

Spectrum Technology

IX270-MC8765

June 25, 2006

Report No. SPTE0021.2

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 25, 2006
Spectrum Technology
Model: IX270-MC8765

Emissions				
Test Description	Specification	Test Method	Pass	Fail
ERP of the Fundamental	FCC 22.913:2005	TIA/EIA-603-B:2002	☒	☐
EIRP of the Fundamental	FCC 24.232:2005	TIA/EIA-603-B:2002	☒	☐
Spurious Radiated Emissions	FCC 22.917:2005	TIA/EIA-603-B:2002	☒	☐
Spurious Radiated Emissions	FCC 24.238:2005	TIA/EIA-603-B:2002	☒	☐
Receiver Spurious Emissions	FCC 15.109(a) Class B:2005	ANSI C63.4:2003	☒	☐
AC Powerline Conducted Emissions	FCC 15.107Class B:2005	ANSI C63.4:2003	☒	☐

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.

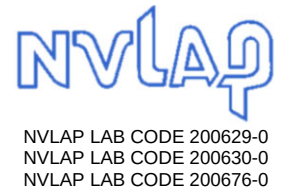
Product compliance is the responsibility of the client, therefore the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. This Report may only be duplicated in its entirety. The results of this test pertain only to the sample(s) tested,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



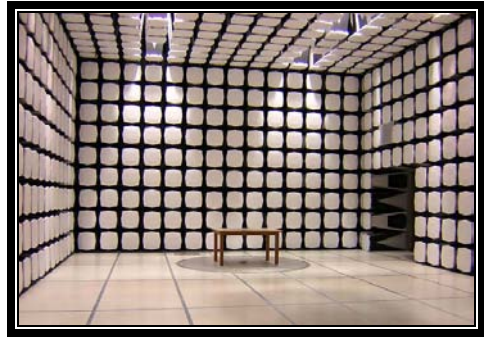
GOST: Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results from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



SCOPE

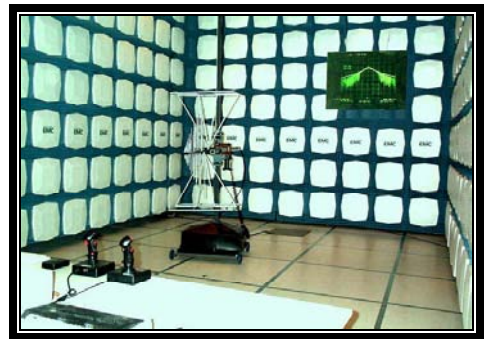
For details on the Scopes of our Accreditations, please visit:

<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

Company Name:	Spectrum Technology, Inc.
Address:	209 Dayton Street Suite #205
City, State, Zip:	Edmonds, WA 98020
Test Requested By:	Rod Munro
Model:	IX270-MC8765
First Date of Test:	05-30-2006
Last Date of Test:	06-13-2006
Receipt Date of Samples:	05-30-2006
Equipment Design Stage:	Production
Equipment Condition:	No visual damage.

Clocks/Oscillators:	Not provided.
I/O Ports:	Mouse, Keyboard, Microphone input, Serial, USB, VGA, Audio Out, Ethernet, Telecom Port. Video

GSM/GPRS radio installed in an Itronix notebook computer.

The product is an engineering sample, representative of the final product.

These radiated and AC powerline conducted emissions tests are required to demonstrate compliance of the GSM/GPRS radio to FCC Parts 22 and 24, as well as the receiver requirement of FCC 15B. The GSM/GPRS radio was previously certified. The antenna port conducted emissions are still representative of those contained in the original filing.

[illegible]

CONFIGURATION 1 SPTE0021**Software/Firmware Running during test**

Description	Version
Procomm Plus Terminal	4.8 Build 71

EUT

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Itronix, Corp.	IX270-MC8765	Unknown

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Host IX270 Notebook PC	Itronix, Corp.	IX-270	None
Vehicle Mount	Itronix, Corp.	IX270 Vehicle Mount	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

Remote Equipment Outside of Test Setup Boundary

Description	Manufacturer	Model/Part Number	Serial Number
13.8 Vdc Power Supply	Radio Shack	Unknown	Unknown

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
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	Unterminated
USB	Yes	1.6m	No	Vehicle Mount	USB Gamepad
Keyboard	PA	1.8m	PA	Vehicle Mount	Keyboard
Mouse	PA	1.8m	PA	Vehicle Mount	Mouse
External antenna	Yes	1.0m	No	Vehicle Mount	Antenna Terminator
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
Microphone	Yes	1.0m	No	Vehicle Mount	Unterminated
Speaker	Yes	1.0m	No	Vehicle Mount	Headphones

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

CONFIGURATION 2 SPTE0021**Software/Firmware Running during test**

Description	Version
Procomm Plus Terminal	4.8 Build 71

EUT

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Itronix, Corp.	IX270-MC8765	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
Vehicle Mount Antenna	MaxRad	BMLPVDB800/1900	Unknown
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

Remote Equipment Outside of Test Setup Boundary

Description	Manufacturer	Model/Part Number	Serial Number
13.8 Vdc Power Supply	Radio Shack	Unknown	Unknown

Cables

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
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	Unterminated
USB	Yes	1.6m	No	Vehicle Mount	USB Gamepad
Keyboard	PA	1.8m	PA	Vehicle Mount	Keyboard
Mouse	PA	1.8m	PA	Vehicle Mount	Mouse
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
Microphone	Yes	1.0m	No	Vehicle Mount	Unterminated
Speaker	Yes	1.0m	No	Vehicle Mount	Headphones
DC power leads	No	1.3m	No	Vehicle Mount	13.8 Vdc Power Supply

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

CONFIGURATION 3 SPTE0021**Software/Firmware Running during test**

Description	Version
Procomm Plus Terminal	4.8 Build 71

EUT

Description	Manufacturer	Model/Part Number	Serial Number
EUT	Itronix, Corp.	IX270-MC8765	Unknown

Peripherals in test setup boundary

Description	Manufacturer	Model/Part Number	Serial Number
Internal Antenna	Well Green	22+600213+00R	Unknown
Host IX270 Notebook PC	Itronix, Corp.	IX-270	None
AC Adapter	Delta Electronics	ADP-90SB BB	VCW0552024972
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
USB	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
USB	Yes	1.0m	No	Host IX270 Notebook PC	CF Card Reader
USB	Yes	1.0m	No	Host IX270 Notebook PC	Unterminated
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
Microphone	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

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	5/30/2006	Spurious Emissions of the Receiver	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	6/1/2006	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	6/12/2006	Field Strength of Fundamental	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	6/13/2006	Out of Band Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

Receiver Spurious 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

Receive mode: Low, Mid, and High Channels in Cellular Band

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	10 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
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, Biconilog	EMCO	3141	AXE	12/28/2005	24
Antenna, Horn	EMCO	3115	AHC	8/30/2005	12
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

MEASUREMENT BANDWIDTHS

	Frequency Range	Peak Data	Quasi-Peak Data	Average Data
	(MHz)	(kHz)	(kHz)	(kHz)
	0.01 - 0.15	1.0	0.2	0.2
	0.15 - 30.0	10.0	9.0	9.0
	30.0 - 1000	100.0	120.0	120.0
	Above 1000	1000.0	N/A	1000.0
Measurements were made using the bandwidths and detectors specified. No video filter was used.				

MEASUREMENT UNCERTAINTY

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.

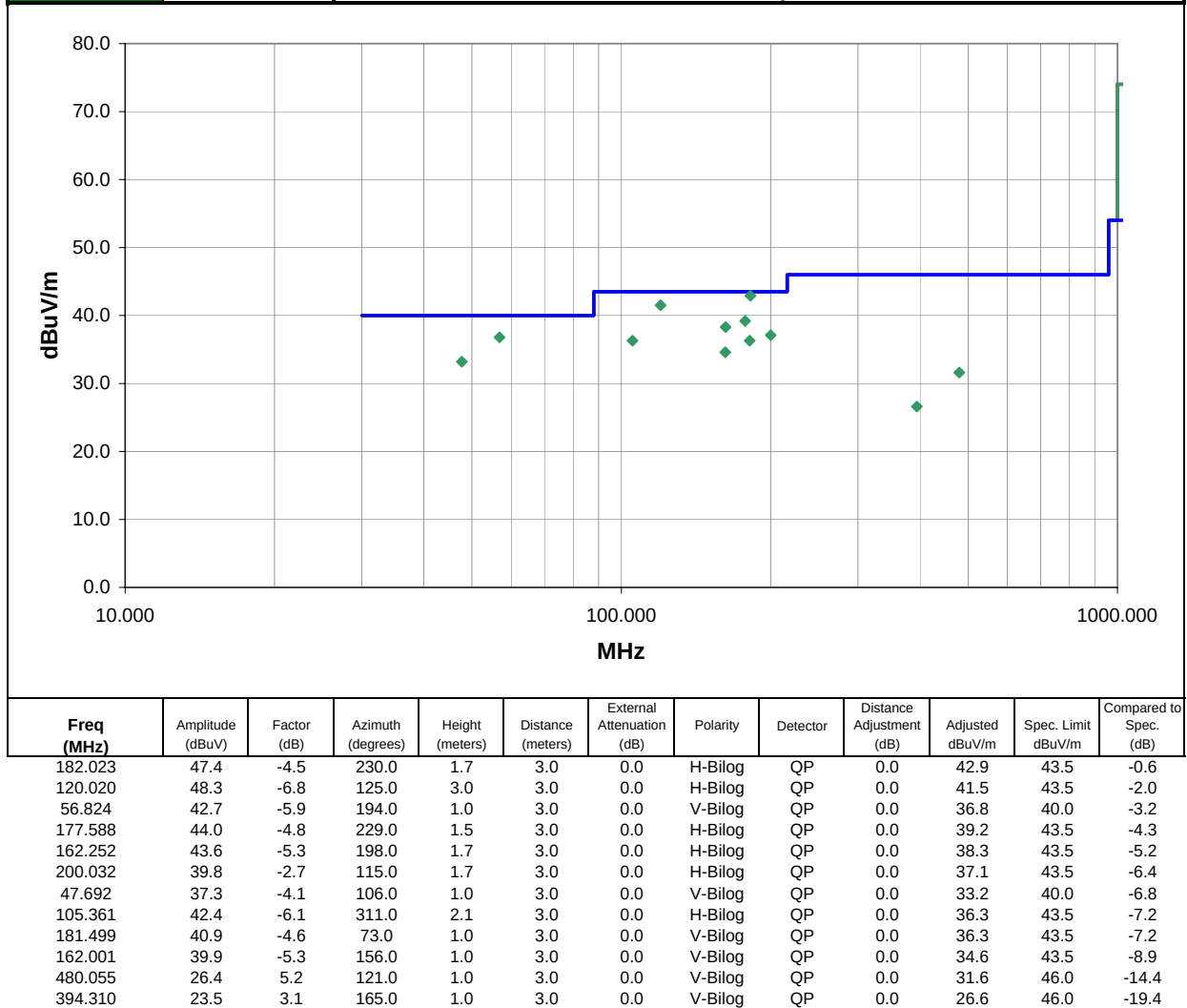
TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, a final radiated emissions test was performed. The frequency range investigated (scanned), is also noted in this report. Radiated emissions measurements were made at the EUT azimuth and antenna height such that the maximum radiated emissions level will be detected. This requires the use of a turntable and an antenna positioner. The preferred method of a continuous azimuth search is utilized for frequency scans of the EUT field strength with both polarities of the measuring antenna. A calibrated, linearly polarized antenna was positioned at the specified distance from the periphery of the EUT.

Tests were made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna was varied in height above the conducting ground plane to obtain the maximum signal strength. Though specified in the report, the measurement distance shall be 3 meters or 10 meters. At any measurement distance, the antenna height was varied from 1 meter to 4 meters. These height scans apply for both horizontal and vertical polarization, except that for vertical polarization the minimum height of the center of the antenna shall be increased so that the lowest point of the bottom of the antenna clears the ground surface by at least 25 cm.

NORTHWEST EMC		Receiver Spurious Emissions		PSA 2006.05.30 EMI 2006.4.26								
EUT: IX270-MC8765			Work Order: SPTE0021									
Serial Number: None			Date: 05/30/06									
Customer: Spectrum Technology, Inc.			Temperature: 23									
Attendees: None			Humidity: 36%									
Project: None			Barometric Pres.: 30.15									
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01								
TEST SPECIFICATIONS			Test Method									
FCC 15.109(a) Class B:2005			ANSI C63.4:2003									
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 3								
COMMENTS												
Internal antenna												
EUT OPERATING MODES												
Receive mode, low channel, cellular band												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #	1		<i>Holly Ashkannejhad</i> Signature									
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)
2213.754	35.1	-0.1	149.0	1.2	3.0	0.0	H-Horn	AV	0.0	35.0	54.0	-19.0
2487.900	53.5	0.5	158.0	1.1	3.0	0.0	V-Horn	PK	0.0	54.0	74.0	-20.0
2201.737	32.2	-0.1	151.0	1.2	3.0	0.0	H-Horn	AV	0.0	32.1	54.0	-21.9
2499.810	49.6	0.5	275.0	1.2	3.0	0.0	H-Horn	PK	0.0	50.1	74.0	-23.9
2498.920	29.4	0.5	158.0	1.1	3.0	0.0	V-Horn	AV	0.0	29.9	54.0	-24.1
2499.270	28.3	0.5	275.0	1.2	3.0	0.0	H-Horn	AV	0.0	28.8	54.0	-25.2
1499.190	29.1	-3.4	345.0	1.1	3.0	0.0	V-Horn	AV	0.0	25.7	54.0	-28.3
1985.240	26.1	-0.7	19.0	1.2	3.0	0.0	H-Horn	AV	0.0	25.4	54.0	-28.6
1499.160	28.6	-3.4	57.0	1.1	3.0	0.0	V-Horn	AV	0.0	25.2	54.0	-28.8
1832.570	25.6	-1.6	220.0	1.2	3.0	0.0	H-Horn	AV	0.0	24.0	54.0	-30.0
2213.547	42.2	-0.1	149.0	1.2	3.0	0.0	H-Horn	PK	0.0	42.1	74.0	-31.9
1500.060	45.3	-3.4	57.0	1.1	3.0	0.0	V-Horn	PK	0.0	41.9	74.0	-32.1
1499.680	45.0	-3.4	345.0	1.1	3.0	0.0	V-Horn	PK	0.0	41.6	74.0	-32.4
1833.240	43.1	-1.6	220.0	1.2	3.0	0.0	H-Horn	PK	0.0	41.5	74.0	-32.5
2201.366	41.6	-0.1	151.0	1.2	3.0	0.0	H-Horn	PK	0.0	41.5	74.0	-32.5
1999.220	38.2	-0.7	19.0	1.2	3.0	0.0	H-Horn	PK	0.0	37.5	74.0	-36.5

NORTHWEST EMC		Receiver Spurious Emissions		PSA 2006.05.30 EMI 2006.4.26
EUT: IX270-MC8765		Work Order: SPTE0021		
Serial Number: None		Date: 05/30/06		
Customer: Spectrum Technology, Inc.		Temperature: 23		
Attendees: None		Humidity: 36%		
Project: None		Barometric Pres.: 30.15		
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz	Job Site: EV01	
TEST SPECIFICATIONS		Test Method		
FCC 15.109(a) Class B:2005		ANSI C63.4:2003		
TEST PARAMETERS				
Antenna Height(s) (m)	1 - 4	Test Distance (m)	3	
COMMENTS				
Internal antenna				
EUT OPERATING MODES				
Receive mode, low channel, cellular band				
DEVIATIONS FROM TEST STANDARD				
No deviations.				
Run #	3	<i>Holly Ashkannejhad</i> Signature		
Configuration #	3			
Results	Pass			
		NVLAP Lab Code 200630-0		



NORTHWEST		Receiver Spurious Emissions		PSA 2006.05.30									
EMC				EMI 2006.4.26									
EUT: IX270-MC8765			Work Order: SPTE0021										
Serial Number: None			Date: 05/31/06										
Customer: Spectrum Technology, Inc.			Temperature: 23										
Attendees: None			Humidity: 36%										
Project: None			Barometric Pres.: 30.15										
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01									
TEST SPECIFICATIONS			Test Method										
FCC 15.109(a) Class B:2005			ANSI C63.4:2003										
TEST PARAMETERS													
Antenna Height(s) (m)		1 - 4		Test Distance (m)									
				3									
COMMENTS													
Internal antenna													
EUT OPERATING MODES													
Receive mode, mid channel, cellular band													
DEVIATIONS FROM TEST STANDARD													
No deviations.													
Run #		9		Signature <i>Holly Ashkannejhad</i> NVLAP Lab Code 200630-0									
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	Spec. (dB)	Compared to Spec. (dB)
1361.110	48.7	-4.0	153.0	1.0	3.0	0.0	V-Horn	PK	0.0	44.7	74.0	-29.3	
1356.390	28.6	-4.0	153.0	1.0	3.0	0.0	V-Horn	AV	0.0	24.6	54.0	-29.4	
1359.880	26.7	-4.0	166.0	1.0	3.0	0.0	H-Horn	AV	0.0	22.7	54.0	-31.3	
1672.796	24.9	-2.5	52.0	1.0	3.0	0.0	V-Horn	AV	0.0	22.4	54.0	-31.6	
1673.002	24.8	-2.5	297.0	1.6	3.0	0.0	H-Horn	AV	0.0	22.3	54.0	-31.7	
1362.350	45.4	-4.0	166.0	1.0	3.0	0.0	H-Horn	PK	0.0	41.4	74.0	-32.6	
1674.754	37.0	-2.5	52.0	1.0	3.0	0.0	V-Horn	PK	0.0	34.5	74.0	-39.5	
1674.318	36.7	-2.5	297.0	1.6	3.0	0.0	H-Horn	PK	0.0	34.2	74.0	-39.8	

NORTHWEST		Receiver Spurious Emissions		PSA 2006.05.30								
EMC				EMI 2006.4.26								
EUT: IX270-MC8765			Work Order: SPTE0021									
Serial Number: None			Date: 05/31/06									
Customer: Spectrum Technology, Inc.			Temperature: 23									
Attendees: None			Humidity: 36%									
Project: None			Barometric Pres.: 30.15									
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01								
TEST SPECIFICATIONS			Test Method									
FCC 15.109(a) Class B:2005			ANSI C63.4:2003									
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m)								
				3								
COMMENTS												
Internal antenna												
EUT OPERATING MODES												
Receive mode, high channel, cellular band												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #		10		<i>Holly Ashkannejhad</i> 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)
1696.868	26.5	-2.3	9.0	1.0	3.0	0.0	V-Horn	AV	0.0	24.2	54.0	-29.8
1696.890	24.9	-2.3	191.0	1.0	3.0	0.0	H-Horn	AV	0.0	22.6	54.0	-31.4
1695.648	40.8	-2.3	9.0	1.0	3.0	0.0	V-Horn	PK	0.0	38.5	74.0	-35.5
1697.130	37.7	-2.3	191.0	1.0	3.0	0.0	H-Horn	PK	0.0	35.4	74.0	-38.6

Receiver Spurious Emissions



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

WCDMA PCS band
WCDMA Cellular band
Edge PCS band
Edge Cellular band
GSM PCS band
GSM Cellular band

CHANNELS INVESTIGATED IN EACH BAND

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
Antenna, Dipole (part of ADA)	ETS	3121C-DB4	ADAA	1/6/2005	24
Antenna, Dipole (ADAA included)	Roberts		ADA	1/6/2005	24
Signal Generator	Hewlett Packard	8341B	TGN	1/26/2006	13
Antenna, Horn	EMCO	3115	AHJ	5/20/2005	24
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
EV01 cables g,h,j			EVB	3/30/2006	13
EV01 cables c,g, h			EVA	3/30/2006	13
Low Pass Filter 0-1000 MHz	Micro-Tronics	LPM50004	LFD	9/28/2005	13
High Pass Filter 1.2 - 18 GHz	Micro-Tronics	HPM50108	HfV	9/28/2005	13
High Pass Filter	Micro-Tronics	HPM50111	HFO	4/4/2006	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)	(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

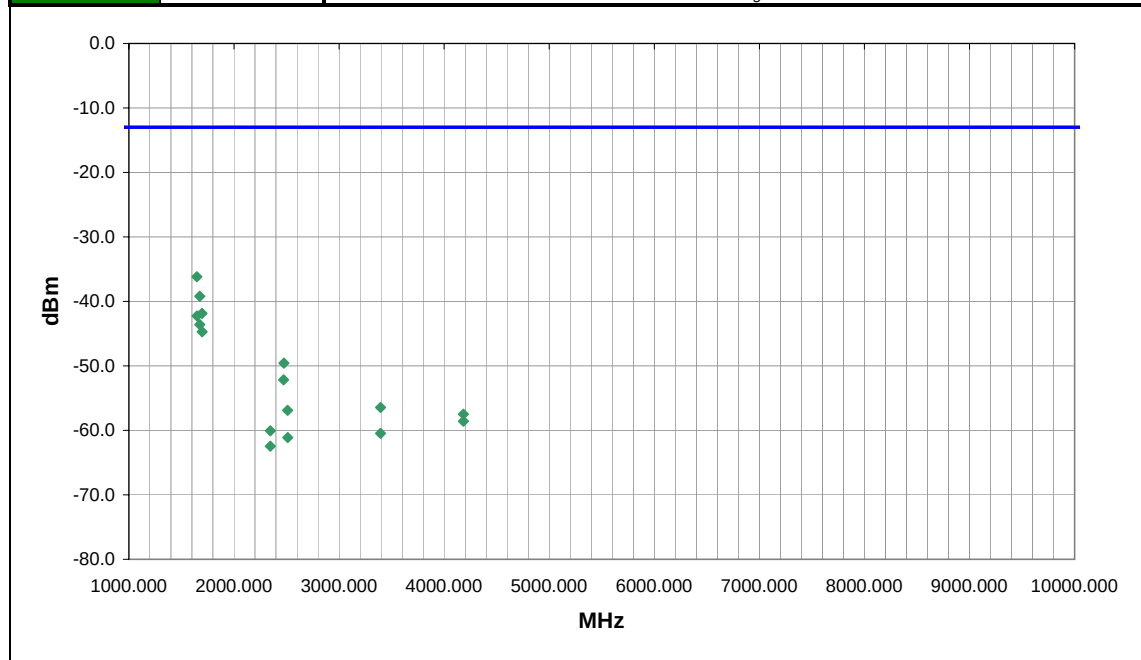
The antennas to be used with the EUT were tested. The EUT was transmitting while set at the lowest channel, a middle channel, and the highest channel available of each band and each modulation type. While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes.

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 dipole antenna and its gain (dBi); the effective radiated power for each radiated spurious emission was determined.

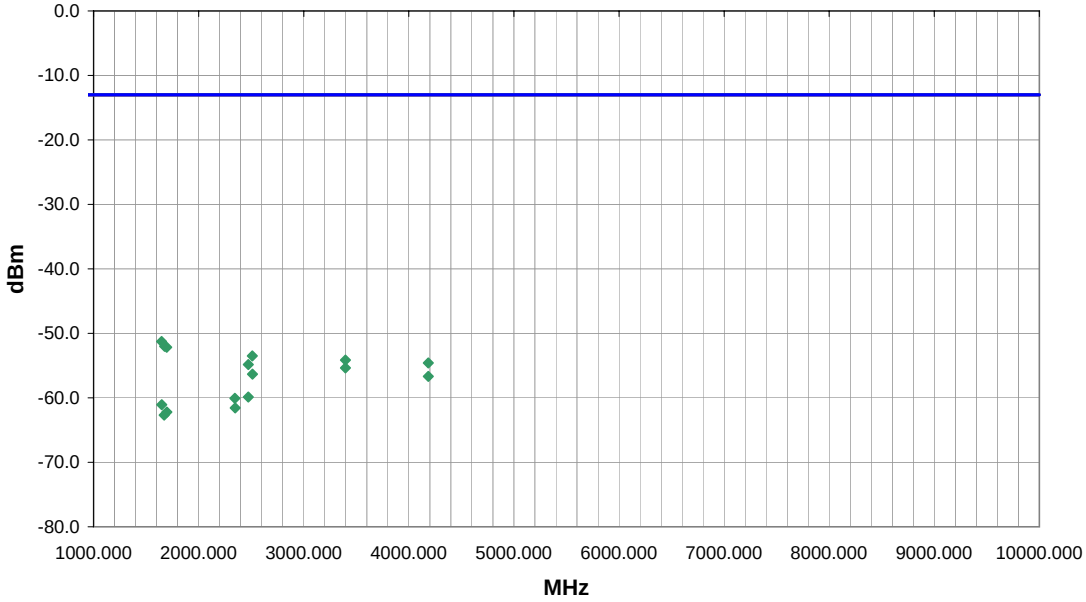
NORTHWEST		PSA 2006.05.30 EMI 2006.4.26	
EMC Spurious Radiated Emissions			
EUT: IX270-MC8765		Work Order: SPTE0021	
Serial Number: None		Date: 05/31/06	
Customer: Spectrum Technology, Inc.		Temperature: 23	
Attendees: Rod Munro		Humidity: 36%	
Project: None		Barometric Pres.: 30.15	
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz	
		Job Site: EV01	
TEST SPECIFICATIONS		Test Method	
FCC 22.917:2005		TIA/EIA-603-B:2002	
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0
COMMENTS			
Internal antenna			
EUT OPERATING MODES			
GSM Cellular band, see comments for channel			
DEVIATIONS FROM TEST STANDARD			
No deviations.			
Run #	5	Signature <i>Holly Ashkannejhad</i>	
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
1647.173			28.0	1.0			V-Horn	PK		-31.5	-13.0	-18.5	Low channel
1673.775			24.0	1.0			V-Horn	PK		-33.8	-13.0	-20.8	Mid channel
1675.293			177.0	1.0			H-Horn	PK		-37.8	-13.0	-24.8	Mid channel
1696.679			360.0	1.3			V-Horn	PK		-36.9	-13.0	-23.9	High channel
1648.497			101.0	1.8			H-Horn	PK		-39.5	-13.0	-26.5	Low channel
1697.795			174.0	1.0			H-Horn	PK		-39.9	-13.0	-26.9	High channel
2473.392			41.0	1.0			V-Horn	PK		-39.7	-13.0	-26.7	Low channel
2472.882			123.0	1.0			H-Horn	PK		-43.1	-13.0	-30.1	Low channel
3394.889			203.0	1.0			V-Horn	PK		-52.9	-13.0	-39.9	High channel
4186.222			24.0	1.0			V-Horn	PK		-54.4	-13.0	-41.4	Mid channel
3394.060			113.0	2.5			H-Horn	PK		-56.8	-13.0	-43.8	High channel
4183.701			181.0	1.0			H-Horn	PK		-57.2	-13.0	-44.2	Mid channel
2511.220			253.0	1.0			V-Horn	PK		-55.3	-13.0	-42.3	Mid channel
2512.166			56.0	1.0			H-Horn	PK		-58.7	-13.0	-45.7	Mid channel
2347.635			198.0	1.6			H-Horn	PK		-61.7	-13.0	-48.7	High channel
2345.014			210.0	1.6			V-Horn	PK		-60.2	-13.0	-47.2	High channel

NORTHWEST		PSA 2006.05.30	
EMC		EMI 2006.4.26	
Spurious Radiated Emissions			
EUT:	IX270-MC8765	Work Order:	SPTE0021
Serial Number:	None	Date:	05/31/06
Customer:	Spectrum Technology, Inc.	Temperature:	23
Attendees:	Rod Munro	Humidity:	36%
Project:	None	Barometric Pres.:	30.15
Tested by:	Holly Ashkannejhad	Power:	120VAC/60Hz
		Job Site:	EV01
TEST SPECIFICATIONS		Test Method	
FCC 22.917:2005		TIA/EIA-603-B:2002	
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0
COMMENTS			
Internal antenna			
EUT OPERATING MODES			
Edge Cellular band, see comments for channel			
DEVIATIONS FROM TEST STANDARD			
No deviations.			
Run #	6		
Configuration #	3		
Results	Pass	NVLAP Lab Code 200630-0	
		Signature <i>Holly Ashkannejhad</i>	

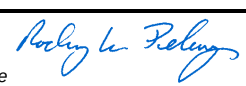
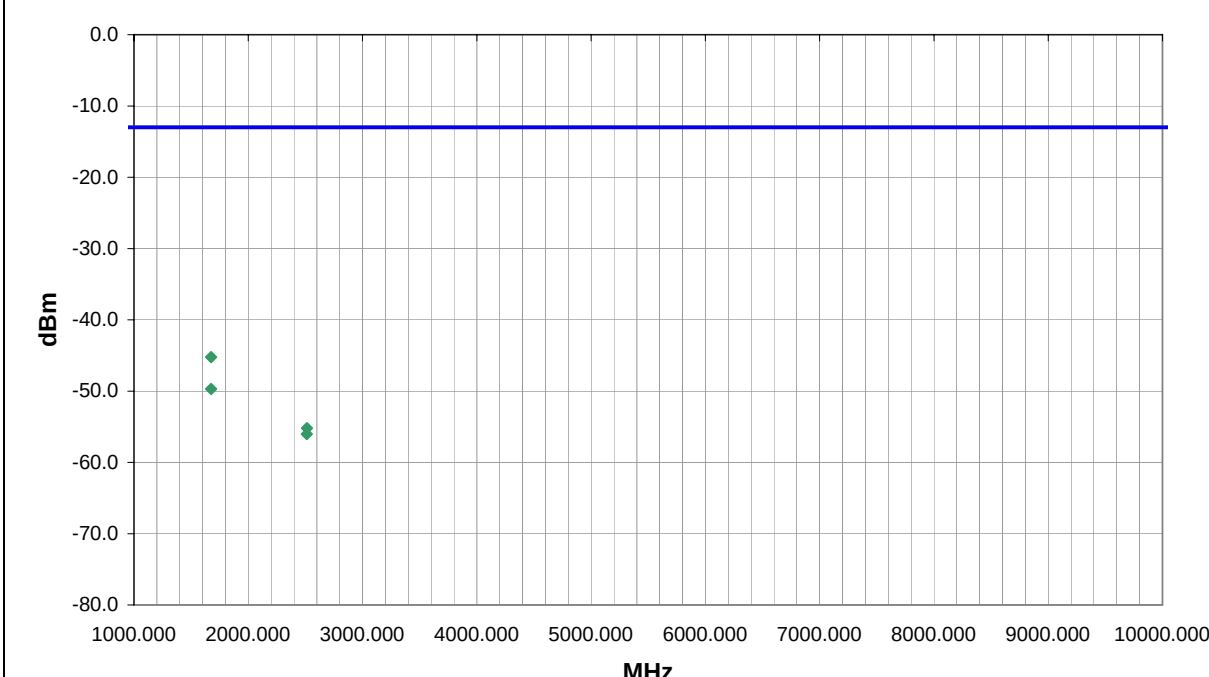


Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector		EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1647.331			336.0	1.0			V-Horn	PK		-36.2	-13.0	-23.2	Low channel
1674.360			27.0	1.0			V-Horn	PK		-39.2	-13.0	-26.2	Mid channel
1647.949			119.0	1.0			H-Horn	PK		-42.3	-13.0	-29.3	Low channel
1673.887			193.0	1.0			H-Horn	PK		-43.6	-13.0	-30.6	Mid channel
1695.377			360.0	1.6			V-Horn	PK		-41.9	-13.0	-28.9	High channel
1697.765			198.0	1.0			H-Horn	PK		-44.7	-13.0	-31.7	High channel
2475.005			245.0	1.0			H-Horn	PK		-49.6	-13.0	-36.6	Low channel
2472.215			360.0	1.6			V-Horn	PK		-52.1	-13.0	-39.1	Low channel
3394.957			273.0	1.0			V-Horn	PK		-56.4	-13.0	-43.4	High channel
4184.030			333.0	1.0			H-Horn	PK		-58.6	-13.0	-45.6	Mid channel
4183.310			122.0	1.5			V-Horn	PK		-57.5	-13.0	-44.5	Mid channel
2509.891			79.0	1.0			V-Horn	PK		-56.9	-13.0	-43.9	Mid channel
3395.759			318.0	1.0			H-Horn	PK		-60.5	-13.0	-47.5	High channel
2512.608			12.0	1.0			H-Horn	PK		-61.1	-13.0	-48.1	Mid channel
2346.599			122.0	1.0			V-Horn	PK		-60.1	-13.0	-47.1	High channel
2346.333			224.0	1.0			H-Horn	PK		-62.5	-13.0	-49.5	High channel

NORTHWEST		PSA 2006.05.30 EMI 2006.4.26																																																																																																																																																																											
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<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th>Freq (MHz)</th> <th>Azimuth (degrees)</th> <th>Height (meters)</th> <th>Polarity</th> <th>Detector</th> <th>EIRP (Watts)</th> <th>EIRP (dBm)</th> <th>Spec. Limit (dBm)</th> <th>Compared to Spec. (dB)</th> <th>Comments</th> </tr> </thead> <tbody> <tr><td>1647.337</td><td>339.0</td><td>1.0</td><td>V-Horn</td><td>PK</td><td>7.46E-09</td><td>-51.3</td><td>-13.0</td><td>-38.3</td><td>Low Channel</td></tr> <tr><td>1675.449</td><td>338.0</td><td>1.0</td><td>V-Horn</td><td>PK</td><td>6.28E-09</td><td>-52.0</td><td>-13.0</td><td>-39.0</td><td>Mid Channel</td></tr> <tr><td>1695.564</td><td>333.0</td><td>1.0</td><td>V-Horn</td><td>PK</td><td>6.09E-09</td><td>-52.2</td><td>-13.0</td><td>-39.2</td><td>High Channel</td></tr> <tr><td>2510.941</td><td>221.0</td><td>1.0</td><td>V-Horn</td><td>PK</td><td>4.47E-09</td><td>-53.5</td><td>-13.0</td><td>-40.5</td><td>Mid Channel</td></tr> <tr><td>3395.963</td><td>360.0</td><td>1.2</td><td>V-Horn</td><td>PK</td><td>3.85E-09</td><td>-54.2</td><td>-13.0</td><td>-41.2</td><td>High Channel</td></tr> <tr><td>4184.585</td><td>301.0</td><td>1.0</td><td>V-Horn</td><td>PK</td><td>3.47E-09</td><td>-54.6</td><td>-13.0</td><td>-41.6</td><td>Mid Channel</td></tr> <tr><td>2472.684</td><td>353.0</td><td>1.0</td><td>V-Horn</td><td>PK</td><td>3.28E-09</td><td>-54.8</td><td>-13.0</td><td>-41.8</td><td>Low Channel</td></tr> <tr><td>3396.860</td><td>102.0</td><td>1.0</td><td>H-Horn</td><td>PK</td><td>2.91E-09</td><td>-55.4</td><td>-13.0</td><td>-42.4</td><td>High Channel</td></tr> <tr><td>2511.613</td><td>200.0</td><td>1.0</td><td>H-Horn</td><td>PK</td><td>2.33E-09</td><td>-56.3</td><td>-13.0</td><td>-43.3</td><td>Mid Channel</td></tr> <tr><td>4185.000</td><td>179.0</td><td>2.1</td><td>H-Horn</td><td>PK</td><td>2.15E-09</td><td>-56.7</td><td>-13.0</td><td>-43.7</td><td>Mid Channel</td></tr> <tr><td>2473.014</td><td>104.0</td><td>1.8</td><td>H-Horn</td><td>PK</td><td>1.03E-09</td><td>-59.9</td><td>-13.0</td><td>-46.9</td><td>Low Channel</td></tr> <tr><td>2345.191</td><td>165.0</td><td>1.0</td><td>V-Horn</td><td>PK</td><td>9.85E-10</td><td>-60.1</td><td>-13.0</td><td>-47.1</td><td>High Channel</td></tr> <tr><td>1648.327</td><td>181.0</td><td>1.0</td><td>H-Horn</td><td>PK</td><td>7.83E-10</td><td>-61.1</td><td>-13.0</td><td>-48.1</td><td>Low Channel</td></tr> <tr><td>2347.166</td><td>167.0</td><td>1.8</td><td>H-Horn</td><td>PK</td><td>6.98E-10</td><td>-61.6</td><td>-13.0</td><td>-48.6</td><td>High Channel</td></tr> <tr><td>1697.832</td><td>95.0</td><td>1.0</td><td>H-Horn</td><td>PK</td><td>6.01E-10</td><td>-62.2</td><td>-13.0</td><td>-49.2</td><td>High Channel</td></tr> <tr><td>1672.021</td><td>146.0</td><td>1.2</td><td>H-Horn</td><td>PK</td><td>5.39E-10</td><td>-62.7</td><td>-13.0</td><td>-49.7</td><td>Mid Channel</td></tr> </tbody> </table>				Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments	1647.337	339.0	1.0	V-Horn	PK	7.46E-09	-51.3	-13.0	-38.3	Low Channel	1675.449	338.0	1.0	V-Horn	PK	6.28E-09	-52.0	-13.0	-39.0	Mid Channel	1695.564	333.0	1.0	V-Horn	PK	6.09E-09	-52.2	-13.0	-39.2	High Channel	2510.941	221.0	1.0	V-Horn	PK	4.47E-09	-53.5	-13.0	-40.5	Mid Channel	3395.963	360.0	1.2	V-Horn	PK	3.85E-09	-54.2	-13.0	-41.2	High Channel	4184.585	301.0	1.0	V-Horn	PK	3.47E-09	-54.6	-13.0	-41.6	Mid Channel	2472.684	353.0	1.0	V-Horn	PK	3.28E-09	-54.8	-13.0	-41.8	Low Channel	3396.860	102.0	1.0	H-Horn	PK	2.91E-09	-55.4	-13.0	-42.4	High Channel	2511.613	200.0	1.0	H-Horn	PK	2.33E-09	-56.3	-13.0	-43.3	Mid Channel	4185.000	179.0	2.1	H-Horn	PK	2.15E-09	-56.7	-13.0	-43.7	Mid Channel	2473.014	104.0	1.8	H-Horn	PK	1.03E-09	-59.9	-13.0	-46.9	Low Channel	2345.191	165.0	1.0	V-Horn	PK	9.85E-10	-60.1	-13.0	-47.1	High Channel	1648.327	181.0	1.0	H-Horn	PK	7.83E-10	-61.1	-13.0	-48.1	Low Channel	2347.166	167.0	1.8	H-Horn	PK	6.98E-10	-61.6	-13.0	-48.6	High Channel	1697.832	95.0	1.0	H-Horn	PK	6.01E-10	-62.2	-13.0	-49.2	High Channel	1672.021	146.0	1.2	H-Horn	PK	5.39E-10	-62.7	-13.0	-49.7	Mid Channel
Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments																																																																																																																																																																				
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2511.613	200.0	1.0	H-Horn	PK	2.33E-09	-56.3	-13.0	-43.3	Mid Channel																																																																																																																																																																				
4185.000	179.0	2.1	H-Horn	PK	2.15E-09	-56.7	-13.0	-43.7	Mid Channel																																																																																																																																																																				
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1648.327	181.0	1.0	H-Horn	PK	7.83E-10	-61.1	-13.0	-48.1	Low Channel																																																																																																																																																																				
2347.166	167.0	1.8	H-Horn	PK	6.98E-10	-61.6	-13.0	-48.6	High Channel																																																																																																																																																																				
1697.832	95.0	1.0	H-Horn	PK	6.01E-10	-62.2	-13.0	-49.2	High Channel																																																																																																																																																																				
1672.021	146.0	1.2	H-Horn	PK	5.39E-10	-62.7	-13.0	-49.7	Mid Channel																																																																																																																																																																				

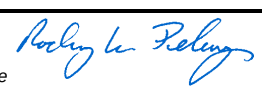
NORTHWEST EMC		Spurious Radiated Emissions		PSA 2006.05.30 EMI 2006.6.2							
EUT: IX270-MC8765			Work Order: SPTE0021								
Serial Number: None			Date: 06/07/06								
Customer: Spectrum Technology, Inc.			Temperature: 23								
Attendees: Rod Munro			Humidity: 36%								
Project: None			Barometric Pres.: 30.15								
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01							
TEST SPECIFICATIONS			Test Method								
FCC 22.917:2005			TIA/EIA-603-B:2002								
TEST PARAMETERS											
Antenna Height(s) (m)		1 - 4		Test Distance (m)							
				0							
COMMENTS											
Internal antenna											
EUT OPERATING MODES											
WCDMA Cellular band, low channel											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
Run #		16		Signature <i>Holly Ashkannejhad</i> NVLAP Lab Code 200630-0							
Configuration #		3									
Results		Pass									
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1655.318			311.0	1.0		V-Horn	PK	7.97E-09	-51.0	-13.0	-38.0
2481.319			101.0	1.0		H-Horn	PK	2.57E-09	-55.9	-13.0	-42.9
1654.276			86.0	1.0		H-Horn	PK	2.65E-09	-55.8	-13.0	-42.8
2481.477			119.0	1.0		V-Horn	PK	1.30E-09	-58.9	-13.0	-45.9

NORTHWEST		PSA 2006.05.30 EMI 2006.6.2							
EMC		Spurious Radiated Emissions							
EUT: IX270-MC8765		Work Order: SPTE0021							
Serial Number: None		Date: 06/07/06							
Customer: Spectrum Technology, Inc.		Temperature: 23							
Attendees: Rod Munro		Humidity: 36%							
Project: None		Barometric Pres.: 30.15							
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01					
TEST SPECIFICATIONS			Test Method						
FCC 22.917:2005			TIA/EIA-603-B:2002						
TEST PARAMETERS									
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0					
COMMENTS									
Internal antenna									
EUT OPERATING MODES									
WCDMA Cellular band, high channel									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
Run #		17		Signature					
Configuration #		3							
Results		Pass							
dBm									
MHz									
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1695.614		283.0	1.0	V-Horn	PK	1.93E-08	-47.2	-13.0	-34.2
1695.264		109.0	1.0	H-Horn	PK	5.61E-09	-52.5	-13.0	-39.5
2543.456		153.0	1.0	V-Horn	PK	3.06E-09	-55.1	-13.0	-42.1
2542.131		84.0	1.2	H-Horn	PK	9.43E-10	-60.3	-13.0	-47.3

NORTHWEST EMC		Spurious Radiated Emissions		PSA 2006.05.30 EMI 2006.6.2							
EUT: IX270-MC8765			Work Order: SPTE0021								
Serial Number: None			Date: 06/08/06								
Customer: Spectrum Technology, Inc.			Temperature: 23								
Attendees: Rod Munro			Humidity: 36%								
Project: None			Barometric Pres.: 30.15								
Tested by: Rod Peloquin		Power: 120VAC/60Hz		Job Site: EV01							
TEST SPECIFICATIONS			Test Method								
FCC 22.917:2005			TIA/EIA-603-B:2002								
TEST PARAMETERS											
Antenna Height(s) (m)		1 - 4		Test Distance (m)							
				0							
COMMENTS											
Internal antenna											
EUT OPERATING MODES											
WCDMA Cellular band, mid channel											
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 (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1675.110			154.0	1.1		V-Horn	PK	3.01E-08	-45.2	-13.0	-32.2
1675.300			86.0	1.2		H-Horn	PK	1.07E-08	-49.7	-13.0	-36.7
2514.100			142.0	1.2		V-Horn	PK	3.02E-09	-55.2	-13.0	-42.2
2511.690			78.0	1.3		H-Horn	PK	2.50E-09	-56.0	-13.0	-43.0

NORTHWEST		Spurious Radiated Emissions		PSA 2006.05.30																																																													
EMC				EMI 2006.6.8																																																													
EUT: IX270-MC8765			Work Order: SPTE0021																																																														
Serial Number: None			Date: 06/09/06																																																														
Customer: Spectrum Technology, Inc.			Temperature: 23																																																														
Attendees: Rod Munro			Humidity: 36%																																																														
Project: None			Barometric Pres.: 30.15																																																														
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01																																																													
TEST SPECIFICATIONS			Test Method																																																														
FCC 22.917:2005			TIA/EIA-603-B:2002																																																														
TEST PARAMETERS																																																																	
Antenna Height(s) (m)		1 - 4		Test Distance (m)																																																													
				0																																																													
COMMENTS																																																																	
External antenna. Vehicle mount configuration.																																																																	
EUT OPERATING MODES																																																																	
WCDMA Cellular band, low channel																																																																	
DEVIATIONS FROM TEST STANDARD																																																																	
No deviations.																																																																	
Run #		26		<i>Holly Ashkannejhad</i> Signature																																																													
Configuration #		2																																																															
Results		Pass																																																															
NVLAP Lab Code 200630-0																																																																	
<table border="1"> <thead> <tr> <th>Freq (MHz)</th> <th></th> <th></th> <th>Azimuth (degrees)</th> <th>Height (meters)</th> <th></th> <th>Polarity</th> <th>Detector</th> <th>EIRP (Watts)</th> <th>EIRP (dBm)</th> <th>Spec. Limit (dBm)</th> <th>Compared to Spec. (dB)</th> </tr> </thead> <tbody> <tr> <td>2476.580</td> <td></td> <td></td> <td>185.0</td> <td>2.6</td> <td></td> <td>H-Horn</td> <td>PK</td> <td>2.14E-08</td> <td>-46.7</td> <td>-13.0</td> <td>-33.7</td> </tr> <tr> <td>2478.220</td> <td></td> <td></td> <td>327.0</td> <td>1.0</td> <td></td> <td>V-Horn</td> <td>PK</td> <td>6.99E-09</td> <td>-51.6</td> <td>-13.0</td> <td>-38.6</td> </tr> <tr> <td>1651.170</td> <td></td> <td></td> <td>211.0</td> <td>1.5</td> <td></td> <td>H-Horn</td> <td>PK</td> <td>5.05E-09</td> <td>-53.0</td> <td>-13.0</td> <td>-40.0</td> </tr> <tr> <td>1651.190</td> <td></td> <td></td> <td>285.0</td> <td>1.0</td> <td></td> <td>V-Horn</td> <td>PK</td> <td>4.49E-09</td> <td>-53.5</td> <td>-13.0</td> <td>-40.5</td> </tr> </tbody> </table>						Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	2476.580			185.0	2.6		H-Horn	PK	2.14E-08	-46.7	-13.0	-33.7	2478.220			327.0	1.0		V-Horn	PK	6.99E-09	-51.6	-13.0	-38.6	1651.170			211.0	1.5		H-Horn	PK	5.05E-09	-53.0	-13.0	-40.0	1651.190			285.0	1.0		V-Horn	PK	4.49E-09	-53.5	-13.0	-40.5
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)																																																						
2476.580			185.0	2.6		H-Horn	PK	2.14E-08	-46.7	-13.0	-33.7																																																						
2478.220			327.0	1.0		V-Horn	PK	6.99E-09	-51.6	-13.0	-38.6																																																						
1651.170			211.0	1.5		H-Horn	PK	5.05E-09	-53.0	-13.0	-40.0																																																						
1651.190			285.0	1.0		V-Horn	PK	4.49E-09	-53.5	-13.0	-40.5																																																						

NORTHWEST		Spurious Radiated Emissions		PSA 2006.05.30 EMI 2006.6.8					
EUT: IX270-MC8765		Work Order: SPTE0021							
Serial Number: None		Date: 06/09/06							
Customer: Spectrum Technology, Inc.		Temperature: 23							
Attendees: Rod Munro		Humidity: 36%							
Project: None		Barometric Pres.: 30.15							
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01					
TEST SPECIFICATIONS		Test Method							
FCC 22.917:2005		TIA/EIA-603-B:2002							
TEST PARAMETERS									
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0					
COMMENTS									
External antenna. Vehicular mount configuration.									
EUT OPERATING MODES									
WCDMA Cellular band, high channel									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
Run #	27	<i>Holly Ashkannejhad</i> Signature							
Configuration #	2								
Results	Pass								
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2542.520		119.0	1.6	V-Horn	PK	3.85E-09	-54.1	-13.0	-41.1
1691.560		76.0	1.0	V-Horn	PK	1.68E-09	-57.7	-13.0	-44.7
2538.260		290.0	2.2	H-Horn	PK	1.13E-09	-59.5	-13.0	-46.5
1688.480		110.0	2.4	H-Horn	PK	4.36E-10	-63.6	-13.0	-50.6

NORTHWEST EMC		Spurious Radiated Emissions		PSA 2006.05.30 EMI 2006.6.9	
EUT: IX270-MC8765		Work Order: SPTE0021			
Serial Number: None		Date: 06/12/06			
Customer: Spectrum Technology		Temperature: 23			
Attendees: None		Humidity: 47%			
Project: None		Barometric Pres.: 29.98			
Tested by: RodPeloquin		Power: 120VAC/60Hz		Job Site: EV01	
TEST SPECIFICATIONS			Test Method		
FCC 22.917:2005			TIA/EIA-603-B:2002		
TEST PARAMETERS					
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0	
COMMENTS					
External antenna. Vehicle mount configuration.					
EUT OPERATING MODES					
W-CDMA Cellular band, mid channel (4189/4414, 837.81 MHz)					
DEVIATIONS FROM TEST STANDARD					
No deviations.					
Run #	35	 Signature			
Configuration #	2				
Results	Pass				
dBm 0.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0 -80.0 1000.000 2000.000 3000.000 4000.000 5000.000 6000.000 7000.000 8000.000 9000.000 10000.000 MHz					

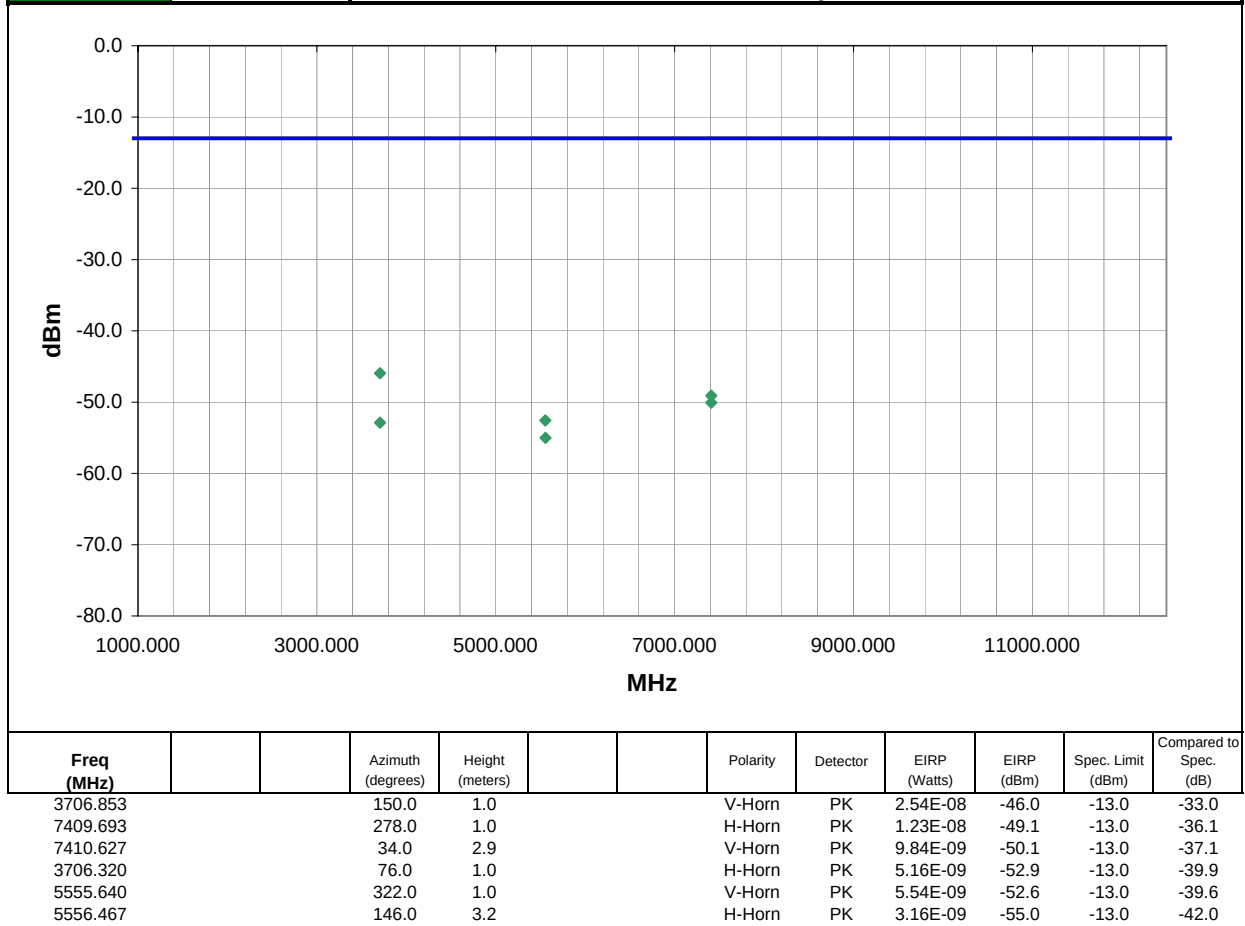
NORTHWEST EMC										Spurious Radiated Emissions		PSA 2006.05.30 EMI 2006.4.26																																																																																																																																																																																							
EUT: IX270-MC8765										Work Order: SPTE0021																																																																																																																																																																																									
Serial Number: None										Date: 05/31/06																																																																																																																																																																																									
Customer: Spectrum Technology, Inc.										Temperature: 23																																																																																																																																																																																									
Attendees: Rod Munro										Humidity: 36%																																																																																																																																																																																									
Project: None										Barometric Pres.: 30.15																																																																																																																																																																																									
Tested by: Holly Ashkannejhad										Power: 120VAC/60Hz		Job Site: EV01																																																																																																																																																																																							
TEST SPECIFICATIONS										Test Method																																																																																																																																																																																									
FCC 24.238:2005										TIA/EIA-603-B:2002																																																																																																																																																																																									
TEST PARAMETERS																																																																																																																																																																																																			
Antenna Height(s) (m)										1 - 4		Test Distance (m)		0																																																																																																																																																																																					
COMMENTS																																																																																																																																																																																																			
Internal antenna																																																																																																																																																																																																			
EUT OPERATING MODES																																																																																																																																																																																																			
GSM PCS band, see comments for channel																																																																																																																																																																																																			
DEVIATIONS FROM TEST STANDARD																																																																																																																																																																																																			
No deviations.																																																																																																																																																																																																			
Run #		7		<i>Holly Ashkannejhad</i> Signature																																																																																																																																																																																															
Configuration #		3																																																																																																																																																																																																	
Results		Pass																																																																																																																																																																																																	
NVLAP Lab Code 200630-0																																																																																																																																																																																																			
<table border="1"> <thead> <tr> <th>Freq (MHz)</th> <th></th> <th></th> <th>Azimuth (degrees)</th> <th>Height (meters)</th> <th></th> <th></th> <th>Polarity</th> <th>Detector</th> <th>EIRP (Watts)</th> <th>EIRP (dBm)</th> <th>Spec. Limit (dBm)</th> <th>Compared to Spec. (dB)</th> <th>Comments</th> </tr> </thead> <tbody> <tr> <td>3697.916</td> <td></td> <td></td> <td>187.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>5.69E-07</td> <td>-32.4</td> <td>-13.0</td> <td>-19.4</td> <td>Low channel</td> </tr> <tr> <td>3697.713</td> <td></td> <td></td> <td>174.0</td> <td>1.0</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>3.11E-07</td> <td>-35.1</td> <td>-13.0</td> <td>-22.1</td> <td>Low channel</td> </tr> <tr> <td>3759.743</td> <td></td> <td></td> <td>148.0</td> <td>1.0</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>1.26E-07</td> <td>-39.0</td> <td>-13.0</td> <td>-26.0</td> <td>Mid channel</td> </tr> <tr> <td>3759.862</td> <td></td> <td></td> <td>71.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>9.11E-08</td> <td>-40.4</td> <td>-13.0</td> <td>-27.4</td> <td>Mid channel</td> </tr> <tr> <td>3817.005</td> <td></td> <td></td> <td>61.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>5.95E-08</td> <td>-42.3</td> <td>-13.0</td> <td>-29.3</td> <td>High channel</td> </tr> <tr> <td>3820.025</td> <td></td> <td></td> <td>236.0</td> <td>1.0</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>4.42E-08</td> <td>-43.5</td> <td>-13.0</td> <td>-30.5</td> <td>High channel</td> </tr> <tr> <td>5550.213</td> <td></td> <td></td> <td>229.0</td> <td>1.3</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>1.94E-08</td> <td>-47.1</td> <td>-13.0</td> <td>-34.1</td> <td>Low channel</td> </tr> <tr> <td>5640.136</td> <td></td> <td></td> <td>201.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>1.53E-08</td> <td>-48.2</td> <td>-13.0</td> <td>-35.2</td> <td>Mid channel</td> </tr> <tr> <td>5550.171</td> <td></td> <td></td> <td>232.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>1.27E-08</td> <td>-49.0</td> <td>-13.0</td> <td>-36.0</td> <td>Low channel</td> </tr> <tr> <td>5642.343</td> <td></td> <td></td> <td>250.0</td> <td>1.4</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>5.83E-09</td> <td>-52.3</td> <td>-13.0</td> <td>-39.3</td> <td>Mid channel</td> </tr> <tr> <td>5731.368</td> <td></td> <td></td> <td>175.0</td> <td>1.0</td> <td></td> <td></td> <td>H-Horn</td> <td>PK</td> <td>5.65E-09</td> <td>-52.5</td> <td>-13.0</td> <td>-39.5</td> <td>High channel</td> </tr> <tr> <td>5729.982</td> <td></td> <td></td> <td>235.0</td> <td>1.0</td> <td></td> <td></td> <td>V-Horn</td> <td>PK</td> <td>3.93E-09</td> <td>-54.1</td> <td>-13.0</td> <td>-41.1</td> <td>High channel</td> </tr> </tbody> </table>														Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments	3697.916			187.0	1.0			V-Horn	PK	5.69E-07	-32.4	-13.0	-19.4	Low channel	3697.713			174.0	1.0			H-Horn	PK	3.11E-07	-35.1	-13.0	-22.1	Low channel	3759.743			148.0	1.0			H-Horn	PK	1.26E-07	-39.0	-13.0	-26.0	Mid channel	3759.862			71.0	1.0			V-Horn	PK	9.11E-08	-40.4	-13.0	-27.4	Mid channel	3817.005			61.0	1.0			V-Horn	PK	5.95E-08	-42.3	-13.0	-29.3	High channel	3820.025			236.0	1.0			H-Horn	PK	4.42E-08	-43.5	-13.0	-30.5	High channel	5550.213			229.0	1.3			H-Horn	PK	1.94E-08	-47.1	-13.0	-34.1	Low channel	5640.136			201.0	1.0			V-Horn	PK	1.53E-08	-48.2	-13.0	-35.2	Mid channel	5550.171			232.0	1.0			V-Horn	PK	1.27E-08	-49.0	-13.0	-36.0	Low channel	5642.343			250.0	1.4			H-Horn	PK	5.83E-09	-52.3	-13.0	-39.3	Mid channel	5731.368			175.0	1.0			H-Horn	PK	5.65E-09	-52.5	-13.0	-39.5	High channel	5729.982			235.0	1.0			V-Horn	PK	3.93E-09	-54.1	-13.0	-41.1	High channel
Freq (MHz)			Azimuth (degrees)	Height (meters)			Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments																																																																																																																																																																																						
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3817.005			61.0	1.0			V-Horn	PK	5.95E-08	-42.3	-13.0	-29.3	High channel																																																																																																																																																																																						
3820.025			236.0	1.0			H-Horn	PK	4.42E-08	-43.5	-13.0	-30.5	High channel																																																																																																																																																																																						
5550.213			229.0	1.3			H-Horn	PK	1.94E-08	-47.1	-13.0	-34.1	Low channel																																																																																																																																																																																						
5640.136			201.0	1.0			V-Horn	PK	1.53E-08	-48.2	-13.0	-35.2	Mid channel																																																																																																																																																																																						
5550.171			232.0	1.0			V-Horn	PK	1.27E-08	-49.0	-13.0	-36.0	Low channel																																																																																																																																																																																						
5642.343			250.0	1.4			H-Horn	PK	5.83E-09	-52.3	-13.0	-39.3	Mid channel																																																																																																																																																																																						
5731.368			175.0	1.0			H-Horn	PK	5.65E-09	-52.5	-13.0	-39.5	High channel																																																																																																																																																																																						
5729.982			235.0	1.0			V-Horn	PK	3.93E-09	-54.1	-13.0	-41.1	High channel																																																																																																																																																																																						

NORTHWEST		PSA 2006.05.30																																																																																																																																																																																							
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Attendees: None		Humidity: 36%																																																																																																																																																																																							
Project: None		Barometric Pres.: 30.15																																																																																																																																																																																							
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NVLAP Lab Code 200630-0		Signature <i>Holly Ashkannejhad</i>																																																																																																																																																																																							
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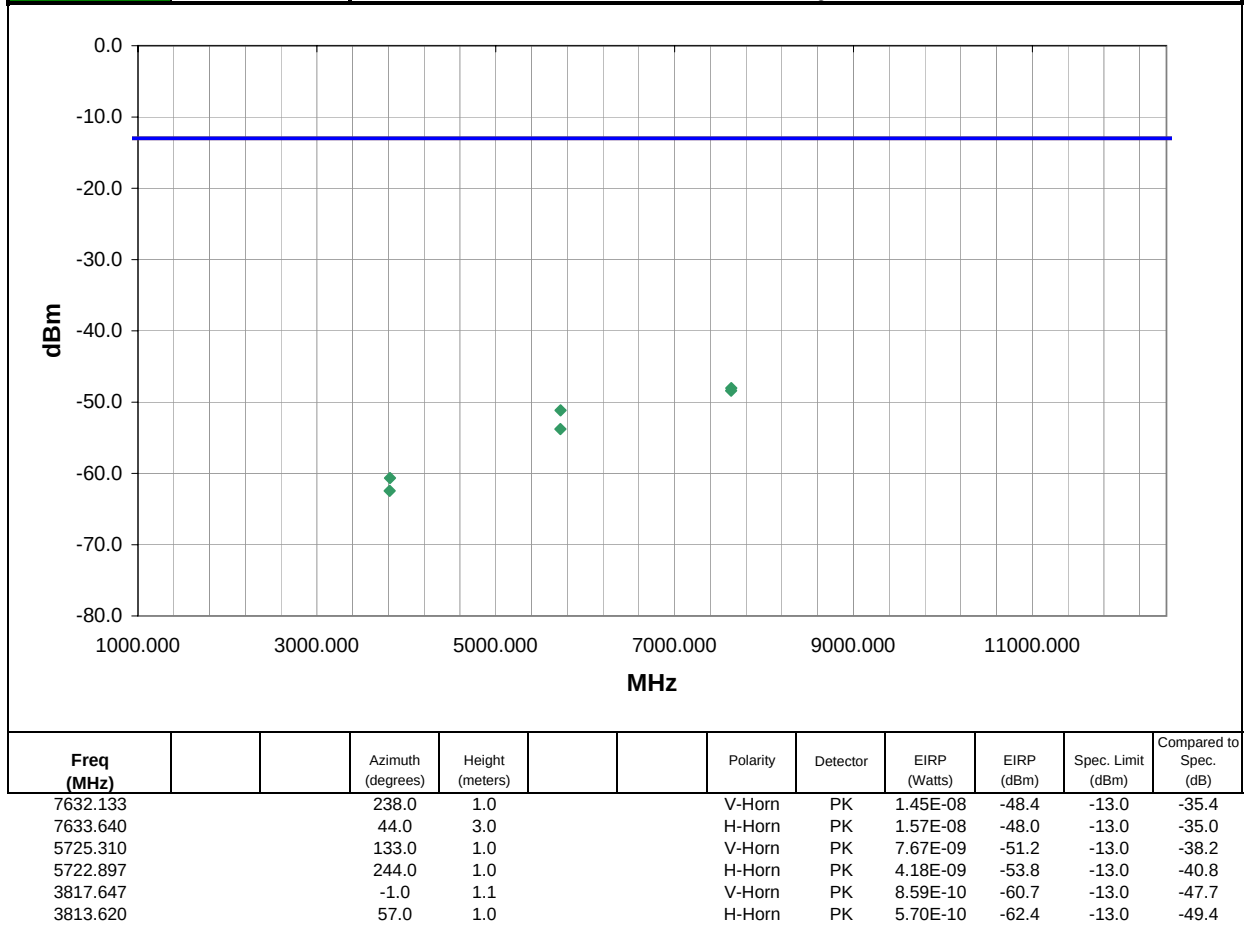
NORTHWEST EMC										Spurious Radiated Emissions		PSA 2006.05.30 EMI 2006.4.26																																																																																																																																																																																							
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3757.338			28.0	1.9			H-Horn	PK	2.29E-08	-46.4	-13.0	-33.4	Mid channel																																																																																																																																																																																						
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3699.558			213.0	1.5			H-Horn	PK	2.06E-08	-46.9	-13.0	-33.9	Low channel																																																																																																																																																																																						
5638.416			187.0	1.0			H-Horn	PK	1.80E-08	-47.4	-13.0	-34.4	Mid channel																																																																																																																																																																																						
3817.908			316.0	1.5			H-Horn	PK	8.82E-09	-50.5	-13.0	-37.5	High channel																																																																																																																																																																																						
5729.726			97.0	1.0			V-Horn	PK	6.84E-09	-51.7	-13.0	-38.7	High channel																																																																																																																																																																																						
5729.893			153.0	1.6			H-Horn	PK	3.91E-09	-54.1	-13.0	-41.1	High channel																																																																																																																																																																																						

NORTHWEST EMC										PSA 2006.05.30 EMI 2006.4.26																																																																																																																																																																																							
Spurious Radiated Emissions																																																																																																																																																																																																	
EUT: IX270-MC8765					Work Order: SPTE0021																																																																																																																																																																																												
Serial Number: None					Date: 06/01/06																																																																																																																																																																																												
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Project: None					Barometric Pres.: 30.15																																																																																																																																																																																												
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NORTHWEST		PSA 2006.05.30	
EMC		Spurious Radiated Emissions	
EUT: IX270-MC8765		Work Order: SPTE0021	
Serial Number: None		Date: 06/07/06	
Customer: Spectrum Technology, Inc.		Temperature: 23	
Attendees: Rod Munro		Humidity: 36%	
Project: None		Barometric Pres.: 30.15	
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz	Job Site: EV01
TEST SPECIFICATIONS		Test Method	
FCC 24.238:2005		TIA/EIA-603-B:2002	
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0
COMMENTS			
Internal antenna			
EUT OPERATING MODES			
WCDMA PCS band, low channel			
DEVIATIONS FROM TEST STANDARD			
No deviations.			
Run #	18	<i>Holly Ashkannejhad</i> Signature	
Configuration #	3		
Results	Pass		
		NVLAP Lab Code 200630-0	



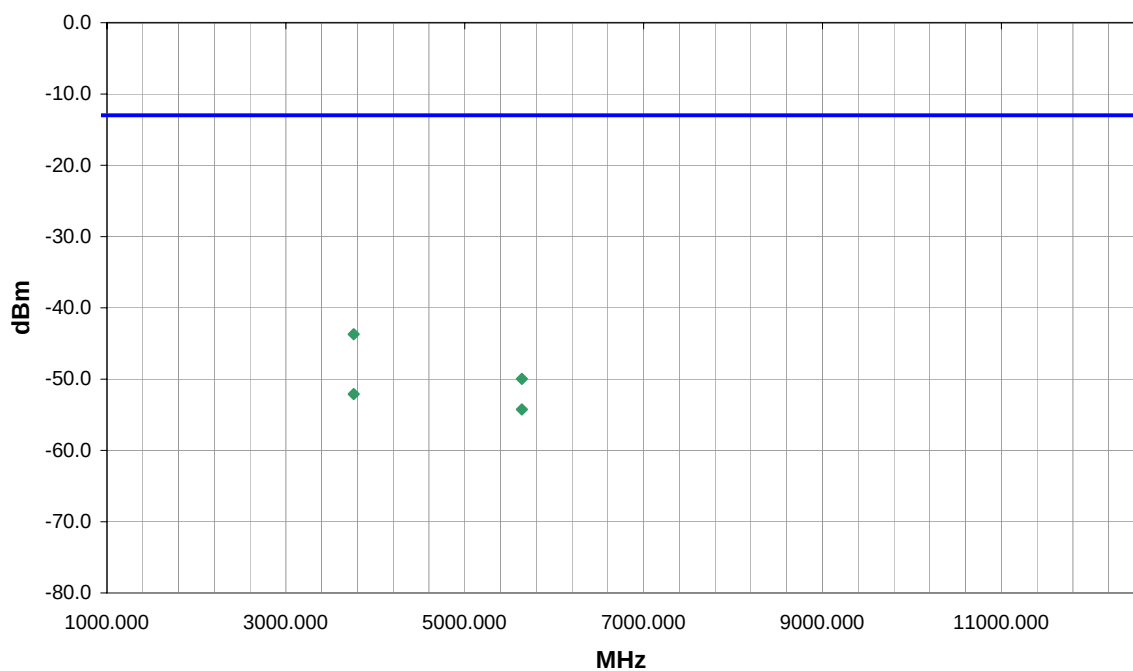
NORTHWEST		PSA 2006.05.30	
EMC		Spurious Radiated Emissions	
EUT: IX270-MC8765		Work Order: SPTE0021	
Serial Number: None		Date: 06/07/06	
Customer: Spectrum Technology, Inc.		Temperature: 23	
Attendees: Rod Munro		Humidity: 36%	
Project: None		Barometric Pres.: 30.15	
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz	Job Site: EV01
TEST SPECIFICATIONS		Test Method	
FCC 24.238:2005		TIA/EIA-603-B:2002	
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0
COMMENTS			
Internal antenna			
EUT OPERATING MODES			
WCDMA PCS band, high channel			
DEVIATIONS FROM TEST STANDARD			
No deviations.			
Run #	19	<i>Holly Ashkannejhad</i> Signature	
Configuration #	3		
Results	Pass		
		NVLAP Lab Code 200630-0	



EMC

Spurious Radiated Emissions

EUT: IX270-MC8765		Work Order: SPTE0021	
Serial Number: None		Date: 06/08/06	
Customer: Spectrum Technology, Inc.		Temperature: 23	
Attendees: Rod Munro		Humidity: 36%	
Project: None		Barometric Pres.: 30.15	
Tested by: Rod Peloquin		Power: 120VAC/60Hz	Job Site: EV01
TEST SPECIFICATIONS		Test Method	
FCC 24.238:2005		TIA/EIA-603-B:2002	
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0
COMMENTS			
Internal antenna			
EUT OPERATING MODES			
WCDMA PCS band, mid channel			
DEVIATIONS FROM TEST STANDARD			
No deviations.			
Run #	20	 Signature	
Configuration #	3		
Results	Pass		
		NVLAP Lab Code 200630-0	



Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
3758.490			133.0	1.1		V-Horn	PK	4.26E-08	-43.7	-13.0	-30.7
5638.560			304.0	1.1		V-Horn	PK	1.01E-08	-50.0	-13.0	-37.0
3758.080			0.0	2.4		H-Horn	PK	6.15E-09	-52.1	-13.0	-39.1
5638.730			154.0	1.6		H-Horn	PK	3.76E-09	-54.2	-13.0	-41.2

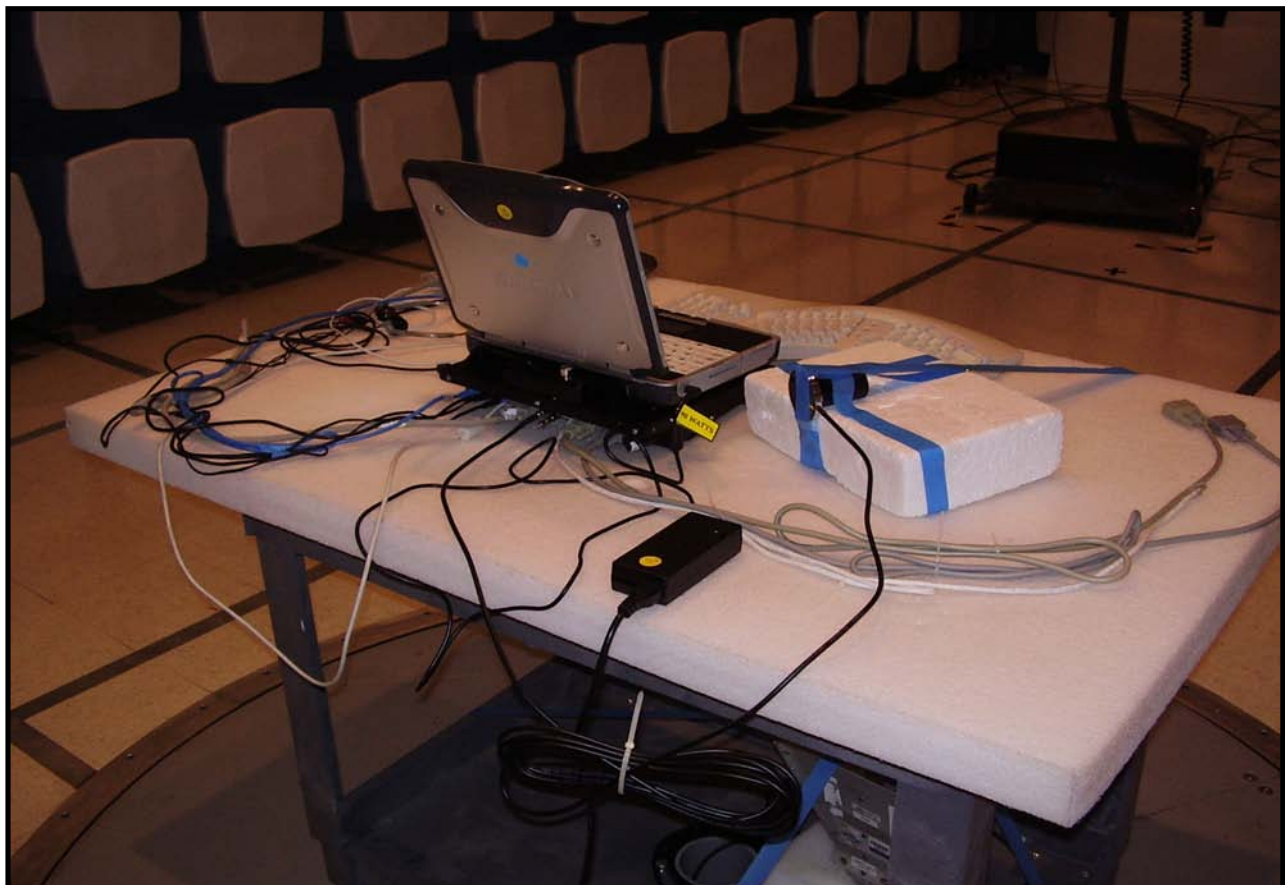
NORTHWEST		Spurious Radiated Emissions		PSA 2006.05.30							
EMC				EMI 2006.6.8							
EUT: IX270-MC8765			Work Order: SPTE0021								
Serial Number: None			Date: 06/09/06								
Customer: Spectrum Technology, Inc.			Temperature: 23								
Attendees: Rod Munro			Humidity: 36%								
Project: None			Barometric Pres.: 30.15								
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01							
TEST SPECIFICATIONS			Test Method								
FCC 24.238:2005			TIA/EIA-603-B:2002								
TEST PARAMETERS											
Antenna Height(s) (m)		1 - 4		Test Distance (m)							
				0							
COMMENTS											
External antenna. Vehicular mount configuration.											
EUT OPERATING MODES											
WCDMA PCS band, high channel											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
Run #		29		Signature <i>Holly Ashkannejhad</i> NVLAP Lab Code 200630-0							
Configuration #		2									
Results		Pass									
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
3818.120			327.0	2.1		H-Horn	PK	5.96E-08	-42.2	-13.0	-29.2
3817.120			326.0	1.0		V-Horn	PK	2.54E-08	-46.0	-13.0	-33.0
7627.720			160.0	2.5		H-Horn	PK	1.53E-08	-48.1	-13.0	-35.1
5718.900			302.0	1.0		V-Horn	PK	1.46E-08	-48.4	-13.0	-35.4
7629.340			352.0	2.9		V-Horn	PK	1.10E-08	-49.6	-13.0	-36.6
5720.050			212.0	2.4		H-Horn	PK	4.18E-09	-53.8	-13.0	-40.8

NORTHWEST EMC		Spurious Radiated Emissions		PSA 2006.05.30 EMI 2006.6.9					
EUT: IX270-MC8765		Work Order: SPTE0021							
Serial Number: None		Date: 06/12/06							
Customer: Spectrum Technology, Inc.		Temperature: 24							
Attendees: None		Humidity: 46%							
Project: None		Barometric Pres.: 29.99							
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01					
TEST SPECIFICATIONS			Test Method						
FCC 24.238:2005			TIA/EIA-603-B:2002						
TEST PARAMETERS									
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0					
COMMENTS									
External antenna. Vehicle mount configuration.									
EUT OPERATING MODES									
WCDMA PCS band, mid channel									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
Run #	38	<i>Holly Ashkannejhad</i> Signature							
Configuration #	2								
Results	Pass								
0.0 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0 -80.0 1000.000 3000.000 5000.000 7000.000 9000.000 11000.000 MHz dBm									
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
5640.390		238.0	1.1	V-Horn	PK	7.66E-09	-51.2	-13.0	-38.2
3761.570		89.0	1.2	H-Horn	PK	4.67E-09	-53.3	-13.0	-40.3
3764.700		228.0	1.1	V-Horn	PK	4.36E-09	-53.6	-13.0	-40.6
5641.500		45.0	1.2	H-Horn	PK	4.03E-09	-53.9	-13.0	-40.9

NORTHWEST		PSA 2006.05.30	
EMI 2006.6.9			
EMC		Spurious Radiated Emissions	
EUT: IX270-MC8765		Work Order: SPTE0021	
Serial Number: None		Date: 06/13/06	
Customer: Spectrum Technology, Inc.		Temperature: 23	
Attendees: None		Humidity: 36%	
Project: None		Barometric Pres.: 30.15	
Tested by: Rod Peloquin		Power: 120VAC/60Hz	Job Site: EV01
TEST SPECIFICATIONS		Test Method	
FCC 22.917:2002		TIA/EIA-603-B:2002	
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0
COMMENTS			
External antenna. Vehicle mount configuration.			
EUT OPERATING MODES			
EDGE Cellular band, see comments for channel			
DEVIATIONS FROM TEST STANDARD			
No deviations.			
Run #	39	<i>Rod L. Peloquin</i> Signature	
Configuration #	1		
Results	Pass		
NVLAP Lab Code 200630-0			

Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
2546.270			227.0	1.0		V-Horn	PK	8.81E-09	-50.5	-13.0	-37.5
2510.948			302.0	1.0		V-Horn	PK	7.24E-09	-51.4	-13.0	-38.4
2472.656			300.0	1.0		V-Horn	PK	6.69E-09	-51.7	-13.0	-38.7
3395.163			342.0	1.4		V-Horn	PK	6.24E-09	-52.0	-13.0	-39.0
1697.856			301.0	1.0		V-Horn	PK	3.19E-09	-55.0	-13.0	-42.0
4185.575			231.0	1.0		V-Horn	PK	2.76E-09	-55.6	-13.0	-42.6
1674.036			14.0	1.0		V-Horn	PK	2.74E-09	-55.6	-13.0	-42.6
4184.515			14.0	1.6		H-Horn	PK	2.53E-09	-56.0	-13.0	-43.0
3395.317			301.0	3.3		H-Horn	PK	2.37E-09	-56.3	-13.0	-43.3
1648.489			313.0	1.0		V-Horn	PK	2.05E-09	-56.9	-13.0	-43.9
2511.285			35.0	1.0		H-Horn	PK	1.81E-09	-57.4	-13.0	-44.4
1672.756			219.0	1.0		H-Horn	PK	1.45E-09	-58.4	-13.0	-45.4
2472.449			162.0	1.5		H-Horn	PK	1.38E-09	-58.6	-13.0	-45.6
1697.446			175.0	1.0		H-Horn	PK	1.29E-09	-58.9	-13.0	-45.9
2546.910			264.0	1.1		H-Horn	PK	1.27E-09	-59.0	-13.0	-46.0
1648.316			329.0	1.7		H-Horn	PK	7.83E-10	-61.1	-13.0	-48.1







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

Edge PCS band
Edge Cellular band
WCDMA PCS band
W-CDMA Cellular band
GSM PCS band
GSM Cellular band

POWER SETTINGS INVESTIGATED

120VAC/60Hz

FREQUENCY RANGE INVESTIGATED

Start Frequency	800MHz	Stop Frequency	1950MHz
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SAMPLE CALCULATIONS

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

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV01 cables g,h,j			EVB	3/30/2006	13
EV01 cables c,g, h			EVA	3/30/2006	13
Antenna, Horn	EMCO	3115	AHC	8/30/2005	12
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
Antenna, Dipole (part of ADA)	ETS	3121C-DB4	ADAA	1/6/2005	24
Antenna, Dipole (ADAA included)	Roberts	Roberts	ADA	1/6/2005	24
Signal Generator	Hewlett Packard	8341B	TGN	1/26/2006	13
Antenna, Horn	EMCO	3115	AHJ	5/20/2005	24
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12

MEASUREMENT BANDWIDTHS

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

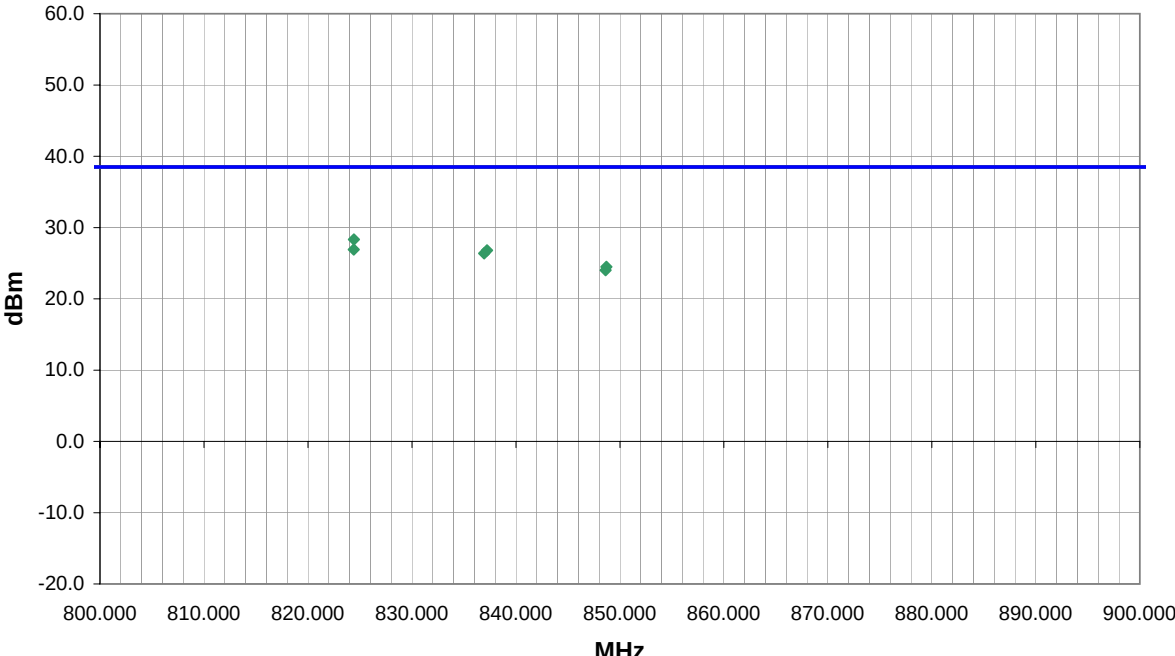
MEASUREMENT UNCERTAINTY

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 antennas to be used with the EUT were tested. The EUT was transmitting while set at the lowest channel, a middle channel, and the highest channel available. The fundamental emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes.

The amplitude and frequency of the highest emissions were noted. The EUT was then replaced with an antenna. A signal generator was connected to the 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 dipole antenna and its gain (dBi); the effective radiated power for each emission was determined.

NORTHWEST		Effective Radiated Power (ERP)		PSA 2006.05.30							
EMC				EMI 2006.4.26							
EUT: IX270-MC8765			Work Order: SPTE0021								
Serial Number: None			Date: 05/30/06								
Customer: Spectrum Technology, Inc.			Temperature: 23								
Attendees: Rod Munro			Humidity: 36%								
Project: None			Barometric Pres.: 30.15								
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01							
TEST SPECIFICATIONS			Test Method								
FCC 22.913:2005			TIA/EIA-603-B:2002								
TEST PARAMETERS											
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0							
COMMENTS											
Internal antenna											
EUT OPERATING MODES											
GSM Cellular band											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
Run #		1		 Signature							
Configuration #		3									
Results		Pass									
NVLAP Lab Code 200630-0											
											
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
824.413			43.0	1.0		V-Bilog	PK	6.79E-01	28.3	38.5	-10.2
824.411			124.0	1.0		H-Bilog	PK	4.91E-01	26.9	38.5	-11.6
837.214			205.0	1.6		H-Bilog	PK	4.79E-01	26.8	38.5	-11.7
836.941			81.0	1.7		V-Bilog	PK	4.34E-01	26.4	38.5	-12.1
848.705			320.0	1.0		H-Bilog	PK	2.81E-01	24.5	38.5	-14.0
848.626			284.0	1.0		V-Bilog	PK	2.52E-01	24.0	38.5	-14.5

NORTHWEST		Effective Radiated Power (EIRP)		PSA 2006.05.30 EMI 2006.4.26							
EUT: IX270-MC8765		Work Order: SPTE0021									
Serial Number: None		Date: 05/30/06									
Customer: Spectrum Technology, Inc.		Temperature: 23									
Attendees: Rod Munro		Humidity: 36%									
Project: None		Barometric Pres.: 30.15									
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01							
TEST SPECIFICATIONS		Test Method									
FCC 24.232:2005		TIA/EIA-603-B:2002									
TEST PARAMETERS											
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0							
COMMENTS											
Internal antenna											
EUT OPERATING MODES											
GSM PCS band											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
Run #	3	NVLAP Lab Code 200630-0 Signature <i>Holly Ashkannejhad</i>									
Configuration #	3										
Results	Pass										
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1850.136			167.0	1.0		V-Horn	PK	3.90E-01	25.9	33.0	-7.1
1850.259			121.0	1.2		H-Horn	PK	3.06E-01	24.9	33.0	-8.1
1880.030			111.0	1.5		H-Horn	PK	2.36E-01	23.7	33.0	-9.3
1879.924			55.0	2.3		V-Horn	PK	2.02E-01	23.1	33.0	-9.9
1909.729			350.0	1.0		V-Horn	PK	7.62E-02	18.8	33.0	-14.2
1909.877			98.0	1.5		H-Horn	PK	7.25E-02	18.6	33.0	-14.4

NORTHWEST		Effective Radiated Power (ERP)		PSA 2006.05.30	
EMC				EMI 2006.4.26	
EUT: IX270-MC8765			Work Order: SPTE0021		
Serial Number: None			Date: 05/30/06		
Customer: Spectrum Technology, Inc.			Temperature: 23		
Attendees: Rod Munro			Humidity: 36%		
Project: None			Barometric Pres.: 30.15		
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01	
TEST SPECIFICATIONS			Test Method		
FCC 22.913:2005			TIA/EIA-603-B:2002		
TEST PARAMETERS					
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0	
COMMENTS					
Internal antenna					
EUT OPERATING MODES					
Edge Cellular band					
DEVIATIONS FROM TEST STANDARD					
No deviations.					
Run #		2		<i>Holly Ashkannejhad</i> Signature	
Configuration #		3			
Results		Pass			
Freq (MHz)		Azimuth (degrees)		Height (meters)	
824.278		83.0		1.8	
824.149		325.0		1.8	
837.023		82.0		1.7	
837.031		22.0		1.0	
848.674		218.0		1.4	
848.813		274.0		1.0	
		Polarity		Detector	
		V-Bilog		PK	
		H-Bilog		PK	
		V-Bilog		PK	
		H-Bilog		PK	
		H-Bilog		PK	
		V-Bilog		PK	
		ERP (Watts)		ERP (dBm)	
		3.48E-01		25.4	
		3.03E-01		24.8	
		2.80E-01		24.5	
		2.19E-01		23.4	
		1.82E-01		22.6	
		1.42E-01		21.5	
		Spec. Limit (dBm)		Spec. (dB)	
		38.5		-13.1	
		38.5		-13.7	
		38.5		-14.0	
		38.5		-15.1	
		38.5		-15.9	
		38.5		-17.0	

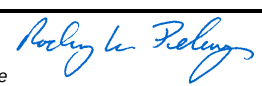
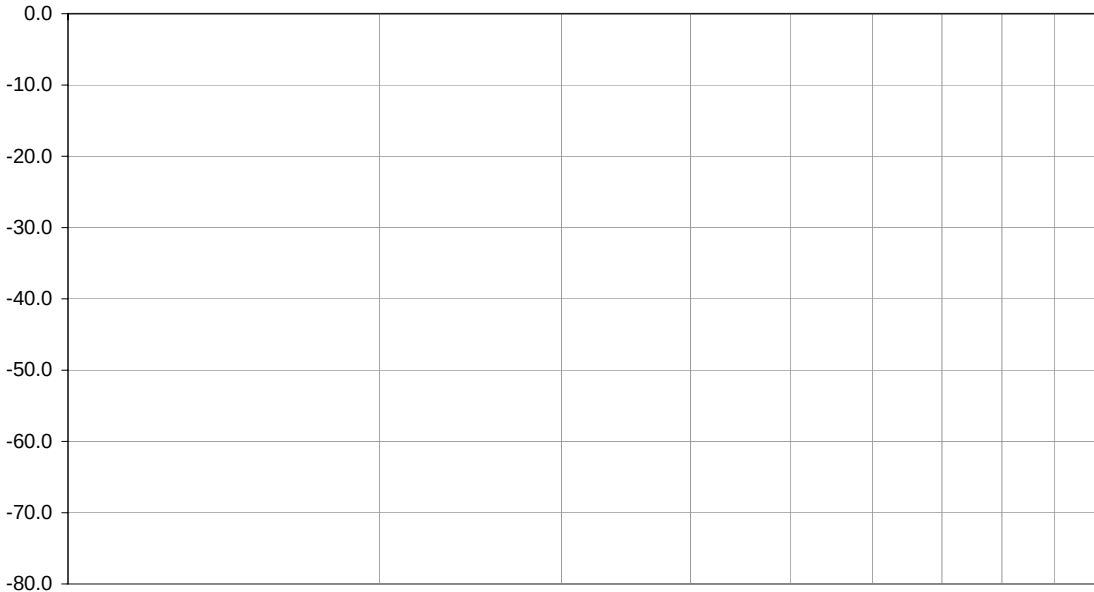
NORTHWEST		Effective Radiated Power (EIRP)		PSA 2006.05.30 EMI 2006.4.26					
EUT: IX270-MC8765		Work Order: SPTE0021							
Serial Number: None		Date: 05/30/06							
Customer: Spectrum Technology, Inc.		Temperature: 23							
Attendees: Rod Munro		Humidity: 36%							
Project: None		Barometric Pres.: 30.15							
Tested by: Holly Ashkannejhad		Power: 120VAC/60Hz		Job Site: EV01					
TEST SPECIFICATIONS		Test Method							
FCC 24.232:2005		TIA/EIA-603-B:2002							
TEST PARAMETERS									
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0					
COMMENTS									
Internal antenna									
EUT OPERATING MODES									
Edge PCS band									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
Run #	4	Signature <i>Holly Ashkannejhad</i> NVLAP Lab Code 200630-0							
Configuration #	3								
Results	Pass								
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1879.879		168.0	2.0	V-Horn	PK	2.67E-02	14.3	33.0	-18.7
1910.006		134.0	1.0	V-Horn	PK	2.46E-02	13.9	33.0	-19.1
1849.947		103.0	1.0	H-Horn	PK	1.93E-02	12.9	33.0	-20.1
1909.831		160.0	1.0	H-Horn	PK	1.35E-02	11.3	33.0	-21.7
1850.289		162.0	1.0	V-Horn	PK	1.23E-02	10.9	33.0	-22.1
1879.953		92.0	1.8	H-Horn	PK	8.77E-03	9.4	33.0	-23.6

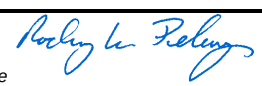
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EUT: IX270-MC8765		Work Order: SPTE0021																																																					
Serial Number: None		Date: 06/09/06																																																					
Customer: Spectrum Technology		Temperature: 23																																																					
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 22.913:2005		TIA/EIA-603-B:2002																																																					
TEST PARAMETERS																																																							
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Run #		30		Signature <i>Holly Ashkannejhad</i>																																																			
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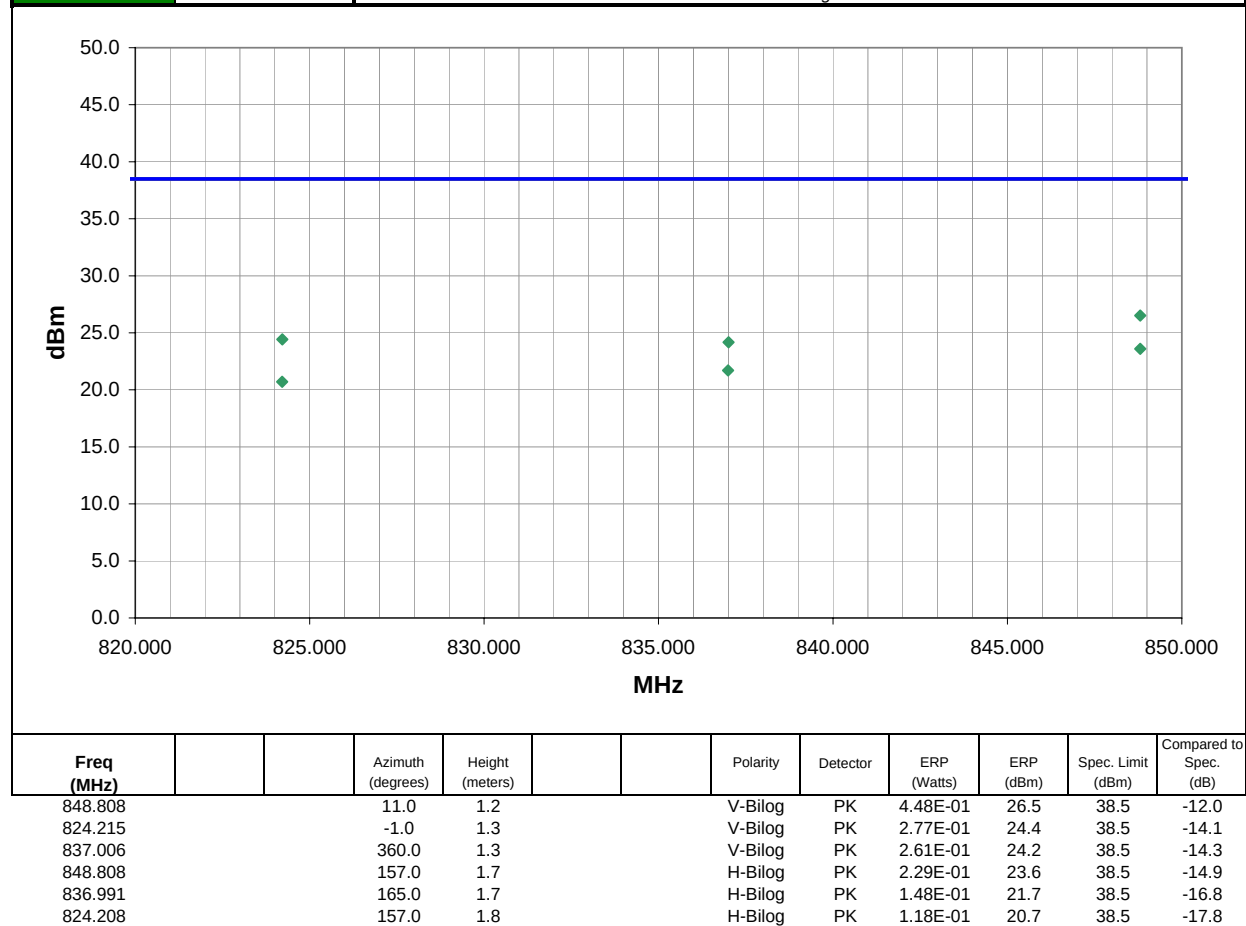
NORTHWEST										PSA 2006.05.30 EMI 2006.6.9																																																			
EMC										Effective Radiated Power (ERP)																																																			
EUT: IX270-MC8765										Work Order: SPTE0021																																																			
Serial Number: None										Date: 06/12/06																																																			
Customer: Spectrum Technology										Temperature: 24																																																			
Attendees: None										Humidity: 49%																																																			
Project: None										Barometric Pres.: 29.88																																																			
Tested by: Holly Ashkannejhad										Power: 120VAC/60Hz					Job Site: EV01																																														
TEST SPECIFICATIONS										Test Method																																																			
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Run #		36		Signature <i>Holly Ashkannejhad</i>																																																									
Configuration #		3																																																											
Results		Pass																																																											
				NVLAP Lab Code 200630-0																																																									
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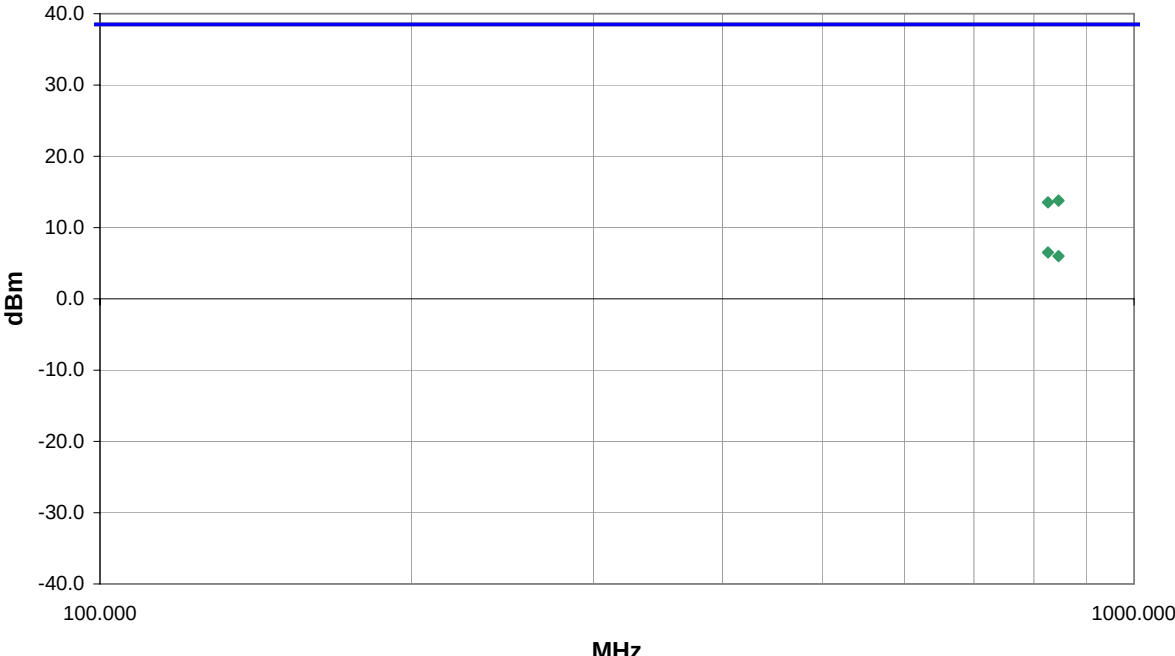
NORTHWEST		Effective Radiated Power (EIRP)		PSA 2006.05.30 EMI 2006.6.8																																																																							
EMC																																																																											
EUT:	IX270-MC8765			Work Order:	SPTE0021																																																																						
Serial Number:	None			Date:	06/09/06																																																																						
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																																																																						
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Run #	31	Signature <i>Holly Ashkannejhad</i> NVLAP Lab Code 200630-0																																																																									
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NORTHWEST		Effective Radiated Power (EIRP)		PSA 2006.05.30 EMI 2006.6.9								
EMC												
EUT: IX270-MC8765				Work Order: SPTE0021								
Serial Number: None				Date: 06/12/06								
Customer: Spectrum Technology				Temperature: 24								
Attendees: None				Humidity: 50%								
Project: None				Barometric Pres.: 29.99								
Tested by: Holly Ashkannejhad				Power: 120VAC/60Hz								
				Job Site: EV01								
TEST SPECIFICATIONS				Test Method								
FCC 24.232:2005				TIA/EIA-603-B:2002								
TEST PARAMETERS												
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0								
COMMENTS												
Internal antenna.												
EUT OPERATING MODES												
WCDMA PCS band, see comments for channel												
DEVIATIONS FROM TEST STANDARD												
No deviations.												
Run #		37		Signature <i>Holly Ashkannejhad</i> NVLAP Lab Code 200630-0								
Configuration #		3										
Results		Pass										
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1878.740			256.0	1.8		V-Horn	PK	6.70E-02	18.3	33.0	-14.7	Mid channel
1878.790			360.0	1.4		H-Horn	PK	2.65E-03	4.2	33.0	-28.8	Mid channel

NORTHWEST		Effective Radiated Power (ERP)		PSA 2006.05.30					
EMC				EMI 2006.6.8					
EUT: IX270-MC8765		Work Order: SPTE0021							
Serial Number: None		Date: 06/09/06							
Customer: Spectrum Technology		Temperature: 23							
Attendees: Rod Munro		Humidity: 47%							
Project: None		Barometric Pres.: 29.98							
Tested by: RodPeloquin		Power: 120VAC/60Hz		Job Site: EV01					
TEST SPECIFICATIONS		Test Method							
FCC 22.913:2005		TIA/EIA-603-B:2002							
TEST PARAMETERS									
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0					
COMMENTS									
External antenna. Vehicle mount configuration.									
EUT OPERATING MODES									
GSM Cellular band, see comments for channel									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
Run #	22	 Signature							
Configuration #	3								
Results	Pass								
dBm 									
MHz									
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
848.868		275.0	1.2	V-Bilog	PK	6.19E-01	27.9	38.5	-10.6
824.268		166.0	1.4	V-Bilog	PK	4.19E-01	26.2	38.5	-12.3
848.871		318.0	1.8	H-Bilog	PK	4.16E-01	26.2	38.5	-12.3
836.934		267.0	1.3	V-Bilog	PK	3.87E-01	25.9	38.5	-12.6
836.931		318.0	1.9	H-Bilog	PK	2.88E-01	24.6	38.5	-13.9
824.268		322.0	1.8	H-Bilog	PK	2.19E-01	23.4	38.5	-15.1

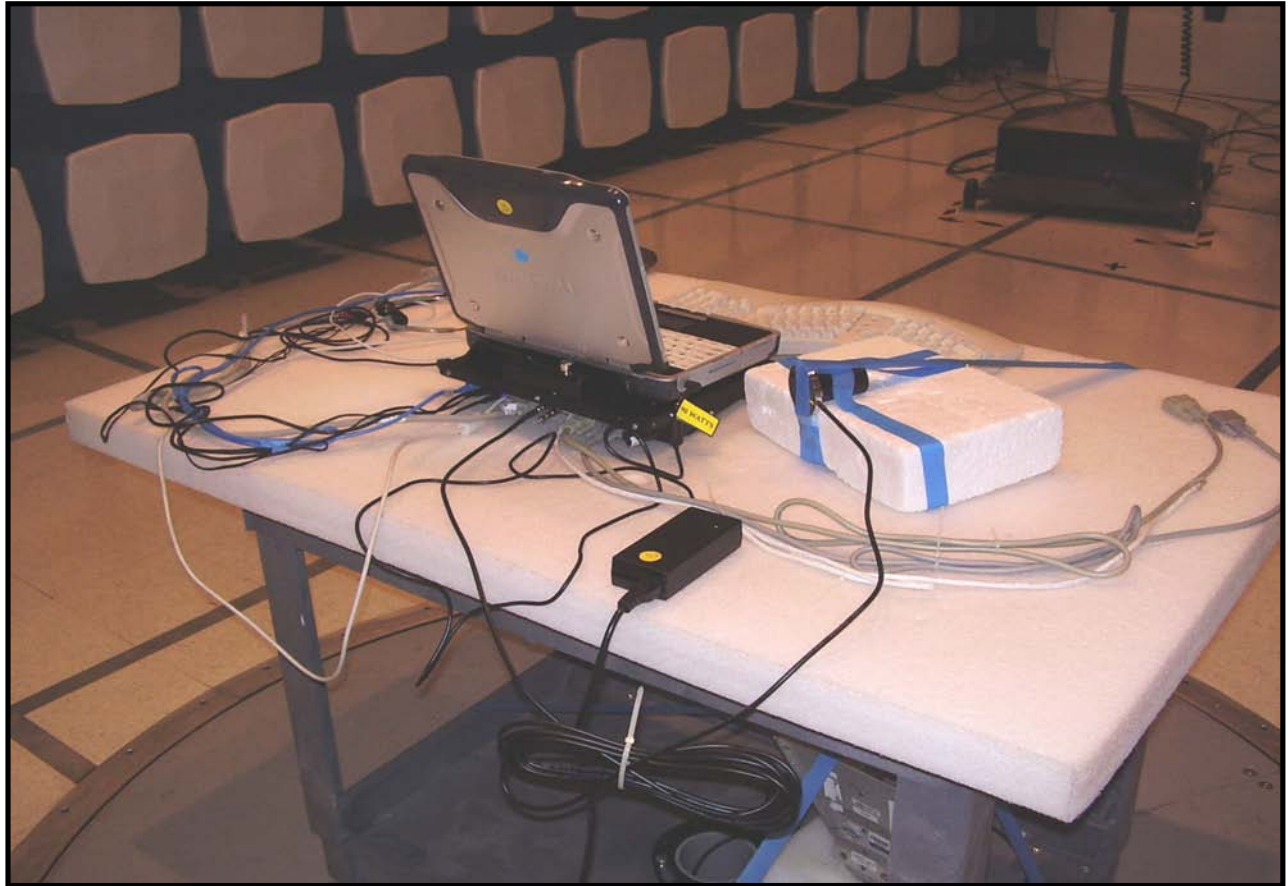
NORTHWEST		Effective Radiated Power (ERP)		PSA 2006.05.30 EMI 2006.6.8	
EUT: IX270-MC8765		Work Order: SPTE0021			
Serial Number: None		Date: 06/09/06			
Customer: Spectrum Technology		Temperature: 23			
Attendees: Rod Munro		Humidity: 47%			
Project: None		Barometric Pres.: 29.98			
Tested by: RodPeloquin		Power: 120VAC/60Hz		Job Site: EV01	
TEST SPECIFICATIONS			Test Method		
FCC 22.913:2005			TIA/EIA-603-B:2002		
TEST PARAMETERS					
Antenna Height(s) (m)		1 - 4		Test Distance (m)	
				0	
COMMENTS					
External antenna. Vehicle mount configuration.					
EUT OPERATING MODES					
EDGE Cellular band, see comments for channel					
DEVIATIONS FROM TEST STANDARD					
No deviations.					
Run #		23		 Signature	
Configuration #		3			
Results		Pass			
NVLAP Lab Code 200630-0					



NORTHWEST		Effective Radiated Power (ERP)		PSA 2006.05.30 EMI 2006.6.8					
EUT: IX270-MC8765		Work Order: SPTE0021							
Serial Number: None		Date: 06/09/06							
Customer: Spectrum Technology		Temperature: 23							
Attendees: Rod Munro		Humidity: 47%							
Project: None		Barometric Pres.: 29.98							
Tested by: RodPeloquin		Power: 120VAC/60Hz		Job Site: EV01					
TEST SPECIFICATIONS			Test Method						
FCC 22.913:2005			TIA/EIA-603-B:2002						
TEST PARAMETERS									
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0					
COMMENTS									
External antenna. Vehicle mount configuration.									
EUT OPERATING MODES									
W-CDMA Cellular band, see comments for channel									
DEVIATIONS FROM TEST STANDARD									
No deviations.									
Run #	24	 Signature							
Configuration #	2								
Results	Pass								
									
Freq (MHz)		Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
845.208		296.0	1.2	V-Bilog	PK	2.38E-02	13.8	38.5	-24.7
825.542		285.0	1.3	V-Bilog	PK	2.26E-02	13.5	38.5	-25.0
825.475		227.0	1.8	H-Bilog	PK	4.48E-03	6.5	38.5	-32.0
845.258		54.0	1.1	H-Bilog	PK	3.98E-03	6.0	38.5	-32.5

NORTHWEST		Effective Radiated Power (EIRP)		PSA 2006.05.30 EMI 2006.6.8							
EUT: IX270-MC8765		Work Order: SPTE0021									
Serial Number: None		Date: 06/09/06									
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 24.232:2005		TIA/EIA-603-B:2002									
TEST PARAMETERS											
Antenna Height(s) (m)		1 - 4		Test Distance (m) 0							
COMMENTS											
External antenna. Vehicle mount configuration.											
EUT OPERATING MODES											
GSM PCS band, see comments for channel											
DEVIATIONS FROM TEST STANDARD											
No deviations.											
Run #	25	NVLAP Lab Code 200630-0 Signature <i>Holly Ashkannejhad</i>									
Configuration #	3										
Results	Pass										
Freq (MHz)			Azimuth (degrees)	Height (meters)		Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)
1853.408			109.0	1.3		V-Horn	PK	5.62E-02	17.5	33.0	-15.5
1878.750			84.0	1.0		V-Horn	PK	4.64E-02	16.7	33.0	-16.3
1906.408			187.0	1.7		H-Horn	PK	1.91E-02	12.8	33.0	-20.2
1906.358			321.0	1.0		V-Horn	PK	7.45E-03	8.7	33.0	-24.3
1851.150			246.0	1.0		H-Horn	PK	5.19E-03	7.2	33.0	-25.8
1879.008			103.0	1.1		H-Horn	PK	3.04E-03	4.8	33.0	-28.2





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

Receive Mode mid channel, GSM PCS band

Receive Mode mid channel, GSM Cellular band

POWER SETTINGS INVESTIGATED

120VAC/60Hz

TEST EQUIPMENT

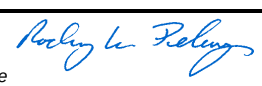
Description	Manufacturer	Model	ID	Last Cal.	Interval
Spectrum Analyzer	Agilent	E4446A	AAT	4/4/2006	12
High Pass Filter	TTE	H97-100k-50-720B	HFC	12/19/2005	13
LISN	Solar	9252-50-R-24-BNC	LIN	12/13/2005	13

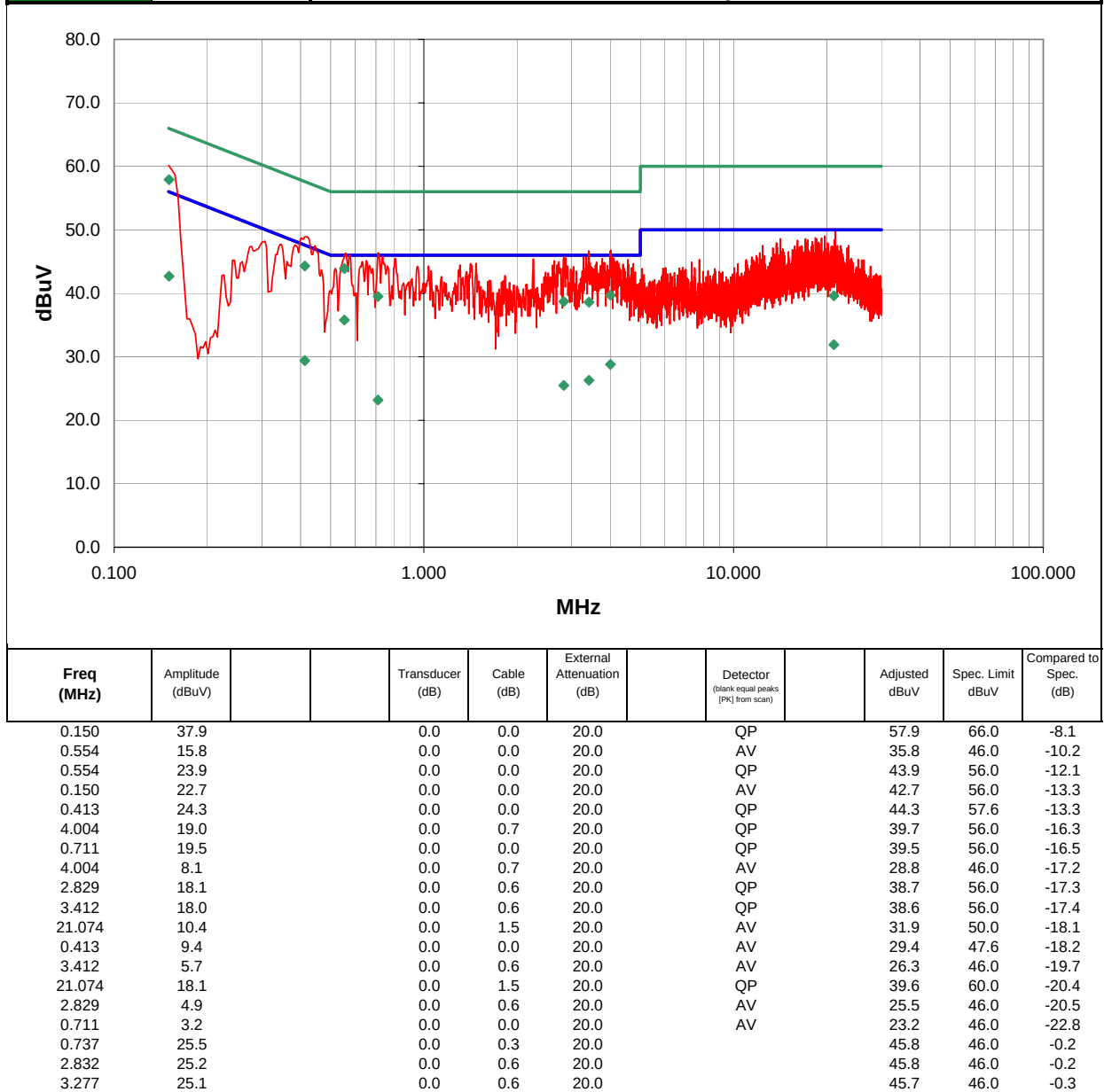
MEASUREMENT UNCERTAINTY

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

TEST DESCRIPTION

The EUT will be powered either directly or indirectly from the AC power line. Therefore measurements were made on the AC input of the EUT, or on the AC input of the device power line conducted emissions were measured with the EUT operating at the middle c receive mode of operation. For each mode, the spectrum was scanned from 150 kHz to procedures were in accordance with ANSI C63.4-2003.

NORTHWEST EMC		CONDUCTED EMISSIONS DATA SHEET		PSA 2006.05.30 EMI 2006.4.26	
EUT: IX270-MC8765			Work Order: SPTE0021		
Serial Number: None			Date: 06/01/06		
Customer: Spectrum Technology, Inc.			Temperature: 23		
Attendees: None			Humidity: 36%		
Project: None			Barometric Pres.: 30.15		
Tested by: Rod Peloquin		Power: 120VAC/60Hz		Job Site: EV01	
TEST SPECIFICATIONS			Test Method		
FCC 15.107 Class B:2005-10			ANSI C63.4:2003		
TEST PARAMETERS					
Cable or Line Tested			L1		
COMMENTS					
EUT OPERATING MODES					
Receive Mode mid channel, GSM Cellular band					
DEVIATIONS FROM TEST STANDARD					
No deviations.					
Run #	3	 Signature			
Configuration #	3				
Results	Pass				
NVLAP Lab Code 200630-0					



EUT:	IX270-MC8765	Work Order:	SPTE0021
Serial Number:	None	Date:	06/01/06
Customer:	Spectrum Technology, Inc.	Temperature:	23
Attendees:	None	Humidity:	36%
Project:	None	Barometric Pres.:	30.15
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

TEST SPECIFICATIONS

FCC 15.107 Class B:2005-10

Test Method

ANSI C63.4:2003

TEST PARAMETERS

Cable or Line Tested

N

COMMENTS

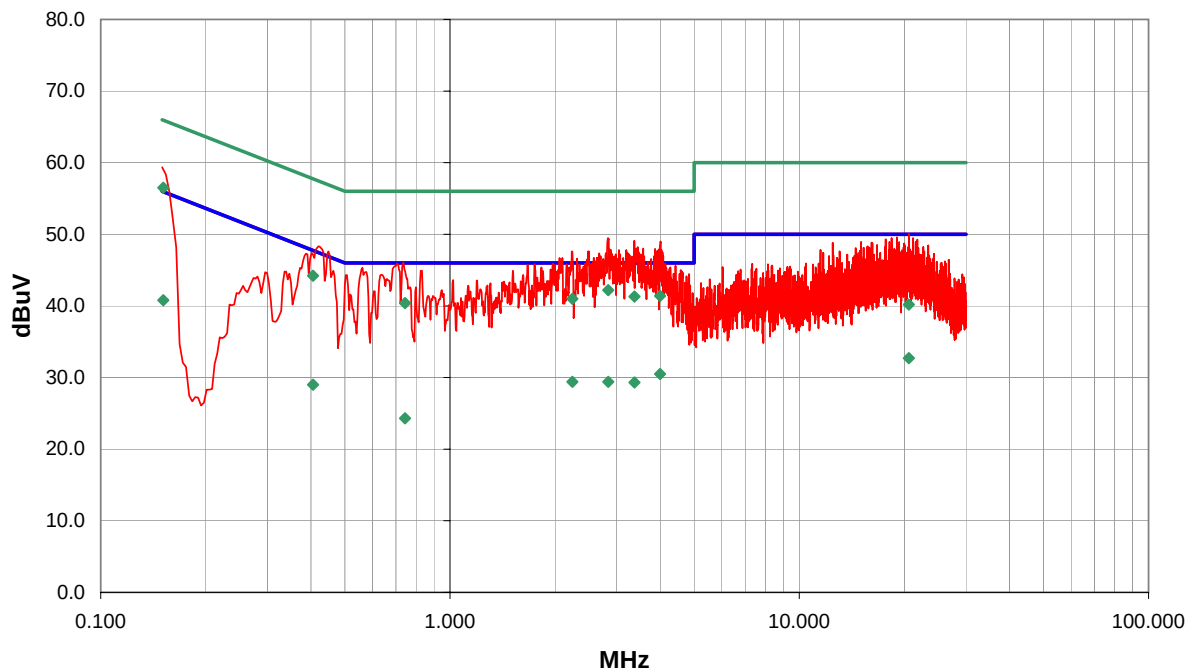
EUT OPERATING MODES

Receive Mode mid channel, GSM Cellular band

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	4	NVLAP Lab Code 200630-0	Signature <i>Rodry Le Peloquin</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	36.5			0.0	0.0	20.0		QP		56.5	65.9	-9.4
0.405	24.2			0.0	0.0	20.0		QP		44.2	57.7	-13.5
2.838	21.6			0.0	0.6	20.0		QP		42.2	56.0	-13.8
3.996	20.7			0.0	0.7	20.0		QP		41.4	56.0	-14.6
3.374	20.7			0.0	0.6	20.0		QP		41.3	56.0	-14.7
2.240	20.5			0.0	0.5	20.0		QP		41.0	56.0	-15.0
0.151	20.8			0.0	0.0	20.0		AV		40.8	55.9	-15.1
3.996	9.8			0.0	0.7	20.0		AV		30.5	46.0	-15.5
0.744	20.4			0.0	0.0	20.0		QP		40.4	56.0	-15.6
2.838	8.8			0.0	0.6	20.0		AV		29.4	46.0	-16.6
2.240	8.9			0.0	0.5	20.0		AV		29.4	46.0	-16.6
3.374	8.7			0.0	0.6	20.0		AV		29.3	46.0	-16.7
20.593	11.2			0.0	1.5	20.0		AV		32.7	50.0	-17.3
0.405	9.0			0.0	0.0	20.0		AV		29.0	47.7	-18.7
20.593	18.7			0.0	1.5	20.0		QP		40.2	60.0	-19.8
0.744	4.3			0.0	0.0	20.0		AV		24.3	46.0	-21.7
0.737	25.7			0.0	0.3	20.0				46.0	46.0	0.0
2.435	25.4			0.0	0.5	20.0				45.9	46.0	-0.1
4.137	25.2			0.0	0.7	20.0				45.9	46.0	-0.1

CONDUCTED EMISSIONS DATA SHEET

EUT:	IX270-MC8765	Work Order:	SPTE0021
Serial Number:	None	Date:	06/01/06
Customer:	Spectrum Technology, Inc.	Temperature:	23
Attendees:	None	Humidity:	36%
Project:	None	Barometric Pres.:	30.15
Tested by:	Rod Peloquin	Power:	120VAC/60Hz
		Job Site:	EV01

TEST SPECIFICATIONS

FCC 15.107 Class B:2005-10

Test Method

ANSI C63.4:2003

TEST PARAMETERS

Cable or Line Tested

L1

COMMENTS

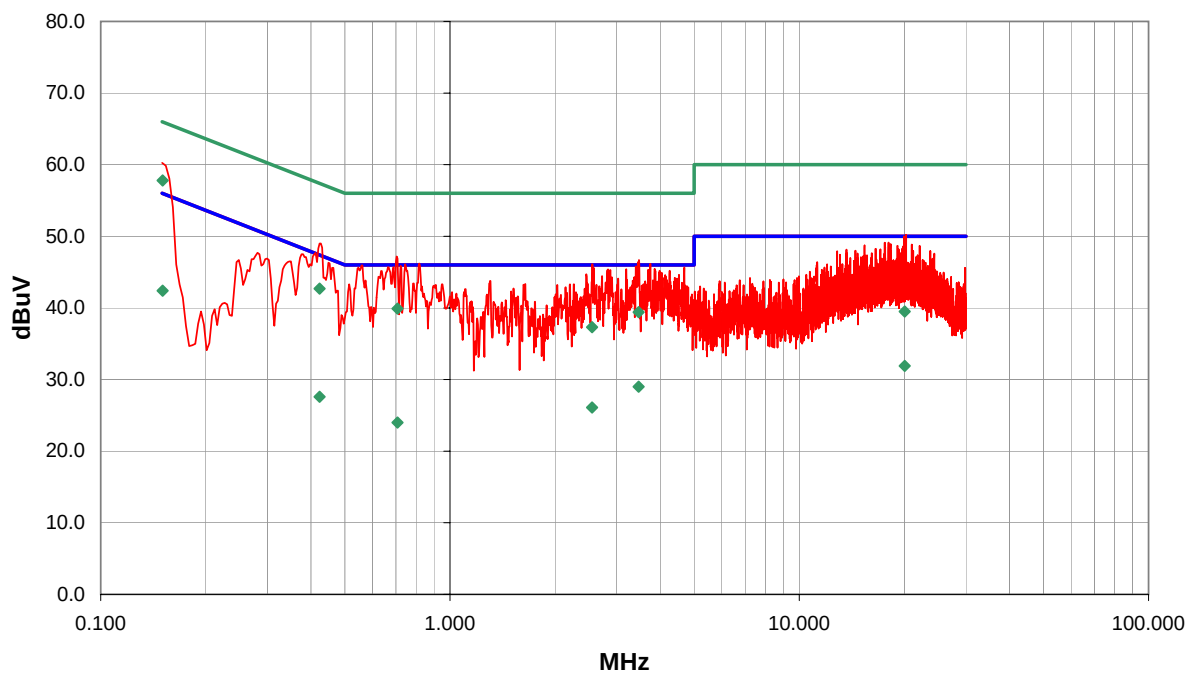
EUT OPERATING MODES

Receive Mode mid channel, GSM PCS band

DEVIATIONS FROM TEST STANDARD

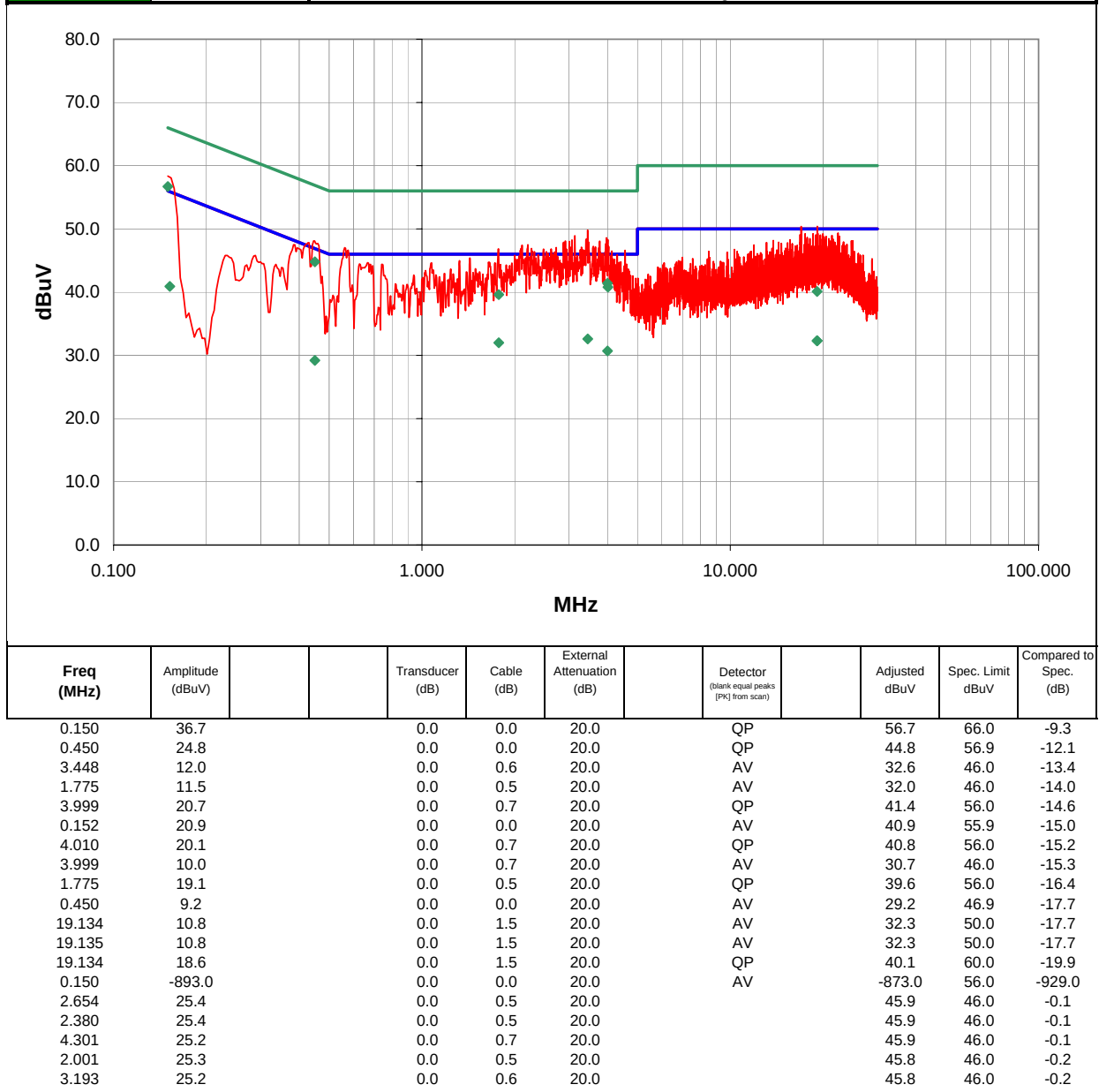
No deviations.

Run #	5	NVLAP Lab Code 200630-0	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)
0.150	37.8			0.0	0.0	20.0		QP		57.8	66.0	-8.2
0.150	22.4			0.0	0.0	20.0		AV		42.4	56.0	-13.6
0.423	22.7			0.0	0.0	20.0		QP		42.7	57.4	-14.7
0.707	19.9			0.0	0.0	20.0		QP		39.9	56.0	-16.1
3.468	18.8			0.0	0.6	20.0		QP		39.4	56.0	-16.6
3.468	8.4			0.0	0.6	20.0		AV		29.0	46.0	-17.0
20.038	10.4			0.0	1.5	20.0		AV		31.9	50.0	-18.1
2.551	16.8			0.0	0.5	20.0		QP		37.3	56.0	-18.7
0.423	7.6			0.0	0.0	20.0		AV		27.6	47.4	-19.8
2.551	5.6			0.0	0.5	20.0		AV		26.1	46.0	-19.9
20.038	18.0			0.0	1.5	20.0		QP		39.5	60.0	-20.5
0.707	4.0			0.0	0.0	20.0		AV		24.0	46.0	-22.0
19.942	28.5			0.0	1.5	20.0				50.0	50.0	0.0
0.562	25.7			0.0	0.2	20.0				45.9	46.0	-0.1
0.722	25.6			0.0	0.3	20.0				45.9	46.0	-0.1
3.404	25.2			0.0	0.6	20.0				45.8	46.0	-0.2
0.689	25.4			0.0	0.3	20.0				45.7	46.0	-0.3
0.667	25.4			0.0	0.3	20.0				45.7	46.0	-0.3
4.687	24.9			0.0	0.7	20.0				45.6	46.0	-0.4

NORTHWEST EMC		CONDUCTED EMISSIONS DATA SHEET		PSA 2006.05.30 EMI 2006.4.26
EUT: IX270-MC8765			Work Order: SPTE0021	
Serial Number: None			Date: 06/01/06	
Customer: Spectrum Technology, Inc.			Temperature: 23	
Attendees: None			Humidity: 36%	
Project: None			Barometric Pres.: 30.15	
Tested by: Rod Peloquin		Power: 120VAC/60Hz	Job Site: EV01	
TEST SPECIFICATIONS			Test Method	
FCC 15.107 Class B:2005-10			ANSI C63.4:2003	
TEST PARAMETERS				
Cable or Line Tested			N	
COMMENTS				
EUT OPERATING MODES				
Receive Mode mid channel, GSM PCS band				
DEVIATIONS FROM TEST STANDARD				
No deviations.				
Run #	6	 Signature		
Configuration #	3			
Results	Pass			
		NVLAP Lab Code 200630-0		



Conducted Emissions



