

Intermec Technologies Corporation

Model: RC12

Tested to the following Specifications:

**FCC 15.247:2010
FCC 15.207:2010**

Report No. INMC0575

Report Prepared By



www.nwemc.com
1-888-EMI-CERT

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EMC Test Report



22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Last Date of Test: August 11, 2010
Intermec Technologies Corporation
Model: RC12

Emissions			
Test Description	Specification	Test Method	Pass/Fail
Occupied Bandwidth	FCC 15.247:2010	ANSI C63.10:2009	Pass
Output Power – Channel Power	FCC 15.247:2010	ANSI C63.10:2009	Pass
Band Edge Compliance	FCC 15.247:2010	ANSI C63.10:2009	Pass
Spurious Conducted Emissions	FCC 15.247:2010	ANSI C63.10:2009	Pass
Power Spectral Density	FCC 15.247:2010	ANSI C63.10:2009	Pass
Spurious Radiated Emissions	FCC 15.247:2010	ANSI C63.10:2009	Pass
AC Powerline Conducted Emissions	FCC 15.207:2010	ANSI C63.10:2009	Pass

Modifications made to the product

See the Modifications section of this report

Test Facility

The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
22975 NW Evergreen Parkway, Suite 400
Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada (Site filing #2834D-2).

Approved By:

Don Facteau, IS Manager



NVLAP Lab Code: 200630-0

This report must not be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government of the United States of America.

Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test.

Revision Number	Description	Date	Page Number
00	None		

Barometric Pressure

The recorded barometric pressure has been normalized to sea level.



Accreditations and Authorizations

FCC

Accredited by NVLAP for performance of FCC radio, digital, and ISM device testing. Our Open Area Test Sites, certification chambers, and conducted measurement facilities have been fully described in reports filed with the FCC and accepted by the FCC in letters maintained in our files. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by the FCC as a Telecommunications Certification Body (TCB). This allows Northwest EMC to certify transmitters to FCC specifications in accordance with 47 CFR 2.960 and 2.962.



NVLAP

Northwest EMC, Inc. is accredited under the United States Department of Commerce, National Institute of Standards and Technology, and National Voluntary Laboratory Accreditation Program for satisfactory compliance with the requirements of ISO/IEC 17025 for Testing Laboratories. The NVLAP accreditation encompasses Electromagnetic Compatibility Testing in accordance with the European Union EMC Directive 2004/108/EC, and ANSI C63.4. Additionally, Northwest EMC is accredited by NVLAP to perform radio testing in accordance with the European Union R&TTE Directive 1999/5/EEC, the requirements of FCC, and the RSS radio standards for Industry Canada.



NVLAP LAB CODE 200629-0
NVLAP LAB CODE 200630-0
NVLAP LAB CODE 200676-0
NVLAP LAB CODE 200761-0
NVLAP LAB CODE 200881-0

Industry Canada

Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS-Gen, Issue 2 and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements. (*Site Filing Numbers - Hillsboro: 2834D-1, 2834D-2, Sultan: 2834C-1, Irvine: 2834B-1, 2834B-2, Brooklyn Park: 2834E-1*)



CAB

Designated by NIST and validated by the European Commission as a Conformity Assessment Body (CAB) to conduct tests and approve products to the EMC directive and transmitters to the R&TTE directive, as described in the U.S. - EU Mutual Recognition Agreement.



NEMKO

Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).



Australia/New Zealand

The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).



VCCI

Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. (Registration Numbers. - Hillsboro: C-1071, R-1025, G-84, C-2687, T-1658, and R-2318, Irvine: R-1943, G-85, C-2766, and T-1659, Sultan: R-871, G-83, C-1784, and T-1511, Brooklyn Park: R-3125, G-86, G-141, C-3464, and T-1634).



BSMI

Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement (US0017). License No.SL2-IN-E-1017.



GOST

Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification



KCC

Northwest EMC, Inc is a CAB designated by MRA partners and recognized by Korea. (Assigned Lab Numbers: Hillsboro: US0017, Irvine: US0158, Sultan: US0157)



VIETNAM

Vietnam MIC has approved Northwest EMC as an accredited test lab. Per Decision No. 194/QD-QLCL (dated December 15, 2009), Northwest EMC test reports can be used for Vietnam approval submissions.



SCOPE

For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/accreditations/>



Northwest EMC Locations



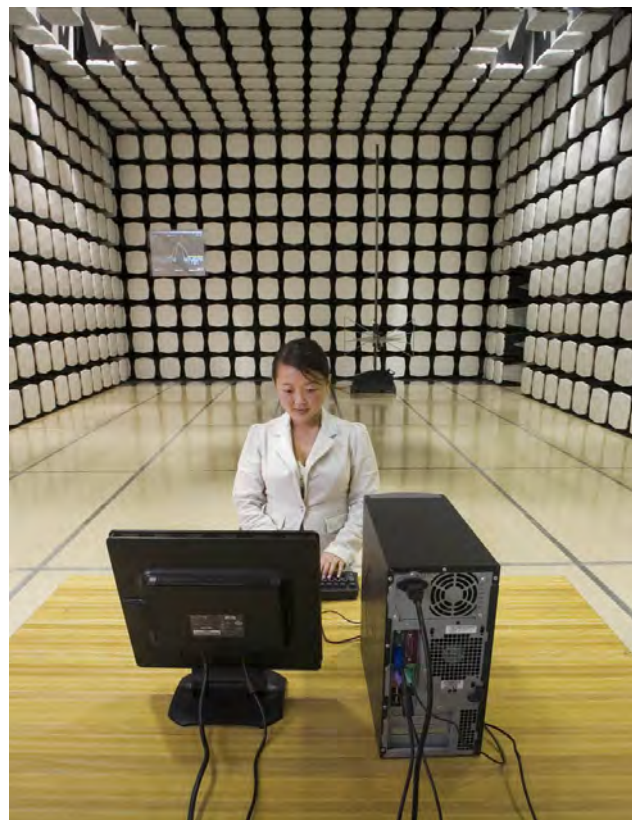
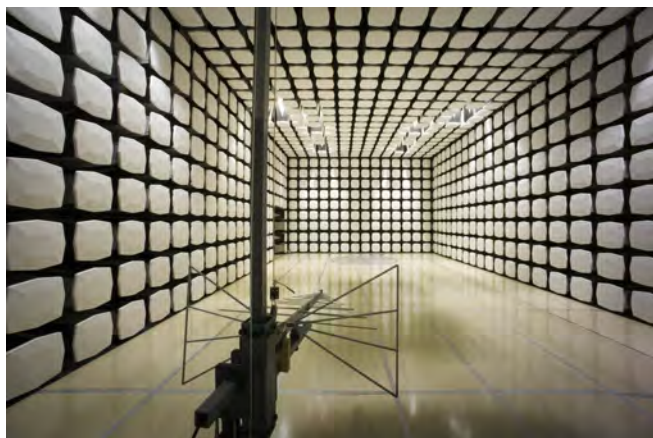
Oregon
Labs EV01-EV12
22975 NW Evergreen Pkwy
Suite 400
Hillsboro, OR 97124
(503) 844-4066

California
Labs OC01-OC13
41 Tesla
Irvine, CA 92618
(949) 861-8918

Minnesota
Labs MN01-MN08
9349 W Broadway Ave.
Brooklyn Park,
MN 55445
(763) 425-2281

Washington
Labs SU01-SU07
14128 339th Ave. SE
Sultan, WA 98294
(360) 793-8675

New York
Labs WA01-WA04
4939 Jordan Rd.
Elbridge, NY 13060
(315) 685-0796



Party Requesting the Test

Company Name:	Intermec Technologies Corporation
Address:	6001 36th Avenue West
City, State, Zip:	Everett, WA 98203-1264
Test Requested By:	Wayne Rieger
Model:	RC12
First Date of Test:	July 29, 2010
Last Date of Test:	August 11, 2010
Receipt Date of Samples:	July 27, 2010
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test**Functional Description of the EUT (Equipment Under Test):**

One combination 802.11a/b/g/n - Bluetooth radio seeking modular approval.

Testing Objective:

Seeking to demonstrate compliance of the 802.11a/b/g/n portion of the radio module to FCC 15.247 specifications in the 2.4 and 5.8 GHz bands.

CONFIGURATION 1 INMC0575**Software/Firmware Running during test**

Description	Version
Regulatory Test Tool	RTT_1.01.00.0007

EUT

Description	Manufacturer	Model/Part Number	Serial Number
Galileo 802.11abgn and Bluetooth radio module	Intermec Technologies Corporation	ES5	R14

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Shuttle Board	Intermec Technologies Corporation	145-375-001	None
AC Adapter	Intermec Technologies Corporation	074749	None
Laird PIFA Antenna	Laird	CAF94400	None
Modular Antenna PCB Assembly	Centurion Wireless Technologies, Inc.	CAF94337	None
Power Supply	Topward Electric Instruments Co., LTD.	TPS-2000	946425

Remote Equipment Outside of Test Setup Boundary

Description	Manufacturer	Model/Part Number	Serial Number
Remote PC	Dell	Latitude D600	3XJ3H51

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC power	PA	1.85m	PA	AC Adapter	Shuttle Board
USB	Yes	5.0m	No	Shuttle Board	Remote PC
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 2 INMC0575**Software/Firmware Running during test**

Description	Version
Regulatory Test Tool	RTT_1.01.00.0007

EUT

Description	Manufacturer	Model/Part Number	Serial Number
Galileo 802.11abgn and Bluetooth radio module	Intermec Technologies Corporation	ES5	R11

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Shuttle Board	Intermec Technologies Corporation	145-375-001	None
AC Adapter	Intermec Technologies Corporation	074749	None
Laird PIFA Antenna	Laird	CAF94400	None
Modular Antenna PCB Assembly	Centurion Wireless Technologies, Inc.	CAF94337	None
Power Supply	Topward Electric Instruments Co., LTD.	TPS-2000	946425

Remote Equipment Outside of Test Setup Boundary

Description	Manufacturer	Model/Part Number	Serial Number
Remote PC	Dell	Inspiron 6000	NW EMC IS386

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC power	PA	1.85m	PA	AC Adapter	Shuttle Board
USB	Yes	3.0m	No	Shuttle Board	Remote PC
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 3 INMC0575**Software/Firmware Running during test**

Description	Version
Regulatory Test Tool	RTT_1.01.00.0007

EUT

Description	Manufacturer	Model/Part Number	Serial Number
Galileo 802.11abgn and Bluetooth radio module	Intermec Technologies Corporation	ES5	R11

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Shuttle Board	Intermec Technologies Corporation	145-375-001	None
Laird PIFA Antenna	Laird	CAF94400	None
Modular Antenna PCB Assembly	Centurion Wireless Technologies, Inc.	CAF94337	None
Power Supply	Topward Electric Instruments Co., LTD.	TPS-2000	946425

Remote Equipment Outside of Test Setup Boundary

Description	Manufacturer	Model/Part Number	Serial Number
Remote PC	Dell	Inspiron 6000	NW EMC IS386

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC power	PA	0.55m	PA	Power Supply	Shuttle Board
AC power	No	1.0m	No	Power Supply	AC Mains
USB	Yes	3.0m	No	Shuttle Board	Remote PC
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	7/29/2010	Output Power – Channel Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	7/29/2010	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	7/30/2010	Power Spectral Density	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
4	8/2/2010	Band Edge Compliance	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	8/5/2010	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
6	8/5/2010	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
7	8/11/2010	AC Powerline Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/21/2009	13
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies in the FCC 15.247 2.4 GHz and 5 GHz bands. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at the required data rates available in 802.11(a)/(b)/(g)/(n).

EMC

OCCUPIED BANDWIDTH

EUT:	RC12	Work Order:	INMC0575
Serial Number:	R11	Date:	07/29/10
Customer:	Intermec Technologies Corporation	Temperature:	23°C
Attendees:	none	Humidity:	42%
Project:	None	Barometric Pres.:	1019.3 mb
Tested by:	Rod Peloquin	Power:	5VDC
		Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2010	ANSI C63.10:2009

COMMENTS
None

DEVIATIONS FROM TEST STANDARD
No Deviations

Configuration #	2	Signature 
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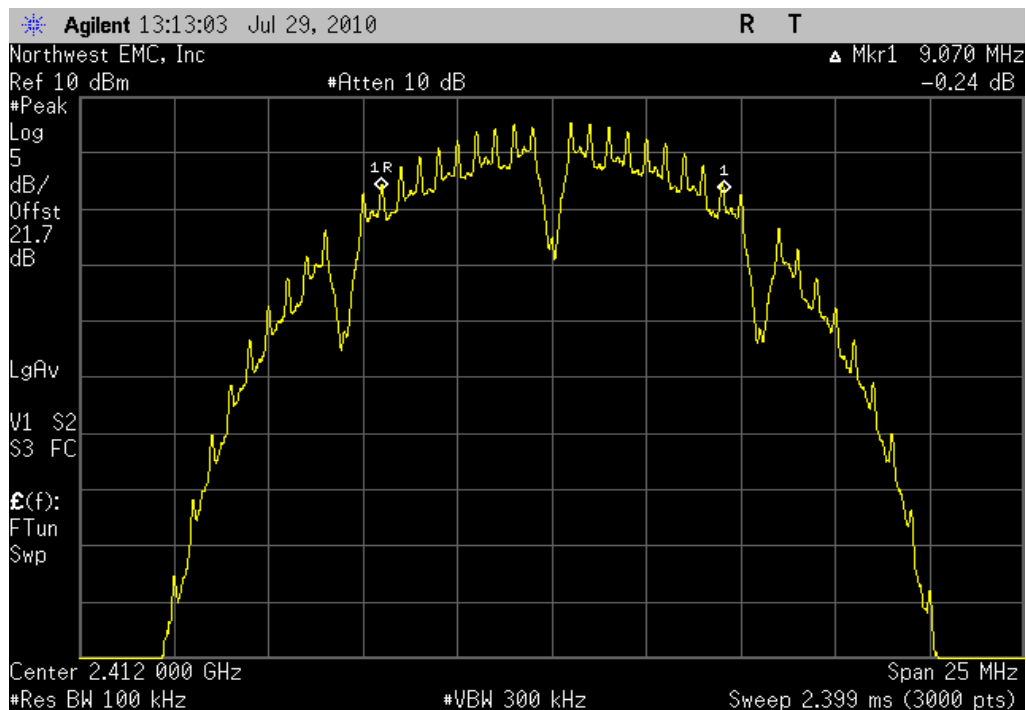
	Value	Limit	Results
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	9.070 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	9.095 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	9.095 MHz	> 500 kHz	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	10.037 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	10.512 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	10.420 MHz	> 500 kHz	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	15.447 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	15.463 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	15.338 MHz	> 500 kHz	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	16.389 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.339 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.372 MHz	> 500 kHz	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	16.389 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	16.405 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.405 MHz	> 500 kHz	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	15.547 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	15.205 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	15.138 MHz	> 500 kHz	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	17.256 MHz	> 500 kHz	Pass
Mid Channel 6, 2437 MHz	17.256 MHz	> 500 kHz	Pass
High Channel 11, 2462 MHz	16.914 MHz	> 500 kHz	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	15.480 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	15.388 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	15.789 MHz	> 500 kHz	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	16.364 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	16.339 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	16.130 MHz	> 500 kHz	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	16.422 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	16.447 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	16.397 MHz	> 500 kHz	Pass
802.11(n) MCS0			
Low Channel 149, 5745 MHz	15.689 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	15.463 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	15.739 MHz	> 500 kHz	Pass
802.11(n) MCS7			
Low Channel 149, 5745 MHz	17.256 MHz	> 500 kHz	Pass
Mid Channel 157, 5785 MHz	17.606 MHz	> 500 kHz	Pass
High Channel 165, 5825 MHz	17.156 MHz	> 500 kHz	Pass

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 9.070 MHz

Limit: > 500 kHz

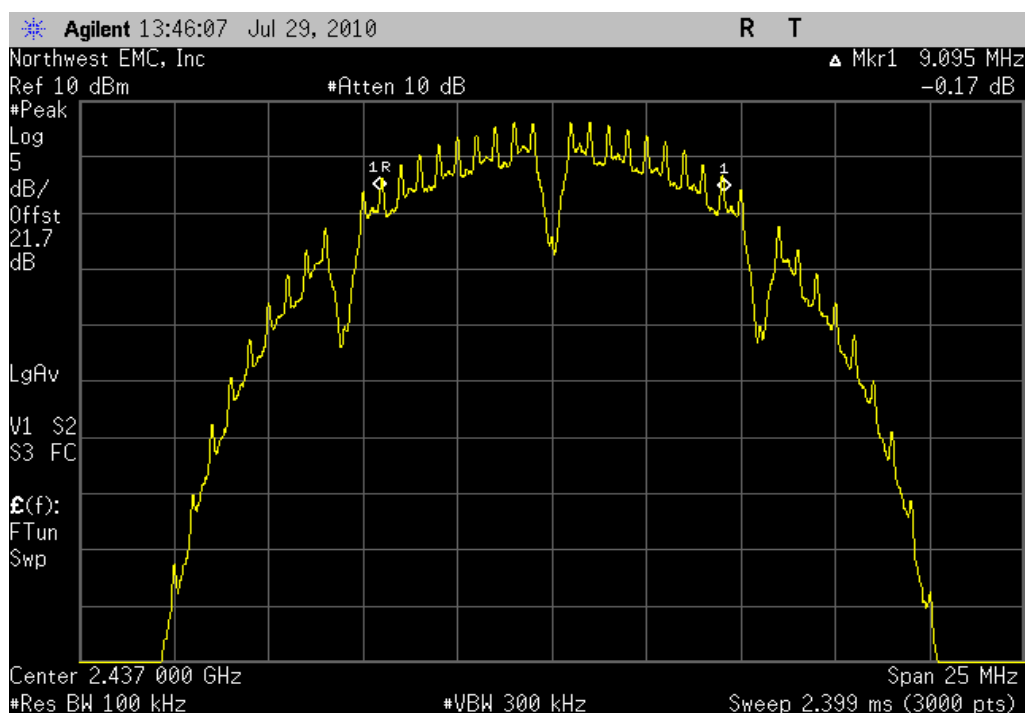


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 9.095 MHz

Limit: > 500 kHz

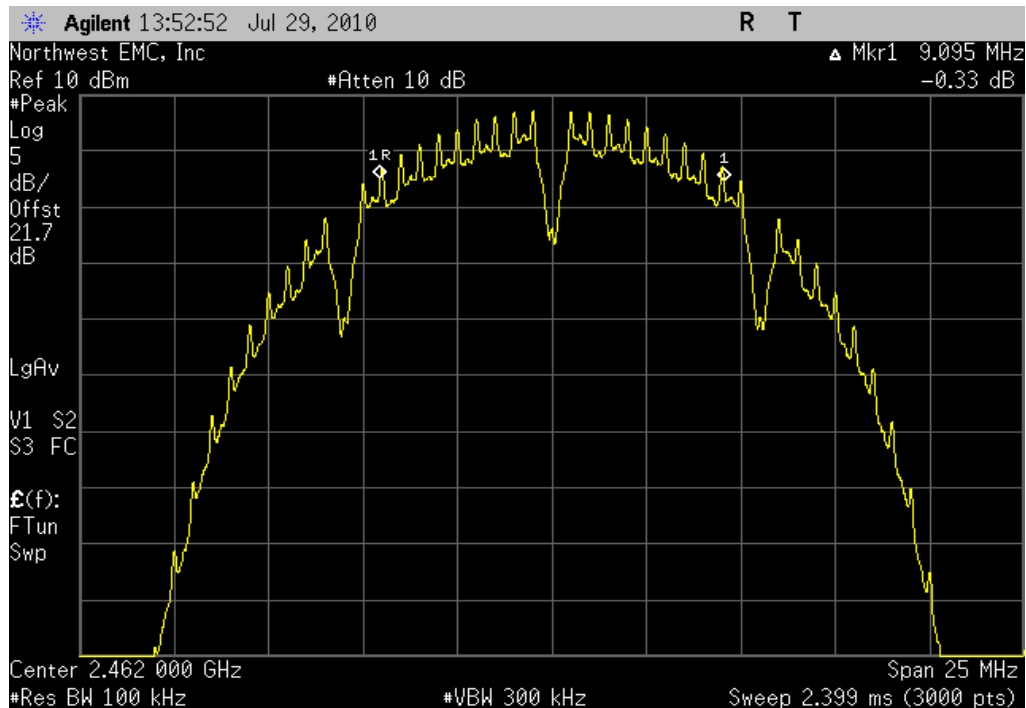


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 9.095 MHz

Limit: > 500 kHz

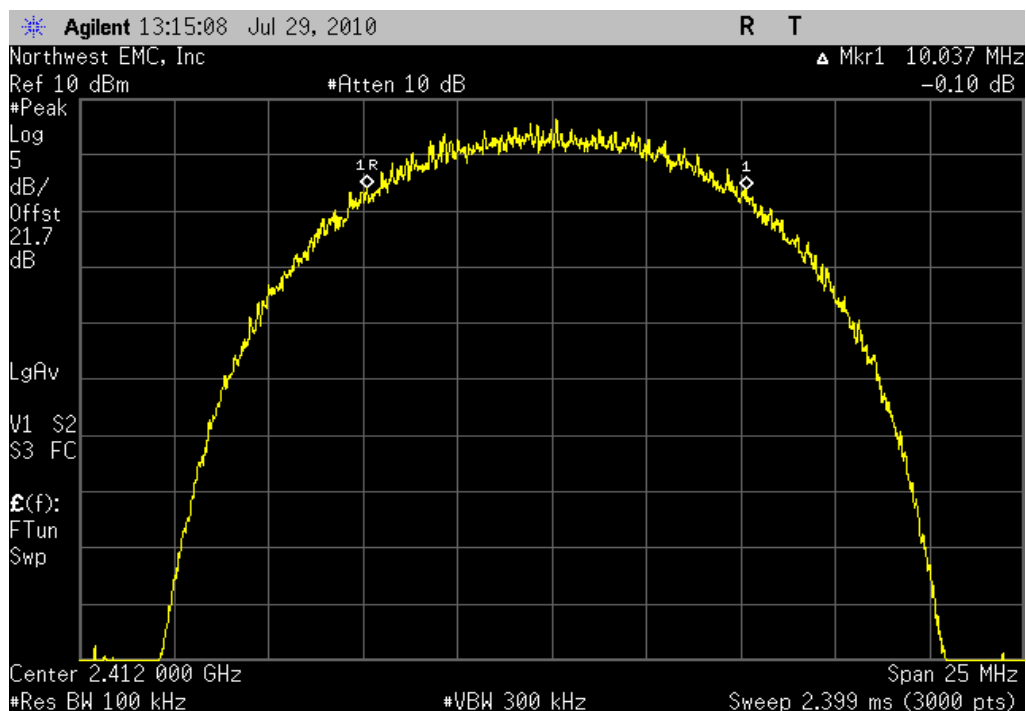


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 10.037 MHz

Limit: > 500 kHz

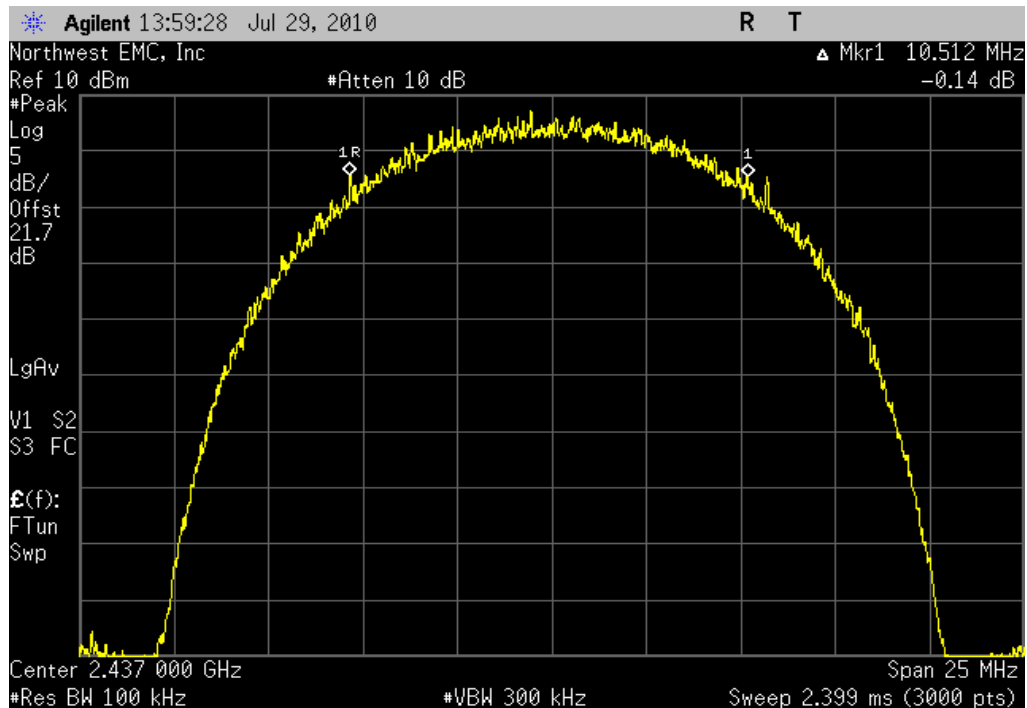


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 10.512 MHz

Limit: > 500 kHz

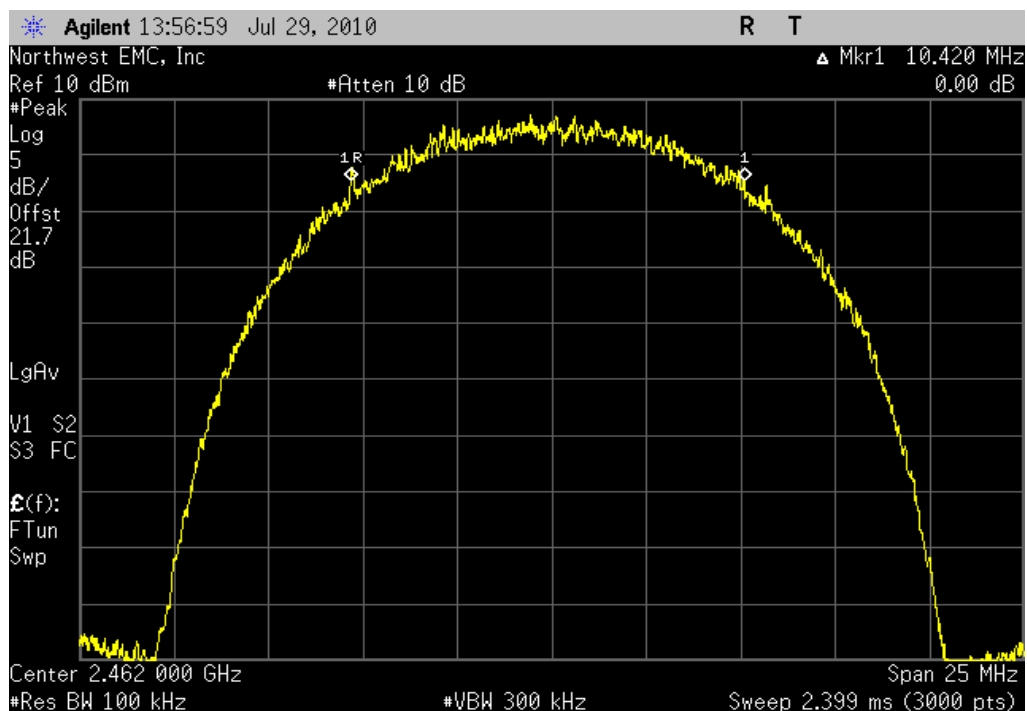


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 10.420 MHz

Limit: > 500 kHz

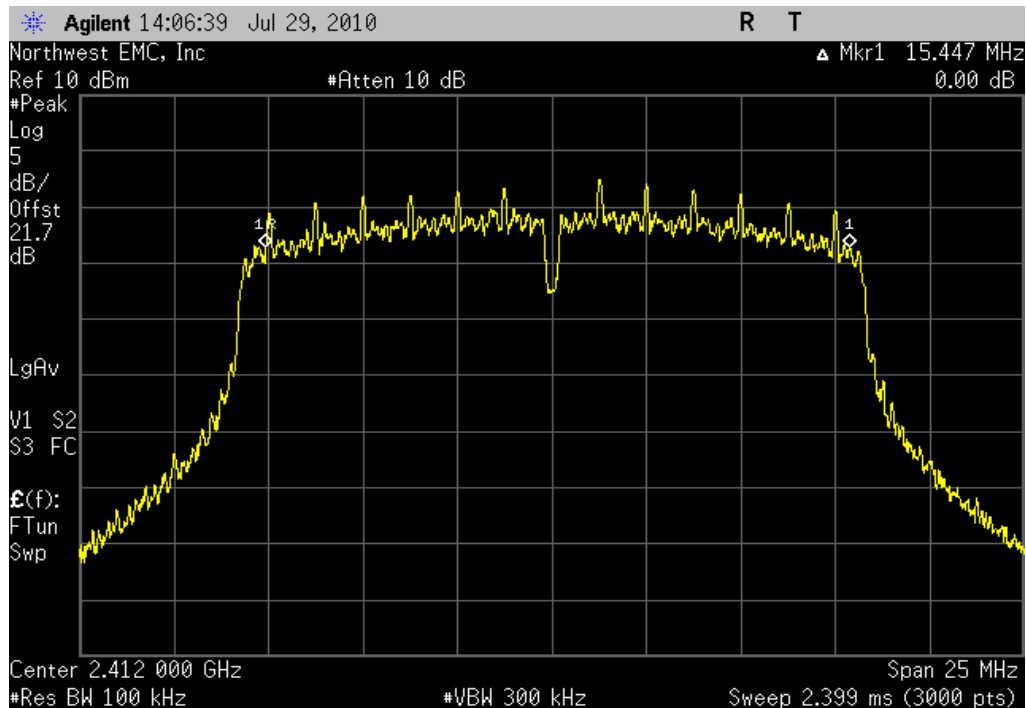


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 15.447 MHz

Limit: > 500 kHz

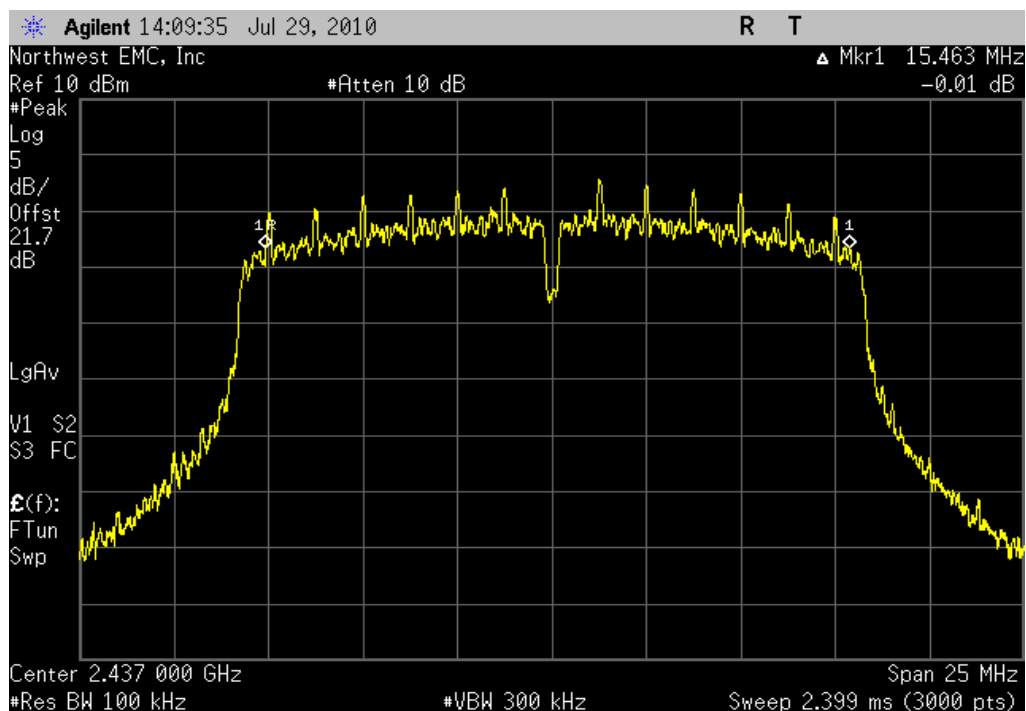


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 15.463 MHz

Limit: > 500 kHz



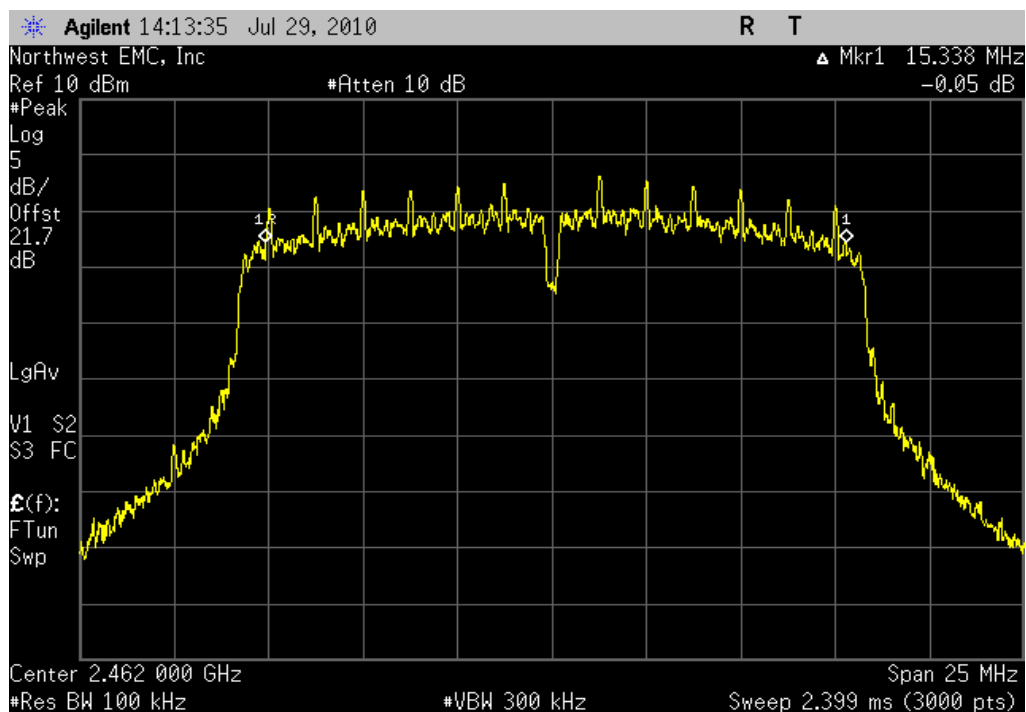
OCCUPIED BANDWIDTH

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 15.338 MHz

Limit: > 500 kHz

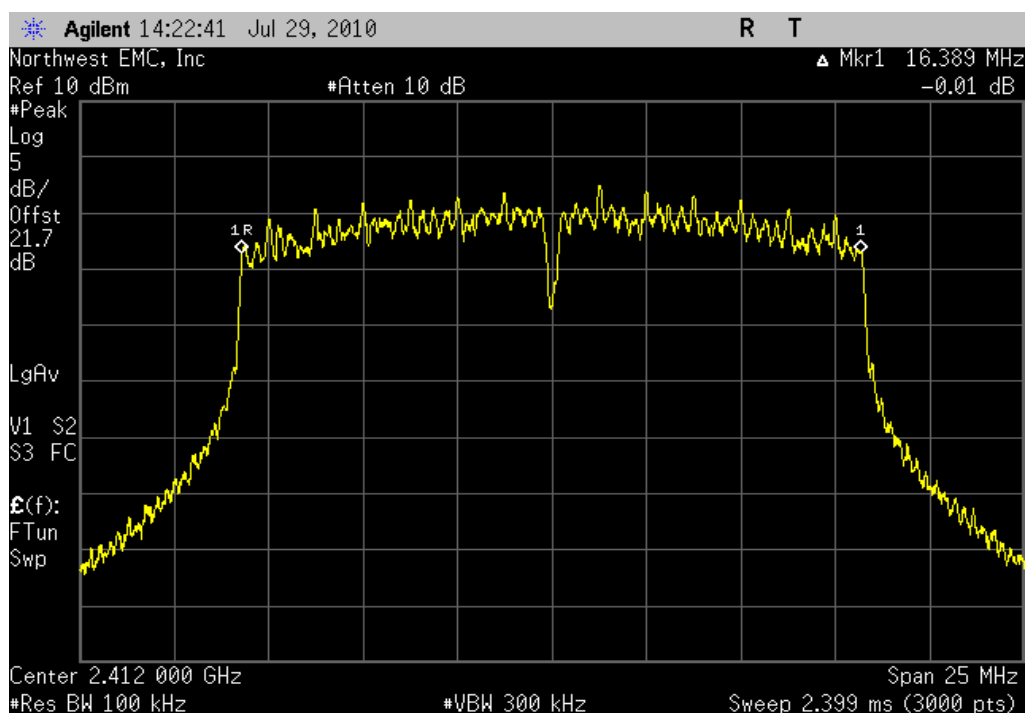


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 16.389 MHz

Limit: > 500 kHz



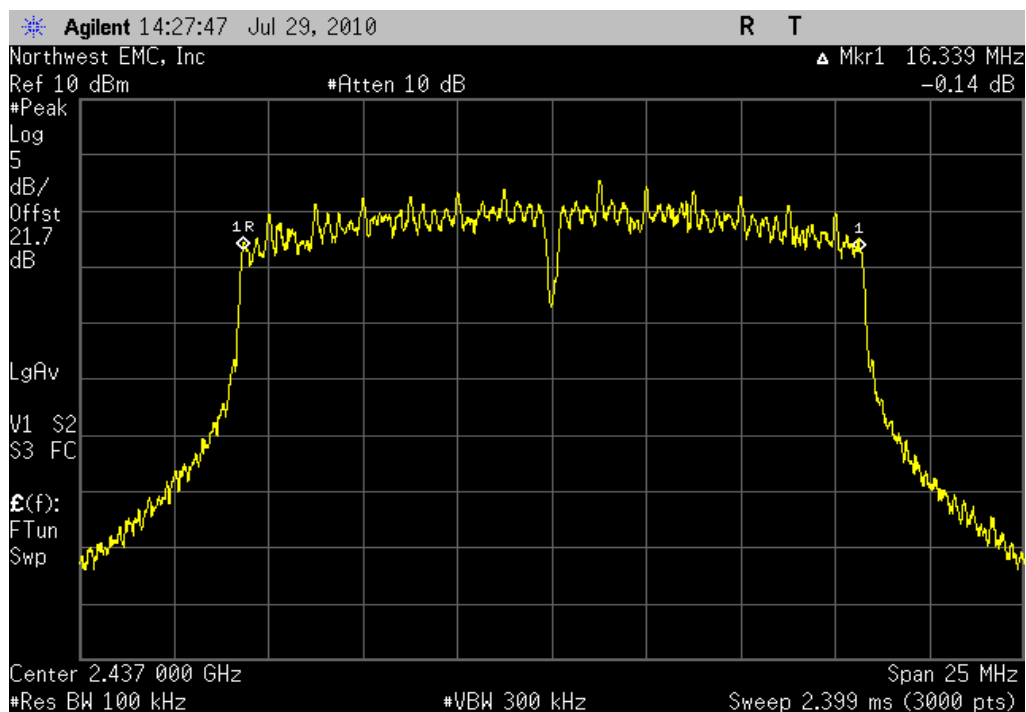
OCCUPIED BANDWIDTH

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 16.339 MHz

Limit: > 500 kHz

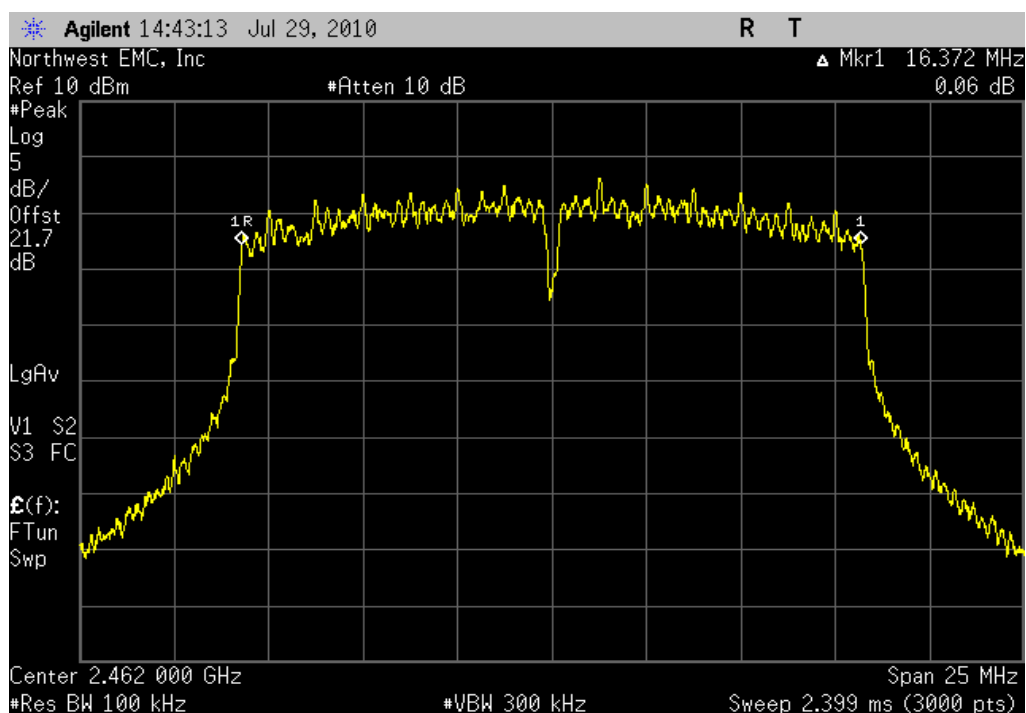


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 16.372 MHz

Limit: > 500 kHz



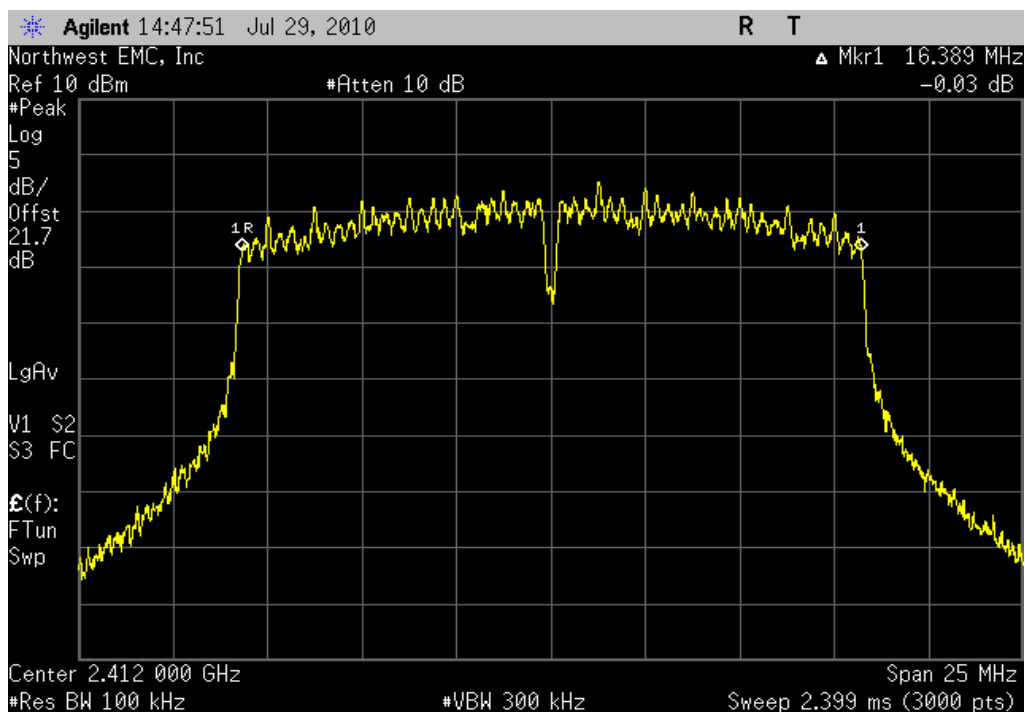
OCCUPIED BANDWIDTH

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 16.389 MHz

Limit: > 500 kHz

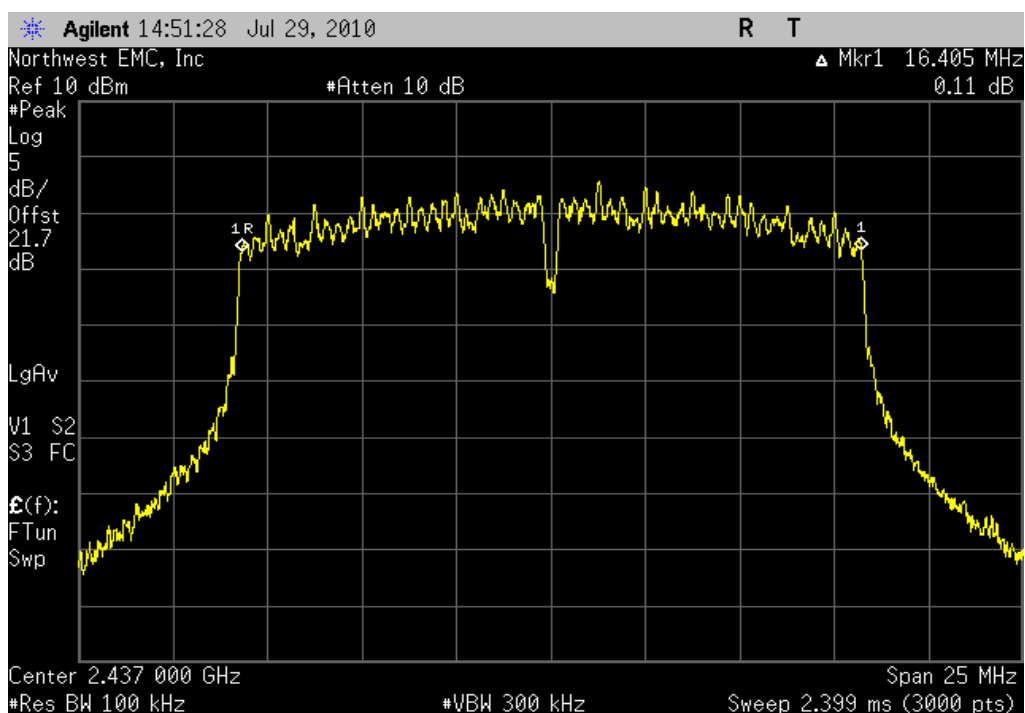


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 16.405 MHz

Limit: > 500 kHz

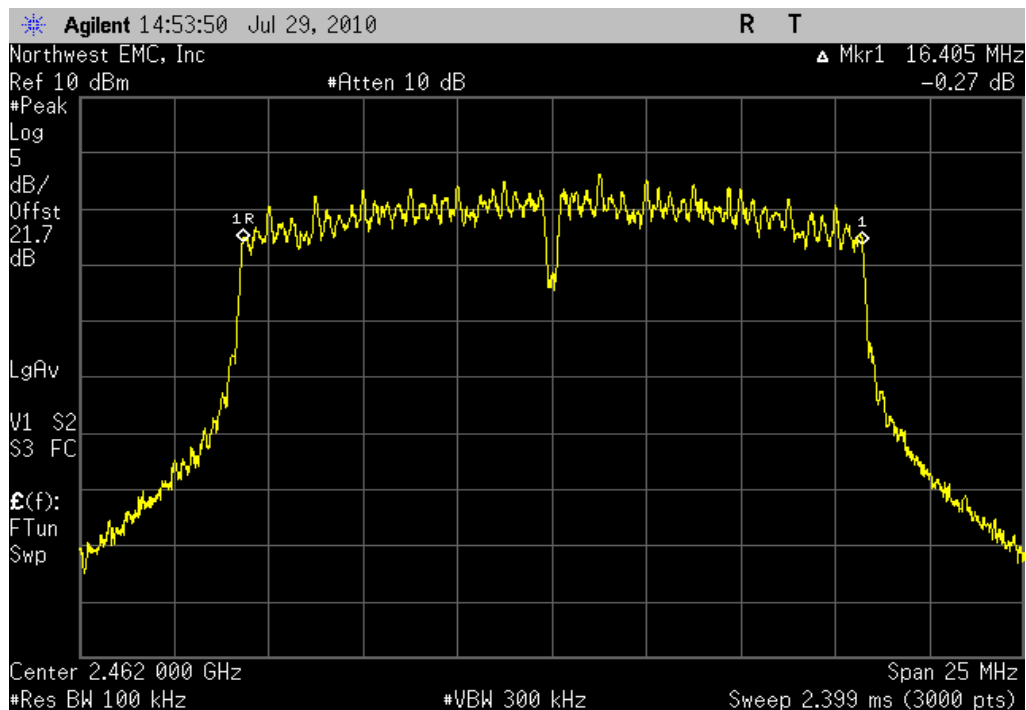


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 16.405 MHz

Limit: > 500 kHz

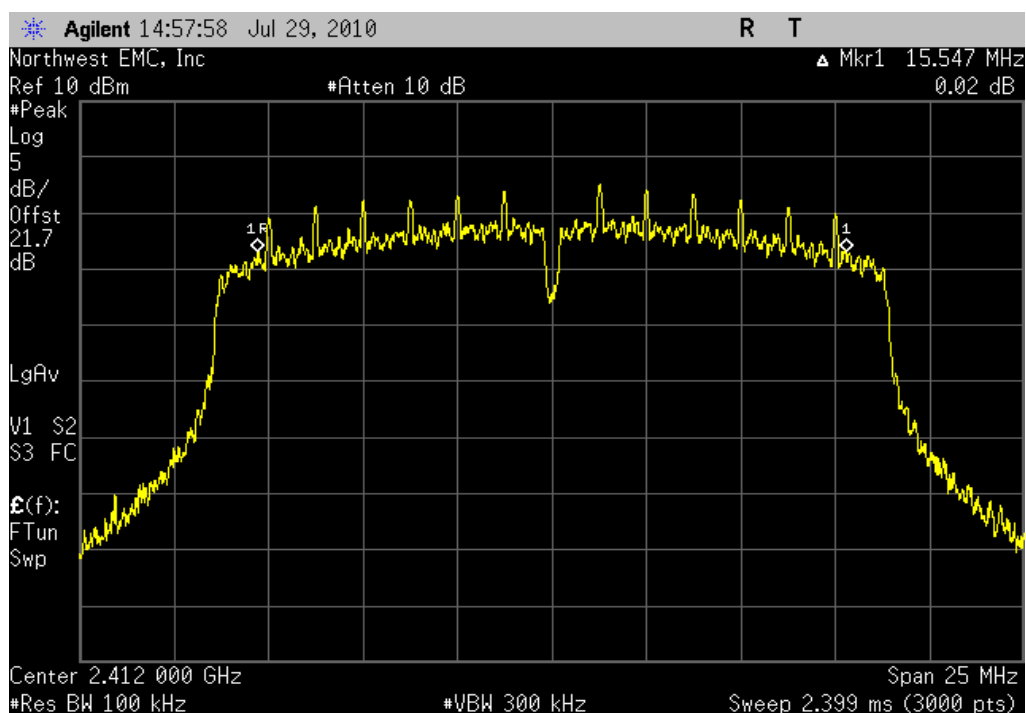


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

Result: Pass

Value: 15.547 MHz

Limit: > 500 kHz

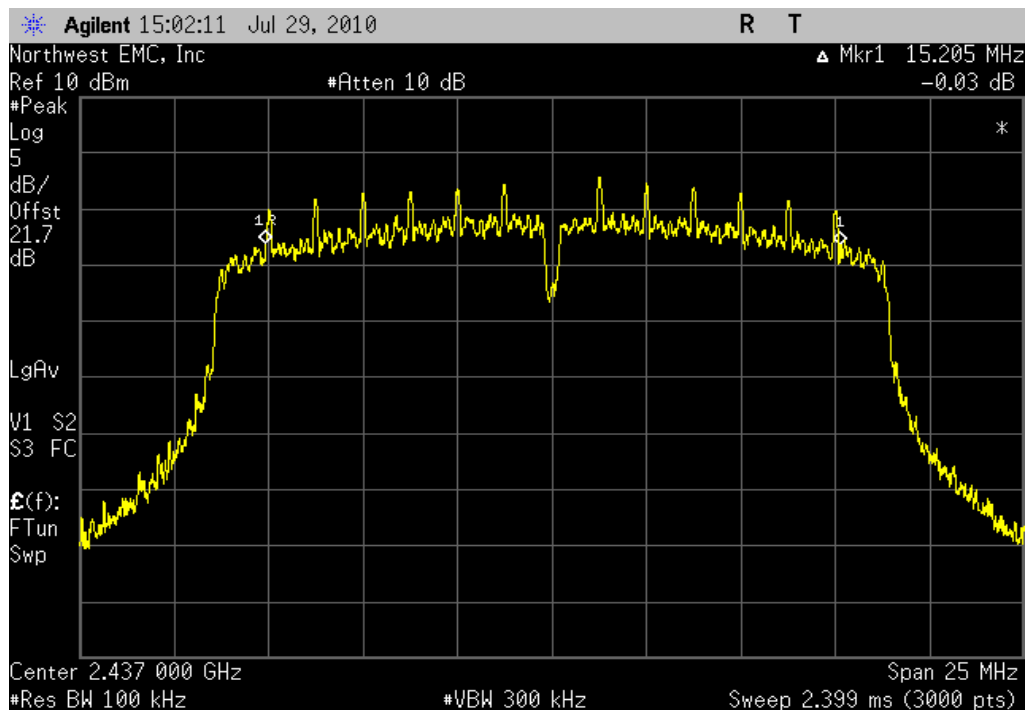


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz

Result: Pass

Value: 15.205 MHz

Limit: > 500 kHz

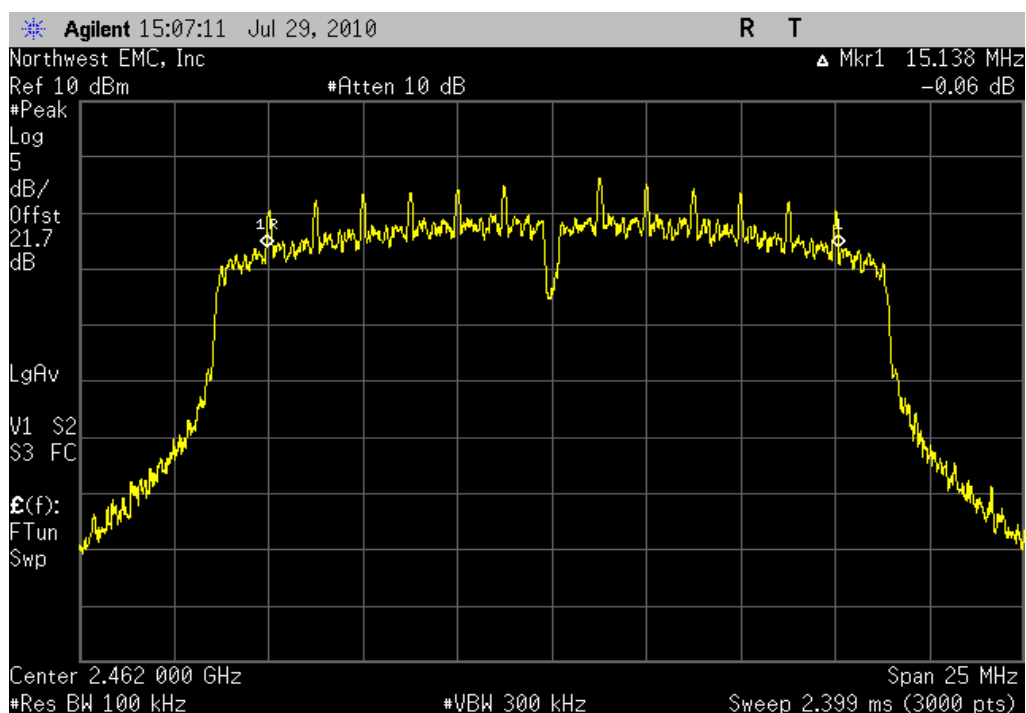


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

Result: Pass

Value: 15.138 MHz

Limit: > 500 kHz



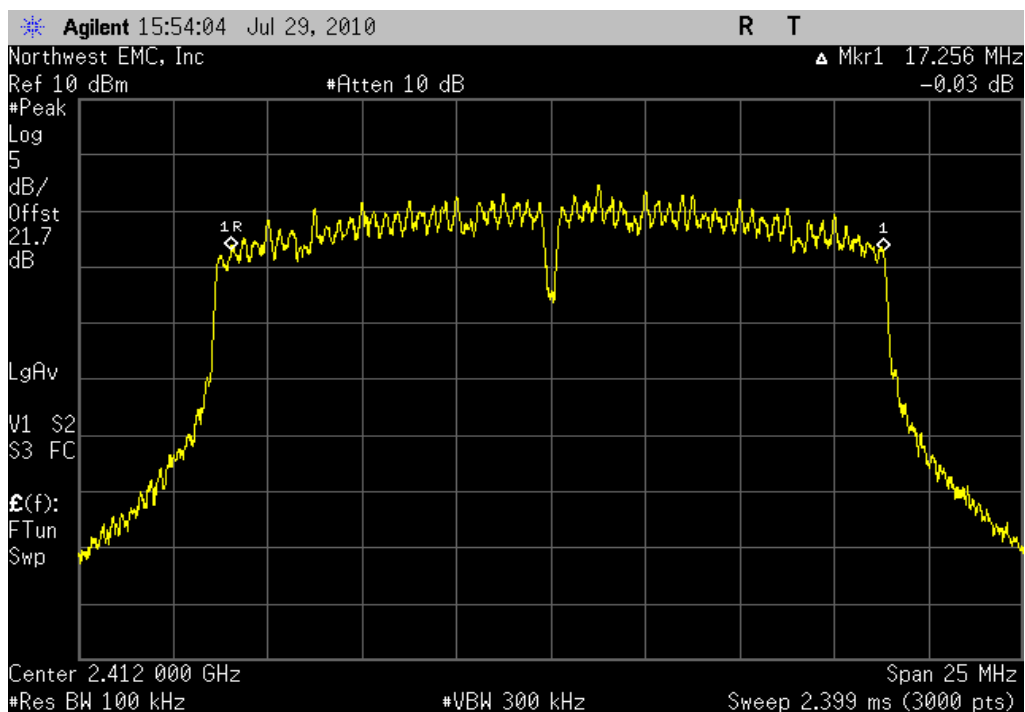
OCCUPIED BANDWIDTH

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

Result: Pass

Value: 17.256 MHz

Limit: > 500 kHz

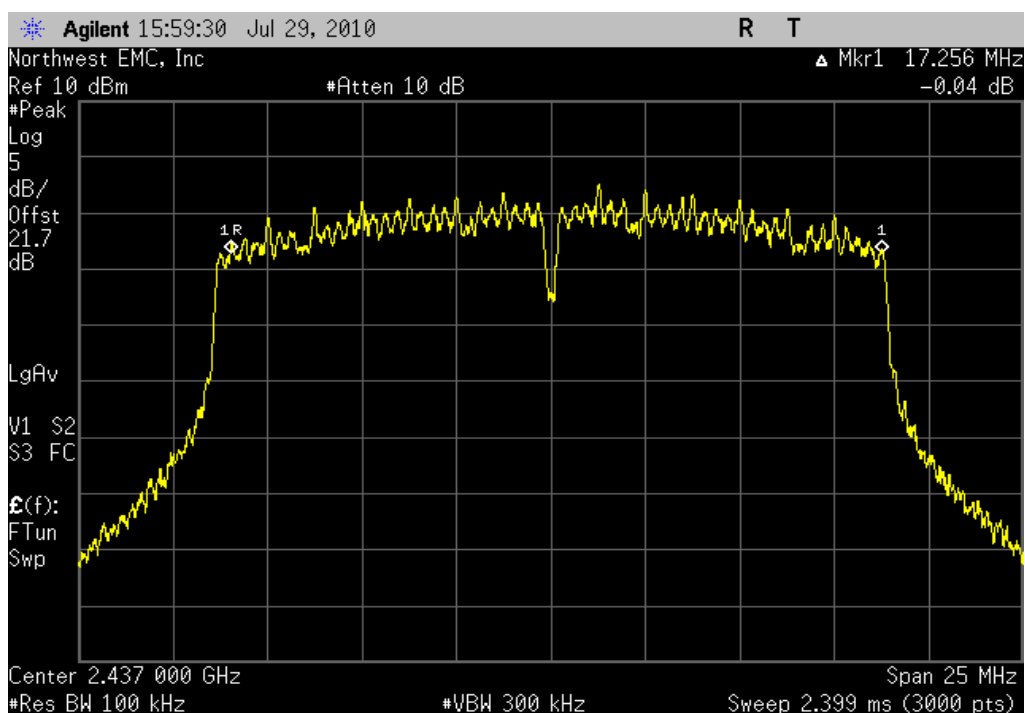


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz

Result: Pass

Value: 17.256 MHz

Limit: > 500 kHz

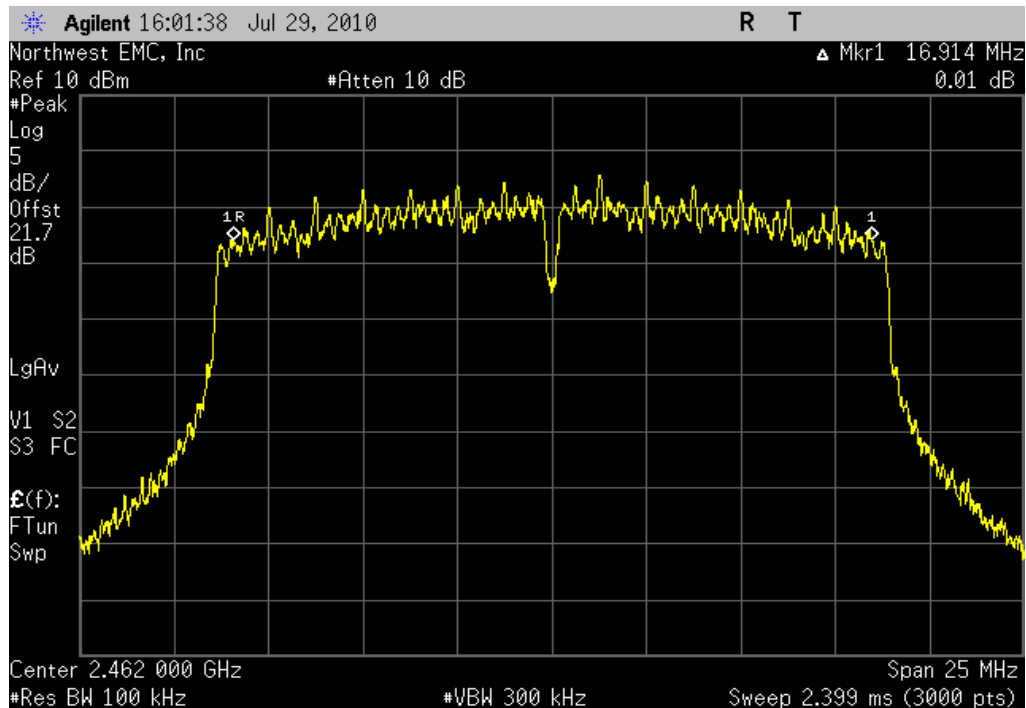


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

Result: Pass

Value: 16.914 MHz

Limit: > 500 kHz

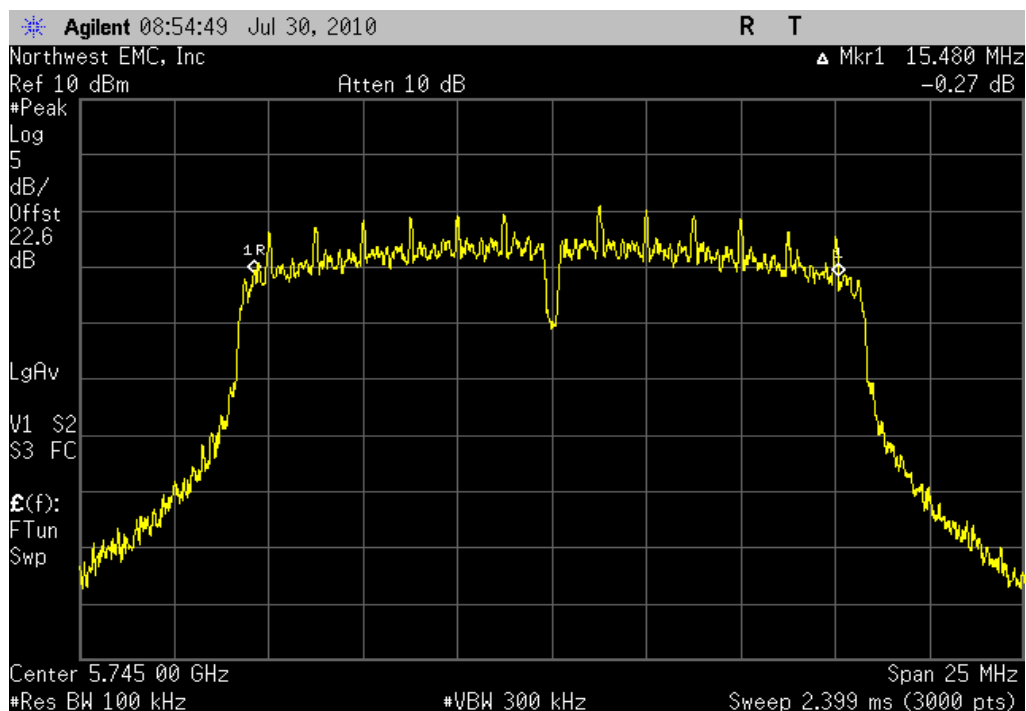


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: 15.480 MHz

Limit: > 500 kHz

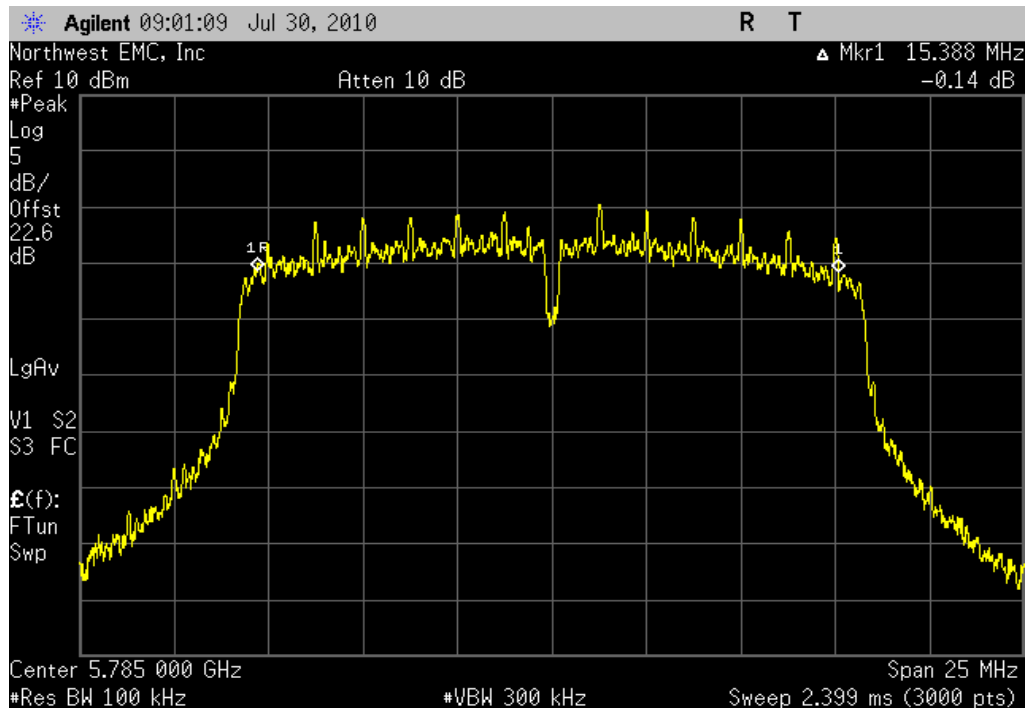


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: 15.388 MHz

Limit: > 500 kHz

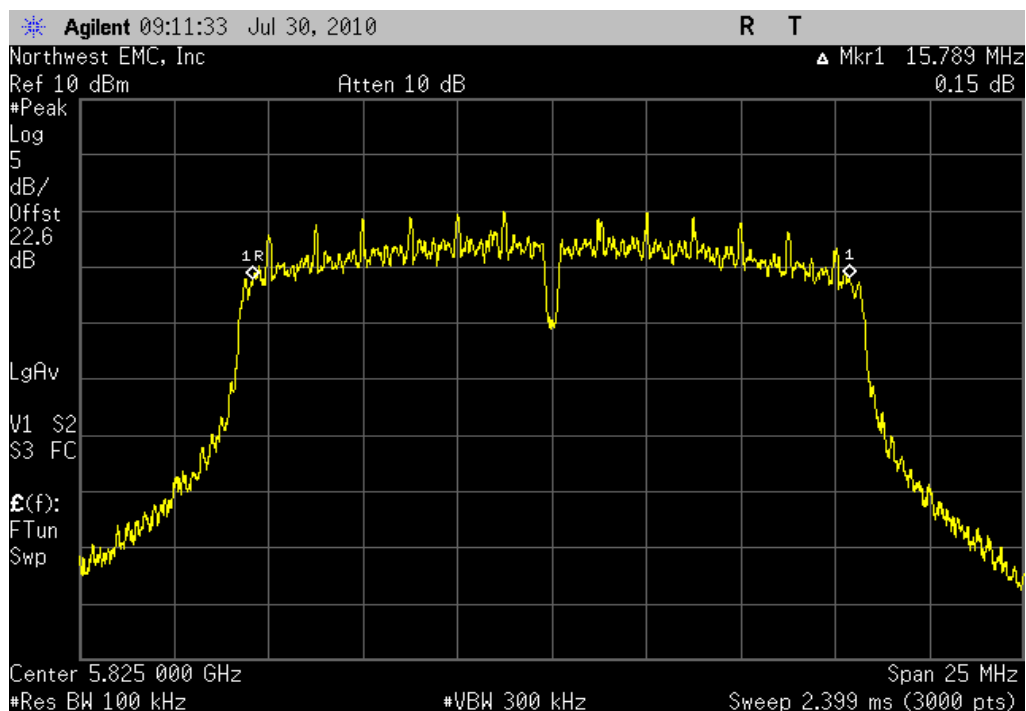


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: 15.789 MHz

Limit: > 500 kHz

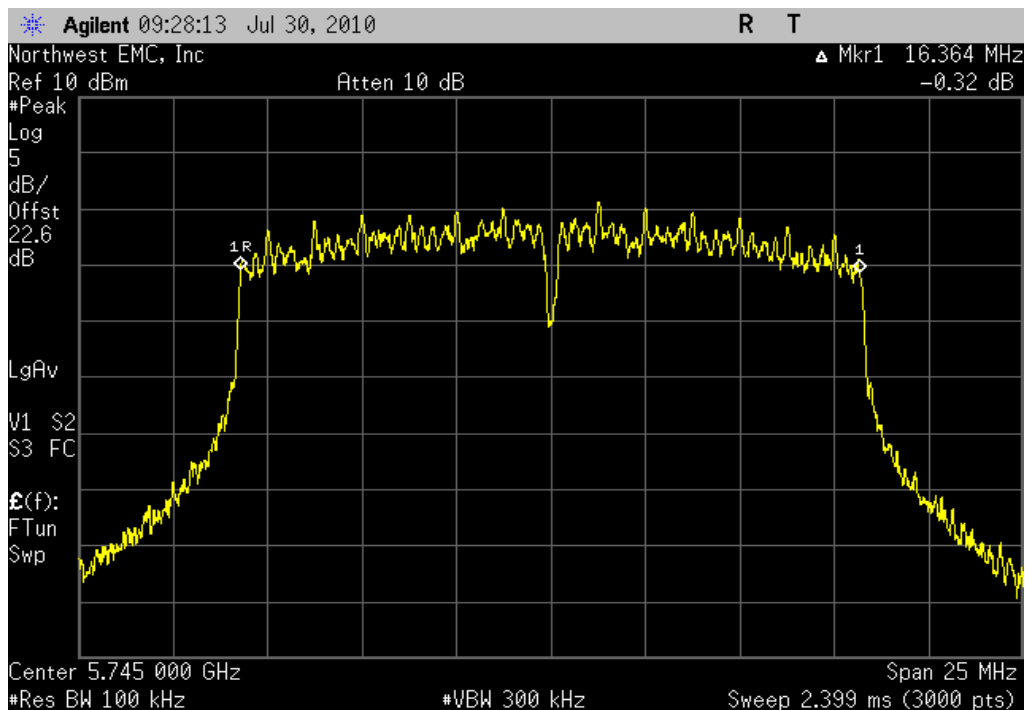


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: 16.364 MHz

Limit: > 500 kHz

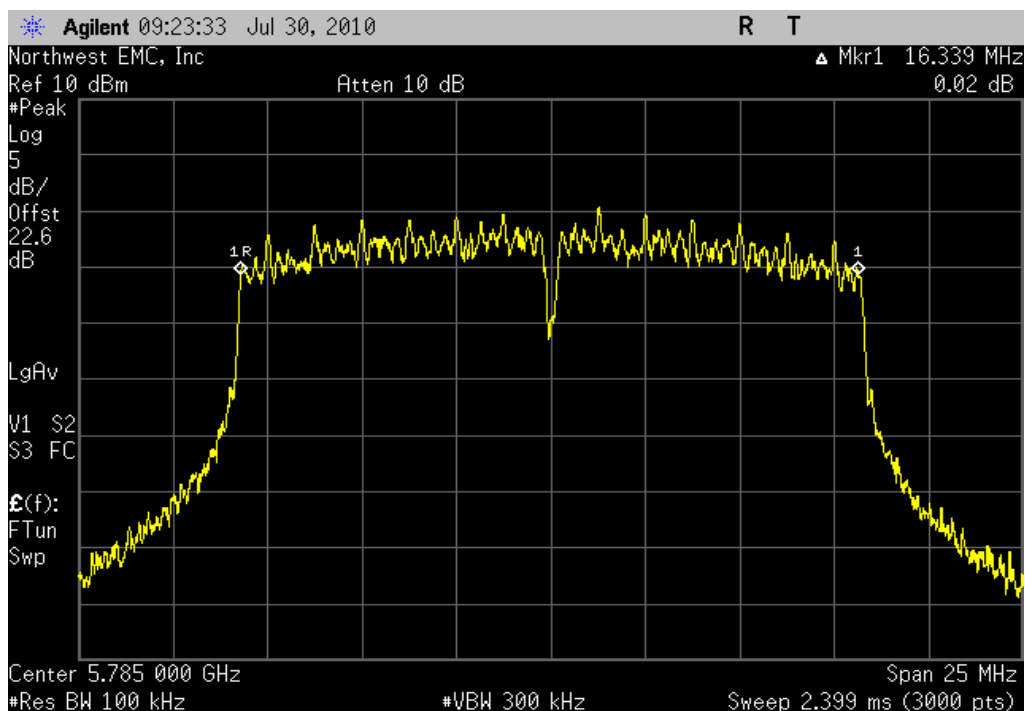


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: 16.339 MHz

Limit: > 500 kHz



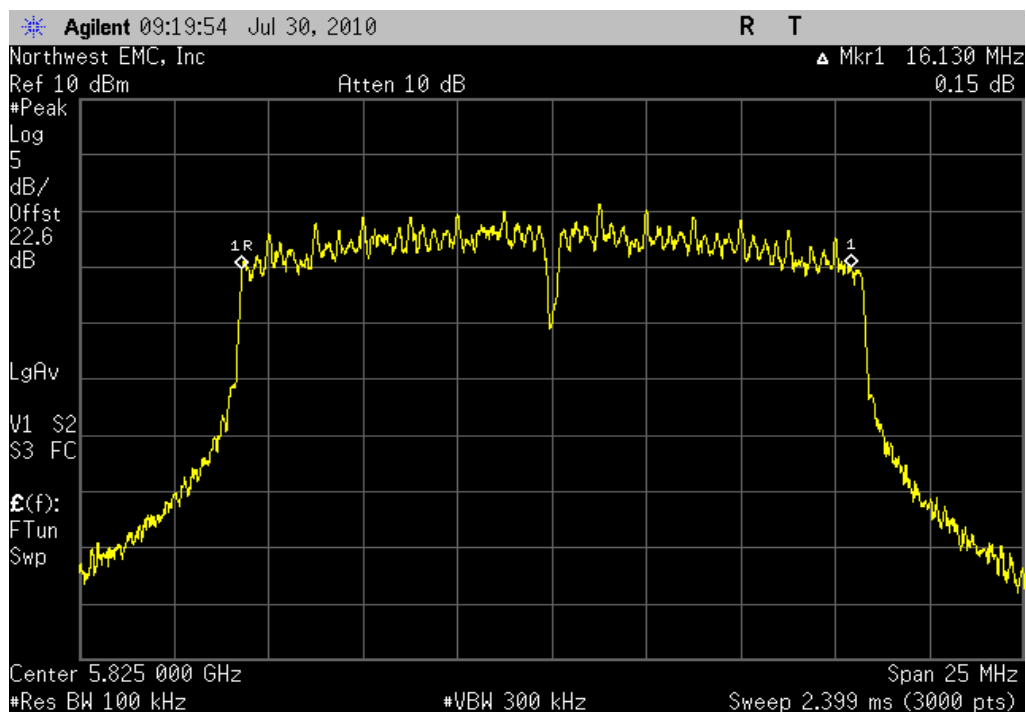
OCCUPIED BANDWIDTH

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: 16.130 MHz

Limit: > 500 kHz

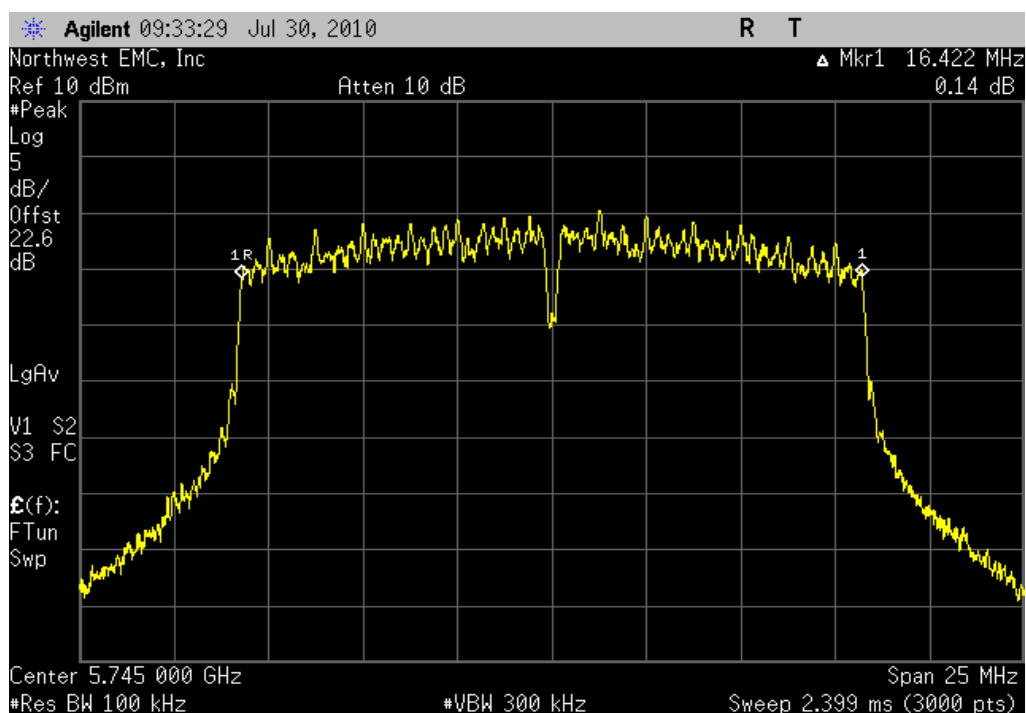


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: 16.422 MHz

Limit: > 500 kHz



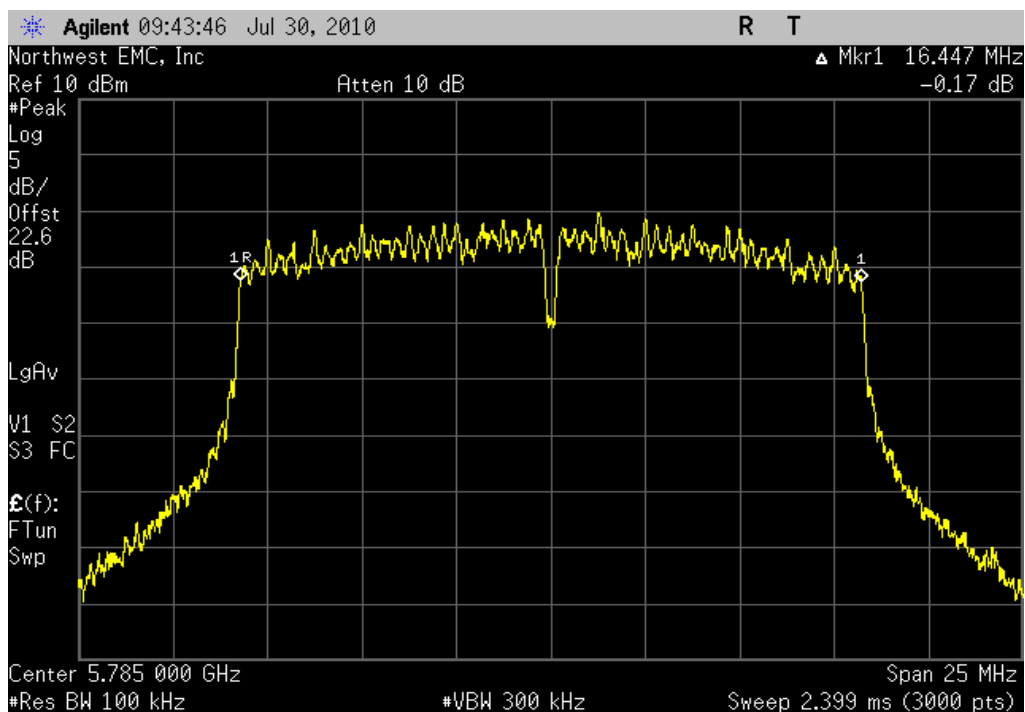
OCCUPIED BANDWIDTH

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: 16.447 MHz

Limit: > 500 kHz

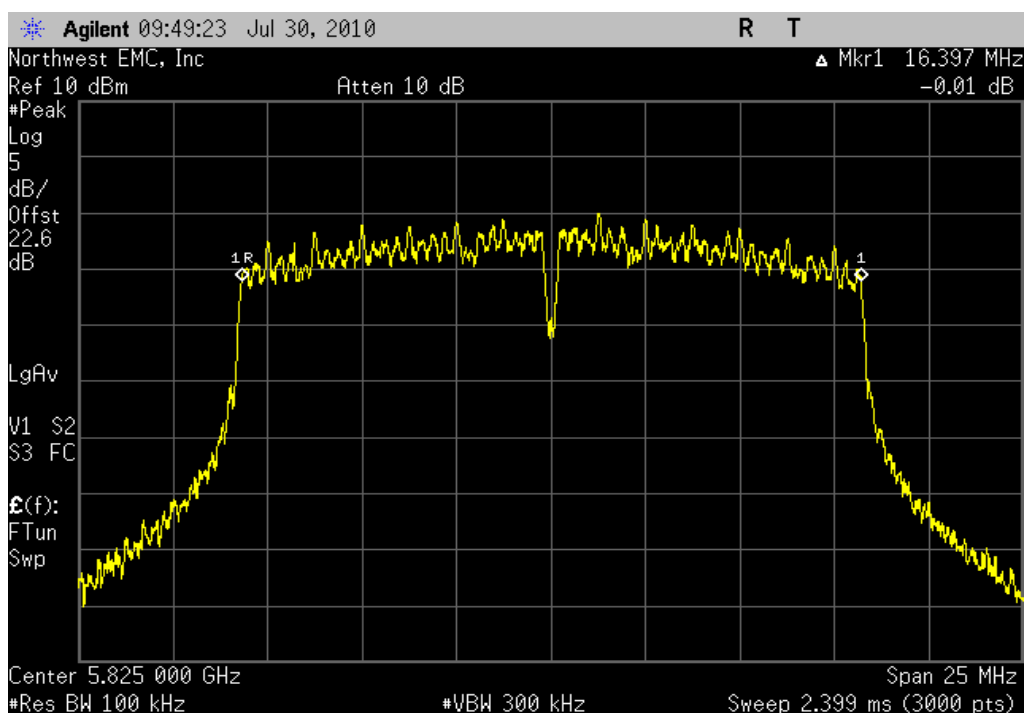


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: 16.397 MHz

Limit: > 500 kHz

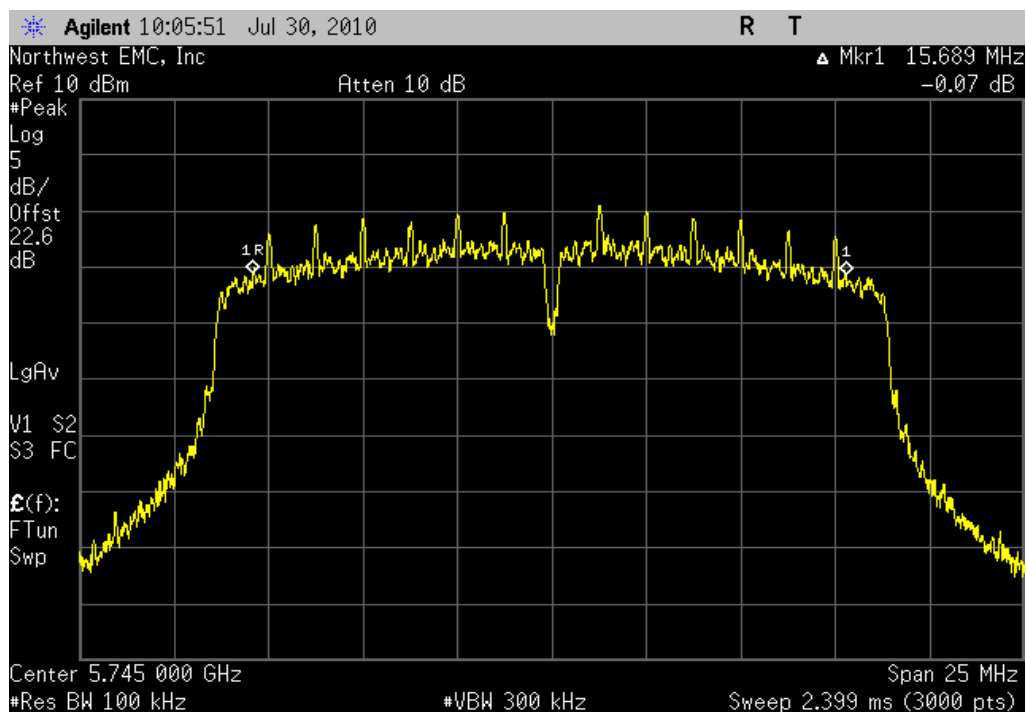


5725 MHz - 5850 MHz Band, 802.11(n) MCS0, Low Channel 149, 5745 MHz

Result: Pass

Value: 15.689 MHz

Limit: > 500 kHz

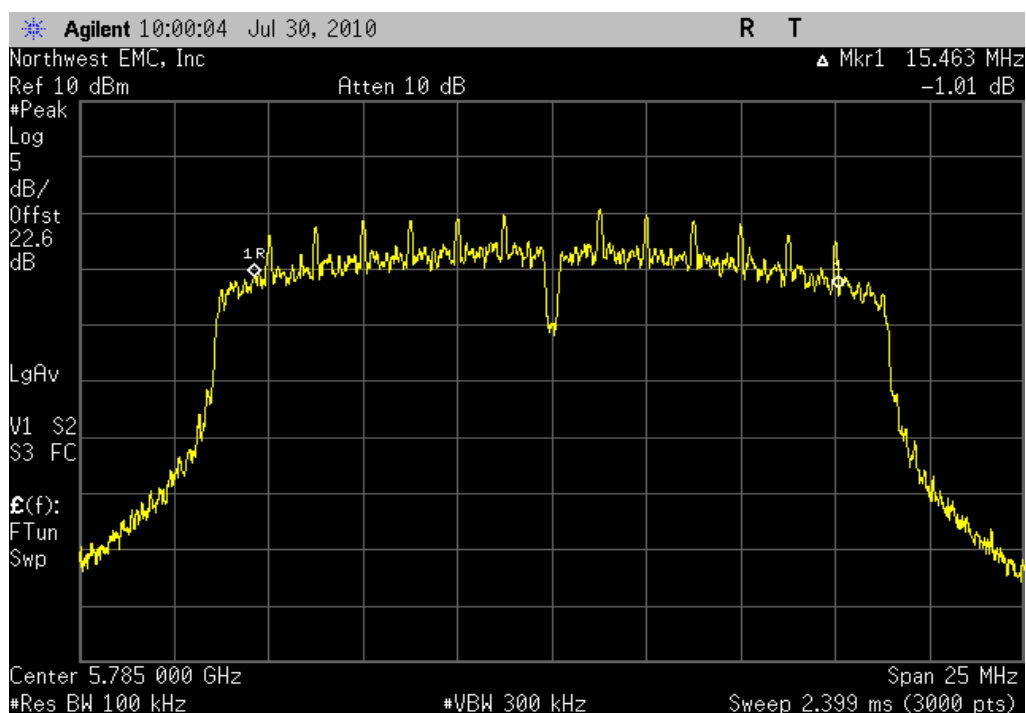


5725 MHz - 5850 MHz Band, 802.11(n) MCS0, Mid Channel 157, 5785 MHz

Result: Pass

Value: 15.463 MHz

Limit: > 500 kHz

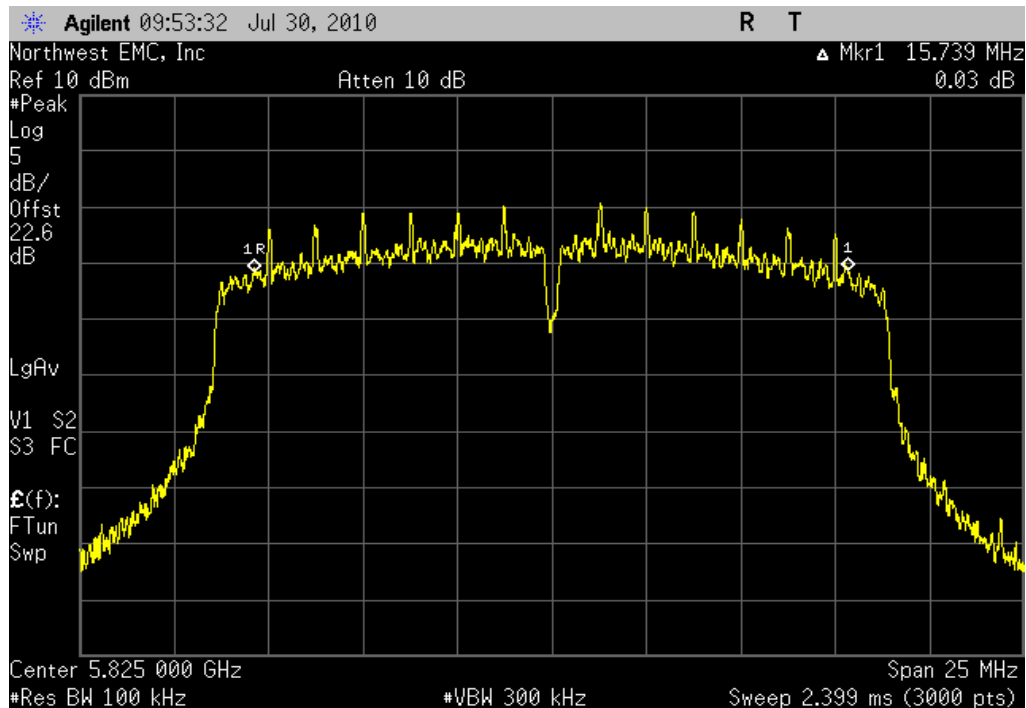


5725 MHz - 5850 MHz Band, 802.11(n) MCS0, High Channel 165, 5825 MHz

Result: Pass

Value: 15.739 MHz

Limit: > 500 kHz

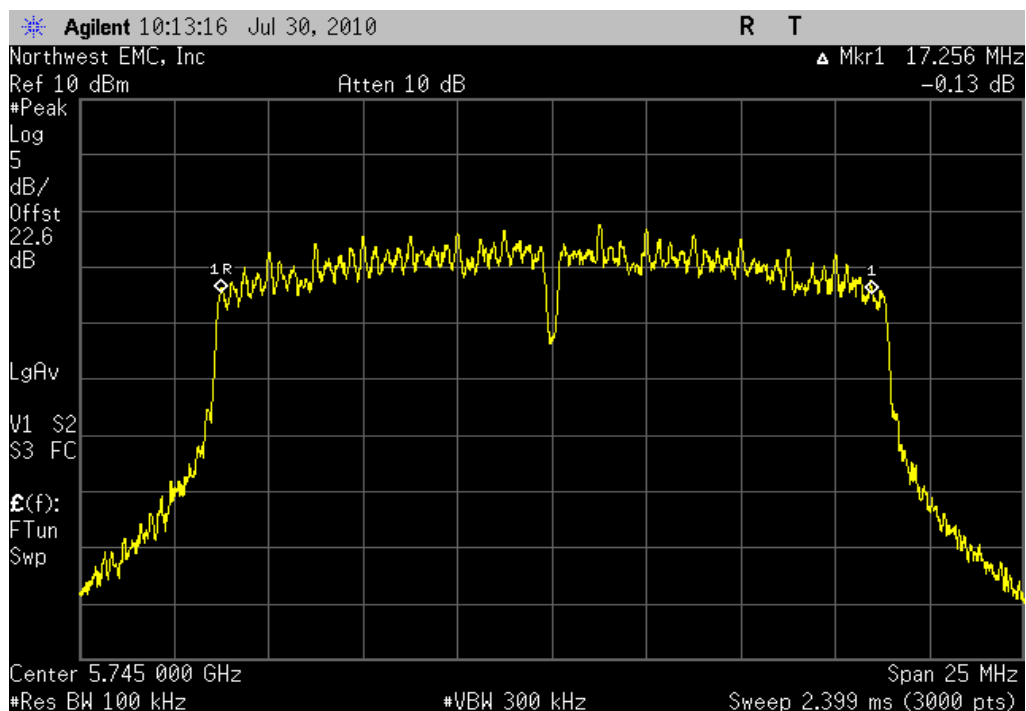


5725 MHz - 5850 MHz Band, 802.11(n) MCS7, Low Channel 149, 5745 MHz

Result: Pass

Value: 17.256 MHz

Limit: > 500 kHz

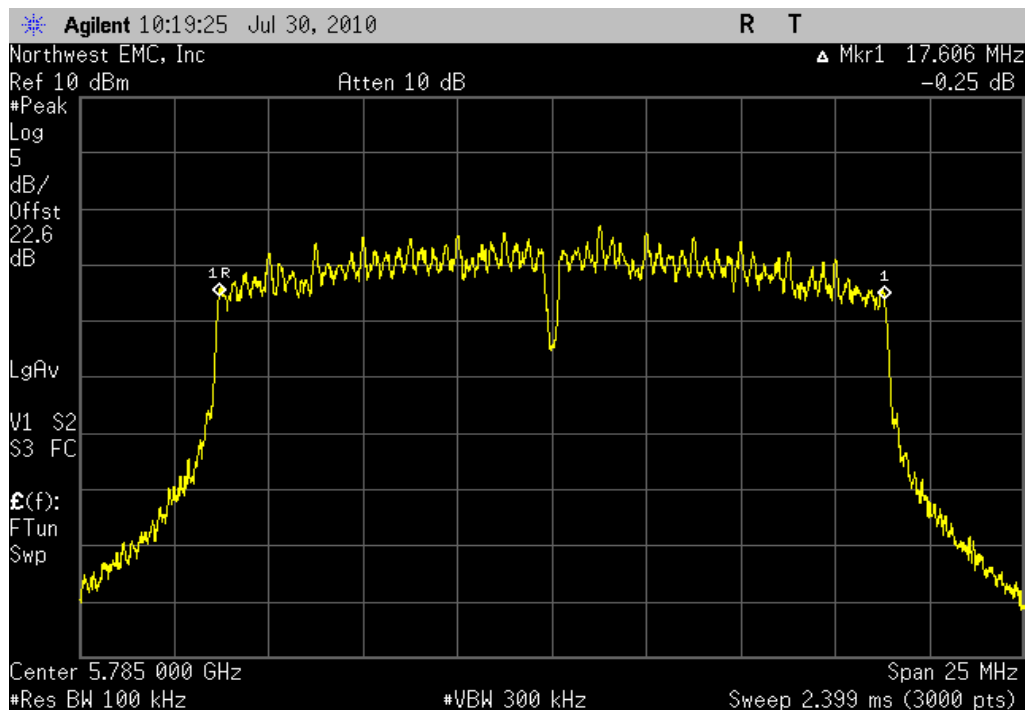


5725 MHz - 5850 MHz Band, 802.11(n) MCS7, Mid Channel 157, 5785 MHz

Result: Pass

Value: 17.606 MHz

Limit: > 500 kHz

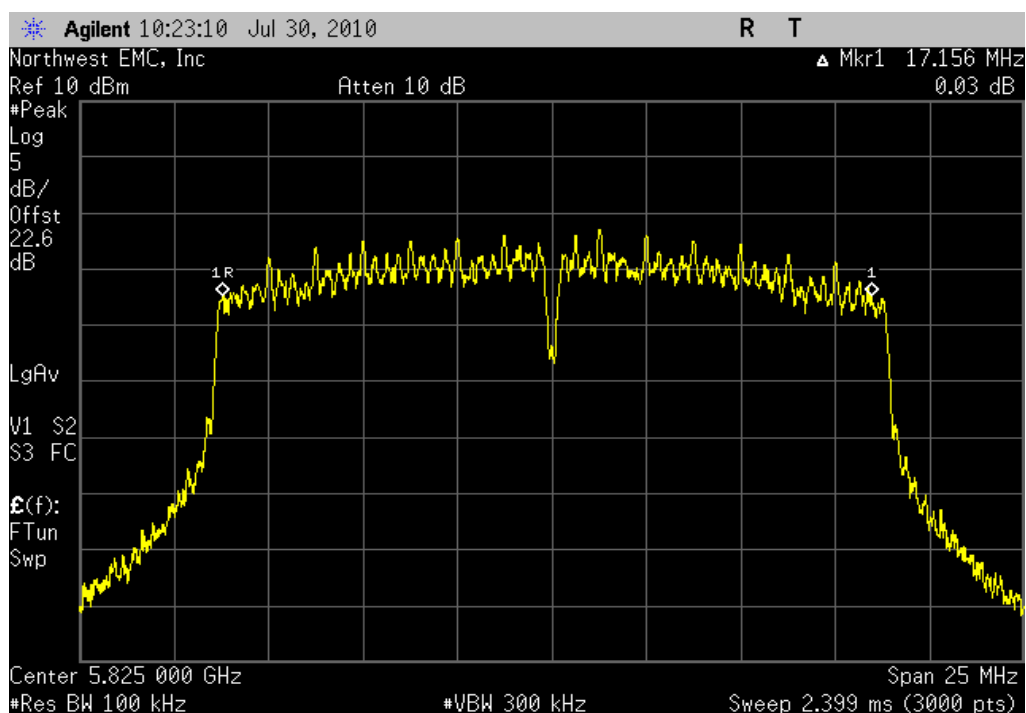


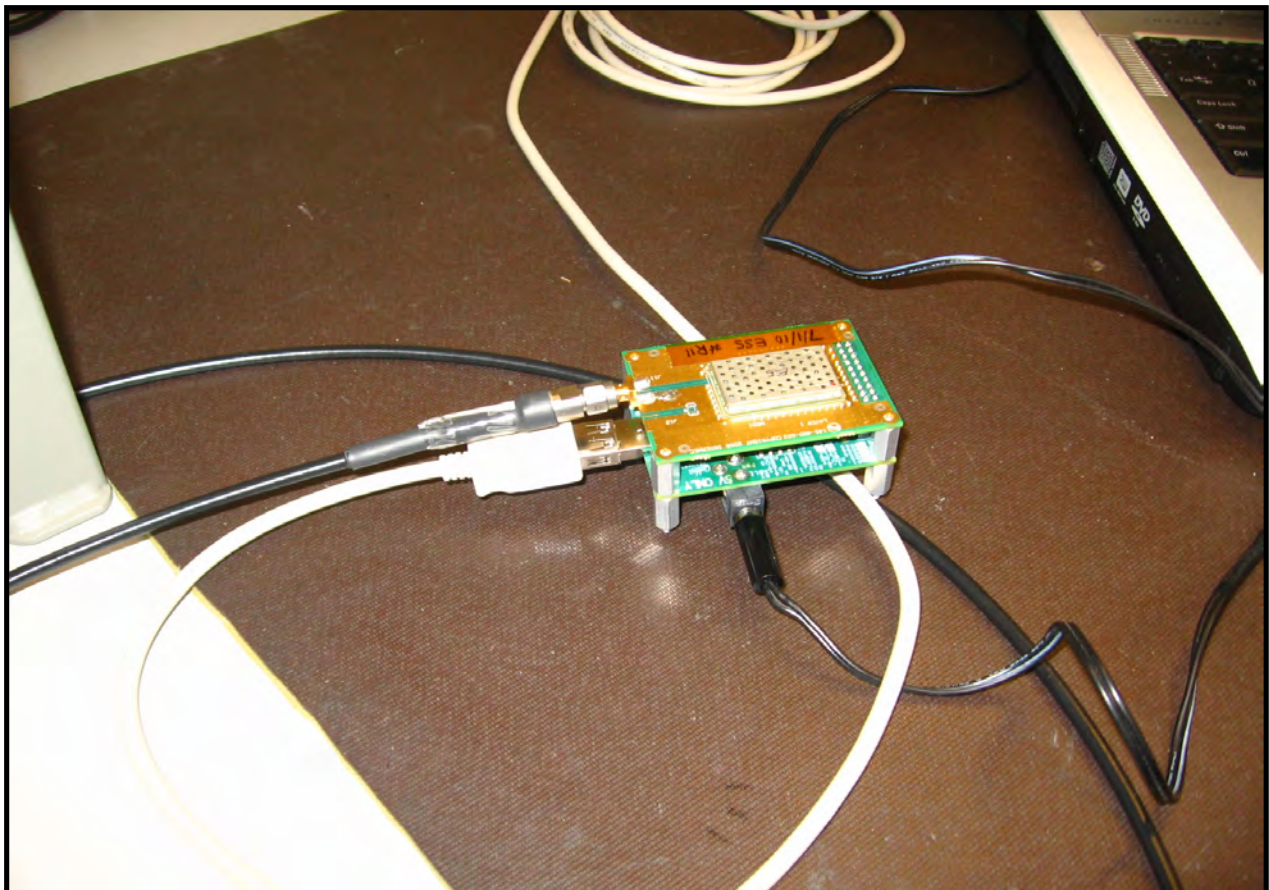
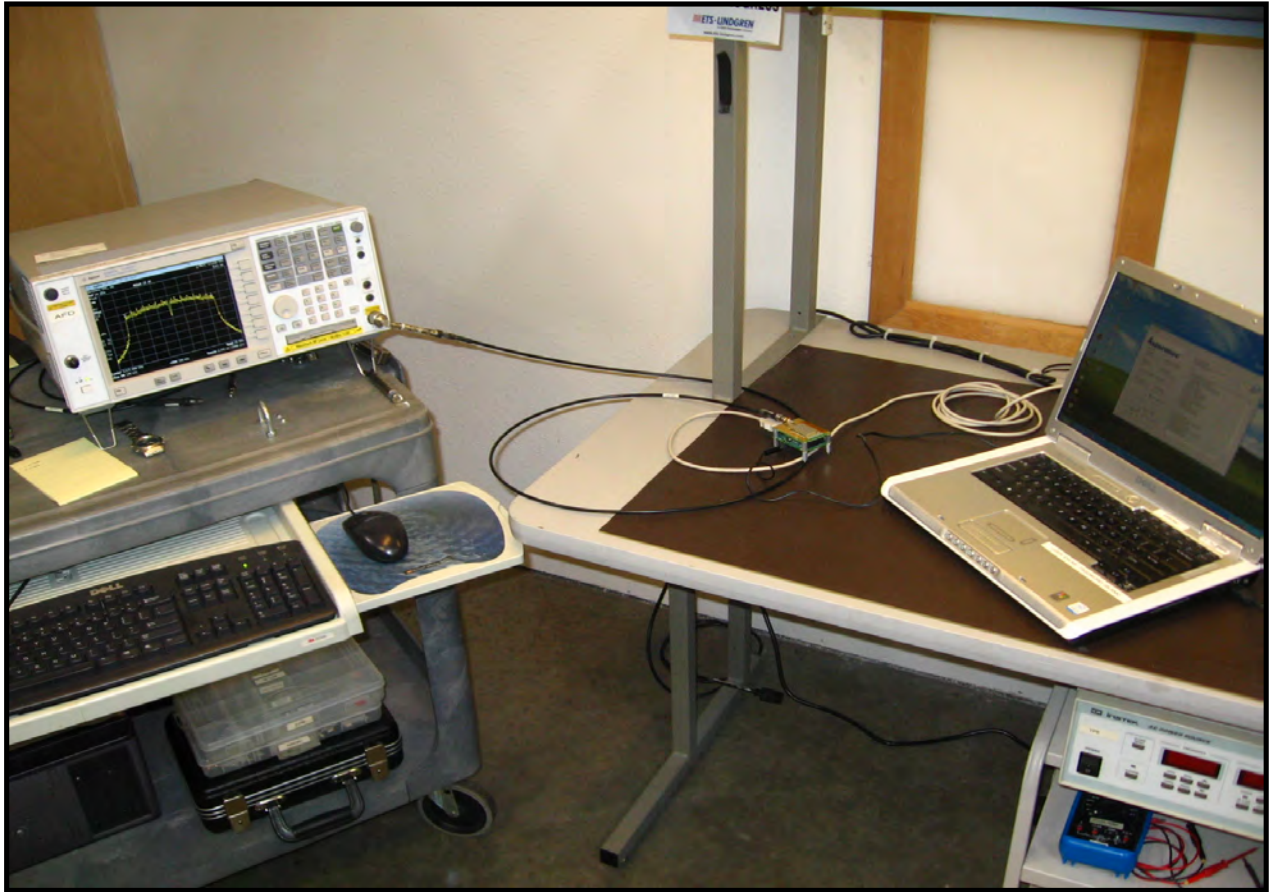
5725 MHz - 5850 MHz Band, 802.11(n) MCS7, High Channel 165, 5825 MHz

Result: Pass

Value: 17.156 MHz

Limit: > 500 kHz





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/21/2009	13
Attenuator, 6 dB, 'SMA'	N/A	93459 3330A-6	AUF	4/1/2010	13
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The transmit frequency was set to the required channels in each band. The transmit power was set to its default maximum. A direct connection was made between the RF output of the EUT and a spectrum analyzer. Attenuation and a DC block were used. The reference level offset on the spectrum analyzer was adjusted to compensate for cable loss and the external attenuation used between the RF output and the spectrum analyzer input. The amplitude accuracy of the spectrum analyzer was further enhanced by calibrating the setup using the power meter and synthesized signal generator.

Prior to measuring peak transmit power; the emission bandwidth (B) and the transmission pulse duration (T) were measured. Both are required to determine the method of measuring Maximum Conducted Output Power. The transmission pulse duration (T) was measured using a zero span on the spectrum analyzer to see the pulses in the time domain.

Method #3 found in ANSI C63.10 section 6.10.2.2 was used because the analyzer sweep time was greater than T for the operating mode which has the shortest transmission pulse duration and the Emission Bandwidth was greater than the largest RBW on the analyzer.

The spectrum analyzer settings were as follows:

- The span was set to encompass entire emission bandwidth (B), centered on the transmit channel.
- The RBW = 1 MHz, VBW = Autocoupled by analyzer firmware
- Sample detector mode because the bin width (span / number of spectral points) < 0.5 RBW.
- Power was integrated across "B", by using the channel power function of the analyzer.

EMC

OUTPUT POWER - CHANNEL POWER

EUT:	RC12	Work Order:	INMC0575
Serial Number:	R11	Date:	07/29/10
Customer:	Intermec Technologies Corporation	Temperature:	20°C
Attendees:	none	Humidity:	47%
Project:	None	Barometric Pres.:	1019.3 mb
Tested by:	Rod Peloquin	Power:	5VDC
		Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2010	ANSI C63.10:2009

COMMENTS
None

DEVIATIONS FROM TEST STANDARD
No Deviations

Configuration #	2	Signature 
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	Value	Limit	Results
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	43.9 mW	1 W	Pass
Mid Channel 6, 2437 MHz	46.2 mW	1 W	Pass
High Channel 11, 2462 MHz	51.1 mW	1 W	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	44.8 mW	1 W	Pass
Mid Channel 6, 2437 MHz	48.7 mW	1 W	Pass
High Channel 11, 2462 MHz	53.2 mW	1 W	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	21.3 mW	1 W	Pass
Mid Channel 6, 2437 MHz	22.7 mW	1 W	Pass
High Channel 11, 2462 MHz	22.7 mW	1 W	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	22.2 mW	1 W	Pass
Mid Channel 6, 2437 MHz	21.1 mW	1 W	Pass
High Channel 11, 2462 MHz	22.9 mW	1 W	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	20.2 mW	1 W	Pass
Mid Channel 6, 2437 MHz	22.0 mW	1 W	Pass
High Channel 11, 2462 MHz	24.3 mW	1 W	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	20.8 mW	1 W	Pass
Mid Channel 6, 2437 MHz	21.6 mW	1 W	Pass
High Channel 11, 2462 MHz	23.4 mW	1 W	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	18.1 mW	1 W	Pass
Mid Channel 6, 2437 MHz	18.9 mW	1 W	Pass
High Channel 11, 2462 MHz	19.9 mW	1 W	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	15.7 mW	1 W	Pass
Mid Channel 157, 5785 MHz	16.1 mW	1 W	Pass
High Channel 165, 5825 MHz	15.9 mW	1 W	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	16.8 mW	1 W	Pass
Mid Channel 157, 5785 MHz	16.0 mW	1 W	Pass
High Channel 165, 5825 MHz	15.7 mW	1 W	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	13.8 mW	1 W	Pass
Mid Channel 157, 5785 MHz	13.9 mW	1 W	Pass
High Channel 165, 5825 MHz	13.6 mW	1 W	Pass
802.11(n) MCS0			
Low Channel 149, 5745 MHz	17.0 mW	1 W	Pass
Mid Channel 157, 5785 MHz	16.7 mW	1 W	Pass
High Channel 165, 5825 MHz	16.5 mW	1 W	Pass
802.11(n) MCS7			
Low Channel 149, 5745 MHz	10.3 mW	1 W	Pass
Mid Channel 157, 5785 MHz	10.1 mW	1 W	Pass
High Channel 165, 5825 MHz	10.3 mW	1 W	Pass

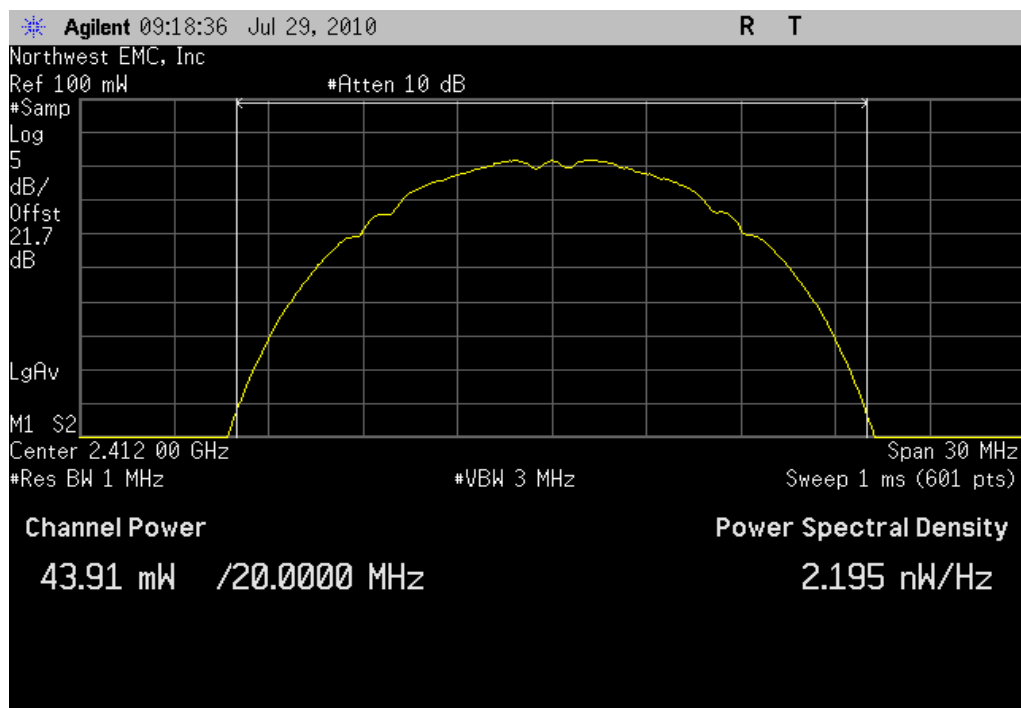
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 43.9 mW

Limit: 1 W

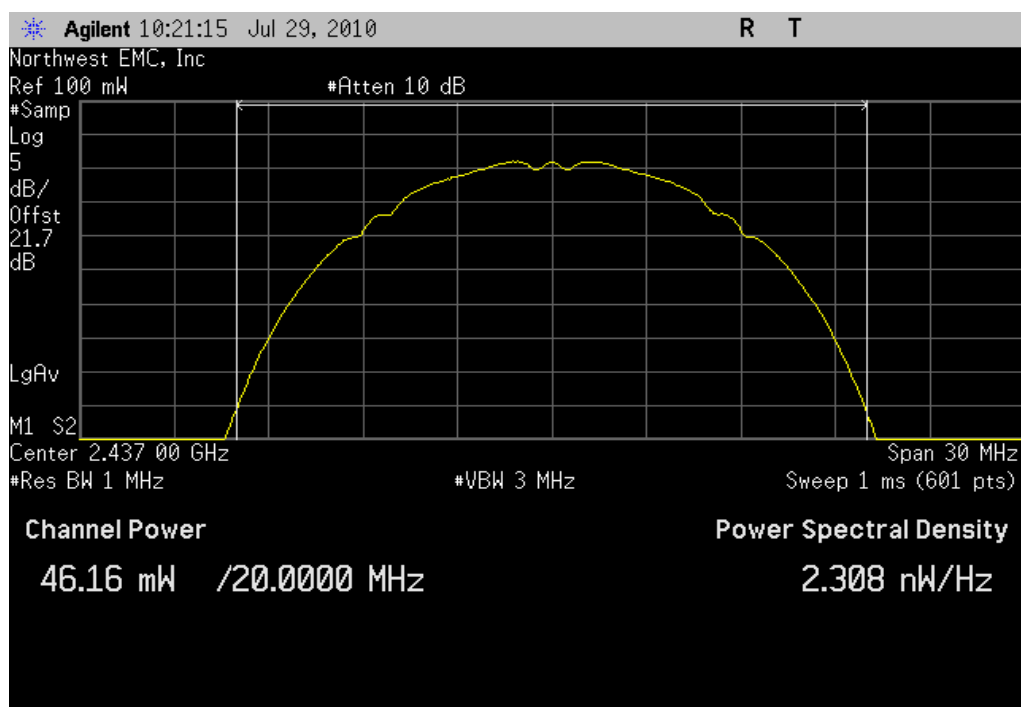


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 46.2 mW

Limit: 1 W



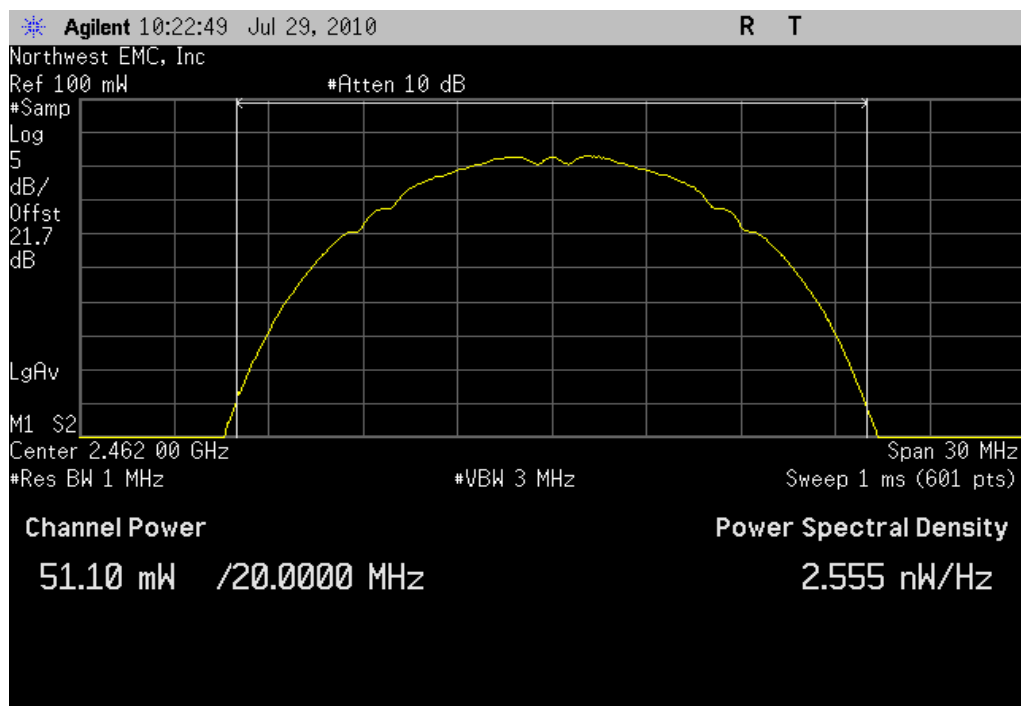
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 51.1 mW

Limit: 1 W

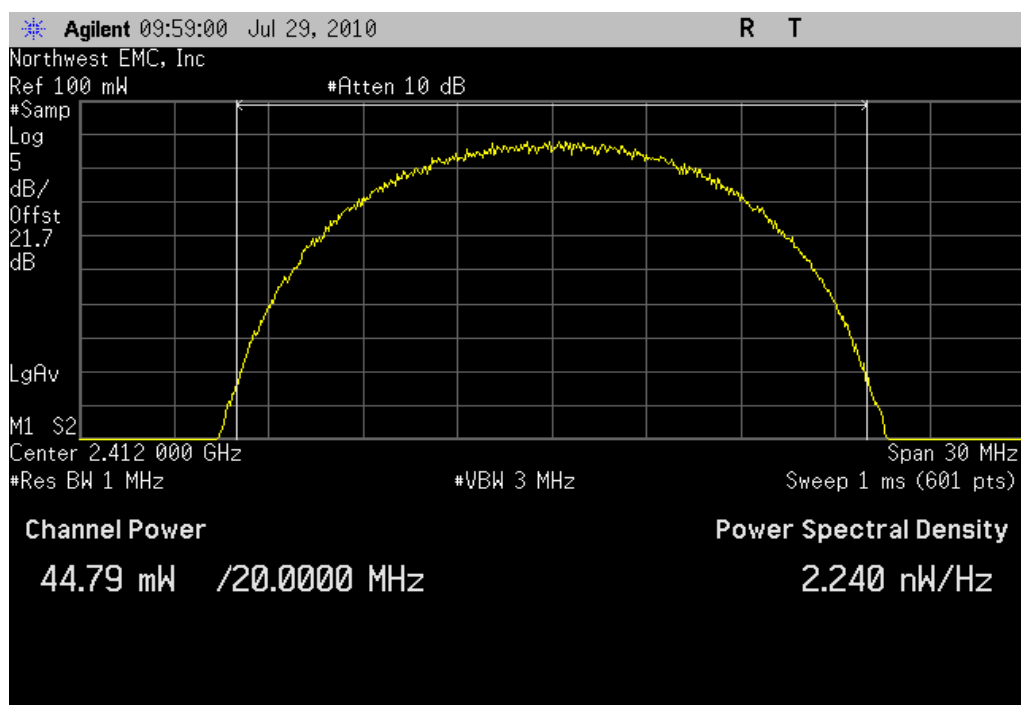


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 44.8 mW

Limit: 1 W



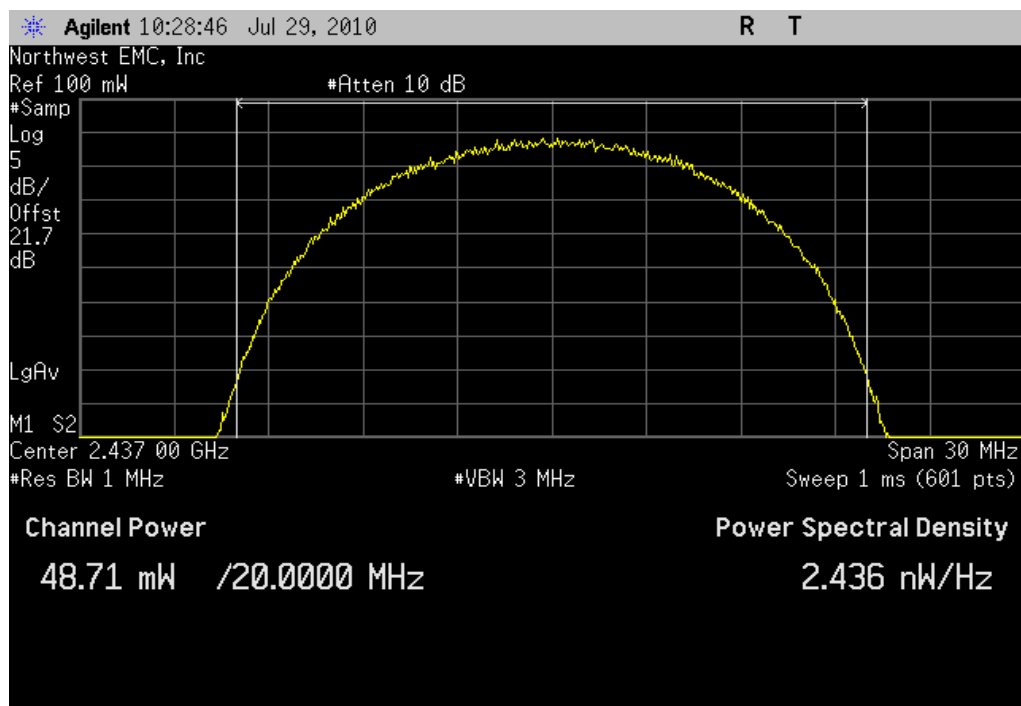
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 48.7 mW

Limit: 1 W

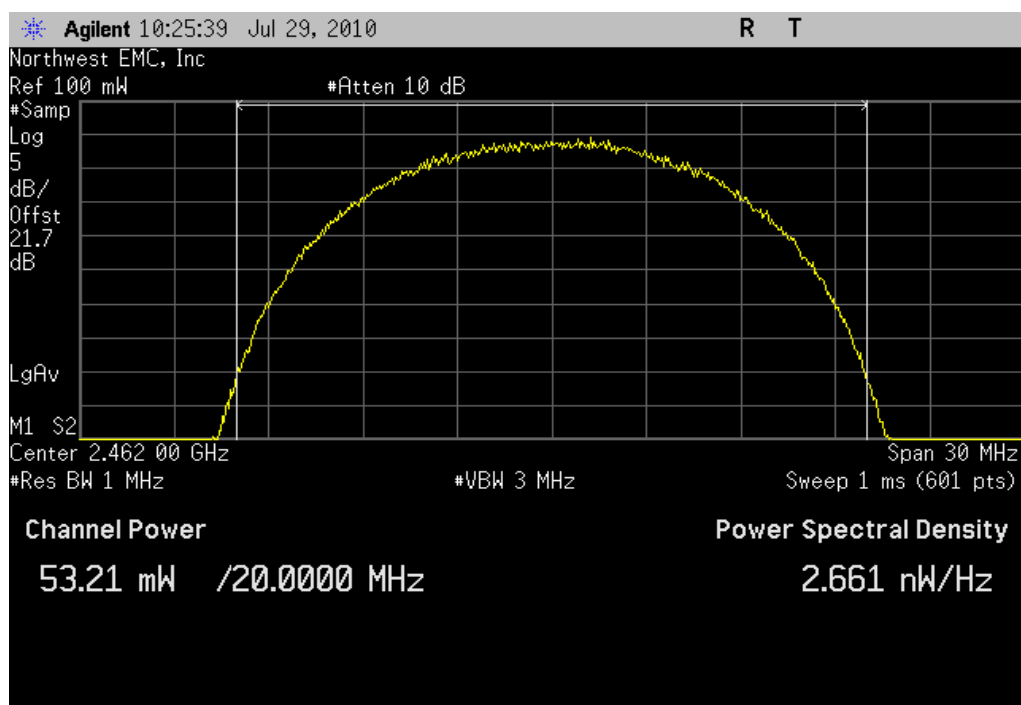


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 53.2 mW

Limit: 1 W



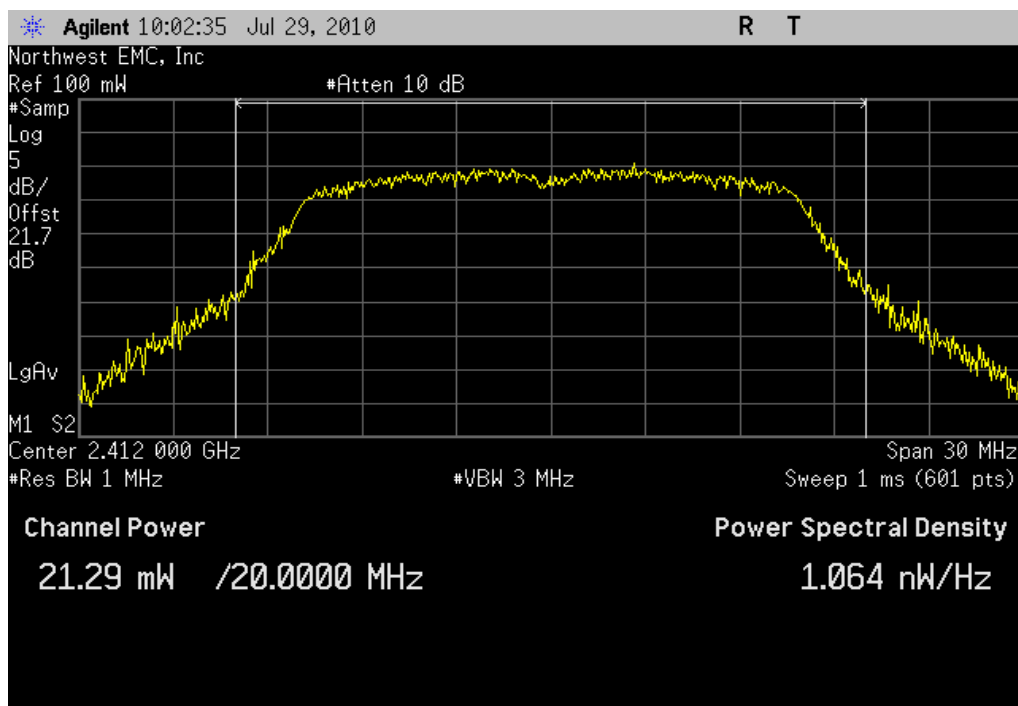
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 21.3 mW

Limit: 1 W

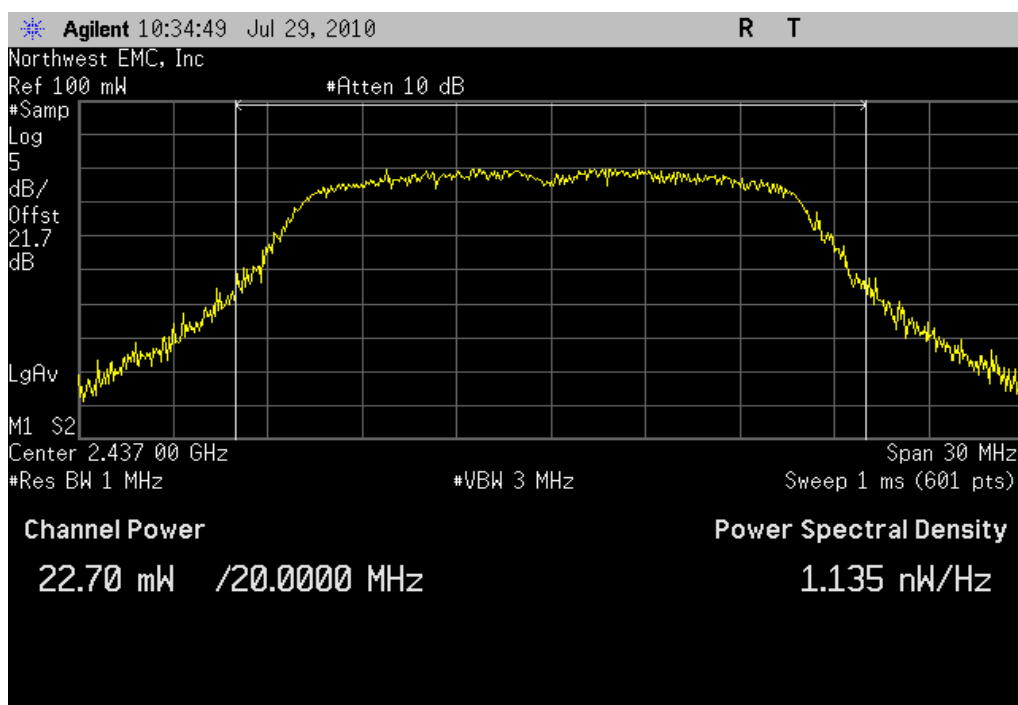


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 22.7 mW

Limit: 1 W



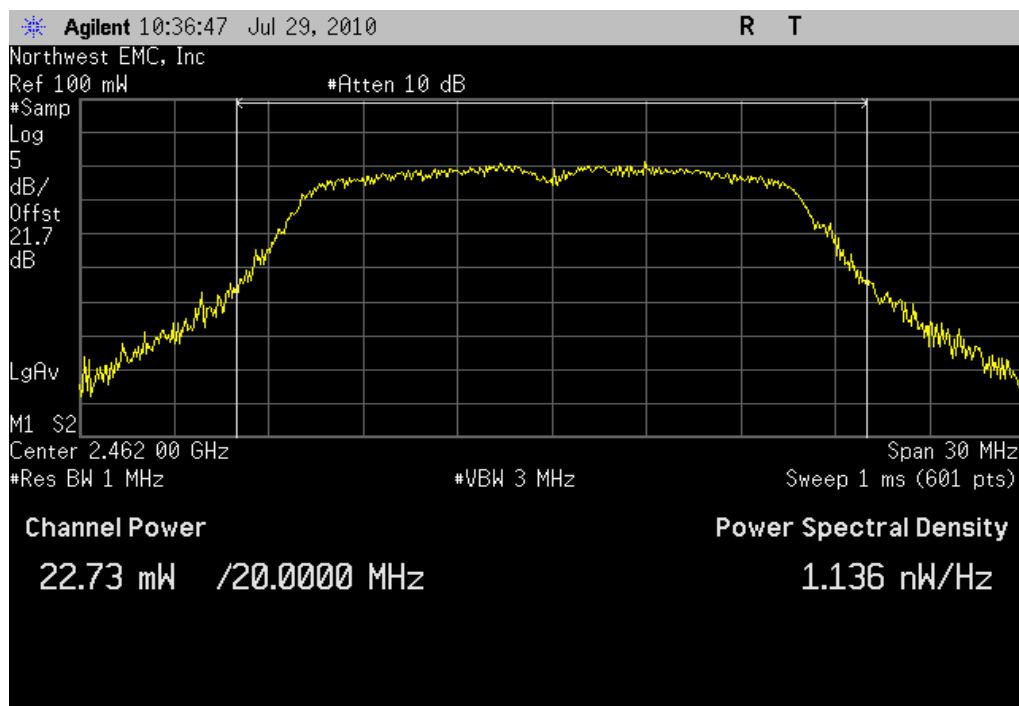
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 22.7 mW

Limit: 1 W

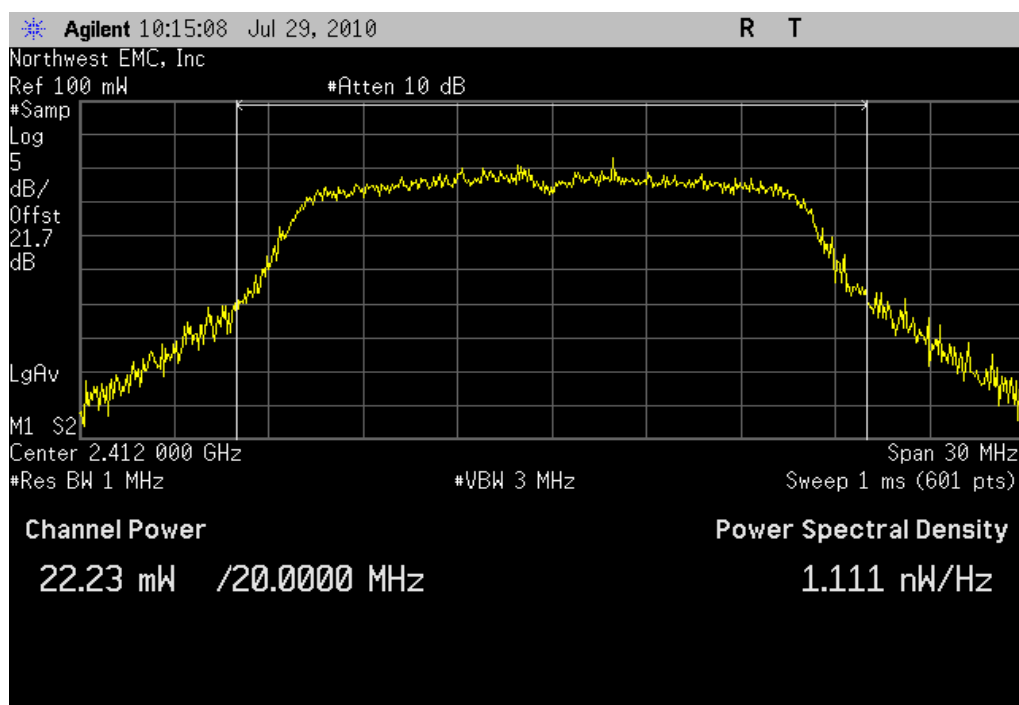


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 22.2 mW

Limit: 1 W



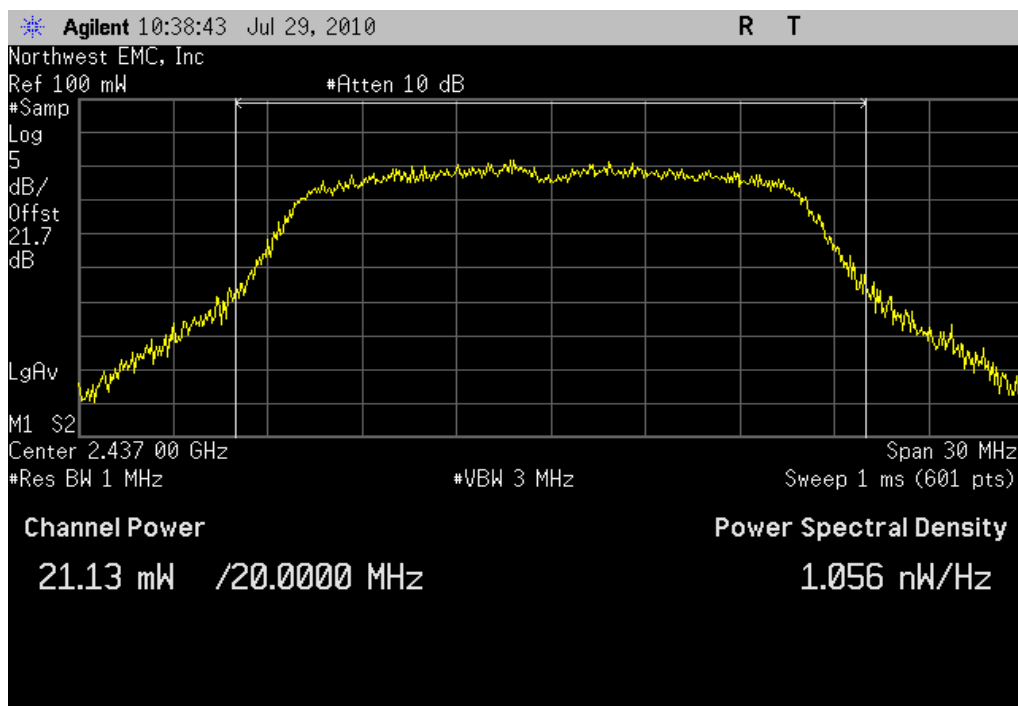
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 21.1 mW

Limit: 1 W

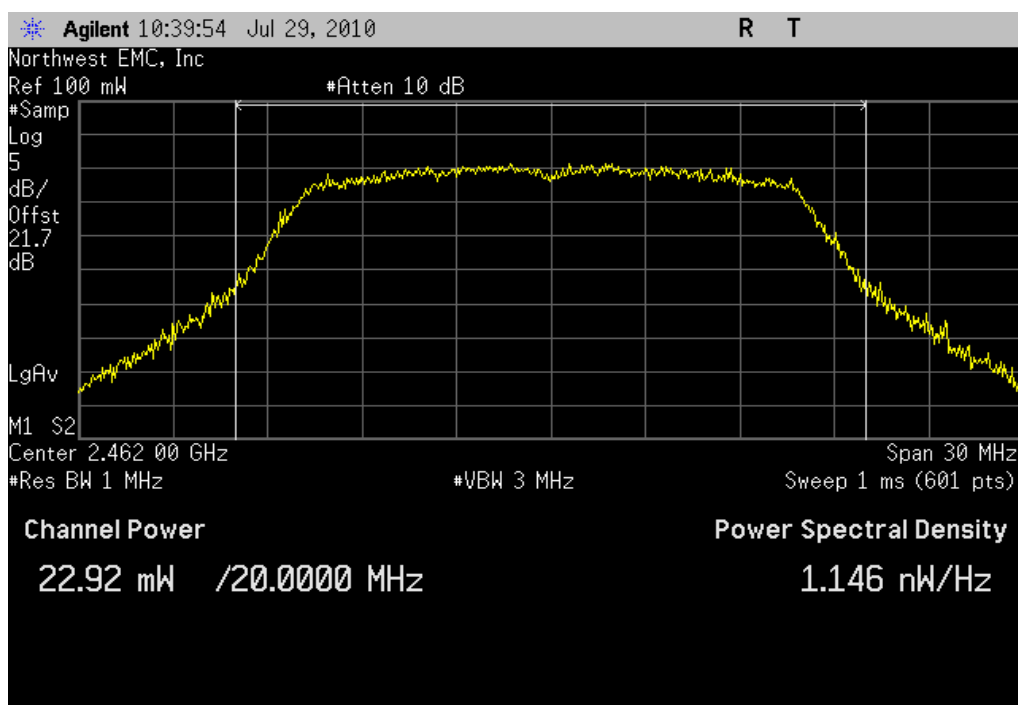


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 22.9 mW

Limit: 1 W



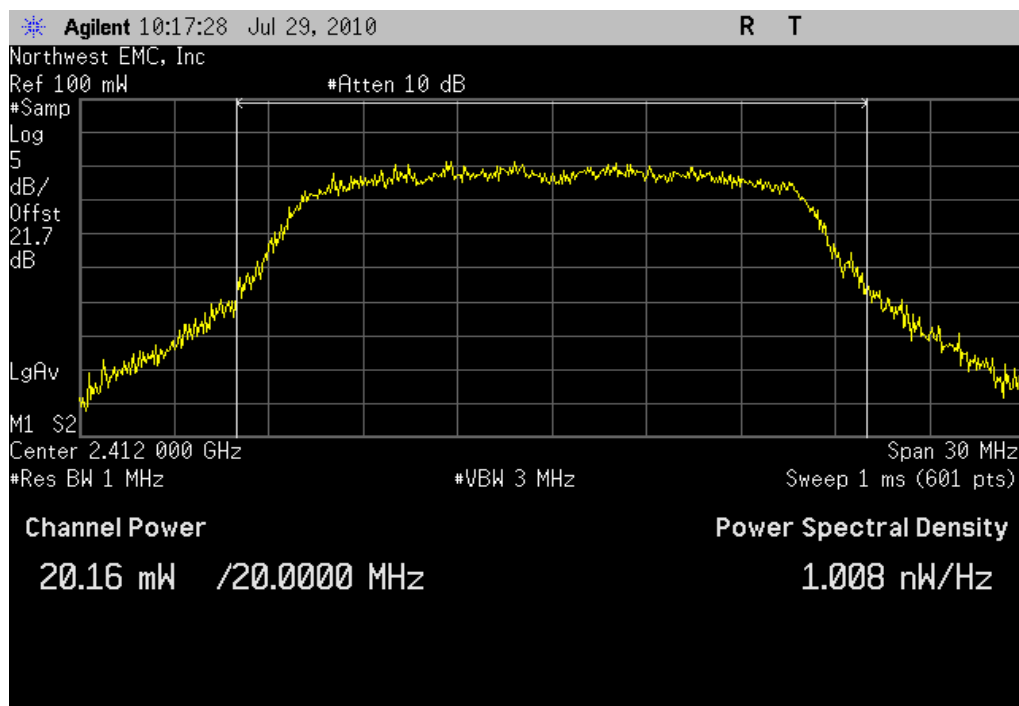
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: 20.2 mW

Limit: 1 W

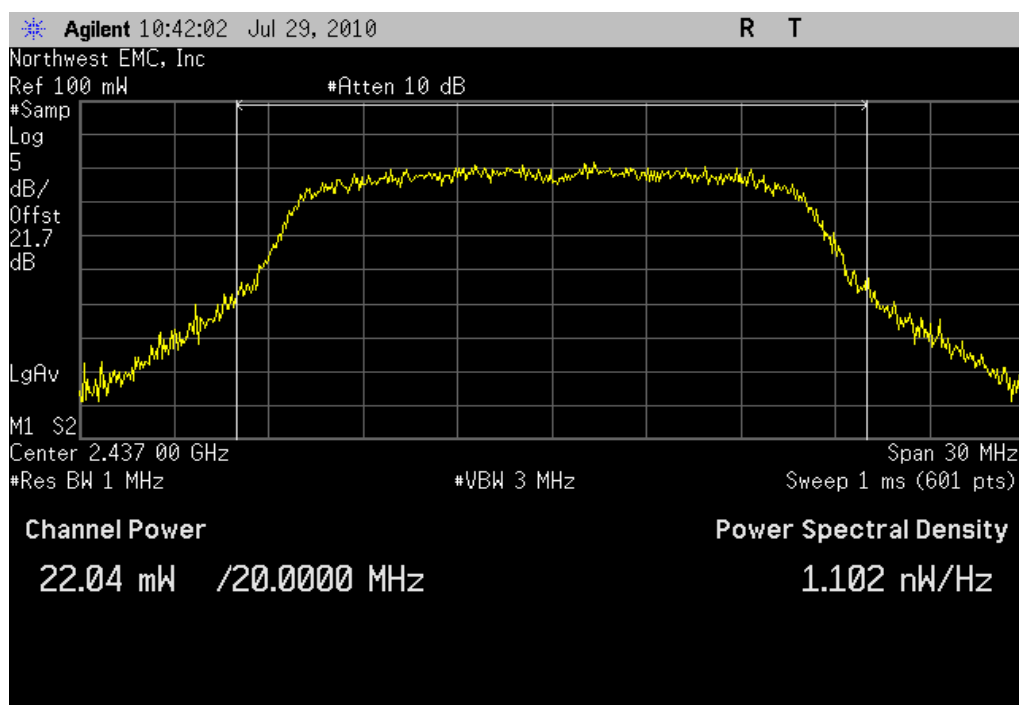


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: 22.0 mW

Limit: 1 W



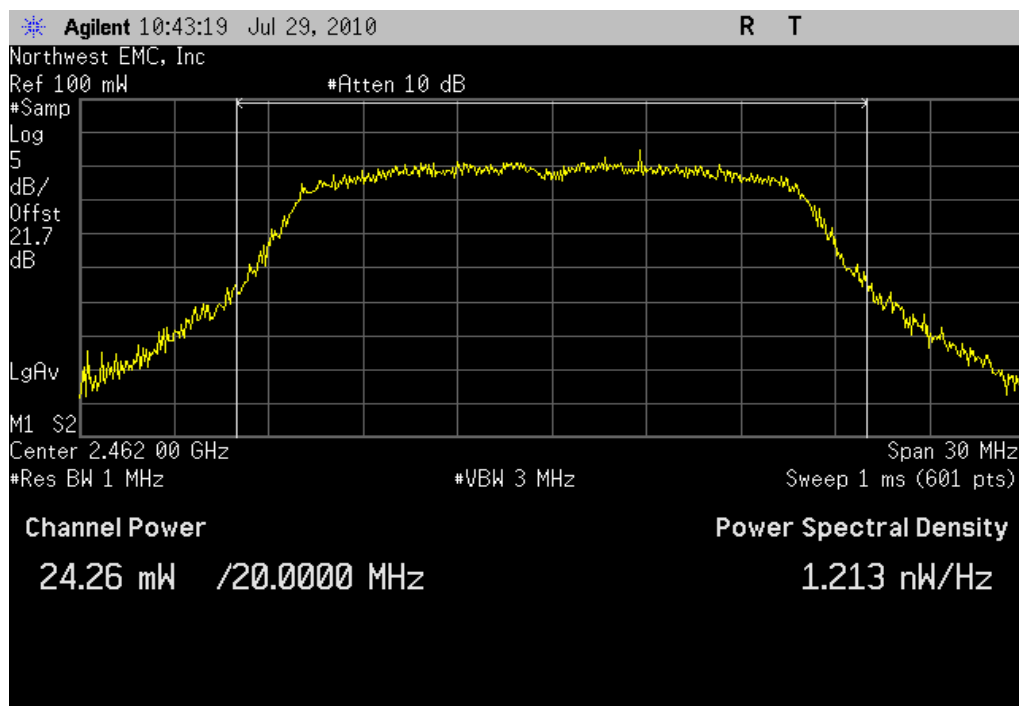
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: 24.3 mW

Limit: 1 W

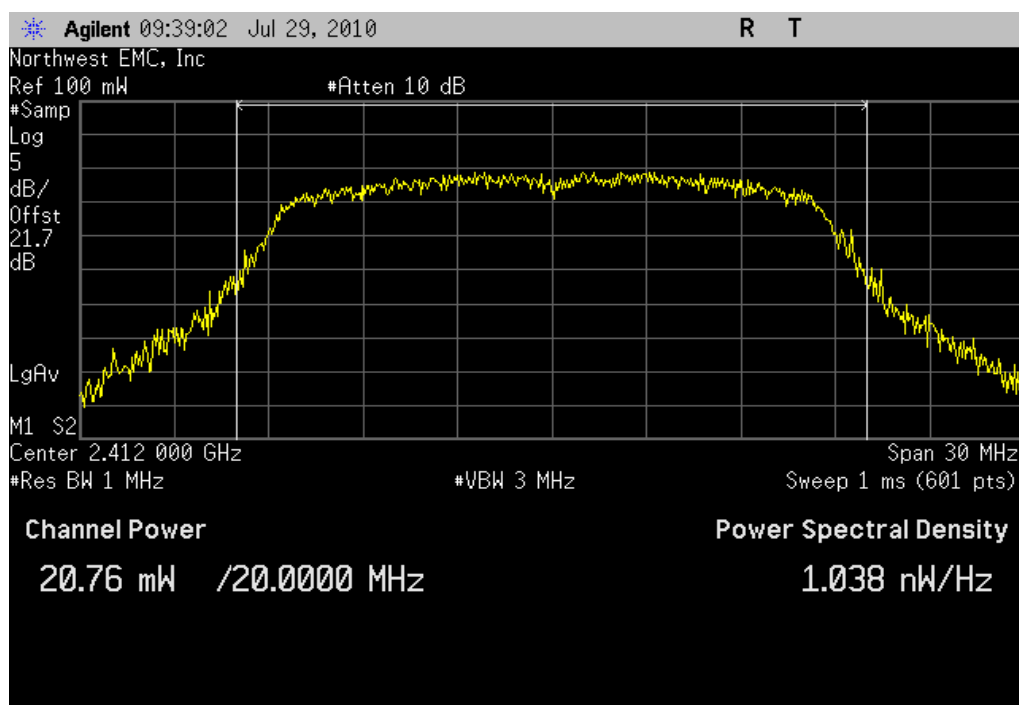


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

Result: Pass

Value: 20.8 mW

Limit: 1 W



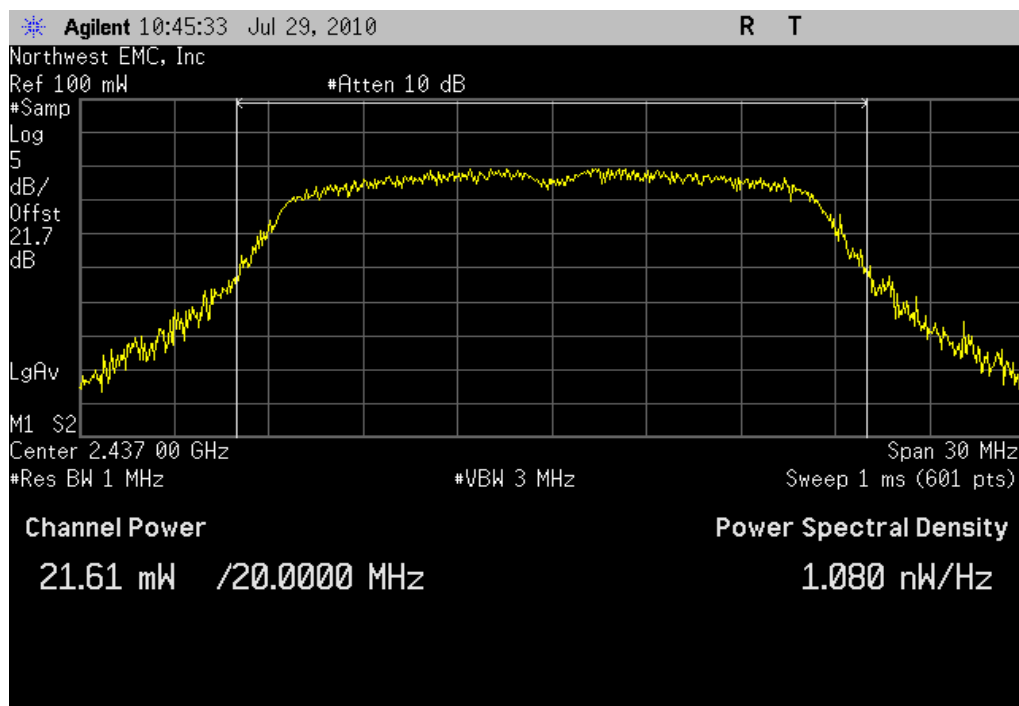
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz

Result: Pass

Value: 21.6 mW

Limit: 1 W

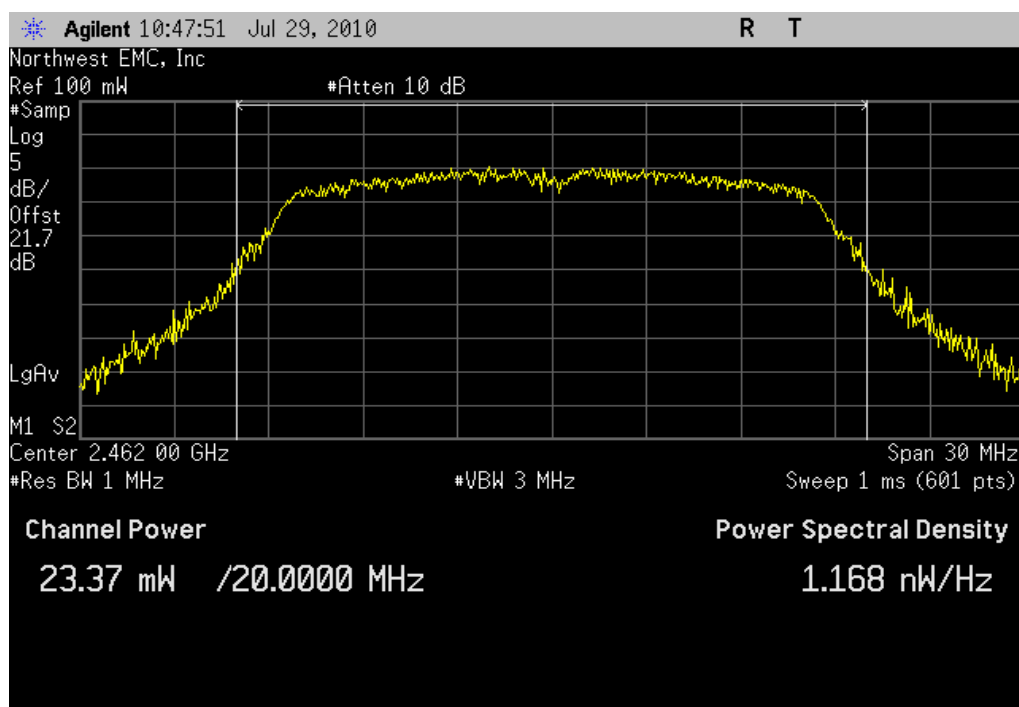


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

Result: Pass

Value: 23.4 mW

Limit: 1 W



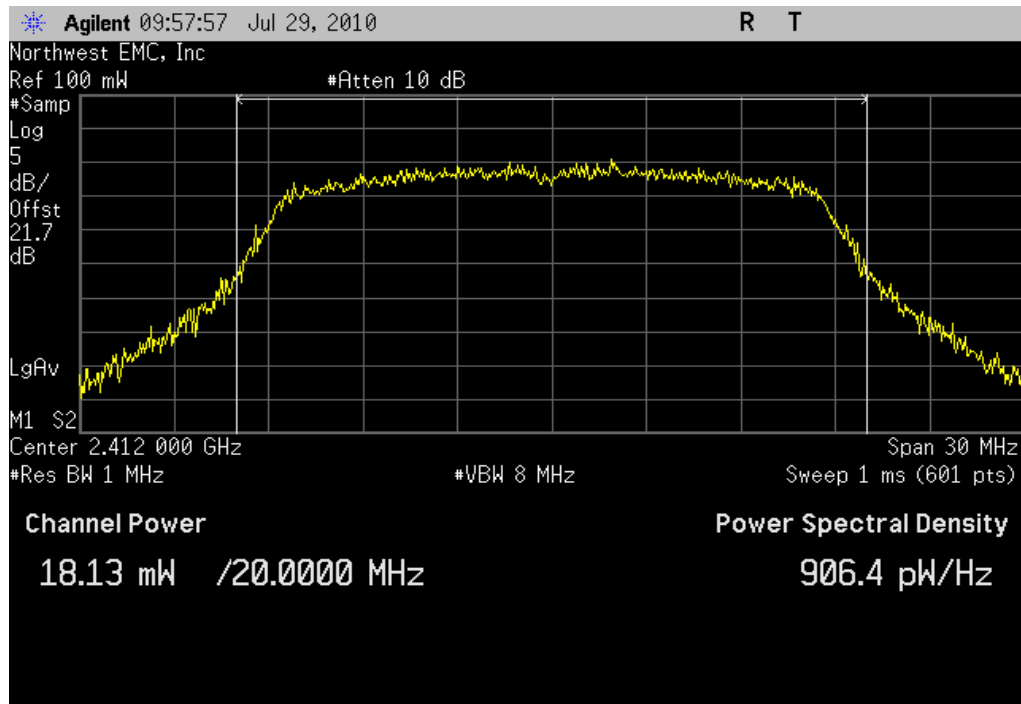
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

Result: Pass

Value: 18.1 mW

Limit: 1 W

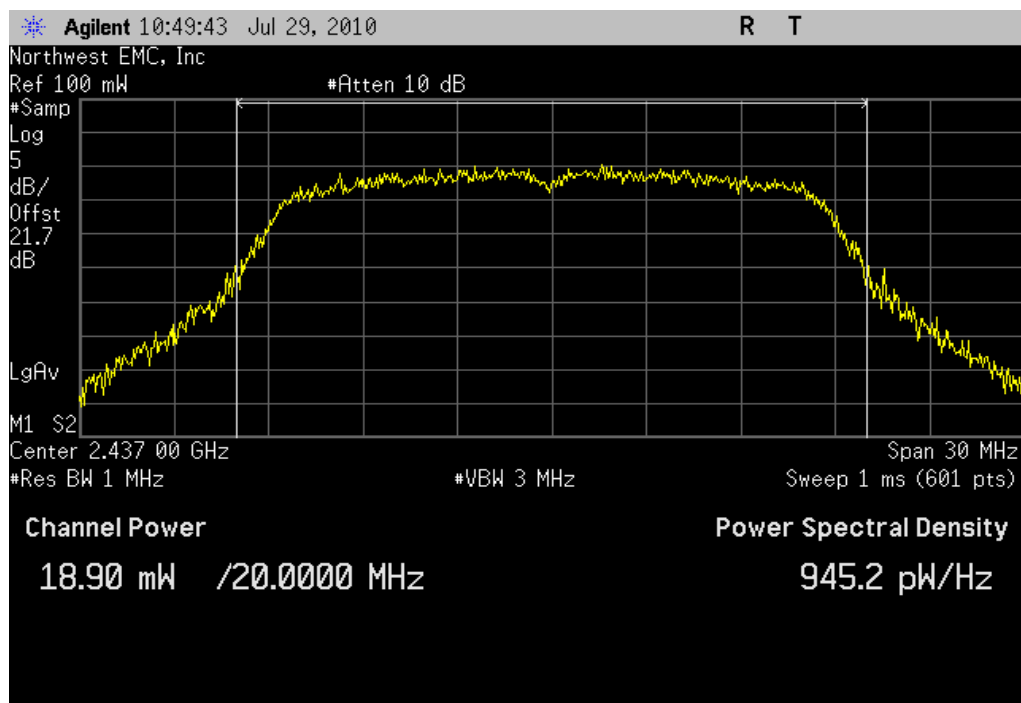


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz

Result: Pass

Value: 18.9 mW

Limit: 1 W



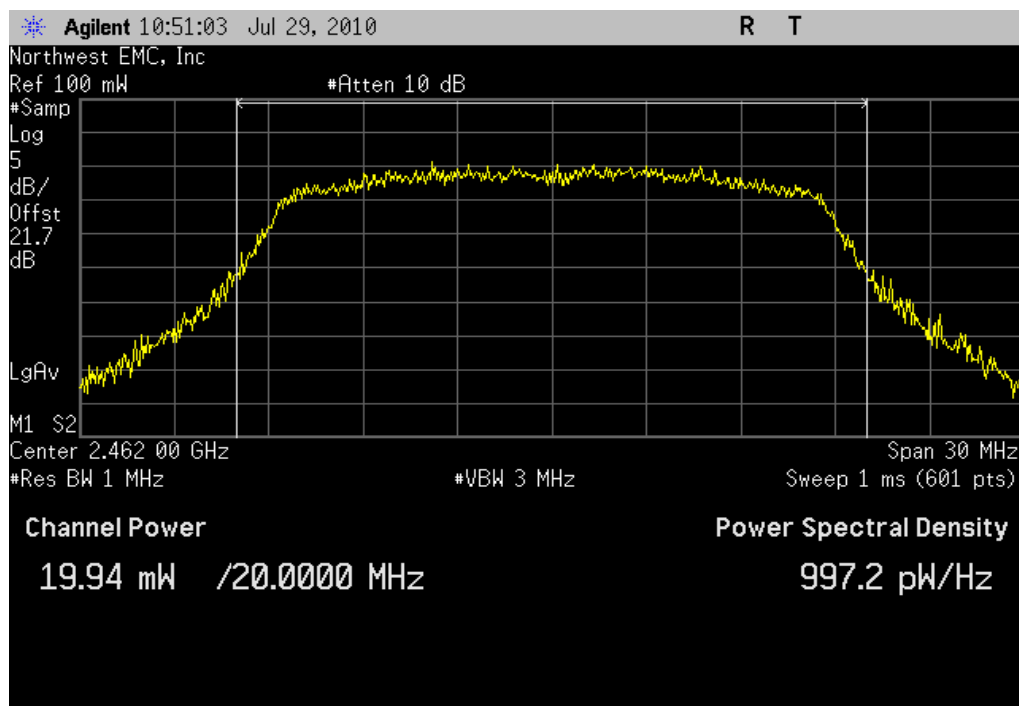
OUTPUT POWER - CHANNEL POWER

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

Result: Pass

Value: 19.9 mW

Limit: 1 W

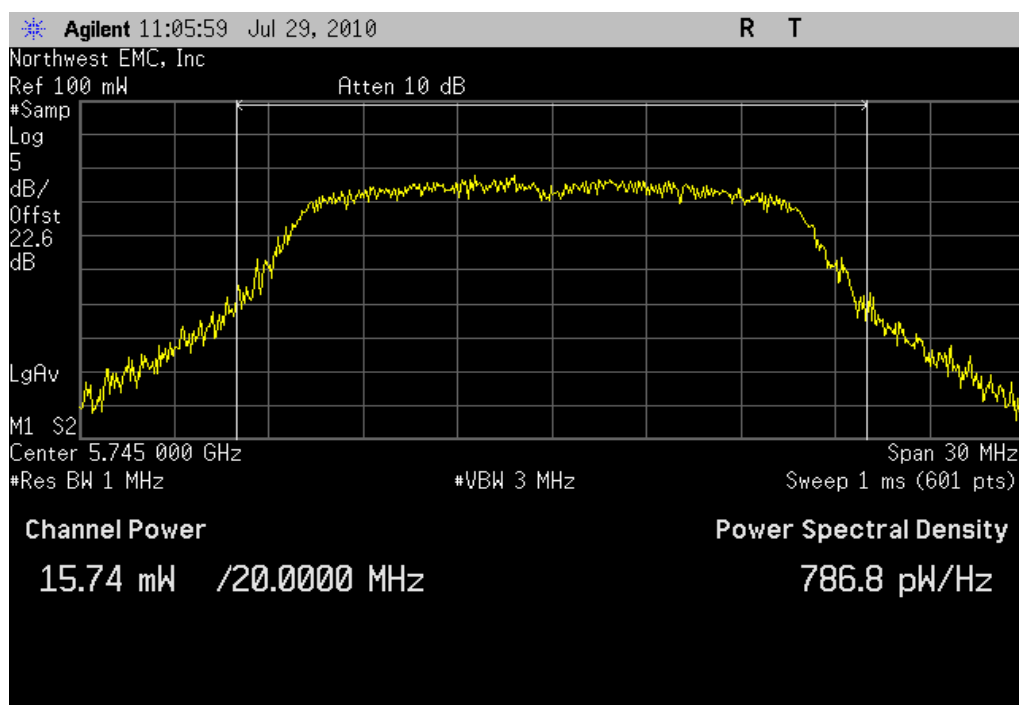


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: 15.7 mW

Limit: 1 W



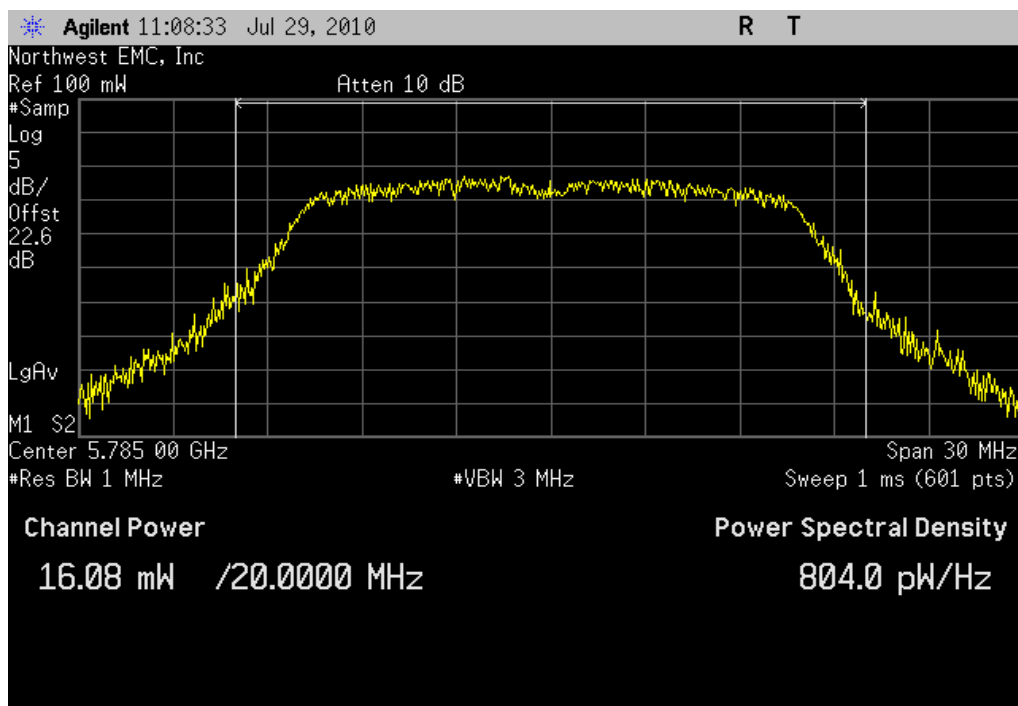
OUTPUT POWER - CHANNEL POWER

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: 16.1 mW

Limit: 1 W

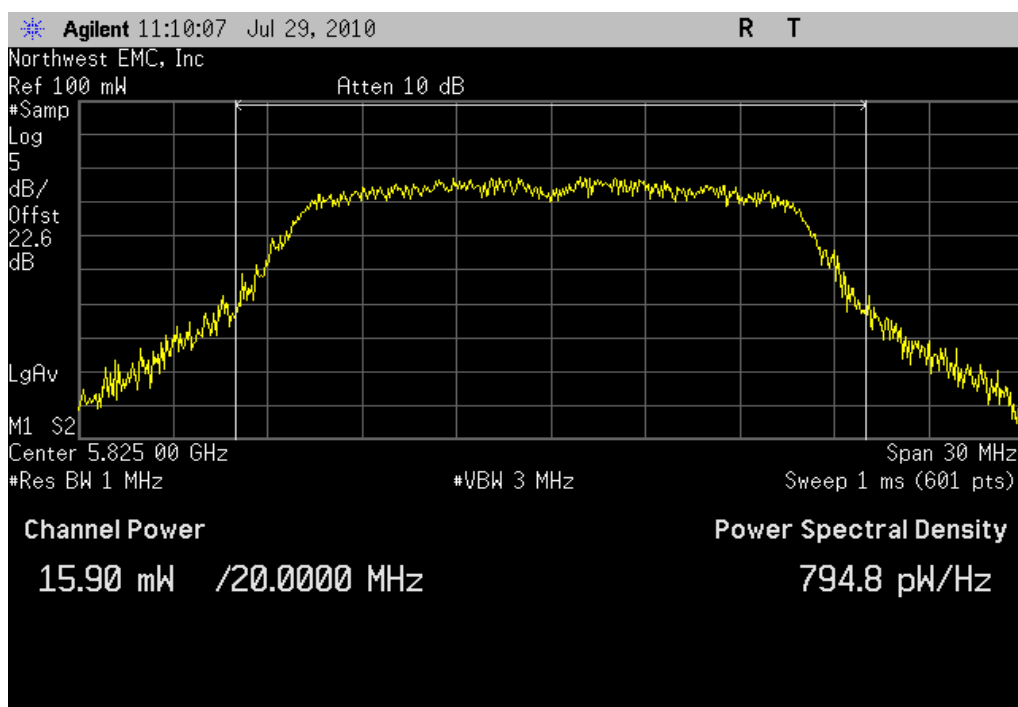


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: 15.9 mW

Limit: 1 W



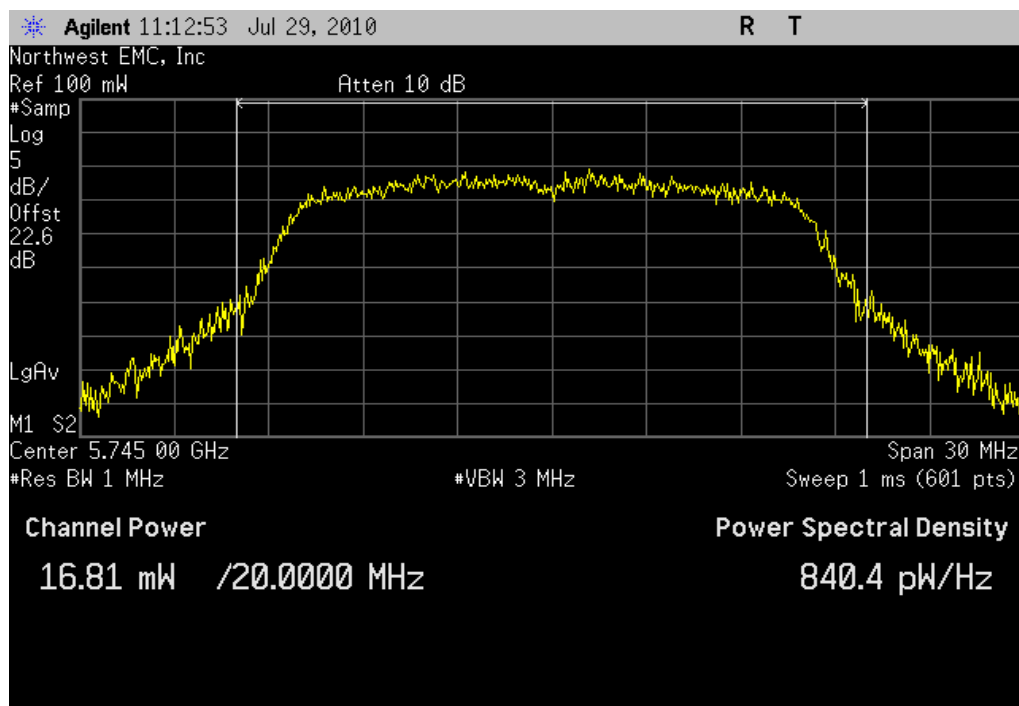
OUTPUT POWER - CHANNEL POWER

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: 16.8 mW

Limit: 1 W



5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: 16.0 mW

Limit: 1 W



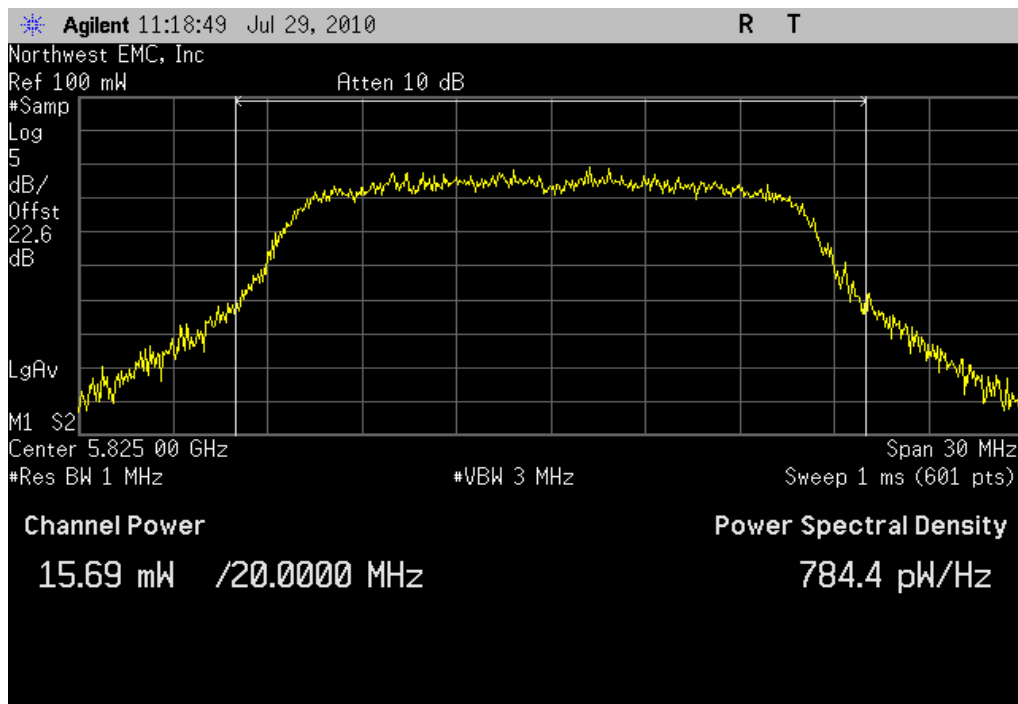
OUTPUT POWER - CHANNEL POWER

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: 15.7 mW

Limit: 1 W

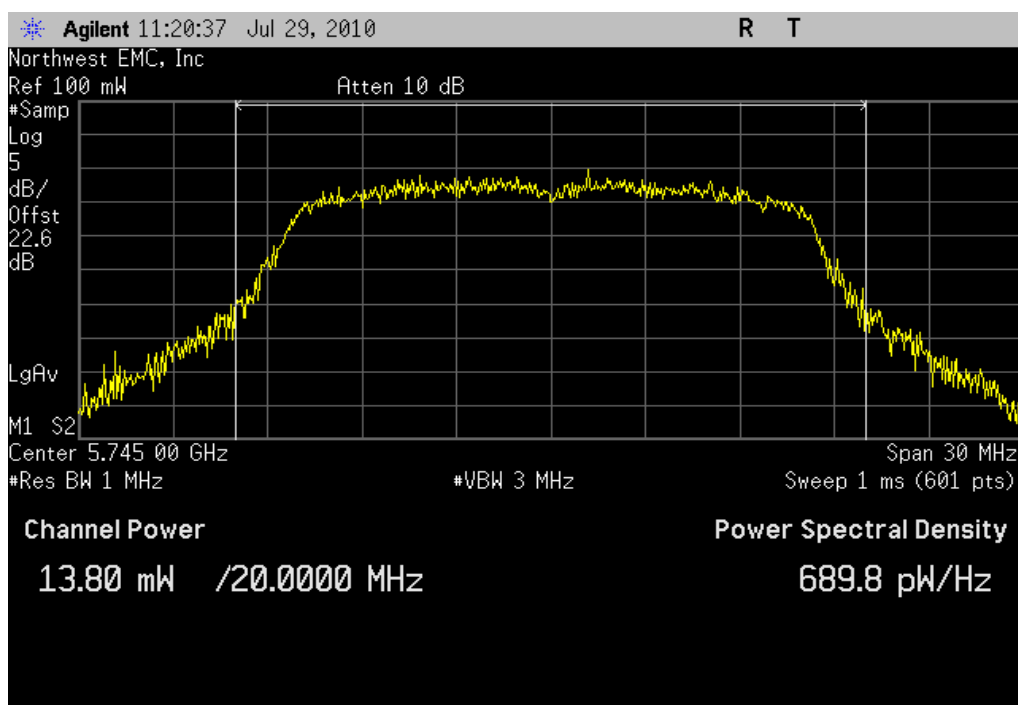


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: 13.8 mW

Limit: 1 W



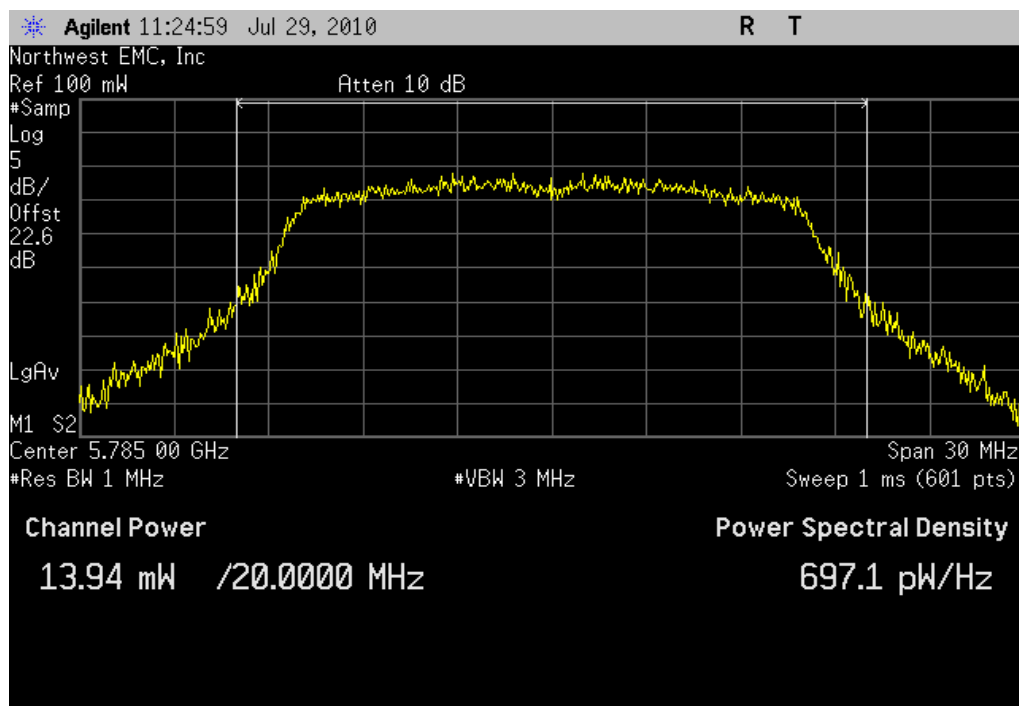
OUTPUT POWER - CHANNEL POWER

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: 13.9 mW

Limit: 1 W

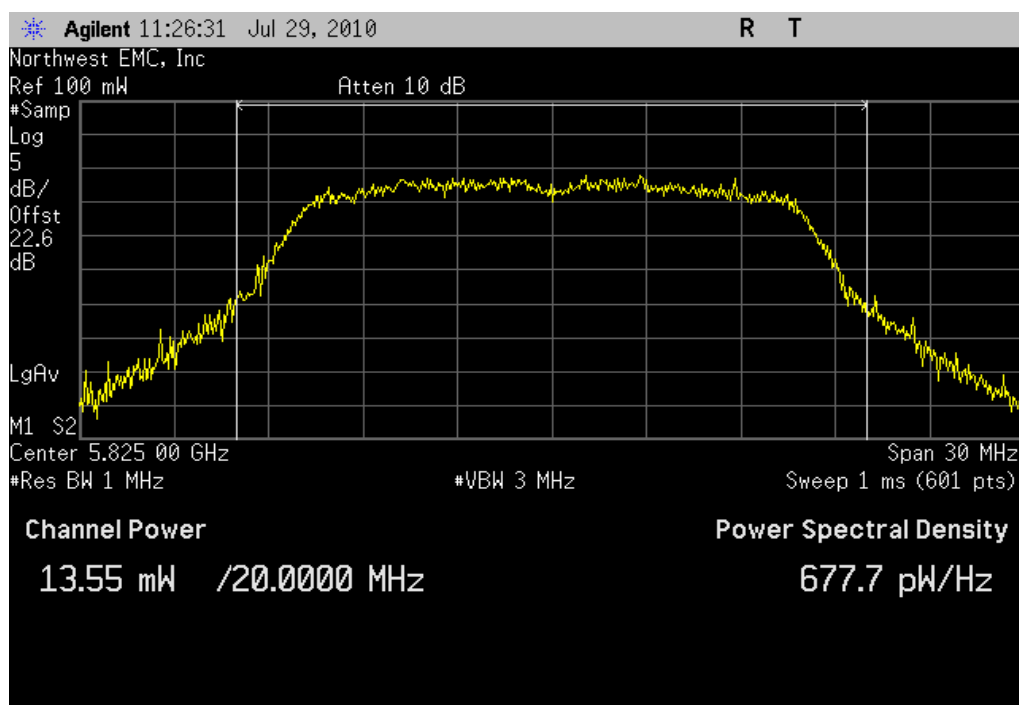


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: 13.6 mW

Limit: 1 W



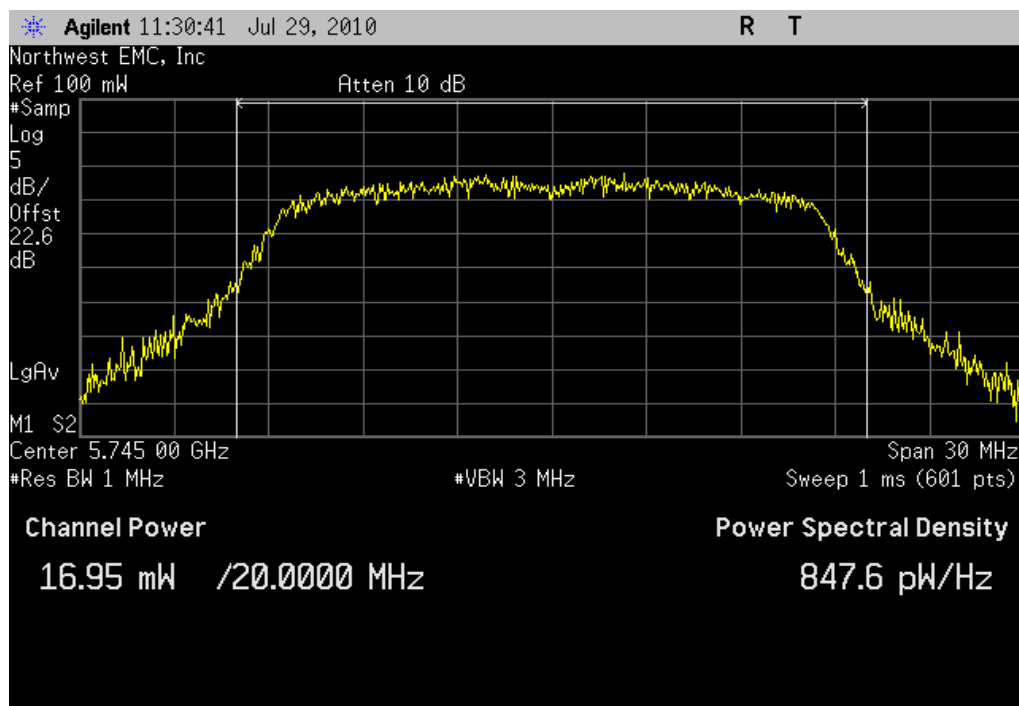
OUTPUT POWER - CHANNEL POWER

5725 MHz - 5850 MHz Band, 802.11(n) MCS0, Low Channel 149, 5745 MHz

Result: Pass

Value: 17.0 mW

Limit: 1 W

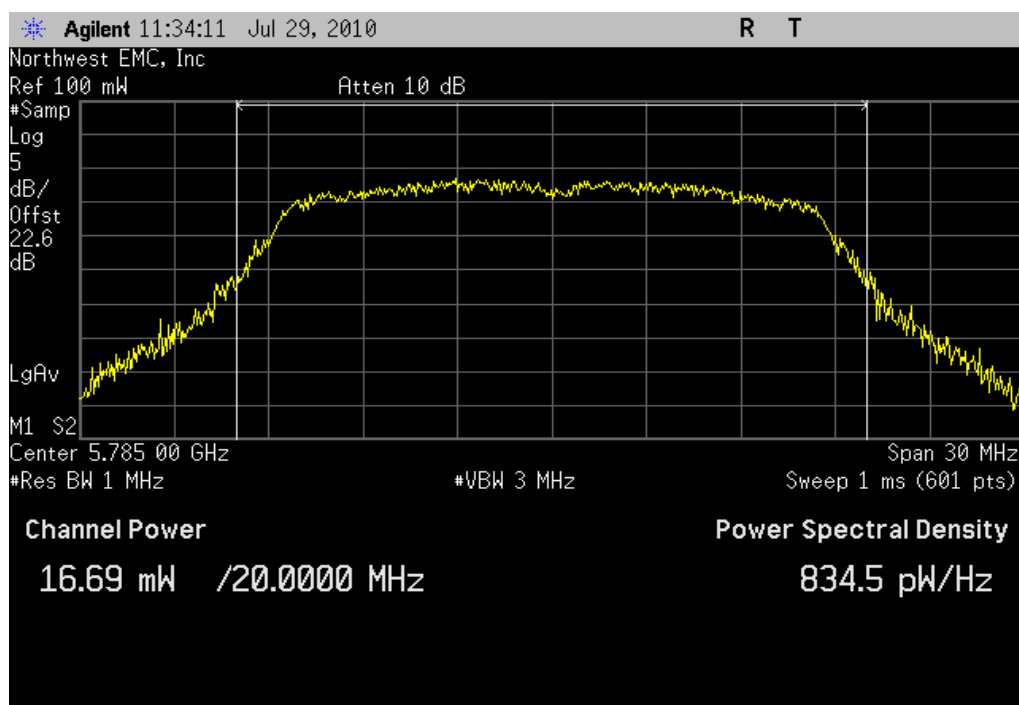


5725 MHz - 5850 MHz Band, 802.11(n) MCS0, Mid Channel 157, 5785 MHz

Result: Pass

Value: 16.7 mW

Limit: 1 W



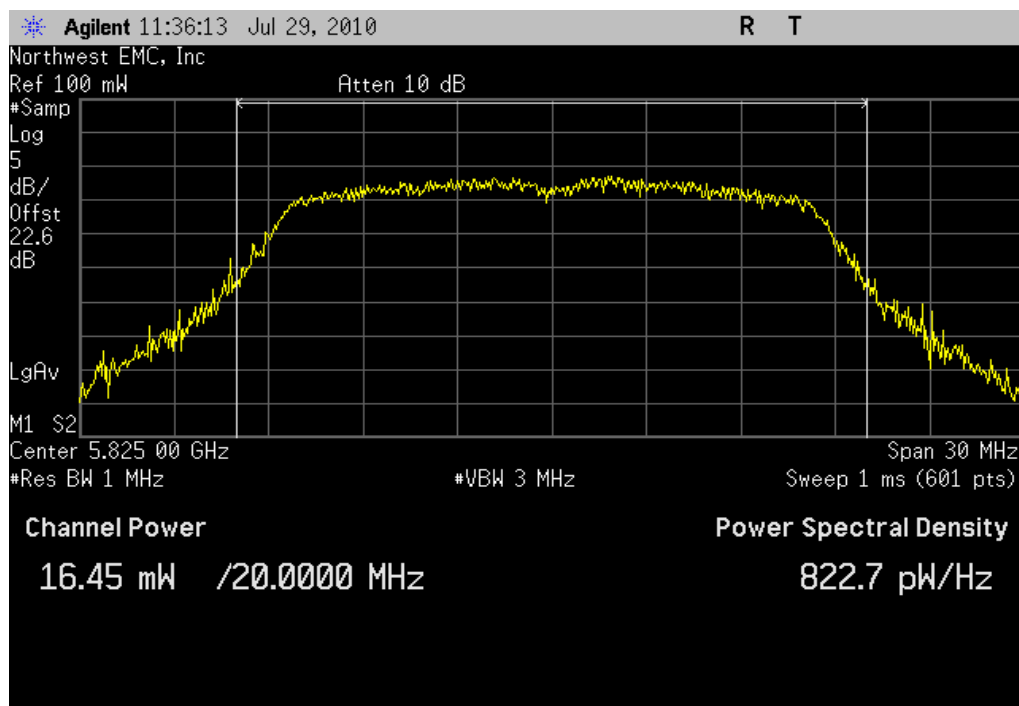
OUTPUT POWER - CHANNEL POWER

5725 MHz - 5850 MHz Band, 802.11(n) MCS0, High Channel 165, 5825 MHz

Result: Pass

Value: 16.5 mW

Limit: 1 W

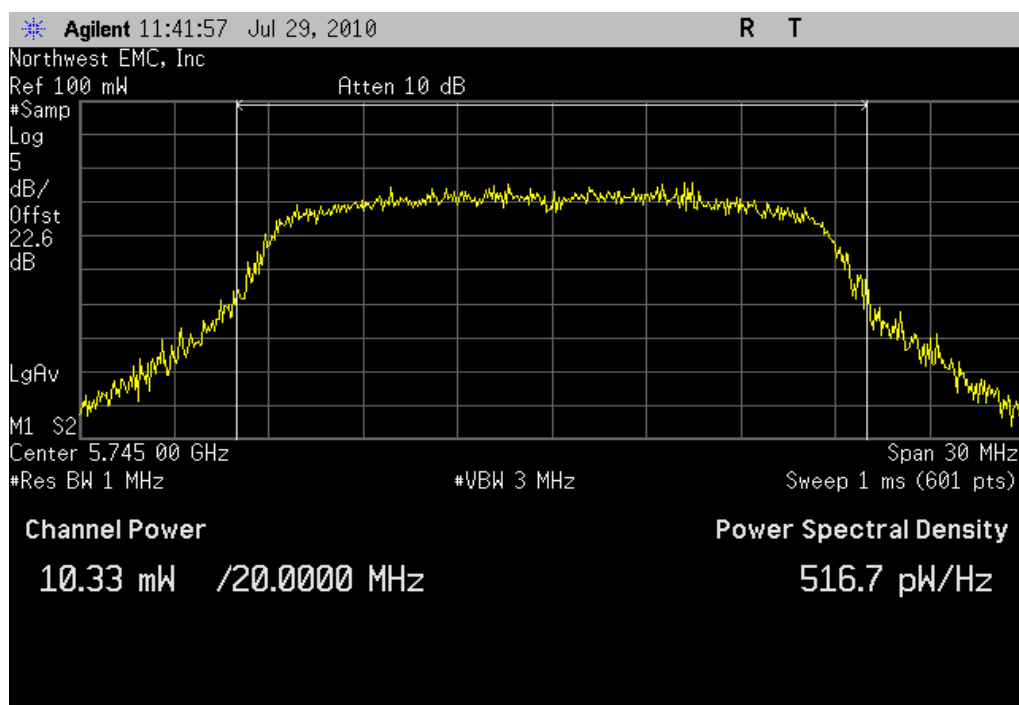


5725 MHz - 5850 MHz Band, 802.11(n) MCS7, Low Channel 149, 5745 MHz

Result: Pass

Value: 10.3 mw

Limit: 1 W



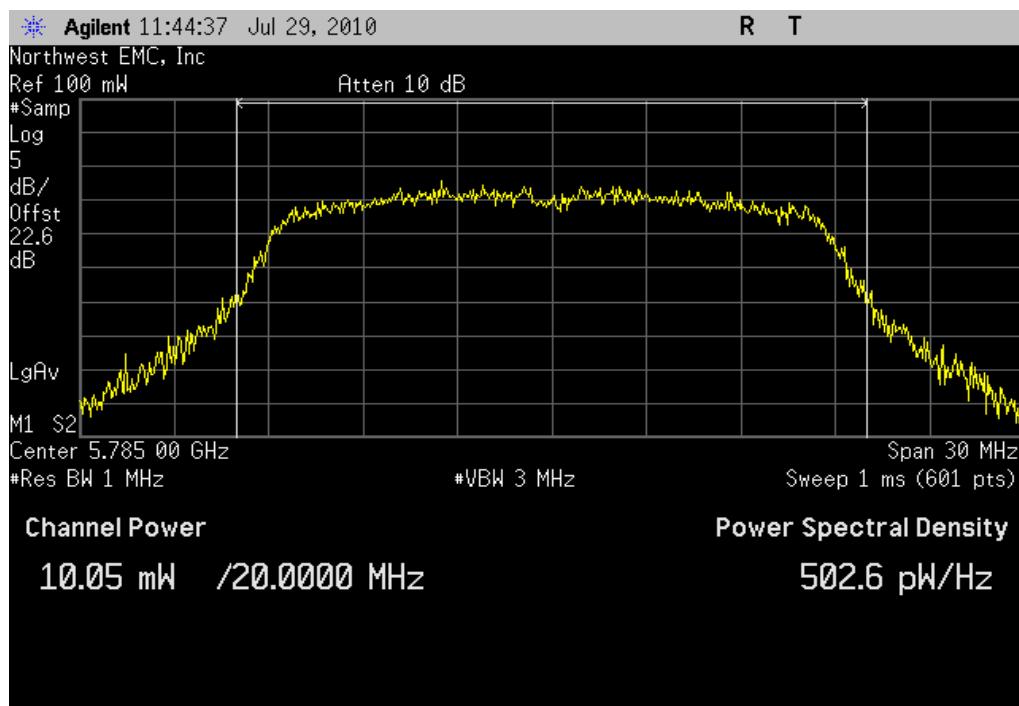
OUTPUT POWER - CHANNEL POWER

5725 MHz - 5850 MHz Band, 802.11(n) MCS7, Mid Channel 157, 5785 MHz

Result: Pass

Value: 10.1 mW

Limit: 1 W

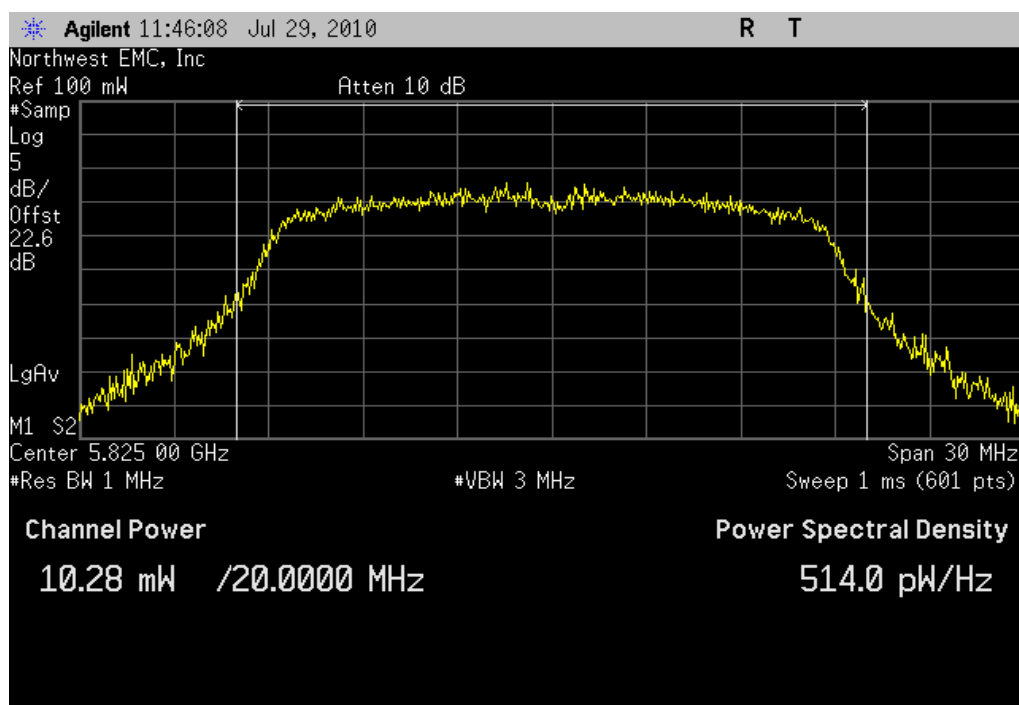


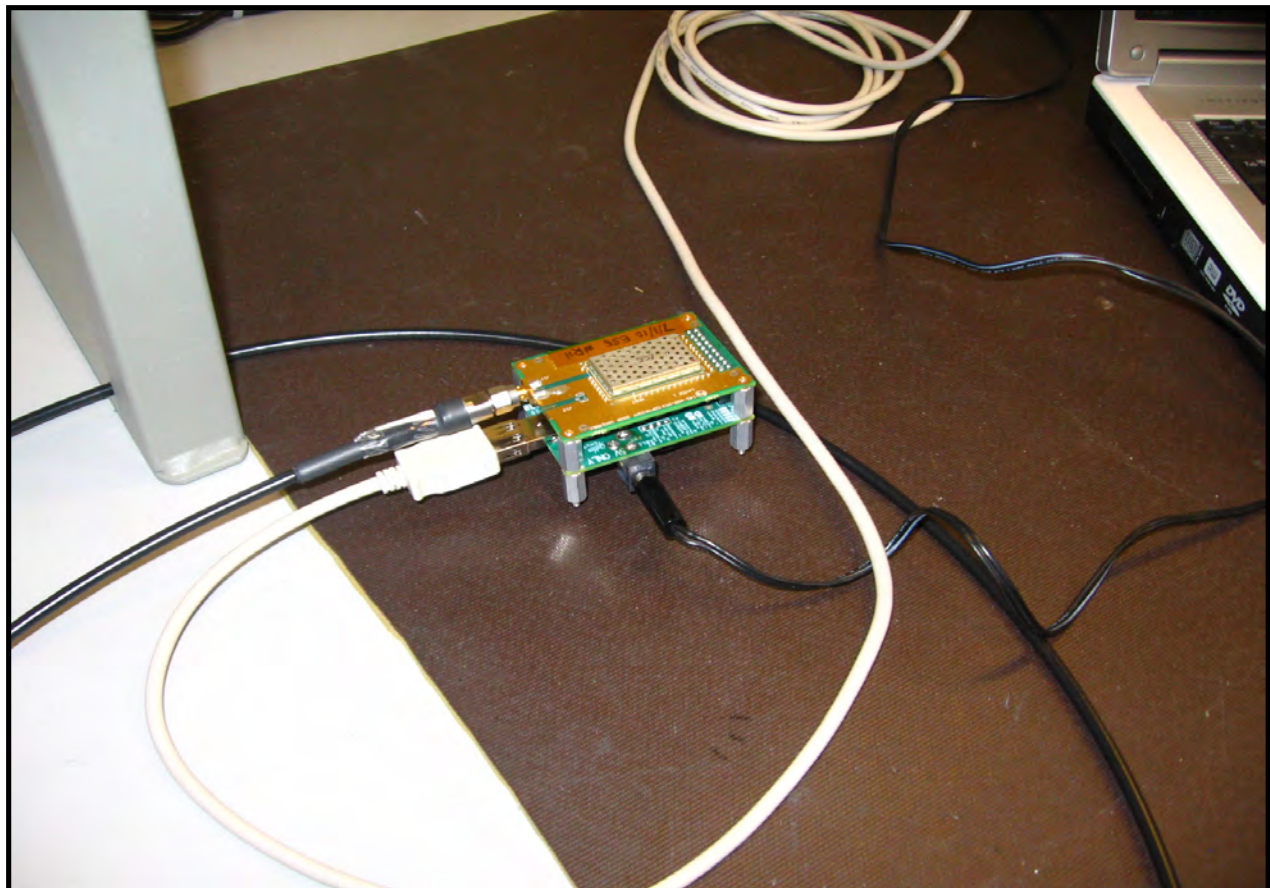
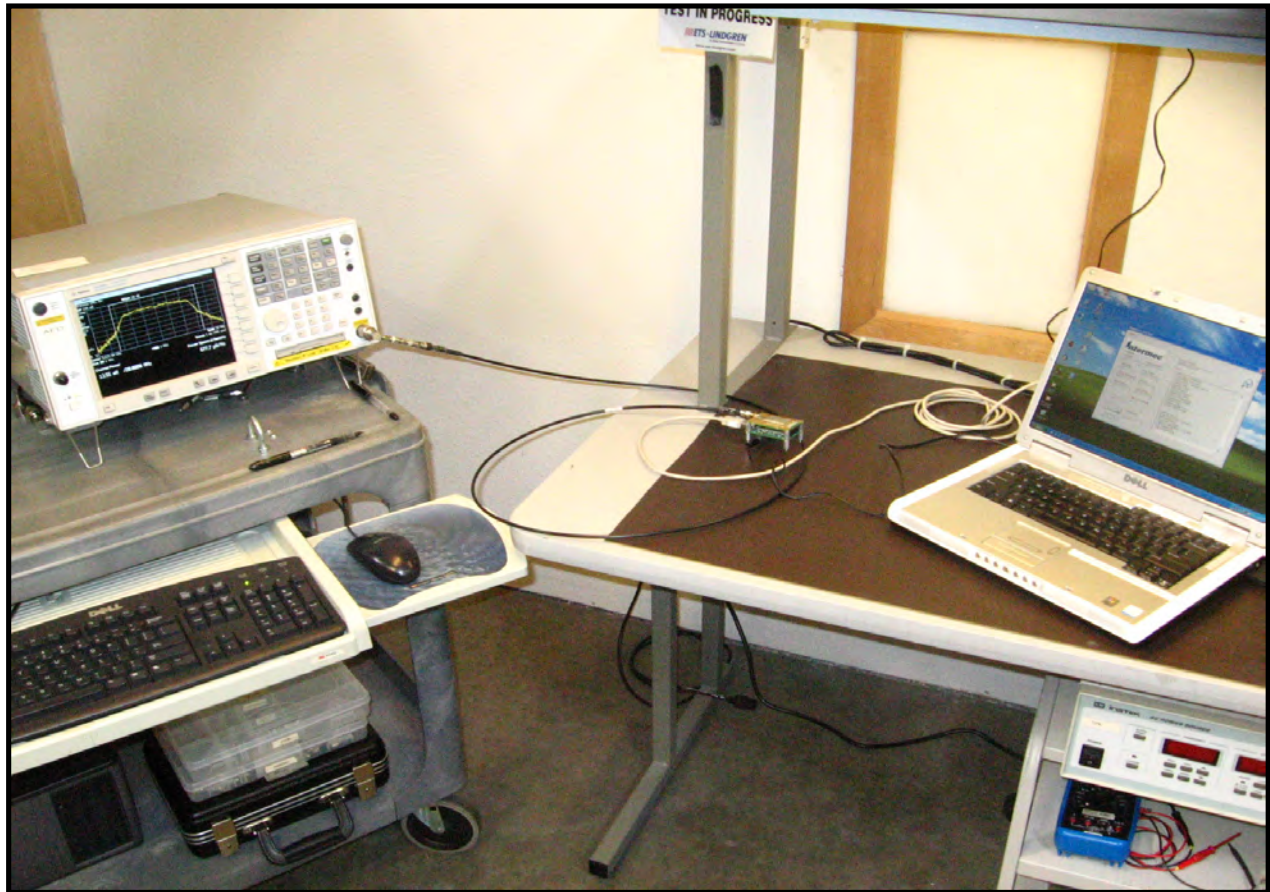
5725 MHz - 5850 MHz Band, 802.11(n) MCS7, High Channel 165, 5825 MHz

Result: Pass

Value: 10.3 mW

Limit: 1 W





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/21/2009	13
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its lowest, middle, and maximum data rate available.

The spectrum was scanned across each band edge from at least 25 MHz below the band edge to 25 MHz above the band edge.

EMC

BAND EDGE COMPLIANCE

EUT:	RC12	Work Order:	INMC0575
Serial Number:	R11	Date:	08/02/10
Customer:	Intermec Technologies Corporation	Temperature:	23°C
Attendees:	none	Humidity:	38%
Project:	None	Barometric Pres.:	1015.3 mb
Tested by:	Rod Peloquin	Power:	5VDC
		Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2010	ANSI C63.10:2009

COMMENTS
None

DEVIATIONS FROM TEST STANDARD
No Deviations

Configuration #	2	Signature 
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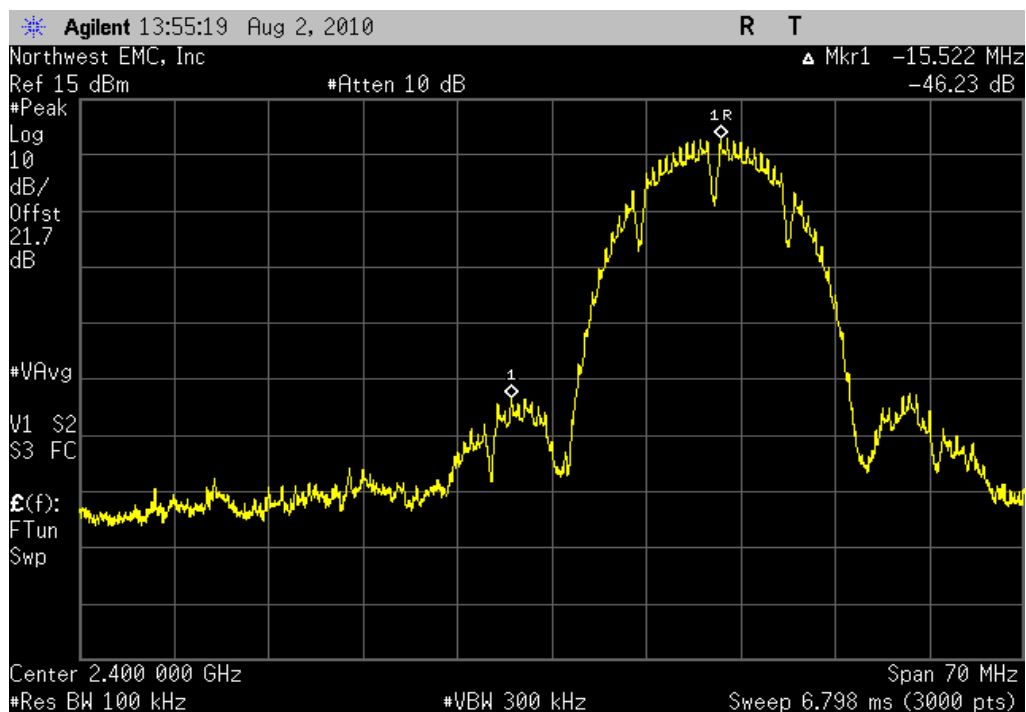
	Value	Limit	Results
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	-46.23 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-58.92 dBc	≤ -20 dBc	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	-45.61 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-58.92 dBc	≤ -20 dBc	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	-30.69 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-48.30 dBc	≤ -20 dBc	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	-32.44 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-49.04 dBc	≤ -20 dBc	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	-33.39 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-47.88 dBc	≤ -20 dBc	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	-31.30 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-45.78 dBc	≤ -20 dBc	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	-32.20 dBc	≤ -20 dBc	Pass
High Channel 11, 2462 MHz	-50.07 dBc	≤ -20 dBc	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	-42.86 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-51.19 dBc	≤ -20 dBc	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	-42.86 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-50.87 dBc	≤ -20 dBc	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	-46.26 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-52.78 dBc	≤ -20 dBc	Pass
802.11(n) MCS0			
Low Channel 149, 5745 MHz	-41.33 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-49.42 dBc	≤ -20 dBc	Pass
802.11(n) MCS7			
Low Channel 149, 5745 MHz	-47.00 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz	-51.58 dBc	≤ -20 dBc	Pass

BAND EDGE COMPLIANCE

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

Result: Pass

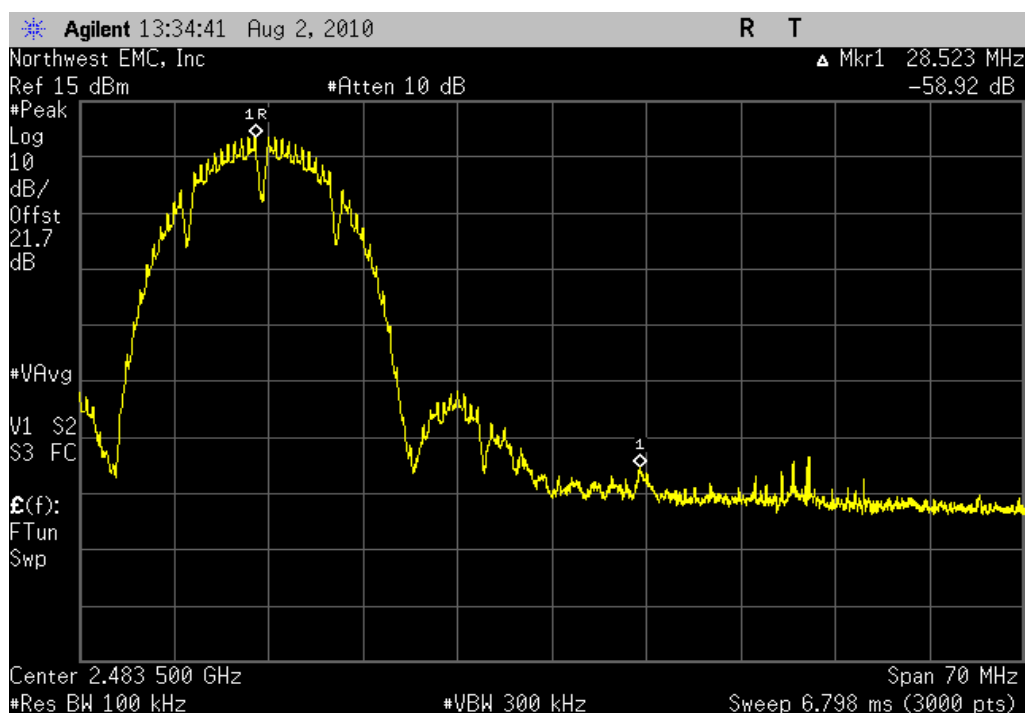
Value: -46.23 dBc

Limit: ≤ -20 dBc

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -58.92 dBc

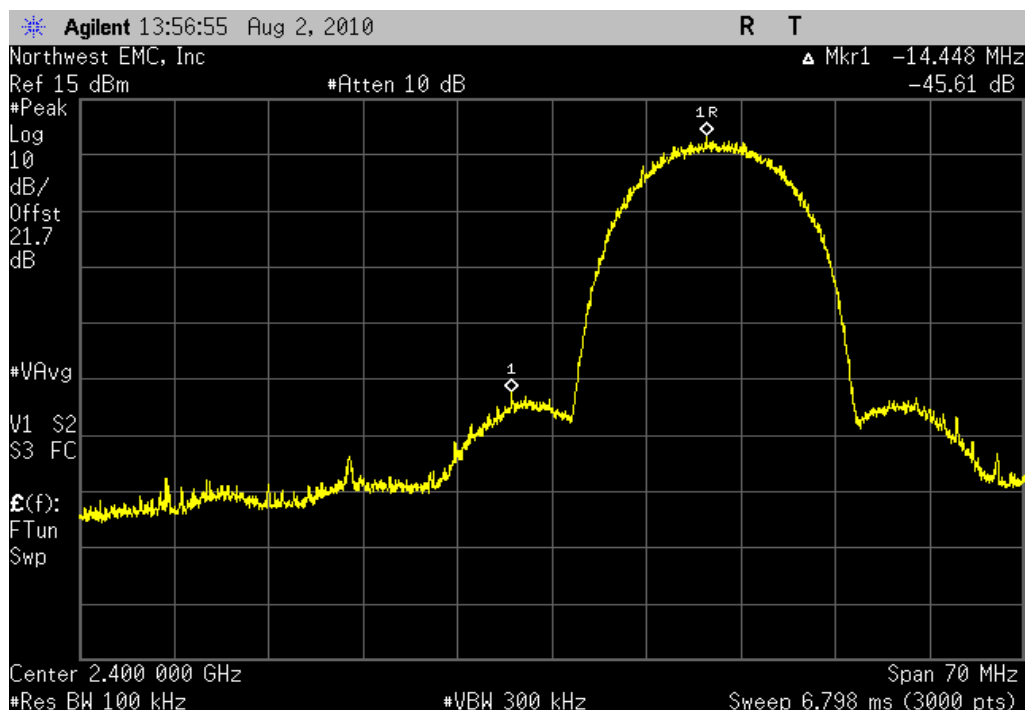
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

Result: Pass

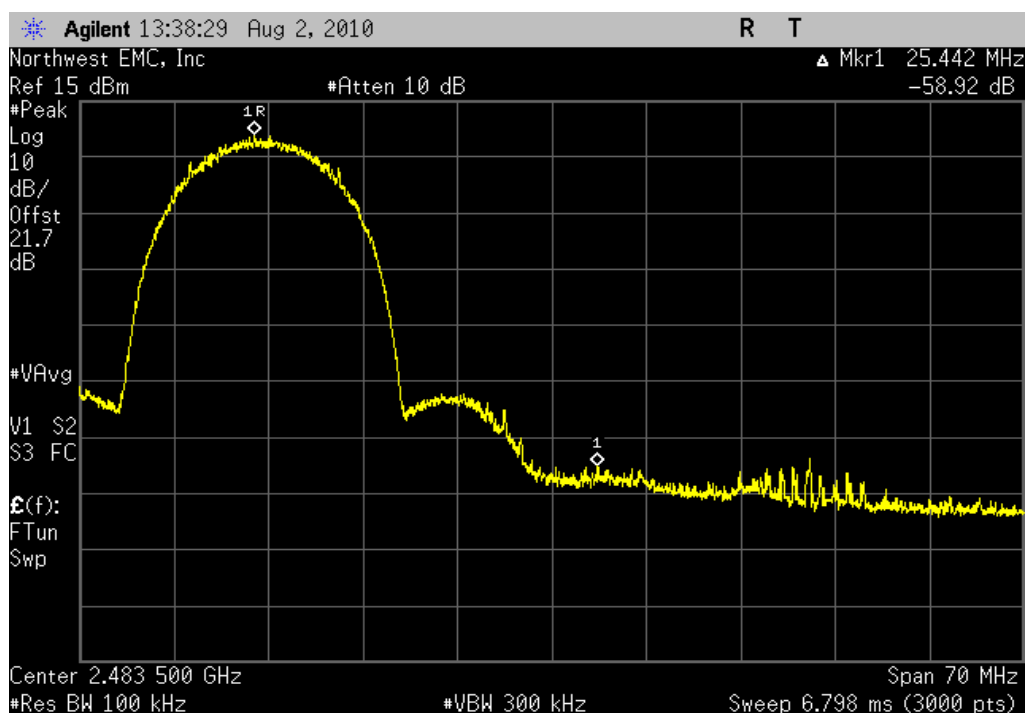
Value: -45.61 dBc

Limit: ≤ -20 dBc

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -58.92 dBc

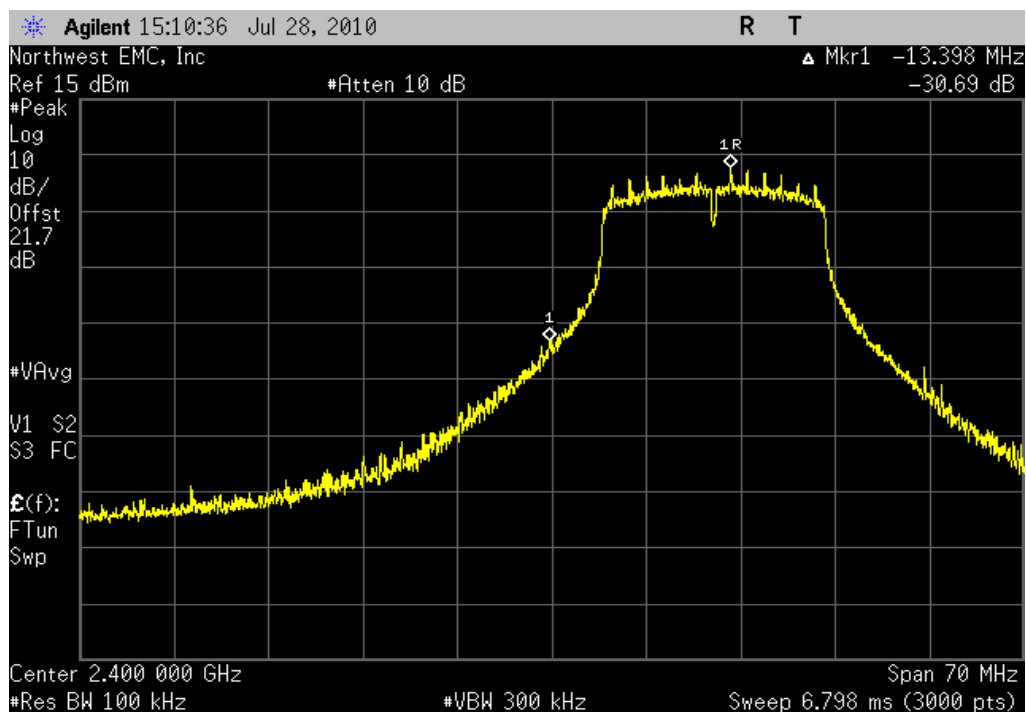
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

Result: Pass

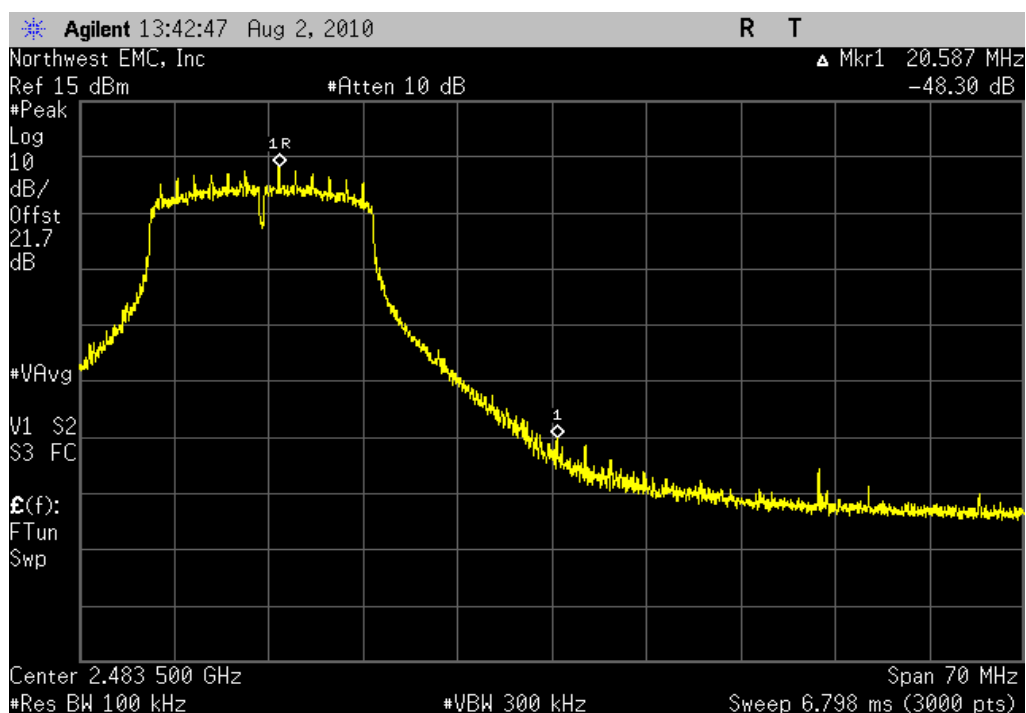
Value: -30.69 dBc

Limit: ≤ -20 dBc

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -48.30 dBc

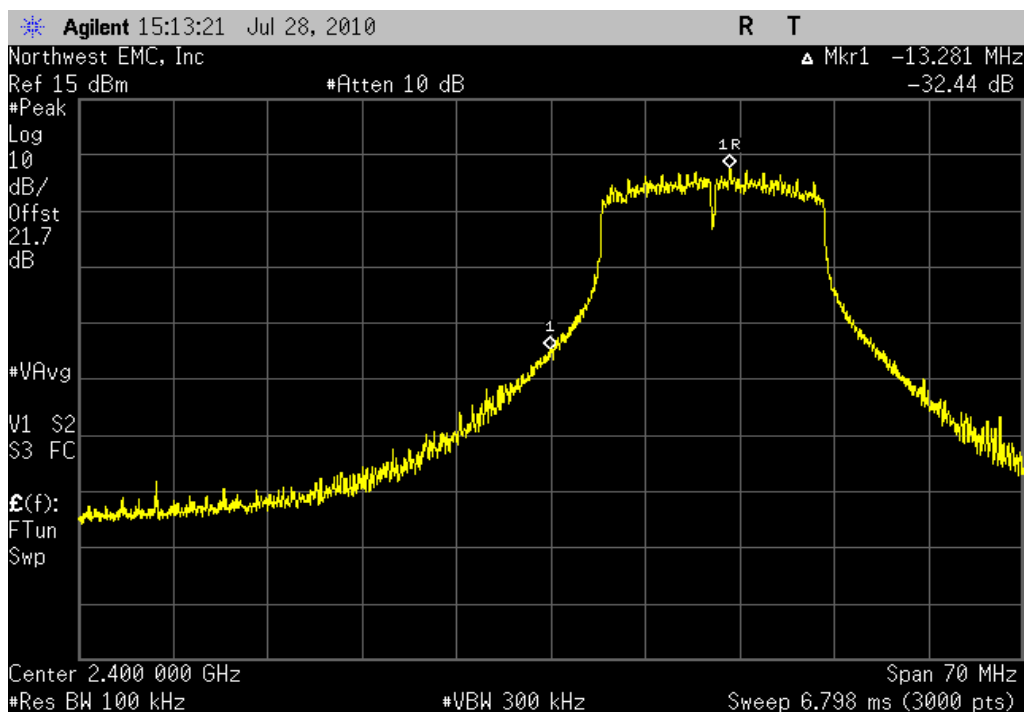
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

Result: Pass

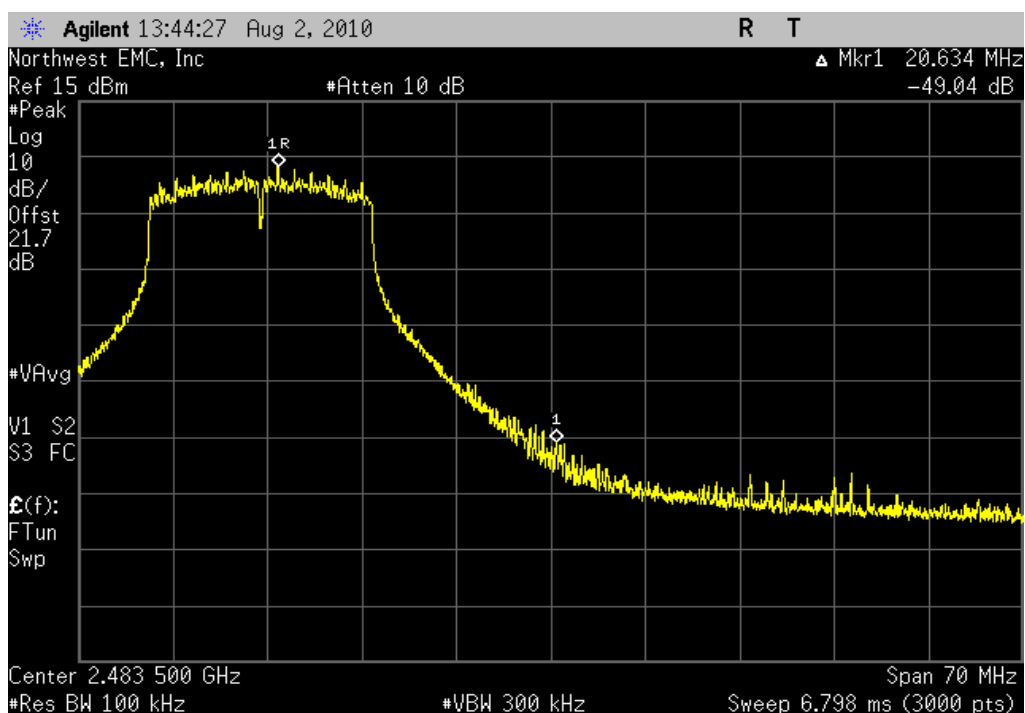
Value: -32.44 dBc

Limit: ≤ -20 dBc

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -49.04 dBc

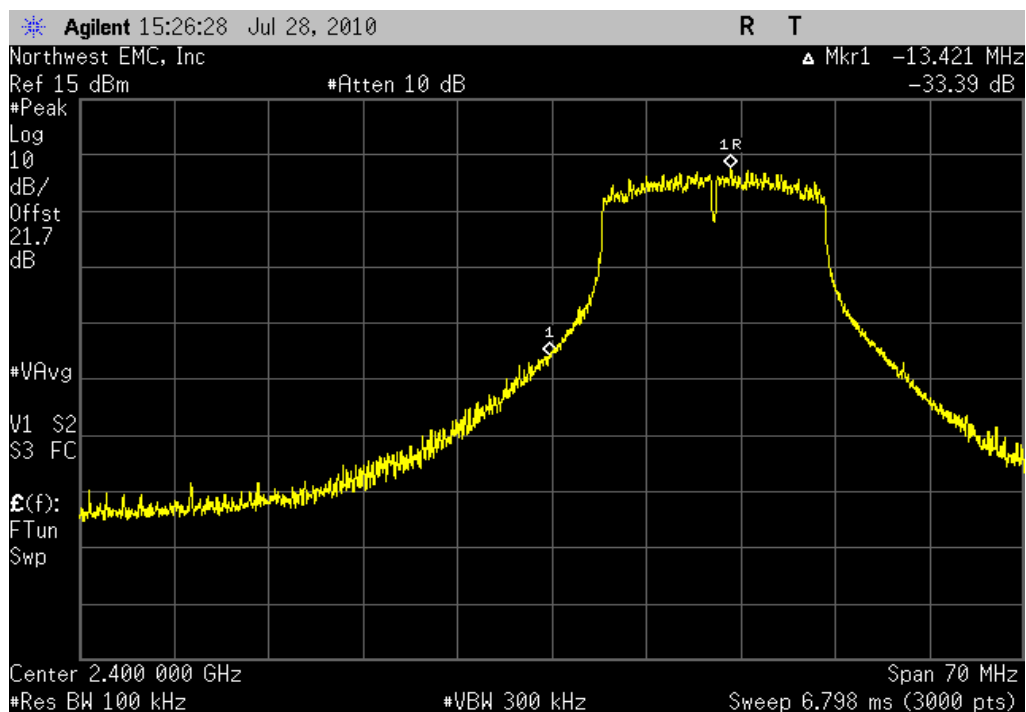
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

Result: Pass

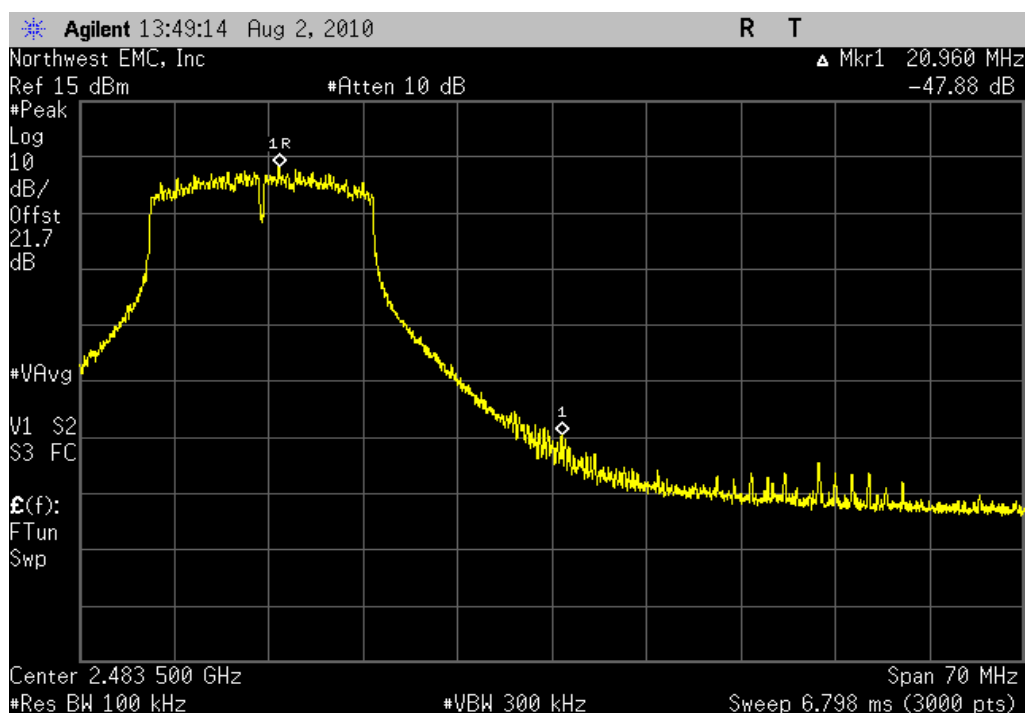
Value: -33.39 dBc

Limit: ≤ -20 dBc

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -47.88 dBc

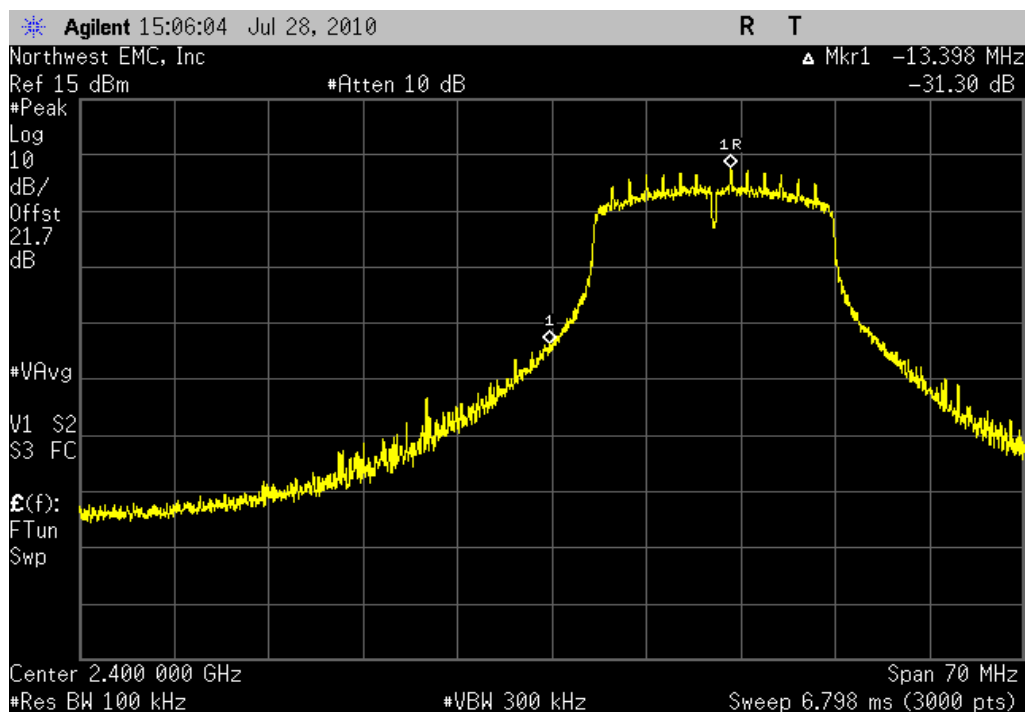
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

Result: Pass

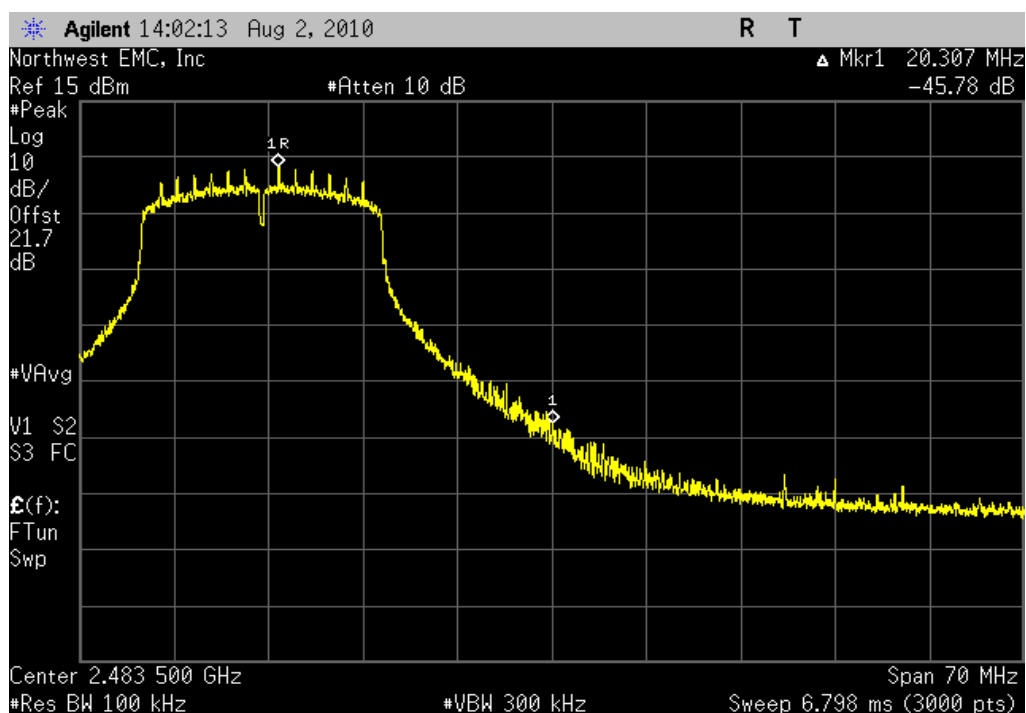
Value: -31.30 dBc

Limit: ≤ -20 dBc

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

Result: Pass

Value: -45.78 dBc

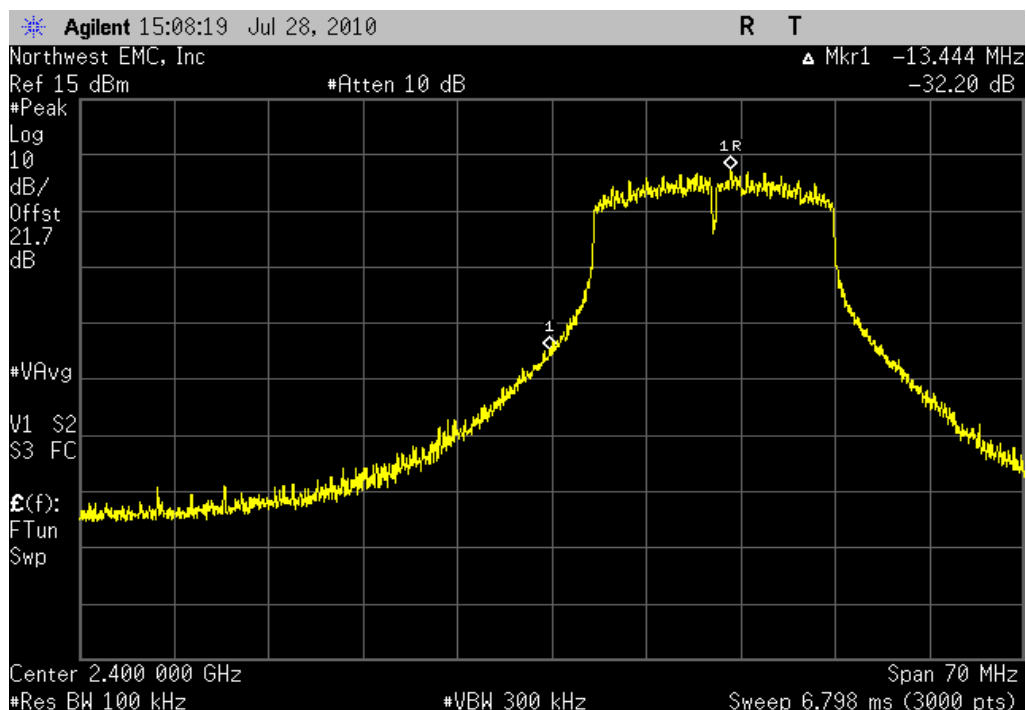
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

Result: Pass

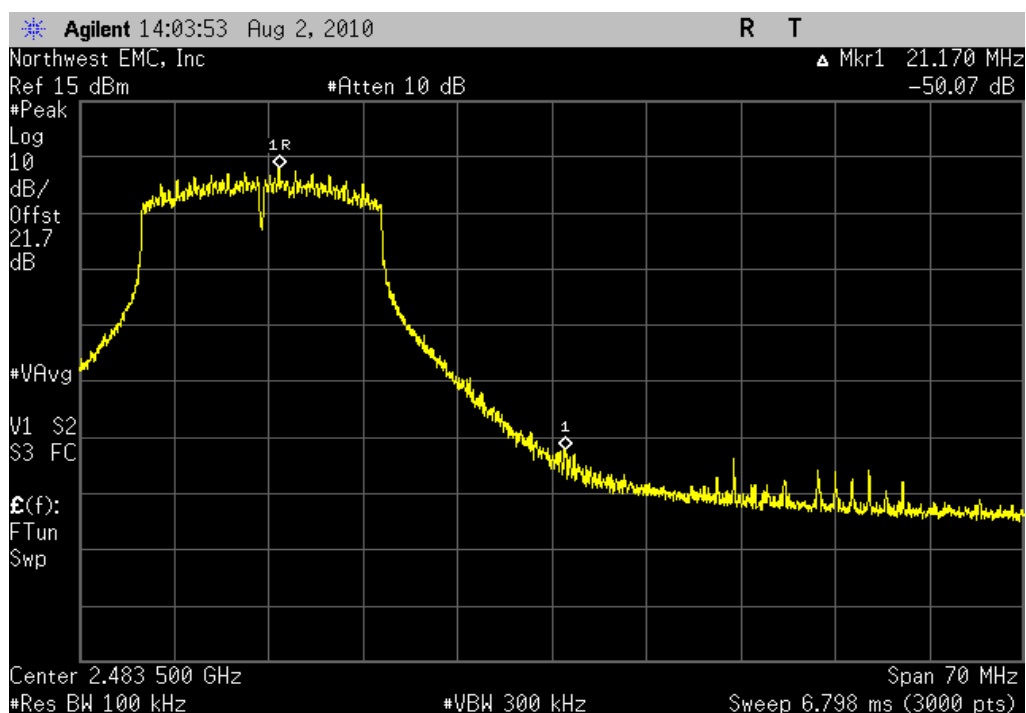
Value: -32.20 dBc

Limit: ≤ -20 dBc

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

Result: Pass

Value: -50.07 dBc

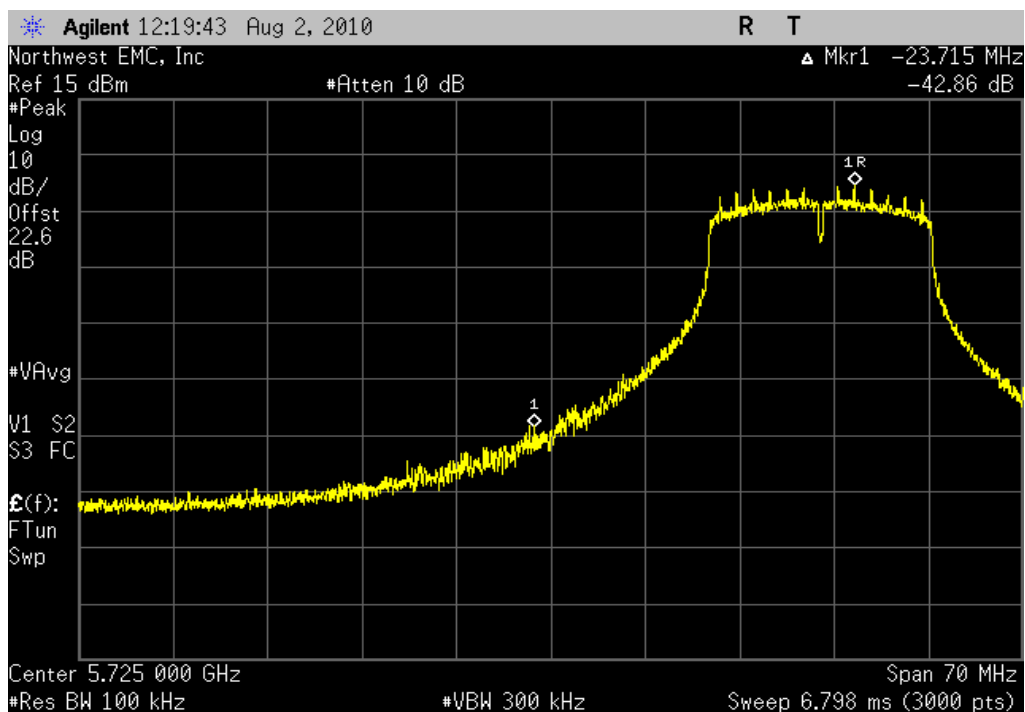
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

Result: Pass

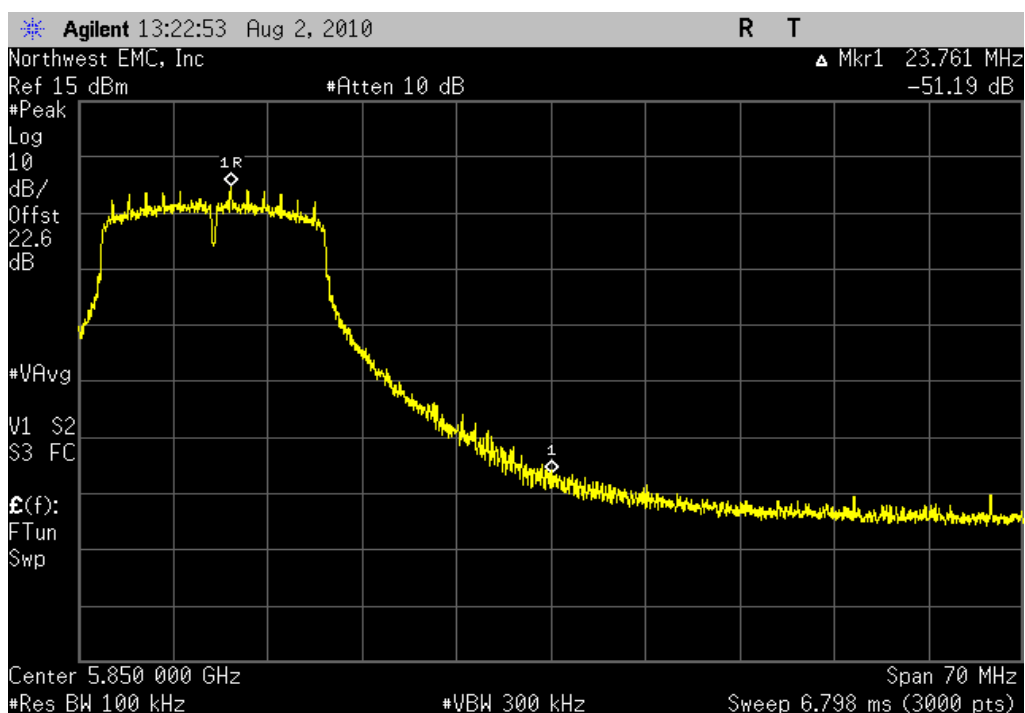
Value: -42.86 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: -51.19 dBc

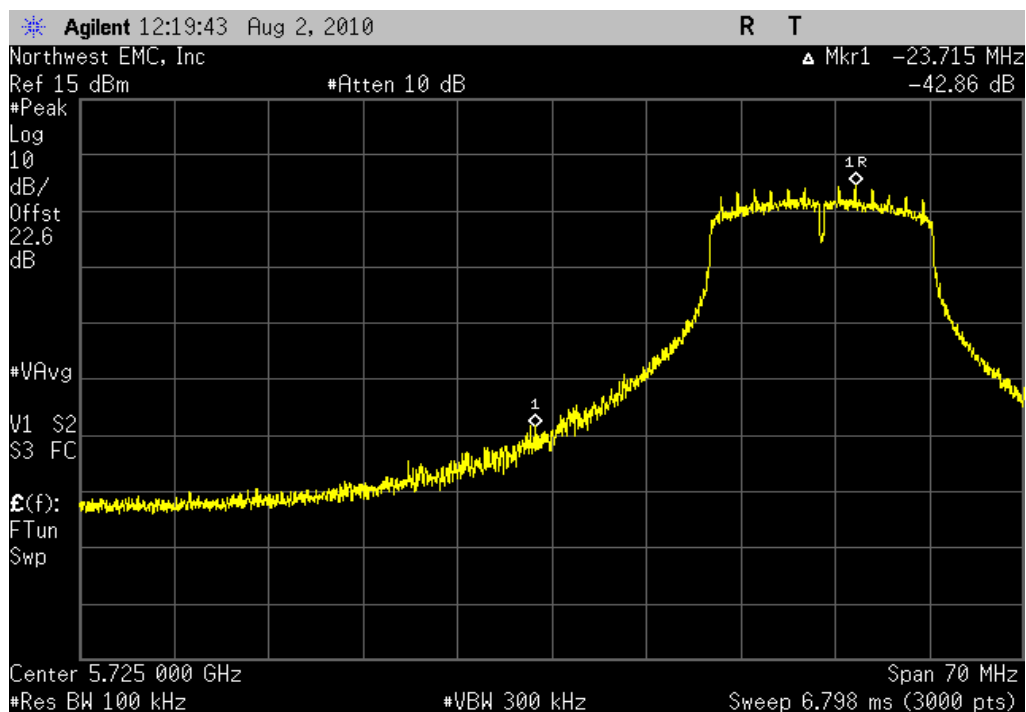
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

Result: Pass

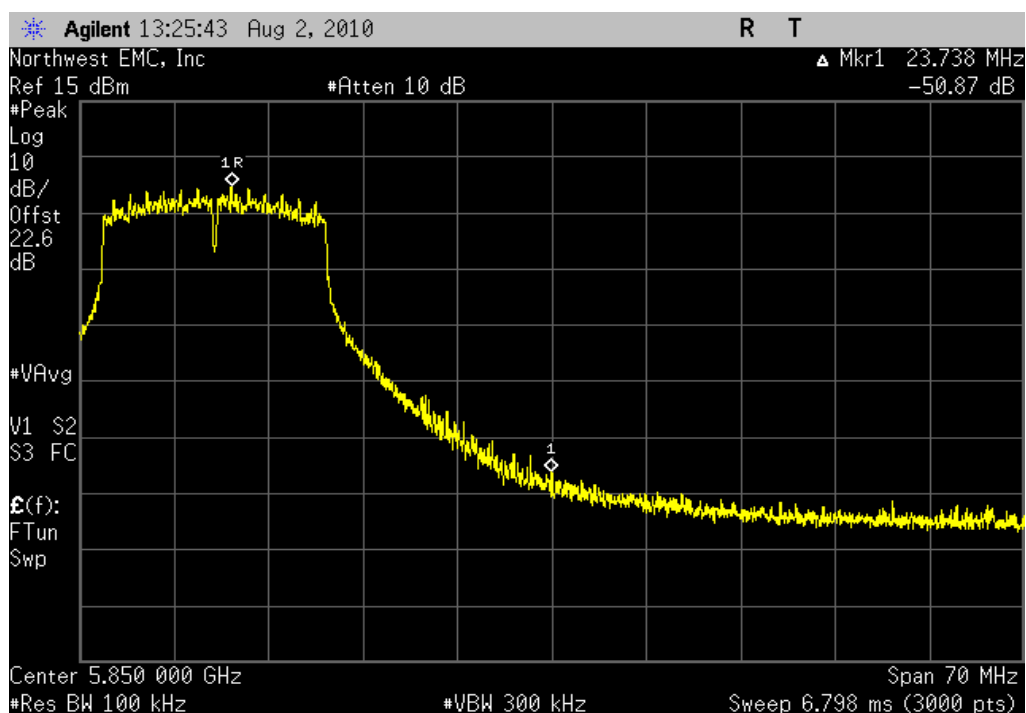
Value: -42.86 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: -50.87 dBc

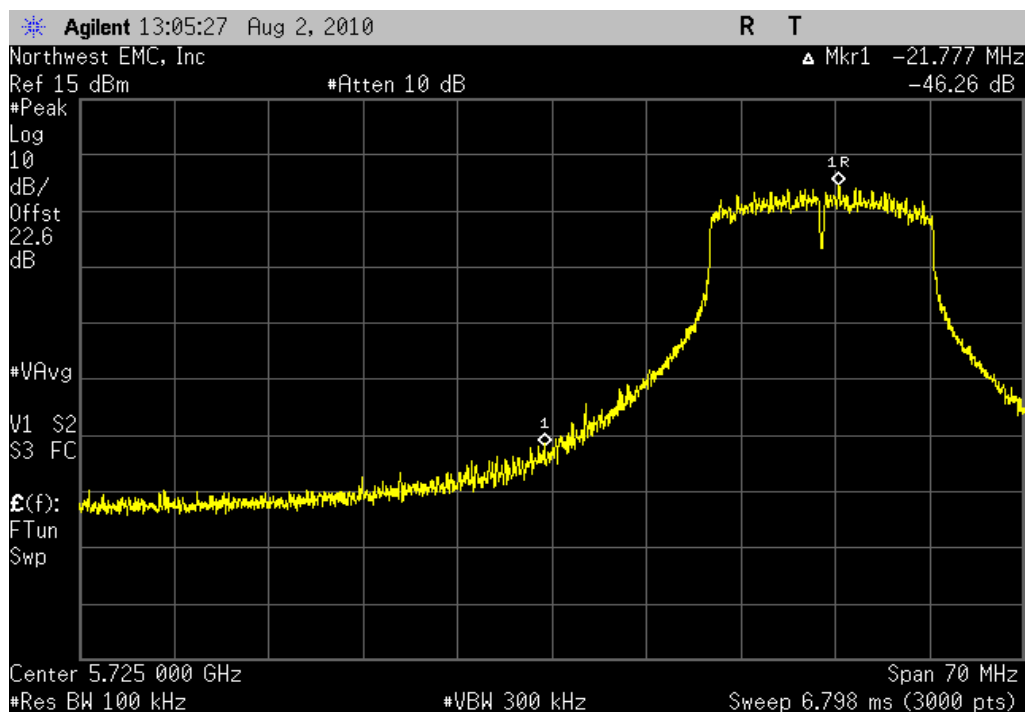
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

Result: Pass

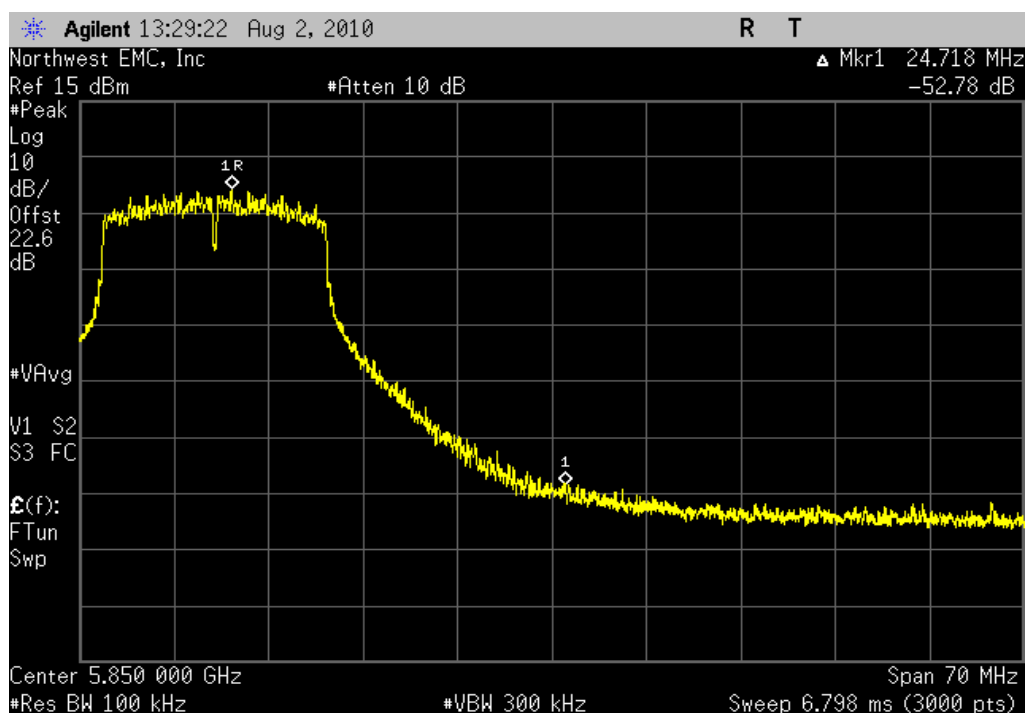
Value: -46.26 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: -52.78 dBc

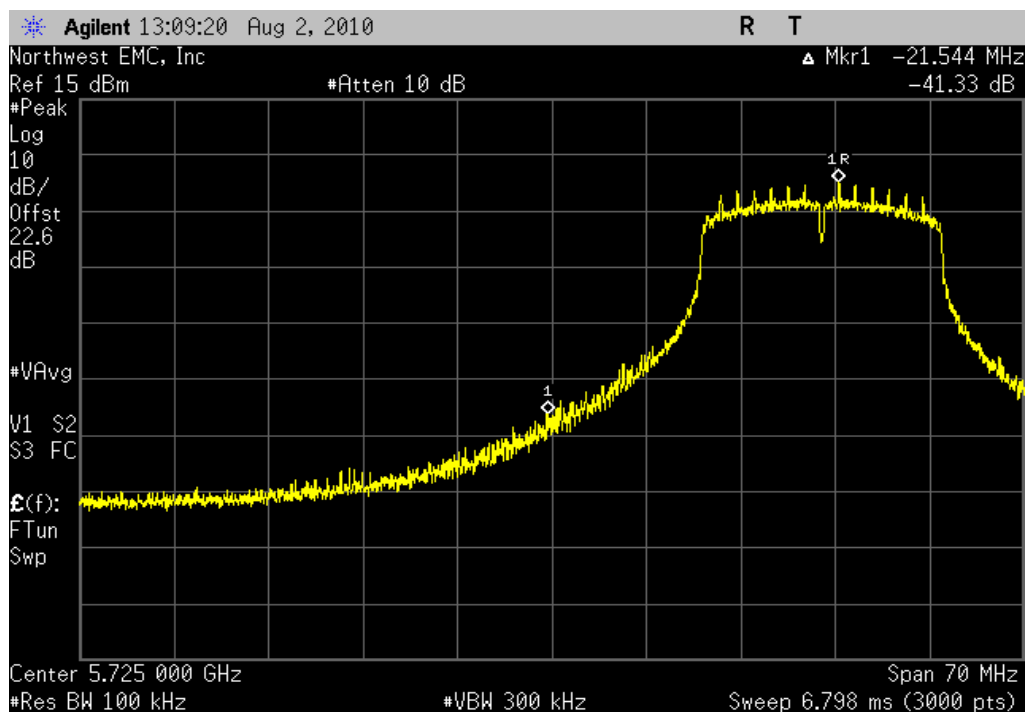
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

5725 MHz - 5850 MHz Band, 802.11(n) MCS0, Low Channel 149, 5745 MHz

Result: Pass

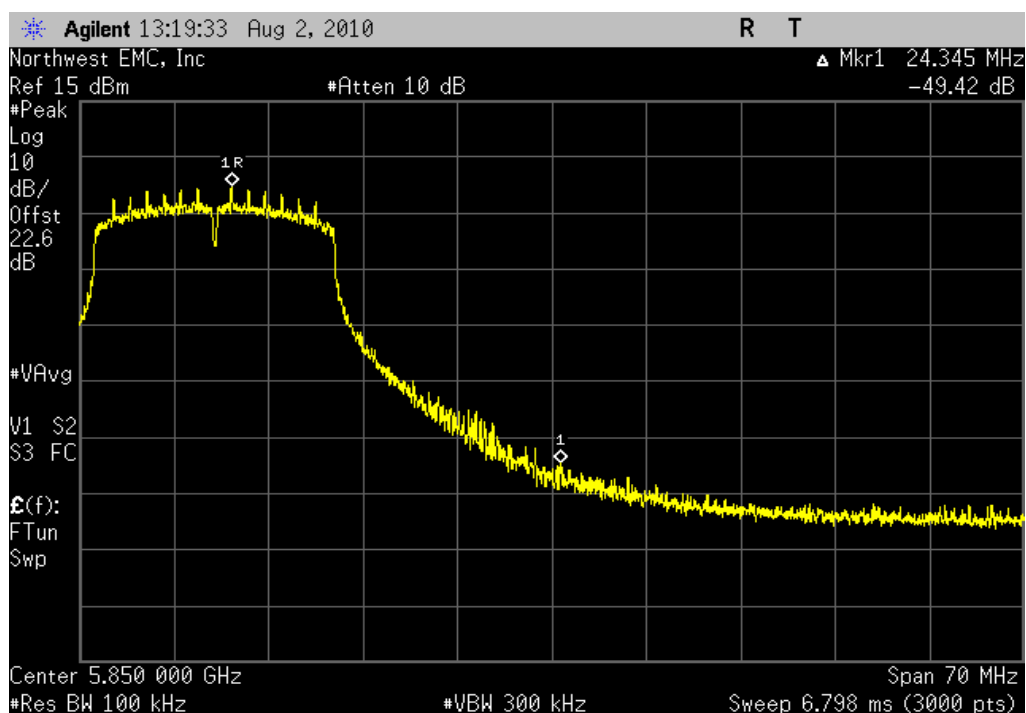
Value: -41.33 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) MCS0, High Channel 165, 5825 MHz

Result: Pass

Value: -49.42 dBc

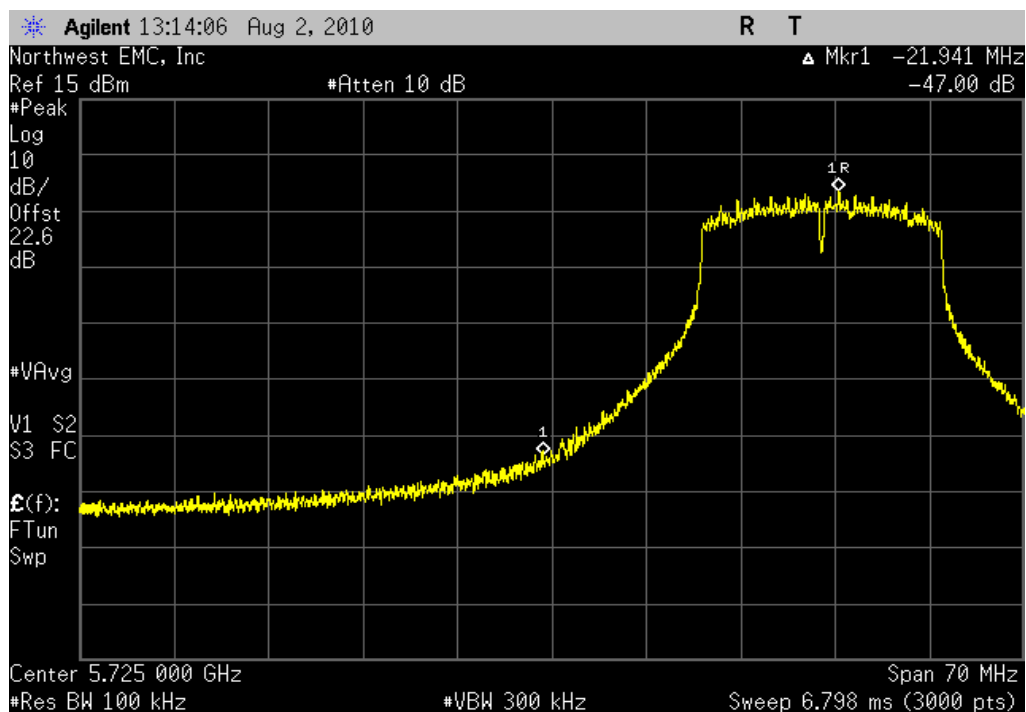
Limit: ≤ -20 dBc

BAND EDGE COMPLIANCE

5725 MHz - 5850 MHz Band, 802.11(n) MCS7, Low Channel 149, 5745 MHz

Result: Pass

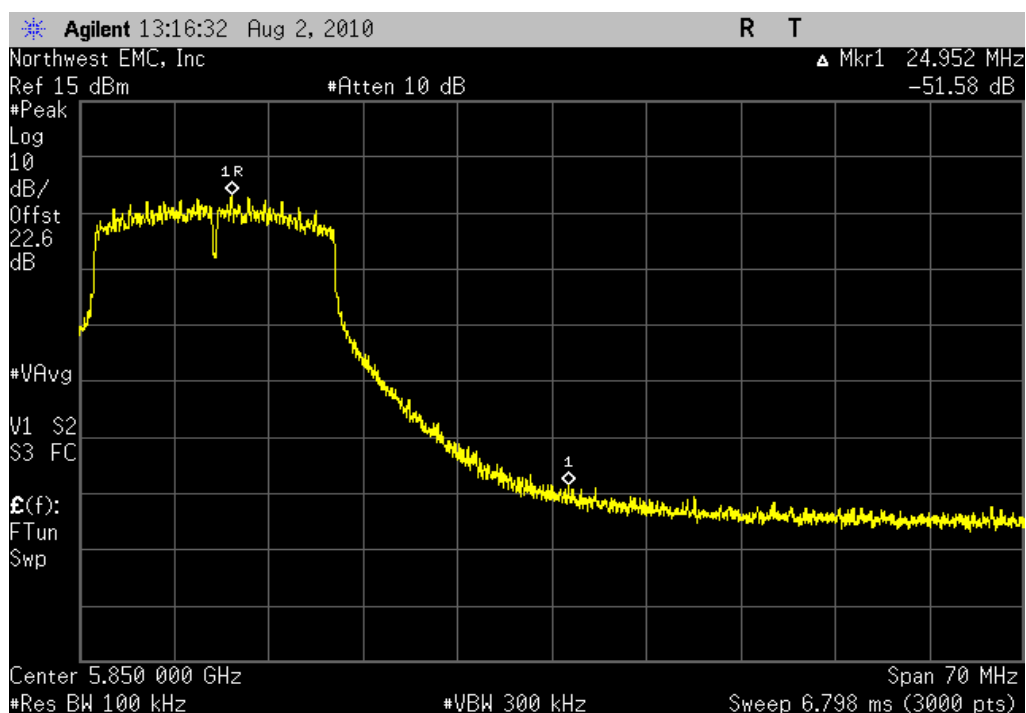
Value: -47.00 dBc

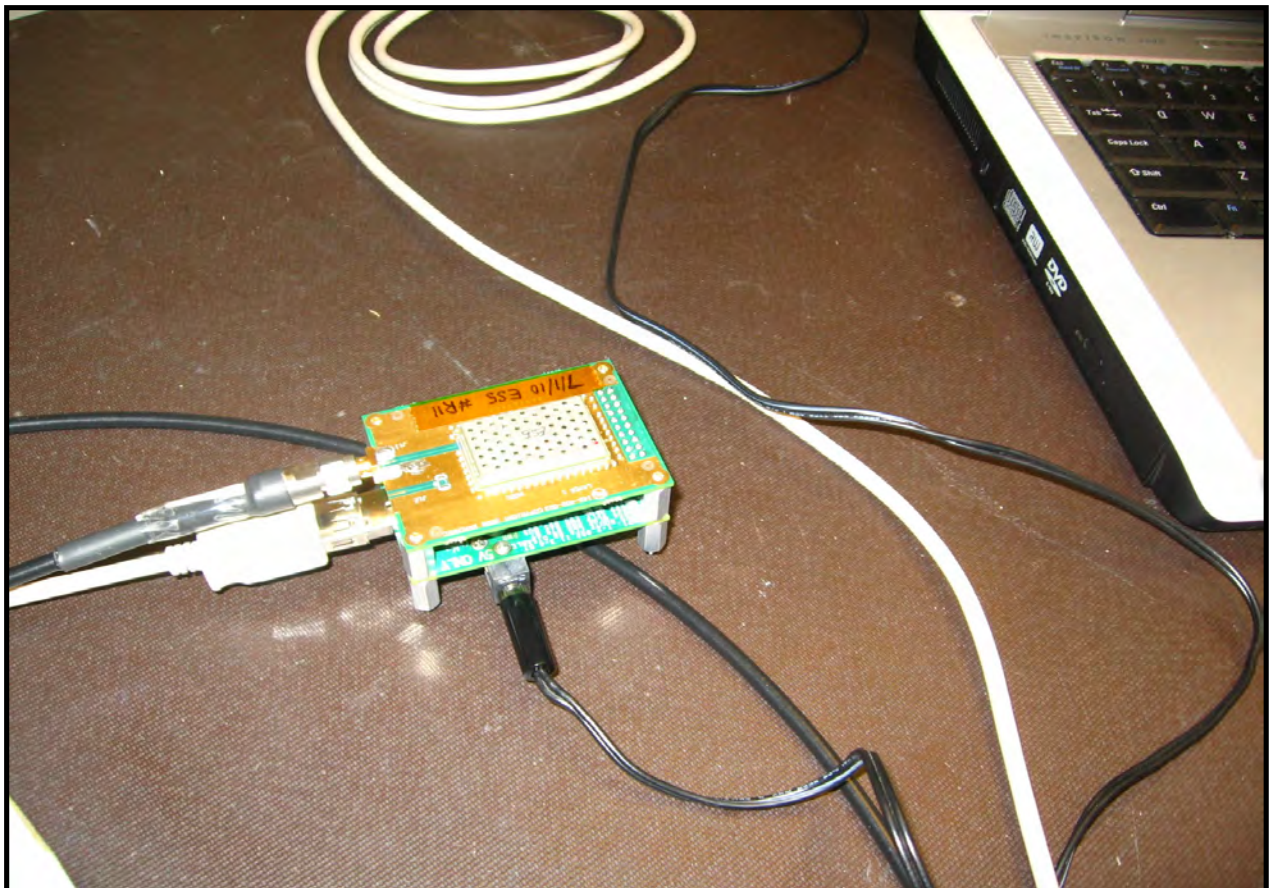
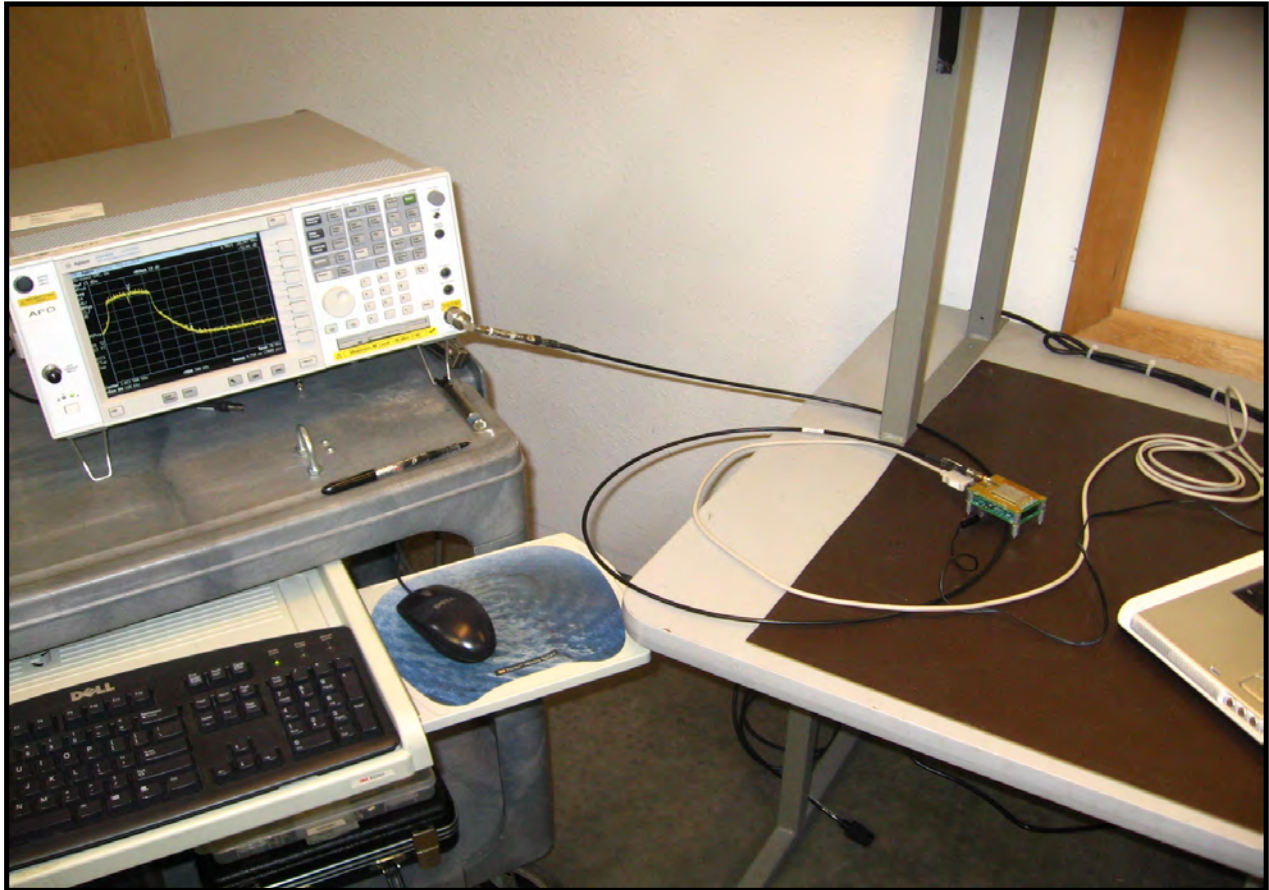
Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) MCS7, High Channel 165, 5825 MHz

Result: Pass

Value: -51.58 dBc

Limit: ≤ -20 dBc



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

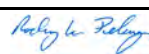
TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/21/2009	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to low, medium, and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate for each of its available modulations. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

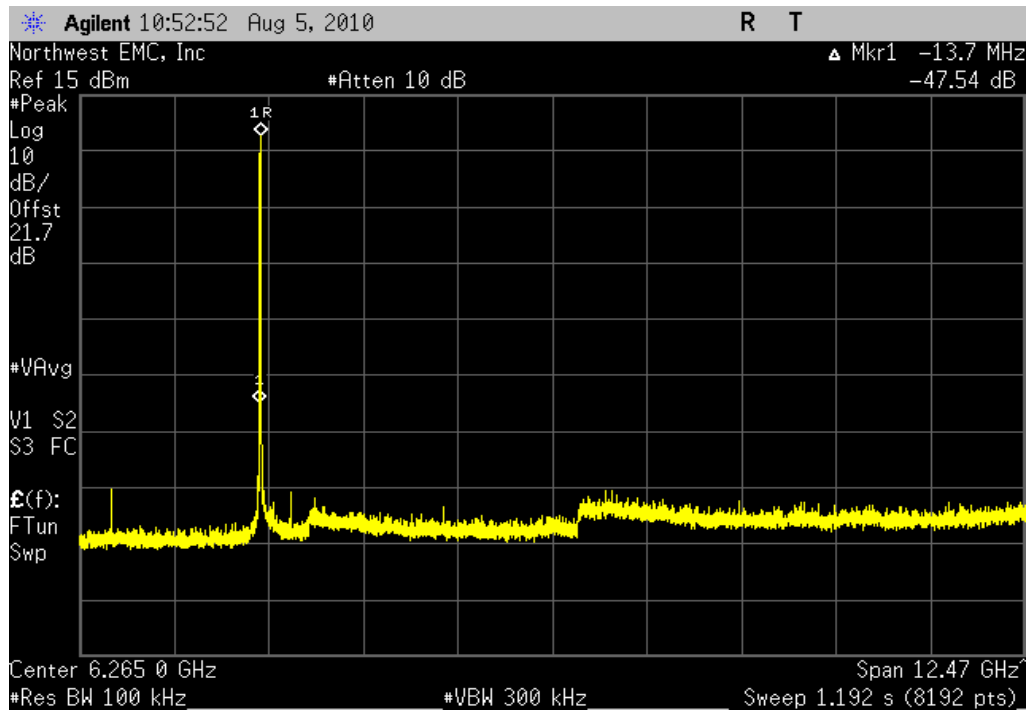
NORTHWEST		SPURIOUS CONDUCTED EMISSIONS		XMit 2010.07.29	
EMC					
EUT: RC12		Work Order: INMC0575			
Serial Number: R11		Date: 08/05/10			
Customer: Intermec Technologies Corporation		Temperature: 22°C			
Attendees: None		Humidity: 38%			
Project: None		Barometric Pres.: 1015.5 mb			
Tested by: Rod Peloquin		Power: 5VDC		Job Site: EV06	
TEST SPECIFICATIONS		Test Method			
FCC 15.247:2010		ANSI C63.10:2009			
COMMENTS					
None					
DEVIATIONS FROM TEST STANDARD					
No Deviations					
Configuration #	2				
		Signature			
		Value		Limit	
				Results	
2400 MHz - 2483.5 MHz Band					
802.11(b) 1 Mbps					
Low Channel 1, 2412 MHz					
30 MHz - 12.5 GHz		-47.5 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.4 dBc		< -20 dBc	
Mid Channel 6, 2437 MHz					
30 MHz - 12.5 GHz		-63.6 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.2 dBc		< -20 dBc	
High Channel 11, 2462 MHz					
30 MHz - 12.5 GHz		-60.6 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-52.7 dBc		< -20 dBc	
802.11(b) 11 Mbps					
Low Channel 1, 2412 MHz					
30 MHz - 12.5 GHz		-46.3 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.0 dBc		< -20 dBc	
Mid Channel 6, 2437 MHz					
30 MHz - 12.5 GHz		-51.3 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.0 dBc		< -20 dBc	
High Channel 11, 2462 MHz					
30 MHz - 12.5 GHz		-56.9 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.2 dBc		< -20 dBc	
802.11(g) 6 Mbps					
Low Channel 1, 2412 MHz					
30 MHz - 12.5 GHz		-32.2 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-52.3 dBc		< -20 dBc	
Mid Channel 6, 2437 MHz					
30 MHz - 12.5 GHz		-55.6 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.0 dBc		< -20 dBc	
High Channel 11, 2462 MHz					
30 MHz - 12.5 GHz		-49.8 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.5 dBc		< -20 dBc	
802.11(g) 36 Mbps					
Low Channel 1, 2412 MHz					
30 MHz - 12.5 GHz		-34.1 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.1 dBc		< -20 dBc	
Mid Channel 6, 2437 MHz					
30 MHz - 12.5 GHz		-48.9 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.3 dBc		< -20 dBc	
High Channel 11, 2462 MHz					
30 MHz - 12.5 GHz		-49.5 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.1 dBc		< -20 dBc	
802.11(g) 54 Mbps					
Low Channel 1, 2412 MHz					
30 MHz - 12.5 GHz		-35.7 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-52.0 dBc		< -20 dBc	
Mid Channel 6, 2437 MHz					
30 MHz - 12.5 GHz		-53.4 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-52.3 dBc		< -20 dBc	
High Channel 11, 2462 MHz					
30 MHz - 12.5 GHz		-51.1 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.4 dBc		< -20 dBc	
802.11(n) 20 MHz, MCS0					
Low Channel 1, 2412 MHz					
30 MHz - 12.5 GHz		-28.8 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.5 dBc		< -20 dBc	
Mid Channel 6, 2437 MHz					
30 MHz - 12.5 GHz		-49.1 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-52.6 dBc		< -20 dBc	
High Channel 11, 2462 MHz					
30 MHz - 12.5 GHz		-48.8 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.1 dBc		< -20 dBc	
802.11(n) 20 MHz, MCS7					
Low Channel 1, 2412 MHz					
30 MHz - 12.5 GHz		-34.8 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-52.3 dBc		< -20 dBc	
Mid Channel 6, 2437 MHz					
30 MHz - 12.5 GHz		-49.0 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.6 dBc		< -20 dBc	
High Channel 11, 2462 MHz					
30 MHz - 12.5 GHz		-51.1 dBc		< -20 dBc	
12.5 GHz - 25 GHz		-53.0 dBc		< -20 dBc	

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -47.5 dBc

Limit: < -20 dBc

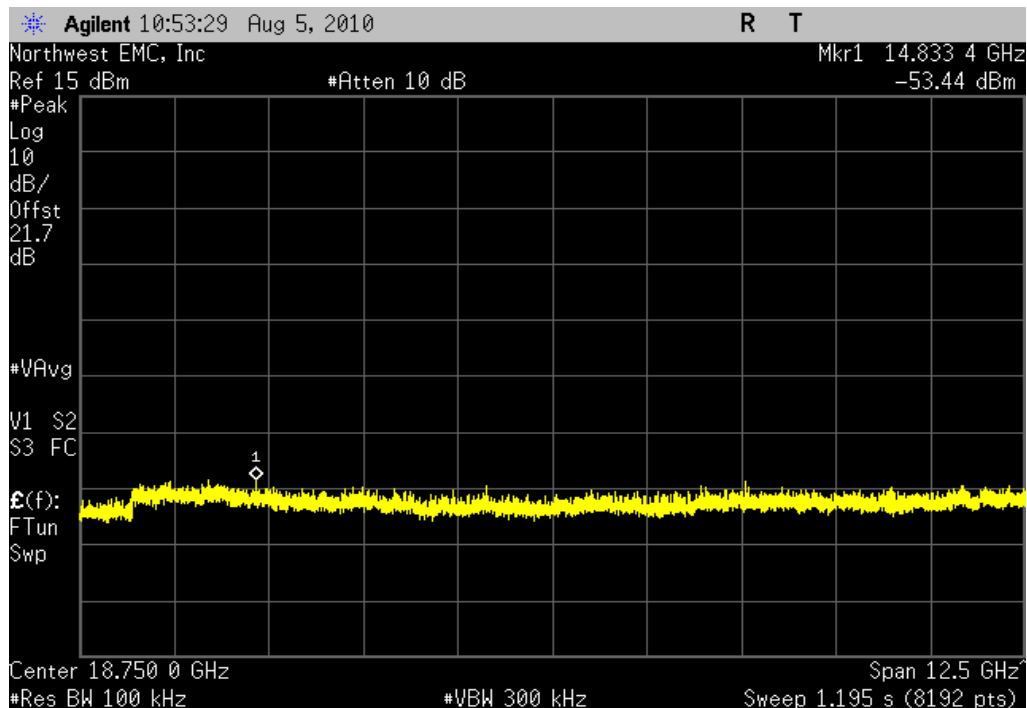


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.4 dBc

Limit: < -20 dBc

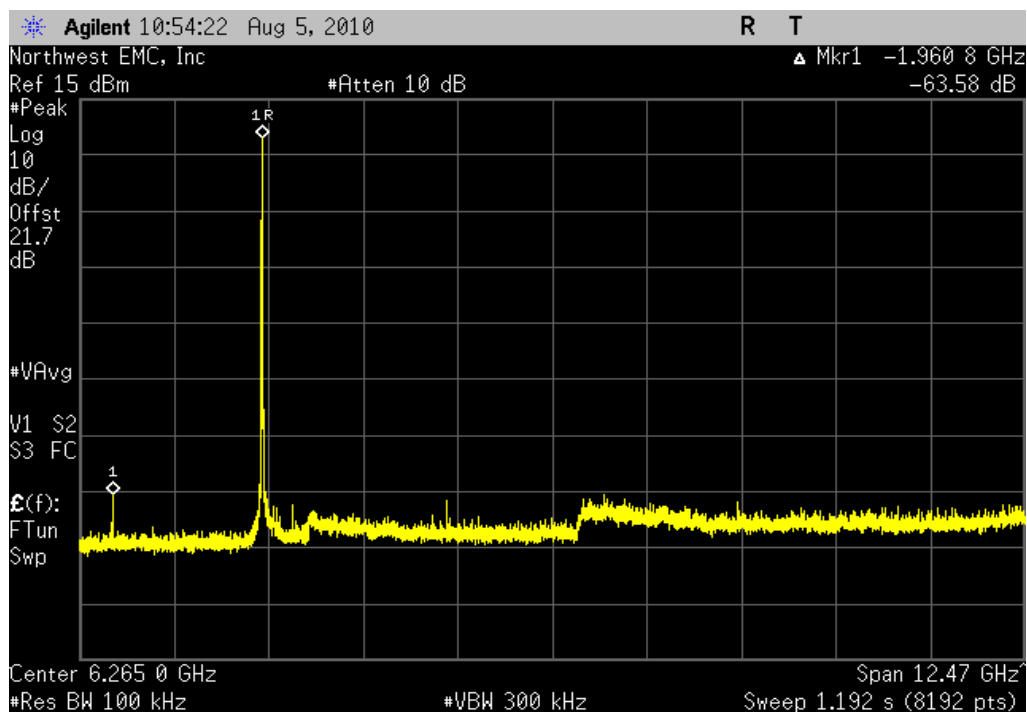


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -63.6 dBc

Limit: < -20 dBc

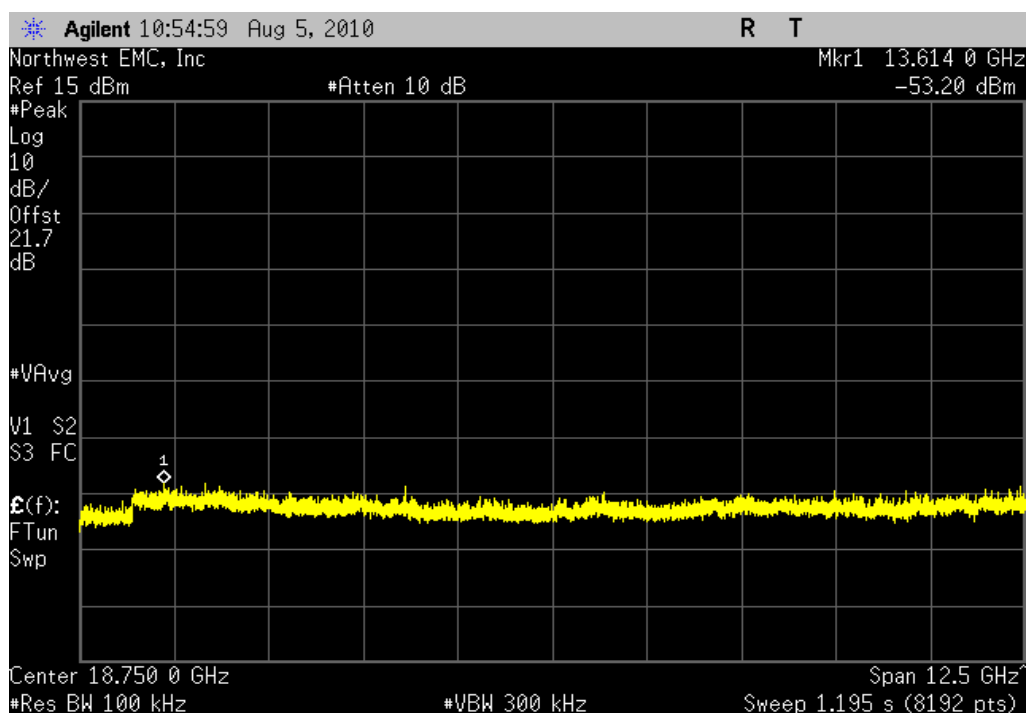


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.2 dBc

Limit: < -20 dBc

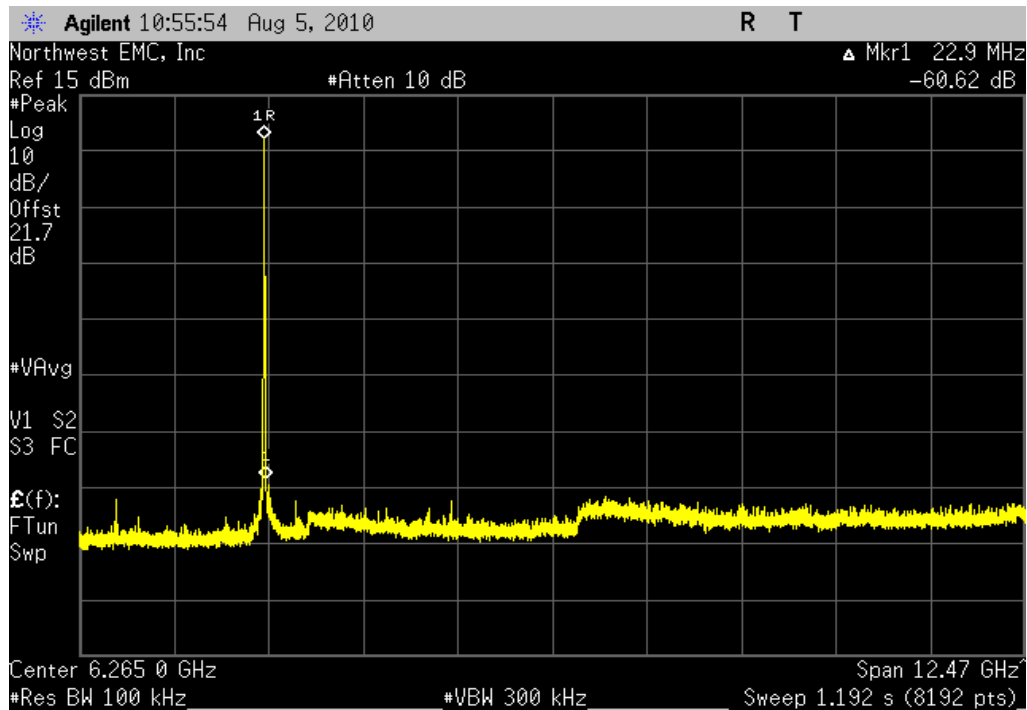


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -60.6 dBc

Limit: < -20 dBc

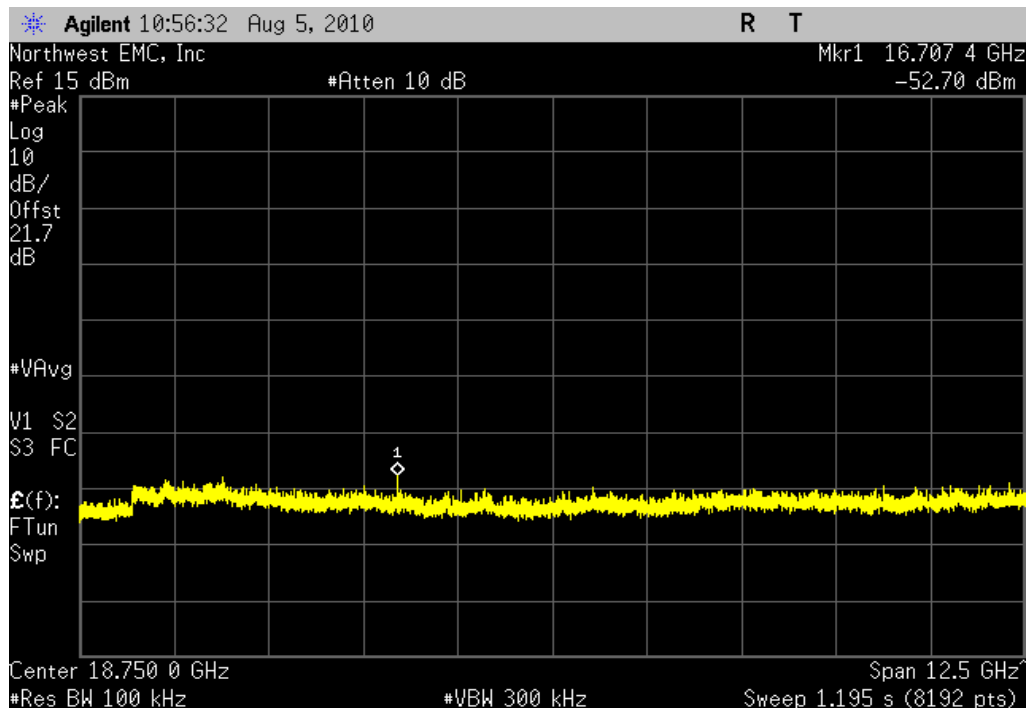


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -52.7 dBc

Limit: < -20 dBc



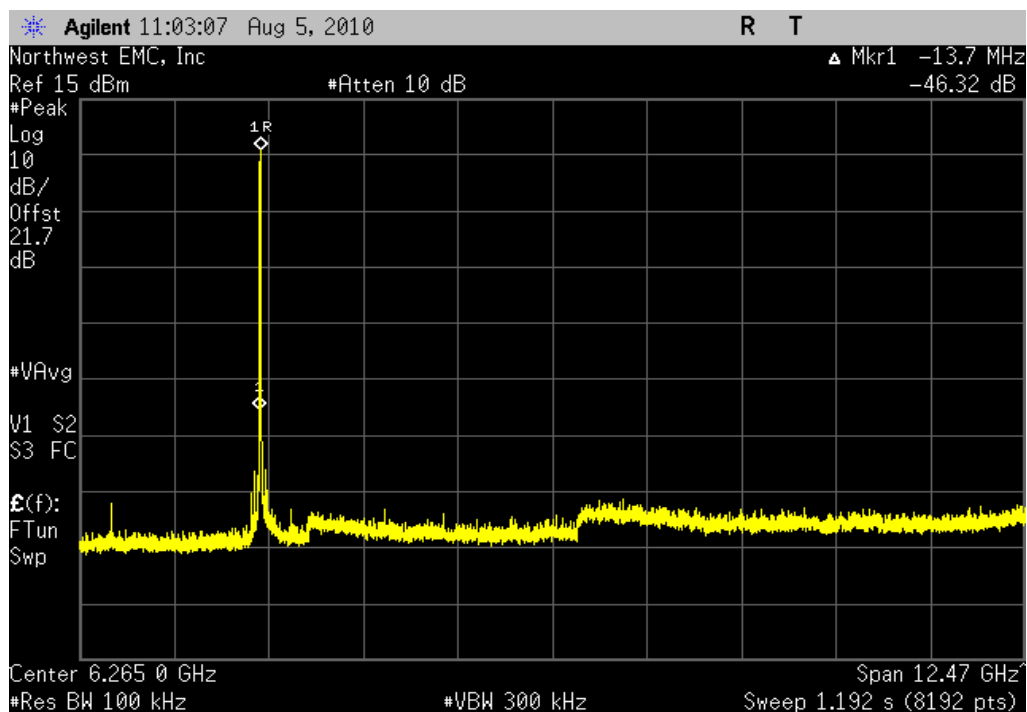
SPURIOUS CONDUCTED EMISSIONS

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -46.3 dBc

Limit: < -20 dBc

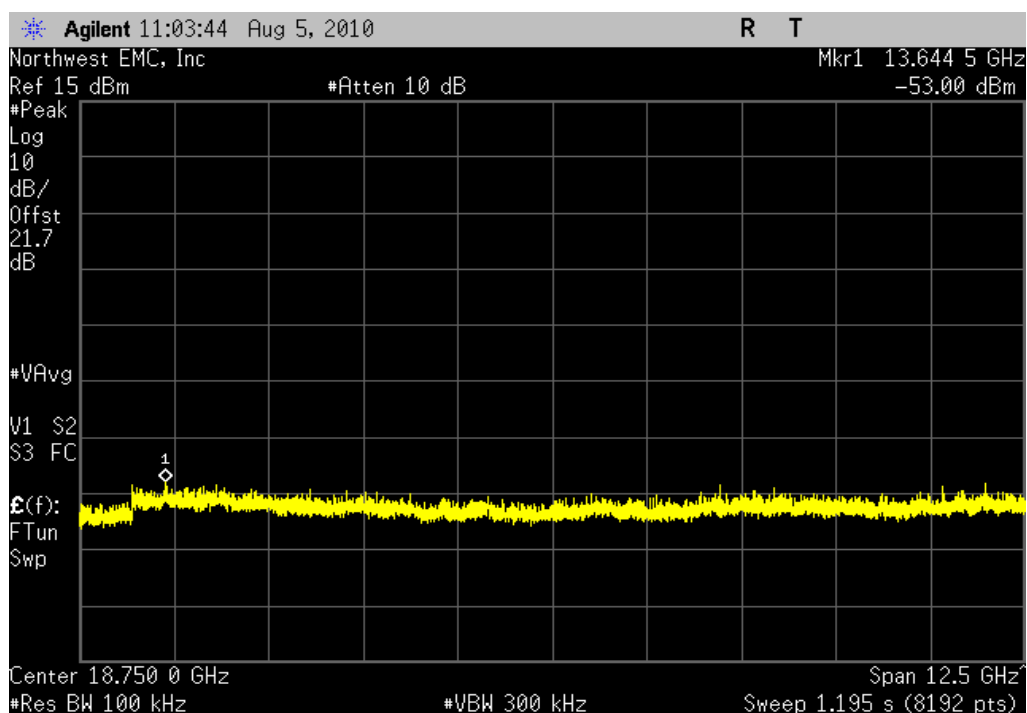


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.0 dBc

Limit: < -20 dBc

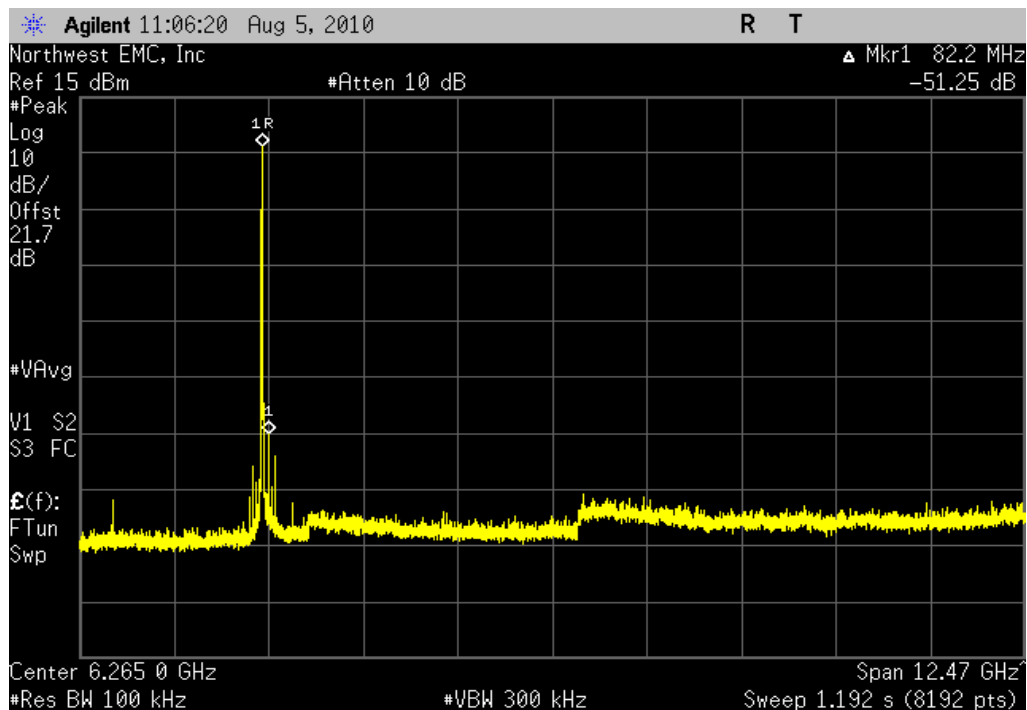


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -51.3 dBc

Limit: < -20 dBc

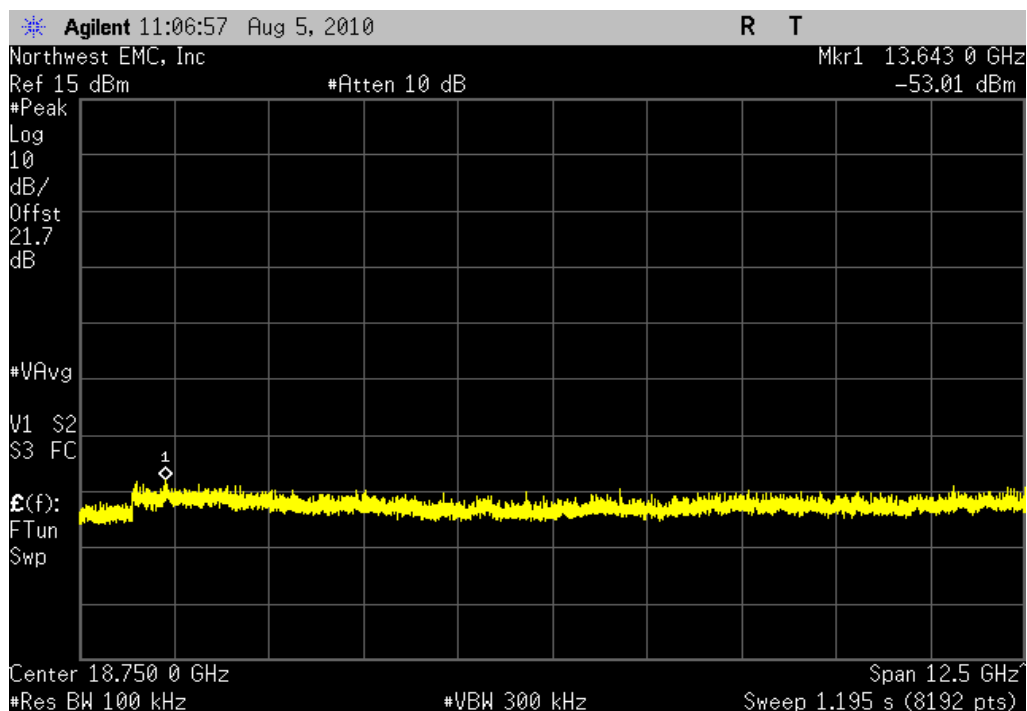


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.0 dBc

Limit: < -20 dBc



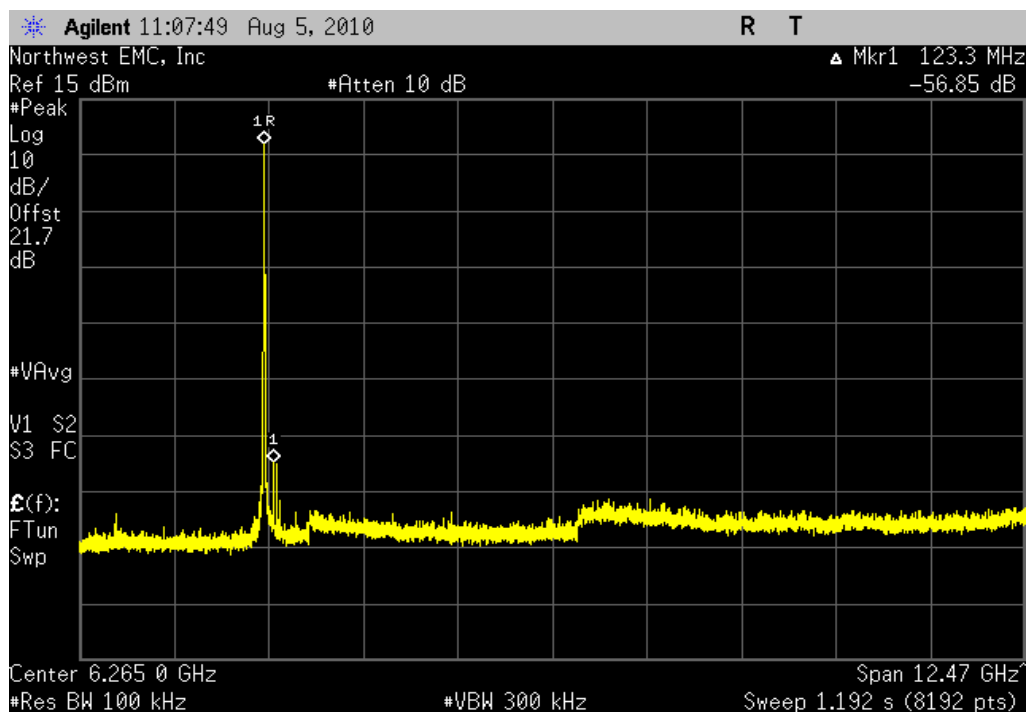
SPURIOUS CONDUCTED EMISSIONS

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -56.9 dBc

Limit: < -20 dBc

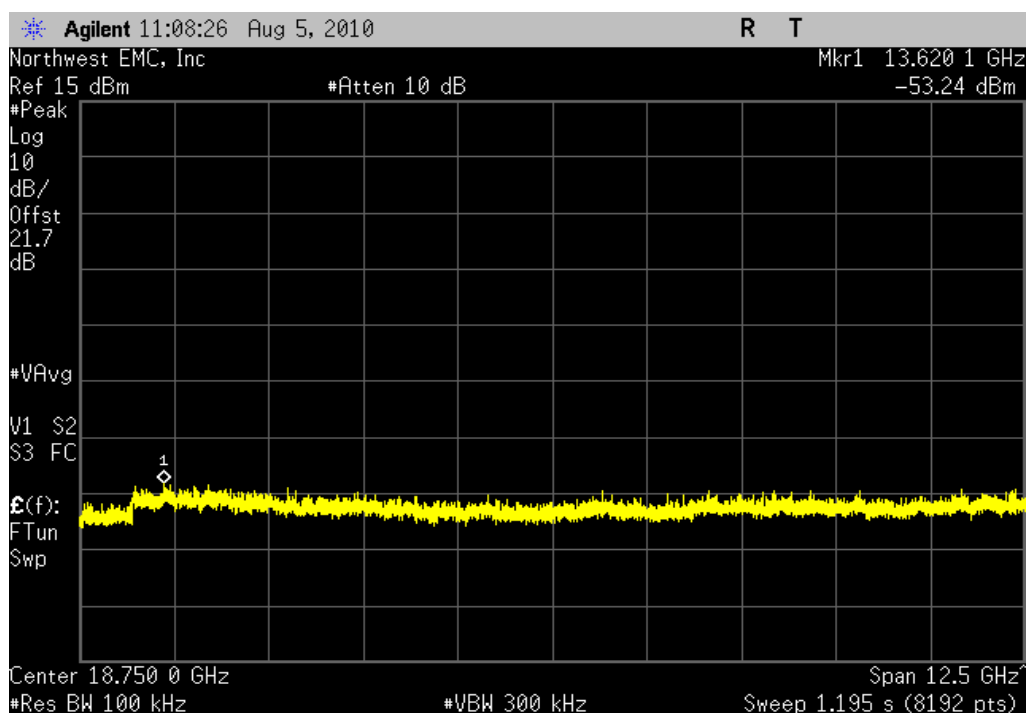


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.2 dBc

Limit: < -20 dBc

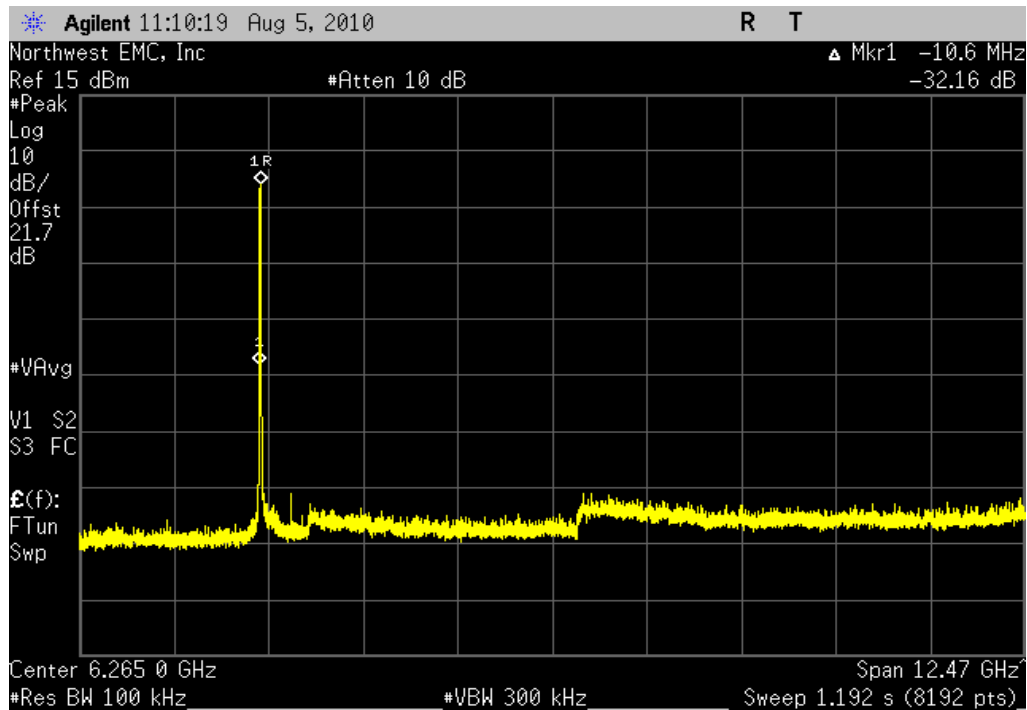


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -32.2 dBc

Limit: < -20 dBc

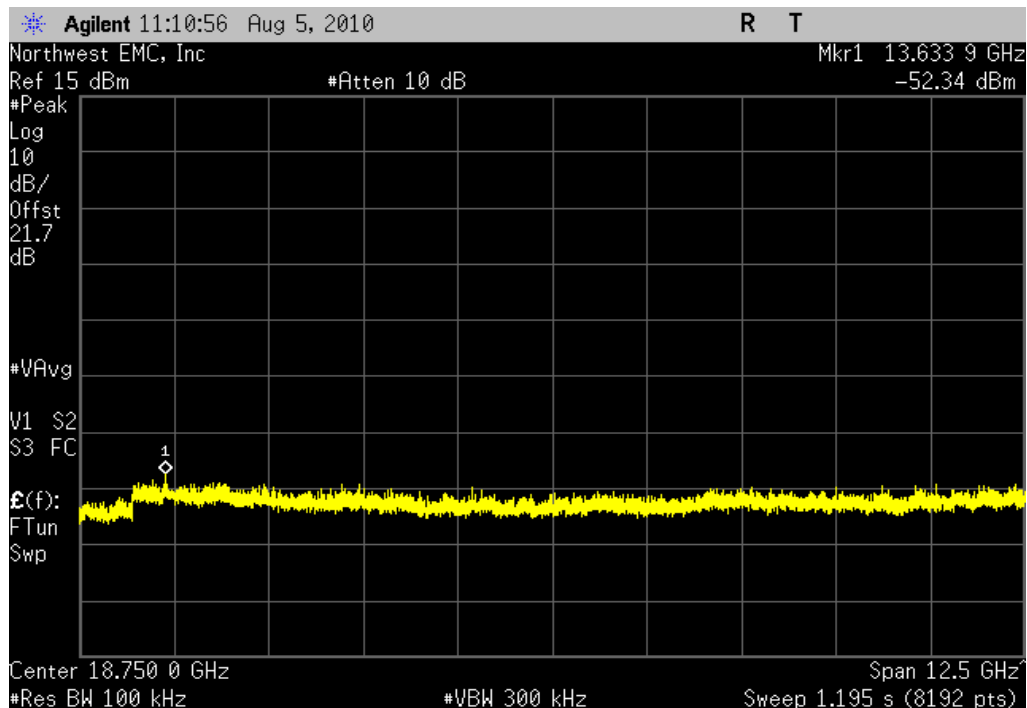


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -52.3 dBc

Limit: < -20 dBc

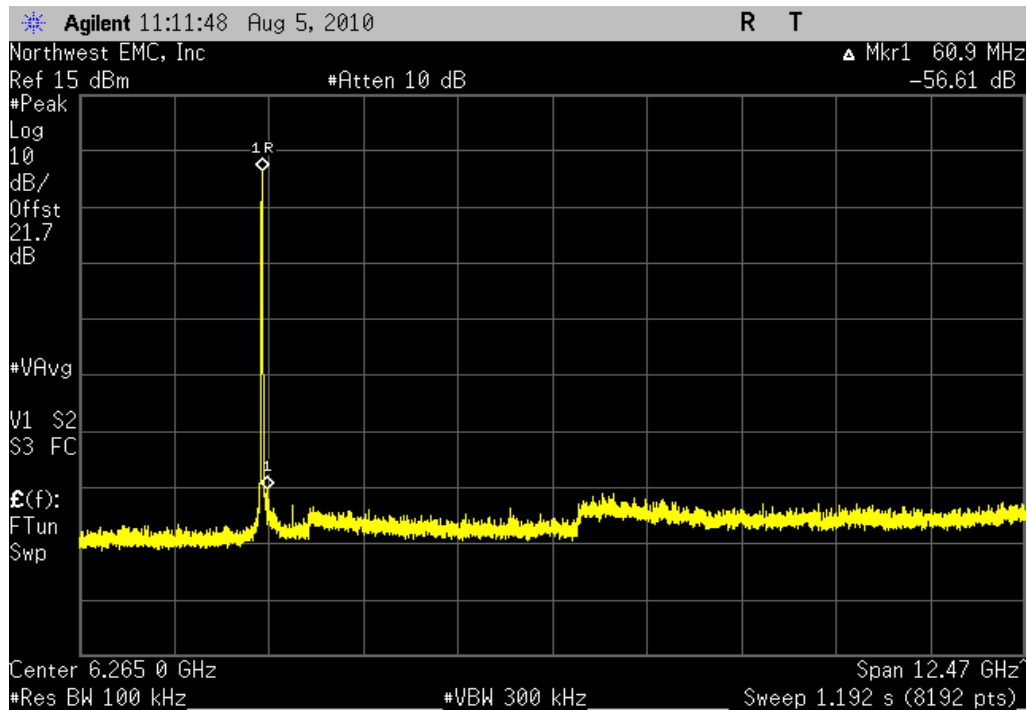


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -55.6 dBc

Limit: < -20 dBc

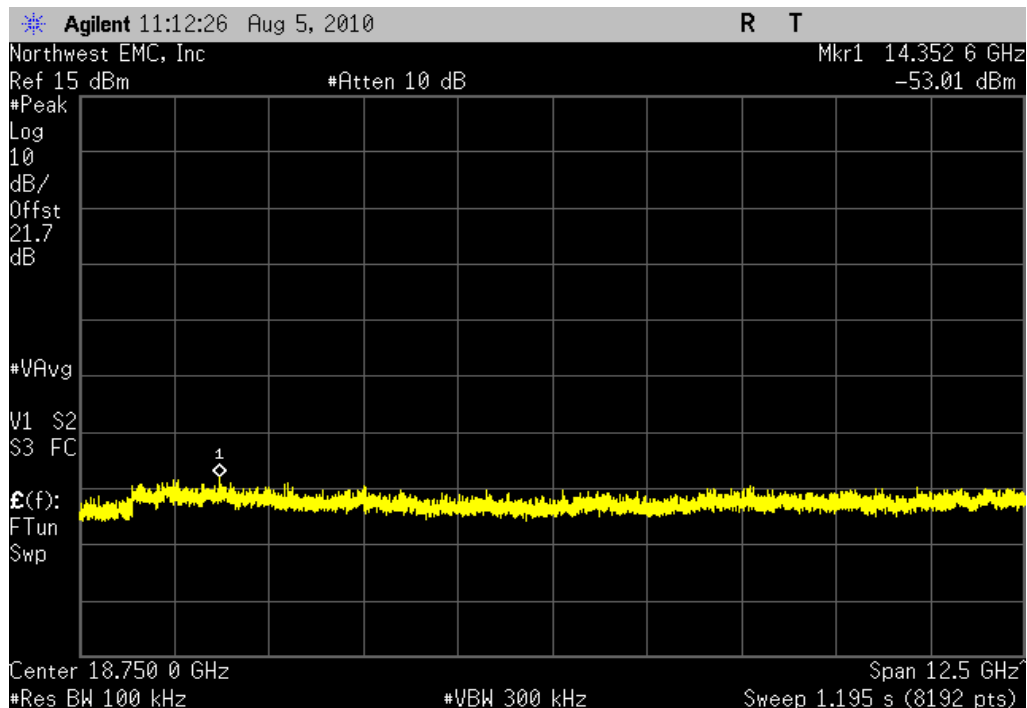


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.0 dBc

Limit: < -20 dBc

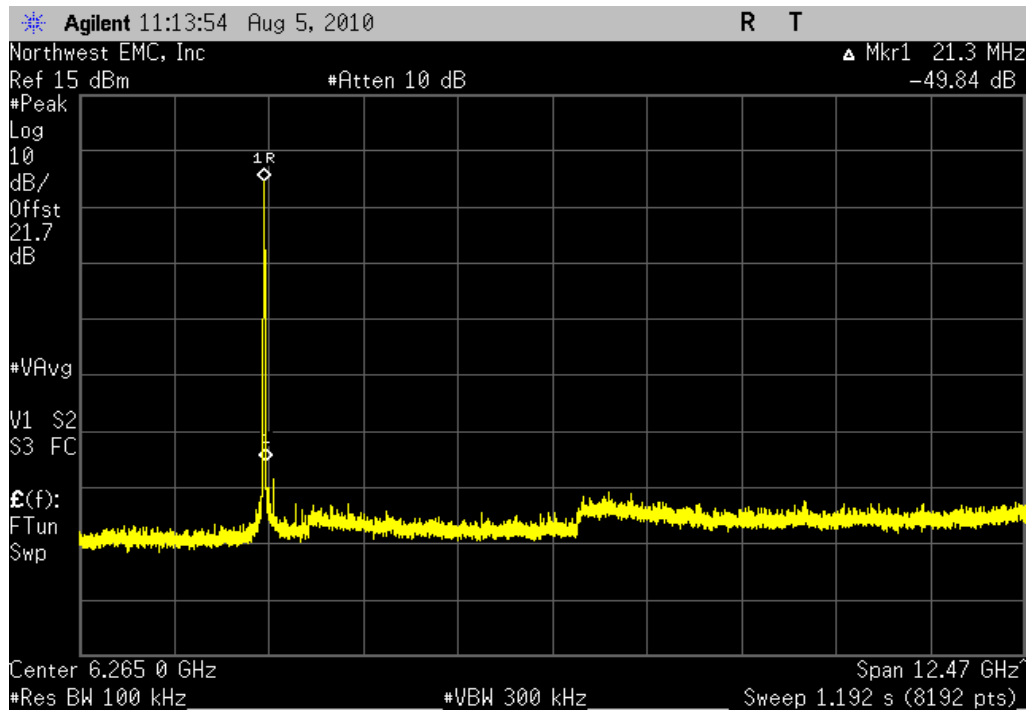


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -49.8 dBc

Limit: < -20 dBc

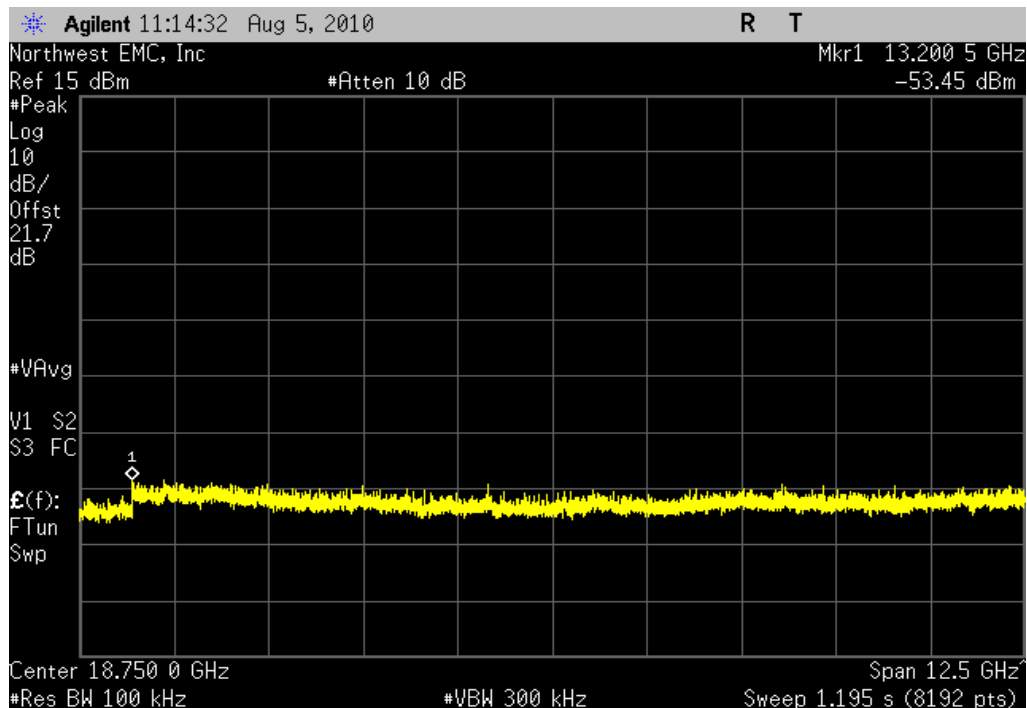


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.5 dBc

Limit: < -20 dBc

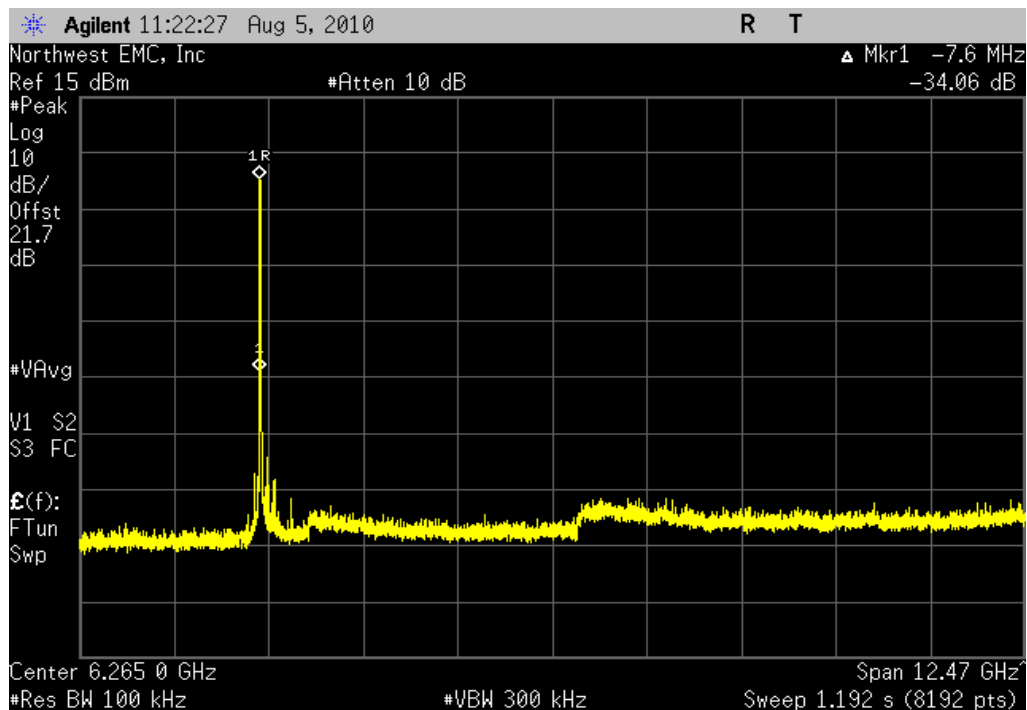


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -34.1 dBc

Limit: < -20 dBc

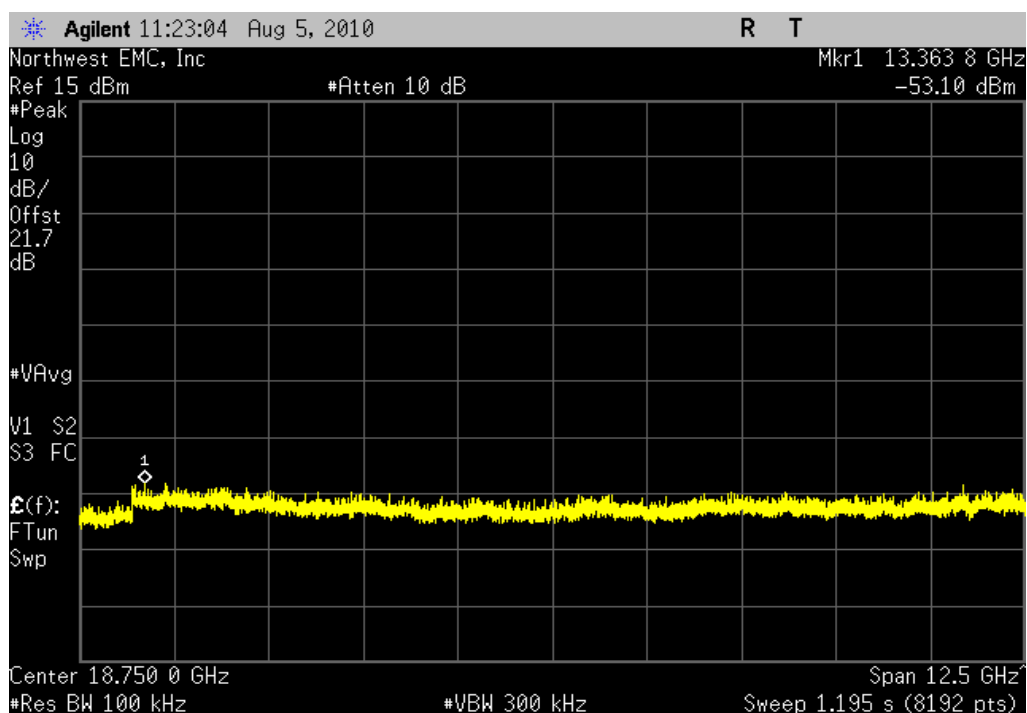


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.1 dBc

Limit: < -20 dBc



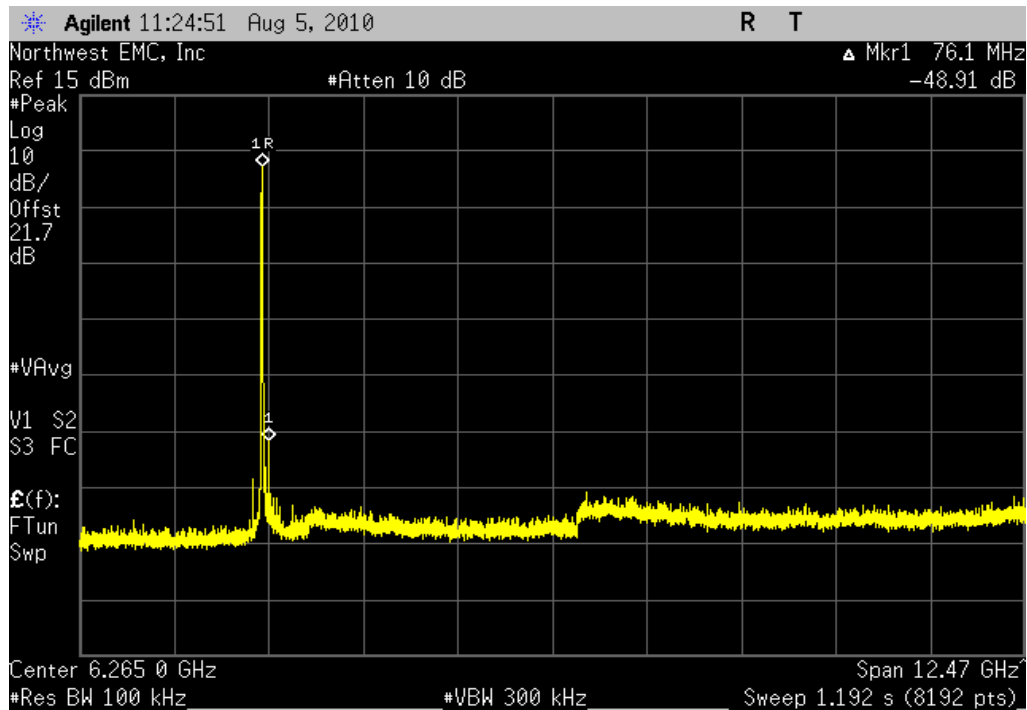
SPURIOUS CONDUCTED EMISSIONS

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -48.9 dBc

Limit: < -20 dBc

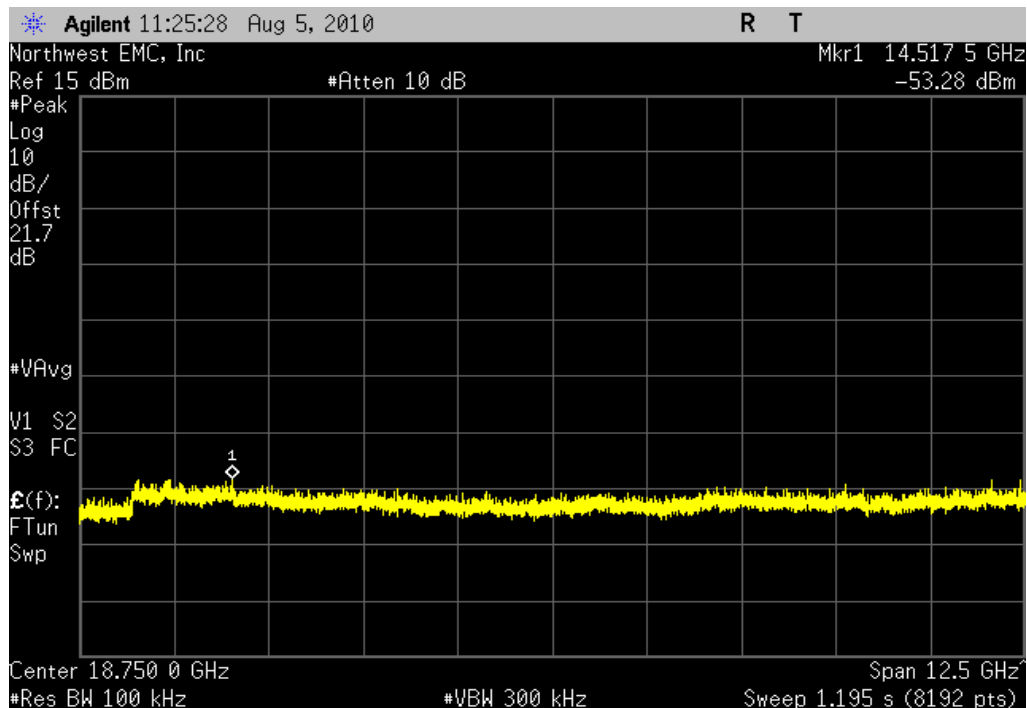


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.3 dBc

Limit: < -20 dBc

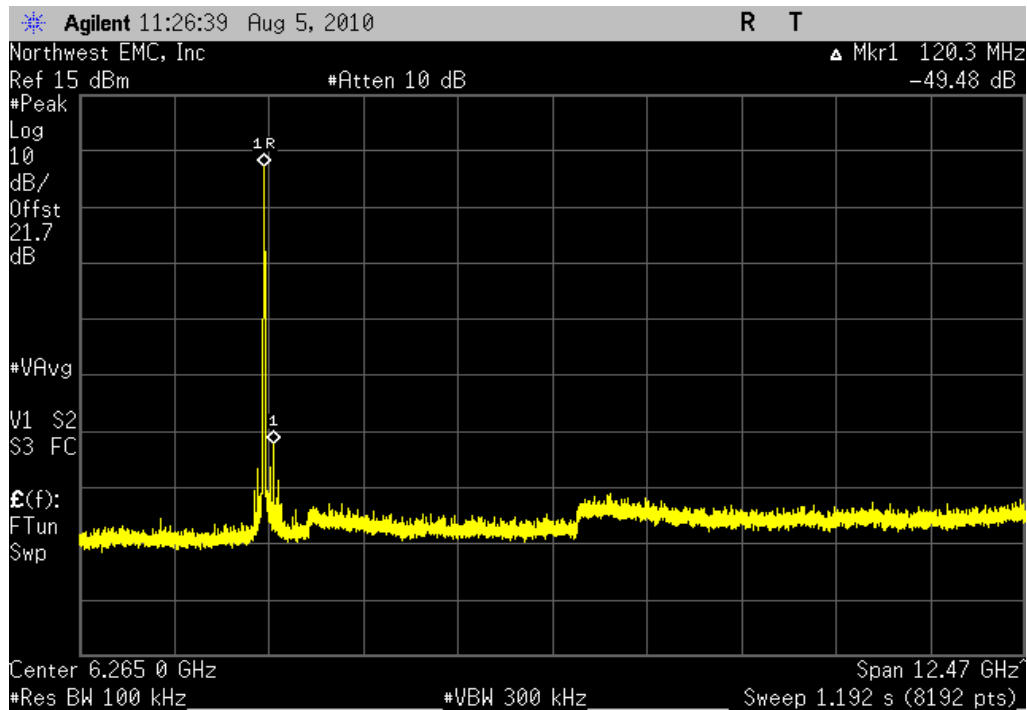


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -49.5 dBc

Limit: < -20 dBc

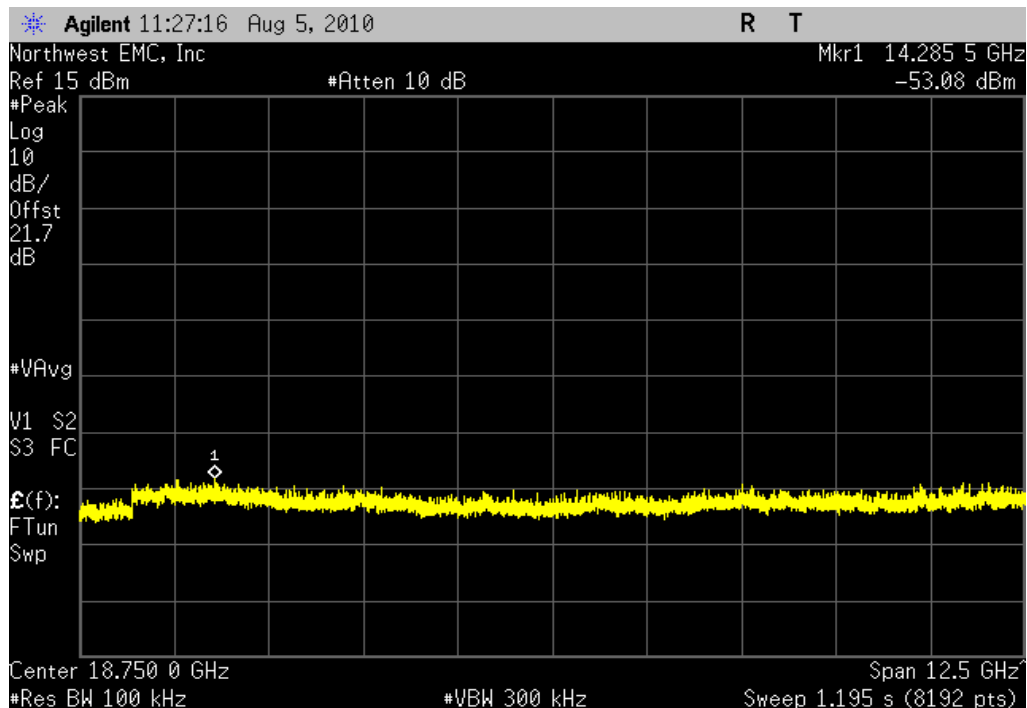


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.1 dBc

Limit: < -20 dBc

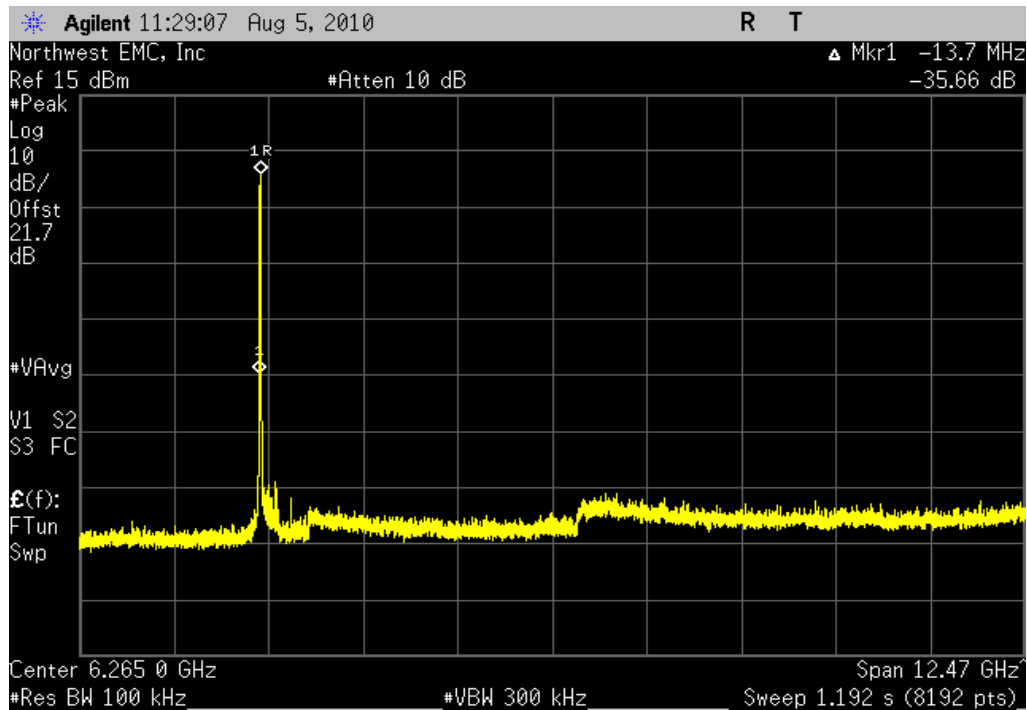


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -35.7 dBc

Limit: < -20 dBc

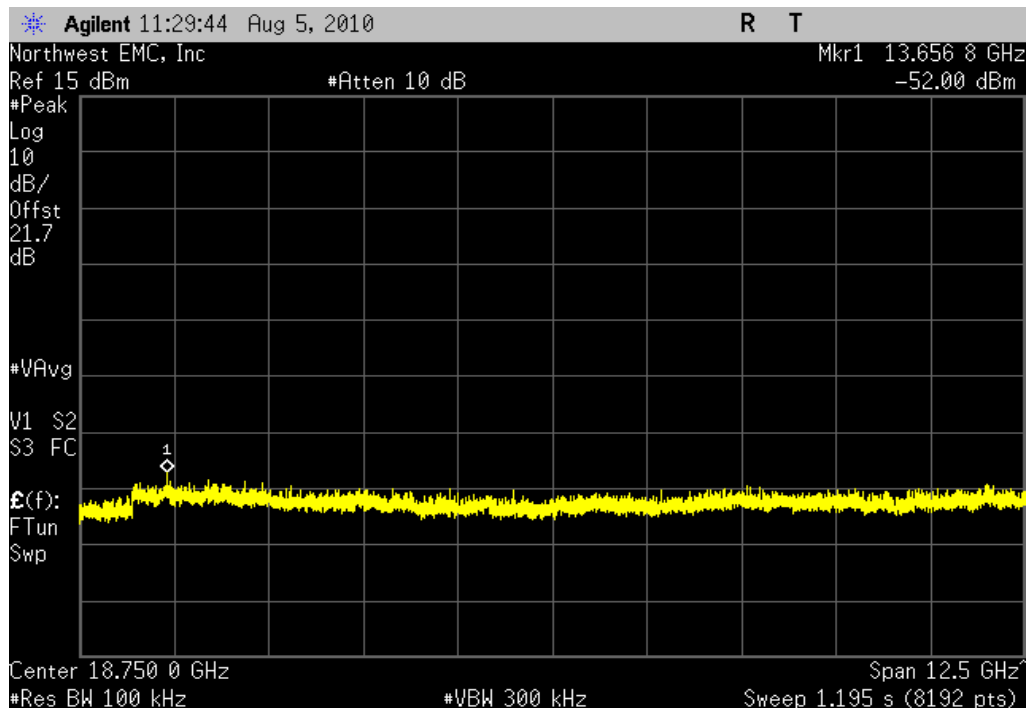


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -52.0 dBc

Limit: < -20 dBc

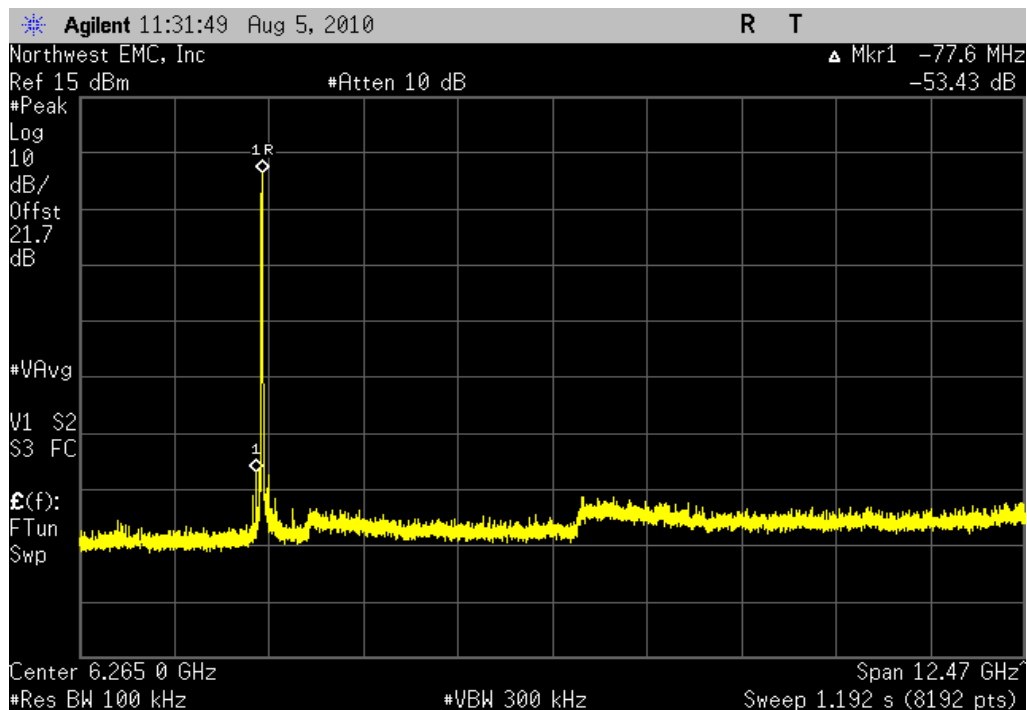


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -53.4 dBc

Limit: < -20 dBc

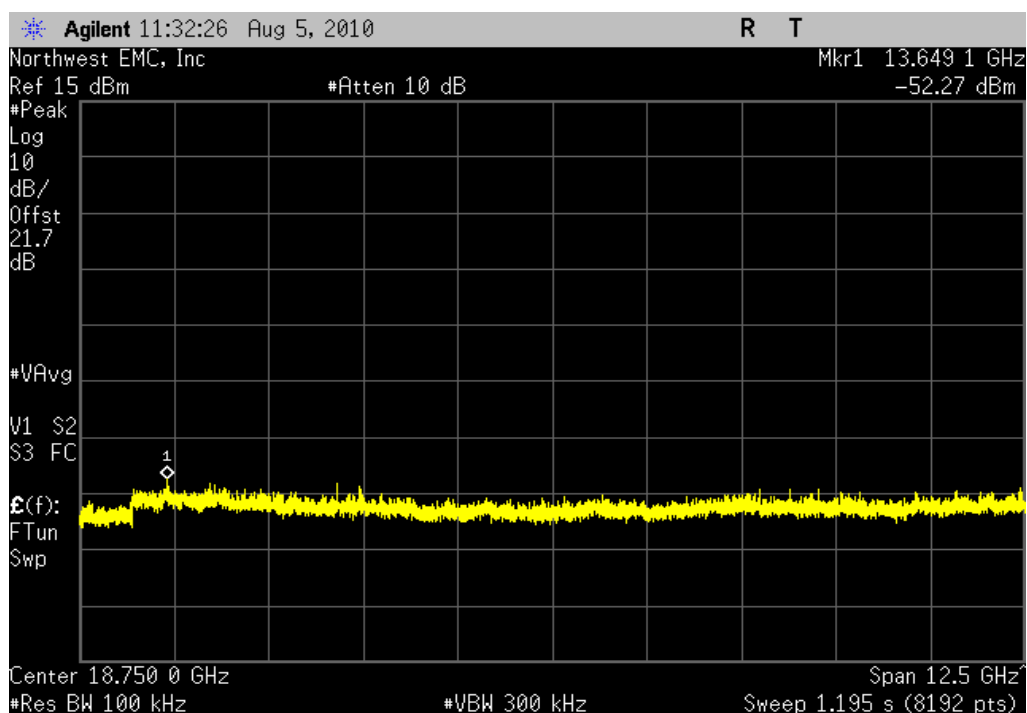


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -52.3 dBc

Limit: < -20 dBc

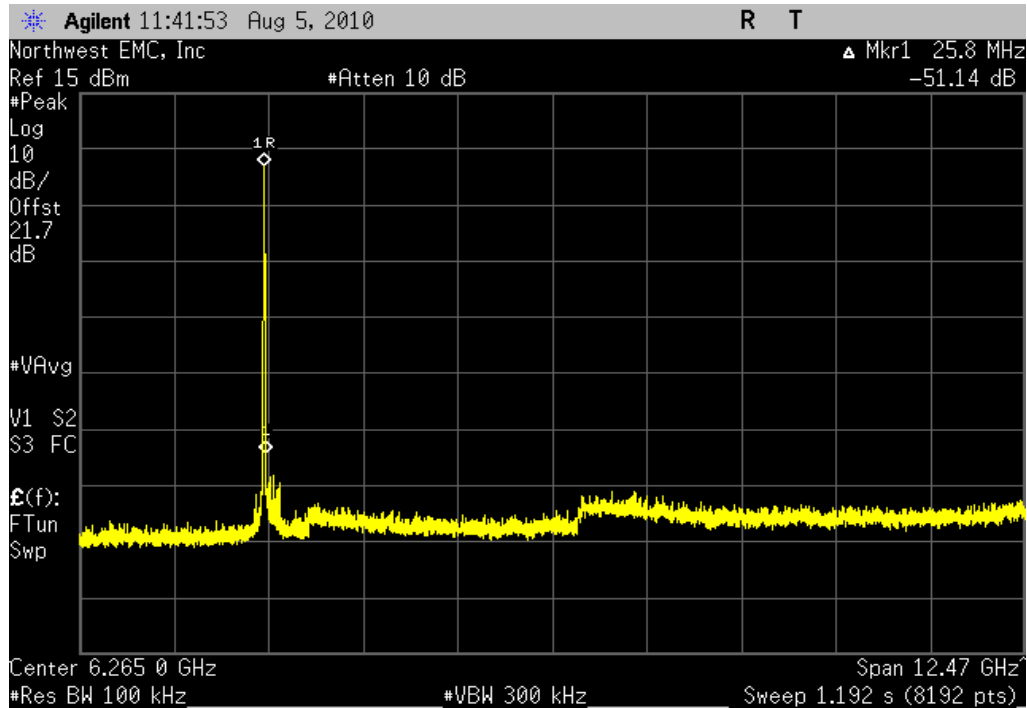


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -51.1 dBc

Limit: < -20 dBc

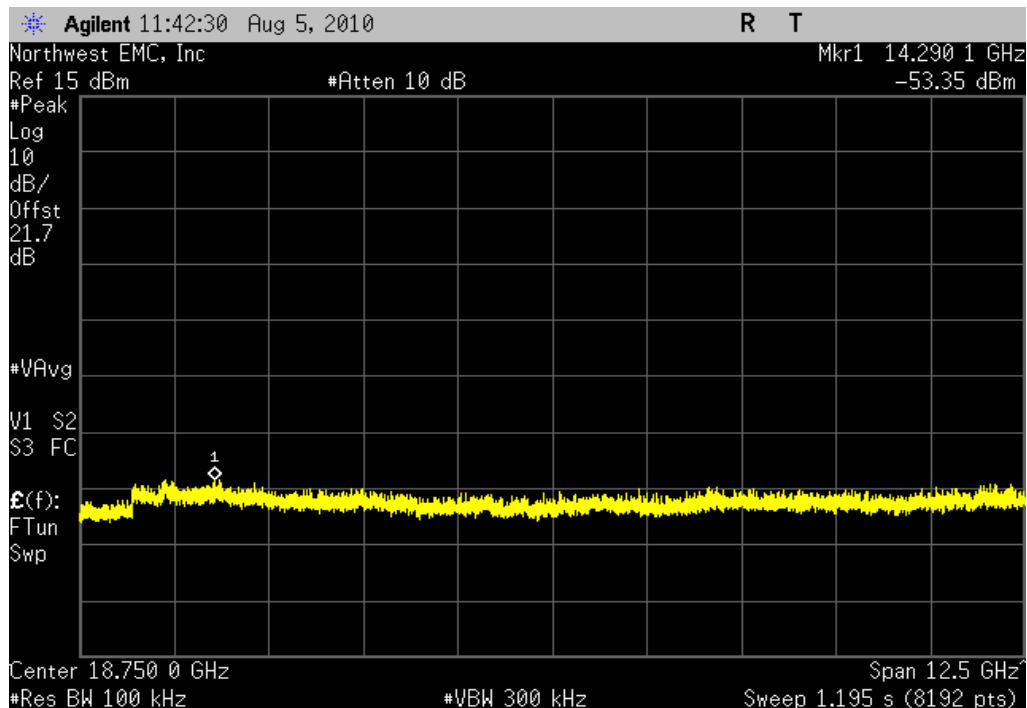


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.4 dBc

Limit: < -20 dBc

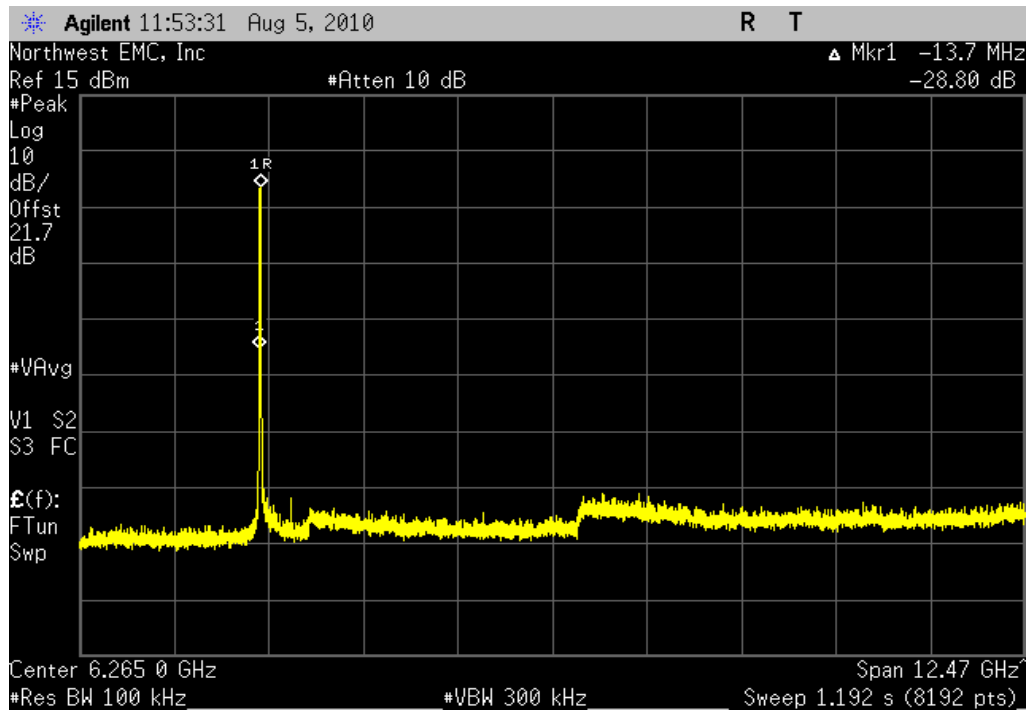


2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS0, Low Channel 1, 2412 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -28.8 dBc

Limit: < -20 dBc

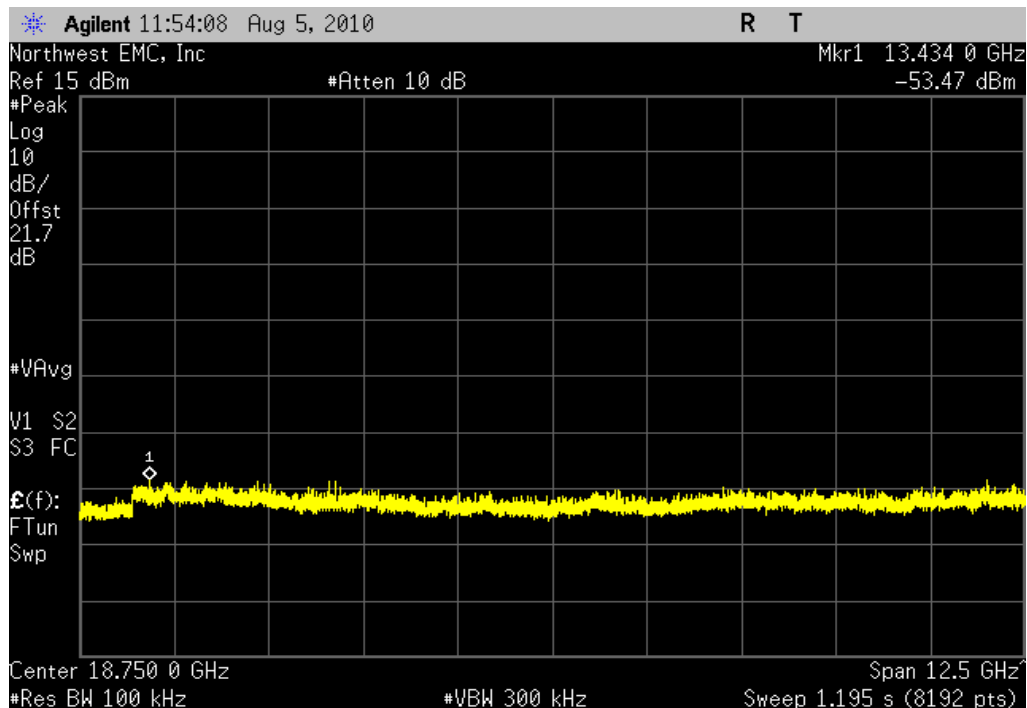


2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS0, Low Channel 1, 2412 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.5 dBc

Limit: < -20 dBc

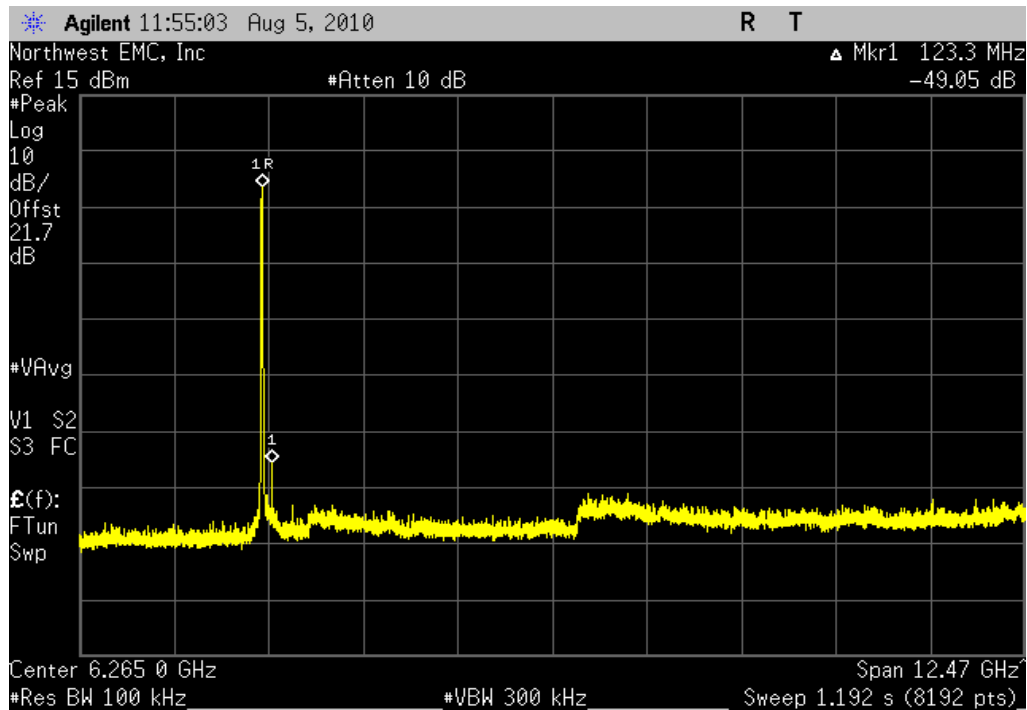


2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS0, Mid Channel 6, 2437 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -49.1 dBc

Limit: < -20 dBc

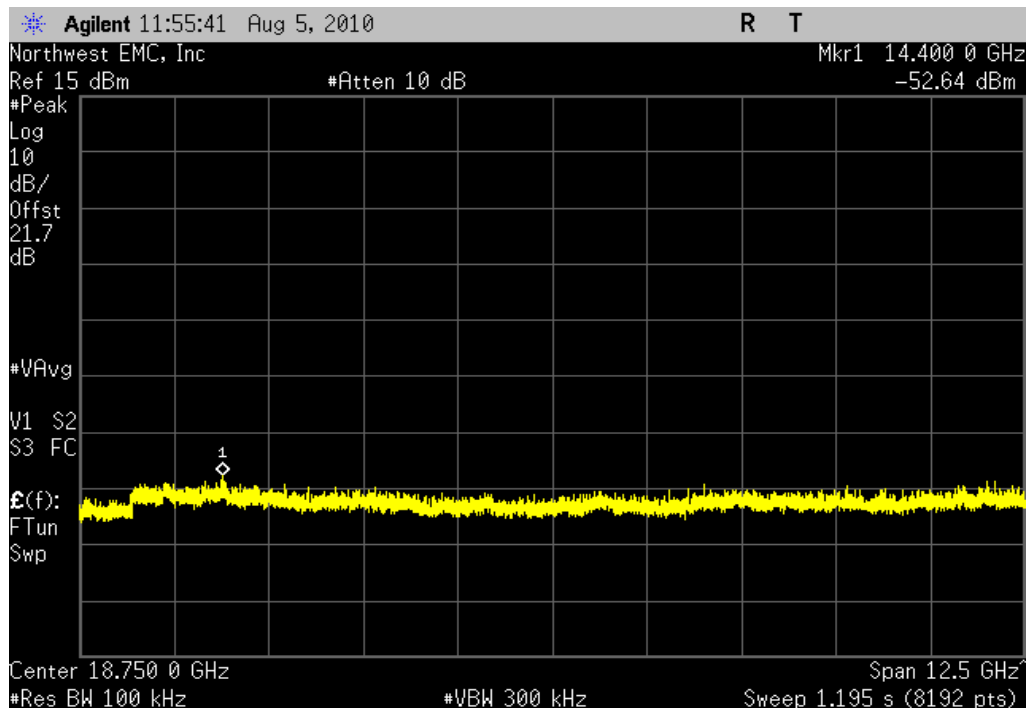


2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS0, Mid Channel 6, 2437 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -52.6 dBc

Limit: < -20 dBc



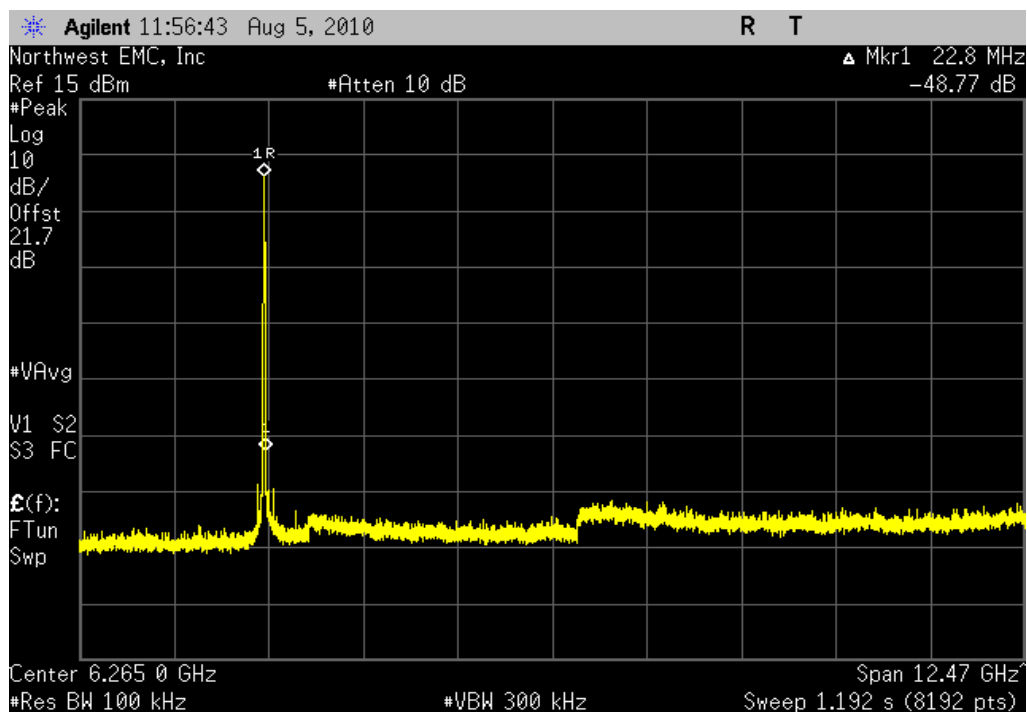
SPURIOUS CONDUCTED EMISSIONS

2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS0, High Channel 11, 2462 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -48.8 dBc

Limit: < -20 dBc

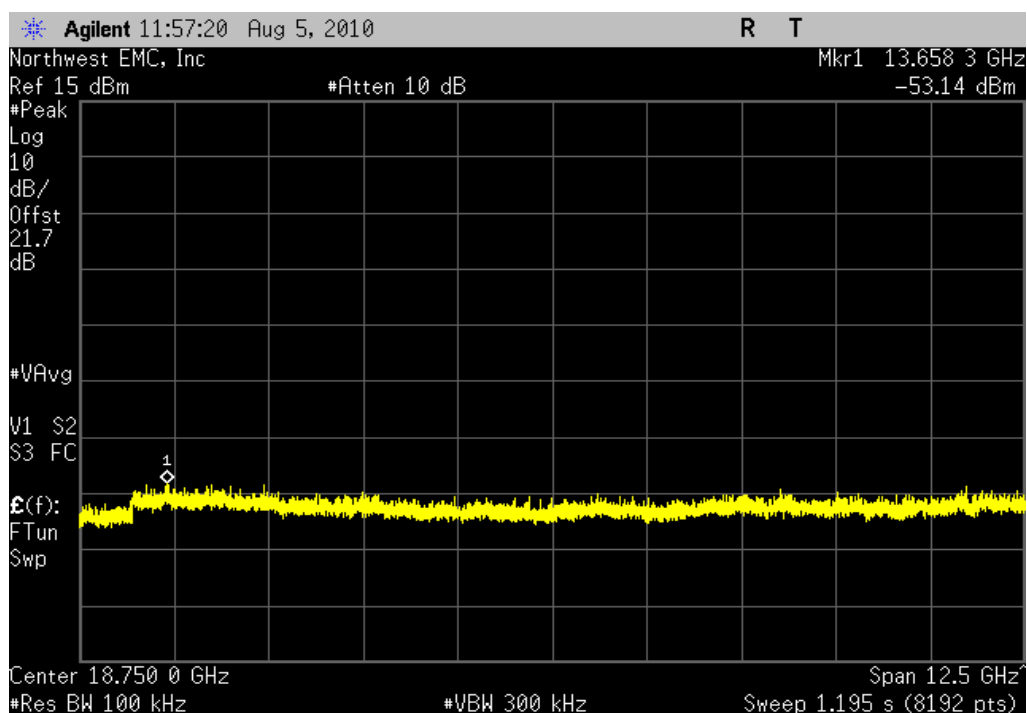


2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS0, High Channel 11, 2462 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.1 dBc

Limit: < -20 dBc



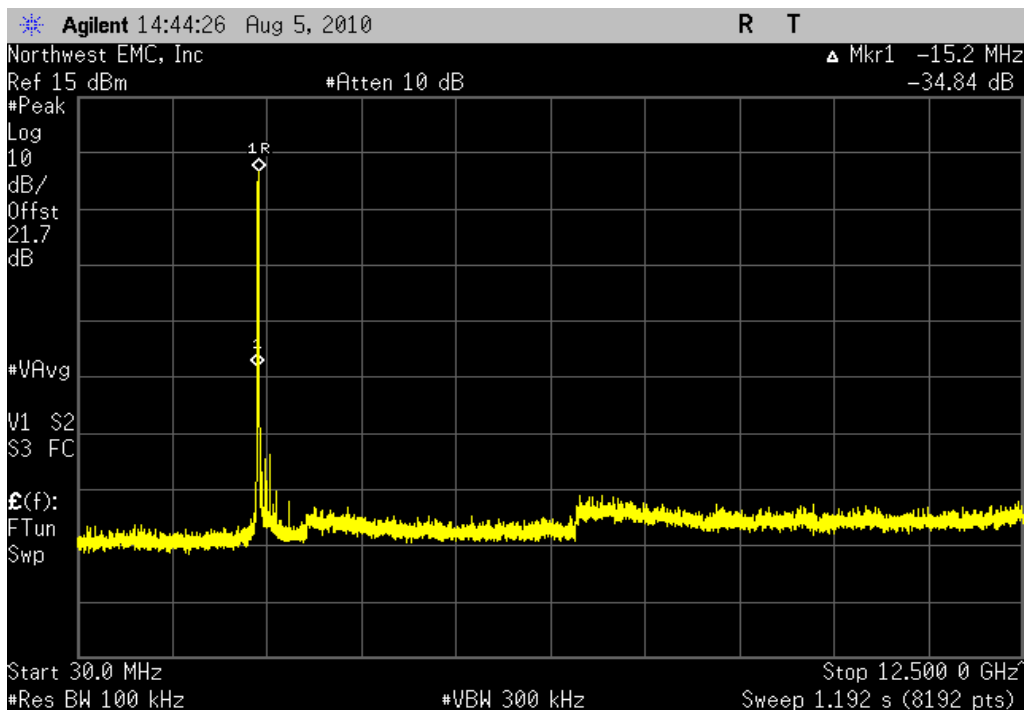
SPURIOUS CONDUCTED EMISSIONS

2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS7, Low Channel 1, 2412 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -34.8 dBc

Limit: < -20 dBc

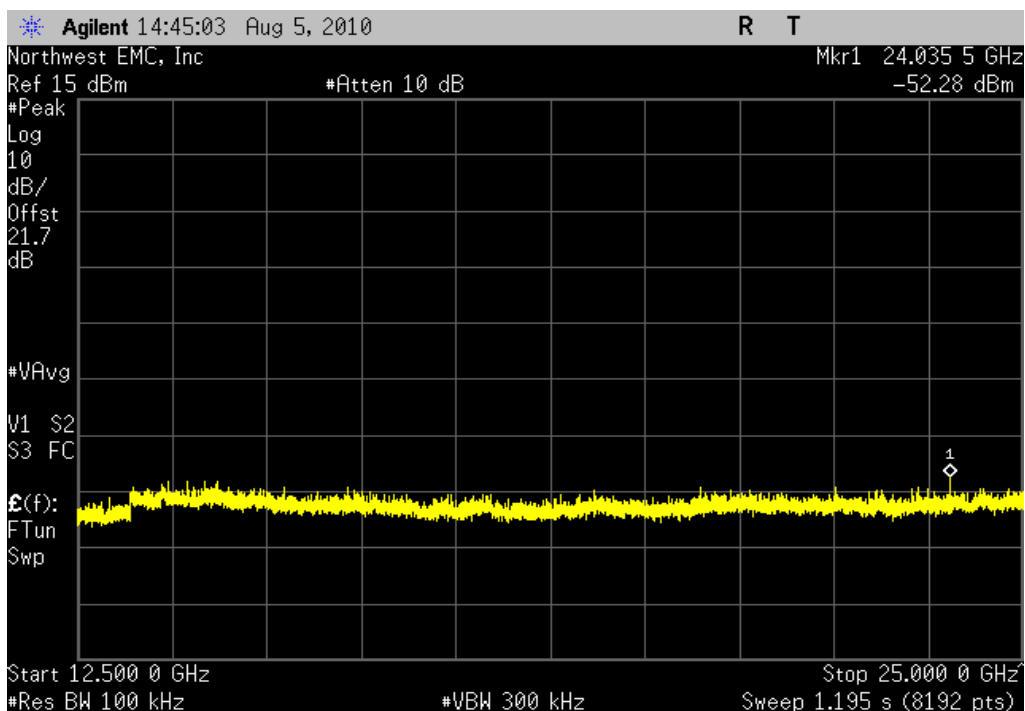


2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS7, Low Channel 1, 2412 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -52.3 dBc

Limit: < -20 dBc



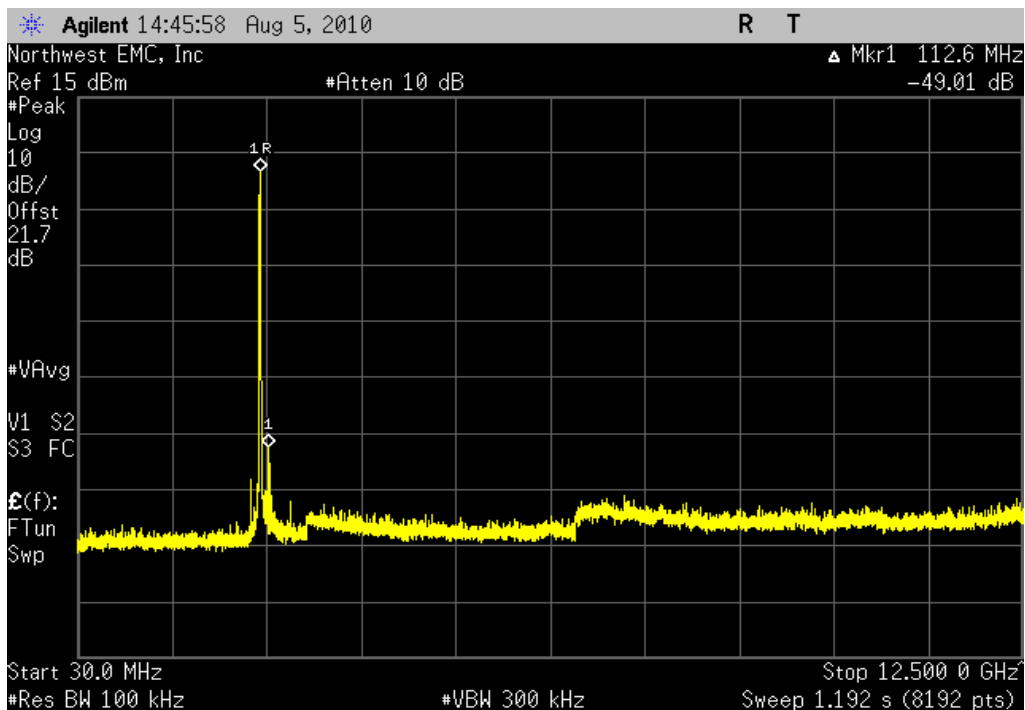
SPURIOUS CONDUCTED EMISSIONS

2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS7, Mid Channel 6, 2437 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -49.0 dBc

Limit: < -20 dBc

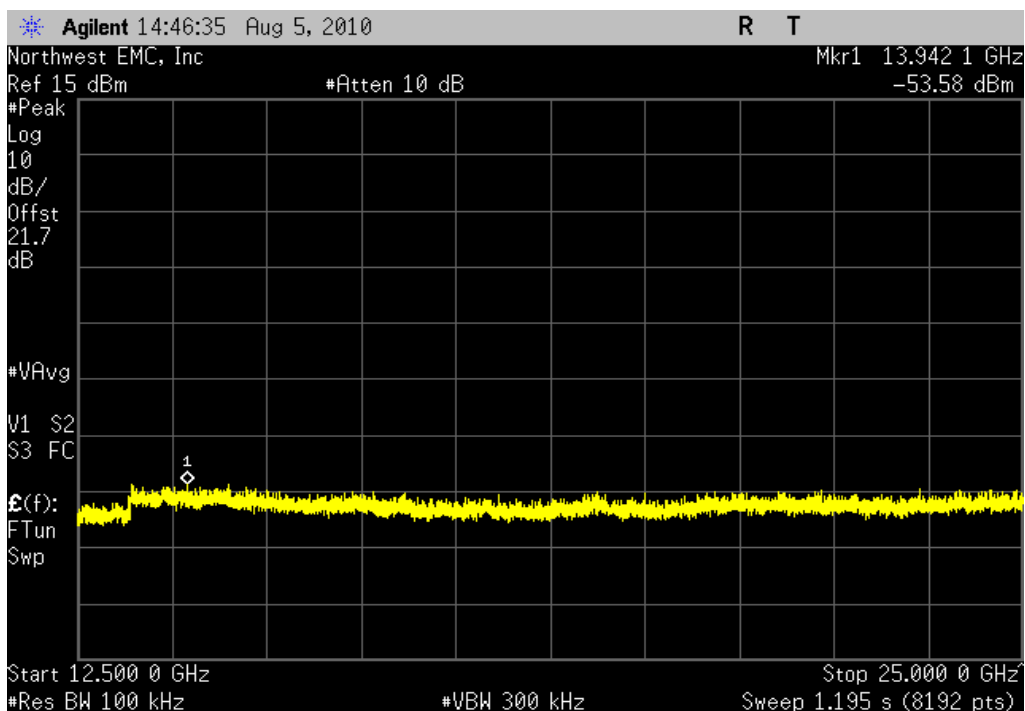


2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS7, Mid Channel 6, 2437 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.6 dBc

Limit: < -20 dBc



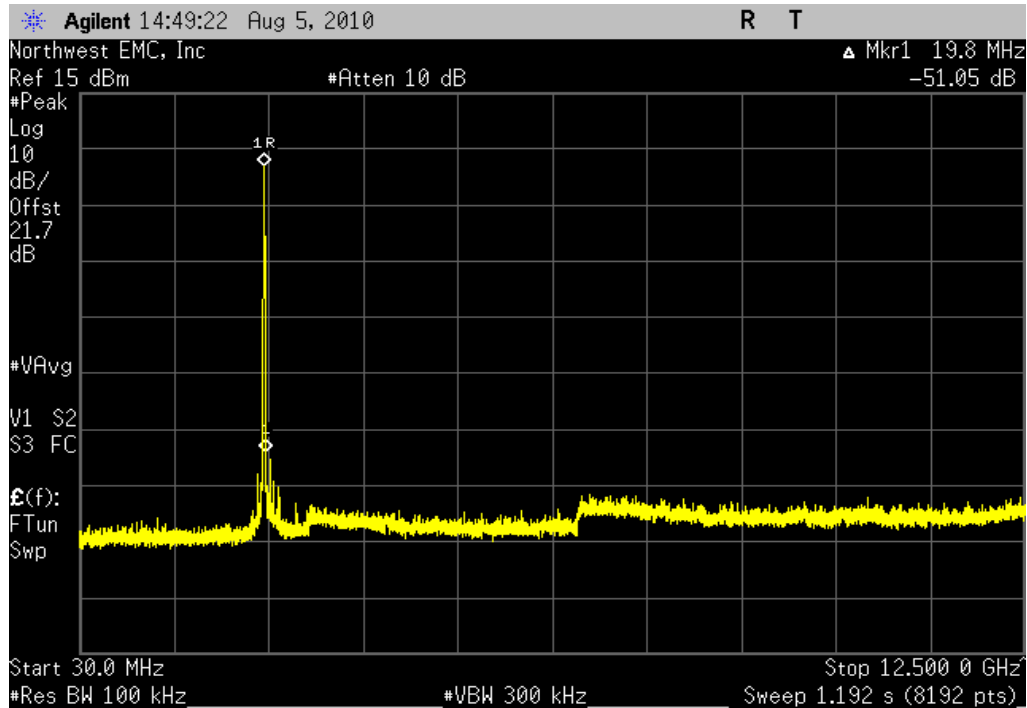
SPURIOUS CONDUCTED EMISSIONS

2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS7, High Channel 11, 2462 MHz, 30 MHz - 12.5 GHz

Result: Pass

Value: -51.1 dBc

Limit: < -20 dBc

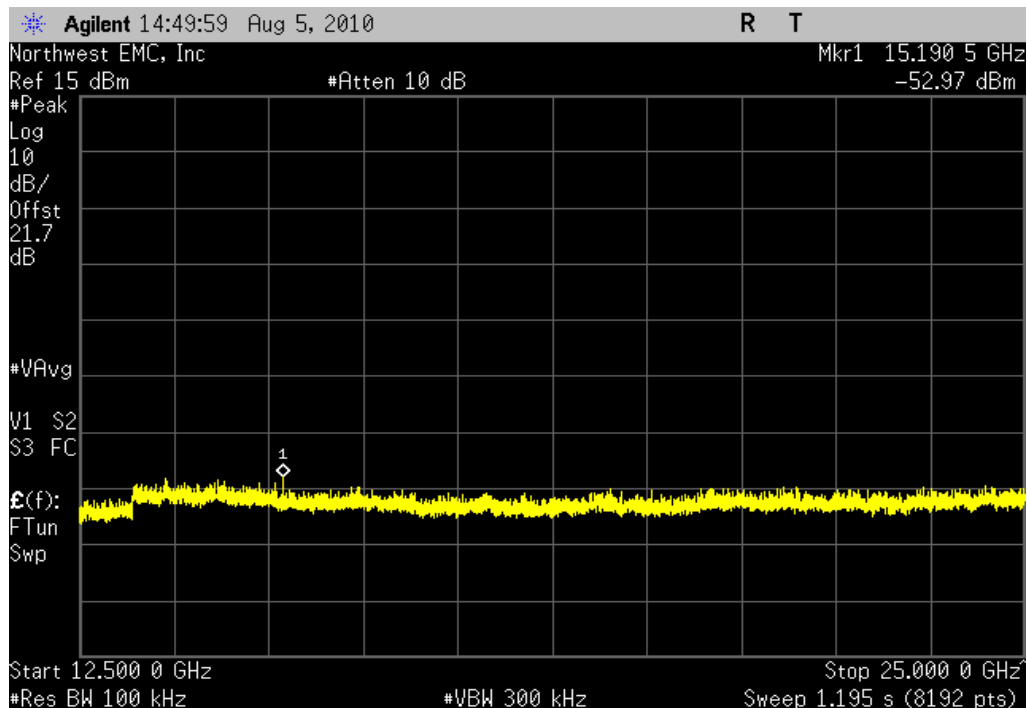


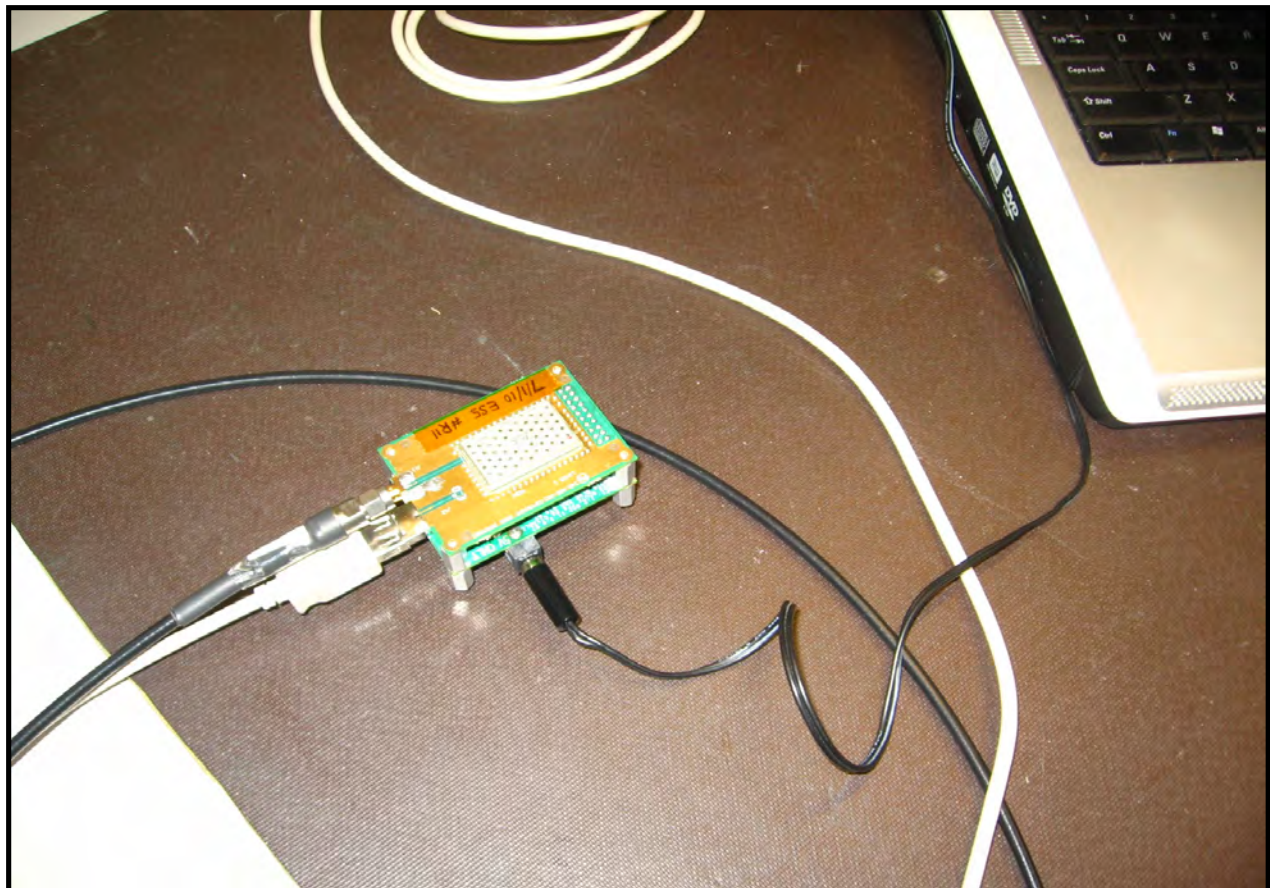
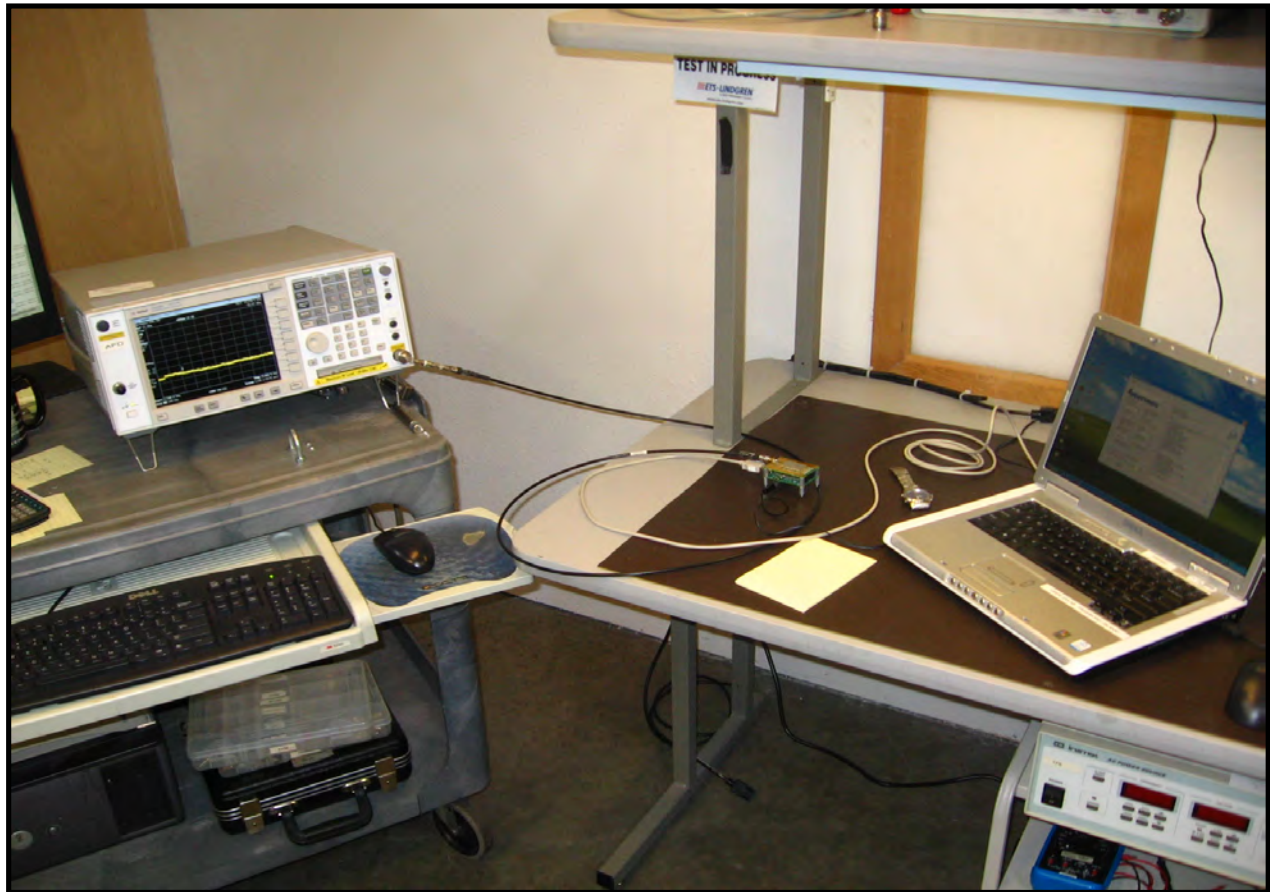
2400 MHz - 2483.5 MHz Band, 802.11(n) 20 MHz, MCS7, High Channel 11, 2462 MHz, 12.5 GHz - 25 GHz

Result: Pass

Value: -53.0 dBc

Limit: < -20 dBc





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAQ	1/6/2010	12
40GHz DC Block	Miteq	DCB4000	AMD	8/19/2009	13
Attenuator	Weinschel Corp.	54A-20	RBL	10/9/2009	13
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The spurious RF conducted emissions were measured with the EUT set to low, medium, and high transmit frequencies. The measurements were made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at each required data rate for the different modulations available. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

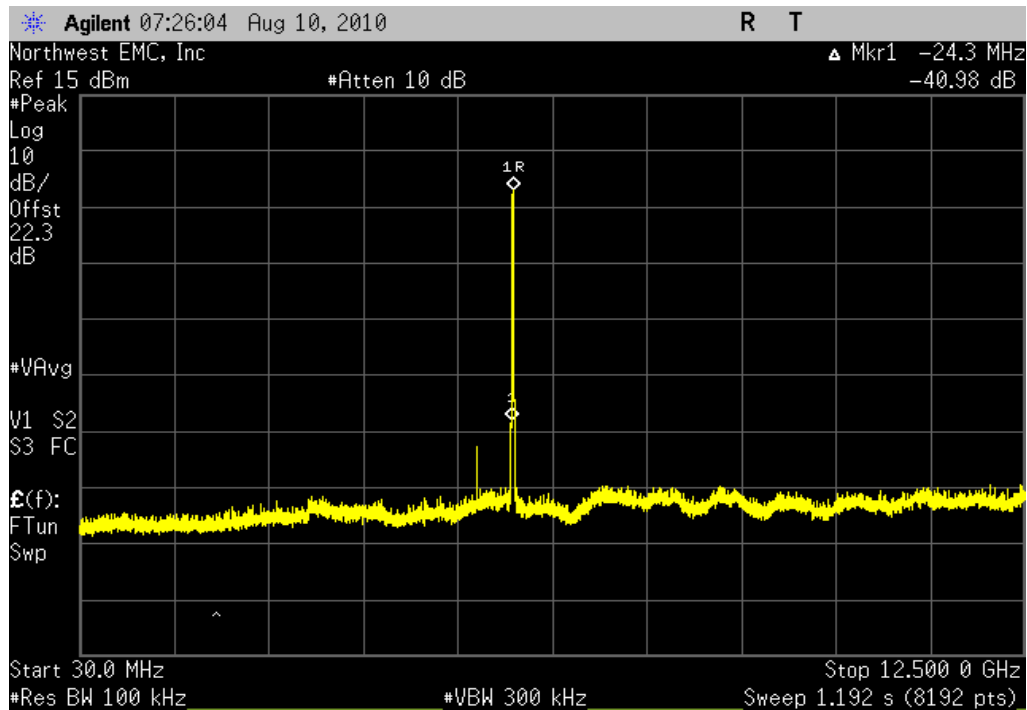
NORTHWEST		SPURIOUS CONDUCTED EMISSIONS		XMIT 2010.07.29	
EMC					
EUT: RC12			Work Order: INMC0575		
Serial Number: R11			Date: 08/05/10		
Customer: Intermec Technologies Corporation			Temperature: 23°C		
Attendees: none			Humidity: 36%		
Project: None			Barometric Pres.: 1015.5 mb		
Tested by: Rod Peloquin		Power: 5VDC	Job Site: EV06		
TEST SPECIFICATIONS			Test Method		
FCC 15.247:2010			ANSI C63.10:2009		
COMMENTS					
None					
DEVIATIONS FROM TEST STANDARD					
No Deviations					
Configuration #	2	Signature 			
			Value	Limit	Results
5725 MHz - 5850 MHz Band					
802.11(a) 6 Mbps					
Low Channel 149, 5745 MHz					
30 MHz - 12.5 GHz			-41.0 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.7 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.9 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.0 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz					
30 MHz - 12.5 GHz			-45.7 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.5 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-49.0 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.4 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz					
30 MHz - 12.5 GHz			-44.3 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.1 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.2 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.3 dBc	≤ -20 dBc	Pass
802.11(a) 36 Mbps					
Low Channel 149, 5745 MHz					
30 MHz - 12.5 GHz			-47.7 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.9 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-49.0 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.1 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz					
30 MHz - 12.5 GHz			-47.7 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.9 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.9 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.7 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz					
30 MHz - 12.5 GHz			-47.0 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-48.3 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-49.1 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.4 dBc	≤ -20 dBc	Pass
802.11(a) 54 Mbps					
Low Channel 149, 5745 MHz					
30 MHz - 12.5 GHz			-47.5 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.1 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.6 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-34.6 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz					
30 MHz - 12.5 GHz			-47.4 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.3 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.7 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.4 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz					
30 MHz - 12.5 GHz			-46.5 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.3 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-49.1 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.8 dBc	≤ -20 dBc	Pass
802.11(n) 20 MHz, MCS0					
Low Channel 149, 5745 MHz					
30 MHz - 12.5 GHz			-39.8 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.7 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.4 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.8 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz					
30 MHz - 12.5 GHz			-44.9 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.5 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.9 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.1 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz					
30 MHz - 12.5 GHz			-44.8 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.6 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.8 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.1 dBc	≤ -20 dBc	Pass
802.11(n) 20 MHz, MCS7					
Low Channel 149, 5745 MHz					
30 MHz - 12.5 GHz			-45.9 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.3 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.6 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.4 dBc	≤ -20 dBc	Pass
Mid Channel 157, 5785 MHz					
30 MHz - 12.5 GHz			-45.5 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-48.1 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.7 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-35.6 dBc	≤ -20 dBc	Pass
High Channel 165, 5825 MHz					
30 MHz - 12.5 GHz			-44.1 dBc	≤ -20 dBc	Pass
12.5 GHz - 26.5 GHz			-47.1 dBc	≤ -20 dBc	Pass
26.5 GHz - 31 GHz			-48.4 dBc	≤ -20 dBc	Pass
31 GHz - 40 GHz			-33.9 dBc	≤ -20 dBc	Pass

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz, 30 MHz - 12.5 GHz

Result: Pass

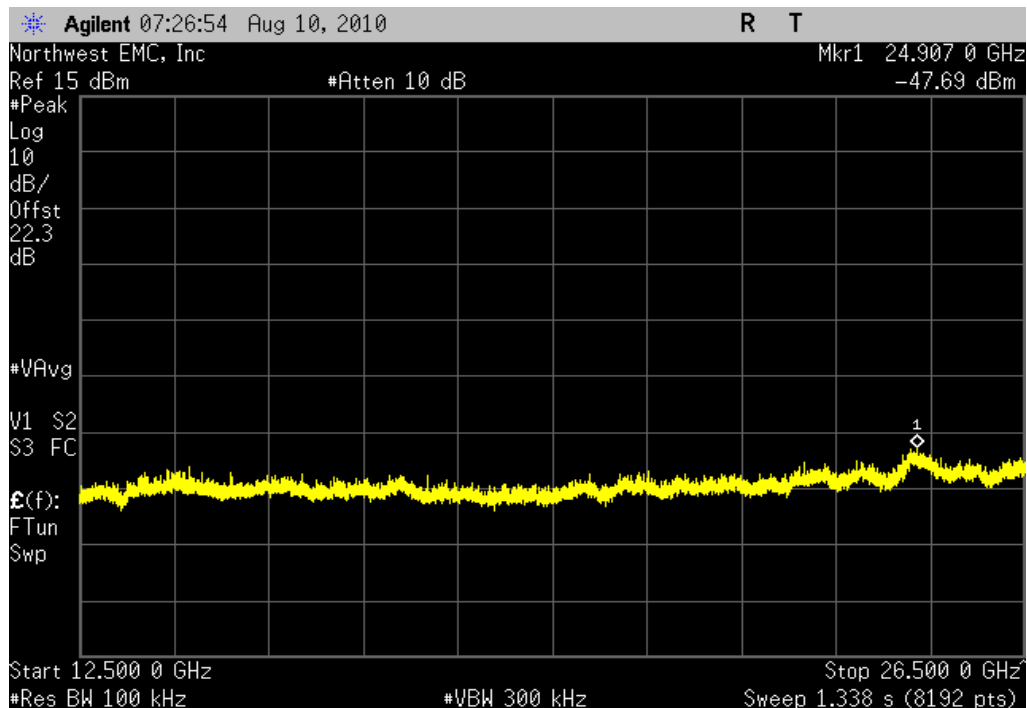
Value: -41.0 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

Value: -47.7 dBc

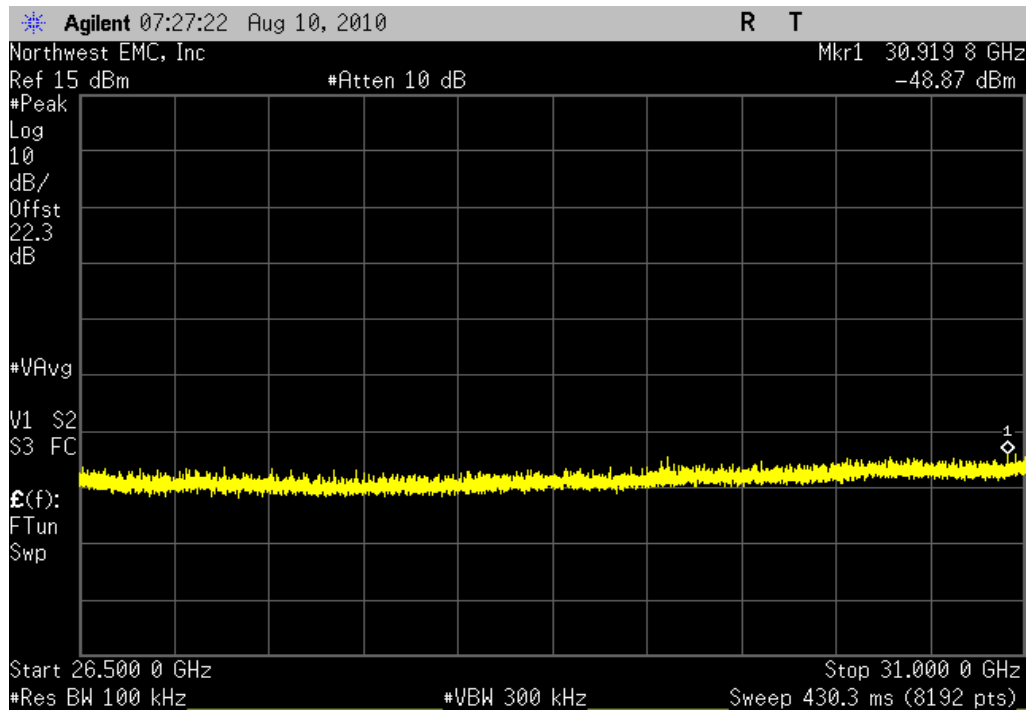
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz, 26.5 GHz - 31 GHz

Result: Pass

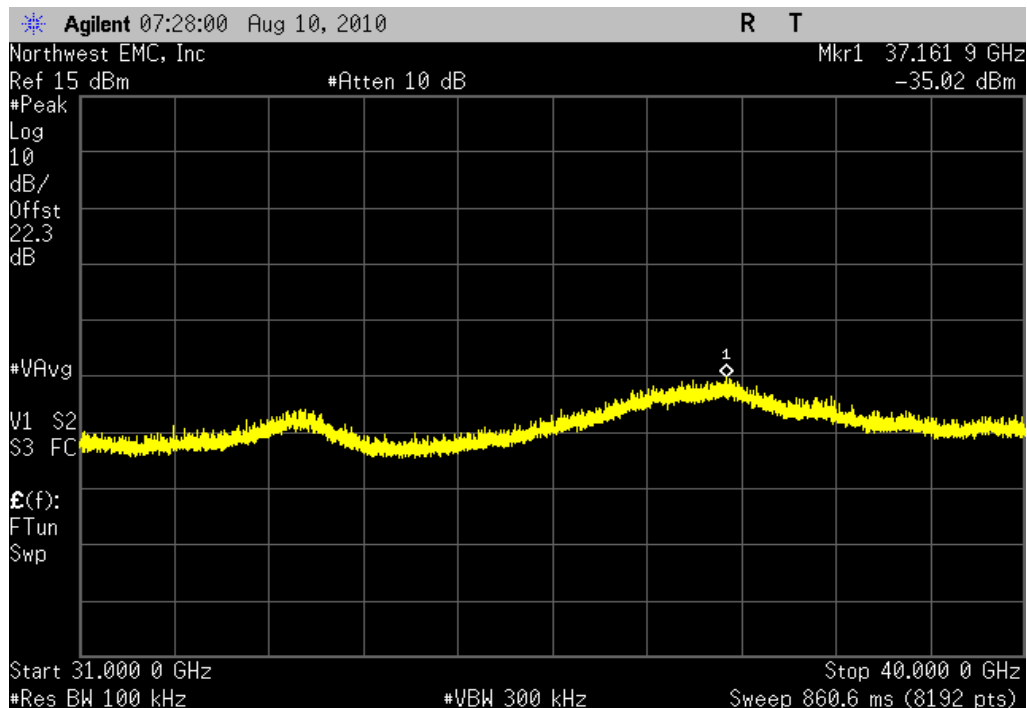
Value: -48.9 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.0 dBc

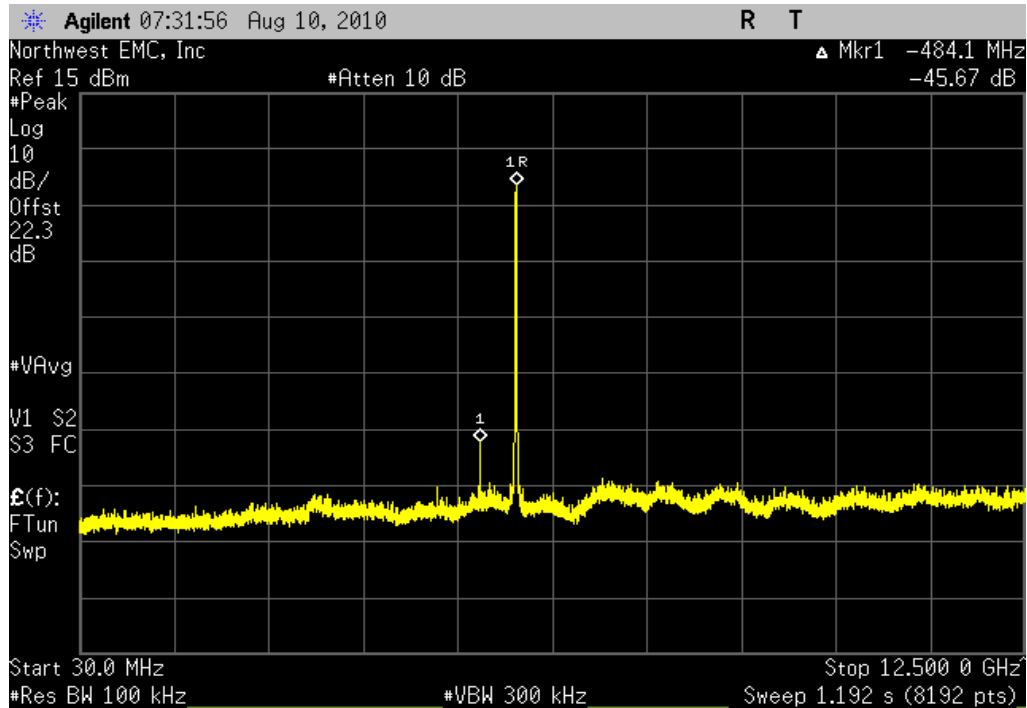
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz, 30 MHz - 12.5 GHz

Result: Pass

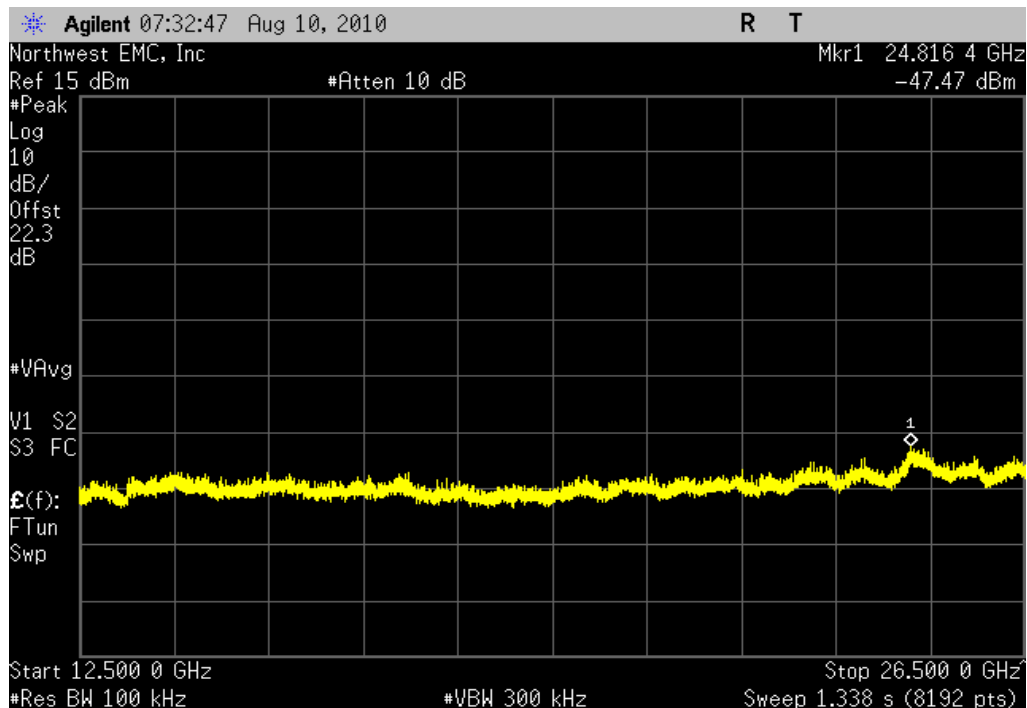
Value: -45.7 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

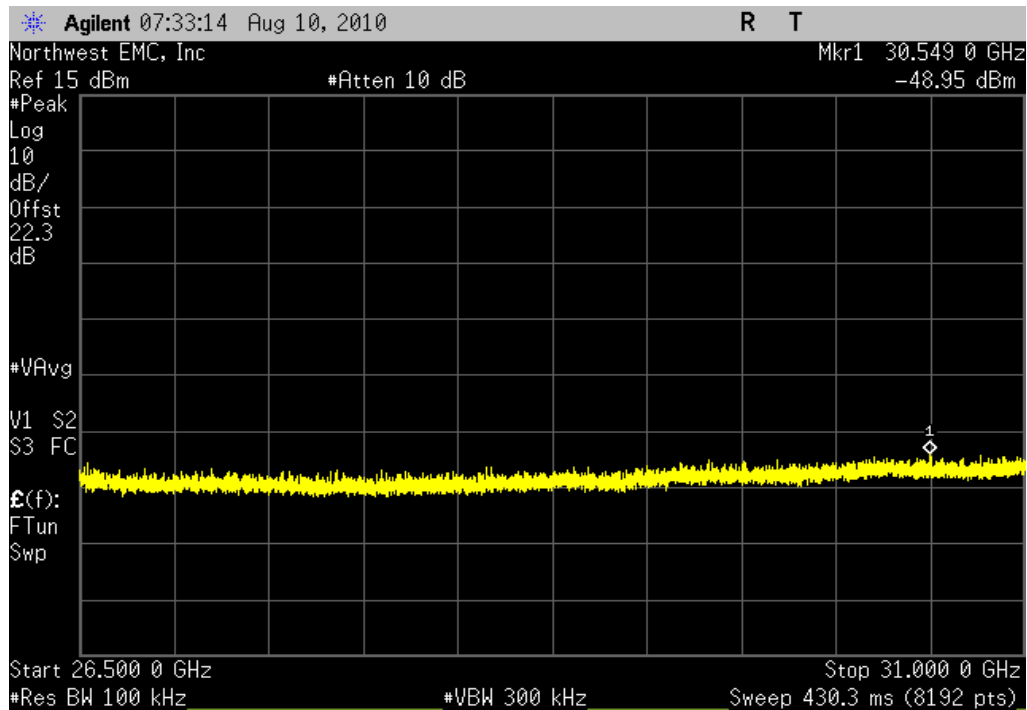
Value: -47.5 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz, 26.5 GHz - 31 GHz

Result: Pass

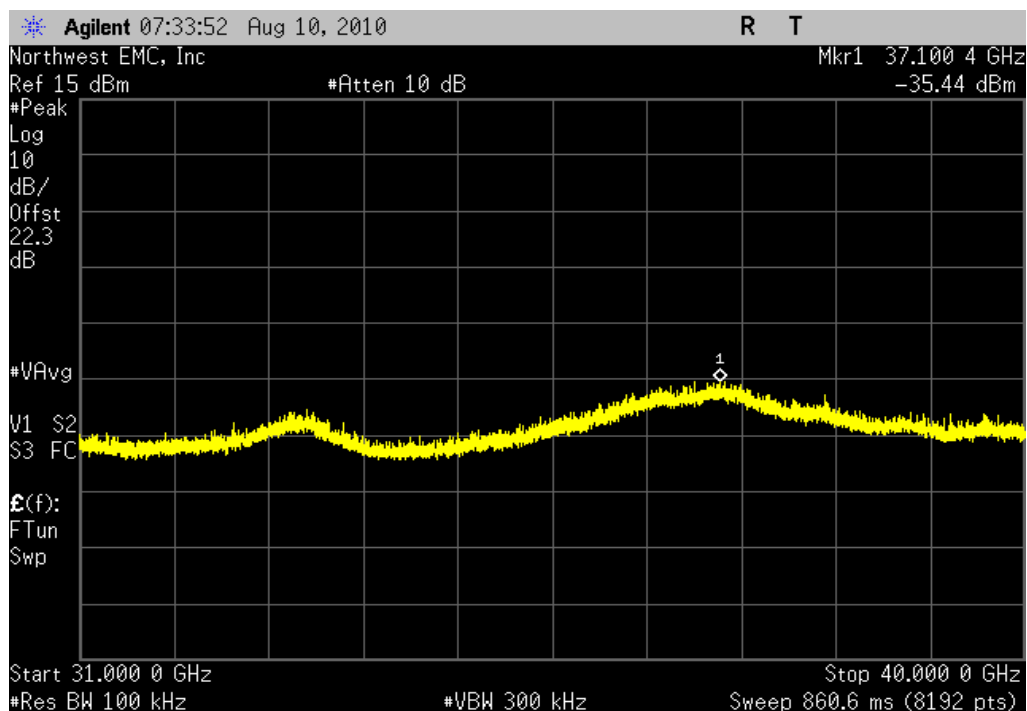
Value: -49.0 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz, 31 GHz - 40 GHz

Result: Pass

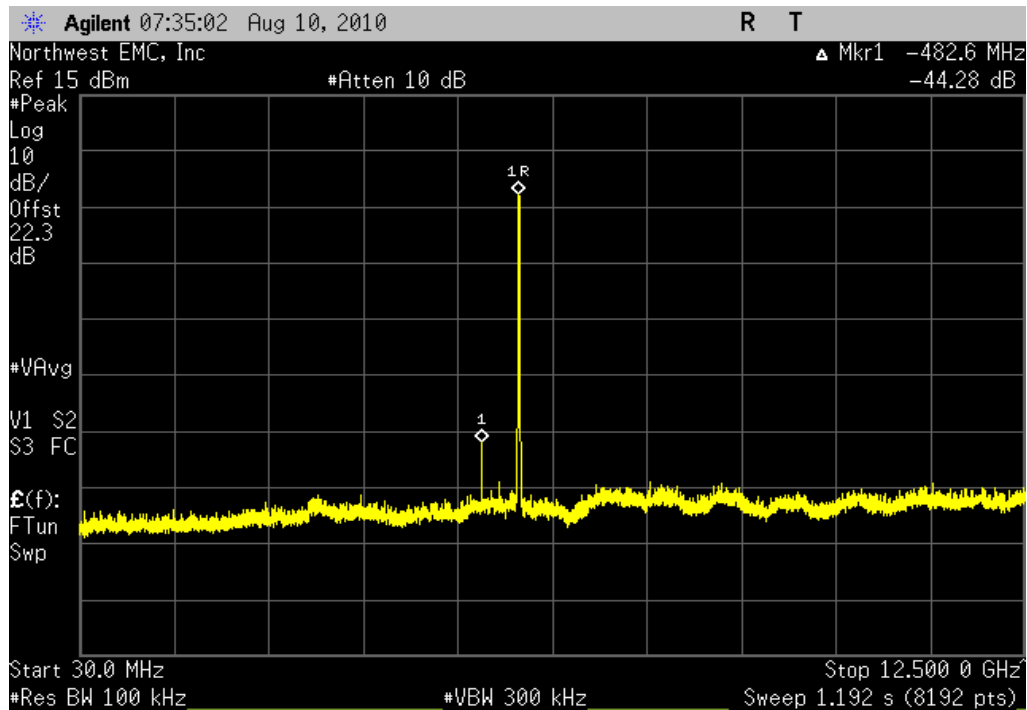
Value: -35.4 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz, 30 MHz - 12.5 GHz

Result: Pass

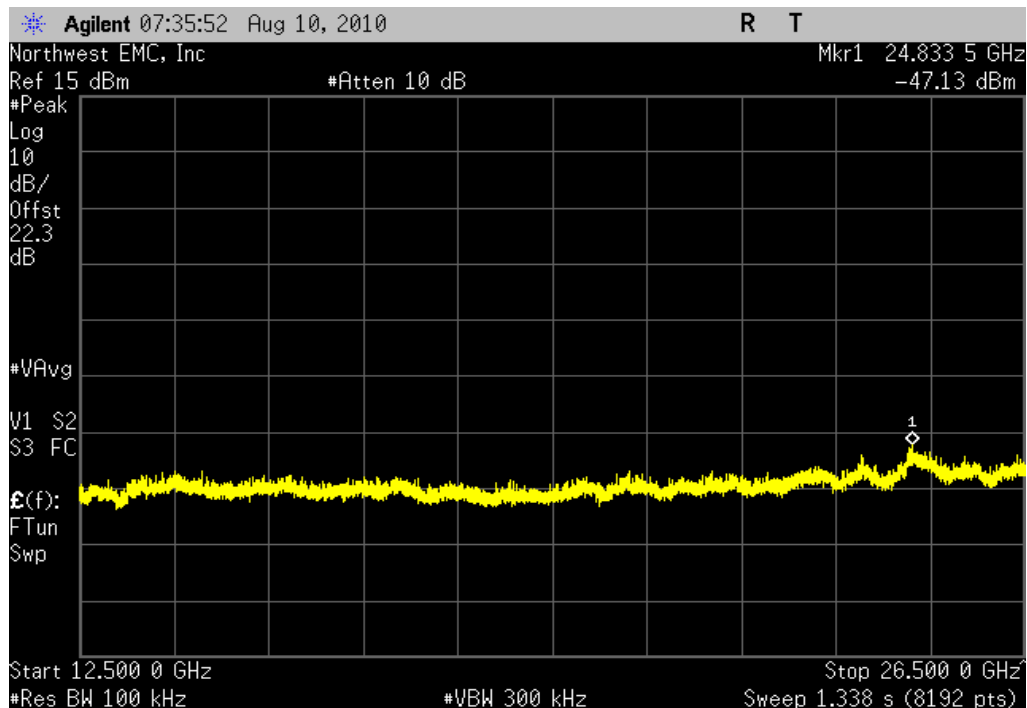
Value: -44.3 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

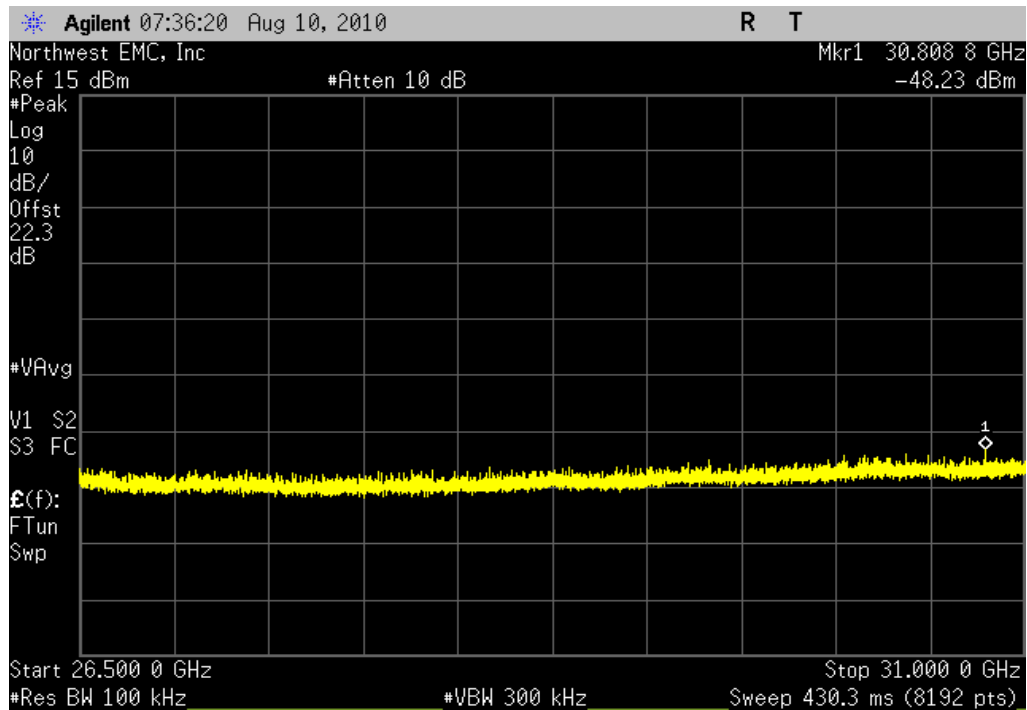
Value: -47.1 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz, 26.5 GHz - 31 GHz

Result: Pass

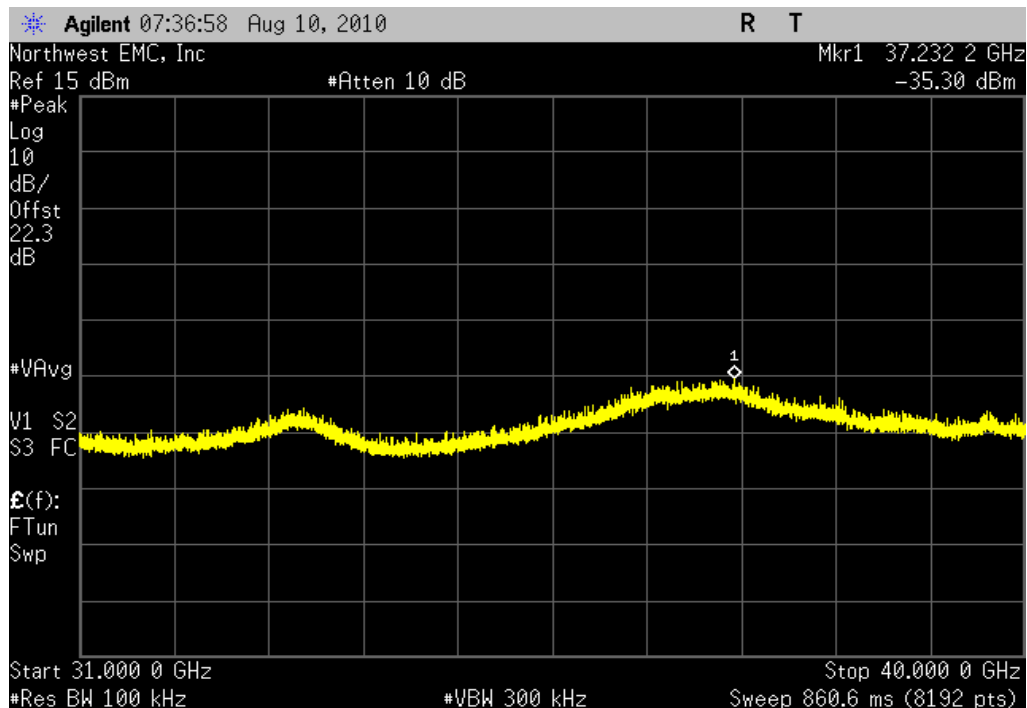
Value: -48.2 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.3 dBc

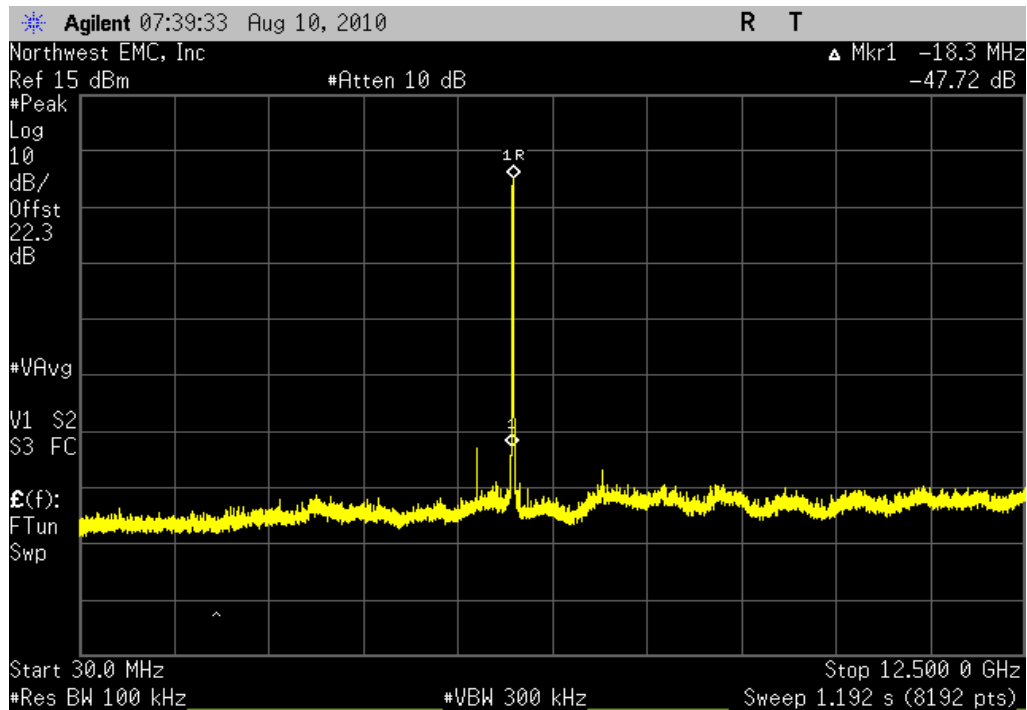
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz, 30 MHz - 12.5 GHz

Result: Pass

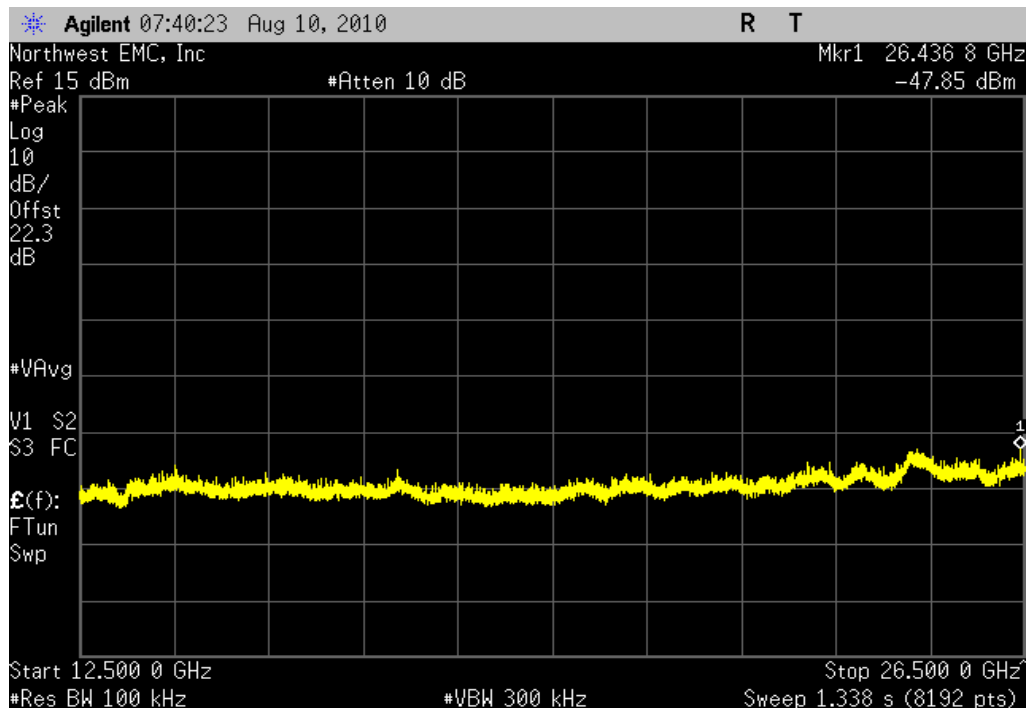
Value: -47.7 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

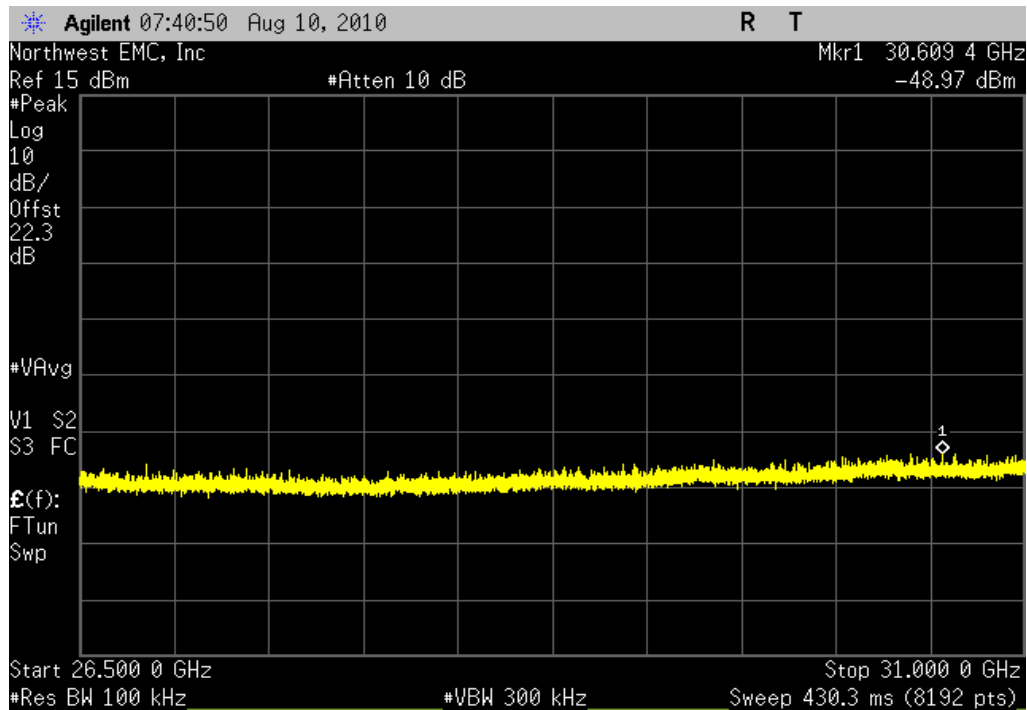
Value: -47.9 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz, 26.5 GHz - 31 GHz

Result: Pass

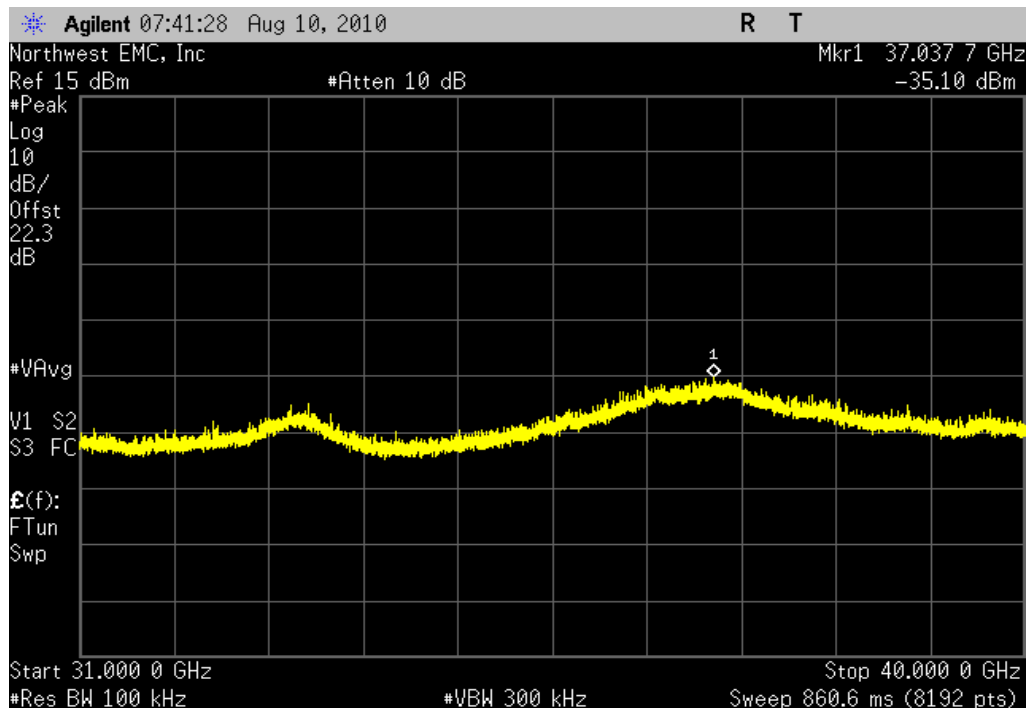
Value: -49.0 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.1 dBc

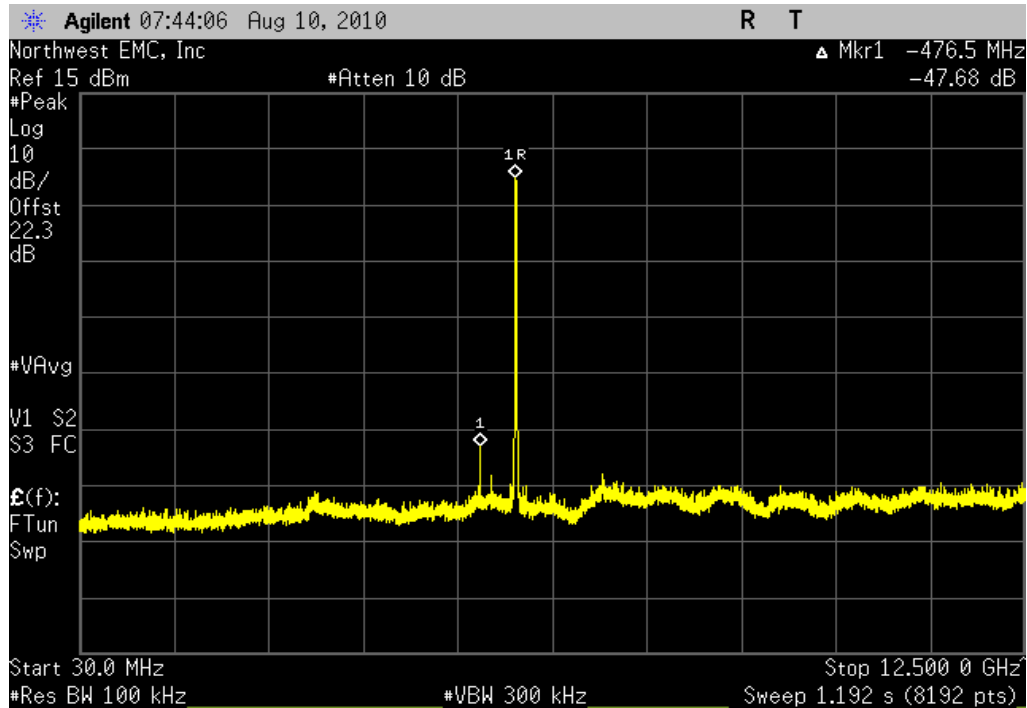
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz, 30 MHz - 12.5 GHz

Result: Pass

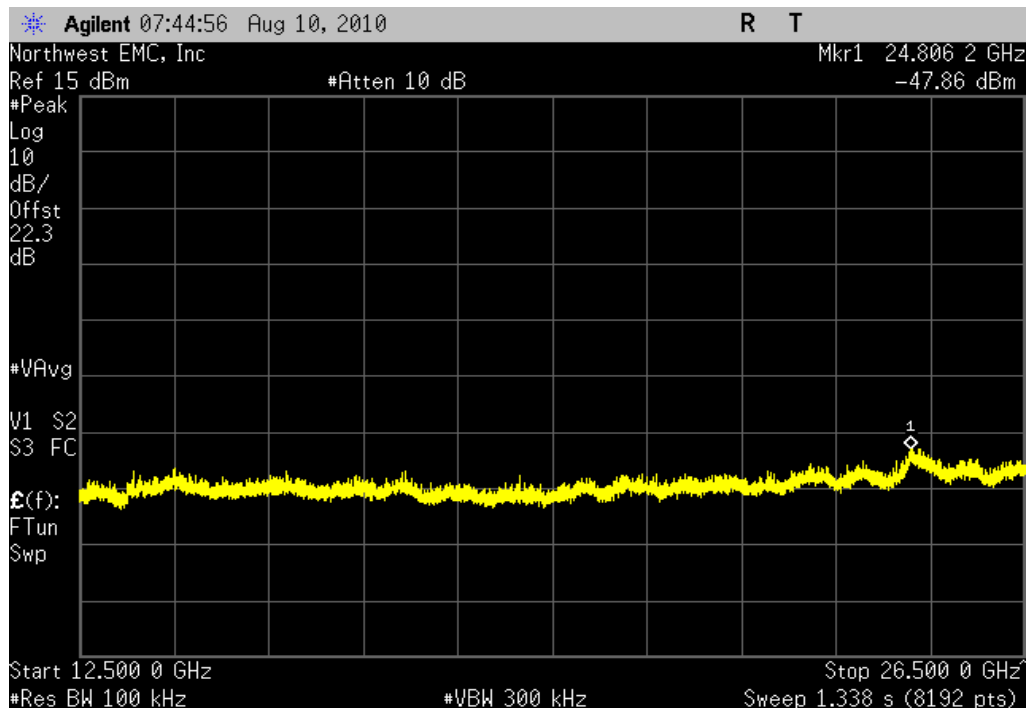
Value: -47.7 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

Value: -47.9 dBc

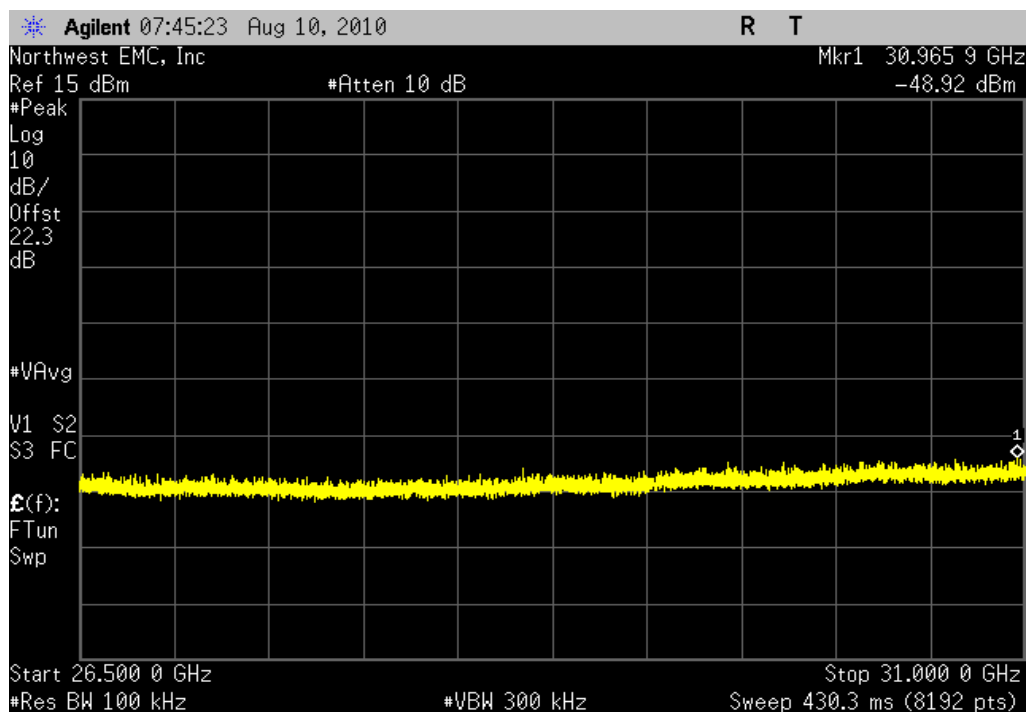
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz, 26.5 GHz - 31 GHz

Result: Pass

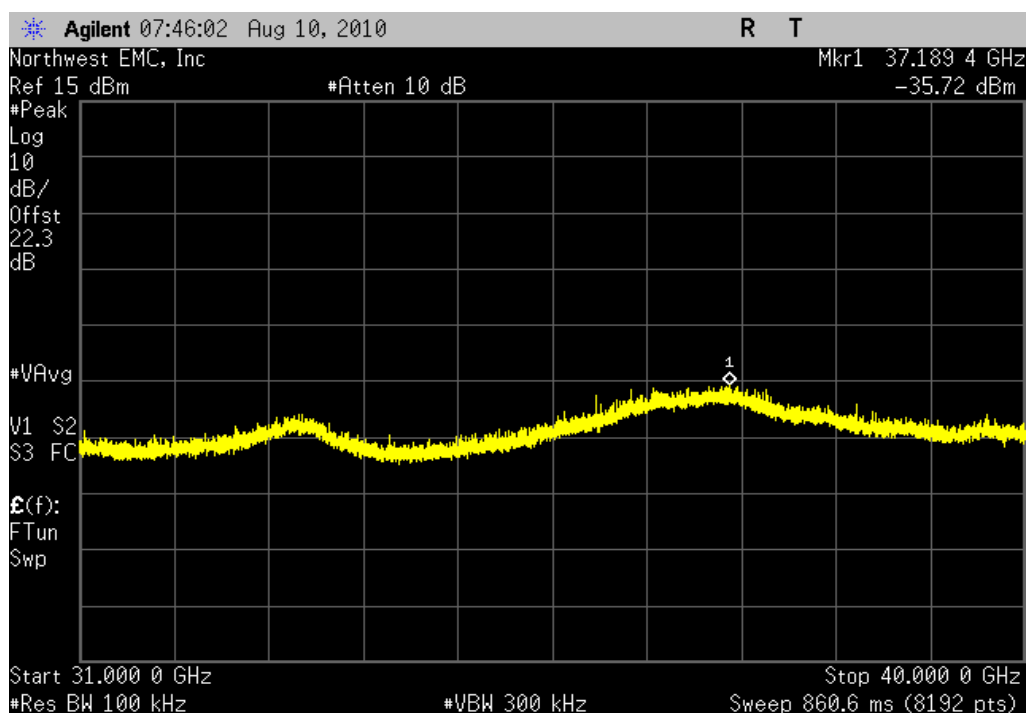
Value: -48.9 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.7 dBc

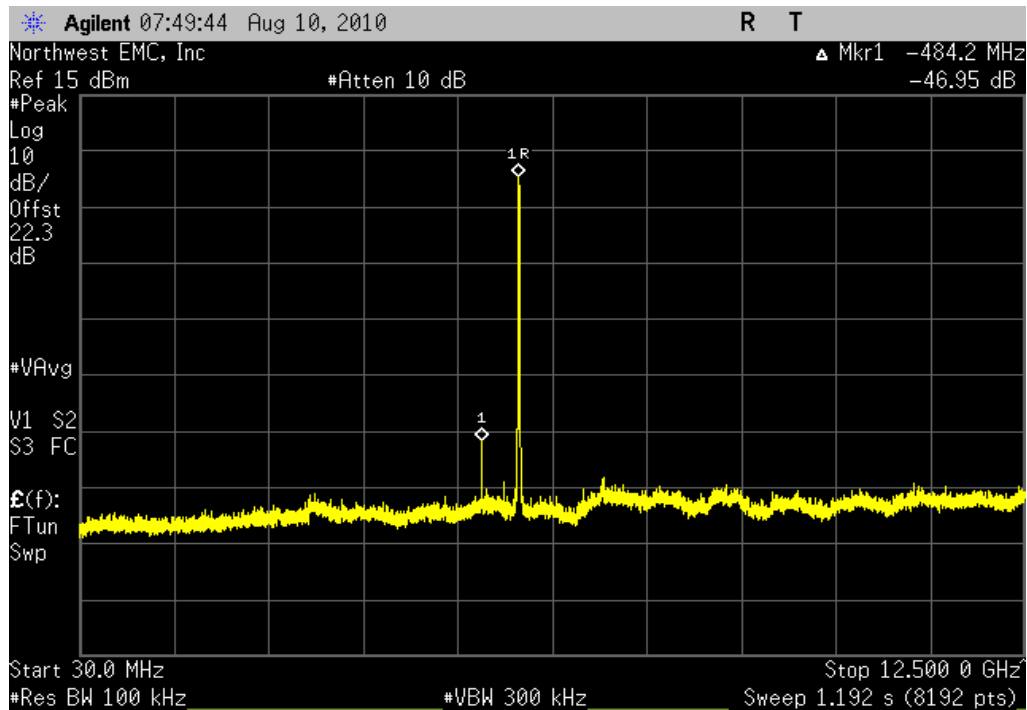
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz, 30 MHz - 12.5 GHz

Result: Pass

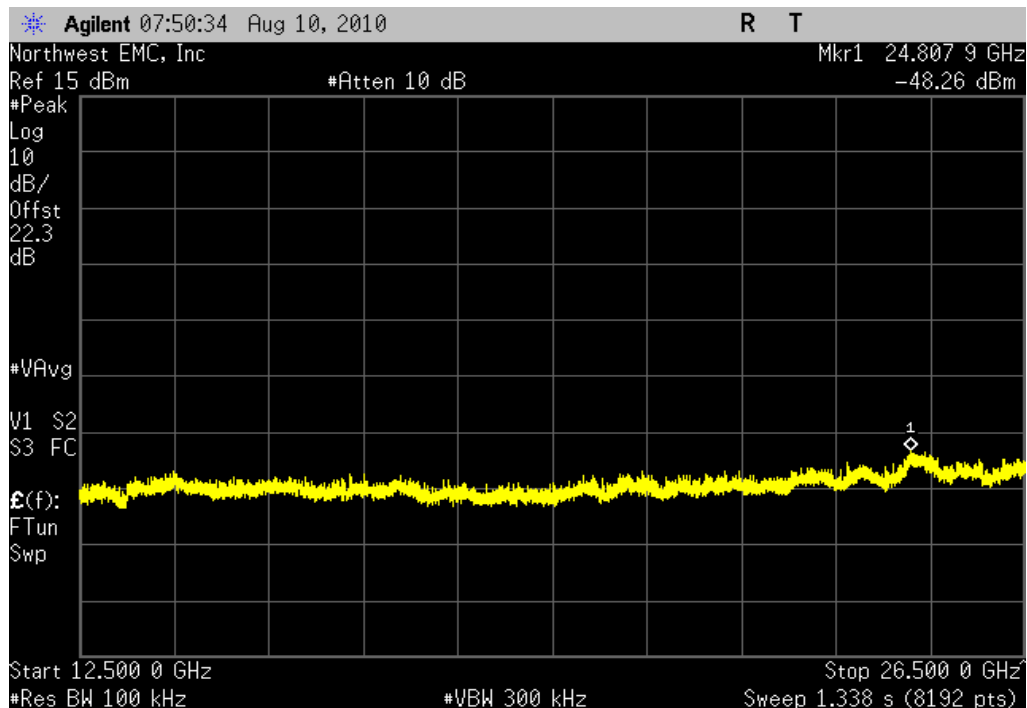
Value: -47.0 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

Value: -48.3 dBc

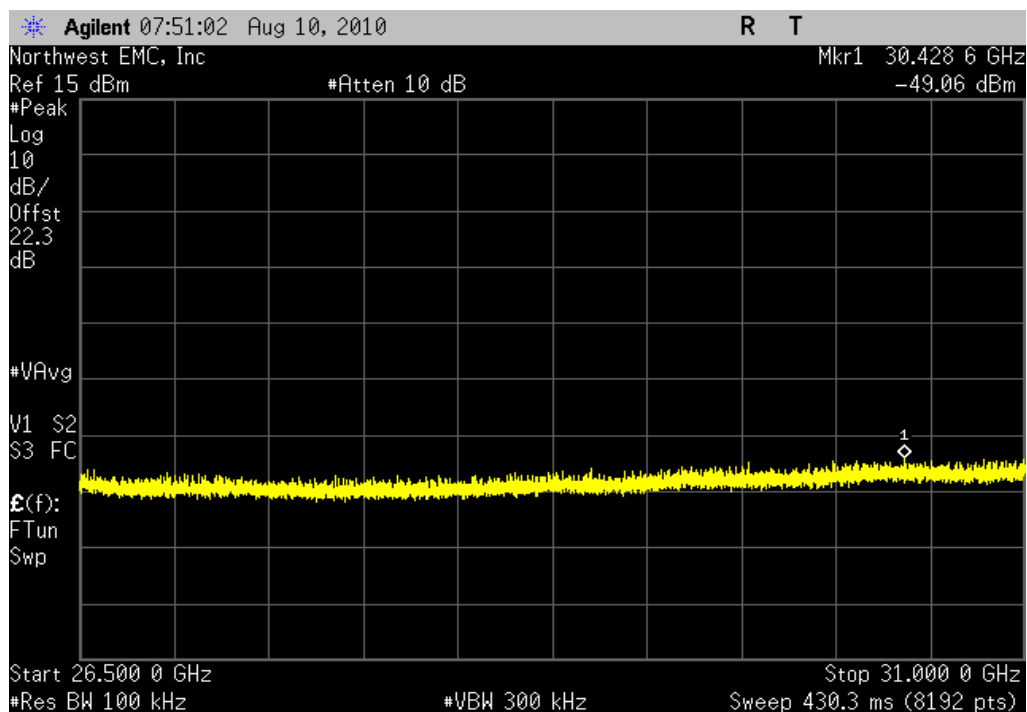
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz, 26.5 GHz - 31 GHz

Result: Pass

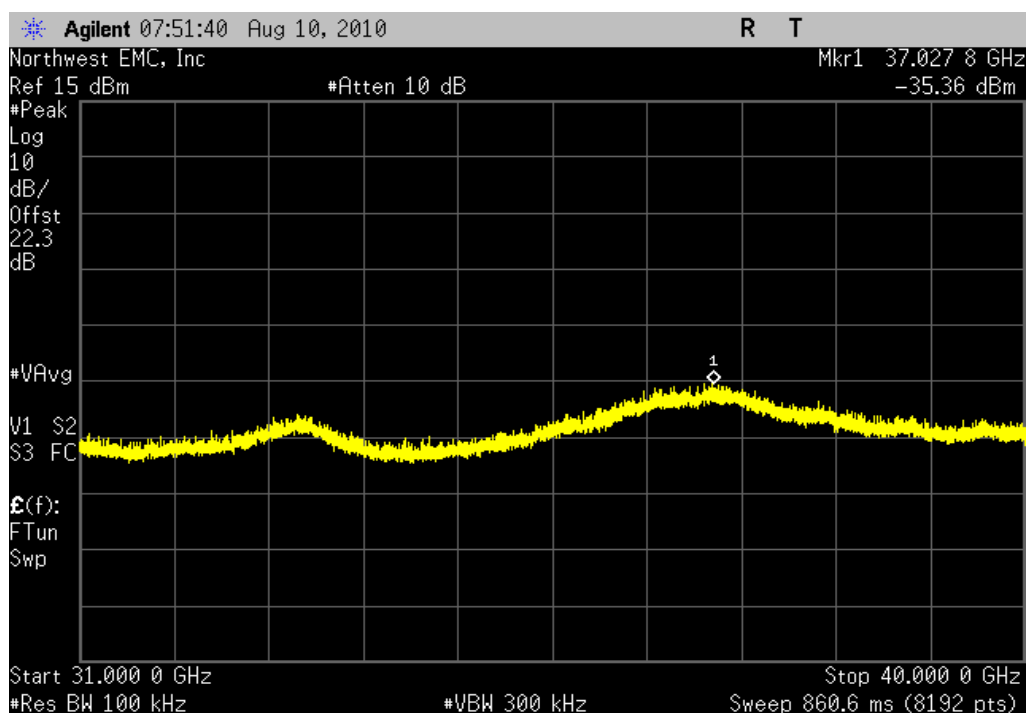
Value: -49.1 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.4 dBc

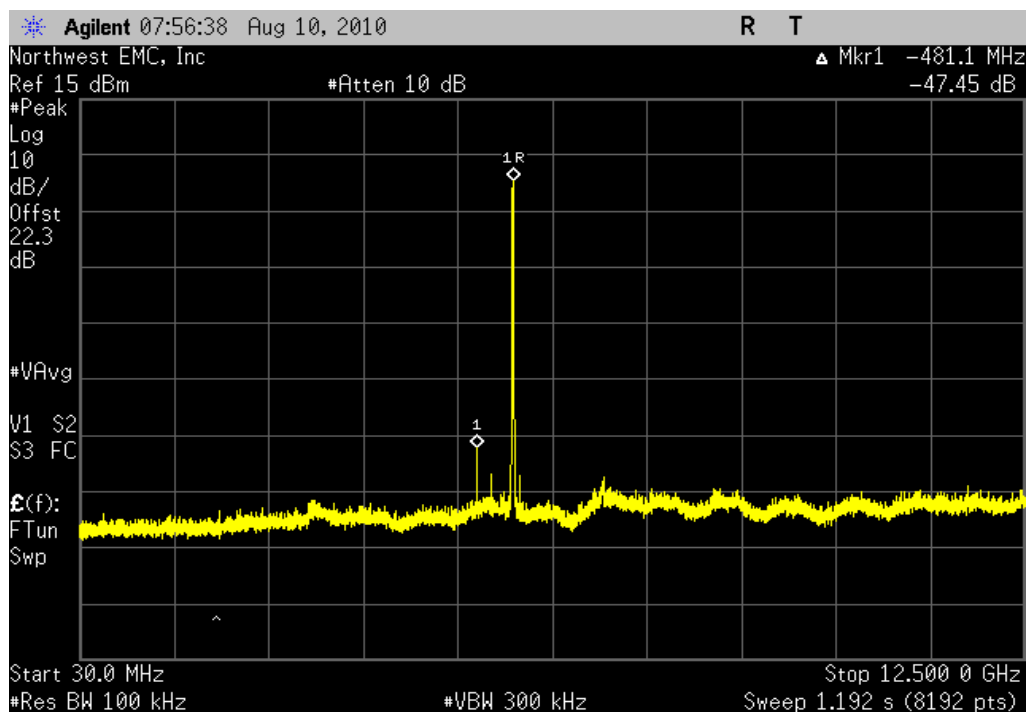
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz, 30 MHz - 12.5 GHz

Result: Pass

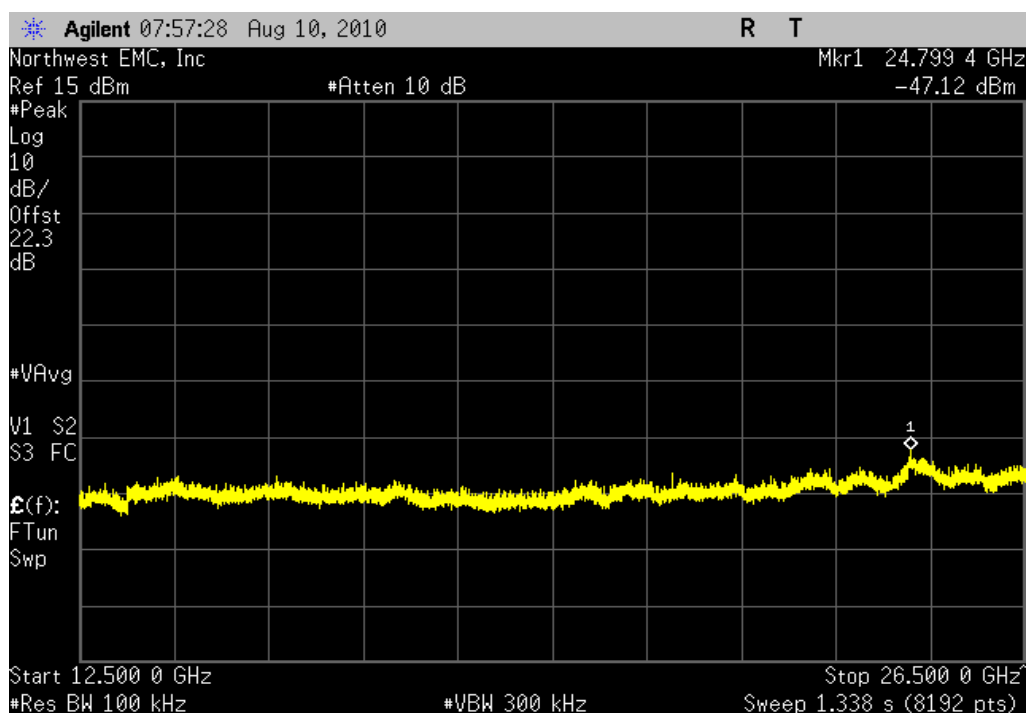
Value: -47.5 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

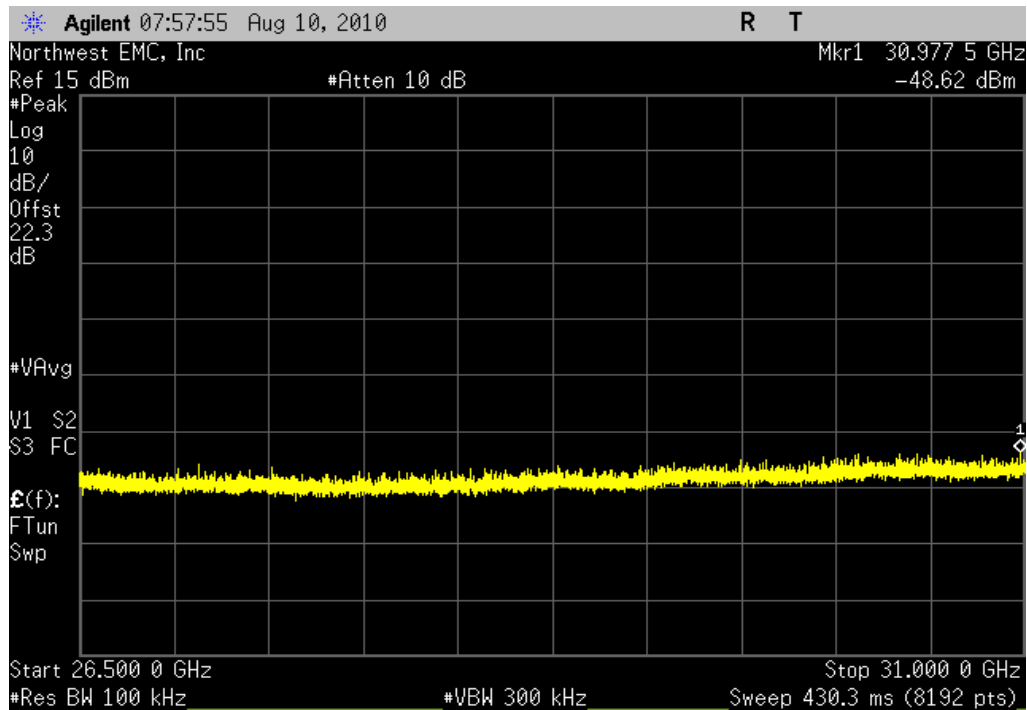
Value: -47.1 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz, 26.5 GHz - 31 GHz

Result: Pass

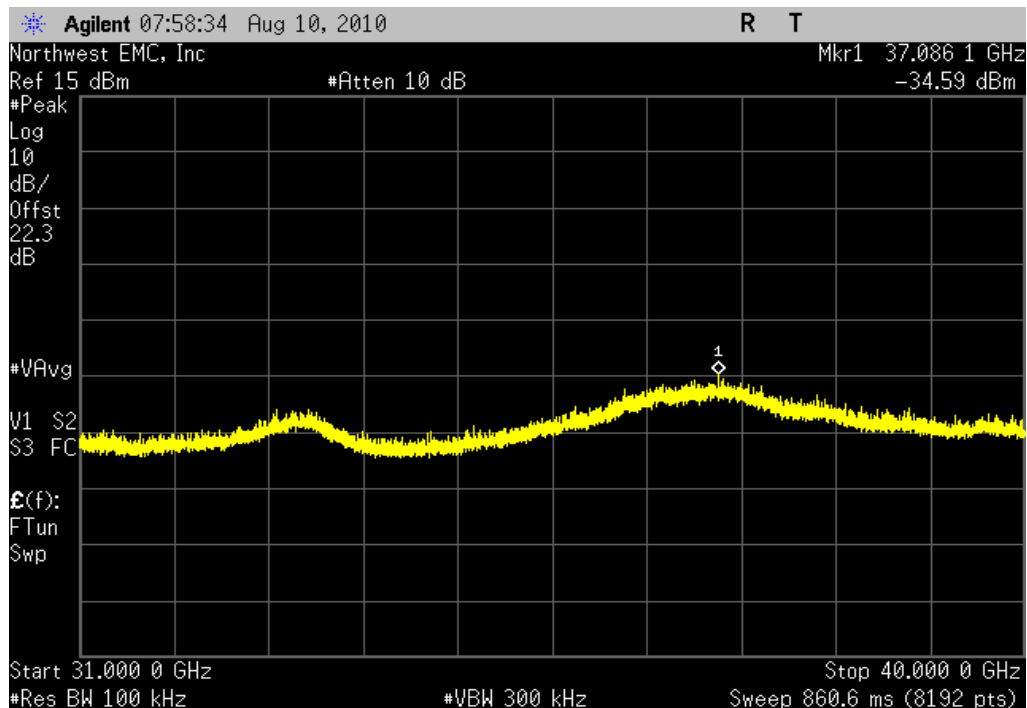
Value: -48.6 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -34.6 dBc

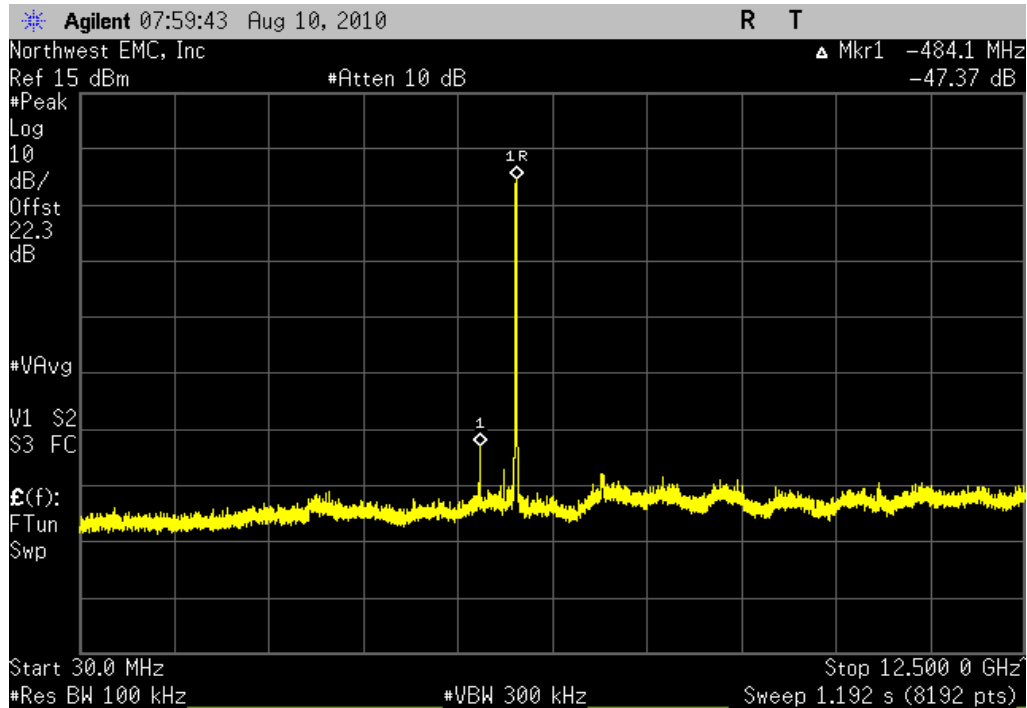
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz, 30 MHz - 12.5 GHz

Result: Pass

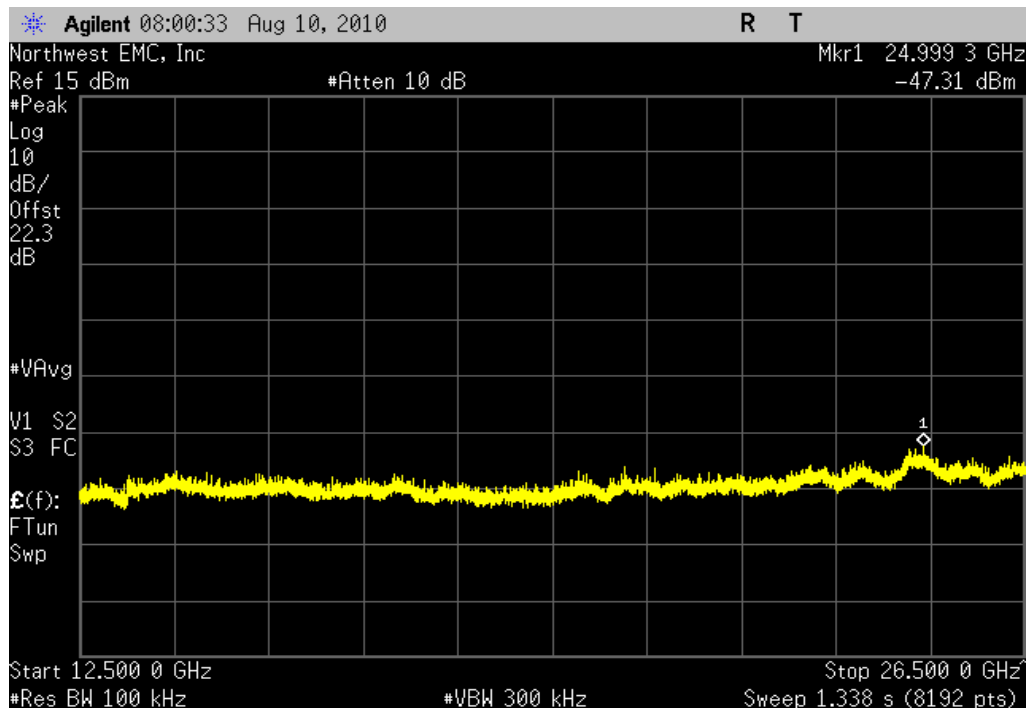
Value: -47.4 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

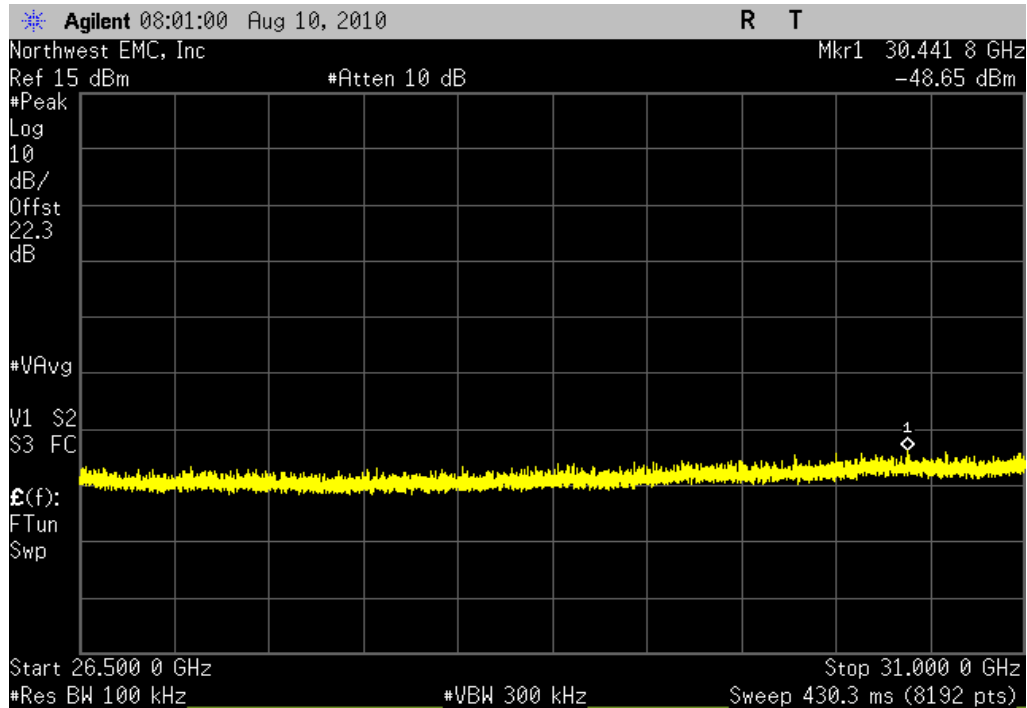
Value: -47.3 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz, 26.5 GHz - 31 GHz

Result: Pass

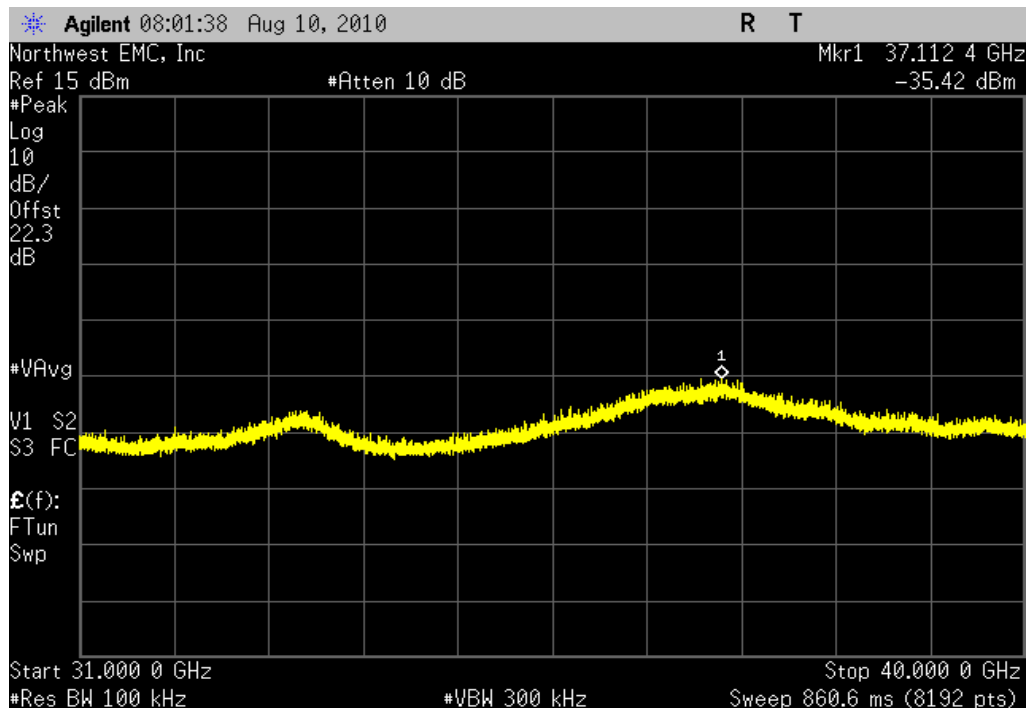
Value: -48.7 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.4 dBc

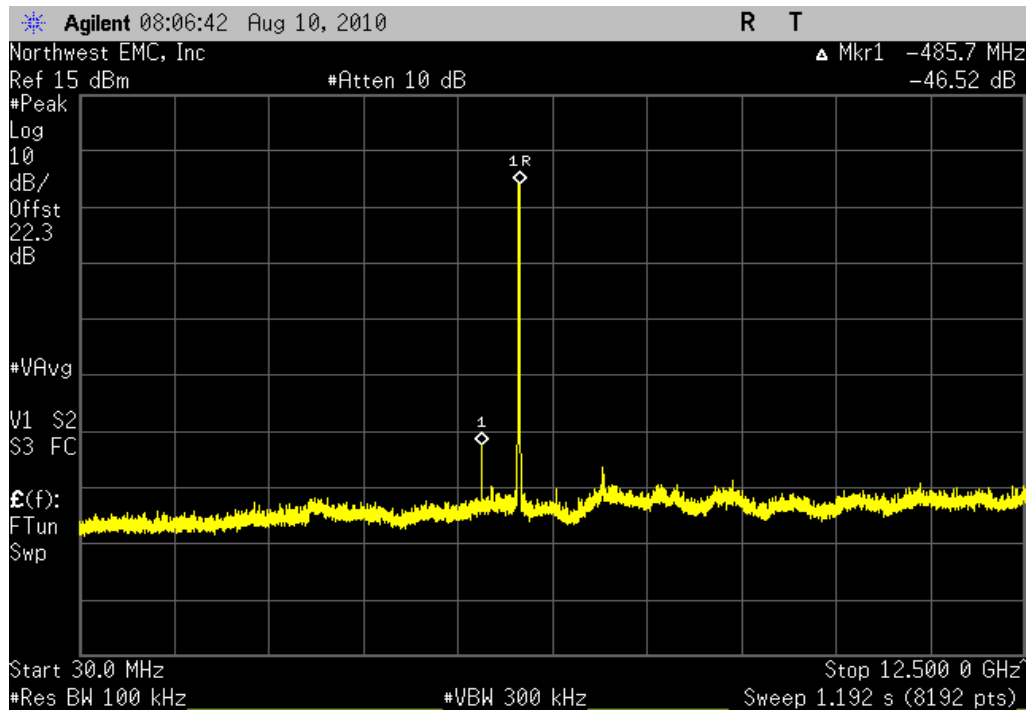
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz, 30 MHz - 12.5 GHz

Result: Pass

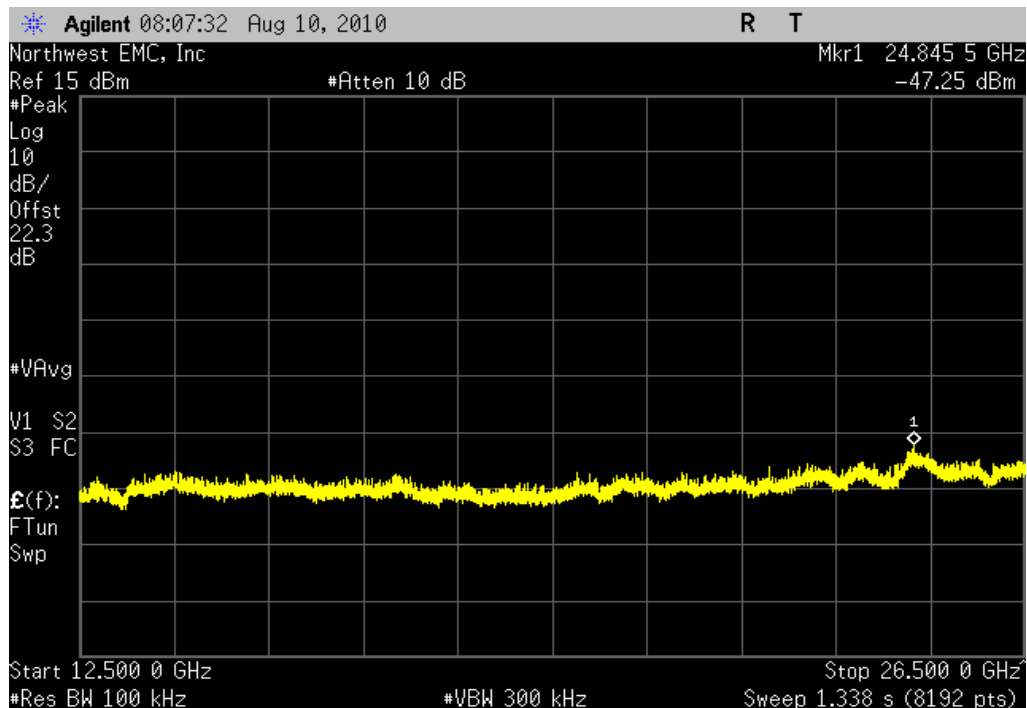
Value: -46.5 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

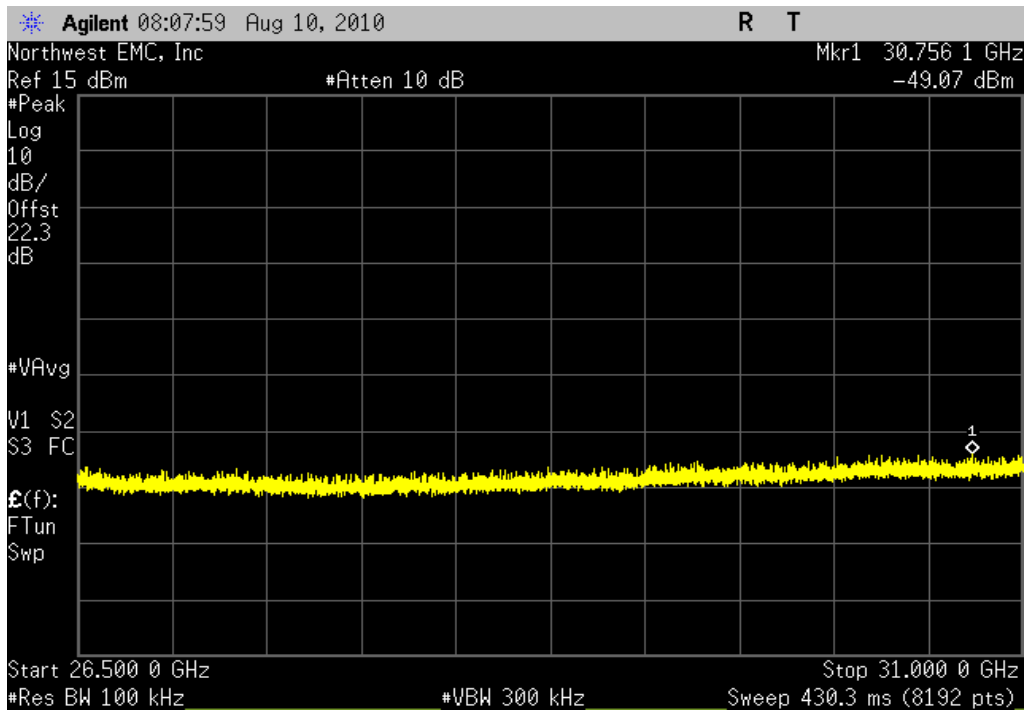
Value: -47.3 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz, 26.5 GHz - 31 GHz

Result: Pass

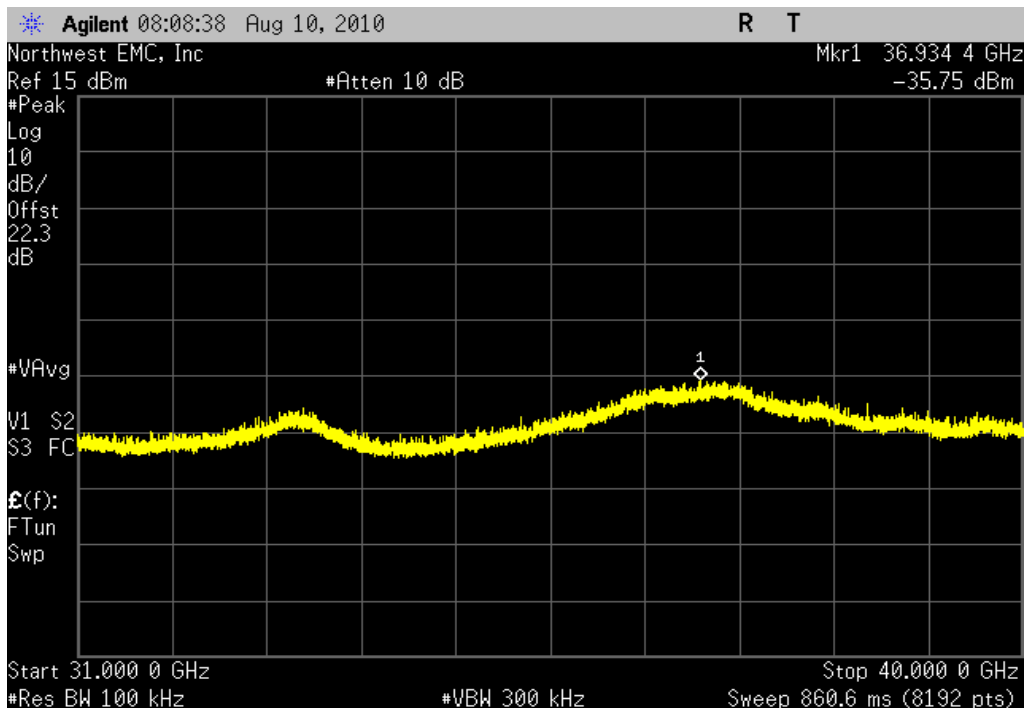
Value: -49.1 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz, 31 GHz - 40 GHz

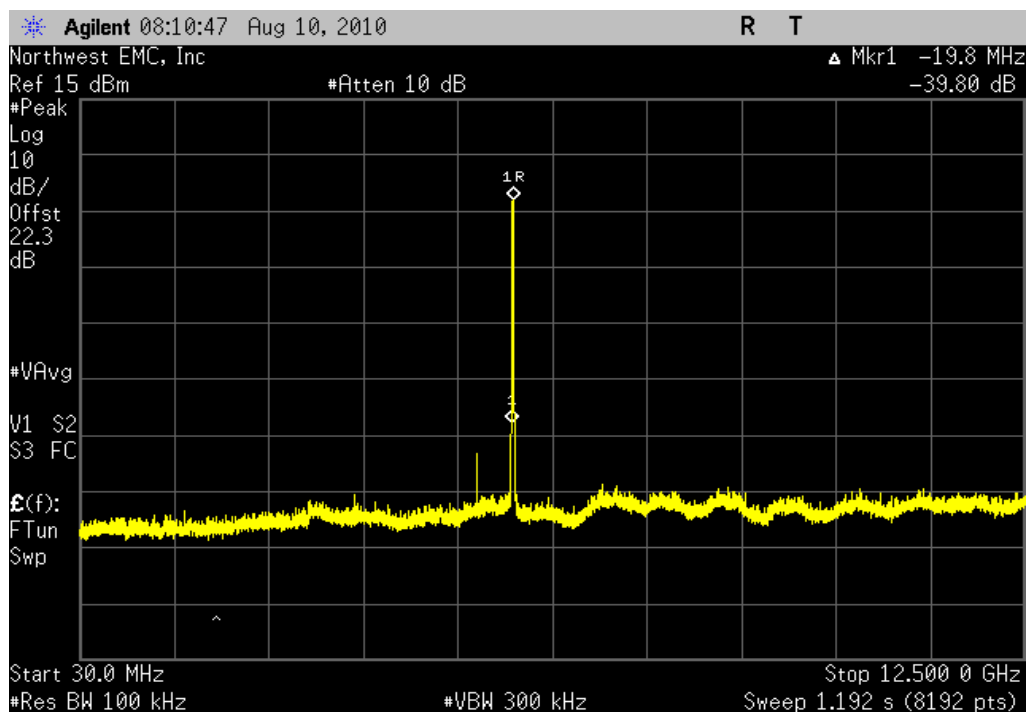
Result: Pass

Value: -35.8 dBc

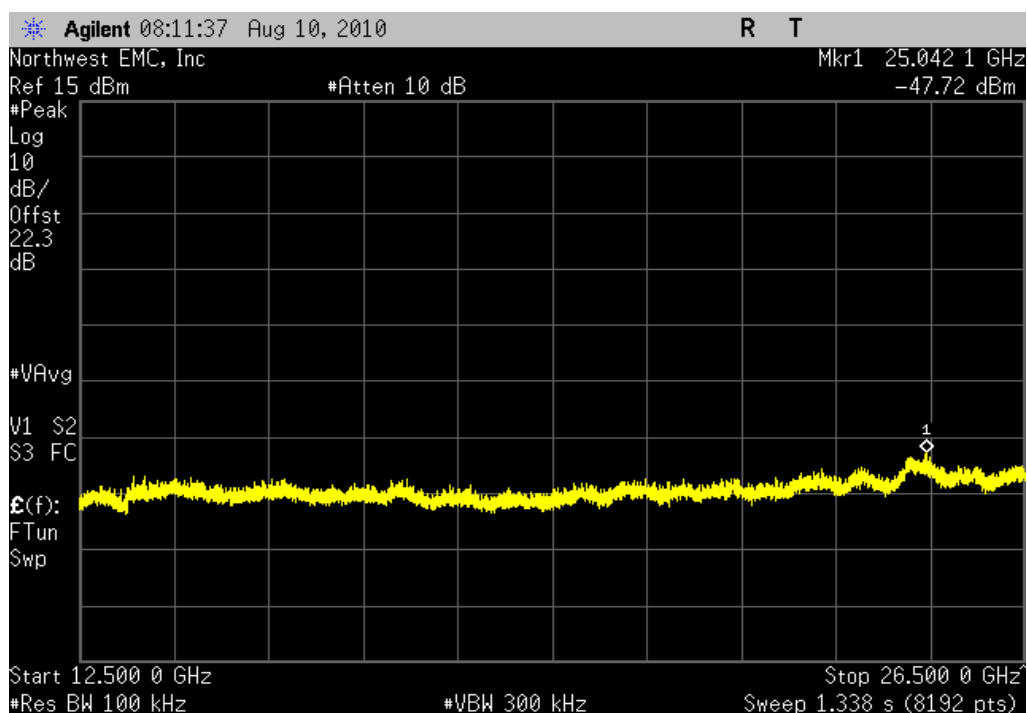
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, Low Channel 149, 5745 MHz, 30 MHz - 12.5 GHz

Result: Pass**Value:** -39.8 dBc**Limit:** ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, Low Channel 149, 5745 MHz, 12.5 GHz - 26.5 GHz

Result: Pass**Value:** -47.7 dBc**Limit:** ≤ -20 dBc

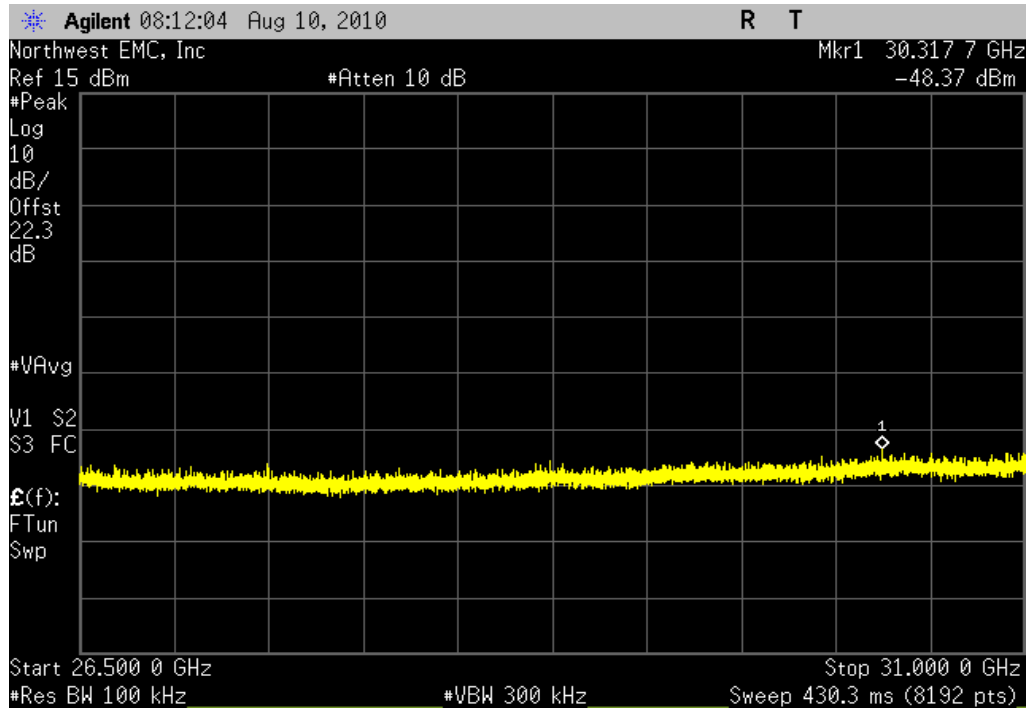
EMC

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, Low Channel 149, 5745 MHz, 26.5 GHz - 31 GHz

Result: Pass

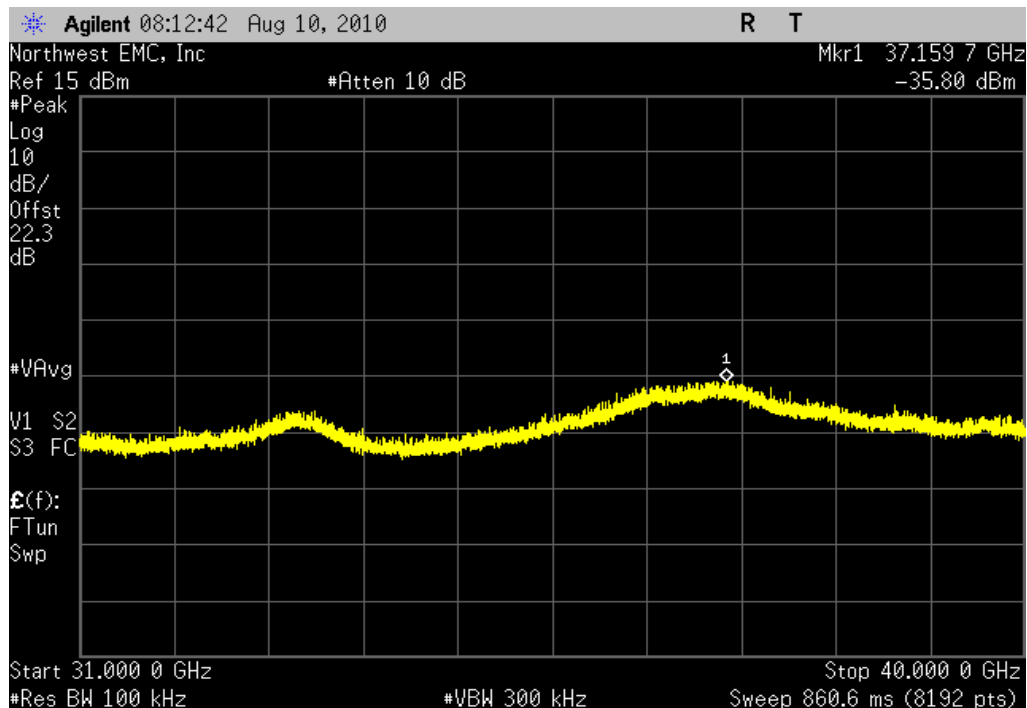
Value: -48.4 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, Low Channel 149, 5745 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.8 dBc

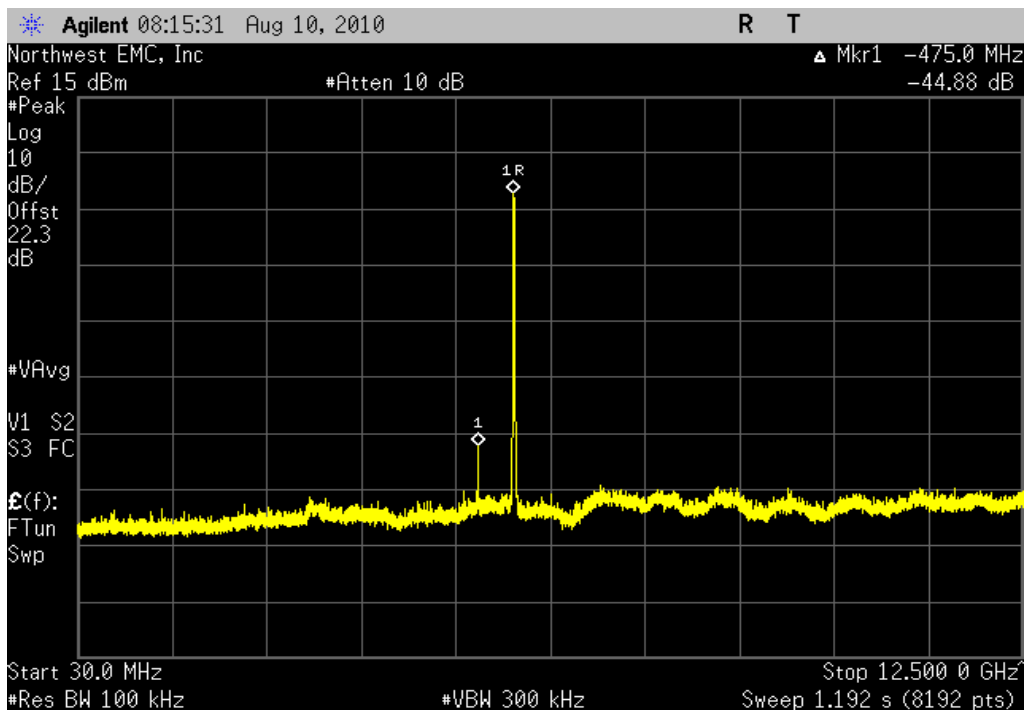
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, Mid Channel 157, 5785 MHz, 30 MHz - 12.5 GHz

Result: Pass

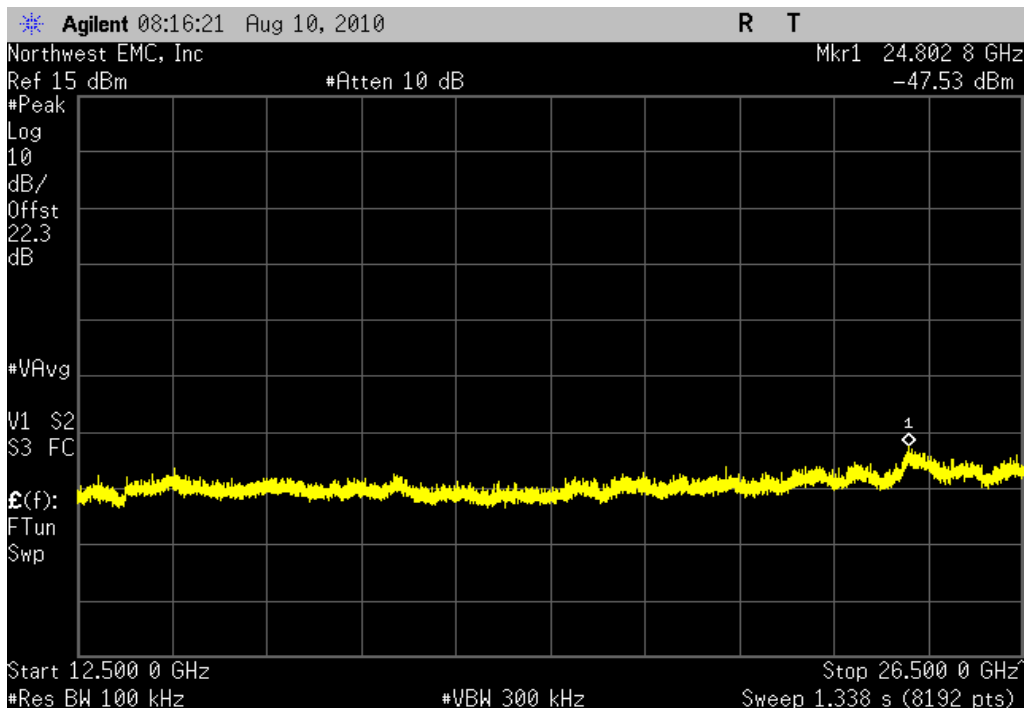
Value: -44.9 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, Mid Channel 157, 5785 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

Value: -47.5 dBc

Limit: ≤ -20 dBc

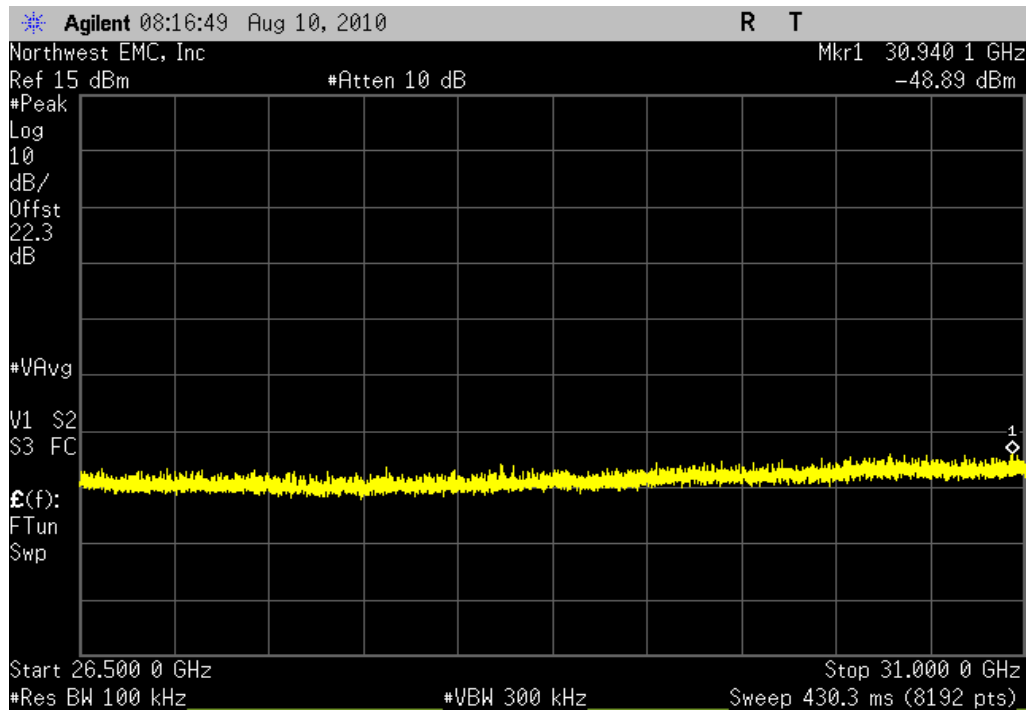
EMC

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, Mid Channel 157, 5785 MHz, 26.5 GHz - 31 GHz

Result: Pass

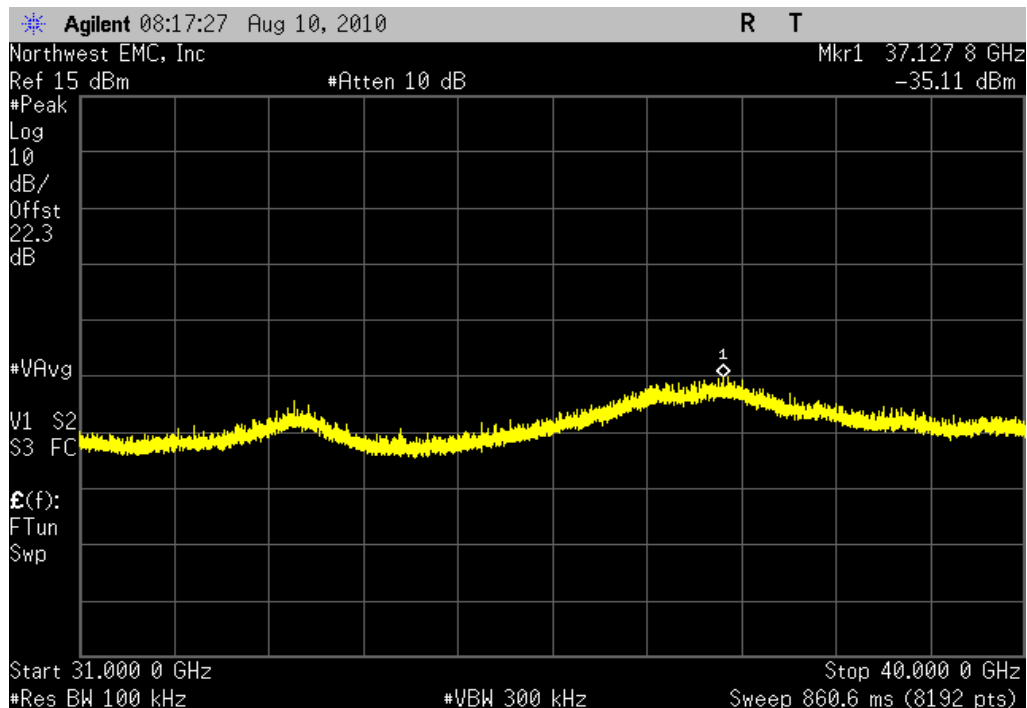
Value: -48.9 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, Mid Channel 157, 5785 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.1 dBc

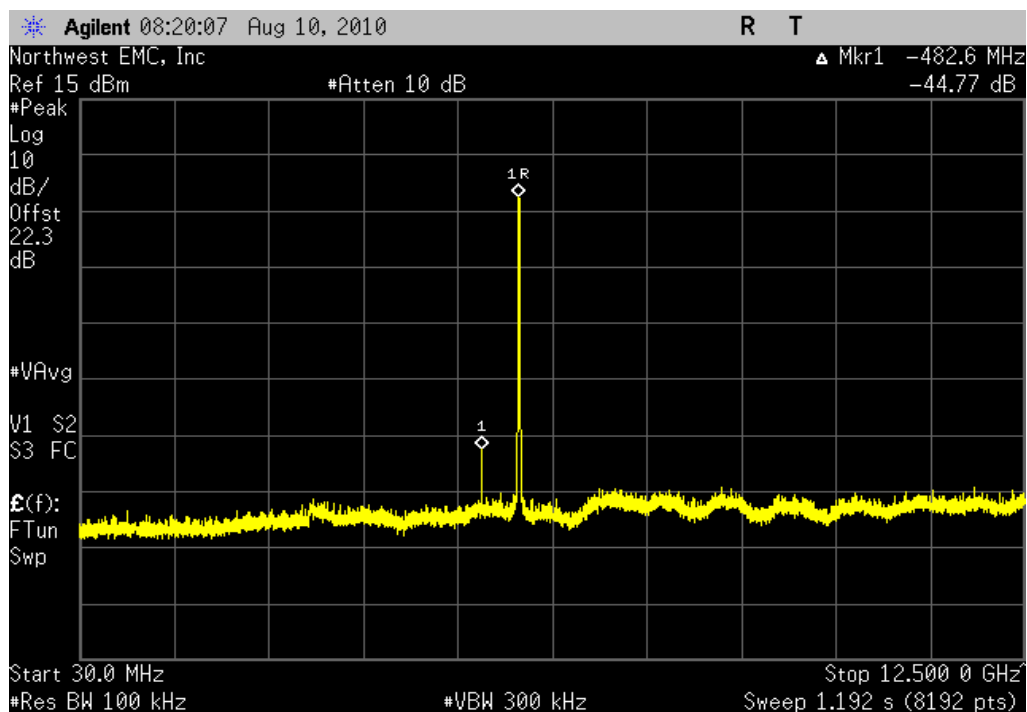
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, High Channel 165, 5825 MHz, 30 MHz - 12.5 GHz

Result: Pass

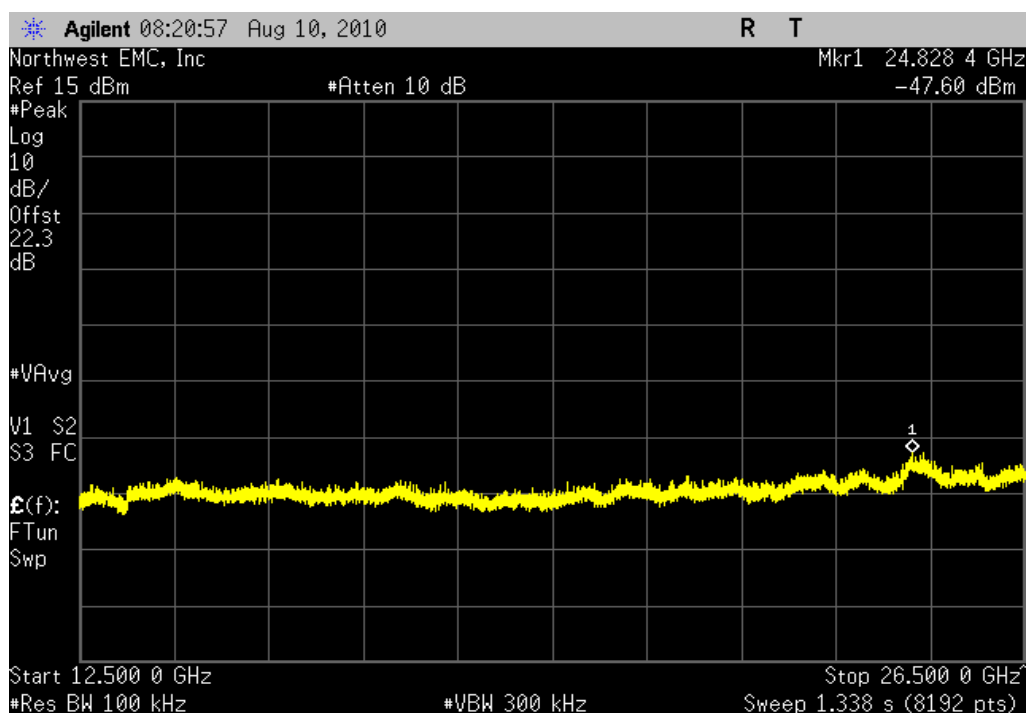
Value: -44.8 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, High Channel 165, 5825 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

Value: -47.6 dBc

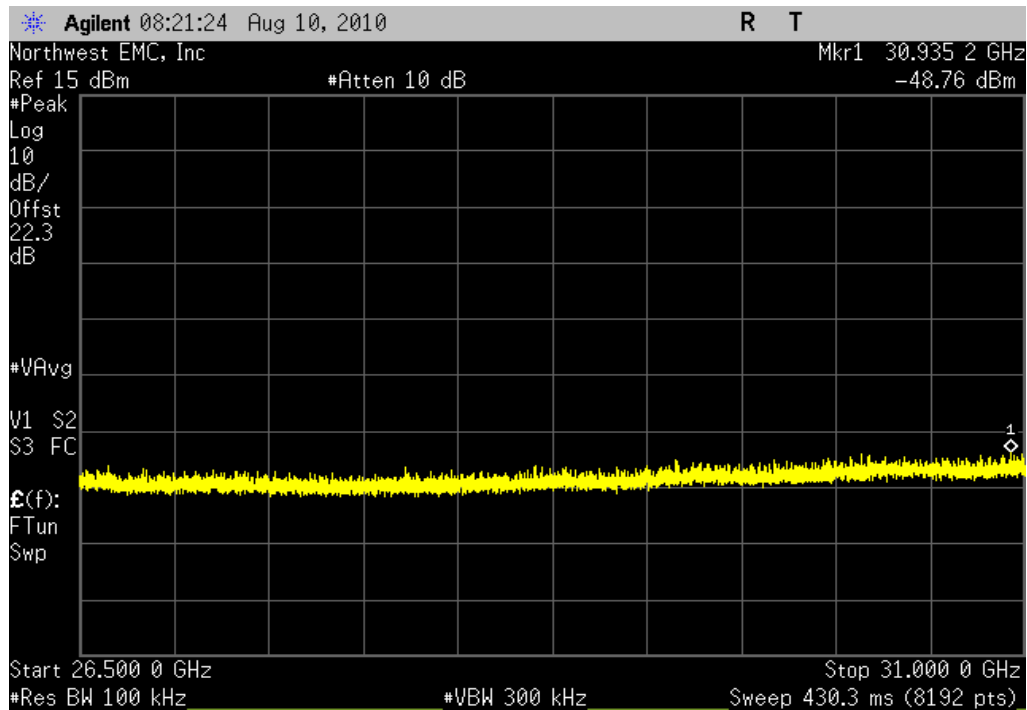
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, High Channel 165, 5825 MHz, 26.5 GHz - 31 GHz

Result: Pass

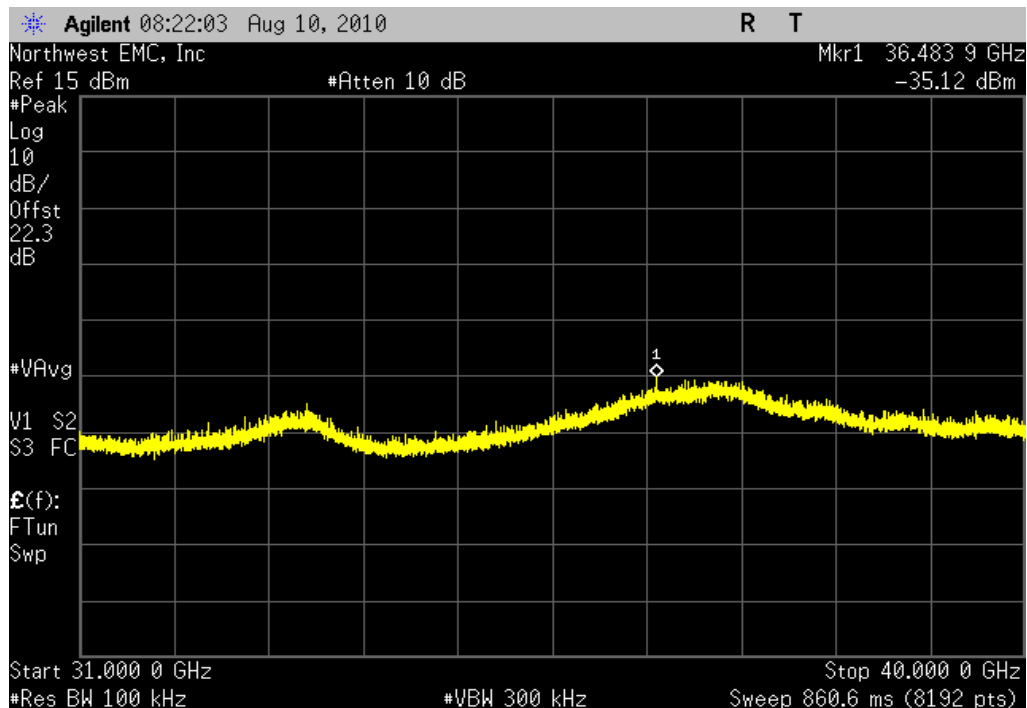
Value: -48.8 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS0, High Channel 165, 5825 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.1 dBc

Limit: ≤ -20 dBc

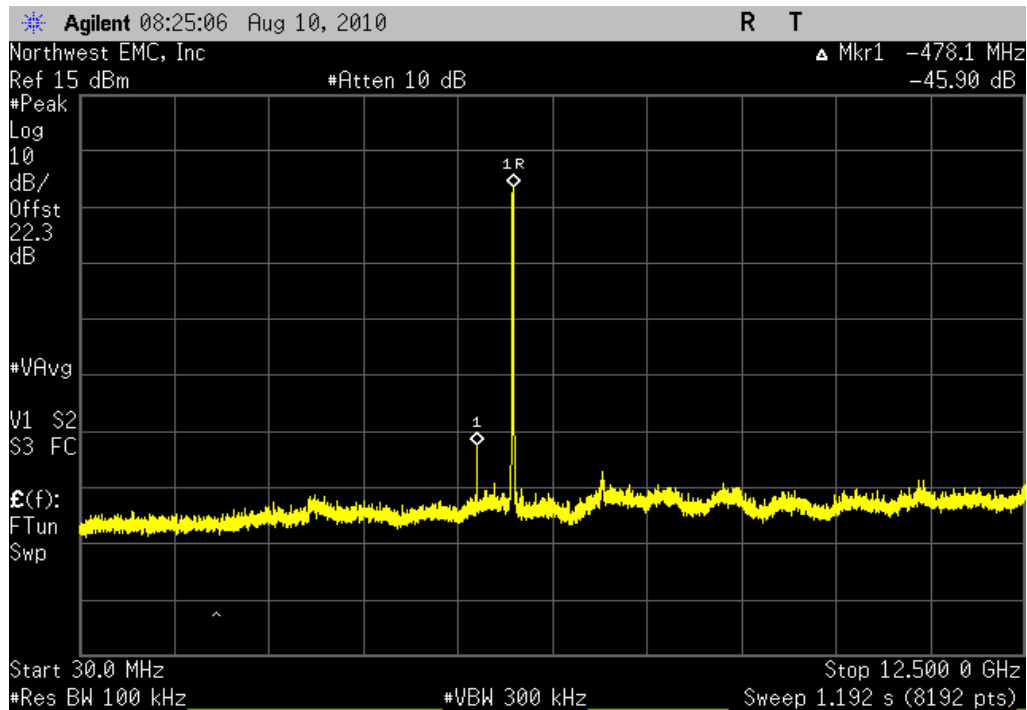
EMC

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, Low Channel 149, 5745 MHz, 30 MHz - 12.5 GHz

Result: Pass

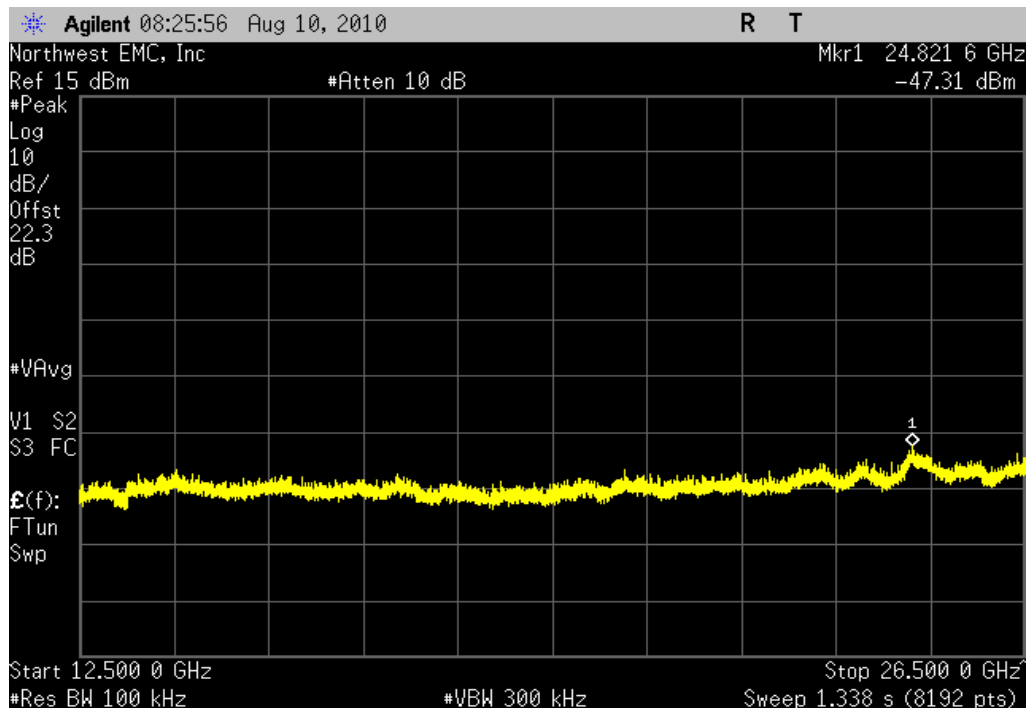
Value: -45.9 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, Low Channel 149, 5745 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

Value: -47.3 dBc

Limit: ≤ -20 dBc

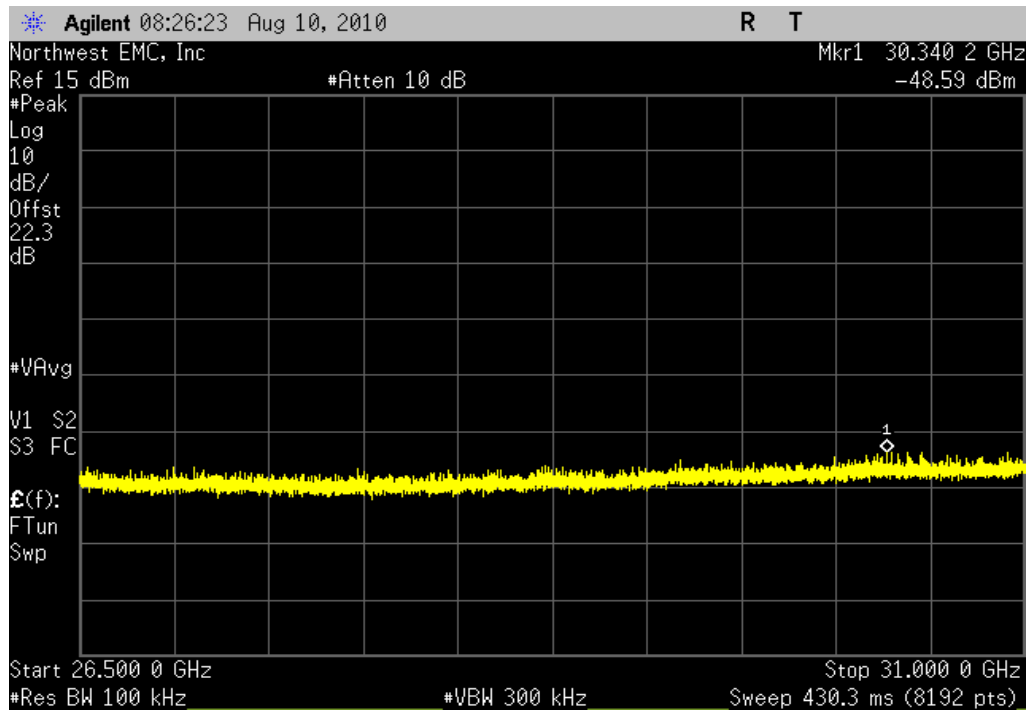
EMC

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, Low Channel 149, 5745 MHz, 26.5 GHz - 31 GHz

Result: Pass

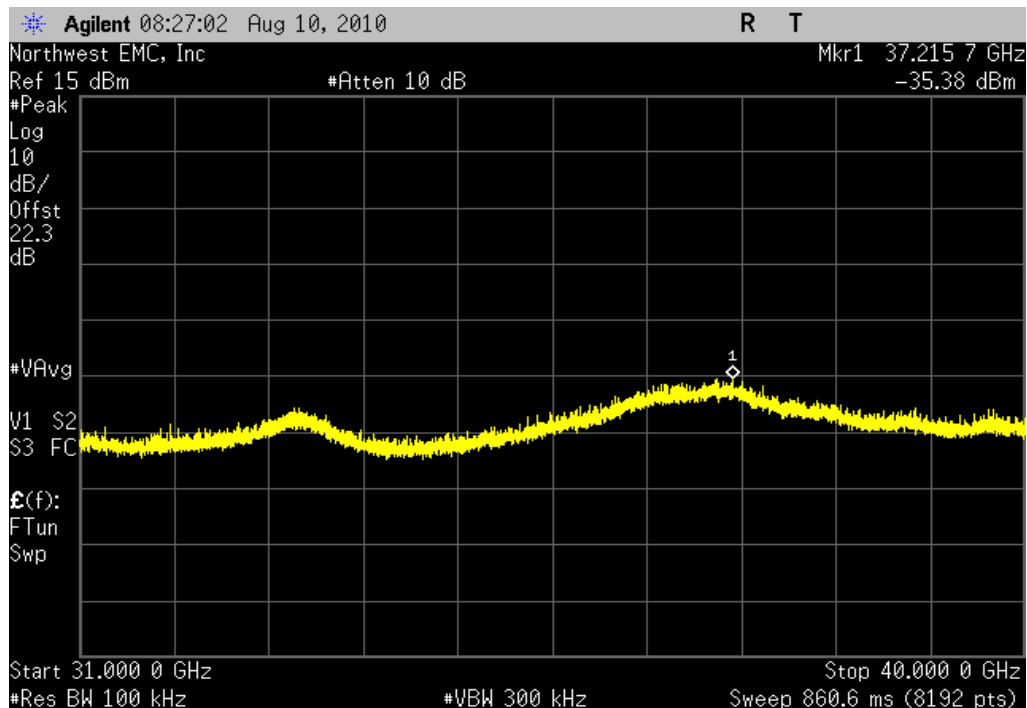
Value: -48.6 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, Low Channel 149, 5745 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.4 dBc

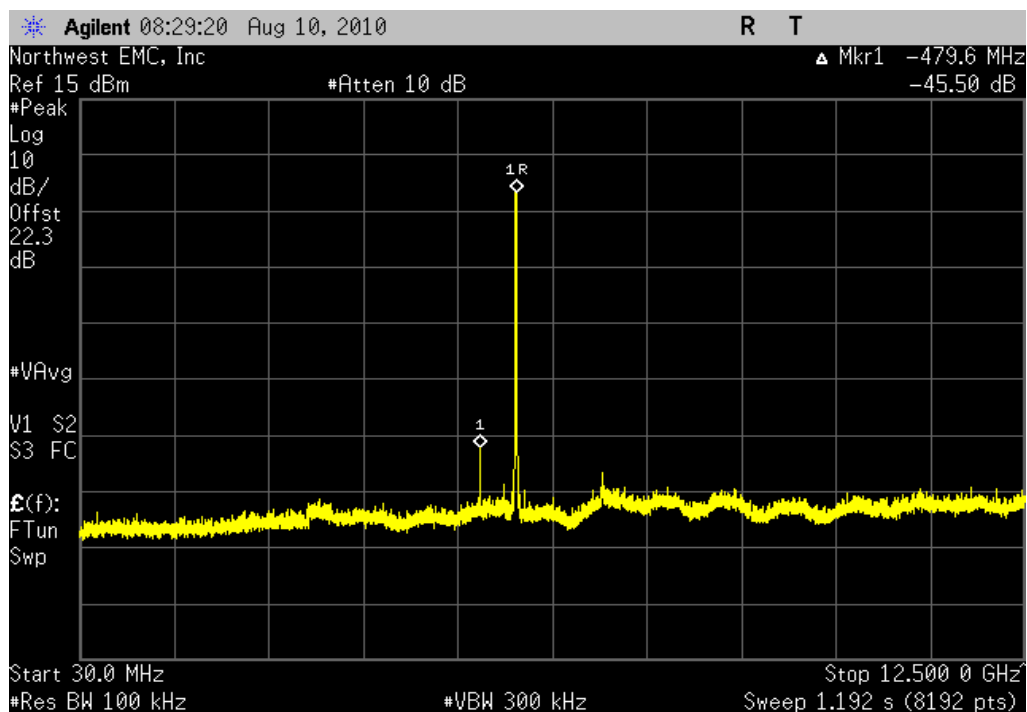
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, Mid Channel 157, 5785 MHz, 30 MHz - 12.5 GHz

Result: Pass

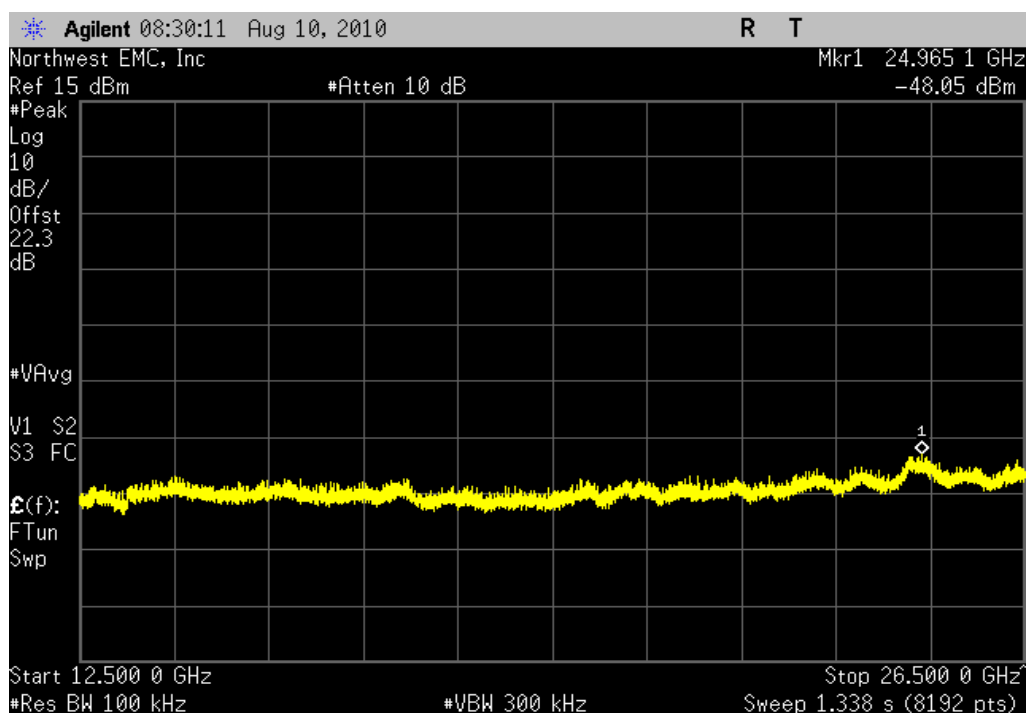
Value: -45.5 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, Mid Channel 157, 5785 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

Value: -48.1 dBc

Limit: ≤ -20 dBc

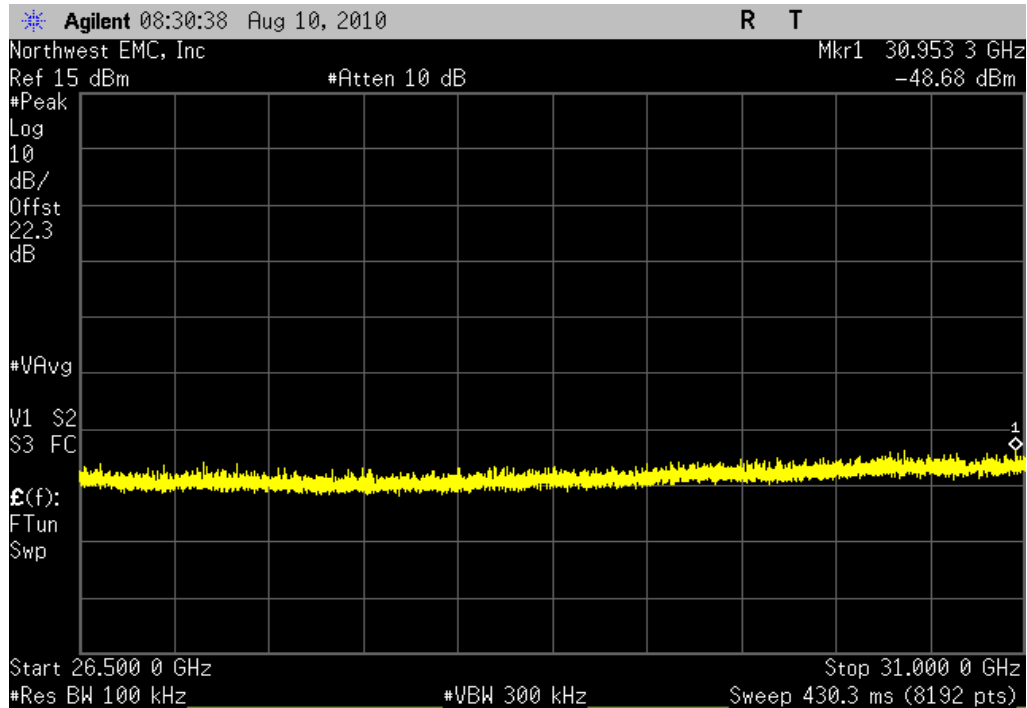
EMC

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, Mid Channel 157, 5785 MHz, 26.5 GHz - 31 GHz

Result: Pass

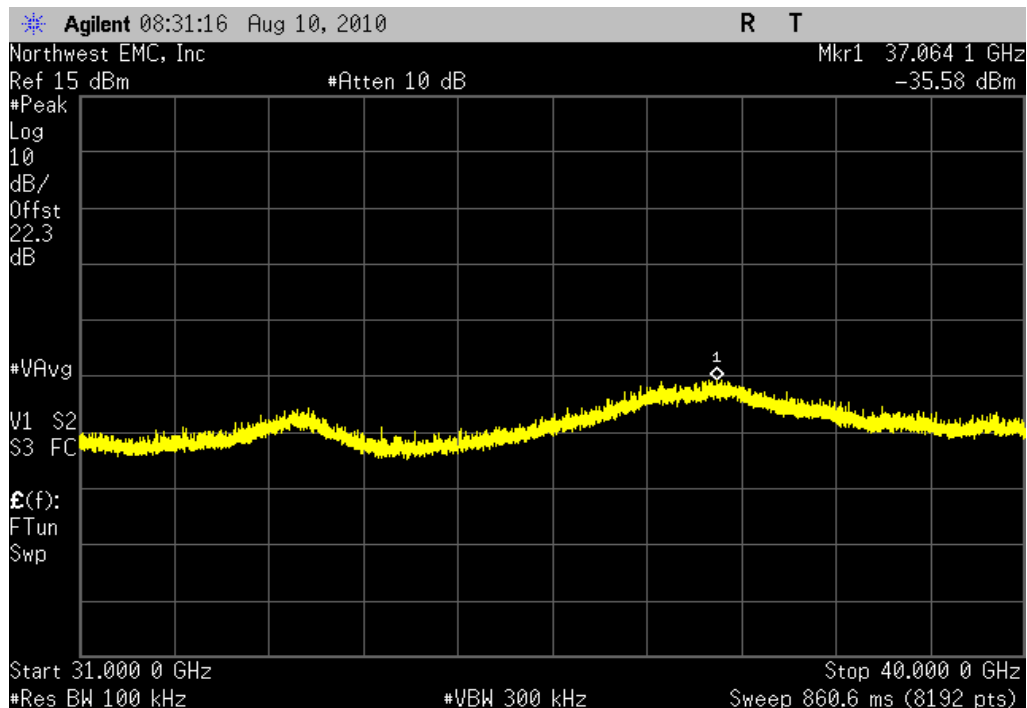
Value: -48.7 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, Mid Channel 157, 5785 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -35.6 dBc

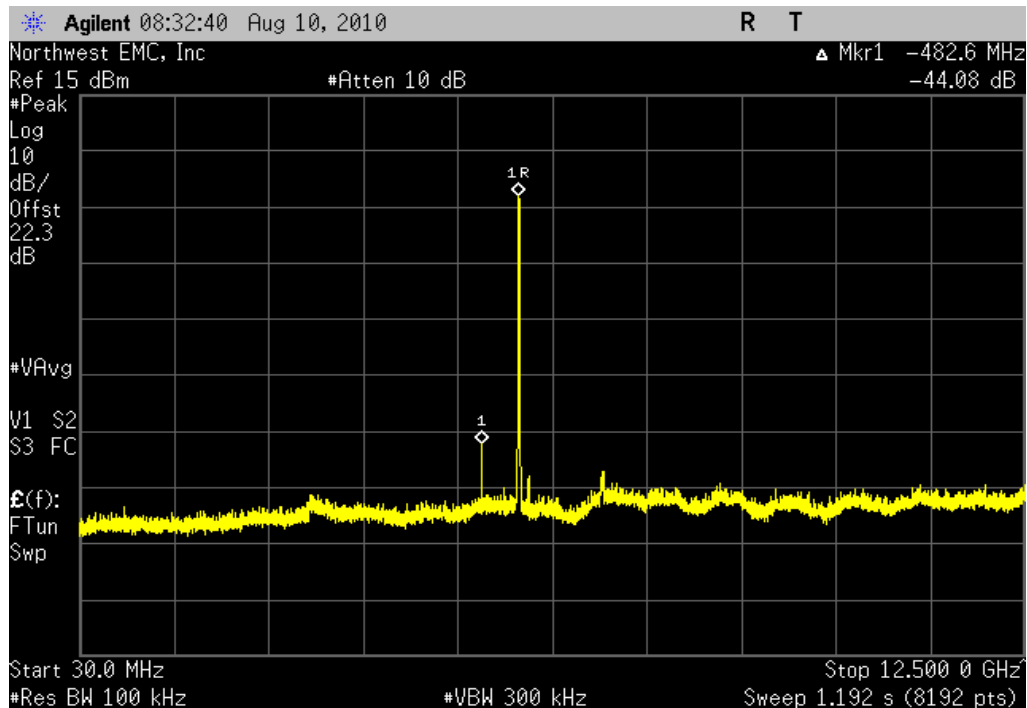
Limit: ≤ -20 dBc

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, High Channel 165, 5825 MHz, 30 MHz - 12.5 GHz

Result: Pass

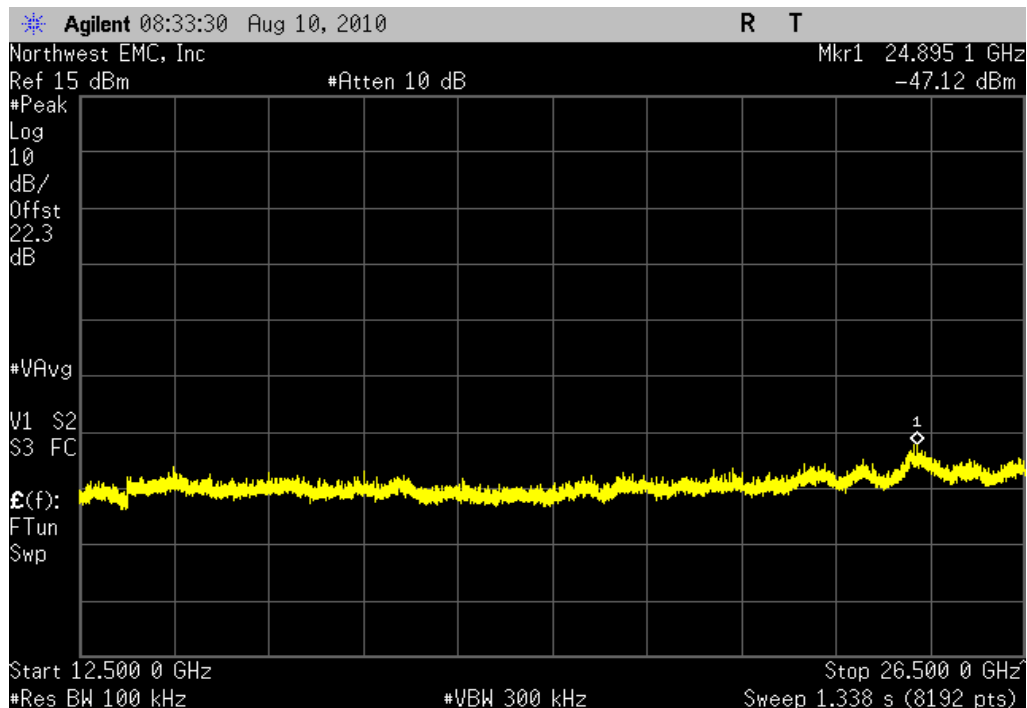
Value: -44.1 dBc

Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, High Channel 165, 5825 MHz, 12.5 GHz - 26.5 GHz

Result: Pass

Value: -47.1 dBc

Limit: ≤ -20 dBc

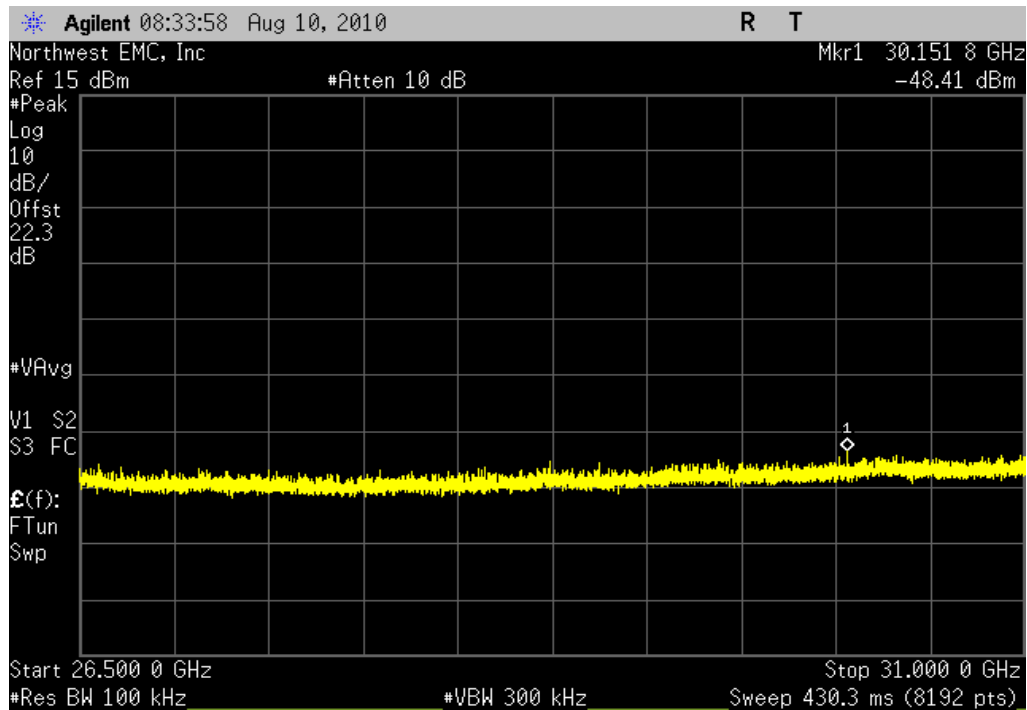
EMC

SPURIOUS CONDUCTED EMISSIONS

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, High Channel 165, 5825 MHz, 26.5 GHz - 31 GHz

Result: Pass

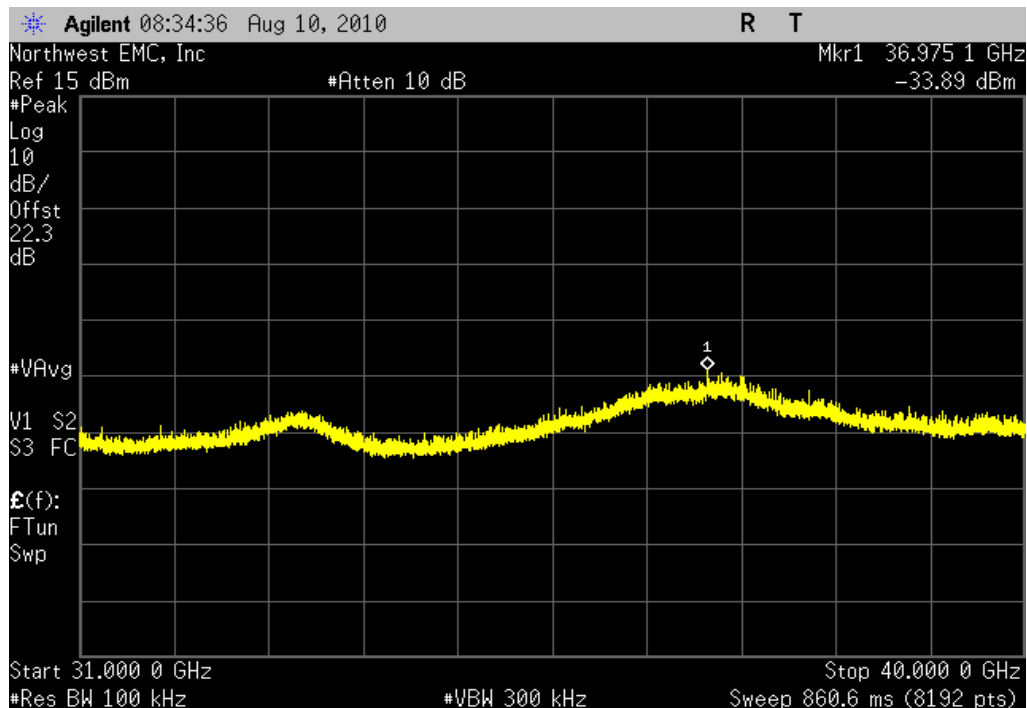
Value: -48.4 dBc

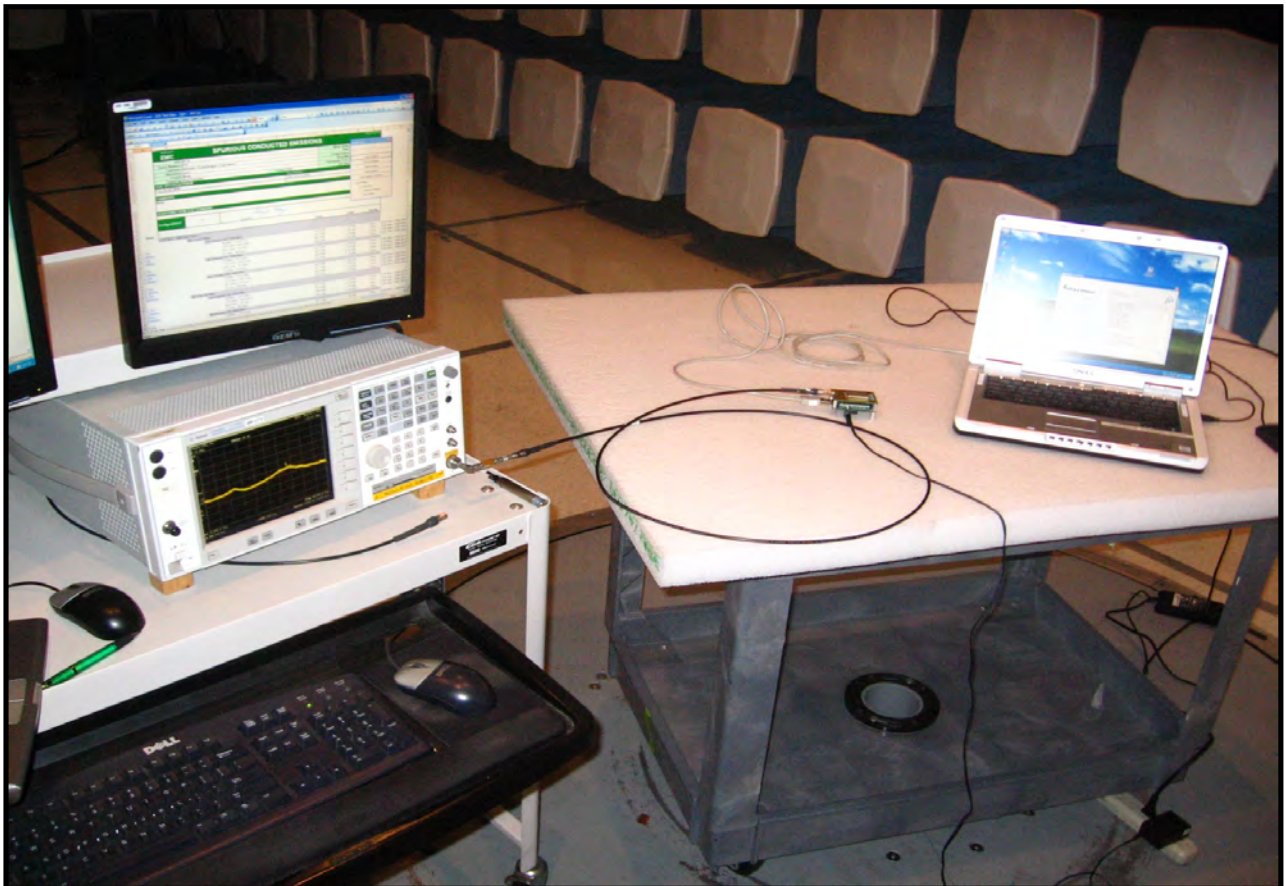
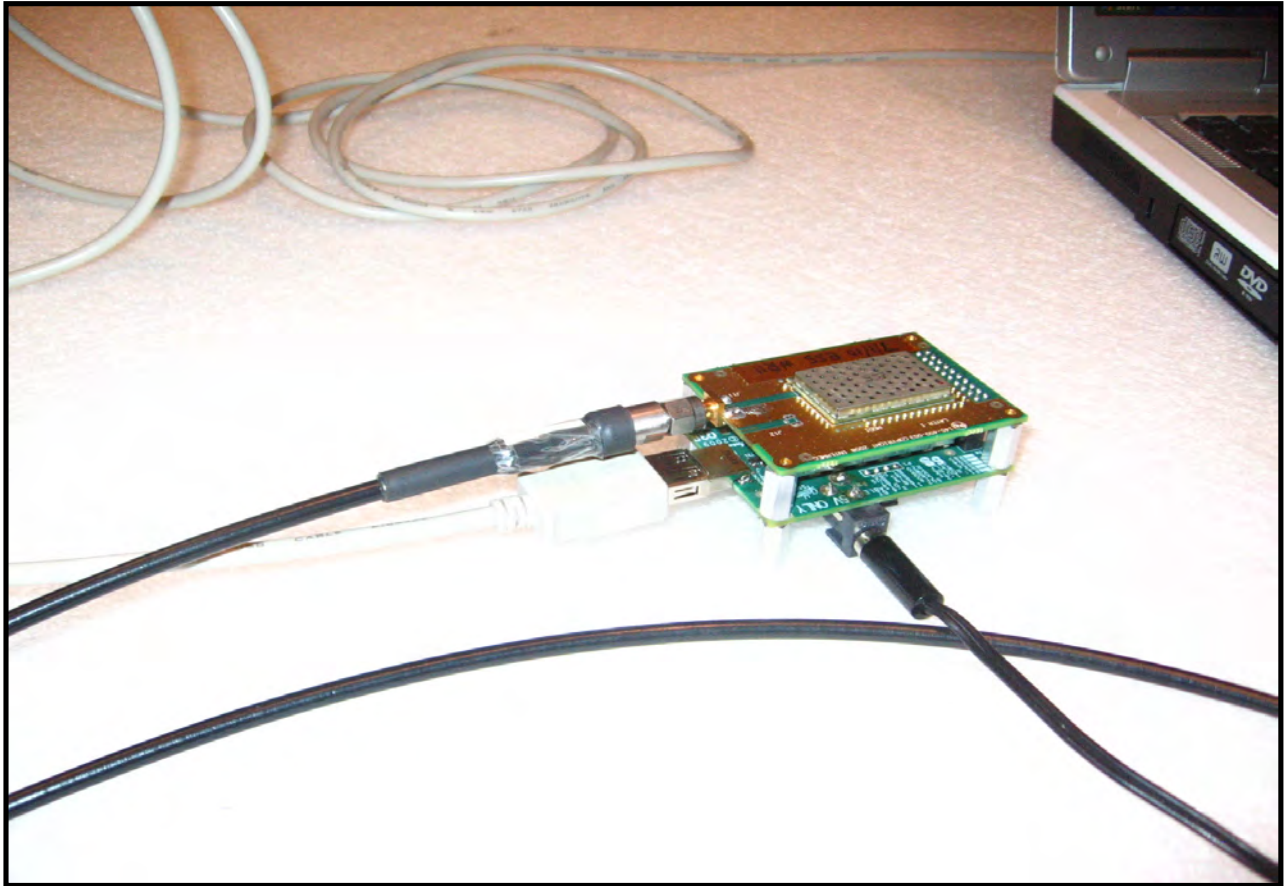
Limit: ≤ -20 dBc

5725 MHz - 5850 MHz Band, 802.11(n) 20 MHz, MCS7, High Channel 165, 5825 MHz, 31 GHz - 40 GHz

Result: Pass

Value: -33.9 dBc

Limit: ≤ -20 dBc



Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT					
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AFD	6/1/2009	24
EV06 Direct Connect Cable	ESM Cable Corp.	TT	ECA	NCR	0
26 GHz DC Block, SMA	Pasternack	PE8210	AME	10/19/2009	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	7/21/2009	13
Attenuator, 6 dB, 'SMA'	N/A	93459 3330A-6	AUF	4/1/2010	13
Power Meter	Gigatronics	8651A	SPM	1/7/2010	13
Power Sensor	Gigatronics	80701A	SPL	1/7/2010	13
Signal Generator	Agilent	E8257D	TGX	12/10/2008	24

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The power spectral density measurements were measured with the EUT set to low, mid, and high transmit frequencies for each of the bands. The measurement was made using a direct connection between the RF output of the EUT and the spectrum analyzer. The EUT was transmitting at its maximum data rate for each modulation type available. ANSI C63.10:2009, Section 6.11.2.3 was followed.

The spectrum analyzer was set as follows:

The emission peak was located and zoomed in on within the passband.

a) RBW = 3 kHz

b) VBW = 10 kHz

c) Span = 300 kHz

d) Sweep time = 100s

e) Trace set to MAX

f) The 1 hz Marker Noise function on the analyzer was used. The data was corrected to 3 kHz by adding 34.8 dB to the reading.

EMC

POWER SPECTRAL DENSITY

EUT:	RC12	Work Order:	INMC0575
Serial Number:	R11	Date:	07/30/10
Customer:	Intermec Technologies Corporation	Temperature:	20°C
Attendees:	none	Humidity:	47%
Project:	None	Barometric Pres.:	1019.3 mb
Tested by:	Rod Peloquin	Power:	5VDC
		Job Site:	EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2010	ANSI C63.10:2009

COMMENTS
None

DEVIATIONS FROM TEST STANDARD
No Deviations

Configuration #	2	Signature 
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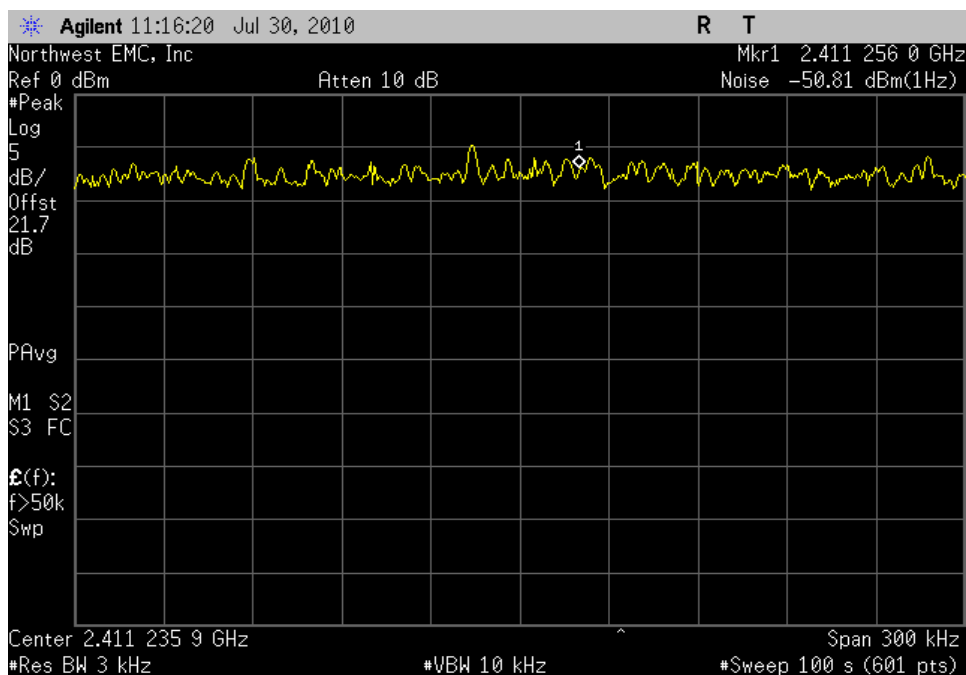
	Value	Limit	Results
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	-16.0 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 6, 2437 MHz	-15.2 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 11, 2462 MHz	-14.9 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	-17.3 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 6, 2437 MHz	-17.0 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 11, 2462 MHz	-16.4 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	-21.8 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 6, 2437 MHz	-21.5 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 11, 2462 MHz	-21.2 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	-22.6 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 6, 2437 MHz	-22.4 dBm / 3 kHz	8 dBm / 3 kHz	pass
High Channel 11, 2462 MHz	-22.0 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	-22.3 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 6, 2437 MHz	-22.1 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 11, 2462 MHz	-21.6 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	21.7 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 6, 2437 MHz	-21.4 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 11, 2462 MHz	-21.1 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	-22.7 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 6, 2437 MHz	-22.3 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 11, 2462 MHz	-22.0 dBm / 3 kHz	8 dBm / 3 kHz	Pass
5725 MHz - 5850 MHz Band			
802.11(a) 6 Mbps			
Low Channel 149, 5745 MHz	-24.0 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 157, 5785 MHz	-24.5 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 165, 5825 MHz	-24.5 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(a) 36 Mbps			
Low Channel 149, 5745 MHz	-24.7 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 157, 5785 MHz	-25.1 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 165, 5825 MHz	-24.9 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(a) 54 Mbps			
Low Channel 149, 5745 MHz	-24.8 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 157, 5785 MHz	-25.0 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 165, 5825 MHz	-25.2 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(n) MCS0			
Low Channel 149, 5745 MHz	-23.9 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 157, 5785 MHz	-24.2 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 165, 5825 MHz	-24.1 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(n) MCS7			
Low Channel 149, 5745 MHz	-25.9 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel 157, 5785 MHz	-26.3 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel 165, 5825 MHz	-26.1 dBm / 3 kHz	8 dBm / 3 kHz	Pass

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: -16.0 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

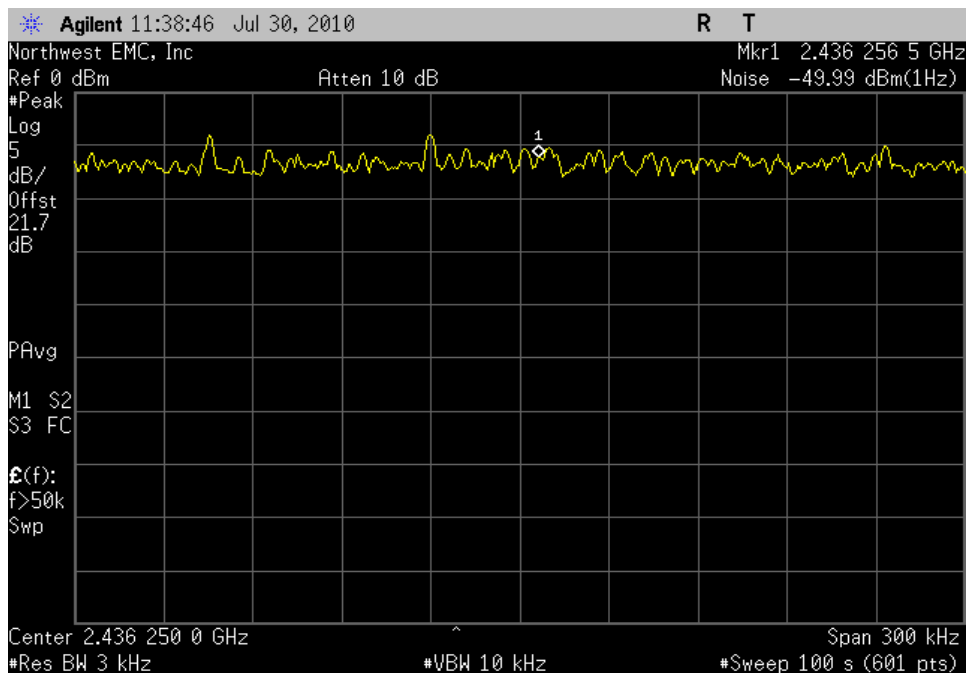


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: -15.2 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

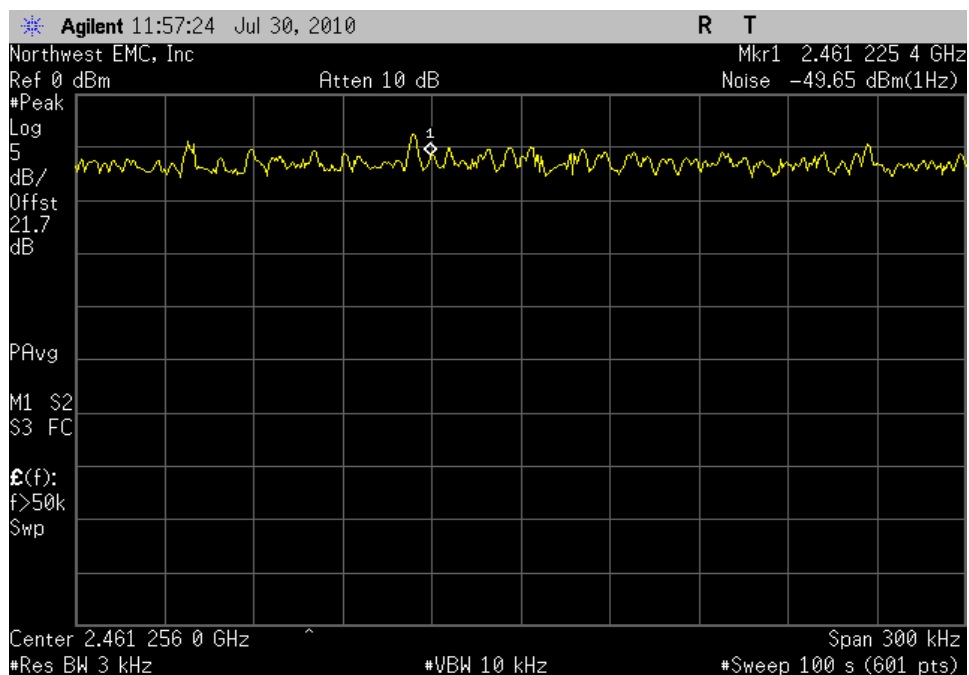


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -14.9 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

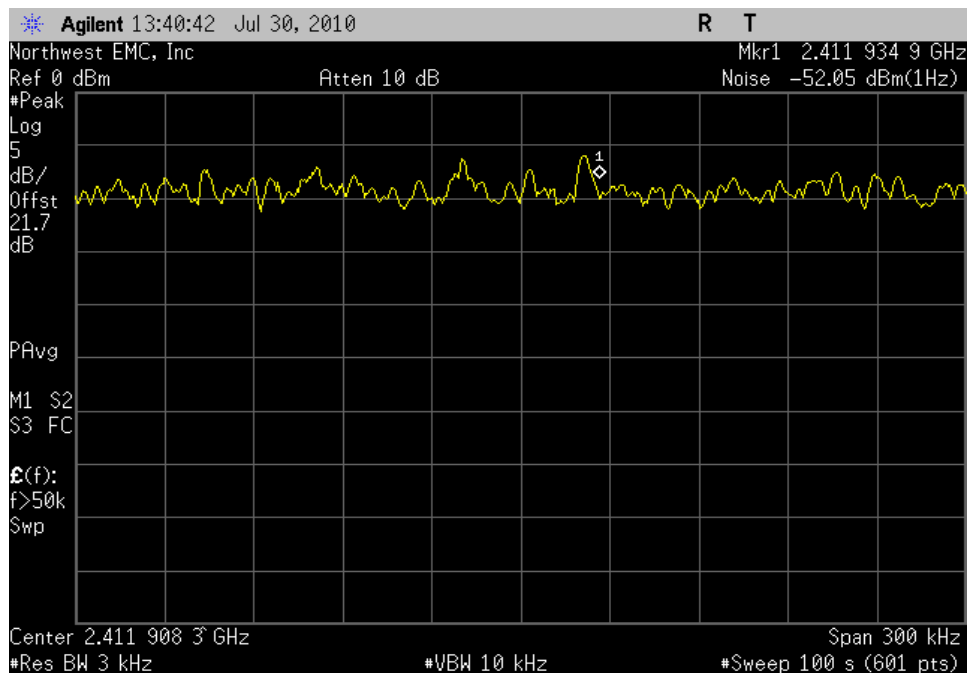


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: -17.3 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

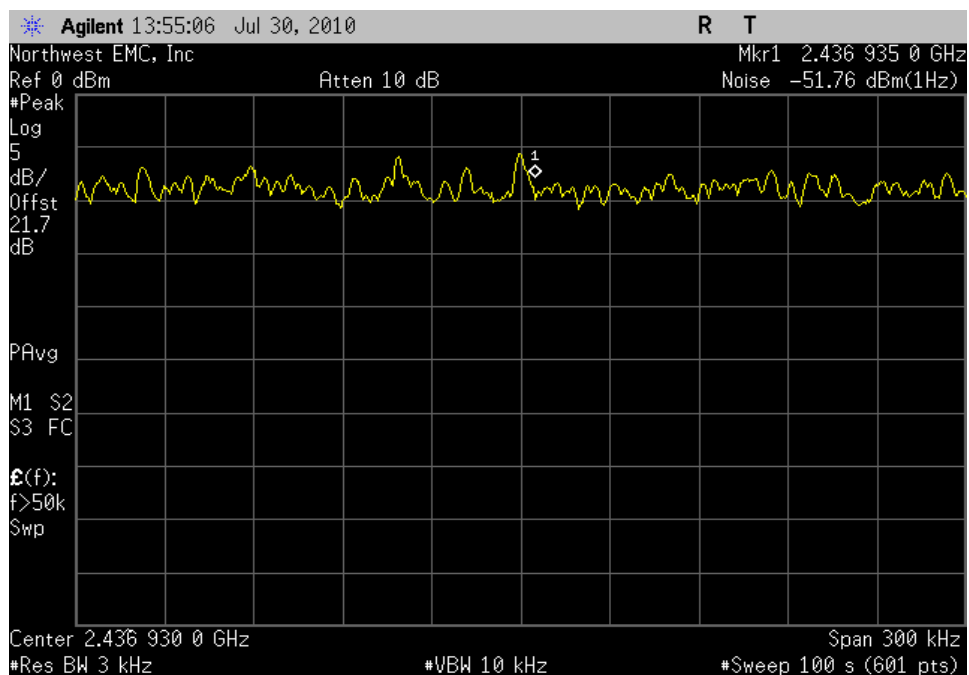


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: -17.0 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

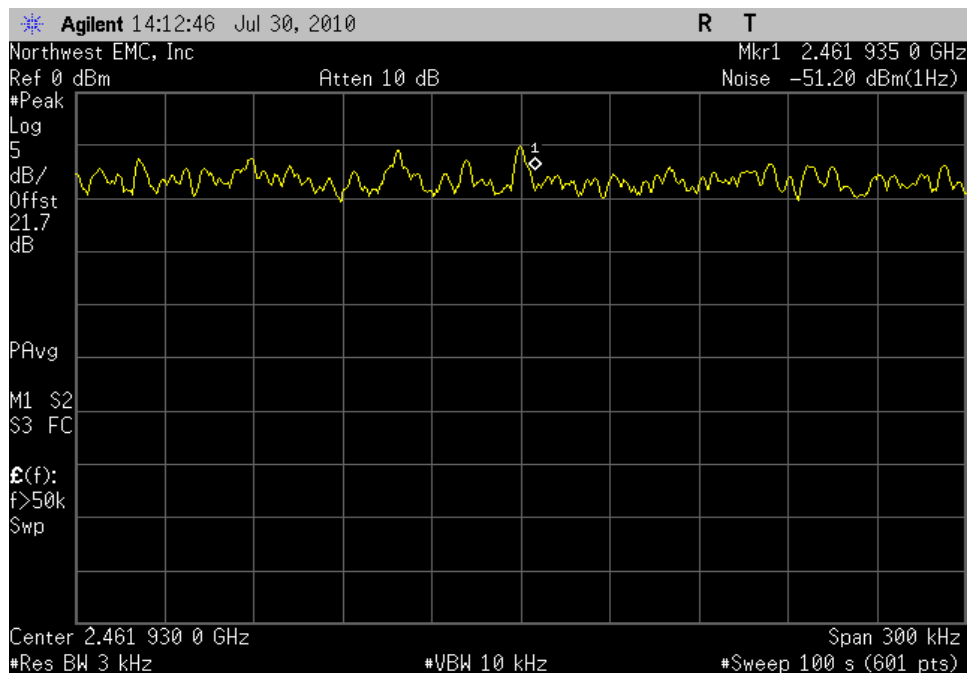


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -16.4 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

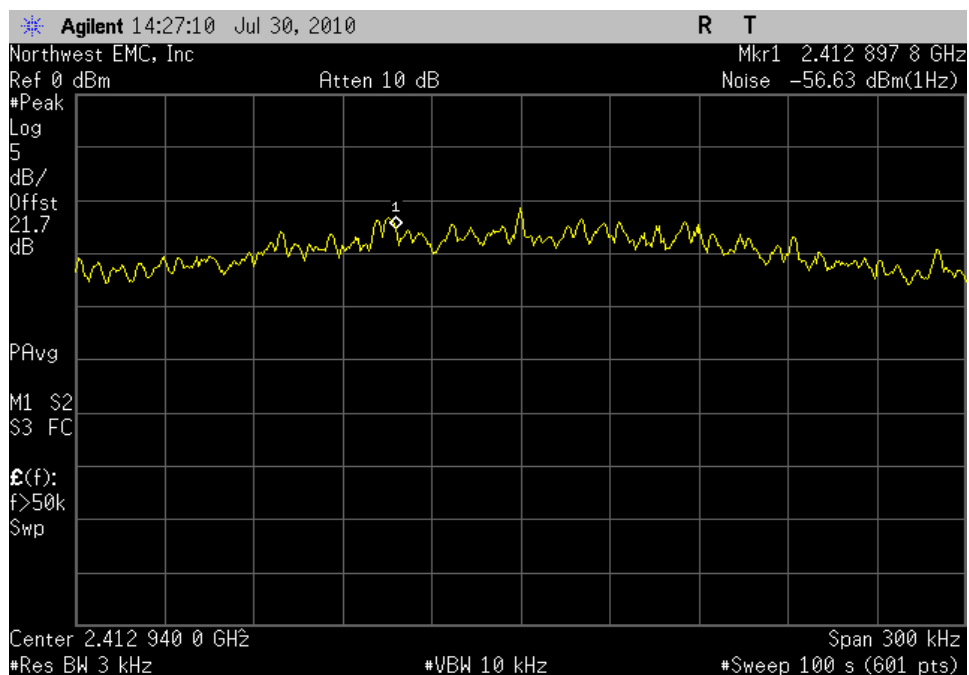


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: -21.8 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

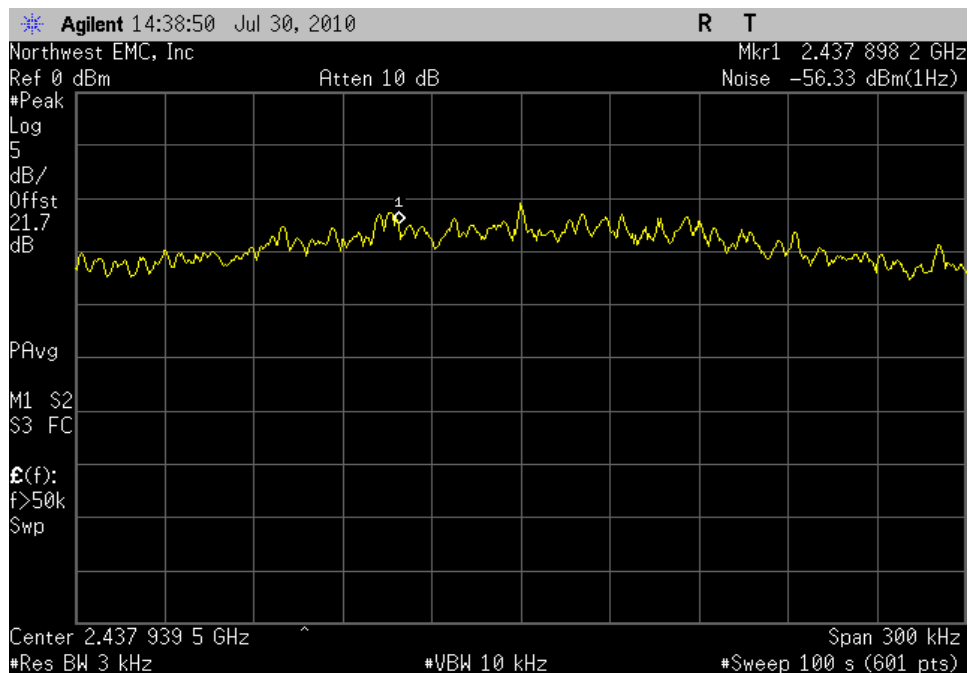


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: -21.5 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

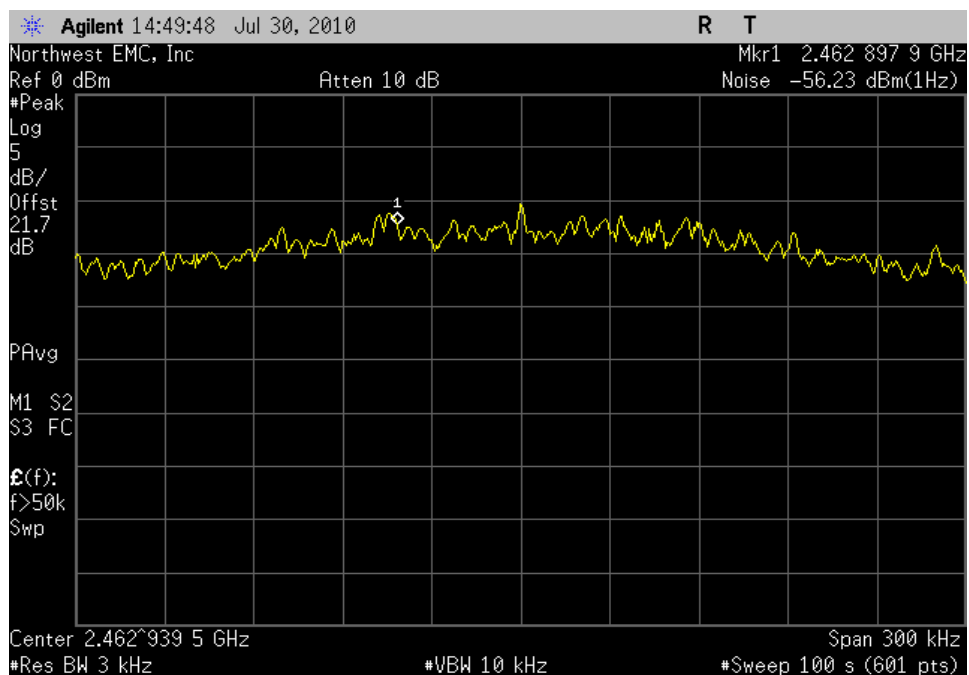


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -21.2 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

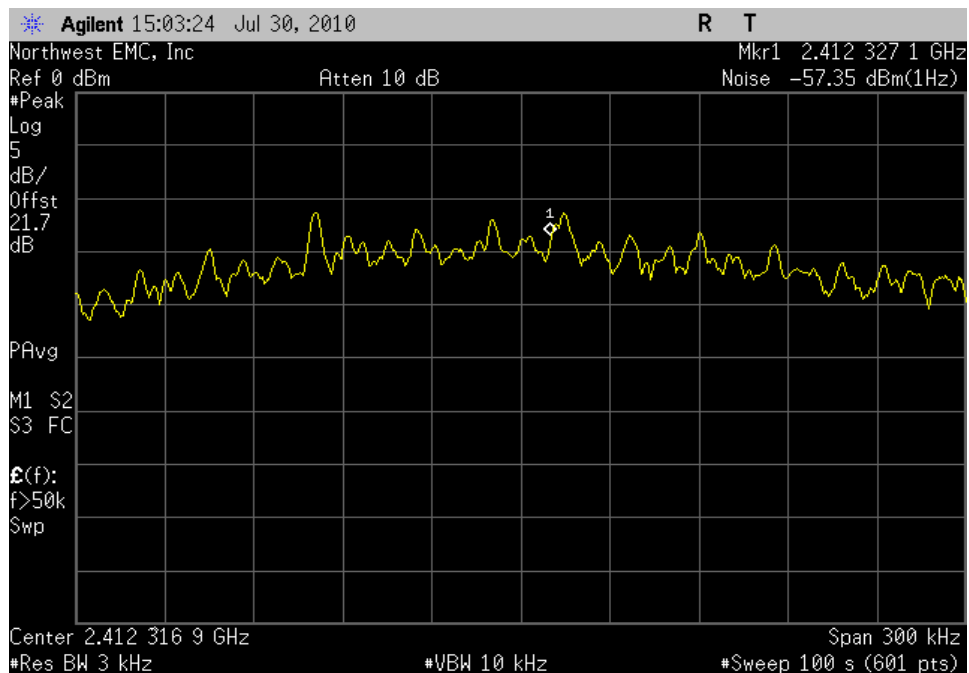


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: -22.6 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

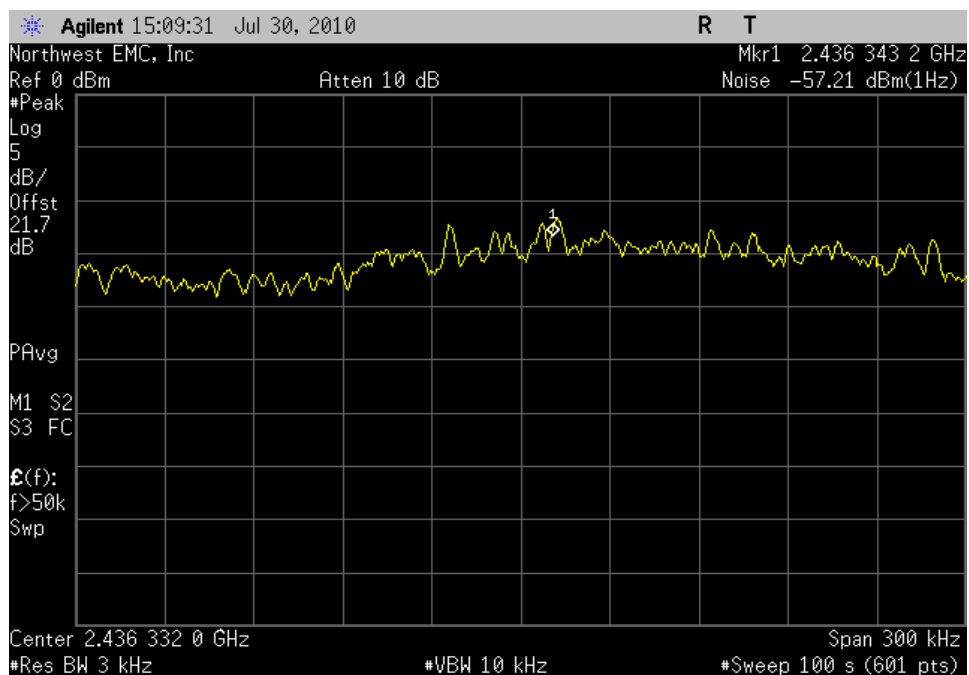


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz

Result: pass

Value: -22.4 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

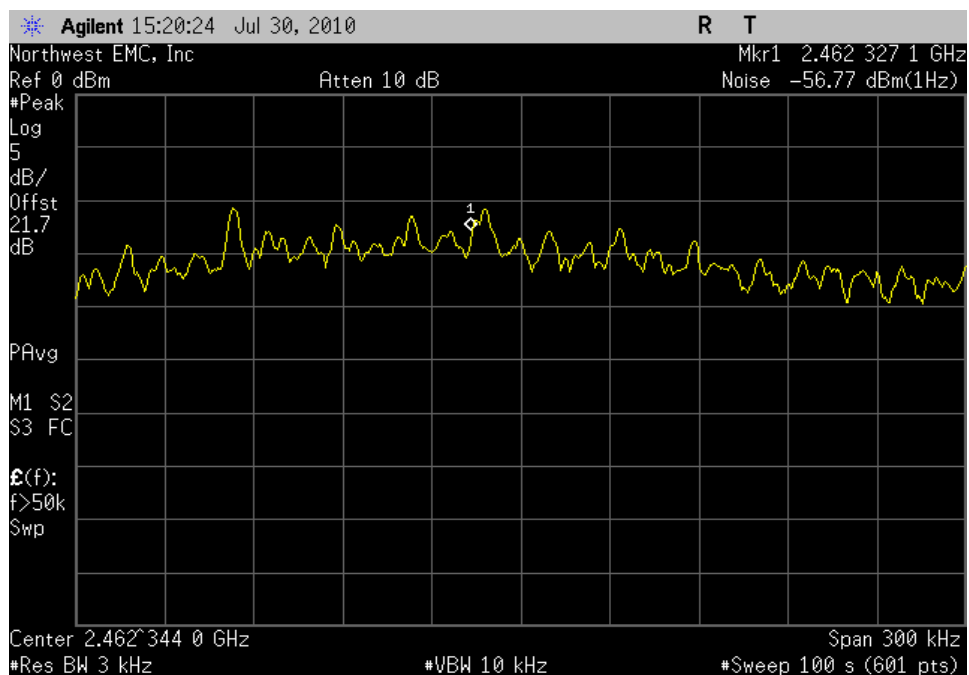


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -22.0 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

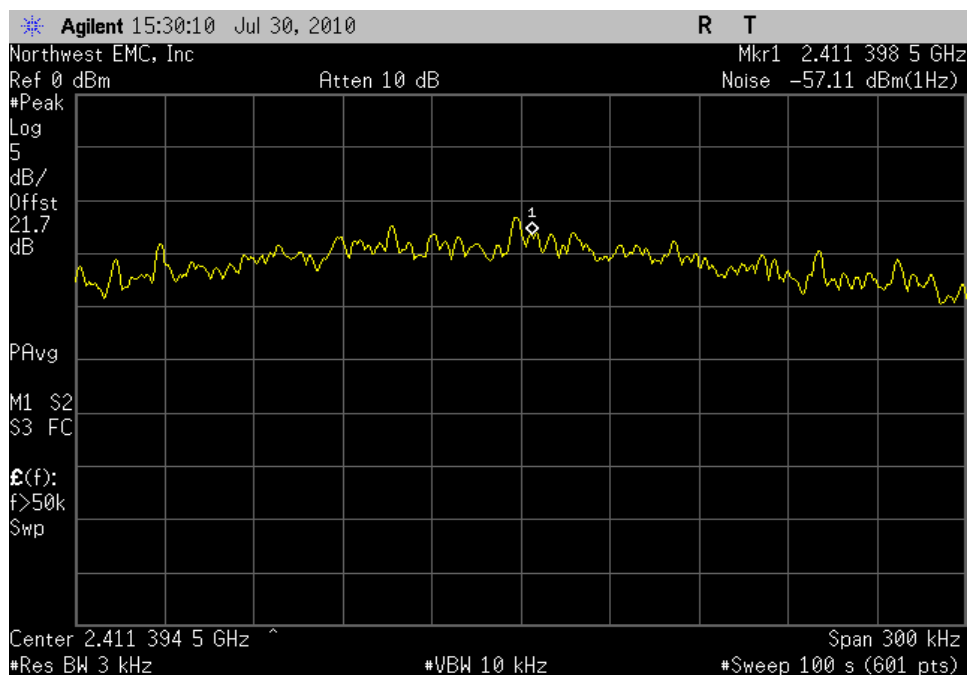


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz

Result: Pass

Value: -22.3 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

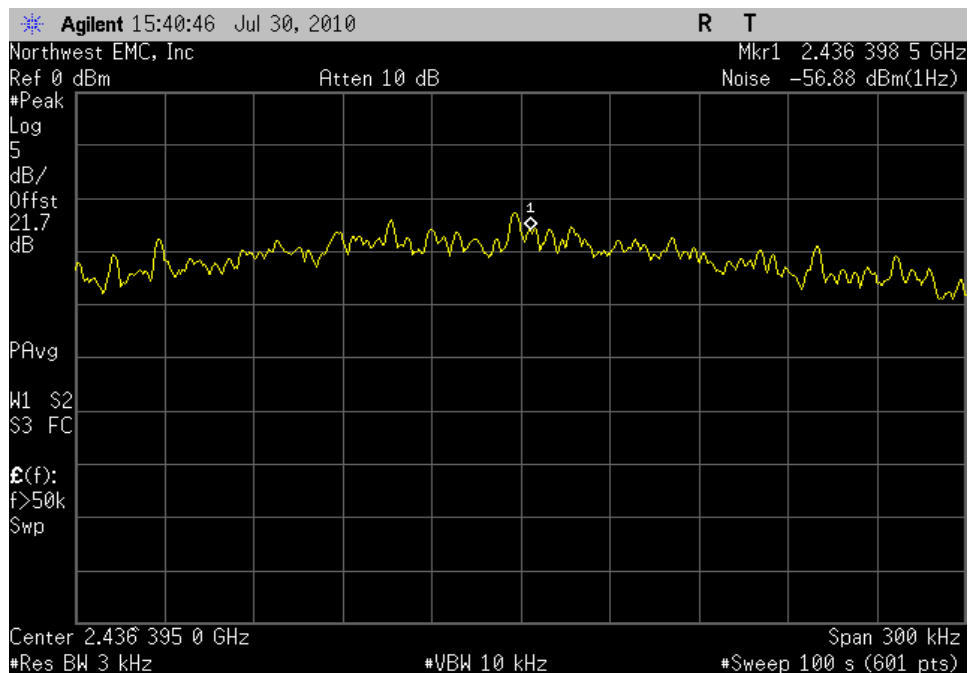


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz

Result: Pass

Value: -22.1 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

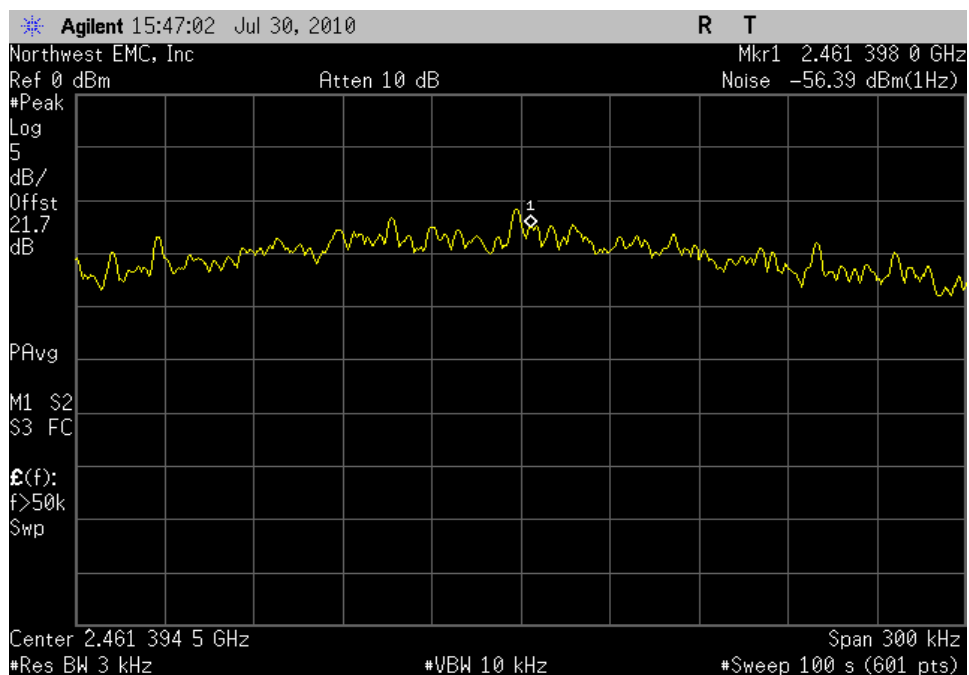


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz

Result: Pass

Value: -21.6 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

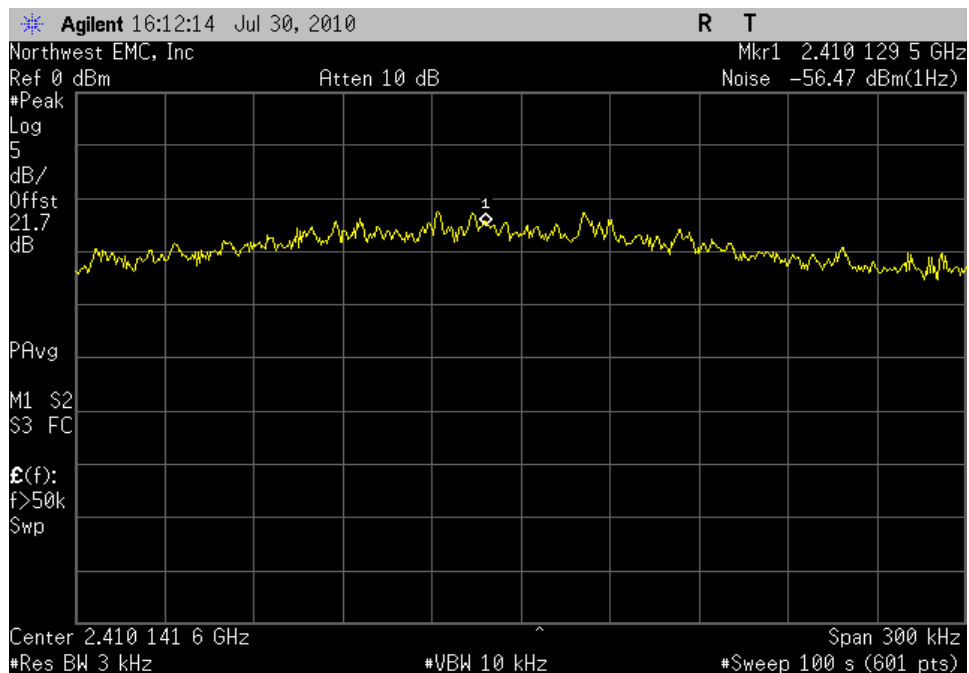


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz

Result: Pass

Value: 21.7 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

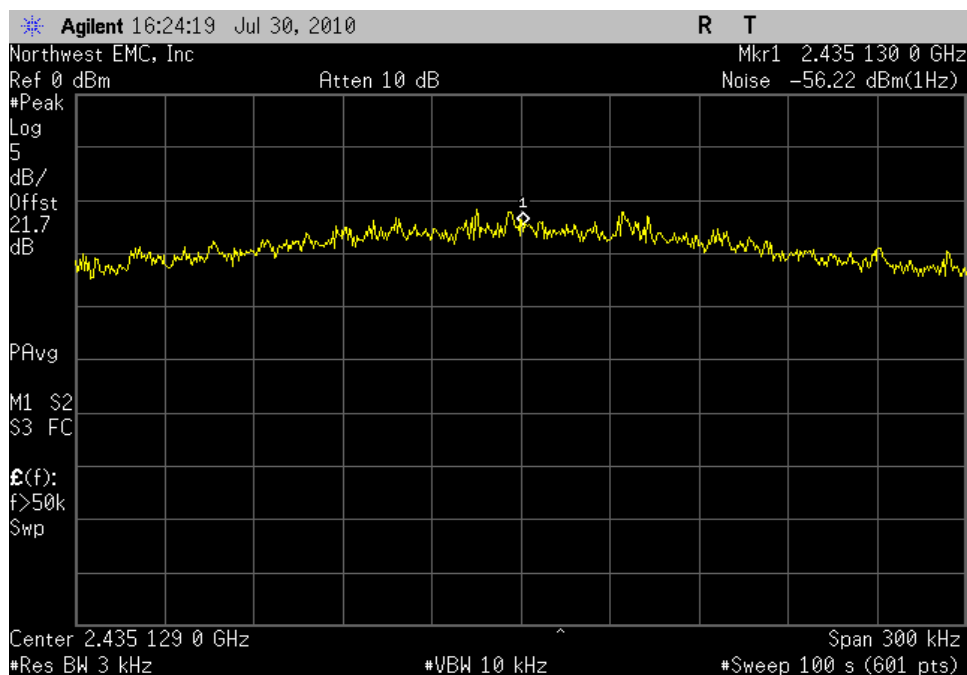


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz

Result: Pass

Value: -21.4 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

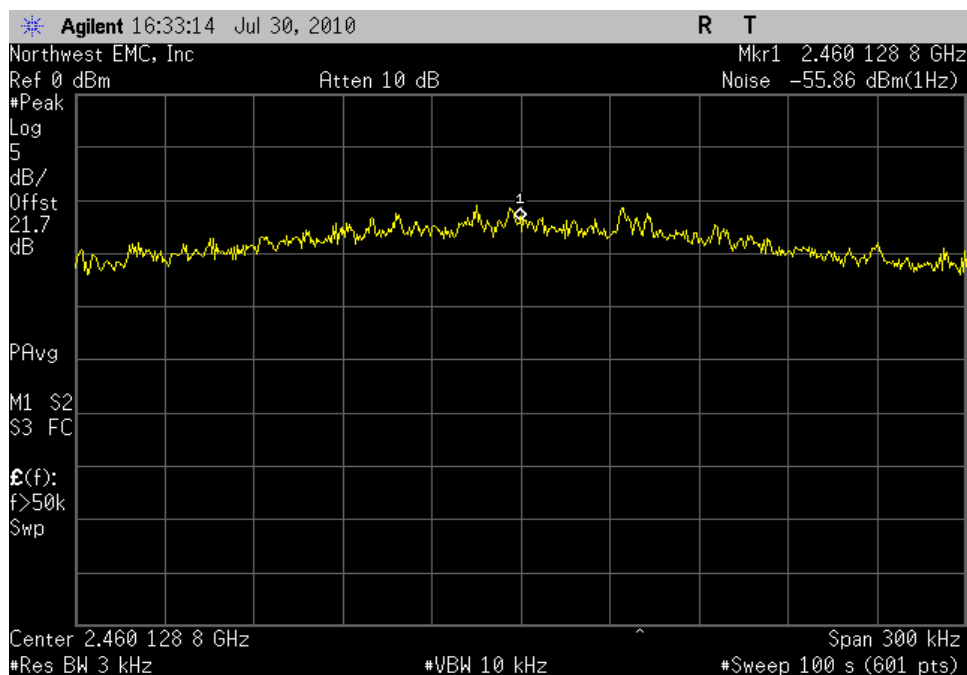


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz

Result: Pass

Value: -21.1 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

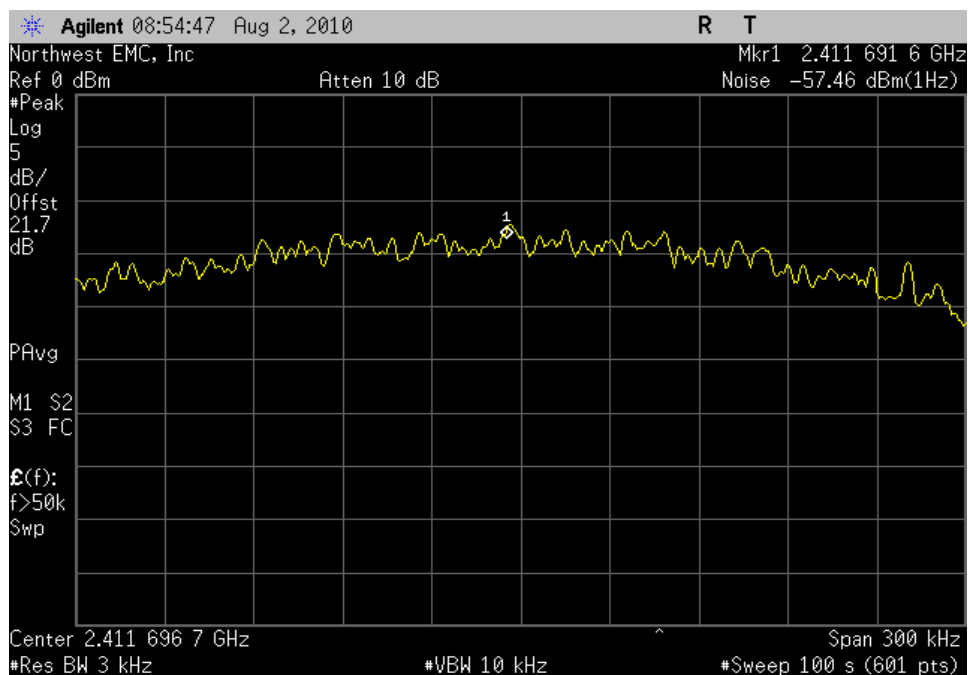


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz

Result: Pass

Value: -22.7 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

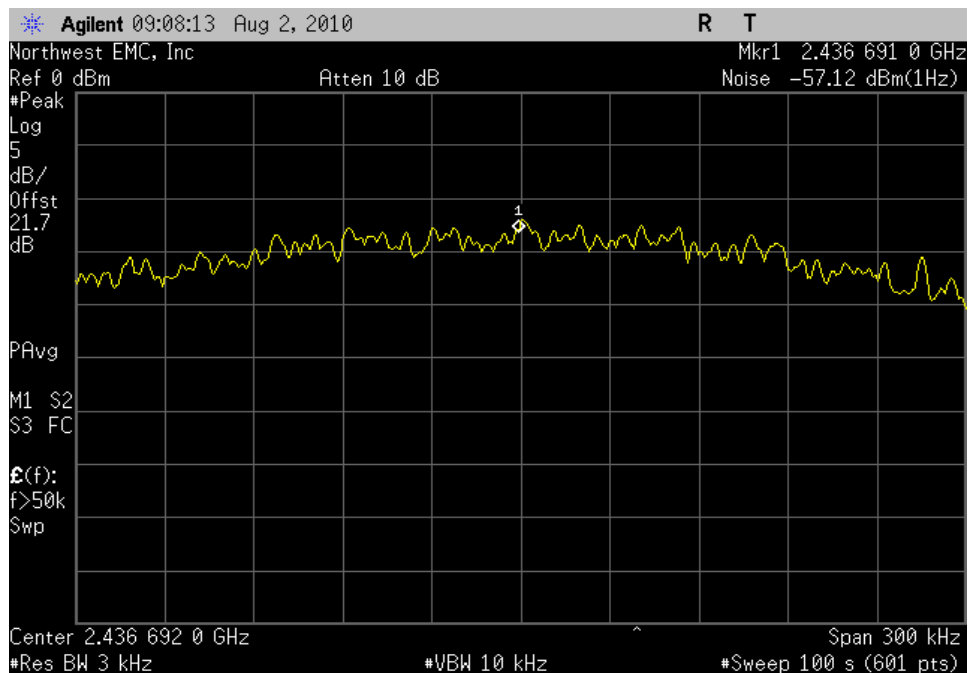


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz

Result: Pass

Value: -22.3 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

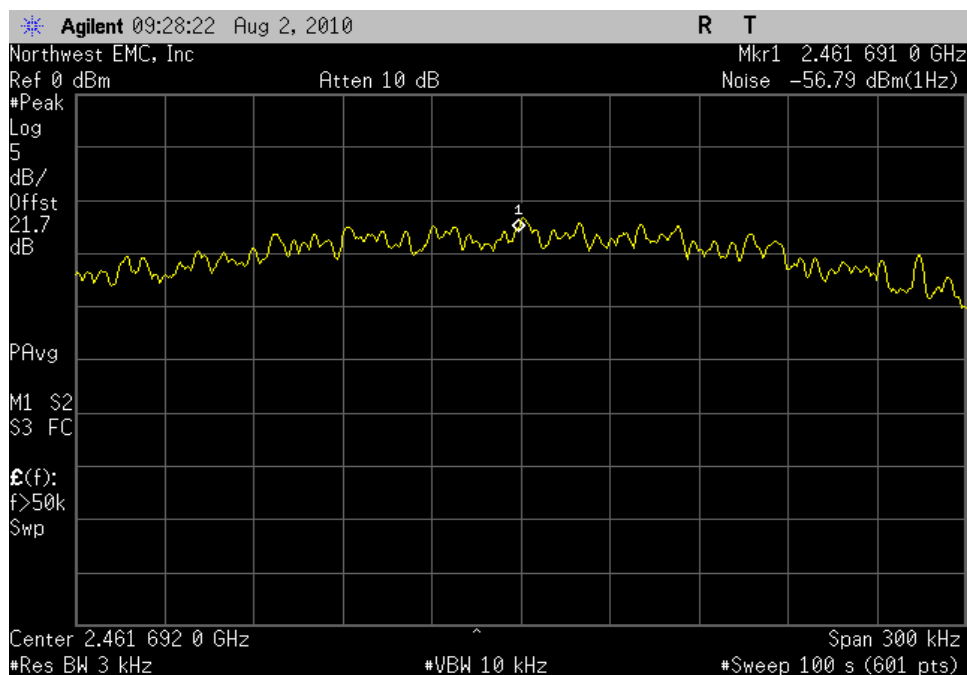


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz

Result: Pass

Value: -22.0 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

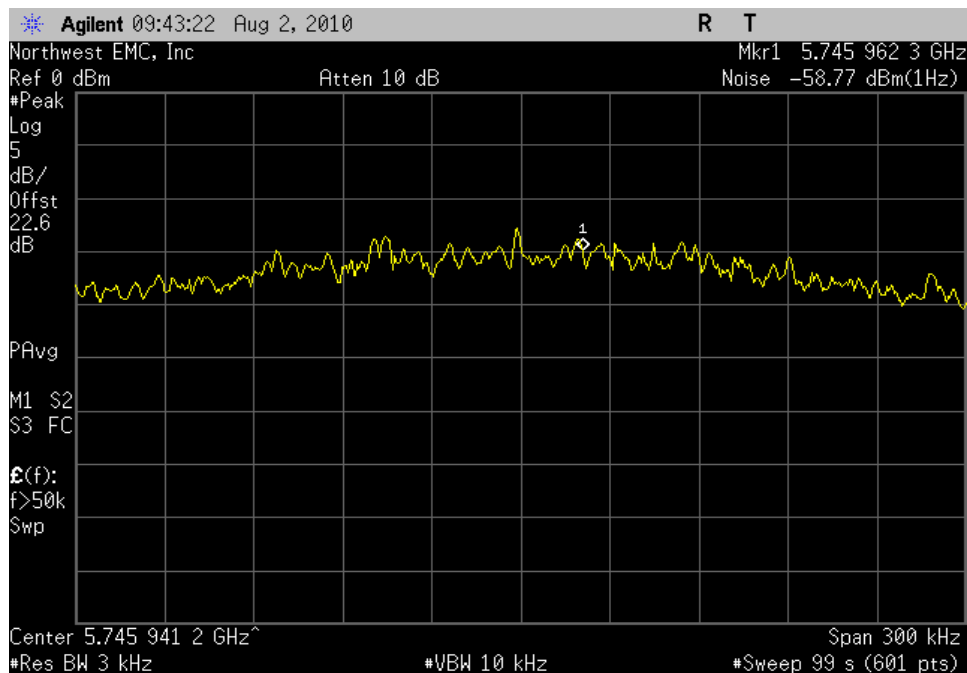


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: -24.0 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

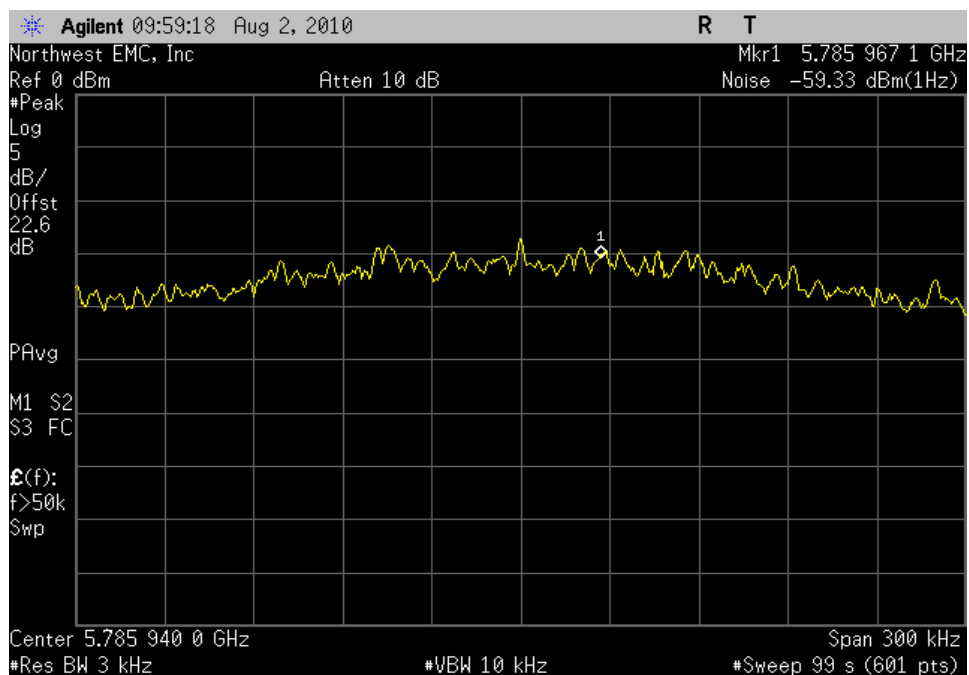


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: -24.5 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

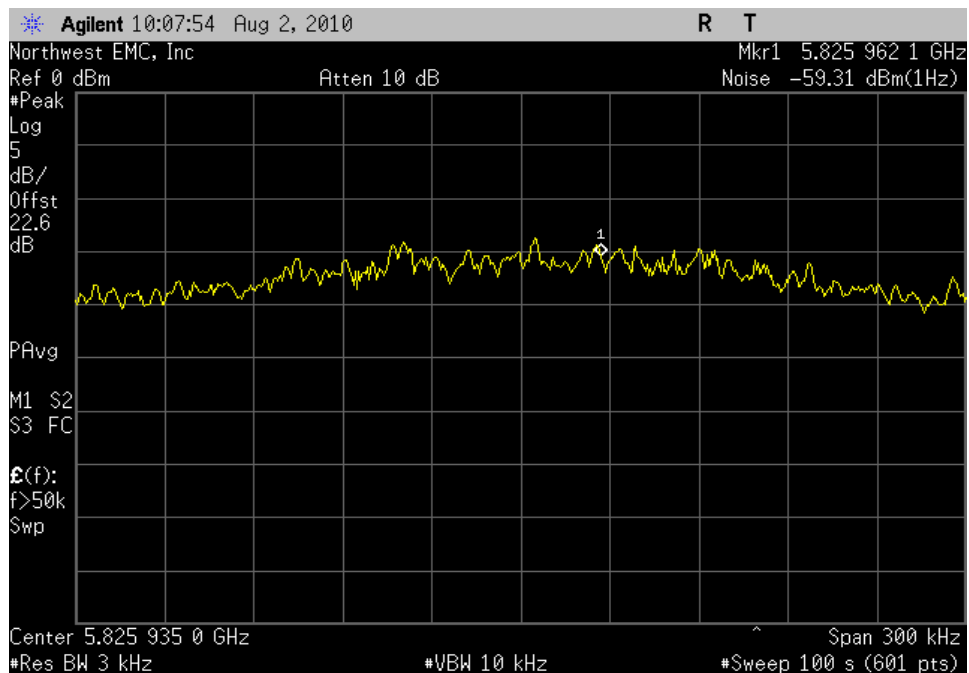


5725 MHz - 5850 MHz Band, 802.11(a) 6 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: -24.5 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

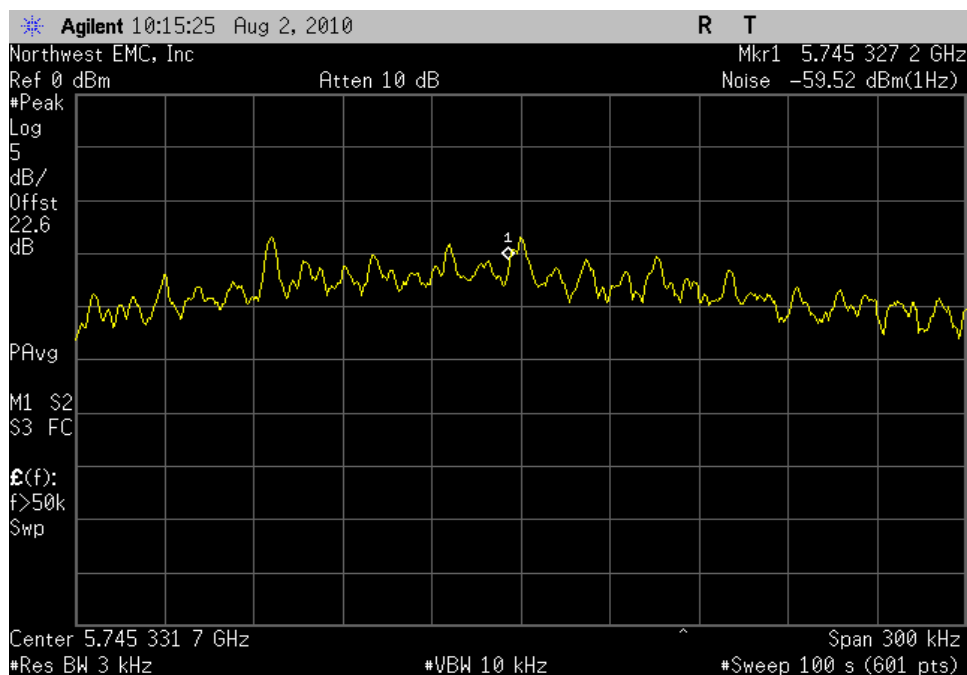


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: -24.7 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

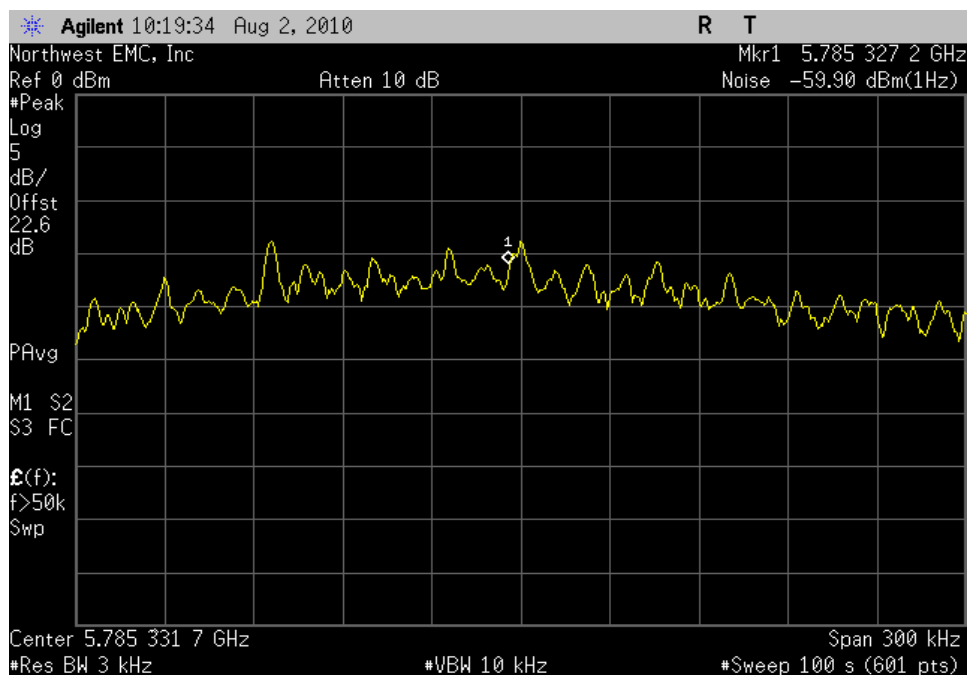


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: -25.1 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

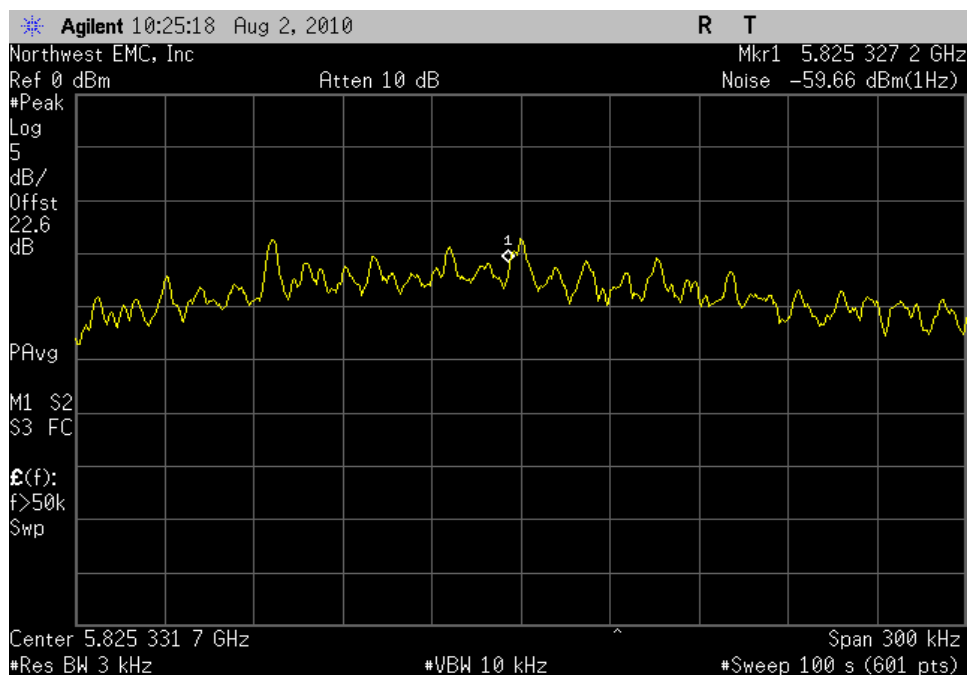


5725 MHz - 5850 MHz Band, 802.11(a) 36 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: -24.9 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

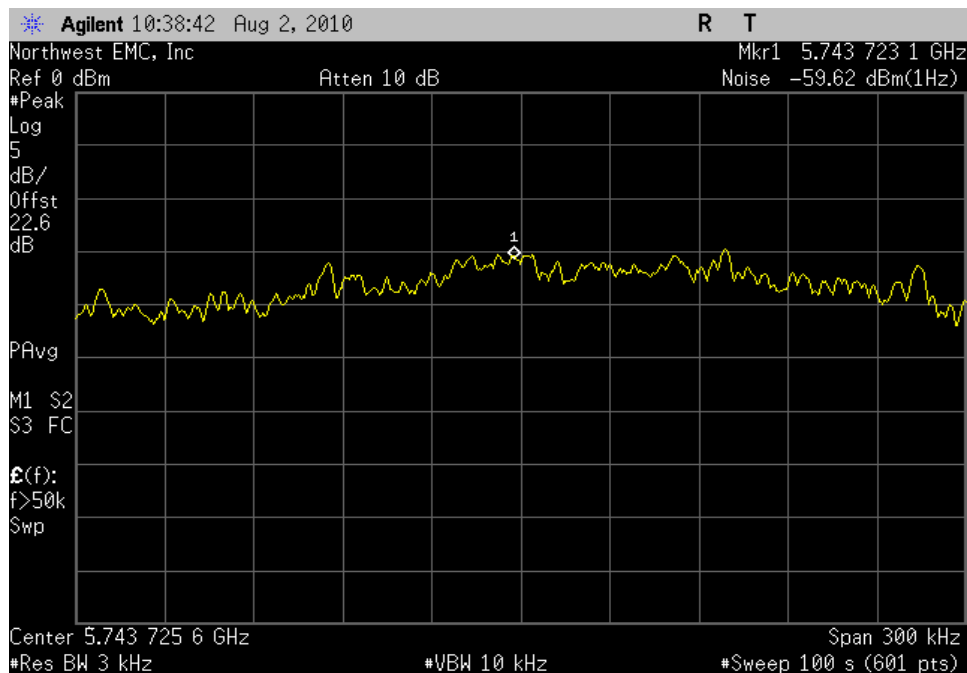


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Low Channel 149, 5745 MHz

Result: Pass

Value: -24.8 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

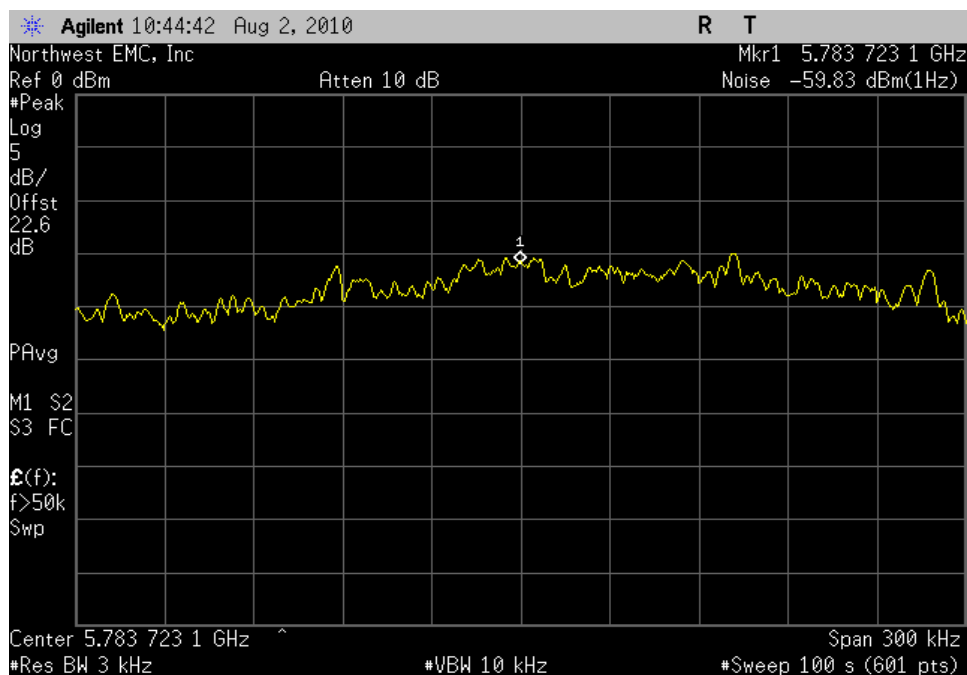


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, Mid Channel 157, 5785 MHz

Result: Pass

Value: -25.0 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

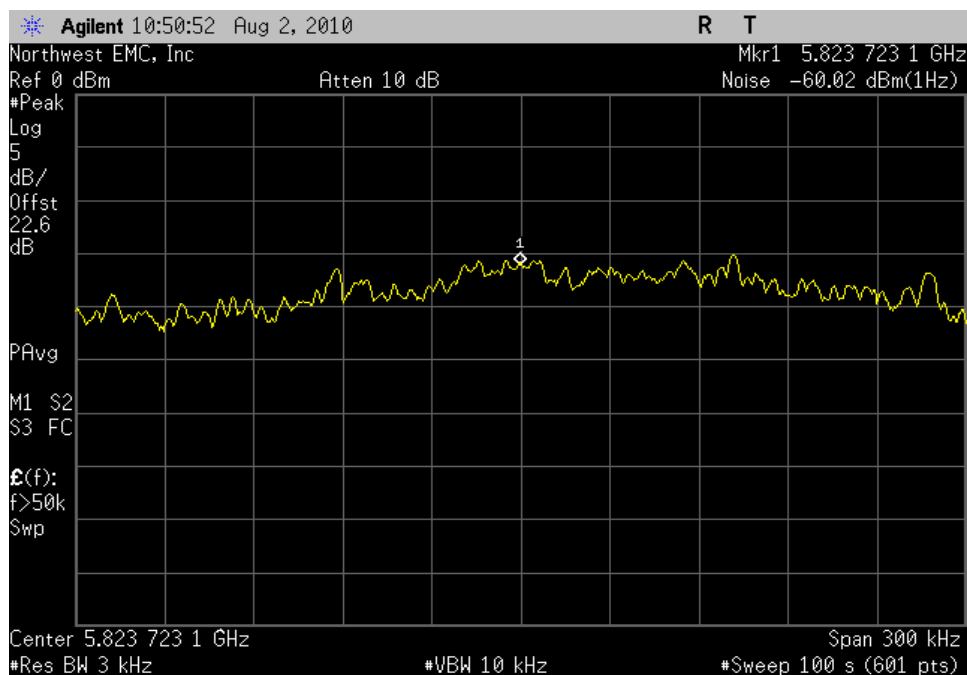


5725 MHz - 5850 MHz Band, 802.11(a) 54 Mbps, High Channel 165, 5825 MHz

Result: Pass

Value: -25.2 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

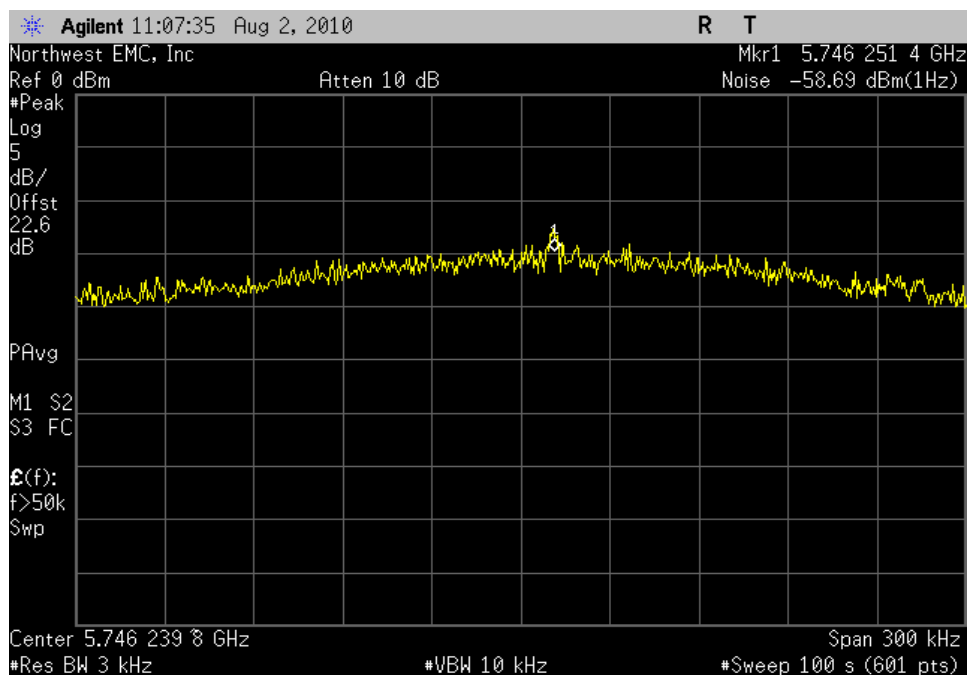


5725 MHz - 5850 MHz Band, 802.11(n) MCS0, Low Channel 149, 5745 MHz

Result: Pass

Value: -23.9 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

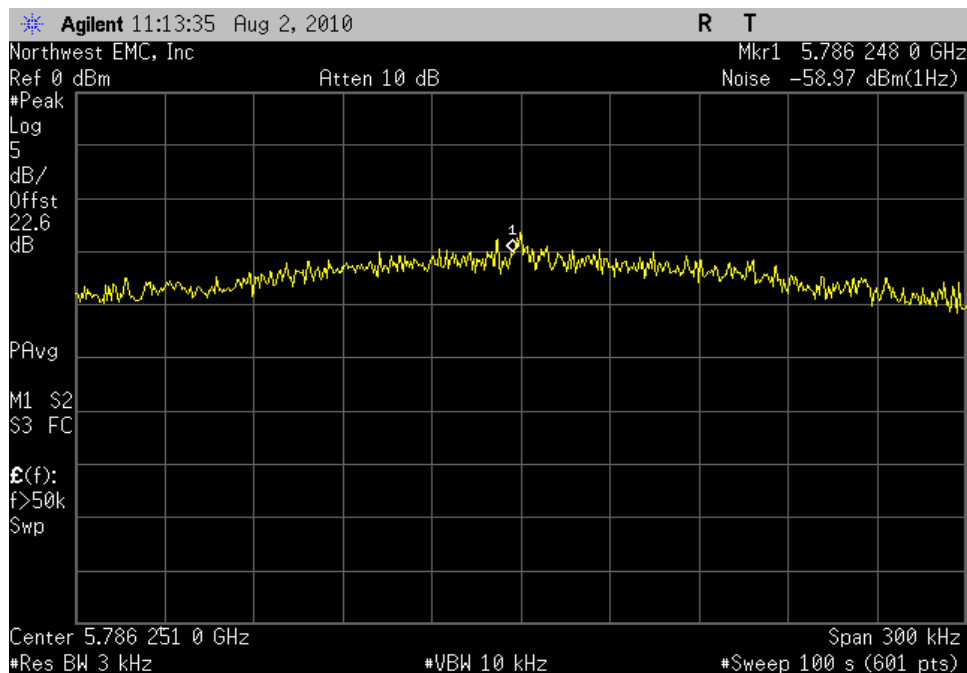


5725 MHz - 5850 MHz Band, 802.11(n) MCS0, Mid Channel 157, 5785 MHz

Result: Pass

Value: -24.2 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

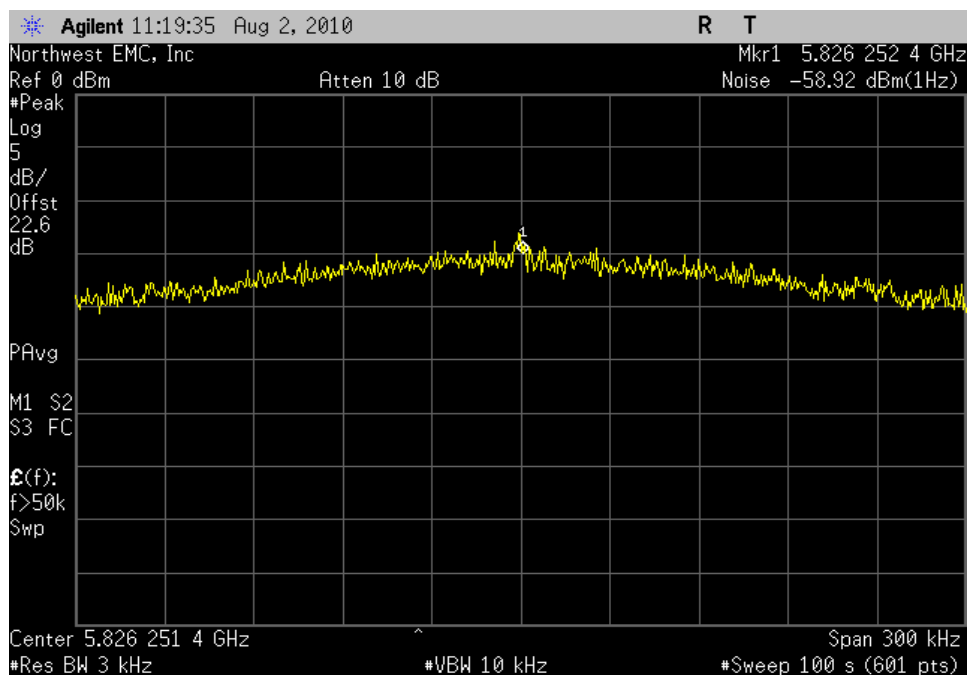


5725 MHz - 5850 MHz Band, 802.11(n) MCS0, High Channel 165, 5825 MHz

Result: Pass

Value: -24.1 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

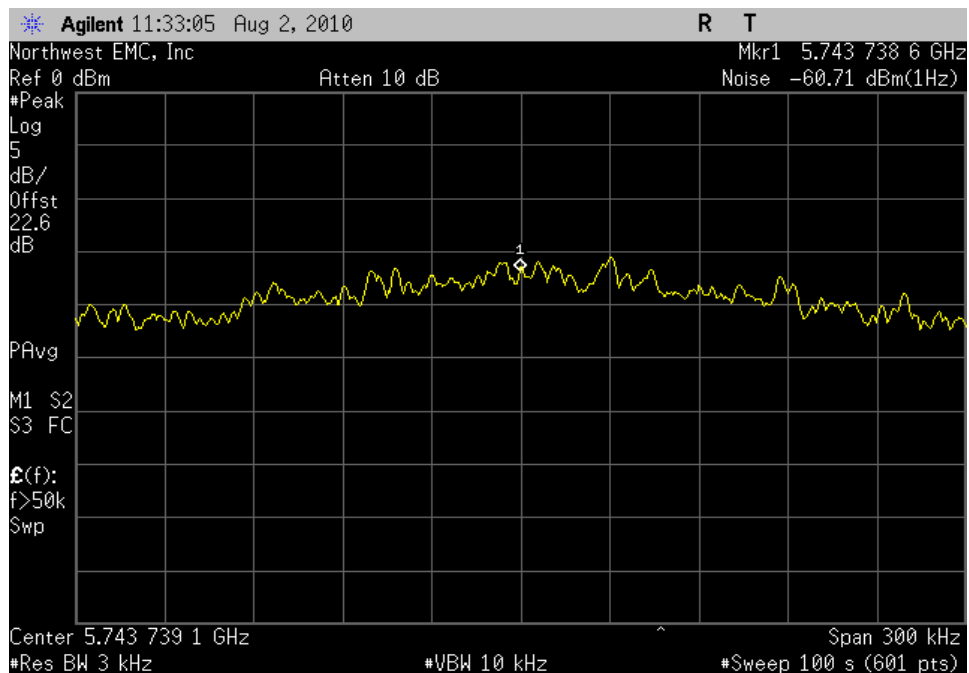


5725 MHz - 5850 MHz Band, 802.11(n) MCS7, Low Channel 149, 5745 MHz

Result: Pass

Value: -25.9 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

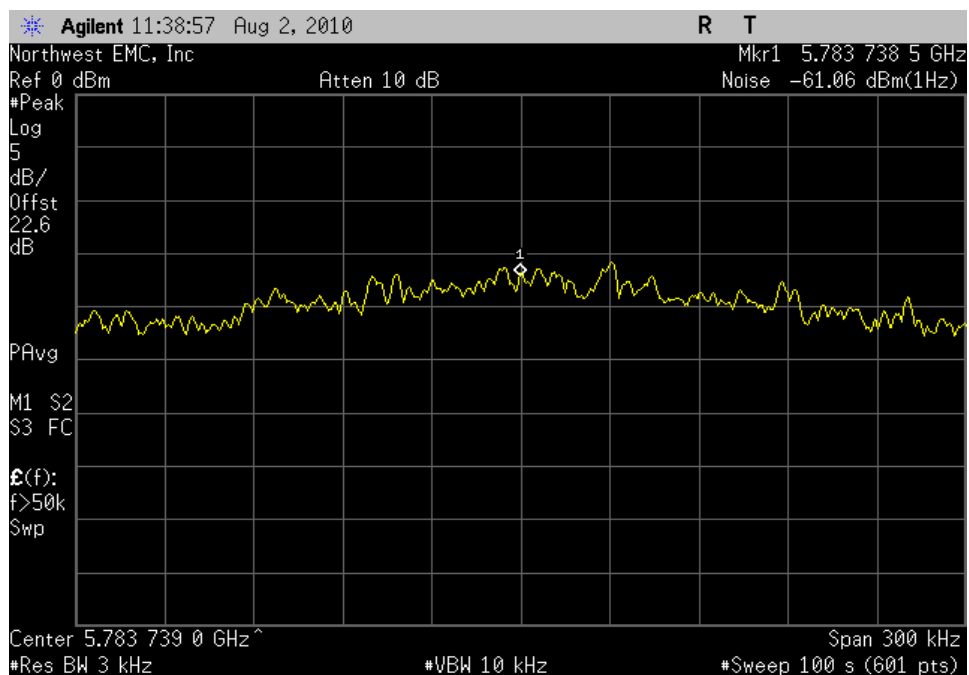


5725 MHz - 5850 MHz Band, 802.11(n) MCS7, Mid Channel 157, 5785 MHz

Result: Pass

Value: -26.3 dBm / 3 kHz

Limit: 8 dBm / 3 kHz

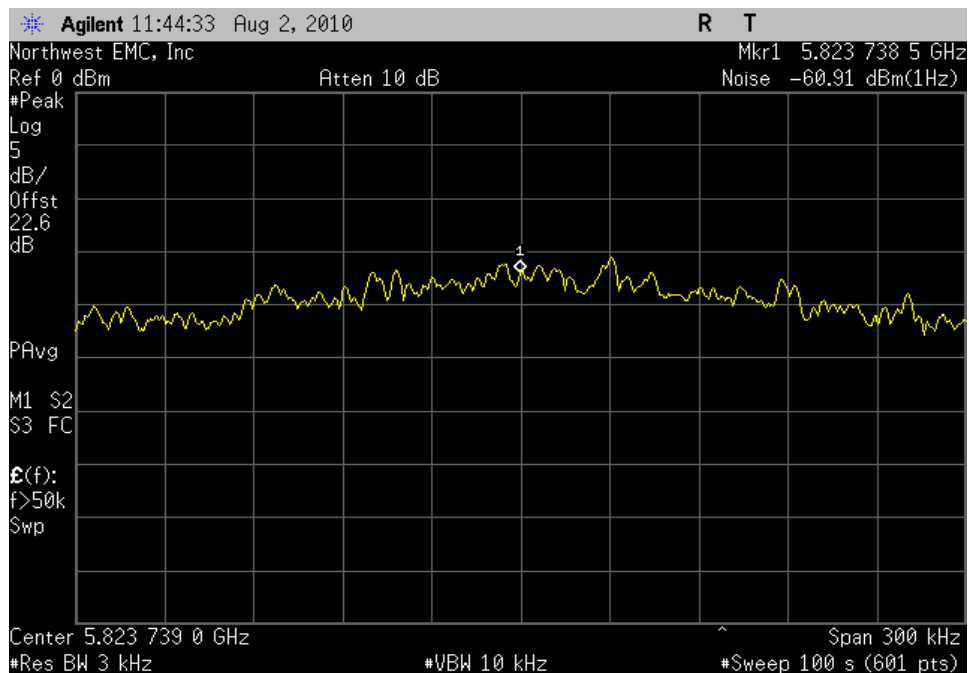


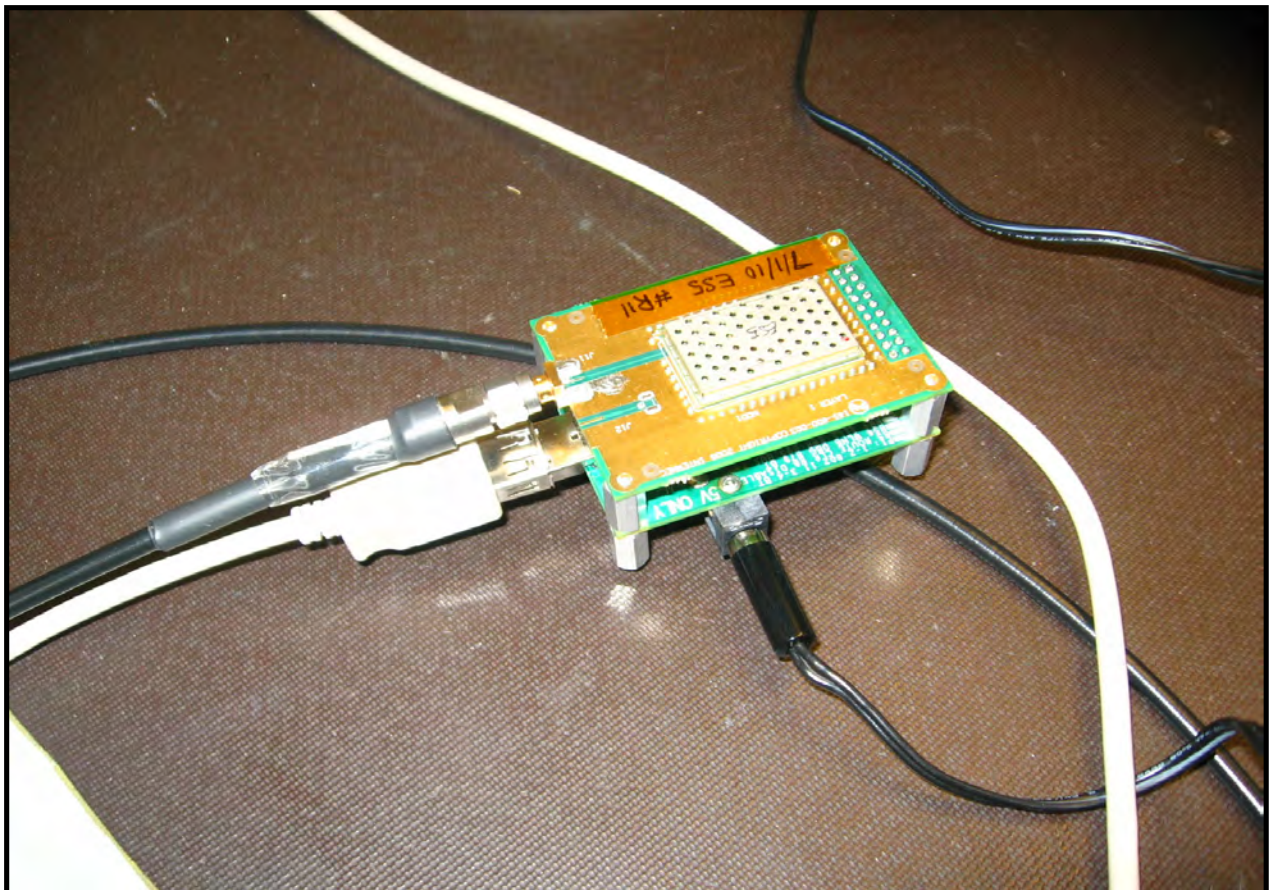
5725 MHz - 5850 MHz Band, 802.11(n) MCS7, High Channel 165, 5825 MHz

Result: Pass

Value: -26.1 dBm / 3 kHz

Limit: 8 dBm / 3 kHz





SPURIOUS RADIATED EMISSIONS

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Continuous Tx. 802.11a, 6Mbps

Continuous Tx. 802.11 5GHz

Continuous Tx. 802.11

Continuous Tx.

MODE USED FOR FINAL DATA

Continuous Tx. 802.11

POWER SETTINGS INVESTIGATED

5VDC

FREQUENCY RANGE INVESTIGATED

Start Frequency

30 MHz

Stop Frequency

40 GHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAQ	1/6/2010	12
Spectrum Analyzer	Agilent	E4440A	AAX	5/14/2010	12
High Pass Filter	Micro-Tronics	HPM50112	HGA	10/1/2009	13
5.725-5.875 Notch Filter	Micro-Tronics	BRC50705	HGJ	7/31/2009	13
5.47-5.725 Notch Filter	Micro-Tronics	BRC50704	HGI	10/1/2009	13
5.25 GHz Notch Filter	K&L Microwave	8N50-5250/X200-0/0	HFK	4/2/2010	13
OC Cable	ESM Cable Corp.	KMKM-72	OCV	11/3/2009	13
Cable	ESM Cable Corp.	KMKM-72	EVY	11/3/2009	13
EV12 Cables	N/A	Standard Gain Horn Cables	EVU	7/14/2010	13
EV12 Cables	N/A	Double Ridge Horn Cables	EVT	10/23/2009	13
EV12 Cables	N/A	Bilog Cables	EVS	7/14/2010	13
Pre-Amplifier	Miteq	JSW45-26004000-40-5P	AVR	6/22/2010	13
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	5/19/2009	16
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVI	7/14/2010	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVH	7/14/2010	13
Pre-Amplifier	Miteq	AMF-3D00100800-32-13P	AVF	7/14/2010	13
Pre-Amplifier	Miteq	AM-1616-1000	AVM	7/14/2010	13
Antenna, Horn	ETS Lindgren	3160-10	AIW	NCR	0
Antenna, Horn	ETS Lindgren	3160-09	AIV	NCR	0
Antenna, Horn	ETS	3160-08	AIA	NCR	0
Antenna, Horn	ETS	3160.07	AHZ	10/14/2008	24
Antenna, Horn	ETS	3115	AIB	8/25/2008	24
Antenna, Biconilog	EMCO	3141	AXG	2/15/2010	13

MEASUREMENT BANDWIDTHS

	Frequency Range	Peak Data	Quasi-Peak Data	Average Data
	(MHz)	(kHz)	(kHz)	(kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. The measurement uncertainty estimation is available upon request.

TEST DESCRIPTION

The highest gain of each type of antenna to be used with the EUT was tested. The EUT was configured for low, mid, and high band transmit frequencies. For each configuration, the spectrum was scanned throughout the specified range. In addition, measurements were made in the restricted bands to verify compliance. While scanning, emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and the EUT antenna in three orthogonal axis, and adjusting measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.10:2009). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

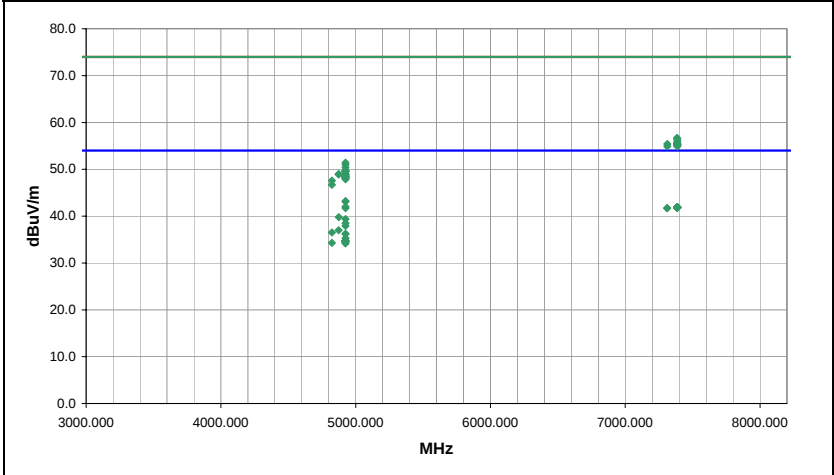
EUT:	RC12	Work Order:	INMC0575
Serial Number:	RL14	Date:	07/28/10
Customer:	Intermec Technologies Corporation	Temperature:	21.7 °C
Attendees:	none	Humidity:	53%
Project:	None	Barometric Pres.:	1015.4 mb
Tested by:	Dan Haas	Power:	5VDC
		Job Site:	EV12

TEST SPECIFICATIONS	Test Method
FCC 15.247:2010	ANSI C63.10:2009

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS
See note for Channel, Data rate, EUT and antenna orientations.

EUT OPERATING MODES		
Continuous Tx.		
DEVIATIONS FROM TEST STANDARD		
No deviations.		
Run #	1	 Signature
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4824.053	33.6	9.4	223.0	1.5	3.0	0.0	H-Horn	AV	0.0	43.2	54.0	-10.8	802.11b Ch:11 (2462MHz), 1Mbps, EUT horizontal, Antenna Vertical.
4824.003	33.7	9.4	319.0	1.3	3.0	0.0	H-Horn	AV	0.0	43.1	54.0	-10.9	802.11b Ch:11 (2462MHz), 1Mbps, EUT on side, Antenna Vertical.
4924.023	32.6	9.4	265.0	1.2	3.0	0.0	V-Horn	AV	0.0	42.0	54.0	-12.0	802.11b Ch:11 (2462MHz), 1Mbps, EUT vertical, Antenna horizontal.
7385.490	24.1	17.8	328.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.9	54.0	-12.1	802.11g Ch:11 (2462MHz), 54Mbps, EUT horizontal, Antenna Vertical.
7385.493	24.1	17.8	243.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	802.11b Ch:11 (2462MHz), 11Mbps, EUT vertical, Antenna horizontal.
7385.613	24.1	17.8	243.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	802.11g Ch:11 (2462MHz), 36Mbps, EUT vertical, Antenna horizontal.
7385.827	24.1	17.8	243.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	802.11g Ch:11 (2462MHz), 54Mbps, EUT vertical, Antenna horizontal.
7385.953	24.1	17.8	243.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	802.11g Ch:11 (2462MHz), 6Mbps, EUT vertical, Antenna horizontal.
7385.963	24.1	17.8	243.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	802.11n Ch:11 (2462MHz), MCS7, EUT vertical, Antenna horizontal.
7385.967	24.1	17.8	243.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	802.11n Ch:11 (2462MHz), MCS0, EUT vertical, Antenna horizontal.
7386.243	24.1	17.8	243.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	802.11b Ch:11 (2462MHz), 1Mbps, EUT horizontal, Antenna Vertical.
7386.983	24.0	17.8	328.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	802.11b Ch:11 (2462MHz), 1Mbps, EUT horizontal, Antenna Vertical.
7386.287	24.0	17.8	328.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	802.11n Ch:11 (2462MHz), MCS0, EUT horizontal, Antenna Vertical.
7386.073	24.0	17.8	328.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	802.11b Ch:11 (2462MHz), 11Mbps, EUT horizontal, Antenna Vertical.
7386.340	24.0	17.8	328.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	802.11g Ch:11 (2462MHz), 36Mbps, EUT horizontal, Antenna Vertical.
7386.453	24.0	17.8	328.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	802.11g Ch:11 (2462MHz), 6Mbps, EUT horizontal, Antenna Vertical.
7386.487	24.0	17.8	328.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	802.11n Ch:11 (2462MHz), MCS7, EUT horizontal, Antenna Vertical.
7310.367	24.1	17.6	317.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.7	54.0	-12.3	802.11b Ch:6 (2437MHz), 1Mbps, EUT horizontal, Antenna Vertical.
7311.257	24.1	17.6	293.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.7	54.0	-12.3	802.11b Ch:6 (2437MHz), 1Mbps, EUT horizontal, Antenna Vertical.
4924.000	32.3	9.4	274.0	1.2	3.0	0.0	V-Horn	AV	0.0	41.7	54.0	-12.3	802.11b Ch:11 (2462MHz), 1Mbps, EUT Vertical, Antenna horizontal.

NORTHWEST

EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2008.07.21
EMI 2008.1.9

EUT:	RC12	Work Order:	INMC0575
Serial Number:	R14	Date:	07/29/10
Customer:	Intermec Technologies Corporation	Temperature:	20.6 °C
Attendees:	none	Humidity:	50%
Project:	None	Barometric Pres.:	1019.1 mb
Tested by:	Dan Haas	Power:	SVDC
		Job Site:	EV12

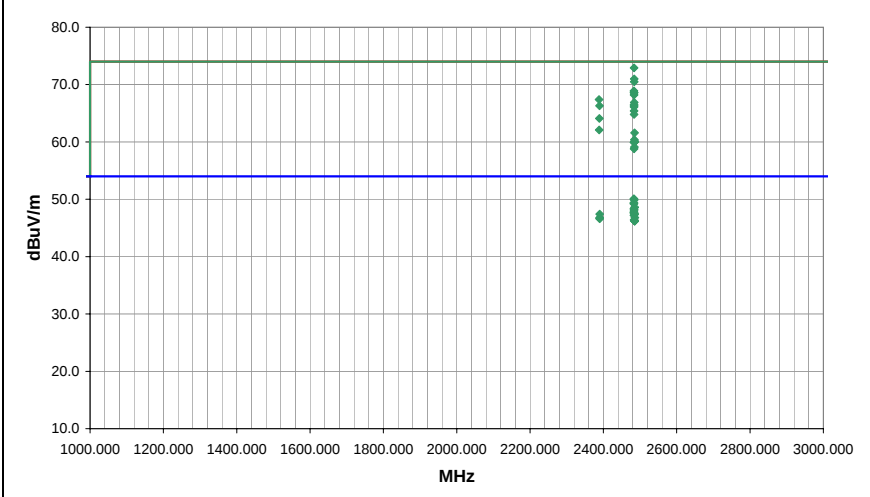
TEST SPECIFICATIONS	Test Method
FCC 15.247:2010	ANSI C63.10:2009

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS

See note for Channel, Data rate, EUT and antenna orientations.

EUT OPERATING MODES		
Continuous Tx.		
DEVIATIONS FROM TEST STANDARD		
No deviations.		
Run #	2	
Configuration #	1	
Results	Pass	
		Signature 



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2483.697	53.2	-0.3	344.0	1.1	3.0	20.0	H-Horn	PK	0.0	72.9	74.0	-1.1	802.11n, Ch:11, MCS0, EUT on side, antenna vertical.
2484.300	51.3	-0.3	242.0	1.0	3.0	20.0	H-Horn	PK	0.0	71.0	74.0	-3.0	802.11g, Ch:11, 36Mbps, EUT on side, antenna vertical.
2484.337	50.8	-0.3	12.0	1.0	3.0	20.0	V-Horn	PK	0.0	70.5	74.0	-3.5	802.11n, Ch:11, MCS0, EUT vertical, antenna horizontal.
2483.517	30.4	-0.3	242.0	1.0	3.0	20.0	H-Horn	AV	0.0	50.1	54.0	-3.9	802.11g, Ch:11, 36Mbps, EUT on side, antenna vertical.
2483.510	30.3	-0.3	226.0	1.0	3.0	20.0	H-Horn	AV	0.0	50.0	54.0	-4.0	802.11n, Ch:11, MCS7, EUT on side, antenna vertical.
2484.240	30.2	-0.3	344.0	1.1	3.0	20.0	H-Horn	AV	0.0	49.9	54.0	-4.1	802.11n, Ch:11, MCS0, EUT on side, antenna vertical.
2483.510	29.7	-0.3	235.0	1.0	3.0	20.0	H-Horn	AV	0.0	49.4	54.0	-4.6	802.11g, Ch:11, 54Mbps, EUT on side, antenna vertical.
2483.513	29.6	-0.3	222.0	1.0	3.0	20.0	H-Horn	AV	0.0	49.3	54.0	-4.7	802.11g, Ch:11, 6Mbps, EUT on side, antenna vertical.
2483.517	29.5	-0.3	12.0	1.0	3.0	20.0	V-Horn	AV	0.0	49.2	54.0	-4.8	802.11n, Ch:11, MCS0, EUT vertical, antenna horizontal.
2483.510	49.2	-0.3	226.0	1.0	3.0	20.0	H-Horn	PK	0.0	68.9	74.0	-5.1	802.11n, Ch:11, MCS7, EUT on side, antenna vertical.
2485.423	28.9	-0.3	223.0	1.1	3.0	20.0	H-Horn	AV	0.0	48.6	54.0	-5.4	802.11b, Ch:11, 11Mbps, EUT on side, antenna vertical.
2483.550	48.9	-0.3	43.0	1.1	3.0	20.0	H-Horn	PK	0.0	68.6	74.0	-5.4	802.11n, Ch:11, MCS0, EUT vertical, antenna horizontal.
2483.843	48.9	-0.3	235.0	1.0	3.0	20.0	H-Horn	PK	0.0	68.6	74.0	-5.4	802.11g, Ch:11, 54Mbps, EUT on side, antenna vertical.
2483.507	28.7	-0.3	349.0	1.9	3.0	20.0	V-Horn	AV	0.0	48.4	54.0	-5.6	802.11g, Ch:11, 36Mbps, EUT vertical, antenna horizontal.
2483.550	28.5	-0.3	52.0	1.9	3.0	20.0	V-Horn	AV	0.0	48.2	54.0	-5.8	802.11g, Ch:11, 6Mbps, EUT vertical, antenna horizontal.
2483.937	48.5	-0.3	222.0	1.0	3.0	20.0	H-Horn	PK	0.0	68.2	74.0	-5.8	802.11g, Ch:11, 6Mbps, EUT on side, antenna vertical.
2483.593	28.4	-0.3	59.0	1.9	3.0	20.0	V-Horn	AV	0.0	48.1	54.0	-5.9	802.11g, Ch:11, 54Mbps, EUT vertical, antenna horizontal.
2483.520	28.1	-0.3	87.0	1.0	3.0	20.0	H-Horn	AV	0.0	47.8	54.0	-6.2	802.11n, Ch:11, MCS0, EUT horizontal, antenna vertical.
2483.510	28.0	-0.3	0.0	1.4	3.0	20.0	H-Horn	AV	0.0	47.7	54.0	-6.3	802.11b, Ch:11, 1Mbps, EUT on side, antenna vertical.
2483.543	27.9	-0.3	148.0	1.0	3.0	20.0	V-Horn	AV	0.0	47.6	54.0	-6.4	802.11n, Ch:11, MCS0, EUT horizontal, antenna vertical.

NORTHWEST

EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2008.07.21
EMI 2008.1.9

EUT:	RC12	Work Order:	INMC0575
Serial Number:	R14	Date:	07/30/10
Customer:	Intermec Technologies Corporation	Temperature:	19.3 °C
Attendees:	none	Humidity:	61%
Project:	None	Barometric Pres.:	1017.9 mb
Tested by:	Dan Haas	Power:	5VDC
		Job Site:	EV12

TEST SPECIFICATIONS

FCC 15.247:2010

ANSI C63.10:2009

TEST PARAMETERS

Antenna Height(s) (m)

1 - 4

Test Distance (m)

3

COMMENTS

See note for Channel, Data rate, EUT and antenna orientations.

EUT OPERATING MODES

Continuous Tx.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3	Signature
Configuration #	1	
Results	Pass	

80.0

70.0

60.0

50.0

40.0

30.0

20.0

10.0

dBuV/m

8200.000

8700.000

9200.000

9700.000

10200.000

10700.000

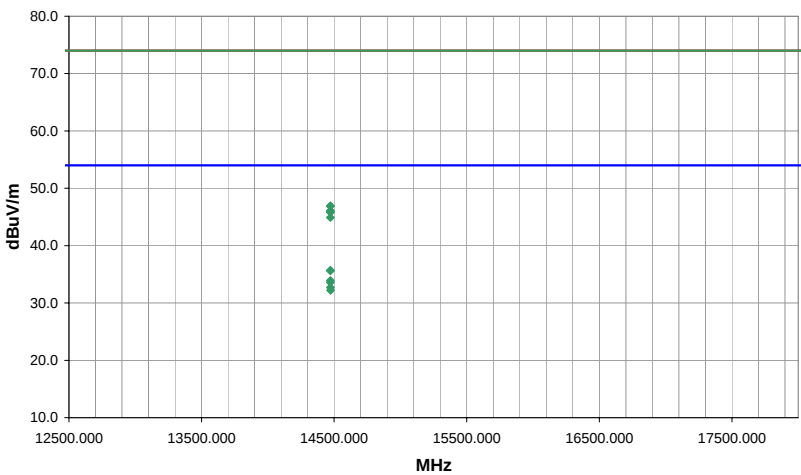
11200.000

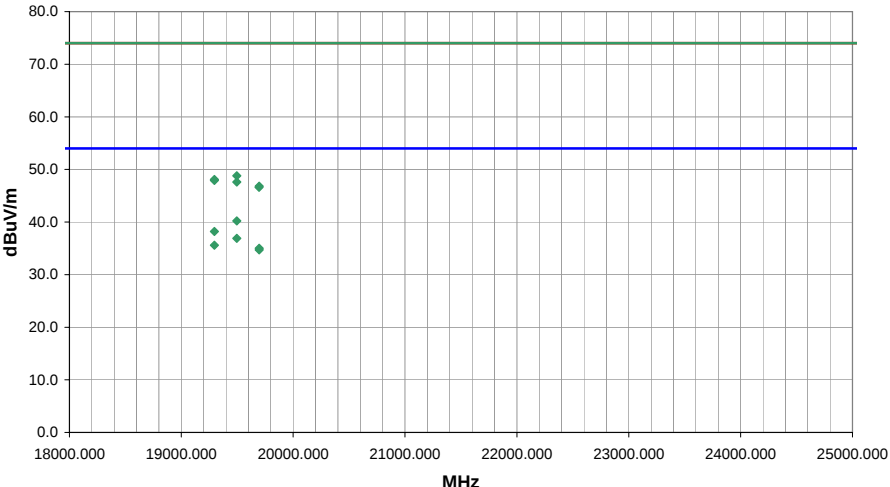
11700.000

12200.000

MHz

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
12310.750	37.0	-9.3	301.0	1.0	3.0	0.0	H-Horn	AV	0.0	27.7	54.0	-26.3	802.11b, CH:11, 1Mbps, EUT vertical, antenna horizontal.
12309.080	36.8	-9.3	97.0	1.0	3.0	0.0	H-Horn	AV	0.0	27.5	54.0	-26.5	802.11b, CH:11, 1Mbps, EUT horizontal, antenna vertical.
12060.140	36.2	-9.4	108.0	1.0	3.0	0.0	V-Horn	AV	0.0	26.8	54.0	-27.2	802.11b, CH:1, 1Mbps, EUT vertical, antenna horizontal.
12310.590	36.1	-9.3	223.0	1.7	3.0	0.0	V-Horn	AV	0.0	26.8	54.0	-27.2	802.11b, CH:11, 1Mbps, EUT horizontal, antenna vertical.
12311.160	36.1	-9.3	251.0	1.7	3.0	0.0	V-Horn	AV	0.0	26.8	54.0	-27.2	802.11b, CH:11, 1Mbps, EUT vertical, antenna horizontal.
12060.040	36.1	-9.4	20.0	1.9	3.0	0.0	H-Horn	AV	0.0	26.7	54.0	-27.3	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
12061.540	36.1	-9.4	265.0	1.9	3.0	0.0	H-Horn	AV	0.0	26.7	54.0	-27.3	802.11b, CH:1, 1Mbps, EUT vertical, antenna horizontal.
12060.340	36.0	-9.4	15.0	1.0	3.0	0.0	V-Horn	AV	0.0	26.6	54.0	-27.4	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
12184.970	35.4	-9.3	113.0	1.0	3.0	0.0	V-Horn	AV	0.0	26.1	54.0	-27.9	802.11b, CH:6, 1Mbps, EUT vertical, antenna horizontal.
12185.120	35.4	-9.3	226.0	1.0	3.0	0.0	H-Horn	AV	0.0	26.1	54.0	-27.9	802.11b, CH:6, 1Mbps, EUT vertical, antenna horizontal.
12185.210	35.3	-9.3	180.0	1.0	3.0	0.0	V-Horn	AV	0.0	26.0	54.0	-28.0	802.11b, CH:6, 1Mbps, EUT horizontal, antenna vertical.
12184.840	35.2	-9.3	212.0	1.0	3.0	0.0	H-Horn	AV	0.0	25.9	54.0	-28.1	802.11b, CH:6, 1Mbps, EUT horizontal, antenna vertical.
12060.830	49.9	-9.4	108.0	1.0	3.0	0.0	V-Horn	PK	0.0	40.5	74.0	-33.5	802.11b, CH:1, 1Mbps, EUT vertical, antenna horizontal.
12310.720	49.8	-9.3	223.0	1.7	3.0	0.0	V-Horn	PK	0.0	40.5	74.0	-33.5	802.11b, CH:11, 1Mbps, EUT horizontal, antenna vertical.
12059.650	49.8	-9.4	15.0	1.0	3.0	0.0	V-Horn	PK	0.0	40.4	74.0	-33.6	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
12310.000	49.7	-9.3	301.0	1.0	3.0	0.0	H-Horn	PK	0.0	40.4	74.0	-33.6	802.11b, CH:11, 1Mbps, EUT vertical, antenna horizontal.
12310.660	49.3	-9.3	251.0	1.7	3.0	0.0	V-Horn	PK	0.0	40.0	74.0	-34.0	802.11b, CH:11, 1Mbps, EUT vertical, antenna horizontal.
12310.960	49.1	-9.3	97.0	1.0	3.0	0.0	H-Horn	PK	0.0	39.8	74.0	-34.2	802.11b, CH:11, 1Mbps, EUT horizontal, antenna vertical.
12059.650	49.1	-9.4	20.0	1.9	3.0	0.0	H-Horn	PK	0.0	39.7	74.0	-34.3	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
12184.970	48.9	-9.3	180.0	1.0	3.0	0.0	V-Horn	PK	0.0	39.6	74.0	-34.4	802.11b, CH:6, 1Mbps, EUT horizontal, antenna vertical.

NORTHWEST		SPURIOUS RADIATED EMISSIONS DATA SHEET		PSA 2008.07.21									
EMC				EMI 2008.1.9									
EUT: RC12		Work Order: INMC0575											
Serial Number: R14		Date: 07/30/10											
Customer: Intermec Technologies Corporation		Temperature: 19.3 °C											
Attendees: none		Humidity: 61%											
Project: None		Barometric Pres.: 1017.9 mb											
Tested by: Dan Haas		Power: 5VDC		Job Site: EV12									
TEST SPECIFICATIONS		Test Method											
FCC 15.247:2010		ANSI C63.10:2009											
TEST PARAMETERS													
Antenna Height(s) (m)		1 - 4		Test Distance (m)									
				3									
COMMENTS													
See note for Channel, Data rate, EUT and antenna orientations.													
EUT OPERATING MODES													
Continuous Tx.													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #		4											
Configuration #		1											
Results		Pass											
Signature 													
													
MHz													
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
14471.970	32.2	3.5	263.0	1.3	3.0	0.0	H-Horn	AV	0.0	35.7	54.0	-18.3	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
14472.070	32.1	3.5	360.0	1.3	3.0	0.0	V-Horn	AV	0.0	35.6	54.0	-18.4	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
14472.010	30.4	3.5	54.0	1.3	3.0	0.0	V-Horn	AV	0.0	33.9	54.0	-20.1	802.11b, CH:1, 1Mbps, EUT vertical, antenna horizontal.
14472.180	30.1	3.5	20.0	1.3	3.0	0.0	V-Horn	AV	0.0	33.6	54.0	-20.4	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
14472.180	29.2	3.5	239.0	1.3	3.0	0.0	H-Horn	AV	0.0	32.7	54.0	-21.3	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
14473.350	28.7	3.5	112.0	1.3	3.0	0.0	H-Horn	AV	0.0	32.2	54.0	-21.8	802.11b, CH:1, 1Mbps, EUT vertical, antenna horizontal.
14471.910	43.4	3.5	360.0	1.3	3.0	0.0	V-Horn	PK	0.0	46.9	74.0	-27.1	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
14472.040	43.4	3.5	263.0	1.3	3.0	0.0	H-Horn	PK	0.0	46.9	74.0	-27.1	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
14471.990	42.6	3.5	20.0	1.3	3.0	0.0	V-Horn	PK	0.0	46.1	74.0	-27.9	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
14471.880	42.5	3.5	54.0	1.3	3.0	0.0	V-Horn	PK	0.0	46.0	74.0	-28.0	802.11b, CH:1, 1Mbps, EUT vertical, antenna horizontal.
14471.750	42.3	3.5	239.0	1.3	3.0	0.0	H-Horn	PK	0.0	45.8	74.0	-28.2	802.11b, CH:1, 1Mbps, EUT horizontal, antenna vertical.
14471.240	41.4	3.5	112.0	1.3	3.0	0.0	H-Horn	PK	0.0	44.9	74.0	-29.1	802.11b, CH:1, 1Mbps, EUT vertical, antenna horizontal.

NORTHWEST EMC										SPURIOUS RADIATED EMISSIONS DATA SHEET										PSA 2008.07.21 EMI 2008.1.9			
EUT: RC12										Work Order: INMC0575													
Serial Number: R14										Date: 08/04/10													
Customer: Intermec Technologies Corporation										Temperature: 23.2 °C													
Attendees: none										Humidity: 50%													
Project: None										Barometric Pres.: 1017.5 mb													
Tested by: Dan Haas										Power: 5VDC										Job Site: EV12			
TEST SPECIFICATIONS										Test Method													
FCC 15.247:2010										ANSI C63.10:2009													
TEST PARAMETERS																							
Antenna Height(s) (m)										1 - 2										Test Distance (m)		3	
COMMENTS																							
See comments for channel and EUT orientaion.																							
EUT OPERATING MODES																							
Continuous Tx: 802.11																							
DEVIATIONS FROM TEST STANDARD																							
No deviations.																							
Run #										10													
Configuration #										1													
Results										Pass										Signature 			
																							
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments										
19496.020	48.7	-8.5	55.0	1.1	3.0	0.0	H - Horn	AV	0.0	40.2	54.0	-13.8	Ch:6, 1Mbps, EUT vertical, antenna horizontal.										
19296.040	46.7	-8.5	51.0	1.1	3.0	0.0	H - Horn	AV	0.0	38.2	54.0	-15.8	Ch:1, 1Mbps, EUT vertical, antenna horizontal.										
19496.010	45.4	-8.5	65.0	1.1	3.0	0.0	V - Horn	AV	0.0	36.9	54.0	-17.1	Ch:6, 1Mbps, EUT horizontal, antenna vertical.										
19296.040	44.1	-8.5	73.0	1.2	3.0	0.0	V - Horn	AV	0.0	35.6	54.0	-18.4	Ch:1, 1Mbps, EUT horizontal, antenna vertical.										
19696.030	43.5	-8.5	53.0	1.0	3.0	0.0	H - Horn	AV	0.0	35.0	54.0	-19.0	Ch:11, 1Mbps, EUT vertical, antenna horizontal.										
19696.040	43.2	-8.5	66.0	1.1	3.0	0.0	V - Horn	AV	0.0	34.7	54.0	-19.3	Ch:11, 1Mbps, EUT horizontal, antenna vertical.										
19495.730	57.3	-8.5	55.0	1.1	3.0	0.0	H - Horn	PK	0.0	48.8	74.0	-25.2	Ch:6, 1Mbps, EUT vertical, antenna horizontal.										
19295.730	56.6	-8.5	73.0	1.2	3.0	0.0	V - Horn	PK	0.0	48.1	74.0	-25.9	Ch:1, 1Mbps, EUT horizontal, antenna vertical.										
19296.060	56.4	-8.5	51.0	1.1	3.0	0.0	H - Horn	PK	0.0	47.9	74.0	-26.1	Ch:1, 1Mbps, EUT vertical, antenna horizontal.										
19496.410	56.1	-8.5	65.0	1.1	3.0	0.0	V - Horn	PK	0.0	47.6	74.0	-26.4	Ch:6, 1Mbps, EUT horizontal, antenna vertical.										
19695.900	55.3	-8.5	53.0	1.0	3.0	0.0	H - Horn	PK	0.0	46.8	74.0	-27.2	Ch:11, 1Mbps, EUT vertical, antenna horizontal.										
19695.600	55.1	-8.5	66.0	1.1	3.0	0.0	V - Horn	PK	0.0	46.6	74.0	-27.4	Ch:11, 1Mbps, EUT horizontal, antenna vertical.										

NORTHWEST		SPURIOUS RADIATED EMISSIONS DATA SHEET		PSA 2008.07.21									
EMC				EMI 2008.1.9									
EUT: RC12		Work Order: INMC0575											
Serial Number: R14		Date: 08/03/10											
Customer: Intermec Technologies Corporation		Temperature: 21.4 °C											
Attendees: none		Humidity: 56%											
Project: None		Barometric Pres.: 1019.1 mb											
Tested by: Dan Haas		Power: SVDC		Job Site: EV12									
TEST SPECIFICATIONS		Test Method											
FCC 15.247:2010		ANSI C63.10:2009											
TEST PARAMETERS													
Antenna Height(s) (m)		1 - 4		Test Distance (m)									
				0									
COMMENTS													
See notes for channel and EUT orientation.													
EUT OPERATING MODES													
Continuous Tx, 802.11.5GHz													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #		7											
Configuration #		1											
Results		Pass											
Signature													
MHz													
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
11570.030	39.6	-9.7	296.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.9	54.0	-24.1	802.11n MCS7, Ch:157, EUT vertical, antenna horizontal.
11570.030	39.5	-9.7	296.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.8	54.0	-24.2	802.11a 54Mbps, Ch:157, EUT vertical, antenna horizontal.
11570.040	39.5	-9.7	296.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.8	54.0	-24.2	802.11n MCS0, Ch:157, EUT vertical, antenna horizontal.
11570.020	39.4	-9.7	296.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.7	54.0	-24.3	802.11a 36Mbps, Ch:157, EUT vertical, antenna horizontal.
11570.010	39.2	-9.7	296.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.5	54.0	-24.5	802.11a 6Mbps, Ch:157, EUT vertical, antenna horizontal.
11490.020	39.3	-9.8	295.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.5	54.0	-24.5	802.11n MCS7, Ch:149, EUT vertical, antenna horizontal.
11490.010	39.1	-9.8	295.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.3	54.0	-24.7	802.11n MCS0, Ch:149, EUT vertical, antenna horizontal.
11490.020	39.1	-9.8	295.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.3	54.0	-24.7	802.11a 36Mbps, Ch:149, EUT vertical, antenna horizontal.
11490.040	39.1	-9.8	295.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.3	54.0	-24.7	802.11a 54Mbps, Ch:149, EUT vertical, antenna horizontal.
11490.050	38.9	-9.8	295.0	1.0	0.0	0.0	H-Horn	AV	0.0	29.1	54.0	-24.9	802.11a 6Mbps, Ch:149, EUT vertical, antenna horizontal.
11650.030	38.6	-9.7	294.0	1.0	0.0	0.0	H-Horn	AV	0.0	28.9	54.0	-25.1	802.11n MCS7, Ch:165, EUT vertical, antenna horizontal.
11650.000	38.5	-9.7	294.0	1.0	0.0	0.0	H-Horn	AV	0.0	28.8	54.0	-25.2	802.11n MCS0, Ch:165, EUT vertical, antenna horizontal.
11650.000	38.5	-9.7	294.0	1.0	0.0	0.0	H-Horn	AV	0.0	28.8	54.0	-25.2	802.11a 54Mbps, Ch:165, EUT vertical, antenna horizontal.
11650.010	38.4	-9.7	294.0	1.0	0.0	0.0	H-Horn	AV	0.0	28.7	54.0	-25.3	802.11a 36Mbps, Ch:165, EUT vertical, antenna horizontal.
11650.030	38.3	-9.7	294.0	1.0	0.0	0.0	H-Horn	AV	0.0	28.6	54.0	-25.4	802.11a 6Mbps, Ch:165, EUT vertical, antenna horizontal.
11570.100	38.0	-9.7	129.0	1.2	0.0	0.0	V-Horn	AV	0.0	28.3	54.0	-25.7	802.11n MCS7, Ch:157, EUT horizontal, antenna vertical.
11490.030	38.1	-9.8	94.0	1.1	0.0	0.0	V-Horn	AV	0.0	28.3	54.0	-25.7	802.11n MCS7, Ch:149, EUT horizontal, antenna vertical.
11569.970	37.9	-9.7	129.0	1.2	0.0	0.0	V-Horn	AV	0.0	28.2	54.0	-25.8	802.11a 54Mbps, Ch:157, EUT horizontal, antenna vertical.
11570.000	37.9	-9.7	129.0	1.2	0.0	0.0	V-Horn	AV	0.0	28.2	54.0	-25.8	802.11n MCS0, Ch:157, EUT horizontal, antenna vertical.
11570.070	37.9	-9.7	129.0	1.2	0.0	0.0	V-Horn	AV	0.0	28.2	54.0	-25.8	802.11a 36Mbps, Ch:157, EUT horizontal, antenna vertical.

EUT: RC12		Work Order: INMC0575	
Serial Number: R14		Date: 08/05/10	
Customer: Intermec Technologies Corporation		Temperature: 23.2 °C	
Attendees: none		Humidity: 50%	
Project: None		Barometric Pres.: 1017.5 mb	
Tested by: Dan Haas		Power: 5VDC	Job Site: EV12

TEST SPECIFICATIONS	Test Method
FCC 15.247:2010	ANSI C63.10:2009

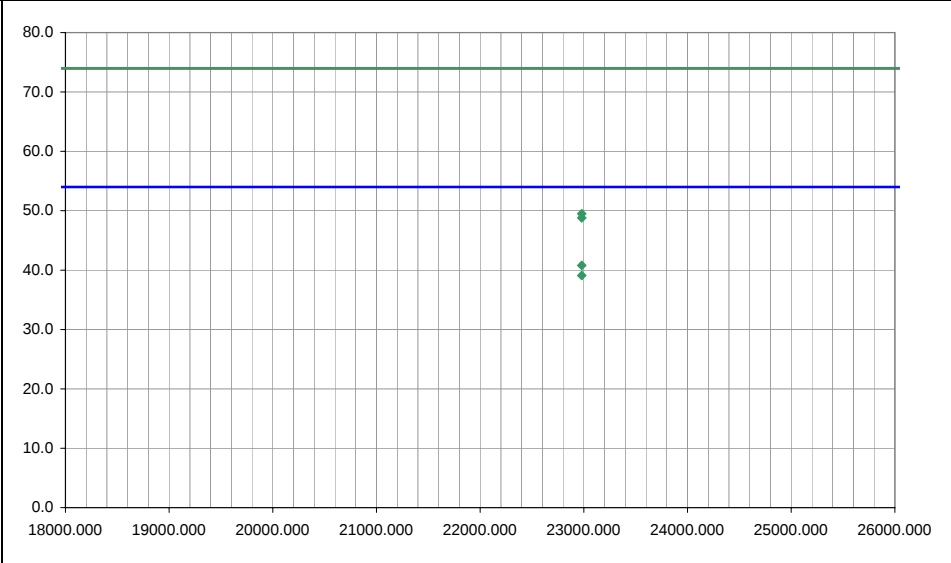
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 2	Test Distance (m)	3

COMMENTS
See comments for channel and EUT orientation.

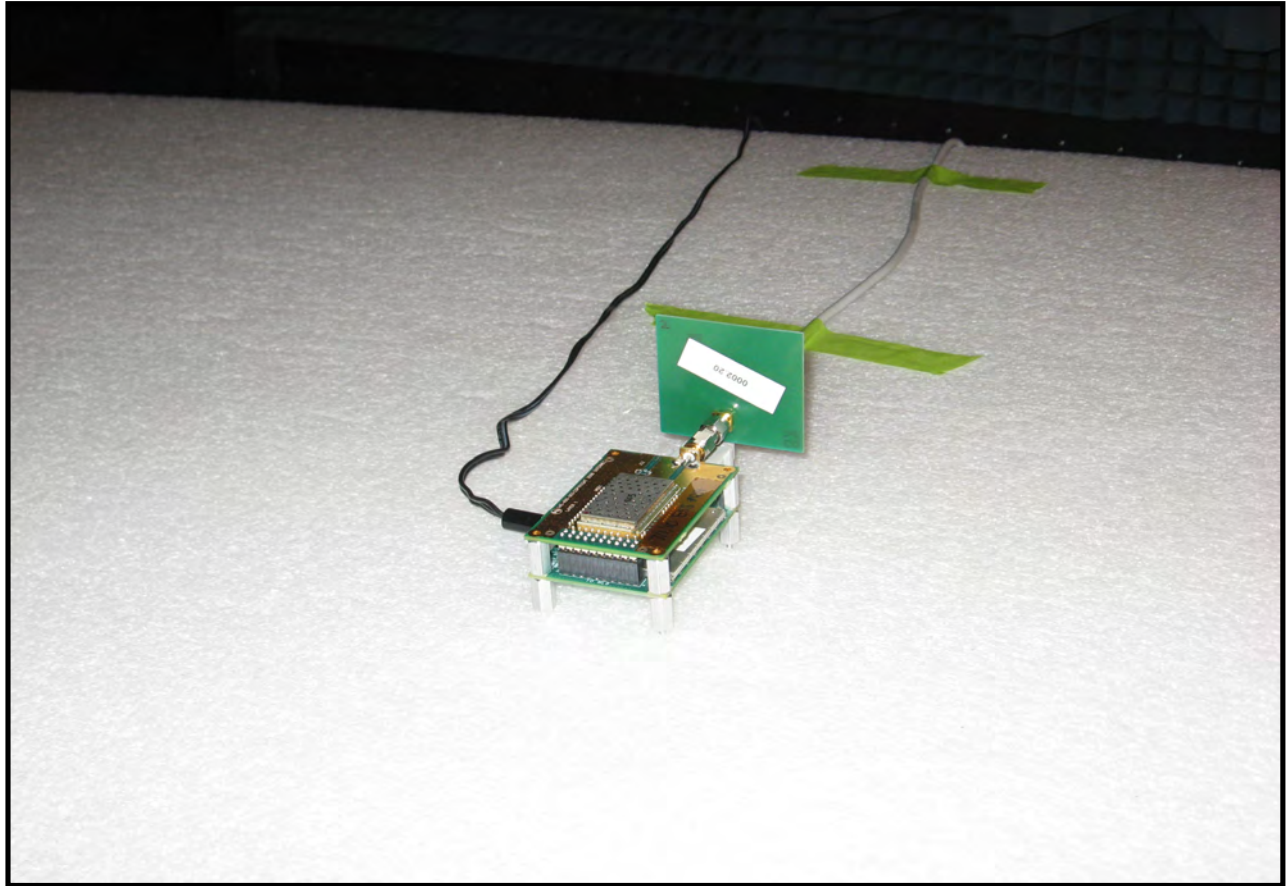
EUT OPERATING MODES
Continuous Tx. 802.11a, 6Mbps

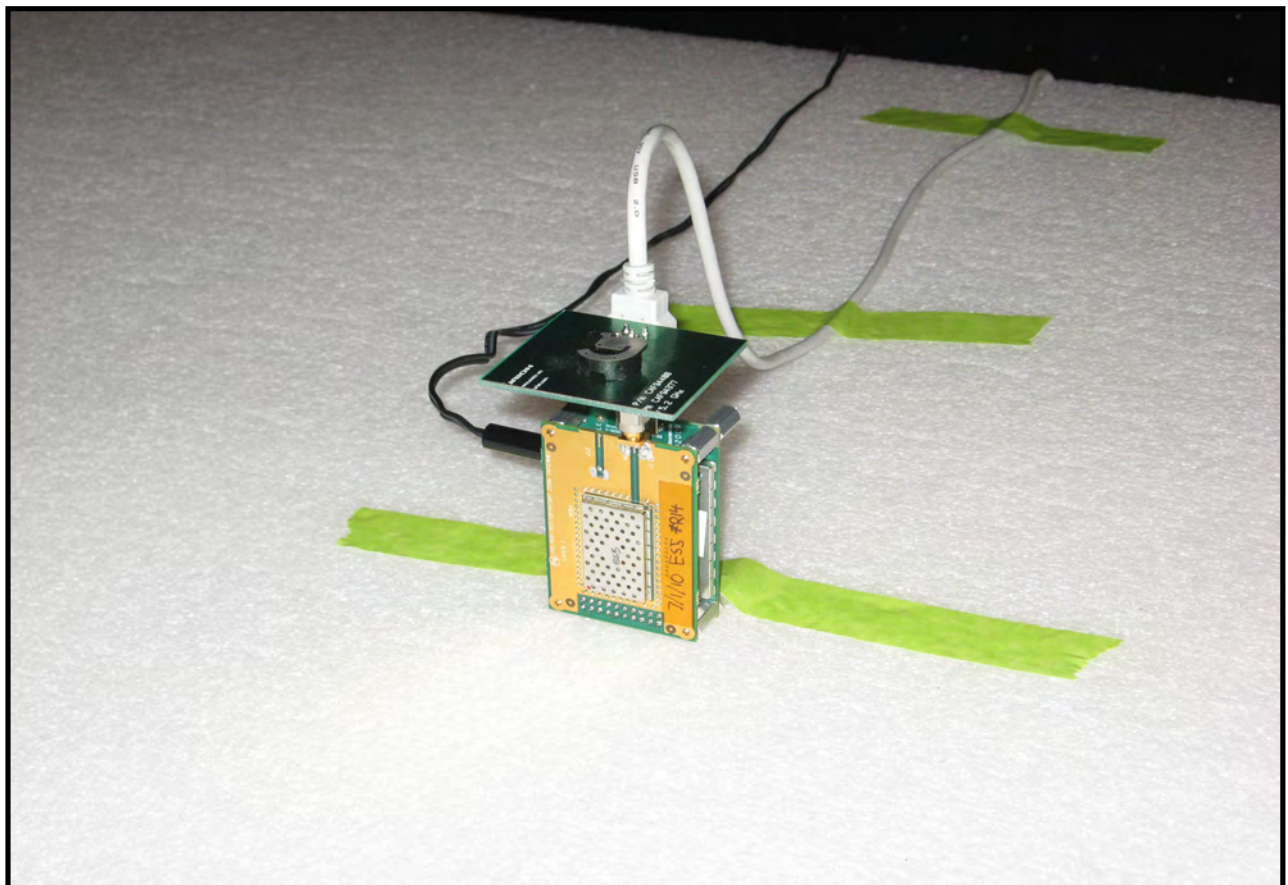
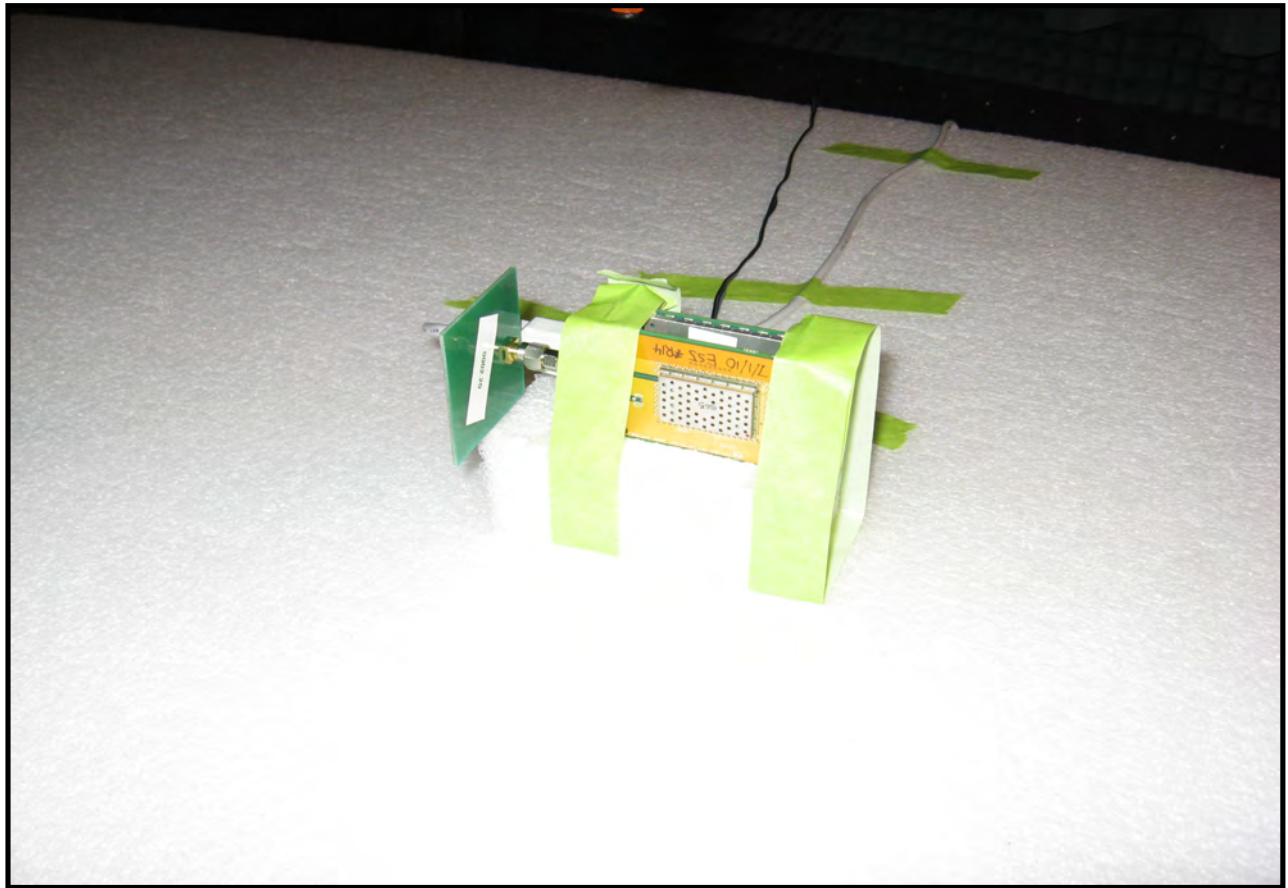
DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	12	Signature 
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
22980.040	49.8	-9.0	21.0	1.0	3.0	0.0	+-High Horr	AV	0.0	40.8	54.0	-13.2	Ch:149, EUT vertical, antenna horizontal.
22980.050	48.1	-9.0	36.0	1.3	3.0	0.0	√-High Horr	AV	0.0	39.1	54.0	-14.9	Ch:149, EUT on side, antenna vertical.
22980.010	58.5	-9.0	21.0	1.0	3.0	0.0	+-High Horr	PK	0.0	49.5	74.0	-24.5	Ch:149, EUT vertical, antenna horizontal.
22979.990	57.8	-9.0	36.0	1.3	3.0	0.0	√-High Horr	PK	0.0	48.8	74.0	-25.2	Ch:149, EUT on side, antenna vertical.





Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

MODES OF OPERATION

Transmitting. 802.11(a), 6 Mbps, High Channel, 165
Transmitting. 802.11(a), 6 Mbps, Mid Channel, 157
Transmitting. 802.11(a), 6 Mbps, Low Channel, 149
Transmitting. 802.11(b), 1 Mbps, High Channel
Transmitting. 802.11(b), 1 Mbps, Mid Channel
Transmitting. 802.11(b), 1 Mbps, Low Channel

POWER SETTINGS INVESTIGATED

3.3 VDC from 120VAC

CONFIGURATIONS INVESTIGATED

INMC0575 - 3

SAMPLE CALCULATIONS

Conducted Emissions: Adjusted Level = Measured Level + Transducer Factor + Cable Attenuation Factor + External Attenuator

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESCI	ARE	4/29/2010	12 mo
High Pass Filter	TTE	H97-100K-50-720B	HFX	2/16/2010	13 mo
Attenuator	Coaxicom	66702 2910-20	ATO	7/21/2009	13 mo
EV07 Cables	N/A	Conducted Cables	EVG	6/21/2010	13 mo
LISN	Solar	9252-50-R-24-BNC	LIR	3/2/2010	12 mo
LISN	Solar	9252-50-R-24-BNC	LIN	5/27/2010	12 mo

MEASUREMENT BANDWIDTHS

Frequency Range	Peak Data	Quasi-Peak Data	Average Data
(MHz)	(kHz)	(kHz)	(kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

Measurements were made using the bandwidths and detectors specified. No video filter was used.

MEASUREMENT UNCERTAINTY

A measurement uncertainty estimation has been performed for each test per our internal quality document WP 342. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty for radiated emissions measurements is less than +/- 4 dB, and for conducted emissions measurements is less than +/- 2.7 dB. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for measurement uncertainty are available upon request.

TEST DESCRIPTION

The EUT will be powered indirectly from the AC power line while operating in a host device. Therefore, conducted emissions measurements were made on the DC input of the EUT, or on the DC input of the device used to power the EUT. The AC power line conducted emissions were measured on a linear power supply providing DC power to the module while providing no filtering of the power inputs to the module.

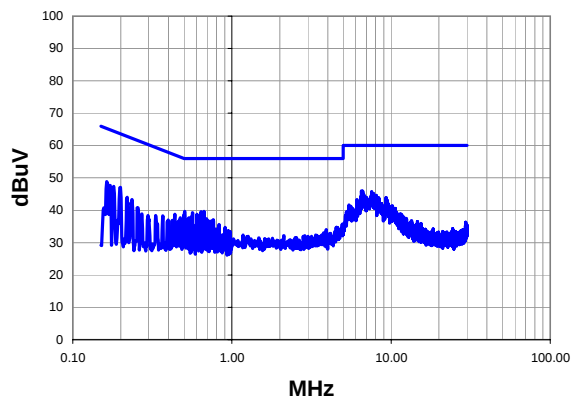
The AC power line conducted emissions were measured with the EUT operating at the lowest, the highest, and a middle channel in the operational band or bands. The EUT was transmitting in the mode which has the highest output power for the band. For each mode, the spectrum was scanned from 150 kHz to 30 MHz. The test setup and procedures were in accordance with ANSI C63.10-2009.

Work Order:	INMC0575	Date:	08/11/10		
Project:	None	Temperature:	22 °C		
Job Site:	EV07	Humidity:	53		
Serial Number:	R11	Barometric Pres.:	1014.8 mb		
				Tested by:	Rod Peloquin
EUT:	RC12				
Configuration:	3 - AC Power Conducted Emissions				
Customer:	Intermec Technologies Corporation				
Attendees:	none				
EUT Power:	3.3 VDC from 120VAC				
Operating Mode:	Transmitting, 802.11(b), 1 Mbps, Low Channel				
Deviations:	No deviations.				
Comments:	Linear lab power supply				

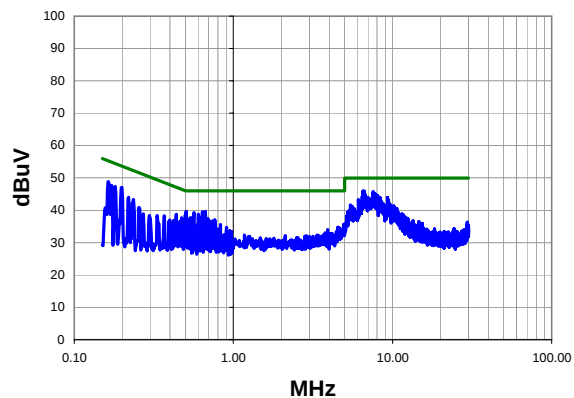
Test Specifications	Test Method
FCC 15.207:2010	ANSI C63.10:2009

Run #	1	Line:	High Line	Ext. Attenuation:	20	Results	Pass
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Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit

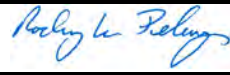


Peak Data - vs - Quasi Peak Limit

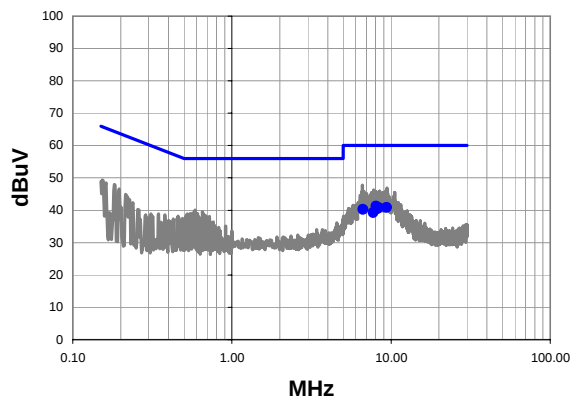
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.520	25.7	20.3	46.0	60.0	-14.0
6.630	25.6	20.3	45.9	60.0	-14.1
7.540	25.4	20.4	45.8	60.0	-14.2
7.770	24.7	20.4	45.1	60.0	-14.9
6.720	24.6	20.4	45.0	60.0	-15.0
8.060	24.2	20.4	44.6	60.0	-15.4
6.440	24.0	20.3	44.3	60.0	-15.7
7.000	23.6	20.4	44.0	60.0	-16.0
9.310	23.5	20.4	43.9	60.0	-16.1
8.360	23.4	20.4	43.8	60.0	-16.2
0.669	19.5	20.2	39.7	56.0	-16.3
0.505	19.5	20.2	39.7	56.0	-16.3
0.164	28.7	20.2	48.9	65.3	-16.4
0.640	19.4	20.2	39.6	56.0	-16.4
0.199	26.9	20.2	47.1	63.6	-16.6
8.320	23.0	20.4	43.4	60.0	-16.6
0.565	19.1	20.2	39.3	56.0	-16.7
6.110	23.0	20.3	43.3	60.0	-16.7
8.220	22.8	20.4	43.2	60.0	-16.8
9.440	22.7	20.4	43.1	60.0	-16.9

Peak Data - vs - Average Limit

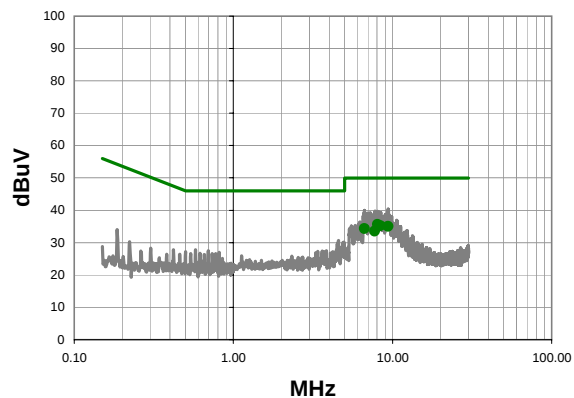
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.520	25.7	20.3	46.0	50.0	-4.0
6.630	25.6	20.3	45.9	50.0	-4.1
7.540	25.4	20.4	45.8	50.0	-4.2
7.770	24.7	20.4	45.1	50.0	-4.9
6.720	24.6	20.4	45.0	50.0	-5.0
8.060	24.2	20.4	44.6	50.0	-5.4
6.440	24.0	20.3	44.3	50.0	-5.7
7.000	23.6	20.4	44.0	50.0	-6.0
9.310	23.5	20.4	43.9	50.0	-6.1
8.360	23.4	20.4	43.8	50.0	-6.2
0.669	19.5	20.2	39.7	46.0	-6.3
0.505	19.5	20.2	39.7	46.0	-6.3
0.164	28.7	20.2	48.9	55.3	-6.4
0.640	19.4	20.2	39.6	46.0	-6.4
0.199	26.9	20.2	47.1	53.6	-6.6
8.320	23.0	20.4	43.4	50.0	-6.6
0.565	19.1	20.2	39.3	46.0	-6.7
6.110	23.0	20.3	43.3	50.0	-6.7
8.220	22.8	20.4	43.2	50.0	-6.8
9.440	22.7	20.4	43.1	50.0	-6.9

Work Order:	INMC0575	Date:	08/11/10		
Project:	None	Temperature:	22 °C		
Job Site:	EV07	Humidity:	53		
Serial Number:	R11	Barometric Pres.:	1014.8 mb		
EUT:	RC12				
Configuration:	3 - AC Power Conducted Emissions				
Customer:	Intermec Technologies Corporation				
Attendees:	none				
EUT Power:	3.3 VDC from 120VAC				
Operating Mode:	Transmitting. 802.11(b), 1 Mbps, Low Channel				
Deviations:	No deviations.				
Comments:	Linear lab power supply				
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009		
Run #	2	Line:	Neutral	Ext. Attenuation: 20	Results Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



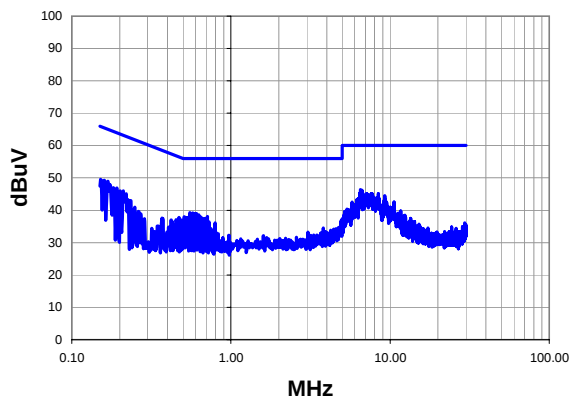
Quasi Peak Data - vs - Quasi Peak Limit						Average Data - vs - Average Limit					
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)	Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
8.048	20.8	20.4	41.2	60.0	-18.8	8.048	15.2	20.4	35.6	50.0	-14.4
9.382	20.4	20.4	40.8	60.0	-19.2	8.418	14.8	20.4	35.2	50.0	-14.8
8.418	20.3	20.4	40.7	60.0	-19.3	8.206	14.7	20.4	35.1	50.0	-14.9
8.206	20.0	20.4	40.4	60.0	-19.6	9.382	14.6	20.4	35.0	50.0	-15.0
6.660	19.9	20.3	40.2	60.0	-19.8	6.660	14.0	20.3	34.3	50.0	-15.7
7.738	18.9	20.4	39.3	60.0	-20.7	7.738	13.1	20.4	33.5	50.0	-16.5

EMC

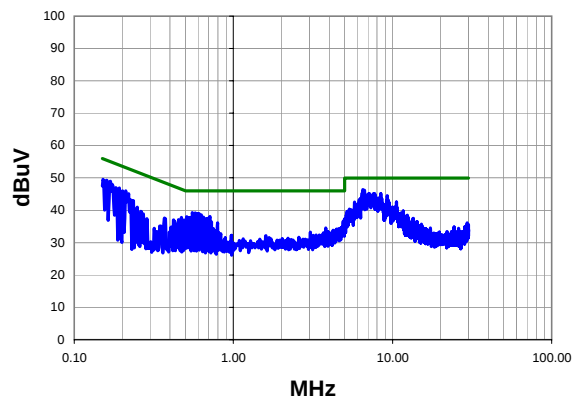
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb				
EUT:	RC12						
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting. 802.11(b), 1 Mbps, Mid Channel						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications			Test Method				
FCC 15.207:2010			ANSI C63.10:2009				
Run #	3	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

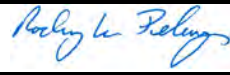
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.520	26.1	20.3	46.4	60.0	-13.6
6.670	25.8	20.3	46.1	60.0	-13.9
8.430	24.7	20.4	45.1	60.0	-14.9
7.740	24.7	20.4	45.1	60.0	-14.9
7.640	24.7	20.4	45.1	60.0	-14.9
7.140	24.7	20.4	45.1	60.0	-14.9
7.200	24.4	20.4	44.8	60.0	-15.2
6.770	24.2	20.4	44.6	60.0	-15.4
9.270	24.1	20.4	44.5	60.0	-15.5
7.780	24.1	20.4	44.5	60.0	-15.5
0.169	28.8	20.2	49.0	65.0	-16.1
8.190	23.4	20.4	43.8	60.0	-16.2
0.160	29.1	20.2	49.3	65.5	-16.2
8.030	23.3	20.4	43.7	60.0	-16.3
0.152	29.4	20.2	49.6	65.9	-16.3
8.540	23.2	20.4	43.6	60.0	-16.4
6.300	23.3	20.3	43.6	60.0	-16.4
9.330	22.9	20.4	43.3	60.0	-16.7
0.553	19.1	20.2	39.3	56.0	-16.7
6.180	23.0	20.3	43.3	60.0	-16.7

Peak Data - vs - Average Limit

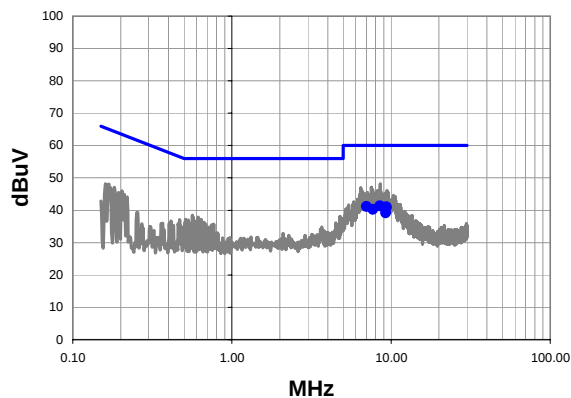
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.520	26.1	20.3	46.4	50.0	-3.6
6.670	25.8	20.3	46.1	50.0	-3.9
8.430	24.7	20.4	45.1	50.0	-4.9
7.740	24.7	20.4	45.1	50.0	-4.9
7.640	24.7	20.4	45.1	50.0	-4.9
7.140	24.7	20.4	45.1	50.0	-4.9
7.200	24.4	20.4	44.8	50.0	-5.2
6.770	24.2	20.4	44.6	50.0	-5.4
9.270	24.1	20.4	44.5	50.0	-5.5
7.780	24.1	20.4	44.5	50.0	-5.5
0.169	28.8	20.2	49.0	55.0	-6.1
8.190	23.4	20.4	43.8	50.0	-6.2
0.160	29.1	20.2	49.3	55.5	-6.2
8.030	23.3	20.4	43.7	50.0	-6.3
0.152	29.4	20.2	49.6	55.9	-6.3
8.540	23.2	20.4	43.6	50.0	-6.4
6.300	23.3	20.3	43.6	50.0	-6.4
9.330	22.9	20.4	43.3	50.0	-6.7
0.553	19.1	20.2	39.3	46.0	-6.7
6.180	23.0	20.3	43.3	50.0	-6.7

EMC

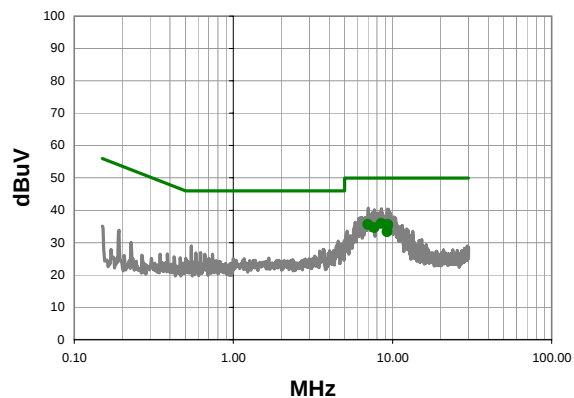
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb				
EUT:	RC12						
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting. 802.11(b), 1 Mbps, Mid Channel						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009				
Run #	4	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



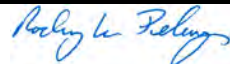
Average Data - vs - Average Limit



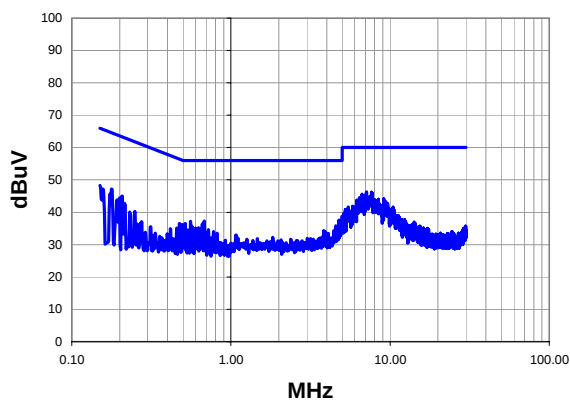
Quasi Peak Data - vs - Quasi Peak Limit						Average Data - vs - Average Limit					
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)	Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
8.504	20.9	20.4	41.3	60.0	-18.7	8.504	15.5	20.4	35.9	50.0	-14.1
7.018	20.8	20.4	41.2	60.0	-18.8	9.342	15.2	20.4	35.6	50.0	-14.4
9.342	20.6	20.4	41.0	60.0	-19.0	7.018	15.2	20.4	35.6	50.0	-14.4
9.358	20.3	20.4	40.7	60.0	-19.3	9.358	14.7	20.4	35.1	50.0	-14.9
7.678	19.8	20.4	40.2	60.0	-19.8	7.678	14.2	20.4	34.6	50.0	-15.4
9.268	18.7	20.4	39.1	60.0	-20.9	9.268	12.9	20.4	33.3	50.0	-16.7

EMC

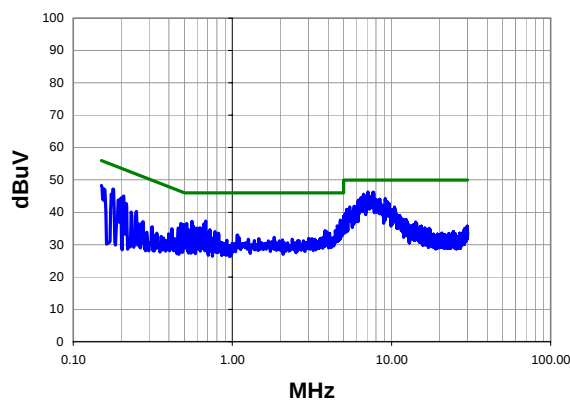
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb	Tested by: Rod Peloquin			
EUT:	RC12						
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting. 802.11(b), 1 Mbps, High Channel						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009				
Run #	5	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

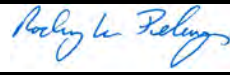
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.120	25.9	20.4	46.3	60.0	-13.7
7.660	25.8	20.4	46.2	60.0	-13.8
7.740	25.6	20.4	46.0	60.0	-14.0
6.670	25.3	20.3	45.6	60.0	-14.4
7.040	25.1	20.4	45.5	60.0	-14.5
6.640	24.7	20.3	45.0	60.0	-15.0
6.430	24.2	20.3	44.5	60.0	-15.5
9.120	23.7	20.4	44.1	60.0	-15.9
8.430	23.6	20.4	44.0	60.0	-16.0
8.030	23.5	20.4	43.9	60.0	-16.1
7.850	23.4	20.4	43.8	60.0	-16.2
6.190	23.4	20.3	43.7	60.0	-16.3
6.330	23.3	20.3	43.6	60.0	-16.4
9.400	22.9	20.4	43.3	60.0	-16.7
5.000	18.5	20.3	38.8	56.0	-17.2
8.510	22.3	20.4	42.7	60.0	-17.3
9.650	22.2	20.4	42.6	60.0	-17.4
0.177	27.0	20.2	47.2	64.6	-17.5
0.150	28.1	20.2	48.3	66.0	-17.7
6.090	21.7	20.3	42.0	60.0	-18.0

Peak Data - vs - Average Limit

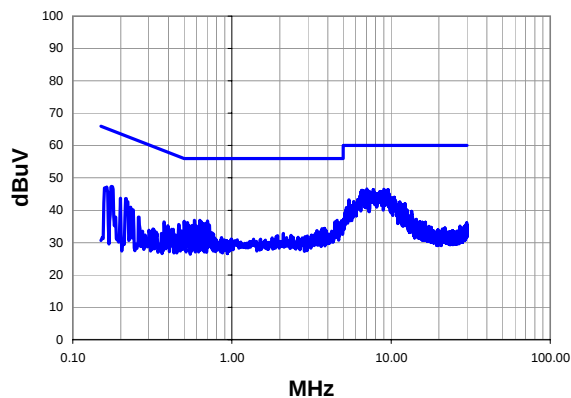
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.120	25.9	20.4	46.3	50.0	-3.7
7.660	25.8	20.4	46.2	50.0	-3.8
7.740	25.6	20.4	46.0	50.0	-4.0
6.670	25.3	20.3	45.6	50.0	-4.4
7.040	25.1	20.4	45.5	50.0	-4.5
6.640	24.7	20.3	45.0	50.0	-5.0
6.430	24.2	20.3	44.5	50.0	-5.5
9.120	23.7	20.4	44.1	50.0	-5.9
8.430	23.6	20.4	44.0	50.0	-6.0
8.030	23.5	20.4	43.9	50.0	-6.1
7.850	23.4	20.4	43.8	50.0	-6.2
6.190	23.4	20.3	43.7	50.0	-6.3
6.330	23.3	20.3	43.6	50.0	-6.4
9.400	22.9	20.4	43.3	50.0	-6.7
5.000	18.5	20.3	38.8	46.0	-7.2
8.510	22.3	20.4	42.7	50.0	-7.3
9.650	22.2	20.4	42.6	50.0	-7.4
0.177	27.0	20.2	47.2	54.6	-7.5
0.150	28.1	20.2	48.3	56.0	-7.7
6.090	21.7	20.3	42.0	50.0	-8.0

EMC

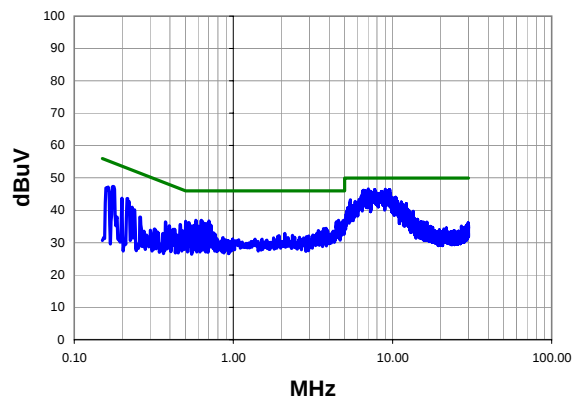
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb	Tested by: Rod Peloquin			
EUT:	RC12						
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting. 802.11(b), 1 Mbps, High Channel						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009				
Run #	6	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit

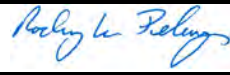


Peak Data - vs - Quasi Peak Limit

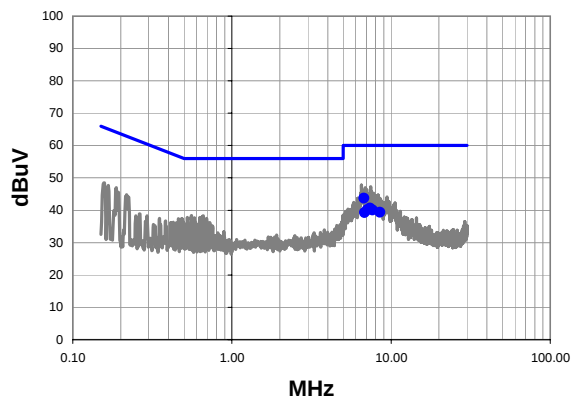
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.030	26.2	20.4	46.6	60.0	-13.4
9.020	26.1	20.4	46.5	60.0	-13.5
7.730	26.0	20.4	46.4	60.0	-13.6
9.610	25.9	20.4	46.3	60.0	-13.7
9.510	25.9	20.4	46.3	60.0	-13.7
6.580	25.9	20.3	46.2	60.0	-13.8
6.510	25.7	20.3	46.0	60.0	-14.0
6.730	25.6	20.4	46.0	60.0	-14.0
7.230	25.5	20.4	45.9	60.0	-14.1
8.520	25.4	20.4	45.8	60.0	-14.2
8.590	25.4	20.4	45.8	60.0	-14.2
7.840	25.3	20.4	45.7	60.0	-14.3
7.380	25.2	20.4	45.6	60.0	-14.4
7.080	25.1	20.4	45.5	60.0	-14.5
9.700	24.7	20.4	45.1	60.0	-14.9
8.030	24.7	20.4	45.1	60.0	-14.9
8.820	24.5	20.4	44.9	60.0	-15.1
6.410	24.4	20.3	44.7	60.0	-15.3
6.830	24.1	20.4	44.5	60.0	-15.5
9.810	23.7	20.4	44.1	60.0	-15.9

Peak Data - vs - Average Limit

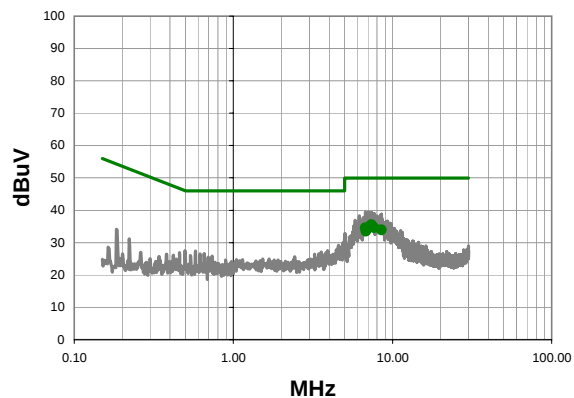
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.030	26.2	20.4	46.6	50.0	-3.4
9.020	26.1	20.4	46.5	50.0	-3.5
7.730	26.0	20.4	46.4	50.0	-3.6
9.610	25.9	20.4	46.3	50.0	-3.7
9.510	25.9	20.4	46.3	50.0	-3.7
6.580	25.9	20.3	46.2	50.0	-3.8
6.510	25.7	20.3	46.0	50.0	-4.0
6.730	25.6	20.4	46.0	50.0	-4.0
7.230	25.5	20.4	45.9	50.0	-4.1
8.520	25.4	20.4	45.8	50.0	-4.2
8.590	25.4	20.4	45.8	50.0	-4.2
7.840	25.3	20.4	45.7	50.0	-4.3
7.380	25.2	20.4	45.6	50.0	-4.4
7.080	25.1	20.4	45.5	50.0	-4.5
9.700	24.7	20.4	45.1	50.0	-4.9
8.030	24.7	20.4	45.1	50.0	-4.9
8.820	24.5	20.4	44.9	50.0	-5.1
6.410	24.4	20.3	44.7	50.0	-5.3
6.830	24.1	20.4	44.5	50.0	-5.5
9.810	23.7	20.4	44.1	50.0	-5.9

Work Order:	INMC0575	Date:	08/11/10		
Project:	None	Temperature:	22 °C		
Job Site:	EV07	Humidity:	53		
Serial Number:	R11	Barometric Pres.:	1014.8 mb		
EUT:	RC12				
Configuration:	3 - AC Power Conducted Emissions				
Customer:	Intermec Technologies Corporation				
Attendees:	none				
EUT Power:	3.3 VDC from 120VAC				
Operating Mode:	Transmitting, 802.11(a), 6 Mbps, Low Channel, 149				
Deviations:	No deviations.				
Comments:	Linear lab power supply				
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009		
Run #	7	Line:	High Line	Ext. Attenuation:	20
Results				Pass	

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

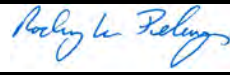
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.758	23.4	20.4	43.8	60.0	-16.2
7.384	20.3	20.4	40.7	60.0	-19.3
7.102	19.8	20.4	40.2	60.0	-19.8
7.662	19.7	20.4	40.1	60.0	-19.9
8.508	19.0	20.4	39.4	60.0	-20.6
6.822	18.9	20.4	39.3	60.0	-20.7

Average Data - vs - Average Limit

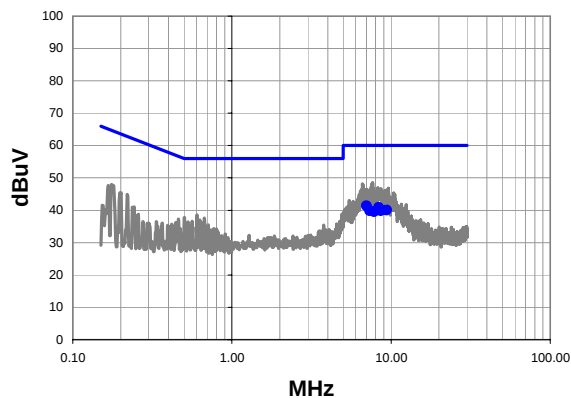
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.384	15.1	20.4	35.5	50.0	-14.5
7.102	14.4	20.4	34.8	50.0	-15.2
7.662	14.2	20.4	34.6	50.0	-15.4
6.758	14.2	20.4	34.6	50.0	-15.4
8.508	13.5	20.4	33.9	50.0	-16.1
6.822	13.2	20.4	33.6	50.0	-16.4

EMC

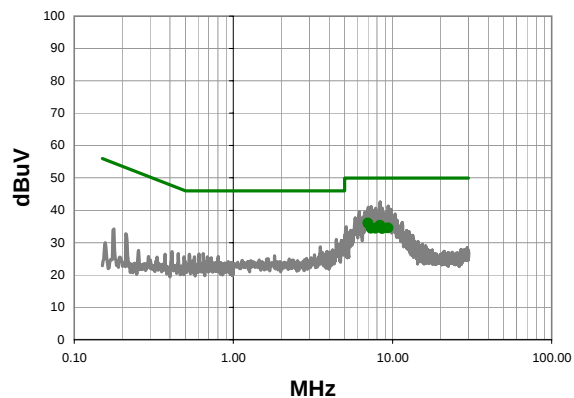
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb				
EUT:	RC12						
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting, 802.11(a), 6 Mbps, Low Channel, 149						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009				
Run #	8	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



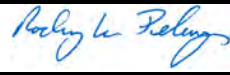
Average Data - vs - Average Limit



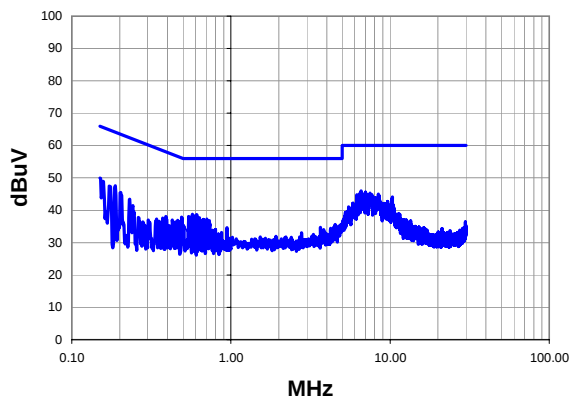
Quasi Peak Data - vs - Quasi Peak Limit						Average Data - vs - Average Limit					
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)	Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.018	21.0	20.4	41.4	60.0	-18.6	7.018	15.6	20.4	36.0	50.0	-14.0
8.358	20.4	20.4	40.8	60.0	-19.2	8.358	14.9	20.4	35.3	50.0	-14.7
9.384	19.6	20.4	40.0	60.0	-20.0	9.384	14.1	20.4	34.5	50.0	-15.5
8.632	19.5	20.4	39.9	60.0	-20.1	7.828	14.0	20.4	34.4	50.0	-15.6
7.348	19.5	20.4	39.9	60.0	-20.1	7.348	14.0	20.4	34.4	50.0	-15.6
7.828	19.2	20.4	39.6	60.0	-20.4	8.632	13.9	20.4	34.3	50.0	-15.7

EMC

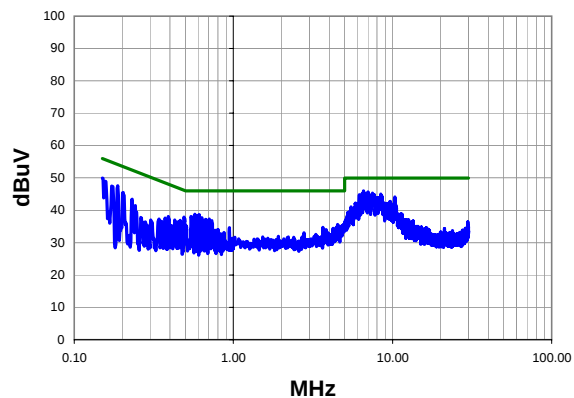
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb	Tested by: Rod Peloquin			
EUT:	RC12						
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting. 802.11(a), 6 Mbps, Mid Channel, 157						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009				
Run #	9	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

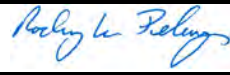
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.560	25.7	20.3	46.0	60.0	-14.0
6.590	25.3	20.3	45.6	60.0	-14.4
7.010	25.2	20.4	45.6	60.0	-14.4
7.470	24.9	20.4	45.3	60.0	-14.7
6.460	24.9	20.3	45.2	60.0	-14.8
6.740	24.7	20.4	45.1	60.0	-14.9
8.450	24.6	20.4	45.0	60.0	-15.0
7.680	24.4	20.4	44.8	60.0	-15.2
6.180	24.5	20.3	44.8	60.0	-15.2
7.170	24.3	20.4	44.7	60.0	-15.3
8.540	24.1	20.4	44.5	60.0	-15.5
6.670	24.1	20.3	44.4	60.0	-15.6
6.410	24.0	20.3	44.3	60.0	-15.7
10.330	23.7	20.4	44.1	60.0	-15.9
8.560	23.7	20.4	44.1	60.0	-15.9
0.150	29.8	20.2	50.0	66.0	-16.0
8.050	23.5	20.4	43.9	60.0	-16.1
10.280	23.3	20.4	43.7	60.0	-16.3
0.187	27.4	20.2	47.6	64.2	-16.6
0.157	28.8	20.2	49.0	65.6	-16.7

Peak Data - vs - Average Limit

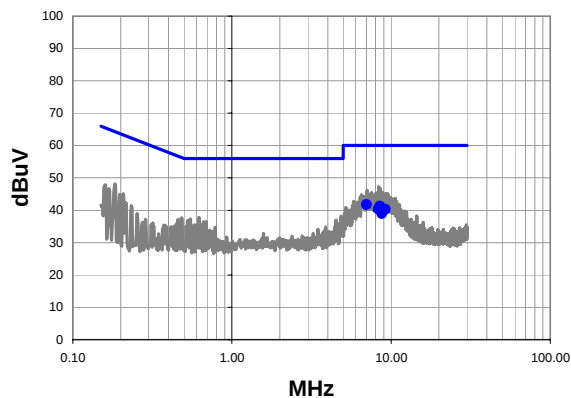
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
6.560	25.7	20.3	46.0	50.0	-4.0
6.590	25.3	20.3	45.6	50.0	-4.4
7.010	25.2	20.4	45.6	50.0	-4.4
7.470	24.9	20.4	45.3	50.0	-4.7
6.460	24.9	20.3	45.2	50.0	-4.8
6.740	24.7	20.4	45.1	50.0	-4.9
8.450	24.6	20.4	45.0	50.0	-5.0
7.680	24.4	20.4	44.8	50.0	-5.2
6.180	24.5	20.3	44.8	50.0	-5.2
7.170	24.3	20.4	44.7	50.0	-5.3
8.540	24.1	20.4	44.5	50.0	-5.5
6.670	24.1	20.3	44.4	50.0	-5.6
6.410	24.0	20.3	44.3	50.0	-5.7
10.330	23.7	20.4	44.1	50.0	-5.9
8.560	23.7	20.4	44.1	50.0	-5.9
0.150	29.8	20.2	50.0	56.0	-6.0
8.050	23.5	20.4	43.9	50.0	-6.1
10.280	23.3	20.4	43.7	50.0	-6.3
0.187	27.4	20.2	47.6	54.2	-6.6
0.157	28.8	20.2	49.0	55.6	-6.7

EMC

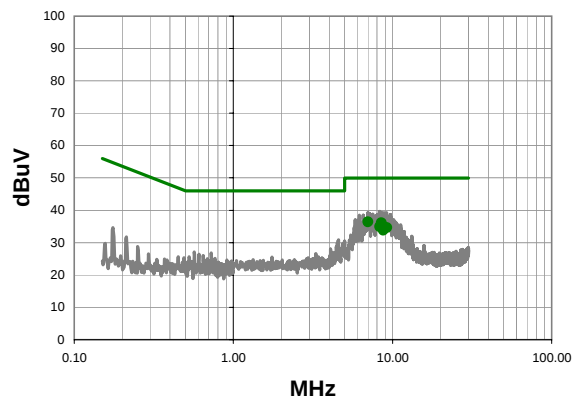
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb				
EUT:	RC12						
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting. 802.11(a), 6 Mbps, Mid Channel, 157						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009				
Run #	10	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit

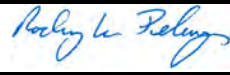


Quasi Peak Data - vs - Quasi Peak Limit

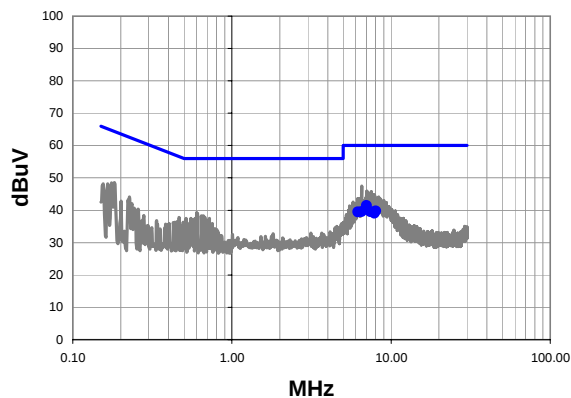
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.018	21.3	20.4	41.7	60.0	-18.3
8.498	20.8	20.4	41.2	60.0	-18.8
8.322	19.9	20.4	40.3	60.0	-19.7
9.198	19.8	20.4	40.2	60.0	-19.8
8.846	19.5	20.4	39.9	60.0	-20.1
8.762	18.6	20.4	39.0	60.0	-21.0

Average Data - vs - Average Limit

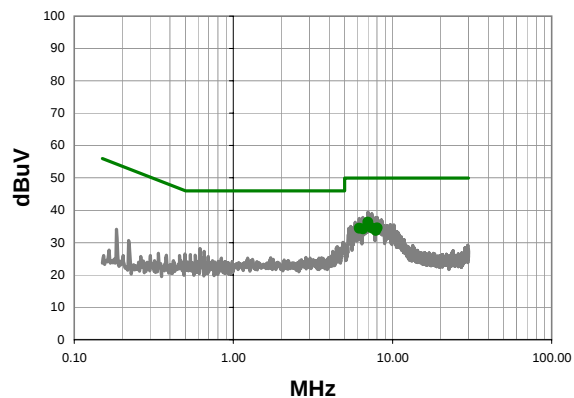
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.018	16.0	20.4	36.4	50.0	-13.6
8.498	15.7	20.4	36.1	50.0	-13.9
8.322	14.5	20.4	34.9	50.0	-15.1
8.846	14.4	20.4	34.8	50.0	-15.2
9.198	14.2	20.4	34.6	50.0	-15.4
8.762	13.4	20.4	33.8	50.0	-16.2

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb				
EUT:	RC12						
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting. 802.11(a), 6 Mbps, High Channel, 165						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications FCC 15.207:2010			Test Method ANSI C63.10:2009				
Run #	11	Line:	High Line	Ext. Attenuation:	20	Results	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.022	21.1	20.4	41.5	60.0	-18.5
8.018	19.4	20.4	39.8	60.0	-20.2
7.414	19.2	20.4	39.6	60.0	-20.4
6.532	19.2	20.3	39.5	60.0	-20.5
6.184	19.2	20.3	39.5	60.0	-20.5
7.858	18.7	20.4	39.1	60.0	-20.9

Average Data - vs - Average Limit

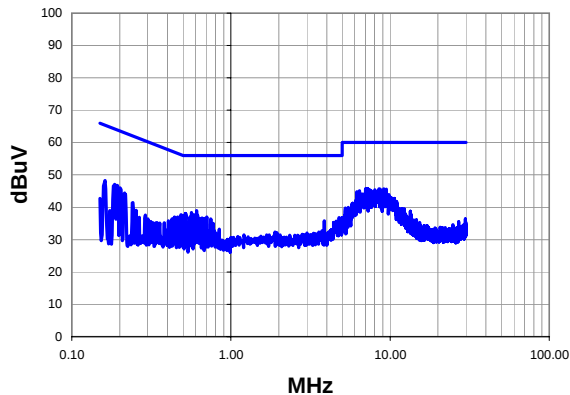
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.022	15.9	20.4	36.3	50.0	-13.7
8.018	14.1	20.4	34.5	50.0	-15.5
7.414	14.1	20.4	34.5	50.0	-15.5
6.184	14.1	20.3	34.4	50.0	-15.6
6.532	13.9	20.3	34.2	50.0	-15.8
7.858	13.3	20.4	33.7	50.0	-16.3

EMC

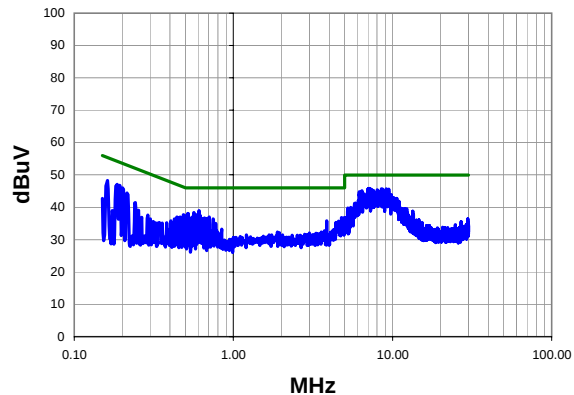
AC POWERLINE CONDUCTED EMISSIONS

Work Order:	INMC0575	Date:	08/11/10				
Project:	None	Temperature:	22 °C				
Job Site:	EV07	Humidity:	53				
Serial Number:	R11	Barometric Pres.:	1014.8 mb				
EUT:		RC12			Tested by:	Rod Peloquin	
Configuration:	3 - AC Power Conducted Emissions						
Customer:	Intermec Technologies Corporation						
Attendees:	none						
EUT Power:	3.3 VDC from 120VAC						
Operating Mode:	Transmitting. 802.11(a), 6 Mbps, High Channel, 165						
Deviations:	No deviations.						
Comments:	Linear lab power supply						
Test Specifications FCC 15.207:2010				Test Method ANSI C63.10:2009			
Run #	12	Line:	Neutral	Ext. Attenuation:	20	Results	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit



Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.210	25.4	20.4	45.8	60.0	-14.2
7.140	25.4	20.4	45.8	60.0	-14.2
9.110	25.3	20.4	45.7	60.0	-14.3
8.500	25.3	20.4	45.7	60.0	-14.3
7.040	25.3	20.4	45.7	60.0	-14.3
9.460	25.2	20.4	45.6	60.0	-14.4
8.690	25.2	20.4	45.6	60.0	-14.4
7.420	25.1	20.4	45.5	60.0	-14.5
8.030	25.0	20.4	45.4	60.0	-14.6
9.130	24.7	20.4	45.1	60.0	-14.9
7.580	24.7	20.4	45.1	60.0	-14.9
6.430	24.8	20.3	45.1	60.0	-14.9
9.430	24.6	20.4	45.0	60.0	-15.0
9.050	24.6	20.4	45.0	60.0	-15.0
6.180	24.5	20.3	44.8	60.0	-15.2
8.360	24.3	20.4	44.7	60.0	-15.3
8.780	24.2	20.4	44.6	60.0	-15.4
9.330	24.0	20.4	44.4	60.0	-15.6
8.870	23.8	20.4	44.2	60.0	-15.8
7.780	23.8	20.4	44.2	60.0	-15.8

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
7.210	25.4	20.4	45.8	50.0	-4.2
7.140	25.4	20.4	45.8	50.0	-4.2
9.110	25.3	20.4	45.7	50.0	-4.3
8.500	25.3	20.4	45.7	50.0	-4.3
7.040	25.3	20.4	45.7	50.0	-4.3
9.460	25.2	20.4	45.6	50.0	-4.4
8.690	25.2	20.4	45.6	50.0	-4.4
7.420	25.1	20.4	45.5	50.0	-4.5
8.030	25.0	20.4	45.4	50.0	-4.6
9.130	24.7	20.4	45.1	50.0	-4.9
7.580	24.7	20.4	45.1	50.0	-4.9
6.430	24.8	20.3	45.1	50.0	-4.9
9.430	24.6	20.4	45.0	50.0	-5.0
9.050	24.6	20.4	45.0	50.0	-5.0
6.180	24.5	20.3	44.8	50.0	-5.2
8.360	24.3	20.4	44.7	50.0	-5.3
8.780	24.2	20.4	44.6	50.0	-5.4
9.330	24.0	20.4	44.4	50.0	-5.6
8.870	23.8	20.4	44.2	50.0	-5.8
7.780	23.8	20.4	44.2	50.0	-5.8

