



**FCC CFR47 PART 22 SUBPART H
AND PART 24 SUBPART E
CERTIFICATION TEST REPORT**

FOR

USB WIRELESS MODEM

MODEL NUMBER: AIRCARD 875U

FCC ID: N7N-MC8775U

REPORT NUMBER: 07U10801-1

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Prepared for
**SIERRA WIRELESS INC.
13811 WIRELESS WAY
RICHMOND, BC V6V 3A4, CANADA**

Prepared by
**COMPLIANCE CERTIFICATION SERVICES
47173 BENICIA STREET
FREMONT, CA 94538, USA
TEL: (510) 771-1000
FAX: (510) 661-0888**



NVLAP LAB CODE 200065-0

Revision History

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SIERRA WIRELESS
13811 WIRELESS WAY
RICHMOND, BC V6V 3A4, CANADA

EUT DESCRIPTION: USB WIRELESS MODEM

MODEL: AIRCARD 875U

SERIAL NUMBER: 110

DATE TESTED: JANUARY 26-29, 2007

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 22 SUBPART H	NO NON-COMPLIANCE NOTED
FCC PART 24 SUBPART E	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

Tested By:



THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

CHIN PANG
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603C (2004), ANSI C63.4-2003, FCC CFR 47 Part 2, FCC CFR 47 Part 15 and FCC CFR 47 Part 22H and 24E.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a multiband wireless modem operating on the GSM/GPRS/EDGE/UMTS network. In the US and Canada, only cellular and PCS bands are used for GSM/GPRS/UMTS operation, so this test report only contains data for these two bands (850MHz and 1900MHz). The EUT was tested in both modes of operation: GMSK Modulation, 8PSK and WCDMA modulation.

5.2. MAXIMUM OUTPUT POWER

For RF conducted output power, please refer to attached report “AC875U FCC Part 22 24 Test Report.pdf”

The transmitter has maximum ERP and EIRP output powers as follows:

Part 22 (824 - 849MHz) & Part 24 (1850 - 1910MHz) Authorized Band:

Frequency Range (MHz)	Modulation	ERP Peak Power (dBm)	ERP Peak Power (mW)
824.2 - 848.75	GPRS	29.80	954.99
824.2 - 848.75	EGPRS	25.40	346.74
826.5 - 846.6	WCDMA	26.10	407.38

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
1850.25 - 1909.8	GPRS	30.10	1023.29
1850.25 - 1909.8	EGPRS	27.60	575.44
1852.4 - 1907.6	WCDMA	29.30	851.14

NOTE: RBW=VBW=8MHz

5.3. SOFTWARE AND FIRMWARE

The test utility software used during testing was ProcommPlus 4.8 @ Copyright 1999 by Symantec Corporation, Build 71 for GSM and EDGE modulations, and the communication test set is used for WCDMA modulation to configure as below:

The following settings were used to configure the Wireless Communications Test Set, Agilent 8960 Series 10, E5515C.

Instrument information: (by press SYSTEM CONFIG)

Application: WCDMA Lap App C
E6703C C.03.11
Format: WCDMA

Call Control: (by press CALL SETUP)

2 of 4 Cell Parameters: PS Domain Information > Present
ATT (IMSI Attach) Flag State > Set
4 of 4 Security Info: Security Parameter - System Operations > None

Call Params: (by press CALL SETUP)

1 of 3
Channel Type: 12.2k RMC
Paging Service: RB Test Mode

HSDPA Parameters:

1 of 2
HSDPA RB Test Mode Setup
FRC Type > H-Set 5 QPSK
CN Domain > PS Domain
Uplink 64k DTCH for HSDPA Loopback State > On
HS-DSCH Data Pattern > CCITT PRBS15
RLC Header on HS-DSCH > Present

Channel (UARFCN) Params: DL Channel: 4357 / 4407 / 4458
UL Channel: 4132 / 4182 / 4233
UL Sep (Band) > 400MHz (Band 4)
Freq Bnad Ind > On

2 of 3
DL DTCH Data: ALL ONES
RLC Reestablish: Off
Call Limit State: Off
Call Drop Timer: Off
SRB Config.: 13.6k DCCH
3 of 3
UE Target Power: -5 dBm
UL CL Pwr Ctrl Params: Active bits (Select "All Up bits" after linked to get maximum power)
DL Channel: 9662 / 9800 / 9938 / 4357 / 4407 / 4458
UL Channel: 9262 / 9400 / 9538 / 4132 / 4182 / 4233

5.4. WORST-CASE CONFIGURATION AND MODE

Based on all test cases, GPRS has the worst case between GPRS & EGPRS modulations. The worst-case channel is determined as the channel with the highest output power. The highest measured output power was at mid channel for CELL band and low channel for PCS band the worst case on DSPDA mode for WCDMA modulation

For the worst case position, EUT at Y position in the cradle is determined to be the worst case for the Cell band and, with EUT at X-position connected directly to the Laptop is the worst case for PCS band

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Test Peripherals				
Device Type	Manufacturer	Model Number	Serial Number	FCC ID
Laptop	Compaq	Presario R3000	CND5011HNJ	DoC
AC Adapter	HP	PPP017L	4Z01237302	DoC
Communications Test Set	Agilent	E5515C	GB46160222	DoC

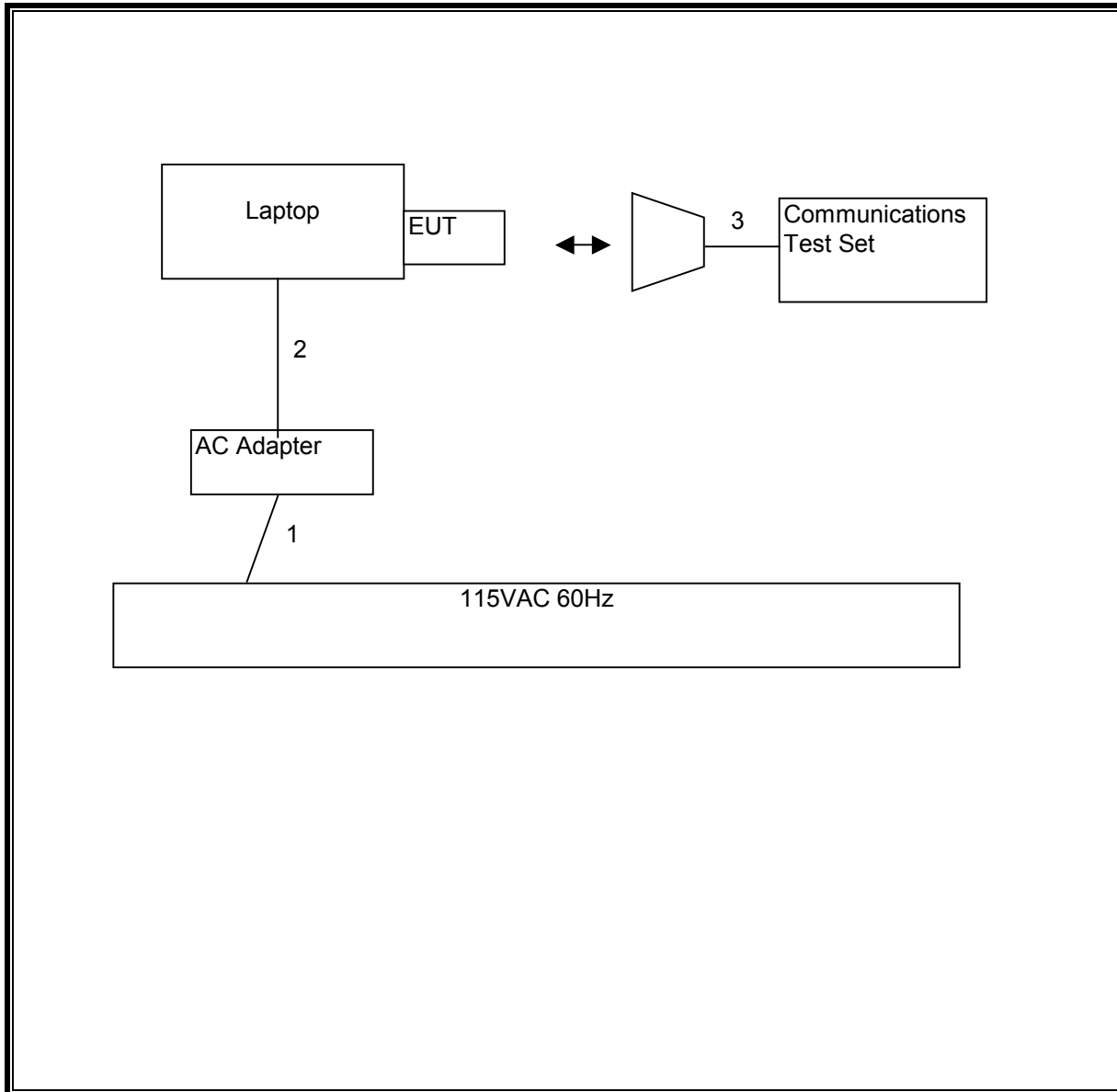
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US 115V	Un-shielded	2 m	NA
2	DC	1	DC	Un-shielded	2m	Ferrite on DC end
3	RF In/Out	1	SMA	Un-shielded	1m	NA

TEST SETUP

The EUT is connected directly to the laptop or through a cradle during the tests. The Wireless Communication test set exercised the EUT.

RADIATED TEST SETUP DIAGRAM



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	Cal Due
Antenna, Bilog 30 MHz ~ 2 Ghz	Sunol Sciences	JB1	A121003	9/6/07
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	4/22/07
EMI Receiver, 9 kHz ~ 2.9 GHz	Agilent / HP	8542E	3942A00286	2/4/07
RF Filter Section	Agilent / HP	85420E	3705A00256	2/4/07
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	4/22/07
Signal Generator 2 -40 GHz	R & S	SMP04	DE 34210	6/2/07
Signal Generator 1024 MHz	R & S	SMY01	DE 12311	5/11/07
Dipole	EMCO	3121C-DB2	22435	5/7/07
2.7GHz HPF	MicroTronic	HPM13194	2	CNR
1.5GHz HPF	MicroTronic	HPM13195	1	CNR
Communication Test Set	Agilent	E5515C	91936	4/8/07

7. LIMITS AND RESULTS

7.1. RADIATED RF POWER OUTPUT

LIMIT

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.
24.232(b) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.2.17

RESULTS

No non-compliance noted.

850 MHz GPRS Mode

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.2	28.20	660.69
Middle	837	29.80	954.99
High	848.8	29.60	912.01

1900 MHz GPRS Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1850.2	30.10	1023.29
Middle	1880.00	28.40	691.83
High	1909.8	28.00	630.96

NOTE: RBW=VBW=8MHz.

850 MHz EGPRS Mode

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.2	25.10	323.59
Middle	837	25.40	346.74
High	848.8	25.20	331.13

1900 MHz EGPRS Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1850.2	27.60	575.44
Middle	1880.00	27.40	549.54
High	1909.8	26.70	467.74

850 MHz WCDMA Modulation

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	826.4	25.10	323.59
Middle	836.4	26.00	398.11
High	846.6	25.90	389.05

1900 MHz WCDMA Modulation

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1852.4	29.30	851.14
Middle	1880.00	28.00	630.96
High	1907.6	26.40	436.52

NOTE: RBW=VBW=8MHz

GPRS Output Power (ERP)

High Frequency Substitution Measurement Compliance Certification Services, Morgan Hill 5m Chamber Site									
Company: Sierra Wireless Inc.									
Project #: 07U10801									
Date: 1/25/2007									
Test Engineer: Chin Pang									
Configuration: EUT only									
Mode: TX, GSM+GPRS, CELL Band									
Test Equipment:									
Receiving: Sunol T122, and 5m Chamber N-type Cable (Setup this one for testing EUT)									
Substitution: Dipole S/N: 00022117, and 4ft SMA Cable Warehouse S/N: 177081002									
f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Y Pos with Cradle									
Low Ch									
824.20	102.3	V	28.7	0.5	0.0	28.2	38.5	-10.2	
824.20	98.2	H	22.9	0.5	0.0	22.4	38.5	-16.0	
Mid Ch									
837.00	103.4	V	30.4	0.6	0.0	29.8	38.5	-8.7	
837.00	99.4	H	24.3	0.6	0.0	23.7	38.5	-14.7	
High Ch									
848.80	103.5	V	30.3	0.7	0.0	29.6	38.5	-8.8	
848.80	98.0	H	22.5	0.7	0.0	21.8	38.5	-16.6	
Rev. 1.24.7									

EGPRS Output Power (ERP)

High Frequency Substitution Measurement Compliance Certification Services, Morgan Hill 5m Chamber Site									
Company: Sierra Wireless Inc.									
Project #: 07U10801									
Date: 1/25/2007									
Test Engineer: Chin Pang									
Configuration: EUT only									
Mode: TX, GSM+EGPRS, CELL Band									
Test Equipment:									
Receiving: Sunol T122, and 5m Chamber N-type Cable (Setup this one for testing EUT)									
Substitution: Dipole S/N: 00022117, and 4ft SMA Cable Warehouse S/N: 177081002									
f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Y Pos with Cradle									
Low Ch									
824.20	99.2	V	25.6	0.5	0.0	25.1	38.5	-13.3	
824.20	92.7	H	17.4	0.5	0.0	16.9	38.5	-21.5	
Mid Ch									
837.00	99.0	V	26.0	0.6	0.0	25.4	38.5	-13.0	
837.00	93.5	H	18.4	0.6	0.0	17.8	38.5	-20.6	
High Ch									
848.80	99.1	V	25.9	0.7	0.0	25.2	38.5	-13.2	
848.80	93.2	H	17.7	0.7	0.0	17.0	38.5	-21.4	
Rev. 1.24.7									

WCDMA Output Power (ERP)

High Frequency Substitution Measurement									
Compliance Certification Services, Morgan Hill 5m Chamber Site									
Company: Sierra Wireless Inc.									
Project #: 07U10801									
Date: 1/25/2007									
Test Engineer: Chin Pang									
Configuration: EUT only									
Mode: TX, WCDMA, CELL Band									
Test Equipment:									
Receiving: Sunol T122, and 5m Chamber N-type Cable (Setup this one for testing EUT)									
Substitution: Dipole S/N: 00022117, and 4ft SMA Cable Warehouse S/N: 177081002									
f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Y pos with Cradle (Worst Case)									
Low Ch									
826.40	99.2	V	25.6	0.5	0.0	25.1	38.5	-13.3	
826.40	95.0	H	19.7	0.5	0.0	19.2	38.5	-19.2	
Mid Ch									
836.40	99.6	V	26.6	0.6	0.0	26.0	38.5	-12.4	
836.40	95.2	H	20.1	0.6	0.0	19.5	38.5	-18.9	
High Ch									
846.60	99.8	V	26.6	0.7	0.0	25.9	38.5	-12.6	
846.60	95.6	H	20.1	0.7	0.0	19.4	38.5	-19.0	
Rev. 1.24.7									

GPRS Output Power (EIRP)

High Frequency Fundamental Measurement									
Compliance Certification Services, Morgan Hill 5m Chamber Site									
Company: Sierra Wireless Inc.									
Project #: 07U10801									
Date: 1/25/2007									
Test Engineer: Chien Ho									
Configuration: EUT Only									
Mode: TX, PCS GSM+GPRS									
Test Equipment:									
Receiving: Horn T73, and 12ft S/N: 197209005 (Setup this one for testing EUT)									
Substitution: Horn T60 Substitution, 4ft SMA Cable Warehouse S/N: 177081002									
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
X Position (Worst Case)									
Low Ch									
1.850	96.1	V	22.7	0.9	8.3	30.1	33.0	-2.9	
1.850	93.4	H	19.5	0.9	8.3	26.9	33.0	-6.1	
Mid Ch									
1.880	95.3	V	21.0	0.9	8.3	28.4	33.0	-4.6	
1.880	91.8	H	17.0	0.9	8.3	24.4	33.0	-8.6	
High Ch									
1.910	93.8	V	20.5	0.9	8.4	28.0	33.0	-5.0	
1.910	90.7	H	17.9	0.9	8.4	25.4	33.0	-7.7	
Rev. 1.24.7									

EGPRS Output Power (EIRP)

High Frequency Fundamental Measurement Compliance Certification Services, Morgan Hill 5m Chamber Site									
Company: Sierra Wireless Inc.									
Project #: 07U10801									
Date: 1/27/2007									
Test Engineer: Chien Ho									
Configuration: EUT Only									
Mode: TX, PCS GSM+EGPRS									
Test Equipment:									
Receiving: Horn T73, and 12ft S/N: 197209005 (Setup this one for testing EUT)									
Substitution: Horn T60 Substitution, 4ft SMA Cable Warehouse S/N: 177081002									
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch									
1.850	93.6	V	20.2	0.9	8.3	27.6	33.0	-5.4	
1.850	89.5	H	15.6	0.9	8.3	23.0	33.0	-10.0	
Mid Ch									
1.880	94.3	V	20.0	0.9	8.3	27.4	33.0	-5.6	
1.880	89.8	H	15.0	0.9	8.3	22.4	33.0	-10.6	
High Ch									
1.910	92.5	V	19.2	0.9	8.4	26.7	33.0	-6.3	
1.910	87.5	H	14.7	0.9	8.4	22.2	33.0	-10.9	
Rev. 1.24.7									

WCDMA Output Power (EIRP)

High Frequency Fundamental Measurement Compliance Certification Services, Morgan Hill 5m Chamber Site									
Company: Sireea Wireless Inc.									
Project #: 07U10801									
Date: 1/29/2007									
Test Engineer: Chin Pang									
Configuration: EUT only									
Mode: TX, PCS, WCDMA									
Test Equipment:									
Receiving: Horn T73, and 12ft S/N: 197209005 (Setup this one for testing EUT)									
Substitution: Horn T60 Substitution, 4ft SMA Cable Warehouse S/N: 177081002									
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
X Position (Worst Case)									
Low Ch									
1.850	95.3	V	21.9	0.9	8.3	29.3	33.0	-3.7	
1.850	88.0	H	14.1	0.9	8.3	21.5	33.0	-11.5	
Mid Ch									
1.880	94.9	V	20.6	0.9	8.3	28.0	33.0	-5.0	
1.880	89.3	H	14.5	0.9	8.3	21.9	33.0	-11.1	
High Ch									
1.910	92.2	V	18.9	0.9	8.4	26.4	33.0	-6.6	
1.910	86.8	H	14.0	0.9	8.4	21.5	33.0	-11.6	
Rev. 1.24.7									

7.2. FIELD STRENGTH OF SPURIOUS EMISSION

LIMIT

§22.917 (e) and §24.238 (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 3.2.12, FCC 22.917 (h), & FCC 24.238 (b)

RESULTS

No non-compliance noted.

Note: No emissions were found within 30-1000MHz & after the third harmonic of 20dB below the system noise.

800MHz Band GPRS Spurious & Harmonic (ERP)

High Frequency Substitution Measurement										
Compliance Certification Services, B- 5m Chamber Fremont Site										
Company:Sierra Wireless										
Project #:07U10801										
Date:1/26/2007										
Test Engineer:Chin Pang										
Configuration:EUT Only										
Mode:TX, CELL,GSM+GPRS										
Test Equipment:										
EMCO Horn 1-18GHz T73; S/N: 6717 @3m			Horn > 18GHz			Limit FCC 22		<input checked="" type="checkbox"/> High Pass Filter		
Hi Frequency Cables <input type="checkbox"/> (2 ft) <input type="checkbox"/> (2 ~ 3 ft) <input type="checkbox"/> (4 ~ 6 ft) <input checked="" type="checkbox"/> (12 ft)				Pre-amplifer 1-26GHz T34 HP 8449B		Pre-amplifer 26-40GHz				
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch										
1.649	69.5	V	-38.2	3.8	8.0	5.8	-36.2	-13.0	-23.2	
2.474	66.7	V	-36.9	4.9	9.5	7.4	-34.4	-13.0	-21.4	
3.298	51.4	V	-48.1	5.6	9.8	7.6	-46.1	-13.0	-33.1	
1.649	63.6	H	-43.4	3.8	8.0	5.8	-41.4	-13.0	-28.4	
2.474	64.5	H	-38.9	4.9	9.5	7.4	-36.4	-13.0	-23.4	
3.298	47.6	H	-51.8	5.6	9.8	7.6	-49.8	-13.0	-36.8	
Mid Ch										
1.674	63.7	V	-43.9	3.9	8.0	5.9	-41.9	-13.0	-28.9	
2.511	64.6	V	-38.8	4.9	9.6	7.4	-36.3	-13.0	-23.3	
3.348	53.5	V	-45.8	5.6	9.8	7.6	-43.8	-13.0	-30.8	
1.674	59.4	H	-47.5	3.9	8.0	5.9	-45.4	-13.0	-32.4	
2.511	60.6	H	-42.6	4.9	9.6	7.4	-40.1	-13.0	-27.1	
3.348	47.8	H	-51.4	5.6	9.8	7.6	-49.4	-13.0	-36.4	
High Ch										
1.697	63.9	V	-43.5	3.9	8.1	5.9	-41.5	-13.0	-28.5	
2.545	62.5	V	-40.8	4.9	9.6	7.4	-38.3	-13.0	-25.3	
3.393	50.2	V	-48.8	5.7	9.7	7.6	-46.9	-13.0	-33.9	
1.697	60.4	H	-46.3	3.9	8.1	5.9	-44.3	-13.0	-31.3	
2.545	63.3	H	-39.8	4.9	9.6	7.4	-37.3	-13.0	-24.3	
3.393	48.6	H	-50.3	5.7	9.7	7.6	-48.4	-13.0	-35.4	
Rev. 1.24.7										

800MHz Band EGPRS Spurious & Harmonic (ERP)

High Frequency Substitution Measurement
 Compliance Certification Services, B- 5m Chamber Fremont Site

Company: Sierra Wireless
 Project #: 07U10801
 Date: 1/26/2007
 Test Engineer: Chin Pang
 Configuration: EUT Only
 Mode: TX, CELL, GSM+EGPRS

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @3m
 Horn > 18GHz:
 Limit: FCC 22 High Pass Filter

Hi Frequency Cables: (2 ft) (2~3 ft) (4~6 ft) (12 ft)

Pre-amplifier 1-26GHz: T34 HP 8449B
 Pre-amplifier 26-40GHz:
 Rev. 1.24.7

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch										
1.649	56.0	V	-51.7	3.8	8.0	5.8	-49.7	-13.0	-36.7	
2.474	54.7	V	-48.9	4.9	9.5	7.4	-46.4	-13.0	-33.4	
3.298	47.7	V	-51.8	5.6	9.8	7.6	-49.8	-13.0	-36.8	
1.649	53.6	H	-53.4	3.8	8.0	5.8	-51.4	-13.0	-38.4	
2.474	51.2	H	-52.2	4.9	9.5	7.4	-49.7	-13.0	-36.7	
3.298	46.8	H	-52.6	5.6	9.8	7.6	-50.6	-13.0	-37.6	
Mid Ch										
1.674	54.6	V	-53.0	3.9	8.0	5.9	-51.0	-13.0	-38.0	
2.511	53.2	V	-50.2	4.9	9.6	7.4	-47.7	-13.0	-34.7	
3.348	46.5	V	-52.8	5.6	9.8	7.6	-50.8	-13.0	-37.8	
1.674	52.7	H	-54.2	3.9	8.0	5.9	-52.1	-13.0	-39.1	
2.511	50.6	H	-52.6	4.9	9.6	7.4	-50.1	-13.0	-37.1	
3.348	46.1	H	-53.1	5.6	9.8	7.6	-51.1	-13.0	-38.1	
High Ch										
1.697	55.6	V	-51.8	3.9	8.1	5.9	-49.8	-13.0	-36.8	
2.545	52.8	V	-50.5	4.9	9.6	7.4	-48.0	-13.0	-35.0	
3.393	48.0	V	-51.0	5.7	9.7	7.6	-49.1	-13.0	-36.1	
1.697	52.9	H	-53.8	3.9	8.1	5.9	-51.8	-13.0	-38.8	
2.545	50.6	H	-52.5	4.9	9.6	7.4	-50.0	-13.0	-37.0	
3.393	47.2	H	-51.7	5.7	9.7	7.6	-49.8	-13.0	-36.8	

800MHz Band WCDMA Spurious & Harmonic (ERP)

High Frequency Substitution Measurement										
Compliance Certification Services, B- 5m Chamber Fremont Site										
Company:Sierra Wireless										
Project #:07U10801										
Date:1/29/2007										
Test Engineer:Chin Pang										
Configuration:EUT Only										
Mode:TX, CELL, WCDMA										
Test Equipment:										
EMCO Horn 1-18GHz			Horn > 18GHz			Limit		High Pass Filter		
T73; S/N: 6717 @3m						FCC 22				
Hi Frequency Cables				Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz				
<input type="checkbox"/> (2 ft) <input type="checkbox"/> (2~3 ft) <input type="checkbox"/> (4~6 ft) <input checked="" type="checkbox"/> (12 ft)				T34 HP 8449B						
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch										
1.653	56.0	V	-51.7	3.8	8.0	5.8	-49.7	-13.0	-36.7	
2.479	52.8	V	-50.8	4.9	9.6	7.4	-48.3	-13.0	-35.3	
3.305	47.6	V	-51.9	5.6	9.8	7.6	-49.9	-13.0	-36.9	
1.653	53.2	H	-53.8	3.8	8.0	5.8	-51.8	-13.0	-38.8	
2.479	48.7	H	-54.7	4.9	9.6	7.4	-52.2	-13.0	-39.2	
3.305	46.3	H	-53.1	5.6	9.8	7.6	-51.1	-13.0	-38.1	
Mid Ch										
1.673	55.1	V	-52.5	3.9	8.0	5.9	-50.5	-13.0	-37.5	
2.509	52.6	V	-50.8	4.9	9.6	7.4	-48.3	-13.0	-35.3	
3.346	46.0	V	-53.3	5.6	9.8	7.6	-51.3	-13.0	-38.3	
1.672	53.8	H	-53.1	3.9	8.0	5.9	-51.1	-13.0	-38.1	
2.509	50.0	H	-53.2	4.9	9.6	7.4	-50.7	-13.0	-37.7	
3.346	45.6	H	-53.6	5.6	9.8	7.6	-51.6	-13.0	-38.6	
High Ch										
1.693	54.3	V	-53.2	3.9	8.1	5.9	-51.1	-13.0	-38.1	
2.540	50.7	V	-52.6	4.9	9.6	7.4	-50.1	-13.0	-37.1	
3.386	47.6	V	-51.5	5.7	9.7	7.6	-49.5	-13.0	-36.5	
1.693	50.6	H	-56.2	3.9	8.1	5.9	-54.1	-13.0	-41.1	
2.540	48.7	H	-54.4	4.9	9.6	7.4	-51.9	-13.0	-38.9	
3.386	45.2	H	-53.8	5.7	9.7	7.6	-51.8	-13.0	-38.8	
Rev. 124.7										

1900MHz Band GPRS Spurious & Harmonic (EIRP)

High Frequency Substitution Measurement										
Compliance Certification Services, B- 5m Chamber Fremont Site										
Company:Sierra Wireless										
Project #:07U10801										
Date:1/29/2007										
Test Engineer:Chin Pang										
Configuration:EUT Only										
Mode:TX, PCS, GSM+GPRS										
Test Equipment:										
EMCO Horn 1-18GHz			Horn > 18GHz			Limit		High Pass Filter		
T73; S/N: 6717 @3m						FCC 24				
Hi Frequency Cables				Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz				
<input type="checkbox"/> (2 ft) <input type="checkbox"/> (2~3 ft) <input type="checkbox"/> (4~6 ft) <input checked="" type="checkbox"/> (12 ft)				T34 HP 8449B						
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch										
3.700	55.8	V	-41.6	5.9	9.7	7.6	-37.9	-13.0	-24.9	
5.550	56.7	V	-35.6	7.4	11.3	9.1	-31.7	-13.0	-18.7	
7.405	53.2	V	-36.5	8.3	12.6	10.4	-32.2	-13.0	-19.2	
11.101	48.8	V	-32.9	11.2	13.8	11.7	-30.3	-13.0	-17.3	
3.700	57.0	H	-40.3	5.9	9.7	7.6	-36.6	-13.0	-23.6	
5.550	57.6	H	-33.7	7.4	11.3	9.1	-29.8	-13.0	-16.8	
7.405	53.2	H	-35.7	8.3	12.6	10.4	-31.4	-13.0	-18.4	
11.101	48.4	H	-32.7	11.2	13.8	11.7	-30.1	-13.0	-17.1	
Mid Ch										
3.760	53.8	V	-43.3	6.0	9.7	7.6	-39.6	-13.0	-26.6	
5.640	58.7	V	-33.8	7.4	11.5	9.3	-29.8	-13.0	-16.8	
7.520	52.8	V	-36.8	8.3	12.6	10.5	-32.5	-13.0	-19.5	
11.280	47.5	V	-33.8	11.4	13.9	11.7	-31.3	-13.0	-18.3	
3.760	55.7	H	-41.3	6.0	9.7	7.6	-37.6	-13.0	-24.6	
5.640	60.3	H	-31.2	7.4	11.5	9.3	-27.2	-13.0	-14.2	
7.520	52.8	H	-36.0	8.3	12.6	10.5	-31.7	-13.0	-18.7	
9.400	48.2	H	-39.2	9.4	13.0	10.9	-35.6	-13.0	-22.6	
11.280	50.3	H	-30.4	11.4	13.9	11.7	-27.9	-13.0	-14.9	
High Ch										
3.820	55.3	V	-41.5	6.0	9.7	7.5	-37.8	-13.0	-24.8	
5.729	57.6	V	-35.2	7.5	11.7	9.5	-31.0	-13.0	-18.0	
7.639	53.3	V	-36.1	8.4	12.7	10.5	-31.8	-13.0	-18.8	
9.549	48.2	V	-38.6	9.6	13.1	11.0	-35.0	-13.0	-22.0	
11.458	48.3	V	-32.6	11.6	13.9	11.8	-30.2	-13.0	-17.2	
3.820	53.7	H	-43.0	6.0	9.7	7.5	-39.3	-13.0	-26.3	
5.729	57.5	H	-34.3	7.5	11.7	9.5	-30.1	-13.0	-17.1	
7.639	55.0	H	-33.6	8.4	12.7	10.5	-29.3	-13.0	-16.3	
9.549	46.3	H	-40.5	9.6	13.1	11.0	-36.9	-13.0	-23.9	
11.458	48.7	H	-31.6	11.6	13.9	11.8	-29.2	-13.0	-16.2	
Rev. 1.24.7										

1900MHz Band EGPRS Spurious & Harmonic (EIRP)

High Frequency Substitution Measurement											
Compliance Certification Services, B- 5m Chamber Fremont Site											
Company:Sierra Wireless											
Project #:07U10801											
Date:1/29/2007											
Test Engineer:Chin Pang											
Configuration:EUT Only											
Mode:TX, PCS, GSM+EGPRS											
Test Equipment:											
EMCO Horn 1-18GHz			Horn > 18GHz				Limit		High Pass Filter		
T73; S/N: 6717 @3m							FCC 24		<input checked="" type="checkbox"/>		
Hi Frequency Cables						Pre-amplifier 1-26GHz		Pre-amplifier 26-40GHz			
<input type="checkbox"/> (2 ft) <input type="checkbox"/> (2~3 ft) <input type="checkbox"/> (4~6 ft) <input checked="" type="checkbox"/> (12 ft)						T34 HP S449B					
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes	
Low Ch											
3.700	54.0	V	-43.4	5.9	9.7	7.6	-39.7	-13.0	-26.7		
5.550	53.8	V	-38.5	7.4	11.3	9.1	-34.6	-13.0	-21.6		
7.405	52.0	V	-37.7	8.3	12.6	10.4	-33.4	-13.0	-20.4		
11.101	48.0	V	-33.7	11.2	13.8	11.7	-31.1	-13.0	-18.1		
3.700	50.0	H	-47.3	5.9	9.7	7.6	-43.6	-13.0	-30.6		
5.550	56.6	H	-34.7	7.4	11.3	9.1	-30.8	-13.0	-17.8		
7.405	49.8	H	-39.1	8.3	12.6	10.4	-34.8	-13.0	-21.8		
11.101	48.9	H	-32.2	11.2	13.8	11.7	-29.6	-13.0	-16.6		
Mid Ch											
3.760	53.3	V	-43.8	6.0	9.7	7.6	-40.1	-13.0	-27.1		
5.640	55.3	V	-37.2	7.4	11.5	9.3	-33.2	-13.0	-20.2		
7.520	50.0	V	-39.6	8.3	12.6	10.5	-35.3	-13.0	-22.3		
9.400	46.2	V	-41.2	9.4	13.0	10.9	-37.6	-13.0	-24.6		
11.280	45.0	V	-36.3	11.4	13.9	11.7	-33.8	-13.0	-20.8		
3.760	51.8	H	-45.2	6.0	9.7	7.6	-41.5	-13.0	-28.5		
5.640	48.0	H	-43.5	7.4	11.5	9.3	-39.5	-13.0	-26.5		
7.520	53.8	H	-35.0	8.3	12.6	10.5	-30.7	-13.0	-17.7		
9.400	45.0	H	-42.4	9.4	13.0	10.9	-38.8	-13.0	-25.8		
11.280	50.5	H	-30.2	11.4	13.9	11.7	-27.7	-13.0	-14.7		
High Ch											
3.820	53.6	V	-43.2	6.0	9.7	7.5	-39.5	-13.0	-26.5		
5.729	56.6	V	-36.2	7.5	11.7	9.5	-32.0	-13.0	-19.0		
7.639	52.2	V	-37.2	8.4	12.7	10.5	-32.9	-13.0	-19.9		
9.549	48.8	V	-38.0	9.6	13.1	11.0	-34.4	-13.0	-21.4		
11.458	47.1	V	-33.8	11.6	13.9	11.8	-31.4	-13.0	-18.4		
3.820	50.3	V	-46.5	6.0	9.7	7.5	-42.8	-13.0	-29.8		
5.729	58.0	H	-33.8	7.5	11.7	9.5	-29.6	-13.0	-16.6		
7.639	54.6	H	-34.0	8.4	12.7	10.5	-29.7	-13.0	-16.7		
9.549	45.9	H	-40.9	9.6	13.1	11.0	-37.3	-13.0	-24.3		
11.458	50.7	H	-29.6	11.6	13.9	11.8	-27.2	-13.0	-14.2		
Rev. 1.24.7											

1900MHz Band WCDMA Spurious & Harmonic (EIRP)

High Frequency Substitution Measurement										
Compliance Certification Services, B- 5m Chamber Fremont Site										
Company:Sierra Wireless										
Project #:07U10801										
Date:1/29/2007										
Test Engineer:Chin Pang										
Configuration:EUT Only										
Mode:TX, PCS, WCDMA										
Test Equipment:										
EMCO Horn 1-18GHz T73; S/N: 6717 @3m			Horn > 18GHz			Limit FCC 24		<input checked="" type="checkbox"/> High Pass Filter		
Hi Frequency Cables <input type="checkbox"/> (2 ft) <input type="checkbox"/> (2 ~ 3 ft) <input type="checkbox"/> (4 ~ 6 ft) <input checked="" type="checkbox"/> (12 ft)				Pre-amplifer 1-26GHz T34 HP 8449B		Pre-amplifer 26-40GHz				
f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch										
3.705	61.3	V	-36.1	5.9	9.7	7.6	-32.3	-13.0	-19.3	
5.557	52.4	V	-39.9	7.4	11.3	9.1	-36.0	-13.0	-23.0	
7.410	47.2	V	-42.5	8.3	12.6	10.4	-38.2	-13.0	-25.2	
3.705	56.5	H	-40.8	5.9	9.7	7.6	-37.0	-13.0	-24.0	
5.557	48.2	H	-43.1	7.4	11.3	9.1	-39.2	-13.0	-26.2	
7.410	46.3	H	-42.6	8.3	12.6	10.4	-38.3	-13.0	-25.3	
Mid Ch										
3.760	62.1	V	-35.0	6.0	9.7	7.6	-31.3	-13.0	-18.3	
5.640	52.4	V	-40.1	7.4	11.5	9.3	-36.1	-13.0	-23.1	
7.520	45.6	V	-44.0	8.3	12.6	10.5	-39.7	-13.0	-26.7	
3.760	60.8	H	-36.2	6.0	9.7	7.6	-32.5	-13.0	-19.5	
5.640	48.5	H	-43.0	7.4	11.5	9.3	-39.0	-13.0	-26.0	
7.520	45.2	H	-43.6	8.3	12.6	10.5	-39.3	-13.0	-26.3	
High Ch										
3.815	64.5	V	-32.3	6.0	9.7	7.5	-28.7	-13.0	-15.7	
5.723	56.3	V	-36.5	7.5	11.6	9.5	-32.3	-13.0	-19.3	
7.630	47.2	V	-42.2	8.4	12.7	10.5	-37.9	-13.0	-24.9	
3.815	61.6	H	-35.1	6.0	9.7	7.5	-31.5	-13.0	-18.5	
5.723	50.3	H	-41.5	7.5	11.6	9.5	-37.3	-13.0	-24.3	
7.630	46.4	H	-42.2	8.4	12.7	10.5	-37.9	-13.0	-24.9	
Rev. 1.24.7										

8. SETUP PHOTOS

RADIATED RF MEASUREMENT SETUP FOR PORTABLE CONFIGURATION



X-AXIS BACK PHOTO



Y-AXIS FRONT PHOTO

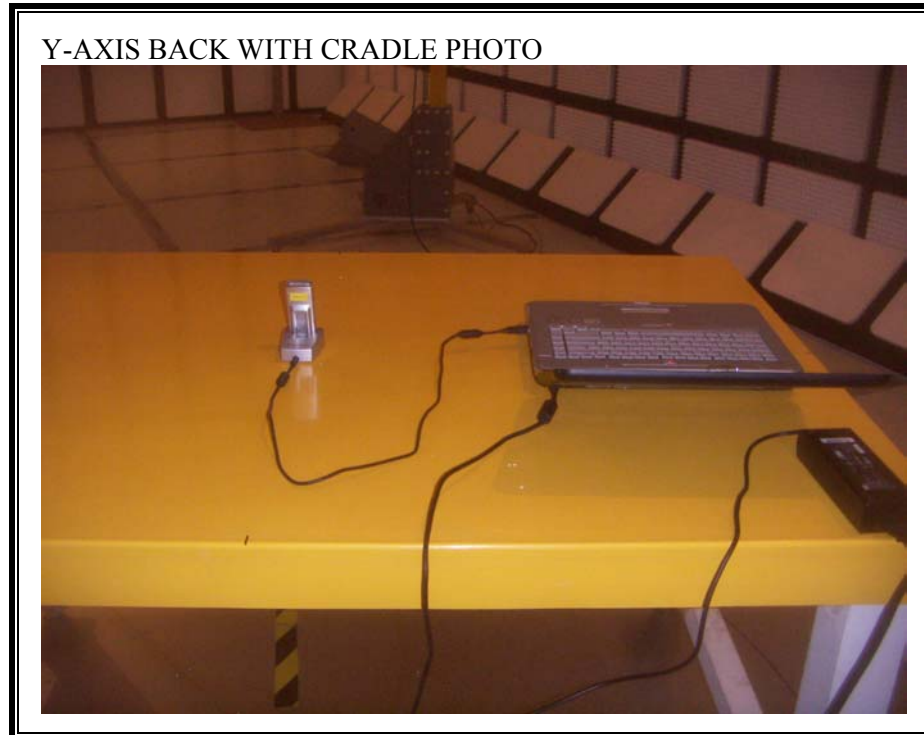


Y-AXIS BACK PHOTO



Y-AXIS WITH CRADLE FRONT PHOTO





END OF REPORT