Cascade Engineering Services, Inc.

WILDR-MIU

Report No. CSCE0011

Report Prepared By

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

EMC Test Report

NORTHWEST EMC

22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test

Last Date of Testing: September 15, 2008
Cascade Engineering Services, Inc.
Model: WILDR-MIU

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**
Band Edge Compliance	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**
Power Spectral Density	FCC 15.247 (DTS):2007	ANSI C63.4:2003 KDB No. 558074	**Pass**
AC Powerline Conducted Emissions	FCC 15.207:2007	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.
22975 NW Evergreen Parkway, Suite 400
Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826
This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada(Site filing #2834D-1).

Approved By:

Don Facteau, IS Manager

NVLAP Lab Code: 200630-0

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

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

Revision Number	Description	Date	Page Number
00	None		

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-Gen, Issue 2 and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements. (*Site Filing Numbers - Hillsboro: 2834D-1, 2834D-2, Sultan: 2834C-1, Irvine: 2834B-1, 2834B-2)*

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).*

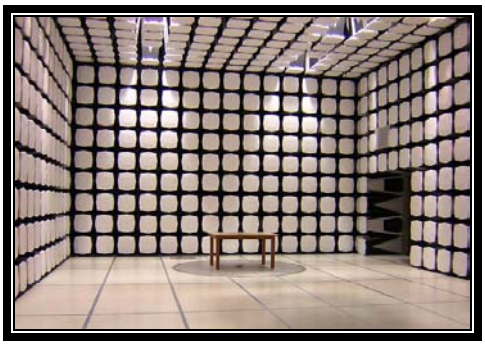
BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement (US0017). License No.SL2-IN-E-1017.

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

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

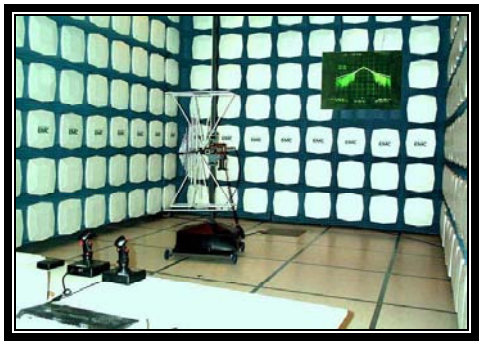
SCOPE

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:	Cascade Engineering Services, Inc.
Address:	2515 140th Ave NE, Suite E
City, State, Zip:	Bellevue, WA 98005
Test Requested By:	Albert Mungin
Model:	WILDR-MIU
First Date of Test:	August 27, 2008
Last Date of Test:	September 15, 2008
Receipt Date of Samples:	August 27, 2008
Equipment Design Stage:	Prototype
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):
Zigbee radio

Testing Objective:
Seeking TCB Certification under FCC 15.247 requirements.

CONFIGURATION 1 CSCE0011

Software/Firmware Running during test	
Description	**Version**
WILDR	V5.5

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
EUT	Cascade Engineering	WILDR-MIU	5 3

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC Adapter	CINCON Electronics Co, LTD	TR1512	None

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote PC	IBM	A21M	IS108

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Leads	No	1.5m	PA	AC Mains	EUT
Serial	No	1.6m	No	EUT	Remote PC
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 2 CSCE0011

Software/Firmware Running during test	
Description	**Version**
WILDR	V5.5

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
EUT	Cascade Engineering	WILDR-MIU	5 3
Antenna	Nearson	171	None

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC Adapter	CINCON Electronics Co, LTD	TR1512	None

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Remote PC	IBM	A21M	IS108

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Leads	No	1.5m	PA	AC Mains	EUT
Serial	No	1.6m	No	EUT	Remote PC
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

CONFIGURATION 4 CSCE0011

Software/Firmware Running during test	
Description	**Version**
WILDR	V5.5

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
EUT	Cascade Engineering	WILDR-MIU	5 3
Antenna	Nearson	171	None

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC Adapter	CINCON Electronics Co, LTD	TR1512	None

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC Leads	No	1.5m	PA	AC Mains	EUT
Serial	No	1.0m	No	EUT	Unterminated
Data	No	1.0m	No	EUT	Unterminated
PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.					

Equipment modifications					
Item	Date	Test	Modification	Note	Disposition of EUT
1	8/27/2008	Radiated Spurious Emissions	Modified from delivered configuration. Initial or No Modification	The power setting in the software for mid channel, 7, 2440 MHz was lowered to 1,6 to obtain passing data for radiated spurious emissions harmonics. Modification done by Software.	EUT remained at Northwest EMC following the test.
2	9/10/2008	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.
3	9/12/2008	AC Powerline 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.
4	9/15/2008	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
5	9/15/2008	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.
6	9/15/2008	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.
7	9/15/2008	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was complete.

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
Transmitting low channel, channel 0, 2405 MHz, power setting 2,6
Transmitting mid channel, channel 7, 2440 MHz, power level 1,6
Transmitting high channel, channel E, 2475 MHz, power setting 2,6

POWER SETTINGS INVESTIGATED
120VAC/60Hz

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30 MHz	Stop Frequency	25 GHz

CLOCKS AND OSCILLATORS
Not provided

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
High Pass Filter	Micro-Tronics	HPM50111	HFO	5/21/2008	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	5/19/2008	13
Antenna, Biconilog	EMCO	3141	AXE	1/15/2008	24
EV01 Cables		Bilog Cables	EVA	5/19/2008	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	5/19/2008	13
EV01 Cables		Double Ridge Horn Cables	EVB	5/19/2008	13
Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	6/30/2008	13
Antenna, Horn	ETS	3160-07	AHU	NCR	0
EV01 Cables		Standard Gain Horns Cables	EVF	10/23/2007	13
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	6/30/2008	13
Antenna, Horn	ETS	3160-08	AHV	NCR	0
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	7/25/2007	16
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
EV01 Cables		18-26GHz Standard Gain Horn Cable	EVD	7/25/2007	16

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

PSA 2007.05.07
EMI 2008.7.3

EUT:	WILDR-MIU			Work Order:	CSCE0016
Serial Number:	5 3			Date:	08/27/08
Customer:	Cascade Engineering Services, Inc.			Temperature:	24
Attendees:	None			Humidity:	38%
Project:	None			Barometric Pres.:	1013.5 mB
Tested by:	Rod Peloquin	Power:	120VAC/60Hz	Job Site:	EV01

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

7 dBi external antenna: EUT horizontal, Antenna vertical

EUT OPERATING MODES

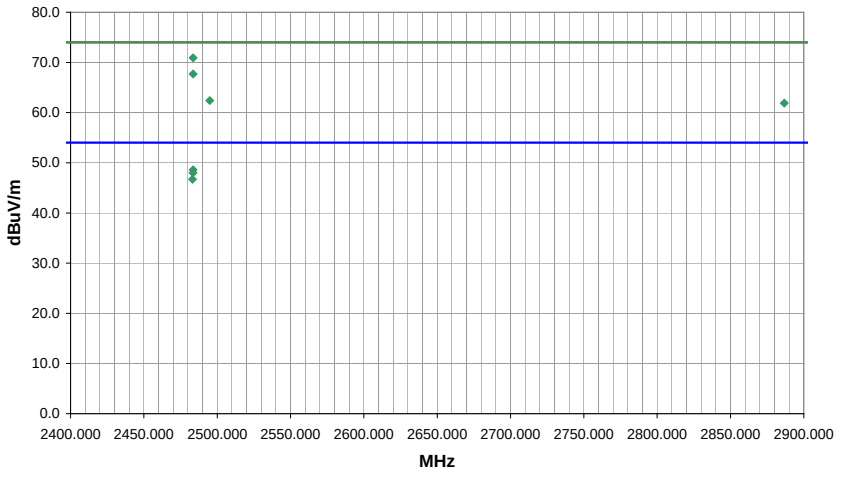
Transmitting Peak mode, max power & data rate, channel E, 2475 MHz

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	1
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2483.550	48.7	2.2	112.0	1.0	3.0	20.0	H-Horn	PK	0.0	70.9	74.0	-3.1	Peak measurement mode, EUT on side, Antenna horizontal
2483.583	26.4	2.2	270.0	1.0	3.0	20.0	H-Horn	AV	0.0	48.6	54.0	-5.4	Ave measurement mode, EUT on side, Antenna horizontal
2483.503	25.8	2.2	218.0	1.2	3.0	20.0	V-Horn	AV	0.0	48.0	54.0	-6.0	Ave measurement mode, EUT horizontal, Antenna vertical
2483.532	45.5	2.2	337.0	1.0	3.0	20.0	V-Horn	PK	0.0	67.7	74.0	-6.3	Peak measurement mode, EUT horizontal, Antenna vertical
2483.087	24.5	2.2	313.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.7	54.0	-7.3	Ave measurement mode, EUT on side, Antenna horizontal
2494.962	40.2	2.2	334.0	1.0	3.0	20.0	V-Horn	PK	0.0	62.4	74.0	-11.6	Peak measurement mode, EUT horizontal, Antenna vertical
2886.686	38.2	3.7	310.0	1.0	3.0	20.0	V-Horn	PK	0.0	61.9	74.0	-12.1	Peak measurement mode, EUT horizontal, Antenna vertical

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.05.07
EMI 2008.7.3

EUT:	WILDR-MIU	Work Order:	CSCE0016
Serial Number:	5 3	Date:	08/27/08
Customer:	Cascade Engineering Services, Inc.	Temperature:	24
Attendees:	None	Humidity:	38%
Project:	None	Barometric Pres.:	1013.5 mB
Tested by:	Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV01

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

7 dBi external antenna: EUT horizontal, Antenna vertical

EUT OPERATING MODES

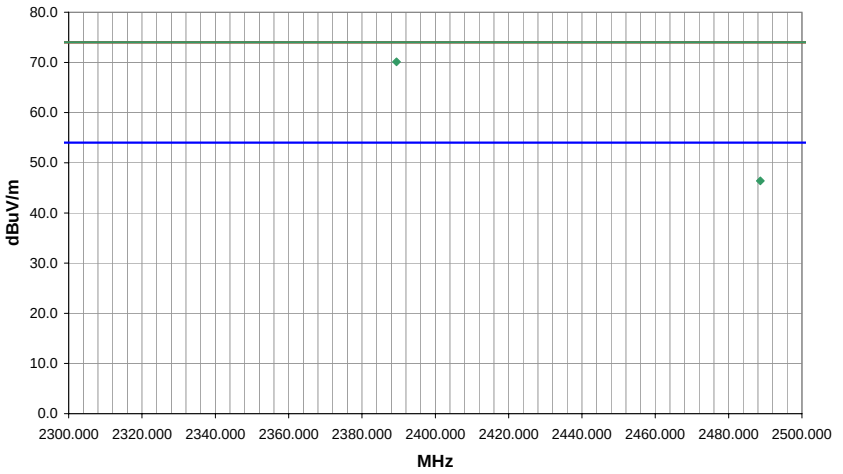
Transmitting max power & data rate, channel 0, 2405 MHz

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
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
2389.410	48.3	1.8	108.0	1.0	3.0	20.0	V-Horn	PK	0.0	70.1	74.0	-3.9	Peak measurement mode, EUT horizontal, Antenna vertical
2488.640	24.2	2.2	108.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.4	54.0	-7.6	Ave measurement mode, EUT horizontal, Antenna vertical

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.07.21
EMI 2008.7.3

EUT:	WILDR-MIU	Work Order:	CSCE0011
Serial Number:	5 3	Date:	09/11/08
Customer:	Cascade Engineering Services, Inc.	Temperature:	22°C
Attendees:	None	Humidity:	42%
Project:	None	Barometric Pres.:	30.04 in
Tested by:	Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV01

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

7 dBi antenna, EUT on end, antenna horizontal

EUT OPERATING MODES

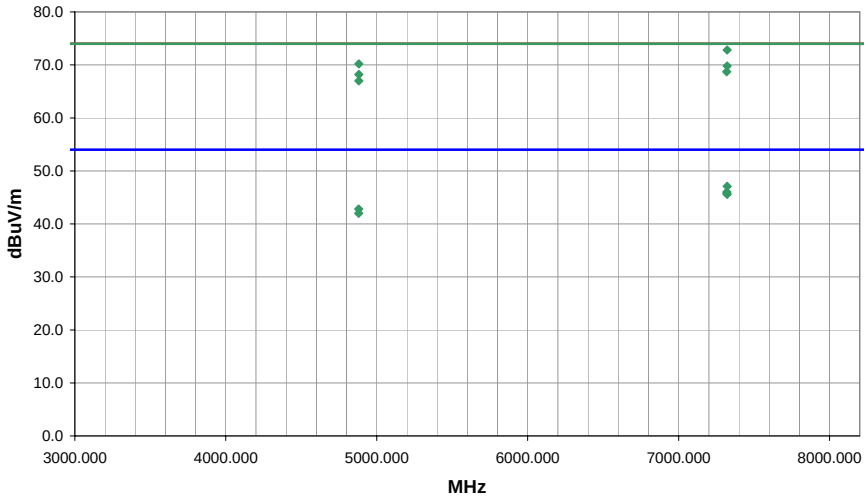
Transmitting mid channel, 7, 2440 MHz, power level 1,6

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	9
Configuration #	2
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
7321.524	57.2	15.6	46.0	1.3	3.0	0.0	H-Horn	PK	0.0	72.8	74.0	-1.2	Peak mode, EUT on end, Antenna horizontal
4881.190	60.4	9.8	80.0	1.3	3.0	0.0	V-Horn	PK	0.0	70.2	74.0	-3.8	Peak mode, EUT on end, Antenna horizontal
7321.750	54.2	15.6	12.0	1.1	3.0	0.0	V-Horn	PK	0.0	69.8	74.0	-4.2	Peak mode, EUT horizontal, Antenna vertical
7318.617	53.1	15.6	87.0	1.1	3.0	0.0	V-Horn	PK	0.0	68.7	74.0	-5.3	Peak mode, EUT on end, Antenna horizontal
4881.114	58.4	9.8	89.0	1.4	3.0	0.0	H-Horn	PK	0.0	68.2	74.0	-5.8	Peak mode, EUT on end, Antenna horizontal
7321.232	31.5	15.6	45.0	1.3	3.0	0.0	H-Horn	AV	0.0	47.1	54.0	-6.9	Ave mode, EUT on end, Antenna horizontal
4880.981	57.2	9.8	218.0	1.1	3.0	0.0	V-Horn	PK	0.0	67.0	74.0	-7.0	Peak mode, EUT horizontal, Antenna vertical
7318.958	30.4	15.6	13.0	1.1	3.0	0.0	V-Horn	AV	0.0	46.0	54.0	-8.0	Ave mode, EUT horizontal, Antenna vertical
7318.875	30.1	15.6	87.0	1.1	3.0	0.0	V-Horn	AV	0.0	45.7	54.0	-8.3	Ave mode, EUT on end, Antenna horizontal
7321.433	30.0	15.6	210.0	1.0	3.0	0.0	V-Horn	AV	0.0	45.6	54.0	-8.4	Ave mode, EUT horizontal, Antenna vertical
4880.106	33.0	9.8	80.0	1.3	3.0	0.0	V-Horn	AV	0.0	42.8	54.0	-11.2	Ave mode, EUT on end, Antenna horizontal
4880.047	32.2	9.8	89.0	1.4	3.0	0.0	H-Horn	AV	0.0	42.0	54.0	-12.0	Ave mode, EUT on end, Antenna horizontal

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.07.21
EMI 2008.7.3

EUT:	WILDR-MIU	Work Order:	CSCE0011
Serial Number:	5 3	Date:	09/11/08
Customer:	Cascade Engineering Services, Inc.	Temperature:	22°C
Attendees:	None	Humidity:	42%
Project:	None	Barometric Pres.:	30.04 in
Tested by:	Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV01

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

7 dBi antenna

EUT OPERATING MODES

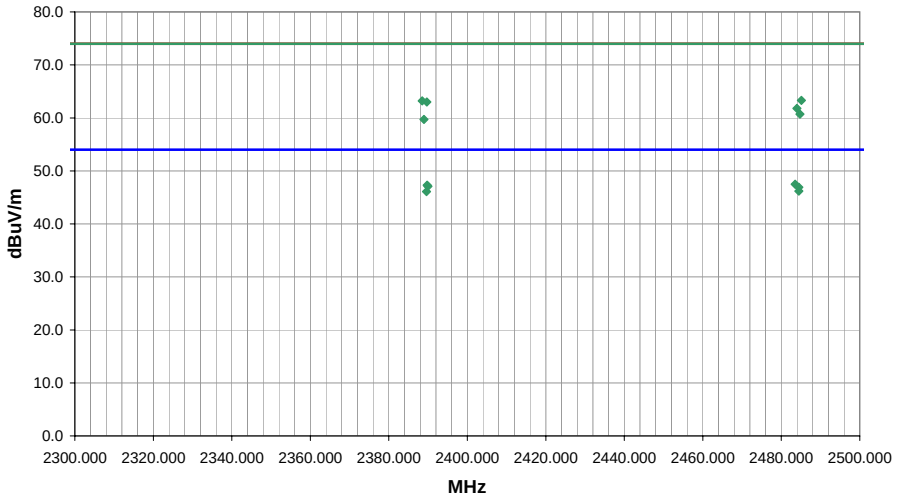
Transmitting mid channel, 7, 2440 MHz, power level 1,6

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	10
Configuration #	2
Results	Pass

Signature



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2483.533	25.3	2.2	321.0	1.3	3.0	20.0	V-Horn	AV	0.0	47.5	54.0	-6.5	Ave mode, EUT horizontal, Antenna vertical
2389.777	25.5	1.8	211.0	1.6	3.0	20.0	H-Horn	AV	0.0	47.3	54.0	-6.7	Ave mode, EUT on end, Antenna horizontal
2389.967	25.3	1.8	234.0	1.0	3.0	20.0	V-Horn	AV	0.0	47.1	54.0	-6.9	Ave mode, EUT horizontal, Antenna vertical
2484.467	24.7	2.2	348.0	1.0	3.0	20.0	H-Horn	AV	0.0	46.9	54.0	-7.1	Ave mode, EUT on end, Antenna horizontal
2484.450	24.0	2.2	124.0	1.7	3.0	20.0	V-Horn	AV	0.0	46.2	54.0	-7.8	Ave mode, EUT on end, Antenna horizontal
2389.617	24.3	1.8	102.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.1	54.0	-7.9	Peak mode, EUT on end, Antenna horizontal
2485.103	41.1	2.2	312.0	1.3	3.0	20.0	V-Horn	PK	0.0	63.3	74.0	-10.7	Peak mode, EUT horizontal, Antenna vertical
2388.507	41.4	1.8	97.0	1.0	3.0	20.0	V-Horn	PK	0.0	63.2	74.0	-10.8	Peak mode, EUT horizontal, Antenna vertical
2389.700	41.2	1.8	198.0	1.6	3.0	20.0	H-Horn	PK	0.0	63.0	74.0	-11.0	Peak mode, EUT on end, Antenna horizontal
2483.967	39.6	2.2	350.0	1.0	3.0	20.0	H-Horn	PK	0.0	61.8	74.0	-12.2	Peak mode, EUT on end, Antenna horizontal
2484.743	38.5	2.2	124.0	1.7	3.0	20.0	V-Horn	PK	0.0	60.7	74.0	-13.3	Peak mode, EUT on end, Antenna horizontal
2388.953	37.9	1.8	102.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.7	74.0	-14.3	Peak mode, EUT on end, Antenna horizontal

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.07.21
EMI 2008.7.3

EUT:	WILDR-MIU	Work Order:	CSCE0011
Serial Number:	5 3	Date:	09/15/08
Customer:	Cascade Engineering Services, Inc.	Temperature:	22°C
Attendees:	None	Humidity:	42%
Project:	None	Barometric Pres.:	30.04 in
Tested by:	Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV01

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

EUT OPERATING MODES

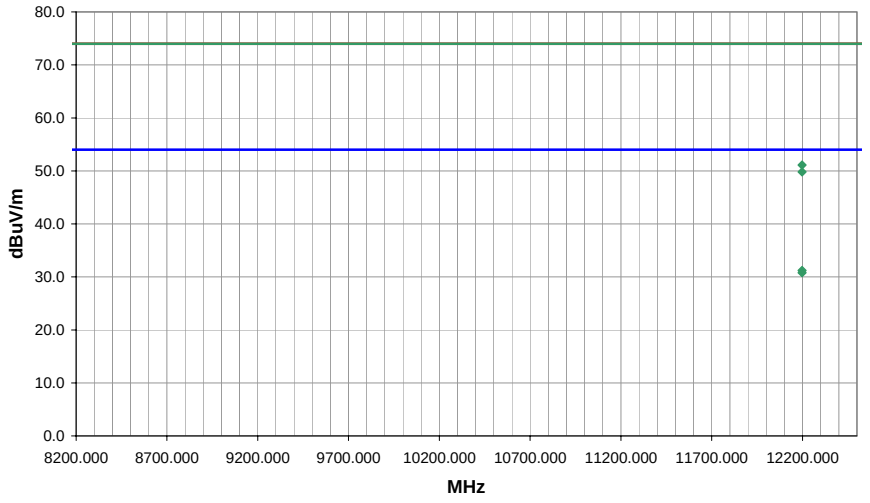
Transmitting mid channel, Power 1,6

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	11
Configuration #	2
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
12198.000	35.2	-4.0	66.0	1.0	3.0	0.0	V-Horn	AV	0.0	31.2	54.0	-22.8	Ave mode, EUT horizontal, Antennna vertical
12197.770	55.1	-4.0	66.0	1.0	3.0	0.0	V-Horn	PK	0.0	51.1	74.0	-22.9	Peak mode, EUT horizontal, Antennna vertical
12198.030	34.8	-4.0	340.0	1.0	3.0	0.0	H-Horn	AV	0.0	30.8	54.0	-23.2	Ave mode, EUT on end, Antennna horizontal
12197.760	53.8	-4.0	338.0	1.0	3.0	0.0	H-Horn	PK	0.0	49.8	74.0	-24.2	Peak mode, EUT on end, Antennna horizontal

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.07.21
EMI 2008.7.3

EUT:	WILDR-MIU	Work Order:	CSCE0011
Serial Number:	5 3	Date:	09/15/08
Customer:	Cascade Engineering Services, Inc.	Temperature:	22°C
Attendees:	None	Humidity:	42%
Project:	None	Barometric Pres.:	30.04 in
Tested by:	Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV01

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

7 dBi antenna

EUT OPERATING MODES

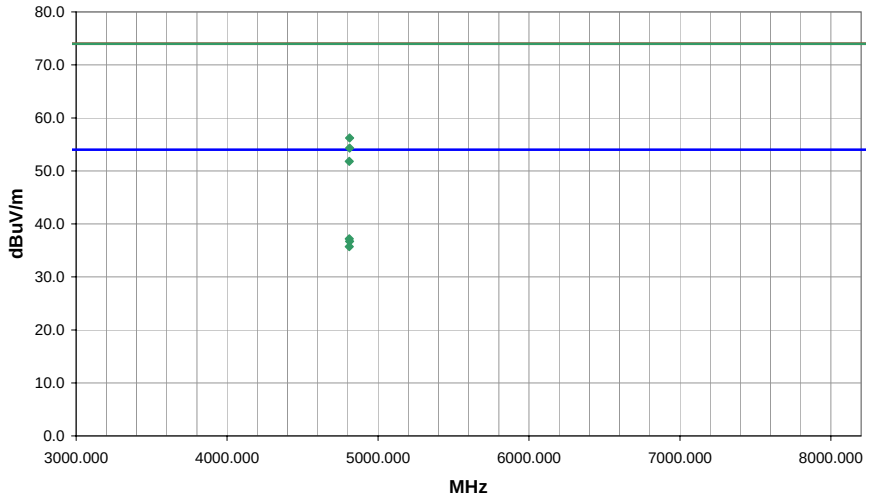
Transmitting low channel, max power

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	12
Configuration #	2
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
4809.198	27.7	9.5	13.0	1.1	3.0	0.0	H-Horn	AV	0.0	37.2	54.0	-16.8	Ave mode, EUT on end, Antennna horizontal
4810.990	27.2	9.5	235.0	1.8	3.0	0.0	V-Horn	AV	0.0	36.7	54.0	-17.3	Ave mode, EUT horizontal, Antennna vertical
4811.189	46.7	9.5	15.0	1.1	3.0	0.0	H-Horn	PK	0.0	56.2	74.0	-17.8	Peak mode, EUT on end, Antennna horizontal
4809.148	26.2	9.5	177.0	1.0	3.0	0.0	V-Horn	AV	0.0	35.7	54.0	-18.3	Ave mode, EUT on end, Antennna horizontal
4811.173	44.8	9.5	235.0	1.8	3.0	0.0	V-Horn	PK	0.0	54.3	74.0	-19.7	Peak mode, EUT horizontal, Antennna vertical
4809.398	42.3	9.5	177.0	1.0	3.0	0.0	V-Horn	PK	0.0	51.8	74.0	-22.2	Peak mode, EUT on end, Antennna horizontal

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS

PSA 2007.07.21
EMI 2008.7.3

EUT:	WILDR-MIU	Work Order:	CSCE0011
Serial Number:	5 3	Date:	09/15/08
Customer:	Cascade Engineering Services, Inc.	Temperature:	22°C
Attendees:	None	Humidity:	42%
Project:	None	Barometric Pres.:	30.04 in
Tested by:	Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV01

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

7 dBi antenna

EUT OPERATING MODES

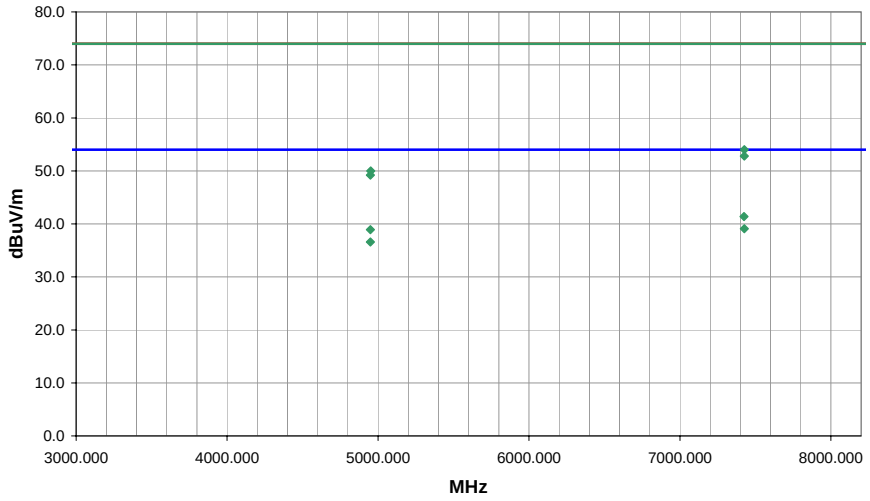
Transmitting high channel, max power

DEVIATIONS FROM TEST STANDARD

No deviations.

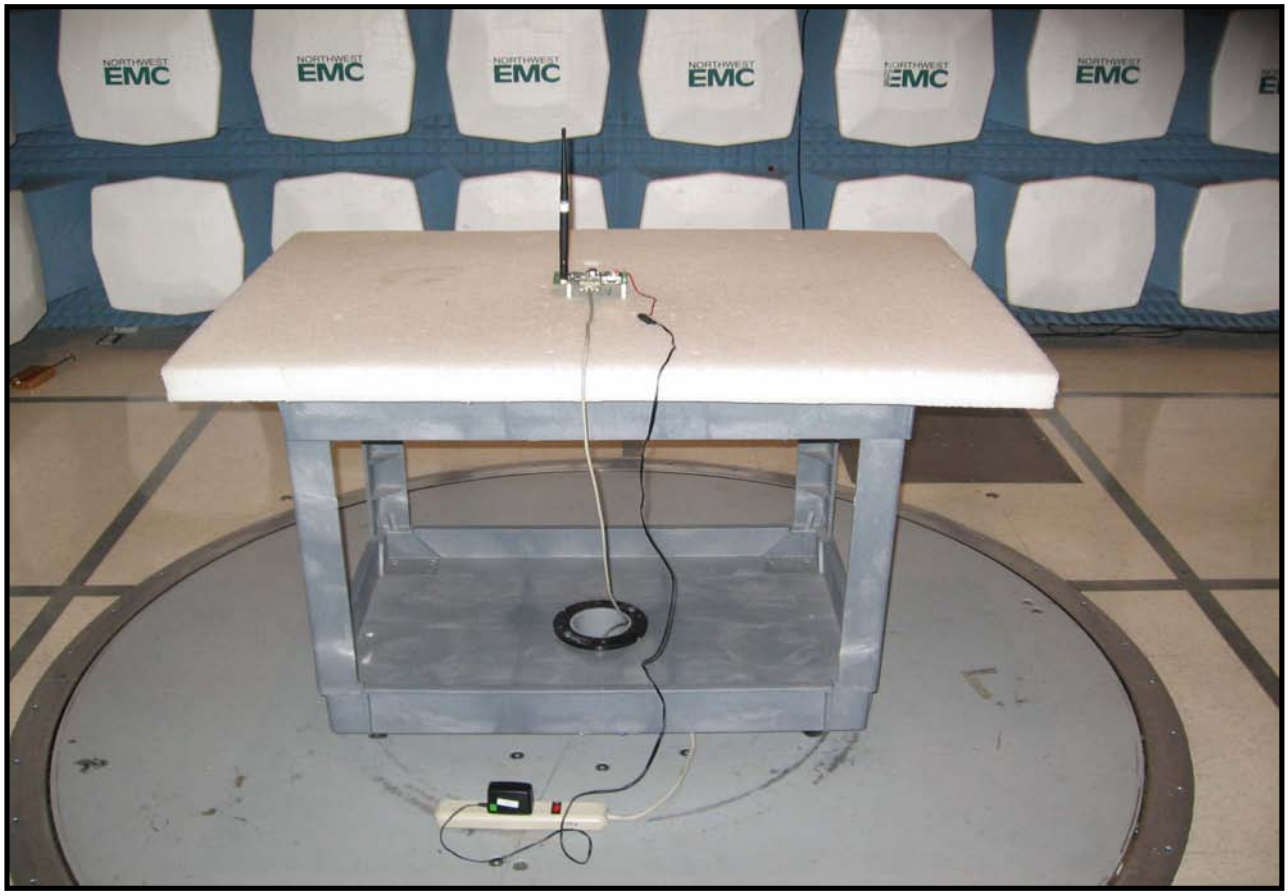
Run #	13
Configuration #	2
Results	Pass

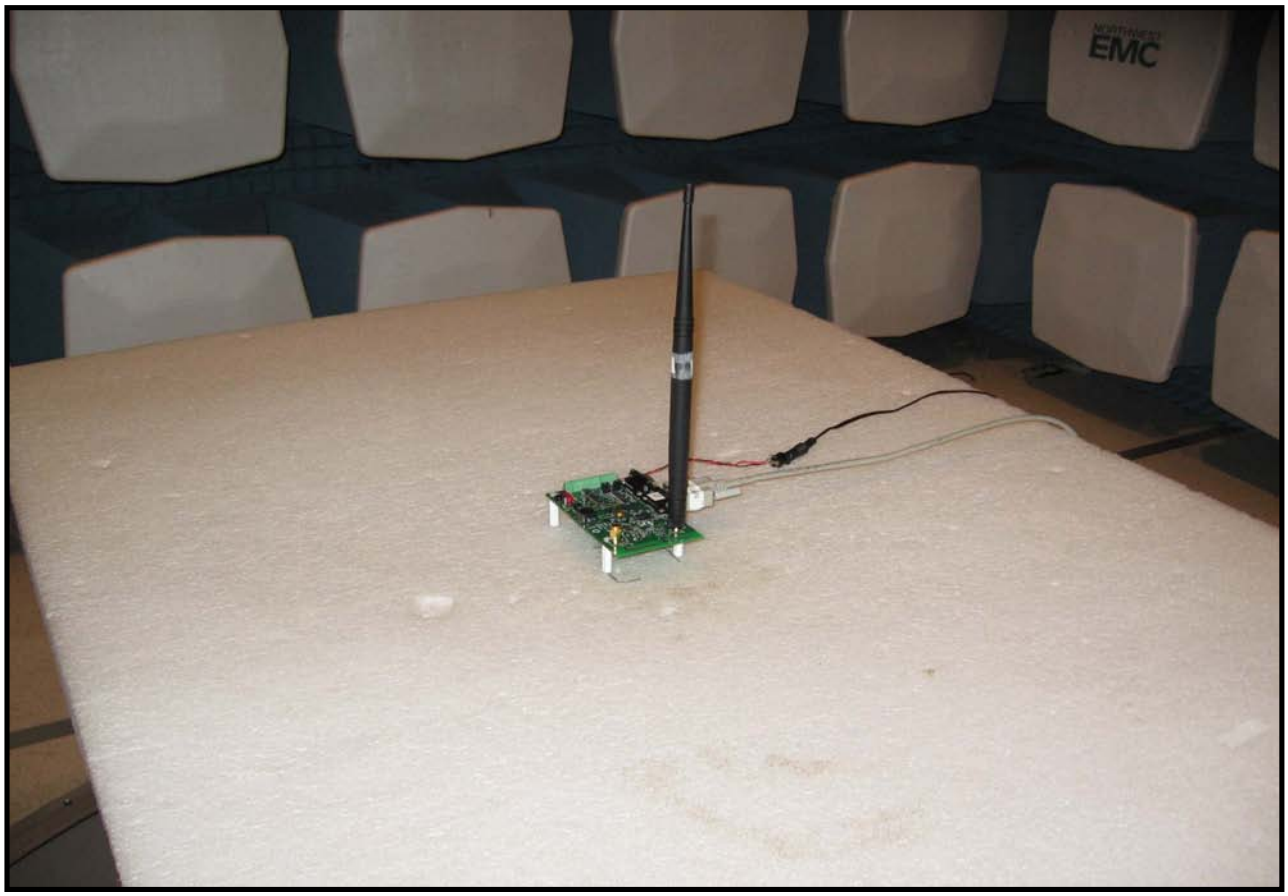
Signature

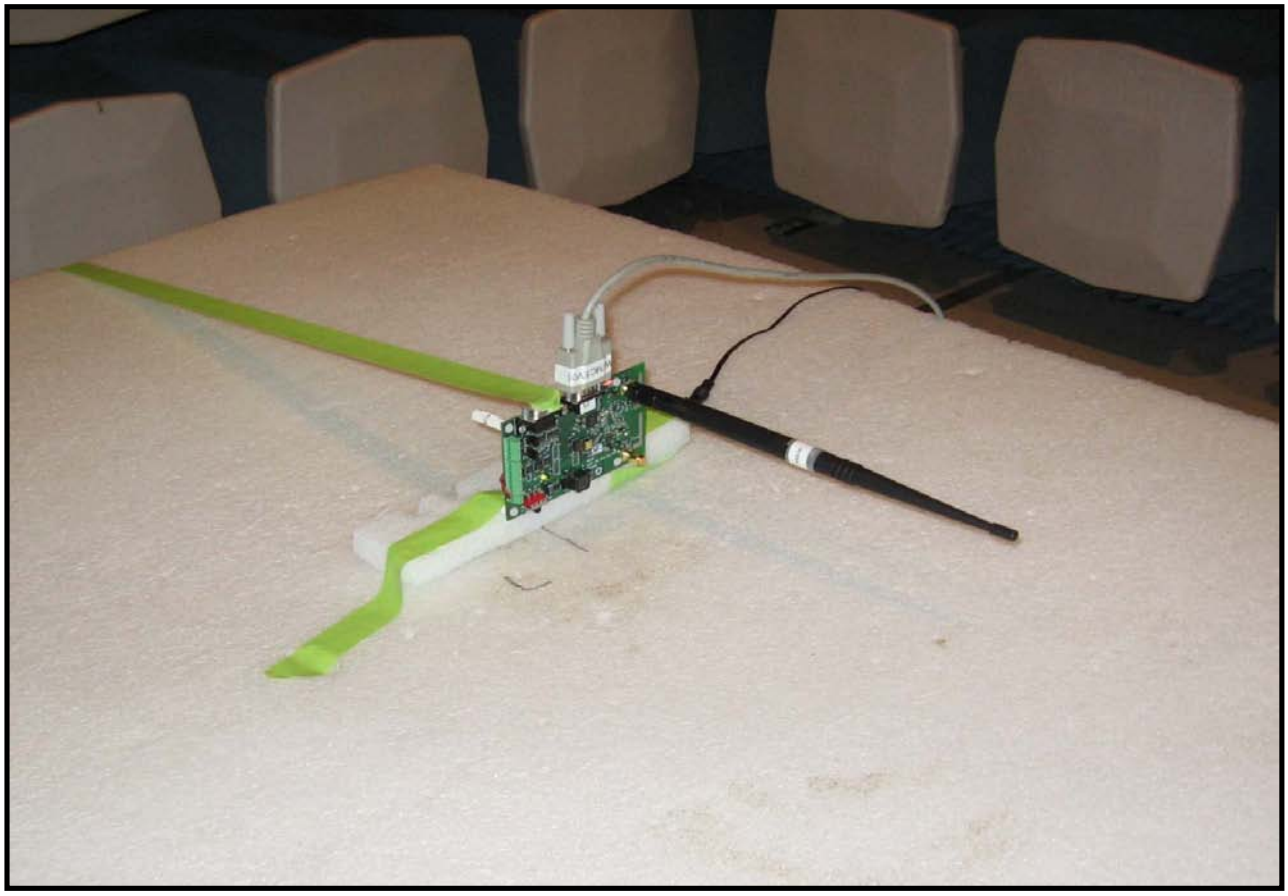


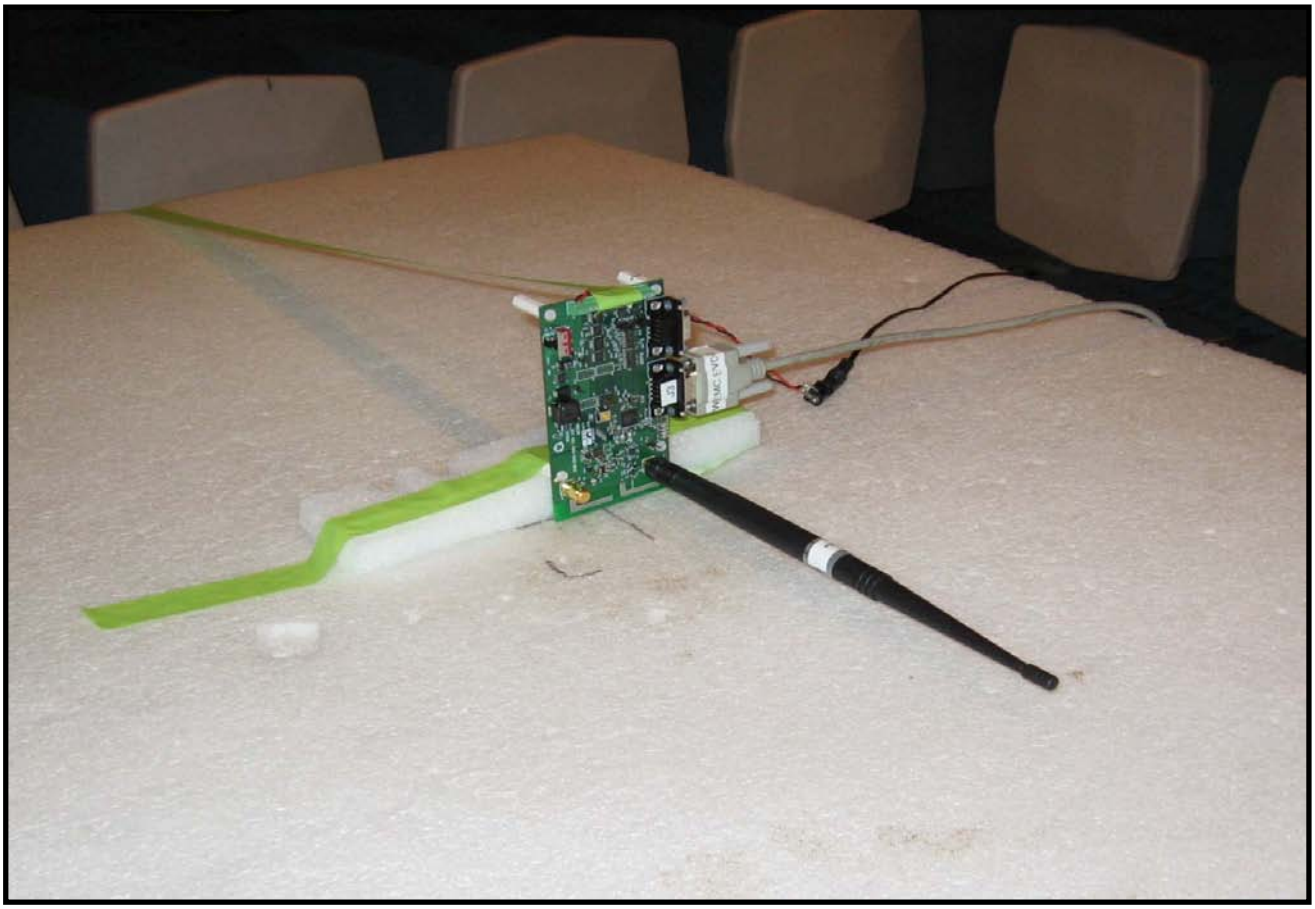
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
7423.865	25.6	15.8	13.0	1.8	3.0	0.0	V-Horn	AV	0.0	41.4	54.0	-12.6	Ave mode, EUT horizontal, Antennna vertical
7426.214	23.3	15.8	190.0	1.0	3.0	0.0	H-Horn	AV	0.0	39.1	54.0	-14.9	Ave mode, EUT on end, Antennna horizontal
4949.214	28.8	10.1	24.0	1.3	3.0	0.0	H-Horn	AV	0.0	38.9	54.0	-15.1	Ave mode, EUT on end, Antennna horizontal
4949.231	26.6	10.0	246.0	2.3	3.0	0.0	V-Horn	AV	0.0	36.6	54.0	-17.4	Ave mode, EUT horizontal, Antennna vertical
7426.556	38.2	15.8	13.0	1.8	3.0	0.0	V-Horn	PK	0.0	54.0	74.0	-20.0	Peak mode, EUT horizontal, Antennna vertical
7426.031	37.0	15.8	190.0	1.0	3.0	0.0	H-Horn	PK	0.0	52.8	74.0	-21.2	Peak mode, EUT on end, Antennna horizontal
4951.373	39.9	10.1	24.0	1.3	3.0	0.0	H-Horn	PK	0.0	50.0	74.0	-24.0	Peak mode, EUT on end, Antennna horizontal
4949.073	39.1	10.1	246.0	2.3	3.0	0.0	V-Horn	PK	0.0	49.2	74.0	-24.8	Peak mode, EUT horizontal, Antennna vertical


NORTHWEST EMC


NORTHWEST EMC


EMC





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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	13

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 following settings were used on the customer provided control software:

Low Channel, High power 2,6
Mid Channel: power 1,6
High Channel: High power 2,6

NORTHWEST EMC

OCCUPIED BANDWIDTH

XMit 2007.06.13

EUT:	WILDR-MIU			**Work Order:**	CSCE0011
Serial Number:	5 3			**Date:**	09/15/08
Customer:	Cascade Engineering Services, Inc.			**Temperature:**	22°C
Attendees:	None			**Humidity:**	42%
Project:	None			**Barometric Pres.:**	30.04 in
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

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

COMMENTS

Measurement taken on external antenna transmit port at highest power for each channel

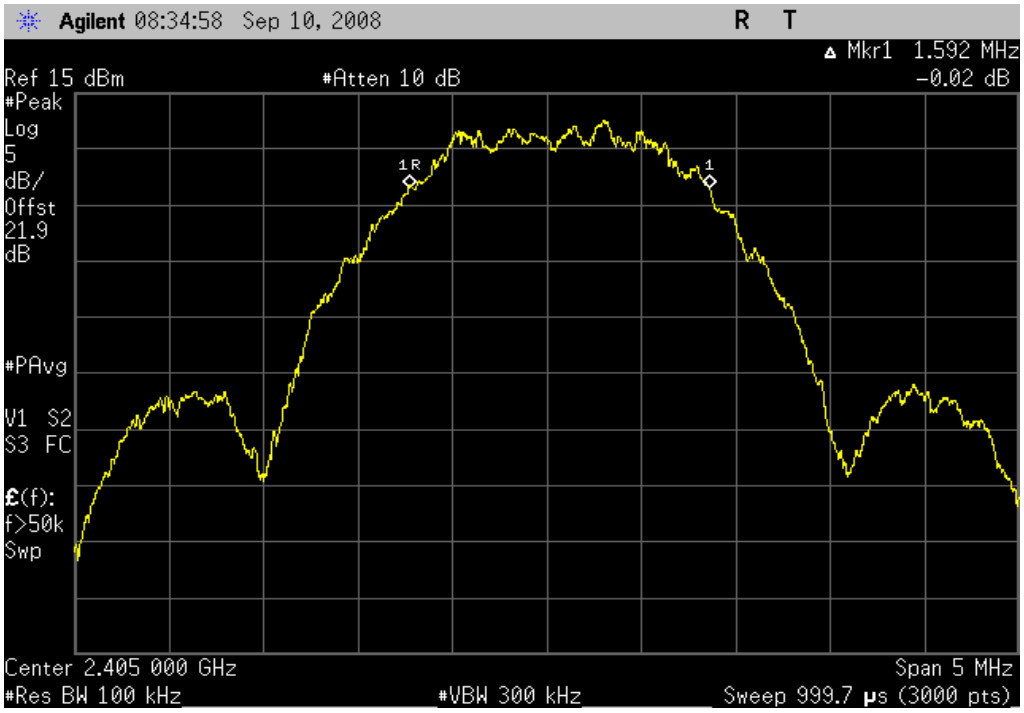
DEVIATIONS FROM TEST STANDARD

No Deviations

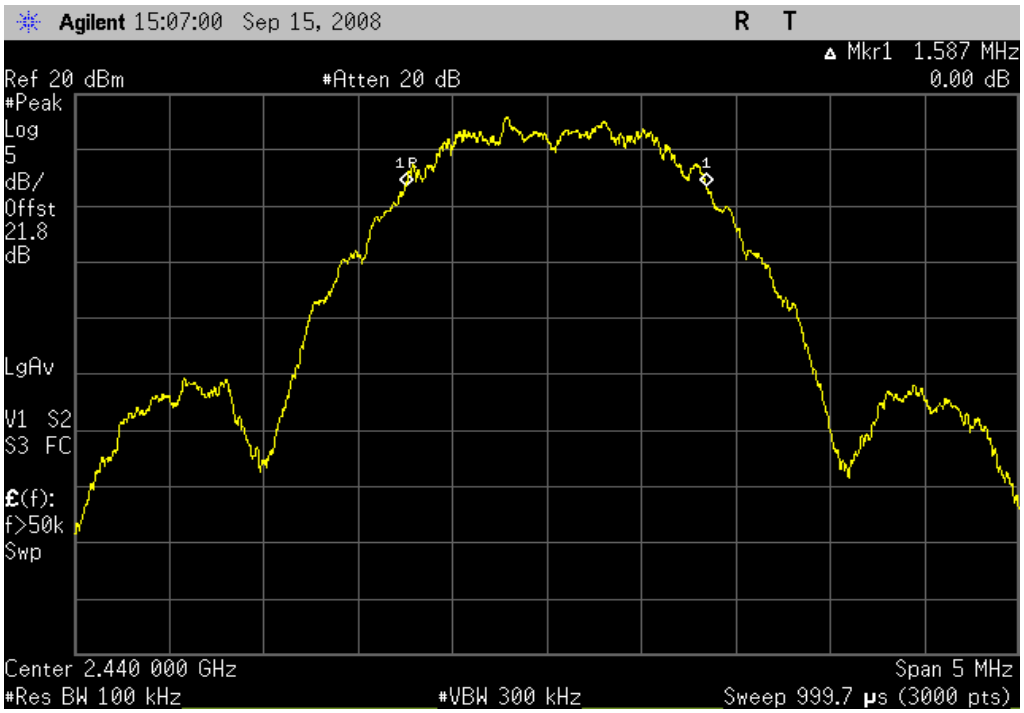
Configuration #	1	Signature

	Value	Limit	Results
Low Channel	1.592 MHz	> 500 kHz	Pass
Mid Channel	1.587 MHz	> 500 kHz	Pass
High Channel	1.586 MHz	> 500 kHz	Pass

Low Channel					
Result:	Pass	**Value:**	1.592 MHz	**Limit:**	> 500 kHz

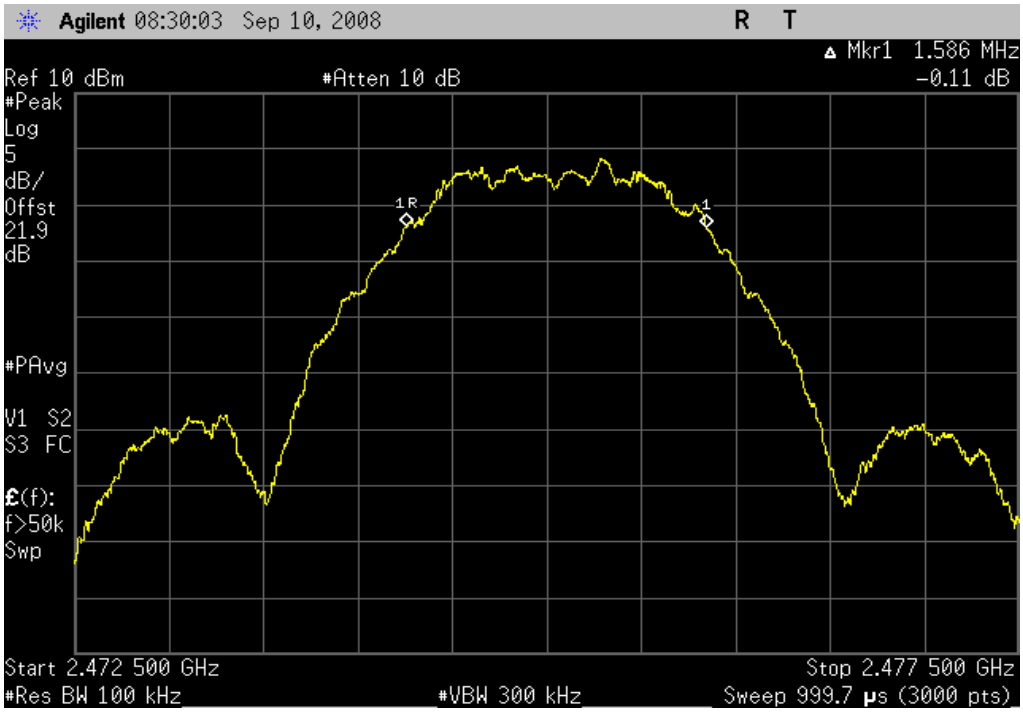


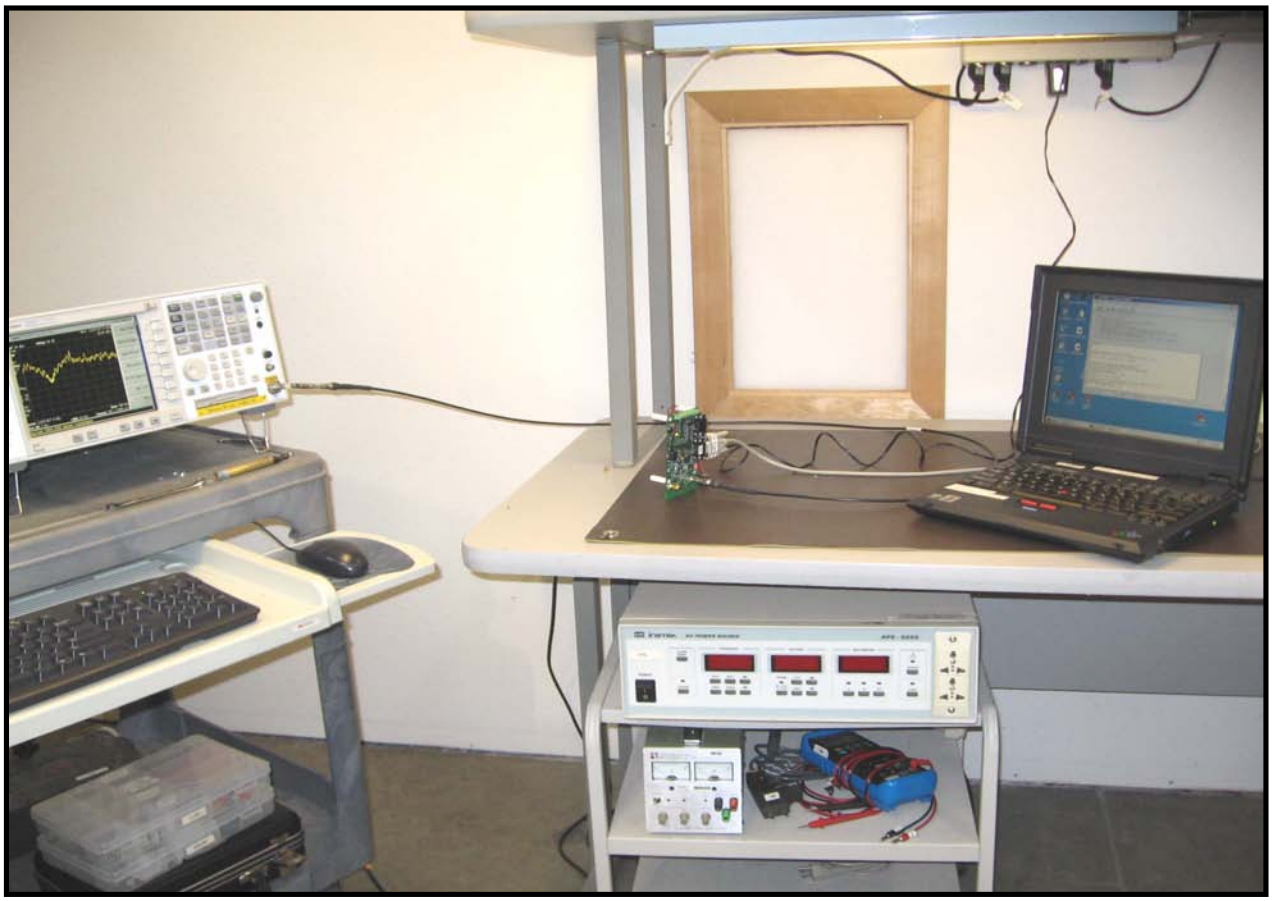
Mid Channel					
Result:	Pass	**Value:**	1.587 MHz	**Limit:**	> 500 kHz

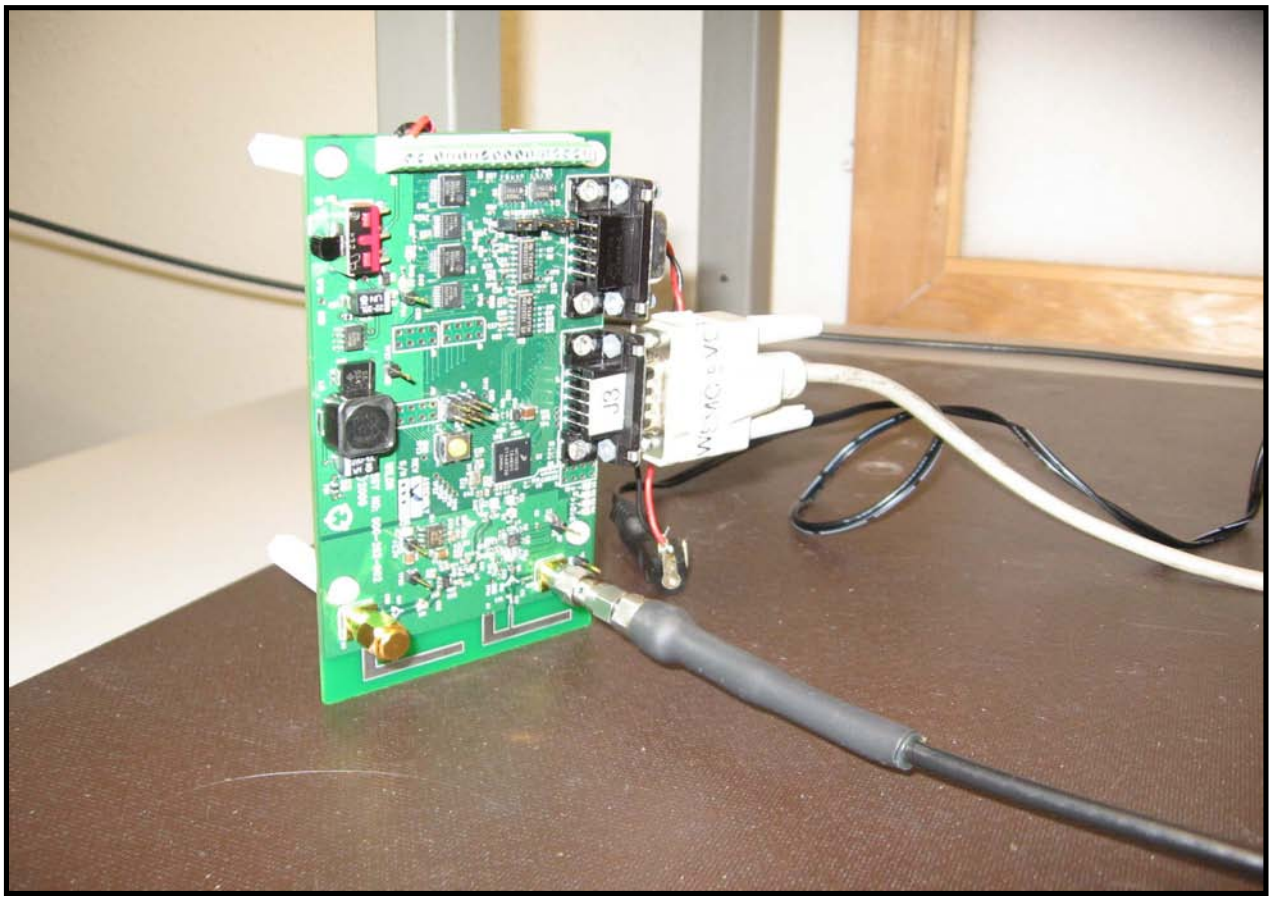


OCCUPIED BANDWIDTH

High Channel					
Result:	Pass	**Value:**	1.586 MHz	**Limit:**	> 500 kHz







PEAK 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
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	13
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13

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 EUT was operated at low, mid, and high power settings. The following settings were used on the customer provided control software:

Low Channel: Low power 0,1; Mid power 0,4; High power 2,6
Mid Channel: Low power 0,1; Mid power 0,6; High power 1,6
High Channel: Low power 0,1; Mid power 0,2; High power 2,6

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 in a no hop mode.

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

The maximum antenna gain of the antenna for this product is +7.0 dBi.

NORTHWEST EMC

PEAK OUTPUT POWER

XMit 2007.06.13

EUT:	WILDR-MIU			**Work Order:**	CSCE0011
Serial Number:	5 3			**Date:**	09/15/08
Customer:	Cascade Engineering Services, Inc.			**Temperature:**	22°C
Attendees:	None			**Humidity:**	42%
Project:	None			**Barometric Pres.:**	30.04 in
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

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

COMMENTS

Measurement taken on external antenna transmit port.

DEVIATIONS FROM TEST STANDARD

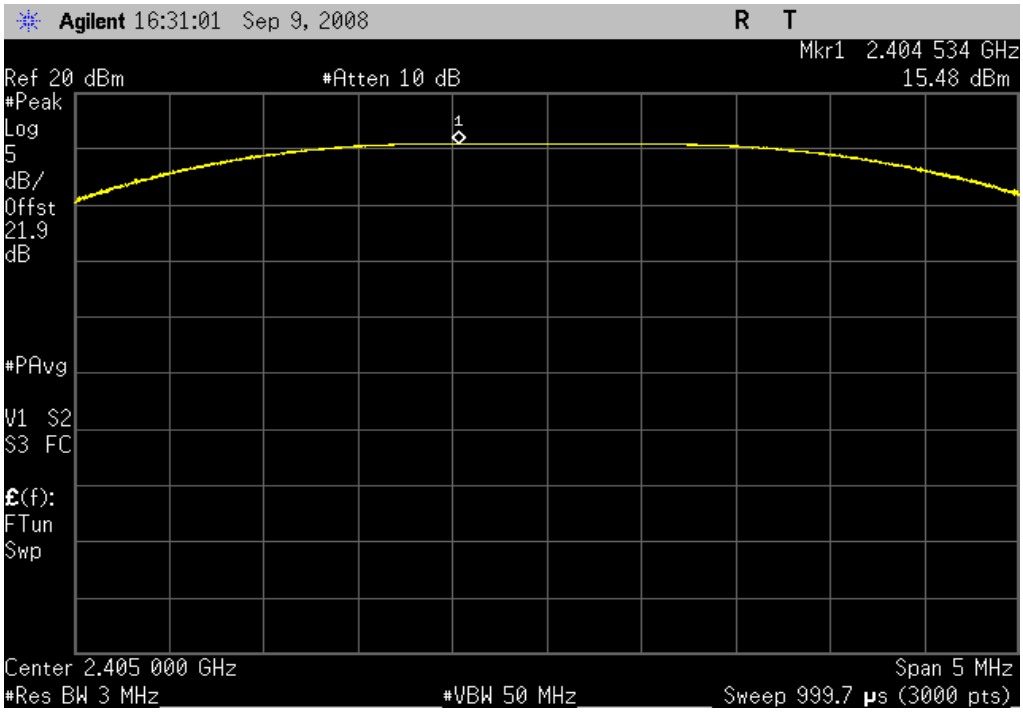
No deviations

Configuration #	1	Signature

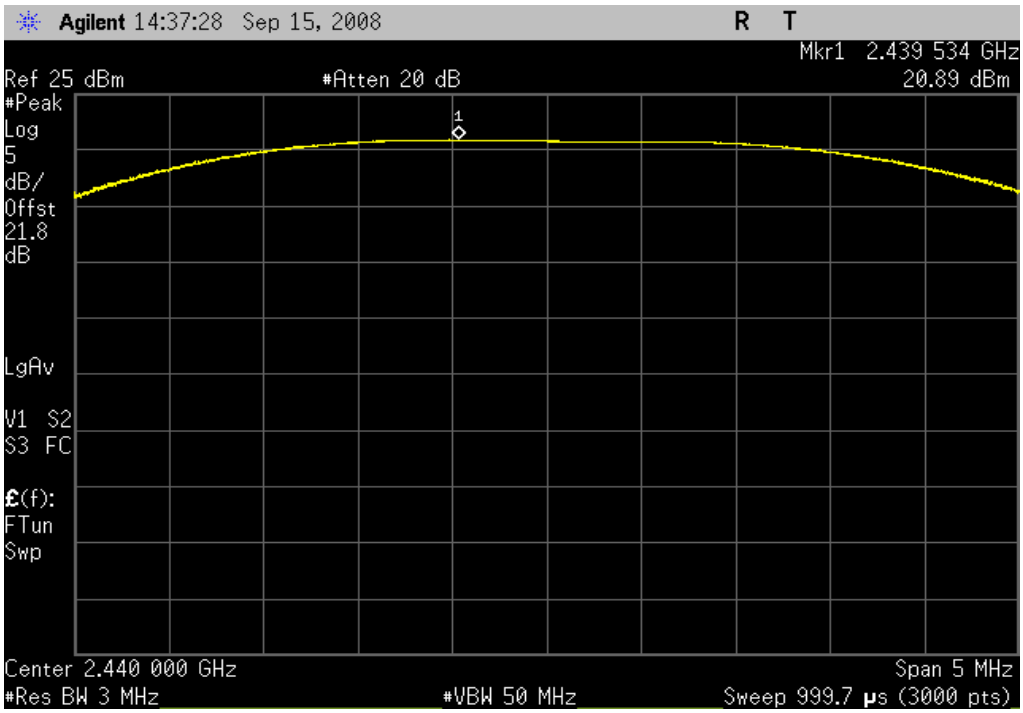
		Value	Limit	Results
High Power				
	Low Channel	15.48 dBm	29 dBm	Pass
	Mid Channel	20.89 dBm	29 dBm	Pass
	High Channel	6.95 dBM	29 dBm	Pass
Mid Power				
	Low Channel	11.32 dBm	29 dBm	Pass
	Mid Channel	13.49 dBm	29 dBm	Pass
	High Channel	4.01 dBm	29 dBm	Pass
Low Power				
	Low Channel	4.45 dBm	29 dBm	Pass
	Mid Channel	4.92 dBm	29 dBm	Pass
	High Channel	3.35 dBm	29 dBm	Pass

PEAK OUTPUT POWER

High Power, Low Channel					
Result:	Pass	**Value:**	15.48 dBm	**Limit:**	29 dBm

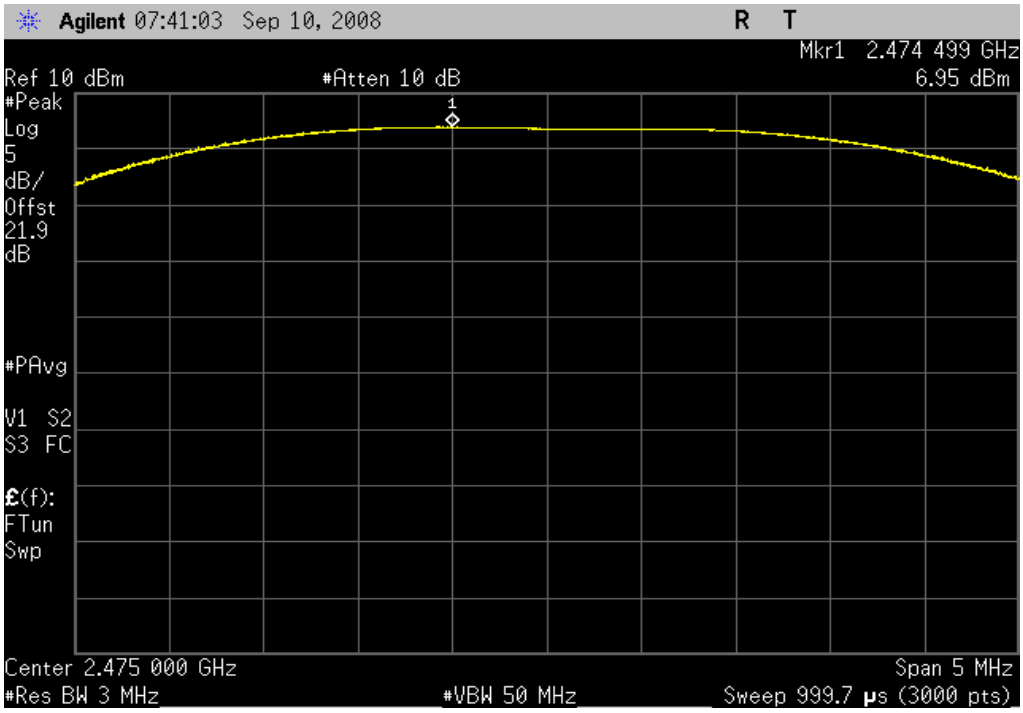


High Power, Mid Channel					
Result:	Pass	**Value:**	20.89 dBm	**Limit:**	29 dBm

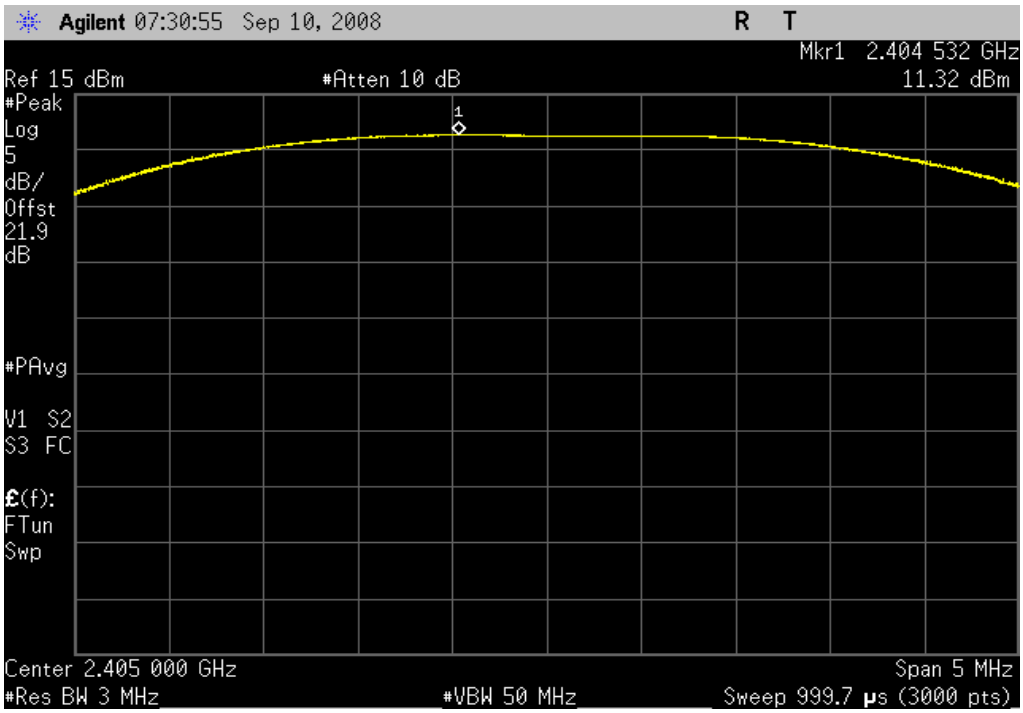


PEAK OUTPUT POWER

High Power, High Channel					
Result:	Pass	**Value:**	6.95 dBM	**Limit:**	29 dBm

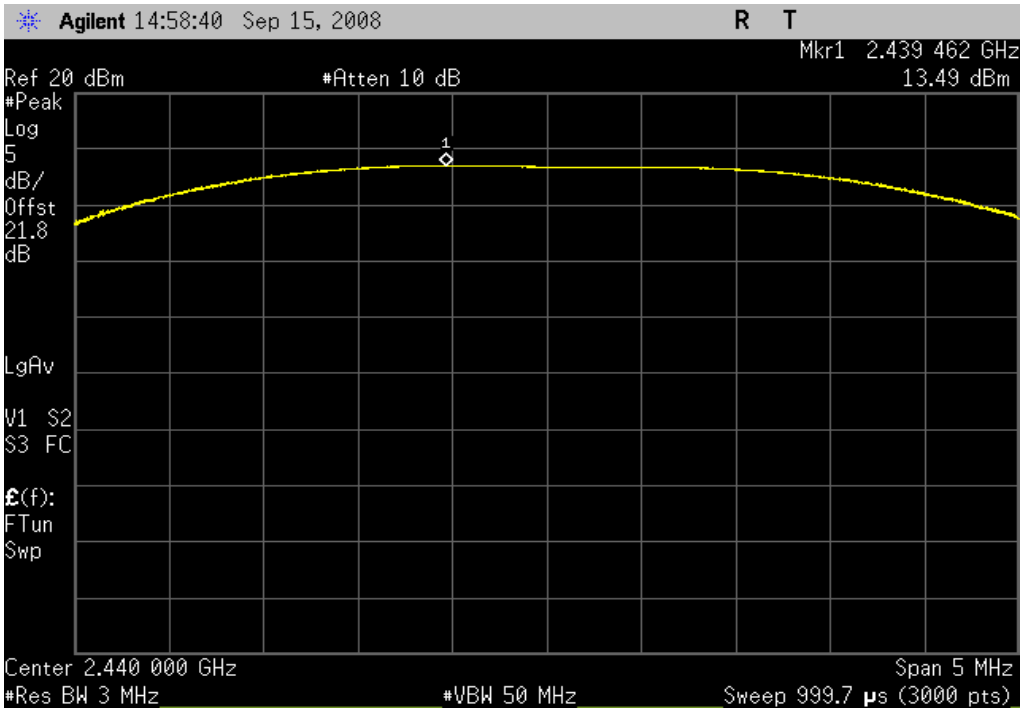


Mid Power, Low Channel					
Result:	Pass	**Value:**	11.32 dBm	**Limit:**	29 dBm

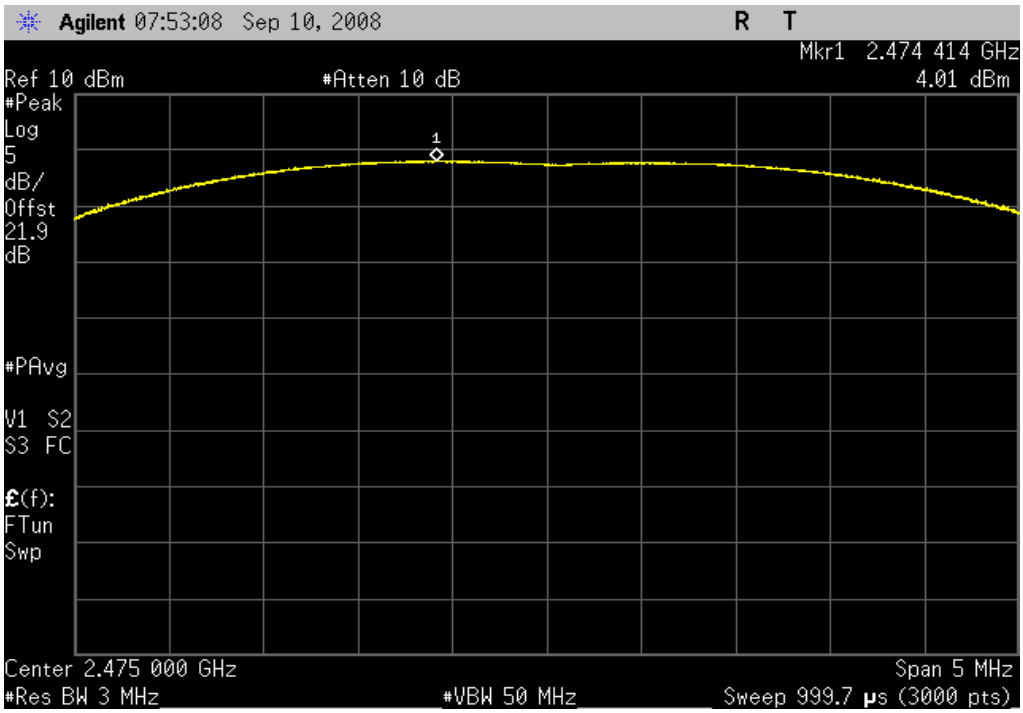


PEAK OUTPUT POWER

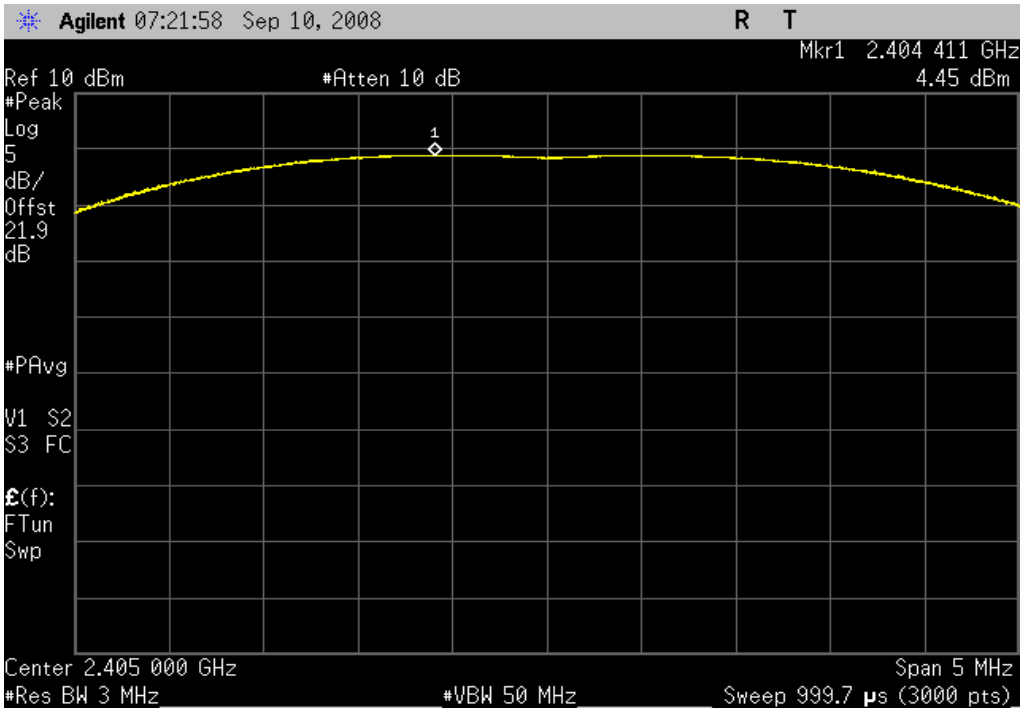
Mid Power, Mid Channel					
Result:	Pass	**Value:**	13.49 dBm	**Limit:**	29 dBm



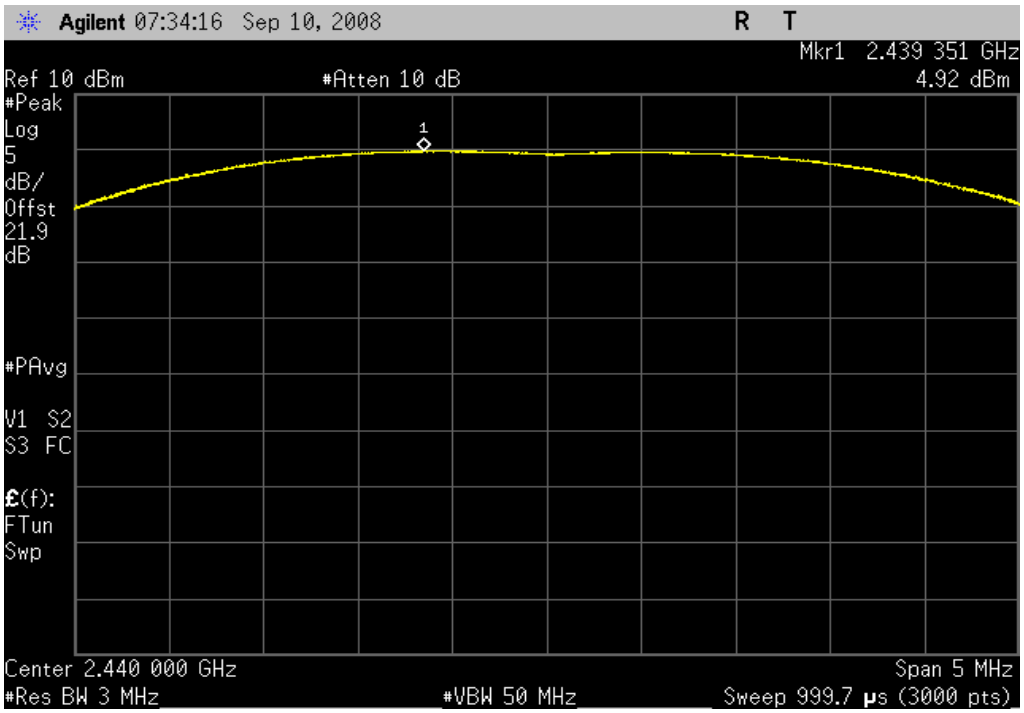
Mid Power, High Channel					
Result:	Pass	**Value:**	4.01 dBm	**Limit:**	29 dBm



Low Power, Low Channel					
Result:	Pass	**Value:**	4.45 dBm	**Limit:**	29 dBm

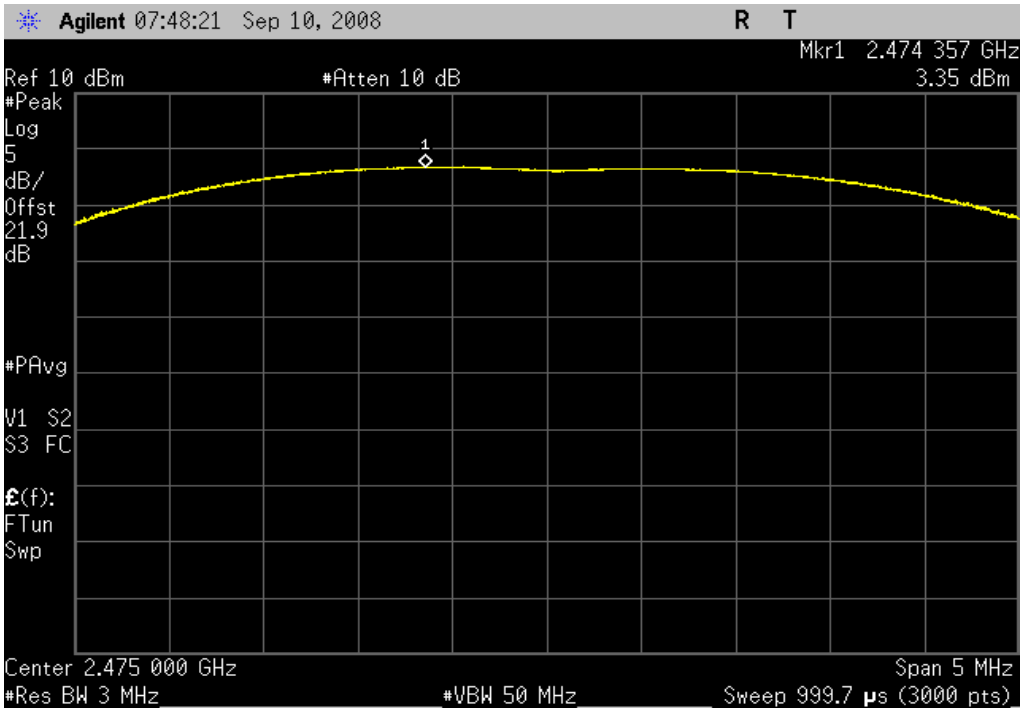


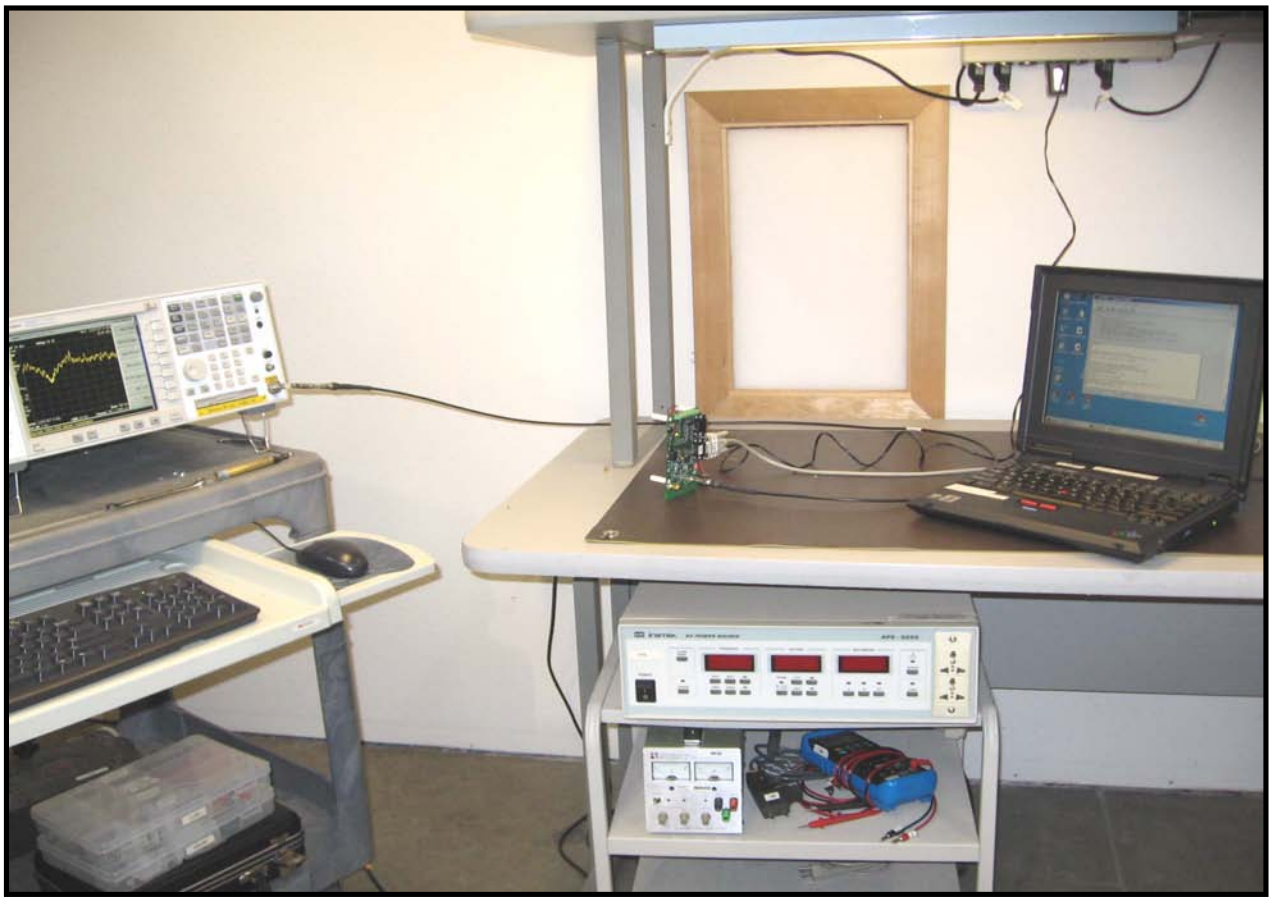
Low Power, Mid Channel					
Result:	Pass	**Value:**	4.92 dBm	**Limit:**	29 dBm

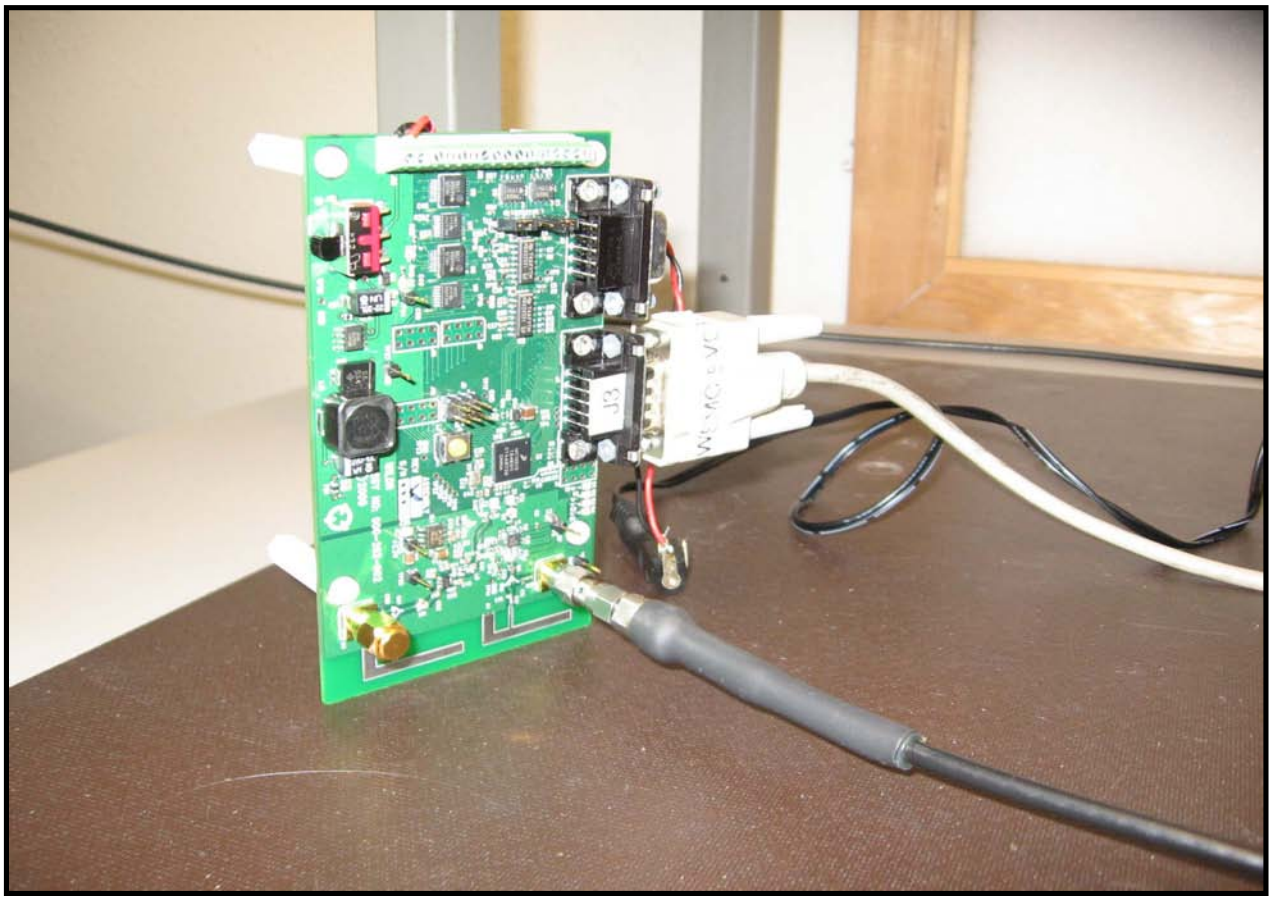


PEAK OUTPUT POWER

Low Power, High Channel					
Result:	Pass	**Value:**	3.35 dBm	**Limit:**	29 dBm







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	E4446A	AAT	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	13

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 at the edges of the authorized band were 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 and maximum output power. The channels closest to the band edges were selected.

NORTHWEST EMC

BAND EDGE COMPLIANCE

XMit 2007.06.13

EUT:	WILDR-MIU			Work Order:	CSCE0011
Serial Number:	5 3			Date:	09/10/08
Customer:	Cascade Engineering Services, Inc.			Temperature:	22°C
Attendees:	None			Humidity:	42%
Project:	None			Barometric Pres.:	30.04 in
Tested by:	Rod Peloquin	Power:	120VAC/60Hz	Job Site:	EV06

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

COMMENTS

Measurement taken on external antenna transmit port at highest power for each channel

DEVIATIONS FROM TEST STANDARD

No Deviations

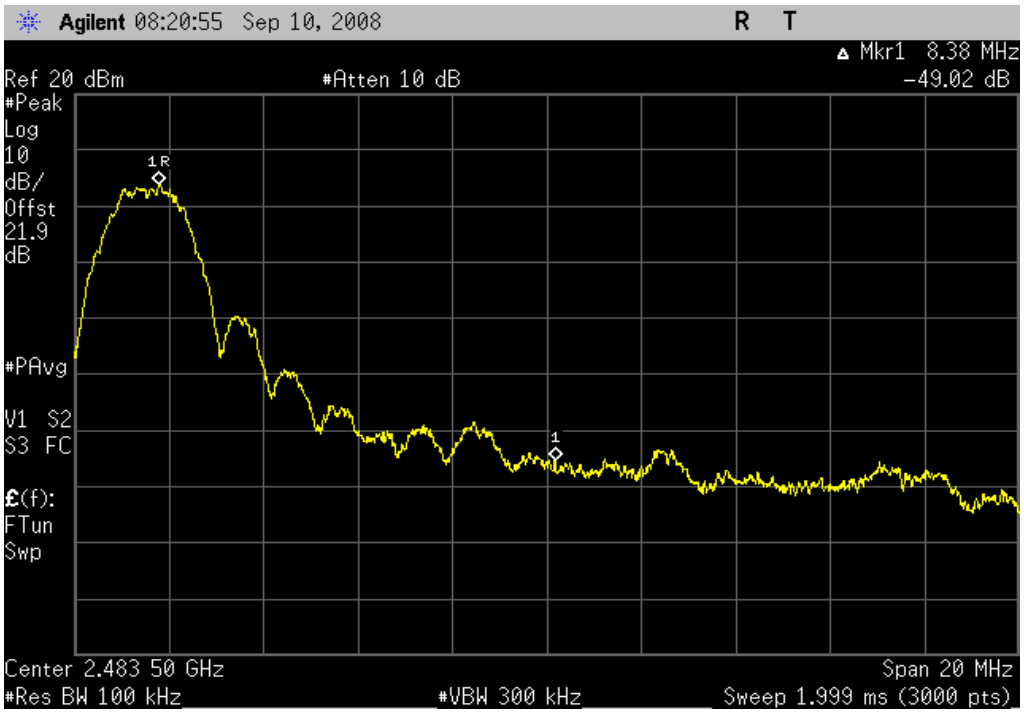
Configuration #	1	Signature

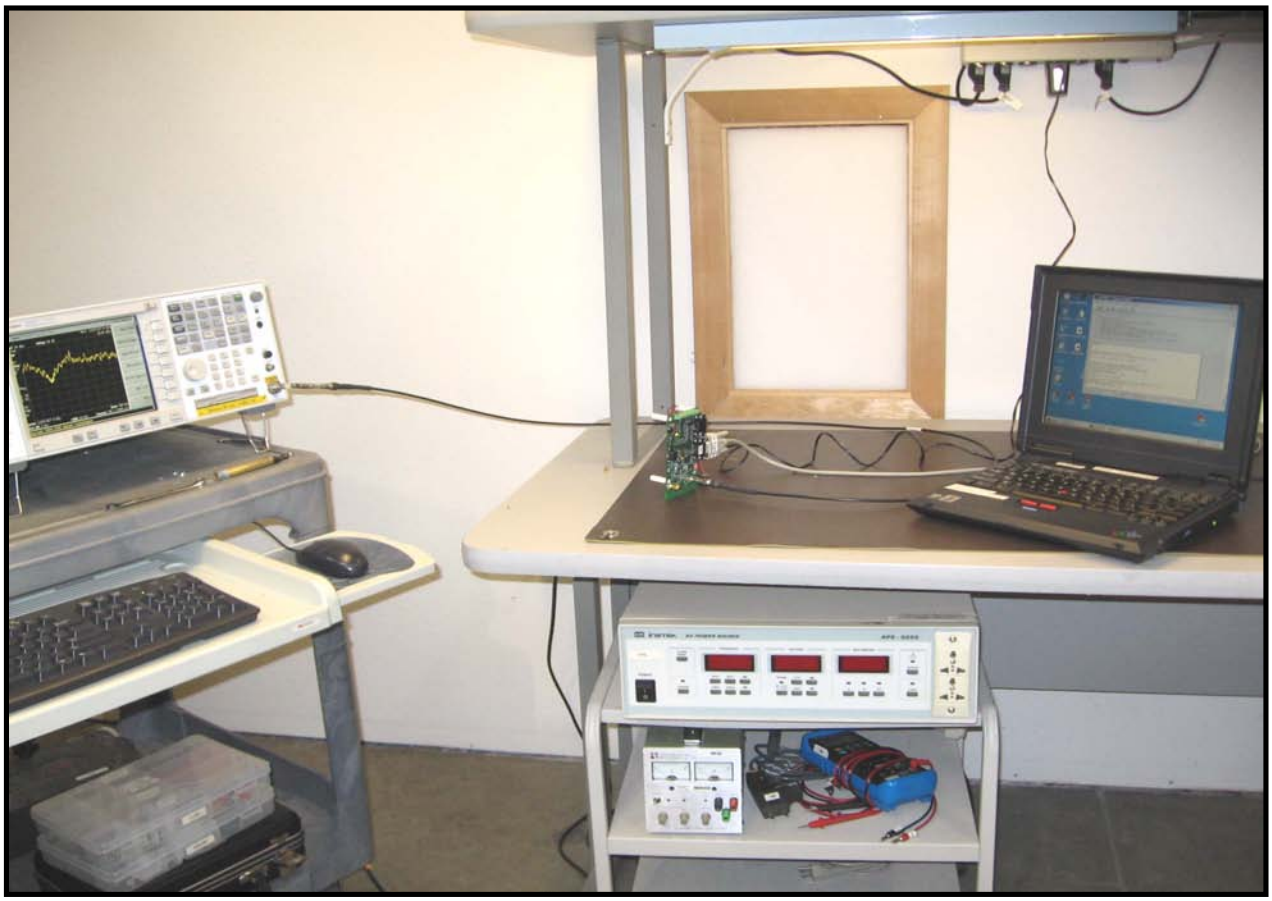
	Value	Limit	Results
Low Channel	- 43.24 dBc	≤ - 20 dBc	Pass
High Channel	- 49.02 dBc	≤ - 20 dBc	Pass

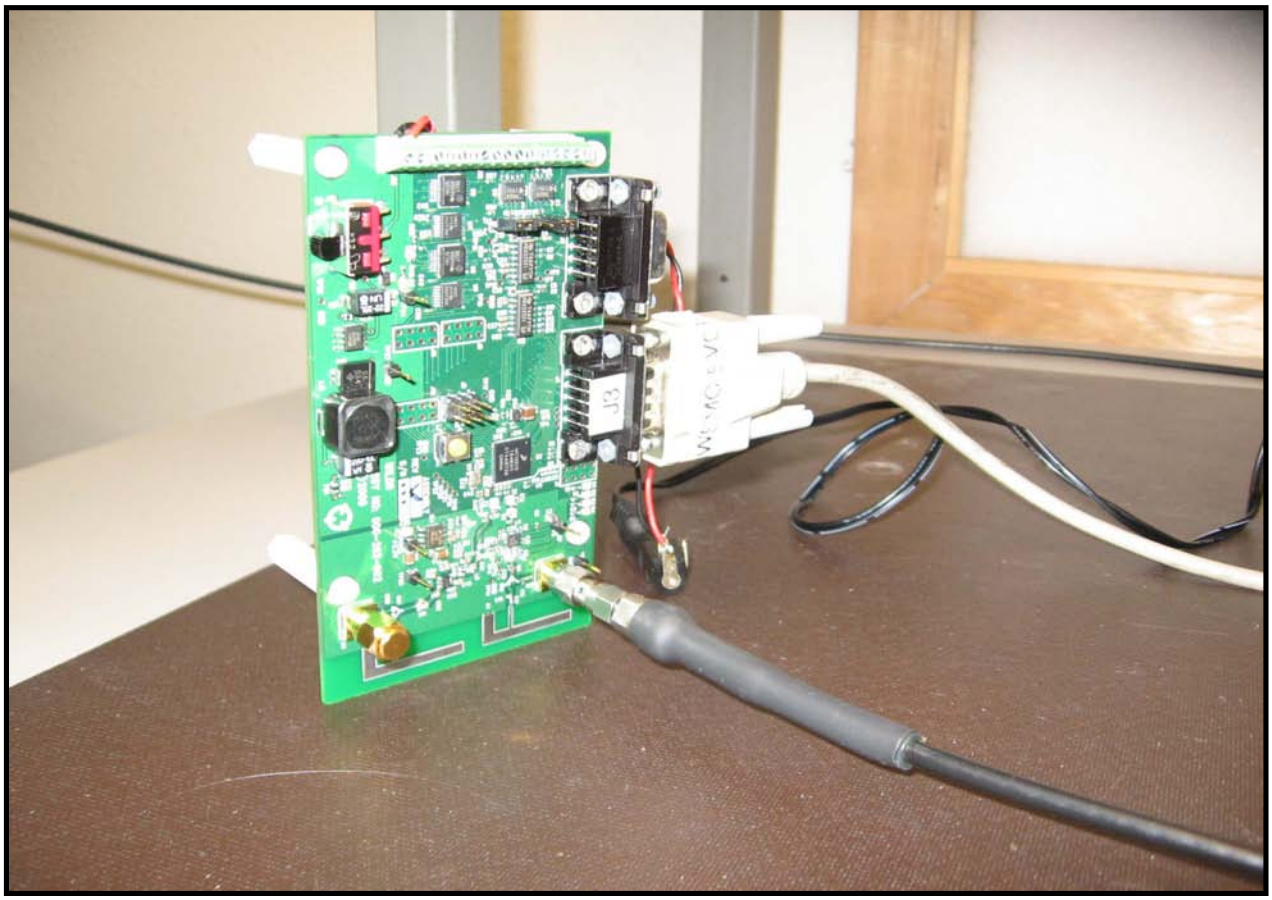
BAND EDGE COMPLIANCE

Low Channel					
Result:	Pass	**Value:**	- 43.24 dBc	**Limit:**	≤ - 20 dBc

High Channel					
Result:	Pass	**Value:**	- 49.02 dBc	**Limit:**	≤ - 20 dBc







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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	13

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. For each transmit frequency, the spectrum was scanned throughout the specified frequency range.

The following settings were used on the customer provided control software:

Low Channel, High power 2,6
Mid Channel: power 1,6
High Channel: High power 2,6

NORTHWEST EMC

SPURIOUS CONDUCTED EMISSIONS

XMit 2007.06.13

EUT:	WILDR-MIU			**Work Order:**	CSCE0011
Serial Number:	5 3			**Date:**	09/15/08
Customer:	Cascade Engineering Services, Inc.			**Temperature:**	22°C
Attendees:	None			**Humidity:**	42%
Project:	None			**Barometric Pres.:**	30.04 in
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

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

COMMENTS

Measurement taken on external antenna transmit port at highest power for each channel

DEVIATIONS FROM TEST STANDARD

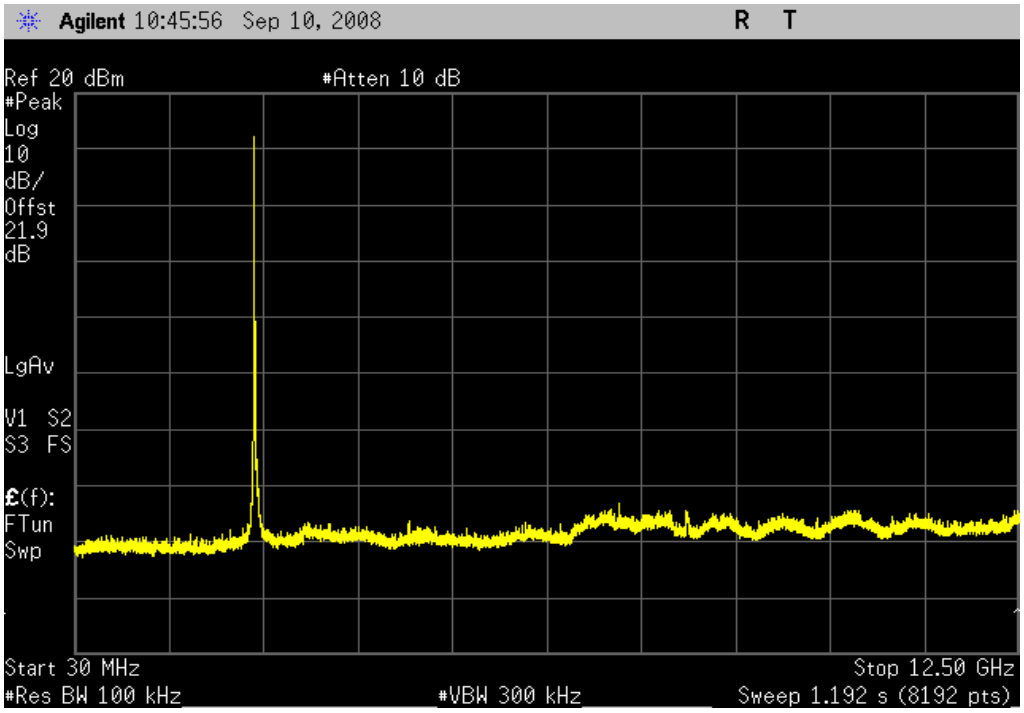
No deviations

Configuration #	1	Signature

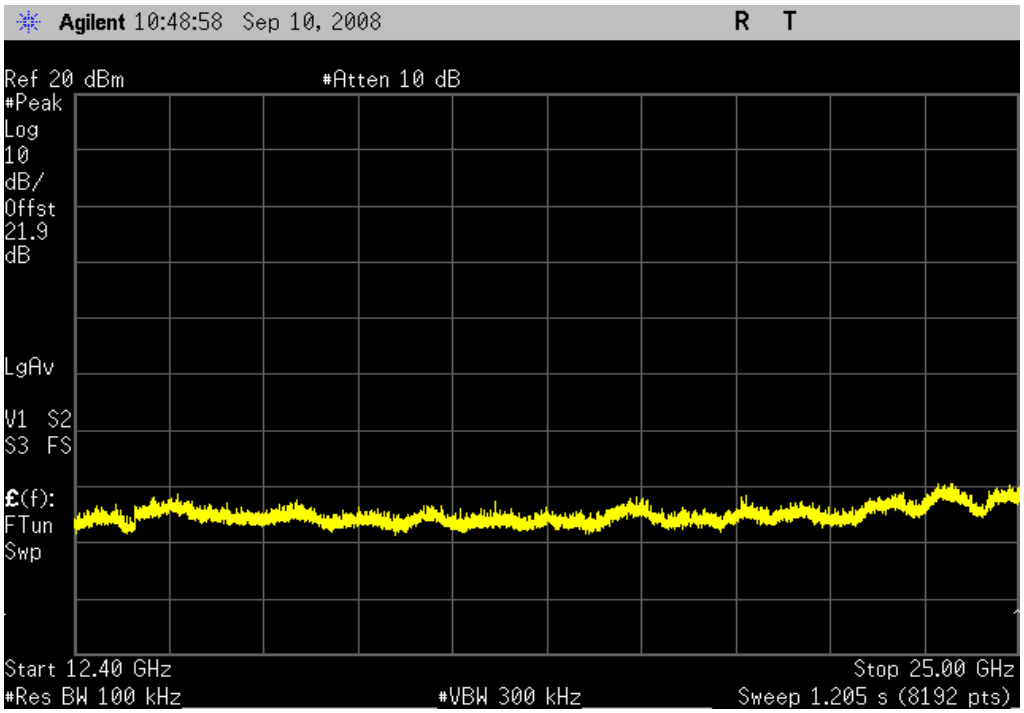
		Value	Limit	Results
Low Channel				
	30MHz - 12.5GHz	< - 50 dBc	≤ - 20 dBc	Pass
	12.4GHz - 25GHz	< - 50 dBc	≤ - 20 dBc	Pass
Mid Channel				
	30MHz - 12.5GHz	< - 50 dBc	≤ - 20 dBc	Pass
	12.4GHz - 25GHz	< - 50 dBc	≤ - 20 dBc	Pass
High Channel				
	30MHz - 12.5GHz	< - 50 dBc	≤ - 20 dBc	Pass
	12.4GHz - 25GHz	< - 50 dBc	≤ - 20 dBc	Pass

SPURIOUS CONDUCTED EMISSIONS

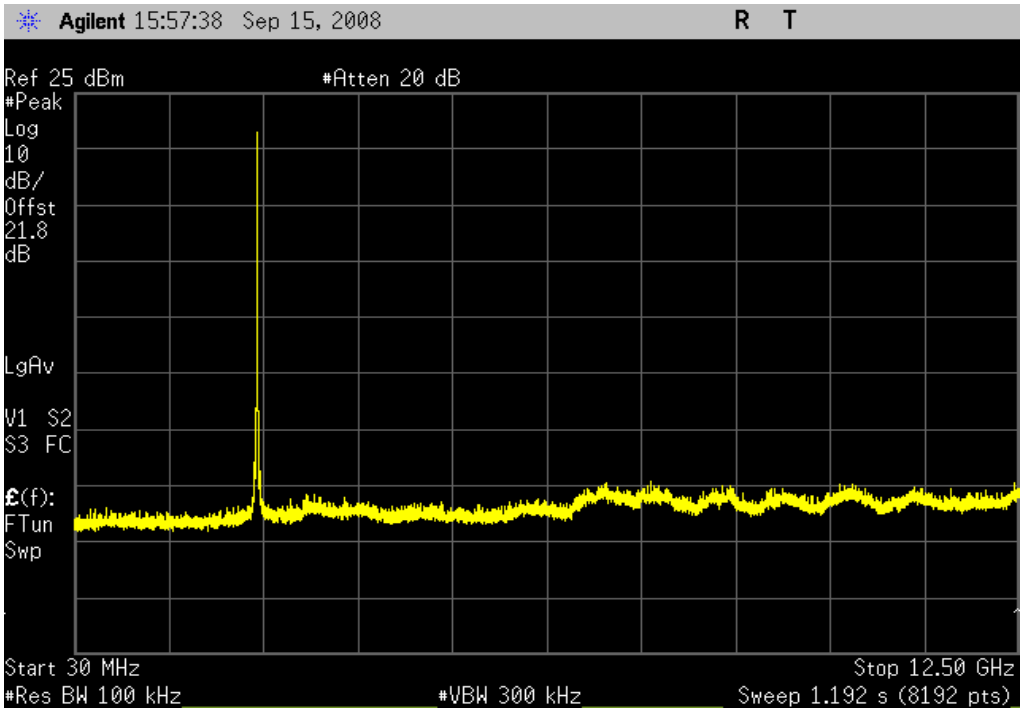
Low Channel, 0MHz - 12.5GHz					
Result:	Pass	**Value:**	< - 50 dBc	**Limit:**	≤ - 20 dBc



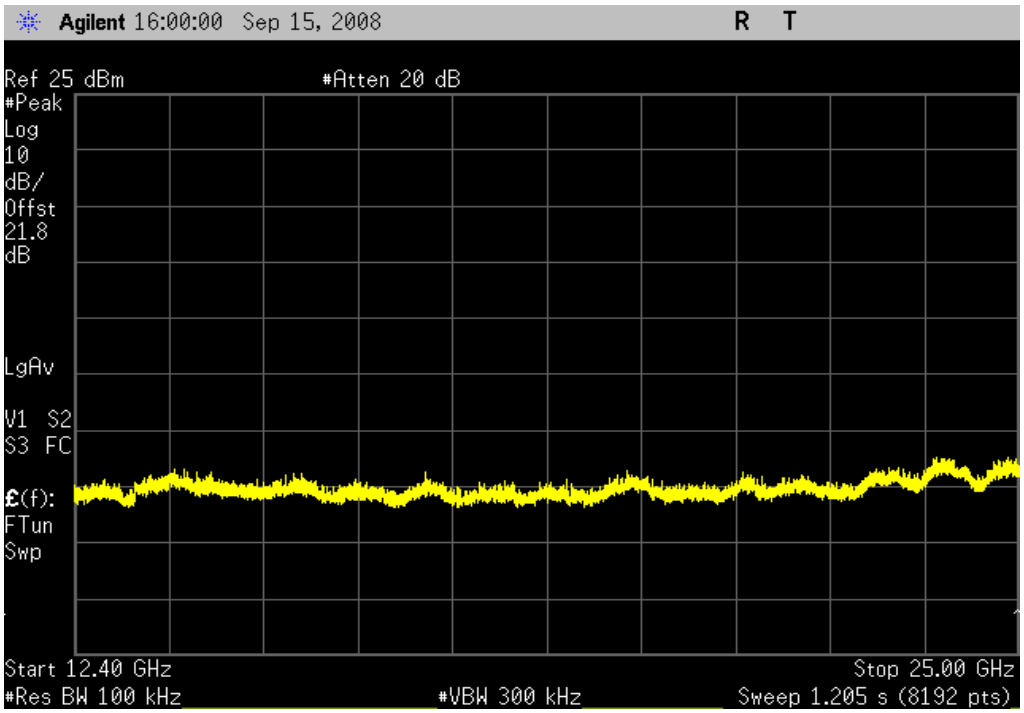
Low Channel, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< - 50 dBc	**Limit:**	≤ - 20 dBc



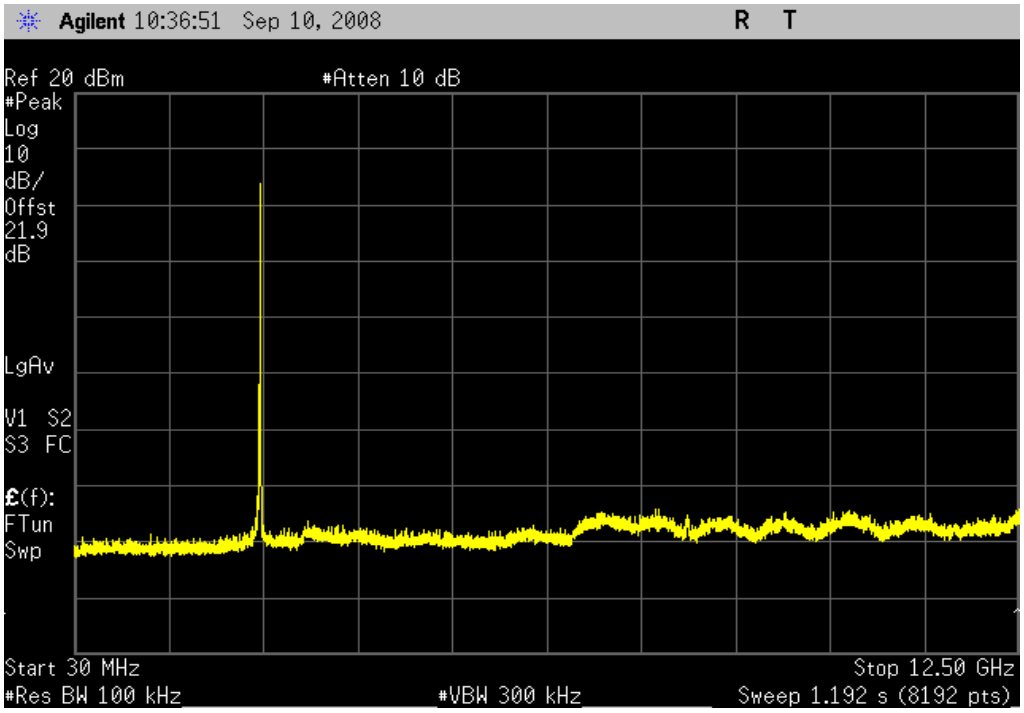
Mid Channel, 0MHz - 12.5GHz					
Result:	Pass	**Value:**	< - 50 dBc	**Limit:**	≤ - 20 dBc



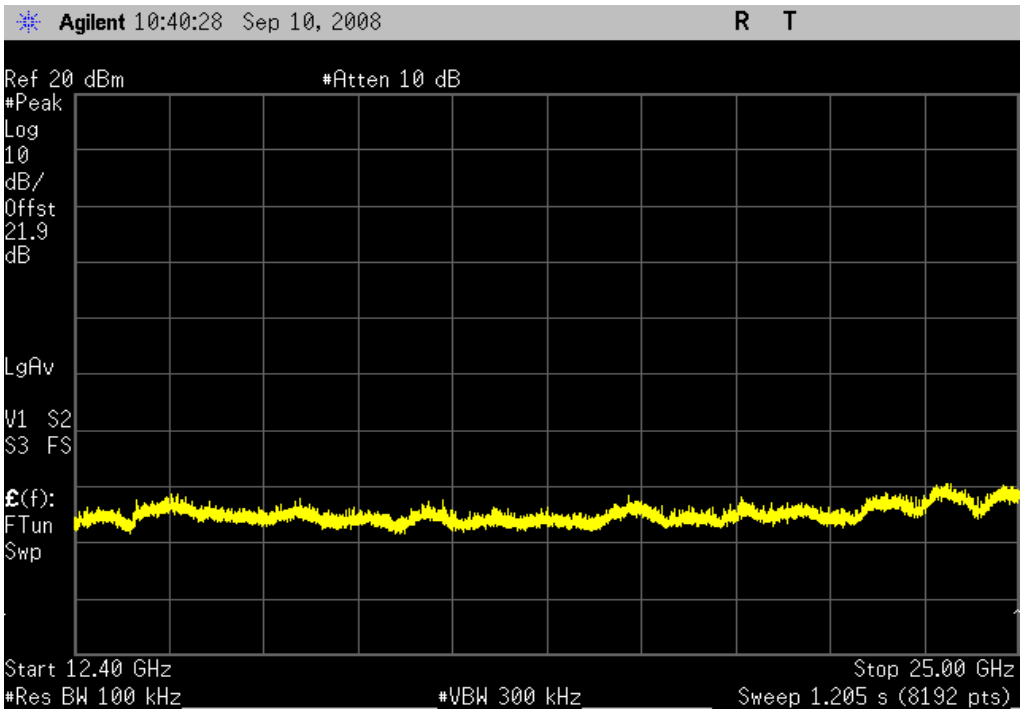
Mid Channel, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< - 50 dBc	**Limit:**	≤ - 20 dBc

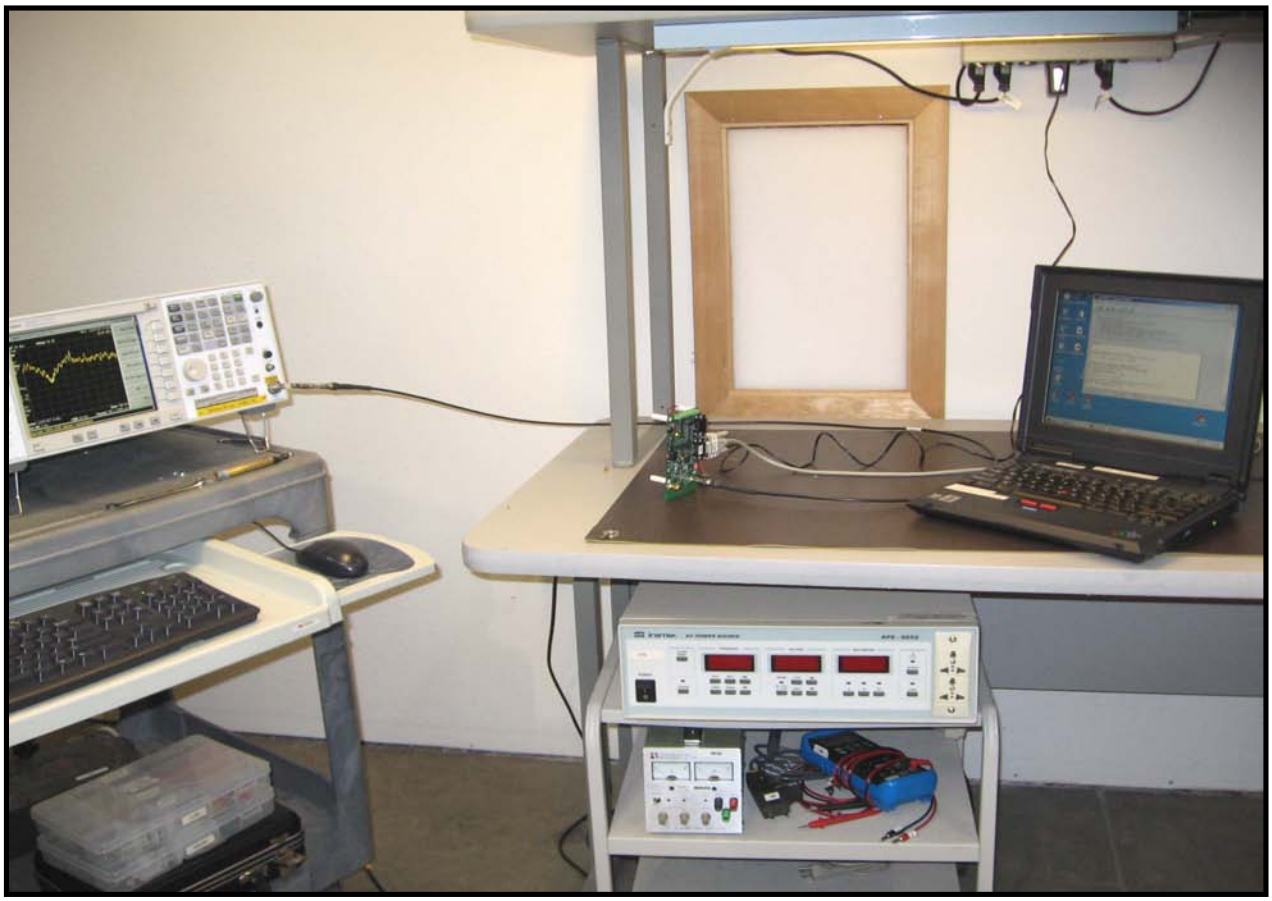


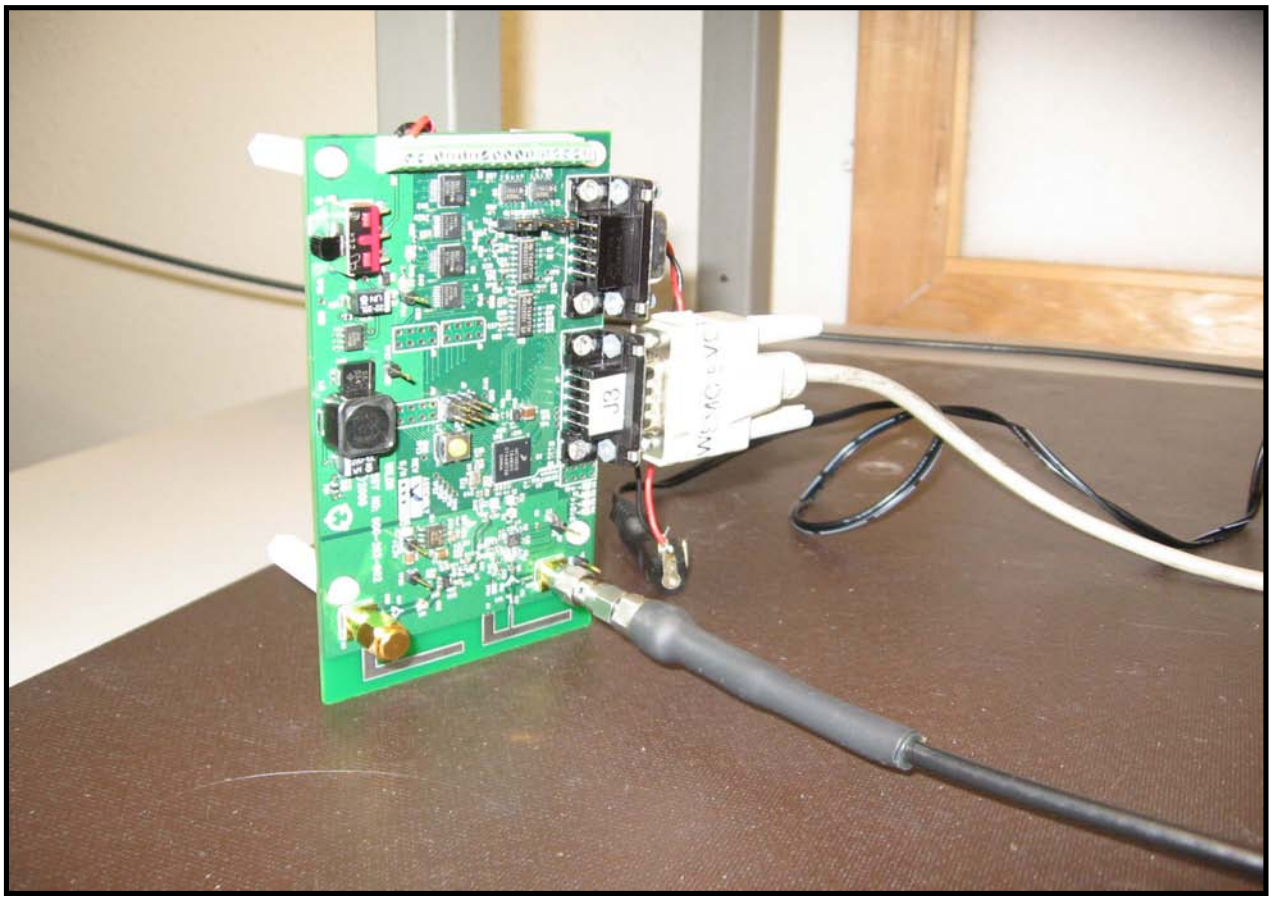
High Channel, 0MHz - 12.5GHz					
Result:	Pass	**Value:**	< - 50 dBc	**Limit:**	≤ - 20 dBc



High Channel, 12.4GHz - 25GHz					
Result:	Pass	**Value:**	< - 50 dBc	**Limit:**	≤ - 20 dBc







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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2007	13
Attenuator 20 dB, SMA M/F 26GHz	S.M. Electronics	SA26B-20	AUY	6/27/2008	13
Power Meter	Gigatronics	8651A	SPM	12/7/2007	13
Power Sensor	Gigatronics	80701A	SPL	12/7/2007	13
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2007	13

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. The following settings were used on the customer provided control software:

Low Channel, High power 2,6
Mid Channel: power 1,6
High Channel: High power 2,6

Per the procedure outlined in FCC KDB 558074, March 23, 2005, 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:	WILDR-MIU			**Work Order:**	CSCE0011
Serial Number:	5 3			**Date:**	09/15/08
Customer:	Cascade Engineering Services, Inc.			**Temperature:**	22°C
Attendees:	None			**Humidity:**	42%
Project:	None			**Barometric Pres.:**	30.04 in
Tested by:	Rod Peloquin	**Power:**	120VAC/60Hz	**Job Site:**	EV06

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

COMMENTS

Measurement taken on external antenna transmit port at highest power for each channel

DEVIATIONS FROM TEST STANDARD

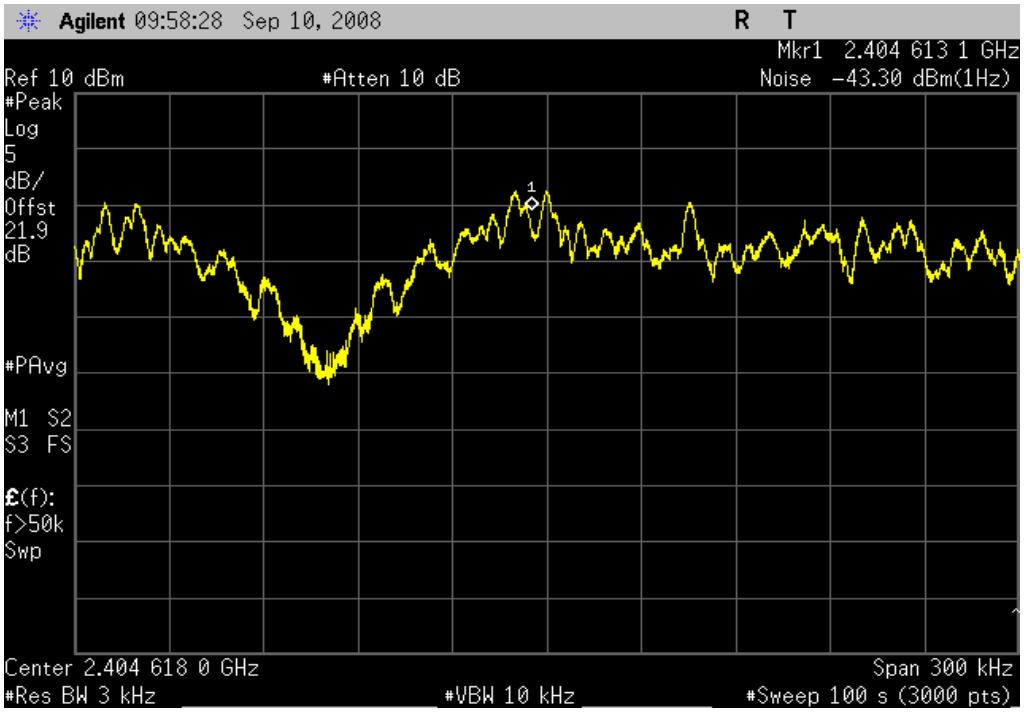
No Deviations

Configuration #	1	Signature

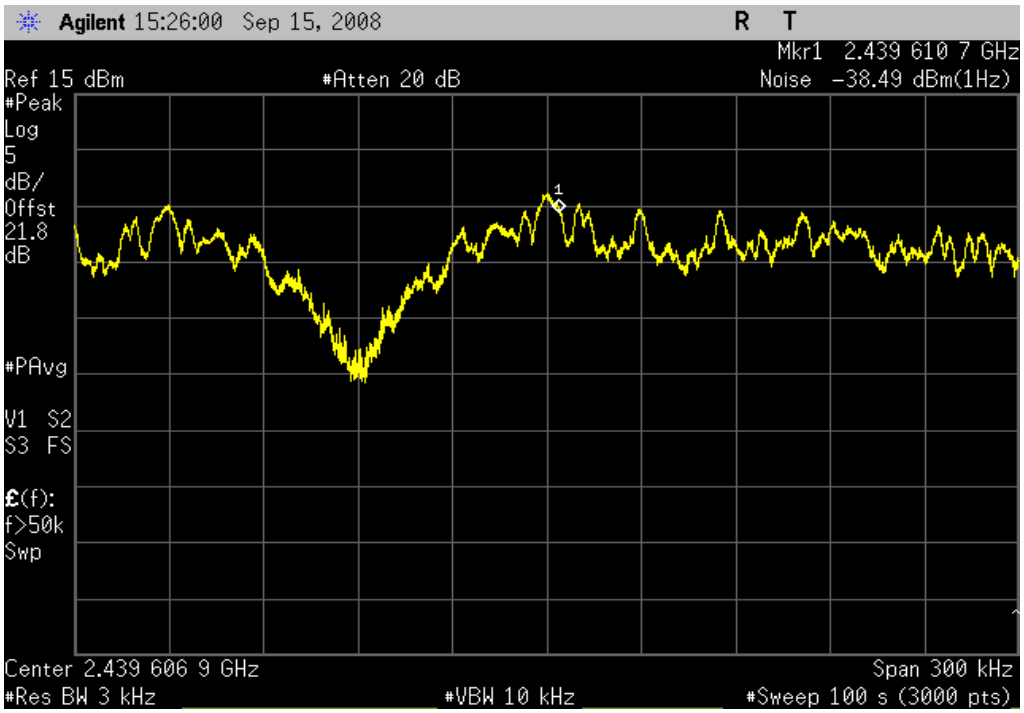
	Value	Limit	Results
Low Channel	- 8.3 dBm / 3 kHz	8 dBm / 3 kHz	Pass
Mid Channel	- 3.49 dBm / 3 kHz	8 dBm / 3 kHz	Pass
High Channel	- 16.93 dBm / 3 kHz	8 dBm / 3 kHz	Pass

POWER SPECTRAL DENSITY

Low Channel					
Result:	Pass	**Value:**	- 8.3 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz

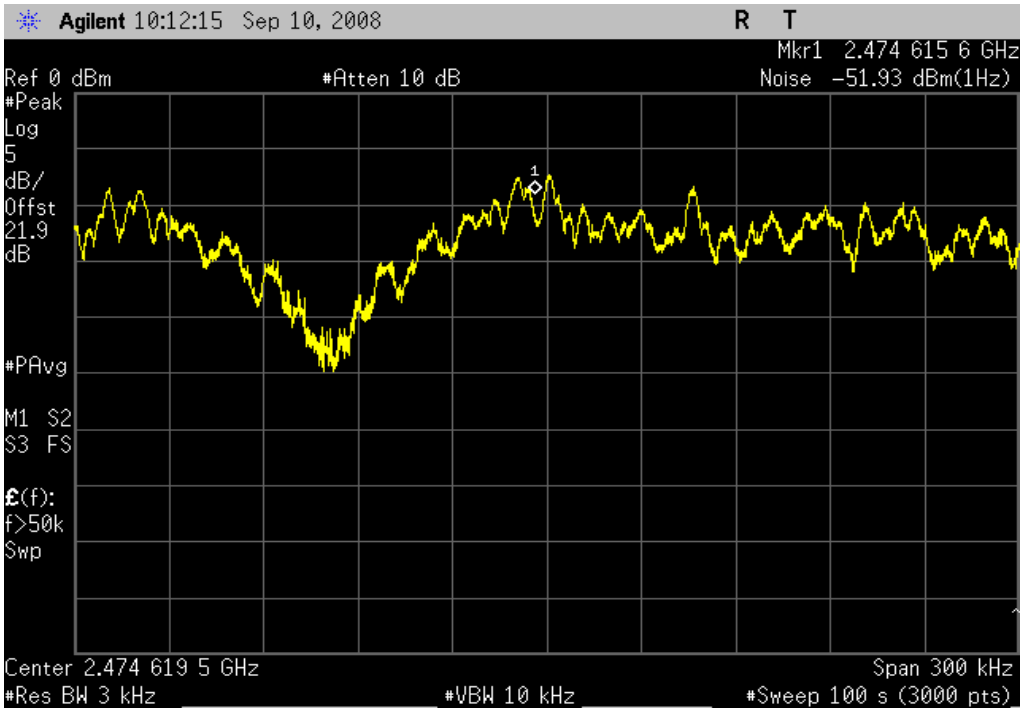


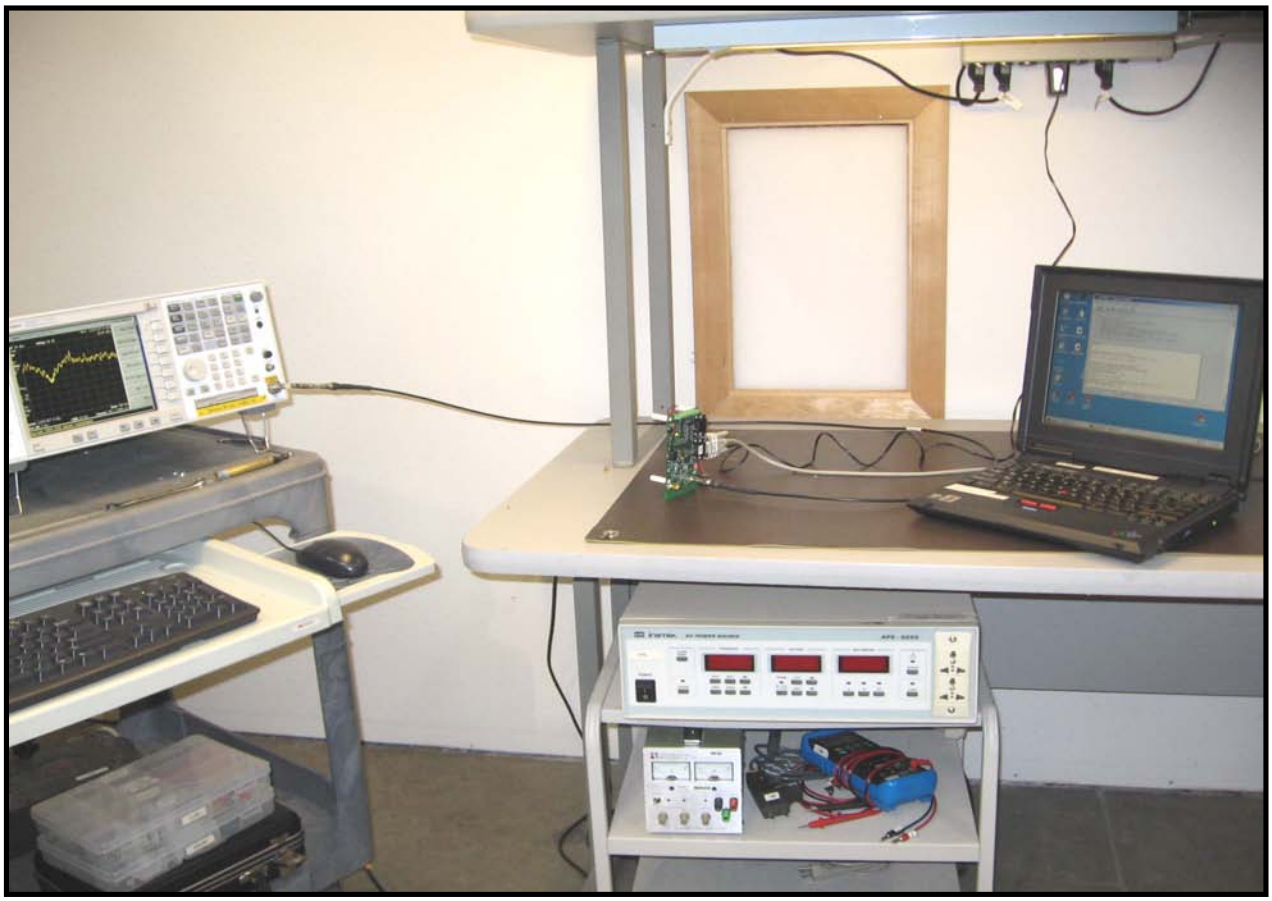
Mid Channel					
Result:	Pass	**Value:**	- 3.49 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz

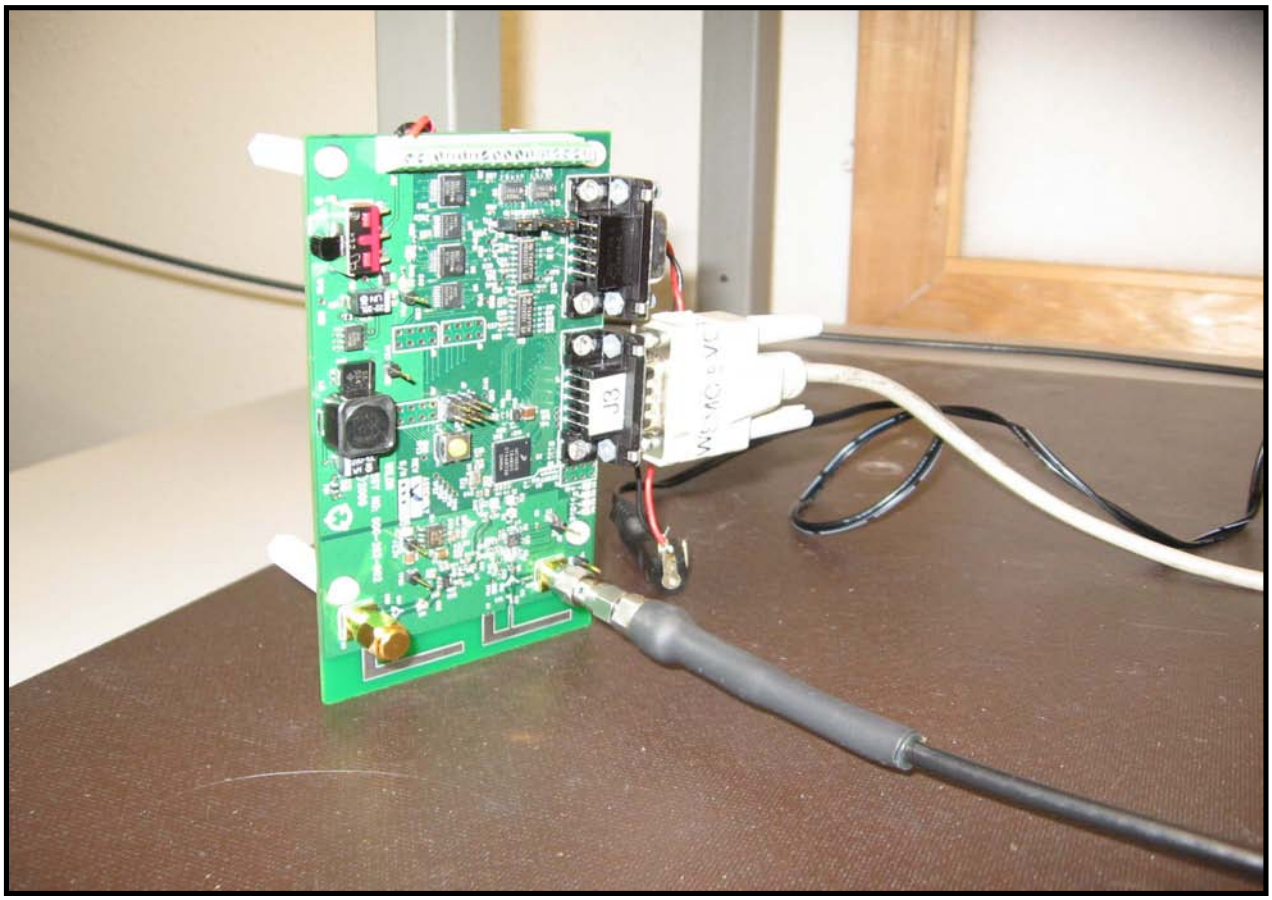


POWER SPECTRAL DENSITY

High Channel					
Result:	Pass	**Value:**	- 16.93 dBm / 3 kHz	**Limit:**	8 dBm / 3 kHz







AC POWERLINE 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
Transmitting high channel.
Transmitting mid channel.
Transmitting low channel.

POWER SETTINGS INVESTIGATED
120VAC/60Hz

CONFIGURATIONS INVESTIGATED
4

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Receiver	Rohde & Schwarz	ESCI	ARG	12/7/2007	13 mo
High Pass Filter	T.T.E.	7766	HFG	2/5/2008	13 mo
Attenuator	Coaxicom	66702 2910-20	ATO	6/30/2008	13 mo
EV07 Cables		Conducted Cables	EVG	5/2/2008	13 mo
LISN	Solar	9252-50-R-24-BNC	LIR	1/4/2008	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

AC POWERLINE CONDUCTED EMISSIONS

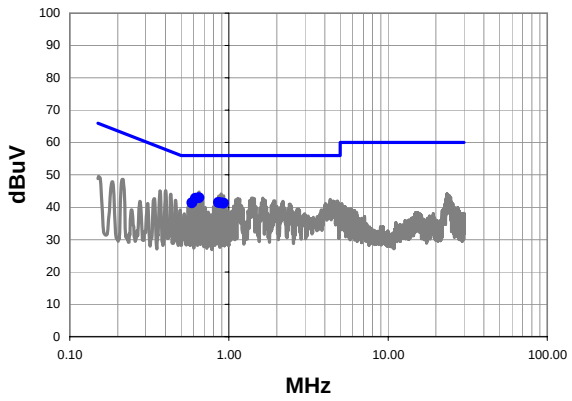
PSA-ESCI 2008.07.07
Version 2008.3.31

Work Order:	CSCE0011	**Date:**	09/12/08		
Project:	None	**Temperature:**	22°C		
Job Site:	EV07	**Humidity:**	42		
Serial Number:	5 3	**Barometric Pres.:**	30.04 in	**Tested by:**	Rod Peloquin
EUT:	WILDR-MIU				
Configuration:	4 - 15.207 AC Powerline Conducted Emissions				
Customer:	Cascade Engineering Services, Inc.				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmitting low channel.				
Deviations:	No deviations.				
Comments:	Both serial ports populated with unterminated cables				

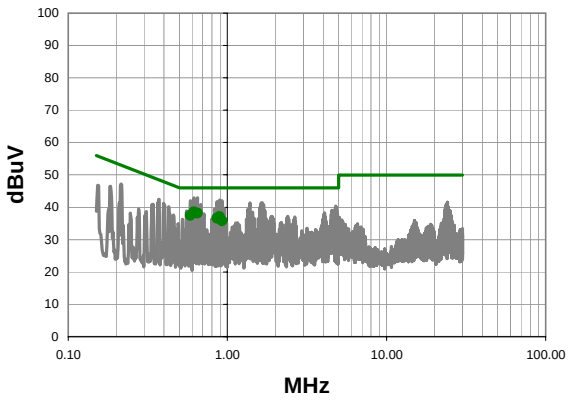
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	12	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.648	22.1	20.8	42.9	56.0	-13.1
0.616	21.9	20.8	42.7	56.0	-13.3
0.862	20.8	20.7	41.5	56.0	-14.5
0.893	20.7	20.6	41.3	56.0	-14.7
0.585	20.5	20.8	41.3	56.0	-14.7
0.927	20.6	20.6	41.2	56.0	-14.8

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.616	17.8	20.8	38.6	46.0	-7.4
0.648	17.4	20.8	38.2	46.0	-7.8
0.585	16.6	20.8	37.4	46.0	-8.6
0.893	16.4	20.6	37.0	46.0	-9.0
0.862	15.9	20.7	36.6	46.0	-9.4
0.927	15.2	20.6	35.8	46.0	-10.2

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

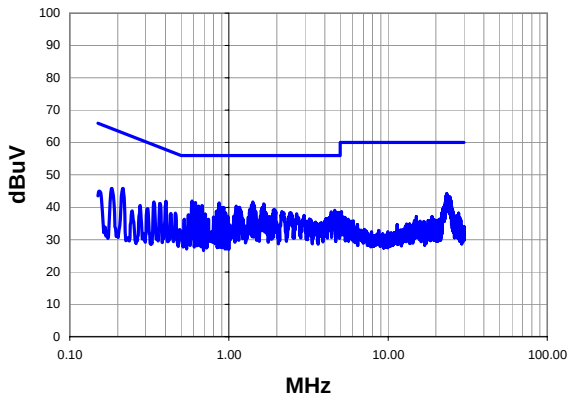
PSA-ESCI 2008.07.07
Version 2008.3.31

Work Order:	CSCE0011	**Date:**	09/12/08		
Project:	None	**Temperature:**	22°C		
Job Site:	EV07	**Humidity:**	42		
Serial Number:	5 3	**Barometric Pres.:**	30.04 in	**Tested by:**	Rod Peloquin
EUT:	WILDR-MIU				
Configuration:	4 - 15.207 AC Powerline Conducted Emissions				
Customer:	Cascade Engineering Services, Inc.				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmitting low channel.				
Deviations:	No deviations.				
Comments:	Both serial ports populated with unterminated cables				

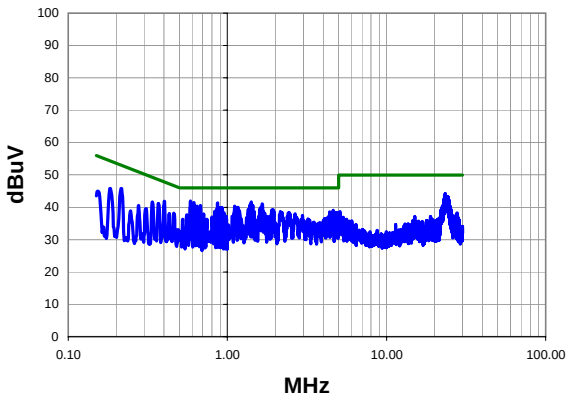
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	13	**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)
0.585	21.1	20.8	41.9	56.0	-14.1
1.416	21.1	20.6	41.7	56.0	-14.3
0.614	20.6	20.8	41.4	56.0	-14.6
0.867	20.7	20.7	41.4	56.0	-14.6
1.656	20.5	20.6	41.1	56.0	-14.9
1.384	20.2	20.6	40.8	56.0	-15.2
1.448	20.0	20.6	40.6	56.0	-15.4
0.677	19.8	20.8	40.6	56.0	-15.4
0.645	19.6	20.8	40.4	56.0	-15.6
1.112	19.8	20.6	40.4	56.0	-15.6
23.380	23.4	20.8	44.2	60.0	-15.8
1.632	19.5	20.6	40.1	56.0	-15.9
0.402	20.9	20.9	41.8	57.8	-16.0
1.160	19.4	20.6	40.0	56.0	-16.0
0.922	19.3	20.6	39.9	56.0	-16.1
1.128	19.3	20.6	39.9	56.0	-16.1
0.893	19.2	20.6	39.8	56.0	-16.2
23.530	23.0	20.8	43.8	60.0	-16.2
1.608	19.2	20.6	39.8	56.0	-16.2
23.500	22.8	20.8	43.6	60.0	-16.4

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.585	21.1	20.8	41.9	46.0	-4.1
1.416	21.1	20.6	41.7	46.0	-4.3
0.614	20.6	20.8	41.4	46.0	-4.6
0.867	20.7	20.7	41.4	46.0	-4.6
1.656	20.5	20.6	41.1	46.0	-4.9
1.384	20.2	20.6	40.8	46.0	-5.2
1.448	20.0	20.6	40.6	46.0	-5.4
0.677	19.8	20.8	40.6	46.0	-5.4
0.645	19.6	20.8	40.4	46.0	-5.6
1.112	19.8	20.6	40.4	46.0	-5.6
23.380	23.4	20.8	44.2	50.0	-5.8
1.632	19.5	20.6	40.1	46.0	-5.9
0.402	20.9	20.9	41.8	47.8	-6.0
1.160	19.4	20.6	40.0	46.0	-6.0
0.922	19.3	20.6	39.9	46.0	-6.1
1.128	19.3	20.6	39.9	46.0	-6.1
0.893	19.2	20.6	39.8	46.0	-6.2
23.530	23.0	20.8	43.8	50.0	-6.2
1.608	19.2	20.6	39.8	46.0	-6.2
23.500	22.8	20.8	43.6	50.0	-6.4

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

PSA-ESCI 2008.07.07
Version 2008.3.31

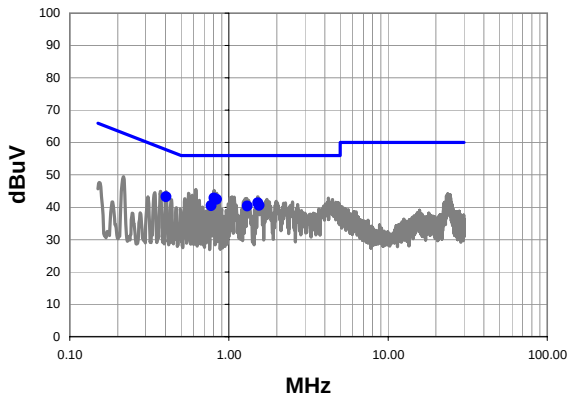
Work Order:	CSCE0011	**Date:**	09/12/08		
Project:	None	**Temperature:**	22°C		
Job Site:	EV07	**Humidity:**	42		
Serial Number:	5 3	**Barometric Pres.:**	30.04 in	**Tested by:**	Rod Peloquin

EUT:	WILDR-MIU
Configuration:	4 - 15.207 AC Powerline Conducted Emissions
Customer:	Cascade Engineering Services, Inc.
Attendees:	None
EUT Power:	120VAC/60Hz
Operating Mode:	Transmitting mid channel.
Deviations:	No deviations.
Comments:	Both serial ports populated with unterminated cables

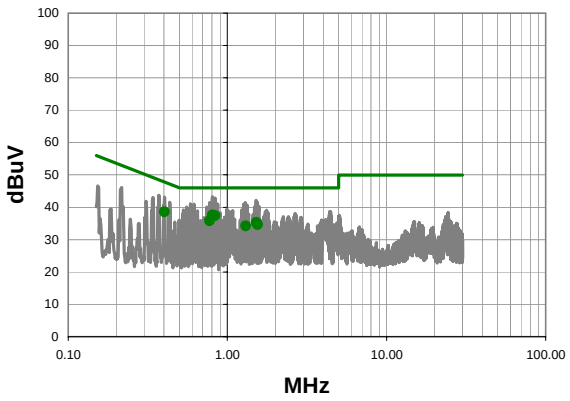
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	14	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.806	22.1	20.7	42.8	56.0	-13.2
0.837	21.8	20.7	42.5	56.0	-13.5
0.403	22.3	20.9	43.2	57.8	-14.5
1.520	20.8	20.6	41.4	56.0	-14.6
1.548	20.0	20.6	40.6	56.0	-15.4
0.774	19.7	20.7	40.4	56.0	-15.6
1.304	19.8	20.6	40.4	56.0	-15.6

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.806	16.9	20.7	37.6	46.0	-8.4
0.837	16.7	20.7	37.4	46.0	-8.6
0.403	17.6	20.9	38.5	47.8	-9.2
0.774	15.1	20.7	35.8	46.0	-10.2
1.520	14.7	20.6	35.3	46.0	-10.7
1.548	14.0	20.6	34.6	46.0	-11.4
1.304	13.6	20.6	34.2	46.0	-11.8

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

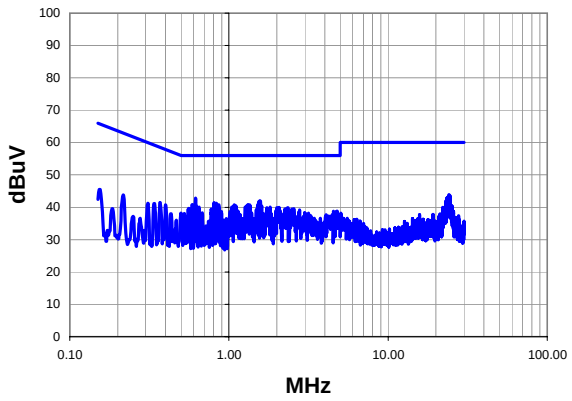
PSA-ESCI 2008.07.07
Version 2008.3.31

Work Order:	CSCE0011	**Date:**	09/12/08		
Project:	None	**Temperature:**	22°C		
Job Site:	EV07	**Humidity:**	42		
Serial Number:	5 3	**Barometric Pres.:**	30.04 in	**Tested by:**	Rod Peloquin
EUT:	WILDR-MIU				
Configuration:	4 - 15.207 AC Powerline Conducted Emissions				
Customer:	Cascade Engineering Services, Inc.				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmitting mid channel.				
Deviations:	No deviations.				
Comments:	Both serial ports populated with unterminated cables				

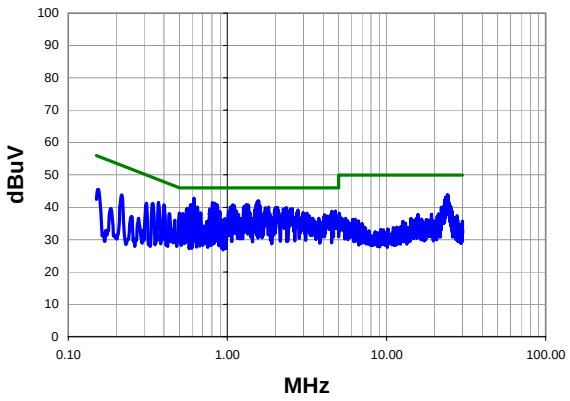
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	15	**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)
0.618	22.0	20.8	42.8	56.0	-13.2
1.568	21.4	20.6	42.0	56.0	-14.0
1.544	21.2	20.6	41.8	56.0	-14.2
0.806	20.7	20.7	41.4	56.0	-14.6
0.835	20.6	20.7	41.3	56.0	-14.7
1.320	20.3	20.6	40.9	56.0	-15.1
0.589	20.0	20.8	40.8	56.0	-15.2
1.352	20.2	20.6	40.8	56.0	-15.2
1.512	20.2	20.6	40.8	56.0	-15.2
1.080	20.2	20.6	40.8	56.0	-15.2
0.864	20.1	20.7	40.8	56.0	-15.2
1.296	19.9	20.6	40.5	56.0	-15.5
1.104	19.9	20.6	40.5	56.0	-15.5
1.608	19.8	20.6	40.4	56.0	-15.6
0.648	19.3	20.8	40.1	56.0	-15.9
1.816	19.5	20.6	40.1	56.0	-15.9
1.264	19.5	20.6	40.1	56.0	-15.9
1.040	19.5	20.6	40.1	56.0	-15.9
2.064	19.4	20.6	40.0	56.0	-16.0
24.190	23.1	20.8	43.9	60.0	-16.1

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.618	22.0	20.8	42.8	46.0	-3.2
1.568	21.4	20.6	42.0	46.0	-4.0
1.544	21.2	20.6	41.8	46.0	-4.2
0.806	20.7	20.7	41.4	46.0	-4.6
0.835	20.6	20.7	41.3	46.0	-4.7
1.320	20.3	20.6	40.9	46.0	-5.1
0.589	20.0	20.8	40.8	46.0	-5.2
1.352	20.2	20.6	40.8	46.0	-5.2
1.512	20.2	20.6	40.8	46.0	-5.2
1.080	20.2	20.6	40.8	46.0	-5.2
0.864	20.1	20.7	40.8	46.0	-5.2
1.296	19.9	20.6	40.5	46.0	-5.5
1.104	19.9	20.6	40.5	46.0	-5.5
1.608	19.8	20.6	40.4	46.0	-5.6
0.648	19.3	20.8	40.1	46.0	-5.9
1.816	19.5	20.6	40.1	46.0	-5.9
1.264	19.5	20.6	40.1	46.0	-5.9
1.040	19.5	20.6	40.1	46.0	-5.9
2.064	19.4	20.6	40.0	46.0	-6.0
24.190	23.1	20.8	43.9	50.0	-6.1

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

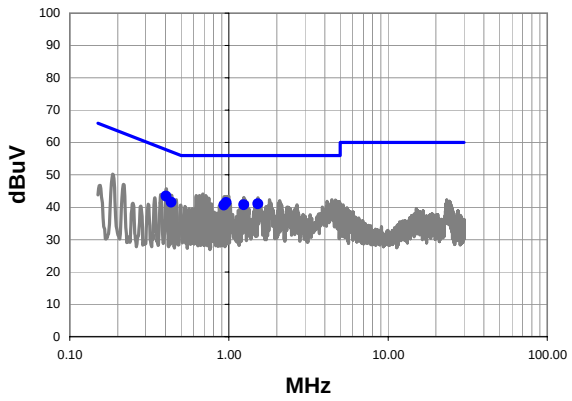
PSA-ESCI 2008.07.07
Version 2008.3.31

Work Order:	CSCE0011	**Date:**	09/12/08		
Project:	None	**Temperature:**	22°C		
Job Site:	EV07	**Humidity:**	42		
Serial Number:	5 3	**Barometric Pres.:**	30.04 in	**Tested by:**	Rod Peloquin
EUT:	WILDR-MIU				
Configuration:	4 - 15.207 AC Powerline Conducted Emissions				
Customer:	Cascade Engineering Services, Inc.				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmitting high channel.				
Deviations:	No deviations.				
Comments:	Both serial ports populated with unterminated cables				

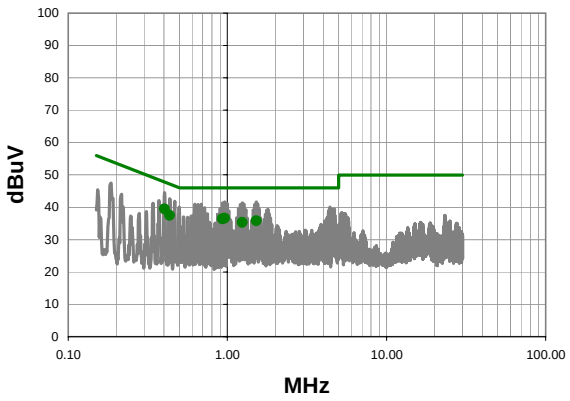
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	16	**Line:**	High Line	**Ext. Attenuation:**	20	**Results**	Pass

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.403	22.5	20.9	43.4	57.8	-14.3
0.964	20.8	20.6	41.4	56.0	-14.6
1.524	20.5	20.6	41.1	56.0	-14.9
1.244	20.2	20.6	40.8	56.0	-15.2
0.932	20.0	20.6	40.6	56.0	-15.4
0.434	20.6	20.9	41.5	57.2	-15.7

Average Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
0.403	18.5	20.9	39.4	47.8	-8.3
0.964	16.0	20.6	36.6	46.0	-9.4
0.932	15.8	20.6	36.4	46.0	-9.6
0.434	16.6	20.9	37.5	47.2	-9.7
1.524	15.2	20.6	35.8	46.0	-10.2
1.244	14.7	20.6	35.3	46.0	-10.7

NORTHWEST

EMC

AC POWERLINE CONDUCTED EMISSIONS

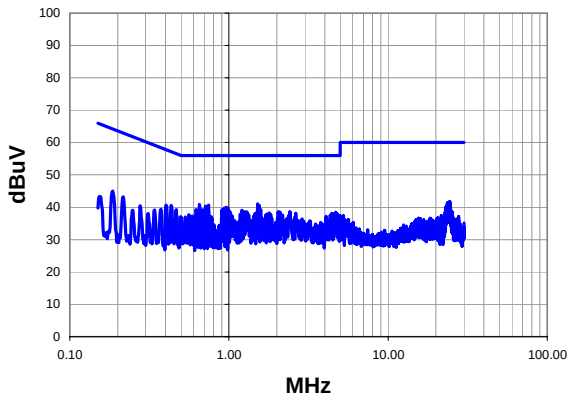
PSA-ESCI 2008.07.07
Version 2008.3.31

Work Order:	CSCE0011	**Date:**	09/12/08		
Project:	None	**Temperature:**	22°C		
Job Site:	EV07	**Humidity:**	42		
Serial Number:	5 3	**Barometric Pres.:**	30.04 in	**Tested by:**	Rod Peloquin
EUT:	WILDR-MIU				
Configuration:	4 - 15.207 AC Powerline Conducted Emissions				
Customer:	Cascade Engineering Services, Inc.				
Attendees:	None				
EUT Power:	120VAC/60Hz				
Operating Mode:	Transmitting high channel.				
Deviations:	No deviations.				
Comments:	Both serial ports populated with unterminated cables				

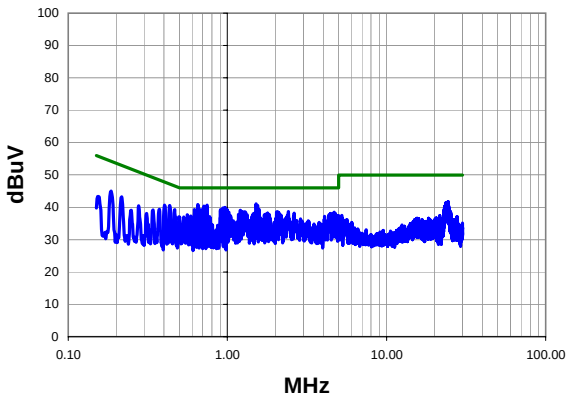
Test Specifications	**Class B**	**Test Method**
FCC 15.207:2007		ANSI C63.4:2003

Run #	17	**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)
1.512	20.5	20.6	41.1	56.0	-14.9
0.653	20.1	20.8	40.9	56.0	-15.1
0.745	19.9	20.7	40.6	56.0	-15.4
1.552	20.0	20.6	40.6	56.0	-15.4
0.713	19.6	20.8	40.4	56.0	-15.6
0.966	19.4	20.6	40.0	56.0	-16.0
0.934	19.1	20.6	39.7	56.0	-16.3
0.991	18.8	20.6	39.4	56.0	-16.6
0.434	19.6	20.9	40.5	57.2	-16.7
0.621	18.5	20.8	39.3	56.0	-16.7
1.576	18.7	20.6	39.3	56.0	-16.7
0.684	18.5	20.8	39.3	56.0	-16.7
0.905	18.6	20.6	39.2	56.0	-16.8
1.208	18.5	20.6	39.1	56.0	-16.9
0.403	19.7	20.9	40.6	57.8	-17.1
0.466	18.4	20.9	39.3	56.6	-17.3
2.416	18.1	20.6	38.7	56.0	-17.3
2.040	18.0	20.6	38.6	56.0	-17.4
2.072	18.0	20.6	38.6	56.0	-17.4
1.232	18.0	20.6	38.6	56.0	-17.4

Peak Data - vs - Average Limit

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Compared to Spec. (dB)
1.512	20.5	20.6	41.1	46.0	-4.9
0.653	20.1	20.8	40.9	46.0	-5.1
0.745	19.9	20.7	40.6	46.0	-5.4
1.552	20.0	20.6	40.6	46.0	-5.4
0.713	19.6	20.8	40.4	46.0	-5.6
0.966	19.4	20.6	40.0	46.0	-6.0
0.934	19.1	20.6	39.7	46.0	-6.3
0.991	18.8	20.6	39.4	46.0	-6.6
0.434	19.6	20.9	40.5	47.2	-6.7
0.621	18.5	20.8	39.3	46.0	-6.7
1.576	18.7	20.6	39.3	46.0	-6.7
0.684	18.5	20.8	39.3	46.0	-6.7
0.905	18.6	20.6	39.2	46.0	-6.8
1.208	18.5	20.6	39.1	46.0	-6.9
0.403	19.7	20.9	40.6	47.8	-7.1
0.466	18.4	20.9	39.3	46.6	-7.3
2.416	18.1	20.6	38.7	46.0	-7.3
2.040	18.0	20.6	38.6	46.0	-7.4
2.072	18.0	20.6	38.6	46.0	-7.4
1.232	18.0	20.6	38.6	46.0	-7.4