

Date:	March 31, 2009	
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	
Equipment: FCC ID: FCC Rules:	PKRNVWE760D Collocated with QDS-BRCM PKRNVWE760D Radio Frequency Radiation Exposure Limits 47 CFR 1.1310 MPE - Mobiles <u>X</u>	I031 802.11 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



Date:	March 31, 2009
Attention:	Federal Communications Commission Authorization & Evaluation Division
Via:	Electronic Filing
Applicant:	Novatel Wireless Inc.
Equipment: FCC ID: FCC Rules:	PKRNVWE760D Collocated with QDS-BRCM1031 802.11 PKRNVWE760D Radio Frequency Radiation Exposure Limits 47 CFR 1.1310 MPE - Mobiles <u>X</u> 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



# **Environmental Assessment**

for

Mobiles

for

## FCC ID: PKRNVWE760D

## Model: PKRNVWE760D Collocated with QDS-BRCM1031

to

## **Federal Communications Commission**

## 47 CFR 1.1310 (MPE)

Radio Frequency Radiation Exposure Limits

Date Of Report: March 31, 2009

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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

Hoosamuddin S. Bandukwala, Lab Director

Supervised By:

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



## **Test Report Revision History**

Revision	Date	Revised By	Reason for revision
1.0	March 31, 2009	H Bandukwala	Original Document



## **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.

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Hoosamuddin S. Bandukwala, Lab Director

Certifying Engineer:

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



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1.1310	Test Report Identification of the Equipment Under Test Standard Test Conditions and Engineering Practices Environmental Assessment	1 2 3 4



Required information per ISO 17025-2005, paragraph 5.0:

a)	

## Test Report (Supplemental)

b) Laboratory: (FCC: 31040/SIT) (Canada: IC 2044)	Flom Test Labs 3356 N. San Marcos Place, Suite 107 Chandler, AZ 85225
c) Report Number:	d0930025
d) Client:	Novatel Wireless Inc. 9645 Scranton Rd, Suite 205 San Diego, CA 92121
e) Identification:	PKRNVWE760D FCC ID: PKRNVWE760D
Description:	Laptop model Studio 1737 – Pacino/Montevina
f) EUT Condition:	Not required unless specified in individual tests.
g) Report Date:	March 31, 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:	$\bigcap$

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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.



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:	PKRNVWE760D		
Model Number:	Studio 1737 – Pacino/Montevina		
Description:	Laptop model Studio 1737 – Pacino/Montevina		
Type of Emission:	CDMA collocated with 802.11		
Frequency Range, MHz:	CDMA 824.7 – 848.31 and 1851.25 – 1908.75 802.11 - 2412 – 2472, 5745 – 5825, and 5180 - 5700		
Power Rating, Watts: Switchable	0.877 Variable X N/A		
Modulation:	AMPS TDMA X CDMA X OTHER		
Antenna:	Helical Monopole Whip X 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.

## <u>A2LA</u>

"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 <u>www.a2la.org</u> 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: Description, EUT:	1.1307, 1.1310, 1.1311, 2.1091 See page 2 of Test Report	
Limits: Uncontrolled Exposure 47 CFR 1.1310 Table 1, (B)	0.3-1.234 MHz: 1.34-30 MHz: 30-300 MHz: 300-1500 MHz 1500-100,000 MHz:	Limit $[mW/cm^{2}] = 100$ Limit $[mW/cm^{2}] = (180/f^{2})$ Limit $[mW/cm^{2}] = 0.2$ Limit $[mW/cm^{2}] = f/1500$ Limit $[mW/cm^{2}] = 1.0$
Test Frequencies, MHz Power, Conducted, mW Antenna Gain Antenna Model Distance cm	824 – 848 = 877 = 1.22 dBi Metal, Modified Planer Inverted 20	F Antenna
Limit Calculations	$\text{Limit}_{[mW/cm2]} = 0.549$	
Test Frequencies, MHz Power, Conducted, mW Antenna Gain Antenna Model Distance cm	1851 - 1908 = 628 = 1.63 dBi Metal, Modified Planer Inverted 20	F Antenna
Limit Calculations	$\text{Limit}_{[\text{mW/cm2}]} = 1.0$	



## **PKRNVWE760D CDMA**

CDMA Frequency MHz	TX Power (m)W	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
824 - 848	877	0.230	0.549	Pass
1850 - 1909	628	0.182	1.0	Pass

#### QDS-BRCM1031 802.11

802.11 Frequency MHz	TX Power (mW)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
2412 - 2472	159	0.172	1.0	Pass
5745 - 5825	98	0.093	1.0	Pass
5180 - 5700	107	0.043	1.0	Pass

## PKRNVWE760D CDMA Collocated with QDS-BRCM1031 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 – 2472	0.230	0.172	0.402	0.549	Pass
824 - 848	5745 - 5825	0.230	0.093	0.323	0.549	Pass
824 - 848	5180 - 5700	0.230	0.043	0.273	0.549	Pass
1850 - 1909	2412 – 2472	0.182	0.172	0.354	1.0	Pass
1850 - 1909	5745 - 5825	0.182	0.093	0.275	1.0	Pass
1850 - 1909	5180 - 5700	0.182	0.043	0.225	1.0	Pass

Hoosamuddin S. Bandukwala, Lab Director

Supervised By:

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