Test of Aruba Networks APIN0214, APIN0215

To: FCC 47 CFR Part 15.247 & IC RSS-210

Test Report Serial No.: ARUB179-U3 Rev A

MiCOM Labs

opening wireless markets

TEST REPORT

FROM

Test of Aruba Networks APIN0214, APIN0215

to

To FCC 47 CFR Part 15.247 & IC RSS-210

Test Report Serial No.: ARUB179-U3 Rev A

Note: this report contains data with regard to the 2400-2483.5 MHz and 5725-5850 MHz operational modes of the Aruba Networks APIN0214 and APIN0215 Wireless Access Point. Test data for the non-DFS Bands 5,150 - 5,250 is reported in MiCOM Labs ARUB179-U6 and 5,250 – 5,350 and 5,470–5,725 MHz (DFS) data reported in MiCOM Labs test report ARUB179-U8

This report supersedes: NONE

Applicant: Aruba Networks
1344 Crossman Avenue
Sunnyvale
California 94089, USA

Product Function: Wireless LAN Access Point

Copy No: pdf Issue Date: 24th June 2014

This Test Report is Issued Under the Authority of;

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

ACCREDITED
TESTING CERT # 2381.01

MiCOM Labs is an ISO 17025 Accredited Testing Laboratory

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

This page has been left intentionally blank

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

TABLE OF CONTENTS

ACCREDITATION, LISTINGS & RECOGNITION 5
TESTING ACCREDITATION 5
RECOGNITION 6
PRODUCT CERTIFICATION 7
TEST RESULT CERTIFICATE 9
1. REFERENCES AND MEASUREMENT UNCERTAINTY 10
1.1. Normative References 10
1.2. Test and Uncertainty Procedures 11
2. PRODUCT DETAILS AND TEST CONFIGURATIONS 12
2.1. Technical Details 12
2.2. Scope of Test Program 13
2.3. Equipment Model(s) and Serial Number(s) 18
2.4. Antenna Details 18
2.5. Cabling and I/O Ports 19
2.6. Test Configurations 20
2.7. Equipment Modifications 21
2.8. Deviations from the Test Standard 21
3. TEST EQUIPMENT CONFIGURATION(S) 22
3.1. Conducted RF Emission Test Set-up 22
3.2. Radiated Spurious Emission Test Set-up > 1 GHz 24
3.3. Digital Emissions Test Set-up (0.03 – 1 GHz) 25
3.4. ac Wireline Emission Test Set-up 26
4. TEST SUMMARY 27
5. TEST RESULTS 29
5.1. Device Characteristics 29
5.1.1. Conducted Testing 29
5.1.2. Radiated Emission Testing 87
5.1.3. AC Wireline Conducted Emissions (150 kHz – 30 MHz) 138
6. PHOTOGRAPHS 141
6.1. Conducted Test Setup 141
6.2. Test Setup - Digital Emissions > 1 GHz 142
6.3. Radiated Emissions Test Setup <1 GHz 143
6.4. ac Wireline Test Setup >1 GHz 144
7. TEST EQUIPMENT 145
APPENDIX 146
A. SUPPORTING INFORMATION 146
A.1. CONDUCTED TEST PLOTS 146
A.1.1. 6 dB & 99% Bandwidth 147
A.1.2. Conducted Spurious Emissions 210
A.1.3. Power Spectral Density 321

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

ACCREDITATION, LISTINGS & RECOGNITION

TESTING ACCREDITATION

MiCOM Labs, Inc. is an accredited Electrical testing laboratory per the international standard EN ISO/IEC 17025. 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.

RECOGNITION

MiCOM Labs, Inc has widely recognized Electrical testing capabilities. Our international recognition includes Conformity Assessment Body designation by APEC MRA** countries. Our test reports are widely accepted for global type approvals.

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
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	

**APEC MRA – Asia Pacific Economic Community Mutual Recognition Agreement.
Is a 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
N/A – Not Applicable

**EU MRA – European Union Mutual Recognition Agreement.
Is a recognition agreement under which test lab is accredited to regulatory standards of the EU member countries.

**NB – Notified Body

PRODUCT CERTIFICATION

MiCOM Labs, Inc. is an accredited Product Certification Body per the international standard EN ISO/IEC 17065. 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)
TCB Identifier – US0159

Industry Canada – Certification Body
CAB Identifier – US0159

Europe – Notified Body
Notified Body Identifier - 2280

Japan – Recognized Certification Body (RCB)
RCB Identifier - 210

DOCUMENT HISTORY

Document History		
Revision	Date	Comments
Draft		
Rev A	24th June 2014	Initial release.

TEST RESULT CERTIFICATE

Manufacturer:	Aruba Networks 1344 Crossman Avenue Sunnyvale California 94089, USA	Tested By:	MiCOM Labs, Inc. 575 Boulder Court Pleasanton California, 94566, USA
EUT:	802.11a/b/g/n/ac Wireless LAN Access Point	Telephone:	+1 925 462 0304
Model(s):	APIN0214, APIN0215	Fax:	+1 925 462 0306
S/N's:	APIN0214: CK0000562, APIN0215: CK0000823		
Test Date(s):	12th May - 18th June 2014	Website:	www.micomlabs.com

STANDARD(S)	TEST RESULTS
FCC 47 CFR Part 15.247 & IC RSS-210	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.

Approved & Released for MiCOM Labs, Inc. by:

ACCREDITED
TESTING CERT # 2381.01

Graeme Grieve
Quality Manager MiCOM Labs,

Gordon Hurst
President & CEO MiCOM Labs, Inc.

1. REFERENCES AND MEASUREMENT UNCERTAINTY

1.1. Normative References

REF.	PUBLICATION	YEAR	TITLE
i.	FCC 47 CFR Part 15, Subpart C	2010	Title 47: Telecommunication PART 15—RADIO FREQUENCY DEVICES Subpart C—Intentional Radiators
ii.	RSS-210 Annex 8	2010	Radio Standards Specification 210, Issue 8, Low-power License-exempt Radiocommunication Devices (All Frequency Bands): Category I Equipment
iii.	FCC OET KDB 662911	31st October 2013	Emissions Testing of Transmitters with Multiple Outputs in the Same Band
iv.	RSS-GEN	2010	Radio Standards Specification-Gen, Issue 3, General Requirements and Information for the Certification of Radiocommunication Equipment
v.	FCC 47 CFR Part 15, Subpart B	2010	47 CFR Part 15, SubPart B; Unintentional Radiators
vi.	ICES-003	31st August 2013	Spectrum Management and Telecommunications Policy Interference-Causing Equipment Standard Digital Apparatus; Issue 5
vii.	ANSI C63.4	2009	American National Standards for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
viii.	CISPR 22/ EN 55022	2010	Limits and Methods of Measurements of Radio Disturbance Characteristics of Information Technology Equipment
ix.	M 3003	Edition 1 Dec. 1997	Expression of Uncertainty and Confidence in Measurements
x.	LAB34	Edition 1 Aug 2002	The expression of uncertainty in EMC Testing
xi.	ETSI TR 100 028	2001	Parts 1 and 2 Electromagnetic compatibility and Radio Spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics
xii.	A2LA	July 2012	Reference to A2LA Accreditation Status – A2LA Advertising Policy

1.2. Test and Uncertainty Procedures

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.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

2. PRODUCT DETAILS AND TEST CONFIGURATIONS

2.1. Technical Details

Details	Description
Purpose:	Test of the Aruba Networks APIN0214, APIN0215 to FCC Part 15.247 and Industry Canada RSS-210 regulations.
Applicant:	Aruba Networks 1344 Crossman Avenue, Sunnyvale, California 94089, USA
Manufacturer:	As applicant.
Laboratory performing the tests:	MiCOM Labs, Inc. 575 Boulder Court, Pleasanton, California 94566 USA
Test report reference number:	ARUB179-U3 Rev A
Date EUT received:	5th May 2014
Standard(s) applied:	FCC 47 CFR Part 15.247 & IC RSS-210
Dates of test (from - to):	12th May - 18th June 2014
No of Units Tested:	Two APIN0214 and APIN0215
Type of Equipment:	802.11a/b/g/n/ac Wireless Access Point 3x3 Spatial Multiplexing MIMO configuration
Manufacturers Trade Name:	Wireless Access Point
Model(s):	APIN0214, APIN0215
Location for use:	Indoor only
Declared Frequency Range(s):	2400 - 2483.5 MHz; 5725 - 5850 MHz
Hardware Rev	Version P3
Software Rev	AOS 6.4.1.0
Type of Modulation:	Per 802.11 –CCK, BPSK, QPSK, DSSS, OFDM
EUT Modes of Operation:	Legacy 802.11a/b/g/n/ac
Declared Nominal Average Output Power:	2.4 GHz Operation 802.11b/g/n: +23 dBm 5 GHz Operation 802.11a/n/ac: +23 dBm
System Beam Forming:	APIN0214, APIN0215 has no capability for antenna beam forming
Transmit/Receive Operation:	Time Division Duplex
Rated Input Voltage and Current:	POE 48 - 53 Vdc 350 mA 12 Vdc 1.5 A
Operating Temperature Range:	Declared range 0° to +50°.
ITU Emission Designator:	2400 – 2483.5 MHz 802.11b 11M8G1D 2400 – 2483.5 MHz 802.11g 16M5D1D 2400 – 2483.5 MHz 802.11n – HT-20 16M5D1D 2400 – 2483.5 MHz 802.11n – HT-40 36M4D1D 5725 – 5850 MHz 802.11a 16M6D1D 5725 – 5850 MHz 802.11n – HT-20 16M5D1D 5725 – 5850 MHz 802.11n – HT-40 36M2D1D 5725 – 5850 MHz 802.11VHT-80 76M0D4D
Equipment Dimensions:	170mm x 170mm x 45mm
Weight:	1.3 lbs
Primary function of equipment:	Wireless Access Point for transmitting data and voice.

2.2. Scope of Test Program

Aruba Networks APIN0214, APIN0215 Wireless Access Point

The scope of the test program was to test the Aruba Networks APIN0214, APIN0215, 3x3 Spatial Multiplexing MIMO configurations in the frequency ranges 2400 - 2483.5 MHz and 5725 – 5850 MHz for compliance against FCC 47 CFR Part 15.247 and Industry Canada RSS-210 specifications.

Model Identification
APIN0214: External Antenna (Reverse SMA)
APIN0215: Integral Antenna

APIN0214 and APIN0215 Operational Modes
Client did not provide software capability for the following operational modes and claimed these were covered under 802.11n HT-20 and 802.11n HT-40.

i).. VHT-20
ii)..VHT-40

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.

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

Aruba Networks Inc
APIN0214 External Antenna 802.11 a/b/g/n/ac Wireless Access Point

Aruba Networks Inc
APIN0215 Integral Antenna 802.11 a/b/g/n/ac Wireless Access Point

Aruba Networks Inc
802.11 a/b/g/n/ac Wireless Access Point (Rear)

Aruba Networks Inc
802.11 a/b/g/n/ac Wireless Access Point Label

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

Type (EUT/ Support)	Equipment Description (Including Brand Name)	Mfr	Model No.	Serial No.
EUT	Wireless LAN Access Point	Aruba Networks	APIN0214	
EUT	Wireless LAN Access Point (Integral Antenna)	Aruba Networks	APIN0215	
Support	Laptop PC	IBM	Thinkpad	None

2.4. Antenna Details

APIN0214 External Antennas

Model	Type	Gain	Freq. Band	Note
		dBi	MHz	
AP-ANT-1B	Omni	3.8	2400 - 2500	
		5.8	4900 - 5875	
AP-ANT-13B	Omni	4.4	2400 - 2500	
		3.3	4900 - 5900	
AP-ANT-16	Omni	3.9	2400 - 2500	
		4.7	4900 - 5900	
AP-ANT-17	Directional 120degr.	6.0	2400 - 2500	
		5.0	4900 - 5875	
AP-ANT-18	Directional 60degr.	7.5	2400 - 2500	
		7.5	5150 - 5875	
AP-ANT-19	Omni	3.0	2400 - 2500	
		6.0	5150 - 5875	
AP-ANT-20	Omni	2.0	2400 - 2500	
		2.0	5150 - 5875	

APIN0215 Integral Antennas

Model	Type	Gain	Freq. Band	Note
		dBi	MHz	
metal sheet	Omni	4.0	2400 - 2500	
metal sheet	Omni	4.5	5150 - 5875	

2.5. Cabling and I/O Ports

Number and type of I/O ports

1. 10/100/1000 Ethernet (POE) (maximum cable length 100m)
2. USB - Serial maintenance terminal
3. 12 Vdc, jack connector
4. RF Antenna Connectors (x3) – Reverse SMA (APIN0214 Only)

2.6. 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)	Variant	Data Rate with Highest Power	Frequencies (MHz)
2.4 GHz			
b	Legacy	1 MBit/s	2,412 2,437 2,462
g	Legacy	6 MBit/s	
n	HT-20	6.5 (MCS 0)	
	HT-40	45 (MCS 16)	2,422 2,437 2,452
5.8 GHz			
a	Legacy	6 MBit/s	5,745 5,785 5,825
n	HT-20	6.5 (MCS 0)	
	HT-40	45 (MCS 16)	5,755 5,795
ac	ac-80	29.3 (MCS 0)	5,775

Legacy – data rates for 802.11abg products

Results for the above configurations are provided in this report

.

Antenna Test Configurations for Radiated Emissions

Results for the following configurations are provided in this report.

Radiated emissions testing was performed for all possible configurations on the integral antenna, the table below identifies all radiated testing completed on the device.

2,400 – 2483.5 MHz

15.247	
802.11b,g, 802.11n HT-20	SE 2412
	SE 2437
	SE 2462
	BE 2390
	BE 2483.5
802.11n HT-40	SE 2412
	SE 2437
	SE 2462
	BE 2390
	BE 2483.5

5,725 – 5850 MHz

15.247	
802.11a 802.11n HT-20	a SE 5745
	a SE 5785
	a SE 5825
802.11n HT-40	SE 5755
	SE 5795
	BE 5460
802.11ac-80	SE 5775
	BE 5460

KEY;-

SE – Spurious Emission
BE – Band-Edge

2.7. Equipment Modifications

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

1. NONE

2.8. Deviations from the Test Standard

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

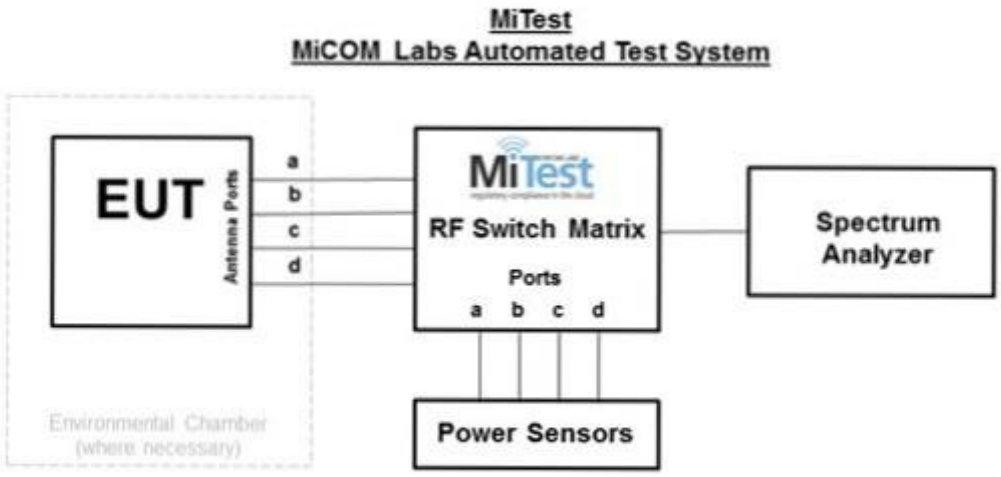
1. NONE

3. TEST EQUIPMENT CONFIGURATION(S)

3.1. Conducted RF Emission Test Set-up

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

1. Section 6.1.1.1. 6 dB and 99% Bandwidth
2. Section 6.1.1.2. Peak Output Power
3. Section 6.1.1.3. Power Spectral Density
4. Section 6.1.1.4. Conducted Spurious Emissions



Conducted Test Measurement Setup

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'.

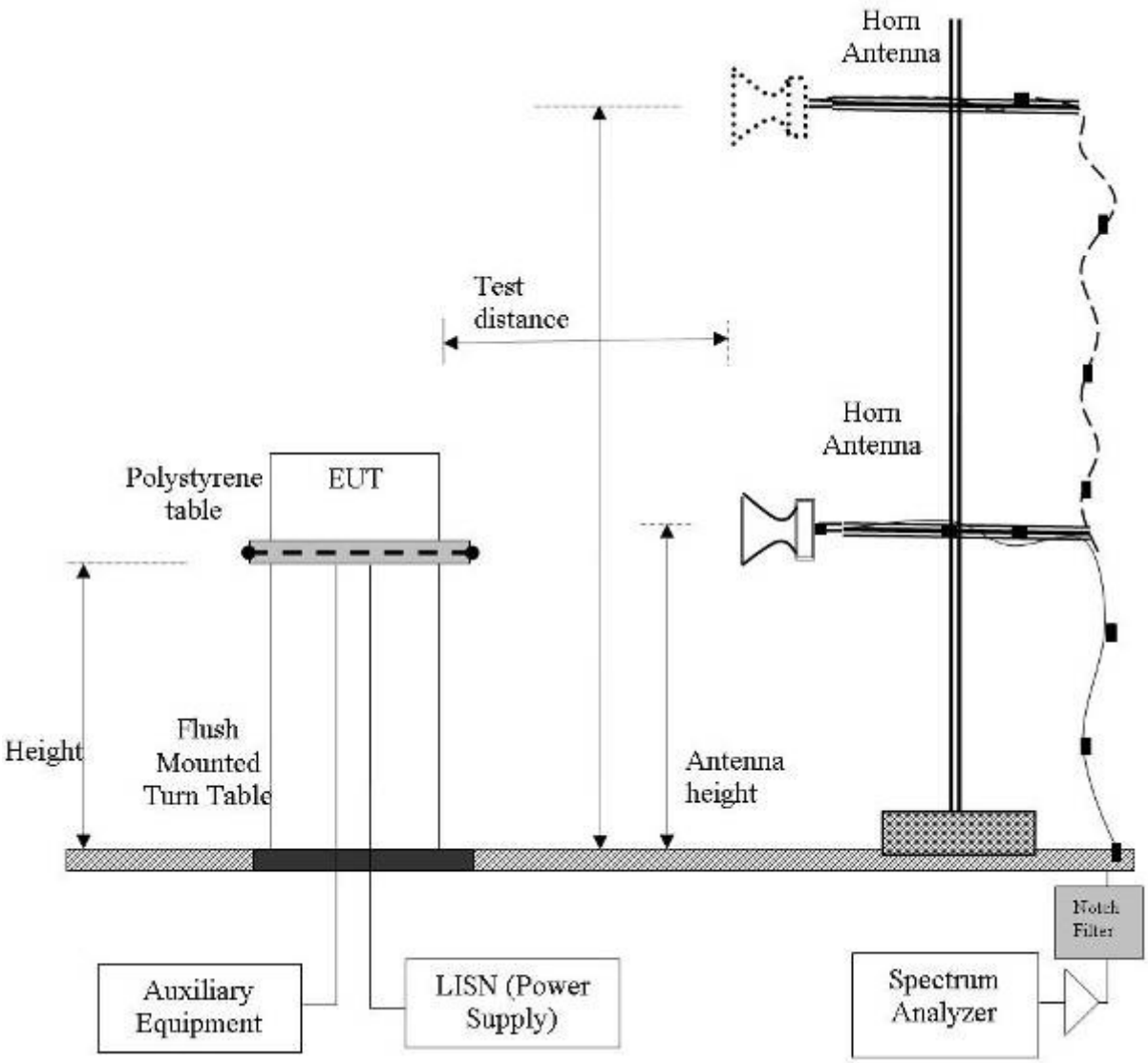
Test and report automation was performed by MiTest. MiTest is an automated test system developed by MiCOM Labs. MiTest is the first cloud based modular test system enabling end-to-end automation of regulatory compliance testing for conducted RF testing.

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

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

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

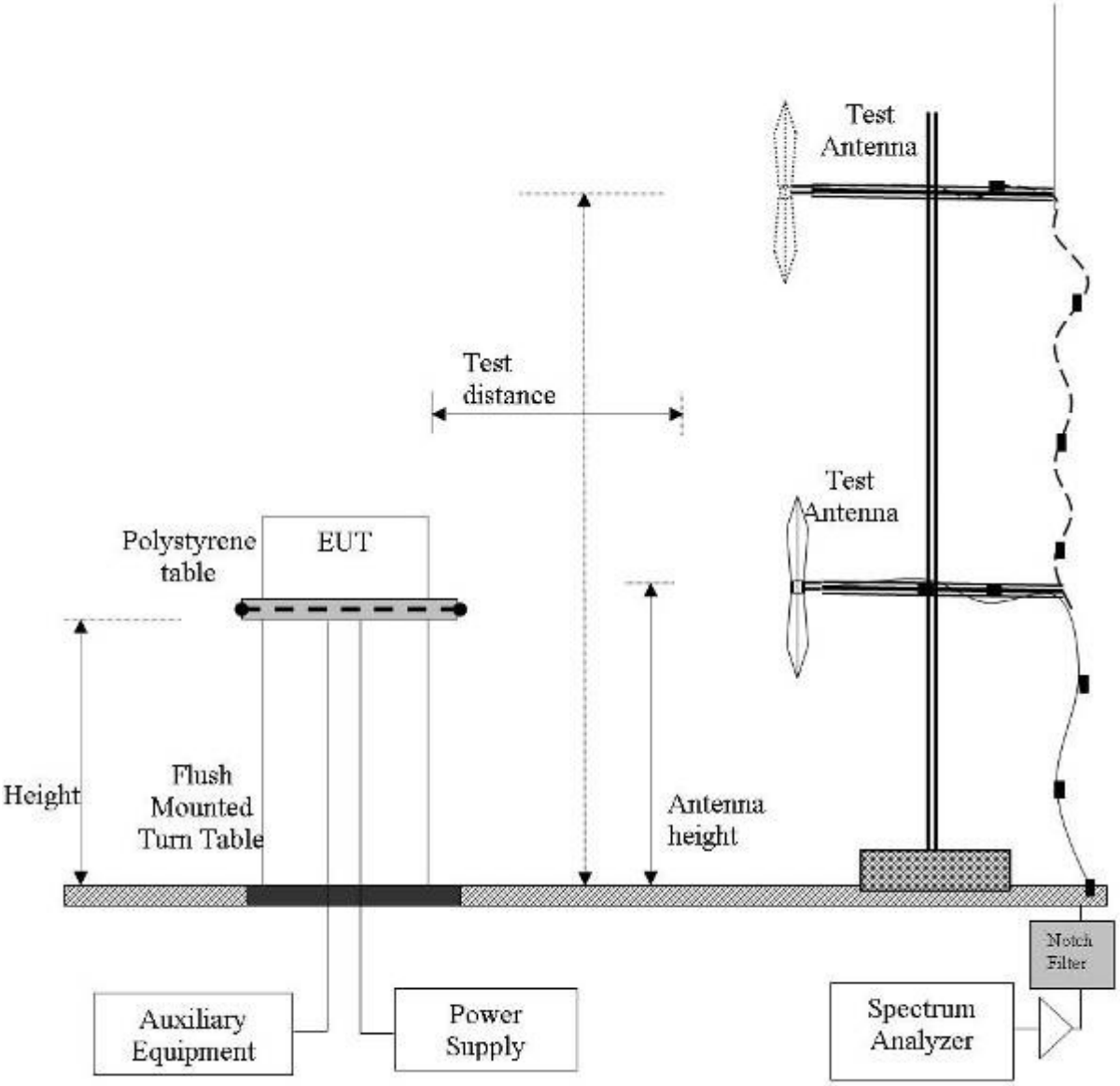
Radiated Emission Measurement Setup – Above 1 GHz



3.3. Digital Emissions Test Set-up (0.03 – 1 GHz)

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

Digital Emission Measurement Setup – Below 1 GHz

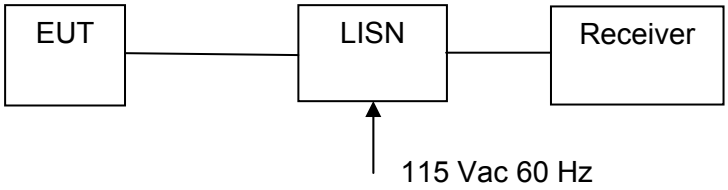


3.4. ac Wireline Emission Test Set-up

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

1. Section 5.1.3 ac Wireline Conducted Emissions

Test Measurement Set up



Measurement set up for AC Wireline Conducted Emissions Test

4. TEST SUMMARY

List of Measurements

The following table represents the list of measurements required under the **FCC CFR47 Part 15.247** and **Industry Canada RSS-210** and **Industry Canada RSS-Gen.**

Section(s)	Test Items	Description	Condition	Result	Test Report Section
15.247(a)(2) **A8.2(1)** **4.4**	6 dB and 99 % Bandwidths	≥500 kHz	Conducted	Complies	5.1.1.1
15.247(b)(3) **15.31(e)** **A8.4(4)**	Peak Output Power Voltage Variation	Shall not exceed 1W Variation of supply voltage 85 % -115 %	Conducted	Complies	5.1.1.2
15.247(e) **A8.2**	Peak Power Spectral Density	Shall not be greater than +8 dBm in any 3 kHz band	Conducted	Complies	5.1.1.3
15.247(d) **15.205 /** **15.209** **A8.5** **2.2** **4.7**	Spurious Emissions (30MHz - 26 GHz b/g and 30 MHz – 40 GHz a)	The radiated emission in any 100 kHz of out-band shall be at least 20 dB below the highest in-band spectral density	Conducted	Complies	5.1.1.4

List of Measurements (continued)

The following table represents the list of measurements required under the **FCC CFR47 Part 15.247, Industry Canada RSS-210,** and **Industry Canada RSS-Gen.**

Section(s)	Test Items	Description	Condition	Result	Test Report Section
15.247(d) **15.205 /** **15.209** **A8.5** **2.2** **2.6** **4.7**	Radiated Emissions	Restricted Bands	Radiated	Complies	5.1.2
	Transmitter Radiated Spurious Emissions	Emissions above 1 GHz		Complies	
	Radiated Band Edge	Band-edge results Peak Emissions		Complies	
15.205 / **15.209** **2.2**	Radiated Spurious Emissions	Emissions <1 GHz (30M-1 GHz)	Radiated	Complies	*5.1.2.4*
15.207 **7.2.2**	AC Wireline Conducted Emissions 150 kHz–30 MHz	Conducted Emissions	Conducted	N/A EUT is POE powered - not shipped with equipment	*5.1.3*

Note 1: *Test results reported in this document relate only to the items tested*
Note 2: *The required tests demonstrated compliance as per client declaration of test configuration, monitoring methodology and associated pass/fail criteria*
Note 3: *Section 3.7 Equipment Modifications highlights the equipment modifications that were required to bring the product into compliance with the above test matrix*

5. TEST RESULTS

5.1. Device Characteristics

5.1.1. Conducted Testing

5.1.1.1. 6 dB and 99 % Bandwidth

Conducted Test Conditions for 6 dB and 99% Bandwidth			
Standard:	FCC CFR 47:15.247	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	6 dB and 99 % Bandwidth	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (a)(2)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	KDB 558074 - D01 DTS Measurement Guidance v01: Section 5.1 Emission Bandwidth		

Test Procedure for 6 dB and 99% Bandwidth Measurement
The bandwidth at 6 dB and 99 % was measured with a spectrum analyzer connected to the antenna terminal, while EUT is operating in transmission mode at the appropriate center frequency.

Equipment Configuration for 6 dB & 99% Bandwidth			
Variant:	802.11b	**Duty Cycle (%):**	99
Data Rate:	1 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	CCK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	KHz	MHz
2412.0	9.218	9.218	9.218	--	9.218	9.218	≥500.0	-8.72
2437.0	8.737	8.737	8.257	--	8.737	8.257	≥500.0	-7.76
2462.0	8.657	8.737	8.737	--	8.737	8.657	≥500.0	-8.16

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	11.784	11.703	11.784	--	11.784		
2437.0	11.463	11.303	11.623	--	11.623		
2462.0	11.383	11.543	11.463	--	11.543		

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 6 dB & 99% Bandwidth

Variant:	802.11g	**Duty Cycle (%):**	94
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	KHz	MHz
2412.0	16.513	16.513	16.513	--	16.513	16.513	≥500.0	-16.01
2437.0	16.513	16.513	16.513	--	16.513	16.513	≥500.0	-16.01
2462.0	16.433	16.513	16.593	--	16.593	16.433	≥500.0	-15.93

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	16.513	16.513	16.513	--	16.513		
2437.0	16.513	16.513	16.513	--	16.513		
2462.0	16.513	16.513	16.513	--	16.513		

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

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

Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11n HT-20	**Duty Cycle (%):**	93
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	KHz	MHz
2412.0	16.273	15.872	16.192	--	16.273	15.872	≥500.0	-15.37
2437.0	16.433	16.513	16.433	--	16.513	16.433	≥500.0	-15.93
2462.0	15.872	15.872	15.872	--	15.872	15.872	≥500.0	-15.37

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2412.0	16.513	16.433	16.353	--	16.513		
2437.0	16.513	16.353	16.353	--	16.513		
2462.0	16.433	16.433	16.433	--	16.433		

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 6 dB & 99% Bandwidth

Variant:	802.11n HT-40	**Duty Cycle (%):**	85
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	KHz	MHz
2422.0	36.072	35.591	35.431	--	36.072	35.431	≥500.0	-34.93
2437.0	36.713	35.752	36.393	--	36.713	35.752	≥500.0	-35.25
2452.0	36.393	36.713	36.072	--	36.713	36.072	≥500.0	-35.57

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
2422.0	36.232	36.232	36.232	--	36.232		
2437.0	36.393	36.072	36.232	--	36.393		
2452.0	36.393	36.393	36.232	--	36.393		

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 6 dB & 99% Bandwidth

Variant:	802.11a	**Duty Cycle (%):**	93
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	KHz	MHz
5745.0	16.513	16.513	16.513	--	16.513	16.513	≥500.0	-16.01
5785.0	16.513	16.513	16.513	--	16.513	16.513	≥500.0	-16.01
5825.0	16.513	16.513	16.513	--	16.513	16.513	≥500.0	-16.01

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
5745.0	16.513	16.513	16.513	--	16.513		
5785.0	16.593	16.513	16.513	--	16.593		
5825.0	16.593	16.513	16.513	--	16.593		

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 6 dB & 99% Bandwidth			
Variant:	802.11ac-80	**Duty Cycle (%):**	90
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	KHz	MHz
5775.0	76.633	76.633	76.954	--	76.954	76.633	≥500.0	-76.13

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
5775.0	75.992	75.992	75.992	--	75.992		

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).

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

Equipment Configuration for 6 dB & 99% Bandwidth

Variant:	802.11n HT-20	**Duty Cycle (%):**	90
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	KHz	MHz
5745.0	16.433	16.433	16.433	--	16.433	16.433	≥500.0	-15.93
5785.0	16.433	16.433	16.433	--	16.433	16.433	≥500.0	-15.93
5825.0	16.433	16.433	16.433	--	16.433	16.433	≥500.0	-15.93

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
5745.0	16.513	16.353	16.433	--	16.513		
5785.0	16.513	16.433	16.433	--	16.513		
5825.0	16.513	16.433	16.433	--	16.513		

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

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

Equipment Configuration for 6 dB & 99% Bandwidth			
Variant:	802.11n HT-40	**Duty Cycle (%):**	85
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured 6 dB Bandwidth (MHz)				6 dB Bandwidth (MHz)		Limit	Lowest Margin
	Port(s)							
MHz	a	b	c	d	Highest	Lowest	KHz	MHz
5755.0	36.713	36.232	35.912	--	36.713	35.912	≥500.0	-35.41
5795.0	36.713	36.232	35.591	--	36.713	35.591	≥500.0	-35.09

Test Frequency	Measured 99% Bandwidth (MHz)				Maximum 99% Bandwidth (MHz)		
	Port(s)						
MHz	a	b	c	d			
5755.0	36.393	36.232	36.232	--	36.393		
5795.0	36.232	36.232	36.232	--	36.232		

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

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

Specification

Limits

§15.247 (a)(2) & RSS-210 §A8.2(1)
The minimum 6 dB bandwidth shall be at least 500 kHz.

§ IC RSS-Gen 4.4.1 Occupied Bandwidth When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99% emission bandwidth, as calculated or measured.

§ IC RSS-Gen 4.4.2 6 dB Bandwidth Where indicated, the 6 dB bandwidth is measured at the points when the spectral density of the signal is 6 dB down from the in –band spectral density of the modulated signal, with the transmitter modulated by a representative signal.

Traceability

Test Equipment Used
0158, 0287, 0252, 0313, 0314, 0070, 0116, 0117

5.1.1.2. Peak Output Power

Conducted Test Conditions for Fundamental Emission Output Power			
Standard:	FCC CFR 47:15.247	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Emission Output Power	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (a)(2)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	KDB 558074 - D01 DTS Measurement Guidance v01: Section 5.2 Fundamental Emission Output Power KDB 662911 was implemented for In-band power measurements. The measure and sum technique was implemented in all cases.		

Test Procedure for Fundamental Emission Output Power Measurement
The transmitter terminal of EUT was connected to the input of the spectrum analyzer set to measure peak power. The resolution filter bandwidth was set to 6 dB, peak detector selected and the analyzer built-in power function was used to integrate peak power over the 20 dB bandwidth.

Supporting Information
Calculated Power = A + G + 10 log (1/x) dBm
A = Total Power [10 Log10 ($10^{a/10}$ + $10^{b/10}$ + $10^{c/10}$ + $10^{d/10}$)], G = Antenna Gain,
x = Duty Cycle

15.247 (c) Operation with directional antenna gains greater than 6 dBi.
If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Uncorrelated Operation

2.4 GHz Uncorrelated Operation (MIMO)

Antenna	Gain	Max. Allowable Conducted Peak Power (dBm)		Maximum EIRP
(dB)	(dBi)	Uncorrelated	Max. Power Per Chain	(dBm)
Integral	2.0	+30.0	+26.99	+32.0

5.8 GHz Uncorrelated Operation (MIMO)

Antenna	Gain	Max. Allowable Conducted Peak Power (dBm)		Maximum EIRP
(dB)	(dBi)	Uncorrelated	Max. Power Per Chain	(dBm)
Integral	2.0	+30.0	+26.99	+32.0

Correlated Operation

2.4 GHz Correlated Operation (Non-MIMO i.e. Legacy)

Antenna	Gain dBi	Antenna Gain Increase V's No. Antenna Ports		Total Gain	Max. Allowable Conducted Peak Power	Maximum EIRP
(dB)		Ports	dB	dBi	∑ (dBm)	(dBm)
Integral	2.0	2	3.01	5.01	+30.0	+32.0

5.8 GHz Correlated Operation (Non-MIMO i.e. Legacy)

Antenna	Gain dBi	Antenna Gain Increase V's No. Antenna Ports		Total Gain	Max. Allowable Conducted Peak Power	Maximum EIRP
(dB)		Ports	dB	dBi	∑ (dBm)	(dBm)
Integral	2.0	2	3.01	5.01	+30.0	+32.0

Equipment Configuration for Average Output Power

Variant:	802.11b	**Duty Cycle (%):**	99.0
Data Rate:	1 MBit/s	**Antenna Gain (dBi):**	2.0
Modulation:	CCK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s) + Duty Cycle Correction Factor : +0.04 dB	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	18.40	18.77	18.32	--	23.32	30.00	-6.68	19.00
2437.0	17.91	18.48	17.95	--	22.94	30.00	-7.06	19.00
2462.0	17.86	18.35	17.62	--	22.77	30.00	-7.23	19.00

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

Equipment Configuration for Average Output Power

Variant:	802.11g	**Duty Cycle (%):**	94.0
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	2.0
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s) + Duty Cycle Correction Factor : +0.27 dB	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	18.11	18.23	17.98	--	23.15	30.00	-6.85	19.00
2437.0	17.81	18.27	17.54	--	22.92	30.00	-7.08	19.00
2462.0	17.56	18.01	17.22	--	22.65	30.00	-7.35	19.00

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

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

Equipment Configuration for Average Output Power

Variant:	802.11n HT-20	**Duty Cycle (%):**	92.5
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	2.0
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s) + Duty Cycle Correction Factor : +0.32 dB	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2412.0	17.22	17.55	17.06	--	22.39	30.00	-7.61	19.00
2437.0	17.03	17.49	16.84	--	22.24	30.00	-7.76	19.00
2462.0	16.60	17.09	16.52	--	21.85	30.00	-8.15	19.00

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

Equipment Configuration for Average Output Power

Variant:	802.11n HT-40	**Duty Cycle (%):**	84.6
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	2.0
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s) + Duty Cycle Correction Factor : +0.71 dB	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
2422.0	17.44	17.88	17.41	--	23.08	30.00	-6.92	19.00
2437.0	17.25	17.80	17.19	--	22.92	30.00	-7.08	19.00
2452.0	17.21	17.69	17.04	--	22.82	30.00	-7.18	19.00

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

Equipment Configuration for Average Output Power

Variant:	802.11a	**Duty Cycle (%):**	93.2
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	2.0
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s) + Duty Cycle Correction Factor : +0.32 dB	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
5745.0	17.31	18.46	17.52	--	22.87	30.00	-7.13	19.00
5785.0	16.88	18.40	17.78	--	22.81	30.00	-7.19	19.00
5825.0	16.91	18.26	17.45	--	22.65	30.00	-7.35	19.00

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

Equipment Configuration for Average Output Power

Variant:	802.11ac-80	**Duty Cycle (%):**	90.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	2.0
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s) + Duty Cycle Correction Factor : +0.46 dB	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
5775.0	15.69	17.45	16.87	--	21.96	30.00	-8.04	23.00

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

Equipment Configuration for Average Output Power

Variant:	802.11n HT-20	**Duty Cycle (%):**	89.9
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	2.0
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s) + Duty Cycle Correction Factor : +0.46 dB	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
5745.0	16.12	17.48	16.43	--	21.95	30.00	-8.05	18.00
5785.0	15.71	17.44	16.47	--	21.83	30.00	-8.17	18.00
5825.0	15.77	17.35	16.26	--	21.74	30.00	-8.26	18.00

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

Equipment Configuration for Average Output Power

Variant:	802.11n HT-40	**Duty Cycle (%):**	84.6
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	2.0
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Measured Output Power (dBm)				Calculated Total Power Σ Port(s) + Duty Cycle Correction Factor : +0.71 dB	Limit	Margin	EUT Power Setting
	Port(s)							
MHz	a	b	c	d	dBm	dBm	dB	
5755.0	15.83	17.83	17.83	--	22.76	30.00	-7.24	23.00
5795.0	15.72	17.59	16.57	--	22.19	30.00	-7.81	23.00

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

Antenna Type V's Power Setting

The following **Antenna Types V's Power Setting** tables consolidates the results of all tests performed on the APIN0214 and APIN0215 to finalize the power setting for each antenna's tested;

Integral Antenna (APIN0215)

Channel	2.4 GHz				5.8 GHz			
	b	g	HT-20	HT-40	a	HT-20	HT-40	ac-80
Low	19	17	17	11.5	19	19	19	19
Mid	19	19	19	19	19	19	19	19
High	17	14	17.5	13.5	19	19	19	19

Antenna AP-ANT-1B (APIN0214)

Channel	2.4 GHz				5.8 GHz			
	b	g	HT-20	HT-40	a	HT-20	HT-40	ac-80
Low	19	17	17.25	12	19	18	23	23
Mid	19	19	19	19	19	18	23	23
High	19	15.5	19	19	19	18	23	23

Antenna AP-ANT-13B (APIN0214)

Channel	2.4 GHz				5.8 GHz			
	b	g	HT-20	HT-40	a	HT-20	HT-40	ac-80
Low	19	16	16.5	10	19	18	23	23
Mid	19	19	19	19	19	18	23	23
High	15	13	17	17	19	18	23	23

Antenna AP-ANT-16 (APIN0214)

Channel	2.4 GHz				5.8 GHz			
	b	g	HT-20	HT-40	a	HT-20	HT-40	ac-80
Low	19	16	16.5	10	19	18	23	23
Mid	19	19	19	19	19	18	23	23
High	15	13	17	17	19	18	23	23

Antenna AP-ANT-18 (APIN0214)

Channel	2.4 GHz				5.8 GHz			
	b	g	HT-20	HT-40	a	HT-20	HT-40	ac-80
Low	19	16	16.5	10	19	18	23	23
Mid	19	19	19	19	19	18	23	23
High	16.25	12.5	17.5	17	19	18	23	23

Antenna AP-ANT-19 (APIN0214)

Channel	2.4 GHz				5.8 GHz			
	b	g	HT-20	HT-40	a	HT-20	HT-40	ac-80
Low	19	16.5	17	11.75	19	18	23	23
Mid	19	19	19	19	19	18	23	23
High	16.75	13.5	17.25	17.25	19	18	23	23

Specification

Limits

§15.247 (b) The maximum peak output power of the intentional radiator shall not exceed the following:

§15.247 (b) (3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz bands: 1.0 watt.

15.247 (b) (4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

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

(1) Fixed point-to-point operation:

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

(ii) Systems operating in the 5725–5850 MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted output power.

§15.31 (e) For intentional radiators, measurements of the variation of the input power or the radiated signal level of the fundamental frequency component of the emission, as appropriate, shall be performed with the supply voltage varied between 85% and 115% of the nominal rated supply voltage. For battery operated equipment, the equipment tests shall be performed using a new battery.

§ RSS-210 A8.4(4) For systems employing digital modulation techniques operating in the 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz bands the maximum peak conducted power shall not exceed 1 watt.

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-01 'Measuring RF Output Power'	0158, 0287, 0252, 0313, 0314, 0070, 0116, 0117

5.1.1.3. Power Spectral Density

Conducted Test Conditions for Power Spectral Density			
Standard:	FCC CFR 47:15.247	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Power Spectral Density	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (e)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	KDB 558074 - D01 DTS Measurement Guidance v01: Section 5.3 Maximum Power Spectral Density Level in the Emission Bandwidth		

Test Procedure for Power Spectral Density

The transmitter output was connected to a spectrum analyzer and the maximum level in a 3 kHz bandwidth was measured. A peak value was found over the full emission bandwidth and the frequency span reduced to obtain enhanced resolution. Sweep time ≥ span / 3 kHz with video averaging turned off. The Peak Power Spectral Density is the highest level found across the emission in a 3 kHz resolution bandwidth.

Supporting Information

Calculated Power = A + 10 log (1/x) dBm

A = Total Power Spectral Density [10 Log10 ($10^{a/10}$ + $10^{b/10}$ + $10^{c/10}$ + $10^{d/10}$)]

x = Duty Cycle

Limit Line: KDB 662911 was implemented for In-band power spectral density (PSD) measurements - Option (2) measure and subtract 10 log (N) dB from the limit for devices with multiple RF ports

Equipment Configuration for Power Spectral Density - Average			
Variant:	802.11b	**Duty Cycle (%):**	99.0
Data Rate:	1 MBit/s	**Antenna Gain (dBi):**	2.00
Modulation:	CCK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation + Duty Cycle Correction Factor : +0.04 dB	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/3KHz**	**dBm/3KHz**	**dB**
2412.0	-14.334	-13.713	-14.294	--	-9.610	8.0	-17.6
2437.0	-14.374	-13.419	-14.620	--	-9.804	8.0	-17.8
2462.0	-14.496	-13.540	-14.634	--	-9.896	8.0	-17.9

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 Power Spectral Density - Average			
Variant:	802.11g	**Duty Cycle (%):**	94.0
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	2.00
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation + Duty Cycle Correction Factor : +0.27 dB	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/3KHz**	**dBm/3KHz**	**dB**
2412.0	-17.520	-17.142	-16.886	--	-12.178	8.0	-20.1
2437.0	-17.540	-16.815	-17.520	--	-12.238	8.0	-20.2
2462.0	-17.579	-17.367	-17.796	--	-12.595	8.0	-20.6

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 Power Spectral Density - Average			
Variant:	802.11n HT-20	**Duty Cycle (%):**	92.5
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	2.00
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation + Duty Cycle Correction Factor : +0.34 dB	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/3KHz**	**dBm/3KHz**	**dB**
2412.0	-15.342	-14.083	-14.579	--	-9.527	8.0	-17.5
2437.0	-16.329	-15.193	-15.402	--	-10.504	8.0	-18.5
2462.0	-16.063	-14.428	-15.524	--	-10.174	8.0	-18.1

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 Power Spectral Density - Average			
Variant:	802.11n HT-40	**Duty Cycle (%):**	84.6
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	2.00
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation + Duty Cycle Correction Factor : +0.73 dB	Limit	Margin
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
2422.0	-19.610	-18.310	-19.512	--	-13.605	8.0	-21.6
2437.0	-18.970	-19.367	-19.016	--	-13.617	8.0	-21.6
2452.0	-18.018	-17.998	-18.183	--	-12.568	8.0	-20.5

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 Power Spectral Density - Average			
Variant:	802.11a	**Duty Cycle (%):**	93.2
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	2.00
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation + Duty Cycle Correction Factor : +0.31 dB	Limit	Margin
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
5745.0	-17.916	-16.245	-17.618	--	-12.175	8.0	-20.1
5785.0	-18.163	-16.414	-16.977	--	-12.048	8.0	-20.0
5825.0	-18.059	-16.448	-17.443	--	-12.188	8.0	-20.2

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 Power Spectral Density - Average			
Variant:	802.11ac-80	**Duty Cycle (%):**	90.0
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	2.00
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results							
Test Frequency	**Measured Power Spectral Density**				**Amplitude Summation + Duty Cycle Correction Factor : +0.46 dB**	**Limit**	**Margin**
	Port(s) (dBm/3KHz)						
MHz	**a**	**b**	**c**	**d**	**dBm/3KHz**	**dBm/3KHz**	**dB**
5775.0	-26.008	-23.957	-24.545	--	-19.525	8.0	-27.5

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 Power Spectral Density - Average			
Variant:	802.11n HT-20	**Duty Cycle (%):**	89.9
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	2.00
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation + Duty Cycle Correction Factor : +0.46 dB	Limit	Margin
MHz	a	b	c	d	dBm/3KHz	dBm/3KHz	dB
5745.0	-16.279	-14.551	-15.917	--	-10.284	8.0	-18.3
5785.0	-16.744	-14.746	-15.934	--	-10.496	8.0	-18.5
5825.0	-16.941	-14.902	-16.465	--	-10.779	8.0	-18.7

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 Power Spectral Density - Average			
Variant:	802.11n HT-40	**Duty Cycle (%):**	84.6
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	2.00
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:			

Test Measurement Results

Test Frequency	Measured Power Spectral Density Port(s) (dBm/3KHz)				Amplitude Summation + Duty Cycle Correction Factor : +0.73 dB	Limit	Margin
MHz	**a**	**b**	**c**	**d**	**dBm/3KHz**	**dBm/3KHz**	**dB**
5755.0	-20.823	-18.834	-20.143	--	-14.563	8.0	-22.5
5795.0	-21.716	-19.319	-20.572	--	-14.928	8.0	-22.9

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).

Specification
Peak Power Spectral Density Limits

§15.247(e) For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission **RSS-210** §**A8.2(2)** The transmitter power spectral density (into the antenna) shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission or over 1.0 second if the transmission exceeds 1.0 second duration.

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-01 'Measuring RF Output Power'	0158, 0287, 0252, 0313, 0314, 0070, 0116, 0117

5.1.1.4. Conducted Spurious Emissions

Conducted Test Conditions for Transmitter Conducted Spurious and Band-Edge Emissions			
Standard:	FCC CFR 47:15.247	**Ambient Temp. (ºC):**	24.0 - 27.5
Test Heading:	Max Unwanted Emission Levels	**Rel. Humidity (%):**	32 - 45
Standard Section(s):	15.247 (d)	**Pressure (mBars):**	999 - 1001
Reference Document(s):	KDB 558074 - D01 DTS Measurement Guidance v01: Section 5.4 Maximum Unwanted Emission Levels		

Test Procedure for Transmitter Conducted Spurious and Band-Edge Emissions Measurement
Transmitter Conducted Spurious and Band-Edge emissions were measured at a limit of 20 dB below the highest in-band spectral density measured with a spectrum analyzer connected to the antenna terminal. Measurements were made while EUT was operating in transmit mode of operation at the appropriate centre frequency closest to the band-edge. Emissions were maximized during the measurement and limits derived from the peak spectral power and drawn on each plot.

Equipment Configuration for Conducted Low Band-Edge Emissions - Average			
Variant:	802.11b	**Duty Cycle (%):**	99
Data Rate:	1 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	CCK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	2412.0 MHz					
Band-Edge Frequency:	2400.0 MHz					
Test Frequency Range:	2350.0 - 2422.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-55.46	-29.05	2404.50	--	--	-4.500
b	-56.34	-28.81	2404.50	--	--	-4.500
c	-55.56	-29.14	2404.50	--	--	-4.500

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions - Average			
Variant:	802.11g	**Duty Cycle (%):**	94
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	2412.0 MHz					
Band-Edge Frequency:	2400.0 MHz					
Test Frequency Range:	2350.0 - 2422.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-39.48	-32.74	2401.80	--	--	-1.800
b	-40.04	-32.68	2401.80	--	--	-1.800
c	-40.80	-32.78	2401.80	--	--	-1.800

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions - Average			
Variant:	802.11n HT-20	**Duty Cycle (%):**	93
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	2412.0 MHz					
Band-Edge Frequency:	2400.0 MHz					
Test Frequency Range:	2350.0 - 2422.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-45.42	-31.91	2402.10	--	--	-2.100
b	-44.90	-32.00	2402.20	--	--	-2.200
c	-46.91	-31.87	2402.40	--	--	-2.400

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions - Average

Variant:	802.11n HT-40	**Duty Cycle (%):**	85
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	2422.0 MHz
Band-Edge Frequency:	2400.0 MHz
Test Frequency Range:	2292.0 - 2442.0 MHz

Port(s)	Band-Edge Markers and Limit			Amended Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-45.42	-36.51	2402.30	--	--	-2.300
b	-45.55	-36.20	2402.60	--	--	-2.600
c	-47.60	-36.57	2402.60	--	--	-2.600

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions - Average

Variant:	802.11a	**Duty Cycle (%):**	93
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	5745.0 MHz					
Band-Edge Frequency:	5725.0 MHz					
Test Frequency Range:	5683.0 - 5755.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-47.44	-33.39	5734.90	--	--	-9.900
b	-51.16	-32.09	5734.90	--	--	-9.900
c	-51.29	-33.02	5734.80	--	--	-9.800

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions - Average

Variant:	802.11ac-80	**Duty Cycle (%):**	90
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	5775.0 MHz
Band-Edge Frequency:	5725.0 MHz
Test Frequency Range:	5600.0 - 5820.0 MHz

Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-47.42	-41.22	5734.90	--	--	-9.900
b	-48.41	-39.54	5735.40	--	--	-10.400
c	-48.24	-39.95	5735.80	--	--	-10.800

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

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

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

Equipment Configuration for Conducted Low Band-Edge Emissions - Average

Variant:	802.11n HT-20	**Duty Cycle (%):**	90
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	5745.0 MHz
Band-Edge Frequency:	5725.0 MHz
Test Frequency Range:	5683.0 - 5755.0 MHz

Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M1 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-48.46	-32.53	5735.20	--	--	-10.200
b	-53.99	-31.05	5735.50	--	--	-10.500
c	-53.94	-32.21	5735.20	--	--	-10.200

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

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

Equipment Configuration for Conducted Low Band-Edge Emissions - Average

Variant:	802.11n HT-40	**Duty Cycle (%):**	85
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	5755.0 MHz
Band-Edge Frequency:	5725.0 MHz
Test Frequency Range:	5625.0 - 5775.0 MHz

Port(s)	Band-Edge Markers and Limit			Amended Limit		Margin
	M1 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-45.90	-38.06	5735.30	--	--	-10.300
b	-48.21	-35.57	5735.60	--	--	-10.600
c	-49.36	-37.01	5735.60	--	--	-10.600

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

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

Equipment Configuration for Conducted High Band-Edge Emissions - Average

Variant:	802.11b	**Duty Cycle (%):**	99
Data Rate:	1 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	CCK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	2462.0 MHz
Band-Edge Frequency:	2483.5 MHz
Test Frequency Range:	2452.0 - 2524.0 MHz

Port(s)	Band-Edge Markers and Limit			Amended Limit		Margin
	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-65.99	-29.79	2469.50	--	--	-14.000
b	-59.87	-29.25	2469.50	--	--	-14.000
c	-60.37	-29.70	2469.60	--	--	-13.900

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

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

Equipment Configuration for Conducted High Band-Edge Emissions - Average

Variant:	802.11g	**Duty Cycle (%):**	94
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	2462.0 MHz
Band-Edge Frequency:	2483.5 MHz
Test Frequency Range:	2452.0 - 2524.0 MHz

Port(s)	Band-Edge Markers and Limit			Amended Limit		Margin
	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-49.34	-33.79	2472.20	--	--	-11.300
b	-49.76	-33.17	2472.20	--	--	-11.300
c	-51.42	-33.67	2472.20	--	--	-11.300

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

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

Equipment Configuration for Conducted High Band-Edge Emissions - Average			
Variant:	802.11n HT-20	**Duty Cycle (%):**	93
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	2462.0 MHz
Band-Edge Frequency:	2483.5 MHz
Test Frequency Range:	2452.0 - 2524.0 MHz

Port(s)	Band-Edge Markers and Limit			Amended Limit		Margin
	M3 Amplitude (dBm)	Plot Limit (dBm)	M2 Frequency (MHz)	Amplitude (dBm)	M2A Frequency (MHz)	(MHz)
a	-53.95	-32.39	2471.80	--	--	-11.700
b	-54.76	-31.89	2471.80	--	--	-11.700
c	-56.28	-32.50	2471.80	--	--	-11.700

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

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

Equipment Configuration for Conducted High Band-Edge Emissions - Average			
Variant:	802.11n HT-40	**Duty Cycle (%):**	85
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	2452.0 MHz					
Band-Edge Frequency:	2483.5 MHz					
Test Frequency Range:	2432.0 - 2582.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-44.12	-37.05	2471.70	--	--	-11.800
b	-45.06	-36.60	2471.40	--	--	-12.100
c	-46.39	-36.53	2471.70	--	--	-11.800

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

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

Equipment Configuration for Conducted High Band-Edge Emissions - Average			
Variant:	802.11a	**Duty Cycle (%):**	93
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	5825.0 MHz					
Band-Edge Frequency:	5850.0 MHz					
Test Frequency Range:	5815.0 - 5887.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-50.69	-33.92	5835.10	--	--	-14.900
b	-54.58	-32.96	5835.10	--	--	-14.900
c	-52.36	-33.43	5835.10	--	--	-14.900

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

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

Equipment Configuration for Conducted High Band-Edge Emissions - Average			
Variant:	802.11ac-80	**Duty Cycle (%):**	90
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	5775.0 MHz					
Band-Edge Frequency:	5850.0 MHz					
Test Frequency Range:	5735.0 - 5955.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-49.13	-41.68	5816.60	--	--	-33.400
b	-50.35	-39.95	5815.70	--	--	-34.300
c	-49.63	-40.23	5815.70	--	--	-34.300

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

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

Equipment Configuration for Conducted High Band-Edge Emissions - Average			
Variant:	802.11n HT-20	**Duty Cycle (%):**	90
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	5825.0 MHz					
Band-Edge Frequency:	5850.0 MHz					
Test Frequency Range:	5815.0 - 5887.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-53.34	-33.35	5834.90	--	--	-15.100
b	-59.26	-31.59	5834.60	--	--	-15.400
c	-54.04	-32.87	5834.80	--	--	-15.200

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

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

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

Equipment Configuration for Conducted High Band-Edge Emissions - Average			
Variant:	802.11n HT-40	**Duty Cycle (%):**	85
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Channel Frequency:	5795.0 MHz					
Band-Edge Frequency:	5850.0 MHz					
Test Frequency Range:	5775.0 - 5925.0 MHz					
Port(s)	**Band-Edge Markers and Limit**			**Amended Limit**		**Margin**
	M3 Amplitude (dBm)	**Plot Limit (dBm)**	**M2 Frequency (MHz)**	**Amplitude (dBm)**	**M2A Frequency (MHz)**	**(MHz)**
a	-52.64	-37.65	5814.40	--	--	-35.600
b	-57.18	-36.07	5814.40	--	--	-35.600
c	-61.20	-37.24	5814.40	--	--	-35.600

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

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

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11b	**Duty Cycle (%):**	99
Data Rate:	1 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	CCK	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30 - 26000	-66.480	-45.65	-66.480	-45.09	-67.504	-45.45	--	--
2437.0	30 - 26000	-66.480	-46.16	-66.480	-45.60	-67.504	-46.36	--	--
2462.0	30 - 26000	-66.480	-46.47	-66.480	-46.03	-67.504	-46.65	--	--

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

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

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11g	**Duty Cycle (%):**	94
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30 - 26000	-66.480	-44.69	-66.480	-44.41	-67.504	-44.85	--	--
2437.0	30 - 26000	-66.480	-44.57	-66.480	-44.52	-67.504	-44.86	--	--
2462.0	30 - 26000	-66.480	-45.07	-66.480	-44.87	-67.504	-45.36	--	--

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

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

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11n HT-20	**Duty Cycle (%):**	93
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2412.0	30 - 26000	-66.480	-46.45	-66.480	-46.29	-67.504	-46.61	--	--
2437.0	30 - 26000	-66.480	-46.19	-66.480	-46.08	-67.504	-46.59	--	--
2462.0	30 - 26000	-66.480	-46.82	-66.480	-46.51	-67.504	-47.02	--	--

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

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

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11n HT-40	**Duty Cycle (%):**	85
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
2422.0	30 - 26000	-66.480	-48.14	-66.480	-47.19	-67.504	-48.20	--	--
2437.0	30 - 26000	-66.480	-43.21	-66.480	-42.74	-67.504	-43.41	--	--
2452.0	30 - 26000	-66.480	-43.37	-66.480	-42.86	-67.504	-43.51	--	--

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

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

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11a	**Duty Cycle (%):**	93
Data Rate:	6 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
5745.0	30 - 26000	-61.483	-49.43	-62.044	-48.26	-63.286	-48.95	--	--
5785.0	30 - 26000	-59.990	-45.34	-62.044	-44.18	-63.286	-44.29	--	--
5825.0	30 - 26000	-60.460	-45.42	-61.483	-43.95	-62.643	-44.89	--	--

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

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

Equipment Configuration for Transmitter Conducted Spurious Emissions			
Variant:	802.11ac-80	**Duty Cycle (%):**	90
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
5775.0	30 - 26000	-63.286	-45.28	-63.286	-43.50	-63.286	-44.00	--	--

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

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

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11n HT-20	**Duty Cycle (%):**	90
Data Rate:	6.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
5745.0	30 - 26000	-62.643	-51.59	-62.643	-50.34	-63.982	-51.25	--	--
5785.0	30 - 26000	-60.956	-47.42	-62.643	-46.16	-63.286	-46.81	--	--
5825.0	30 - 26000	-61.483	-47.53	-62.643	-46.12	-63.286	-47.23	--	--

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

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

Equipment Configuration for Transmitter Conducted Spurious Emissions

Variant:	802.11n HT-40	**Duty Cycle (%):**	85
Data Rate:	13.5 MBit/s	**Antenna Gain (dBi):**	Not Applicable
Modulation:	OFDM	**Beam Forming Gain (Y):**	Not Applicable
TPC:	Not Applicable	**Tested By:**	SB
Engineering Test Notes:	Image built 2014-05-07 at 04:01:39 EDT (gcc version 4.5.1)		

Test Measurement Results

Test Frequency	Frequency Range	Transmitter Conducted Spurious Emissions (dBm)							
		Port a		Port b		Port c		Port d	
MHz	MHz	SE	Limit	SE	Limit	SE	Limit	SE	Limit
5755.0	30 - 26000	-63.286	-46.03	-62.643	-44.13	-63.982	-45.64	--	--
5795.0	30 - 26000	-62.643	-49.99	-63.286	-48.53	-63.286	-49.65	--	--

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

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

Specification

Limits Band-Edge

Lower Limit Band-edge	Upper Limit Band-edge	Limit below highest level of desired power
2,400 MHz	2,483.5 MHz	≥ 20 dB
5725 MHz	5850 MHz	

§15.247(d) and RSS-210 §A8.5 In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

§15.247(d)
If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section §15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(a)).

RSS-210 §A8.5 If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required. In addition, radiated emissions which fall in the restricted bands of Table 1 must also comply with the radiated emission limits specified in Tables 2 and 3.

RSS-Gen §4.7
The search for unwanted emissions shall be from the lowest frequency internally generated or used in the device (local oscillator, intermediate of carrier frequency), or from 30 MHz , whichever is the lowest frequency, to the 5th harmonic of the highest frequency generated without exceeding 40 GHz.

Laboratory Measurement Uncertainty for Conducted Spurious Emissions

Measurement uncertainty	±2.37 dB

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-05 'Measurement of Spurious Emissions'	0088, 0158, 0287, 0252, 0313, 0314, 0070, 0116, 0117.

5.1.2. Radiated Emission Testing

Transmitter Radiated Spurious Emissions (above 1 GHz); Peak Field Strength Measurements; and Radiated Band Edge Measurements – Restricted Bands

FCC, Part 15 Subpart C §15.247(d) 15.205; 15.209
Industry Canada RSS-210 §A8.5, §2.2, §2.6
Industry Canada RSS-Gen §4.7

Test Procedure

Radiated emissions above 1 GHz are measured in the anechoic chamber at a 3-meter distance on every azimuth in both horizontal and vertical polarities. The emissions are recorded and maximized as a function of azimuth by rotation through 360° with a spectrum analyzer in peak hold mode. Depending on the frequency band spanned a notch filter and waveguide filter was used to remove the fundamental frequency. The highest emissions relative to the limit are listed for each frequency spanned.

All measurements on any frequency or frequencies over 1 MHz are based on the use of measurement instrumentation employing an average detector function. All measurements above 1 GHz were performed using a minimum resolution bandwidth of 1 MHz.

Operational Modes

Operational mode(s) tested for spurious emissions were the modes which delivered maximum spectral density 802.11b and 802.11a.

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

where: 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

For 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:

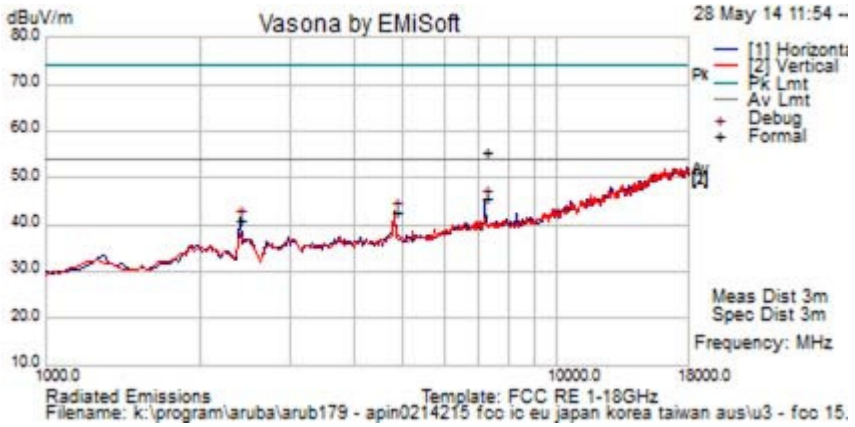
Level (dBμV/m) = 20 * Log (level (μV/m))

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

NOTE: KDB 662911 was implemented for Out-of-Band measurements. Where necessary Option (2) Measure and add 10 log (N) dB was implemented

5.1.2.1. Integral antenna – Spurious and Band-Edge Emissions

Test Freq.	2412 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	Integral	**Duty Cycle (%)**	99
Test Notes 1	AP215 P302; EUT=Vertical; S/N : CK0000953; MAC: 24 DE C6 CF 5D 38;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

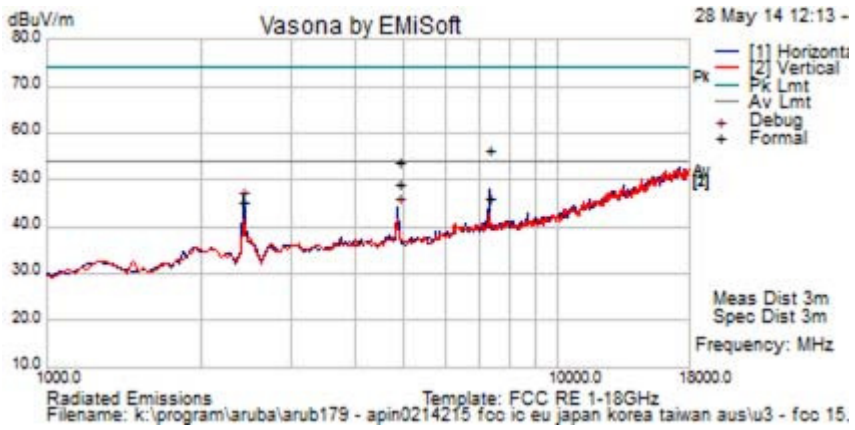


Formally measured emission peaks

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
7234.872	48.5	7.2	-0.2	55.4	Peak Max	H	119	234	74.0	-18.6	Pass	RB
7234.872	38.6	7.2	-0.2	45.5	Average Max	H	119	234	54.0	-8.5	Pass	RB
2400.753	42.3	3.9	-5.5	40.7	Peak [Scan]	H	98					FUND
4816.550	39.5	5.7	-2.3	42.8	Peak [Scan]	H	98	234	54.0	-11.2	Pass	RB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2437 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	Integral	**Duty Cycle (%)**	99
Test Notes 1	AP215 P302; EUT=Vertical; S/N : CK0000953; MAC: 24 DE C6 CF 5D 38;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

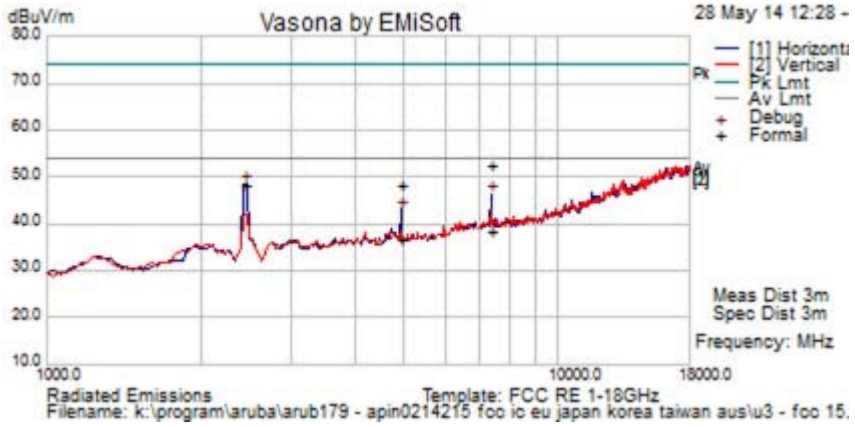


Formally measured emission peaks

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
7310.949	49.4	7.2	-0.3	56.4	Peak Max	H	110	99	74.0	-17.6	Pass	RB
4874.008	50.4	5.7	-2.3	53.8	Peak Max	H	117	225	74.0	-20.2	Pass	RB
7310.949	38.9	7.2	-0.3	45.9	Average Max	H	110	99	54	-8.1	Pass	RB
4874.008	45.5	5.7	-2.3	48.9	Average Max	H	117	225	54	-5.1	Pass	RB
2425.163	46.5	3.9	-5.3	45.1	Peak [Scan]	V	98					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2462 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	Integral	**Duty Cycle (%)**	99
Test Notes 1	AP215 P302; EUT=Vertical; S/N : CK0000953; MAC: 24 DE C6 CF 5D 38;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

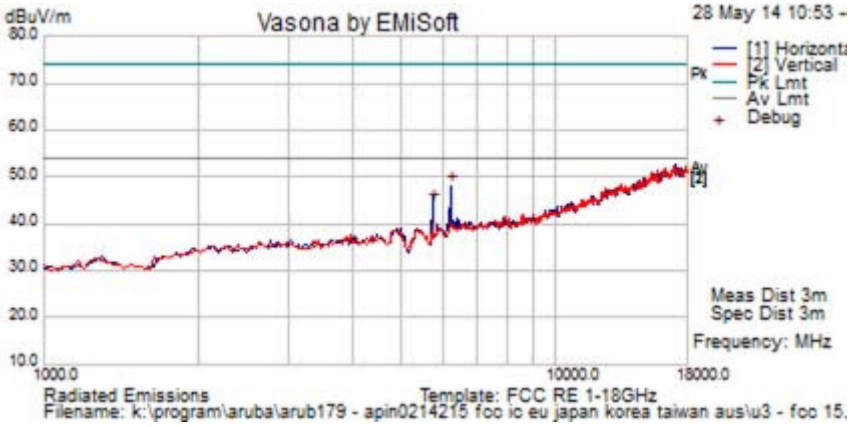


Formally measured emission peaks

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
7385.560	45.2	7.3	-0.1	52.4	Peak Max	V	182	166	74.0	-21.6	Pass	RB
4923.975	44.8	5.7	-2.5	48.0	Peak Max	V	118	198	74.0	-26.0	Pass	RB
7385.560	31.4	7.3	-0.1	38.5	Average Max	V	182	166	54	-15.5	Pass	RB
4923.975	33.3	5.7	-2.5	36.5	Average Max	V	118	198	54	-17.5	Pass	RB
2430.862	49.7	3.9	-5.3	48.3	Peak [Scan]	H	200					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5745 MHz	**Engineer**	SB
Variant	802.11a; 6.5 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	Integral	**Duty Cycle (%)**	99
Test Notes 1	AP215 P302; EUT=Vertical; S/N : CK0000953; MAC: 24 DE C6 CF 5D 38;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

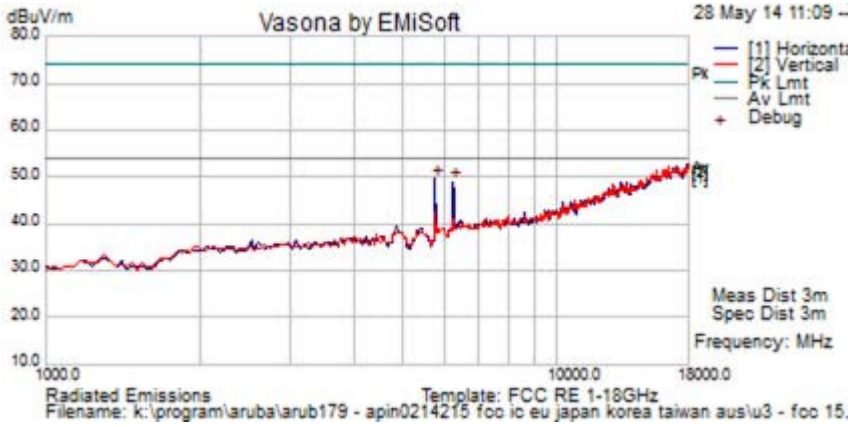


Formally measured emission peaks

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
6212.425	42.1	6.6	-0.6	48.0	Peak [Scan]	H	150					NRB
5731.037	40.0	6.2	-1.9	44.3	Peak [Scan]	H	100					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5785 MHz	**Engineer**	SB
Variant	802.11a; 6.5 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	Integral	**Duty Cycle (%)**	99
Test Notes 1	AP215 P302; EUT=Vertical; S/N : CK0000953; MAC: 24 DE C6 CF 5D 38;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

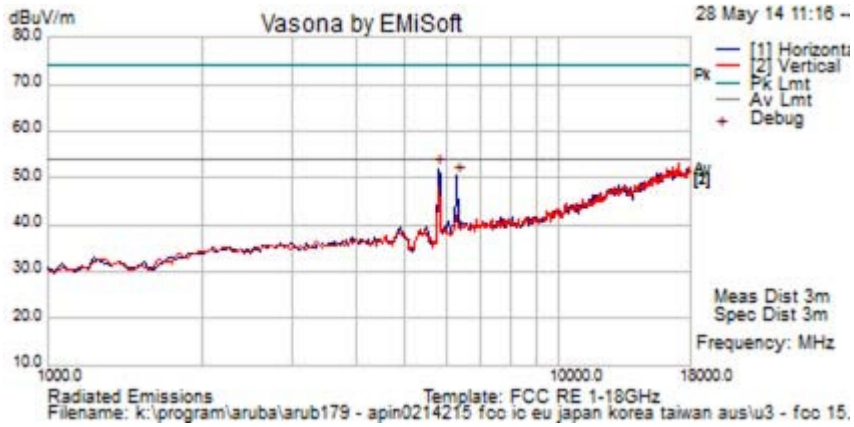


Formally measured emission peaks

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
5769.539	45.0	6.3	-1.8	49.5	Peak [Scan]	H	100					FUND
6246.49299	42.9	6.6	-0.6	48.9	Peak [Scan]	H	150					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5825 MHz	**Engineer**	SB
Variant	802.11a; 6.5 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	Integral	**Duty Cycle (%)**	99
Test Notes 1	AP215 P302; EUT=Vertical; S/N : CK0000953; MAC: 24 DE C6 CF 5D 38;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		



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
5803.607	47.4	6.3	-1.8	51.9	Peak [Scan]	H	100					FUND
6314.62926	44.4	6.6	-0.6	50.5	Peak [Scan]	H	100					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Band-Edge Antenna Integral

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

2.4 GHz Frequency Band

	Restricted Band 2390 MHz			Restricted Band 2483.5 MHz		
	dBµV/m		Power Setting	dBµV/m		Power Setting
Operational Mode	Peak	Average		Peak	Average	
b	66.55	46.11	19	73.89	52.32	17
g	67.98	53.72	17	71.25	53.89	14
n HT-20	67.67	52.72	17	70.82	53.30	17.5
n HT-40	65.61	53.65	11.5	71.20	53.75	13.5

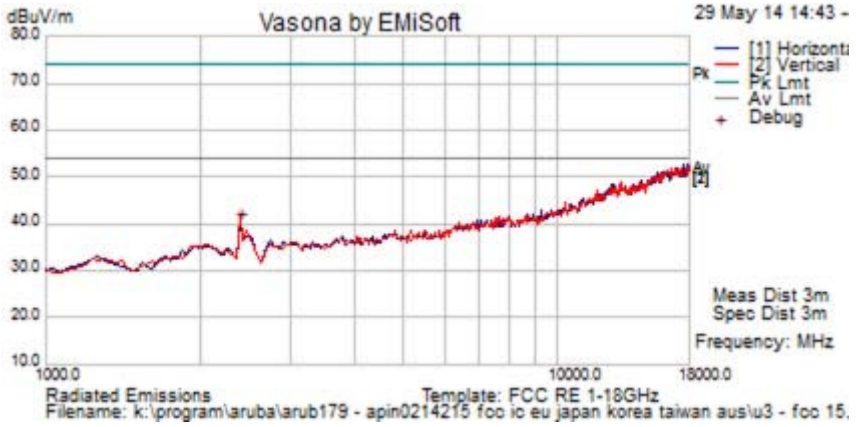
5.8 GHz Frequency Band

	Restricted Band 5460 MHz		
Operational Mode	Peak	Average	Power Setting
a	53.86	40.88	19
n HT-20	54.03	40.88	19
n HT-40	54.03	40.88	19
ac-80	54.03	40.88	19

All band-edge plots are kept on file by the laboratory

5.1.2.2. AP-ANT-1B – Spurious and Band-Edge Emissions

Test Freq.	2412 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 1B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

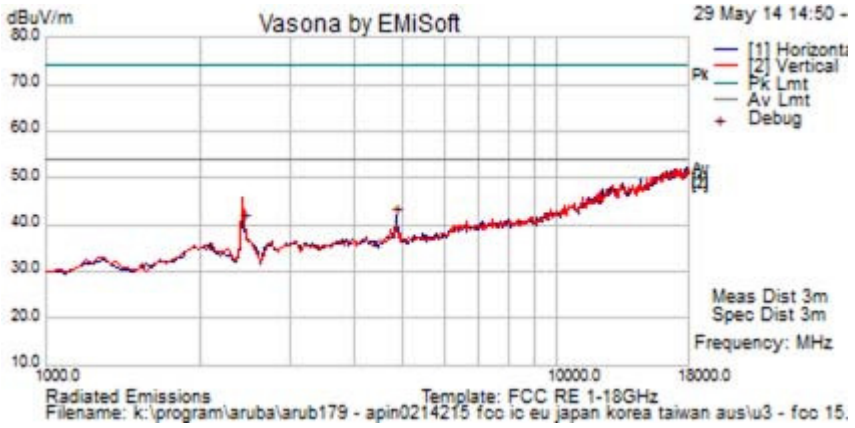


Formally measured emission peaks

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
2400.753	41.5	3.9	-5.5	40.0	Peak [Scan]	V	98					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2437 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 1B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

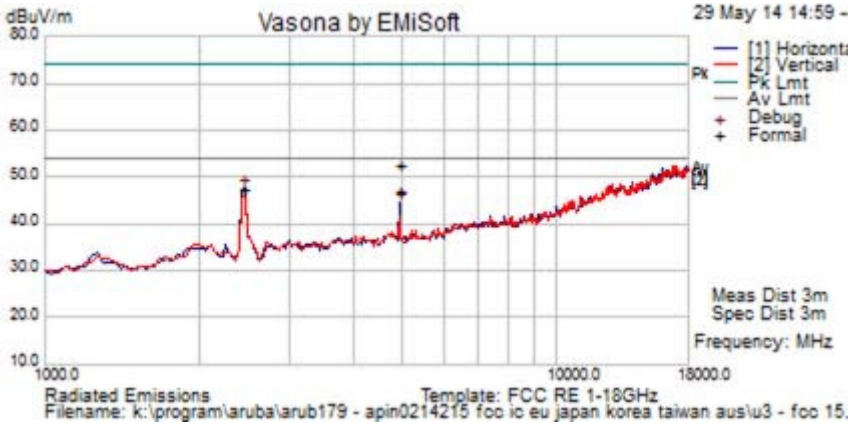


Formally measured emission peaks

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
4845.948	38.0	5.7	-2.3	41.4	Peak [Scan]	V	98	-1	54.0	-12.6	Pass	RB
2446.284	41.5	4.0	-5.2	40.2	Peak [Scan]	V	98					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2462 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 1B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

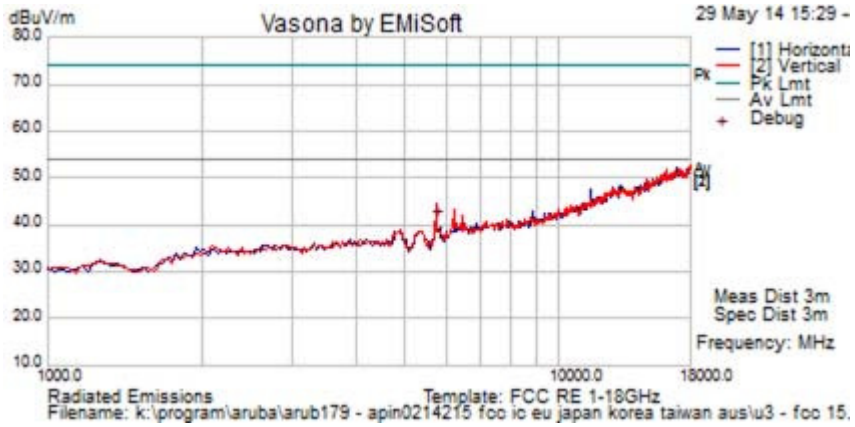


Formally measured emission peaks

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
4923.835	49.2	5.7	-2.5	52.5	Peak Max	H	125	226	74.0	-21.5	Pass	RB
4923.835	43.6	5.7	-2.5	46.8	Average Max	H	125	226	54.0	-7.2	Pass	RB
2446.284	48.6	4.0	-5.2	47.3	Peak [Scan]	V	99					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5745 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 1B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

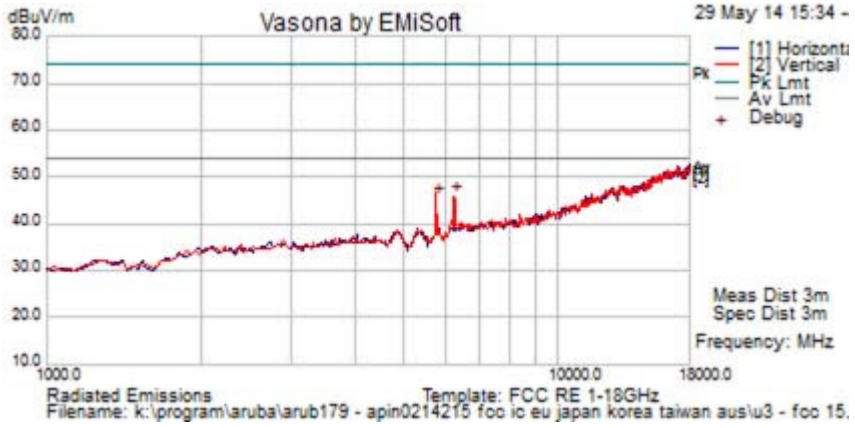


Formally measured emission peaks

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
5755.294	36.6	6.3	-1.8	41.0	Peak [Scan]	V	98					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5785 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 1B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

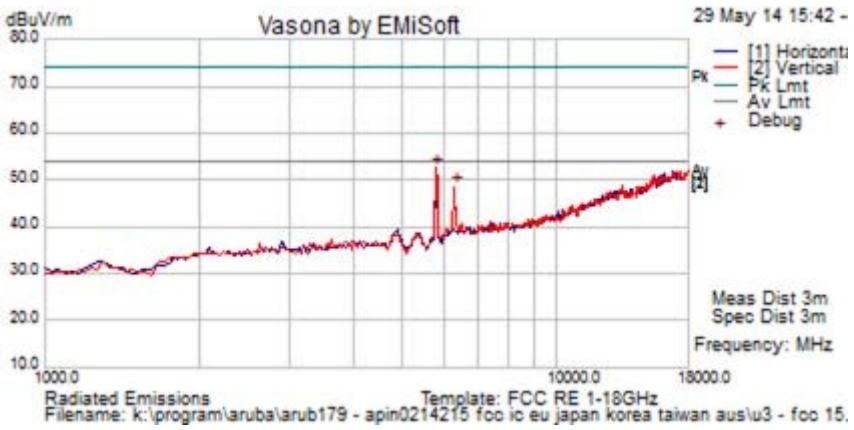


Formally measured emission peaks

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
5774.592	41.1	6.3	-1.8	45.6	Peak [Scan]	V	98					FUND
6249.44	39.9	6.6	-0.5	45.9	Peak [Scan]	V	98					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5825 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 1B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		



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
5803.607	48.2	6.3	-1.8	52.7	Peak [Scan]	V	100					FUND
6314.62926	42.5	6.6	-0.6	48.5	Peak [Scan]	V	150					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Band-Edge Antenna AP-ANT-1B

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

2.4 GHz Frequency Band

	Restricted Band 2390 MHz			Restricted Band 2483.5 MHz		
	dBµV/m		Power Setting	dBµV/m		Power Setting
Operational Mode	Peak	Average		Peak	Average	
b	59.41	40.76	19	73.08	50.49	19
g	68.67	53.65	17	71.22	53.90	15.5
n HT-20	69.17	53.27	17.25	67.33	49.06	19
n HT-40	66.34	53.65	12	68.62	49.18	19

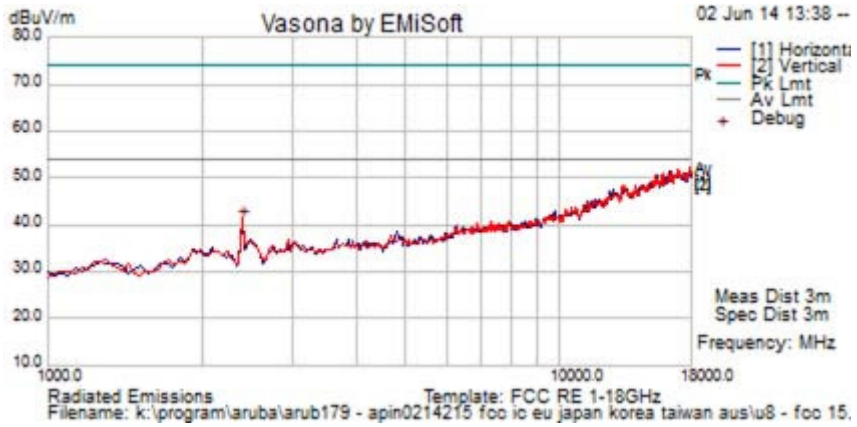
5.8 GHz Frequency Band

	Restricted Band 5460 MHz		
Operational Mode	Peak	Average	Power Setting
a	54.86	41.99	20
n HT-20	54.62	41.27	20
n HT-40	54.54	41.99	23
ac-80	54.78	41.27	23

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

5.1.2.3. AP-ANT-13B – Spurious and Band-Edge Emissions

Test Freq.	2412 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 13B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

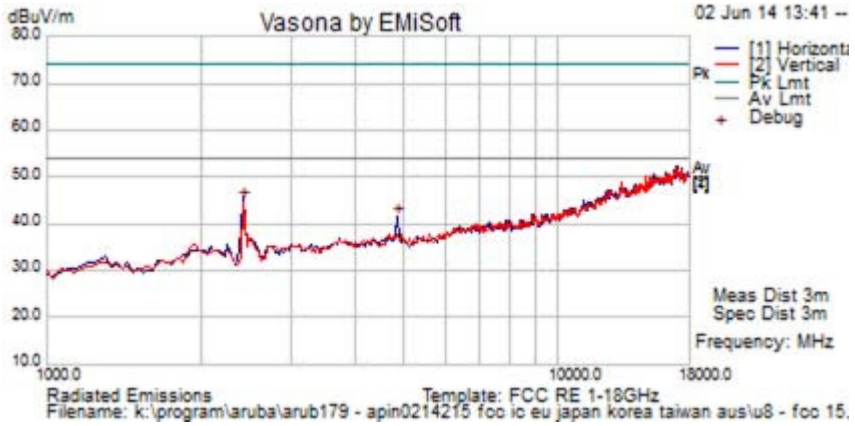


Formally measured emission peaks

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
2397.261	42.5	3.9	-5.5	40.9	Peak [Scan]	V	101					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2437 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 13B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

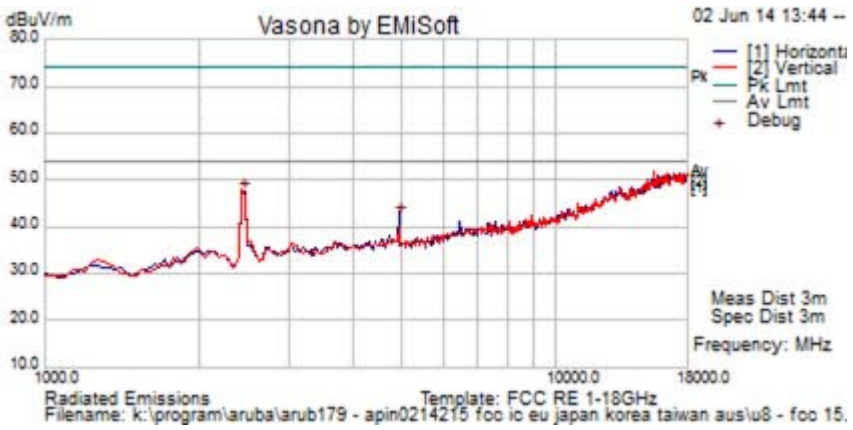


Formally measured emission peaks

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
2425.744	46.1	3.9	-5.3	44.7	Peak [Scan]	V	101					FUND
4847.653	37.8	5.7	-2.3	41.2	Peak [Scan]	H	101	-1	54.0	-12.8	Pass	RB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2462 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 13B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

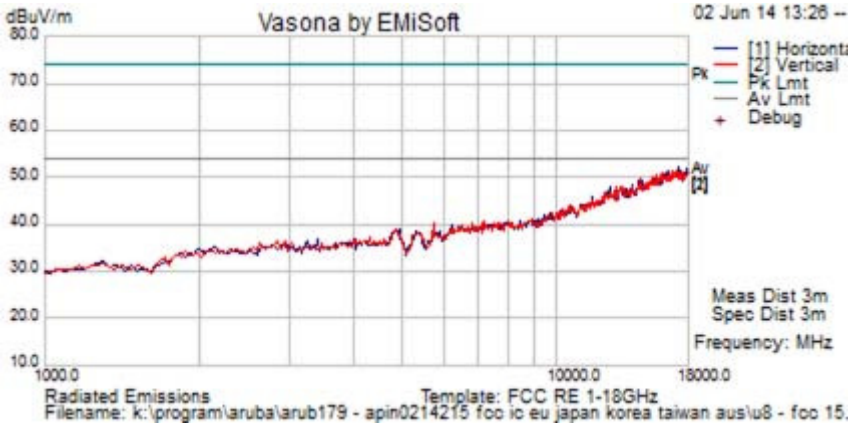


Formally measured emission peaks

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
2446.634	48.6	4.0	-5.2	47.4	Peak [Scan]	V	101					FUND
4912.630	37.9	5.7	-2.4	41.2	Peak [Scan]	V	101	-1	54.0	-12.8	Pass	RB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5745 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 13B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

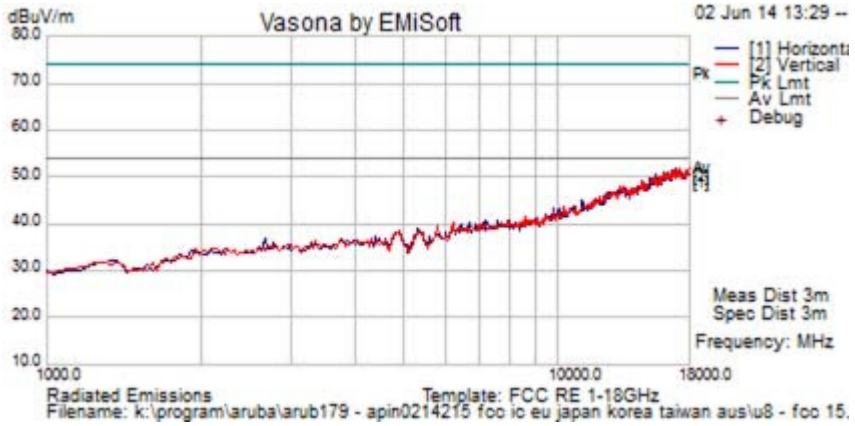


Formally measured emission peaks

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
5737.025	42.1	6.2	-1.9	46.4	Peak [Scan]	V	101					FUND
6223.893	37.1	6.6	-0.6	43.0	Peak [Scan]	V	101					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5785 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 13B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

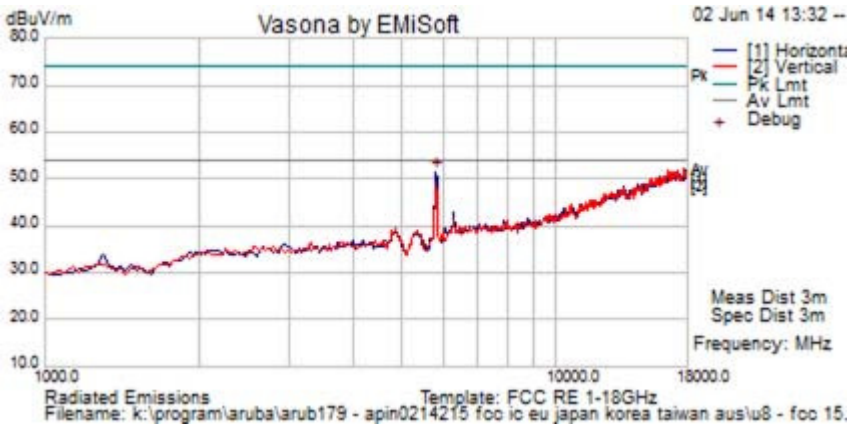


Formally measured emission peaks

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
No Emissions observed within 6dB of the limit.												

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5825 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 13B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		



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
5803.607	47.1	6.3	-1.8	51.6	Peak [Scan]	H	100					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Band-Edge Antenna AP-ANT-13B

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

2.4 GHz Frequency Band

	Restricted Band 2390 MHz			Restricted Band 2483.5 MHz		
	dBµV/m		Power Setting	dBµV/m		Power Setting
Operational Mode	Peak	Average		Peak	Average	
b	61.57	47.28	19	70.67	53.56	15
g	68.98	53.21	16	72.41	53.80	13
n HT-20	69.02	53.02	16.5	71.96	52.90	17
n HT-40	66.28	53.83	10	68.33	52.60	17

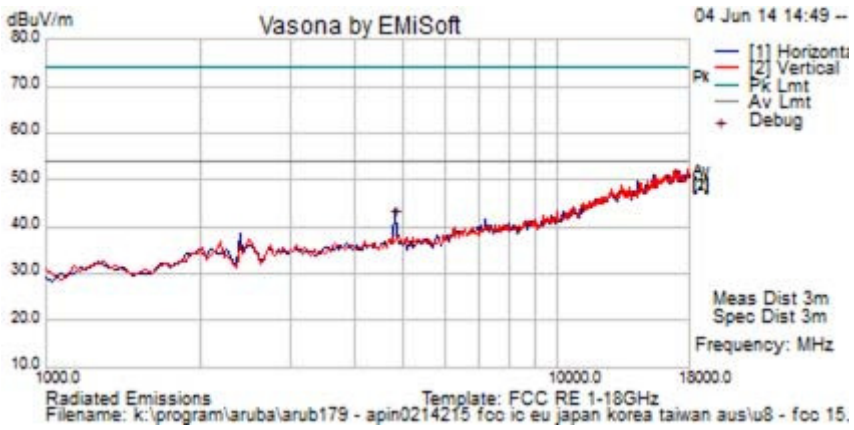
5.8 GHz Frequency Band

	Restricted Band 5460 MHz		
Operational Mode	Peak	Average	Power Setting
a	55.55	42.72	23
n HT-20	55.55	42.82	23
n HT-40	55.88	42.83	23
ac-80	55.54	42.72	23

This test report may be reproduced in full only. The document may only be updated by MiCOM Labs personnel. Any changes will be noted in the Document History section of the report.

5.1.2.4. AP-ANT-16 – Spurious and Band-Edge Emissions

Test Freq.	2412 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 16	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

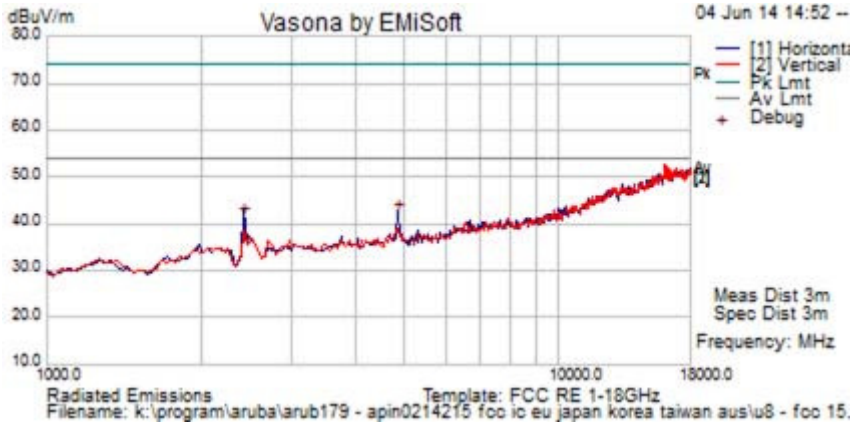


Formally measured emission peaks

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
4804.110	38.0	5.7	-2.3	41.4	Peak [Scan]	V	99	361	54.0	-12.6	Pass	RB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2437 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 16	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

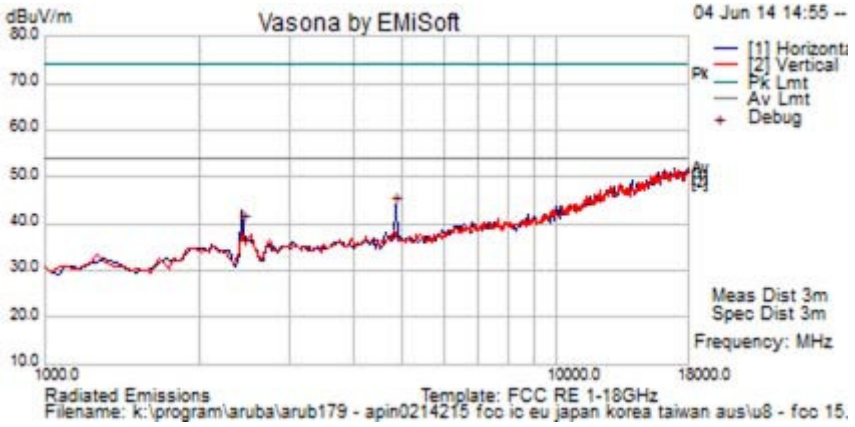


Formally measured emission peaks

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
4845.948	38.6	5.7	-2.3	42.0	Peak [Scan]	H	99	361	54.0	-12.0	Pass	RB
2425.163	42.7	3.9	-5.3	41.3	Peak [Scan]	H	99					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2462 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 16	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

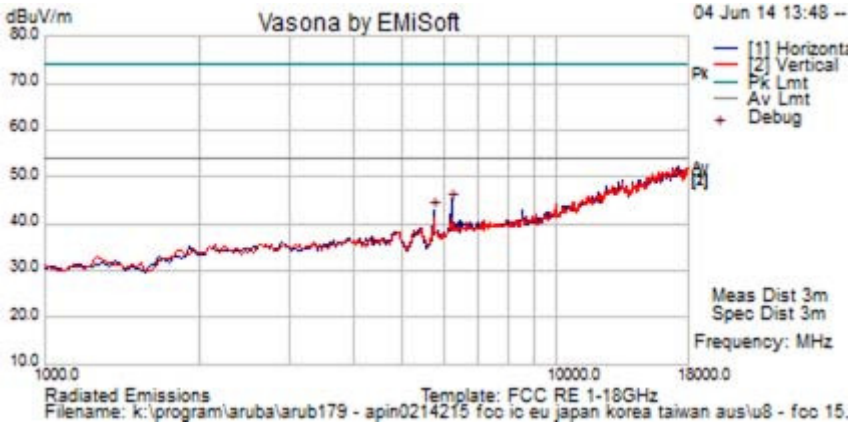


Formally measured emission peaks

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
4845.948	38.5	5.7	-2.3	41.9	Peak [Scan]	V	99	361	54.0	-12.1	Pass	RB
2446.284	41.0	4.0	-5.2	39.8	Peak [Scan]	V	99					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5745 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 16	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

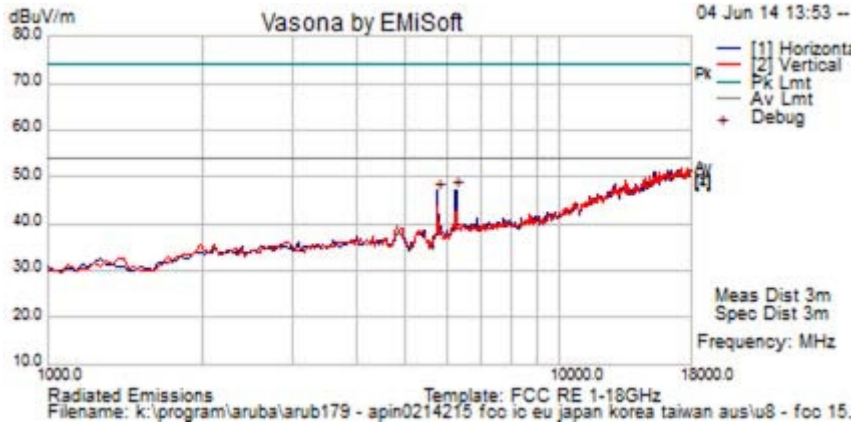


Formally measured emission peaks

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
6207.330	38.4	6.5	-0.7	44.3	Peak [Scan]	V	99					NRB
5736.948	38.4	6.2	-1.9	42.8	Peak [Scan]	V	99					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5785 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 16	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

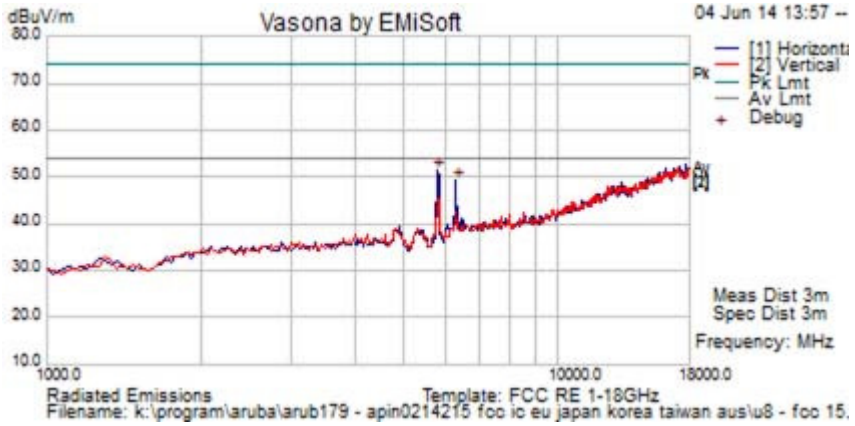


Formally measured emission peaks

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
5771.890	42.2	6.3	-1.8	46.7	Peak [Scan]	V	99					FUND
6269.106	41.1	6.6	-0.6	47.1	Peak [Scan]	V	99					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5825 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 16	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		



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
5803.607	46.8	6.3	-1.8	51.3	Peak [Scan]	H	100					FUND
6314.62926	43.2	6.6	-0.6	49.3	Peak [Scan]	H	100					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Antenna AP-ANT-16

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

2.4 GHz Frequency Band

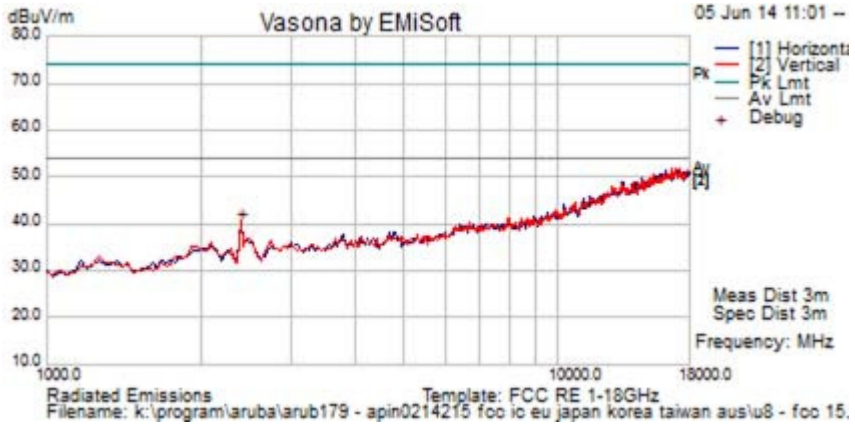
	Restricted Band 2390 MHz			Restricted Band 2483.5 MHz		
	dBµV/m		Power Setting	dBµV/m		Power Setting
Operational Mode	Peak	Average		Peak	Average	
b	54.84	41.01	19	67.70	48.57	15
g	68.07	53.27	16	72.05	53.13	13
n HT-20	68.47	53.02	16.5	67.07	45.34	17
n HT-40	67.46	53.82	10	63.94	45.42	17

5.8 GHz Frequency Band

	Restricted Band 5460 MHz		
Operational Mode	Peak	Average	Power Setting
a	54.79	41.75	23
n HT-20	54.61	41.75	23
n HT-40	54.54	41.65	23
ac-80	54.51	41.76	23

5.1.2.5. AP-ANT-18 – Spurious and Band-Edge Emissions

Test Freq.	2412 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 18	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

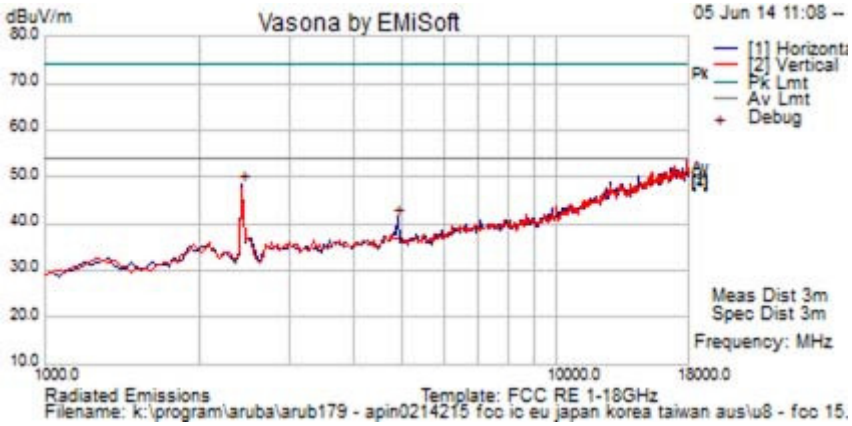


Formally measured emission peaks

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
2401.063	41.5	3.9	-5.5	39.9	Peak [Scan]	V	100					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2437 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 18	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

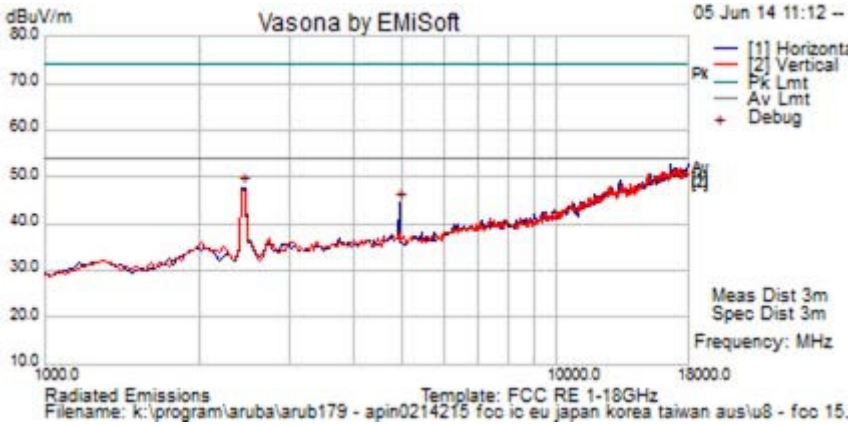


Formally measured emission peaks

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
4881.506	37.7	5.7	-2.3	41.1	Peak [Scan]	V	100	361	54.0	-12.9	Pass	RB
2430.86172	49.8	3.9	-5.3	48.4	Peak [Scan]	H	100					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2462 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 18	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

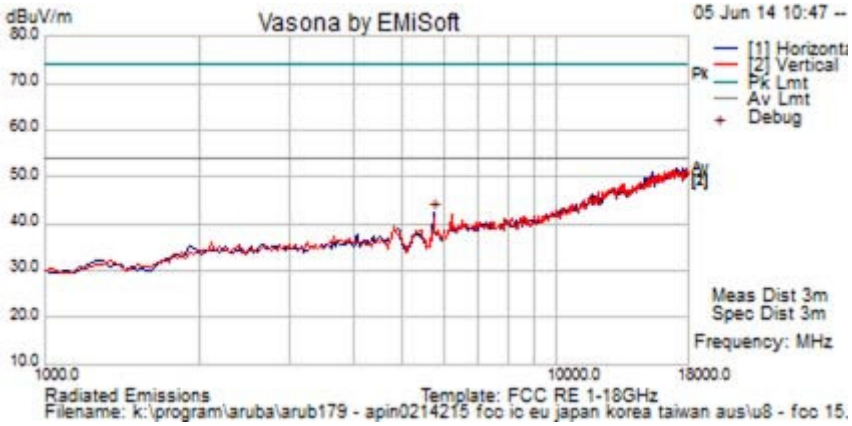


Formally measured emission peaks

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
4916.944	41.0	5.7	-2.4	44.3	Peak [Scan]	V	100	361	54.0	-9.7	Pass	RB
2447.504	48.9	4.0	-5.2	47.6	Peak [Scan]	V	100					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5745 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 18	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

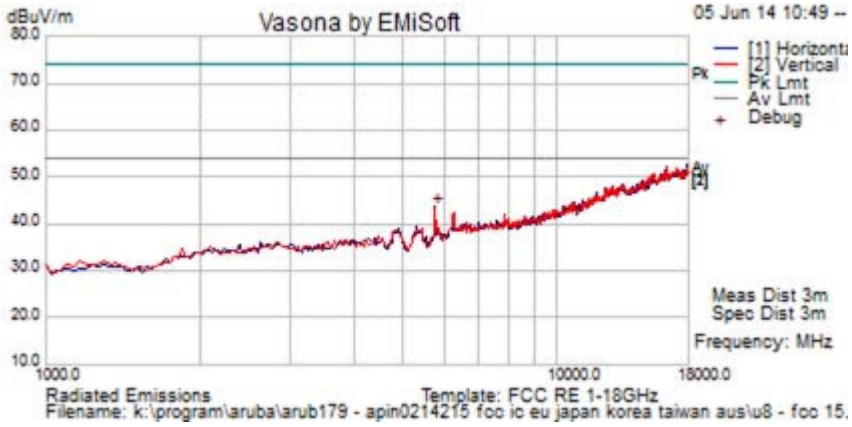


Formally measured emission peaks

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
5737.543	37.9	6.2	-1.9	42.3	Peak [Scan]	V	100					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5785 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 18	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

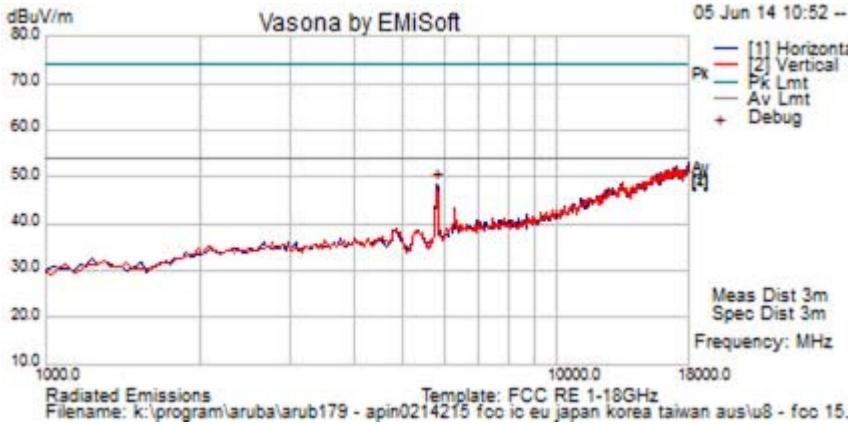


Formally measured emission peaks

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
5771.890	38.9	6.3	-1.8	43.3	Peak [Scan]	V	100					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5825 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 18	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		



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
5803.607	44.0	6.3	-1.8	48.5	Peak [Scan]	H	100					FUND
6321.528	36.3	6.6	-0.6	42.4	Peak [Scan]	V	100					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Antenna AP-ANT-18

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

2.4 GHz Frequency Band

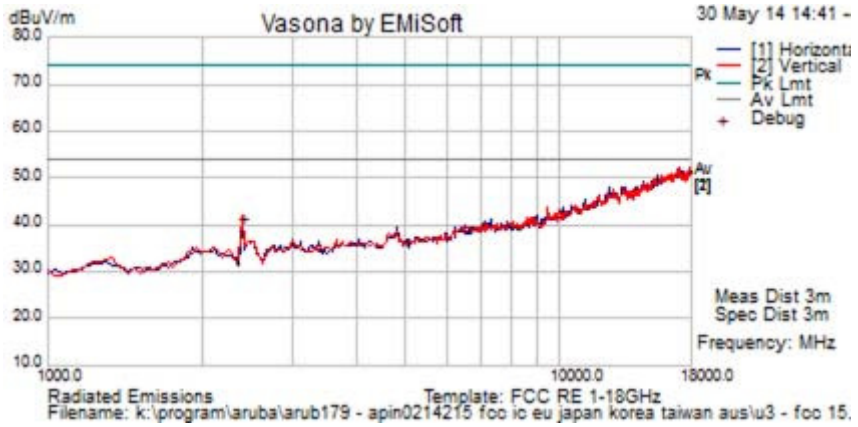
	Restricted Band 2390 MHz			Restricted Band 2483.5 MHz		
	dBµV/m		Power Setting	dBµV/m		Power Setting
Operational Mode	Peak	Average		Peak	Average	
b	64.63	45.75	19	72.72	53.59	16.25
g	68.00	52.67	16	73.80	51.44	12.5
n HT-20	70.17	53.42	16.5	71.45	53.13	17.5
n HT-40	65.83	52.83	10	69.69	50.67	17

5.8 GHz Frequency Band

	Restricted Band 5460 MHz		
Operational Mode	Peak	Average	Power Setting
a	54.69	42.09	23
n HT-20	55.36	42.20	23
n HT-40	55.81	42.20	23
ac-80	54.89	42.31	23

5.1.2.6. AP-ANT-19 – Spurious and Band-Edge Emissions

Test Freq.	2412 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 19	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

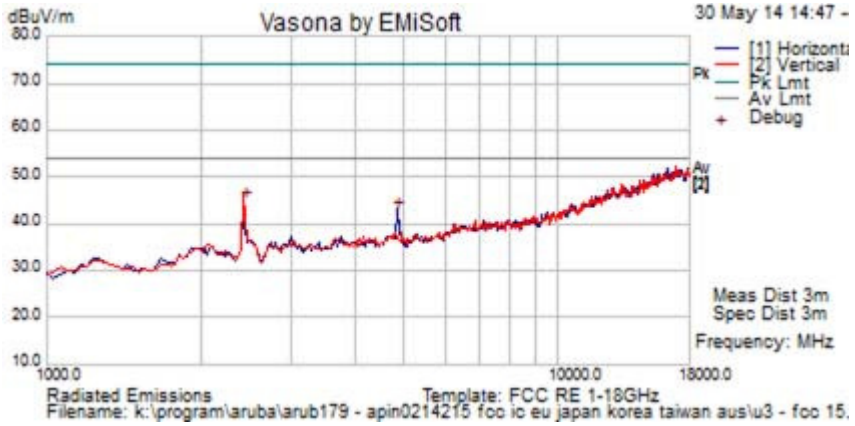


Formally measured emission peaks

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
2400.753	40.8	3.9	-5.5	39.3	Peak [Scan]	V	101					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2437 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 19	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

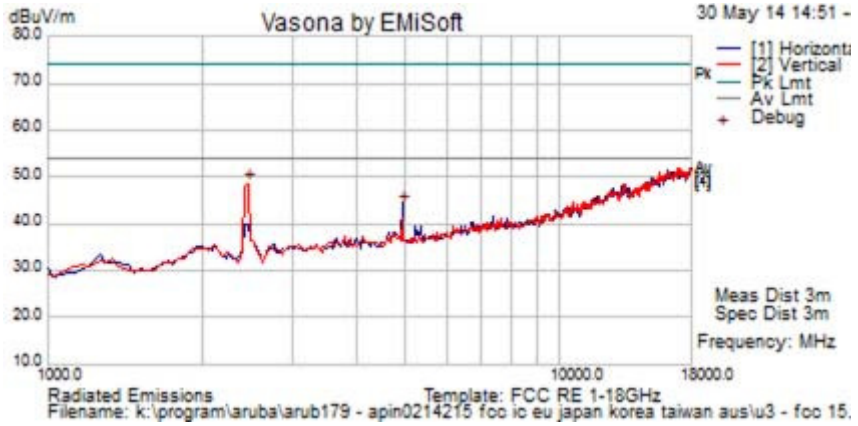


Formally measured emission peaks

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
4847.697	38.5	5.7	-2.3	41.9	Peak [Scan]	V	101	361	54.0	-12.1	Pass	RB
2435.371	46.2	4.0	-5.3	44.8	Peak [Scan]	V	101					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	2462 MHz	**Engineer**	SB
Variant	802.11b; 1 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	20	**Press. (mBars)**	1004
Antenna	AP ANT 19	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

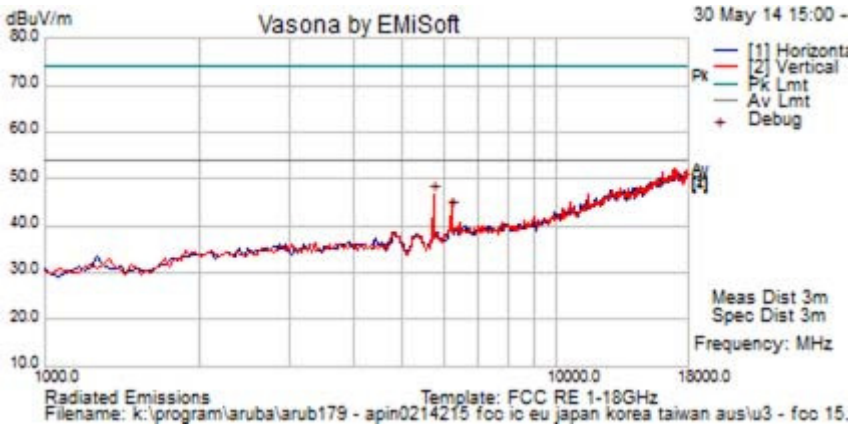


Formally measured emission peaks

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
4913.957	38.6	5.7	-2.4	41.8	Peak [Scan]	V	101	361	54.0	-12.2	Pass	RB
2464.930	49.8	4.0	-5.2	48.6	Peak [Scan]	V	100					FUND

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5745 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 19	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

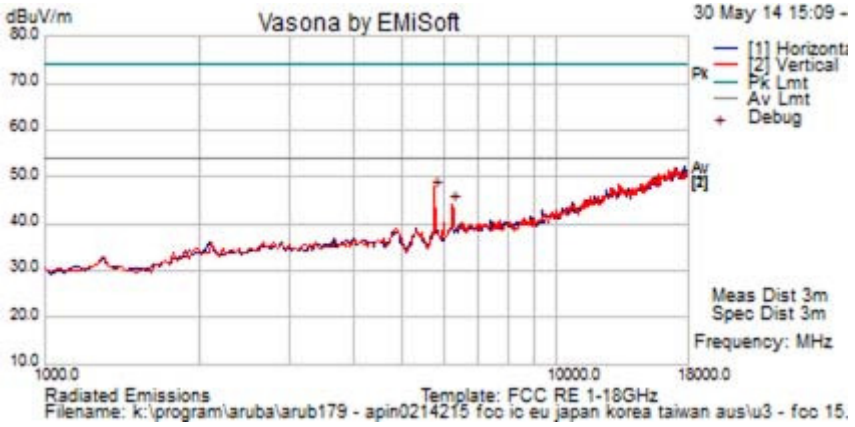


Formally measured emission peaks

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
5737.025	42.1	6.2	-1.9	46.4	Peak [Scan]	V	101					FUND
6223.893	37.1	6.6	-0.6	43.0	Peak [Scan]	V	101					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5785 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 19	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		

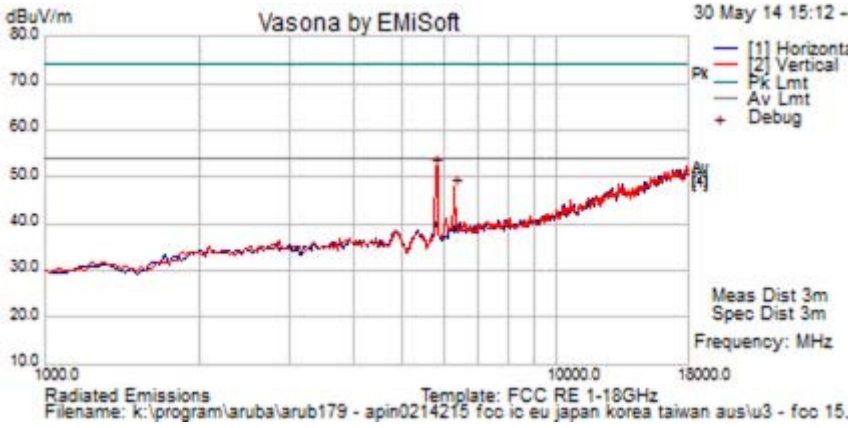


Formally measured emission peaks

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
5766.229	42.4	6.3	-1.8	46.9	Peak [Scan]	V	101					FUND
6258.561	37.8	6.6	-0.6	43.9	Peak [Scan]	V	101					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Test Freq.	5825 MHz	**Engineer**	SB
Variant	802.11a; 6.0 Mbs	**Temp (ºC)**	18.5
Freq. Range	1000 MHz - 18000 MHz	**Rel. Hum.(%)**	34
Power Setting	23	**Press. (mBars)**	1004
Antenna	AP ANT 19	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		



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
5801.741	47.2	6.3	-1.8	51.7	Peak [Scan]	V	101					FUND
6309.986	41.3	6.6	-0.6	47.4	Peak [Scan]	V	101					NRB

Legend:	TX = Transmitter Emissions; DIG = Digital Emissions; FUND = Fundamental; WB = Wideband Emission
	RB = Restricted Band (15.209 Limits); NRB = Non Restricted Band, Limit is 20dB below fundamental peak

Antenna AP-ANT-19

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

2.4 GHz Frequency Band

	Restricted Band 2390 MHz			Restricted Band 2483.5 MHz		
	dBµV/m		Power Setting	dBµV/m		Power Setting
Operational Mode	Peak	Average		Peak	Average	
b	58.21	43.97	19	70.87	53.53	16.75
g	68.58	53.50	16.5	73.16	53.16	13.5
n HT-20	69.35	53.48	17	71.89	53.53	17.25
n HT-40	67.76	53.75	11.75	70.48	53.68	17.25

5.8 GHz Frequency Band

	Restricted Band 5460 MHz		
Operational Mode	Peak	Average	Power Setting
a	56.28	43.22	19
n HT-20	56.13	43.22	28
n HT-40	56.61	43.08	23
ac-80	56.98	43.31	23

Specification Limits

FCC §15.247(d) and RSS-210 §A8.5 In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits.

FCC §15.247(d)
If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section §15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(a)).

IC RSS-210 §A8.5 If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under section A8.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Tables 2 and 3 is not required. In addition, radiated emissions which fall in the restricted bands of Table 1 must also comply with the radiated emission limits specified in Tables 2 and 3.

IC RSS-Gen §4.7
The search for unwanted emissions shall be from the lowest frequency internally generated or used in the device (local oscillator, intermediate of carrier frequency), or from 30 MHz , whichever is the lowest frequency, to the 5th harmonic of the highest frequency generated without exceeding 40 GHz.

FCC §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.

FCC §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.

FCC §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

Traceability

Method	Test Equipment Used
Measurements were made per work instruction WI-03 'Measurement of Radiated Emissions'	0088, 0158, 0134, 0304, 0311, 0315, 0310, 0312

5.1.2.7. Digital Emissions (0.03-1 GHz)

FCC, Part 15 Subpart C §15.205/ §15.209
Industry Canada RSS-210 §2.2

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.

The EUT had two methods of powering on ac/dc converter and Power over Ethernet (POE). Both modes were tested for emissions below 1GHz.

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 = 36.3dBμV/m

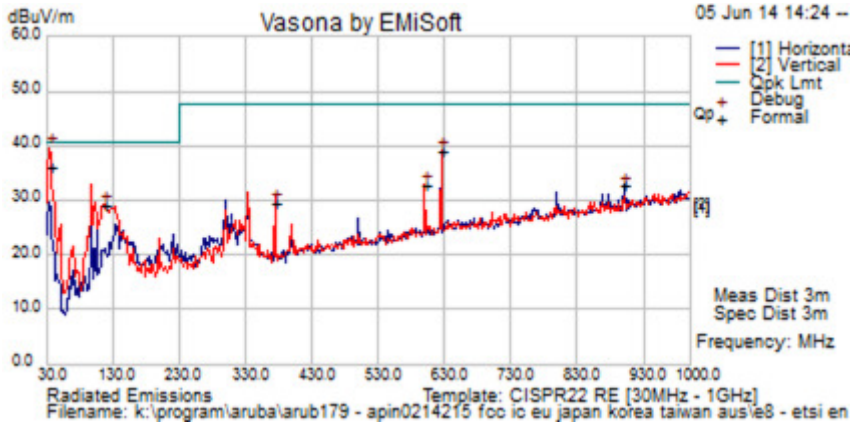
Conversion between dBμV/m (or dBμV) and μV/m (or μV) are done as:

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

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

APIN0214

Test Freq.	2437 MHz	**Engineer**	SB
Variant	Digital Emissions	**Temp (ºC)**	24
Freq. Range	30 MHz - 1000 MHz	**Rel. Hum.(%)**	32
Power Setting	19	**Press. (mBars)**	997
Antenna	AP ANT 1B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	Sunny Switching Adapter; Model: SYS1357-1812; 12VDC / 1/5A;		



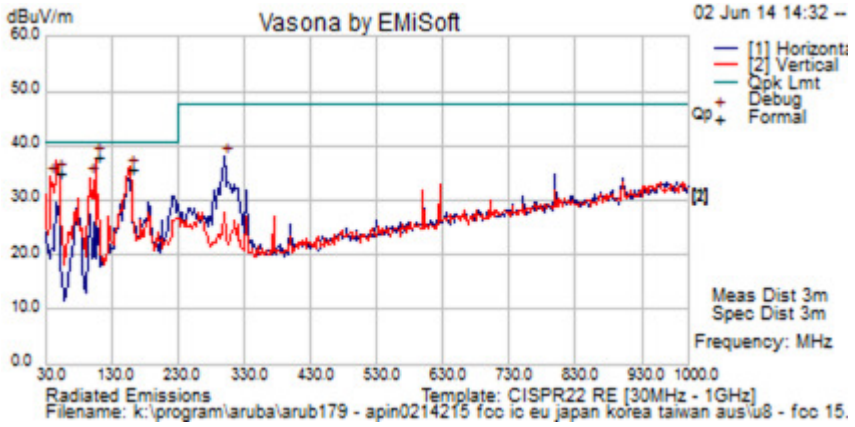
Formally measured emission peaks

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
35.732	46.3	3.6	-13.8	36.1	Quasi Max	V	97	361	40.5	-4.4	Pass	
624.991	43.4	6.3	-10.6	39.1	Peak [Scan]	V	98	361	47.5	-8.4	Pass	
600.005	38.0	6.2	-11.3	32.9	Peak [Scan]	H	98	361	47.5	-14.6	Pass	
116.099	42.6	4.2	-17.6	29.2	Peak [Scan]	V	98	361	40.5	-11.3	Pass	
374.987	39.4	5.4	-15.3	29.5	Peak [Scan]	V	98	361	47.5	-18.0	Pass	
900.957	32.6	7.1	-7.2	32.6	Peak [Scan]	H	98	361	47.5	-14.9	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

APIN0214

Test Freq.	2437 MHz	**Engineer**	JMH
Variant	Digital Emissions	**Temp (ºC)**	24
Freq. Range	30 MHz - 1000 MHz	**Rel. Hum.(%)**	32
Power Setting	19	**Press. (mBars)**	997
Antenna	AP ANT 13B	**Duty Cycle (%)**	99
Test Notes 1	AP214 P302; EUT=Vertical; S/N : CK0000634; MAC: 24 DE C6 CF 5A BA;		
Test Notes 2	POE:PowerDSine 9001GR 55VDC / 350mA;		



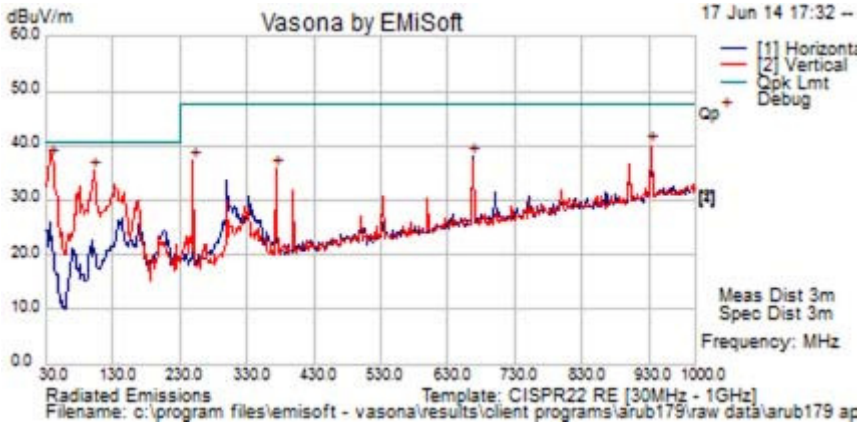
Formally measured emission peaks

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
50.130	54.1	3.7	-22.8	35.0	Quasi Max	V	109	95	40.5	-5.5	Pass	
106.904	52.4	4.1	-19.1	37.4	Quasi Max	V	106	112	40.5	-3.1	Pass	
158.567	49.7	4.4	-18.4	35.8	Quasi Max	V	99	108	40.5	-4.7	Pass	
38.040	46.4	3.6	-15.8	34.3	Peak [Scan]	V	98	0	40.5	-6.3	Pass	
98.055	51.4	4.1	-21.4	34.1	Peak [Scan]	V	98	0	40.5	-6.4	Pass	
300.280	49.8	5.1	-17.0	37.9	Peak [Scan]	H	98	0	47.5	-9.6	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

APIN0215

Test Freq.	2437	**Engineer**	JMH
Variant	Digital Emissions	**Temp (ºC)**	24
Freq. Range	30 MHz - 1000 MHz	**Rel. Hum.(%)**	31
Power Setting	16	**Press. (mBars)**	999
Antenna	Integral		
Test Notes 1	Sunny PS (model# SYS1357-1812) Powered, AP215 SN# CK0000823		
Test Notes 2	Ethernet hub mounted underneath turntable and console cable removed		



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
38.968	50.1	3.6	-16.3	37.4	Quasi Max	V	131	179	40.5	-3.1	Pass	
101.899	51.3	4.1	-20.3	35.2	Quasi Max	V	98	346	40.5	-5.3	Pass	
933.896	39.4	7.2	-6.6	40.0	Peak [Scan]	V	98	361	47.5	-7.5	Pass	
667.592	41.8	6.4	-10.2	38.0	Peak [Scan]	H	98	361	47.5	-9.5	Pass	
249.674	51.1	4.9	-18.8	37.2	Peak [Scan]	V	98	361	47.5	-10.3	Pass	
374.121	45.5	5.4	-15.3	35.6	Peak [Scan]	V	98	361	47.5	-12.0	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) and **RSS-Gen §2.2** 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

Traceability

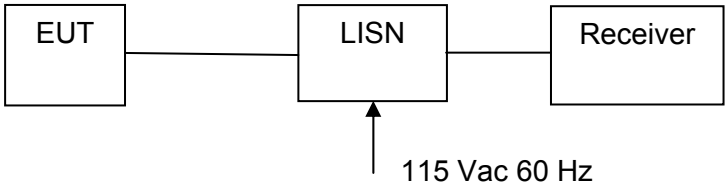
Method	Test Equipment Used
Measurements were made per work instruction WI-03 'Measurement of Radiated Emissions'	0088, 0158, 0134, 0304, 0311, 0315, 0310, 0312

5.1.3. AC Wireline Conducted Emissions (150 kHz – 30 MHz)

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



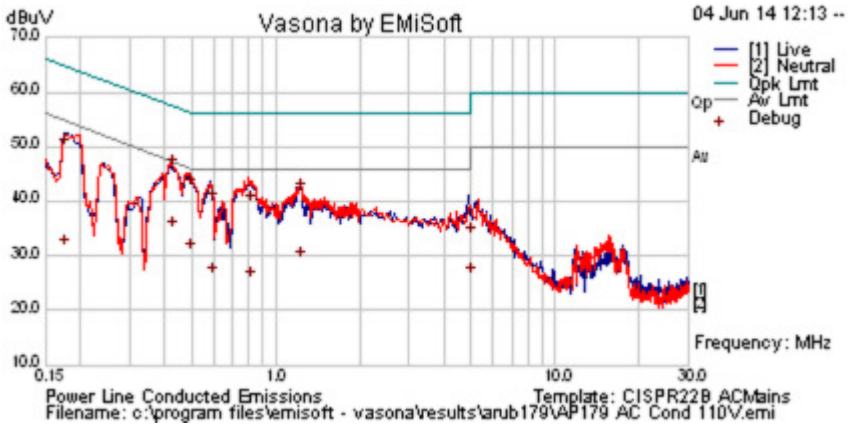
Measurement set up for AC Wireline Conducted Emissions Test

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

Ambient conditions.
Temperature: 17 to 23 °C Relative humidity: 31 to 57 % Pressure: 999 to 1012 mbar

ac Wireline Emissions

Test Freq.	N/A	**Engineer**	JMH
Variant	AC Line Emissions	**Temp (ºC)**	20
Freq. Range	0.150 MHz - 30 MHz	**Rel. Hum.(%)**	35
Power Setting	NA	**Press. (mBars)**	999
Antenna	N/A		
Test Notes 1	POE Powered By 650 Controller AP Model# AP-214, SN# CK0000562		
Test Notes 2	110VAC 60 Hz		



Formally measured emission peaks

Frequency MHz	Raw dBuV	Cable Loss	Factors dB	Level dBuV	Measurement Type	Line	Limit dBuV	Margin dB	Pass /Fail	Comments
0.175	21.4	9.9	0.1	31.4	Average	Live	54.7	-23.3	Pass	
0.175	39.6	9.9	0.1	49.6	Quasi Peak	Live	64.7	-15.2	Pass	
0.421	36.3	9.9	0.1	46.3	Quasi Peak	Neutral	57.4	-11.2	Pass	
0.421	24.8	9.9	0.1	34.8	Average	Neutral	47.4	-12.7	Pass	
0.488	20.7	9.9	0.1	30.7	Average	Neutral	46.2	-15.5	Pass	
0.488	32.4	9.9	0.1	42.4	Quasi Peak	Neutral	56.2	-13.8	Pass	
0.586	29.8	9.9	0.1	39.8	Quasi Peak	Live	56.0	-16.2	Pass	
0.586	16.4	9.9	0.1	26.4	Average	Live	46.0	-19.6	Pass	
0.803	29.5	10.0	0.1	39.5	Quasi Peak	Neutral	56.0	-16.5	Pass	
0.803	15.6	10.0	0.1	25.6	Average	Neutral	46.0	-20.4	Pass	
1.225	31.5	10.0	0.1	41.5	Quasi Peak	Neutral	56.0	-14.5	Pass	
1.225	19.0	10.0	0.1	29.1	Average	Neutral	46.0	-16.9	Pass	
4.954	23.2	10.2	0.2	33.5	Quasi Peak	Live	56.0	-22.5	Pass	
4.954	15.7	10.2	0.2	26.1	Average	Live	46.0	-19.9	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

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.

RSS-Gen §7.2.2
The radio frequency voltage that is conducted back into the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in the table below. The tighter limit applies at the frequency range boundaries.

§15.207 (a) and **RSS-Gen §7.2.2** 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

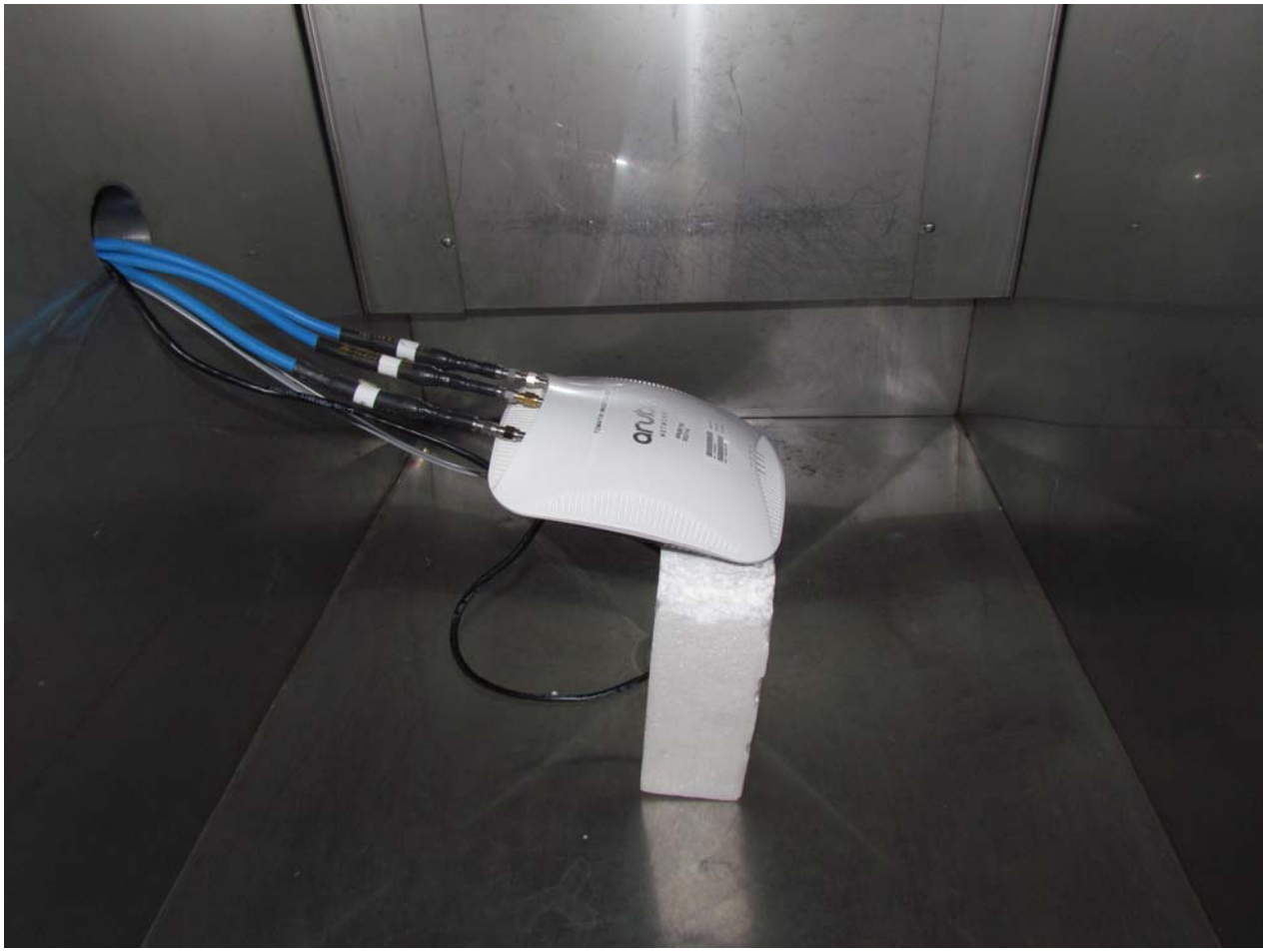
Measurement uncertainty	±2.64 dB

Traceability

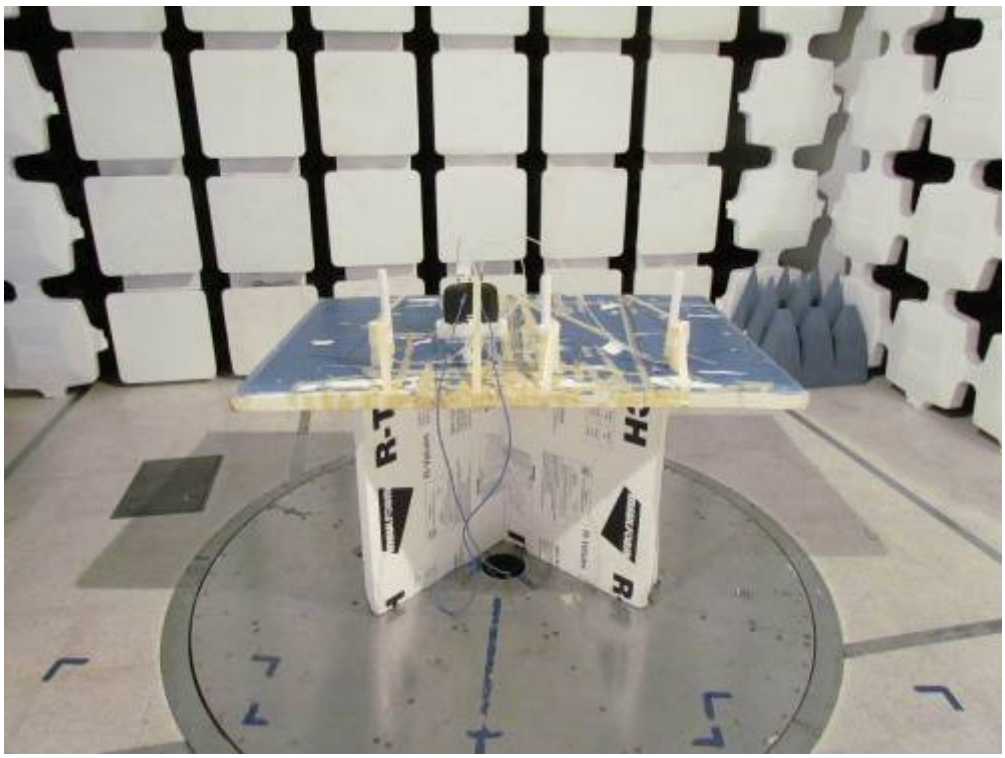
Method	Test Equipment Used
Measurements were made per work instruction WI-EMC-01 'Measurement of Conducted Emissions'	0158, 0184, 0287, 0190, 0293, 0307

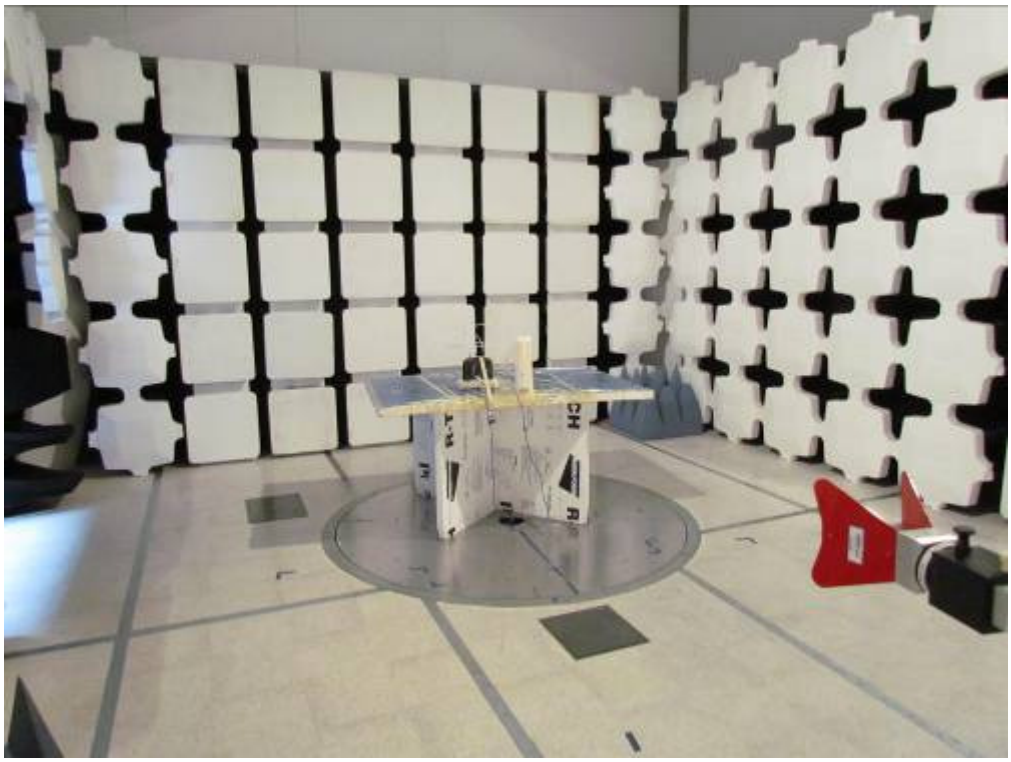
6. PHOTOGRAPHS

6.1. Conducted Test Setup

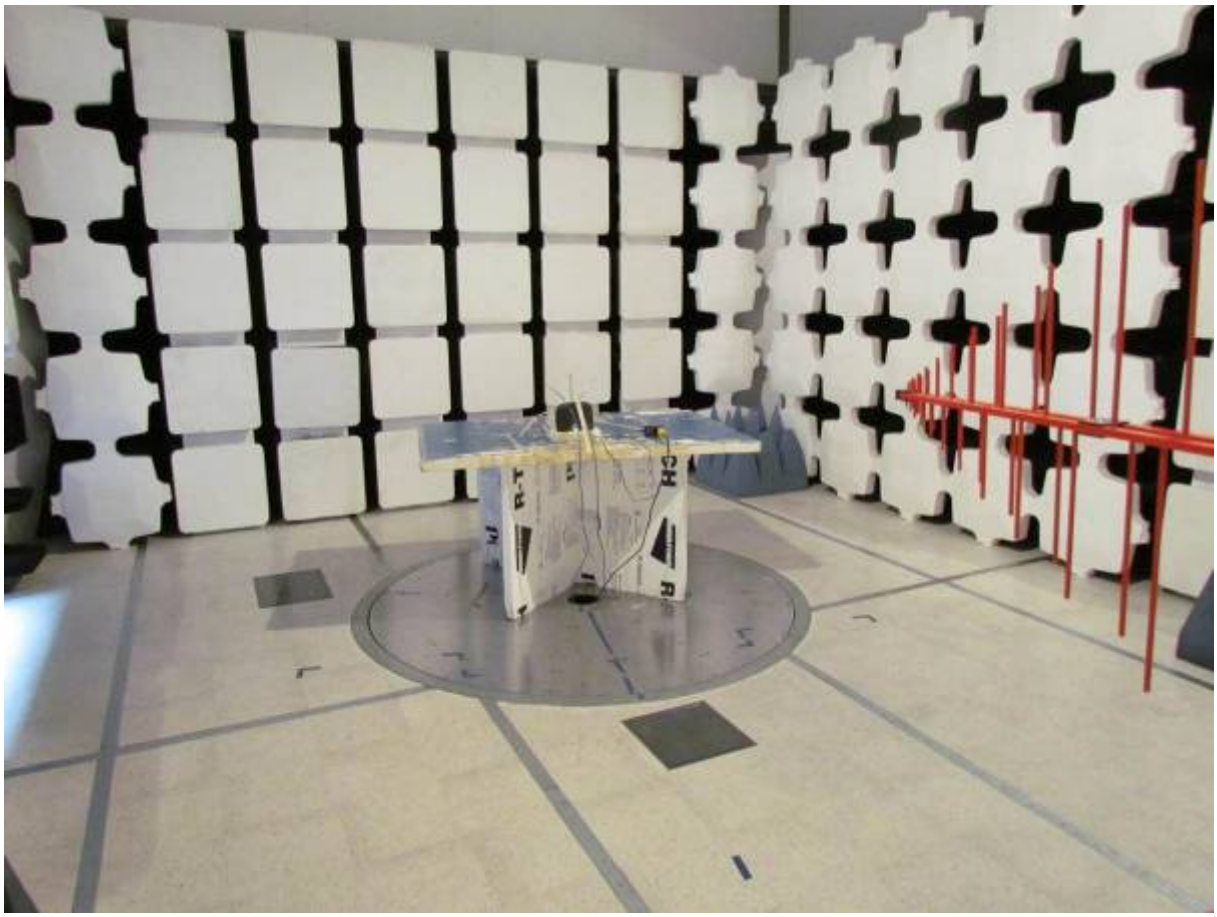


6.2. Test Setup - Digital Emissions > 1 GHz





6.3. Radiated Emissions Test Setup <1 GHz



6.4. ac Wireline Test Setup >1 GHz

7. TEST EQUIPMENT

Asset #	Instrument	Manufacturer	Part #	Serial #	Calibration Due Date
0117	Power Sensor	Hewlett Packard	8487D	3318A00371	18th Oct 14
0223	Power Meter	Hewlett Packard	EPM-442A	US37480256	18th Oct 14
0376	Power Sensor	Agilent	U2000A	MY51440005	28th Oct 14
0390	Power Sensor	Agilent	U2002A	MY50000103	17th Oct 14
0158	Barometer /Thermometer	Control Co.	4196	E2846	6th Dec 14
0287	EMI Receiver	Rhode & Schwartz	ESIB40	100201	31st Jul 14
0378	EMI Receiver	Rhode & Schwartz	ESIB40	100107/040	17th Jul 14
0338	30 - 3000 MHz Antenna	Sunol	JB3	A052907	14th Aug 14
0399	1-18 GHz Horn Antenna	EMCO	3117	00154575	10th Oct 14
0252	SMA Cable	Megaphase	Sucoflex 104	None	N/A
0310	2m SMA Cable	Micro-Coax	UFA210A-0-0787-3G03G0	209089-001	N/A
0312	3m SMA Cable	Micro-Coax	UFA210A-1-1181-3G0300	209092-001	N/A
0314	30dB N-Type Attenuator	ARRA	N9444-30	1623	N/A
0359	DFS Test System	Aeroflex	PXI-1042	300001/004	21st Oct 14
0299	DFS Test Software	Aeroflex	PXIModule	Version 7.1.0	N/A
0502	EMC Test Software	EMISoft	Vasona	5.0051	N/A
0503	RF Conducted Test Software	National Instruments	Labview	Version 8.2	N/A
0398	RF Conducted Test Software	MiCOM Labs ATS	--	Version 1.8	N/A
0380	RF Switch	MiCOM Labs	MIC001	MIC001	20th March 14

APPENDIX

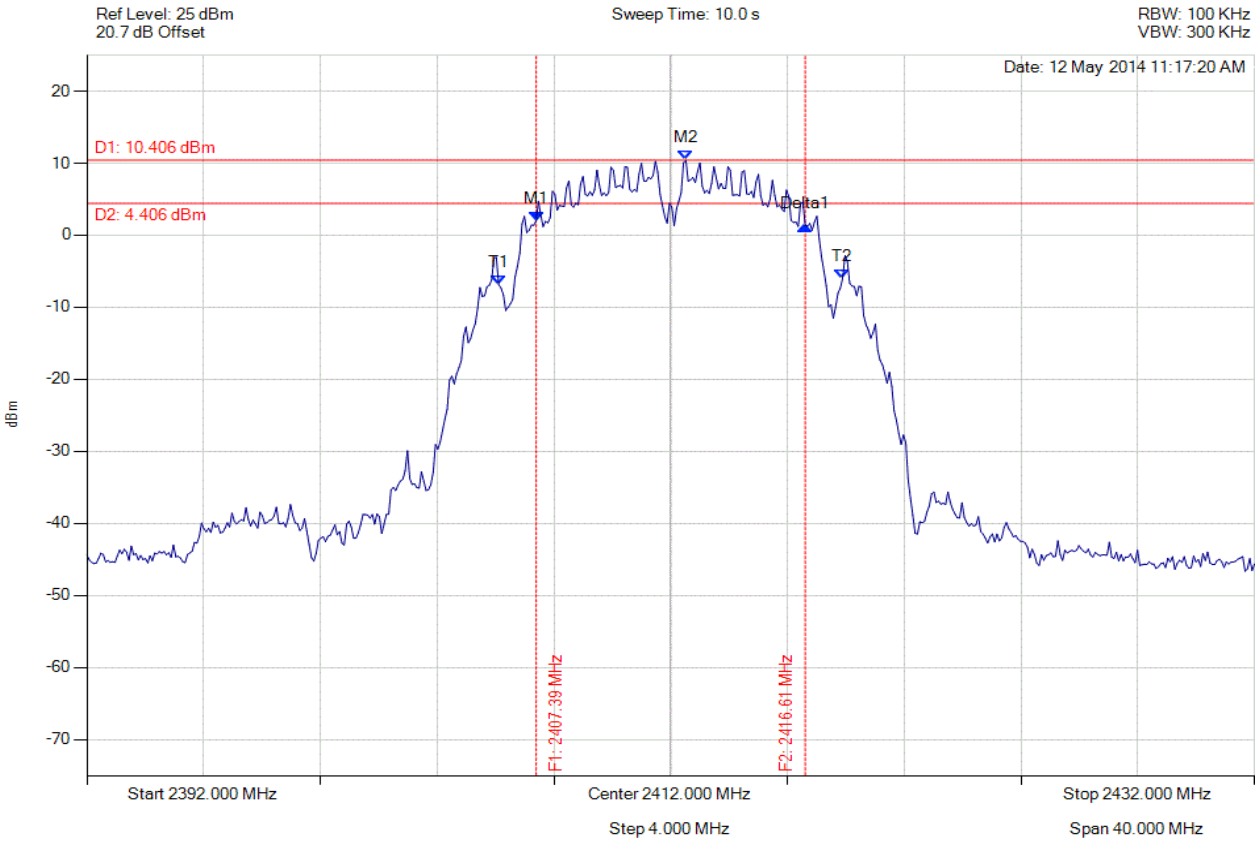
A. SUPPORTING INFORMATION

A.1. CONDUCTED TEST PLOTS

A.1.1. 6 dB & 99% Bandwidth

6 dB & 99% BANDWIDTH

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

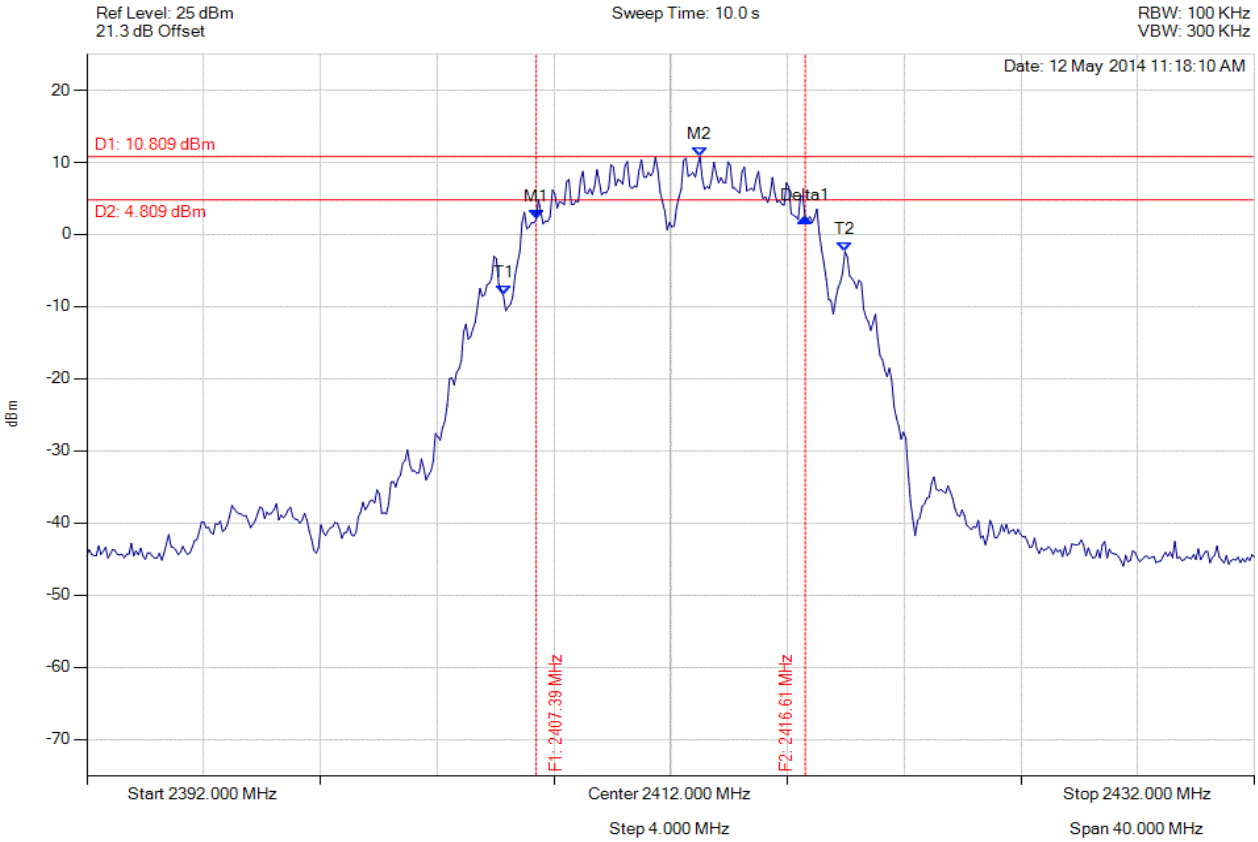


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2407.391 MHz : 2.023 dBm M2 : 2412.521 MHz : 10.406 dBm Delta1 : 9.218 MHz : -0.704 dB T1 : 2406.108 MHz : -6.869 dBm T2 : 2417.892 MHz : -6.029 dBm OBW : 11.784 MHz	Measured 6 dB Bandwidth: 9.218 MHz Limit: ≥500.0 kHz Margin: -8.72 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

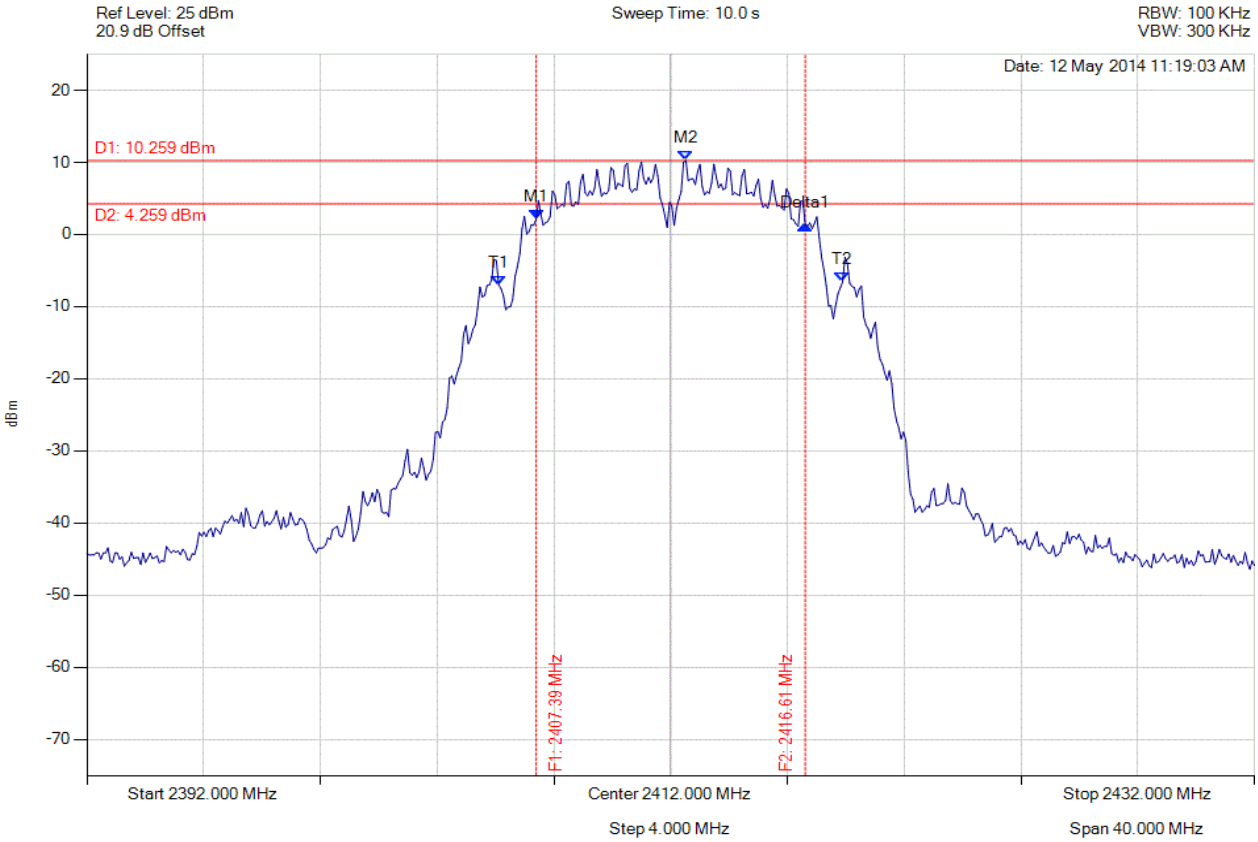


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2407.391 MHz : 2.067 dBm M2 : 2413.002 MHz : 10.809 dBm Delta1 : 9.218 MHz : 0.246 dB T1 : 2406.269 MHz : -8.398 dBm T2 : 2417.972 MHz : -2.334 dBm OBW : 11.703 MHz	Measured 6 dB Bandwidth: 9.218 MHz Limit: ≥500.0 kHz Margin: -8.72 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

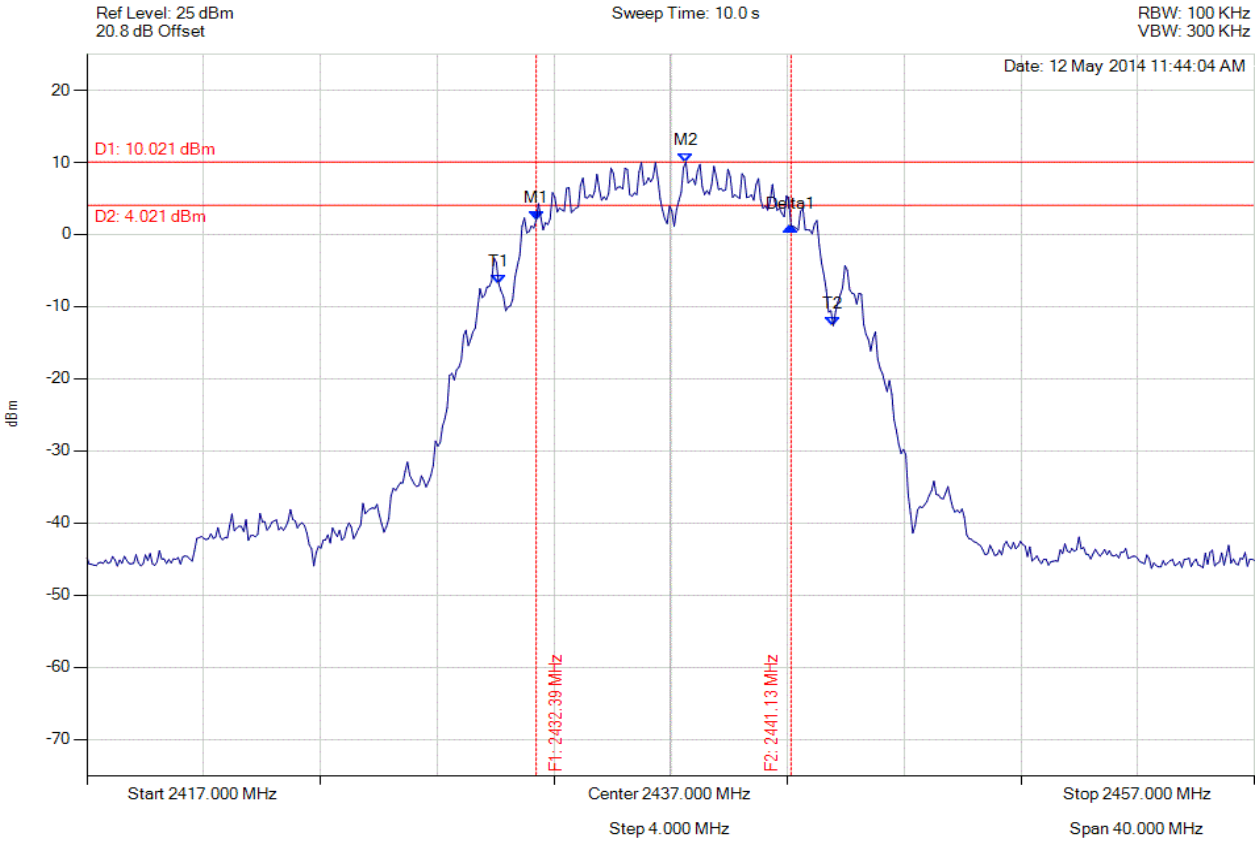


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2407.391 MHz : 2.120 dBm M2 : 2412.521 MHz : 10.259 dBm Delta1 : 9.218 MHz : -0.752 dB T1 : 2406.108 MHz : -6.979 dBm T2 : 2417.892 MHz : -6.582 dBm OBW : 11.784 MHz	Measured 6 dB Bandwidth: 9.218 MHz Limit: ≥500.0 kHz Margin: -8.72 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

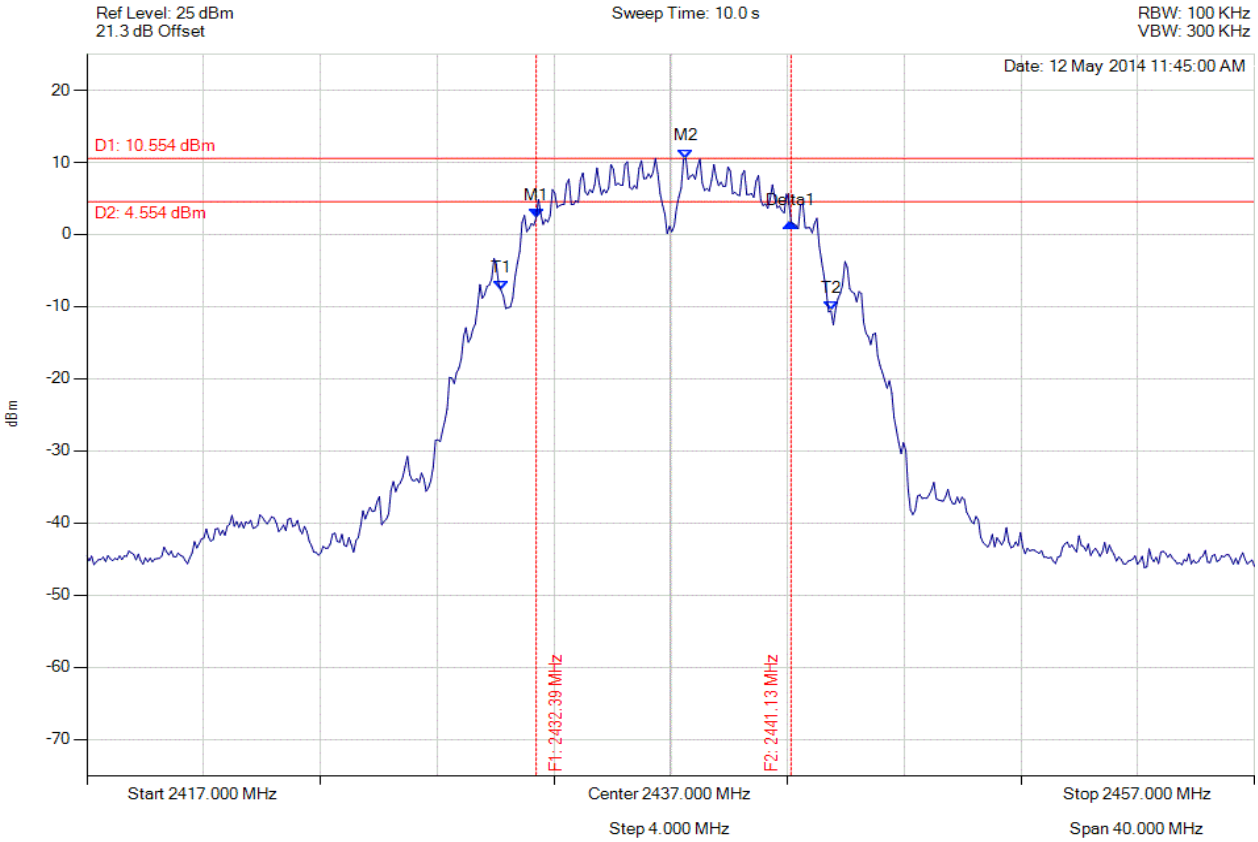


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2432.391 MHz : 1.992 dBm M2 : 2437.521 MHz : 10.021 dBm Delta1 : 8.737 MHz : -0.858 dB T1 : 2431.108 MHz : -6.834 dBm T2 : 2442.571 MHz : -12.649 dBm OBW : 11.463 MHz	Measured 6 dB Bandwidth: 8.737 MHz Limit: ≥500.0 kHz Margin: -8.24 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

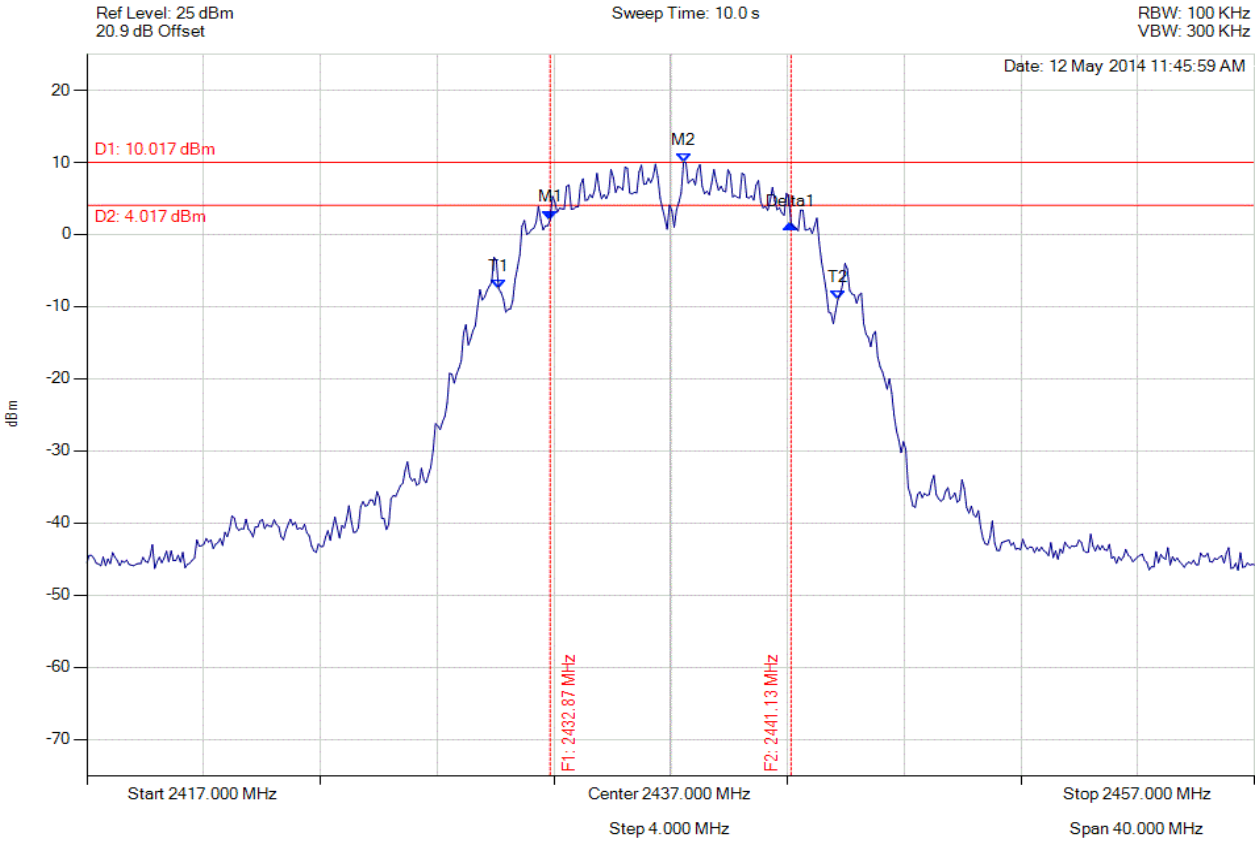


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2432.391 MHz : 2.324 dBm M2 : 2437.521 MHz : 10.554 dBm Delta1 : 8.737 MHz : -0.667 dB T1 : 2431.188 MHz : -7.735 dBm T2 : 2442.491 MHz : -10.572 dBm OBW : 11.303 MHz	Measured 6 dB Bandwidth: 8.737 MHz Limit: ≥500.0 kHz Margin: -8.24 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

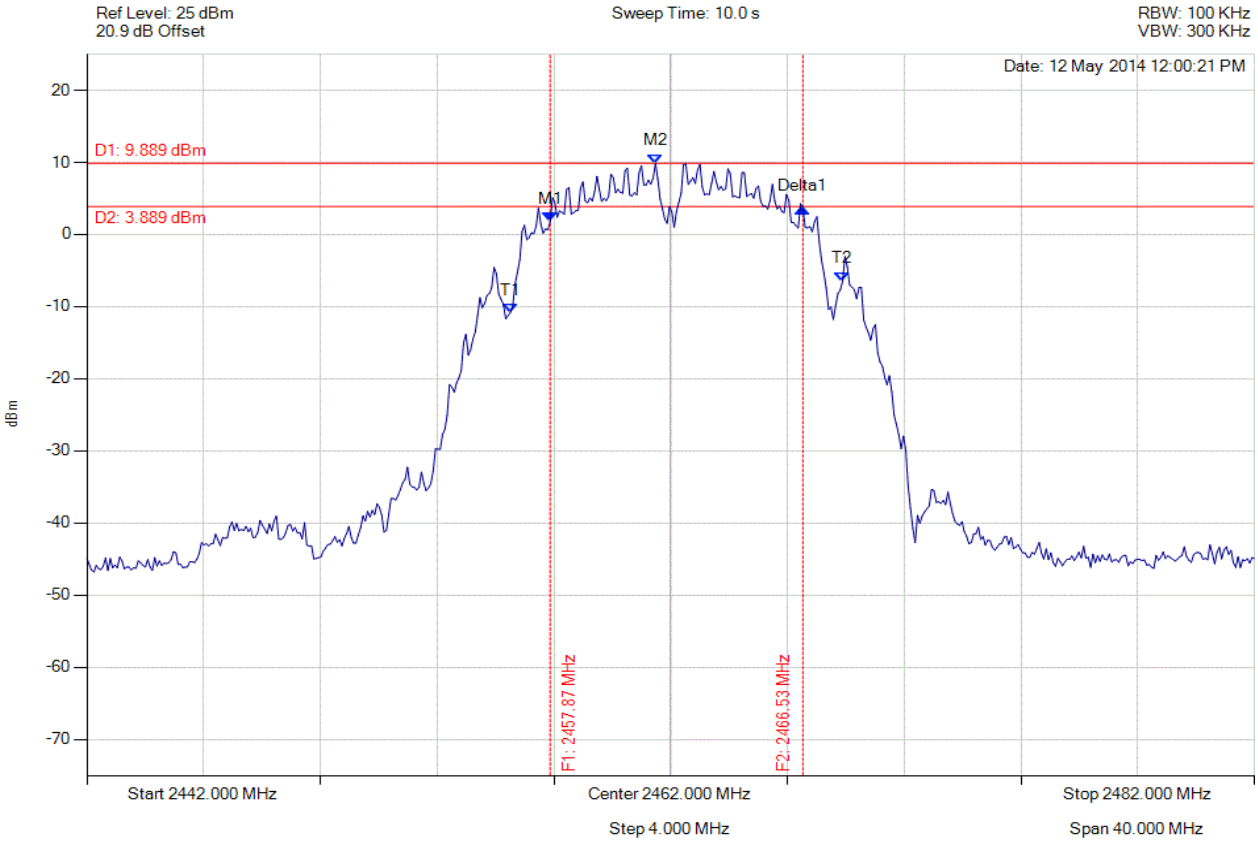


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2432.872 MHz : 2.043 dBm M2 : 2437.441 MHz : 10.017 dBm Delta1 : 8.257 MHz : -0.622 dB T1 : 2431.108 MHz : -7.499 dBm T2 : 2442.731 MHz : -8.976 dBm OBW : 11.623 MHz	Measured 6 dB Bandwidth: 8.257 MHz Limit: ≥500.0 kHz Margin: -7.76 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

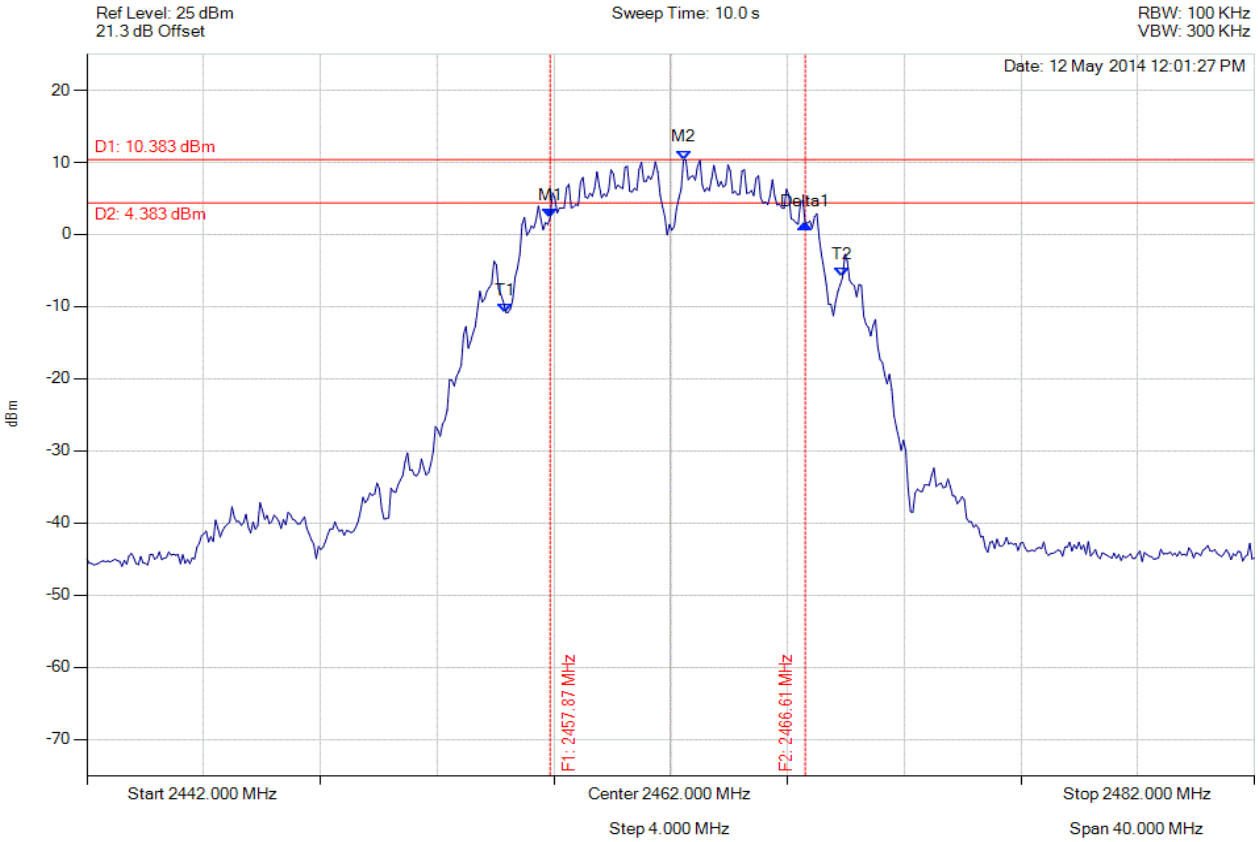


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2457.872 MHz : 1.740 dBm M2 : 2461.479 MHz : 9.889 dBm Delta1 : 8.657 MHz : 1.920 dB T1 : 2456.509 MHz : -10.820 dBm T2 : 2467.892 MHz : -6.460 dBm OBW : 11.383 MHz	Measured 6 dB Bandwidth: 8.657 MHz Limit: ≥500.0 kHz Margin: -8.16 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

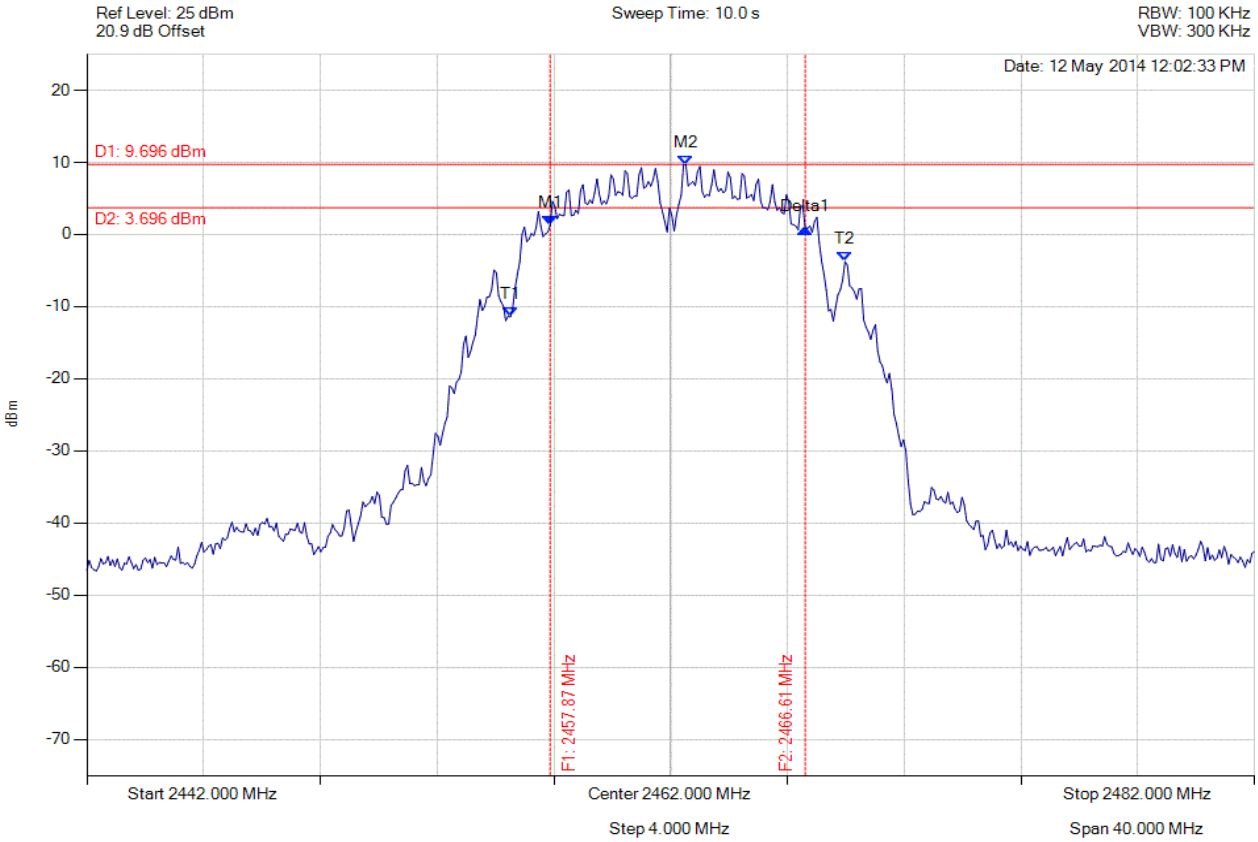


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2457.872 MHz : 2.336 dBm M2 : 2462.441 MHz : 10.383 dBm Delta1 : 8.737 MHz : -0.795 dB T1 : 2456.349 MHz : -10.818 dBm T2 : 2467.892 MHz : -5.941 dBm OBW : 11.543 MHz	Measured 6 dB Bandwidth: 8.737 MHz Limit: ≥500.0 kHz Margin: -8.24 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

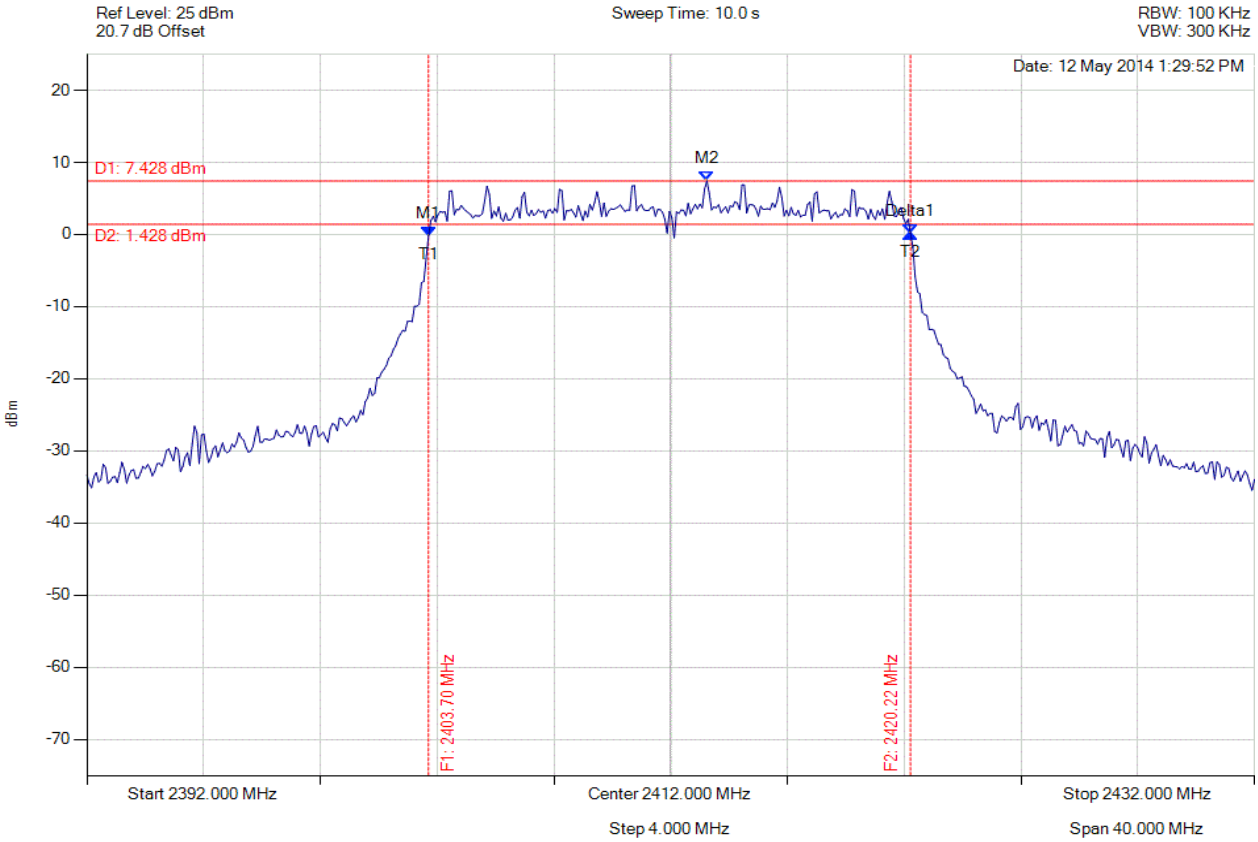


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2457.872 MHz : 1.272 dBm M2 : 2462.521 MHz : 9.696 dBm Delta1 : 8.737 MHz : -0.427 dB T1 : 2456.509 MHz : -11.414 dBm T2 : 2467.972 MHz : -3.763 dBm OBW : 11.463 MHz	Measured 6 dB Bandwidth: 8.737 MHz Limit: ≥500.0 kHz Margin: -8.24 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

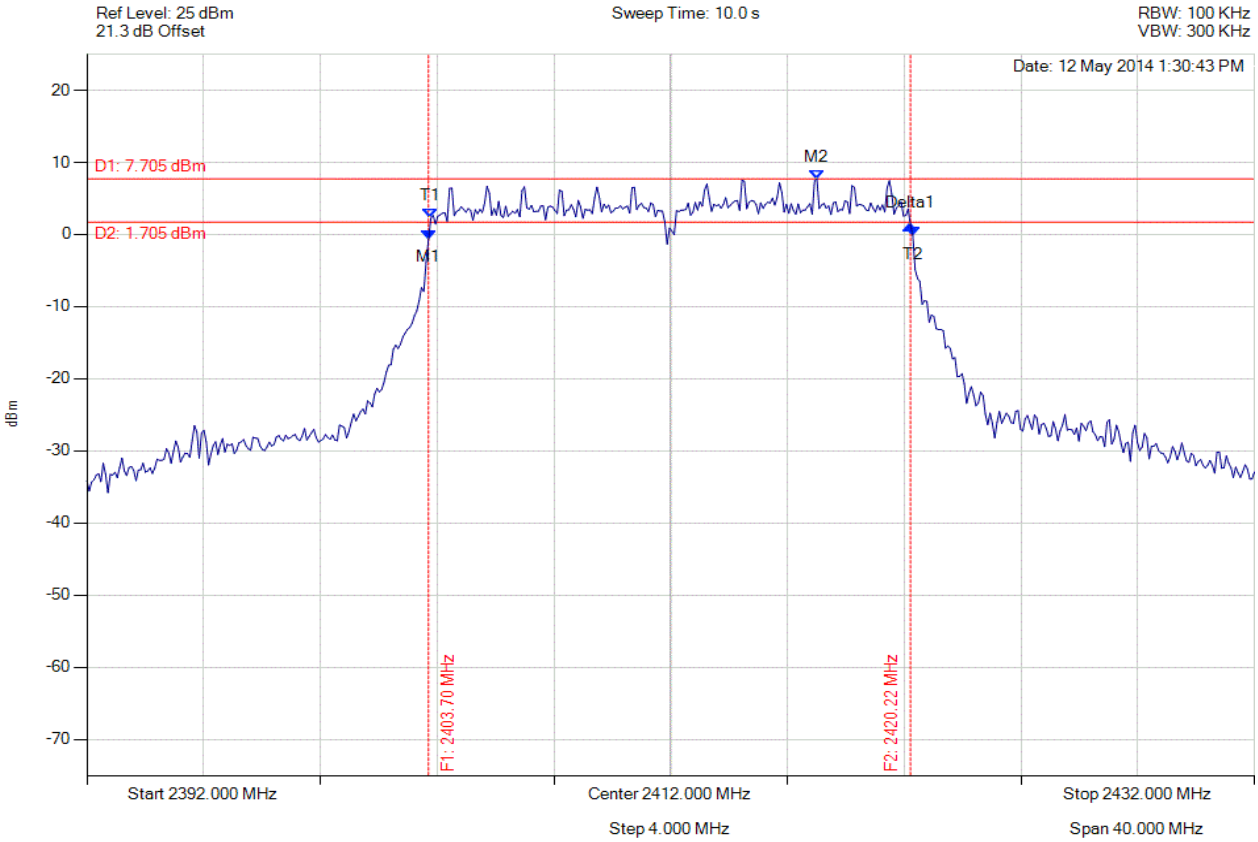


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.703 MHz : -0.202 dBm M2 : 2413.242 MHz : 7.428 dBm Delta1 : 16.513 MHz : 0.313 dB T1 : 2403.703 MHz : -0.202 dBm T2 : 2420.216 MHz : 0.111 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

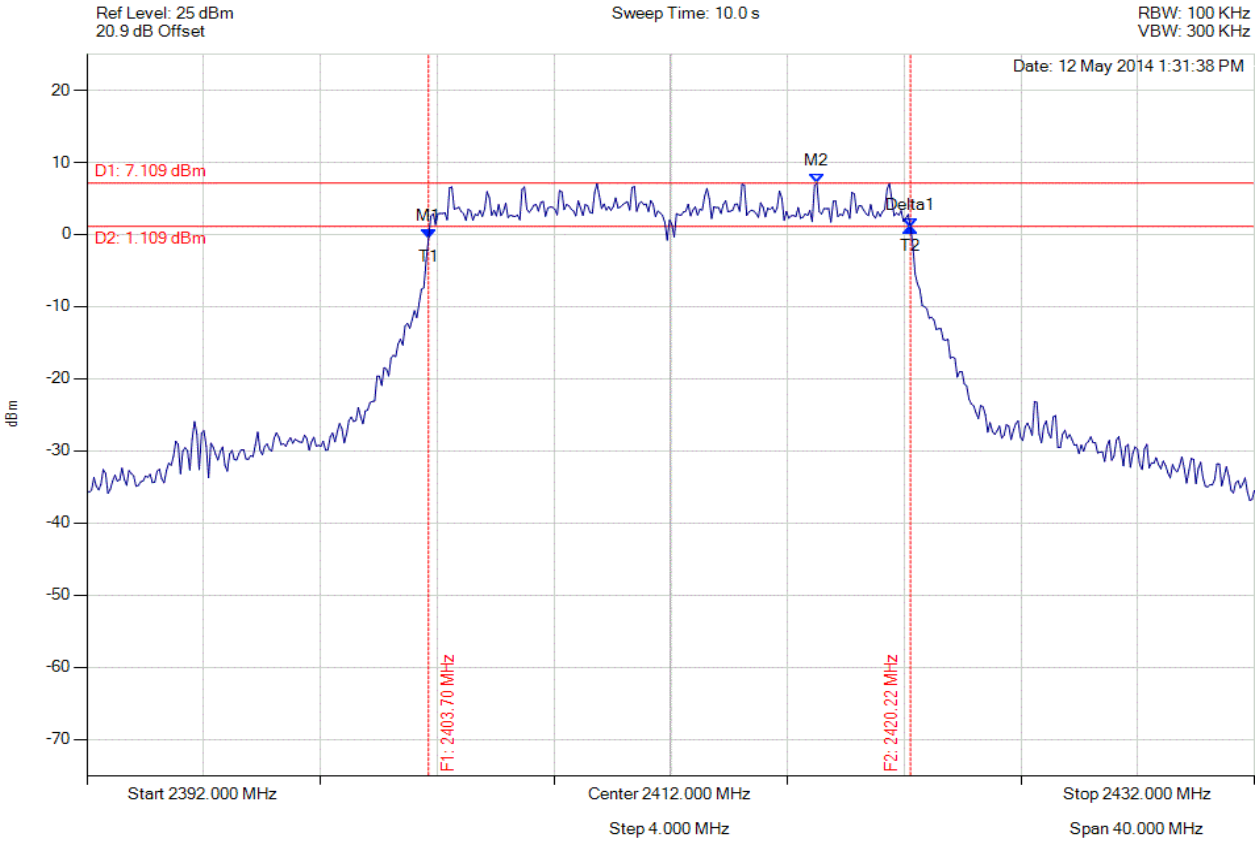


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.703 MHz : -0.631 dBm M2 : 2417.010 MHz : 7.705 dBm Delta1 : 16.513 MHz : 1.879 dB T1 : 2403.784 MHz : 2.236 dBm T2 : 2420.297 MHz : -0.204 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

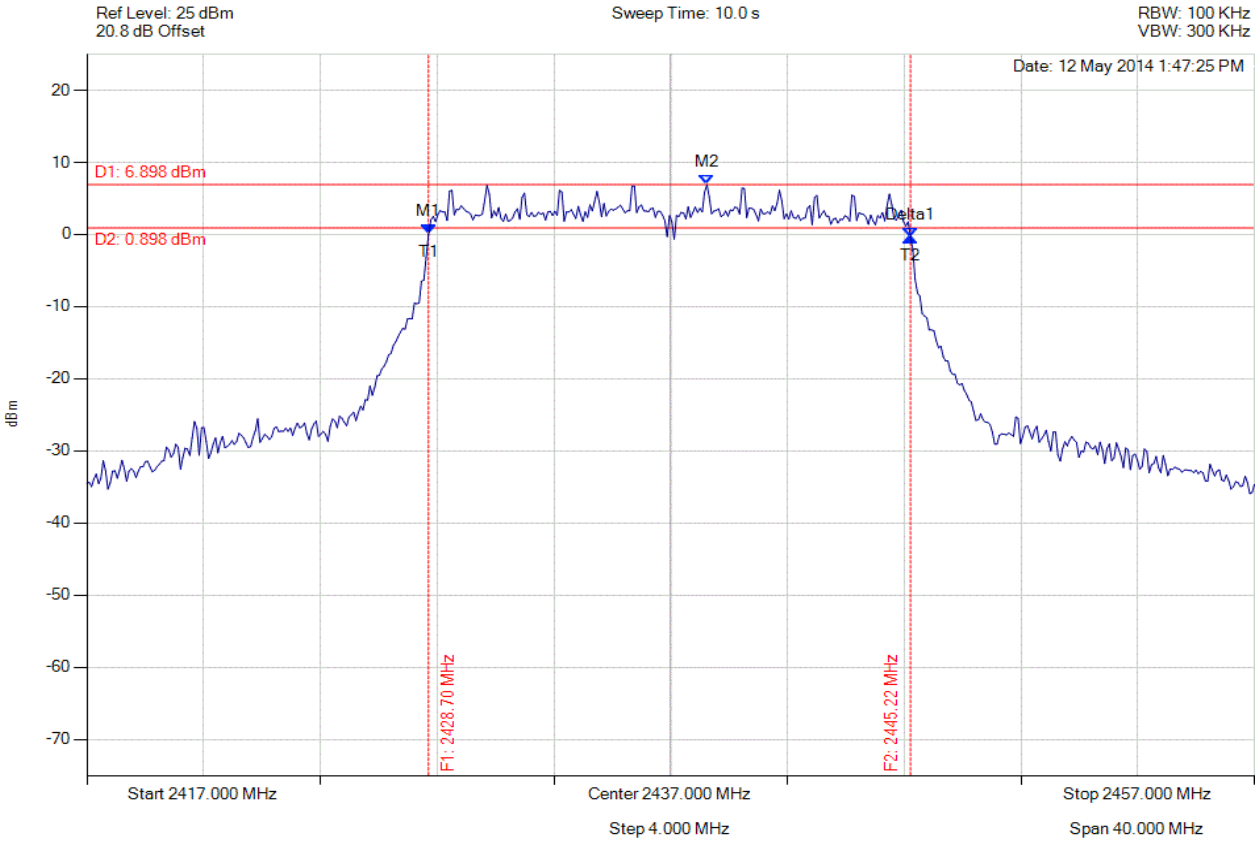


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.703 MHz : -0.568 dBm M2 : 2417.010 MHz : 7.109 dBm Delta1 : 16.513 MHz : 1.523 dB T1 : 2403.703 MHz : -0.568 dBm T2 : 2420.216 MHz : 0.955 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

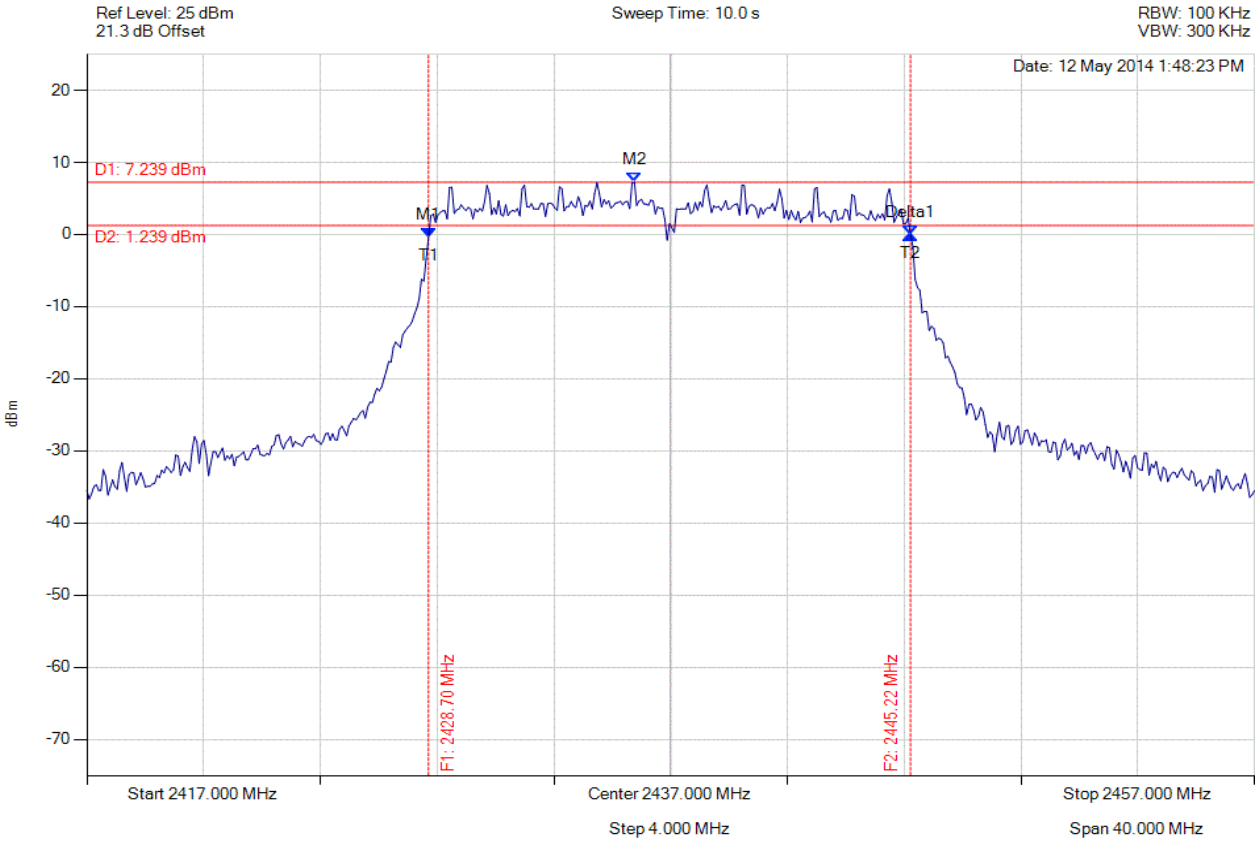


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.703 MHz : 0.070 dBm M2 : 2438.242 MHz : 6.898 dBm Delta1 : 16.513 MHz : -0.445 dB T1 : 2428.703 MHz : 0.070 dBm T2 : 2445.216 MHz : -0.375 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

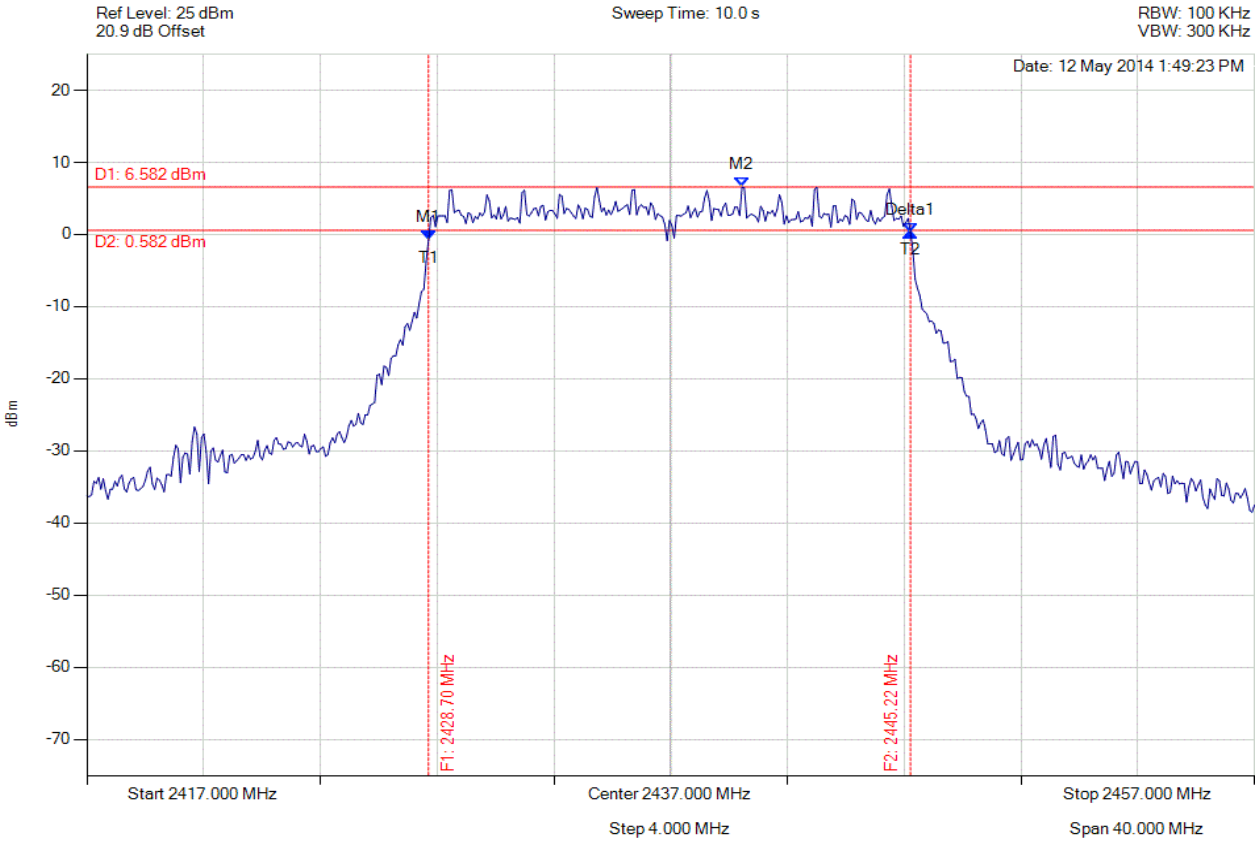


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.703 MHz : -0.377 dBm M2 : 2435.758 MHz : 7.239 dBm Delta1 : 16.513 MHz : 0.299 dB T1 : 2428.703 MHz : -0.377 dBm T2 : 2445.216 MHz : -0.078 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

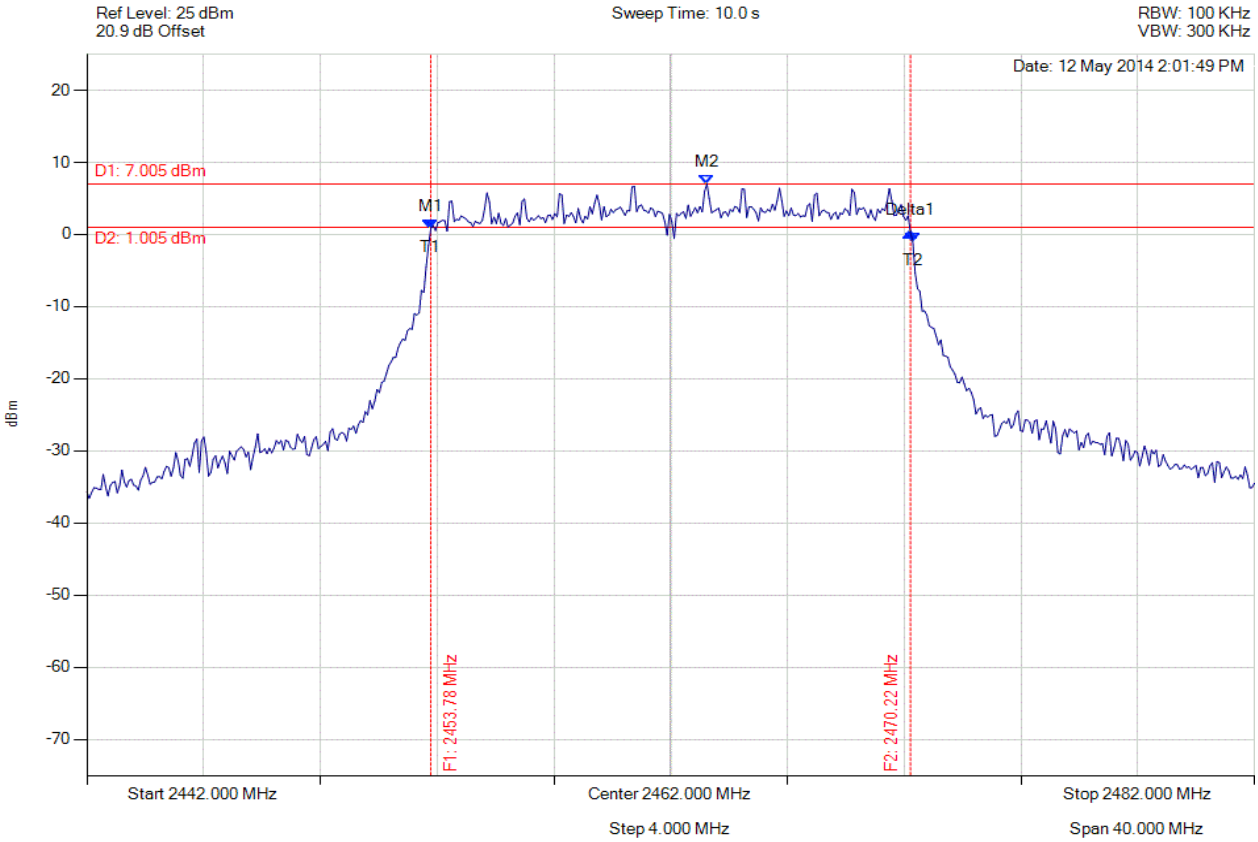


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.703 MHz : -0.759 dBm M2 : 2439.445 MHz : 6.582 dBm Delta1 : 16.513 MHz : 1.098 dB T1 : 2428.703 MHz : -0.759 dBm T2 : 2445.216 MHz : 0.339 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

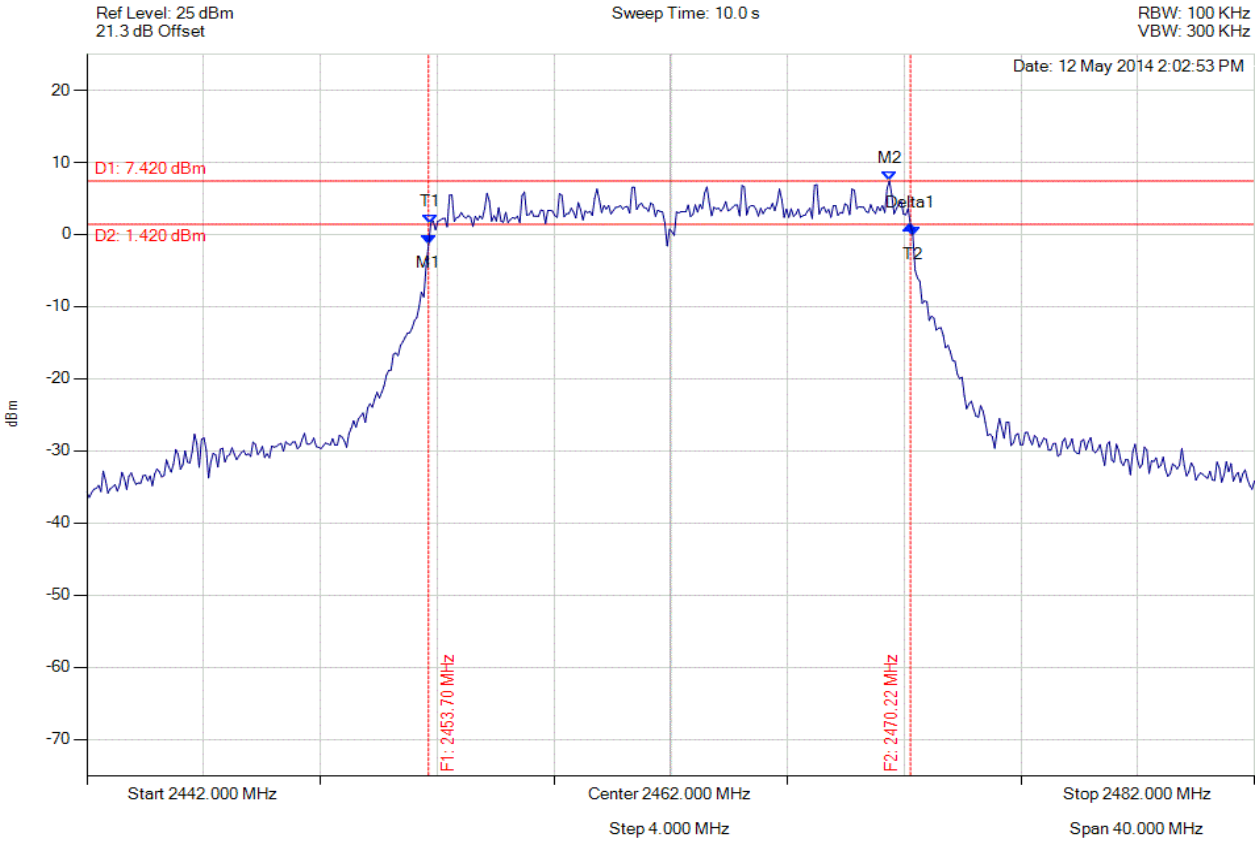


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2453.784 MHz : 0.772 dBm M2 : 2463.242 MHz : 7.005 dBm Delta1 : 16.433 MHz : -0.519 dB T1 : 2453.784 MHz : 0.772 dBm T2 : 2470.297 MHz : -1.067 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

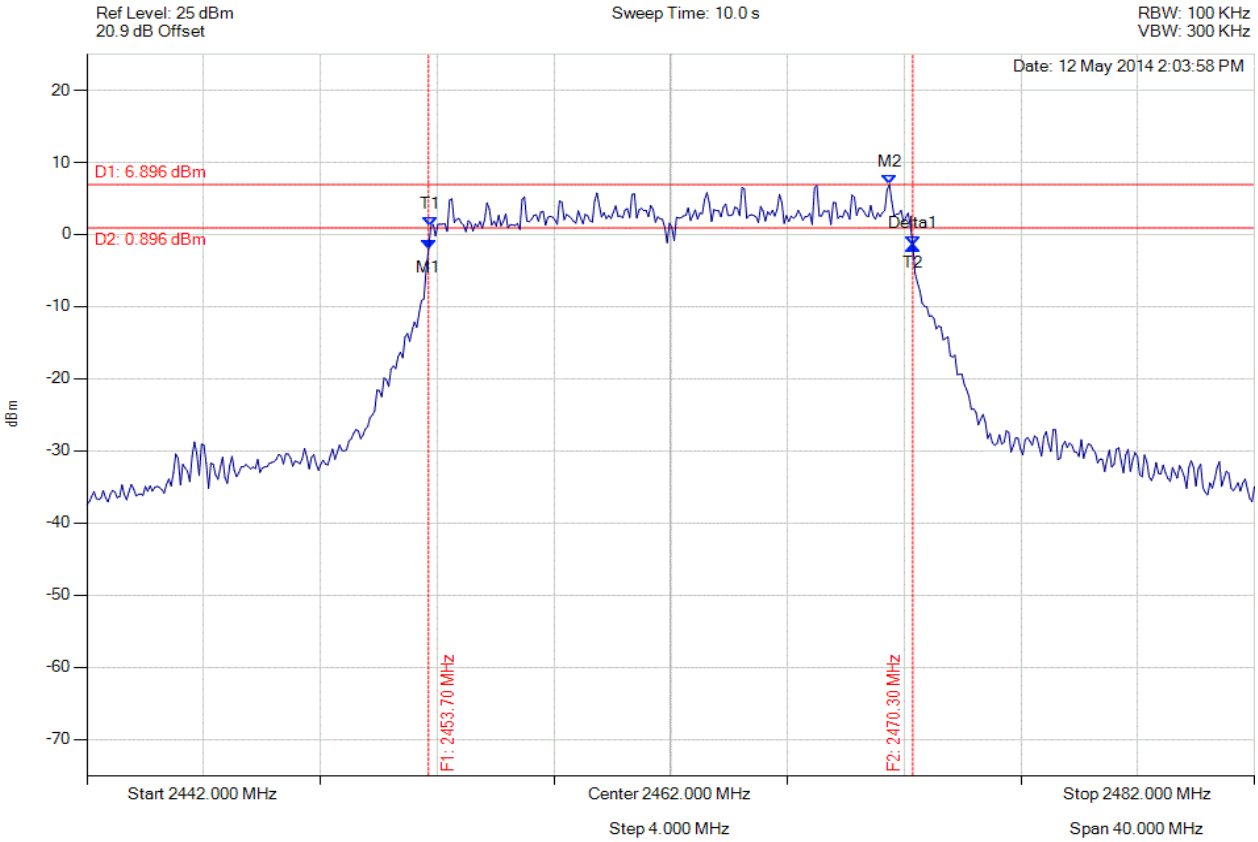


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2453.703 MHz : -1.433 dBm M2 : 2469.495 MHz : 7.420 dBm Delta1 : 16.513 MHz : 2.699 dB T1 : 2453.784 MHz : 1.527 dBm T2 : 2470.297 MHz : -0.194 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

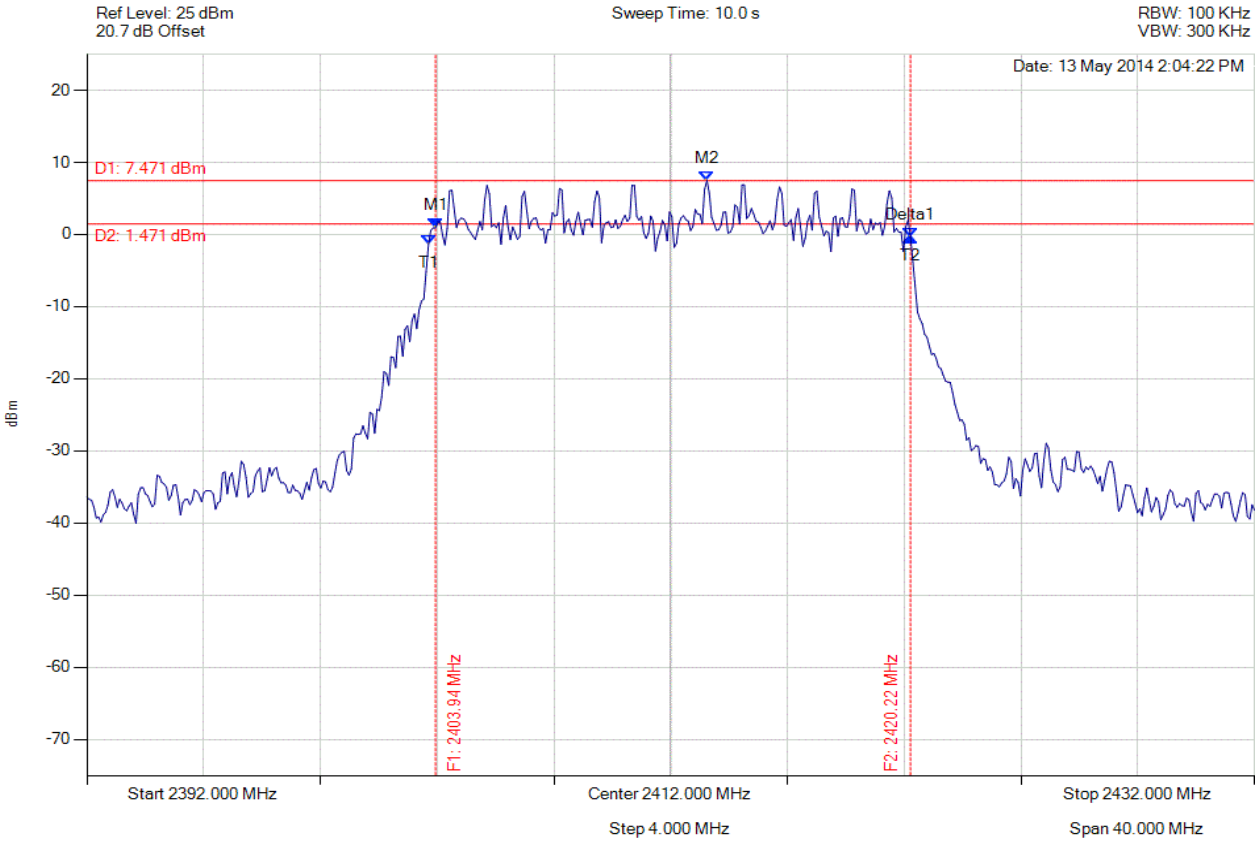


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2453.703 MHz : -2.100 dBm M2 : 2469.495 MHz : 6.896 dBm Delta1 : 16.593 MHz : 0.596 dB T1 : 2453.784 MHz : 1.097 dBm T2 : 2470.297 MHz : -1.504 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.593 MHz Limit: ≥500.0 kHz Margin: -16.09 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

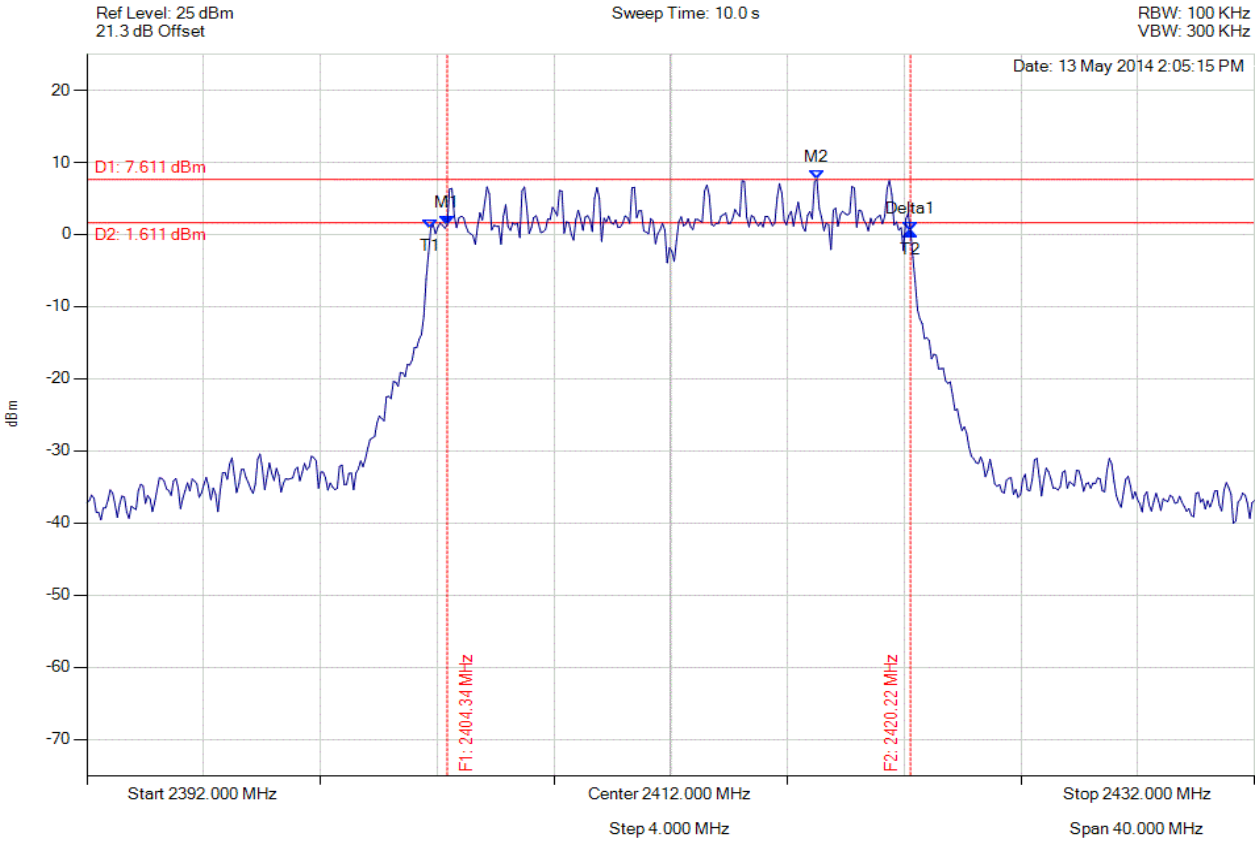


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.944 MHz : 0.927 dBm M2 : 2413.242 MHz : 7.471 dBm Delta1 : 16.273 MHz : -1.281 dB T1 : 2403.703 MHz : -1.355 dBm T2 : 2420.216 MHz : -0.355 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.273 MHz Limit: ≥500.0 kHz Margin: -15.77 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

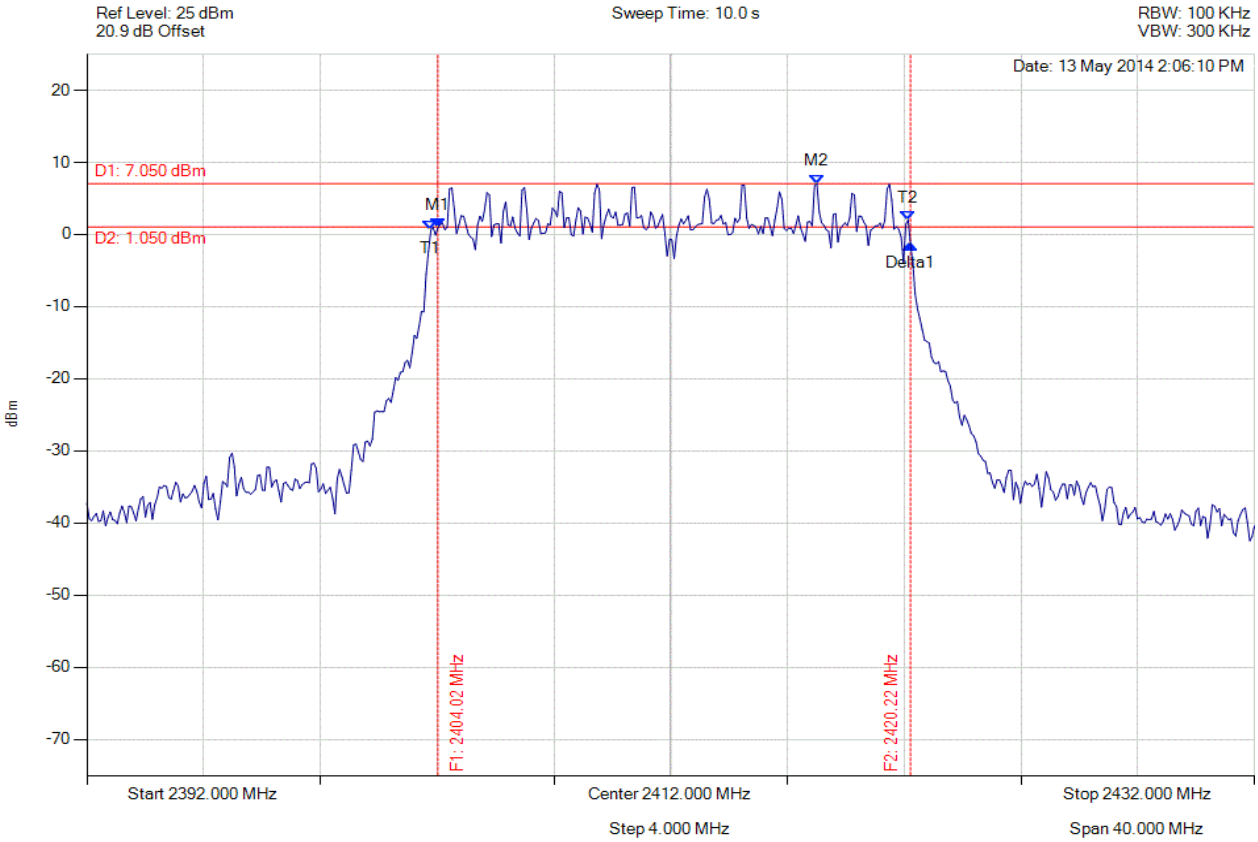


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2404.345 MHz : 1.335 dBm M2 : 2417.010 MHz : 7.611 dBm Delta1 : 15.872 MHz : -0.870 dB T1 : 2403.784 MHz : 0.882 dBm T2 : 2420.216 MHz : 0.465 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 15.872 MHz Limit: ≥500.0 kHz Margin: -15.37 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

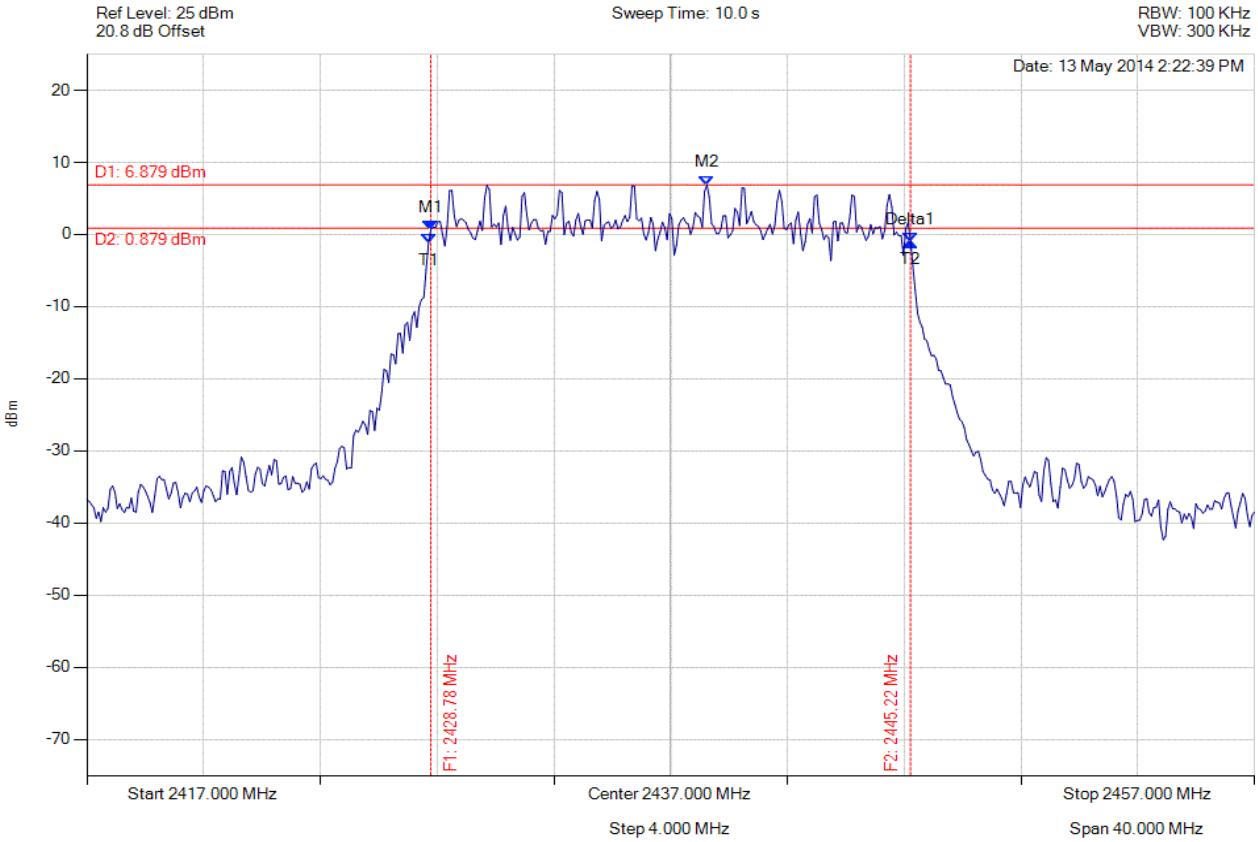


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2404.024 MHz : 0.922 dBm M2 : 2417.010 MHz : 7.050 dBm Delta1 : 16.192 MHz : -2.331 dB T1 : 2403.784 MHz : 0.587 dBm T2 : 2420.136 MHz : 2.002 dBm OBW : 16.353 MHz	Measured 6 dB Bandwidth: 16.192 MHz Limit: ≥500.0 kHz Margin: -15.69 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

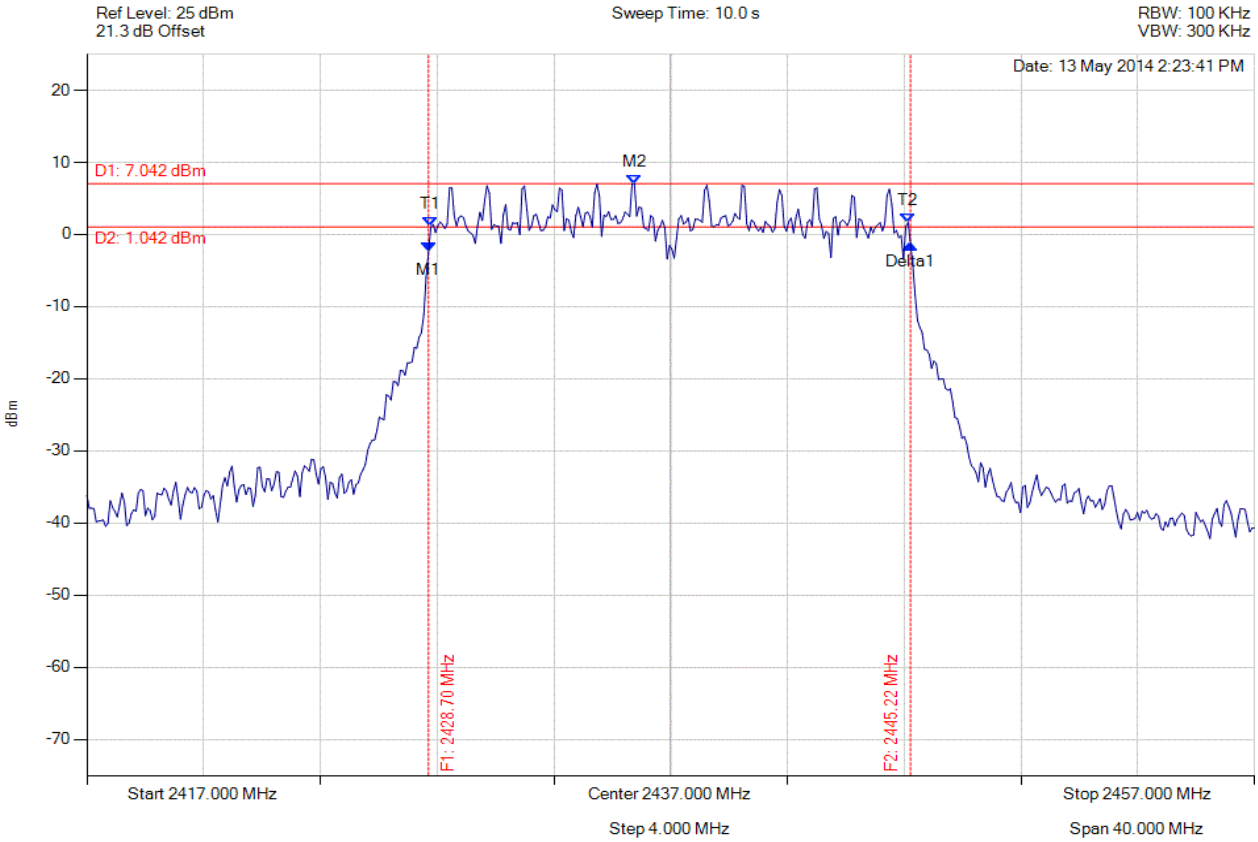


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.784 MHz : 0.670 dBm M2 : 2438.242 MHz : 6.879 dBm Delta1 : 16.433 MHz : -1.639 dB T1 : 2428.703 MHz : -1.150 dBm T2 : 2445.216 MHz : -0.969 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

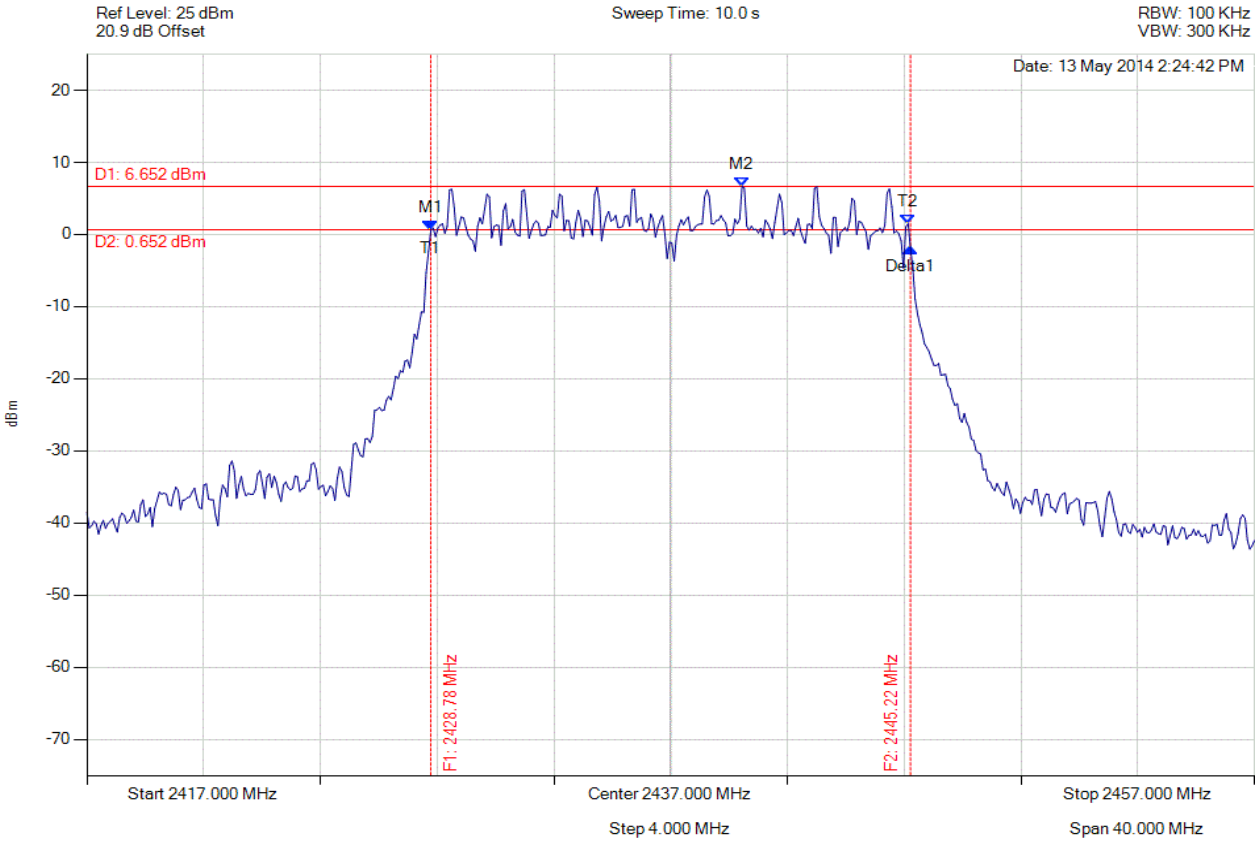


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.703 MHz : -2.395 dBm M2 : 2435.758 MHz : 7.042 dBm Delta1 : 16.513 MHz : 1.094 dB T1 : 2428.784 MHz : 1.061 dBm T2 : 2445.136 MHz : 1.663 dBm OBW : 16.353 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

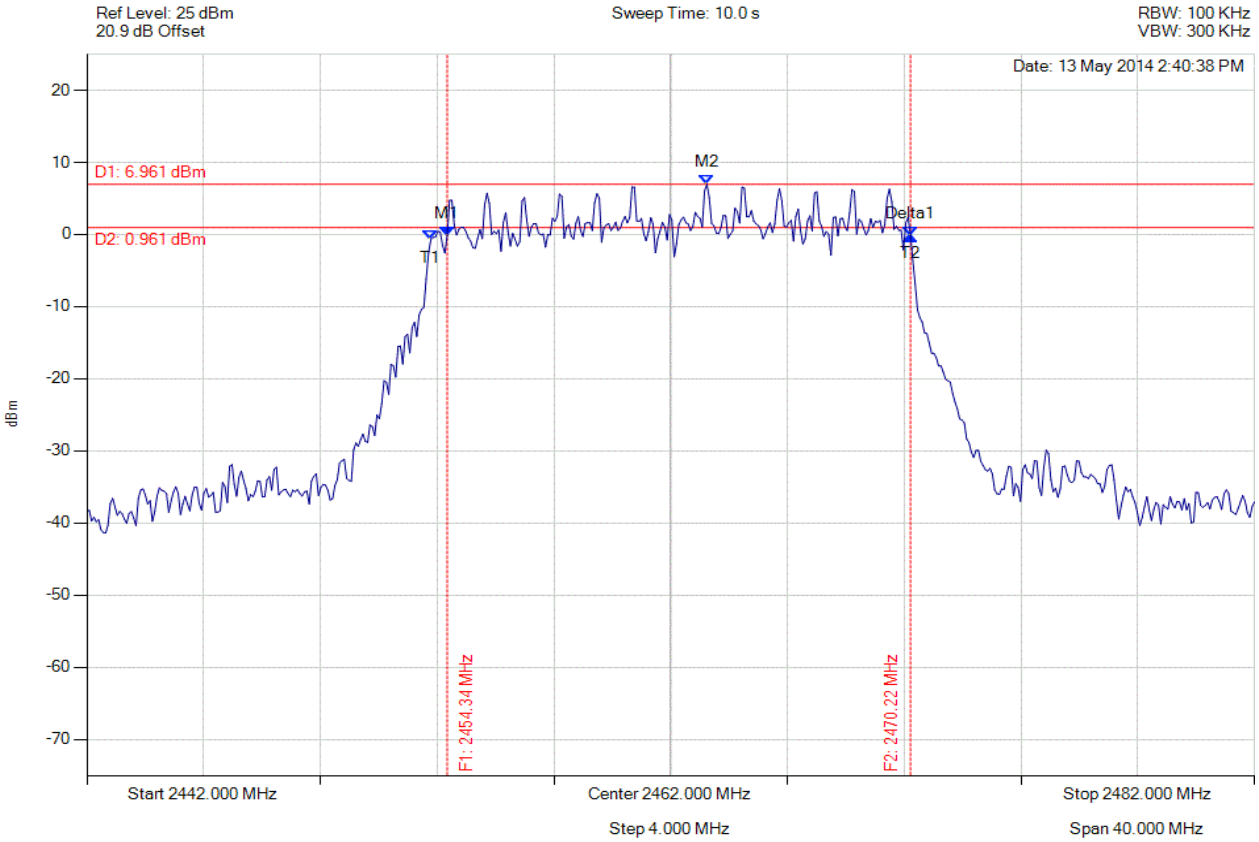


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2428.784 MHz : 0.587 dBm M2 : 2439.445 MHz : 6.652 dBm Delta1 : 16.433 MHz : -2.520 dB T1 : 2428.784 MHz : 0.587 dBm T2 : 2445.136 MHz : 1.492 dBm OBW : 16.353 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

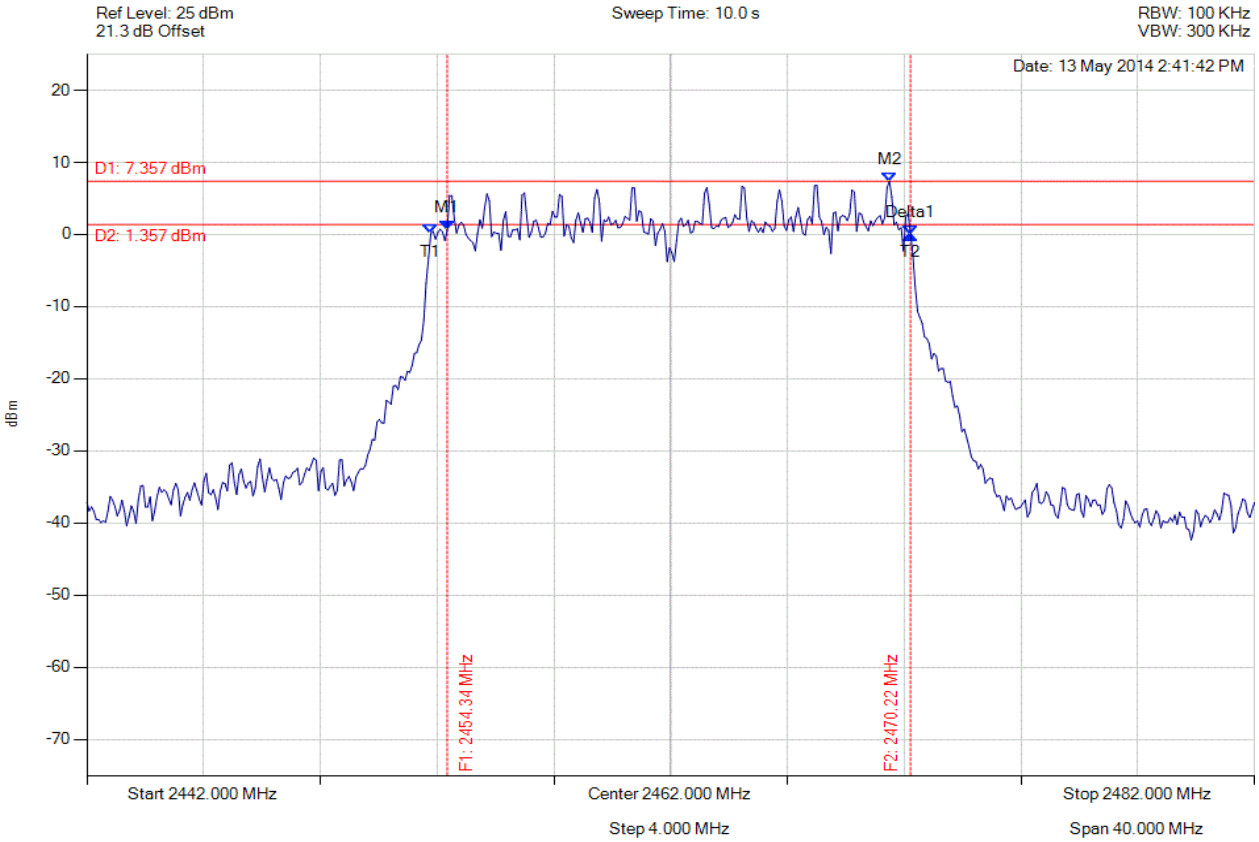


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2454.345 MHz : -0.147 dBm M2 : 2463.242 MHz : 6.961 dBm Delta1 : 15.872 MHz : 0.012 dB T1 : 2453.784 MHz : -0.682 dBm T2 : 2470.216 MHz : -0.135 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 15.872 MHz Limit: ≥500.0 kHz Margin: -15.37 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

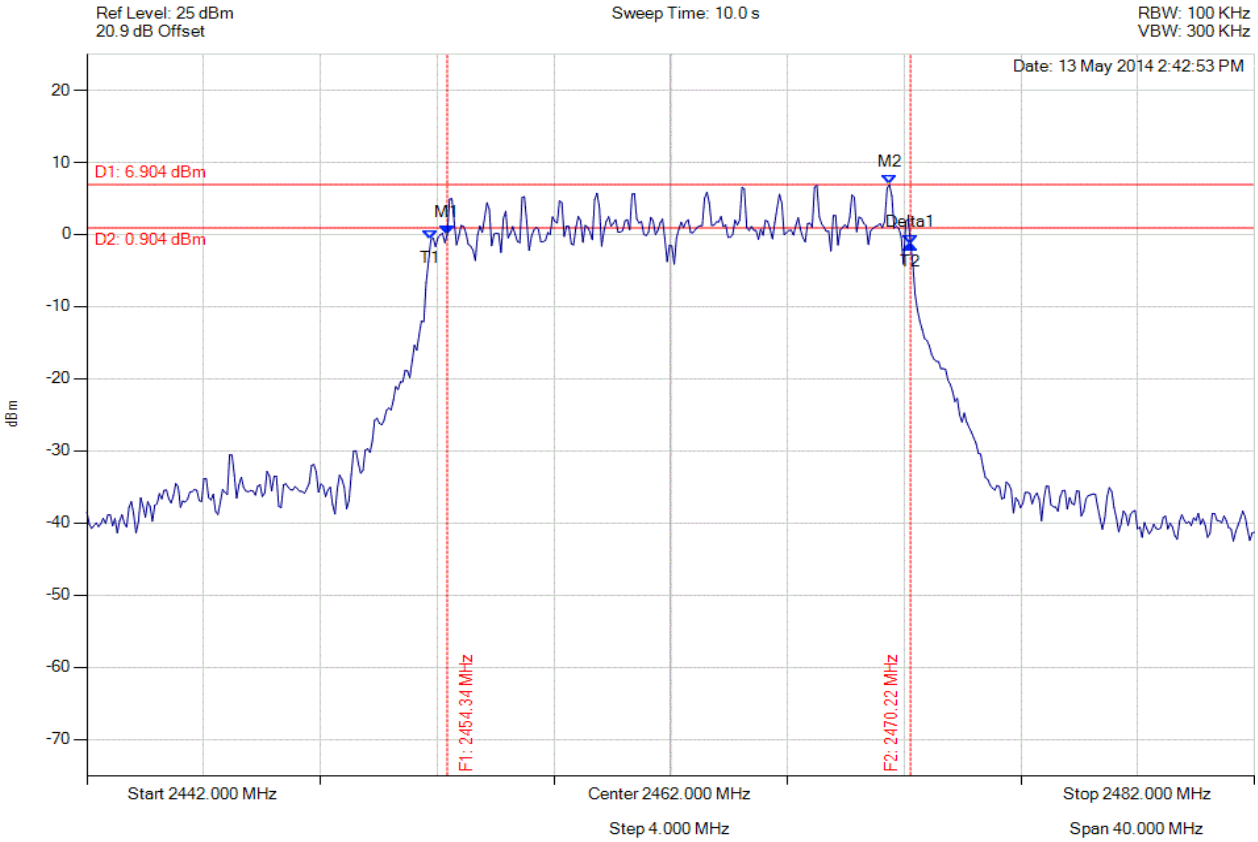


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2454.345 MHz : 0.567 dBm M2 : 2469.495 MHz : 7.357 dBm Delta1 : 15.872 MHz : -0.547 dB T1 : 2453.784 MHz : 0.144 dBm T2 : 2470.216 MHz : 0.019 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 15.872 MHz Limit: ≥500.0 kHz Margin: -15.37 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

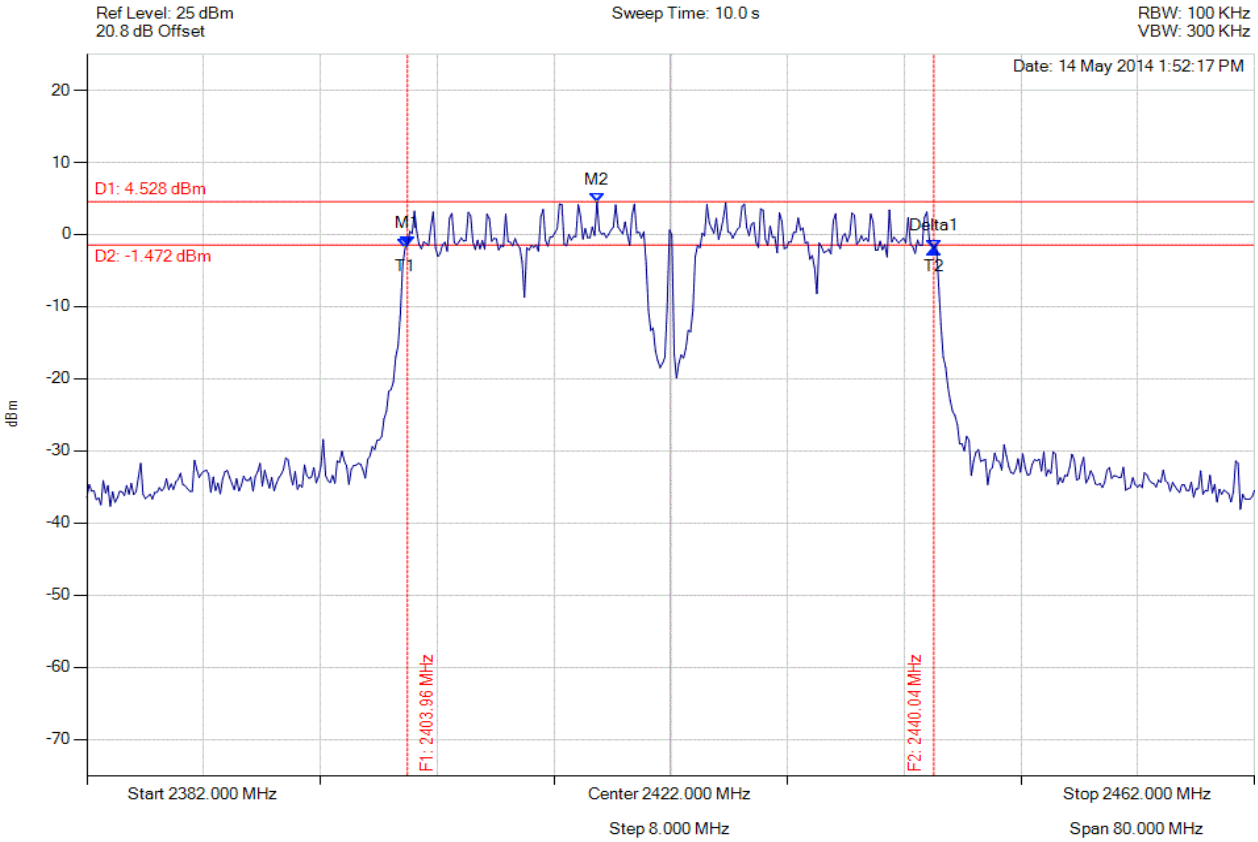


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2454.345 MHz : -0.046 dBm M2 : 2469.495 MHz : 6.904 dBm Delta1 : 15.872 MHz : -1.255 dB T1 : 2453.784 MHz : -0.719 dBm T2 : 2470.216 MHz : -1.300 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 15.872 MHz Limit: ≥500.0 kHz Margin: -15.37 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

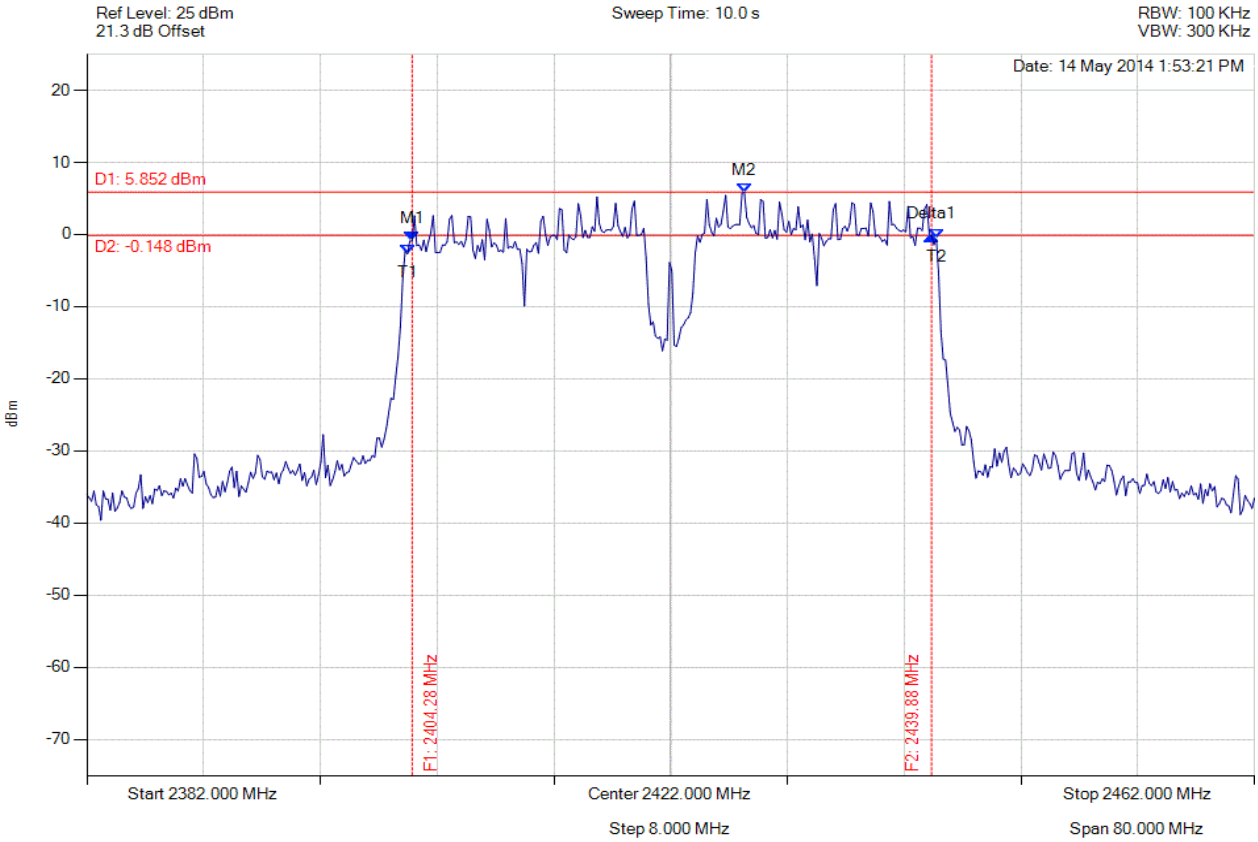


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2403.964 MHz : -1.593 dBm M2 : 2416.950 MHz : 4.528 dBm Delta1 : 36.072 MHz : -0.354 dB T1 : 2403.804 MHz : -1.904 dBm T2 : 2440.036 MHz : -1.947 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.072 MHz Limit: ≥500.0 kHz Margin: -35.57 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

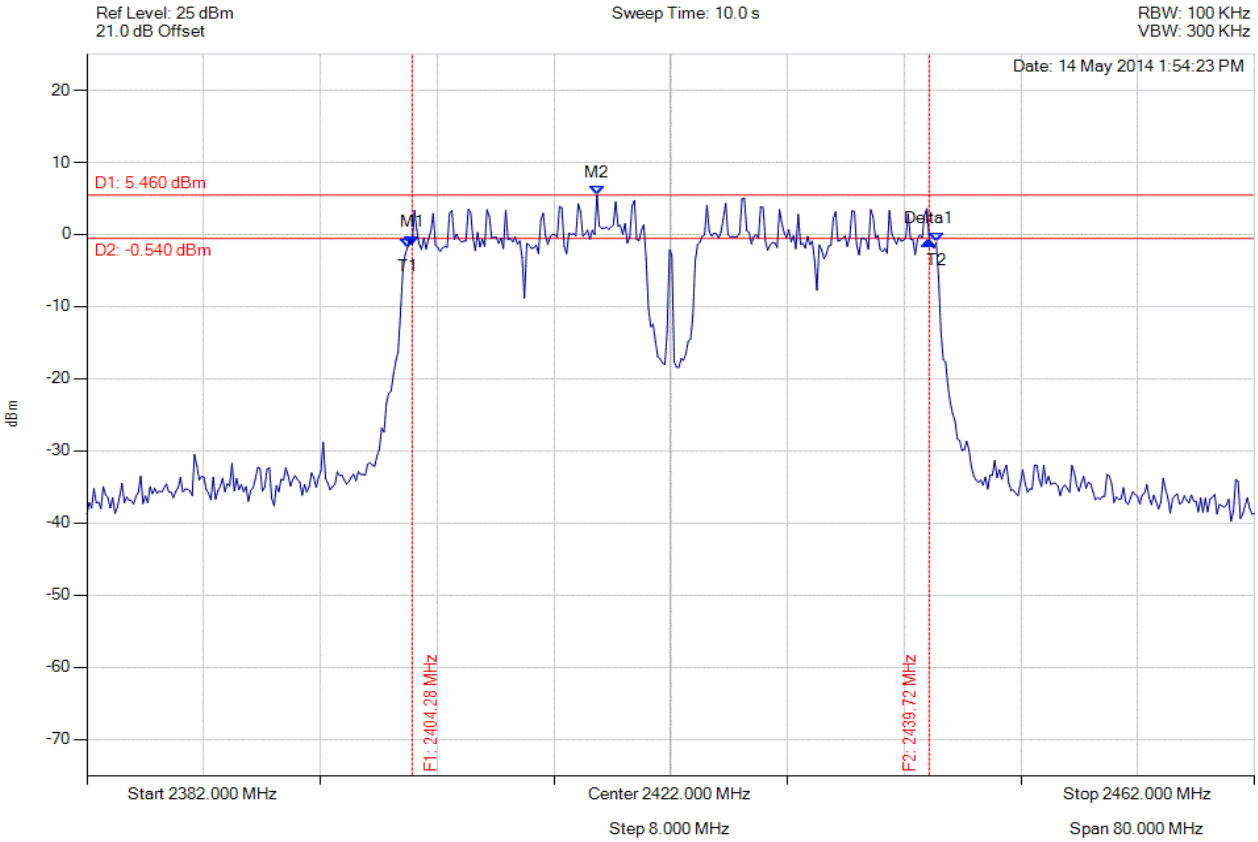


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2404.285 MHz : -0.930 dBm M2 : 2427.050 MHz : 5.852 dBm Delta1 : 35.591 MHz : 0.667 dB T1 : 2403.964 MHz : -2.714 dBm T2 : 2440.196 MHz : -0.605 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 35.591 MHz Limit: ≥500.0 kHz Margin: -35.09 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

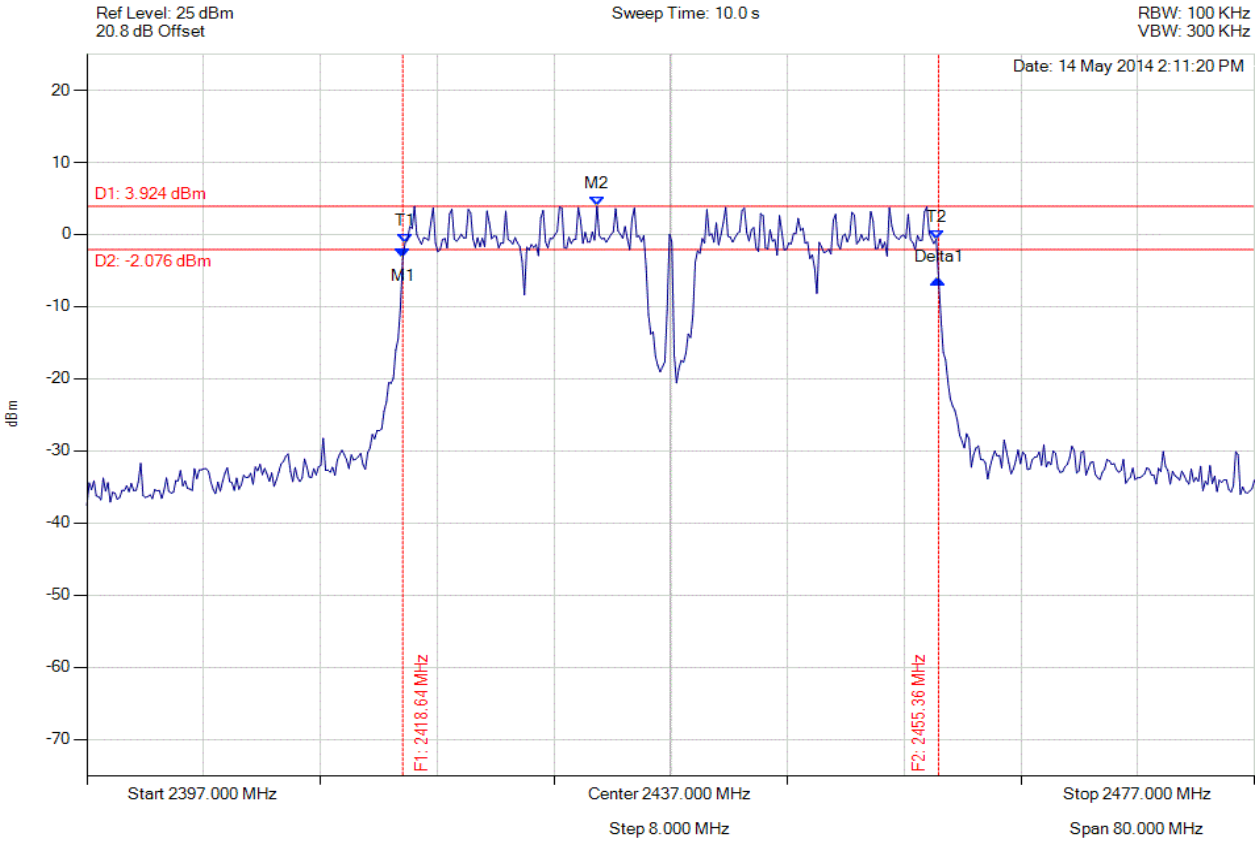


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2404.285 MHz : -1.449 dBm M2 : 2416.950 MHz : 5.460 dBm Delta1 : 35.431 MHz : 0.639 dB T1 : 2403.964 MHz : -1.850 dBm T2 : 2440.196 MHz : -1.099 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 35.431 MHz Limit: ≥500.0 kHz Margin: -34.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

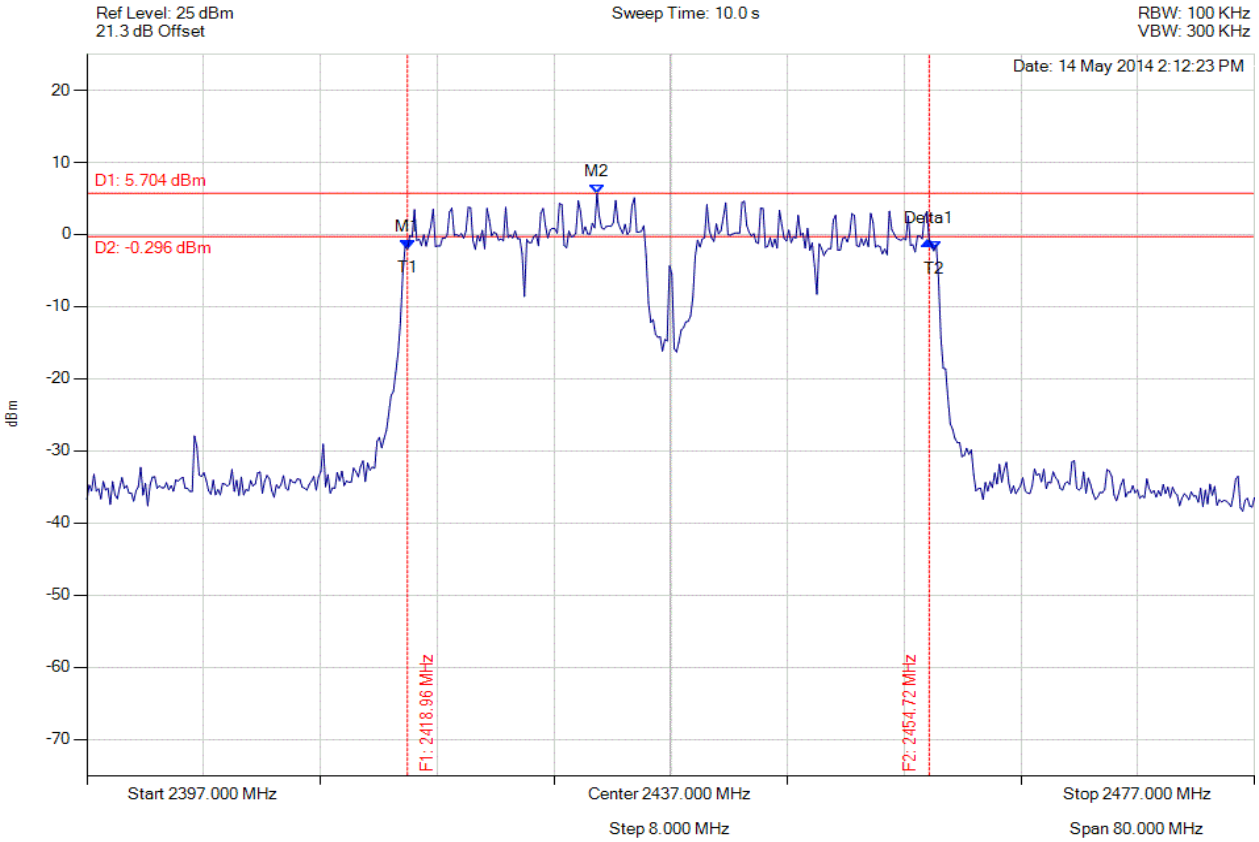


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2418.643 MHz : -3.194 dBm M2 : 2431.950 MHz : 3.924 dBm Delta1 : 36.713 MHz : -2.967 dB T1 : 2418.804 MHz : -1.154 dBm T2 : 2455.196 MHz : -0.631 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

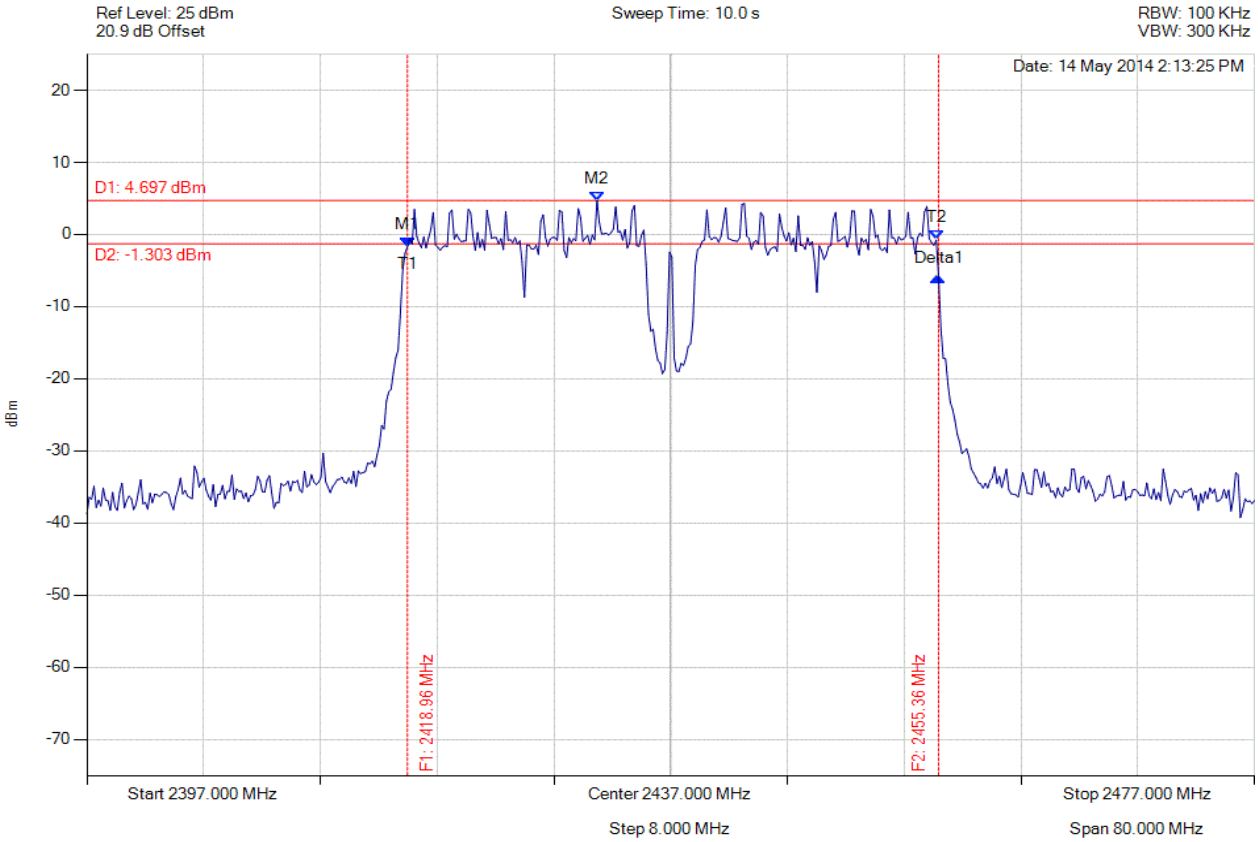


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2418.964 MHz : -2.010 dBm M2 : 2431.950 MHz : 5.704 dBm Delta1 : 35.752 MHz : 1.155 dB T1 : 2418.964 MHz : -2.010 dBm T2 : 2455.036 MHz : -2.258 dBm OBW : 36.072 MHz	Measured 6 dB Bandwidth: 35.752 MHz Limit: ≥500.0 kHz Margin: -35.25 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

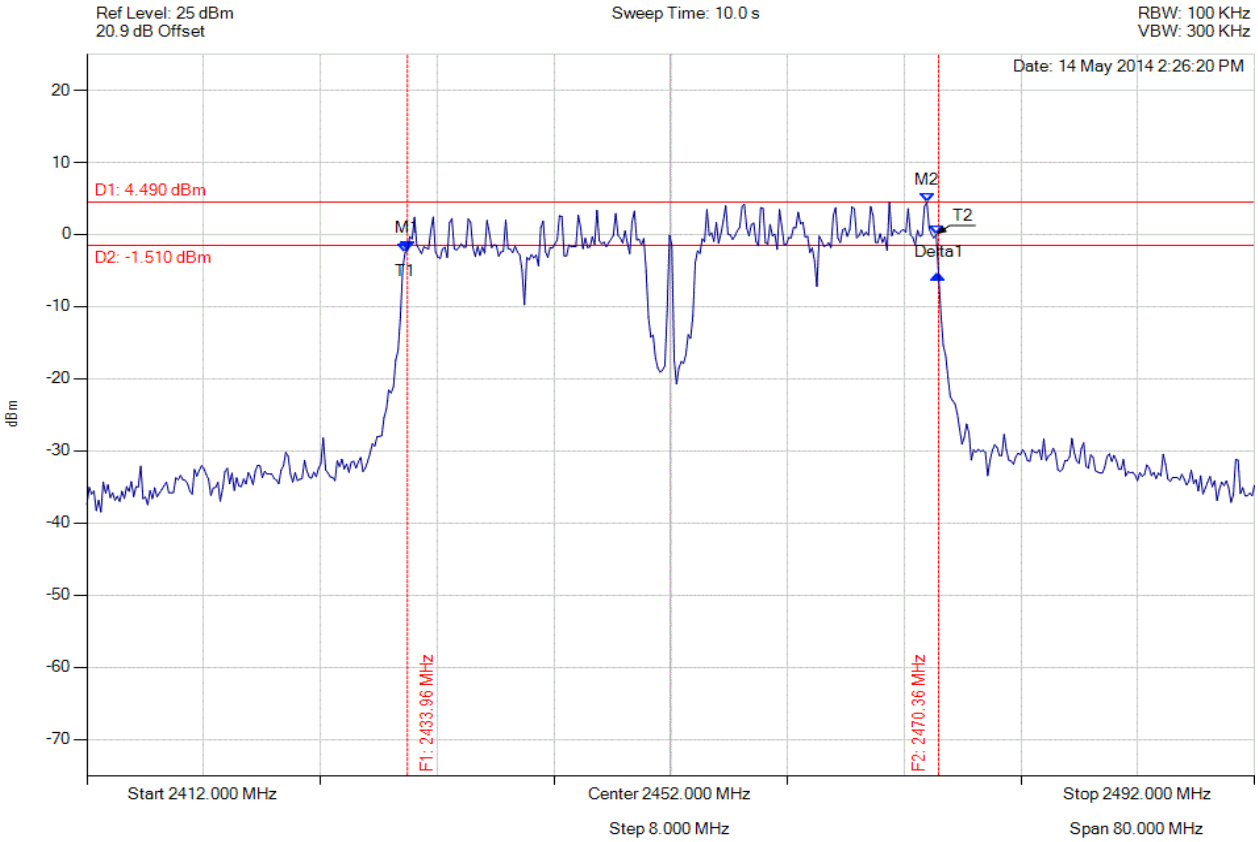


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2418.964 MHz : -1.636 dBm M2 : 2431.950 MHz : 4.697 dBm Delta1 : 36.393 MHz : -4.179 dB T1 : 2418.964 MHz : -1.636 dBm T2 : 2455.196 MHz : -0.770 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.393 MHz Limit: ≥500.0 kHz Margin: -35.89 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

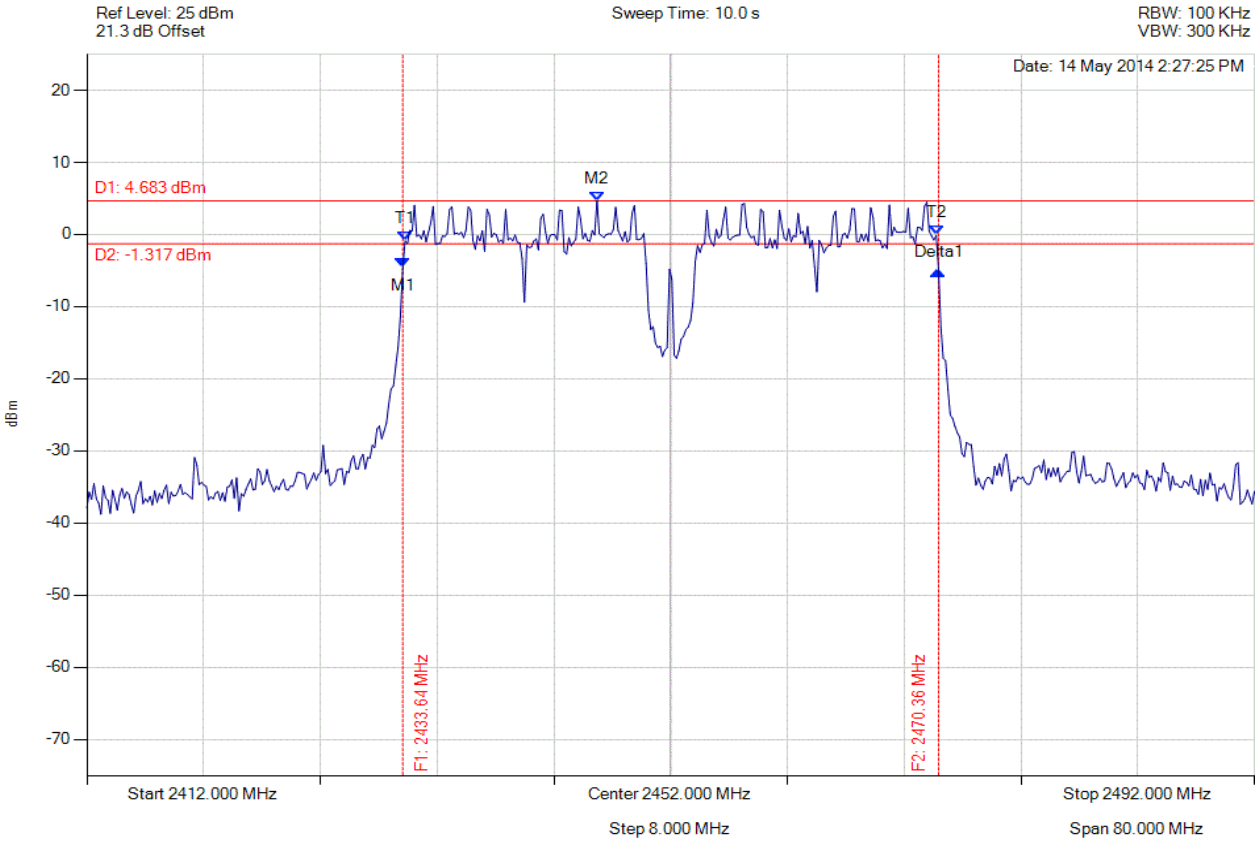


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2433.964 MHz : -2.266 dBm M2 : 2469.555 MHz : 4.490 dBm Delta1 : 36.393 MHz : -3.213 dB T1 : 2433.804 MHz : -2.553 dBm T2 : 2470.196 MHz : 0.005 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.393 MHz Limit: ≥500.0 kHz Margin: -35.89 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

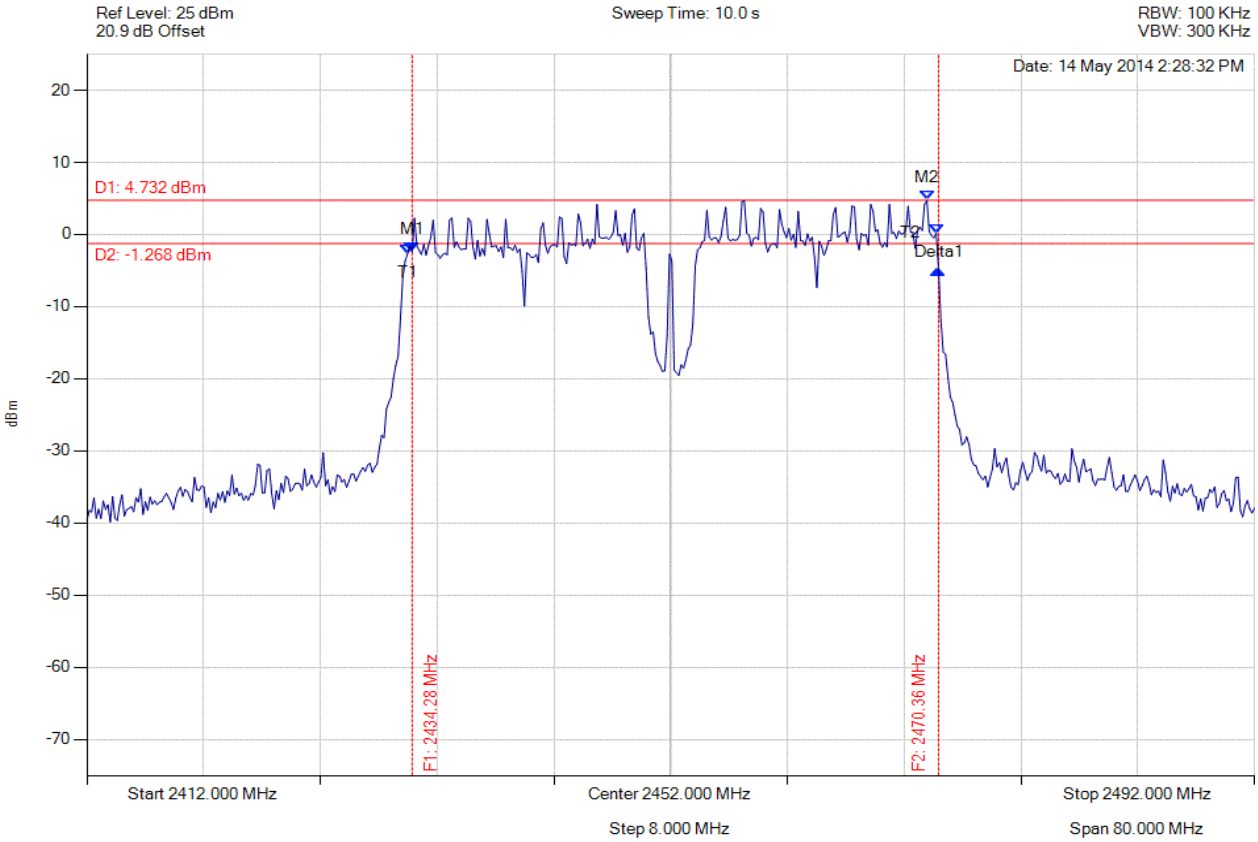


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2433.643 MHz : -4.530 dBm M2 : 2446.950 MHz : 4.683 dBm Delta1 : 36.713 MHz : -0.437 dB T1 : 2433.804 MHz : -0.898 dBm T2 : 2470.196 MHz : -0.103 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

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

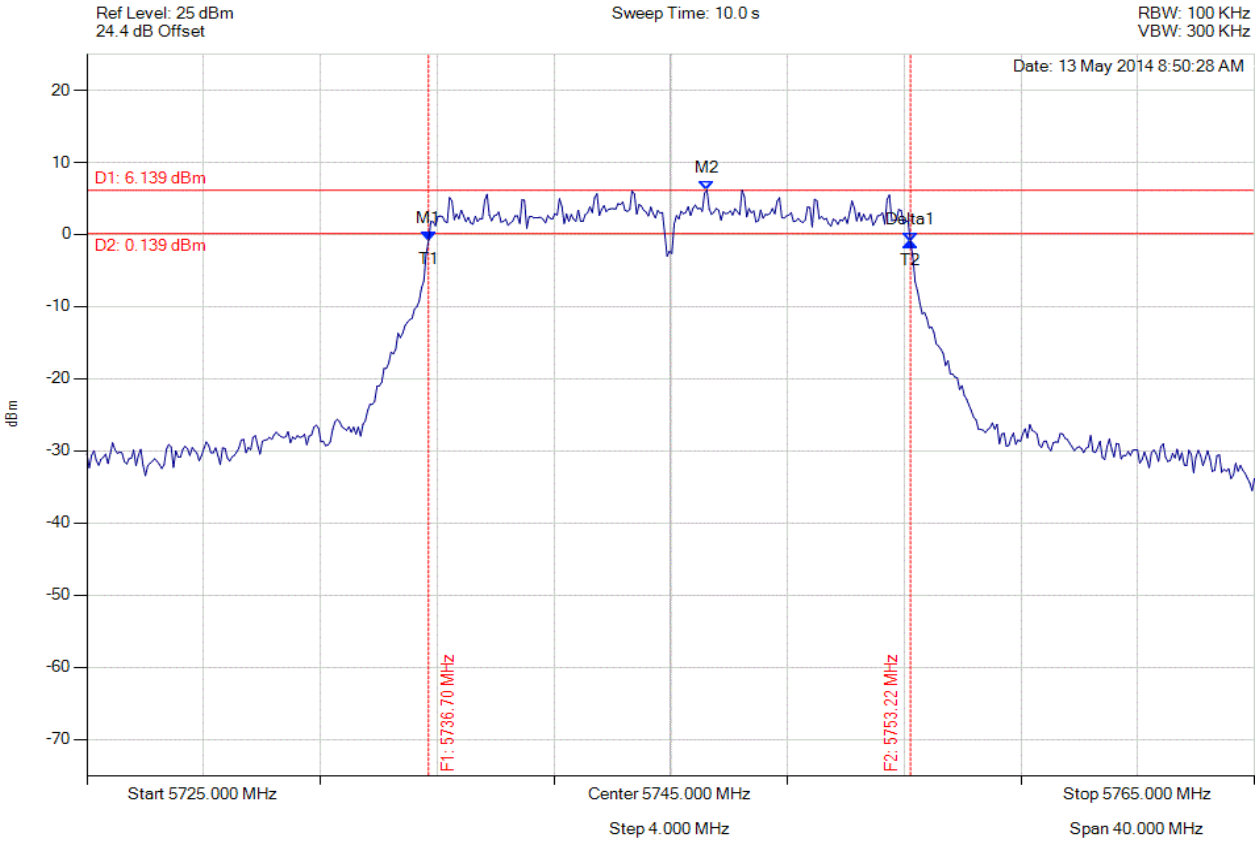


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2434.285 MHz : -2.427 dBm M2 : 2469.555 MHz : 4.732 dBm Delta1 : 36.072 MHz : -2.481 dB T1 : 2433.964 MHz : -2.698 dBm T2 : 2470.196 MHz : 0.196 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.072 MHz Limit: ≥500.0 kHz Margin: -35.57 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

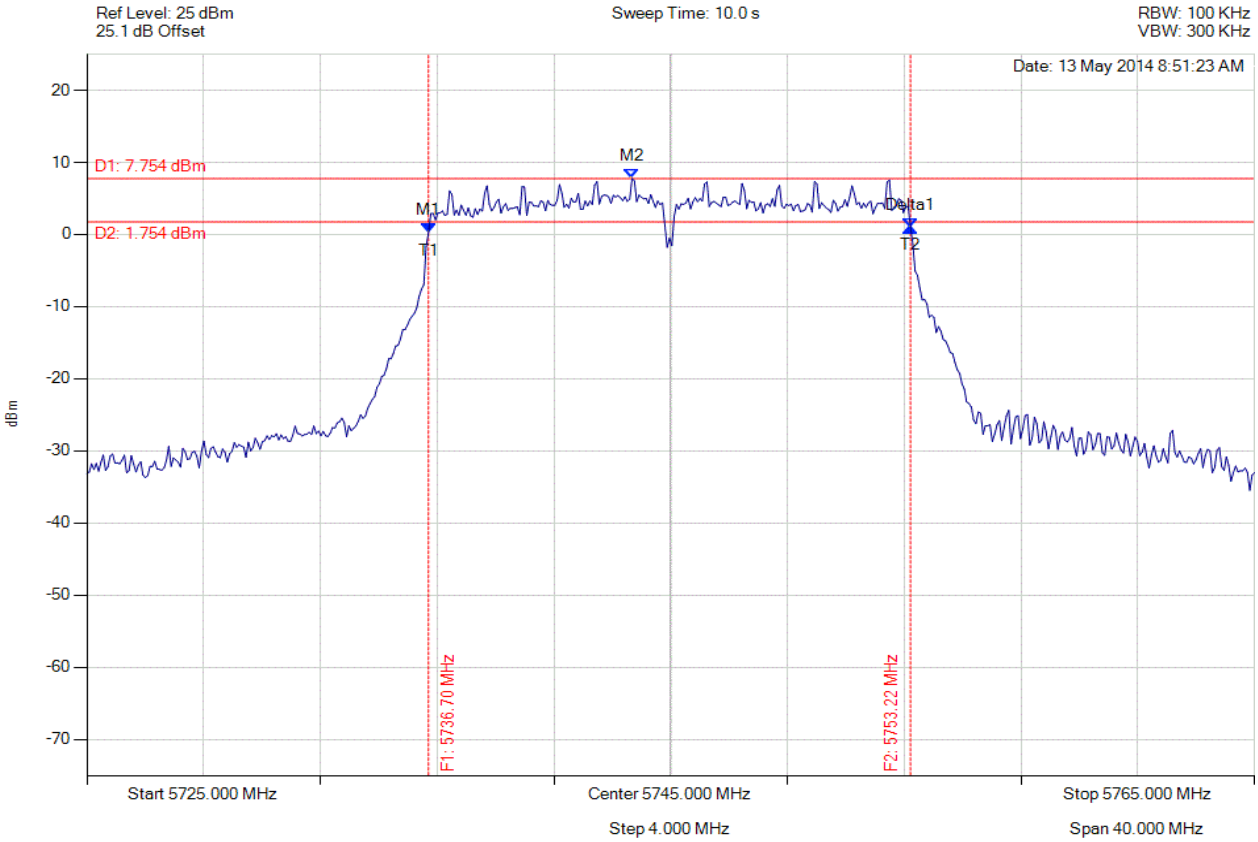


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.703 MHz : -0.847 dBm M2 : 5746.242 MHz : 6.139 dBm Delta1 : 16.513 MHz : -0.187 dB T1 : 5736.703 MHz : -0.847 dBm T2 : 5753.216 MHz : -1.034 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

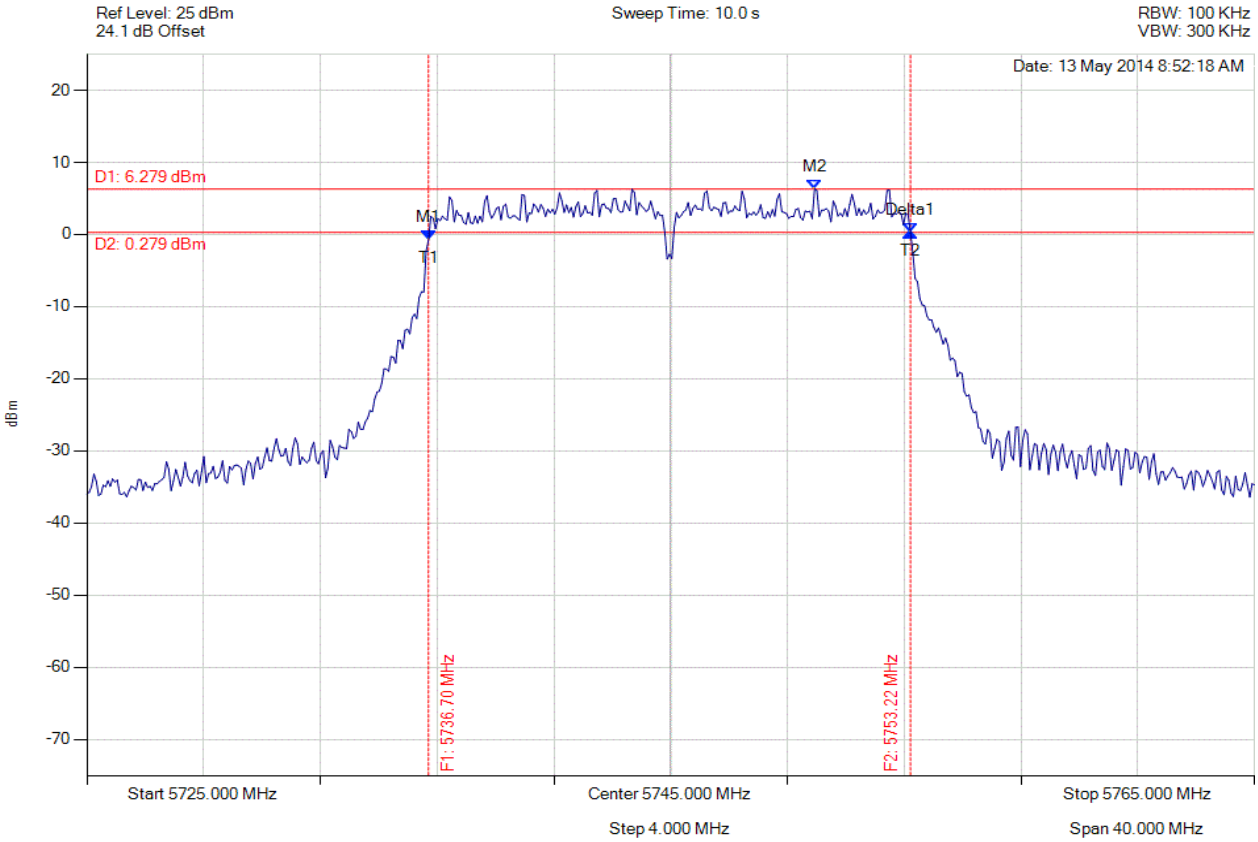


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.703 MHz : 0.268 dBm M2 : 5743.677 MHz : 7.754 dBm Delta1 : 16.513 MHz : 0.757 dB T1 : 5736.703 MHz : 0.268 dBm T2 : 5753.216 MHz : 1.024 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

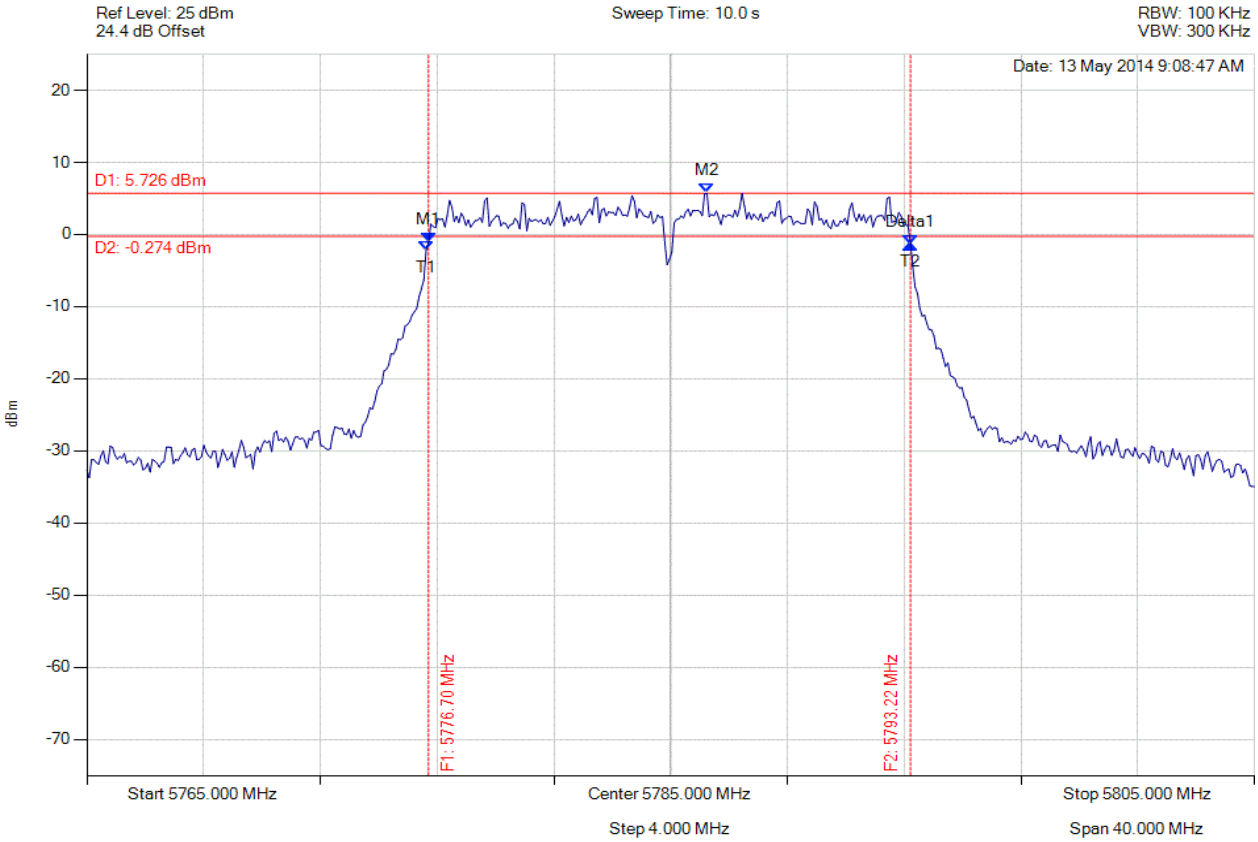


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.703 MHz : -0.751 dBm M2 : 5749.930 MHz : 6.279 dBm Delta1 : 16.513 MHz : 0.997 dB T1 : 5736.703 MHz : -0.751 dBm T2 : 5753.216 MHz : 0.245 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

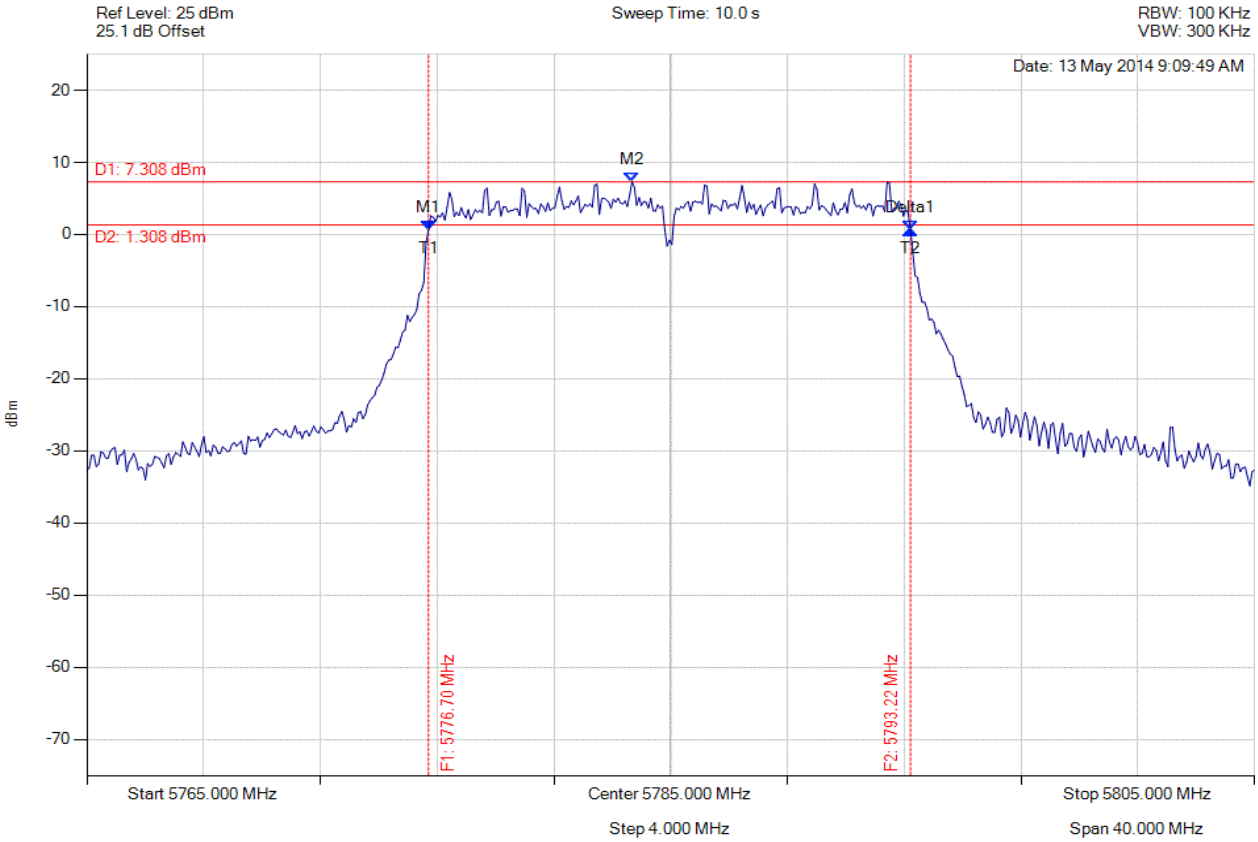


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.703 MHz : -1.050 dBm M2 : 5786.242 MHz : 5.726 dBm Delta1 : 16.513 MHz : -0.268 dB T1 : 5776.623 MHz : -2.167 dBm T2 : 5793.216 MHz : -1.319 dBm OBW : 16.593 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

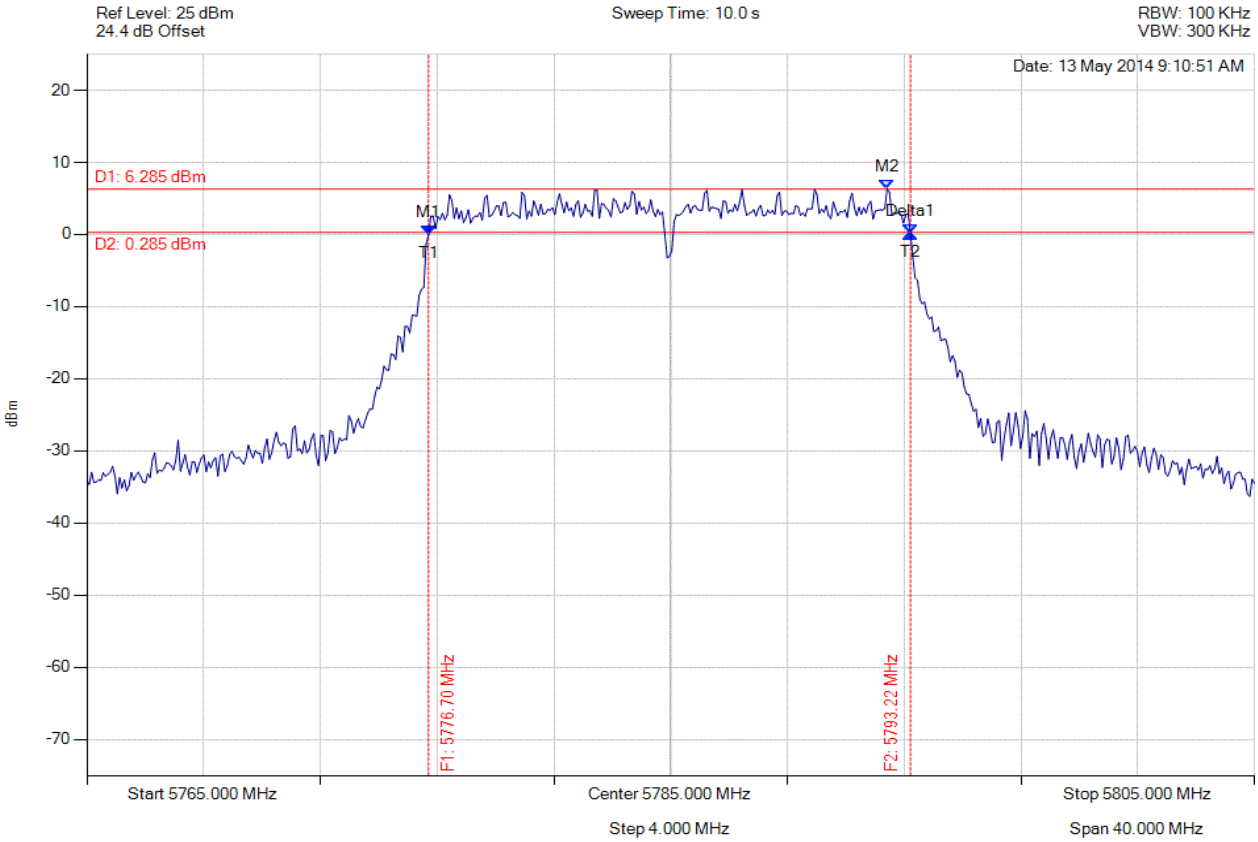


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.703 MHz : 0.607 dBm M2 : 5783.677 MHz : 7.308 dBm Delta1 : 16.513 MHz : 0.010 dB T1 : 5776.703 MHz : 0.607 dBm T2 : 5793.216 MHz : 0.617 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5785.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

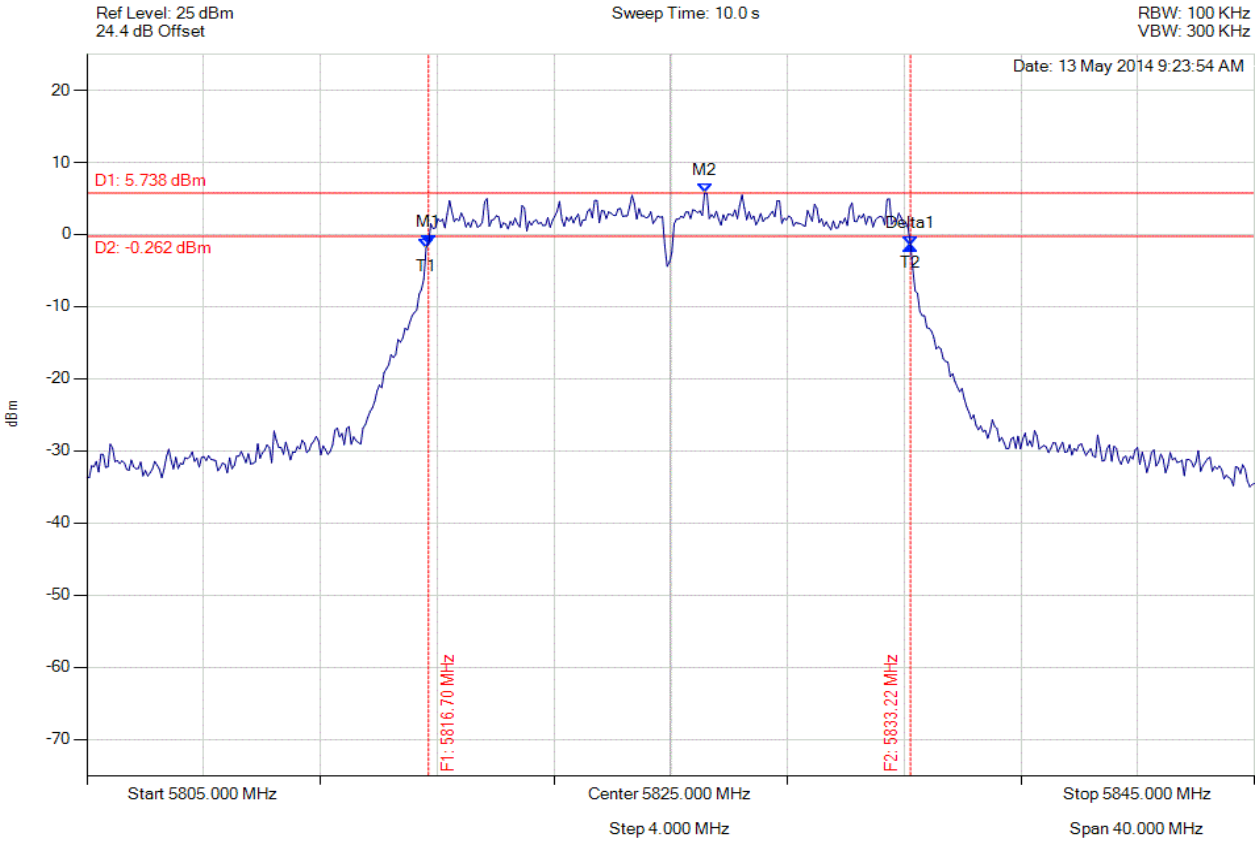


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.703 MHz : -0.090 dBm M2 : 5792.415 MHz : 6.285 dBm Delta1 : 16.513 MHz : 0.177 dB T1 : 5776.703 MHz : -0.090 dBm T2 : 5793.216 MHz : 0.087 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

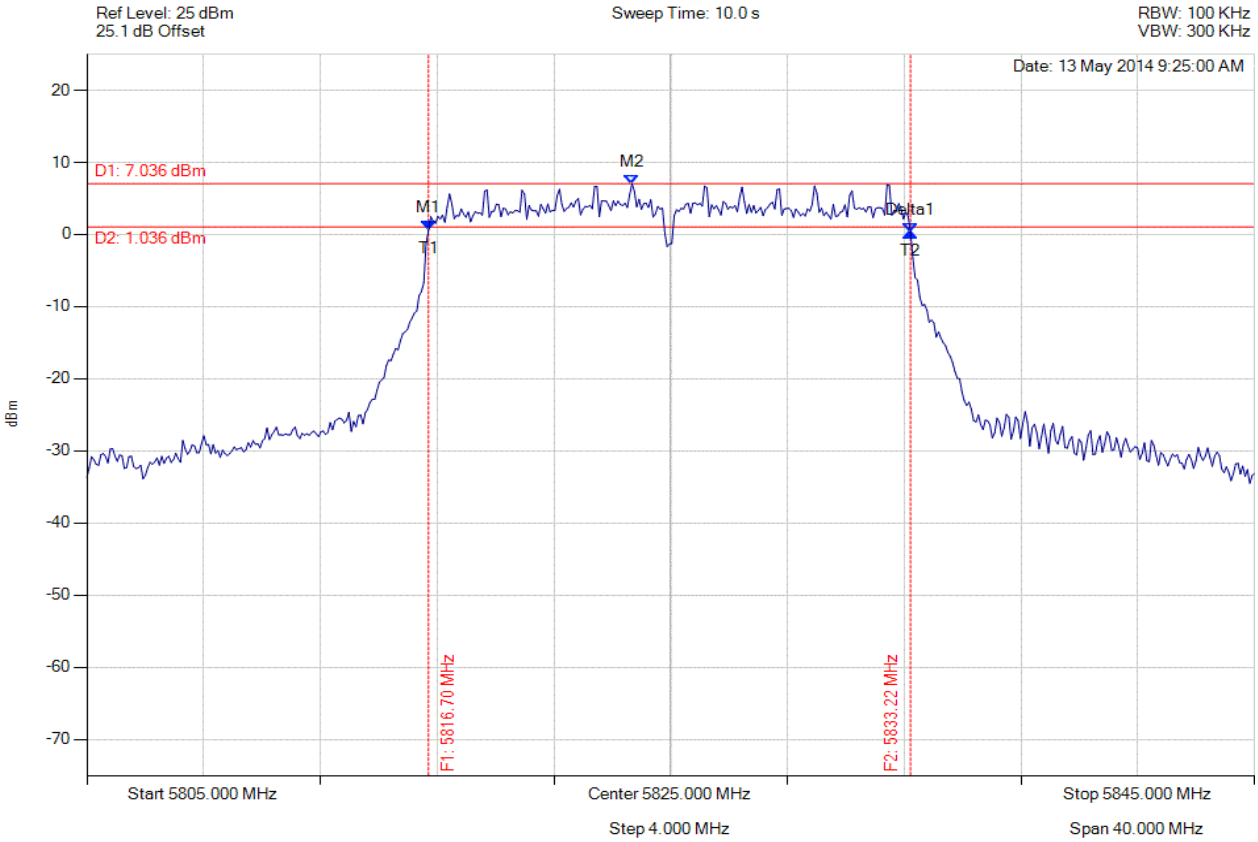


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.703 MHz : -1.300 dBm M2 : 5826.162 MHz : 5.738 dBm Delta1 : 16.513 MHz : -0.177 dB T1 : 5816.623 MHz : -1.860 dBm T2 : 5833.216 MHz : -1.477 dBm OBW : 16.593 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

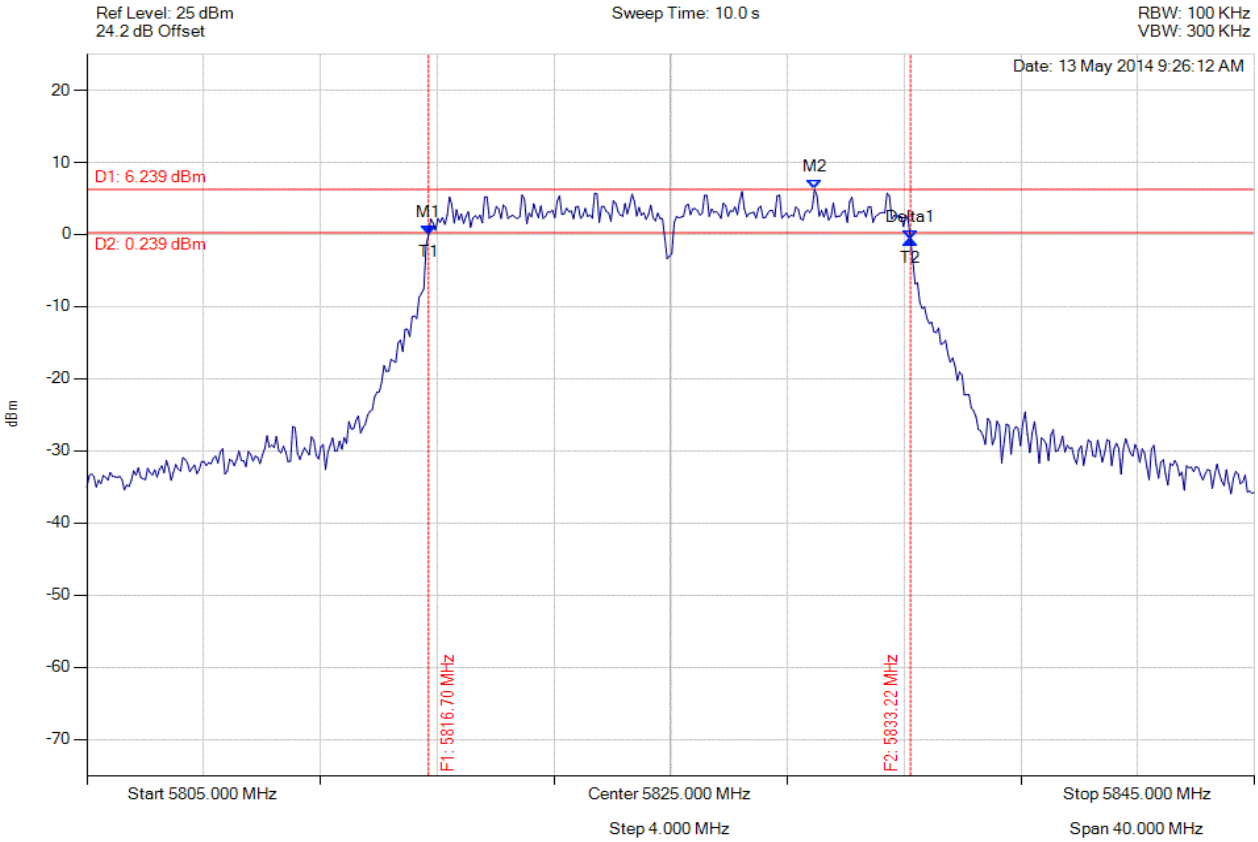


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.703 MHz : 0.569 dBm M2 : 5823.677 MHz : 7.036 dBm Delta1 : 16.513 MHz : -0.270 dB T1 : 5816.703 MHz : 0.569 dBm T2 : 5833.216 MHz : 0.298 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11a, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

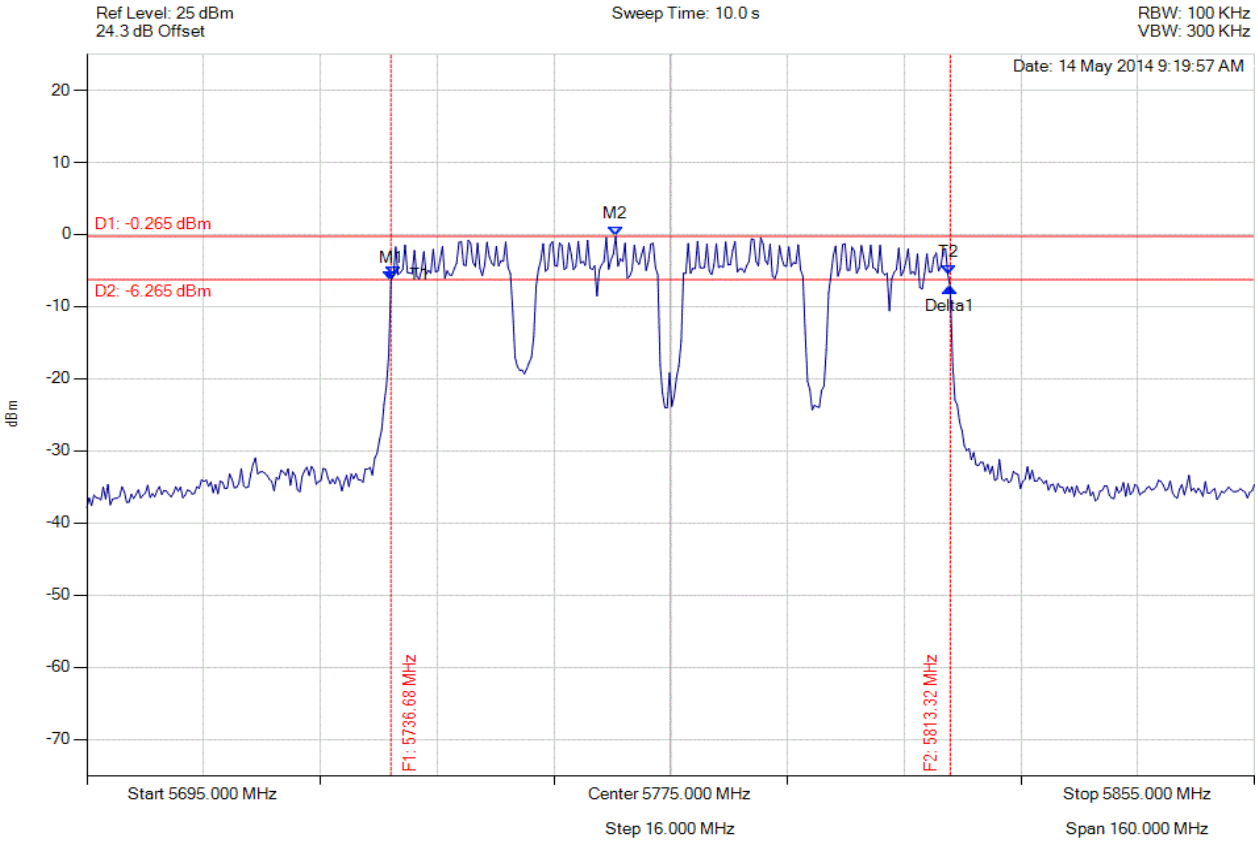


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.703 MHz : -0.001 dBm M2 : 5829.930 MHz : 6.239 dBm Delta1 : 16.513 MHz : -0.673 dB T1 : 5816.703 MHz : -0.001 dBm T2 : 5833.216 MHz : -0.674 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.513 MHz Limit: ≥500.0 kHz Margin: -16.01 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

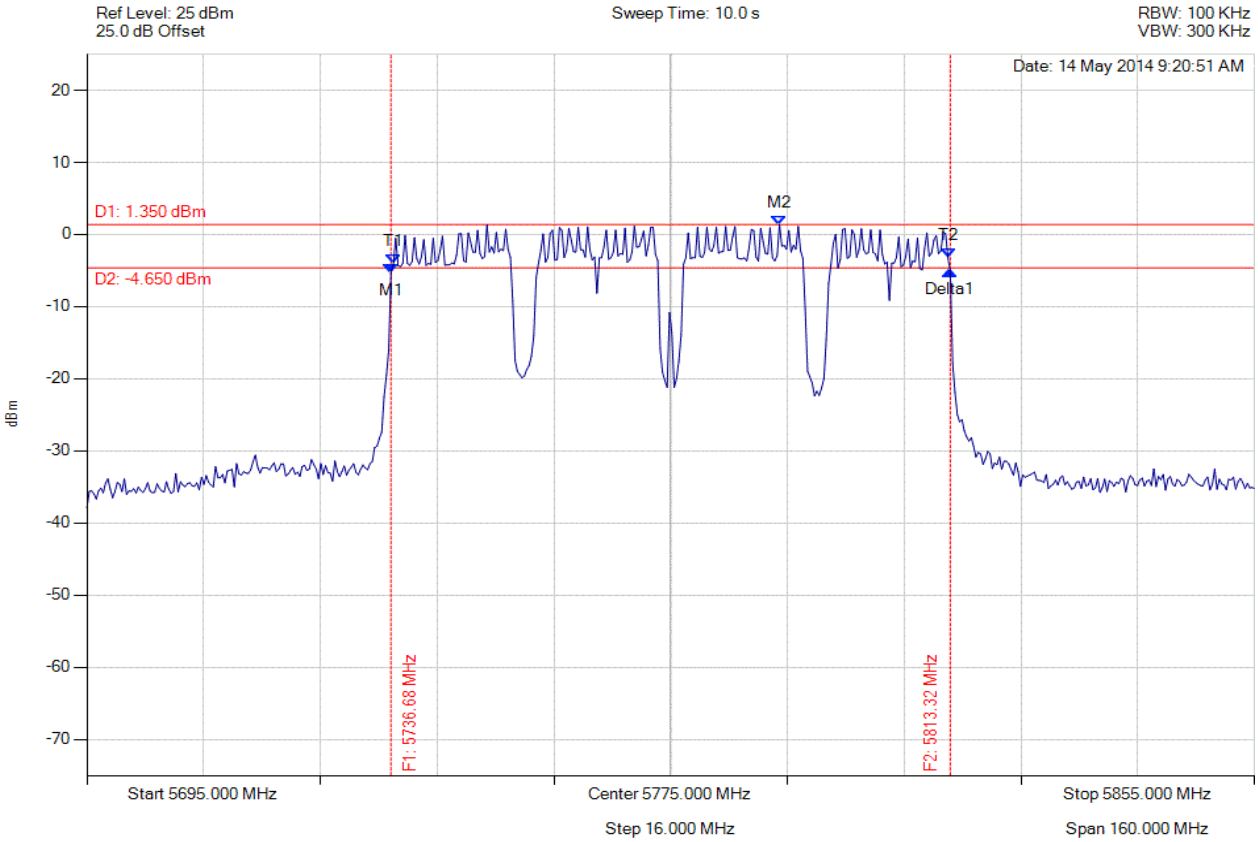


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.683 MHz : -6.312 dBm M2 : 5767.465 MHz : -0.265 dBm Delta1 : 76.633 MHz : -1.127 dB T1 : 5737.004 MHz : -5.661 dBm T2 : 5812.996 MHz : -5.547 dBm OBW : 75.992 MHz	Measured 6 dB Bandwidth: 76.633 MHz Limit: ≥500.0 kHz Margin: -76.13 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

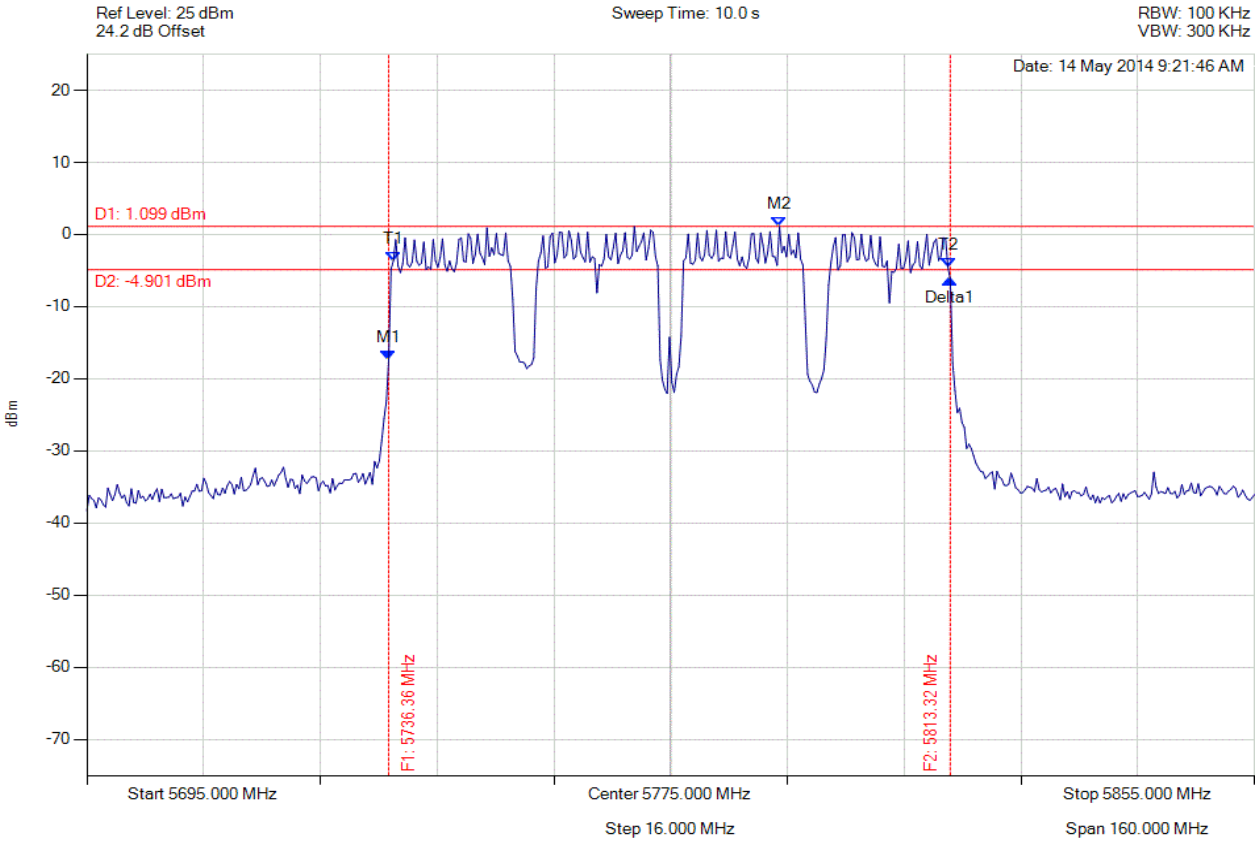


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.683 MHz : -5.293 dBm M2 : 5789.910 MHz : 1.350 dBm Delta1 : 76.633 MHz : 0.228 dB T1 : 5737.004 MHz : -4.105 dBm T2 : 5812.996 MHz : -3.237 dBm OBW : 75.992 MHz	Measured 6 dB Bandwidth: 76.633 MHz Limit: ≥500.0 kHz Margin: -76.13 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

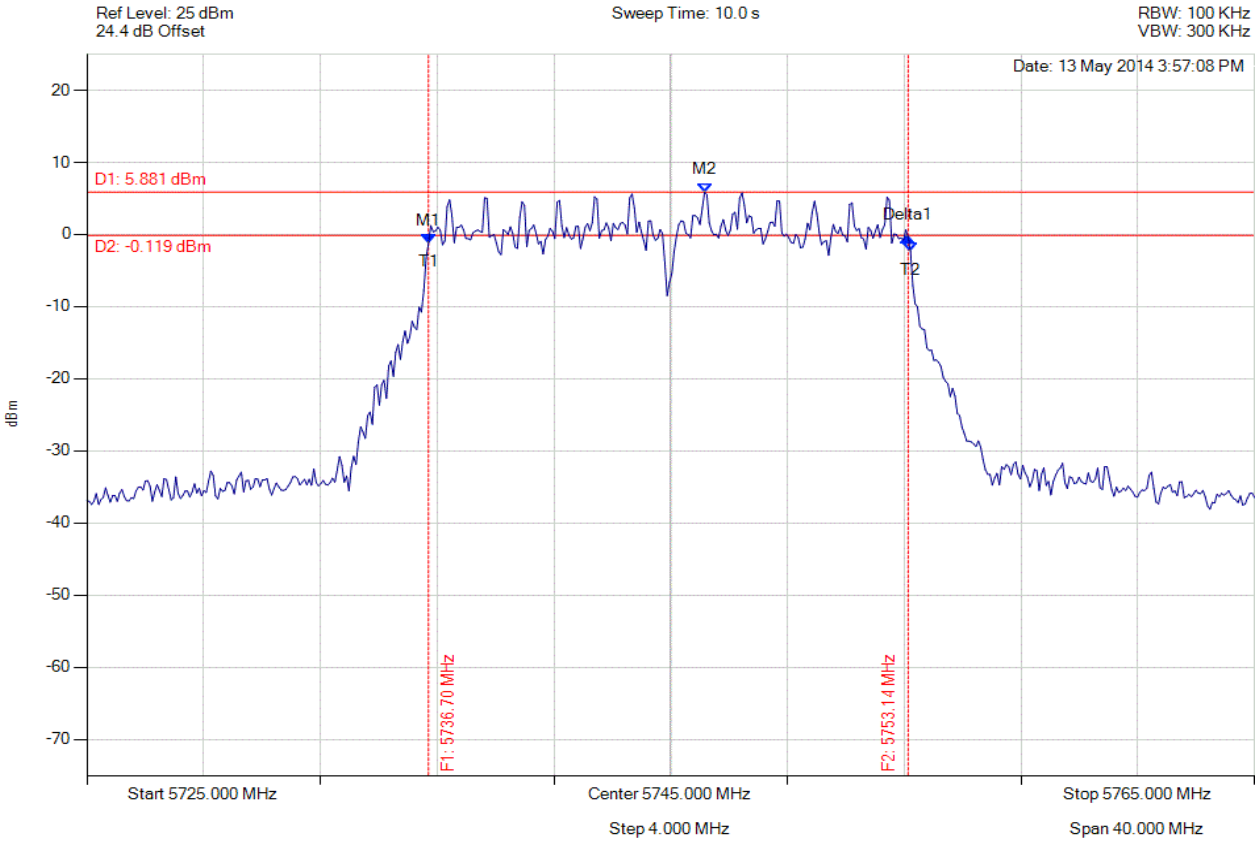


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.363 MHz : -17.336 dBm M2 : 5789.910 MHz : 1.099 dBm Delta1 : 76.954 MHz : 11.066 dB T1 : 5737.004 MHz : -3.629 dBm T2 : 5812.996 MHz : -4.499 dBm OBW : 75.992 MHz	Measured 6 dB Bandwidth: 76.954 MHz Limit: ≥500.0 kHz Margin: -76.45 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

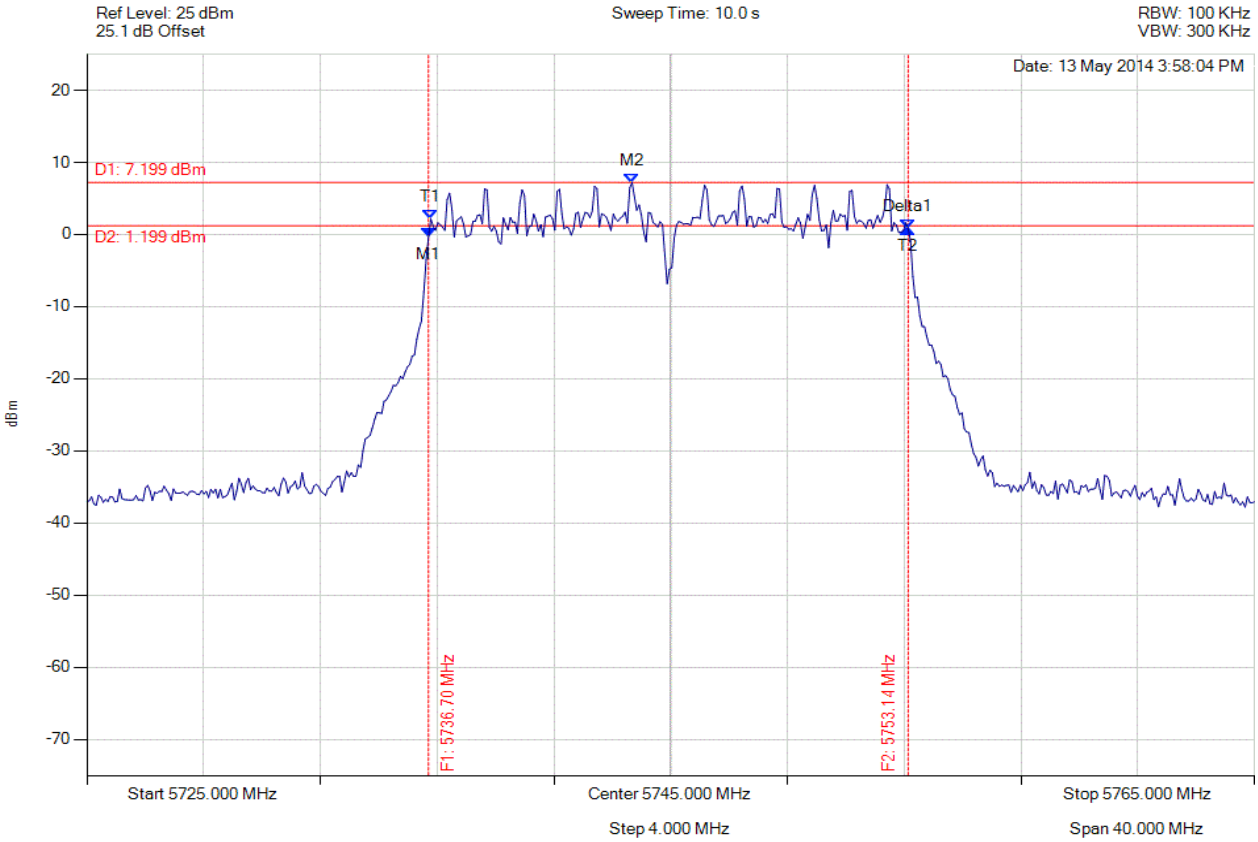


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.703 MHz : -1.180 dBm M2 : 5746.162 MHz : 5.881 dBm Delta1 : 16.433 MHz : 0.744 dB T1 : 5736.703 MHz : -1.180 dBm T2 : 5753.216 MHz : -2.384 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

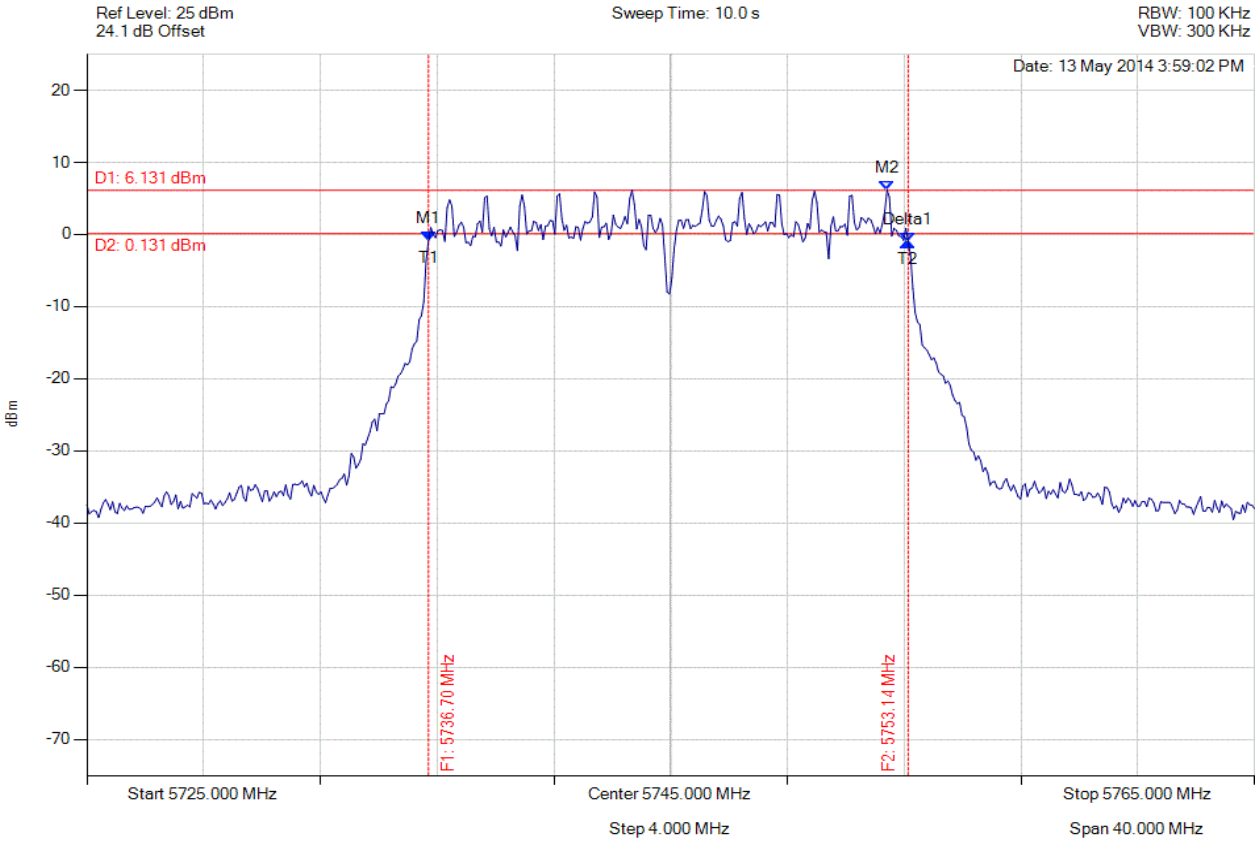


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.703 MHz : -0.296 dBm M2 : 5743.677 MHz : 7.199 dBm Delta1 : 16.433 MHz : 1.135 dB T1 : 5736.784 MHz : 2.151 dBm T2 : 5753.136 MHz : 0.839 dBm OBW : 16.353 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

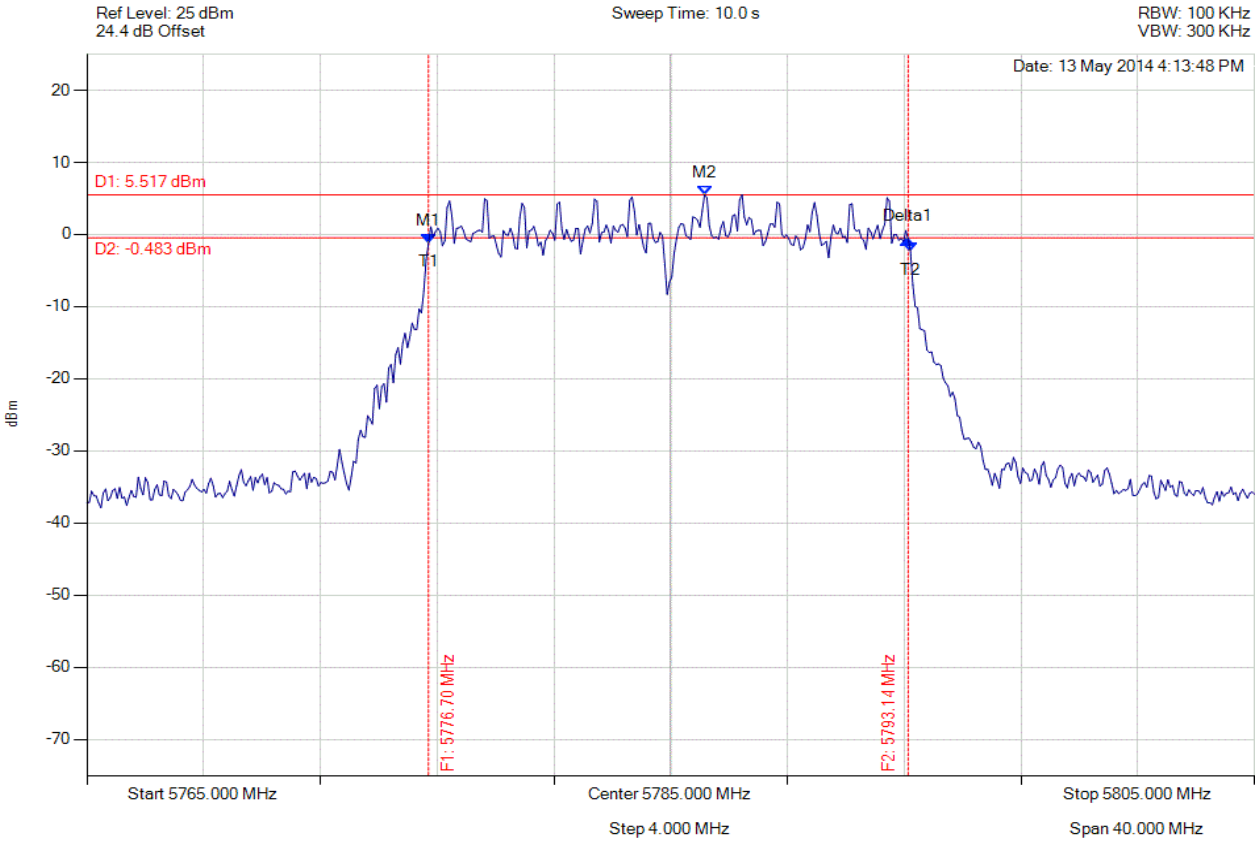


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.703 MHz : -0.831 dBm M2 : 5752.415 MHz : 6.131 dBm Delta1 : 16.433 MHz : -0.138 dB T1 : 5736.703 MHz : -0.831 dBm T2 : 5753.136 MHz : -0.969 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

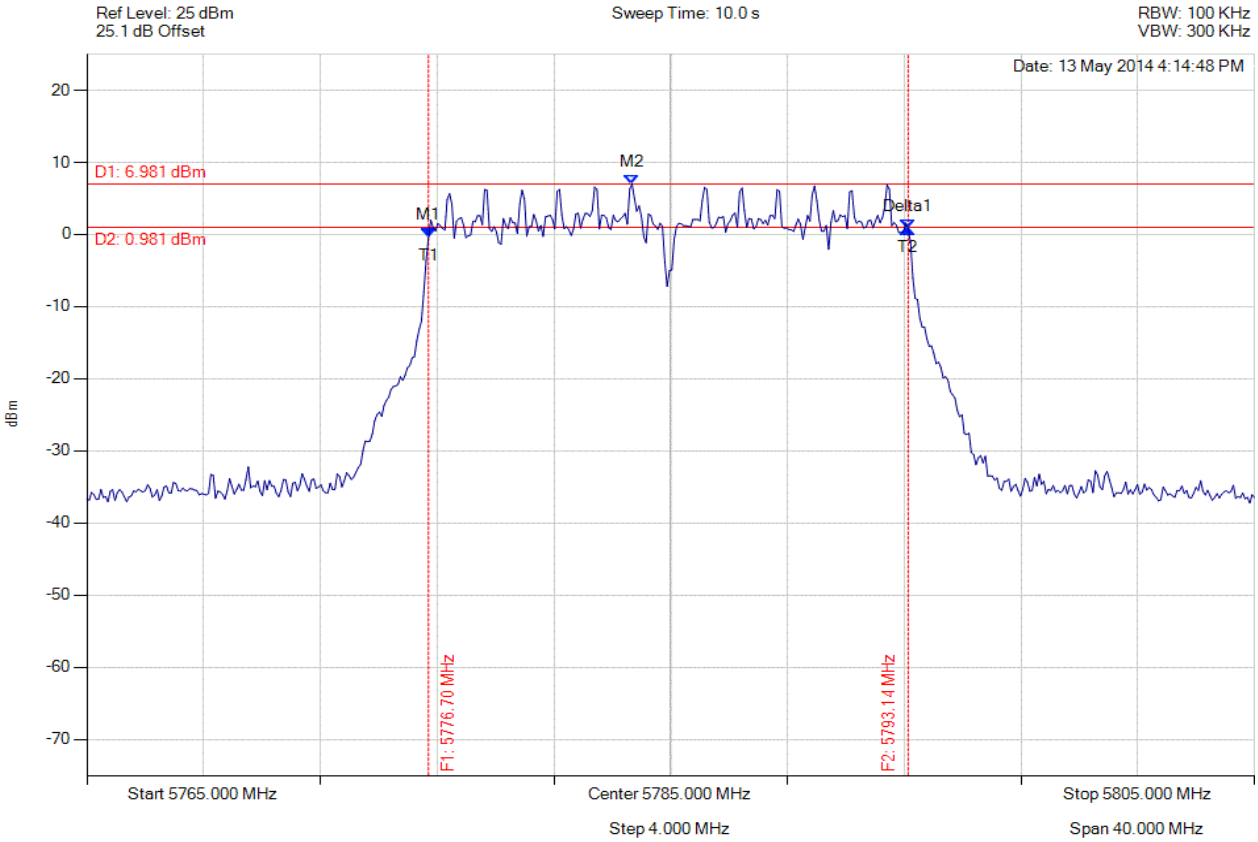


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.703 MHz : -1.254 dBm M2 : 5786.162 MHz : 5.517 dBm Delta1 : 16.433 MHz : 0.632 dB T1 : 5776.703 MHz : -1.254 dBm T2 : 5793.216 MHz : -2.409 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

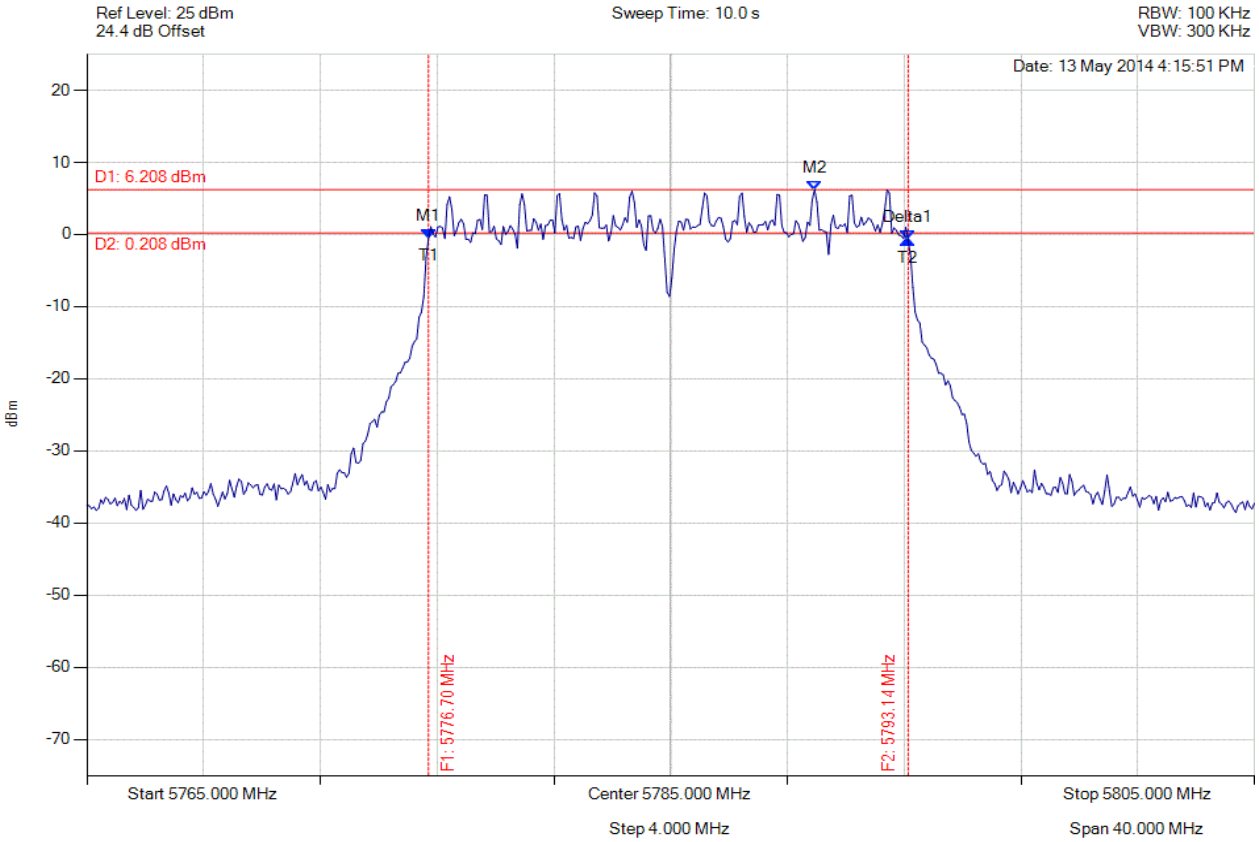


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.703 MHz : -0.391 dBm M2 : 5783.677 MHz : 6.981 dBm Delta1 : 16.433 MHz : 1.173 dB T1 : 5776.703 MHz : -0.391 dBm T2 : 5793.136 MHz : 0.782 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5785.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

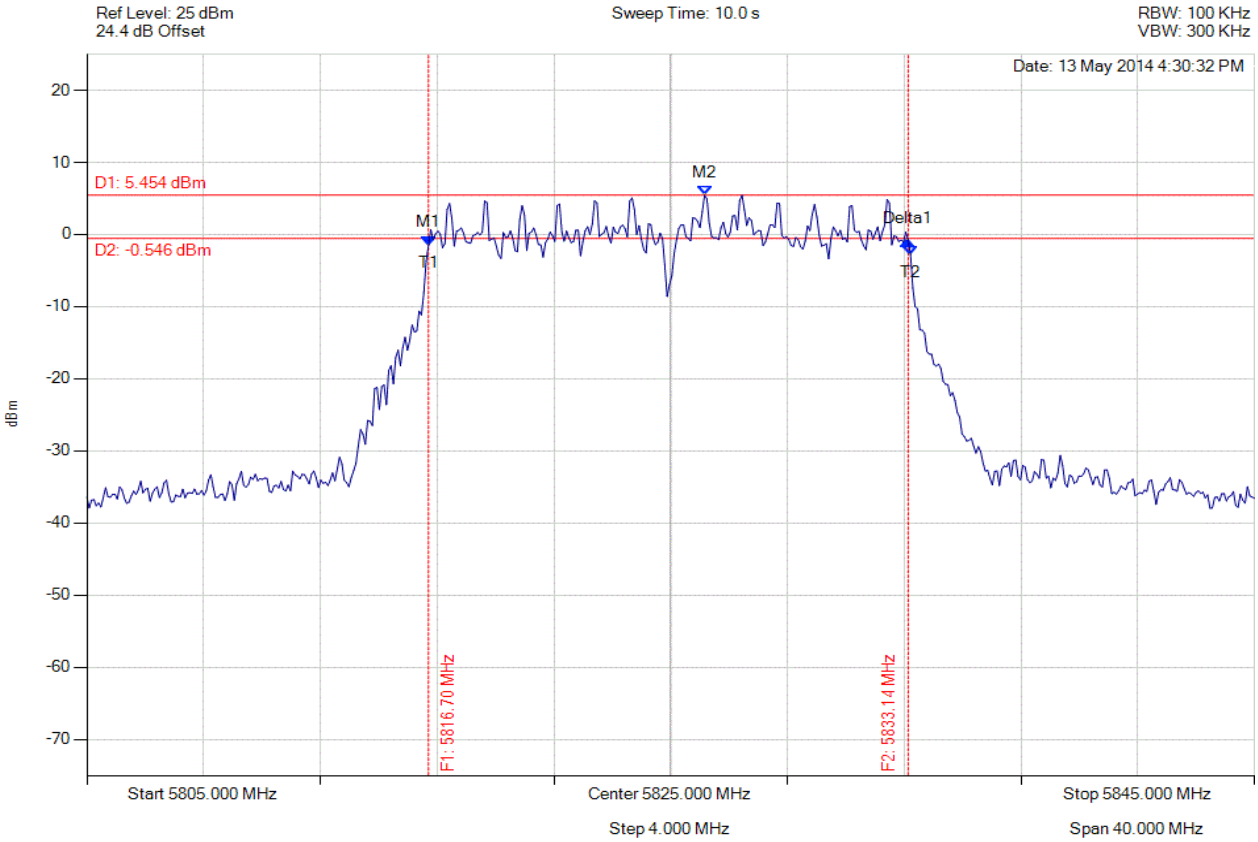


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.703 MHz : -0.462 dBm M2 : 5789.930 MHz : 6.208 dBm Delta1 : 16.433 MHz : -0.295 dB T1 : 5776.703 MHz : -0.462 dBm T2 : 5793.136 MHz : -0.757 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

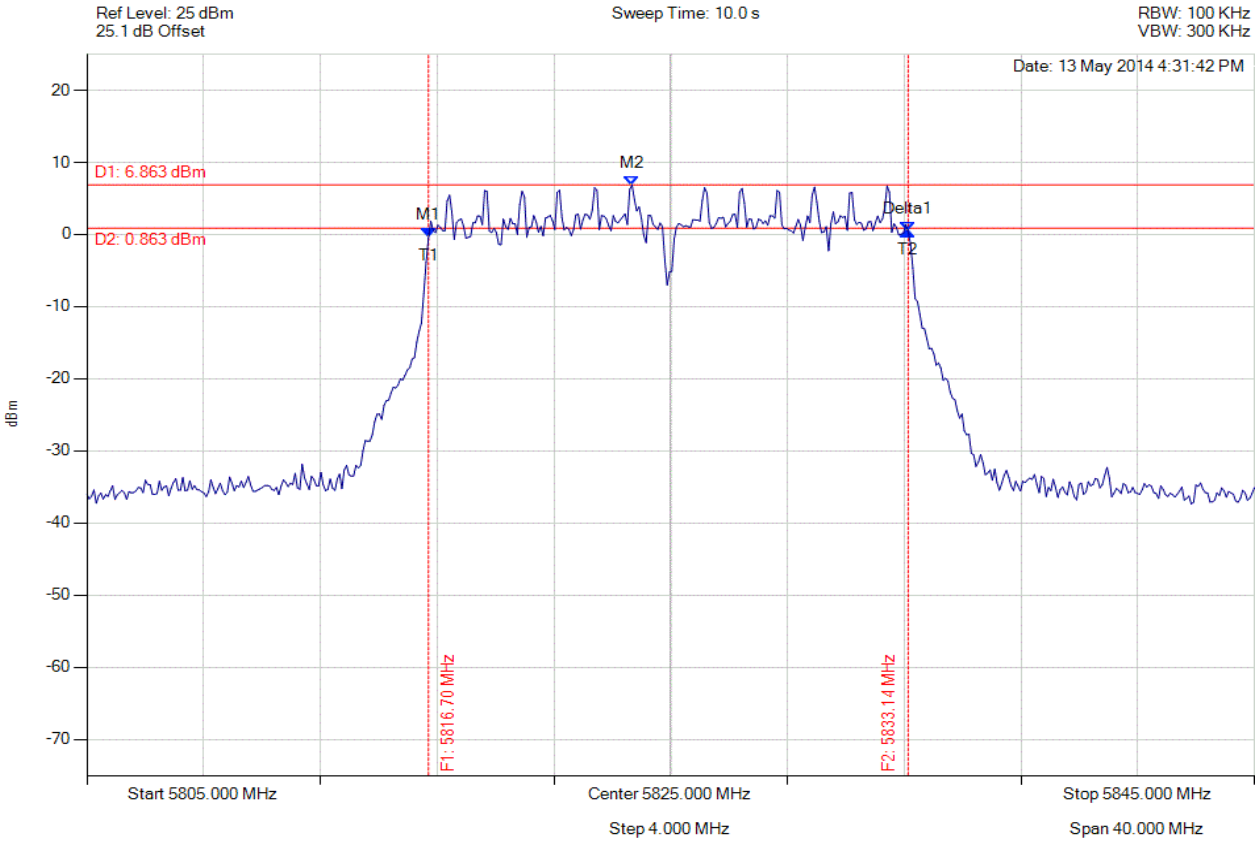


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.703 MHz : -1.447 dBm M2 : 5826.162 MHz : 5.454 dBm Delta1 : 16.433 MHz : 0.594 dB T1 : 5816.703 MHz : -1.447 dBm T2 : 5833.216 MHz : -2.783 dBm OBW : 16.513 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

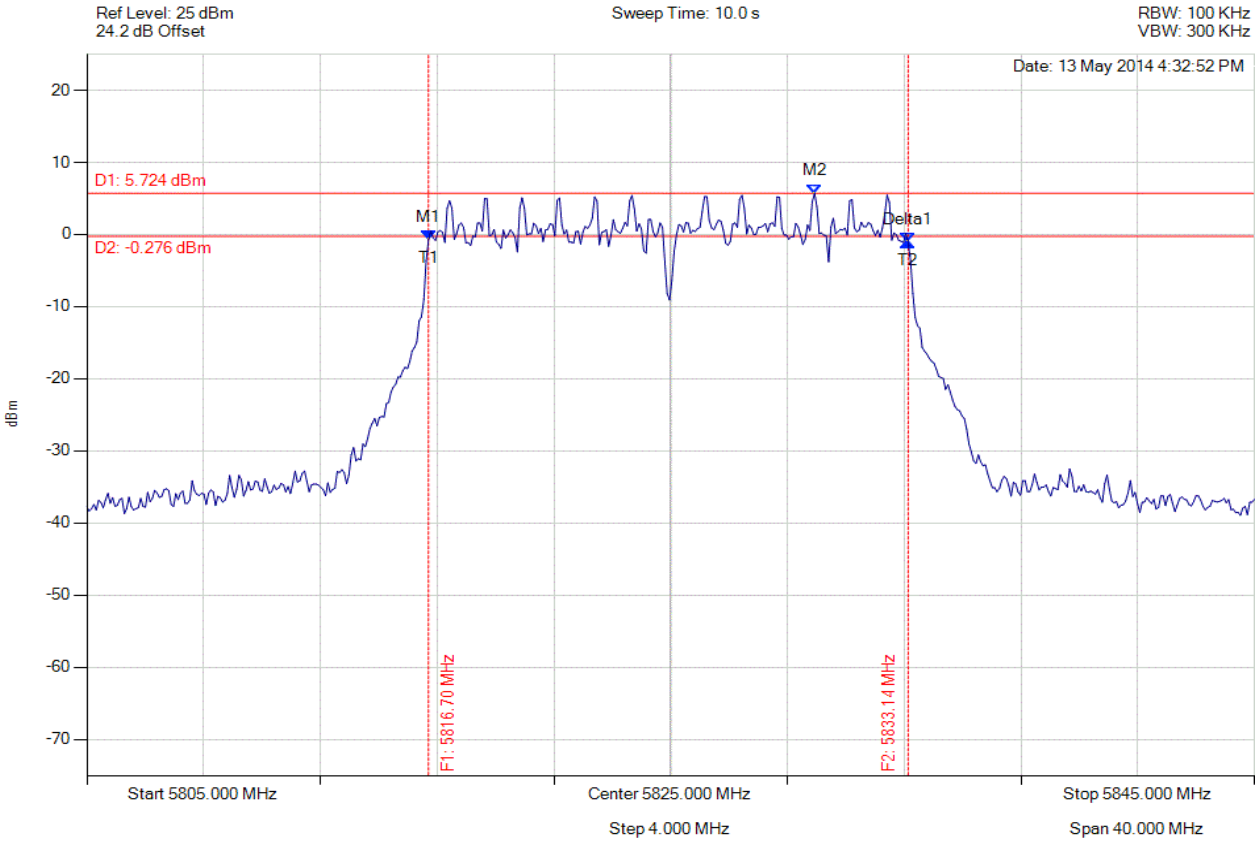


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.703 MHz : -0.440 dBm M2 : 5823.677 MHz : 6.863 dBm Delta1 : 16.433 MHz : 0.895 dB T1 : 5816.703 MHz : -0.440 dBm T2 : 5833.136 MHz : 0.455 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

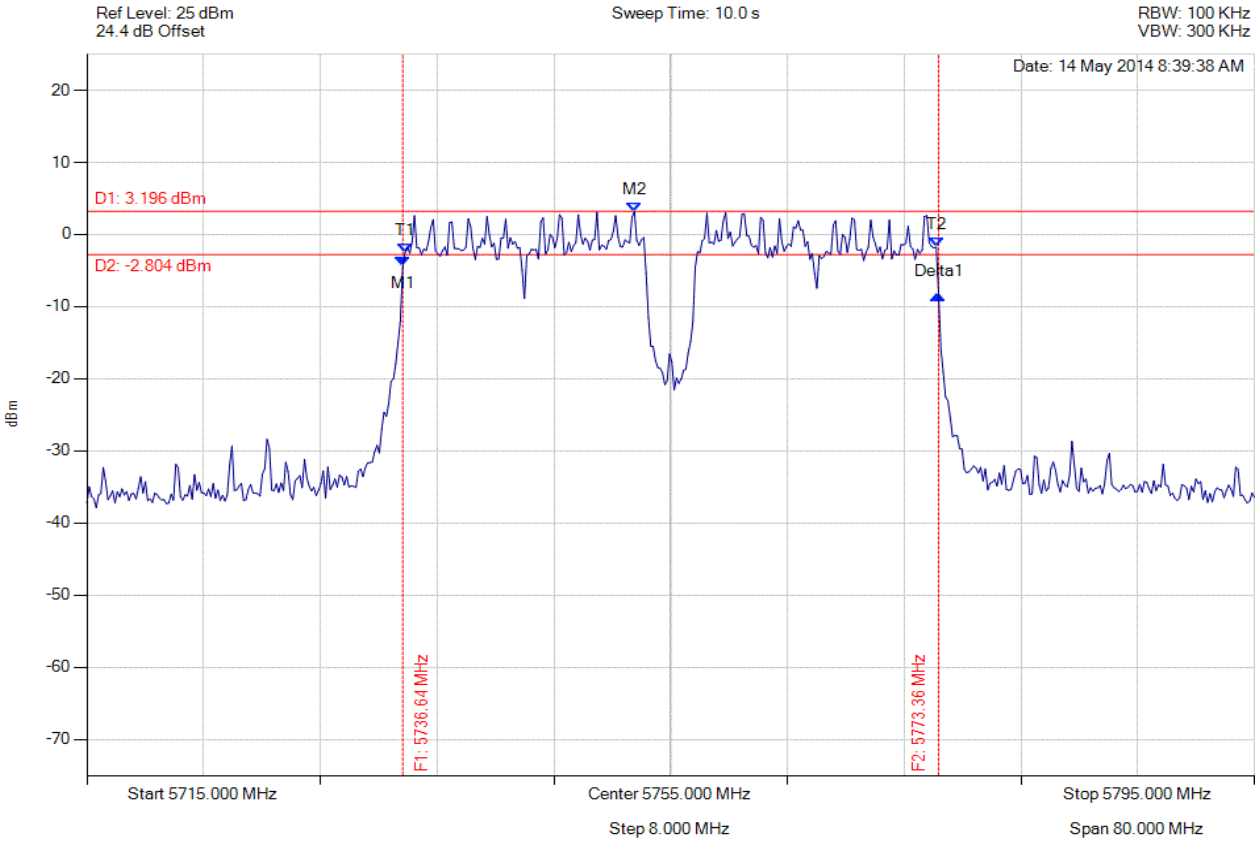


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5816.703 MHz : -0.761 dBm M2 : 5829.930 MHz : 5.724 dBm Delta1 : 16.433 MHz : -0.252 dB T1 : 5816.703 MHz : -0.761 dBm T2 : 5833.136 MHz : -1.014 dBm OBW : 16.433 MHz	Measured 6 dB Bandwidth: 16.433 MHz Limit: ≥500.0 kHz Margin: -15.93 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

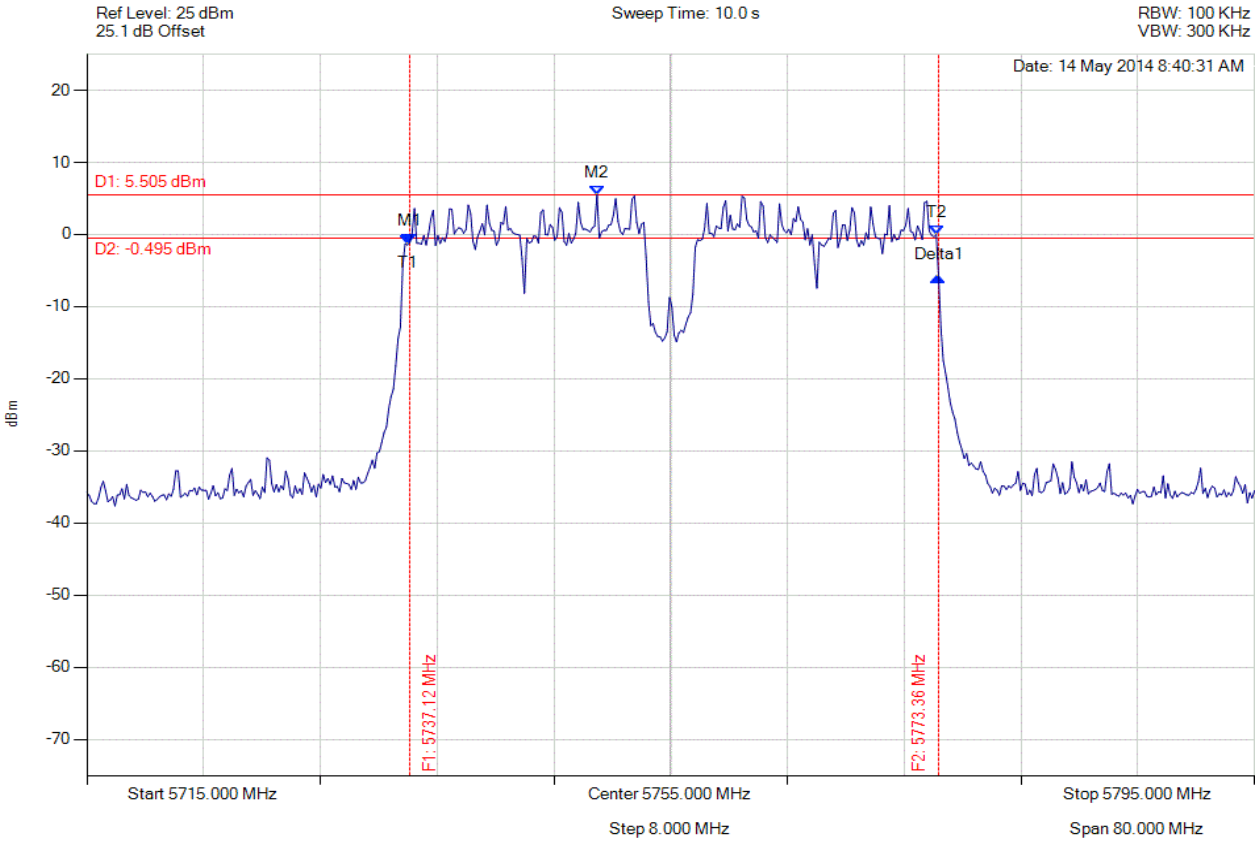


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.643 MHz : -4.331 dBm M2 : 5752.515 MHz : 3.196 dBm Delta1 : 36.713 MHz : -3.960 dB T1 : 5736.804 MHz : -2.506 dBm T2 : 5773.196 MHz : -1.717 dBm OBW : 36.393 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

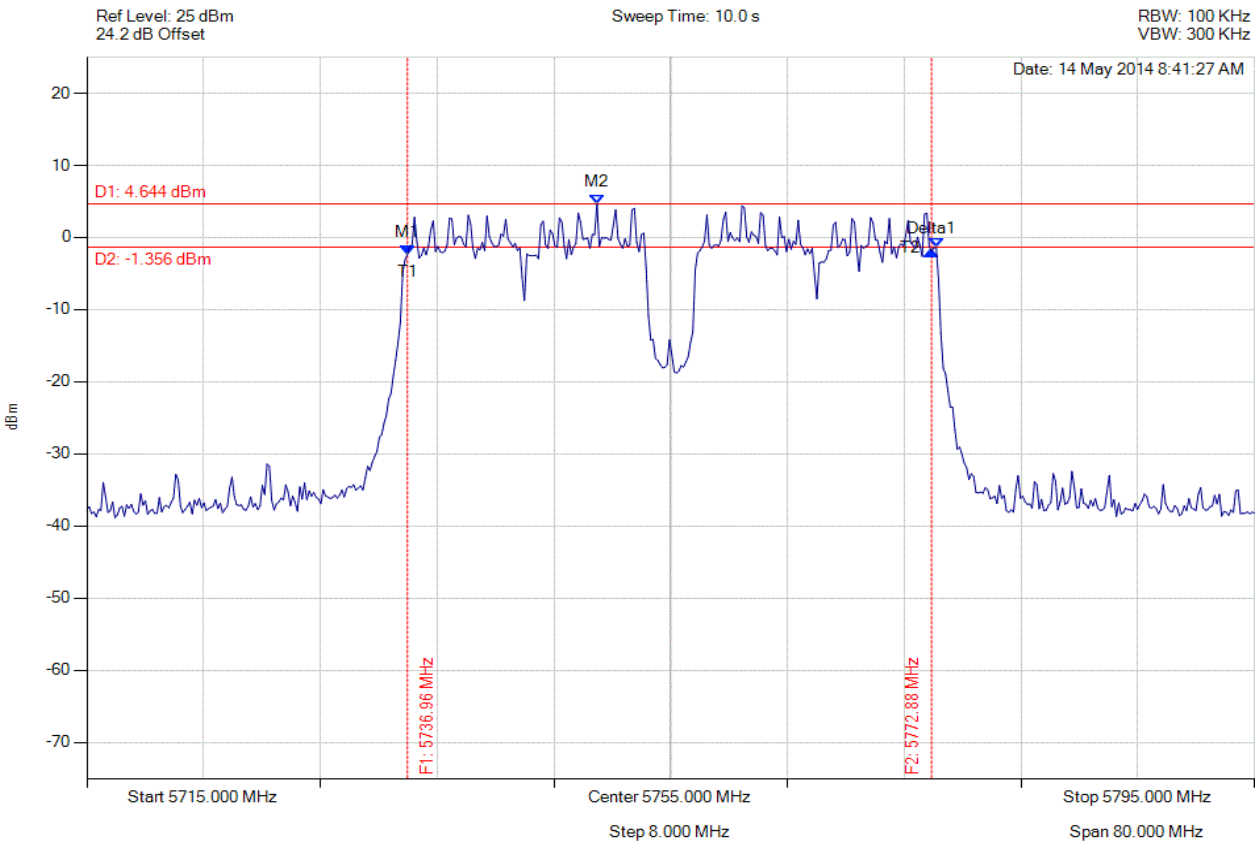


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5737.124 MHz : -1.156 dBm M2 : 5749.950 MHz : 5.505 dBm Delta1 : 36.232 MHz : -4.669 dB T1 : 5736.964 MHz : -1.445 dBm T2 : 5773.196 MHz : -0.017 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.232 MHz Limit: ≥500.0 kHz Margin: -35.73 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

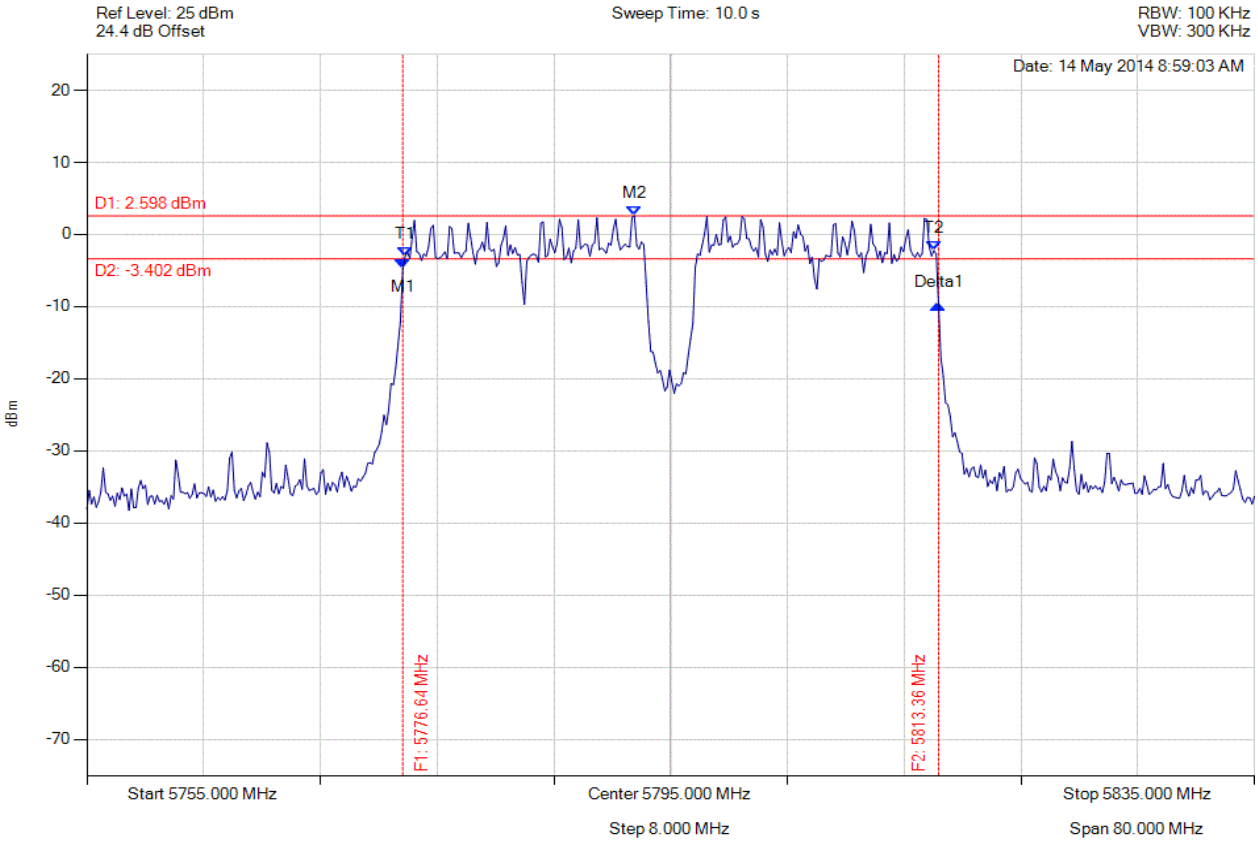


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5736.964 MHz : -2.311 dBm M2 : 5749.950 MHz : 4.644 dBm Delta1 : 35.912 MHz : 0.370 dB T1 : 5736.964 MHz : -2.311 dBm T2 : 5773.196 MHz : -1.443 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 35.912 MHz Limit: ≥500.0 kHz Margin: -35.41 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

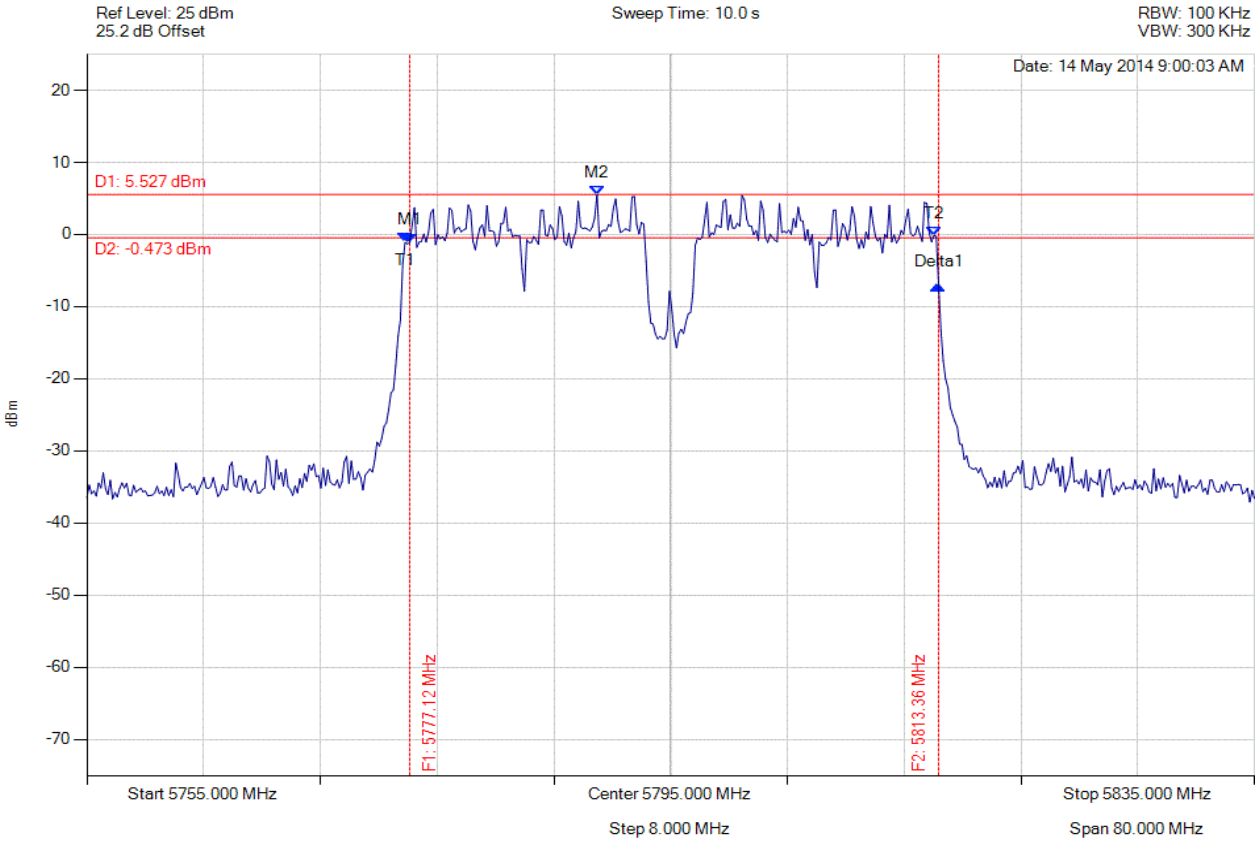


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5776.643 MHz : -4.744 dBm M2 : 5792.515 MHz : 2.598 dBm Delta1 : 36.713 MHz : -5.031 dB T1 : 5776.804 MHz : -3.070 dBm T2 : 5813.036 MHz : -2.230 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.713 MHz Limit: ≥500.0 kHz Margin: -36.21 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

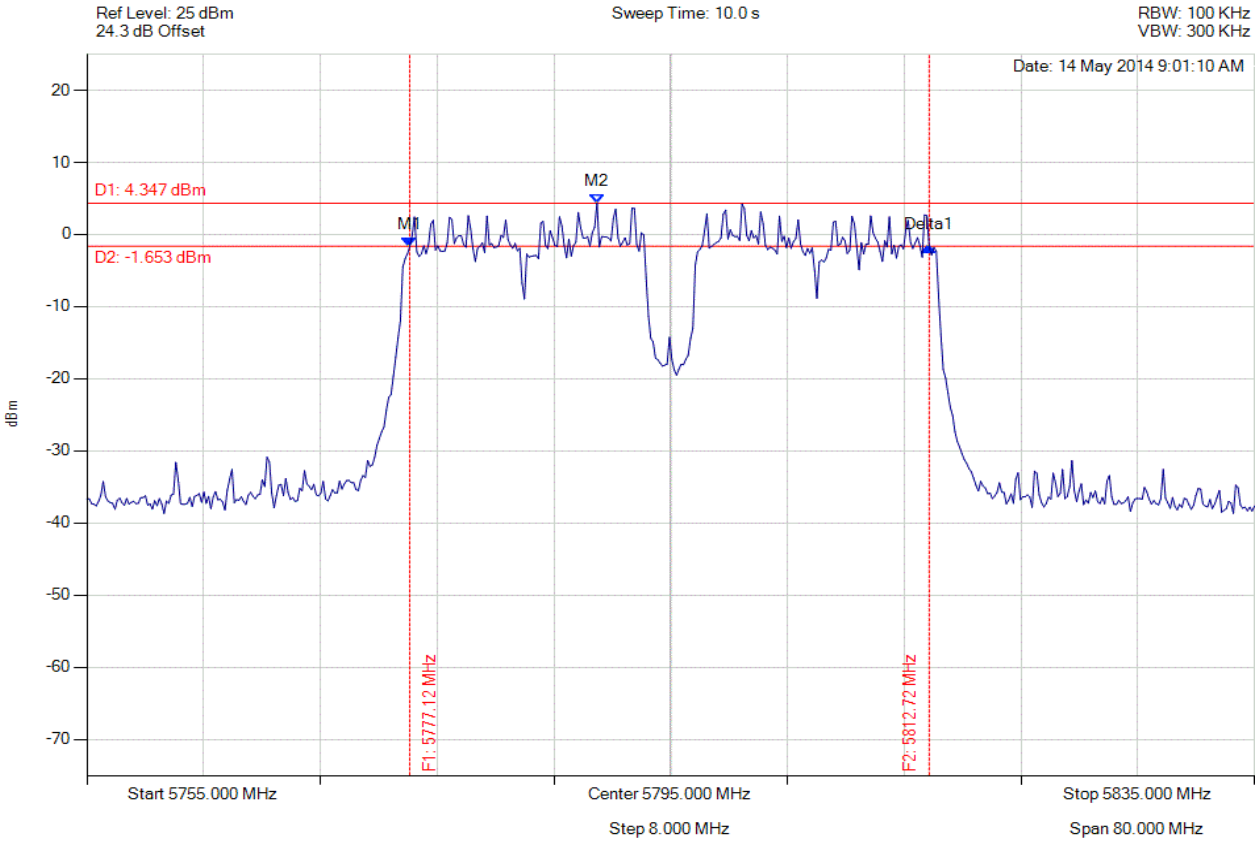


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5777.124 MHz : -1.115 dBm M2 : 5789.950 MHz : 5.527 dBm Delta1 : 36.232 MHz : -5.835 dB T1 : 5776.804 MHz : -1.103 dBm T2 : 5813.036 MHz : -0.168 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 36.232 MHz Limit: ≥500.0 kHz Margin: -35.73 MHz

Back to the Matrix

6 dB & 99% BANDWIDTH

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc



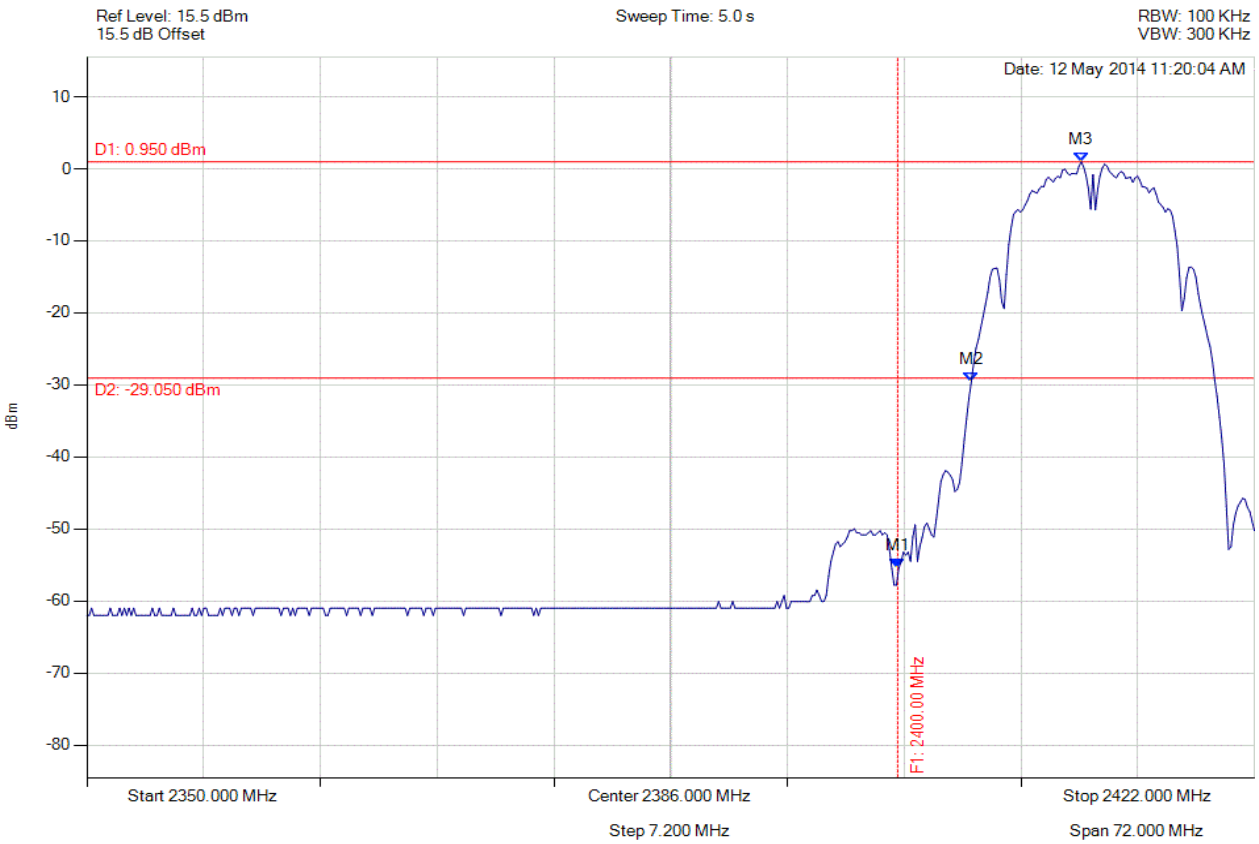
Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = MAX PEAK Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5777.124 MHz : -1.654 dBm M2 : 5789.950 MHz : 4.347 dBm Delta1 : 35.591 MHz : -0.098 dB T1 : 0 Hz : 500.000 dBm T2 : 0 Hz : 500.000 dBm OBW : 36.232 MHz	Measured 6 dB Bandwidth: 35.591 MHz Limit: ≥500.0 kHz Margin: -35.09 MHz

Back to the Matrix

A.1.2. Conducted Spurious Emissions

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

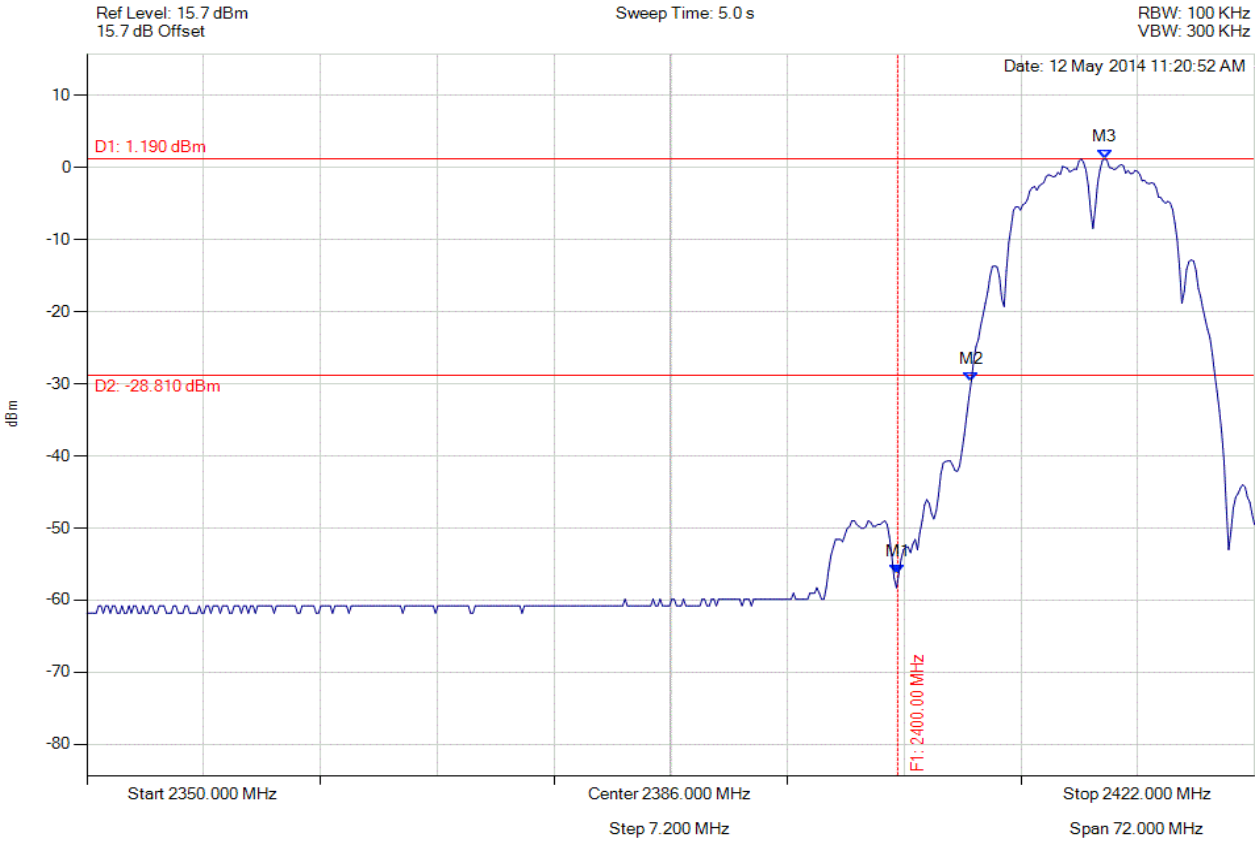


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -55.456 dBm M2 : 2404.541 MHz : -29.590 dBm M3 : 2411.323 MHz : 0.950 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

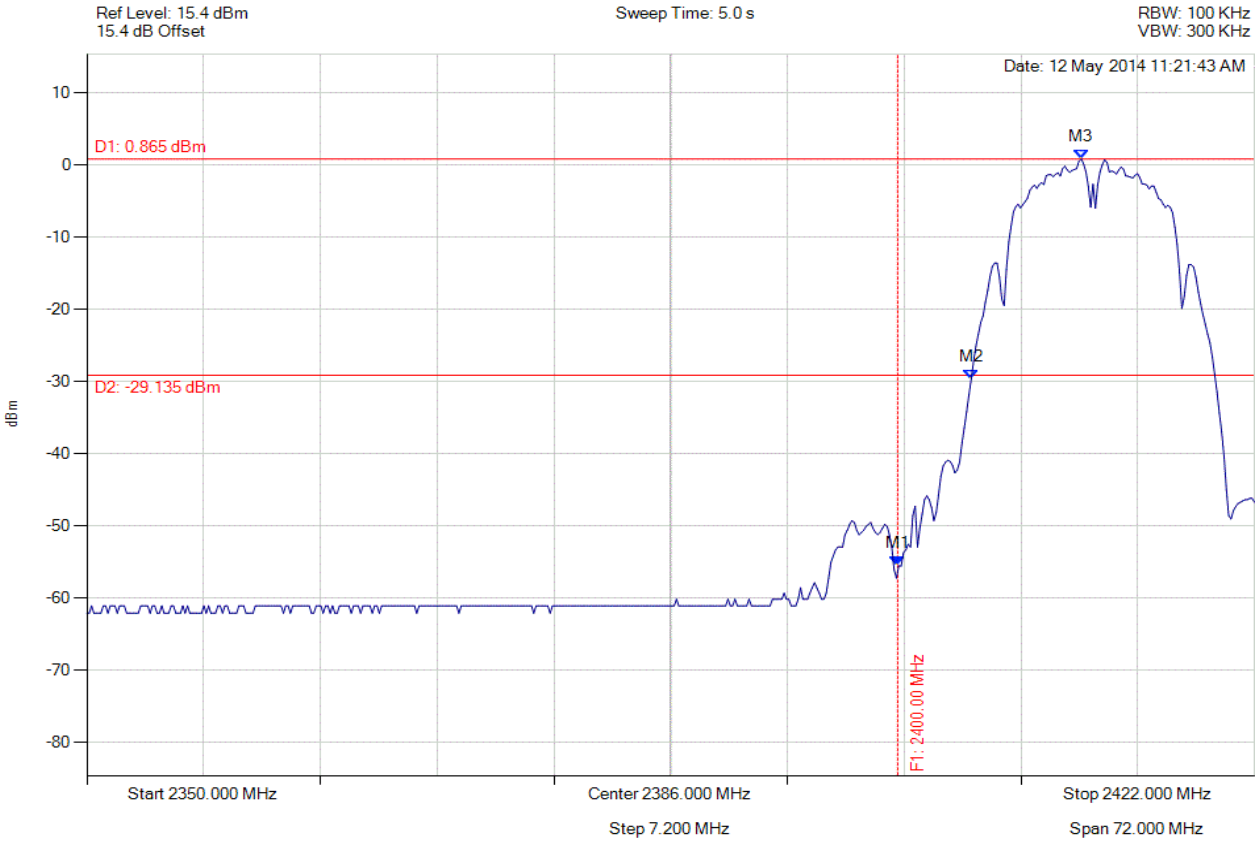


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -56.344 dBm M2 : 2404.541 MHz : -29.654 dBm M3 : 2412.766 MHz : 1.190 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

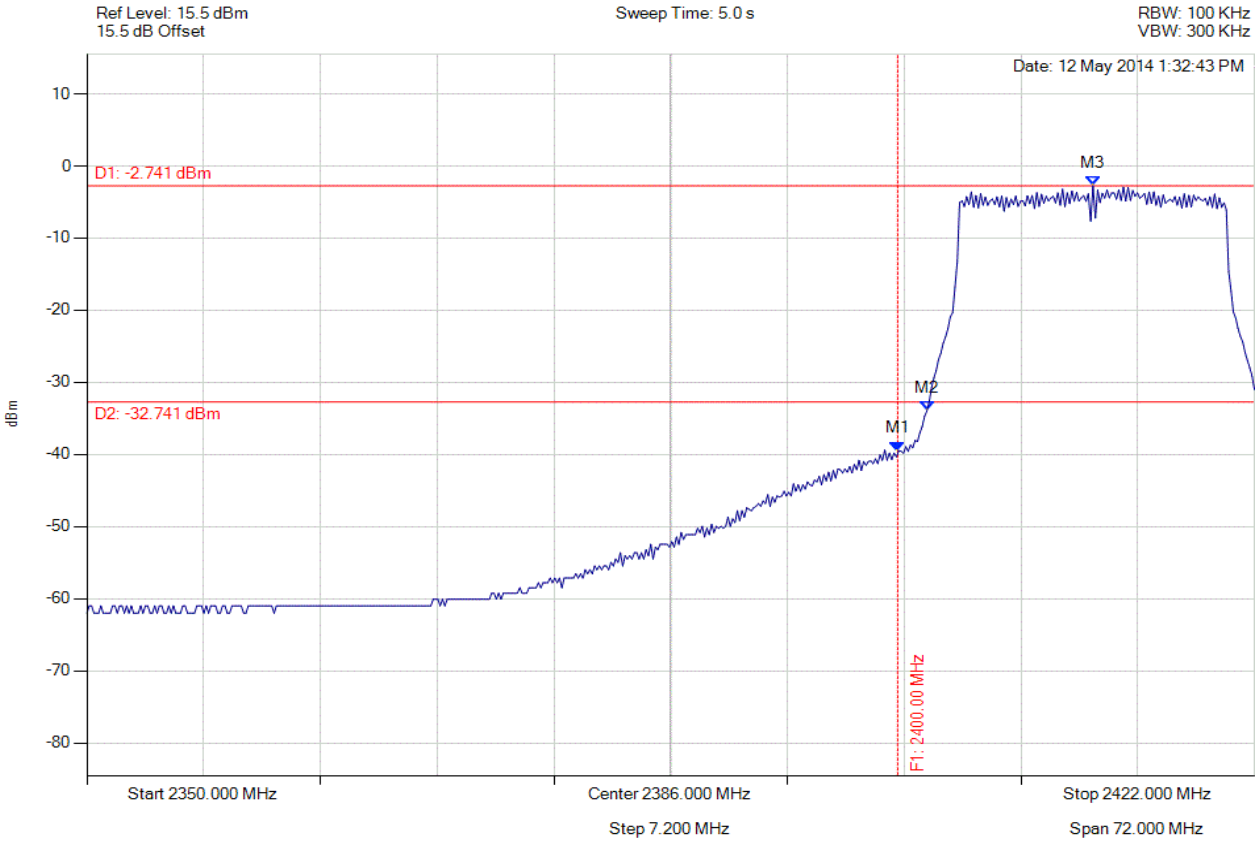


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -55.556 dBm M2 : 2404.541 MHz : -29.587 dBm M3 : 2411.323 MHz : 0.865 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

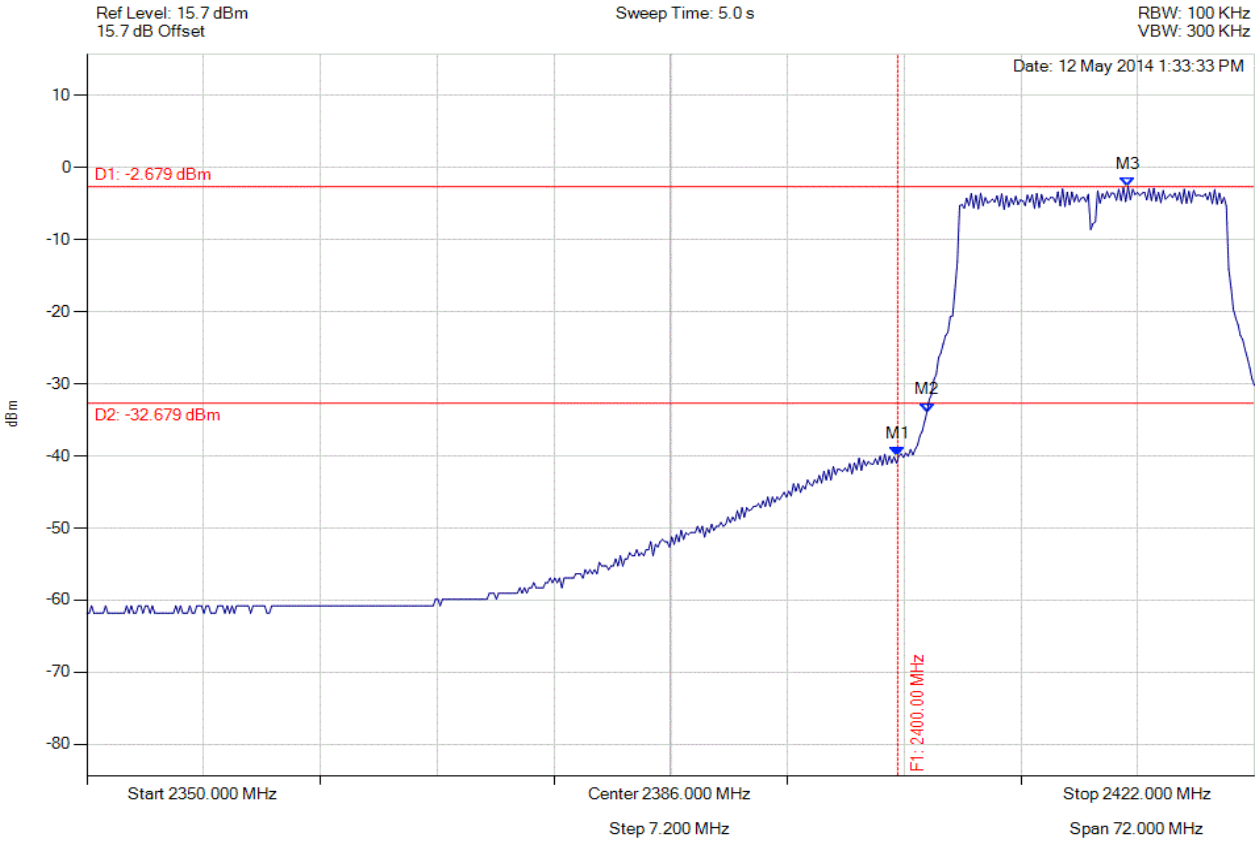


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -39.478 dBm M2 : 2401.800 MHz : -33.958 dBm M3 : 2412.044 MHz : -2.741 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

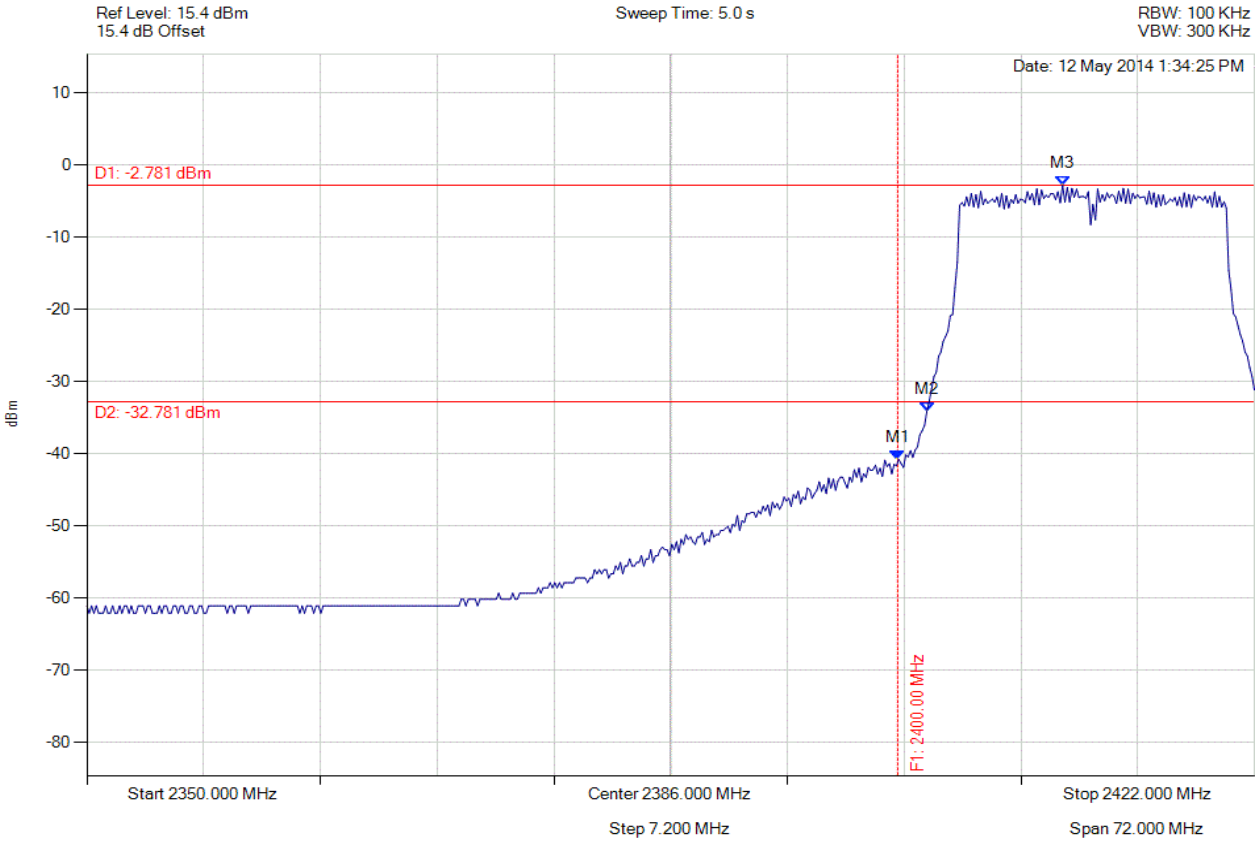


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -40.041 dBm M2 : 2401.800 MHz : -33.932 dBm M3 : 2414.208 MHz : -2.679 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

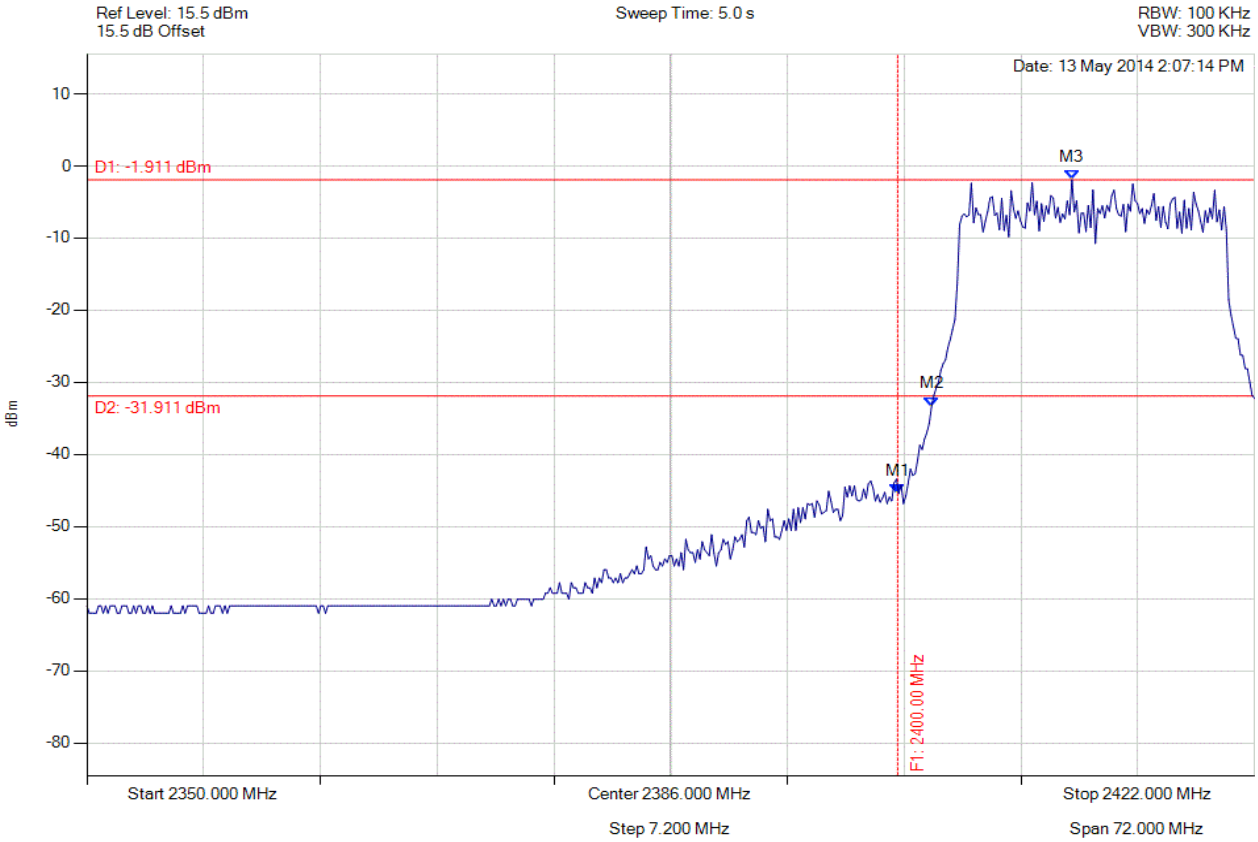


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -40.796 dBm M2 : 2401.800 MHz : -34.101 dBm M3 : 2410.168 MHz : -2.781 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

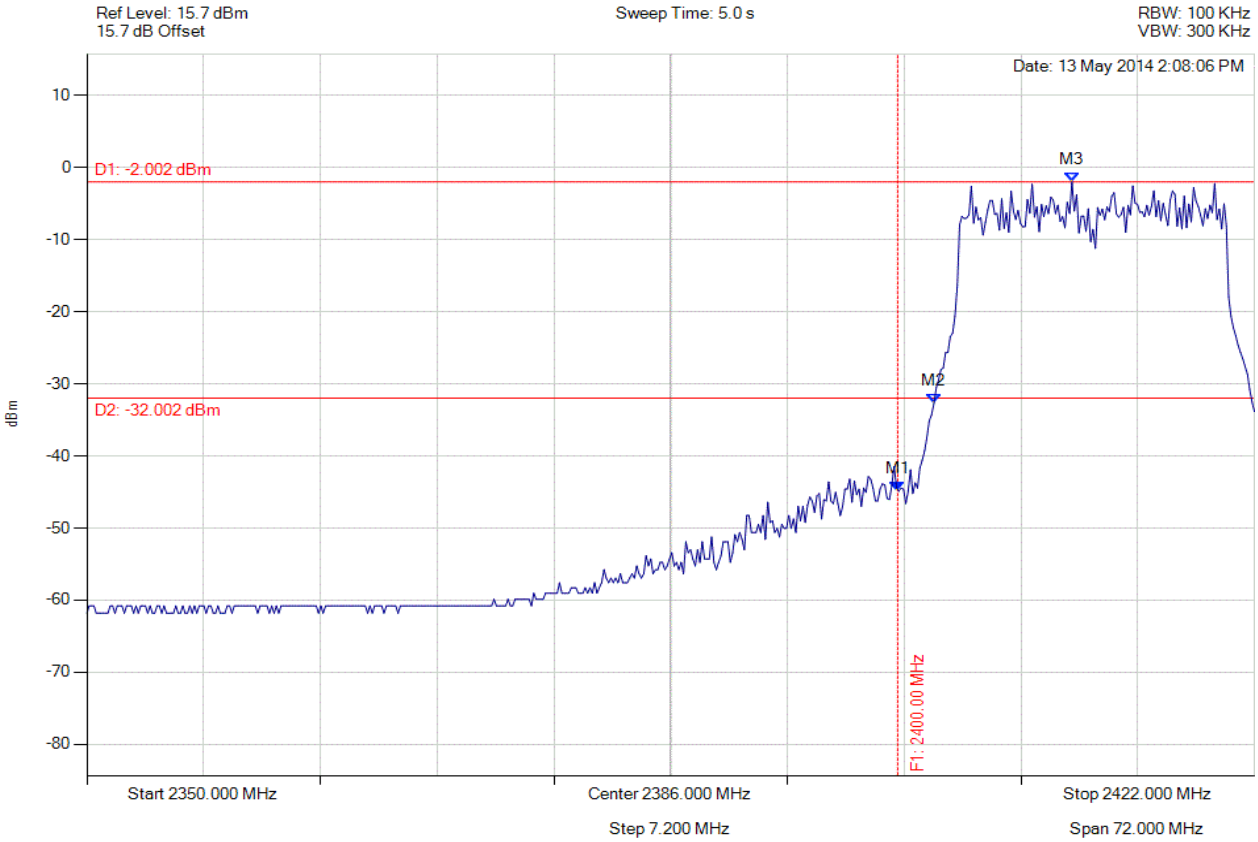


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -45.417 dBm M2 : 2402.088 MHz : -33.296 dBm M3 : 2410.745 MHz : -1.911 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

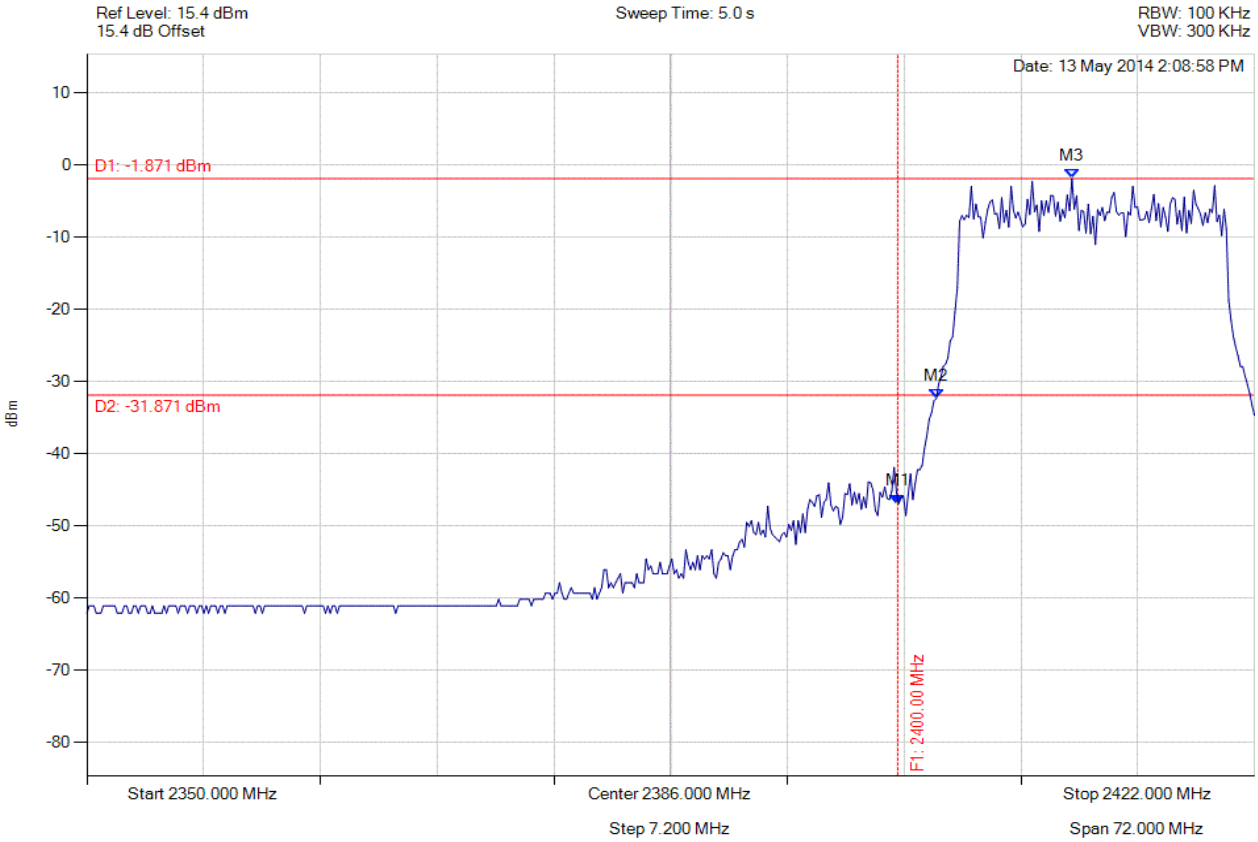


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -44.902 dBm M2 : 2402.232 MHz : -32.745 dBm M3 : 2410.745 MHz : -2.002 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

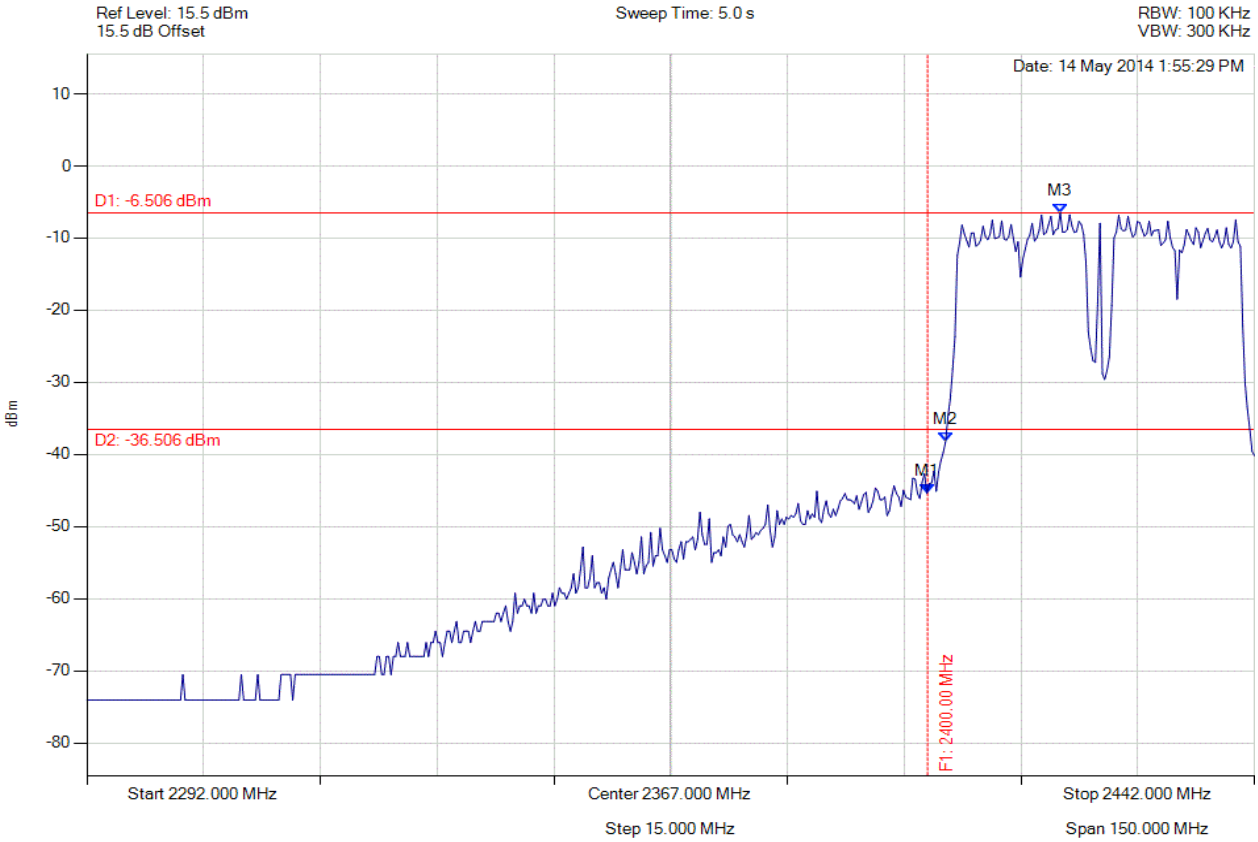


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -46.910 dBm M2 : 2402.377 MHz : -32.382 dBm M3 : 2410.745 MHz : -1.871 dBm	Channel Frequency: 2412.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

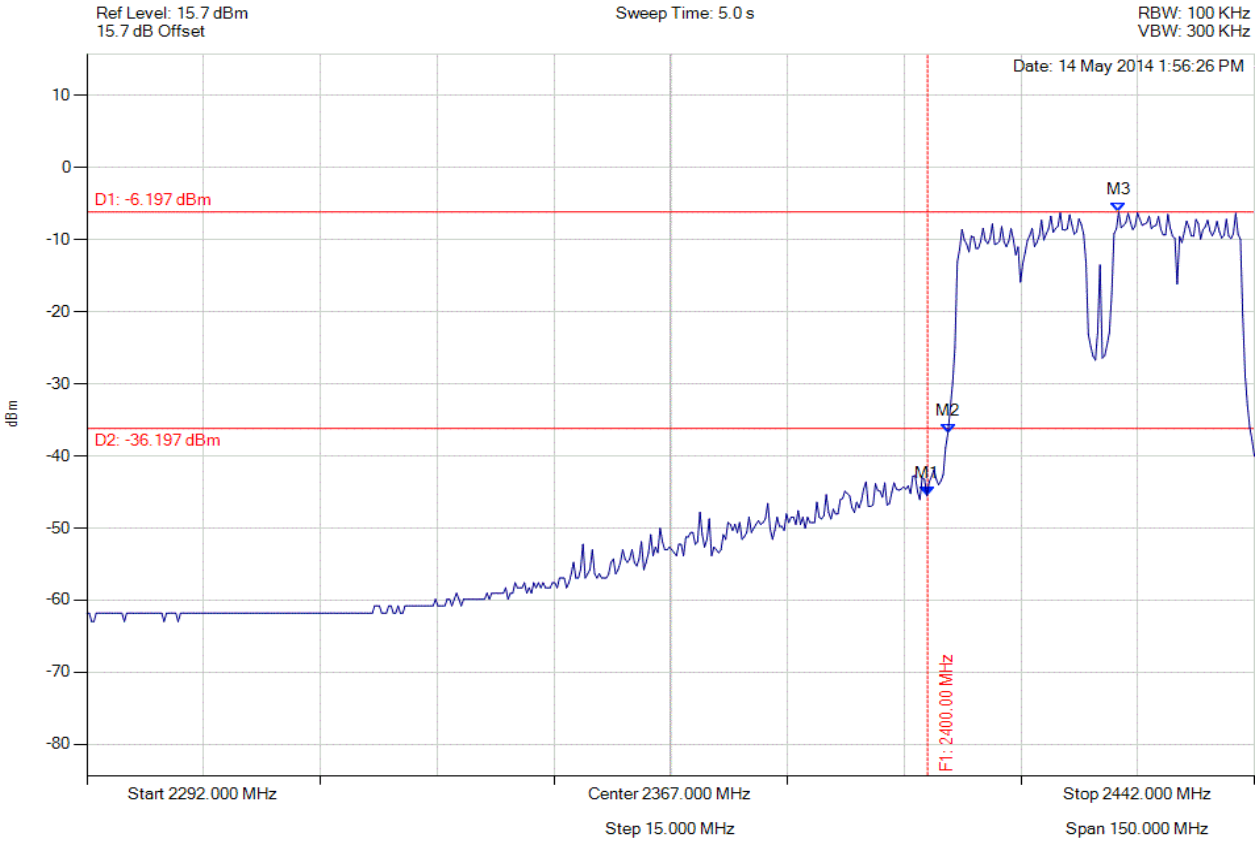


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -45.417 dBm M2 : 2402.321 MHz : -38.267 dBm M3 : 2417.050 MHz : -6.506 dBm	Channel Frequency: 2422.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

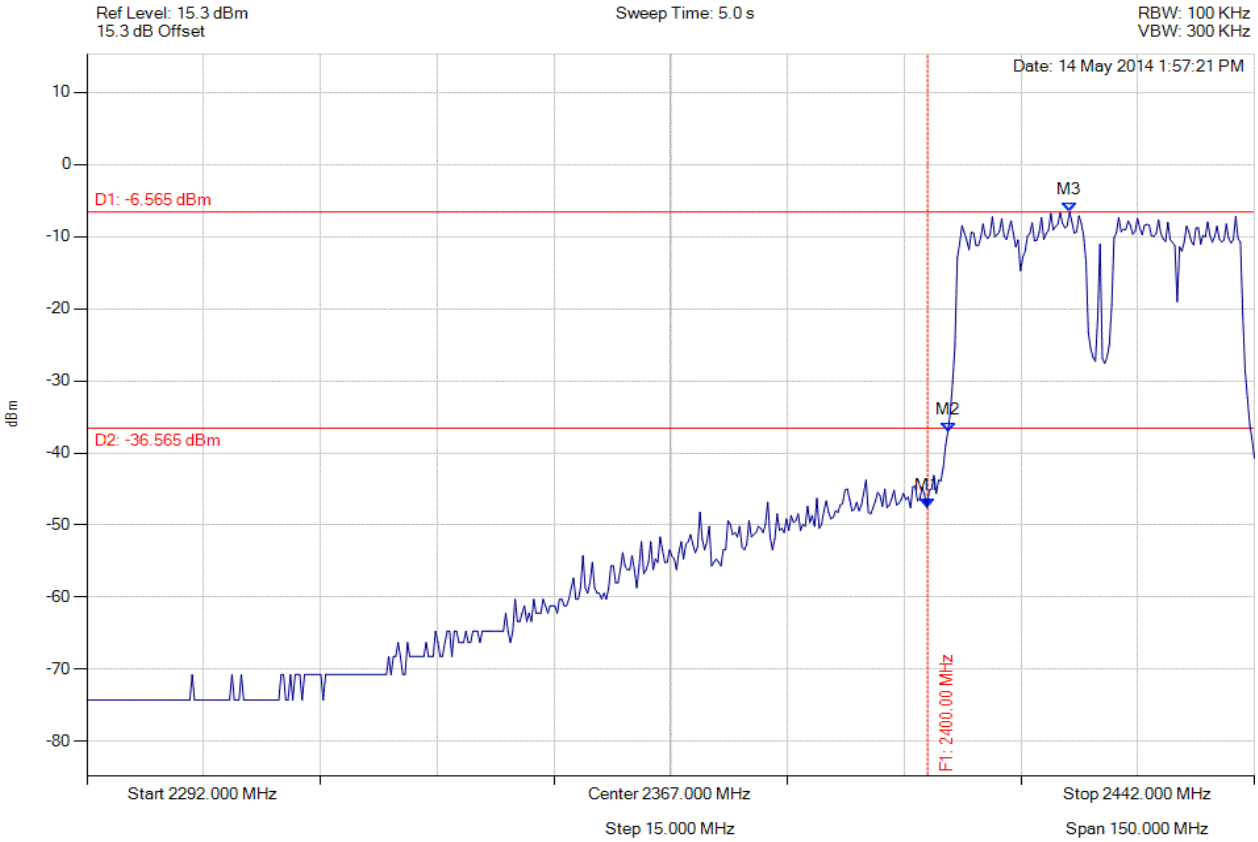


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2400.000 MHz : -45.545 dBm M2 : 2402.621 MHz : -36.820 dBm M3 : 2424.565 MHz : -6.197 dBm	Channel Frequency: 2422.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

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

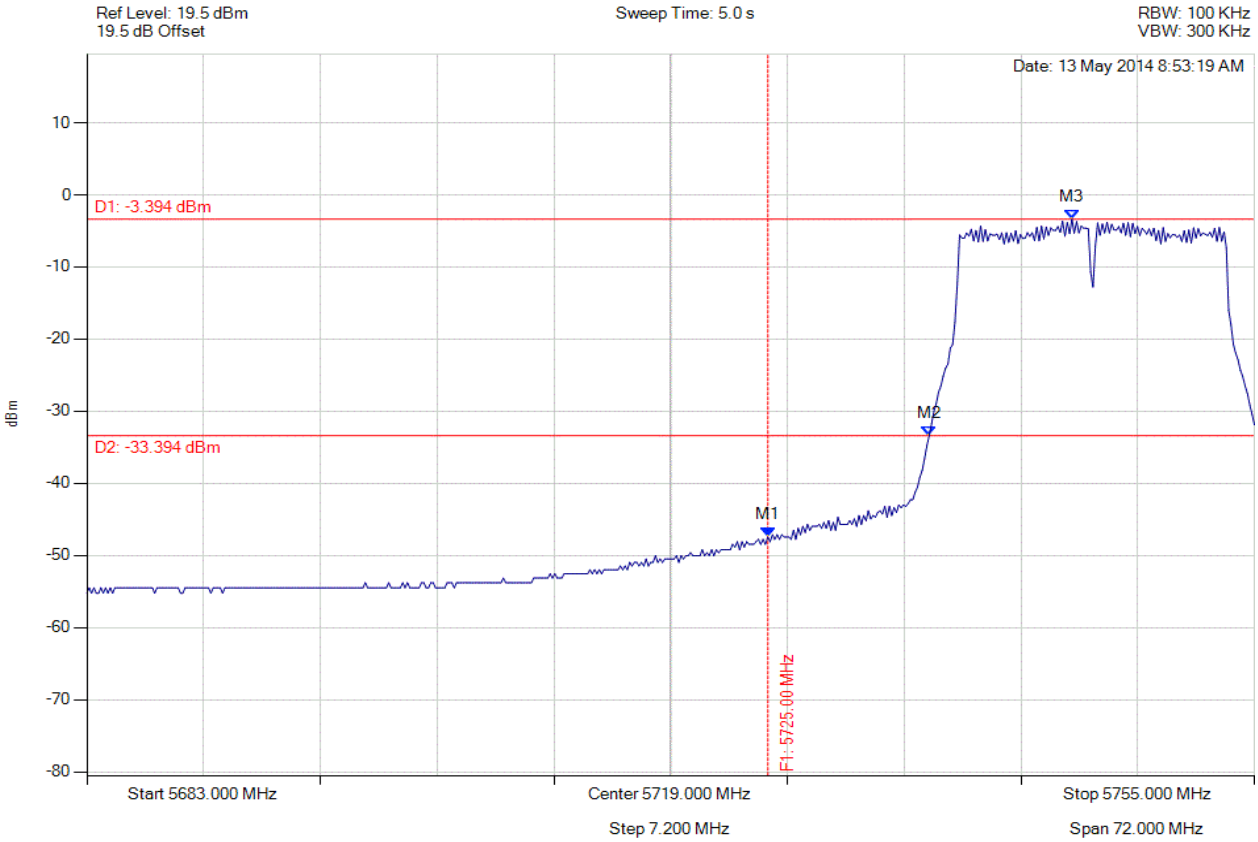


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2400.000 MHz : -47.596 dBm M2 : 2402.621 MHz : -37.038 dBm M3 : 2418.253 MHz : -6.565 dBm	Channel Frequency: 2422.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

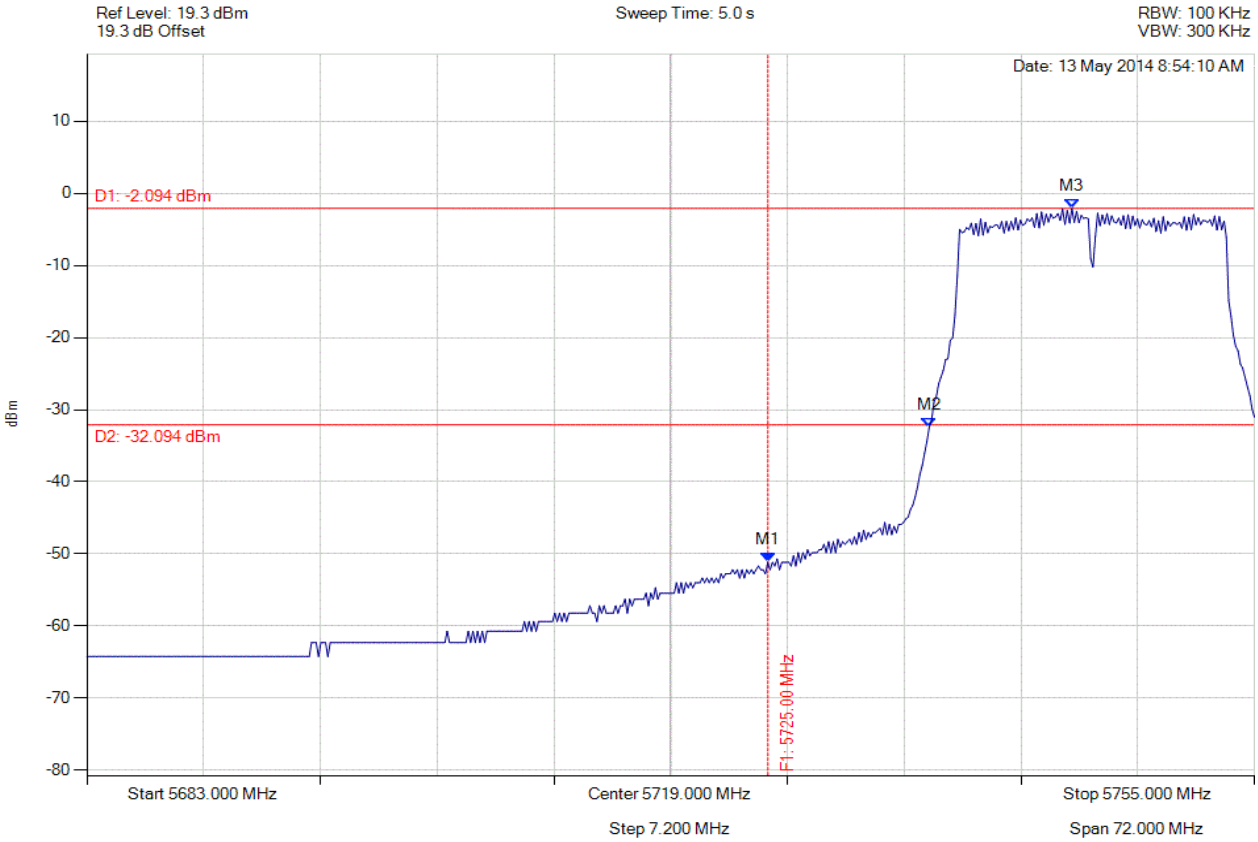


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -47.438 dBm M2 : 5734.944 MHz : -33.395 dBm M3 : 5743.745 MHz : -3.394 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

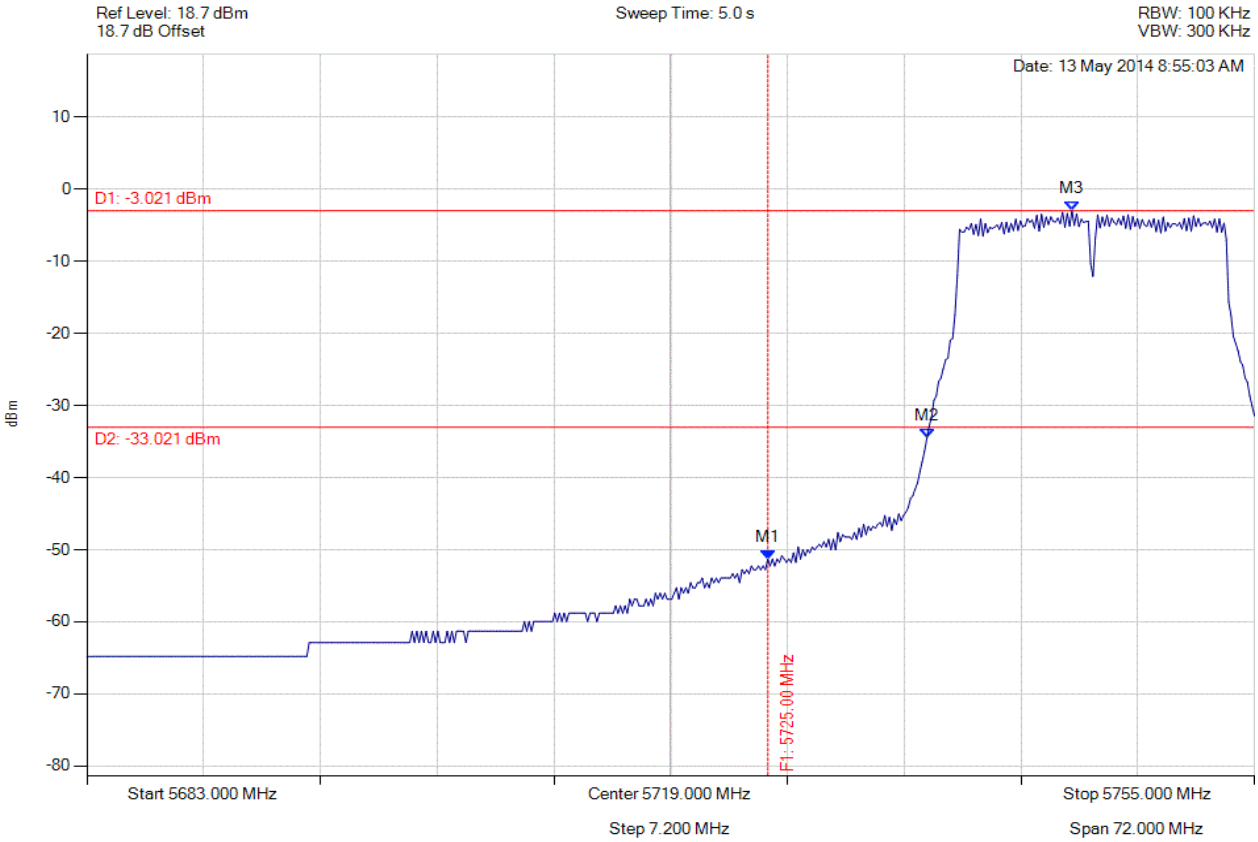


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -51.160 dBm M2 : 5734.944 MHz : -32.459 dBm M3 : 5743.745 MHz : -2.094 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

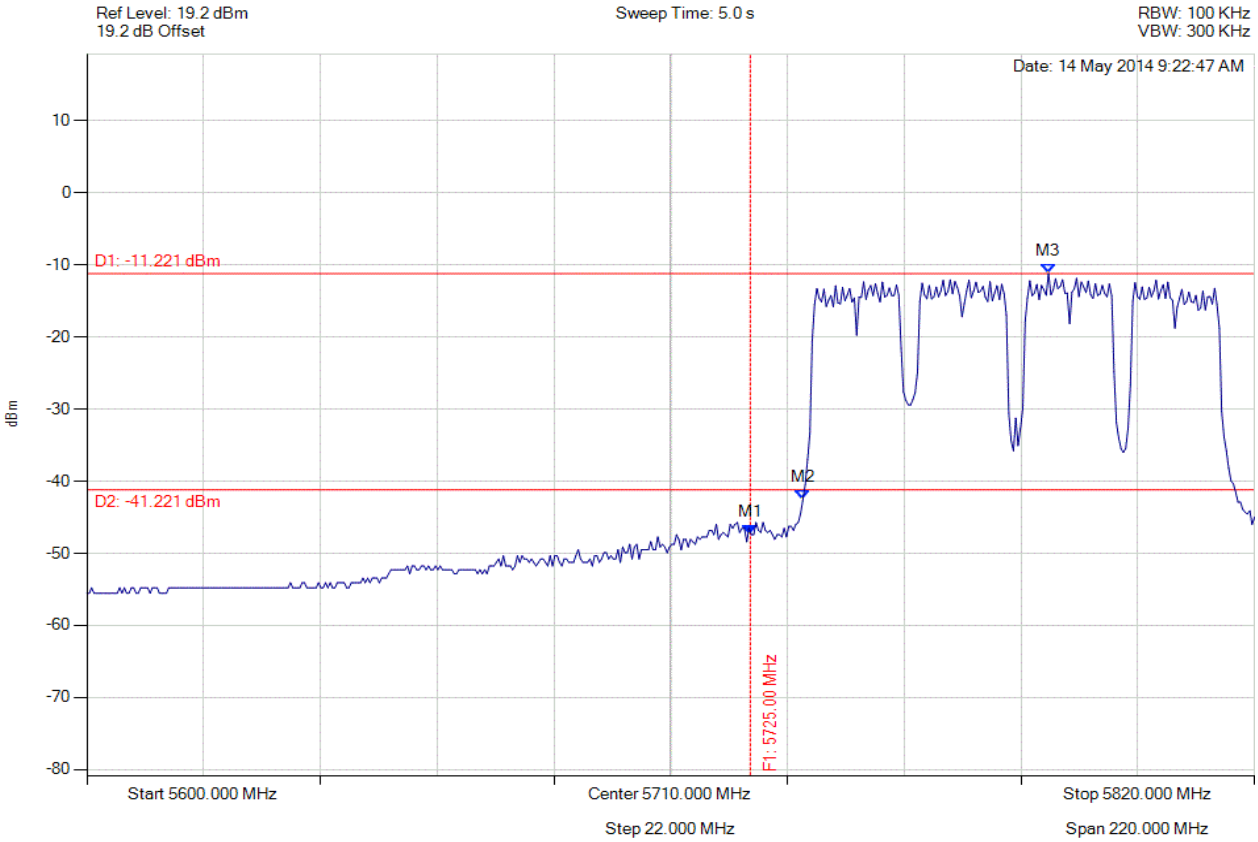


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -51.290 dBm M2 : 5734.800 MHz : -34.520 dBm M3 : 5743.745 MHz : -3.021 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

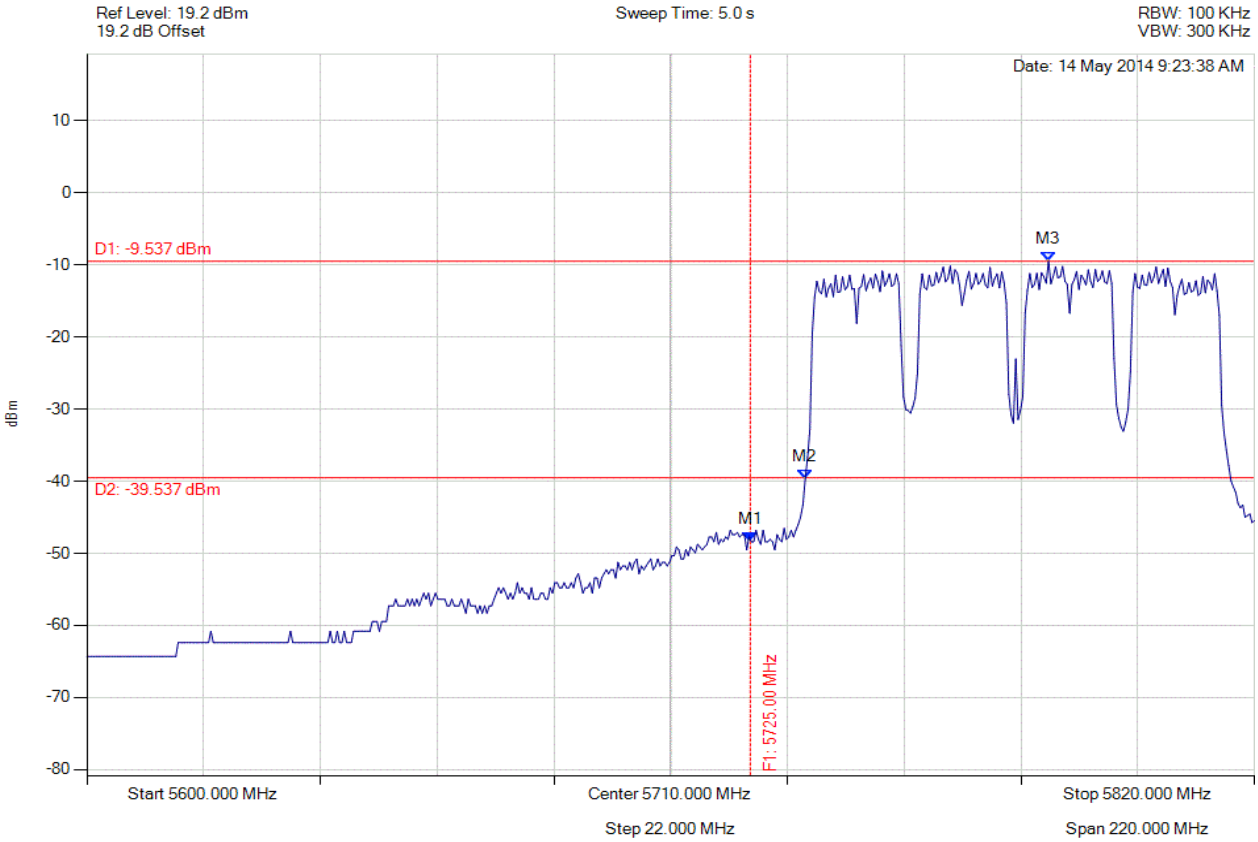


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -47.422 dBm M2 : 5734.910 MHz : -42.561 dBm M3 : 5781.202 MHz : -11.221 dBm	Channel Frequency: 5775.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

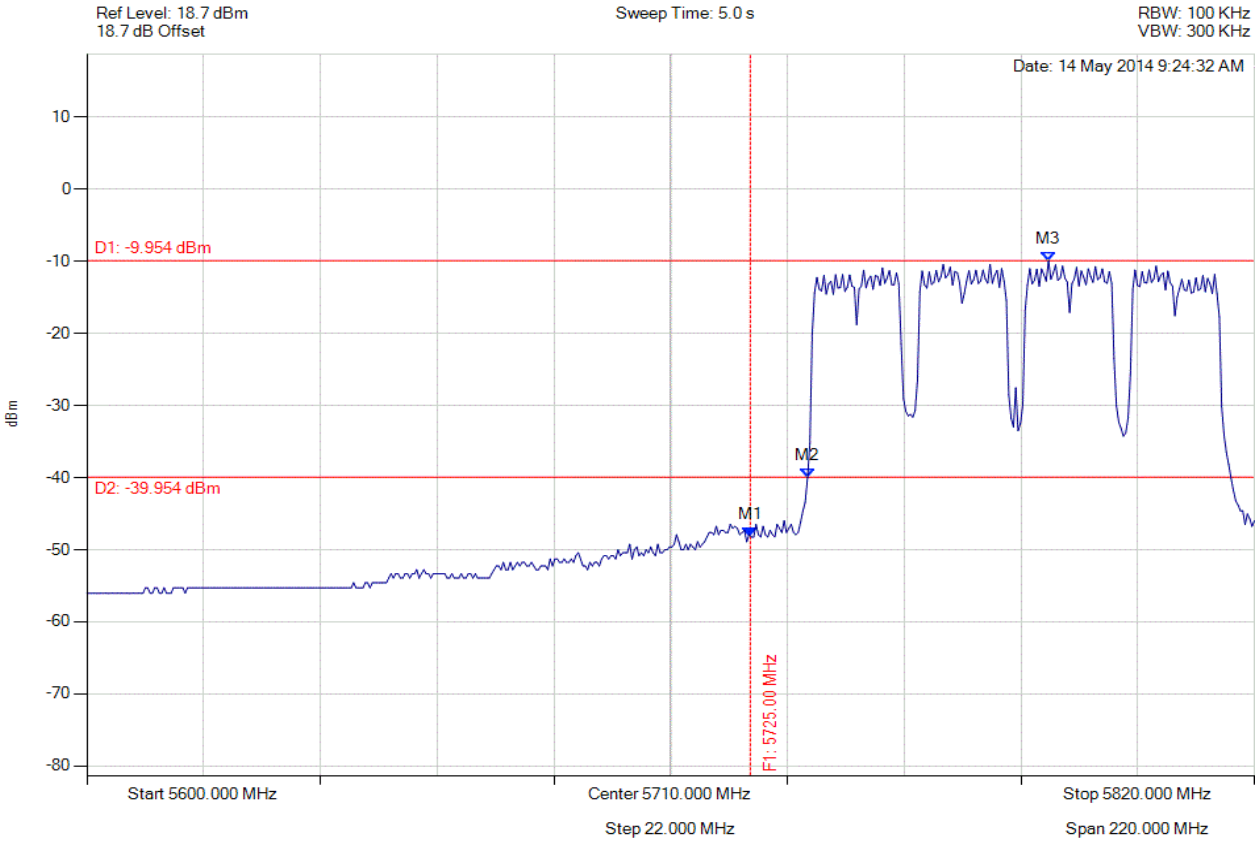


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -48.407 dBm M2 : 5735.351 MHz : -39.715 dBm M3 : 5781.202 MHz : -9.537 dBm	Channel Frequency: 5775.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

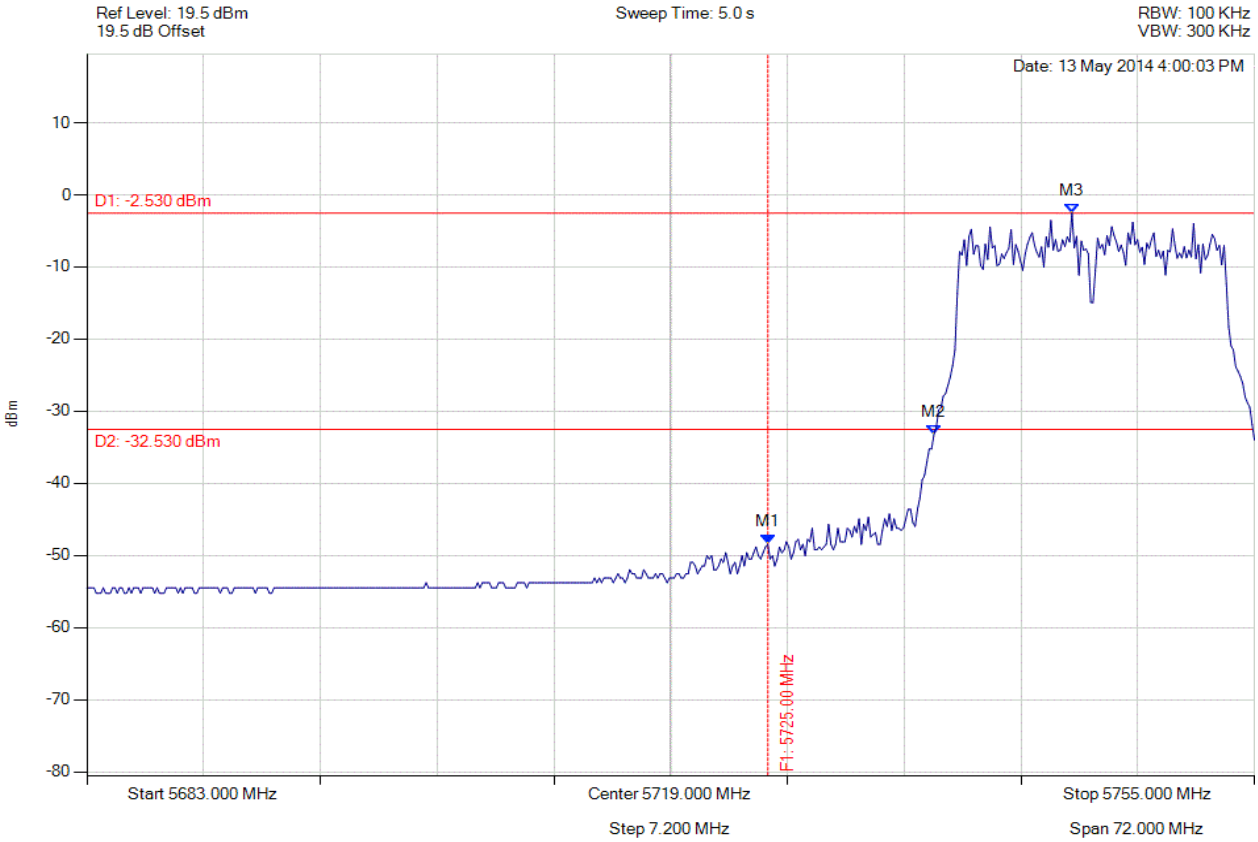


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -48.238 dBm M2 : 5735.792 MHz : -39.963 dBm M3 : 5781.202 MHz : -9.954 dBm	Channel Frequency: 5775.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

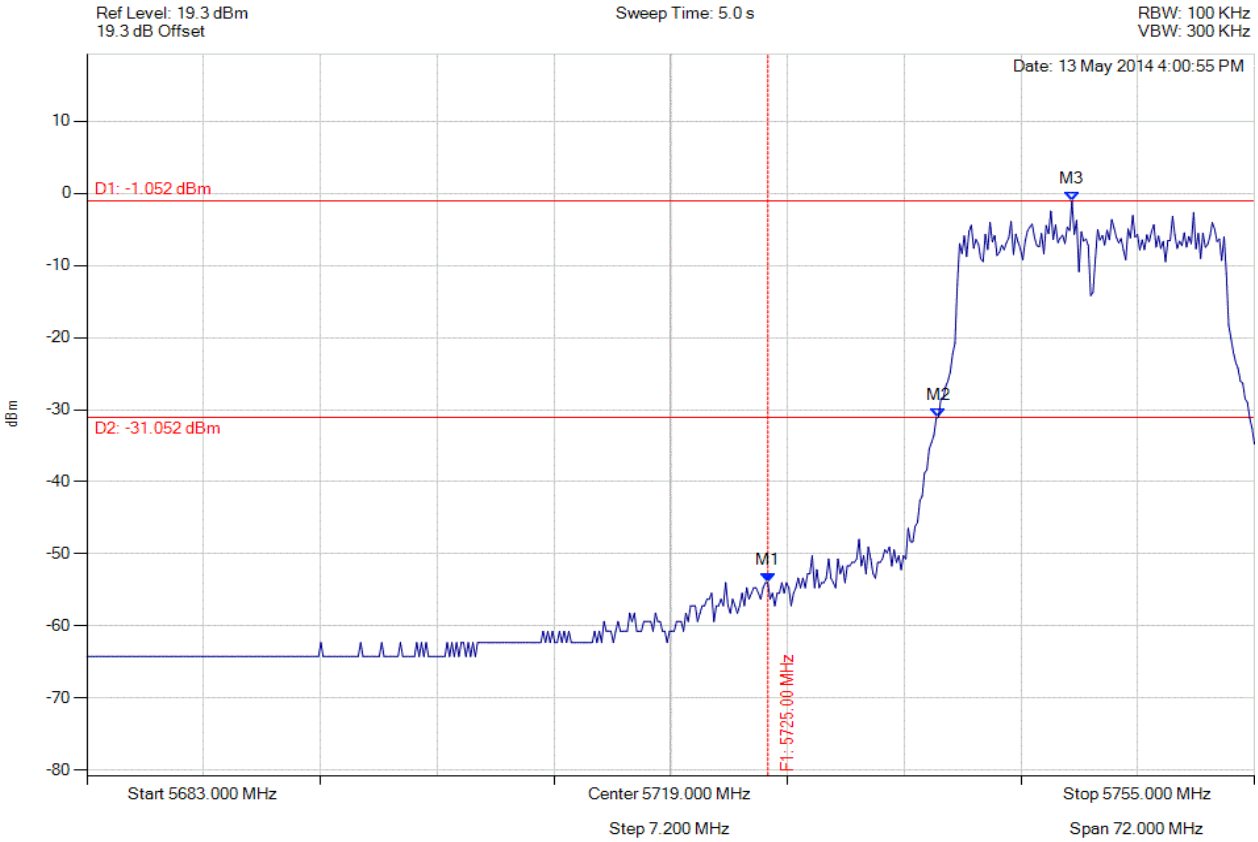


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -48.461 dBm M2 : 5735.232 MHz : -33.268 dBm M3 : 5743.745 MHz : -2.530 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

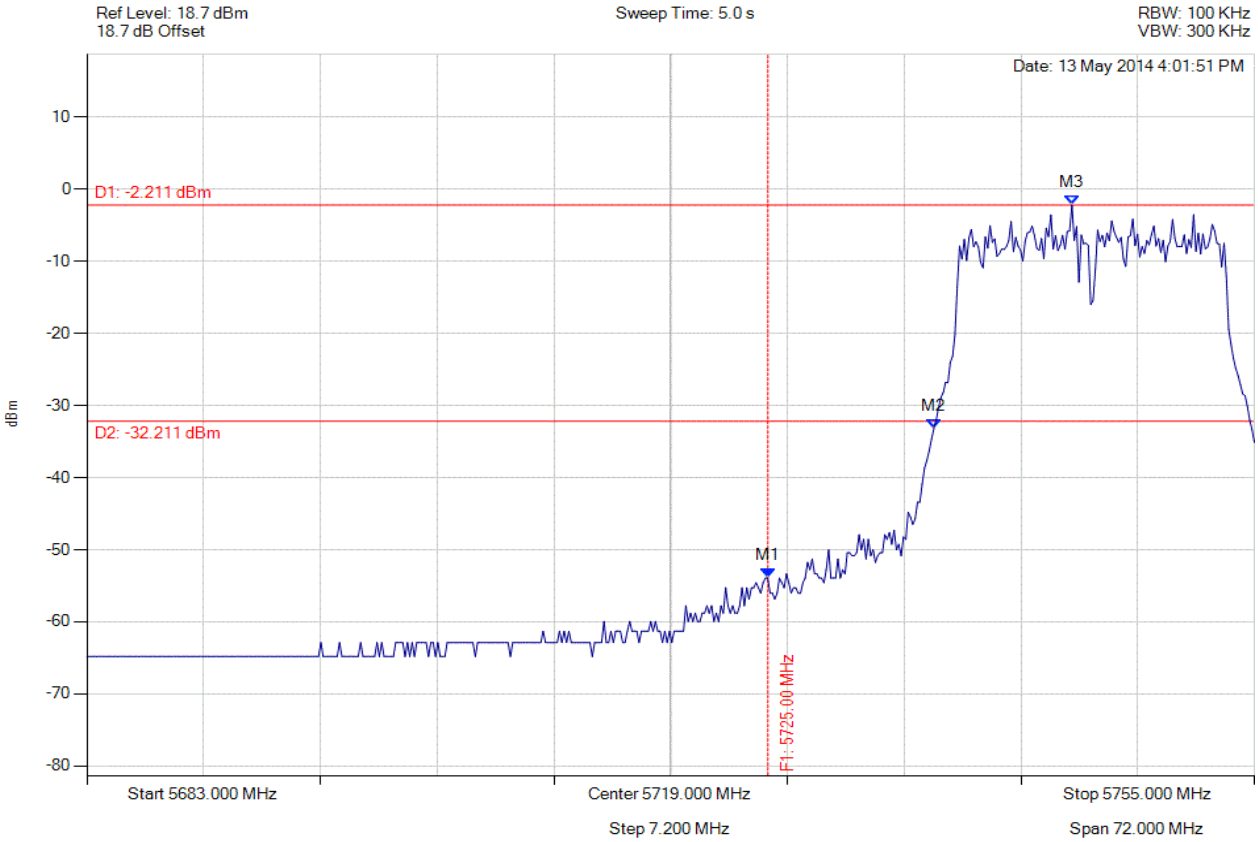


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -53.986 dBm M2 : 5735.521 MHz : -31.064 dBm M3 : 5743.745 MHz : -1.052 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5745.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

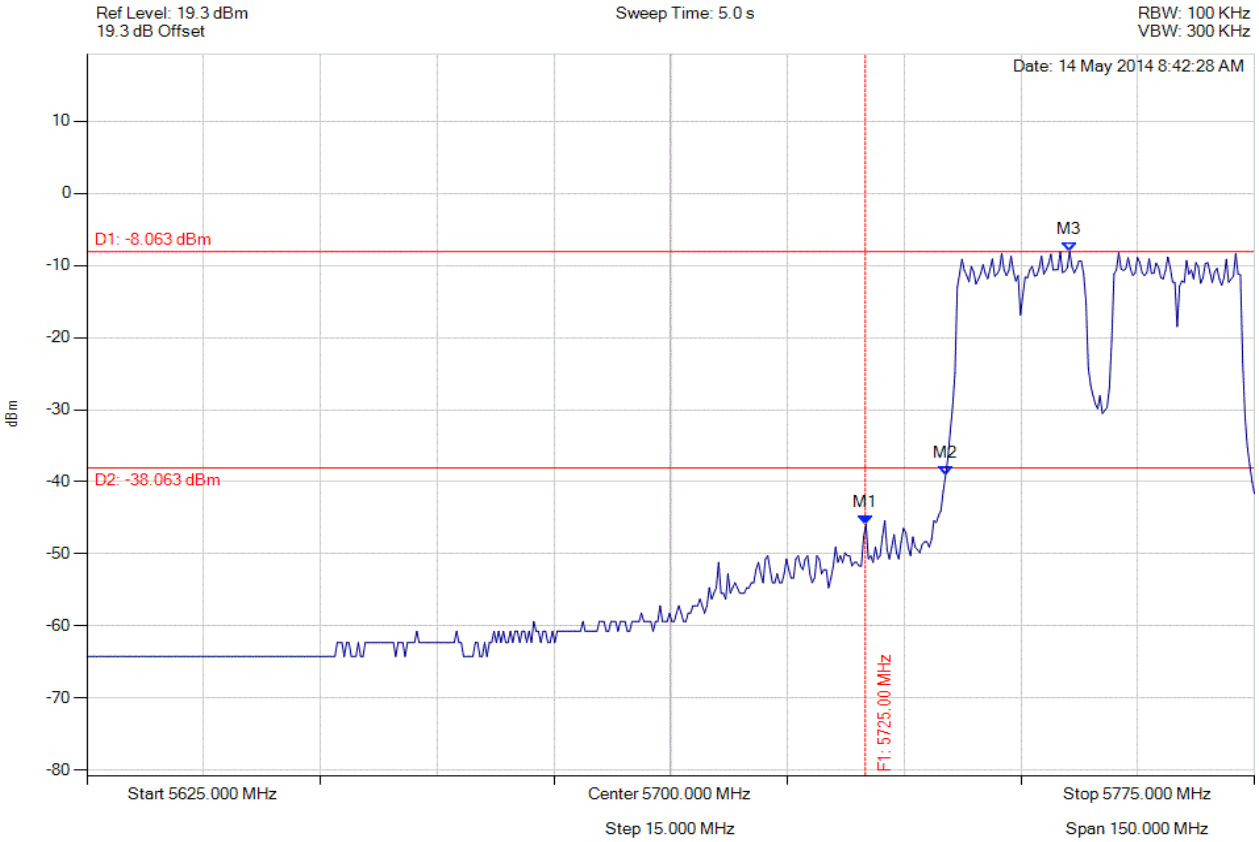


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -53.943 dBm M2 : 5735.232 MHz : -33.172 dBm M3 : 5743.745 MHz : -2.211 dBm	Channel Frequency: 5745.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

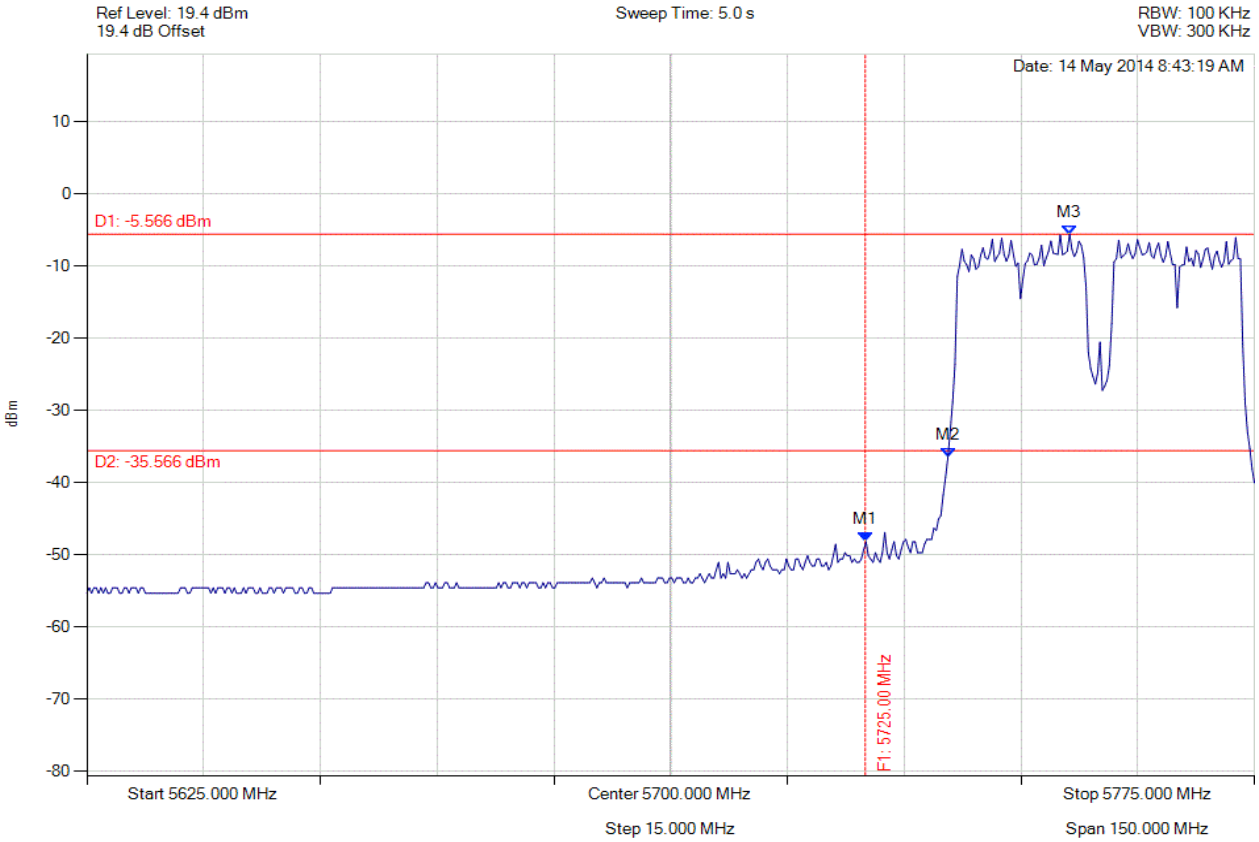


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -45.895 dBm M2 : 5735.321 MHz : -39.119 dBm M3 : 5751.253 MHz : -8.063 dBm	Channel Frequency: 5755.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

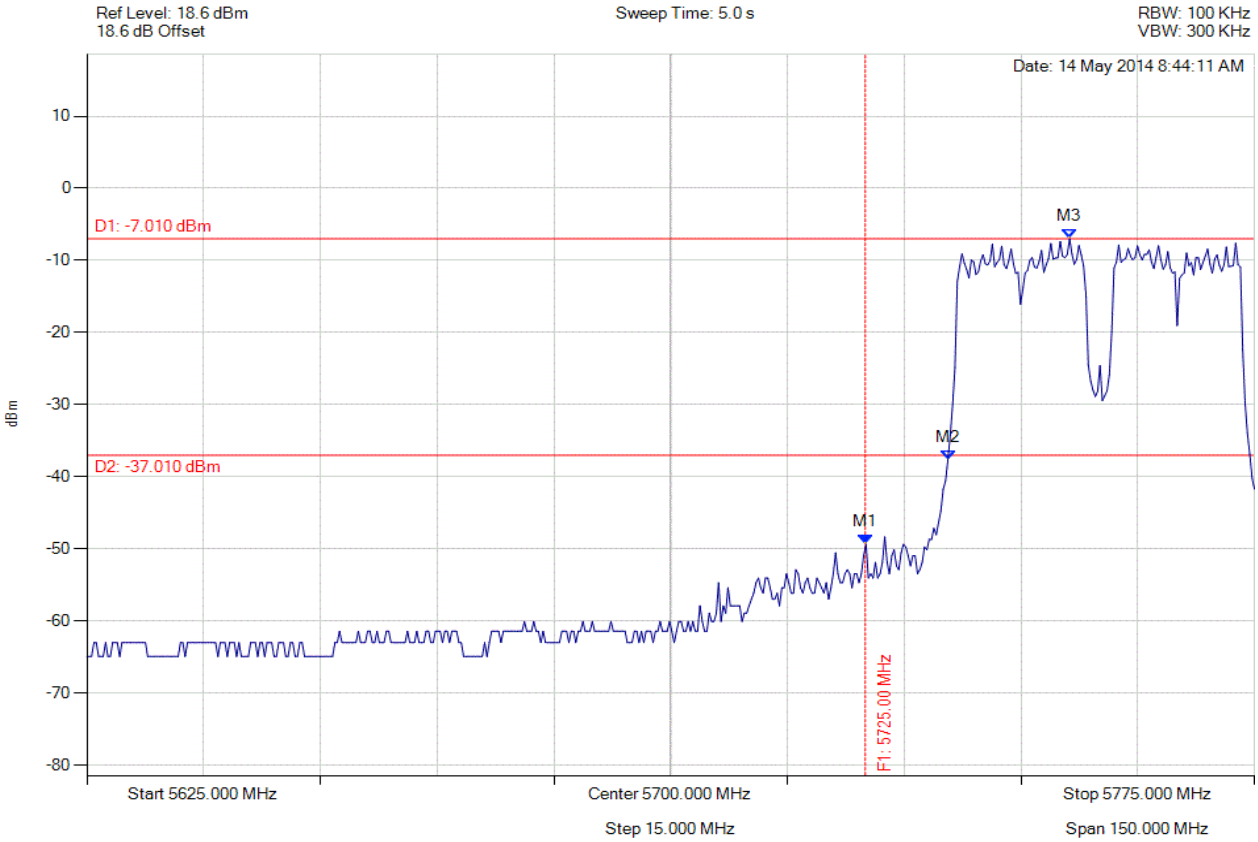


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5725.000 MHz : -48.207 dBm M2 : 5735.621 MHz : -36.430 dBm M3 : 5751.253 MHz : -5.566 dBm	Channel Frequency: 5755.00 MHz

Back to the Matrix

CONDUCTED LOW BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5755.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

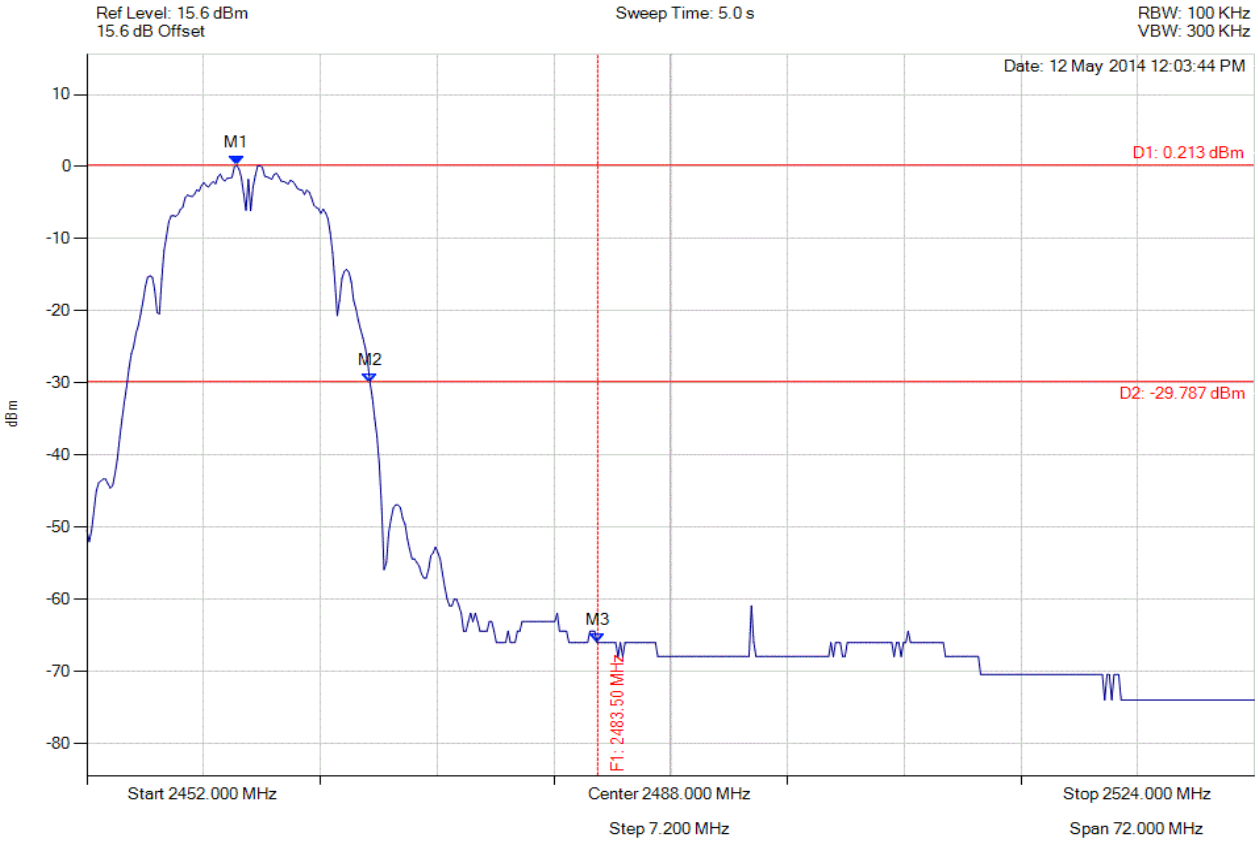


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5725.000 MHz : -49.361 dBm M2 : 5735.621 MHz : -37.596 dBm M3 : 5751.253 MHz : -7.010 dBm	Channel Frequency: 5755.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

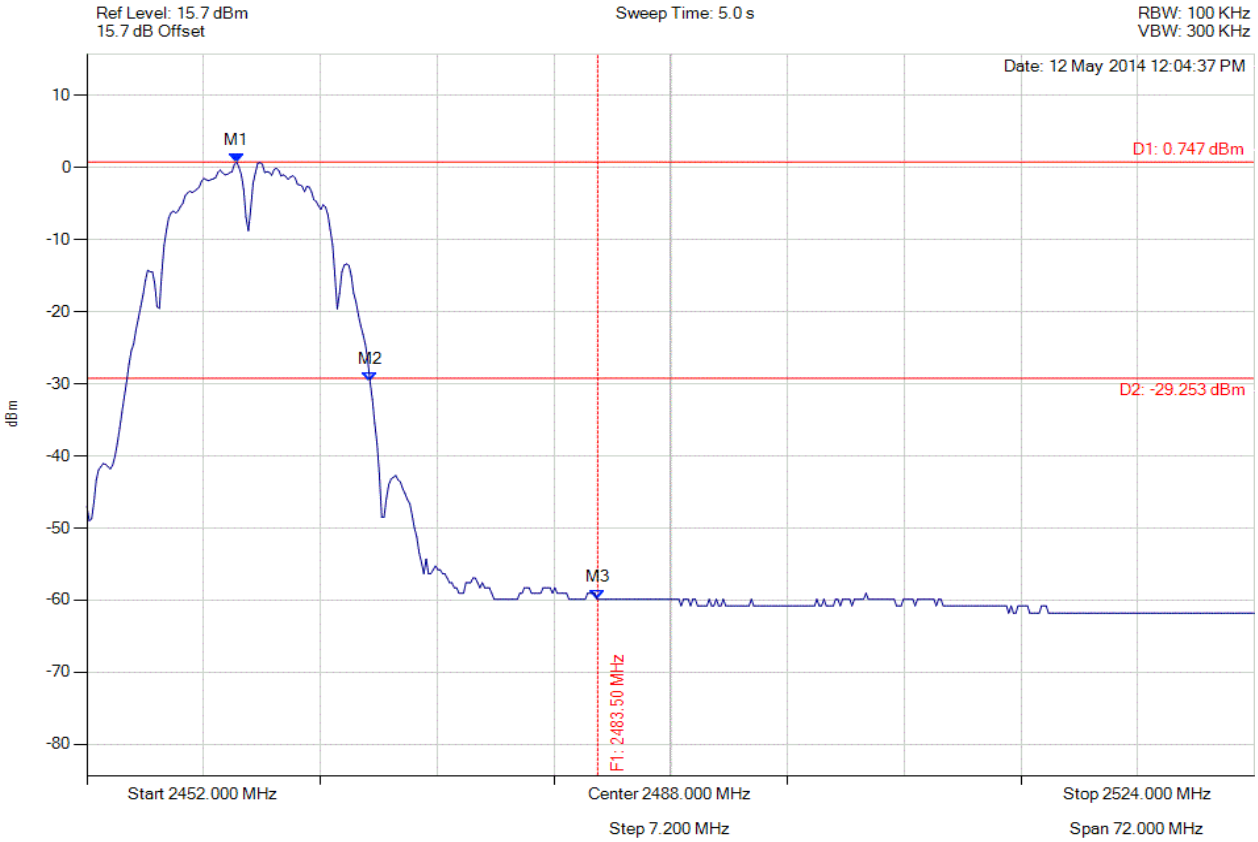


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2461.234 MHz : 0.213 dBm M2 : 2469.459 MHz : -29.972 dBm M3 : 2483.500 MHz : -65.986 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

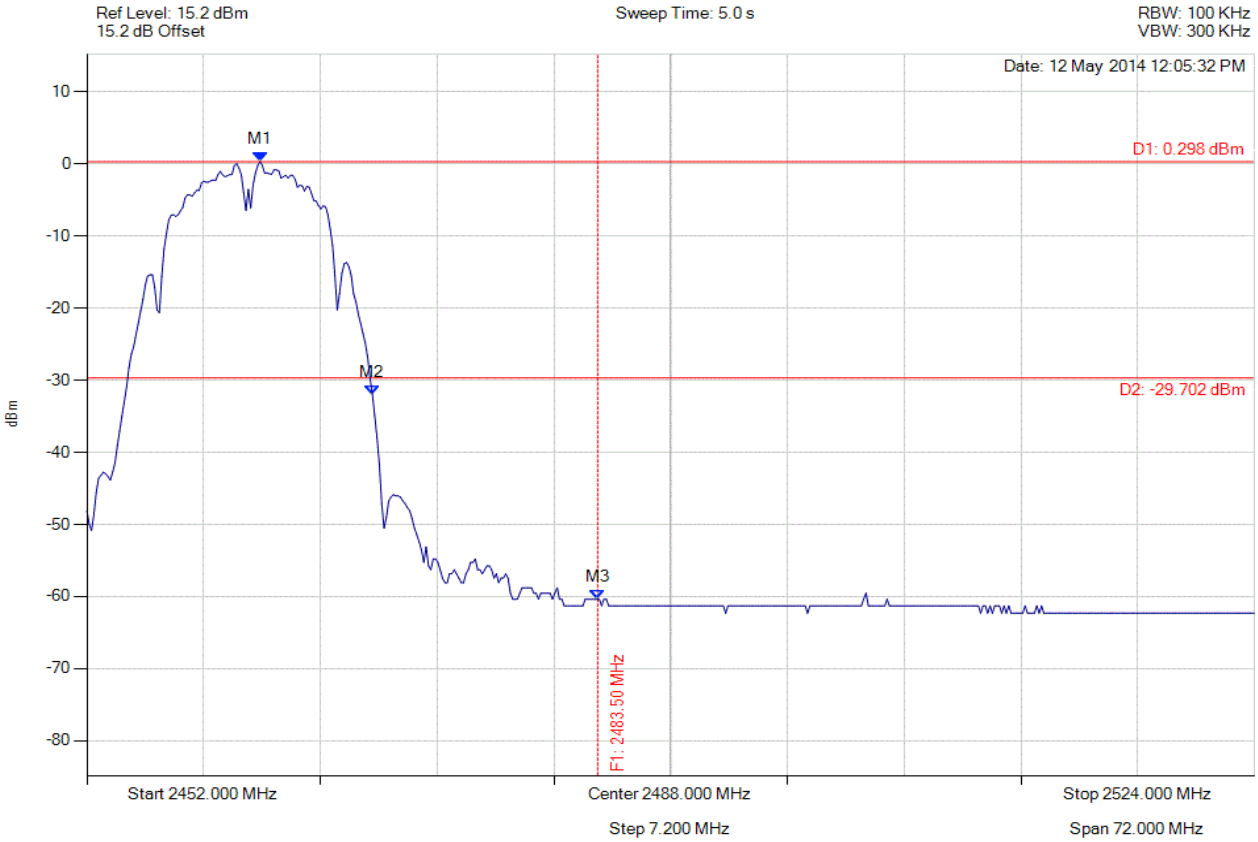


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2461.234 MHz : 0.747 dBm M2 : 2469.459 MHz : -29.681 dBm M3 : 2483.500 MHz : -59.865 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

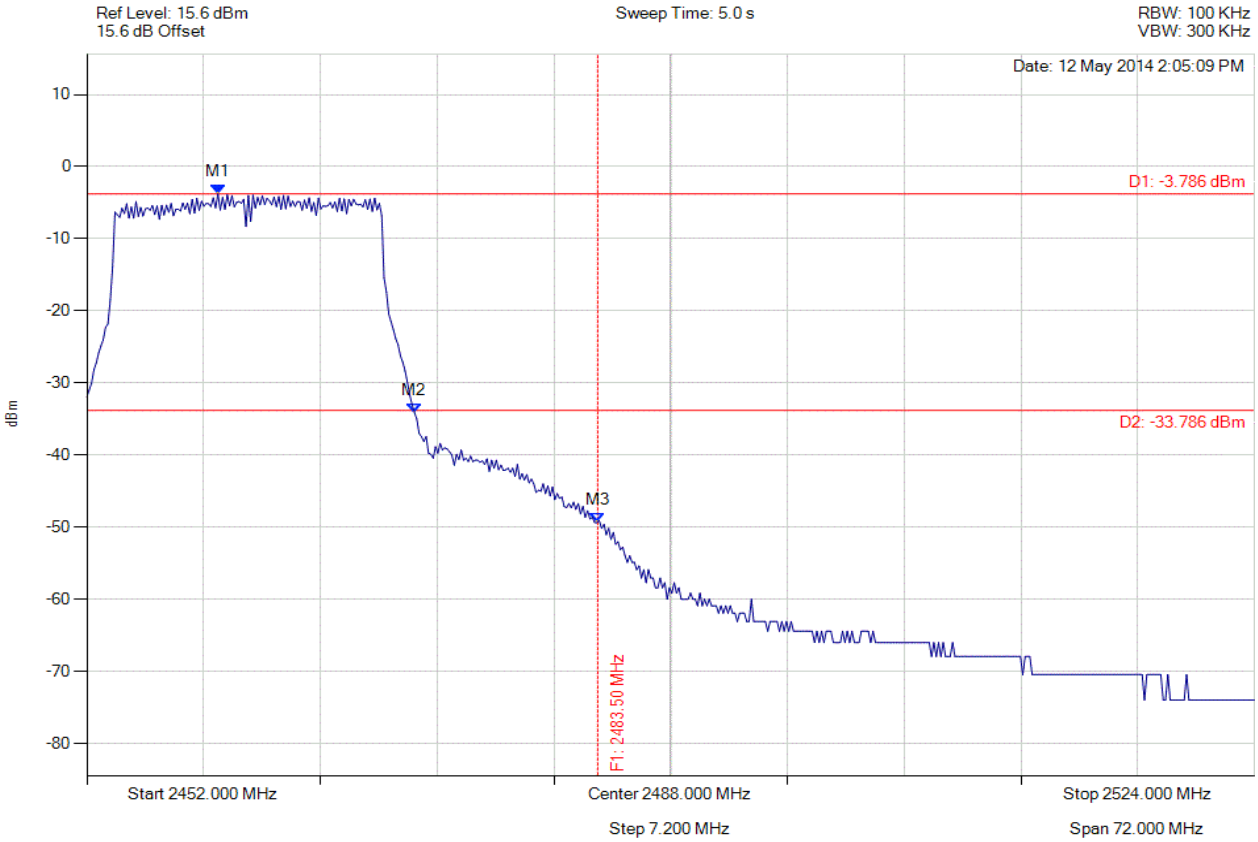


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2462.677 MHz : 0.298 dBm M2 : 2469.603 MHz : -31.966 dBm M3 : 2483.500 MHz : -60.365 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

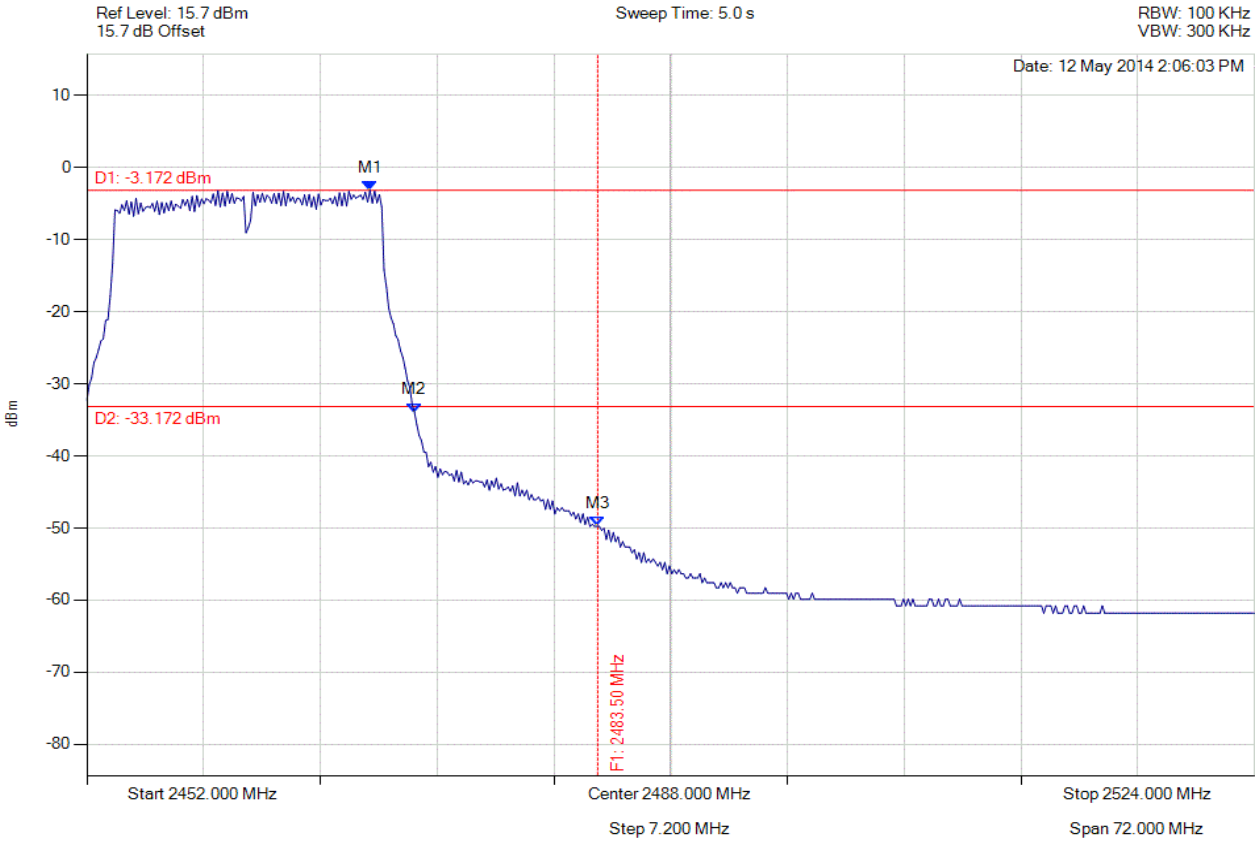


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2460.080 MHz : -3.786 dBm M2 : 2472.200 MHz : -34.120 dBm M3 : 2483.500 MHz : -49.336 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

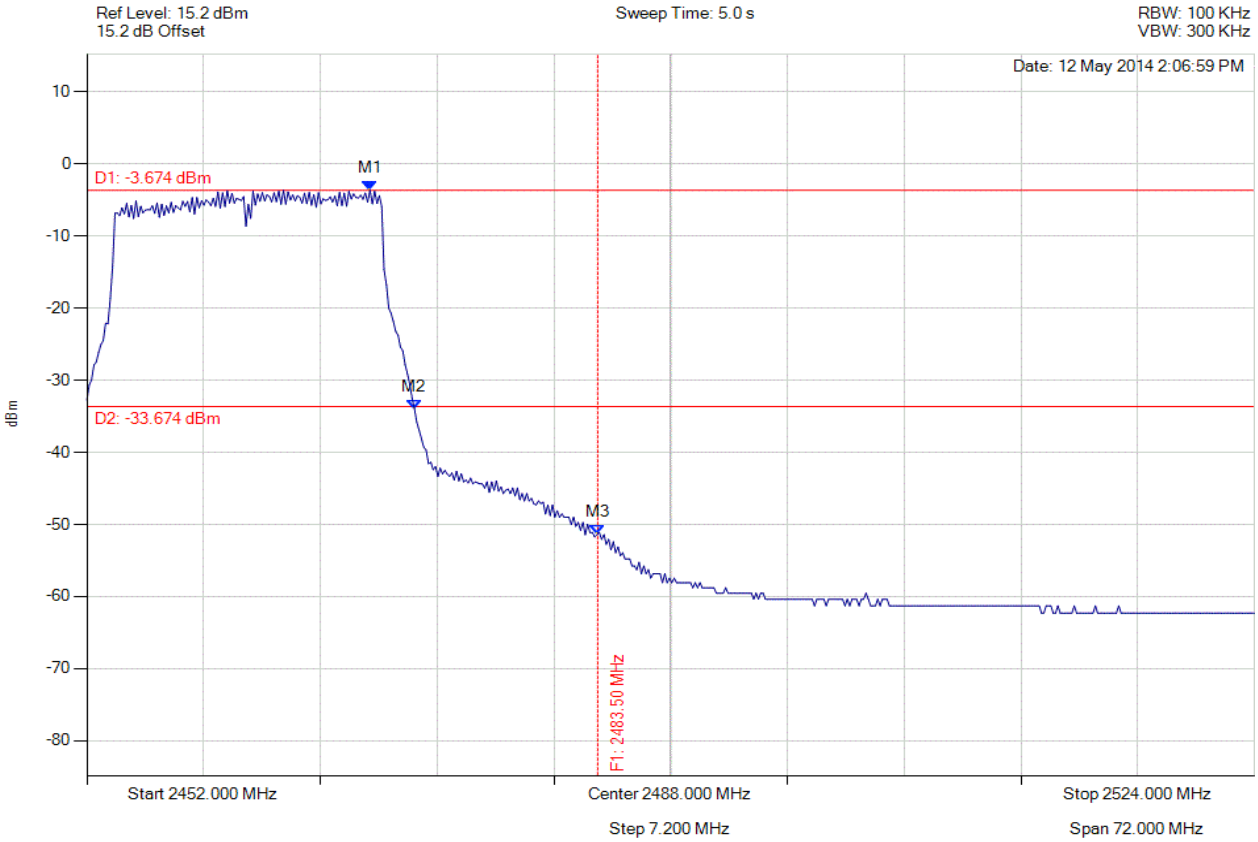


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2469.459 MHz : -3.172 dBm M2 : 2472.200 MHz : -33.932 dBm M3 : 2483.500 MHz : -49.762 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

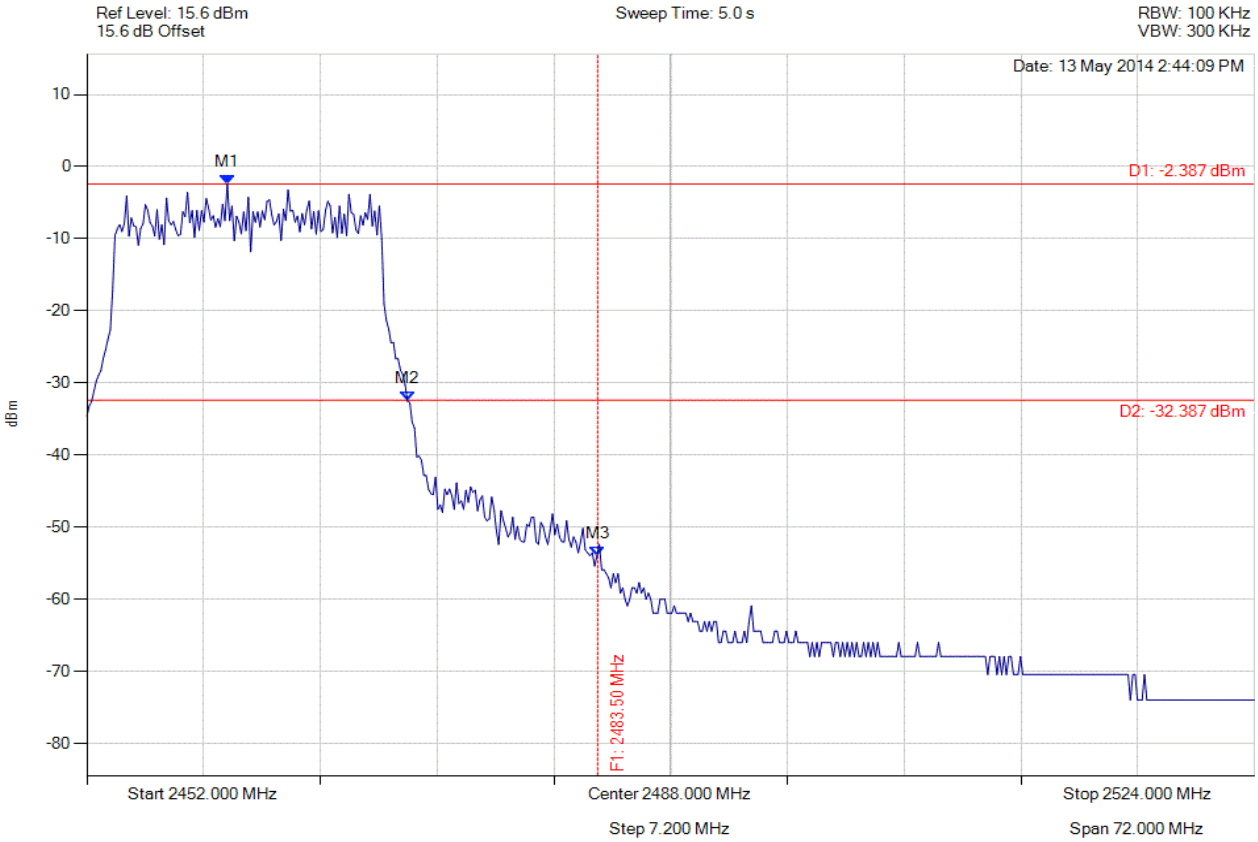


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2469.459 MHz : -3.674 dBm M2 : 2472.200 MHz : -33.962 dBm M3 : 2483.500 MHz : -51.422 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

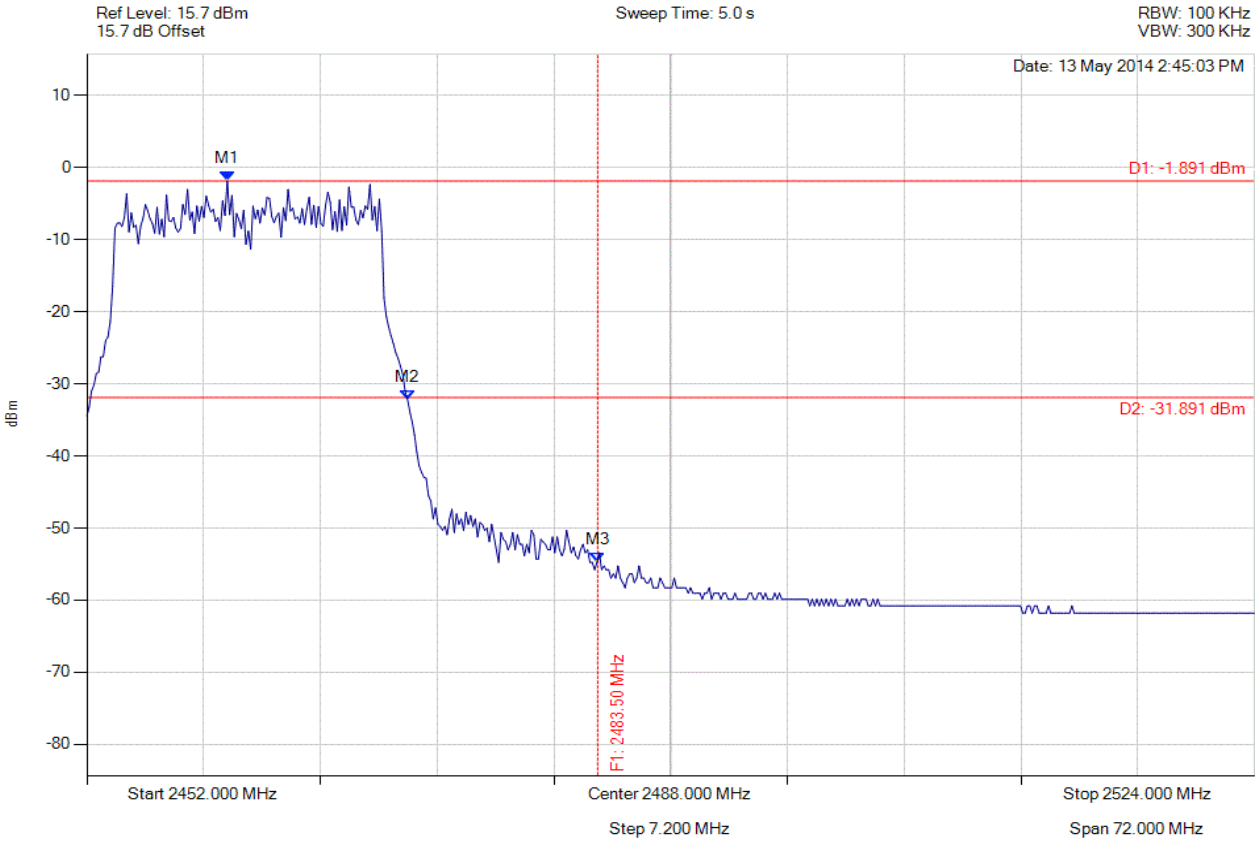


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2460.657 MHz : -2.387 dBm M2 : 2471.768 MHz : -32.507 dBm M3 : 2483.500 MHz : -53.945 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

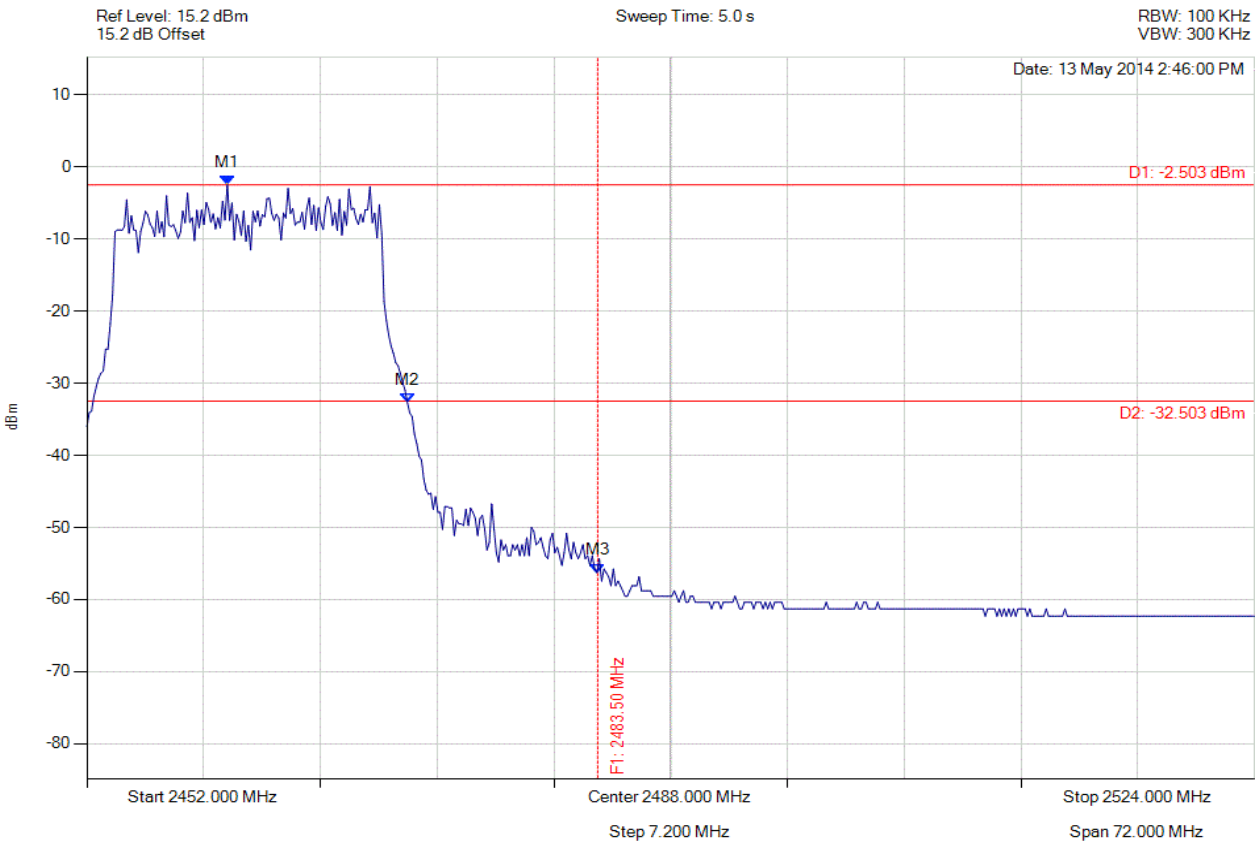


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.657 MHz : -1.891 dBm M2 : 2471.768 MHz : -32.153 dBm M3 : 2483.500 MHz : -54.760 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

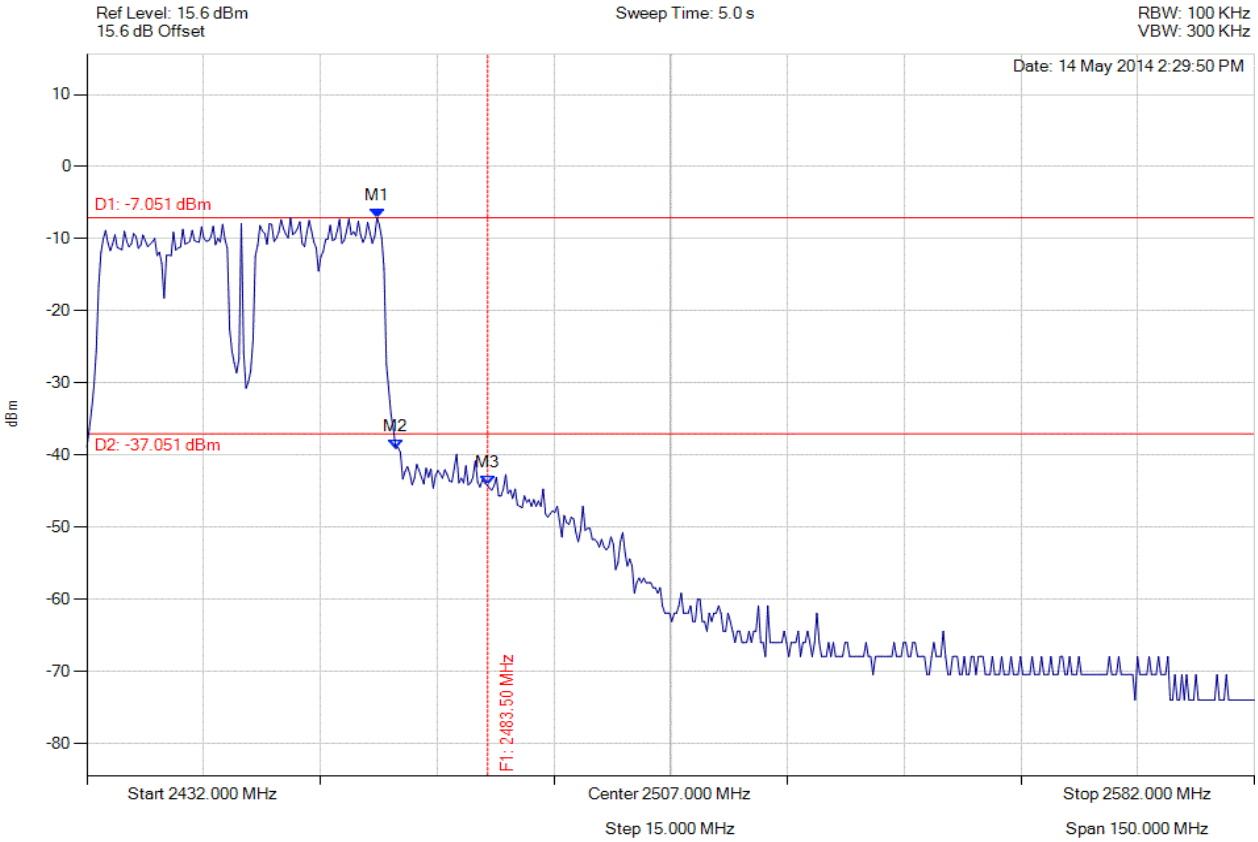


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2460.657 MHz : -2.503 dBm M2 : 2471.768 MHz : -32.725 dBm M3 : 2483.500 MHz : -56.283 dBm	Channel Frequency: 2462.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

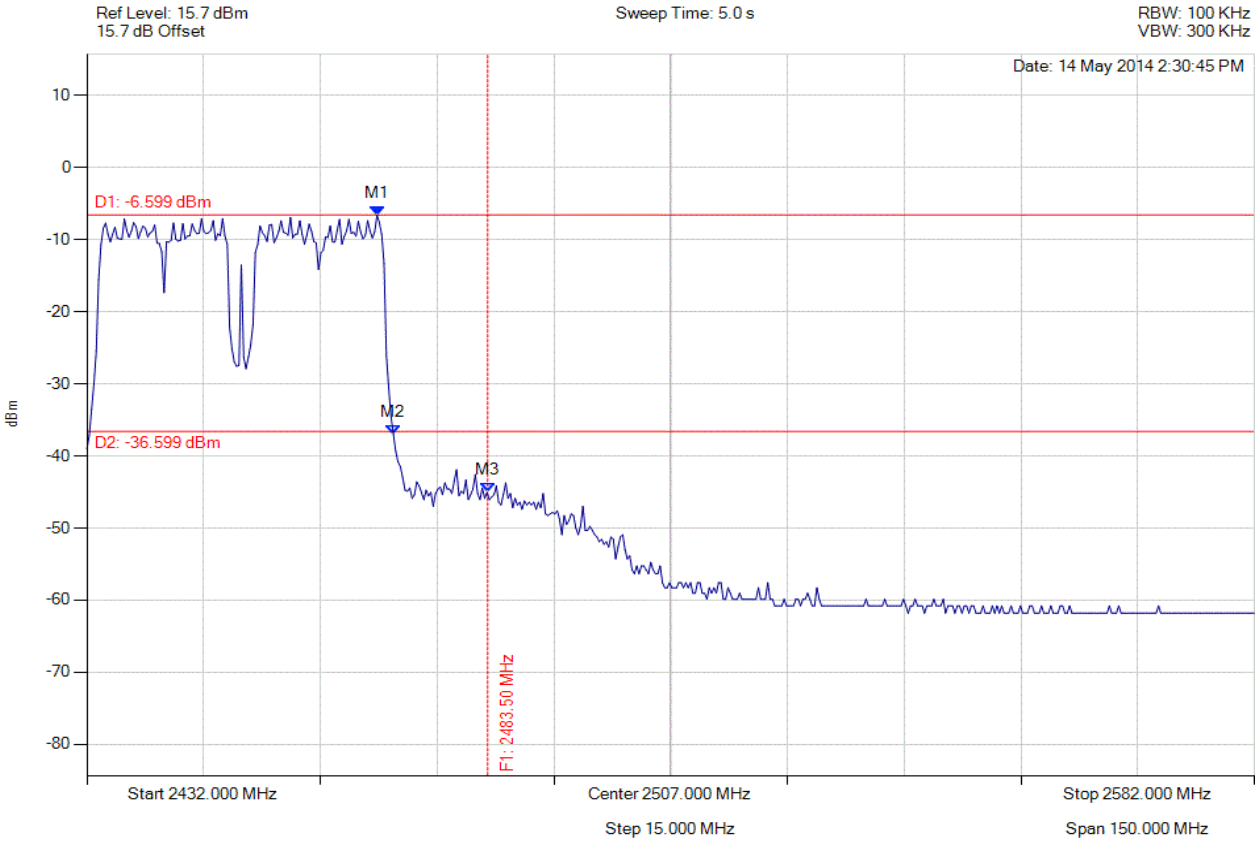


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 2469.275 MHz : -7.051 dBm M2 : 2471.679 MHz : -39.059 dBm M3 : 2483.500 MHz : -44.118 dBm	Channel Frequency: 2452.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

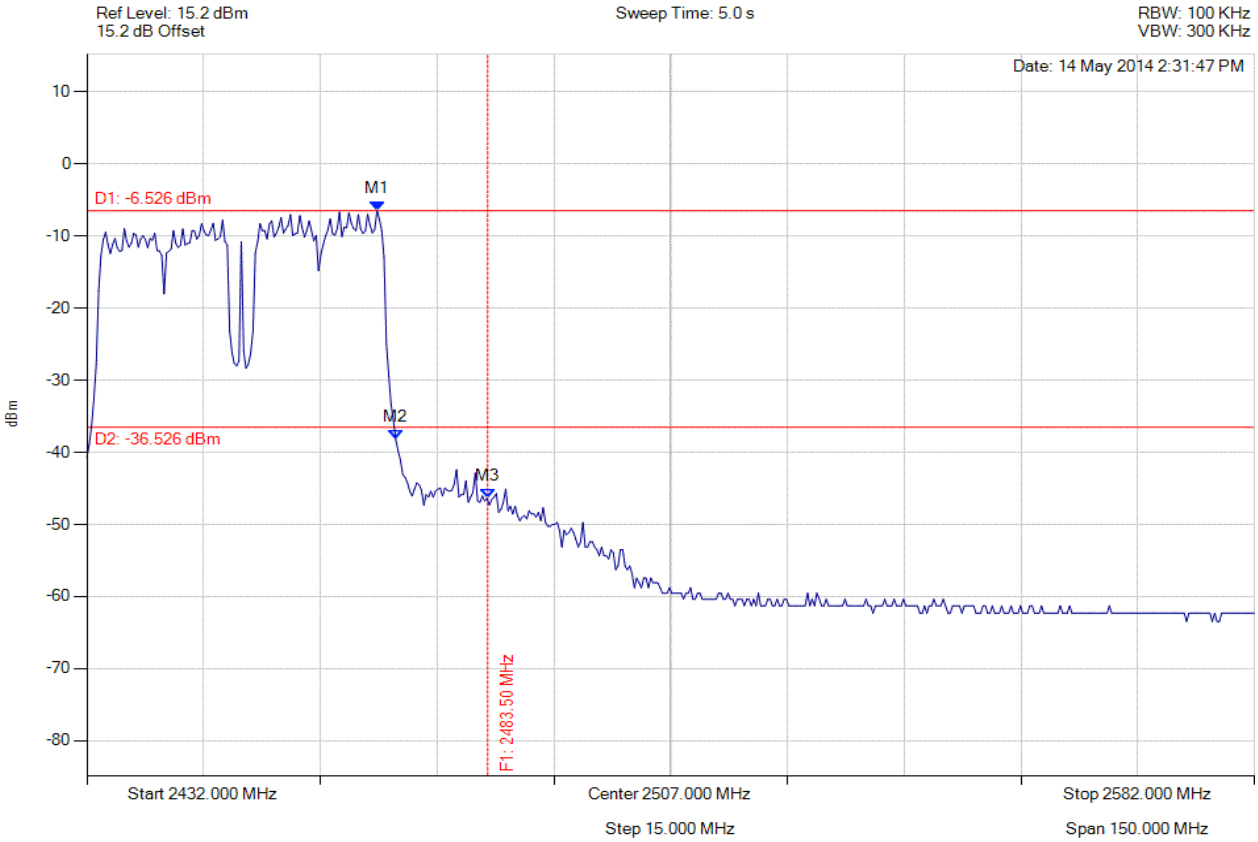


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2469.275 MHz : -6.599 dBm M2 : 2471.379 MHz : -37.005 dBm M3 : 2483.500 MHz : -45.058 dBm	Channel Frequency: 2452.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

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

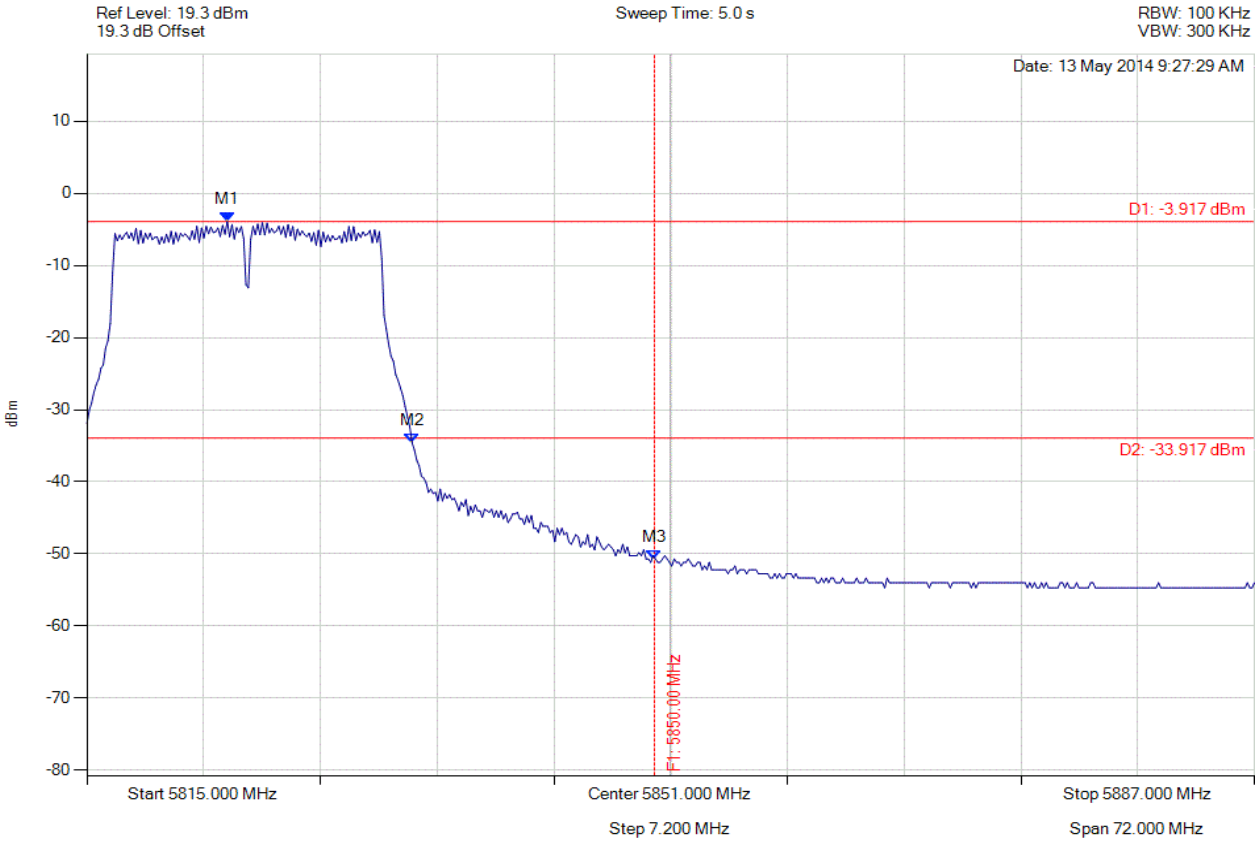


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 2469.275 MHz : -6.526 dBm M2 : 2471.679 MHz : -38.221 dBm M3 : 2483.500 MHz : -46.386 dBm	Channel Frequency: 2452.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

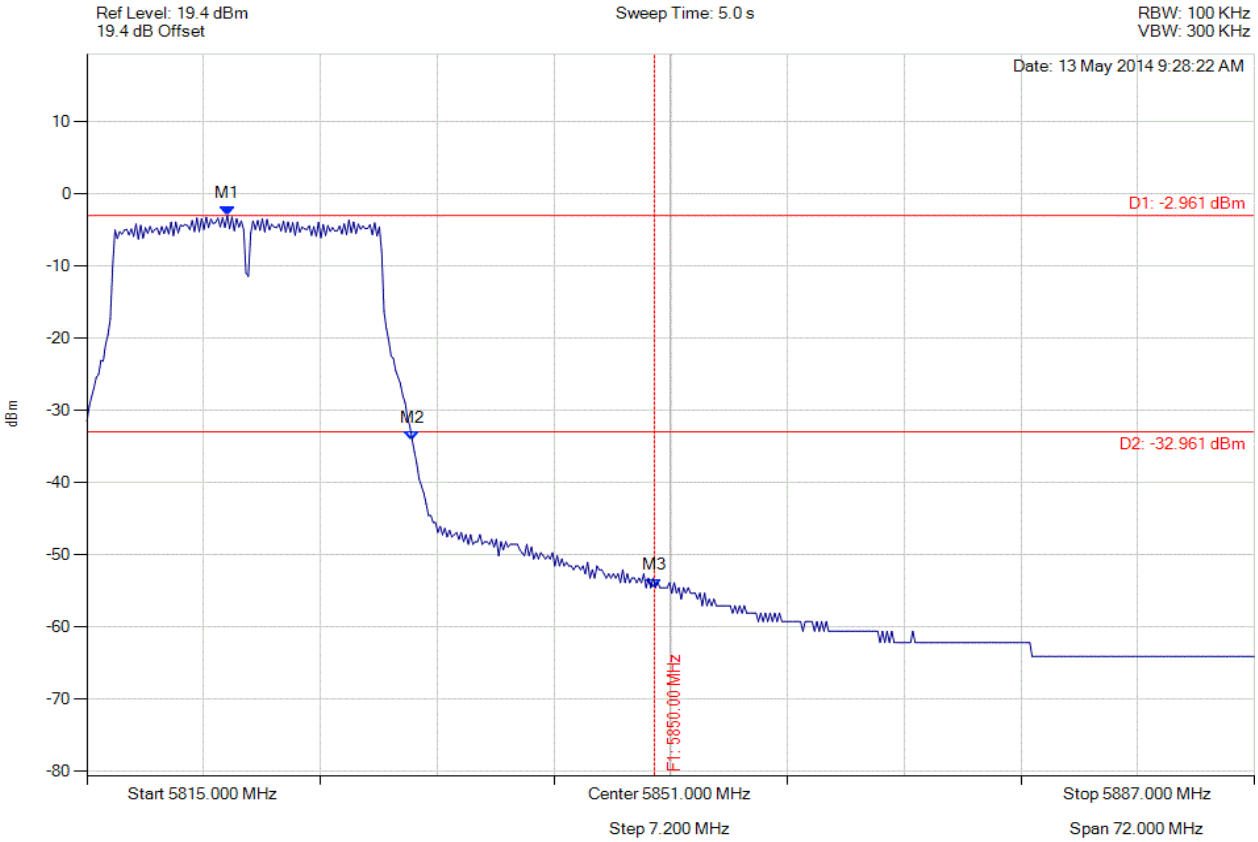


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5823.657 MHz : -3.917 dBm M2 : 5835.056 MHz : -34.610 dBm M3 : 5850.000 MHz : -50.690 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

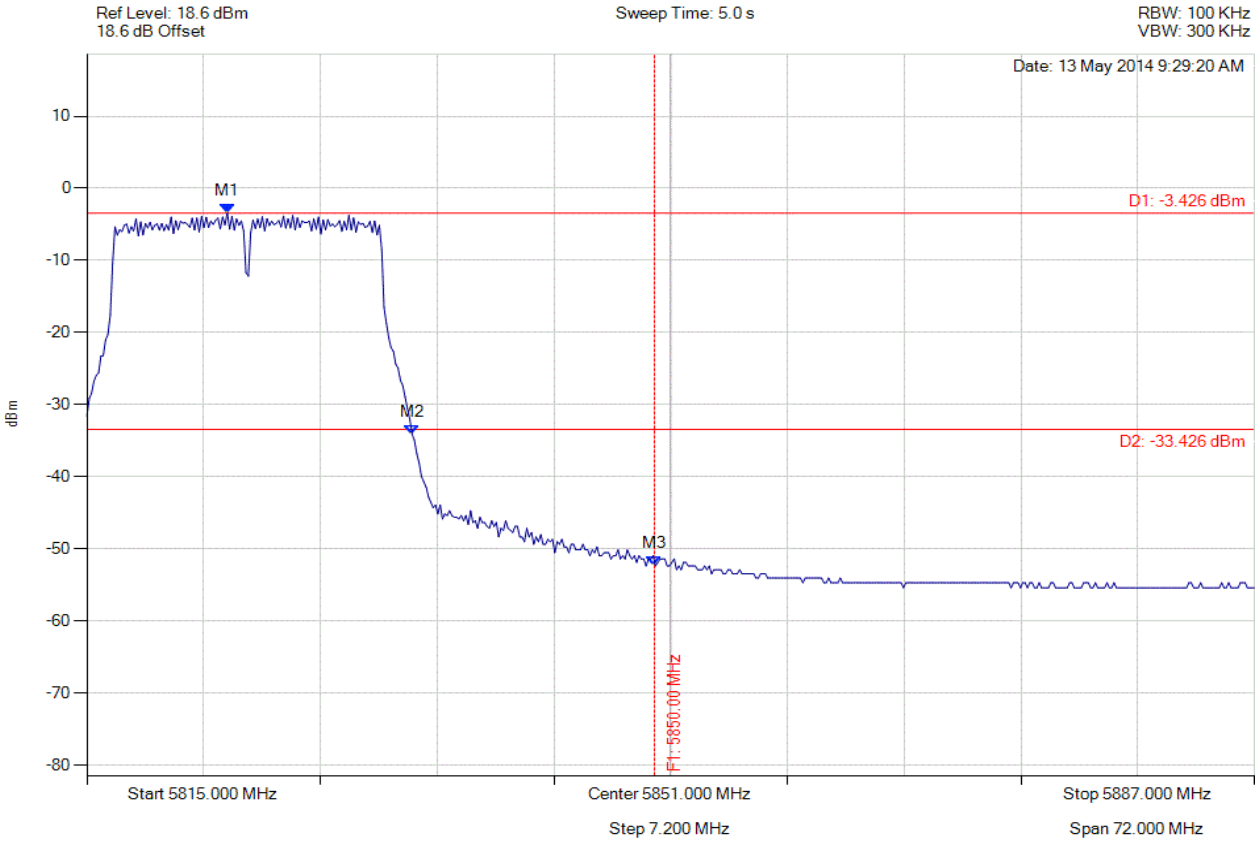


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5823.657 MHz : -2.961 dBm M2 : 5835.056 MHz : -34.089 dBm M3 : 5850.000 MHz : -54.582 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11a, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

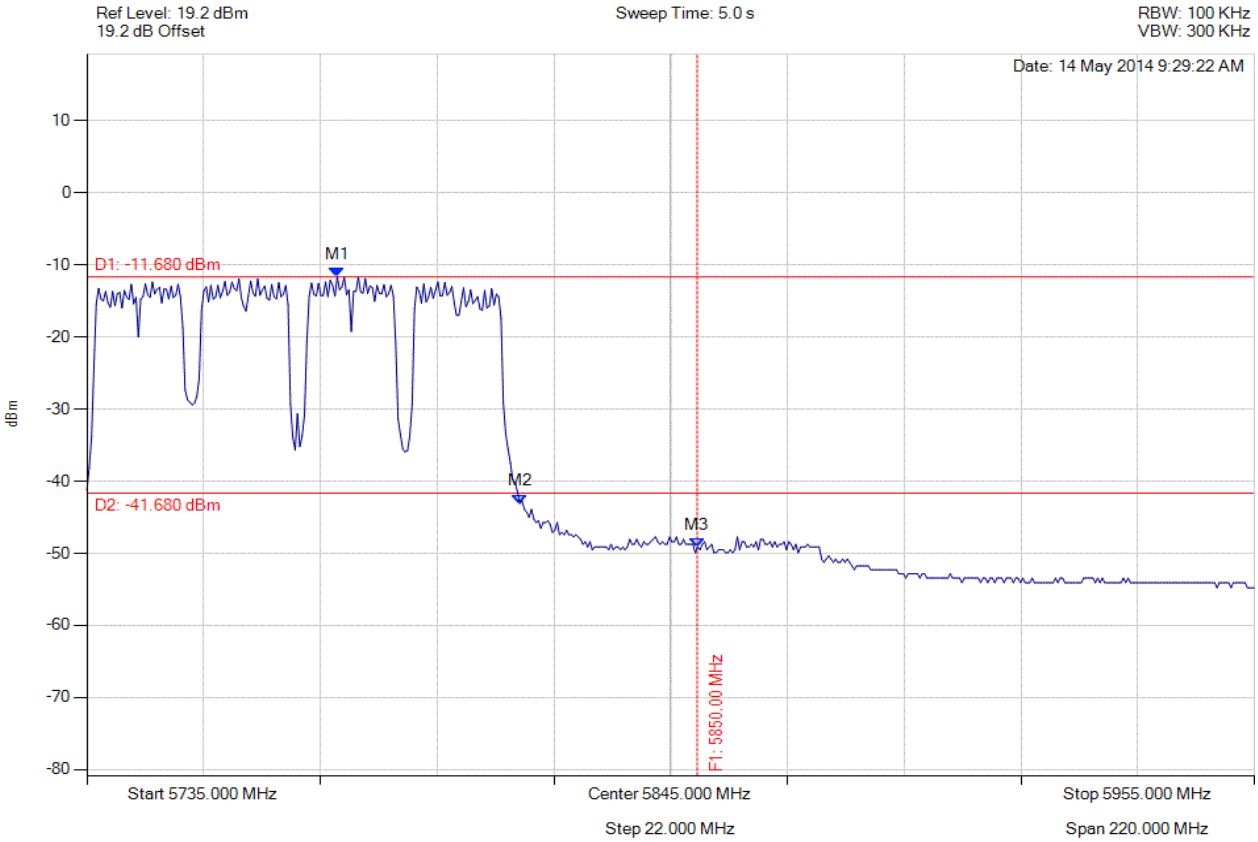


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5823.657 MHz : -3.426 dBm M2 : 5835.056 MHz : -34.105 dBm M3 : 5850.000 MHz : -52.356 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

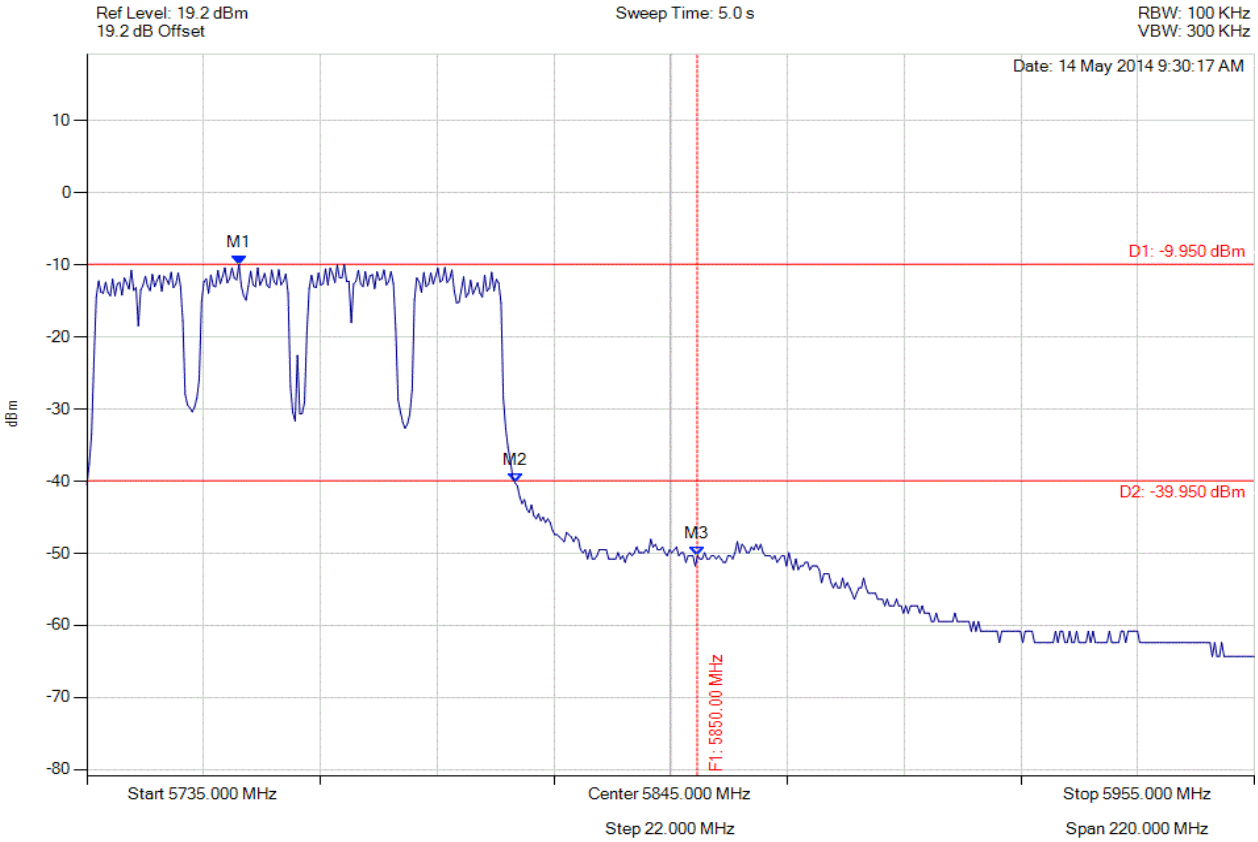


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5782.174 MHz : -11.680 dBm M2 : 5816.563 MHz : -43.110 dBm M3 : 5850.000 MHz : -49.131 dBm	Channel Frequency: 5775.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

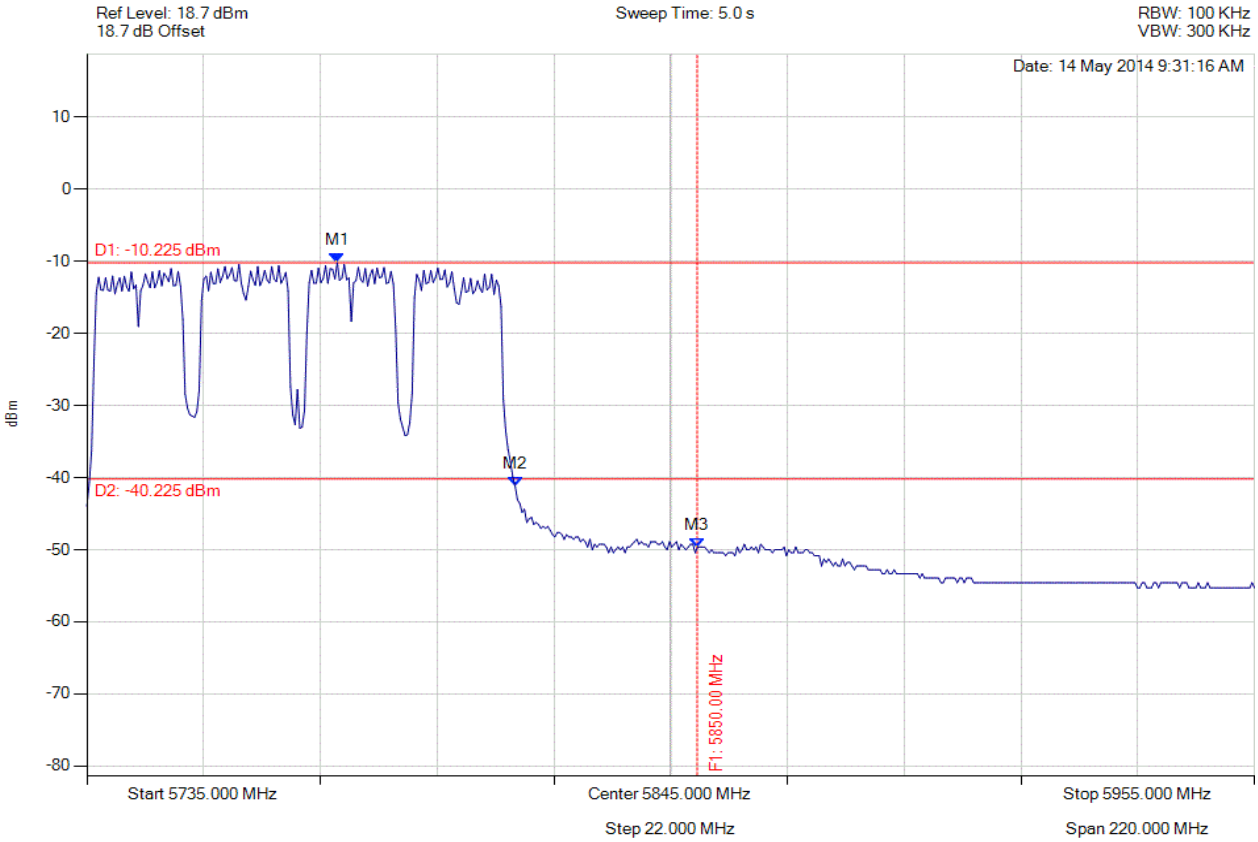


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5763.657 MHz : -9.950 dBm M2 : 5815.681 MHz : -40.242 dBm M3 : 5850.000 MHz : -50.345 dBm	Channel Frequency: 5775.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11ac-80, Channel: 5775.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

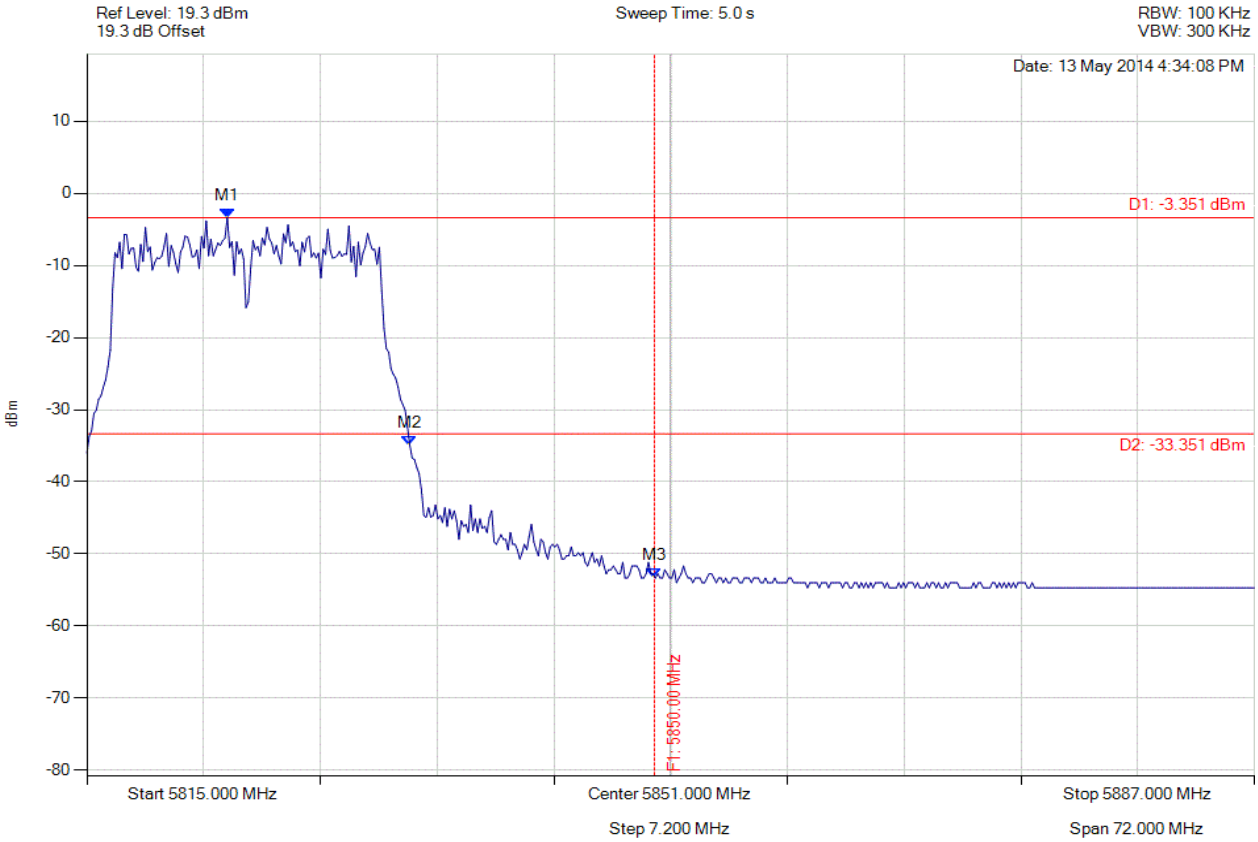


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5782.174 MHz : -10.225 dBm M2 : 5815.681 MHz : -41.159 dBm M3 : 5850.000 MHz : -49.631 dBm	Channel Frequency: 5775.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

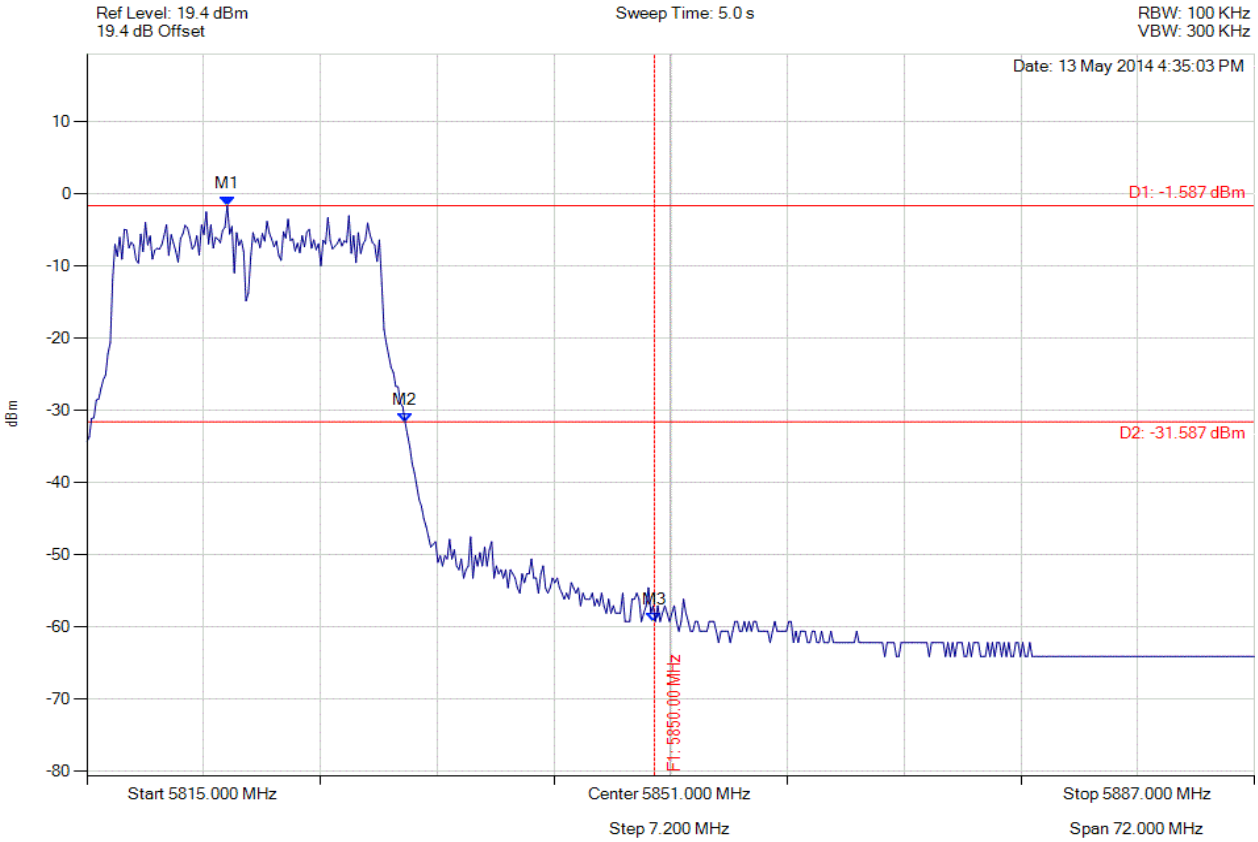


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5823.657 MHz : -3.351 dBm M2 : 5834.912 MHz : -34.902 dBm M3 : 5850.000 MHz : -53.343 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

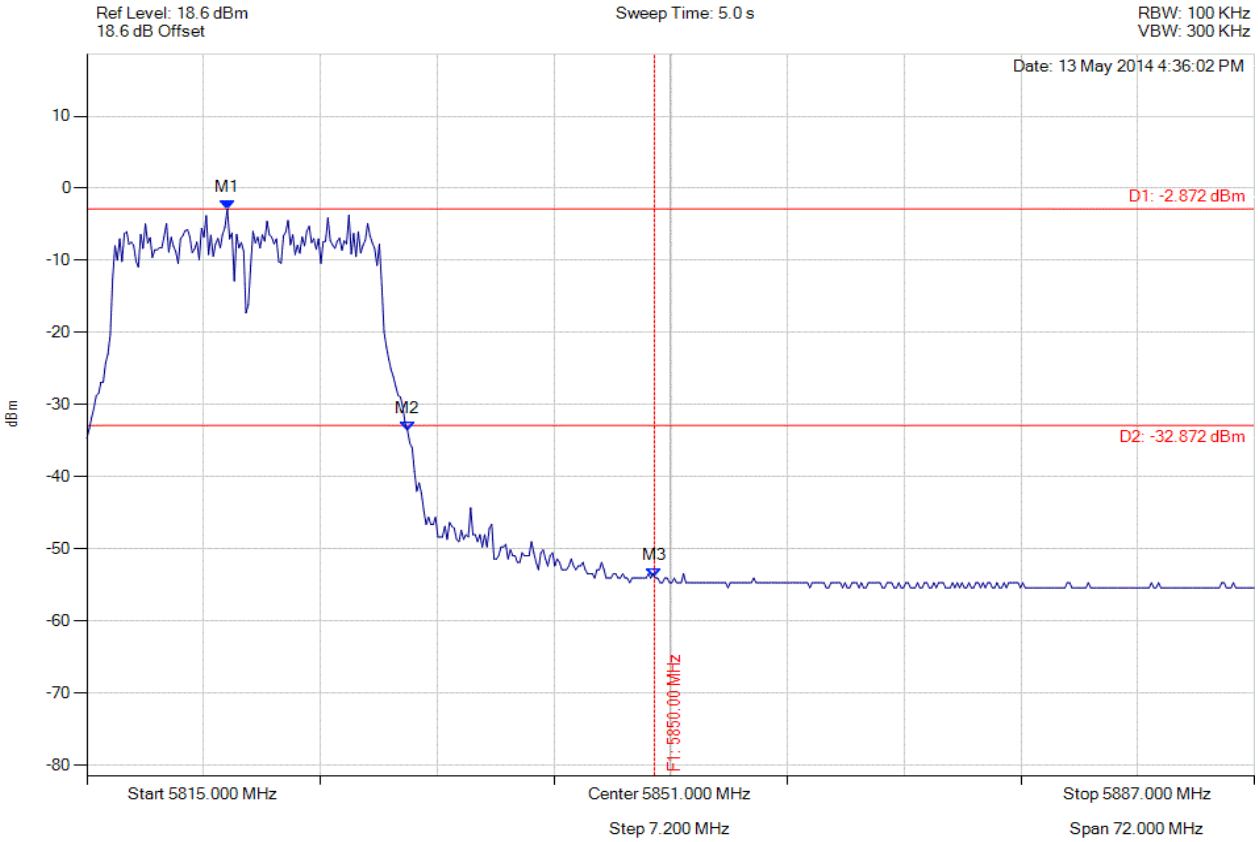


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5823.657 MHz : -1.587 dBm M2 : 5834.623 MHz : -31.608 dBm M3 : 5850.000 MHz : -59.263 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-20, Channel: 5825.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc

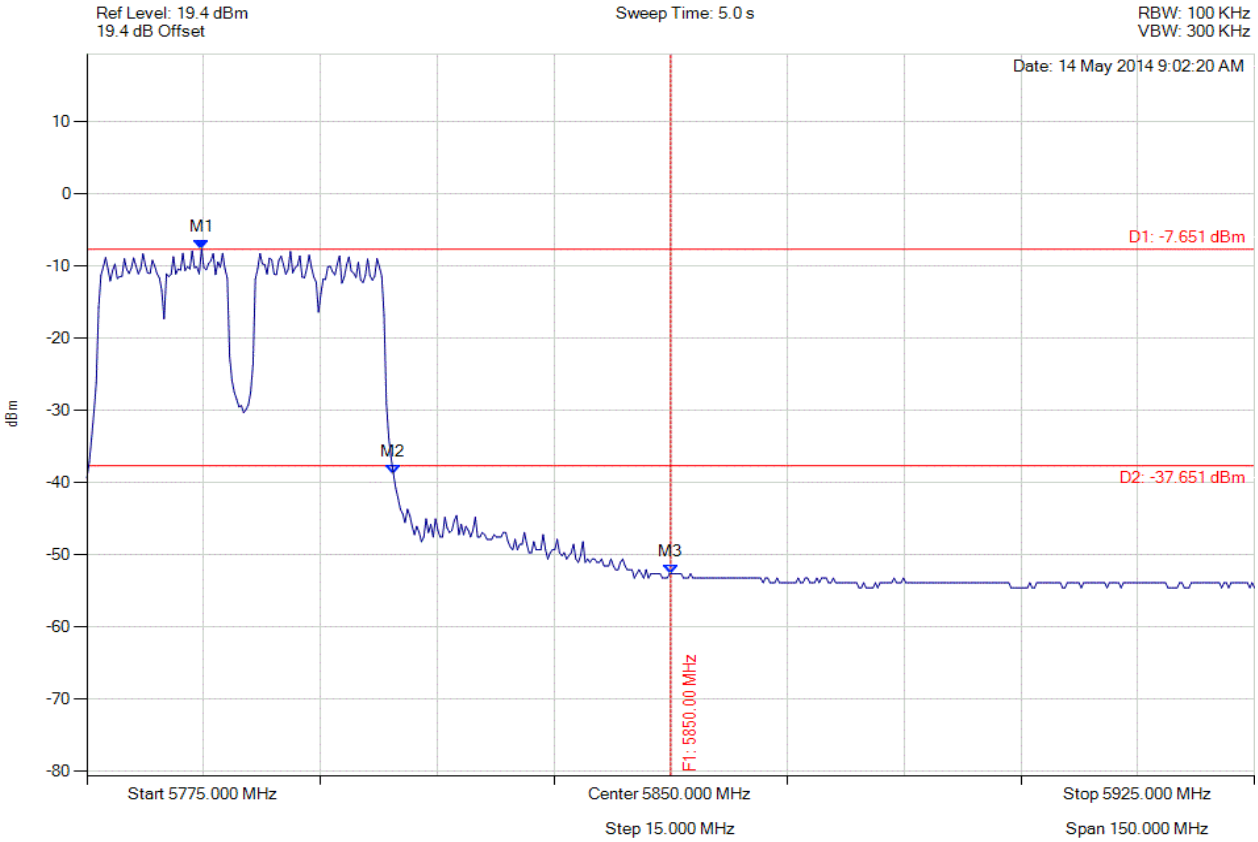


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5823.657 MHz : -2.872 dBm M2 : 5834.768 MHz : -33.560 dBm M3 : 5850.000 MHz : -54.043 dBm	Channel Frequency: 5825.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain a, Temp: Ambient, Voltage: 12 Vdc

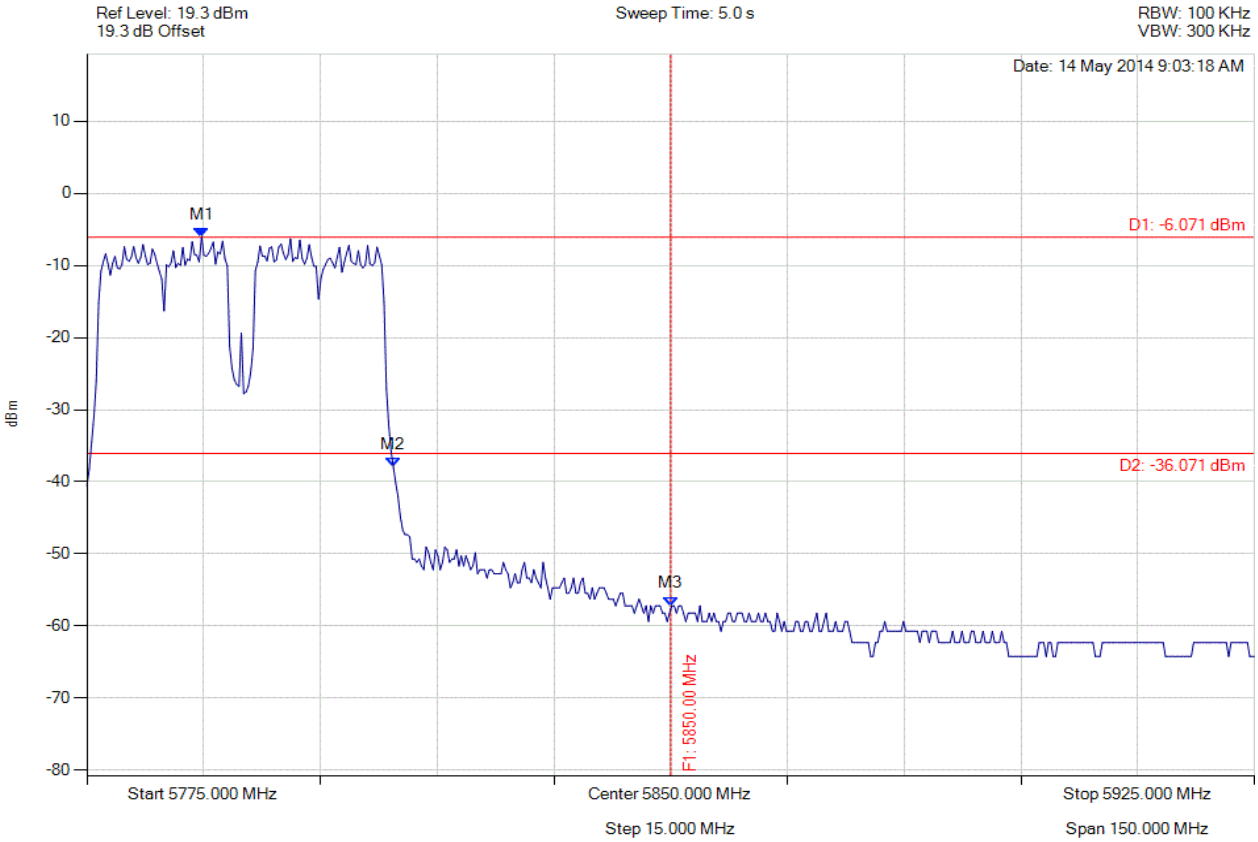


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 20 Trace Mode = VIEW	M1 : 5789.729 MHz : -7.651 dBm M2 : 5814.379 MHz : -38.781 dBm M3 : 5850.000 MHz : -52.644 dBm	Channel Frequency: 5795.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain b, Temp: Ambient, Voltage: 12 Vdc

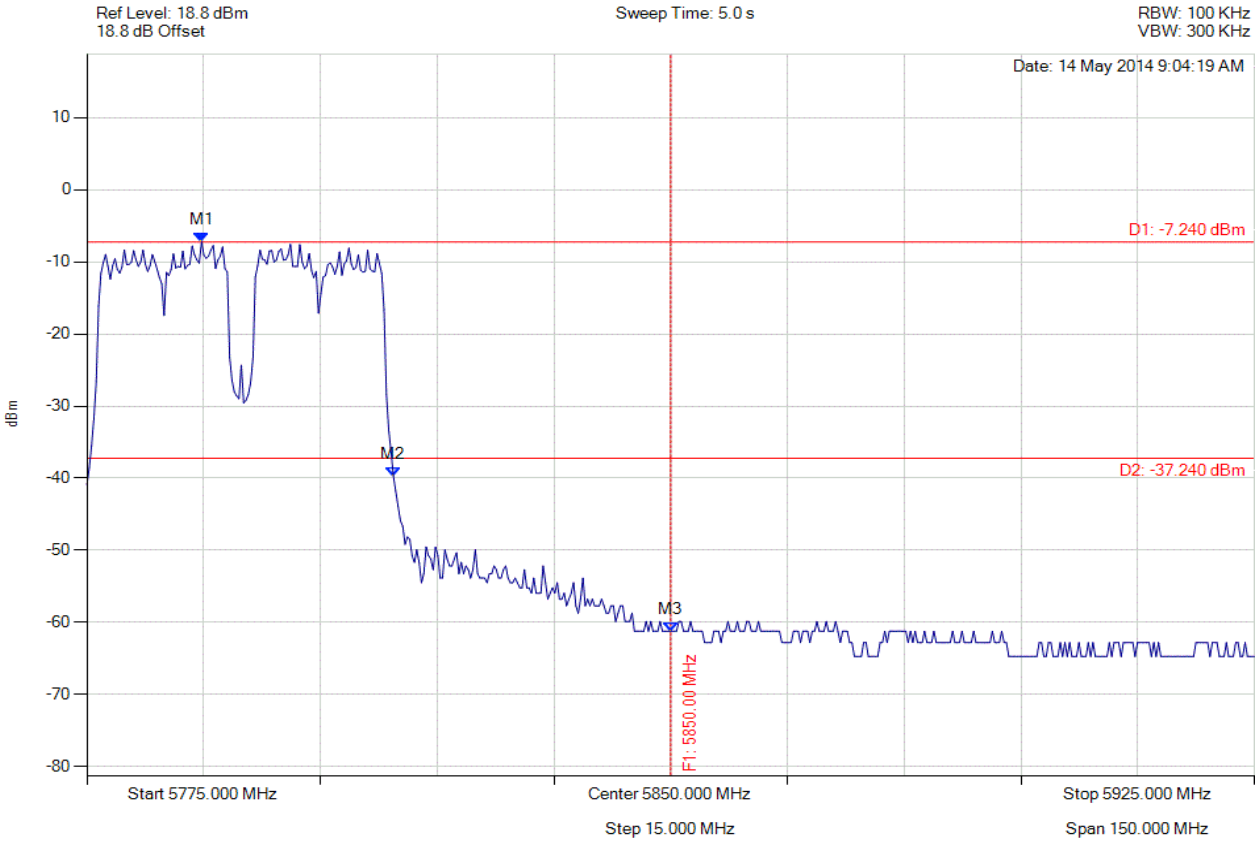


Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5789.729 MHz : -6.071 dBm M2 : 5814.379 MHz : -37.989 dBm M3 : 5850.000 MHz : -57.180 dBm	Channel Frequency: 5795.00 MHz

Back to the Matrix

CONDUCTED HIGH BAND-EDGE EMISSIONS - AVERAGE

Variant: 802.11n HT-40, Channel: 5795.00 MHz, Chain c, Temp: Ambient, Voltage: 12 Vdc



Analyser Setup	Marker : Frequency : Amplitude	Test Results
Detector = AVERAGE Sweep Count = 0 RF Atten (dB) = 10 Trace Mode = VIEW	M1 : 5789.729 MHz : -7.240 dBm M2 : 5814.379 MHz : -39.740 dBm M3 : 5850.000 MHz : -61.202 dBm	Channel Frequency: 5795.00 MHz

Back to the Matrix