



PCTEST ENGINEERING LABORATORY, INC.

6660-B Dobbin Road, Columbia, MD 21045 USA

Tel. 410.290.6652 / Fax 410.290.6554

http://www.pctestlab.com



CERTIFICATE OF COMPLIANCE

FCC Part 22 & 24 / INDUSTRY CANADA RSS-129/RSS-133 Class II Permissive Change

Applicant Name:
Sierra Wireless
13811 Wireless Way
Richmond, British Columbia
Canada, V6V 3A4

Date of Testing:
March 19, 2010
Test Site/Location:
PCTEST Lab., Columbia, MD, USA
Test Report Serial No.:
0Y1003170427.O9E

FCC ID:	O9EGTM1
APPLICANT:	SIERRA WIRELESS


Application Type: Class II Permissive Change
FCC Classification: PCS Licensed Transmitter (PCB)
FCC Rule Part(s): §2; §22(H), §24(E)
IC Specification(s): RSS-129 Issue 2; RSS-133 Issue 5
EUT Type: Cellular/PCS CDMA Module
Model(s): GTM1
Tx Frequency Range: 824.70 - 848.31MHz (Cell. CDMA) / 1851.25 - 1908.75MHz (PCS CDMA)
Max. Cond. Output Power: 24.40 dBm Conducted (Cell. CDMA)
24.26 dBm Conducted (PCS CDMA)
Emission Designator(s): 1M26F9W (CDMA) / 1M26F9W (PCS)
Test Device Serial No.: *identical prototype* [S/N: A40020002103831]
Class II Permissive Change: Please see FCC Change Document.
Original Grant Date: November 6, 2007

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

Grant Conditions: Power output listed is conducted.

PCTEST certifies that no party to this application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.


Randy Ortanez
President







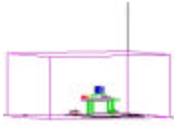
FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.O9E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 1 of 18	

TABLE OF CONTENTS

FCC PART 22 & 24 MEASUREMENT REPORT.....		3
1.0 INTRODUCTION		4
1.1 SCOPE.....		4
1.2 TESTING FACILITY.....		4
2.0 PRODUCT INFORMATION.....		5
2.1 EQUIPMENT DESCRIPTION		5
2.2 EMI SUPPRESSION DEVICE(S)/MODIFICATIONS		5
2.3 LABELING REQUIREMENTS.....		5
3.0 DESCRIPTION OF TESTS		6
3.1 MEASUREMENT PROCEDURE.....		6
3.2 CELLULAR - BASE FREQUENCY BLOCKS		6
3.3 CELLULAR - MOBILE FREQUENCY BLOCKS.....		6
3.4 PCS - BASE FREQUENCY BLOCKS.....		7
3.5 PCS - MOBILE FREQUENCY BLOCKS		7
3.6 RADIATED POWER AND RADIATED SPURIOUS EMISSIONS.....		7
4.0 TEST EQUIPMENT CALIBRATION DATA		8
5.0 SAMPLE CALCULATIONS		9
6.0 TEST RESULTS		10
6.1 SUMMARY		10
6.2 CONDUCTED OUTPUT POWER		11
6.3 CELLULAR CDMA RADIATED MEASUREMENTS.....		12
6.4 PCS CDMA RADIATED MEASUREMENTS		15
7.0 CONCLUSION		18

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module		Page 2 of 18



MEASUREMENT REPORT

FCC Part 22 & 24



§2.1033 General Information

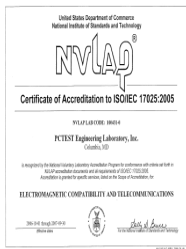
APPLICANT: Sierra Wireless
APPLICANT ADDRESS: 13811 Wireless Way
 Richmond, British Columbia, Canada, V6V 3A4
TEST SITE: PCTEST ENGINEERING LABORATORY, INC.
TEST SITE ADDRESS: 6660-B Dobbin Road, Columbia, MD 21045 USA
FCC RULE PART(S): §2; §22(H), §24(E)
IC SPECIFICATION(S): RSS-129 Issue 2; RSS-133 Issue 5
BASE MODEL: GTM1
FCC ID: O9EGTM1
FCC CLASSIFICATION: PCS Licensed Transmitter (PCB)
EMISSION DESIGNATOR(S): 1M26F9W (CDMA) / 1M26F9W (PCS)
MODE: CDMA
FREQUENCY TOLERANCE: ±0.00025 % (2.5 ppm)
Test Device Serial No.: A40020002103831 Production Pre-Production Engineering
DATE(S) OF TEST: March 19, 2010
TEST REPORT S/N: 0Y1003170427.O9E



Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab. located in Columbia, MD 21045, U.S.A.



- PCTEST facility is an FCC registered (PCTEST Reg. No. 90864) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules and Industry Canada (2451A-1).
- PCTEST Lab is accredited to ISO 17025 by U.S. National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP Lab code: 100431-0) in EMC, FCC and Telecommunications.
- PCTEST Lab is accredited to ISO 17025-2005 by the American Association for Laboratory Accreditation (A2LA) in Specific Absorption Rate (SAR) testing, Hearing Aid Compatibility (HAC) testing, CTIA Test Plans, and wireless testing for FCC and Industry Canada Rules.
- PCTEST Lab is a recognized U.S. Conformity Assessment Body (CAB) in EMC and R&TTE (n.b. 0982) under the U.S.-EU Mutual Recognition Agreement (MRA).
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC Guide 65 by the American National Standards Institute (ANSI) in all scopes of FCC Rules and Industry Canada Standards (RSS).
- PCTEST facility is an IC registered (2451A-1) test laboratory with the site description on file at Industry Canada.
- PCTEST is a CTIA Authorized Test Laboratory (CATL) for AMPS, CDMA, and EvDO wireless devices and for Over-the-Air (OTA) Antenna Performance testing for AMPS, CDMA, GSM, GPRS, EGPRS, UMTS (W-CDMA), CDMA 1xEVDO, and CDMA 1xRTT.



FCC ID: O9EGTM1	 FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)	 Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.O9E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module

1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

1.2 Testing Facility

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity area, the Baltimore-Washington Intern't'l (BWI) airport, the city of Baltimore and the Washington, DC area. (See Figure 1-1).

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. The site coordinates are 39° 11'15" N latitude and 76° 49'38" W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2003 on January 28, 2009.

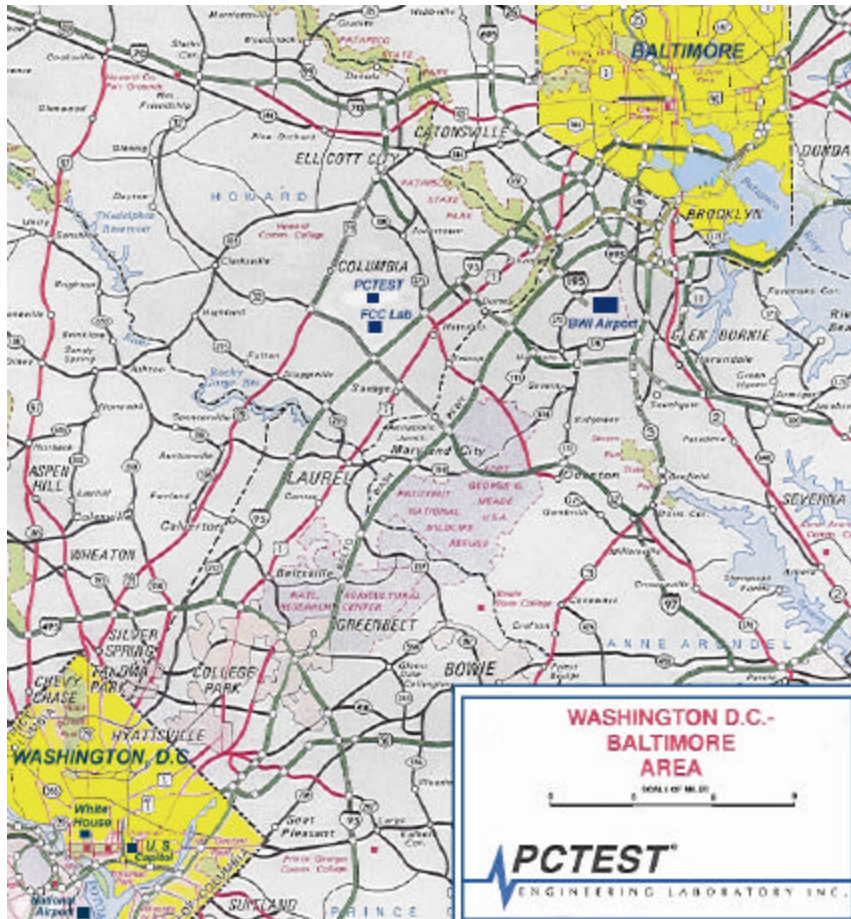




Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.O9E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module		Page 4 of 18

2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Sierra Wireless Cellular/PCS CDMA Module FCC ID: O9EGTM1**. The EUT consisted of the following component(s):

Trade Name / Base Model	FCC ID	Description
Sierra Wireless / Model: GTM1	O9EGTM1	Cellular/PCS CDMA Module

Table 2-1. EUT Equipment Description

Note: An ARC Wireless Solutions Cellular Freedom Antenna was supplied as a proper termination for the RF antenna port and for allowing network connection during radiated spurious emissions testing.

2.2 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

2.3 Labeling Requirements

Per 2.925

The FCC identifier shall be permanently affixed to the equipment and shall be readily visible to the purchaser at the time of purchase.



Per 15.19; Docket 95-19

In addition to this requirement, a device subject to certification shall be labeled as follows:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the trade name and FCC ID must be displayed on the device per Section 15.19(b)(2).

Please see attachment for FCC ID label and label location.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 5 of 18	

3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The radiated spurious measurements were made outdoors at a 3-meter test range (See Figure 3-1). The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This power level was recorded using a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This level is recorded with the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

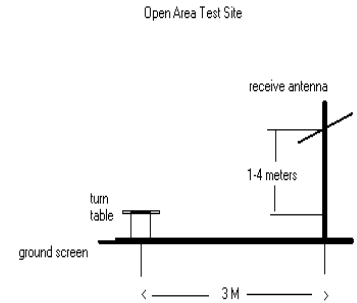
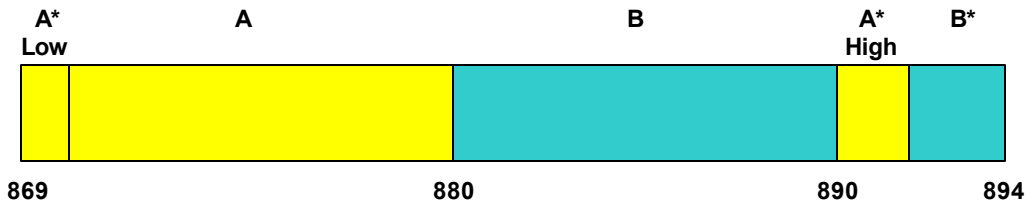


Figure 3-1. Diagram of 3-meter outdoor test range

Deviation from Measurement Procedure.....None

3.2 Cellular - Base Frequency Blocks



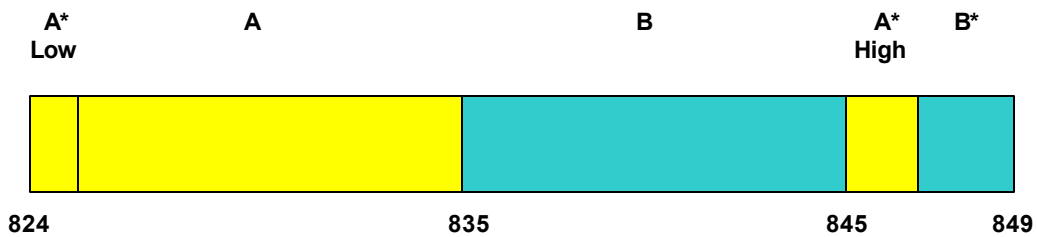
BLOCK 1: 869 – 880 MHz (A* Low + A)

BLOCK 3: 890 – 891.5 MHz (A* High)

BLOCK 2: 880 – 890 MHz (B)

BLOCK 4: 891.5 – 894 MHz (B*)

3.3 Cellular - Mobile Frequency Blocks



BLOCK 1: 824 – 835 MHz (A* Low + A)

BLOCK 3: 845 – 846.5 MHz (A* High)

BLOCK 2: 835 – 845 MHz (B)

BLOCK 4: 846.5 – 849 MHz (B*)



FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.O9E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module		Page 6 of 18

4.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST).

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	263-10dB	(DC-18GHz) 10 dB Attenuator	N/A		N/A	N/A
-	No. 166	(1000-26500MHz) Microwave RF Cable	N/A		N/A	N/A
-	No. 167	(100kHz - 100MHz) RG58 Coax Cable	N/A		N/A	N/A
Agilent	11713A	Attenuation/Switch Driver	12/2/2009	Annual	12/2/2010	3439A02645
Agilent	8449B	(1-26.5GHz) Pre-Amplifier	12/2/2009	Annual	12/2/2010	3008A00985
Agilent	8495A	(0-70dB) DC-4GHz Attenuator	N/A		N/A	N/A
Agilent	85650A	Quasi-Peak Adapter	12/2/2009	Annual	12/2/2010	3303A01872
Agilent	85650A	Quasi-Peak Adapter	3/24/2009	Annual	3/24/2010	2043A00301
Agilent	8566B	(100Hz-22GHz) Spectrum Analyzer	12/2/2009	Annual	12/2/2010	3638A08713
Agilent	8648D	(9kHz-4GHz) Signal Generator	9/19/2009	Biennial	9/19/2011	3613A00315
Agilent	E4432B	ESG-D Series Signal Generator	9/10/2009	Annual	9/10/2010	US40053896
Agilent	E4448A	PSA (3Hz-50GHz) Spectrum Analyzer	10/1/2009	Annual	10/1/2010	US42510244
Agilent	E5515C	Wireless Communications Test Set	9/10/2009	Annual	9/10/2010	GB46110872
Agilent	E5515C	Wireless Communications Test Set	9/11/2009	Annual	9/11/2010	GB46310798
Agilent	E5515C	Wireless Communications Test Set	8/25/2009	Annual	8/25/2010	GB41450275
Agilent	E8257D	(250kHz-20GHz) Signal Generator	3/25/2009	Biennial	3/25/2011	MY45470194
Agilent	E8267C	Vector Signal Generator	9/29/2009	Biennial	9/29/2011	US42340152
Agilent	N9020A	MXA Signal Analyzer	10/22/2009	Annual	10/22/2010	US46470561
Anritsu	ML2495A	Power Meter	10/12/2009	Annual	10/12/2010	941001
Emco	3115	Horn Antenna (1-18GHz)	10/14/2009	Biennial	10/14/2011	9704-5182
Espec	ESX-2CA	Environmental Chamber	3/30/2009	Annual	3/30/2010	17620
K & L	11SH10	Band Pass Filter	N/A	Annual	N/A	1300/4000
K & L	11SH10	Band Pass Filter	N/A	Annual	N/A	4000/12000
MiniCircuits	VHF-1300+	High Pass Filter	N/A		N/A	30716
MiniCircuits	VHF-3100+	High Pass Filter	N/A		N/A	30721
Rohde & Schwarz	CMU200	Base Station Simulator	9/11/2009	Annual	9/11/2010	836371/0079
Sunol	DRH-118	Horn Antenna (1 - 18GHz)	5/14/2009	Biennial	5/14/2011	A050307

Table 4-1. Test Equipment

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 8 of 18	

5.0 SAMPLE CALCULATIONS

Emission Designator

Emission Designator = 1M25F9W

CDMA BW = 1.25 MHz

F = Frequency Modulation



9 = Composite Digital Info

W = Combination (Audio/Data) (Measured at the 99.75% power bandwidth)

Spurious Radiated Emission - PCS Band

Example: Channel 25 PCS Mode 2nd Harmonic (3702.50 MHz)

The average receive power meter reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the power meter. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3702.50 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm $- (-24.80) = 50.3$ dBc.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.O9E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module		Page 9 of 18



6.0 TEST RESULTS

6.1 Summary

Company Name: Sierra Wireless
 FCC ID: O9EGTM1
 FCC Classification: PCS Licensed Transmitter (PCB)
 Mode(s): CDMA

FCC Part Section(s)	RSS Sections	Test Description	Test Limit	Test Condition	Test Result	Reference
TRANSMITTER MODE (TX)						
2.1046	RSS-132 (4.4) RSS-133 (4.1)	Transmitter Conducted Output Power	N/A	CONDUCTED	PASS	Section 6.2
2.1053, 22.917(a), 24.238(a)	RSS-129 (8.1.1) RSS-133 (6.5.1)	Undesirable Emissions	< 43 + 10log ₁₀ (P[Watts]) for all out-of-band emissions	RADIATED	PASS	Sections 6.3, 6.4

Table 6-1. Summary of Test Results

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 10 of 18	

6.2 Conducted Output Power

§22.913(a)(2); RSS-129 (9.1)

This section contains conducted output power measurements for CDMA.

Band	Channel	Conducted Power
		[dBm]
Cellular CDMA	1013	24.3
	384	24.4
	777	24.4
PCS CDMA	25	24.03
	600	24.08
	1175	24.26

Table 6-2. Maximum Cellular / PCS CDMA Conducted Power Output Table for GTM1

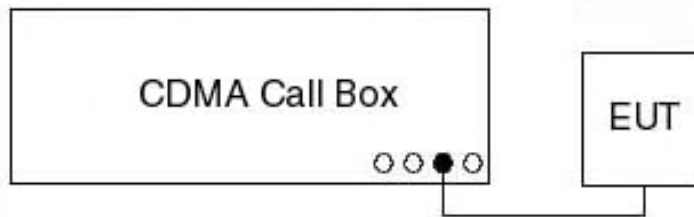




Figure 6-1. Cellular / PCS CDMA Conducted Power Measurement Setup

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.O9E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 11 of 18	

6.3 Cellular CDMA Radiated Measurements §2.1053, 22.917(a), RSS-129 (8.1.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 824.70 MHz
 CHANNEL: 1013
 MODULATION SIGNAL: CDMA (Internal)
 DISTANCE: 3 meters
 LIMIT: -13 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	Margin [dB]
1649.40	-52.90	6.08	-46.82	V	-33.8
2474.10	-59.20	6.08	-53.12	V	-40.1
3298.80	-60.36	6.53	-53.83	V	-40.8
4123.50	-93.87	6.87	-87.00	V	-74.0
4948.20	-91.54	7.21	-84.33	V	-71.3



Table 6-3. Radiated Spurious Data (Cellular CDMA Mode – Ch. 1013)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested with its standard battery. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found while the antenna was sitting upright. The data reported in the table above was measured in this test setup.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 12 of 18	

Cellular CDMA Radiated Measurements (Cont'd)
§2.1053, 22.917(a), RSS-129 (8.1.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.52 MHz
 CHANNEL: 384
 MODULATION SIGNAL: CDMA (Internal)
 DISTANCE: 3 meters
 LIMIT: -13 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	Margin [dB]
1673.04	-50.47	6.09	-44.39	V	-31.4
2509.56	-56.22	6.55	-49.66	V	-36.7
3346.08	-58.33	6.89	-51.44	V	-38.4
4182.60	-91.73	7.43	-84.30	V	-71.3
5019.12	-89.99	8.35	-81.65	V	-68.6



Table 6-4. Radiated Spurious Data (Cellular CDMA Mode – Ch. 384)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested with its standard battery. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found while the antenna was sitting upright. The data reported in the table above was measured in this test setup.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 13 of 18	

Cellular CDMA Radiated Measurements (Cont'd)
§2.1053, 22.917(a), RSS-129 (8.1.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 848.31 MHz
 CHANNEL: 777
 MODULATION SIGNAL: CDMA (Internal)
 DISTANCE: 3 meters
 LIMIT: -13 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	Margin [dB]
1696.62	-49.35	6.09	-43.25	V	-30.3
2544.93	-58.40	6.57	-51.83	V	-38.8
3393.24	-58.15	6.91	-51.24	V	-38.2
4241.55	-91.92	7.65	-84.28	V	-71.3
5089.86	-89.73	8.33	-81.39	V	-68.4



Table 6-5. Radiated Spurious Data (Cellular CDMA Mode – Ch. 777)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested with its standard battery. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found while the antenna was sitting upright. The data reported in the table above was measured in this test setup.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 14 of 18	

6.4 PCS CDMA Radiated Measurements

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1851.25 MHz
 CHANNEL: 25
 MODULATION SIGNAL: CDMA (Internal)
 DISTANCE: 3 meters
 LIMIT: -13 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	Margin [dB]
3702.50	-45.20	9.02	-36.19	V	-23.2
5553.75	-54.34	10.40	-43.94	V	-30.9
7405.00	-47.61	10.51	-37.10	V	-24.1
9256.25	-86.23	11.84	-74.39	V	-61.4
11107.50	-83.73	12.76	-70.97	V	-58.0



Table 6-6. Radiated Spurious Data (PCS CDMA Mode – Ch. 25)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested with its standard battery. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found while the antenna was sitting upright. The data reported in the table above was measured in this test setup.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 15 of 18	

PCS CDMA Radiated Measurements (Cont'd)
§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz
 CHANNEL: 600
 MODULATION SIGNAL: CDMA (Internal)
 DISTANCE: 3 meters
 LIMIT: -13 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	Margin [dB]
3760.00	-42.17	8.99	-33.18	V	-20.2
5640.00	-54.45	10.40	-44.05	V	-31.1
7520.00	-48.70	10.62	-38.08	V	-25.1
9400.00	-86.05	11.70	-74.35	V	-61.3
11280.00	-82.98	12.69	-70.29	V	-57.3



Table 6-7. Radiated Spurious Data (PCS CDMA Mode – Ch. 600)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested with its standard battery. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found while the antenna was sitting upright. The data reported in the table above was measured in this test setup.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 16 of 18	

PCS CDMA Radiated Measurements (Cont'd)
§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1908.75 MHz
 CHANNEL: 1175
 MODULATION SIGNAL: CDMA (Internal)
 DISTANCE: 3 meters
 LIMIT: -13 dBm

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	Margin [dB]
3817.50	-29.85	8.97	-20.88	V	-7.9
5726.25	-53.96	10.40	-43.56	V	-30.6
7635.00	-49.24	10.71	-38.53	V	-25.5
9543.75	-85.88	11.64	-74.25	V	-61.2
11452.50	-82.24	12.62	-69.62	V	-56.6



Table 6-8. Radiated Spurious Data (PCS CDMA Mode – Ch. 1175)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:



The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits. This unit was tested with its standard battery. The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found while the antenna was sitting upright. The data reported in the table above was measured in this test setup.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.09E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module	Page 17 of 18	

7.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Sierra Wireless Cellular/PCS CDMA Module FCC ID: O9EGTM1** complies with all the requirements of Parts 2, 22, and 24 of the FCC rules and RSS-129 and RSS-133 of the Industry Canada rules.

FCC ID: O9EGTM1		FCC Pt. 22/24 CDMA MEASUREMENT REPORT (CLASS II PERMISSIVE CHANGE)		Reviewed by: Quality Manager
Test Report S/N: 0Y1003170427.O9E	Test Dates: March 19, 2010	EUT Type: Cellular/PCS CDMA Module		Page 18 of 18