toll-free: (866)311-3268 http://www.flomlabs.com info@flomlabs.com

March 03, 2009 Date:

Novatel Wireless Inc. Applicant:

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

**Equipment:** PKRNVWE725 co located with E2K512ANHMW

FCC ID: PKRNVWE725

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

47 CFR 1.1310

MPE - Mobiles 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.

Supervised By:

Hoosamuddin S. Bandukwala. Lab Director

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



http://www.flomlabs.com info@flomlabs.com

March 03, 2009 Date:

Federal Communications Commission

Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Novatel Wireless Inc.

**Equipment:** PKRNVWE725 co located with E2K512ANHMW

FCC ID: PKRNVWE725

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

47 CFR 1.1310

MPE - Mobiles Χ \_ 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.

Supervised By:

Hoosamuddin S. Bandukwala, Lab Director

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



http://www.flomlabs.com info@flomlabs.com

## **Environmental Assessment**

for

**Mobiles** 

for

FCC ID:

Model: PKRNVWE725 co located with E2K512ANHMW

to

**Federal Communications Commission** 

47 CFR 1.1310

Radio Frequency Radiation Exposure Limits

Date Of Report: March 03, 2009

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

Supervised By:

Hoosamuddin S. Bandukwala, Lab Director



# **Revision History**

Revision	Date	Revised By	Reason for revision
1.0	March 03, 2009	H Bandukwala	Original Document



## **Table of Contents**

Rule	Description	Page
	Test Report	1
	Identification of the Equipment Under Test	2
	Standard Test Conditions and Engineering Practices	4
1.1310	Environmental Assessment	5



## Required information per ISO 17025-2005, paragraph 5.10:

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: d0930004

d) Client: Novatel Wireless Inc.

9645 Scranton Rd, Suite 205

San Diego, CA 92121

e) Identification: PKRNVWE725 co located with E2K512ANHMW

Description: Latitude E6400 XFR – "Roush XFR"

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

g) Report Date: March 03, 2009

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

i) Sampling method: No sampling procedure used.

I) Uncertainty: In accordance with FTL 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:	Latitude E6400 XFR – "Roush XFR"			
Description:	Class II Permissive			
Type of Emission:	CDMA			
Frequency Range, MHz:	824 – 848, 1851 - 1908			
Power Rating, Watts: Switchable	296 mW VariableX N/A			
Modulation:	AMPS TDMA X CDMA X OTHER			
Antenna:	Helical  X Monopole Whip 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.



## 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 for current scope of accreditation.

Certificate number: 2152.01





## **Standard Test Conditions and Engineering Practices**

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

In accordance with ANSI C63.4-2004 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.



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

**Limits: Uncontrolled Exposure** 

47 CFR 1.1310 Table 1, (B)  $\begin{array}{lll} 0.3\text{-}1.234 \text{ MHz:} & \text{Limit } [\text{mW/cm}^2] = 100 \\ 1.34\text{-}30 \text{ MHz:} & \text{Limit } [\text{mW/cm}^2] = (180/\text{f}^2) \\ 30\text{-}300 \text{ MHz:} & \text{Limit } [\text{mW/cm}^2] = 0.2 \\ 300\text{-}1500 \text{ MHz} & \text{Limit } [\text{mW/cm}^2] = \text{f}/1500 \\ \end{array}$ 

1500-100,000 MHz: Limit [mW/cm²] = 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**  $Limit_{[mW/cm2]} = 0.549$ 

Test Frequencies, MHz 1851 - 1908 Power, Conducted, mW = 296 Antenna Gain = 3 dBi

Antenna Model Planer Inverted F Antenna

Distance cm 20

**Limit Calculations**  $Limit_{[mW/cm2]} = 1.0$ 



## **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

## E2K512ANHMW 802.11

802.11 Frequency	TX Power	Power Density	Limit	Result
MHz	(mW)	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	
2412 - 2462	72	0.0286	1.0	Pass
5180 - 5320	45	0.0179	1.0	Pass
5500 - 5700	71	0.0282	1.0	Pass
5745 - 5825	62	0.0246	1.0	Pass

## PKRNVWE725 CDMA Collocated with QDS-BRCM1031 802.11

CDMA Frequency	802.11	CDMA	802.11	Total	Limit	Result
MHz	Frequency	Power	Power	Power	(mW/cm <sup>2</sup> )	
	MHz	Density	Density	Density		
		(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )		
824 – 848	2412 - 2462	0.116	0.0286	0.1446	0.549	Pass
824 – 848	5180 - 5320	0.116	0.0179	0.1339	0.549	Pass
824 – 848	5500 - 5700	0.116	0.0282	0.1442	0.549	Pass
824 – 848	5745 - 5825	0.116	0.0246	0.1406	0.549	Pass
1851 - 1908	2412 - 2462	0.118	0.0286	0.1466	1.0	Pass
1851 - 1908	5180 - 5320	0.118	0.0179	0.1359	1.0	Pass
1851 - 1908	5500 - 5700	0.118	0.0282	0.1462	1.0	Pass
1851 - 1908	5745 - 5825	0.118	0.0246	0.1426	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.

Supervised By:

Hoosamuddin S. Bandukwala, Lab Director