Company: VT Miltope Corporation

Test of: nMap2 (802.11 a/n/ac Wireless Access Point)

To: FCC CFR 47 Part 15 Subpart E 15.407

Report No.: MLTP26-U8 Rev A

TEST REPORT

FROM

MiCOM Labs
opening wireless markets

Test of: VT Miltope Corporation nMAP2

to

To: FCC CFR 47 Part 15 Subpart C 15.407

Test Report Serial No.: MLTP26-U8 Rev A

This report supersedes: NONE

Applicant:	VT Miltope Corporation 3800 Richardson Road South Hope Hull, AL 36043 USA
Product Function:	In-Flight Entertainment Wireless Access Point
Issue Date:	31st March 2015

This Test Report is Issued Under the Authority of:

MiCOM Labs, Inc.
575 Boulder Court
Pleasanton California 94566
USA
Phone: +1 (925) 462-0304
Fax: +1 (925) 462-0306
www.micomlabs.com

A2LA ACCREDITED
TESTING CERT #2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

Contents

1. ACCREDITATION, LISTINGS & RECOGNITION

1.1. TESTING ACCREDITATION

MiCOM Labs, Inc. is an accredited Electrical testing laboratory per the international standard ISO/IEC 17025:2005. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.01. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-01.pdf

American Association for Laboratory Accreditation

Accredited Laboratory

A2LA has accredited

MICOM LABS

Pleasanton, CA

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 8 January 2009*).

Presented this 28th day of February 2014.

President & CEO
For the Accreditation Council
Certificate Number 2381.01
Valid to November 30, 2015

For the tests or types of tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

1.2. RECOGNITION

MiCOM Labs, Inc has widely recognized wireless testing capabilities. Our international recognition includes Conformity Assessment Body designation by APEC MRA countries. MiCOM Labs test reports are accepted globally.

Country	Recognition Body	Status	Phase	Identification No.
USA	Federal Communications Commission (FCC)	TCB	-	US0159 Listing #: 102167
Canada	Industry Canada (IC)	FCB	APEC MRA 2	US0159 Listing #: 4143A-2 4143A-3
Japan	MIC (Ministry of Internal Affairs and Communication)	CAB	APEC MRA 2	RCB 210
	VCCI	--	--	A-0012
Europe	European Commission	NB	EU MRA	NB 2280
Australia	Australian Communications and Media Authority (ACMA)	CAB	APEC MRA 1	US0159
Hong Kong	Office of the Telecommunication Authority (OFTA)	CAB	APEC MRA 1	
Korea	Ministry of Information and Communication Radio Research Laboratory (RRL)	CAB	APEC MRA 1	
Singapore	Infocomm Development Authority (IDA)	CAB	APEC MRA 1	
Taiwan	National Communications Commission (NCC) Bureau of Standards, Metrology and Inspection (BSMI)	CAB	APEC MRA 1	
Vietnam	Ministry of Communication (MIC)	CAB	APEC MRA 1	

EU MRA – European Union Mutual Recognition Agreement.
NB – Notified Body
APEC MRA – Asia Pacific Economic Community Mutual Recognition Agreement. Recognition agreement under which test lab is accredited to regulatory standards of the APEC member countries.
Phase I - recognition for product testing
Phase II – recognition for both product testing and certification

1.3. PRODUCT CERTIFICATION

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard ISO/IEC 17065:2012. The company is accredited by the American Association for Laboratory Accreditation (A2LA) www.a2la.org test laboratory number 2381.02. MiCOM Labs test schedule is available at the following URL; http://www.a2la.org/scopepdf/2381-02.pdf


American Association for Laboratory Accreditation

Accredited Product Certification Body

A2LA has accredited

MICOM LABS

Pleasanton, CA

for technical competence as a

Product Certification Body

This product certification body is accredited in accordance with the recognized International Standard ISO/IEC 17065:2012 - *Requirements for bodies certifying products, processes and services*. This accreditation demonstrates technical competence for a defined scope and the operation of a quality management system.

Presented this 28th day of February 2014.

President & CEO
For the Accreditation Council
Certificate Number 2381.02
Valid to November 30, 2015

For the product certification schemes to which this accreditation applies, please refer to the organization's Product Certification Scope of Accreditation

United States of America – Telecommunication Certification Body (TCB)
Industry Canada – Certification Body, CAB Identifier – US0159
Europe – Notified Body (NB), NB Identifier - 2280
Japan – Recognized Certification Body (RCB), RCB Identifier - 210

2. DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft	12th March 2015	
Rev A	31st March 2015	Initial Release
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In the above table the latest report revision will replace all earlier versions.

3. TEST RESULT CERTIFICATE

Manufacturer:	VT Miltope Corporation 3800 Richardson Road South Hope Hull, AL 36043 USA	**Tested By:**	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
EUT:	In-Flight Entertainment System Wireless Access Point	**Telephone:**	+1 925 462 0304
Model:	nMAP2	**Fax:**	+1 925 462 0306
S/N's:	Not Available		
Test Date(s):	4th – 18th February 2015	**Website:**	www.micomlabs.com

STANDARD(S)	TEST RESULTS
FCC CFR 47 Part 15 Subpart C new 15.407	**EQUIPMENT COMPLIES**

MiCOM Labs, Inc. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

Notes:

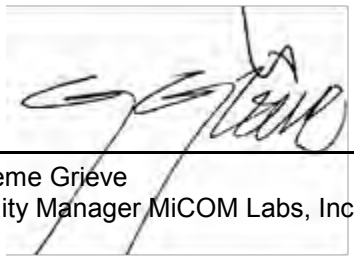
1. This document reports conditions under which testing was conducted and the results of testing performed.

2. Details of test methods used have been recorded and kept on file by the laboratory.

3. Test results apply only to the item(s) tested.

A2LA ACCREDITED
TESTING CERT #2381.01

Approved & Released for MiCOM Labs, Inc. by:



Graeme Grieve
Quality Manager MiCOM Labs, Inc.

Gordon Hurst
President & CEO MiCOM Labs, Inc.

4. REFERENCES AND MEASUREMENT UNCERTAINTY

4.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
I	A2LA	April 2014	Reference to A2LA Accreditation Status – A2LA Advertising Policy
II	ETSI TR 100 028	2001-12	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
III	M 3003	Edition 3 Nov. 2012	Expression of Uncertainty and Confidence in Measurements
IV	FCC 47 CFR Part 2.1033	2014	FCC requirements and rules regarding photographs and test setup diagrams.

4.2. Test And Uncertainty Procedure

Conducted and radiated emission measurements were conducted in accordance with American National Standards Institute ANSI C63.4, listed in the Normative References section of this report.

Measurement uncertainty figures are calculated in accordance with ETSI TR 100 028 Parts 1 and 2.

Measurement uncertainties stated are based on a standard uncertainty multiplied by a coverage factor k = 2, providing a level of confidence of approximately 95 % in accordance with UKAS document M 3003 listed in the Normative References section of this report.

5. PRODUCT DETAILS AND TEST CONFIGURATIONS

5.1. Technical Details

Details	Description
Purpose:	Test of the VT Miltope Corporation nMAP2 to FCC CFR 47 Part 15 Subpart C 15.407.
Applicant:	VT Miltope Corporation 3800 Richardson Road South Hope Hull, AL 36043 USA
Manufacturer:	As Applicant
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California 94566 USA
Test report reference number:	MLTP26-U8 Rev A
Date EUT received:	November 25, 2014
Standard(s) applied:	FCC CFR 47 Part 15 Subpart C new 15.407
Dates of test (from - to):	4th – 18th February 2015
No of Units Tested:	1
Type of Equipment:	802.11 a/n/ac Wireless Access Point
Product Trade Name:	nMAP
Model(s):	nMAP2
Location for use:	Indoor
Declared Frequency Range(s):	5150 - 5250 MHz; 5250 - 5350 MHz; 5470 - 5725 MHz; 5470 - 5825 MHz; 5725 - 5850 MHz;
Hardware Rev	Rev B
Software Rev	v1.3.04-root
Type of Modulation:	OFDM
EUT Modes of Operation:	5150 - 5250 MHz: 802.11a; n HT-20; n HT-40; ac-80; 5725 - 5850 MHz: 802.11a; n HT-20; n HT-40; ac-80;
Declared Nominal Output Power (Ave):	5150 - 5250 MHz: Not Declared: 802.11a; 802.11ac-80; 802.11n HT-20; 802.11n HT-40; 5725 - 5850 MHz: Not Declared: 802.11a; 802.11ac-80; 802.11n HT-20; 802.11n HT-40;
Transmit/Receive Operation:	Half Duplex
System Beam Forming:	This device has no beam-forming capability
Rated Input Voltage and Current:	DC only (Battery operated / external supply) 28Vdc
Operating Temperature Range:	Declared Range 0°C to 50°C

ITU Emission Designator:	802.11a	16M8D1D
	802.11n HT20	17M9D1D
	802.11n HT40	36M7D1D
	802.11ac80	76M9D1D
Equipment Dimensions:	226mm x 192mm x 161mm / 8.9"" x 7.6"" x 6.3"" (W x D x H)	
Weight:	2.0 kg	
Primary function of equipment:	Wireless Access Point	

5.2. Scope Of Test Program

The scope of the test program was to test the nMAP2 configurations in the frequency ranges 5150 - 5250 MHz; 5725 - 5850 MHz (non-DFS frequency bands); for compliance against FCC CFR 47 Part 15 Subpart C 15.407 specifications.

FCC OET KDB Implementation
This test program implements the following FCC KDB – 662911 31st October 2013;
Emissions Testing of Transmitters with Multiple Outputs in the Same Band

The KDB document provides guidance for measurements of conducted output emissions of devices that employ a single transmitter with multiple outputs in the same band, with the outputs occupying the same or overlapping frequency ranges. It applies to EMC compliance measurements on devices that transmit on multiple antennas simultaneously in the same or overlapping frequency ranges through a coordinated process. Examples include, but are not limited to, devices employing beam forming or multiple-input and multiple-output (MIMO.) This guidance applies to both licensed and unlicensed devices wherever the FCC rules call for conducted output measurements. Guidance is provided for in-band, out-of-band and spurious emission measurements.

This guidance does not apply to the multiple transmitters included in a composite device, such as a device that combines an 802.11 modem with a cell phone in one enclosure with each driving its own antenna.

VT Miltope Corporation nMAP2 Wireless Access Point

VT Miltope Corporation nMAP2 Wireless Access Point

5.3. Equipment Model(s) and Serial Number(s)

Model / Description	Serial no.	Hardware version	Software version
nMAP2	nMAP2-EQ24	Rev B	v1.3.04-root

5.4. Antenna Details

Type	Manufacturer	Model	Family	Gain (dBi)	BF Gain	Dir BW	X-Pol	Frequency Band (MHz)
Inverted F	Skycross	AHAD00123	Inverted F	5.1	-	360	-	2400-2483.5
Inverted F	Skycross	AHAD00123	Inverted F	6.4	-	360	-	5150 - 5850
Inverted F	Skycross	AHAD00123	Inverted F	4.8	-	360	-	2400-2483.5
Inverted F	Skycross	AHAD00123	Inverted F	6.2	-	360	-	5725 - 5850
Inverted F	Skycross	AHAD00123	Inverted F	4.5	-	360	-	2400-2483.5
Inverted F	Skycross	AHAD00123P	Inverted F	7.1	-	360	-	5725 - 5850

BF Gain - Beamforming Gain
Dir BW - Directional BeamWidth
X-Pole – Cross Polarization

5.5. Cabling and I/O Ports

Number and type of I/O ports

1. J1 – EN4165 Power & I/O Connector, >1 m screened cable
2. J2 – 2 x EN4165 I/O Connector, >1 m screened cable

5.6. Test Configurations

Testing was performed to determine the highest power level versus bit rate. The variant with the highest power was used to exercise the product.

Operational Mode(s) (802.11a/b/g/n/ac)	Data Rate with Highest Power MBit/s	Channel Frequency (MHz)		
		Low	Mid	High
5150 - 5250 MHz				
802.11a	6	5,180.00	5,200.00	5,240.00
802.11n HT-20	6.5	5,180.00	5,200.00	5,240.00
802.11n HT-40	13.5	5,190.00	--	5,230.00
802.11ac-80	29.3	--	5,210.00	--
5725 - 5850 MHz				
802.11a	6	5,745.00	5,785.00	5,825.00
802.11n HT-20	6.5	5,745.00	5,785.00	5,825.00
802.11n HT-40	13.5	5,755.00	-	5,795.00
802.11ac-80	29.3	-	5,775.00	-

Legacy – data rates for 802.11abg products

Results for the above configurations are provided in this report

5.7. Equipment Modifications

The following modifications were required to bring the equipment into compliance:

1. NONE

5.8. Deviations from the Test Standard

The following deviations from the test standard were required in order to complete the test program:

1. NONE

6. TEST SUMMARY

List of Measurements

Test Header	Result	Data Link
Conducted Testing		
15.407 (a) Peak Output Power	Complies	View Data
15.247 (h) Transmit Power Control (TPC)	Complies	View Data
26 dB & 99% Bandwidth	Complies	View Data
15.407 (a) Power Spectral Density	Complies	View Data
Radiated Testing		
15.407(b)(2), 15.205(a)/15.209(a) Radiated Spurious Emissions	Complies	View Data
15.407(b)(2), 15.205(a)/15.209(a) Radiated Restricted Band-Edge Emissions	Complies	View Data
15.205 / 15.209 Digital Emissions (0.03 - 1GHz)	Complies	View Data
15.207 ac Wireline Testing	*Not Applicable	--

* **Not applicable under the scope of this project.** Although the nMAP2 can be powered from 115 Vac it does not connect to the Public Utility Network and therefore ac Wireline Emissions were not tested as part of this program.

NOTE: VT Miltope Corporation tested the device against **DO-160, "Environmental Conditions and Test Procedures for Airborne Equipment.**"

D0-160 Test Report Details
Test Lab: ITL Inc.
Address: 1127 Baker Street, Costa Mesa, California 92626
Report Number: 15627, Rev N/C
Issue Date: 11th March 2015

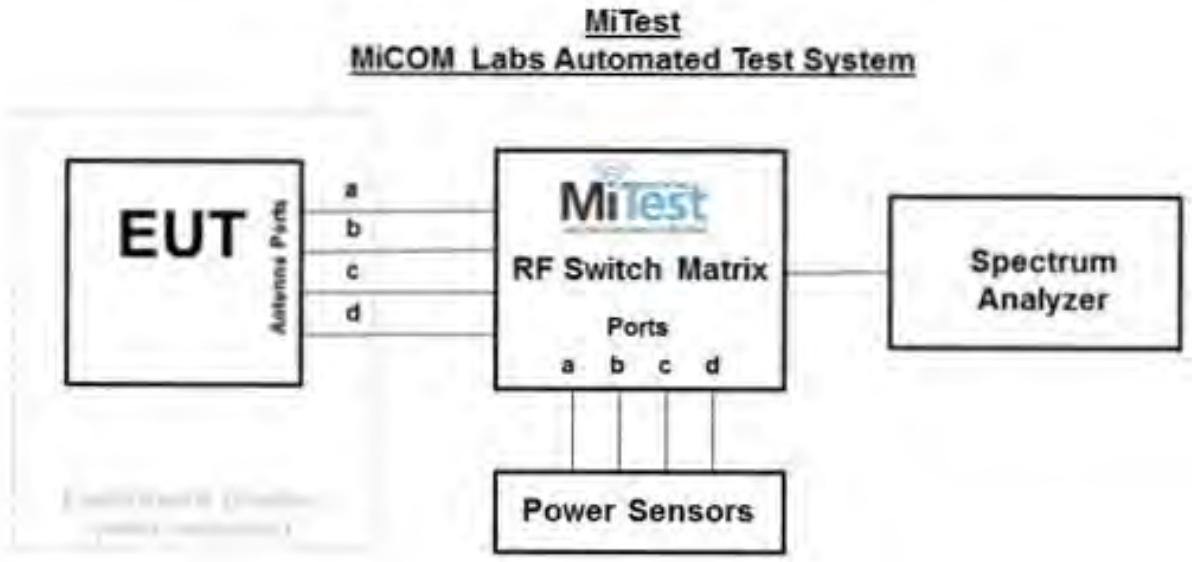
7. TEST EQUIPMENT CONFIGURATION(S)

7.1. Conducted Test Set-up

Conducted RF Emission Test Set-up(s) with Environmental Chamber
The following tests were performed using the conducted test set-up shown in the diagram below.

1. Peak Transmit Power
2. 26 dB & 99% Occupied Bandwidth
3. Power Spectral Density

*environmental chamber utilized



Conducted Test Measurement Setup

A full system calibration was performed on the test station and any resulting system losses (or gains) were taken into account in the production of all final measurement data.

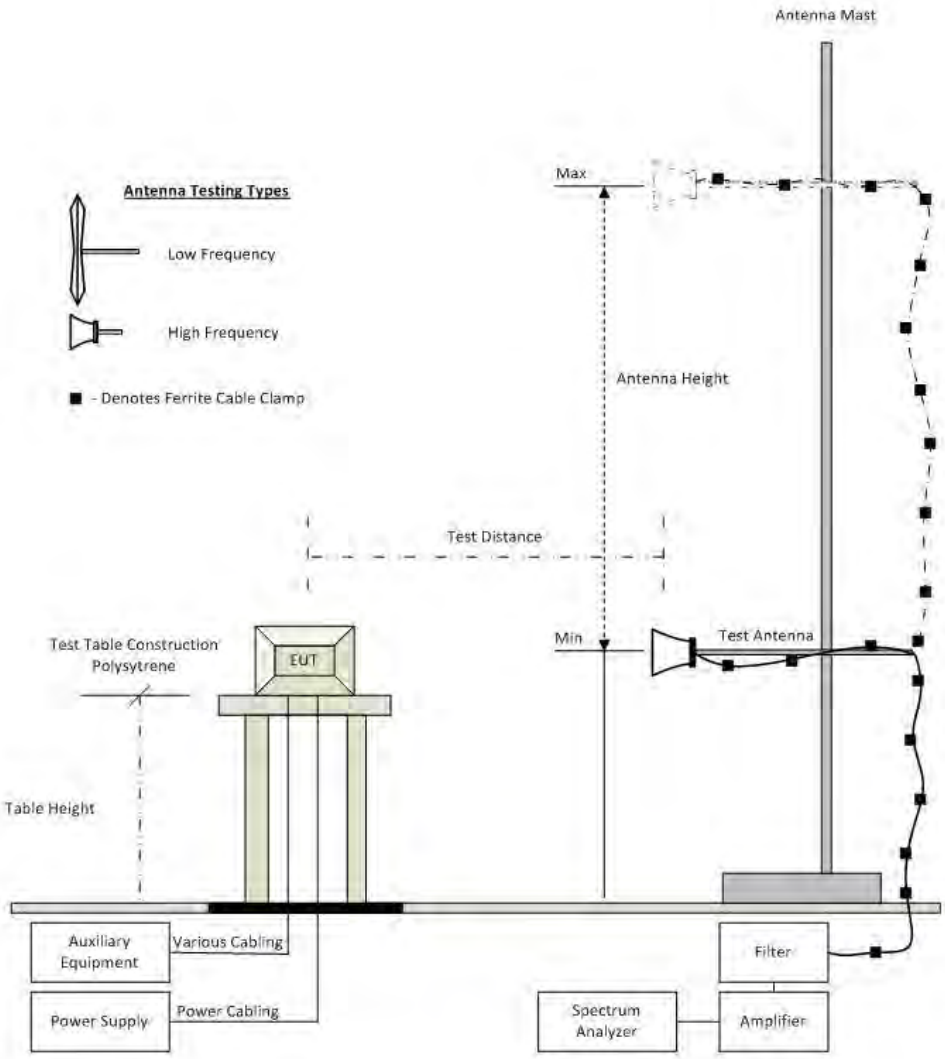
Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
158	Barometer/Thermometer	Control Company	4196	E2846	04 Dec 2015
193	Receiver 20 Hz to 7 GHz	Rhode & Schwarz	ESI 7	838496/007	14 Jan 2016
249	Resistance Thermometer	Thermotronics	GR2105-02	9340 #2	30 Oct 2015
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	31 Jul 2015
361	Desktop for RF#1, Labview Software installed	Dell	Vostro 220	WS RF#1	Not Required
378	Rohde & Schwarz 40 GHz Receiver with Generator	Rhode & Schwarz	ESIB40	100107/040	17 Jul 2015
380	4x4 RF Switch Box	MiCOM Labs	MiTest RF Switch Box	MIC001	30 Jun 2015
390	USB Power Head 50MHz - 24GHz -60 to +20dBm	Agilent	U2002A	MY50000103	17 Oct 2015
398	Test Software	MiCOM	MiTest ATS	Version 1.9	Not Required
405	DC Power Supply 0-60V	Agilent	6654A	MY4001826	Cal when used
408	USB to GPIB interface	National Instruments	GPIB-USB HS	14C0DE9	Not Required
440	USB Wideband Power Sensor	Boonton	55006	9178	25 Sep 2015
441	USB Wideband Power Sensor	Boonton	55006	9179	25 Sep 2015
442	USB Wideband Power Sensor	Boonton	55006	9181	25 Sep 2015
445	PoE Injector	D-Link	DPE-101GL	QTAH1E2000625	Not Required
75	Environmental Chamber	Thermatron	SE-300-2-2	27946	28 Nov 2015
RF#1 GPIB#1	GPIB cable to Power Supply	HP	GPIB	None	Not Required
RF#1 SMA#1	EUT to Mitest box port 1	Flexco	SMA Cable port1	None	30 Jun 2015
RF#1 SMA#2	EUT to Mitest box port 2	Flexco	SMA Cable port2	None	30 Jun 2015
RF#1 SMA#3	EUT to Mitest box port 3	Flexco	SMA Cable port3	None	30 Jun 2015
RF#1 SMA#4	EUT to Mitest box port 4	Flexco	SMA Cable port4	None	30 Jun 2015
RF#1 SMA#SA	Mitest box to SA	Flexco	SMA Cable SA	None	30 Jun 2015
RF#1 USB#1	USB Cable to Mitest Box	Dynex	USB Cable	None	Not Required

7.2. Radiated Spurious Emission Test Set-up > 1 GHz

The following tests were performed using the conducted test set-up shown in the diagram below.

1. Section 6.2 Radiated Spurious Emissions

Radiated Emission Measurement Setup – Above 1 GHz



Radiated Emission Test Setup

Traceability of Test Equipment Utilized for Radiated Emission Testing

Asset#	Description	Manufacturer	Model#	Serial#	Calibration Due Date
158	Barometer/Thermometer	Control Company	4196	E2846	04 Dec 2015
170	Video System Controller for Semi Anechoic Chamber	Panasonic	WV-CY101	04R08507	Not Required
287	Rohde & Schwarz 40 GHz Receiver	Rhode & Schwarz	ESIB40	100201	31 Jul 2015
301	5470 to 5725 MHz Notch Filter	Microtronics	RBC50704	001	08 Oct 2015
302	5150 to 5350 MHz Notch Filter	Microtronics	BRC50703	002	08 Oct 2015
303	5725 to 5875 MHz Notch filter	Microtronics	BRC50705	003	08 Oct 2015
310	SMA Cable	Micro-Coax	UFA210A-0-0787-3G03G0	209089-001	30 Oct 2015
338	Sunol 30 to 3000 MHz Antenna	Sunol	JB3	A052907	14 Aug 2015
342	2.4 GHz Notch Filter	EWT	EWT-14-0203	H1	08 Oct 2015
343	5.15 GHz Notch Filter	EWT	EWT-14-0200	H1	08 Oct 2015
344	5.35 GHz Notch Filter	EWT	EWT-14-0201	H1	08 Oct 2015
345	5.46 GHz Notch Filter	EWT	EWT-14-0202	H1	08 Oct 2015
377	Band Rejection Filter 5150 to 5880MHz	Microtronics	BRM50716	034	08 Oct 2015
396	2.4 GHz Notch Filter	Microtronics	BRM50701	001	07 Oct 2015
397	Amp 10 - 2500MHz	MiCOM Labs	Amp 10 - 2500 MHz	NA	23 Oct 2015
399	ETS 1-18 GHz Horn Antenna	ETS	3117	00154575	10 Oct 2015
406	Amplifier for Radiated Emissions	MiCOM Labs	40dB 1 to 18GHz Amp	0406	30 May 2015
410	Desktop Computer	Dell	Inspiron 620	WS38	Not Required
411	Mast/Turntable Controller	Sunol Sciences	SC98V	060199-1D	Not Required
412	USB to GPIB Interface	National Instruments	GPIB-USB HS	11B8DC2	Not Required
413	Mast Controller	Sunol Science	TWR95-4	030801-3	Not Required
414	DC Power Supply 0-60V	HP	6274	1029A01285	Cal when used
415	Turntable Controller	Sunol Sciences	Turntable Controller	None	Not Required
416	Gigabit ethernet filter	ETS-Lingren	Gigafoil 260366	None	Not Required
502	Test Software for Radiated Emissions	EMISoft	Vasona	Version 5 Build 59	Not Required
87	Uninterruptible Power Supply	Falcon Electric	ED2000-1/2LC	F3471 02/01	Cal when used

8. 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 MiTest. MiTest is an automated test system developed by MiCOM Labs. MiTest is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.

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

9. TEST RESULTS

9.1. Peak Transmit Power

Conducted Test Conditions for Maximum Conducted Output Power			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Maximum Conducted Output Power	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.407 (a)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	KDB 789033 - D01 DTS General UNII Test Procedures v01		

Test Procedure for Maximum Conducted Output Power Measurement

Method PM (Measurement using an RF average power meter). Section C) 4) of 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 cable losses and offsets were taken into consideration in the measured result. All operational modes and frequency bands were measured independently and the resultant calculated. For multiple outputs, the measurements were made simultaneously on each output port and summed in a linear fashion. This technique was used in order to prove compliance.

Equipment Configuration for Peak Transmit Power			
Variant:	802.11a	**Duty Cycle (%):**	73.0
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) dBm	MHz	dBm	dBm	
5180.0	4.16	5.78	4.46	--	11.00	N/A	29.80	-18.80	16.00
5200.0	3.27	5.36	4.49	--	10.59	N/A	29.80	-19.21	16.00
5240.0	3.23	3.43	3.94	--	9.68	N/A	29.80	-20.12	16.00

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

DCCF - Duty Cycle Correction Factor

Variant:	802.11ac-80	**Duty Cycle (%):**	43.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) + DCCF dBm	MHz	dBm	dBm	
5210.0	2.68	5.03	3.83	--	12.39	N/A	29.80	-17.41	16.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-20	**Duty Cycle (%):**	73.0
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
	Port(s)								
MHz	a	Σ Port(s) + DCCF dBm	MHz	d	Σ Port(s) + DCCF dBm	MHz	dBm	dBm	
5180.0	6.86	8.66	6.98	--	13.72	N/A	29.80	-16.08	16.00
5200.0	6.80	7.60	7.96	--	13.62	N/A	29.80	-16.18	16.00
5240.0	6.45	6.90	8.36	--	13.45	N/A	29.80	-16.35	16.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power

Variant:	802.11n HT-40	**Duty Cycle (%):**	65.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) + DCCF dBm	MHz	dBm	dBm	
5190.0	5.90	7.25	6.21	--	13.13	N/A	29.80	-16.67	16.00
5230.0	5.23	6.18	6.56	--	12.67	N/A	29.80	-17.13	16.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power			
Variant:	802.11a	**Duty Cycle (%):**	73.0
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) + DCCF dBm	MHz	dBm	dBm	
5745.0	5.26	4.41	4.79	--	10.97	N/A	29.80	-18.83	16.00
5785.0	3.45	5.08	4.48	--	10.53	N/A	29.80	-19.27	16.00
5825.0	4.38	4.00	4.43	--	10.41	N/A	29.80	-19.39	16.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power			
Variant:	802.11ac-80	**Duty Cycle (%):**	60.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) + DCCF dBm	MHz	dBm	dBm	
5775.0	6.08	5.12	4.90	--	12.39	N/A	29.80	-17.41	16.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power			
Variant:	802.11n HT-20	**Duty Cycle (%):**	96.0
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) + DCCF dBm	MHz	dBm	dBm	
5745.0	8.45	7.51	7.89	--	12.92	N/A	29.80	-16.88	16.00
5785.0	8.87	7.82	7.52	--	13.06	N/A	29.80	-16.74	16.00
5825.0	7.77	7.67	6.71	--	12.36	N/A	29.80	-17.44	16.00

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

DCCF - Duty Cycle Correction Factor

Equipment Configuration for Peak Transmit Power			
Variant:	802.11n HT-40	**Duty Cycle (%):**	94.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Conducted Output Power (dBm) Port(s)				Calculated Total Power	Minimum 26 dB Bandwidth	Limit	Margin	EUT Power Setting
MHz	a	b	c	d	Σ Port(s) + DCCF dBm	MHz	dBm	dBm	
5755.0	8.22	8.12	7.69	--	13.06	N/A	29.80	-16.74	16.00
5795.0	7.48	6.94	6.58	--	12.29	N/A	29.80	-17.51	16.00

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

DCCF - Duty Cycle Correction Factor

9.2. Transmit Power Control (TPC)

Conducted Test Conditions for Transmit Power Control (TPC)			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	20.0 - 24.5
Test Heading:	Transmit Power Control (TPC)	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (h)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	See Section "Normative References" KDB 789033 - D01 DTS General UNII Test Procedures KDB 662911 - Measurement of Transmitters with Multiple Output, MIMO, Smart Antenna		

Test Procedure for Transmit Power Control
Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.
Transmit Power Control measurement test setup diagram is provided in Section "Test Equipment Measurement Setup \ Conducted RF Emissions".

From the Peak Transmit Power section in this document it was found that the device EIRP was less than 500 mW therefore Transmit Power Control implementation is not required.

9.3. 26 dB & 99% Bandwidth

Conducted Test Conditions for 26 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	26 dB and 99 % Bandwidth	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.407 (a)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	KDB 789033 - D01 DTS General UNII Test Procedures v01		

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. KDB 789033 Section 5.1 Emission Bandwidth was used in order to prove compliance. The Resolution Bandwidth was set to approximately 1% of the emission bandwidth.

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11a	**Duty Cycle (%):**	73.0
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	6
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	a	b	c	d	Highest	Lowest		
5180.0	20.842	20.741	20.741	--	20.842	20.741		
5200.0	19.940	19.339	19.739	--	19.940	19.339		
5240.0	20.541	9.870	19.739	--	20.541	9.870		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	a	b	c	d	Highest	Lowest		
5180.0	16.834	16.633	16.633	--	16.834	16.633		
5200.0	16.533	16.533	16.533	--	16.533	16.533		
5240.0	16.533	16.533	16.633	--	16.633	16.533		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11ac-80	**Duty Cycle (%):**	43.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	a	b	c	d	Highest	Lowest		
5210.0	89.379	84.168	86.172	--	89.379	84.168		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	a	b	c	d	Highest	Lowest		
5210.0	76.553	76.152	76.954	--	76.954	76.152		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11n HT-20	**Duty Cycle (%):**	73.0
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	6
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	a	b	c	d	Highest	Lowest		
5180.0	21.844	22.144	22.645	--	22.645	21.844		
5200.0	20.942	21.844	20.842	--	21.844	20.842		
5240.0	21.443	21.142	20.741	--	21.443	20.741		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	a	b	c	d	Highest	Lowest		
5180.0	17.936	17.936	17.836	--	17.936	17.836		
5200.0	17.836	17.836	17.735	--	17.836	17.735		
5240.0	17.836	17.836	17.836	--	17.836	17.836		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11n HT-40	**Duty Cycle (%):**	65.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5190.0	44.088	44.088	43.687	--	44.088	43.687		
5230.0	43.487	42.886	43.287	--	43.487	42.886		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5190.0	36.673	36.673	36.673	--	36.673	36.673		
5230.0	36.673	36.673	36.473	--	36.673	36.473		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth

Variant:	802.11a	**Duty Cycle (%):**	73.0
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	6
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5745.0	21.042	21.242	21.343	--	21.343	21.042		
5785.0	21.343	22.044	21.042	--	22.044	21.042		
5825.0	21.242	21.543	21.142	--	21.543	21.142		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5745.0	16.633	16.633	16.633	--	16.633	16.633		
5785.0	16.633	16.633	16.433	--	16.633	16.433		
5825.0	16.733	16.834	16.633	--	16.834	16.633		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11ac-80	**Duty Cycle (%):**	60.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5775.0	90.982	84.569	84.168	--	90.982	84.168		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5775.0	76.553	76.553	76.152	--	76.553	76.152		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11n HT-20	**Duty Cycle (%):**	96.0
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	6
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	a	b	c	d	Highest	Lowest		
5745.0	20.942	21.543	21.343	--	21.543	20.942		
5785.0	20.641	22.144	21.242	--	22.144	20.641		
5825.0	20.942	21.343	21.743	--	21.743	20.942		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	a	b	c	d	Highest	Lowest		
5745.0	17.836	17.836	17.836	--	17.836	17.836		
5785.0	17.735	17.836	17.735	--	17.836	17.735		
5825.0	17.836	17.836	17.735	--	17.836	17.735		

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

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

Equipment Configuration for 26 dB & 99% Occupied Bandwidth			
Variant:	802.11n HT-40	**Duty Cycle (%):**	94.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured 26 dB Bandwidth (MHz) Port(s)				26 dB Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5755.0	46.092	42.685	44.289	--	46.092	42.685		
5795.0	42.886	43.287	43.687	--	43.687	42.886		

Test Frequency	Measured 99% Bandwidth (MHz) Port(s)				99% Bandwidth (MHz)			
MHz	**a**	**b**	**c**	**d**	**Highest**	**Lowest**		
5755.0	36.673	36.673	36.673	--	36.673	36.673		
5795.0	36.673	36.673	36.673	--	36.673	36.673		

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

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

9.4. Power Spectral Density

Conducted Test Conditions for Power Spectral Density			
Standard:	FCC CFR 47:15.407	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Power Spectral Density	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (a)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	KDB 789033 - D01 DTS General UNII Test Procedures v01		

Test Procedure for Power Spectral Density

The In-Band power spectral density was measured using the measure and sum approach per FCC KDB 662911 (D01 Multiple Transmitter Output v0.)

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 N 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 calculated on a computer, and the results read back into the spectrum analyzer as a data file to produce a representative plot of total spectral power density.

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 summation plot adds each point on the spectrum analyzer for all antenna chains (assuming a MIMO device) and combines into one single graphical image. 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 (10a/10 + 10 b/10 + 10c/10 + 10d/10)]

x = Duty Cycle

Equipment Configuration for Power Spectral Density			
Variant:	802.11a	**Duty Cycle (%):**	80.0
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+0.97 dB)	Limit	Margin
MHz	a	b	c	d	dBm/MHz	dBm/MHz	dB
5180.0	-8.947	-10.134	-7.861	--	-5.203	16.8	-22.0
5200.0	-10.831	-8.443	-17.866	--	-6.413	16.8	-23.2
5240.0	-11.917	-18.942	-14.755	--	-8.651	16.8	-25.4

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11ac-80	**Duty Cycle (%):**	43.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+3.67 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5210.0	-28.005	-26.856	-25.945	--	-19.756	16.8	-36.5

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11n HT-20	**Duty Cycle (%):**	73.0
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+1.37 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5180.0	-7.714	-6.675	-8.039	--	-2.362	16.8	-19.1
5200.0	-13.494	-18.302	-16.629	--	-10.913	16.8	-27.7
5240.0	-18.075	-15.867	-16.243	--	-11.533	16.8	-28.3

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11n HT-40	**Duty Cycle (%):**	65.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+1.87 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5190.0	-14.706	-14.055	-13.159	--	-8.333	16.8	-25.1
5230.0	-21.781	-22.298	-21.031	--	-16.950	16.8	-33.7

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11a	**Duty Cycle (%):**	73.0
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+1.37 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5745.0	-12.676	-14.493	-15.872	--	-9.179	16.8	-26.0
5785.0	-11.117	-11.675	-12.682	--	-6.383	16.8	-23.2
5825.0	-19.099	-18.601	-15.718	--	-12.969	16.8	-29.7

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11ac-80	**Duty Cycle (%):**	60.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+2.22 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5775.0	-24.055	-23.542	-23.680	--	-15.088	16.8	-31.9

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11n HT-20	**Duty Cycle (%):**	96.0
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+0.18 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5745.0	-6.054	-7.657	-6.928	--	-2.502	16.8	-19.3
5785.0	-6.093	-6.666	-6.973	--	-2.576	16.8	-19.3
5825.0	-6.075	-7.403	-8.296	--	-2.731	16.8	-19.5

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

DCCF - Duty Cycle Correction Factor

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

Equipment Configuration for Power Spectral Density			
Variant:	802.11n HT-40	**Duty Cycle (%):**	94.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	6.20
Modulation:	OFDM	**Beam Forming Gain (Y)(dB):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/MHz)				Amplitude Summation + DCCF (+0.27 dB)	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/MHz**	**dBm/MHz**	**dB**
5755.0	-9.076	-9.526	-10.447	--	-5.306	16.8	-22.1
5795.0	-13.407	-12.489	-13.312	--	-8.758	16.8	-25.5

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

DCCF - Duty Cycle Correction Factor

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

9.5. Radiated Emissions

Radiated Spurious Emissions

FCC, Part 15 Subpart C §15.407(b)(2), §15.205(a)/15.209(a)

Test Procedure

Testing was performed in a 3-meter anechoic chamber. Preliminary radiated emissions were measured on every azimuth and with the receiving antenna in both horizontal and vertical polarizations. Preliminary emissions were recorded with in Spectrum Analyzer mode, using a maximum peak detector while in peak hold mode. Depending on the frequency band spanned a notch filter and/or waveguide filter was used to remove the fundamental frequency.

Emissions nearest the limits were chosen for maximization and formal measurement using a CISPR compliant receiver. Emissions above 1000 MHz are measured utilizing a CISPR compliant average detector with a tuned receiver, using a bandwidth of 1 MHz. Only the highest emissions relative to the limit are listed.

Specification

(b) *Undesirable emission limits.* Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

(5) The emission measurements shall be performed using a minimum resolution bandwidth of 1 MHz. A lower resolution bandwidth may be employed near the band edge, when necessary, provided the measured energy is integrated to show the total power over 1 MHz.

(6) Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in §15.209. Further, any U-NII devices using an AC power line are required to comply also with the conducted limits set forth in §15.207.

(7) The provisions of §15.205 apply to intentional radiators operating under this section.

(8) When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the upper and lower frequency band edges as the design of the equipment permits.

The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength (dBµV/m);

$$E = 1000000 \times \sqrt{30P}/3 \ \mu V/m$$

where P is the EIRP in Watts

Therefore: -27 dBm/MHz = 68.23 dBuV/m

Note: The data in this Section identifies that the EUT is in compliance with the -27dBm/MHz EIRP limit (68.23 dBµV/m) for out of band emissions. All out of band emissions are less than 68.23 dB µV/m.

Field Strength Calculation
The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. All factors are included in the reported data.

FS = R + AF + CORR – FO
FS = Field Strength
R = Measured Spectrum analyzer Input Amplitude
AF = Antenna Factor

CORR = Correction Factor = CL – AG + NFL
CL = Cable Loss
AG = Amplifier Gain
FO = Distance Falloff Factor
NFL = Notch Filter Loss or Waveguide Loss

Field Strength Calculation Example:

Given receiver input reading of 51.5 dBµV; Antenna Factor of 8.5 dB; Cable Loss of 1.3 dB; Falloff Factor of 0 dB, an Amplifier Gain of 26 dB and Notch Filter Loss of 1 dB. The Field Strength of the measured emission is:

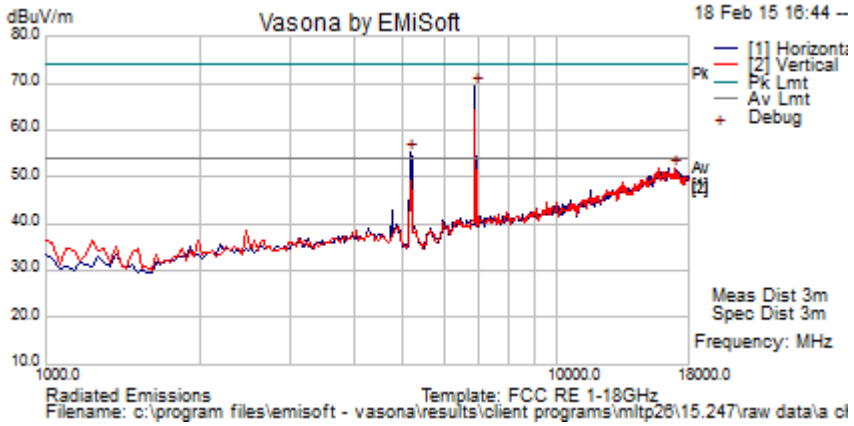
FS = 51.5 + 8.5 + 1.3 - 26.0 +1 = 36.3 dBµV/m

Conversion between dBµV/m (or dBµV) and µV/m (or µV) are done as:

Level (dBµV/m) = 20 * Log (level (µV/m))

40 dBµV/m = 100 µV/m
48 dBµV/m = 250 µV/m

Test Freq.	5180 MHz	**Engineer**	JMH
Variant	802.11a; 6 Mbs	**Temp (ºC)**	19
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	47
Power Setting	16	**Press. (mBars)**	1009
Antenna	Integral	**Duty Cycle (%)**	75
Test Notes 1	Duty Cycle setup through master laptop to wifi client laptop w/ iperf;		
Test Notes 2	120VAC;		

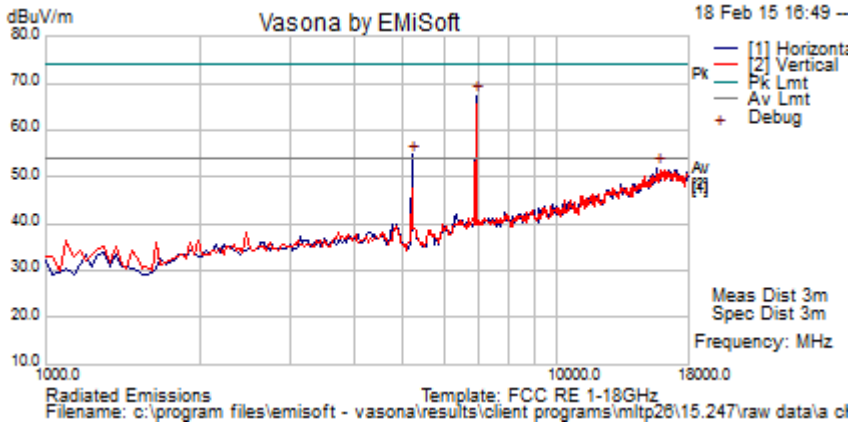


Formally measured emission peaks

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
6893.788	70.0	7.0	-7.6	69.4	Peak [Scan]	H	100					NRB
5156.31263	60.9	5.9	-11.6	55.2	Peak [Scan]	H						FUND
16943.888	38.7	12.3	0.8	51.8	Peak [Scan]	V	100	0	54	-2.2	Pass	Noise

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	NRB = Non-Restricted Band. Limit = 68.23 dBuV/m; RB = Restricted Band. Limits per 15.205

Test Freq.	5200 MHz	**Engineer**	JMH
Variant	802.11a; 6 Mbs	**Temp (ºC)**	19
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	47
Power Setting	16	**Press. (mBars)**	1009
Antenna	Integral	**Duty Cycle (%)**	75
Test Notes 1	Duty Cycle setup through master laptop to wifi client laptop w/ iperf;		
Test Notes 2	120VAC;		

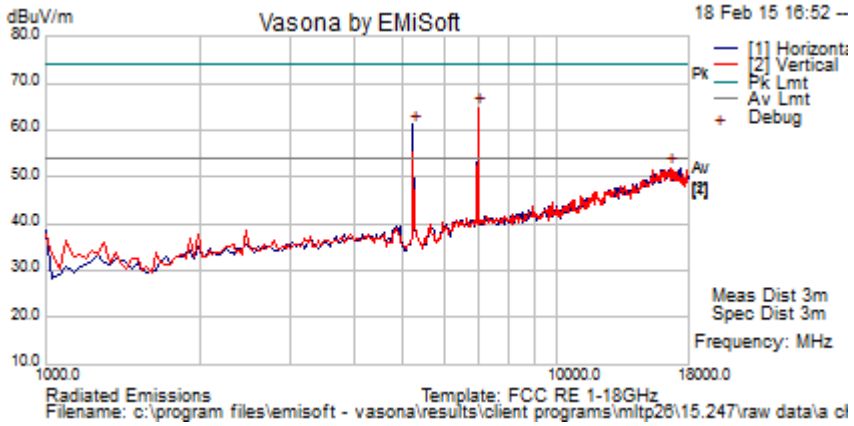


Formally measured emission peaks

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
6927.856	68.0	7.0	-7.5	67.4	Peak [Scan]	H	100					NRB
5190.38076	60.4	5.9	-11.5	54.8	Peak [Scan]	H						FUND
15683.367	40.3	11.6	0.2	52.1	Peak [Scan]	H	100	0	54	-1.9	Pass	Noise

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	NRB = Non-Restricted Band. Limit = 68.23 dBuV/m; RB = Restricted Band. Limits per 15.205

Test Freq.	5240 MHz	**Engineer**	JMH
Variant	802.11a; 6 Mbs	**Temp (ºC)**	19
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	47
Power Setting	16	**Press. (mBars)**	1009
Antenna	Integral	**Duty Cycle (%)**	75
Test Notes 1	Duty Cycle setup through master laptop to wifi client laptop w/ iperf;		
Test Notes 2	120VAC;		

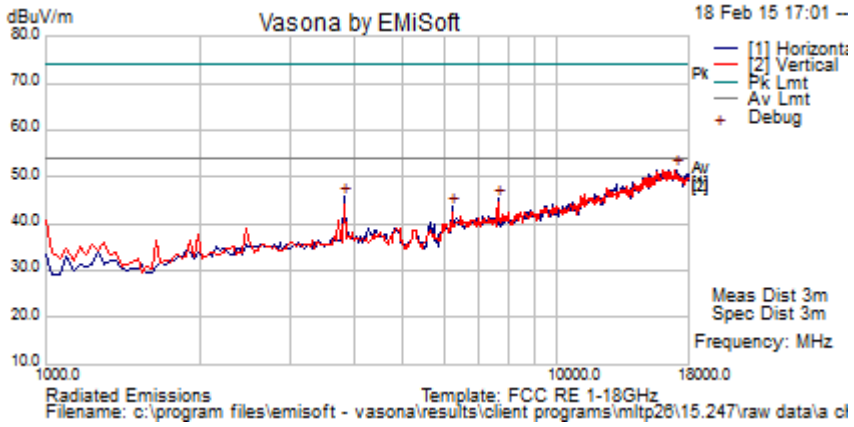


Formally measured emission peaks

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
6995.992	65.2	7.0	-7.5	64.8	Peak [Scan]	H						NRB
5224.4489	66.6	5.9	-11.4	61.1	Peak [Scan]							FUND
16569.138	38.4	11.9	1.6	52.0	Peak [Scan]	V	100	0	54	-2.0	Pass	Noise

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	NRB = Non-Restricted Band. Limit = 68.23 dBuV/m; RB = Restricted Band. Limits per 15.205

Test Freq.	5745 MHz	**Engineer**	JMH
Variant	802.11a; 6 Mbs	**Temp (ºC)**	19
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	47
Power Setting	16	**Press. (mBars)**	1009
Antenna	Integral	**Duty Cycle (%)**	75
Test Notes 1	Duty Cycle setup through master laptop to wifi client laptop w/ iperf;		
Test Notes 2	120VAC;		

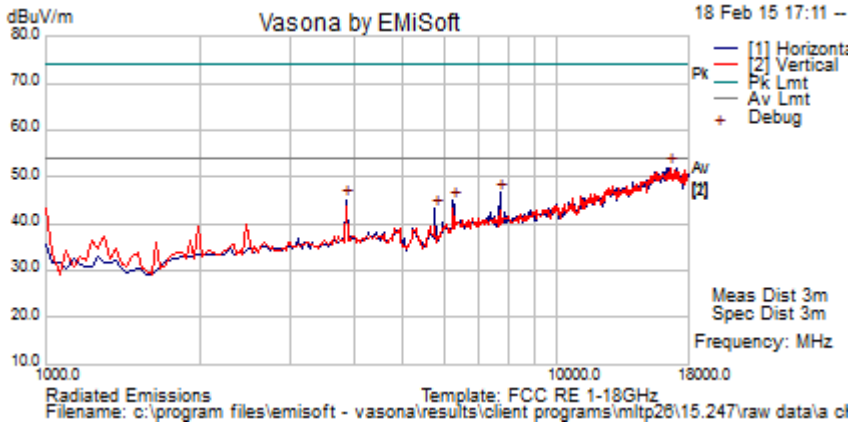


Formally measured emission peaks

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
17080.160	38.5	12.5	0.6	51.6	Peak [Scan]	H	100	0	54.0	-2.4	Pass	Noise
3827.558	51.5	5.0	-10.8	45.7	Peak [Scan]	H	98	0	54.0	-8.3	Pass	RB
7641.263	44.6	7.4	-7.0	45.1	Peak [Scan]	H	98	0	54	-9.0	Pass	RB
6213.704	45.8	6.5	-8.8	43.5	Peak [Scan]	H						NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	NRB = Non-Restricted Band. Limit = 68.23 dBuV/m; RB = Restricted Band. Limits per 15.205

Test Freq.	5785 MHz	**Engineer**	JMH
Variant	802.11a; 6 Mbs	**Temp (ºC)**	19
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	47
Power Setting	16	**Press. (mBars)**	1009
Antenna	Integral	**Duty Cycle (%)**	75
Test Notes 1	Duty Cycle setup through master laptop to wifi client laptop w/ iperf;		
Test Notes 2	120VAC;		

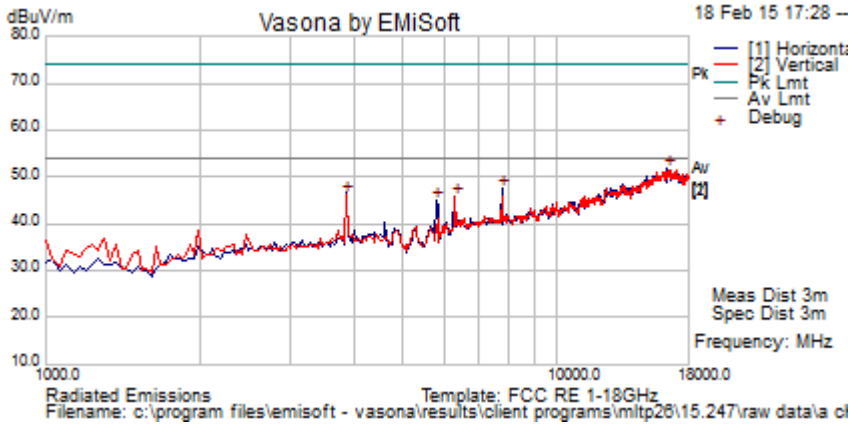


Formally measured emission peaks

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
16637.275	38.4	12.0	1.6	52.0	Peak [Scan]	V	100	0	54.0	-2.0	Pass	Noise
7711.515	46.1	7.4	-6.9	46.6	Peak [Scan]	H	98	-1	54.0	-7.4	Pass	RB
3862.176	50.8	5.0	-10.8	45.1	Peak [Scan]	H	98	-1	54	-9.0	Pass	RB
6247.330	46.9	6.6	-8.6	44.9	Peak [Scan]	H	98					NRB
5768.929	47.2	6.3	-10.5	43.0	Peak [Scan]	H						FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	NRB = Non-Restricted Band. Limit = 68.23 dBuV/m; RB = Restricted Band. Limits per 15.205

Test Freq.	5825 MHz	**Engineer**	JMH
Variant	802.11a; 6 Mbs	**Temp (ºC)**	19
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	47
Power Setting	16	**Press. (mBars)**	1009
Antenna	Integral	**Duty Cycle (%)**	75
Test Notes 1	Duty Cycle setup through master laptop to wifi client laptop w/ iperf;		
Test Notes 2	120VAC;		



Formally measured emission peaks

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
16398.798	38.2	12.0	1.6	51.8	Peak [Scan]	H	100	0	54.0	-2.3	Pass	Noise
7766.487	46.7	7.5	-6.7	47.4	Peak [Scan]	H	98					NRB
3863.010	51.9	5.0	-10.8	46.2	Peak [Scan]	H	98	-1	54	-7.9	Pass	RB
6314.305	47.6	6.6	-8.4	45.9	Peak [Scan]	H	98					NRB
5806.731	49.0	6.3	-10.3	45.0	Peak [Scan]	H						FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	NRB = Non-Restricted Band. Limit = 68.23 dBuV/m; RB = Restricted Band. Limits per 15.205

Band-Edge Radiated Emissions

Peak Limit 74.0 dBµV/m, Average Limit 54.0 dBµV/m

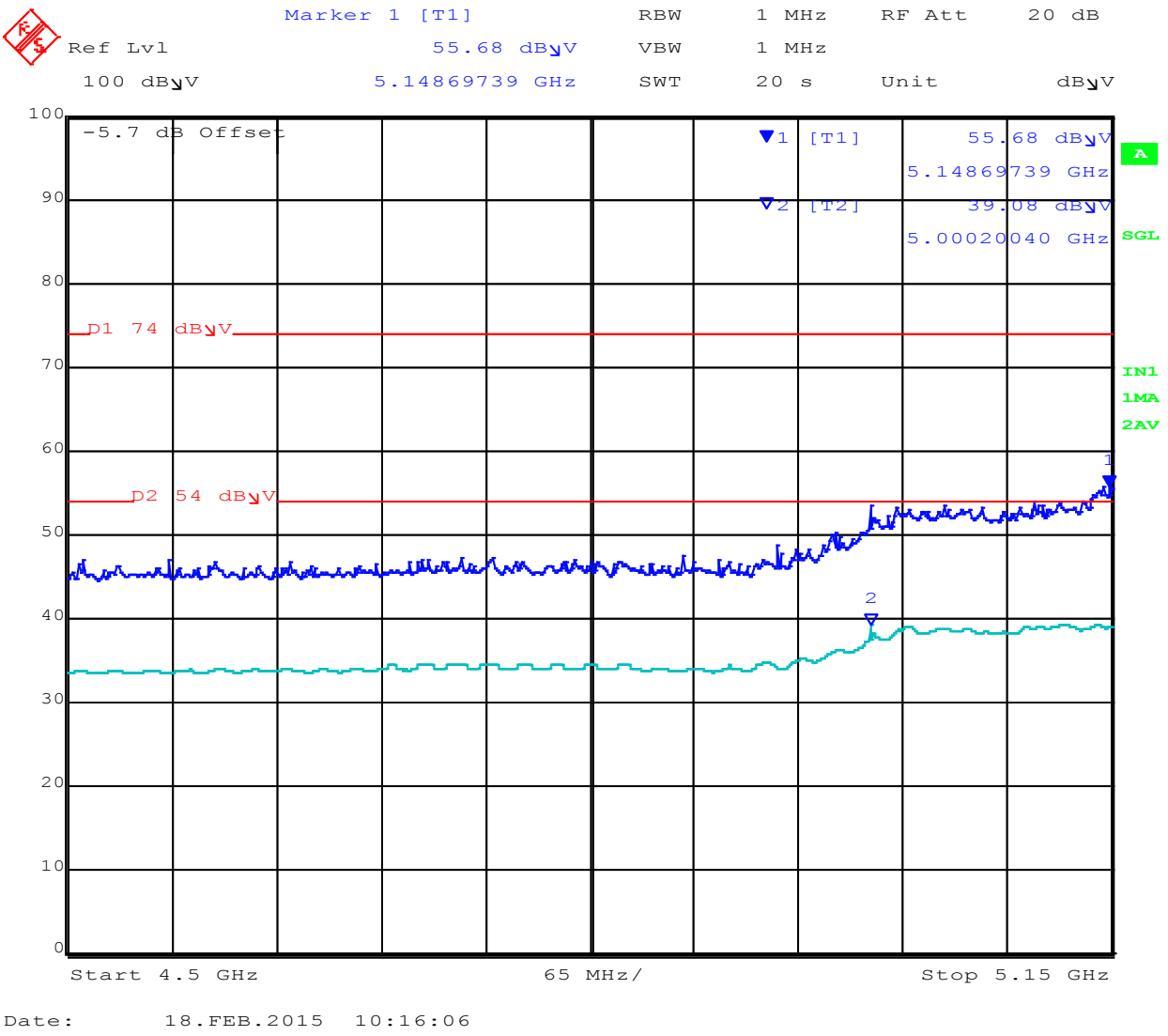
Frequency Band 5150 – 5250 MHz

	5150 MHz		
	dBµV/m		Power Setting
Operational Mode	Peak	Average	
a	55.68	39.08	16
n HT-20	60.23	39.24	16
n HT-40	60.23	39.24	16
ac-80	71.55	42.28	16

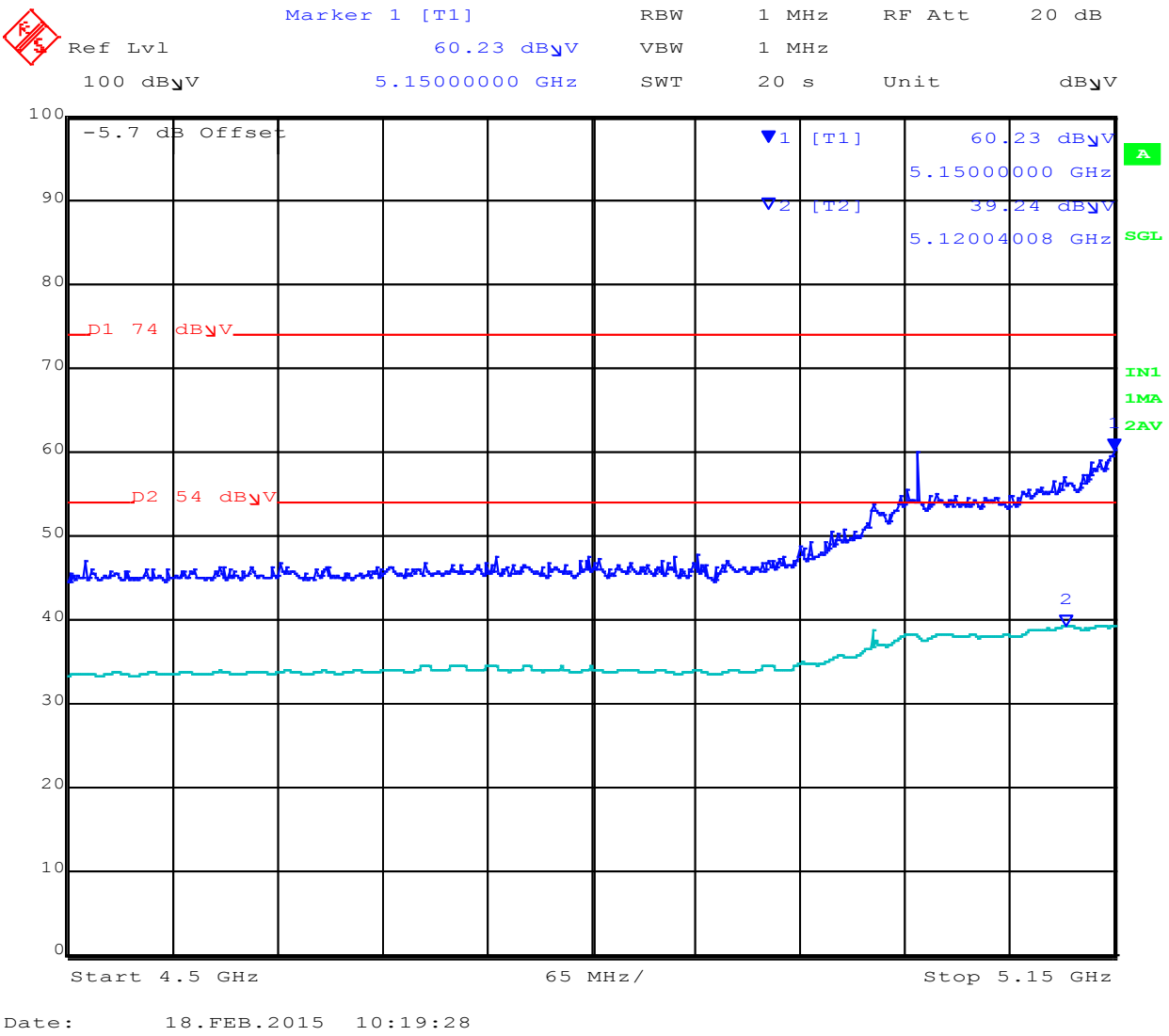
Frequency Band 5725 – 5850 MHz

	5725 MHz		5850 MHz	
Operational Mode	Limit -27 dBm\EIRP	Power Setting	Limit -27 dBm\EIRP	Power Setting
a	-36.64	16	-36.49	16
n HT-20	-37.61	16	-37.48	16
n HT-40	-36.76	16	-37.16	16
ac-80	-35.86	16	-36.60	16

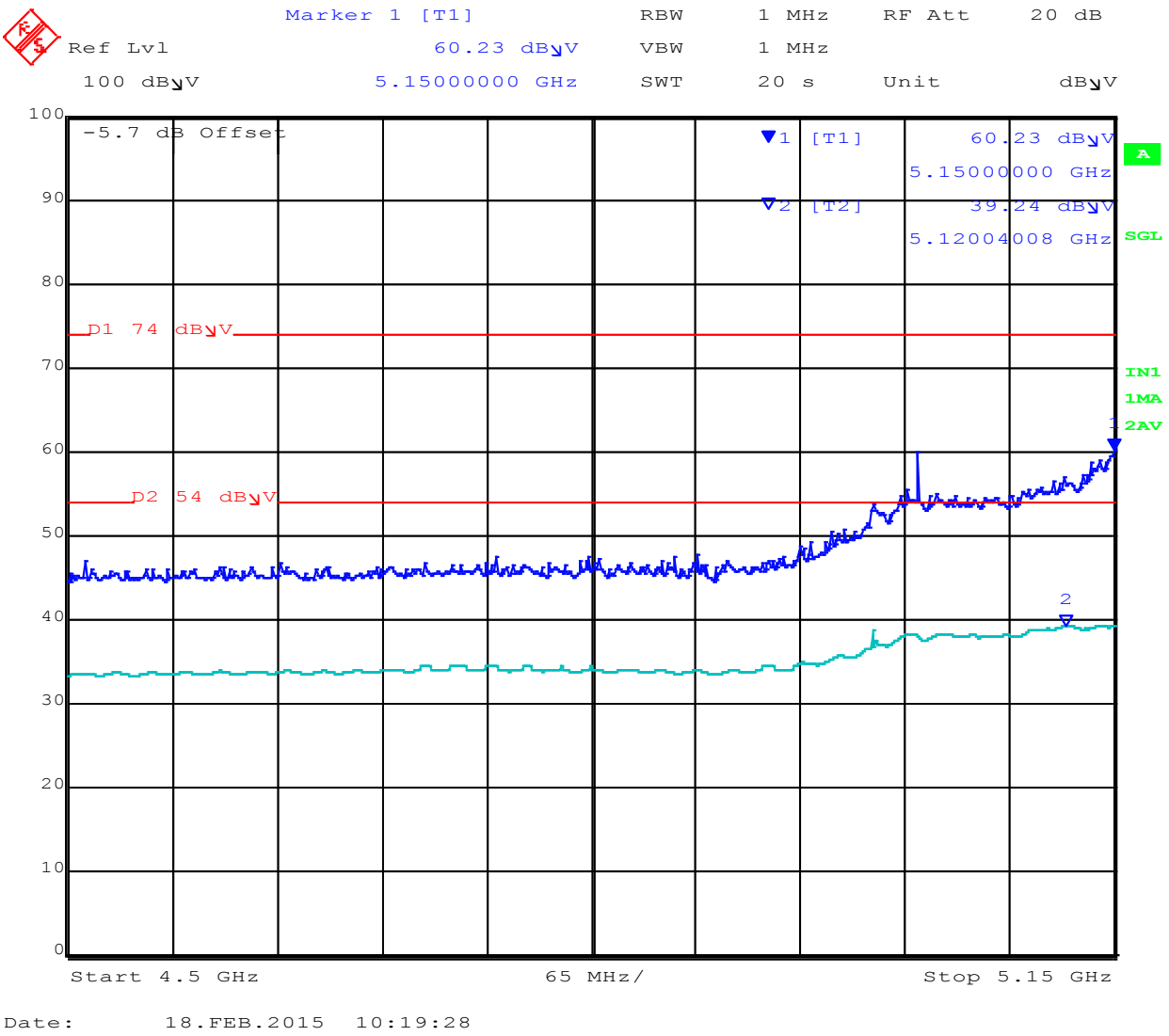
5150-5250 MHz 802.11a - 5150 MHz Band-Edge Emissions



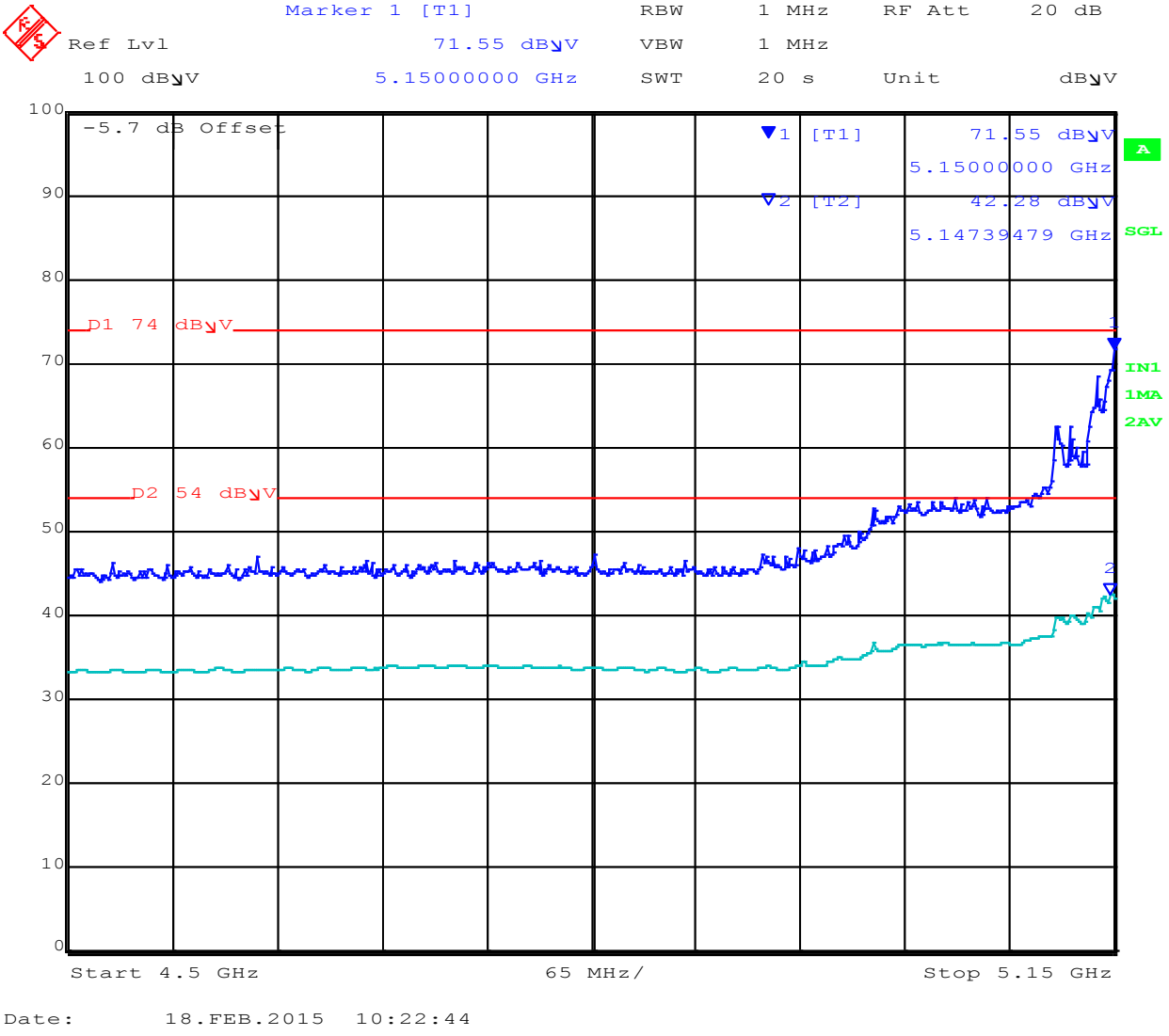
5150-5250 MHz 802.11n HT-20 5150 MHz Band-Edge Emissions



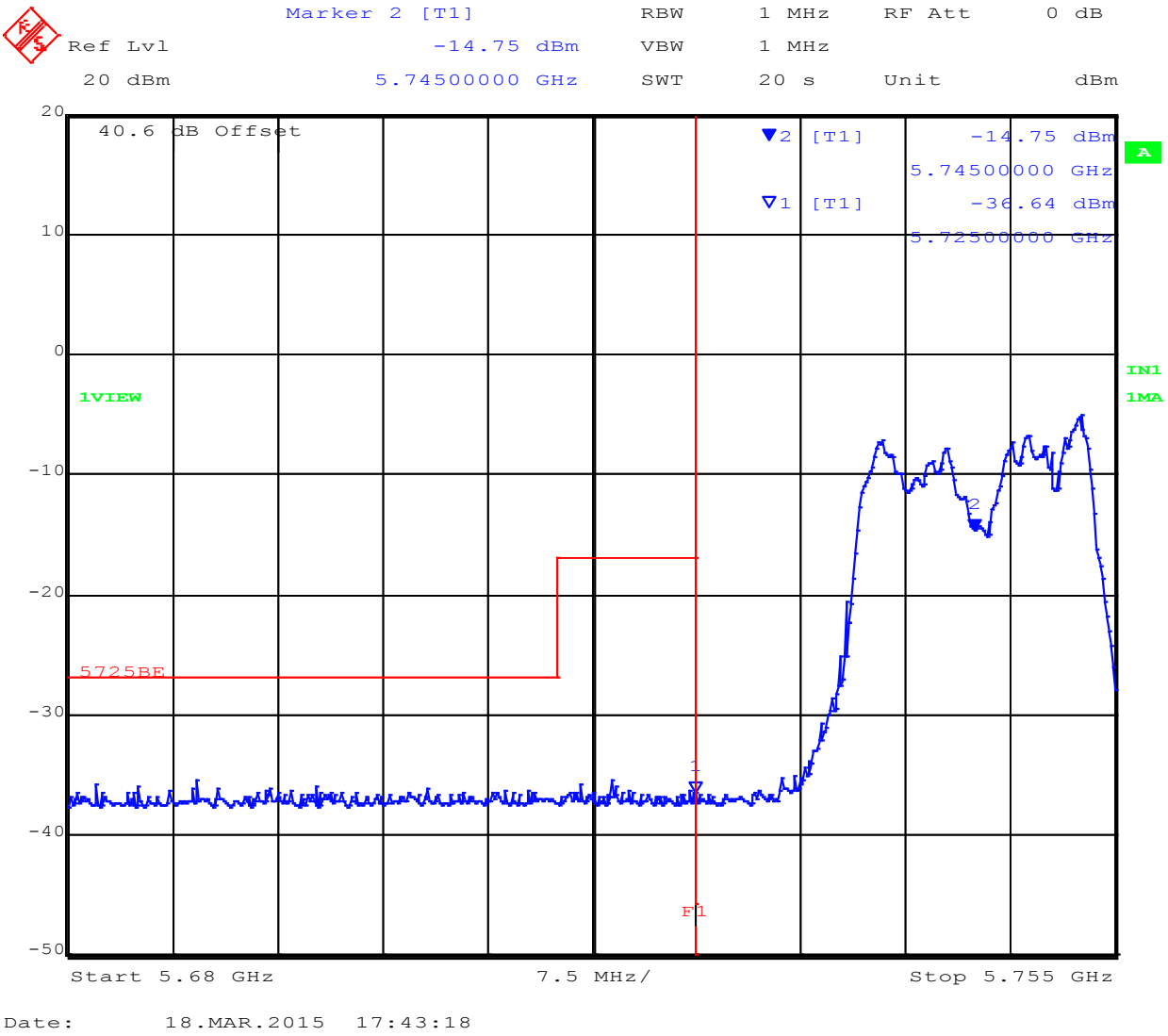
5150-5250 MHz 802.11n HT-40 5150 MHz Band-Edge Emissions



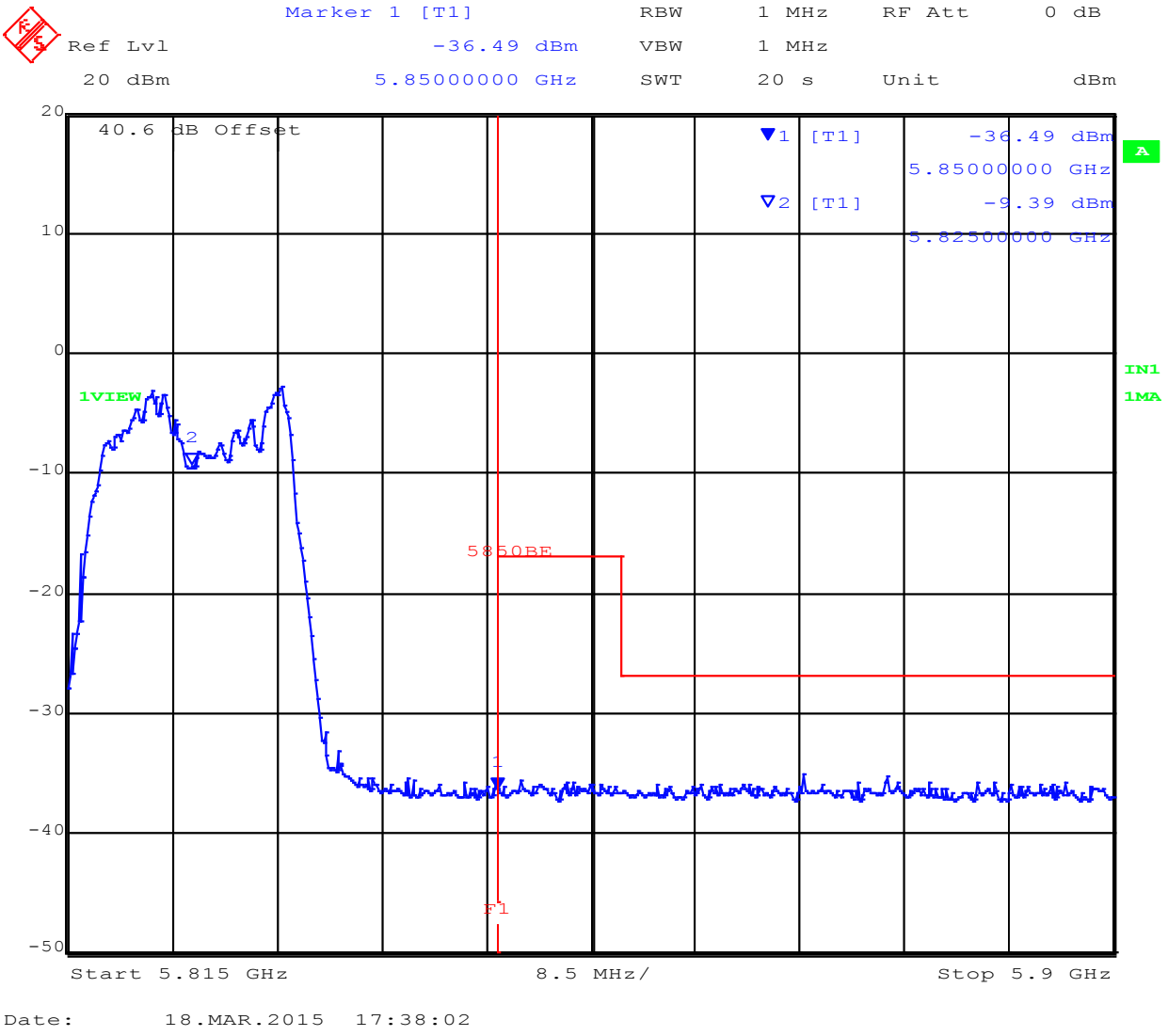
5150-5250 MHz 802.11ac-80 5150 MHz Band-Edge Emissions



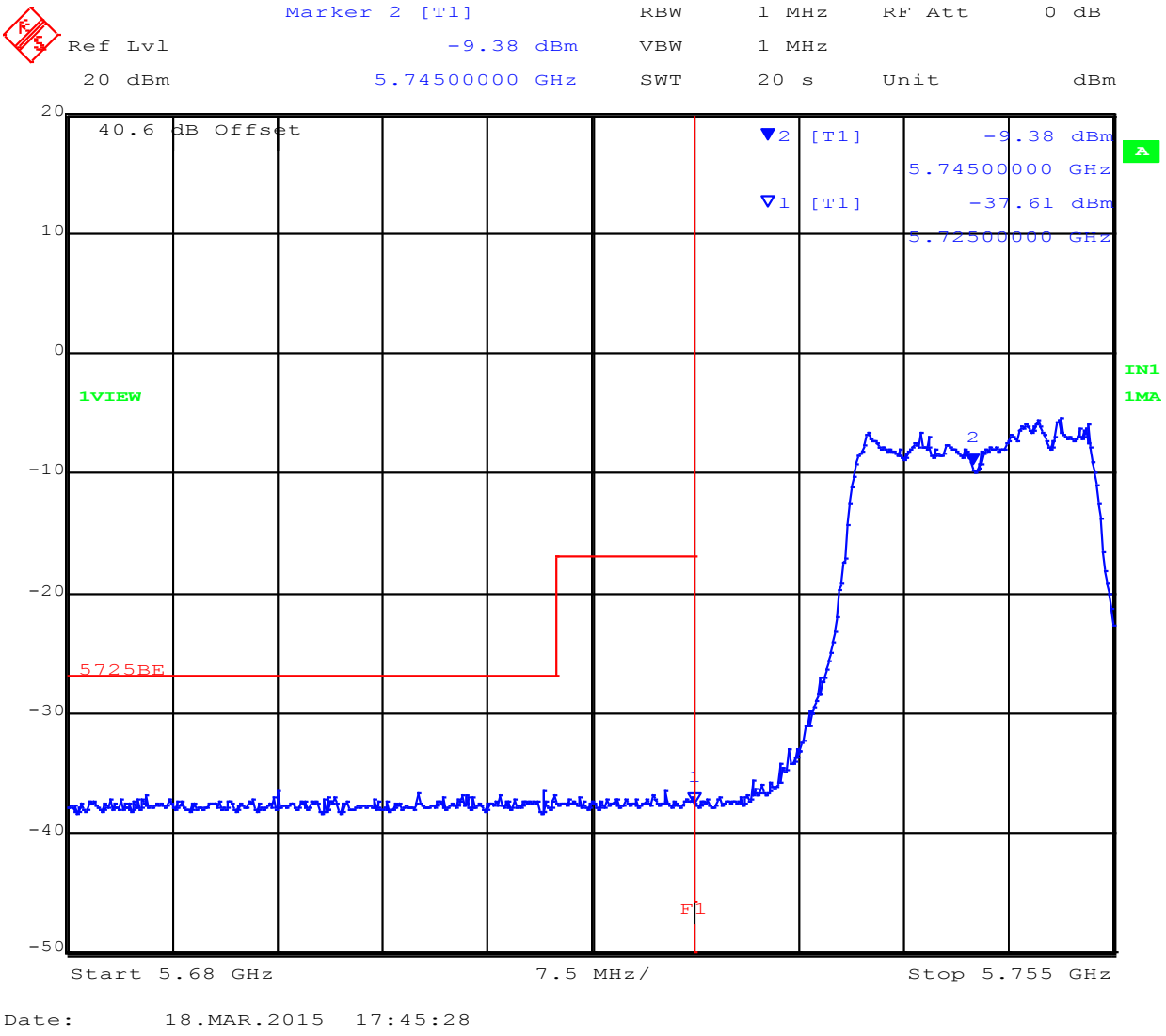
5725 - 5850 MHz 802.11a – Channel 5745 MHz 5725 MHz Band-Edge Emissions



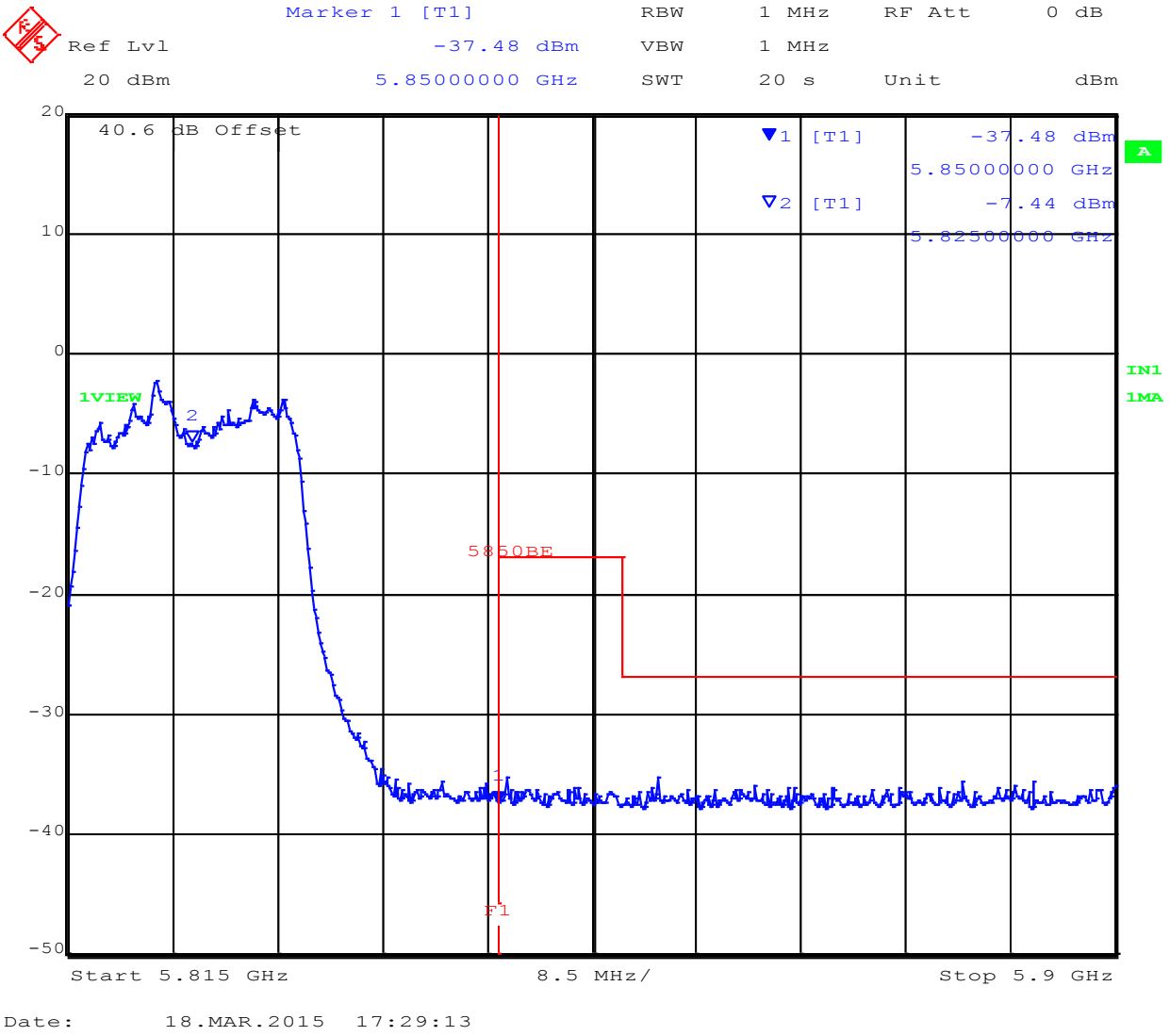
5725 - 5850 MHz 802.11a – Channel 5825 MHz 5850 MHz Band-Edge Emissions



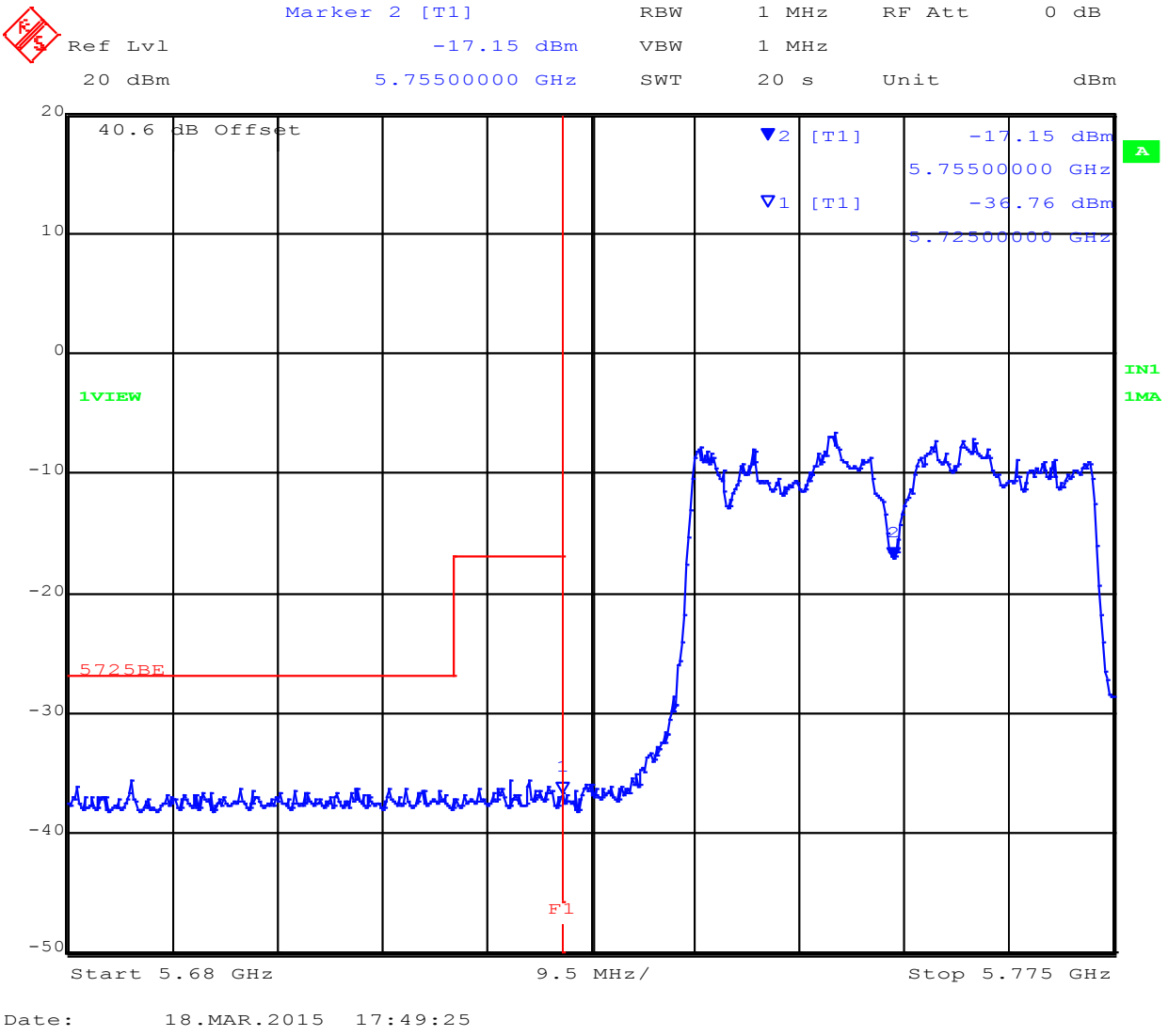
5725 - 5850 MHz 802.11n HT-20 – Channel 5745 MHz 5725 MHz Band-Edge Emissions



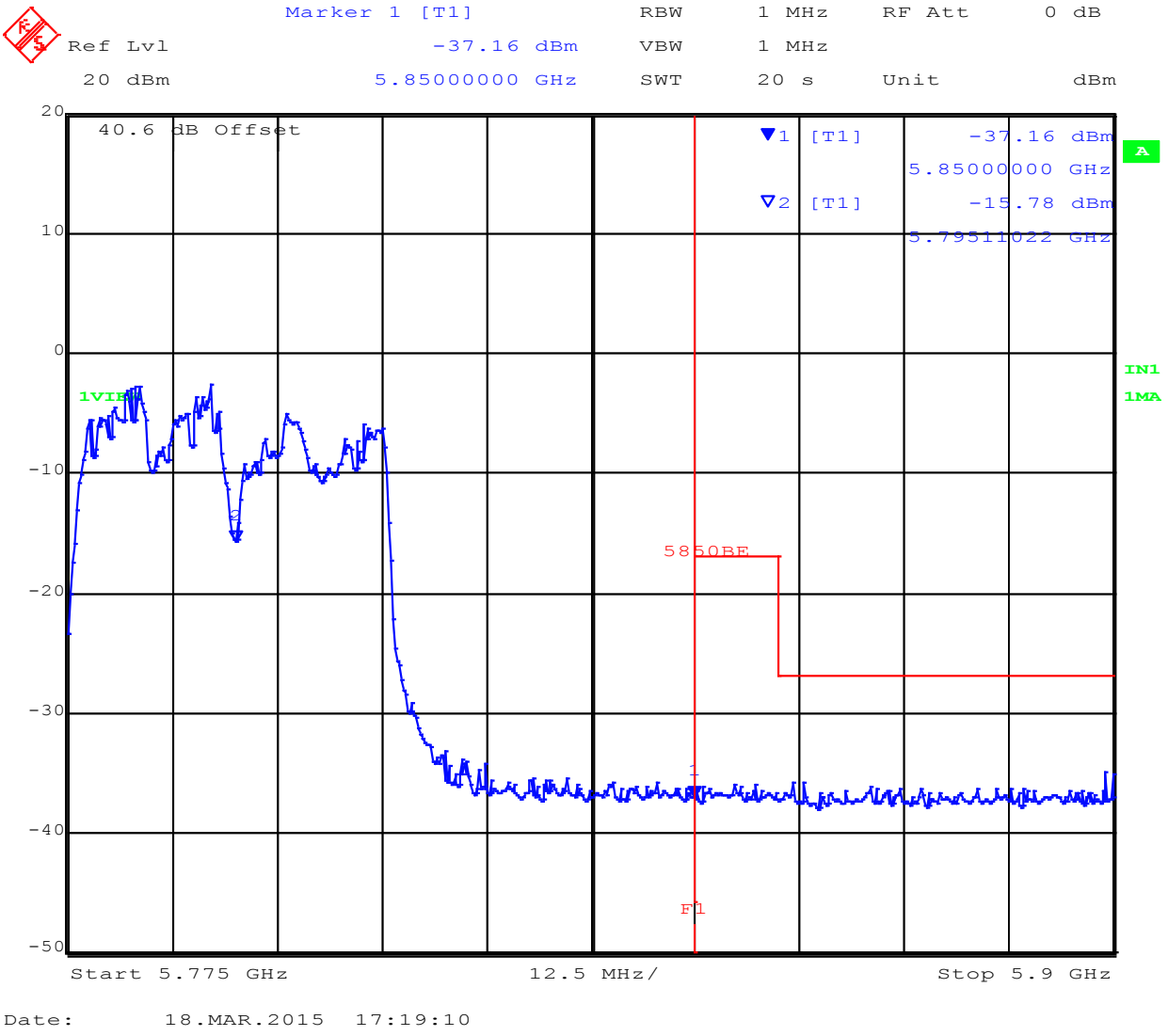
5725 - 5850 MHz 802.11n HT-20 – Channel 5825 MHz 5850 MHz Band-Edge Emissions



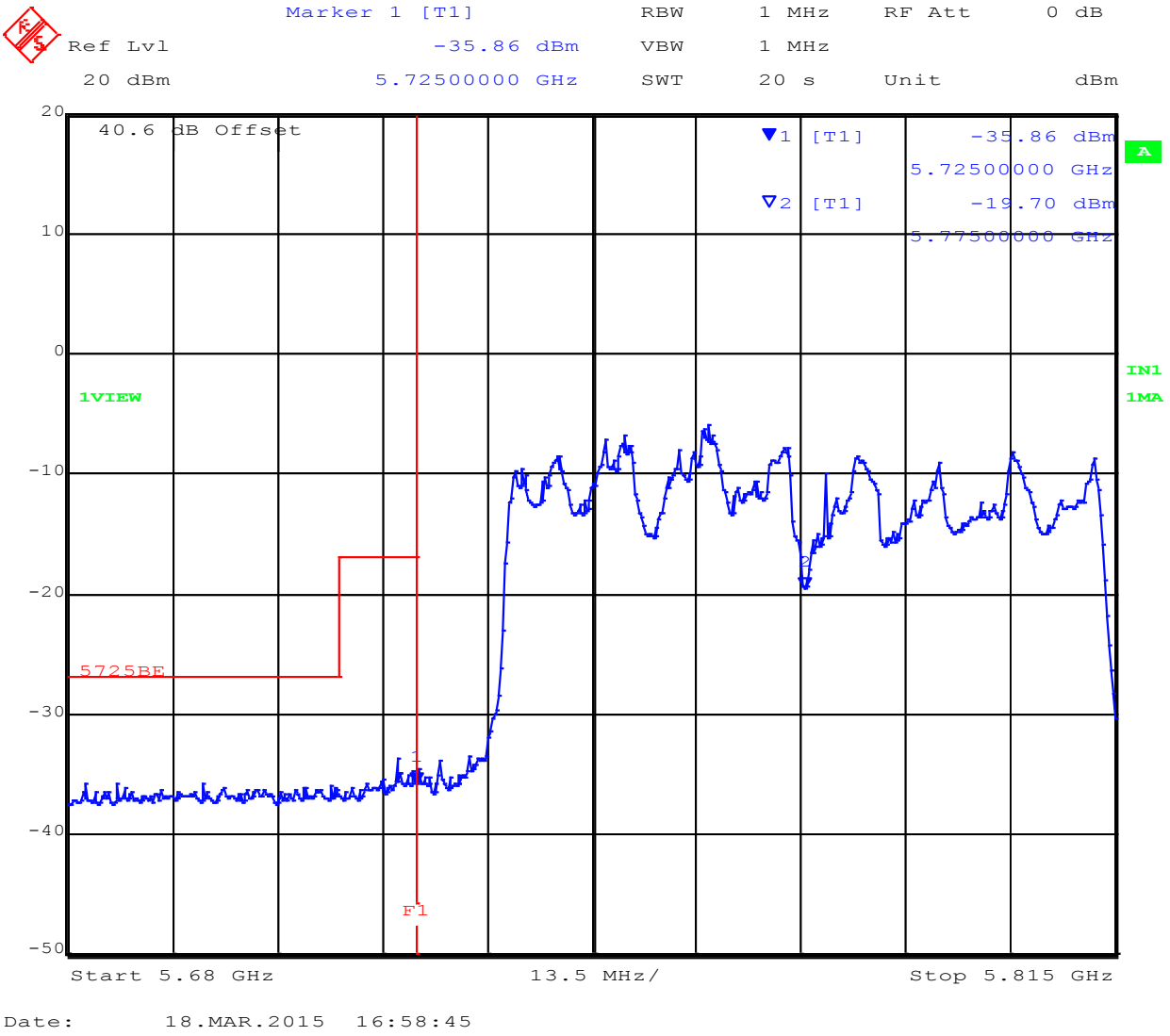
5725 - 5850 MHz 802.11n HT-40 – Channel 5755 MHz 5725 MHz Band-Edge Emissions



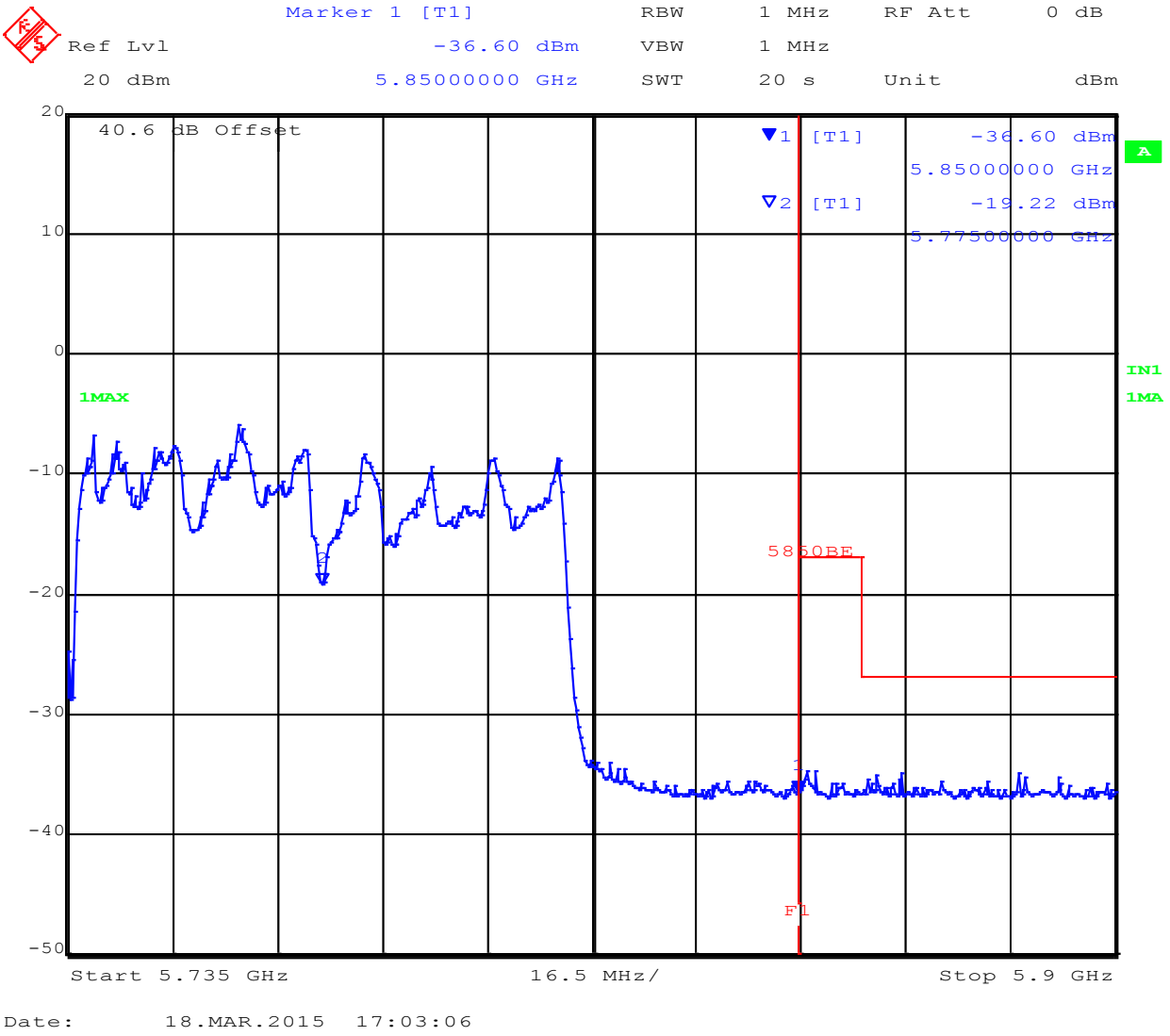
5725 - 5850 MHz 802.11n HT-40 – Channel 5795 MHz 5850 MHz Band-Edge Emissions



5725 - 5850 MHz 802.11ac-80 – Channel 5775 MHz 5725 MHz Band-Edge Emissions



5725 - 5850 MHz 802.11ac-80 – Channel 5775 MHz 5850 MHz Band-Edge Emissions



Digital Emissions (30M-1 GHz)

FCC, Part 15 Subpart C §15.205/ §15.209

Test Procedure

Testing 30M-1 GHz was performed in a 3-meter anechoic chamber using a CISPR compliant receiver. Preliminary radiated emissions were measured on every azimuth and with the receiving antenna in both horizontal and vertical polarizations. To further maximize emissions the receive antenna was varied between 1 and 4 meters. The emissions are recorded with receiver in peak hold mode. Emissions closest to the limits are measured in the quasi-peak mode with the tuned receiver using a bandwidth of 120 kHz. Only the highest emissions relative to the limit are listed. The anechoic chamber test set-up is identified in Section 6 Test Set-Up Photographs.

Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Loss, and subtracting Amplifier Gain from the measured reading. In this test facility, the Antenna Factor, Cable Loss, and Amplifier Gains are loaded into the Rohde & Schwarz Receiver and the corrected field strength can be read directly on the receiver.

$$FS = R + AF + CORR$$

where:

FS = Field Strength
R = Measured Receiver Input Amplitude
AF = Antenna Factor
CORR = Correction Factor = CL – AG + NFL
CL = Cable Loss
AG = Amplifier Gain

For example:
Given a Receiver input reading of 51.5dBμV; Antenna Factor of 8.5dB; Cable Loss of 1.3dB; Falloff Factor of 0dB, an Amplifier Gain of 26dB and Notch Filter Loss of 1dB. The Field Strength of the measured emission is:

$$FS = 51.5 + 8.5 + 1.3 - 26.0 + 1 = 36.3 dB\mu V/m$$

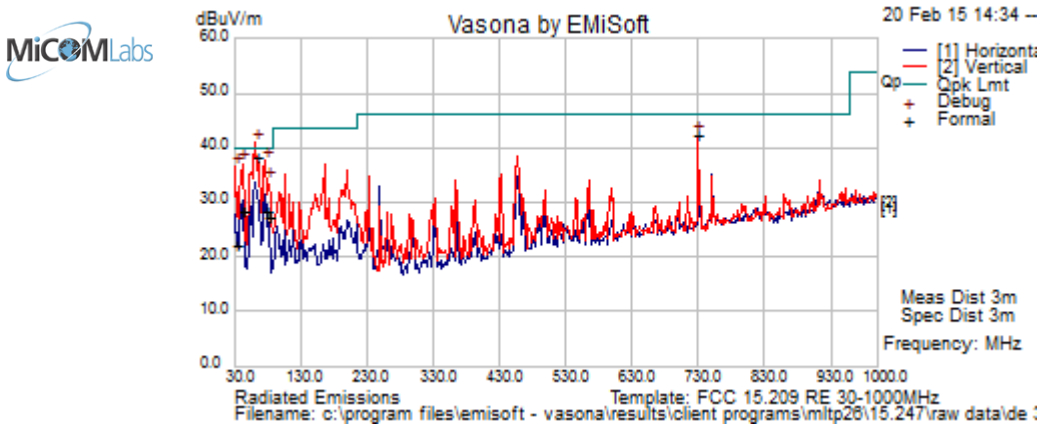
Conversion between dBμV/m (or dBμV) and μV/m (or μV) are done as:

$$Level\ (dB\mu V/m) = 20 * Log\ (level\ (\mu V/m))$$

40 dBμV/m = 100μV/m
48 dBμV/m = 250μV/m

Measurement Results: Radiated Emissions; 30-1000MHz,

Test Freq.:	2437	**Engineer:**	SB
Variant:	802.11g	**Temp (ºC):**	21.5
Freq. Range:	30-1000 MHz	**Rel. Hum.(%):**	37
Power Setting:	20	**Press. (mBars):**	1002
Antenna:	Integral		
Test Notes 1:	120VAC		
Test Notes 2:	Master laptop outside via ethernet; Client laptop inside wifi client;		



Formally measured emission peaks

Frequency MHz	Raw dBuV	Cable Loss	AF dB	Level dBuV/m	Measurement Type	Pol	Hgt cm	Azt Deg	Limit dBuV/m	Margin dB	Pass /Fail	Comments
62.520	58.4	3.7	-23.8	38.3	Quasi Max	V	99	355	40.0	-1.7	Pass	
76.653	47.8	3.8	-23.2	28.4	Quasi Max	V	124	74	40.0	-11.6	Pass	
41.007	42.8	3.6	-18.2	28.2	Quasi Max	V	129	-1	40.0	-11.8	Pass	
31.944	29.8	3.5	-11.2	22.1	Quasi Max	V	136	208	40.0	-17.9	Pass	
729.012	45.8	6.2	-9.8	42.2	Quasi Max	V	99	106	46.0	-3.8	Pass	
81.137	46.9	3.9	-23.7	27.1	Quasi Max	V	117	145	40.0	-12.9	Pass	

Legend:	DIG = Digital Device Emission; TX = Transmitter Emission; FUND = Fundamental Frequency
	NRB = Non-Restricted Band, Limit is 20 dB below Fundamental; RB = Restricted Band

Specification

Limits

§15.205 (a) Except as shown in paragraph (d) of 15.205 (a), only spurious emissions are permitted in any of the frequency bands listed.

§15.205 (a) Except as shown in paragraphs (d) and (e) of this section, the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section §15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§15.209 (a) Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table.

§15.209 (a) Limit Matrix

Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance (meters)
30-88	100	40.0	3
88-216	150	43.5	3
216-960	200	46.0	3
Above 960	500	54.0	3

Laboratory Measurement Uncertainty for Radiated Emissions

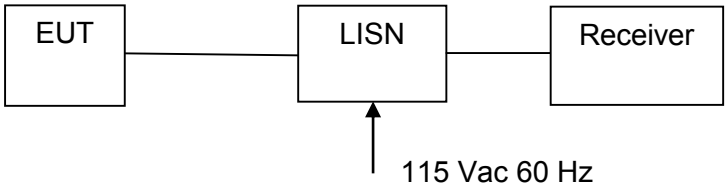
Measurement uncertainty	+5.6/ -4.5 dB

9.6. ac Wireline Emissions

FCC, Part 15 Subpart C §15.207
Industry Canada RSS-Gen §7.2.2

Test Procedure
The EUT is configured in accordance with ANSI C63.4. The conducted emissions are measured in a shielded room with a spectrum analyzer in peak hold in the first instance. Emissions closest to the limit are measured in the quasi-peak mode (QP) with the tuned receiver using a bandwidth of 9 kHz. The emissions are maximized further by cable manipulation. The highest emissions relative to the limit are listed.

Test Measurement Set up



Measurement set up for AC Wireline Conducted Emissions Test

Measurement Results for AC Wireline Conducted Emissions (150 kHz – 30 MHz)

Not applicable under the scope of this project. Although the nMAP2 can be powered from 115 Vac it does not connect to the Public Utility Network and therefore ac Wireline Emissions were not tested as part of this program.

NOTE: VT Miltope Corporation tested the device against **DO-160, "Environmental Conditions and Test Procedures for Airborne Equipment.**"

D0-160 Test Report Details
Test Lab: ITL Inc.
Address: 1127 Baker Street, Costa Mesa, California 92626
Report Number: 15627, Rev N/C
Issue Date: 11th March 2015

Specification

Limit

§15.207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μΩ line impedance stabilization network (LISN), see §15.207 (a) matrix below. Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

§15.207 (a) Limit Matrix
The lower limit applies at the boundary between frequency ranges

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency

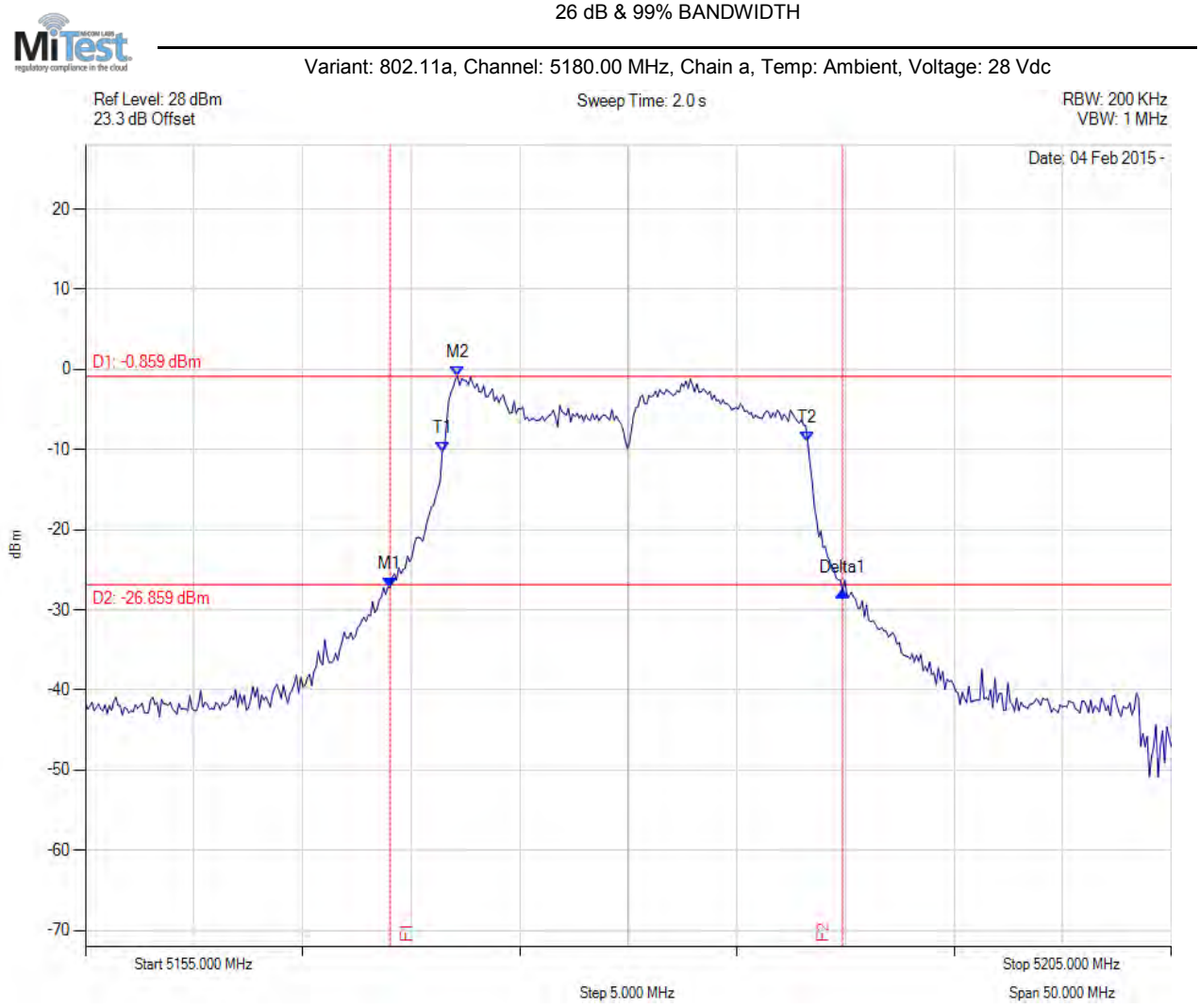
Laboratory Measurement Uncertainty for Conducted Emissions

Measurement uncertainty	±2.64 dB

APPENDIX A – GRAPHICAL DATA

A.1. CONDUCTED TEST PLOTS

A.1.1. 26 dB & 99% Bandwidth

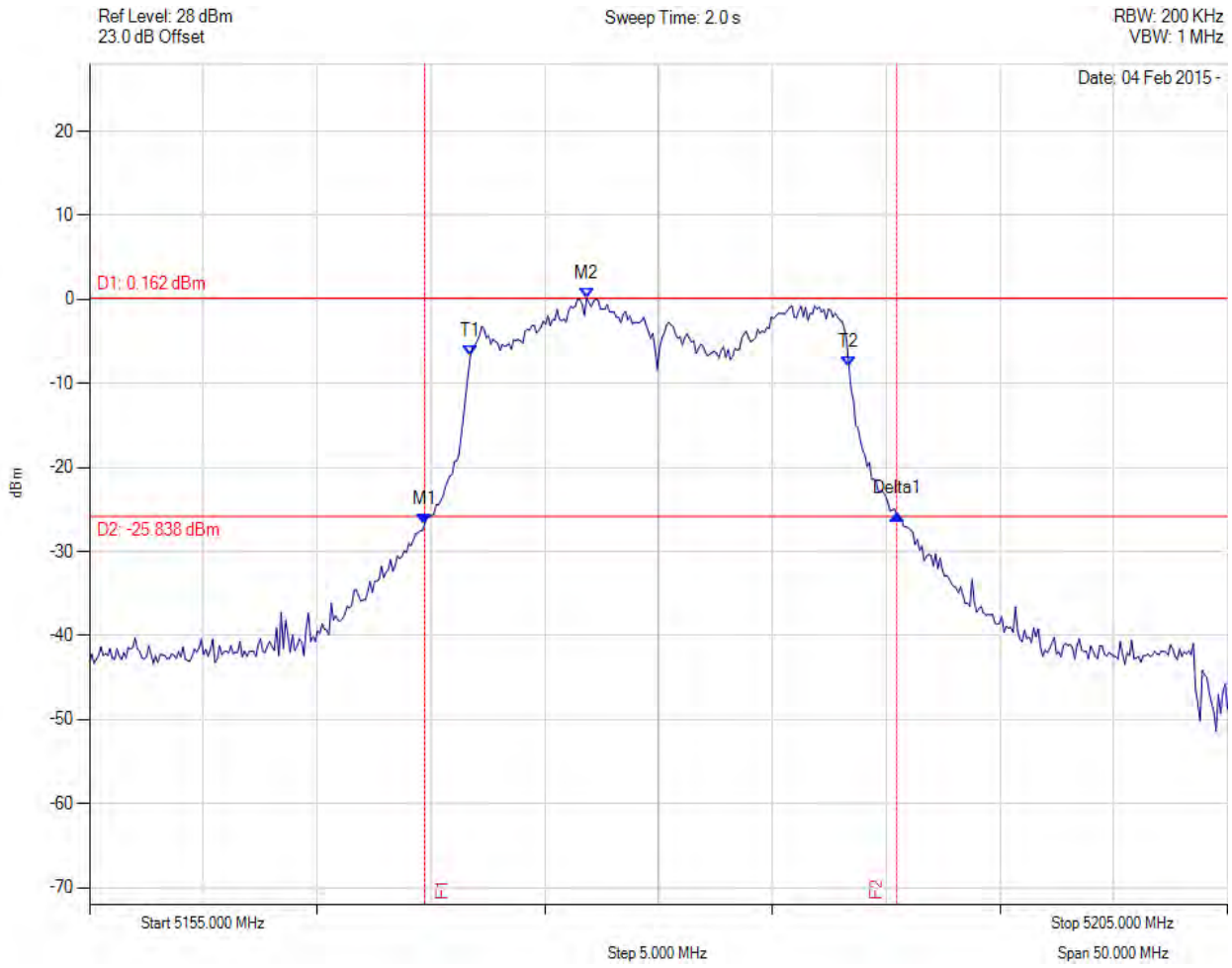


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5169.028 MHz : -27.220 dBm M2 : 5172.134 MHz : -0.859 dBm Delta1 : 20.842 MHz : -0.531 dB T1 : 5171.433 MHz : -10.255 dBm T2 : 5188.267 MHz : -9.012 dBm OBW : 16.834 MHz	Measured 26 dB Bandwidth: 20.842 MHz Measured 99% Bandwidth: 16.834 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc

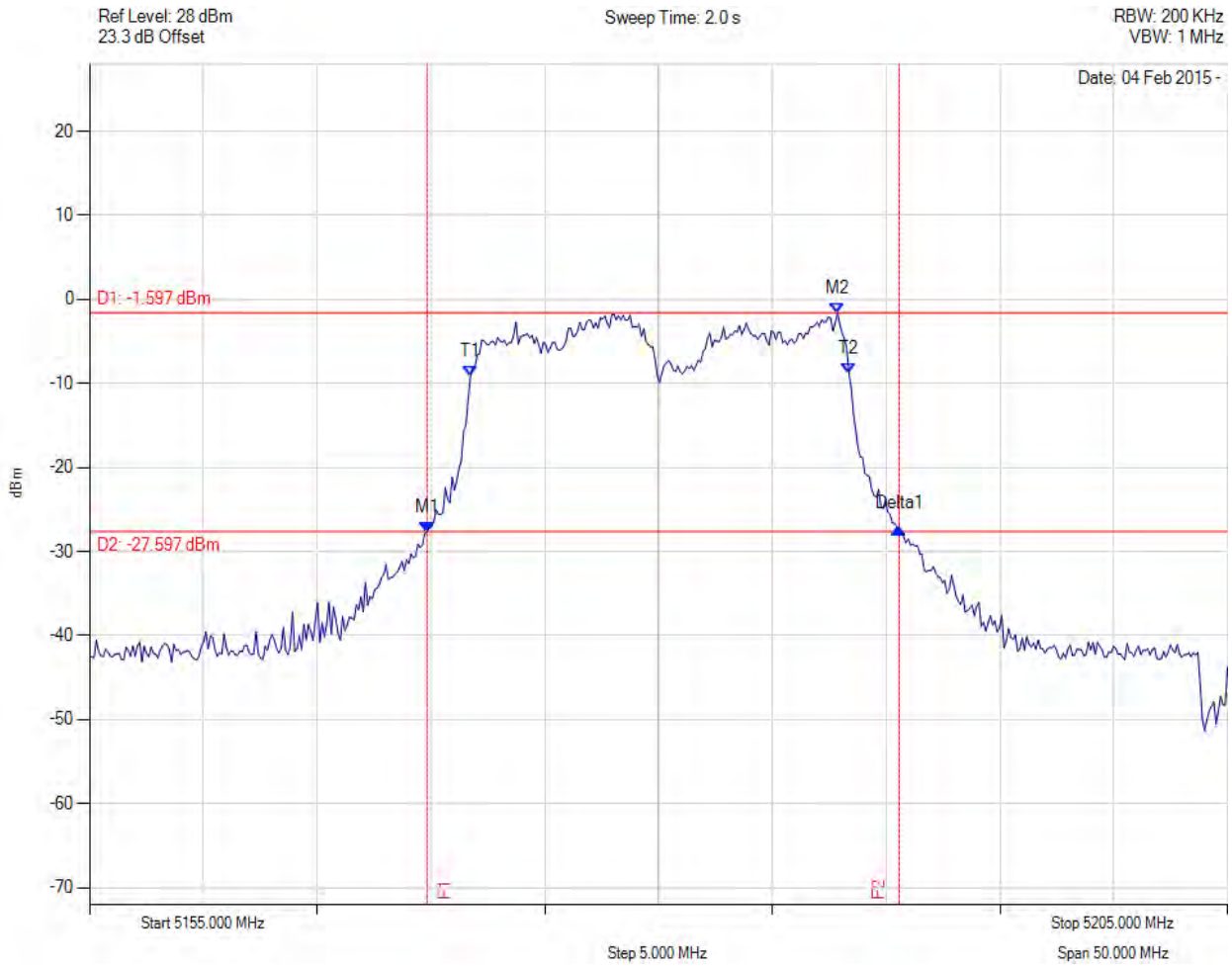


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5169.729 MHz : -26.742 dBm M2 : 5176.844 MHz : 0.162 dBm Delta1 : 20.741 MHz : 1.212 dB T1 : 5171.733 MHz : -6.657 dBm T2 : 5188.367 MHz : -7.951 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 20.741 MHz Measured 99% Bandwidth: 16.633 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5180.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc

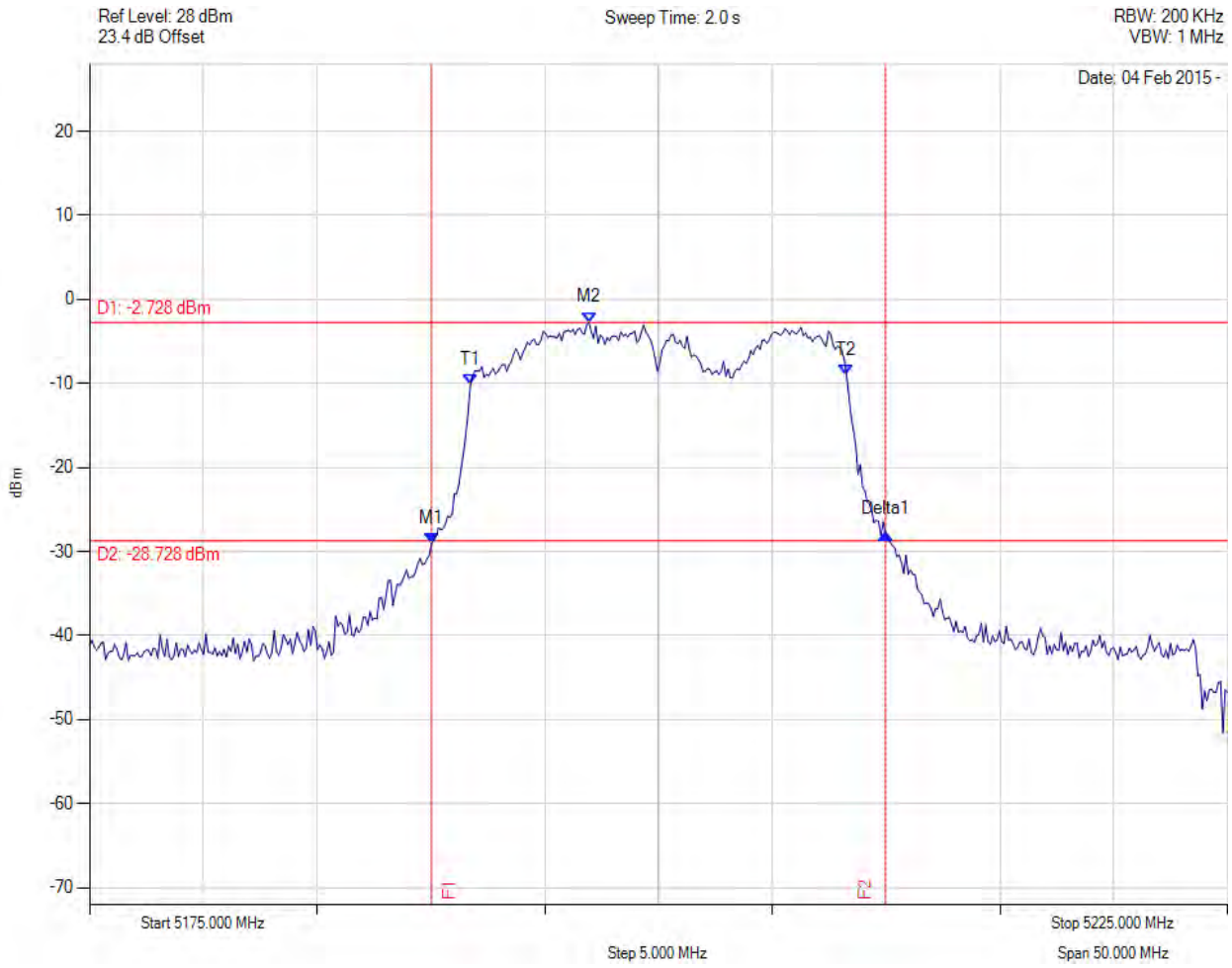


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5169.830 MHz : -27.668 dBm M2 : 5187.866 MHz : -1.597 dBm Delta1 : 20.741 MHz : 0.409 dB T1 : 5171.733 MHz : -9.155 dBm T2 : 5188.367 MHz : -8.766 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 20.741 MHz Measured 99% Bandwidth: 16.633 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5190.030 MHz : -28.992 dBm M2 : 5196.944 MHz : -2.728 dBm Delta1 : 19.940 MHz : 1.147 dB T1 : 5191.733 MHz : -10.119 dBm T2 : 5208.267 MHz : -9.049 dBm OBW : 16.533 MHz	Measured 26 dB Bandwidth: 19.940 MHz Measured 99% Bandwidth: 16.533 MHz

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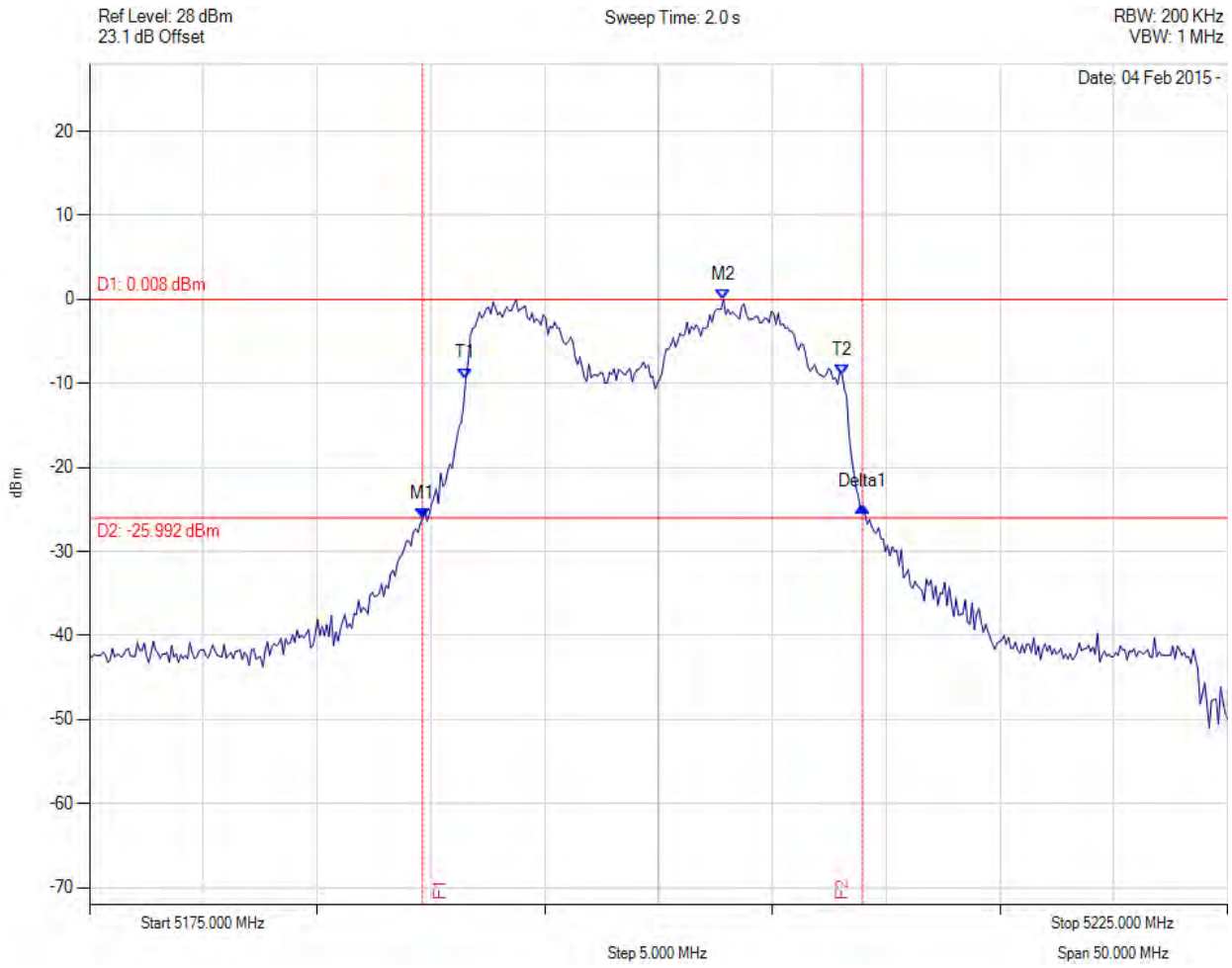
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc

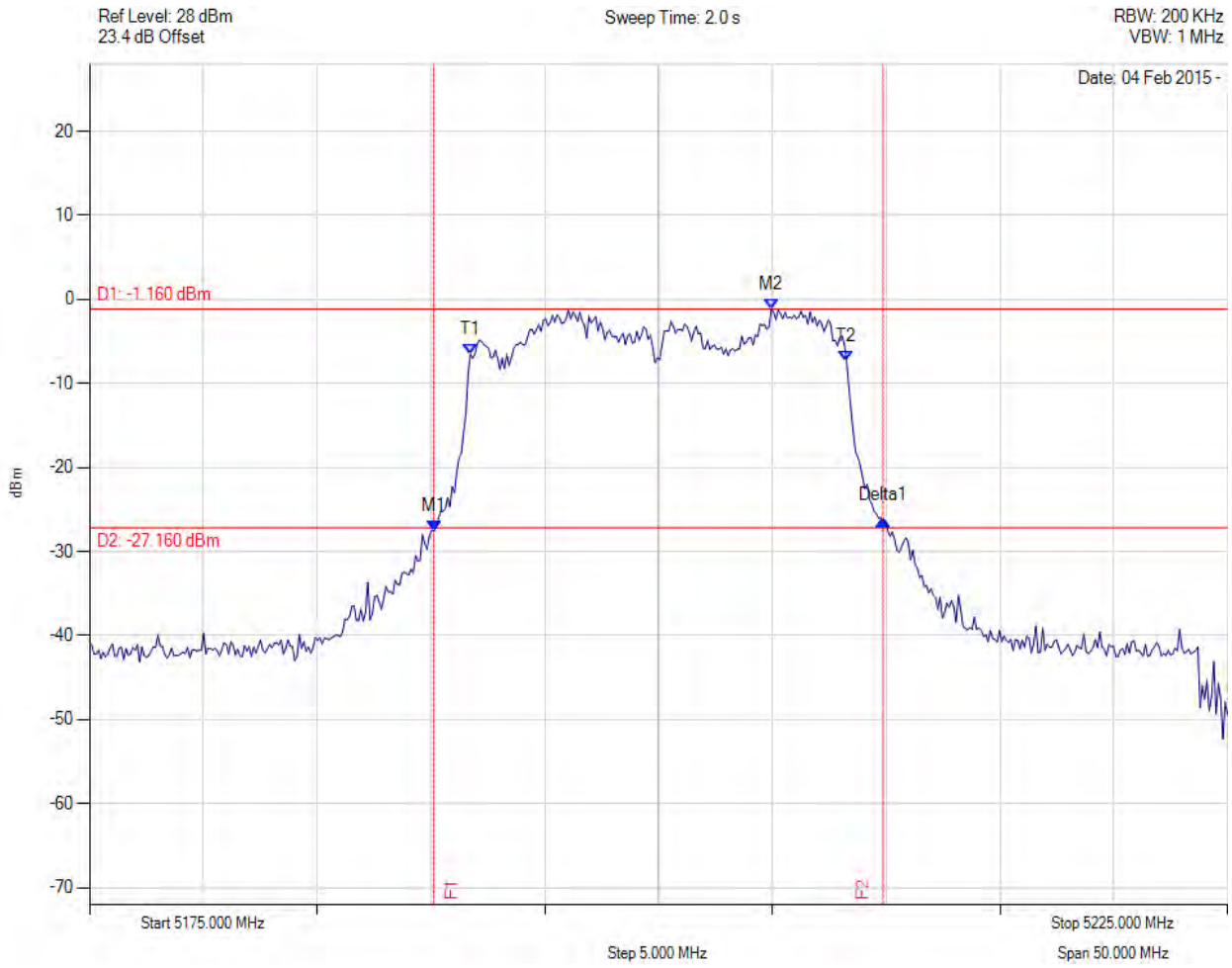


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5189.629 MHz : -26.055 dBm M2 : 5202.856 MHz : 0.008 dBm Delta1 : 19.339 MHz : 1.420 dB T1 : 5191.533 MHz : -9.403 dBm T2 : 5208.066 MHz : -8.969 dBm OBW : 16.533 MHz	Measured 26 dB Bandwidth: 19.339 MHz Measured 99% Bandwidth: 16.533 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5200.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc

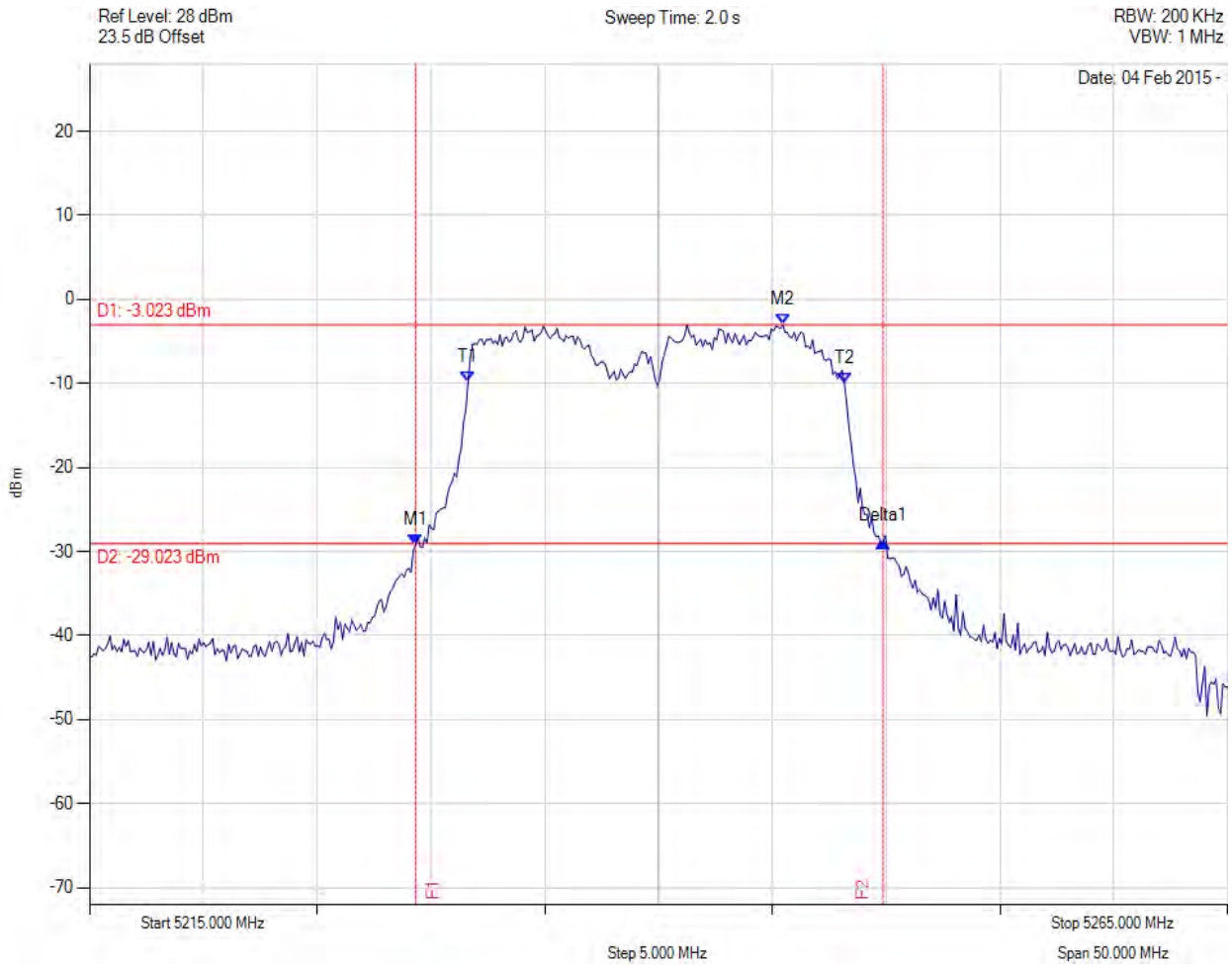


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5190.130 MHz : -27.538 dBm M2 : 5204.960 MHz : -1.160 dBm Delta1 : 19.739 MHz : 1.275 dB T1 : 5191.733 MHz : -6.561 dBm T2 : 5208.267 MHz : -7.340 dBm OBW : 16.533 MHz	Measured 26 dB Bandwidth: 19.739 MHz Measured 99% Bandwidth: 16.533 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc

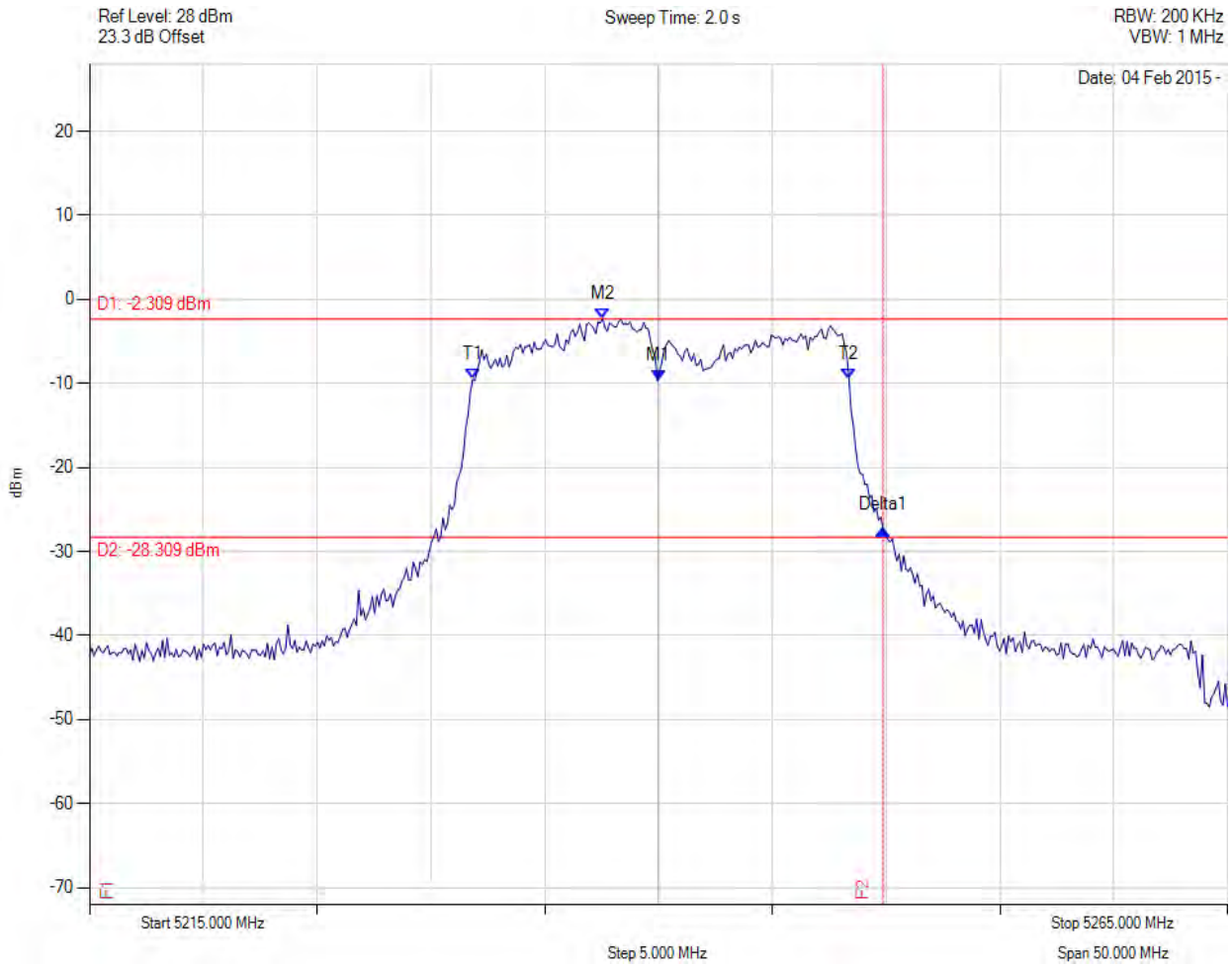


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5229.329 MHz : -29.254 dBm M2 : 5245.461 MHz : -3.023 dBm Delta1 : 20.541 MHz : 0.472 dB T1 : 5231.633 MHz : -9.789 dBm T2 : 5248.166 MHz : -9.950 dBm OBW : 16.533 MHz	Measured 26 dB Bandwidth: 20.541 MHz Measured 99% Bandwidth: 16.533 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc

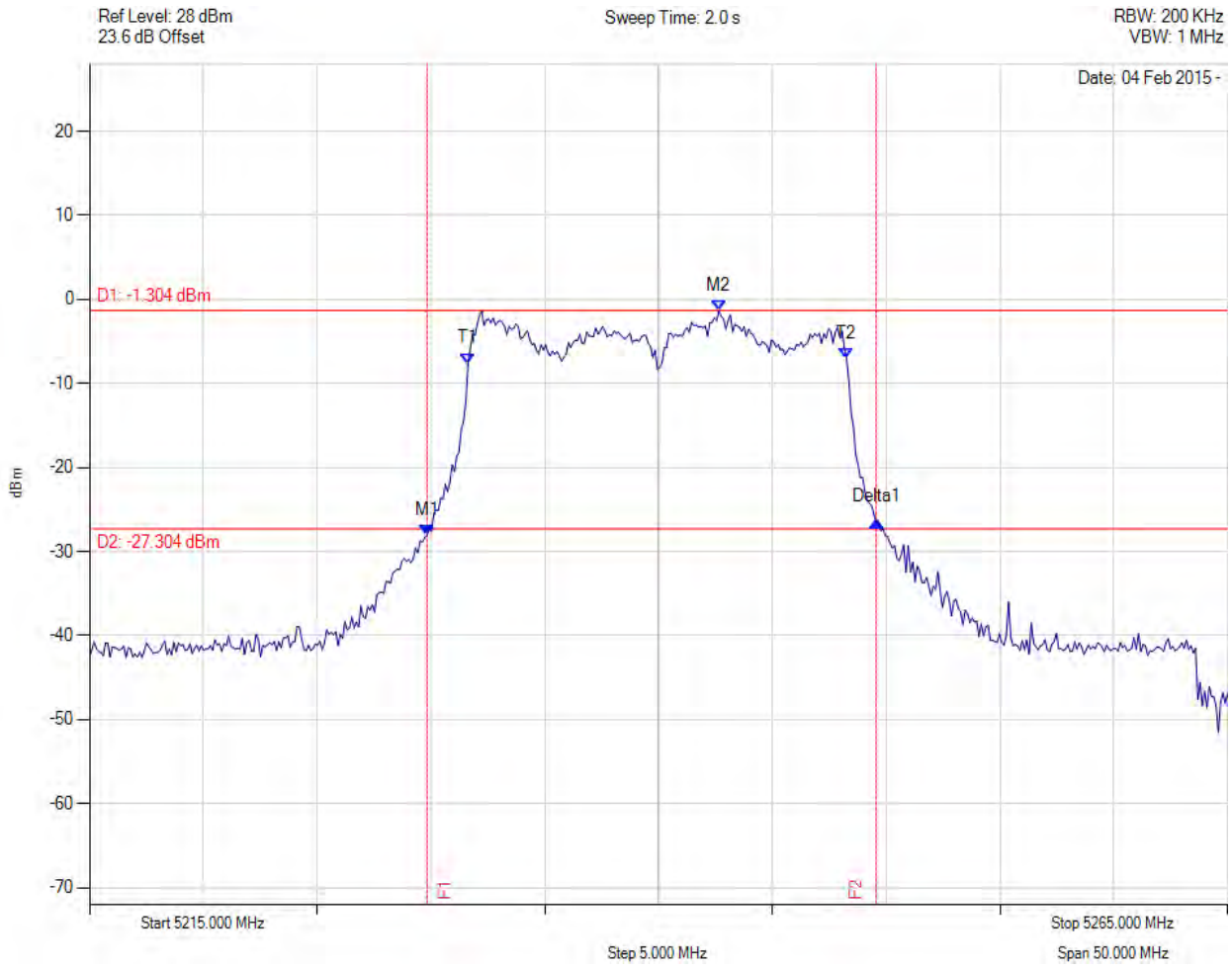


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5240.000 MHz : -9.673 dBm M2 : 5237.545 MHz : -2.309 dBm Delta1 : 9.870 MHz : -17.765 dB T1 : 5231.834 MHz : -9.517 dBm T2 : 5248.367 MHz : -9.468 dBm OBW : 16.533 MHz	Measured 26 dB Bandwidth: 9.870 MHz Measured 99% Bandwidth: 16.533 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5240.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5229.830 MHz : -28.079 dBm M2 : 5242.655 MHz : -1.304 dBm Delta1 : 19.739 MHz : 1.613 dB T1 : 5231.633 MHz : -7.605 dBm T2 : 5248.267 MHz : -7.052 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 19.739 MHz Measured 99% Bandwidth: 16.633 MHz

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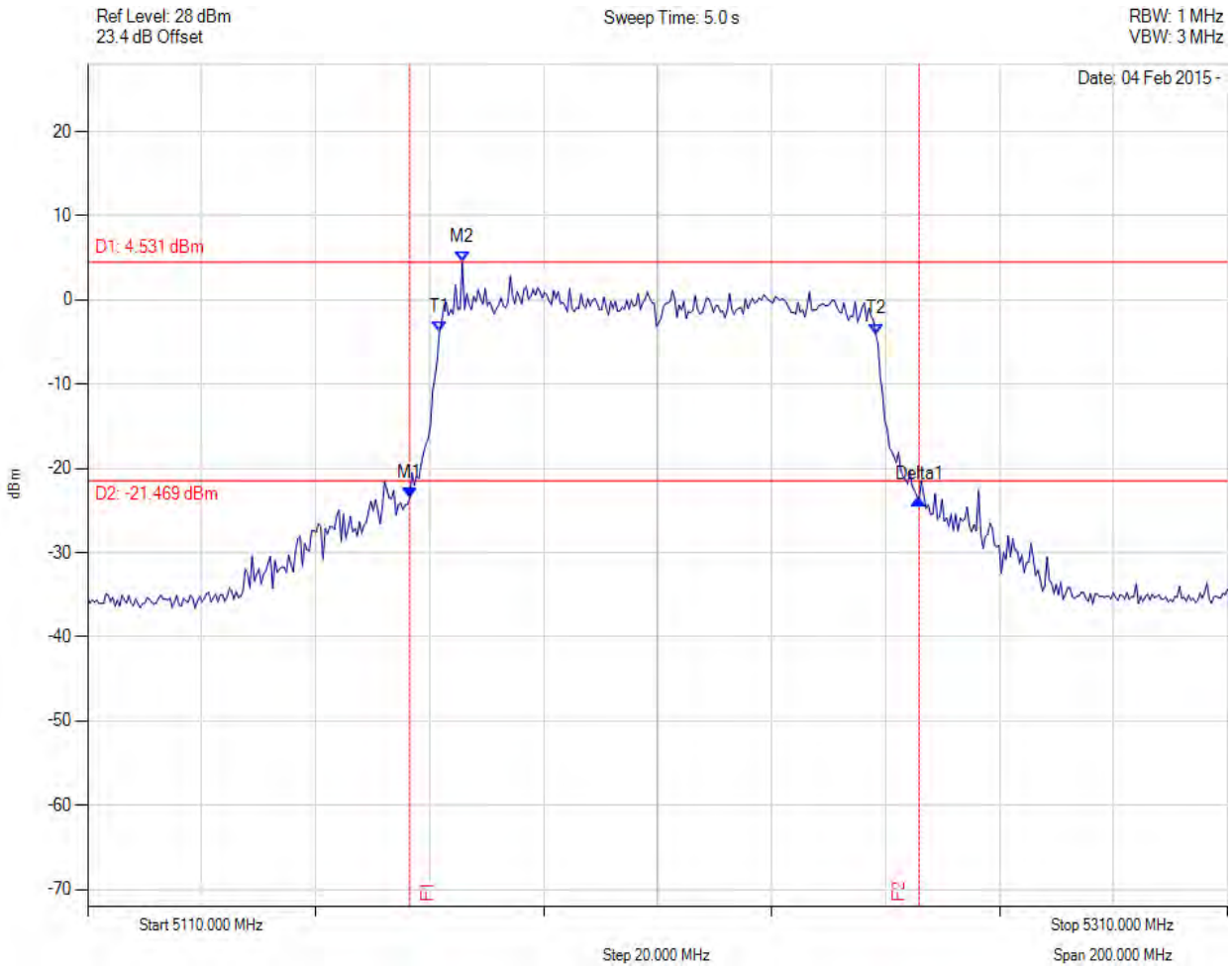
26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc

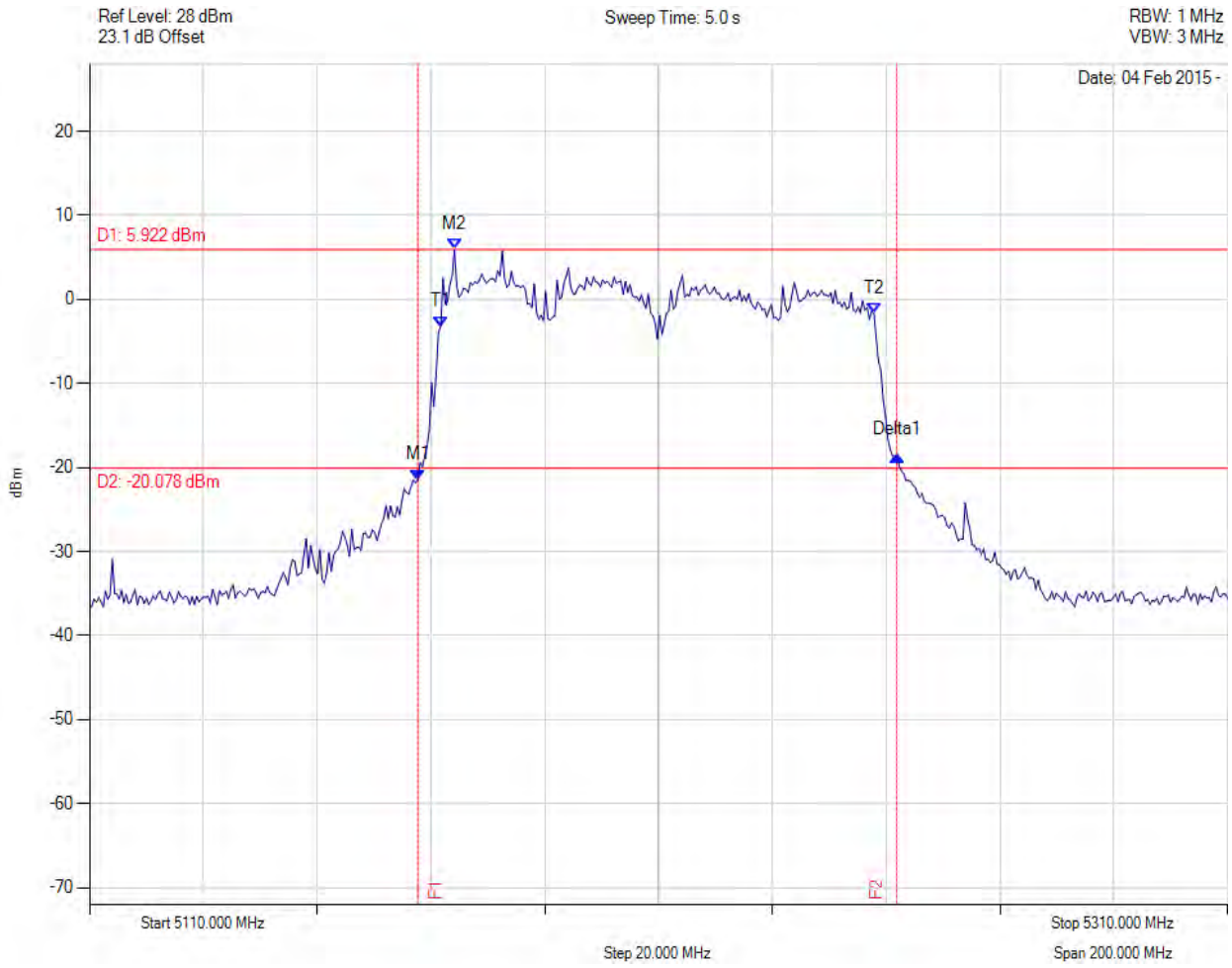


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5166.513 MHz : -23.478 dBm M2 : 5175.731 MHz : 4.531 dBm Delta1 : 89.379 MHz : -0.199 dB T1 : 5171.723 MHz : -3.796 dBm T2 : 5248.277 MHz : -4.027 dBm OBW : 76.553 MHz	Measured 26 dB Bandwidth: 89.379 MHz Measured 99% Bandwidth: 76.553 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5167.715 MHz : -21.455 dBm M2 : 5174.128 MHz : 5.922 dBm Delta1 : 84.168 MHz : 2.922 dB T1 : 5171.723 MHz : -3.208 dBm T2 : 5247.876 MHz : -1.680 dBm OBW : 76.152 MHz	Measured 26 dB Bandwidth: 84.168 MHz Measured 99% Bandwidth: 76.152 MHz

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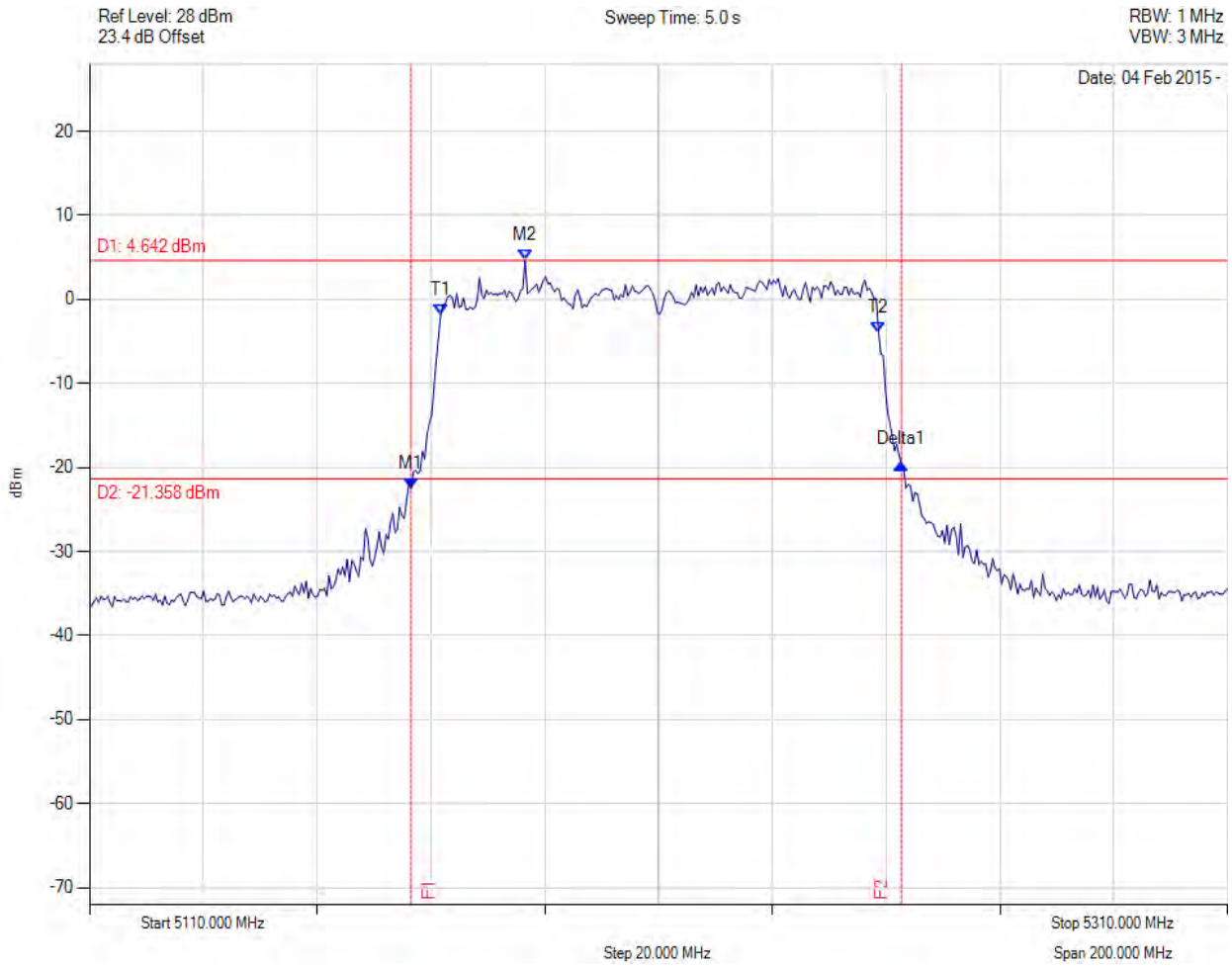
26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5166.513 MHz : -22.502 dBm M2 : 5186.553 MHz : 4.642 dBm Delta1 : 86.172 MHz : 2.990 dB T1 : 5171.723 MHz : -1.817 dBm T2 : 5248.677 MHz : -3.924 dBm OBW : 76.954 MHz	Measured 26 dB Bandwidth: 86.172 MHz Measured 99% Bandwidth: 76.954 MHz

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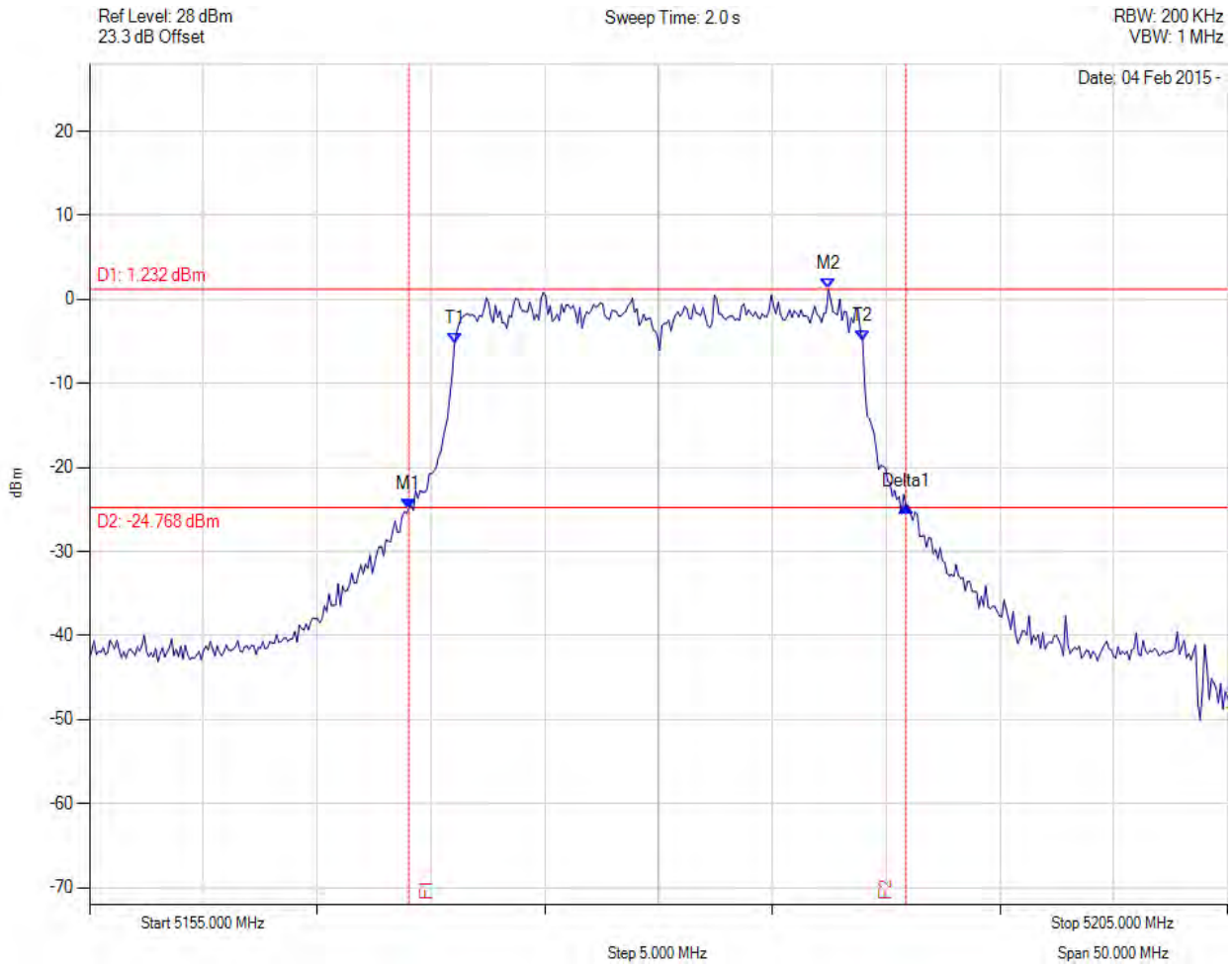
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc

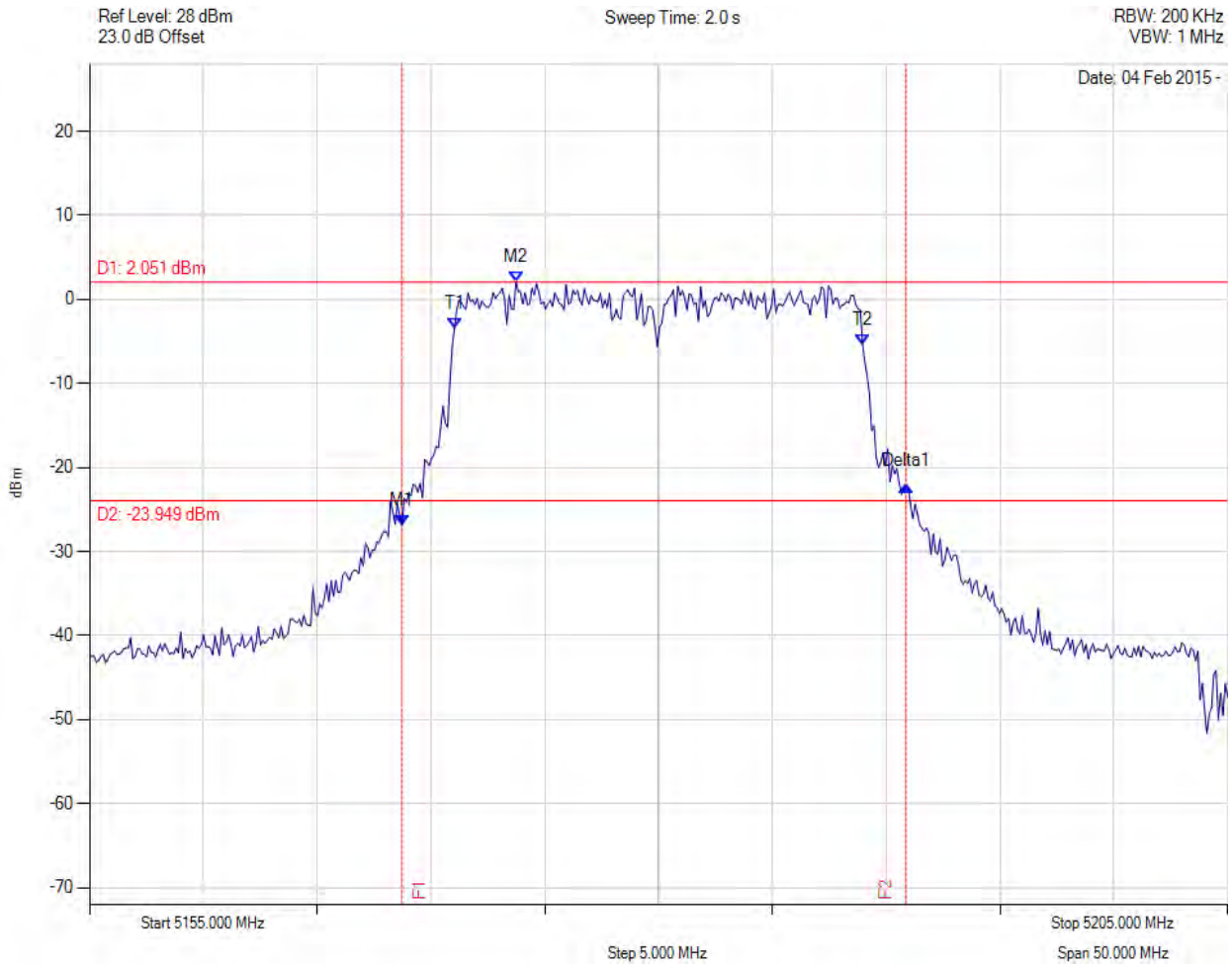


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5169.028 MHz : -24.920 dBm M2 : 5187.465 MHz : 1.232 dBm Delta1 : 21.844 MHz : 0.344 dB T1 : 5171.032 MHz : -5.299 dBm T2 : 5188.968 MHz : -4.890 dBm OBW : 17.936 MHz	Measured 26 dB Bandwidth: 21.844 MHz Measured 99% Bandwidth: 17.936 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc

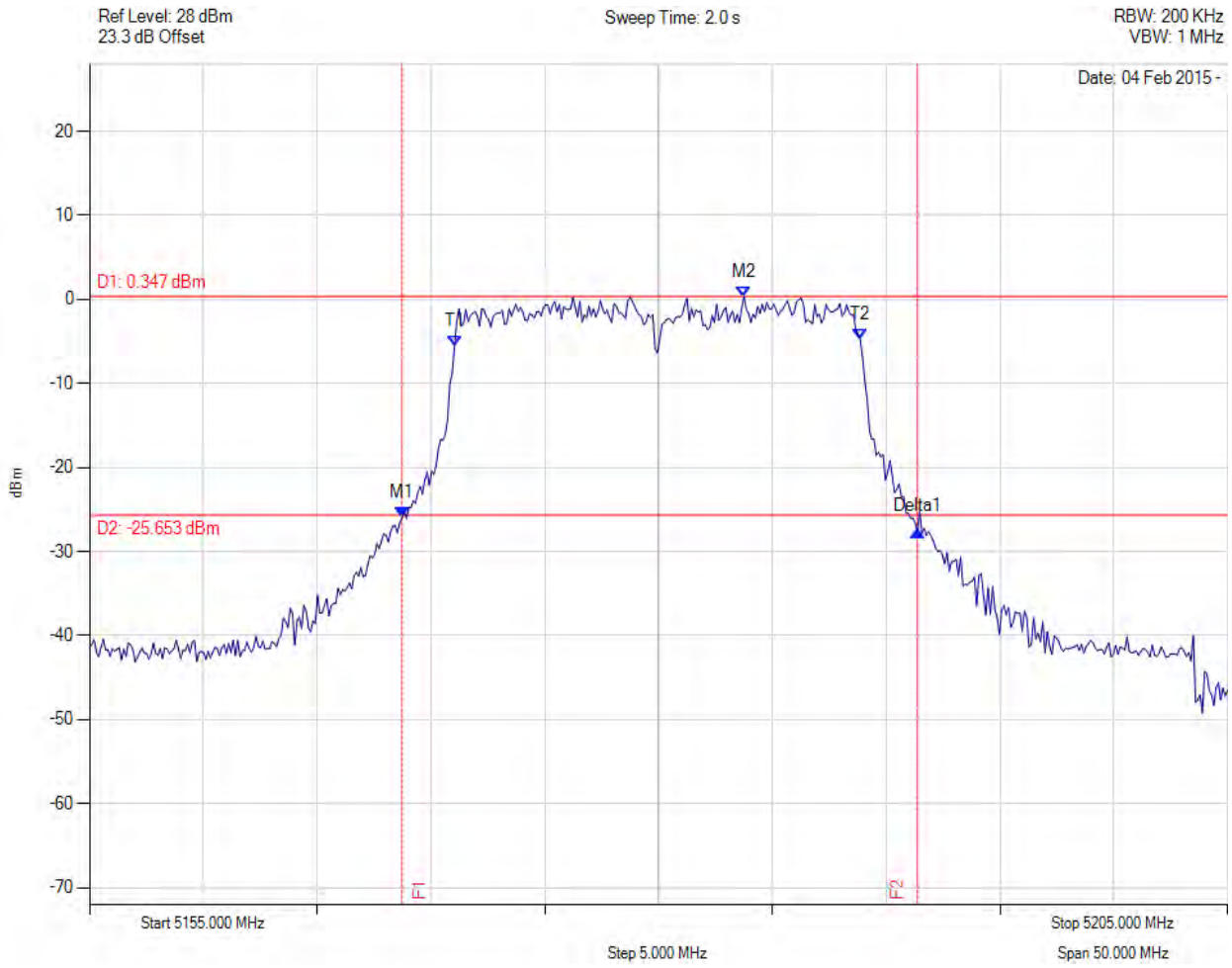


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5168.727 MHz : -26.860 dBm M2 : 5173.737 MHz : 2.051 dBm Delta1 : 22.144 MHz : 4.714 dB T1 : 5171.032 MHz : -3.425 dBm T2 : 5188.968 MHz : -5.380 dBm OBW : 17.936 MHz	Measured 26 dB Bandwidth: 22.144 MHz Measured 99% Bandwidth: 17.936 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc

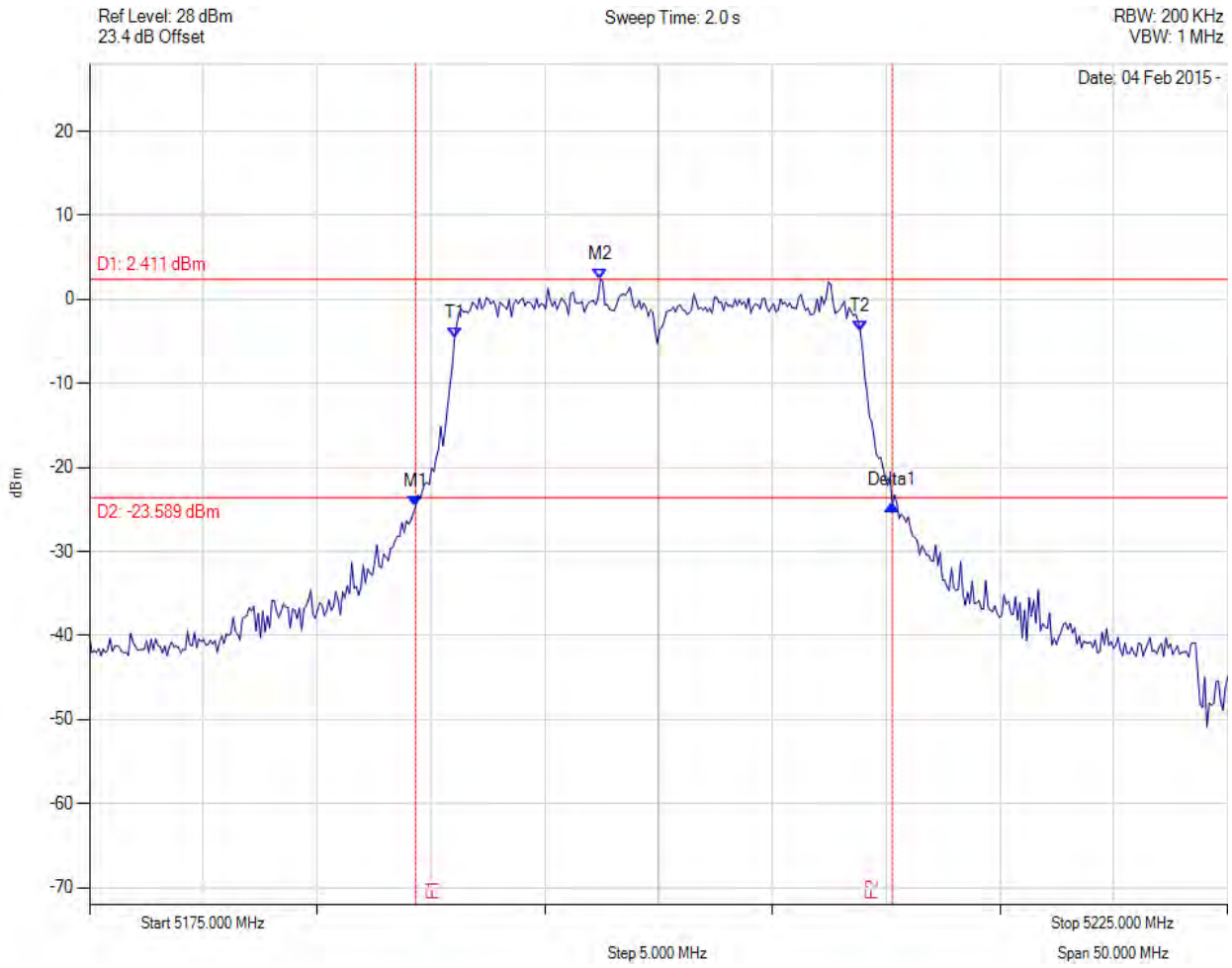


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5168.727 MHz : -26.004 dBm M2 : 5183.758 MHz : 0.347 dBm Delta1 : 22.645 MHz : -1.590 dB T1 : 5171.032 MHz : -5.632 dBm T2 : 5188.868 MHz : -4.812 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 22.645 MHz Measured 99% Bandwidth: 17.836 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc

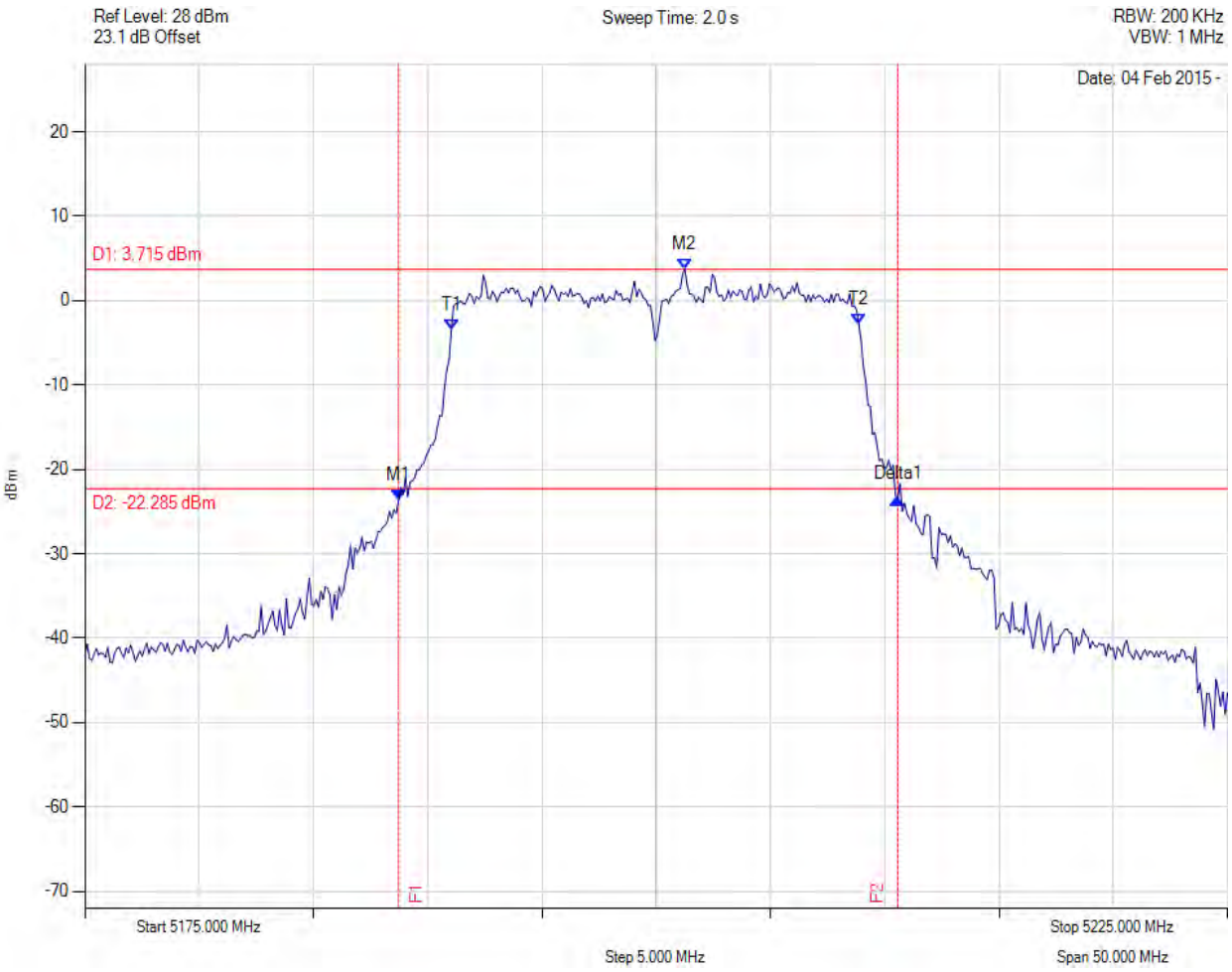


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5189.329 MHz : -24.676 dBm M2 : 5197.445 MHz : 2.411 dBm Delta1 : 20.942 MHz : 0.157 dB T1 : 5191.032 MHz : -4.656 dBm T2 : 5208.868 MHz : -3.804 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 20.942 MHz Measured 99% Bandwidth: 17.836 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc

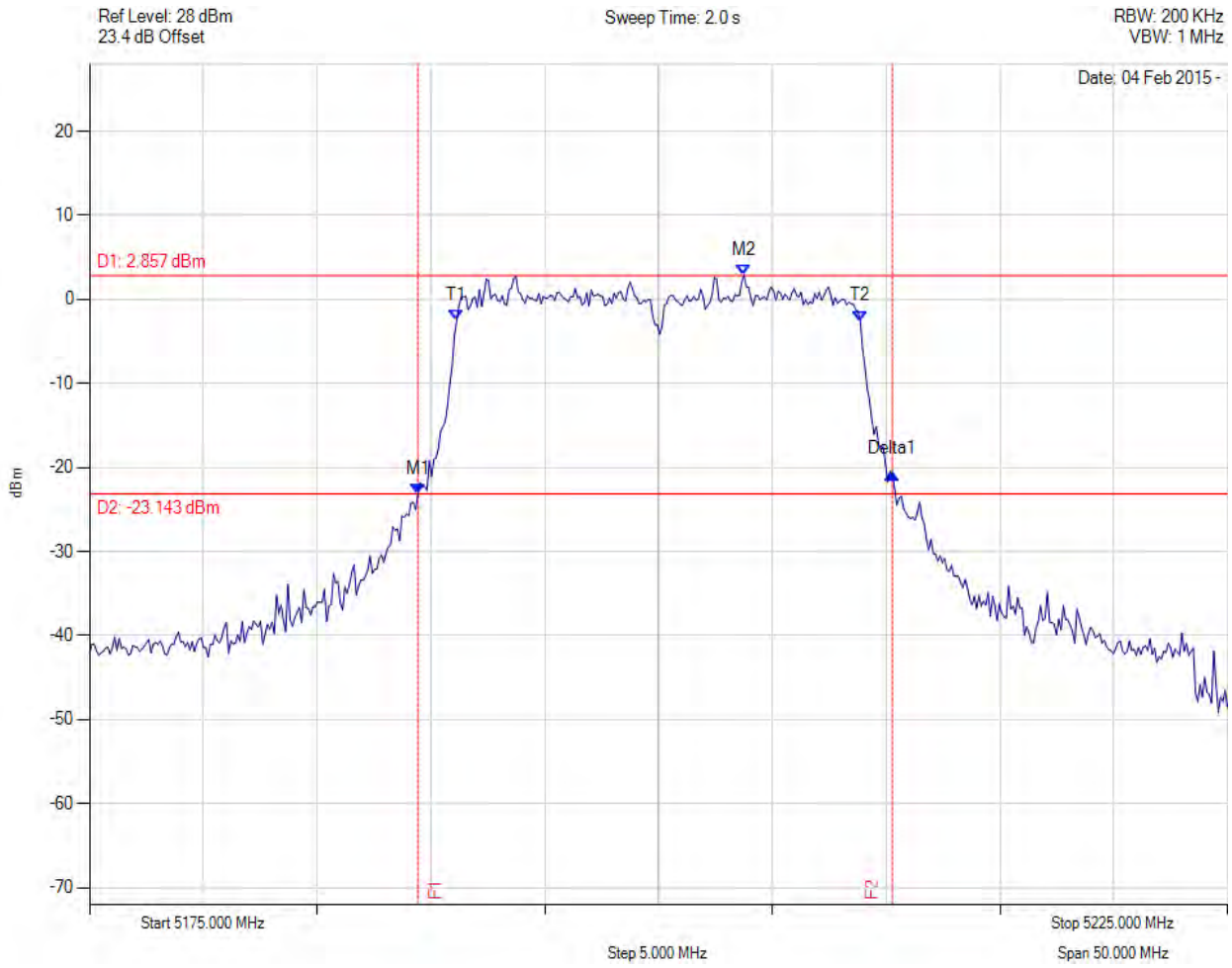


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5188.727 MHz : -23.604 dBm M2 : 5201.253 MHz : 3.715 dBm Delta1 : 21.844 MHz : 0.089 dB T1 : 5191.032 MHz : -3.527 dBm T2 : 5208.868 MHz : -2.811 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 21.844 MHz Measured 99% Bandwidth: 17.836 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc

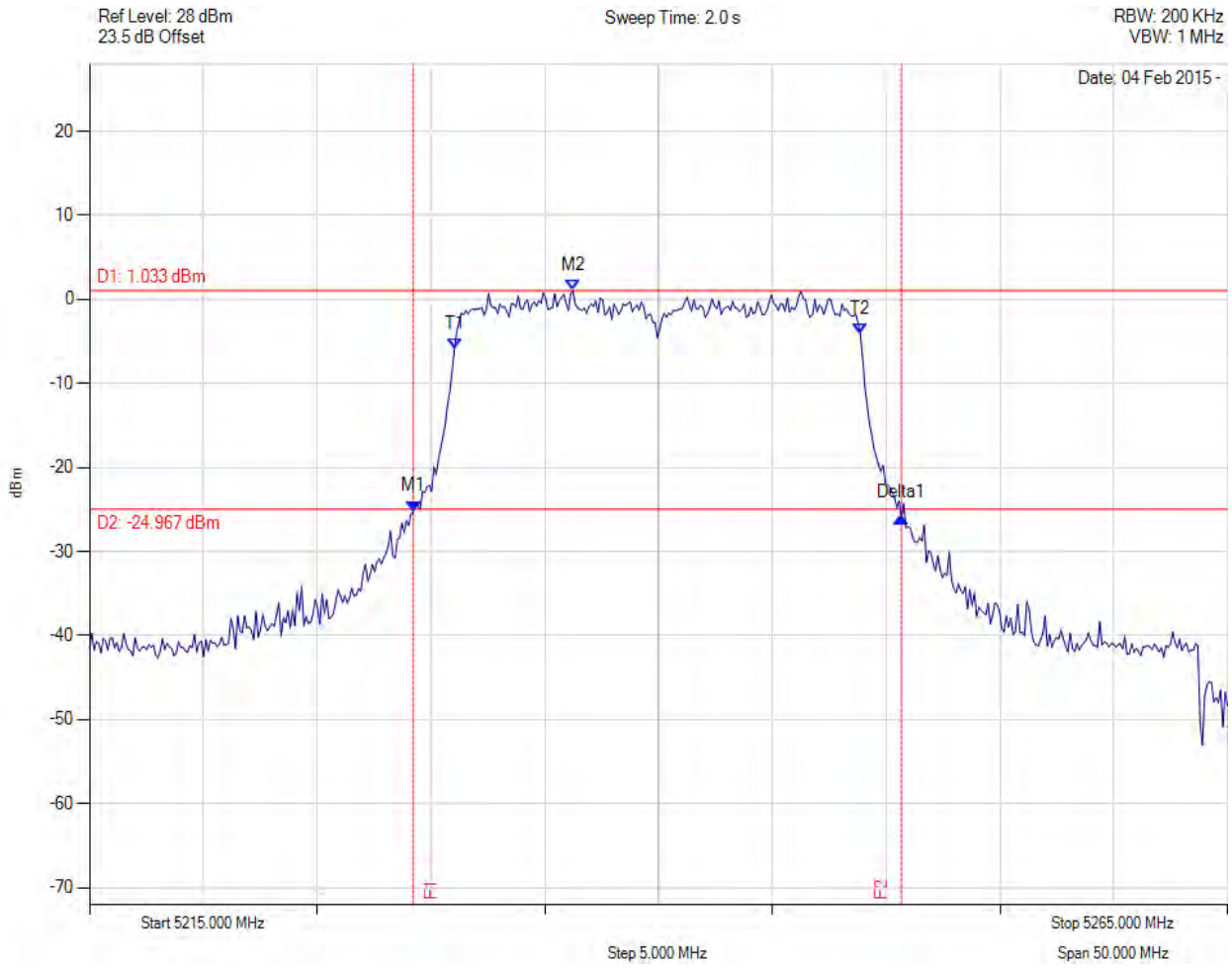


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5189.429 MHz : -23.226 dBm M2 : 5203.758 MHz : 2.857 dBm Delta1 : 20.842 MHz : 2.532 dB T1 : 5191.132 MHz : -2.472 dBm T2 : 5208.868 MHz : -2.559 dBm OBW : 17.735 MHz	Measured 26 dB Bandwidth: 20.842 MHz Measured 99% Bandwidth: 17.735 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc

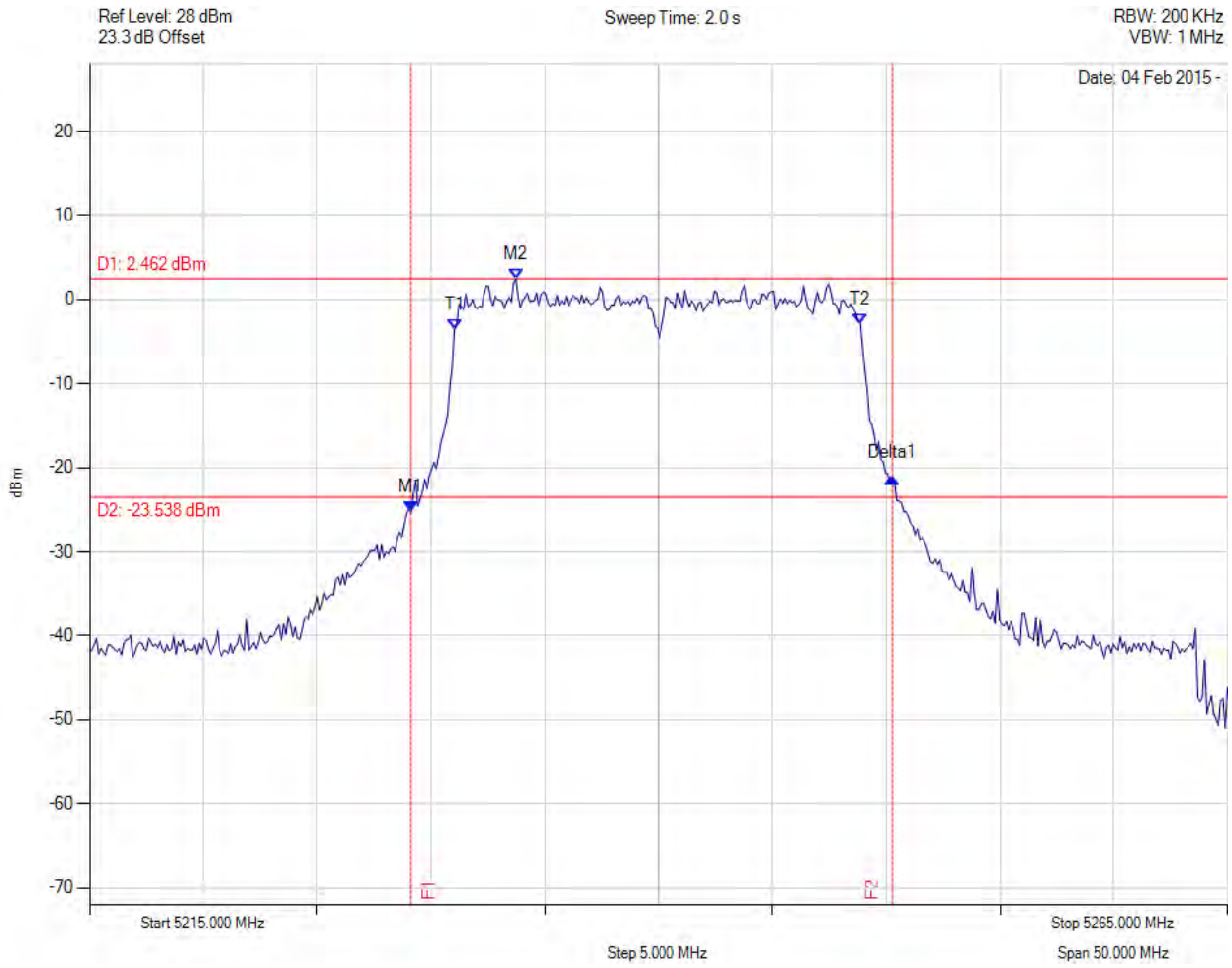


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5229.228 MHz : -25.199 dBm M2 : 5236.242 MHz : 1.033 dBm Delta1 : 21.443 MHz : -0.801 dB T1 : 5231.032 MHz : -5.835 dBm T2 : 5248.868 MHz : -4.090 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 21.443 MHz Measured 99% Bandwidth: 17.836 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc

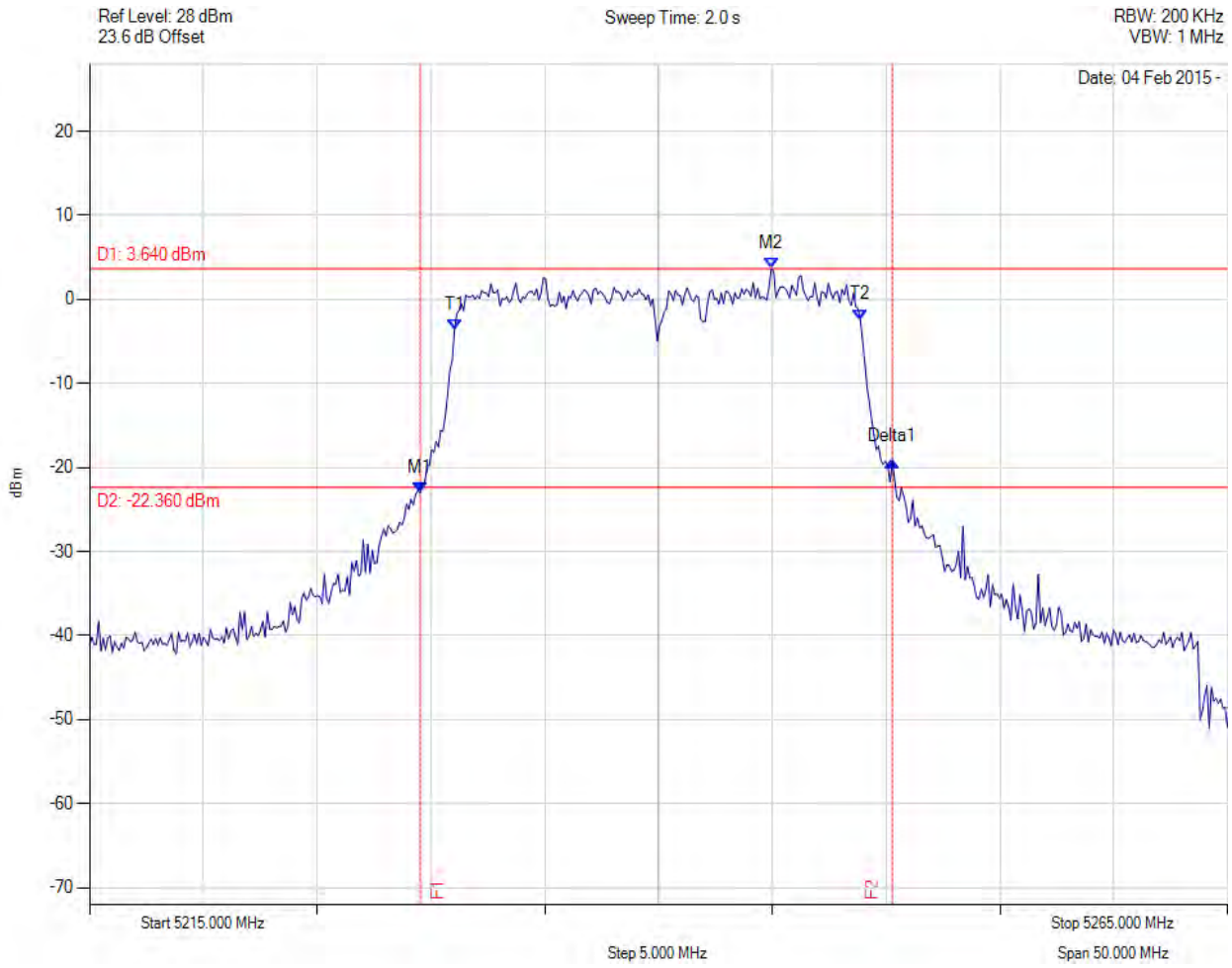


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5229.128 MHz : -25.235 dBm M2 : 5233.737 MHz : 2.462 dBm Delta1 : 21.142 MHz : 3.980 dB T1 : 5231.032 MHz : -3.615 dBm T2 : 5248.868 MHz : -2.933 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 21.142 MHz Measured 99% Bandwidth: 17.836 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5229.529 MHz : -23.019 dBm M2 : 5244.960 MHz : 3.640 dBm Delta1 : 20.741 MHz : 3.750 dB T1 : 5231.032 MHz : -3.623 dBm T2 : 5248.868 MHz : -2.394 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 20.741 MHz Measured 99% Bandwidth: 17.836 MHz

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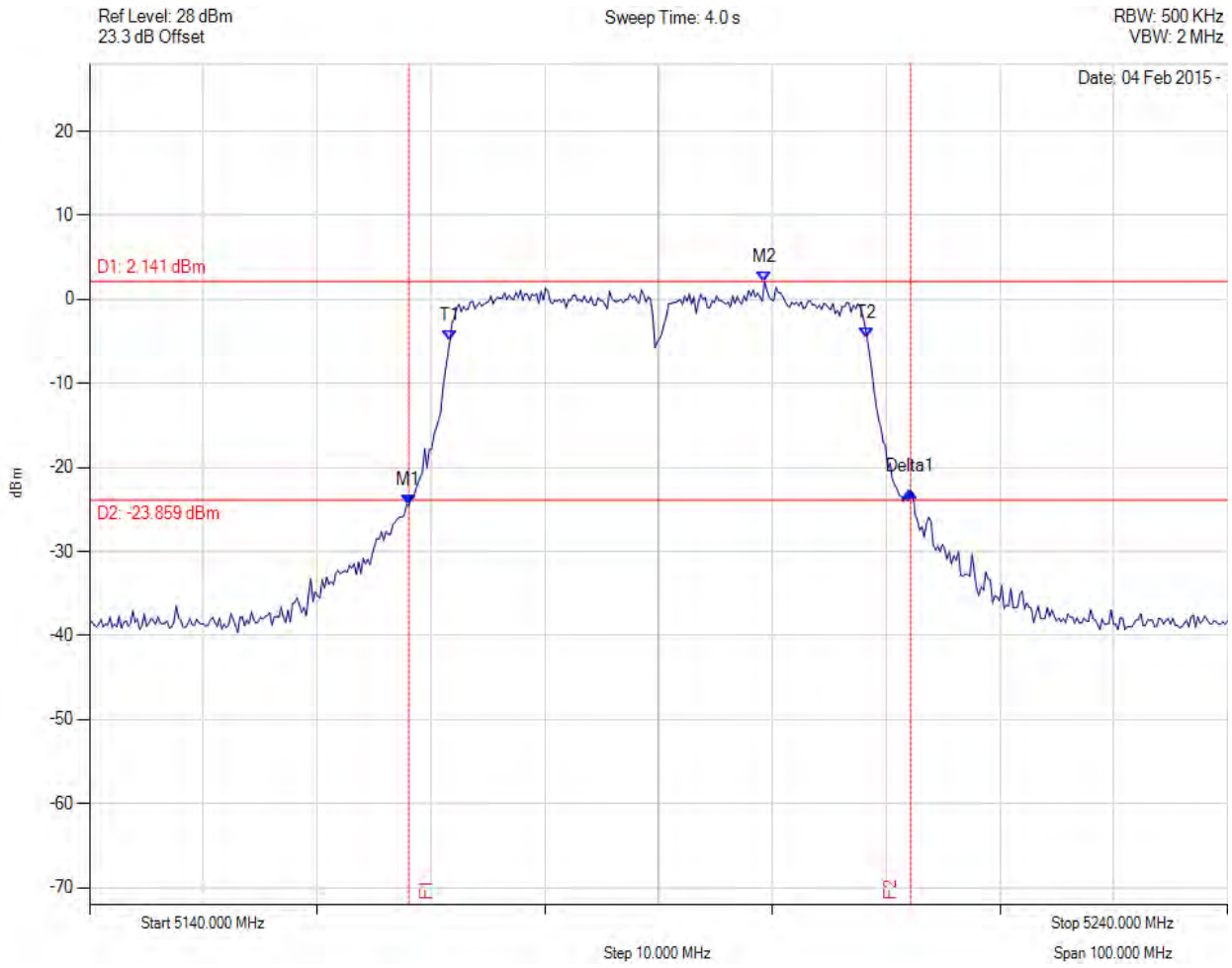
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5168.056 MHz : -24.536 dBm M2 : 5199.319 MHz : 2.141 dBm Delta1 : 44.088 MHz : 1.723 dB T1 : 5171.663 MHz : -4.934 dBm T2 : 5208.337 MHz : -4.621 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 44.088 MHz Measured 99% Bandwidth: 36.673 MHz

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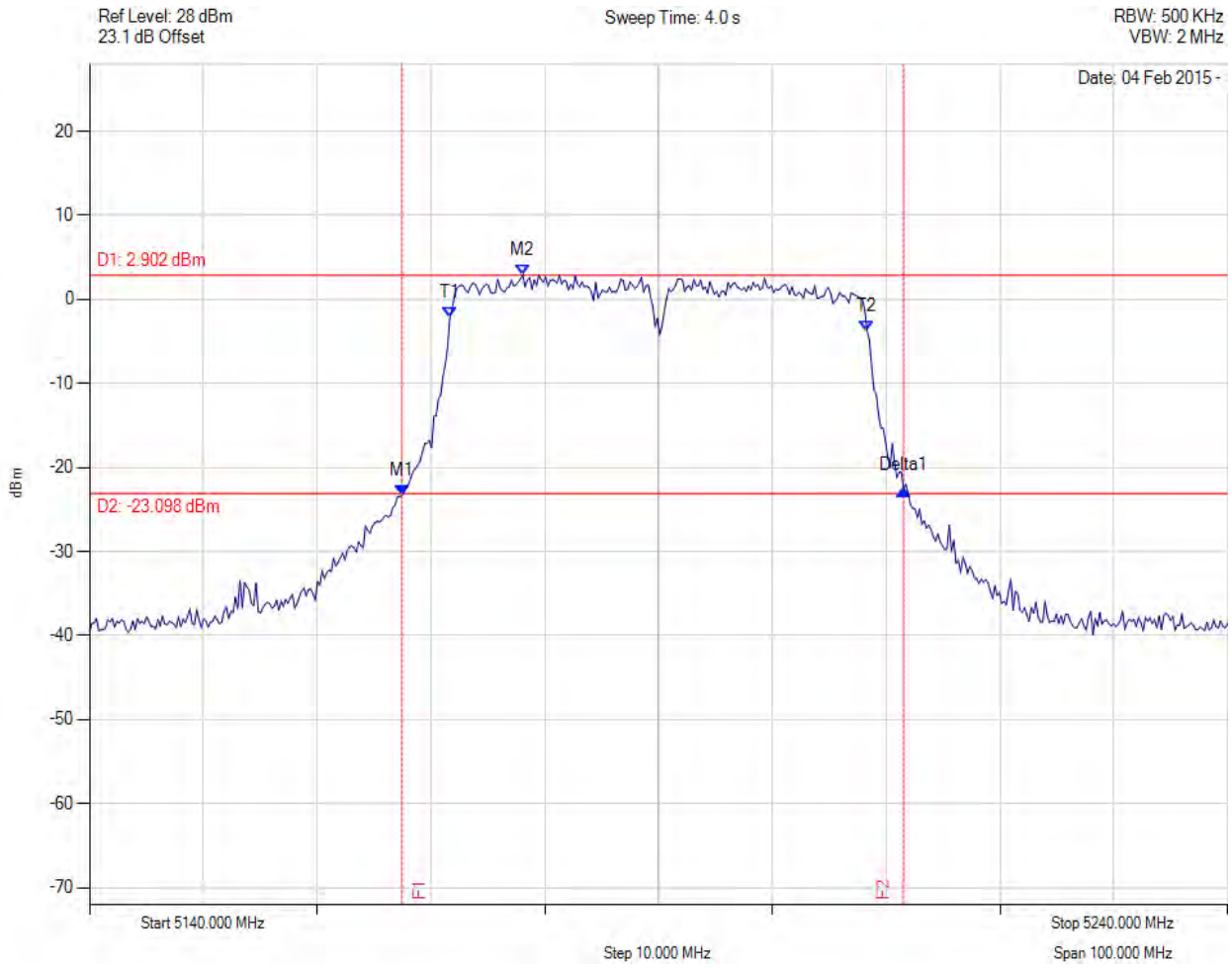
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5167.455 MHz : -23.259 dBm M2 : 5178.076 MHz : 2.902 dBm Delta1 : 44.088 MHz : 0.641 dB T1 : 5171.663 MHz : -2.207 dBm T2 : 5208.337 MHz : -3.769 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 44.088 MHz Measured 99% Bandwidth: 36.673 MHz

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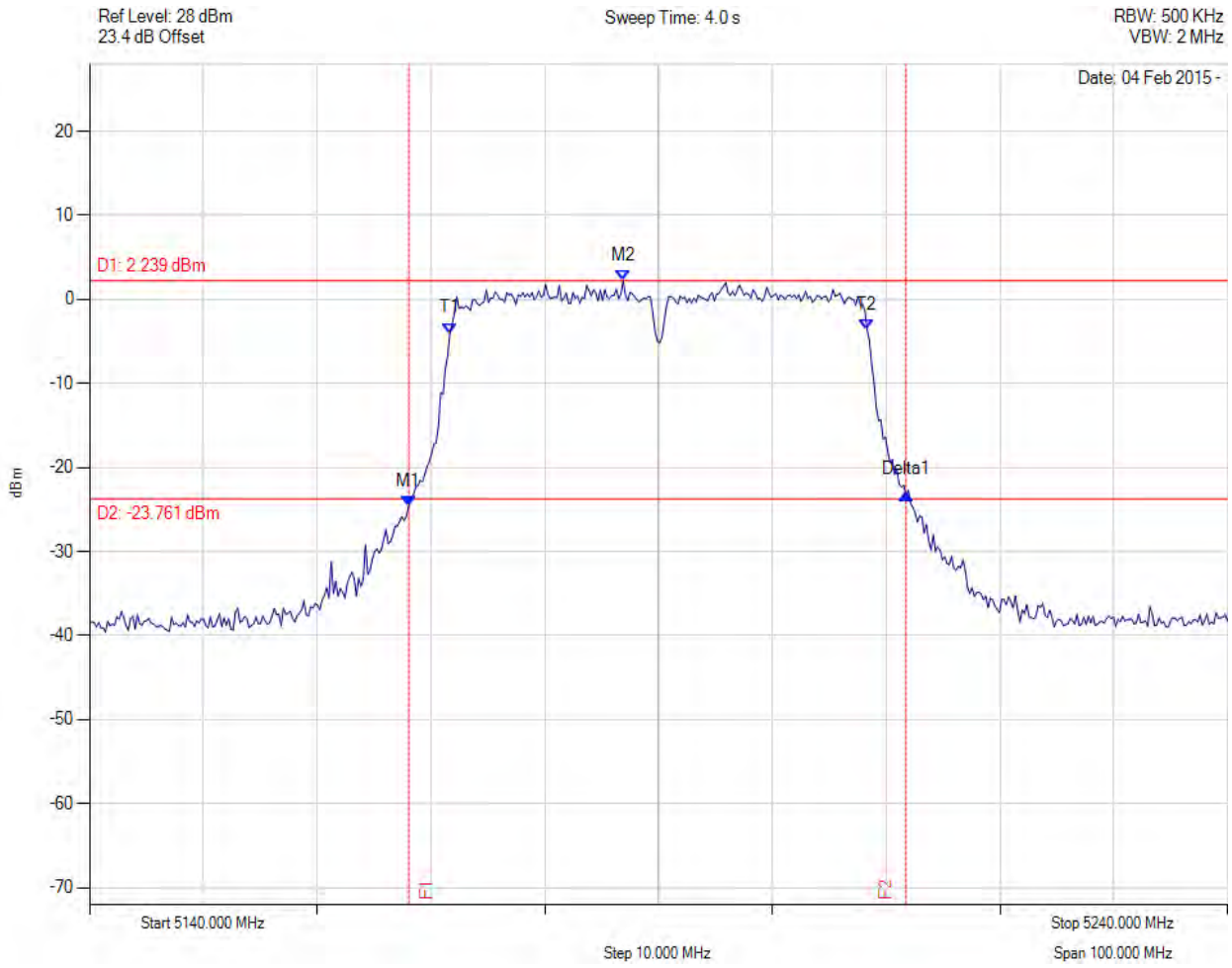
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5168.056 MHz : -24.574 dBm M2 : 5186.894 MHz : 2.239 dBm Delta1 : 43.687 MHz : 1.338 dB T1 : 5171.663 MHz : -4.019 dBm T2 : 5208.337 MHz : -3.621 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 43.687 MHz Measured 99% Bandwidth: 36.673 MHz

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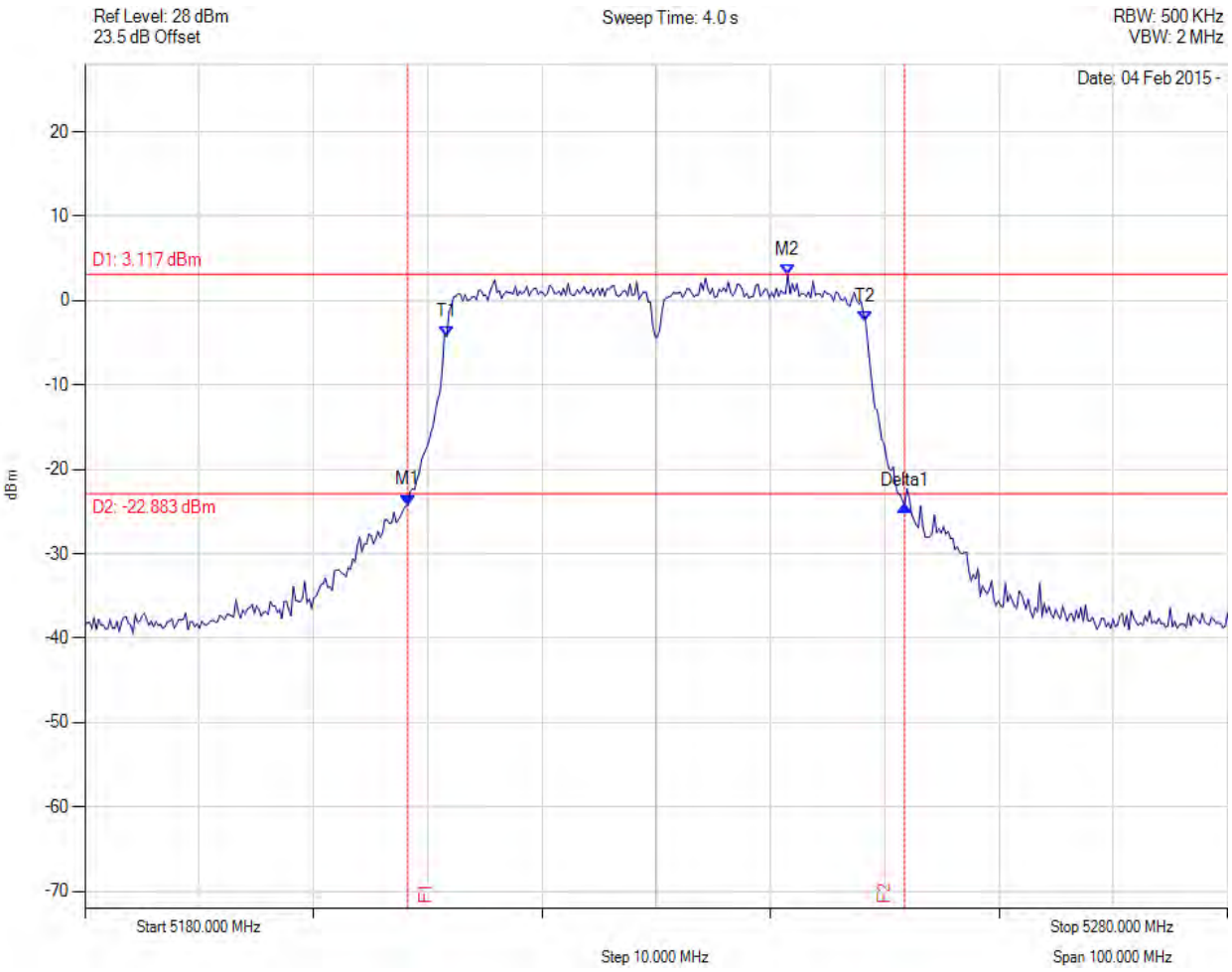
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5208.257 MHz : -24.220 dBm M2 : 5241.523 MHz : 3.117 dBm Delta1 : 43.487 MHz : -0.039 dB T1 : 5211.663 MHz : -4.282 dBm T2 : 5248.337 MHz : -2.543 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 43.487 MHz Measured 99% Bandwidth: 36.673 MHz

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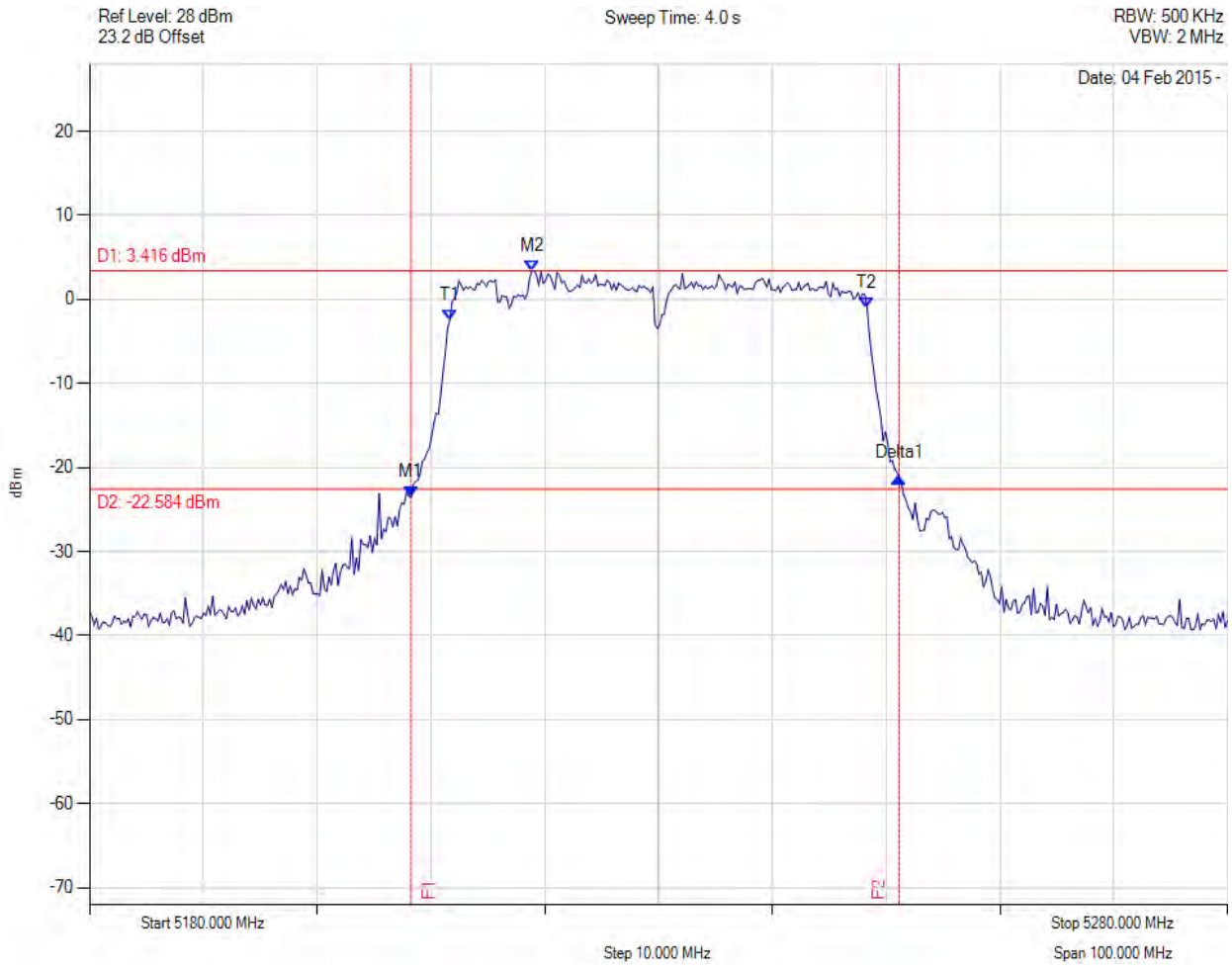
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5208.257 MHz : -23.515 dBm M2 : 5218.878 MHz : 3.416 dBm Delta1 : 42.886 MHz : 2.329 dB T1 : 5211.663 MHz : -2.451 dBm T2 : 5248.337 MHz : -1.078 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 42.886 MHz Measured 99% Bandwidth: 36.673 MHz

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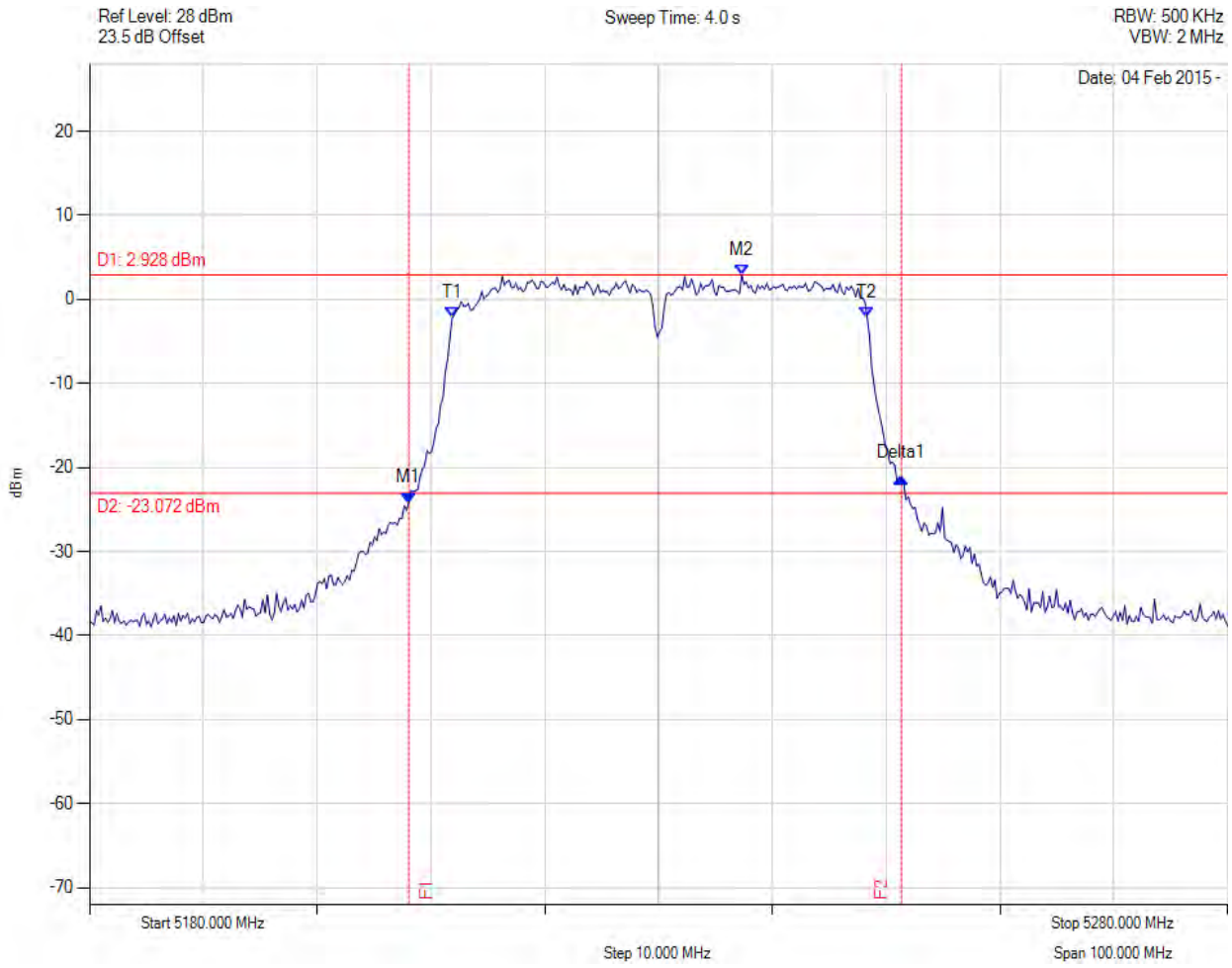
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5208.056 MHz : -24.227 dBm M2 : 5237.315 MHz : 2.928 dBm Delta1 : 43.287 MHz : 3.077 dB T1 : 5211.864 MHz : -2.223 dBm T2 : 5248.337 MHz : -2.136 dBm OBW : 36.473 MHz	Measured 26 dB Bandwidth: 43.287 MHz Measured 99% Bandwidth: 36.473 MHz

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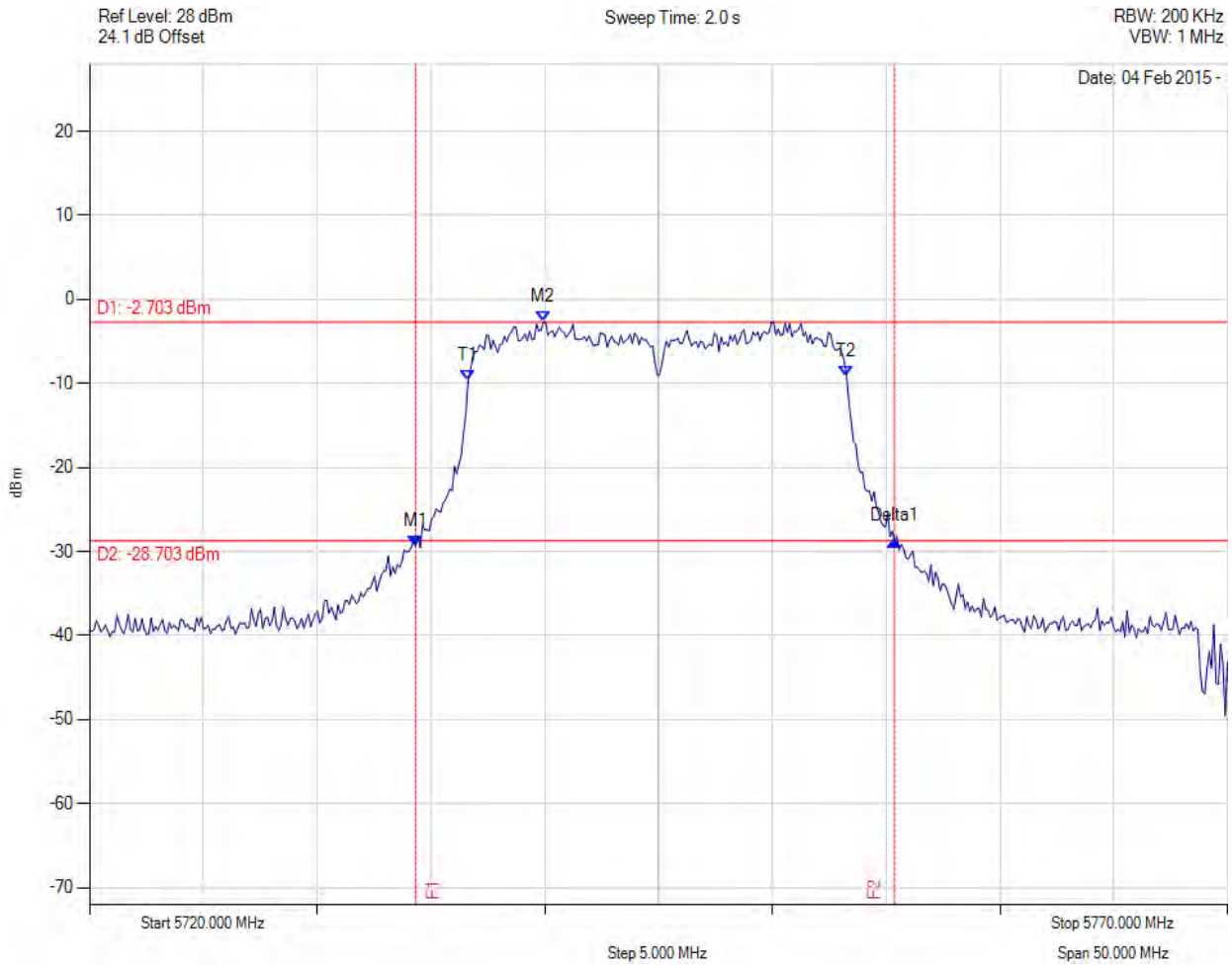
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5734.329 MHz : -29.337 dBm M2 : 5739.940 MHz : -2.703 dBm Delta1 : 21.042 MHz : 0.645 dB T1 : 5736.633 MHz : -9.712 dBm T2 : 5753.267 MHz : -9.089 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 21.042 MHz Measured 99% Bandwidth: 16.633 MHz

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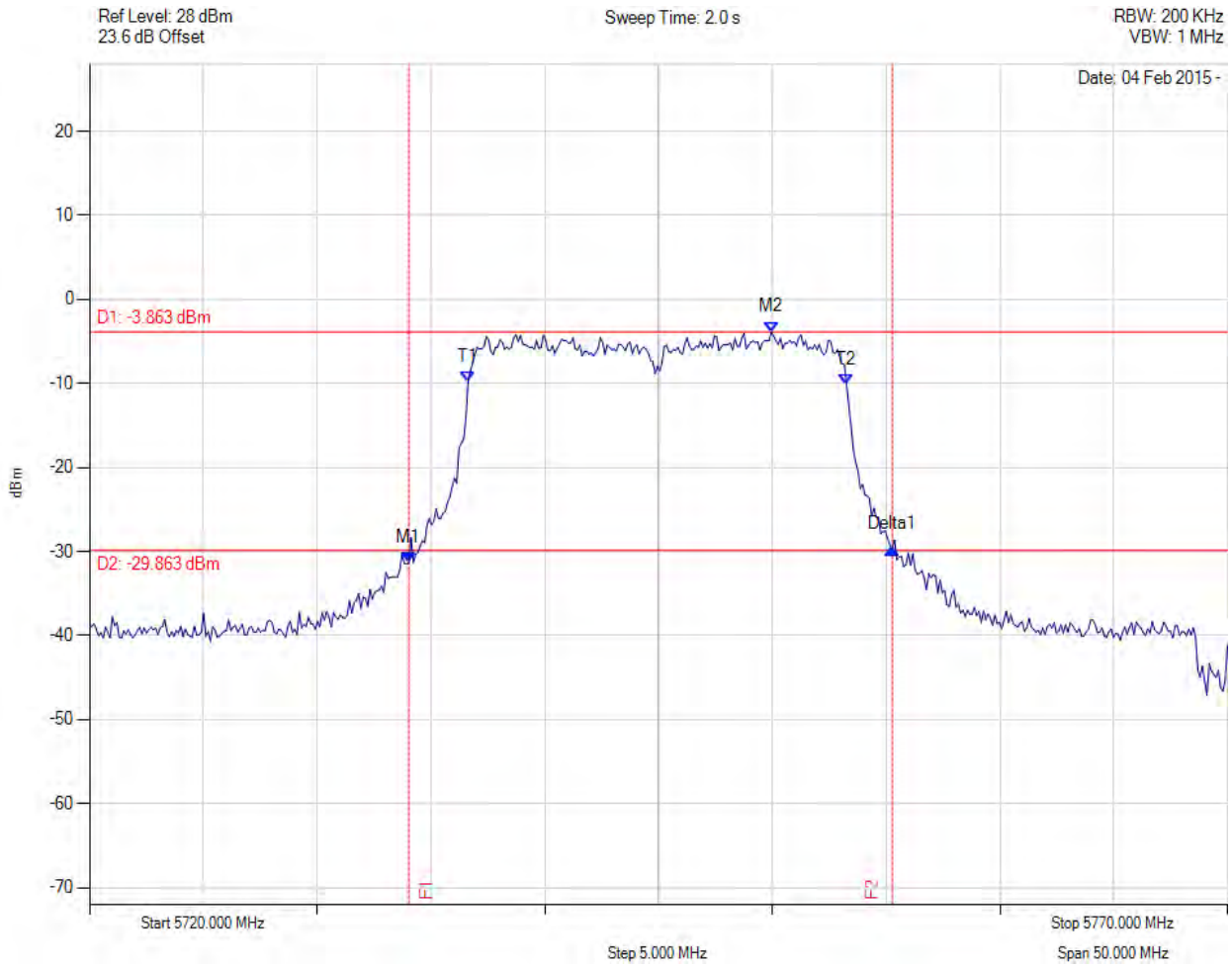
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5734.028 MHz : -31.371 dBm M2 : 5749.960 MHz : -3.863 dBm Delta1 : 21.242 MHz : 1.741 dB T1 : 5736.633 MHz : -9.805 dBm T2 : 5753.267 MHz : -10.167 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 21.242 MHz Measured 99% Bandwidth: 16.633 MHz

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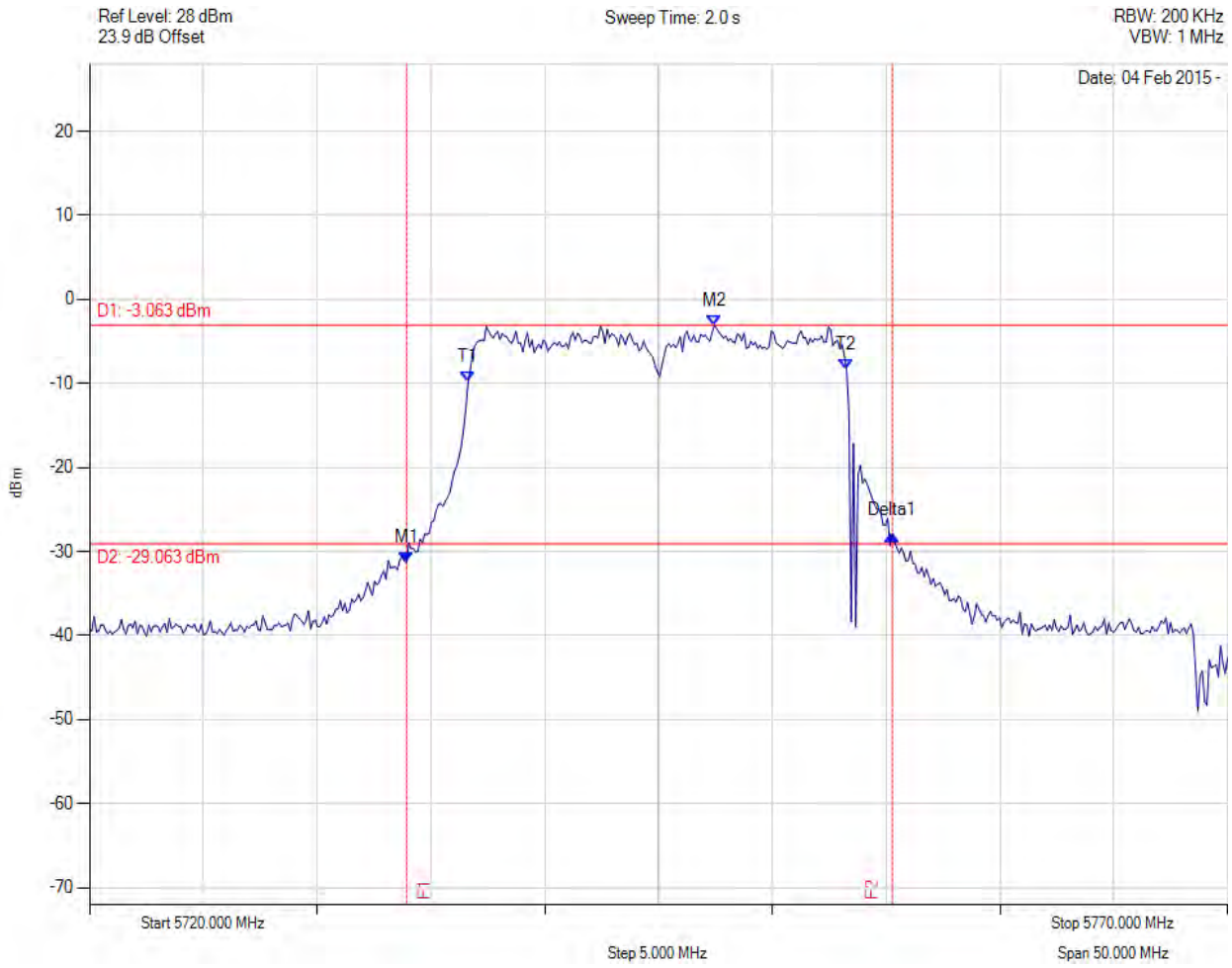
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5733.928 MHz : -31.339 dBm M2 : 5747.455 MHz : -3.063 dBm Delta1 : 21.343 MHz : 3.291 dB T1 : 5736.633 MHz : -9.815 dBm T2 : 5753.267 MHz : -8.402 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 21.343 MHz Measured 99% Bandwidth: 16.633 MHz

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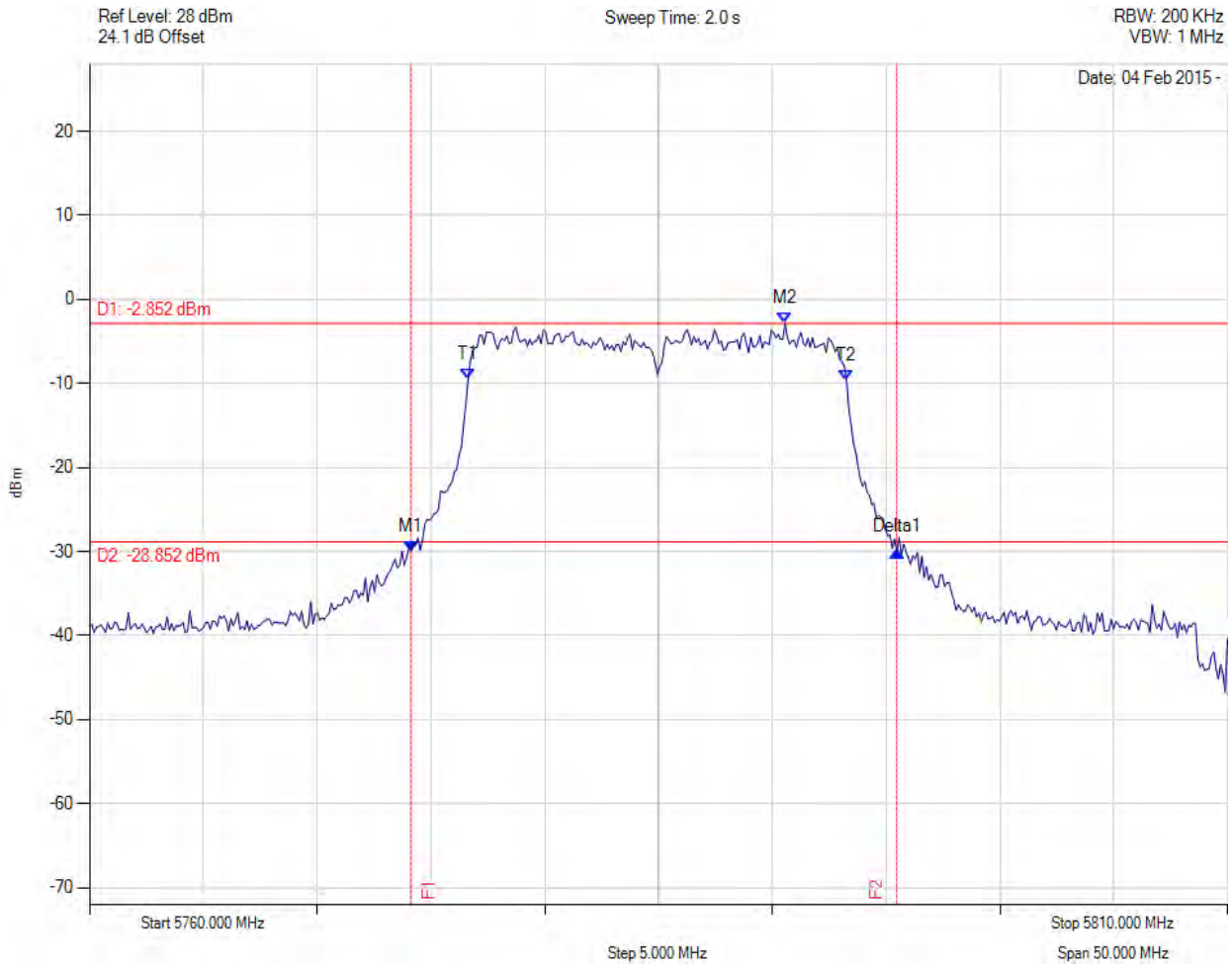
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5774.128 MHz : -29.939 dBm M2 : 5790.561 MHz : -2.852 dBm Delta1 : 21.343 MHz : -0.024 dB T1 : 5776.633 MHz : -9.506 dBm T2 : 5793.267 MHz : -9.628 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 21.343 MHz Measured 99% Bandwidth: 16.633 MHz

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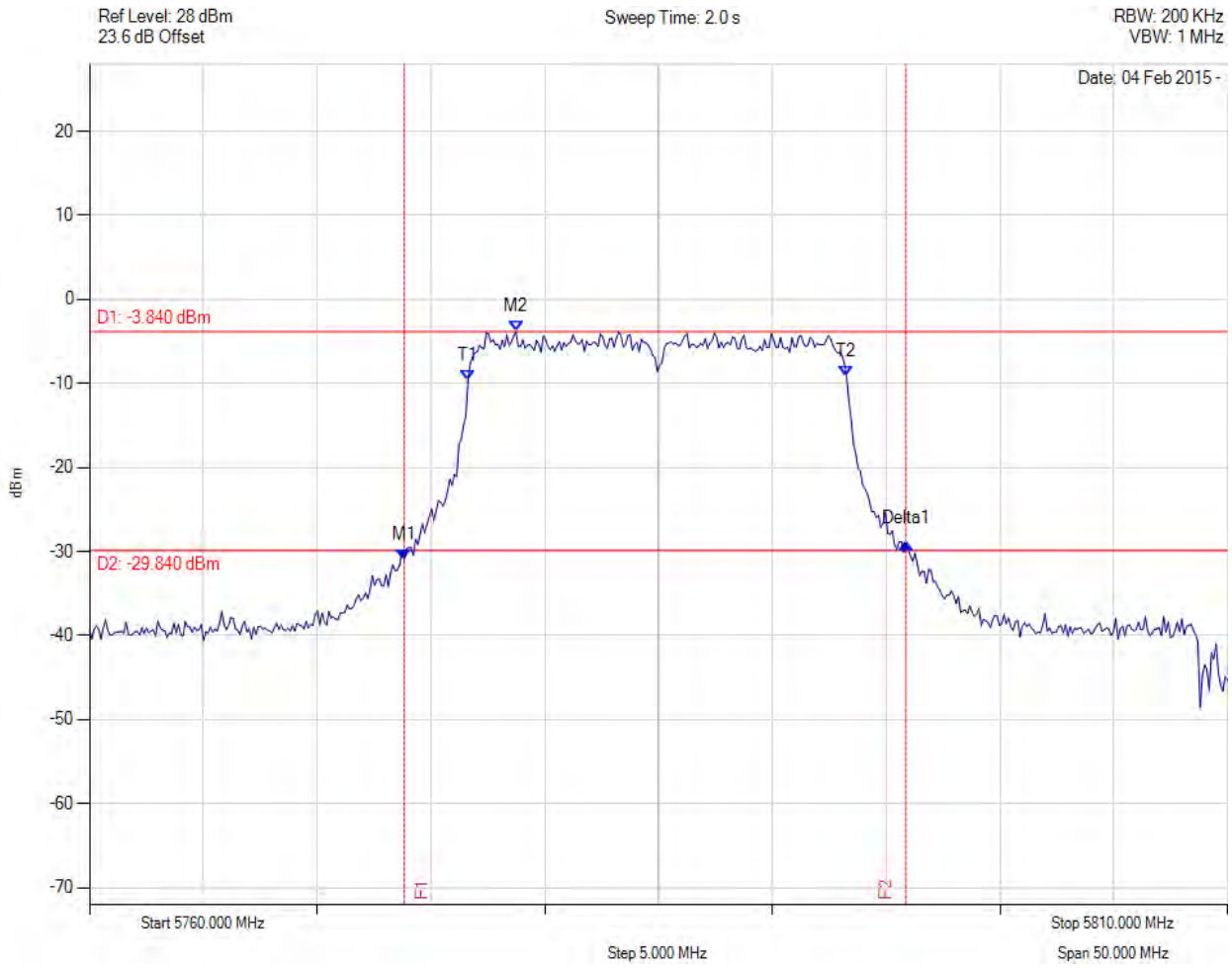
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5773.828 MHz : -31.007 dBm M2 : 5778.737 MHz : -3.840 dBm Delta1 : 22.044 MHz : 2.001 dB T1 : 5776.633 MHz : -9.592 dBm T2 : 5793.267 MHz : -9.213 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 22.044 MHz Measured 99% Bandwidth: 16.633 MHz

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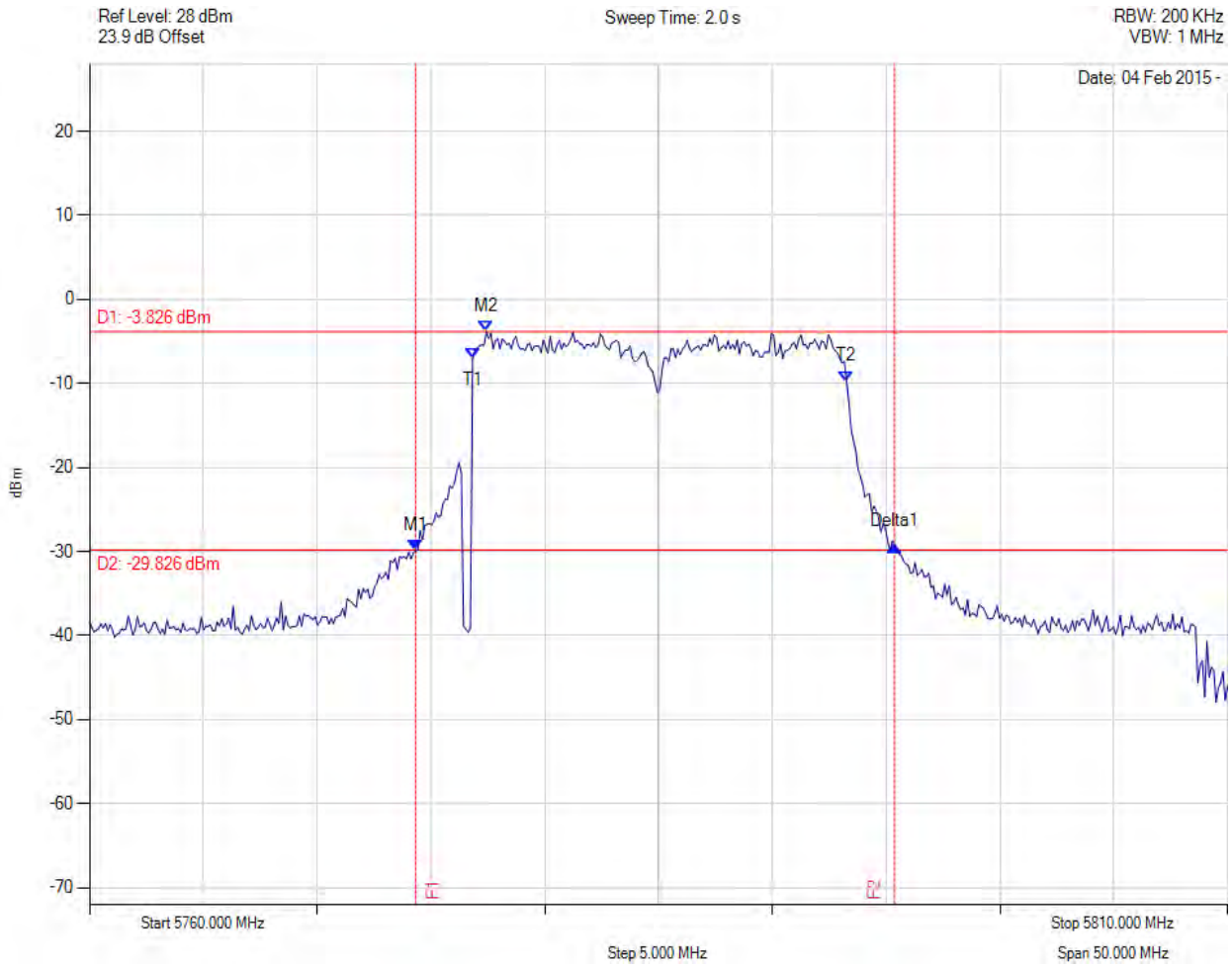
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5774.329 MHz : -29.917 dBm M2 : 5777.435 MHz : -3.826 dBm Delta1 : 21.042 MHz : 0.582 dB T1 : 5776.834 MHz : -7.054 dBm T2 : 5793.267 MHz : -9.734 dBm OBW : 16.433 MHz	Measured 26 dB Bandwidth: 21.042 MHz Measured 99% Bandwidth: 16.433 MHz

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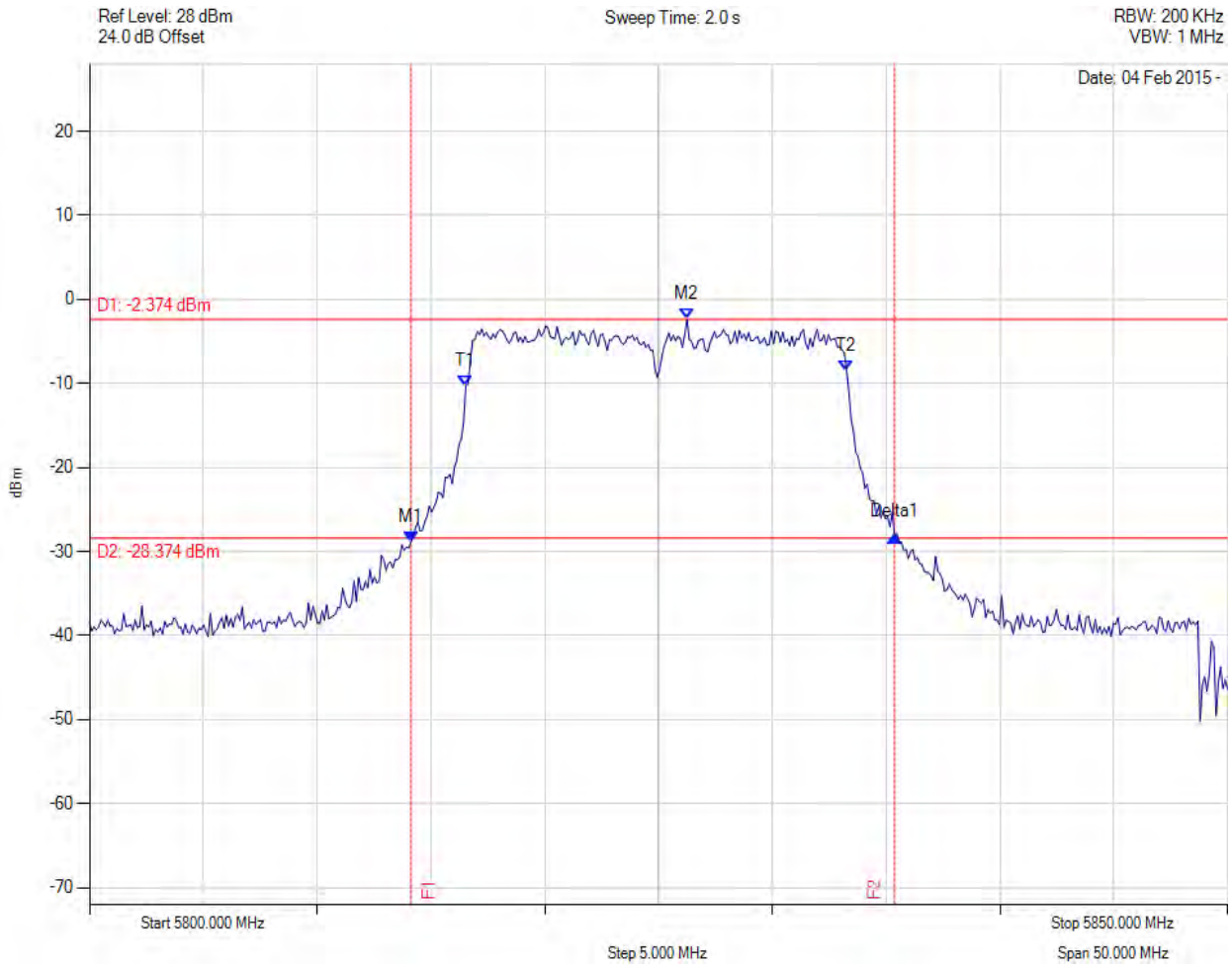
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5814.128 MHz : -28.831 dBm M2 : 5826.253 MHz : -2.374 dBm Delta1 : 21.242 MHz : 0.675 dB T1 : 5816.533 MHz : -10.279 dBm T2 : 5833.267 MHz : -8.445 dBm OBW : 16.733 MHz	Measured 26 dB Bandwidth: 21.242 MHz Measured 99% Bandwidth: 16.733 MHz

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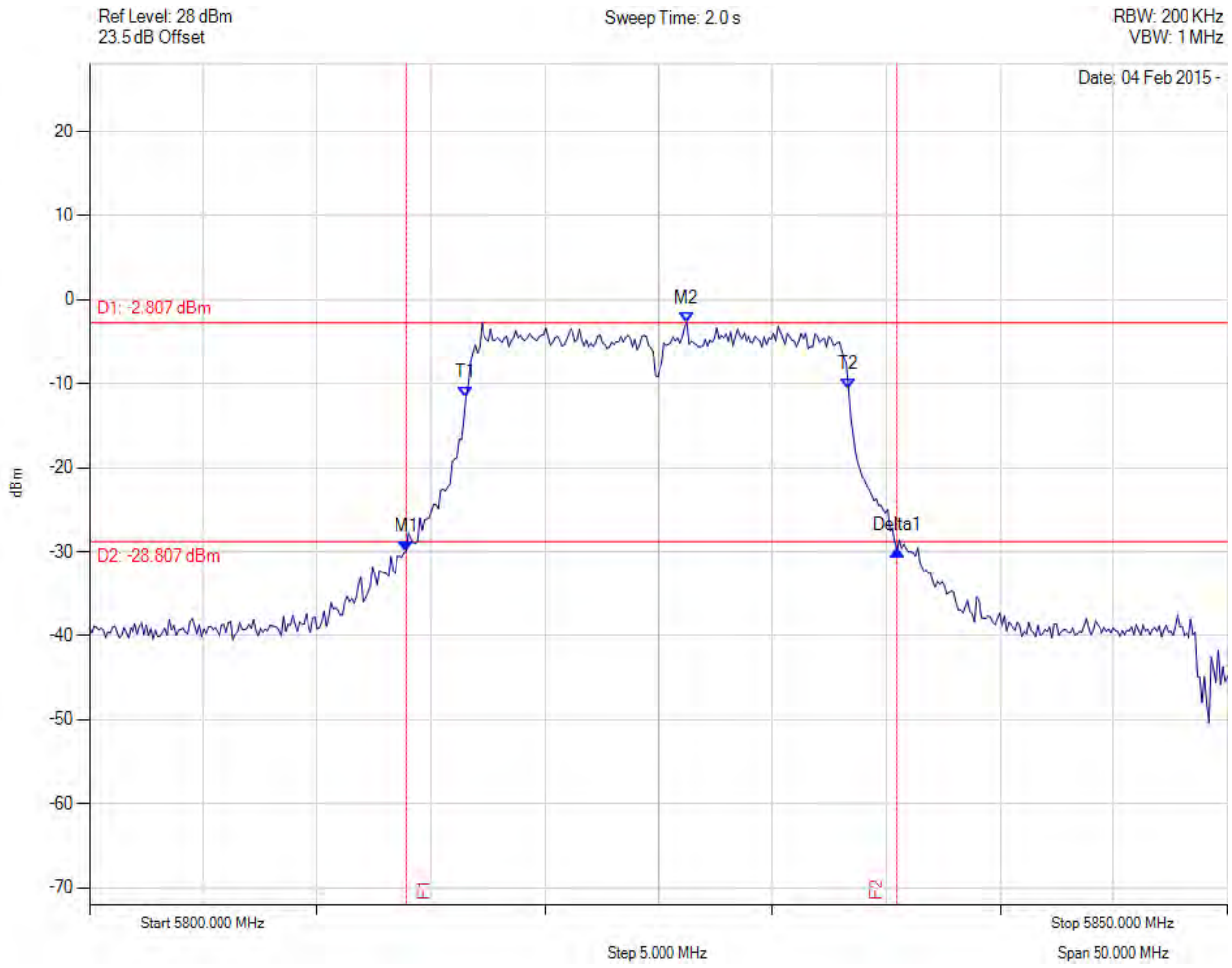
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5813.928 MHz : -29.950 dBm M2 : 5826.253 MHz : -2.807 dBm Delta1 : 21.543 MHz : 0.150 dB T1 : 5816.533 MHz : -11.615 dBm T2 : 5833.367 MHz : -10.678 dBm OBW : 16.834 MHz	Measured 26 dB Bandwidth: 21.543 MHz Measured 99% Bandwidth: 16.834 MHz

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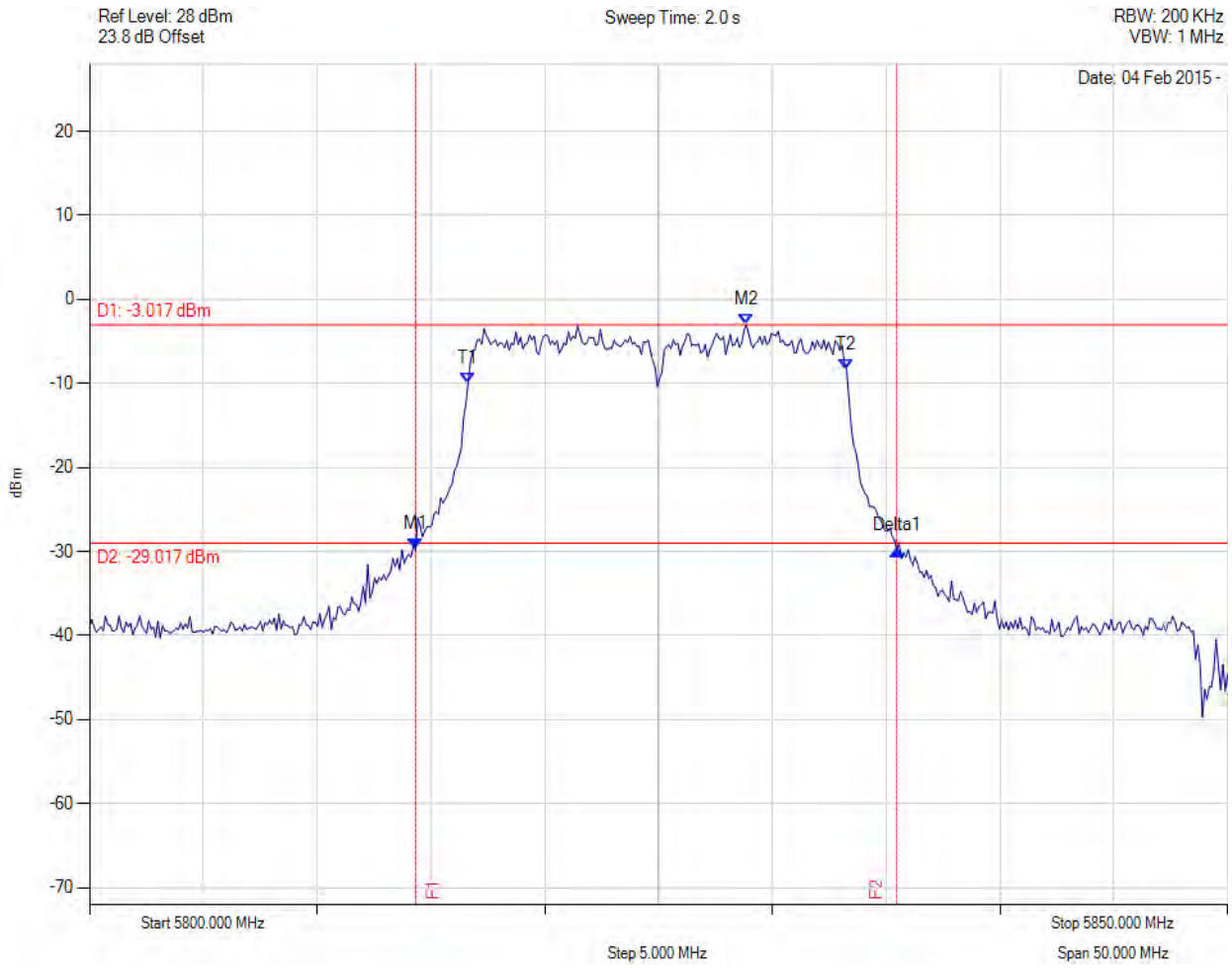
26 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5814.329 MHz : -29.752 dBm M2 : 5828.858 MHz : -3.017 dBm Delta1 : 21.142 MHz : -0.055 dB T1 : 5816.633 MHz : -9.950 dBm T2 : 5833.267 MHz : -8.337 dBm OBW : 16.633 MHz	Measured 26 dB Bandwidth: 21.142 MHz Measured 99% Bandwidth: 16.633 MHz

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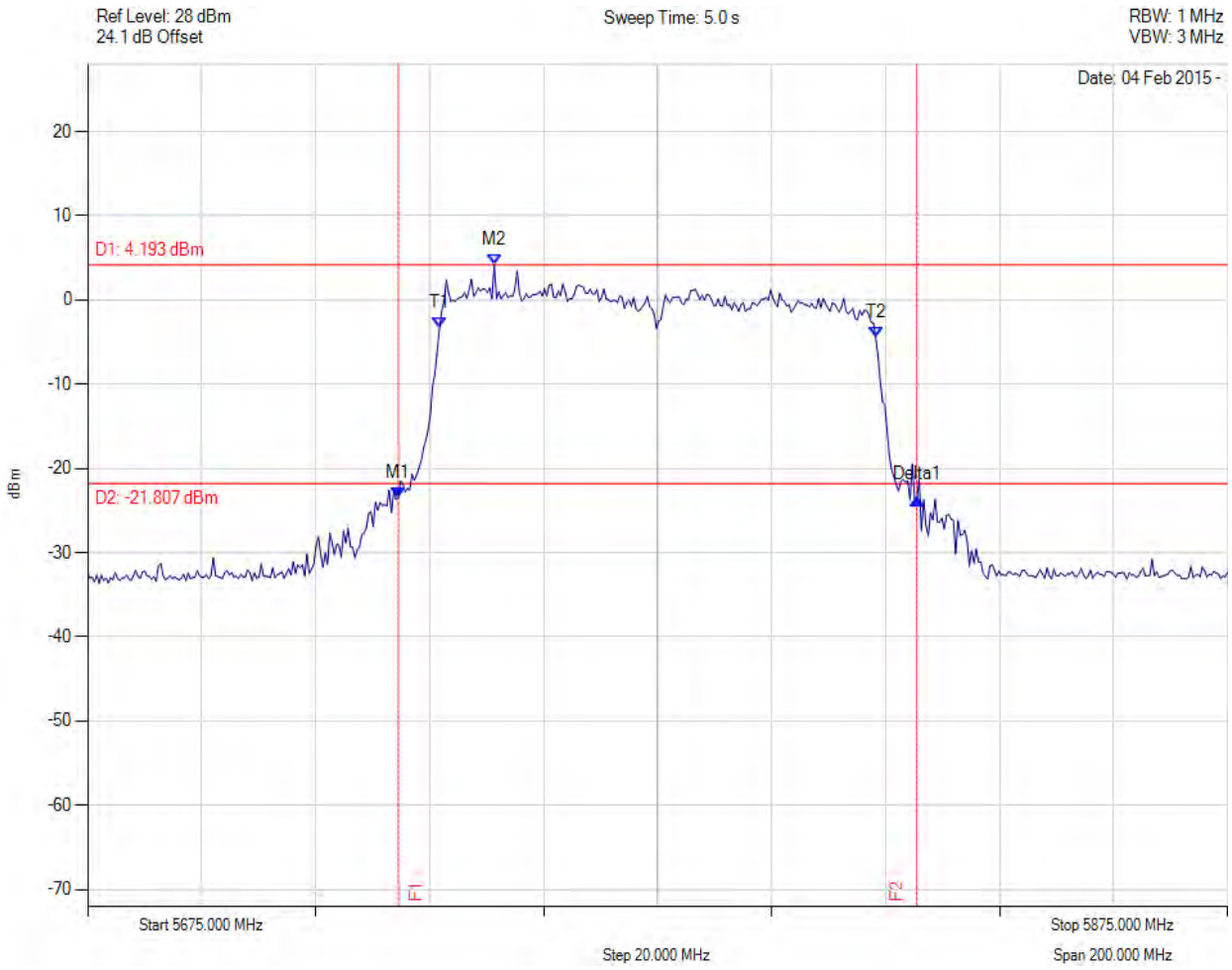
26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5729.509 MHz : -23.437 dBm M2 : 5746.343 MHz : 4.193 dBm Delta1 : 90.982 MHz : -0.201 dB T1 : 5736.723 MHz : -3.350 dBm T2 : 5813.277 MHz : -4.477 dBm OBW : 76.553 MHz	Measured 26 dB Bandwidth: 90.982 MHz Measured 99% Bandwidth: 76.553 MHz

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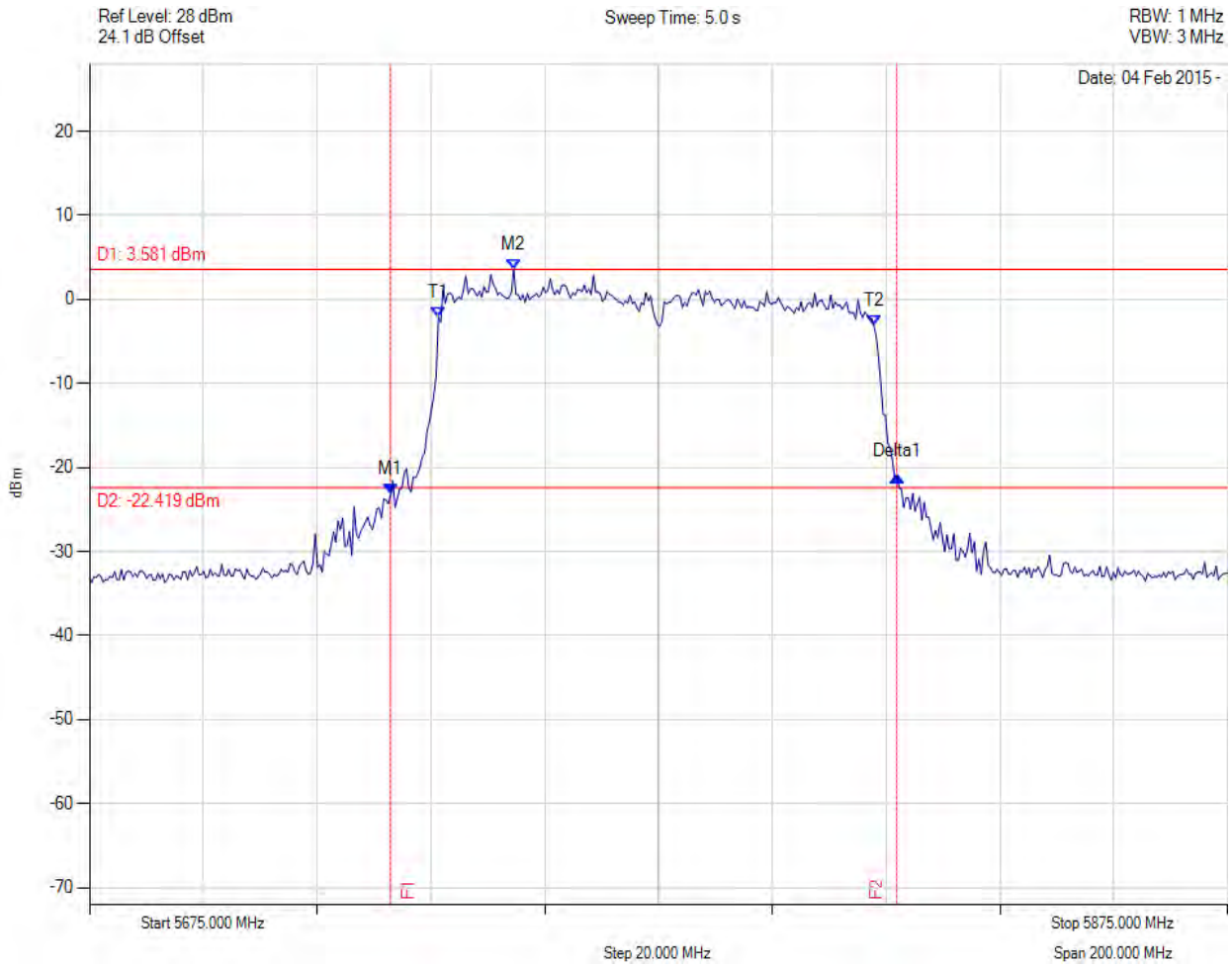
26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5727.906 MHz : -23.238 dBm M2 : 5749.549 MHz : 3.581 dBm Delta1 : 88.978 MHz : 2.174 dB T1 : 5736.323 MHz : -2.185 dBm T2 : 5812.876 MHz : -3.167 dBm OBW : 76.553 MHz	Channel Frequency: 5775.00 MHz

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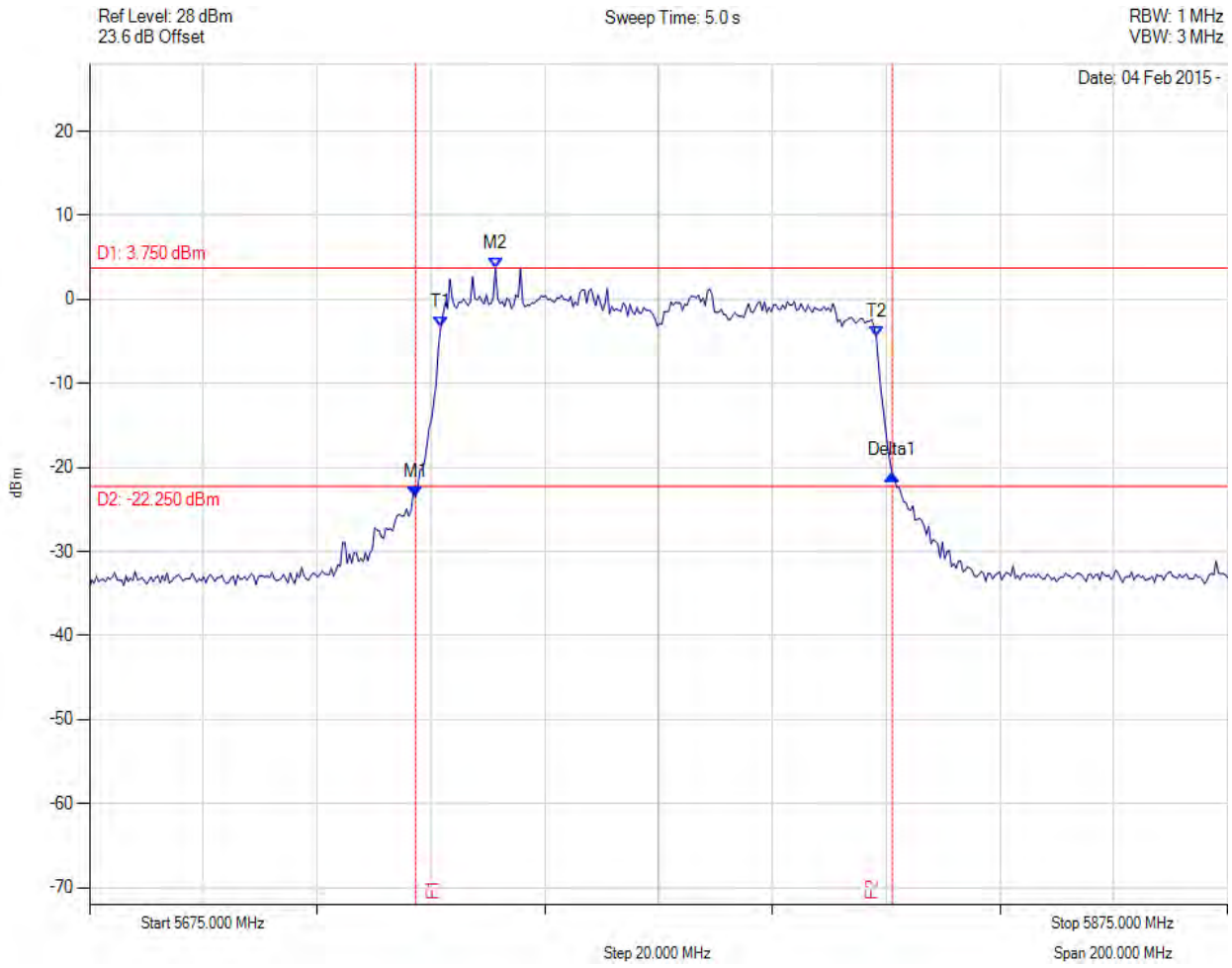
26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5732.315 MHz : -23.452 dBm M2 : 5746.343 MHz : 3.750 dBm Delta1 : 83.768 MHz : 2.552 dB T1 : 5736.723 MHz : -3.322 dBm T2 : 5813.277 MHz : -4.400 dBm OBW : 76.553 MHz	Channel Frequency: 5775.00 MHz

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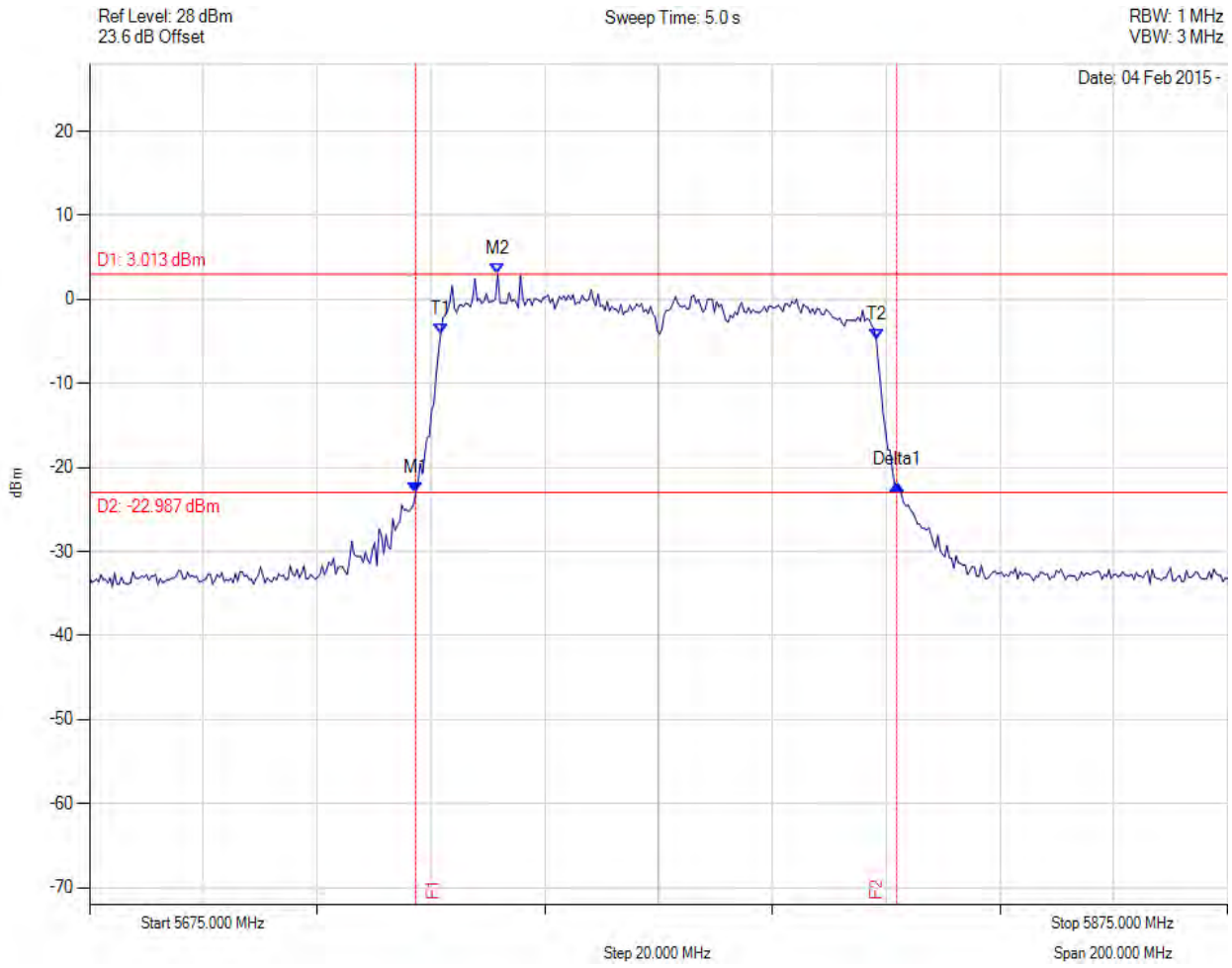
26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5732.315 MHz : -23.069 dBm M2 : 5746.743 MHz : 3.013 dBm Delta1 : 84.569 MHz : 1.058 dB T1 : 5736.723 MHz : -4.062 dBm T2 : 5813.277 MHz : -4.782 dBm OBW : 76.553 MHz	Measured 26 dB Bandwidth: 84.569 MHz Measured 99% Bandwidth: 76.553 MHz

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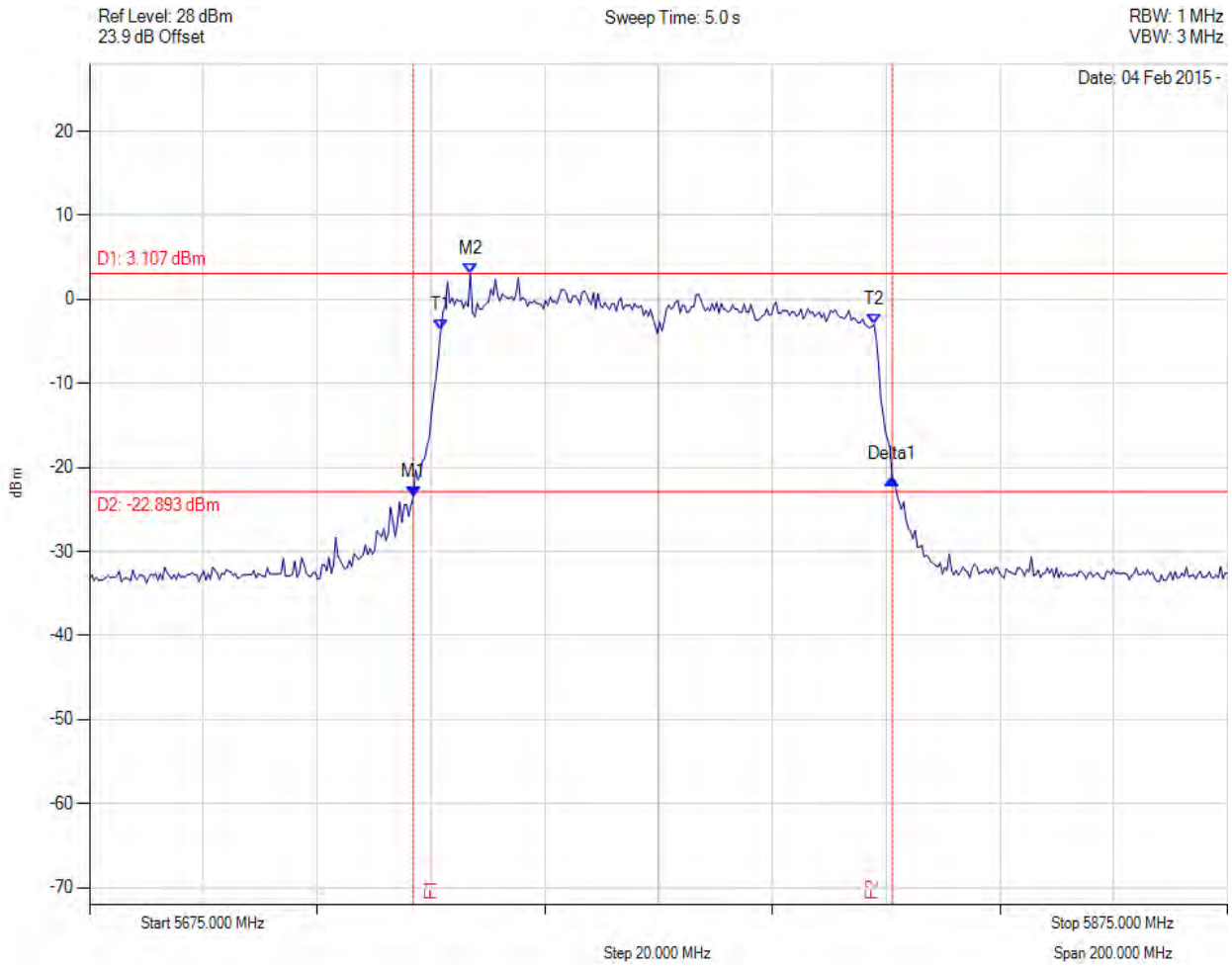
26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5731.914 MHz : -23.446 dBm M2 : 5741.934 MHz : 3.107 dBm Delta1 : 84.168 MHz : 2.095 dB T1 : 5736.723 MHz : -3.676 dBm T2 : 5812.876 MHz : -2.962 dBm OBW : 76.152 MHz	Measured 26 dB Bandwidth: 84.168 MHz Measured 99% Bandwidth: 76.152 MHz

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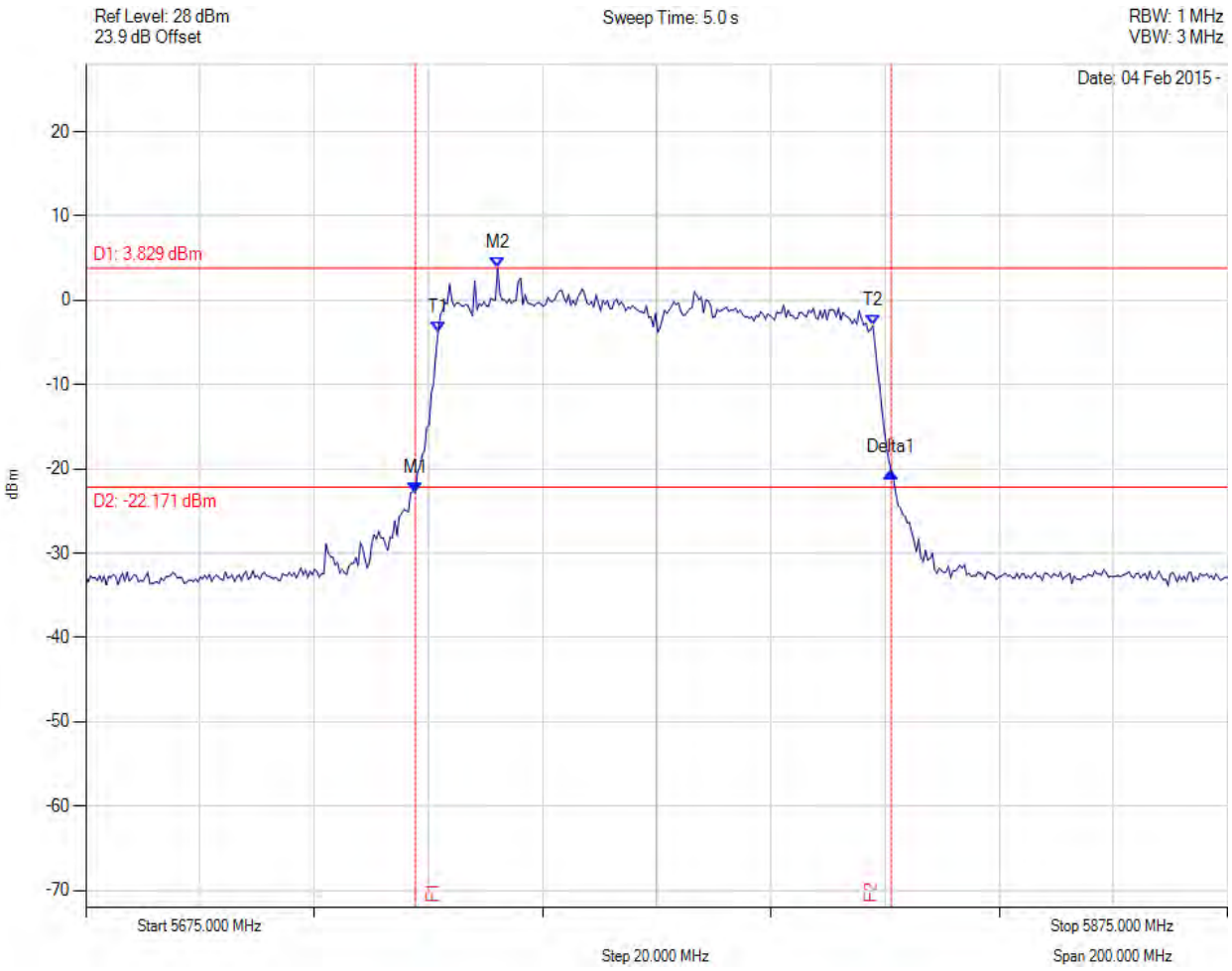
26 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5732.715 MHz : -22.825 dBm M2 : 5747.144 MHz : 3.829 dBm Delta1 : 83.367 MHz : 2.489 dB T1 : 5736.723 MHz : -3.733 dBm T2 : 5812.876 MHz : -3.015 dBm OBW : 76.152 MHz	Measured 26 dB Bandwidth: 83.367 MHz Measured 99% Bandwidth: 76.152 MHz

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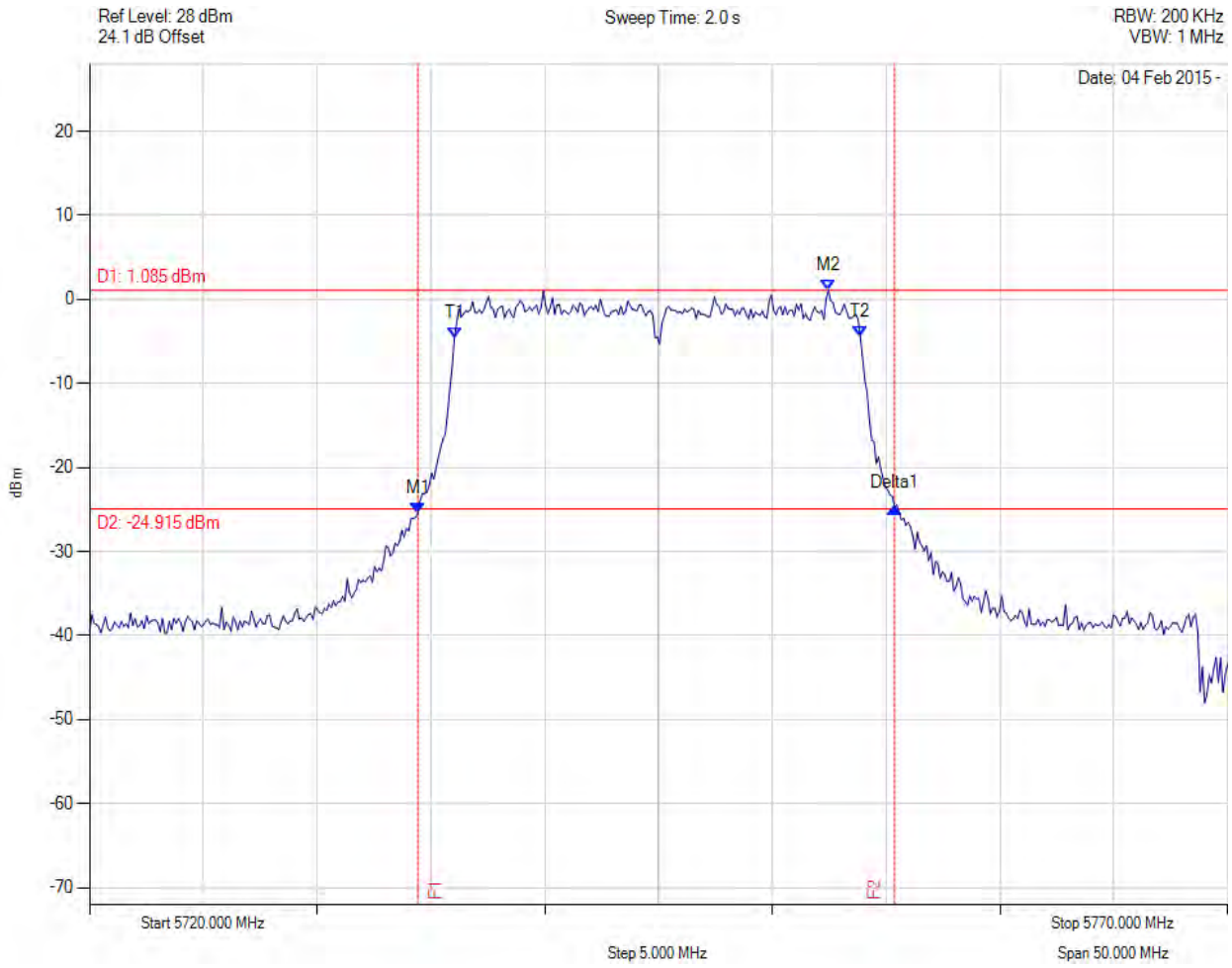
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5734.429 MHz : -25.380 dBm M2 : 5752.465 MHz : 1.085 dBm Delta1 : 20.942 MHz : 0.645 dB T1 : 5736.032 MHz : -4.532 dBm T2 : 5753.868 MHz : -4.414 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 20.942 MHz Measured 99% Bandwidth: 17.836 MHz

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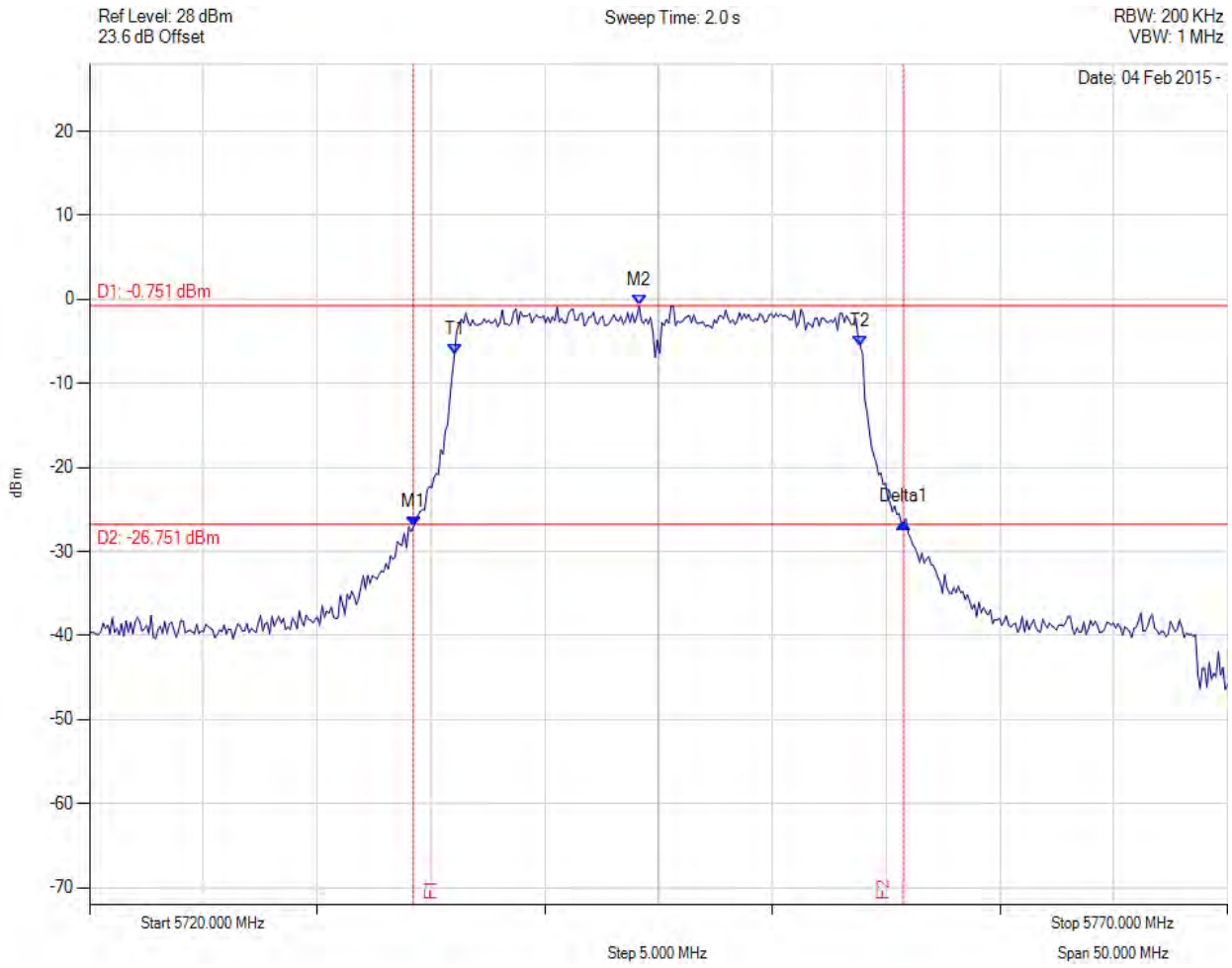
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5734.228 MHz : -27.098 dBm M2 : 5744.148 MHz : -0.751 dBm Delta1 : 21.543 MHz : 0.588 dB T1 : 5736.032 MHz : -6.525 dBm T2 : 5753.868 MHz : -5.553 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 21.543 MHz Measured 99% Bandwidth: 17.836 MHz

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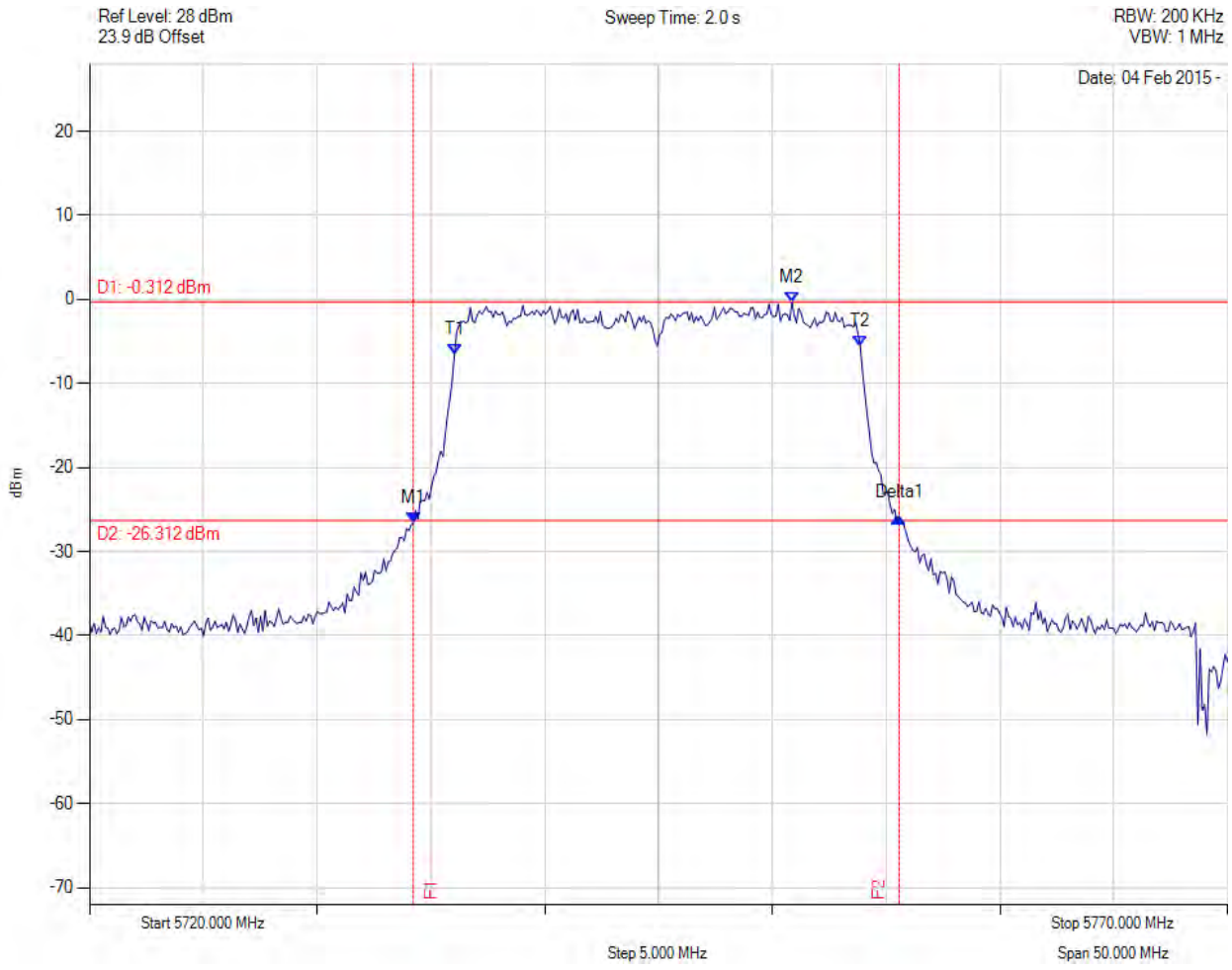
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5734.228 MHz : -26.604 dBm M2 : 5750.862 MHz : -0.312 dBm Delta1 : 21.343 MHz : 0.696 dB T1 : 5736.032 MHz : -6.549 dBm T2 : 5753.868 MHz : -5.591 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 21.343 MHz Measured 99% Bandwidth: 17.836 MHz

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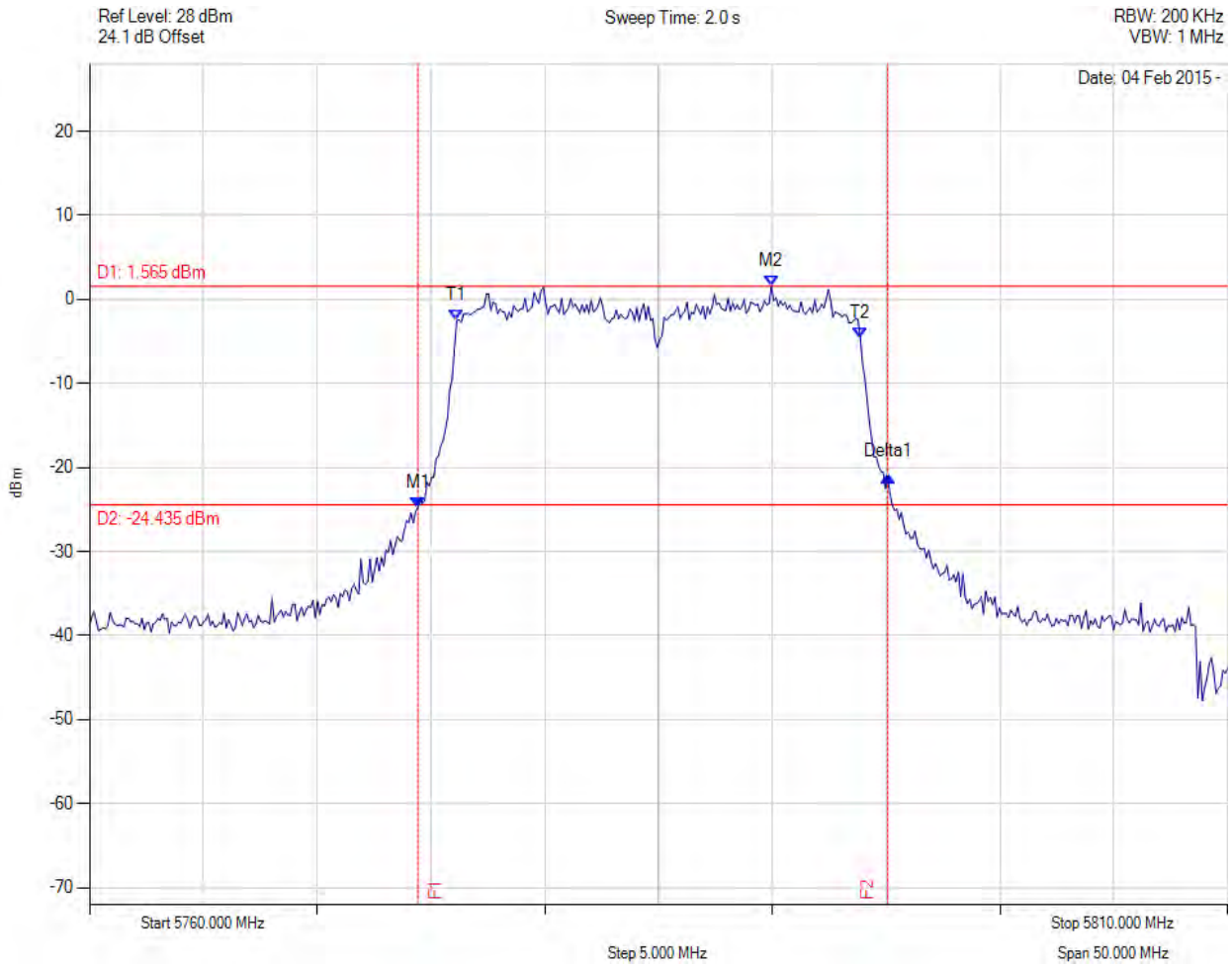
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc

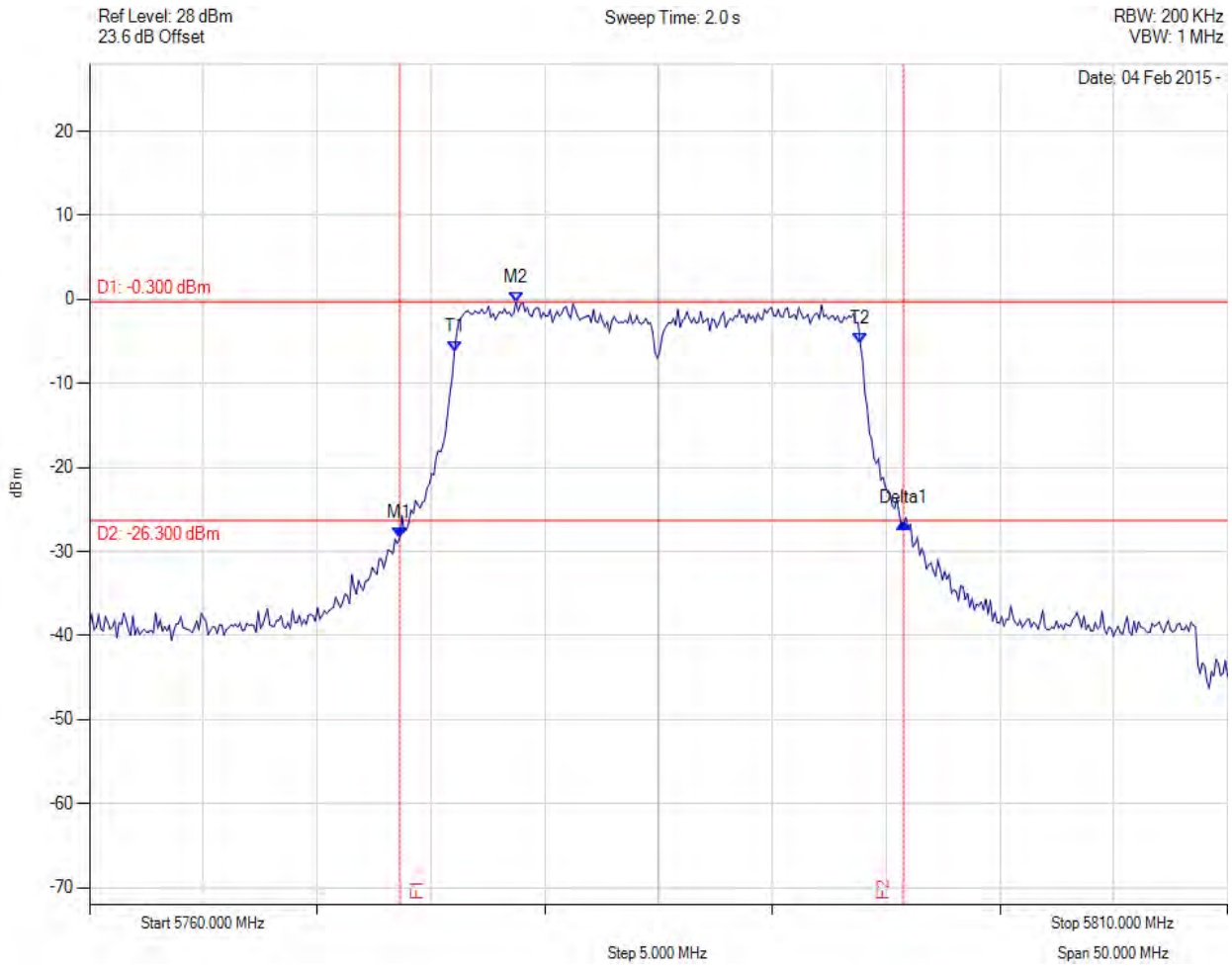


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5774.429 MHz : -24.804 dBm M2 : 5789.960 MHz : 1.565 dBm Delta1 : 20.641 MHz : 3.819 dB T1 : 5776.132 MHz : -2.514 dBm T2 : 5793.868 MHz : -4.609 dBm OBW : 17.735 MHz	Measured 26 dB Bandwidth: 20.641 MHz Measured 99% Bandwidth: 17.735 MHz

Back to Matrix

26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5773.627 MHz : -28.412 dBm M2 : 5778.737 MHz : -0.300 dBm Delta1 : 22.144 MHz : 1.881 dB T1 : 5776.032 MHz : -6.157 dBm T2 : 5793.868 MHz : -5.294 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 22.144 MHz Measured 99% Bandwidth: 17.836 MHz

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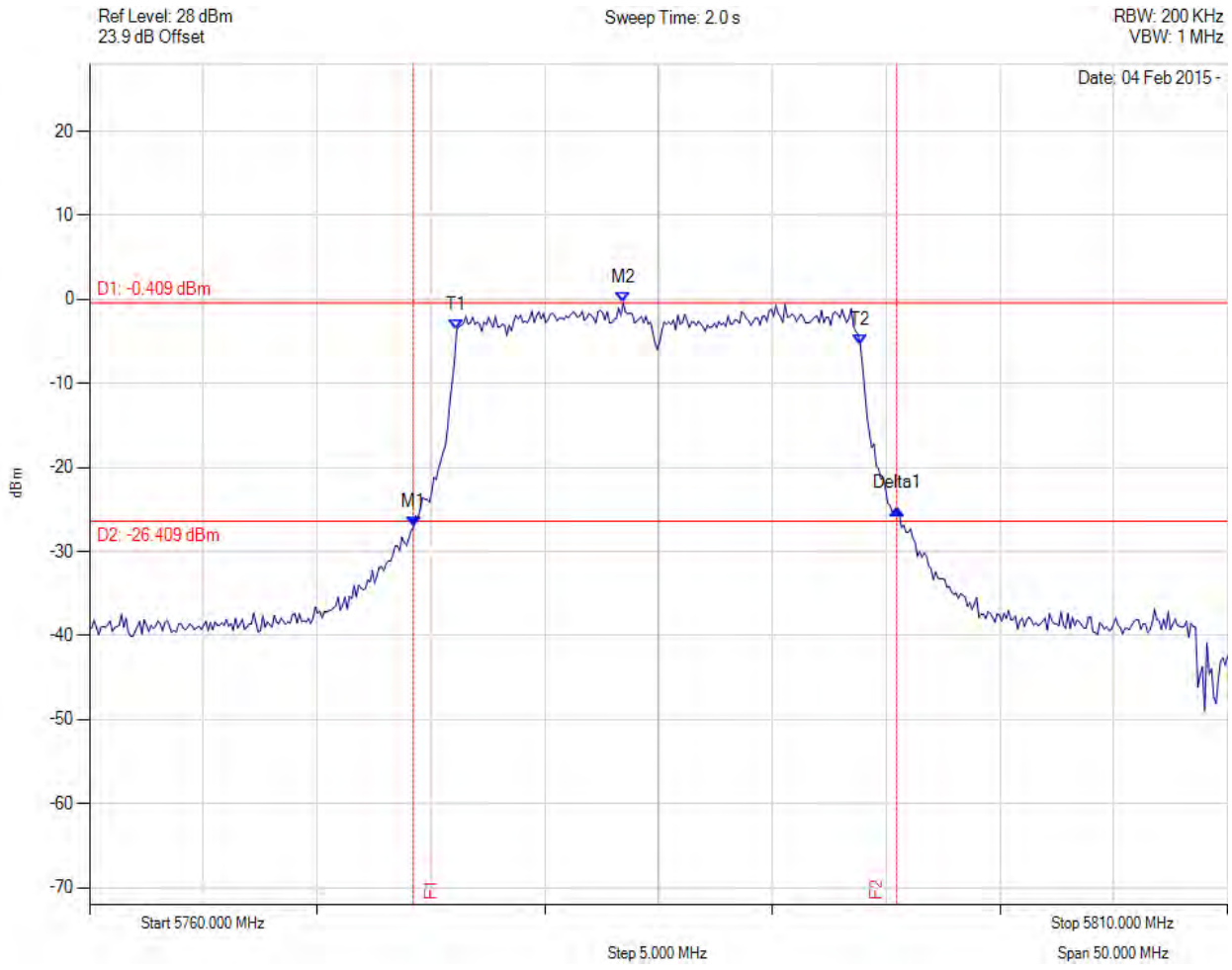
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5774.228 MHz : -27.115 dBm M2 : 5783.447 MHz : -0.409 dBm Delta1 : 21.242 MHz : 2.241 dB T1 : 5776.132 MHz : -3.667 dBm T2 : 5793.868 MHz : -5.410 dBm OBW : 17.735 MHz	Measured 26 dB Bandwidth: 21.242 MHz Measured 99% Bandwidth: 17.735 MHz

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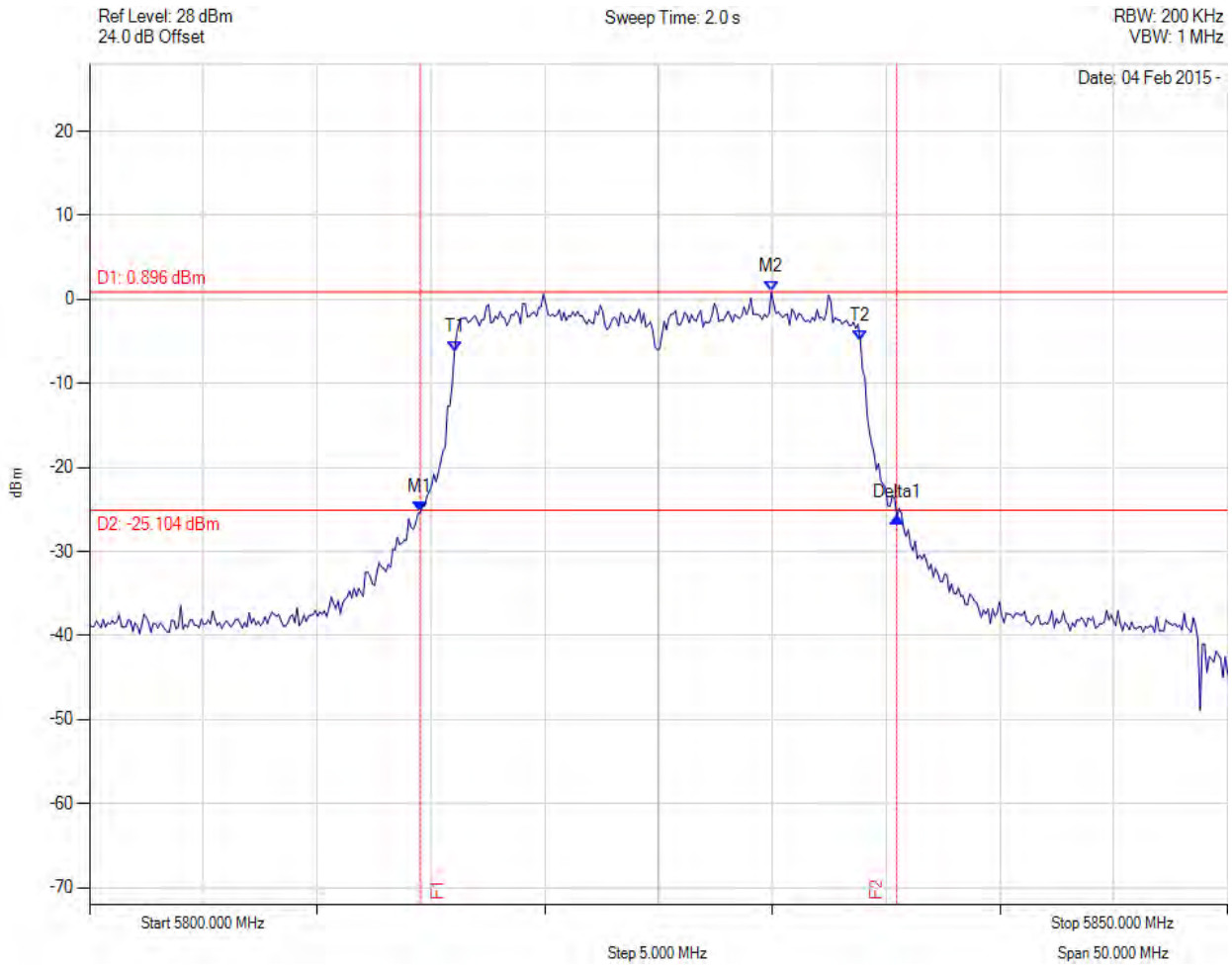
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5814.529 MHz : -25.327 dBm M2 : 5829.960 MHz : 0.896 dBm Delta1 : 20.942 MHz : -0.637 dB T1 : 5816.032 MHz : -6.230 dBm T2 : 5833.868 MHz : -4.890 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 20.942 MHz Measured 99% Bandwidth: 17.836 MHz

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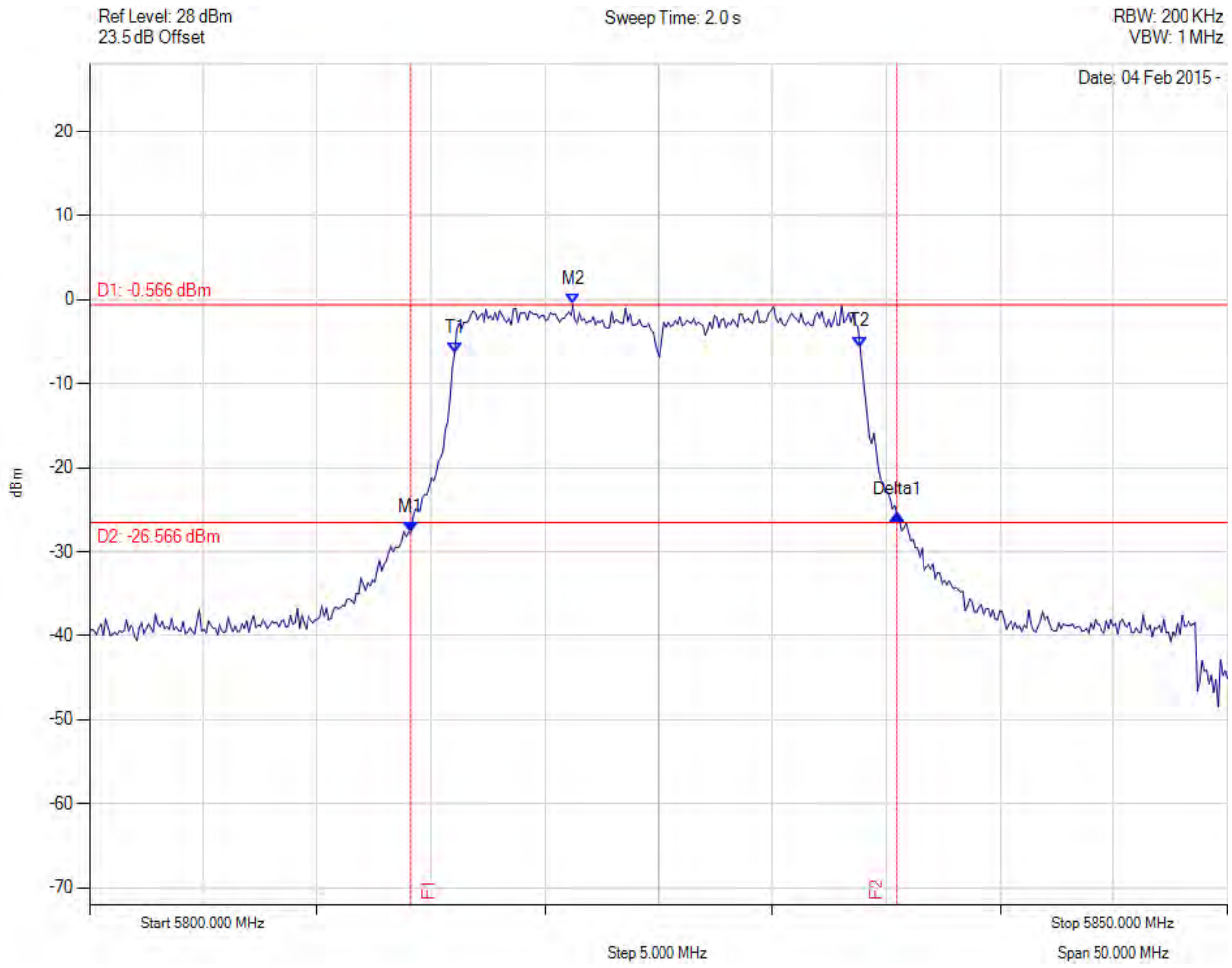
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5814.128 MHz : -27.708 dBm M2 : 5821.242 MHz : -0.566 dBm Delta1 : 21.343 MHz : 2.042 dB T1 : 5816.032 MHz : -6.401 dBm T2 : 5833.868 MHz : -5.648 dBm OBW : 17.836 MHz	Measured 26 dB Bandwidth: 21.343 MHz Measured 99% Bandwidth: 17.836 MHz

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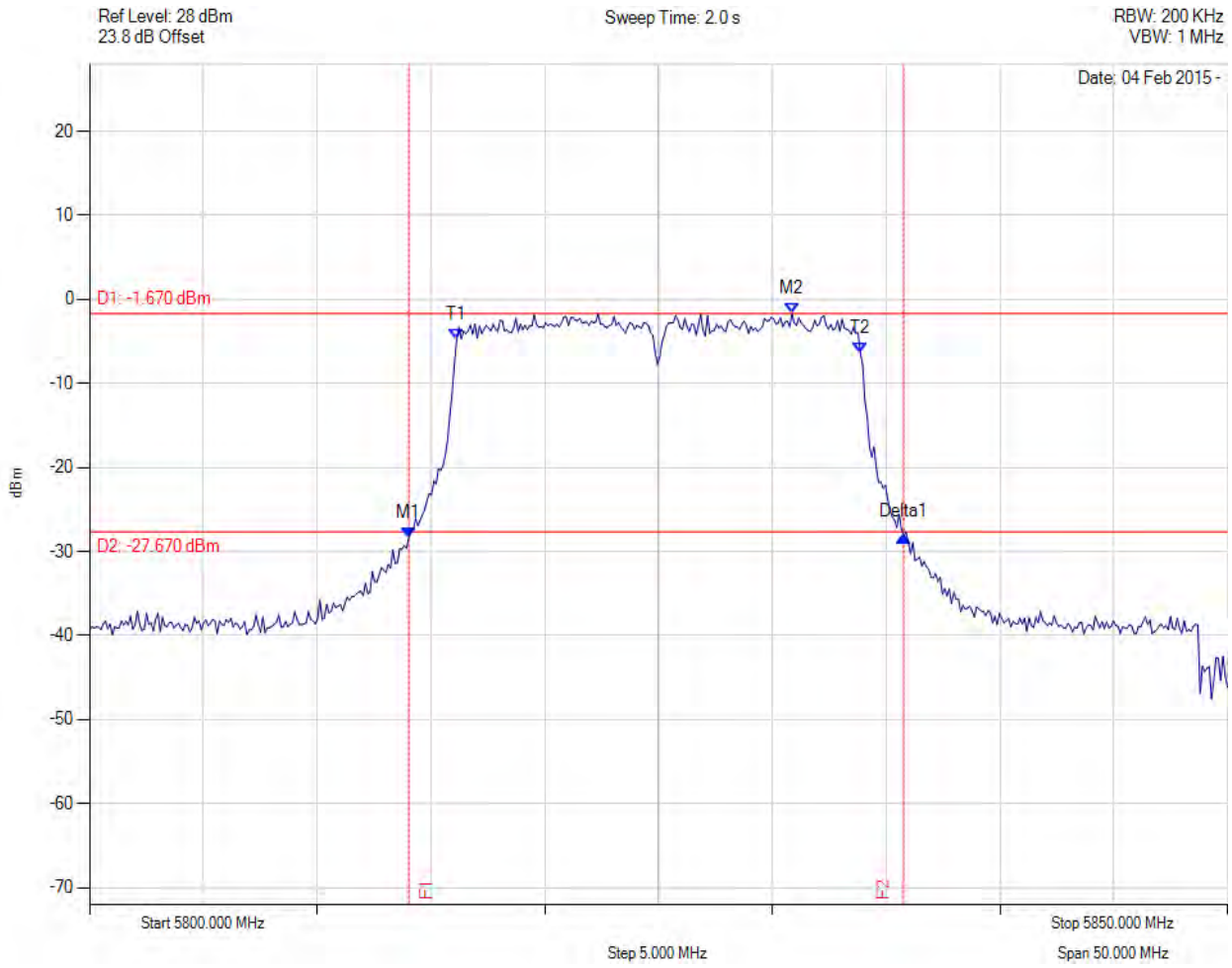
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5814.028 MHz : -28.347 dBm M2 : 5830.862 MHz : -1.670 dBm Delta1 : 21.743 MHz : 0.155 dB T1 : 5816.132 MHz : -4.766 dBm T2 : 5833.868 MHz : -6.358 dBm OBW : 17.735 MHz	Measured 26 dB Bandwidth: 21.743 MHz Measured 99% Bandwidth: 17.735 MHz

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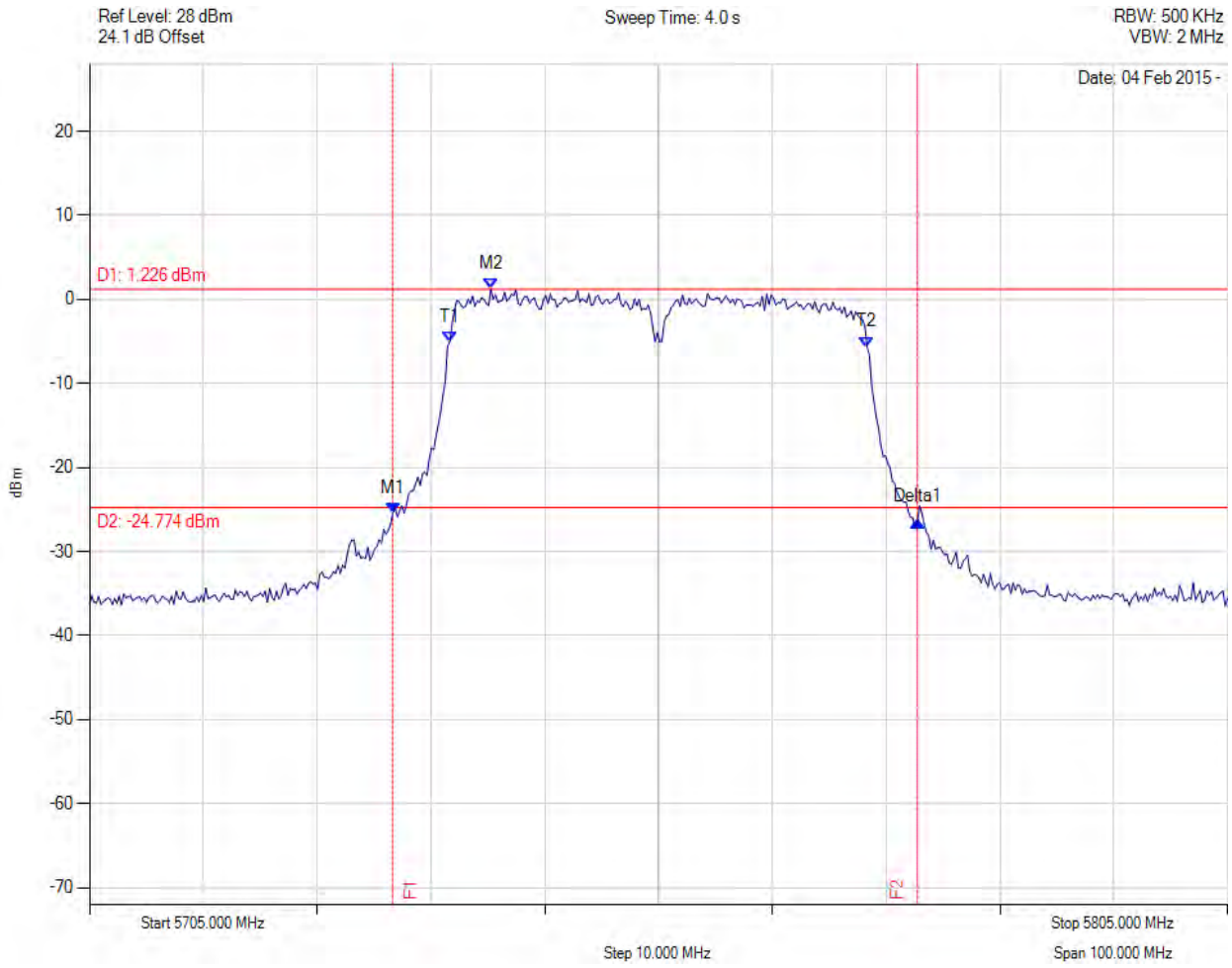
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5731.653 MHz : -25.420 dBm M2 : 5740.271 MHz : 1.226 dBm Delta1 : 46.092 MHz : -1.047 dB T1 : 5736.663 MHz : -5.020 dBm T2 : 5773.337 MHz : -5.654 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 46.092 MHz Measured 99% Bandwidth: 36.673 MHz

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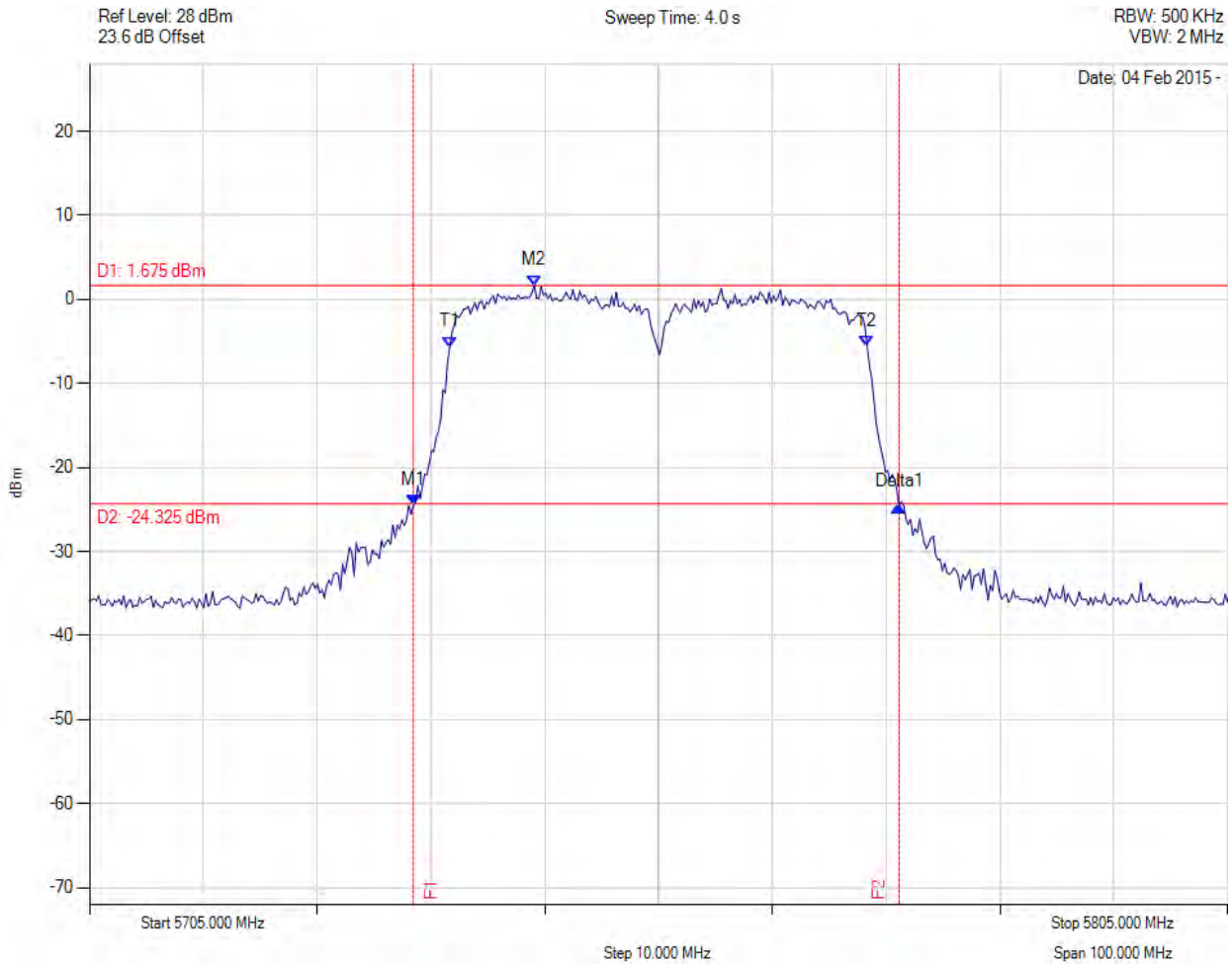
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5733.457 MHz : -24.542 dBm M2 : 5744.078 MHz : 1.675 dBm Delta1 : 42.685 MHz : -0.067 dB T1 : 5736.663 MHz : -5.650 dBm T2 : 5773.337 MHz : -5.524 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 42.685 MHz Measured 99% Bandwidth: 36.673 MHz

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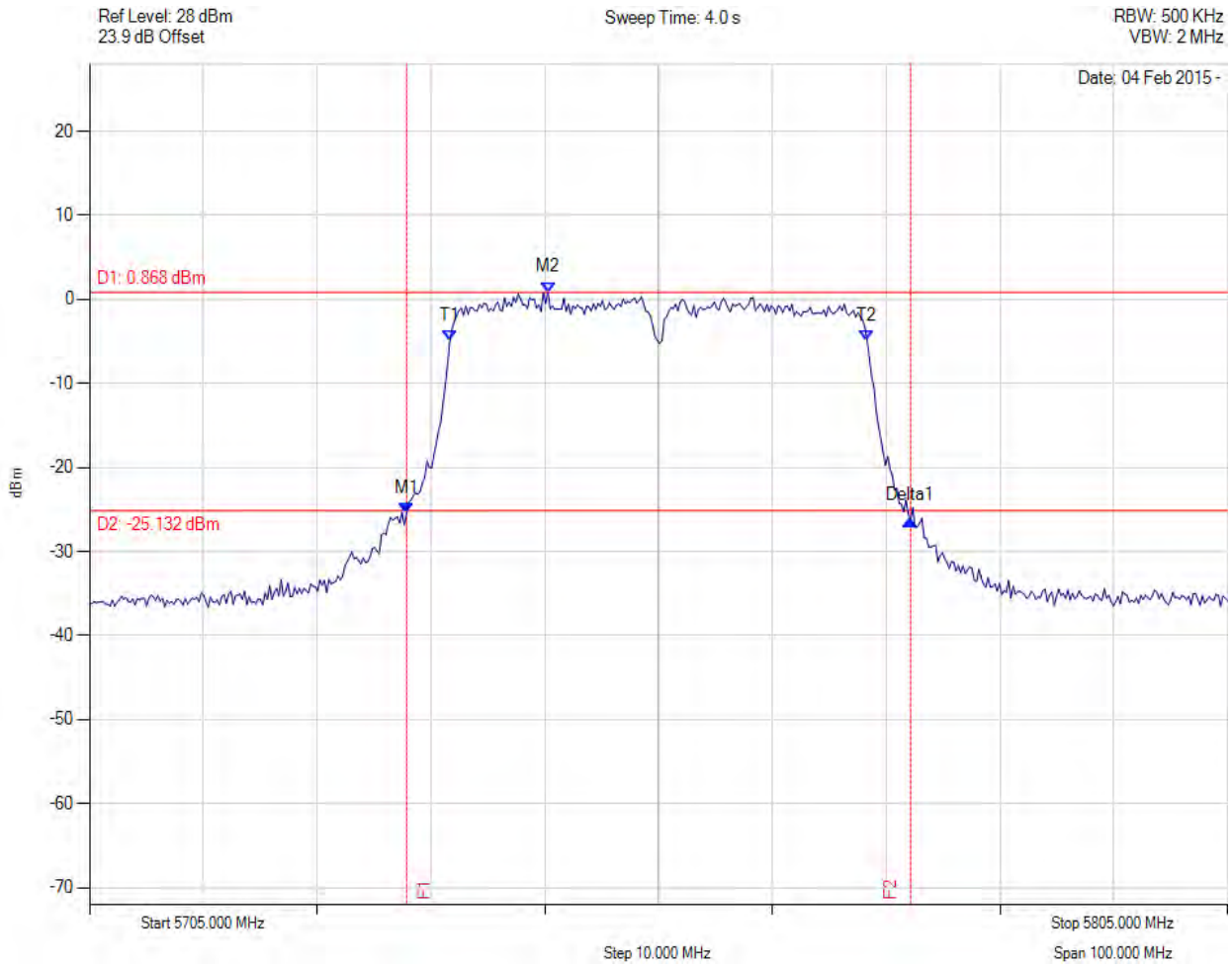
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5732.856 MHz : -25.471 dBm M2 : 5745.281 MHz : 0.868 dBm Delta1 : 44.289 MHz : -0.836 dB T1 : 5736.663 MHz : -4.892 dBm T2 : 5773.337 MHz : -4.890 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 44.289 MHz Measured 99% Bandwidth: 36.673 MHz

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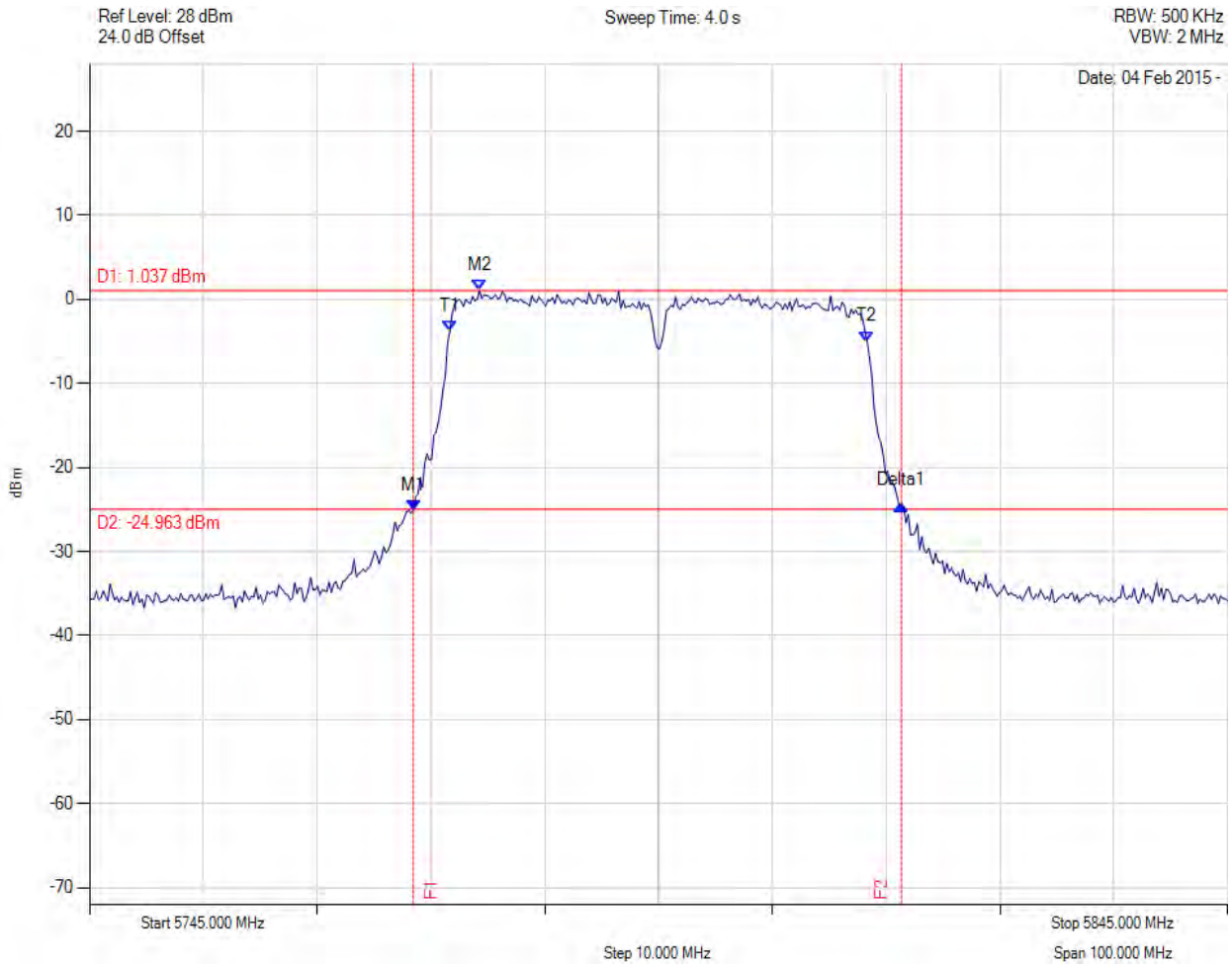
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5773.457 MHz : -25.079 dBm M2 : 5779.269 MHz : 1.037 dBm Delta1 : 42.886 MHz : 0.632 dB T1 : 5776.663 MHz : -3.804 dBm T2 : 5813.337 MHz : -5.006 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 42.886 MHz Measured 99% Bandwidth: 36.673 MHz

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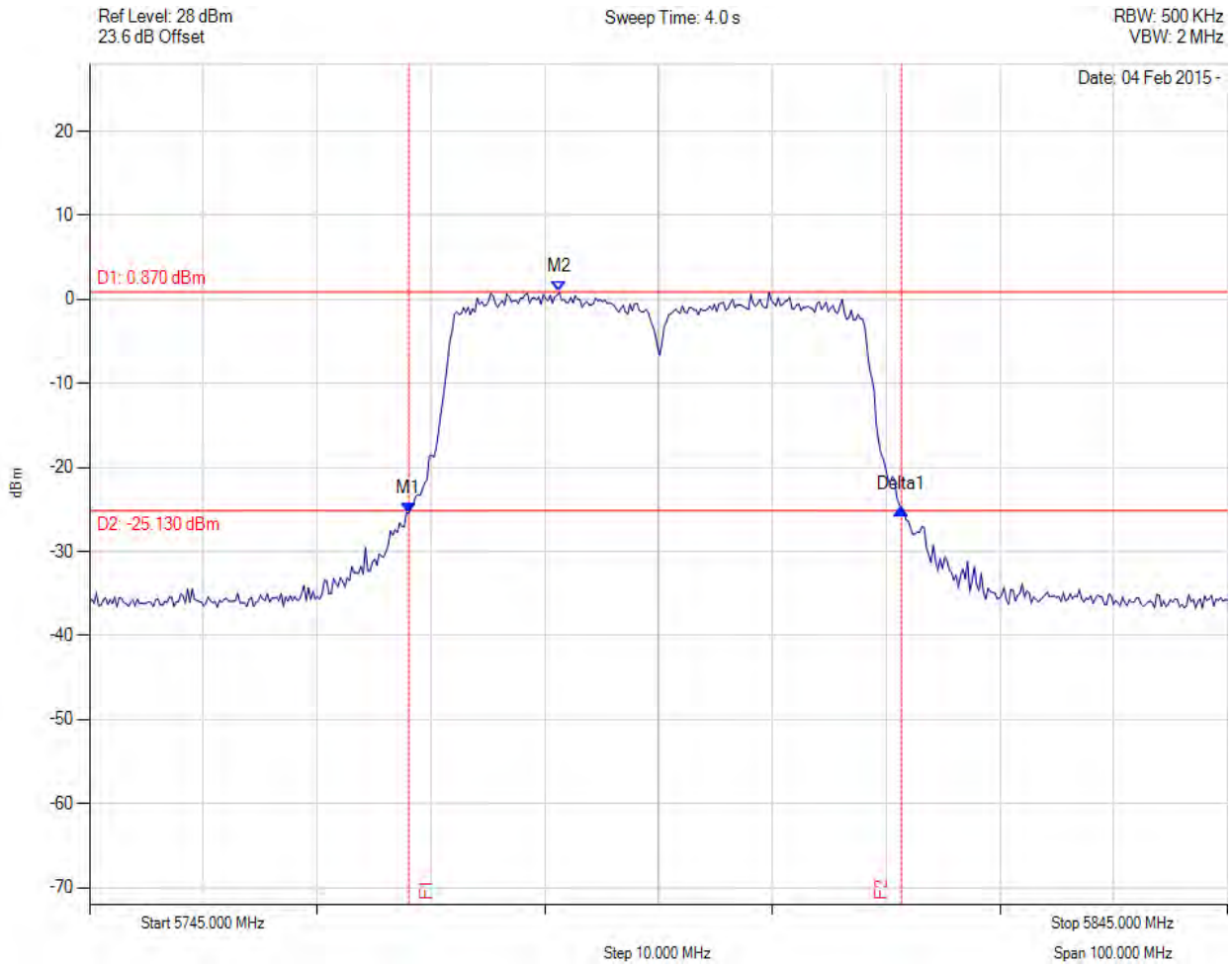
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5773.056 MHz : -25.463 dBm M2 : 5786.283 MHz : 0.870 dBm Delta1 : 43.287 MHz : 0.565 dB T1 : 0 Hz : 0.000 dBm T2 : 0 Hz : 0.000 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 43.287 MHz Measured 99% Bandwidth: 36.673 MHz

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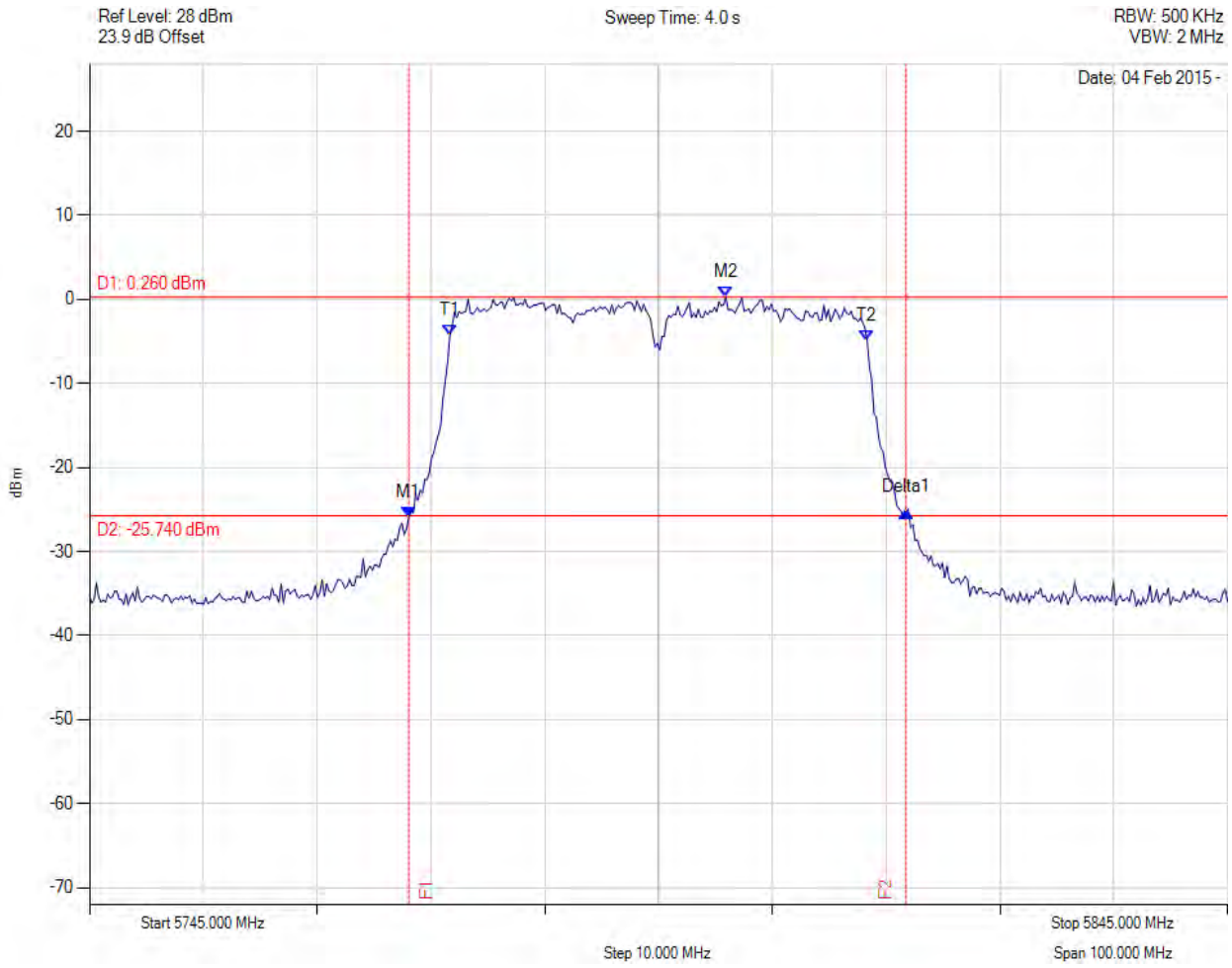
26 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5773.056 MHz : -25.937 dBm M2 : 5800.912 MHz : 0.260 dBm Delta1 : 43.687 MHz : 0.687 dB T1 : 5776.663 MHz : -4.265 dBm T2 : 5813.337 MHz : -4.894 dBm OBW : 36.673 MHz	Measured 26 dB Bandwidth: 43.687 MHz Measured 99% Bandwidth: 36.673 MHz

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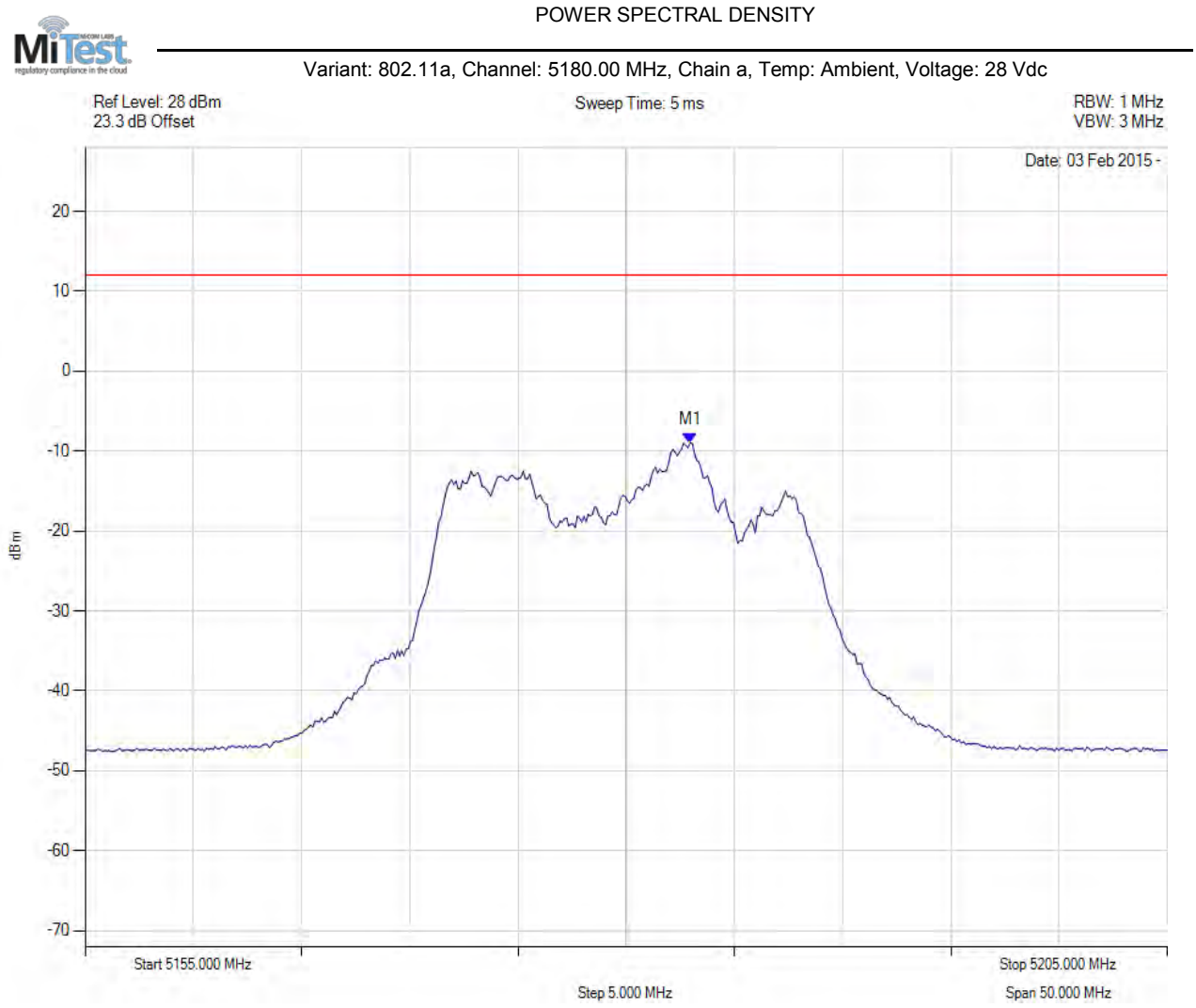
A.1.2. Power Spectral Density



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5182.956 MHz : -8.947 dBm	Limit: ≤ 12.030 dBm

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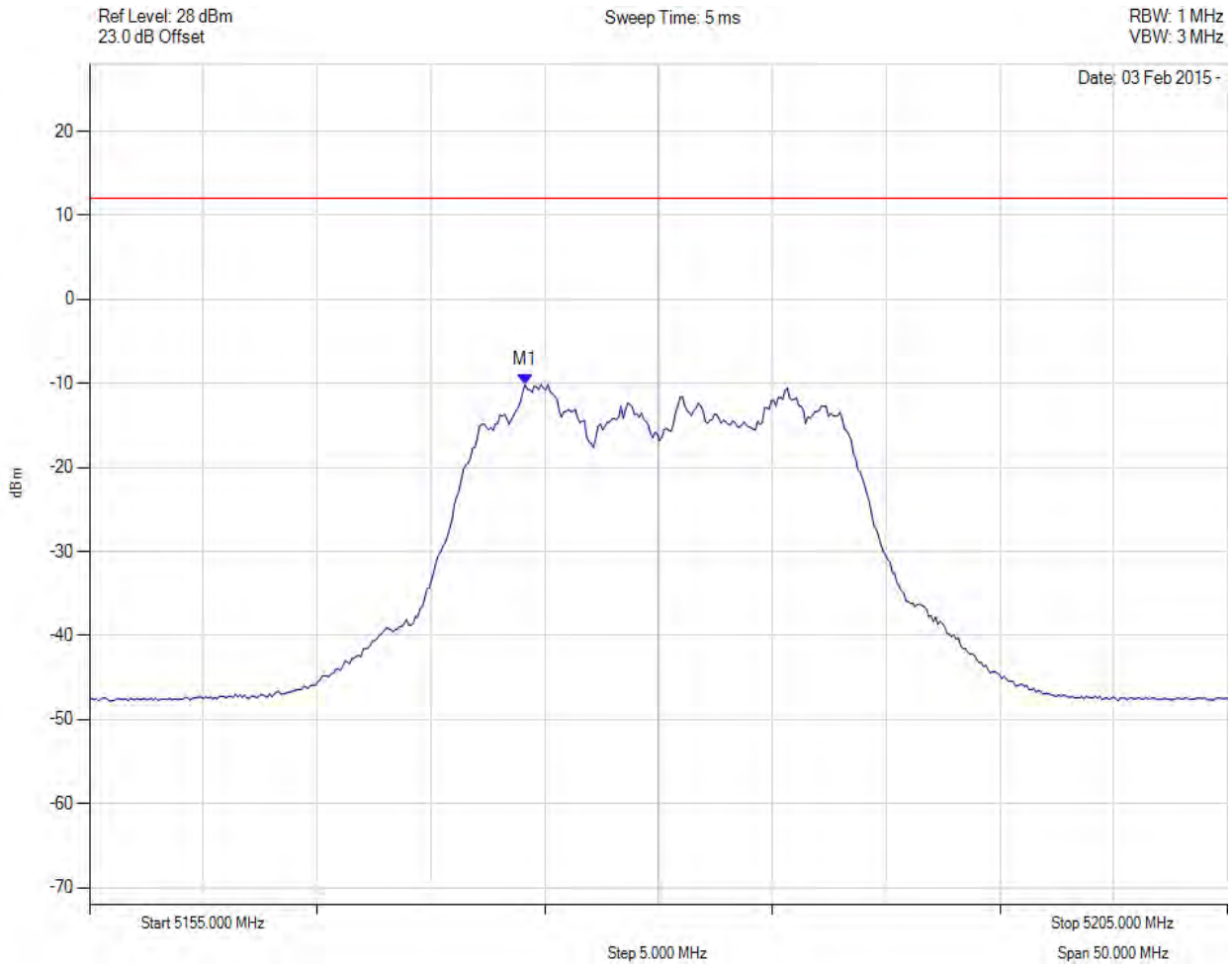
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5180.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5174.138 MHz : -10.134 dBm	Limit: ≤ 12.030 dBm

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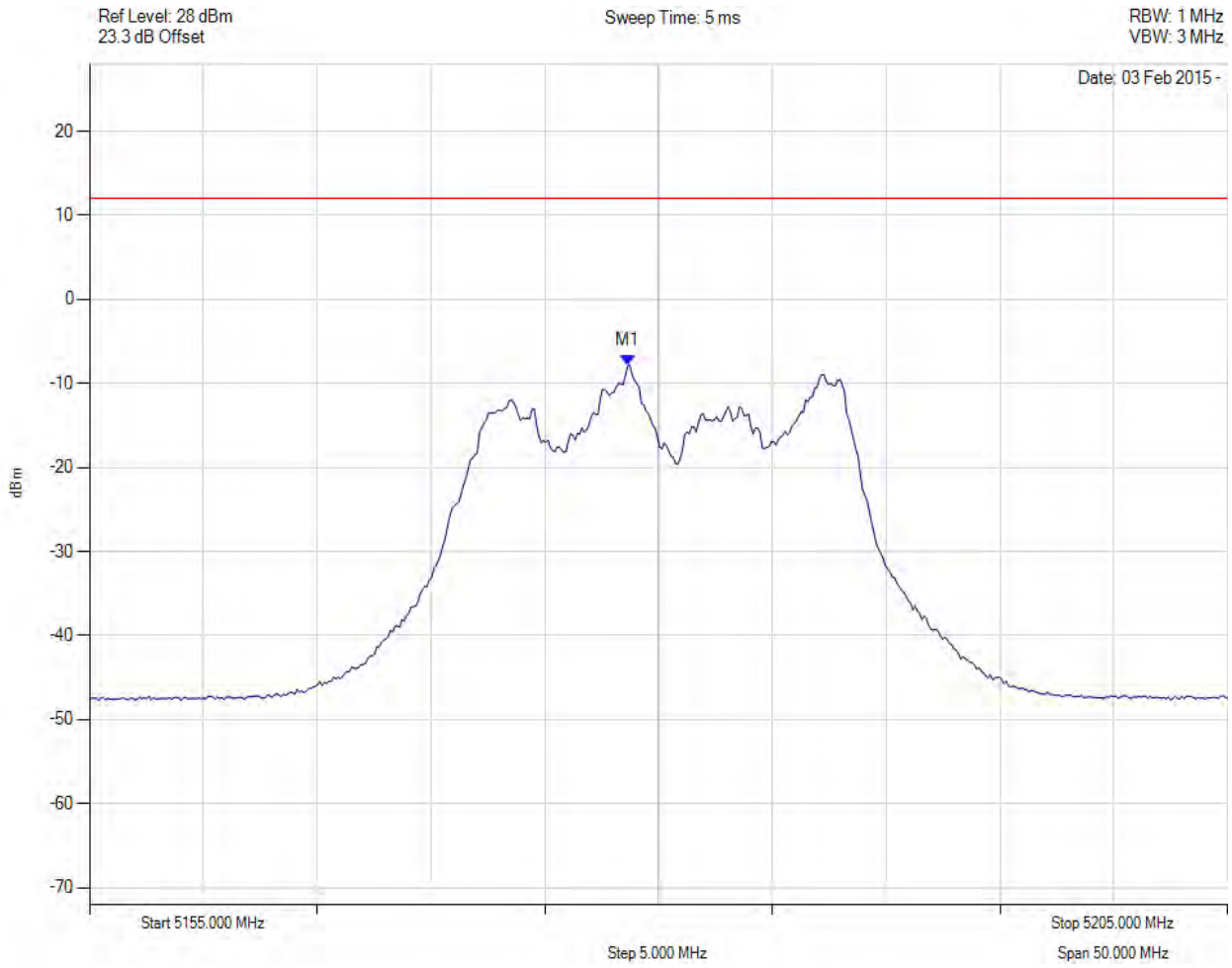
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5180.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5178.647 MHz : -7.861 dBm	Limit: ≤ 12.030 dBm

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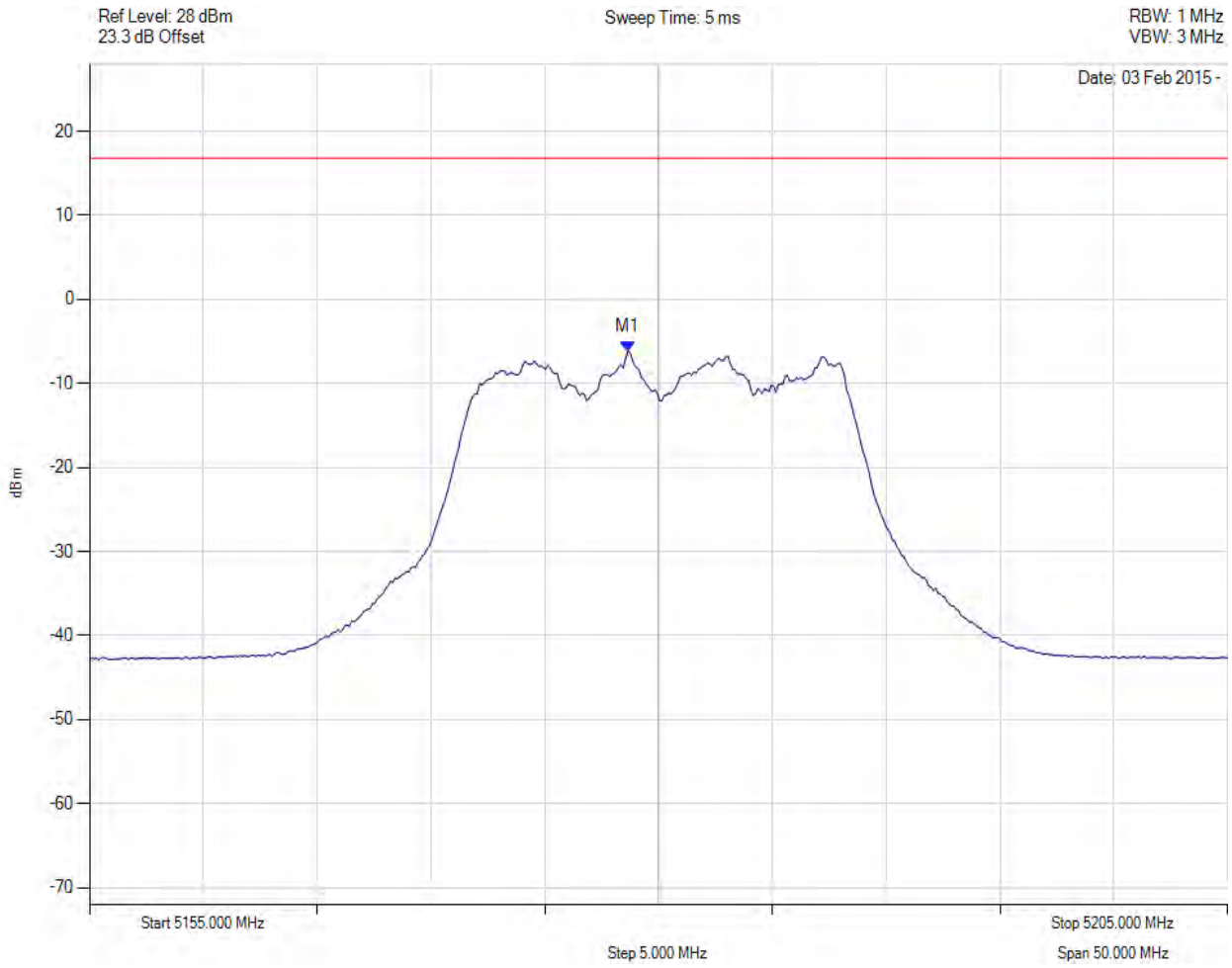
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5180.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5178.600 MHz : -6.172 dBm M1 + DCCF : 5178.600 MHz : -5.203 dBm Duty Cycle Correction Factor : +0.97 dB	Limit: ≤ 16.8 dBm Margin: -22.0 dB

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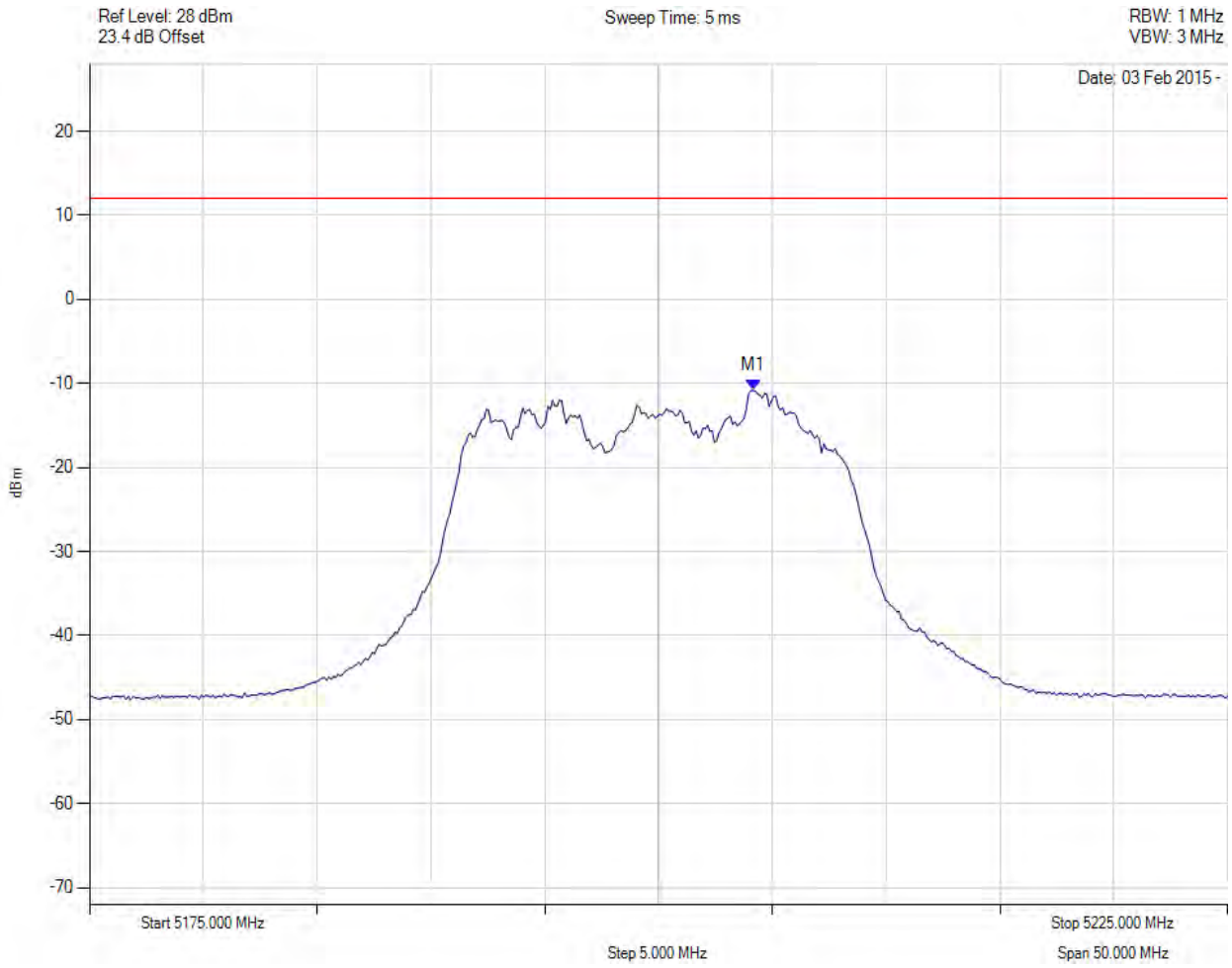
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5204.158 MHz : -10.831 dBm	Limit: ≤ 12.030 dBm

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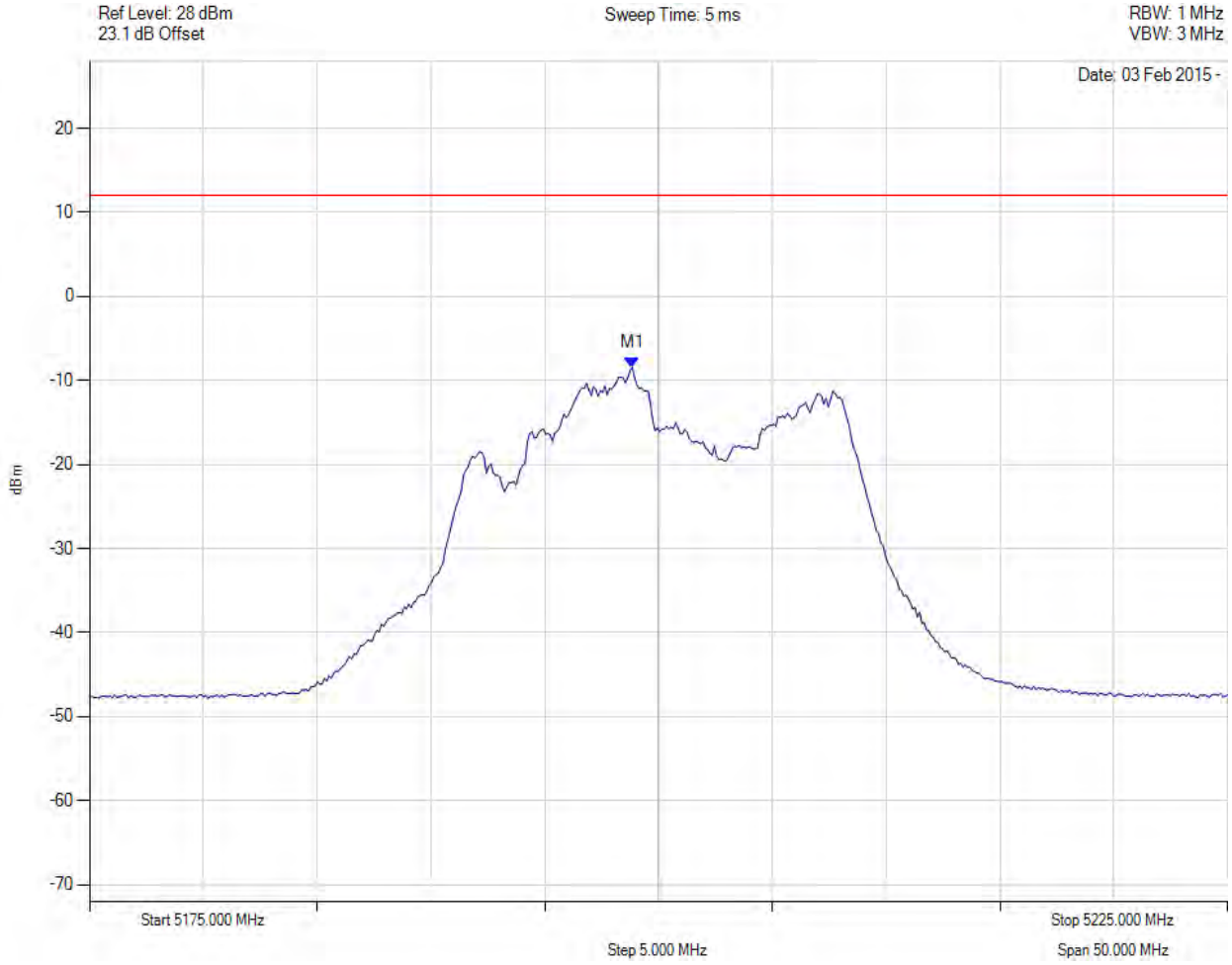
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5198.848 MHz : -8.443 dBm	Channel Frequency: 5200.00 MHz

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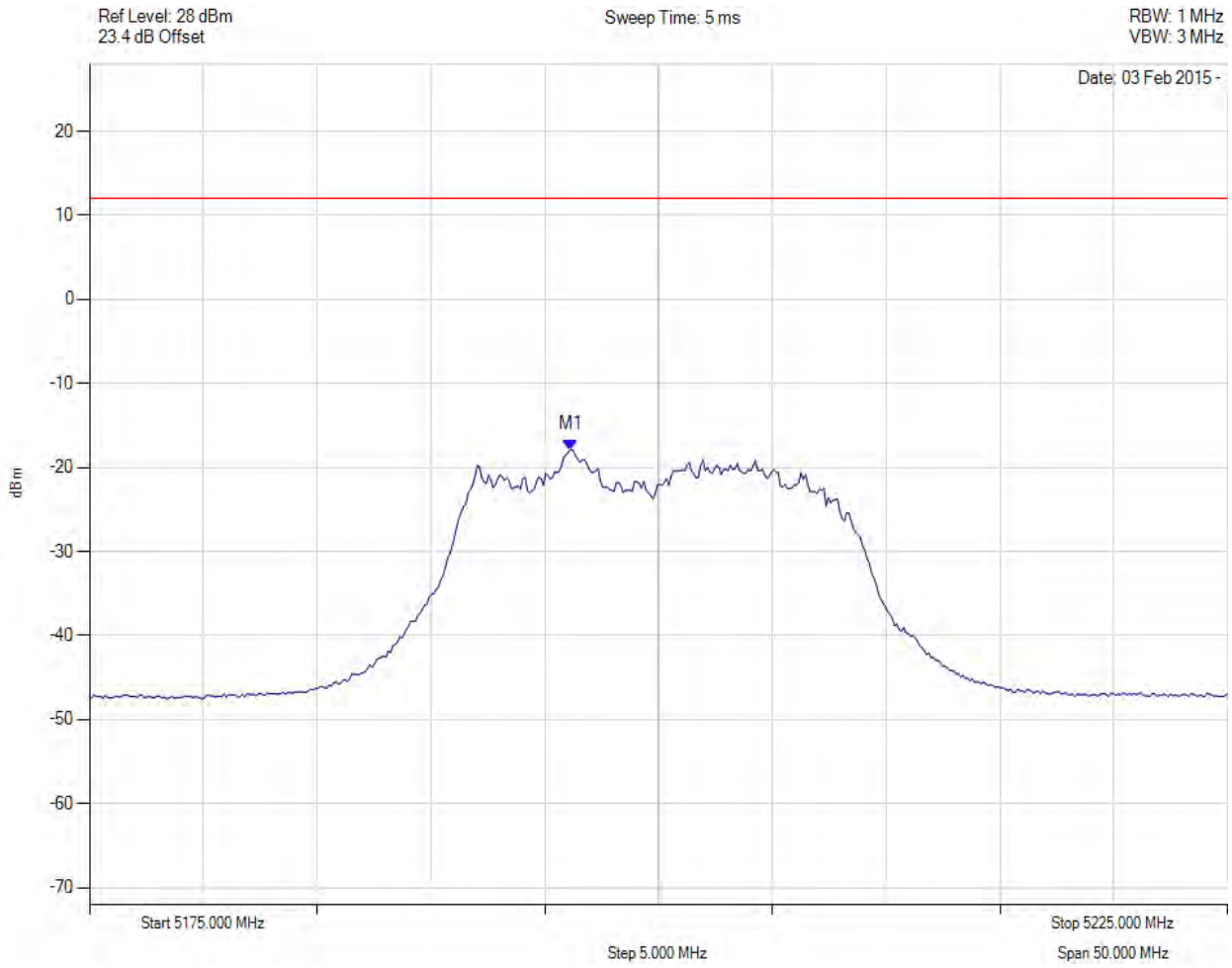
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5196.142 MHz : -17.866 dBm	Limit: ≤ 12.030 dBm

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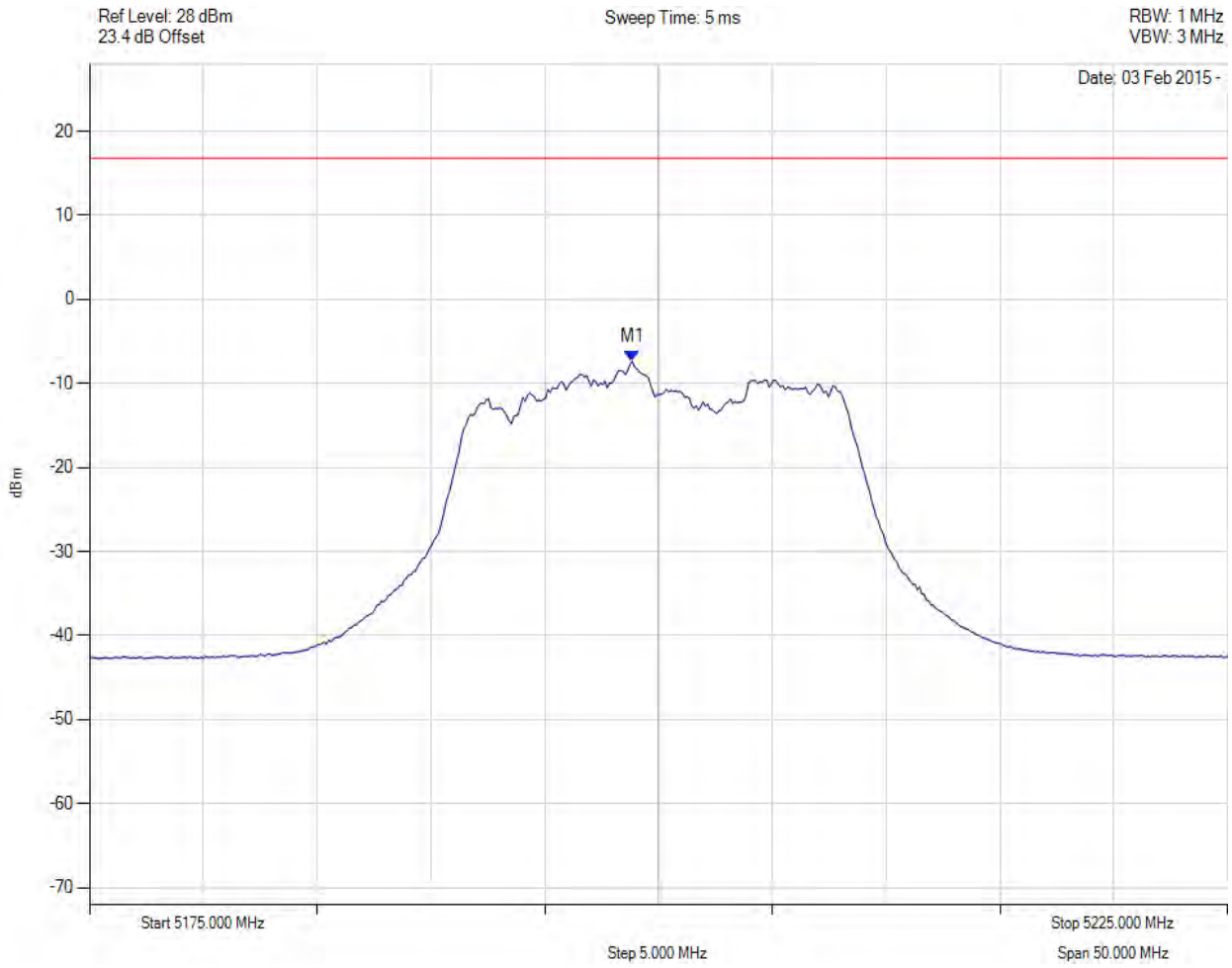
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5200.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5198.800 MHz : -7.382 dBm M1 + DCCF : 5198.800 MHz : -6.413 dBm Duty Cycle Correction Factor : +0.97 dB	Limit: ≤ 16.8 dBm Margin: -23.2 dB

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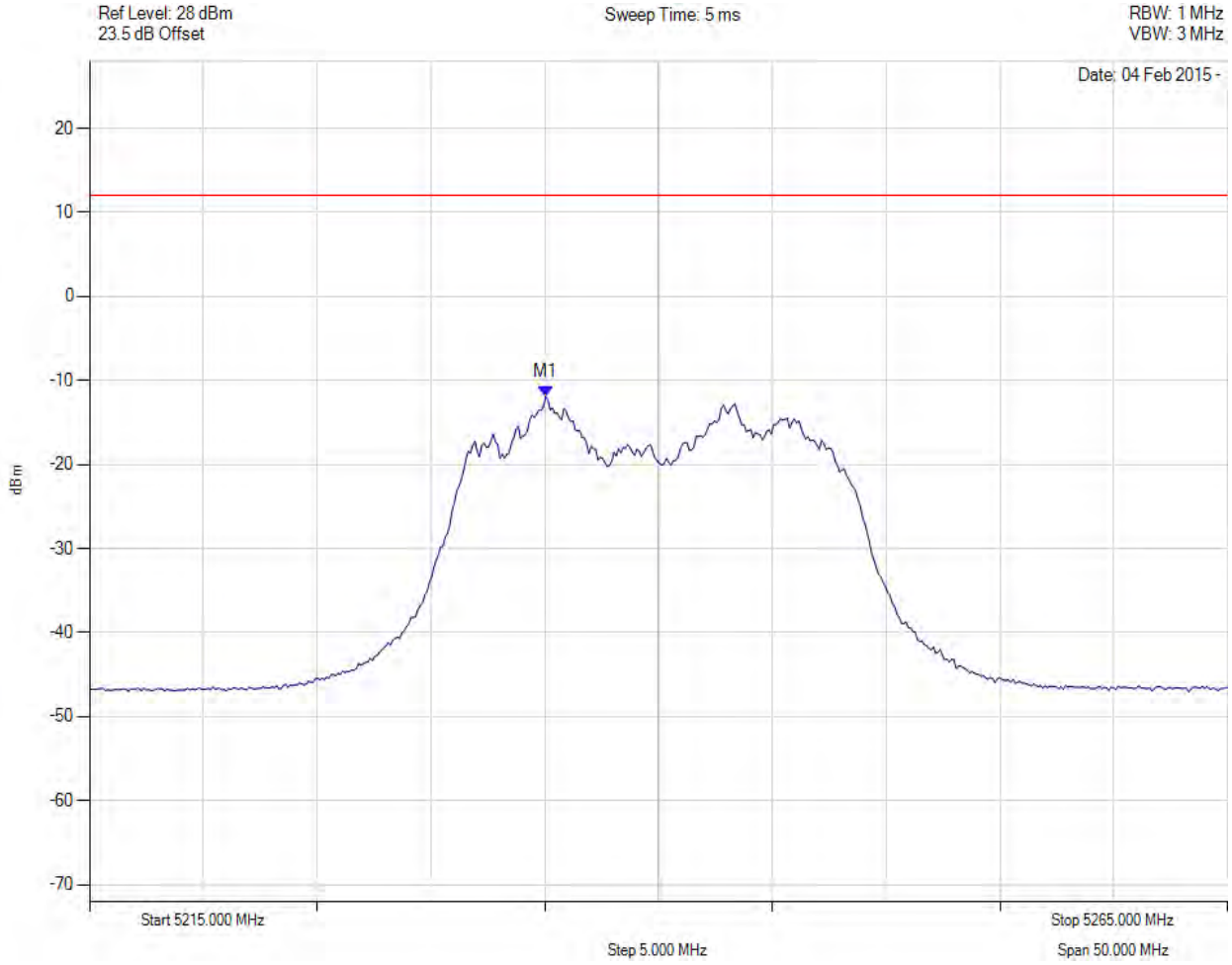
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5235.040 MHz : -11.917 dBm	Limit: ≤ 12.030 dBm

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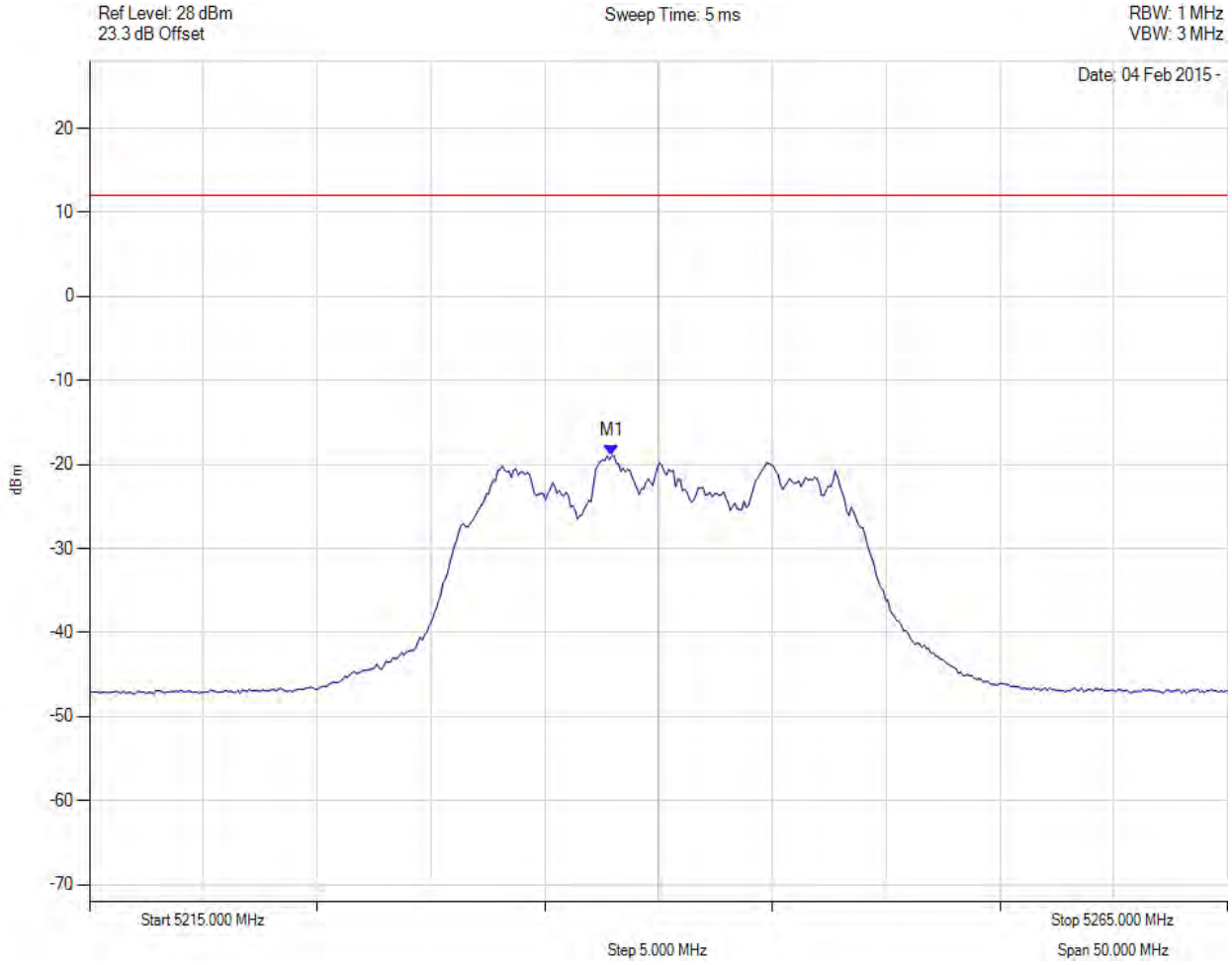
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5237.946 MHz : -18.942 dBm	Limit: ≤ 12.030 dBm

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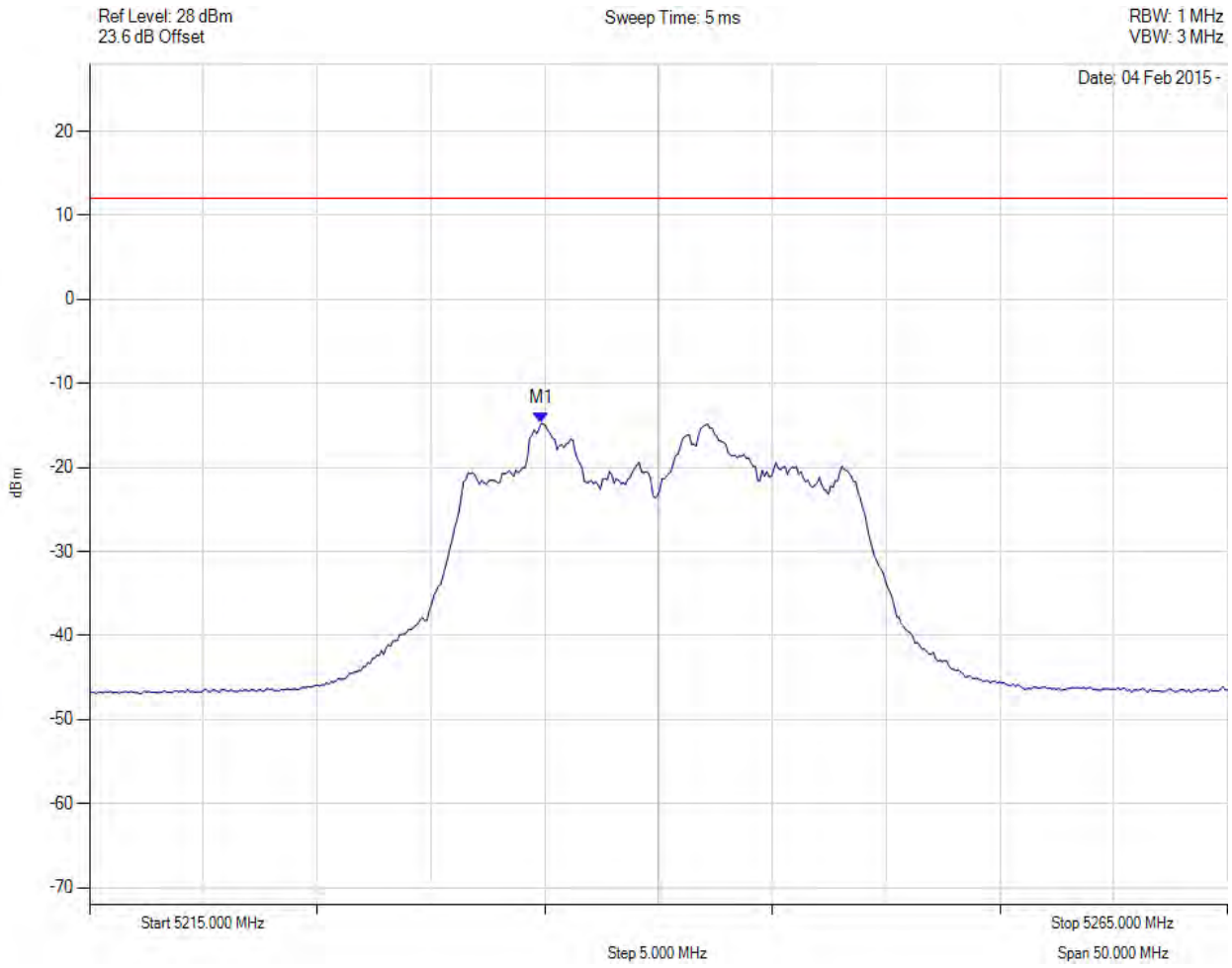
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5234.840 MHz : -14.755 dBm	Limit: ≤ 12.030 dBm

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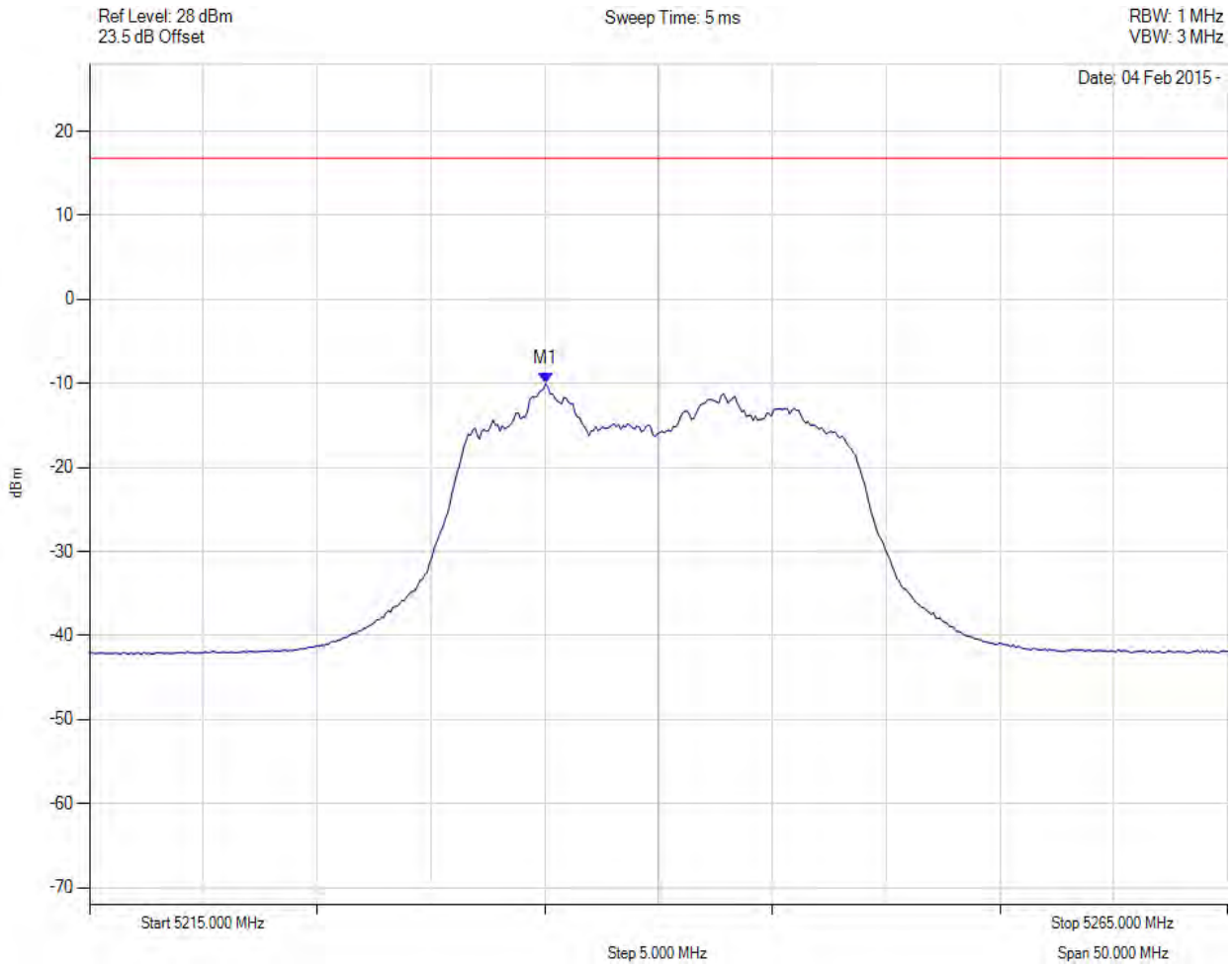
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5240.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5235.000 MHz : -10.018 dBm M1 + DCCF : 5235.000 MHz : -8.651 dBm Duty Cycle Correction Factor : +0.97 dB	Limit: ≤ 16.8 dBm Margin: -25.4 dB

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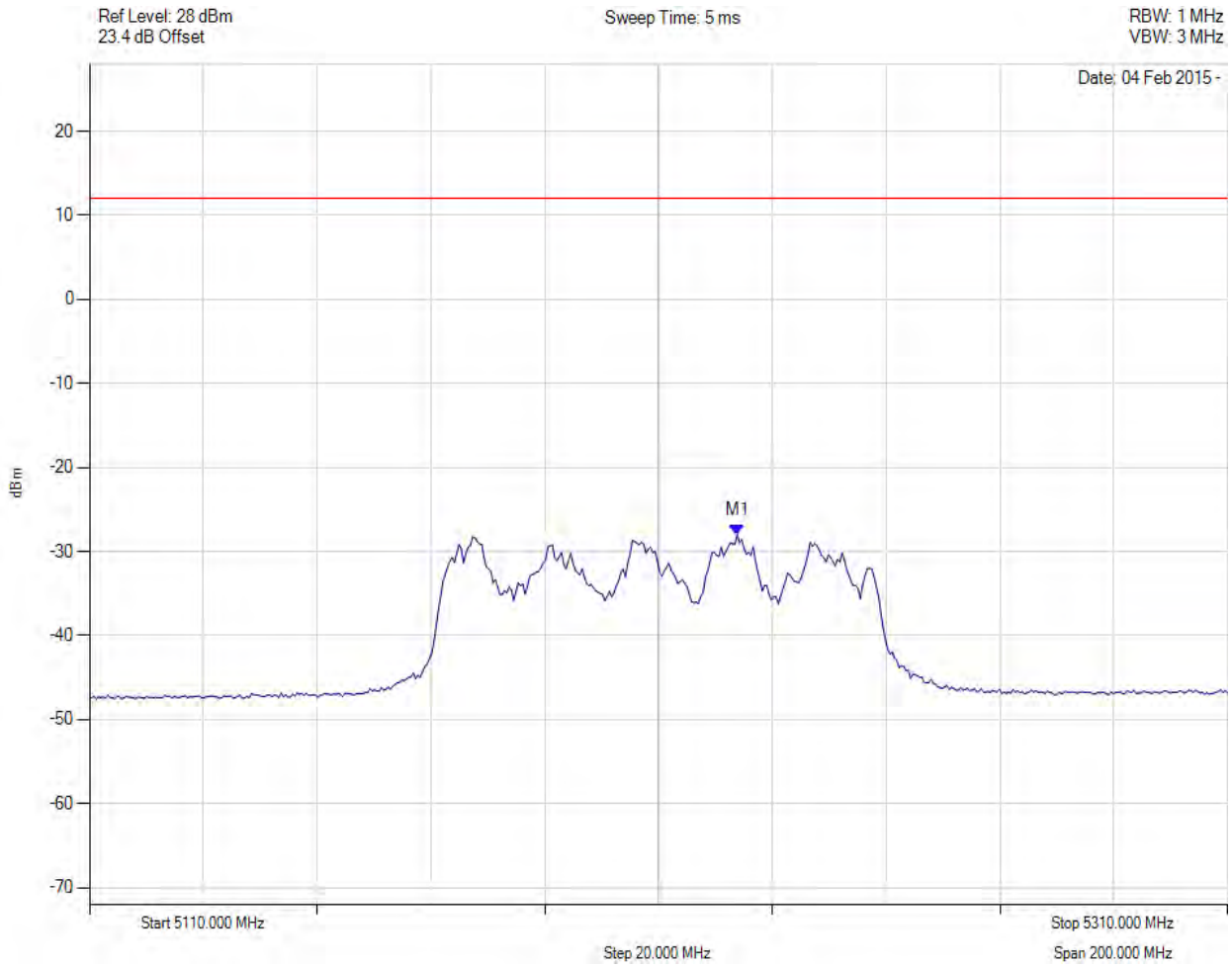
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5223.828 MHz : -28.005 dBm	Limit: ≤ 12.030 dBm

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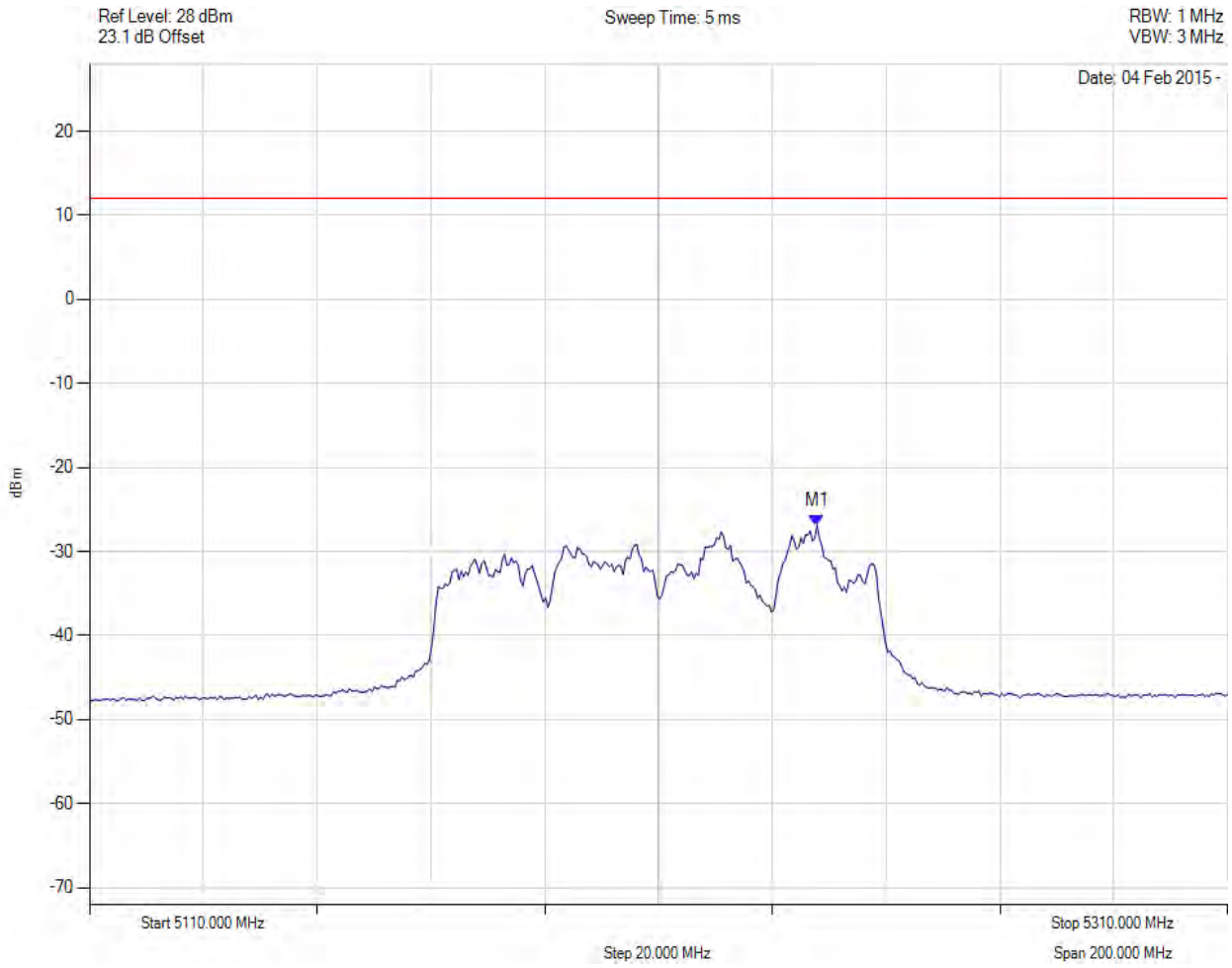
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5237.856 MHz : -26.856 dBm	Limit: ≤ 12.030 dBm

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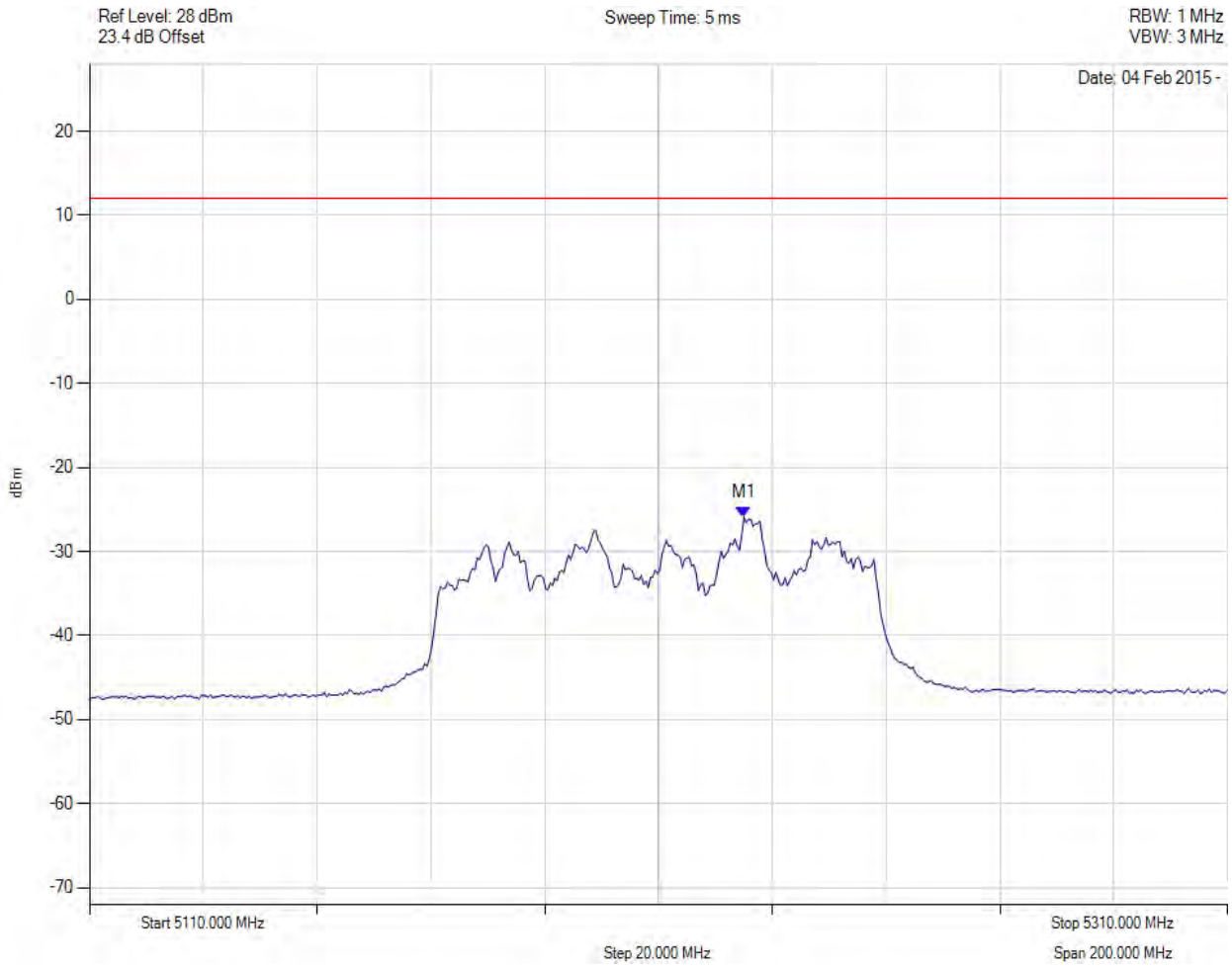
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5225.030 MHz : -25.945 dBm	Limit: ≤ 12.030 dBm

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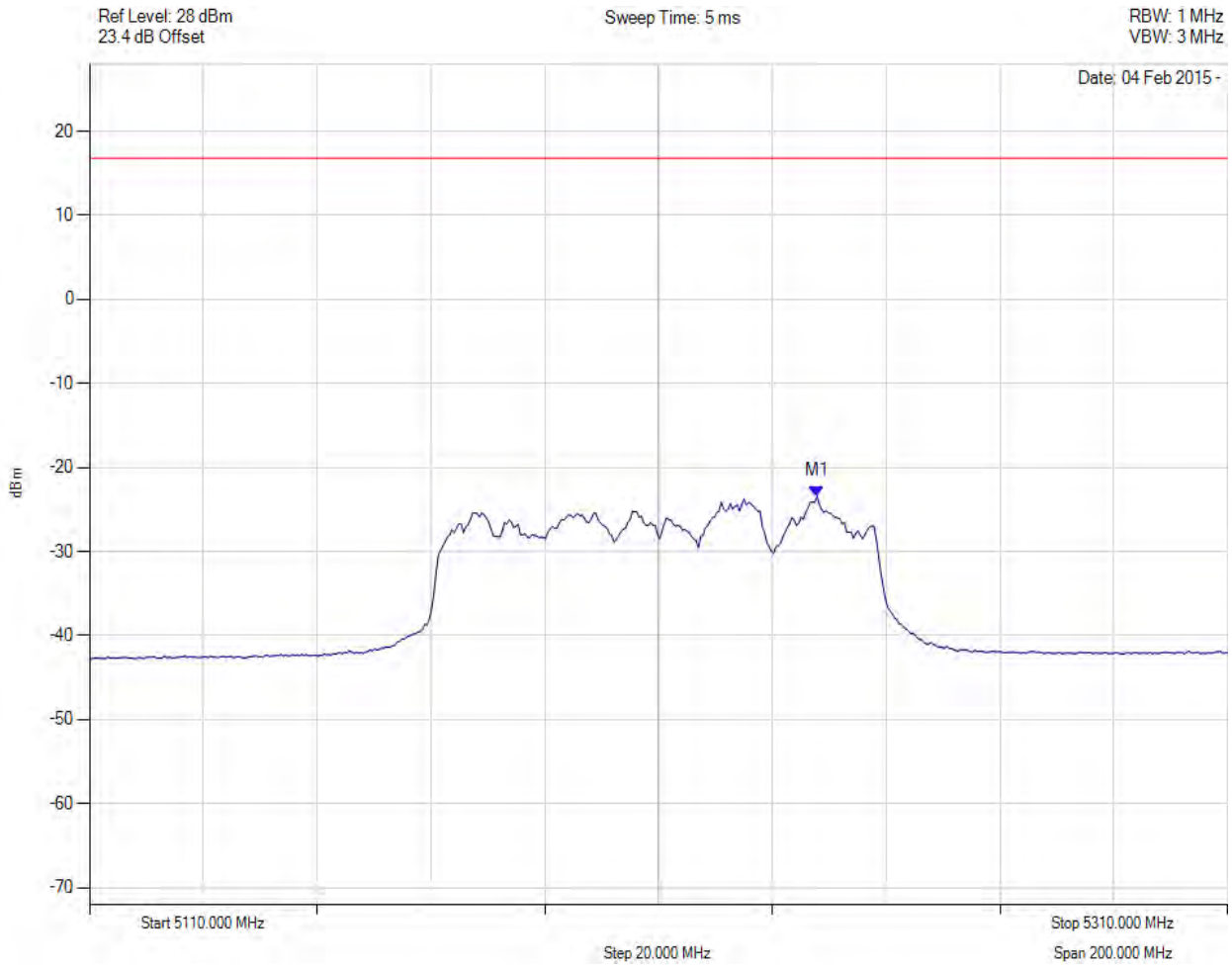
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5210.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5237.900 MHz : -23.421 dBm M1 + DCCF : 5237.900 MHz : -19.756 dBm Duty Cycle Correction Factor : +3.67 dB	Limit: ≤ 16.8 dBm Margin: -36.5 dB

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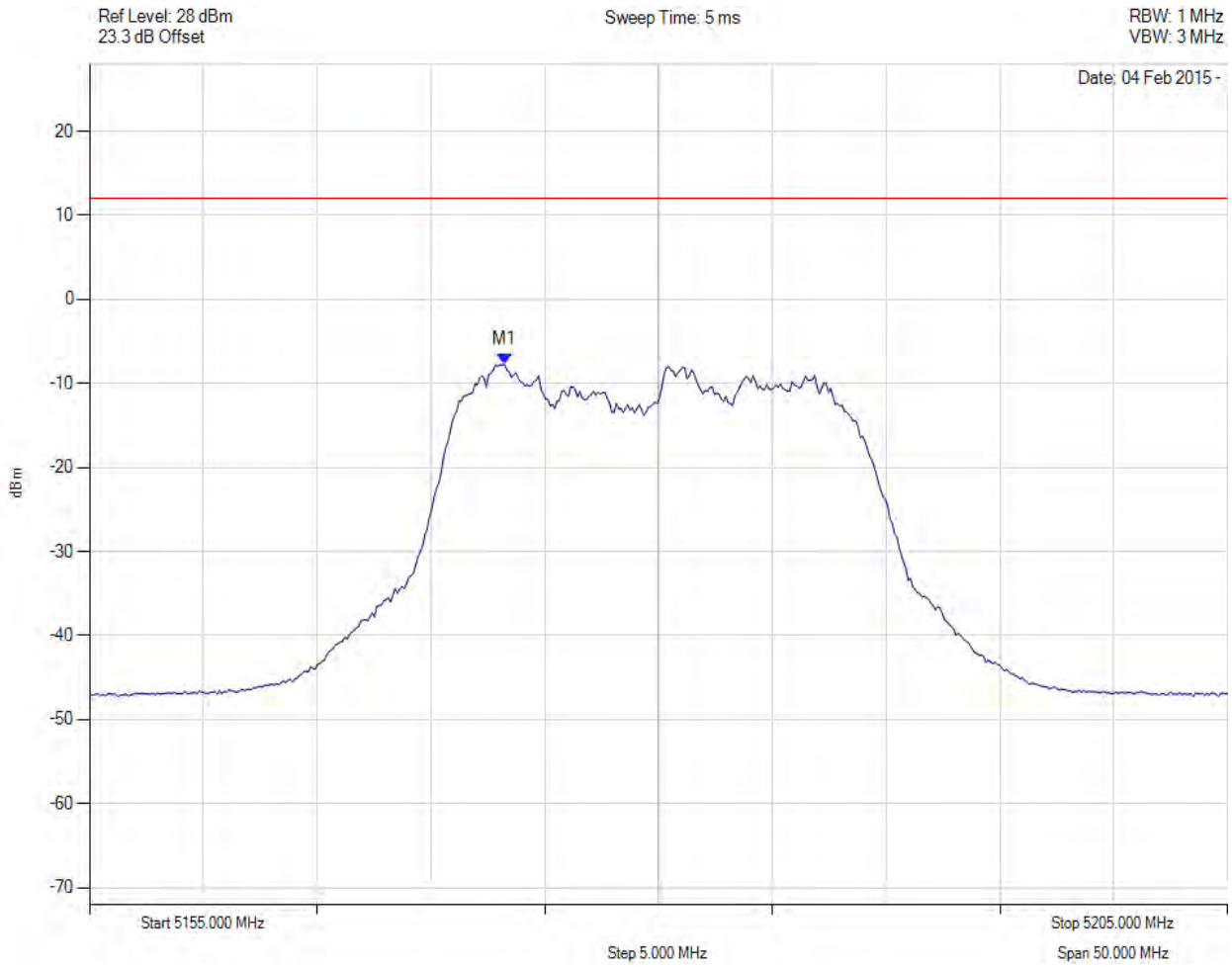
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc

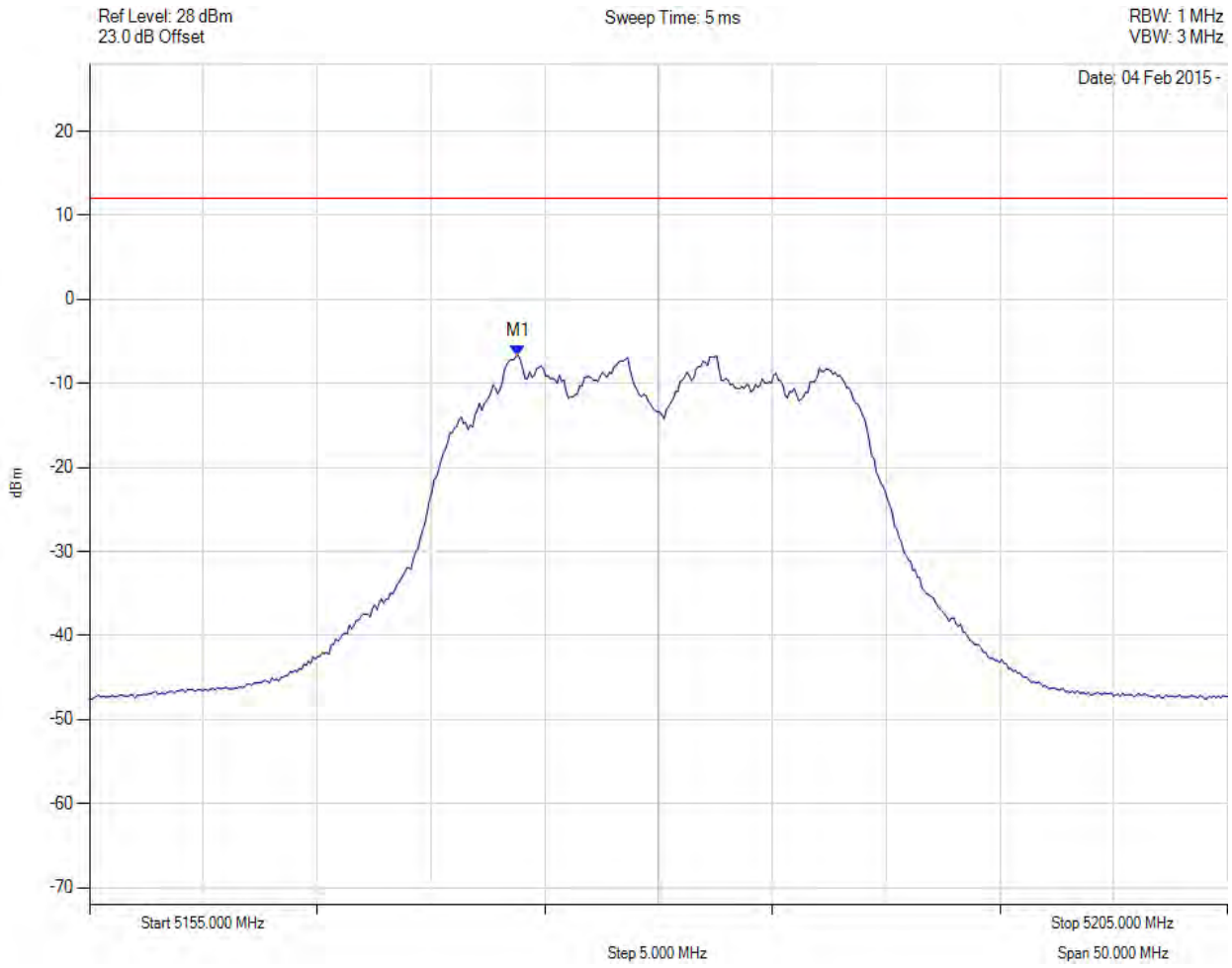


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5173.236 MHz : -7.714 dBm	Limit: ≤ 12.030 dBm

Back to Matrix

POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5173.838 MHz : -6.675 dBm	Limit: ≤ 12.030 dBm

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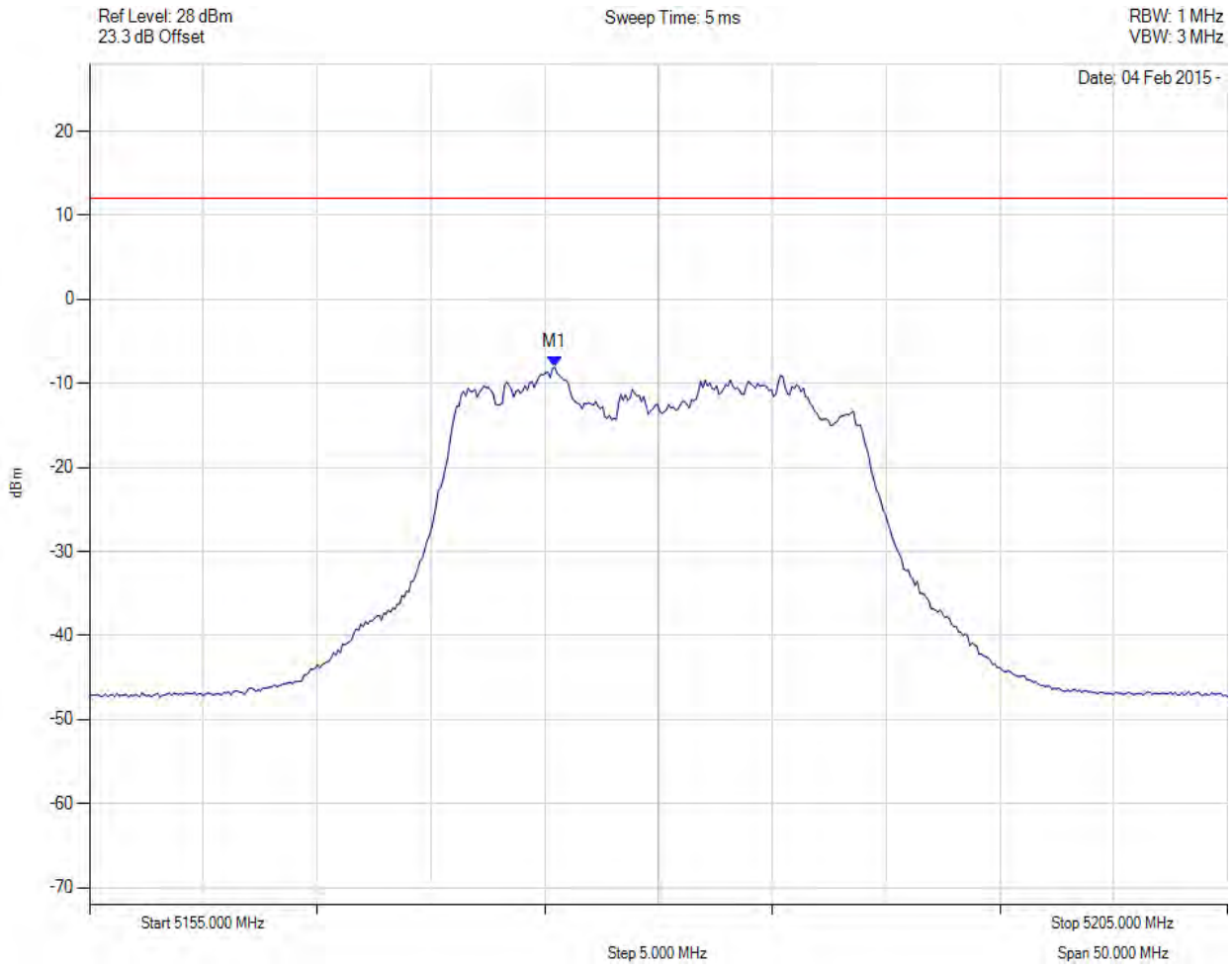
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5175.441 MHz : -8.039 dBm	Limit: ≤ 12.030 dBm

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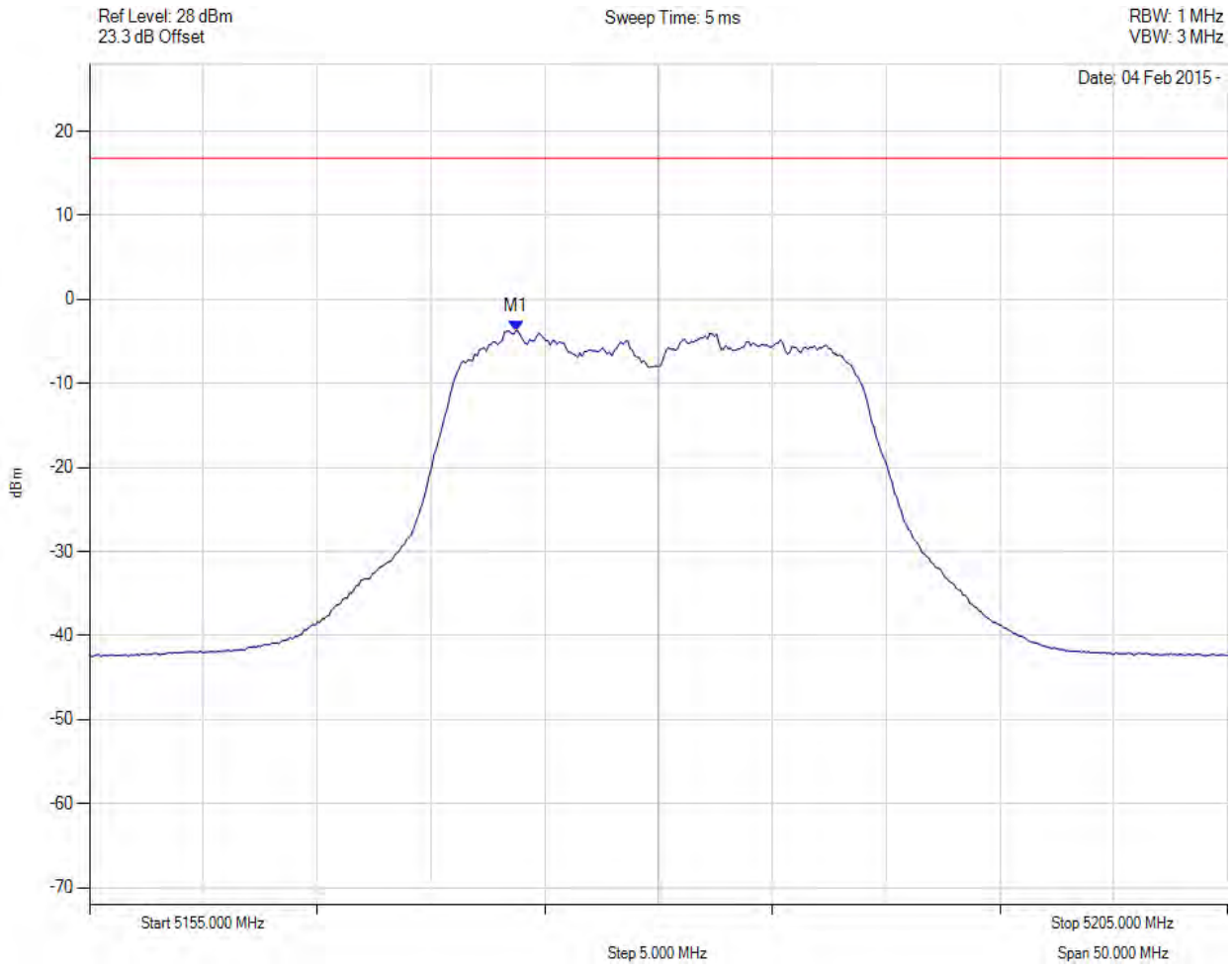
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5180.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5173.700 MHz : -3.729 dBm M1 + DCCF : 5173.700 MHz : -2.362 dBm Duty Cycle Correction Factor : +1.37 dB	Limit: ≤ 16.8 dBm Margin: -19.1 dB

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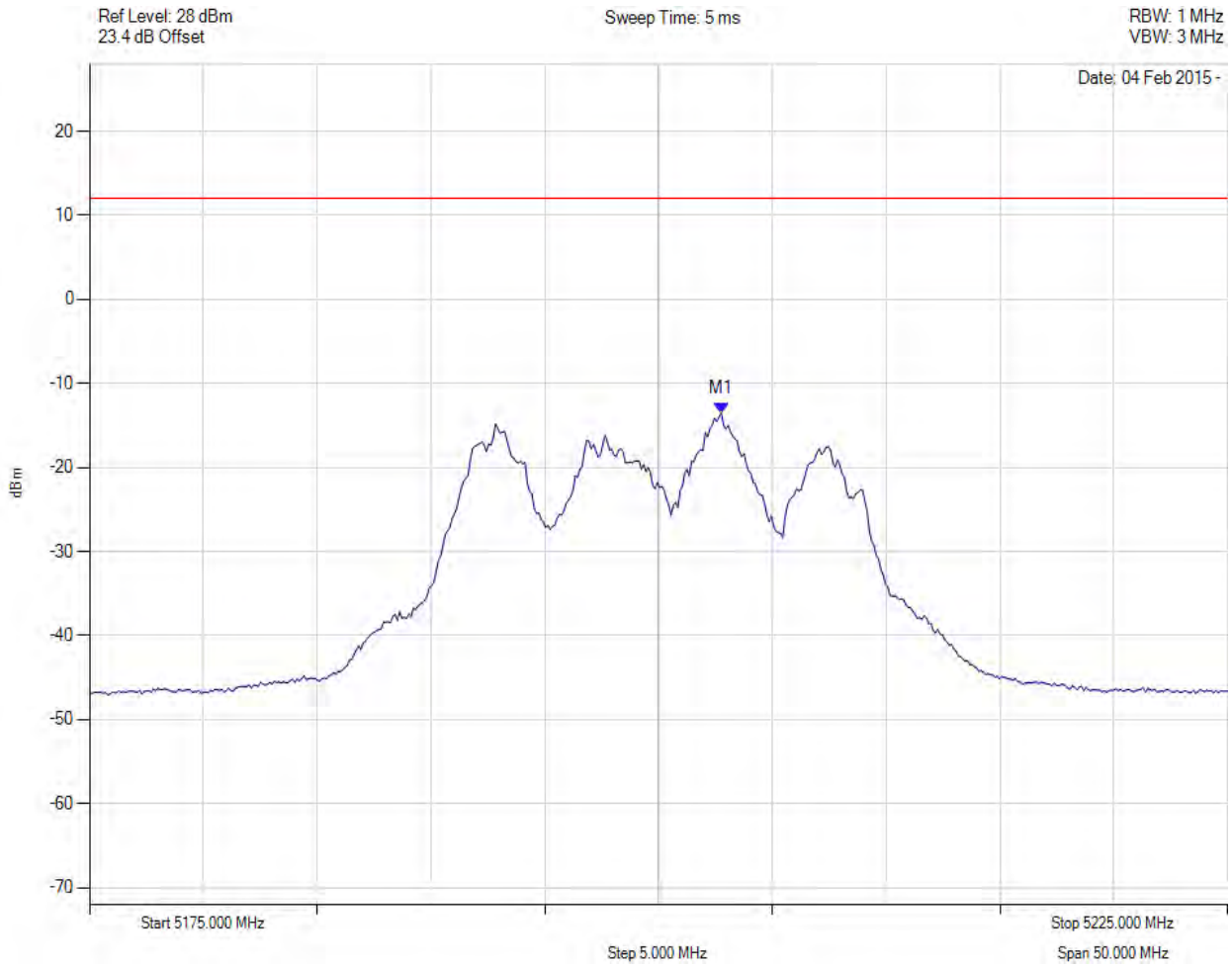
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc

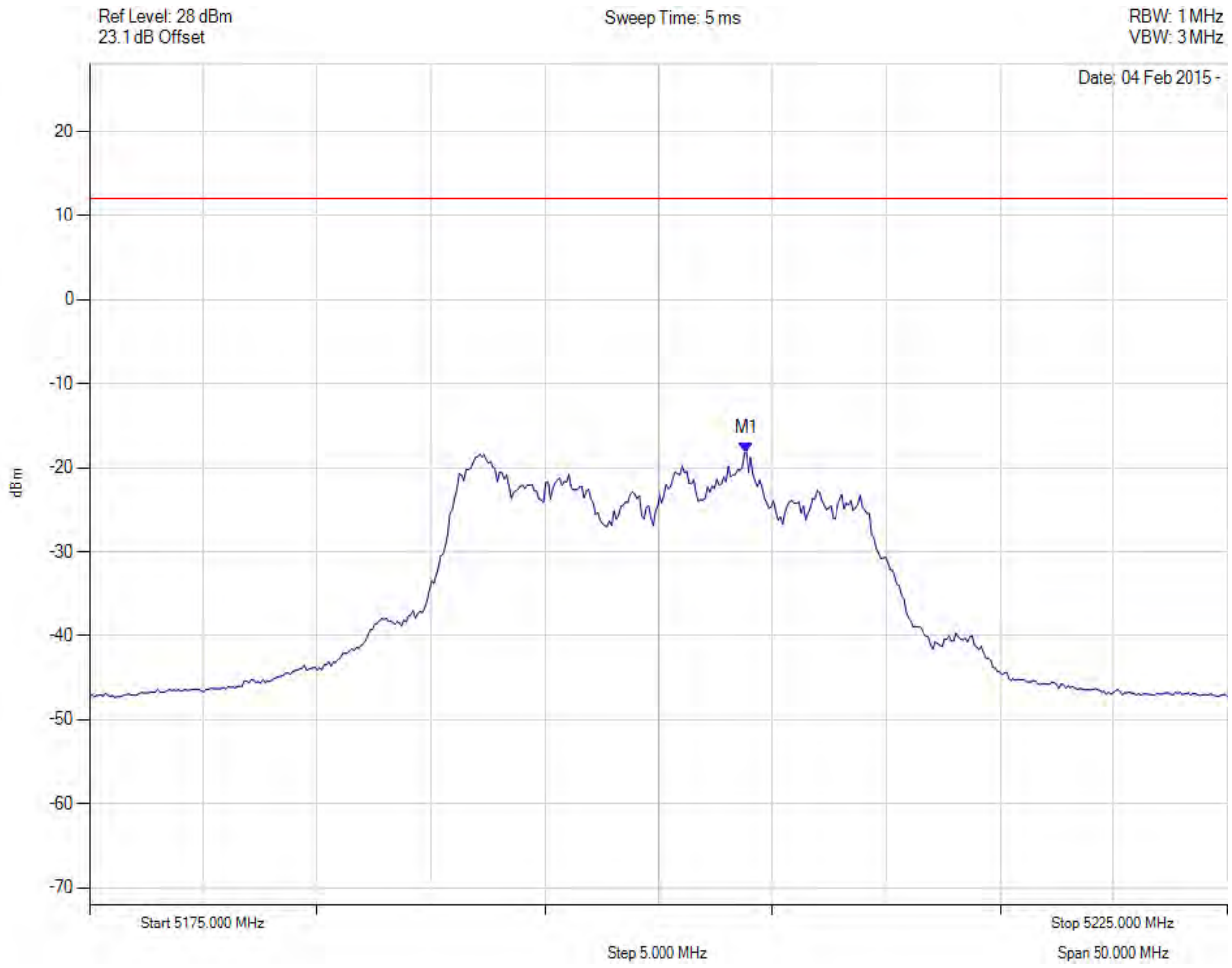


Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5202.756 MHz : -13.494 dBm	Limit: ≤ 12.030 dBm

Back to Matrix

POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5203.858 MHz : -18.302 dBm	Channel Frequency: 5200.00 MHz

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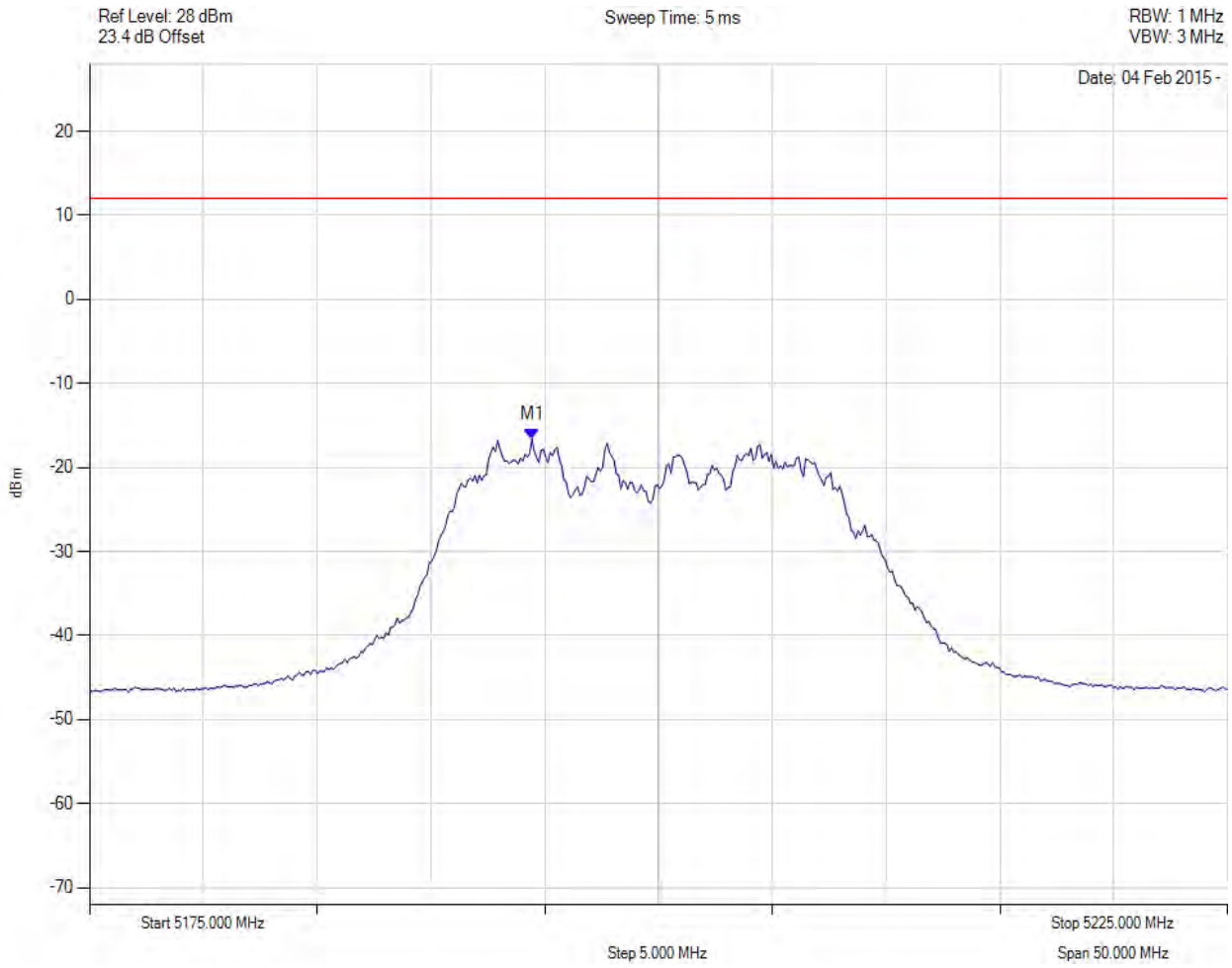
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5194.439 MHz : -16.629 dBm	Limit: ≤ 12.030 dBm

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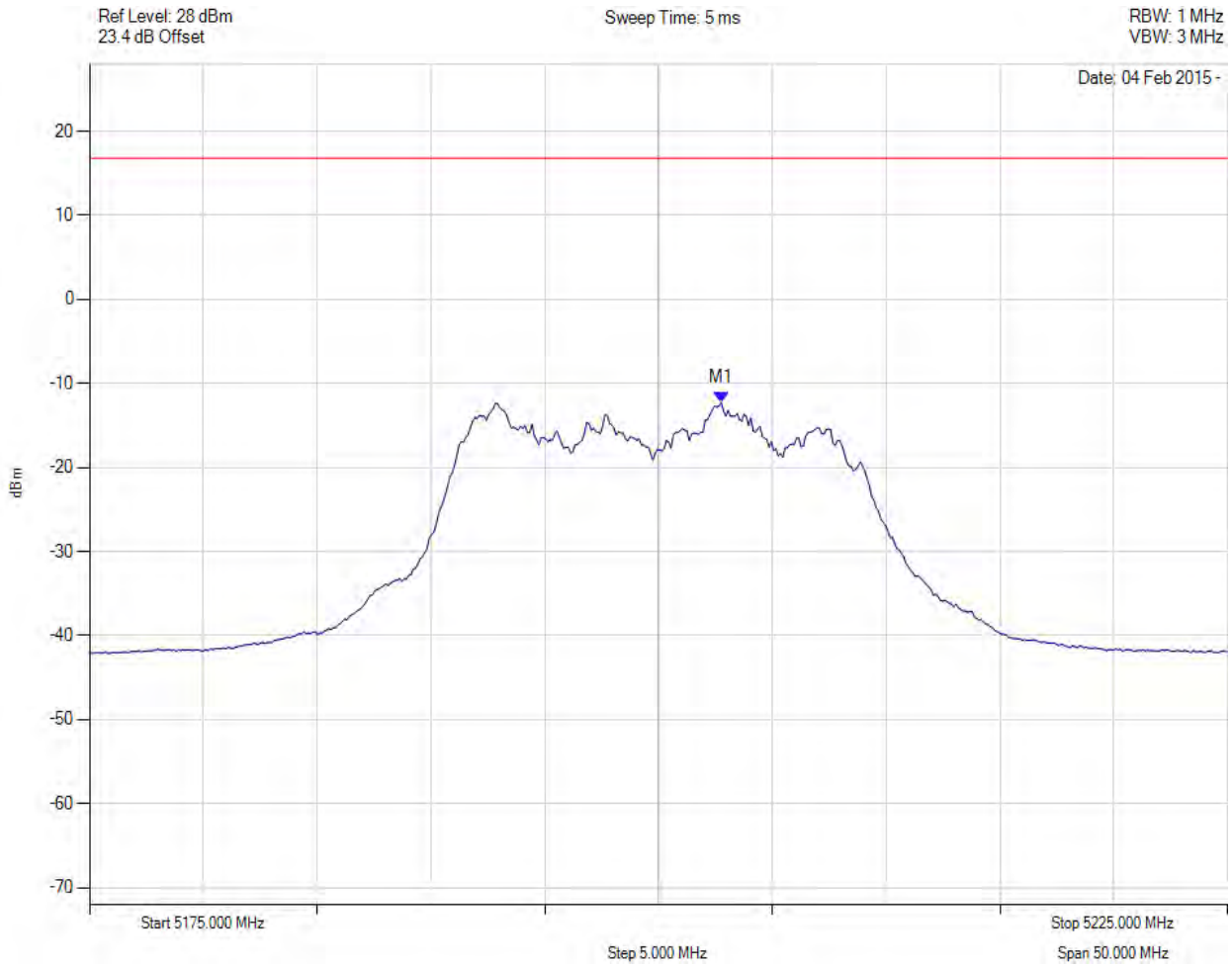
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5200.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5202.800 MHz : -12.280 dBm M1 + DCCF : 5202.800 MHz : -10.913 dBm Duty Cycle Correction Factor : +1.37 dB	Limit: ≤ 16.8 dBm Margin: -27.7 dB

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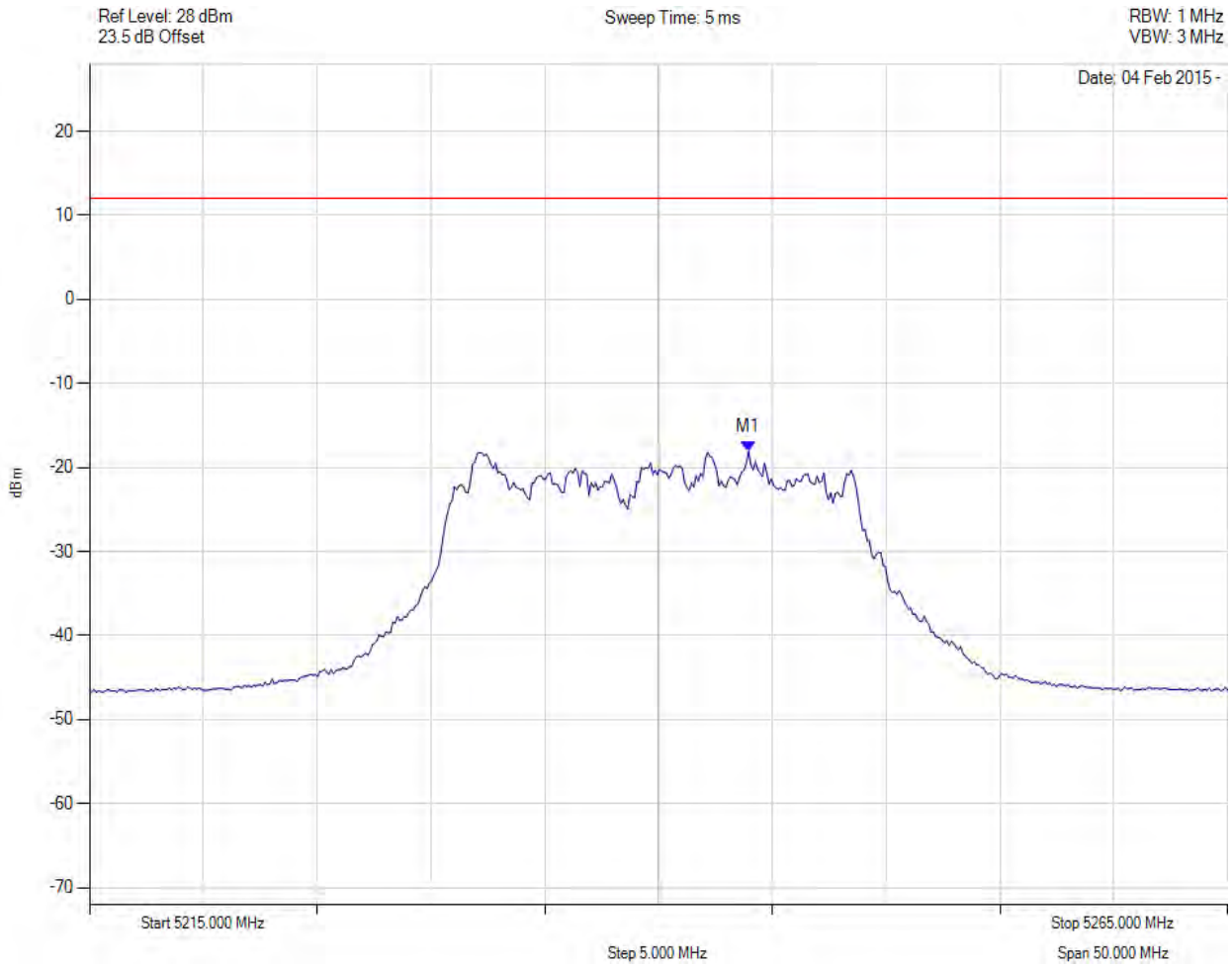
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5243.958 MHz : -18.075 dBm	Limit: ≤ 12.030 dBm

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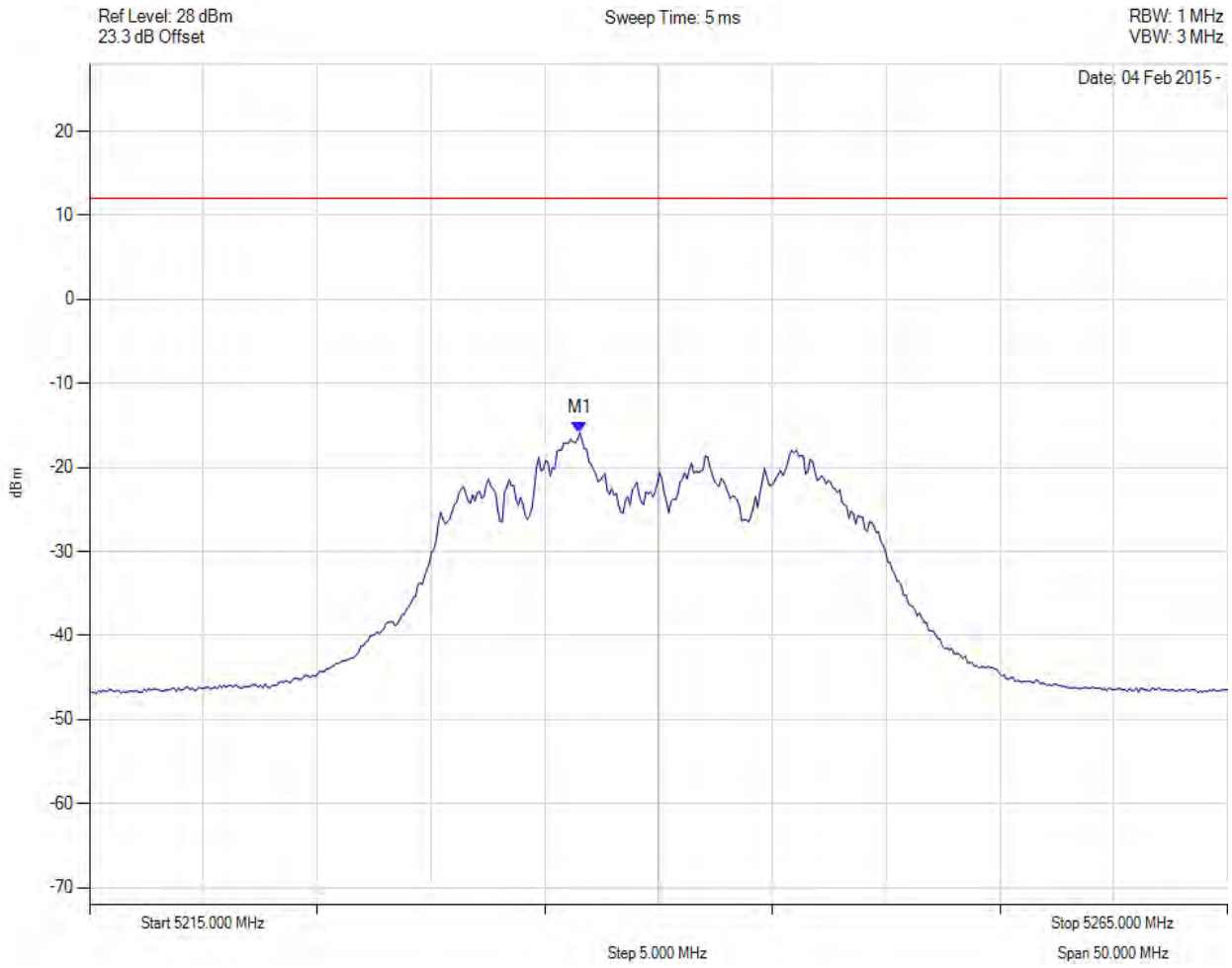
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5236.543 MHz : -15.867 dBm	Limit: ≤ 12.030 dBm

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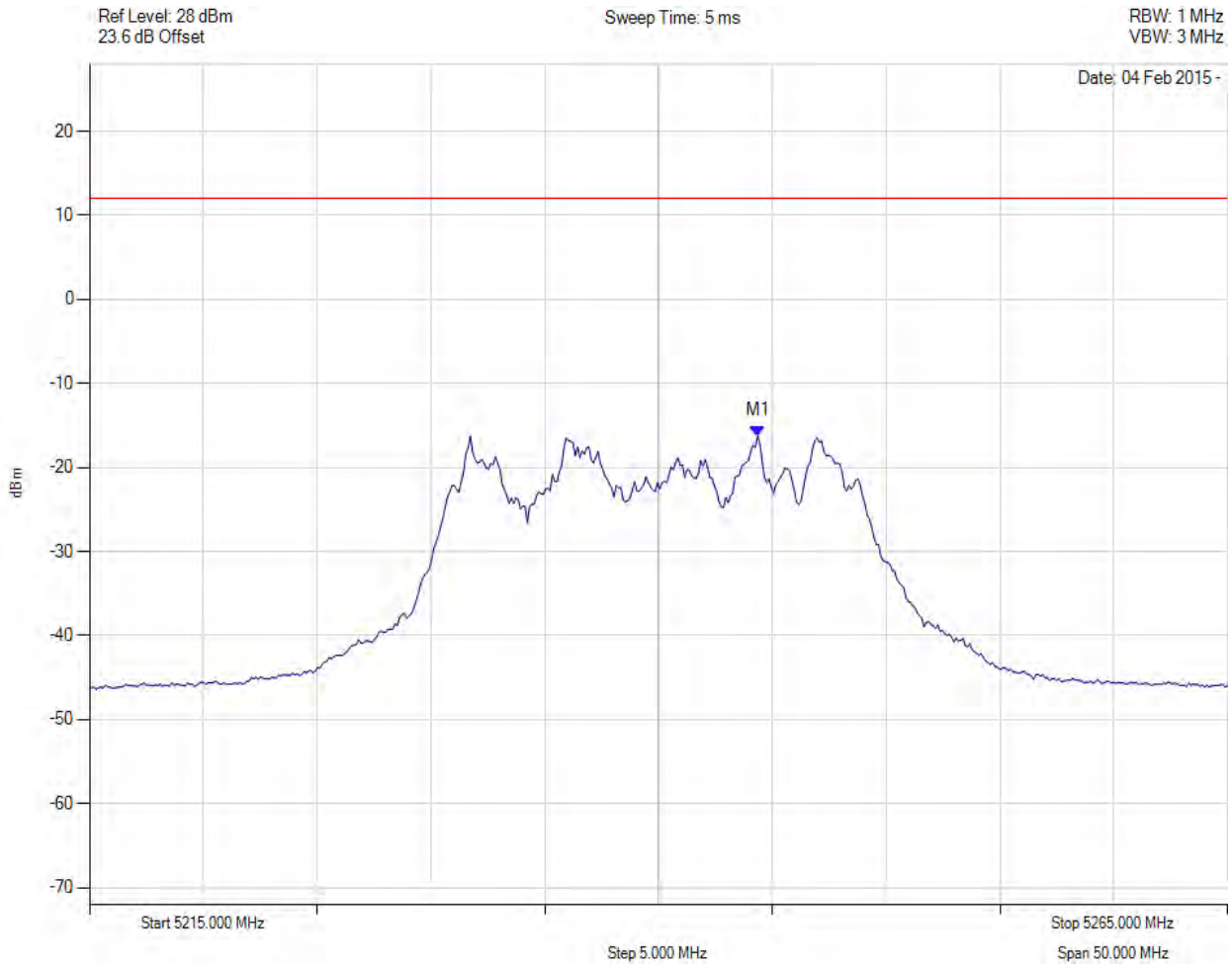
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5244.359 MHz : -16.243 dBm	Limit: ≤ 12.030 dBm

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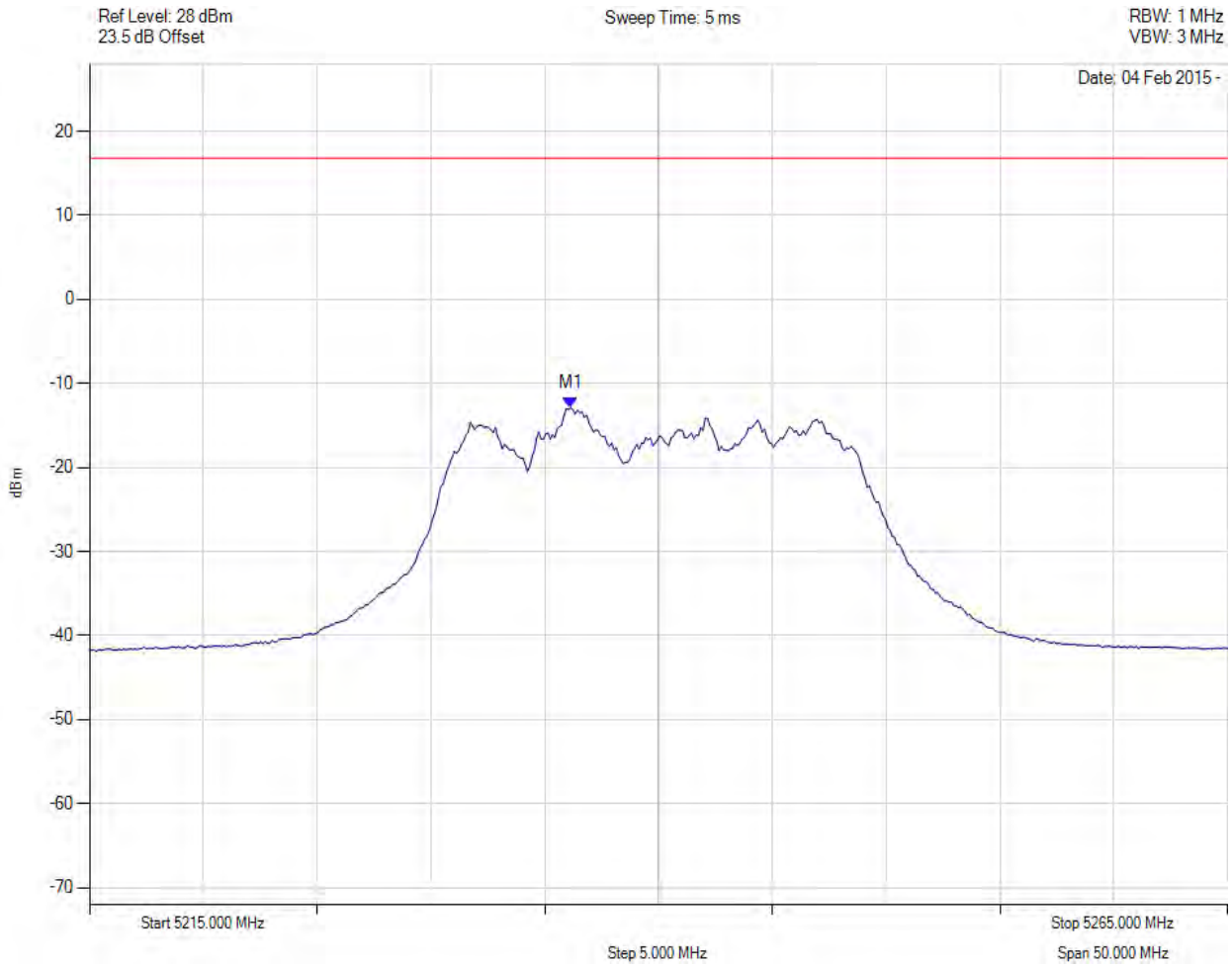
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5240.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5236.100 MHz : -12.900 dBm M1 + DCCF : 5236.100 MHz : -11.533 dBm Duty Cycle Correction Factor : +1.37 dB	Limit: ≤ 16.8 dBm Margin: -28.3 dB

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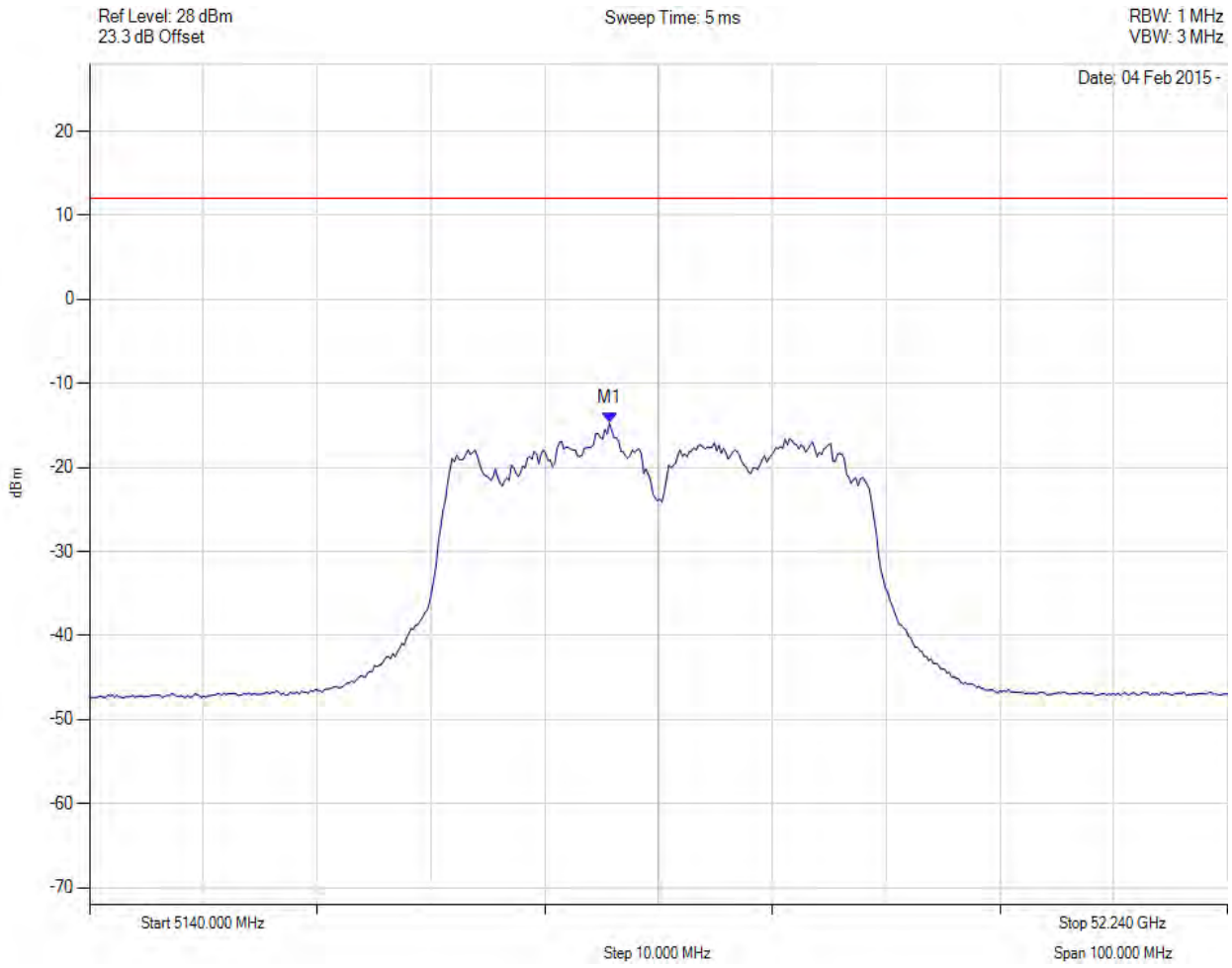
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5185.691 MHz : -14.706 dBm	Limit: ≤ 12.030 dBm

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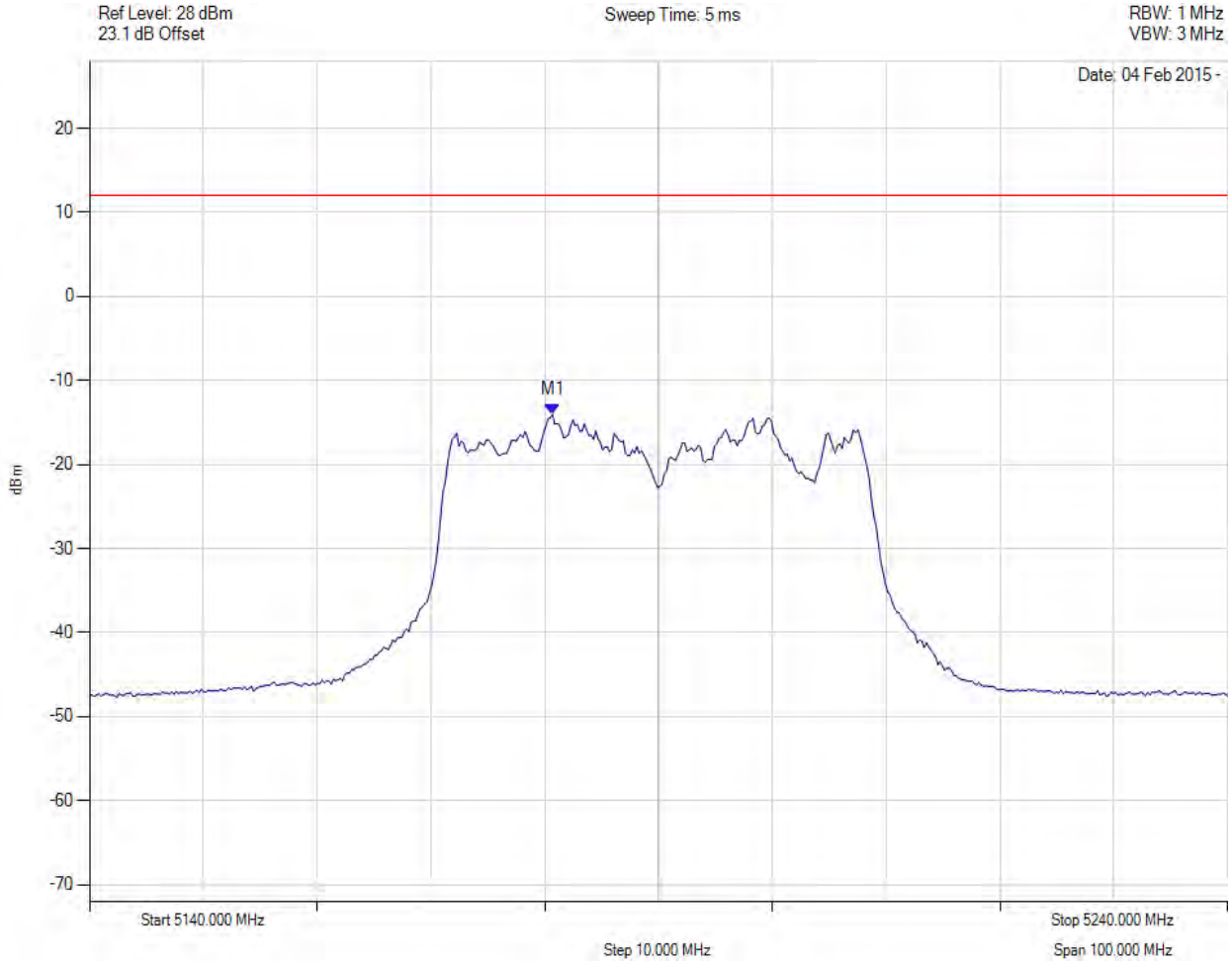
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5180.681 MHz : -14.055 dBm	Limit: ≤ 12.030 dBm

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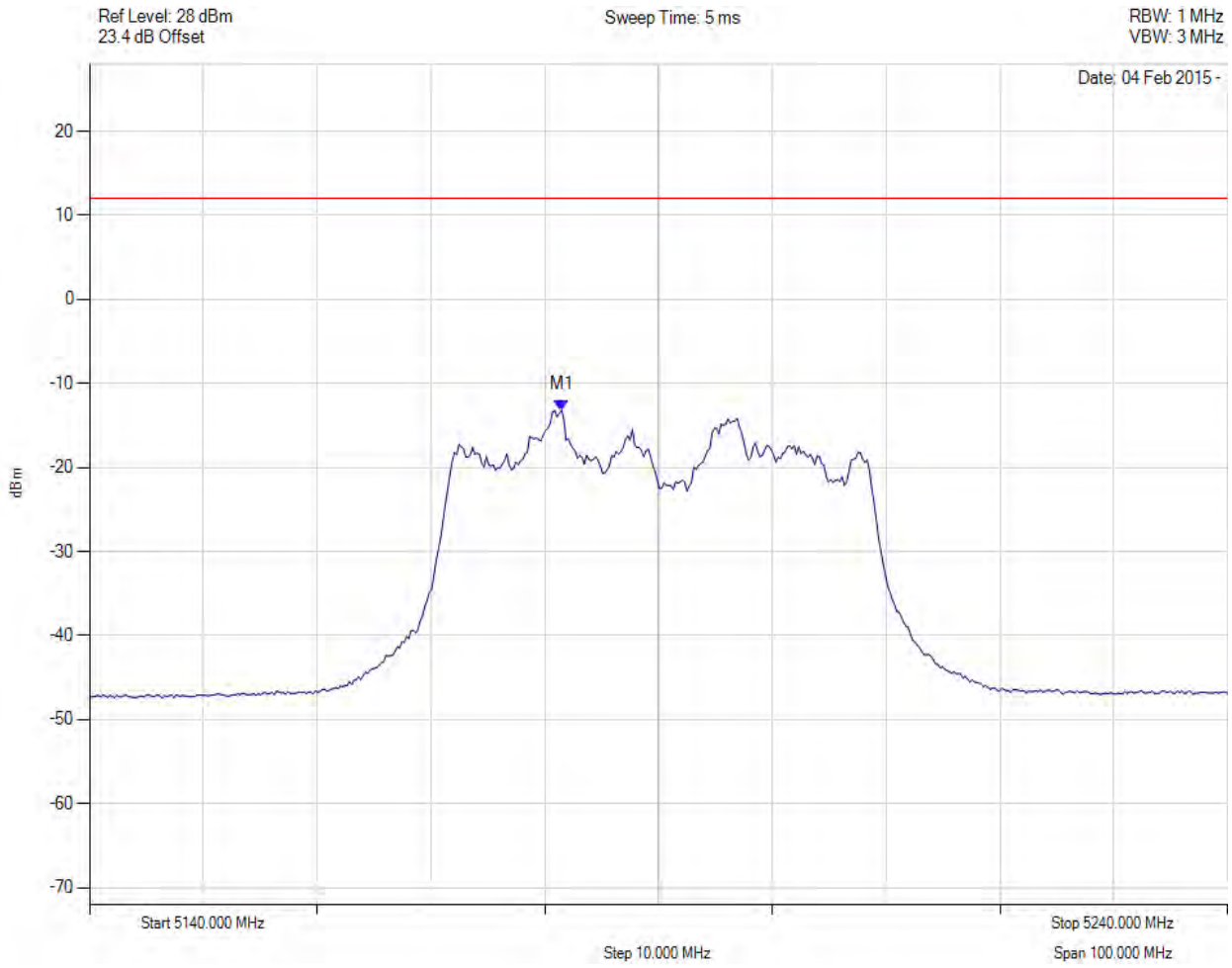
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5181.483 MHz : -13.159 dBm	Limit: ≤ 12.030 dBm

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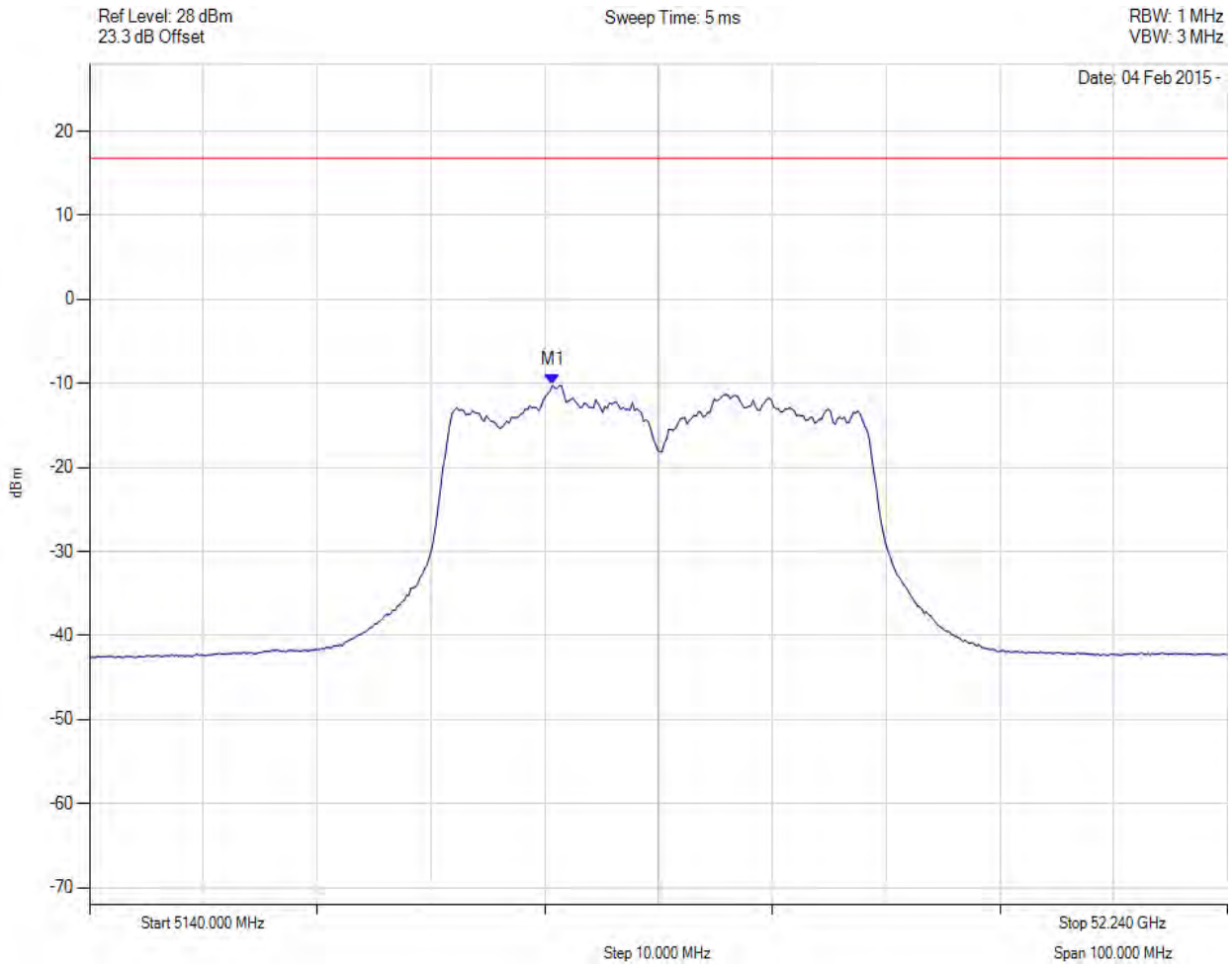
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5190.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5180.700 MHz : -10.204 dBm M1 + DCCF : 5180.700 MHz : -8.333 dBm Duty Cycle Correction Factor : +1.87 dB	Limit: ≤ 16.8 dBm Margin: -25.1 dB

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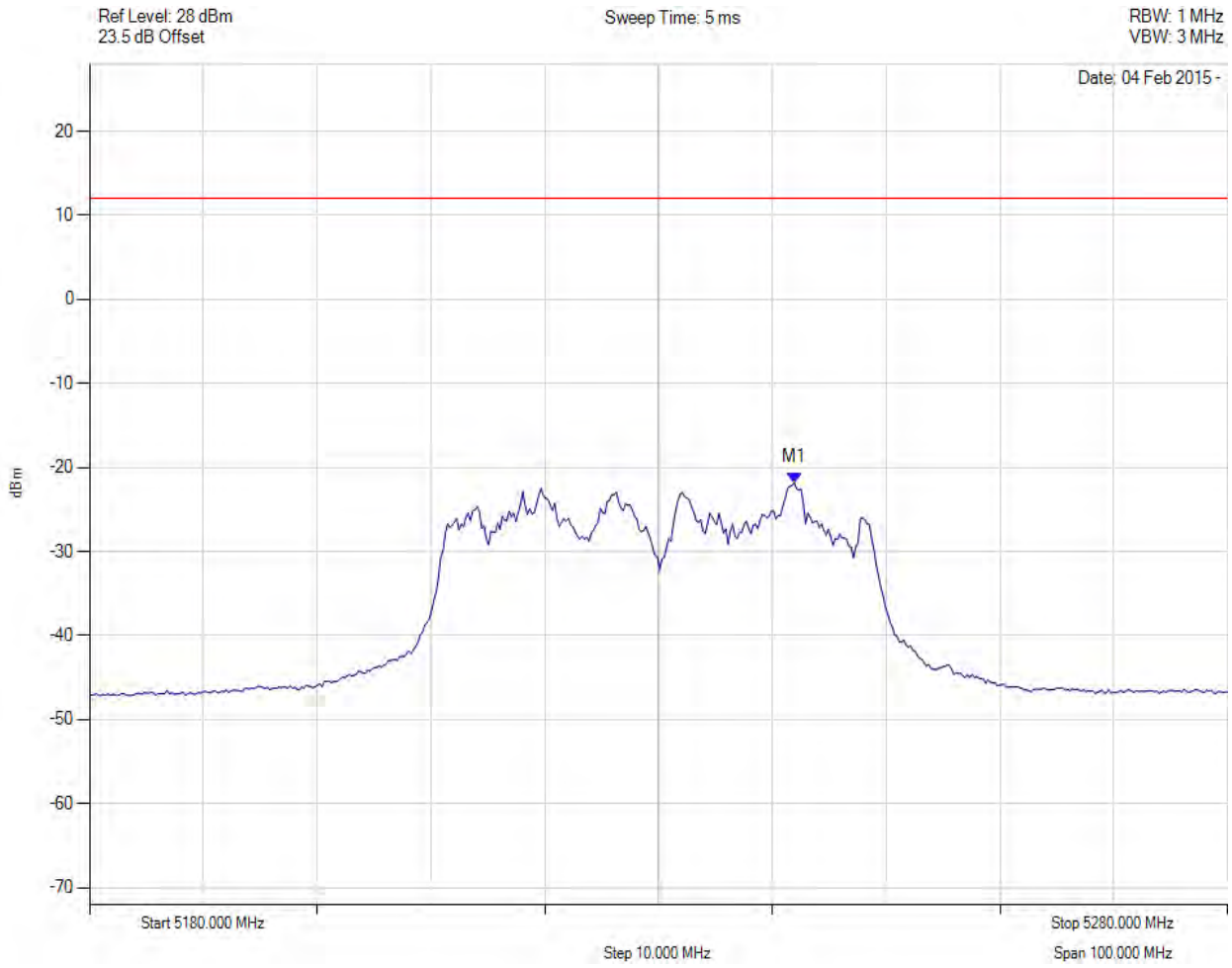
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5241.924 MHz : -21.781 dBm	Limit: ≤ 12.030 dBm

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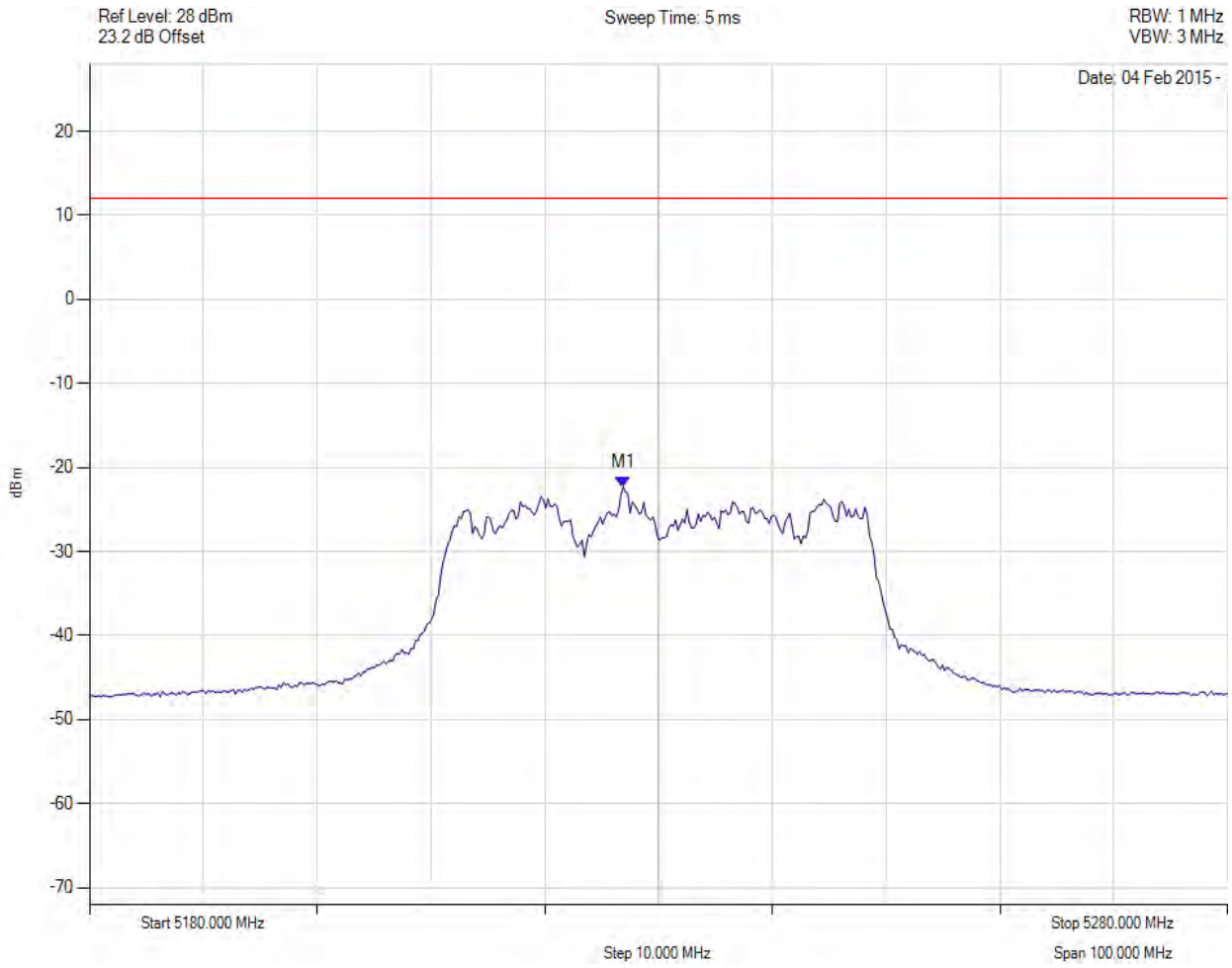
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5226.894 MHz : -22.298 dBm	Limit: ≤ 12.030 dBm

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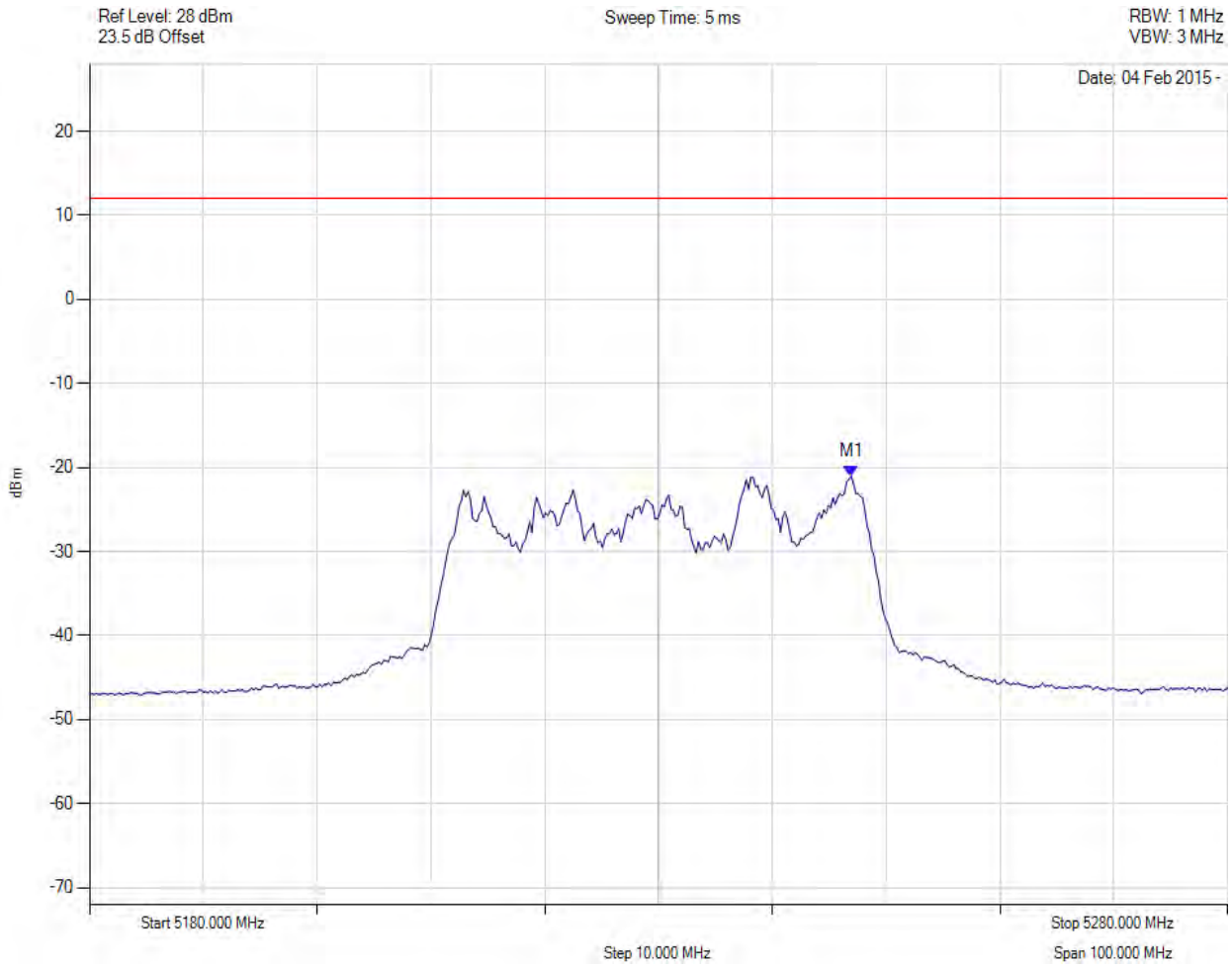
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5246.934 MHz : -21.031 dBm	Limit: ≤ 12.030 dBm

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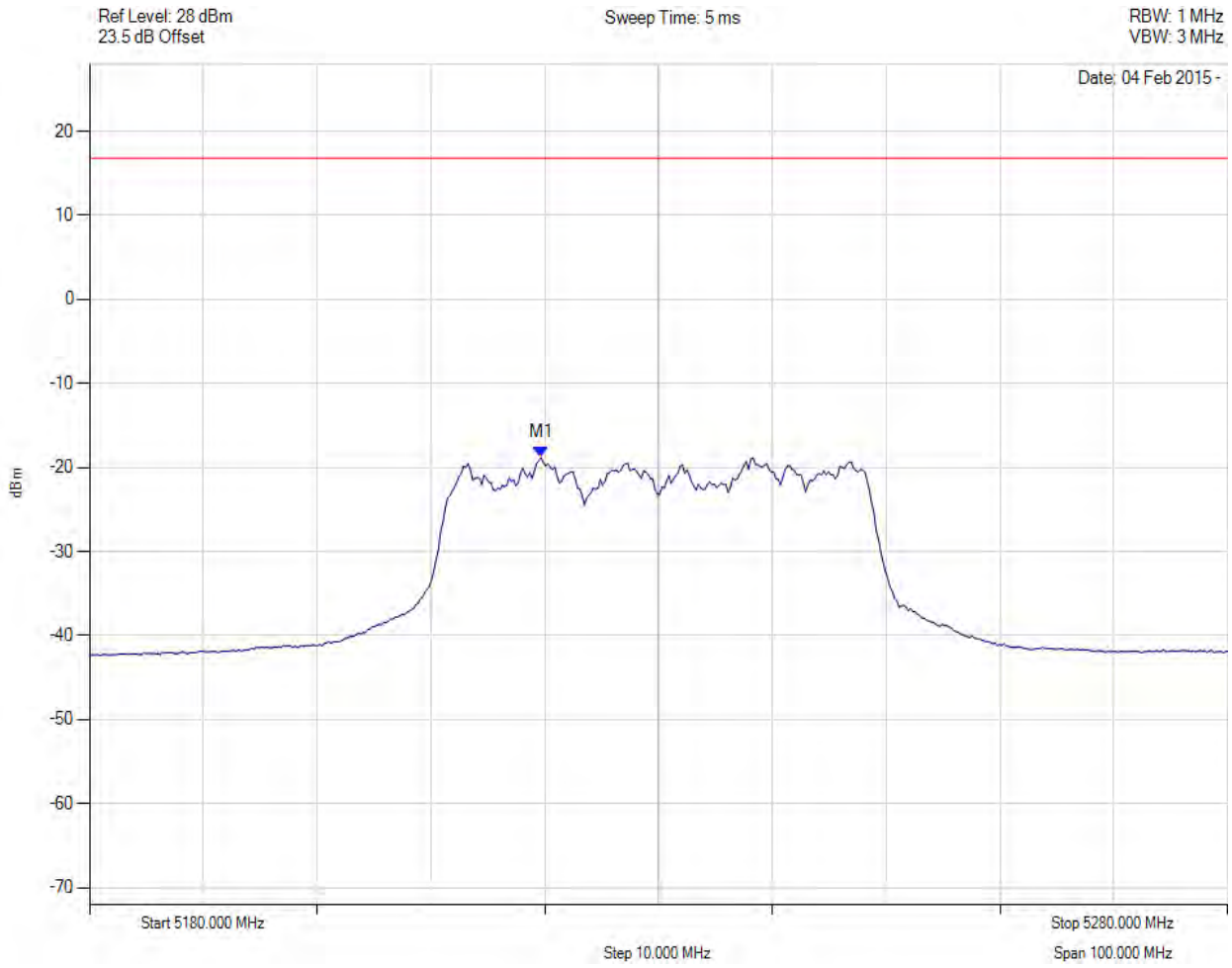
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5230.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5219.700 MHz : -18.821 dBm M1 + DCCF : 5219.700 MHz : -16.950 dBm Duty Cycle Correction Factor : +1.87 dB	Limit: ≤ 16.8 dBm Margin: -33.7 dB

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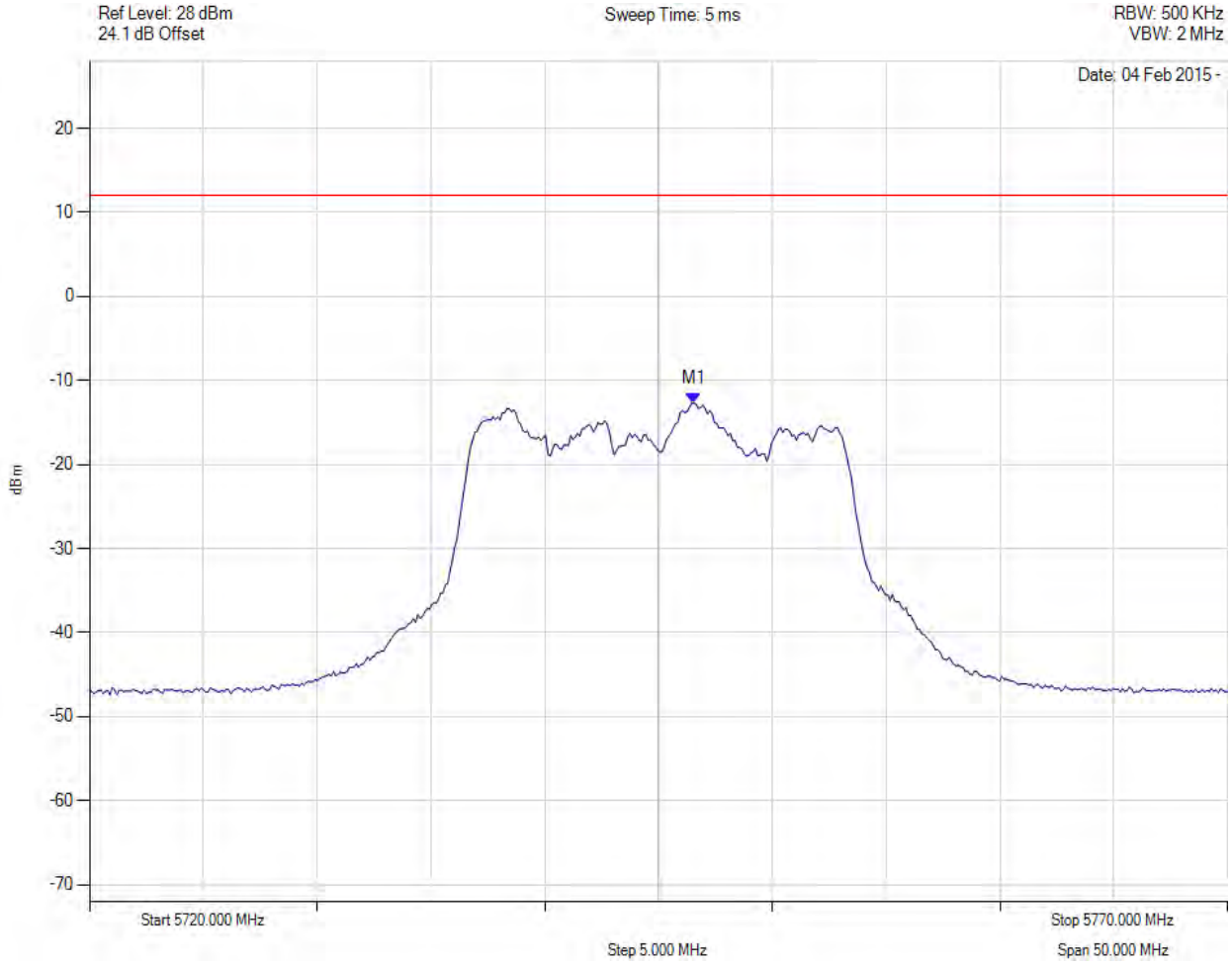
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5746.553 MHz : -12.676 dBm	Limit: ≤ 12.030 dBm

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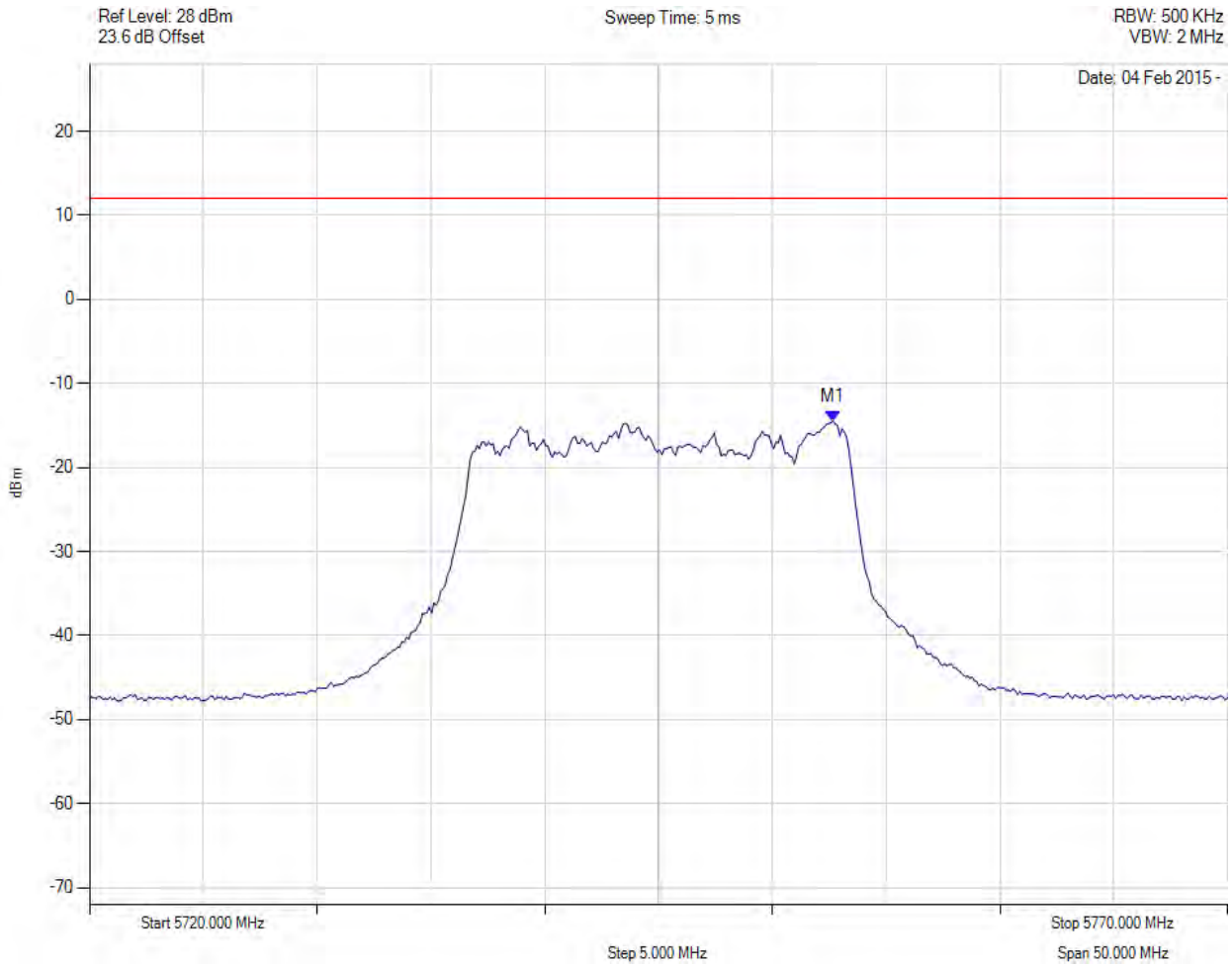
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5752.665 MHz : -14.493 dBm	Limit: ≤ 12.030 dBm

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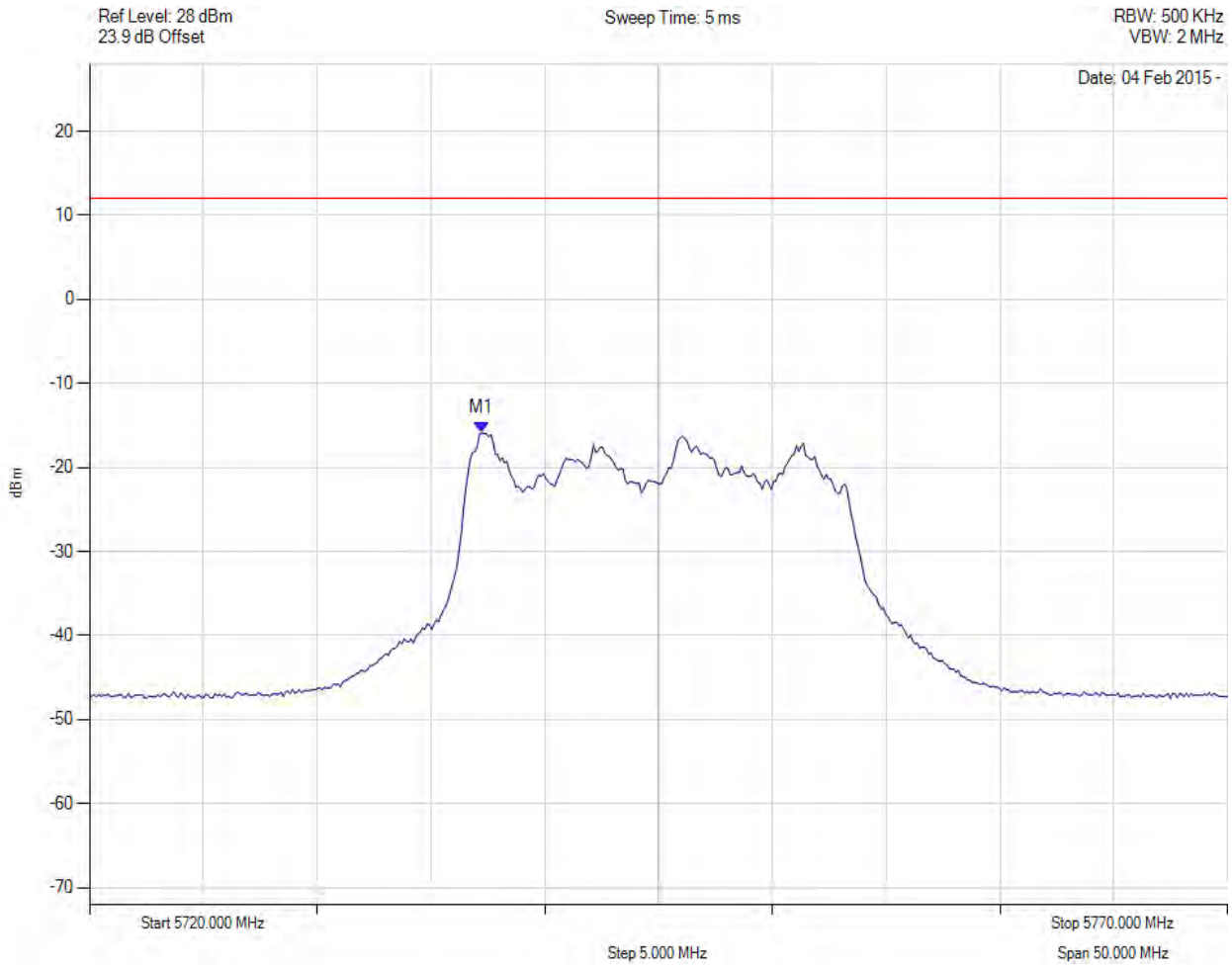
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5737.234 MHz : -15.872 dBm	Limit: ≤ 12.030 dBm

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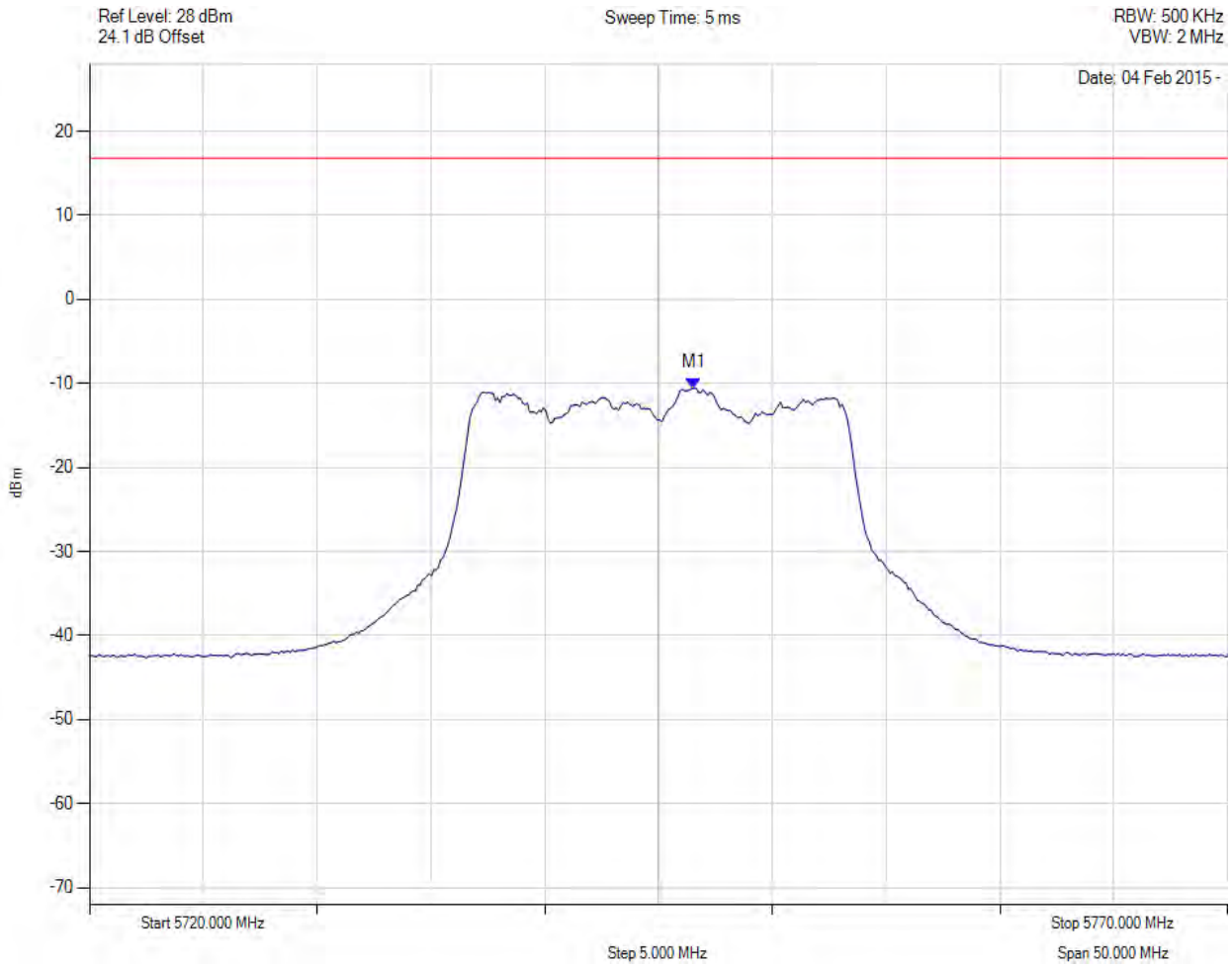
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5745.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5746.600 MHz : -10.546 dBm M1 + DCCF : 5746.600 MHz : -9.179 dBm Duty Cycle Correction Factor : +1.37 dB	Limit: ≤ 16.8 dBm Margin: -26.0 dB

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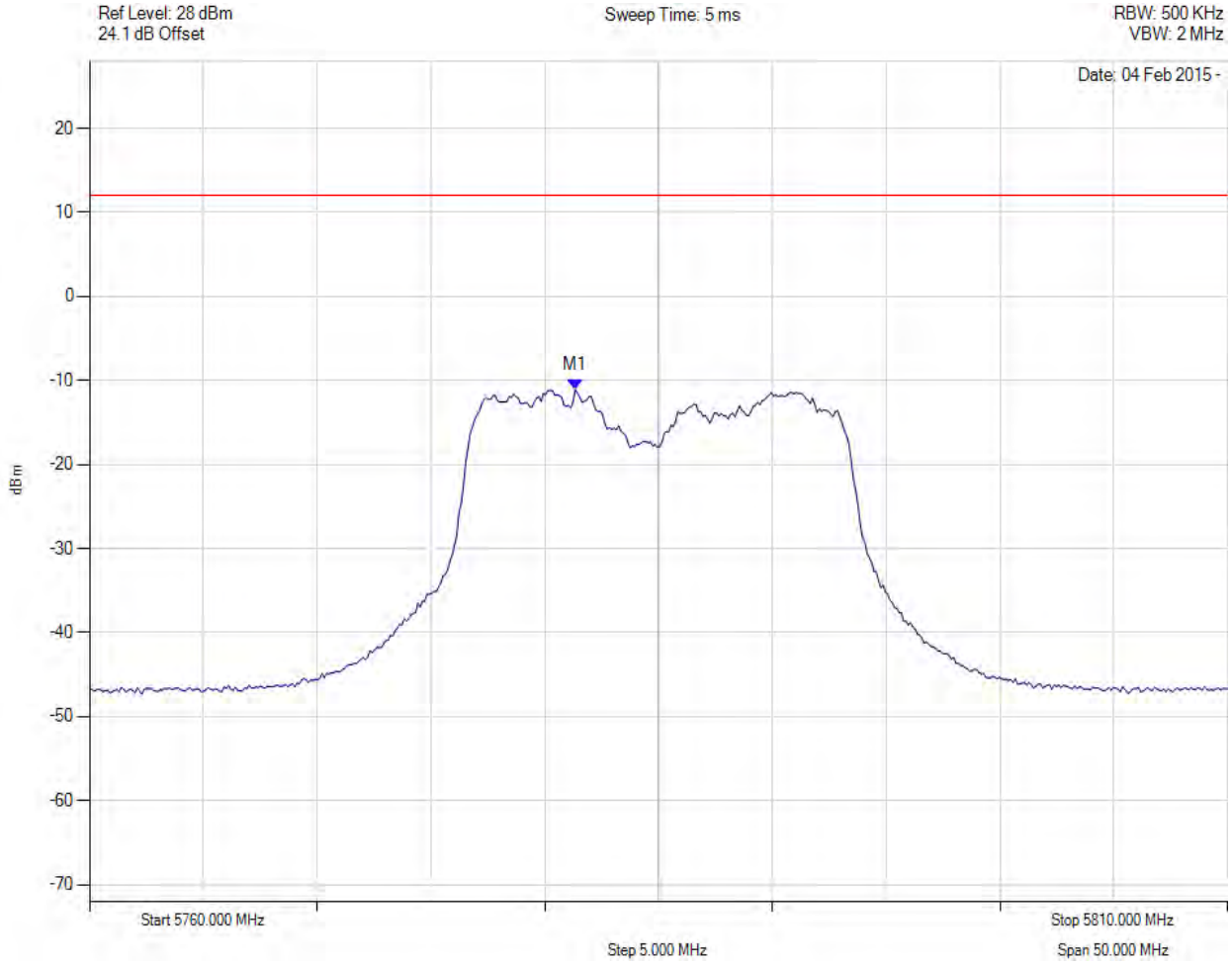
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5781.343 MHz : -11.117 dBm	Limit: ≤ 12.030 dBm

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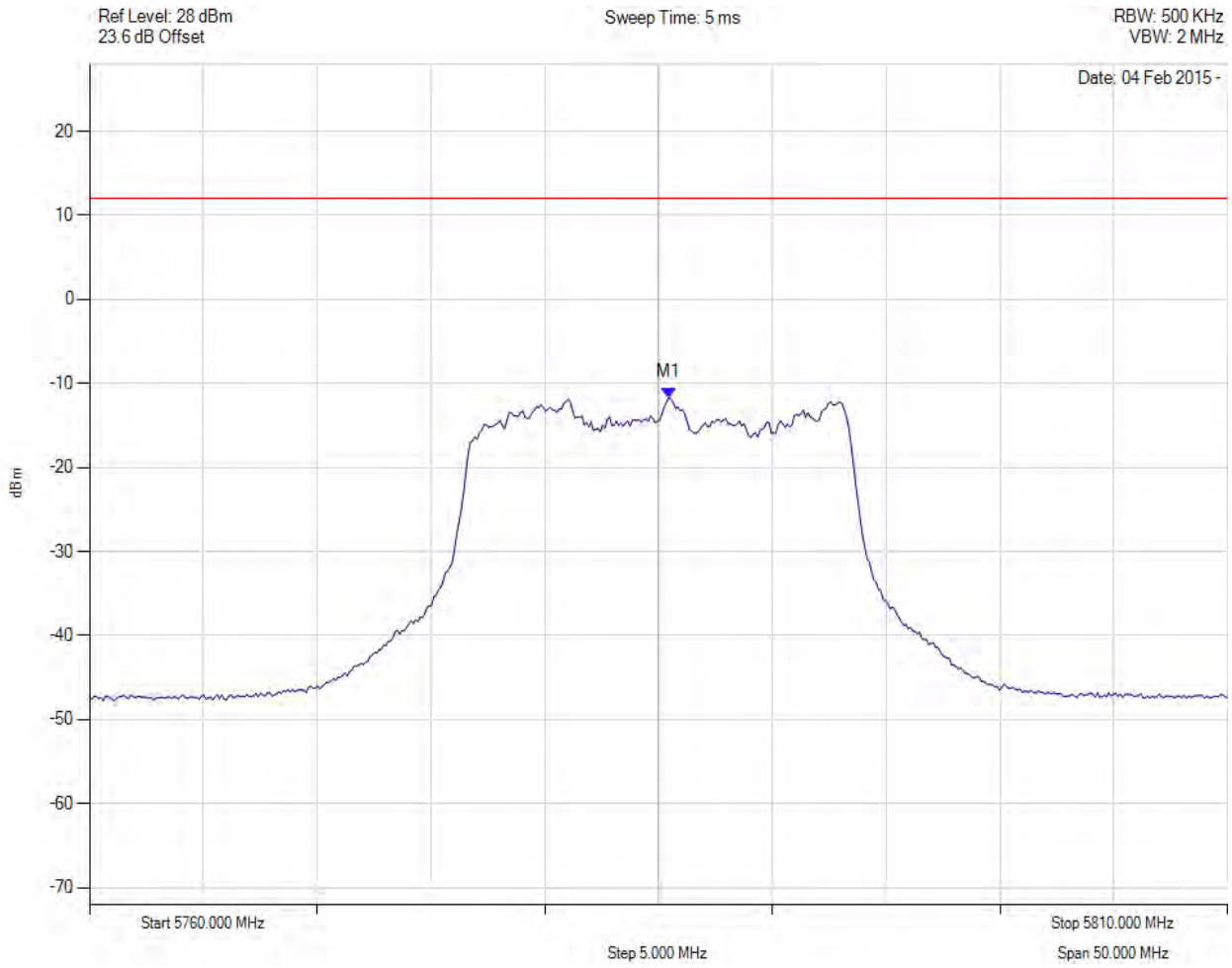
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5785.451 MHz : -11.675 dBm	Channel Frequency: 5785.00 MHz

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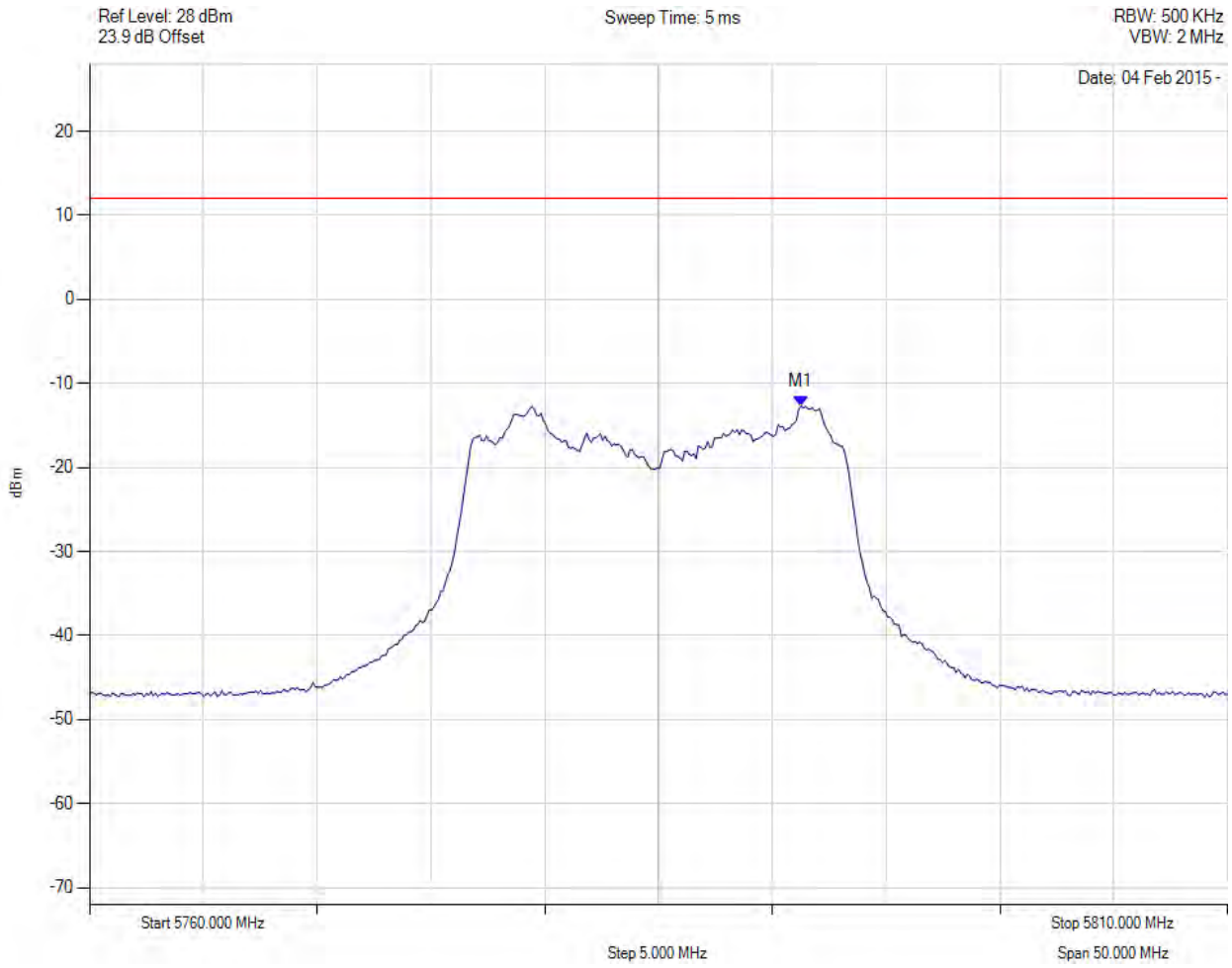
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5791.263 MHz : -12.682 dBm	Limit: ≤ 12.030 dBm

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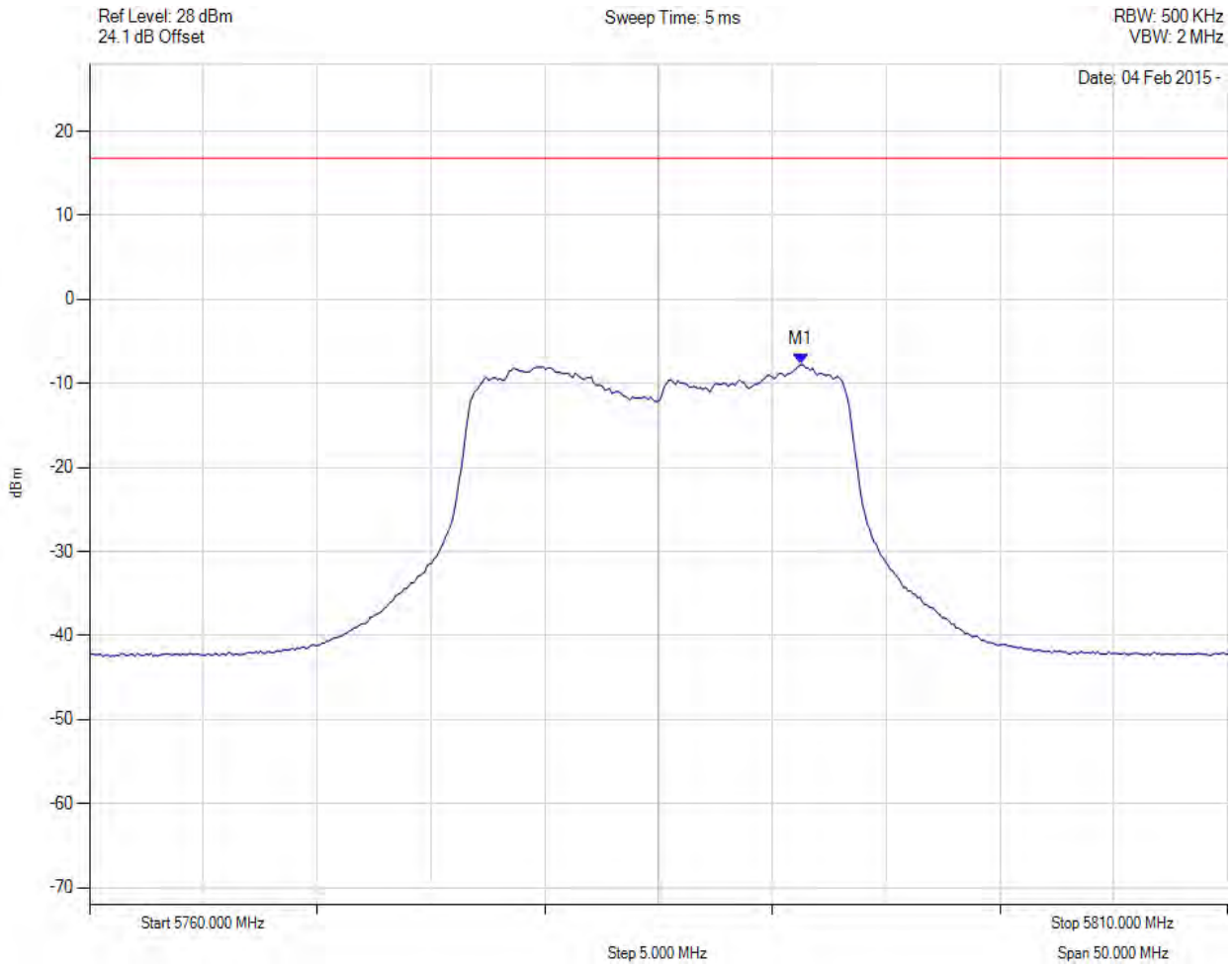
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5785.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5791.300 MHz : -7.750 dBm M1 + DCCF : 5791.300 MHz : -6.383 dBm Duty Cycle Correction Factor : +1.37 dB	Limit: ≤ 16.8 dBm Margin: -23.2 dB

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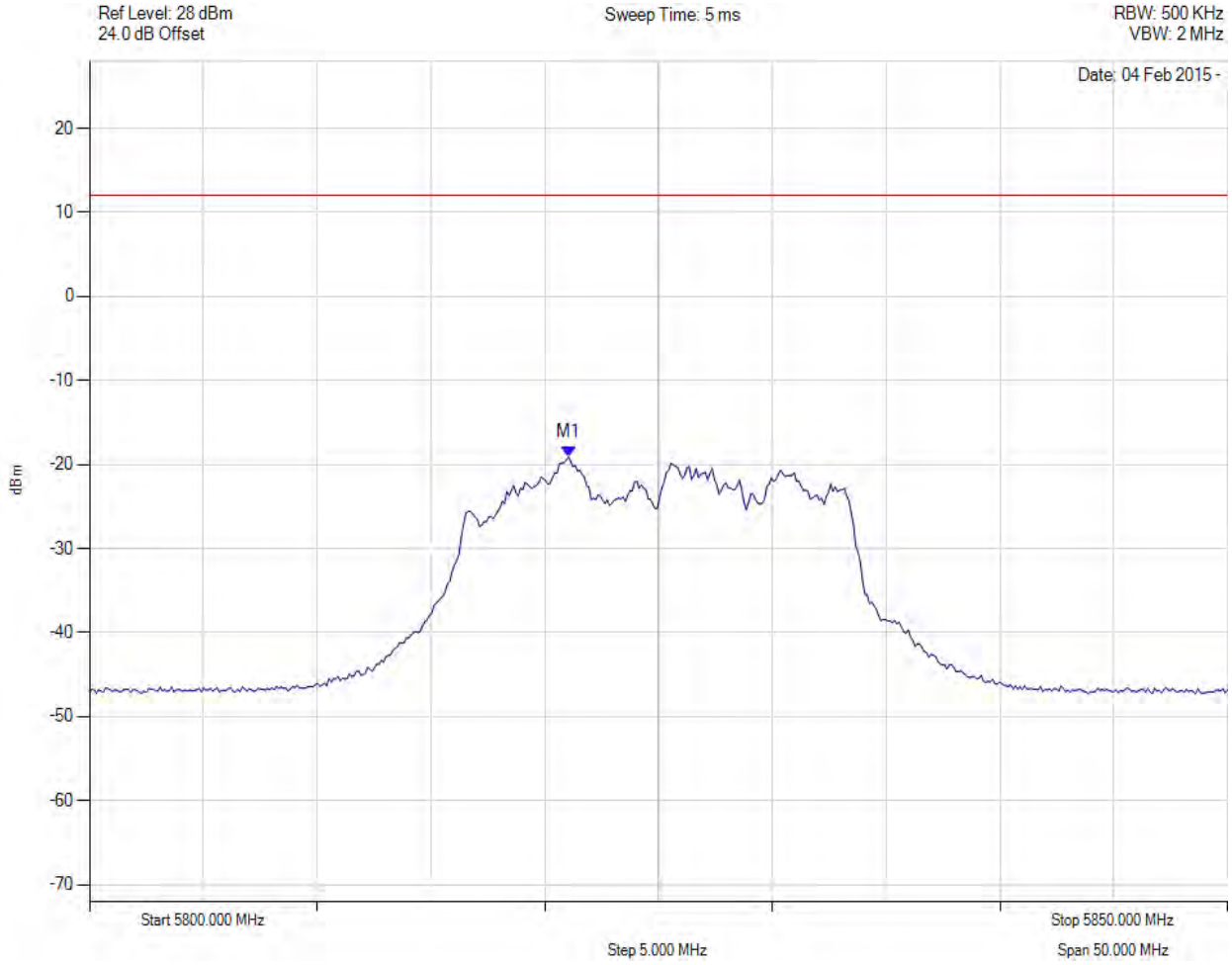
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5821.042 MHz : -19.099 dBm	Limit: ≤ 12.030 dBm

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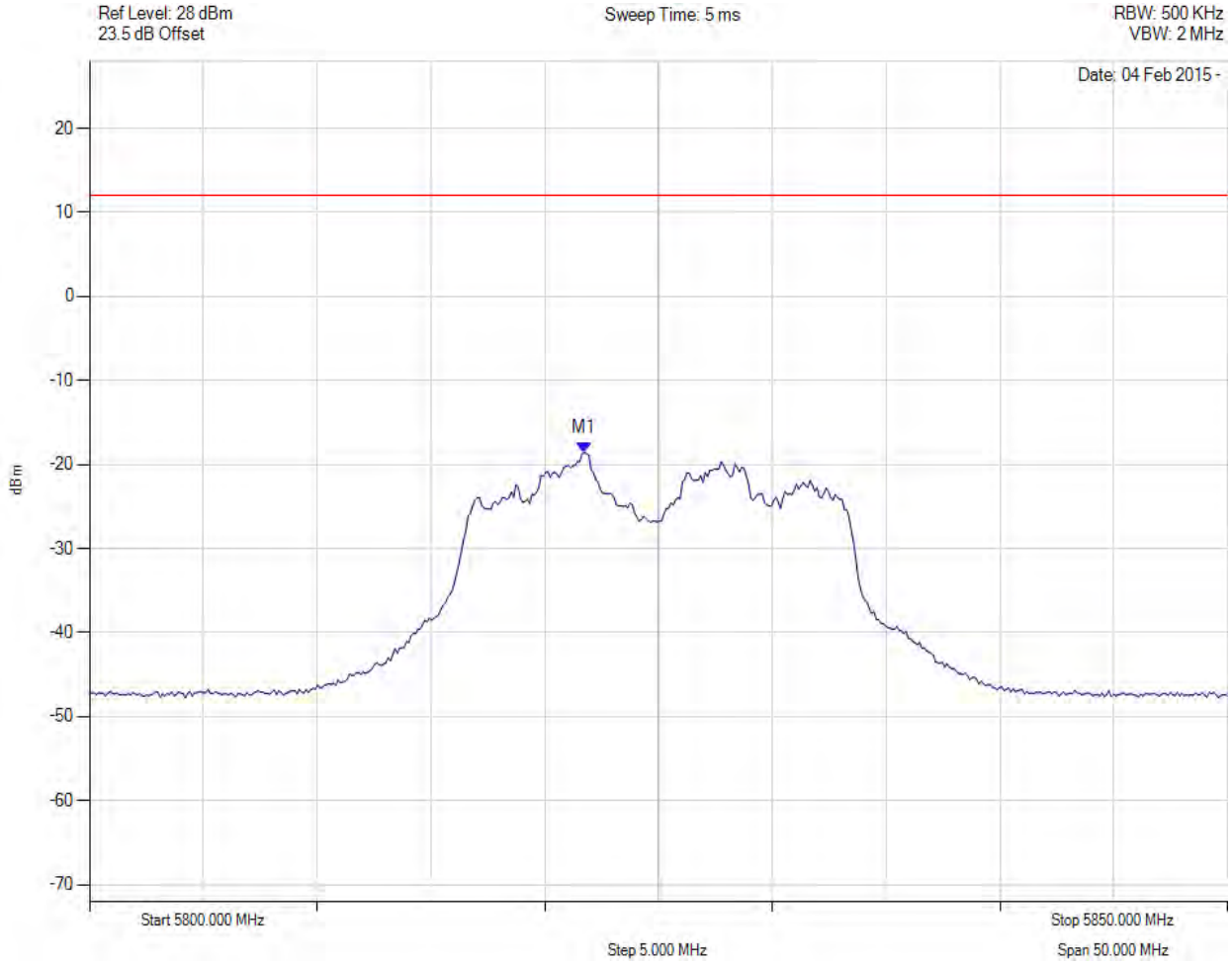
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5821.743 MHz : -18.601 dBm	Limit: ≤ 12.030 dBm

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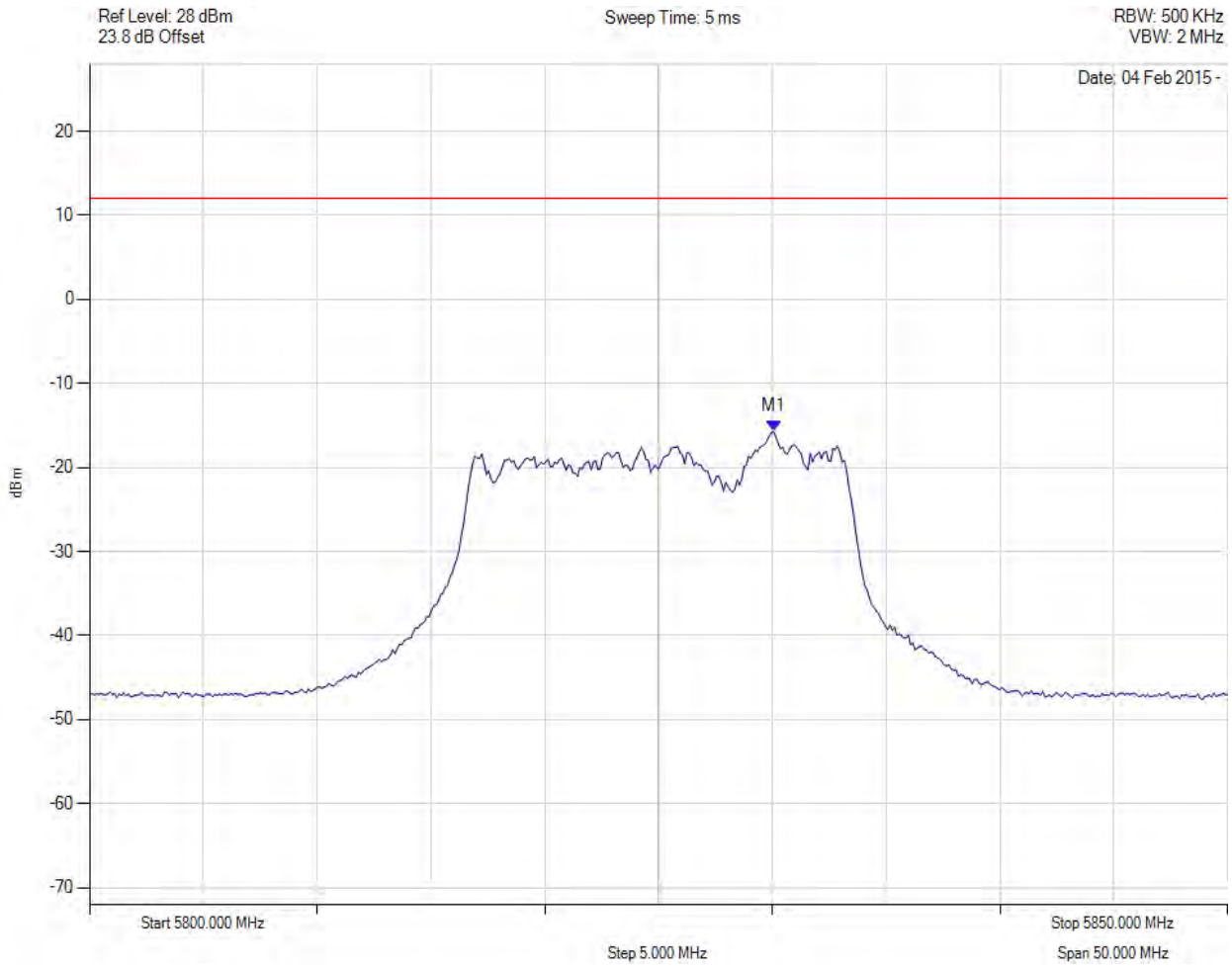
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5830.060 MHz : -15.718 dBm	Limit: ≤ 12.030 dBm

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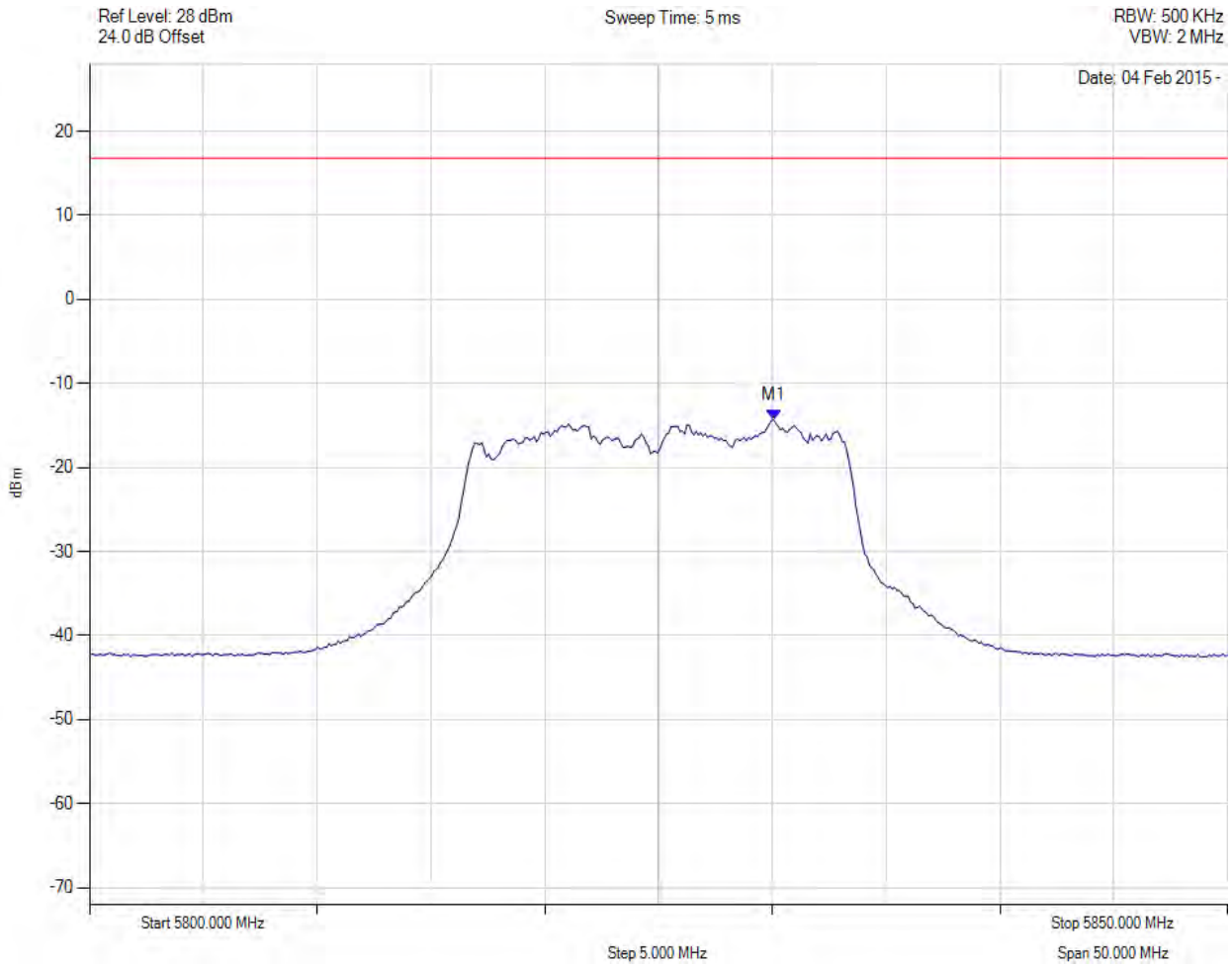
POWER SPECTRAL DENSITY

Variant: 802.11a, Channel: 5825.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5830.100 MHz : -14.336 dBm M1 + DCCF : 5830.100 MHz : -12.969 dBm Duty Cycle Correction Factor : +1.37 dB	Limit: ≤ 16.8 dBm Margin: -29.7 dB

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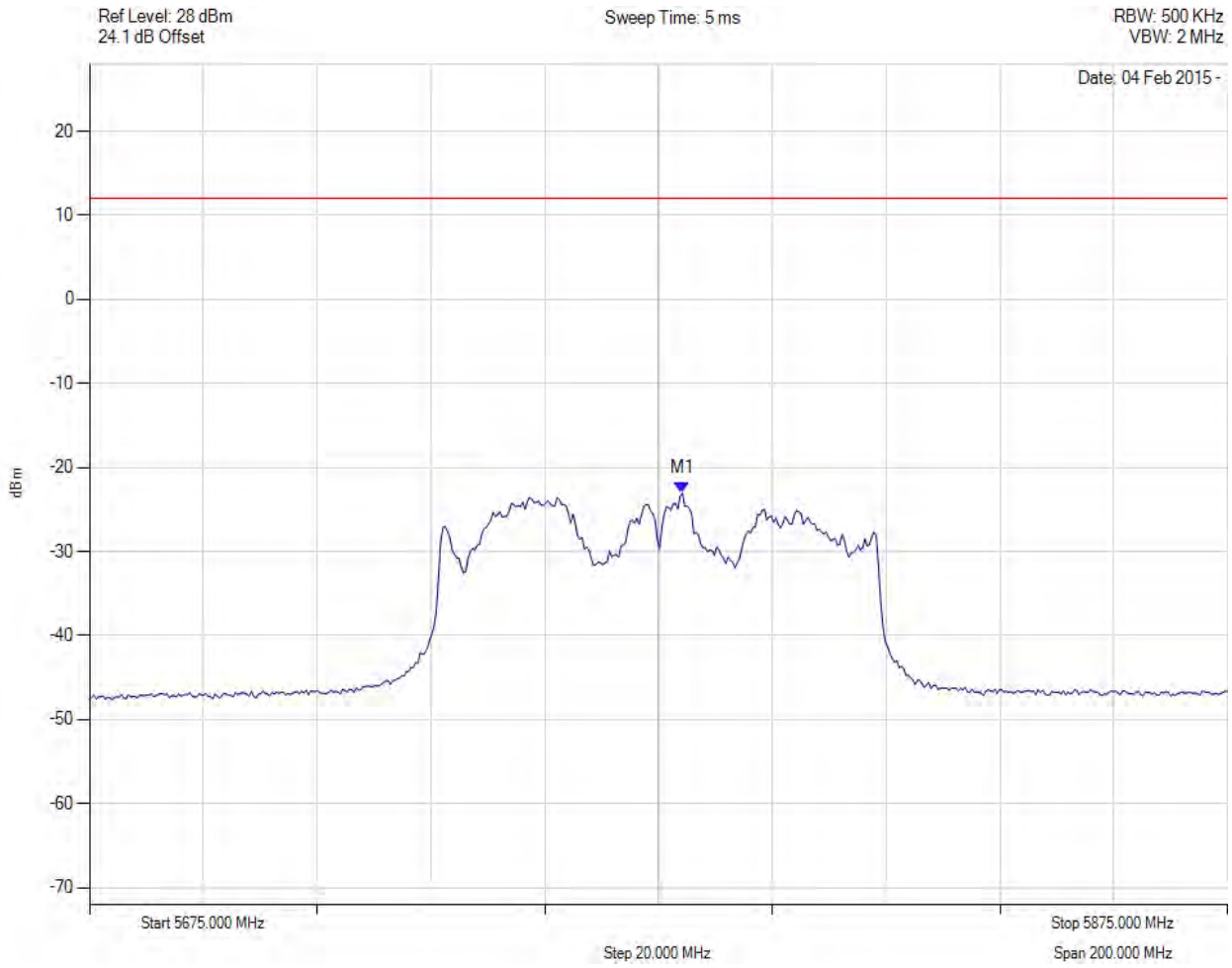
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5779.208 MHz : -23.066 dBm	Channel Frequency: 5775.00 MHz

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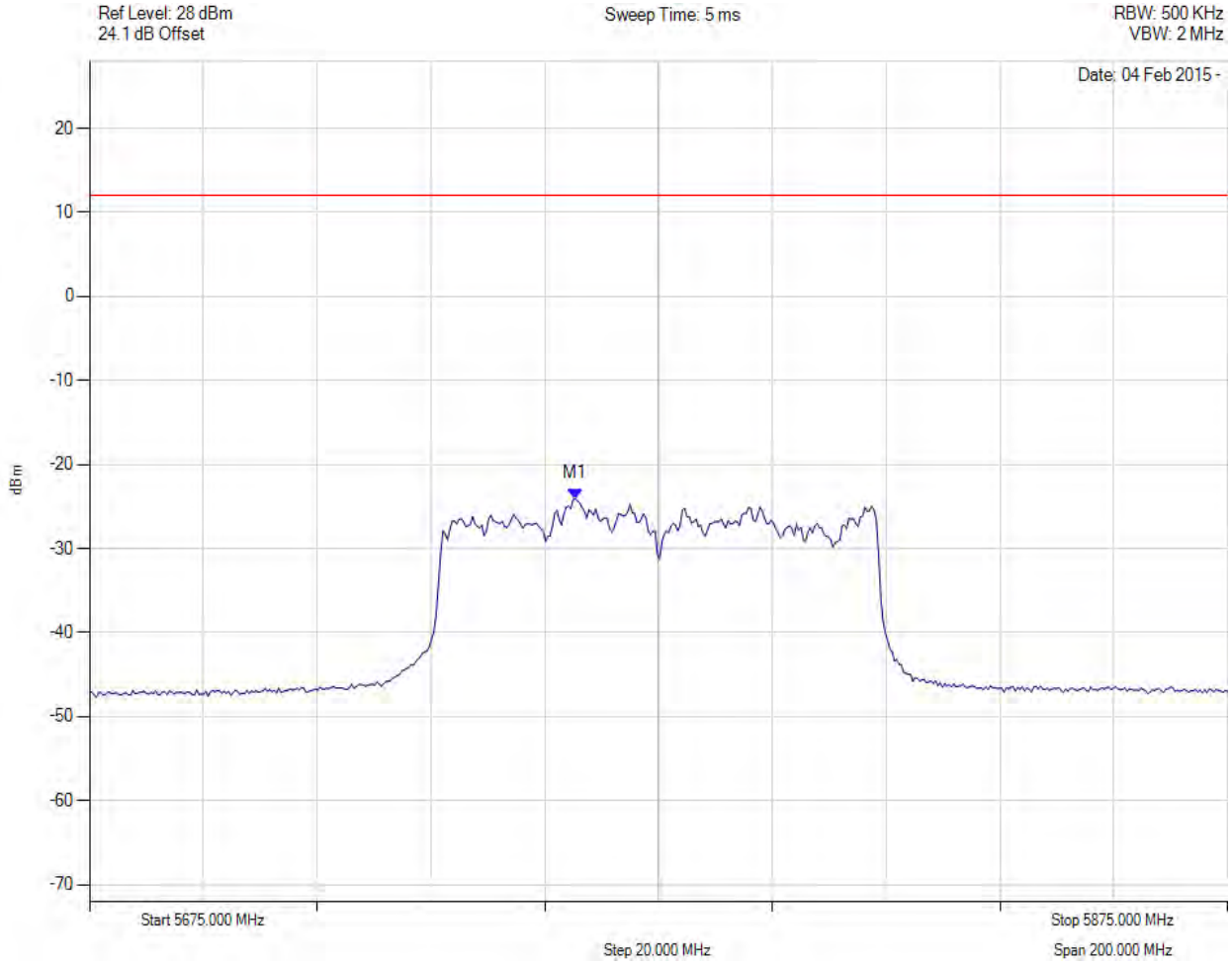
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5760.371 MHz : -24.055 dBm	Limit: ≤ 12.030 dBm

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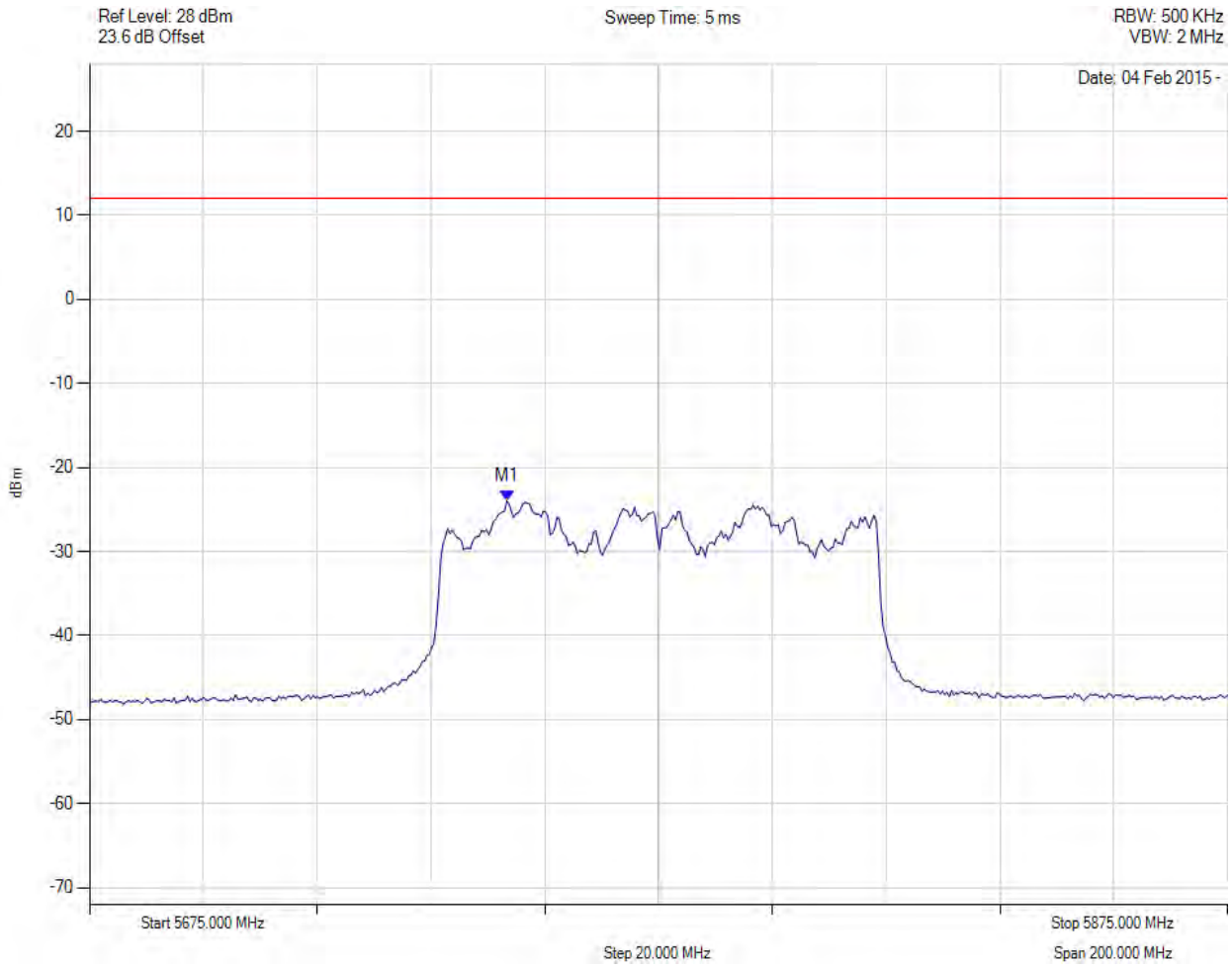
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5748.347 MHz : -24.002 dBm	Channel Frequency: 5775.00 MHz

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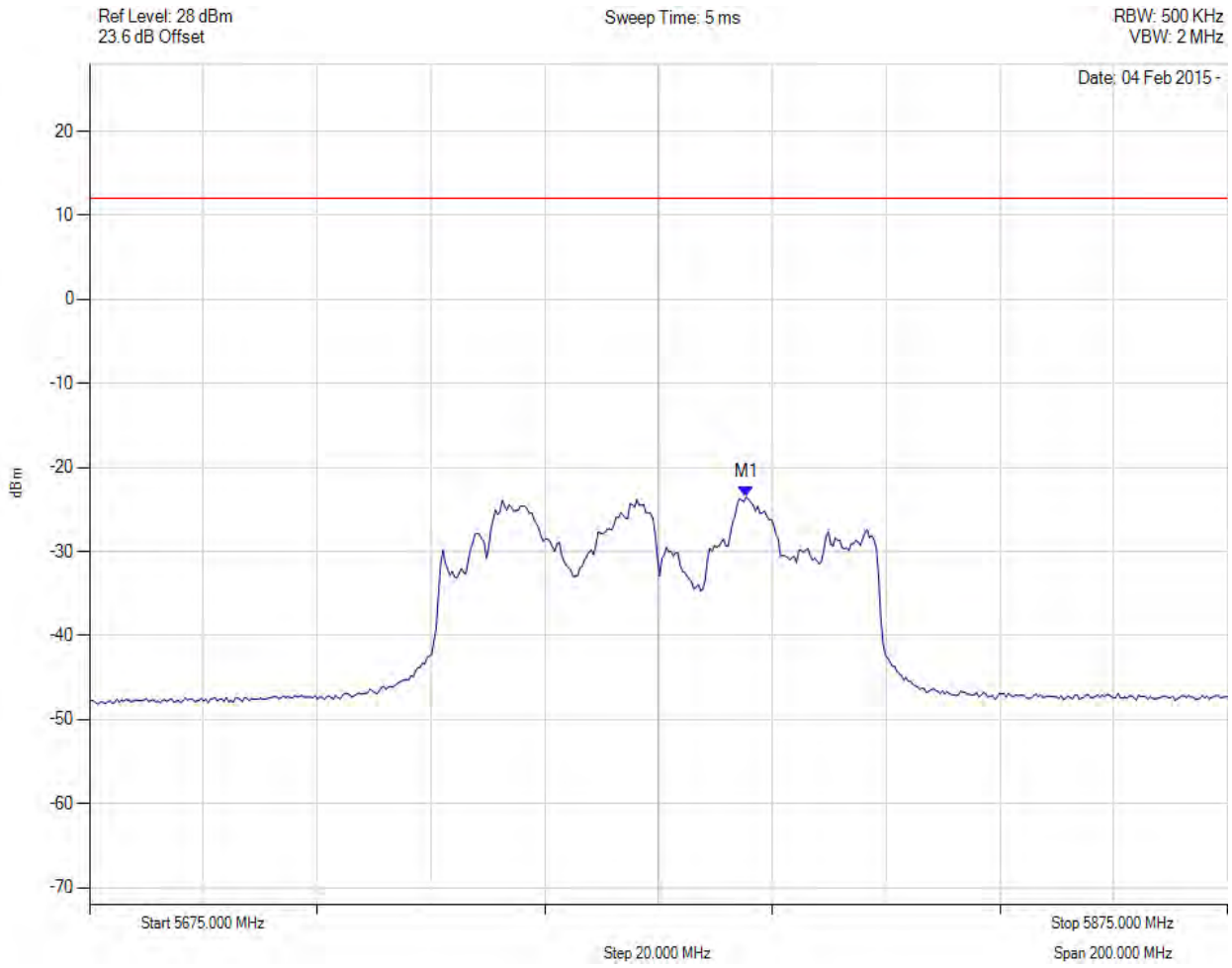
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5790.431 MHz : -23.542 dBm	Limit: ≤ 12.030 dBm

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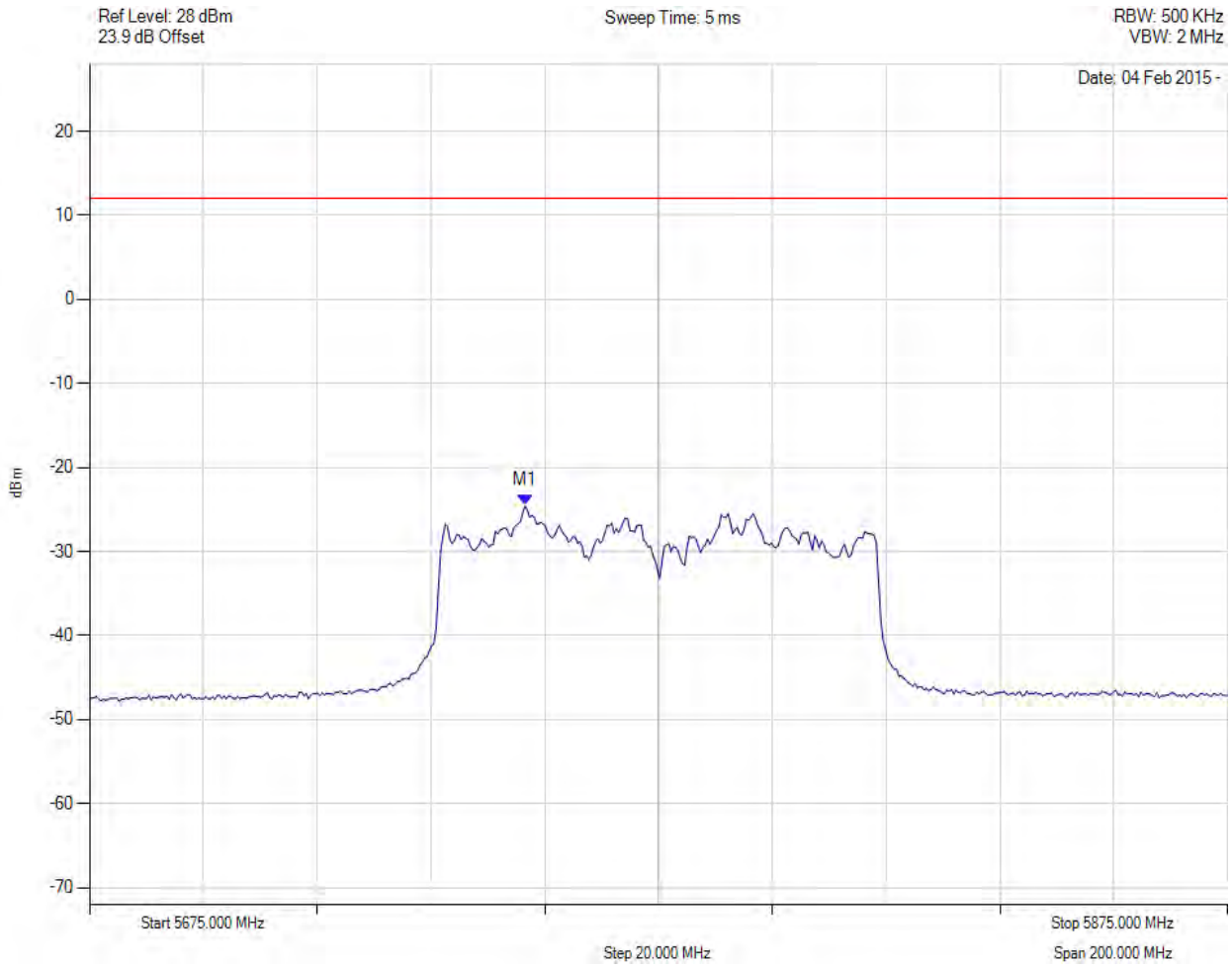
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5751.553 MHz : -24.532 dBm	Channel Frequency: 5775.00 MHz

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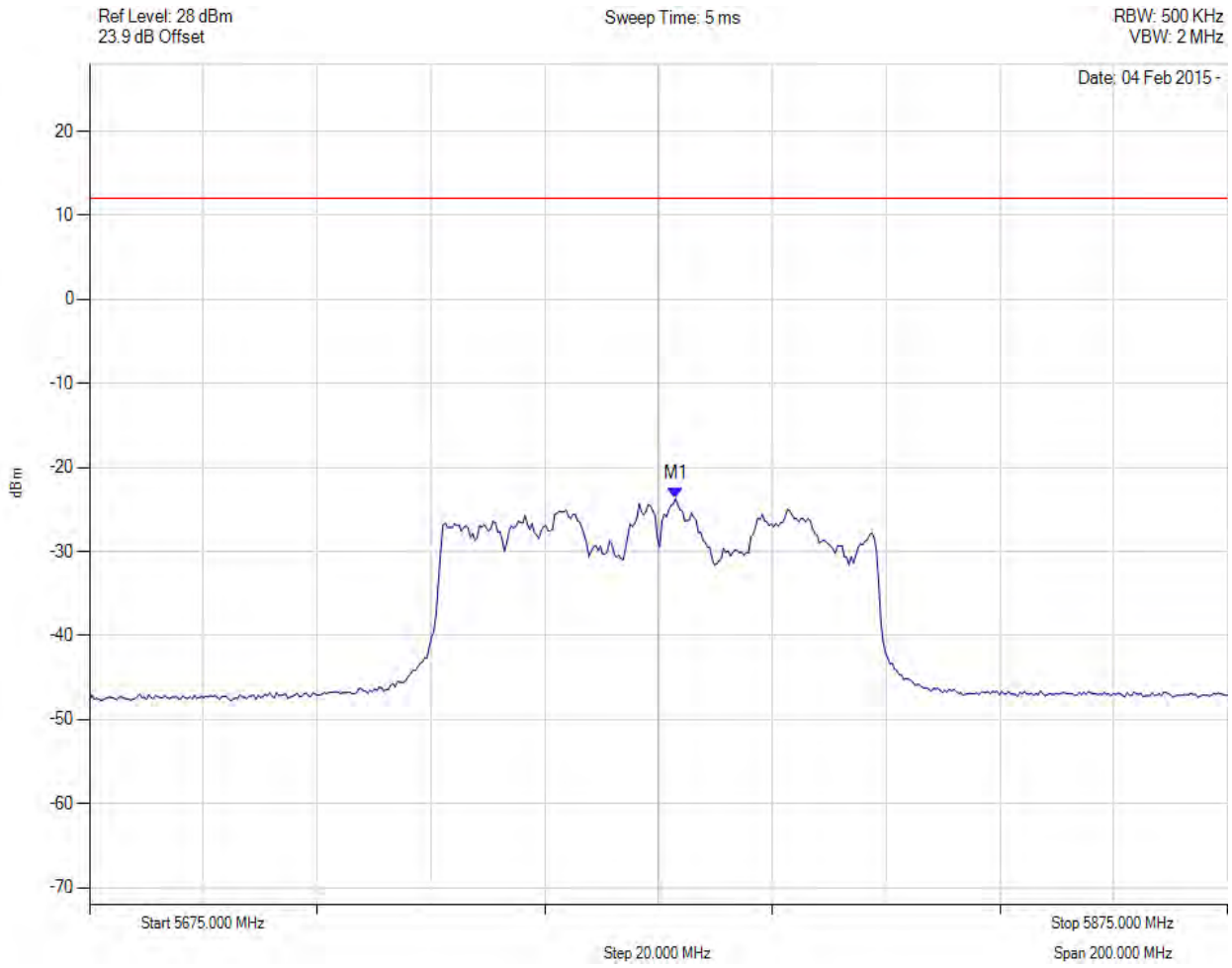
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5778.006 MHz : -23.680 dBm	Limit: ≤ 12.030 dBm

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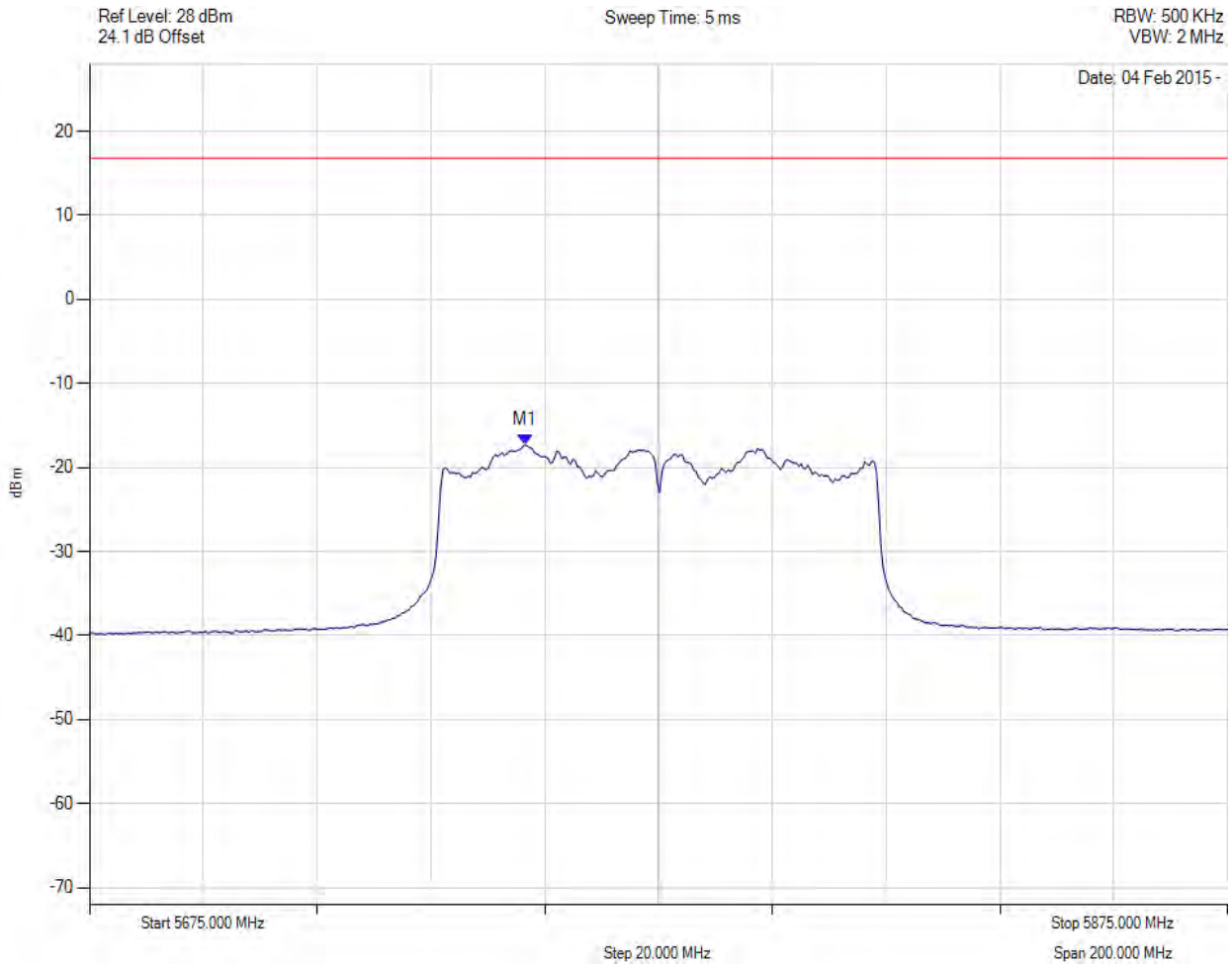
POWER SPECTRAL DENSITY

Variant: 802.11ac-80, Channel: 5775.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5751.600 MHz : -17.306 dBm M1 + DCCF : 5751.600 MHz : -15.088 dBm Duty Cycle Correction Factor : +2.22 dB	Limit: ≤ 16.8 dBm Margin: -31.9 dB

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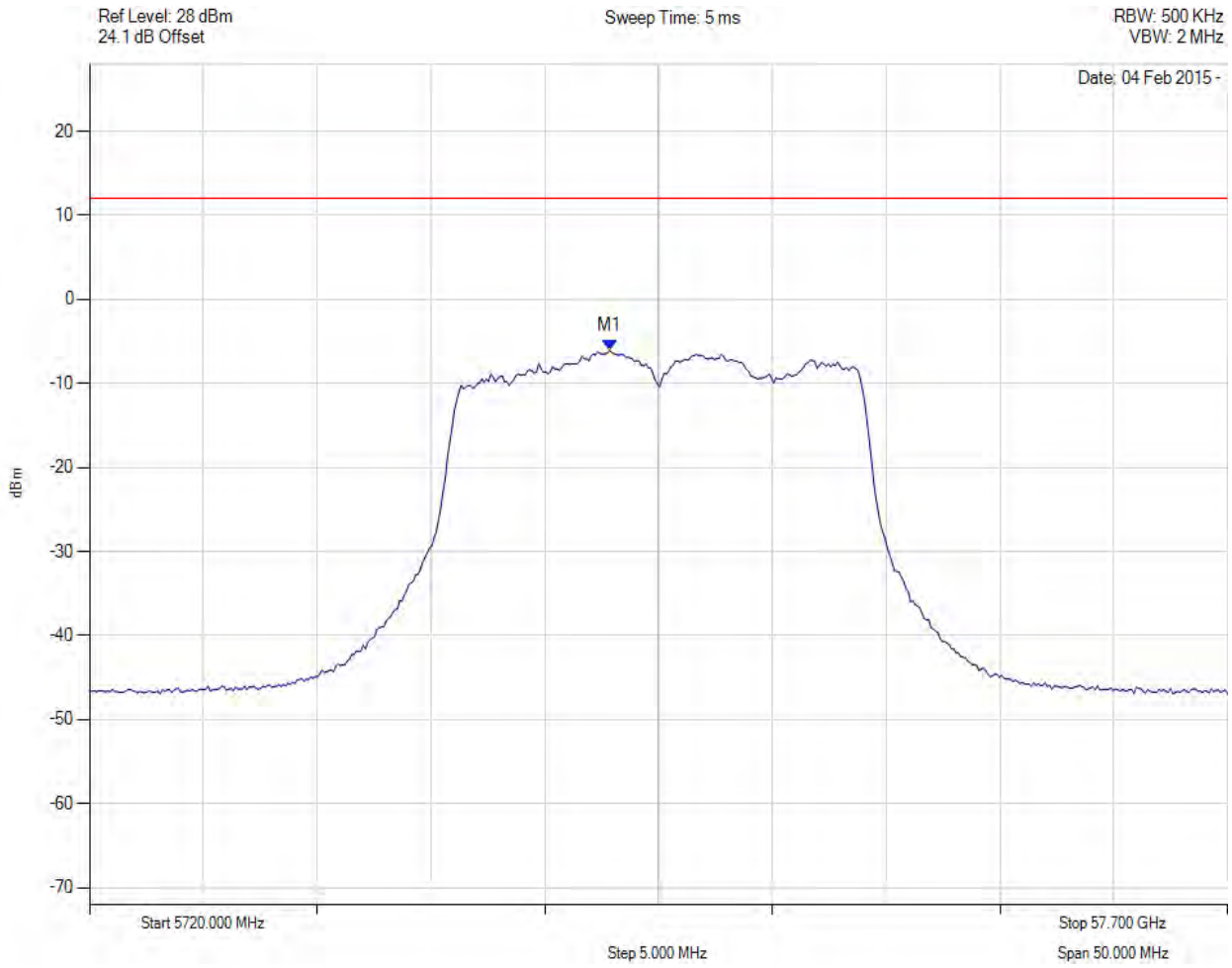
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5742.846 MHz : -6.054 dBm	Limit: ≤ 12.030 dBm

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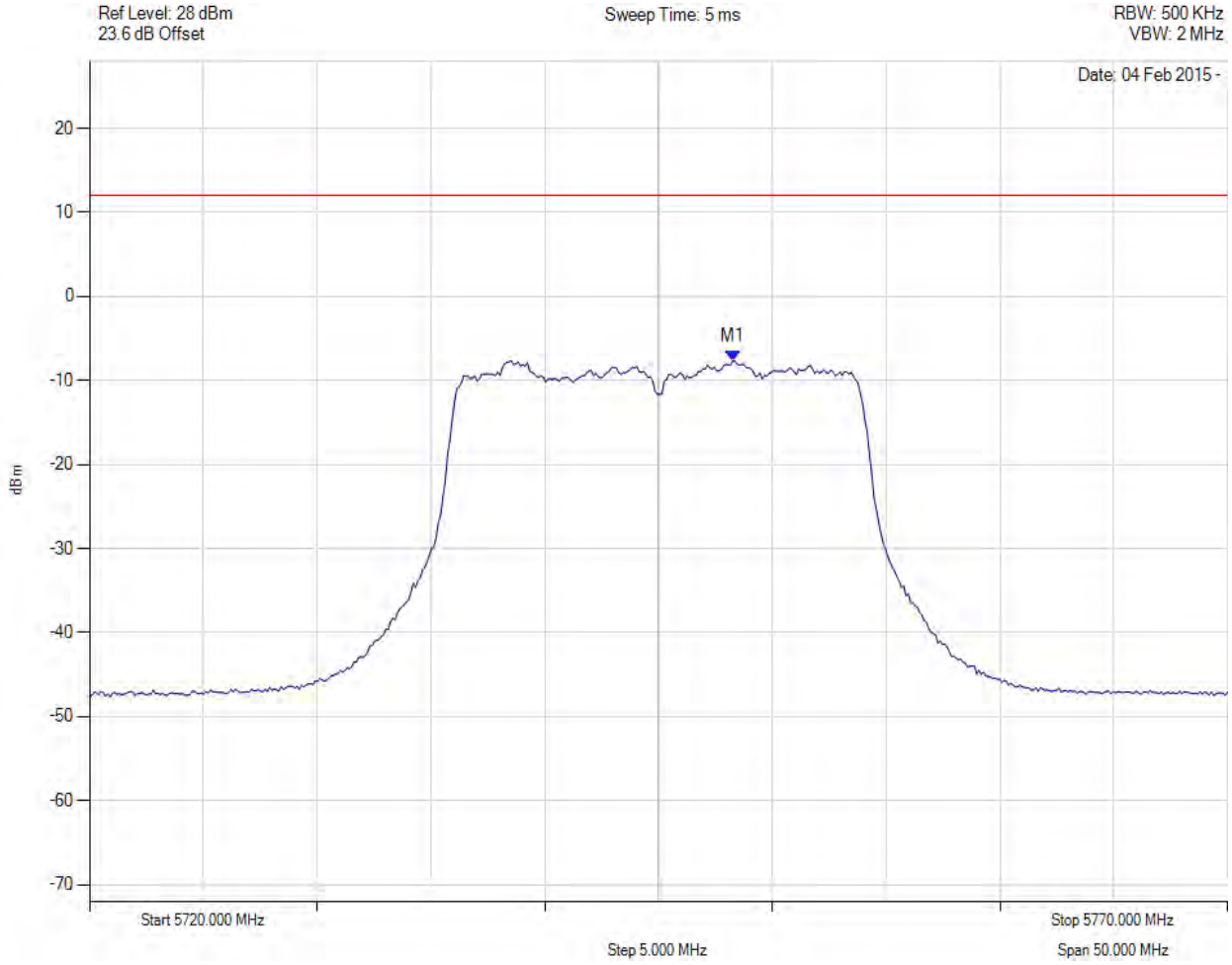
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5748.257 MHz : -7.657 dBm	Limit: ≤ 12.030 dBm

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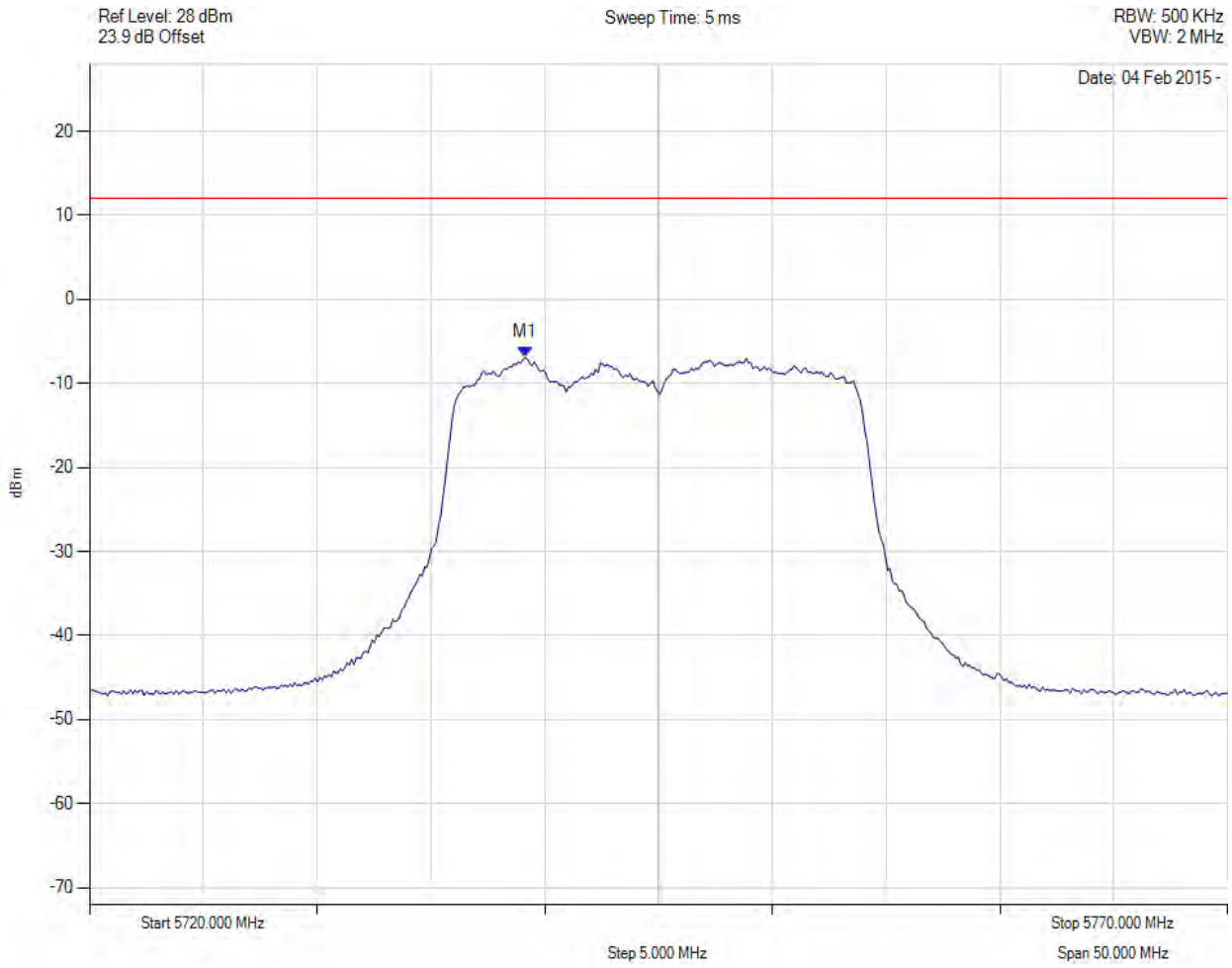
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5739.138 MHz : -6.928 dBm	Limit: ≤ 12.030 dBm

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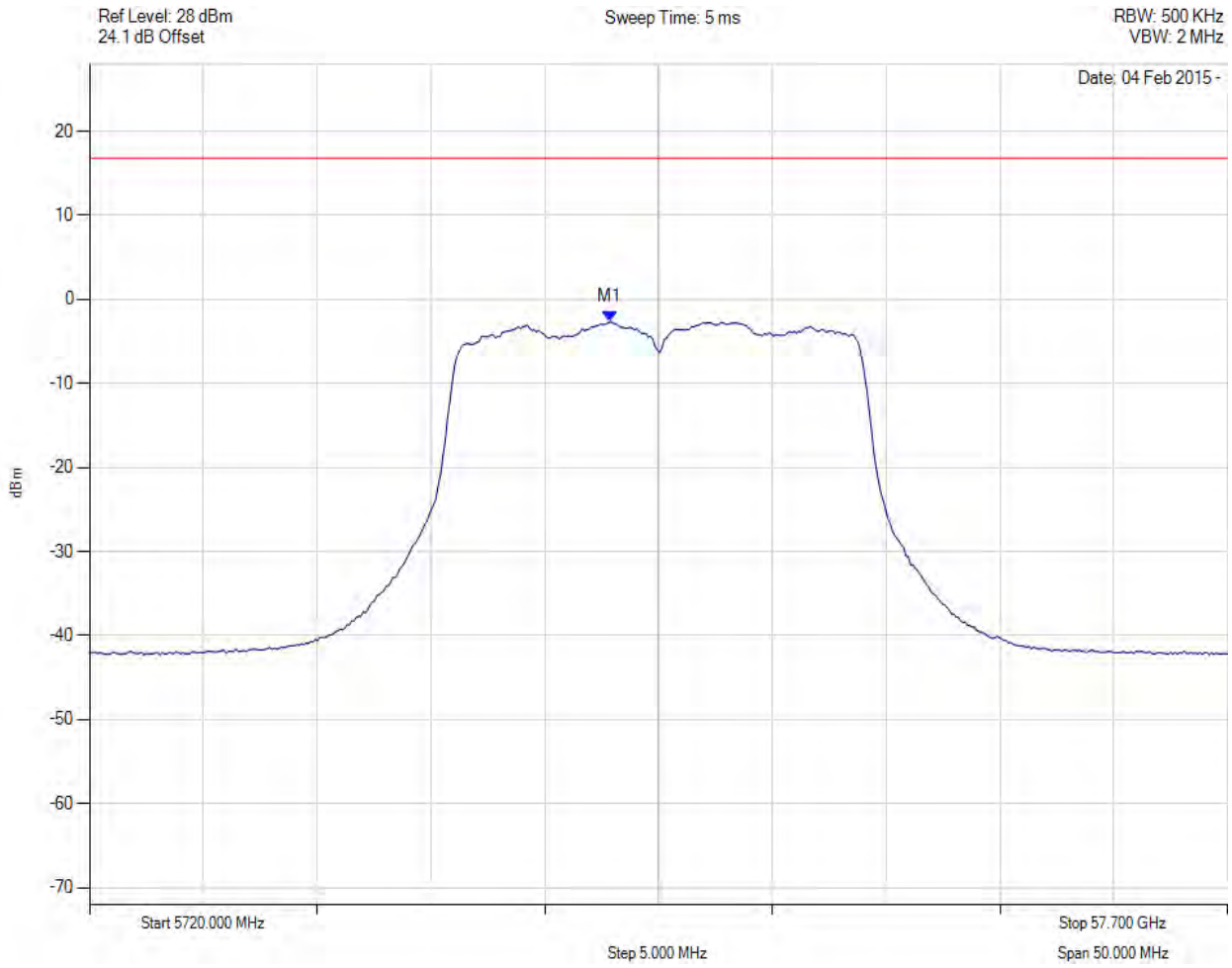
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5745.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5742.800 MHz : -2.679 dBm M1 + DCCF : 5742.800 MHz : -2.502 dBm Duty Cycle Correction Factor : +0.18 dB	Limit: ≤ 16.8 dBm Margin: -19.3 dB

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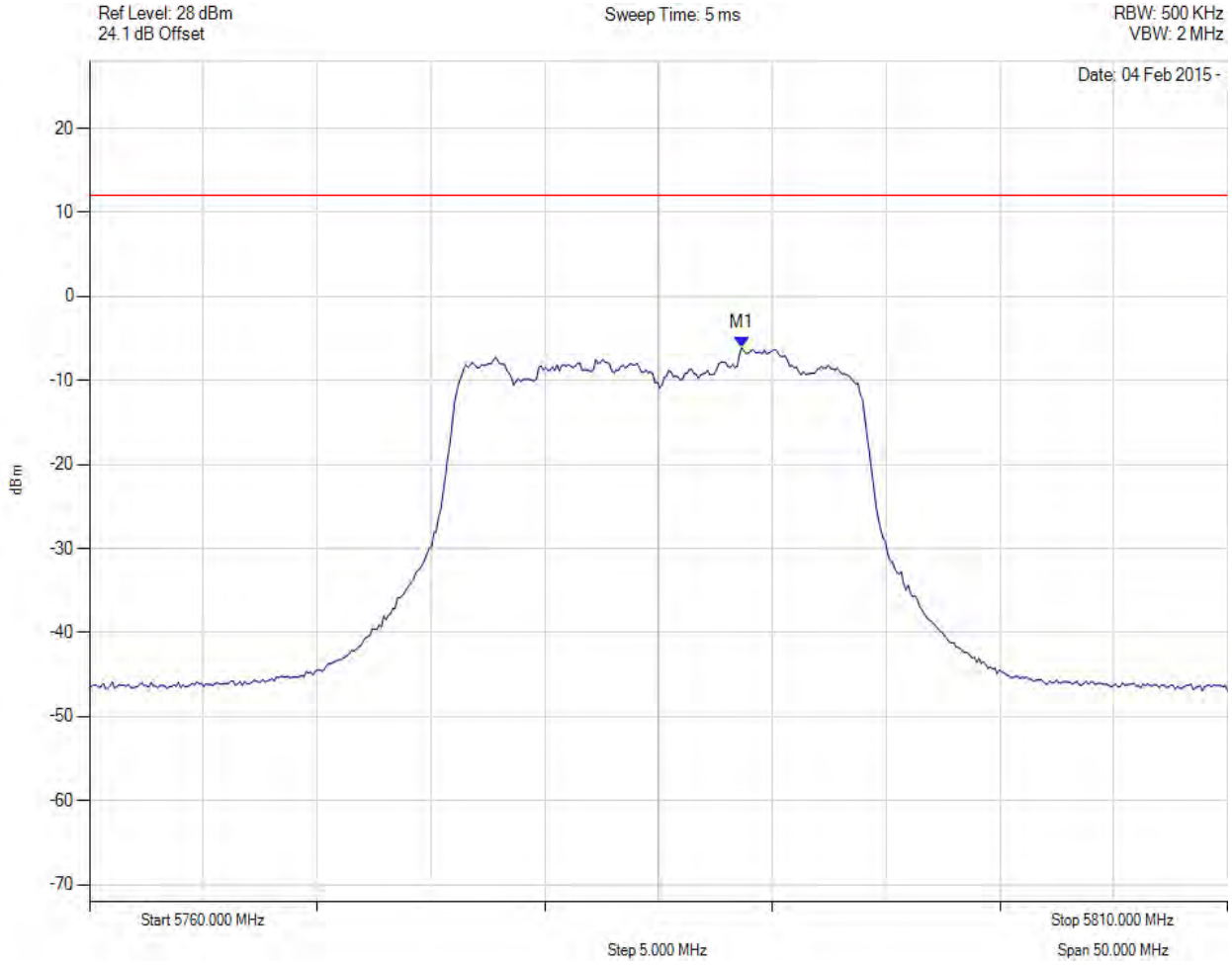
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5788.657 MHz : -6.093 dBm	Limit: ≤ 12.030 dBm

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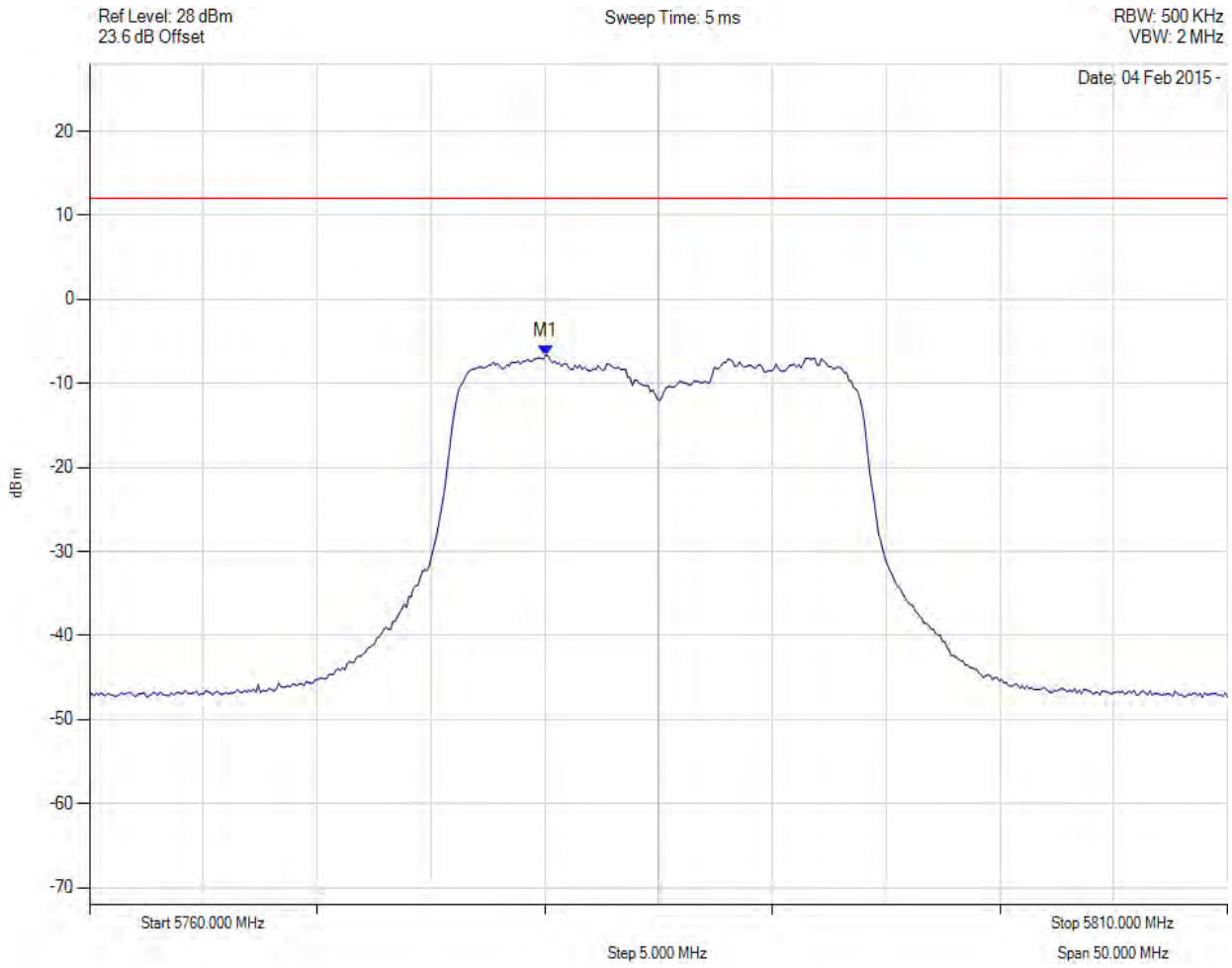
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5780.040 MHz : -6.666 dBm	Channel Frequency: 5785.00 MHz

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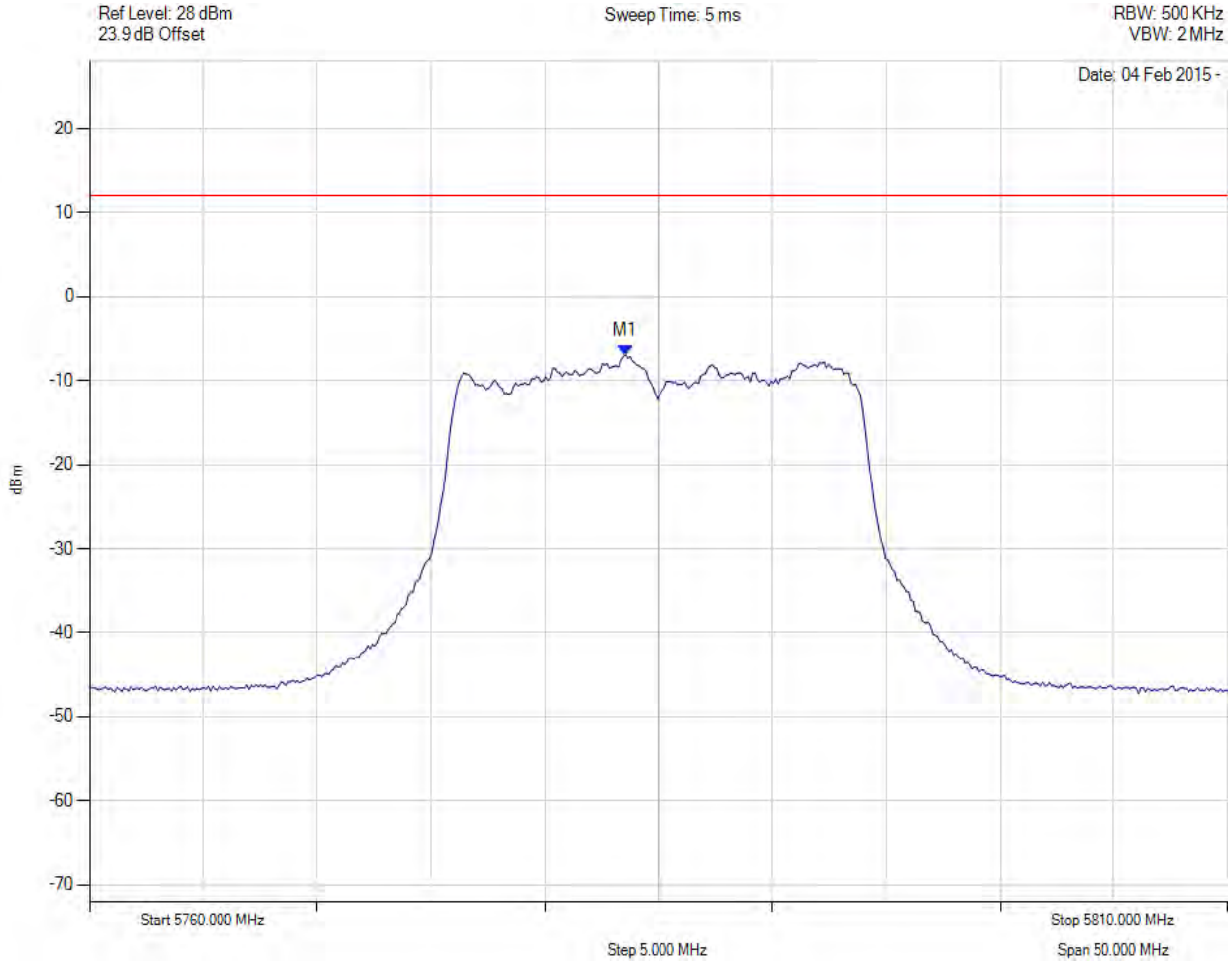
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5783.547 MHz : -6.973 dBm	Limit: ≤ 12.030 dBm

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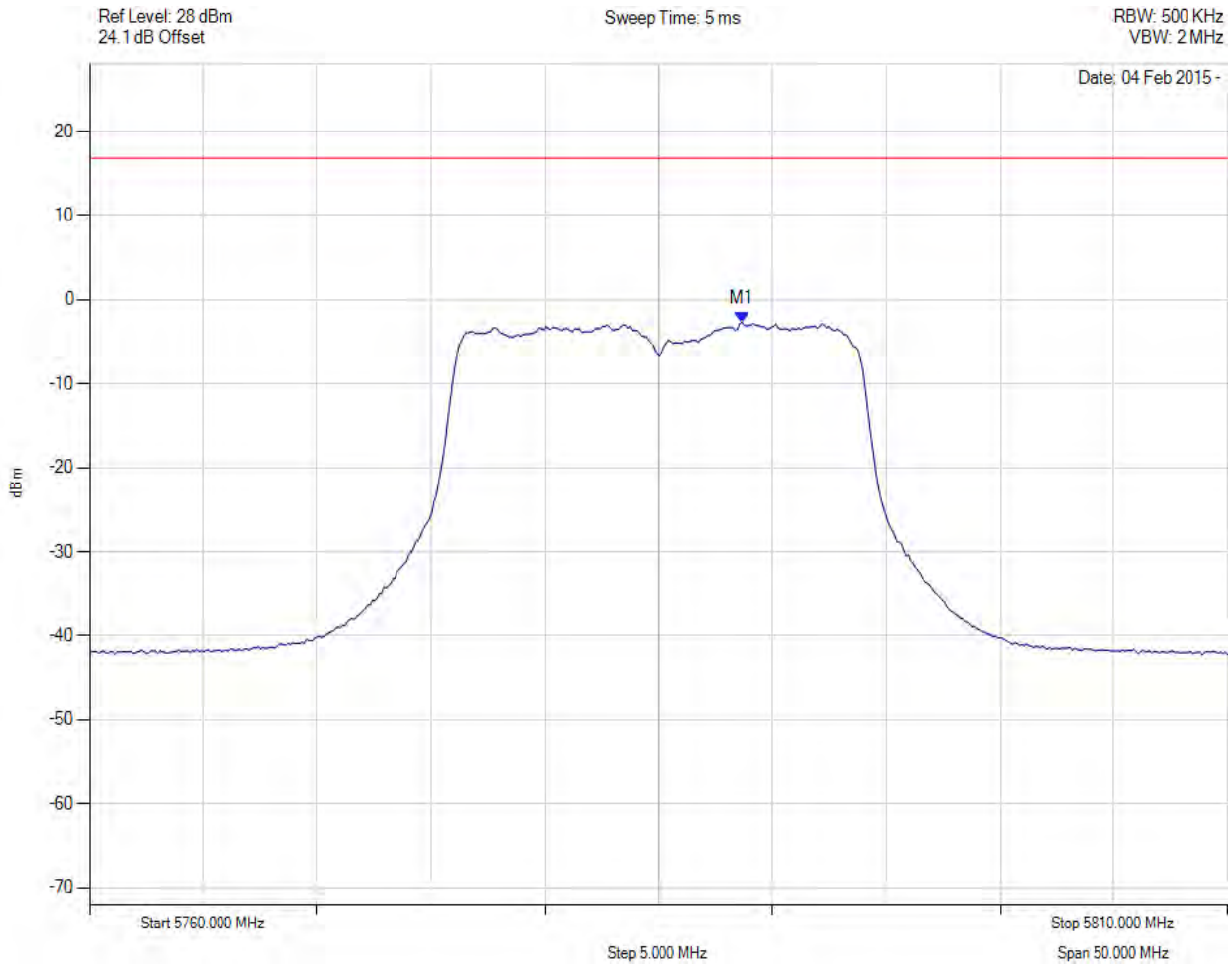
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5785.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5788.700 MHz : -2.753 dBm M1 + DCCF : 5788.700 MHz : -2.576 dBm Duty Cycle Correction Factor : +0.18 dB	Limit: ≤ 16.8 dBm Margin: -19.3 dB

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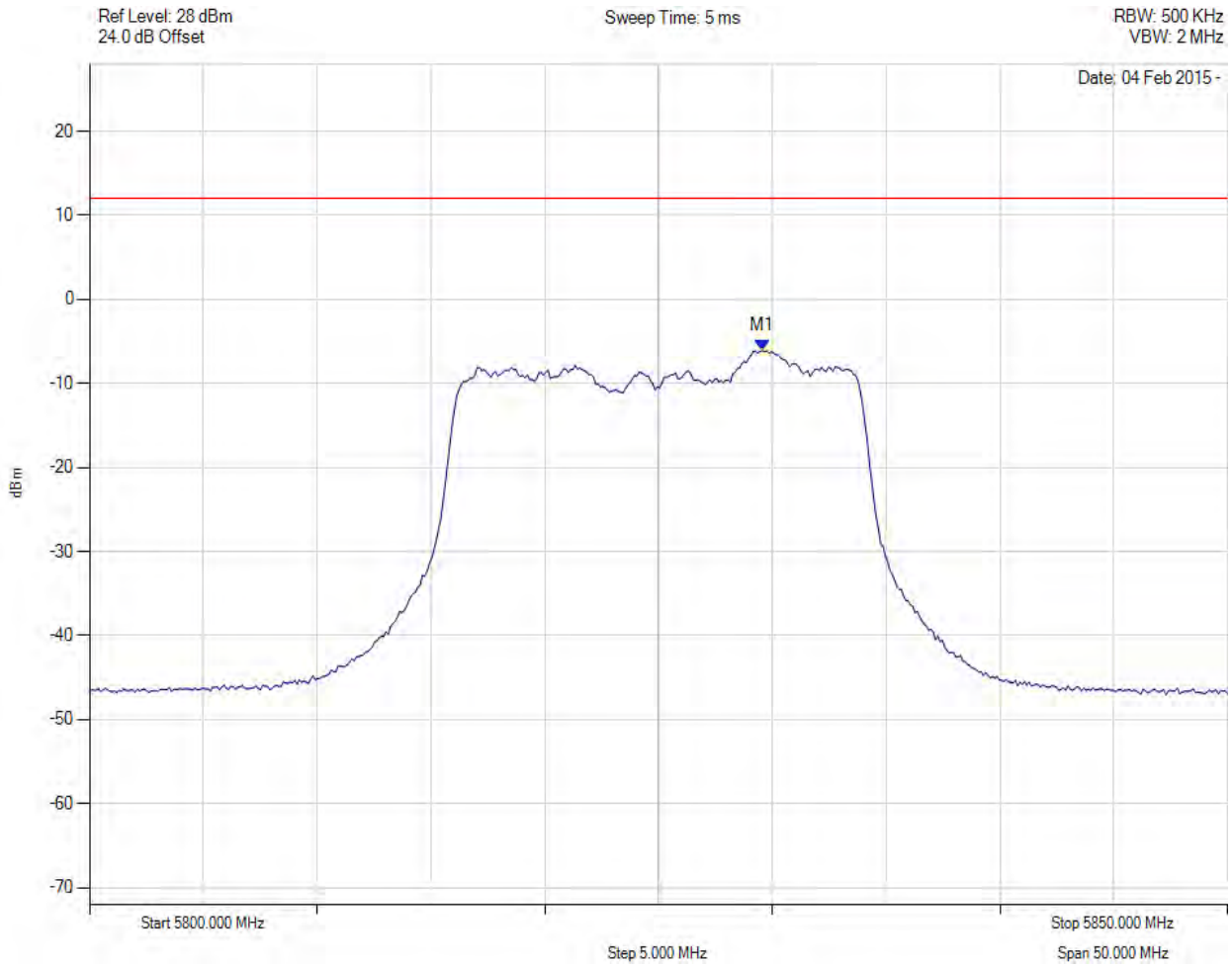
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5829.559 MHz : -6.075 dBm	Limit: ≤ 12.030 dBm

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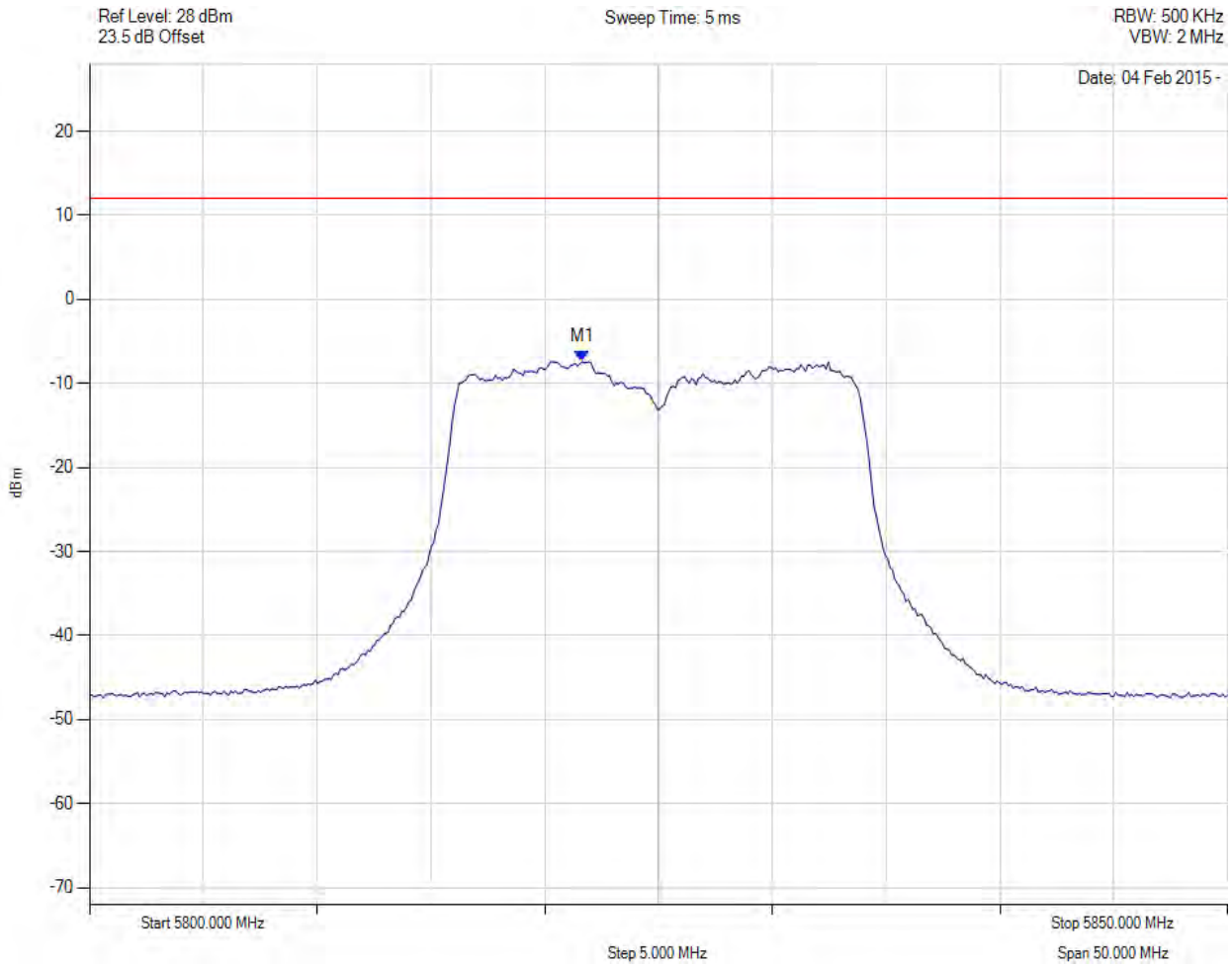
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5821.643 MHz : -7.403 dBm	Limit: ≤ 12.030 dBm

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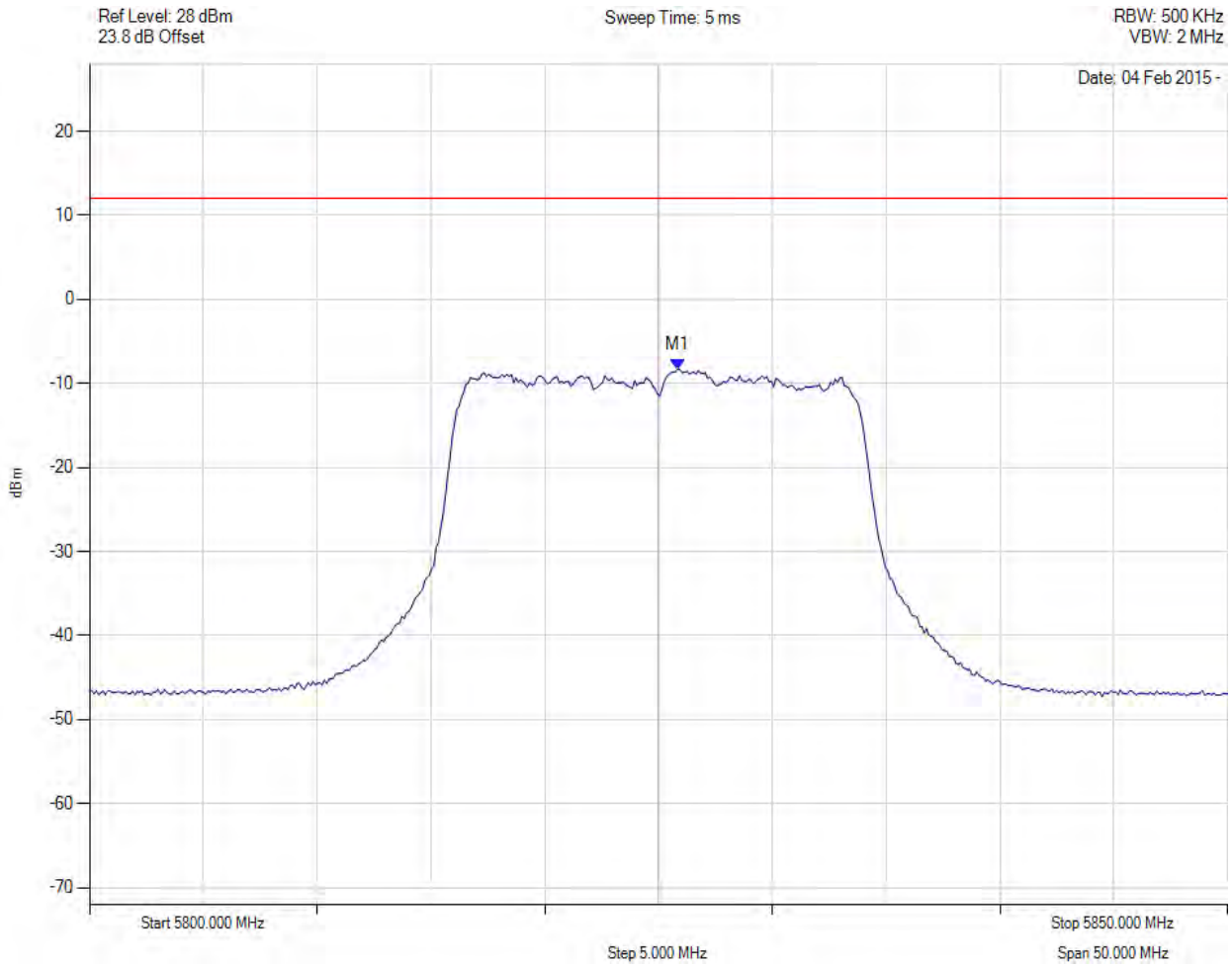
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5825.852 MHz : -8.296 dBm	Limit: ≤ 12.030 dBm

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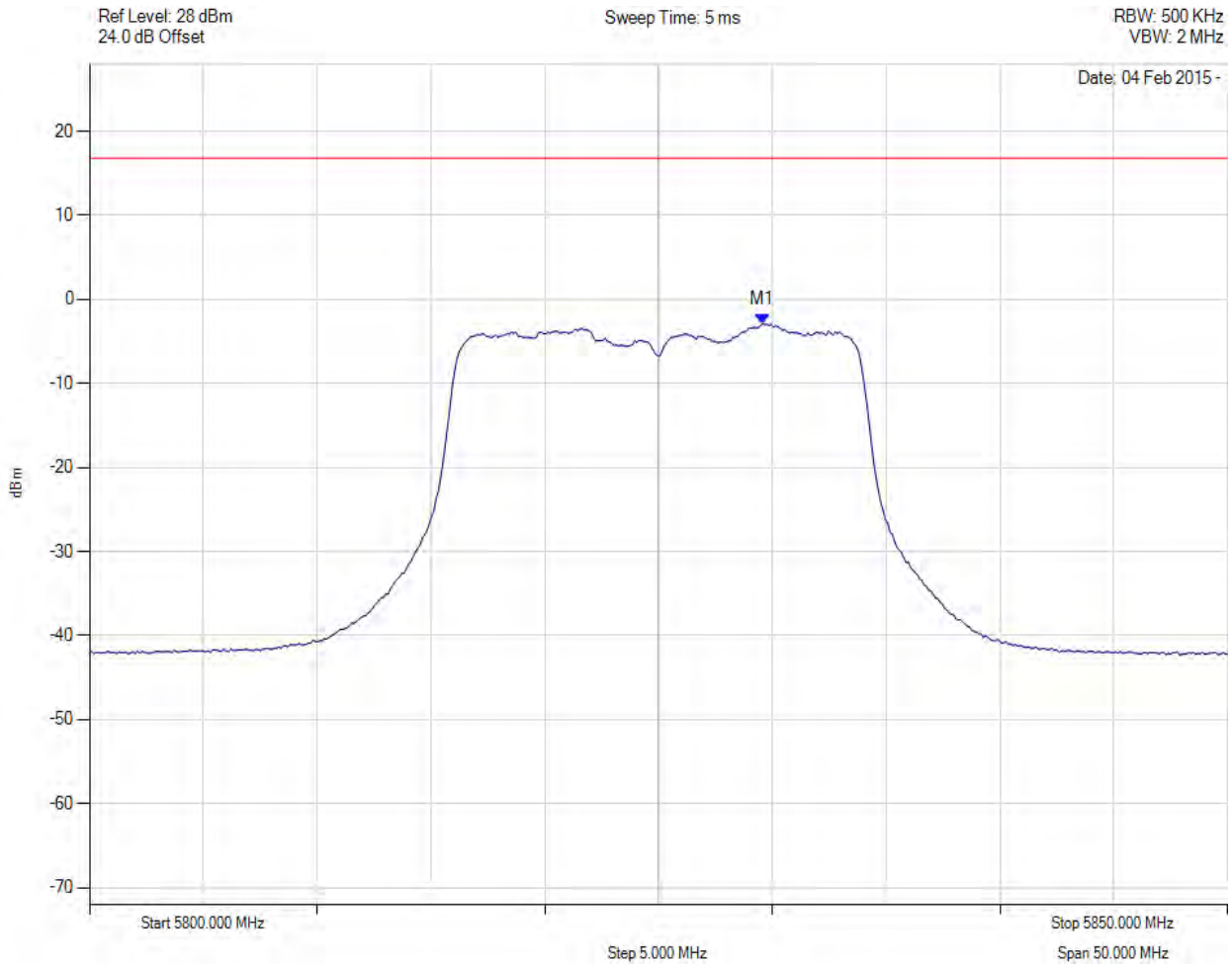
POWER SPECTRAL DENSITY

Variant: 802.11n HT-20, Channel: 5825.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5829.600 MHz : -2.908 dBm M1 + DCCF : 5829.600 MHz : -2.731 dBm Duty Cycle Correction Factor : +0.18 dB	Limit: ≤ 16.8 dBm Margin: -19.5 dB

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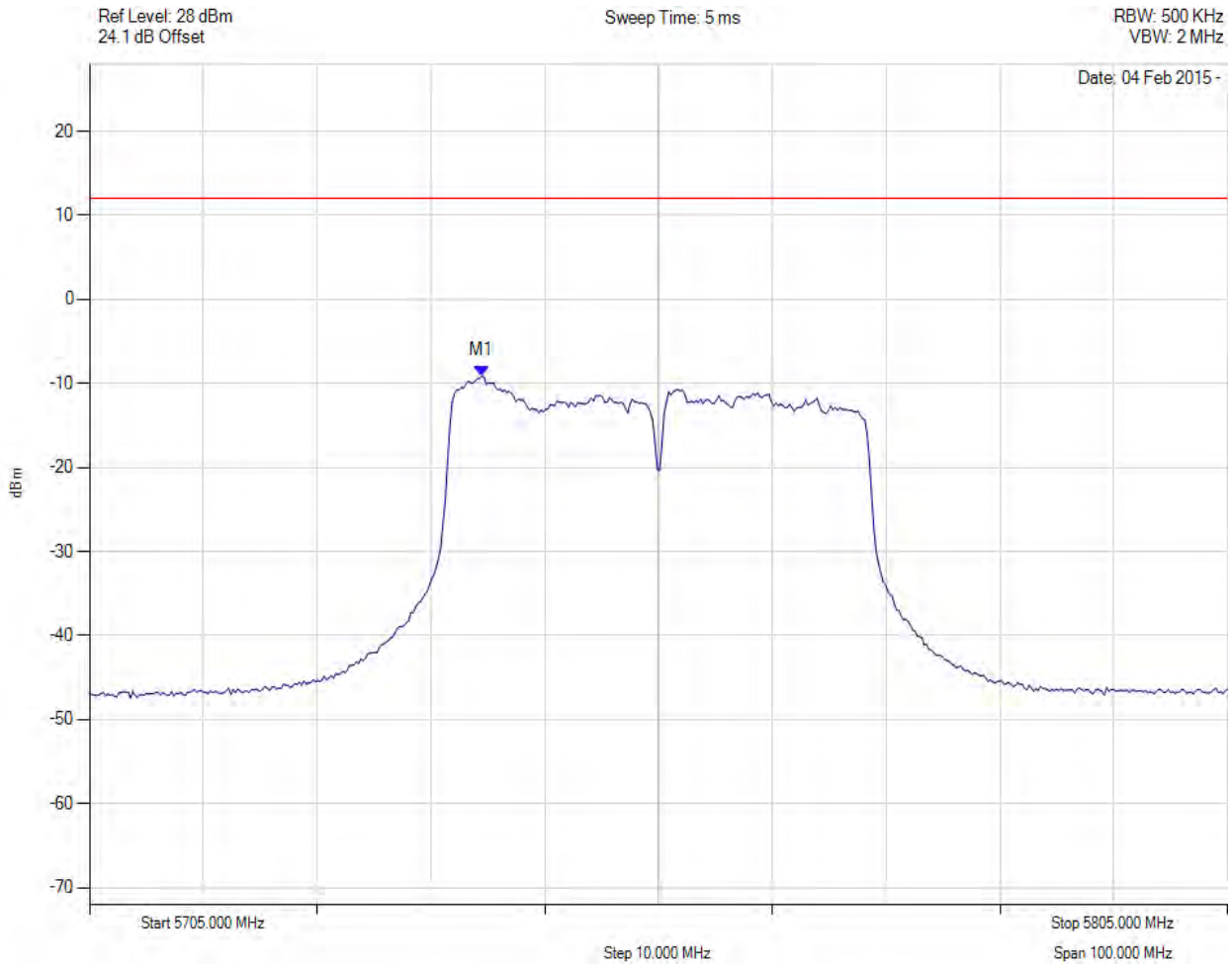
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5739.469 MHz : -9.076 dBm	Limit: ≤ 12.030 dBm

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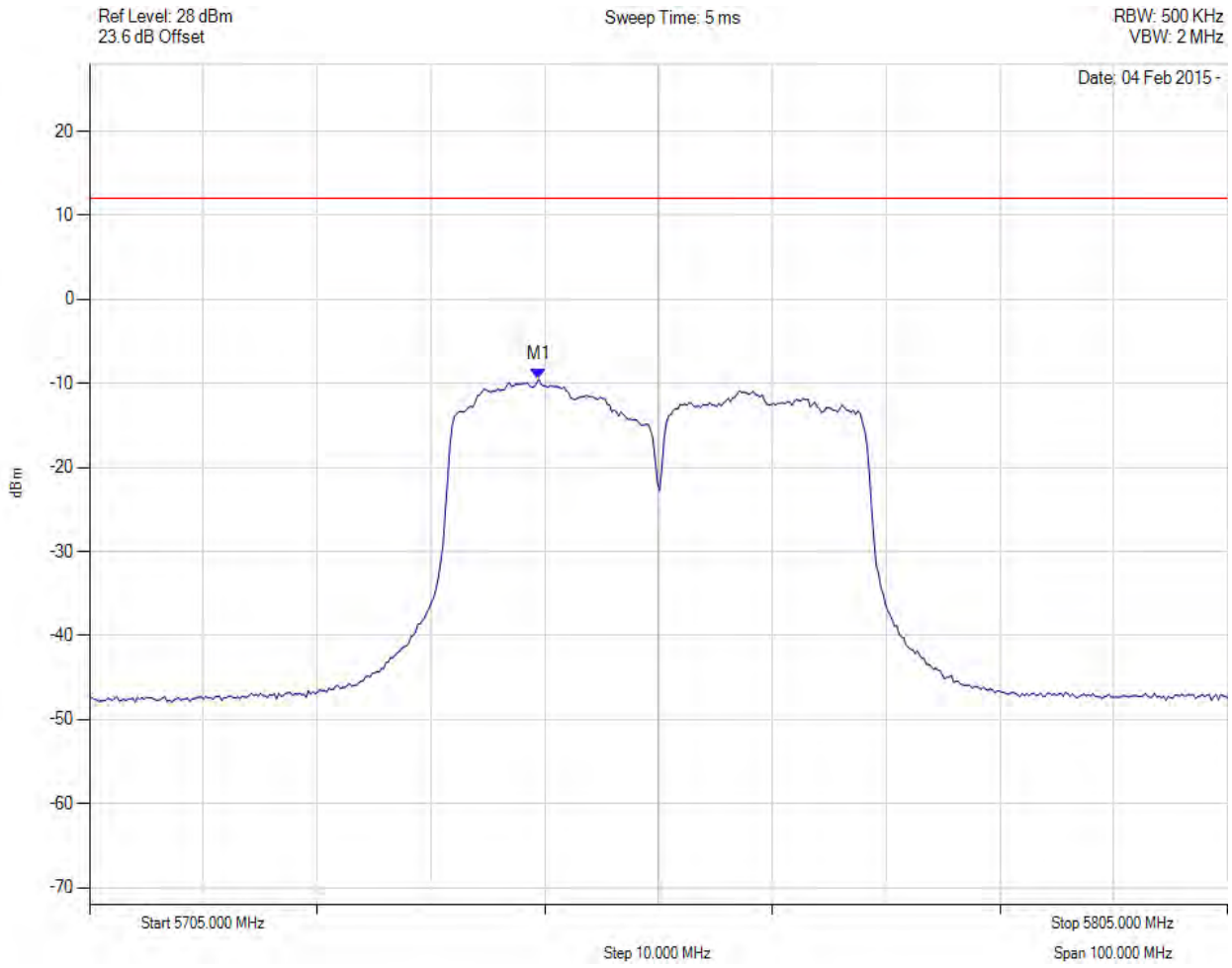
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5744.479 MHz : -9.526 dBm	Limit: ≤ 12.030 dBm

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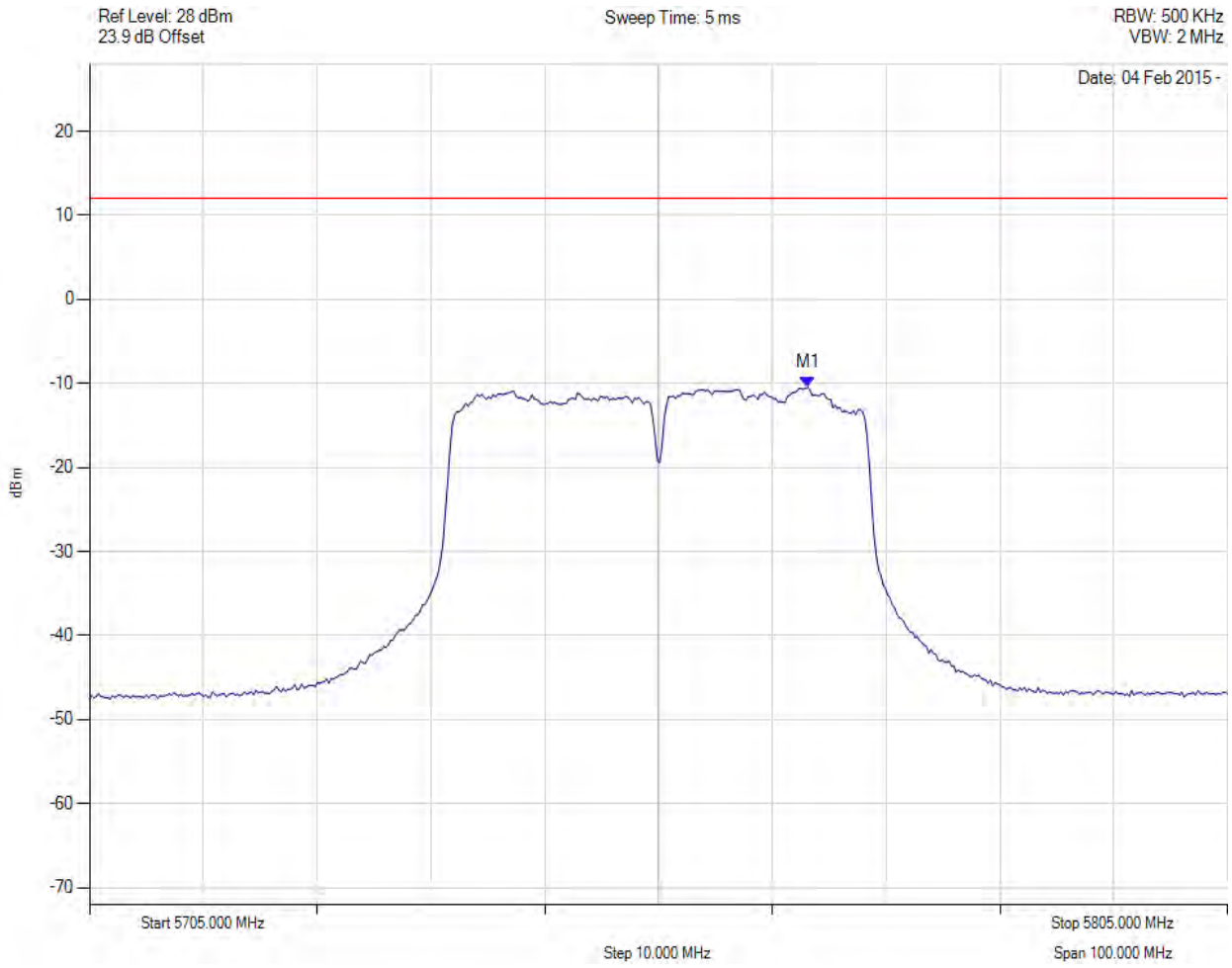
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5768.126 MHz : -10.447 dBm	Limit: ≤ 12.030 dBm

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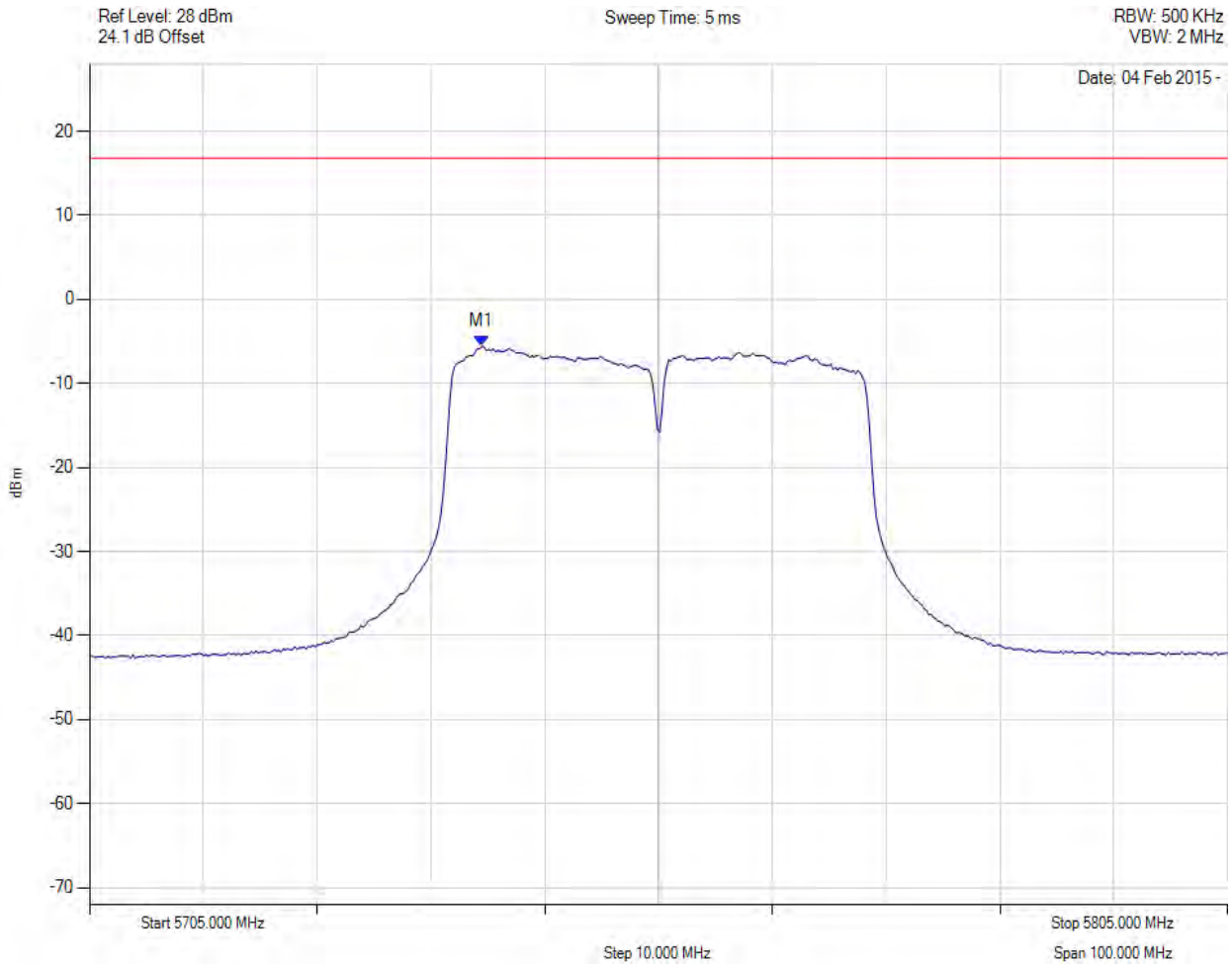
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5755.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5739.500 MHz : -5.575 dBm M1 + DCCF : 5739.500 MHz : -5.306 dBm Duty Cycle Correction Factor : +0.27 dB	Limit: ≤ 16.8 dBm Margin: -22.1 dB

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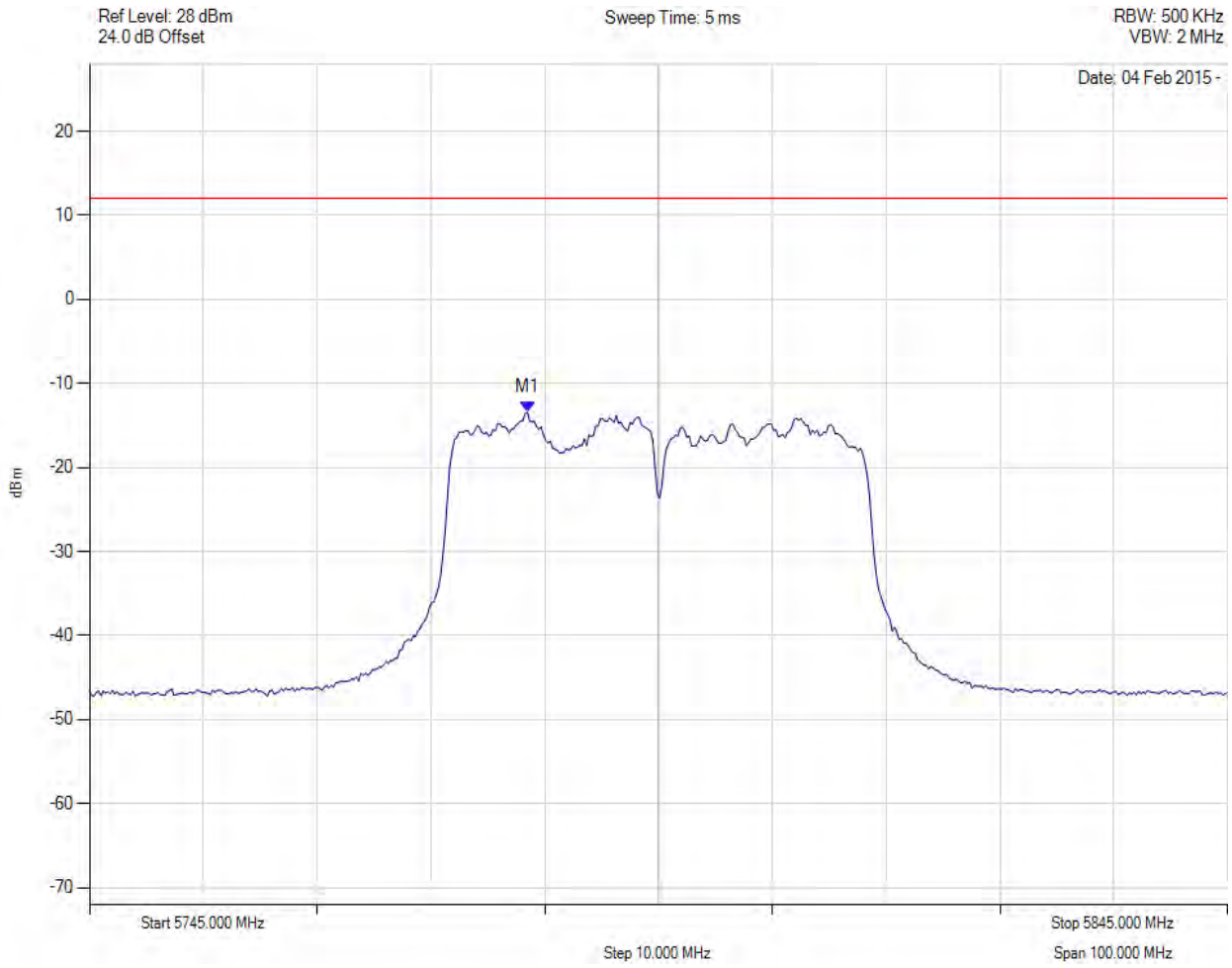
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5783.477 MHz : -13.407 dBm	Limit: ≤ 12.030 dBm

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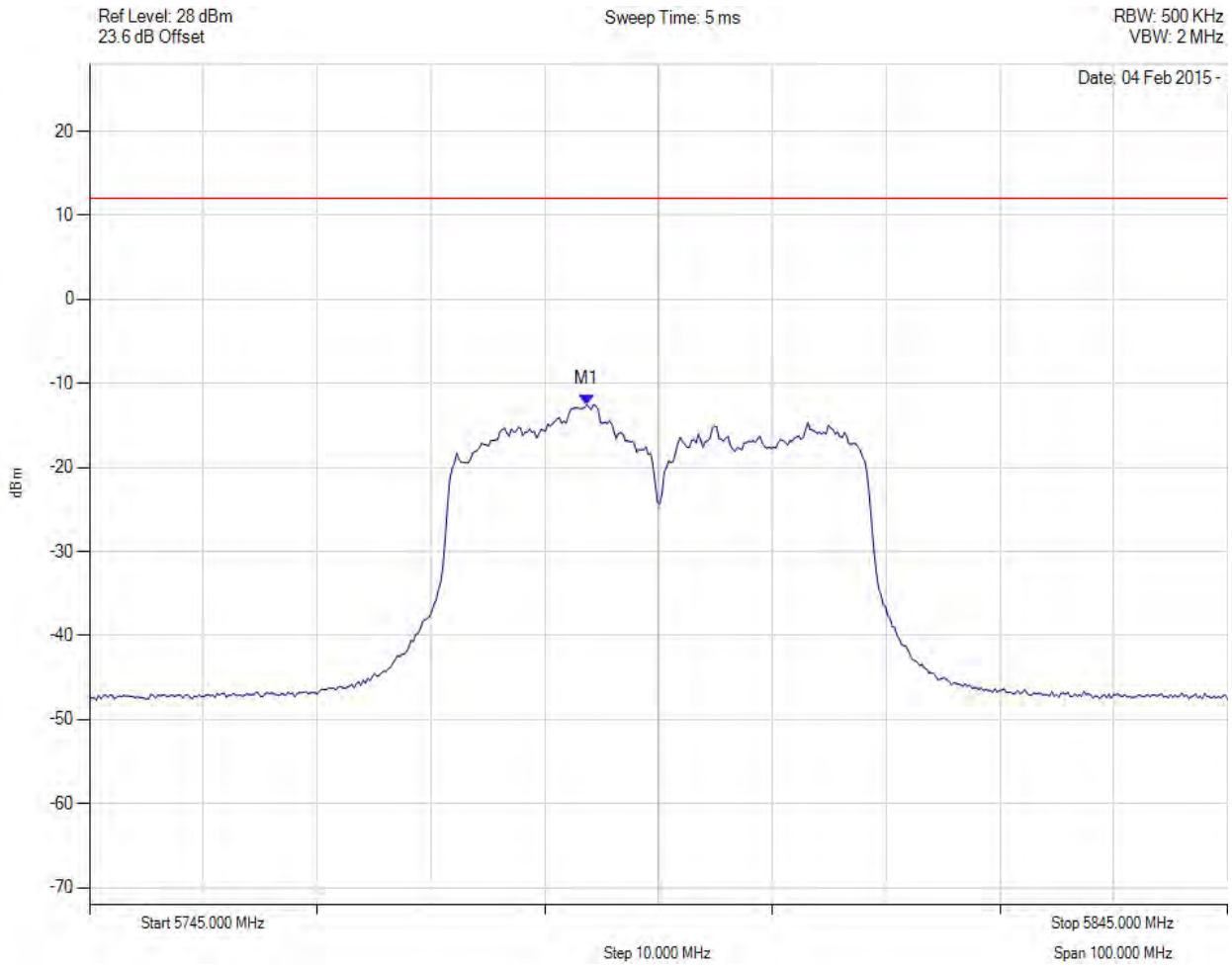
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5788.687 MHz : -12.489 dBm	Limit: ≤ 12.030 dBm

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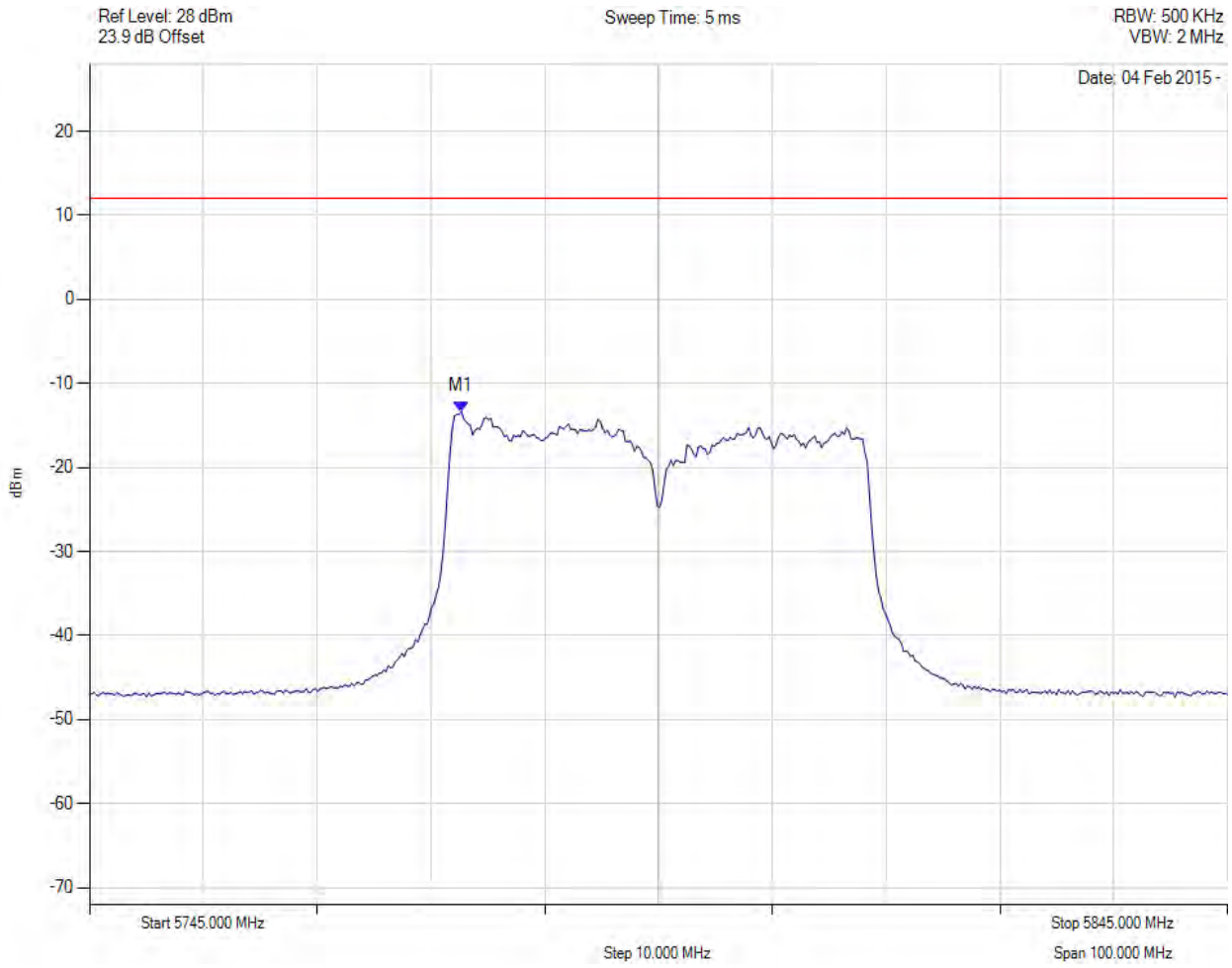
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain c, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5777.665 MHz : -13.312 dBm	Limit: ≤ 12.030 dBm

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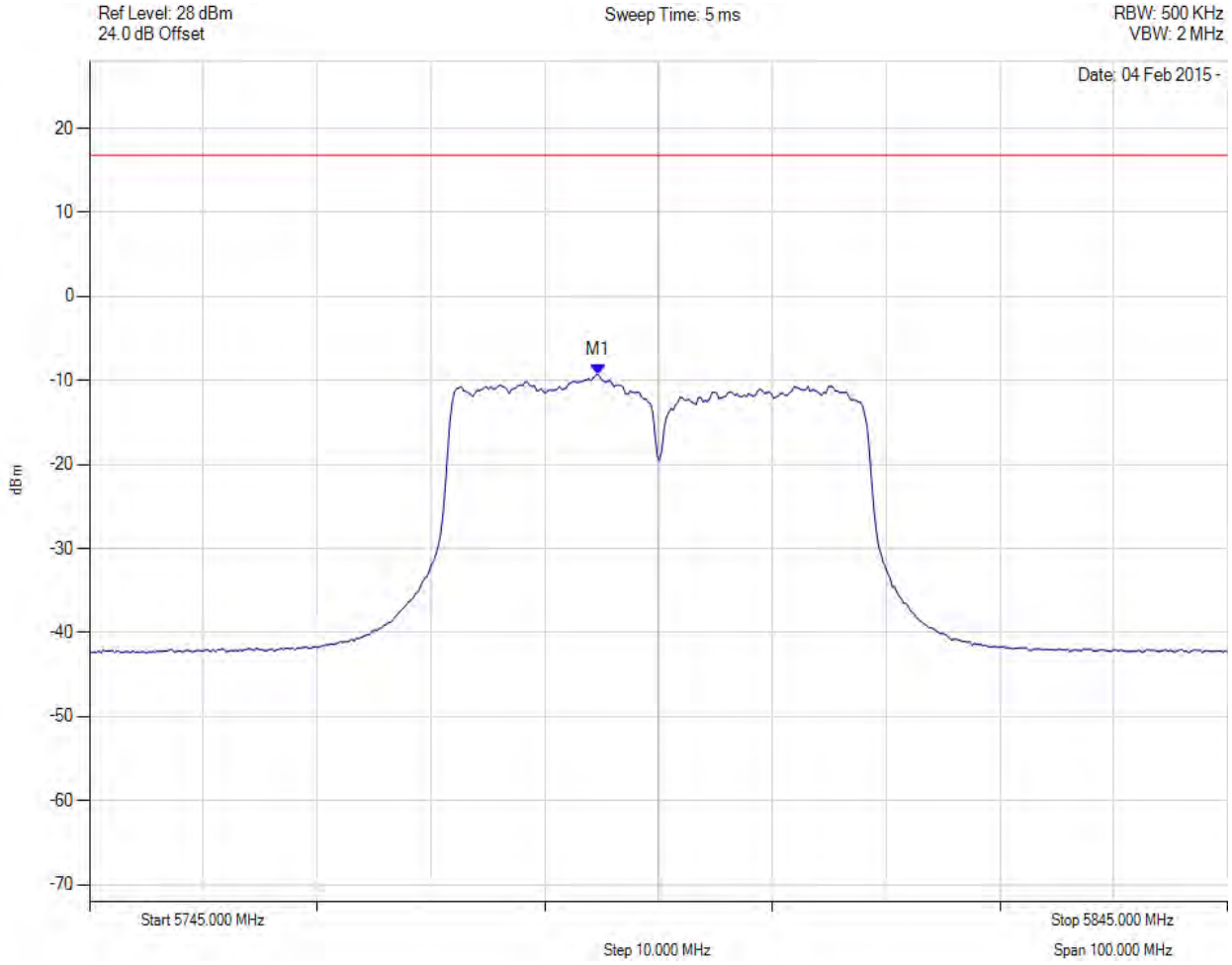
POWER SPECTRAL DENSITY

Variant: 802.11n HT-40, Channel: 5795.00 MHz, SUM, Temp: Ambient, Voltage: 28 Vdc



Analyser Setup	Marker:Frequency:Amplitude	Test Results
Detector = RMS Sweep Count = 100 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5789.700 MHz : -9.264 dBm M1 + DCCF : 5789.700 MHz : -8.758 dBm Duty Cycle Correction Factor : +0.27 dB	Limit: ≤ 16.8 dBm Margin: -25.5 dB

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