Honeywell

Multinode Extended Temperature, Model WNMS, Part number 51153884-201, Rev. B, with Wistron DCMA-82 802.11 radio

May 27, 2008

Report No. HONE0031.1

Report Prepared By

NORTHWEST EMC

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

EMC Test Report

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Issue Date: May 27, 2008
Honeywell
Model: Multinode Extended Temperature,
Model WNMS,
Part number 51153884-201, Rev. B,
with Wistron DCMA-82 802.11 radio

Emissions			
Test Description	**Specification**	**Test Method**	**Pass/Fail**
Spurious Radiated Emissions	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	**Pass**
Occupied Bandwidth	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	**Pass**
Output Power	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	**Pass**
Power Spectral Density	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	**Pass**
Spurious Conducted Emissions	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	**Pass**
Band Edge Compliance	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	**Pass**
AC Power Line Conducted Emissions	FCC 15.107:2007 Class A	ANSI C63.4:2003	**Pass**

Modifications made to the product
See the Modifications section of this report

Test Facility

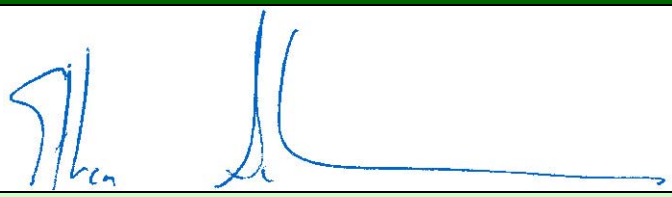
The measurement facility used to collect the data is located at:

Northwest EMC, Inc.
41 Tesla Ave.
Irvine, CA 92618

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 #2834B).

Approved By:



Ethan Schoonover, Sultan Lab Manager

NVLAP Lab Code: 200676-0

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		

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

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 212, Issue 1 (Provisional) 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.

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.

TÜV Product Service: Included in TUV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TUV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TUV's current Listing of CARAT Laboratories, available from TUV. A certificate was issued to represent that this laboratory continues to meet TUV's CARAT Program requirements. Certificate No. USA0604C.

TÜV Rheinland: Authorized to carryout EMC tests by order and under supervision of TÜV Rheinland. This authorization is based on "Conditions for EMC-Subcontractors" of November 1992.

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, C-2687, T-289, and R-2318, Irvine: R-1943, C-2766, and T-298, Sultan: R-871, C-1784, and T-294).*

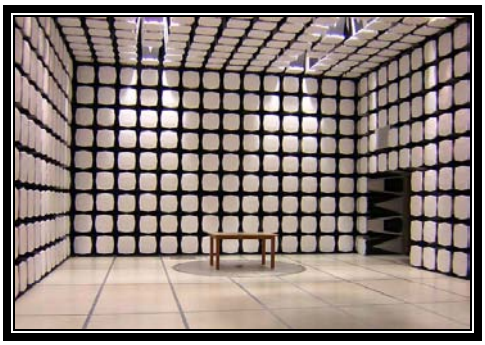
BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement. License No.SL2-IN-E-1017.

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

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

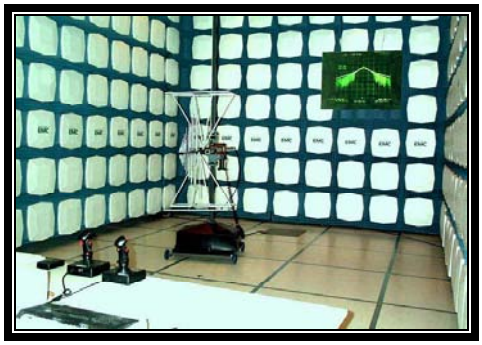
SCOPE

For details on the Scopes of our Accreditations, please visit:
http://www.nwemc.com/accreditations/



California – Orange County Facility
Labs OC01 – OC13

41 Tesla Ave. Irvine, CA 92618
(888) 364-2378 Fax: (503) 844-3826



Oregon – Evergreen Facility
Labs EV01 – EV11

22975 NW Evergreen Pkwy. Suite 400 Hillsboro, OR 97124
(503) 844-4066 Fax: (503) 844-3826

Washington – Sultan Facility
Labs SU01 – SU07

14128 339th Ave. SE Sultan, WA 98294
(888) 364-2378

Party Requesting the Test

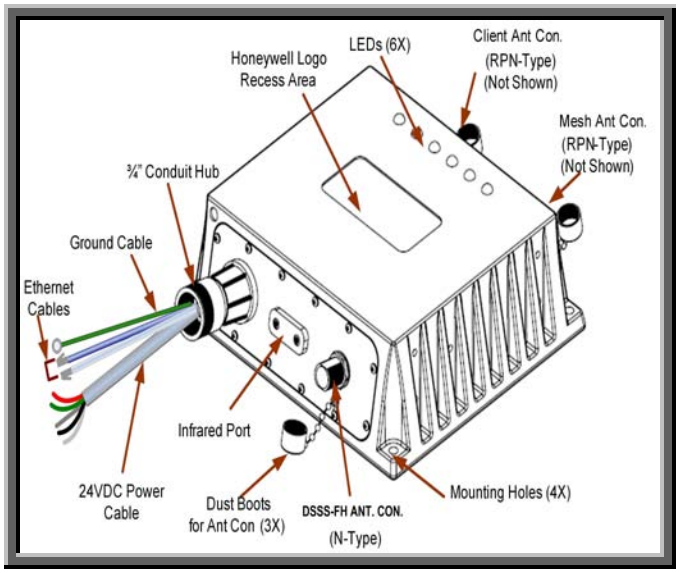
Company Name:	Honeywell
Address:	2500 W. Union Hills Road
City, State, Zip:	Phoenix, AZ 85027
Test Requested By:	David Shipley
Model:	Multinode Extended Temperature, Model WNMS, Part number 51153884-201, Rev. B, with Wistron DCMA-82 802.11 radio
First Date of Test:	April 18, 2008
Last Date of Test:	May 15, 2008
Receipt Date of Samples:	April 17, 2008
Equipment Design Stage:	Production
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
DTS radio with variable output power operating in the 2.4 and 5.8GHz bands (802.11abg)

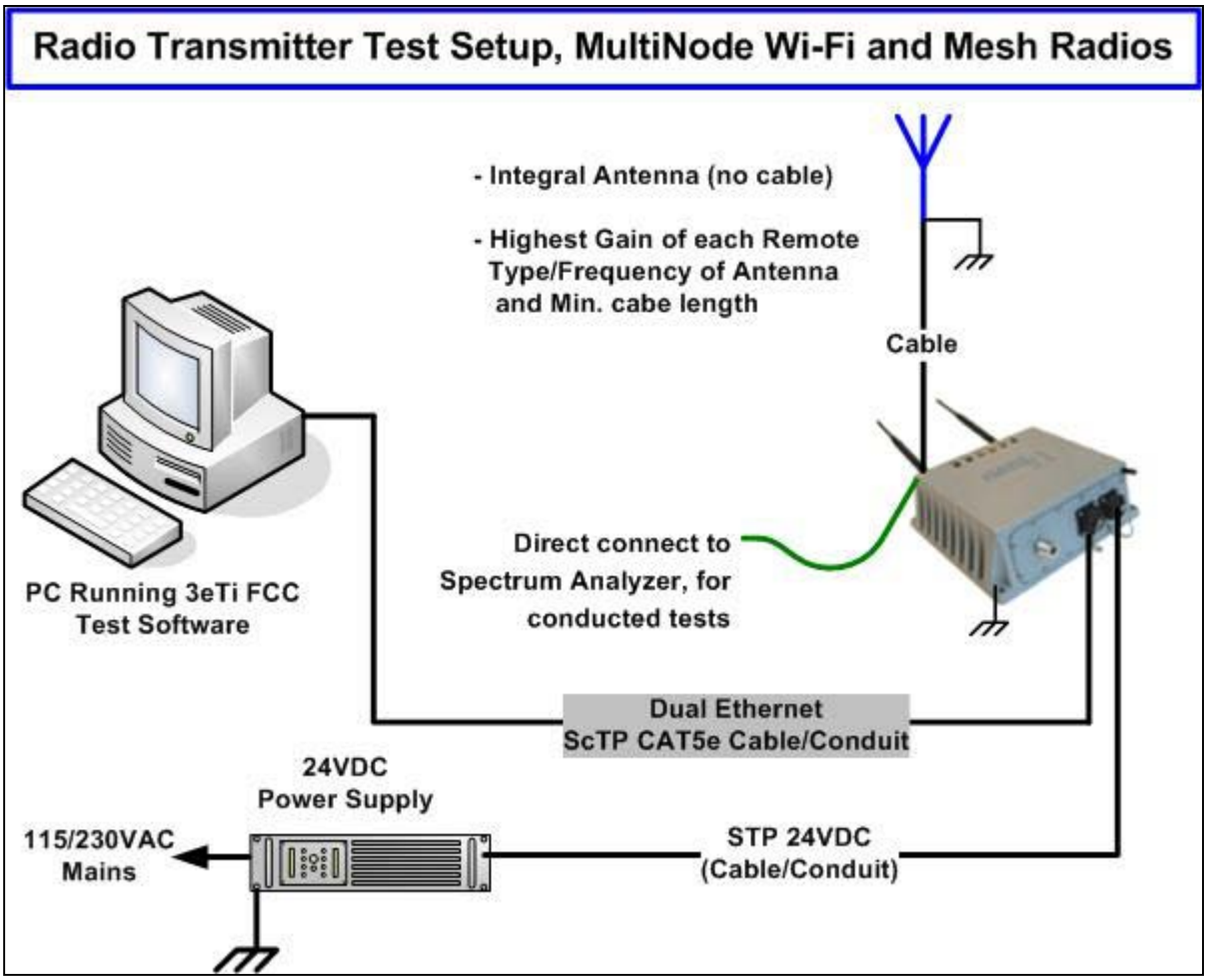
Testing Objective:
Seeking Limited Modular Approval via TCB Certification under FCC 15.247.

EUT Photo



CONFIGURATION 1 HONE0031 & HONE0032

EUT
Description
Refer to the configuration document provided by the client below.



Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	4/18/2008	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.
2	5/6/2008	Output 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.
3	5/7/2008	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	5/7/2008	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.
5	5/7/2008	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.
6	5/14/2008	AC Power Line 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.
7	5/15/2008	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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
Channel 1. All Data Rates
Channel 6. All Data Rates
Channel 11. All Data Rates

MODE USED FOR FINAL DATA
Channel 1. All Data Rates
Channel 6. All Data Rates
Channel 11. All Data Rates

POWER SETTINGS INVESTIGATED
120VAC/60Hz

POWER SETTINGS USED FOR FINAL DATA
120VAC/60Hz

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30 MHz	Stop Frequency	26 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
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	3/3/2008	13
Antenna, Horn	EMCO	3160-09	AHN	NCR	0
OC10 SMA cable for 18026 GHz			OCK	3/3/2008	13
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	2/8/2008	13
Antenna, Horn	EMCO	3160-08	AHK	NCR	0
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	2/8/2008	13
Antenna, Horn	ETS	3160-07	AHX	10/25/2007	12
OC11 8-18 GHz Cables a-b-c-e			OCS	2/7/2008	13
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	4/25/2008	13
Antenna, Horn	EMCO	3115	AHB	8/31/2007	24
OC11 1-8 GHz Cables a-b-c-d			OCR	2/7/2008	13
Spectrum Analyzer	Agilent	E4440A	AAX	10/1/2007	12

MEASUREMENT BANDWIDTHS

	Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (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

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test 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 C63.4:2003). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/18/08
Customer:	Honeywell			Temperature:	22c
Attendees:	David Shipley			Humidity:	42%
Project:	Nonw			Barometric Pres.:	1019 mb
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -8 Antenna: 5.5 dBi

EUT OPERATING MODES

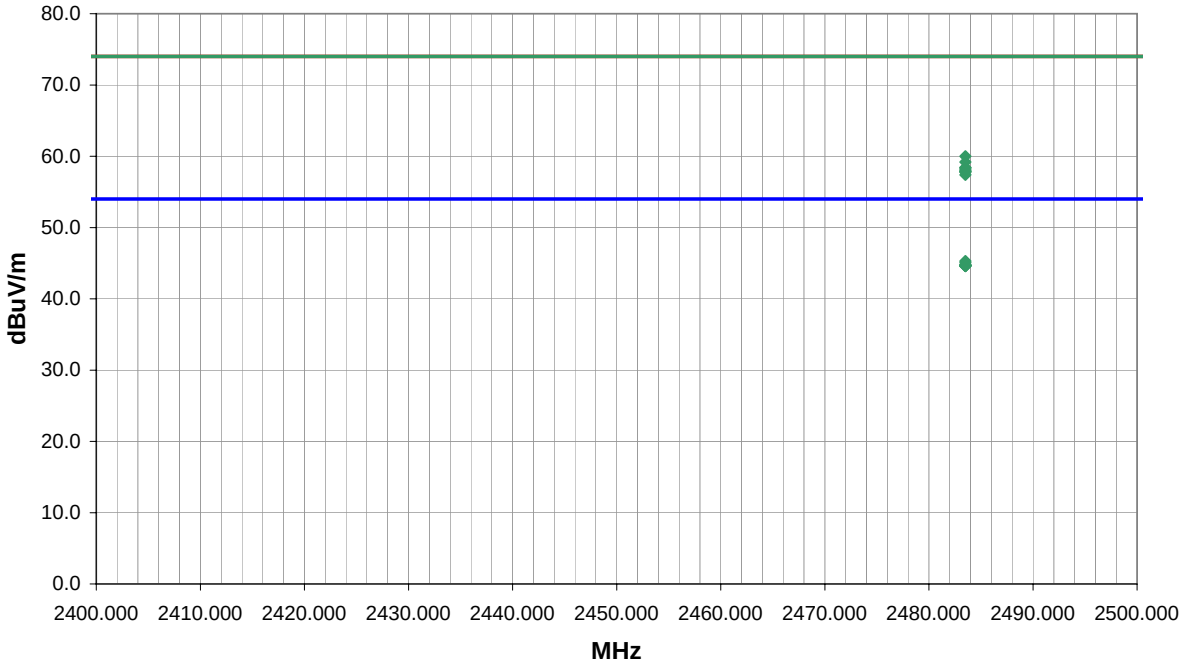
1 Mbps. Channel 11.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	9
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)
2483.499	26.9	-1.6	216.0	1.0	0.0	20.0	V-Horn	AV	0.0	45.3	54.0	-8.7
2483.500	26.7	-1.6	288.0	1.0	0.0	20.0	V-Horn	AV	0.0	45.1	54.0	-8.9
2483.500	26.4	-1.6	301.0	1.0	0.0	20.0	H-Horn	AV	0.0	44.8	54.0	-9.2
2483.500	26.3	-1.6	198.0	1.0	0.0	20.0	H-Horn	AV	0.0	44.7	54.0	-9.3
2483.500	26.3	-1.6	336.0	1.5	0.0	20.0	H-Horn	AV	0.0	44.7	54.0	-9.3
2483.501	26.3	-1.6	320.0	1.0	0.0	20.0	V-Horn	AV	0.0	44.7	54.0	-9.3
2483.501	26.3	-1.6	220.0	1.2	0.0	20.0	H-Horn	AV	0.0	44.7	54.0	-9.3
2483.500	26.2	-1.6	1.0	2.4	0.0	20.0	H-Horn	AV	0.0	44.6	54.0	-9.4
2483.500	26.2	-1.6	9.0	1.0	0.0	20.0	V-Horn	AV	0.0	44.6	54.0	-9.4
2483.500	26.2	-1.6	126.0	1.0	0.0	20.0	V-Horn	AV	0.0	44.6	54.0	-9.4
2483.500	41.6	-1.6	216.0	1.0	0.0	20.0	V-Horn	PK	0.0	60.0	74.0	-14.0
2483.500	40.8	-1.6	288.0	1.0	0.0	20.0	V-Horn	PK	0.0	59.2	74.0	-14.8
2483.500	40.0	-1.6	198.0	1.0	0.0	20.0	H-Horn	PK	0.0	58.4	74.0	-15.6
2483.500	40.0	-1.6	320.0	1.0	0.0	20.0	V-Horn	PK	0.0	58.4	74.0	-15.6
2483.500	39.8	-1.6	126.0	1.0	0.0	20.0	V-Horn	PK	0.0	58.2	74.0	-15.8
2483.500	39.6	-1.6	220.0	1.2	0.0	20.0	H-Horn	PK	0.0	58.0	74.0	-16.0
2483.500	39.5	-1.6	336.0	1.5	0.0	20.0	H-Horn	PK	0.0	57.9	74.0	-16.1
2483.500	39.4	-1.6	1.0	2.4	0.0	20.0	H-Horn	PK	0.0	57.8	74.0	-16.2
2483.500	39.4	-1.6	301.0	1.0	0.0	20.0	H-Horn	PK	0.0	57.8	74.0	-16.2
2483.500	39.0	-1.6	9.0	1.0	0.0	20.0	V-Horn	PK	0.0	57.4	74.0	-16.6

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/18/08
Customer:	Honeywell			Temperature:	22c
Attendees:	David Shipley			Humidity:	41%
Project:	Nonw			Barometric Pres.:	1019 mb
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -8 Antenna: 5.5 dBi

EUT OPERATING MODES

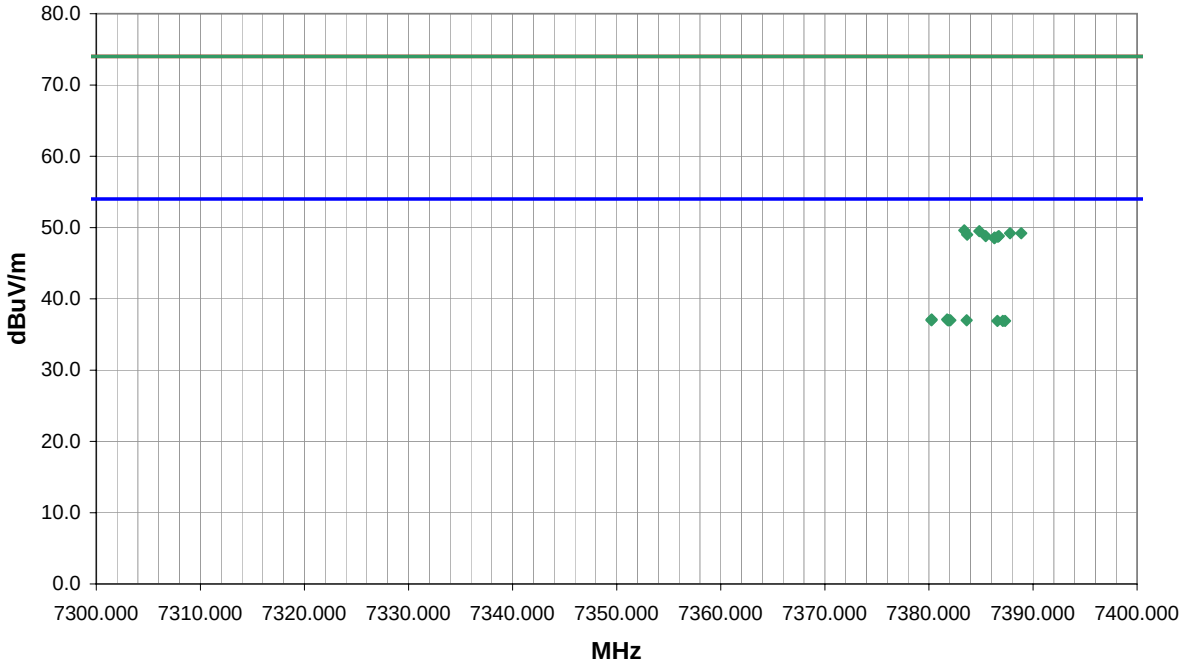
All Data Rates. Channel 11.

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)
7380.269	27.1	10.0	359.0	3.5	0.0	0.0	V-Horn	AV	0.0	37.1	54.0	-16.9
7381.759	27.1	10.0	42.0	3.5	0.0	0.0	H-Horn	AV	0.0	37.1	54.0	-16.9
7380.250	27.1	9.9	63.0	1.7	0.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
7381.835	27.1	9.9	272.0	1.0	0.0	0.0	H-Horn	AV	0.0	37.0	54.0	-17.0
7381.908	27.1	9.9	155.0	2.5	0.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
7382.063	27.0	10.0	241.0	3.5	0.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
7383.625	27.0	10.0	242.0	1.2	0.0	0.0	H-Horn	AV	0.0	37.0	54.0	-17.0
7386.578	27.0	9.9	73.0	3.1	0.0	0.0	H-Horn	AV	0.0	36.9	54.0	-17.1
7387.100	27.0	9.9	302.0	1.1	0.0	0.0	V-Horn	AV	0.0	36.9	54.0	-17.1
7387.321	27.0	9.9	231.0	1.0	0.0	0.0	H-Horn	AV	0.0	36.9	54.0	-17.1
7383.397	39.7	9.9	272.0	1.0	0.0	0.0	H-Horn	PK	0.0	49.6	74.0	-24.4
7384.838	39.6	9.9	73.0	3.1	0.0	0.0	H-Horn	PK	0.0	49.5	74.0	-24.5
7387.789	39.3	9.9	242.0	1.2	0.0	0.0	H-Horn	PK	0.0	49.2	74.0	-24.8
7388.864	39.3	9.9	241.0	3.5	0.0	0.0	V-Horn	PK	0.0	49.2	74.0	-24.8
7383.681	39.1	9.9	63.0	1.7	0.0	0.0	V-Horn	PK	0.0	49.0	74.0	-25.0
7385.456	38.9	9.9	231.0	1.0	0.0	0.0	H-Horn	PK	0.0	48.8	74.0	-25.2
7386.713	38.9	9.9	359.0	3.5	0.0	0.0	V-Horn	PK	0.0	48.8	74.0	-25.2
7386.631	38.8	9.9	42.0	3.5	0.0	0.0	H-Horn	PK	0.0	48.7	74.0	-25.3
7386.323	38.7	9.9	302.0	1.1	0.0	0.0	V-Horn	PK	0.0	48.6	74.0	-25.4
7386.285	38.6	9.9	155.0	2.5	0.0	0.0	V-Horn	PK	0.0	48.5	74.0	-25.5

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/21/08
Customer:	Honeywell			Temperature:	20
Attendees:	David Shipley			Humidity:	36%
Project:	Nonw			Barometric Pres.:	1017
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -8. Antenna: 5.5 dBi Sector.

EUT OPERATING MODES

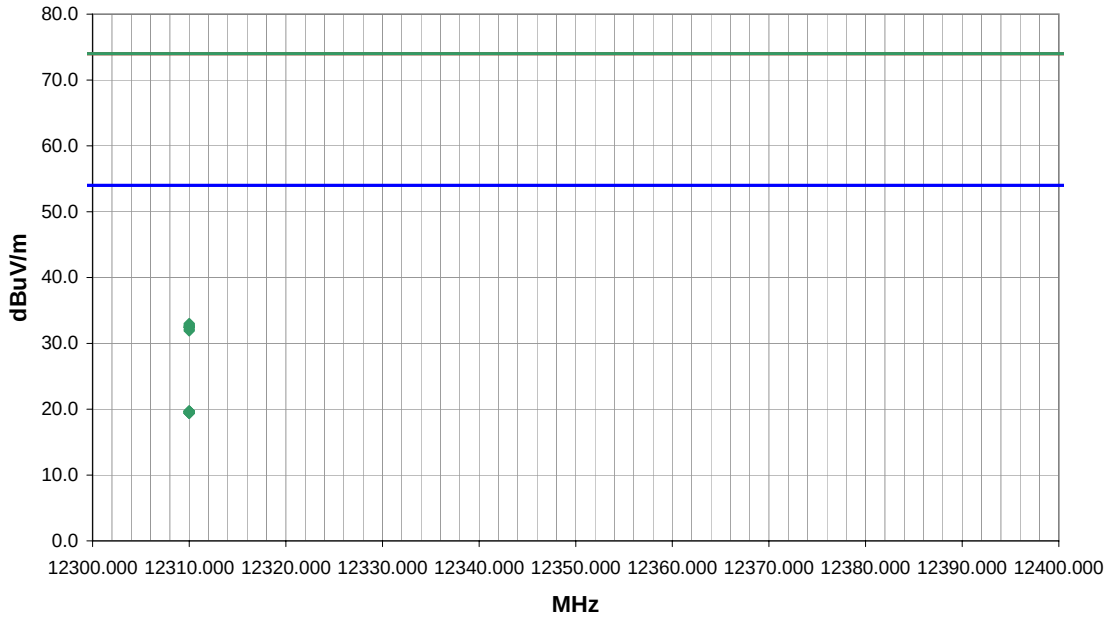
All data rates (see comments below)

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	11
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
12310.000	36.6	-16.9	155.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.7	54.0	-34.3	6Mbps
12310.000	36.6	-16.9	81.0	1.0	3.0	0.0	H-Horn	AV	0.0	19.7	54.0	-34.3	1Mbps
12310.000	36.6	-16.9	163.0	1.0	3.0	0.0	H-Horn	AV	0.0	19.7	54.0	-34.3	6Mbps
12309.990	36.5	-16.9	224.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.6	54.0	-34.4	1Mbps
12310.000	36.5	-16.9	270.0	2.7	3.0	0.0	V-Horn	AV	0.0	19.6	54.0	-34.4	54Mbps
12310.000	36.5	-16.9	1.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.6	54.0	-34.4	36Mbps
12310.000	36.4	-16.9	280.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.5	54.0	-34.5	11Mbps
12309.990	36.3	-16.9	308.0	1.5	3.0	0.0	H-Horn	AV	0.0	19.4	54.0	-34.6	36Mbps
12310.000	36.3	-16.9	254.0	1.5	3.0	0.0	H-Horn	AV	0.0	19.4	54.0	-34.6	11Mbps
12310.000	36.3	-16.9	231.0	1.4	3.0	0.0	H-Horn	AV	0.0	19.4	54.0	-34.6	54Mbps
12310.000	49.9	-16.9	270.0	2.7	3.0	0.0	V-Horn	PK	0.0	33.0	74.0	-41.0	54Mbps
12310.000	49.7	-16.9	308.0	1.5	3.0	0.0	H-Horn	PK	0.0	32.8	74.0	-41.2	36Mbps
12310.000	49.6	-16.9	231.0	1.4	3.0	0.0	H-Horn	PK	0.0	32.7	74.0	-41.3	54Mbps
12310.000	49.4	-16.9	280.0	1.0	3.0	0.0	V-Horn	PK	0.0	32.5	74.0	-41.5	11Mbps
12310.000	49.4	-16.9	1.0	1.0	3.0	0.0	V-Horn	PK	0.0	32.5	74.0	-41.5	36Mbps
12310.000	49.4	-16.9	81.0	1.0	3.0	0.0	H-Horn	PK	0.0	32.5	74.0	-41.5	1Mbps
12310.000	49.3	-16.9	254.0	1.5	3.0	0.0	H-Horn	PK	0.0	32.4	74.0	-41.6	11Mbps
12310.000	49.3	-16.9	155.0	1.0	3.0	0.0	V-Horn	PK	0.0	32.4	74.0	-41.6	6Mbps
12310.000	49.0	-16.9	224.0	1.0	3.0	0.0	V-Horn	PK	0.0	32.1	74.0	-41.9	1Mbps
12310.000	48.8	-16.9	163.0	1.0	3.0	0.0	H-Horn	PK	0.0	31.9	74.0	-42.1	6Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/17/08
Customer:	Honeywell			Temperature:	22c
Attendees:	David Shipley			Humidity:	41%
Project:	Nonw			Barometric Pres.:	1015.9 mb
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -10. Antenna: 8dBi

EUT OPERATING MODES

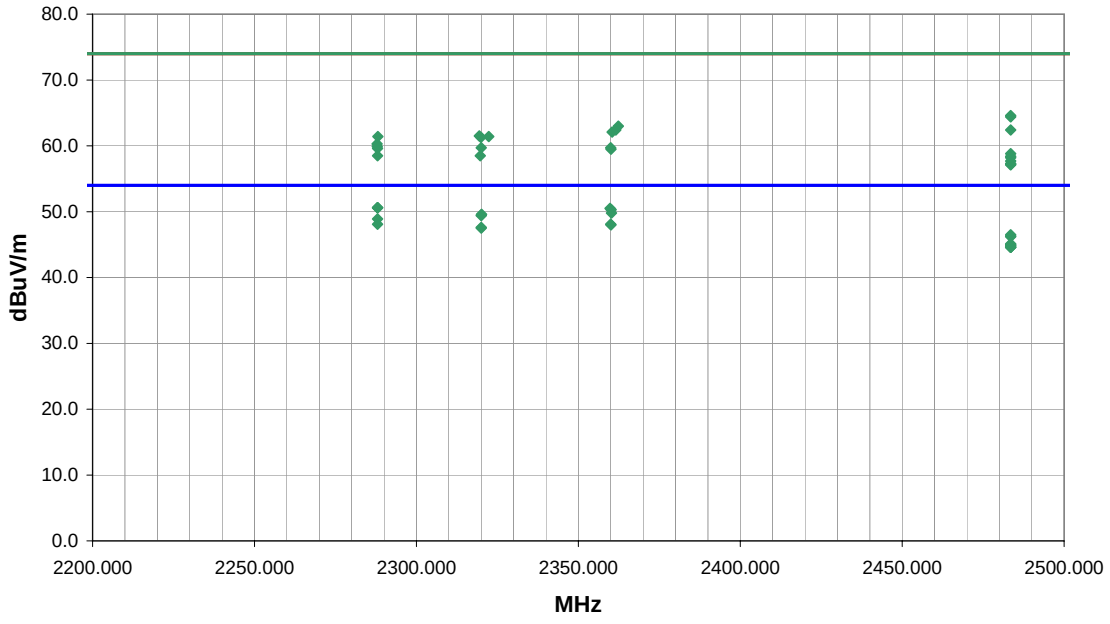
1 Mbps. Channel 11.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	7
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
2287.986	32.9	-2.3	126.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.6	54.0	-3.4	54 Mbps
2287.992	32.9	-2.3	128.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.6	54.0	-3.4	6 Mbps
2288.013	32.9	-2.3	127.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.6	54.0	-3.4	36 Mbps
2359.762	32.5	-2.0	79.0	1.1	3.0	20.0	V-Horn	AV	0.0	50.5	54.0	-3.5	36 Mbps
2360.145	32.3	-2.0	87.0	1.0	3.0	20.0	V-Horn	AV	0.0	50.3	54.0	-3.7	6 Mbps
2360.229	31.8	-2.0	81.0	1.0	3.0	20.0	V-Horn	AV	0.0	49.8	54.0	-4.2	54 Mbps
2320.099	31.7	-2.1	355.0	1.0	3.0	20.0	V-Horn	AV	0.0	49.6	54.0	-4.4	54 Mbps
2320.072	31.6	-2.1	310.0	1.0	3.0	20.0	V-Horn	AV	0.0	49.5	54.0	-4.5	36 Mbps
2320.003	31.5	-2.1	309.0	1.0	3.0	20.0	V-Horn	AV	0.0	49.4	54.0	-4.6	6 Mbps
2288.014	31.2	-2.3	126.0	1.0	3.0	20.0	V-Horn	AV	0.0	48.9	54.0	-5.1	1 Mbps
2360.000	30.1	-2.0	82.0	1.0	3.0	20.0	V-Horn	AV	0.0	48.1	54.0	-5.9	11 Mbps
2287.995	30.4	-2.3	128.0	1.0	3.0	20.0	V-Horn	AV	0.0	48.1	54.0	-5.9	11 Mbps
2360.102	30.0	-2.0	78.0	1.0	3.0	20.0	V-Horn	AV	0.0	48.0	54.0	-6.0	1 Mbps
2319.996	29.7	-2.1	155.0	1.0	3.0	20.0	V-Horn	AV	0.0	47.6	54.0	-6.4	1 Mbps
2320.000	29.6	-2.1	307.0	1.0	3.0	20.0	V-Horn	AV	0.0	47.5	54.0	-6.5	11 Mbps
2483.501	28.1	-1.6	216.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.5	54.0	-7.5	54 Mbps
2483.500	27.9	-1.6	195.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.3	54.0	-7.7	36 Mbps
2483.500	27.8	-1.6	213.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.2	54.0	-7.8	6 Mbps
2483.500	26.7	-1.6	198.0	1.0	3.0	20.0	V-Horn	AV	0.0	45.1	54.0	-8.9	1 Mbps
2483.500	26.6	-1.6	171.0	1.3	3.0	20.0	V-Horn	AV	0.0	45.0	54.0	-9.0	11 Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/18/08
Customer:	Honeywell			Temperature:	22c
Attendees:	David Shipley			Humidity:	42%
Project:	Nonw			Barometric Pres.:	1019mb
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -10 Antenna: 8dBi

EUT OPERATING MODES

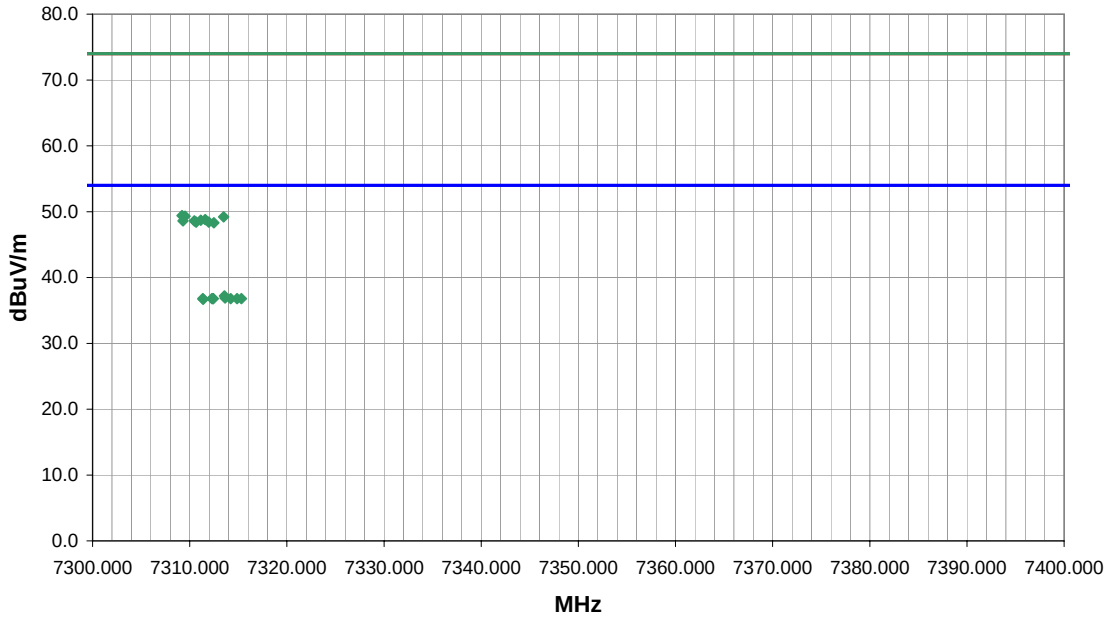
All Data Rates. Channel 6

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8
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
7313.572	27.3	9.9	159.0	3.1	0.0	0.0	V-Horn	AV	0.0	37.2	54.0	-16.8	54 Mbps
7313.630	27.0	9.9	92.0	3.3	0.0	0.0	H-Horn	AV	0.0	36.9	54.0	-17.1	36 Mbps
7311.355	26.9	9.9	49.0	3.4	0.0	0.0	H-Horn	AV	0.0	36.8	54.0	-17.2	11 Mbps
7312.290	26.9	9.9	359.0	3.6	0.0	0.0	H-Horn	AV	0.0	36.8	54.0	-17.2	54 Mbps
7312.387	26.9	9.9	145.0	3.3	0.0	0.0	H-Horn	AV	0.0	36.8	54.0	-17.2	6 Mbps
7312.417	26.9	9.9	348.0	3.2	0.0	0.0	V-Horn	AV	0.0	36.8	54.0	-17.2	11 Mbps
7314.208	26.9	9.9	170.0	2.7	0.0	0.0	H-Horn	AV	0.0	36.8	54.0	-17.2	1 Mbps
7314.875	26.9	9.9	86.0	3.1	0.0	0.0	V-Horn	AV	0.0	36.8	54.0	-17.2	36 Mbps
7315.308	26.9	9.9	325.0	3.2	0.0	0.0	V-Horn	AV	0.0	36.8	54.0	-17.2	6 Mbps
7311.374	26.8	9.9	341.0	3.3	0.0	0.0	V-Horn	AV	0.0	36.7	54.0	-17.3	1 Mbps
7309.198	39.5	9.9	170.0	2.7	0.0	0.0	H-Horn	PK	0.0	49.4	74.0	-24.6	1 Mbps
7309.526	39.4	9.9	159.0	3.1	0.0	0.0	V-Horn	PK	0.0	49.3	74.0	-24.7	54 Mbps
7313.493	39.3	9.9	86.0	3.1	0.0	0.0	V-Horn	PK	0.0	49.2	74.0	-24.8	36 Mbps
7311.602	38.9	9.9	325.0	3.2	0.0	0.0	V-Horn	PK	0.0	48.8	74.0	-25.2	6 Mbps
7311.132	38.8	9.9	341.0	3.3	0.0	0.0	V-Horn	PK	0.0	48.7	74.0	-25.3	1 Mbps
7309.313	38.7	9.9	49.0	3.4	0.0	0.0	H-Horn	PK	0.0	48.6	74.0	-25.4	11 Mbps
7310.469	38.7	9.9	92.0	3.3	0.0	0.0	H-Horn	PK	0.0	48.6	74.0	-25.4	36 Mbps
7310.654	38.5	9.9	348.0	3.2	0.0	0.0	V-Horn	PK	0.0	48.4	74.0	-25.6	11 Mbps
7311.958	38.5	9.9	145.0	3.3	0.0	0.0	H-Horn	PK	0.0	48.4	74.0	-25.6	6 Mbps
7312.479	38.4	9.9	359.0	3.6	0.0	0.0	H-Horn	PK	0.0	48.3	74.0	-25.7	54 Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/18/08
Customer:	Honeywell			Temperature:	22c
Attendees:	David Shipley			Humidity:	42%
Project:	Nonw			Barometric Pres.:	1019mb
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -10 Antenna: 8dBi

EUT OPERATING MODES

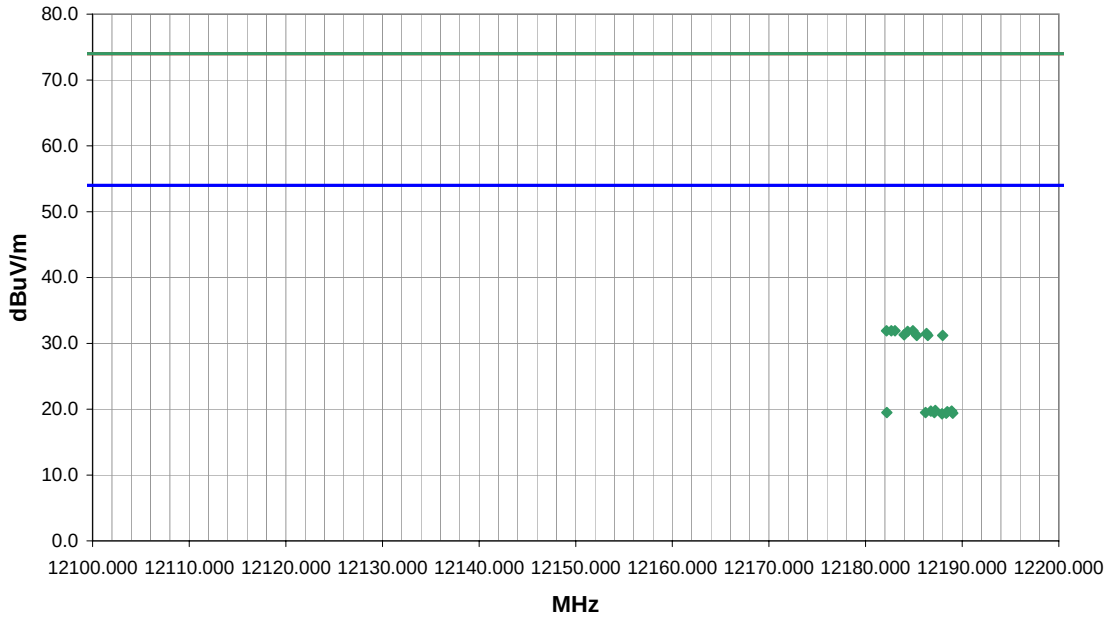
All Data Rates. Channel 6

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8
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
12187.210	37.4	-17.6	18.0	1.0	3.0	0.0	H-Horn	AV	0.0	19.8	54.0	-34.2	1 Mbps
12186.750	37.3	-17.6	170.0	1.0	3.0	0.0	H-Horn	AV	0.0	19.7	54.0	-34.3	11 Mbps
12188.900	37.3	-17.6	275.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.7	54.0	-34.3	1 Mbps
12188.460	37.2	-17.6	213.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.6	54.0	-34.4	11 Mbps
12182.200	37.1	-17.6	43.0	1.0	3.0	0.0	H-Horn	AV	0.0	19.5	54.0	-34.5	36 Mbps
12186.200	37.1	-17.6	128.0	1.0	3.0	0.0	H-Horn	AV	0.0	19.5	54.0	-34.5	6 Mbps
12187.120	37.1	-17.6	204.0	1.0	3.0	0.0	H-Horn	AV	0.0	19.5	54.0	-34.5	54 Mbps
12188.350	37.0	-17.6	291.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.4	54.0	-34.6	36 Mbps
12189.020	37.0	-17.6	1.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.4	54.0	-34.6	6 Mbps
12187.920	36.9	-17.6	61.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.3	54.0	-34.7	54 Mbps
12182.170	49.5	-17.6	170.0	1.0	3.0	0.0	H-Horn	PK	0.0	31.9	74.0	-42.1	11 Mbps
12182.670	49.5	-17.6	1.0	1.0	3.0	0.0	V-Horn	PK	0.0	31.9	74.0	-42.1	6 Mbps
12183.050	49.5	-17.6	18.0	1.0	3.0	0.0	H-Horn	PK	0.0	31.9	74.0	-42.1	1 Mbps
12184.890	49.5	-17.6	204.0	1.0	3.0	0.0	H-Horn	PK	0.0	31.9	74.0	-42.1	54 Mbps
12184.350	49.4	-17.6	291.0	1.0	3.0	0.0	V-Horn	PK	0.0	31.8	74.0	-42.2	36 Mbps
12186.300	49.1	-17.6	43.0	1.0	3.0	0.0	H-Horn	PK	0.0	31.5	74.0	-42.5	36 Mbps
12183.980	48.9	-17.6	61.0	1.0	3.0	0.0	V-Horn	PK	0.0	31.3	74.0	-42.7	54 Mbps
12185.290	48.8	-17.6	213.0	1.0	3.0	0.0	V-Horn	PK	0.0	31.2	74.0	-42.8	11 Mbps
12186.440	48.8	-17.6	275.0	1.0	3.0	0.0	V-Horn	PK	0.0	31.2	74.0	-42.8	1 Mbps
12187.980	48.8	-17.6	128.0	1.0	3.0	0.0	H-Horn	PK	0.0	31.2	74.0	-42.8	6 Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/17/08
Customer:	Honeywell			Temperature:	22c
Attendees:	David Shipley			Humidity:	41%
Project:	Nonw			Barometric Pres.:	1015.9 mb
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC08

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12. Antenna: 14dBi Sector.

EUT OPERATING MODES

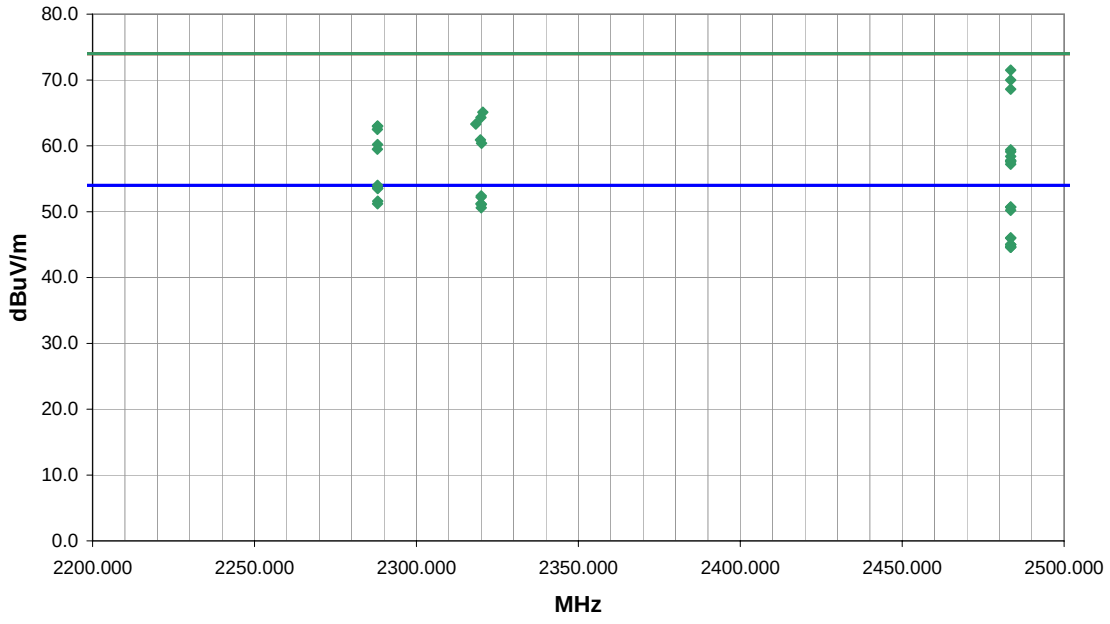
Channel 11. 1, 11, 6, 36, 54 Mbps.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5
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
2288.016	36.3	-2.3	27.0	1.6	3.0	20.0	V-Horn	AV	0.0	54.0	54.0	0.0	54 Mbps
2288.000	35.9	-2.3	33.0	1.6	3.0	20.0	V-Horn	AV	0.0	53.6	54.0	-0.4	6 Mbps
2288.022	35.8	-2.3	30.0	1.5	3.0	20.0	V-Horn	AV	0.0	53.5	54.0	-0.5	36 Mbps
2319.991	34.5	-2.1	41.0	1.6	3.0	20.0	V-Horn	AV	0.0	52.4	54.0	-1.6	54 Mbps
2319.971	34.3	-2.1	349.0	1.6	3.0	20.0	V-Horn	AV	0.0	52.2	54.0	-1.8	36 Mbps
2288.051	33.9	-2.3	21.0	1.6	3.0	20.0	V-Horn	AV	0.0	51.6	54.0	-2.4	1 Mbps
2483.500	53.1	-1.6	359.0	1.8	3.0	20.0	V-Horn	PK	0.0	71.5	74.0	-2.5	54 Mbps
2288.009	33.5	-2.3	27.0	1.5	3.0	20.0	V-Horn	AV	0.0	51.2	54.0	-2.8	11 Mbps
2319.927	33.3	-2.1	325.0	1.6	3.0	20.0	V-Horn	AV	0.0	51.2	54.0	-2.8	6 Mbps
2320.055	33.2	-2.1	350.0	1.6	3.0	20.0	V-Horn	AV	0.0	51.1	54.0	-2.9	1 Mbps
2483.500	32.3	-1.6	352.0	1.5	3.0	20.0	V-Horn	AV	0.0	50.7	54.0	-3.3	36 Mbps
2483.500	32.3	-1.6	359.0	1.8	3.0	20.0	V-Horn	AV	0.0	50.7	54.0	-3.3	54 Mbps
2320.004	32.7	-2.1	43.0	1.6	3.0	20.0	V-Horn	AV	0.0	50.6	54.0	-3.4	11 Mbps
2483.500	31.8	-1.6	47.0	1.6	3.0	20.0	V-Horn	AV	0.0	50.2	54.0	-3.8	6 Mbps
2483.500	51.6	-1.6	352.0	1.5	3.0	20.0	V-Horn	PK	0.0	70.0	74.0	-4.0	36 Mbps
2483.500	50.2	-1.6	47.0	1.6	3.0	20.0	V-Horn	PK	0.0	68.6	74.0	-5.4	6 Mbps
2483.500	27.6	-1.6	313.0	1.5	3.0	20.0	V-Horn	AV	0.0	46.0	54.0	-8.0	1 Mbps
2483.500	27.6	-1.6	349.0	1.5	3.0	20.0	V-Horn	AV	0.0	46.0	54.0	-8.0	11 Mbps
2320.485	47.2	-2.1	41.0	1.6	3.0	20.0	V-Horn	PK	0.0	65.1	74.0	-8.9	54 Mbps
2483.500	26.6	-1.6	324.0	1.8	3.0	20.0	H-Horn	AV	0.0	45.0	54.0	-9.0	54 Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/21/08
Customer:	Honeywell			Temperature:	20
Attendees:	David Shipley			Humidity:	36%
Project:	Nonw			Barometric Pres.:	1017
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12. Antenna: 14dBi Sector.

EUT OPERATING MODES

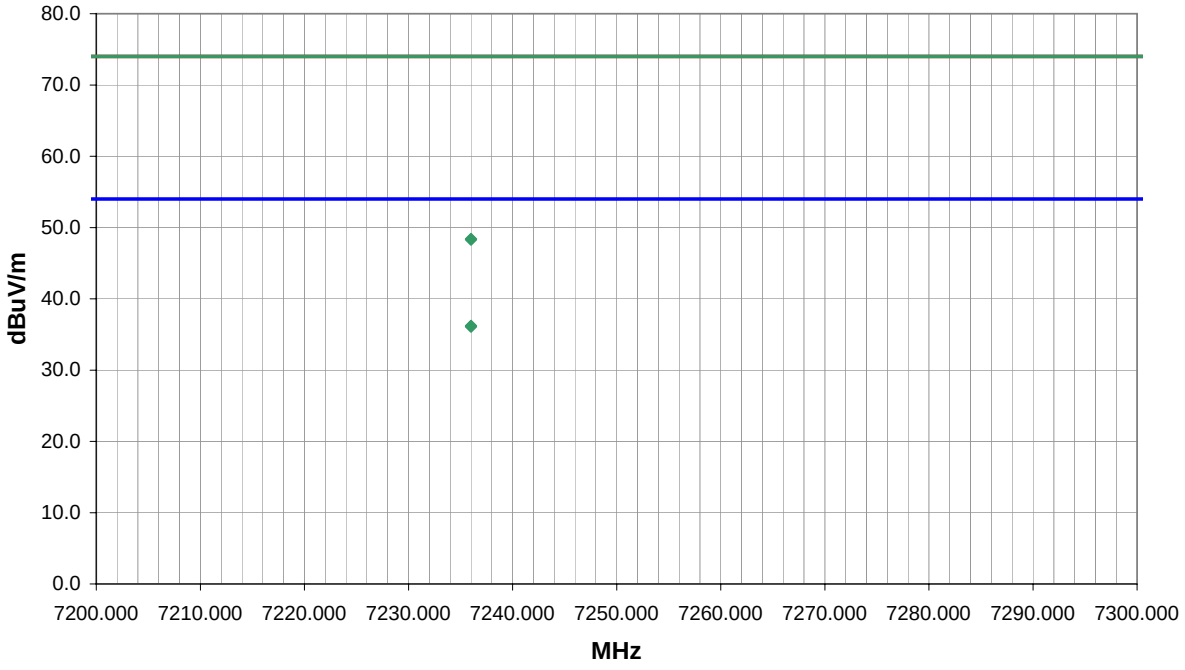
54 Mbps. Channel 1.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	12
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)
7236.008	26.5	9.7	245.0	1.0	3.0	0.0	H-Horn	AV	0.0	36.2	54.0	-17.8
7235.998	26.4	9.7	1.0	1.0	3.0	0.0	V-Horn	AV	0.0	36.1	54.0	-17.9
7235.999	38.7	9.7	1.0	1.0	3.0	0.0	V-Horn	PK	0.0	48.4	74.0	-25.6
7236.000	38.6	9.7	245.0	1.0	3.0	0.0	H-Horn	PK	0.0	48.3	74.0	-25.7

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/21/08
Customer:	Honeywell			Temperature:	20
Attendees:	David Shipley			Humidity:	36%
Project:	Nonw			Barometric Pres.:	1017
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12. Antenna: 14dBi Sector.

EUT OPERATING MODES

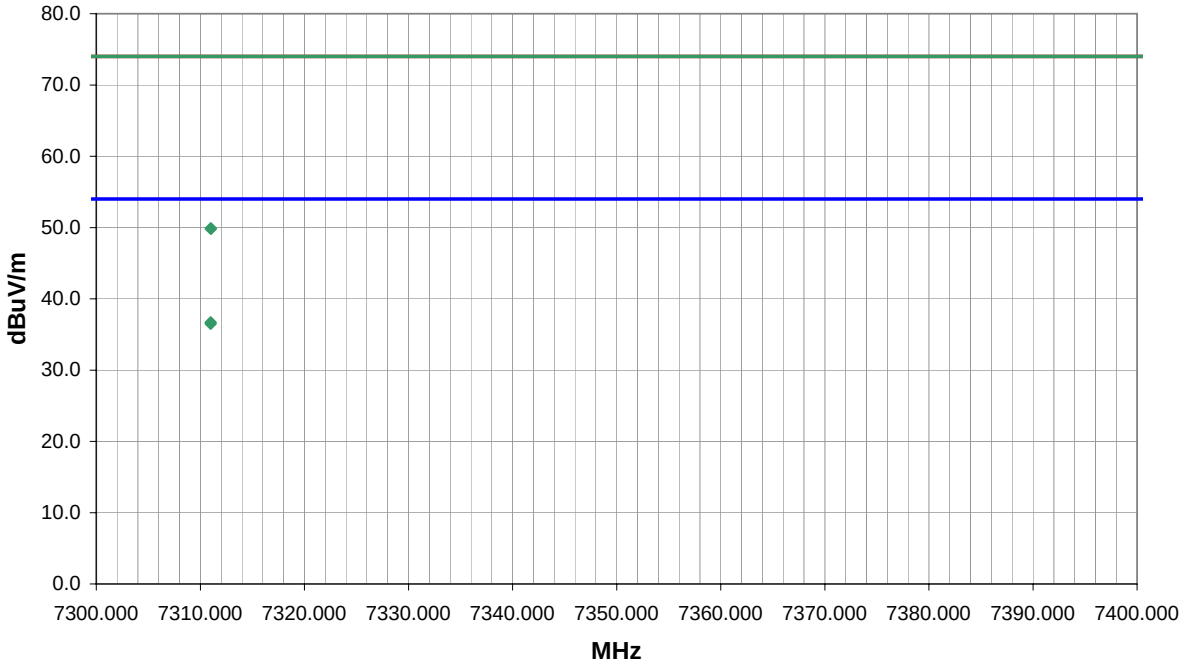
54 Mbps. Channel 6.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	15
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)
7310.997	26.8	9.9	129.0	1.0	3.0	0.0	V-Horn	AV	0.0	36.7	54.0	-17.3
7310.996	26.6	9.9	358.0	1.0	3.0	0.0	H-Horn	AV	0.0	36.5	54.0	-17.5
7311.004	40.0	9.9	358.0	1.0	3.0	0.0	H-Horn	PK	0.0	49.9	74.0	-24.1
7311.004	39.9	9.9	129.0	1.0	3.0	0.0	V-Horn	PK	0.0	49.8	74.0	-24.2

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/16/08
Customer:	Honeywell			Temperature:	22c
Attendees:	David Shipley			Humidity:	41%
Project:	Nonw			Barometric Pres.:	1015.9 mb
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC08

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12. Antenna: 14dBi Sector.

EUT OPERATING MODES

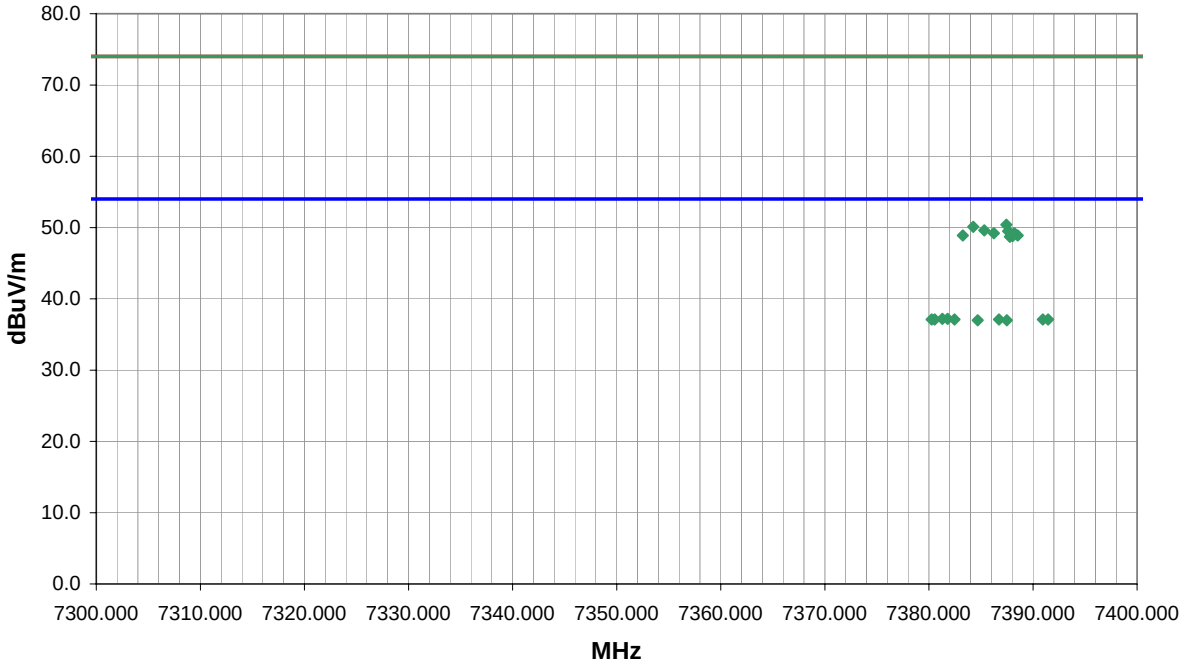
1 Mbps. Channel 11.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	4
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)
7381.296	27.2	10.0	341.0	3.3	3.0	0.0	V-Horn	AV	0.0	37.2	54.0	-16.8
7381.800	27.2	10.0	343.0	3.5	3.0	0.0	H-Horn	AV	0.0	37.2	54.0	-16.8
7382.465	27.1	10.0	155.0	1.0	3.0	0.0	H-Horn	AV	0.0	37.1	54.0	-16.9
7386.732	27.1	10.0	308.0	1.0	3.0	0.0	H-Horn	AV	0.0	37.1	54.0	-16.9
7391.447	27.1	10.0	359.0	2.3	3.0	0.0	V-Horn	AV	0.0	37.1	54.0	-16.9
7380.255	27.2	9.9	1.0	1.4	3.0	0.0	H-Horn	AV	0.0	37.1	54.0	-16.9
7380.554	27.2	9.9	1.0	3.3	3.0	0.0	V-Horn	AV	0.0	37.1	54.0	-16.9
7390.944	27.2	9.9	289.0	1.0	3.0	0.0	H-Horn	AV	0.0	37.1	54.0	-16.9
7384.682	27.1	9.9	85.0	3.2	3.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
7387.492	27.0	10.0	85.0	3.2	3.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
7387.440	40.5	9.9	155.0	1.0	3.0	0.0	H-Horn	PK	0.0	50.4	74.0	-23.6
7384.264	40.2	9.9	1.0	1.4	3.0	0.0	H-Horn	PK	0.0	50.1	74.0	-23.9
7385.321	39.7	9.9	1.0	3.3	3.0	0.0	V-Horn	PK	0.0	49.6	74.0	-24.4
7387.610	39.6	9.9	85.0	3.2	3.0	0.0	V-Horn	PK	0.0	49.5	74.0	-24.5
7386.244	39.3	9.9	289.0	1.0	3.0	0.0	H-Horn	PK	0.0	49.2	74.0	-24.8
7388.208	39.3	9.9	308.0	1.0	3.0	0.0	H-Horn	PK	0.0	49.2	74.0	-24.8
7383.260	39.0	9.9	85.0	3.2	3.0	0.0	V-Horn	PK	0.0	48.9	74.0	-25.1
7388.531	39.0	9.9	343.0	3.5	3.0	0.0	H-Horn	PK	0.0	48.9	74.0	-25.1
7388.045	38.9	9.9	341.0	3.3	3.0	0.0	V-Horn	PK	0.0	48.8	74.0	-25.2
7387.786	38.8	9.9	359.0	2.3	3.0	0.0	V-Horn	PK	0.0	48.7	74.0	-25.3

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/21/08
Customer:	Honeywell			Temperature:	20
Attendees:	David Shipley			Humidity:	36%
Project:	Nonw			Barometric Pres.:	1017
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12. Antenna: 14dBi Sector.

EUT OPERATING MODES

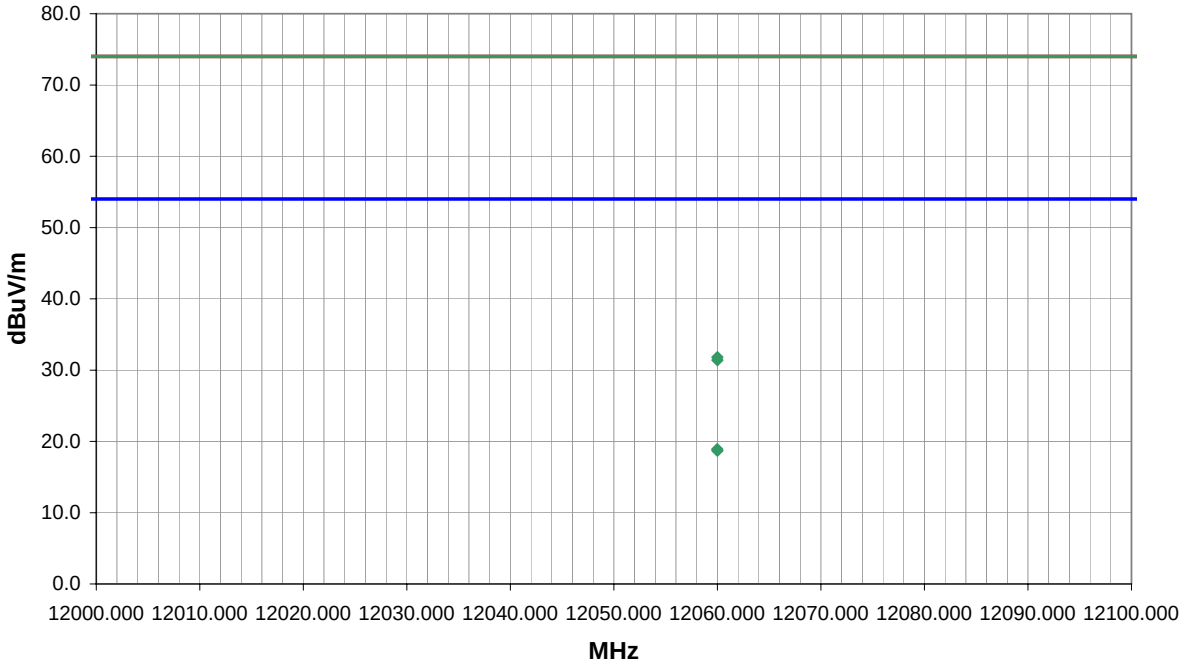
54 Mbps. Channel 1.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	13
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)
12059.990	37.1	-18.2	150.0	1.0	3.0	0.0	H-Horn	AV	0.0	18.9	54.0	-35.1
12060.000	36.9	-18.2	22.0	1.0	3.0	0.0	V-Horn	AV	0.0	18.7	54.0	-35.3
12060.000	50.0	-18.2	150.0	1.0	3.0	0.0	H-Horn	PK	0.0	31.8	74.0	-42.2
12060.000	49.6	-18.2	22.0	1.0	3.0	0.0	V-Horn	PK	0.0	31.4	74.0	-42.6

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/21/08
Customer:	Honeywell			Temperature:	20
Attendees:	David Shipley			Humidity:	36%
Project:	Nonw			Barometric Pres.:	1017
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12. Antenna: 14dBi Sector.

EUT OPERATING MODES

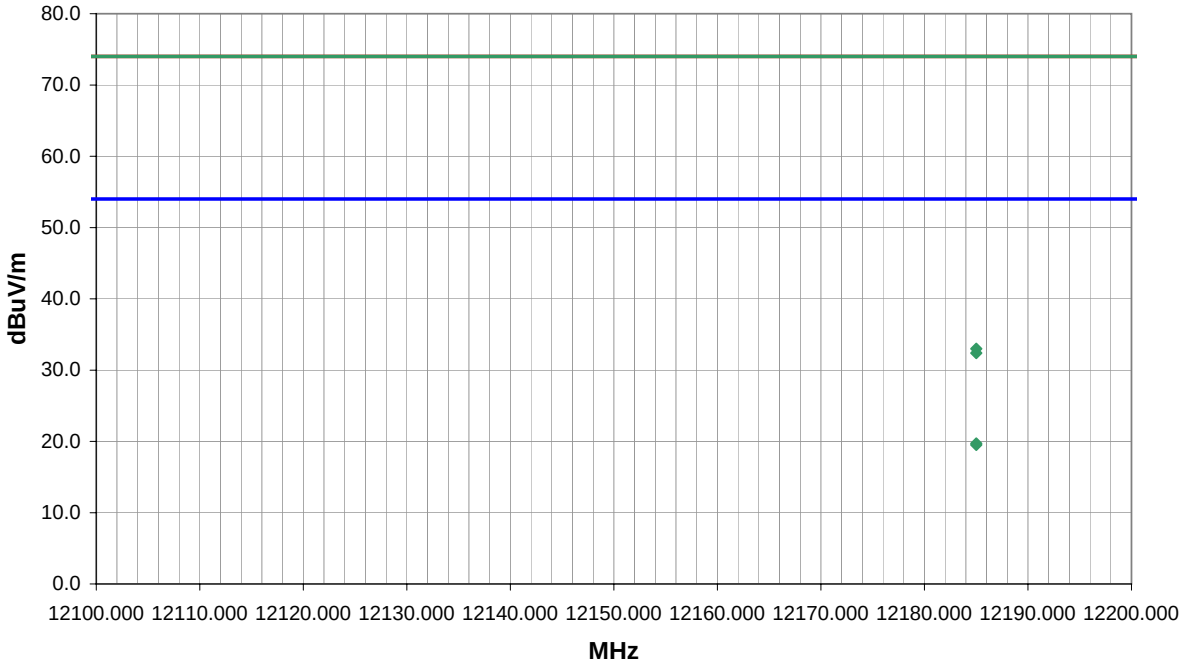
54 Mbps. Channel 6.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	16
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)
12185.000	37.3	-17.6	242.0	1.0	3.0	0.0	H-Horn	AV	0.0	19.7	54.0	-34.3
12185.000	37.1	-17.6	267.0	1.0	3.0	0.0	V-Horn	AV	0.0	19.5	54.0	-34.5
12185.000	50.6	-17.6	267.0	1.0	3.0	0.0	V-Horn	PK	0.0	33.0	74.0	-41.0
12185.000	50.0	-17.6	242.0	1.0	3.0	0.0	H-Horn	PK	0.0	32.4	74.0	-41.6

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/17/08
Customer:	Honeywell			Temperature:	22c
Attendees:	David Shipley			Humidity:	41%
Project:	Nonw			Barometric Pres.:	1015.9 mb
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC08

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12. Antenna: 14dBi Sector.

EUT OPERATING MODES

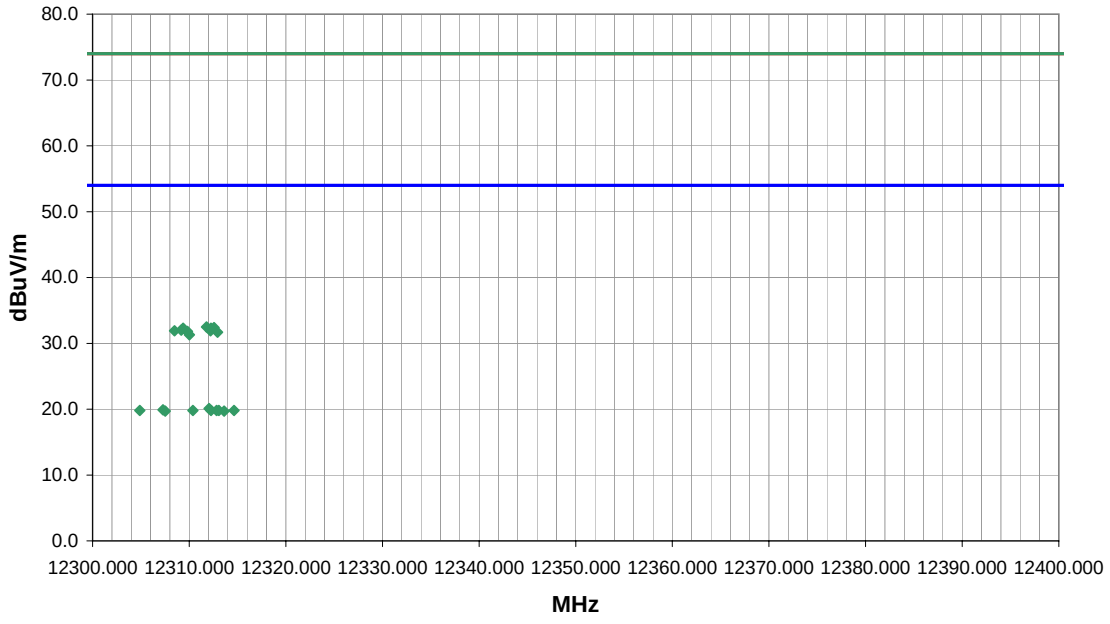
1 Mbps. Channel 11.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	6
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
12312.060	37.0	-16.9	248.0	1.0	3.0	0.0	H-Horn	AV	0.0	20.1	54.0	-33.9	54 Mbps
12307.290	36.8	-16.9	1.0	1.5	3.0	0.0	V-Horn	AV	0.0	19.9	54.0	-34.1	54 Mbps
12304.880	36.7	-16.9	329.0	1.5	3.0	0.0	H-Horn	AV	0.0	19.8	54.0	-34.2	36 Mbps
12310.390	36.7	-16.9	251.0	1.4	3.0	0.0	V-Horn	AV	0.0	19.8	54.0	-34.2	36 Mbps
12312.260	36.7	-16.9	298.0	1.4	3.0	0.0	H-Horn	AV	0.0	19.8	54.0	-34.2	6 Mbps
12312.830	36.7	-16.9	299.0	1.3	3.0	0.0	V-Horn	AV	0.0	19.8	54.0	-34.2	11 Mbps
12313.060	36.7	-16.9	350.0	1.2	3.0	0.0	H-Horn	AV	0.0	19.8	54.0	-34.2	1 Mbps
12314.630	36.7	-16.9	301.0	1.3	3.0	0.0	H-Horn	AV	0.0	19.8	54.0	-34.2	11 Mbps
12307.510	36.6	-16.9	144.0	1.4	3.0	0.0	V-Horn	AV	0.0	19.7	54.0	-34.3	6 Mbps
12313.610	36.6	-16.9	1.0	1.2	3.0	0.0	V-Horn	AV	0.0	19.7	54.0	-34.3	1 Mbps
12311.790	49.4	-16.9	350.0	1.2	3.0	0.0	H-Horn	PK	0.0	32.5	74.0	-41.5	1 Mbps
12312.570	49.3	-16.9	329.0	1.5	3.0	0.0	H-Horn	PK	0.0	32.4	74.0	-41.6	36 Mbps
12309.380	49.2	-16.9	1.0	1.5	3.0	0.0	V-Horn	PK	0.0	32.3	74.0	-41.7	54 Mbps
12312.260	49.2	-16.9	144.0	1.4	3.0	0.0	V-Horn	PK	0.0	32.3	74.0	-41.7	6 Mbps
12309.170	48.9	-16.9	251.0	1.4	3.0	0.0	V-Horn	PK	0.0	32.0	74.0	-42.0	36 Mbps
12308.480	48.8	-16.9	299.0	1.3	3.0	0.0	V-Horn	PK	0.0	31.9	74.0	-42.1	11 Mbps
12312.200	48.8	-16.9	301.0	1.3	3.0	0.0	H-Horn	PK	0.0	31.9	74.0	-42.1	11 Mbps
12309.820	48.7	-16.9	248.0	1.0	3.0	0.0	H-Horn	PK	0.0	31.8	74.0	-42.2	54 Mbps
12312.930	48.6	-16.9	298.0	1.4	3.0	0.0	H-Horn	PK	0.0	31.7	74.0	-42.3	6 Mbps
12310.020	48.2	-16.9	1.0	1.2	3.0	0.0	V-Horn	PK	0.0	31.3	74.0	-42.7	1 Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/21/08
Customer:	Honeywell			Temperature:	20
Attendees:	David Shipley			Humidity:	36%
Project:	Nonw			Barometric Pres.:	1017
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

TEST PARAMETERS

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12. Antenna: 14dBi Sector.

EUT OPERATING MODES

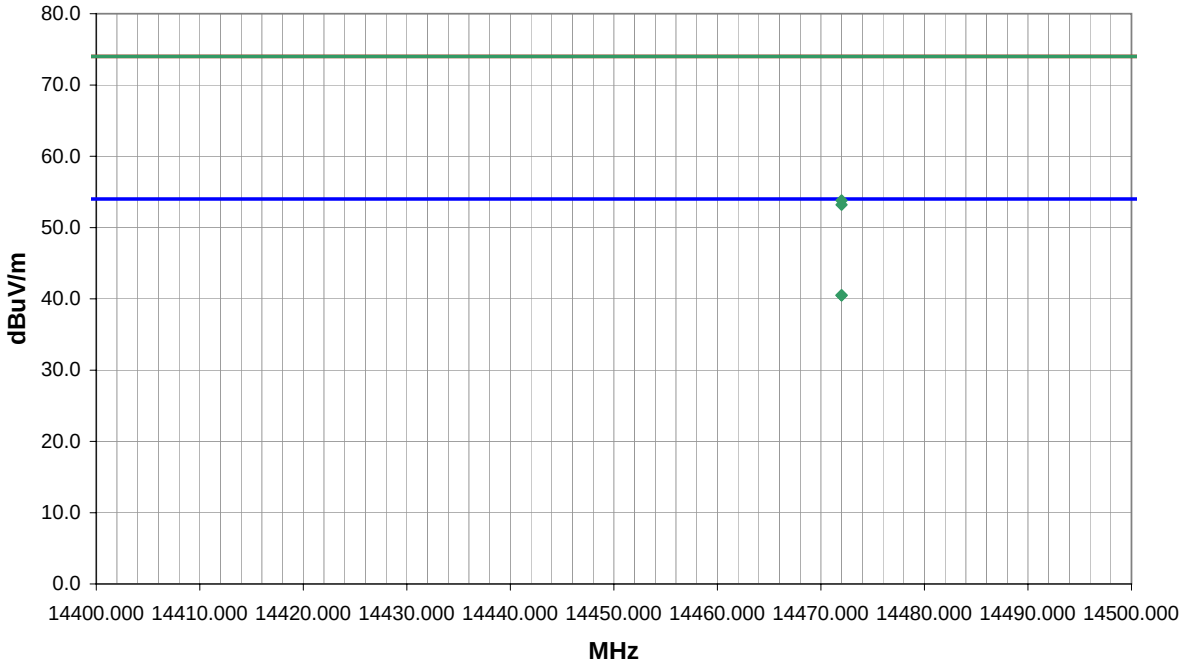
54 Mbps. Channel 1.

DEVIATIONS FROM TEST STANDARD

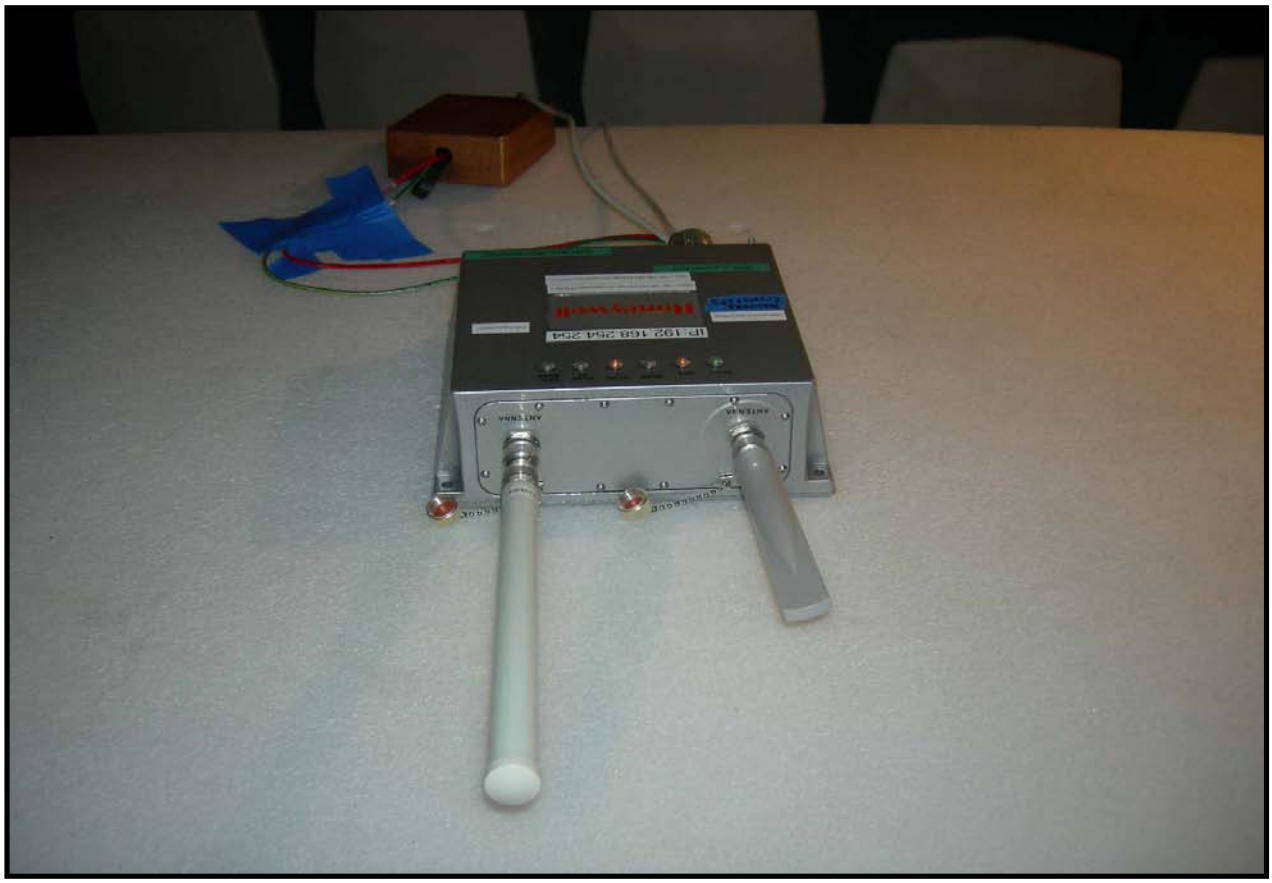
No deviations.

Run #	14
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)
14472.000	24.1	16.4	33.0	1.0	3.0	0.0	V-Horn	AV	0.0	40.5	54.0	-13.5
14472.000	24.1	16.4	19.0	1.0	3.0	0.0	H-Horn	AV	0.0	40.5	54.0	-13.5
14472.000	37.4	16.4	19.0	1.0	3.0	0.0	H-Horn	PK	0.0	53.8	74.0	-20.2
14472.000	36.8	16.4	33.0	1.0	3.0	0.0	V-Horn	PK	0.0	53.2	74.0	-20.8



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
6 Mbps. Channel 157.
6 Mbps. Channel 165.
6 Mbps. Channel 149.

MODE USED FOR FINAL DATA
6 Mbps. Channel 157.

POWER SETTINGS INVESTIGATED
120VAC/60Hz

POWER SETTINGS USED FOR FINAL DATA
120VAC/60Hz

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30 MHz	Stop Frequency	40 GHz

CLOCKS AND OSCILLATORS
5745, 5785, 5825 MHz

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
Pre-Amplifier	Miteq	JS4-26004000-50-5A	AON	7/25/2007	13
Antenna, Horn	EMCO	3160-10	AHI	NCR	0
Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	3/3/2008	13
Antenna, Horn	EMCO	3160-09	AHN	NCR	0
OC10 SMA cable for 18026 GHz			OCK	3/3/2008	13
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	2/8/2008	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVL	2/8/2008	13
Antenna, Horn	ETS	3160-07	AHX	10/25/2007	12
OC11 8-18 GHz Cables a-b-c-e			OCS	2/7/2008	13
Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	4/25/2008	13
Antenna, Horn	EMCO	3115	AHB	8/31/2007	24
OC11 1-8 GHz Cables a-b-c-d			OCR	2/7/2008	13
Spectrum Analyzer	Agilent	E4440A	AAX	10/1/2007	12

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (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

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test 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 C63.4:2003). A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	36%
Project:	None			Barometric Pres.:	1016
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40. Antenna: 8.5 dBi Omni.

EUT OPERATING MODES

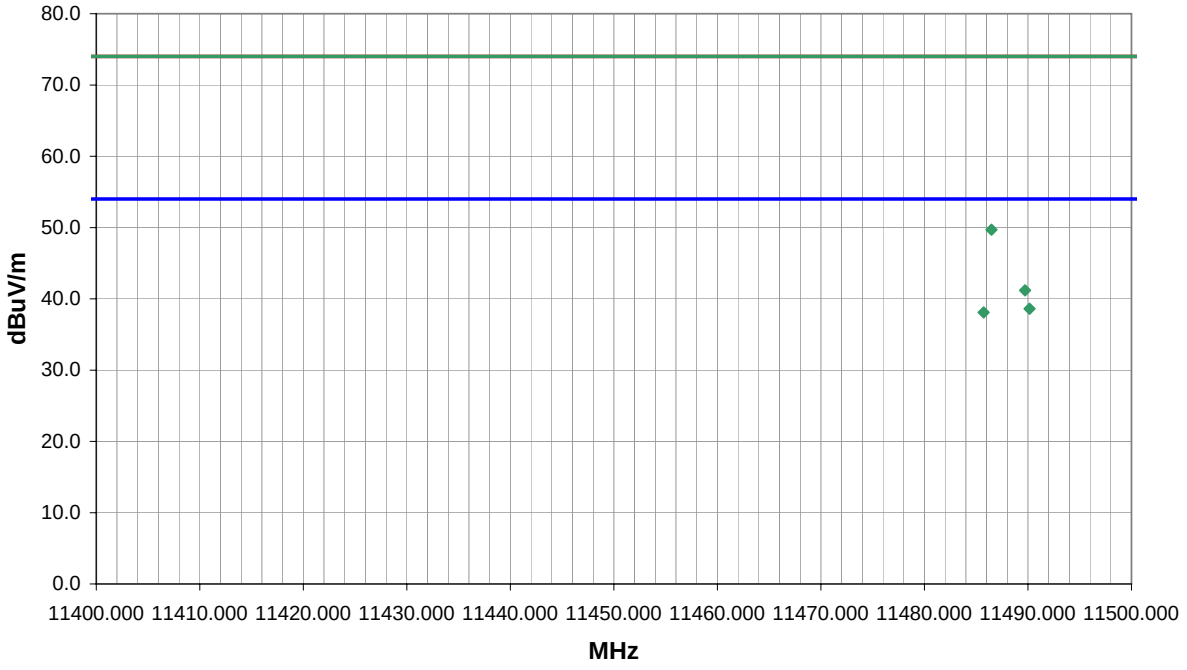
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	38
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)
11489.720	52.9	-11.7	211.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.2	54.0	-12.8
11490.160	50.3	-11.7	218.0	1.0	3.0	0.0	V-Horn	AV	0.0	38.6	54.0	-15.4
11486.480	61.4	-11.7	218.0	1.0	3.0	0.0	V-Horn	PK	0.0	49.7	74.0	-24.3
11485.720	49.8	-11.7	211.0	1.0	3.0	0.0	H-Horn	PK	0.0	38.1	74.0	-35.9

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 8.5 dBi Omni.

EUT OPERATING MODES

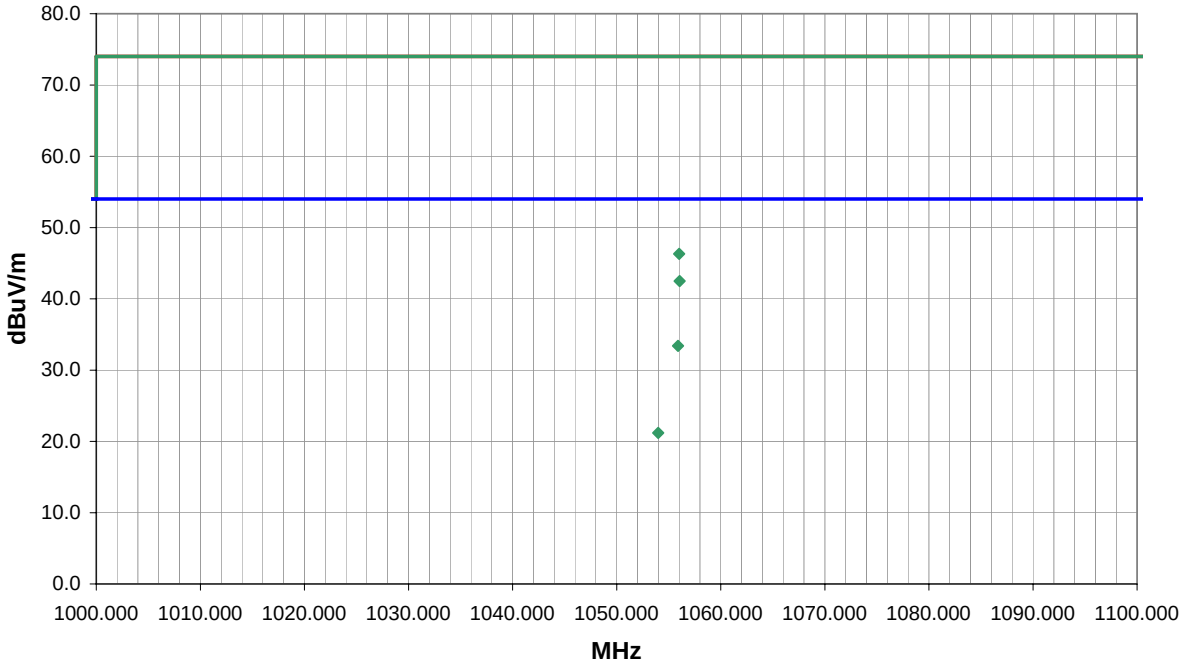
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	39
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)
1056.049	51.3	-8.8	139.0	1.2	3.0	0.0	V-Horn	AV	0.0	42.5	54.0	-11.5
1055.999	55.1	-8.8	139.0	1.2	3.0	0.0	V-Horn	PK	0.0	46.3	74.0	-27.7
1053.990	30.0	-8.8	105.0	1.7	3.0	0.0	H-Horn	AV	0.0	21.2	54.0	-32.8
1055.899	42.2	-8.8	105.0	1.7	3.0	0.0	H-Horn	PK	0.0	33.4	74.0	-40.6

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/28/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	36%
Project:	Nonw			Barometric Pres.:	1016
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 8.5 dBi Omni.

EUT OPERATING MODES

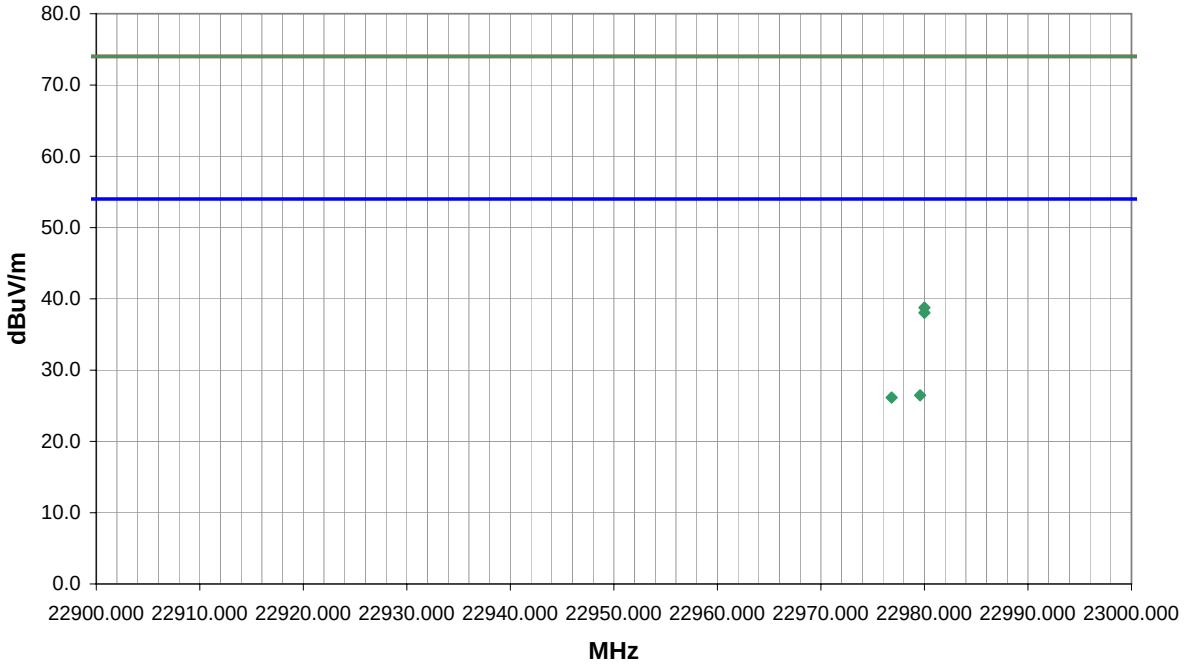
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No Deviations

Run #	48
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)
22980.000	48.2	0.1	360.0	1.0	1.0	0.0	-High Horr	AV	-9.5	38.8	54.0	-15.2
22980.000	47.5	0.1	360.0	1.0	1.0	0.0	√-High Horr	AV	-9.5	38.1	54.0	-15.9
22979.590	35.9	0.1	343.0	1.0	1.0	0.0	-High Horr	AV	-9.5	26.5	54.0	-27.5
22976.830	35.6	0.1	322.0	1.0	1.0	0.0	√-High Horr	AV	-9.5	26.2	54.0	-27.8

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 12dBi Omni.

EUT OPERATING MODES

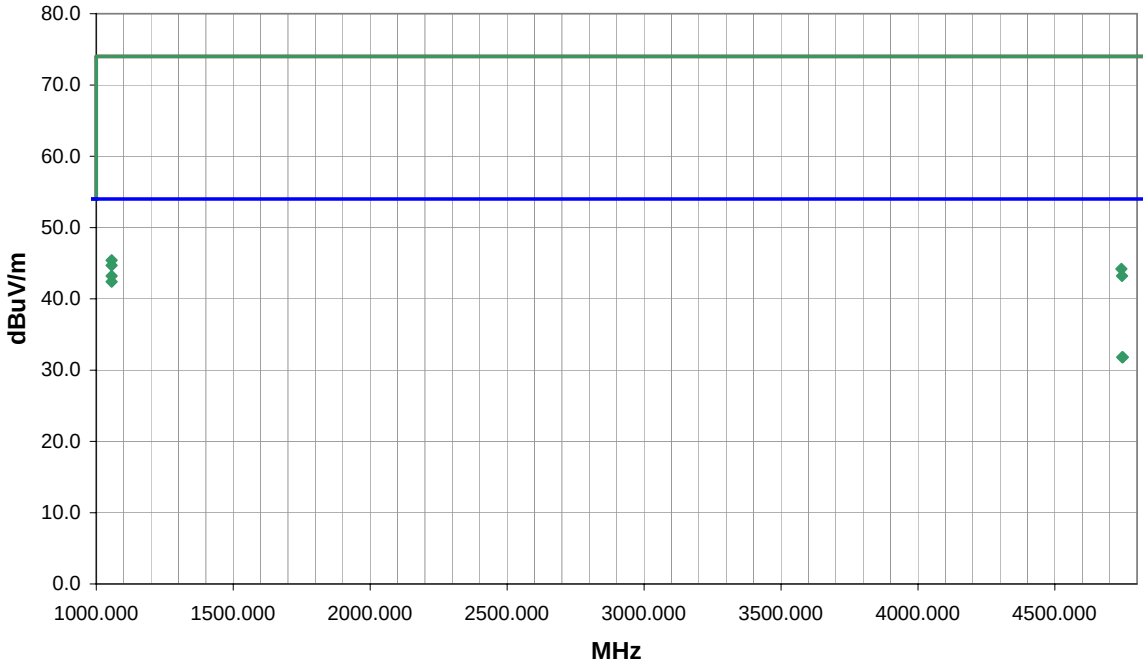
6 Mbps. Channel 165.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	36
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)
1056.048	52.0	-8.8	89.0	1.0	3.0	0.0	H-Horn	AV	0.0	43.2	54.0	-10.8
1056.037	51.2	-8.8	237.0	1.0	3.0	0.0	V-Horn	AV	0.0	42.4	54.0	-11.6
4745.762	29.1	2.7	172.0	1.0	3.0	0.0	V-Horn	AV	0.0	31.8	54.0	-22.2
4747.921	29.1	2.7	31.0	1.0	3.0	0.0	H-Horn	AV	0.0	31.8	54.0	-22.2
1055.911	54.2	-8.8	89.0	1.0	3.0	0.0	H-Horn	PK	0.0	45.4	74.0	-28.6
1056.062	53.5	-8.8	237.0	1.0	3.0	0.0	V-Horn	PK	0.0	44.7	74.0	-29.3
4742.639	41.5	2.7	172.0	1.0	3.0	0.0	V-Horn	PK	0.0	44.2	74.0	-29.8
4745.195	40.5	2.7	31.0	1.0	3.0	0.0	H-Horn	PK	0.0	43.2	74.0	-30.8

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 12dBi Omni.

EUT OPERATING MODES

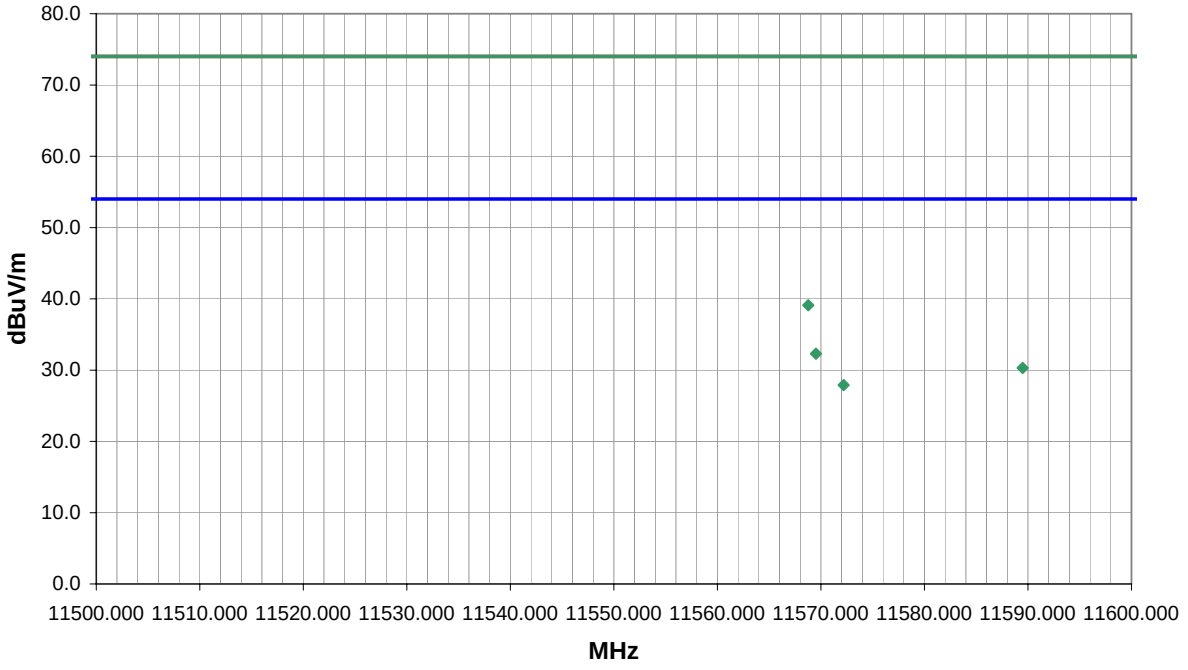
6 Mbps. Channel 157.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	37
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)
11569.520	43.8	-11.5	318.0	1.0	3.0	0.0	V-Horn	AV	0.0	32.3	54.0	-21.7
11572.200	39.3	-11.4	301.0	1.0	3.0	0.0	H-Horn	AV	0.0	27.9	54.0	-26.1
11568.780	50.6	-11.5	318.0	1.0	3.0	0.0	V-Horn	PK	0.0	39.1	74.0	-34.9
11589.490	41.8	-11.5	301.0	1.0	3.0	0.0	H-Horn	PK	0.0	30.3	74.0	-43.7

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/28/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	36%
Project:	None			Barometric Pres.:	1016
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 12 dBi Omni.

EUT OPERATING MODES

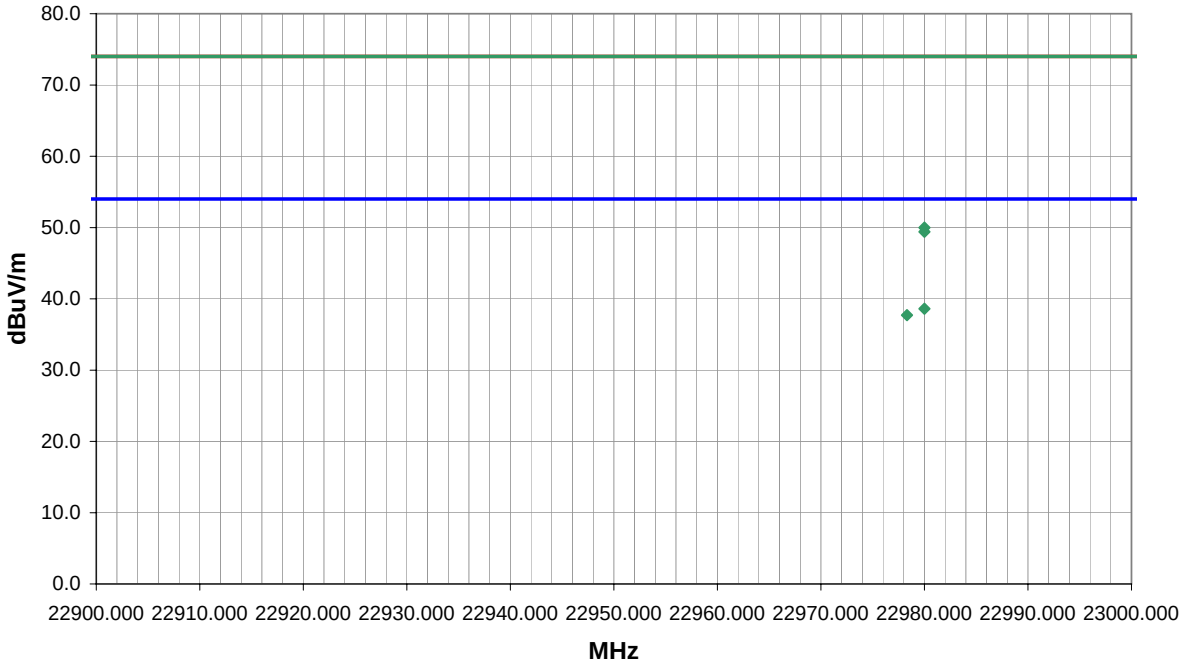
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No Deviations

Run #	49
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)
22980.000	49.9	0.1	358.0	1.0	1.0	0.0	-High Horr	AV	0.0	50.0	54.0	-4.0
22980.000	49.3	0.1	358.0	1.0	1.0	0.0	√-High Horr	AV	0.0	49.4	54.0	-4.6
22980.000	38.5	0.1	359.0	1.0	1.0	0.0	-High Horr	AV	0.0	38.6	54.0	-15.4
22978.320	37.6	0.1	347.0	1.0	1.0	0.0	√-High Horr	AV	0.0	37.7	54.0	-16.3

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 16.5dBi Yagi.

EUT OPERATING MODES

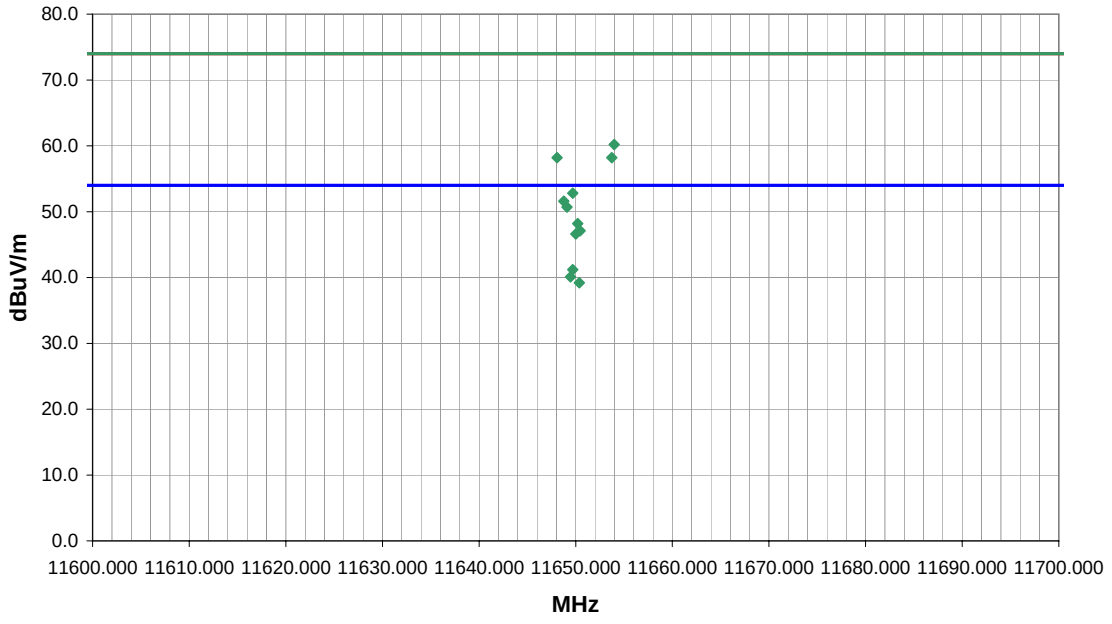
Data Rates see comments below, Channel 165.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	26
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
11650.210	59.4	-11.2	23.0	1.0	3.0	0.0	V-Horn	AV	0.0	48.2	54.0	-5.8	6Mbps
11650.460	58.3	-11.2	23.0	1.0	3.0	0.0	V-Horn	AV	0.0	47.1	54.0	-6.9	36Mbps
11650.000	57.8	-11.2	23.0	1.0	3.0	0.0	V-Horn	AV	0.0	46.6	54.0	-7.4	54Mbps
11649.690	52.4	-11.2	22.0	1.7	3.0	0.0	H-Horn	AV	0.0	41.2	54.0	-12.8	6Mbps
11653.980	71.4	-11.2	23.0	1.0	3.0	0.0	V-Horn	PK	0.0	60.2	74.0	-13.8	6Mbps
11649.460	51.3	-11.2	22.0	1.7	3.0	0.0	H-Horn	AV	0.0	40.1	54.0	-13.9	36Mbps
11650.370	50.4	-11.2	27.0	1.7	3.0	0.0	H-Horn	AV	0.0	39.2	54.0	-14.8	54Mbps
11648.070	69.4	-11.2	23.0	1.0	3.0	0.0	V-Horn	PK	0.0	58.2	74.0	-15.8	36Mbps
11653.730	69.4	-11.2	23.0	1.0	3.0	0.0	V-Horn	PK	0.0	58.2	74.0	-15.8	54Mbps
11649.700	64.0	-11.2	22.0	1.7	3.0	0.0	H-Horn	PK	0.0	52.8	74.0	-21.2	6Mbps
11648.760	62.8	-11.2	22.0	1.7	3.0	0.0	H-Horn	PK	0.0	51.6	74.0	-22.4	36Mbps
11649.100	61.9	-11.2	27.0	1.7	3.0	0.0	H-Horn	PK	0.0	50.7	74.0	-23.3	54Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 16.5dBi Yagi.

EUT OPERATING MODES

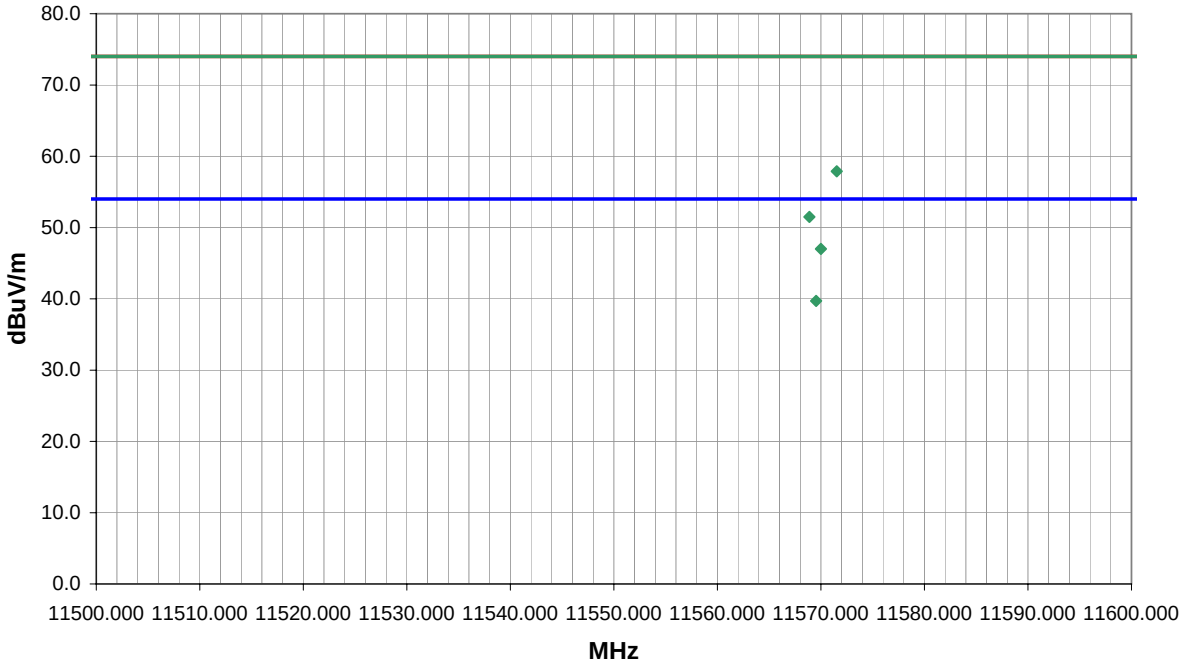
6 Mbps. Channel 157.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	27
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)
11570.000	58.5	-11.5	15.0	1.0	3.0	0.0	V-Horn	AV	0.0	47.0	54.0	-7.0
11569.540	51.2	-11.5	31.0	1.7	3.0	0.0	H-Horn	AV	0.0	39.7	54.0	-14.3
11571.530	69.4	-11.5	15.0	1.0	3.0	0.0	V-Horn	PK	0.0	57.9	74.0	-16.1
11568.890	63.0	-11.5	31.0	1.7	3.0	0.0	H-Horn	PK	0.0	51.5	74.0	-22.5

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 16.5dBi Yagi.

EUT OPERATING MODES

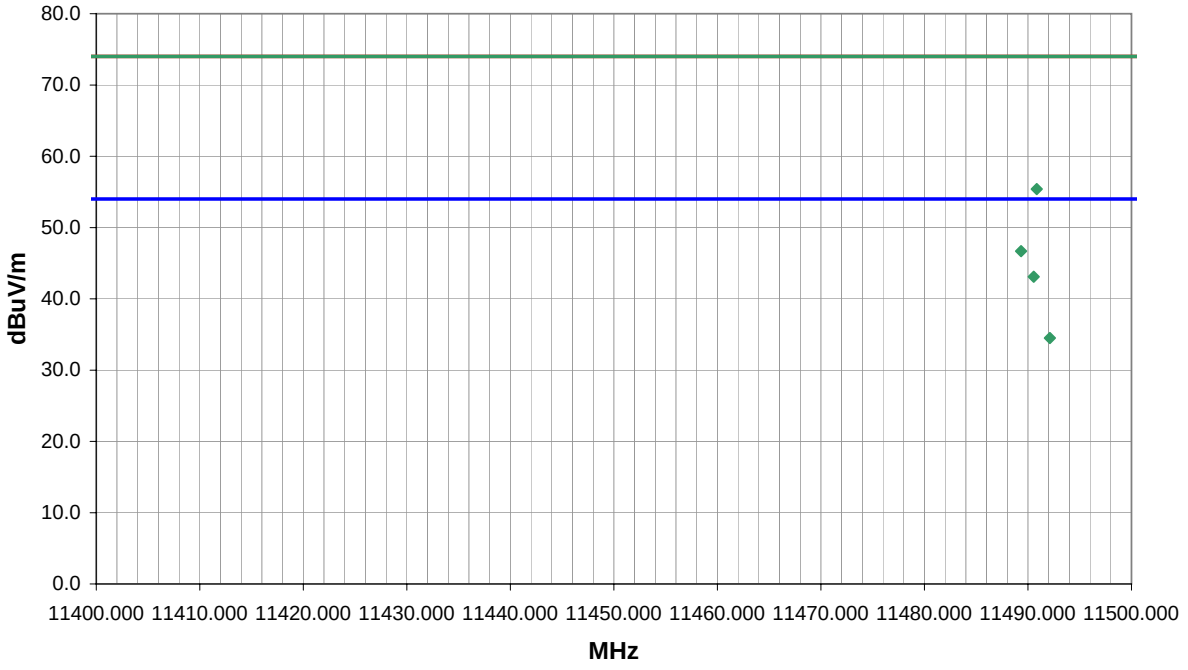
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	28
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)
11490.560	54.8	-11.7	25.0	1.0	3.0	0.0	V-Horn	AV	0.0	43.1	54.0	-10.9
11490.850	67.1	-11.7	25.0	1.0	3.0	0.0	V-Horn	PK	0.0	55.4	74.0	-18.6
11492.120	46.2	-11.7	22.0	1.7	3.0	0.0	H-Horn	AV	0.0	34.5	54.0	-19.5
11489.340	58.4	-11.7	22.0	1.7	3.0	0.0	H-Horn	PK	0.0	46.7	74.0	-27.3

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 16.5dBi Yagi.

EUT OPERATING MODES

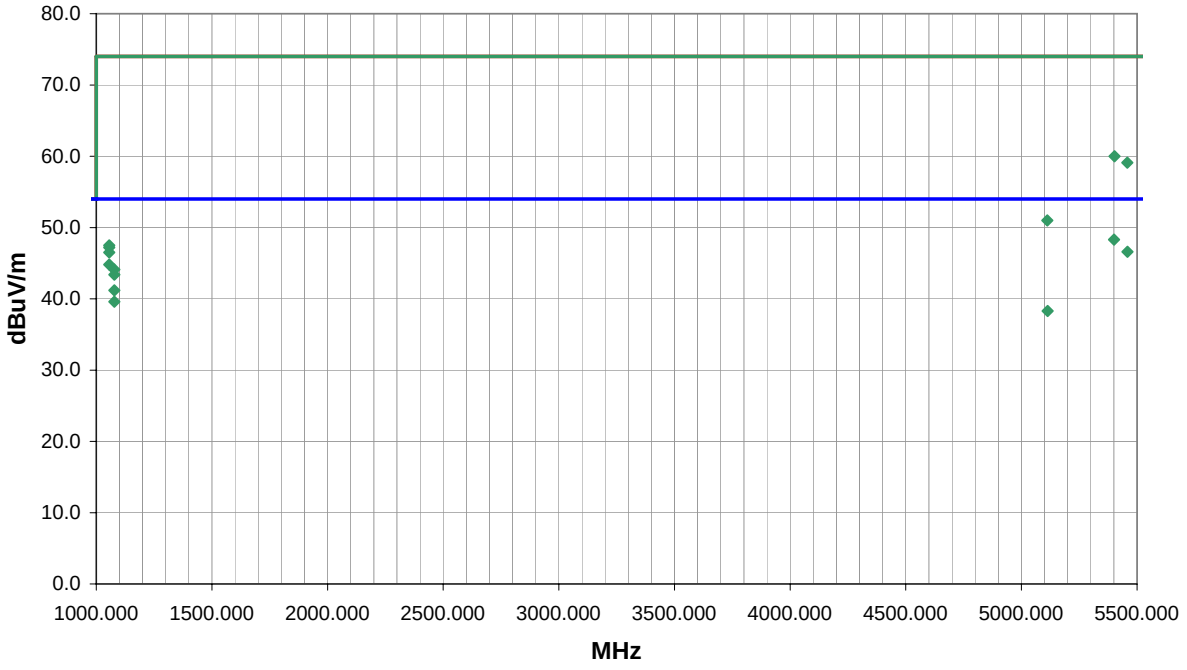
6 Mbps. Channel 165.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	29
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)
5400.356	41.4	6.9	333.0	1.3	3.0	0.0	V-Horn	AV	0.0	48.3	54.0	-5.7
1056.007	55.7	-8.5	169.0	1.3	3.0	0.0	H-Horn	AV	0.0	47.2	54.0	-6.8
5458.300	39.5	7.1	327.0	1.2	3.0	0.0	V-Horn	AV	0.0	46.6	54.0	-7.4
1055.995	53.3	-8.5	145.0	1.0	3.0	0.0	V-Horn	AV	0.0	44.8	54.0	-9.2
1078.054	49.7	-8.5	146.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.2	54.0	-12.8
5402.577	53.1	6.9	333.0	1.3	3.0	0.0	V-Horn	PK	0.0	60.0	74.0	-14.0
1077.927	48.1	-8.5	1.0	1.0	3.0	0.0	H-Horn	AV	0.0	39.6	54.0	-14.4
5457.837	52.0	7.1	327.0	1.2	3.0	0.0	V-Horn	PK	0.0	59.1	74.0	-14.9
5113.130	32.3	6.0	165.0	1.4	3.0	0.0	V-Horn	AV	0.0	38.3	54.0	-15.7
5111.899	45.0	6.0	165.0	1.4	3.0	0.0	V-Horn	PK	0.0	51.0	74.0	-23.0
1055.972	56.0	-8.5	169.0	1.3	3.0	0.0	H-Horn	PK	0.0	47.5	74.0	-26.5
1056.097	55.0	-8.5	145.0	1.0	3.0	0.0	V-Horn	PK	0.0	46.5	74.0	-27.5
1078.061	52.6	-8.5	146.0	1.0	3.0	0.0	V-Horn	PK	0.0	44.1	74.0	-29.9
1077.907	51.9	-8.5	1.0	1.0	3.0	0.0	H-Horn	PK	0.0	43.4	74.0	-30.6

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 16.5dBi Yagi.

EUT OPERATING MODES

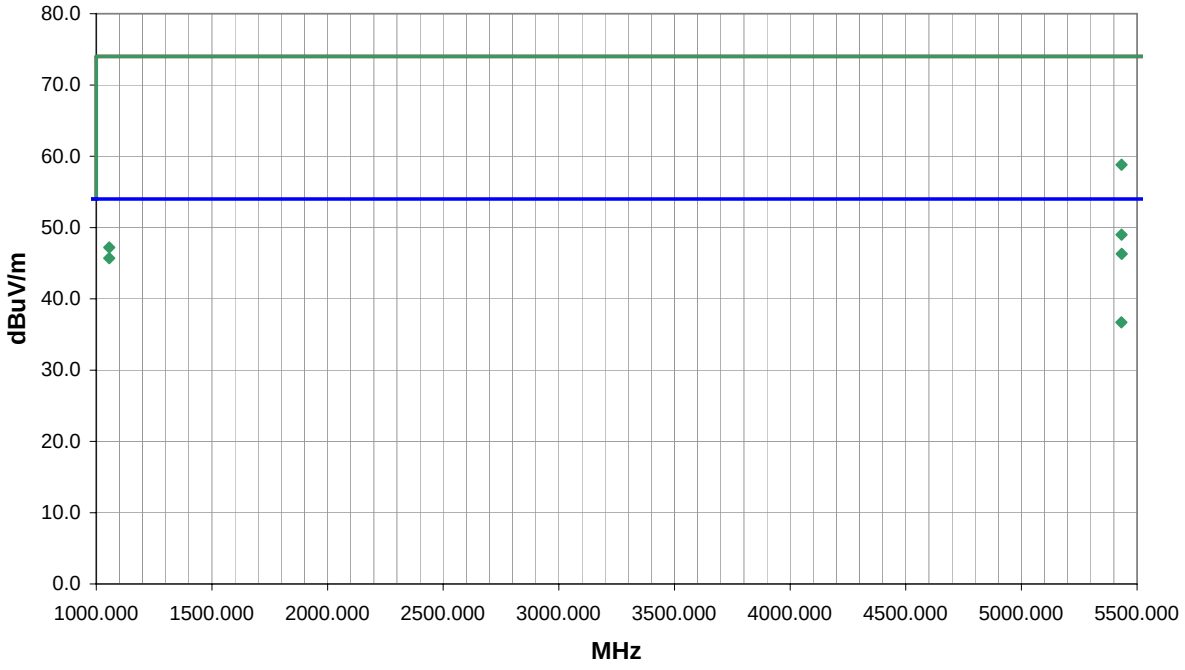
6 Mbps. Channel 157.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	30
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)
5433.592	39.3	7.0	337.0	1.0	3.0	0.0	V-Horn	AV	0.0	46.3	54.0	-7.7
1056.051	54.2	-8.5	214.0	1.2	3.0	0.0	V-Horn	AV	0.0	45.7	54.0	-8.3
5432.639	51.8	7.0	337.0	1.0	3.0	0.0	V-Horn	PK	0.0	58.8	74.0	-15.2
5432.034	29.7	7.0	320.0	1.0	3.0	0.0	H-Horn	AV	0.0	36.7	54.0	-17.3
5433.038	42.0	7.0	320.0	1.0	3.0	0.0	H-Horn	PK	0.0	49.0	74.0	-25.0
1055.994	55.7	-8.5	214.0	1.2	3.0	0.0	V-Horn	PK	0.0	47.2	74.0	-26.8

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 16.5dBi Yagi.

EUT OPERATING MODES

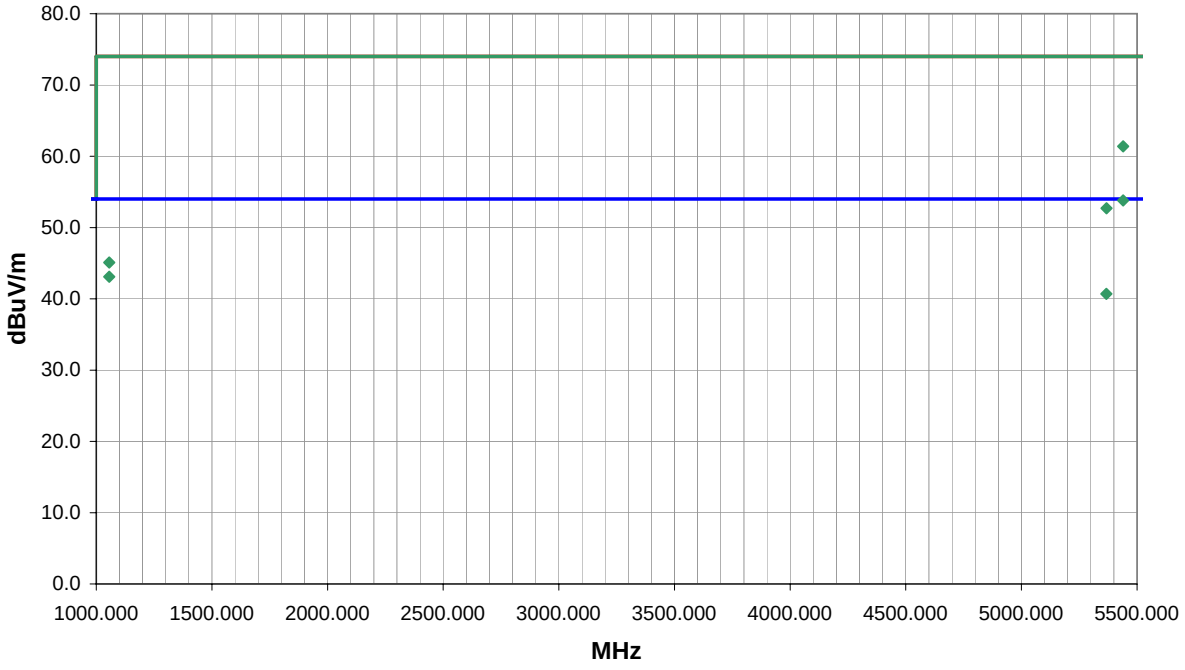
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	31
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)
5440.025	46.7	7.1	330.0	1.2	3.0	0.0	V-Horn	AV	0.0	53.8	54.0	-0.2
1056.040	51.6	-8.5	214.0	1.2	3.0	0.0	V-Horn	AV	0.0	43.1	54.0	-10.9
5439.982	54.3	7.1	330.0	1.2	3.0	0.0	V-Horn	PK	0.0	61.4	74.0	-12.6
5367.334	33.9	6.8	333.0	1.2	3.0	0.0	V-Horn	AV	0.0	40.7	54.0	-13.3
5367.838	45.9	6.8	333.0	1.2	3.0	0.0	V-Horn	PK	0.0	52.7	74.0	-21.3
1056.018	53.6	-8.5	214.0	1.2	3.0	0.0	V-Horn	PK	0.0	45.1	74.0	-28.9

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/28/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	36%
Project:	None			Barometric Pres.:	1016
Tested by:	Jaemi Suh	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15, Antenna: 16.5 dBi Yagi.

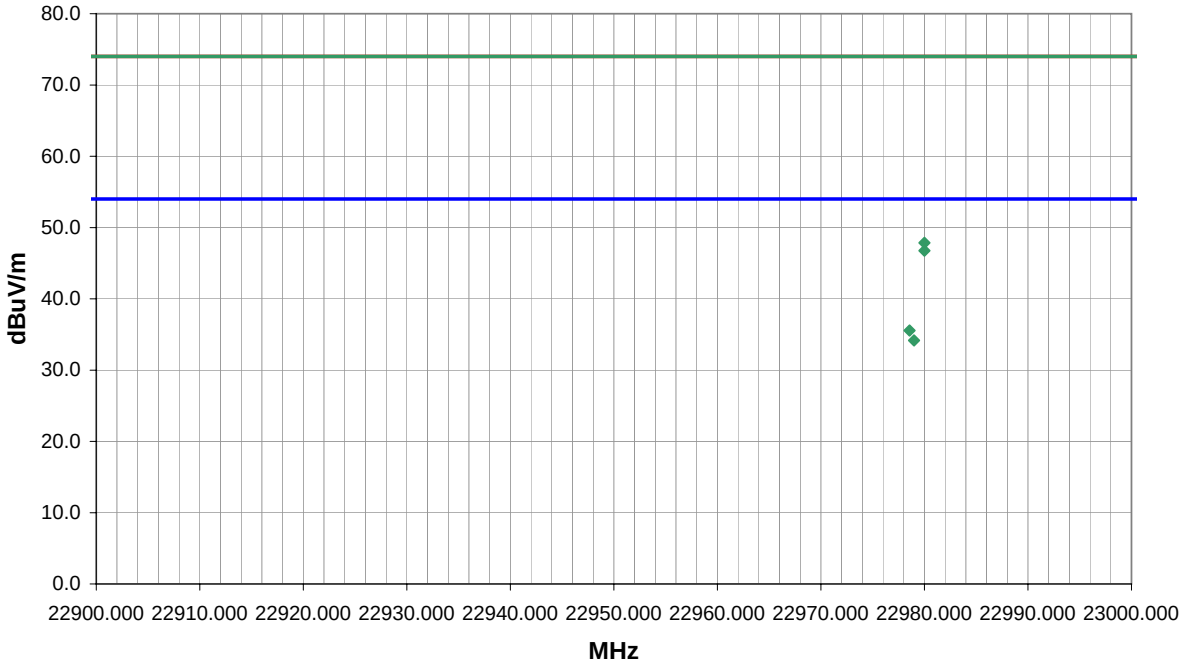
EUT OPERATING MODES

6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

Run #	50
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)
22980.000	57.3	0.1	360.0	1.0	1.0	0.0	-High Horr	AV	-9.5	47.9	54.0	-6.1
22980.000	56.2	0.1	1.0	1.0	1.0	0.0	√-High Horr	AV	-9.5	46.8	54.0	-7.2
22978.570	45.0	0.1	349.0	1.0	1.0	0.0	-High Horr	AV	-9.5	35.6	54.0	-18.4
22978.990	43.6	0.1	38.0	1.0	1.0	0.0	√-High Horr	AV	-9.5	34.2	54.0	-19.8

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/22/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	36%
Project:	None			Barometric Pres.:	1016
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 17dBi Sector.

EUT OPERATING MODES

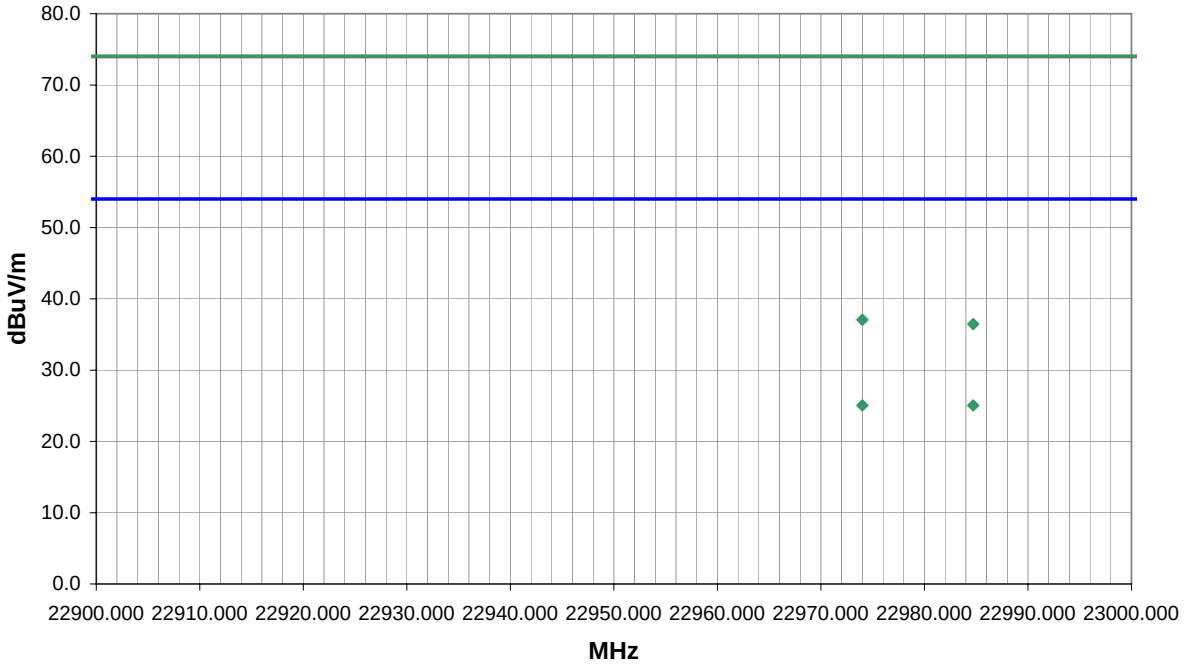
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	22
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)
22974.010	34.5	0.1	162.0	1.3	1.0	0.0	√-High Horr	AV	-9.5	25.1	54.0	-28.9
22984.720	34.5	0.1	162.0	1.3	1.0	0.0	⊣-High Horr	AV	-9.5	25.1	54.0	-28.9
22974.010	46.5	0.1	162.0	1.3	1.0	0.0	√-High Horr	PK	-9.5	37.1	74.0	-36.9
22984.720	45.9	0.1	162.0	1.3	1.0	0.0	⊣-High Horr	PK	-9.5	36.5	74.0	-37.5

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/22/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	36%
Project:	None			Barometric Pres.:	1016
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 17dBi Sector.

EUT OPERATING MODES

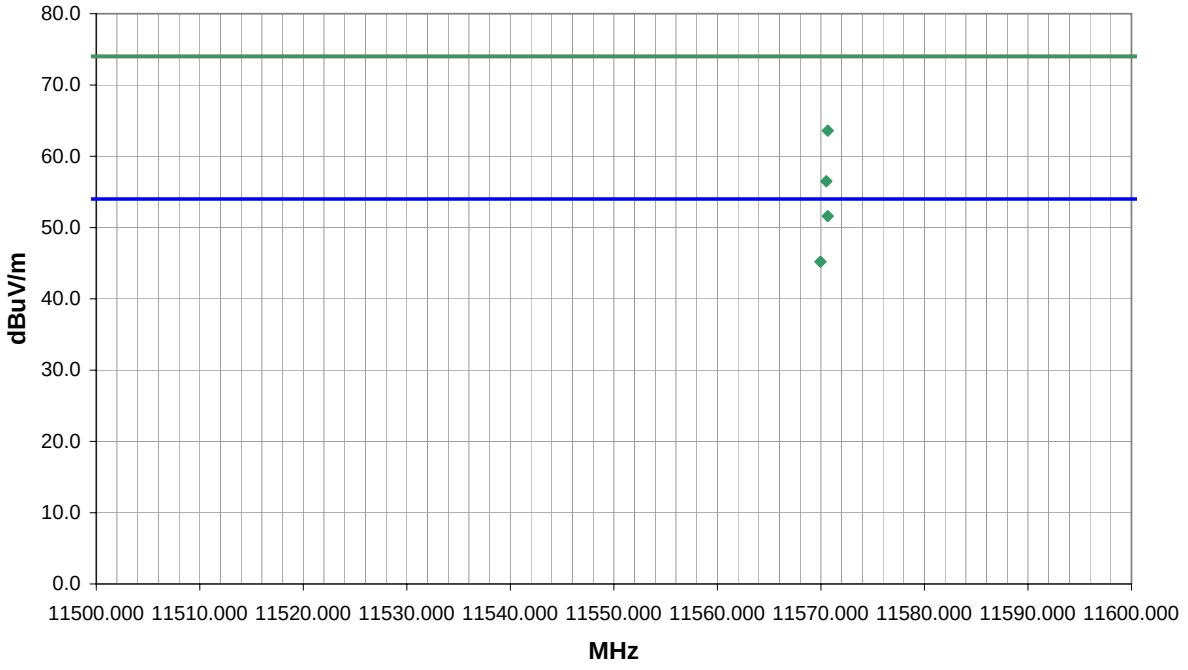
6 Mbps. Channel 157.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	23
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)
11570.670	63.1	-11.5	204.0	1.0	3.0	0.0	V-Horn	AV	0.0	51.6	54.0	-2.4
11569.960	56.7	-11.5	103.0	1.4	3.0	0.0	H-Horn	AV	0.0	45.2	54.0	-8.8
11570.670	75.1	-11.5	204.0	1.0	3.0	0.0	V-Horn	PK	0.0	63.6	74.0	-10.4
11570.520	68.0	-11.5	103.0	1.4	3.0	0.0	H-Horn	PK	0.0	56.5	74.0	-17.5

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 17dBi Sector.

EUT OPERATING MODES

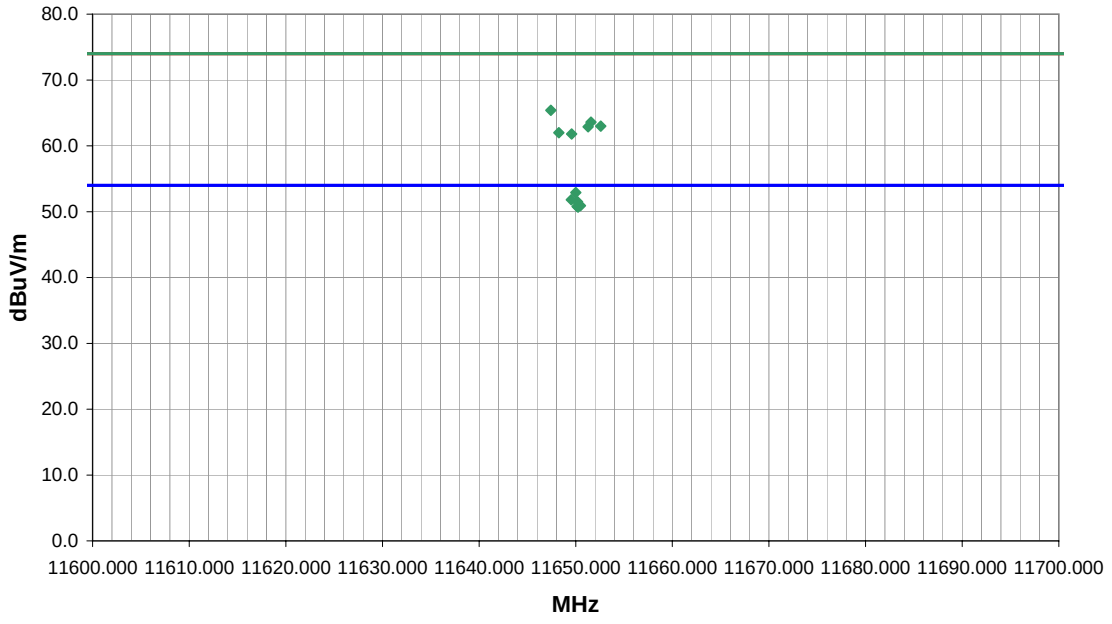
Data Rates see comments below. Channel 165.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	24
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
11650.000	64.1	-11.2	135.0	1.0	3.0	0.0	V-Horn	AV	0.0	52.9	54.0	-1.1	6Mbps
11649.550	63.0	-11.2	129.0	1.2	3.0	0.0	H-Horn	AV	0.0	51.8	54.0	-2.2	6Mbps
11650.190	62.7	-11.2	135.0	1.0	3.0	0.0	V-Horn	AV	0.0	51.5	54.0	-2.5	54Mbps
11650.490	62.1	-11.2	135.0	1.0	3.0	0.0	V-Horn	AV	0.0	50.9	54.0	-3.1	36Mbps
11650.140	62.0	-11.2	129.0	1.2	3.0	0.0	H-Horn	AV	0.0	50.8	54.0	-3.2	36Mbps
11650.240	61.9	-11.2	129.0	1.2	3.0	0.0	H-Horn	AV	0.0	50.7	54.0	-3.3	54Mbps
11647.430	76.6	-11.2	135.0	1.0	3.0	0.0	V-Horn	PK	0.0	65.4	74.0	-8.6	6Mbps
11651.580	74.8	-11.2	129.0	1.2	3.0	0.0	H-Horn	PK	0.0	63.6	74.0	-10.4	6Mbps
11652.590	74.2	-11.2	135.0	1.0	3.0	0.0	V-Horn	PK	0.0	63.0	74.0	-11.0	54Mbps
11651.290	74.1	-11.2	129.0	1.2	3.0	0.0	H-Horn	PK	0.0	62.9	74.0	-11.1	36Mbps
11648.260	73.2	-11.2	135.0	1.0	3.0	0.0	V-Horn	PK	0.0	62.0	74.0	-12.0	36Mbps
11649.570	73.0	-11.2	129.0	1.2	3.0	0.0	H-Horn	PK	0.0	61.8	74.0	-12.2	54Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 17dBi Sector.

EUT OPERATING MODES

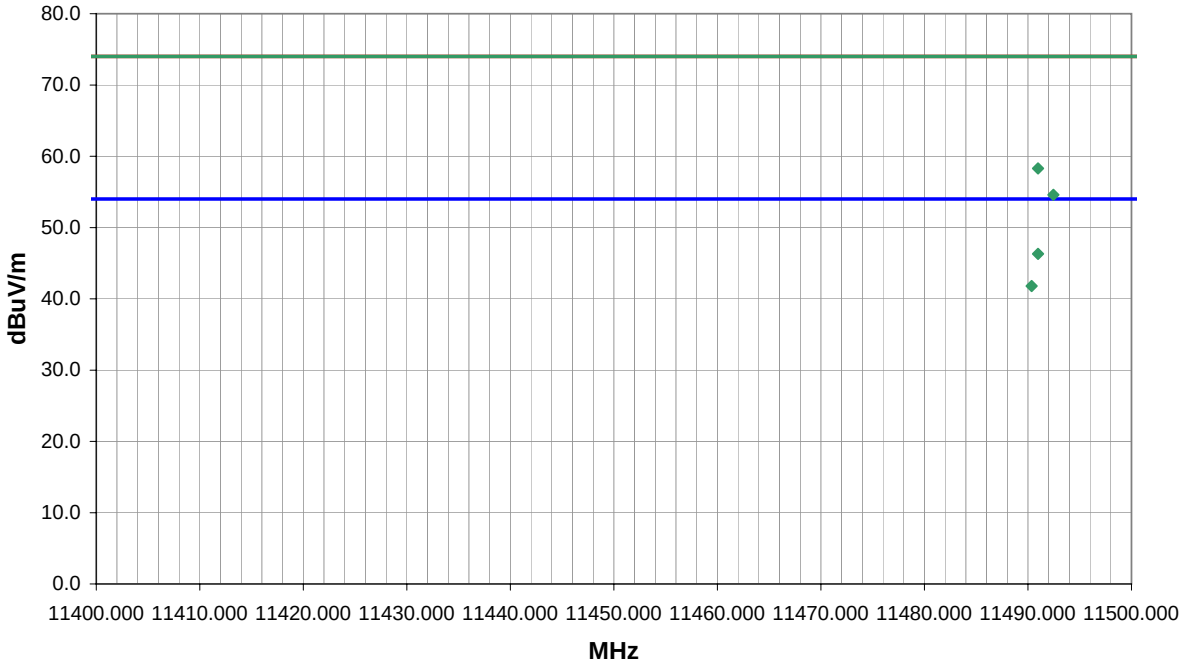
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	25
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)
11490.970	58.0	-11.7	133.0	1.1	3.0	0.0	V-Horn	AV	0.0	46.3	54.0	-7.7
11490.360	53.5	-11.7	127.0	1.4	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2
11490.970	70.0	-11.7	133.0	1.1	3.0	0.0	V-Horn	PK	0.0	58.3	74.0	-15.7
11492.450	66.3	-11.7	127.0	1.4	3.0	0.0	H-Horn	PK	0.0	54.6	74.0	-19.4

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/23/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	38%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -15. Antenna: 17dBi Sector.

EUT OPERATING MODES

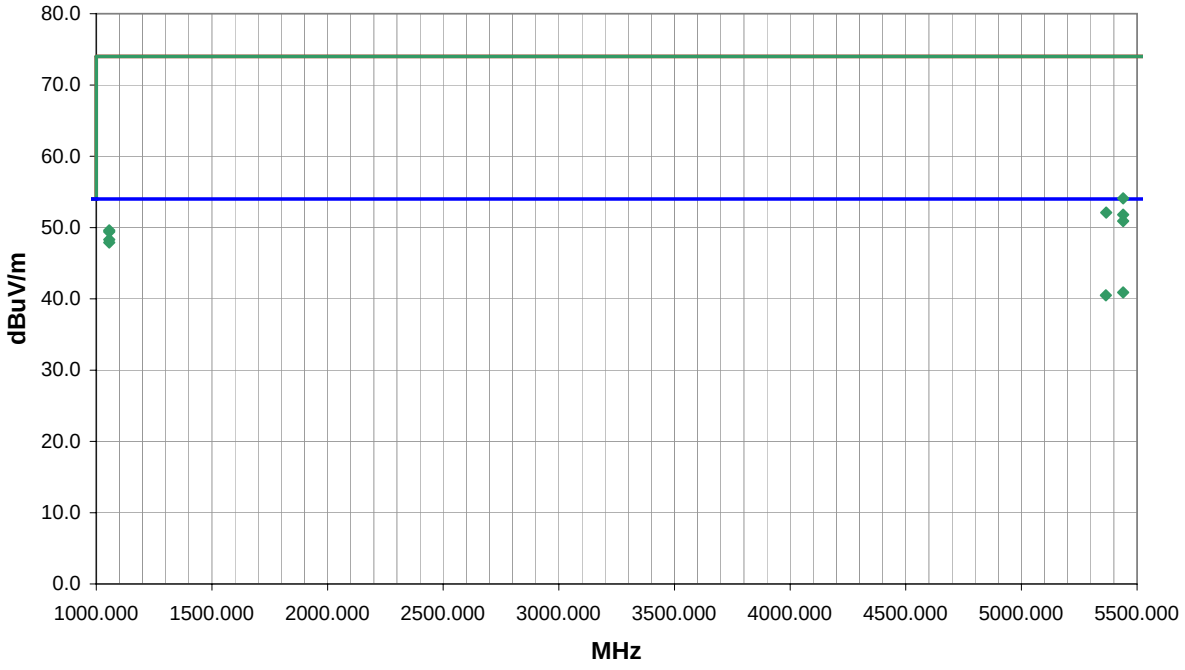
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	35
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)
5440.032	43.8	7.1	132.0	1.2	3.0	0.0	V-Horn	AV	0.0	50.9	54.0	-3.1
1056.035	56.8	-8.5	209.0	1.3	3.0	0.0	V-Horn	AV	0.0	48.3	54.0	-5.7
1056.041	56.4	-8.5	171.0	1.2	3.0	0.0	H-Horn	AV	0.0	47.9	54.0	-6.1
5440.006	33.8	7.1	185.0	1.0	3.0	0.0	H-Horn	AV	0.0	40.9	54.0	-13.1
5365.347	33.7	6.8	137.0	1.3	3.0	0.0	V-Horn	AV	0.0	40.5	54.0	-13.5
5439.866	47.0	7.1	132.0	1.2	3.0	0.0	V-Horn	PK	0.0	54.1	74.0	-19.9
5366.371	45.3	6.8	137.0	1.3	3.0	0.0	V-Horn	PK	0.0	52.1	74.0	-21.9
5439.814	44.7	7.1	185.0	1.0	3.0	0.0	H-Horn	PK	0.0	51.8	74.0	-22.2
1056.059	58.1	-8.5	209.0	1.3	3.0	0.0	V-Horn	PK	0.0	49.6	74.0	-24.4
1056.146	57.9	-8.5	171.0	1.2	3.0	0.0	H-Horn	PK	0.0	49.4	74.0	-24.6

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 24 dBi Dish.

EUT OPERATING MODES

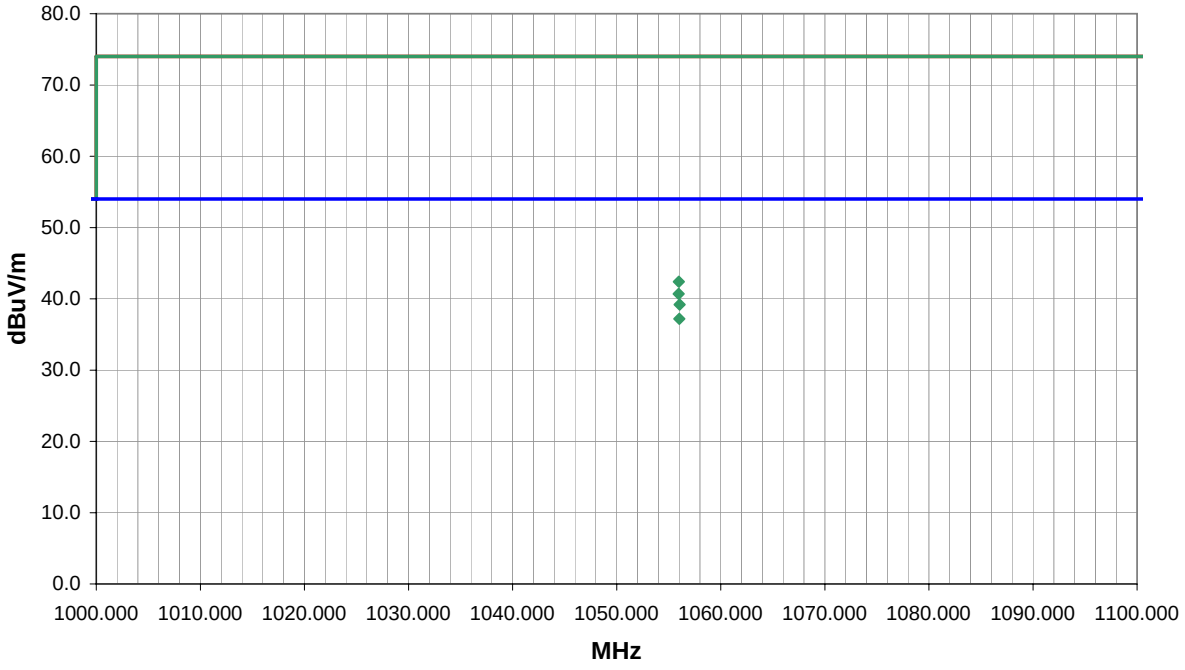
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	42
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)
1056.047	48.0	-8.8	327.0	1.0	3.0	0.0	V-Horn	AV	0.0	39.2	54.0	-14.8
1056.018	46.0	-8.8	56.0	1.0	3.0	0.0	H-Horn	AV	0.0	37.2	54.0	-16.8
1055.970	51.2	-8.8	327.0	1.0	3.0	0.0	V-Horn	PK	0.0	42.4	74.0	-31.6
1055.958	49.5	-8.8	56.0	1.0	3.0	0.0	H-Horn	PK	0.0	40.7	74.0	-33.3

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 24 dBi Dish.

EUT OPERATING MODES

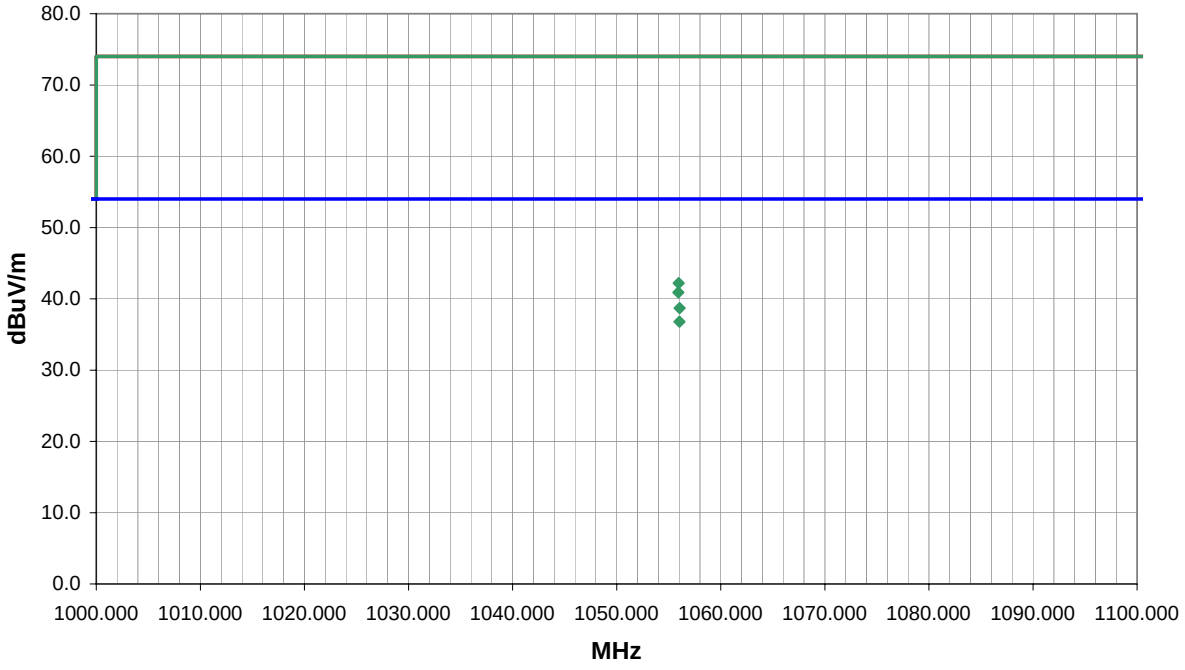
6 Mbps. Channel 157.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	41
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)
1056.045	47.5	-8.8	324.0	1.0	3.0	0.0	V-Horn	AV	0.0	38.7	54.0	-15.3
1056.031	45.6	-8.8	57.0	1.0	3.0	0.0	H-Horn	AV	0.0	36.8	54.0	-17.2
1055.961	51.0	-8.8	324.0	1.0	3.0	0.0	V-Horn	PK	0.0	42.2	74.0	-31.8
1055.927	49.7	-8.8	57.0	1.0	3.0	0.0	H-Horn	PK	0.0	40.9	74.0	-33.1

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 24 dBi Dish.

EUT OPERATING MODES

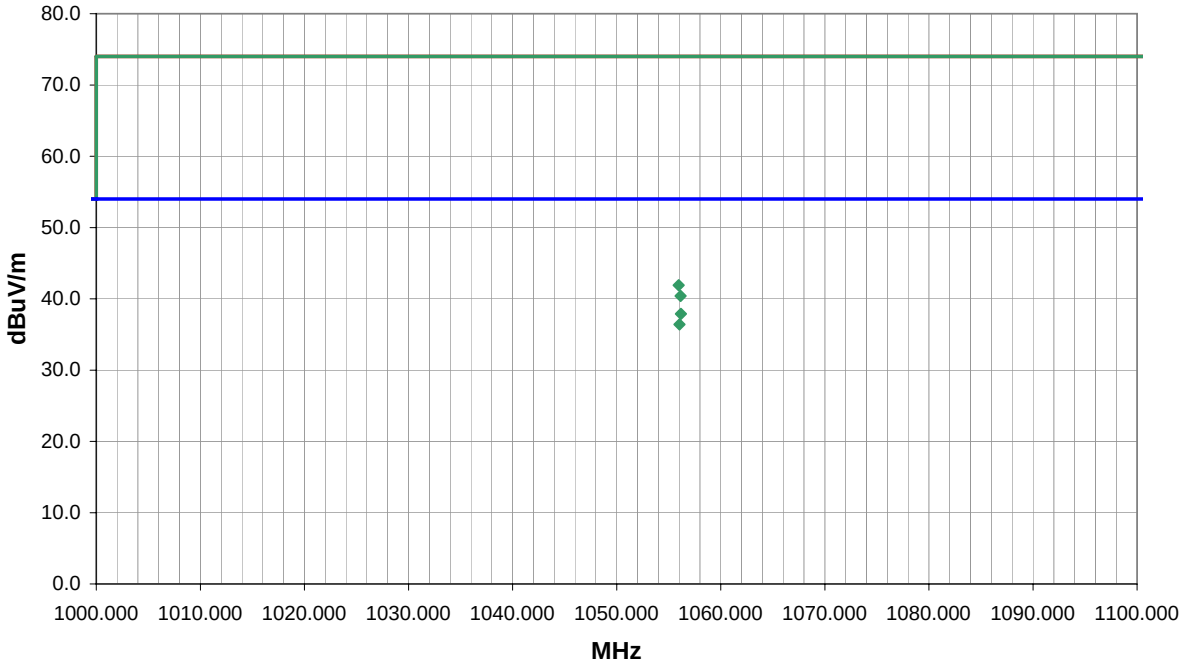
6 Mbps. Channel 165.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	43
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)
1056.171	46.7	-8.8	324.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.9	54.0	-16.1
1056.034	45.2	-8.8	54.0	1.0	3.0	0.0	H-Horn	AV	0.0	36.4	54.0	-17.6
1055.954	50.7	-8.8	324.0	1.0	3.0	0.0	V-Horn	PK	0.0	41.9	74.0	-32.1
1056.144	49.2	-8.8	54.0	1.0	3.0	0.0	H-Horn	PK	0.0	40.4	74.0	-33.6

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 24 dBi Dish.

EUT OPERATING MODES

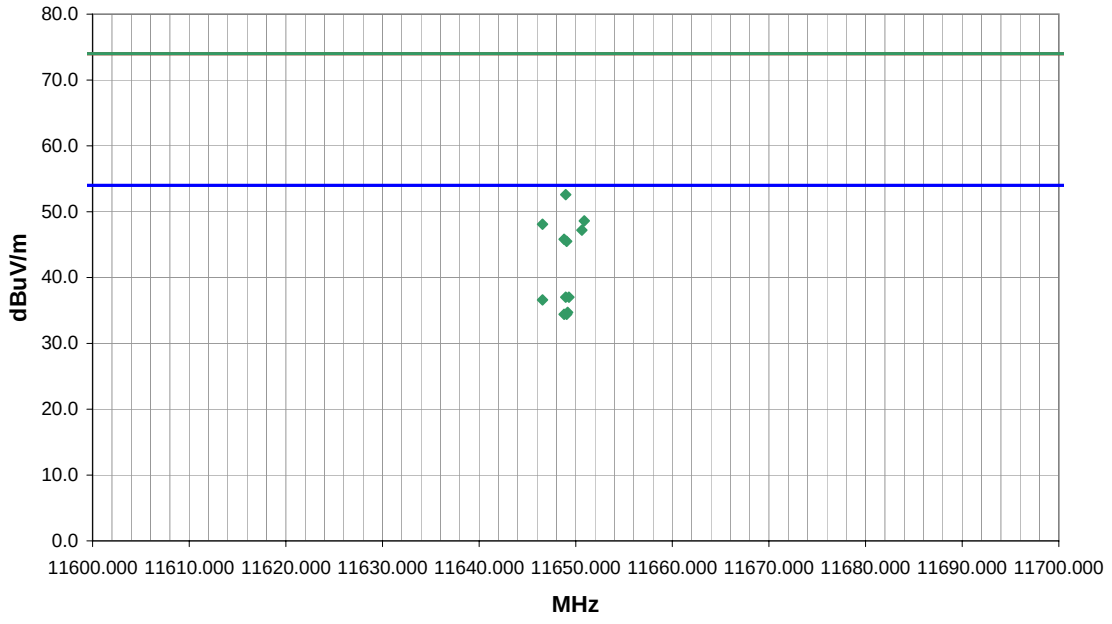
Data Rates see comments below. Channel 165.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	43
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
11648.960	48.2	-11.2	159.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0	36Mbps
11649.290	48.2	-11.2	159.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0	6Mbps
11646.570	47.8	-11.2	159.0	1.0	3.0	0.0	V-Horn	AV	0.0	36.6	54.0	-17.4	54Mbps
11649.160	45.9	-11.2	160.0	1.0	3.0	0.0	H-Horn	AV	0.0	34.7	54.0	-19.3	6Mbps
11648.800	45.6	-11.2	159.0	1.0	3.0	0.0	H-Horn	AV	0.0	34.4	54.0	-19.6	36Mbps
11649.060	45.6	-11.2	159.0	1.0	3.0	0.0	H-Horn	AV	0.0	34.4	54.0	-19.6	54Mbps
11648.960	63.8	-11.2	159.0	1.0	3.0	0.0	V-Horn	PK	0.0	52.6	74.0	-21.4	36Mbps
11650.890	59.8	-11.2	159.0	1.0	3.0	0.0	V-Horn	PK	0.0	48.6	74.0	-25.4	6Mbps
11646.570	59.3	-11.2	159.0	1.0	3.0	0.0	V-Horn	PK	0.0	48.1	74.0	-25.9	54Mbps
11650.640	58.4	-11.2	160.0	1.0	3.0	0.0	H-Horn	PK	0.0	47.2	74.0	-26.8	6Mbps
11648.800	57.0	-11.2	159.0	1.0	3.0	0.0	H-Horn	PK	0.0	45.8	74.0	-28.2	36Mbps
11649.060	56.7	-11.2	159.0	1.0	3.0	0.0	H-Horn	PK	0.0	45.5	74.0	-28.5	54Mbps

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 24 dBi Dish.

EUT OPERATING MODES

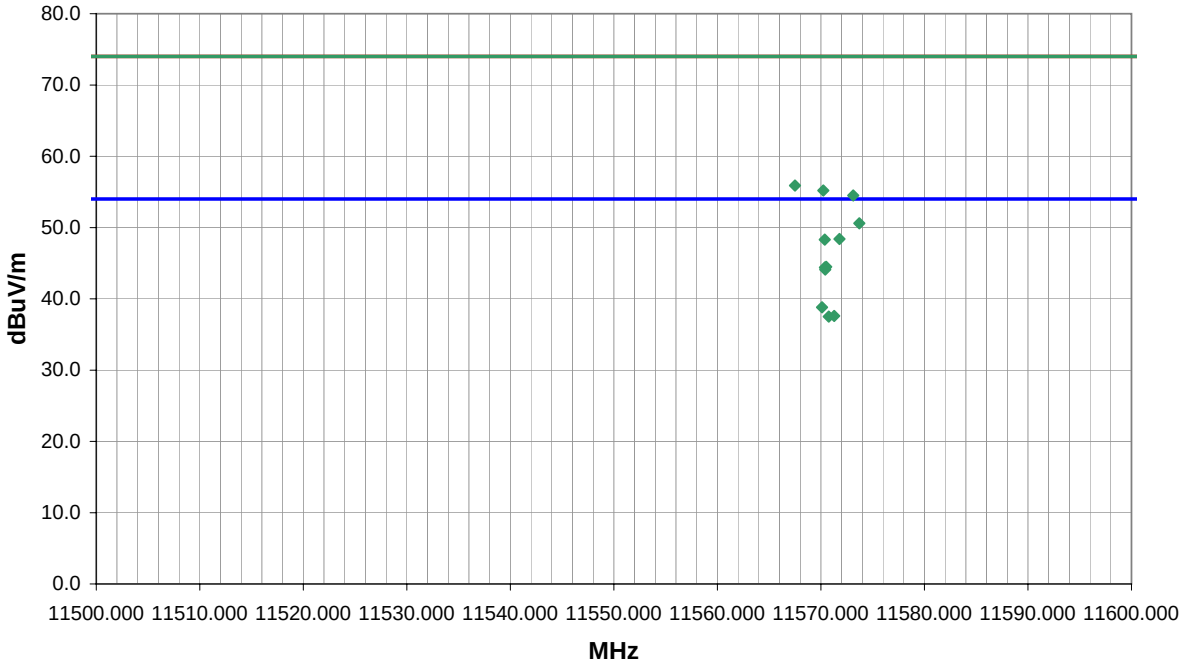
Data Rates see below Channel 157.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	45
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)
11570.510	56.0	-11.5	160.0	1.0	3.0	0.0	V-Horn	AV	0.0	44.5	54.0	-9.5
11570.390	55.9	-11.5	160.0	1.0	3.0	0.0	V-Horn	AV	0.0	44.4	54.0	-9.6
11570.420	55.6	-11.5	160.0	1.0	3.0	0.0	V-Horn	AV	0.0	44.1	54.0	-9.9
11570.110	50.3	-11.5	159.0	1.0	3.0	0.0	H-Horn	AV	0.0	38.8	54.0	-15.2
11571.280	49.1	-11.5	160.0	1.0	3.0	0.0	H-Horn	AV	0.0	37.6	54.0	-16.4
11570.750	49.0	-11.5	160.0	1.0	3.0	0.0	H-Horn	AV	0.0	37.5	54.0	-16.5
11567.490	67.4	-11.5	160.0	1.0	3.0	0.0	V-Horn	PK	0.0	55.9	74.0	-18.1
11570.230	66.7	-11.5	160.0	1.0	3.0	0.0	V-Horn	PK	0.0	55.2	74.0	-18.8
11573.120	66.0	-11.5	160.0	1.0	3.0	0.0	V-Horn	PK	0.0	54.5	74.0	-19.5
11573.710	62.1	-11.5	159.0	1.0	3.0	0.0	H-Horn	PK	0.0	50.6	74.0	-23.4
11571.790	59.9	-11.5	160.0	1.0	3.0	0.0	H-Horn	PK	0.0	48.4	74.0	-25.6
11570.370	59.8	-11.5	160.0	1.0	3.0	0.0	H-Horn	PK	0.0	48.3	74.0	-25.7

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/25/08
Customer:	Honeywell			Temperature:	24
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40 Antenna: 24 dBi Dish.

EUT OPERATING MODES

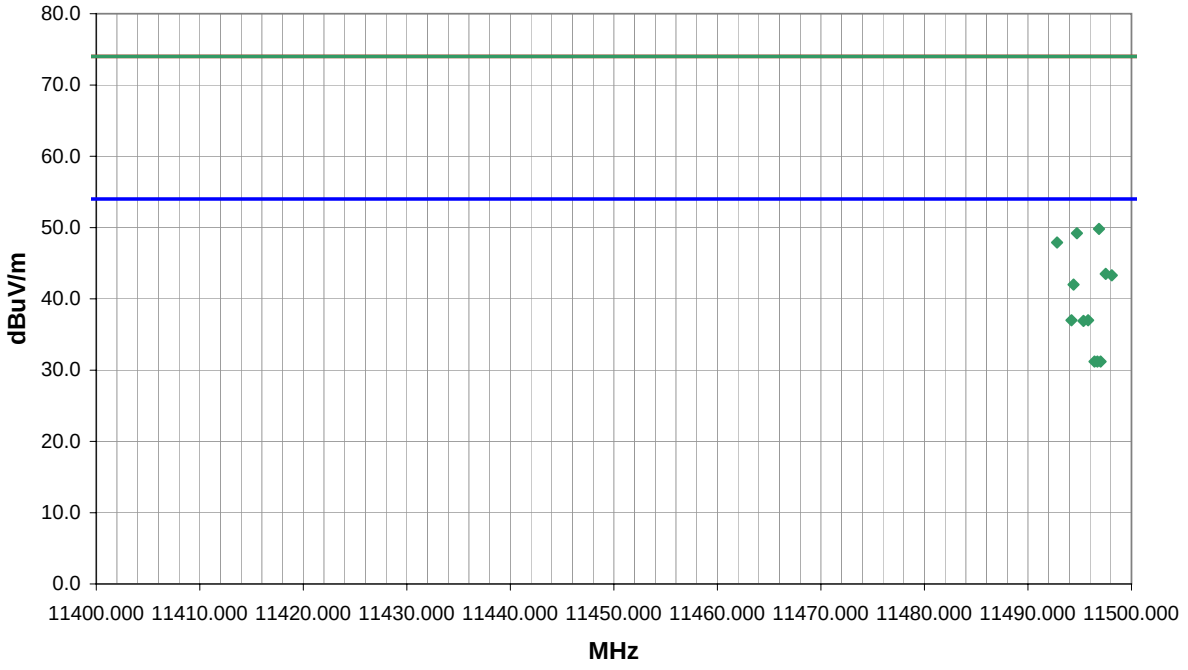
Data Rates see below. Channel 149.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	46
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)
11494.200	48.7	-11.7	159.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
11495.810	48.6	-11.6	159.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
11495.360	48.5	-11.6	159.0	1.0	3.0	0.0	V-Horn	AV	0.0	36.9	54.0	-17.1
11496.430	42.8	-11.6	159.0	1.0	3.0	0.0	H-Horn	AV	0.0	31.2	54.0	-22.8
11496.710	42.8	-11.6	159.0	1.0	3.0	0.0	H-Horn	AV	0.0	31.2	54.0	-22.8
11497.020	42.8	-11.6	159.0	1.0	3.0	0.0	H-Horn	AV	0.0	31.2	54.0	-22.8
11496.870	61.5	-11.7	159.0	1.0	3.0	0.0	V-Horn	PK	0.0	49.8	74.0	-24.2
11494.730	60.8	-11.6	159.0	1.0	3.0	0.0	V-Horn	PK	0.0	49.2	74.0	-24.8
11492.820	59.6	-11.7	159.0	1.0	3.0	0.0	V-Horn	PK	0.0	47.9	74.0	-26.1
11497.510	55.2	-11.7	159.0	1.0	3.0	0.0	H-Horn	PK	0.0	43.5	74.0	-30.5
11498.100	54.9	-11.6	159.0	1.0	3.0	0.0	H-Horn	PK	0.0	43.3	74.0	-30.7
11494.410	53.7	-11.7	159.0	1.0	3.0	0.0	H-Horn	PK	0.0	42.0	74.0	-32.0

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.05.07
EMI 2006.4.26

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/22/08
Customer:	Honeywell			Temperature:	21
Attendees:	David Shipley			Humidity:	36%
Project:	None			Barometric Pres.:	1016
Tested by:	Jeremiah Darden	Power:	120VAC/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

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

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40. Antenna: 24dBi Dish.

EUT OPERATING MODES

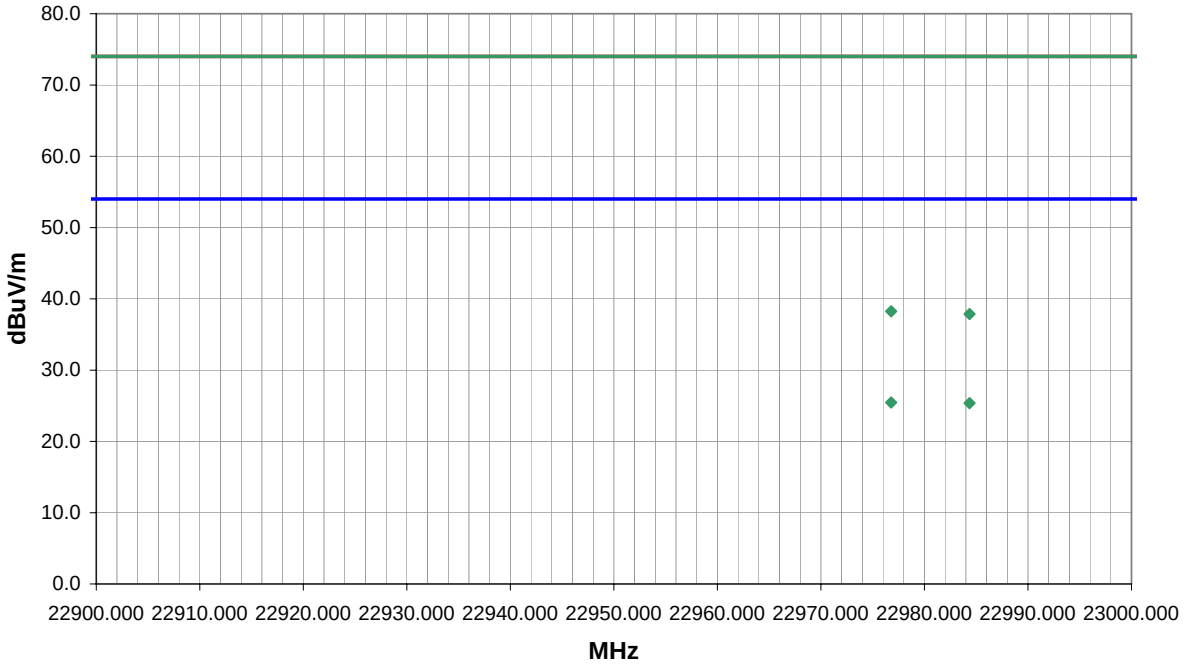
6 Mbps. Channel 149.

DEVIATIONS FROM TEST STANDARD

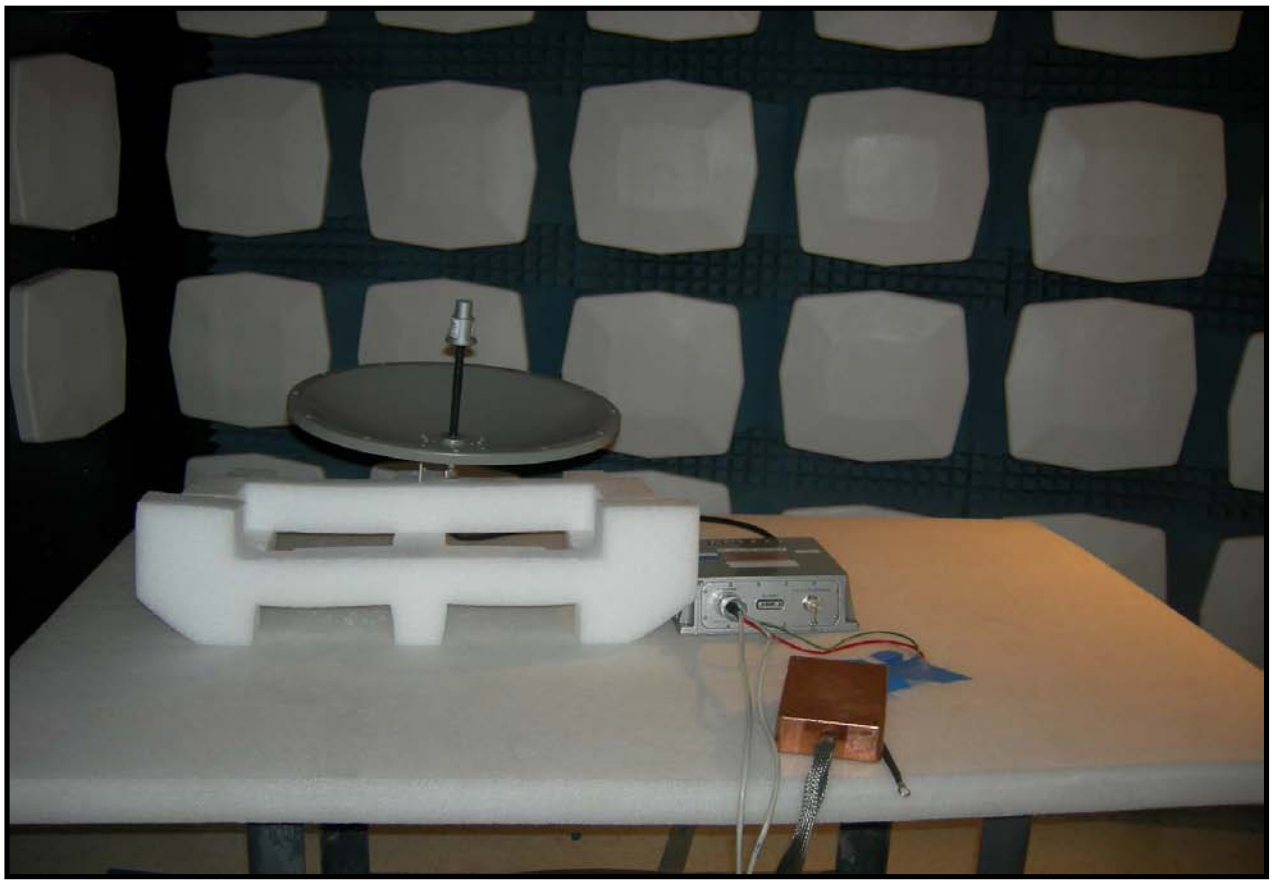
No deviations.

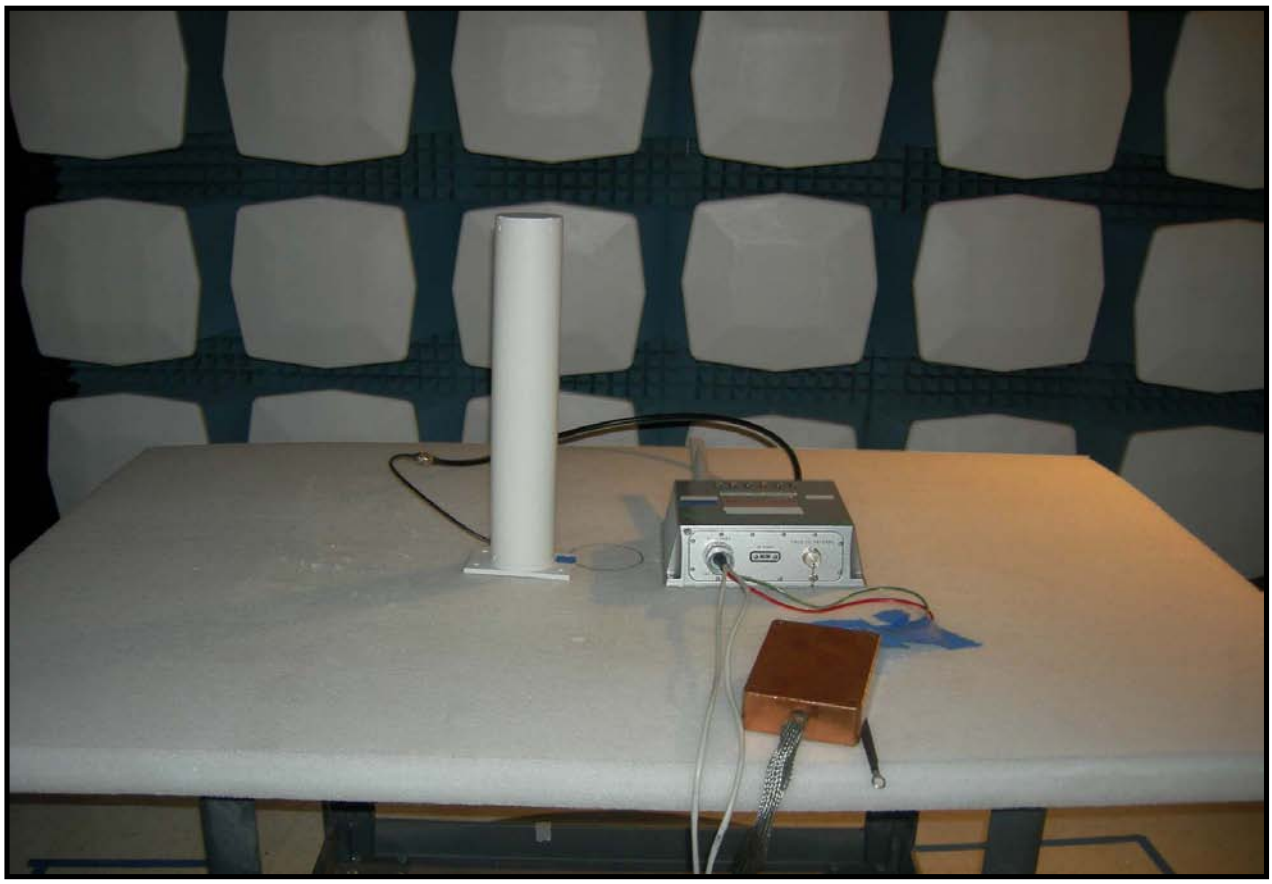
Run #	21
Configuration #	1
Results	Pass

Signature



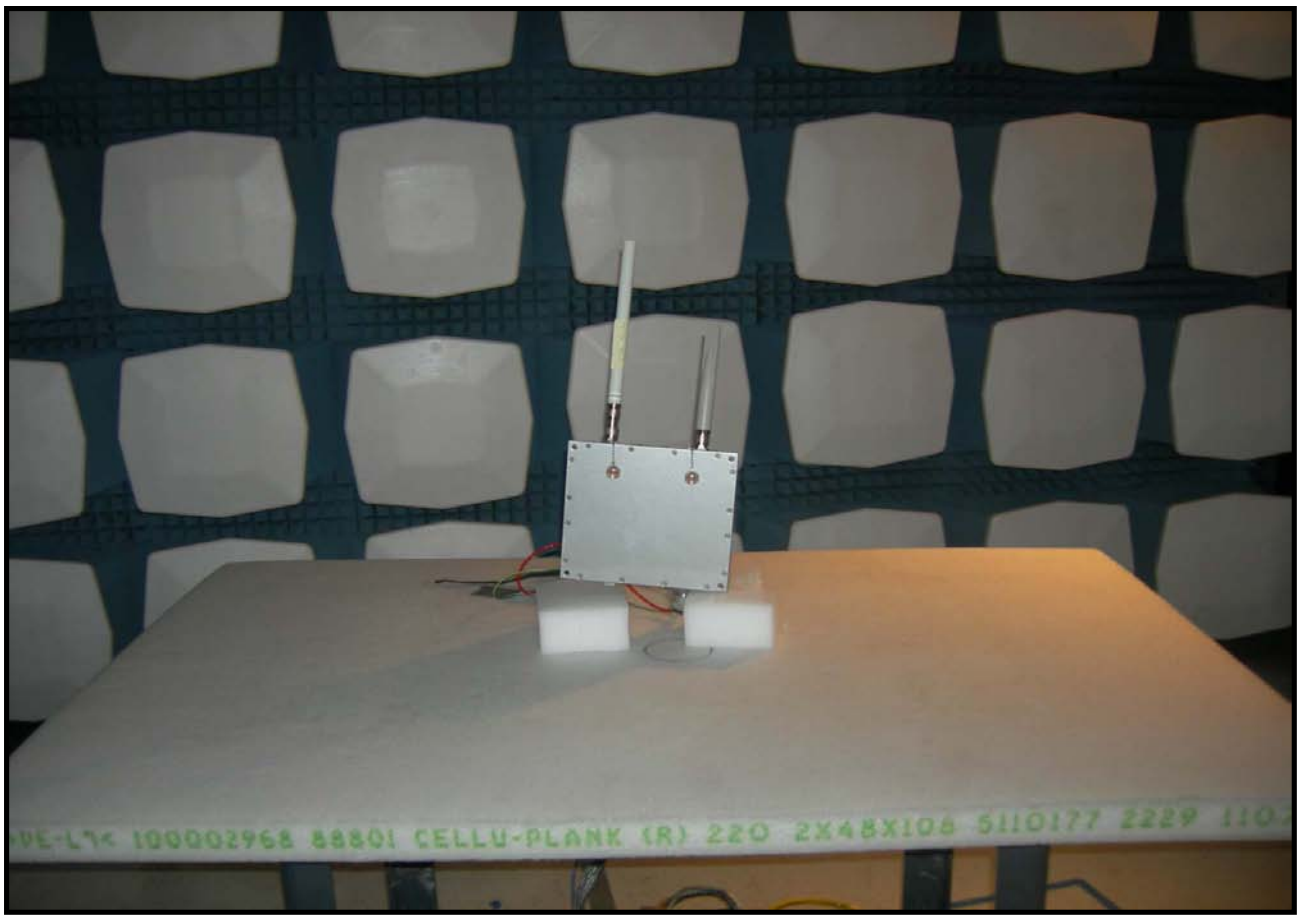
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)
22976.790	34.9	0.1	166.0	1.2	1.0	0.0	√-High Horr	AV	-9.5	25.5	54.0	-28.5
22984.360	34.8	0.1	166.0	1.2	1.0	0.0	⊣-High Horr	AV	-9.5	25.4	54.0	-28.6
22976.790	47.7	0.1	166.0	1.2	1.0	0.0	√-High Horr	PK	-9.5	38.3	74.0	-35.7
22984.360	47.3	0.1	166.0	1.2	1.0	0.0	⊣-High Horr	PK	-9.5	37.9	74.0	-36.1






100002968 88801 CELLU-PLANK (R) 220 2X48X108 5110177


100002968 88801 CELLU-PLANK (R) 220 2X48X108 5110177


CELLU-PLANK (R) 220 2X48X108

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

Channel 11 (2462 MHz). Data Rate: 6 Mbps.
Channel 6 (2437 MHz). Data Rate: 6 Mbps.
Channel 1 (2412 MHz). Data Rate: 6 Mbps.

POWER SETTINGS INVESTIGATED

120V/60Hz

CONFIGURATIONS INVESTIGATED

HONE0031 - 1

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
LISN	Solar	9252-50-R-24-BNC	LIC	2/6/2008	13 mo
OC06 Cables B and C			OCM	1/10/2008	13 mo
Receiver	Rohde & Schwarz	ESCI	ARF	12/14/2007	13 mo

MEASUREMENT BANDWIDTHS

	Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (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

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm.

NORTHWEST

EMC

CONDUCTED EMISSIONS

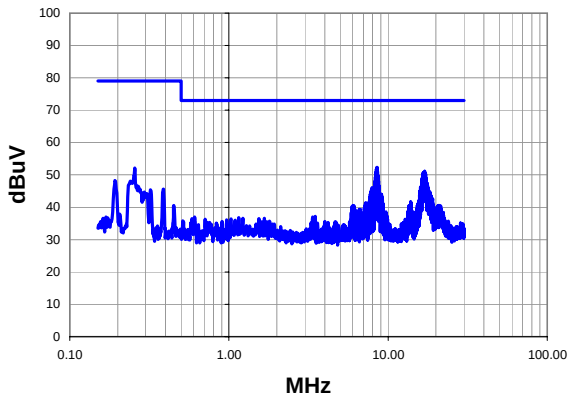
Version 2008.3.31
PSA-ESCI 2008.05.13

Work Order:	HONE0031	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh
EUT:	Multinode (R110 Extended Temperature)				
Configuration:	1				
Customer:	Honeywell				
Attendees:	David Shipley				
EUT Power:	120V/60Hz				
Operating Mode:	Channel 1 (2412 MHz). Data Rate: 6 Mbps.				
Deviations:	No deviations.				
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:-12 Antenna: 14 dBi Sector.				

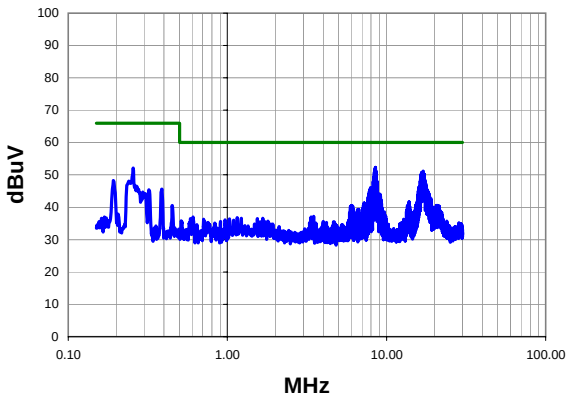
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

Run #	1	**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)
8.520	31.6	20.8	52.4	73.0	-20.6
8.450	31.1	20.8	51.9	73.0	-21.1
8.570	30.6	20.8	51.4	73.0	-21.6
16.960	30.1	21.1	51.2	73.0	-21.8
8.390	30.2	20.7	50.9	73.0	-22.1
16.680	29.7	21.1	50.8	73.0	-22.2
16.750	29.6	21.1	50.7	73.0	-22.3
16.630	29.6	21.1	50.7	73.0	-22.3
17.080	29.5	21.1	50.6	73.0	-22.4
17.020	29.5	21.1	50.6	73.0	-22.4
17.210	29.2	21.1	50.3	73.0	-22.7
16.800	29.2	21.1	50.3	73.0	-22.7
16.500	29.2	21.1	50.3	73.0	-22.7
17.150	29.1	21.1	50.2	73.0	-22.8
16.560	29.1	21.1	50.2	73.0	-22.8
8.640	29.0	20.8	49.8	73.0	-23.2
16.870	28.4	21.1	49.5	73.0	-23.5
8.320	28.6	20.7	49.3	73.0	-23.7
16.440	28.2	21.1	49.3	73.0	-23.7
17.280	27.9	21.1	49.0	73.0	-24.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.520	31.6	20.8	52.4	60.0	-7.6
8.450	31.1	20.8	51.9	60.0	-8.1
8.570	30.6	20.8	51.4	60.0	-8.6
16.960	30.1	21.1	51.2	60.0	-8.8
8.390	30.2	20.7	50.9	60.0	-9.1
16.680	29.7	21.1	50.8	60.0	-9.2
16.750	29.6	21.1	50.7	60.0	-9.3
16.630	29.6	21.1	50.7	60.0	-9.3
17.080	29.5	21.1	50.6	60.0	-9.4
17.020	29.5	21.1	50.6	60.0	-9.4
17.210	29.2	21.1	50.3	60.0	-9.7
16.800	29.2	21.1	50.3	60.0	-9.7
16.500	29.2	21.1	50.3	60.0	-9.7
17.150	29.1	21.1	50.2	60.0	-9.8
16.560	29.1	21.1	50.2	60.0	-9.8
8.640	29.0	20.8	49.8	60.0	-10.2
16.870	28.4	21.1	49.5	60.0	-10.5
8.320	28.6	20.7	49.3	60.0	-10.7
16.440	28.2	21.1	49.3	60.0	-10.7
17.280	27.9	21.1	49.0	60.0	-11.0

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

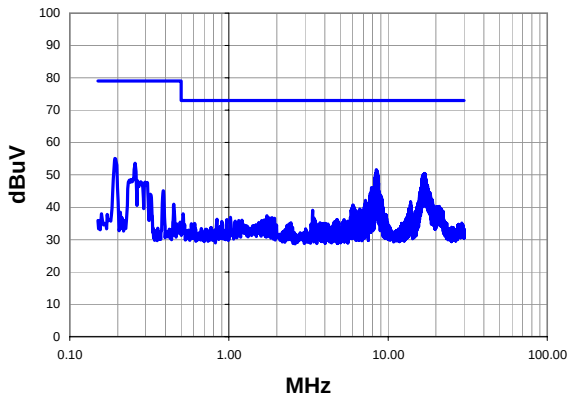
Work Order:	HONE0031	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	Multinode (R110 Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 1 (2412 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:-12 Antenna: 14 dBi Sector.

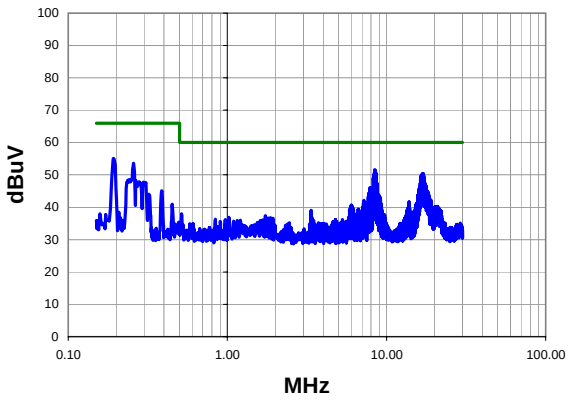
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

Run #	2	**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)
8.450	30.9	20.8	51.7	73.0	-21.3
8.510	30.5	20.8	51.3	73.0	-21.7
8.570	29.9	20.8	50.7	73.0	-22.3
8.390	29.9	20.7	50.6	73.0	-22.4
16.900	29.4	21.1	50.5	73.0	-22.5
17.020	29.3	21.1	50.4	73.0	-22.6
17.080	29.2	21.1	50.3	73.0	-22.7
16.740	29.1	21.1	50.2	73.0	-22.8
16.970	29.0	21.1	50.1	73.0	-22.9
16.620	29.0	21.1	50.1	73.0	-22.9
16.830	28.8	21.1	49.9	73.0	-23.1
16.560	28.8	21.1	49.9	73.0	-23.1
8.330	29.1	20.7	49.8	73.0	-23.2
8.630	29.0	20.8	49.8	73.0	-23.2
17.150	28.6	21.1	49.7	73.0	-23.3
16.680	28.5	21.1	49.6	73.0	-23.4
16.510	28.4	21.1	49.5	73.0	-23.5
16.440	28.4	21.1	49.5	73.0	-23.5
0.193	33.5	21.6	55.1	79.0	-23.9
8.260	28.3	20.7	49.0	73.0	-24.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.450	30.9	20.8	51.7	60.0	-8.3
8.510	30.5	20.8	51.3	60.0	-8.7
8.570	29.9	20.8	50.7	60.0	-9.3
8.390	29.9	20.7	50.6	60.0	-9.4
16.900	29.4	21.1	50.5	60.0	-9.5
17.020	29.3	21.1	50.4	60.0	-9.6
17.080	29.2	21.1	50.3	60.0	-9.7
16.740	29.1	21.1	50.2	60.0	-9.8
16.970	29.0	21.1	50.1	60.0	-9.9
16.620	29.0	21.1	50.1	60.0	-9.9
16.830	28.8	21.1	49.9	60.0	-10.1
16.560	28.8	21.1	49.9	60.0	-10.1
8.330	29.1	20.7	49.8	60.0	-10.2
8.630	29.0	20.8	49.8	60.0	-10.2
17.150	28.6	21.1	49.7	60.0	-10.3
16.680	28.5	21.1	49.6	60.0	-10.4
16.510	28.4	21.1	49.5	60.0	-10.5
16.440	28.4	21.1	49.5	60.0	-10.5
0.193	33.5	21.6	55.1	66.0	-10.9
8.260	28.3	20.7	49.0	60.0	-11.0

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

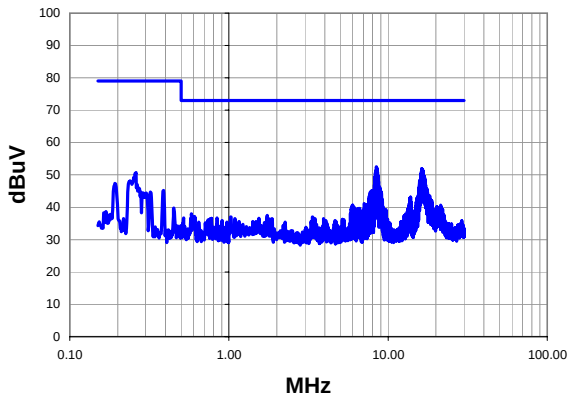
Work Order:	HONE0031	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	Multinode (R110 Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 6 (2437 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:-12 Antenna: 14 dBi Sector.

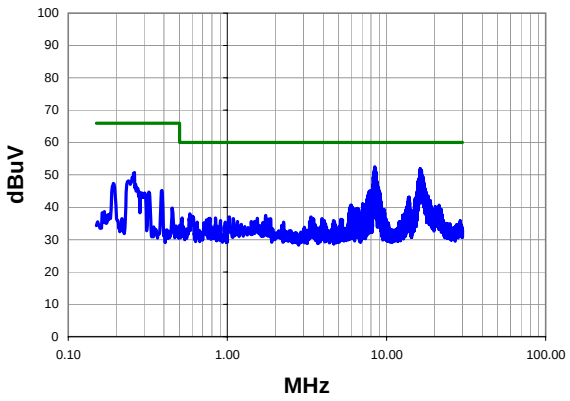
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

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)
8.450	31.8	20.8	52.6	73.0	-20.4
8.510	31.3	20.8	52.1	73.0	-20.9
16.310	30.9	21.1	52.0	73.0	-21.0
16.430	30.5	21.1	51.6	73.0	-21.4
16.370	30.5	21.1	51.6	73.0	-21.4
16.250	30.5	21.1	51.6	73.0	-21.4
16.500	30.4	21.1	51.5	73.0	-21.5
8.390	30.7	20.7	51.4	73.0	-21.6
16.560	30.2	21.1	51.3	73.0	-21.7
16.190	30.1	21.1	51.2	73.0	-21.8
8.570	30.3	20.8	51.1	73.0	-21.9
8.320	29.9	20.7	50.6	73.0	-22.4
16.120	29.4	21.1	50.5	73.0	-22.5
16.620	29.2	21.1	50.3	73.0	-22.7
8.630	29.0	20.8	49.8	73.0	-23.2
16.770	28.7	21.1	49.8	73.0	-23.2
16.900	28.4	21.1	49.5	73.0	-23.5
8.260	28.6	20.7	49.3	73.0	-23.7
16.830	28.2	21.1	49.3	73.0	-23.7
16.960	28.0	21.1	49.1	73.0	-23.9

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.450	31.8	20.8	52.6	60.0	-7.4
8.510	31.3	20.8	52.1	60.0	-7.9
16.310	30.9	21.1	52.0	60.0	-8.0
16.430	30.5	21.1	51.6	60.0	-8.4
16.370	30.5	21.1	51.6	60.0	-8.4
16.250	30.5	21.1	51.6	60.0	-8.4
16.500	30.4	21.1	51.5	60.0	-8.5
8.390	30.7	20.7	51.4	60.0	-8.6
16.560	30.2	21.1	51.3	60.0	-8.7
16.190	30.1	21.1	51.2	60.0	-8.8
8.570	30.3	20.8	51.1	60.0	-8.9
8.320	29.9	20.7	50.6	60.0	-9.4
16.120	29.4	21.1	50.5	60.0	-9.5
16.620	29.2	21.1	50.3	60.0	-9.7
8.630	29.0	20.8	49.8	60.0	-10.2
16.770	28.7	21.1	49.8	60.0	-10.2
16.900	28.4	21.1	49.5	60.0	-10.5
8.260	28.6	20.7	49.3	60.0	-10.7
16.830	28.2	21.1	49.3	60.0	-10.7
16.960	28.0	21.1	49.1	60.0	-10.9

NORTHWEST

EMC

CONDUCTED EMISSIONS

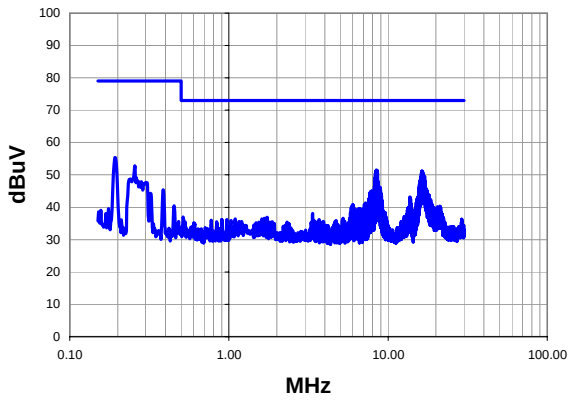
Version 2008.3.31
PSA-ESCI 2008.05.13

Work Order:	HONE0031	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh
EUT:	Multinode (R110 Extended Temperature)				
Configuration:	1				
Customer:	Honeywell				
Attendees:	David Shipley				
EUT Power:	120V/60Hz				
Operating Mode:	Channel 6 (2437 MHz). Data Rate: 6 Mbps.				
Deviations:	No deviations.				
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:-12 Antenna: 14 dBi Sector.				

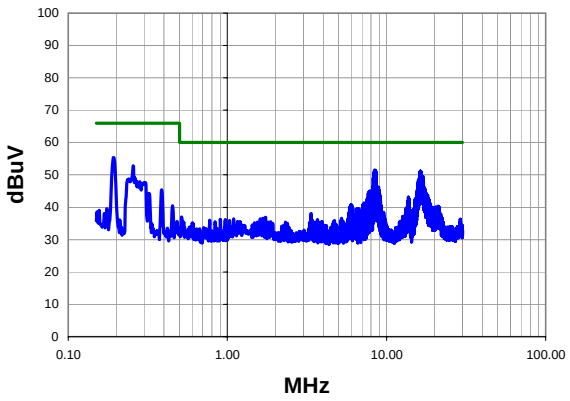
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

Run #	4	**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)
8.450	30.8	20.8	51.6	73.0	-21.4
8.510	30.6	20.8	51.4	73.0	-21.6
8.570	30.5	20.8	51.3	73.0	-21.7
8.390	30.5	20.7	51.2	73.0	-21.8
16.370	30.1	21.1	51.2	73.0	-21.8
16.310	30.1	21.1	51.2	73.0	-21.8
16.440	30.0	21.1	51.1	73.0	-21.9
16.250	29.9	21.1	51.0	73.0	-22.0
16.490	29.8	21.1	50.9	73.0	-22.1
16.180	29.5	21.1	50.6	73.0	-22.4
8.320	29.7	20.7	50.4	73.0	-22.6
16.550	29.2	21.1	50.3	73.0	-22.7
16.120	28.5	21.1	49.6	73.0	-23.4
16.960	28.4	21.1	49.5	73.0	-23.5
16.830	28.4	21.1	49.5	73.0	-23.5
0.193	33.8	21.6	55.4	79.0	-23.6
16.770	28.2	21.1	49.3	73.0	-23.7
8.260	28.3	20.7	49.0	73.0	-24.0
16.640	27.9	21.1	49.0	73.0	-24.0
16.030	27.9	21.1	49.0	73.0	-24.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.450	30.8	20.8	51.6	60.0	-8.4
8.510	30.6	20.8	51.4	60.0	-8.6
8.570	30.5	20.8	51.3	60.0	-8.7
8.390	30.5	20.7	51.2	60.0	-8.8
16.370	30.1	21.1	51.2	60.0	-8.8
16.310	30.1	21.1	51.2	60.0	-8.8
16.440	30.0	21.1	51.1	60.0	-8.9
16.250	29.9	21.1	51.0	60.0	-9.0
16.490	29.8	21.1	50.9	60.0	-9.1
16.180	29.5	21.1	50.6	60.0	-9.4
8.320	29.7	20.7	50.4	60.0	-9.6
16.550	29.2	21.1	50.3	60.0	-9.7
16.120	28.5	21.1	49.6	60.0	-10.4
16.960	28.4	21.1	49.5	60.0	-10.5
16.830	28.4	21.1	49.5	60.0	-10.5
0.193	33.8	21.6	55.4	66.0	-10.6
16.770	28.2	21.1	49.3	60.0	-10.7
8.260	28.3	20.7	49.0	60.0	-11.0
16.640	27.9	21.1	49.0	60.0	-11.0
16.030	27.9	21.1	49.0	60.0	-11.0

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

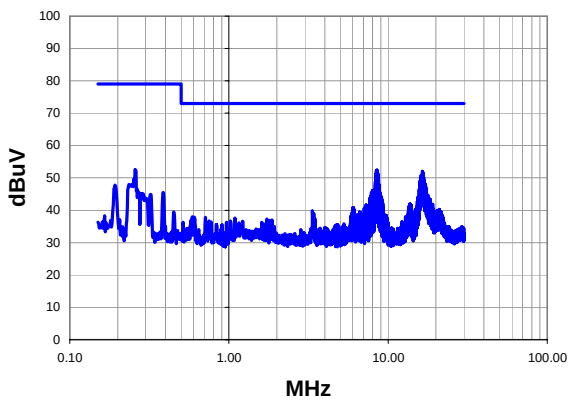
Work Order:	HONE0031	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	Multinode (R110 Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 11 (2462 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:-12 Antenna: 14 dBi Sector.

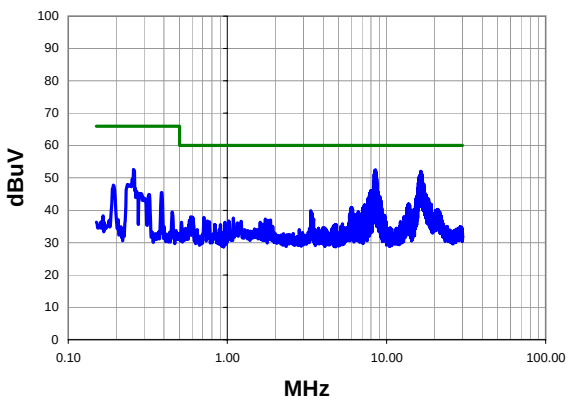
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

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)
8.500	31.8	20.8	52.6	73.0	-20.4
8.440	31.5	20.8	52.3	73.0	-20.7
8.560	31.4	20.8	52.2	73.0	-20.8
16.420	31.0	21.1	52.1	73.0	-20.9
16.480	30.8	21.1	51.9	73.0	-21.1
16.550	30.6	21.1	51.7	73.0	-21.3
16.610	30.3	21.1	51.4	73.0	-21.6
8.630	30.5	20.8	51.3	73.0	-21.7
8.380	30.4	20.7	51.1	73.0	-21.9
16.660	30.0	21.1	51.1	73.0	-21.9
16.170	29.8	21.1	50.9	73.0	-22.1
16.350	29.7	21.1	50.8	73.0	-22.2
16.090	29.3	21.1	50.4	73.0	-22.6
16.740	29.1	21.1	50.2	73.0	-22.8
16.020	29.1	21.1	50.2	73.0	-22.8
16.210	28.9	21.1	50.0	73.0	-23.0
8.690	29.0	20.8	49.8	73.0	-23.2
16.280	28.7	21.1	49.8	73.0	-23.2
16.790	28.3	21.1	49.4	73.0	-23.6
15.960	28.2	21.1	49.3	73.0	-23.7

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.500	31.8	20.8	52.6	60.0	-7.4
8.440	31.5	20.8	52.3	60.0	-7.7
8.560	31.4	20.8	52.2	60.0	-7.8
16.420	31.0	21.1	52.1	60.0	-7.9
16.480	30.8	21.1	51.9	60.0	-8.1
16.550	30.6	21.1	51.7	60.0	-8.3
16.610	30.3	21.1	51.4	60.0	-8.6
8.630	30.5	20.8	51.3	60.0	-8.7
8.380	30.4	20.7	51.1	60.0	-8.9
16.660	30.0	21.1	51.1	60.0	-8.9
16.170	29.8	21.1	50.9	60.0	-9.1
16.350	29.7	21.1	50.8	60.0	-9.2
16.090	29.3	21.1	50.4	60.0	-9.6
16.740	29.1	21.1	50.2	60.0	-9.8
16.020	29.1	21.1	50.2	60.0	-9.8
16.210	28.9	21.1	50.0	60.0	-10.0
8.690	29.0	20.8	49.8	60.0	-10.2
16.280	28.7	21.1	49.8	60.0	-10.2
16.790	28.3	21.1	49.4	60.0	-10.6
15.960	28.2	21.1	49.3	60.0	-10.7

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

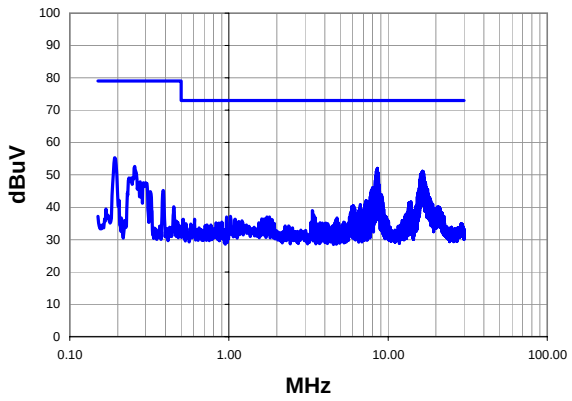
Work Order:	HONE0031	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	Multinode (R110 Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 11 (2462 MHz). Data Rate: 6 Mbps.
Deviations:	No Deviations
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:-12 Antenna: 14 dBi Sector.

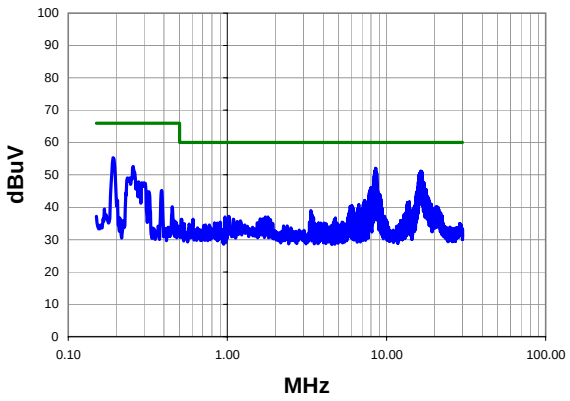
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

Run #	6	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit

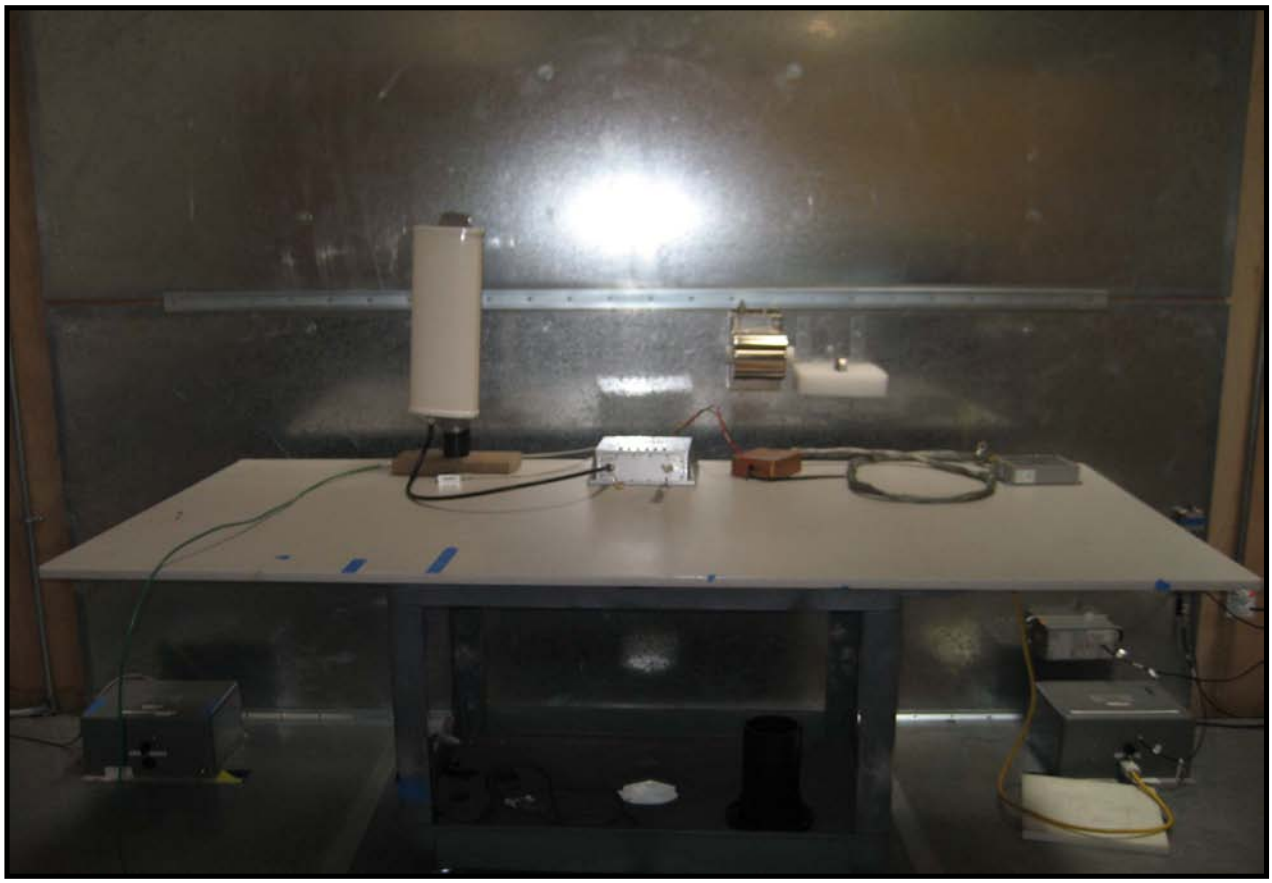


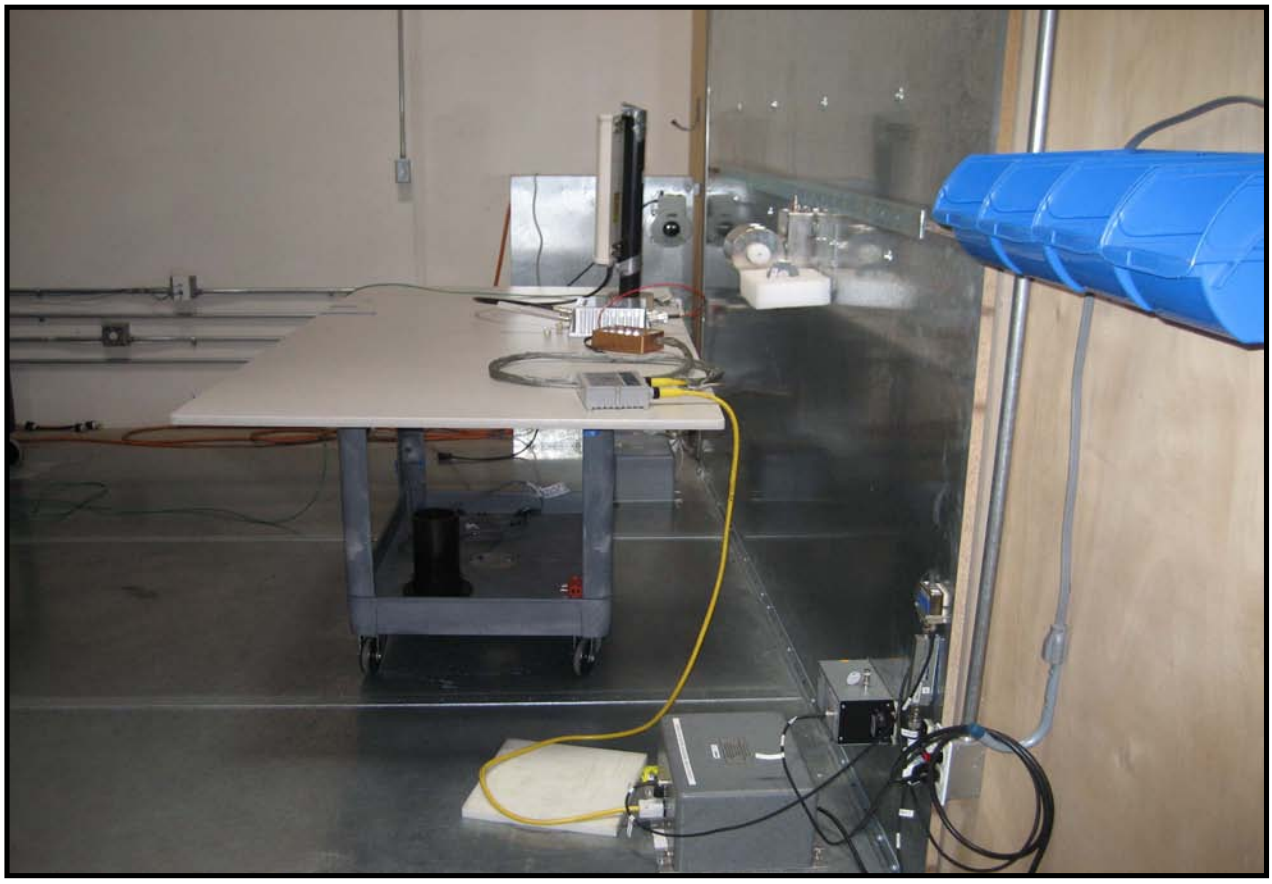
Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.560	31.3	20.8	52.1	73.0	-20.9
8.500	30.9	20.8	51.7	73.0	-21.3
16.420	30.1	21.1	51.2	73.0	-21.8
8.440	30.4	20.8	51.2	73.0	-21.8
16.600	30.0	21.1	51.1	73.0	-21.9
16.660	29.8	21.1	50.9	73.0	-22.1
16.540	29.8	21.1	50.9	73.0	-22.1
16.470	29.8	21.1	50.9	73.0	-22.1
16.350	29.8	21.1	50.9	73.0	-22.1
8.630	30.0	20.8	50.8	73.0	-22.2
8.690	29.8	20.8	50.6	73.0	-22.4
16.200	29.5	21.1	50.6	73.0	-22.4
16.720	29.3	21.1	50.4	73.0	-22.6
16.140	29.3	21.1	50.4	73.0	-22.6
16.080	29.1	21.1	50.2	73.0	-22.8
16.020	28.8	21.1	49.9	73.0	-23.1
16.300	28.6	21.1	49.7	73.0	-23.3
8.370	28.9	20.7	49.6	73.0	-23.4
15.950	28.4	21.1	49.5	73.0	-23.5
16.780	28.3	21.1	49.4	73.0	-23.6

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.560	31.3	20.8	52.1	60.0	-7.9
8.500	30.9	20.8	51.7	60.0	-8.3
16.420	30.1	21.1	51.2	60.0	-8.8
8.440	30.4	20.8	51.2	60.0	-8.8
16.600	30.0	21.1	51.1	60.0	-8.9
16.660	29.8	21.1	50.9	60.0	-9.1
16.540	29.8	21.1	50.9	60.0	-9.1
16.470	29.8	21.1	50.9	60.0	-9.1
16.350	29.8	21.1	50.9	60.0	-9.1
8.630	30.0	20.8	50.8	60.0	-9.2
8.690	29.8	20.8	50.6	60.0	-9.4
16.200	29.5	21.1	50.6	60.0	-9.4
16.720	29.3	21.1	50.4	60.0	-9.6
16.140	29.3	21.1	50.4	60.0	-9.6
16.080	29.1	21.1	50.2	60.0	-9.8
16.020	28.8	21.1	49.9	60.0	-10.1
16.300	28.6	21.1	49.7	60.0	-10.3
8.370	28.9	20.7	49.6	60.0	-10.4
15.950	28.4	21.1	49.5	60.0	-10.5
16.780	28.3	21.1	49.4	60.0	-10.6





CONDUCTED 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

Channel 165 (5825 MHz). Data Rate: 6 Mbps.
Channel 157 (5785 MHz). Data Rate: 6 Mbps.
Channel 149 (5745 MHz). Data Rate: 6 Mbps.

POWER SETTINGS INVESTIGATED

120V/60Hz

CONFIGURATIONS INVESTIGATED

HONE0031 - 1

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
OC06 Cables B and C			OCM	1/10/2008	13 mo
Receiver	Rohde & Schwarz	ESCI	ARF	12/14/2007	13 mo
LISN	Solar	9252-50-R-24-BNC	LIC	2/6/2008	13 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (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

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm.

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

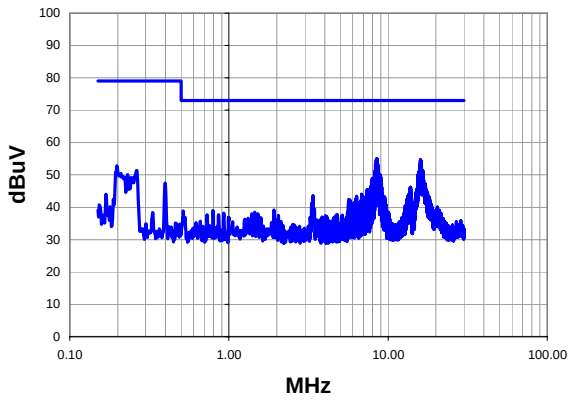
Work Order:	HONE0032	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	MultiNode (R110, Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 149 (5745 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:40. Antenna: 24 dBi Sector.

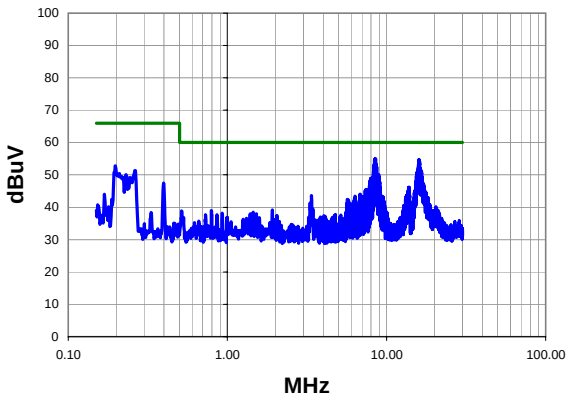
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

Run #	1	**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)
8.480	34.2	20.8	55.0	73.0	-18.0
8.540	34.1	20.8	54.9	73.0	-18.1
16.000	33.6	21.1	54.7	73.0	-18.3
8.420	33.9	20.8	54.7	73.0	-18.3
16.070	33.3	21.1	54.4	73.0	-18.6
15.950	33.3	21.1	54.4	73.0	-18.6
16.130	33.0	21.1	54.1	73.0	-18.9
15.880	32.4	21.0	53.4	73.0	-19.6
8.610	32.5	20.8	53.3	73.0	-19.7
8.340	32.4	20.7	53.1	73.0	-19.9
8.670	31.6	20.8	52.4	73.0	-20.6
15.820	31.2	21.0	52.2	73.0	-20.8
15.760	30.4	21.0	51.4	73.0	-21.6
16.480	30.3	21.1	51.4	73.0	-21.6
16.350	30.2	21.1	51.3	73.0	-21.7
8.280	30.5	20.7	51.2	73.0	-21.8
16.250	30.1	21.1	51.2	73.0	-21.8
16.590	30.0	21.1	51.1	73.0	-21.9
15.600	30.0	21.0	51.0	73.0	-22.0
16.550	29.9	21.1	51.0	73.0	-22.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.480	34.2	20.8	55.0	60.0	-5.0
8.540	34.1	20.8	54.9	60.0	-5.1
16.000	33.6	21.1	54.7	60.0	-5.3
8.420	33.9	20.8	54.7	60.0	-5.3
16.070	33.3	21.1	54.4	60.0	-5.6
15.950	33.3	21.1	54.4	60.0	-5.6
16.130	33.0	21.1	54.1	60.0	-5.9
15.880	32.4	21.0	53.4	60.0	-6.6
8.610	32.5	20.8	53.3	60.0	-6.7
8.340	32.4	20.7	53.1	60.0	-6.9
8.670	31.6	20.8	52.4	60.0	-7.6
15.820	31.2	21.0	52.2	60.0	-7.8
15.760	30.4	21.0	51.4	60.0	-8.6
16.480	30.3	21.1	51.4	60.0	-8.6
16.350	30.2	21.1	51.3	60.0	-8.7
8.280	30.5	20.7	51.2	60.0	-8.8
16.250	30.1	21.1	51.2	60.0	-8.8
16.590	30.0	21.1	51.1	60.0	-8.9
15.600	30.0	21.0	51.0	60.0	-9.0
16.550	29.9	21.1	51.0	60.0	-9.0

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

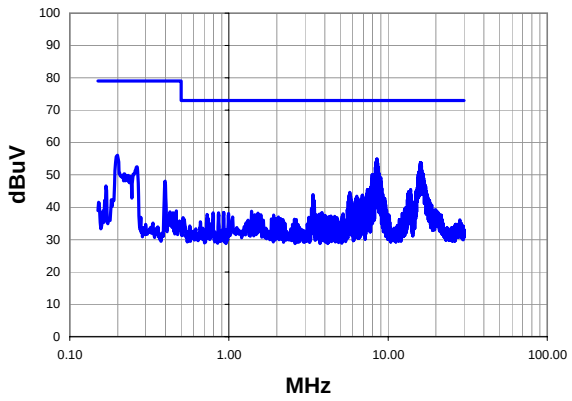
Work Order:	HONE0032	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	MultiNode (R110, Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 149 (5745 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:40. Antenna: 24 dBi Sector.

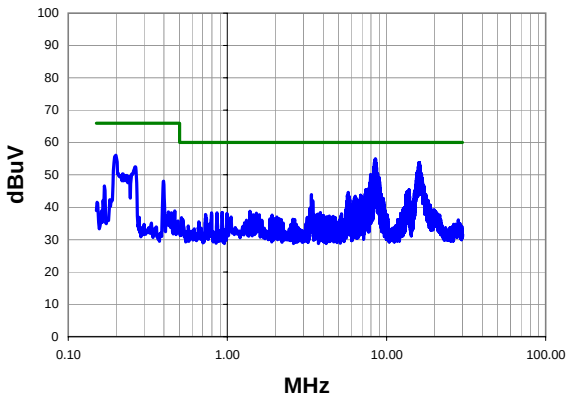
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

Run #	2	**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)
8.530	34.2	20.8	55.0	73.0	-18.0
8.470	34.0	20.8	54.8	73.0	-18.2
8.400	33.2	20.7	53.9	73.0	-19.1
16.070	32.8	21.1	53.9	73.0	-19.1
16.000	32.8	21.1	53.9	73.0	-19.1
8.600	32.8	20.8	53.6	73.0	-19.4
15.940	32.5	21.1	53.6	73.0	-19.5
16.140	32.4	21.1	53.5	73.0	-19.5
15.860	31.5	21.0	52.5	73.0	-20.5
8.650	31.7	20.8	52.5	73.0	-20.5
8.330	31.6	20.7	52.3	73.0	-20.7
16.260	30.4	21.1	51.5	73.0	-21.5
15.730	30.1	21.0	51.1	73.0	-21.9
15.660	30.0	21.0	51.0	73.0	-22.0
15.600	29.8	21.0	50.8	73.0	-22.2
15.530	29.5	21.0	50.5	73.0	-22.5
16.530	29.4	21.1	50.5	73.0	-22.5
8.270	29.6	20.7	50.3	73.0	-22.7
8.800	29.5	20.8	50.3	73.0	-22.7
16.590	29.1	21.1	50.2	73.0	-22.8

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.530	34.2	20.8	55.0	60.0	-5.0
8.470	34.0	20.8	54.8	60.0	-5.2
8.400	33.2	20.7	53.9	60.0	-6.1
16.070	32.8	21.1	53.9	60.0	-6.1
16.000	32.8	21.1	53.9	60.0	-6.1
8.600	32.8	20.8	53.6	60.0	-6.4
15.940	32.5	21.1	53.6	60.0	-6.5
16.140	32.4	21.1	53.5	60.0	-6.5
15.860	31.5	21.0	52.5	60.0	-7.5
8.650	31.7	20.8	52.5	60.0	-7.5
8.330	31.6	20.7	52.3	60.0	-7.7
16.260	30.4	21.1	51.5	60.0	-8.5
15.730	30.1	21.0	51.1	60.0	-8.9
15.660	30.0	21.0	51.0	60.0	-9.0
15.600	29.8	21.0	50.8	60.0	-9.2
15.530	29.5	21.0	50.5	60.0	-9.5
16.530	29.4	21.1	50.5	60.0	-9.5
8.270	29.6	20.7	50.3	60.0	-9.7
8.800	29.5	20.8	50.3	60.0	-9.7
16.590	29.1	21.1	50.2	60.0	-9.8

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

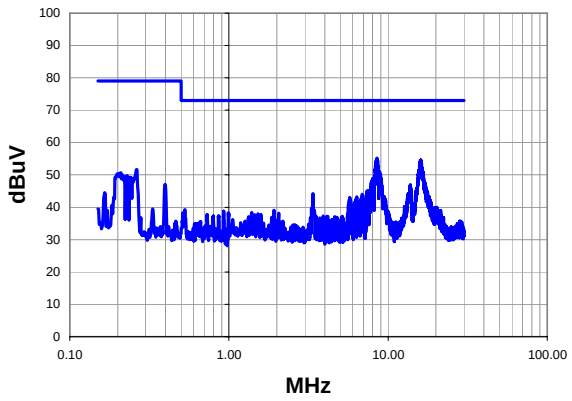
Work Order:	HONE0032	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	MultiNode (R110, Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 157 (5785 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:40. Antenna: 24 dBi Sector.

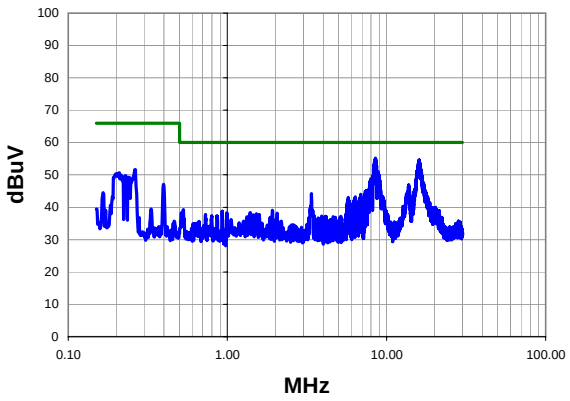
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

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)
8.530	34.4	20.8	55.2	73.0	-17.8
16.060	33.5	21.1	54.6	73.0	-18.4
8.430	33.8	20.8	54.6	73.0	-18.4
8.590	33.6	20.8	54.4	73.0	-18.6
8.370	32.6	20.7	53.3	73.0	-19.7
8.660	32.0	20.8	52.8	73.0	-20.2
16.380	30.9	21.1	52.0	73.0	-21.0
8.720	30.2	20.8	51.0	73.0	-22.0
8.830	30.1	20.8	50.9	73.0	-22.1
7.990	28.1	20.7	48.8	73.0	-24.2
8.070	27.7	20.7	48.4	73.0	-24.6
9.070	27.4	20.8	48.2	73.0	-24.8
7.940	27.5	20.7	48.2	73.0	-24.8
7.880	27.2	20.7	47.9	73.0	-25.1
16.980	26.6	21.1	47.7	73.0	-25.3
7.830	26.9	20.7	47.6	73.0	-25.4
8.170	26.8	20.7	47.5	73.0	-25.5
13.790	25.9	20.9	46.8	73.0	-26.2
0.262	30.5	21.1	51.6	79.0	-27.4
7.760	24.5	20.7	45.2	73.0	-27.8

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.530	34.4	20.8	55.2	60.0	-4.8
16.060	33.5	21.1	54.6	60.0	-5.4
8.430	33.8	20.8	54.6	60.0	-5.4
8.590	33.6	20.8	54.4	60.0	-5.6
8.370	32.6	20.7	53.3	60.0	-6.7
8.660	32.0	20.8	52.8	60.0	-7.2
16.380	30.9	21.1	52.0	60.0	-8.0
8.720	30.2	20.8	51.0	60.0	-9.0
8.830	30.1	20.8	50.9	60.0	-9.1
7.990	28.1	20.7	48.8	60.0	-11.2
8.070	27.7	20.7	48.4	60.0	-11.6
9.070	27.4	20.8	48.2	60.0	-11.8
7.940	27.5	20.7	48.2	60.0	-11.8
7.880	27.2	20.7	47.9	60.0	-12.1
16.980	26.6	21.1	47.7	60.0	-12.3
7.830	26.9	20.7	47.6	60.0	-12.4
8.170	26.8	20.7	47.5	60.0	-12.5
13.790	25.9	20.9	46.8	60.0	-13.2
0.262	30.5	21.1	51.6	66.0	-14.4
7.760	24.5	20.7	45.2	60.0	-14.8

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

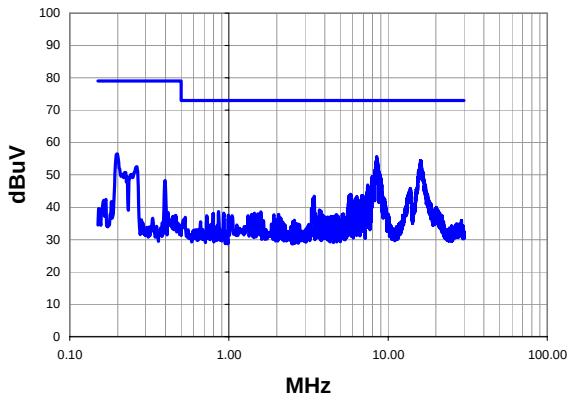
Work Order:	HONE0032	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	MultiNode (R110, Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 157 (5785 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:40. Antenna: 24 dBi Sector.

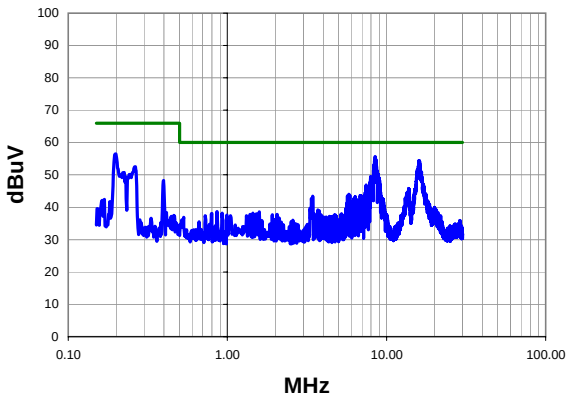
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

Run #	4	**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)
8.490	34.9	20.8	55.7	73.0	-17.3
16.030	33.3	21.1	54.4	73.0	-18.6
8.410	33.6	20.8	54.4	73.0	-18.6
8.590	33.1	20.8	53.9	73.0	-19.1
8.290	30.7	20.7	51.4	73.0	-21.6
0.199	35.1	21.4	56.5	79.0	-22.5
8.810	29.4	20.8	50.2	73.0	-22.8
7.930	28.7	20.7	49.4	73.0	-23.6
8.230	28.6	20.7	49.3	73.0	-23.7
8.070	28.4	20.7	49.1	73.0	-23.9
8.990	28.1	20.8	48.9	73.0	-24.1
8.130	28.0	20.7	48.7	73.0	-24.3
7.890	27.0	20.7	47.7	73.0	-25.3
9.120	26.1	20.8	46.9	73.0	-26.1
7.430	26.2	20.7	46.9	73.0	-26.1
0.262	31.4	21.1	52.5	79.0	-26.5
7.820	25.8	20.7	46.5	73.0	-26.5
13.790	24.8	20.9	45.7	73.0	-27.3
7.530	24.4	20.7	45.1	73.0	-27.9
7.760	24.2	20.7	44.9	73.0	-28.1

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
8.490	34.9	20.8	55.7	60.0	-4.3
16.030	33.3	21.1	54.4	60.0	-5.6
8.410	33.6	20.8	54.4	60.0	-5.6
8.590	33.1	20.8	53.9	60.0	-6.1
8.290	30.7	20.7	51.4	60.0	-8.6
0.199	35.1	21.4	56.5	66.0	-9.5
8.810	29.4	20.8	50.2	60.0	-9.8
7.930	28.7	20.7	49.4	60.0	-10.6
8.230	28.6	20.7	49.3	60.0	-10.7
8.070	28.4	20.7	49.1	60.0	-10.9
8.990	28.1	20.8	48.9	60.0	-11.1
8.130	28.0	20.7	48.7	60.0	-11.3
7.890	27.0	20.7	47.7	60.0	-12.3
9.120	26.1	20.8	46.9	60.0	-13.1
7.430	26.2	20.7	46.9	60.0	-13.1
0.262	31.4	21.1	52.5	66.0	-13.5
7.820	25.8	20.7	46.5	60.0	-13.5
13.790	24.8	20.9	45.7	60.0	-14.3
7.530	24.4	20.7	45.1	60.0	-14.9
7.760	24.2	20.7	44.9	60.0	-15.1

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

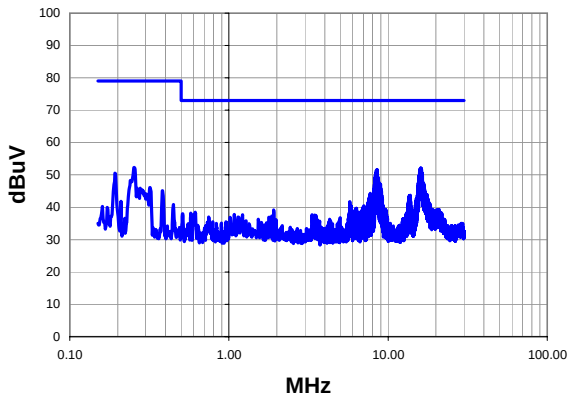
Work Order:	HONE0032	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	MultiNode (R110, Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 165 (5825 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:40. Antenna: 24 dBi Sector.

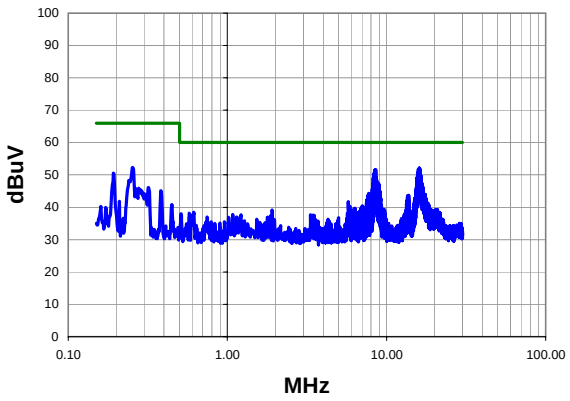
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

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)
16.050	31.1	21.1	52.2	73.0	-20.8
16.120	30.9	21.1	52.0	73.0	-21.0
16.170	30.7	21.1	51.8	73.0	-21.2
15.830	30.7	21.0	51.7	73.0	-21.3
16.230	30.6	21.1	51.7	73.0	-21.3
15.990	30.6	21.1	51.7	73.0	-21.3
8.550	30.8	20.8	51.6	73.0	-21.4
8.490	30.8	20.8	51.6	73.0	-21.4
8.440	30.7	20.8	51.5	73.0	-21.5
16.290	29.7	21.1	50.8	73.0	-22.2
15.780	29.7	21.0	50.7	73.0	-22.3
8.380	29.9	20.7	50.6	73.0	-22.4
8.310	29.3	20.7	50.0	73.0	-23.0
15.720	28.9	21.0	49.9	73.0	-23.1
16.420	28.7	21.1	49.8	73.0	-23.2
16.350	28.7	21.1	49.8	73.0	-23.2
15.660	28.7	21.0	49.7	73.0	-23.3
8.630	28.5	20.8	49.3	73.0	-23.7
15.600	28.1	21.0	49.1	73.0	-23.9
8.260	28.3	20.7	49.0	73.0	-24.0

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
16.050	31.1	21.1	52.2	60.0	-7.8
16.120	30.9	21.1	52.0	60.0	-8.0
16.170	30.7	21.1	51.8	60.0	-8.2
15.830	30.7	21.0	51.7	60.0	-8.3
16.230	30.6	21.1	51.7	60.0	-8.3
15.990	30.6	21.1	51.7	60.0	-8.3
8.550	30.8	20.8	51.6	60.0	-8.4
8.490	30.8	20.8	51.6	60.0	-8.4
8.440	30.7	20.8	51.5	60.0	-8.5
16.290	29.7	21.1	50.8	60.0	-9.2
15.780	29.7	21.0	50.7	60.0	-9.3
8.380	29.9	20.7	50.6	60.0	-9.4
8.310	29.3	20.7	50.0	60.0	-10.0
15.720	28.9	21.0	49.9	60.0	-10.1
16.420	28.7	21.1	49.8	60.0	-10.2
16.350	28.7	21.1	49.8	60.0	-10.2
15.660	28.7	21.0	49.7	60.0	-10.3
8.630	28.5	20.8	49.3	60.0	-10.7
15.600	28.1	21.0	49.1	60.0	-10.9
8.260	28.3	20.7	49.0	60.0	-11.0

NORTHWEST

EMC

CONDUCTED EMISSIONS

Version 2008.3.31
PSA-ESCI 2008.05.13

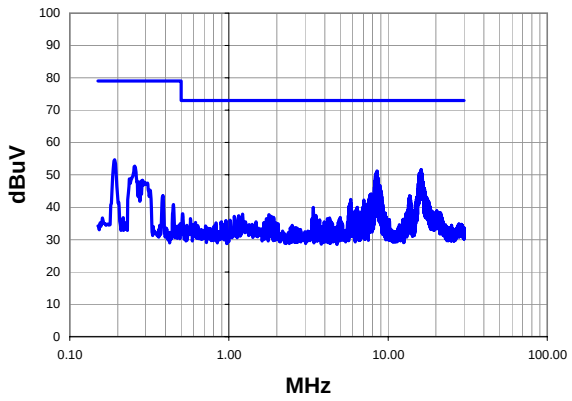
Work Order:	HONE0032	**Date:**	05/14/08		
Project:	None	**Temperature:**	24		
Job Site:	OC06	**Humidity:**	34		
Serial Number:	None	**Barometric Pres.:**	1018	**Tested by:**	Jaemi Suh

EUT:	MultiNode (R110, Extended Temperature)
Configuration:	1
Customer:	Honeywell
Attendees:	David Shipley
EUT Power:	120V/60Hz
Operating Mode:	Channel 165 (5825 MHz). Data Rate: 6 Mbps.
Deviations:	No deviations.
Comments:	Tx PWR: Fixed 8, Pro-Install Setting:40. Antenna: 24 dBi Sector.

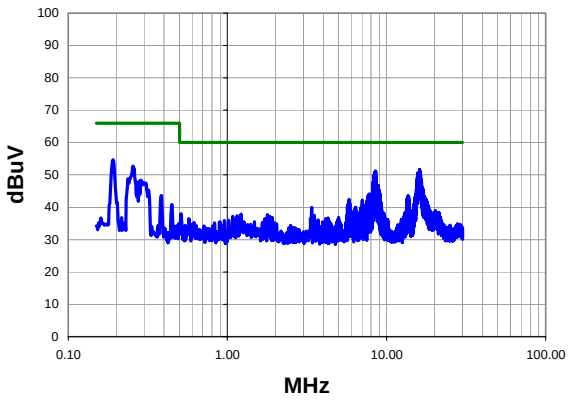
Test Specifications	**Class A**	**Test Method**
FCC 15.107:2007		ANSI C63.4:2003

Run #	6	**Line:**	Neutral	**Ext. Attenuation:**	20	**Results**	Pass

Peak Data - vs - Quasi Peak Limit



Peak Data - vs - Average Limit

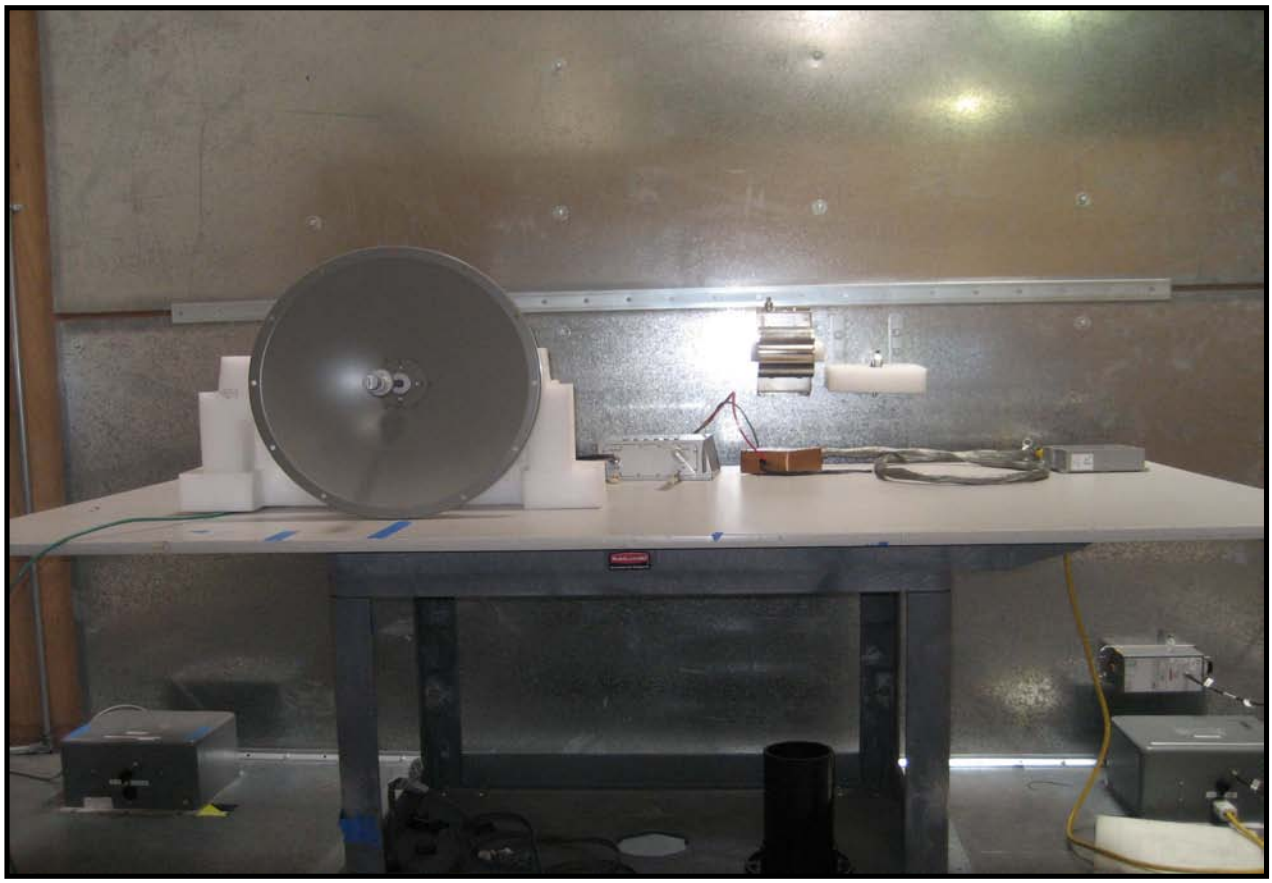


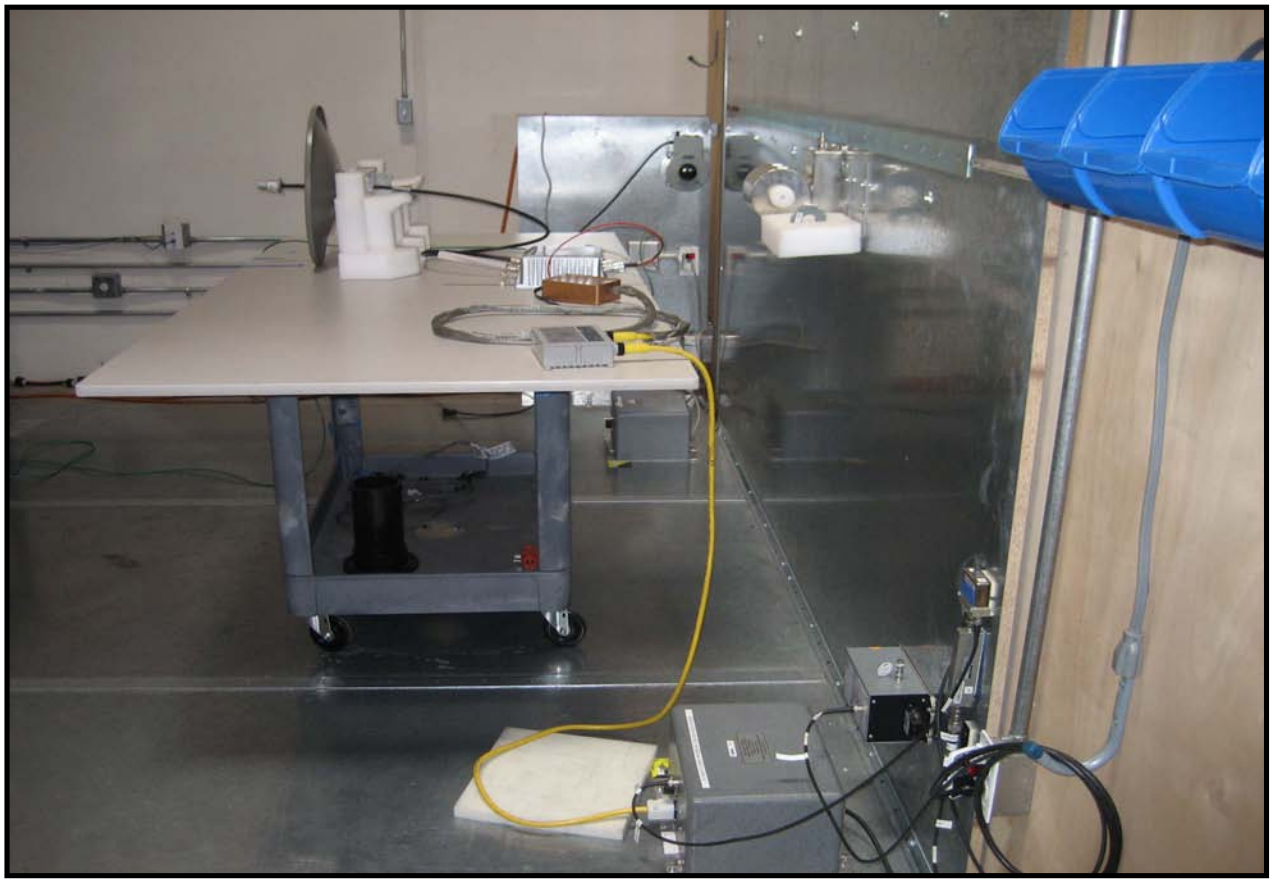
Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
16.120	30.6	21.1	51.7	73.0	-21.3
8.500	30.5	20.8	51.3	73.0	-21.7
16.170	30.1	21.1	51.2	73.0	-21.8
8.560	30.2	20.8	51.0	73.0	-22.0
16.060	29.9	21.1	51.0	73.0	-22.0
8.440	30.0	20.8	50.8	73.0	-22.2
16.300	29.5	21.1	50.6	73.0	-22.4
16.230	29.5	21.1	50.6	73.0	-22.4
15.780	29.5	21.0	50.5	73.0	-22.5
15.830	29.4	21.0	50.4	73.0	-22.6
15.720	29.4	21.0	50.4	73.0	-22.6
15.950	29.3	21.1	50.4	73.0	-22.6
8.380	29.4	20.7	50.1	73.0	-22.9
16.360	29.0	21.1	50.1	73.0	-22.9
8.320	29.0	20.7	49.7	73.0	-23.3
15.660	28.7	21.0	49.7	73.0	-23.3
8.630	28.3	20.8	49.1	73.0	-23.9
15.590	28.0	21.0	49.0	73.0	-24.0
16.420	27.7	21.1	48.8	73.0	-24.2
0.191	33.0	21.7	54.7	79.0	-24.3

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
16.120	30.6	21.1	51.7	60.0	-8.3
8.500	30.5	20.8	51.3	60.0	-8.7
16.170	30.1	21.1	51.2	60.0	-8.8
8.560	30.2	20.8	51.0	60.0	-9.0
16.060	29.9	21.1	51.0	60.0	-9.0
8.440	30.0	20.8	50.8	60.0	-9.2
16.300	29.5	21.1	50.6	60.0	-9.4
16.230	29.5	21.1	50.6	60.0	-9.4
15.780	29.5	21.0	50.5	60.0	-9.5
15.830	29.4	21.0	50.4	60.0	-9.6
15.720	29.4	21.0	50.4	60.0	-9.6
15.950	29.3	21.1	50.4	60.0	-9.6
8.380	29.4	20.7	50.1	60.0	-9.9
16.360	29.0	21.1	50.1	60.0	-9.9
8.320	29.0	20.7	49.7	60.0	-10.3
15.660	28.7	21.0	49.7	60.0	-10.3
8.630	28.3	20.8	49.1	60.0	-10.9
15.590	28.0	21.0	49.0	60.0	-11.0
16.420	27.7	21.1	48.8	60.0	-11.2
0.191	33.0	21.7	54.7	66.0	-11.3





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	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies. 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 in a no hop mode.

NORTHWEST EMC

OCCUPIED BANDWIDTH

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/30/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -8(Highest Output Power)

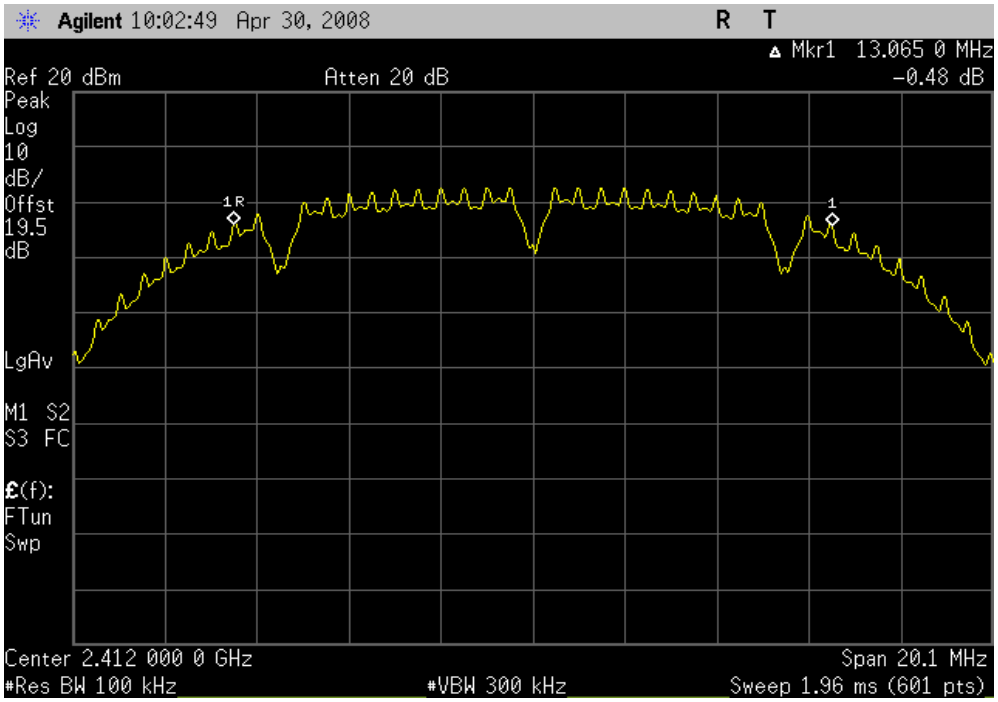
DEVIATIONS FROM TEST STANDARD

No Deviations

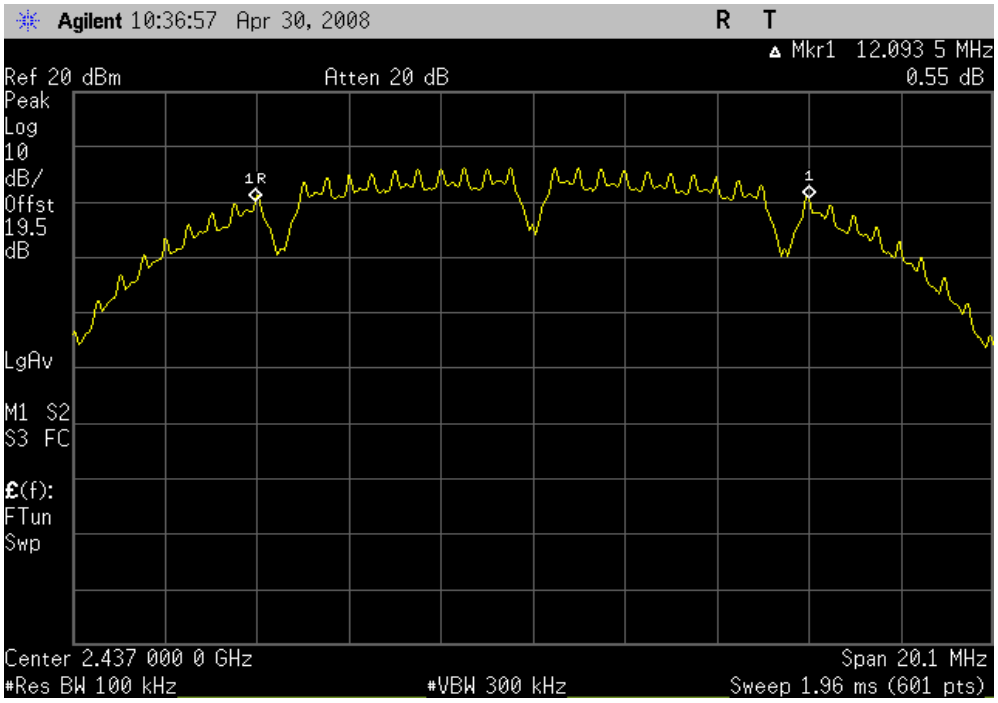
Configuration #	1	Signature

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel	13.065 MHz	≥ 500kHz	Pass
	Mid Channel	12.093 MHz	≥ 500kHz	Pass
	High Channel	12.964 Mhz	≥ 500kHz	Pass
802.11(b) 11 Mbps				
	Low Channel	12.998 MHz	≥ 500kHz	Pass
	Mid Channel	12.964 MHz	≥ 500kHz	Pass
	High Channel	12.529 MHz	≥ 500kHz	Pass
802.11(g) 6 Mbps				
	Low Channel	16.582 Mhz	≥ 500kHz	Pass
	Mid Channel	16.582 Mhz	≥ 500kHz	Pass
	High Channel	16.582 Mhz	≥ 500kHz	Pass
802.11(g) 36 Mbps				
	Low Channel	16.582 Mhz	≥ 500kHz	Pass
	Mid Channel	16.582 Mhz	≥ 500kHz	Pass
	High Channel	16.582 Mhz	≥ 500kHz	Pass
802.11(g) 54 Mbps				
	Low Channel	16.582 Mhz	≥ 500kHz	Pass
	Mid Channel	16.582 Mhz	≥ 500kHz	Pass
	High Channel	16.582 Mhz	≥ 500kHz	Pass

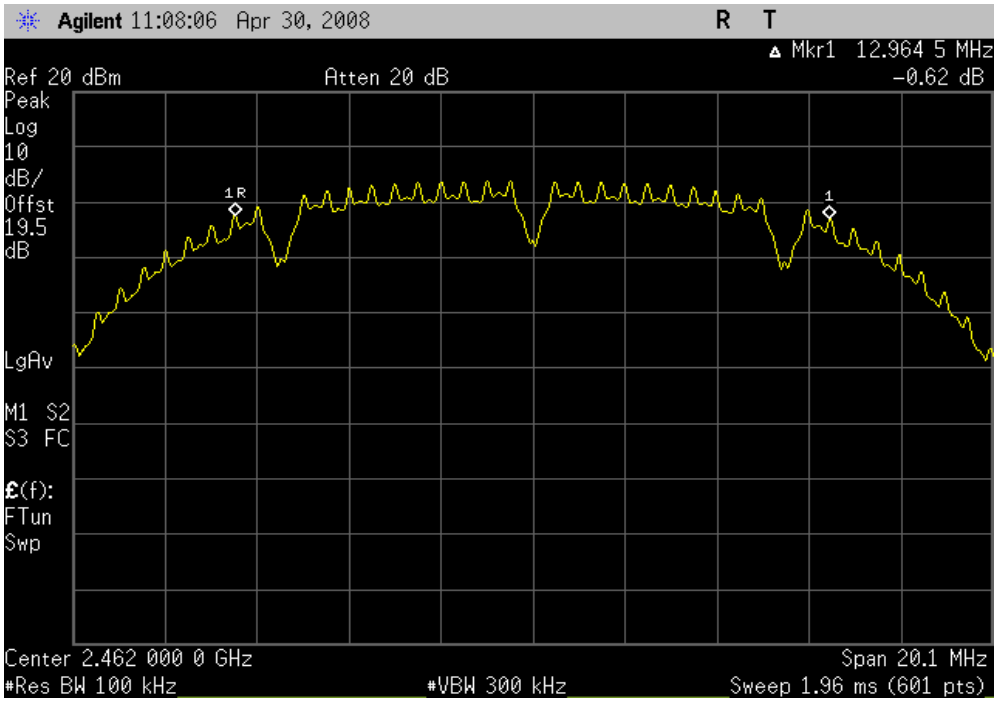
802.11(b) 1 Mbps, Low Channel					
Result:	Pass	**Value:**	13.065 MHz	**Limit:**	≥ 500kHz



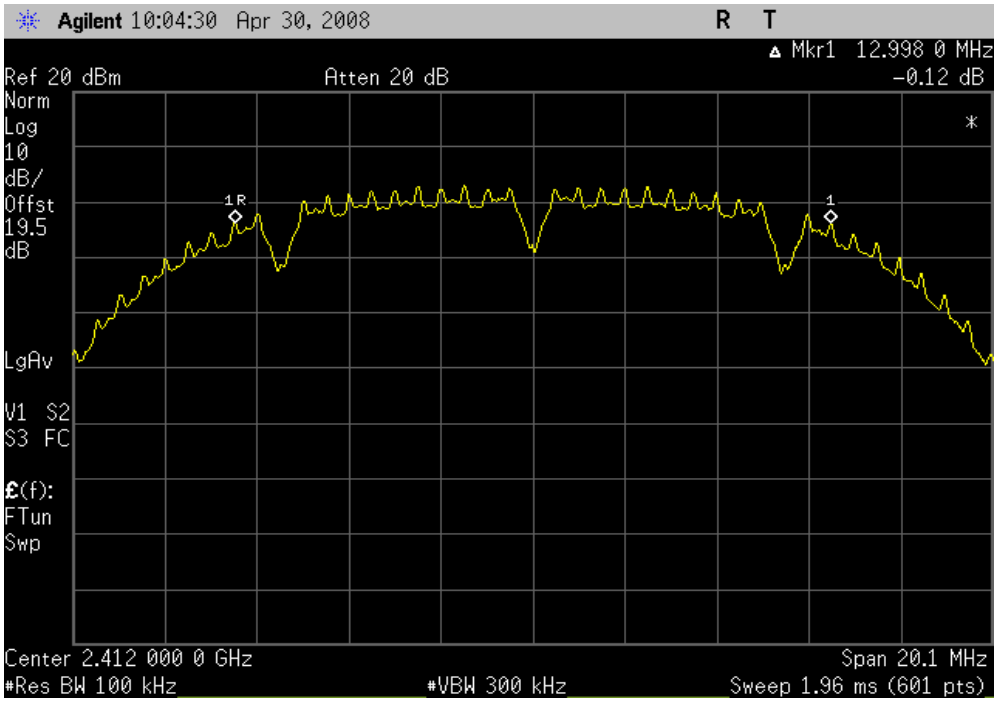
802.11(b) 1 Mbps, Mid Channel					
Result:	Pass	**Value:**	12.093 MHz	**Limit:**	≥ 500kHz



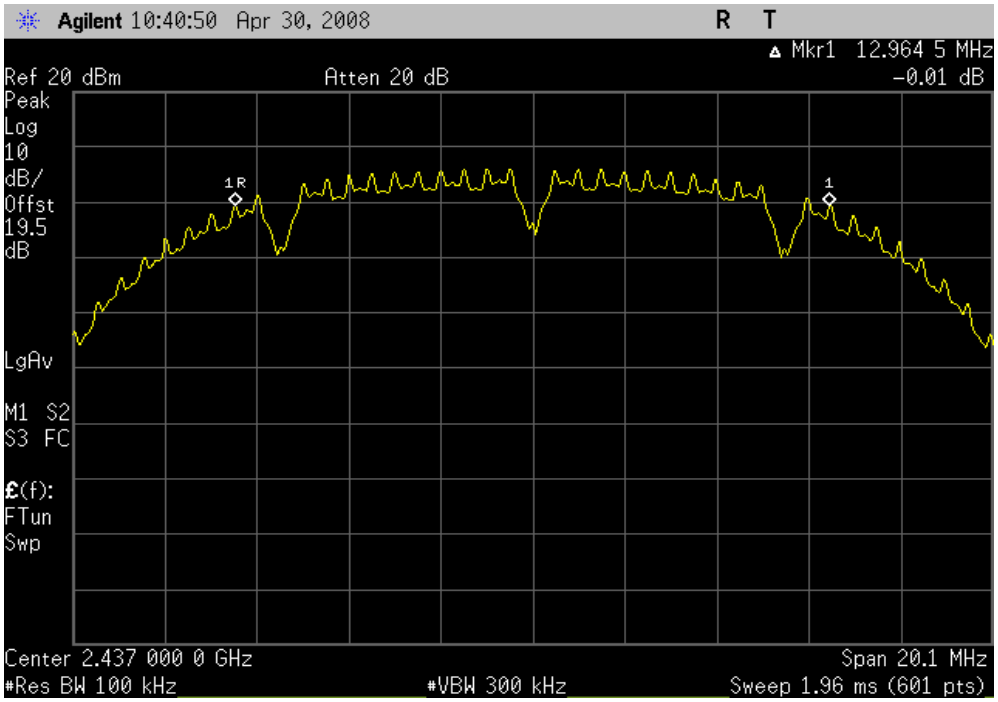
802.11(b) 1 Mbps, High Channel					
Result:	Pass	**Value:**	12.964 Mhz	**Limit:**	≥ 500kHz



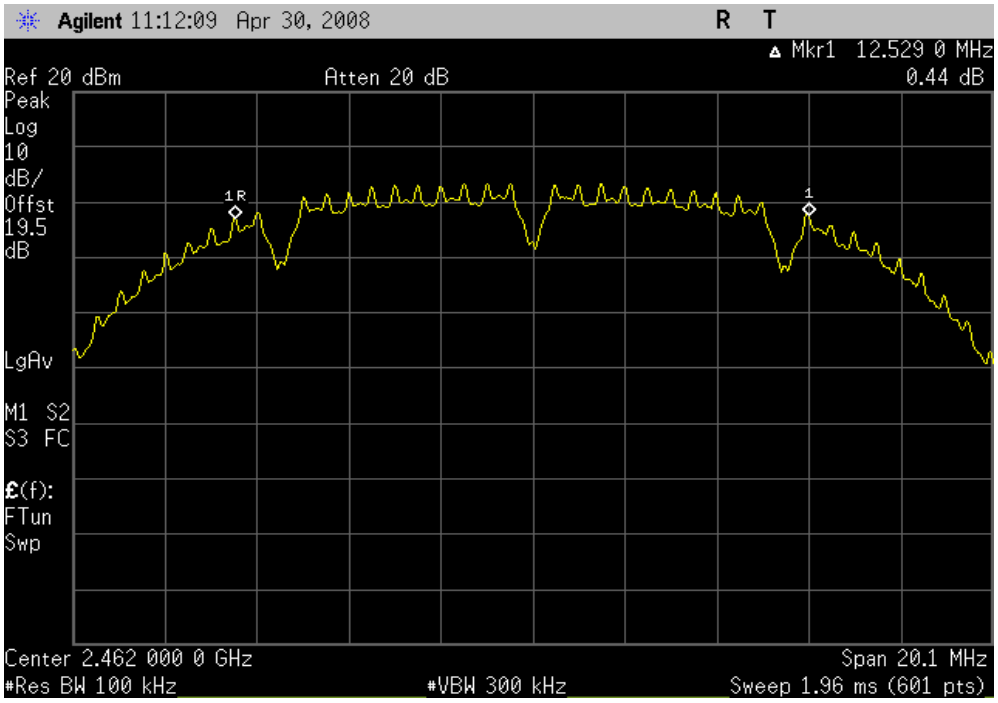
802.11(b) 11 Mbps, Low Channel					
Result:	Pass	**Value:**	12.998 MHz	**Limit:**	≥ 500kHz



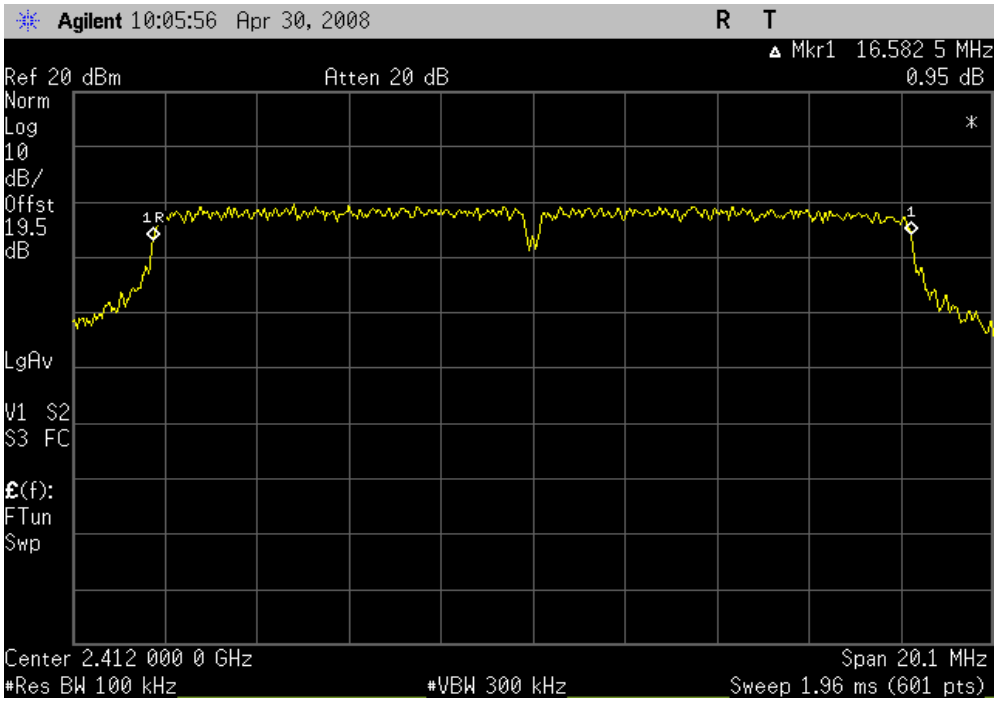
802.11(b) 11 Mbps, Mid Channel					
Result:	Pass	**Value:**	12.964 MHz	**Limit:**	≥ 500kHz



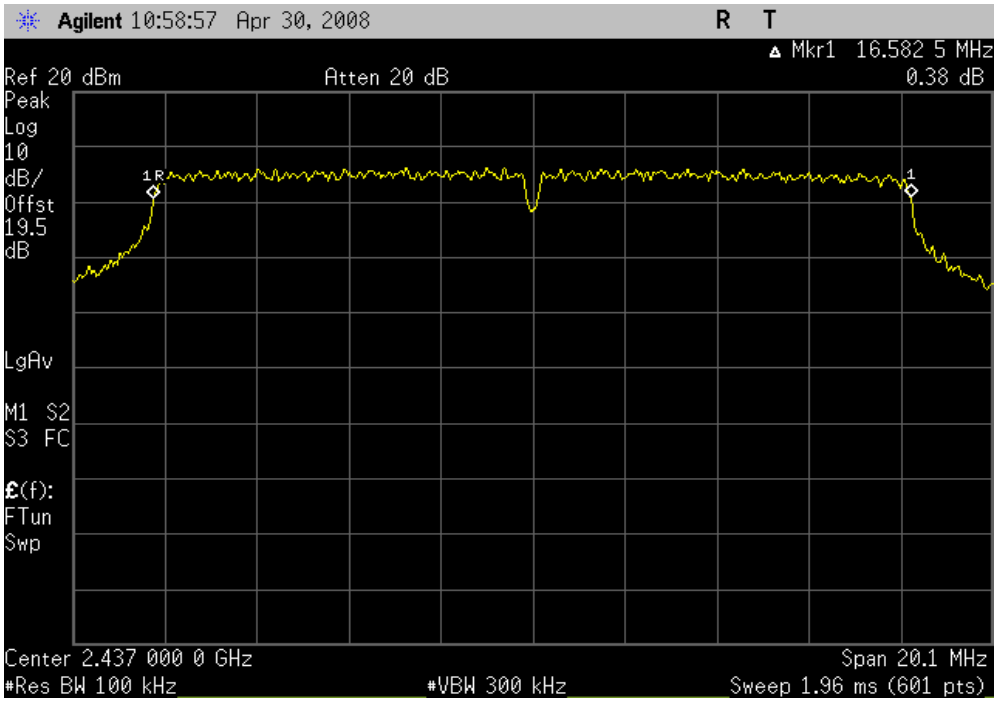
802.11(b) 11 Mbps, High Channel					
Result:	Pass	**Value:**	12.529 MHz	**Limit:**	≥ 500kHz



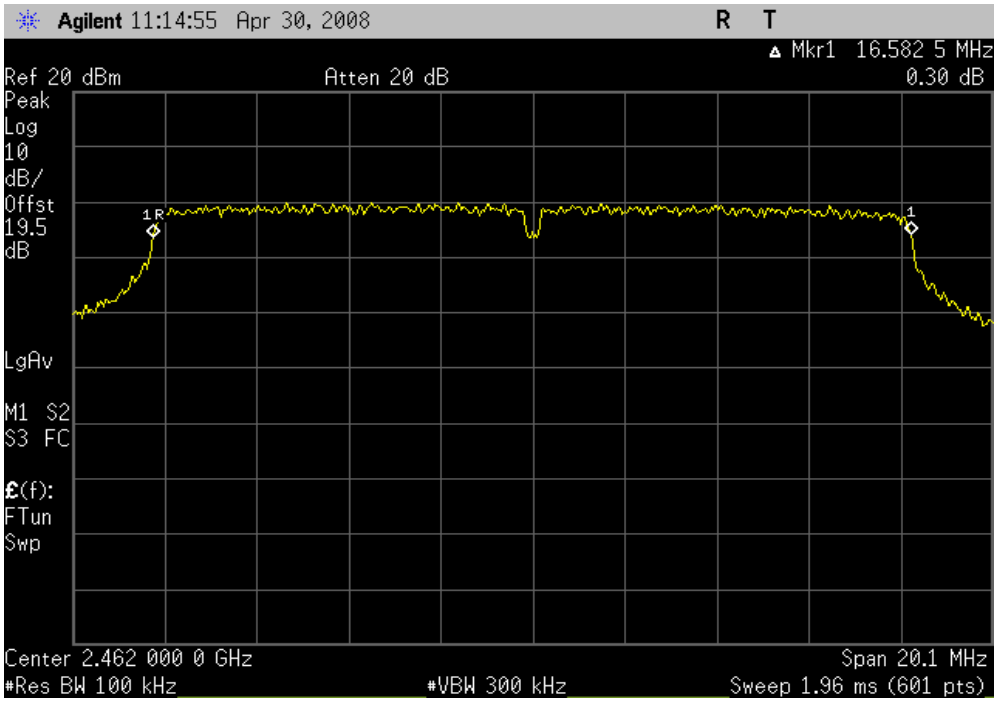
802.11(g) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz



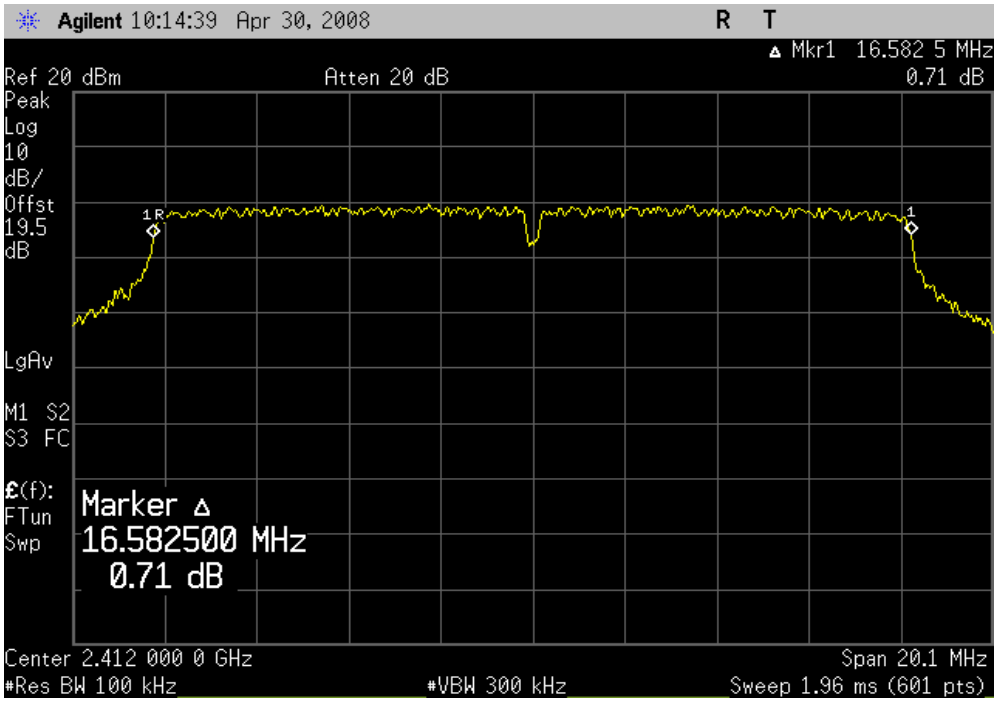
802.11(g) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz



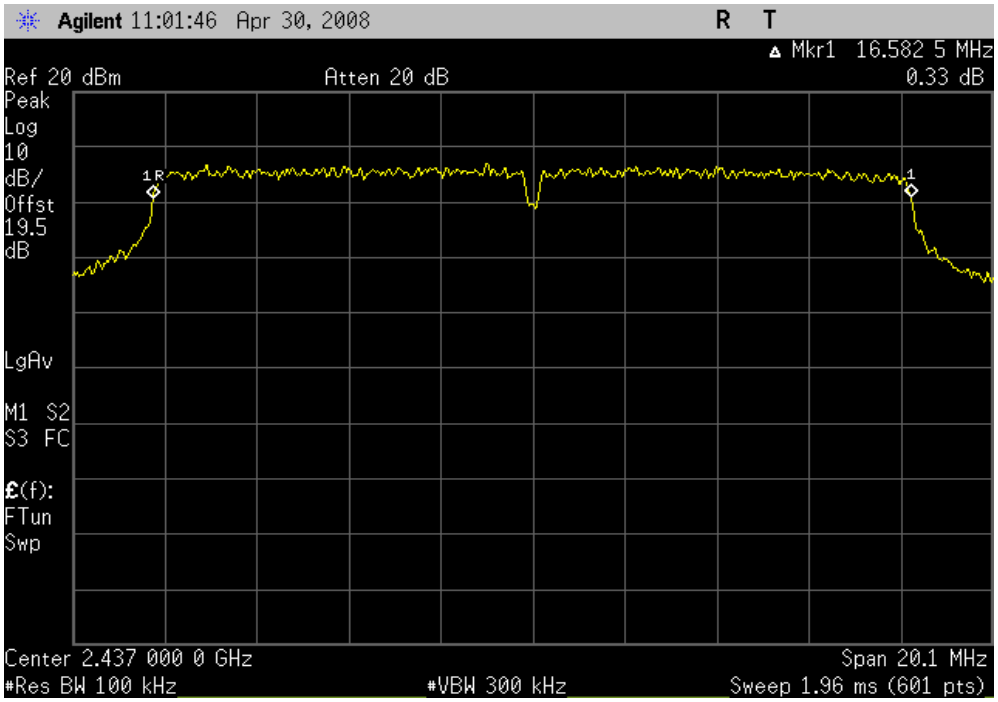
802.11(g) 6 Mbps, High Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz



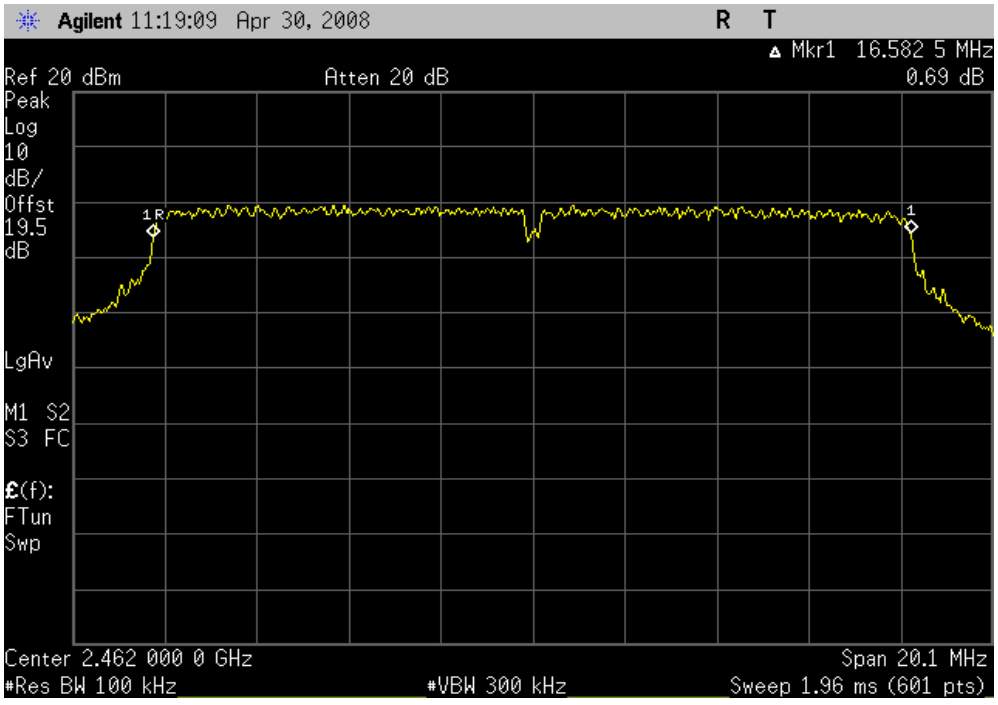
802.11(g) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz



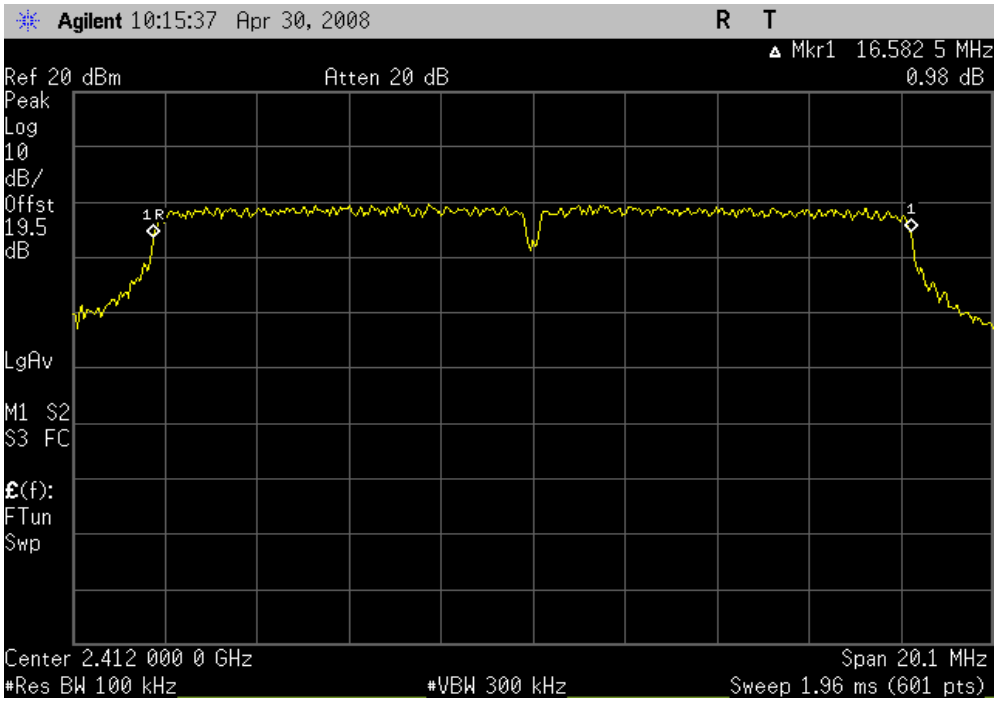
802.11(g) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz



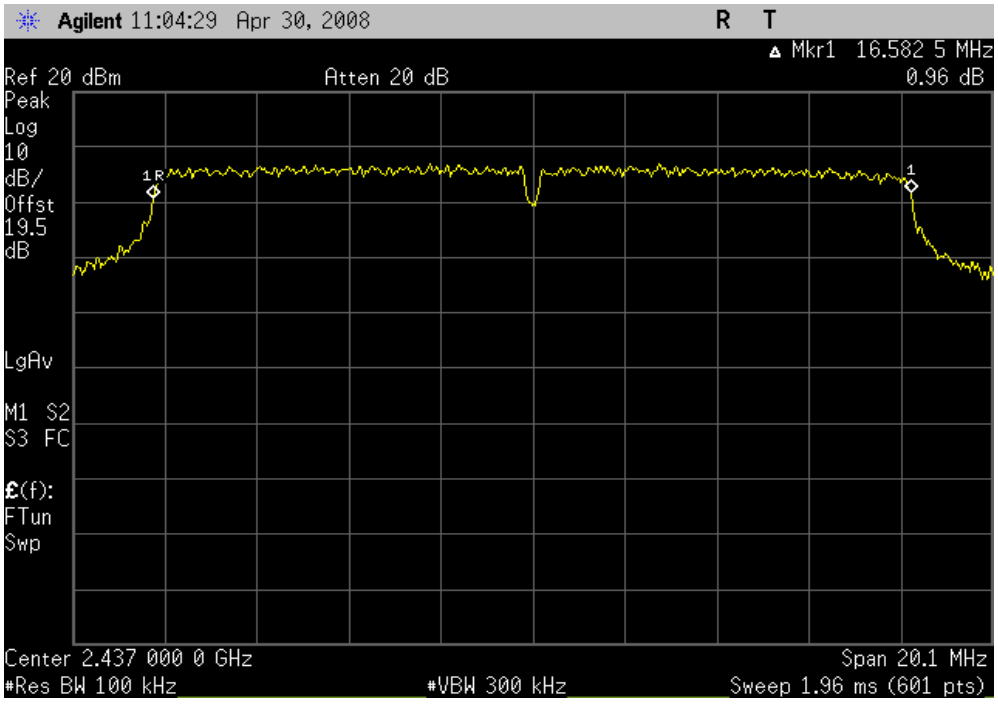
802.11(g) 36 Mbps, High Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz



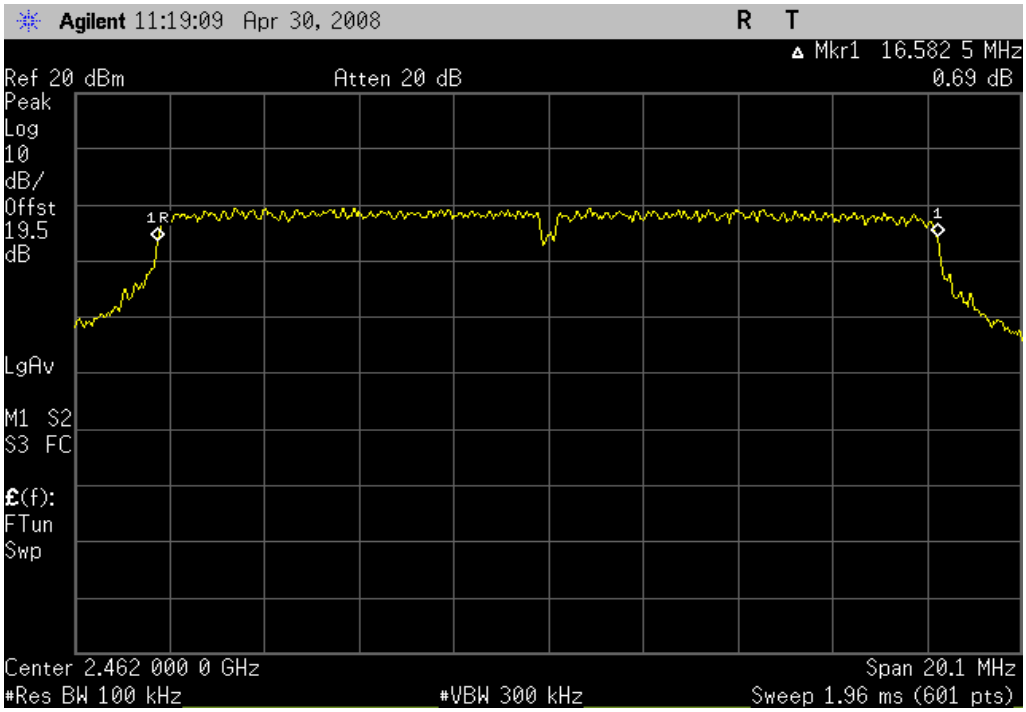
802.11(g) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz

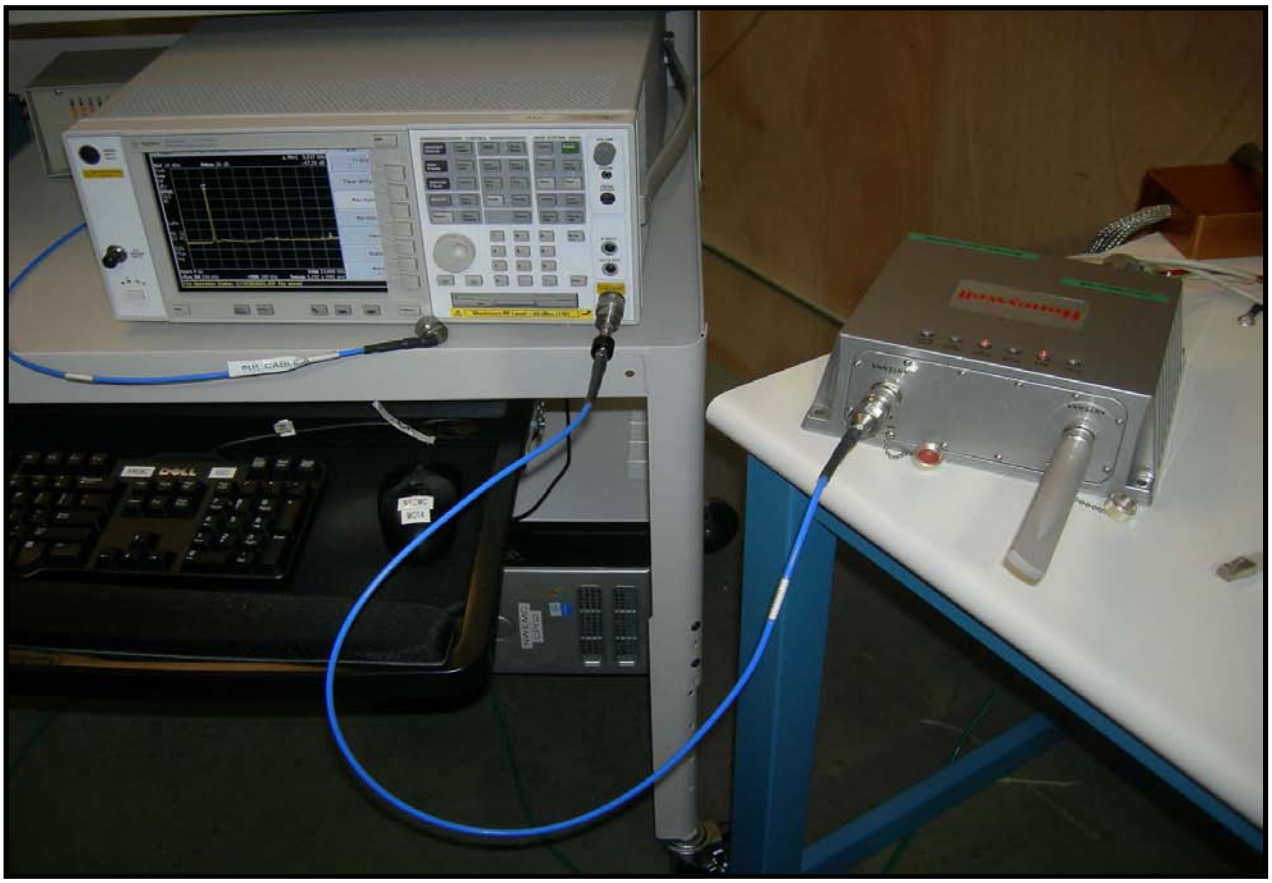


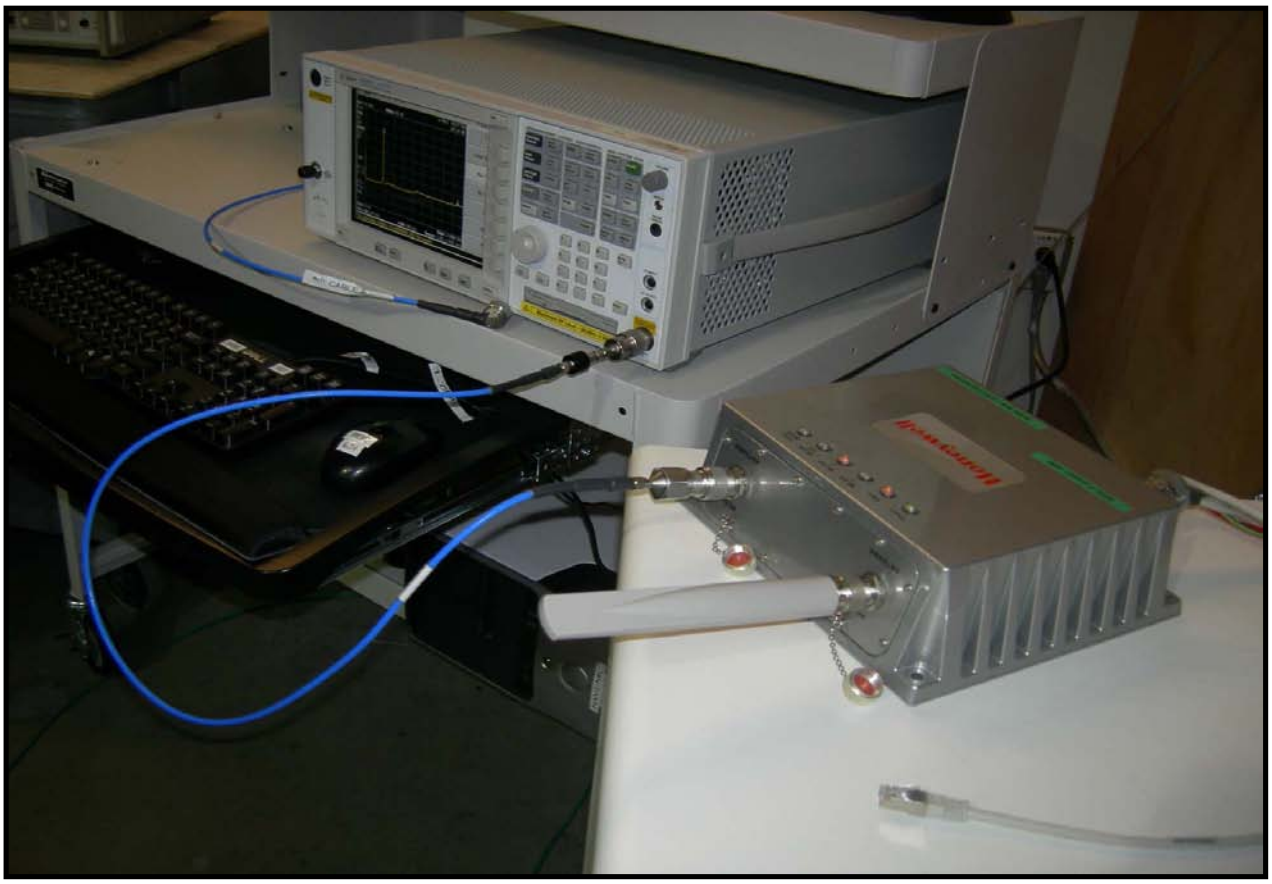
802.11(g) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz



802.11(g) 54 Mbps, High Channel					
Result:	Pass	**Value:**	16.582 Mhz	**Limit:**	≥ 500kHz







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	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The occupied bandwidth was measured with the EUT set to low, medium, and high transmit frequencies. 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 in a no hop mode.

NORTHWEST EMC

OCCUPIED BANDWIDTH

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	05/07/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40

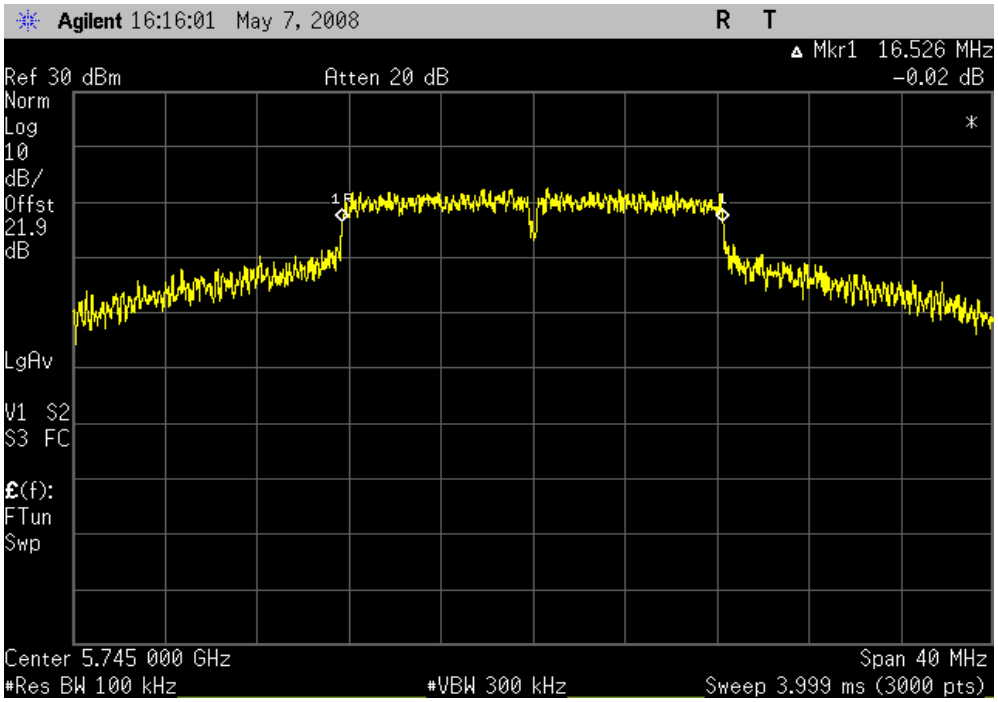
DEVIATIONS FROM TEST STANDARD

No Deviations

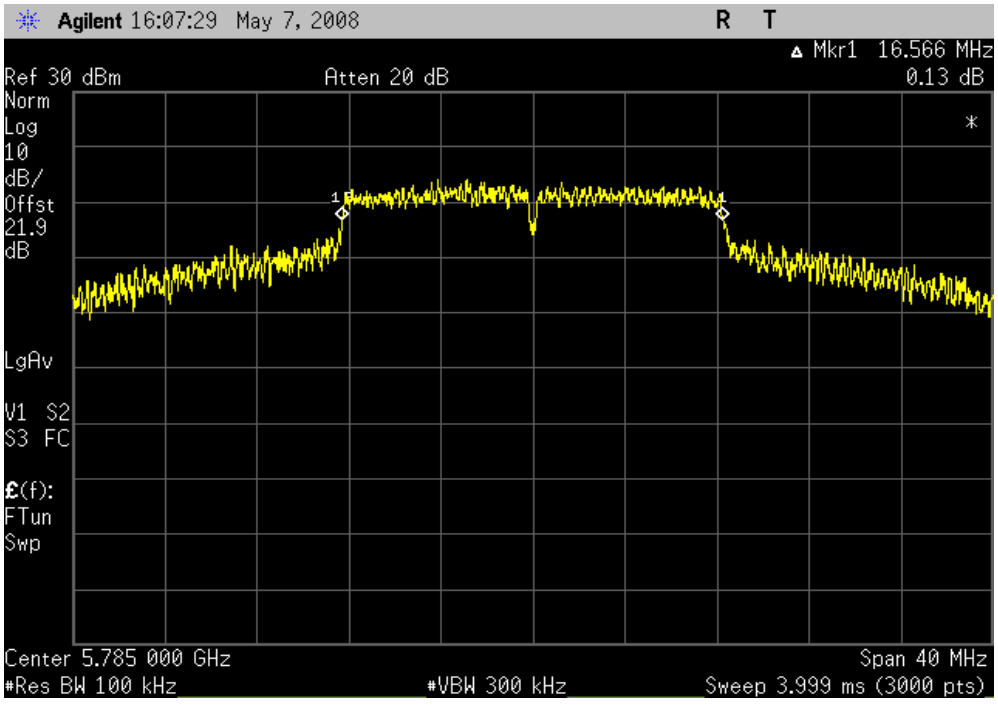
Configuration #	1	Signature

		Value	Limit	Results
802.11(a) 6 Mbps				
	Low Channel	16.526 MHz	> 500 kHz	Pass
	Mid Channel	16.566 MHz	> 500 kHz	Pass
	High Channel	16.566 MHz	> 500 kHz	Pass
802.11(a) 36 Mbps				
	Low Channel	16.539 MHz	> 500 kHz	Pass
	Mid Channel	16.526 MHz	> 500 kHz	Pass
	High Channel	16.526 MHz	> 500 kHz	Pass
802.11(a) 54 Mbps				
	Low Channel	16.539 MHz	> 500 kHz	Pass
	Mid Channel	16.512 MHz	> 500 kHz	Pass
	High Channel	16.539 MHz	> 500 kHz	Pass

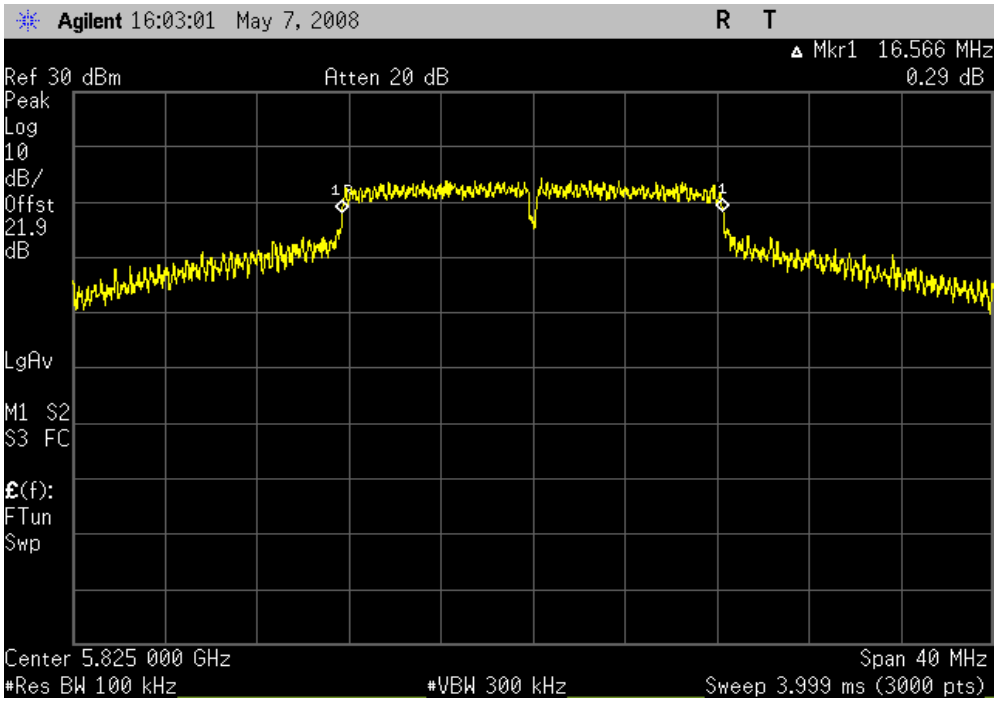
802.11(a) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	16.526 MHz	**Limit:**	> 500 kHz



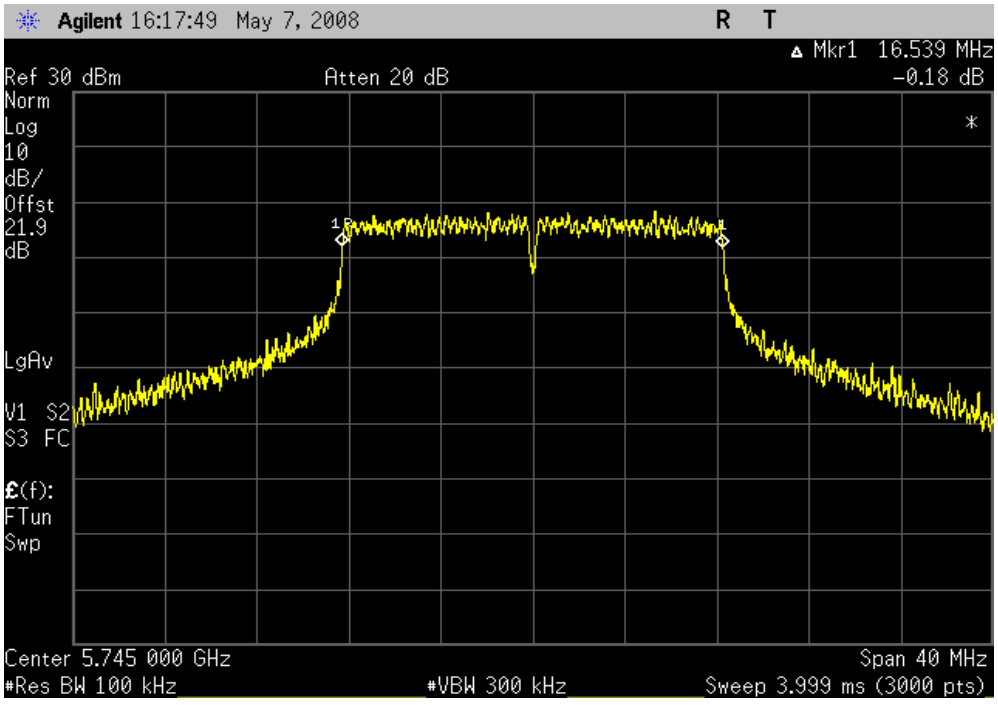
802.11(a) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.566 MHz	**Limit:**	> 500 kHz



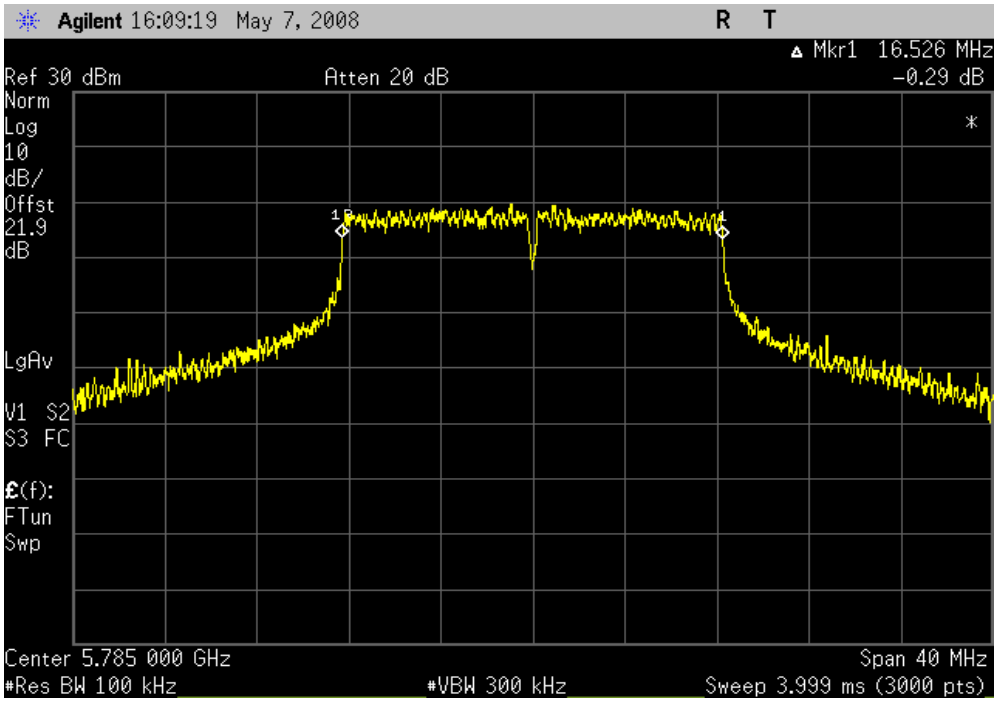
802.11(a) 6 Mbps, High Channel					
Result:	Pass	**Value:**	16.566 MHz	**Limit:**	> 500 kHz



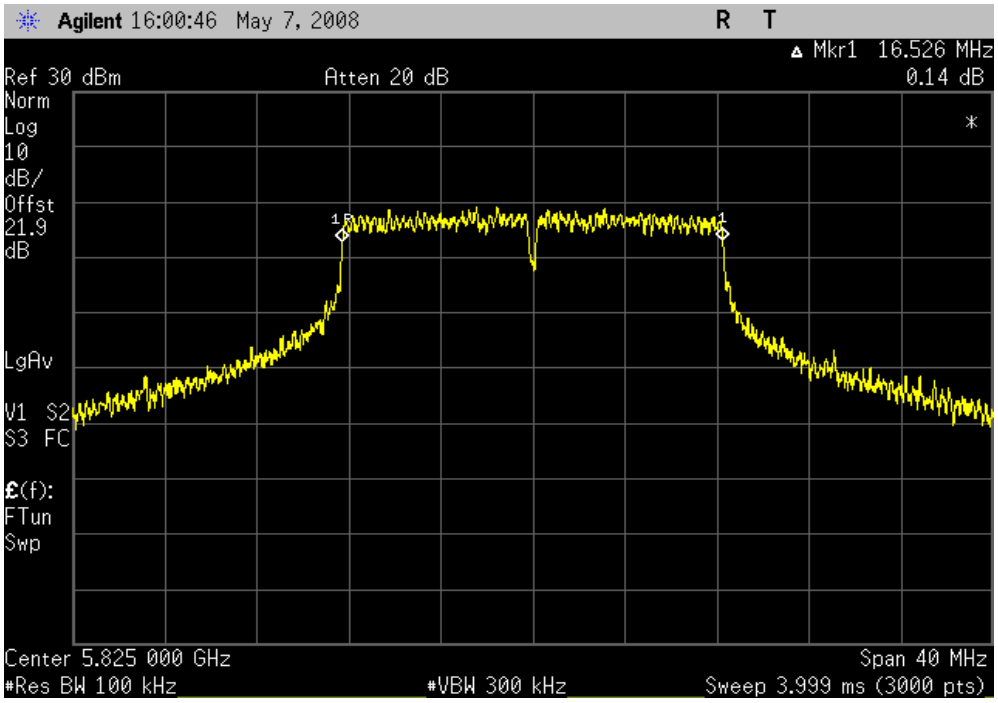
802.11(a) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	16.539 MHz	**Limit:**	> 500 kHz



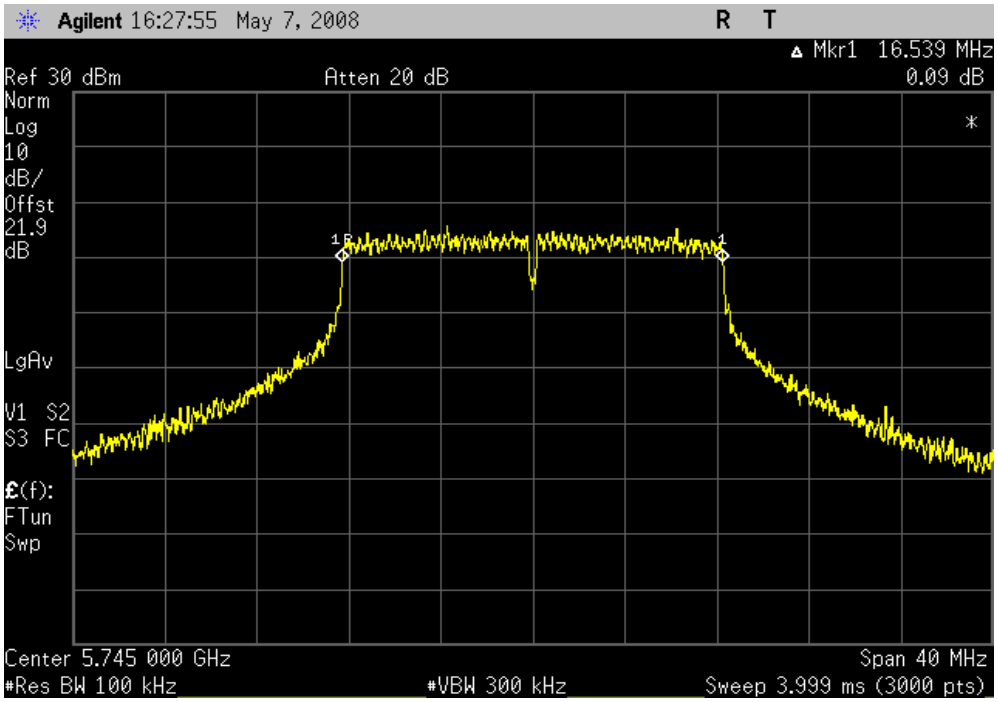
802.11(a) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.526 MHz	**Limit:**	> 500 kHz



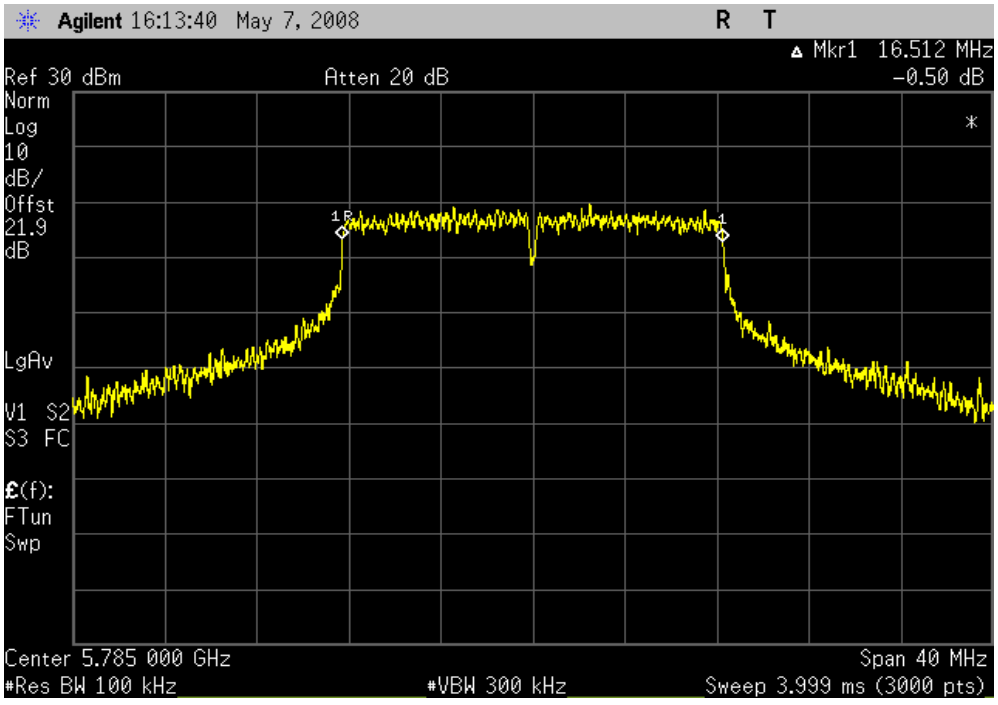
802.11(a) 36 Mbps, High Channel					
Result:	Pass	**Value:**	16.526 MHz	**Limit:**	> 500 kHz



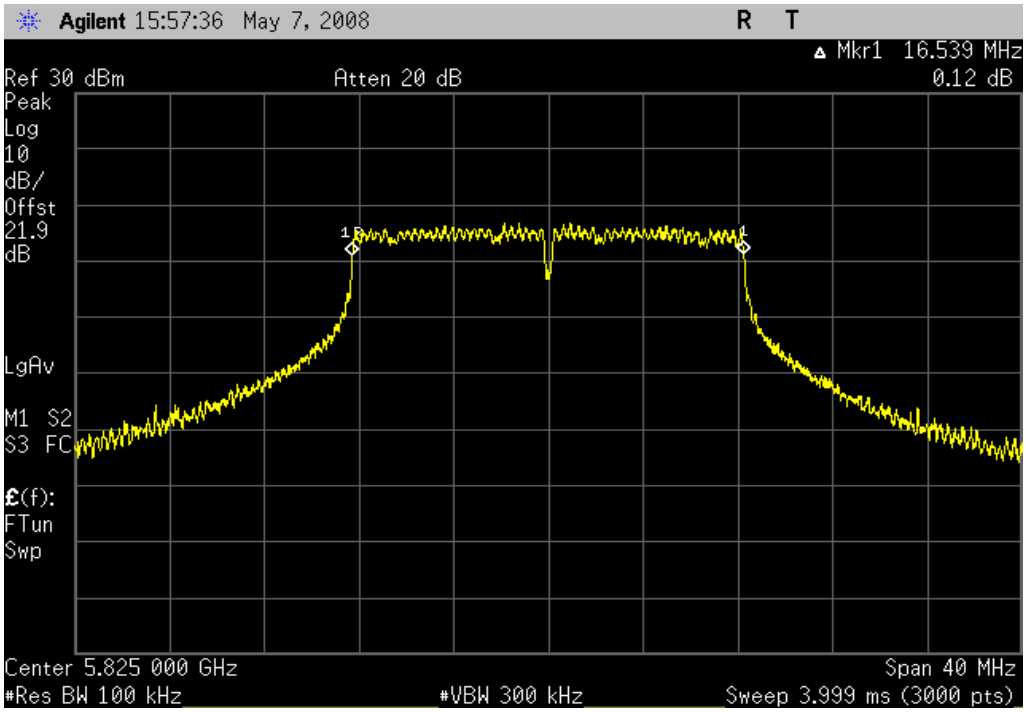
802.11(a) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	16.539 MHz	**Limit:**	> 500 kHz

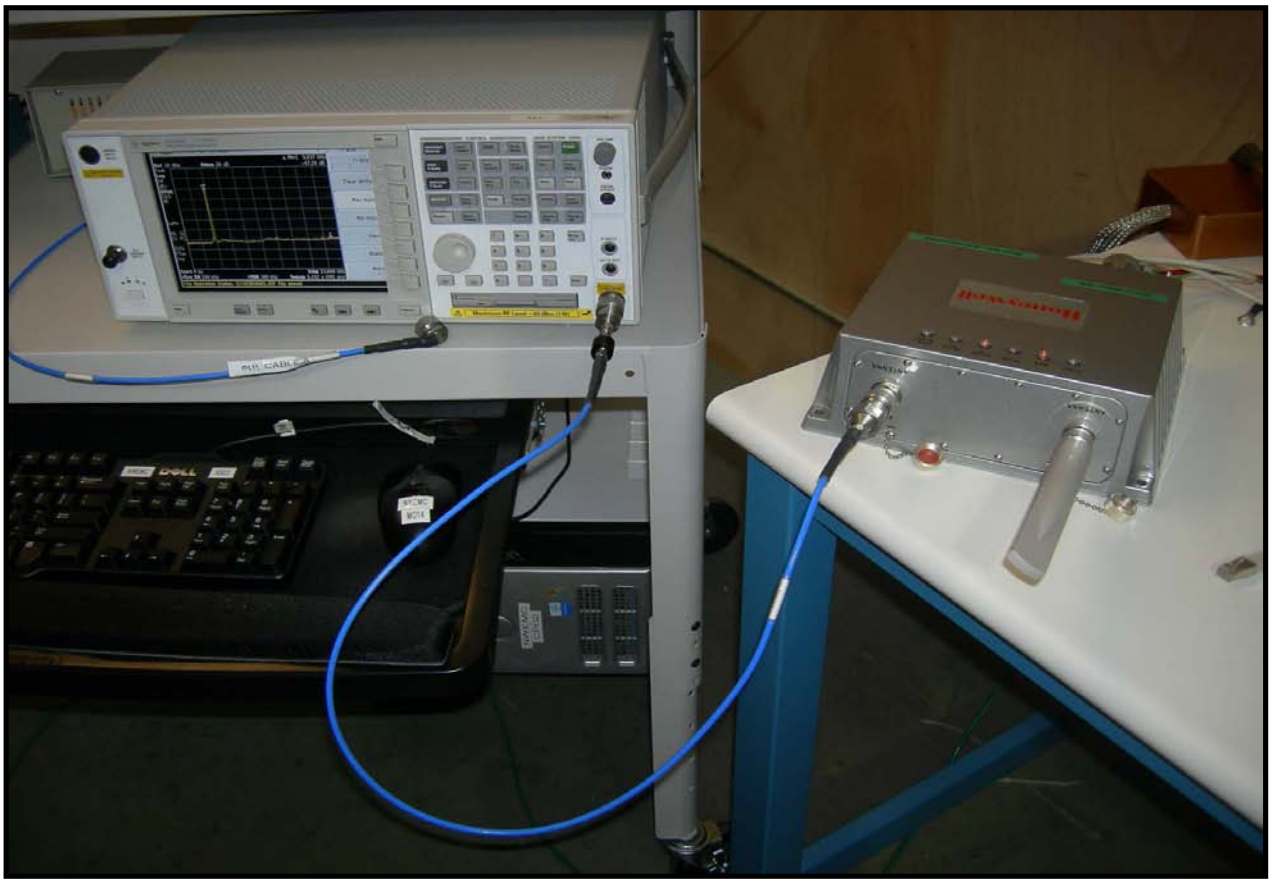


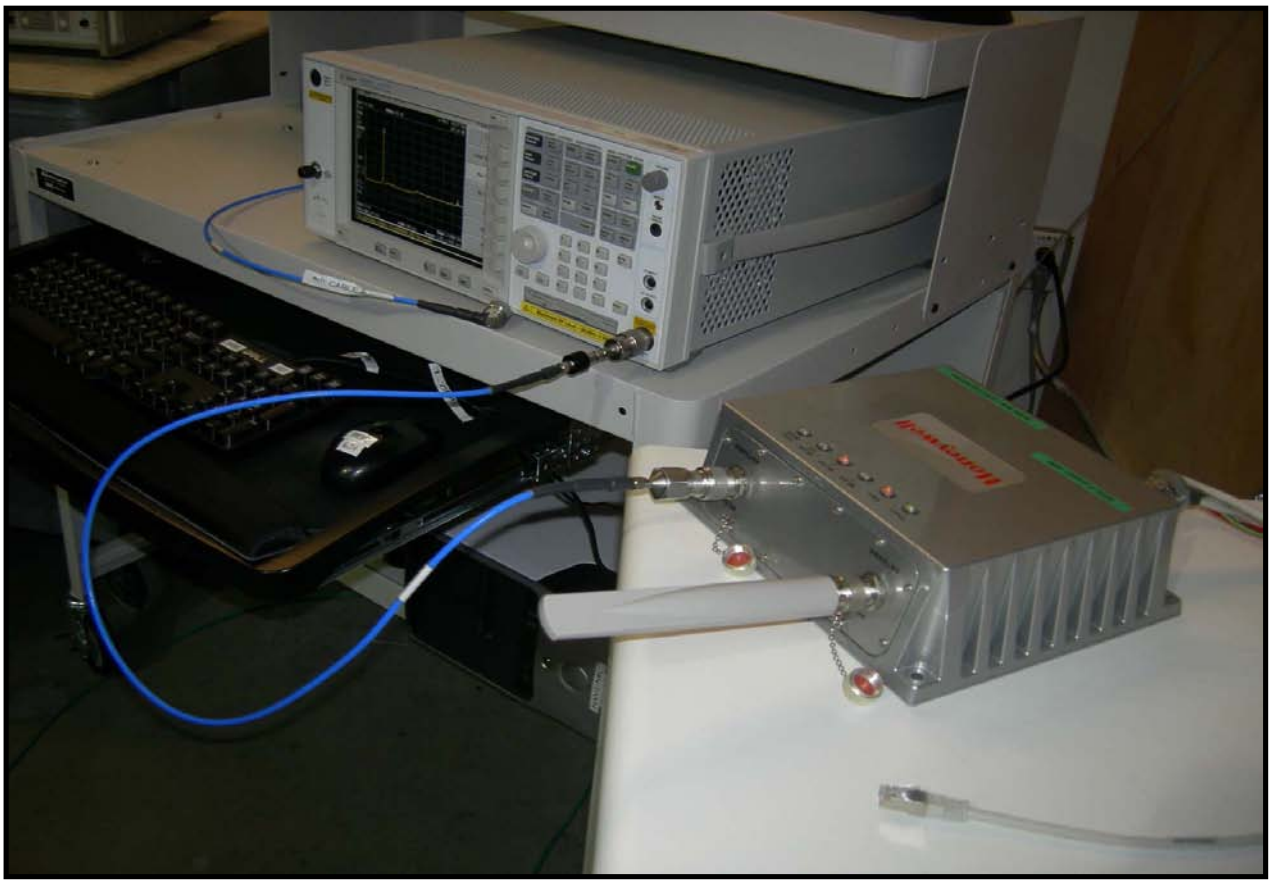
802.11(a) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	16.512 MHz	**Limit:**	> 500 kHz



802.11(a) 54 Mbps, High Channel					
Result:	Pass	**Value:**	16.539 MHz	**Limit:**	> 500 kHz







OUTPUT POWER

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
Power Meter	Hewlett Packard	E4418A	SPA	12/14/2007	13
Spectrum Analyzer	Agilent	E4440A	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The peak output power was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and a power meter. The EUT was transmitting at its maximum data rate and maximum output power.

De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +36dBm.

NORTHWEST EMC

OUTPUT POWER

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			**Work Order:**	HONE0031
Serial Number:	None			**Date:**	04/29/08
Customer:	Honeywell			**Temperature:**	24°C
Attendees:	David Shipley			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	1018
Tested by:	Jaemi Suh	**Power:**	120V/60Hz	**Job Site:**	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

TX Output Power = -8. 5.5 dBi Antenna Limit = 30- 0 = 30 dBm = 1000 mW

DEVIATIONS FROM TEST STANDARD

No Deviations

Configuration #	1	Signature

S1

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel - 2412 MHz	18.9 mW	1 W	Pass
	Mid Channel - 2437 MHz	40.7 mW	1 W	Pass
	High Channel - 2462 MHz	21.6 mW	1 W	Pass
802.11(b) 11 Mbps				
	Low Channel - 2412 MHz	20.9 mW	1 W	Pass
	Mid Channel - 2437 MHz	39.6 mW	1 W	Pass
	High Channel - 2462 MHz	21.0 mW	1 W	Pass
802.11(g) 6 Mbps				
	Low Channel- 2412 MHz	24.6 mW	1 W	Pass
	Mid Channel - 2437 MHz	132 mW	1 W	Pass
	High Channel - 2462 MHz	27.6 mW	1 W	Pass
802.11(g) 36 Mbps				
	Low Channel- 2412 MHz	27 mW	1 W	Pass
	Mid Channel - 2437 MHz	147 mW	1 W	Pass
	High Channel- 2462 MHz	24.6 Mw	1 W	Pass
802.11(g) 54 Mbps				
	Low Channel- 2412 MHz	26.8 mW	1 W	Pass
	Mid Channel - 2437 MHz	145 mW	1 W	Pass
	High Channel- 2462 MHz	27.6 mW	1 W	Pass

NORTHWEST EMC

OUTPUT POWER

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			**Work Order:**	HONE0031
Serial Number:	None			**Date:**	04/29/08
Customer:	Honeywell			**Temperature:**	24°C
Attendees:	David Shipley			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	1018
Tested by:	Jaemi Suh	**Power:**	120V/60Hz	**Job Site:**	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

TX Output Power = -10. 8 dBi Antenna (2 dB over 6 dB Gain limit). Limit = 30- 2 = 28 dBm = 631 mW

DEVIATIONS FROM TEST STANDARD

No Deviations

Configuration #	1	Signature

S1

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel - 2412 MHz	17.5 mW	631 mW	Pass
	Mid Channel - 2437 MHz	29.7 mW	631 mW	Pass
	High Channel - 2462 MHz	17.6 mW	631 mW	Pass
802.11(b) 11 Mbps				
	Low Channel - 2412 MHz	16.5 mW	631 mW	Pass
	Mid Channel - 2437 MHz	29.2 mW	631 mW	Pass
	High Channel - 2462 MHz	17.4 mW	631 mW	Pass
802.11(g) 6 Mbps				
	Low Channel - 2412 MHz	19.6 mW	631 mW	Pass
	Mid Channel - 2437 MHz	120 mW	631 mW	Pass
	High Channel - 2462 MHz	19.3 mW	631 mW	Pass
802.11(g) 36 Mbps				
	Low Channel - 2412 MHz	18.7 mW	631 mW	Pass
	Mid Channel - 2437 MHz	115 mW	631 mW	Pass
	High Channel - 2462 MHz	19.0 mW	631 mW	Pass
802.11(g) 54 Mbps				
	Low Channel - 2412 MHz	21.2 mW	631 mW	Pass
	Mid Channel - 2437 MHz	114 mW	631 mW	Pass
	High Channel - 2462 MHz	18.9 mW	631 mW	Pass

NORTHWEST EMC

OUTPUT POWER

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			**Work Order:**	HONE0031
Serial Number:	None			**Date:**	04/29/08
Customer:	Honeywell			**Temperature:**	24°C
Attendees:	David Shipley			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	1018
Tested by:	Jaemi Suh	**Power:**	120V/60Hz	**Job Site:**	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

TX Output Power = -12. 14 dBi Antenna (8 dB over 6 dB Gain limit). Limit = 30- 8 = 22 dBm = 158.5 mW

DEVIATIONS FROM TEST STANDARD

No Deviations

Configuration #	1	Signature

S1

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel - 2412 MHz	12.6 mW	158.5 mW	Pass
	Mid Channel - 2437 MHz	26.1 mW	158.5 mW	Pass
	High Channel - 2462 MHz	13.5 mW	158.5 mW	Pass
802.11(b) 11 Mbps				
	Low Channel - 2412 MHz	14.2 mW	158.5 mW	Pass
	Mid Channel - 2437 MHz	23.3 mW	158.5 mW	Pass
	High Channel - 2462 MHz	13.6 mW	158.5 mW	Pass
802.11(g) 6 Mbps				
	Low Channel - 2412 MHz	15.5 mW	158.5 mW	Pass
	Mid Channel - 2437 MHz	88.2 mW	158.5 mW	Pass
	High Channel - 2462 MHz	17.2 mW	158.5 mW	Pass
802.11(g) 36 Mbps				
	Low Channel - 2412 MHz	15.6 mW	158.5 mW	Pass
	Mid Channel - 2437 MHz	77.0 mW	158.5 mW	Pass
	High Channel - 2462 MHz	14.8 mW	158.5 mW	Pass
802.11(g) 54 Mbps				
	Low Channel - 2412 MHz	15.2 mW	158.5 mW	Pass
	Mid Channel - 2437 MHz	87.0 mW	158.5 mW	Pass
	High Channel - 2462 MHz	16.8 mW	158.5 mW	Pass

OUTPUT POWER

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
Power Meter	Hewlett Packard	E4418A	SPA	12/14/2007	13
Spectrum Analyzer	Agilent	E4440A	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The peak output power was measured with the EUT set to low, medium, and high transmit frequencies. The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was transmitting at its maximum data rate and maximum output power.

De Facto EIRP Limit: Per 47 CFR 15.247 (b)(1-3), the EUT meets the de facto EIRP limit of +36dBm.

NORTHWEST EMC

OUTPUT POWER

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			**Work Order:**	HONE0031
Serial Number:	None			**Date:**	05/06/08
Customer:	Honeywell			**Temperature:**	24°C
Attendees:	David Shipley			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	1018
Tested by:	Jaemi Suh	**Power:**	120V/60Hz	**Job Site:**	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: Power Setting = -3. Omni Antenna = 12 dBi. Limit = 30 dBm - 6 dBi (12 dBi - 6) = 24dBm = 251.2 mW

DEVIATIONS FROM TEST STANDARD

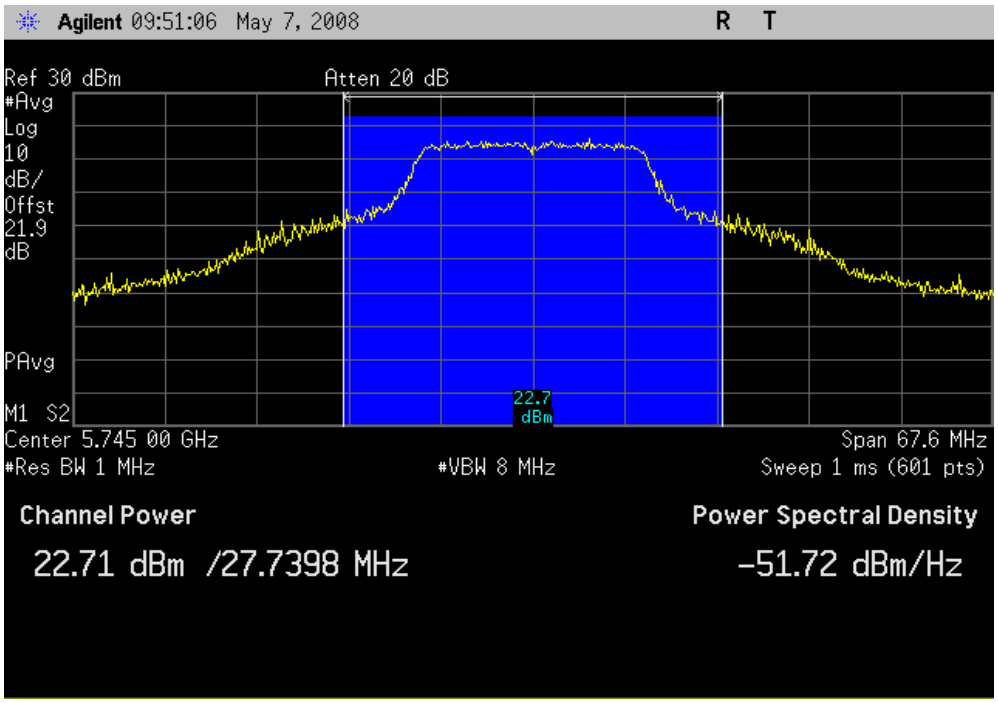
No deviations

Configuration #	1	Signature

S1

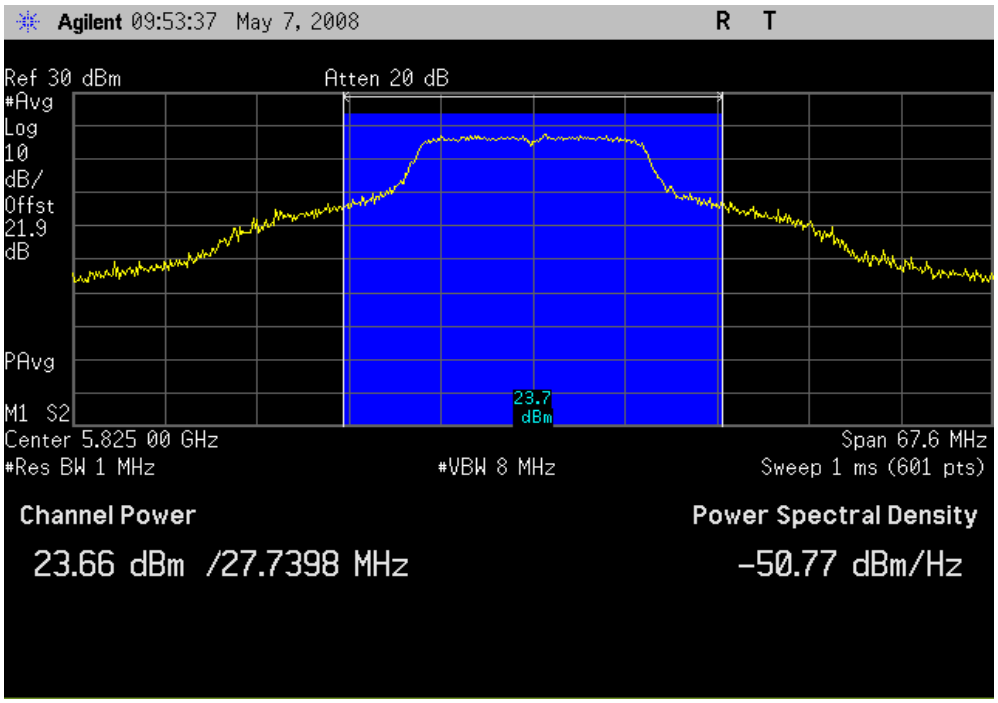
		Result (dBm)	Result (mW)	Limit	Results
802.11(a) 6 Mbps					
	Low Channel	22.7	186.21	251.2 mW	Pass
	Mid Channel	23.6	229.09	251.2 mW	Pass
	High Channel	23.7	234.42	251.2 mW	Pass
802.11(a) 36 Mbps					
	Low Channel	20.9	123.03	251.2 mW	Pass
	Mid Channel	23.6	229.09	251.2 mW	Pass
	High Channel	23.7	234.42	251.2 mW	Pass
802.11(a) 54 Mbps					
	Low Channel	17.2	52.48	251.2 mW	Pass
	Mid Channel	18.5	70.79	251.2 mW	Pass
	High Channel	18.6	72.44	251.2 mW	Pass

802.11(a) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	22.7	**Limit:**	79.4 mW

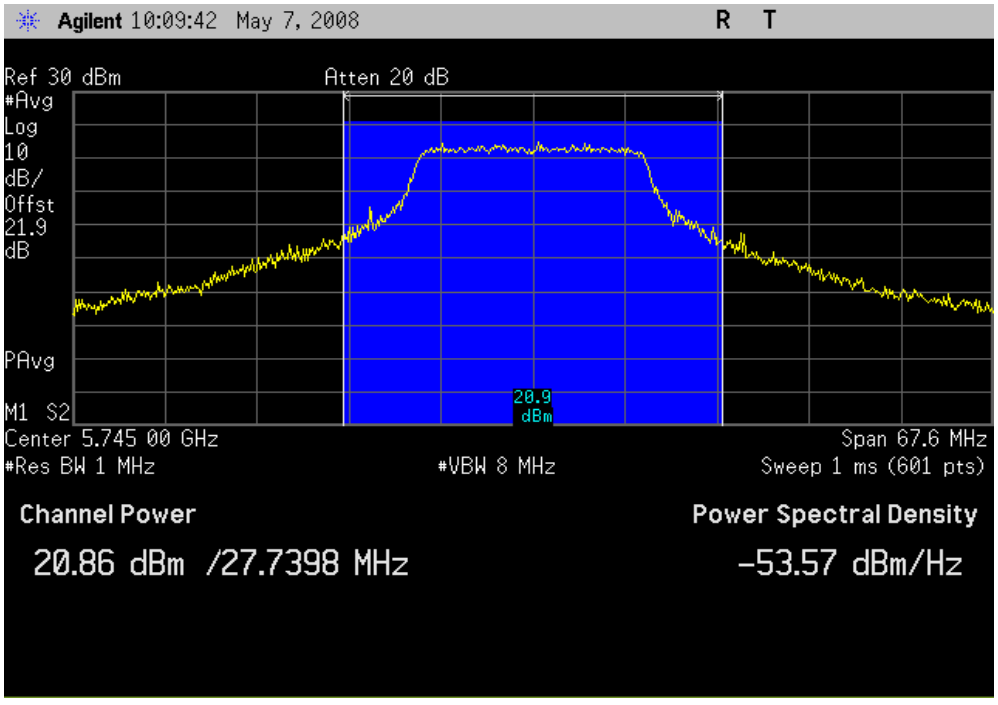


802.11(a) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	23.6	**Limit:**	79.4 mW

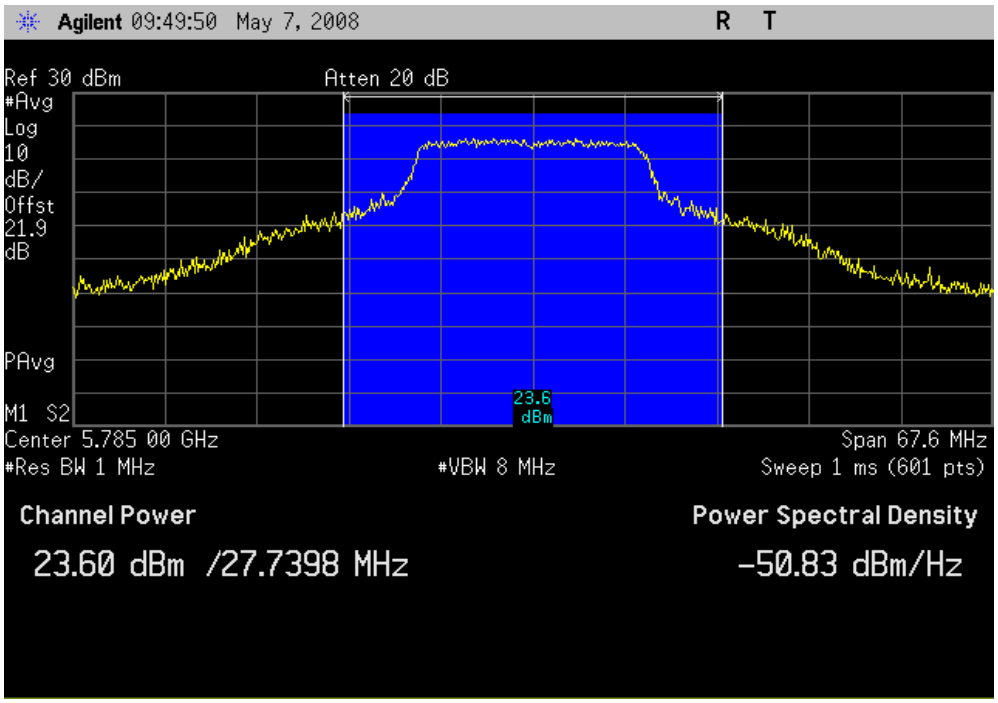
802.11(a) 6 Mbps, High Channel					
Result:	Pass	**Value:**	23.7	**Limit:**	79.4 mW



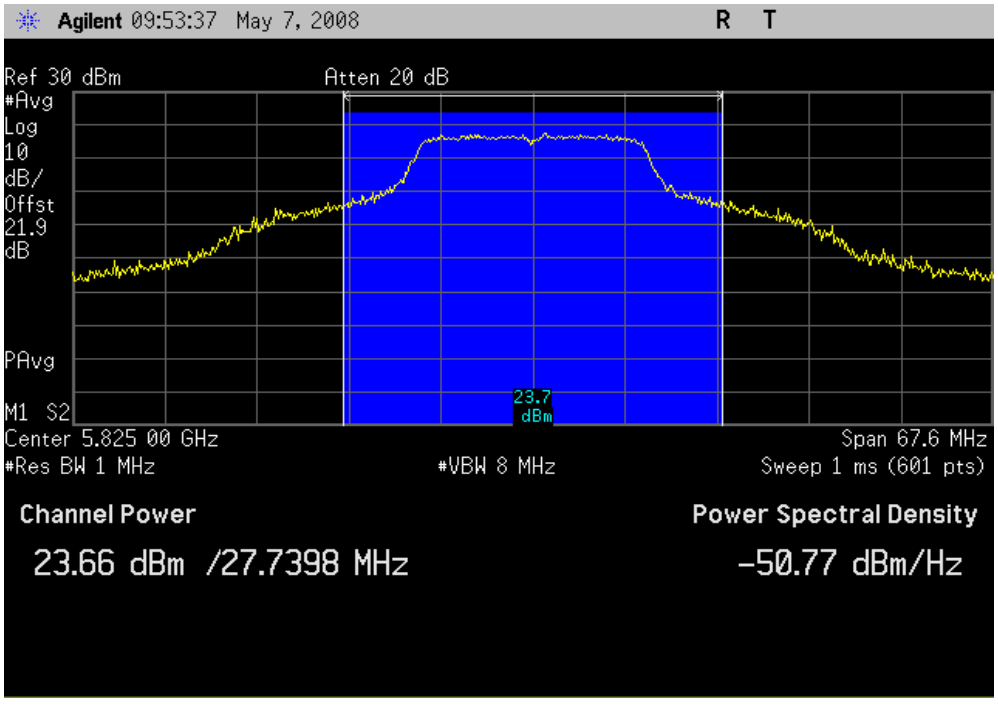
802.11(a) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	20.9	**Limit:**	79.4 mW



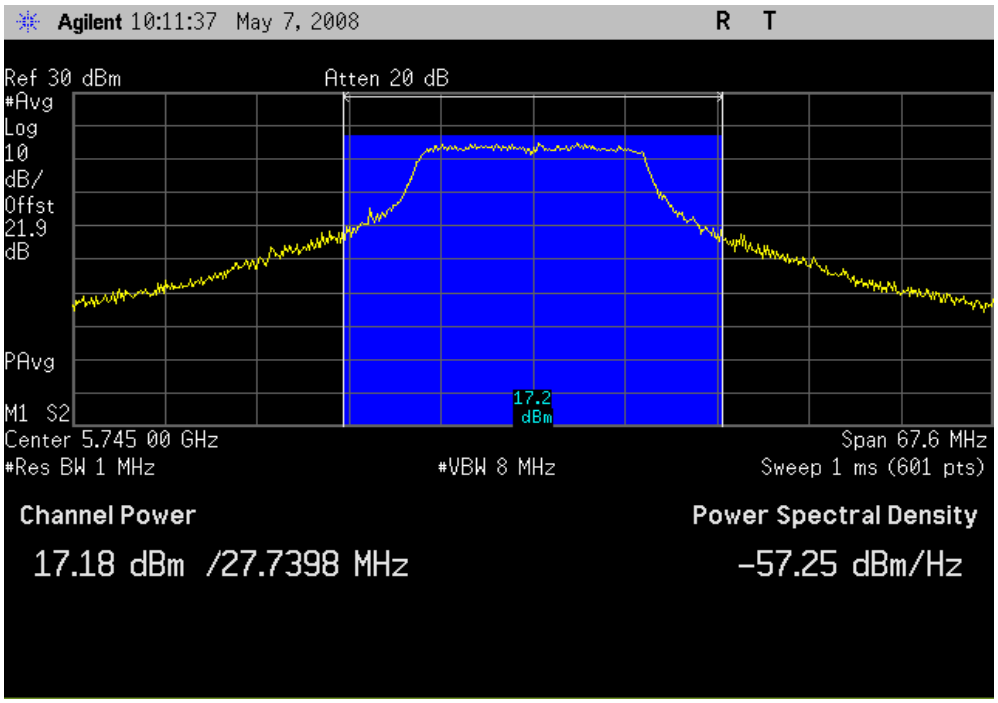
802.11(a) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	23.6	**Limit:**	79.4 mW



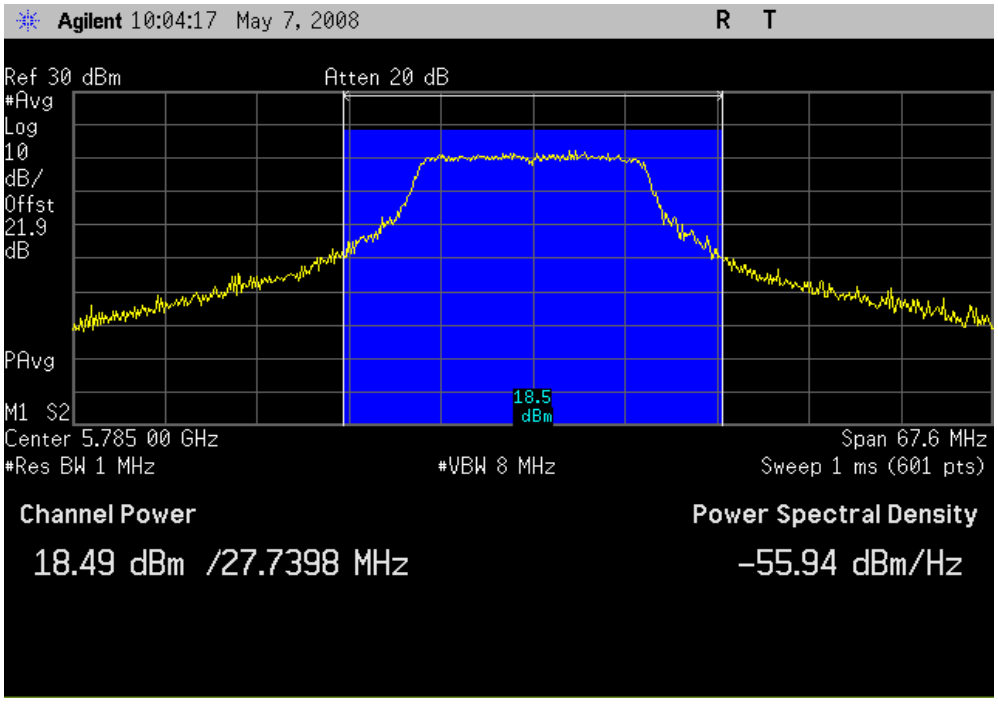
802.11(a) 36 Mbps, High Channel					
Result:	Pass	**Value:**	23.7	**Limit:**	79.4 mW



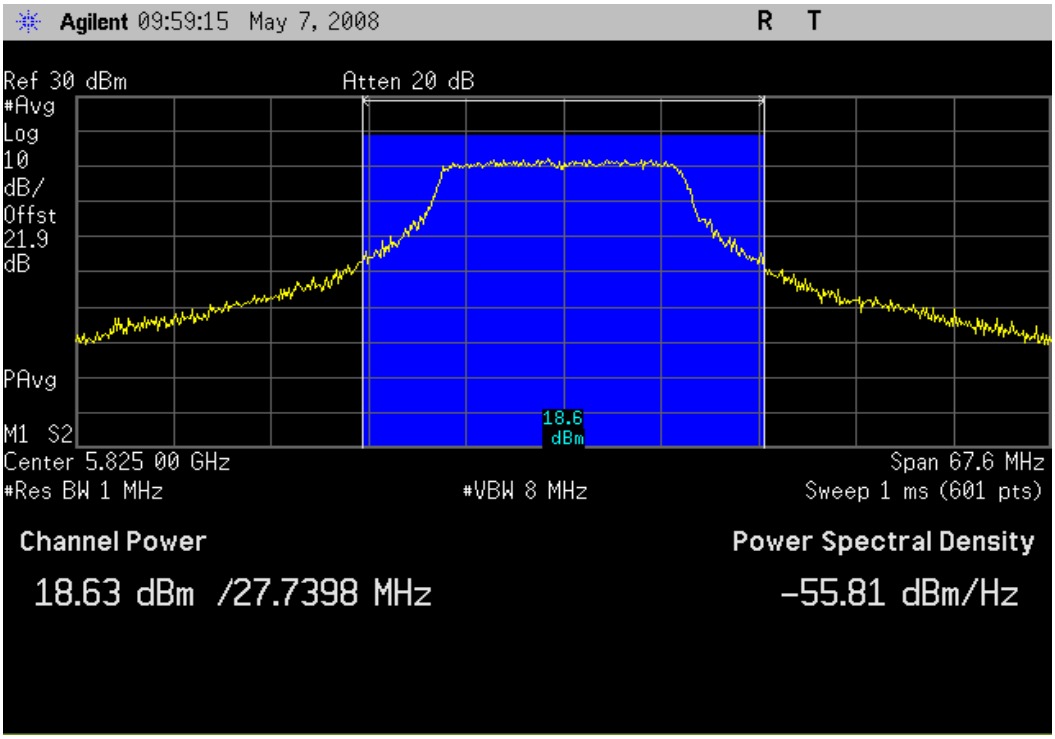
802.11(a) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	17.2	**Limit:**	79.4 mW



802.11(a) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	18.5	**Limit:**	79.4 mW



802.11(a) 54 Mbps, High Channel					
Result:	Pass	**Value:**	18.6	**Limit:**	79.4 mW



NORTHWEST EMC

OUTPUT POWER

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			**Work Order:**	HONE0031
Serial Number:	None			**Date:**	05/06/08
Customer:	Honeywell			**Temperature:**	24°C
Attendees:	David Shipley			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	1018
Tested by:	Jaemi Suh	**Power:**	120V/60Hz	**Job Site:**	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: = 40. Lowest Gain Omni Antenna = 8.5 dBi. Limit = 30 dBm - 2.5 dBi (8.5 dBi - 6) = 27.5 dBm = 562.3 mW

DEVIATIONS FROM TEST STANDARD

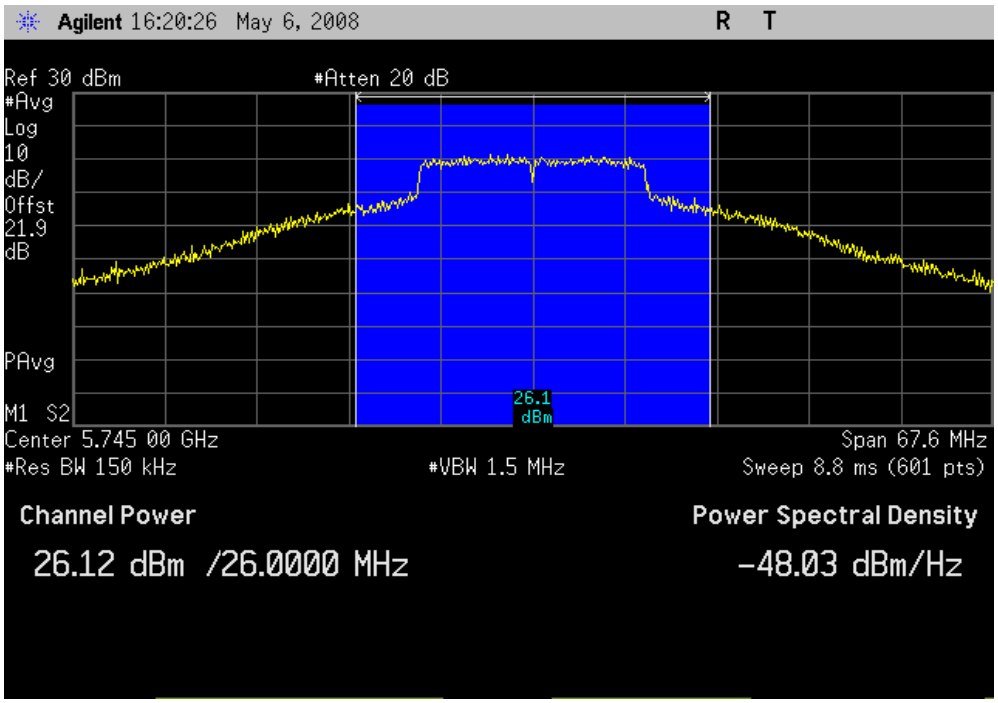
No Deviations

Configuration #	1	Signature

S1

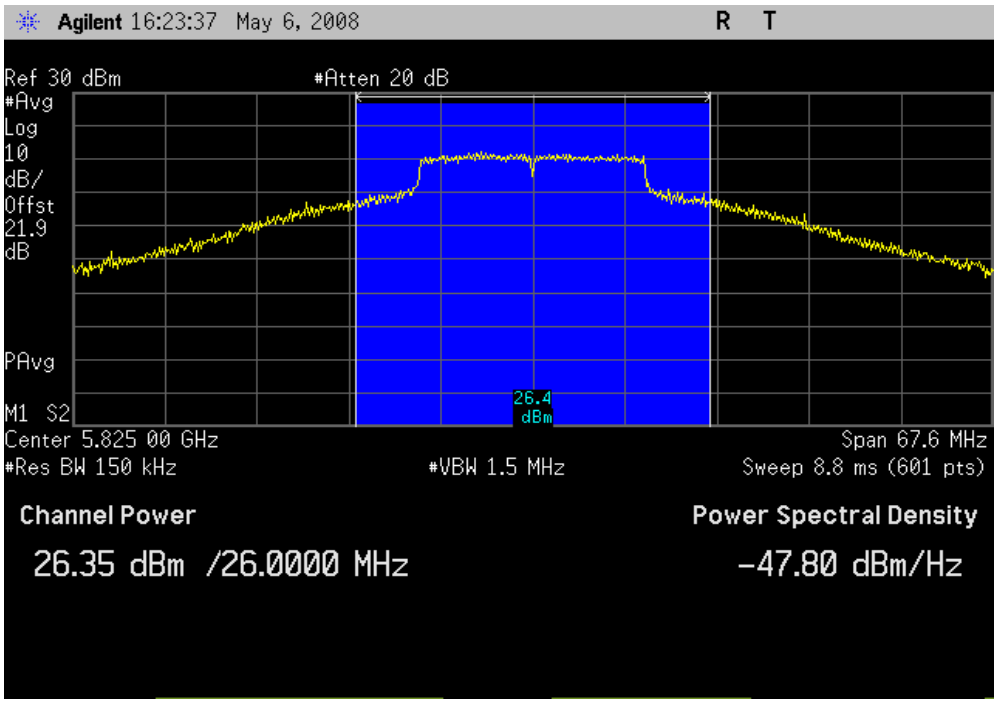
		Result (dBm)	Result (mW)	Limit	Results
802.11(a) 6 Mbps					
	Low Channel	26.1	407.38	562.3 mW	Pass
	Mid Channel	26.5	446.68	562.3 mW	Pass
	High Channel	26.4	436.52	562.3 mW	Pass
802.11(a) 36 Mbps					
	Low Channel	21.5	141.25	562.3 mW	Pass
	Mid Channel	21.4	138.04	562.3 mW	Pass
	High Channel	21.5	141.25	562.3 mW	Pass
802.11(a) 54 Mbps					
	Low Channel	17.4	54.95	562.3 mW	Pass
	Mid Channel	18.8	75.86	562.3 mW	Pass
	High Channel	18.7	74.13	562.3 mW	Pass

802.11(a) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	26.1	**Limit:**	562.3 mW

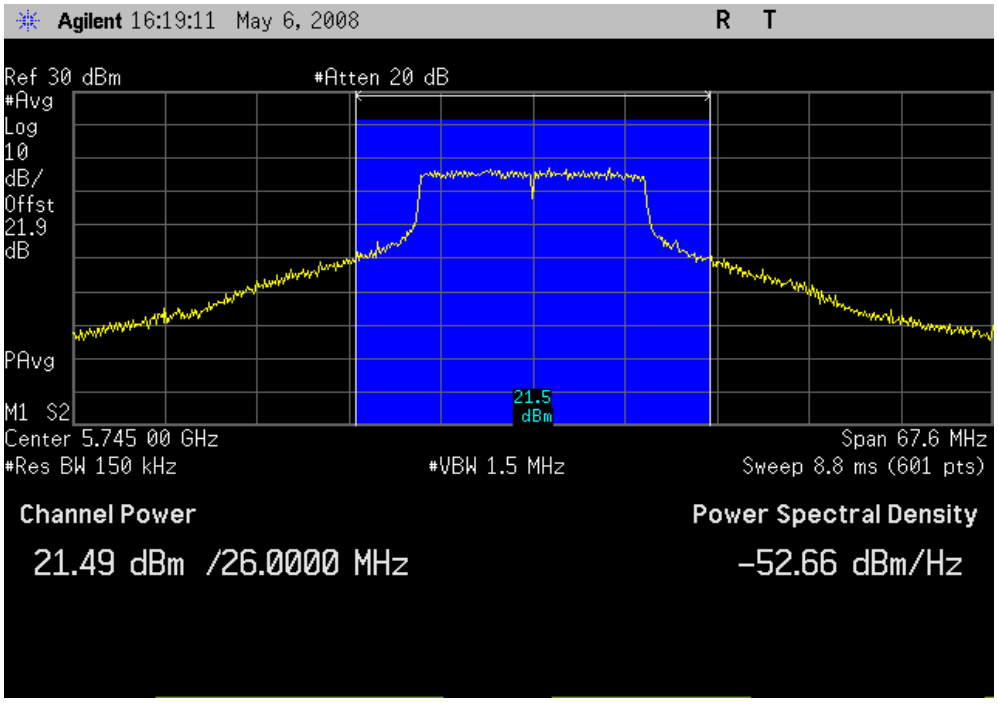


802.11(a) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	26.5	**Limit:**	562.3 mW

802.11(a) 6 Mbps, High Channel					
Result:	Pass	**Value:**	26.4	**Limit:**	562.3 mW

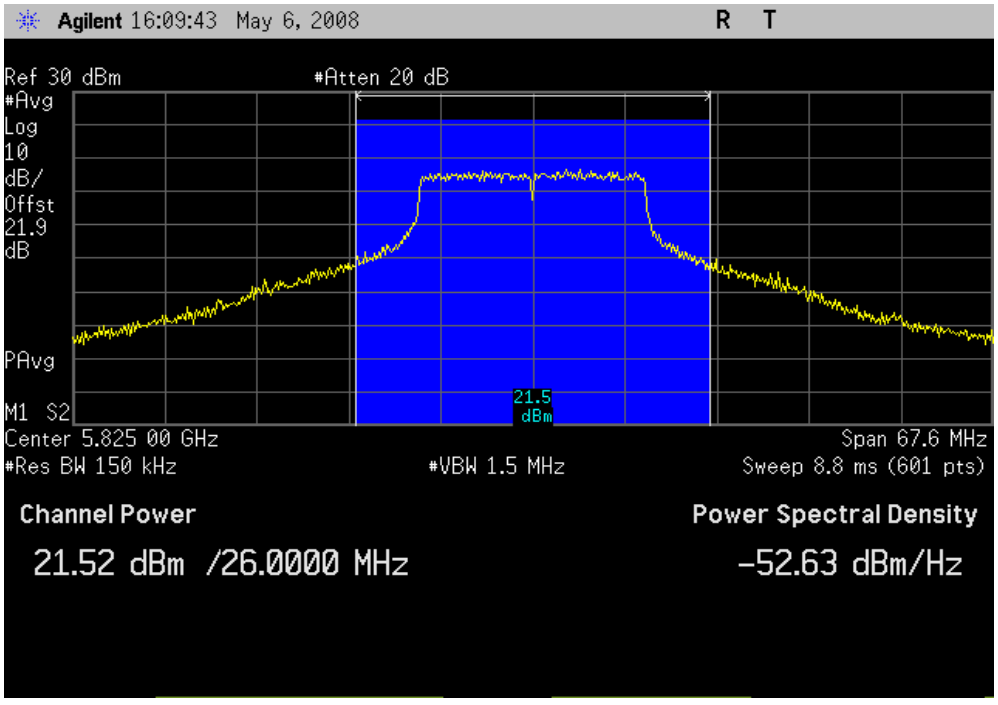


802.11(a) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	21.5	**Limit:**	562.3 mW

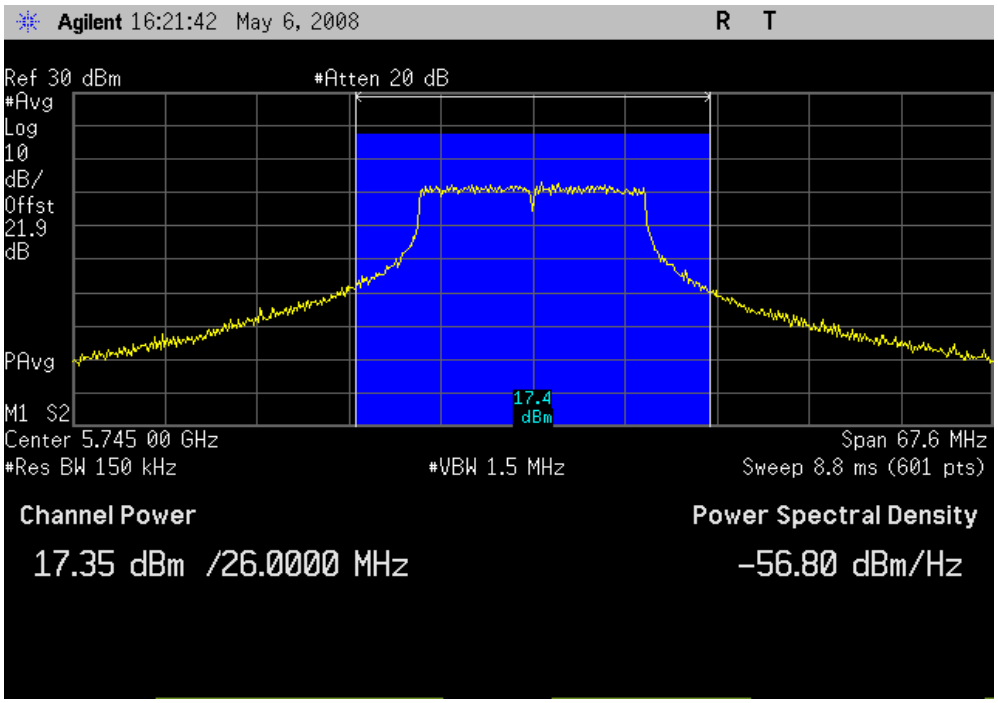


802.11(a) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	21.4	**Limit:**	562.3 mW

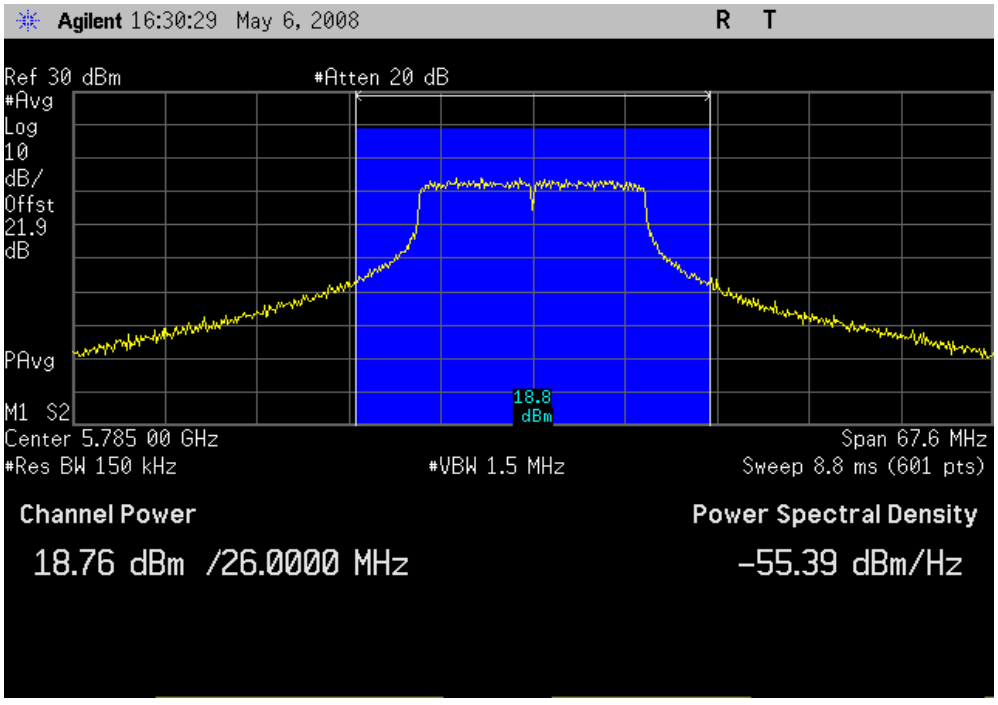
802.11(a) 36 Mbps, High Channel					
Result:	Pass	**Value:**	21.5	**Limit:**	562.3 mW



802.11(a) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	17.4	**Limit:**	562.3 mW



802.11(a) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	18.8	**Limit:**	562.3 mW



802.11(a) 54 Mbps, High Channel					
Result:	Pass	**Value:**	18.7	**Limit:**	562.3 mW

NORTHWEST EMC

OUTPUT POWER

XMit 2007.06.13

EUT:	**Multinode (R110 Extended Temperature)**			**Work Order:**	**HONE0031**
Serial Number:	**None**			**Date:**	**05/06/08**
Customer:	**Honeywell**			**Temperature:**	**24°C**
Attendees:	**David Shipley**			**Humidity:**	**34%**
Project:	**None**			**Barometric Pres.:**	**1018**
Tested by:	**Jaemi Suh**	**Power:**	**120V/60Hz**	**Job Site:**	**OC11**

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: = -15. Middle Gain Sector Antenna = 17 dBi. Limit = 30 dBm - 11 dBi (17 dBi - 6) = 19dBm = 79.4 mW

DEVIATIONS FROM TEST STANDARD

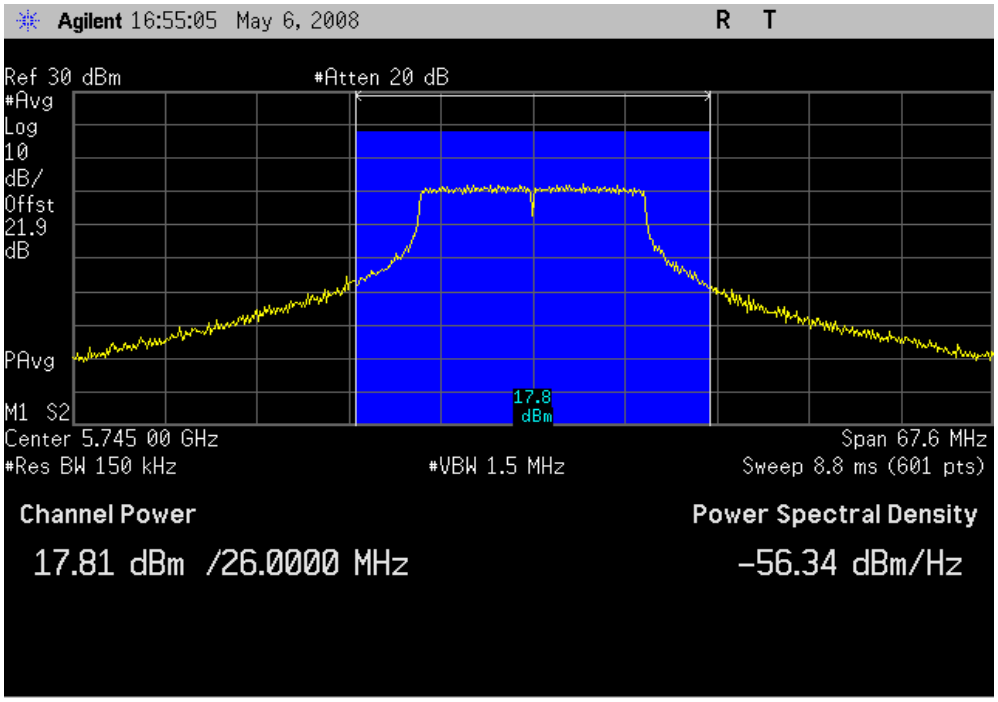
No Deviations

Configuration #	**1**	*Signature*

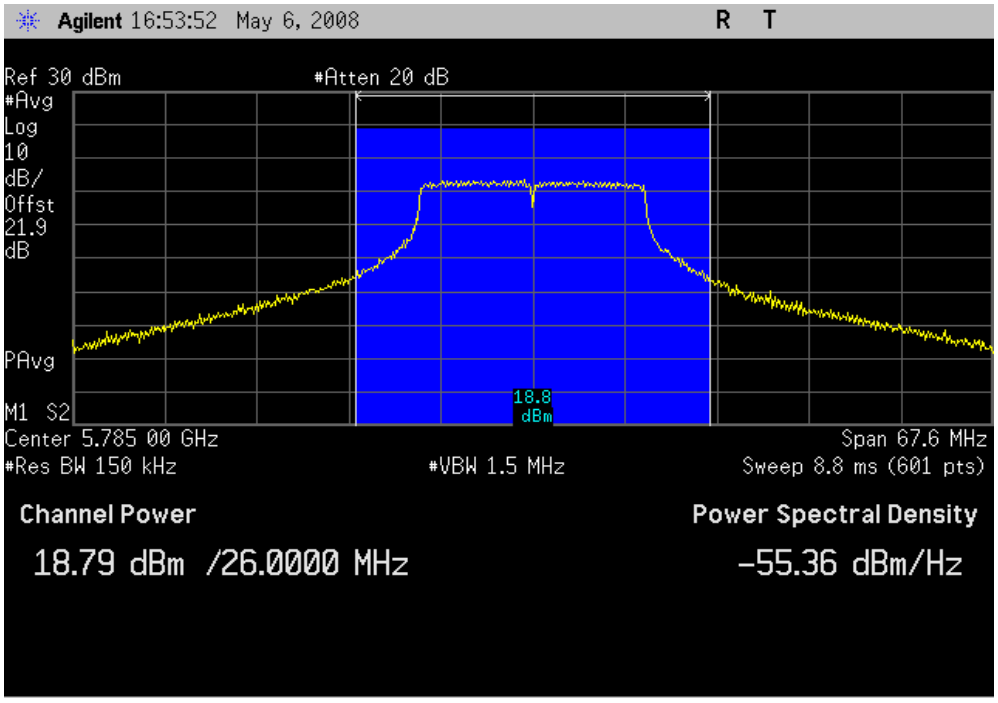
S1

		Result (dBm)	Result (mW)	Limit	Results
802.11(a) 6 Mbps					
	Low Channel	17.8	60.26	79.4 mW	Pass
	Mid Channel	18.8	75.86	79.4 mW	Pass
	High Channel	18.6	72.44	79.4 mW	Pass
802.11(a) 36 Mbps					
	Low Channel	15.5	35.48	79.4 mW	Pass
	Mid Channel	15.8	38.02	79.4 mW	Pass
	High Channel	16.7	46.77	79.4 mW	Pass
802.11(a) 54 Mbps					
	Low Channel	16	39.81	79.4 mW	Pass
	Mid Channel	15.7	37.15	79.4 mW	Pass
	High Channel	16.6	45.71	79.4 mW	Pass

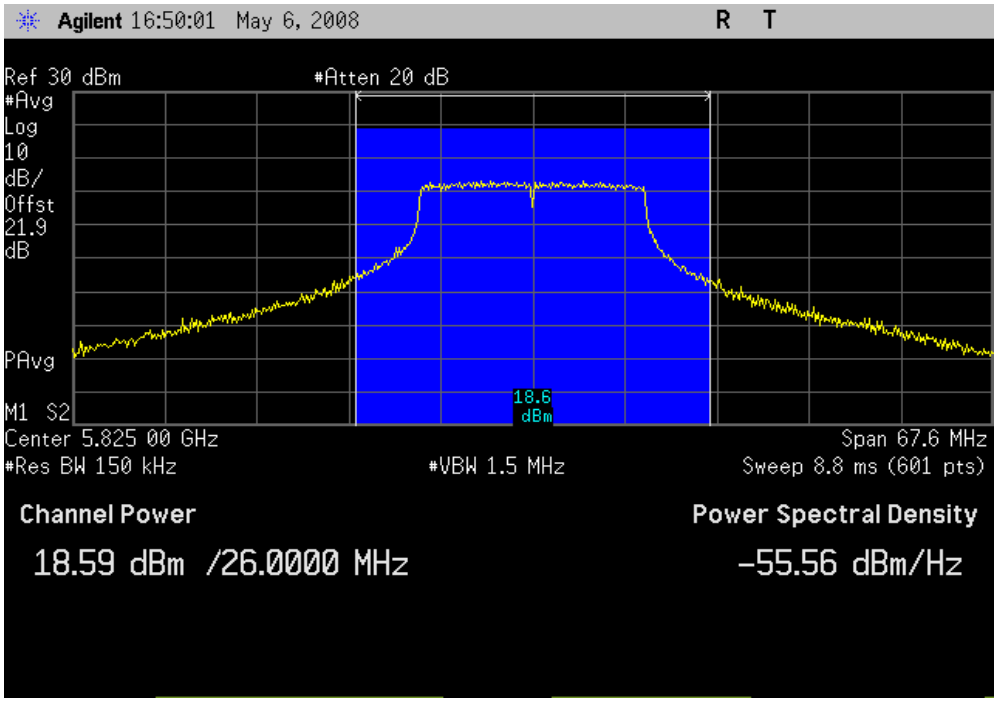
802.11(a) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	17.8	**Limit:**	79.4 mW



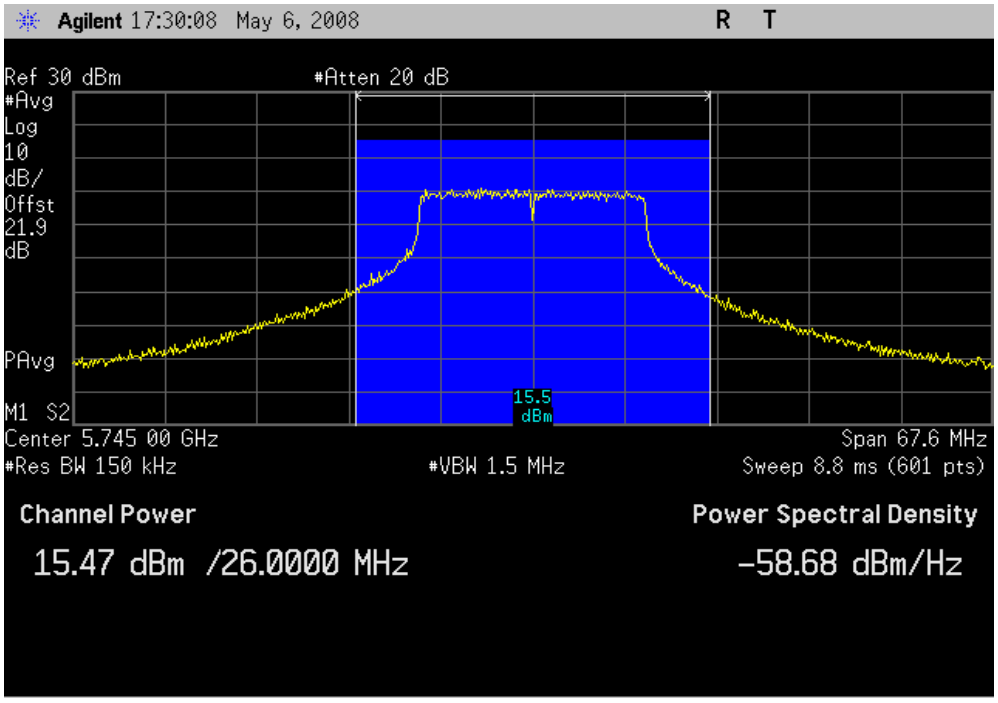
802.11(a) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	18.8	**Limit:**	79.4 mW



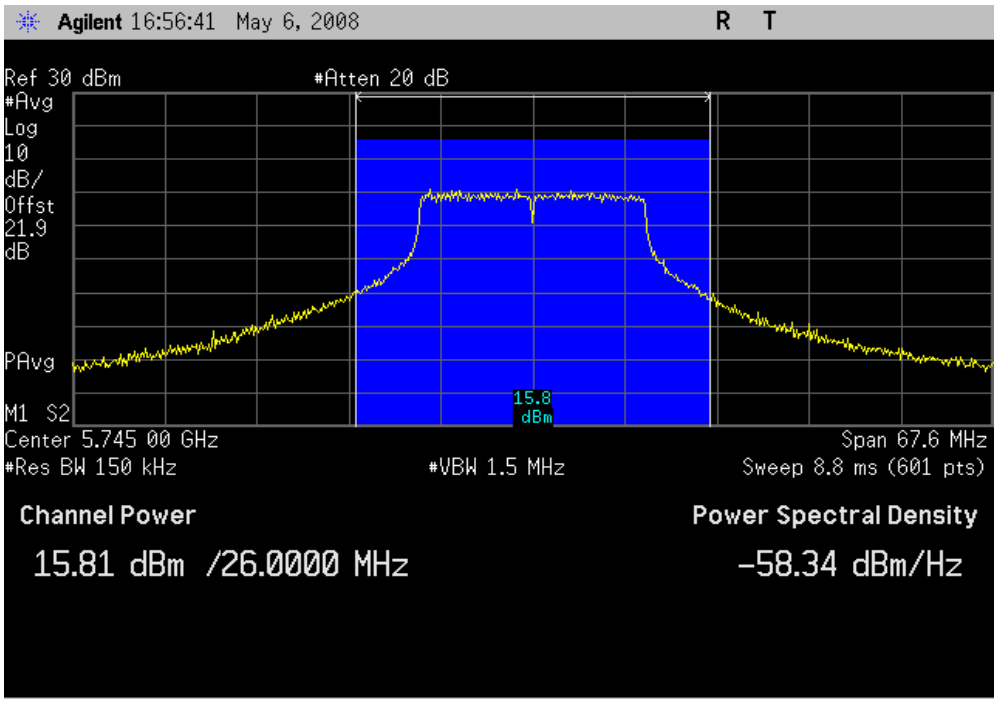
802.11(a) 6 Mbps, High Channel					
Result:	Pass	**Value:**	18.6	**Limit:**	79.4 mW



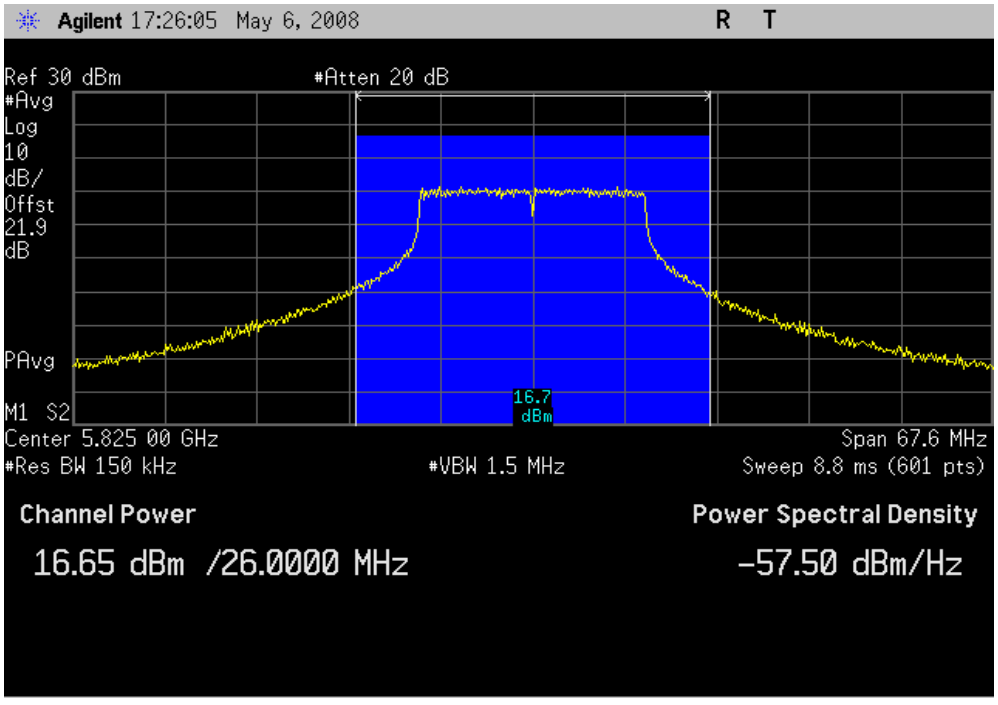
802.11(a) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	15.5	**Limit:**	79.4 mW



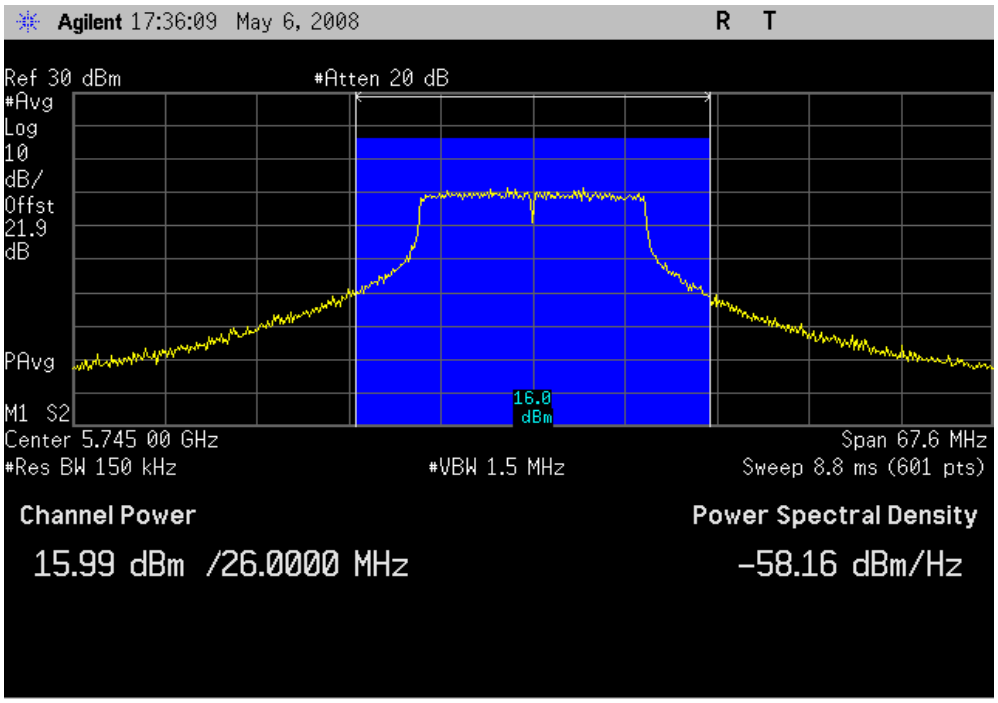
802.11(a) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	15.8	**Limit:**	79.4 mW



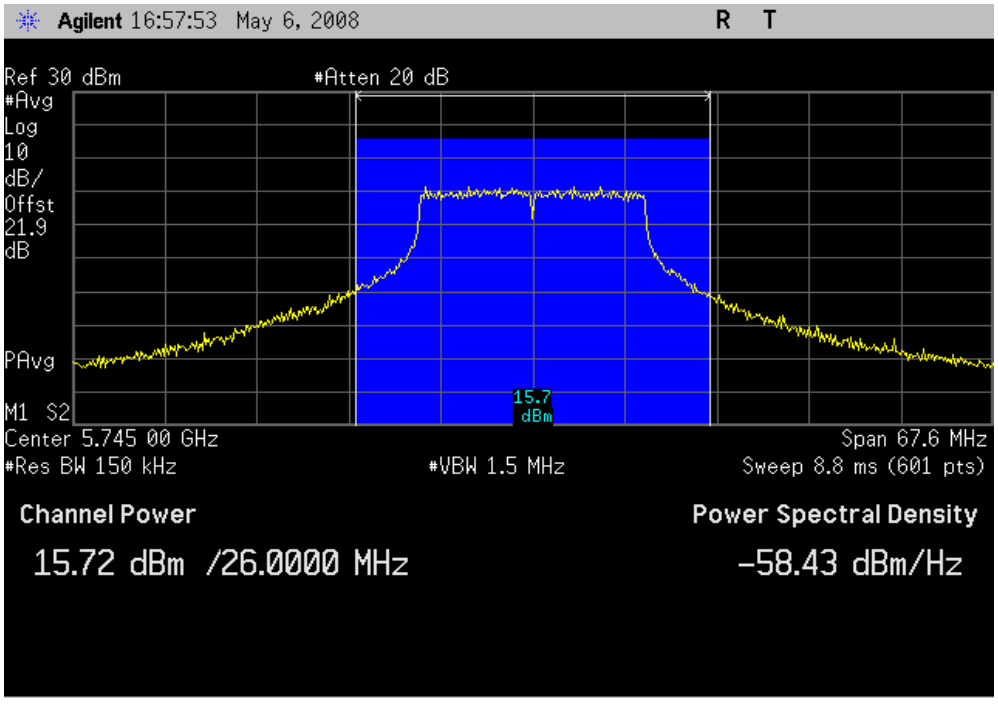
802.11(a) 36 Mbps, High Channel					
Result:	Pass	**Value:**	16.7	**Limit:**	79.4 mW



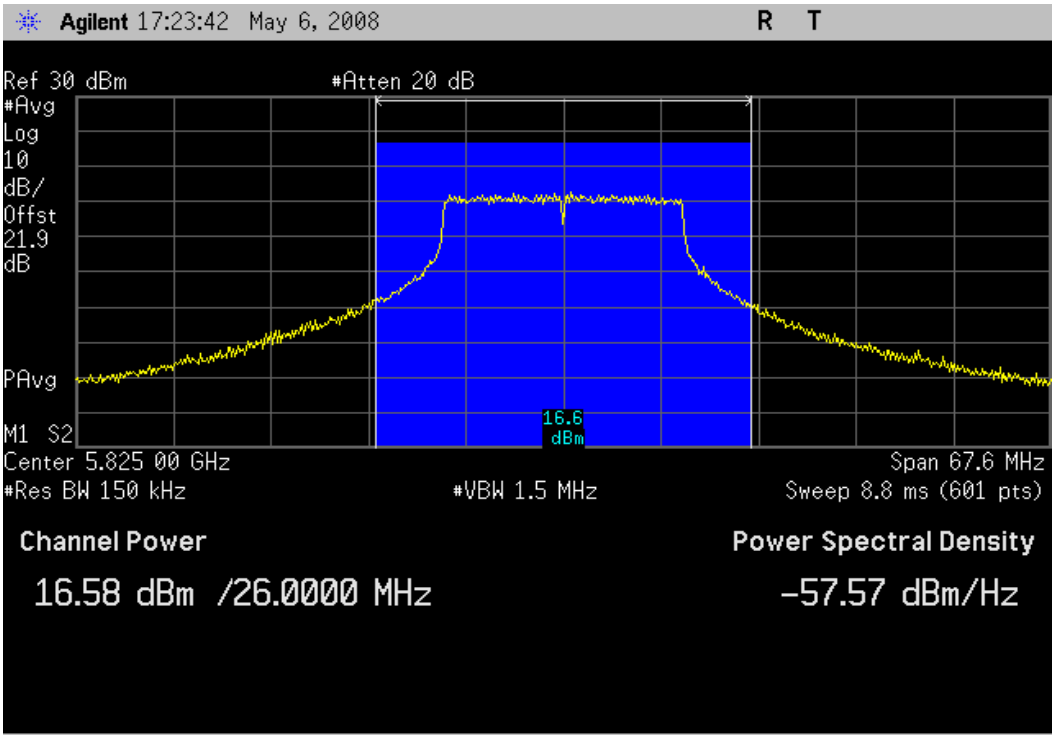
802.11(a) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	16	**Limit:**	79.4 mW

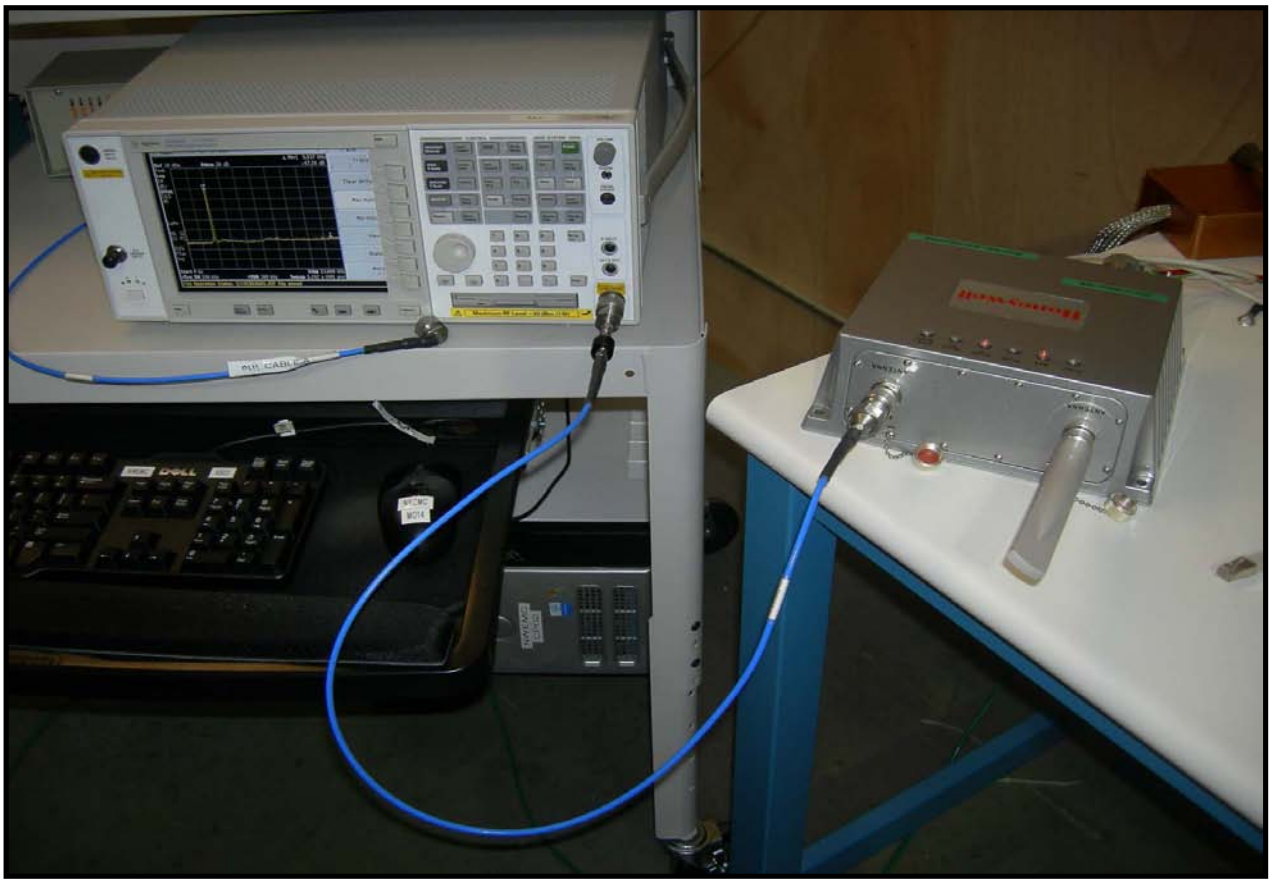


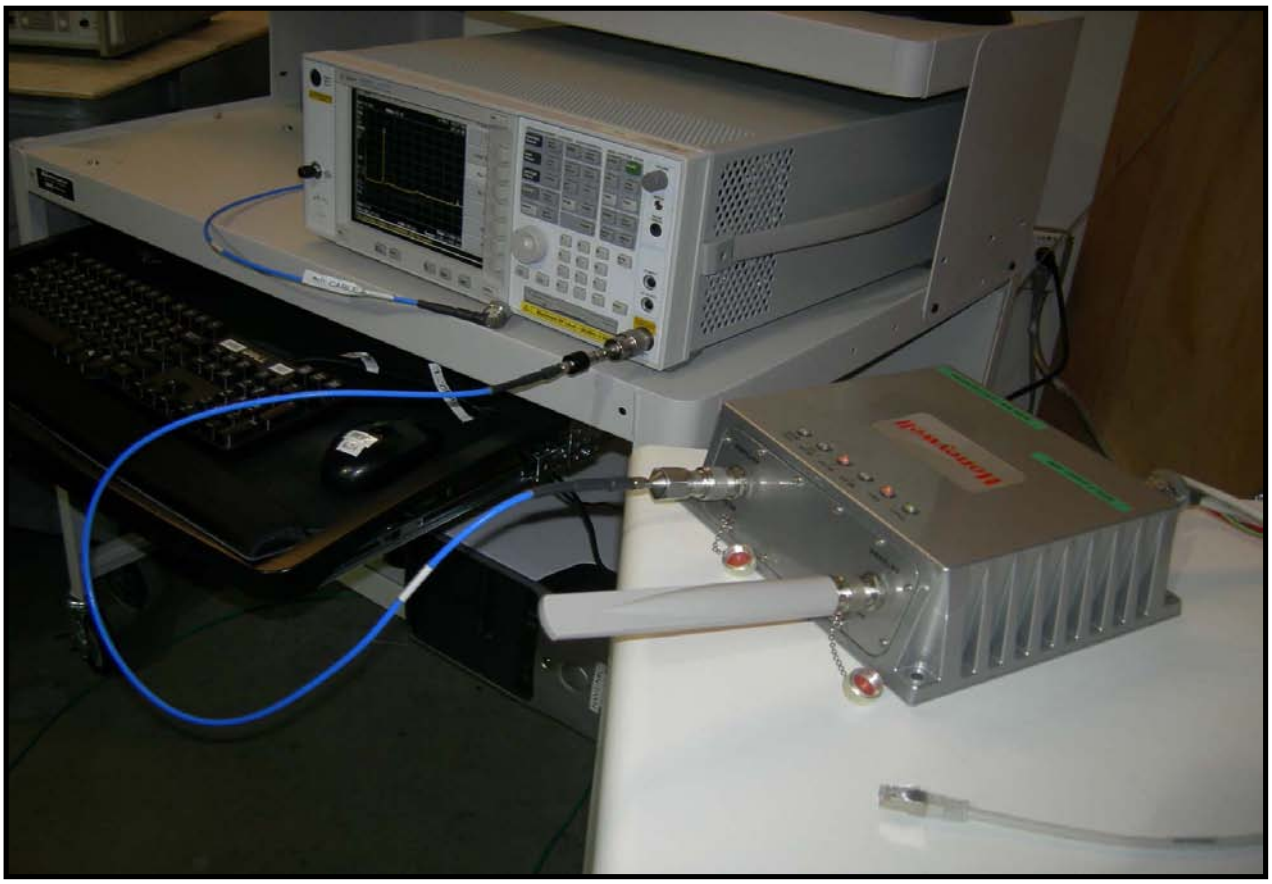
802.11(a) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	15.7	**Limit:**	79.4 mW



802.11(a) 54 Mbps, High Channel					
Result:	Pass	**Value:**	16.6	**Limit:**	79.4 mW







BAND EDGE COMPLIANCE

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	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The requirements of FCC 15.247(d) for emissions at least 20dB below the carrier in any 100kHz bandwidth outside the allowable band was measured with the EUT set to low and high transmit frequencies. 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 using direct sequence modulation. The channels closest to the band edges were selected. The spectrum was scanned across each band edge from 10 MHz below the band edge to 10 MHz above the band edge.

NORTHWEST EMC

BAND EDGE COMPLIANCE

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/30/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -8. (Highest Output Power).

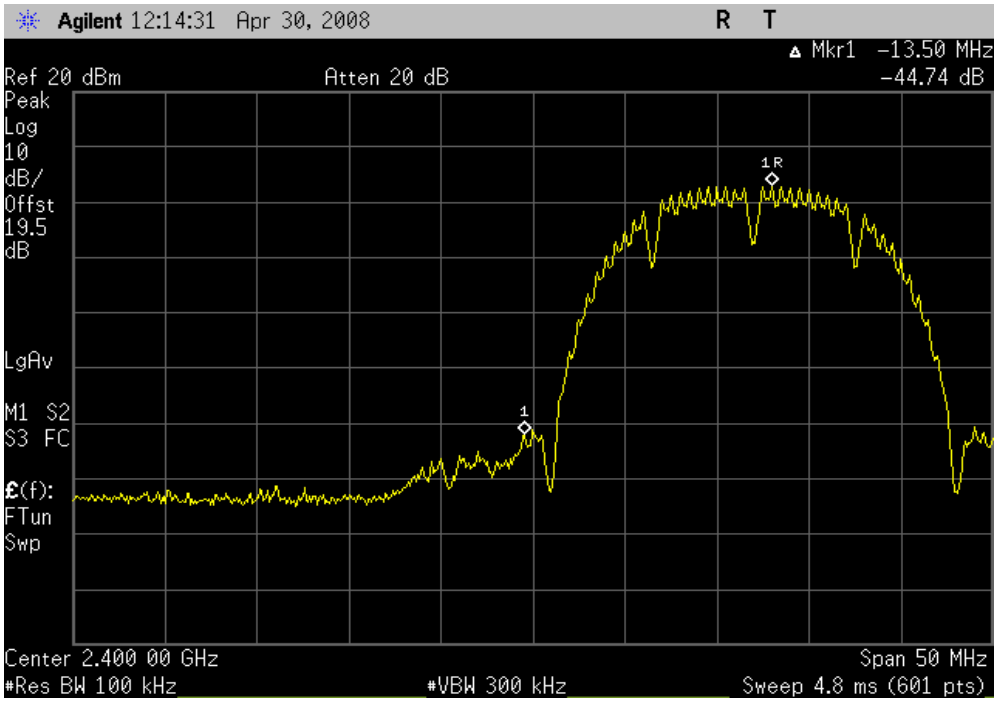
DEVIATIONS FROM TEST STANDARD

No Deviations

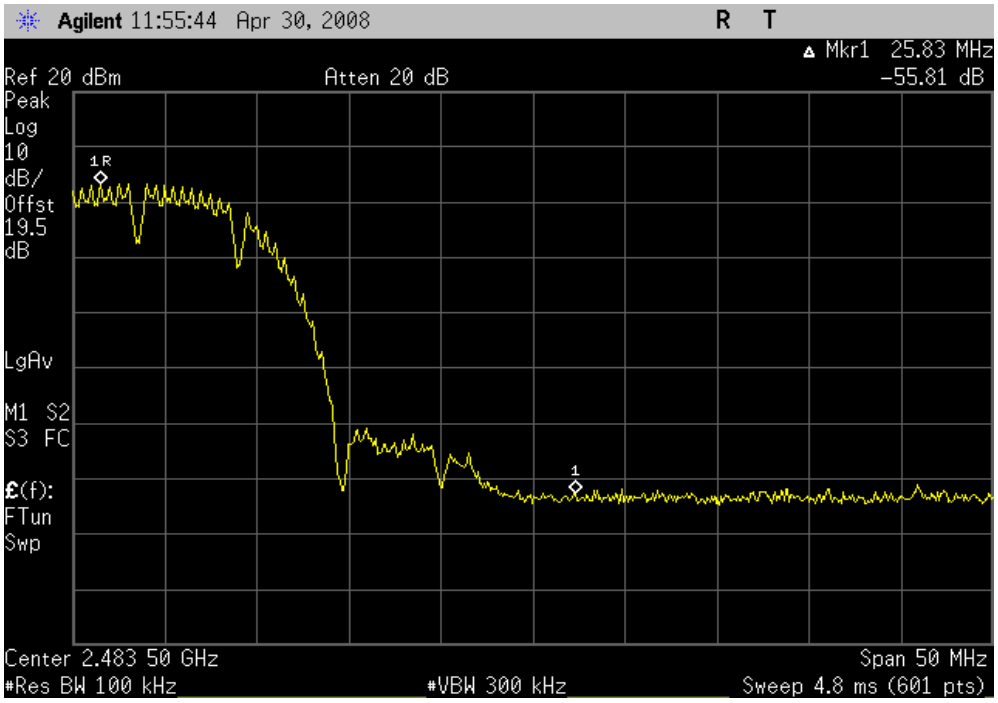
Configuration #	1	Signature

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel	- 44.74 dBc	≤ -20 dBc	Pass
	High Channel	- 55.81 dBc	≤ -20 dBc	Pass
802.11(b) 11 Mbps				
	Low Channel	- 44.02 dBc	≤ -20 dBc	Pass
	High Channel	- 54.81 dBc	≤ -20 dBc	Pass
802.11(g) 6 Mbps				
	Low Channel	- 26.83 dBc	≤ -20 dBc	Pass
	High Channel	- 46.17 dBc	≤ -20 dBc	Pass
802.11(g) 36 Mbps				
	Low Channel	-24.87 dBc	≤ -20 dBc	Pass
	High Channel	- 48.95 dBc	≤ -20 dBc	Pass
802.11(g) 54 Mbps				
	Low Channel	-28.35 dBc	≤ -20 dBc	Pass
	High Channel	- 49.33 dBc	≤ -20 dBc	Pass

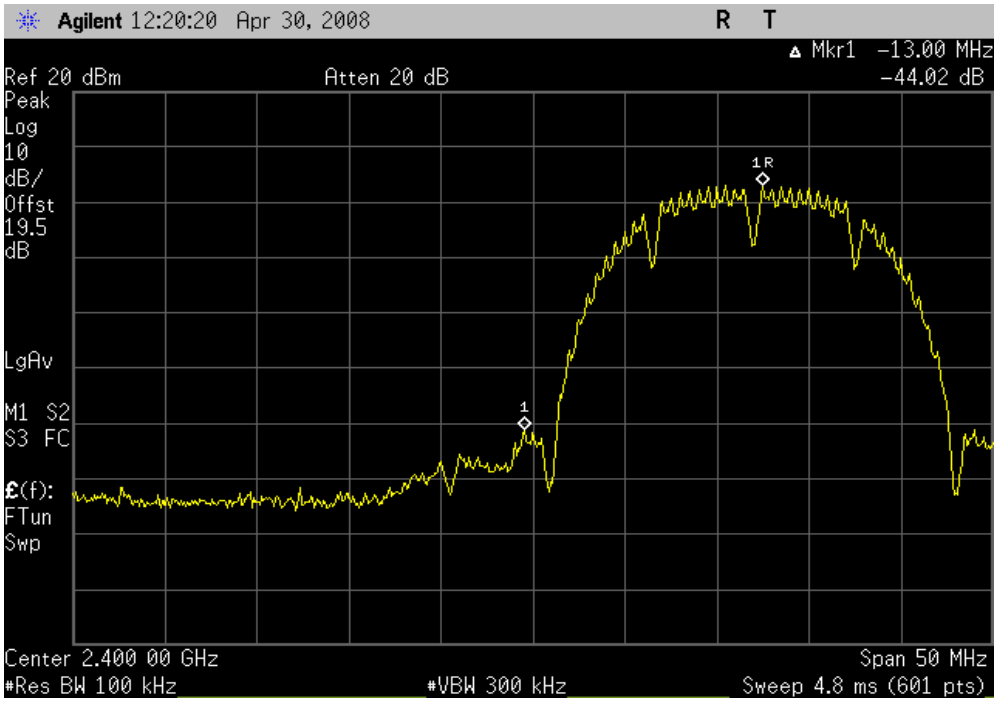
802.11(b) 1 Mbps, Low Channel					
Result:	Pass	**Value:**	- 44.74 dBc	**Limit:**	≤ -20 dBc



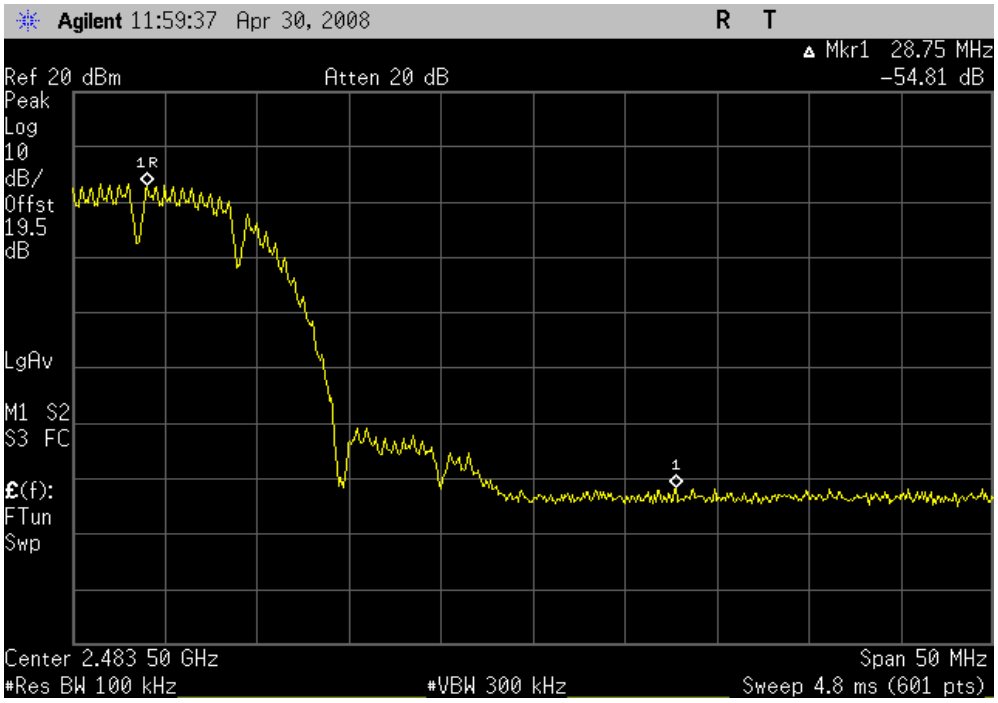
802.11(b) 1 Mbps, High Channel					
Result:	Pass	**Value:**	- 55.81 dBc	**Limit:**	≤ -20 dBc



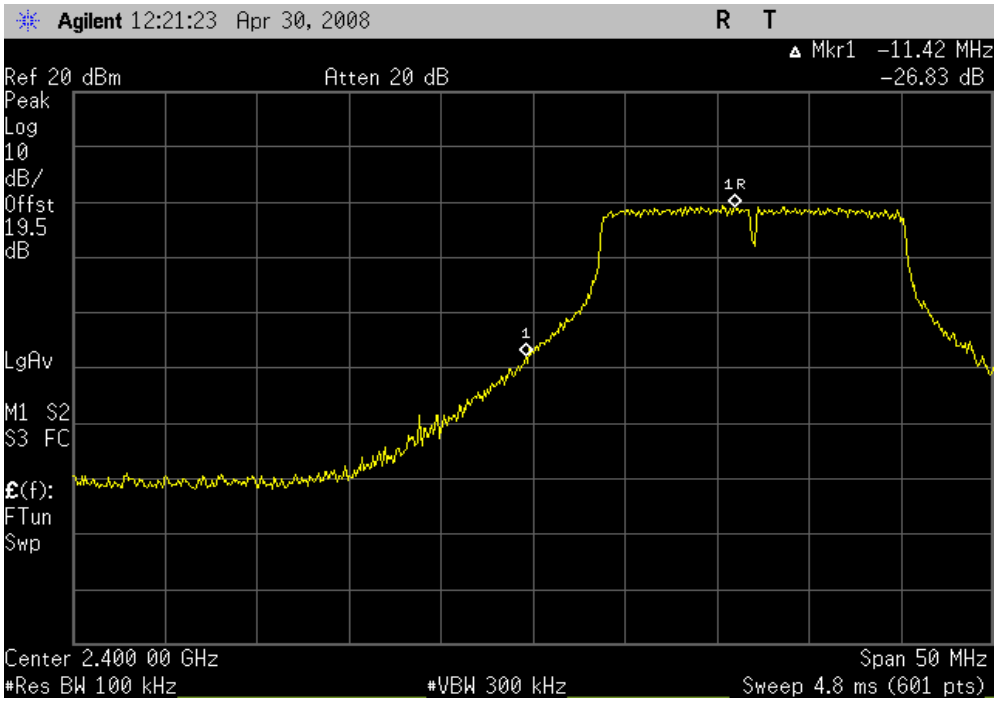
802.11(b) 11 Mbps, Low Channel					
Result:	Pass	**Value:**	- 44.02 dBc	**Limit:**	≤ -20 dBc



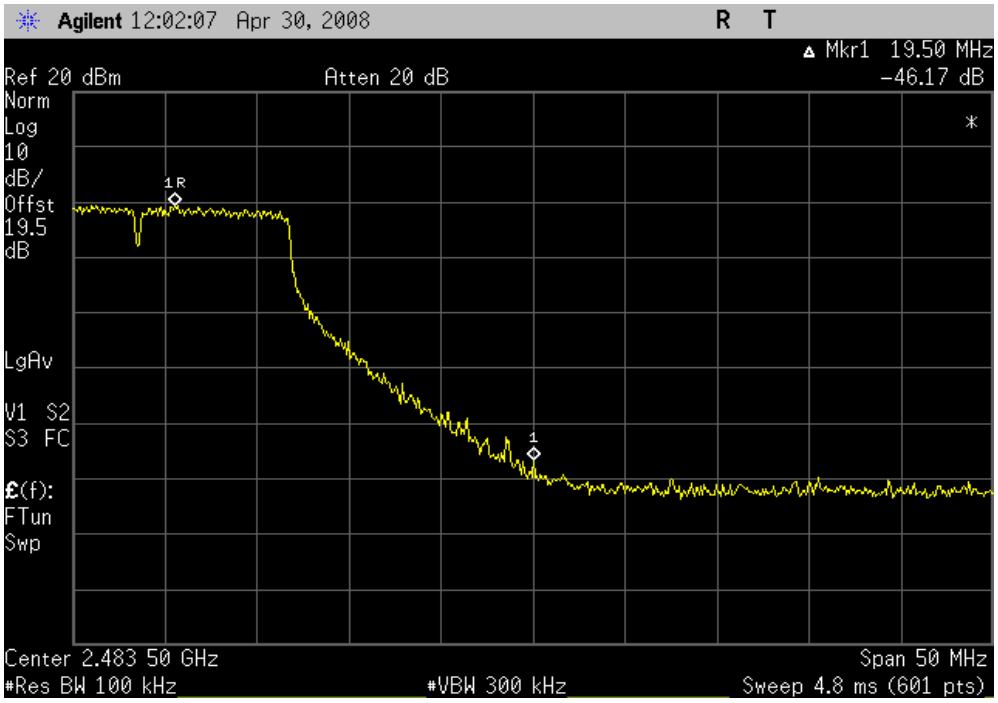
802.11(b) 11 Mbps, High Channel					
Result:	Pass	**Value:**	- 54.81 dBc	**Limit:**	≤ -20 dBc



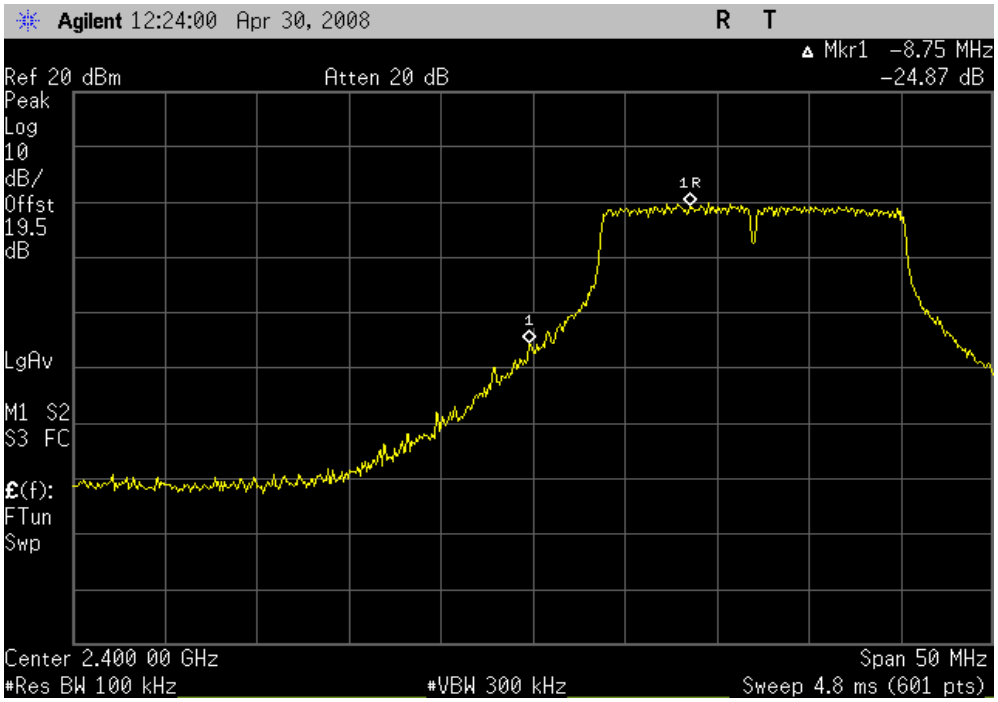
802.11(g) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	- 26.83 dBc	**Limit:**	≤ -20 dBc



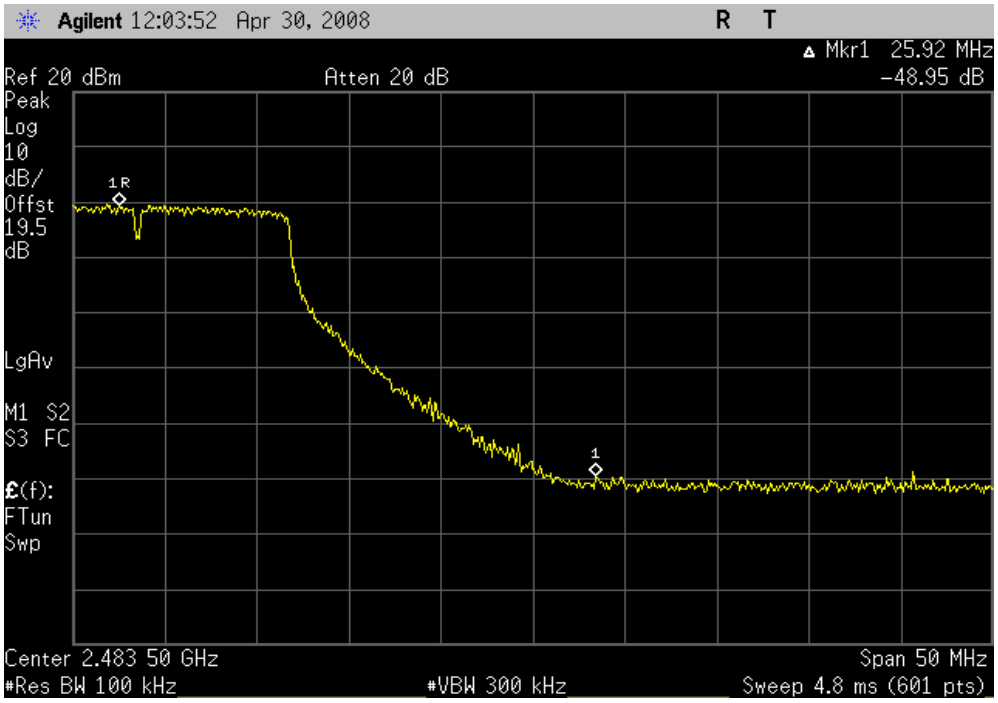
802.11(g) 6 Mbps, High Channel					
Result:	Pass	**Value:**	- 46.17 dBc	**Limit:**	≤ -20 dBc



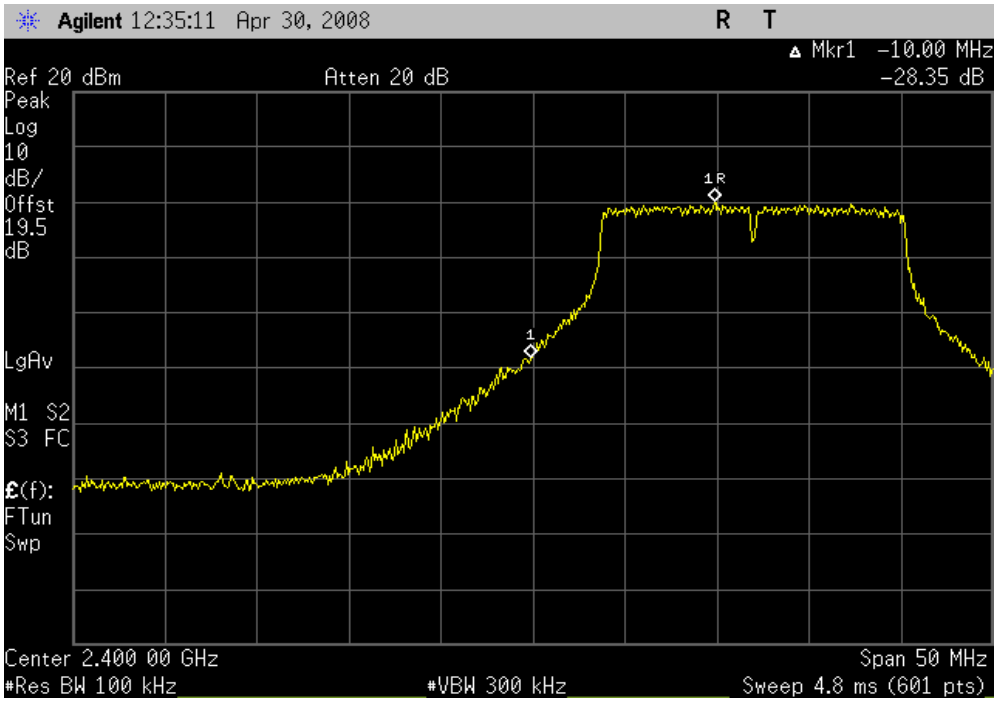
802.11(g) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-24.87 dBc	**Limit:**	≤ -20 dBc



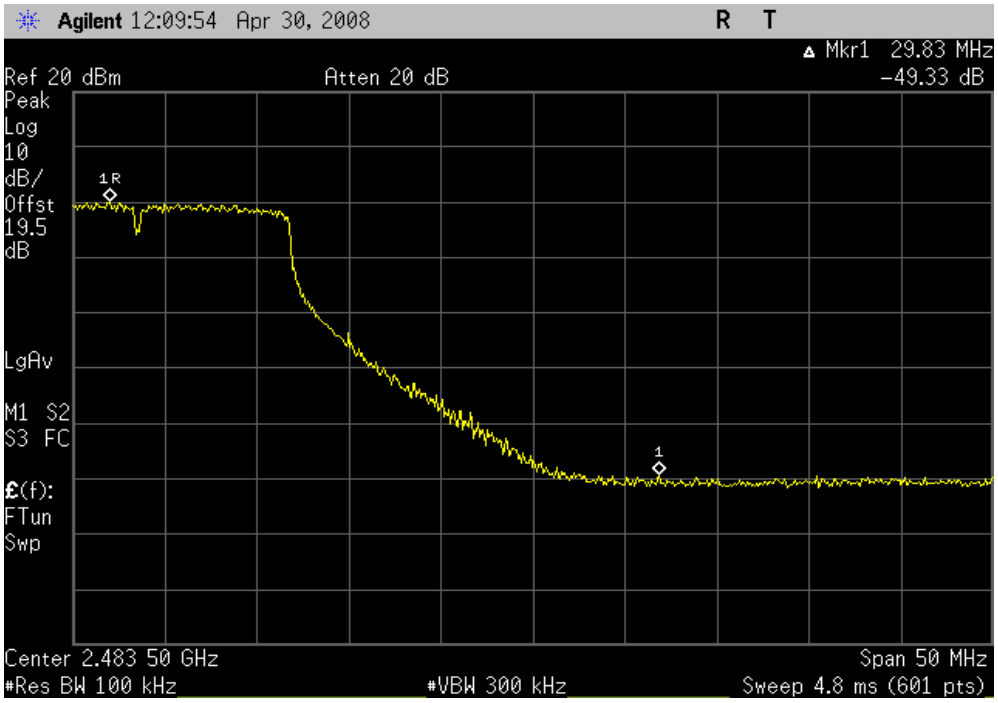
802.11(g) 36 Mbps, High Channel					
Result:	Pass	**Value:**	- 48.95 dBc	**Limit:**	≤ -20 dBc

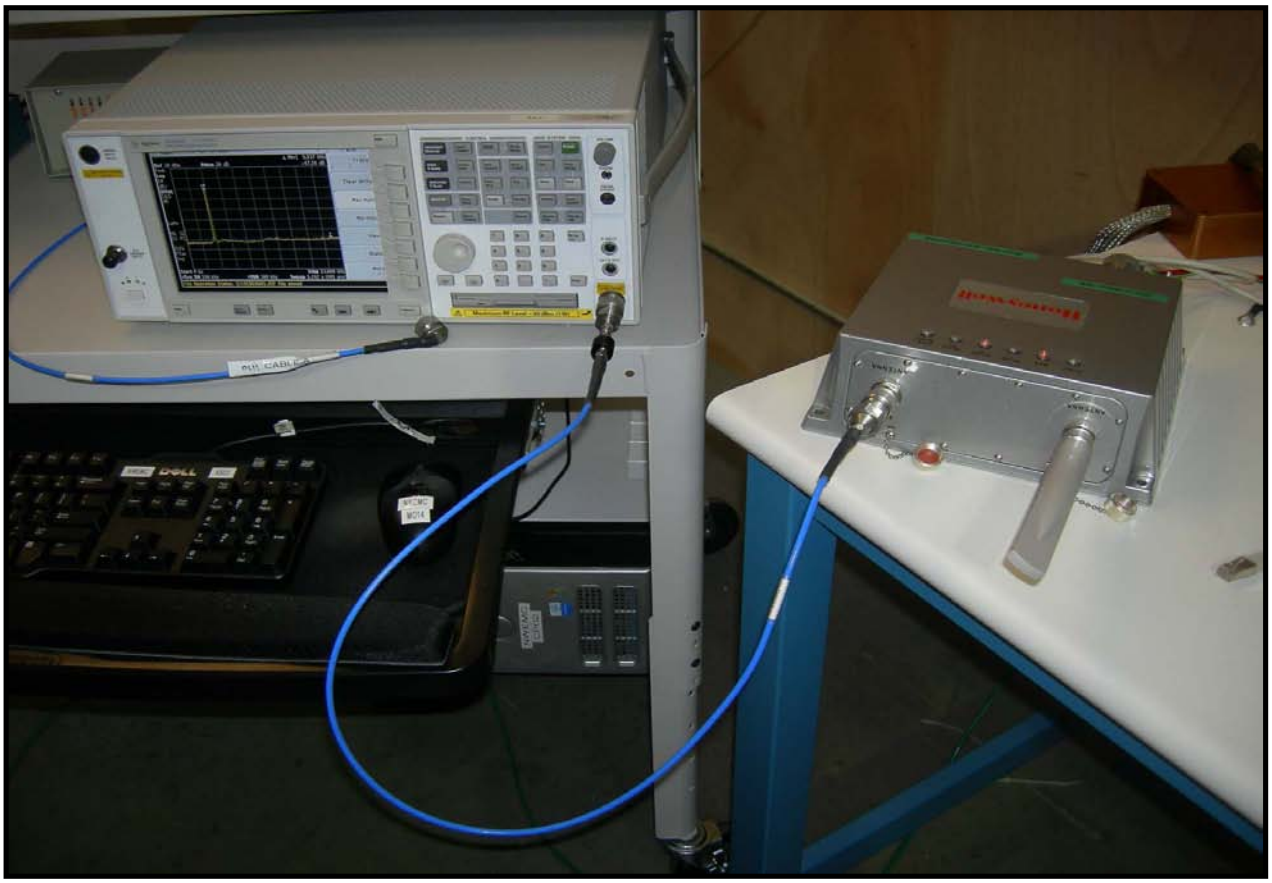


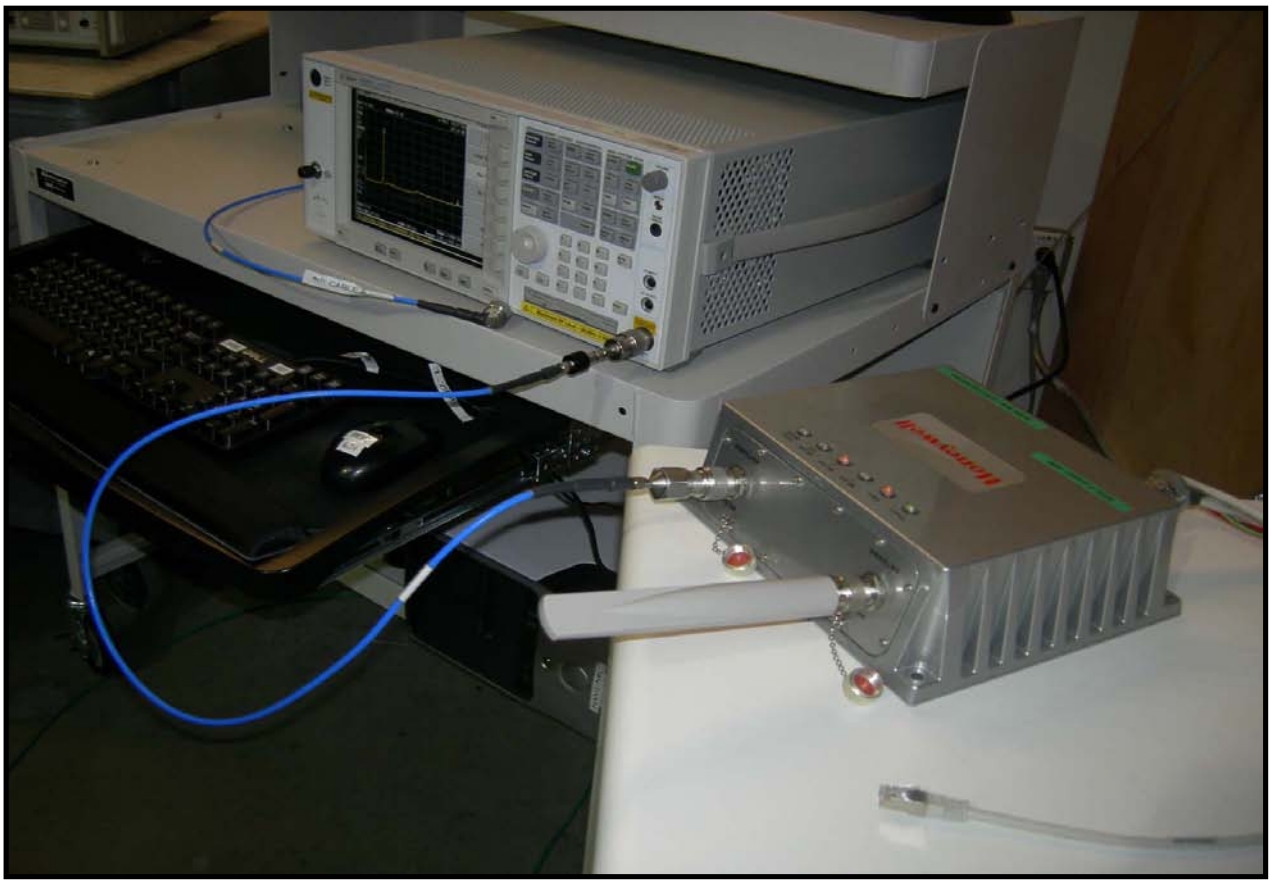
802.11(g) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-28.35 dBc	**Limit:**	≤ -20 dBc



802.11(g) 54 Mbps, High Channel					
Result:	Pass	**Value:**	- 49.33 dBc	**Limit:**	≤ -20 dBc







BAND EDGE COMPLIANCE

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	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The requirements of FCC 15.247(d) for emissions at least 20dB below the carrier in any 100kHz bandwidth outside the allowable band was measured with the EUT set to low and high transmit frequencies. 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 using direct sequence modulation. The channels closest to the band edges were selected. The spectrum was scanned across each band edge from 10 MHz below the band edge to 10 MHz above the band edge.

NORTHWEST EMC

BAND EDGE COMPLIANCE

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	05/07/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40

DEVIATIONS FROM TEST STANDARD

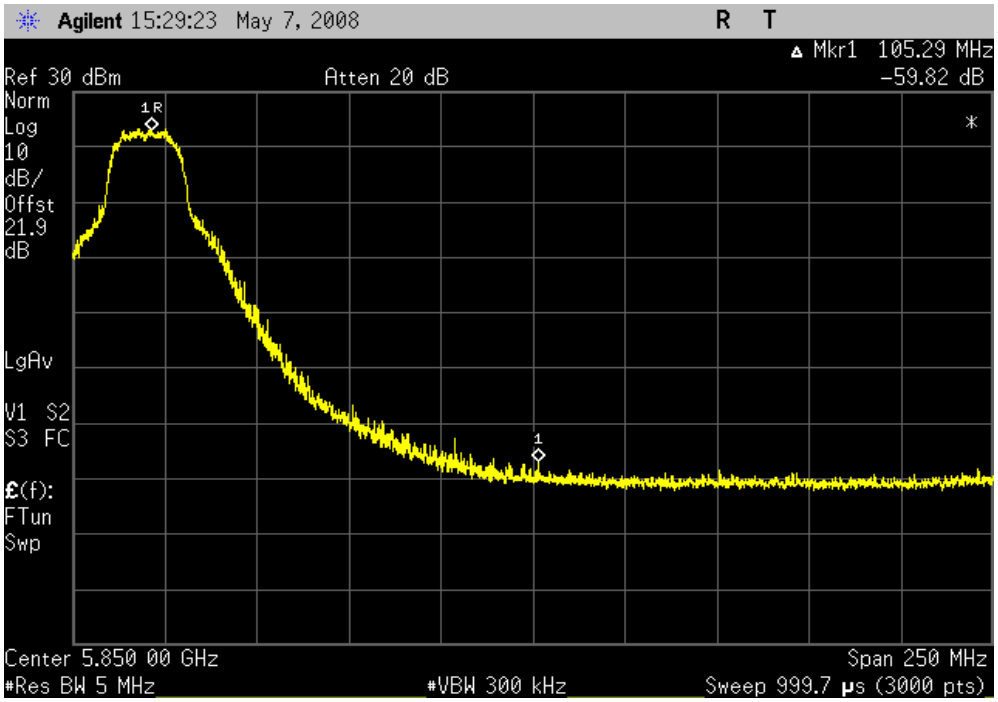
No Deviations

Configuration #	1	Signature

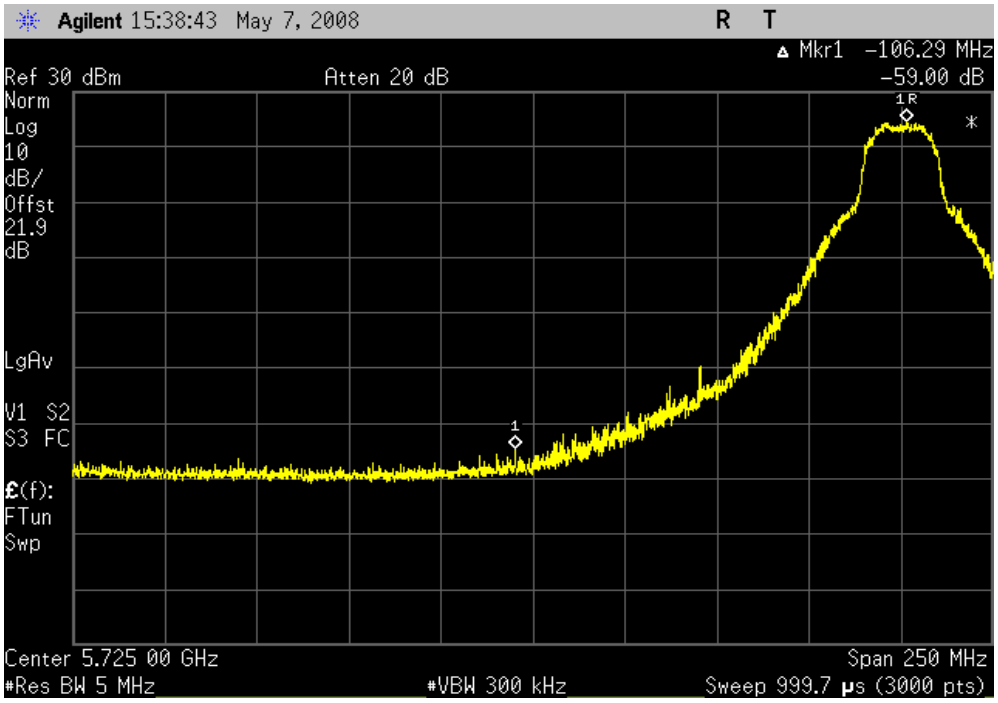
		Value	Limit	Results
802.11(a) 6 Mbps				
	Low Channel	-59.82 dBm	≤ -20 dBc	Pass
	High Channel	-59.08 dBm	≤ -20 dBc	Pass
802.11(a) 36 Mbps				
	Low Channel	-58.09 dBm	≤ -20 dBc	Pass
	High Channel	-59.06 dBm	≤ -20 dBc	Pass
802.11(a) 54 Mbps				
	Low Channel	-55.18 dBm	≤ -20 dBc	Pass
	High Channel	-56.74 dBm	≤ -20 dBc	Pass

BAND EDGE COMPLIANCE

802.11(a) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-59.82 dBm	**Limit:**	≤ -20 dBc

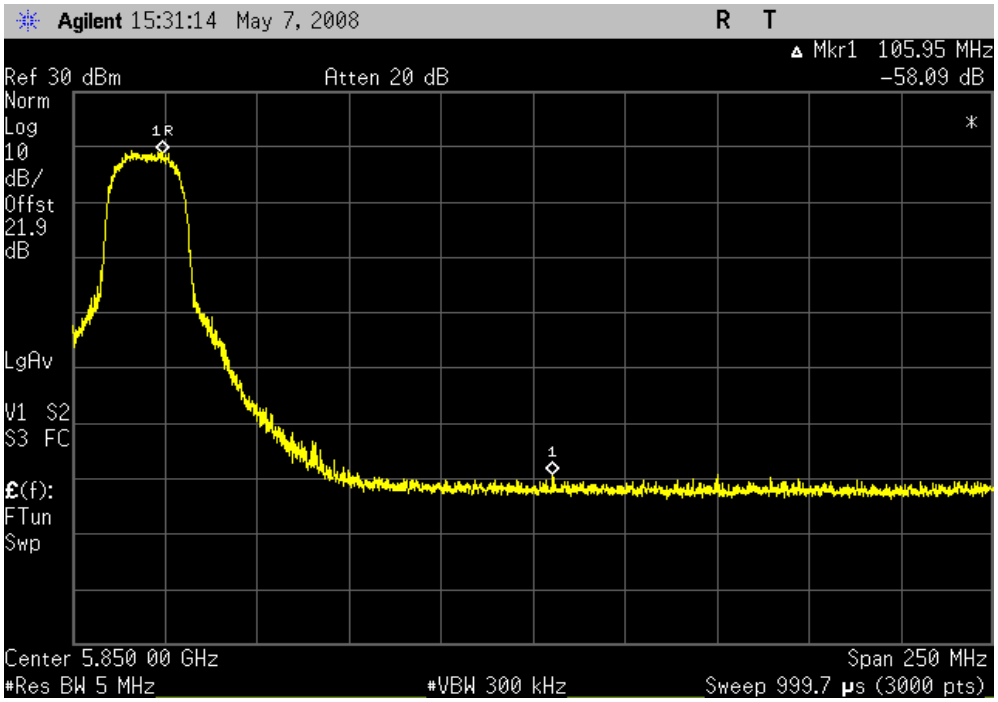


802.11(a) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-59.08 dBm	**Limit:**	≤ -20 dBc

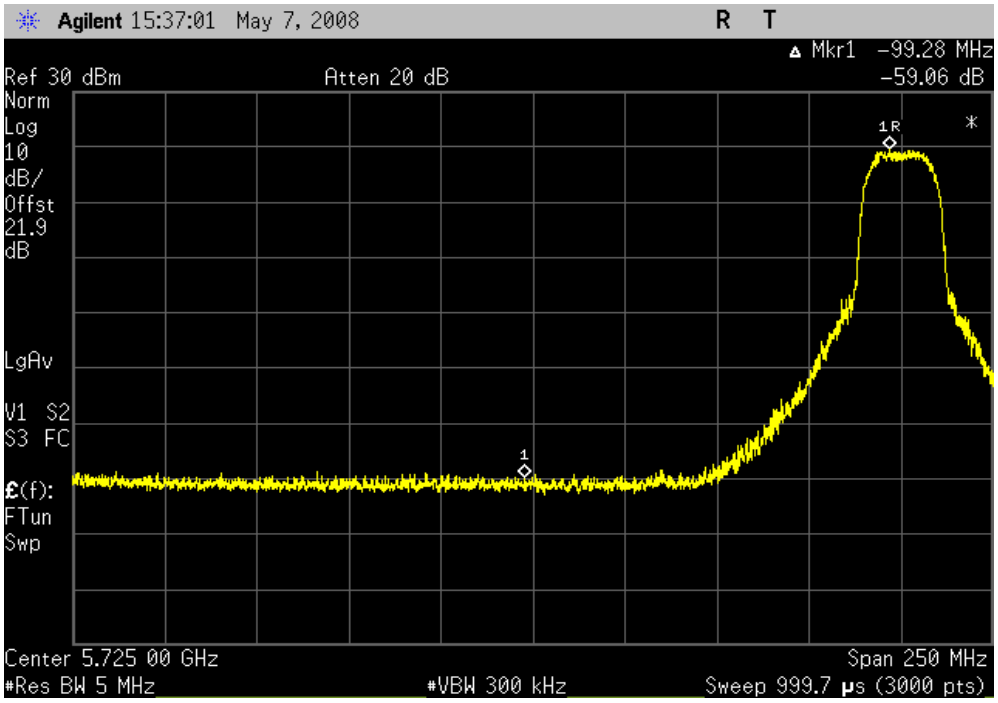


BAND EDGE COMPLIANCE

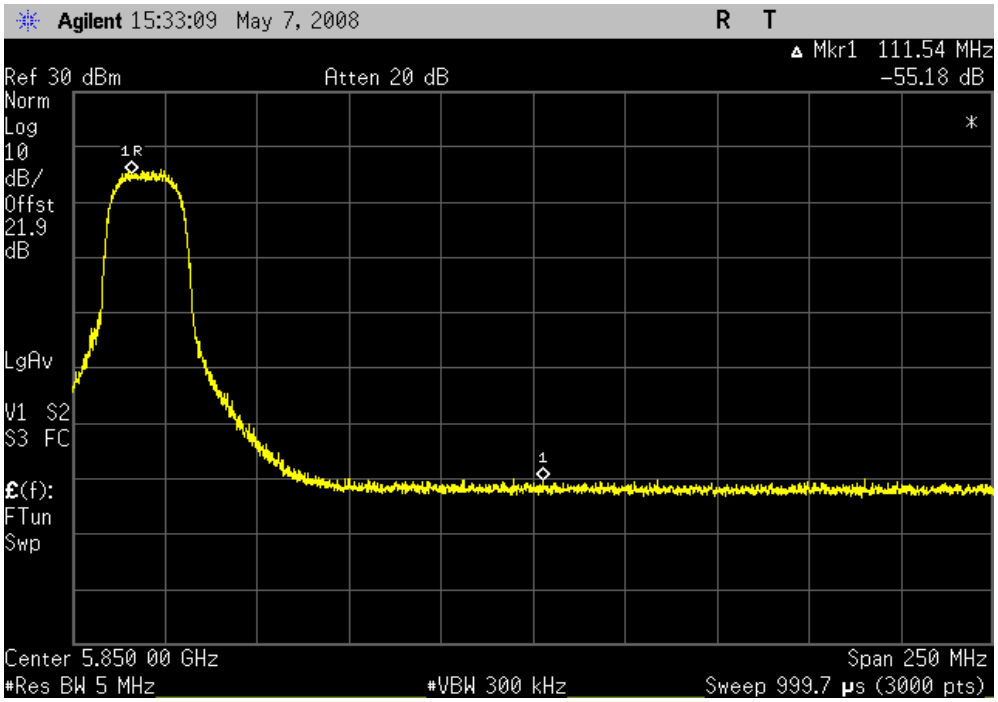
802.11(a) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-58.09 dBm	**Limit:**	≤ -20 dBc



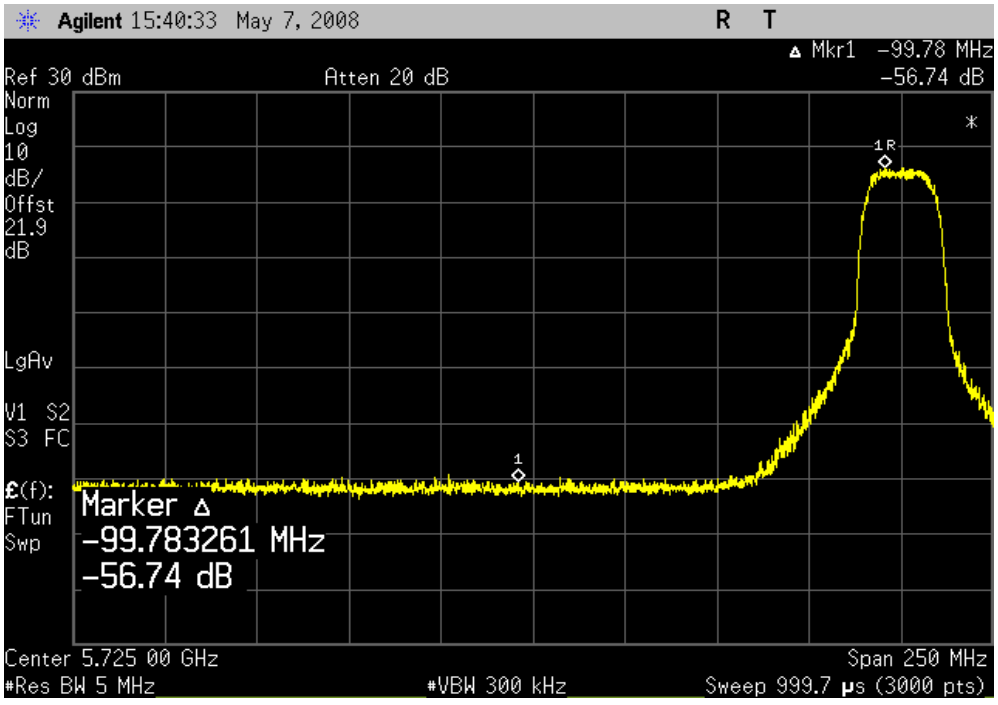
802.11(a) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-59.06 dBm	**Limit:**	≤ -20 dBc

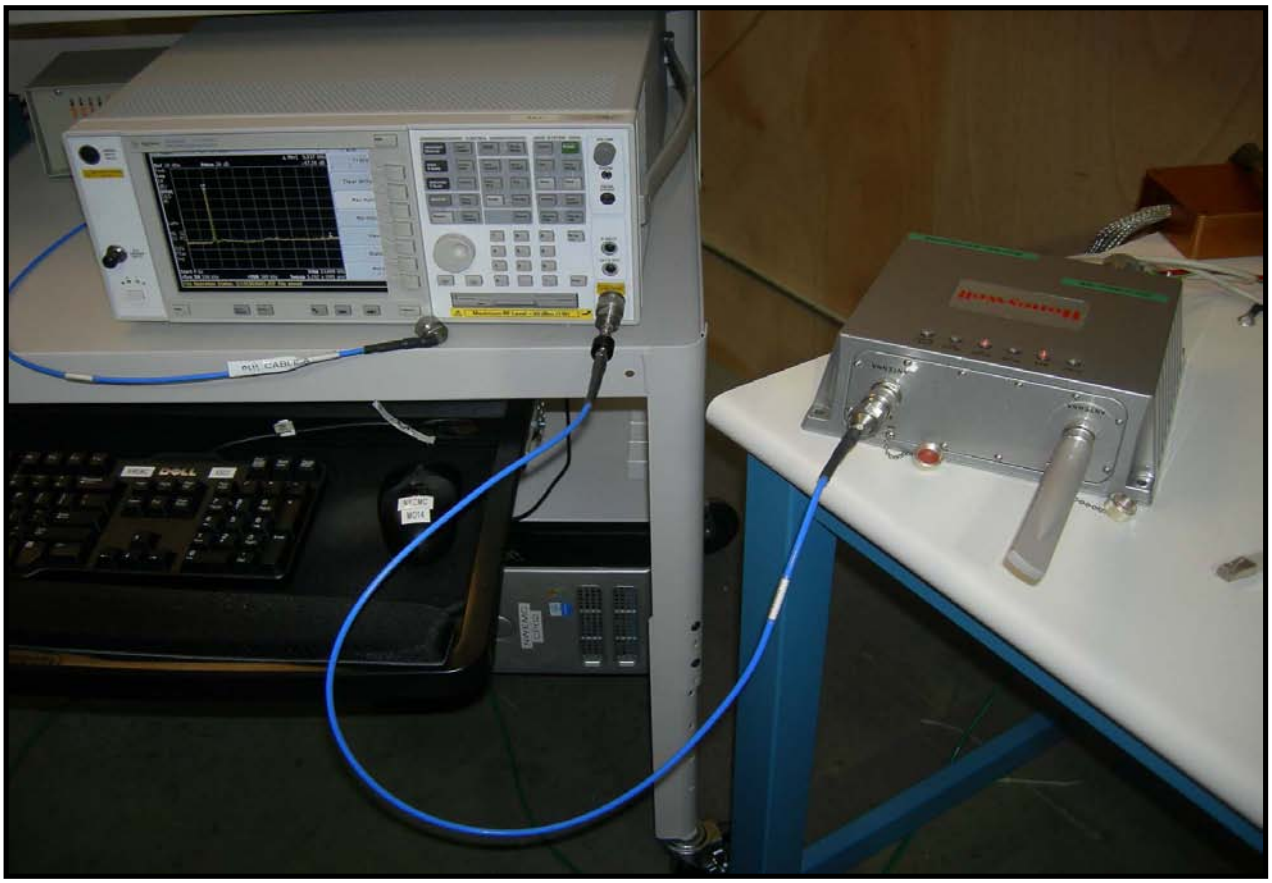


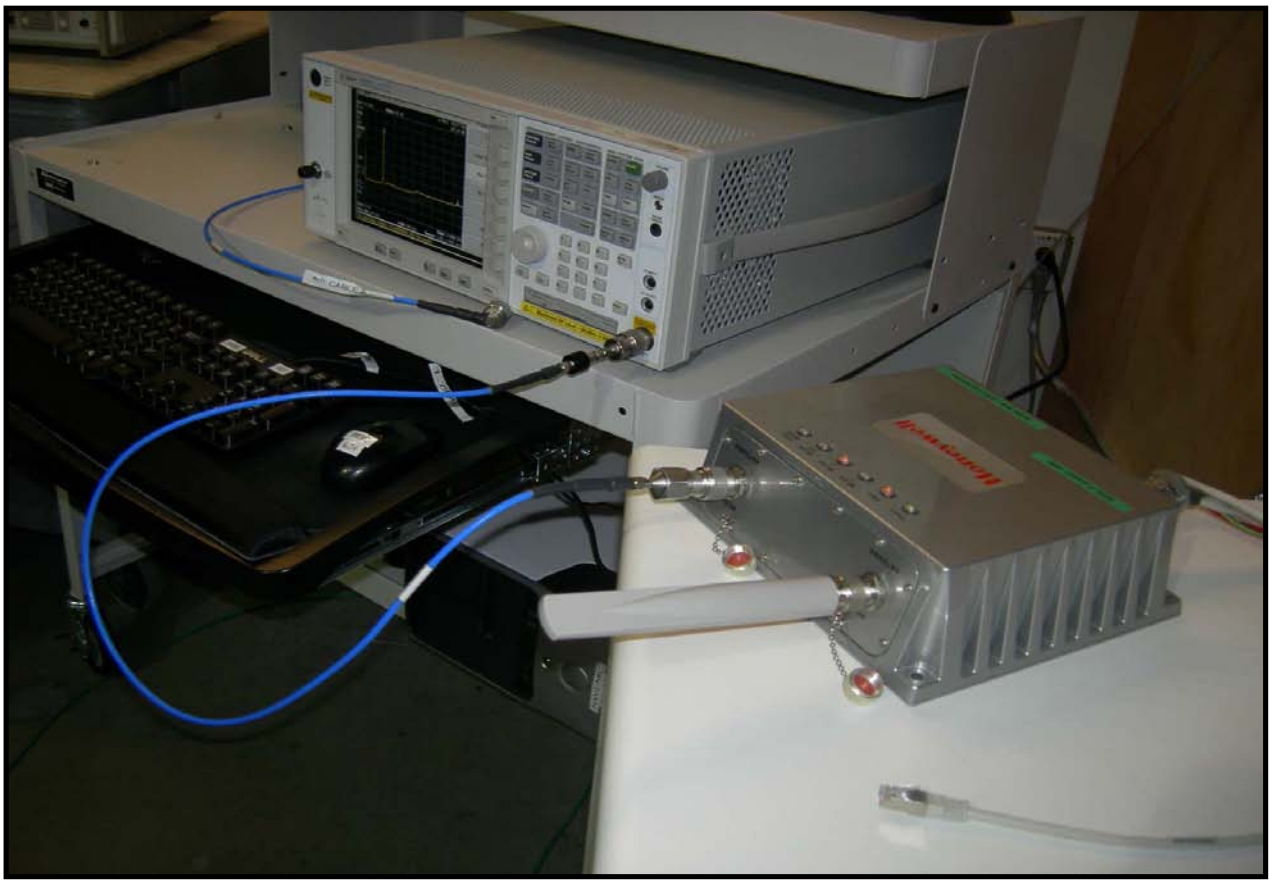
802.11(a) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-55.18 dBm	**Limit:**	≤ -20 dBc



802.11(a) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-56.74 dBm	**Limit:**	≤ -20 dBc







SPURIOUS CONDUCTED 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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is 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 using direct sequence modulation. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

NORTHWEST EMC

SPURIOUS CONDUCTED EMISSIONS

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			**Work Order:**	HONE0031
Serial Number:	None			**Date:**	04/30/08
Customer:	Honeywell			**Temperature:**	24°C
Attendees:	David Shipley			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	1018
Tested by:	Jaemi Suh	**Power:**	120V/60Hz	**Job Site:**	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -8 (Highest Output Power).

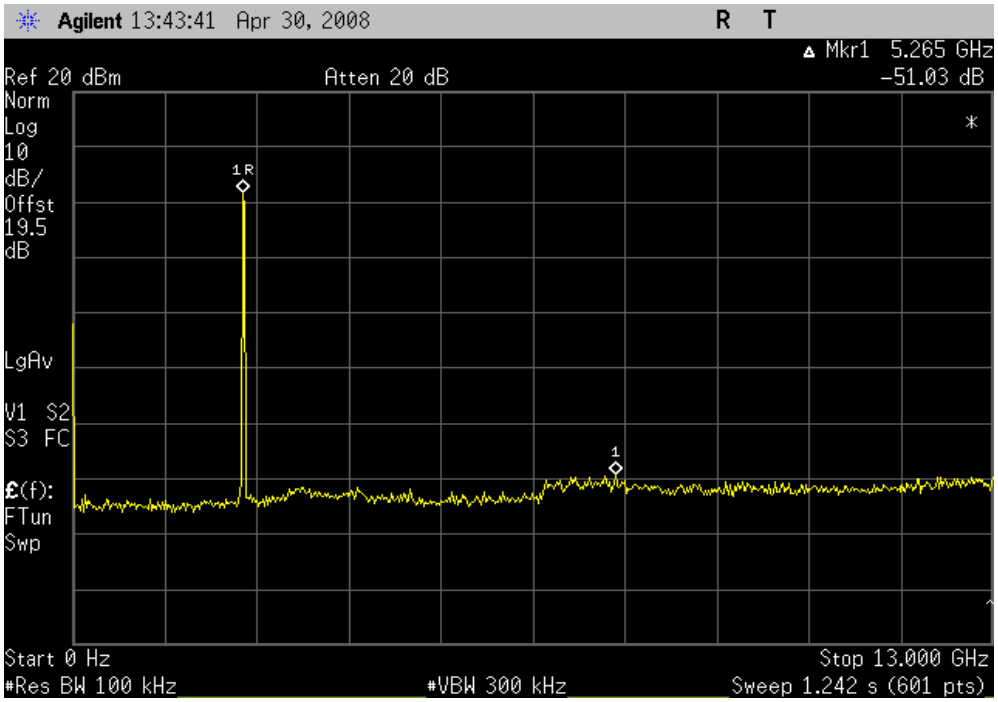
DEVIATIONS FROM TEST STANDARD

No Deviations

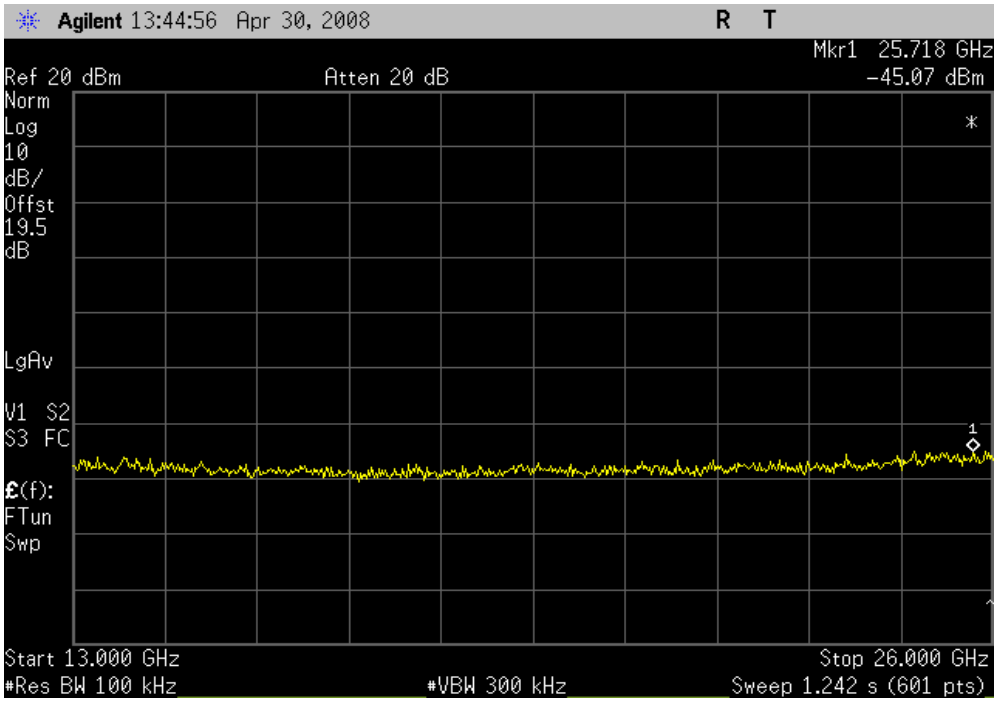
Configuration #	1	Signature

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	Mid Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	High Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
802.11(b) 11 Mbps				
	Low Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	Mid Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	High Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
802.11(g) 6 Mbps				
	Low Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	Mid Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	High Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
802.11(g) 36 Mbps				
	Low Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	Mid Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	High Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
802.11(g) 54 Mbps				
	Low Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	Mid Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	High Channel			
	0 MHz - 13 GHz	≤ - 30 dBC	≤ - 20 dBC	Pass
	13 GHz - 26GHz	≤ - 30 dBC	≤ - 20 dBC	Pass

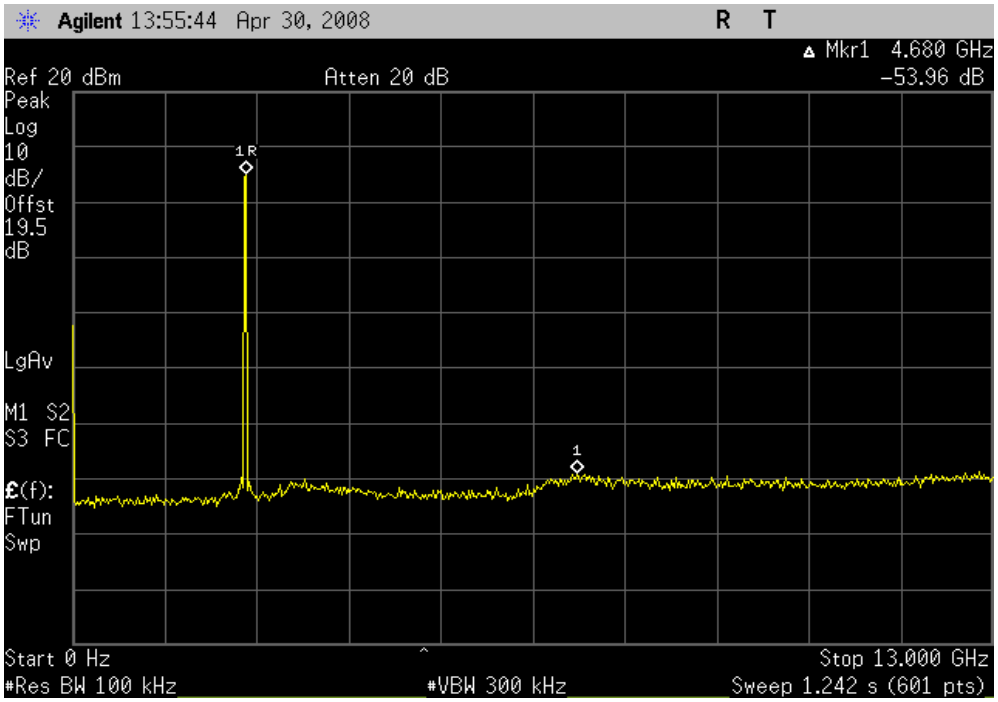
802.11(b) 1 Mbps, Low Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



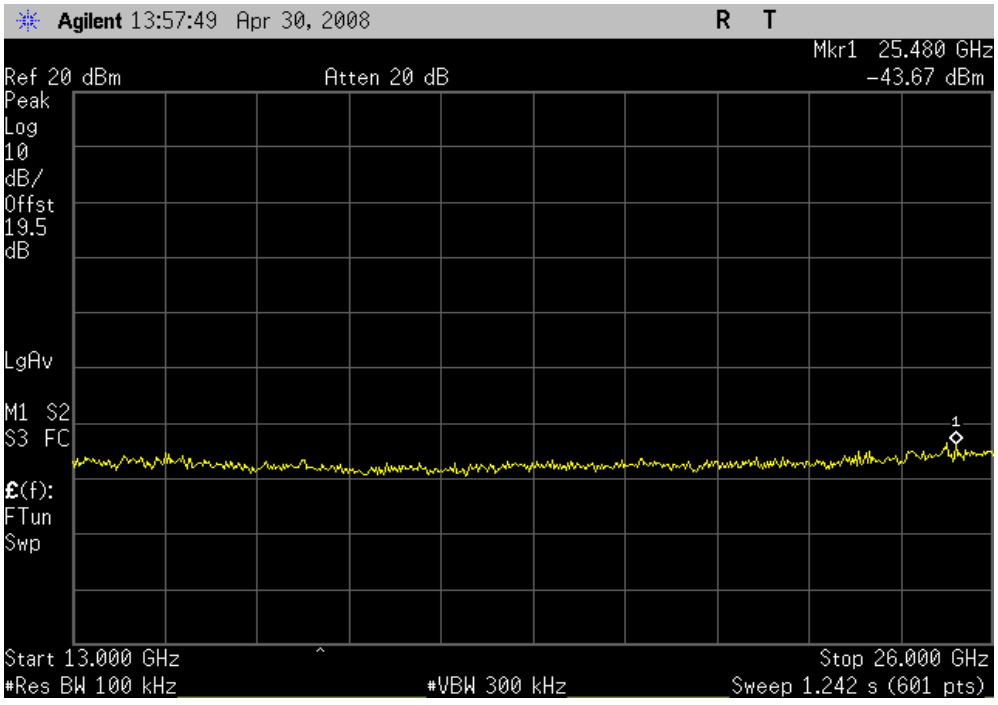
802.11(b) 1 Mbps, Low Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



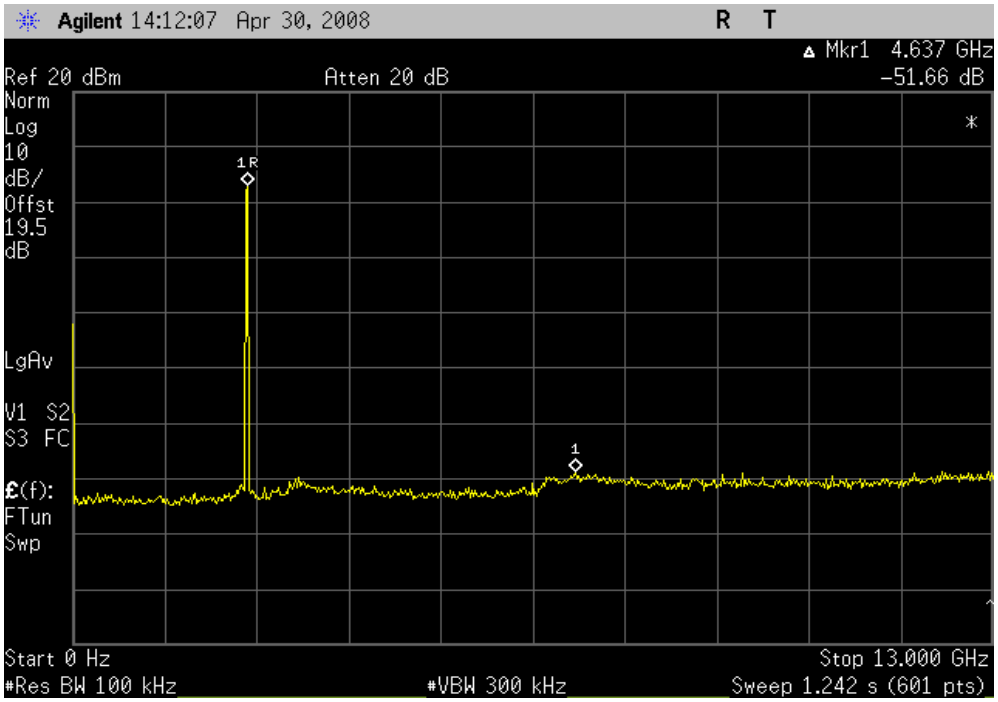
802.11(b) 1 Mbps, Mid Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



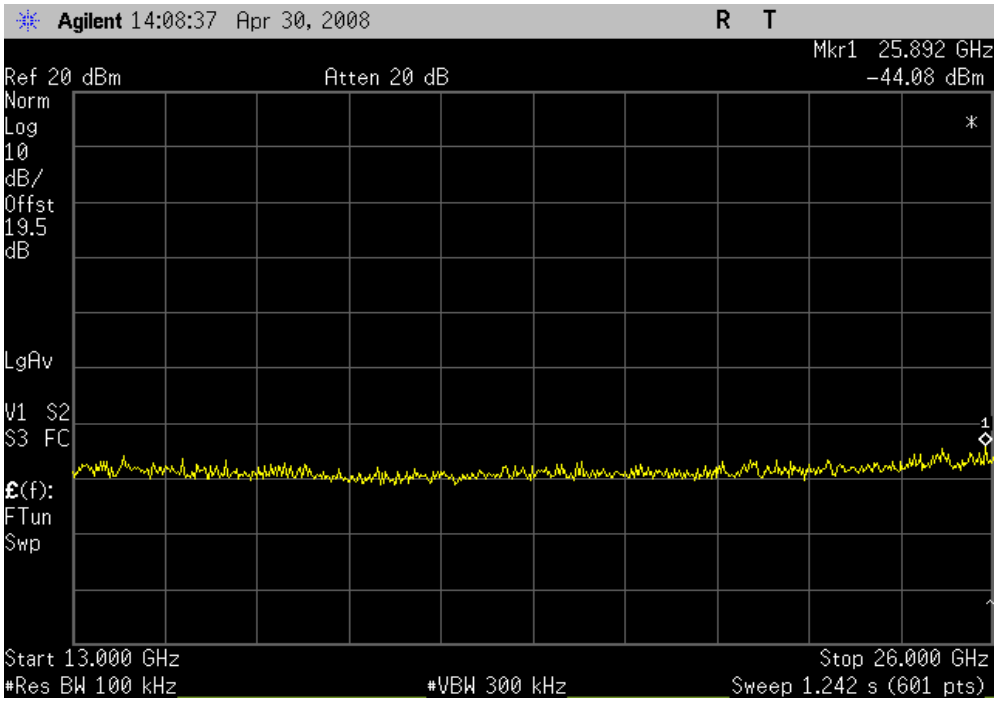
802.11(b) 1 Mbps, Mid Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



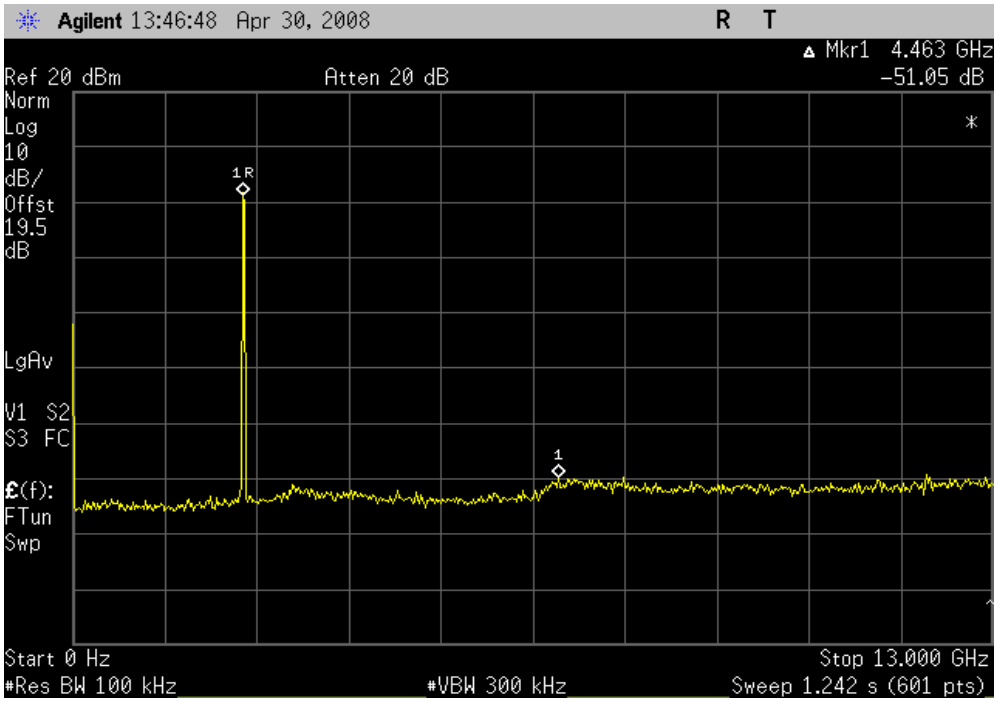
802.11(b) 1 Mbps, High Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



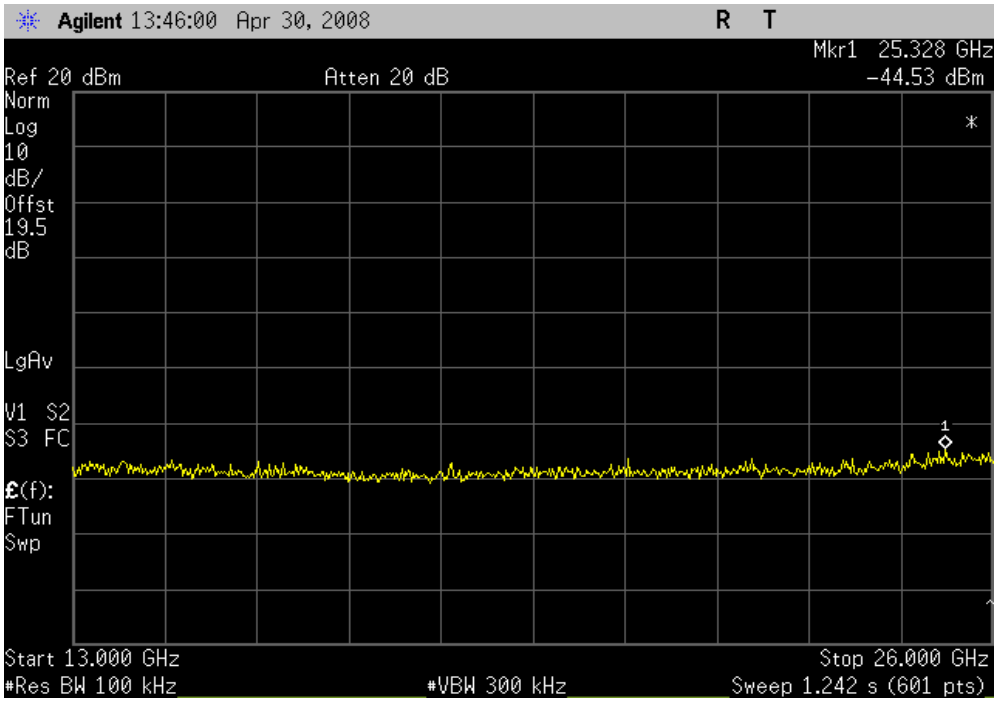
802.11(b) 1 Mbps, High Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



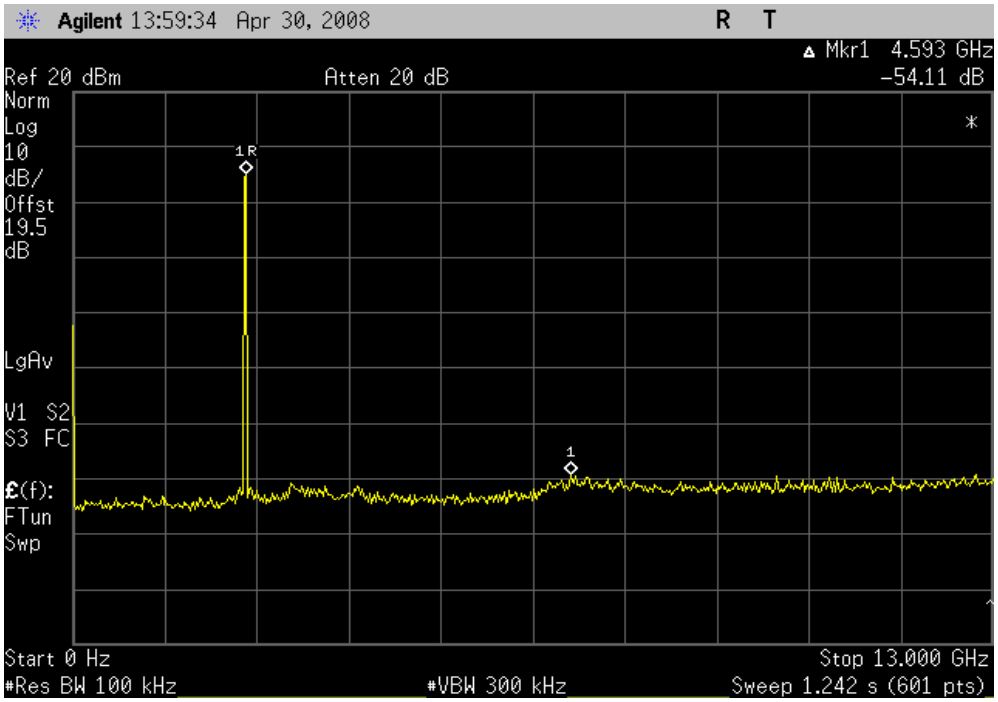
802.11(b) 11 Mbps, Low Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



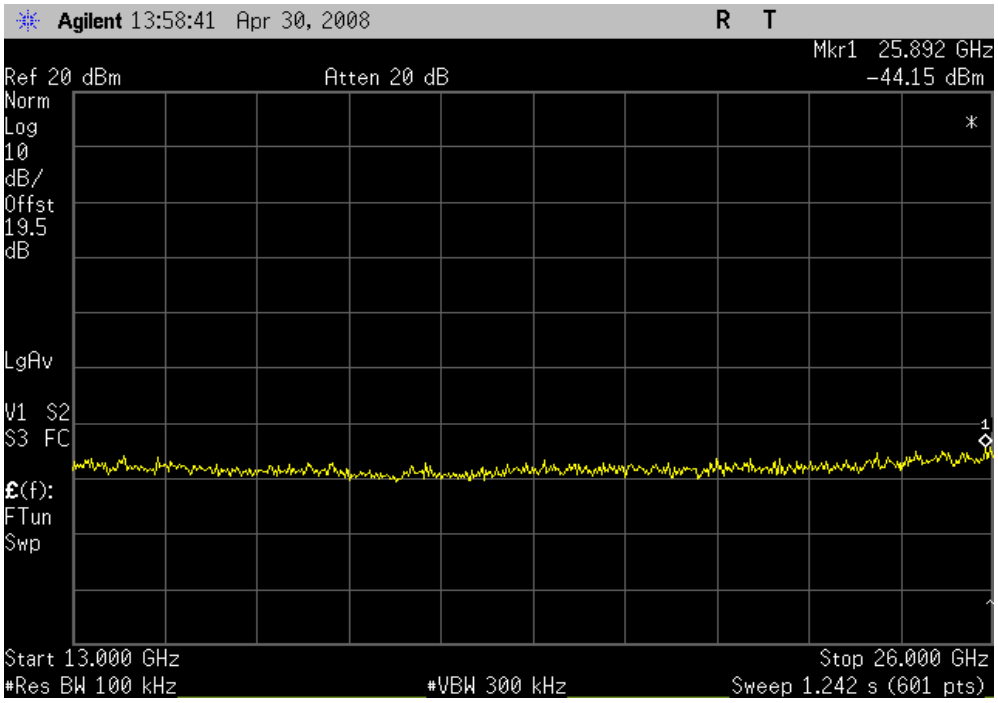
802.11(b) 11 Mbps, Low Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



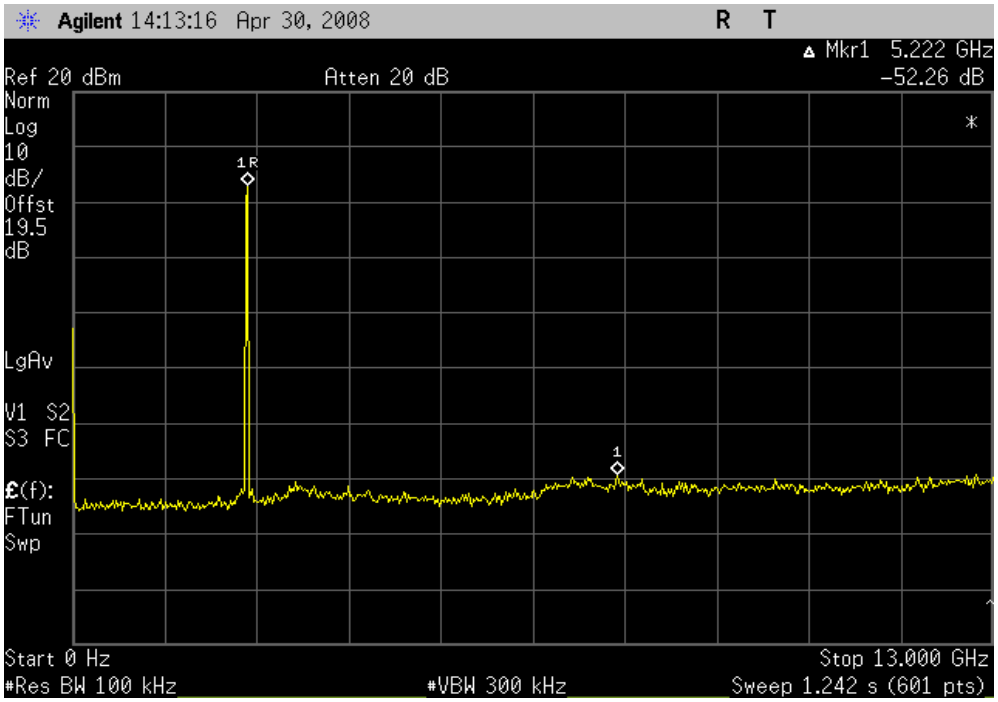
802.11(b) 11 Mbps, Mid Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



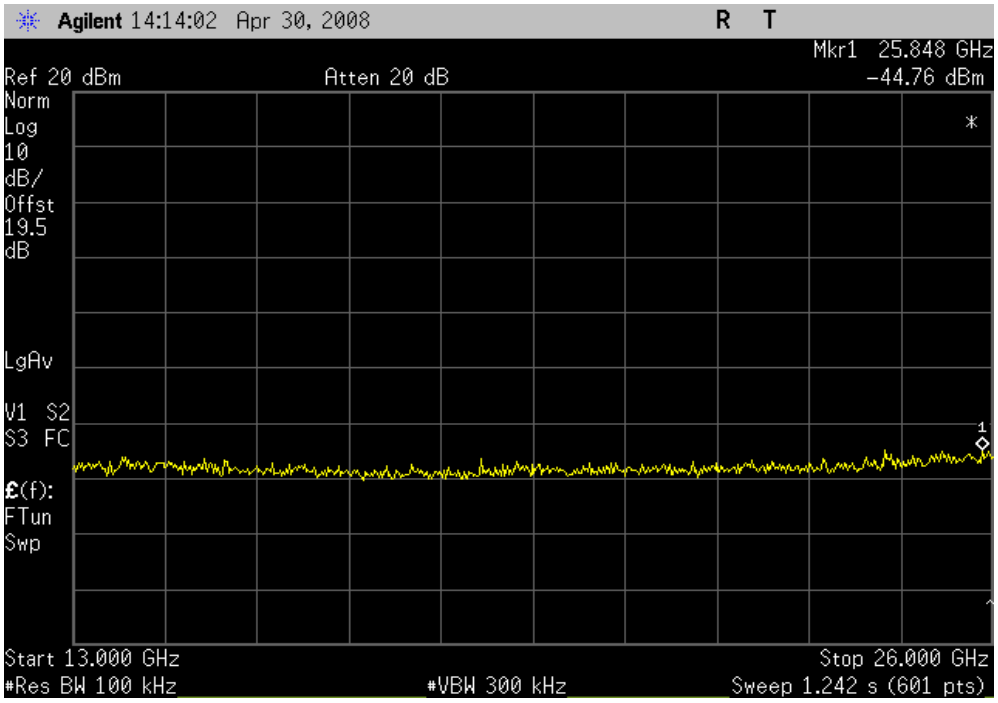
802.11(b) 11 Mbps, Mid Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



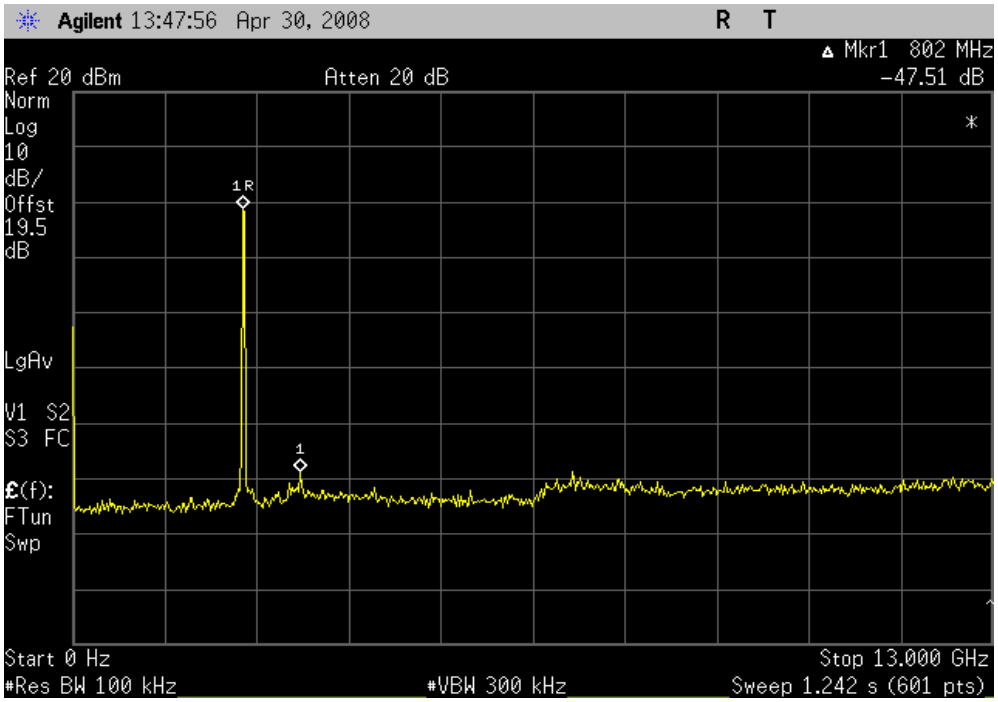
802.11(b) 11 Mbps, High Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



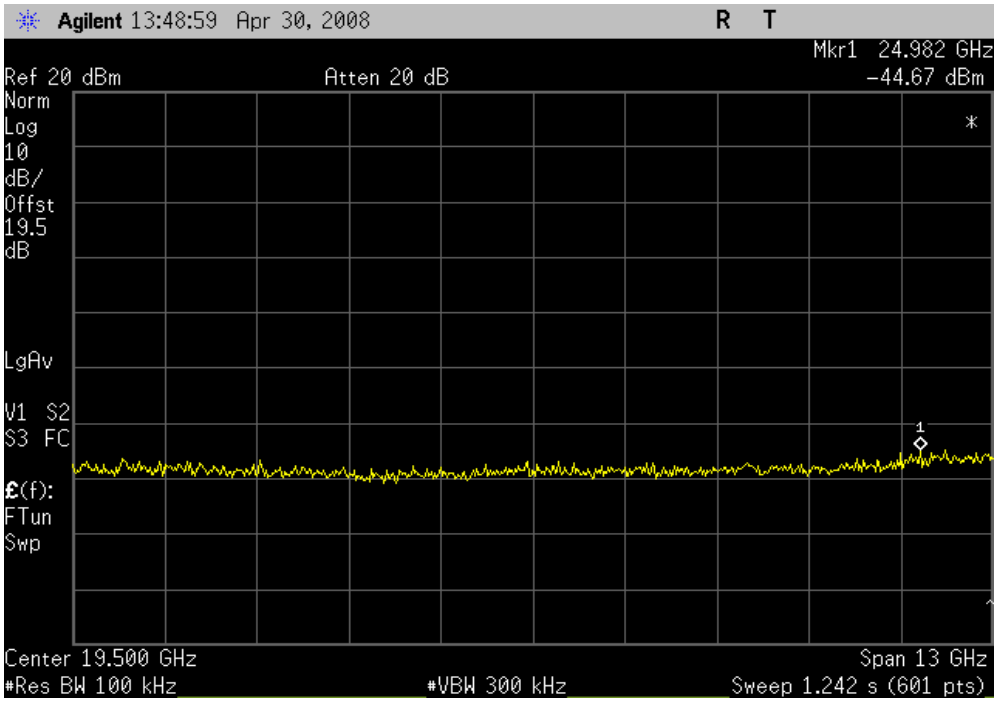
802.11(b) 11 Mbps, High Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



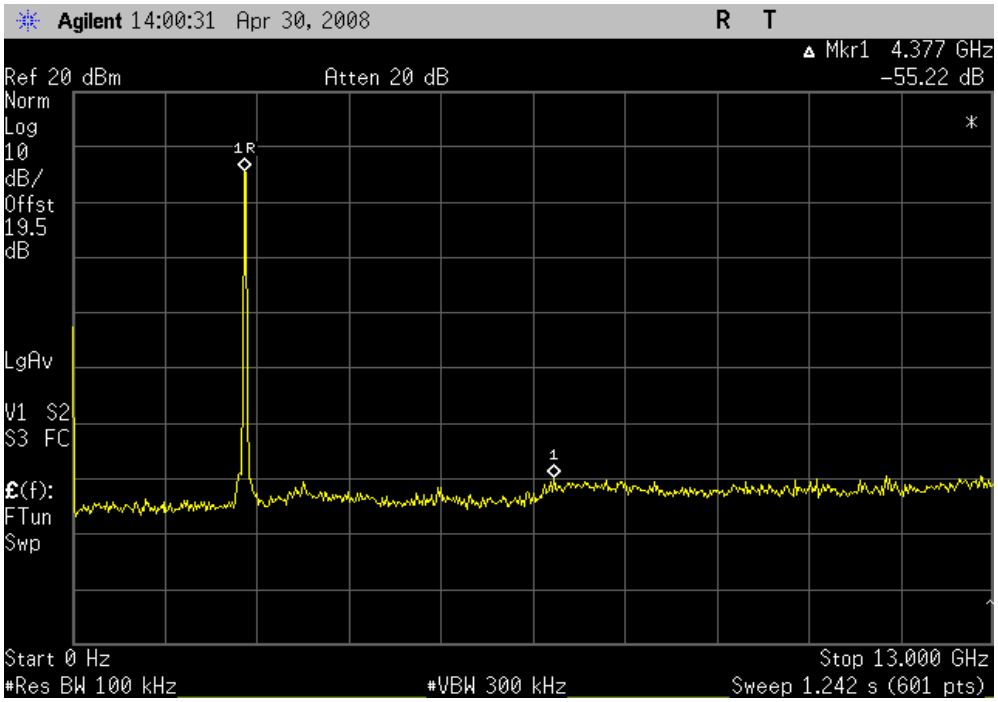
802.11(g) 6 Mbps, Low Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



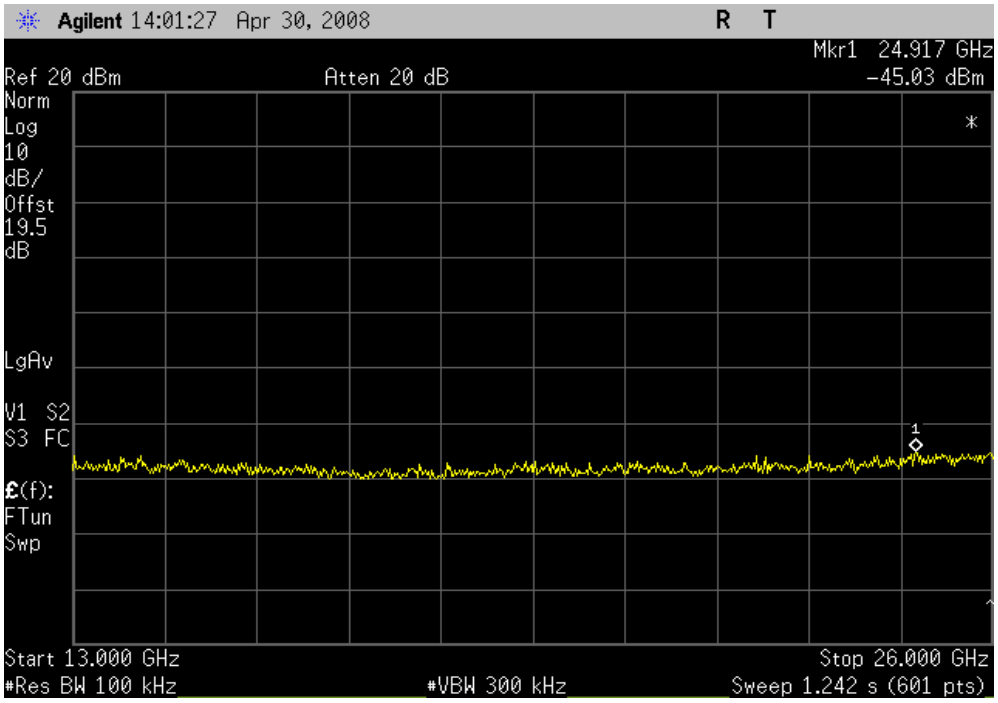
802.11(g) 6 Mbps, Low Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



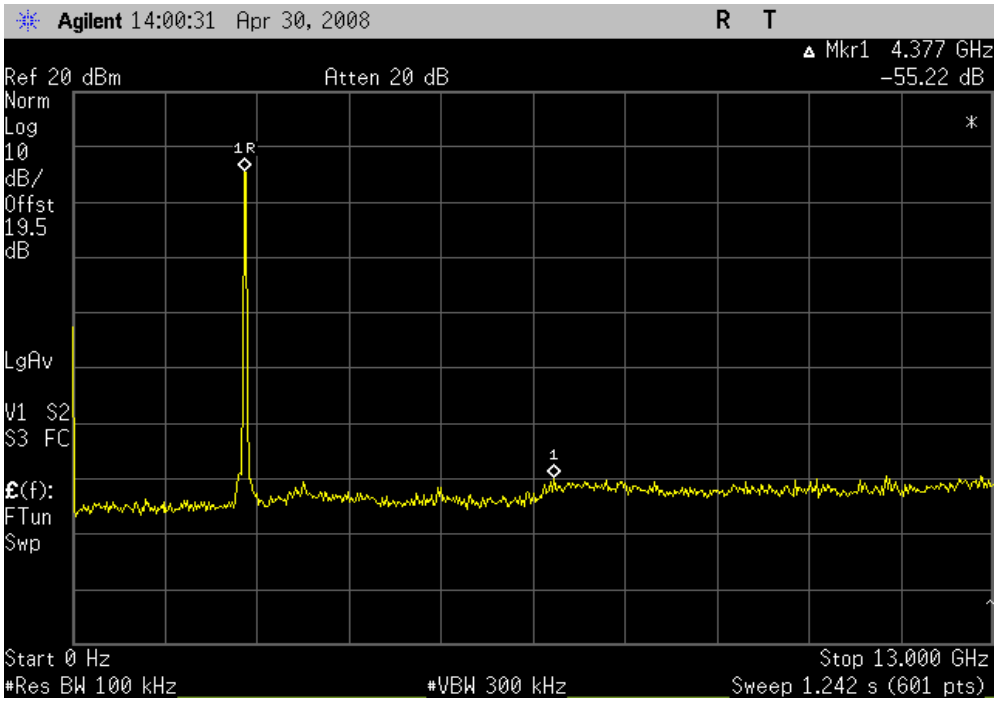
802.11(g) 6 Mbps, Mid Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



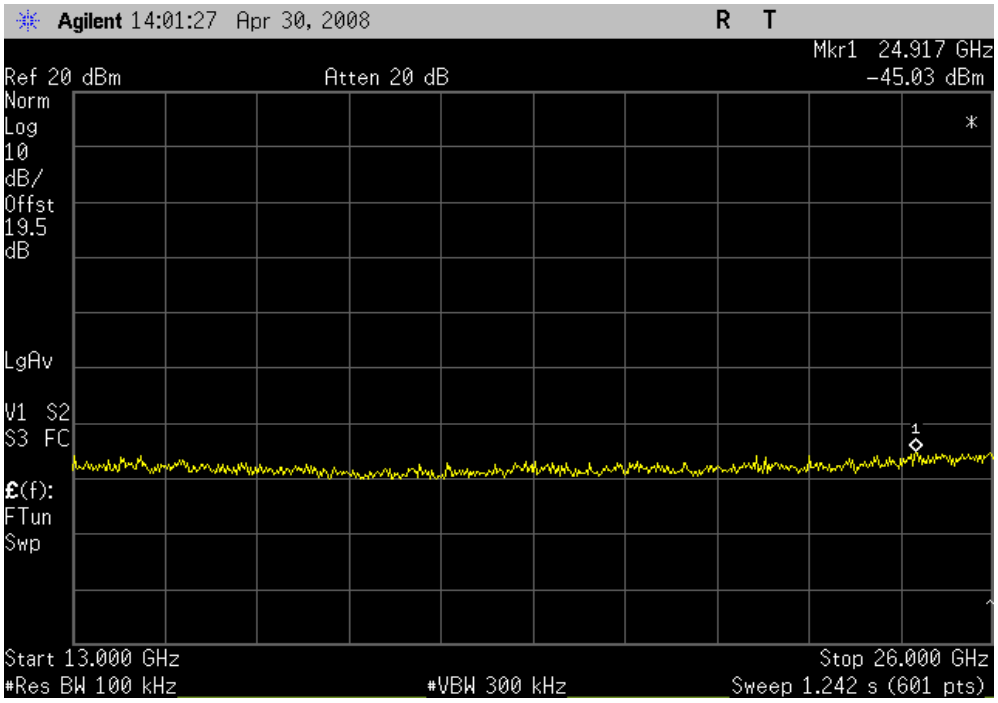
802.11(g) 6 Mbps, Mid Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



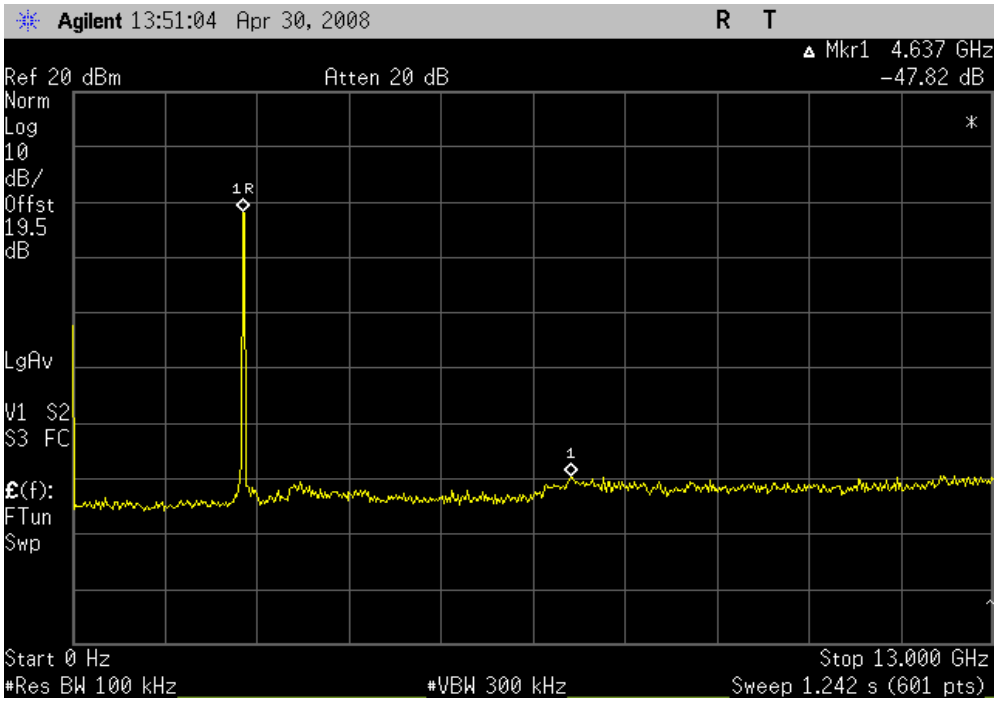
802.11(g) 6 Mbps, High Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



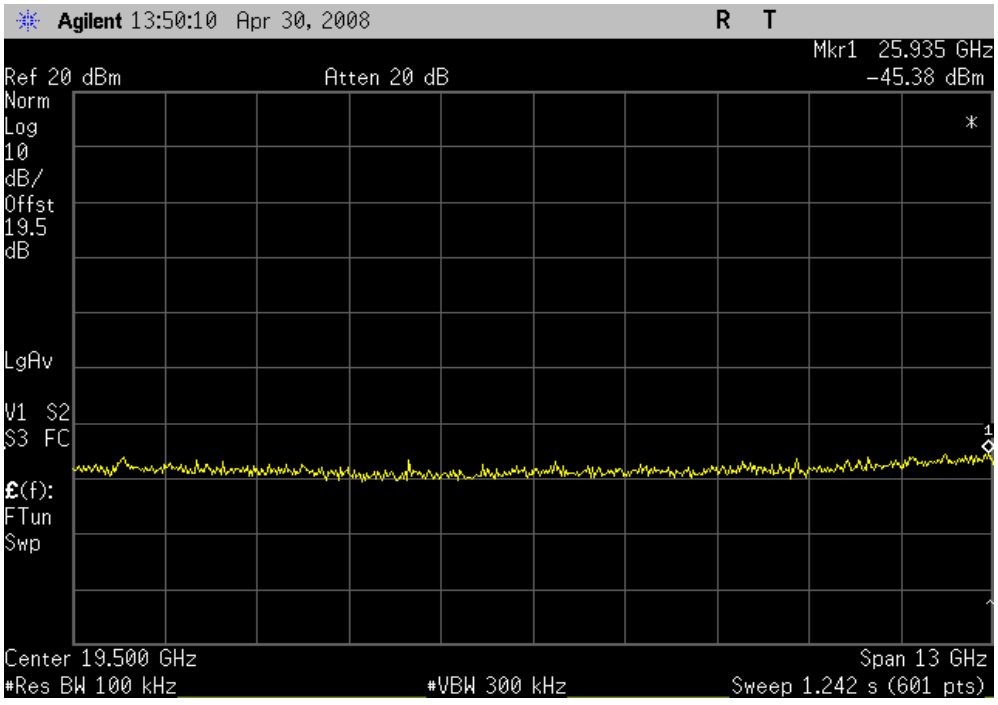
802.11(g) 6 Mbps, High Channel,13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



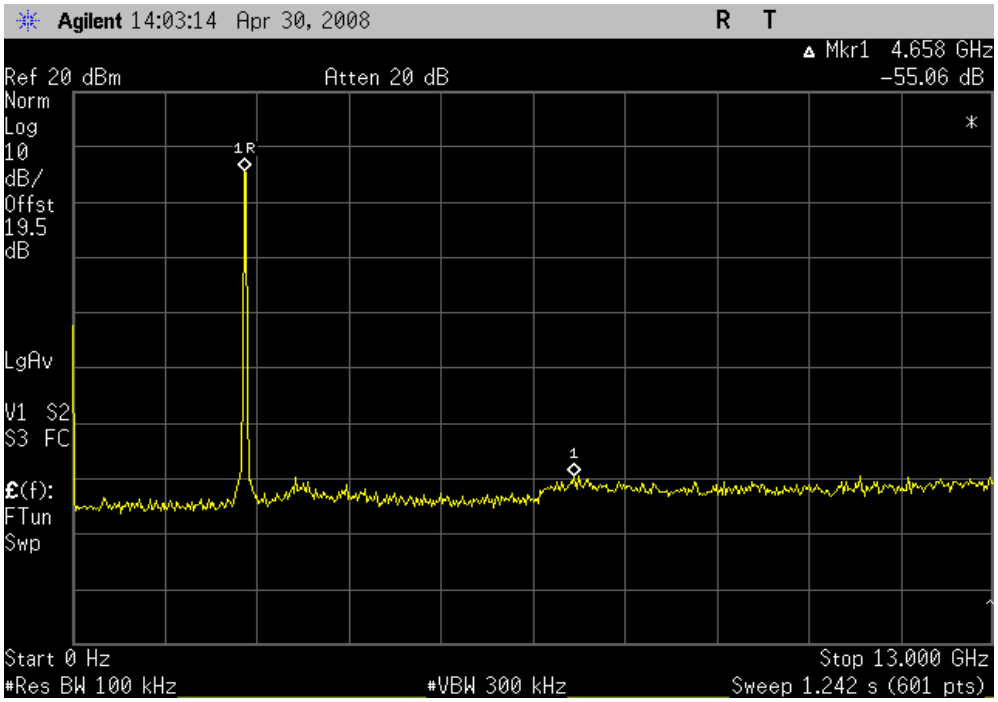
802.11(g) 36 Mbps, Low Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



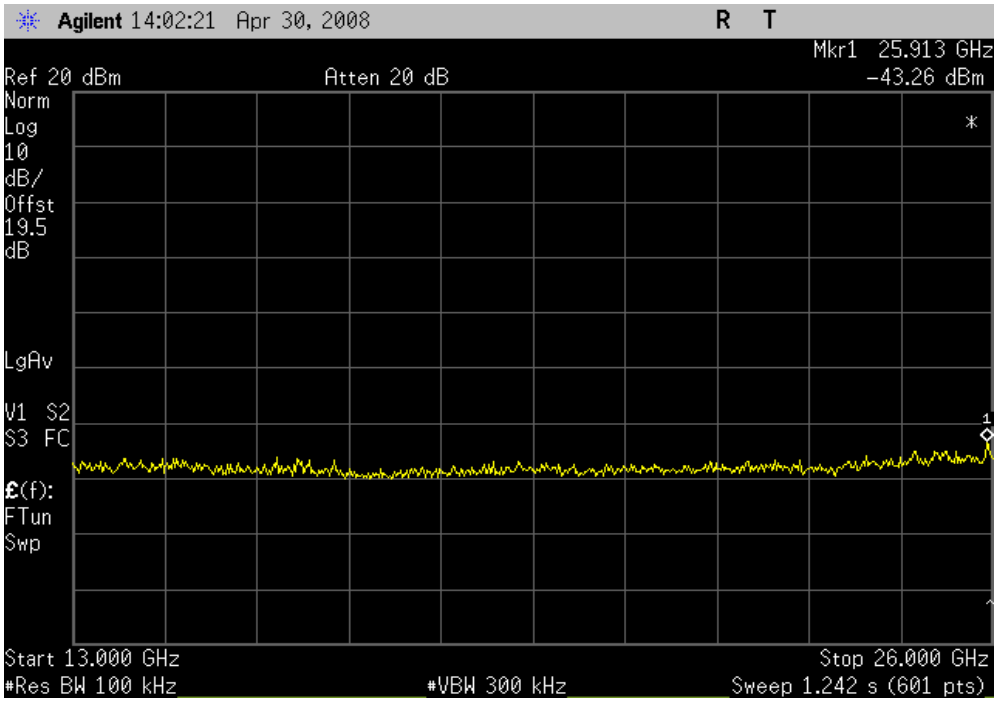
802.11(g) 36 Mbps, Low Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



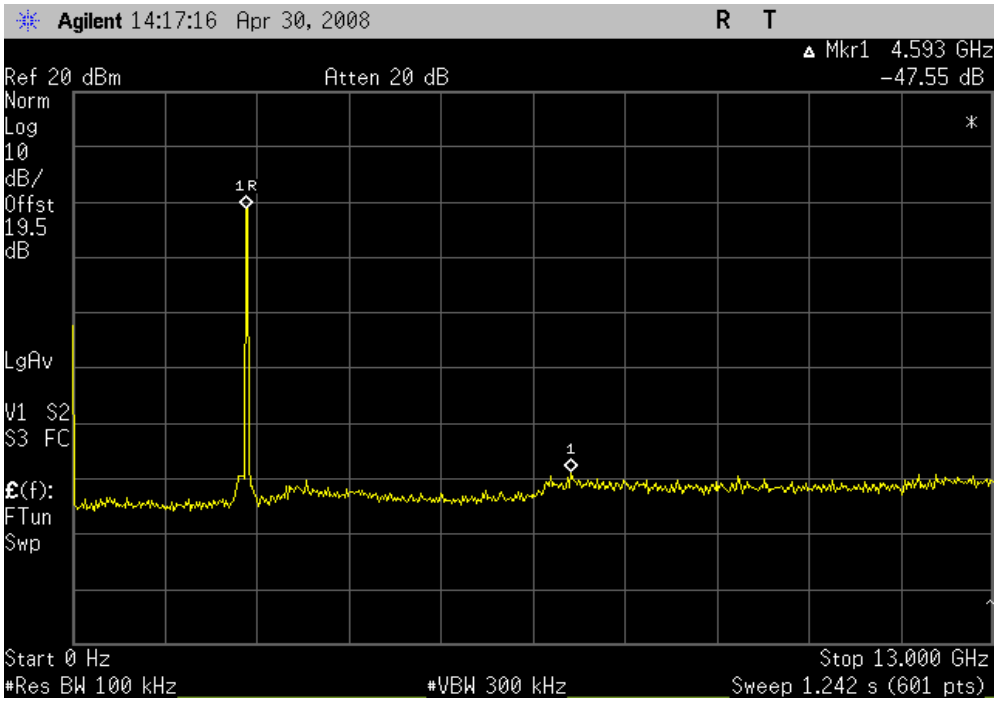
802.11(g) 36 Mbps, Mid Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



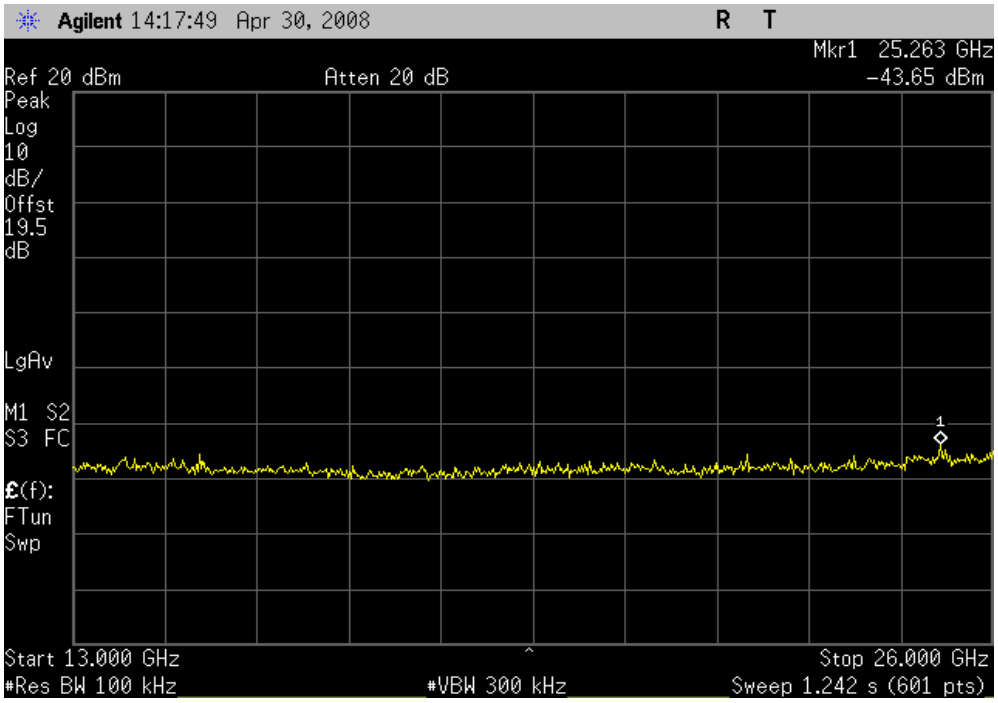
802.11(g) 36 Mbps, Mid Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



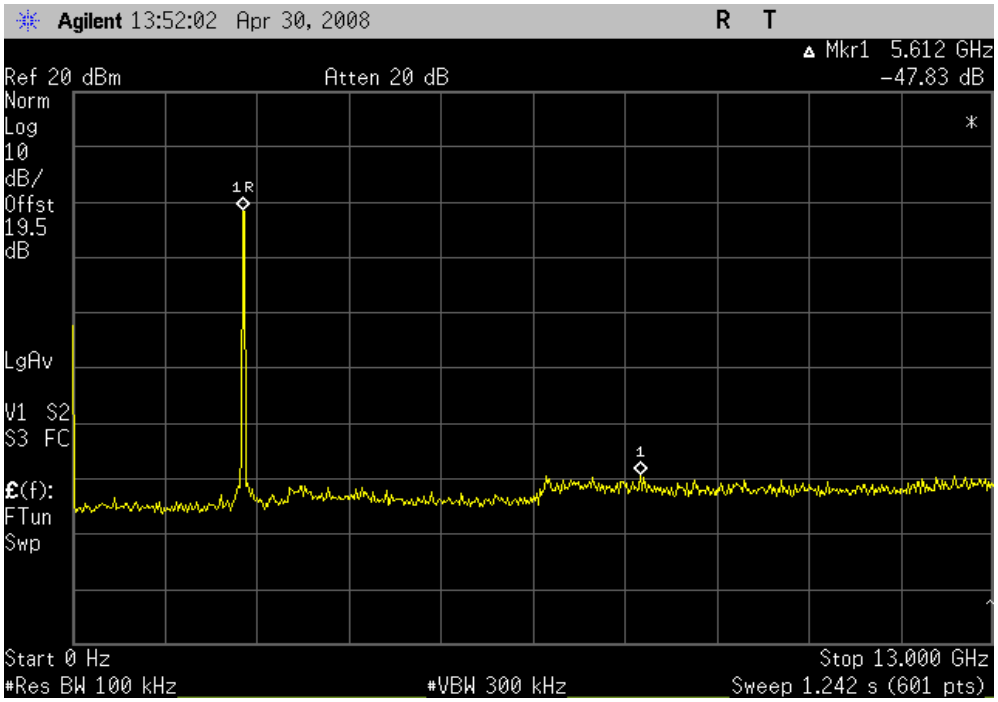
802.11(g) 36 Mbps, High Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



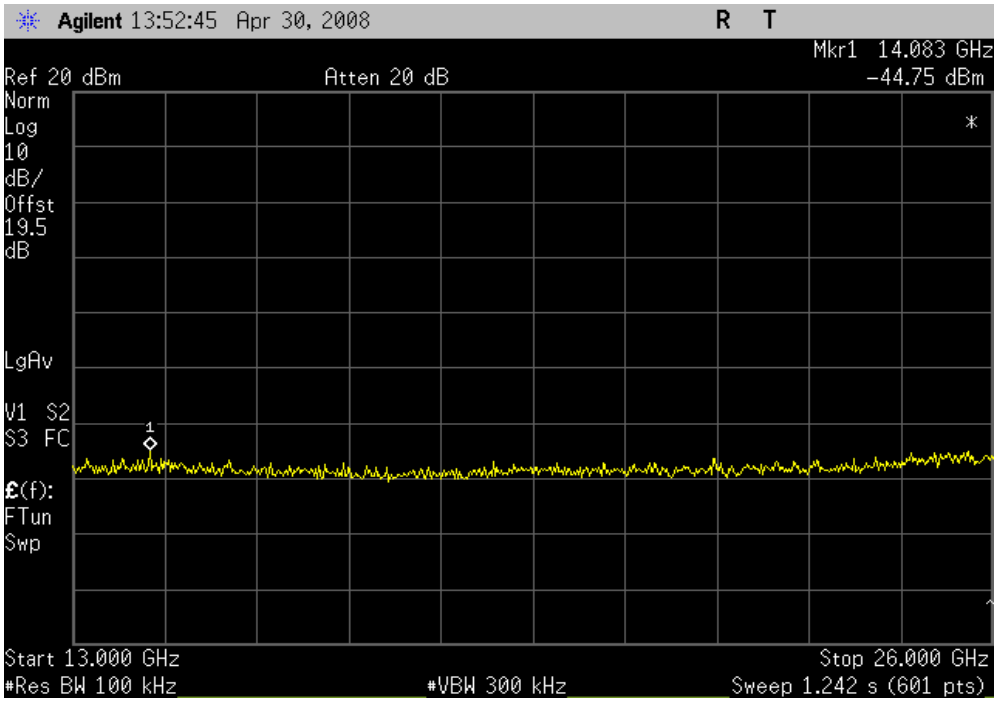
802.11(g) 36 Mbps, High Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



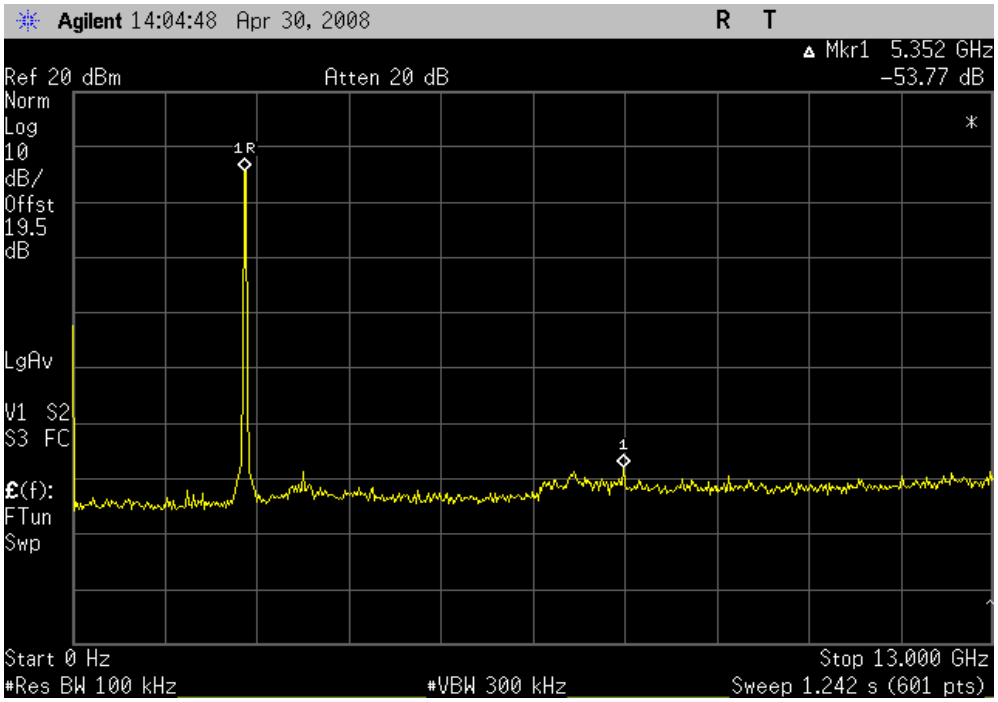
802.11(g) 54 Mbps, Low Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



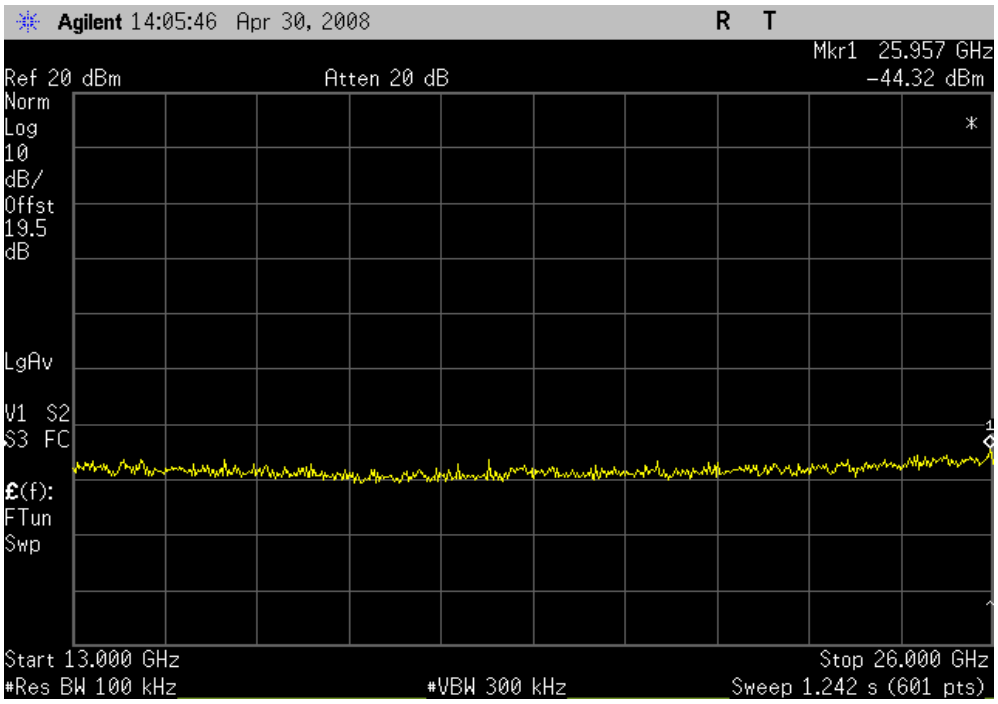
802.11(g) 54 Mbps, Low Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



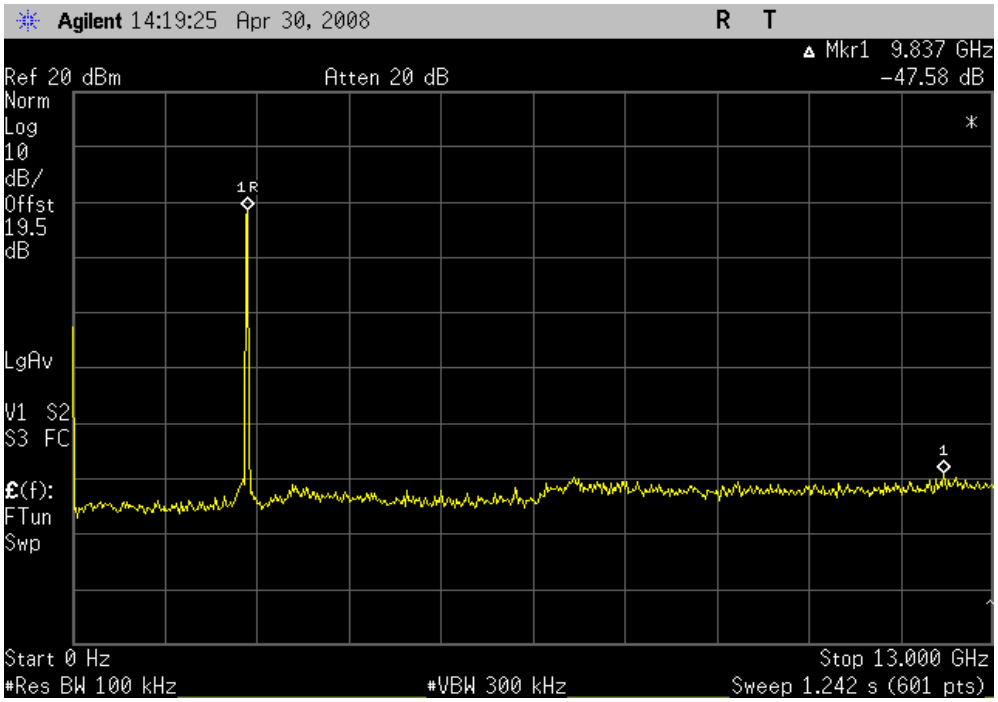
802.11(g) 54 Mbps, Mid Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



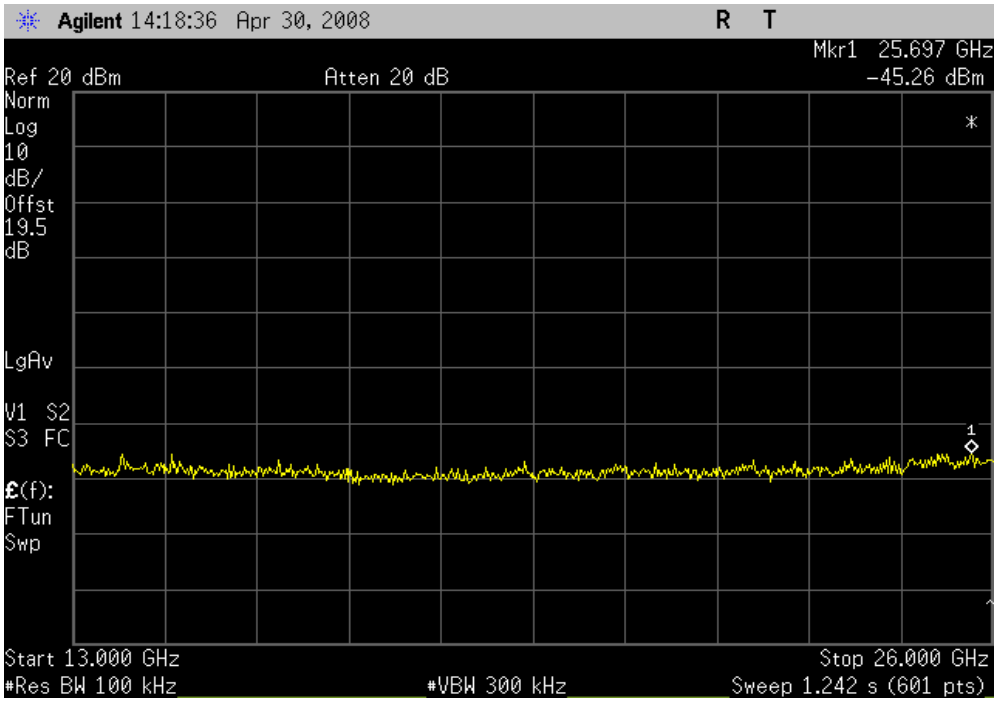
802.11(g) 54 Mbps, Mid Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC

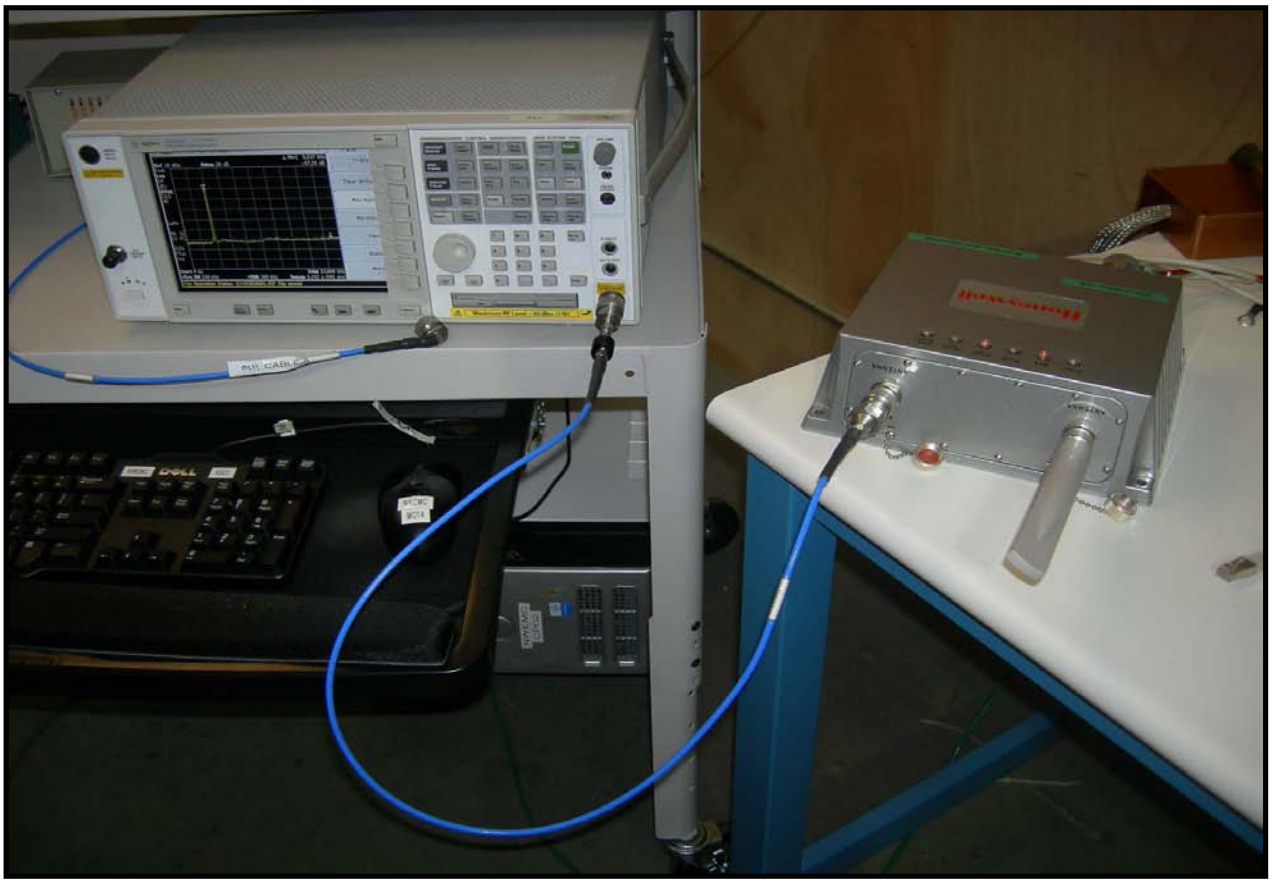


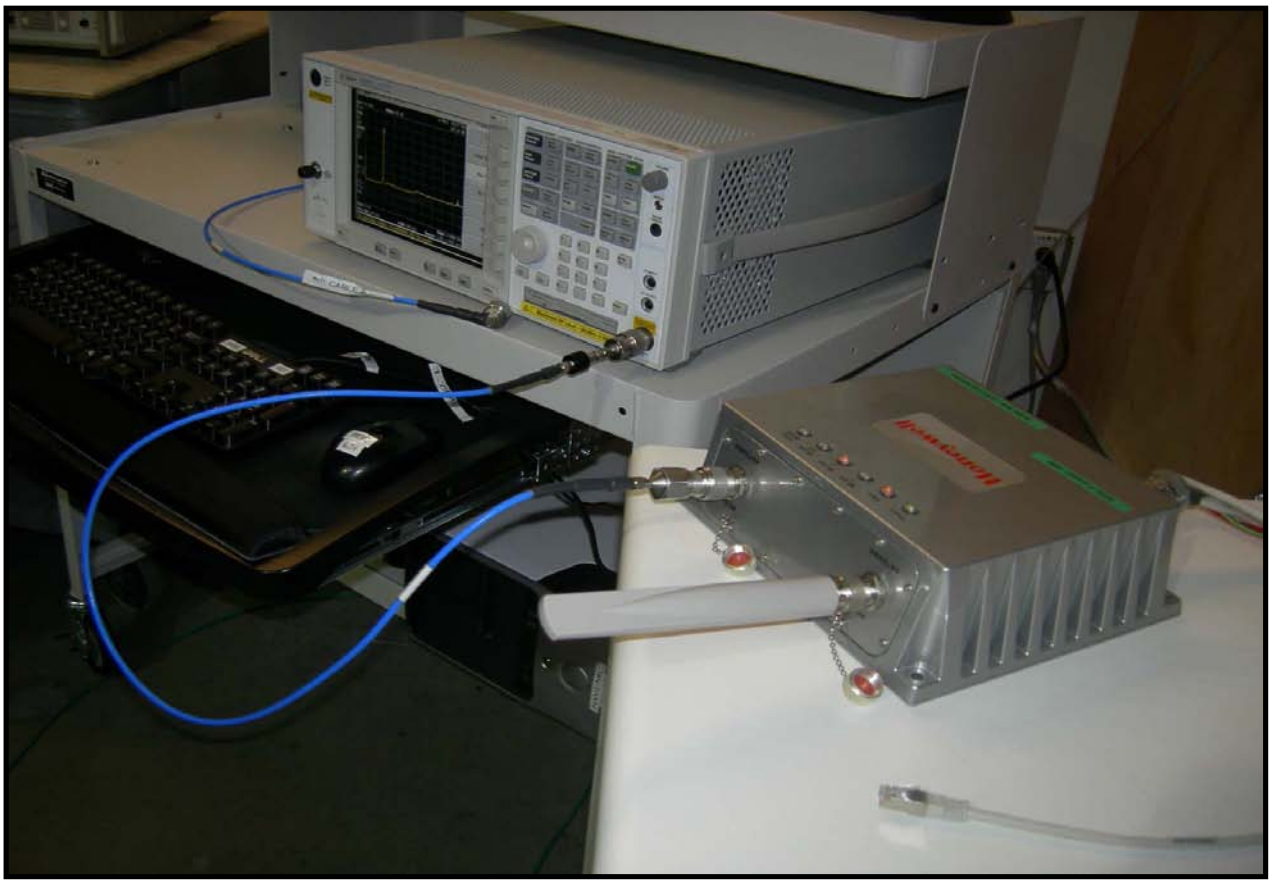
802.11(g) 54 Mbps, High Channel, 0 MHz - 13 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC



802.11(g) 54 Mbps, High Channel, 13 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBC	**Limit:**	≤ - 20 dBC







SPURIOUS CONDUCTED 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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4440A	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is 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 using direct sequence modulation. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

NORTHWEST EMC

SPURIOUS CONDUCTED EMISSIONS

XMit 2007.06.13

EUT:	MultiNode (R110, Extended Temperature)			**Work Order:**	HONE0032
Serial Number:	None			**Date:**	05/15/08
Customer:	Honeywell			**Temperature:**	24°C
Attendees:	David Shipley			**Humidity:**	34%
Project:	None			**Barometric Pres.:**	1018
Tested by:	Jaemi Suh	**Power:**	120V/60Hz	**Job Site:**	OC06

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40

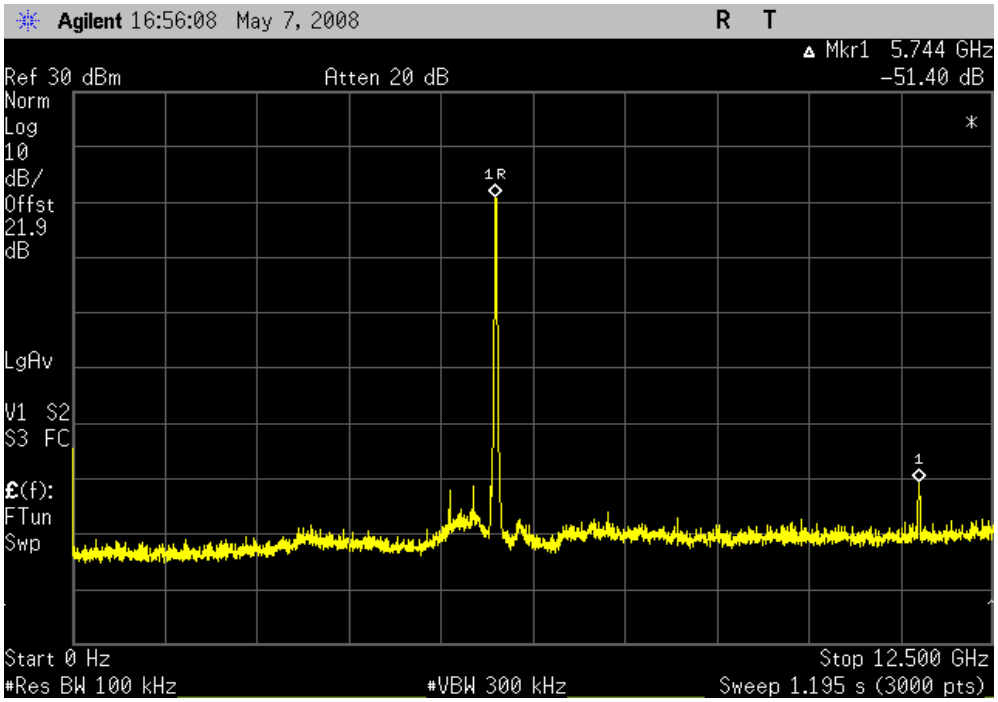
DEVIATIONS FROM TEST STANDARD

No Deviations

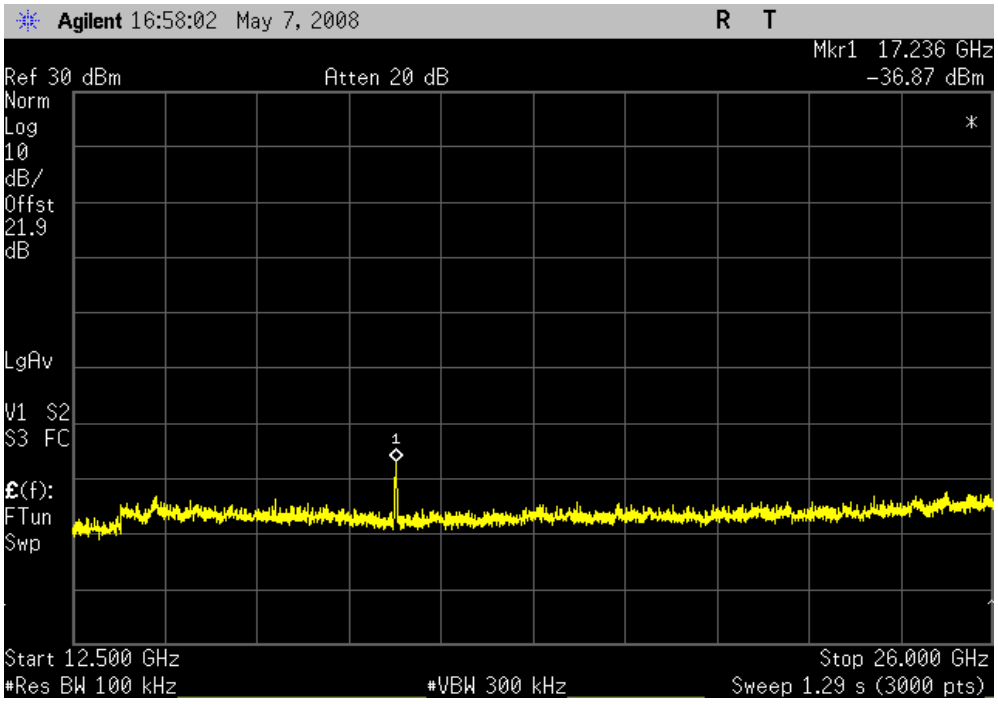
Configuration #	1	Signature

		Value	Limit	Results
802.11(a) 6 Mbps				
	Low Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	Mid Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	High Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
802.11(a) 36 Mbps				
	Low Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	Mid Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	High Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
802.11(a) 54 Mbps				
	Low Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	Mid Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	High Channel			
	0 MHz - 12.5 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass
	12.5 GHz - 26 GHz	≤ - 30 dBc	≤ -20 dBc	Pass
	26 GHz - 40 GHz	≤ - 30 dBc	≤ - 20 dBc	Pass

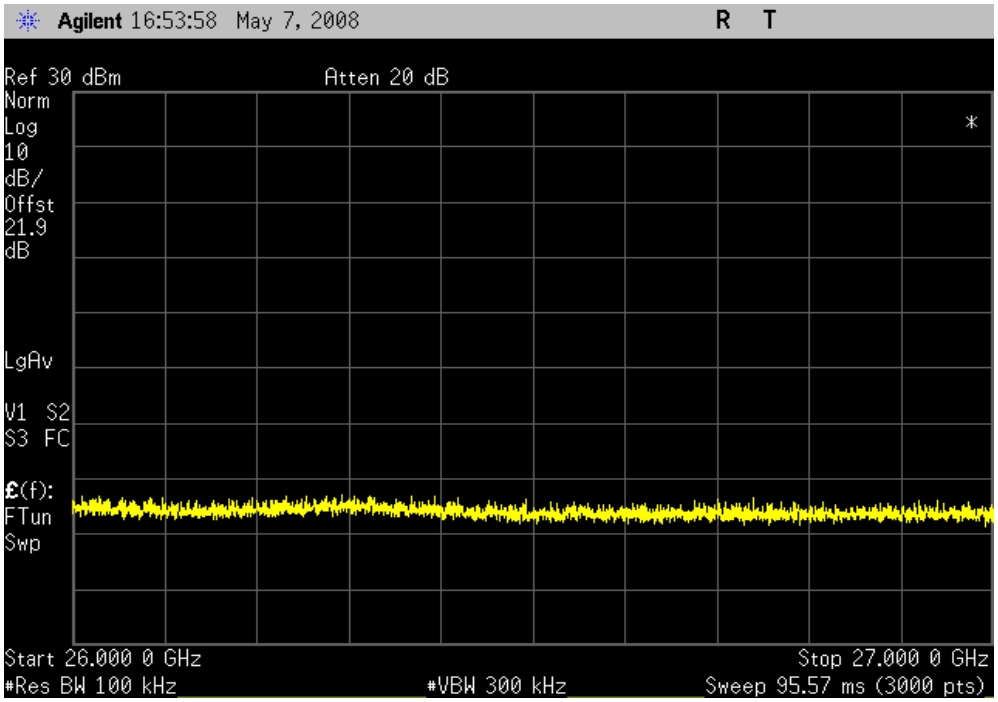
802.11(a) 6 Mbps, Low Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



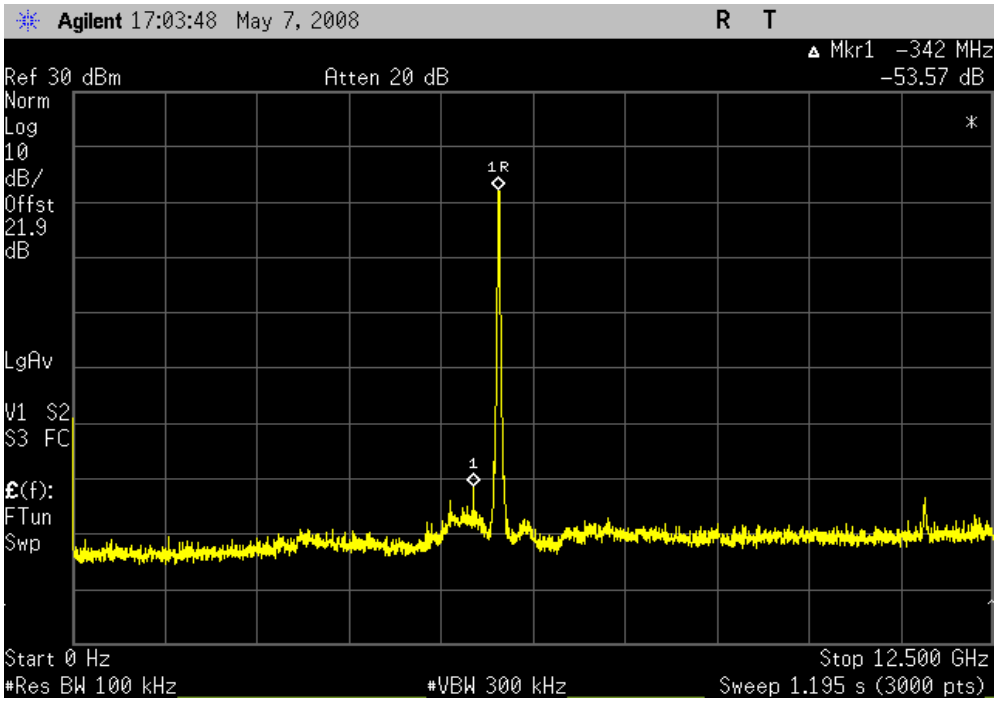
802.11(a) 6 Mbps, Low Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



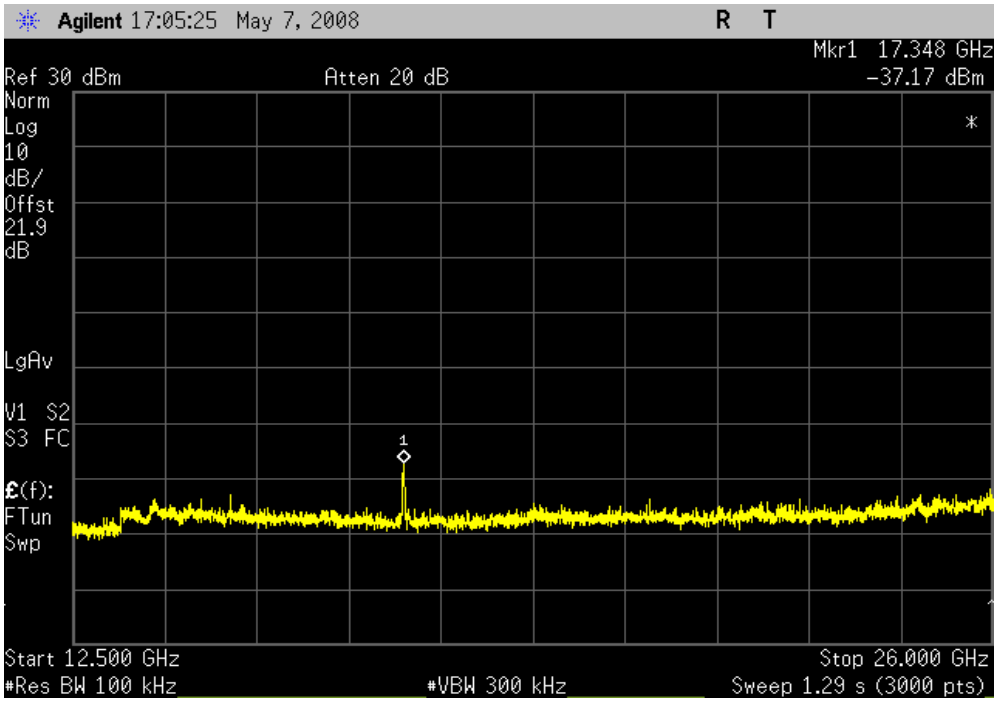
802.11(a) 6 Mbps, Low Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



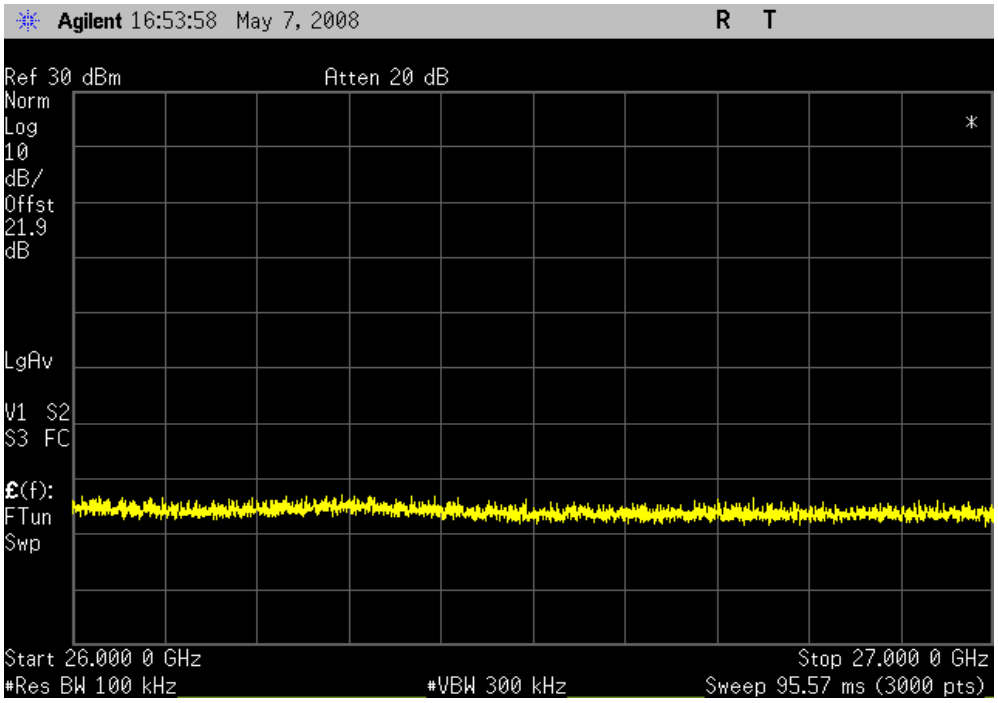
802.11(a) 6 Mbps, Mid Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



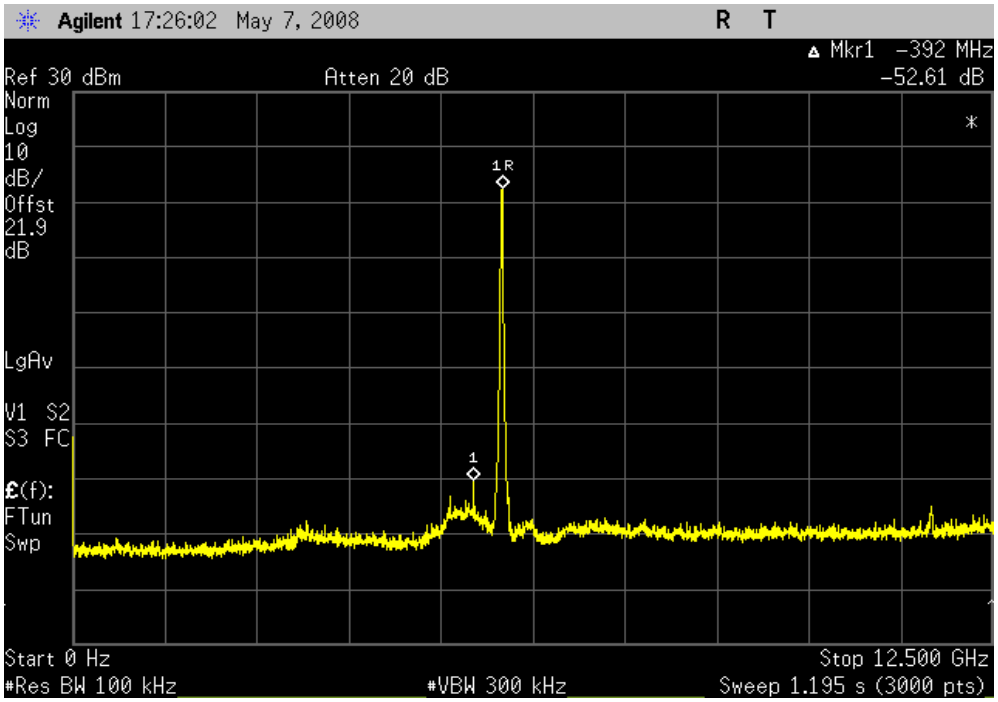
802.11(a) 6 Mbps, Mid Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



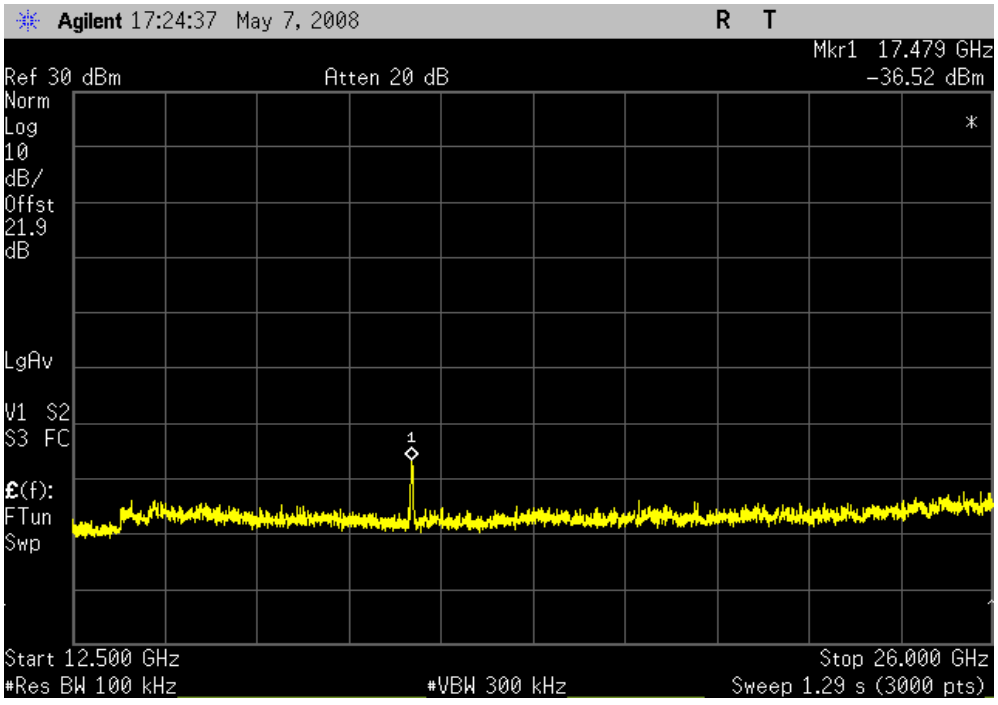
802.11(a) 6 Mbps, Mid Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



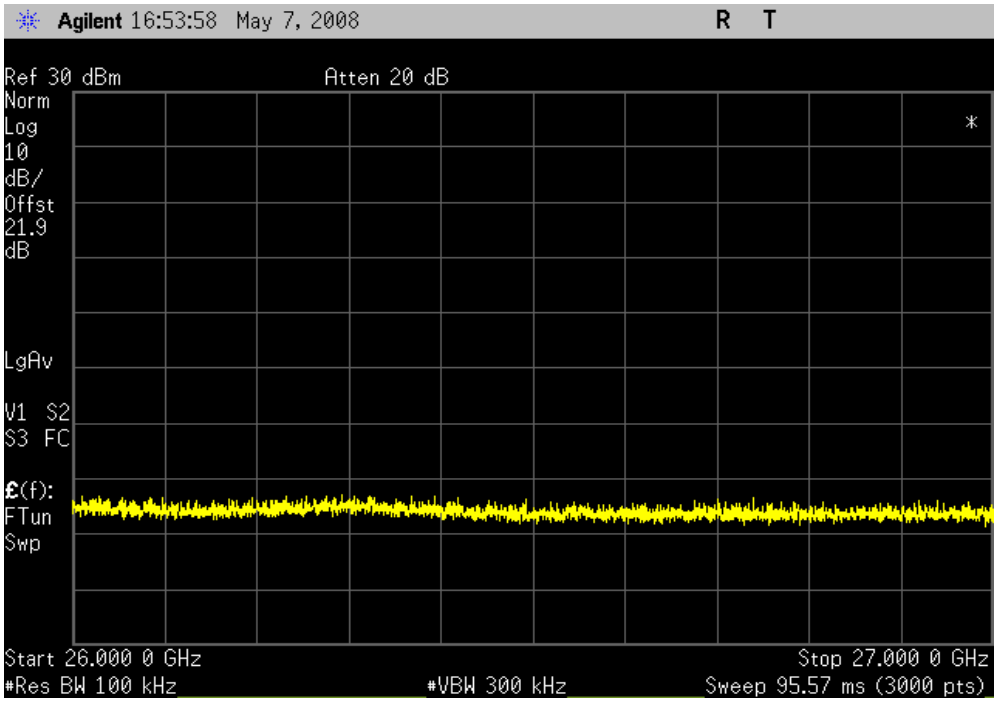
802.11(a) 6 Mbps, High Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



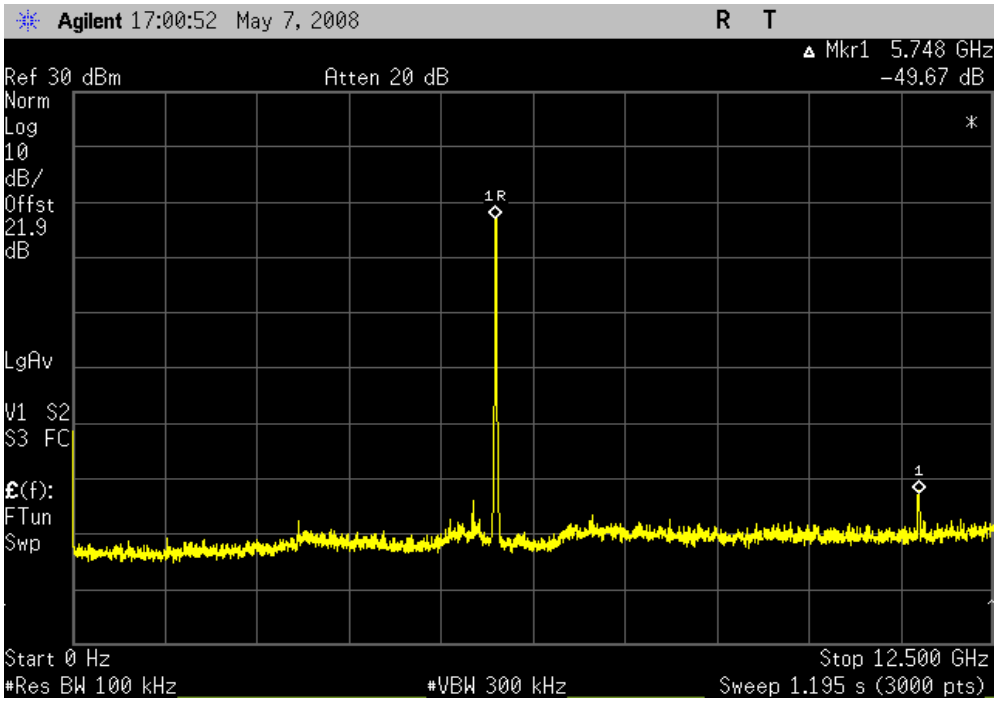
802.11(a) 6 Mbps, High Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



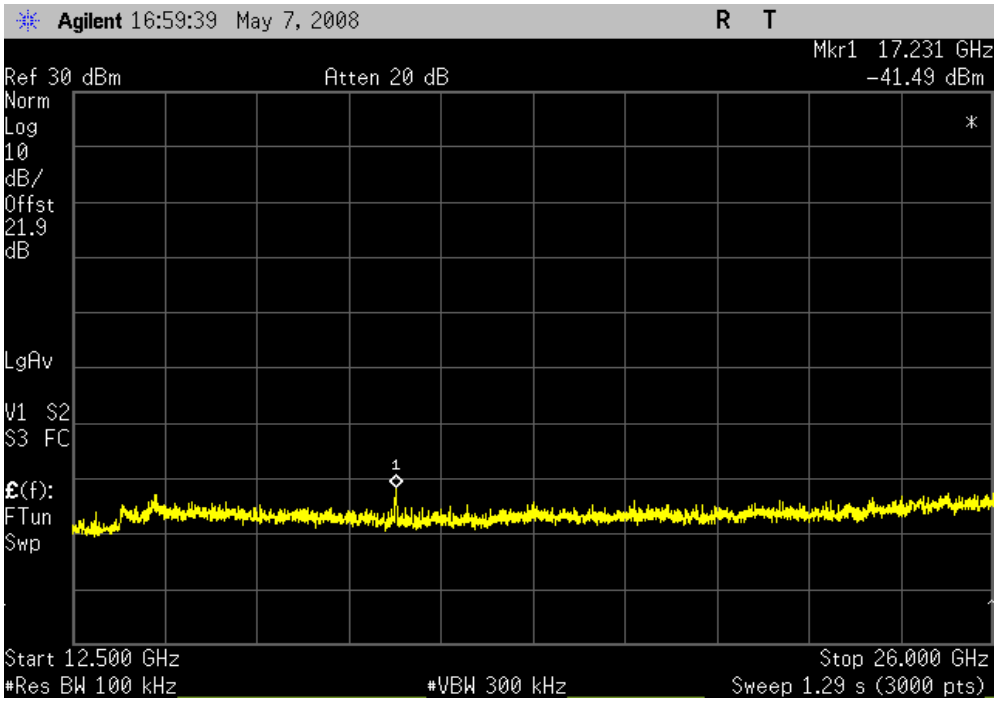
802.11(a) 6 Mbps, High Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



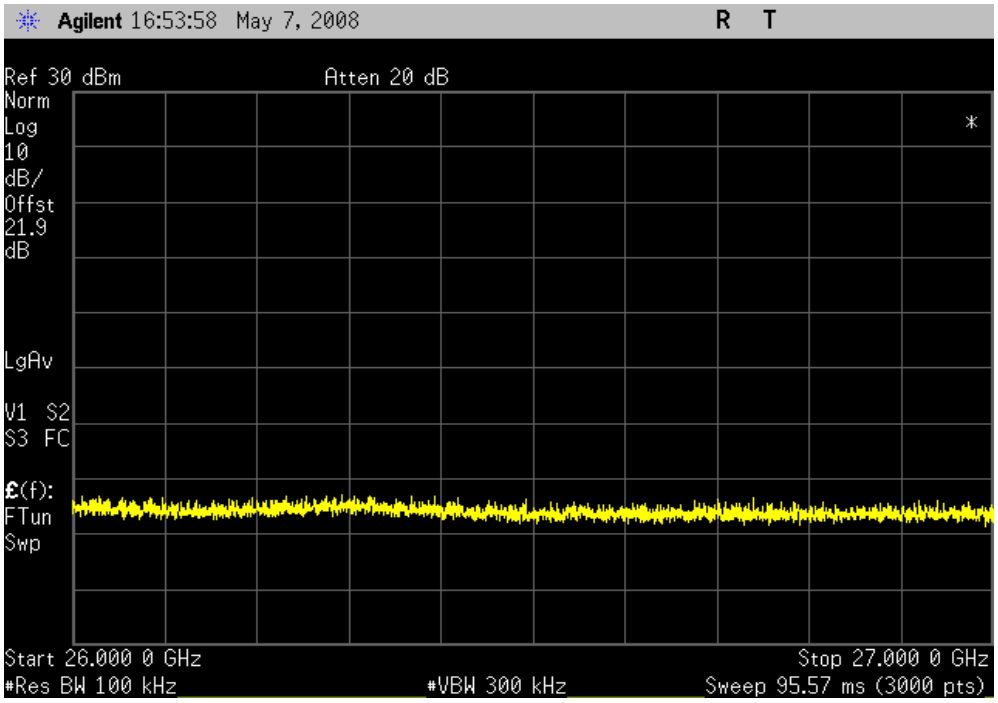
802.11(a) 36 Mbps, Low Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



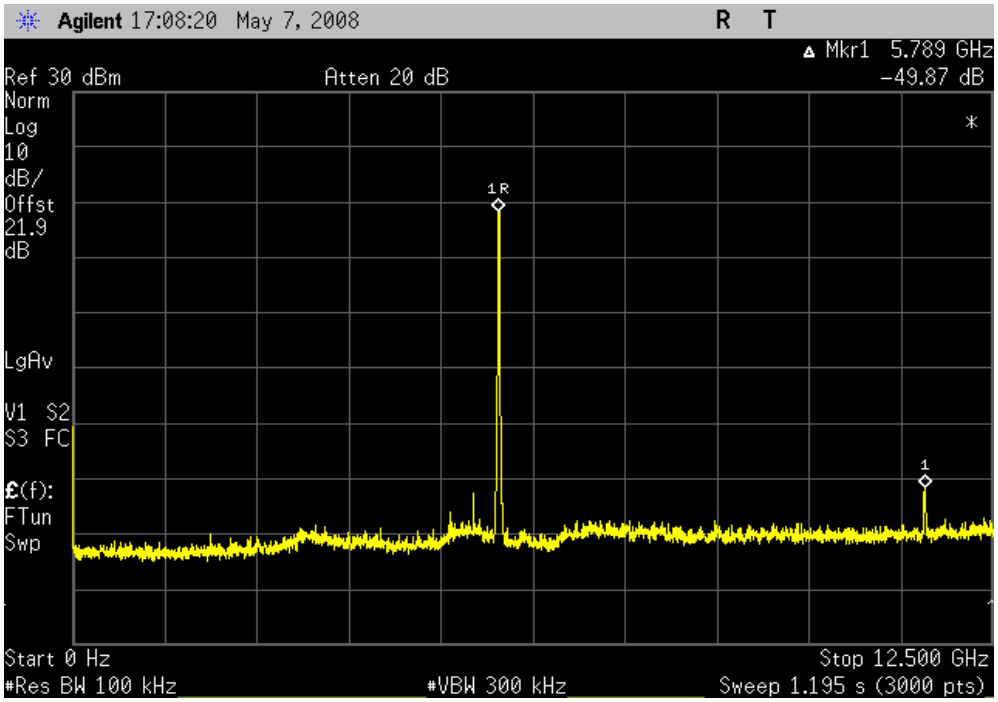
802.11(a) 36 Mbps, Low Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



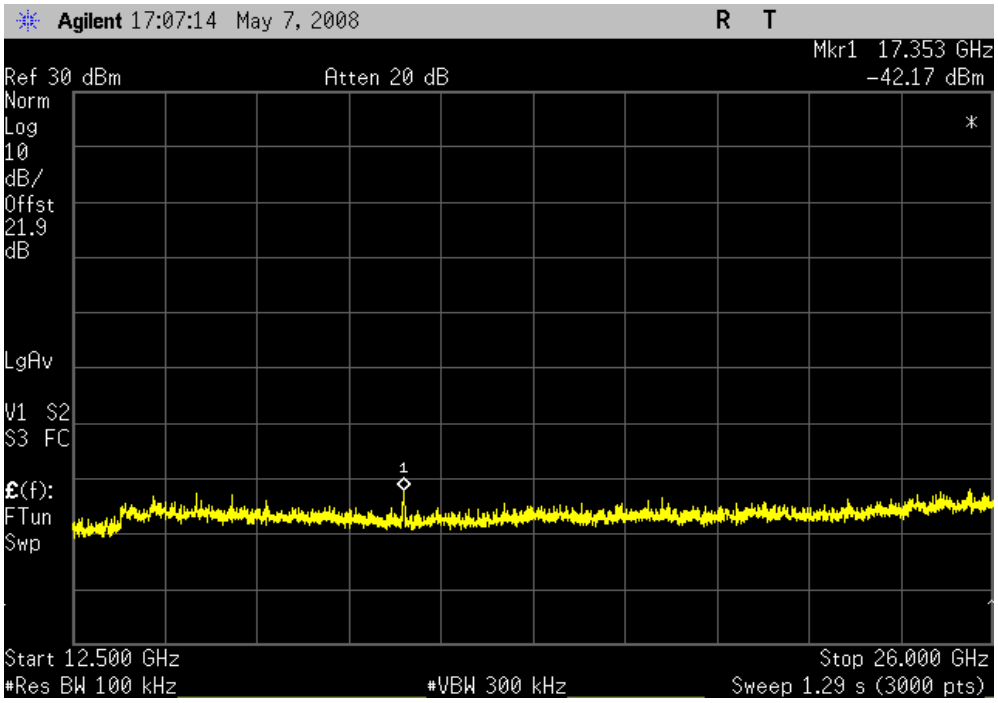
802.11(a) 36 Mbps, Low Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



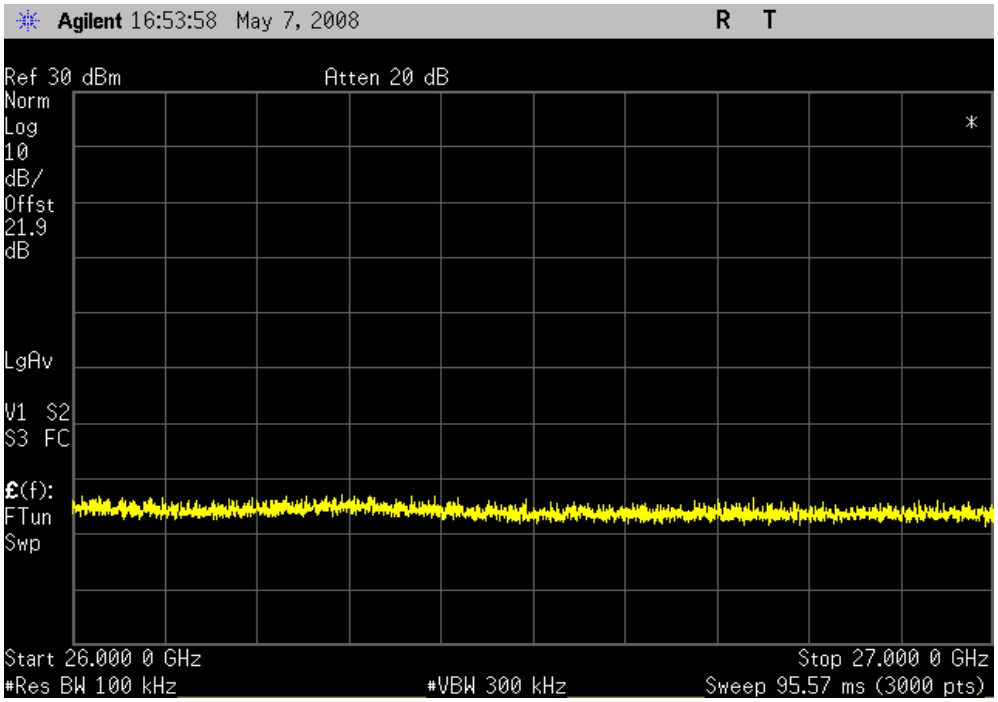
802.11(a) 36 Mbps, Mid Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



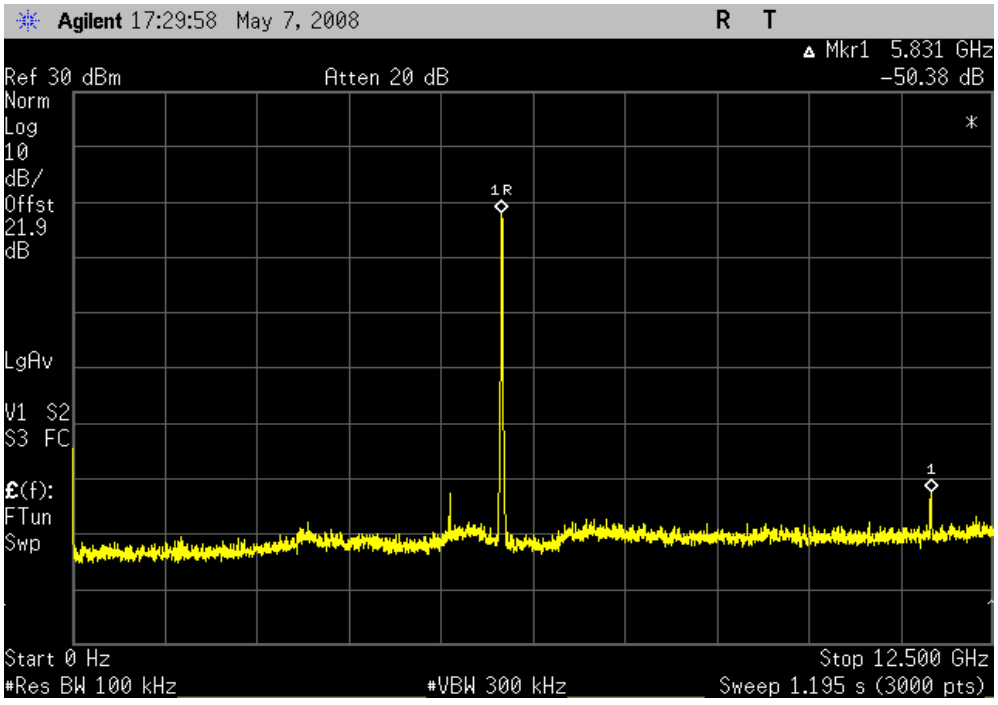
802.11(a) 36 Mbps, Mid Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



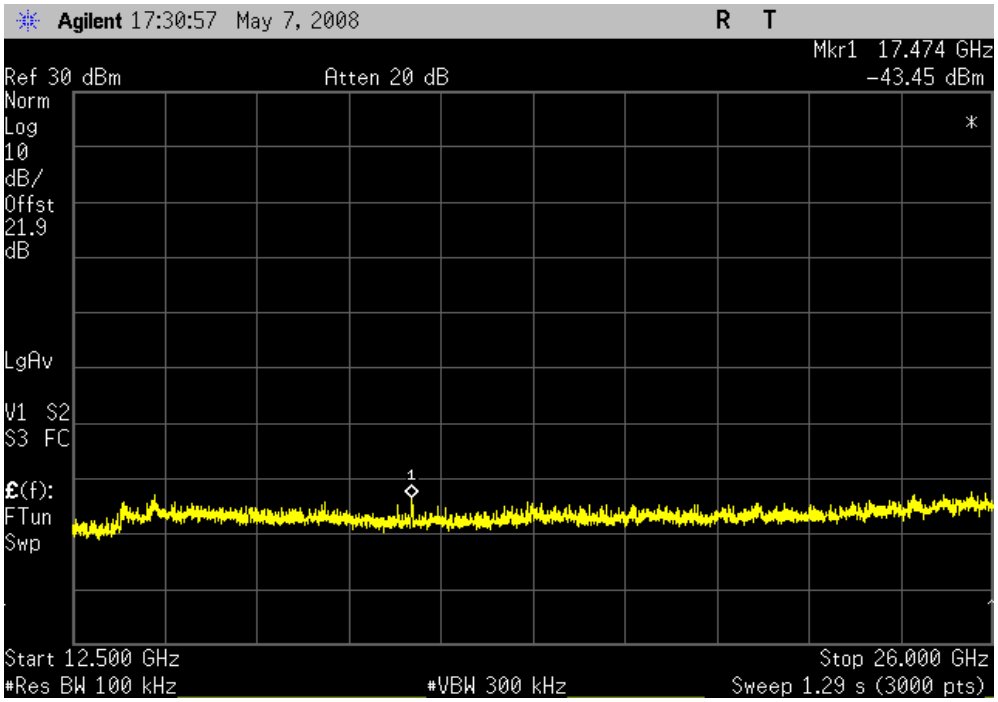
802.11(a) 36 Mbps, Mid Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



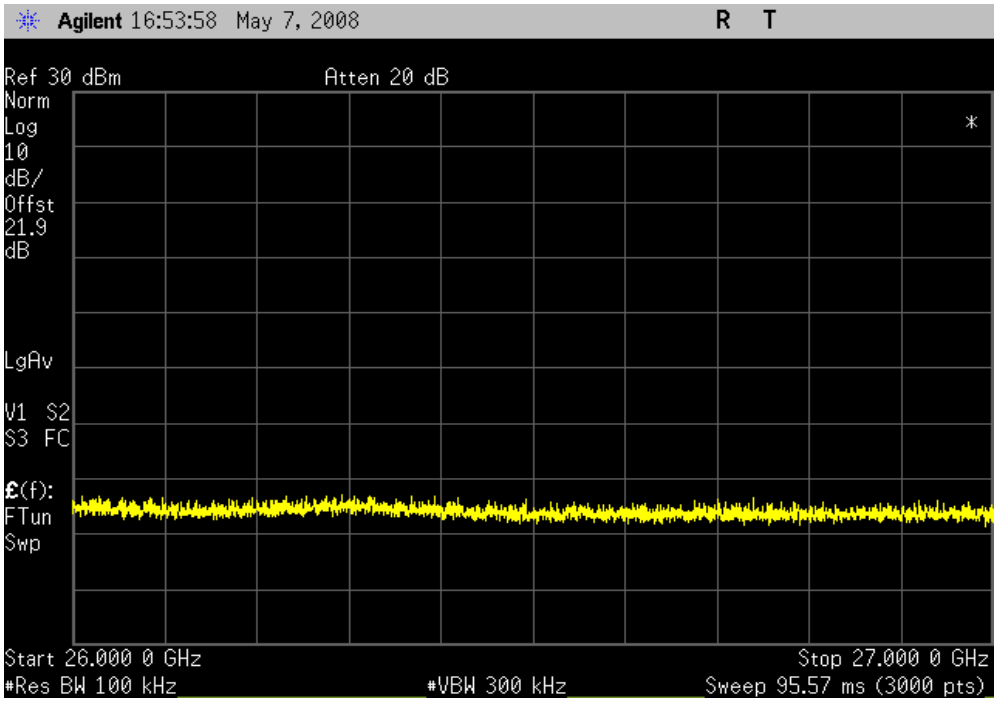
802.11(a) 36 Mbps, High Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



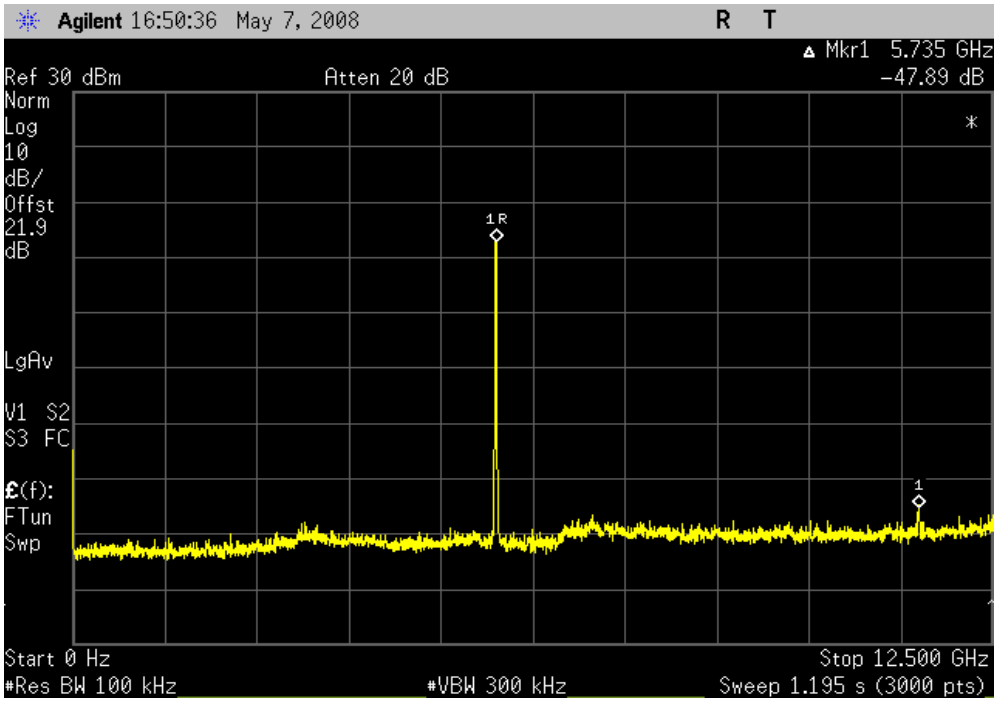
802.11(a) 36 Mbps, High Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



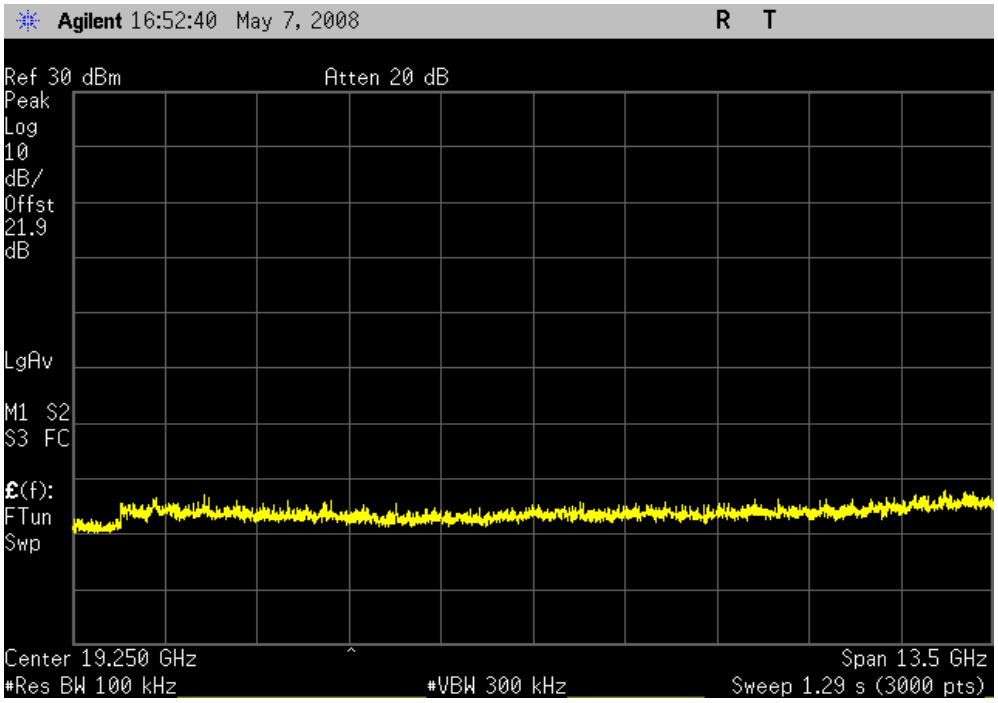
802.11(a) 36 Mbps, High Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



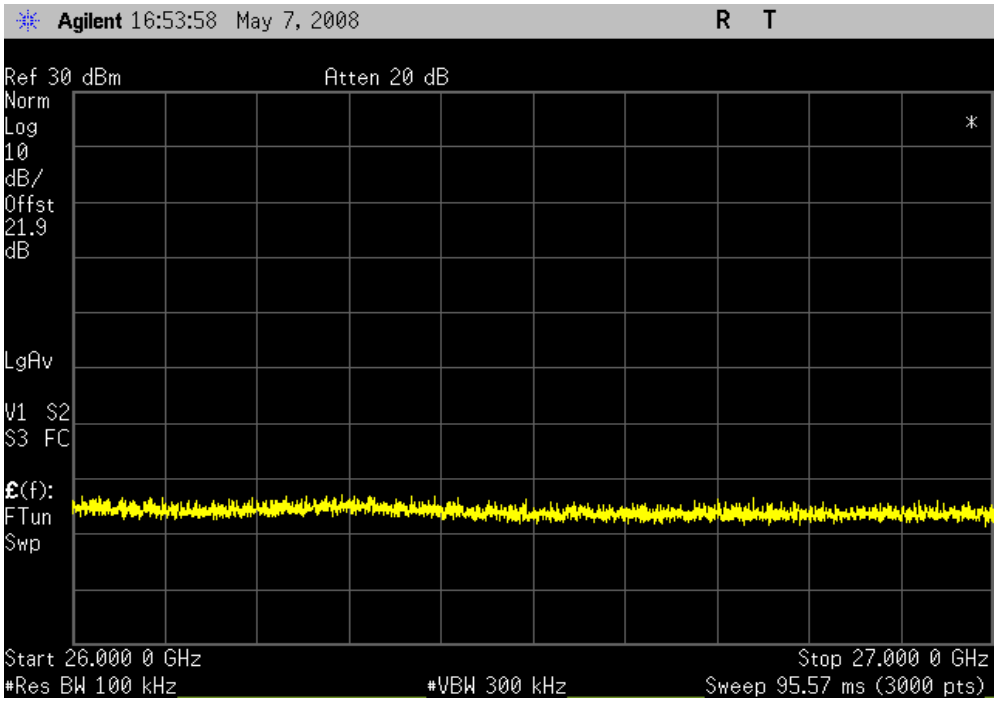
802.11(a) 54 Mbps, Low Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



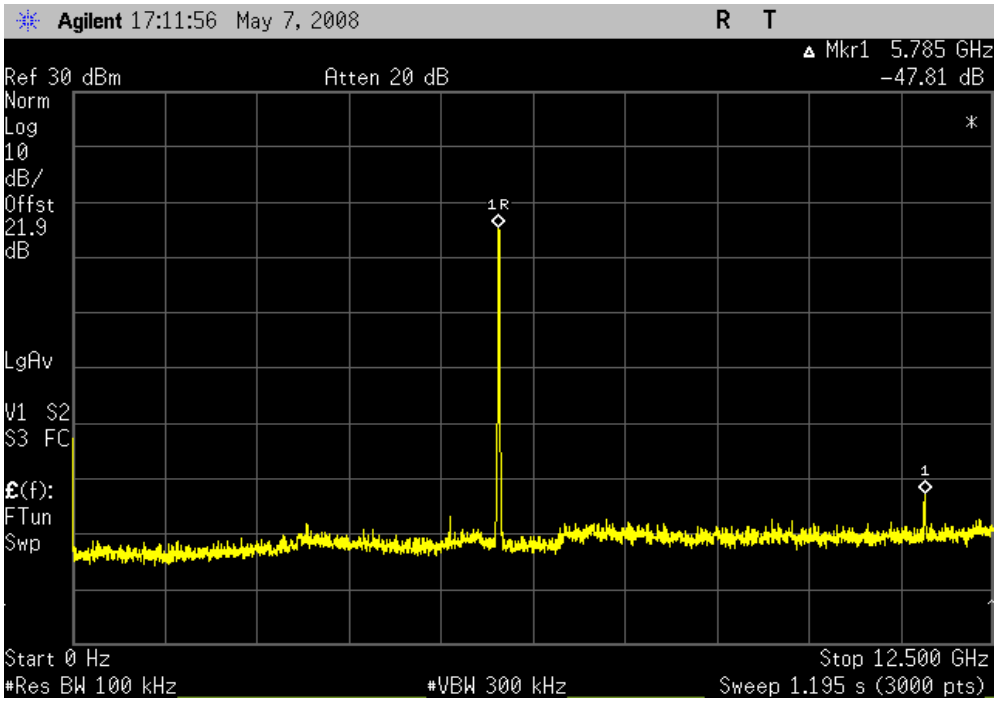
802.11(a) 54 Mbps, Low Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



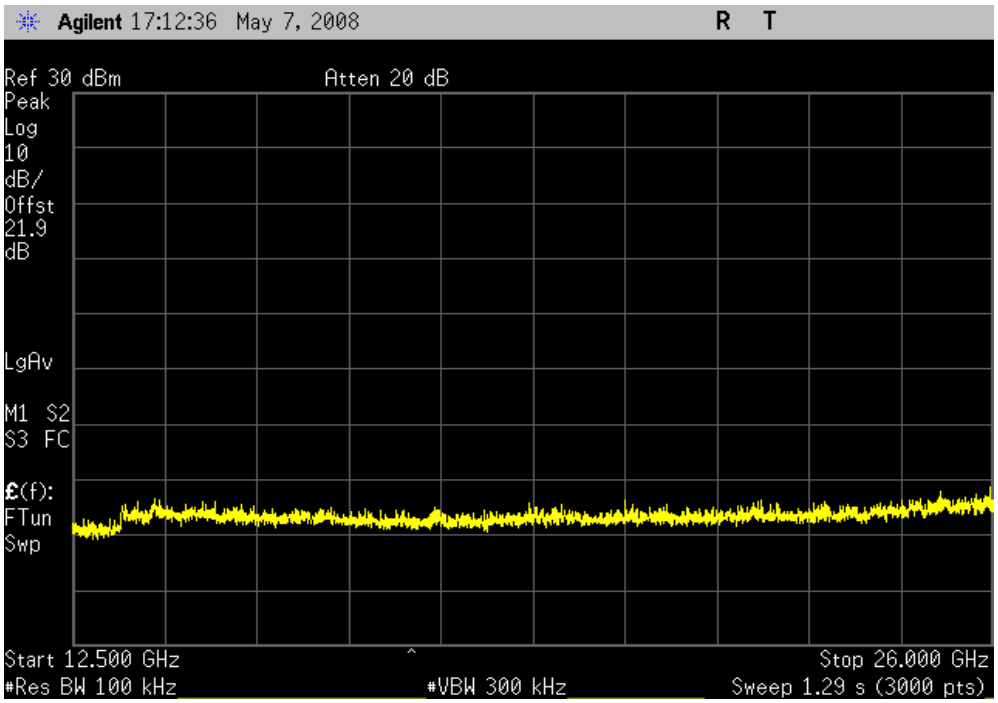
802.11(a) 54 Mbps, Low Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



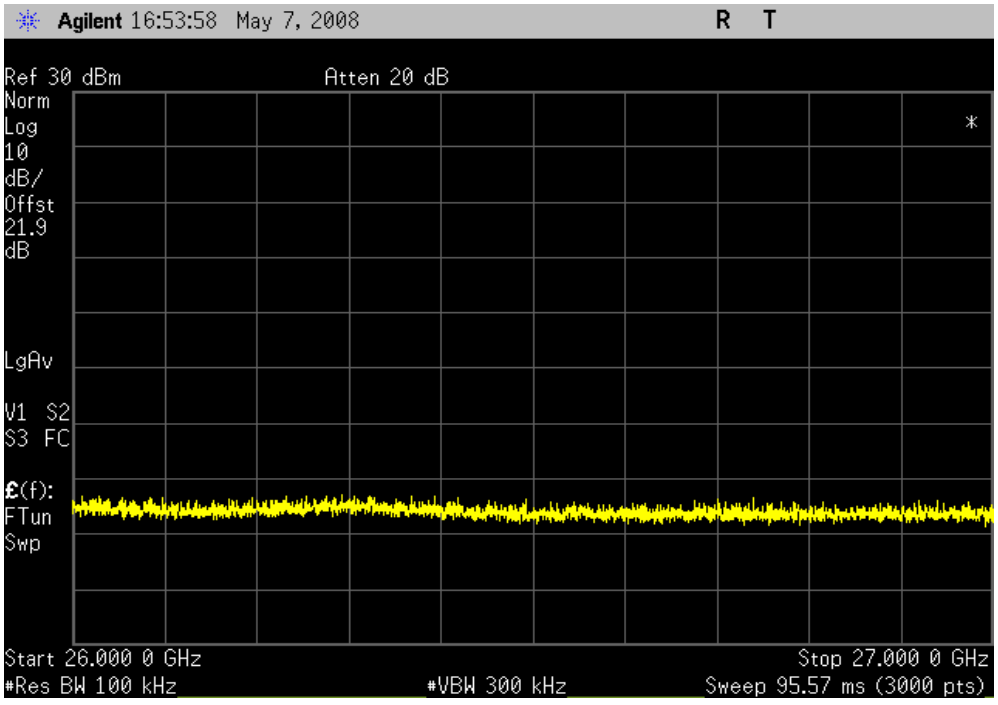
802.11(a) 54 Mbps, Mid Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



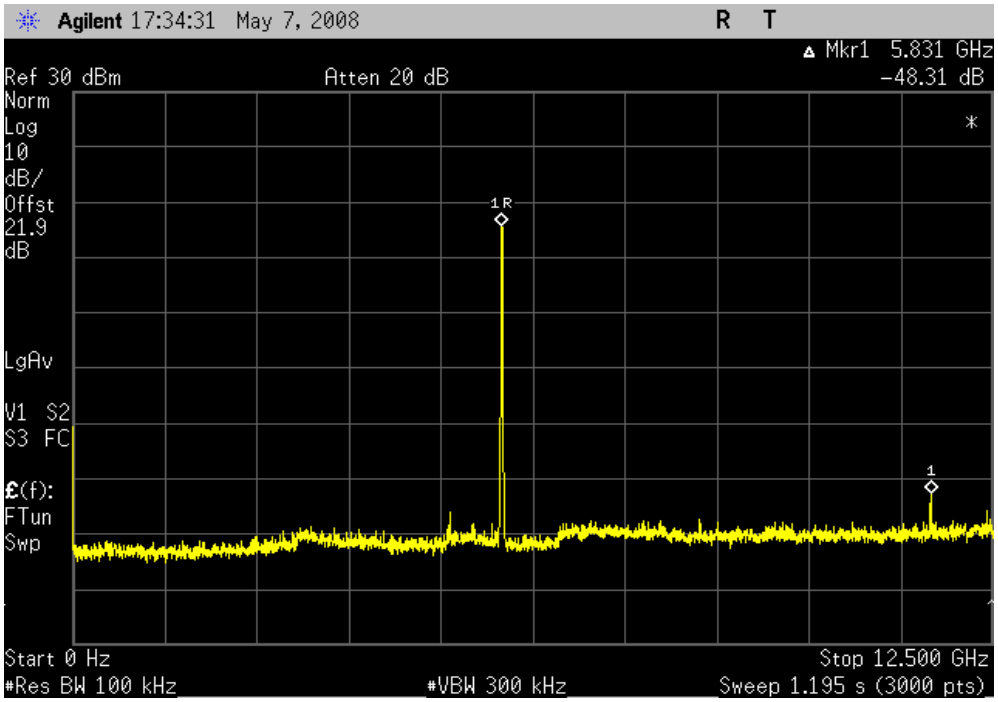
802.11(a) 54 Mbps, Mid Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc



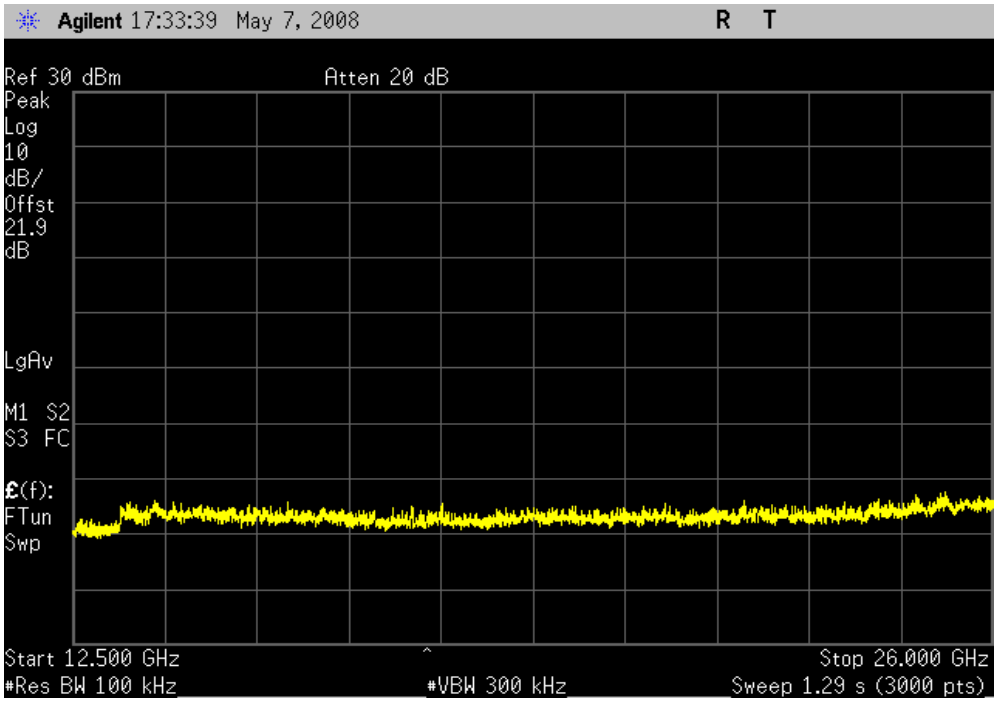
802.11(a) 54 Mbps, Mid Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



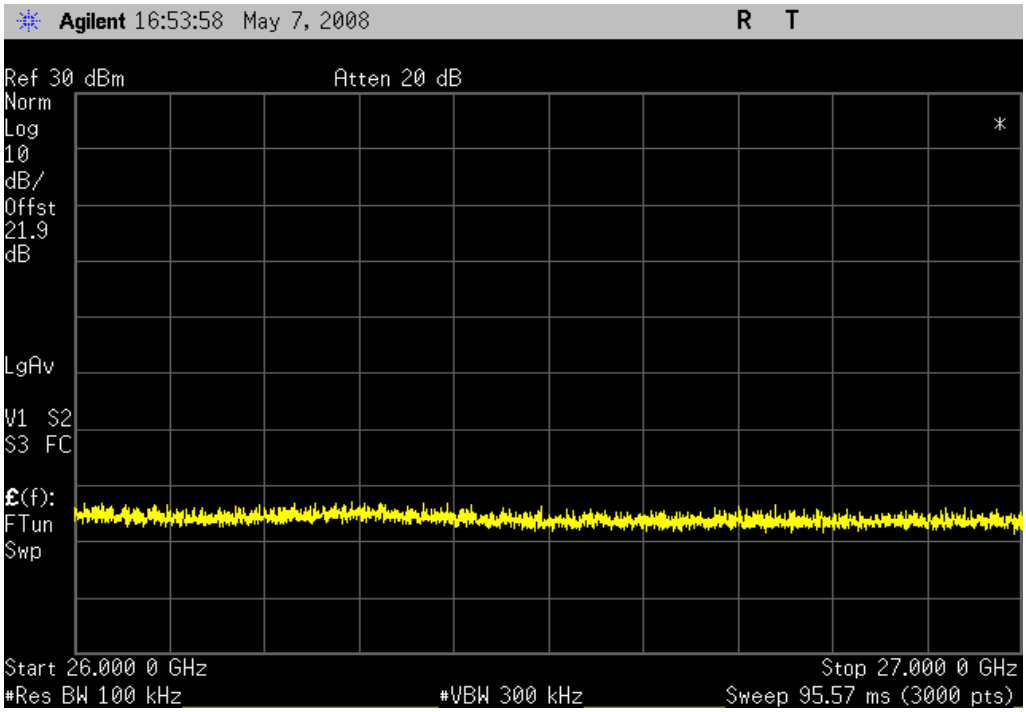
802.11(a) 54 Mbps, High Channel, 0 MHz - 12.5 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ - 20 dBc

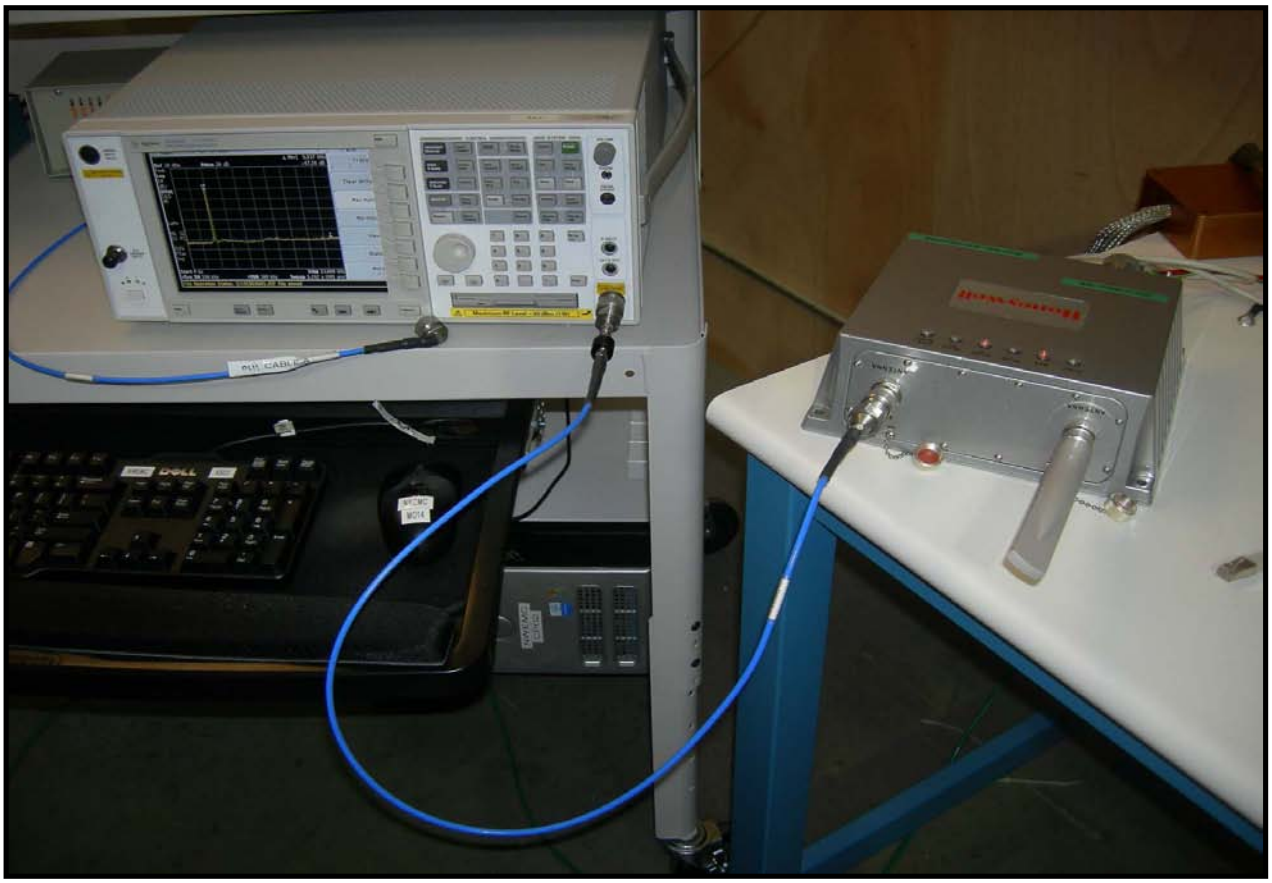


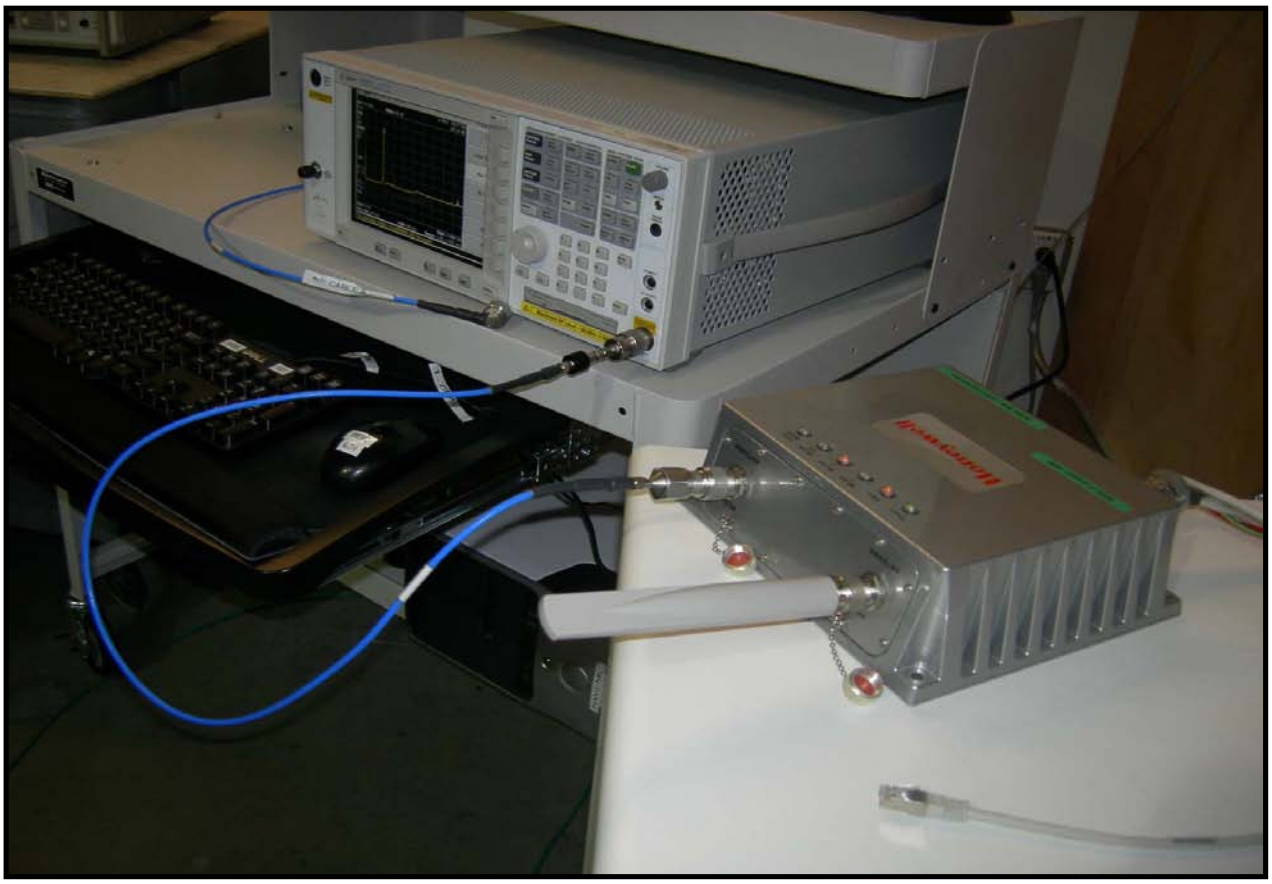
802.11(a) 54 Mbps, High Channel, 12.5 GHz - 26 GHz					
Result:	Pass	**Value:**	≤ - 30 dBc	**Limit:**	≤ -20 dBc



802.11(a) 54 Mbps, High Channel, 26 GHz - 40 GHz					
Result:	Pass	**Value:**	≤ - 30 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	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The peak power spectral density measurements were measured with the EUT set to low, mid, and high transmit frequencies. 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 using direct sequence modulation. Per the procedure outlined in FCC 97-114, the spectrum analyzer was used as follows:

> The emission peak(s) were located and zoom in on within the passband. The resolution bandwidth was set to 3 kHz, the video bandwidth was set to greater than or equal to the resolution bandwidth. The sweep speed was set equal to the span divided by 3 kHz (sweep = (SPAN/3 kHz)). For example, given a span of 1.5 MHz, the sweep should be 1.5 x 10^6 ÷ 3 x 10^3 = 500 seconds. External attenuation was used and added to the reading. The following FCC procedure was used for modifying the power spectral density measurements:

"If the spectrum line spacing cannot be resolved on the available spectrum analyzer, the noise density function on most modern conventional spectrum analyzers will directly measure the noise power density normalized to a 1 Hz noise power bandwidth. Add 35 dB for correction to 3 kHz."

NORTHWEST EMC

POWER SPECTRAL DENSITY

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/30/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -8 (Highest Output Power).

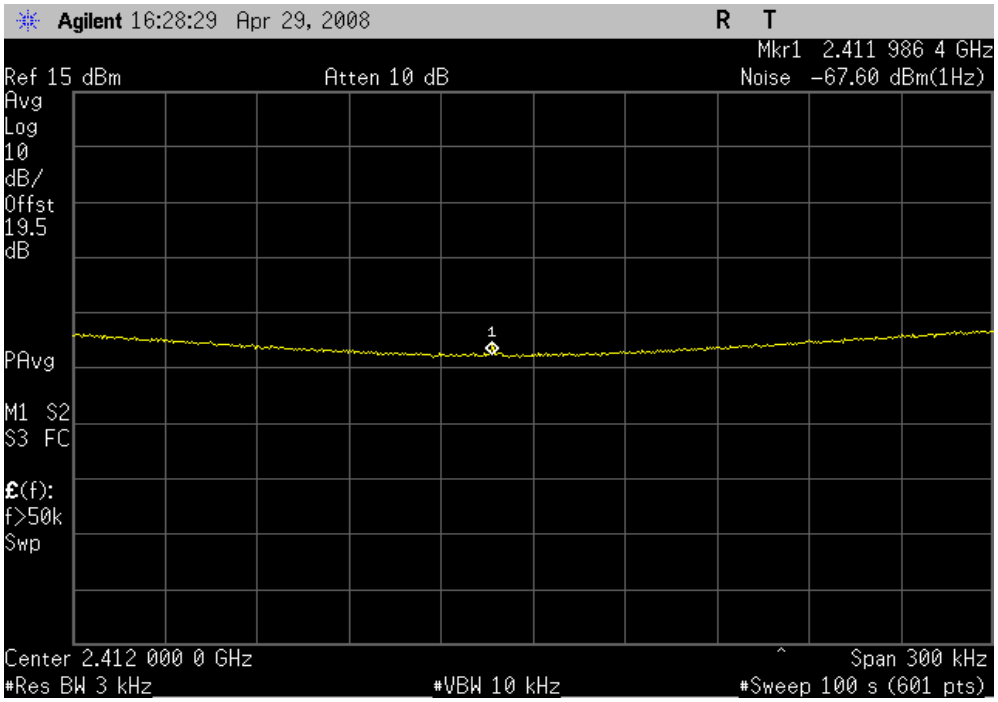
DEVIATIONS FROM TEST STANDARD

No Deviations

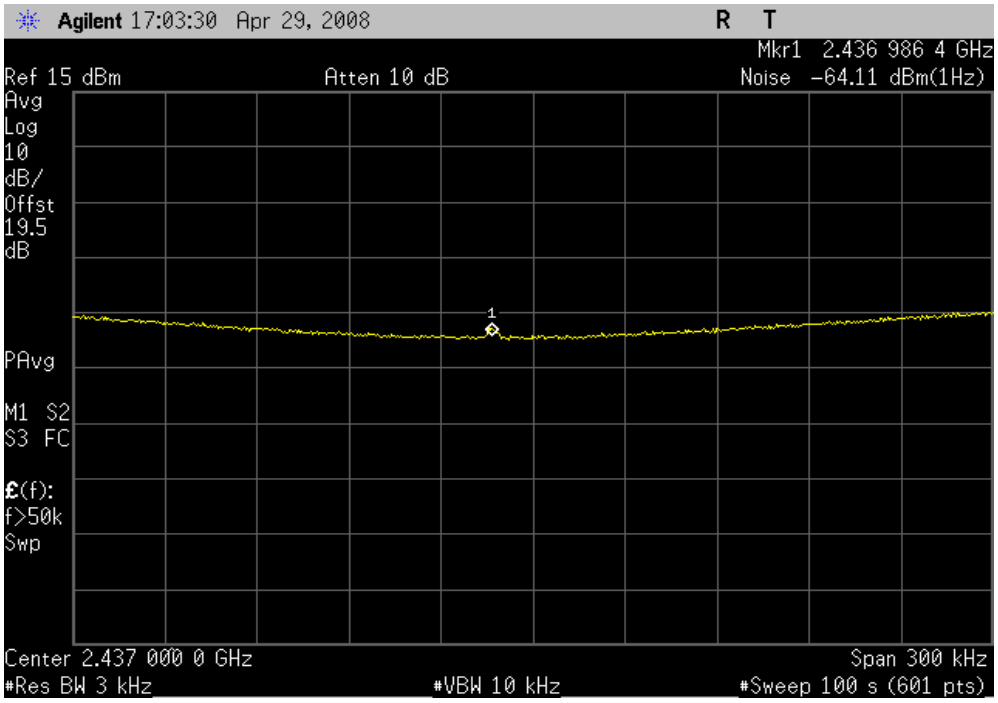
Configuration #	1	Signature

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel	-32.6 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-29.11 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-28.04 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(b) 11 Mbps				
	Low Channel	-30.65 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-27.44 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-29.01 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 6 Mbps				
	Low Channel	-23.64 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-22.29 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-23.86 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 36 Mbps				
	Low Channel	-28.29 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-22.35 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-25.32 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 54 Mbps				
	Low Channel	-28.28 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-22.62 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-27.7 dBm / 3 kHz	8 dBm / 3 kHz	Pass

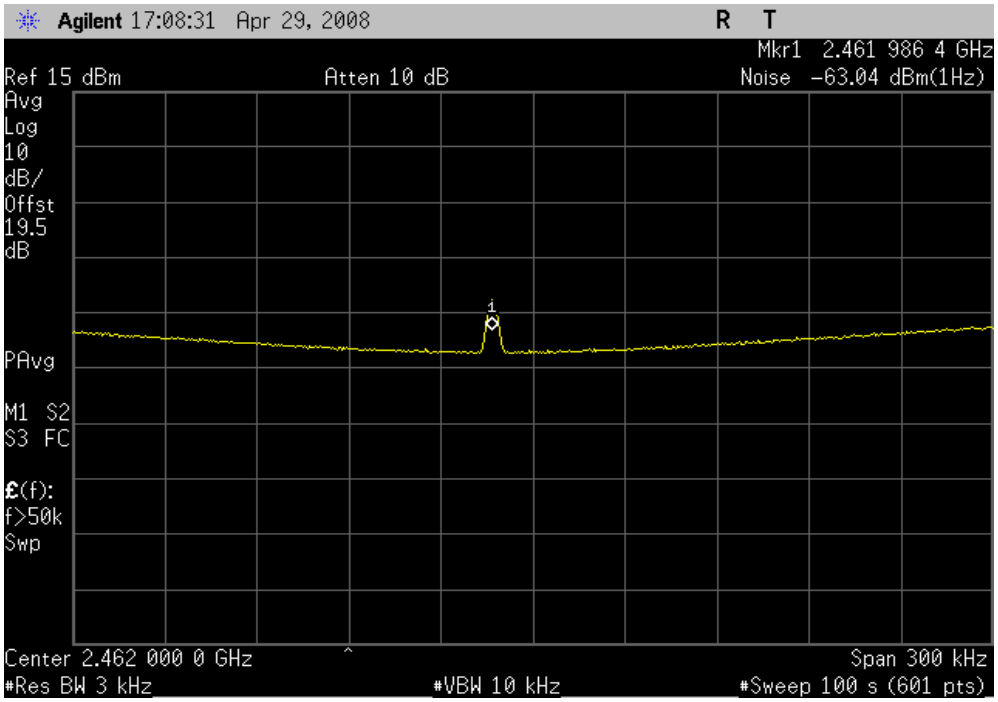
802.11(b) 1 Mbps, Low Channel					
Result:	Pass	**Value:**	-32.6 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



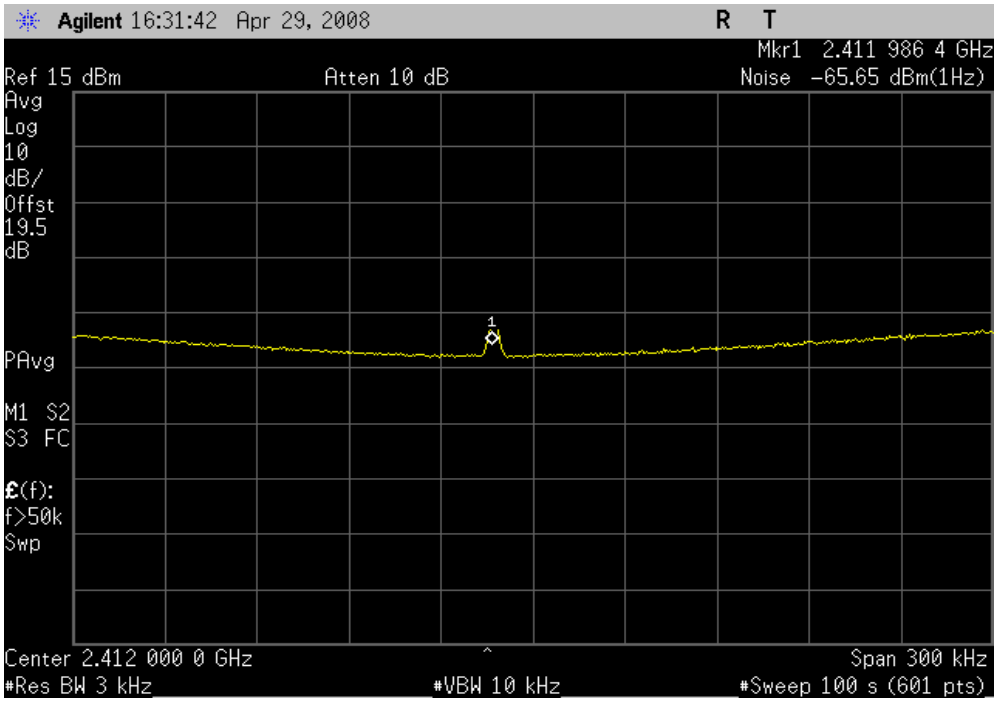
802.11(b) 1 Mbps, Mid Channel					
Result:	Pass	**Value:**	-29.11 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



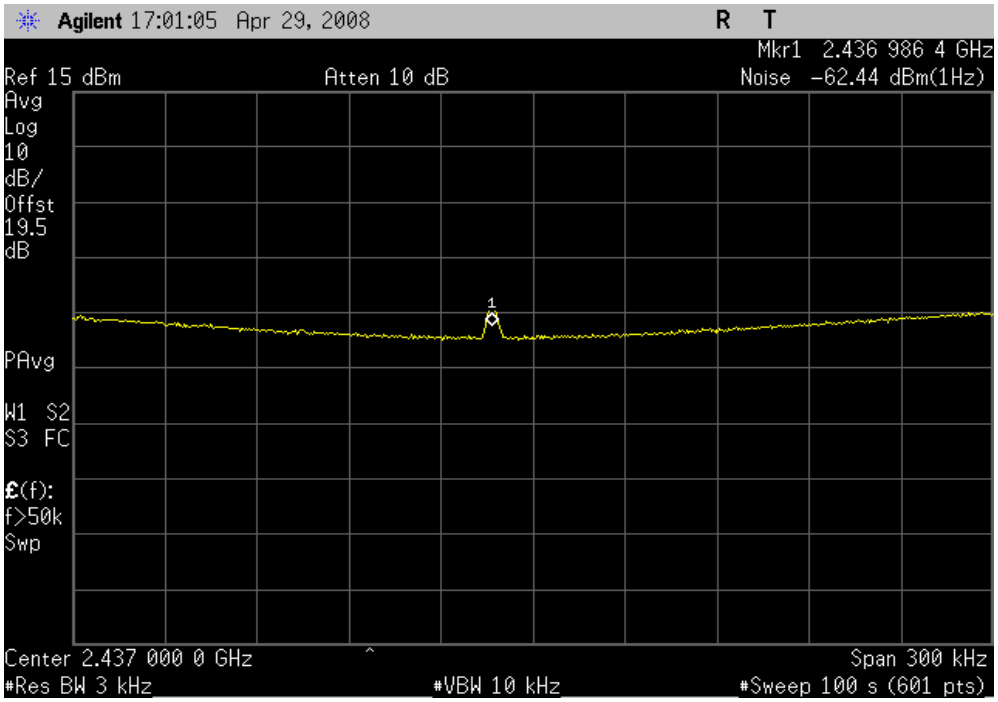
802.11(b) 1 Mbps, High Channel					
Result:	Pass	**Value:**	-28.04 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



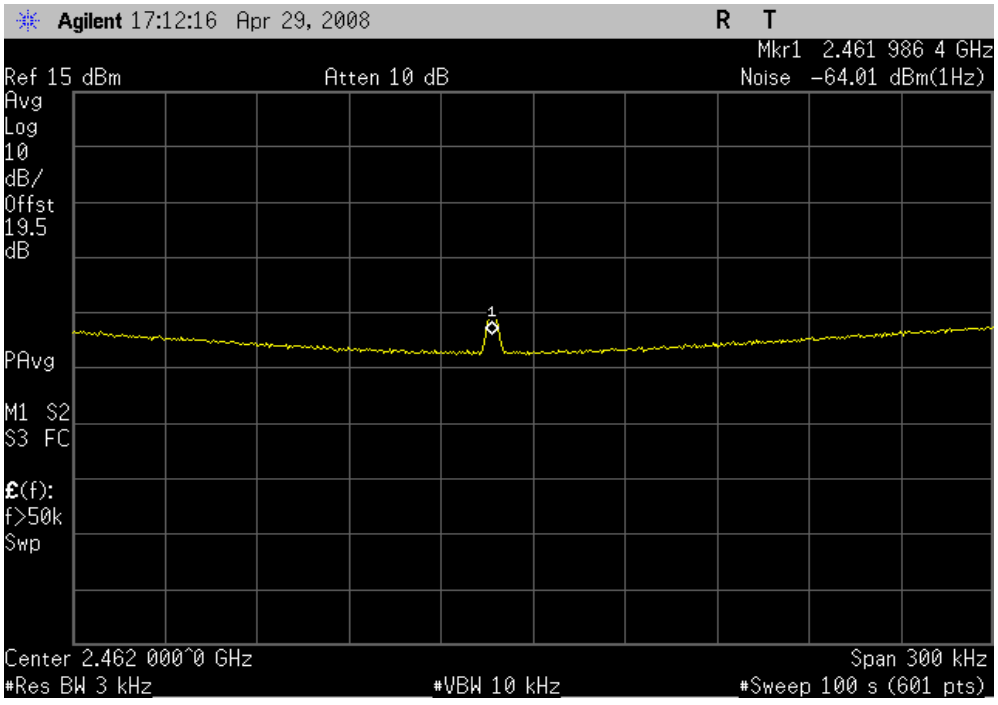
802.11(b) 11 Mbps, Low Channel					
Result:	Pass	**Value:**	-30.65 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



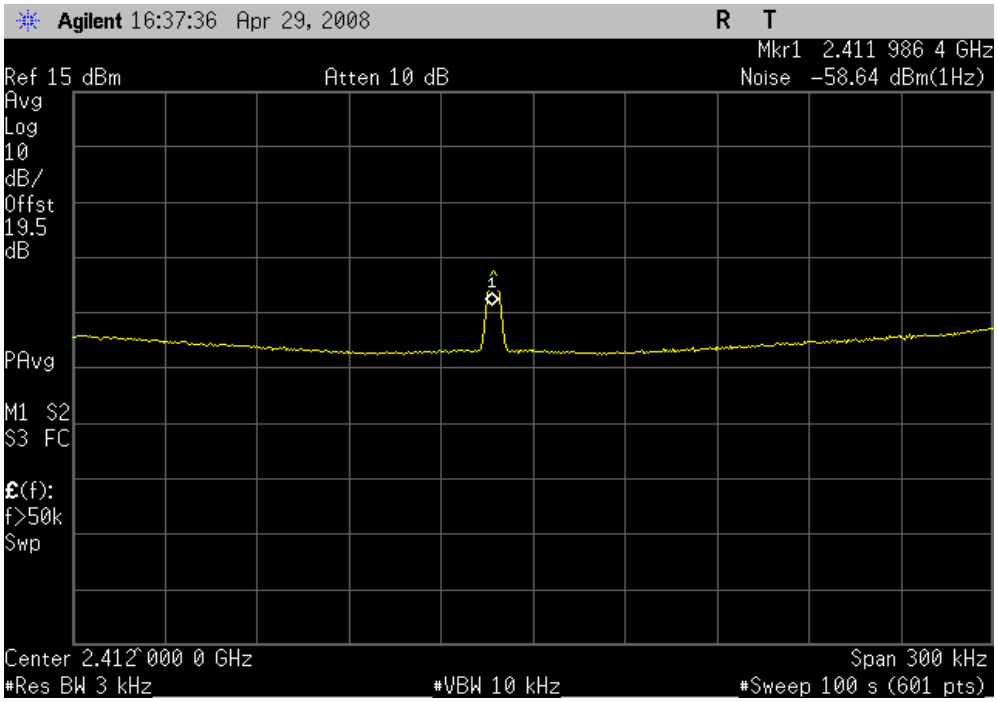
802.11(b) 11 Mbps, Mid Channel					
Result:	Pass	**Value:**	-27.44 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



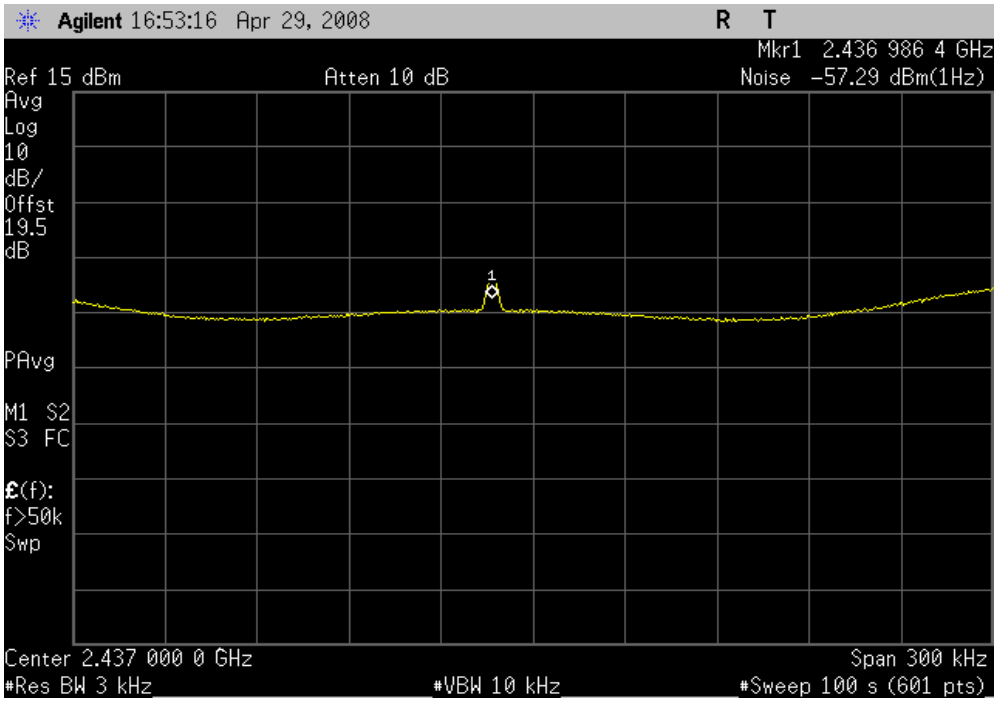
802.11(b) 11 Mbps, High Channel					
Result:	Pass	**Value:**	-29.01 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



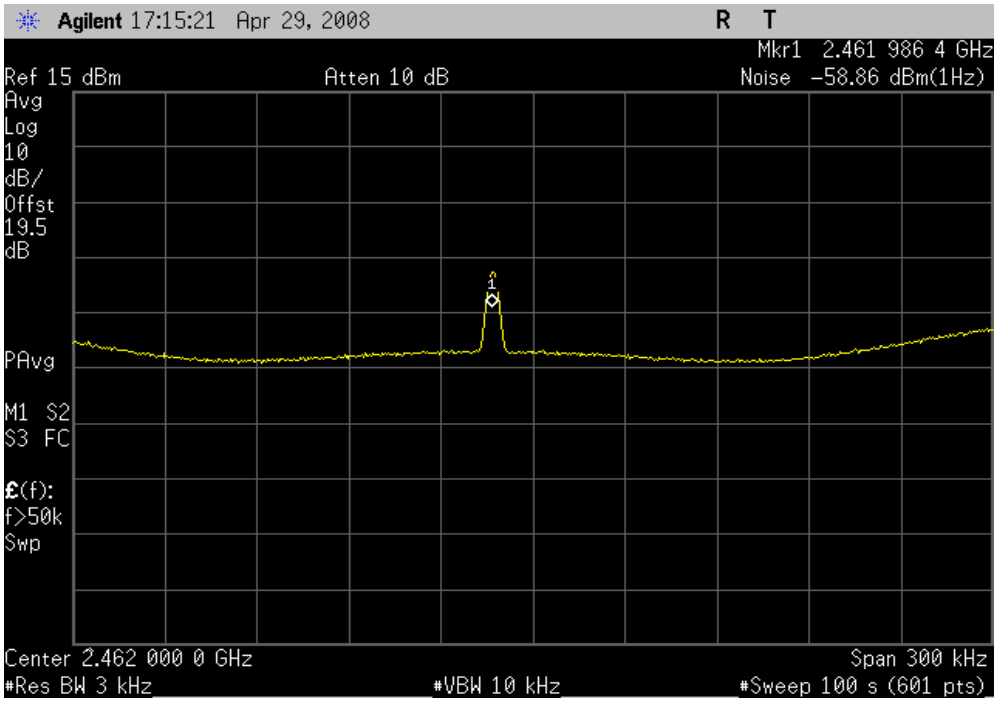
802.11(g) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-23.64 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



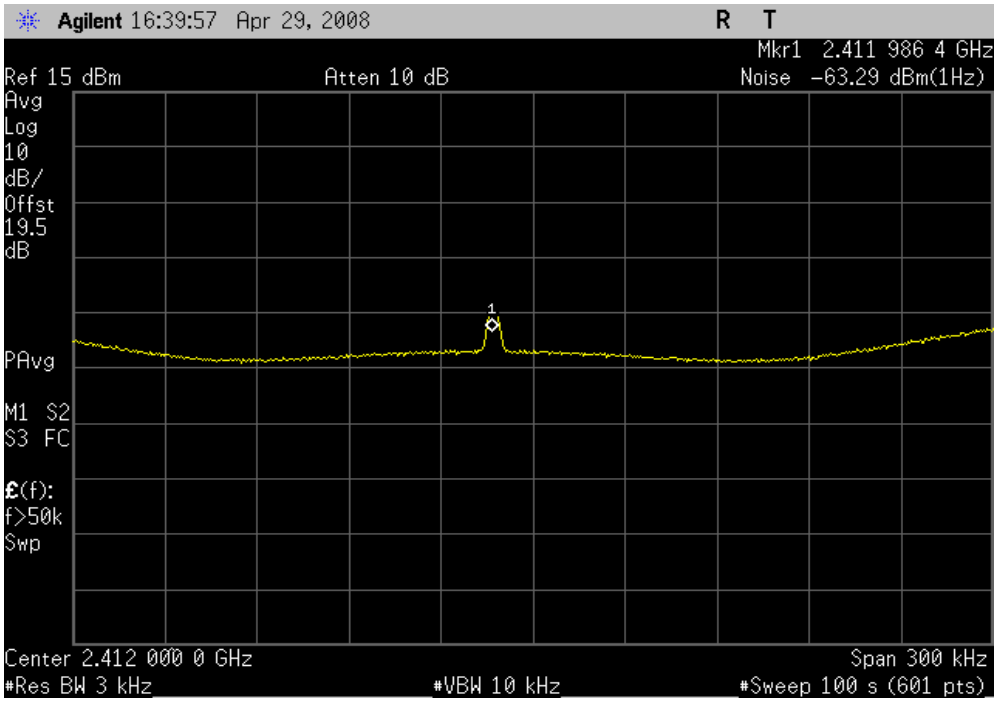
802.11(g) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	-22.29 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



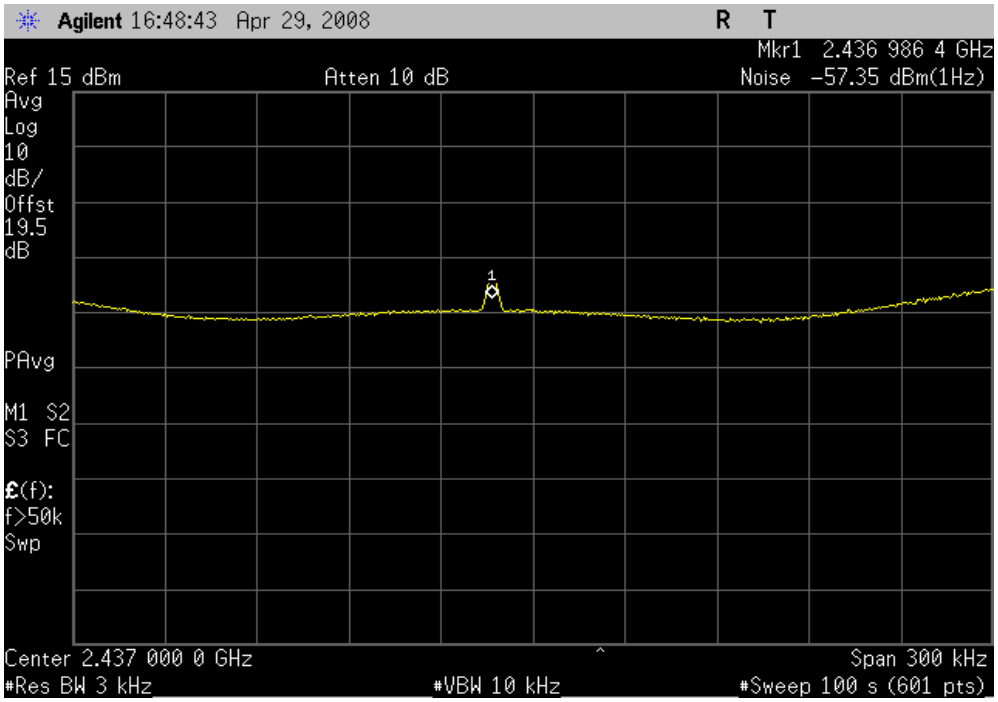
802.11(g) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-23.86 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



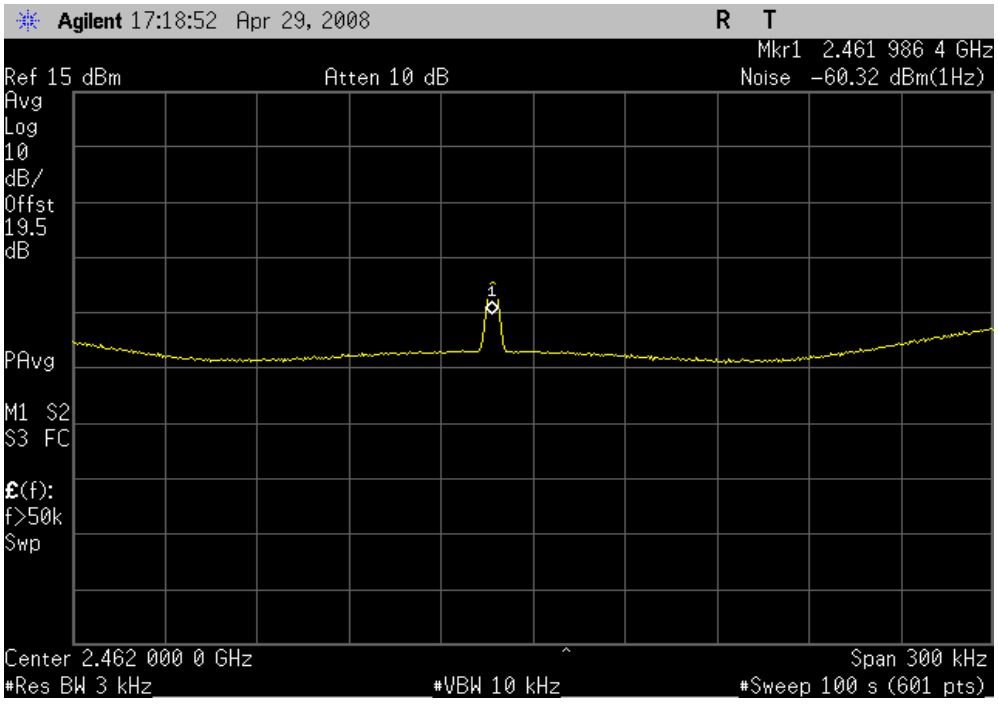
802.11(g) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-28.29 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



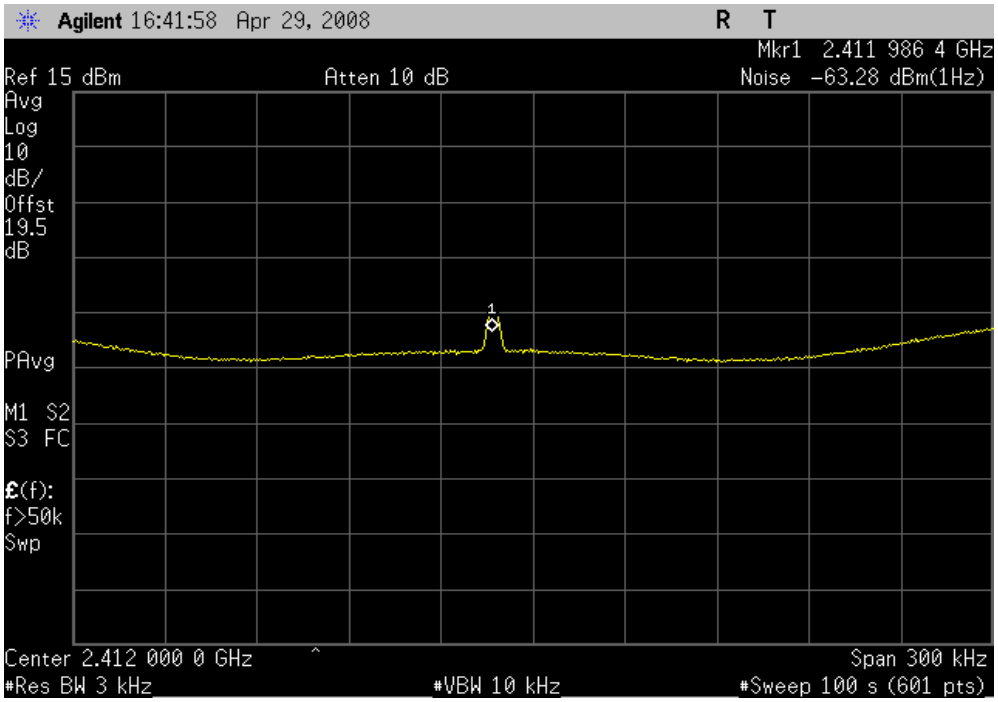
802.11(g) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	-22.35 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



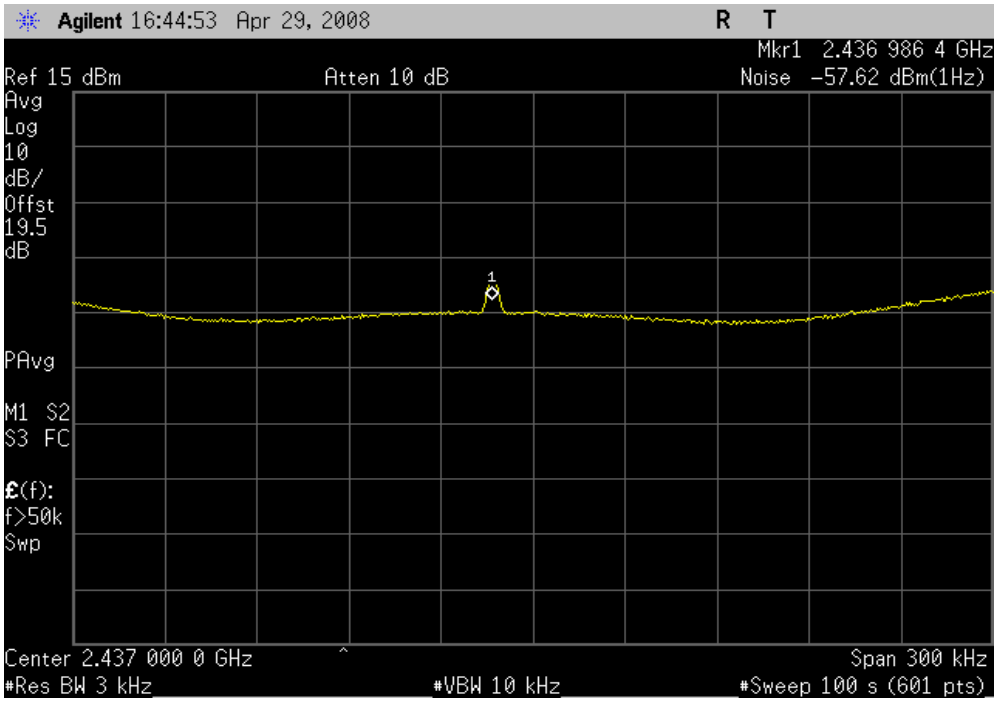
802.11(g) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-25.32 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



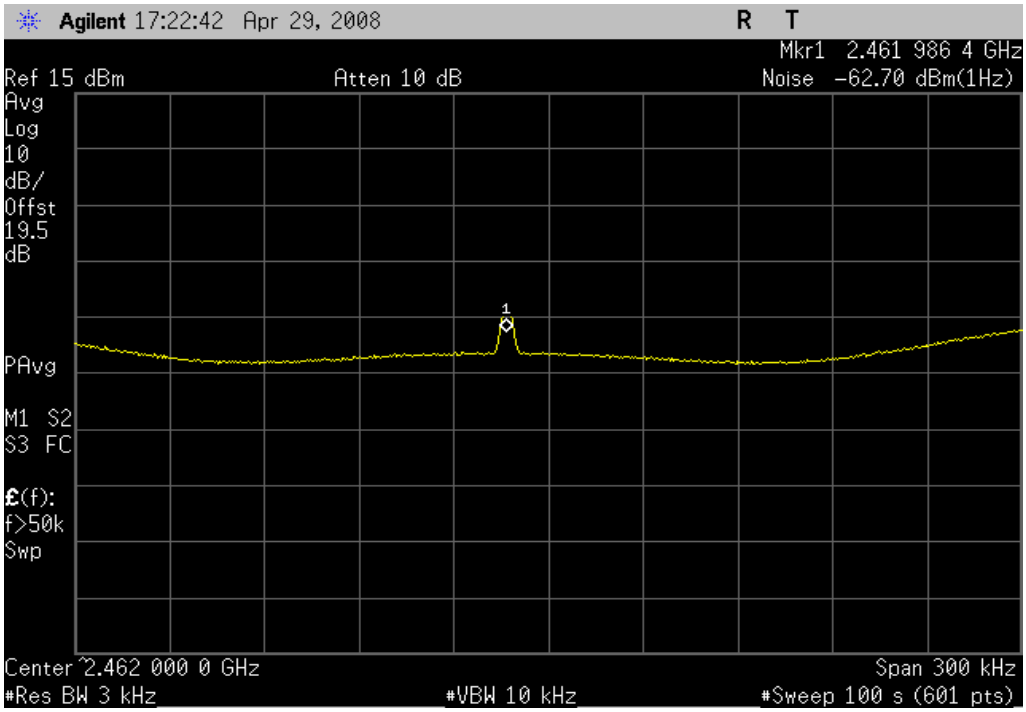
802.11(g) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-28.28 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(g) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	-22.62 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(g) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-27.7 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



NORTHWEST EMC

POWER SPECTRAL DENSITY

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/30/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -10.

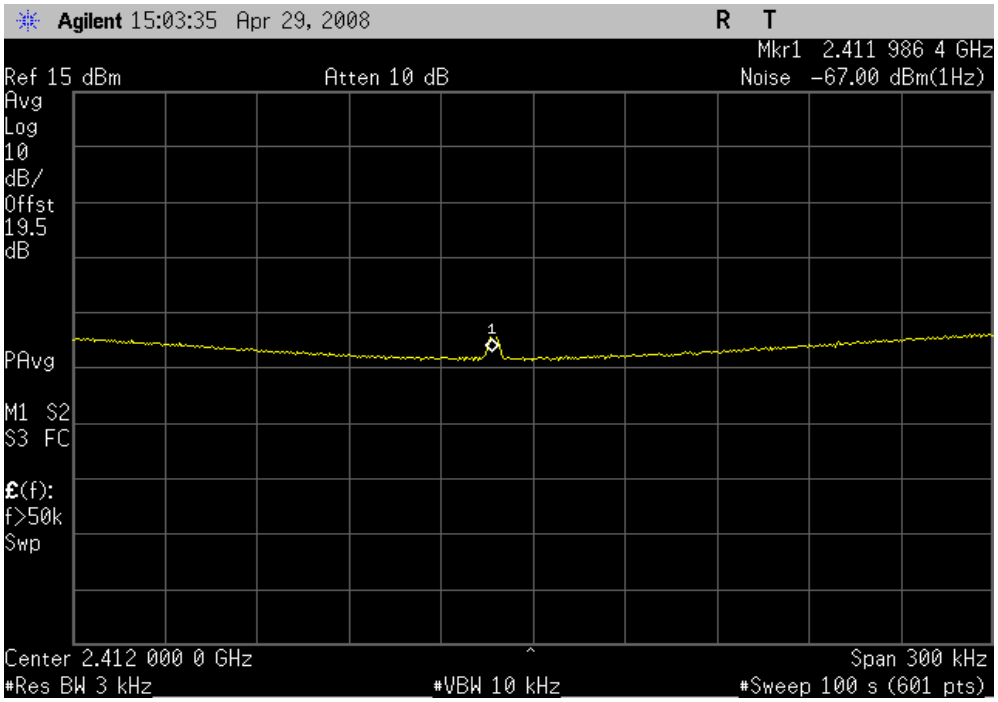
DEVIATIONS FROM TEST STANDARD

No Deviations

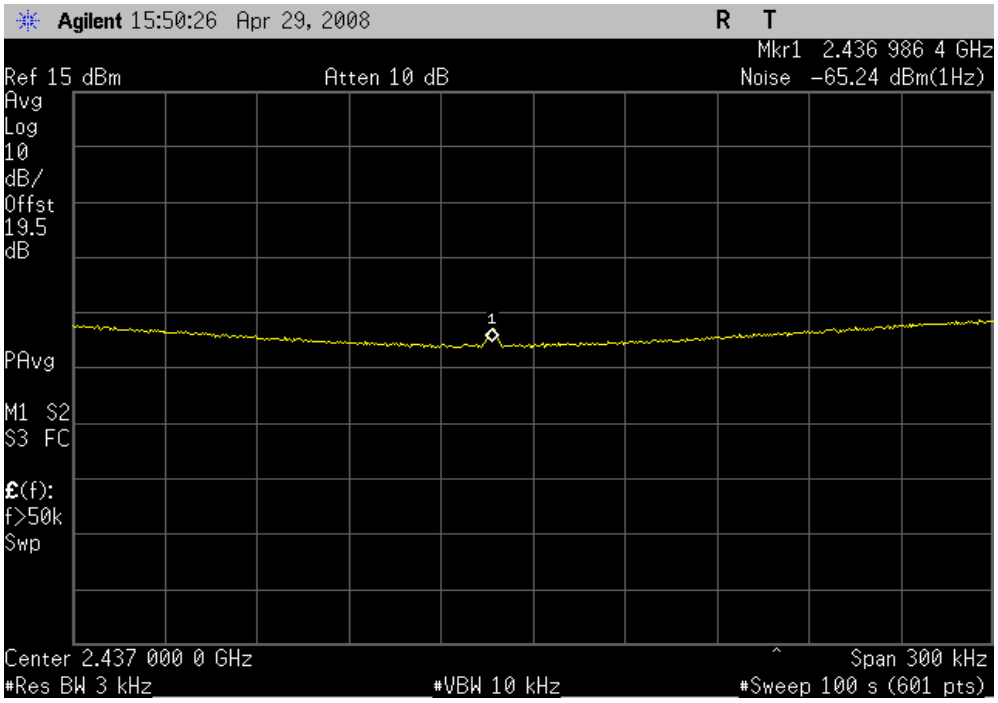
Configuration #	1	Signature

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel	-32.00 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-30.24 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-31.66 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(b) 11 Mbps				
	Low Channel	-29.61 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-30.24 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-31.52 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 6 Mbps				
	Low Channel	-23.99 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-22.58 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-23.85 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 36 Mbps				
	Low Channel	-28.86 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-23.61 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-25.52 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 54 Mbps				
	Low Channel	-28.58 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-23.73 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-25.25 dBm / 3 kHz	8 dBm / 3 kHz	Pass

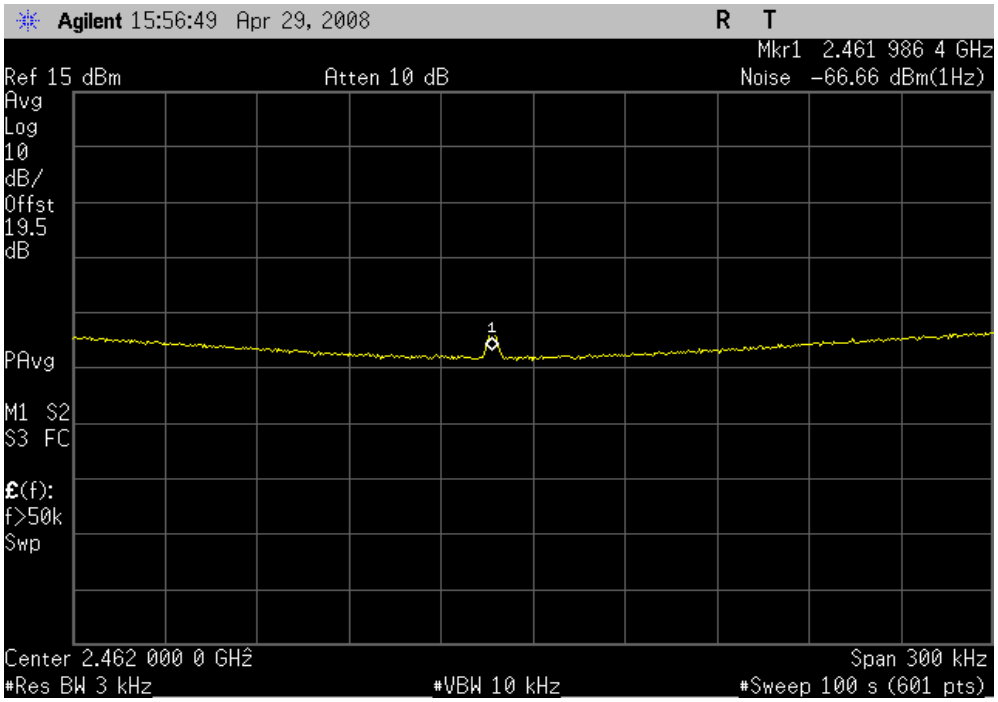
802.11(b) 1 Mbps, Low Channel					
Result:	Pass	**Value:**	-32.00 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



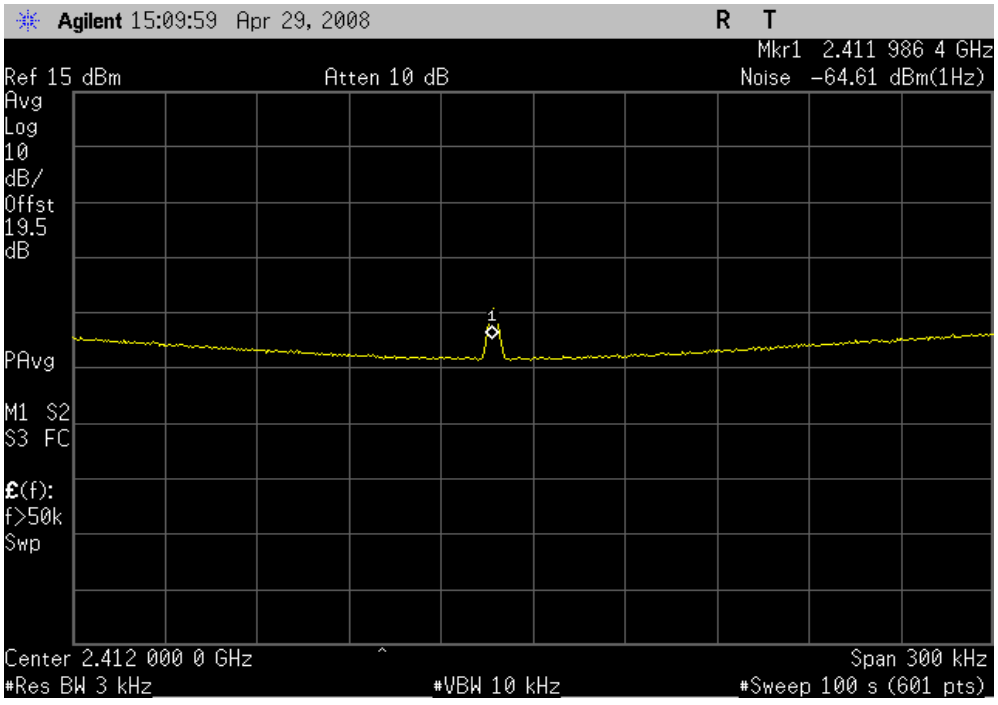
802.11(b) 1 Mbps, Mid Channel					
Result:	Pass	**Value:**	-30.24 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



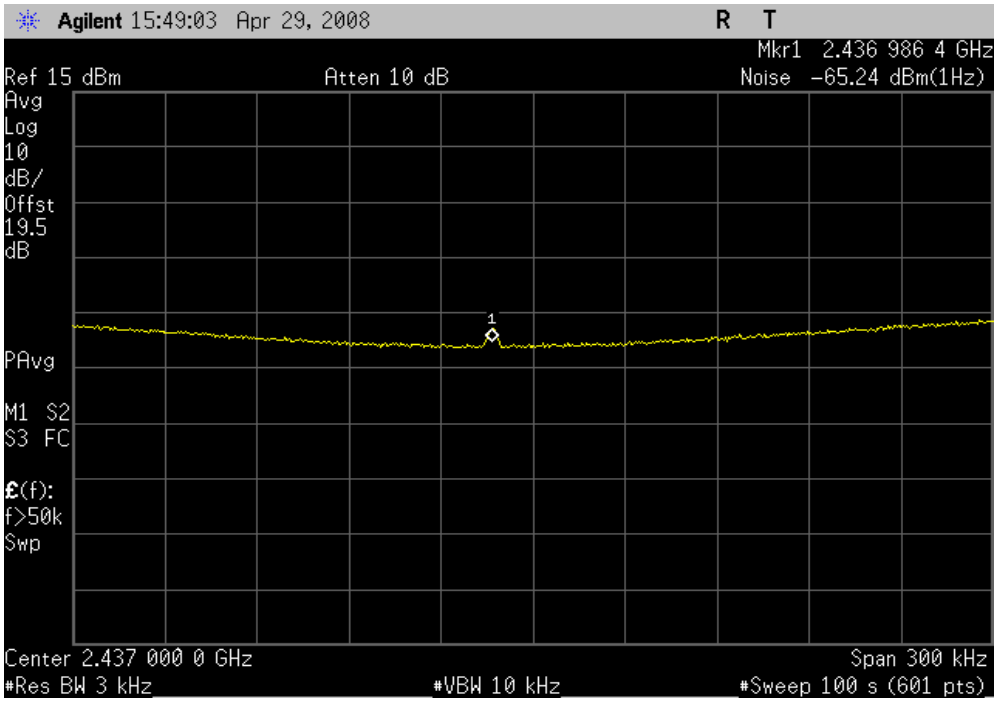
802.11(b) 1 Mbps, High Channel					
Result:	Pass	**Value:**	-31.66 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



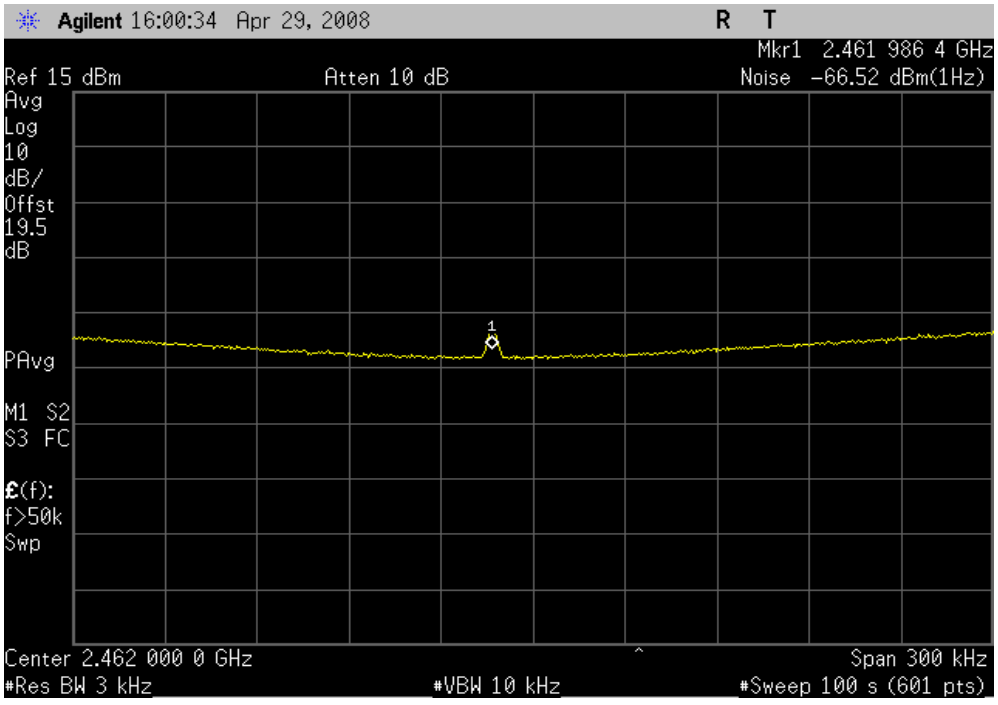
802.11(b) 11 Mbps, Low Channel					
Result:	Pass	**Value:**	-29.61 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



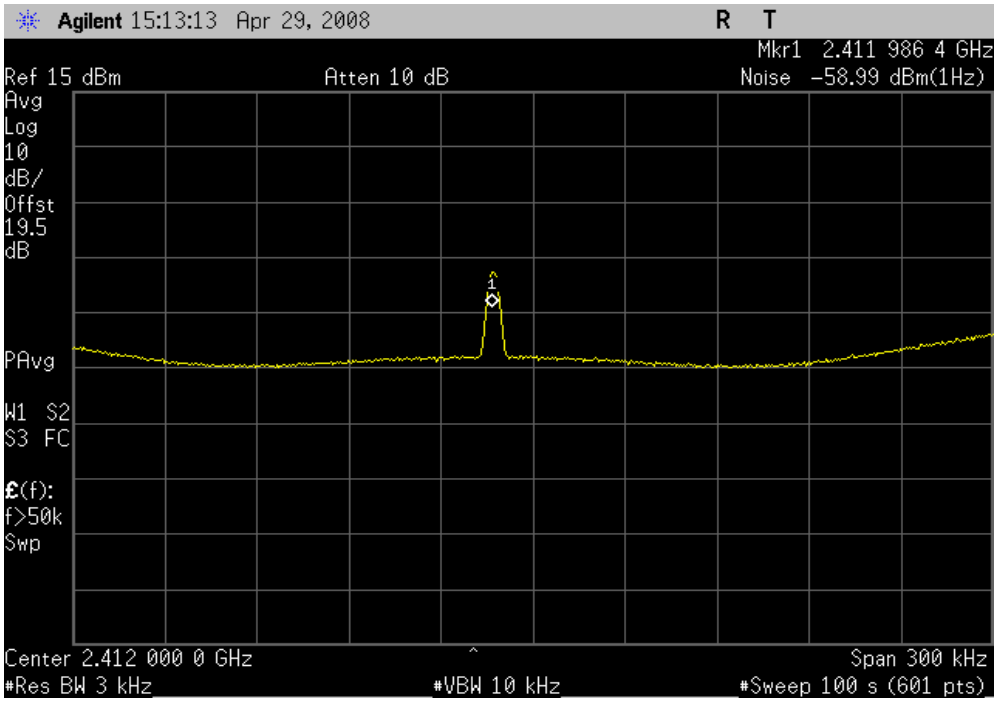
802.11(b) 11 Mbps, Mid Channel					
Result:	Pass	**Value:**	-30.24 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



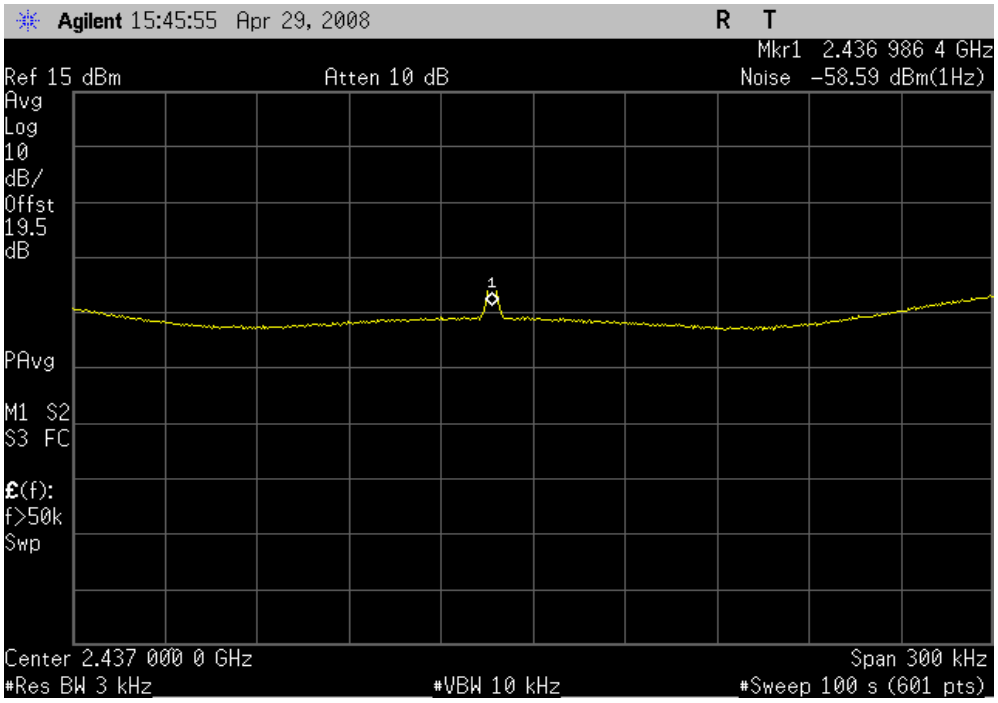
802.11(b) 11 Mbps, High Channel					
Result:	Pass	**Value:**	-31.52 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



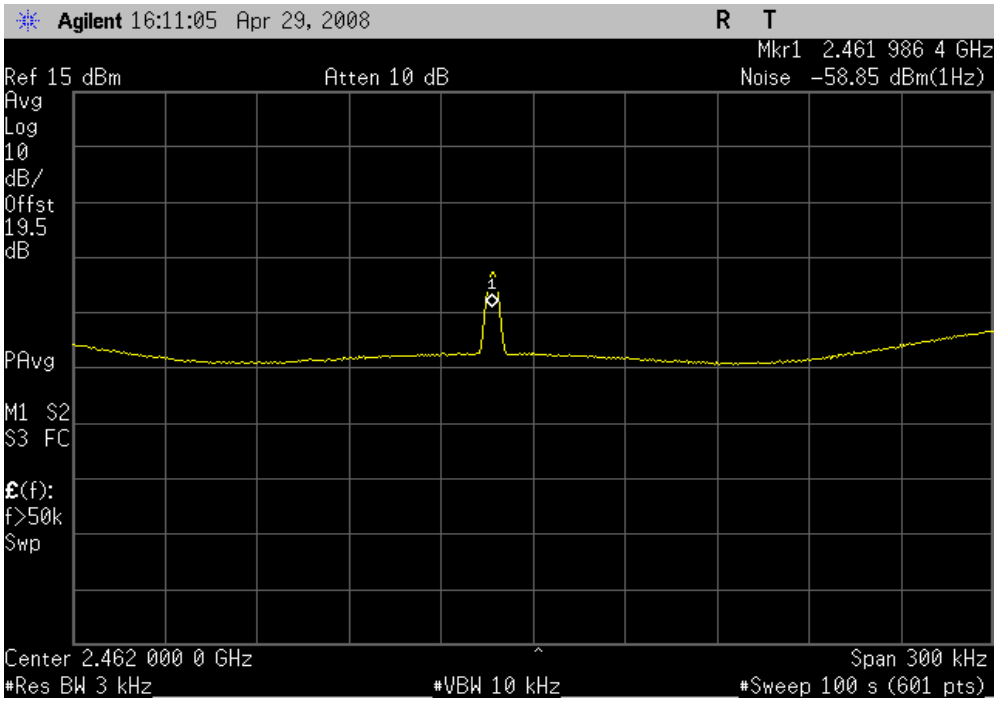
802.11(g) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-23.99 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



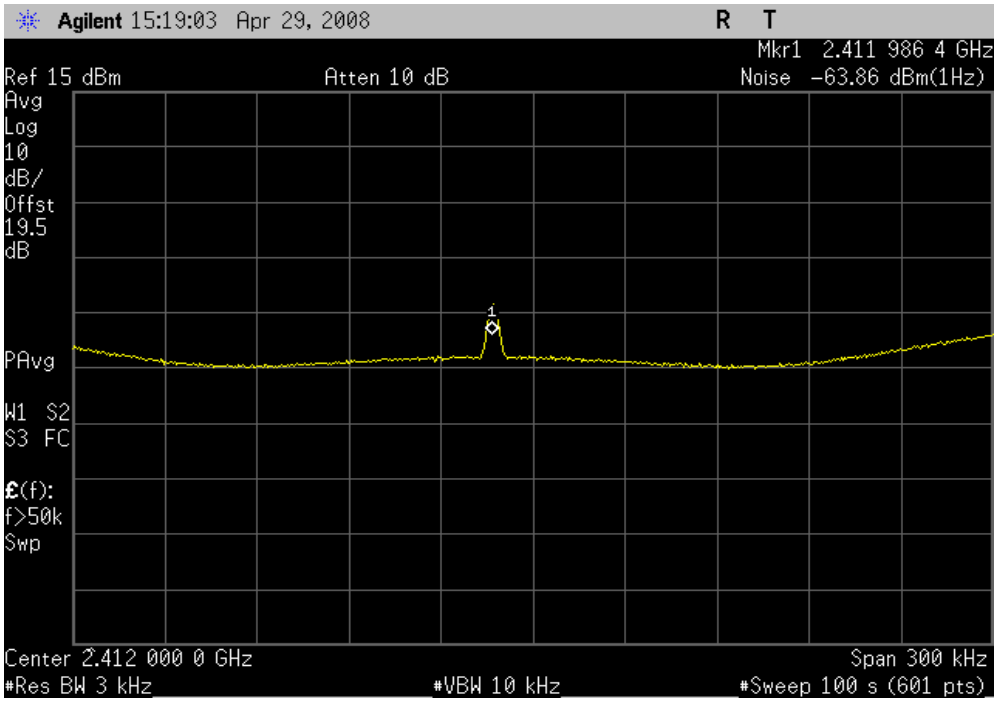
802.11(g) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	-22.58 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



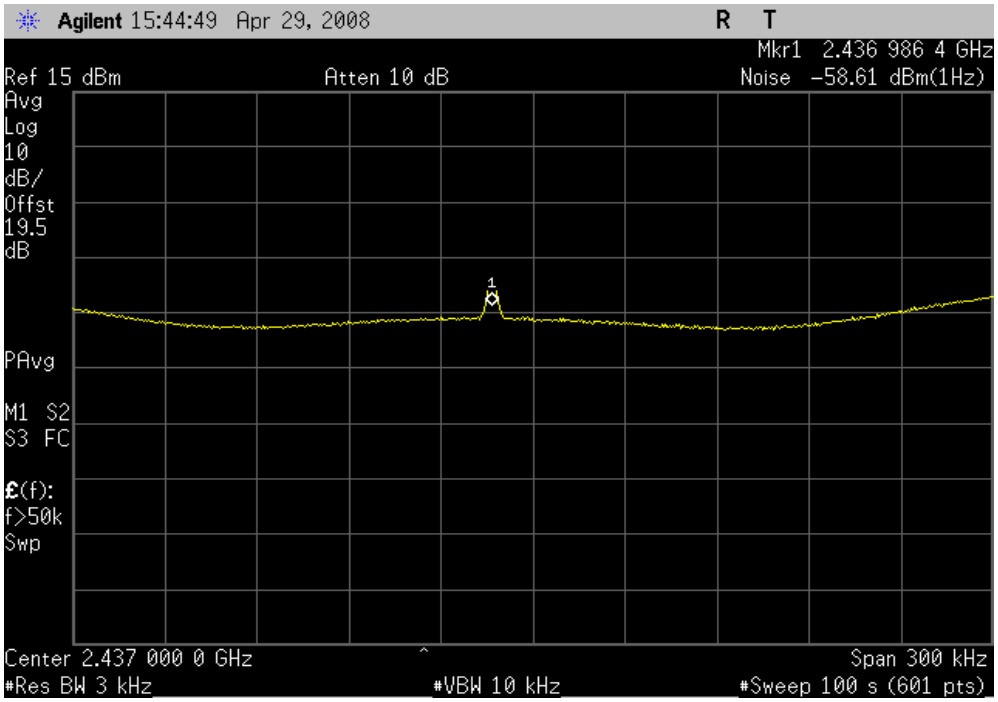
802.11(g) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-23.85 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



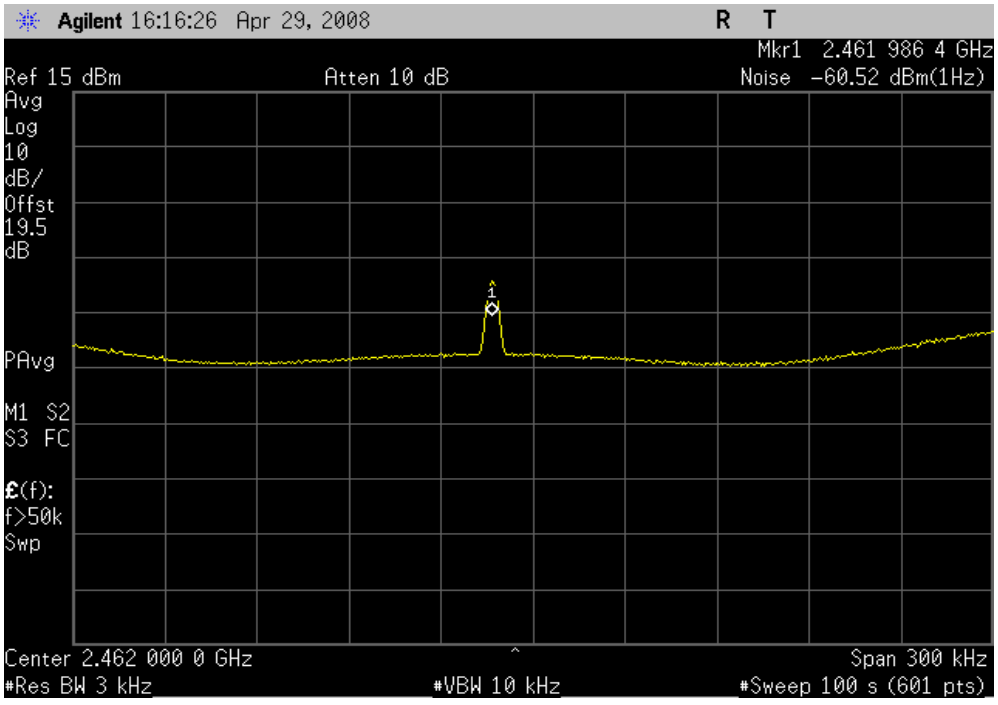
802.11(g) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-28.86 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



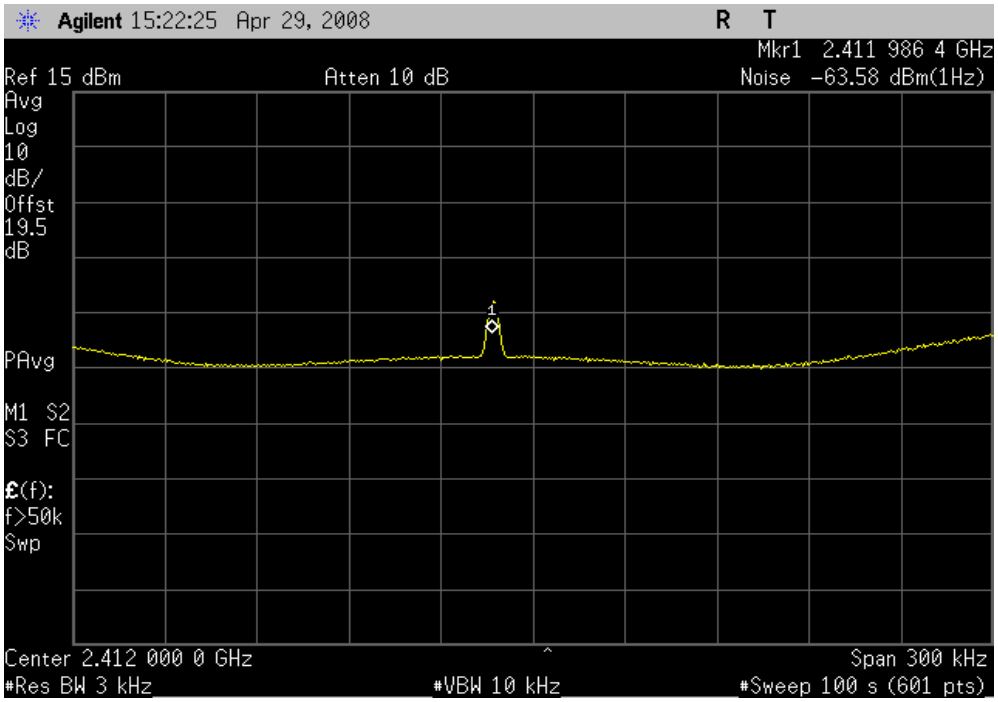
802.11(g) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	-23.61 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



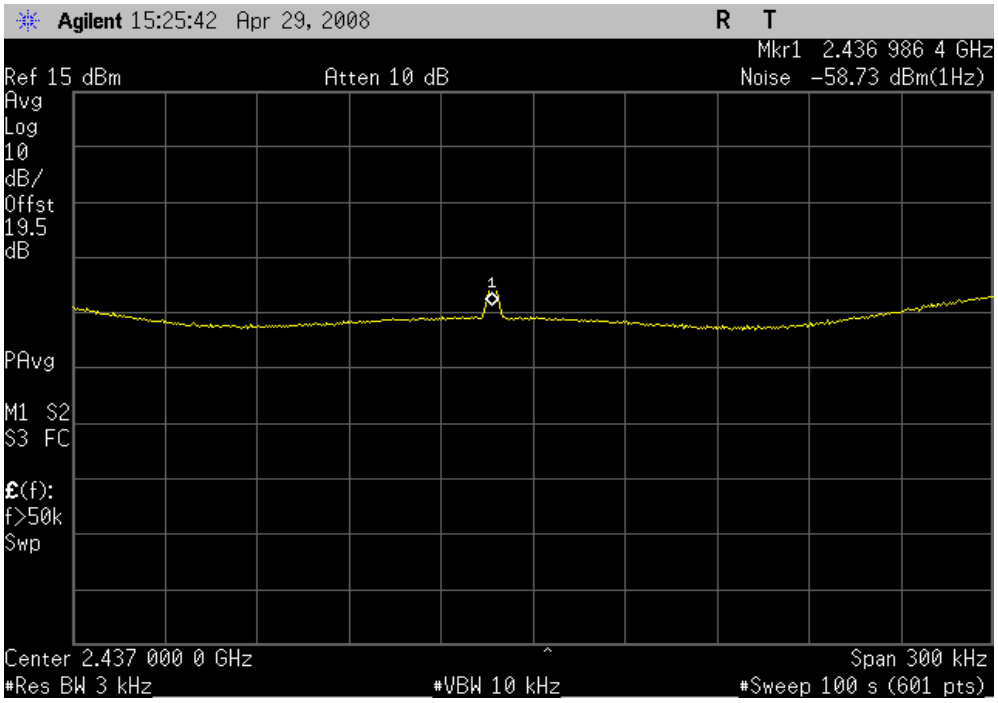
802.11(g) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-25.52 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



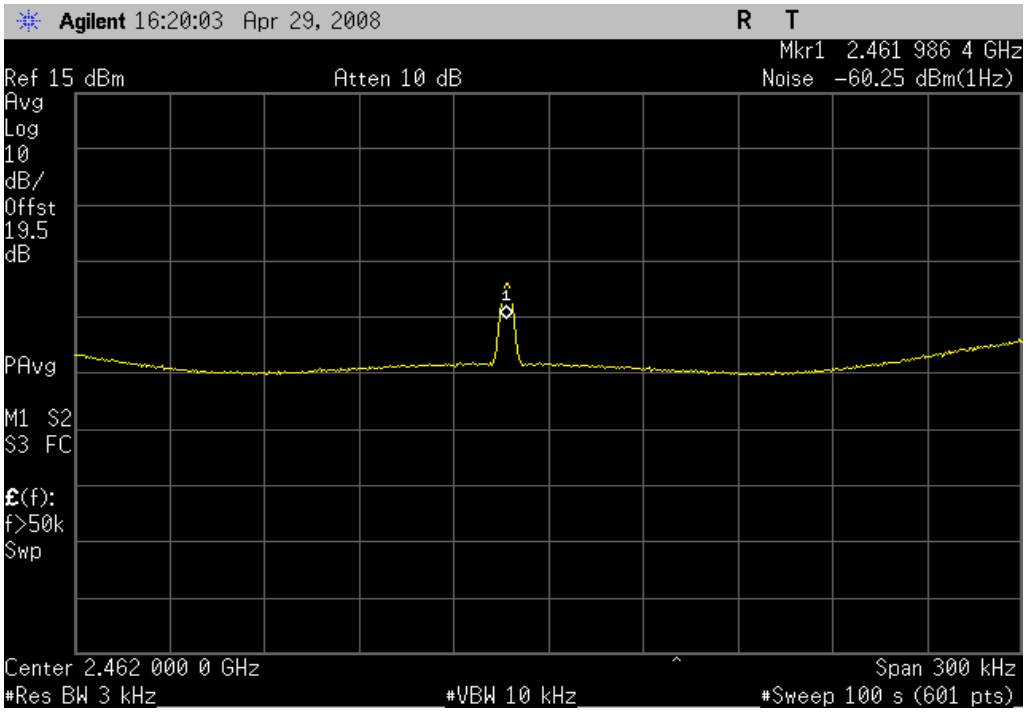
802.11(g) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-28.58 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(g) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	-23.73 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(g) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-25.25 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



NORTHWEST EMC

POWER SPECTRAL DENSITY

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	04/30/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: -12.

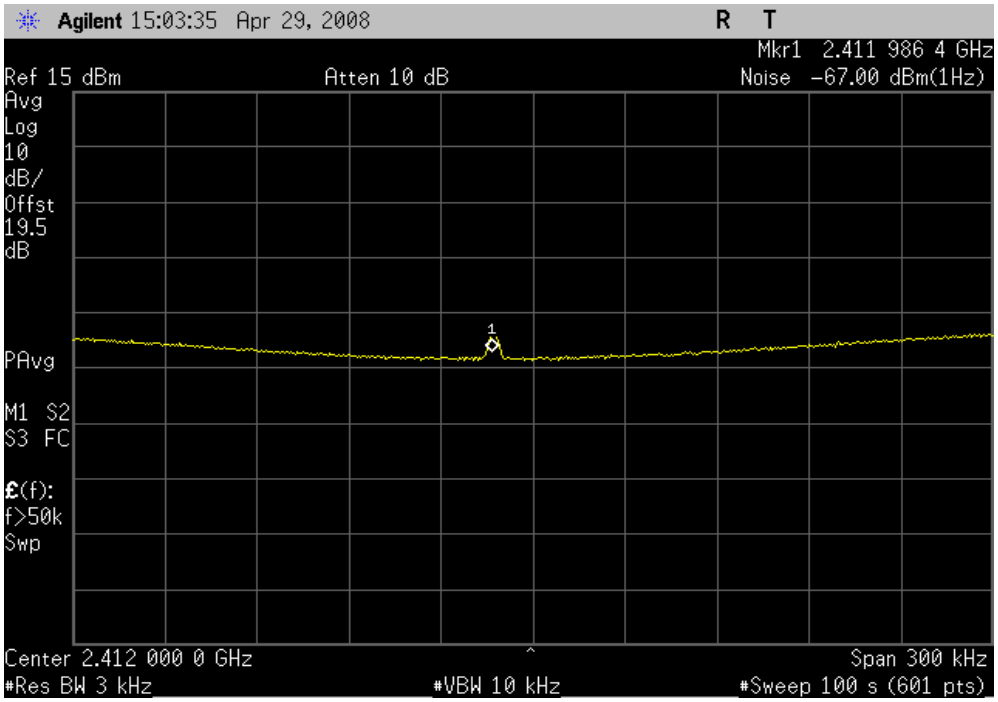
DEVIATIONS FROM TEST STANDARD

No Deviations

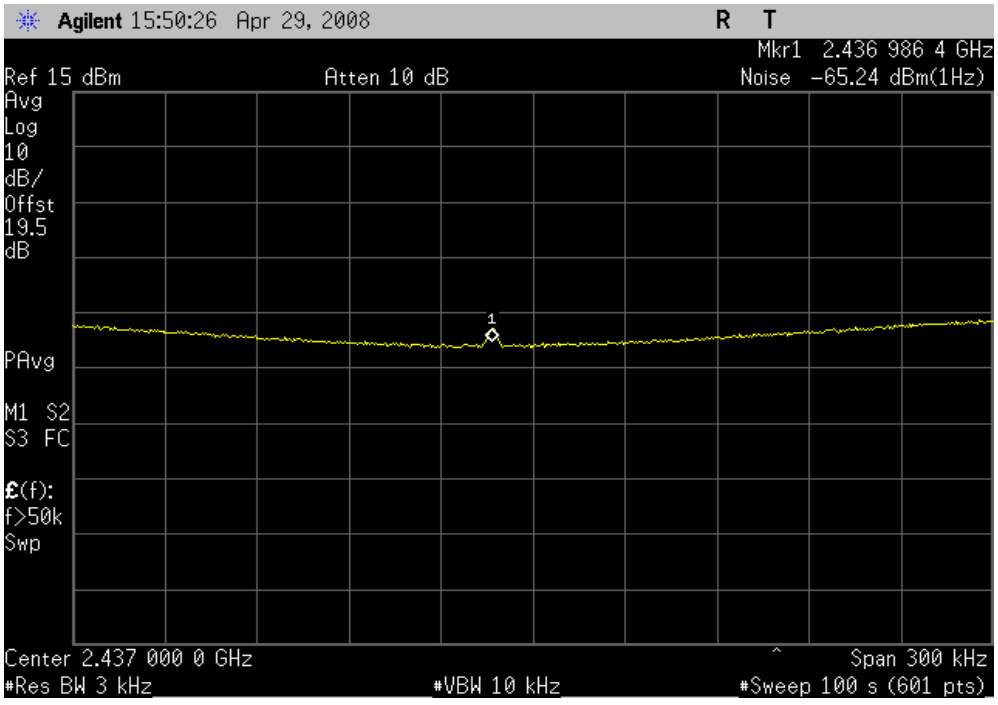
Configuration #	1	Signature

		Value	Limit	Results
802.11(b) 1 Mbps				
	Low Channel	-32.00 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-30.24 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-31.66 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(b) 11 Mbps				
	Low Channel	-29.61 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-30.24 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-31.52 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 6 Mbps				
	Low Channel	-23.99 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-22.58 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-23.85 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 36 Mbps				
	Low Channel	-28.86 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-23.61 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-25.52 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(g) 54 Mbps				
	Low Channel	-28.58 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-23.73 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-25.25 dBm / 3 kHz	8 dBm / 3 kHz	Pass

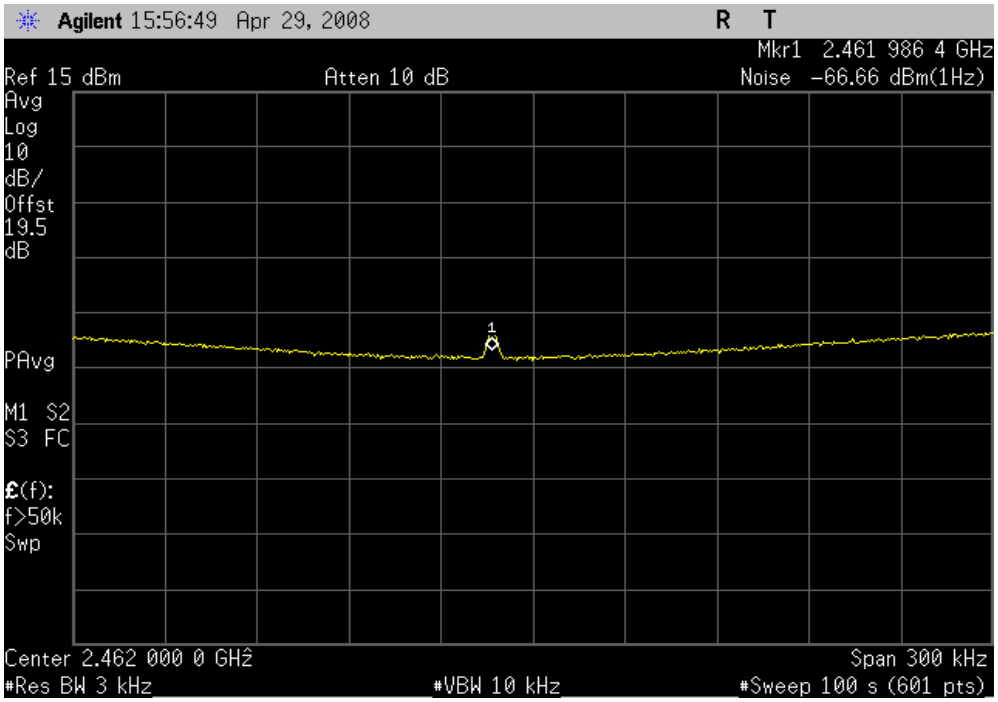
802.11(b) 1 Mbps, Low Channel					
Result:	Pass	**Value:**	-32.00 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



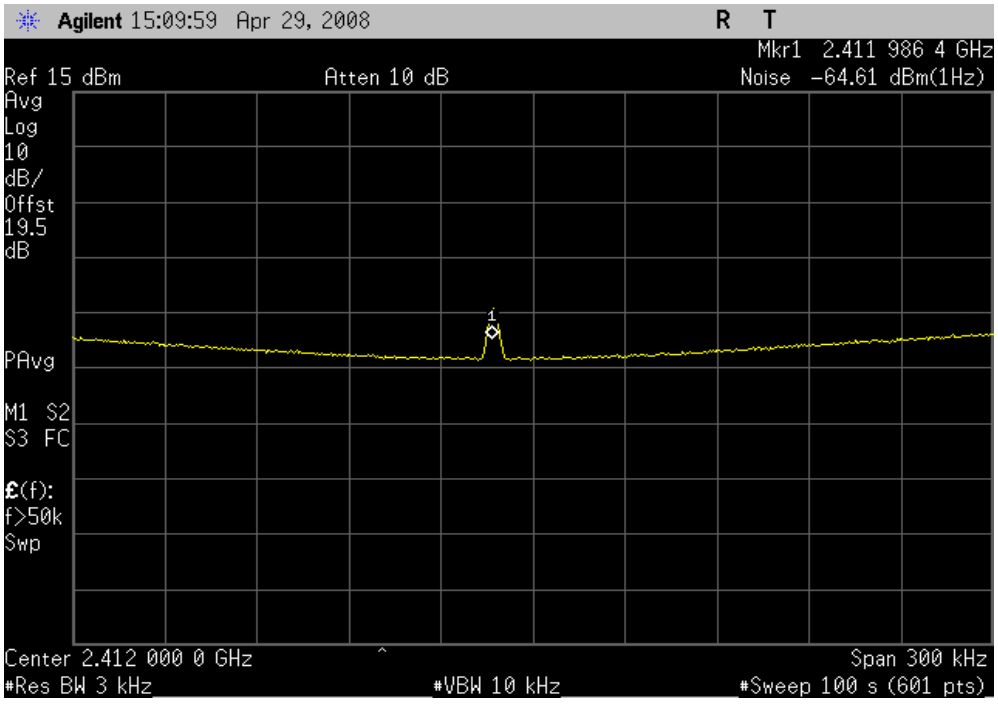
802.11(b) 1 Mbps, Mid Channel					
Result:	Pass	**Value:**	-30.24 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



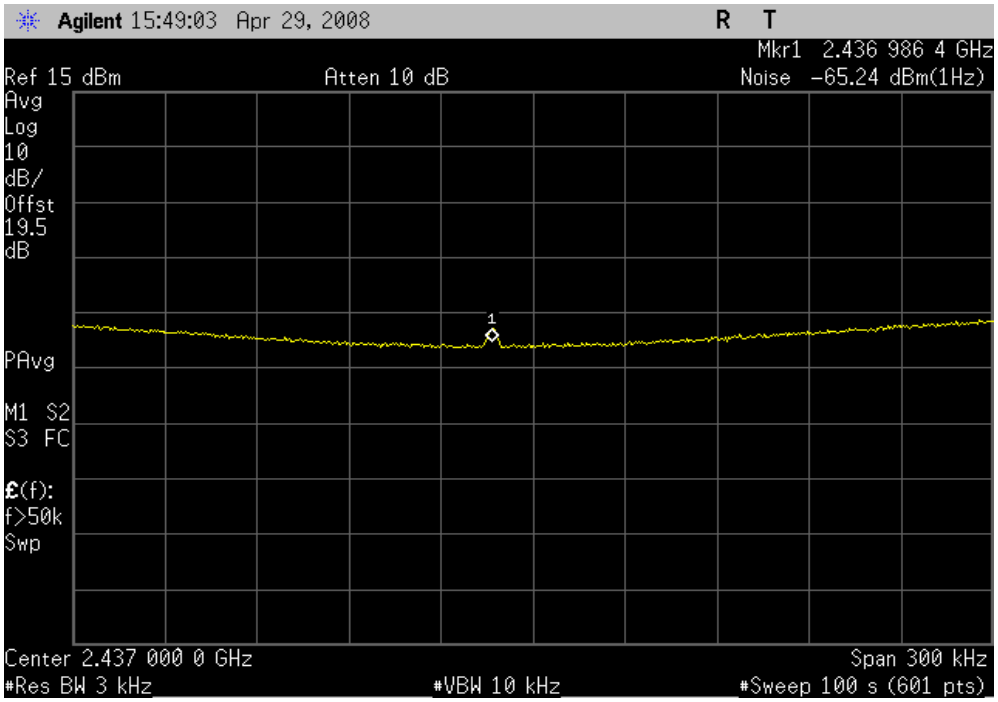
802.11(b) 1 Mbps, High Channel					
Result:	Pass	**Value:**	-31.66 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



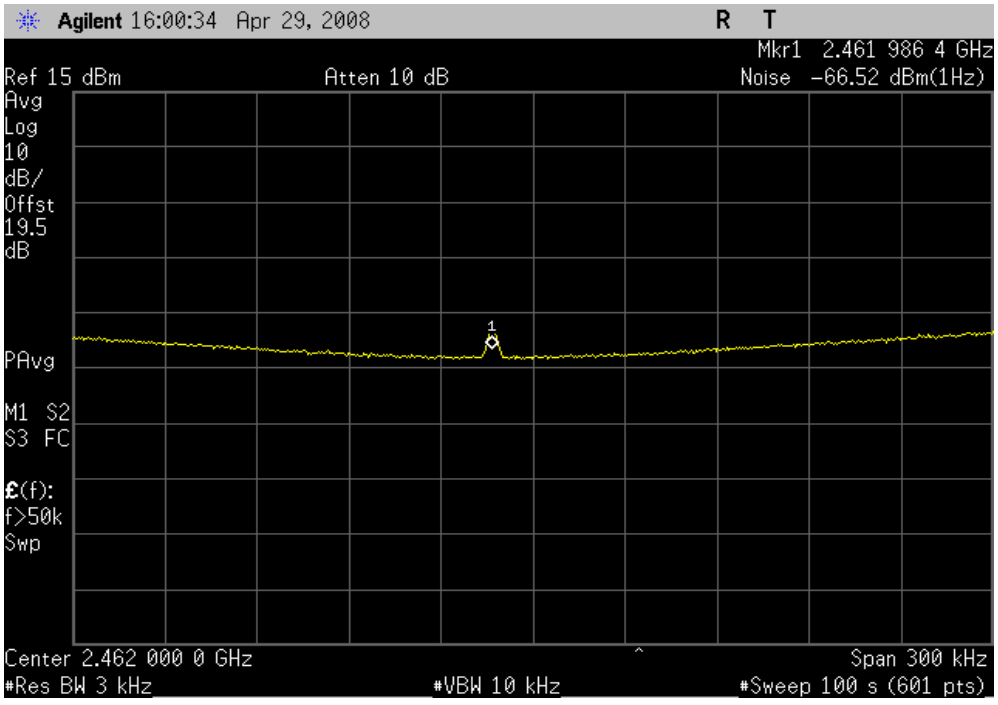
802.11(b) 11 Mbps, Low Channel					
Result:	Pass	**Value:**	-29.61 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



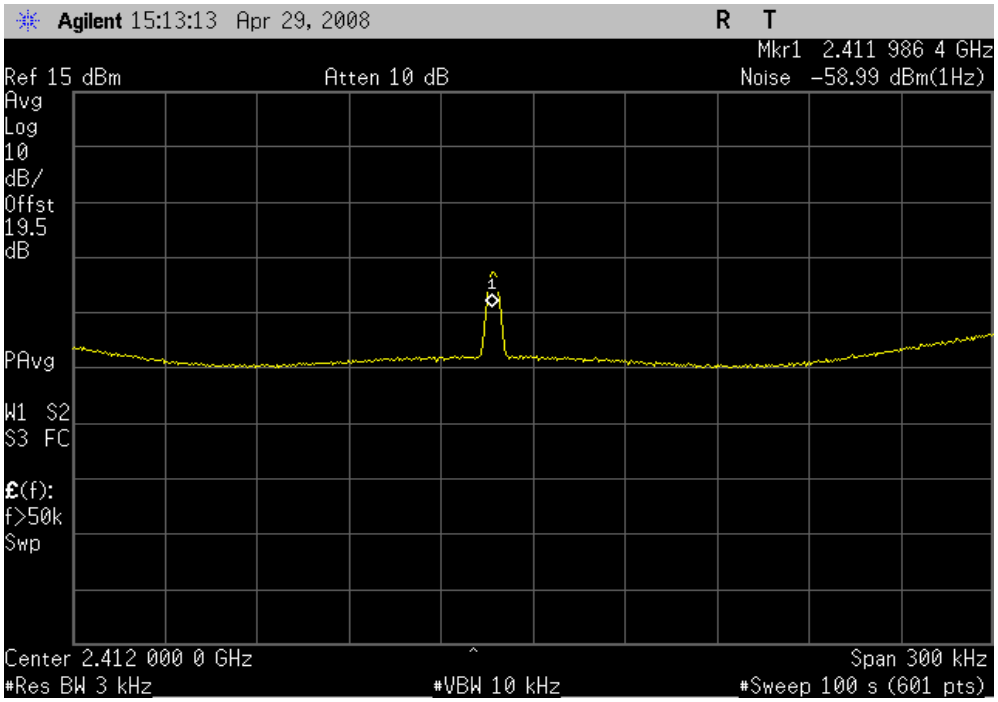
802.11(b) 11 Mbps, Mid Channel					
Result:	Pass	**Value:**	-30.24 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



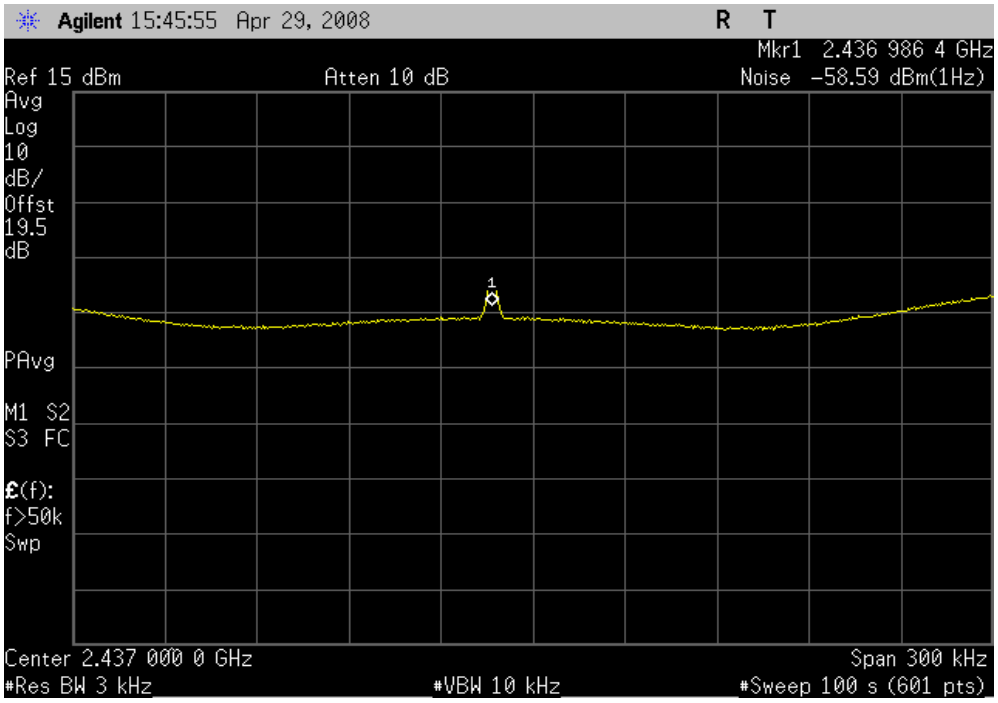
802.11(b) 11 Mbps, High Channel					
Result:	Pass	**Value:**	-31.52 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



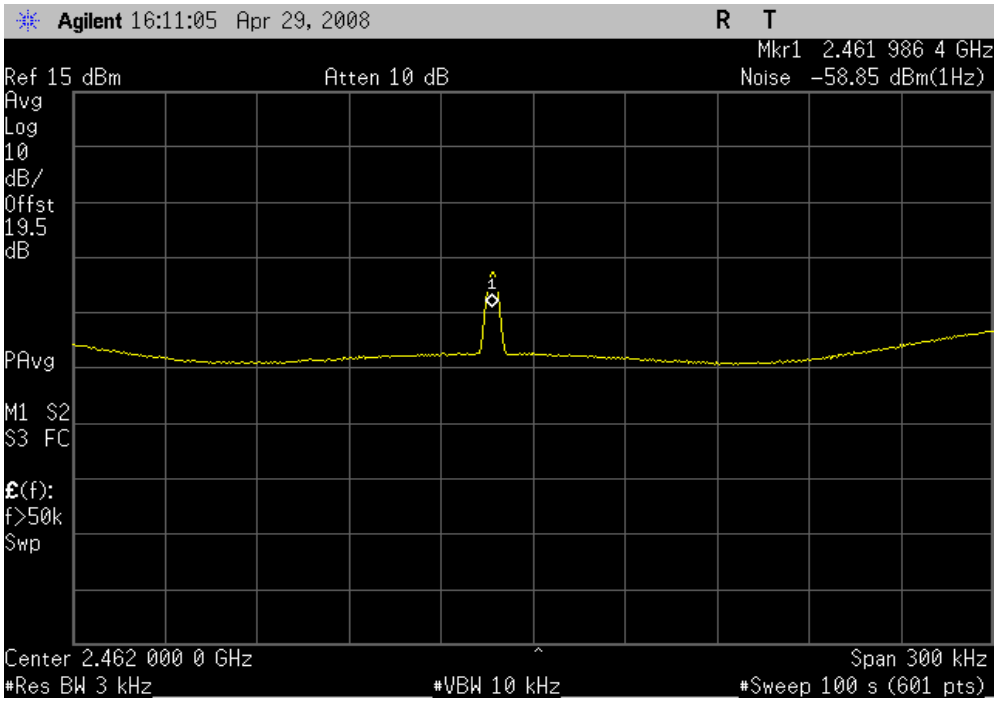
802.11(g) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-23.99 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



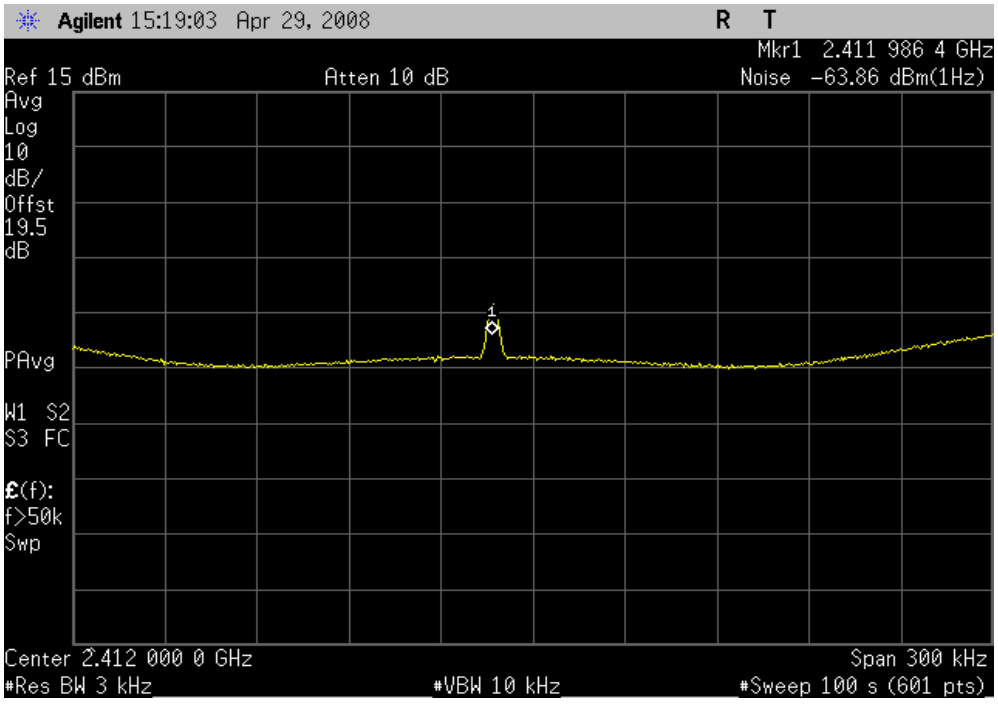
802.11(g) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	-22.58 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



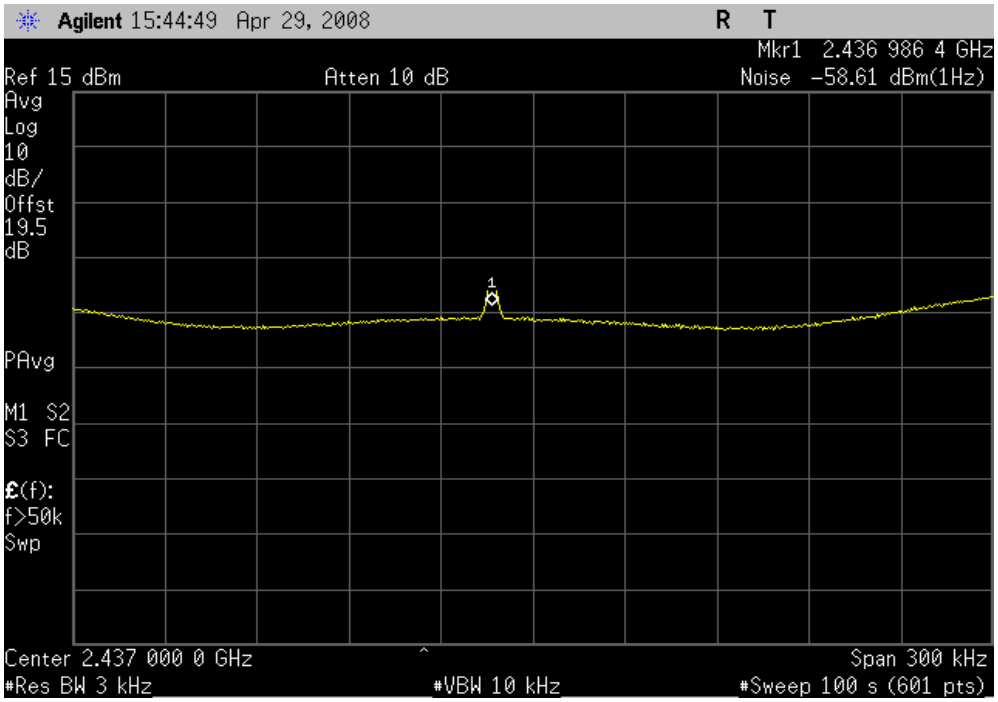
802.11(g) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-23.85 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



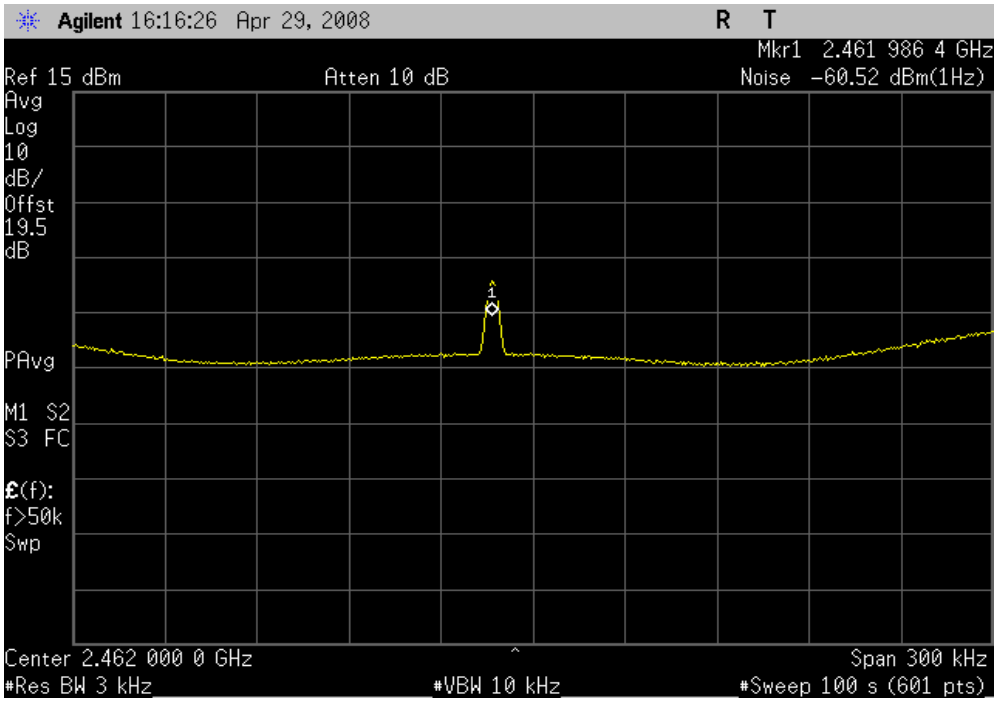
802.11(g) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-28.86 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



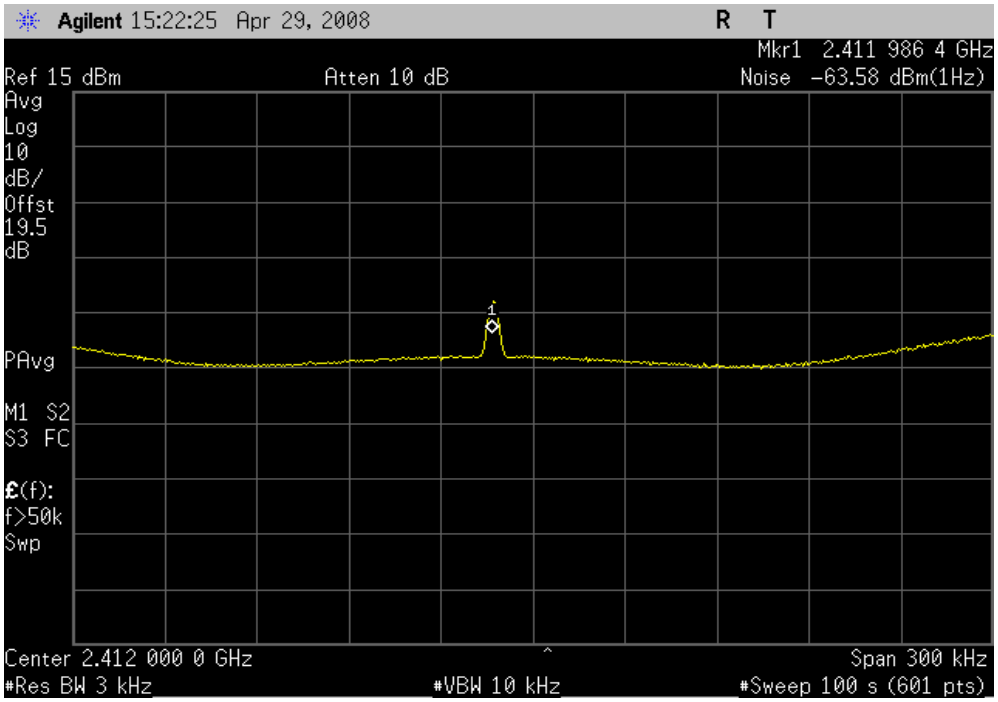
802.11(g) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	-23.61 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



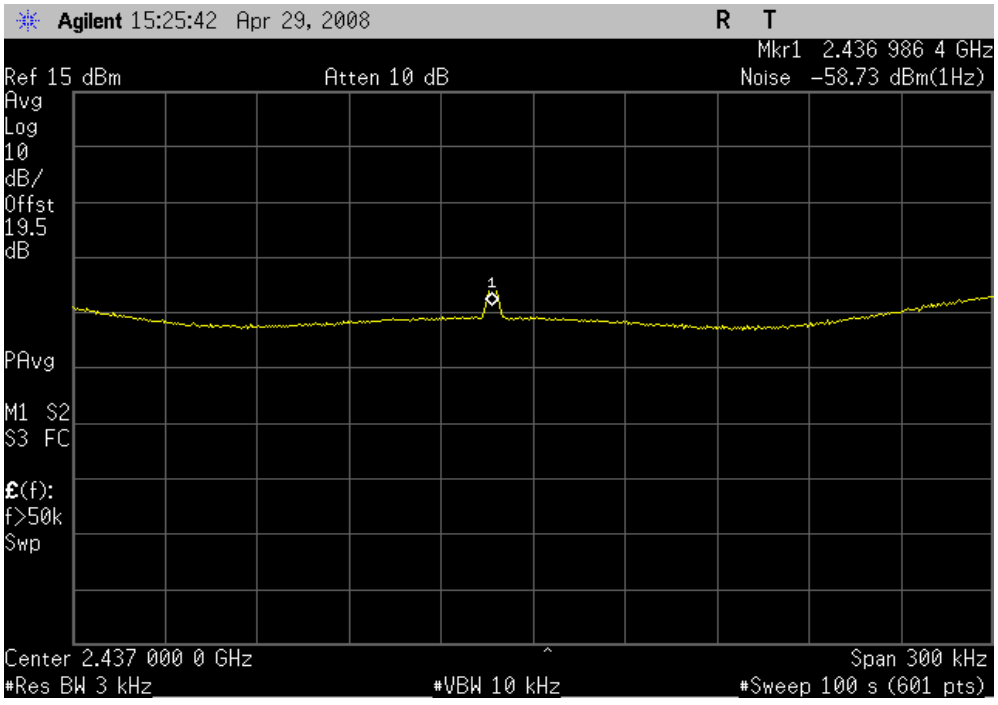
802.11(g) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-25.52 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(g) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-28.58 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz

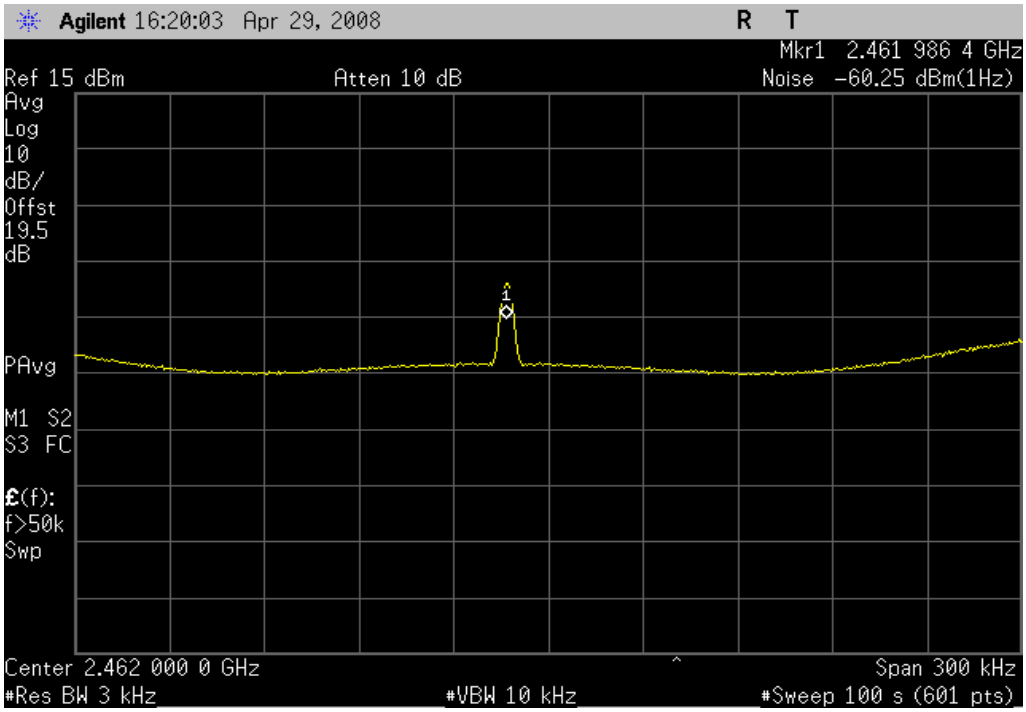


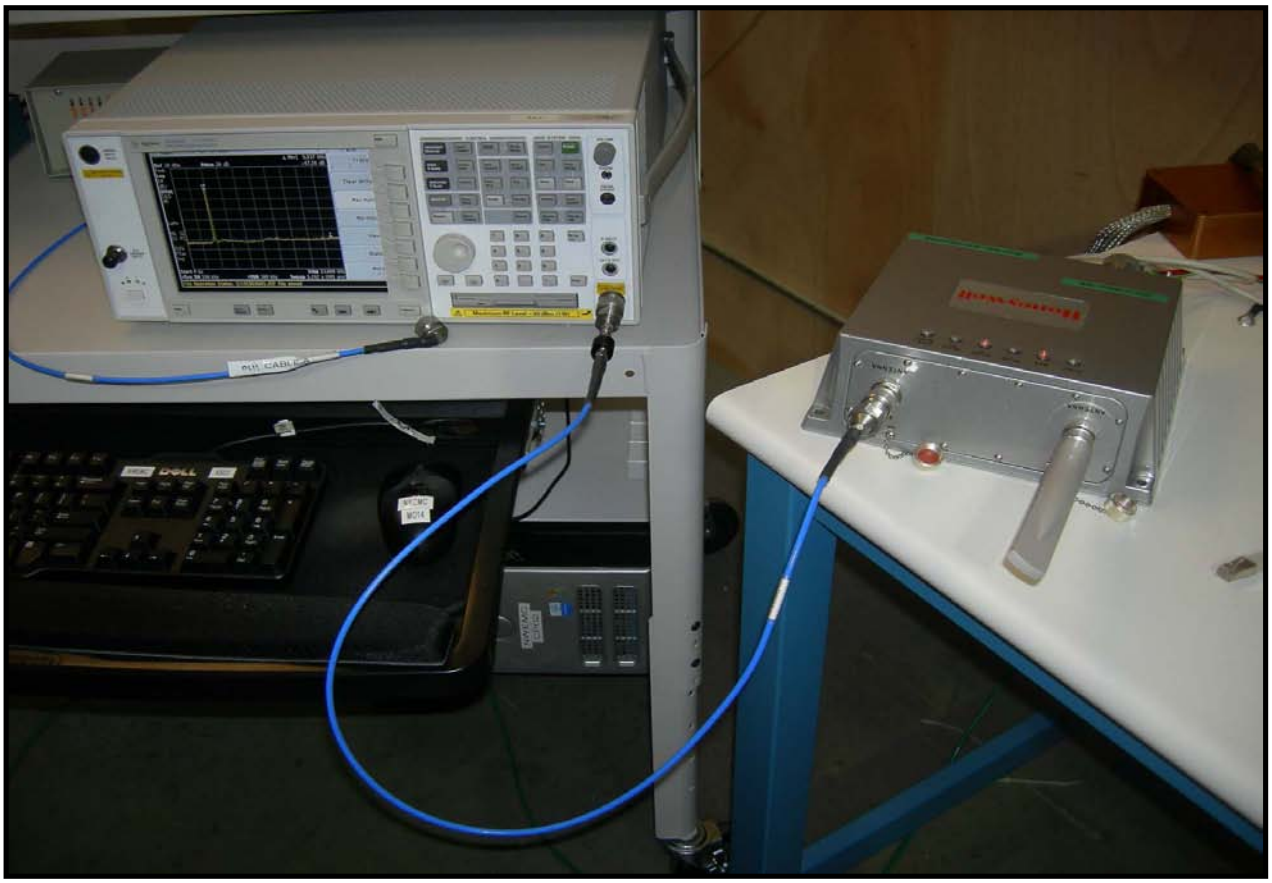
802.11(g) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	-23.73 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz

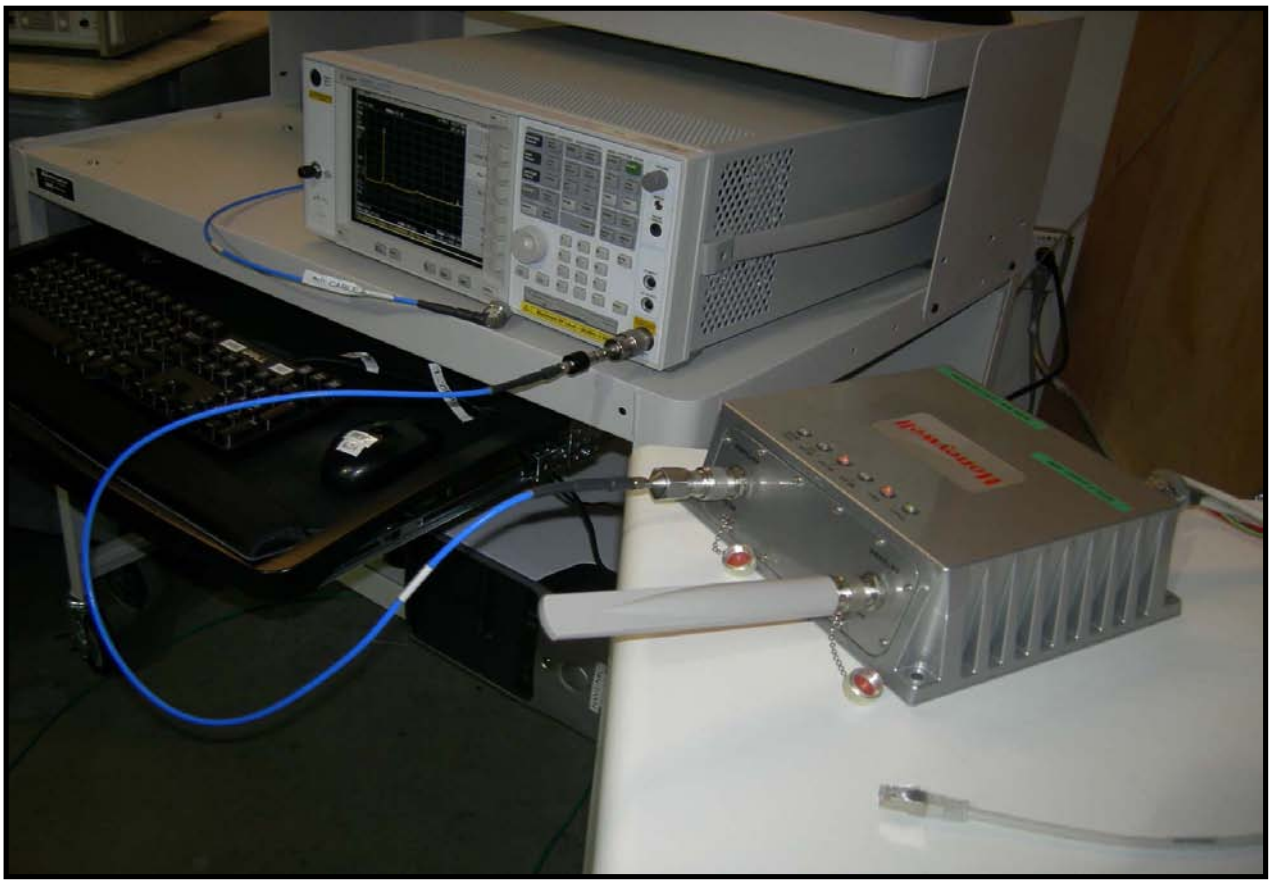


POWER SPECTRAL DENSITY

802.11(g) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-25.25 dBm / 3 kHz	**Limit:**	8 dBm / 3 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
Spectrum Analyzer	Agilent	E4440A	AAX	10/1/2007	12

MEASUREMENT UNCERTAINTY

Measurement uncertainty is used to reflect the accuracy of the measured result as compared with its "true" or theoretically correct value. Our measurement data meets or exceeds the measurement uncertainty requirements of CISPR 16-4. In the case of transient tests our test equipment has been demonstrated by calibration to provide at least a 95% confidence that it complies with the test specification requirements. The measurement uncertainty for any test is available upon request.

TEST DESCRIPTION

The peak power spectral density measurements were measured with the EUT set to low, mid, and high transmit frequencies. 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 using direct sequence modulation. Per the procedure outlined in FCC 97-114, the spectrum analyzer was used as follows:

> The emission peak(s) were located and zoom in on within the passband. The resolution bandwidth was set to 3 kHz, the video bandwidth was set to greater than or equal to the resolution bandwidth. The sweep speed was set equal to the span divided by 3 kHz (sweep = (SPAN/3 kHz)). For example, given a span of 1.5 MHz, the sweep should be 1.5 x 10^6 ÷ 3 x 10^3 = 500 seconds. External attenuation was used and added to the reading. The following FCC procedure was used for modifying the power spectral density measurements:

"If the spectrum line spacing cannot be resolved on the available spectrum analyzer, the noise density function on most modern conventional spectrum analyzers will directly measure the noise power density normalized to a 1 Hz noise power bandwidth. Add 35 dB for correction to 3 kHz."

NORTHWEST EMC

POWER SPECTRAL DENSITY

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	05/07/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: - 3

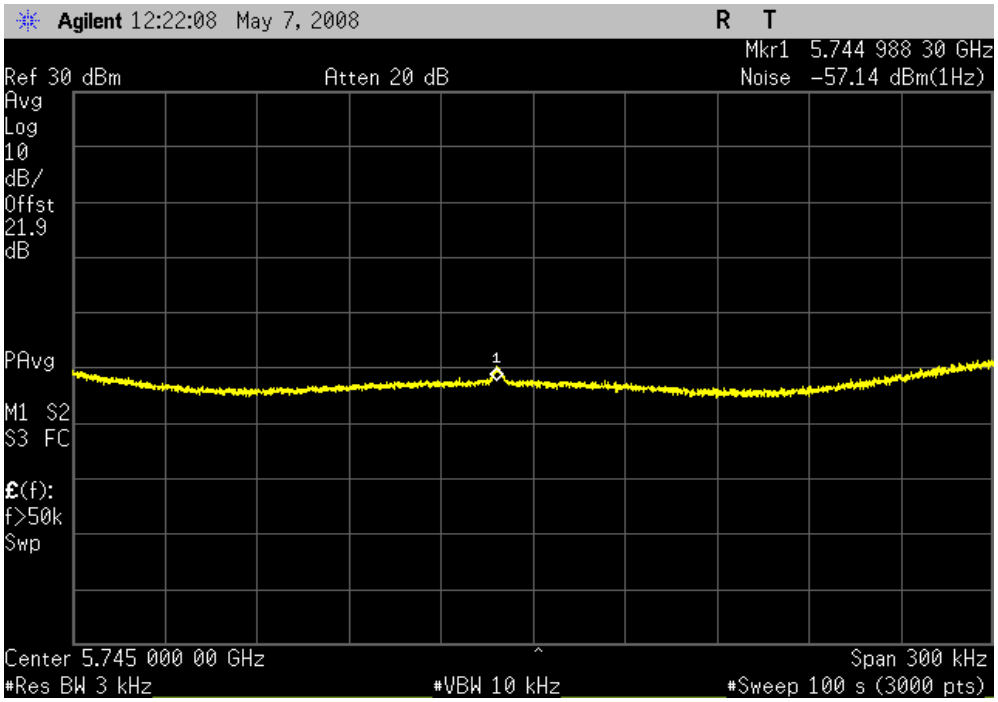
DEVIATIONS FROM TEST STANDARD

No Deviations

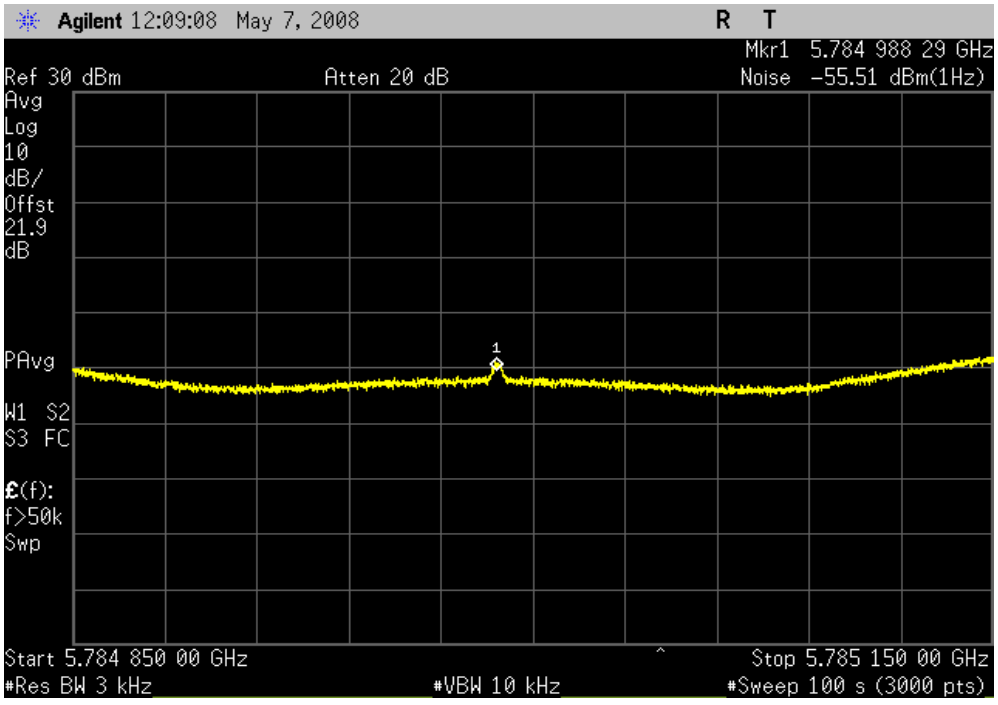
Configuration #	1	Signature

		Value	Limit	Results
802.11(a) 6 Mbps				
	Low Channel	-22.14 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-20.51 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-19.53 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(a) 36 Mbps				
	Low Channel	-20.26 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-21.26 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-22.02 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(a) 54 Mbps				
	Low Channel	-25.53 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-21.26 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-24.75 dBm / 3 kHz	8 dBm / 3 kHz	Pass

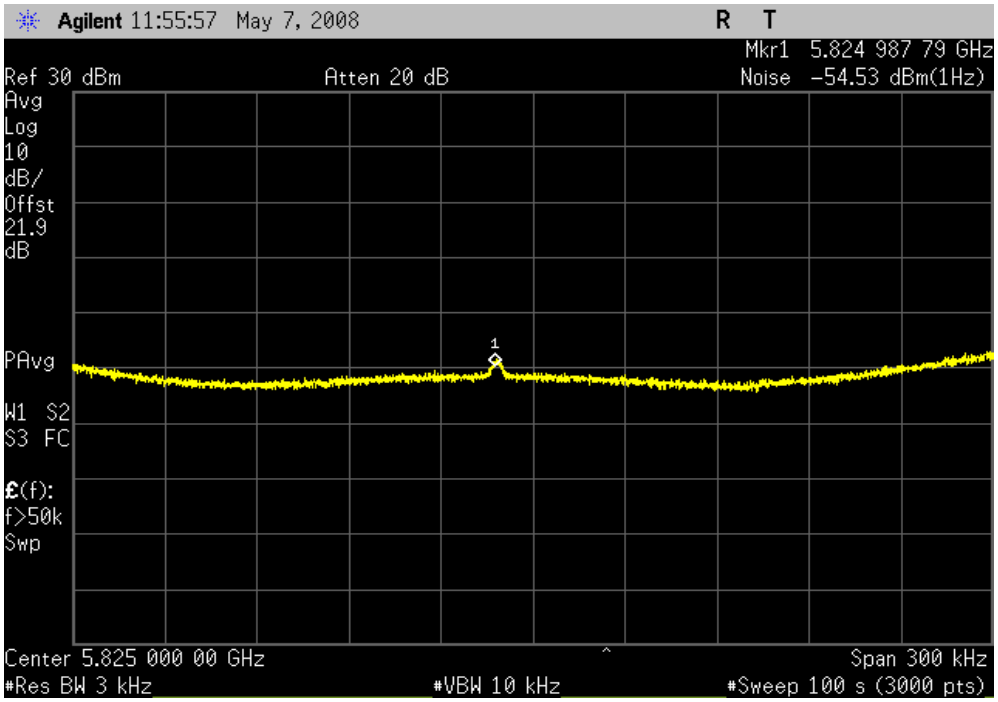
802.11(a) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-22.14 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



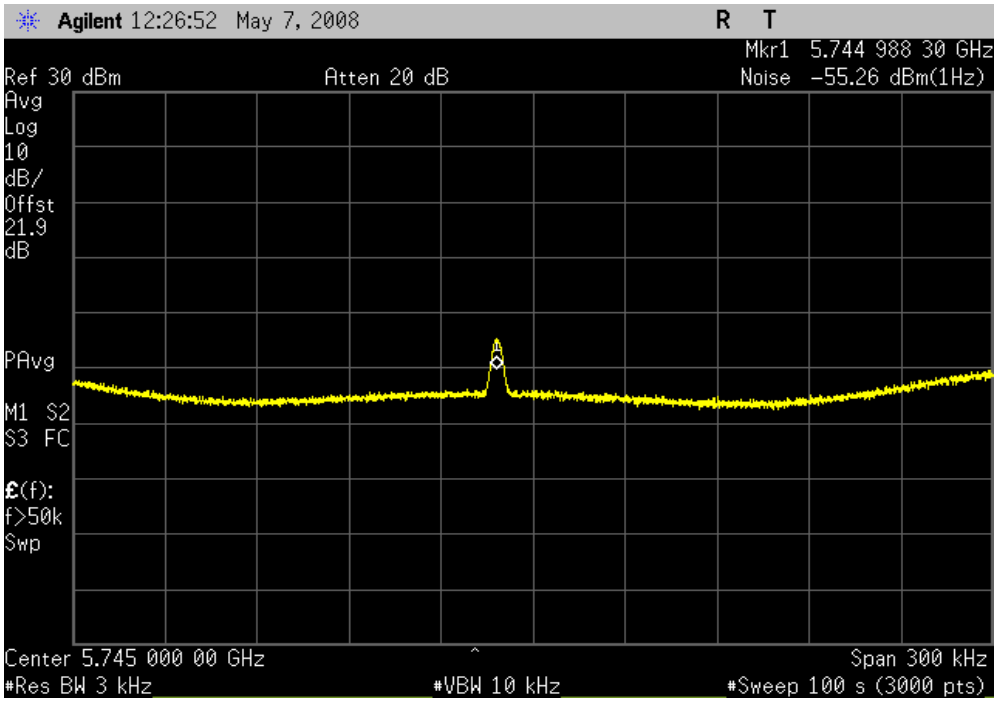
802.11(a) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	-20.51 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



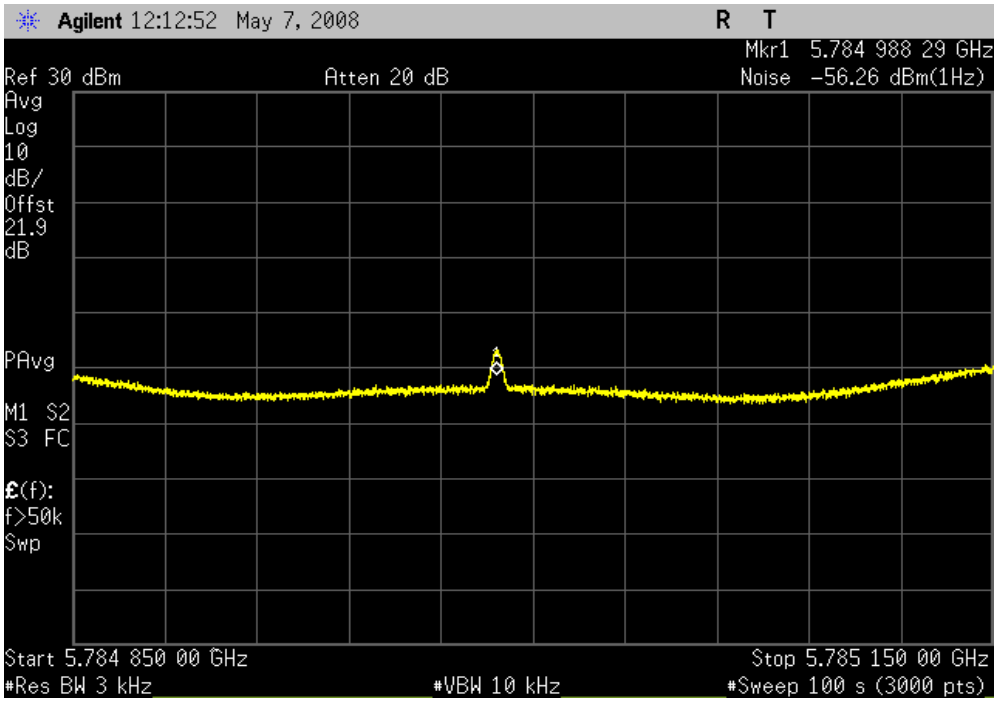
802.11(a) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-19.53 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



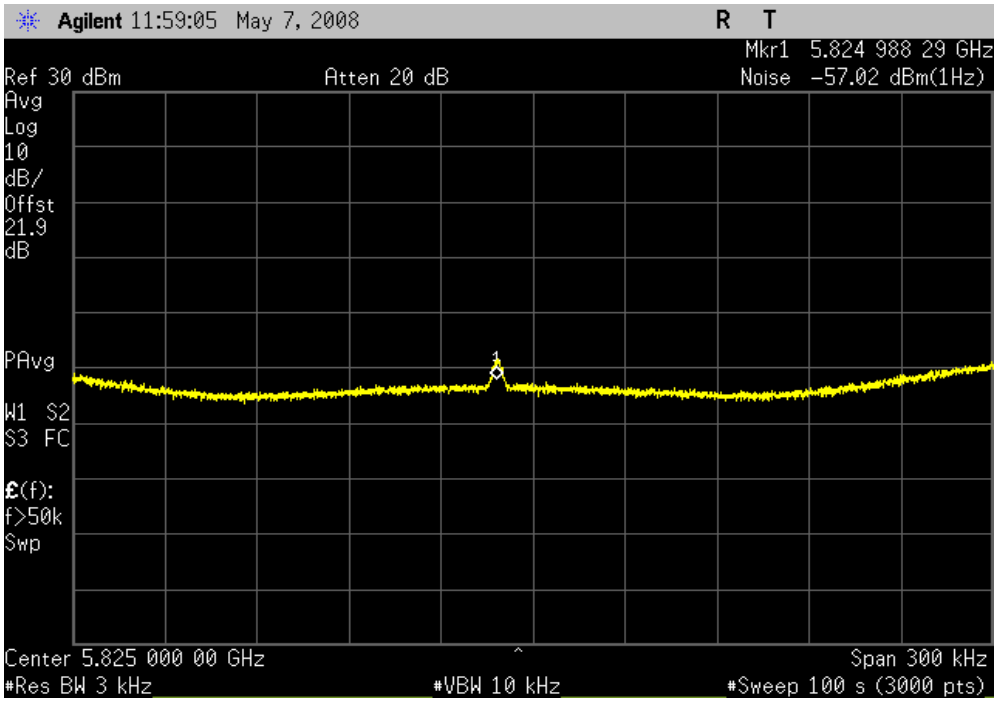
802.11(a) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-20.26 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



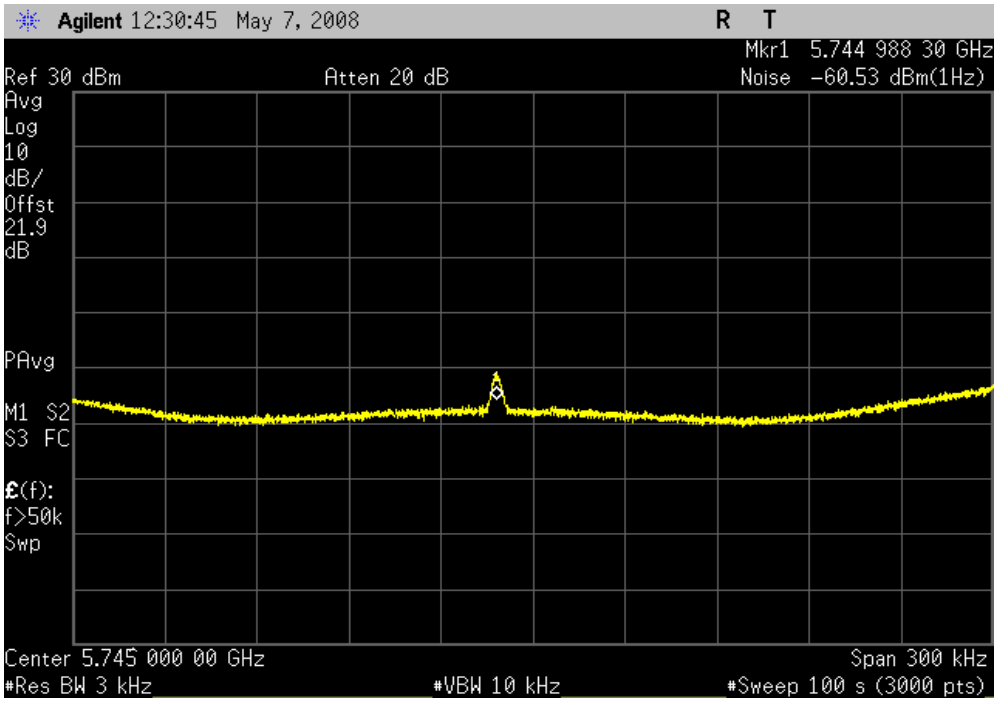
802.11(a) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	-21.26 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



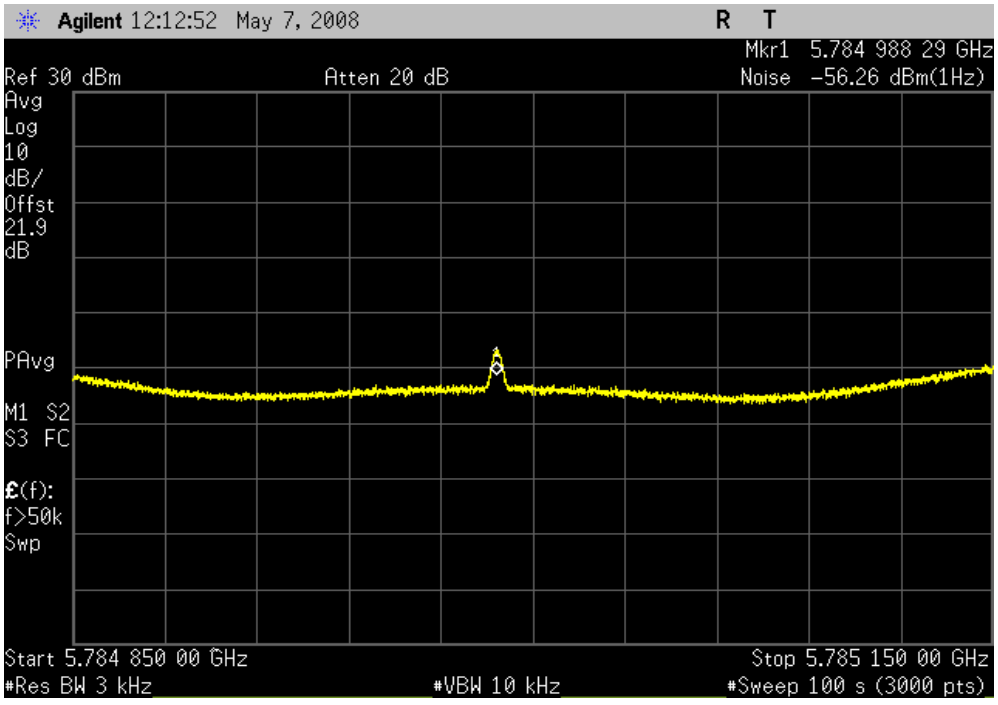
802.11(a) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-22.02 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(a) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-25.53 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz

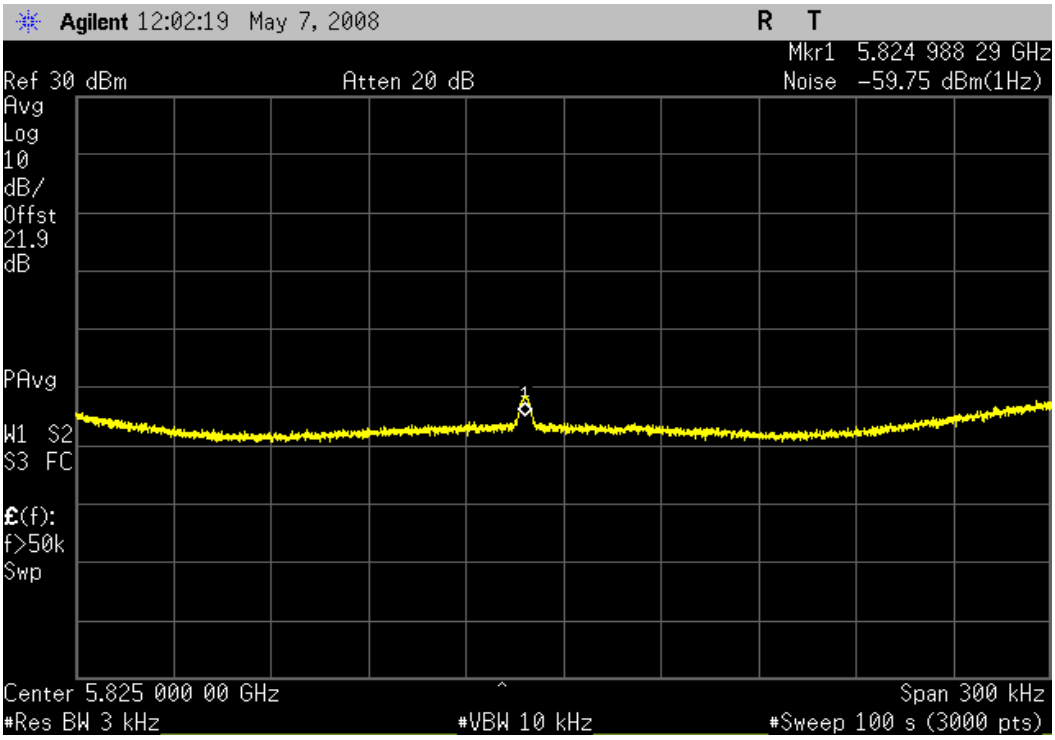


802.11(a) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	-21.26 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



POWER SPECTRAL DENSITY

802.11(a) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-24.75 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



NORTHWEST EMC

POWER SPECTRAL DENSITY

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	05/07/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: 40

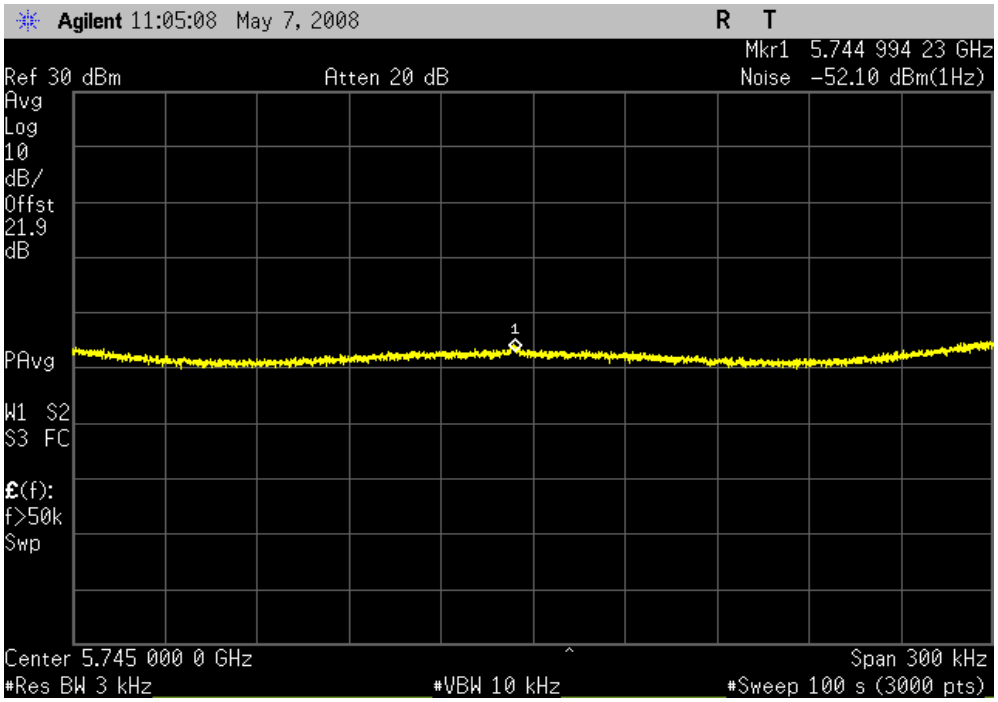
DEVIATIONS FROM TEST STANDARD

No Deviations

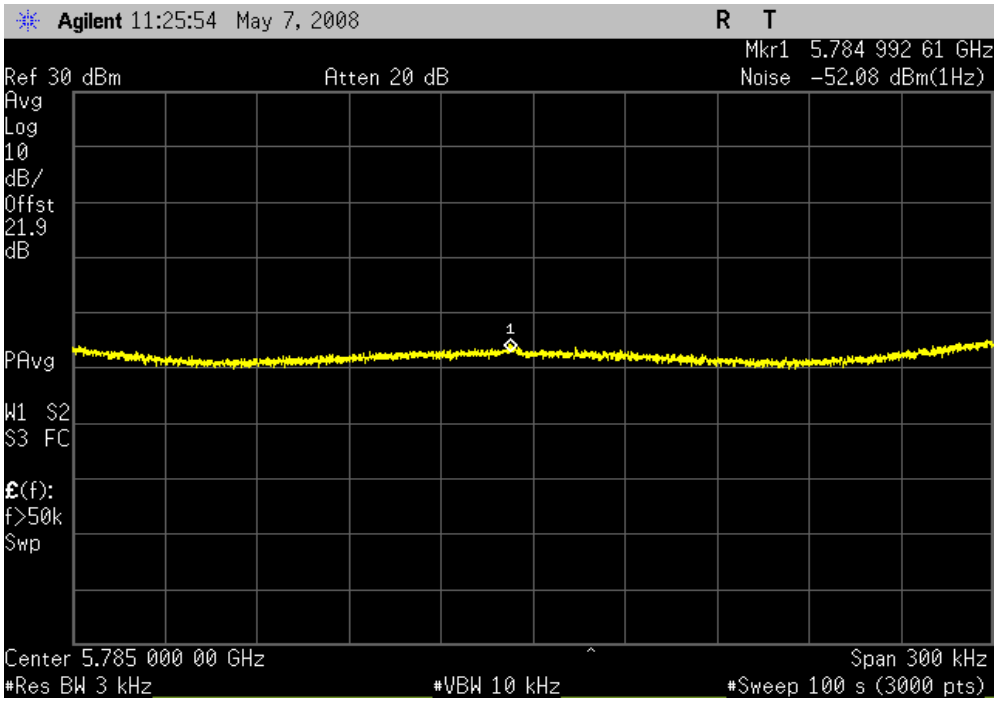
Configuration #	1	Signature

		Value	Limit	Results
802.11(a) 6 Mbps				
	Low Channel	-17.1 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-17.08 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-12.88 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(a) 36 Mbps				
	Low Channel	-21.78 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-19.28 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-20.1 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(a) 54 Mbps				
	Low Channel	-23.76 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-24.88 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-24.39 dBm / 3 kHz	8 dBm / 3 kHz	Pass

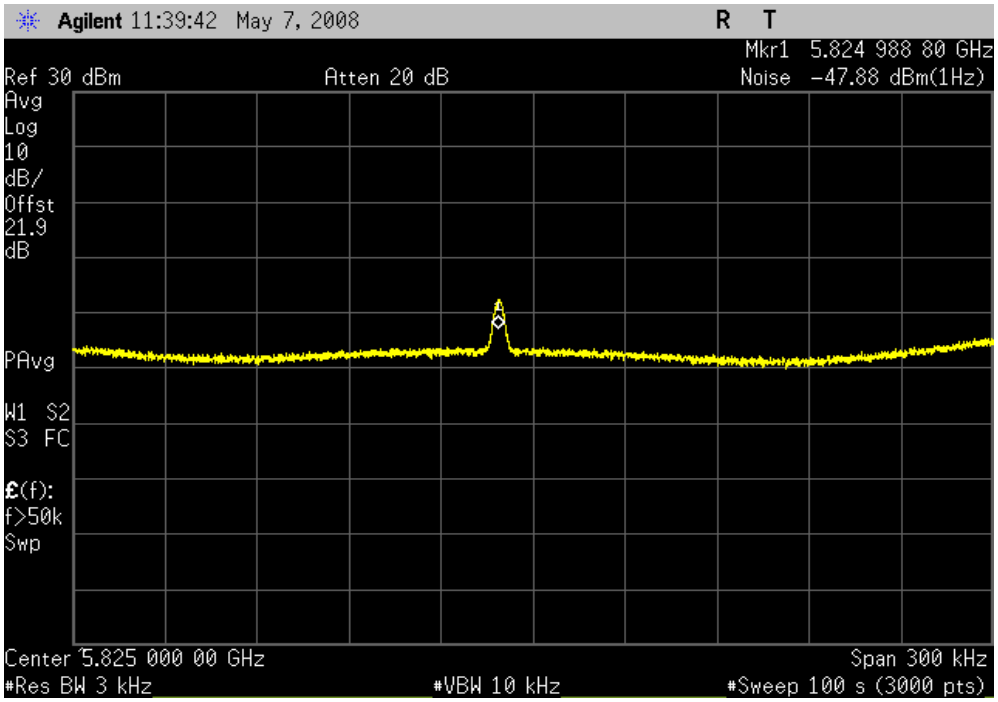
802.11(a) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-17.1 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



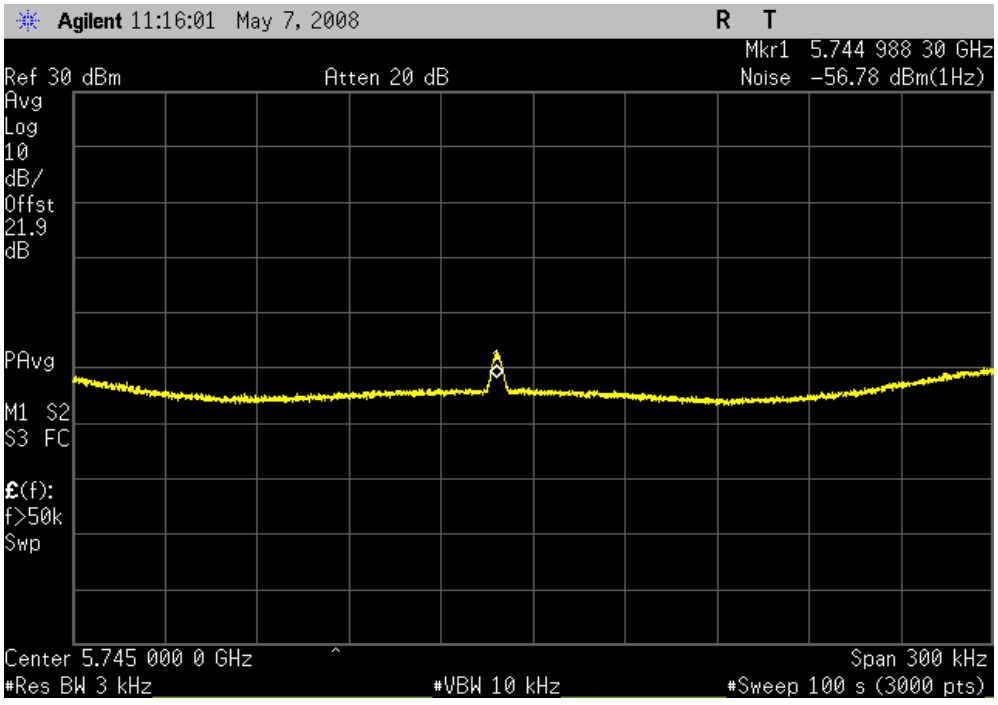
802.11(a) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	-17.08 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



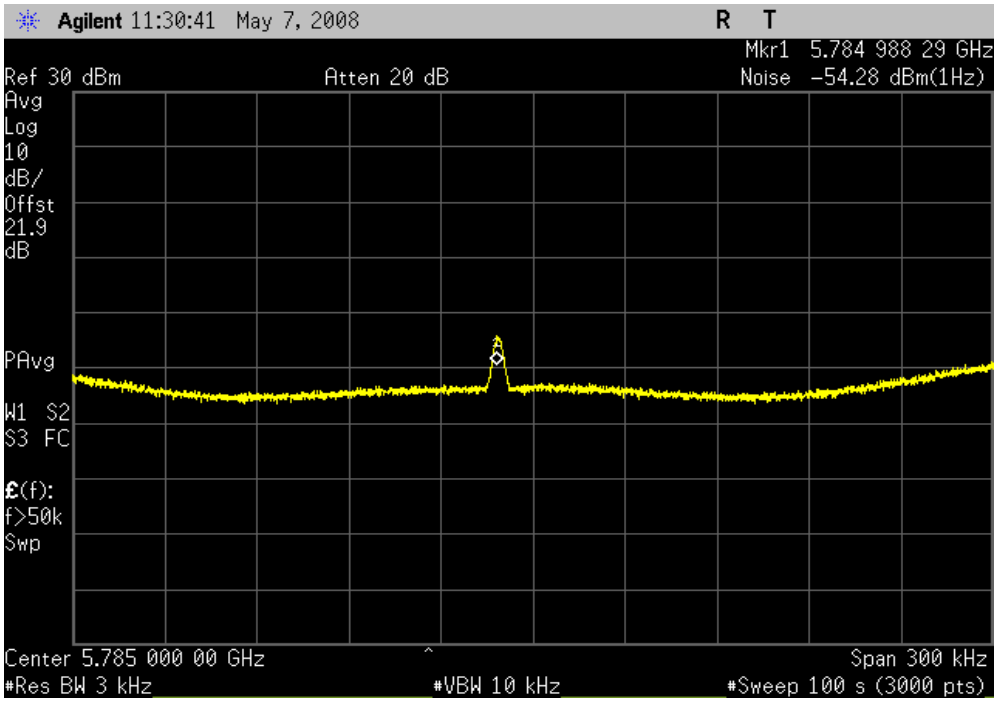
802.11(a) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-12.88 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



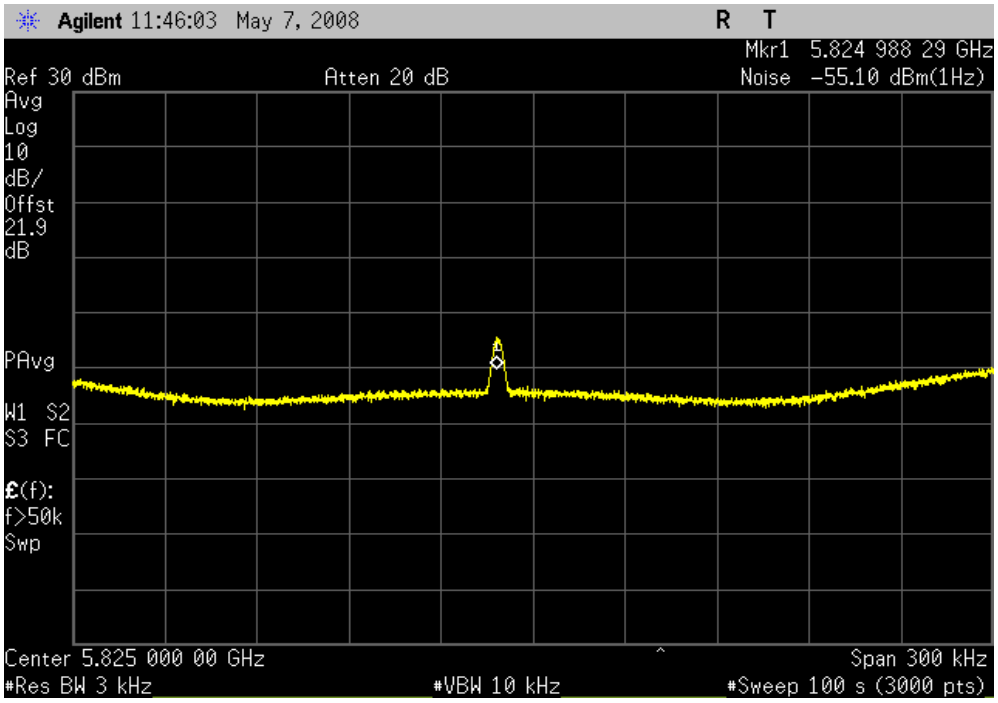
802.11(a) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-21.78 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



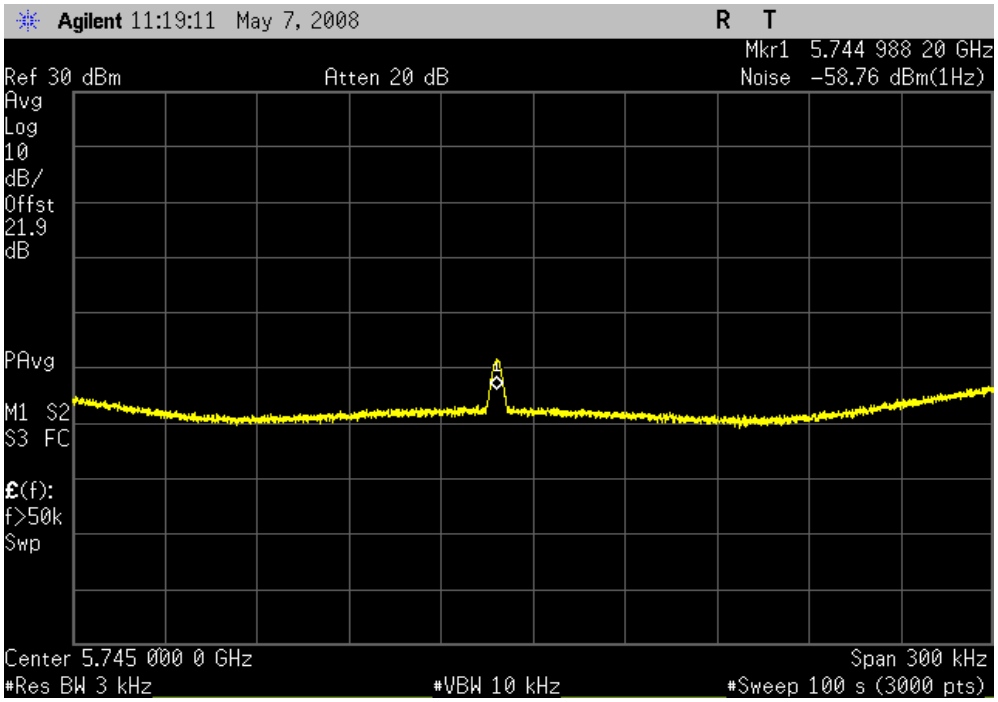
802.11(a) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	-19.28 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



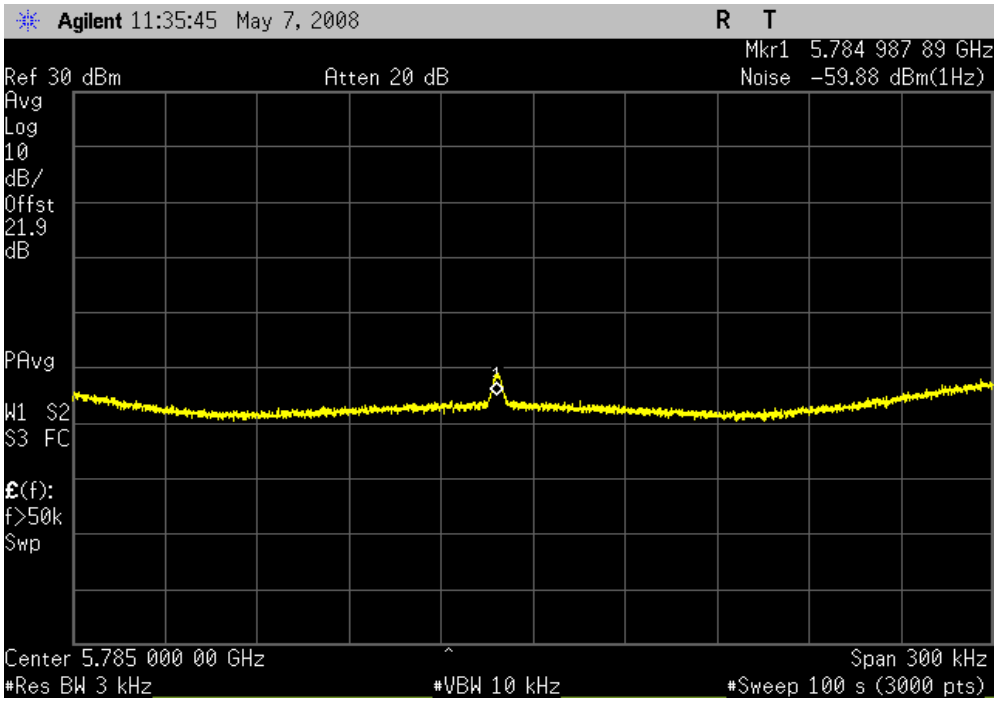
802.11(a) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-20.1 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



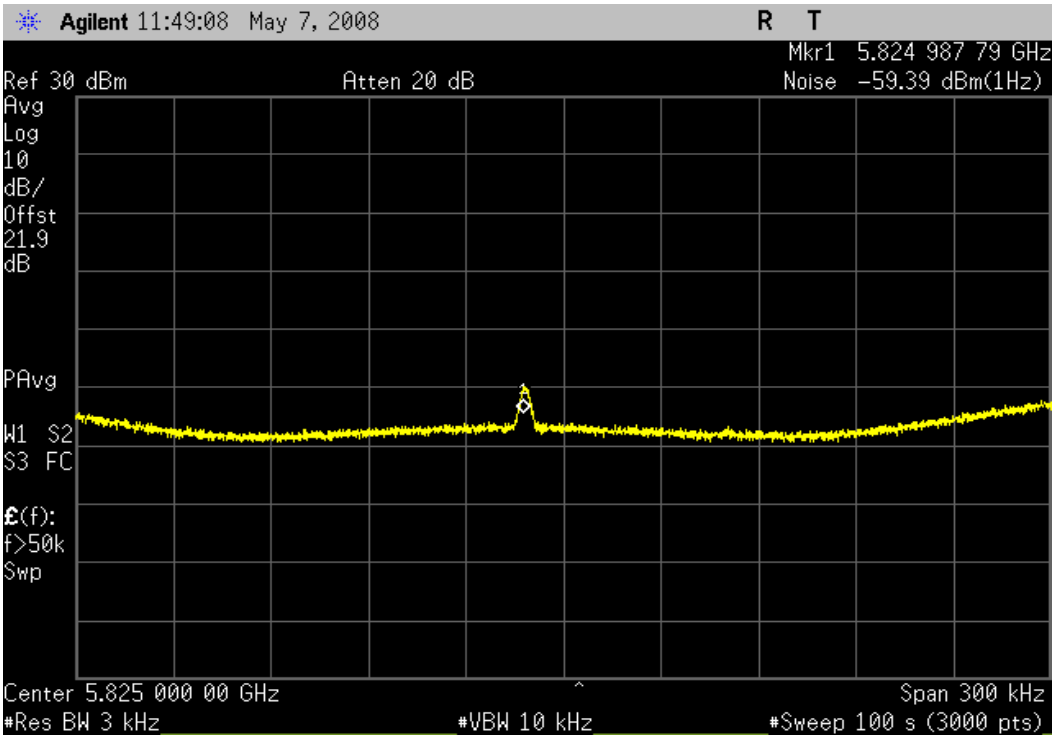
802.11(a) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-23.76 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(a) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	-24.88 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(a) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-24.39 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



NORTHWEST EMC

POWER SPECTRAL DENSITY

XMit 2007.06.13

EUT:	Multinode (R110 Extended Temperature)			Work Order:	HONE0031
Serial Number:	None			Date:	05/07/08
Customer:	Honeywell			Temperature:	24°C
Attendees:	David Shipley			Humidity:	34%
Project:	None			Barometric Pres.:	1018
Tested by:	Jaemi Suh	Power:	120V/60Hz	Job Site:	OC11

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074

COMMENTS

Tx PWR: Fixed 8, Pro-Install Setting: - 15

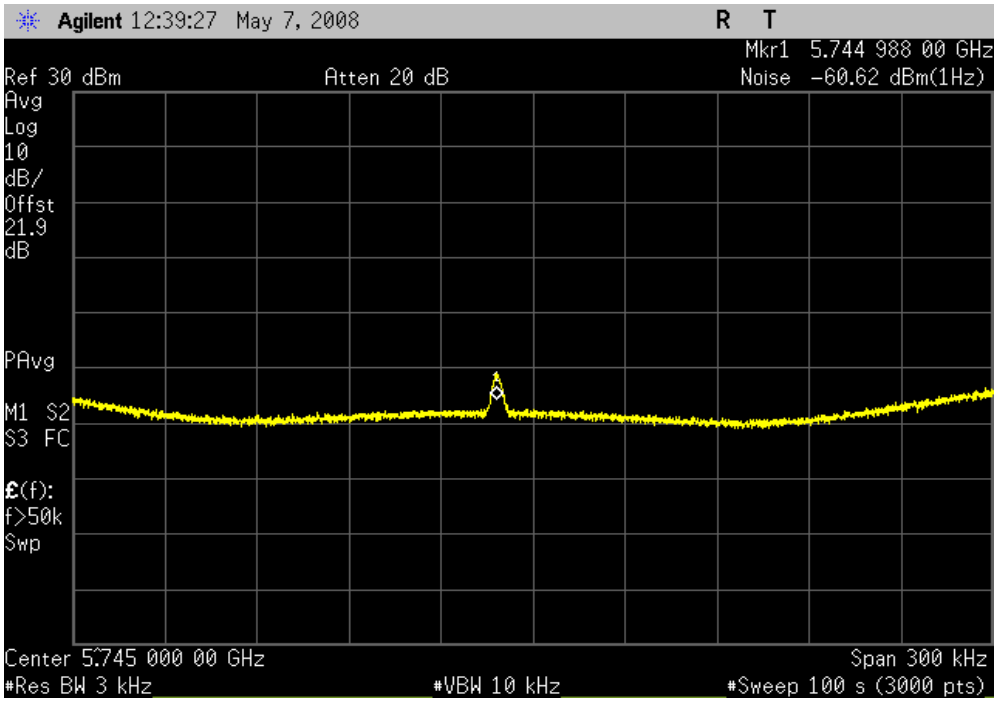
DEVIATIONS FROM TEST STANDARD

No Deviations

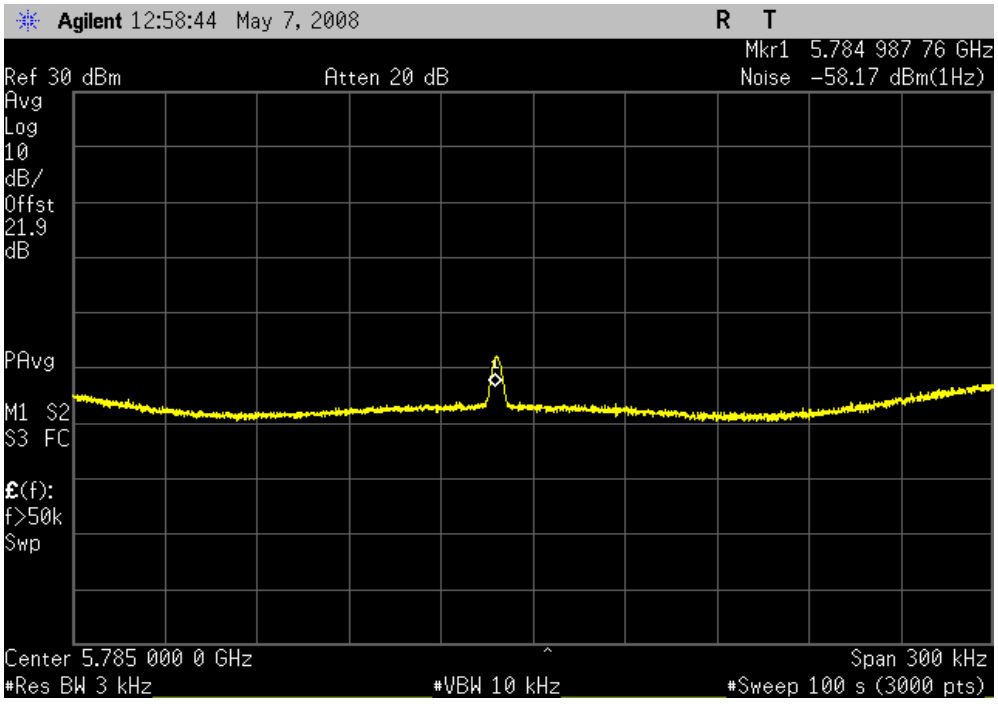
Configuration #	1	Signature

		Value	Limit	Results
802.11(a) 6 Mbps				
	Low Channel	-25.62 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-23.17 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-26.02 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(a) 36 Mbps				
	Low Channel	-29.39 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-25.35 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-28.39 dBm / 3 kHz	8 dBm / 3 kHz	Pass
802.11(a) 54 Mbps				
	Low Channel	-23.97 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	Mid Channel	-25.33 dBm / 3 kHz	8 dBm / 3 kHz	Pass
	High Channel	-25.07 dBm / 3 kHz	8 dBm / 3 kHz	Pass

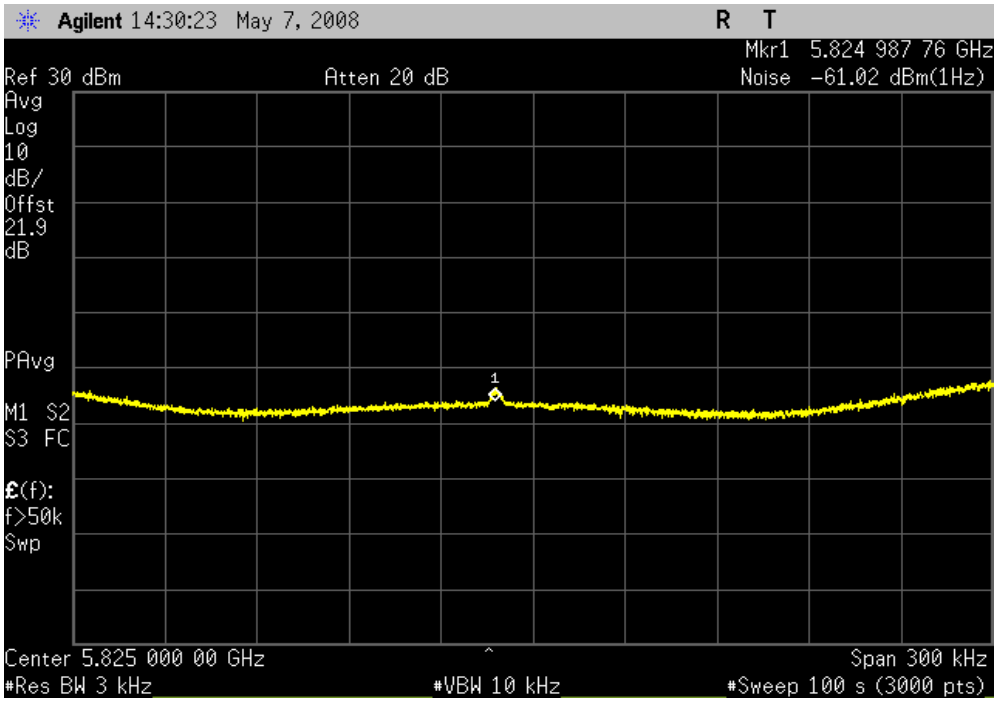
802.11(a) 6 Mbps, Low Channel					
Result:	Pass	**Value:**	-25.62 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



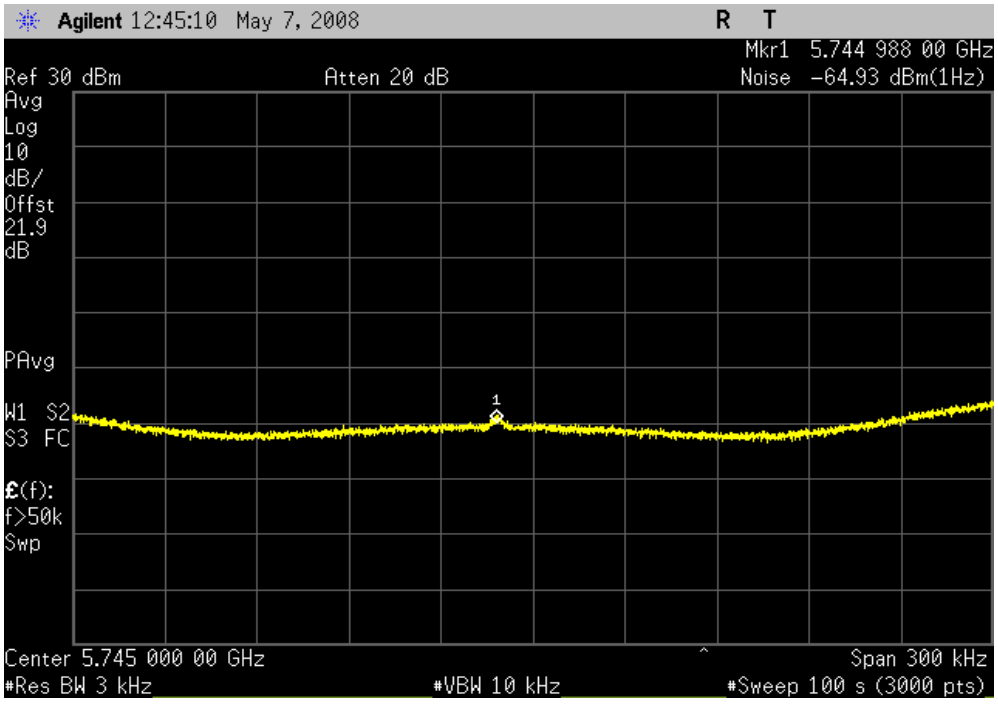
802.11(a) 6 Mbps, Mid Channel					
Result:	Pass	**Value:**	-23.17 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



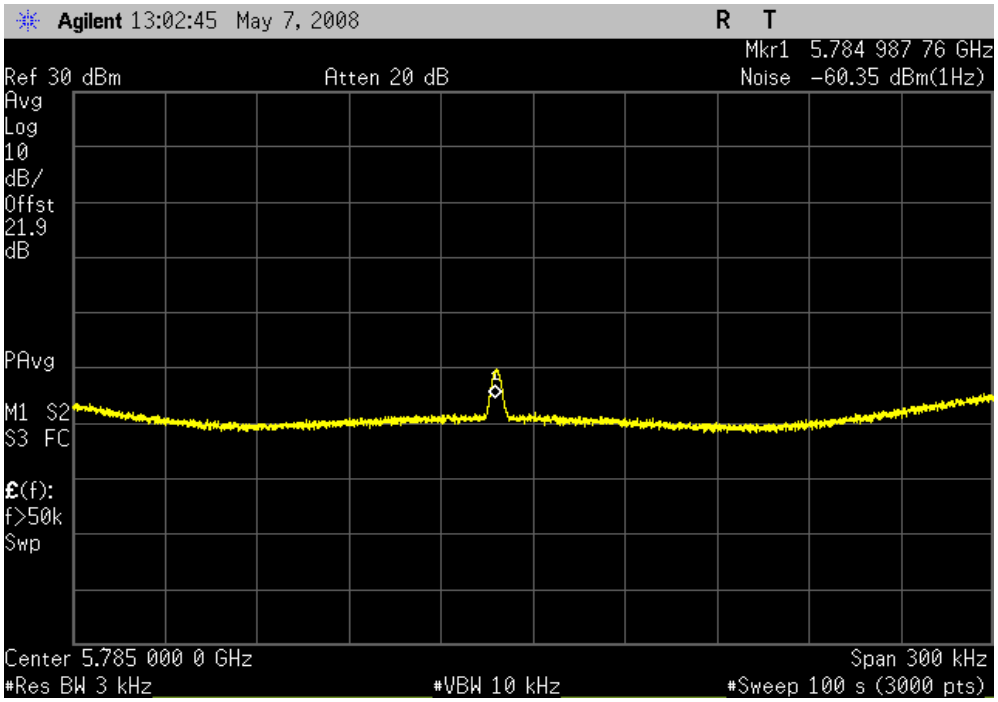
802.11(a) 6 Mbps, High Channel					
Result:	Pass	**Value:**	-26.02 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



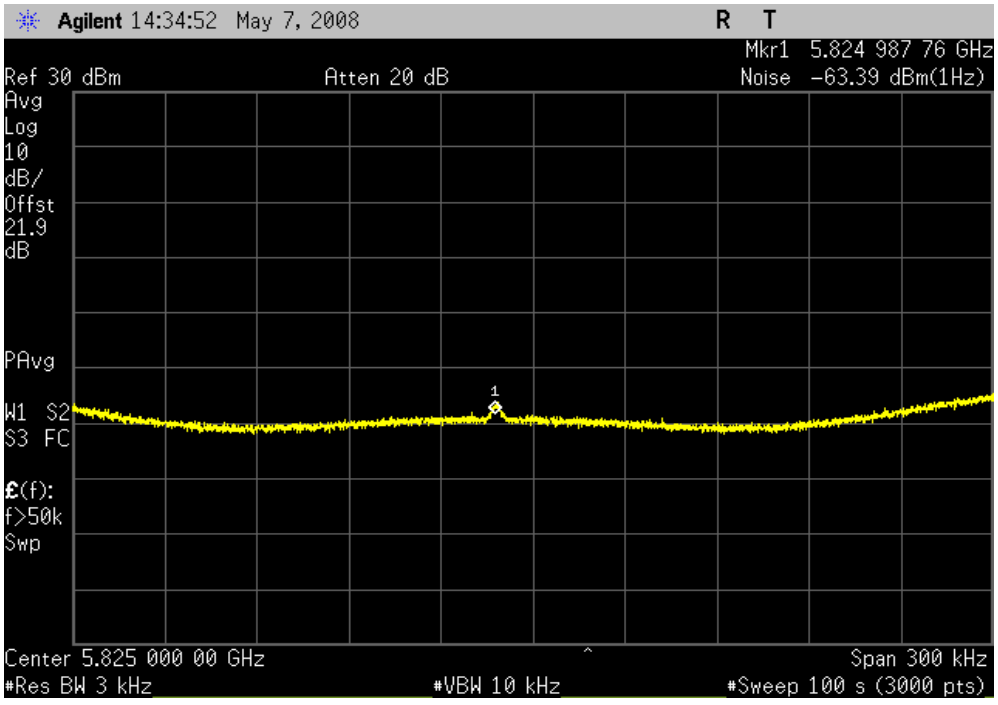
802.11(a) 36 Mbps, Low Channel					
Result:	Pass	**Value:**	-29.39 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



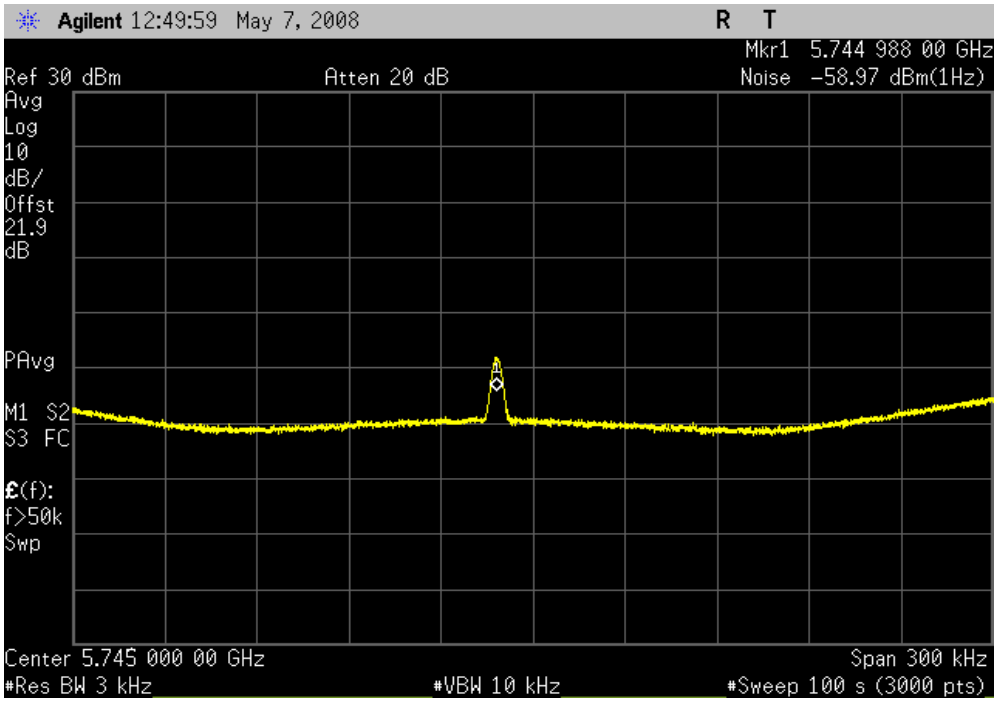
802.11(a) 36 Mbps, Mid Channel					
Result:	Pass	**Value:**	-25.35 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



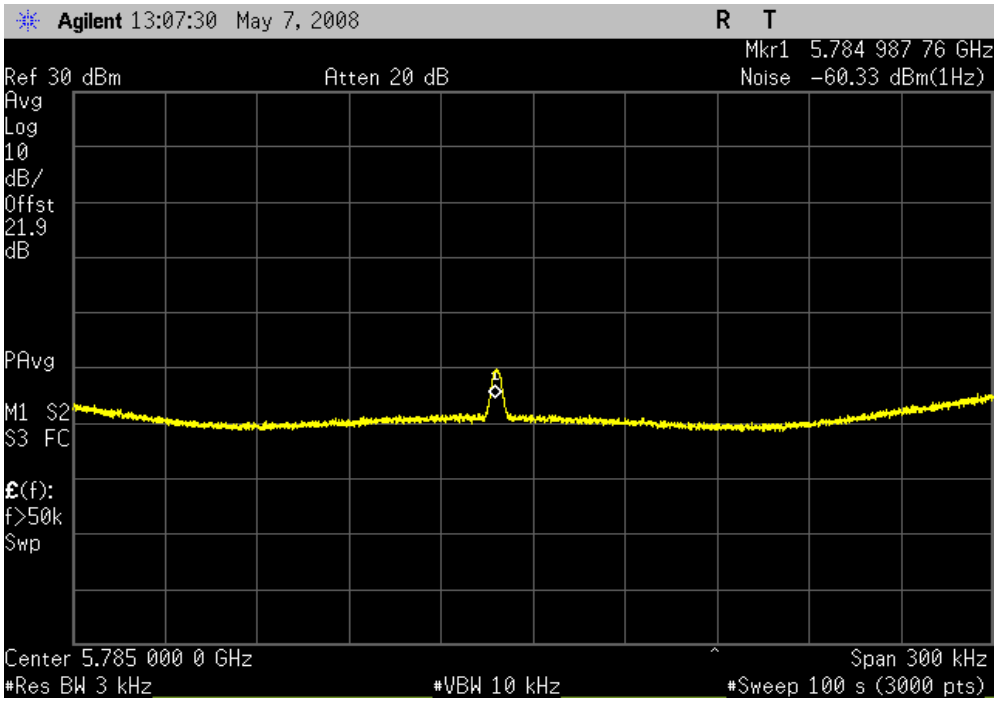
802.11(a) 36 Mbps, High Channel					
Result:	Pass	**Value:**	-28.39 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(a) 54 Mbps, Low Channel					
Result:	Pass	**Value:**	-23.97 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(a) 54 Mbps, Mid Channel					
Result:	Pass	**Value:**	-25.33 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz



802.11(a) 54 Mbps, High Channel					
Result:	Pass	**Value:**	-25.07 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz