

Spectrum Technology

IX270-WL3945

June 29, 2006

Report No. SPTE0018.1

Report Prepared By



www.nwemc.com

1-888-EMI-CERT

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EMC Test Report



22975 NW Evergreen Parkway
Suite 400
Hillsboro, Oregon 97124

Certificate of Test
Issue Date: June 29, 2006
Spectrum Technology
Model: IX270-WL3945

Emissions				
Test Description	Specification	Test Method	Pass	Fail
Spurious Radiated Emissions	FCC 15.407:2006	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Spurious Radiated Emissions	FCC 15.247:2006	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>
AC Powerline Conducted Emissions	FCC 15.207:2006	ANSI C63.4:2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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.

Approved By:

Greg Kiemel, Director of Engineering

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.

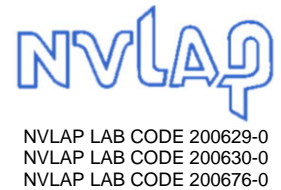
Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested, 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 89/336/EEC, ANSI C63.4, MIL-STD 461E, DO-160D and SAE J1113. 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.



Industry Canada: Accredited by NVLAP for performance of Industry Canada RSS and ICES testing. Our Open Area Test Sites and certification chambers comply with RSS 212, Issue 1 (Provisional) and have been filed with Industry Canada and accepted. Northwest EMC has been accredited by ANSI to ISO / IEC Guide 65 as a product certifier. We have been designated by NIST and recognized by Industry Canada as a Certification Body (CB) per the APEC Mutual Recognition Arrangement (MRA). This allows Northwest EMC to certify transmitters to Industry Canada technical requirements.



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



TÜV Product Service: Included in TÜV Product Service Group's Listing of Recognized Laboratories. It qualifies in connection with the TÜV Certification after Recognition of Agent's Testing Program for the product categories and/or standards shown in TÜV's current Listing of CARAT Laboratories, available from TÜV. A certificate was issued to represent that this laboratory continues to meet TÜV's CARAT Program requirements. Certificate No. USA0401C.



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, and R-2318, Irvine: C-2094 and R-1943, Sultan: R-871, C-1784 and R-1761*).



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



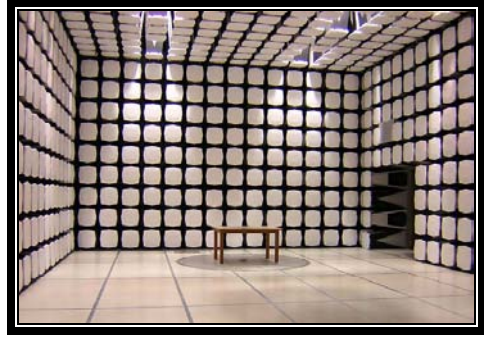
GOST: Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from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



SCOPE

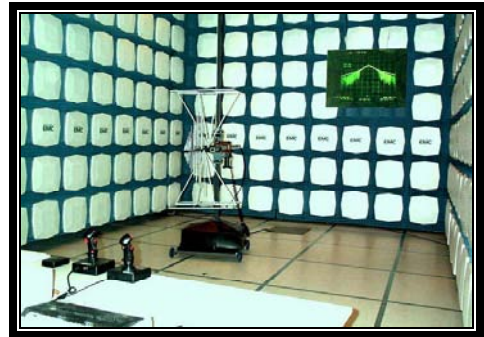
For details on the Scopes of our Accreditations, please visit:

<http://www.nwemc.com/scope.asp>



**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
Address:	209 Dayton Street Suite #205
City, State, Zip:	Edmonds, WA 98020
Test Requested By:	Rod Munro
Model:	IX270-WL3945
First Date of Test:	June 20, 2006
Last Date of Test:	June 23, 2006
Receipt Date of Samples:	June 19, 2006
Equipment Design Stage:	Production
Equipment Condition:	No Damage

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

802.11 (a/b/g) radio module installed in Itronix's personal computer, Model Titan XR1

Testing Objective:

For "b/g" modes, the applicant seeks to demonstrate compliance with FCC 15.247 spurious radiated emissions requirements for the 2400 – 2483.5 MHz band. For the "a" mode, compliance will be demonstrated with 15.407 spurious radiated emissions requirements in the 5150 – 5250 MHz, and 5250 – 5350 MHz bands. In addition, the "a" mode will demonstrate compliance with FCC 15.247 requirements for the 5725 – 5850 MHz band.

The antenna port conducted data used for the original application continues to be representative for this radio.

EUT Photo

CONFIGURATION 1 SPTE0018**Software/Firmware Running during test**

Description	Version
Intel/Pro Wireless WM3945ABG CRTU	V.4.0.19.0000

EUT

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Itronix, Corp.	IX270-WL3945	Unknown

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Host IX270 Notebook PC	Itronix, Corp.	IX-270	None
AC Adapter	Delta Electronics	ADP-90SB BB	VCW0552024972
Vehicle Mount	Itronix, Corp.	IX270 Vehicle Mount	None
5 dbi Vehicle Mount Antenna	MaxRad	BMAXC24505	None
CF Card Reader	Itronix, Corp.	SDDR-91	None
Mouse	Logitech	M-BE58	LZE02357693
Keyboard	Microsoft	E06401COMB	51061
Headphones	Unknown	None	None
Antenna Terminator	Unknown	None	None
USB Gamepad	Microsoft	X04-63237	00623744

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	AC Adapter	AC Mains
DC Lead	PA	1.8m	PA	AC Adapter	Host Notebook PC
USB	Yes	1.0m	No	Vehicle Mount	Unterminated
USB	Yes	1.0m	No	Vehicle Mount	CF Card Reader
USB	Yes	1.0m	No	Vehicle Mount	USB Mouse
USB	Yes	1.6m	No	Vehicle Mount	USB Gamepad
Keyboard	PA	1.8m	PA	Vehicle Mount	Keyboard
External antenna	Yes	1.0m	No	Vehicle Mount	Antenna Terminator
External antenna	Yes	1.0m	No	Vehicle Mount	Vehicle Mount Antenna
Audio	Yes	1.0m	No	Vehicle Mount	Unterminated
Serial	Yes	1.0m	No	Vehicle Mount	Unterminated
Serial	Yes	1.0m	No	Vehicle Mount	Unterminated
VGA	Yes	1.0m	No	Vehicle Mount	Unterminated
Speaker	Yes	1.0m	No	Vehicle Mount	Headphones
Ethernet	No	1.0m	No	Vehicle Mount	Unterminated

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

CONFIGURATION 2 SPTE0018

Software/Firmware Running during test	
Description	Version
Intel/Pro Wireless WM3945ABG CRTU	V.4.0.19.0000

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
EUT	Itronix, Corp.	IX270-WL3945	Unknown

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Host IX270 Notebook PC	Itronix, Corp.	IX-270	None
AC Adapter	Delta Electronics	ADP-90SB BB	VCW0552024972
Vehicle Mount	Itronix, Corp.	IX270 Vehicle Mount	None
3 dBi Vehicle Mount Antenna	MaxRad	MAXC24503	None
CF Card Reader	Itronix, Corp.	SDDR-91	None
Mouse	Logitech	M-BE58	LZE02357693
Keyboard	Microsoft	E06401COMB	51061
Headphones	Unknown	None	None
Antenna Terminator	Unknown	None	None
USB Gamepad	Microsoft	X04-63237	00623744

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	AC Adapter	AC Mains
DC Lead	PA	1.8m	PA	AC Adapter	Host Notebook PC
USB	Yes	1.0m	No	Vehicle Mount	Unterminated
USB	Yes	1.0m	No	Vehicle Mount	CF Card Reader
USB	Yes	1.0m	No	Vehicle Mount	USB Mouse
USB	Yes	1.6m	No	Vehicle Mount	USB Gamepad
Keyboard	PA	1.8m	PA	Vehicle Mount	Keyboard
External antenna	Yes	1.0m	No	Vehicle Mount	Antenna Terminator
External antenna	Yes	1.0m	No	Vehicle Mount	Vehicle Mount Antenna
Audio	Yes	1.0m	No	Vehicle Mount	Unterminated
Serial	Yes	1.0m	No	Vehicle Mount	Unterminated
Serial	Yes	1.0m	No	Vehicle Mount	Unterminated
VGA	Yes	1.0m	No	Vehicle Mount	Unterminated
Speaker	Yes	1.0m	No	Vehicle Mount	Headphones
Ethernet	No	1.0m	No	Vehicle Mount	Unterminated

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

CONFIGURATION 3 SPTE0018**Software/Firmware Running during test**

Description	Version
Intel/Pro Wireless WM3945ABG CRTU	V.4.0.19.0000

EUT

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Itronix, Corp.	IX270-WL3945	Unknown

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Host IX270 Notebook PC	Itronix, Corp.	IX-270	None
AC Adapter	Delta Electronics	ADP-90SB BB	VCW0552024972
Internal Antenna 1	Well Green	22+600211+00R	None
CF Card Reader	Itronix, Corp.	SDDR-91	None
Mouse	Logitech	M-BE58	LZE02357693
Headphones	Unknown	None	None

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	AC Adapter	AC Mains
DC Lead	PA	1.8m	PA	AC Adapter	Host Notebook PC
USB	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
USB	Yes	1.0m	No	Host IX270 Notebook PC	CF Card Reader
Serial	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
Ethernet	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
Modem	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
Speaker	Yes	1.0m	No	Host IX270 Notebook PC	Headphones
VGA	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
USB	Yes	1.2m	No	Host IX270 Notebook PC	USB Mouse
Audio	No	1.3m	No	Host IX270 Notebook PC	Unterminated

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

CONFIGURATION 4 SPTE0018**Software/Firmware Running during test**

Description	Version
Intel/Pro Wireless WM3945ABG CRTU	V.4.0.19.0000

EUT

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Itronix, Corp.	IX270-WL3945	Unknown

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Host IX270 Notebook PC	Itronix, Corp.	IX-270	None
Internal Antenna 1	Well Green	22+600211+00R	None
CF Card Reader	Itronix, Corp.	SDDR-91	None
Mouse	Logitech	M-BE58	LZE02357693
Keyboard	Microsoft	E06401COMB	51061
USB Gamepad	Microsoft	X04-63237	00623744
Headphones	Sony	MDR-013	None
Microphone	Telex	700373-000	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	1.8m	No	AC Adapter	AC Mains
DC Lead	PA	1.8m	PA	AC Adapter	Host Notebook PC
USB	Yes	1.0m	No	Host IX270 Notebook PC	CF Card Reader
Serial	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
Modem	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
VGA	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
USB	Yes	1.2m	No	Host IX270 Notebook PC	USB Mouse
Audio	No	1.3m	No	Host IX270 Notebook PC	Unterminated
Ethernet	No	1.8m	No	Host IX270 Notebook PC	Unterminated
USB	Yes	1.9m	No	Host IX270 Notebook PC	Unterminated
Audio	PA	1.0m	No	Microphone	Host IX270 Notebook PC
Audio	PA	1.0m	No	Headphones	Host IX270 Notebook PC

PA = Cable is permanently attached to the device. Shielding and/or presence of ferrite may be unknown.

Equipment modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	6/19/2006	Spurious Radiated Emissions - b/g Mode	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	6/21/2006	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.
3	6/22/2006	Spurious Radiated Emissions - A Mode, High Band	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	6/23/2006	Spurious Radiated Emissions - A Mode, Lower Bands	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

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

MODES OF OPERATION

802.1(a), high band, channel 149
 802.11(a), high band, channel 157
 802.11(a), high band, channel 165
 802.11(a), low band 1, channel 36
 802.11(a), low band 1, channel 48
 802.11(a), low band 2, channel 52
 802.11(a), low band, 2, channel 64

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	40 GHz
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CLOCKS AND OSCILLATORS

Unknown

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
Signal Generator	Hewlett Packard	8341B	TGN	1/26/2006	13
Antenna, Horn	EMCO	3115	AHJ	5/20/2005	24
EV01 cable B			EVE	3/30/2006	13
Pre-Amplifier	Miteq	JS4-26004000-50-5A	AON	3/29/2006	13
Pre-Amplifier	Miteq	JS4-26004000-40-8P	APV	3/29/2006	13
Antenna, Horn	EMCO	3160-10	AHI	NCR	0
EV01 Cable D			EVD	3/30/2006	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	3/23/2006	13
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
EV01 cables g,h,i			EVF	4/17/2006	13
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	5/12/2006	13
Antenna, Horn	EMCO	3160-08	AHK	NCR	0
7.5-9.5 GHz Bandpass Filter	K&L Microwave	7ED20-8500/E2000-O/O	HFL	4/3/2006	24
5.8 GHz Notch Filter	Micro-Tronics	BRC50705	HFQ	12/19/2005	13
High Pass Filter	K&L Microwave	1WP01-15000/E6000-O/O	HFJ	4/3/2006	24
5.25 GHz Notch Filter	K&L Microwave	8N50-5250/X200-0/0	HFK	4/3/2006	24
EV01 cables g,h,j			EVB	3/30/2006	13
EV01 cables c,g, h			EVA	3/30/2006	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	8/2/2005	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	1/4/2006	13
Antenna, Horn	EMCO	3115	AHC	8/30/2005	12
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

MEASUREMENT BANDWIDTHS

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

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

MEASUREMENT UNCERTAINTY

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 trans

TEST DESCRIPTION

The radio was tested to FCC 15.407(b) requirements for operation in the 5150 to 5250 MHz, and 5250 to 5350 MHz bands. It was also tested to FCC 15.247 requirements for operation in the 5725 to 5850 MHz band.

The only antenna to be used with the EUT was tested. The EUT was configured for the lowest, a middle, and the highest transmit frequency in each operational band. 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 EUT antenna in three orthogonal axis, and adjusting the measurement antenna height and polarization (per ANSI C63.4:2003). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

To demonstrate compliance with the EIRP requirements, the amplitude and frequency of the highest emissions were noted. The EUT was then replaced with a horn antenna. A signal generator was connected to the horn antenna and its output was adjusted to match the level previously noted for each frequency. The output of the signal generator was recorded, and by factoring in the cable loss to the reference antenna and its gain (dBi); the effective radiated power for each radiated spurious emission was determined.

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/20/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.209: 2006	ANSI C63.4:2003

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

COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES

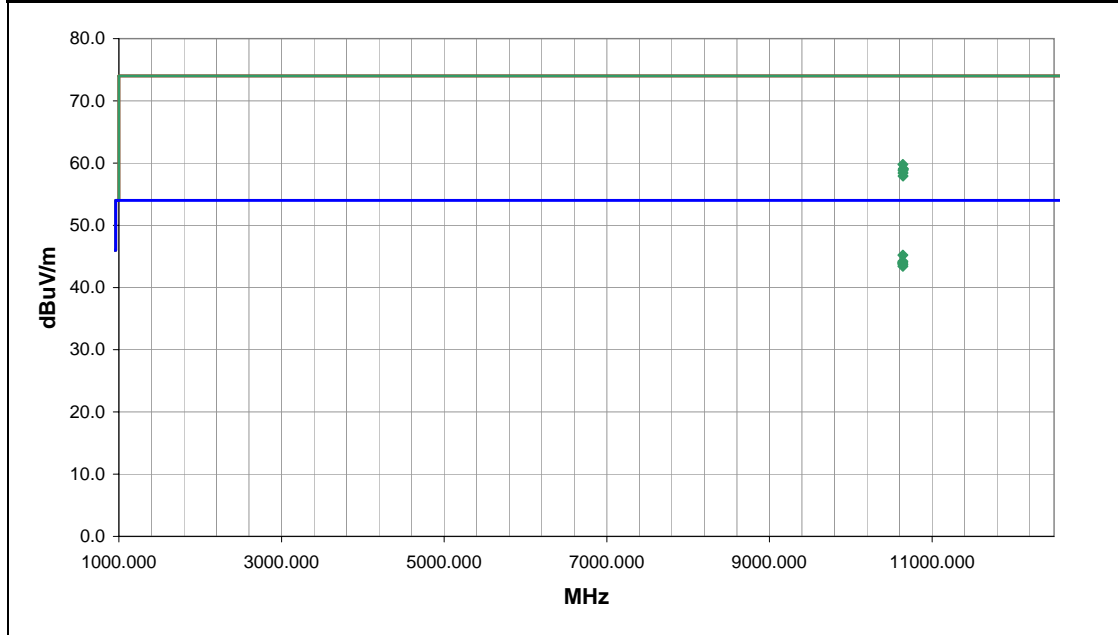
802.11(a)

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	10	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



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
10640.090	29.4	15.8	213.0	1.2	3.0	0.0	V-Horn	AV	0.0	45.2	54.0	-8.8	Ch. 64, 6Mbps
10640.050	28.4	15.8	209.0	1.4	3.0	0.0	H-Horn	AV	0.0	44.2	54.0	-9.8	Ch. 64, 6Mbps
10638.310	28.2	15.8	211.0	1.5	3.0	0.0	H-Horn	AV	0.0	44.0	54.0	-10.0	Ch. 64, 36Mbps
10638.360	28.1	15.8	216.0	1.1	3.0	0.0	V-Horn	AV	0.0	43.9	54.0	-10.1	Ch. 64, 36Mbps
10641.560	27.9	15.8	215.0	1.6	3.0	0.0	H-Horn	AV	0.0	43.7	54.0	-10.3	Ch. 64, 54Mbps
10641.670	27.6	15.8	219.0	1.2	3.0	0.0	V-Horn	AV	0.0	43.4	54.0	-10.6	Ch. 64, 54Mbps
10640.880	44.0	15.8	215.0	1.6	3.0	0.0	H-Horn	PK	0.0	59.8	74.0	-14.2	Ch. 64, 54Mbps
10647.490	43.3	15.8	219.0	1.2	3.0	0.0	V-Horn	PK	0.0	59.1	74.0	-14.9	Ch. 64, 54Mbps
10644.840	43.2	15.8	211.0	1.5	3.0	0.0	H-Horn	PK	0.0	59.0	74.0	-15.0	Ch. 64, 36Mbps
10642.400	43.0	15.8	216.0	1.1	3.0	0.0	V-Horn	PK	0.0	58.8	74.0	-15.2	Ch. 64, 36Mbps
10642.370	42.6	15.8	213.0	1.2	3.0	0.0	V-Horn	PK	0.0	58.4	74.0	-15.6	Ch. 64, 6Mbps
10641.860	42.1	15.8	209.0	1.4	3.0	0.0	H-Horn	PK	0.0	57.9	74.0	-16.1	Ch. 64, 6Mbps

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/20/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	
FCC 15.407:2006	ANSI C63.4:2003
Test Method	

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

COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES

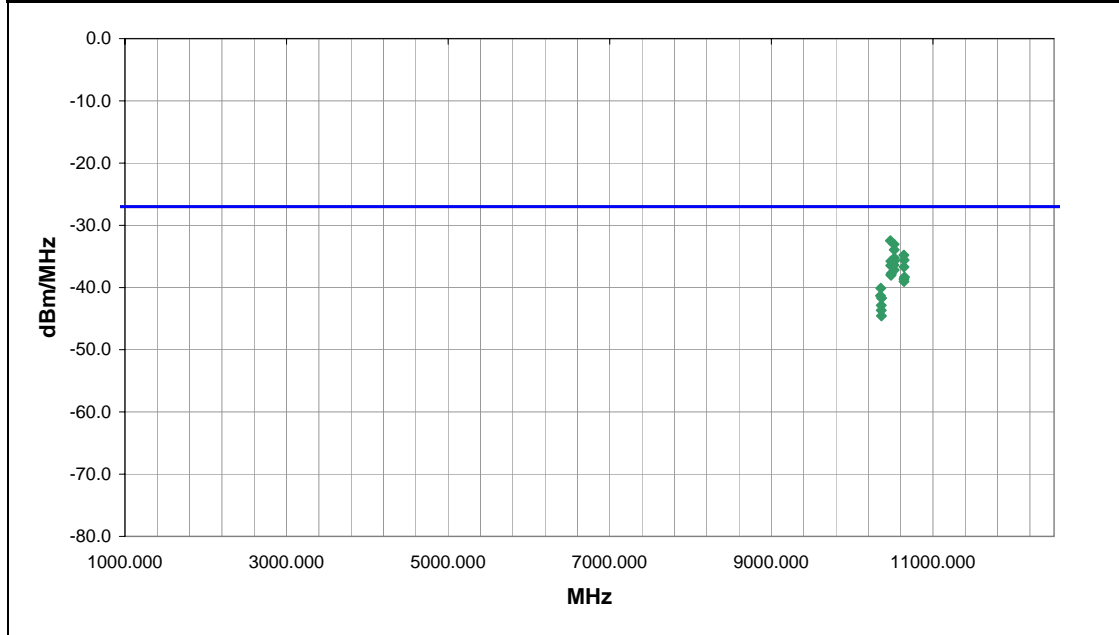
802.11(a)

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	10	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts/MHz)	EIRP (dBm/MHz)	Spec. Limit (dBm/MHz)	Compared to Spec. (dB)	Comments
10474.390	233.0	1.9	H-Horn	PK	5.66E-07	-32.5	-27.0	-5.5	Ch. 48, 54Mbps
10519.120	233.0	1.5	H-Horn	PK	4.95E-07	-33.1	-27.0	-6.1	Ch. 52, 54Mbps
10520.700	175.0	1.0	H-Horn	PK	4.03E-07	-34.0	-27.0	-7.0	Ch. 52, 6Mbps
10640.880	215.0	1.6	H-Horn	PK	3.31E-07	-34.8	-27.0	-7.8	Ch. 64, 54Mbps
10524.480	175.0	1.1	H-Horn	PK	2.99E-07	-35.2	-27.0	-8.2	Ch. 52, 36Mbps
10644.840	211.0	1.5	H-Horn	PK	2.75E-07	-35.6	-27.0	-8.6	Ch. 64, 36Mbps
10479.980	232.0	1.6	H-Horn	PK	2.65E-07	-35.8	-27.0	-8.8	Ch. 48, 6Mbps
10521.050	234.0	1.1	V-Horn	PK	2.64E-07	-35.8	-27.0	-8.8	Ch. 52, 6Mbps
10517.950	235.0	1.1	V-Horn	PK	2.30E-07	-36.4	-27.0	-9.4	Ch. 52, 36Mbps
10478.920	234.0	1.6	H-Horn	PK	2.26E-07	-36.5	-27.0	-9.5	Ch. 48, 36Mbps
10641.860	209.0	1.4	H-Horn	PK	2.14E-07	-36.7	-27.0	-9.7	Ch. 64, 6Mbps
10520.980	232.0	1.1	V-Horn	PK	1.92E-07	-37.2	-27.0	-10.2	Ch. 52, 54Mbps
10485.740	228.0	1.2	V-Horn	PK	1.69E-07	-37.7	-27.0	-10.7	Ch. 48, 54Mbps
10480.980	219.0	1.3	V-Horn	PK	1.61E-07	-37.9	-27.0	-10.9	Ch. 48, 6Mbps
10482.780	225.0	1.2	V-Horn	PK	1.58E-07	-38.0	-27.0	-11.0	Ch. 48, 36Mbps
10647.490	219.0	1.2	V-Horn	PK	1.47E-07	-38.3	-27.0	-11.3	Ch. 64, 54Mbps
10642.400	216.0	1.1	V-Horn	PK	1.37E-07	-38.6	-27.0	-11.6	Ch. 64, 36Mbps
10642.370	213.0	1.2	V-Horn	PK	1.25E-07	-39.0	-27.0	-12.0	Ch. 64, 6Mbps
10355.720	172.0	1.1	H-Horn	PK	9.73E-08	-40.1	-27.0	-13.1	Ch. 36, 6Mbps
10351.930	113.0	1.3	H-Horn	PK	7.38E-08	-41.3	-27.0	-14.3	Ch. 36, 54Mbps

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/22/06
Customer: Spectrum Technology	Temperature: 25
Attendees: None	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.209: 2006	ANSI C63.4:2003

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

COMMENTS

Internal antenna . Notebook configuration.

EUT OPERATING MODES

802.11(a) 6Mbps, channel 36

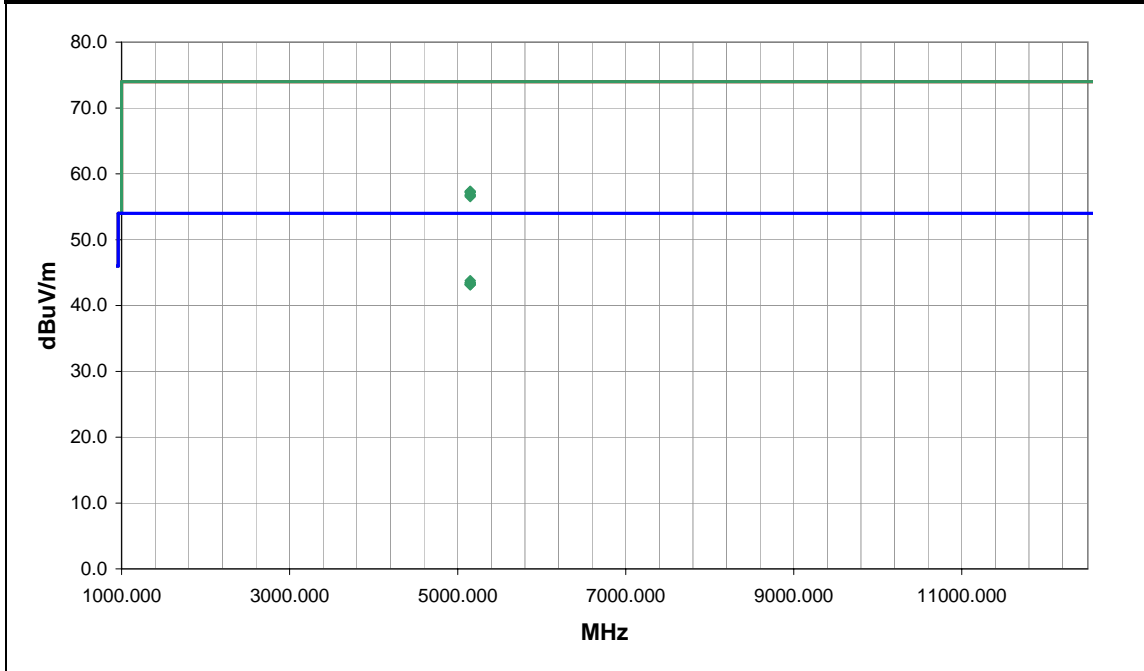
DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	21	
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0

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
5150.000	16.4	36.9	351.0	1.0	1.0	0.0	V-Horn	AV	-9.5	43.8	54.0	-10.2	6Mbps
5150.000	16.1	36.9	-1.0	1.1	1.0	0.0	V-Horn	AV	-9.5	43.5	54.0	-10.5	36Mbps
5150.000	16.1	36.9	352.0	1.0	1.0	0.0	V-Horn	AV	-9.5	43.5	54.0	-10.5	54Mbps
5150.000	15.9	36.9	-1.0	1.0	1.0	0.0	H-Horn	AV	-9.5	43.3	54.0	-10.7	36Mbps
5150.000	15.8	36.9	360.0	1.0	1.0	0.0	H-Horn	AV	-9.5	43.2	54.0	-10.8	6Mbps
5150.000	15.8	36.9	-1.0	1.0	1.0	0.0	H-Horn	AV	-9.5	43.2	54.0	-10.8	54Mbps
5150.000	30.0	36.9	352.0	1.0	1.0	0.0	V-Horn	PK	-9.5	57.4	74.0	-16.6	54Mbps
5150.000	29.9	36.9	351.0	1.0	1.0	0.0	V-Horn	PK	-9.5	57.3	74.0	-16.7	6Mbps
5150.000	29.8	36.9	-1.0	1.1	1.0	0.0	V-Horn	PK	-9.5	57.2	74.0	-16.8	36Mbps
5150.000	29.4	36.9	-1.0	1.0	1.0	0.0	H-Horn	PK	-9.5	56.8	74.0	-17.2	6Mbps
5150.000	29.4	36.9	-1.0	1.0	1.0	0.0	H-Horn	PK	-9.5	56.8	74.0	-17.2	54Mbps
5150.000	29.2	36.9	360.0	1.0	1.0	0.0	H-Horn	PK	-9.5	56.6	74.0	-17.4	6Mbps

EUT: IX270-WL3945	Work Order: SPT0018
Serial Number: None	Date: 06/22/06
Customer: Spectrum Technology	Temperature: 25
Attendees: None	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS		Test Method	
FCC 15.407: 2006		ANSI C63.4:2003	

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

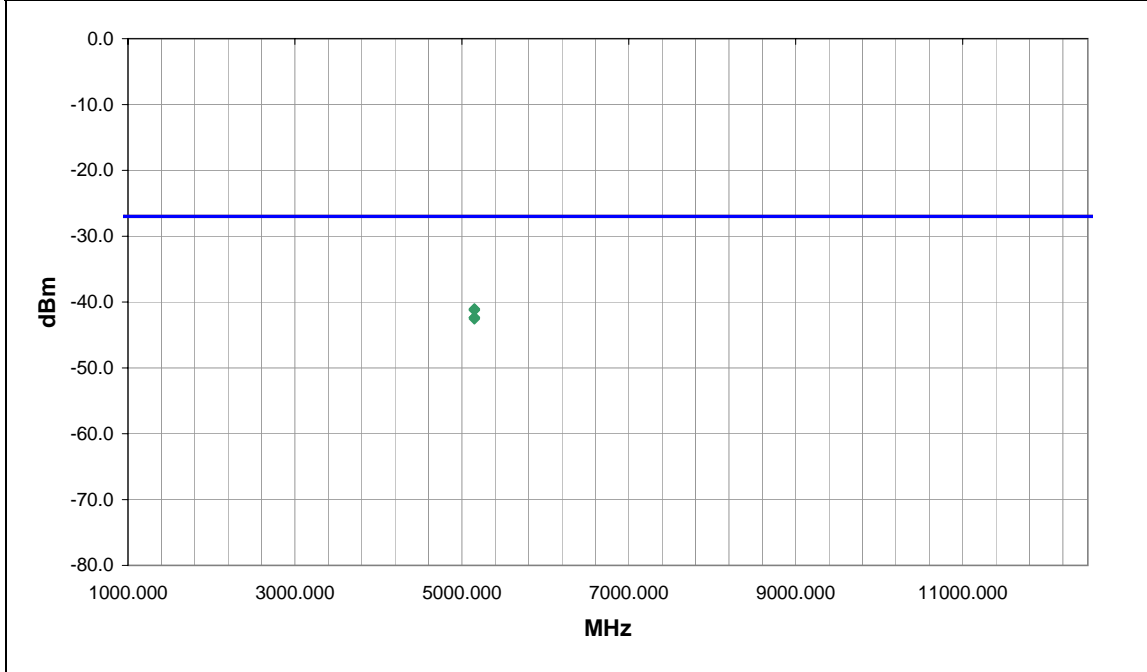
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(a) 6Mbps, channel 36

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	21	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5150.000	352.0	1.0	V-Horn	PK	-41.0	-27.0	-14.0	54Mbps
5150.000	351.0	1.0	V-Horn	PK	-41.1	-27.0	-14.1	6Mbps
5150.000	-1.0	1.1	V-Horn	PK	-41.2	-27.0	-14.2	36Mbps
5150.000	-1.0	1.0	H-Horn	PK	-42.4	-27.0	-15.4	6Mbps
5150.000	-1.0	1.0	H-Horn	PK	-42.4	-27.0	-15.4	54Mbps
5150.000	360.0	1.0	H-Horn	PK	-42.6	-27.0	-15.6	6Mbps

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/22/06
Customer: Spectrum Technology	Temperature: 25
Attendees: None	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	
FCC 15.209: 2006	Test Method ANSI C63.4:2003

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

COMMENTS

Internal antenna . Notebook configuration.

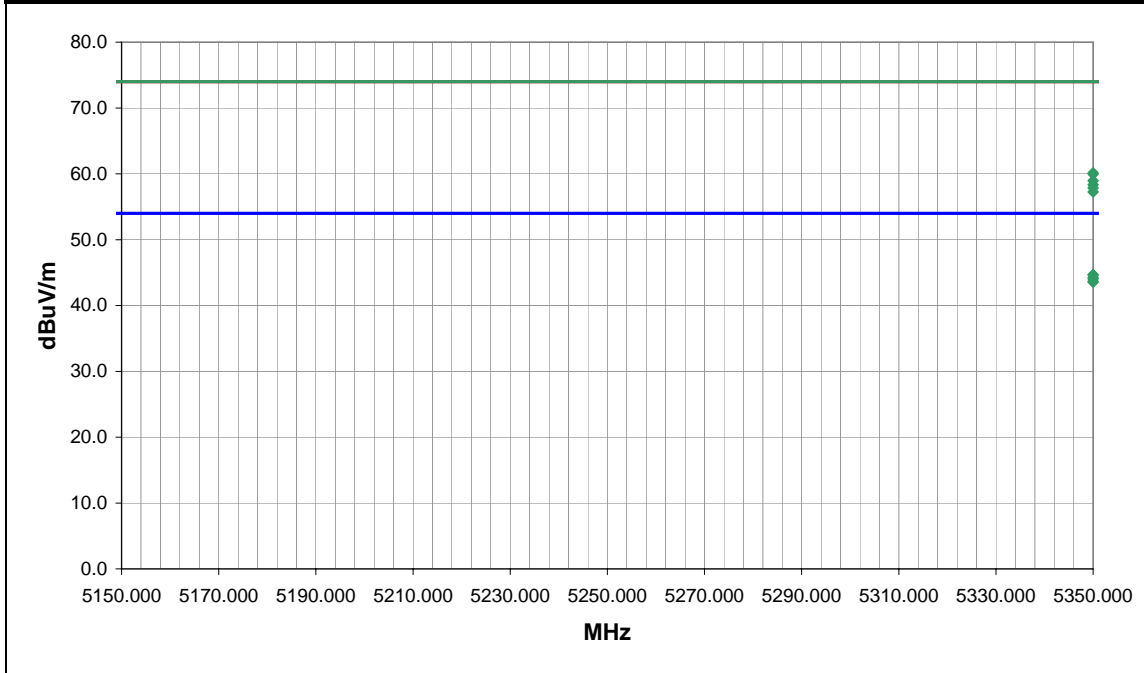
EUT OPERATING MODES

802.11(a), channel 64, see comments for data rate

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	20	NVLAP Lab Code 200630-0	Signature <i>Rod Peloquin</i>
Configuration #	3		
Results	Pass		



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
5350.000	17.2	37.0	360.0	1.4	1.0	0.0	V-Horn	AV	-9.5	44.7	54.0	-9.3	6Mbps
5350.000	17.2	37.0	-1.0	1.0	1.0	0.0	V-Horn	AV	-9.5	44.7	54.0	-9.3	36Mbps
5350.000	16.8	37.0	360.0	1.1	1.0	0.0	V-Horn	AV	-9.5	44.3	54.0	-9.7	54Mbps
5350.000	16.6	37.0	289.0	1.2	1.0	0.0	H-Horn	AV	-9.5	44.1	54.0	-9.9	6Mbps
5350.000	16.2	37.0	319.0	1.1	1.0	0.0	H-Horn	AV	-9.5	43.7	54.0	-10.3	36Mbps
5350.000	16.1	37.0	10.0	1.1	1.0	0.0	H-Horn	AV	-9.5	43.6	54.0	-10.4	54Mbps
5350.000	32.7	37.0	360.0	1.1	1.0	0.0	V-Horn	PK	-9.5	60.2	74.0	-13.8	54Mbps
5350.000	32.5	37.0	-1.0	1.0	1.0	0.0	V-Horn	PK	-9.5	60.0	74.0	-14.0	36Mbps
5350.000	31.5	37.0	360.0	1.4	1.0	0.0	V-Horn	PK	-9.5	59.0	74.0	-15.0	6Mbps
5350.000	30.9	37.0	289.0	1.2	1.0	0.0	H-Horn	PK	-9.5	58.4	74.0	-15.6	6Mbps
5350.000	30.4	37.0	319.0	1.1	1.0	0.0	H-Horn	PK	-9.5	57.9	74.0	-16.1	36Mbps
5350.000	29.8	37.0	10.0	1.1	1.0	0.0	H-Horn	PK	-9.5	57.3	74.0	-16.7	54Mbps

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/22/06
Customer: Spectrum Technology	Temperature: 25
Attendees: None	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS		Test Method	
FCC 15.407:2006		ANSI C63.4:2003	

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

COMMENTS
Internal antenna . Notebook configuration.

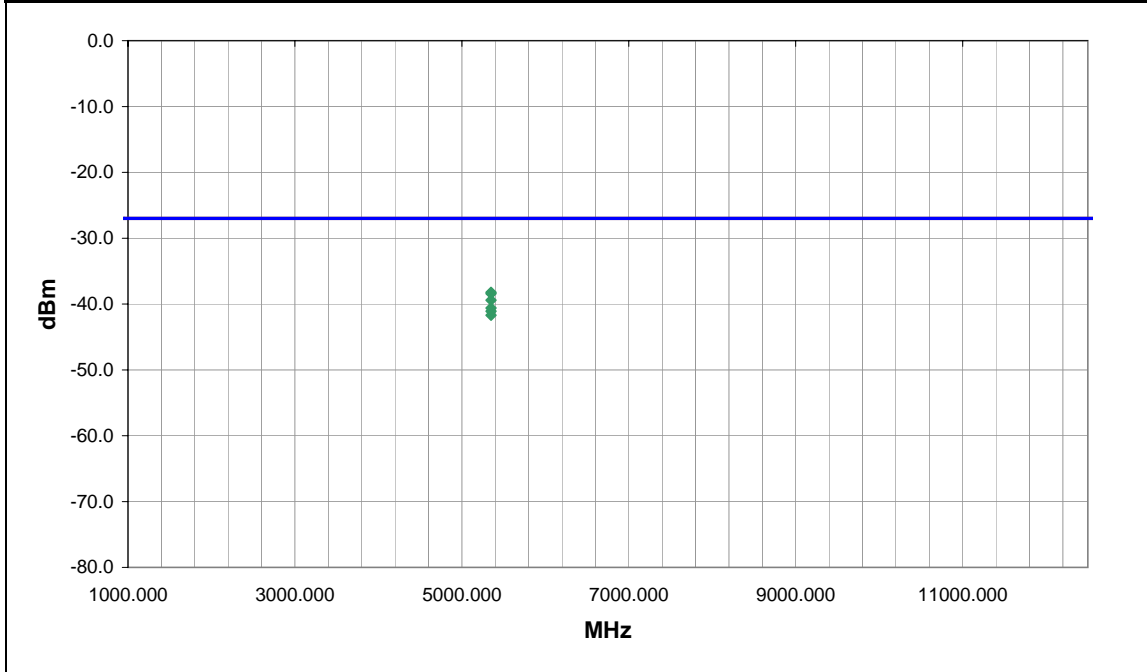
EUT OPERATING MODES

802.11(a), channel 64, see comments for data rate

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	20	NVLAP Lab Code 200630-0	Signature <i>Rod Peloquin</i>
Configuration #	3		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5350.000	360.0	1.1	V-Horn	PK	-38.2	-27.0	-11.2	54Mbps
5350.000	-1.0	1.0	V-Horn	PK	-38.4	-27.0	-11.4	36Mbps
5350.000	360.0	1.4	V-Horn	PK	-39.4	-27.0	-12.4	6Mbps
5350.000	289.0	1.2	H-Horn	PK	-40.6	-27.0	-13.6	6Mbps
5350.000	319.0	1.1	H-Horn	PK	-41.1	-27.0	-14.1	36Mbps
5350.000	10.0	1.1	H-Horn	PK	-41.7	-27.0	-14.7	54Mbps

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/23/06
Customer: Spectrum Technology	Temperature: 25
Attendees: none	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.209: 2006	ANSI C63.4:2003

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

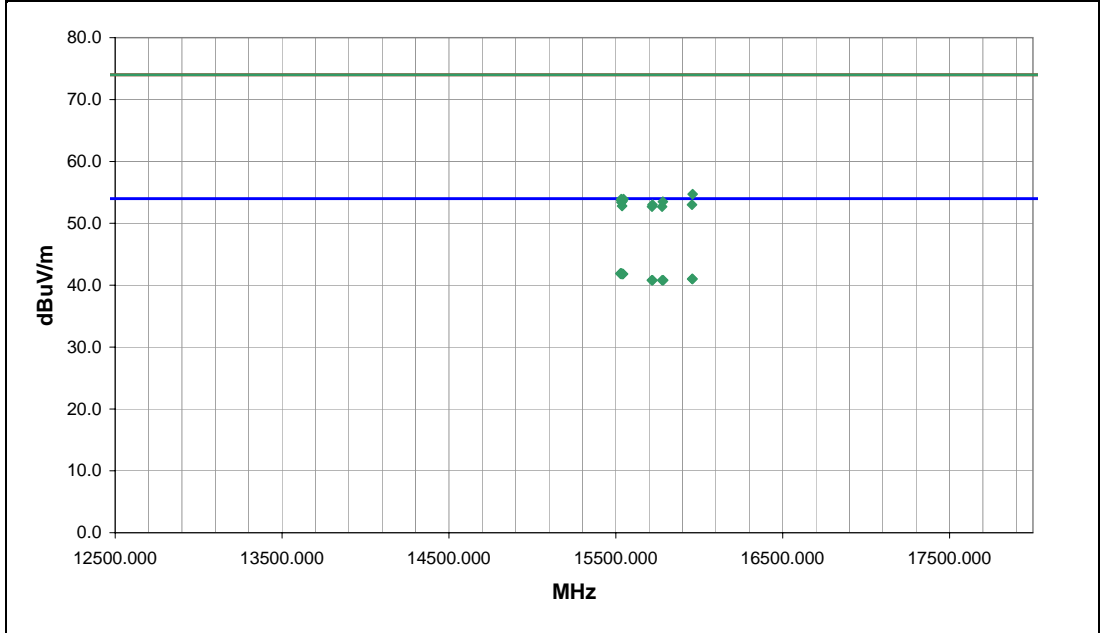
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(a)

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	23
Configuration #	3
Results	Pass

NVLAP Lab Code 200630-0 Signature *Holly Ashkannejhad*



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 (dB)	Compared to Spec. (dB)	Comments
15528.350	24.6	17.3	186.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	Channel 36, 6Mbps
15530.060	24.6	17.3	116.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.9	54.0	-12.1	Channel 36, 6Mbps
15534.170	24.6	17.3	286.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.9	54.0	-12.1	Channel 36, 6Mbps
15532.310	24.5	17.3	113.0	1.0	3.0	0.0	V-Horn	AV	0.0	41.8	54.0	-12.2	Channel 36, 6Mbps
15539.430	24.5	17.3	239.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	Channel 36, 6Mbps
15543.030	24.5	17.3	31.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.8	54.0	-12.2	Channel 36, 6Mbps
15957.740	23.3	17.7	336.0	1.7	3.0	0.0	V-Horn	AV	0.0	41.0	54.0	-13.0	Channel 64, 6Mbps
15959.440	23.3	17.7	67.0	1.0	3.0	0.0	H-Horn	AV	0.0	41.0	54.0	-13.0	Channel 64, 6Mbps
15715.730	23.3	17.5	81.0	1.0	3.0	0.0	H-Horn	AV	0.0	40.8	54.0	-13.2	Channel 48, 6Mbps
15719.610	23.3	17.5	338.0	1.0	3.0	0.0	V-Horn	AV	0.0	40.8	54.0	-13.2	Channel 48, 6Mbps
15778.240	23.3	17.5	189.0	1.0	3.0	0.0	V-Horn	AV	0.0	40.8	54.0	-13.2	Channel 52, 6Mbps
15783.730	23.3	17.5	13.0	2.7	3.0	0.0	H-Horn	AV	0.0	40.8	54.0	-13.2	Channel 52, 6Mbps
15960.160	37.0	17.7	336.0	1.7	3.0	0.0	V-Horn	PK	0.0	54.7	74.0	-19.3	Channel 64, 6Mbps
15532.720	36.6	17.3	186.0	1.0	3.0	0.0	V-Horn	PK	0.0	53.9	74.0	-20.1	Channel 36, 6Mbps
15546.630	36.6	17.3	239.0	1.0	3.0	0.0	H-Horn	PK	0.0	53.9	74.0	-20.1	Channel 36, 6Mbps
15532.960	36.4	17.3	116.0	1.0	3.0	0.0	H-Horn	PK	0.0	53.7	74.0	-20.3	Channel 36, 6Mbps
15540.490	36.3	17.3	31.0	1.0	3.0	0.0	H-Horn	PK	0.0	53.6	74.0	-20.4	Channel 36, 6Mbps
15782.310	36.0	17.5	189.0	1.0	3.0	0.0	V-Horn	PK	0.0	53.5	74.0	-20.5	Channel 52, 6Mbps
15533.680	36.1	17.3	113.0	1.0	3.0	0.0	V-Horn	PK	0.0	53.4	74.0	-20.6	Channel 36, 6Mbps
15719.480	35.5	17.5	81.0	1.0	3.0	0.0	H-Horn	PK	0.0	53.0	74.0	-21.0	Channel 48, 6Mbps

EMC

Spurious Radiated Emissions

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/23/06
Customer: Spectrum Technology	Temperature: 25
Attendees: none	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.407: 2006	ANSI C63.4:2003

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

COMMENTS
Internal antenna . Notebook configuration.

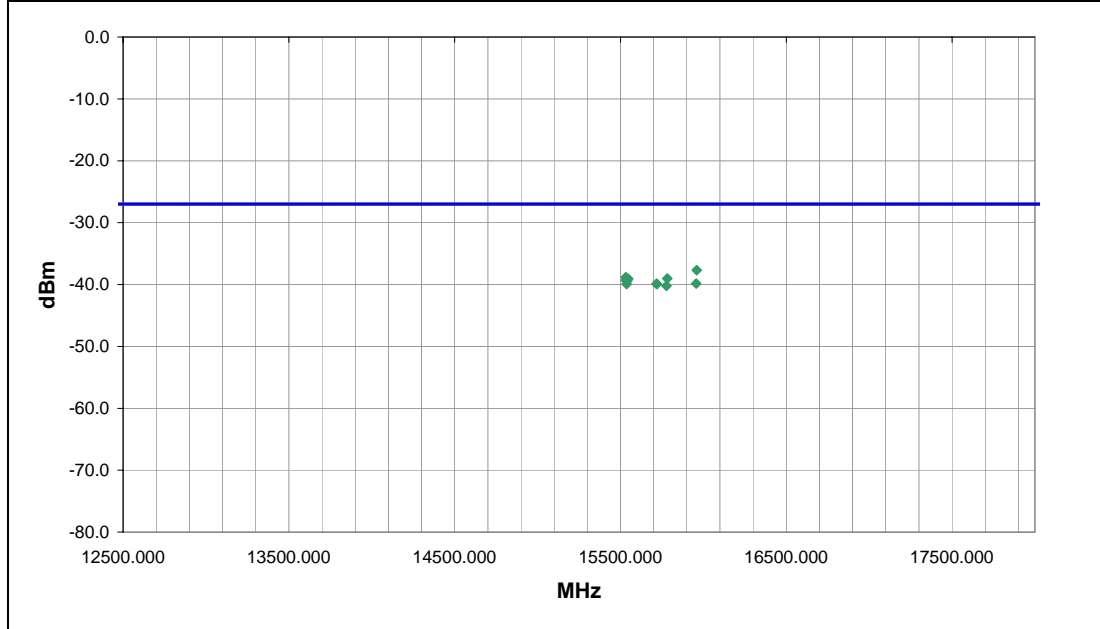
EUT OPERATING MODES
802.11(a)

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	23
Configuration #	3
Results	Pass

NVLAP Lab Code 200630-0

Signature *Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
15960.160	336.0	1.7	V-Horn	PK	1.70E-07	-37.7	-27.0	-10.7	Channel 64, 6Mbps
15532.720	186.0	1.0	V-Horn	PK	1.31E-07	-38.8	-27.0	-11.8	Channel 36, 6Mbps
15546.630	239.0	1.0	H-Horn	PK	1.24E-07	-39.1	-27.0	-12.1	Channel 36, 6Mbps
15532.960	116.0	1.0	H-Horn	PK	1.18E-07	-39.3	-27.0	-12.3	Channel 36, 6Mbps
15540.490	31.0	1.0	H-Horn	PK	1.16E-07	-39.4	-27.0	-12.4	Channel 36, 6Mbps
15782.310	189.0	1.0	V-Horn	PK	1.25E-07	-39.0	-27.0	-12.0	Channel 52, 6Mbps
15533.680	113.0	1.0	V-Horn	PK	1.17E-07	-39.3	-27.0	-12.3	Channel 36, 6Mbps
15719.480	81.0	1.0	H-Horn	PK	1.02E-07	-39.9	-27.0	-12.9	Channel 48, 6Mbps

EUT: IX270-WL3945		Work Order: SPT0018
Serial Number: None		Date: 06/22/06
Customer: Spectrum Technology		Temperature: 23
Attendees: None		Humidity: 47%
Project: None		Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz	Job Site: EV01


TEST SPECIFICATIONS	Test Method
FCC 15.247: 2006	ANSI C63.4:2003

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

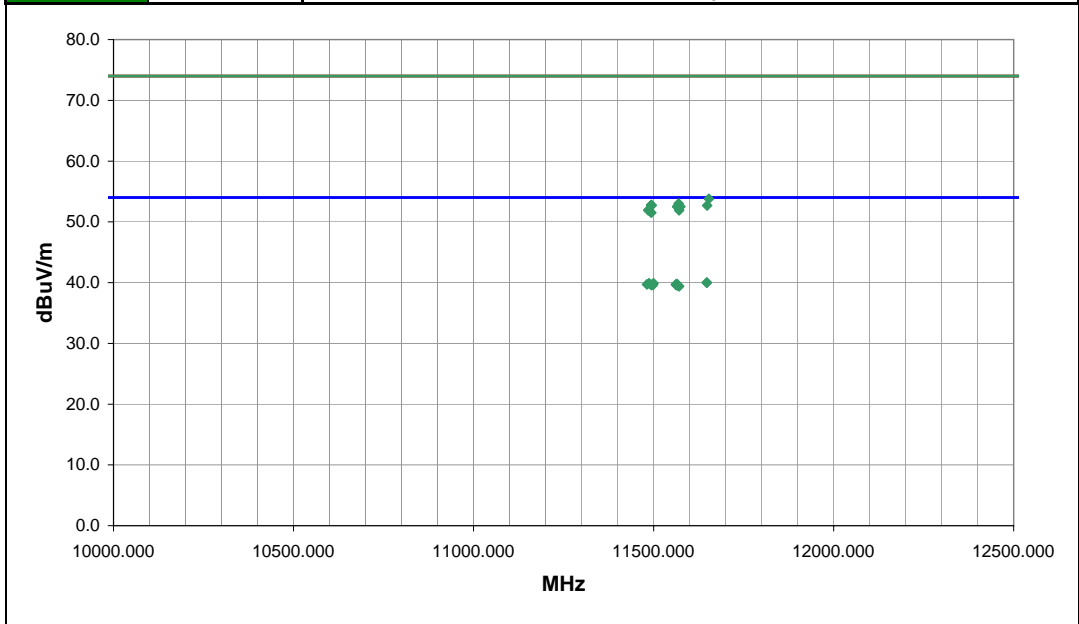
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(a), high band

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	22	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



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
11647.630	24.0	16.0	234.0	1.4	3.0	0.0	V-Horn	AV	0.0	40.0	54.0	-14.0	Channel 157, 54Mbps
11647.780	24.0	16.0	177.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.0	54.0	-14.0	Channel 157, 54Mbps
11487.300	23.9	16.0	45.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.9	54.0	-14.1	Channel 149, 36Mbps
11499.930	23.9	16.0	301.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.9	54.0	-14.1	Channel 149, 6Mbps
11564.760	23.7	16.1	50.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.8	54.0	-14.2	Channel 157, 36Mbps
11481.610	23.7	16.0	261.0	1.2	3.0	0.0	H-Horn	AV	0.0	39.7	54.0	-14.3	Channel 149, 6Mbps
11497.490	23.7	16.0	314.0	2.0	3.0	0.0	H-Horn	AV	0.0	39.7	54.0	-14.3	Channel 149, 54Mbps
11561.740	23.6	16.1	212.0	1.6	3.0	0.0	H-Horn	AV	0.0	39.7	54.0	-14.3	Channel 157, 6Mbps
11493.500	23.6	16.0	22.0	1.1	3.0	0.0	H-Horn	AV	0.0	39.6	54.0	-14.4	Channel 149, 36Mbps
11497.740	23.6	16.0	136.0	2.9	3.0	0.0	V-Horn	AV	0.0	39.6	54.0	-14.4	Channel 149, 54Mbps
11563.310	23.5	16.1	231.0	1.2	3.0	0.0	H-Horn	AV	0.0	39.6	54.0	-14.4	Channel 157, 54Mbps
11563.780	23.5	16.1	99.0	1.5	3.0	0.0	H-Horn	AV	0.0	39.6	54.0	-14.4	Channel 157, 36Mbps
11568.060	23.4	16.1	327.0	1.0	3.0	0.0	V-Horn	AV	0.0	39.5	54.0	-14.5	Channel 157, 54Mbps
11570.670	23.3	16.1	28.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.4	54.0	-14.6	Channel 157, 6Mbps
11653.670	37.8	16.0	234.0	1.4	3.0	0.0	V-Horn	PK	0.0	53.8	74.0	-20.2	Channel 157, 54Mbps
11569.340	36.9	16.1	212.0	1.6	3.0	0.0	H-Horn	PK	0.0	53.0	74.0	-21.0	Channel 157, 6Mbps
11493.490	36.8	16.0	261.0	1.2	3.0	0.0	H-Horn	PK	0.0	52.8	74.0	-21.2	Channel 149, 6Mbps
11493.220	36.7	16.0	301.0	1.1	3.0	0.0	V-Horn	PK	0.0	52.7	74.0	-21.3	Channel 149, 6Mbps
11494.190	36.7	16.0	314.0	2.0	3.0	0.0	H-Horn	PK	0.0	52.7	74.0	-21.3	Channel 149, 54Mbps
11648.530	36.7	16.0	177.0	1.2	3.0	0.0	H-Horn	PK	0.0	52.7	74.0	-21.3	Channel 157, 54Mbps

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/20/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247: 2006	ANSI C63.4:2003

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

COMMENTS
Internal antenna . Notebook configuration.

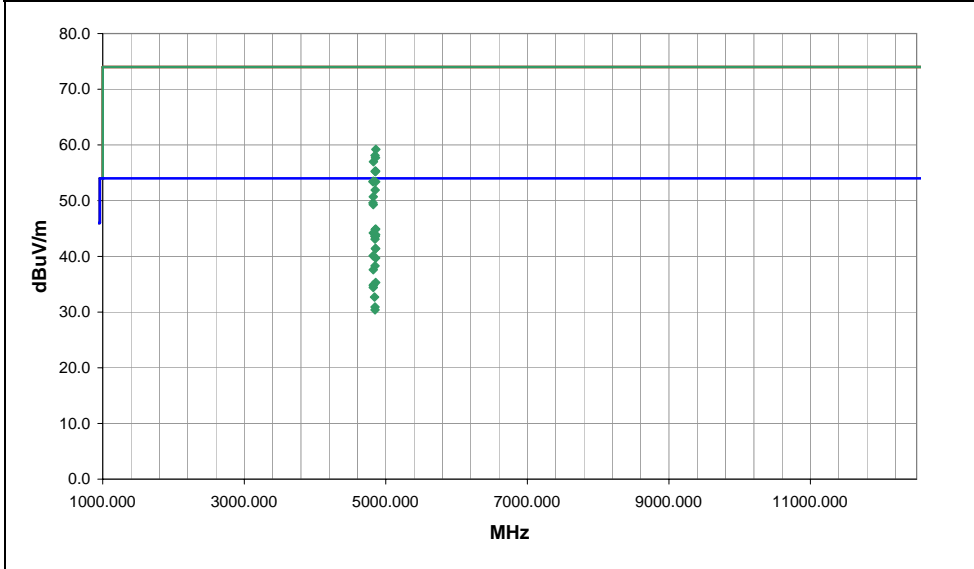
EUT OPERATING MODES
802.11(a)

DEVIATIONS FROM TEST STANDARD
No deviations.

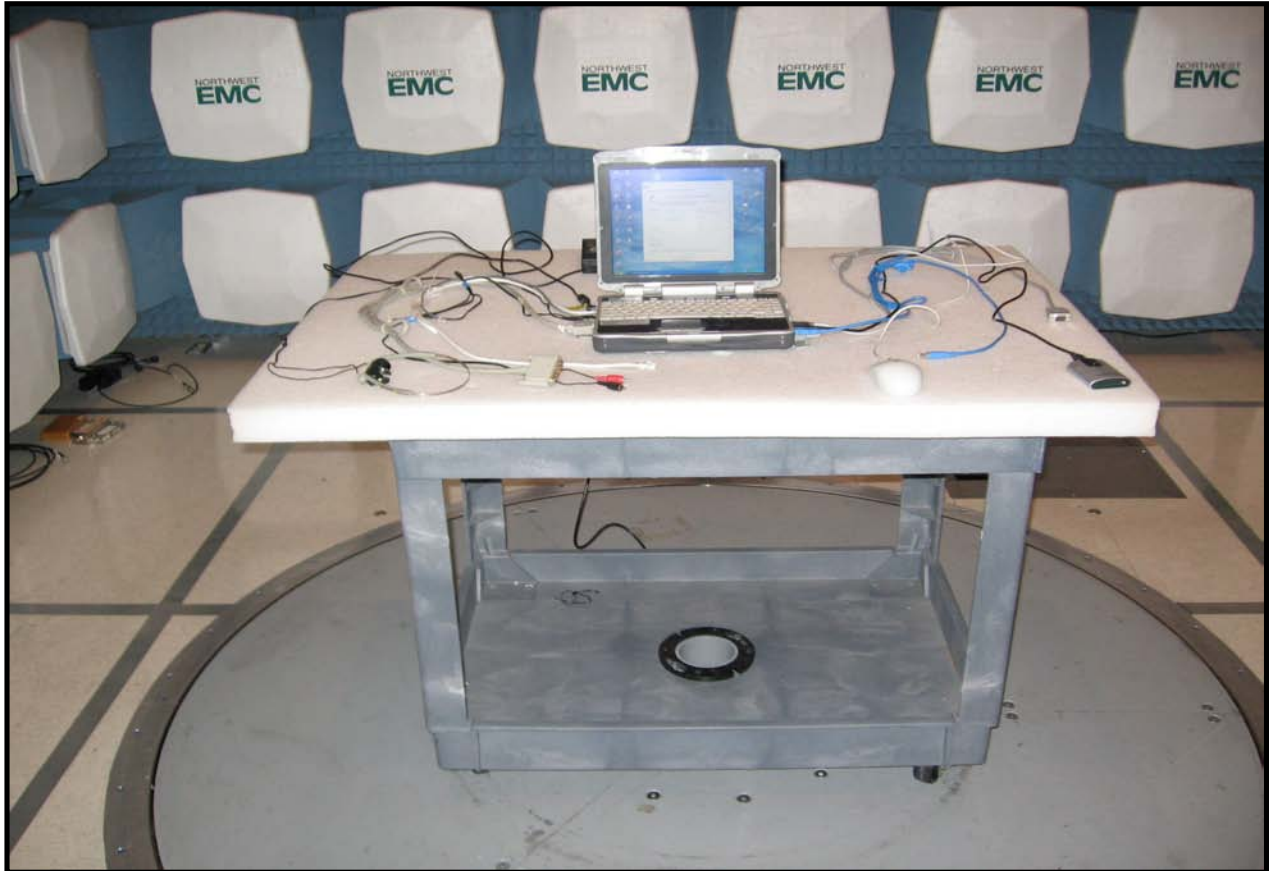
Run #	11
Configuration #	3
Results	Pass

NVLAP Lab Code 200630-0

Signature *Rod Peloquin*



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
4857.310	38.5	6.4	345.0	1.4	3.0	0.0	H-Horn	AV	0.0	44.9	54.0	-9.1	Ch. 165, 6Mbps, EUT on side
4822.960	37.8	6.4	327.0	1.6	3.0	0.0	H-Horn	AV	0.0	44.2	54.0	-9.8	Ch. 157, 6Mbps, EUT on side
4856.400	37.5	6.4	350.0	1.2	3.0	0.0	V-Horn	AV	0.0	43.9	54.0	-10.1	Ch. 165, 6Mbps, EUT vertical
4852.700	37.2	6.4	65.0	1.3	3.0	0.0	H-Horn	AV	0.0	43.6	54.0	-10.4	Ch. 165, 6Mbps, EUT horizontal
4853.220	35.0	6.4	317.0	1.2	3.0	0.0	V-Horn	AV	0.0	41.4	54.0	-12.6	Ch. 165, 6Mbps, EUT horizontal
4856.170	35.0	6.4	127.0	1.1	3.0	0.0	V-Horn	AV	0.0	41.4	54.0	-12.6	Ch. 165, 6Mbps, EUT on side
4819.920	33.7	6.4	10.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.1	54.0	-13.9	Ch. 157, 6Mbps, EUT typical position
4856.200	33.3	6.4	269.0	1.3	3.0	0.0	H-Horn	AV	0.0	39.7	54.0	-14.3	Ch. 165, 6Mbps, EUT vertical
4858.890	52.8	6.4	345.0	1.4	3.0	0.0	H-Horn	PK	0.0	59.2	74.0	-14.8	Ch. 165, 6Mbps, EUT on side
4847.840	31.9	6.4	350.0	1.4	3.0	0.0	H-Horn	AV	0.0	38.3	54.0	-15.7	Ch. 165, 36Mbps, EUT on side
4847.130	51.7	6.4	350.0	1.2	3.0	0.0	V-Horn	PK	0.0	58.1	74.0	-15.9	Ch. 165, 6Mbps, EUT vertical
4853.330	51.3	6.4	65.0	1.3	3.0	0.0	H-Horn	PK	0.0	57.7	74.0	-16.3	Ch. 165, 6Mbps, EUT horizontal
4823.680	31.2	6.4	327.0	1.5	3.0	0.0	H-Horn	AV	0.0	37.6	54.0	-16.4	Ch. 157, 36Mbps, EUT on side
4823.960	50.6	6.4	327.0	1.6	3.0	0.0	H-Horn	PK	0.0	57.0	74.0	-17.0	Ch. 157, 6Mbps, EUT on side
4849.540	48.9	6.4	350.0	1.4	3.0	0.0	H-Horn	PK	0.0	55.3	74.0	-18.7	Ch. 165, 36Mbps, EUT on side
4857.120	48.9	6.4	317.0	1.2	3.0	0.0	V-Horn	PK	0.0	55.3	74.0	-18.7	Ch. 165, 6Mbps, EUT horizontal
4856.280	28.9	6.4	348.0	1.3	3.0	0.0	H-Horn	AV	0.0	35.3	54.0	-18.7	Ch. 165, 54Mbps, EUT on side
4852.780	48.8	6.4	127.0	1.1	3.0	0.0	V-Horn	PK	0.0	55.2	74.0	-18.8	Ch. 165, 6Mbps, EUT on side
4828.360	28.5	6.4	37.0	1.1	3.0	0.0	V-Horn	AV	0.0	34.9	54.0	-19.1	Ch. 157, 36Mbps, EUT typical position
4822.780	28.4	6.4	5.0	1.5	3.0	0.0	H-Horn	AV	0.0	34.8	54.0	-19.2	Ch. 157, 54Mbps, EUT on side





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

802.11(b), 1Mbps
 802.11(b), 11Mbps
 802.11(g), 6Mbps
 802.11(g), 36Mbps
 802.11(g), 54Mbps

CHANNELS INVESTIGATED

Low channel
 Mid channel
 High channel

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	26 GHz
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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
EV01 cables c,g, h			EVA	3/30/2006	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	1/4/2006	13
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
EV01 cables g,h,j			EVB	3/30/2006	13
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	8/2/2005	13
Antenna, Horn	EMCO	3115	AHC	8/30/2005	12
EV01 cables g,h,l			EVF	4/17/2006	13
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	5/12/2006	13
Antenna, Horn	EMCO	3160-08	AHK	NCR	0
EV01 Cable D			EVD	3/30/2006	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	3/23/2006	13
Antenna, Horn	EMCO	3160-09	AHG	NCR	0
Low Pass Filter 0-1000 MHz	Micro-Tronics	LPM50004	LFD	9/28/2005	13
High Pass Filter	Micro-Tronics	HPM50111	HFO	4/4/2006	13
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

MEASUREMENT BANDWIDTHS

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

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

MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The radio was tested to FCC 15.247 requirements for operation in the 2400 – 2483.5 MHz band. 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 axes, 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.

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/19/06
Customer: Spectrum Technology	Temperature: 23
Attendees: Rod Munro	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS		Test Method
FCC 15.247: 2006		ANSI C63.4:2003

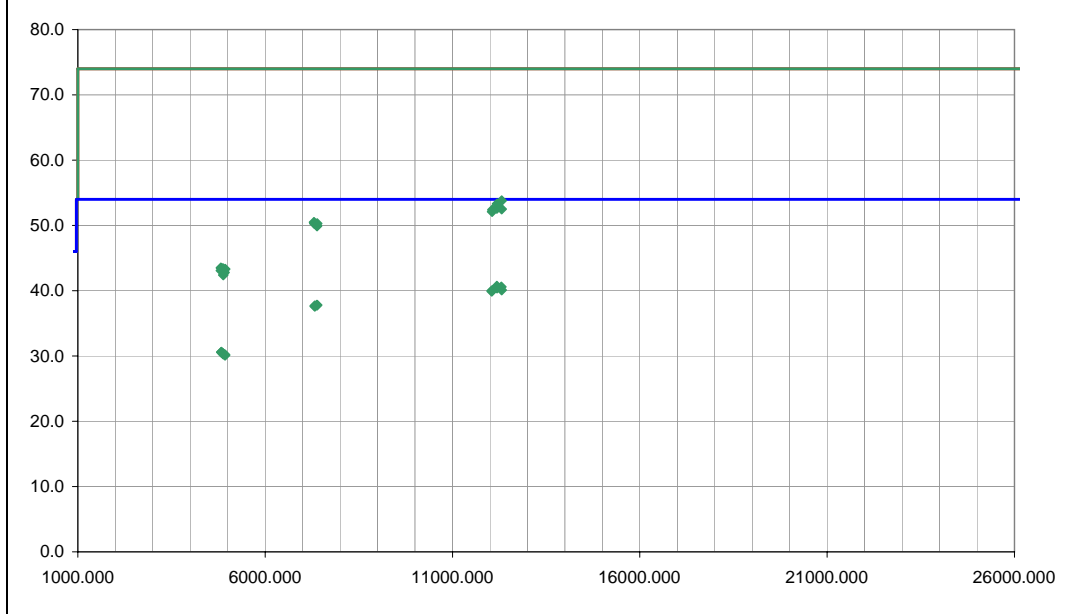
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3

COMMENTS
BMAXC24505 external antenna . Vehicle mount configuration.

EUT OPERATING MODES
802.11(g)

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	1	NVLAP Lab Code 200630-0 <i>Roddy Le Pelley</i> Signature
Configuration #	1	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
12182.600	24.5	16.2	332.0	2.1	3.0	0.0	V-Horn	AV	0.0	40.7	54.0	-13.3	6Mbps, mid channel
12304.800	24.5	16.1	352.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.6	54.0	-13.4	6Mbps, high channel
12189.000	24.2	16.2	0.0	2.4	3.0	0.0	H-Horn	AV	0.0	40.4	54.0	-13.6	6Mbps, mid channel
12314.500	24.0	16.1	1.0	2.4	3.0	0.0	H-Horn	AV	0.0	40.1	54.0	-13.9	6Mbps, high channel
12046.330	23.9	16.1	251.0	1.6	3.0	0.0	V-Horn	AV	0.0	40.0	54.0	-14.0	6Mbps, low channel
12047.570	23.8	16.1	102.0	1.8	3.0	0.0	H-Horn	AV	0.0	39.9	54.0	-14.1	6Mbps, low channel
7382.770	24.2	13.6	257.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.8	54.0	-16.2	6Mbps, high channel
7383.570	24.2	13.6	49.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.8	54.0	-16.2	6Mbps, high channel
7323.530	24.4	13.3	37.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.7	54.0	-16.3	6Mbps, mid channel
7324.600	24.3	13.3	307.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.6	54.0	-16.4	6Mbps, mid channel
12311.300	37.7	16.1	352.0	1.1	3.0	0.0	V-Horn	PK	0.0	53.8	74.0	-20.2	6Mbps, high channel
12189.000	37.1	16.2	332.0	2.1	3.0	0.0	V-Horn	PK	0.0	53.3	74.0	-20.7	6Mbps, mid channel
12182.570	36.4	16.2	0.0	2.4	3.0	0.0	H-Horn	PK	0.0	52.6	74.0	-21.4	6Mbps, mid channel
12311.870	36.4	16.1	1.0	2.4	3.0	0.0	H-Horn	PK	0.0	52.5	74.0	-21.5	6Mbps, high channel
12064.670	36.3	16.1	251.0	1.6	3.0	0.0	V-Horn	PK	0.0	52.4	74.0	-21.6	6Mbps, low channel
12056.230	36.0	16.1	102.0	1.8	3.0	0.0	H-Horn	PK	0.0	52.1	74.0	-21.9	6Mbps, low channel
4830.000	24.2	6.4	-1.0	1.7	3.0	0.0	V-Horn	AV	0.0	30.6	54.0	-23.4	6Mbps, low channel
4830.830	24.2	6.4	359.0	1.8	3.0	0.0	H-Horn	AV	0.0	30.6	54.0	-23.4	6Mbps, low channel
7302.230	37.2	13.3	37.0	1.1	3.0	0.0	V-Horn	PK	0.0	50.5	74.0	-23.5	6Mbps, mid channel
4874.600	23.9	6.5	9.0	1.1	3.0	0.0	V-Horn	AV	0.0	30.4	54.0	-23.6	6Mbps, mid channel

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/19/06
Customer: Spectrum Technology	Temperature: 23
Attendees: Rod Munro	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247: 2006	ANSI C63.4:2003

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

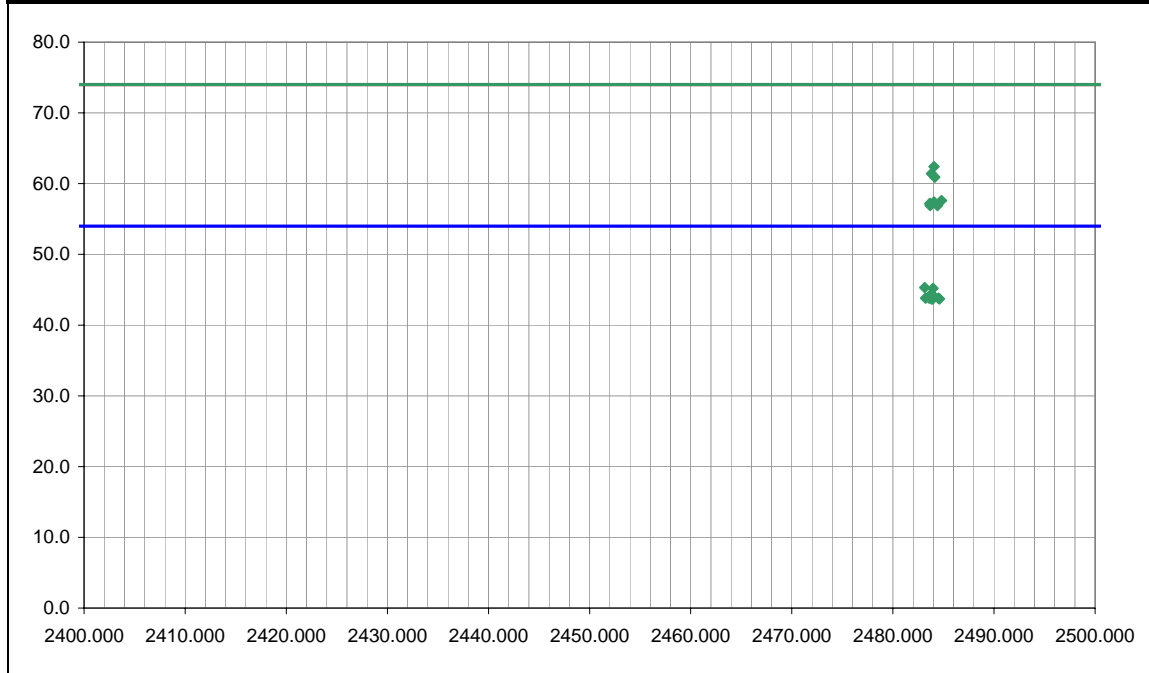
COMMENTS
BMAXC24505 external antenna . Vehicle mount configuration.

EUT OPERATING MODES
High channel, 802.11(b/g)

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	2	 Signature
Configuration #	1	
Results	Pass	

NVLAP Lab Code 200630-0



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
2483.152	24.8	0.5	309.0	1.0	3.0	20.0	V-Horn	AV	0.0	45.3	54.0	-8.7	36Mbps
2483.970	24.7	0.5	20.0	1.1	3.0	20.0	V-Horn	AV	0.0	45.2	54.0	-8.8	6Mbps
2483.818	23.9	0.5	211.0	1.0	3.0	20.0	V-Horn	AV	0.0	44.4	54.0	-9.6	54Mbps
2484.058	23.5	0.5	323.0	1.0	3.0	20.0	V-Horn	AV	0.0	44.0	54.0	-10.0	11Mbps
2483.232	23.3	0.5	93.0	1.0	3.0	20.0	H-Horn	AV	0.0	43.8	54.0	-10.2	54Mbps
2483.585	23.3	0.5	169.0	1.0	3.0	20.0	V-Horn	AV	0.0	43.8	54.0	-10.2	1Mbps
2484.503	23.3	0.5	105.0	3.4	3.0	20.0	H-Horn	AV	0.0	43.8	54.0	-10.2	6Mbps
2483.825	23.2	0.5	317.0	3.2	3.0	20.0	H-Horn	AV	0.0	43.7	54.0	-10.3	1Mbps
2483.938	23.2	0.5	154.0	3.2	3.0	20.0	H-Horn	AV	0.0	43.7	54.0	-10.3	11Mbps
2484.600	23.2	0.5	254.0	1.0	3.0	20.0	H-Horn	AV	0.0	43.7	54.0	-10.3	36Mbps
2484.065	41.9	0.5	20.0	1.1	3.0	20.0	V-Horn	PK	0.0	62.4	74.0	-11.6	6Mbps
2483.817	40.9	0.5	309.0	1.0	3.0	20.0	V-Horn	PK	0.0	61.4	74.0	-12.6	36Mbps
2484.140	40.4	0.5	211.0	1.0	3.0	20.0	V-Horn	PK	0.0	60.9	74.0	-13.1	54Mbps
2484.813	37.1	0.5	105.0	3.4	3.0	20.0	H-Horn	PK	0.0	57.6	74.0	-16.4	6Mbps
2484.065	36.9	0.5	317.0	3.2	3.0	20.0	H-Horn	PK	0.0	57.4	74.0	-16.6	1Mbps
2483.657	36.7	0.5	169.0	1.0	3.0	20.0	V-Horn	PK	0.0	57.2	74.0	-16.8	1Mbps
2483.707	36.6	0.5	93.0	1.0	3.0	20.0	H-Horn	PK	0.0	57.1	74.0	-16.9	54Mbps
2484.393	36.5	0.5	323.0	1.0	3.0	20.0	V-Horn	PK	0.0	57.0	74.0	-17.0	11Mbps
2483.677	36.4	0.5	154.0	3.2	3.0	20.0	H-Horn	PK	0.0	56.9	74.0	-17.1	11Mbps
2484.420	36.4	0.5	254.0	1.0	3.0	20.0	H-Horn	PK	0.0	56.9	74.0	-17.1	36Mbps

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/19/06
Customer: Spectrum Technology	Temperature: 23
Attendees: Rod Munro	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	
FCC 15.247: 2006	ANSI C63.4:2003
Test Method	

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

COMMENTS

MAXC24503 external antenna . Vehicle mount configuration.

EUT OPERATING MODES

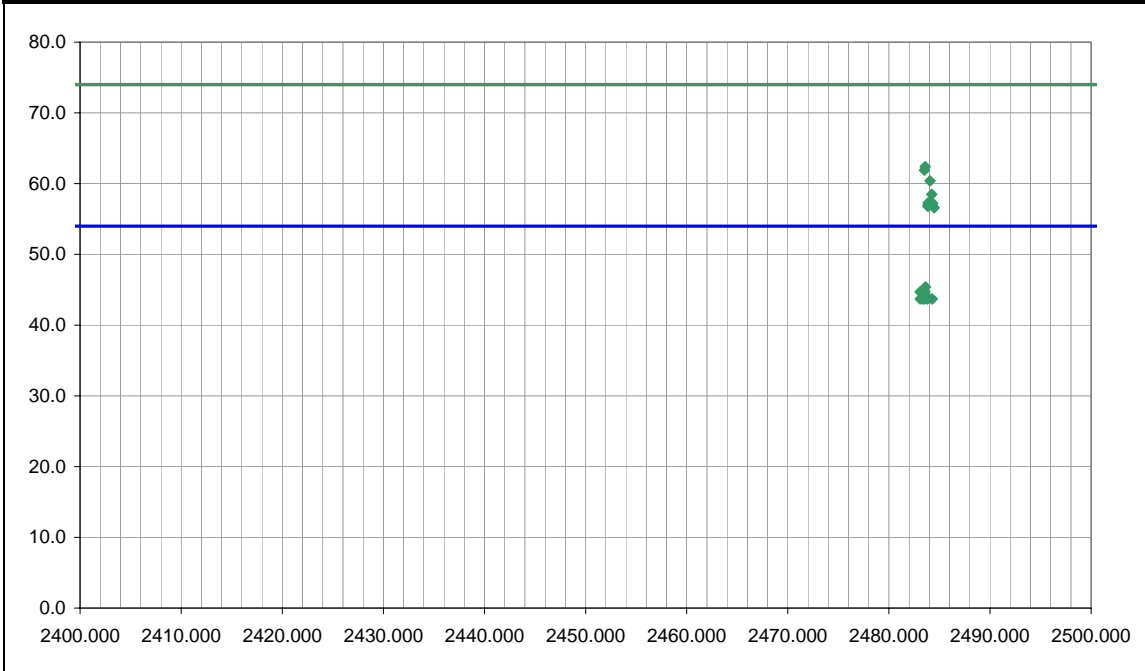
High channel, 802.11(b/g)

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	3	 Signature
Configuration #	2	
Results	Pass	

NVLAP Lab Code 200630-0



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
2483.625	24.9	0.5	170.0	1.0	3.0	20.0	V-Horn	AV	0.0	45.4	54.0	-8.6	6Mbps
2483.082	24.2	0.5	351.0	1.0	3.0	20.0	V-Horn	AV	0.0	44.7	54.0	-9.3	36Mbps
2483.565	24.2	0.5	334.0	1.0	3.0	20.0	V-Horn	AV	0.0	44.7	54.0	-9.3	54Mbps
2483.897	23.3	0.5	234.0	1.0	3.0	20.0	V-Horn	AV	0.0	43.8	54.0	-10.2	11Mbps
2483.960	23.3	0.5	159.0	1.0	3.0	20.0	V-Horn	AV	0.0	43.8	54.0	-10.2	1Mbps
2483.093	23.2	0.5	242.0	1.6	3.0	20.0	H-Horn	AV	0.0	43.7	54.0	-10.3	54Mbps
2483.357	23.2	0.5	240.0	1.0	3.0	20.0	H-Horn	AV	0.0	43.7	54.0	-10.3	11Mbps
2483.485	23.2	0.5	123.0	1.6	3.0	20.0	H-Horn	AV	0.0	43.7	54.0	-10.3	36Mbps
2483.758	23.2	0.5	339.0	1.0	3.0	20.0	H-Horn	AV	0.0	43.7	54.0	-10.3	1Mbps
2484.290	23.2	0.5	268.0	1.1	3.0	20.0	H-Horn	AV	0.0	43.7	54.0	-10.3	6Mbps
2483.597	41.9	0.5	334.0	1.0	3.0	20.0	V-Horn	PK	0.0	62.4	74.0	-11.6	54Mbps
2483.507	41.4	0.5	170.0	1.0	3.0	20.0	V-Horn	PK	0.0	61.9	74.0	-12.1	6Mbps
2484.070	39.9	0.5	351.0	1.0	3.0	20.0	V-Horn	PK	0.0	60.4	74.0	-13.6	36Mbps
2484.243	38.0	0.5	242.0	1.6	3.0	20.0	H-Horn	PK	0.0	58.5	74.0	-15.5	54Mbps
2483.895	36.8	0.5	159.0	1.0	3.0	20.0	V-Horn	PK	0.0	57.3	74.0	-16.7	1Mbps
2484.333	36.7	0.5	123.0	1.6	3.0	20.0	H-Horn	PK	0.0	57.2	74.0	-16.8	36Mbps
2483.905	36.5	0.5	339.0	1.0	3.0	20.0	H-Horn	PK	0.0	57.0	74.0	-17.0	1Mbps
2483.875	36.4	0.5	234.0	1.0	3.0	20.0	V-Horn	PK	0.0	56.9	74.0	-17.1	11Mbps
2483.852	36.3	0.5	268.0	1.1	3.0	20.0	H-Horn	PK	0.0	56.8	74.0	-17.2	6Mbps
2484.468	36.1	0.5	240.0	1.0	3.0	20.0	H-Horn	PK	0.0	56.6	74.0	-17.4	11Mbps

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/19/06
Customer: Spectrum Technology	Temperature: 23
Attendees: Rod Munro	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS		Test Method
FCC 15.247: 2006		ANSI C63.4:2003

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

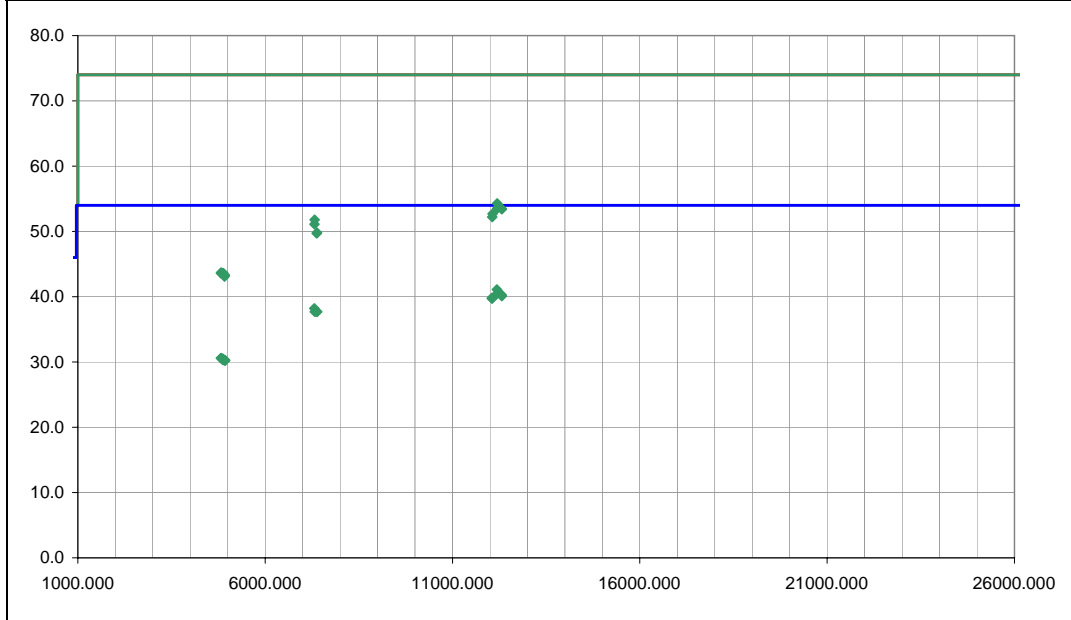
COMMENTS
 MAXC24503 external antenna . Vehicle mount configuration.

EUT OPERATING MODES
 802.11(g), 6Mbps

DEVIATIONS FROM TEST STANDARD
 No deviations.

Run #	4	 Signature
Configuration #	2	
Results	Pass	

NVLAP Lab Code 200630-0



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
12182.830	24.9	16.2	355.0	1.4	3.0	0.0	V-Horn	AV	0.0	41.1	54.0	-12.9	6Mbps, mid channel
12177.470	24.2	16.2	19.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.4	54.0	-13.6	6Mbps, mid channel
12310.400	24.2	16.1	347.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.3	54.0	-13.7	6Mbps, high channel
12316.030	24.0	16.1	155.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.1	54.0	-13.9	6Mbps, high channel
12048.430	23.7	16.1	155.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.8	54.0	-14.2	6Mbps, low channel
12057.730	23.6	16.1	62.0	1.2	3.0	0.0	H-Horn	AV	0.0	39.7	54.0	-14.3	6Mbps, low channel
7311.000	24.8	13.4	335.0	1.2	3.0	0.0	V-Horn	AV	0.0	38.2	54.0	-15.8	6Mbps, mid channel
7325.700	24.4	13.3	69.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.7	54.0	-16.3	6Mbps, mid channel
7382.530	24.1	13.6	298.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.7	54.0	-16.3	6Mbps, high channel
7385.370	24.1	13.6	222.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.7	54.0	-16.3	6Mbps, high channel
12192.770	38.1	16.2	355.0	1.4	3.0	0.0	V-Horn	PK	0.0	54.3	74.0	-19.7	6Mbps, mid channel
12192.770	37.3	16.2	19.0	1.2	3.0	0.0	H-Horn	PK	0.0	53.5	74.0	-20.5	6Mbps, mid channel
12306.800	37.4	16.1	155.0	1.2	3.0	0.0	H-Horn	PK	0.0	53.5	74.0	-20.5	6Mbps, high channel
12317.930	37.3	16.1	347.0	1.1	3.0	0.0	V-Horn	PK	0.0	53.4	74.0	-20.6	6Mbps, high channel
12067.730	36.6	16.1	155.0	1.1	3.0	0.0	V-Horn	PK	0.0	52.7	74.0	-21.3	6Mbps, low channel
12060.100	36.1	16.1	62.0	1.2	3.0	0.0	H-Horn	PK	0.0	52.2	74.0	-21.8	6Mbps, low channel
7320.630	38.5	13.3	335.0	1.2	3.0	0.0	V-Horn	PK	0.0	51.8	74.0	-22.2	6Mbps, mid channel
7317.870	37.8	13.3	69.0	1.2	3.0	0.0	H-Horn	PK	0.0	51.1	74.0	-22.9	6Mbps, mid channel
4819.330	24.2	6.4	133.0	1.7	3.0	0.0	V-Horn	AV	0.0	30.6	54.0	-23.4	6Mbps, low channel
4831.630	24.2	6.4	71.0	2.7	3.0	0.0	H-Horn	AV	0.0	30.6	54.0	-23.4	6Mbps, low channel

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/19/06
Customer: Spectrum Technology	Temperature: 23
Attendees: Rod Munro	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247: 2006	ANSI C63.4:2003

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

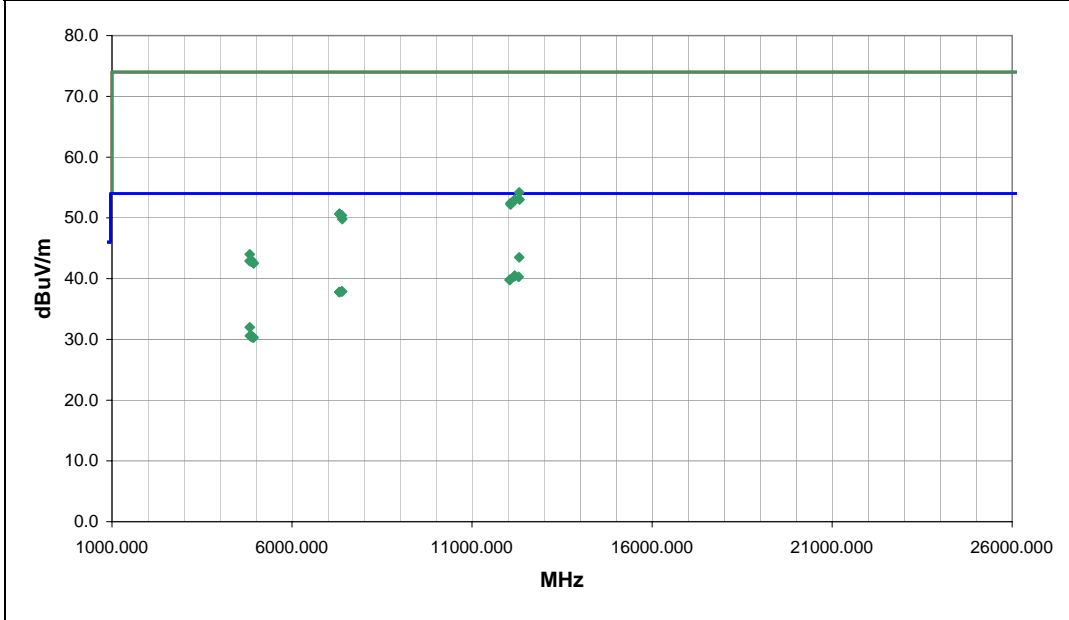
COMMENTS
BMAXC24505 external antenna . Vehicle mount configuration.

EUT OPERATING MODES
802.11(b), 1Mbps

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	5	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Factor	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
12309.070	27.4	16.1	-1.0	1.4	3.0	0.0	V-Horn	AV	0.0	43.5	54.0	-10.5	1Mbps, high channel
12186.530	24.3	16.2	108.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.5	54.0	-13.5	1Mbps, mid channel
12186.800	24.2	16.2	239.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.4	54.0	-13.6	1Mbps, mid channel
12293.900	24.2	16.1	89.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.3	54.0	-13.7	1Mbps, high channel
12046.500	23.7	16.1	161.0	2.9	3.0	0.0	H-Horn	AV	0.0	39.8	54.0	-14.2	1Mbps, low channel
12046.570	23.7	16.1	68.0	1.1	3.0	0.0	V-Horn	AV	0.0	39.8	54.0	-14.2	1Mbps, low channel
7384.970	24.3	13.6	70.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.9	54.0	-16.1	1Mbps, high channel
7387.170	24.3	13.6	191.0	1.2	3.0	0.0	V-Horn	AV	0.0	37.9	54.0	-16.1	1Mbps, high channel
7313.500	24.5	13.3	236.0	2.7	3.0	0.0	V-Horn	AV	0.0	37.8	54.0	-16.2	1Mbps, mid channel
7312.430	24.4	13.4	351.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.8	54.0	-16.2	1Mbps, mid channel
12308.430	38.1	16.1	-1.0	1.4	3.0	0.0	V-Horn	PK	0.0	54.2	74.0	-19.8	1Mbps, high channel
12186.730	36.8	16.2	239.0	1.1	3.0	0.0	V-Horn	PK	0.0	53.0	74.0	-21.0	1Mbps, mid channel
12318.930	36.9	16.1	89.0	1.2	3.0	0.0	H-Horn	PK	0.0	53.0	74.0	-21.0	1Mbps, high channel
12189.970	36.7	16.2	108.0	1.2	3.0	0.0	H-Horn	PK	0.0	52.9	74.0	-21.1	1Mbps, mid channel
12064.230	36.3	16.1	68.0	1.1	3.0	0.0	V-Horn	PK	0.0	52.4	74.0	-21.6	1Mbps, low channel
12069.900	36.1	16.1	161.0	2.9	3.0	0.0	H-Horn	PK	0.0	52.2	74.0	-21.8	1Mbps, low channel
4824.100	25.6	6.4	247.0	1.1	3.0	0.0	V-Horn	AV	0.0	32.0	54.0	-22.0	1Mbps, low channel
7320.870	37.4	13.3	351.0	1.2	3.0	0.0	H-Horn	PK	0.0	50.7	74.0	-23.3	1Mbps, mid channel
4831.430	24.2	6.4	76.0	2.2	3.0	0.0	H-Horn	AV	0.0	30.6	54.0	-23.4	1Mbps, low channel
7312.700	37.3	13.3	236.0	2.7	3.0	0.0	V-Horn	PK	0.0	50.6	74.0	-23.4	1Mbps, mid channel

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/19/06
Customer: Spectrum Technology	Temperature: 23
Attendees: Rod Munro	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247: 2006	ANSI C63.4:2003

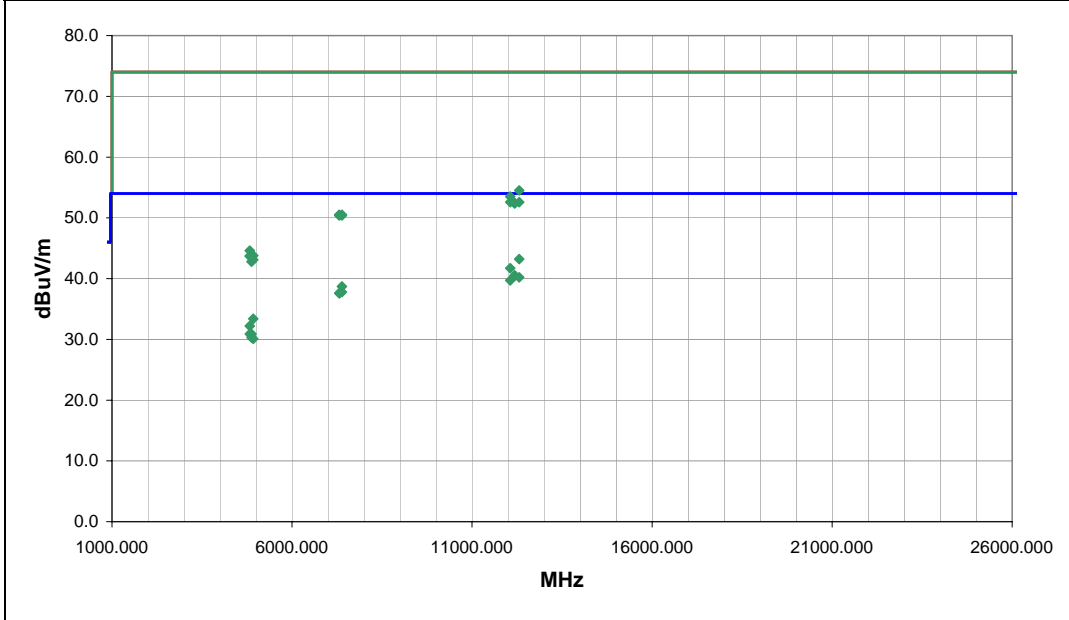
TEST PARAMETERS
Antenna Height(s) (m) 1 - 4 Test Distance (m) 3

COMMENTS
MAXC24503 external antenna . Vehicle mount configuration.

EUT OPERATING MODES
802.11(b), 1Mbps

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	6	NVLAP Lab Code 200630-0	Signature <i>Holly Ashkannejhad</i>
Configuration #	2		
Results	Pass		



Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
12310.850	27.1	16.1	6.0	1.4	3.0	0.0	V-Horn	AV	0.0	43.2	54.0	-10.8	1Mbps, high channel
12058.890	25.6	16.1	360.0	1.8	3.0	0.0	V-Horn	AV	0.0	41.7	54.0	-12.3	1Mbps, low channel
12185.860	24.3	16.2	28.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.5	54.0	-13.5	1Mbps, mid channel
12186.230	24.3	16.2	291.0	1.7	3.0	0.0	V-Horn	AV	0.0	40.5	54.0	-13.5	1Mbps, mid channel
12309.130	24.1	16.1	249.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.2	54.0	-13.8	1Mbps, high channel
12060.490	23.6	16.1	217.0	2.9	3.0	0.0	H-Horn	AV	0.0	39.7	54.0	-14.3	1Mbps, low channel
7384.950	25.1	13.6	289.0	1.1	3.0	0.0	V-Horn	AV	0.0	38.7	54.0	-15.3	1Mbps, high channel
7385.337	24.2	13.6	259.0	1.1	3.0	0.0	H-Horn	AV	0.0	37.8	54.0	-16.2	1Mbps, high channel
7312.687	24.3	13.3	87.0	2.7	3.0	0.0	V-Horn	AV	0.0	37.6	54.0	-16.4	1Mbps, mid channel
7312.787	24.3	13.3	101.0	1.1	3.0	0.0	H-Horn	AV	0.0	37.6	54.0	-16.4	1Mbps, mid channel
12309.140	38.4	16.1	6.0	1.4	3.0	0.0	V-Horn	PK	0.0	54.5	74.0	-19.5	1Mbps, high channel
12059.570	37.4	16.1	360.0	1.8	3.0	0.0	V-Horn	PK	0.0	53.5	74.0	-20.5	1Mbps, low channel
4923.963	26.7	6.7	318.0	1.1	3.0	0.0	V-Horn	AV	0.0	33.4	54.0	-20.6	1Mbps, high channel
12060.800	36.5	16.1	217.0	2.9	3.0	0.0	H-Horn	PK	0.0	52.6	74.0	-21.4	1Mbps, low channel
12310.010	36.5	16.1	249.0	1.2	3.0	0.0	H-Horn	PK	0.0	52.6	74.0	-21.4	1Mbps, high channel
12184.020	36.2	16.2	291.0	1.7	3.0	0.0	V-Horn	PK	0.0	52.4	74.0	-21.6	1Mbps, mid channel
12185.850	36.2	16.2	28.0	1.2	3.0	0.0	H-Horn	PK	0.0	52.4	74.0	-21.6	1Mbps, mid channel
4823.983	25.8	6.4	313.0	1.1	3.0	0.0	V-Horn	AV	0.0	32.2	54.0	-21.8	1Mbps, low channel
4823.883	24.5	6.4	194.0	2.1	3.0	0.0	H-Horn	AV	0.0	30.9	54.0	-23.1	1Mbps, low channel
4873.857	24.4	6.5	280.0	2.6	3.0	0.0	V-Horn	AV	0.0	30.9	54.0	-23.1	1Mbps, mid channel

EMC Spurious Radiated Emissions

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/19/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannehad	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS		Test Method	
FCC 15.247: 2006		ANSI C63.4:2003	

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

COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES

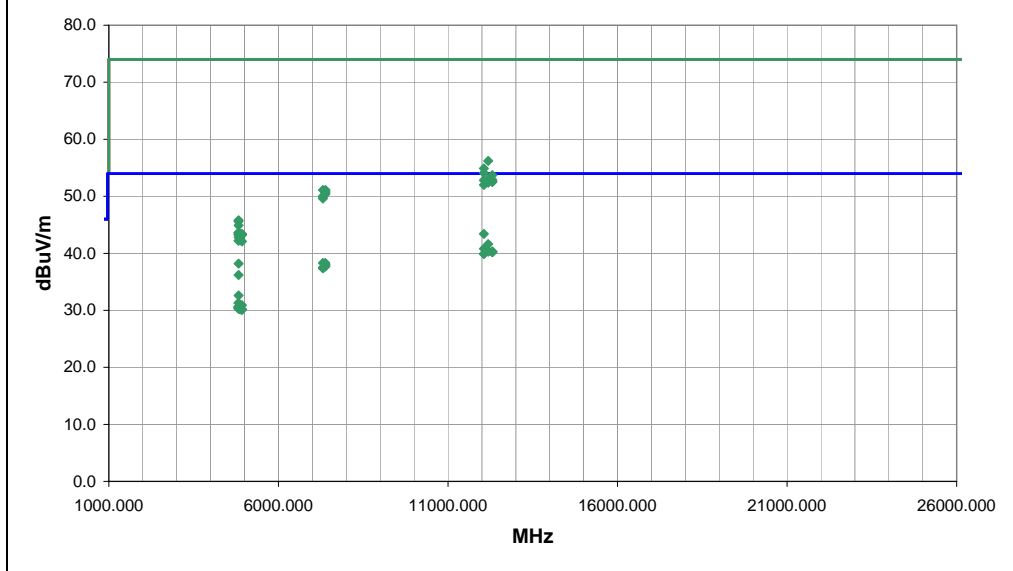
802.11

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8
Configuration #	3
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannehad*



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
12059.170	27.3	16.1	351.0	1.1	3.0	0.0	V-Horn	AV	0.0	43.4	54.0	-10.6	802.11(b), 1Mbps, low channel
12185.610	25.4	16.2	9.0	1.1	3.0	0.0	V-Horn	AV	0.0	41.6	54.0	-12.4	802.11(g), 6Mbps, mid channel
12060.750	24.7	16.1	12.0	1.0	3.0	0.0	V-Horn	AV	0.0	40.8	54.0	-13.2	802.11(g), 6Mbps, low channel
12185.710	24.2	16.2	49.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.4	54.0	-13.6	802.11(b), 1Mbps, mid channel
12186.700	24.2	16.2	131.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.4	54.0	-13.6	802.11(b), 1Mbps, mid channel
12186.760	24.1	16.2	197.0	1.3	3.0	0.0	H-Horn	AV	0.0	40.3	54.0	-13.7	802.11(g), 6Mbps, mid channel
12309.620	24.2	16.1	208.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.3	54.0	-13.7	802.11(b), 1Mbps, high channel
12310.720	24.2	16.1	262.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.3	54.0	-13.7	802.11(g), 6Mbps, high channel
12308.960	24.1	16.1	125.0	1.1	3.0	0.0	V-Horn	AV	0.0	40.2	54.0	-13.8	802.11(b), 1Mbps, high channel
12309.000	24.1	16.1	312.0	1.2	3.0	0.0	H-Horn	AV	0.0	40.2	54.0	-13.8	802.11(g), 6Mbps, high channel
12059.620	23.8	16.1	360.0	2.3	3.0	0.0	H-Horn	AV	0.0	39.9	54.0	-14.1	802.11(g), 6Mbps, low channel
12060.260	23.8	16.1	179.0	1.2	3.0	0.0	H-Horn	AV	0.0	39.9	54.0	-14.1	802.11(b), 1Mbps, low channel
7312.687	25.0	13.3	59.0	1.0	3.0	0.0	V-Horn	AV	0.0	38.3	54.0	-15.7	802.11(g), 6Mbps, mid channel
7385.023	24.7	13.6	224.0	1.1	3.0	0.0	V-Horn	AV	0.0	38.3	54.0	-15.7	802.11(b), 1Mbps, high channel
4824.050	31.8	6.4	69.0	1.1	3.0	0.0	V-Horn	AV	0.0	38.2	54.0	-15.8	802.11(b), 1Mbps, low channel
7386.330	24.4	13.6	118.0	1.1	3.0	0.0	V-Horn	AV	0.0	38.0	54.0	-16.0	802.11(g), 6Mbps, high channel
7385.157	24.1	13.6	119.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.7	54.0	-16.3	802.11(g), 6Mbps, high channel
7385.390	24.1	13.6	70.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.7	54.0	-16.3	802.11(b), 1Mbps, high channel
7312.453	24.2	13.3	70.0	1.2	3.0	0.0	H-Horn	AV	0.0	37.5	54.0	-16.5	802.11(g), 6Mbps, mid channel
7311.217	24.1	13.3	168.0	1.1	3.0	0.0	V-Horn	AV	0.0	37.4	54.0	-16.6	802.11(b), 1Mbps, mid channel

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/19/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: David Divergigelis	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.247: 2006	ANSI C63.4:2003

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

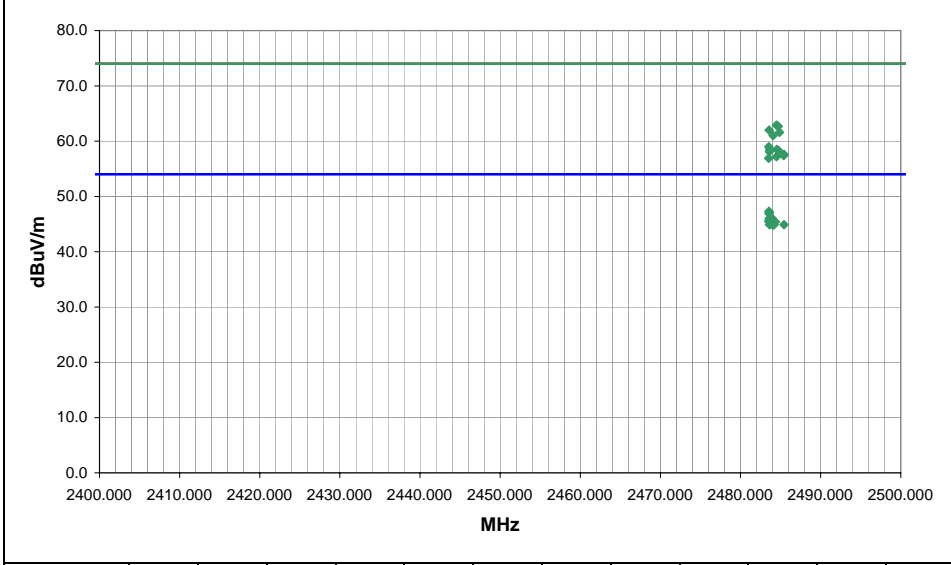
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11, high channel.

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	7
Configuration #	3
Results	Pass

NVLAP Lab Code 200630-0 *Signature David Divergigelis*

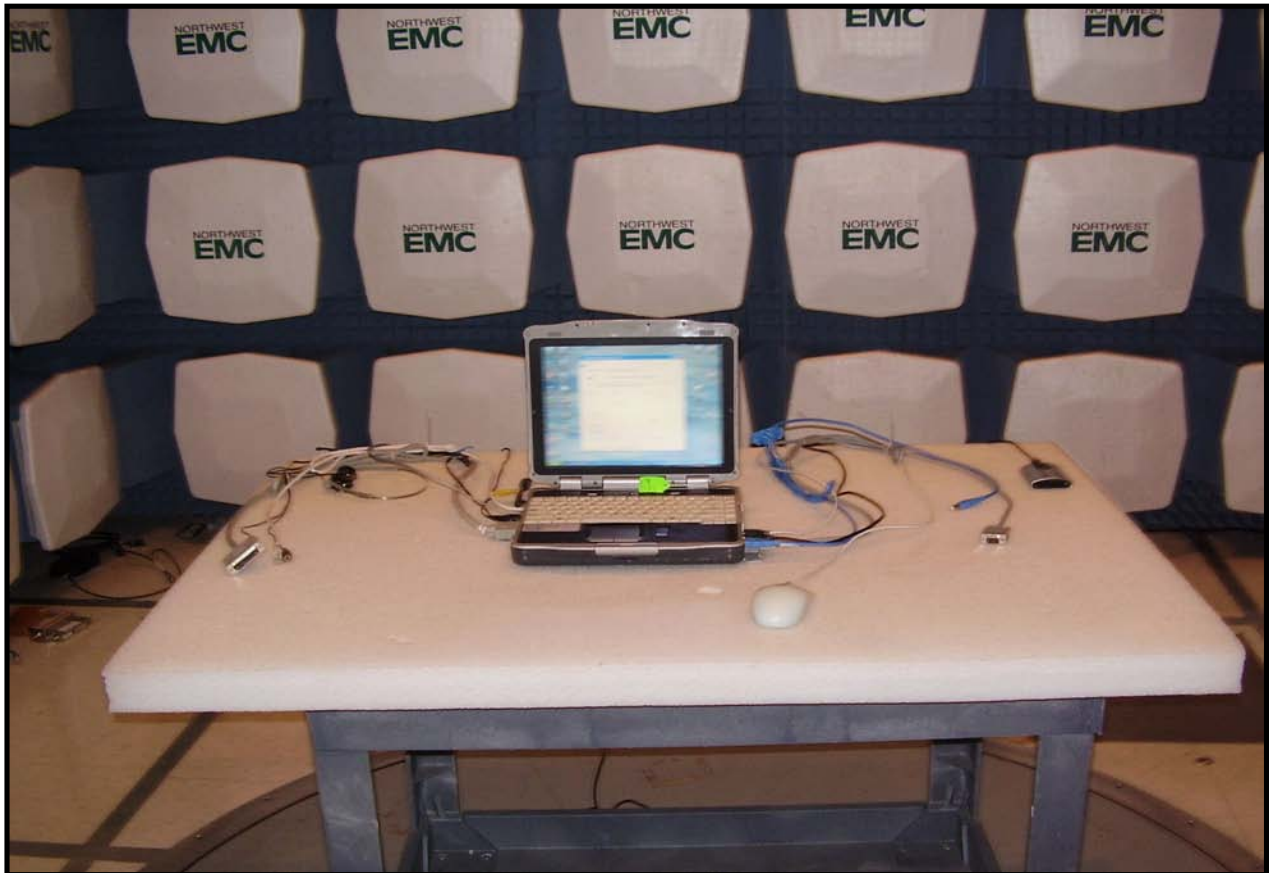


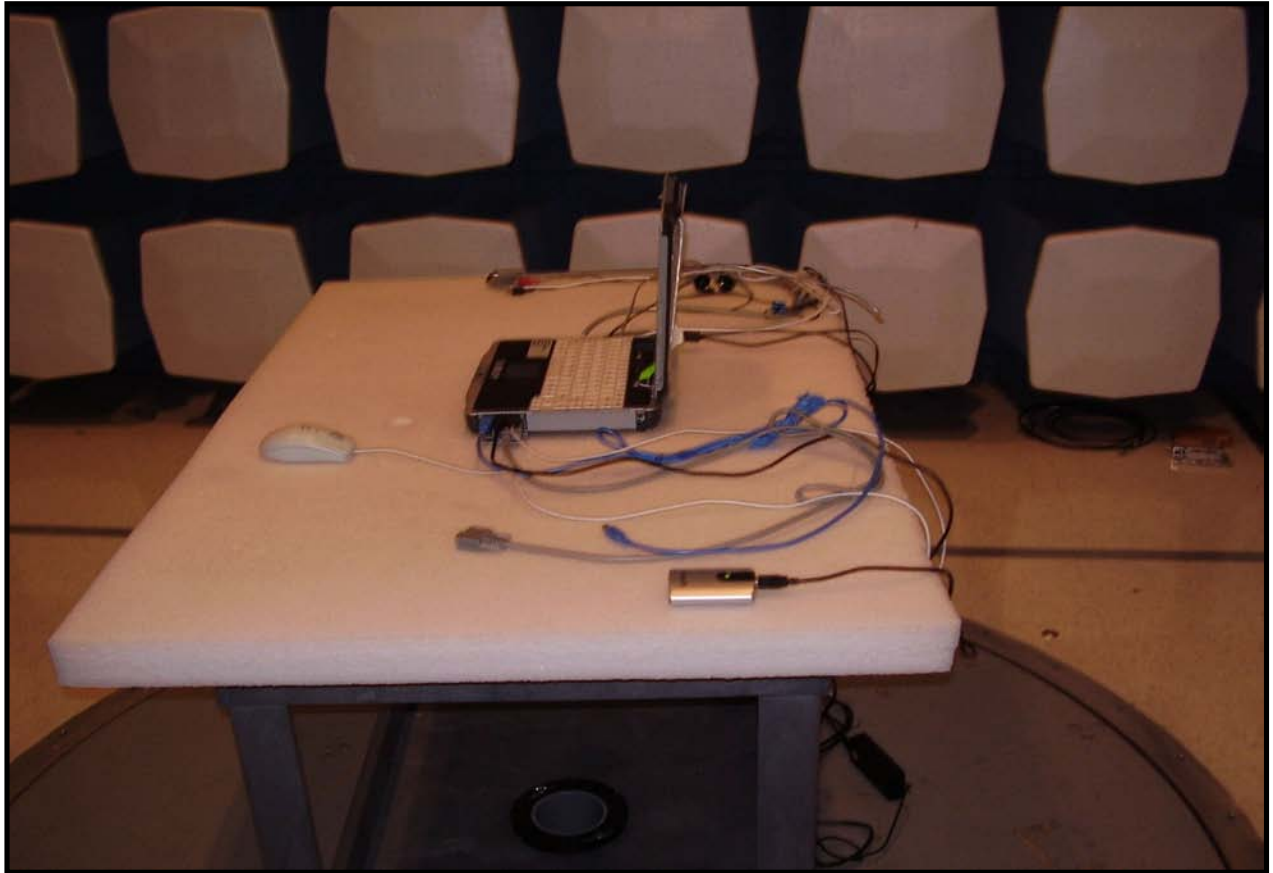
Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Azimuth (degrees)	Height (meters)	Distance (meters)	External Attenuation (dB)	Polarity	Detector	Distance Adjustment (dB)	Adjusted dBuV/m	Spec. Limit dBuV/m	Compared to Spec. (dB)	Comments
2483.547	26.8	0.5	125.0	1.0	3.0	20.0	H-Horn	AV	0.0	47.3	54.0	-6.7	EUT on side 802.11(g) 6Mbps
2483.583	26.6	0.5	152.0	1.0	3.0	20.0	H-Horn	AV	0.0	47.1	54.0	-6.9	EUT normal position 802.11(g) 6Mbps
2483.560	26.4	0.5	327.0	1.0	3.0	20.0	H-Horn	AV	0.0	46.9	54.0	-7.1	EUT screen horizontal. 802.11(g) 6Mbps
2483.907	25.6	0.5	177.0	2.3	3.0	20.0	H-Horn	AV	0.0	46.1	54.0	-7.9	EUT normal position, 802.11(g) 54Mbps
2483.560	25.5	0.5	165.0	2.0	3.0	20.0	V-Horn	AV	0.0	46.0	54.0	-8.0	EUT normal position, 802.11(g) 54Mbps
2483.870	25.1	0.5	137.0	2.1	3.0	20.0	V-Horn	AV	0.0	45.6	54.0	-8.4	EUT on side 802.11(g) 6Mbps
2483.507	25.0	0.5	167.0	2.1	3.0	20.0	V-Horn	AV	0.0	45.5	54.0	-8.5	EUT screen horizontal. 802.11(g) 6Mbps
2484.350	24.9	0.5	266.0	1.8	3.0	20.0	V-Horn	AV	0.0	45.4	54.0	-8.6	EUT normal position 802.11(g) 6Mbps
2483.977	24.8	0.5	58.0	2.0	3.0	20.0	V-Horn	AV	0.0	45.3	54.0	-8.7	EUT normal position, 802.11(g) 36Mbps
2483.760	24.5	0.5	41.0	1.0	3.0	20.0	H-Horn	AV	0.0	45.0	54.0	-9.0	EUT normal position, 802.11(g) 36Mbps
2483.597	24.4	0.5	86.0	2.2	3.0	20.0	H-Horn	AV	0.0	44.9	54.0	-9.1	EUT normal position, 802.11(b) 11Mbps
2484.180	24.4	0.5	125.0	2.7	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	EUT normal position, 802.11(b) 11Mbps
2485.417	24.4	0.5	121.0	1.9	3.0	20.0	V-Horn	AV	0.0	44.9	54.0	-9.1	EUT normal position, 802.11(b) 11Mbps
2484.070	24.3	0.5	260.0	2.2	3.0	20.0	H-Horn	AV	0.0	44.8	54.0	-9.2	EUT normal position, 802.11(b) 1Mbps
2484.490	42.4	0.5	125.0	1.0	3.0	20.0	H-Horn	PK	0.0	62.9	74.0	-11.1	EUT on side 802.11(g) 6Mbps
2484.703	42.2	0.5	152.0	1.0	3.0	20.0	H-Horn	PK	0.0	62.7	74.0	-11.3	EUT normal position 802.11(g) 6Mbps
2483.563	41.5	0.5	327.0	1.0	3.0	20.0	H-Horn	PK	0.0	62.0	74.0	-12.0	EUT screen horizontal. 802.11(g) 6Mbps
2484.860	41.1	0.5	165.0	2.0	3.0	20.0	V-Horn	PK	0.0	61.6	74.0	-12.4	EUT normal position, 802.11(g) 54Mbps
2484.073	40.5	0.5	177.0	2.3	3.0	20.0	H-Horn	PK	0.0	61.0	74.0	-13.0	EUT normal position, 802.11(g) 54Mbps
2483.523	38.5	0.5	266.0	1.8	3.0	20.0	V-Horn	PK	0.0	59.0	74.0	-15.0	EUT normal position 802.11(g) 6Mbps



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

802.11(a) 6Mbps, low channel, low band
802.11(a) 6Mbps, high channel, mid band
802.11(a) 6Mbps, high channel, high band
802.11(g) 6Mbps, high channel
802.11(g) 6Mbps, mid channel
802.11(g) 6Mbps, low channel
802.11(b) 1Mbps, high channel
802.11(b) 1Mbps, mid channel
802.11(b) 1Mbps, low channel

POWER SETTINGS INVESTIGATED

120VAC/60Hz

SAMPLE CALCULATIONS

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
High Pass Filter	T.T.E.	7766	HFG	12/19/2005	13
Attenuator	Coaxicom	66702 2910-20	RBR	5/3/2006	13
LISN	Solar	9252-50-R-24-BNC	LIP	12/13/2005	13
Spectrum Analyzer	Hewlett-Packard	8568B	AAI	12/21/2005	13
Spectrum Analyzer Display	Hewlett Packard	85662A	AAID	12/21/2005	13
Quasi-Peak Adapter	Hewlett-Packard	85650A	AQD	12/21/2005	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

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 50 Ω measuring port is terminated by a 50 Ω EMI meter or a 50 Ω resistive load. All 50 Ω measuring ports of the LISN are terminated by 50 Ω .

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS Test Method

FCC 15.207: 2006	ANSI C63.4:2003
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TEST PARAMETERS

Cable or Line Tested	L1
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COMMENTS

Internal antenna . Notebook configuration.

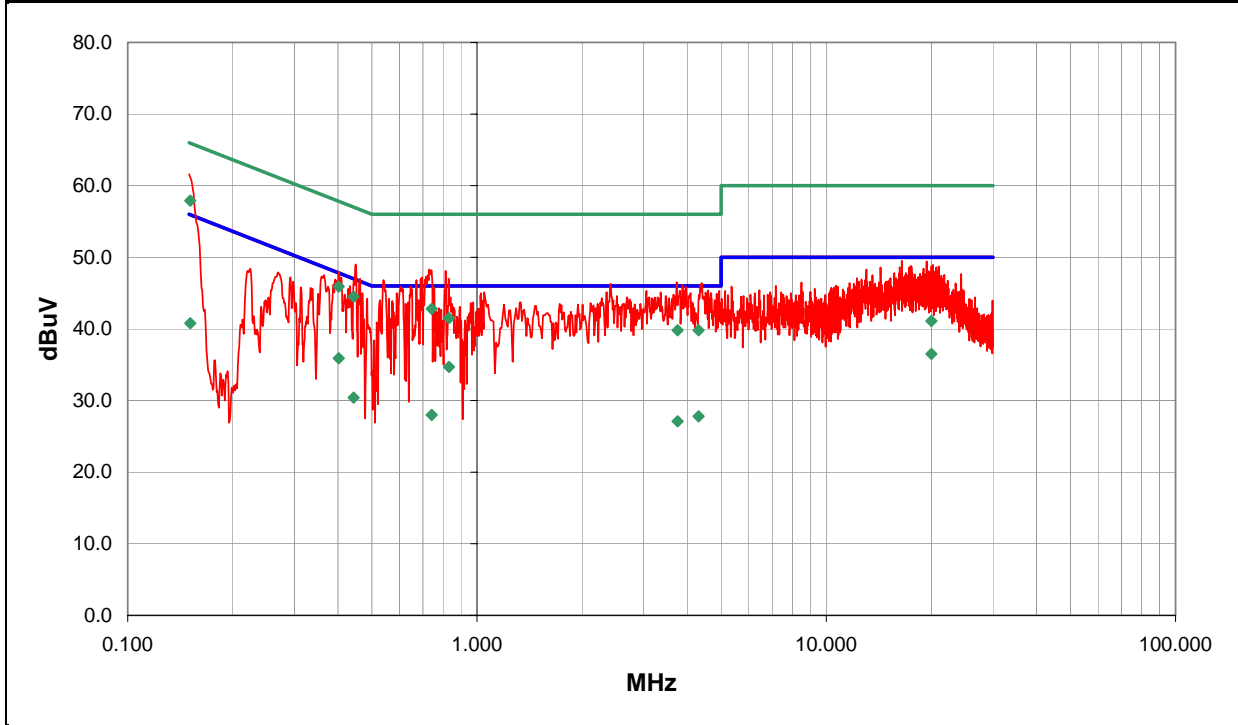
EUT OPERATING MODES

802.11(b) 1Mbps, low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	1	NVLAP Lab Code 200630-0 <i>Signature</i>
Configuration #	3	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.151	37.9	0.0	0.0	20.0	QP	57.9	65.9	-8.0
0.832	14.7	0.0	0.0	20.0	AV	34.7	46.0	-11.3
0.402	15.9	0.0	0.0	20.0	AV	35.9	47.8	-11.9
0.402	25.9	0.0	0.0	20.0	QP	45.9	57.8	-11.9
0.443	24.5	0.0	0.0	20.0	QP	44.5	57.0	-12.5
0.742	22.8	0.0	0.0	20.0	QP	42.8	56.0	-13.2
19.996	16.5	0.0	0.0	20.0	AV	36.5	50.0	-13.5
0.832	21.5	0.0	0.0	20.0	QP	41.5	56.0	-14.5
0.151	20.8	0.0	0.0	20.0	AV	40.8	55.9	-15.1
3.755	19.8	0.0	0.0	20.0	QP	39.8	56.0	-16.2
4.311	19.8	0.0	0.0	20.0	QP	39.8	56.0	-16.2
0.443	10.4	0.0	0.0	20.0	AV	30.4	47.0	-16.6
0.742	8.0	0.0	0.0	20.0	AV	28.0	46.0	-18.0
4.311	7.8	0.0	0.0	20.0	AV	27.8	46.0	-18.2
3.755	7.1	0.0	0.0	20.0	AV	27.1	46.0	-18.9
19.996	21.1	0.0	0.0	20.0	QP	41.1	60.0	-18.9
0.606	25.9	0.0	0.0	20.0		45.9	46.0	-0.1
0.646	25.9	0.0	0.0	20.0		45.9	46.0	-0.1
3.956	25.9	0.0	0.0	20.0		45.9	46.0	-0.1

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

TEST PARAMETERS
Cable or Line Tested: L1

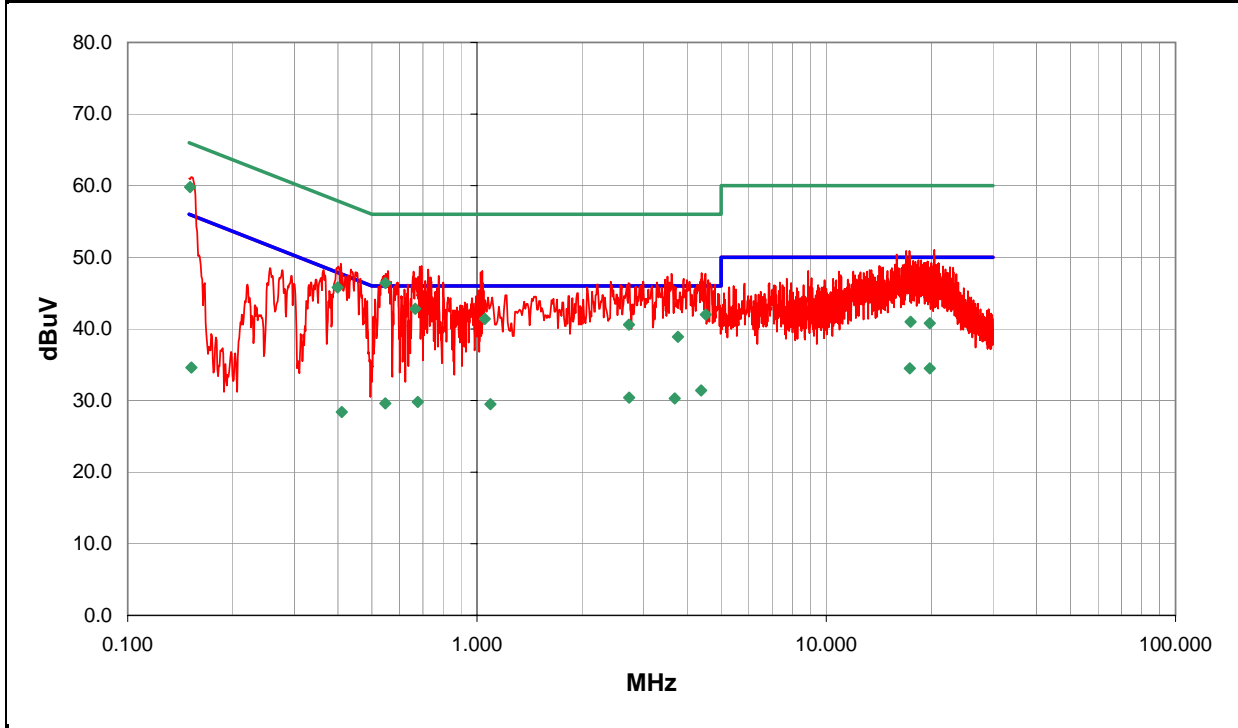
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(a) 6Mbps, channel 165

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	18	Signature <i>Holly Ashkannejhad</i>
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.151	39.8	0.0	0.0	20.0	QP	59.8	65.9	-6.1
0.547	26.4	0.0	0.0	20.0	QP	46.4	56.0	-9.6
0.399	25.8	0.0	0.0	20.0	QP	45.8	57.9	-12.1
0.665	22.8	0.0	0.0	20.0	QP	42.8	56.0	-13.2
4.518	22.0	0.0	0.0	20.0	QP	42.0	56.0	-14.0
1.053	21.4	0.0	0.0	20.0	QP	41.4	56.0	-14.6
4.382	11.4	0.0	0.0	20.0	AV	31.4	46.0	-14.6
2.724	20.6	0.0	0.0	20.0	QP	40.6	56.0	-15.4
17.346	14.5	0.0	0.0	20.0	AV	34.5	50.0	-15.5
19.789	14.5	0.0	0.0	20.0	AV	34.5	50.0	-15.5
2.727	10.4	0.0	0.0	20.0	AV	30.4	46.0	-15.6
3.683	10.3	0.0	0.0	20.0	AV	30.3	46.0	-15.7
0.677	9.8	0.0	0.0	20.0	AV	29.8	46.0	-16.2
0.546	9.6	0.0	0.0	20.0	AV	29.6	46.0	-16.4
1.092	9.5	0.0	0.0	20.0	AV	29.5	46.0	-16.5
3.762	18.9	0.0	0.0	20.0	QP	38.9	56.0	-17.1
17.431	21.0	0.0	0.0	20.0	QP	41.0	60.0	-19.0
19.789	20.8	0.0	0.0	20.0	QP	40.8	60.0	-19.2
0.410	8.4	0.0	0.0	20.0	AV	28.4	47.6	-19.2
0.152	14.6	0.0	0.0	20.0	AV	34.6	55.9	-21.3

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS Test Method

FCC 15.207: 2006	ANSI C63.4:2003
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TEST PARAMETERS

Cable or Line Tested	N
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COMMENTS

Internal antenna . Notebook configuration.

EUT OPERATING MODES

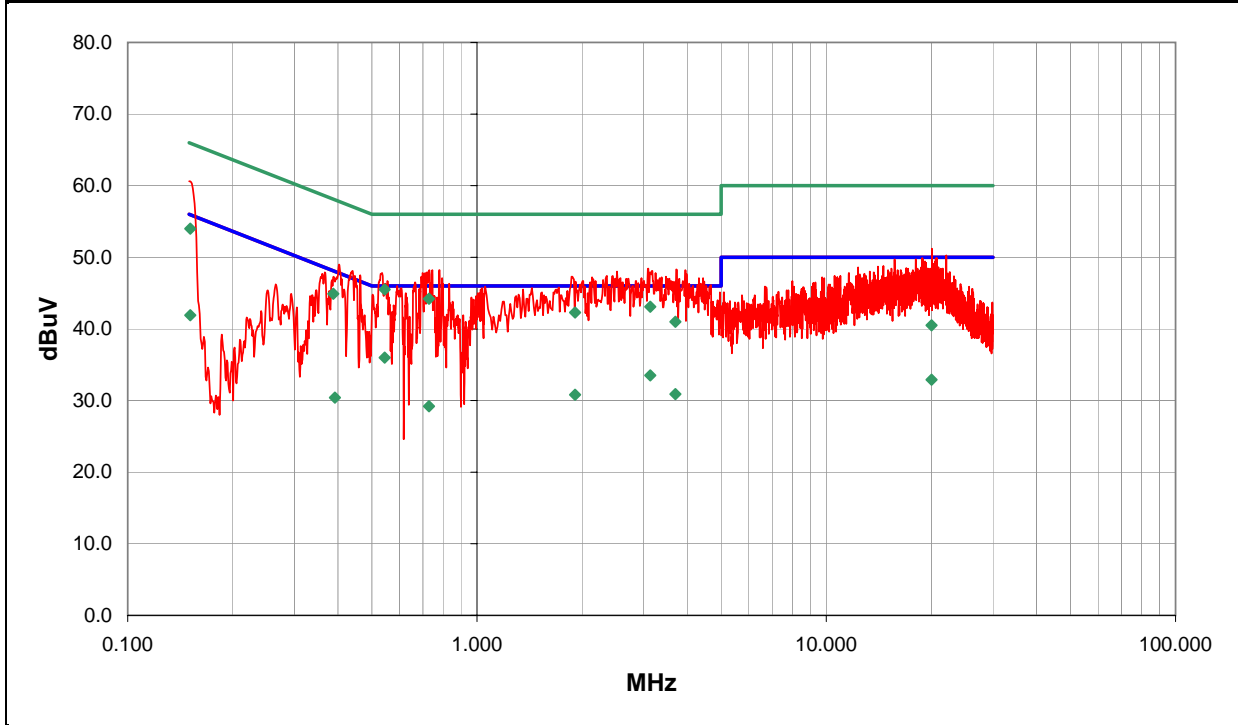
802.11(b) 1Mbps, low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	2	<i>Rod L. Peloquin</i> Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.544	16.0	0.0	0.0	20.0	AV	36.0	46.0	-10.0
0.544	25.5	0.0	0.0	20.0	QP	45.5	56.0	-10.5
0.728	24.2	0.0	0.0	20.0	QP	44.2	56.0	-11.8
0.151	34.0	0.0	0.0	20.0	QP	54.0	65.9	-11.9
3.133	13.5	0.0	0.0	20.0	AV	33.5	46.0	-12.5
3.133	23.1	0.0	0.0	20.0	QP	43.1	56.0	-12.9
0.388	24.9	0.0	0.0	20.0	QP	44.9	58.1	-13.2
1.910	22.3	0.0	0.0	20.0	QP	42.3	56.0	-13.7
0.151	21.9	0.0	0.0	20.0	AV	41.9	55.9	-14.0
3.700	21.0	0.0	0.0	20.0	QP	41.0	56.0	-15.0
3.700	10.9	0.0	0.0	20.0	AV	30.9	46.0	-15.1
1.910	10.8	0.0	0.0	20.0	AV	30.8	46.0	-15.2
0.728	9.2	0.0	0.0	20.0	AV	29.2	46.0	-16.8
20.015	12.9	0.0	0.0	20.0	AV	32.9	50.0	-17.1
0.392	10.4	0.0	0.0	20.0	AV	30.4	48.0	-17.6
20.015	20.5	0.0	0.0	20.0	QP	40.5	60.0	-19.5
0.591	26.0	0.0	0.0	20.0		46.0	46.0	0.0
2.786	26.0	0.0	0.0	20.0		46.0	46.0	0.0
4.527	26.0	0.0	0.0	20.0		46.0	46.0	0.0

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

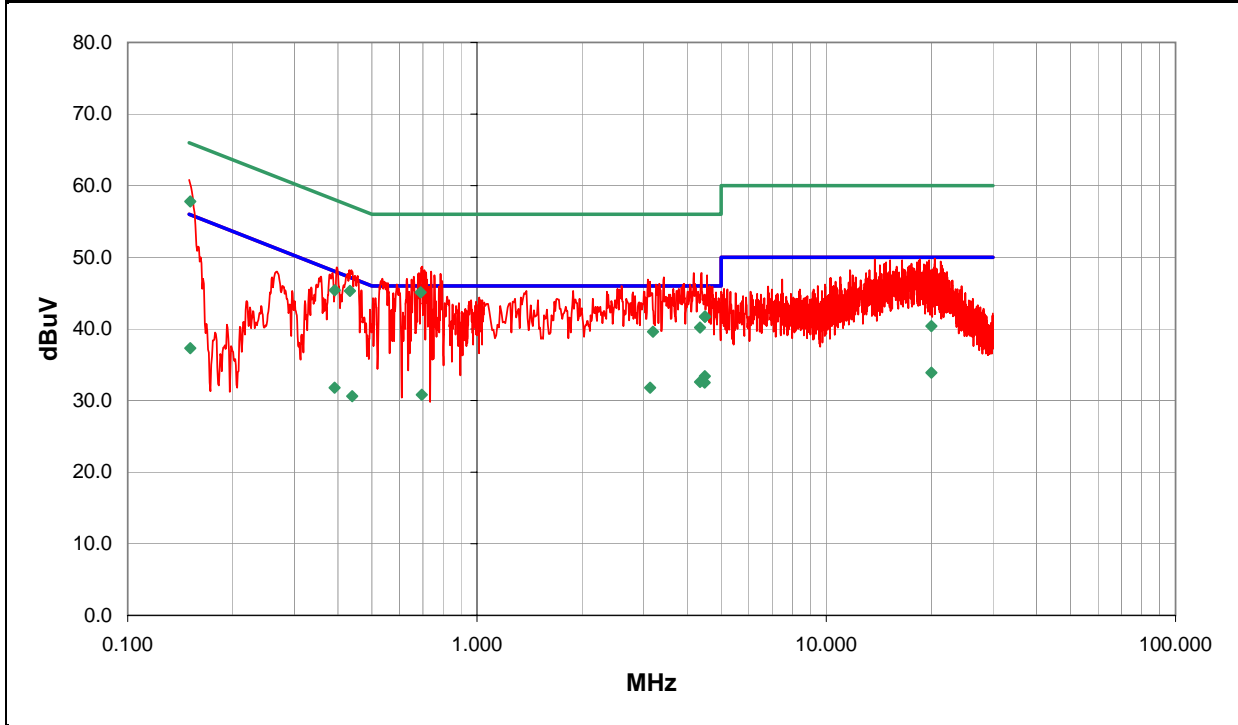
TEST PARAMETERS
Cable or Line Tested: L1

COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(b) 1Mbps, mid channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	3	NVLAP Lab Code 200630-0 <i>Signature</i>
Configuration #	3	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.151	37.8	0.0	0.0	20.0	QP	57.8	65.9	-8.1
0.690	25.1	0.0	0.0	20.0	QP	45.1	56.0	-10.9
0.433	25.3	0.0	0.0	20.0	QP	45.3	57.2	-11.9
4.491	13.4	0.0	0.0	20.0	AV	33.4	46.0	-12.6
0.392	25.4	0.0	0.0	20.0	QP	45.4	58.0	-12.6
4.352	12.6	0.0	0.0	20.0	AV	32.6	46.0	-13.4
4.488	12.5	0.0	0.0	20.0	AV	32.5	46.0	-13.5
3.132	11.8	0.0	0.0	20.0	AV	31.8	46.0	-14.2
4.495	21.7	0.0	0.0	20.0	QP	41.7	56.0	-14.3
4.495	21.7	0.0	0.0	20.0	QP	41.7	56.0	-14.3
0.695	10.8	0.0	0.0	20.0	AV	30.8	46.0	-15.2
4.352	20.2	0.0	0.0	20.0	QP	40.2	56.0	-15.8
20.000	13.9	0.0	0.0	20.0	AV	33.9	50.0	-16.1
0.391	11.8	0.0	0.0	20.0	AV	31.8	48.0	-16.2
3.192	19.6	0.0	0.0	20.0	QP	39.6	56.0	-16.4
0.439	10.6	0.0	0.0	20.0	AV	30.6	47.1	-16.5
0.151	17.3	0.0	0.0	20.0	AV	37.3	55.9	-18.6
20.000	20.4	0.0	0.0	20.0	QP	40.4	60.0	-19.6
2.596	26.0	0.0	0.0	20.0		46.0	46.0	0.0

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	
FCC 15.207: 2006	Test Method: ANSI C63.4:2003

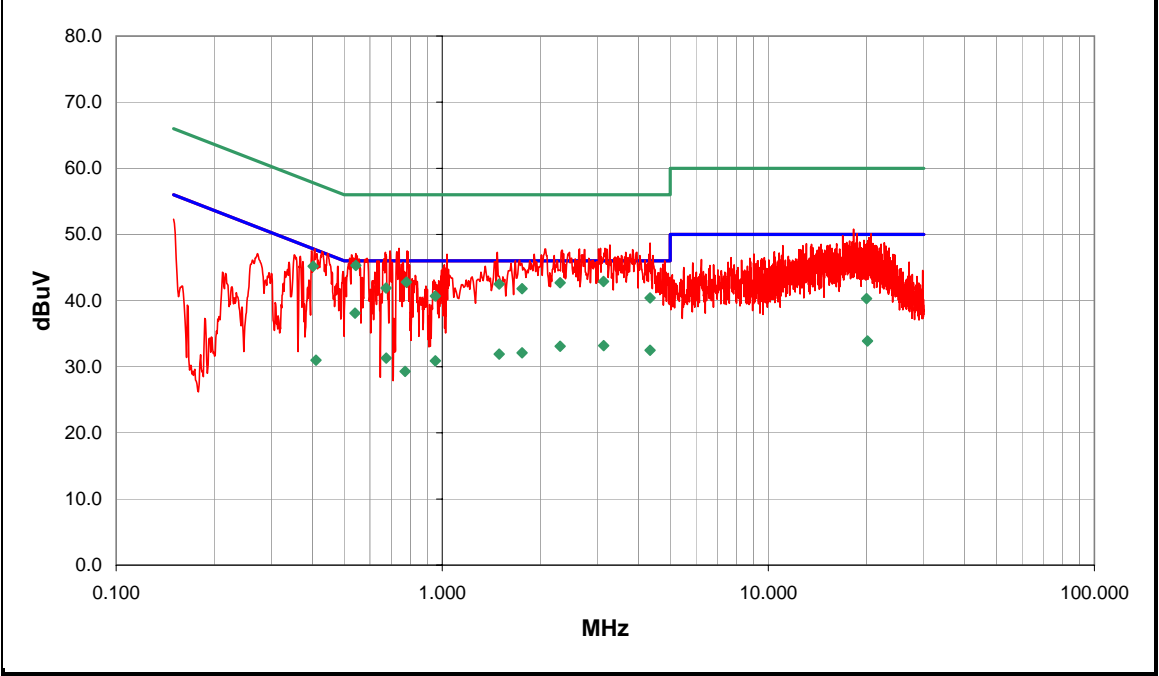
TEST PARAMETERS	
Cable or Line Tested	N

COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(b) 1Mbps, mid channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	4	NVLAP Lab Code 200630-0	<i>Rod Peloquin</i> Signature
Configuration #	3		
Results	Pass		



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.541	18.1	0.0	0.0	20.0	AV	38.1	46.0	-7.9
0.544	25.3	0.0	0.0	20.0	QP	45.3	56.0	-10.7
0.402	25.2	0.0	0.0	20.0	QP	45.2	57.8	-12.6
3.127	13.2	0.0	0.0	20.0	AV	33.2	46.0	-12.8
2.299	13.1	0.0	0.0	20.0	AV	33.1	46.0	-12.9
3.122	22.9	0.0	0.0	20.0	QP	42.9	56.0	-13.1
0.776	22.8	0.0	0.0	20.0	QP	42.8	56.0	-13.2
2.299	22.7	0.0	0.0	20.0	QP	42.7	56.0	-13.3
4.339	12.5	0.0	0.0	20.0	AV	32.5	46.0	-13.5
1.495	22.5	0.0	0.0	20.0	QP	42.5	56.0	-13.5
1.757	12.1	0.0	0.0	20.0	AV	32.1	46.0	-13.9
0.673	21.9	0.0	0.0	20.0	QP	41.9	56.0	-14.1
1.495	11.9	0.0	0.0	20.0	AV	31.9	46.0	-14.1
1.757	21.8	0.0	0.0	20.0	QP	41.8	56.0	-14.2
0.673	11.3	0.0	0.0	20.0	AV	31.3	46.0	-14.7
0.952	10.9	0.0	0.0	20.0	AV	30.9	46.0	-15.1
0.952	20.7	0.0	0.0	20.0	QP	40.7	56.0	-15.3
4.339	20.4	0.0	0.0	20.0	QP	40.4	56.0	-15.6
20.145	13.9	0.0	0.0	20.0	AV	33.9	50.0	-16.1
0.410	11.0	0.0	0.0	20.0	AV	31.0	47.6	-16.6
0.770	9.3	0.0	0.0	20.0	AV	29.3	46.0	-16.7
20.001	20.3	0.0	0.0	20.0	QP	40.3	60.0	-19.7

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS Test Method

FCC 15.207: 2006	ANSI C63.4:2003
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TEST PARAMETERS

Cable or Line Tested	L1
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COMMENTS

Internal antenna . Notebook configuration.

EUT OPERATING MODES

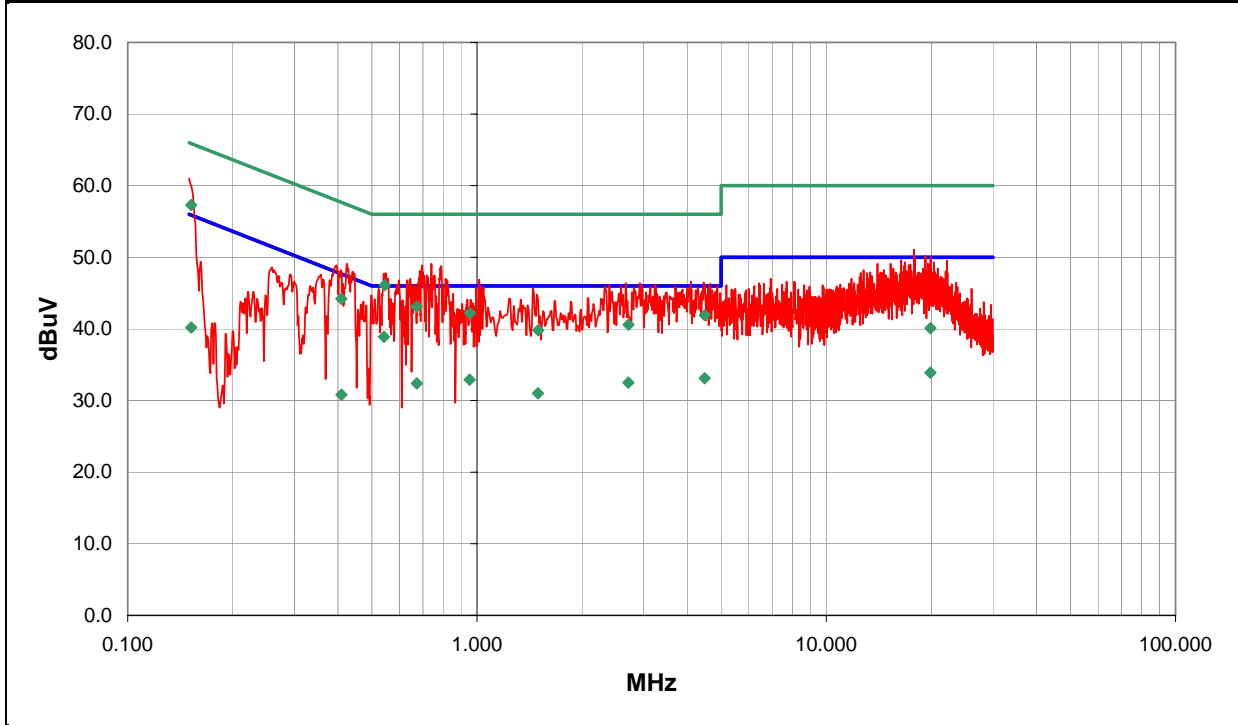
802.11(b) 1Mbps, high channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	5	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.542	18.9	0.0	0.0	20.0	AV	38.9	46.0	-7.1
0.152	37.3	0.0	0.0	20.0	QP	57.3	65.9	-8.6
0.544	26.1	0.0	0.0	20.0	QP	46.1	56.0	-9.9
4.487	13.1	0.0	0.0	20.0	AV	33.1	46.0	-12.9
0.672	23.1	0.0	0.0	20.0	QP	43.1	56.0	-12.9
0.953	12.9	0.0	0.0	20.0	AV	32.9	46.0	-13.1
0.409	24.2	0.0	0.0	20.0	QP	44.2	57.7	-13.5
2.711	12.5	0.0	0.0	20.0	AV	32.5	46.0	-13.5
0.672	12.4	0.0	0.0	20.0	AV	32.4	46.0	-13.6
0.956	22.2	0.0	0.0	20.0	QP	42.2	56.0	-13.8
4.491	21.9	0.0	0.0	20.0	QP	41.9	56.0	-14.1
1.495	11.0	0.0	0.0	20.0	AV	31.0	46.0	-15.0
2.716	20.6	0.0	0.0	20.0	QP	40.6	56.0	-15.4
0.152	20.2	0.0	0.0	20.0	AV	40.2	55.9	-15.7
19.862	13.9	0.0	0.0	20.0	AV	33.9	50.0	-16.1
1.498	19.8	0.0	0.0	20.0	QP	39.8	56.0	-16.2
0.409	10.8	0.0	0.0	20.0	AV	30.8	47.7	-16.9
19.862	20.1	0.0	0.0	20.0	QP	40.1	60.0	-19.9
0.652	26.0	0.0	0.0	20.0		46.0	46.0	0.0

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

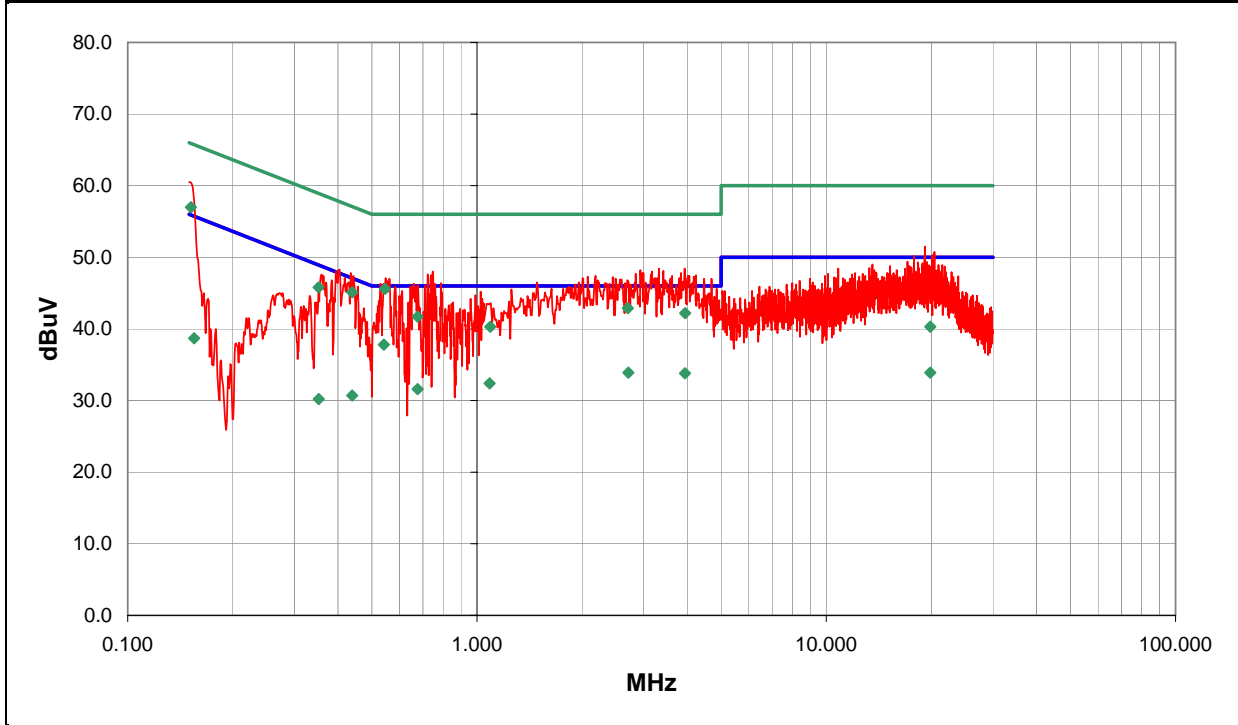
TEST PARAMETERS
Cable or Line Tested: N

COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(b) 1Mbps, high channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	6	NVLAP Lab Code 200630-0 <i>Signature</i>
Configuration #	3	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.541	17.8	0.0	0.0	20.0	AV	37.8	46.0	-8.2
0.152	37.0	0.0	0.0	20.0	QP	57.0	65.9	-8.9
0.545	25.6	0.0	0.0	20.0	QP	45.6	56.0	-10.4
0.439	25.1	0.0	0.0	20.0	QP	45.1	57.1	-12.0
2.712	13.9	0.0	0.0	20.0	AV	33.9	46.0	-12.1
3.941	13.8	0.0	0.0	20.0	AV	33.8	46.0	-12.2
2.705	22.9	0.0	0.0	20.0	QP	42.9	56.0	-13.1
0.352	25.8	0.0	0.0	20.0	QP	45.8	58.9	-13.1
1.087	12.4	0.0	0.0	20.0	AV	32.4	46.0	-13.6
3.944	22.2	0.0	0.0	20.0	QP	42.2	56.0	-13.8
0.676	21.7	0.0	0.0	20.0	QP	41.7	56.0	-14.3
0.676	11.6	0.0	0.0	20.0	AV	31.6	46.0	-14.4
1.092	20.3	0.0	0.0	20.0	QP	40.3	56.0	-15.7
19.843	13.9	0.0	0.0	20.0	AV	33.9	50.0	-16.1
0.439	10.7	0.0	0.0	20.0	AV	30.7	47.1	-16.4
0.155	18.7	0.0	0.0	20.0	AV	38.7	55.7	-17.0
0.352	10.2	0.0	0.0	20.0	AV	30.2	48.9	-18.7
19.843	20.3	0.0	0.0	20.0	QP	40.3	60.0	-19.7
0.710	26.0	0.0	0.0	20.0		46.0	46.0	0.0

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

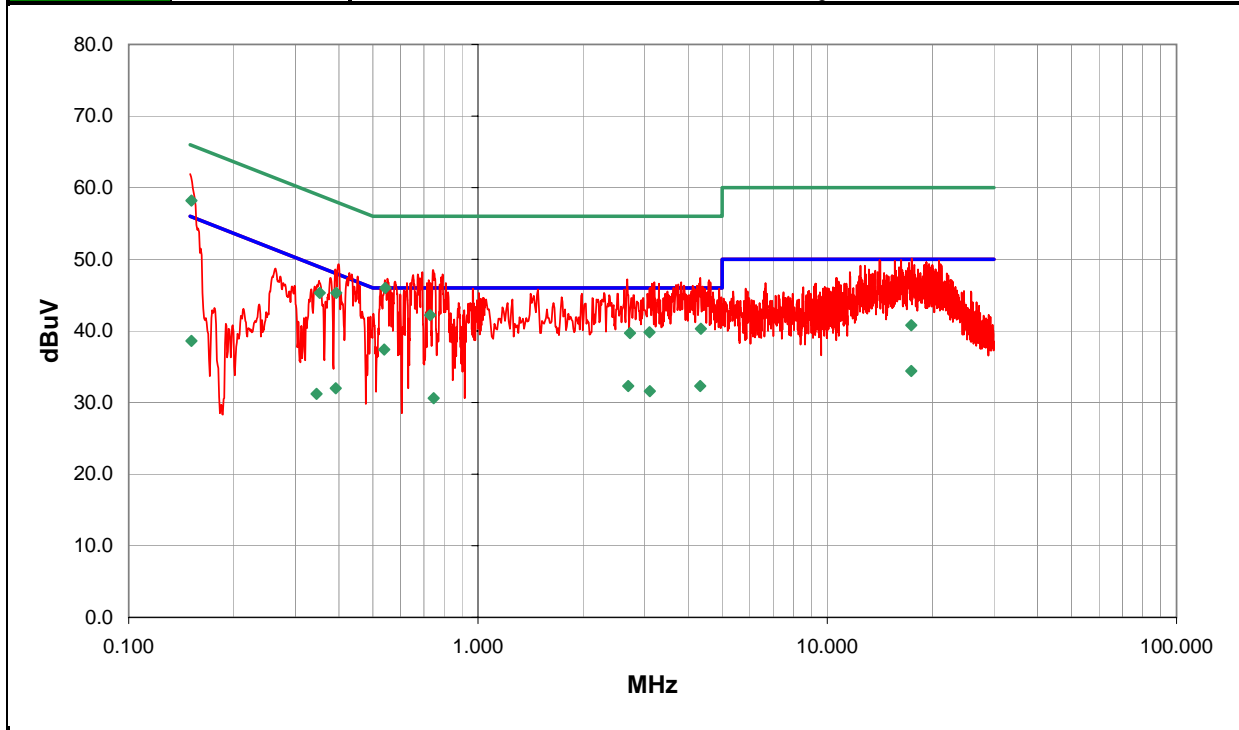
TEST PARAMETERS
Cable or Line Tested: L1

COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(g) 6Mbps, low channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	7	NVLAP Lab Code 200630-0 <i>Signature</i>
Configuration #	3	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.151	38.2	0.0	0.0	20.0	QP	58.2	65.9	-7.7
0.539	17.4	0.0	0.0	20.0	AV	37.4	46.0	-8.6
0.543	26.0	0.0	0.0	20.0	QP	46.0	56.0	-10.0
0.393	25.3	0.0	0.0	20.0	QP	45.3	58.0	-12.7
0.352	25.3	0.0	0.0	20.0	QP	45.3	58.9	-13.6
2.692	12.3	0.0	0.0	20.0	AV	32.3	46.0	-13.7
4.327	12.3	0.0	0.0	20.0	AV	32.3	46.0	-13.7
0.729	22.2	0.0	0.0	20.0	QP	42.2	56.0	-13.8
3.103	11.6	0.0	0.0	20.0	AV	31.6	46.0	-14.4
0.747	10.6	0.0	0.0	20.0	AV	30.6	46.0	-15.4
17.401	14.4	0.0	0.0	20.0	AV	34.4	50.0	-15.6
4.344	20.3	0.0	0.0	20.0	QP	40.3	56.0	-15.7
0.392	12.0	0.0	0.0	20.0	AV	32.0	48.0	-16.0
3.099	19.8	0.0	0.0	20.0	QP	39.8	56.0	-16.2
2.722	19.7	0.0	0.0	20.0	QP	39.7	56.0	-16.3
0.151	18.6	0.0	0.0	20.0	AV	38.6	55.9	-17.3
0.345	11.2	0.0	0.0	20.0	AV	31.2	49.1	-17.9
17.401	20.8	0.0	0.0	20.0	QP	40.8	60.0	-19.2
3.106	26.0	0.0	0.0	20.0		46.0	46.0	0.0

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS Test Method

FCC 15.207: 2006	ANSI C63.4:2003
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TEST PARAMETERS

Cable or Line Tested	N
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COMMENTS

Internal antenna . Notebook configuration.

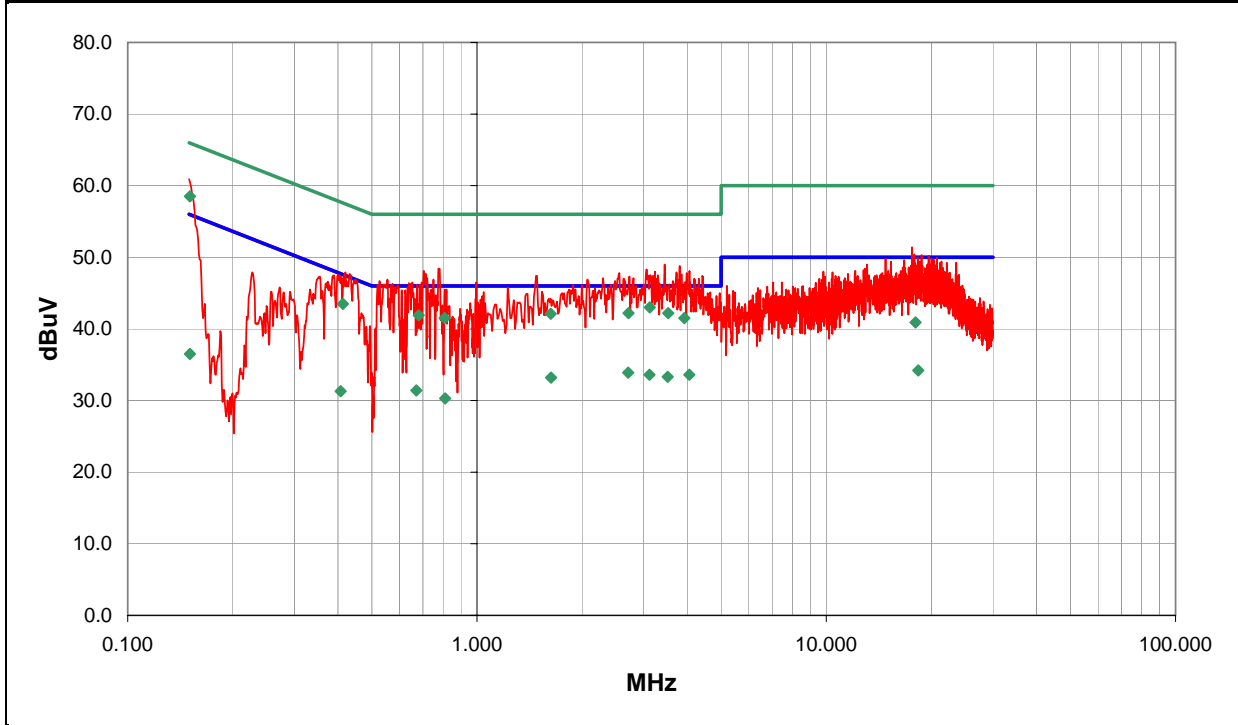
EUT OPERATING MODES

802.11(g) 6Mbps, low channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	8	NVLAP Lab Code 200630-0 <i>Signature</i>
Configuration #	3	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.151	38.5	0.0	0.0	20.0	QP	58.5	66.0	-7.5
2.710	13.9	0.0	0.0	20.0	AV	33.9	46.0	-12.1
4.055	13.6	0.0	0.0	20.0	AV	33.6	46.0	-12.4
3.117	13.6	0.0	0.0	20.0	AV	33.6	46.0	-12.4
3.514	13.3	0.0	0.0	20.0	AV	33.3	46.0	-12.7
1.629	13.2	0.0	0.0	20.0	AV	33.2	46.0	-12.8
3.125	23.0	0.0	0.0	20.0	QP	43.0	56.0	-13.0
2.714	22.2	0.0	0.0	20.0	QP	42.2	56.0	-13.8
3.526	22.2	0.0	0.0	20.0	QP	42.2	56.0	-13.8
1.627	22.1	0.0	0.0	20.0	QP	42.1	56.0	-13.9
0.413	23.5	0.0	0.0	20.0	QP	43.5	57.6	-14.1
0.681	21.9	0.0	0.0	20.0	QP	41.9	56.0	-14.1
0.808	21.5	0.0	0.0	20.0	QP	41.5	56.0	-14.5
3.924	21.5	0.0	0.0	20.0	QP	41.5	56.0	-14.5
0.670	11.4	0.0	0.0	20.0	AV	31.4	46.0	-14.6
0.811	10.3	0.0	0.0	20.0	AV	30.3	46.0	-15.7
18.333	14.2	0.0	0.0	20.0	AV	34.2	50.0	-15.8
0.407	11.3	0.0	0.0	20.0	AV	31.3	47.7	-16.4
18.022	20.9	0.0	0.0	20.0	QP	40.9	60.0	-19.1
0.151	16.5	0.0	0.0	20.0	AV	36.5	56.0	-19.5

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS Test Method

FCC 15.207: 2006	ANSI C63.4:2003
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TEST PARAMETERS

Cable or Line Tested	L1
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COMMENTS

Internal antenna . Notebook configuration.

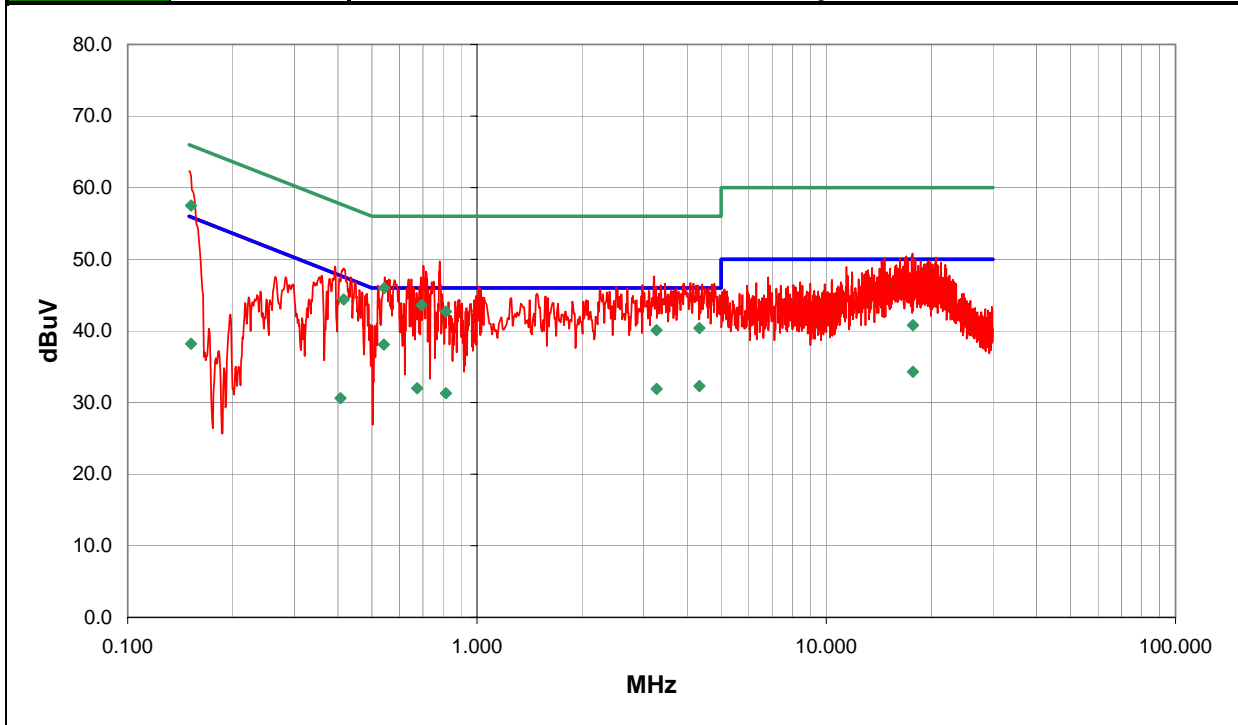
EUT OPERATING MODES

802.11(g) 6Mbps, mid channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	9	NVLAP Lab Code 200630-0	Signature <i>Rodney Le Pelouquin</i>
Configuration #	3		
Results	Pass		



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.541	18.1	0.0	0.0	20.0	AV	38.1	46.0	-7.9
0.152	37.5	0.0	0.0	20.0	QP	57.5	65.9	-8.4
0.543	26.0	0.0	0.0	20.0	QP	46.0	56.0	-10.0
0.693	23.6	0.0	0.0	20.0	QP	43.6	56.0	-12.4
0.416	24.4	0.0	0.0	20.0	QP	44.4	57.5	-13.1
0.815	22.7	0.0	0.0	20.0	QP	42.7	56.0	-13.3
4.332	12.3	0.0	0.0	20.0	AV	32.3	46.0	-13.7
0.674	12.0	0.0	0.0	20.0	AV	32.0	46.0	-14.0
3.269	11.9	0.0	0.0	20.0	AV	31.9	46.0	-14.1
0.815	11.3	0.0	0.0	20.0	AV	31.3	46.0	-14.7
4.335	20.4	0.0	0.0	20.0	QP	40.4	56.0	-15.6
17.720	14.3	0.0	0.0	20.0	AV	34.3	50.0	-15.7
3.266	20.1	0.0	0.0	20.0	QP	40.1	56.0	-15.9
0.407	10.6	0.0	0.0	20.0	AV	30.6	47.7	-17.1
0.152	18.2	0.0	0.0	20.0	AV	38.2	55.9	-17.7
17.720	20.8	0.0	0.0	20.0	QP	40.8	60.0	-19.2
4.487	26.0	0.0	0.0	20.0		46.0	46.0	0.0
4.597	26.0	0.0	0.0	20.0		46.0	46.0	0.0
17.988	30.0	0.0	0.0	20.0		50.0	50.0	0.0

EUT:	IX270-WL3945	Work Order:	SPTE0018
Serial Number:	None	Date:	06/21/06
Customer:	Spectrum Technology	Temperature:	23
Attendees:	None	Humidity:	47%
Project:	None	Barometric Pres.:	29.98
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

TEST SPECIFICATIONS Test Method

FCC 15.207: 2006	ANSI C63.4:2003
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TEST PARAMETERS

Cable or Line Tested	N
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COMMENTS

Internal antenna . Notebook configuration.

EUT OPERATING MODES

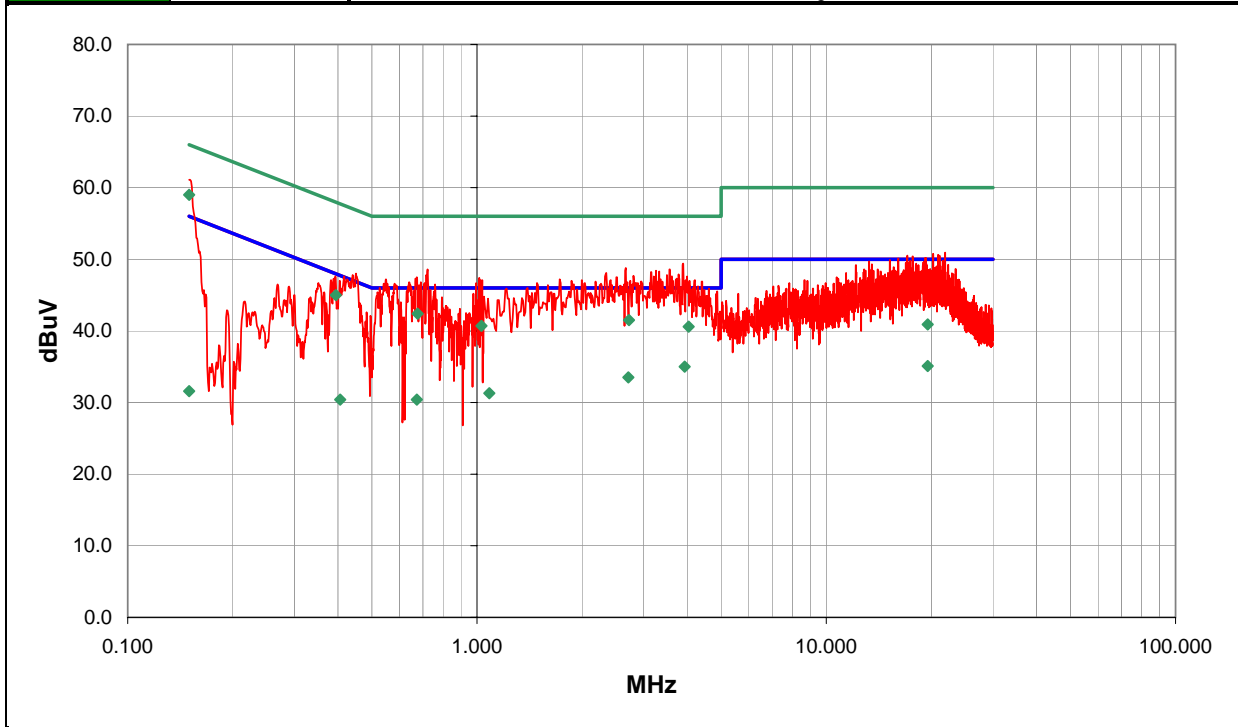
802.11(g) 6Mbps, mid channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	10	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.150	39.0	0.0	0.0	20.0	QP	59.0	66.0	-7.0
3.932	15.0	0.0	0.0	20.0	AV	35.0	46.0	-11.0
2.713	13.5	0.0	0.0	20.0	AV	33.5	46.0	-12.5
0.394	25.0	0.0	0.0	20.0	QP	45.0	58.0	-13.0
0.676	22.4	0.0	0.0	20.0	QP	42.4	56.0	-13.6
2.724	21.5	0.0	0.0	20.0	QP	41.5	56.0	-14.5
1.084	11.3	0.0	0.0	20.0	AV	31.3	46.0	-14.7
19.517	15.1	0.0	0.0	20.0	AV	35.1	50.0	-14.9
1.030	20.7	0.0	0.0	20.0	QP	40.7	56.0	-15.3
4.037	20.6	0.0	0.0	20.0	QP	40.6	56.0	-15.4
0.673	10.4	0.0	0.0	20.0	AV	30.4	46.0	-15.6
0.406	10.4	0.0	0.0	20.0	AV	30.4	47.7	-17.3
19.516	20.9	0.0	0.0	20.0	QP	40.9	60.0	-19.1
0.150	11.6	0.0	0.0	20.0	AV	31.6	56.0	-24.4
0.526	26.0	0.0	0.0	20.0		46.0	46.0	0.0
1.395	26.0	0.0	0.0	20.0		46.0	46.0	0.0
4.147	26.0	0.0	0.0	20.0		46.0	46.0	0.0
1.215	25.9	0.0	0.0	20.0		45.9	46.0	-0.1
4.617	25.9	0.0	0.0	20.0		45.9	46.0	-0.1

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

TEST PARAMETERS
Cable or Line Tested: L1

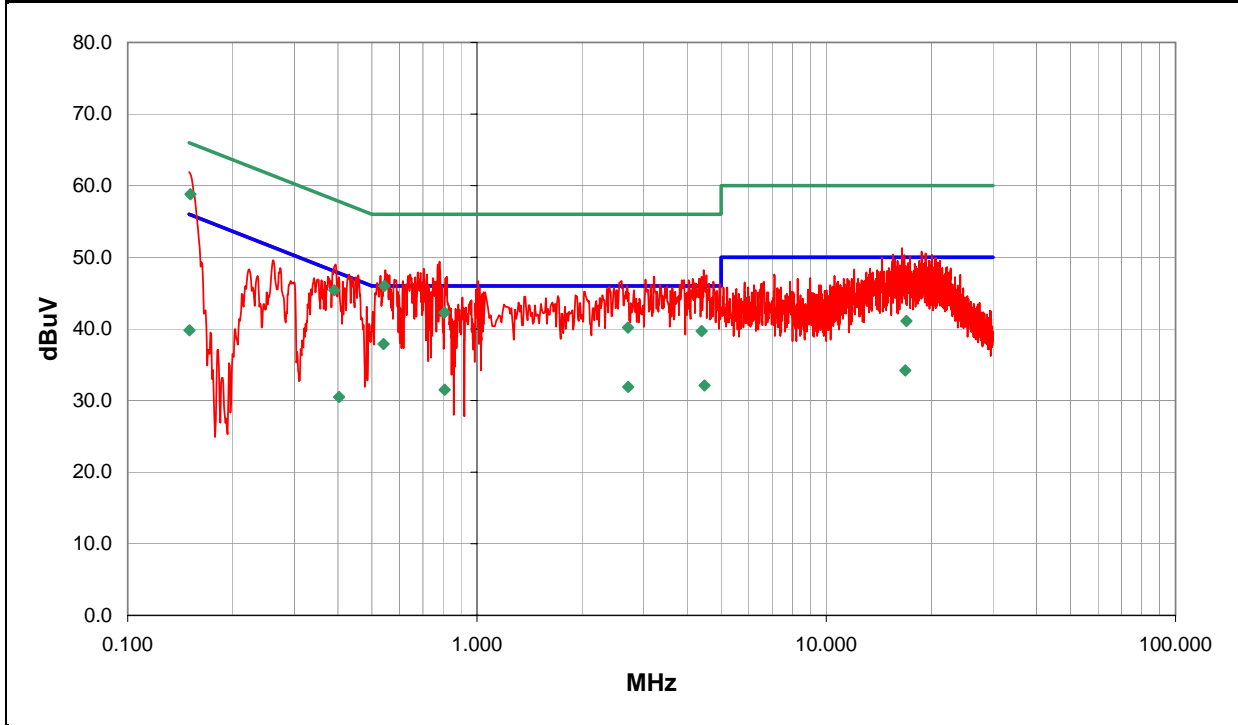
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(g) 6Mbps, high channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	11	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.151	38.8	0.0	0.0	20.0	QP	58.8	65.9	-7.1
0.540	17.9	0.0	0.0	20.0	AV	37.9	46.0	-8.1
0.543	26.0	0.0	0.0	20.0	QP	46.0	56.0	-10.0
0.390	25.4	0.0	0.0	20.0	QP	45.4	58.1	-12.7
0.808	22.3	0.0	0.0	20.0	QP	42.3	56.0	-13.7
4.483	12.1	0.0	0.0	20.0	AV	32.1	46.0	-13.9
2.710	11.9	0.0	0.0	20.0	AV	31.9	46.0	-14.1
0.808	11.5	0.0	0.0	20.0	AV	31.5	46.0	-14.5
16.837	14.2	0.0	0.0	20.0	AV	34.2	50.0	-15.8
2.706	20.2	0.0	0.0	20.0	QP	40.2	56.0	-15.8
0.150	19.8	0.0	0.0	20.0	AV	39.8	56.0	-16.2
4.399	19.7	0.0	0.0	20.0	QP	39.7	56.0	-16.3
0.403	10.5	0.0	0.0	20.0	AV	30.5	47.8	-17.3
16.965	21.1	0.0	0.0	20.0	QP	41.1	60.0	-18.9
0.792	26.0	0.0	0.0	20.0		46.0	46.0	0.0
2.686	26.0	0.0	0.0	20.0		46.0	46.0	0.0
14.436	30.0	0.0	0.0	20.0		50.0	50.0	0.0
20.568	29.9	0.0	0.0	20.0		49.9	50.0	-0.1
20.556	29.9	0.0	0.0	20.0		49.9	50.0	-0.1

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

TEST PARAMETERS
Cable or Line Tested: N

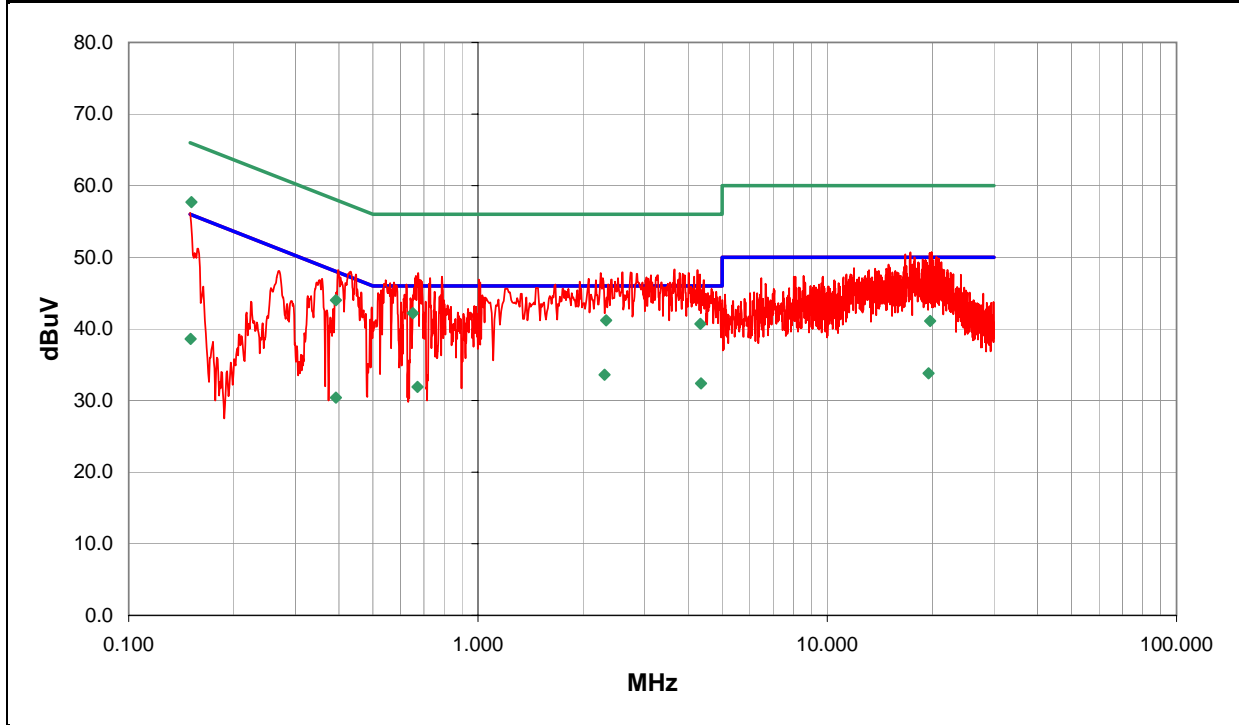
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(g) 6Mbps, high channel

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	12	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.151	37.7	0.0	0.0	20.0	QP	57.7	65.9	-8.2
2.304	13.6	0.0	0.0	20.0	AV	33.6	46.0	-12.4
4.351	12.4	0.0	0.0	20.0	AV	32.4	46.0	-13.6
0.651	22.2	0.0	0.0	20.0	QP	42.2	56.0	-13.8
0.392	24.0	0.0	0.0	20.0	QP	44.0	58.0	-14.0
0.671	11.9	0.0	0.0	20.0	AV	31.9	46.0	-14.1
2.328	21.2	0.0	0.0	20.0	QP	41.2	56.0	-14.8
4.333	20.7	0.0	0.0	20.0	QP	40.7	56.0	-15.3
19.497	13.8	0.0	0.0	20.0	AV	33.8	50.0	-16.2
0.150	18.6	0.0	0.0	20.0	AV	38.6	56.0	-17.4
0.392	10.4	0.0	0.0	20.0	AV	30.4	48.0	-17.6
19.711	21.1	0.0	0.0	20.0	QP	41.1	60.0	-18.9
17.772	30.0	0.0	0.0	20.0		50.0	50.0	0.0
4.077	25.9	0.0	0.0	20.0		45.9	46.0	-0.1
20.880	29.8	0.0	0.0	20.0		49.8	50.0	-0.2
1.465	25.7	0.0	0.0	20.0		45.7	46.0	-0.3
18.756	29.7	0.0	0.0	20.0		49.7	50.0	-0.3
20.122	29.6	0.0	0.0	20.0		49.6	50.0	-0.4
1.195	25.6	0.0	0.0	20.0		45.6	46.0	-0.4

EUT:	IX270-WL3945	Work Order:	SPTE0018
Serial Number:	None	Date:	06/21/06
Customer:	Spectrum Technology	Temperature:	23
Attendees:	None	Humidity:	47%
Project:	None	Barometric Pres.:	29.98
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

TEST PARAMETERS
Cable or Line Tested: L1

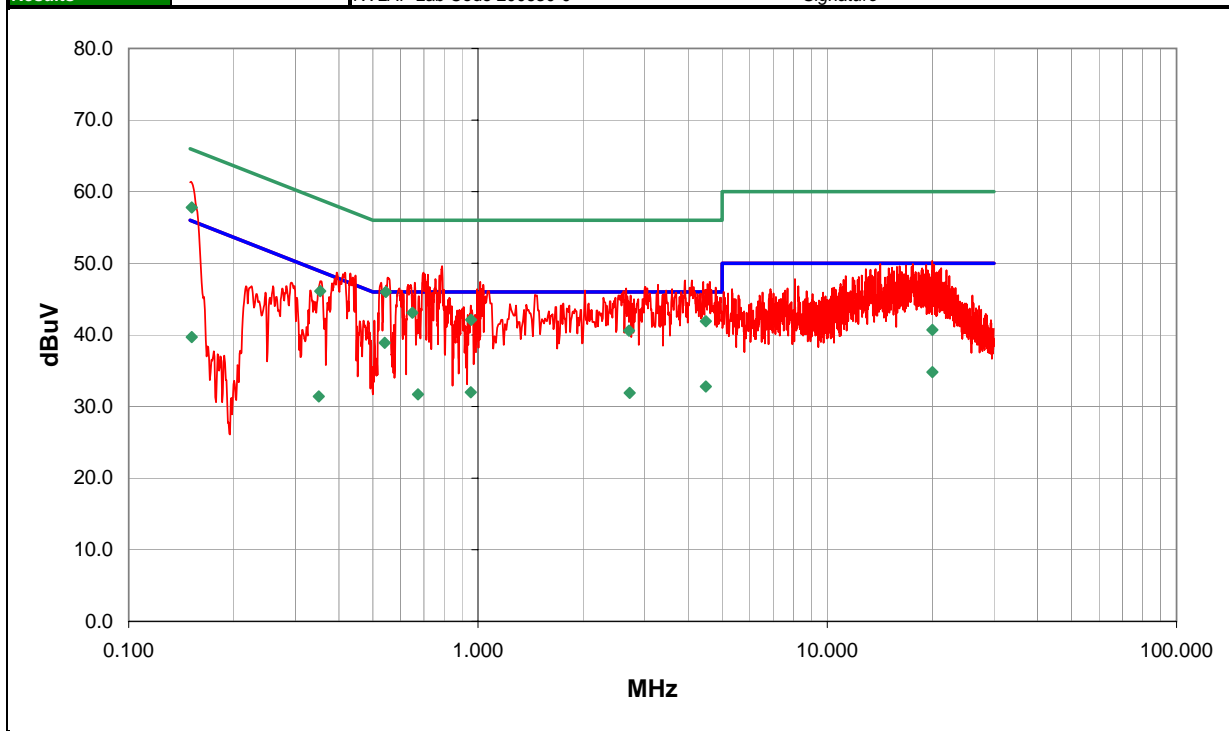
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(a) 6Mbps, channel 36

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	13	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.541	18.9	0.0	0.0	20.0	AV	38.9	46.0	-7.1
0.151	37.8	0.0	0.0	20.0	QP	57.8	65.9	-8.1
0.545	26.0	0.0	0.0	20.0	QP	46.0	56.0	-10.0
0.354	26.1	0.0	0.0	20.0	QP	46.1	58.9	-12.8
0.649	23.1	0.0	0.0	20.0	QP	43.1	56.0	-12.9
4.489	12.8	0.0	0.0	20.0	AV	32.8	46.0	-13.2
0.956	22.1	0.0	0.0	20.0	QP	42.1	56.0	-13.9
0.954	12.0	0.0	0.0	20.0	AV	32.0	46.0	-14.0
4.493	21.9	0.0	0.0	20.0	QP	41.9	56.0	-14.1
2.718	11.9	0.0	0.0	20.0	AV	31.9	46.0	-14.1
0.674	11.7	0.0	0.0	20.0	AV	31.7	46.0	-14.3
20.000	14.8	0.0	0.0	20.0	AV	34.8	50.0	-15.2
2.707	20.6	0.0	0.0	20.0	QP	40.6	56.0	-15.4
0.151	19.7	0.0	0.0	20.0	AV	39.7	55.9	-16.2
0.350	11.4	0.0	0.0	20.0	AV	31.4	49.0	-17.6
20.000	20.7	0.0	0.0	20.0	QP	40.7	60.0	-19.3
1.005	26.0	0.0	0.0	20.0		46.0	46.0	0.0
1.026	26.0	0.0	0.0	20.0		46.0	46.0	0.0
3.816	26.0	0.0	0.0	20.0		46.0	46.0	0.0

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

TEST PARAMETERS
Cable or Line Tested: N

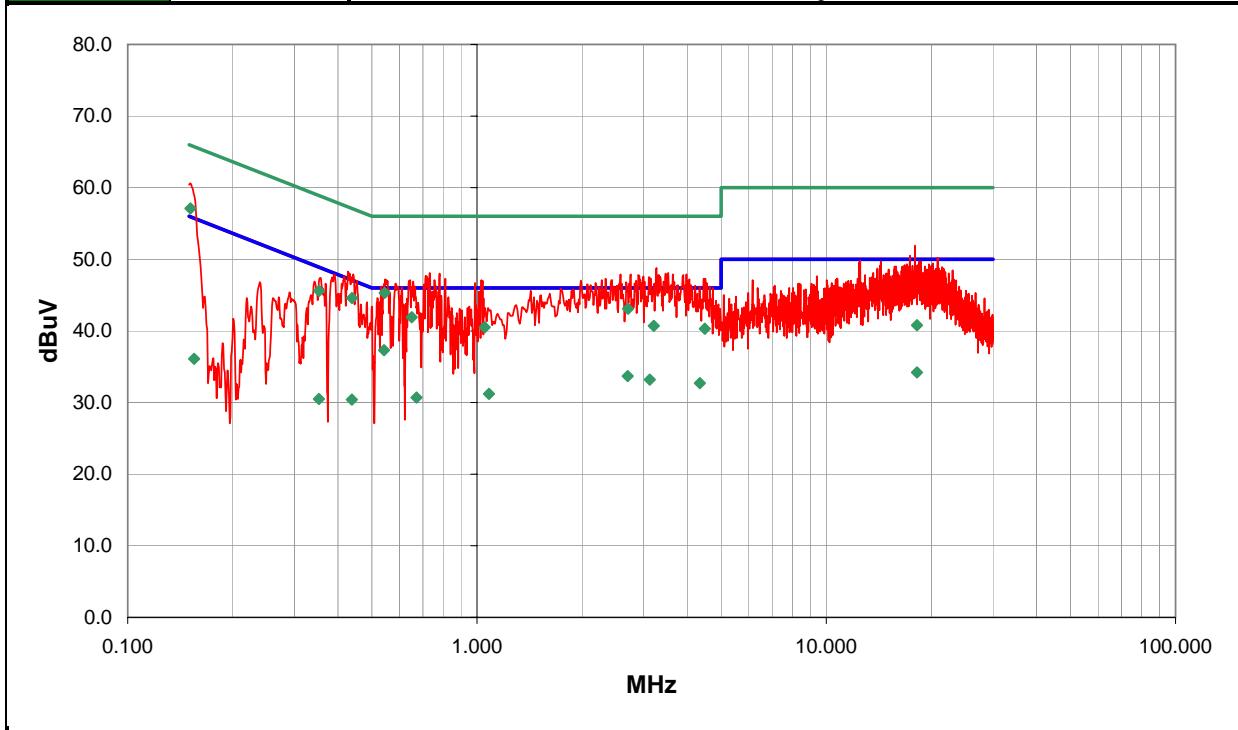
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(a) 6Mbps, channel 36

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	14	 Signature
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.542	17.3	0.0	0.0	20.0	AV	37.3	46.0	-8.7
0.151	37.1	0.0	0.0	20.0	QP	57.1	65.9	-8.8
0.544	25.3	0.0	0.0	20.0	QP	45.3	56.0	-10.7
2.700	13.7	0.0	0.0	20.0	AV	33.7	46.0	-12.3
0.439	24.6	0.0	0.0	20.0	QP	44.6	57.1	-12.5
3.125	13.2	0.0	0.0	20.0	AV	33.2	46.0	-12.8
2.707	23.1	0.0	0.0	20.0	QP	43.1	56.0	-12.9
0.353	25.6	0.0	0.0	20.0	QP	45.6	58.9	-13.3
4.346	12.7	0.0	0.0	20.0	AV	32.7	46.0	-13.3
0.650	21.9	0.0	0.0	20.0	QP	41.9	56.0	-14.1
1.082	11.2	0.0	0.0	20.0	AV	31.2	46.0	-14.8
0.671	10.7	0.0	0.0	20.0	AV	30.7	46.0	-15.3
3.209	20.7	0.0	0.0	20.0	QP	40.7	56.0	-15.3
1.052	20.5	0.0	0.0	20.0	QP	40.5	56.0	-15.5
4.492	20.3	0.0	0.0	20.0	QP	40.3	56.0	-15.7
18.191	14.2	0.0	0.0	20.0	AV	34.2	50.0	-15.8
0.438	10.4	0.0	0.0	20.0	AV	30.4	47.1	-16.7
0.353	10.5	0.0	0.0	20.0	AV	30.5	48.9	-18.4
18.191	20.8	0.0	0.0	20.0	QP	40.8	60.0	-19.2
0.155	16.1	0.0	0.0	20.0	AV	36.1	55.7	-19.6

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

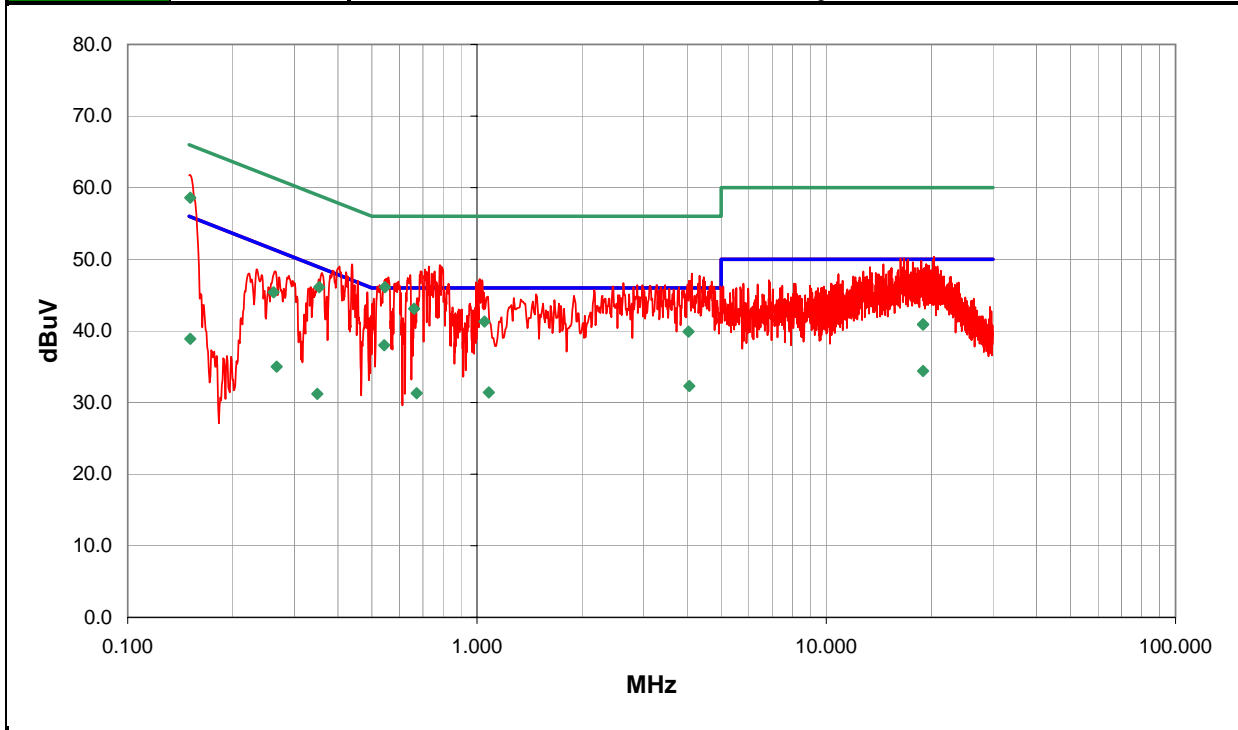
TEST PARAMETERS
Cable or Line Tested: L1

COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(a) 6Mbps, channel 64

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	15	NVLAP Lab Code 200630-0 <i>Signature</i>
Configuration #	3	
Results	Pass	



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.151	38.6	0.0	0.0	20.0	QP	58.6	65.9	-7.3
0.542	18.0	0.0	0.0	20.0	AV	38.0	46.0	-8.0
0.545	26.1	0.0	0.0	20.0	QP	46.1	56.0	-9.9
0.354	26.1	0.0	0.0	20.0	QP	46.1	58.9	-12.8
0.661	23.1	0.0	0.0	20.0	QP	43.1	56.0	-12.9
4.054	12.3	0.0	0.0	20.0	AV	32.3	46.0	-13.7
1.081	11.4	0.0	0.0	20.0	AV	31.4	46.0	-14.6
0.672	11.3	0.0	0.0	20.0	AV	31.3	46.0	-14.7
1.050	21.3	0.0	0.0	20.0	QP	41.3	56.0	-14.7
18.933	14.4	0.0	0.0	20.0	AV	34.4	50.0	-15.6
0.262	25.4	0.0	0.0	20.0	QP	45.4	61.4	-16.0
4.034	19.9	0.0	0.0	20.0	QP	39.9	56.0	-16.1
0.267	15.0	0.0	0.0	20.0	AV	35.0	51.2	-16.2
0.151	18.9	0.0	0.0	20.0	AV	38.9	55.9	-17.0
0.349	11.2	0.0	0.0	20.0	AV	31.2	49.0	-17.8
18.932	20.9	0.0	0.0	20.0	QP	40.9	60.0	-19.1
18.932	20.9	0.0	0.0	20.0	QP	40.9	60.0	-19.1
17.136	30.0	0.0	0.0	20.0		50.0	50.0	0.0
2.996	25.9	0.0	0.0	20.0		45.9	46.0	-0.1

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS Test Method

FCC 15.207: 2006	ANSI C63.4:2003
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TEST PARAMETERS

Cable or Line Tested	N
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COMMENTS

Internal antenna . Notebook configuration.

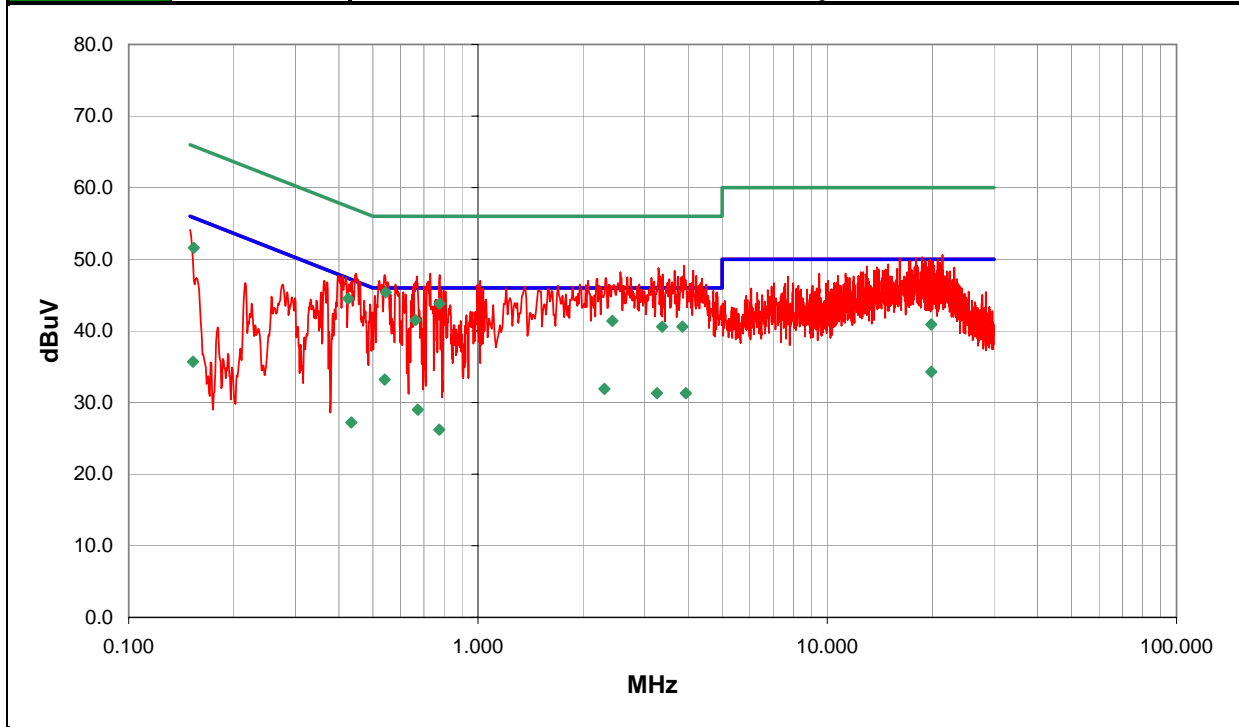
EUT OPERATING MODES

802.11(a) 6Mbps, channel 64

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	16	NVLAP Lab Code 200630-0	Signature <i>Holly Ashkannejhad</i>
Configuration #	3		
Results	Pass		



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.545	25.4	0.0	0.0	20.0	QP	45.4	56.0	-10.6
0.777	23.8	0.0	0.0	20.0	QP	43.8	56.0	-12.2
0.541	13.2	0.0	0.0	20.0	AV	33.2	46.0	-12.8
0.425	24.5	0.0	0.0	20.0	QP	44.5	57.3	-12.8
2.302	11.9	0.0	0.0	20.0	AV	31.9	46.0	-14.1
0.154	31.6	0.0	0.0	20.0	QP	51.6	65.8	-14.2
0.662	21.5	0.0	0.0	20.0	QP	41.5	56.0	-14.5
2.427	21.4	0.0	0.0	20.0	QP	41.4	56.0	-14.6
3.254	11.3	0.0	0.0	20.0	AV	31.3	46.0	-14.7
3.935	11.3	0.0	0.0	20.0	AV	31.3	46.0	-14.7
3.850	20.6	0.0	0.0	20.0	QP	40.6	56.0	-15.4
3.366	20.6	0.0	0.0	20.0	QP	40.6	56.0	-15.4
19.850	14.3	0.0	0.0	20.0	AV	34.3	50.0	-15.7
0.673	9.0	0.0	0.0	20.0	AV	29.0	46.0	-17.0
19.850	20.9	0.0	0.0	20.0	QP	40.9	60.0	-19.1
0.775	6.2	0.0	0.0	20.0	AV	26.2	46.0	-19.8
0.434	7.2	0.0	0.0	20.0	AV	27.2	47.2	-20.0
0.153	15.7	0.0	0.0	20.0	AV	35.7	55.8	-20.1
1.205	26.0	0.0	0.0	20.0		46.0	46.0	0.0

EUT: IX270-WL3945	Work Order: SPTE0018
Serial Number: None	Date: 06/21/06
Customer: Spectrum Technology	Temperature: 23
Attendees: None	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	Test Method
FCC 15.207: 2006	ANSI C63.4:2003

TEST PARAMETERS
Cable or Line Tested: N

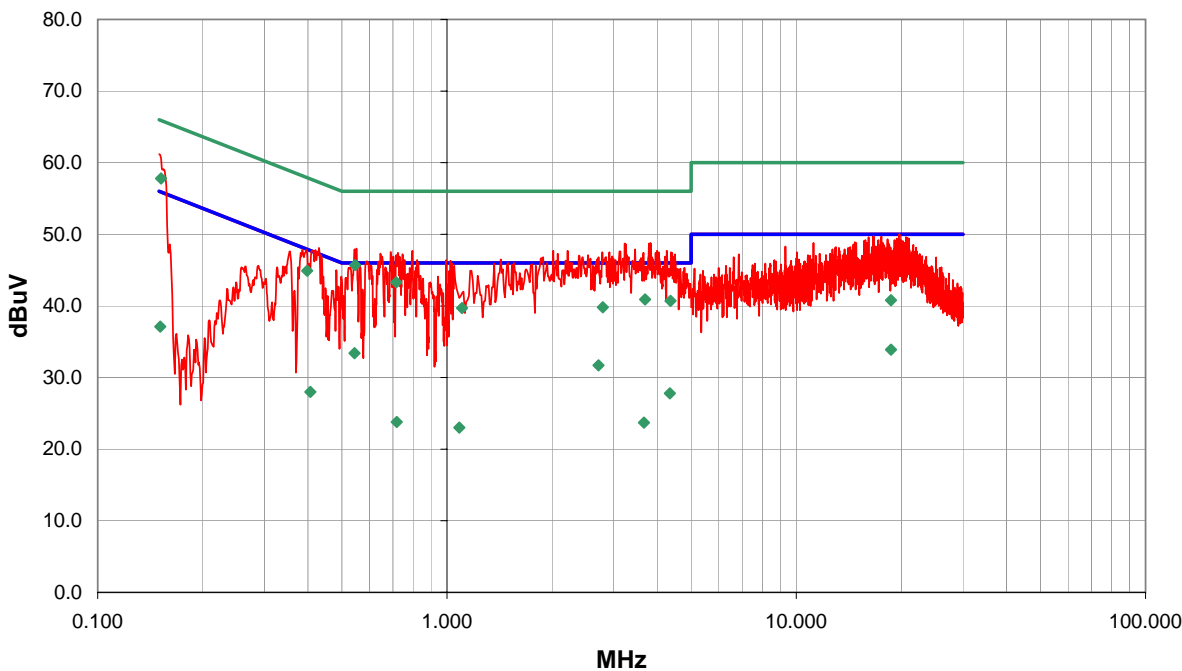
COMMENTS
Internal antenna . Notebook configuration.

EUT OPERATING MODES
802.11(a) 6Mbps, channel 165

DEVIATIONS FROM TEST STANDARD
No deviations.

Run #	17	Signature <i>Holly Ashkannejhad</i>
Configuration #	3	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Amplitude (dBuV)	Transducer (dB)	Cable (dB)	External Attenuation (dB)	Detector (blank equal peaks [PK] from scan)	Adjusted dBuV	Spec. Limit dBuV	Compared to Spec. (dB)
0.152	37.8	0.0	0.0	20.0	QP	57.8	65.9	-8.1
0.546	25.7	0.0	0.0	20.0	QP	45.7	56.0	-10.3
0.543	13.4	0.0	0.0	20.0	AV	33.4	46.0	-12.6
0.716	23.3	0.0	0.0	20.0	QP	43.3	56.0	-12.7
0.398	24.9	0.0	0.0	20.0	QP	44.9	57.9	-13.0
2.714	11.7	0.0	0.0	20.0	AV	31.7	46.0	-14.3
3.691	20.9	0.0	0.0	20.0	QP	40.9	56.0	-15.1
4.365	20.7	0.0	0.0	20.0	QP	40.7	56.0	-15.3
18.681	13.9	0.0	0.0	20.0	AV	33.9	50.0	-16.1
2.795	19.8	0.0	0.0	20.0	QP	39.8	56.0	-16.2
1.104	19.7	0.0	0.0	20.0	QP	39.7	56.0	-16.3
4.345	7.8	0.0	0.0	20.0	AV	27.8	46.0	-18.2
0.151	17.1	0.0	0.0	20.0	AV	37.1	55.9	-18.8
18.681	20.8	0.0	0.0	20.0	QP	40.8	60.0	-19.2
0.406	8.0	0.0	0.0	20.0	AV	28.0	47.7	-19.7
0.718	3.8	0.0	0.0	20.0	AV	23.8	46.0	-22.2
3.664	3.7	0.0	0.0	20.0	AV	23.7	46.0	-22.3
1.085	3.0	0.0	0.0	20.0	AV	23.0	46.0	-23.0
1.495	26.0	0.0	0.0	20.0		46.0	46.0	0.0

