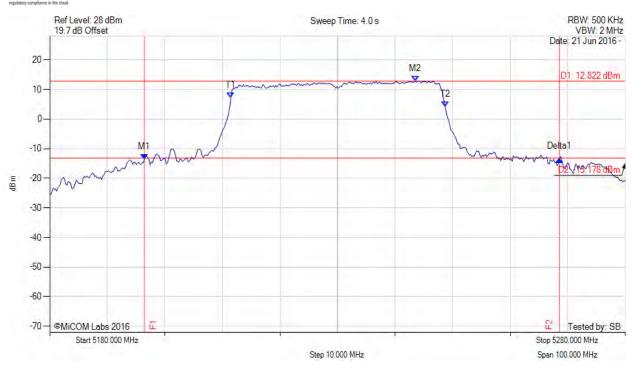
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## **WiTest**

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5230.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5196.433 MHz : -13.682 dBm M2 : 5243.527 MHz : 12.822 dBm Delta1 : 72.144 MHz : 0.181 dB T1 : 5211.463 MHz : 7.176 dBm T2 : 5248.737 MHz : 4.053 dBm OBW : 37.275 MHz	Measured 26 dB Bandwidth: 72.144 MHz Measured 99% Bandwidth: 37.275 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

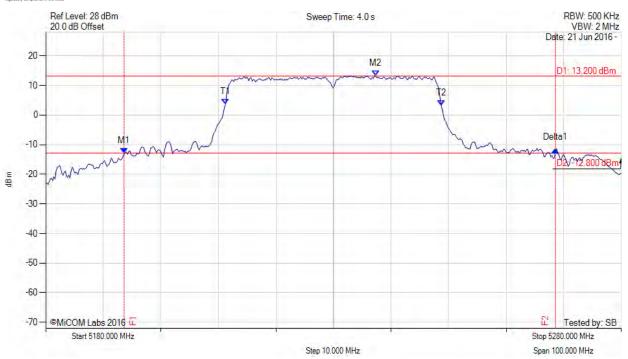
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#### 26 dB & 99% BANDWIDTH



Variant: 802.11ac 40, Channel: 5230.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5193.627 MHz : -13.004 dBm M2 : 5237.315 MHz : 13.200 dBm Delta1 : 74.950 MHz : 1.298 dB T1 : 5211.263 MHz : 3.746 dBm T2 : 5248.737 MHz : 3.117 dBm OBW : 37.475 MHz	Measured 26 dB Bandwidth: 74.950 MHz Measured 99% Bandwidth: 37.475 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

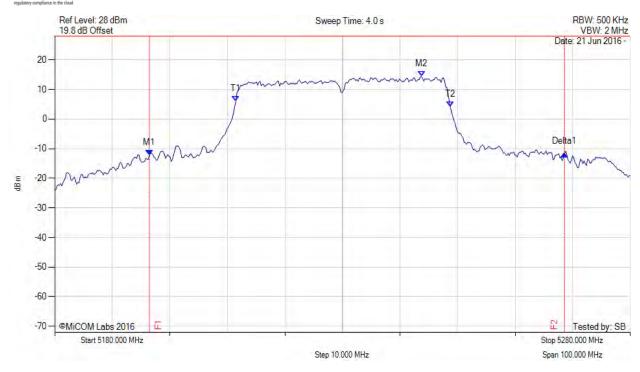
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# MÎTEST.

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5230.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5196.433 MHz : -12.295 dBm M2 : 5243.727 MHz : 14.378 dBm Delta1 : 72.144 MHz : 0.604 dB T1 : 5211.463 MHz : 5.950 dBm T2 : 5248.737 MHz : 4.097 dBm OBW : 37.275 MHz	Measured 26 dB Bandwidth: 72.144 MHz Measured 99% Bandwidth: 37.275 MHz



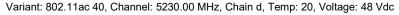
To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

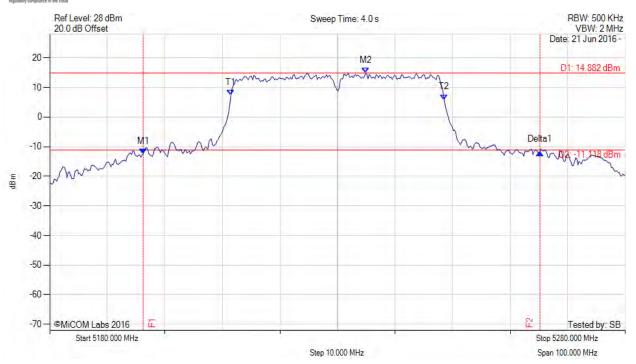
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### 26 dB & 99% BANDWIDTH





Detector = MAX PEAK	



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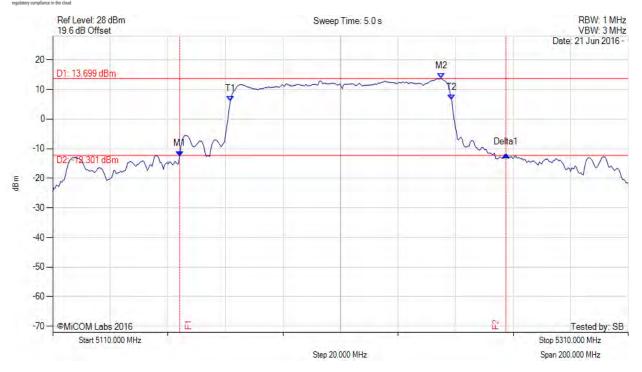
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### ATTOCH ....

#### 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
Sweep Count = 0 RF Atten (dB) = 20		Measured 26 dB Bandwidth: 113.427 MHz Measured 99% Bandwidth: 76.954 MHz



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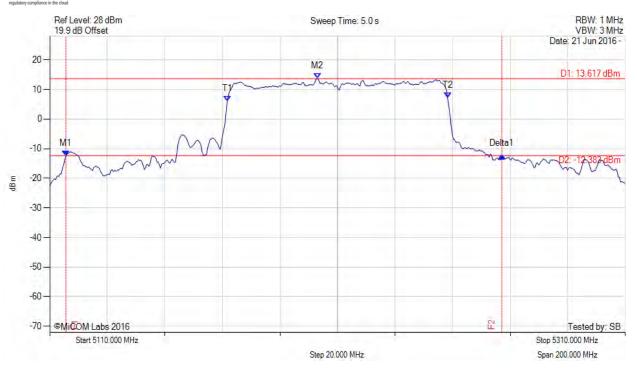
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## WITEST

#### 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 = MAX PEAK		Measured 26 dB Bandwidth: 151.503 MHz
Sweep Count = 0		Measured 99% Bandwidth: 76.553 MHz
RF Atten (dB) = 20	Delta1: 151.503 MHz: 0.126 dB	
Trace Mode = MAX HOLD	T1: 5171.723 MHz: 6.088 dBm	
	T2 : 5248.277 MHz : 7.075 dBm	
	OBW : 76.553 MHz	



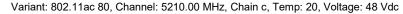
To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

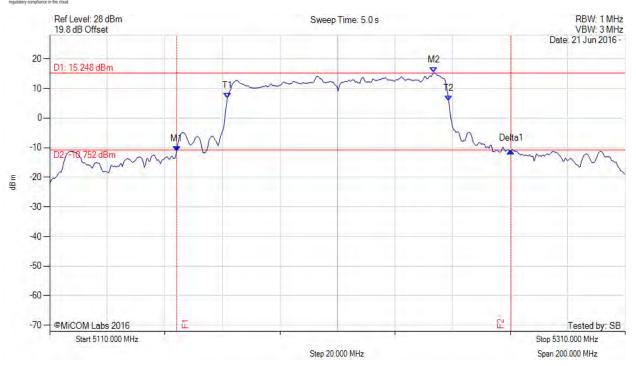
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### 26 dB & 99% BANDWIDTH





Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1: 5154.088 MHz: -11.202 dBm M2: 5243.467 MHz: 15.248 dBm Delta1: 116.232 MHz: 0.096 dB T1: 5171.723 MHz: 6.709 dBm T2: 5248.677 MHz: 5.781 dBm OBW: 76.954 MHz	Measured 26 dB Bandwidth: 116.232 MHz Measured 99% Bandwidth: 76.954 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

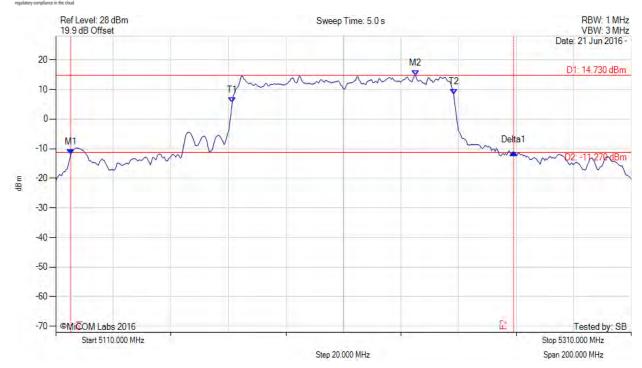
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# MiTest.

#### 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
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD		Measured 26 dB Bandwidth: 153.908 MHz Measured 99% Bandwidth: 76.954 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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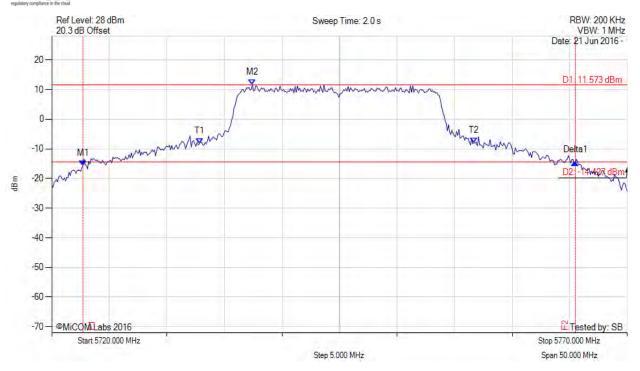
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# Mi Test.

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5722.705 MHz : -15.662 dBm M2 : 5737.435 MHz : 11.573 dBm Delta1 : 42.786 MHz : 1.003 dB T1 : 5732.826 MHz : -8.249 dBm T2 : 5756.673 MHz : -7.983 dBm OBW : 23.848 MHz	Measured 26 dB Bandwidth: 42.786 MHz Measured 99% Bandwidth: 23.848 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

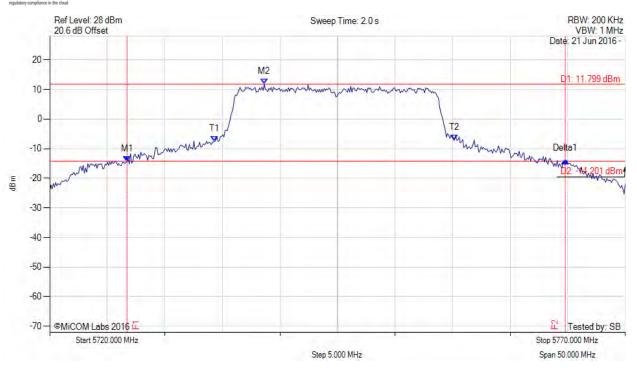
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## **WiTest**

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
		Measured 26 dB Bandwidth: 38.076 MHz Measured 99% Bandwidth: 20.842 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

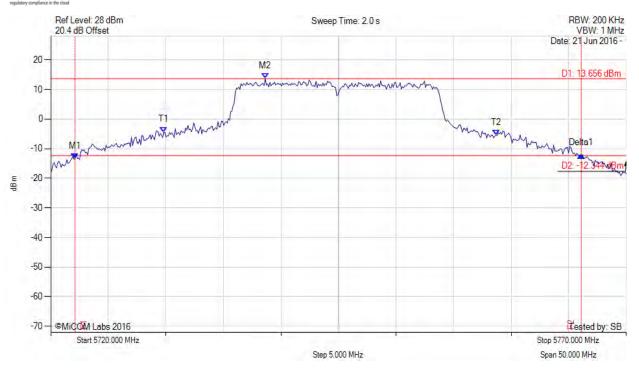
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# **Witest**

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
		Measured 26 dB Bandwidth: 43.988 MHz Measured 99% Bandwidth: 28.858 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

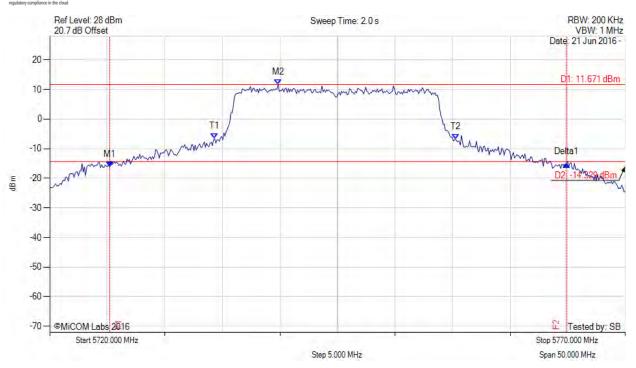
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#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
I	M1 : 5725.210 MHz : -16.136 dBm M2 : 5739.840 MHz : 11.671 dBm Delta1 : 39.679 MHz : 0.893 dB T1 : 5734.329 MHz : -6.633 dBm T2 : 5755.271 MHz : -6.850 dBm OBW : 20.942 MHz	Measured 26 dB Bandwidth: 39.679 MHz Measured 99% Bandwidth: 20.942 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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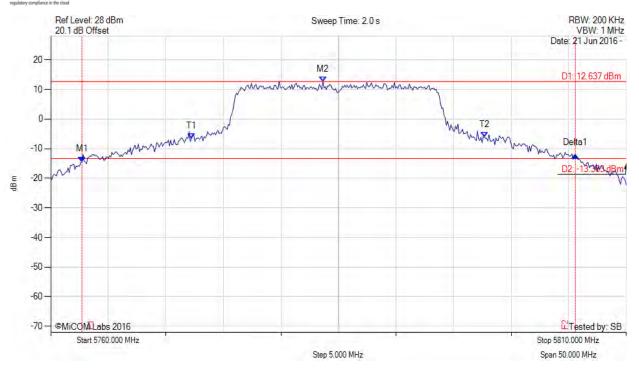
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### WITOCT

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1: 5762.705 MHz: -14.436 dBm M2: 5783.647 MHz: 12.637 dBm Delta1: 42.886 MHz: 2.304 dB T1: 5772.224 MHz: -6.681 dBm T2: 5797.675 MHz: -6.216 dBm OBW: 25.451 MHz	Measured 26 dB Bandwidth: 42.886 MHz Measured 99% Bandwidth: 25.451 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

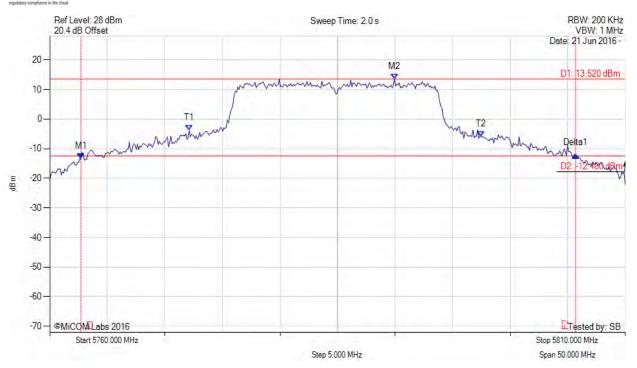
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# MiTest.

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK	M1: 5762.705 MHz: -13.488 dBm	Measured 26 dB Bandwidth: 42.986 MHz
RF Atten (dB) = 20 Trace Mode = MAX HOLD	M2 : 5789.960 MHz : 13.520 dBm Delta1 : 42.986 MHz : 1.163 dB T1 : 5772.124 MHz : -3.824 dBm T2 : 5797.475 MHz : -5.976 dBm OBW : 25.351 MHz	Measured 99% Bandwidth: 25.351 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

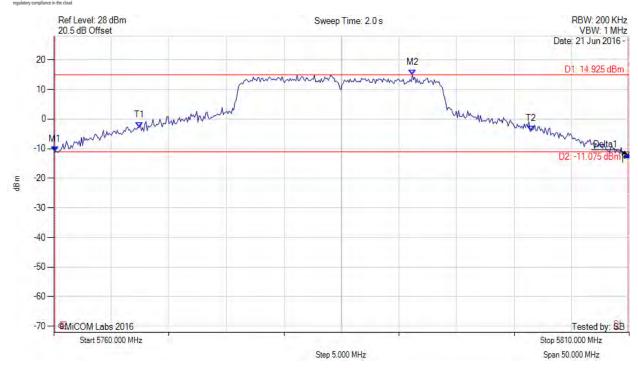
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## **Vitest**

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1: 5760.100 MHz: -11.144 dBm M2: 5791.162 MHz: 14.925 dBm Delta1: 49.800 MHz: -0.952 dB T1: 5767.415 MHz: -2.931 dBm T2: 5801.483 MHz: -4.005 dBm OBW: 34.068 MHz	Measured 26 dB Bandwidth: 49.800 MHz Measured 99% Bandwidth: 34.068 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

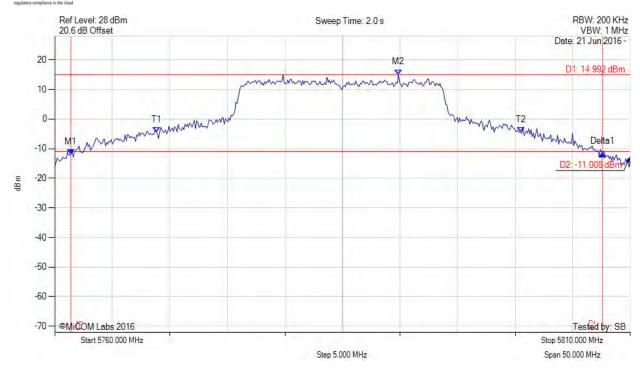
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# MiTest.

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
		Measured 26 dB Bandwidth: 46.192 MHz Measured 99% Bandwidth: 31.663 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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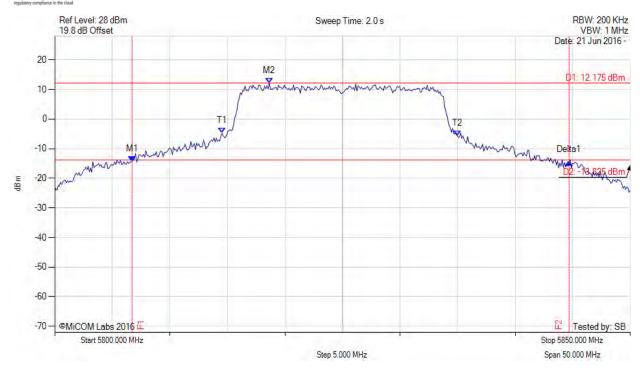
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# MiTest.

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
I		Measured 26 dB Bandwidth: 37.976 MHz Measured 99% Bandwidth: 20.441 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

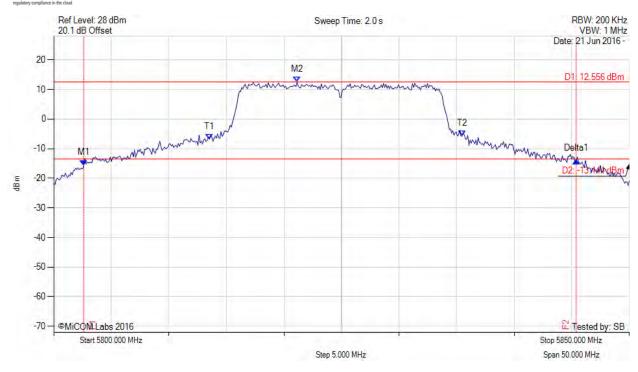
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### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1: 5802.605 MHz: -15.616 dBm M2: 5821.142 MHz: 12.556 dBm Delta1: 42.786 MHz: 1.615 dB T1: 5813.527 MHz: -6.808 dBm T2: 5835.471 MHz: -5.768 dBm OBW: 21.944 MHz	Measured 26 dB Bandwidth: 42.786 MHz Measured 99% Bandwidth: 21.944 MHz
	OBW . 21.344 WII IZ	



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

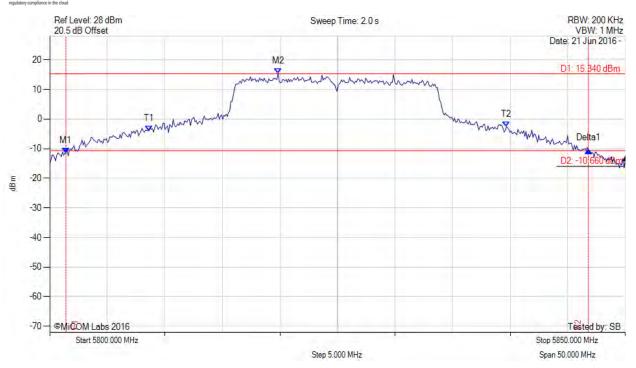
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### 26 dB & 99% BANDWIDTH

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



Analyzer Setup Marker: Frequency: Amplitude Test Results	
	B Bandwidth: 45.391 MHz Bandwidth: 31.062 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

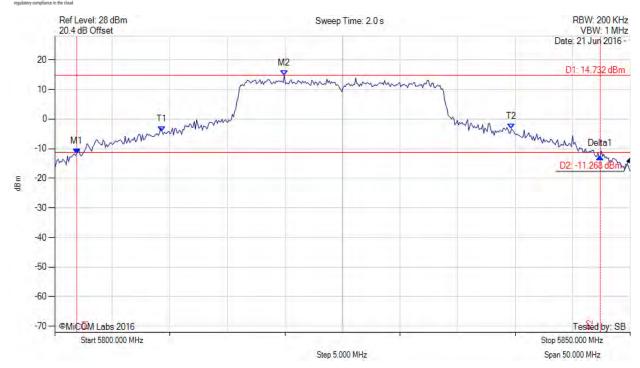
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## **WiTest**

#### 26 dB & 99% BANDWIDTH

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD		Measured 26 dB Bandwidth: 45.491 MHz Measured 99% Bandwidth: 30.361 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

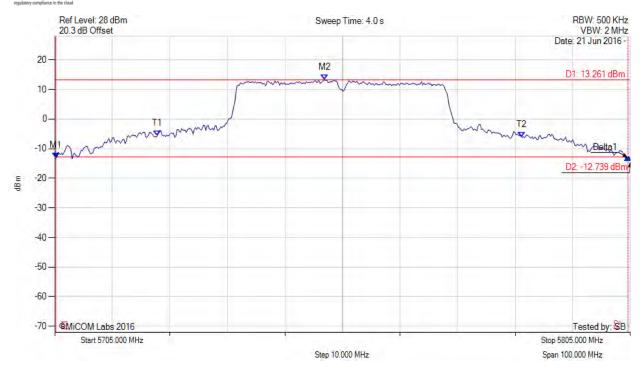
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### VIITect

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5755.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1: 5705.200 MHz: -13.226 dBm M2: 5751.894 MHz: 13.261 dBm Delta1: 99.399 MHz: 0.230 dB T1: 5722.836 MHz: -5.600 dBm T2: 5786.162 MHz: -6.206 dBm OBW: 63.327 MHz	Measured 26 dB Bandwidth: 99.399 MHz Measured 99% Bandwidth: 63.327 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

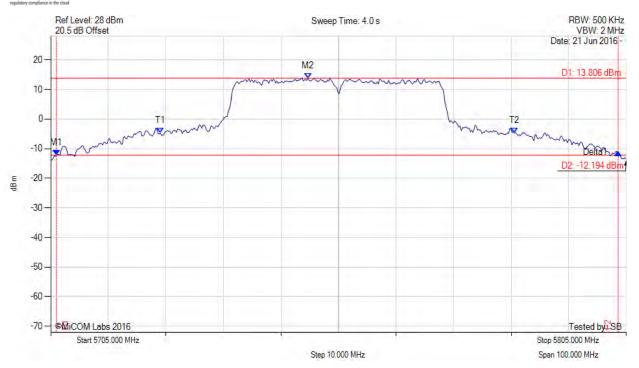
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# MiTest.

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5755.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20		Measured 26 dB Bandwidth: 97.595 MHz Measured 99% Bandwidth: 61.523 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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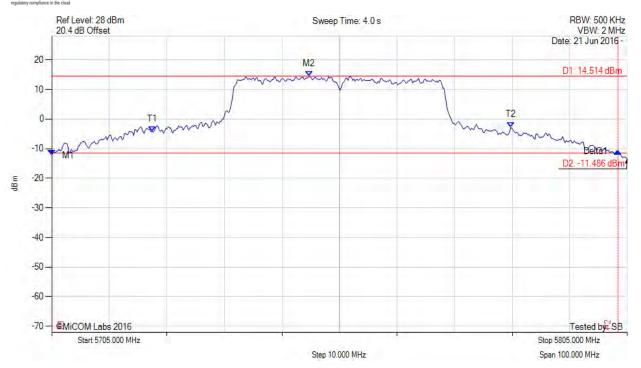
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#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5755.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD		Measured 26 dB Bandwidth: 98.397 MHz Measured 99% Bandwidth: 62.325 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

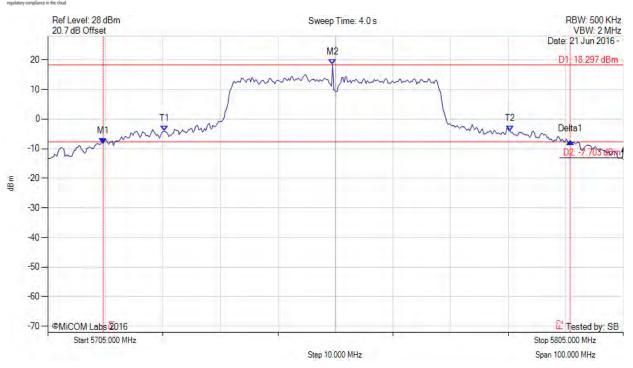
Serial #: MIMO09-U5\_Conducted Addendum Rev A

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### \_\_\_\_\_26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5755.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD	M1 : 5714.619 MHz : -8.327 dBm M2 : 5754.499 MHz : 18.297 dBm Delta1 : 81.162 MHz : 0.793 dB T1 : 5725.240 MHz : -4.131 dBm T2 : 5785.361 MHz : -4.023 dBm OBW : 60.120 MHz	Measured 26 dB Bandwidth: 81.162 MHz Measured 99% Bandwidth: 60.120 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

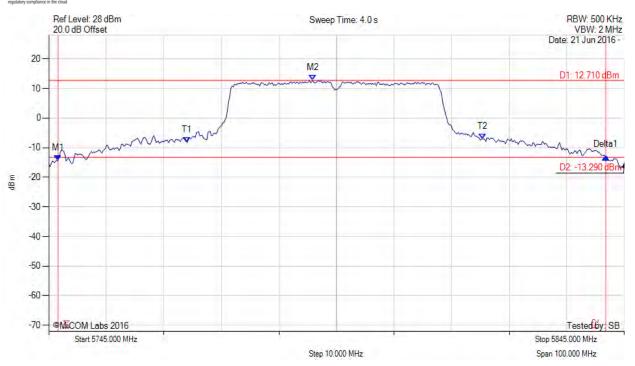
Serial #: MIMO09-U5\_Conducted Addendum Rev A

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#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5795.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20		Measured 26 dB Bandwidth: 95.190 MHz Measured 99% Bandwidth: 51.303 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

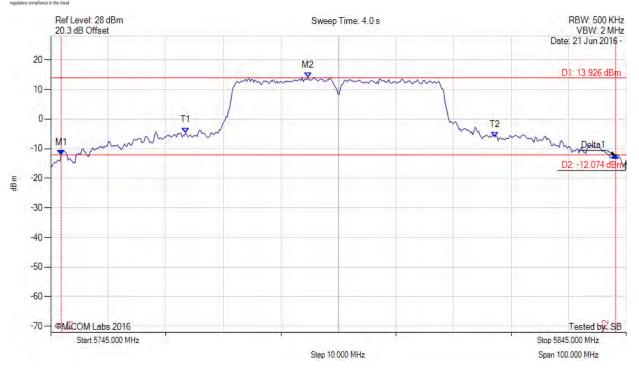
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### VITEST

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5795.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD		Measured 26 dB Bandwidth: 96.393 MHz Measured 99% Bandwidth: 53.707 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

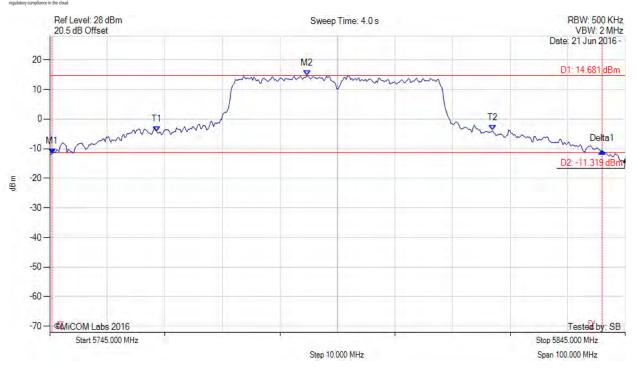
Issue Date: 2<sup>nd</sup> August 2016

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# MiTest.

#### 26 dB & 99% BANDWIDTH

Variant: 802.11ac 40, Channel: 5795.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20	M1 : 5745.401 MHz : -11.754 dBm M2 : 5789.689 MHz : 14.681 dBm Delta1 : 95.591 MHz : 1.017 dB T1 : 5763.637 MHz : -4.369 dBm T2 : 5821.954 MHz : -3.916 dBm OBW : 58.317 MHz	Measured 26 dB Bandwidth: 95.591 MHz Measured 99% Bandwidth: 58.317 MHz



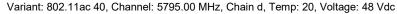
To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

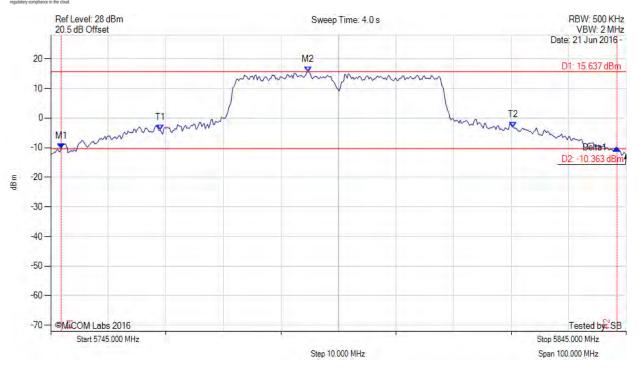
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### 26 dB & 99% BANDWIDTH





Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = MAX HOLD		Measured 26 dB Bandwidth: 96.593 MHz Measured 99% Bandwidth: 61.323 MHz



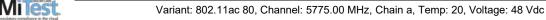
To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

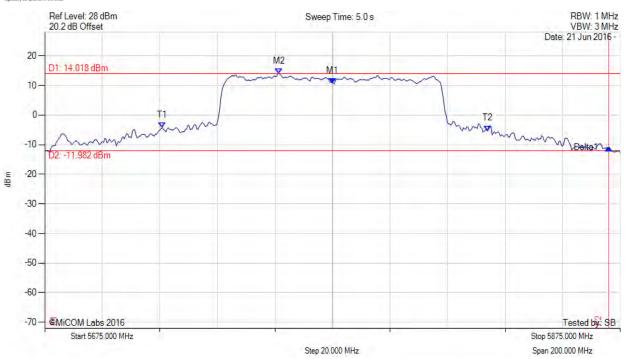
Serial #: MIMO09-U5\_Conducted Addendum Rev A

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### 26 dB & 99% BANDWIDTH





Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Sweep Count = 0 RF Atten (dB) = 20		Measured 26 dB Bandwidth: 95.992 MHz Measured 99% Bandwidth: 113.026 MHz
	OBW : 113.026 MHz	



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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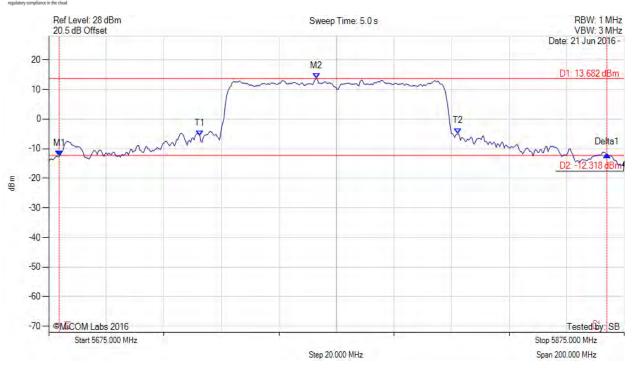
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# MiTest.

#### 26 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
Sweep Count = 0 RF Atten (dB) = 20	M1 : 5678.607 MHz : -12.502 dBm M2 : 5767.986 MHz : 13.682 dBm Delta1 : 190.381 MHz : 0.533 dB T1 : 5727.505 MHz : -5.630 dBm T2 : 5817.285 MHz : -4.873 dBm OBW : 89.780 MHz	Measured 26 dB Bandwidth: 190.381 MHz Measured 99% Bandwidth: 89.780 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

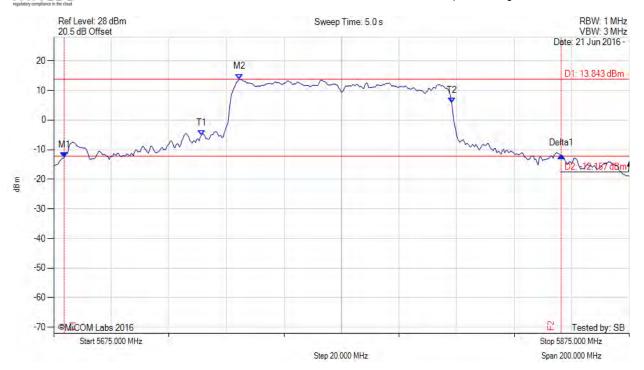
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## MiTest.

#### 26 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
Sweep Count = 0	M1 : 5678.607 MHz : -12.663 dBm M2 : 5739.529 MHz : 13.843 dBm Delta1 : 172.745 MHz : 0.767 dB T1 : 5726.303 MHz : -5.191 dBm T2 : 5813.277 MHz : 5.763 dBm OBW : 86.974 MHz	Measured 26 dB Bandwidth: 172.745 MHz Measured 99% Bandwidth: 86.974 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

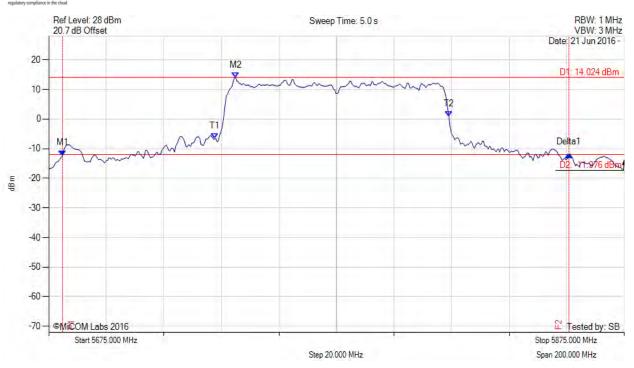
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## MiTest.

#### 26 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
Sweep Count = 0 RF Atten (dB) = 20	M1 : 5679.810 MHz : -12.347 dBm M2 : 5739.930 MHz : 14.024 dBm Delta1 : 175.952 MHz : 0.301 dB T1 : 5732.715 MHz : -6.688 dBm T2 : 5814.078 MHz : 0.809 dBm OBW : 81.363 MHz	Measured 26 dB Bandwidth: 175.952 MHz Measured 99% Bandwidth: 81.363 MHz



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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**Issue Date:** 2<sup>nd</sup> August 2016

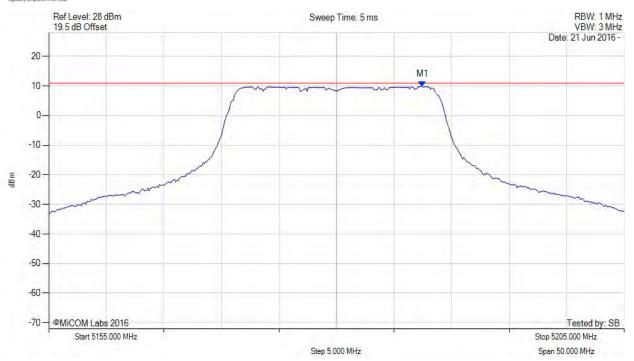
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## A.2. Power Spectral Density



#### POWER SPECTRAL DENSITY

Variant: 802.11ac 20, Channel: 5165.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5187.465 MHz: 9.796 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

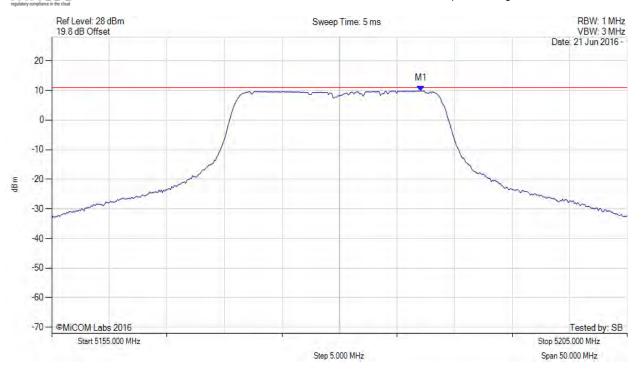
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#### POWER SPECTRAL DENSITY

Variant: 802.11ac 20, Channel: 5165.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5187.064 MHz: 9.860 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

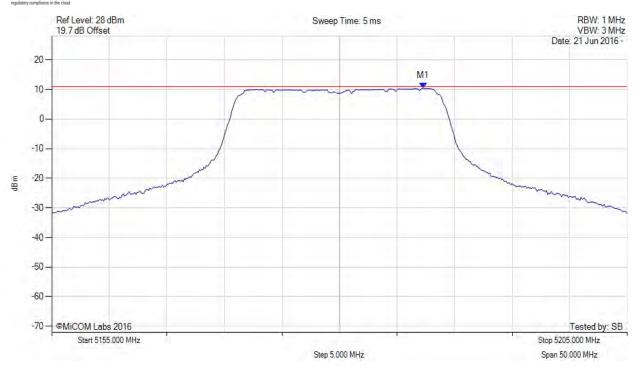
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# MiTest.

#### POWER SPECTRAL DENSITY

Variant: 802.11ac 20, Channel: 5165.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5187.265 MHz: 10.368 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

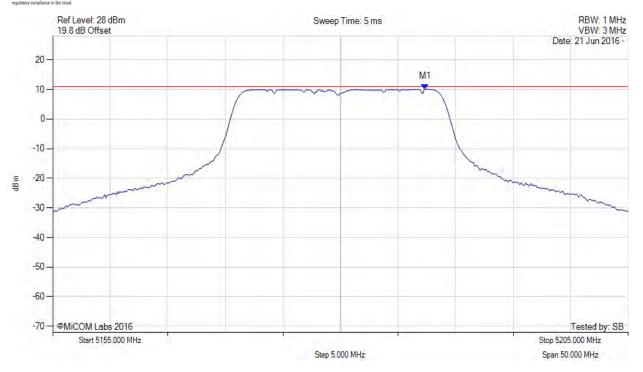
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#### POWER SPECTRAL DENSITY

Variant: 802.11ac 20, Channel: 5165.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5187.365 MHz: 10.105 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

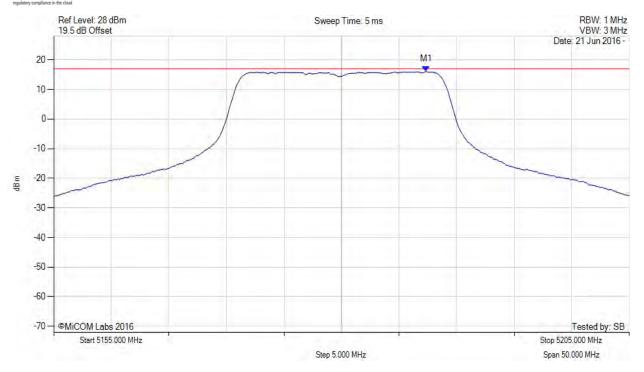
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# WiTest.

#### POWER SPECTRAL DENSITY

Variant: 802.11ac 20, Channel: 5165.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5187.400 MHz: 16.043 dBm	Limit: ≤ 17.0 dBm
Sweep Count = 100	M1 + DCCF : 5187.400 MHz : 16.087 dBm	Margin: -0.9 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

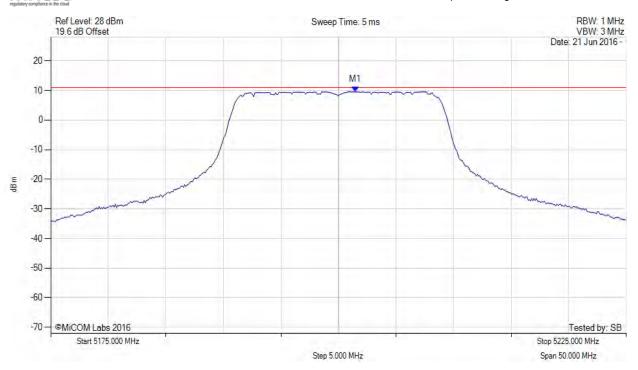
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#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5201.453 MHz: 9.566 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

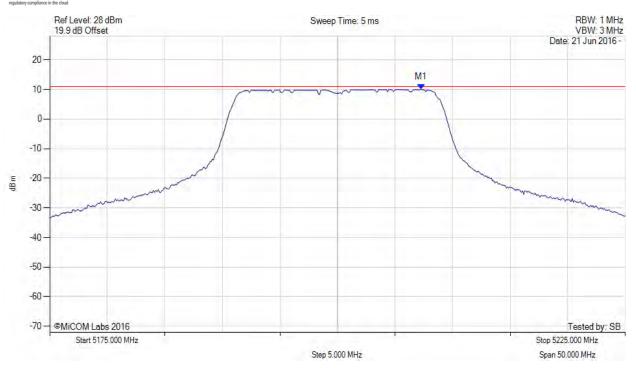
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#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5207.265 MHz: 10.058 dBm	Channel Frequency: 5200.00 MHz
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

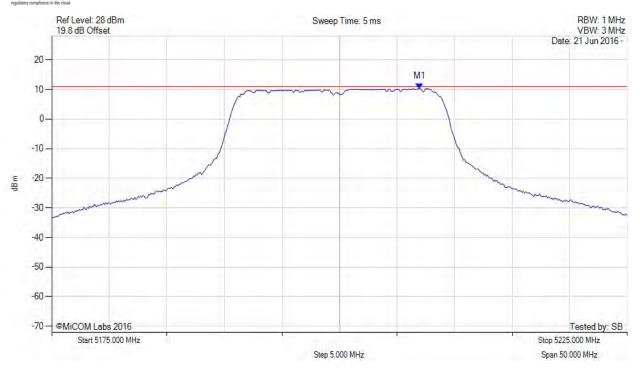
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#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5206.964 MHz: 10.235 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



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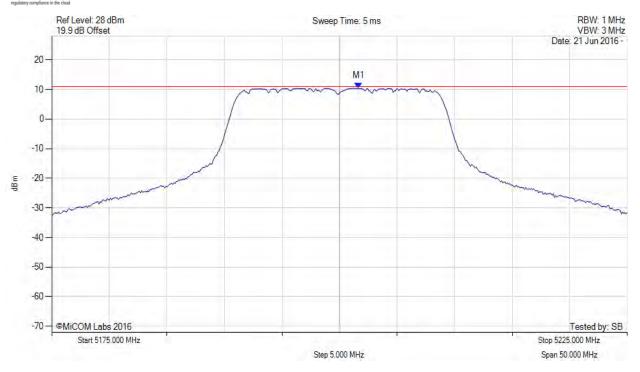
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#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5201.653 MHz: 10.362 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

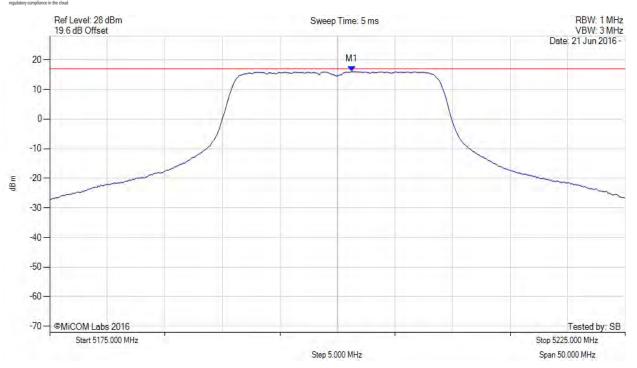
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## POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1 : 5201.300 MHz : 15.990 dBm	Limit: ≤ 17.0 dBm
Sweep Count = 100	M1 + DCCF : 5201.300 MHz : 16.034 dBm	Margin: -1.0 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

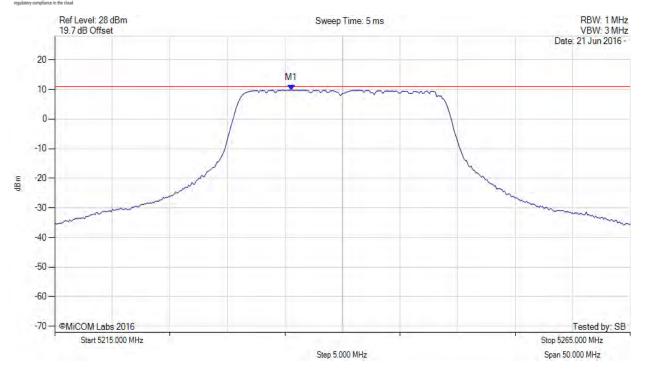
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# MiTest.

#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5235.541 MHz: 9.816 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

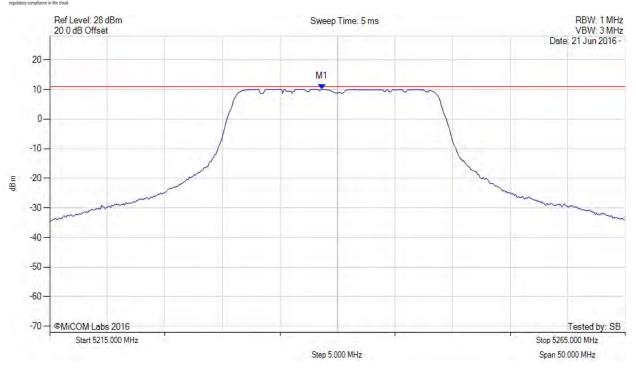
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#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5238.647 MHz: 10.104 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

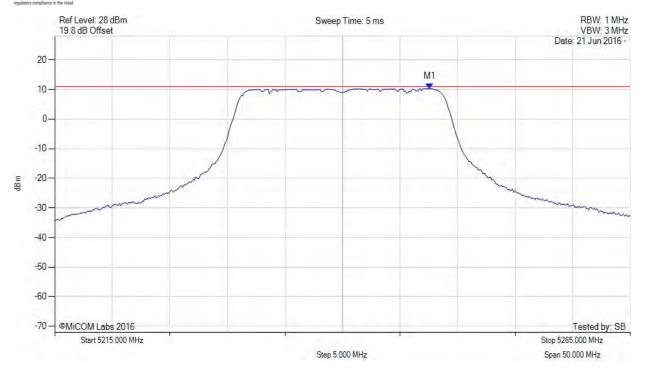
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#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5247.565 MHz: 10.283 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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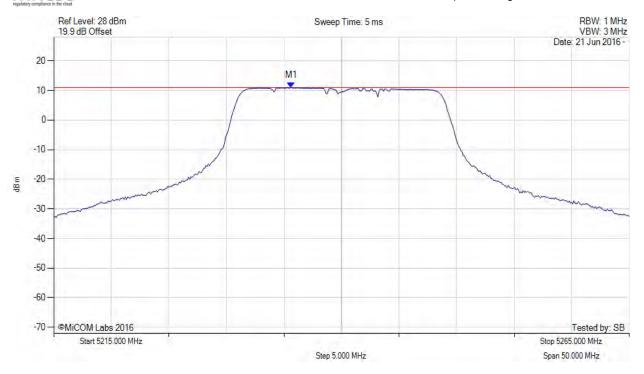
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#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5235.641 MHz: 10.949 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



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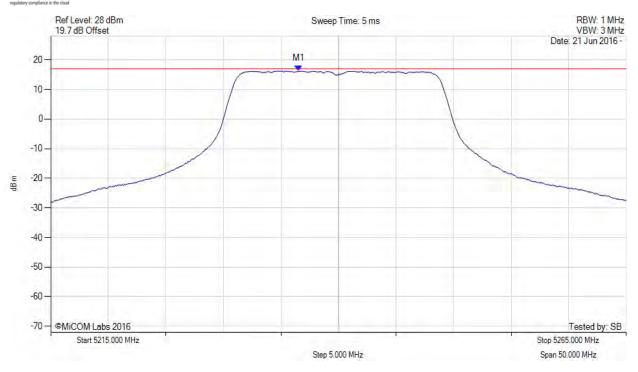
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# MiTest.

#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5236.500 MHz: 16.186 dBm	Limit: ≤ 17.0 dBm
Sweep Count = 100	M1 + DCCF : 5236.500 MHz : 16.230 dBm	Margin: -0.8 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

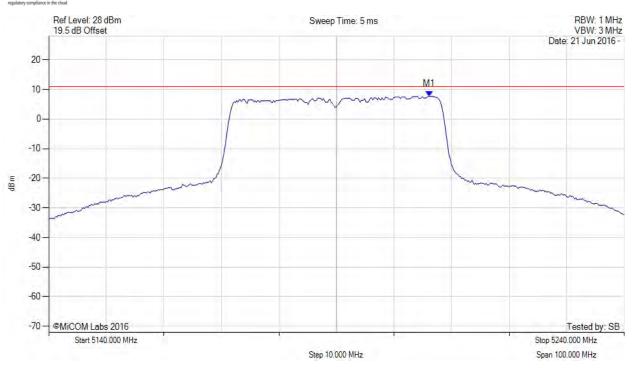
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## Variant: 9

#### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5175.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5206.132 MHz: 7.730 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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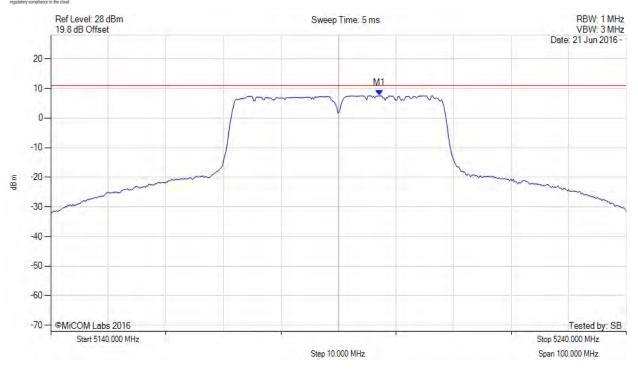
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#### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5175.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5197.114 MHz: 7.547 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

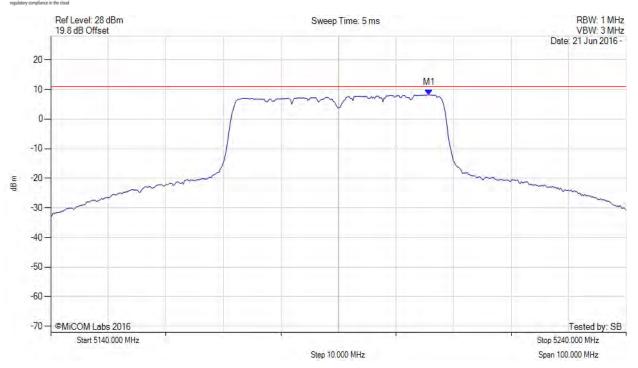
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#### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5175.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5205.731 MHz: 8.199 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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#### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5175.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5205.531 MHz: 7.946 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

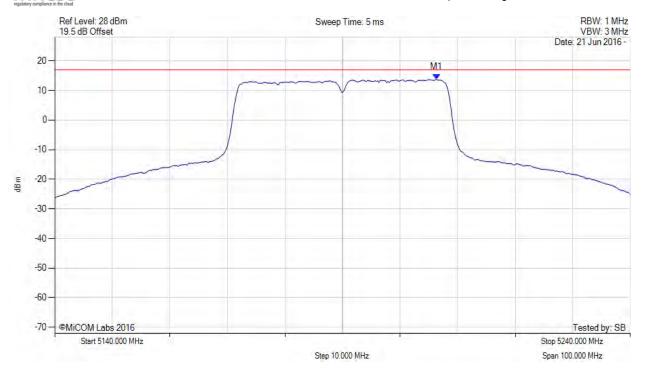
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## **WiTest**

#### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5175.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5206.300 MHz: 13.665 dBm	Limit: ≤ 17.0 dBm
Sweep Count = 100	M1 + DCCF : 5206.300 MHz : 13.709 dBm	Margin: -3.3 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

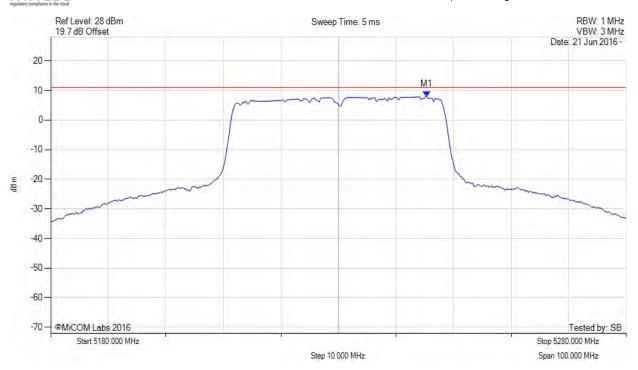
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# WiTest.

#### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5230.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5245.331 MHz: 7.969 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

Serial #: MIMO09-U5\_Conducted Addendum Rev A

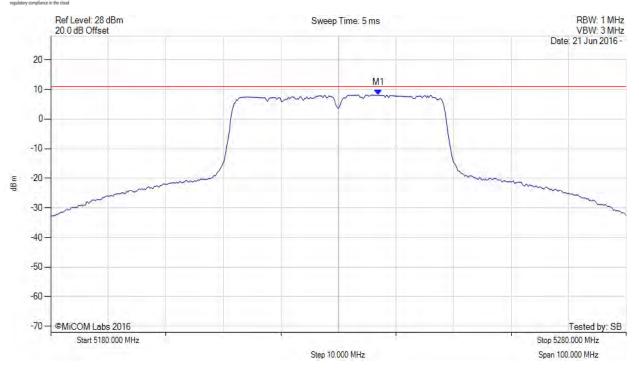
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## **WiTest**

#### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5230.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5236.914 MHz: 8.086 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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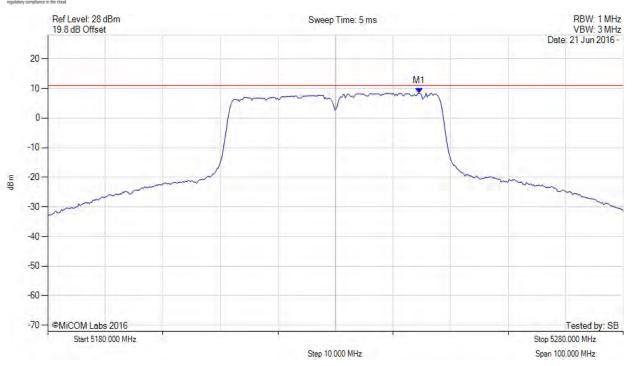
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#### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5230.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5244.529 MHz: 8.426 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

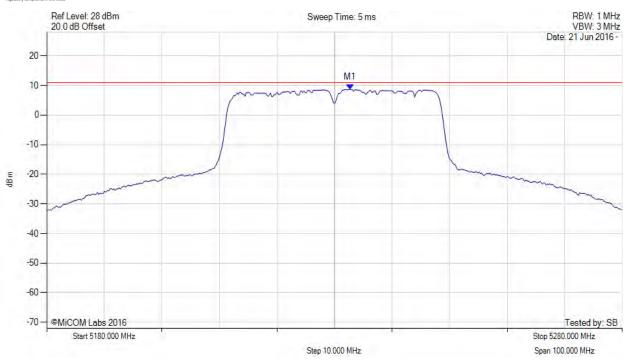
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#### POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 40, Channel: 5230.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5232.705 MHz: 8.616 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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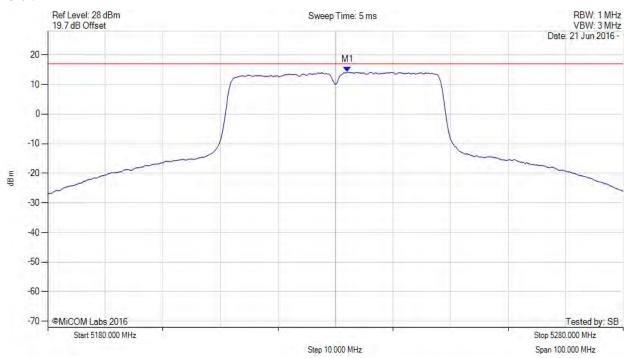
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5230.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5232.100 MHz: 14.117 dBm	Limit: ≤ 17.0 dBm
Sweep Count = 100	M1 + DCCF : 5232.100 MHz : 14.161 dBm	Margin: -2.9 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

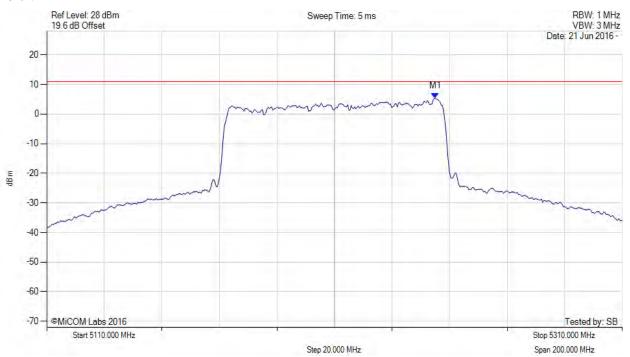
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#### POWER SPECTRAL DENSITY



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5245.070 MHz: 5.283 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



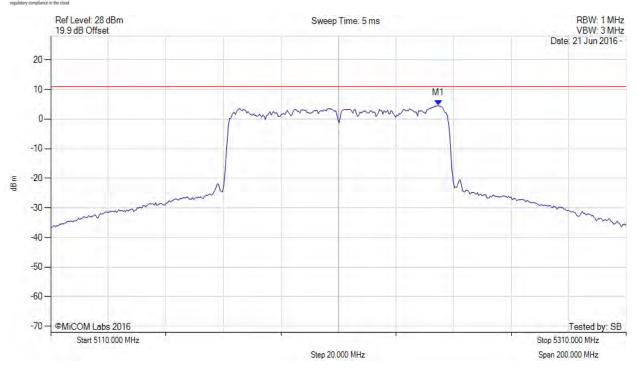
To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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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 = RMS	M1: 5244.669 MHz: 4.553 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

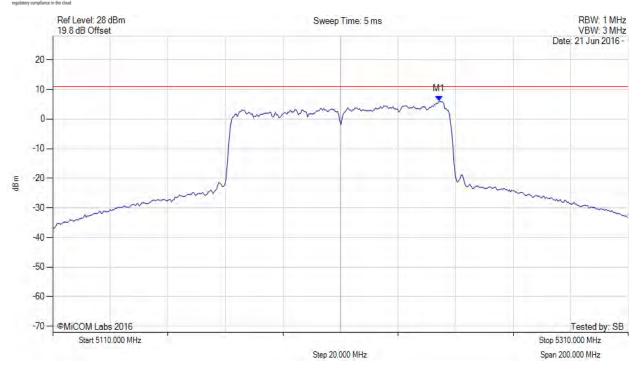
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## A TOOM LINE

#### POWER SPECTRAL DENSITY





Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5244.269 MHz: 5.960 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

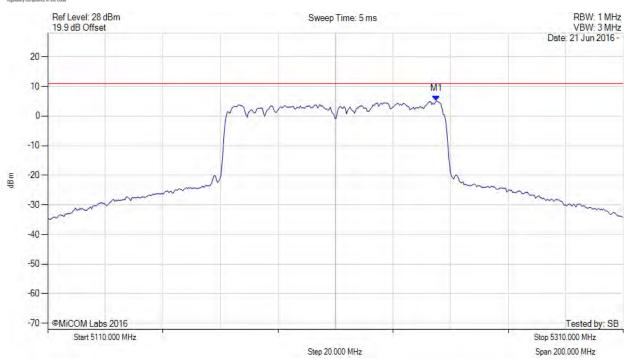
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#### POWER SPECTRAL DENSITY

MiTest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5245.070 MHz: 5.098 dBm	Limit: ≤ 10.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

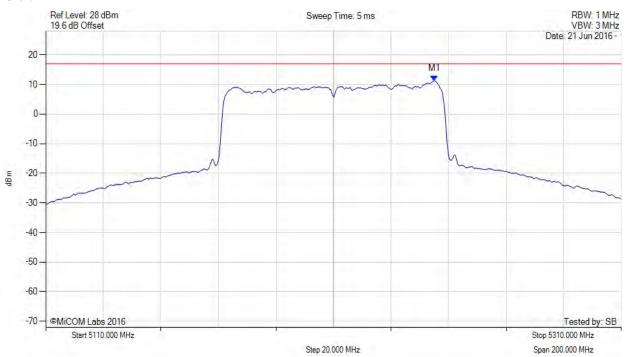
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#### POWER SPECTRAL DENSITY



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1 : 5245.100 MHz : 11.188 dBm	Limit: ≤ 17.0 dBm
Sweep Count = 100	M1 + DCCF : 5245.100 MHz : 11.232 dBm	Margin: -5.8 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor: +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

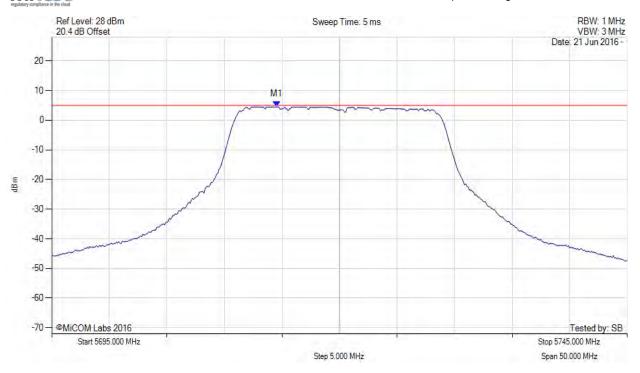
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#### POWER SPECTRAL DENSITY

Variant: 802.11ac 20, Channel: 5720.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5714.539 MHz: 4.516 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

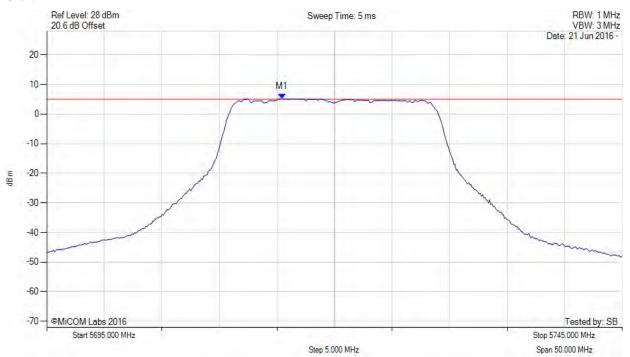
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 20, Channel: 5720.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5715.441 MHz: 5.160 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



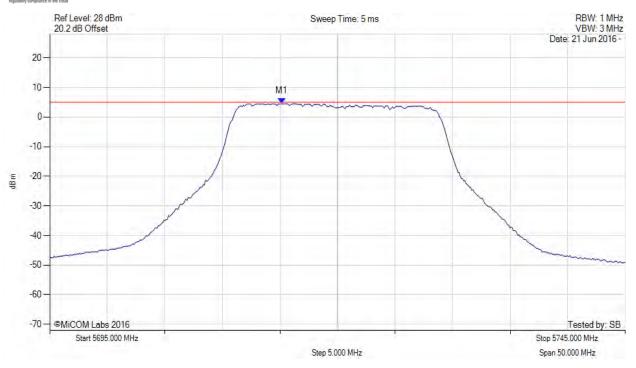
To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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## POWER SPECTRAL DENSITY

Variant: 802.11ac 20, Channel: 5720.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5715.140 MHz: 4.502 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

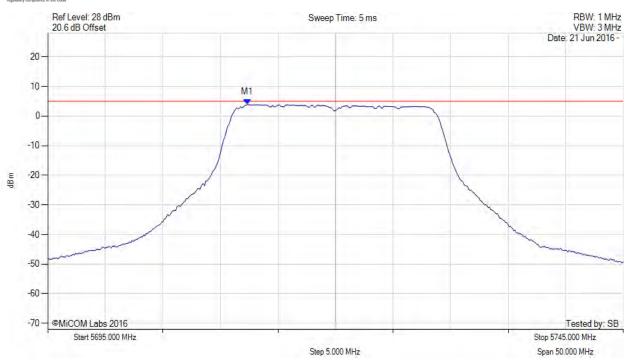
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#### POWER SPECTRAL DENSITY

**MiTest** 

Variant: 802.11ac 20, Channel: 5720.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5712.335 MHz: 3.889 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

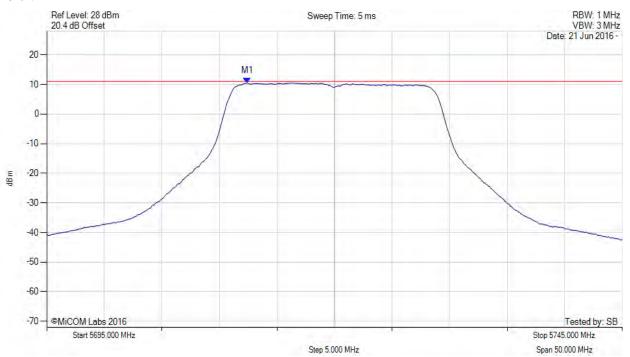
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## POWER SPECTRAL DENSITY



Variant: 802.11ac 20, Channel: 5720.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1 : 5712.400 MHz : 10.485 dBm	Limit: ≤ 11.0 dBm
Sweep Count = 100	M1 + DCCF : 5712.400 MHz : 10.529 dBm	Margin: -0.5 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

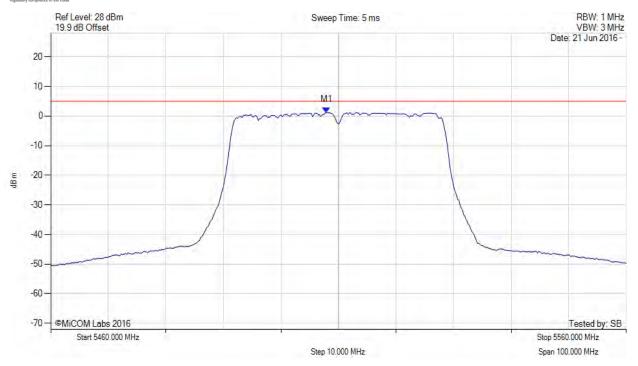
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### POWER SPECTRAL DENSITY

**MiTest** 

Variant: 802.11ac 40, Channel: 5510.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5507.896 MHz: 1.223 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

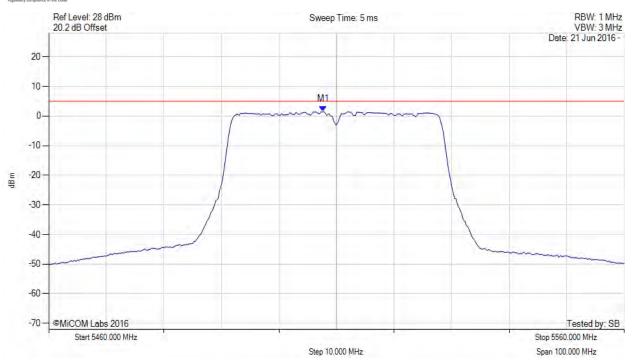
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#### POWER SPECTRAL DENSITY

**MiTest** 

Variant: 802.11ac 40, Channel: 5510.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1 : 5507.695 MHz : 1.464 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

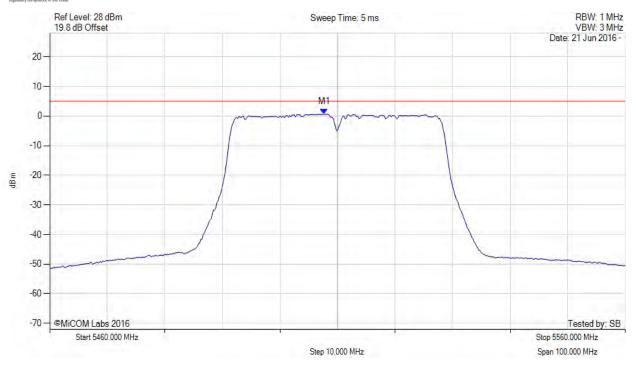
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#### POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 40, Channel: 5510.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5507.695 MHz: 0.629 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

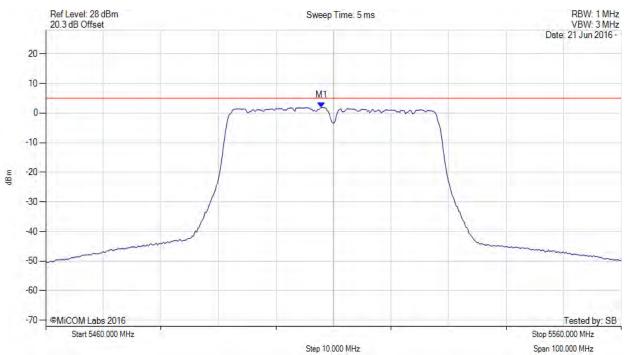
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5510.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5507.896 MHz: 1.865 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

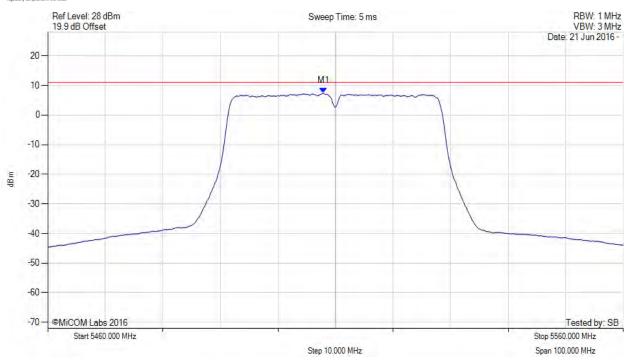
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#### POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 40, Channel: 5510.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5507.900 MHz: 7.303 dBm	Limit: ≤ 11.0 dBm
Sweep Count = 100	M1 + DCCF : 5507.900 MHz : 7.347 dBm	Margin: -3.7 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

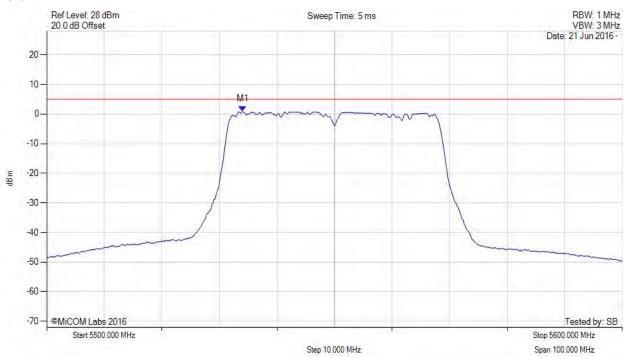
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5550.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5534.068 MHz: 0.813 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

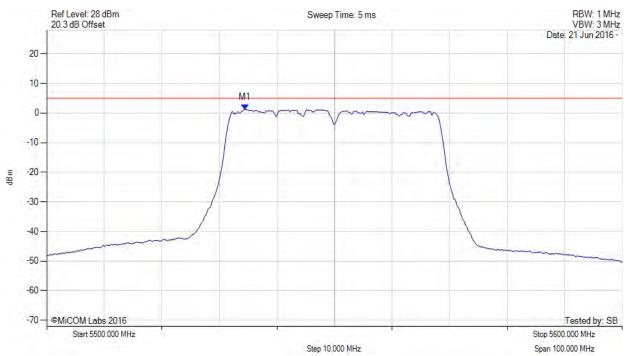
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5550.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5534.469 MHz: 1.174 dBm	Channel Frequency: 5550.00 MHz
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

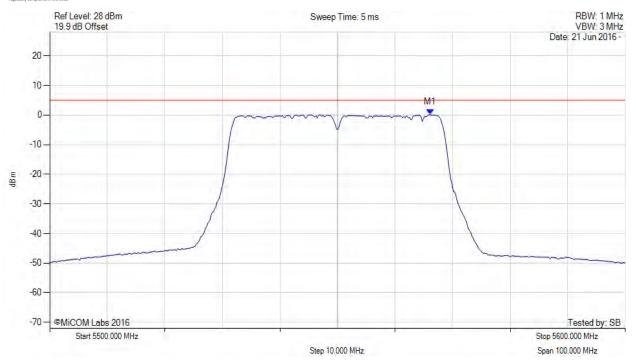
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#### POWER SPECTRAL DENSITY

Mitest.

Variant: 802.11ac 40, Channel: 5550.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5566.132 MHz: 0.098 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

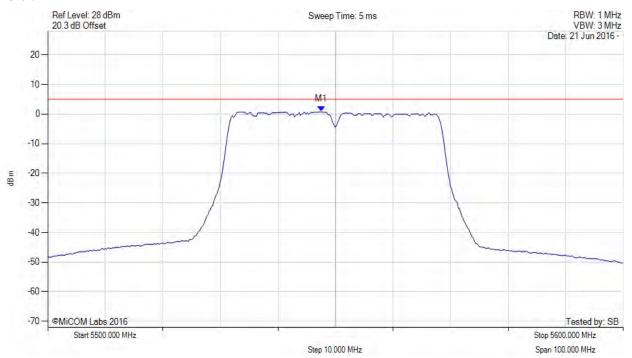
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5550.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5547.495 MHz: 0.759 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

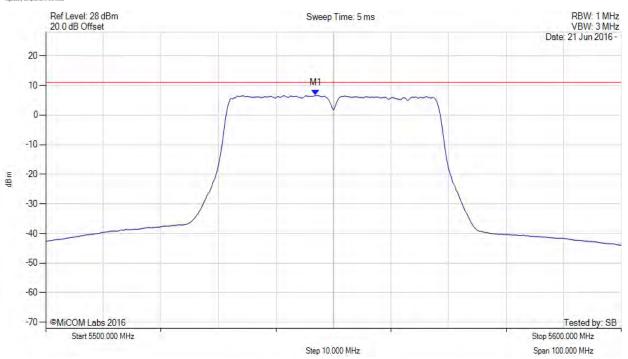
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## POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5550.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5546.900 MHz: 6.623 dBm	Limit: ≤ 11.0 dBm
Sweep Count = 100	M1 + DCCF : 5546.900 MHz : 6.667 dBm	Margin: -4.4 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

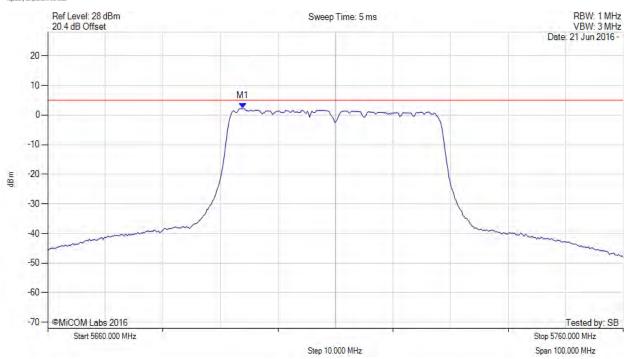
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#### POWER SPECTRAL DENSITY

Mitest.

Variant: 802.11ac 40, Channel: 5710.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5693.868 MHz: 2.209 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

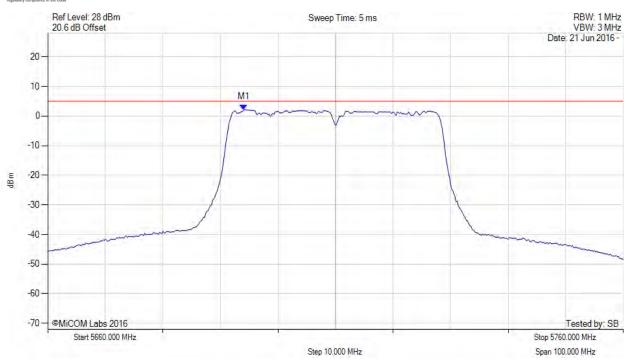
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#### POWER SPECTRAL DENSITY

**MiTest** 

Variant: 802.11ac 40, Channel: 5710.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5694.068 MHz: 2.140 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

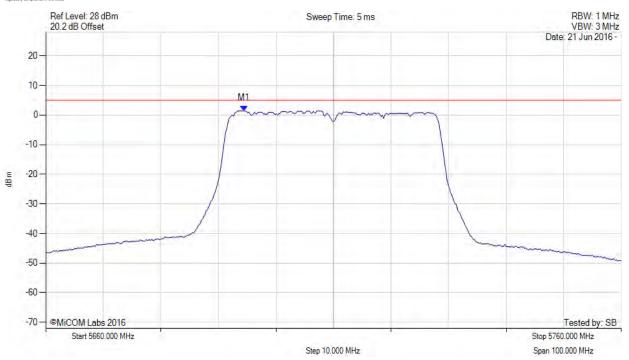
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5710.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5694.469 MHz: 1.451 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

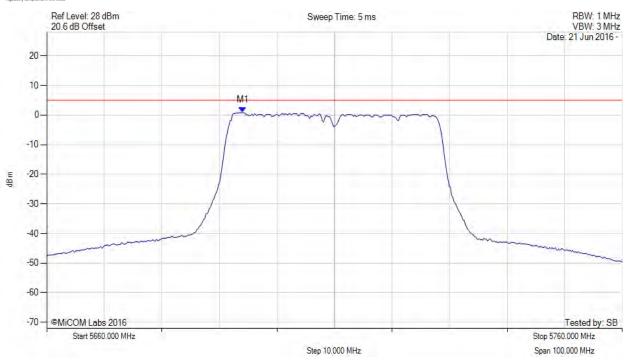
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5710.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5694.068 MHz: 0.854 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

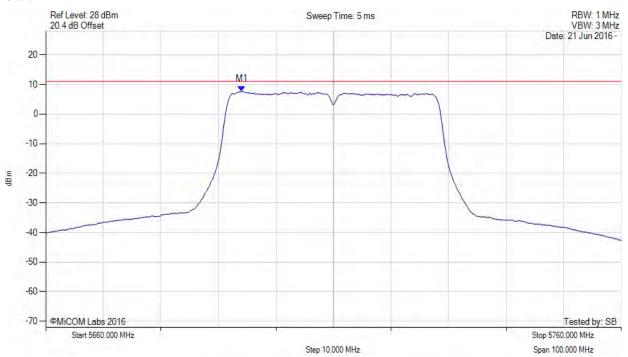
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5710.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5694.100 MHz: 7.667 dBm	Limit: ≤ 11.0 dBm
Sweep Count = 100	M1 + DCCF : 5694.100 MHz : 7.711 dBm	Margin: -3.3 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

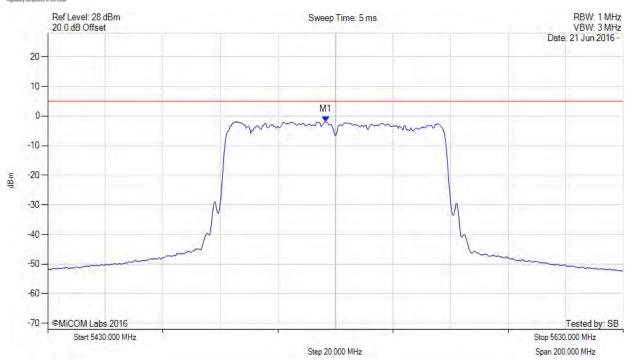
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## POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 80, Channel: 5530.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5526.593 MHz: -1.961 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

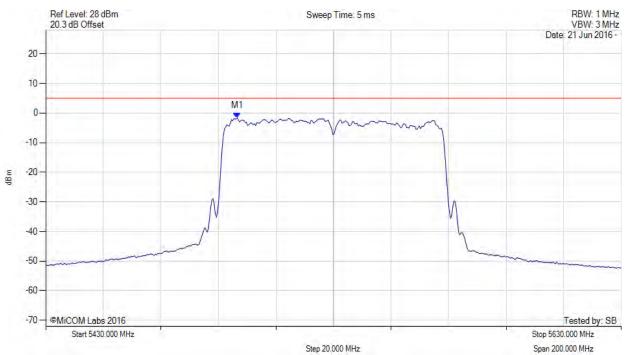
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5530.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5496.533 MHz: -1.657 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

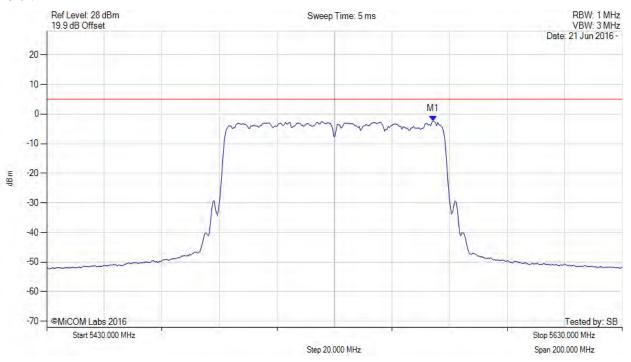
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5530.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5564.269 MHz: -2.337 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

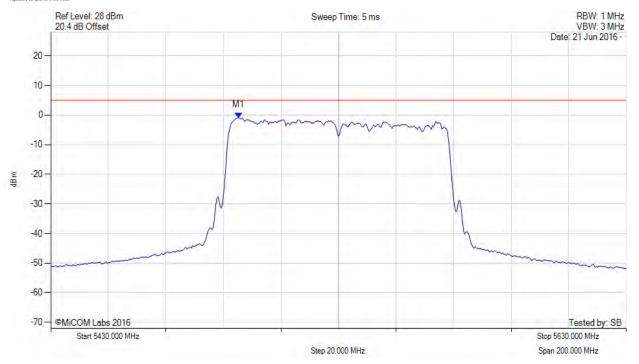
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#### POWER SPECTRAL DENSITY

**MiTest** 

Variant: 802.11ac 80, Channel: 5530.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5495.331 MHz: -0.893 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



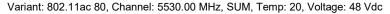
To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

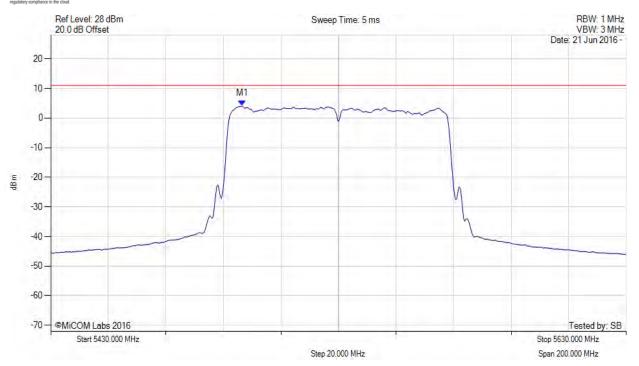
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# POWER SPECTRAL DENSITY





Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5496.500 MHz: 4.078 dBm	Limit: ≤ 11.0 dBm
Sweep Count = 100	M1 + DCCF : 5496.500 MHz : 4.122 dBm	Margin: -6.9 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

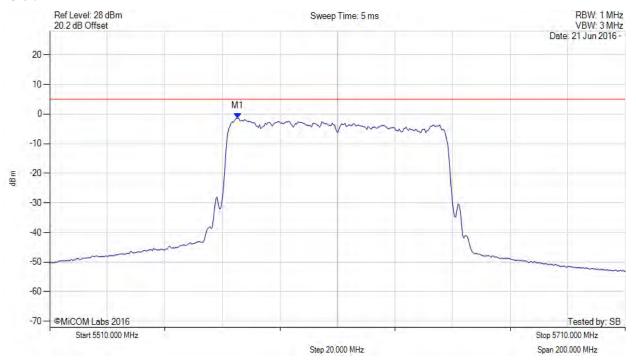
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5610.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5575.331 MHz: -1.376 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

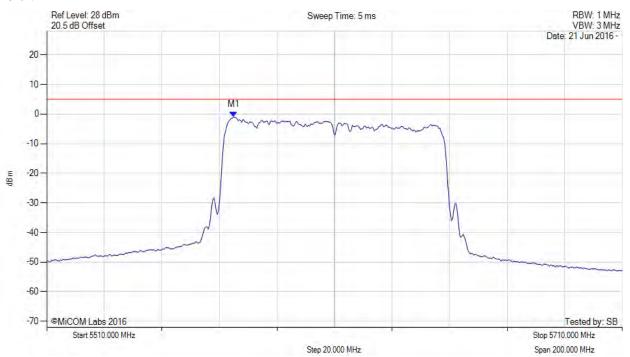
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5610.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5574.930 MHz: -1.038 dBm	Channel Frequency: 5610.00 MHz
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

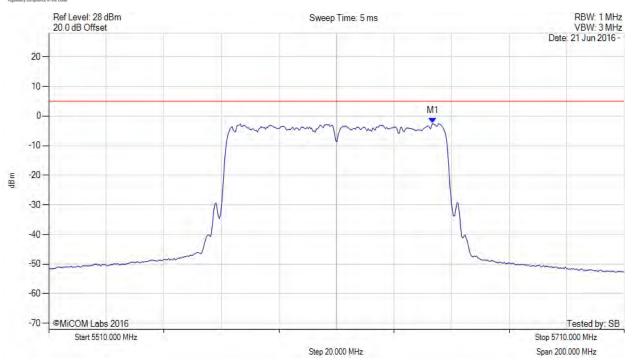
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#### POWER SPECTRAL DENSITY

**MiTest** 

Variant: 802.11ac 80, Channel: 5610.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5643.467 MHz: -2.435 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

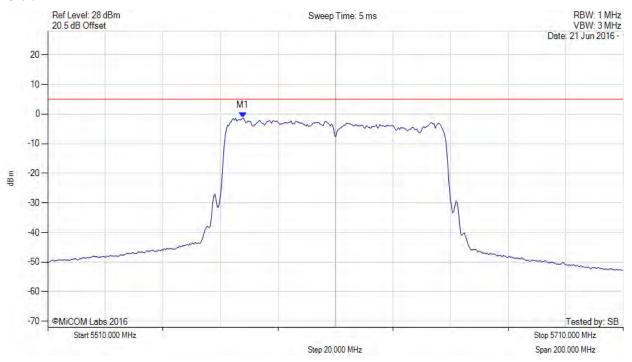
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5610.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5577.735 MHz: -1.336 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

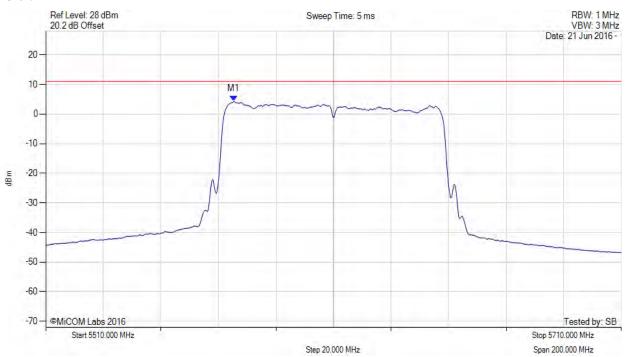
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5610.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5575.300 MHz: 4.292 dBm	Limit: ≤ 11.0 dBm
Sweep Count = 100	M1 + DCCF : 5575.300 MHz : 4.336 dBm	Margin: -6.7 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

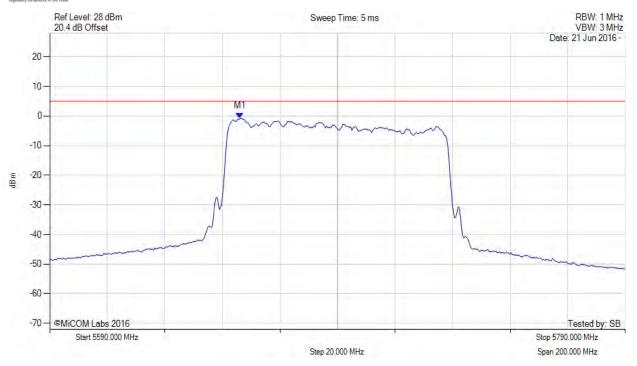
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## POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 80, Channel: 5690.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5656.132 MHz: -0.735 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

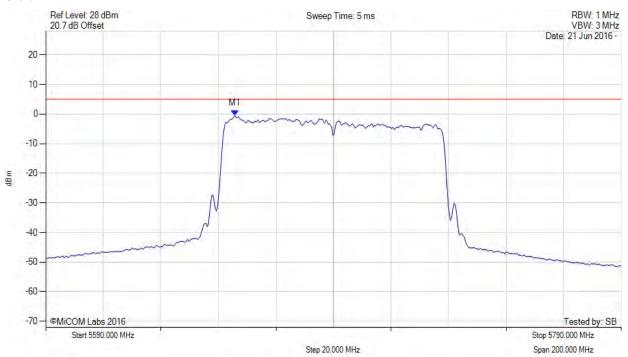
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5690.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5655.731 MHz: -0.482 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

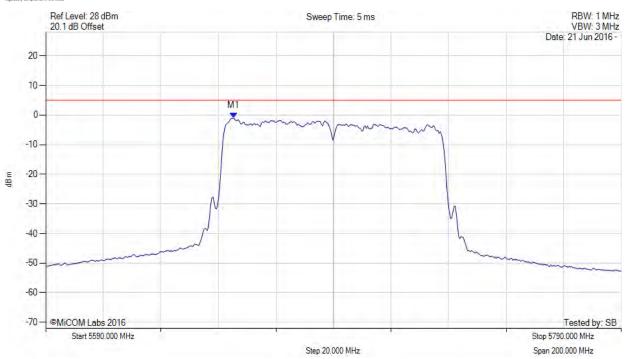
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5690.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5655.331 MHz: -1.002 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

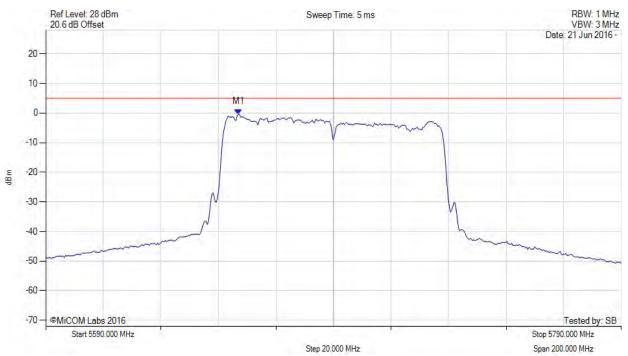
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5690.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5656.934 MHz: -0.428 dBm	Limit: ≤ 4.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

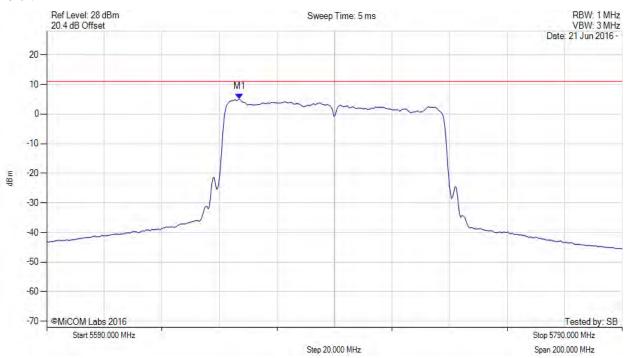
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## POWER SPECTRAL DENSITY



Variant: 802.11ac 80, Channel: 5690.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5656.900 MHz: 5.076 dBm	Limit: ≤ 11.0 dBm
Sweep Count = 100	M1 + DCCF : 5656.900 MHz : 5.120 dBm	Margin: -5.9 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

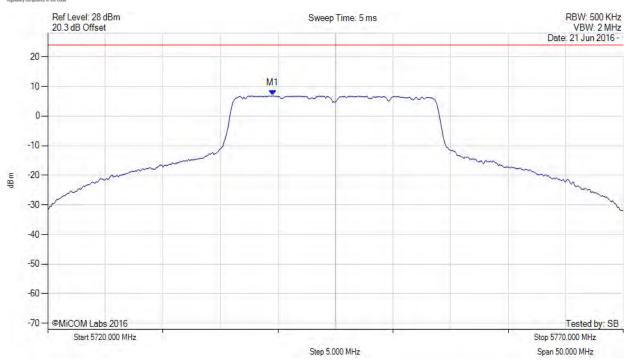
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#### POWER SPECTRAL DENSITY

MiTest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5739.539 MHz: 6.842 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

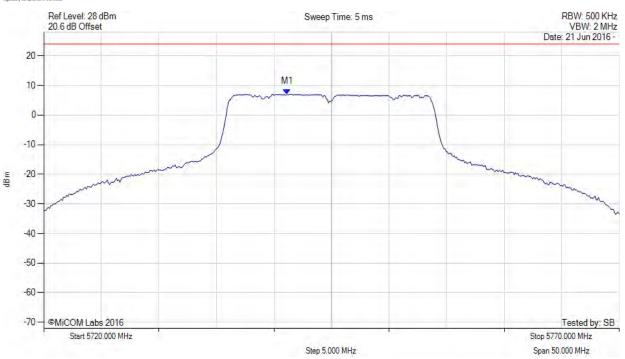
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#### POWER SPECTRAL DENSITY



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5741.142 MHz: 7.065 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

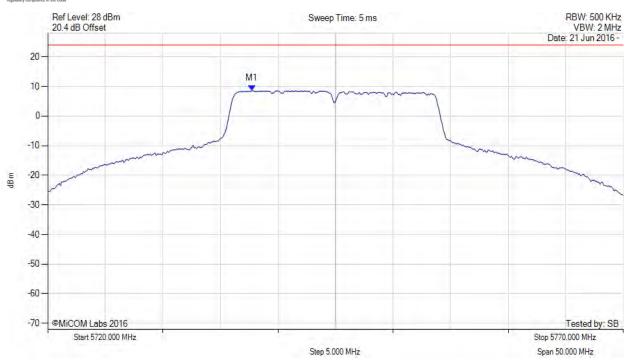
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#### POWER SPECTRAL DENSITY

**MiTest** 

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5737.735 MHz: 8.599 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

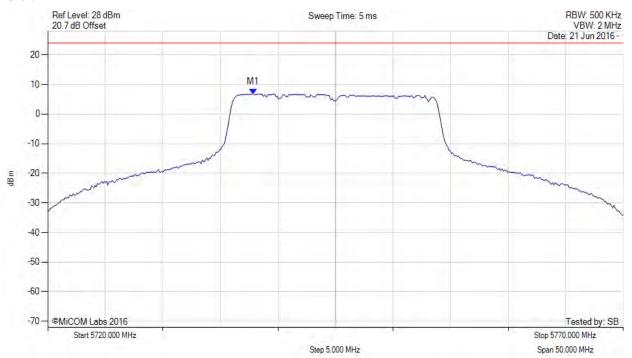
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#### POWER SPECTRAL DENSITY



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5737.836 MHz: 6.797 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

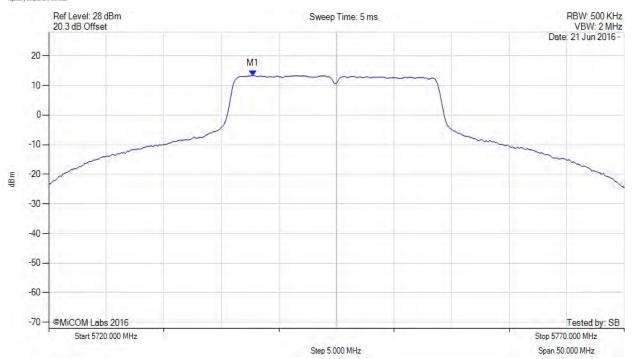
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#### POWER SPECTRAL DENSITY

Mitest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5737.700 MHz: 13.340 dBm	Limit: ≤ 30.0 dBm
Sweep Count = 100	M1 + DCCF : 5737.700 MHz : 13.384 dBm	Margin: -16.6 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

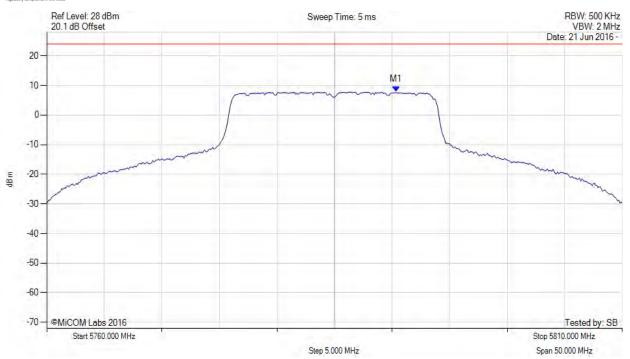
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#### POWER SPECTRAL DENSITY

Mitest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5790.361 MHz: 7.778 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

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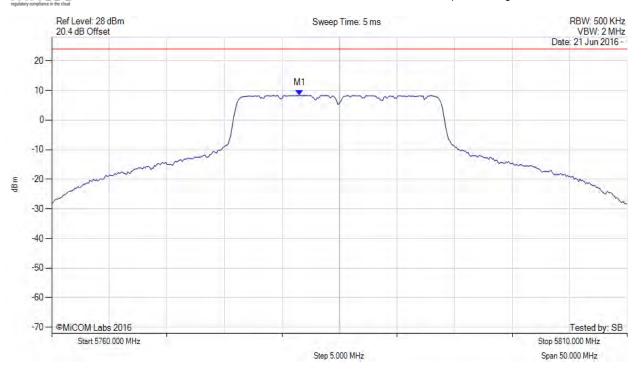
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# MiTest.

#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5781.543 MHz: 8.396 dBm	Channel Frequency: 5785.00 MHz
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

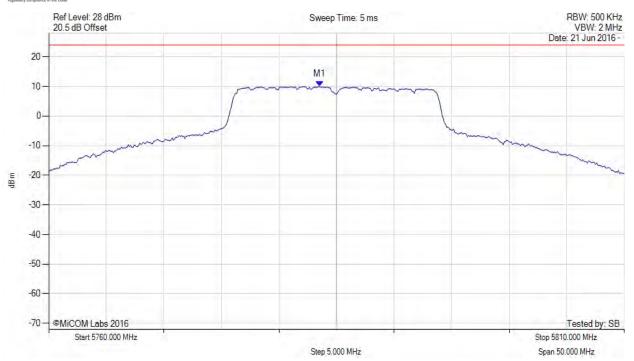
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#### POWER SPECTRAL DENSITY

MiTest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5783.547 MHz: 9.921 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

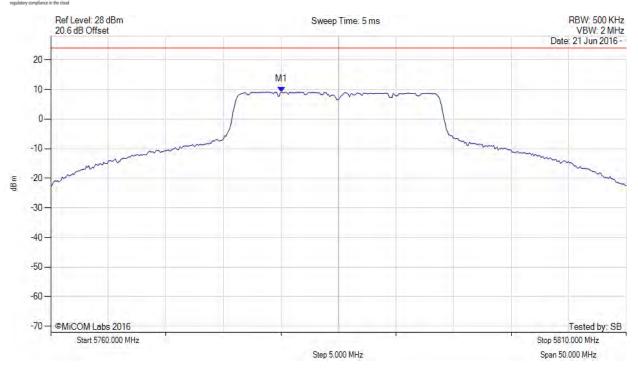
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## VITOCT -

#### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5780.040 MHz: 9.145 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



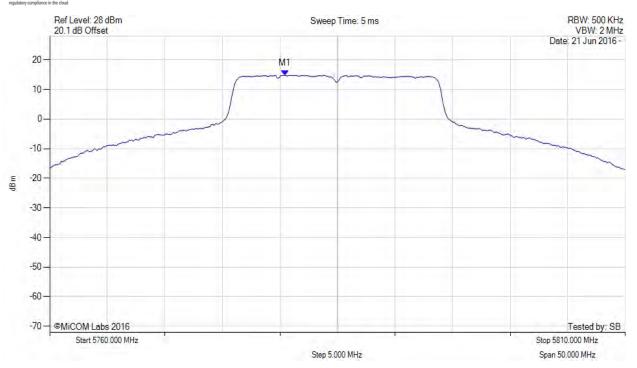
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### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1 : 5780.400 MHz : 14.751 dBm	Limit: ≤ 30.0 dBm
Sweep Count = 100	M1 + DCCF : 5780.400 MHz : 14.795 dBm	Margin: -15.2 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor: +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

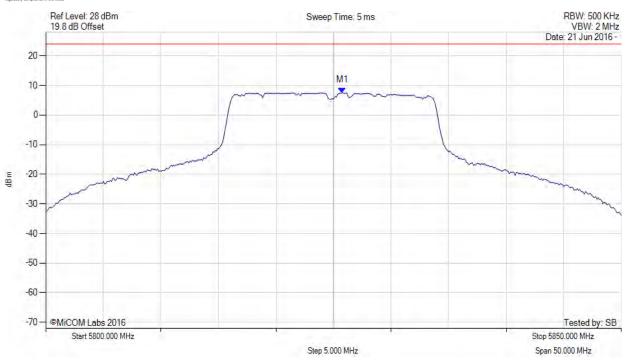
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#### POWER SPECTRAL DENSITY

MiTest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5825.752 MHz: 7.514 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



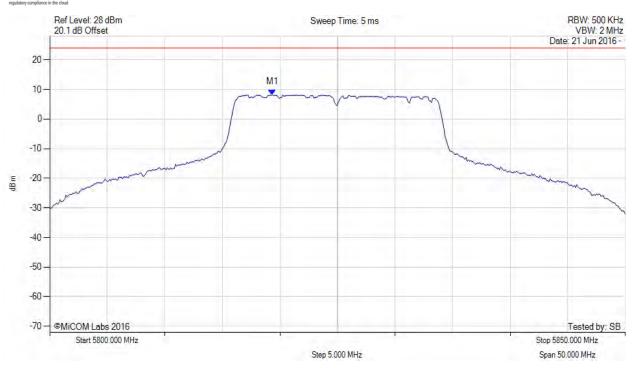
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### POWER SPECTRAL DENSITY

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5819.339 MHz: 8.231 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

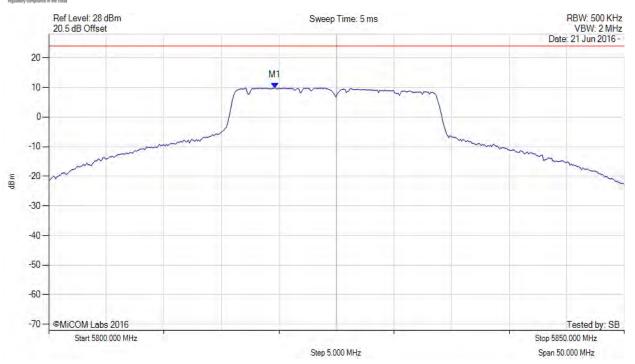
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#### POWER SPECTRAL DENSITY

Milest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5819.639 MHz: 9.865 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

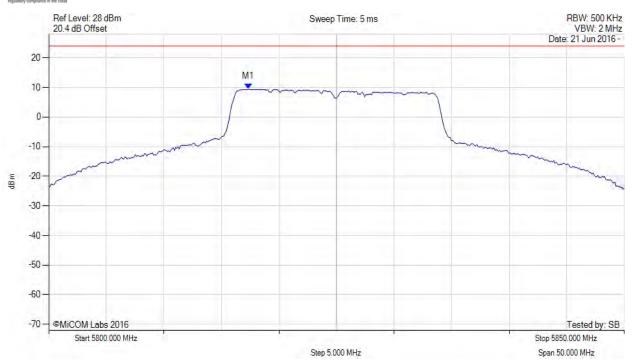
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#### POWER SPECTRAL DENSITY

MiTest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5817.335 MHz: 9.410 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

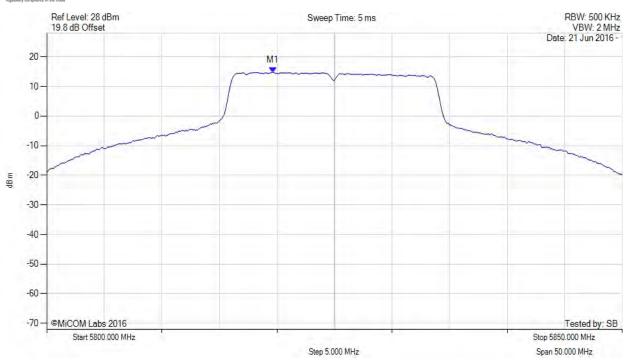
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#### POWER SPECTRAL DENSITY

**MiTest** 

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1 : 5819.600 MHz : 14.741 dBm	Limit: ≤ 30.0 dBm
Sweep Count = 100	M1 + DCCF : 5819.600 MHz : 14.785 dBm	Margin: -15.2 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

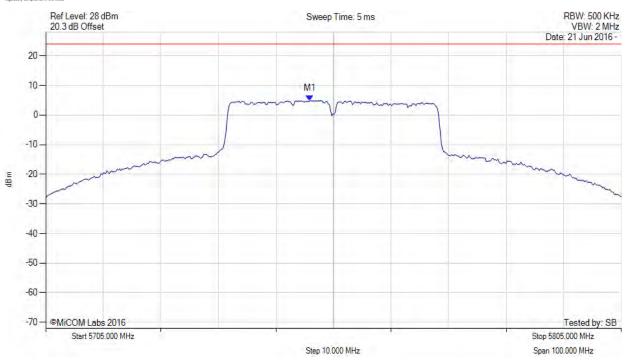
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#### POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 40, Channel: 5755.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5750.892 MHz: 4.873 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

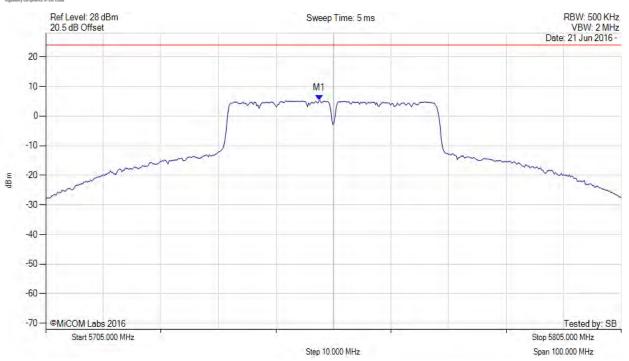
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#### POWER SPECTRAL DENSITY

**MiTest** 

Variant: 802.11ac 40, Channel: 5755.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5752.495 MHz: 5.202 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

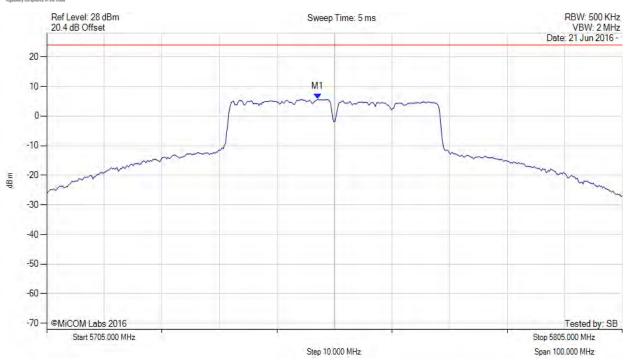
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#### POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 40, Channel: 5755.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5752.094 MHz: 5.712 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

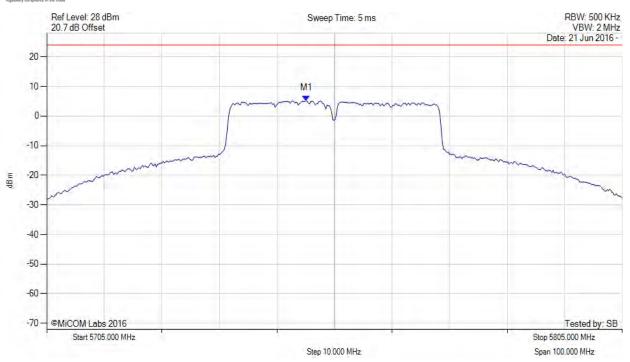
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#### POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 40, Channel: 5755.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5750.090 MHz: 5.186 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

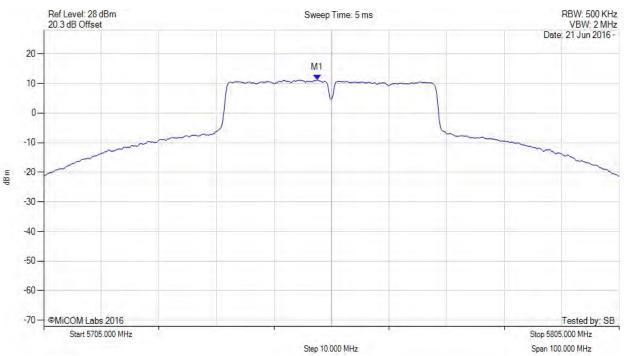
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#### POWER SPECTRAL DENSITY



Variant: 802.11ac 40, Channel: 5755.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5752.500 MHz: 11.137 dBm	Limit: ≤ 30.0 dBm
Sweep Count = 100	M1 + DCCF : 5752.500 MHz : 11.181 dBm	Margin: -18.8 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

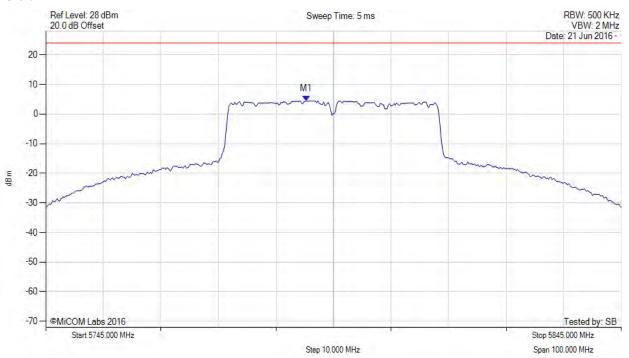
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#### POWER SPECTRAL DENSITY

MITEST.

Variant: 802.11ac 40, Channel: 5795.00 MHz, Chain a, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5790.291 MHz: 4.459 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

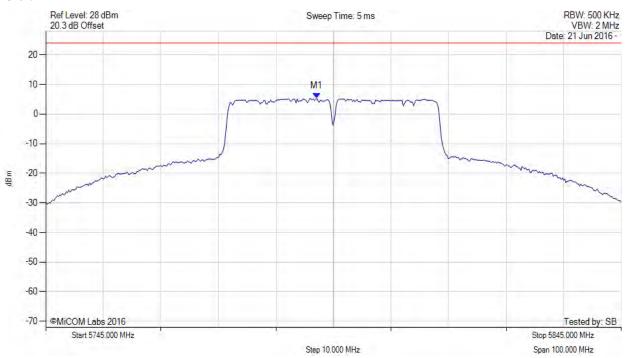
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#### POWER SPECTRAL DENSITY

Mitest.

Variant: 802.11ac 40, Channel: 5795.00 MHz, Chain b, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5792.094 MHz: 5.302 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

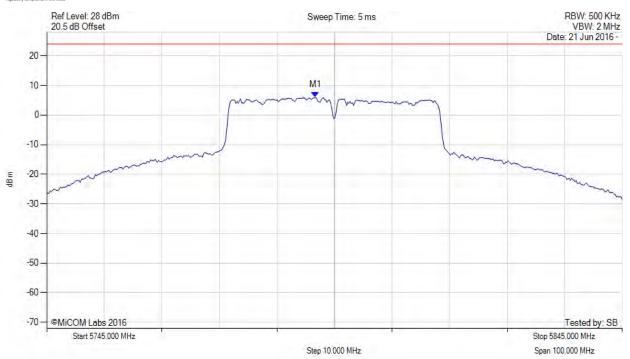
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#### POWER SPECTRAL DENSITY

MiTest.

Variant: 802.11ac 40, Channel: 5795.00 MHz, Chain c, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5791.693 MHz: 5.908 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

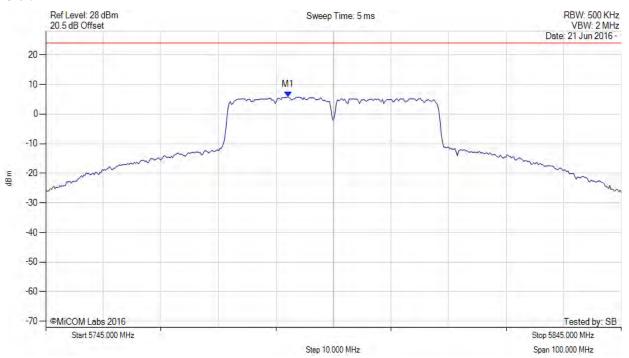
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#### POWER SPECTRAL DENSITY

Mitest.

Variant: 802.11ac 40, Channel: 5795.00 MHz, Chain d, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5787.084 MHz: 5.805 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

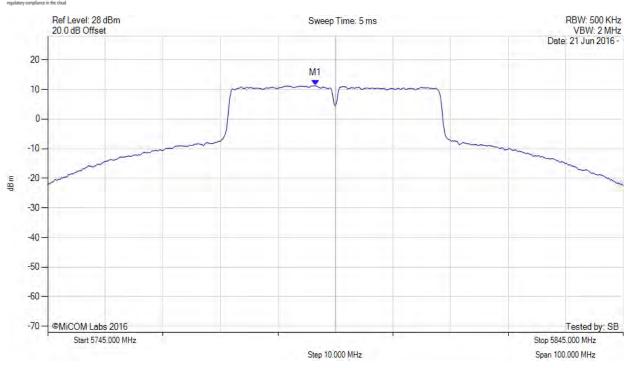
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### POWER SPECTRAL DENSITY

Variant: 802.11ac 40, Channel: 5795.00 MHz, SUM, Temp: 20, Voltage: 48 Vdc



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5791.500 MHz: 11.300 dBm	Limit: ≤ 30.0 dBm
Sweep Count = 100	M1 + DCCF : 5791.500 MHz : 11.344 dBm	Margin: -18.7 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

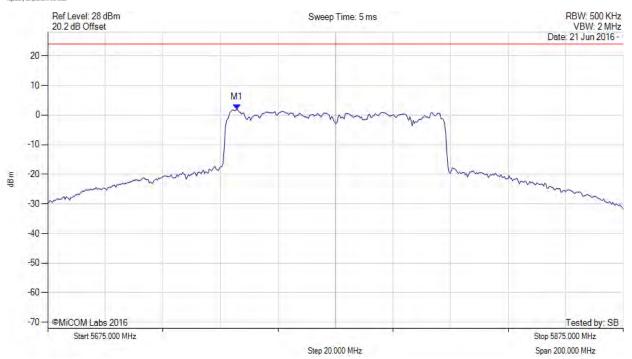
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#### POWER SPECTRAL DENSITY

Mitest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5740.731 MHz: 1.786 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

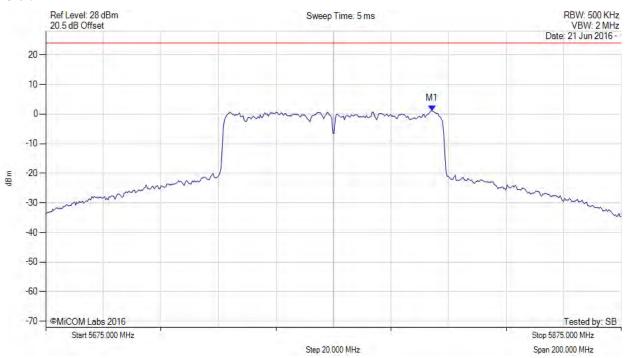
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#### POWER SPECTRAL DENSITY



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5809.269 MHz: 1.138 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

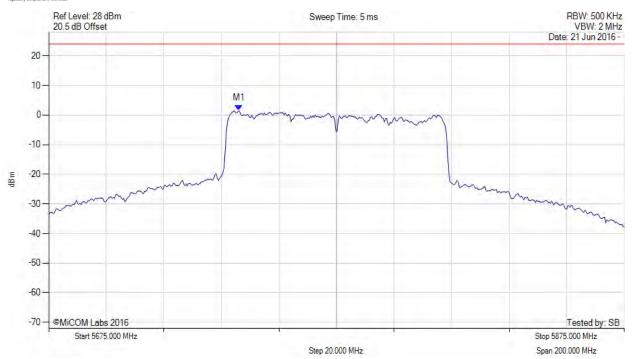
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#### POWER SPECTRAL DENSITY

Mitest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5741.132 MHz: 1.460 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

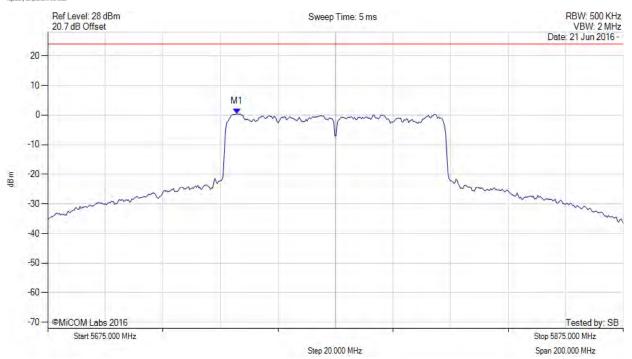
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#### POWER SPECTRAL DENSITY

Mitest.

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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5740.731 MHz: 0.367 dBm	Limit: ≤ 23.980 dBm
Sweep Count = 100		
RF Atten (dB) = 20		
Trace Mode = VIEW		



To: FCC CFR 47 Part 15 Subpart E 15.407 (non-DFS bands)

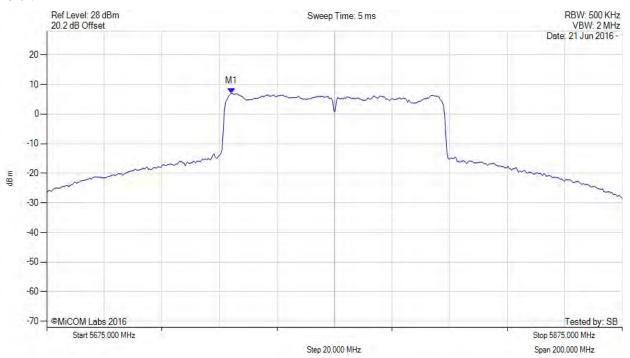
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#### POWER SPECTRAL DENSITY



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



Analyzer Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS	M1: 5739.100 MHz: 7.004 dBm	Limit: ≤ 30.0 dBm
Sweep Count = 100	M1 + DCCF : 5739.100 MHz : 7.048 dBm	Margin: -23.0 dB
RF Atten (dB) = 20	Duty Cycle Correction Factor : +0.04 dB	
Trace Mode = VIEW		



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