Spectrum Technology, Inc.

GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth

Report No. SPTE0102.1 Rev 02

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 Test: December 4, 2008
Spectrum Technology, Inc.
Model: GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth

Emissions			
Test Description	**Specification**	**Test Method**	**Pass/Fail**
Spurious Radiated Emissions	FCC 15.247 (DTS):2008	ANSI C63.4:2003 , KDB No. 558074	**Pass**

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

Test Facility

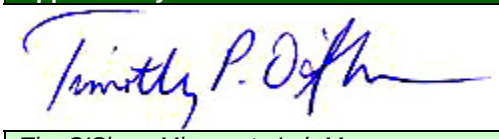
The measurement facility used to collect the data is located at:

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:



Tim O'Shea, Minnesota Lab 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
01	Corrected model name of WLAN radio and changed WiFi to WLAN	2/16/09	1-2,7,11-22
01	Added WLAN radio model number	2/16/09	8
02	Corrected model name of BT radio	3/4/09	1-2,7,11-22

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.

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).*

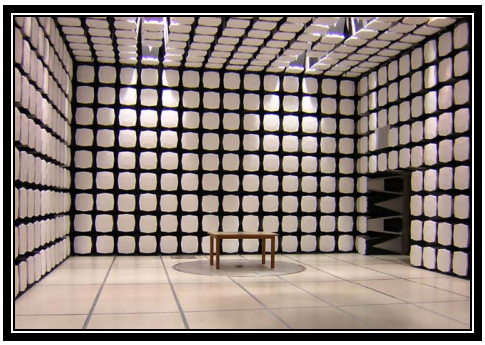
BSMI: Northwest EMC has been designated by NIST and validated by C-Taipei (BSMI) as a CAB to conduct tests as described in the APEC Mutual Recognition Agreement (US0017). License No.SL2-IN-E-1017.

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

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

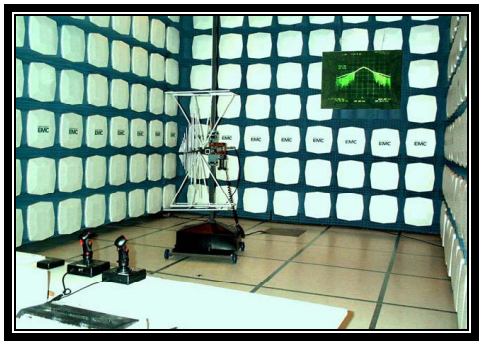
SCOPE

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:	Spectrum Technology, Inc.
Address:	4801 166th Place SE
City, State, Zip:	Bothell, WA 98012
Test Requested By:	Rod Munro
Model:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth
First Date of Test:	November 20, 2008
Last Date of Test:	December 4, 2008
Receipt Date of Samples:	November 20, 2008
Equipment Design Stage:	Preproduction
Equipment Condition:	No Damage

Information Provided by the Party Requesting the Test

Functional Description of the EUT (Equipment Under Test):

The Itronix Model GD8000 is a fully ruggedized PC that can be used in either a notebook or vehicle - mount configuration. The GD8000 has an 802.11(b/g/a/n) WLAN, and Bluetooth 2.0 EDR radio modules.

Testing Objective:

To demonstrate compliance of the 802.11(b/g/a/n) radio to FCC 15.247 requirements. The radio has a new external antenna.

CONFIGURATION 3 SPTE0102

Software/Firmware Running during test	
Description	**Version**
Windows XP	SP3
Intel WLAN CTRU	1.0

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
802.11(a)/(b)/(g)/(n) radio	Intel Corporation	IX-512AN	None
Notebook PC	General Dynamics Itronix, Corp.	GD8000	SY8350000052

Peripherals in test setup boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Vehicle Dock	General Dynamics Itronix, Corp.	GD8000 VEH DCK RF	ZZCWA8177AE0010
External WLAN Antenna	Maxrad	None	None
USB Keyboard	Logitech	Y-UT76	SC7250Z
USB Card Reader	GE	24-in-1 Card Reader	WK3807
Headset	Sony	MDR-013	None
Microphone	Gateway	7000981	C19808008
12V Car Battery	None	None	None
USB Mouse	Dell	M-UK DEL3	HC8090COCNK
PS2 Mouse	Logitech	M-886	HCA12126846

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
DC	No	1.6m	No	Vehicle Dock	12V Car Battery
Serial	Yes	1.0m	No	Vehicle Dock	Unterminated
Serial	Yes	1.0m	No	Vehicle Dock	Unterminated
Ethernet	No	1.2m	No	Vehicle Dock	Unterminated
Antenna	Yes	3.0m	No	Vehicle Dock	External WLAN Antenna
Video	Yes	1.0m	Yes	Vehicle Dock	Unterminated
PS2	No	1.3m	PA	Vehicle Dock	PS2 Mouse
Audio	No	1.0m	No	Vehicle Dock	Microphone
Audio	No	1.0m	No	Vehicle Dock	Headset
USB	Yes	1.3m	No	Vehicle Dock	Unterminated
USB	Yes	1.0m	No	Vehicle Dock	USB Card Reader
USB	No	1.6m	No	Vehicle Dock	USB Keyboard
USB	PA	1.9m	No	Vehicle Dock	USB Mouse
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	12/4/2008	Spurious Radiated Emissions	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
Continuous Tx 802.11(b/g)
Continuous Tx 802.11(a)
Continuous Tx 802.11(n) 2400 band 20MHz wide
Continuous Tx 802.11(n) 5GHz band 20MHz wide
Continuous Tx 802.11(n) 5GHz band 40MHz wide

CHANNELS USED FOR FINAL DATA
Low Channel 1 - 2412MHz
Mid Channel 6 - 2437MHz
High Channel 11 - 2462MHz
Channel 149- 5745MHz
Channel 157 - 5785MHz
Channel 165 - 5825MHz
Channel 151 - 5755MHz
Channel 159 - 5795MHz

DATA RATES USED FOR FINAL DATA
1Mbps
11Mbps
6Mbps
36Mbps
54Mbps
HT0
HT8

POWER SETTINGS INVESTIGATED
12VDC Battery

POWER SETTINGS USED FOR FINAL DATA
12VDC Battery

FREQUENCY RANGE INVESTIGATED			
Start Frequency	30MHz	Stop Frequency	40GHz

CLOCKS AND OSCILLATORS
See Channels used above

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	12/12/2008	13
EV01 Cables		Bilog Cables	EVA	5/19/2008	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	5/19/2008	13
Antenna, Biconilog	EMCO	3141	AXE	1/15/2008	24
EV01 Cables		Double Ridge Horn Cables	EVB	5/19/2008	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	5/19/2008	13
Antenna, Horn	EMCO	3115	AHC	8/12/2008	24
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	11/13/2008	13
Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	6/30/2008	13
Antenna, Horn	ETS	3160-08	AHV	NCR	0
EV01 Cables		18-26GHz Standard Gain Horn Cable	EVD	12/2/2008	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	12/2/2008	13
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
26-40GHz Cable		TTBJ141-KMKM-72	EVX	7/30/2008	13
Antenna, Horn	ETS	3160-10	AIC	NCR	0
Pre-Amplifier	Miteq	JSW45-26004000-40-5P	AVN	7/30/2008	13

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 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth	Work Order:	SPTE0102
Serial Number:	See Configurations	Date:	11/20/08
Customer:	Spectrum Technology, Inc.	Temperature:	9
Attendees:	Rod Munro	Humidity:	86%
Project:	None	Barometric Pres.:	1021.6 mb
Tested by:	David Divergigelis	Power: 12VDC Battery	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

None

EUT OPERATING MODES

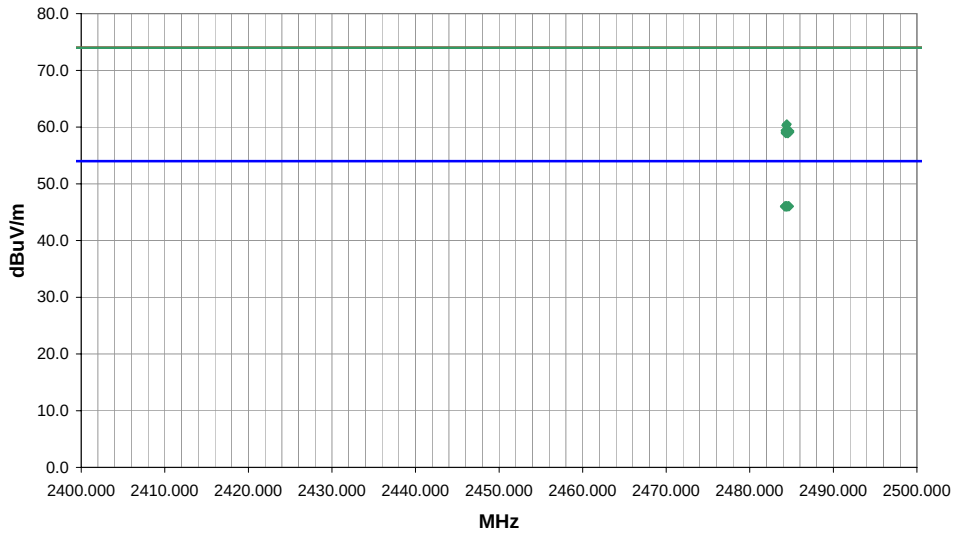
Transmitting 802.11(b/g) High Channel, 6Mbps

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1
Configuration #	3
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
2484.338	23.9	2.2	41.0	1.5	3.0	20.0	V-Horn	AV	0.0	46.1	54.0	-7.9	11Mbps, EUT Antenna vertical
2484.646	23.9	2.2	300.0	1.0	3.0	20.0	V-Horn	AV	0.0	46.1	54.0	-7.9	6Mbps, EUT Antenna horizontal
2484.180	23.8	2.2	129.0	3.6	3.0	20.0	V-Horn	AV	0.0	46.0	54.0	-8.0	1Mbps, EUT Antenna vertical
2484.212	23.8	2.2	108.0	2.5	3.0	20.0	V-Horn	AV	0.0	46.0	54.0	-8.0	36Mbps, EUT Antenna vertical
2484.215	23.8	2.2	217.0	3.7	3.0	20.0	H-Horn	AV	0.0	46.0	54.0	-8.0	36Mbps, EUT Antenna horizontal
2484.350	23.8	2.2	95.0	1.9	3.0	20.0	H-Horn	AV	0.0	46.0	54.0	-8.0	1Mbps, EUT Antenna horizontal
2484.352	23.8	2.2	186.0	1.9	3.0	20.0	H-Horn	AV	0.0	46.0	54.0	-8.0	6Mbps, EUT Antenna horizontal
2484.355	23.8	2.2	72.0	1.3	3.0	20.0	V-Horn	AV	0.0	46.0	54.0	-8.0	6Mbps, EUT Antenna vertical
2484.462	23.8	2.2	122.0	3.6	3.0	20.0	H-Horn	AV	0.0	46.0	54.0	-8.0	54Mbps, EUT Antenna horizontal
2484.487	23.8	2.2	347.0	2.5	3.0	20.0	V-Horn	AV	0.0	46.0	54.0	-8.0	54Mbps, EUT Antenna vertical
2484.594	23.8	2.2	18.0	1.9	3.0	20.0	H-Horn	AV	0.0	46.0	54.0	-8.0	11Mbps, EUT Antenna horizontal
2484.695	23.8	2.2	249.0	1.9	3.0	20.0	H-Horn	AV	0.0	46.0	54.0	-8.0	6Mbps, EUT Antenna vertical
2484.433	38.3	2.2	186.0	1.9	3.0	20.0	H-Horn	PK	0.0	60.5	74.0	-13.5	6Mbps, EUT Antenna horizontal
2484.367	38.1	2.2	108.0	2.5	3.0	20.0	V-Horn	PK	0.0	60.3	74.0	-13.7	36Mbps, EUT Antenna vertical
2484.285	37.2	2.2	72.0	1.3	3.0	20.0	V-Horn	PK	0.0	59.4	74.0	-14.6	6Mbps, EUT Antenna vertical
2484.323	37.2	2.2	18.0	1.9	3.0	20.0	H-Horn	PK	0.0	59.4	74.0	-14.6	11Mbps, EUT Antenna horizontal
2484.481	37.1	2.2	41.0	1.5	3.0	20.0	V-Horn	PK	0.0	59.3	74.0	-14.7	11Mbps, EUT Antenna vertical
2484.743	37.1	2.2	249.0	1.9	3.0	20.0	H-Horn	PK	0.0	59.3	74.0	-14.7	6Mbps, EUT Antenna vertical
2484.279	36.9	2.2	300.0	1.0	3.0	20.0	V-Horn	PK	0.0	59.1	74.0	-14.9	6Mbps, EUT Antenna horizontal
2484.742	36.9	2.2	129.0	3.6	3.0	20.0	V-Horn	PK	0.0	59.1	74.0	-14.9	1Mbps, EUT Antenna vertical

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth	Work Order:	SPTE0102
Serial Number:	See Configurations	Date:	11/20/08
Customer:	Spectrum Technology, Inc.	Temperature:	9
Attendees:	Rod Munro	Humidity:	86%
Project:	None	Barometric Pres.:	1021.6 mb
Tested by:	David Divergigelis	Power: 12VDC Battery	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

See comments below for data rate.

EUT OPERATING MODES

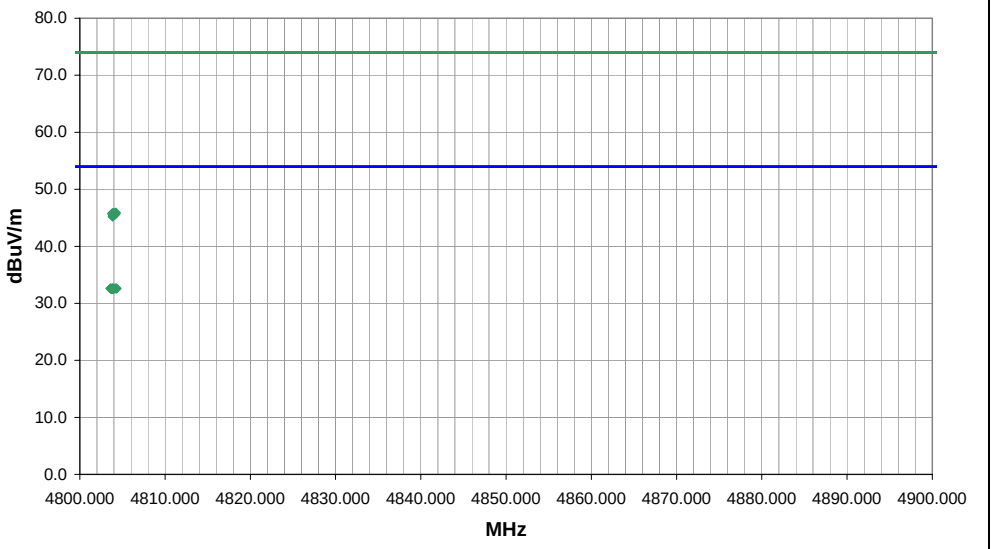
Transmitting 802.11(b/g) Low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2
Configuration #	3
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
4803.585	23.1	9.5	334.0	1.5	3.0	0.0	V-Horn	AV	0.0	32.6	54.0	-21.4	36Mbps, EUT Antenna vertical
4803.643	23.1	9.5	35.0	1.8	3.0	0.0	H-Horn	AV	0.0	32.6	54.0	-21.4	1Mbps, EUT Antenna horizontal
4803.783	23.1	9.5	330.0	1.5	3.0	0.0	V-Horn	AV	0.0	32.6	54.0	-21.4	6Mbps, EUT Antenna vertical
4803.846	23.1	9.5	234.0	1.3	3.0	0.0	H-Horn	AV	0.0	32.6	54.0	-21.4	36Mbps, EUT Antenna vertical
4803.882	23.1	9.5	299.0	1.3	3.0	0.0	H-Horn	AV	0.0	32.6	54.0	-21.4	54Mbps, EUT Antenna vertical
4804.112	23.1	9.5	81.0	3.3	3.0	0.0	H-Horn	AV	0.0	32.6	54.0	-21.4	1Mbps, EUT Antenna vertical
4804.243	23.1	9.5	136.0	1.5	3.0	0.0	V-Horn	AV	0.0	32.6	54.0	-21.4	1Mbps, EUT Antenna horizontal
4804.312	23.1	9.5	248.0	1.8	3.0	0.0	H-Horn	AV	0.0	32.6	54.0	-21.4	6Mbps, EUT Antenna vertical
4803.711	23.0	9.5	360.0	1.4	3.0	0.0	H-Horn	AV	0.0	32.5	54.0	-21.5	11Mbps, EUT Antenna vertical
4803.774	23.0	9.5	188.0	1.5	3.0	0.0	V-Horn	AV	0.0	32.5	54.0	-21.5	11Mbps, EUT Antenna vertical
4803.885	23.0	9.5	204.0	3.1	3.0	0.0	V-Horn	AV	0.0	32.5	54.0	-21.5	1Mbps, EUT Antenna vertical
4803.942	23.0	9.5	29.0	2.2	3.0	0.0	V-Horn	AV	0.0	32.5	54.0	-21.5	54Mbps, EUT Antenna vertical
4804.211	36.4	9.5	81.0	3.3	3.0	0.0	H-Horn	PK	0.0	45.9	74.0	-28.1	1Mbps, EUT Antenna vertical
4803.833	36.3	9.5	204.0	3.1	3.0	0.0	V-Horn	PK	0.0	45.8	74.0	-28.2	1Mbps, EUT Antenna vertical
4803.877	36.3	9.5	299.0	1.3	3.0	0.0	H-Horn	PK	0.0	45.8	74.0	-28.2	54Mbps, EUT Antenna vertical
4803.930	36.3	9.5	29.0	2.2	3.0	0.0	V-Horn	PK	0.0	45.8	74.0	-28.2	54Mbps, EUT Antenna vertical
4804.126	36.3	9.5	188.0	1.5	3.0	0.0	V-Horn	PK	0.0	45.8	74.0	-28.2	11Mbps, EUT Antenna vertical
4804.214	36.3	9.5	35.0	1.8	3.0	0.0	H-Horn	PK	0.0	45.8	74.0	-28.2	1Mbps, EUT Antenna horizontal
4803.790	36.2	9.5	330.0	1.5	3.0	0.0	V-Horn	PK	0.0	45.7	74.0	-28.3	6Mbps, EUT Antenna vertical
4803.922	36.2	9.5	360.0	1.4	3.0	0.0	H-Horn	PK	0.0	45.7	74.0	-28.3	11Mbps, EUT Antenna vertical

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth	Work Order:	SPTE0102
Serial Number:	See Configurations	Date:	11/20/08
Customer:	Spectrum Technology, Inc.	Temperature:	9
Attendees:	Rod Munro	Humidity:	86%
Project:	None	Barometric Pres.:	1021.6 mb
Tested by:	David Divergigelis	Power: 12VDC Battery	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

None

EUT OPERATING MODES

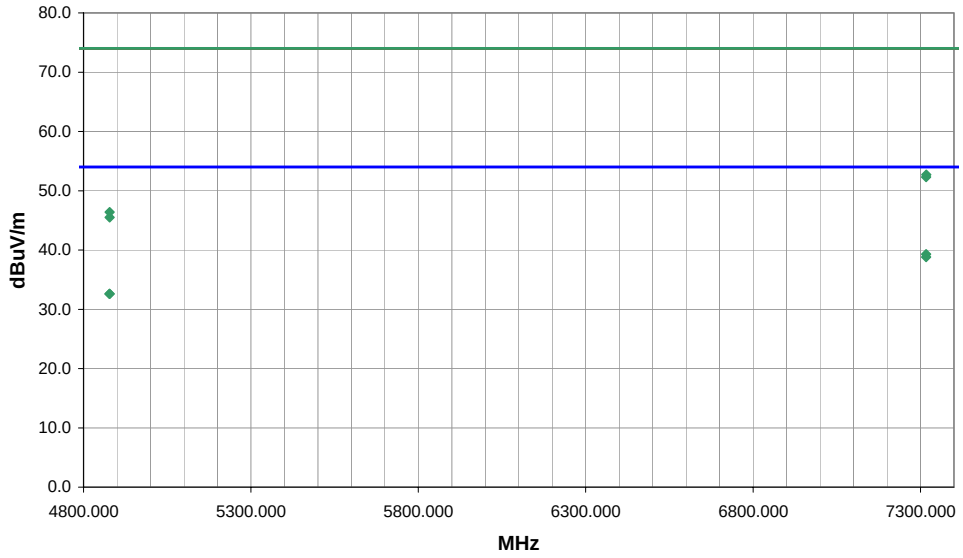
Transmitting 802.11(b/g) Mid Channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3
Configuration #	3
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
7316.630	23.7	15.6	325.0	2.0	3.0	0.0	V-Horn	AV	0.0	39.3	54.0	-14.7	6Mbps, EUT Antenna vertical
7316.910	23.2	15.6	108.0	1.0	3.0	0.0	H-Horn	AV	0.0	38.8	54.0	-15.2	6Mbps, EUT Antenna vertical
7317.132	37.1	15.6	325.0	2.0	3.0	0.0	V-Horn	PK	0.0	52.7	74.0	-21.3	6Mbps, EUT Antenna vertical
4877.507	22.8	9.8	80.0	3.7	3.0	0.0	V-Horn	AV	0.0	32.6	54.0	-21.4	6Mbps, EUT Antenna vertical
4878.040	22.8	9.8	42.0	2.6	3.0	0.0	H-Horn	AV	0.0	32.6	54.0	-21.4	6Mbps, EUT Antenna vertical
7317.066	36.7	15.6	108.0	1.0	3.0	0.0	H-Horn	PK	0.0	52.3	74.0	-21.7	6Mbps, EUT Antenna vertical
4877.844	36.6	9.8	80.0	3.7	3.0	0.0	V-Horn	PK	0.0	46.4	74.0	-27.6	6Mbps, EUT Antenna vertical
4877.993	35.7	9.8	42.0	2.6	3.0	0.0	H-Horn	PK	0.0	45.5	74.0	-28.5	6Mbps, EUT Antenna vertical

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth	Work Order:	SPTE0102
Serial Number:	See Configurations	Date:	11/20/08
Customer:	Spectrum Technology, Inc.	Temperature:	9
Attendees:	Rod Munro	Humidity:	86%
Project:	None	Barometric Pres.:	1021.6 mb
Tested by:	David Divergigelis	Power: 12VDC Battery	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

None

EUT OPERATING MODES

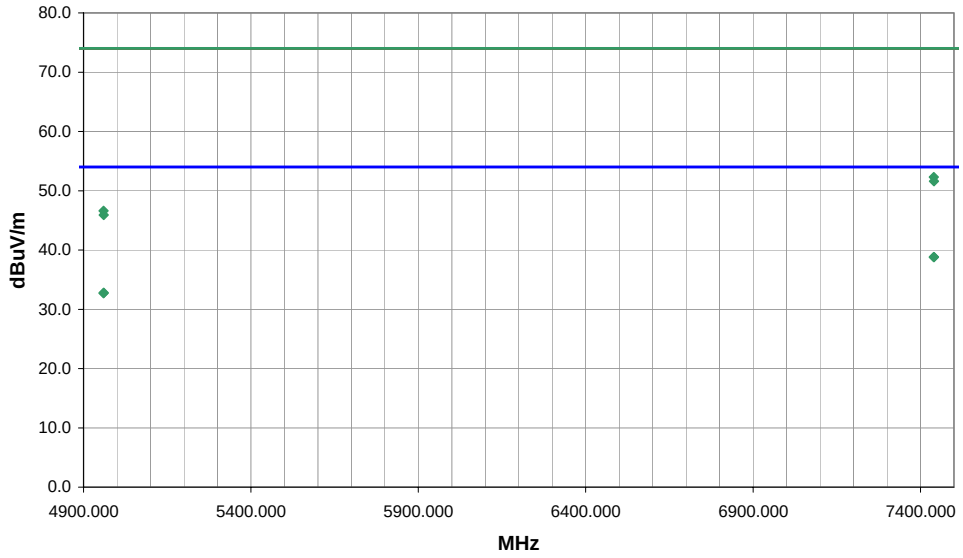
Transmitting 802.11(b/g) High Channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	4
Configuration #	3
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
7439.579	23.0	15.8	158.0	1.7	3.0	0.0	V-Horn	AV	0.0	38.8	54.0	-15.2	6Mbps, EUT Antenna vertical
7440.228	23.0	15.8	102.0	1.0	3.0	0.0	H-Horn	AV	0.0	38.8	54.0	-15.2	6Mbps, EUT Antenna vertical
4960.010	22.7	10.1	140.0	1.0	3.0	0.0	H-Horn	AV	0.0	32.8	54.0	-21.2	6Mbps, EUT Antenna vertical
4959.962	22.6	10.1	41.0	3.4	3.0	0.0	V-Horn	AV	0.0	32.7	54.0	-21.3	6Mbps, EUT Antenna vertical
7439.812	36.5	15.8	158.0	1.7	3.0	0.0	V-Horn	PK	0.0	52.3	74.0	-21.7	6Mbps, EUT Antenna vertical
7440.244	35.8	15.8	102.0	1.0	3.0	0.0	H-Horn	PK	0.0	51.6	74.0	-22.4	6Mbps, EUT Antenna vertical
4959.911	36.5	10.1	41.0	3.4	3.0	0.0	V-Horn	PK	0.0	46.6	74.0	-27.4	6Mbps, EUT Antenna vertical
4960.156	35.8	10.1	140.0	1.0	3.0	0.0	H-Horn	PK	0.0	45.9	74.0	-28.1	6Mbps, EUT Antenna vertical

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth			Work Order:	SPTE0102
Serial Number:	See Configurations			Date:	11/21/08
Customer:	Spectrum Technology, Inc.			Temperature:	21.3° C
Attendees:	Rod Munro			Humidity:	37%
Project:	None			Barometric Pres.:	1027.8mb
Tested by:	Dan Haas	Power:	12VDC Battery	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

Antenna Vertical.

EUT OPERATING MODES

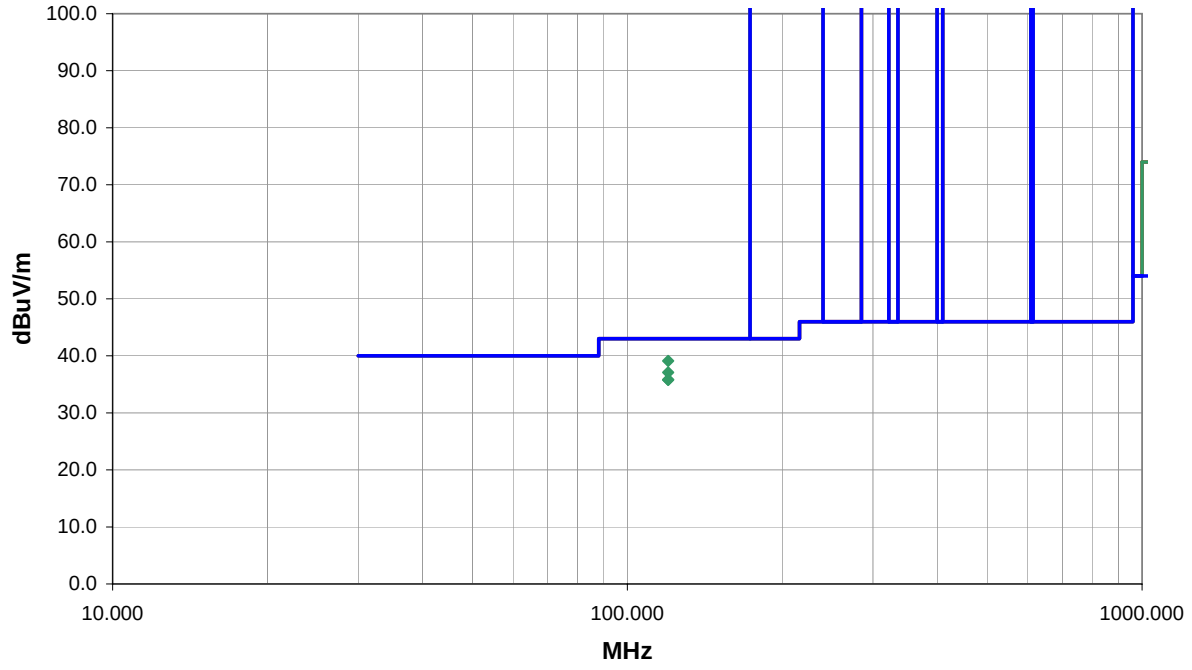
Transmitting 802.11(n) Low channel

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)
119.998	45.7	-6.6	167.0	2.3	3.0	0.0	H-Bilog	QP	0.0	39.1	43.0	-3.9
119.998	43.7	-6.6	269.0	1.8	3.0	0.0	H-Bilog	QP	0.0	37.1	43.0	-5.9
119.998	42.4	-6.6	280.0	1.2	3.0	0.0	V-Bilog	QP	0.0	35.8	43.0	-7.2
119.998	42.4	-6.6	282.0	1.2	3.0	0.0	V-Bilog	QP	0.0	35.8	43.0	-7.2

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth			Work Order:	SPTE0102
Serial Number:	See Configurations			Date:	11/21/08
Customer:	Spectrum Technology, Inc.			Temperature:	21.3° C
Attendees:	Rod Munro			Humidity:	37%
Project:	None			Barometric Pres.:	1027.8mb
Tested by:	Dan Haas	Power:	12VDC Battery	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

MCS=HT0

EUT OPERATING MODES

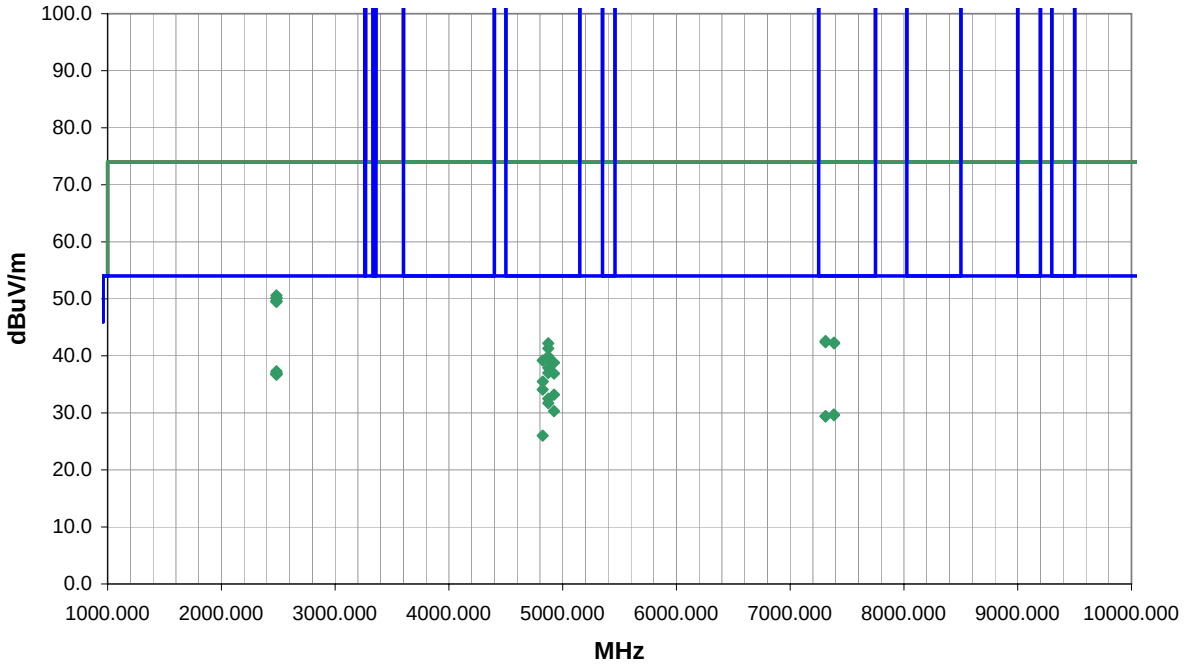
Transmitting 802.11(n)

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	6
Configuration #	3
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)
4873.996	28.2	9.7	277.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.9	54.0	-16.1
2483.501	15.1	2.2	150.0	1.0	3.0	20.0	V-Horn	AV	0.0	37.3	54.0	-16.7
2483.501	14.8	2.2	34.0	1.0	3.0	20.0	H-Horn	AV	0.0	37.0	54.0	-17.0
4873.960	27.3	9.7	133.0	1.0	3.0	0.0	V-Horn	AV	0.0	37.0	54.0	-17.0
2483.501	14.6	2.2	220.0	1.0	3.0	20.0	H-Horn	AV	0.0	36.8	54.0	-17.2
2483.501	14.6	2.2	343.0	1.0	3.0	20.0	V-Horn	AV	0.0	36.8	54.0	-17.2
2483.501	14.6	2.2	172.0	1.6	3.0	20.0	H-Horn	AV	0.0	36.8	54.0	-17.2
2483.501	14.5	2.2	341.0	1.0	3.0	20.0	V-Horn	AV	0.0	36.7	54.0	-17.3
4823.965	24.6	9.5	261.0	1.0	3.0	0.0	V-Horn	AV	0.0	34.1	54.0	-19.9
4923.960	23.3	9.9	88.0	1.7	3.0	0.0	V-Horn	AV	0.0	33.2	54.0	-20.8
4873.996	22.8	9.7	297.0	1.0	3.0	0.0	H-Horn	AV	0.0	32.5	54.0	-21.5
4873.960	22.0	9.7	104.0	1.0	3.0	0.0	H-Horn	AV	0.0	31.7	54.0	-22.3
2483.501	28.4	2.2	343.0	1.0	3.0	20.0	V-Horn	PK	0.0	50.6	74.0	-23.4
4923.960	20.4	9.9	289.0	1.0	3.0	0.0	H-Horn	AV	0.0	30.3	54.0	-23.7
2483.501	28.0	2.2	220.0	1.0	3.0	20.0	H-Horn	PK	0.0	50.2	74.0	-23.8
2483.501	27.9	2.2	150.0	1.0	3.0	20.0	V-Horn	PK	0.0	50.1	74.0	-23.9
7383.555	14.0	15.7	215.0	1.0	3.0	0.0	H-Horn	AV	0.0	29.7	54.0	-24.3
2483.501	27.5	2.2	172.0	1.6	3.0	20.0	H-Horn	PK	0.0	49.7	74.0	-24.3
7385.645	13.9	15.7	156.0	2.4	3.0	0.0	V-Horn	AV	0.0	29.6	54.0	-24.4
2483.501	27.3	2.2	34.0	1.0	3.0	20.0	H-Horn	PK	0.0	49.5	74.0	-24.5
2483.501	27.3	2.2	341.0	1.0	3.0	20.0	V-Horn	PK	0.0	49.5	74.0	-24.5

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)
7310.920	13.9	15.5	148.0	1.0	3.0	0.0	H-Horn	AV	0.0	29.4	54.0	-24.6
7311.037	13.9	15.5	314.0	1.0	3.0	0.0	V-Horn	AV	0.0	29.4	54.0	-24.6
4823.955	16.5	9.5	121.0	2.5	3.0	0.0	H-Horn	AV	0.0	26.0	54.0	-28.0
7310.764	27.1	15.5	148.0	1.0	3.0	0.0	H-Horn	PK	0.0	42.6	74.0	-31.4
7311.005	26.9	15.5	314.0	1.0	3.0	0.0	V-Horn	PK	0.0	42.4	74.0	-31.6
7384.720	26.6	15.7	156.0	2.4	3.0	0.0	V-Horn	PK	0.0	42.3	74.0	-31.7
4874.000	32.5	9.7	277.0	1.0	3.0	0.0	V-Horn	PK	0.0	42.2	74.0	-31.8
7386.970	26.5	15.7	215.0	1.0	3.0	0.0	H-Horn	PK	0.0	42.2	74.0	-31.8
4873.937	31.6	9.7	133.0	1.0	3.0	0.0	V-Horn	PK	0.0	41.3	74.0	-32.7
4873.999	30.2	9.7	297.0	1.0	3.0	0.0	H-Horn	PK	0.0	39.9	74.0	-34.1
4873.936	29.8	9.7	104.0	1.0	3.0	0.0	H-Horn	PK	0.0	39.5	74.0	-34.5
4824.010	29.7	9.5	261.0	1.0	3.0	0.0	V-Horn	PK	0.0	39.2	74.0	-34.8
4923.935	28.9	9.9	88.0	1.7	3.0	0.0	V-Horn	PK	0.0	38.8	74.0	-35.2
4923.890	27.0	9.9	289.0	1.0	3.0	0.0	H-Horn	PK	0.0	36.9	74.0	-37.1
4825.040	26.0	9.5	121.0	2.5	3.0	0.0	H-Horn	PK	0.0	35.5	74.0	-38.5

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth			Work Order:	SPTE0102
Serial Number:	See Configurations			Date:	11/25/08
Customer:	Spectrum Technology, Inc.			Temperature:	21.5° C
Attendees:	Rod Munro			Humidity:	30%
Project:	None			Barometric Pres.:	1021.1mb
Tested by:	Dan Haas	Power:	12VDC Battery	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

COMMENTS

See notes for channel and antenna polarity.

EUT OPERATING MODES

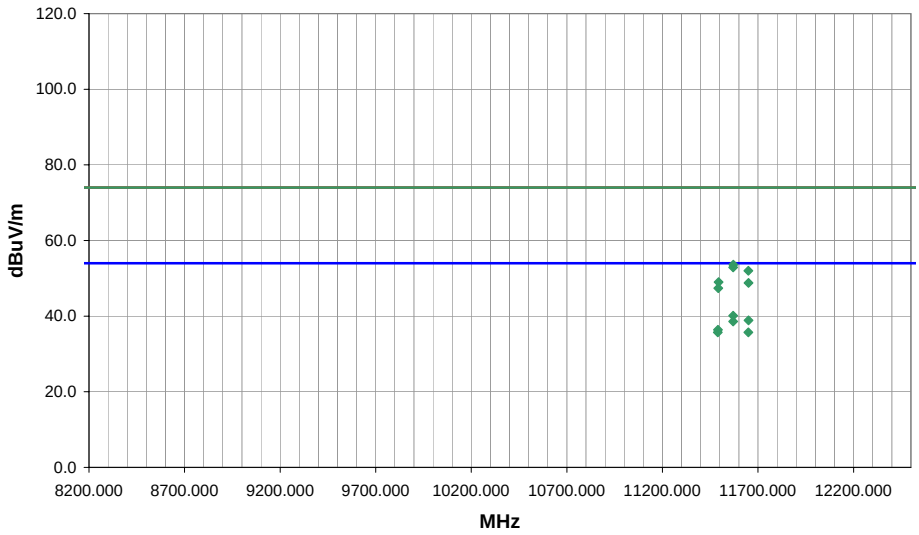
Continuous Tx 802.11(n)

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	10
Configuration #	3
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
11570.170	46.2	-6.1	232.0	1.0	0.0	0.0	V-Horn	AV	0.0	40.1	54.0	-13.9	Ch. 157, HT0, Vertical antenna.
11650.170	44.6	-5.7	234.0	1.0	0.0	0.0	V-Horn	AV	0.0	38.9	54.0	-15.1	Ch. 165, HT0, Vertical antenna.
11569.920	44.7	-6.1	194.0	1.0	0.0	0.0	H-Horn	AV	0.0	38.6	54.0	-15.4	Ch. 157, HT0, Vertical antenna.
11490.420	42.8	-6.4	188.0	1.0	0.0	0.0	H-Horn	AV	0.0	36.4	54.0	-17.6	Ch. 149, HT0, Vertical antenna.
11649.920	41.4	-5.7	231.0	1.0	0.0	0.0	H-Horn	AV	0.0	35.7	54.0	-18.3	Ch. 165, HT0, Vertical antenna.
11490.000	42.1	-6.4	335.0	1.0	0.0	0.0	V-Horn	AV	0.0	35.7	54.0	-18.3	Ch. 149, HT0, Vertical antenna.

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth			Work Order:	SPTE0102
Serial Number:	See Configurations			Date:	11/25/08
Customer:	Spectrum Technology, Inc.			Temperature:	21.5° C
Attendees:	Rod Munro			Humidity:	30%
Project:	None			Barometric Pres.:	1021.1mb
Tested by:	David Divergigelis	Power:	12VDC Battery	Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

See comments below for channel

EUT OPERATING MODES

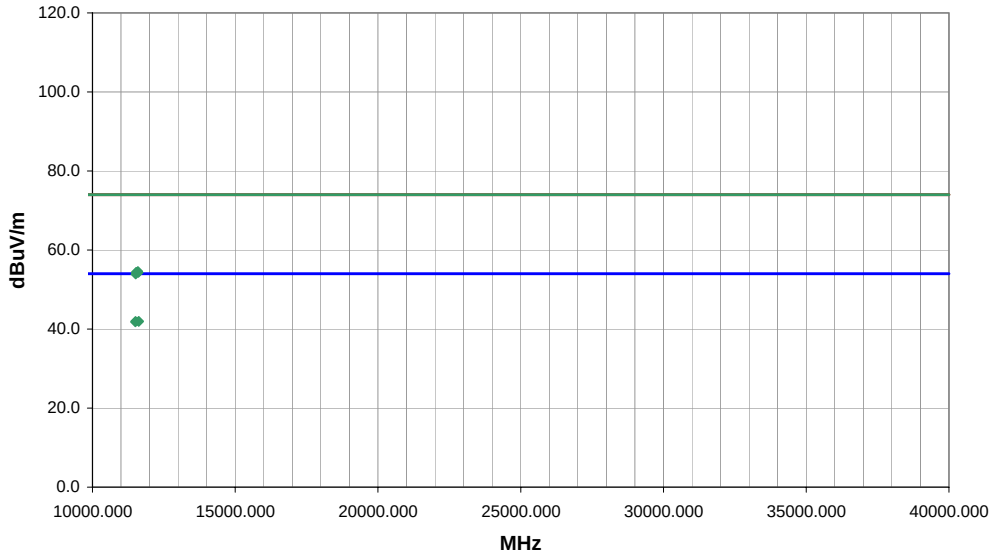
Continuous Tx 802.11(n) 40MHz (wide), HT0

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	13
Configuration #	3
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
11506.170	23.1	18.9	46.0	1.0	3.0	0.0	V-Horn	AV	0.0	42.0	54.0	-12.0	EUT Ant. Vert, Channel 151
11618.670	23.0	19.0	205.0	1.0	3.0	0.0	H-Horn	AV	0.0	42.0	54.0	-12.0	EUT Ant. Vert, Channel 159
11620.420	22.9	19.0	96.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	EUT Ant. Vert, Channel 159
11504.170	22.9	18.9	72.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	EUT Ant. Vert, Channel 151

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth	Work Order:	SPTE0102
Serial Number:	See Configurations	Date:	12/04/08
Customer:	Spectrum Technology, Inc.	Temperature:	21.3° C
Attendees:	Rod Munro	Humidity:	35%
Project:	None	Barometric Pres.:	1028.7mb
Tested by:	Dan Haas	Power: 12VDC Battery	Job Site: EV07

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

Laptop in vehicle mount. See notes for data rate and antenna polarity.

EUT OPERATING MODES

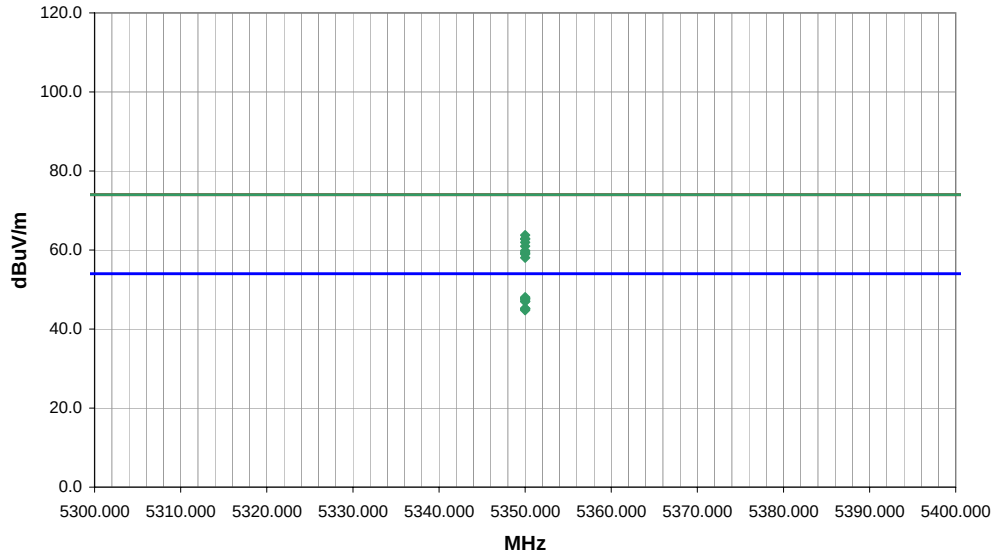
Continuous TX 802.11(a), Ch.64

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	18
Configuration #	3
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
5350.000	20.7	36.9	95.0	1.0	1.0	0.0	V-Horn	AV	-9.5	48.1	54.0	-5.9	36Mbps, Horizontal antenna.
5350.000	20.4	36.9	90.0	1.0	1.0	0.0	V-Horn	AV	-9.5	47.8	54.0	-6.2	6Mbps, Horizontal antenna.
5350.000	20.4	36.9	106.0	1.0	1.0	0.0	H-Horn	AV	-9.5	47.8	54.0	-6.2	36Mbps, Horizontal antenna.
5350.000	20.1	36.9	99.0	1.0	1.0	0.0	H-Horn	AV	-9.5	47.5	54.0	-6.5	6Mbps, Horizontal antenna.
5350.000	19.7	36.9	141.0	1.0	1.0	0.0	V-Horn	AV	-9.5	47.1	54.0	-6.9	6Mbps, vertical antenna.
5350.000	19.6	36.9	51.0	1.0	1.0	0.0	H-Horn	AV	-9.5	47.0	54.0	-7.0	6Mbps, vertical antenna.
5350.000	17.9	36.9	149.0	1.0	1.0	0.0	V-Horn	AV	-9.5	45.3	54.0	-8.7	36Mbps, vertical antenna.
5350.000	17.8	36.9	53.0	1.0	1.0	0.0	H-Horn	AV	-9.5	45.2	54.0	-8.8	36Mbps, vertical antenna.
5350.000	17.7	36.9	14.0	1.0	1.0	0.0	H-Horn	AV	-9.5	45.1	54.0	-8.9	54Mbps, Horizontal antenna.
5350.000	17.4	36.9	95.0	1.0	1.0	0.0	V-Horn	AV	-9.5	44.8	54.0	-9.2	54Mbps, Horizontal antenna.
5350.000	36.4	36.9	95.0	1.0	1.0	0.0	V-Horn	PK	-9.5	63.8	74.0	-10.2	36Mbps, Horizontal antenna.
5350.000	35.5	36.9	106.0	1.0	1.0	0.0	H-Horn	PK	-9.5	62.9	74.0	-11.1	36Mbps, Horizontal antenna.
5350.000	35.4	36.9	90.0	1.0	1.0	0.0	V-Horn	PK	-9.5	62.8	74.0	-11.2	6Mbps, Horizontal antenna.
5350.000	34.6	36.9	99.0	1.0	1.0	0.0	H-Horn	PK	-9.5	62.0	74.0	-12.0	6Mbps, Horizontal antenna.
5350.000	33.6	36.9	141.0	1.0	1.0	0.0	V-Horn	PK	-9.5	61.0	74.0	-13.0	6Mbps, vertical antenna.
5350.000	32.5	36.9	95.0	1.0	1.0	0.0	V-Horn	PK	-9.5	59.9	74.0	-14.1	54Mbps, Horizontal antenna.
5350.000	32.1	36.9	14.0	1.0	1.0	0.0	H-Horn	PK	-9.5	59.5	74.0	-14.5	54Mbps, Horizontal antenna.
5350.000	31.8	36.9	149.0	1.0	1.0	0.0	V-Horn	PK	-9.5	59.2	74.0	-14.8	36Mbps, vertical antenna.
5350.000	31.6	36.9	53.0	1.0	1.0	0.0	H-Horn	PK	-9.5	59.0	74.0	-15.0	36Mbps, vertical antenna.
5350.000	30.7	36.9	51.0	1.0	1.0	0.0	H-Horn	PK	-9.5	58.1	74.0	-15.9	6Mbps, vertical antenna.

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth			**Work Order:**	SPTE0102
Serial Number:	See Configurations			**Date:**	12/04/08
Customer:	Spectrum Technology, Inc.			**Temperature:**	21.3° C
Attendees:	Rod Munro			**Humidity:**	35%
Project:	None			**Barometric Pres.:**	1028.7mb
Tested by:	Dan Haas	**Power:**	12VDC Battery	**Job Site:**	EV07

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

TEST PARAMETERS

Antenna Height(s) (m)	1 - 2	**Test Distance (m)**	1

COMMENTS

See notes for antenna polarity and data rate.

EUT OPERATING MODES

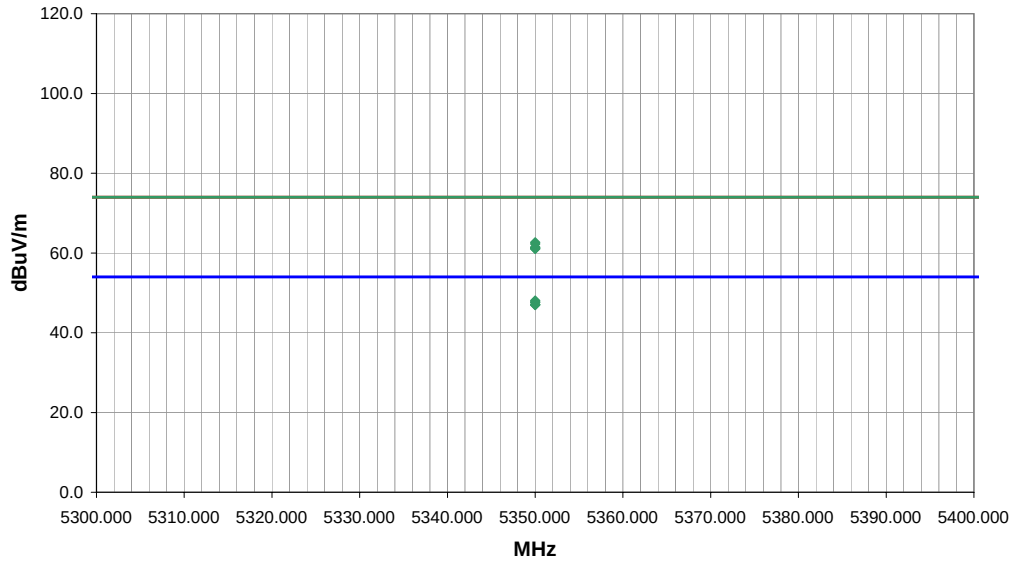
Continuous TX 802.11(n), 20MHz, Ch. 64.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	19
Configuration #	3
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
5350.000	20.7	36.9	111.0	1.0	1.0	0.0	H-Horn	AV	-9.5	48.1	54.0	-5.9	Antenna horizontal, HT0
5350.000	20.3	36.9	206.0	1.3	1.0	0.0	V-Horn	AV	-9.5	47.7	54.0	-6.3	Antenna vertical, HT0
5350.000	20.3	36.9	97.0	1.0	1.0	0.0	V-Horn	AV	-9.5	47.7	54.0	-6.3	Antenna horizontal, HT0
5350.000	19.7	36.9	164.0	1.0	1.0	0.0	H-Horn	AV	-9.5	47.1	54.0	-6.9	Antenna vertical, HT0
5350.000	19.7	36.9	22.0	1.0	1.0	0.0	H-Horn	AV	-9.5	47.1	54.0	-6.9	Antenna horizontal, HT7
5350.000	19.6	36.9	11.0	1.0	1.0	0.0	V-Horn	AV	-9.5	47.0	54.0	-7.0	Antenna horizontal, HT7
5350.000	35.3	36.9	111.0	1.0	1.0	0.0	H-Horn	PK	-9.5	62.7	74.0	-11.3	Antenna horizontal, HT0
5350.000	34.9	36.9	97.0	1.0	1.0	0.0	V-Horn	PK	-9.5	62.3	74.0	-11.7	Antenna horizontal, HT0
5350.000	34.1	36.9	206.0	1.3	1.0	0.0	V-Horn	PK	-9.5	61.5	74.0	-12.5	Antenna vertical, HT0
5350.000	34.0	36.9	11.0	1.0	1.0	0.0	V-Horn	PK	-9.5	61.4	74.0	-12.6	Antenna horizontal, HT7
5350.000	33.7	36.9	164.0	1.0	1.0	0.0	H-Horn	PK	-9.5	61.1	74.0	-12.9	Antenna vertical, HT0
5350.000	33.7	36.9	22.0	1.0	1.0	0.0	H-Horn	PK	-9.5	61.1	74.0	-12.9	Antenna horizontal, HT7

NORTHWEST EMC

SPURIOUS RADIATED EMISSIONS DATA SHEET

PSA 2007.07.21
EMI 2008.7.3

EUT:	GD8000 PC with IX-512AN WLAN, and IX-WT11 Bluetooth			Work Order:	SPTE0102
Serial Number:	See Confgurations			Date:	12/04/08
Customer:	Spectrum Technology, Inc.			Temperature:	21.3° C
Attendees:	Rod Munro			Humidity:	35%
Project:	None			Barometric Pres.:	1028.7mb
Tested by:	Dan Haas	Power:	12VDC Battery	Job Site:	EV07

TEST SPECIFICATIONS	Test Method
FCC 15.247 (DTS):2008	ANSI C63.4:2003, KDB No. 558074

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

COMMENTS

See notes for antenna polarity and data rate.

EUT OPERATING MODES

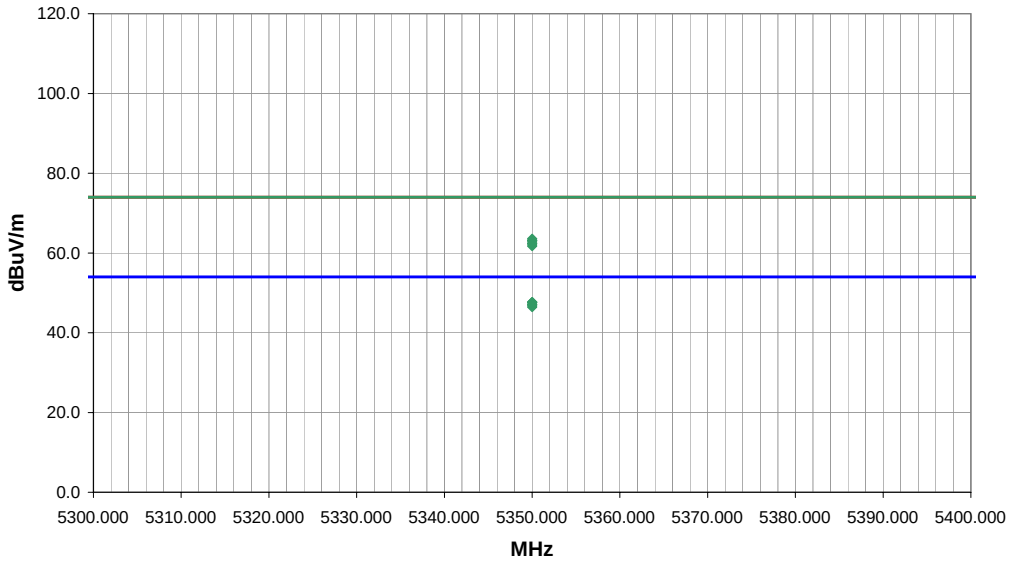
Continuous TX 802.11(n), 40MHz Wide, Ch. 62.

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	20
Configuration #	3
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
5350.000	20.3	36.9	101.0	1.0	1.0	0.0	V-Horn	AV	-9.5	47.7	54.0	-6.3	Antenna horizontal, HT0.
5350.000	20.3	36.9	103.0	1.0	1.0	0.0	V-Horn	AV	-9.5	47.7	54.0	-6.3	Antenna horizontal, HT7.
5350.000	20.2	36.9	104.0	1.3	1.0	0.0	V-Horn	AV	-9.5	47.6	54.0	-6.4	Antenna vertical, HT0.
5350.000	19.7	36.9	114.0	1.0	1.0	0.0	H-Horn	AV	-9.5	47.1	54.0	-6.9	Antenna horizontal, HT7.
5350.000	19.6	36.9	119.0	1.0	1.0	0.0	H-Horn	AV	-9.5	47.0	54.0	-7.0	Antenna horizontal, HT0.
5350.000	19.1	36.9	346.0	1.0	1.0	0.0	H-Horn	AV	-9.5	46.5	54.0	-7.5	Antenna vertical, HT0.
5350.000	36.2	36.9	101.0	1.0	1.0	0.0	V-Horn	PK	-9.5	63.6	74.0	-10.4	Antenna horizontal, HT0.
5350.000	35.7	36.9	104.0	1.3	1.0	0.0	V-Horn	PK	-9.5	63.1	74.0	-10.9	Antenna vertical, HT0.
5350.000	35.7	36.9	103.0	1.0	1.0	0.0	V-Horn	PK	-9.5	63.1	74.0	-10.9	Antenna horizontal, HT7.
5350.000	35.1	36.9	119.0	1.0	1.0	0.0	H-Horn	PK	-9.5	62.5	74.0	-11.5	Antenna horizontal, HT0.
5350.000	34.9	36.9	114.0	1.0	1.0	0.0	H-Horn	PK	-9.5	62.3	74.0	-11.7	Antenna horizontal, HT7.
5350.000	34.4	36.9	346.0	1.0	1.0	0.0	H-Horn	PK	-9.5	61.8	74.0	-12.2	Antenna vertical, HT0.