

# Spectrum Technology, Inc.

## MC8775 in the IX605

May 08, 2007

Report No. SPTE0050

Report Prepared By



[www.nwemc.com](http://www.nwemc.com)  
1-888-EMI-CERT

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EMC Test Report

**Certificate of Test**  
**Issue Date: May 08, 2007**  
**Spectrum Technology**  
**Model: MC8775 in the IX605**

Emissions				
Test Description	Specification	Test Method	Pass	Fail
Effective Isotropic Radiated Power	FCC 24E:2006	ANSI/TIA/EIA-603-B:2002	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Effective Radiated Power	FCC 22H:2006	ANSI/TIA/EIA-603-B:2002	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Out of Band Emissions	FCC 24E:2006	ANSI/TIA/EIA-603-B:2002	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Out of Band Emissions	FCC 22H:2006	ANSI/TIA/EIA-603-B:2002	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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

### Test Facility

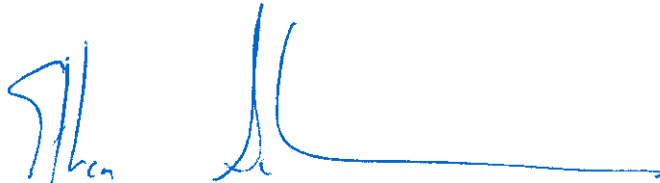
The measurement facility used to collect the data is located at:

Northwest EMC, Inc.  
22975 NW Evergreen Parkway, Suite 400  
Hillsboro, OR 97124

Phone: (503) 844-4066 Fax: 844-3826

This site has been fully described in a report filed with and accepted by the FCC (Federal Communications Commission) and Industry Canada.

**Approved By:**



Ethan Schoonover, Sultan Lab Manager

*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.



NVLAP LAB CODE 200629-0  
 NVLAP LAB CODE 200630-0  
 NVLAP LAB CODE 200676-0  
 NVLAP LAB CODE 200761-0

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



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



**TÜV Product Service:** Included in 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. USA0604C.



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



**NEMKO:** Assessed and accredited by NEMKO (Norwegian testing and certification body) for European emissions and immunity testing. As a result of NEMKO's laboratory assessment, they will accept test results from Northwest EMC, Inc. for product certification (Authorization No. ELA 119).



**Australia/New Zealand:** The National Association of Testing Authorities (NATA), Australia has been appointed by the ACA as an accreditation body to accredit test laboratories and competent bodies for EMC standards. Accredited test reports or assessments by competent bodies must carry the NATA logo. Test reports made by an overseas laboratory that has been accredited for the relevant standards by an overseas accreditation body that has a Mutual Recognition Agreement (MRA) with NATA are also accepted as technical grounds for product conformity. The report should be endorsed with the respective logo of the accreditation body (NVLAP).



**VCCI:** Accepted as an Associate Member to the VCCI, Acceptance No. 564. Conducted and radiated measurement facilities have been registered in accordance with Regulations for Voluntary Control Measures, Article 8. (*Registration Numbers. - Hillsboro: C-1071, R-1025, C-2687, T-289, and R-2318, Irvine: R-1943, C-2766, and T-298, Sultan: R-871, C-1784, and T-294.*)



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



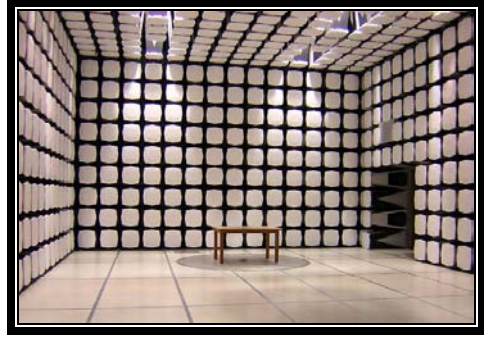
**GOST:** Northwest EMC, Inc. has been assessed and accredited by the Russian Certification bodies Certinform VNIINMASH, CERTINFO, SAMTES, and Federal CHEC, to perform EMC and Hygienic testing for Information Technology Products. As a result of their laboratory assessment, they will accept test results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



## SCOPE

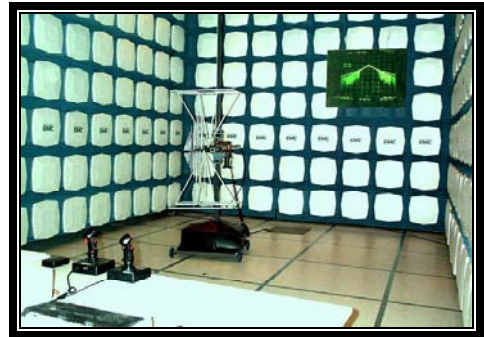
For details on the Scopes of our Accreditations, please visit:

<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 339<sup>th</sup> Ave. SE Sultan, WA 98294  
(888) 364-2378

**Party Requesting the Test**

<b>Company Name:</b>	Spectrum Technology, Inc.
<b>Address:</b>	209 Dayton Street Suite #205
<b>City, State, Zip:</b>	Edmonds, WA 98020
<b>Test Requested By:</b>	Rod Munro
<b>Model:</b>	MC8775 in the IX605
<b>First Date of Test:</b>	April 9, 2007
<b>Last Date of Test:</b>	April 19, 2007
<b>Receipt Date of Samples:</b>	April 9, 2007
<b>Equipment Design Stage:</b>	Production
<b>Equipment Condition:</b>	No Damage

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

WAN Network Card.

**Testing Objective:**

TCB certification of the Sierra Wireless MC8775 card in the IX605 notebook. There are two antenna configurations; an internal antenna when used standalone, and an external antenna when used in a vehicle mount configuration. Antenna port conducted data will be used from the Sierra Wireless FCC grant, FCC ID: N7N-MC8775U. Northwest EMC will only do the radiated testing for the new host configurations. Radio operates in GSM, GPRS, Edge, HSDPA, and WCDMA modes. The Sierra MC8775 is collocated with the Intel 4965AGN and Broadcom BT BCM92035NMD in the IX605 computer.

**CONFIGURATION 1 SPTE0050****Software/Firmware Running during test**

Description	Version
ProcommPlus Terminal	4.8 Build 71

**EUT**

Description	Manufacturer	Model/Part Number	Serial Number
WAN Network Card	Sierra Wireless, Inc.	MC8775	None

**Peripherals in test setup boundary**

Description	Manufacturer	Model/Part Number	Serial Number
Notebook PC	General Dynamics Itronix, Corporation	IX605	814T101002G70400806M000
AC Adapter	Delta Electronics	SADP-65KB D	92W0546007993
USB Card Reader	ImageMate	SDDR-91	015336
802.11(a)/(b)/(g)/(n)	Intel Corporation	4965AGN	Unknown
USB Bluetooth Module	Broadcomm	BCM92035NMD	Unknown
Headset	Unknown	Unknown	Unknown

**Cables**

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
USB	Yes	1.0m	No	Card Reader	Notebook PC
Audio	No	1.0m	No	Headset	Notebook PC
Serial	Yes	1.0m	No	Notebook PC	Unterminated
Video	Yes	1.0m	No	Notebook PC	Unterminated
Phone	No	1.3m	No	Notebook PC	Unterminated
Ethernet	No	1.0m	No	Notebook PC	Unterminated
DC	No	1.2m	Yes	Notebook PC	AC Adapter
AC	No	1.6m	No	AC Adapter	AC Mains
USB	Yes	1.3m	No	Notebook PC	Unterminated

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



**CONFIGURATION 2 SPTE0050****Software/Firmware Running during test**

Description	Version
ProcommPlus Terminal	4.8 Build 71

**EUT**

Description	Manufacturer	Model/Part Number	Serial Number
WAN Network Card	Sierra Wireless, Inc.	MC8775	None

**Peripherals in test setup boundary**

Description	Manufacturer	Model/Part Number	Serial Number
USB Card Reader	ImageMate	SDDR-91	015336
USB Mouse	Logitech	M-BE58	LZE02357693
802.11(a)/(b)/(g)/(n)	Intel Corporation	4965AGN	Unknown
USB Bluetooth Module	Broadcomm	BCM92035NMD	Unknown
Vehicle Dock	General Dynamics Itronix, Corporation	IX600 Vehicle Dock, RF	ZZTPE7003ZN7393
Game Controller	Microsoft	X04-63237	6323700623744
PS2 Mouse	Microsoft	X04-72174	5041022-6
12V Car Battery	N/A	N/A	N/A
External WAN Antenna	Maxrad	Unknown	Unknown
External WLAN Antenna (to populate port only)	Maxrad	Unknown	Unknown
Keyboard	Compaq	166516-006	B13990E39G7250
Headset	Unknown	Unknown	Unknown

**Cables**

Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
USB	Yes	1.3m	No	Vehicle Dock	Unterminated
USB	Yes	1.3m	No	Vehicle Dock	Game Controller
Serial	Yes	1.0m	No	Vehicle Dock	Unterminated
Mouse	No	1.3m	No	PS2 Mouse	Vehicle Dock
Keyboard	No	1.6m	No	Keyboard	Vehicle Dock
Antenna	Yes	2m	No	External WAN Antenna	Vehicle Dock
Antenna	Yes	2m	No	External WLAN Antenna	Vehicle Dock
DC	No	1.6m	No	Vehicle Dock	12V Battery
USB	Yes	1.3m	No	Notebook PC	Unterminated
USB	Yes	1.3m	No	Vehicle Dock	USB Mouse
USB	Yes	1.3m	No	Vehicle Dock	Card Reader
Video	Yes	1.0m	Yes	Vehicle Dock	Unterminated
Parallel	Yes	1.2m	No	Vehicle Dock	Unterminated
Audio	No	1.0m	No	Vehicle Dock	Headset

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

<b>Equipment modifications</b>					
Item	Date	Test	Modification	Note	Disposition of EUT
1	4/9/2007	Effective Isotropic Radiated Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
2	4/19/2007	Effective Radiated Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Northwest EMC following the test.
3	4/19/2007	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.

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.

**OPERATING BANDS**

PCS  
Cellular

**MODES OF OPERATION**

GPRS  
EDGE  
WCDMA  
HSDPA

**CHANNELS INVESTIGATED FOR GPRS AND EDGE**

PCS, Low channel, Ch. 512, 1850.2MHz  
PCS, Mid channel, Ch. 661, 1880MHz  
PCS, High channel, Ch. 810, 1909.8MHz  
Cellular, Low channel, Ch. 128, 824.2MHz  
Cellular, Mid channel, Ch. 192, 837MHz  
Cellular, High channel, Ch. 251, 848.8MHz

**CHANNELS INVESTIGATED FOR WCDMA AND HSDPA**

PCS, Low channel, Ch. 9262, 1852.4MHz  
PCS, Mid channel, Ch. 9400, 1880MHz  
PCS, High channel, Ch. 9538, 1907.6MHz  
Cellular, Low channel, Ch. 4132, 826.4MHz  
Cellular, Mid channel, Ch. 4182, 836.4MHz  
Cellular, High channel, Ch. 4233, 846.6MHz

**CONFIGURATIONS INVESTIGATED**

Notebook configuration, internal antenna  
Optional vehicle mount configuration, external antenna

**POWER SETTINGS INVESTIGATED**

120VAC/60Hz

**FREQUENCY RANGE INVESTIGATED****PCS BAND**

Start Frequency	30MHz	Stop Frequency	26 GHz
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**CELLULAR BAND**

Start Frequency	30MHz	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
Low Pass Filter 0-1000 MHz	Micro-Tronics	LPM50004	LFD	12/29/2006	13
Low Pass Filter 0-425 MHz	Micro-Tronics	LPM50003	LFB	12/29/2006	13
High Pass Filter 1.2 - 18 GHz	Micro-Tronics	HPM50108	HFV	12/29/2006	13
High Pass Filter	Micro-Tronics	HPM50111	HFO	12/29/2006	13
Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	3/23/2006	13
Antenna, Horn	EMCO	3160-09	AHG	NCR	0

EV01 Cable D			EVD	3/30/2006	13
Pre-Amplifier	Miteq	AMF-4D-005180-24-10P	APC	5/12/2006	13
EV01 cables g,h,l			EVF	4/17/2006	13
Antenna, Horn	EMCO	3160-08	AHK	NCR	0
Pre-Amplifier	Miteq	AMF-4D-010100-24-10P	APW	12/29/2006	13
Pre-Amplifier	Miteq	AM-1616-1000	AOL	12/29/2006	13
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24
EV01 cables c,g, h			EVA	12/29/2006	13
Antenna, Dipole (part of ADA)	ETS	3121C-DB4	ADAA	12/28/2006	24
Antenna, Dipole (ADAA included)	Roberts	Roberts	ADA	12/28/2006	24
EV01 cables g,h,j			EVB	12/29/2006	13
Antenna, Horn	EMCO	3115	AHJ	5/20/2005	24
Antenna, Horn	EMCO	3115	AHC	8/24/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2006	13
Power Meter	Gigatronics	8651A	SPM	9/19/2006	12
Power Sensor	Gigatronics	80701A	SPL	9/19/2006	12
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2006	13

### 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 and/or receiving while set at the lowest channel, a middle channel, and the highest channel available. 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 (per ANSI C63.4:2003).

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

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/10/07
Customer: Spectrum Technology, Inc.	Temperature: 22
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.05
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 22H:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>
Antenna Height(s) (m)   1 - 4   Test Distance (m)   0

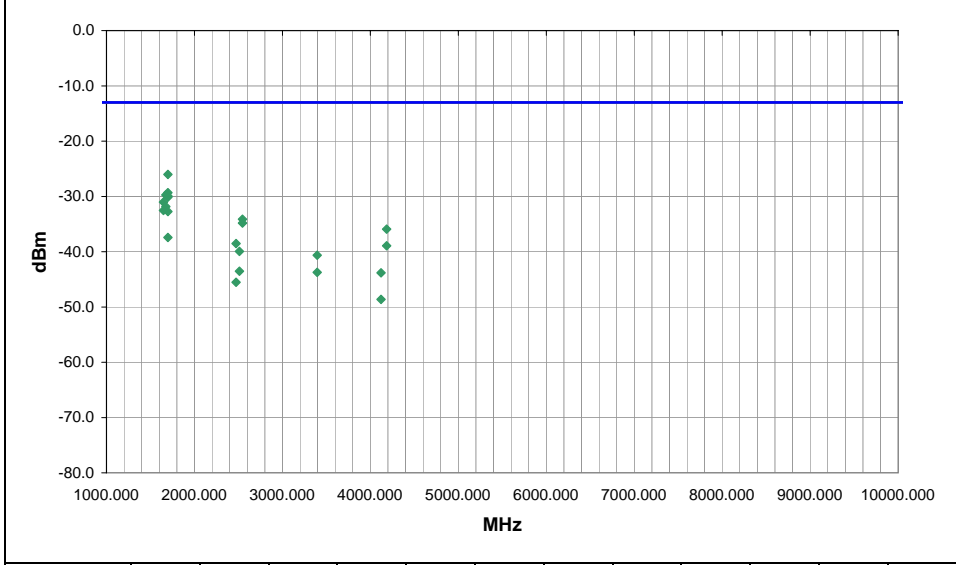
**COMMENTS**  
Internal antenna. Notebook standalone configuration.

**EUT OPERATING MODES**  
GPRS, Packet Data, Cellular band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	7
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1697.665	309.0	1.0	H-Horn	PK	2.50E-06	-26.0	-13.0	-13.0	High channel, Notebook screen horizontal
1697.775	146.0	1.0	V-Horn	PK	1.17E-06	-29.3	-13.0	-16.3	High channel, Notebook on side
1674.072	128.0	1.0	V-Horn	PK	1.06E-06	-29.7	-13.0	-16.7	Mid channel, Notebook on side
1697.720	306.0	1.0	V-Horn	PK	1.02E-06	-29.9	-13.0	-16.9	High channel, Notebook screen horizontal
1697.775	312.0	1.0	V-Horn	PK	9.71E-07	-30.1	-13.0	-17.1	High channel, Notebook typical position
1648.305	35.0	1.0	H-Horn	PK	7.89E-07	-31.0	-13.0	-18.0	Low channel, Notebook screen horizontal
1674.127	242.0	1.4	H-Horn	PK	6.56E-07	-31.8	-13.0	-18.8	Mid channel, Notebook screen horizontal
1648.325	125.0	1.0	V-Horn	PK	5.59E-07	-32.5	-13.0	-19.5	Low channel, Notebook on side
1697.640	171.0	1.3	H-Horn	PK	5.33E-07	-32.7	-13.0	-19.7	High channel, Notebook typical position
2546.450	178.0	1.0	V-Horn	PK	3.86E-07	-34.1	-13.0	-21.1	High channel, Notebook on side
2546.165	72.0	1.0	H-Horn	PK	3.29E-07	-34.8	-13.0	-21.8	High channel, Notebook screen horizontal
4185.031	324.0	1.0	H-Horn	PK	2.55E-07	-35.9	-13.0	-22.9	Mid channel, Notebook screen horizontal
1697.685	285.0	1.0	H-Horn	PK	1.81E-07	-37.4	-13.0	-24.4	High channel, Notebook on side
2472.906	62.0	1.0	H-Horn	PK	1.40E-07	-38.5	-13.0	-25.5	Low channel, Notebook screen horizontal
4185.226	8.0	1.0	V-Horn	PK	1.28E-07	-38.9	-13.0	-25.9	Mid channel, Notebook on side
2511.299	276.0	1.0	H-Horn	PK	1.02E-07	-39.9	-13.0	-26.9	Mid channel, Notebook screen horizontal
3395.525	155.0	1.0	V-Horn	PK	8.65E-08	-40.6	-13.0	-27.6	High channel, Notebook on side
2511.164	15.0	1.0	V-Horn	PK	4.44E-08	-43.5	-13.0	-30.5	Mid channel, Notebook on side
3394.915	275.0	1.0	H-Horn	PK	4.24E-08	-43.7	-13.0	-30.7	High channel, Notebook screen horizontal
4121.039	6.0	1.8	V-Horn	PK	4.14E-08	-43.8	-13.0	-30.8	Low channel, Notebook on side

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/12/07
Customer: Spectrum Technology, Inc.	Temperature: 21° C
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: Dan Haas and Holly Ashkannehad	Power: 13.8VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 22H:2006	ANSI/TIA/EIA-603-B:2002

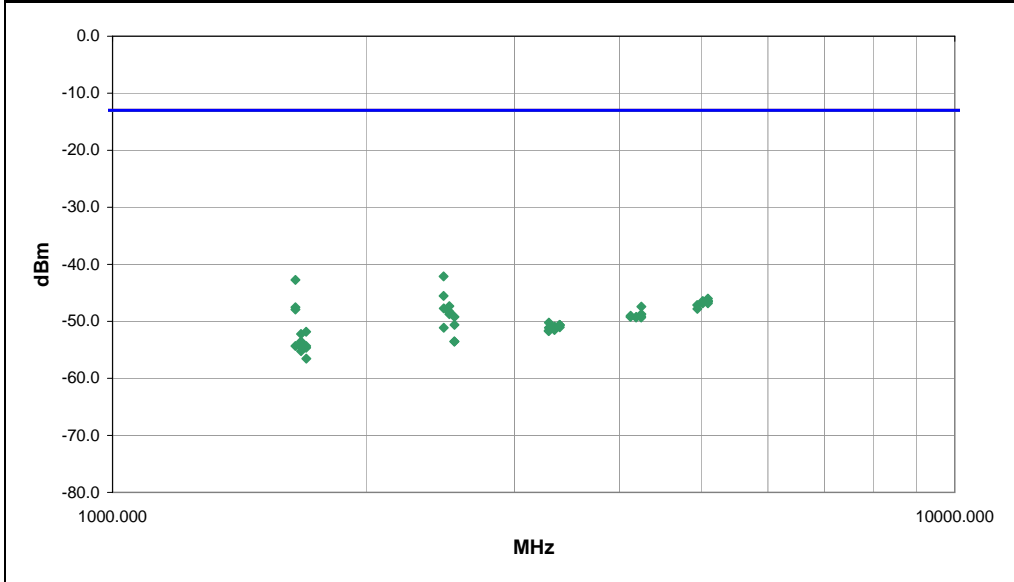
<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

**COMMENTS**  
Notebook in optional vehicular configuration. External antenna.

**EUT OPERATING MODES**  
GPRS, Packet Data, Cellular band.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	21	NVLAP Lab Code 200630-0	Signature 
Configuration #	2		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2472.525	187.0	1.0	V-Horn	PK	6.13E-08	-42.1	-13.0	-29.1	Low channel, antenna vertical
1648.485	318.0	1.0	V-Horn	PK	5.33E-08	-42.7	-13.0	-29.7	Low channel, antenna vertical
2472.440	186.0	1.0	V-Horn	PK	2.80E-08	-45.5	-13.0	-32.5	Low channel, antenna on side
5092.245	238.0	2.9	V-Horn	PK	2.50E-08	-46.0	-13.0	-33.0	High channel, antenna vertical
5020.855	316.0	1.0	V-Horn	PK	2.28E-08	-46.4	-13.0	-33.4	Mid channel, antenna vertical
5094.130	2.0	1.0	H-Horn	PK	2.28E-08	-46.4	-13.0	-33.4	High channel, antenna vertical
5093.175	357.0	2.9	V-Horn	PK	2.22E-08	-46.5	-13.0	-33.5	High channel, antenna on side
5022.185	125.0	1.0	H-Horn	PK	2.08E-08	-46.8	-13.0	-33.8	Mid channel, antenna vertical
5091.425	227.0	1.0	H-Horn	PK	2.08E-08	-46.8	-13.0	-33.8	High channel, antenna on side
4945.305	359.0	1.9	V-Horn	PK	1.94E-08	-47.1	-13.0	-34.1	Low channel, antenna vertical
2510.700	63.0	1.0	V-Horn	PK	1.85E-08	-47.3	-13.0	-34.3	Mid channel, antenna vertical
4244.025	218.0	1.0	V-Horn	PK	1.81E-08	-47.4	-13.0	-34.4	High channel, antenna vertical
1648.410	236.0	1.0	V-Horn	PK	1.77E-08	-47.5	-13.0	-34.5	Low channel, antenna on side
2472.925	115.0	1.0	H-Horn	PK	1.69E-08	-47.7	-13.0	-34.7	Low channel, antenna on side
4946.475	62.0	1.0	H-Horn	PK	1.65E-08	-47.8	-13.0	-34.8	Low channel, antenna vertical
1648.325	168.0	1.3	H-Horn	PK	1.61E-08	-47.9	-13.0	-34.9	Low channel, antenna on side
2510.710	143.0	1.0	H-Horn	PK	1.47E-08	-48.3	-13.0	-35.3	Mid channel, antenna vertical
2511.010	7.0	1.0	V-Horn	PK	1.47E-08	-48.3	-13.0	-35.3	Mid channel, antenna on side
2511.280	317.0	1.0	H-Horn	PK	1.34E-08	-48.7	-13.0	-35.7	Mid channel, antenna on side
4245.060	300.0	1.0	V-Horn	PK	1.34E-08	-48.7	-13.0	-35.7	High channel, antenna on side

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/11/07
Customer: Spectrum Technology, Inc.	Temperature: 22
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.05
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>
Antenna Height(s) (m)   1 - 4   Test Distance (m)   0

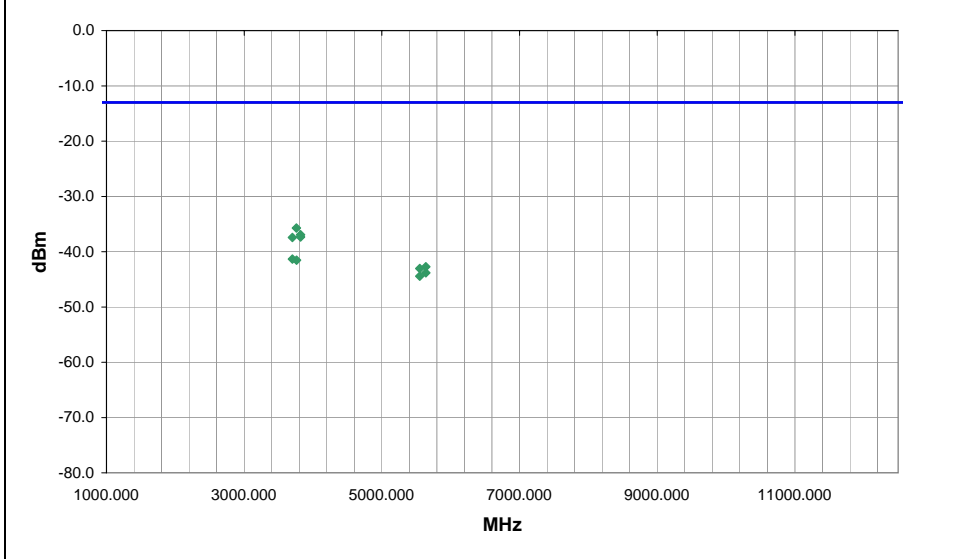
**COMMENTS**  
Internal antenna. Notebook standalone configuration.

**EUT OPERATING MODES**  
GPRS, Packet Data, PCS band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	10
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3758.719	84.0	1.0	H-Horn	PK	2.67E-07	-35.7	-13.0	-22.7	Mid channel, Notebook screen horizontal
3819.195	333.0	1.0	H-Horn	PK	2.03E-07	-36.9	-13.0	-23.9	High channel, Notebook screen horizontal
3819.750	109.0	1.0	V-Horn	PK	1.85E-07	-37.3	-13.0	-24.3	High channel, Notebook on side
3700.365	355.0	1.0	H-Horn	PK	1.81E-07	-37.4	-13.0	-24.4	Low channel, Notebook screen horizontal
3700.490	155.0	1.0	V-Horn	PK	7.36E-08	-41.3	-13.0	-28.3	Low channel, Notebook on side
3760.039	151.0	1.0	V-Horn	PK	7.03E-08	-41.5	-13.0	-28.5	Mid channel, Notebook on side
5639.960	114.0	1.0	V-Horn	PK	5.33E-08	-42.7	-13.0	-29.7	Mid channel, Notebook on side
5550.500	13.0	1.3	H-Horn	PK	4.98E-08	-43.0	-13.0	-30.0	Low channel, Notebook screen horizontal
5639.350	153.0	1.0	H-Horn	PK	4.14E-08	-43.8	-13.0	-30.8	Mid channel, Notebook screen horizontal
5551.290	178.0	1.0	V-Horn	PK	3.61E-08	-44.4	-13.0	-31.4	Low channel, Notebook on side

# Out of Band Emissions

## EMC

EUT:	MC8775 in the IX605	Work Order:	SPT0050
Serial Number:	None	Date:	04/12/07
Customer:	Spectrum Technology, Inc.	Temperature:	21° C
Attendees:	Rod Munro	Humidity:	32%
Project:	None	Barometric Pres.:	30.11
Tested by:	Dan Haas	Power:	13.8VDC
		Job Site:	EV01

TEST SPECIFICATIONS		Test Method	
FCC 24E:2006		ANSI/TIA/EIA-603-B:2002	

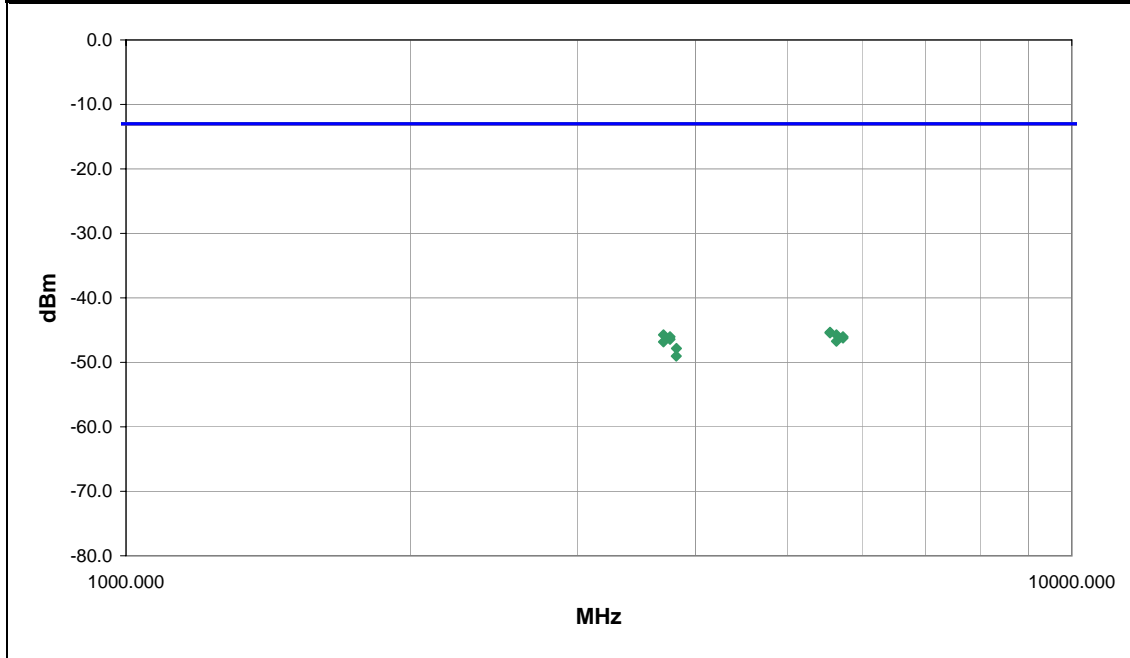
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

**COMMENTS**  
Notebook in optional vehicular configuration. External antenna.

**EUT OPERATING MODES**  
GPRS, Packet Data, PCS band.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	18	NVLAP Lab Code 200630-0	Signature 
Configuration #	2		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5550.440	95.0	1.0	V-Horn	PK	2.93E-08	-45.3	-13.0	-32.3	Low Channel.
5550.345	321.0	1.0	H-Horn	PK	2.86E-08	-45.4	-13.0	-32.4	Low Channel.
3700.455	164.0	1.0	V-Horn	PK	2.67E-08	-45.7	-13.0	-32.7	Low Channel.
5639.140	119.0	1.0	V-Horn	PK	2.67E-08	-45.7	-13.0	-32.7	Mid Channel.
3760.000	139.0	2.6	H-Horn	PK	2.50E-08	-46.0	-13.0	-33.0	Mid Channel.
5729.305	158.0	1.0	V-Horn	PK	2.50E-08	-46.0	-13.0	-33.0	High Channel.
5728.695	272.0	1.0	H-Horn	PK	2.38E-08	-46.2	-13.0	-33.2	High Channel.
3760.135	317.0	1.0	V-Horn	PK	2.28E-08	-46.4	-13.0	-33.4	Mid Channel.
5638.660	82.0	1.0	H-Horn	PK	2.12E-08	-46.7	-13.0	-33.7	Mid Channel.
3700.435	127.0	1.0	H-Horn	PK	2.08E-08	-46.8	-13.0	-33.8	Low Channel.
3819.730	158.0	2.0	H-Horn	PK	1.65E-08	-47.8	-13.0	-34.8	High Channel.
3818.275	172.0	1.0	V-Horn	PK	1.25E-08	-49.0	-13.0	-36.0	High Channel.



EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/10/07
Customer: Spectrum Technology, Inc.	Temperature: 22
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.05
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	
FCC 22H:2006	Test Method: ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

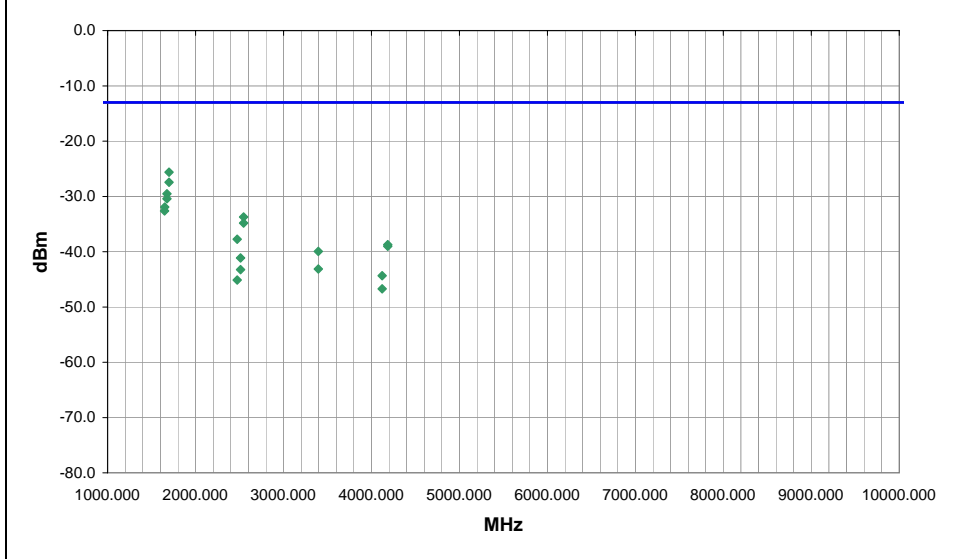
**COMMENTS**  
Internal antenna. Notebook standalone configuration.

**EUT OPERATING MODES**  
Edge, Packet Data, Cellular band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	8
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1697.725	268.0	1.3	H-Horn	PK	2.74E-06	-25.6	-13.0	-12.6	High channel, notebook screen horizontal
1697.735	99.0	1.0	V-Horn	PK	1.81E-06	-27.4	-13.0	-14.4	High channel, notebook on side
1674.117	282.0	1.3	H-Horn	PK	1.11E-06	-29.5	-13.0	-16.5	Mid channel, notebook screen horizontal
1674.062	109.0	1.0	V-Horn	PK	9.06E-07	-30.4	-13.0	-17.4	Mid channel, notebook on side
1648.500	23.0	1.0	H-Horn	PK	6.41E-07	-31.9	-13.0	-18.9	Low channel, notebook screen horizontal
1648.295	110.0	1.0	V-Horn	PK	5.46E-07	-32.6	-13.0	-19.6	Low channel, notebook on side
2546.490	339.0	1.0	H-Horn	PK	4.24E-07	-33.7	-13.0	-20.7	High channel, notebook screen horizontal
2546.585	148.0	1.0	V-Horn	PK	3.29E-07	-34.8	-13.0	-21.8	High channel, notebook on side
2472.646	56.0	1.0	H-Horn	PK	1.69E-07	-37.7	-13.0	-24.7	Low channel, notebook screen horizontal
4185.251	318.0	1.0	H-Horn	PK	1.34E-07	-38.7	-13.0	-25.7	Mid channel, notebook screen horizontal
4185.001	8.0	1.0	V-Horn	PK	1.25E-07	-39.0	-13.0	-26.0	Mid channel, notebook on side
3395.500	148.0	1.0	V-Horn	PK	1.02E-07	-39.9	-13.0	-26.9	High channel, notebook on side
2511.289	272.0	1.0	H-Horn	PK	7.71E-08	-41.1	-13.0	-28.1	Mid channel, notebook screen horizontal
3395.545	32.0	1.0	H-Horn	PK	4.87E-08	-43.1	-13.0	-30.1	High channel, notebook screen horizontal
2510.994	74.0	1.0	V-Horn	PK	4.75E-08	-43.2	-13.0	-30.2	Mid channel, notebook on side
4121.439	331.0	1.3	H-Horn	PK	3.69E-08	-44.3	-13.0	-31.3	Low channel, notebook screen horizontal
2472.741	143.0	1.0	V-Horn	PK	3.07E-08	-45.1	-13.0	-32.1	Low channel, notebook on side
4120.754	359.0	2.0	V-Horn	PK	2.12E-08	-46.7	-13.0	-33.7	Low channel, notebook on side

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/12/07
Customer: Spectrum Technology, Inc.	Temperature: 21° C
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: Holly Ashkannejhad	Power: 13.8VDC
	Job Site: EV01

TEST SPECIFICATIONS		Test Method	
FCC 22H:2006		ANSI/TIA/EIA-603-B:2002	

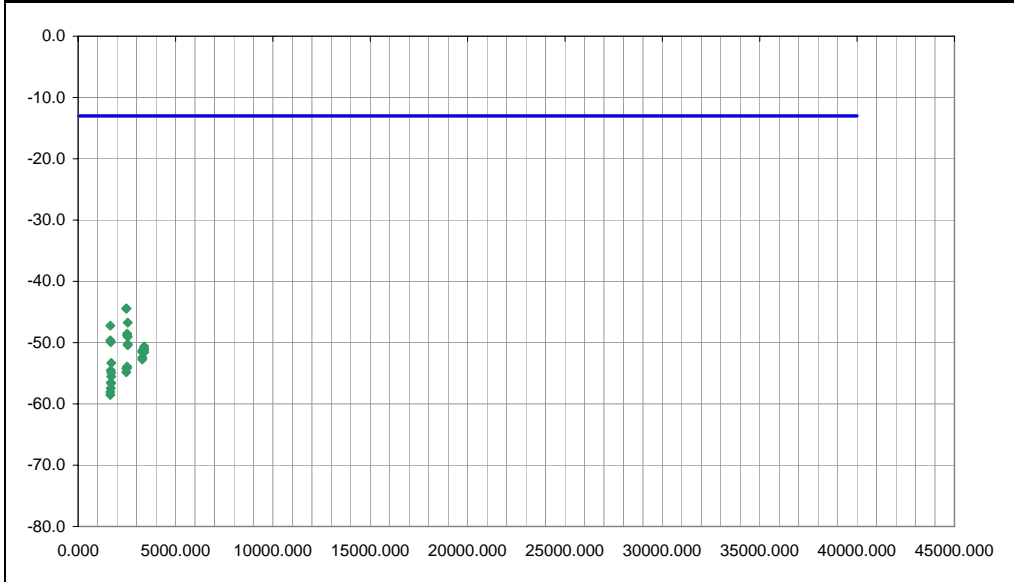
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

**COMMENTS**  
Notebook in optional vehicular configuration. External antenna.

**EUT OPERATING MODES**  
EGPRS, Packet Data, Cellular band.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	23	NVLAP Lab Code 200630-0	Signature <i>Holly Ashkannejhad</i>
Configuration #	2		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2472.745	318.0	1.0	H-Horn	PK	3.61E-08	-44.4	-13.0	-31.4	Low channel, antenna on side
2472.775	263.0	1.0	V-Horn	PK	3.61E-08	-44.4	-13.0	-31.4	Low channel, antenna on side
2546.360	113.0	1.0	V-Horn	PK	2.12E-08	-46.7	-13.0	-33.7	High channel, antenna vertical
1648.355	4.0	1.0	V-Horn	PK	1.89E-08	-47.2	-13.0	-34.2	Low channel, antenna on side
2511.055	6.0	1.0	V-Horn	PK	1.40E-08	-48.5	-13.0	-35.5	Mid channel, antenna vertical
2510.560	41.0	1.0	H-Horn	PK	1.31E-08	-48.8	-13.0	-35.8	Mid channel, antenna vertical
2546.115	113.0	1.0	V-Horn	PK	1.25E-08	-49.0	-13.0	-36.0	High channel, antenna on side
1648.375	276.0	1.0	H-Horn	PK	1.09E-08	-49.6	-13.0	-36.6	Low channel, antenna on side
1673.910	232.0	1.0	V-Horn	PK	1.02E-08	-49.9	-13.0	-36.9	Mid channel, antenna vertical
2546.325	114.0	1.0	H-Horn	PK	9.49E-09	-50.2	-13.0	-37.2	High channel, antenna on side
2546.525	121.0	1.0	H-Horn	PK	9.06E-09	-50.4	-13.0	-37.4	High channel, antenna vertical
3395.535	47.0	1.0	V-Horn	PK	8.65E-09	-50.6	-13.0	-37.6	High channel, antenna on side
3348.355	105.0	2.6	H-Horn	PK	7.89E-09	-51.0	-13.0	-38.0	Mid channel, antenna on side
3394.995	78.0	1.0	V-Horn	PK	7.89E-09	-51.0	-13.0	-38.0	High channel, antenna vertical
3395.360	227.0	1.0	H-Horn	PK	7.71E-09	-51.1	-13.0	-38.1	High channel, antenna vertical
3297.125	274.0	1.0	V-Horn	PK	7.36E-09	-51.3	-13.0	-38.3	Low channel, antenna on side
3349.080	308.0	2.6	H-Horn	PK	7.20E-09	-51.4	-13.0	-38.4	Mid channel, antenna vertical
3348.810	83.0	1.0	V-Horn	PK	7.03E-09	-51.5	-13.0	-38.5	Mid channel, antenna on side
3296.970	28.0	1.0	H-Horn	PK	7.03E-09	-51.5	-13.0	-38.5	Low channel, antenna on side
3396.080	248.0	1.0	H-Horn	PK	7.03E-09	-51.5	-13.0	-38.5	High channel, antenna on side

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/10/07
Customer: Spectrum Technology, Inc.	Temperature: 22
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.05
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>
Antenna Height(s) (m)   1 - 4   Test Distance (m)   0

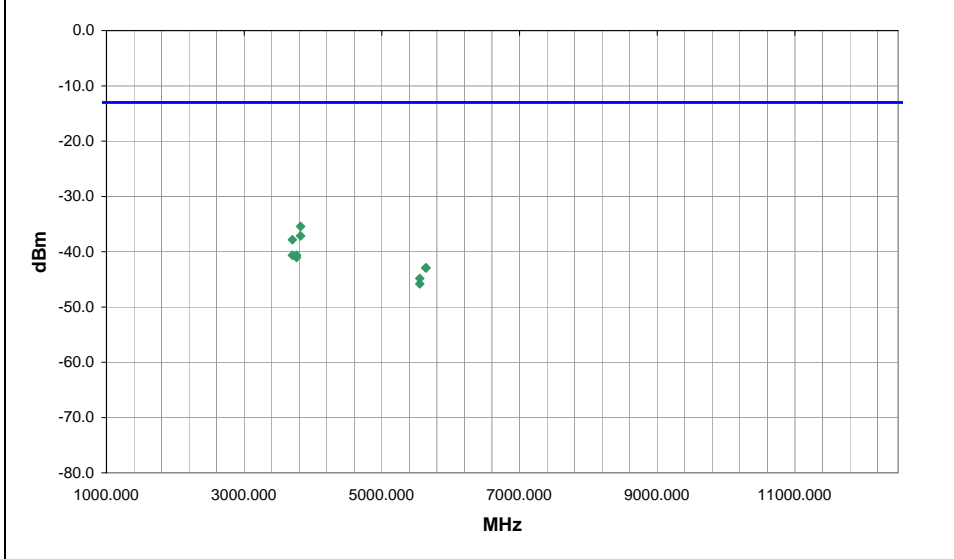
**COMMENTS**  
Internal antenna. Notebook standalone configuration.

**EUT OPERATING MODES**  
Edge, Packet Data, PCS band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	9
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3819.745	47.0	1.0	H-Horn	PK	2.86E-07	-35.4	-13.0	-22.4	High channel, Notebook screen horizontal
3819.540	35.0	1.2	V-Horn	PK	1.94E-07	-37.1	-13.0	-24.1	High channel, Notebook on side
3700.215	353.0	1.0	H-Horn	PK	1.65E-07	-37.8	-13.0	-24.8	Low channel, Notebook screen horizontal
3700.655	156.0	1.0	V-Horn	PK	8.65E-08	-40.6	-13.0	-27.6	Low channel, Notebook on side
3760.134	149.0	1.0	V-Horn	PK	8.65E-08	-40.6	-13.0	-27.6	Mid channel, Notebook on side
3760.319	42.0	1.0	H-Horn	PK	7.89E-08	-41.0	-13.0	-28.0	Mid channel, Notebook screen horizontal
5640.050	116.0	1.0	V-Horn	PK	5.09E-08	-42.9	-13.0	-29.9	Mid channel, Notebook on side
5640.900	42.0	1.0	H-Horn	PK	5.09E-08	-42.9	-13.0	-29.9	Mid channel, Notebook screen horizontal
5550.795	192.0	1.0	V-Horn	PK	3.29E-08	-44.8	-13.0	-31.8	Low channel, Notebook on side
5550.660	7.0	1.4	H-Horn	PK	2.61E-08	-45.8	-13.0	-32.8	Low channel, Notebook screen horizontal

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/12/07
Customer: Spectrum Technology, Inc.	Temperature: 23
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 29.99
Tested by: Holly Ashkannejhad	Power: 13.8VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

**COMMENTS**  
Notebook in optional vehicular configuration. External antenna.

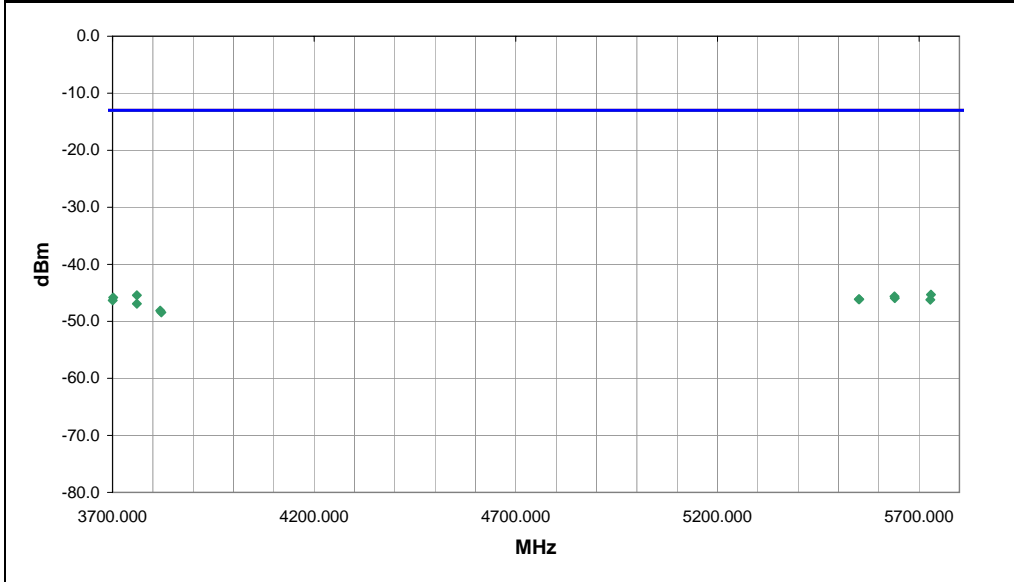
**EUT OPERATING MODES**  
EGPRS, Packet Data, PCS band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**

No deviations.

Run #	24
Configuration #	2
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
5729.185	65.0	1.0	V-Horn	PK	2.93E-08	-45.3	-13.0	-32.3	High channel, antenna vertical
3760.365	94.0	1.0	V-Horn	PK	2.86E-08	-45.4	-13.0	-32.4	Mid channel, antenna vertical
5638.845	336.0	1.3	H-Horn	PK	2.74E-08	-45.6	-13.0	-32.6	Mid channel, antenna on side
3701.770	186.0	1.0	V-Horn	PK	2.61E-08	-45.8	-13.0	-32.8	Low channel, antenna vertical
5639.770	168.0	1.0	V-Horn	PK	2.55E-08	-45.9	-13.0	-32.9	Mid channel, antenna vertical
5550.470	273.0	3.6	V-Horn	PK	2.44E-08	-46.1	-13.0	-33.1	Low channel, antenna vertical
5551.520	36.0	1.0	H-Horn	PK	2.44E-08	-46.1	-13.0	-33.1	Low channel, on side
5727.980	68.0	1.0	H-Horn	PK	2.38E-08	-46.2	-13.0	-33.2	High channel, antenna on side
3700.385	122.0	1.3	H-Horn	PK	2.33E-08	-46.3	-13.0	-33.3	Low channel, on side
3760.285	95.0	1.0	H-Horn	PK	2.03E-08	-46.9	-13.0	-33.9	Mid channel, antenna on side
3818.175	313.0	1.0	H-Horn	PK	1.54E-08	-48.1	-13.0	-35.1	High channel, antenna on side
3820.835	244.0	1.0	V-Horn	PK	1.44E-08	-48.4	-13.0	-35.4	High channel, antenna vertical

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/18/07
Customer: Spectrum Technology, Inc.	Temperature: 22
Attendees: None	Humidity: 33%
Project: None	Barometric Pres.: 30.18
Tested by: David Divergigelis	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS		Test Method	
FCC 22H:2006		ANSI/TIA/EIA-603-B:2002	

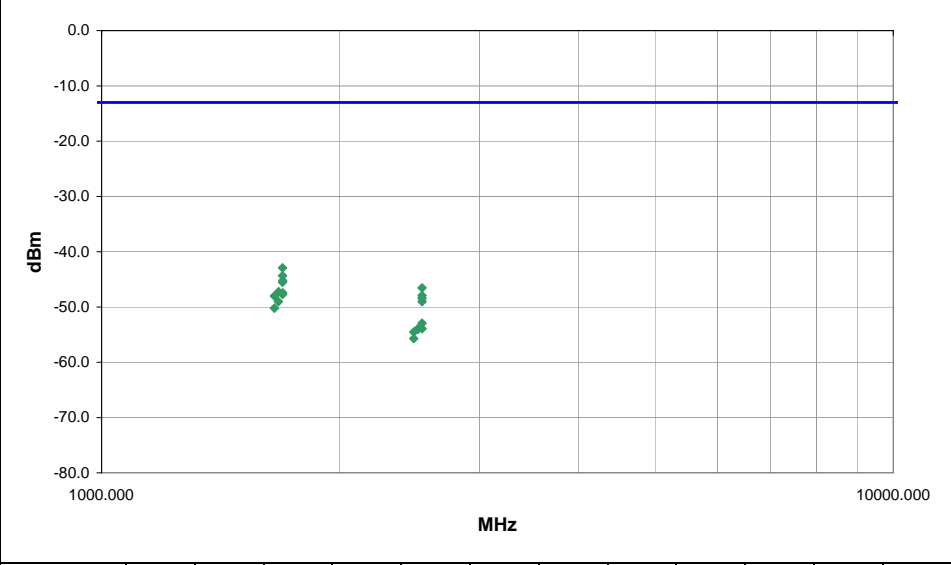
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

**COMMENTS**  
Notebook in standard notebook configuration with internal antenna

**EUT OPERATING MODES**  
Cellular Band - W-CDMA (Please see comment area for channel measured)

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	31	NVLAP Lab Code 200630-0	Signature <i>D. A. Rife, E.</i>
Configuration #	1		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Spec. (dB)	Compared to Spec. (dB)	Comments
1692.710	126.0	1.0	H-Horn	PK	5.09E-08	-42.9	-13.0	-29.9	High channel, notebook screen horizontal	
1692.715	270.0	1.0	V-Horn	PK	3.69E-08	-44.3	-13.0	-31.3	High channel, notebook on side	
1693.502	122.0	1.0	V-Horn	PK	3.00E-08	-45.2	-13.0	-32.2	High channel, notebook screen horizontal	
1692.735	229.0	1.0	V-Horn	PK	2.80E-08	-45.5	-13.0	-32.5	High channel, notebook typical position	
2540.107	17.0	1.0	V-Horn	PK	2.22E-08	-46.5	-13.0	-33.5	High channel, notebook typical position	
1673.287	103.0	1.0	H-Horn	PK	1.89E-08	-47.2	-13.0	-34.2	Mid channel, notebook screen horizontal	
1693.297	246.0	1.0	H-Horn	PK	1.81E-08	-47.4	-13.0	-34.4	High channel, notebook on side	
1692.842	6.0	1.4	H-Horn	PK	1.69E-08	-47.7	-13.0	-34.7	High channel, notebook typical position	
2539.315	184.0	1.0	V-Horn	PK	1.61E-08	-47.9	-13.0	-34.9	High channel, notebook screen horizontal	
1653.280	102.0	1.0	H-Horn	PK	1.57E-08	-48.0	-13.0	-35.0	Low channel, notebook screen horizontal	
2540.188	19.0	1.0	H-Horn	PK	1.44E-08	-48.4	-13.0	-35.4	High channel, notebook on side	
1672.537	126.0	1.0	V-Horn	PK	1.25E-08	-49.0	-13.0	-36.0	Mid channel, notebook screen horizontal	
2539.723	76.0	1.0	H-Horn	PK	1.25E-08	-49.0	-13.0	-36.0	High channel, notebook typical position	
1653.280	176.0	1.0	V-Horn	PK	9.49E-09	-50.2	-13.0	-37.2	Low channel, notebook screen horizontal	
2539.820	249.0	1.0	V-Horn	PK	5.09E-09	-52.9	-13.0	-39.9	High channel, notebook on side	
2539.373	190.0	1.8	H-Horn	PK	4.05E-09	-53.9	-13.0	-40.9	High channel, notebook screen horizontal	
2508.920	175.0	1.0	V-Horn	PK	4.05E-09	-53.9	-13.0	-40.9	Mid channel, notebook screen horizontal	
2509.002	102.0	1.0	H-Horn	PK	3.95E-09	-54.0	-13.0	-41.0	Mid channel, notebook screen horizontal	
2479.393	235.0	1.0	H-Horn	PK	3.52E-09	-54.5	-13.0	-41.5	Low channel, notebook screen horizontal	
2479.268	33.0	1.0	V-Horn	PK	2.67E-09	-55.7	-13.0	-42.7	Low channel, notebook screen horizontal	

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22
Attendees: None	Humidity: 33%
Project: None	Barometric Pres.: 30.18
Tested by: Rod Peloquin	Power: 13.8 VDC
	Job Site: EV01

TEST SPECIFICATIONS		Test Method	
FCC 2H:2006		ANSI/TIA/EIA-603-B:2002	

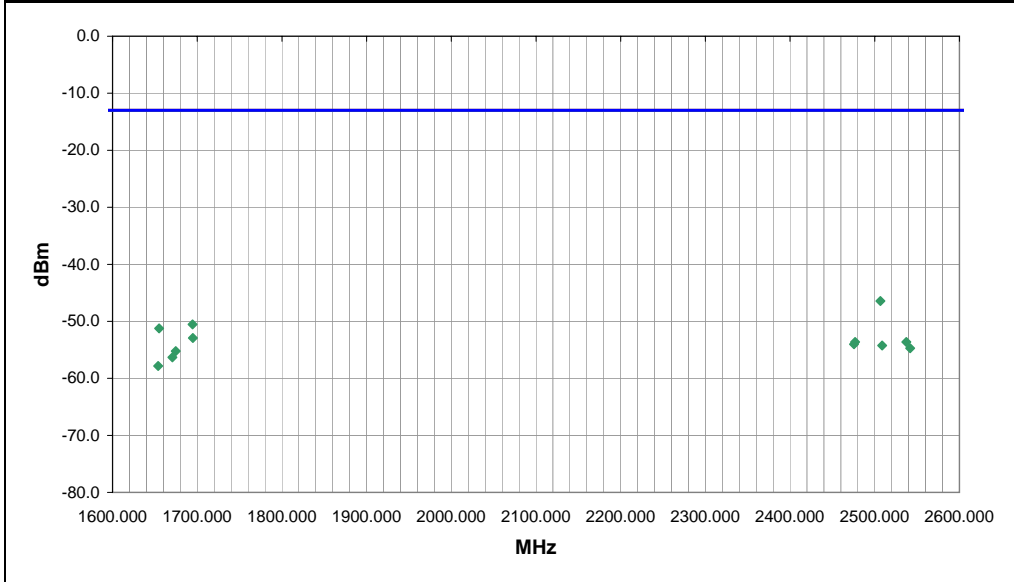
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

**COMMENTS**  
Notebook in optional vehicle mount external antenna

**EUT OPERATING MODES**  
W-CDMA, packet data, Cell band

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	34	NVLAP Lab Code 200630-0	Signature <i>Rod Peloquin</i>
Configuration #	2		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
2506.590	177.0	1.2	H-Horn	PK	2.28E-08	-46.4	-13.0	-33.4	Mid channel, antenna on side
1694.550	223.0	1.2	H-Horn	PK	8.85E-09	-50.5	-13.0	-37.5	High channel, antenna on side
1655.065	334.0	1.0	V-Horn	PK	7.54E-09	-51.2	-13.0	-38.2	Low channel, antenna vertical
1694.850	277.0	1.0	V-Horn	PK	5.09E-09	-52.9	-13.0	-39.9	High channel, antenna vertical
2476.725	188.0	1.1	H-Horn	PK	4.34E-09	-53.6	-13.0	-40.6	Low channel, antenna on side
2537.185	156.0	1.1	H-Horn	PK	4.34E-09	-53.6	-13.0	-40.6	High channel, antenna on side
2475.435	344.0	1.0	V-Horn	PK	3.95E-09	-54.0	-13.0	-41.0	Low channel, antenna vertical
2508.750	205.0	1.0	V-Horn	PK	3.78E-09	-54.2	-13.0	-41.2	Mid channel, antenna vertical
2541.805	114.0	1.0	V-Horn	PK	3.37E-09	-54.7	-13.0	-41.7	High channel, antenna vertical
1674.645	338.0	1.0	V-Horn	PK	3.00E-09	-55.2	-13.0	-42.2	Mid channel, antenna vertical
1670.655	313.0	1.2	H-Horn	PK	2.33E-09	-56.3	-13.0	-43.3	Mid channel, antenna on side
1653.850	248.0	1.1	H-Horn	PK	1.65E-09	-57.8	-13.0	-44.8	Low channel, antenna on side

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>
Antenna Height(s) (m)   1 - 4   Test Distance (m)   0

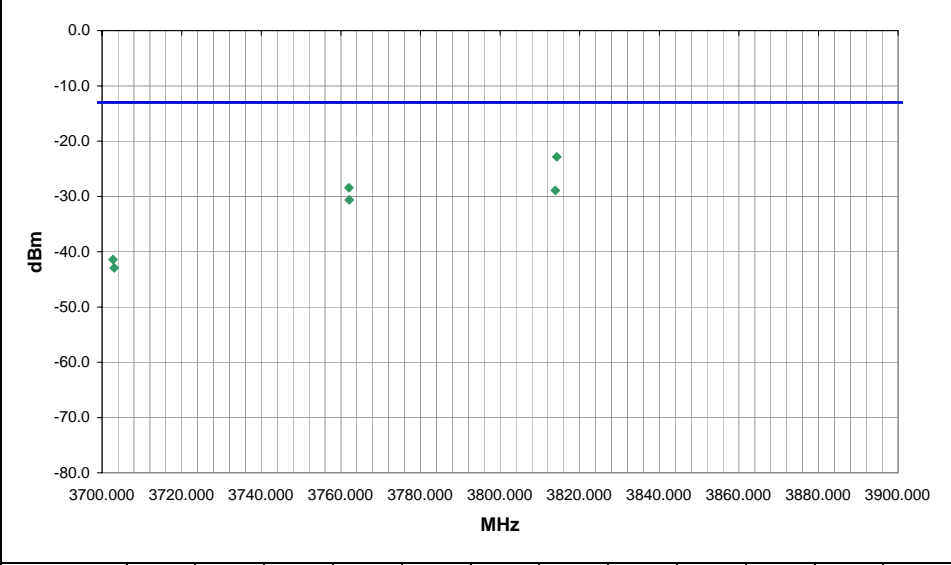
**COMMENTS**  
Notebook standalone

**EUT OPERATING MODES**  
W-CDMA, packet data, PCS band

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	32	
Configuration #	1	
Results	Pass	

NVLAP Lab Code 200630-0



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Spec. (dB)	Compared to Spec. (dB)	Comments
3814.243	55.0	1.2	H-Horn	PK	5.21E-06	-22.8	-13.0	-9.8	-9.8	High channel, Notebook screen horizontal
3762.018	7.0	1.1	H-Horn	PK	1.44E-06	-28.4	-13.0	-15.4	-15.4	Mid channel, Notebook screen horizontal
3813.893	61.0	1.0	V-Horn	PK	1.28E-06	-28.9	-13.0	-15.9	-15.9	High channel, Notebook on side
3762.100	293.0	2.1	V-Horn	PK	8.65E-07	-30.6	-13.0	-17.6	-17.6	Mid channel, Notebook on side
3702.752	51.0	1.1	H-Horn	PK	7.20E-08	-41.4	-13.0	-28.4	-28.4	Low channel, Notebook screen horizontal
3703.050	76.0	1.2	V-Horn	PK	5.09E-08	-42.9	-13.0	-29.9	-29.9	Low channel, Notebook on side

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: Rod Peloquin	Power: 13.8 VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

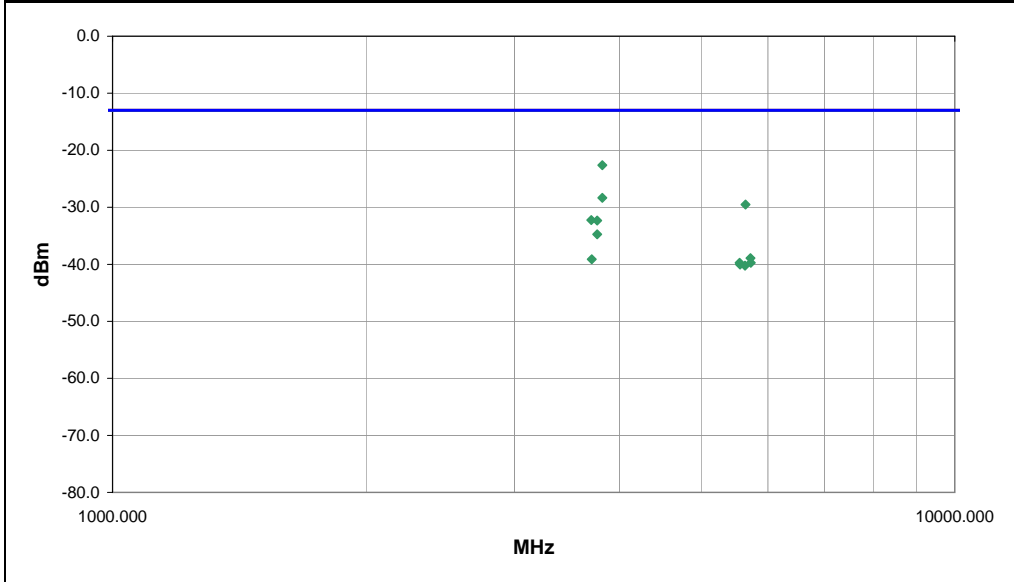
**COMMENTS**  
Vehicular configuration with external antenna.

**EUT OPERATING MODES**  
W-CDMA, packet data, PCS band

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	33	Signature <i>Rod Peloquin</i>
Configuration #	2	
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)	Comments
3814.280	202.0	1.2	H-Horn	PK	5.46E-06	-22.6	-13.0	-9.6	High channel, antenna on side
3814.620	12.0	1.0	V-Horn	PK	1.47E-06	-28.3	-13.0	-15.3	High channel, antenna vertical
5642.720	131.0	1.0	V-Horn	PK	1.11E-06	-29.5	-13.0	-16.5	Mid channel, antenna vertical
3701.800	208.0	1.1	H-Horn	PK	5.99E-07	-32.2	-13.0	-19.2	Low channel, antenna on side
3761.880	156.0	1.2	V-Horn	PK	5.85E-07	-32.3	-13.0	-19.3	Mid channel, antenna vertical
3761.813	198.0	1.1	H-Horn	PK	3.37E-07	-34.7	-13.0	-21.7	Mid channel, antenna on side
5720.320	154.0	2.1	V-Horn	PK	1.28E-07	-38.9	-13.0	-25.9	High channel, antenna vertical
3706.320	153.0	1.0	V-Horn	PK	1.22E-07	-39.1	-13.0	-26.1	Low channel, antenna vertical
5552.480	163.0	1.0	V-Horn	PK	1.06E-07	-39.7	-13.0	-26.7	Low channel, antenna vertical
5724.920	180.0	1.1	H-Horn	PK	1.06E-07	-39.7	-13.0	-26.7	High channel, antenna on side
5559.220	129.0	1.2	H-Horn	PK	9.93E-08	-40.0	-13.0	-27.0	Low channel, antenna on side
5635.870	274.0	1.2	H-Horn	PK	9.49E-08	-40.2	-13.0	-27.2	Mid channel, antenna on side



EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/18/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: David Divergigelis	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	
FCC 22H:2006	Test Method ANSI/TIA/EIA-603-B:2002

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

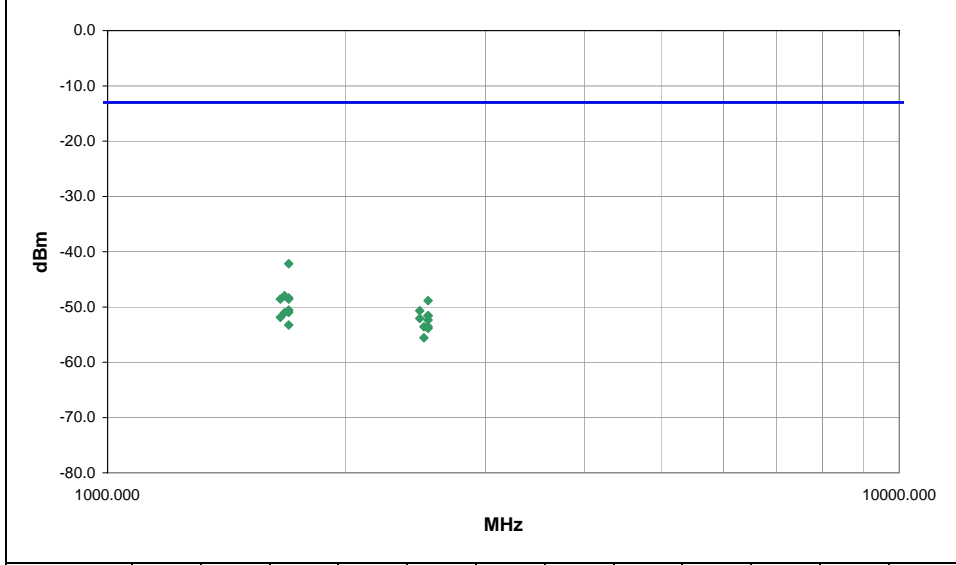
**COMMENTS**  
Notebook standalone

**EUT OPERATING MODES**  
HSDPA, packet data, Cellular band, (Please see comment section for channel measured)

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	28
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature* 



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1693.603	141.0	1.0	H-Horn	PK	6.07E-08	-42.2	-13.0	-29.2	High channel, notebook typical position
1673.300	138.0	1.0	H-Horn	PK	1.60E-08	-48.0	-13.0	-35.0	Mid channel, notebook in typical position
1693.672	-1.0	1.5	V-Horn	PK	1.46E-08	-48.4	-13.0	-35.4	High channel, notebook screen horizontal
1653.235	139.0	1.0	H-Horn	PK	1.39E-08	-48.6	-13.0	-35.6	Low channel, notebook in typical position
1693.663	289.0	1.8	V-Horn	PK	1.39E-08	-48.6	-13.0	-35.6	High channel, notebook on side
2539.445	183.0	1.0	V-Horn	PK	1.30E-08	-48.9	-13.0	-35.9	High channel, notebook typical position
1693.667	359.0	1.9	H-Horn	PK	8.77E-09	-50.6	-13.0	-37.6	High channel, notebook on side
2479.168	58.0	1.0	H-Horn	PK	8.57E-09	-50.7	-13.0	-37.7	Low channel, notebook in typical position
1693.537	55.0	1.4	H-Horn	PK	8.00E-09	-51.0	-13.0	-38.0	High channel, notebook screen horizontal
1672.328	296.0	1.0	V-Horn	PK	7.82E-09	-51.1	-13.0	-38.1	Mid channel, notebook in typical position
2539.727	172.0	1.0	V-Horn	PK	6.97E-09	-51.6	-13.0	-38.6	High channel, notebook screen horizontal
2539.863	165.0	1.0	H-Horn	PK	6.97E-09	-51.6	-13.0	-38.6	High channel, notebook on side
1653.298	333.0	1.0	V-Horn	PK	6.50E-09	-51.9	-13.0	-38.9	Low channel, notebook in typical position
2479.477	154.0	1.0	V-Horn	PK	6.21E-09	-52.1	-13.0	-39.1	Low channel, notebook in typical position
2540.233	217.0	1.0	H-Horn	PK	5.80E-09	-52.4	-13.0	-39.4	High channel, notebook typical position
1693.683	0.0	1.9	V-Horn	PK	4.71E-09	-53.3	-13.0	-40.3	High channel, notebook typical position
2539.750	11.0	2.8	H-Horn	PK	4.40E-09	-53.6	-13.0	-40.6	High channel, notebook screen horizontal
2509.613	194.0	1.0	V-Horn	PK	4.40E-09	-53.6	-13.0	-40.6	Mid channel, notebook in typical position
2540.108	92.0	1.0	V-Horn	PK	4.10E-09	-53.9	-13.0	-40.9	High channel, notebook on side
2509.350	64.0	1.0	H-Horn	PK	2.77E-09	-55.6	-13.0	-42.6	Mid channel, notebook in typical position

EUT: MC8775 in the IX605	Work Order: SPT0050
Serial Number: None	Date: 04/18/07
Customer: Spectrum Technology, Inc.	Temperature: 23
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 29.99
Tested by: Rod Peloquin	Power: 13.8 VDC
	Job Site: EV01

TEST SPECIFICATIONS

FCC 22H:2006	Test Method
	ANSI/TIA/EIA-603-B:2002

TEST PARAMETERS

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

Notebook in optional vehical mount configuration. External antenna.

EUT OPERATING MODES

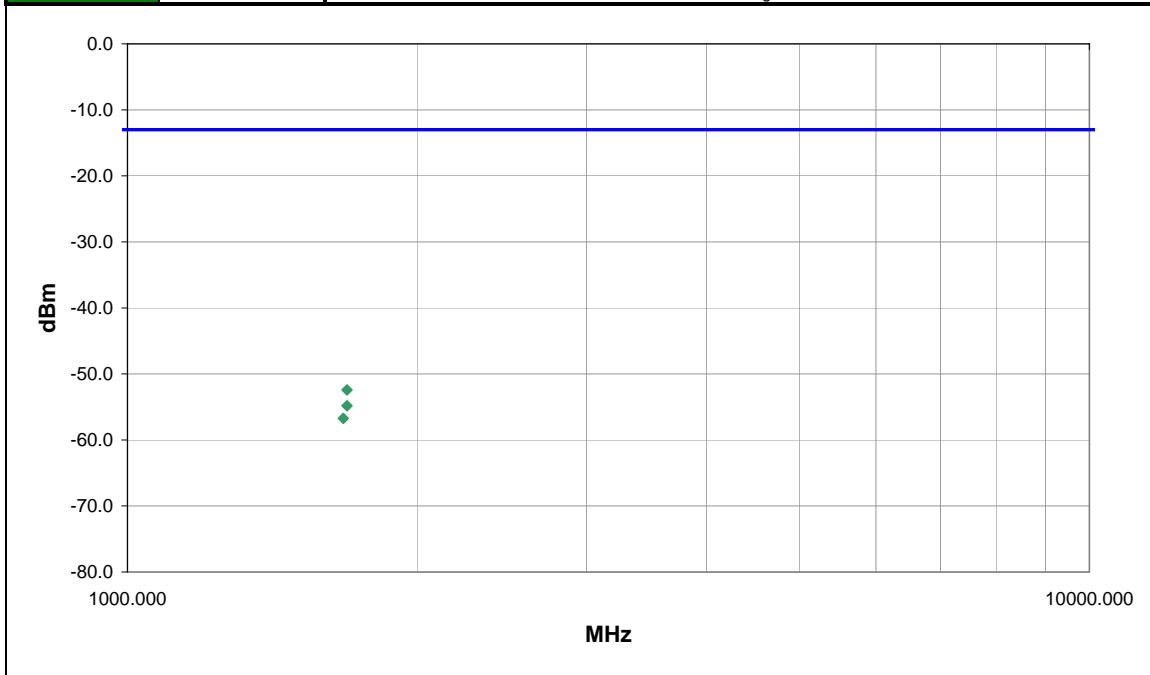
HSDPA, Packet Data, Cell band, see comments for channel

DEVIATIONS FROM TEST STANDARD

No deviations.

Run #	30	 Signature
Configuration #	2	
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)	Comments
1690.978	354.0	1.5	V-Horn	PK	5.72E-09	-52.4	-13.0	-39.4	nel, antenr
1690.988	158.0	1.3	H-Horn	PK	3.29E-09	-54.8	-13.0	-41.8	nel, antenr
1676.344	198.0	1.0	H-Horn	PK	2.12E-09	-56.7	-13.0	-43.7	nel, antenn

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/17/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: David Divergigelis	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>		<b>Test Method</b>	
FCC 24E:2006		ANSI/TIA/EIA-603-B:2002	

<b>TEST PARAMETERS</b>			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

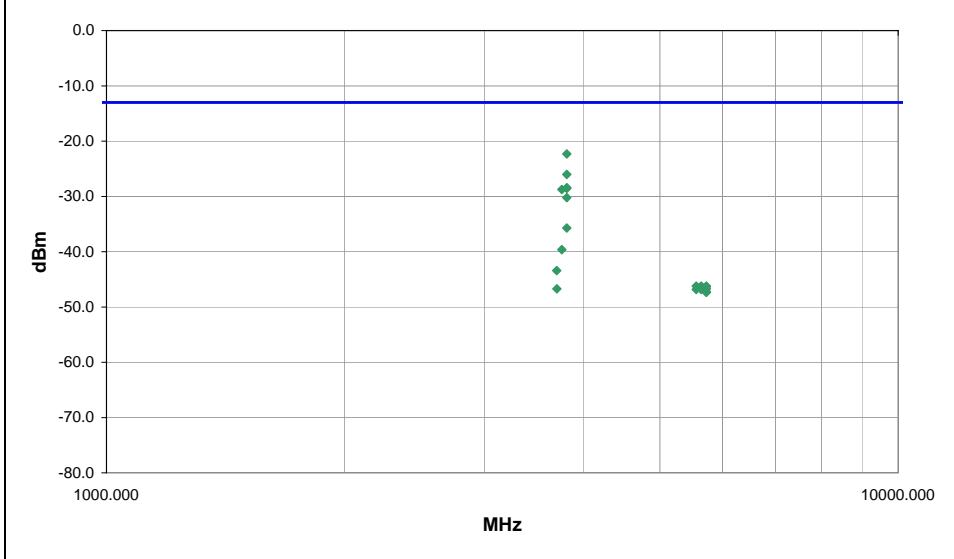
**COMMENTS**  
Notebook standalone

**EUT OPERATING MODES**  
HSDPA, packet data, PCS band, (Please see comment section for channel measured)

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	28
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature* 



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3814.915	142.0	1.0	H-Horn	PK	5.85E-06	-22.3	-13.0	-9.3	High channel, notebook on side
3814.762	259.0	1.0	H-Horn	PK	2.50E-06	-26.0	-13.0	-13.0	High channel, notebook in typical position
3814.870	317.0	1.0	V-Horn	PK	1.44E-06	-28.4	-13.0	-15.4	High channel, notebook screen horizontal
3814.798	44.0	1.0	H-Horn	PK	1.40E-06	-28.5	-13.0	-15.5	High channel, notebook screen horizontal
3760.188	151.0	1.0	H-Horn	PK	1.34E-06	-28.7	-13.0	-15.7	Mid channel, notebook on side
3814.758	137.0	1.0	V-Horn	PK	9.49E-07	-30.2	-13.0	-17.2	High channel, notebook in typical position
3814.842	272.0	1.0	V-Horn	PK	2.67E-07	-35.7	-13.0	-22.7	High channel, notebook on side
3760.490	41.0	1.0	V-Horn	PK	1.09E-07	-39.6	-13.0	-26.6	Mid channel, notebook on side
3705.227	124.0	1.0	H-Horn	PK	4.54E-08	-43.4	-13.0	-30.4	Low channel, notebook on side
5557.245	279.0	2.1	H-Horn	PK	2.38E-08	-46.2	-13.0	-33.2	Low channel, notebook screen horizontal
5640.403	173.0	2.9	H-Horn	PK	2.38E-08	-46.2	-13.0	-33.2	Mid channel, notebook on side
5722.613	89.0	1.0	H-Horn	PK	2.38E-08	-46.2	-13.0	-33.2	High channel, notebook screen horizontal
5722.870	307.0	2.6	V-Horn	PK	2.33E-08	-46.3	-13.0	-33.3	High channel, notebook screen horizontal
3705.282	36.0	1.0	V-Horn	PK	2.12E-08	-46.7	-13.0	-33.7	Low channel, notebook on side
5722.413	254.0	1.0	V-Horn	PK	2.12E-08	-46.7	-13.0	-33.7	High channel, notebook in typical position
5557.323	199.0	2.5	V-Horn	PK	2.08E-08	-46.8	-13.0	-33.8	Low channel, notebook in typical position
5640.275	313.0	3.4	V-Horn	PK	2.08E-08	-46.8	-13.0	-33.8	Mid channel, notebook on side
5722.705	246.0	1.0	H-Horn	PK	1.89E-08	-47.2	-13.0	-34.2	High channel, notebook in typical position
5722.422	87.0	1.0	H-Horn	PK	1.85E-08	-47.3	-13.0	-34.3	High channel, notebook on side
5723.185	173.0	2.1	V-Horn	PK	1.85E-08	-47.3	-13.0	-34.3	High channel, notebook on side

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/18/07
Customer: Spectrum Technology, Inc.	Temperature: 23
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 29.99
Tested by: Rod Peloquin	Power: 13.8 VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

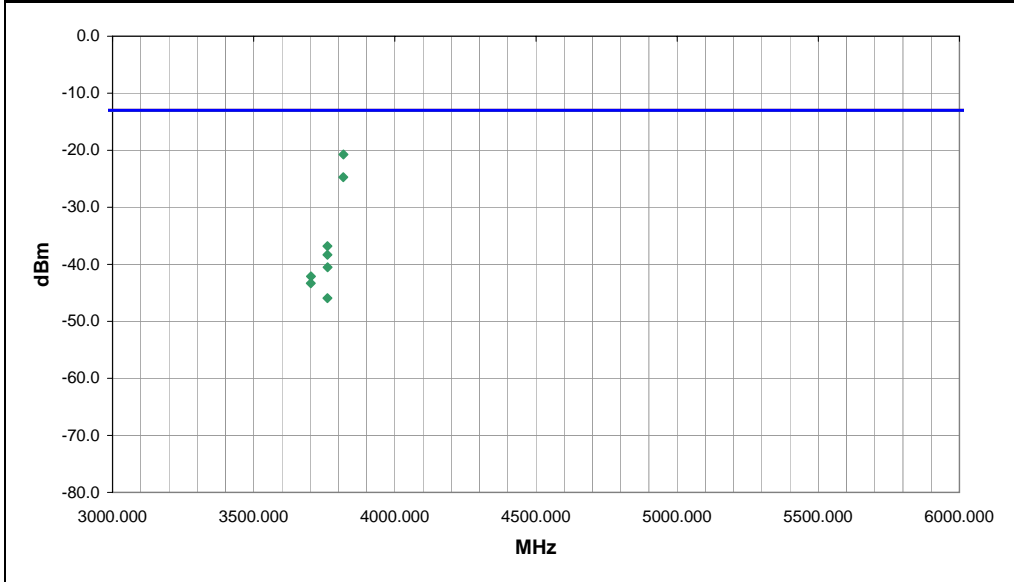
<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

**COMMENTS**  
Notebook in optional vehical mount configuration. External antenna.

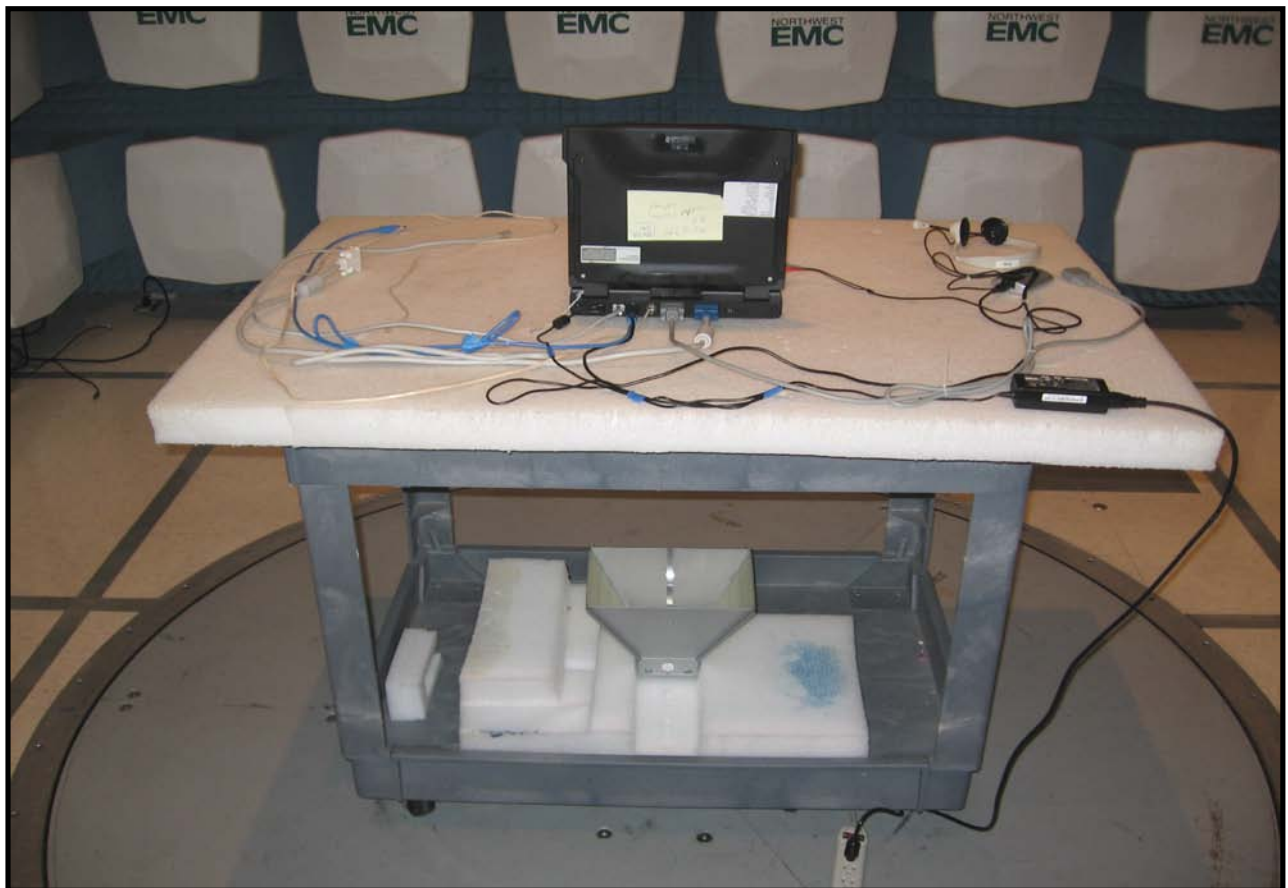
**EUT OPERATING MODES**  
HSDPA, Packet Data, PCS band

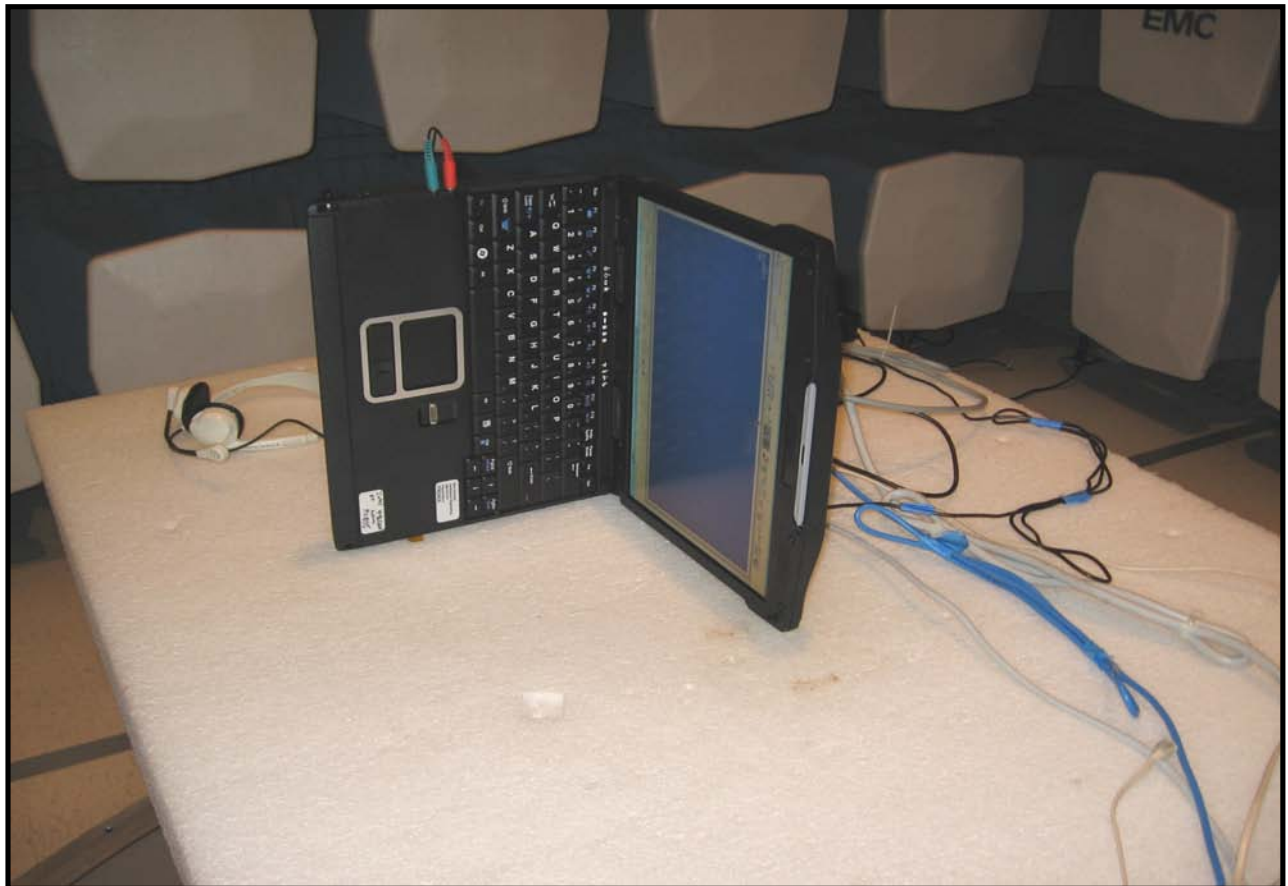
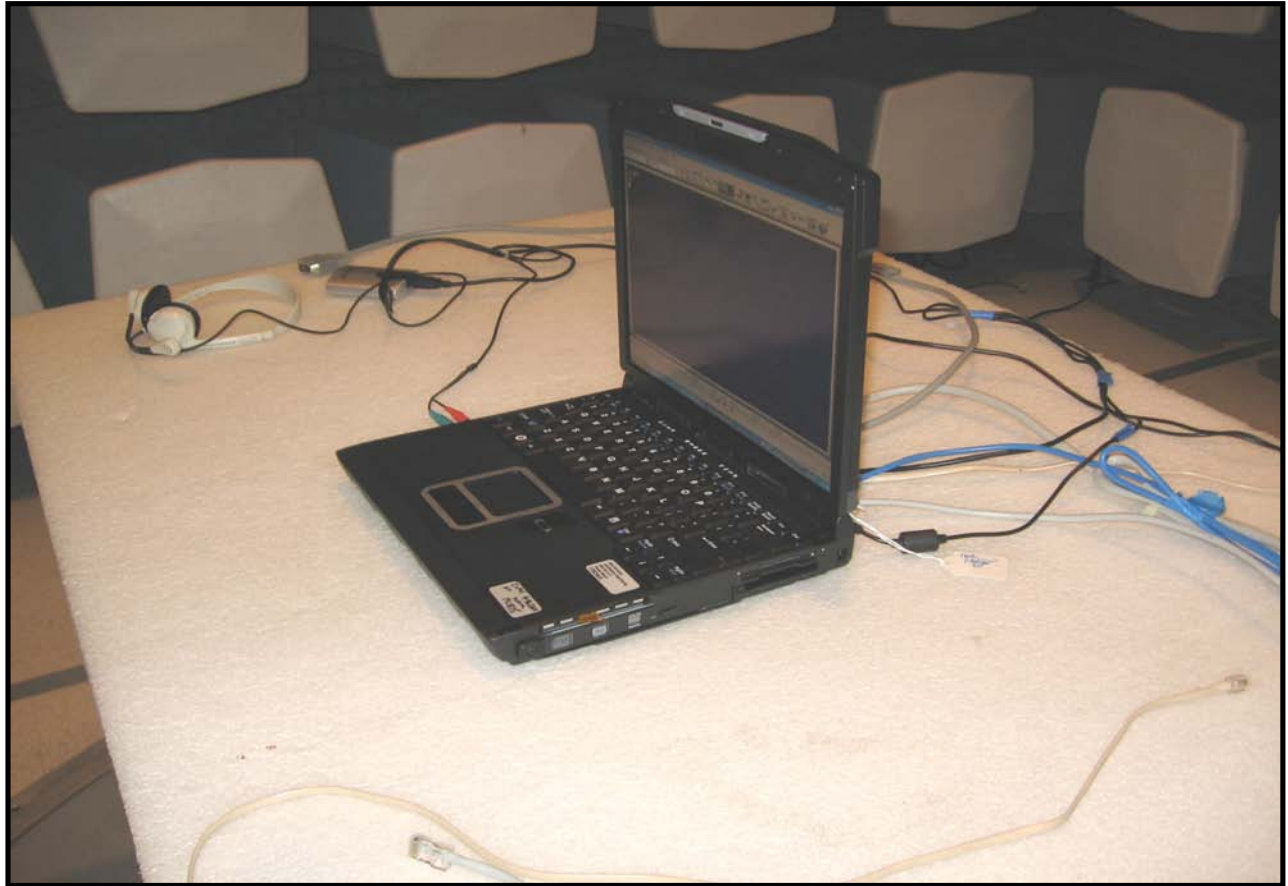
**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	29	NVLAP Lab Code 200630-0	Signature <i>Rodney Le Peloquin</i>
Configuration #	2		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
3817.610	237.0	1.2	H-Horn	PK	8.46E-06	-20.7	-13.0	-7.7	High channel, antenna on side
3817.380	210.0	1.1	V-Horn	PK	3.37E-06	-24.7	-13.0	-11.7	High channel, antenna vertical
3760.920	249.0	1.2	H-Horn	PK	2.08E-07	-36.8	-13.0	-23.8	Mid channel, antenna on side
3761.410	186.0	1.0	V-Horn	PK	1.47E-07	-38.3	-13.0	-25.3	Mid channel, antenna vertical
3761.490	151.0	1.1	V-Horn	PK	8.85E-08	-40.5	-13.0	-27.5	Mid channel, antenna on side
3702.720	234.0	1.2	H-Horn	PK	6.13E-08	-42.1	-13.0	-29.1	Low channel, antenna on side
3702.050	157.0	1.0	V-Horn	PK	4.65E-08	-43.3	-13.0	-30.3	Low channel, antenna vertical
3761.330	223.0	1.2	H-Horn	PK	2.55E-08	-45.9	-13.0	-32.9	Mid channel, antenna vertical













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.

**OPERATING BANDS**

PCS

**MODES OF OPERATION**

GPRS

EDGE

WCDMA

HSDPA

**CHANNELS INVESTIGATED FOR GPRS AND EDGE**

Low channel, Ch. 512, 1850.2MHz

Mid channel, Ch. 661, 1880MHz

High channel, Ch. 810, 1909.8MHz

**CHANNELS INVESTIGATED FOR WCDMA AND HSDPA**

Low channel, Ch. 9262, 1852.4MHz

Mid channel, Ch. 9400, 1880MHz

High channel, Ch. 9538, 1907.6MHz

**CONFIGURATIONS INVESTIGATED**

Notebook configuration, internal antenna

Optional vehicle mount configuration, external antenna

**POWER SETTINGS INVESTIGATED**

120VAC/60Hz

**FREQUENCY RANGE INVESTIGATED**

Start Frequency	1850.2MHz	Stop Frequency	1909.8MHz
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**SAMPLE CALCULATIONS**

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

**TEST EQUIPMENT**

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV01 cables g,h,j			EVB	12/29/2006	13
Antenna, Horn	EMCO	3115	AHJ	5/20/2005	24
Antenna, Horn	EMCO	3115	AHC	8/24/2006	12
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2006	13
Power Meter	Gigatronics	8651A	SPM	9/19/2006	12
Power Sensor	Gigatronics	80701A	SPL	9/19/2006	12
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2006	13

**MEASUREMENT BANDWIDTHS**

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data	
			(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 and/or receiving while set at the lowest channel, a middle channel, and the highest channel available. 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 (per ANSI C63.4:2003).

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 horn antenna and its gain (dBi); the effective isotropic radiated power for each fundamental emission was determined.

EUT: MC8775 in the IX605	Work Order: SPT0050
Serial Number: None	Date: 04/09/07
Customer: Spectrum Technology, Inc.	Temperature: 23
Attendees: Rod Munro	Humidity: 47%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkanjehad	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS	
FCC 24E:2006	Test Method
	ANSI/TIA/EIA-603-B:2002

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

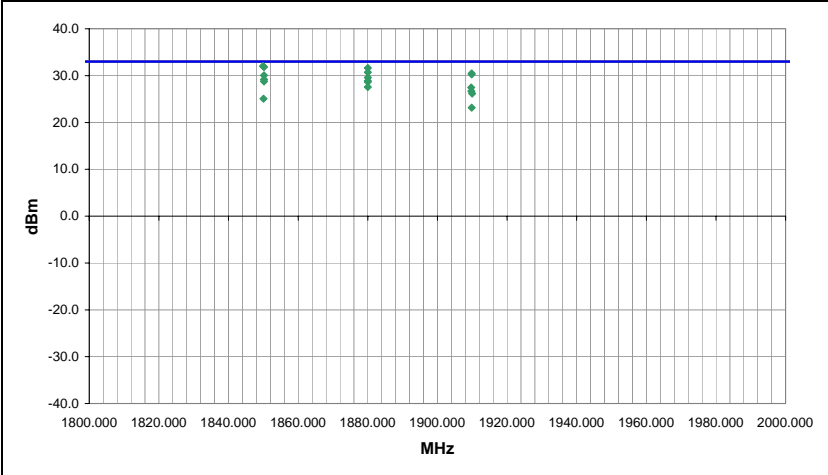
COMMENTS  
Internal antenna. Notebook standalone configuration.

EUT OPERATING MODES  
GSM PCS band, see comments for channel

DEVIATIONS FROM TEST STANDARD  
No deviations.

Run #	2
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkanjehad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1849.890	360.0	1.7	V-Horn	PK	1.59E+00	32.0	33.0	-1.0	Packet Switched (GPRS), Low channel, Notebook screen horizontal
1850.200	39.0	1.0	H-Horn	PK	1.53E+00	31.9	33.0	-1.1	Packet Switched (GPRS), Low channel, Notebook on side
1880.000	11.0	1.0	H-Horn	PK	1.45E+00	31.6	33.0	-1.4	Packet Switched (GPRS), Mid channel, Notebook on side
1880.000	55.0	1.4	H-Horn	PK	1.18E+00	30.7	33.0	-2.3	Packet Switched (GPRS), Mid channel, Notebook screen horizontal
1909.830	21.0	1.0	H-Horn	PK	1.11E+00	30.5	33.0	-2.5	Packet Switched (GPRS), High channel, Notebook on side
1909.840	18.0	1.0	H-Horn	PK	1.06E+00	30.3	33.0	-2.7	Packet Switched (GPRS), High channel, Notebook typical position
1850.200	26.0	1.0	V-Horn	PK	1.02E+00	30.1	33.0	-2.9	Packet Switched (GPRS), Low channel, Notebook on side
1880.000	57.0	1.0	V-Horn	PK	9.06E-01	29.6	33.0	-3.4	Packet Switched (GPRS), Mid channel, Notebook typical position
1850.200	288.0	1.0	V-Horn	PK	8.26E-01	29.2	33.0	-3.8	Packet Switched (GPRS), Low channel, Notebook typical position
1880.000	278.0	1.0	V-Horn	PK	7.71E-01	28.9	33.0	-4.1	Packet Switched (GPRS), Mid channel, Notebook on side
1850.200	8.0	1.0	H-Horn	PK	7.54E-01	28.8	33.0	-4.2	Packet Switched (GPRS), Low channel, Notebook typical position
1880.000	360.0	1.1	V-Horn	PK	7.36E-01	28.7	33.0	-4.3	Packet Switched (GPRS), Mid channel, Notebook screen horizontal
1880.000	326.0	1.0	H-Horn	PK	5.72E-01	27.6	33.0	-5.4	Packet Switched (GPRS), Mid channel, Notebook typical position
1909.705	360.0	1.7	V-Horn	PK	5.59E-01	27.5	33.0	-5.5	Packet Switched (GPRS), High channel, Notebook screen horizontal
1909.760	300.0	1.0	V-Horn	PK	4.65E-01	26.7	33.0	-6.3	Packet Switched (GPRS), High channel, Notebook on side
1909.960	300.0	1.0	V-Horn	PK	4.14E-01	26.2	33.0	-6.8	Packet Switched (GPRS), High channel, Notebook typical position
1850.050	45.0	1.0	H-Horn	PK	3.21E-01	25.1	33.0	-7.9	Packet Switched (GPRS), Low channel, Notebook screen horizontal
1909.815	41.0	1.0	H-Horn	PK	2.08E-01	23.2	33.0	-9.8	Packet Switched (GPRS), High channel, Notebook screen horizontal

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/11/07
Customer: Spectrum Technology, Inc.	Temperature: 23
Attendees: Rod Munro	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 13.8 VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	<b>Test Method</b>
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

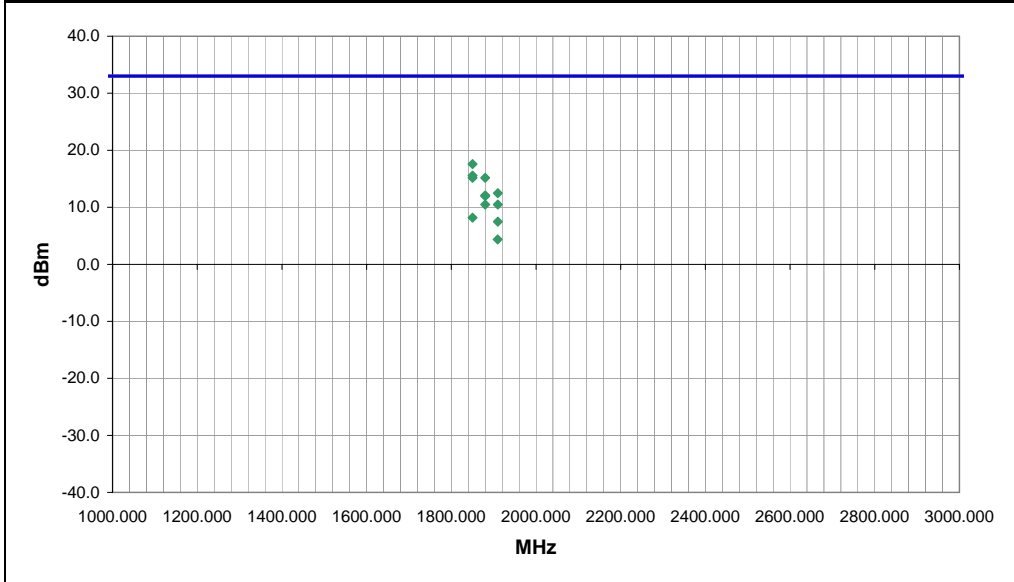
<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

**COMMENTS**  
Notebook in optional vehicular configuration. External antenna.

**EUT OPERATING MODES**  
GPRS, PCS band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	14	NVLAP Lab Code 200630-0	Signature <i>Holly Ashkannejhad</i>
Configuration #	2		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1850.060	0.0	1.0	V-Horn	PK	5.72E-02	17.6	33.0	-15.4	Low channel, antenna vertical
1850.200	353.0	1.4	V-Horn	PK	3.61E-02	15.6	33.0	-17.4	Low channel, antenna on side
1850.200	265.0	1.0	H-Horn	PK	3.29E-02	15.2	33.0	-17.8	Low channel, antenna on side
1880.120	346.0	1.3	V-Horn	PK	3.29E-02	15.2	33.0	-17.8	Mid channel, antenna vertical
1909.875	360.0	1.0	V-Horn	PK	1.77E-02	12.5	33.0	-20.5	High channel, antenna vertical
1880.000	340.0	1.0	V-Horn	PK	1.61E-02	12.1	33.0	-20.9	Mid channel, antenna on side
1880.000	344.0	1.0	V-Horn	PK	1.57E-02	12.0	33.0	-21.0	Mid channel, antenna on side
1880.080	272.0	1.0	V-Horn	PK	1.11E-02	10.5	33.0	-22.5	Mid channel, antenna vertical
1909.900	246.0	1.0	H-Horn	PK	1.11E-02	10.5	33.0	-22.5	High channel, antenna on side
1850.085	31.0	1.0	H-Horn	PK	6.56E-03	8.2	33.0	-24.8	Low channel, antenna vertical
1909.845	251.0	1.0	V-Horn	PK	5.59E-03	7.5	33.0	-25.5	High channel, antenna on side
1909.655	112.0	1.0	H-Horn	PK	2.74E-03	4.4	33.0	-28.6	High channel, antenna vertical

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/09/07
Customer: Spectrum Technology, Inc.	Temperature: 21
Attendees: Rod Munro	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	
FCC 24E:2006	Test Method: ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

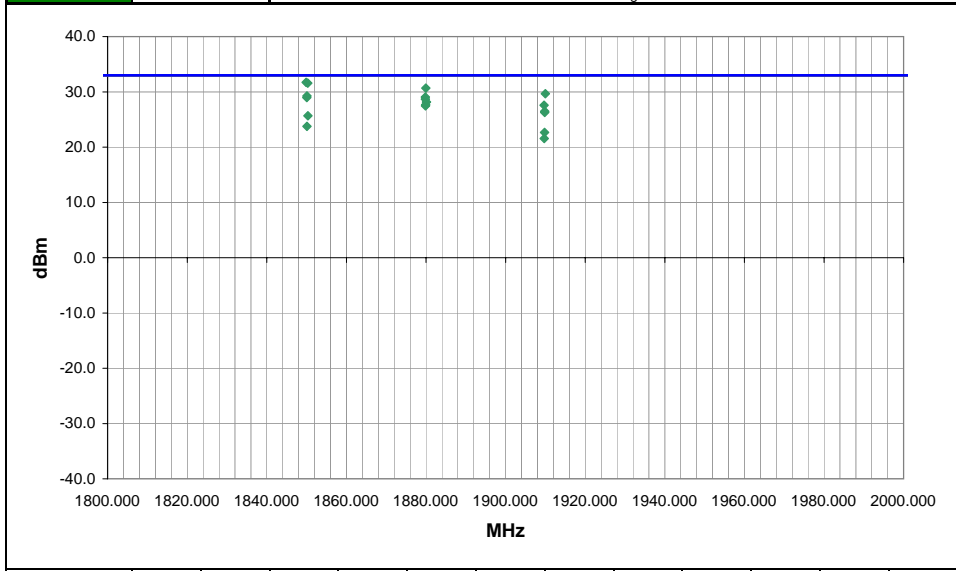
**COMMENTS**  
Internal antenna. Notebook standalone configuration.

**EUT OPERATING MODES**  
EGPRS, Packet Data, PCS band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	3
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1849.905	39.0	1.0	H-Horn	PK	1.48E+00	31.7	33.0	-1.3	Mid channel, notebook on side
1850.280	209.0	1.1	H-Horn	PK	1.44E+00	31.6	33.0	-1.4	Mid channel, notebook typical position
1879.940	35.0	1.0	H-Horn	PK	1.17E+00	30.7	33.0	-2.3	Mid channel, Notebook on side
1910.000	360.0	1.0	H-Horn	PK	9.27E-01	29.7	33.0	-3.3	High channel, notebook on side
1850.075	296.0	1.0	V-Horn	PK	8.46E-01	29.3	33.0	-3.7	Mid channel, notebook typical position
1879.845	350.0	1.0	V-Horn	PK	8.07E-01	29.1	33.0	-3.9	Mid channel, typical position
1850.070	328.0	1.0	V-Horn	PK	7.89E-01	29.0	33.0	-4.0	Mid channel, notebook on side
1879.825	301.0	1.0	V-Horn	PK	7.36E-01	28.7	33.0	-4.3	Mid channel, notebook screen horizontal
1880.120	17.0	1.0	V-Horn	PK	6.56E-01	28.2	33.0	-4.8	Mid channel, Notebook on side
1879.905	327.0	1.0	H-Horn	PK	5.85E-01	27.7	33.0	-5.3	Mid channel, typical position
1909.660	-1.0	1.7	V-Horn	PK	5.72E-01	27.6	33.0	-5.4	High channel, notebook typical position
1879.875	327.0	1.0	H-Horn	PK	5.59E-01	27.5	33.0	-5.5	Mid channel, notebook screen horizontal
1909.815	284.0	1.0	V-Horn	PK	4.44E-01	26.5	33.0	-6.5	High channel, notebook on side
1909.825	109.0	1.0	H-Horn	PK	4.24E-01	26.3	33.0	-6.7	High channel, notebook typical position
1850.315	27.0	1.0	V-Horn	PK	3.69E-01	25.7	33.0	-7.3	Mid channel, notebook screen horizontal
1850.105	359.0	1.2	H-Horn	PK	2.38E-01	23.8	33.0	-9.2	Mid channel, notebook screen horizontal
1909.790	223.0	1.0	V-Horn	PK	1.85E-01	22.7	33.0	-10.3	High channel, notebook screen horizontal
1909.720	45.0	1.0	H-Horn	PK	1.44E-01	21.6	33.0	-11.4	High channel, notebook screen horizontal

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/11/07
Customer: Spectrum Technology, Inc.	Temperature: 23
Attendees: Rod Munro	Humidity: 33%
Project: None	Barometric Pres.: 29.98
Tested by: Holly Ashkannejhad	Power: 13.8 VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

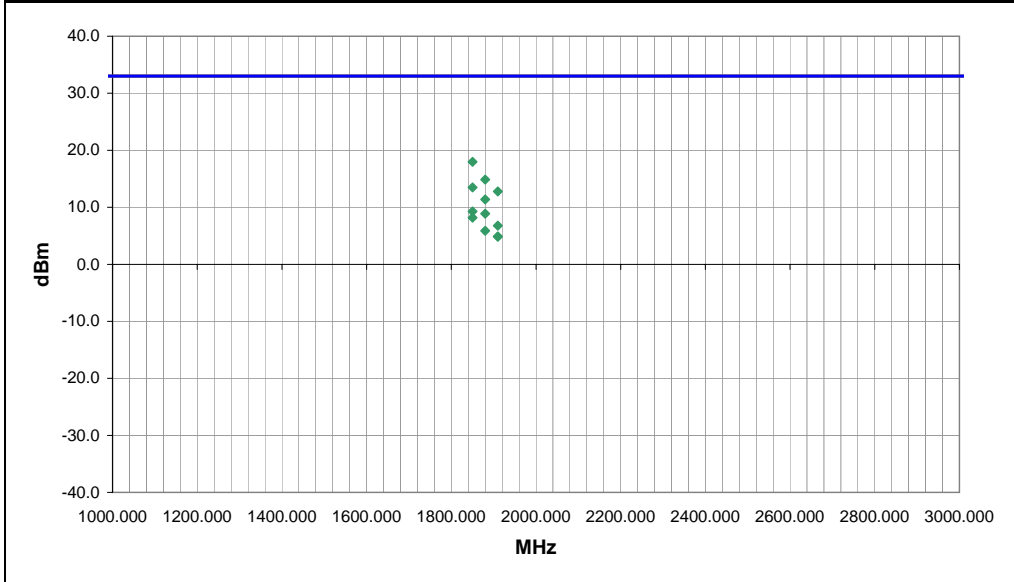
<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

**COMMENTS**  
Notebook in optional vehicular configuration. External antenna.

**EUT OPERATING MODES**  
Edge, PCS band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	15	NVLAP Lab Code 200630-0	Signature <i>Holly Ashkannejhad</i>
Configuration #	2		
Results	Pass		



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1850.160	-1.0	1.4	V-Horn	PK	6.27E-02	18.0	33.0	-15.0	Low channel, antenna vertical
1879.985	344.0	1.3	V-Horn	PK	3.07E-02	14.9	33.0	-18.1	Mid channel, antenna vertical
1850.090	7.0	1.4	V-Horn	PK	2.22E-02	13.5	33.0	-19.5	Low channel, antenna on side
1909.705	360.0	1.0	V-Horn	PK	1.89E-02	12.8	33.0	-20.2	High channel, antenna vertical
1879.915	-1.0	1.3	V-Horn	PK	1.37E-02	11.4	33.0	-21.6	Mid channel, antenna on side
1850.250	187.0	1.0	H-Horn	PK	8.46E-03	9.3	33.0	-23.7	Low channel, antenna on side
1880.000	125.0	1.0	H-Horn	PK	7.71E-03	8.9	33.0	-24.1	Mid channel, antenna on side
1850.170	27.0	1.0	H-Horn	PK	6.56E-03	8.2	33.0	-24.8	Low channel, antenna vertical
1909.695	251.0	1.0	H-Horn	PK	4.75E-03	6.8	33.0	-26.2	High channel, antenna on side
1880.040	-1.0	1.3	V-Horn	PK	3.86E-03	5.9	33.0	-27.1	Mid channel, antenna vertical
1909.720	112.0	1.0	H-Horn	PK	3.07E-03	4.9	33.0	-28.1	High channel, antenna vertical
1909.850	-1.0	1.3	V-Horn	PK	3.07E-03	4.9	33.0	-28.1	High channel, antenna on side

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: David Divergigelis	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	
FCC 24E:2006	Test Method: ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

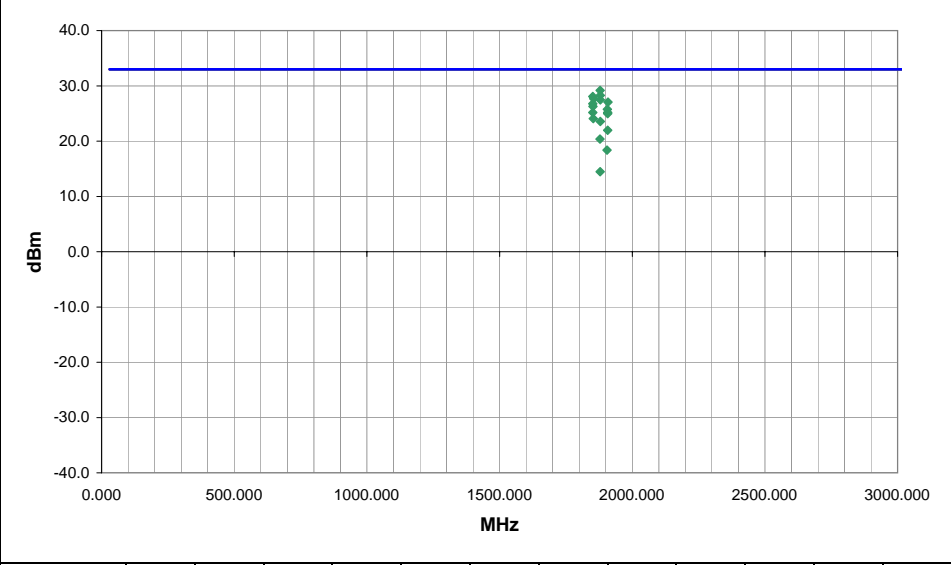
**COMMENTS**  
Notebook standalone

**EUT OPERATING MODES**  
WCDMA, PCS, see comments for channel.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	40
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature* 



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1878.940	216.0	1.2	H-Horn	PK	8.26E-01	29.2	33.0	-3.8	Mid channel, notebook typical position
1879.360	53.0	1.5	H-Horn	PK	6.72E-01	28.3	33.0	-4.7	Mid channel, notebook creen horizontal
1851.540	62.0	1.0	H-Horn	PK	6.41E-01	28.1	33.0	-4.9	Low channel, notebook on side
1854.720	337.0	1.0	V-Horn	PK	5.85E-01	27.7	33.0	-5.3	Low channel, notebook on side
1879.540	360.0	1.2	H-Horn	PK	5.59E-01	27.5	33.0	-5.5	Mid channel, notebook on side
1908.660	59.0	1.0	H-Horn	PK	5.09E-01	27.1	33.0	-5.9	High channel, notebook on side
1851.320	296.0	1.0	V-Horn	PK	4.75E-01	26.8	33.0	-6.2	Low channel, notebook typical position
1852.000	208.0	1.0	H-Horn	PK	4.24E-01	26.3	33.0	-6.7	Low channel, notebook typical position
1906.020	303.0	1.0	V-Horn	PK	3.78E-01	25.8	33.0	-7.2	High channel, notebook typical position
1851.340	297.0	1.0	H-Horn	PK	3.29E-01	25.2	33.0	-7.8	Low channel, notebook screen horizontal
1907.320	323.0	1.0	V-Horn	PK	3.29E-01	25.2	33.0	-7.8	High channel, notebook on side
1907.340	235.0	1.0	V-Horn	PK	3.14E-01	25.0	33.0	-8.0	High channel, notebook on side
1853.220	163.0	1.0	V-Horn	PK	2.55E-01	24.1	33.0	-8.9	Low channel, notebook screen horizontal
1879.560	308.0	1.2	V-Horn	PK	2.28E-01	23.6	33.0	-9.4	Mid channel, notebook typical position
1907.500	107.0	1.0	H-Horn	PK	1.57E-01	22.0	33.0	-11.0	High channel, notebook typical position
1878.120	210.0	1.2	V-Horn	PK	1.09E-01	20.4	33.0	-12.6	Mid channel, notebook on side
1905.180	65.0	1.0	H-Horn	PK	6.87E-02	18.4	33.0	-14.6	High channel, notebook screen horizontal
1879.160	215.0	1.2	V-Horn	PK	2.80E-02	14.5	33.0	-18.5	Mid channel, notebook creen horizontal

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: David Divergigelis	Power: 13.8 VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

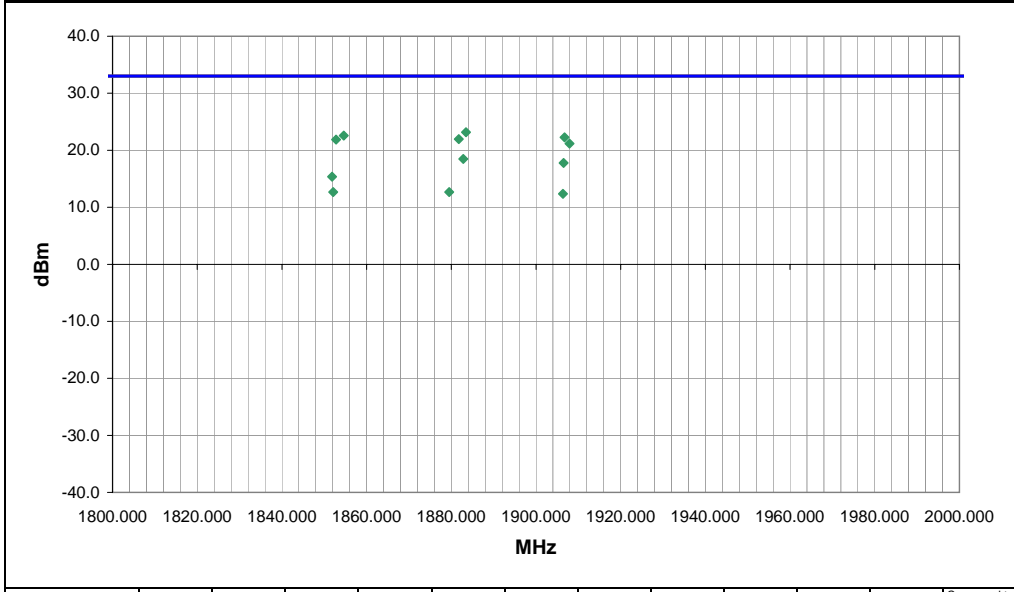
**COMMENTS**  
Optional vehicular configuration with external attenuation

**EUT OPERATING MODES**  
WCDMA, PCS, see comments for channel.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	37
Configuration #	2
Results	Pass

NVLAP Lab Code 200630-0 *Signature* 



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1883.480	26.0	1.0	V-Horn	PK	2.08E-01	23.2	33.0	-9.8	Mid channel, antenna vertical
1854.600	34.0	1.0	V-Horn	PK	1.81E-01	22.6	33.0	-10.4	Low channel, antenna vertical
1906.760	22.0	1.0	V-Horn	PK	1.69E-01	22.3	33.0	-10.7	High channel, antenna vertical
1881.760	297.0	1.0	H-Horn	PK	1.57E-01	22.0	33.0	-11.0	Mid channel, antenna on side
1852.780	301.0	1.0	H-Horn	PK	1.54E-01	21.9	33.0	-11.1	Low channel, antenna on side
1907.920	267.0	1.0	H-Horn	PK	1.31E-01	21.2	33.0	-11.8	High channel, antenna on side
1882.840	160.0	1.0	V-Horn	PK	7.03E-02	18.5	33.0	-14.5	Mid channel, antenna on side
1906.520	167.0	1.0	V-Horn	PK	5.99E-02	17.8	33.0	-15.2	High channel, antenna on side
1851.860	20.0	1.0	V-Horn	PK	3.44E-02	15.4	33.0	-17.6	Low channel, antenna on side
1852.120	207.0	1.0	H-Horn	PK	1.85E-02	12.7	33.0	-20.3	Low channel, antenna vertical
1879.500	324.0	1.0	H-Horn	PK	1.85E-02	12.7	33.0	-20.3	Mid channel, antenna vertical
1906.360	325.0	1.0	H-Horn	PK	1.73E-02	12.4	33.0	-20.6	High channel, antenna vertical

EUT: MC8775 in the IX605	Work Order: SPT0050
Serial Number: None	Date: 04/17/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

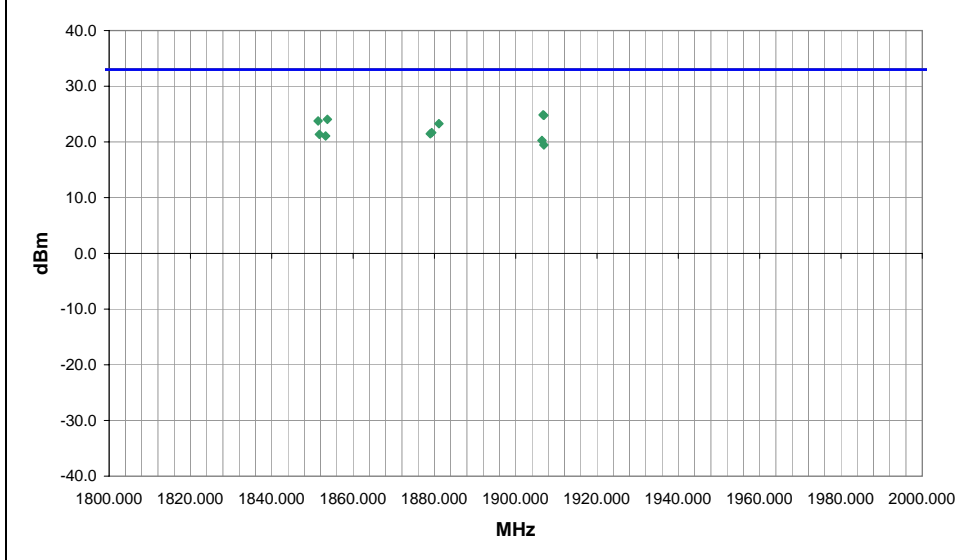
**COMMENTS**  
Notebook standalone

**EUT OPERATING MODES**  
HSDPA, packet data, PCS band, see comments for channel.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	26
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1906.742	221.0	1.0	H-Horn	PK	3.07E-01	24.9	33.0	-8.1	High channel, Notebook typical position
1906.925	53.0	1.0	H-Horn	PK	3.00E-01	24.8	33.0	-8.2	High channel, Notebook on side
1853.667	16.0	1.0	V-Horn	PK	2.55E-01	24.1	33.0	-8.9	Low channel, Notebook typical position
1851.380	204.0	1.3	H-Horn	PK	2.38E-01	23.8	33.0	-9.2	Low channel, Notebook on side
1881.100	196.0	1.2	H-Horn	PK	2.12E-01	23.3	33.0	-9.7	Mid channel, Notebook on side
1879.350	7.0	1.0	V-Horn	PK	1.47E-01	21.7	33.0	-11.3	Mid channel, Notebook on side
1878.992	13.0	1.0	V-Horn	PK	1.40E-01	21.5	33.0	-11.5	Mid channel, Notebook typical position
1851.730	189.0	1.0	V-Horn	PK	1.37E-01	21.4	33.0	-11.6	Low channel, Notebook on side
1853.242	270.0	1.3	H-Horn	PK	1.28E-01	21.1	33.0	-11.9	Low channel, Notebook typical position
1906.458	28.0	1.0	V-Horn	PK	1.06E-01	20.3	33.0	-12.7	High channel, Notebook typical position
1906.930	186.0	1.0	V-Horn	PK	8.85E-02	19.5	33.0	-13.5	High channel, Notebook on side



EUT: MC8775 in the IX605	Work Order: SPT0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: Holly Ashkannejhad	Power: 13.8 VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 24E:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>
Antenna Height(s) (m)   1 - 4   Test Distance (m)   0

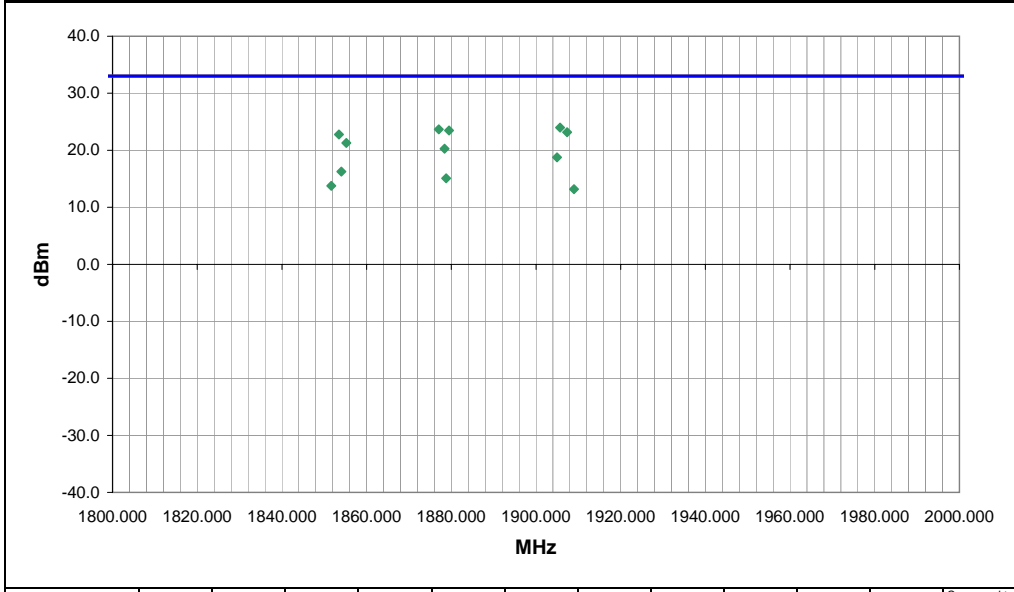
**COMMENTS**  
Optional vehicular configuration with external antenna.

**EUT OPERATING MODES**  
HSDPA, packet data, PCS band, see comments for channel.

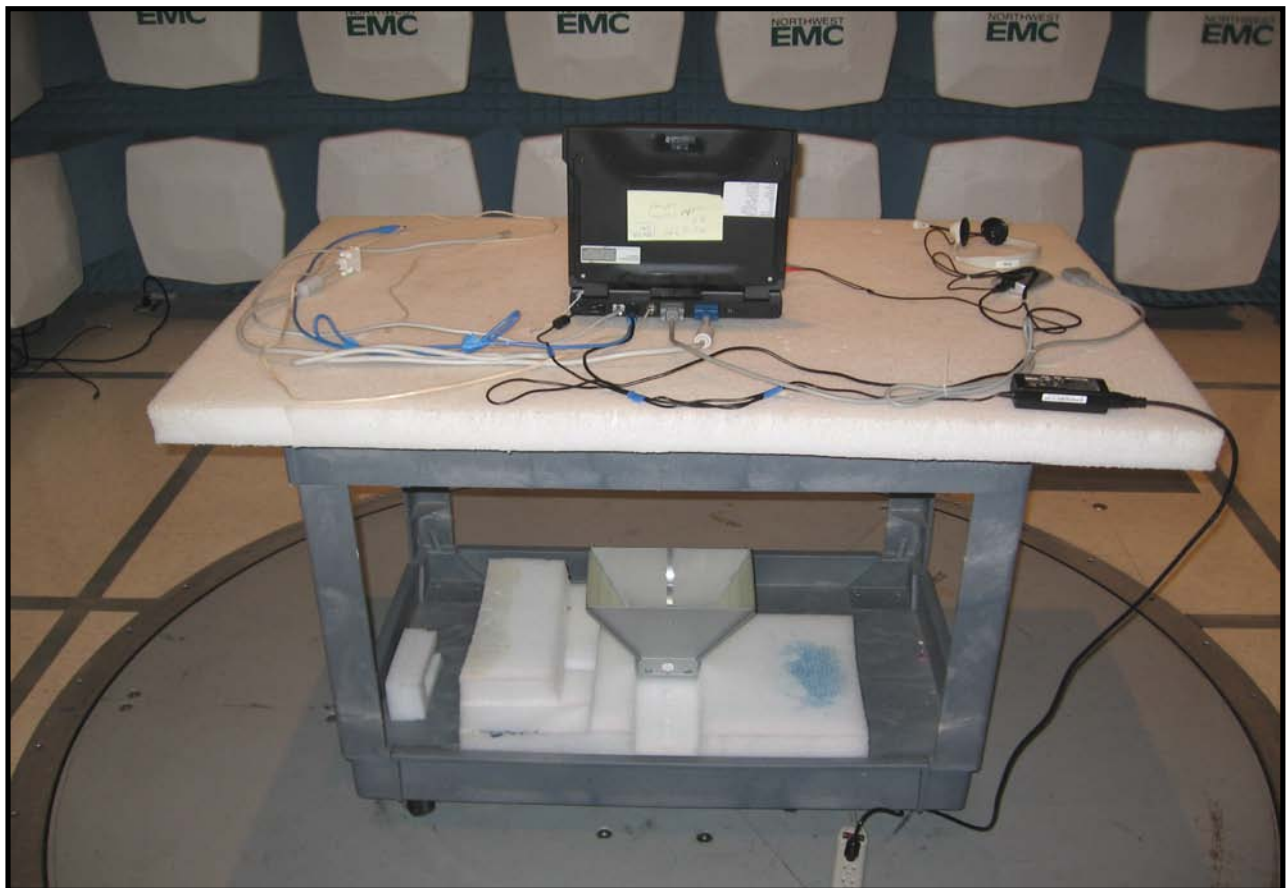
**DEVIATIONS FROM TEST STANDARD**  
No deviations.

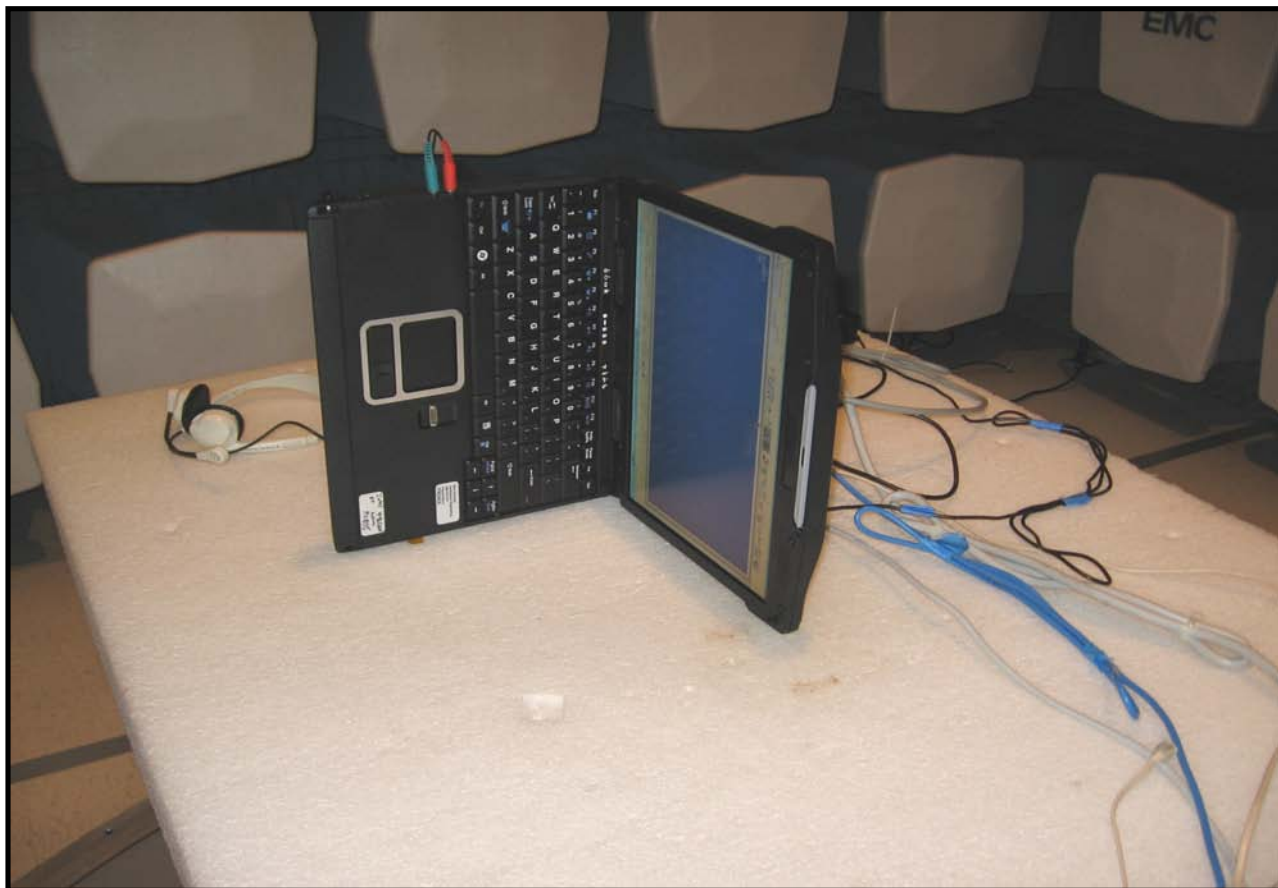
Run #	36
Configuration #	2
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*

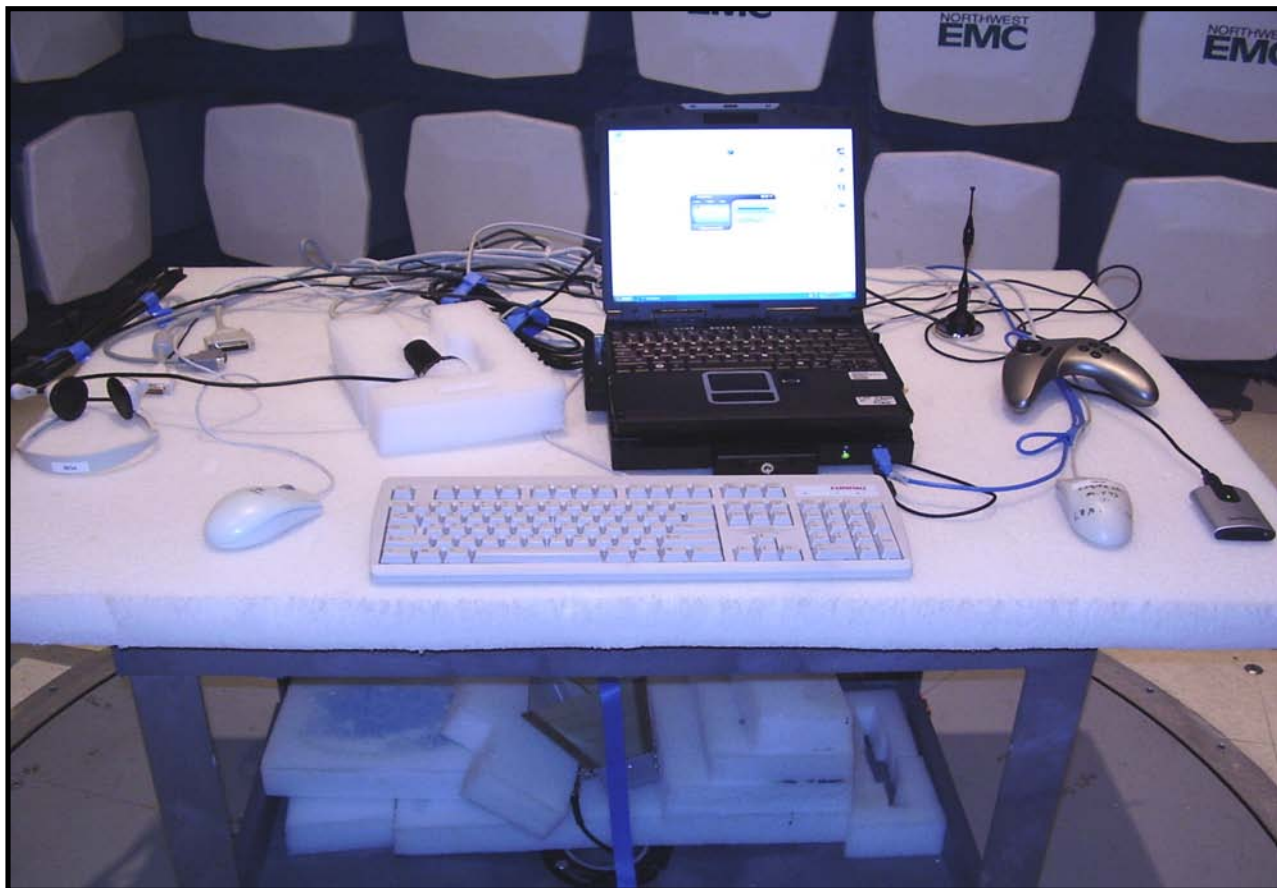


Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	EIRP (Watts)	EIRP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
1905.700	88.0	1.0	V-Horn	PK	2.50E-01	24.0	33.0	-9.0	High channel, antenna vertical
1877.040	11.0	1.0	V-Horn	PK	2.33E-01	23.7	33.0	-9.3	Mid channel, antenna vertical
1879.480	294.0	1.0	H-Horn	PK	2.22E-01	23.5	33.0	-9.5	Mid channel, antenna on side
1907.340	296.0	1.0	H-Horn	PK	2.08E-01	23.2	33.0	-9.8	High channel, antenna on side
1853.480	22.0	1.0	V-Horn	PK	1.89E-01	22.8	33.0	-10.2	Low channel, antenna vertical
1855.220	286.0	1.0	H-Horn	PK	1.34E-01	21.3	33.0	-11.7	Low channel, antenna on side
1878.400	269.0	1.0	V-Horn	PK	1.06E-01	20.3	33.0	-12.7	Mid channel, antenna on side
1904.980	266.0	1.0	V-Horn	PK	7.54E-02	18.8	33.0	-14.2	High channel, antenna on side
1854.040	268.0	1.0	V-Horn	PK	4.24E-02	16.3	33.0	-16.7	Low channel, antenna on side
1878.800	332.0	1.0	H-Horn	PK	3.21E-02	15.1	33.0	-17.9	Mid channel, antenna vertical
1851.640	314.0	1.0	H-Horn	PK	2.38E-02	13.8	33.0	-19.2	Low channel, antenna vertical
1908.980	356.0	1.0	H-Horn	PK	2.08E-02	13.2	33.0	-19.8	High channel, antenna vertical











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.

**OPERATING BANDS**

Cellular

**MODES OF OPERATION**

GPRS

EDGE

WCDMA

HSDPA

**CHANNELS INVESTIGATED FOR GPRS AND EDGE**

Low channel, Ch. 128, 824.2MHz

Mid channel, Ch. 192, 837MHz

High channel, Ch. 251, 848.8MHz

**CHANNELS INVESTIGATED FOR WCDMA AND HSDPA**

Low channel, Ch. 4132, 826.4MHz

Mid channel, Ch. 4182, 836.4MHz

High channel, Ch. 4233, 846.6MHz

**CONFIGURATIONS INVESTIGATED**

Notebook configuration, internal antenna

Optional vehicle mount configuration, external antenna

**POWER SETTINGS INVESTIGATED**

120VAC/60Hz

**FREQUENCY RANGE INVESTIGATED**

Start Frequency	824.2MHz	Stop Frequency	848.8MHz
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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	12/28/2006	24
Antenna, Dipole (ADAA included)	Roberts	Roberts	ADA	12/28/2006	24
Signal Generator	Hewlett-Packard	8648D	TGC	12/7/2006	13
Power Meter	Gigatronics	8651A	SPM	9/19/2006	12
Power Sensor	Gigatronics	80701A	SPL	9/19/2006	12
Spectrum Analyzer	Agilent	E4446A	AAT	12/7/2006	13
EV01 cables c,g, h			EVA	12/29/2006	13
Antenna, Biconilog	EMCO	3141	AXE	12/28/2005	24

**MEASUREMENT BANDWIDTHS**

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

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

**MEASUREMENT UNCERTAINTY**

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

**TEST DESCRIPTION**

The antennas to be used with the EUT were tested. The EUT was transmitting and/or receiving while set at the lowest channel, a middle channel, and the highest channel available. 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 (per ANSI C63.4:2003).

The amplitude and frequency of the highest emissions were noted. The EUT was then replaced with a dipole antenna. A signal generator was connected to the dipole 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.



EUT: MC8775 in the IX605	Work Order: SPT0050
Serial Number: None	Date: 04/09/07
Customer: Spectrum Technology, Inc.	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 22H:2006		ANSI/TIA/EIA-603-B:2002

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

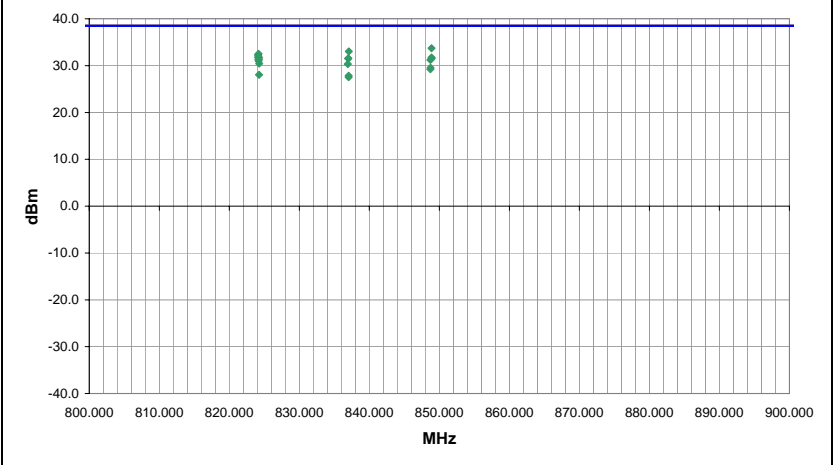
COMMENTS  
Internal antenna. Notebook standalone configuration.

EUT OPERATING MODES  
GSM Cellular band, see comments for channel

DEVIATIONS FROM TEST STANDARD  
No deviations.

Run #	1
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Holly Ashkannejhad*  
Signature



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.879	206.0	1.4	H-Bilog	PK	2.36E+00	33.7	38.5	-4.8	Packet Switched (GPRS), High channel, Notebook typical position
837.075	205.0	1.4	H-Bilog	PK	2.01E+00	33.0	38.5	-5.5	Packet Switched (GPRS), Mid channel, Notebook typical position
824.175	54.0	1.1	V-Bilog	PK	1.79E+00	32.5	38.5	-6.0	Circuit Switched, Low channel, Notebook typical
824.112	58.0	1.1	V-Bilog	PK	1.71E+00	32.3	38.5	-6.2	Packet Switched (GPRS), Low channel, Notebook typical
824.125	195.0	1.6	H-Bilog	PK	1.60E+00	32.0	38.5	-6.5	Circuit Switched, Low channel, Notebook typical
824.125	267.0	1.7	V-Bilog	PK	1.49E+00	31.7	38.5	-6.8	Packet Switched (GPRS), Low channel, Notebook on side
824.254	258.0	1.7	H-Bilog	PK	1.49E+00	31.7	38.5	-6.8	Packet Switched (GPRS), Low channel, Notebook on side
848.875	267.0	1.0	V-Bilog	PK	1.49E+00	31.7	38.5	-6.8	Packet Switched (GPRS), High channel, Notebook typical position
836.971	299.0	1.5	H-Bilog	PK	1.42E+00	31.5	38.5	-7.0	Packet Switched (GPRS), Mid channel, Notebook screen horizontal
836.996	257.0	1.0	V-Bilog	PK	1.42E+00	31.5	38.5	-7.0	Packet Switched (GPRS), Mid channel, Notebook typical position
848.892	142.0	1.6	V-Bilog	PK	1.42E+00	31.5	38.5	-7.0	Packet Switched (GPRS), High channel, Notebook on side
824.162	74.0	1.6	H-Bilog	PK	1.36E+00	31.3	38.5	-7.2	Packet Switched (GPRS), Low channel, Notebook screen horizontal
824.212	295.0	1.7	V-Bilog	PK	1.36E+00	31.3	38.5	-7.2	Circuit Switched, Low channel, Notebook typical
848.717	57.0	2.3	H-Bilog	PK	1.33E+00	31.2	38.5	-7.3	Packet Switched (GPRS), High channel, Notebook screen horizontal
824.183	197.0	1.6	H-Bilog	PK	1.27E+00	31.0	38.5	-7.5	Packet Switched (GPRS), Low channel, Notebook typical
824.267	10.0	1.0	H-Bilog	PK	1.10E+00	30.4	38.5	-8.1	Circuit Switched, Low channel, Notebook typical
836.933	140.0	1.5	V-Bilog	PK	1.08E+00	30.3	38.5	-8.2	Packet Switched (GPRS), Mid channel, Notebook on side
848.733	347.0	1.5	H-Bilog	PK	8.98E-01	29.5	38.5	-9.0	Packet Switched (GPRS), High channel, Notebook on side
848.725	72.0	2.5	V-Bilog	PK	8.38E-01	29.2	38.5	-9.3	Packet Switched (GPRS), High channel, Notebook screen horizontal
824.250	53.0	1.6	V-Bilog	PK	6.36E-01	28.0	38.5	-10.5	Packet Switched (GPRS), Low channel, Notebook screen horizontal

EUT:	MC8775 in the IX605	Work Order:	SPT0050
Serial Number:	None	Date:	04/12/07
Customer:	Spectrum Technology, Inc.	Temperature:	21° C
Attendees:	Rod Munro	Humidity:	32%
Project:	None	Barometric Pres.:	30.11
Tested by:	Dan Haas	Power:	13.8 VDC
		Job Site:	EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 22H:2006	ANSI/TIA/EIA-603-B:2002

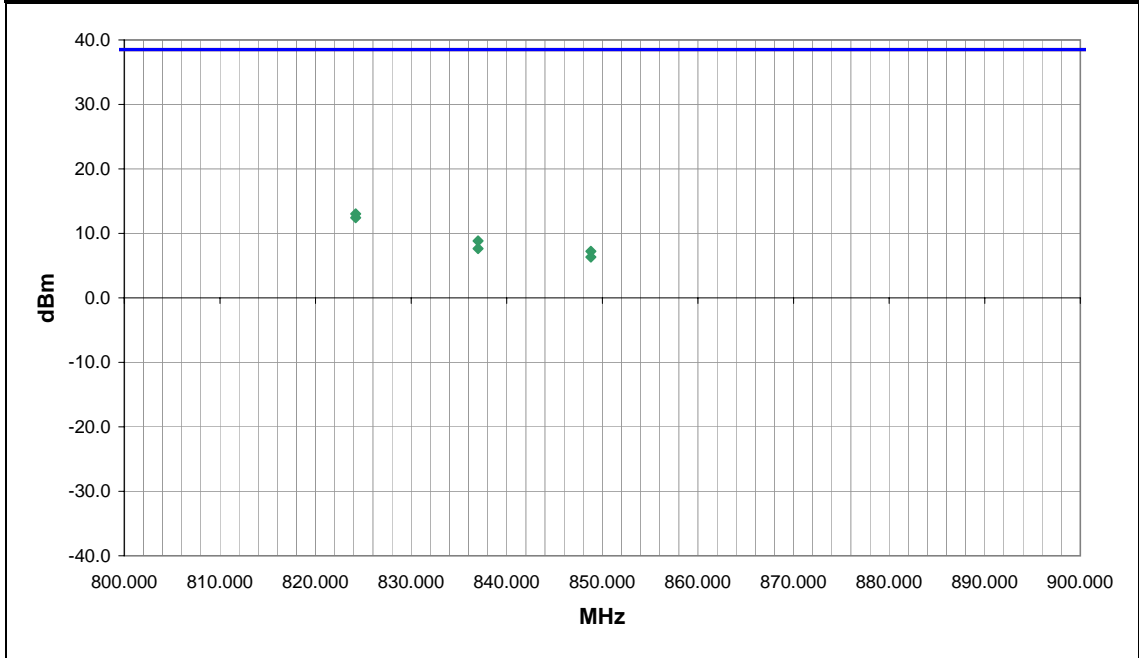
<b>TEST PARAMETERS</b>			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

**COMMENTS**  
Notebook in optional vehicular configuration. External antenna.

**EUT OPERATING MODES**  
GPRS, Packet Data, Cellular band.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	20	NVLAP Lab Code 200630-0 Signature 
Configuration #	2	
Results	Pass	



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
824.200	241.0	1.0	H-Bilog	PK	2.01E-02	13.0	38.5	-25.5	Low channel.
824.200	227.0	1.4	V-Bilog	PK	1.75E-02	12.4	38.5	-26.1	Low channel.
837.000	269.0	1.2	V-Bilog	PK	7.64E-03	8.8	38.5	-29.7	Mid channel.
837.000	244.0	1.0	H-Bilog	PK	5.80E-03	7.6	38.5	-30.9	Mid channel.
848.800	202.0	1.6	H-Bilog	PK	5.29E-03	7.2	38.5	-31.3	High channel.
848.800	241.0	1.0	V-Bilog	PK	4.30E-03	6.3	38.5	-32.2	High channel.



EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/10/07
Customer: Spectrum Technology, Inc.	Temperature: 22
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.05
Tested by: Rod Peloquin	Power: 120VAC/60Hz
	Job Site: EV01

TEST SPECIFICATIONS		Test Method	
FCC 22H:2006		ANSI/TIA/EIA-603-B:2002	

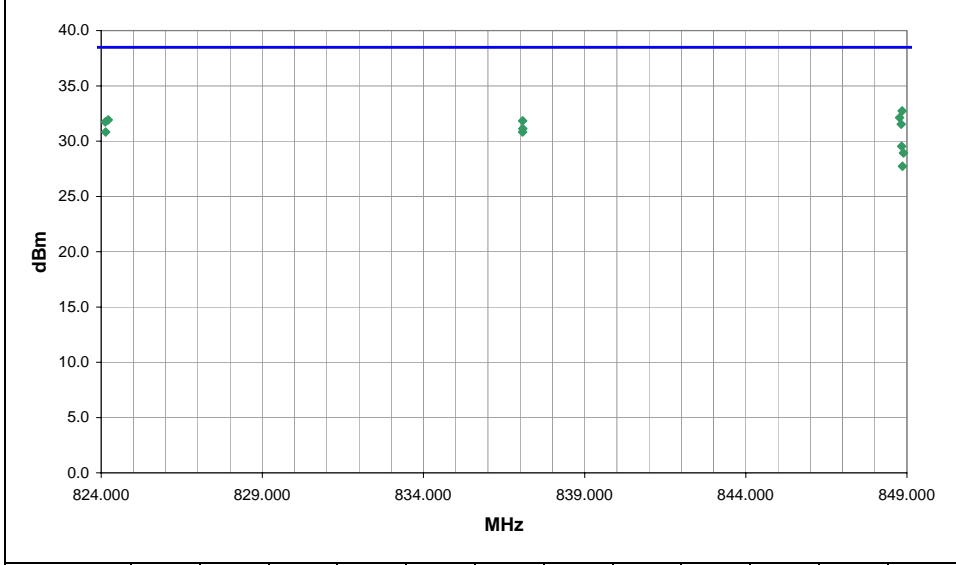
TEST PARAMETERS			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

**COMMENTS**  
Internal antenna. Notebook standalone configuration.

**EUT OPERATING MODES**  
EGPRS, Packet Data, Cellular band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	5	 Signature
Configuration #	1	
Results	Pass	



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
848.853	71.0	1.5	H-Bilog	PK	1.88E+00	32.7	38.5	-5.8	High channel, Notebook screen horizontal
848.773	207.0	1.5	H-Bilog	PK	1.63E+00	32.1	38.5	-6.4	High channel, Notebook typical
824.217	206.0	1.0	H-Bilog	PK	1.56E+00	31.9	38.5	-6.6	Low channel, Notebook typical
837.077	69.0	1.5	H-Bilog	PK	1.52E+00	31.8	38.5	-6.7	Mid channel, Notebook screen horizontal
824.127	67.0	1.6	H-Bilog	PK	1.49E+00	31.7	38.5	-6.8	Low channel, Notebook screen horizontal
848.820	232.0	1.0	V-Bilog	PK	1.42E+00	31.5	38.5	-7.0	High channel, Notebook typical
837.080	203.0	1.6	H-Bilog	PK	1.30E+00	31.1	38.5	-7.4	Mid channel, Notebook typical
824.137	125.0	1.0	V-Bilog	PK	1.21E+00	30.8	38.5	-7.7	Low channel, Notebook typical
837.077	237.0	1.0	V-Bilog	PK	1.21E+00	30.8	38.5	-7.7	Mid channel, Notebook typical
848.837	1.0	1.6	H-Bilog	PK	8.98E-01	29.5	38.5	-9.0	High channel, Notebook on side
848.890	219.0	1.0	V-Bilog	PK	7.82E-01	28.9	38.5	-9.6	High channel, Notebook on side
848.860	231.0	3.1	V-Bilog	PK	5.93E-01	27.7	38.5	-10.8	High channel, Notebook screen horizontal

NORTHWEST **EMC Effective Radiated Power (ERP)** PSA 2007.01.31  
EMI 2006.12.20

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/12/07
Customer: Spectrum Technology, Inc.	Temperature: 22
Attendees: Rod Munro	Humidity: 33%
Project: None	Barometric Pres.: 30.12
Tested by: Holly Ashkannejhad	Power: 13.8 VDC
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>		<b>Test Method</b>	
FCC 22H:2006		ANSI/TIA/EIA-603-B:2002	

<b>TEST PARAMETERS</b>			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

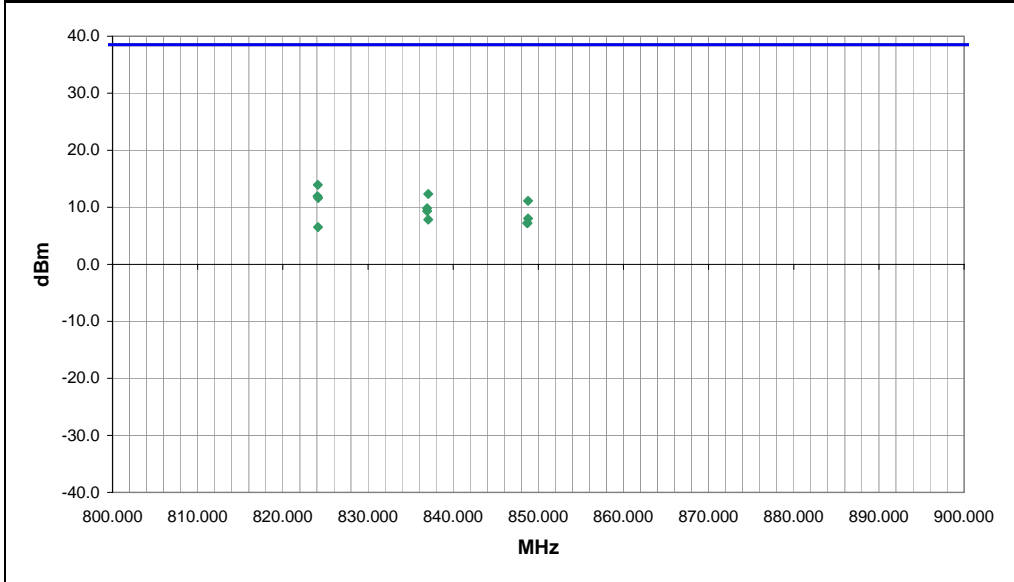
**COMMENTS**  
Notebook in optional vehicular configuration. External antenna.

**EUT OPERATING MODES**  
EGPRS, Packet Data, Cellular band, see comments for channel

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	22	Signature <i>Holly Ashkannejhad</i>
Configuration #	2	
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)	Comments
824.100	312.0	1.0	H-Bilog	PK	2.47E-02	13.9	38.5	-24.6	Low channel, antenna on side
837.080	312.0	1.0	H-Bilog	PK	1.71E-02	12.3	38.5	-26.2	Mid channel, antenna on side
824.070	248.0	1.0	V-Bilog	PK	1.56E-02	11.9	38.5	-26.6	Low channel, antenna on side
824.150	236.0	1.0	H-Bilog	PK	1.46E-02	11.6	38.5	-26.9	Low channel, antenna vertical
848.805	56.0	1.7	V-Bilog	PK	1.30E-02	11.1	38.5	-27.4	High channel, antenna vertical
836.945	260.0	1.7	V-Bilog	PK	9.62E-03	9.8	38.5	-28.7	Mid channel, antenna vertical
836.940	264.0	1.7	V-Bilog	PK	8.57E-03	9.3	38.5	-29.2	Mid channel, antenna on side
848.790	62.0	1.7	V-Bilog	PK	6.36E-03	8.0	38.5	-30.5	High channel, antenna on side
837.075	242.0	1.0	H-Bilog	PK	6.07E-03	7.8	38.5	-30.7	Mid channel, antenna vertical
848.705	204.0	1.7	H-Bilog	PK	5.29E-03	7.2	38.5	-31.3	High channel, antenna vertical
848.730	301.0	1.0	H-Bilog	PK	5.29E-03	7.2	38.5	-31.3	High channel, antenna on side
824.130	166.0	1.3	V-Bilog	PK	4.50E-03	6.5	38.5	-32.0	Low channel, antenna vertical

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: David Divergigelis	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	
FCC 22H:2006	Test Method: ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>			
Antenna Height(s) (m)	1 - 4	Test Distance (m)	0

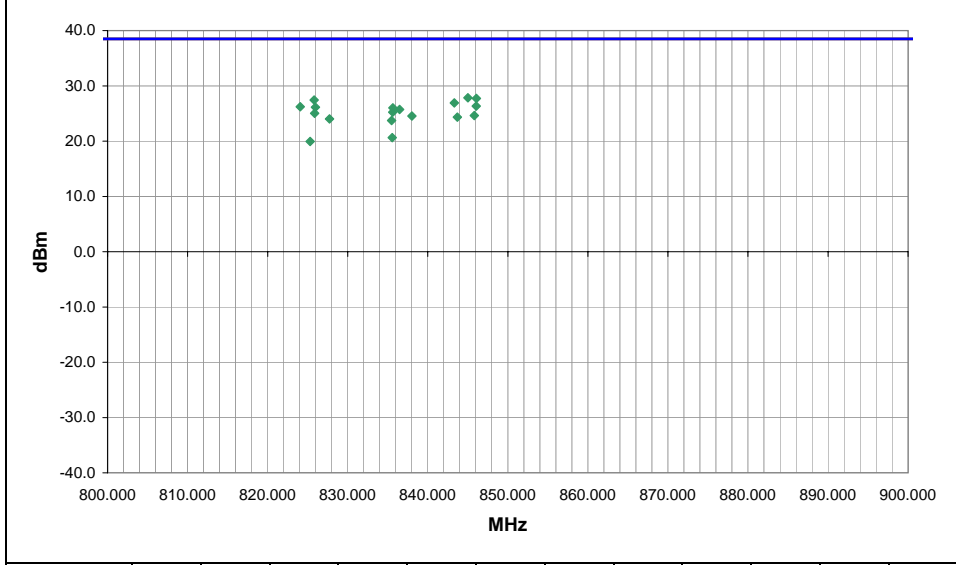
**COMMENTS**  
Notebook standalone

**EUT OPERATING MODES**  
WCDMA, Cellular, see comments for channel.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	39
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature* 



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
845.020	212.0	1.6	V-Bilog	PK	6.07E-01	27.8	38.5	-10.7	High channel, notebook on side
846.080	300.0	1.0	V-Bilog	PK	5.93E-01	27.7	38.5	-10.8	High channel, notebook typical position
825.800	297.0	1.0	H-Bilog	PK	5.54E-01	27.4	38.5	-11.1	Low channel, notebook screen horizontal
843.320	189.0	1.0	H-Bilog	PK	4.93E-01	26.9	38.5	-11.6	High channel, notebook typical position
846.060	81.0	1.6	H-Bilog	PK	4.30E-01	26.3	38.5	-12.2	High channel, notebook screen horizontal
824.060	122.0	1.0	H-Bilog	PK	4.20E-01	26.2	38.5	-12.3	Low channel, notebook typical position
825.960	76.0	1.7	V-Bilog	PK	4.10E-01	26.1	38.5	-12.4	Low channel, notebook typical position
835.640	78.0	1.0	V-Bilog	PK	4.01E-01	26.0	38.5	-12.5	Mid channel, notebook typical position
836.480	181.0	1.0	H-Bilog	PK	3.74E-01	25.7	38.5	-12.8	Mid channel, notebook typical position
835.620	119.0	1.8	V-Bilog	PK	3.34E-01	25.2	38.5	-13.3	Mid channel, notebook on side
825.860	340.0	1.0	H-Bilog	PK	3.19E-01	25.0	38.5	-13.5	Low channel, notebook on side
845.820	337.0	2.8	H-Bilog	PK	2.90E-01	24.6	38.5	-13.9	High channel, notebook on side
838.020	248.0	1.6	H-Bilog	PK	2.84E-01	24.5	38.5	-14.0	Mid channel, notebook screen horizontal
843.700	49.0	1.6	V-Bilog	PK	2.71E-01	24.3	38.5	-14.2	High channel, notebook screen horizontal
827.720	316.0	1.0	V-Bilog	PK	2.53E-01	24.0	38.5	-14.5	Low channel, notebook on side
835.480	294.0	1.0	H-Bilog	PK	2.36E-01	23.7	38.5	-14.8	Mid channel, notebook on side
835.560	221.0	1.0	V-Bilog	PK	1.16E-01	20.6	38.5	-17.9	Mid channel, notebook screen horizontal
825.300	226.0	1.0	V-Bilog	PK	9.84E-02	19.9	38.5	-18.6	Low channel, notebook screen horizontal

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: None	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: David Divergigelis	Power: 13.8 VDC
	Job Site: EV01

TEST SPECIFICATIONS		Test Method	
FCC 22H:2006		ANSI/TIA/EIA-603-B:2002	

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

**COMMENTS**  
Optional vehicular configuration with external attenuation

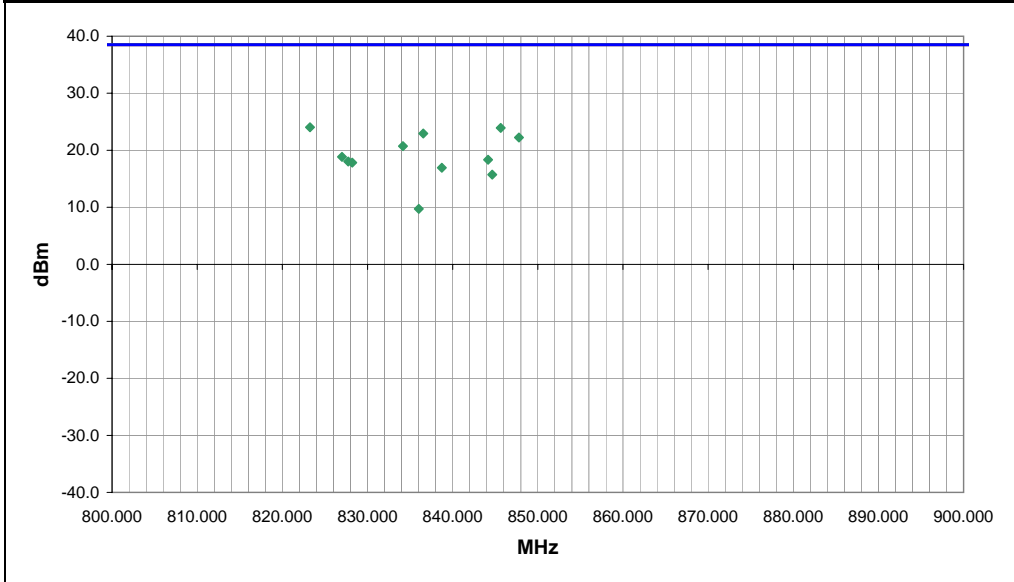
**EUT OPERATING MODES**  
WCDMA, Cellular, see comments for channel.

**DEVIATIONS FROM TEST STANDARD**

No deviations.

Run #	38
Configuration #	2
Results	Pass

NVLAP Lab Code 200630-0 *Signature* 



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
823.240	276.0	1.0	H-Bilog	PK	2.53E-01	24.0	38.5	-14.5	Low channel, antenna on side
845.640	19.0	1.7	V-Bilog	PK	2.47E-01	23.9	38.5	-14.6	High channel, antenna vertical
836.540	308.0	1.0	H-Bilog	PK	1.96E-01	22.9	38.5	-15.6	Mid channel, antenna on side
847.780	225.0	1.0	H-Bilog	PK	1.67E-01	22.2	38.5	-16.3	High channel, antenna on side
834.160	342.0	1.0	V-Bilog	PK	1.18E-01	20.7	38.5	-17.8	Mid channel, antenna on side
827.000	303.0	1.0	H-Bilog	PK	7.64E-02	18.8	38.5	-19.7	Low channel, antenna vertical
844.160	230.0	1.0	H-Bilog	PK	6.81E-02	18.3	38.5	-20.2	High channel, antenna vertical
827.740	282.0	1.0	V-Bilog	PK	6.36E-02	18.0	38.5	-20.5	Low channel, antenna on side
828.200	9.0	1.8	V-Bilog	PK	6.07E-02	17.8	38.5	-20.7	Low channel, antenna vertical
838.720	236.0	1.0	H-Bilog	PK	4.93E-02	16.9	38.5	-21.6	Mid channel, antenna vertical
844.640	-1.0	1.0	V-Bilog	PK	3.74E-02	15.7	38.5	-22.8	High channel, antenna on side
836.020	359.0	1.8	V-Bilog	PK	9.40E-03	9.7	38.5	-28.8	Mid channel, antenna vertical

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/17/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: Holly Ashkannejhad	Power: 120VAC/60Hz
	Job Site: EV01

<b>TEST SPECIFICATIONS</b>	Test Method
FCC 22H:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>
Antenna Height(s) (m)   1 - 4   Test Distance (m)   0

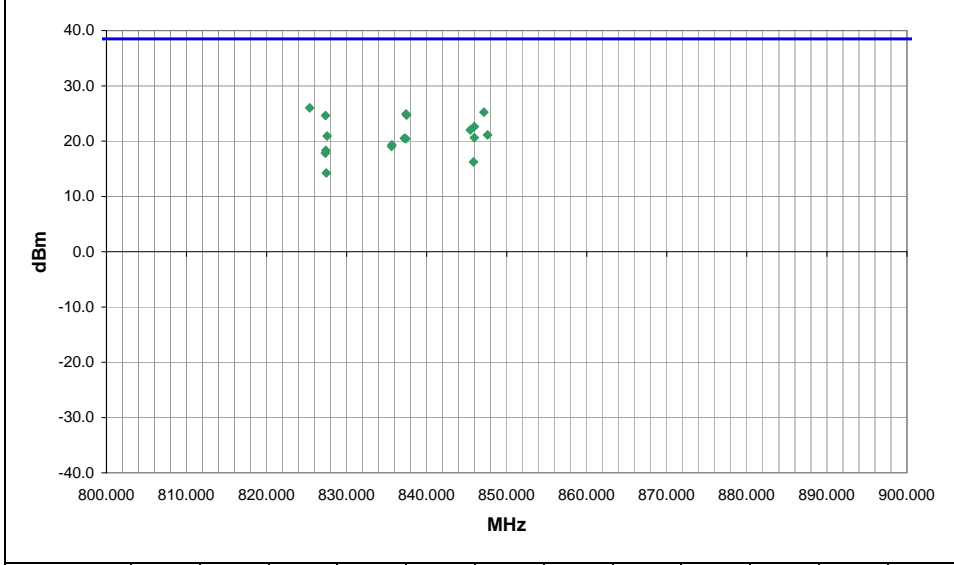
**COMMENTS**  
Notebook standalone

**EUT OPERATING MODES**  
HSDPA, packet data, cellular band, see comments for channel.

**DEVIATIONS FROM TEST STANDARD**  
No deviations.

Run #	25
Configuration #	1
Results	Pass

NVLAP Lab Code 200630-0 *Signature Holly Ashkannejhad*



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
825.383	316.0	1.6	H-Bilog	PK	4.01E-01	26.0	38.5	-12.5	Low channel, Notebook screen horizontal
847.142	344.0	1.0	H-Bilog	PK	3.34E-01	25.2	38.5	-13.3	High channel, Notebook typical position
837.408	55.0	1.6	H-Bilog	PK	3.11E-01	24.9	38.5	-13.6	Mid channel, Notebook screen horizontal
837.500	343.0	1.0	H-Bilog	PK	2.97E-01	24.7	38.5	-13.8	Mid channel, Notebook typical position
827.367	343.0	1.0	H-Bilog	PK	2.90E-01	24.6	38.5	-13.9	Low channel, Notebook typical position
845.950	117.0	1.6	H-Bilog	PK	1.83E-01	22.6	38.5	-15.9	High channel, Notebook screen horizontal
845.450	308.0	1.0	H-Bilog	PK	1.60E-01	22.0	38.5	-16.5	High channel, Notebook on side
847.608	224.0	1.8	V-Bilog	PK	1.30E-01	21.1	38.5	-17.4	High channel, Notebook on side
827.567	311.0	1.0	H-Bilog	PK	1.24E-01	20.9	38.5	-17.6	Low channel, Notebook on side
845.958	53.0	1.8	V-Bilog	PK	1.16E-01	20.6	38.5	-17.9	High channel, Notebook screen horizontal
837.208	0.0	1.8	V-Bilog	PK	1.13E-01	20.5	38.5	-18.0	Mid channel, Notebook on side
837.400	317.0	1.0	H-Bilog	PK	1.10E-01	20.4	38.5	-18.1	Mid channel, Notebook on side
835.650	93.0	1.7	V-Bilog	PK	8.57E-02	19.3	38.5	-19.2	Mid channel, Notebook screen horizontal
835.625	319.0	1.0	V-Bilog	PK	8.00E-02	19.0	38.5	-19.5	Mid channel, Notebook typical position
827.400	229.0	1.0	V-Bilog	PK	6.81E-02	18.3	38.5	-20.2	Low channel, Notebook on side
827.342	235.0	1.0	V-Bilog	PK	6.07E-02	17.8	38.5	-20.7	Low channel, Notebook screen horizontal
845.858	-1.0	1.2	V-Bilog	PK	4.20E-02	16.2	38.5	-22.3	High channel, Notebook typical position
827.467	-1.0	1.2	V-Bilog	PK	2.65E-02	14.2	38.5	-24.3	Low channel, Notebook typical position

EUT: MC8775 in the IX605	Work Order: SPTE0050
Serial Number: None	Date: 04/19/07
Customer: Spectrum Technology, Inc.	Temperature: 22° C
Attendees: Rod Munro	Humidity: 32%
Project: None	Barometric Pres.: 30.11
Tested by: Holly Ashkannejhad	Power: 13.8 VDC
	Job Site: EV01

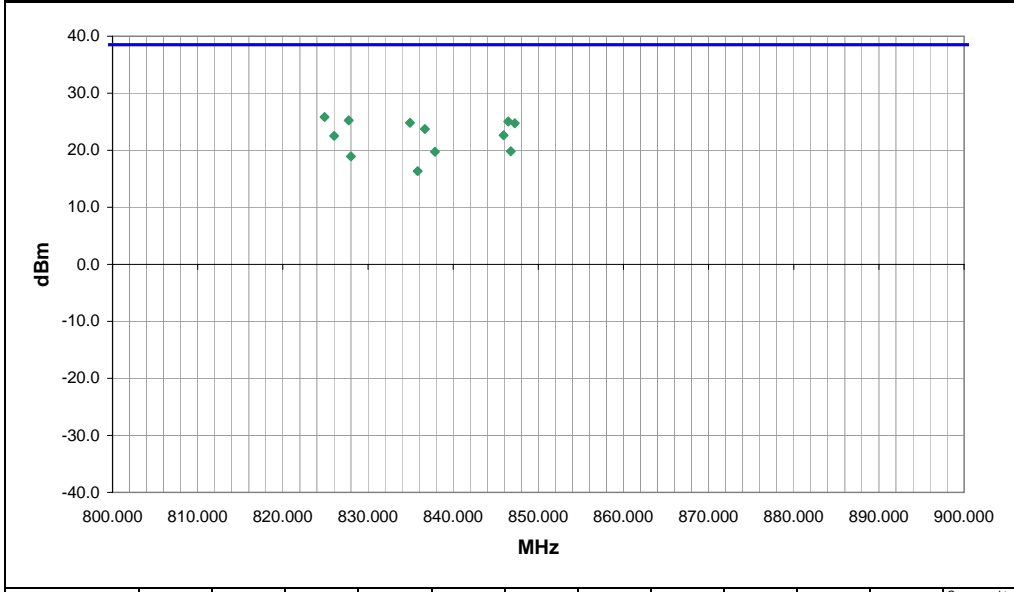
<b>TEST SPECIFICATIONS</b>	Test Method
FCC 22H:2006	ANSI/TIA/EIA-603-B:2002

<b>TEST PARAMETERS</b>	
Antenna Height(s) (m) 1 - 4	Test Distance (m) 0

**COMMENTS**  
Optional vehicular configuration with external antenna.

**EUT OPERATING MODES**  
HSDPA, packet data, cellular band, see comments for channel.

<b>DEVIATIONS FROM TEST STANDARD</b>	
No deviations.	
Run # 35	Signature <i>Holly Ashkannejhad</i>
Configuration # 2	
Results Pass	



Freq (MHz)	Azimuth (degrees)	Height (meters)	Polarity	Detector	ERP (Watts)	ERP (dBm)	Spec. Limit (dBm)	Compared to Spec. (dB)	Comments
824.900	257.0	1.3	V-Bilog	PK	3.83E-01	25.8	38.5	-12.7	Low channel, antenna vertical
827.730	304.0	1.0	H-Bilog	PK	3.34E-01	25.2	38.5	-13.3	Low channel, antenna on side
846.470	261.0	1.6	V-Bilog	PK	3.19E-01	25.0	38.5	-13.5	High channel, antenna vertical
834.930	256.0	1.5	V-Bilog	PK	3.04E-01	24.8	38.5	-13.7	Mid channel, antenna vertical
847.230	315.0	1.0	H-Bilog	PK	2.97E-01	24.7	38.5	-13.8	High channel, antenna on side
836.670	311.0	1.0	H-Bilog	PK	2.36E-01	23.7	38.5	-14.8	Mid channel, antenna on side
845.930	-1.0	1.8	V-Bilog	PK	1.83E-01	22.6	38.5	-15.9	High channel, antenna on side
826.030	218.0	1.2	V-Bilog	PK	1.79E-01	22.5	38.5	-16.0	Low channel, antenna on side
846.770	256.0	1.0	H-Bilog	PK	9.62E-02	19.8	38.5	-18.7	High channel, antenna vertical
837.870	0.0	1.8	V-Bilog	PK	9.40E-02	19.7	38.5	-18.8	Mid channel, antenna on side
828.000	253.0	1.0	H-Bilog	PK	7.82E-02	18.9	38.5	-19.6	Low channel, antenna vertical
835.830	255.0	1.0	H-Bilog	PK	4.30E-02	16.3	38.5	-22.2	Mid channel, antenna vertical

## Effective Radiated Power

