



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

For MFA internal use only

Please keep this page with the report in out files.

Applicant:	Novatel Wireless Inc.
Model:	PKRNVWE725 Collocated with E2KWM3945ABG 802.11.a
FCC ID:	PKRNVWE725

Formulaire:	L:\Project\Formulaire\FCC.MPE.Novatel.rtf
Last Modified:	2000-Oct-17
Purpose:	Environmental Assessment (MPE)

MFA Project ID:	p0720004
Client ID:	NOVATEL SD

MFA Document ID:	d0730044
Date:	March 22, 2007
This Printing	2007-Mar-29 Thu
Writer:	HSB/jhe

☐ < Check here if this report has been manually modified.

☐ < Check here if this report was made from another report.

Original document:

☐ < Check here if this report varies significantly from the formulaire



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

Date: March 22, 2007

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

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

Attention of: John Jiang, Project Manager
888-888-9231; FAX: -2888
Email: jjiang@novatelwireless.com

Equipment: PKRNVWE725 Collocated with E2KWM3945ABG 802.11.a
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

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

p0720004, d0730044



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

Date: March 22, 2007

Federal Communications Commission
Via: Electronic Filing

Attention: Authorization & Evaluation Division

Applicant: Novatel Wireless Inc.
Equipment: PKRNVWE725 Collocated with E2KWM3945ABG 802.11.a
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/jh

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

p0720004, d0730044



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

Environmental Assessment

for

Mobiles

for

FCC ID: FCC ID: PKRNVWE725

Model: PKRNVWE725

to

Federal Communications Commission

47 CFR 1.1310 (MPE)

Radio Frequency Radiation Exposure Limits

Date Of Report: March 22, 2007

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 Jiang, Project Manager
888-888-9231; FAX: -2888
Email: jjiang@novatelwireless.com

Supervised By:

Hoosamuddin S. Bandukwala, Lab Director

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/IEC Guide 25-1990, paragraph 13.2:

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: d0730044

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

e) Identification: PKRNVWE725
FCC ID: PKRNVWE725
Description: Laptop with CDMA and 802.11 a

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

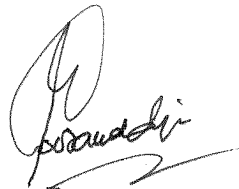
g) Report Date: March 22, 2007

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:	Laptop with CDMA and 802.11.a		
Type of Emission:	CDMA collocated with 802.11.a		
Frequency Range, MHz:	CDMA 824 - 848 and 1851 - 1908 802.11.a 5180 – 5240 and 5260 - 5320		
Power Rating, Watts:	0.296		
	☐ Switchable	☐ Variable	☒ N/A
Modulation:	☐	AMPS	
	☐	TDMA	
	☒	CDMA	
	☒	OTHER	
Antenna:	☐	Helical	
	☐	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 C63.4-1992/2000, section 6.1.9, 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
 Description, EUT: See page 2 of Test Report

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

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 $_{[mW/cm^2]} = 0.549$

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 $_{[mW/cm^2]} = 1.0$

PKRNVWE725 CDMA

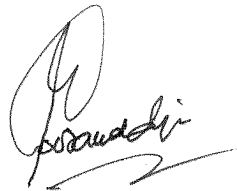
CDMA Frequency MHz	TX Power (m)W	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
824 – 848	291	0.116	0.549	Pass
1851 - 1908	296	0.117	1.0	Pass

E2KWM3945ABG 802.11.a

802.11 a Frequency MHz	TX Power (mW)	Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
5180 - 5240	45	0.018	1.0	Pass
5260 - 5320	69	0.027	1.0	Pass

PKRNVWE725 CDMA Collocated with E2KWM3945ABG 802.11.a

CDMA Frequency MHz	802.11.a Frequency MHz	CDMA Power Density (mW/cm ²)	802.11.a Power Density (mW/cm ²)	Total Power Density (mW/cm ²)	Limit (mW/cm ²)	Result
824 – 848	5180 - 5240	0.116	0.018	0.124	0.549	Pass
824 – 848	5260 - 5320	0.116	0.027	0.143	0.549	pass
1851 - 1908	5180 - 5240	0.117	0.018	0.125	1.0	Pass
1851 - 1908	5260 - 5320	0.117	0.027	0.144	1.0	pass



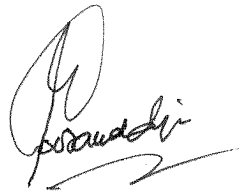
Supervised By:

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