



# Flom Test Labs

EMI, EMC, RF Testing Experts Since 1963

toll-free: (866) 311-3268  
fax: (480) 926-3598  
<http://www.flomlabs.com>  
[info@flomlabs.com](mailto:info@flomlabs.com)

**Date:** September 30, 2008

**Applicant:** Novatel Wireless Inc.  
9645 Scranton Rd, Suite 205  
San Diego, CA 92121

**Attention of:** John Spall, Project Manager  
Ph: 858-812-0697, Fax: 858-450-7183  
email: [jspall@nvtl.com](mailto:jspall@nvtl.com)

**Equipment:** PKRNVWE725 Collocated with PPD-AR5BHB92 802.11

**FCC ID:** PKRNVWE725

**FCC Rules:** Radio Frequency Radiation Exposure Limits

47 CFR 1.1310

MPE - Mobiles

  X  

Fixed Based Station

Gentlemen:

Enclosed please find your copy of the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

Please allow from 8-12 weeks to hear from the Commission, who may request additional data or information, and even a sample for pre-grant audit testing.

Should you need any clarification, just fax or phone. Thank you again for this order - it has been a pleasure to be of service.

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)  
HSB/jhe



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**Date:** September 30, 2008

Federal Communications Commission  
Via: Electronic Filing

**Attention:** Authorization & Evaluation Division

**Applicant:** Novatel Wireless Inc.  
**Equipment:** PKRNVWE725 Collocated with PPD-AR5BHB92 802.11  
**FCC ID:** PKRNVWE725  
**FCC Rules:** Radio Frequency Radiation Exposure Limits  
47 CFR 1.1310  
MPE - Mobiles   X   Fixed Based Station           

Gentlemen:

On behalf of the Applicant, enclosed please find the Supplemental Test Data Report, the whole for Environmental Assessment (MPE) of the referenced equipment as shown.

We trust the same is in order. Should you need any further information, kindly contact the writer who is authorized to act as agent.

Sincerely yours,

Hoosamuddin S. Bandukwala, Lab Director

enclosure(s)  
cc: Applicant  
HSB/jhe

Flom Test Labs  
3356 N. San Marcos Place, Suite 107  
Chandler, Arizona 85225-7176  
(866) 311-3268 phone, (480) 926-3598 fax

d0890029, p0890009 Rev 1.0



## **Environmental Assessment**

for

**Mobiles**

for

**FCC ID:** FCC ID: PKRNVWE725

Model: E725

to

**Federal Communications Commission**

**47 CFR 1.1310 (MPE)**

Radio Frequency Radiation Exposure Limits

**Date Of Report:** September 30, 2008

**On the Behalf of the Applicant:** Novatel Wireless Inc.

**At the Request of:** Novatel Wireless Inc.  
9645 Scranton Rd, Suite 205  
San Diego, CA 92121

**Attention of:** John Spall, Project Manager  
Ph: 858-812-0697, Fax: 858-450-7183  
email: [jspall@nvtl.com](mailto:jspall@nvtl.com)

Supervised By:

Hoosamuddin S. Bandukwala, Lab Director

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Required information per ISO 17025-2005, paragraph 5.0:

a) **Test Report (Supplemental)**

b) Laboratory: Flom Test Labs  
(FCC: 31040/SIT) 3356 N. San Marcos Place, Suite 107  
(Canada: IC 2044) Chandler, AZ 85225

c) Report Number: d0890029

d) Client: Novatel Wireless Inc.  
9645 Scranton Rd, Suite 205  
San Diego, CA 92121

e) Identification: PKRNVWE725  
FCC ID: PKRNVWE725  
Description: Dell laptop model Studio XPS1640

f) EUT Condition: Not required unless specified in individual tests.

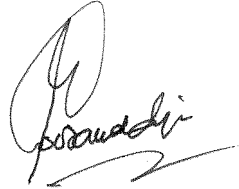
g) Report Date: September 30, 2008

h, j, k): As indicated in individual tests.

i) Sampling method: No sampling procedure used.

l) Uncertainty: In accordance with MFA internal quality manual.

m) Supervised by:



Hoosamuddin S. Bandukwala, Lab Director

n) Results: The results presented in this report relate only to the item tested.

o) Reproduction: This report must not be reproduced, except in full, without written permission from this laboratory.

### Identification of the Equipment Under Test (EUT)

**Name and Address of Applicant:** Novatel Wireless Inc.  
9645 Scranton Rd, Suite 205  
San Diego, CA 92121

**Manufacturer:** Novatel Wireless Inc.  
9645 Scranton Rd, Suite 205  
San Diego, CA 92121

**FCC ID:** PKRNVWE725

**Model Number:** PKRNVWE725

**Description:** Dell laptop model Studio XPS1640

**Type of Emission:** CDMA collocated with 802.11

**Frequency Range, MHz:** CDMA 824 - 848 and 1851 - 1908  
802.11 2412 – 2462, 5745 - 5825

**Power Rating, Watts:** 0.296  
 Switchable       Variable       N/A

**Modulation:**

<input type="checkbox"/>	AMPS
<input type="checkbox"/>	TDMA
<input checked="" type="checkbox"/>	CDMA
<input checked="" type="checkbox"/>	OTHER

**Antenna:**

<input type="checkbox"/>	Helical
<input type="checkbox"/>	Monopole
<input type="checkbox"/>	Whip
<input checked="" type="checkbox"/>	Other

**Note:** For RF Safety test antenna gain taken at the upper range of expected gain (i.e. 0 dBd) and RF Power set to highest nominal power across all channels.

## Standard Test Conditions and Engineering Practices

Except as noted herein, the following conditions and procedures were observed during the testing:

In accordance with ANSI C63.4-2003 and unless otherwise indicated in the specific measurement results, the ambient temperature of the actual EUT was maintained within the range of 10° to 40°C (50° to 104 °F) unless the particular equipment requirements specify testing over a different temperature range. Also, unless otherwise indicated, the humidity levels were in the range of 10% to 90% relative humidity.

Prior to testing, the EUT was tuned up in accordance with the manufacturer's alignment procedures. All external gain controls were maintained at the position of maximum and/or optimum gain throughout the testing.

Measurement results, unless otherwise noted, are worst-case measurements.

### **A2LA**

"A2LA has accredited Flom Test Labs, Inc. Chandler, AZ for technical competence in the field of Electrical testing. The accreditation covers the specific tests and types of tests listed on the agreed scope of accreditation. This laboratory meets the requirements of ISO 17025:2005 'General Requirements for the Competence of Testing and Calibration Laboratories' and any additional program requirements in the identified field of testing."

Please refer to [www.a2la.org](http://www.a2la.org) for current scope of accreditation.

Certificate number: 2152.01



**Name of Test:** Environmental Assessment

**Specification:** FCC: 47 CFR 1.1310

**Measurement Guide:** ANSI/IEEE C95.1 1992

**Name of Test:** R.F. Radiation Exposure

FCC Rules: 1.1307, 1.1310, 1.1311, 2.1091  
Description, EUT: See page 2 of Test Report

Limits: Uncontrolled Exposure	0.3-1.234 MHz:	Limit [mW/cm <sup>2</sup> ] = 100
47 CFR 1.1310	1.34-30 MHz:	Limit [mW/cm <sup>2</sup> ] = (180/f <sup>2</sup> )
Table 1, (B)	30-300 MHz:	Limit [mW/cm <sup>2</sup> ] = 0.2
	300-1500 MHz	Limit [mW/cm <sup>2</sup> ] = f/1500
	1500-100,000 MHz:	Limit [mW/cm <sup>2</sup> ] = 1.0

Test Frequencies, MHz	824 – 848
Power, Conducted, mW	= 291
Antenna Gain	= 3 dBi
Antenna Model	Planer Inverted F Antenna
Distance cm	20

Limit Calculations      Limit<sub>[mW/cm<sup>2</sup>]</sub> = 0.549

Test Frequencies, MHz	1851 - 1908
Power, Conducted, mW	= 296
Antenna Gain	= 3 dBi
Antenna Model	Planer Inverted F Antenna
Distance cm	20

Limit Calculations      Limit<sub>[mW/cm<sup>2</sup>]</sub> = 1.0



### PKRNVWE725 CDMA

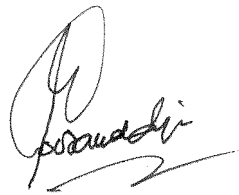
CDMA Frequency MHz	TX Power (m)W	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
824 – 848	291	0.116	0.549	Pass
1851 - 1908	296	0.118	1.0	Pass

### PPD-AR5BHB92 802.11

802.11 Frequency MHz	TX Power (mW)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
2412 – 2462	907	0.360	1.0	Pass
5745 - 5825	965	0.388	1.0	Pass

### PKRNVWE725 CDMA Collocated with PPD-AR5BHB92 802.11

CDMA Frequency MHz	802.11.a,b,g Frequency MHz	CDMA Power Density (mW/cm <sup>2</sup> )	802.11.a,b,g Power Density (mW/cm <sup>2</sup> )	Total Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
824 – 848	2412 – 2462	0.116	0.360	0.476	0.549	Pass
1851 - 1908	2412 – 2462	0.118	0.360	0.478	1.0	Pass
824 – 848	5745 - 5825	0.116	0.388	0.504	0.549	Pass
1851 - 1908	5745 - 5825	0.118	0.388	0.506	1.0	Pass



Supervised By:

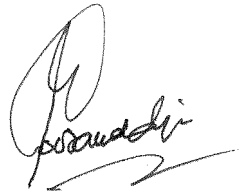
Hoosamuddin S. Bandukwala, Lab Director

**Testimonial  
and  
Statement of Certification**

**This is to certify that:**

1. **That** the application was prepared either by, or under the direct supervision of, the undersigned.
2. **That** the technical data supplied with the application was taken under my direction and supervision.
3. **That** the data was obtained on representative units, randomly selected.
4. **That**, to the best of my knowledge and belief, the facts set forth in the application and accompanying technical data are true and correct.

Certifying Engineer:



Hoosamuddin S. Bandukwala, Lab Director