FCC CFR47 PART 22 SUBPART H
AND PART 24 SUBPART E
CLASS II PERMISSIVE CHANGE
CERTIFICATION TEST REPORT
FOR

EXPRESS MINI-PCI USB WIRELESS CDMA MODEM MODULE

MODEL NUMBER: MC5720

FCC ID: N7N-MC5720

REPORT NUMBER: 06U10632-1B

ISSUE DATE: OCTOBER 24, 2006

Prepared for
SIERRA WIRELESS
2290 COSMOS CT.
CARLSBAD, CA 92009 USA

Prepared by
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Revision History

Rev.	Issue Date	Revisions	Revised By
--	10/20/06	Initial Issue	Thu
B	10/24/06	Updated & Revised Frequency Range	Thu

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME:	SIERRA WIRELESS 2290 COSMOS CT. CARLSBAD, CA 92009, USA
EUT DESCRIPTION:	EXPRESS MINI-PCI USB WIRELESS CDMA MODEM MODULE
MODEL:	MC5720
SERIAL NUMBER:	LV00112
DATE TESTED:	OCTOBER 02 – 05, 2006

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:

THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

Tested By:

CHIN PANG
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603A (2001), ANSI C63.4-2003, FCC CFR 47 Part 2, FCC CFR 47 Part 15 and FCC CFR 47 Part 22 & 24.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, 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 dual band 800 / 1900MHz Mini-PCI Express Card CDMA Modem Module.

The module is manufactured by Sierra Wireless, Inc.

The MC-5720 supports CDMA IS-95 A/B, 1XRelease 0/A, and IS-856 1xEVDO.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak ERP/ EIRP as follows:

PORTABLE CONFIGURATION

Frequency Range (MHz)	Modulation	Output ERP / EIRP (dBm)	Output ERP / EIRP (mW)
824.7 - 848.3	CDMA	20.20	104.71
1851.25-1908.75	CDMA	30.10	1023.29

MOBILE CONFIGURATION

Frequency Range (MHz)	Modulation	Output ERP / EIRP (dBm)	Output ERP / EIRP (mW)
824.7 - 848.3	CDMA	22.90	194.98
1851.25-1908.75	CDMA	29.10	812.83

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

Pre-scan was performed on RF conducted port to determine the worst-case scenario:

Cellular Band	Avg. Output Power (dBm) Mid CH	99% BW (MHz) Mid CH	26 dB BW (MHz) Mid CH	Band edge (dBm) Low CH	Band edge (dBm) High CH
1xRRT RC3, SO2	24.38	1.2549	1.394	-17.915	-14.993
1xRRT RC3, SO32 (+F-SCH)	**24.63**	**1.2638**	**1.396**	**-16.942**	**-14.463**
1xRRT RC3, SO32 (+SCH)	24.58	1.279	1.394	-17.511	-14.684
1xRRT RC3, SO55	24.55	1.2749	1.39	-17.216	-14.97
EVDO	24.50	1.2519	1.39	-17.97	-14.897

PCS Band	Avg. Output Power (dBm) Mid CH	99% BW (MHz) Mid CH	26 dB BW (MHz) Mid CH	Band edge (dBm) Low CH	Band edge (dBm) High CH
1xRRT RC3, SO2	24.35	1.253	1.403	-35.968	-33.323
1xRRT RC3, SO32 (+F-SCH)	**24.54**	**1.270**	**1.419**	**-35.016**	**-32.422**
1xRRT RC3, SO32 (+SCH)	24.51	1.261	1.41	-35.869	-32.894
1xRRT RC3, SO55	24.44	1.263	1.408	-35.509	-32.5
EVDO	23.08	1.253	1.394	-36.878	-33.473

Based on the above results from the different modulations, EVDO is determined to be the worst-case scenario for fundamental ERP /EIRP measurement and radiated spurious emissions tests; and 1xRRT RC3, SO32 (+F-SCH) to be the worst-case scenario for RF conducted band-edge and bandwidth tests.

The worst-case channel is determined as the channel with the highest output power. The highest measured output power was at mid channel for both bands.

The chip set used in the MC5720 does not support 1xEVDO Rev. A.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Laptop	LENOVO	814Q-01G	LV00112	DoC
AC Adapter	LENOVO	92P1158	11S92P1158Z1ZAW566	DoC
Wireless Communications	Agilent	E5515C	GB42361381	NA

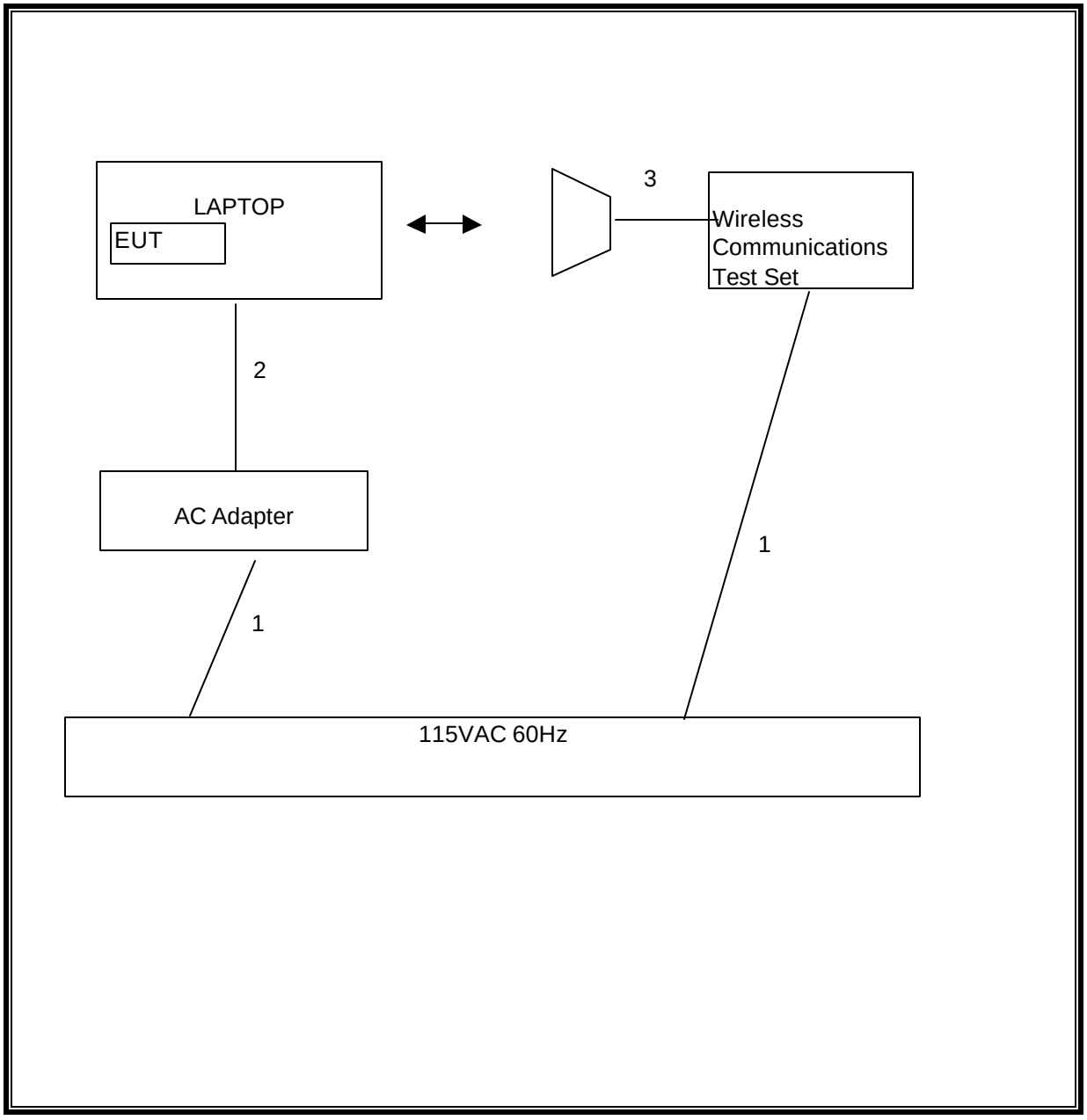
I/O CABLES

I/O CABLE LIST						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length**	**Remarks**
1	AC	1	US 115V	Un-shielded	1m	N/A
2	DC	1	DC	Un-shielded	2m	N/A
3	RF Out	1	Horn	Un-shielded	2m.	Setup Link between EUT and

TEST SETUP

The EUT is installed inside the Laptop during tests. The EUT is linked with Agilent Communication Test Set.

SETUP DIAGRAM FOR TESTS



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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**
Spectrum Analyzer 3 Hz ~ 44 GHz	Agilent / HP	E4446A	MY43360112	5/3/2007
Antenna, Horn 1 ~ 18 GHz	ETS	3117	29301	4/22/07
Preamplifier, 1 ~ 26.5 GHz	Agilent / HP	8449B	3008A00561	10/3/07
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, Bilog 30 MHz ~ 2 Ghz	Sunol Sciences	JB1	A121003	9/3/07
Wireless Communications Test Set	Agilent	E5515C	GB42361381	5/7/07
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
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

7. LIMITS AND RESULTS

7.1. 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.

PORTABLE CONFIGURATION

850 MHz CDMA Mode

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.7	19.20	83.18
Middle	836.5	20.20	104.71
High	848.3	20.00	100.00

1900 MHz CDMA Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1851.25	28.20	660.69
Middle	1880.00	30.10	1023.29
High	1908.75	28.40	691.83

NOTE: RBW=VBW=8MHz.

MOBILE CONFIGURATION

850 MHz CDMA Mode

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.7	21.90	154.88
Middle	836.5	21.90	154.88
High	848.3	22.90	194.98

1900 MHz CDMA Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1851.25	28.40	691.83
Middle	1880.00	29.10	812.83
High	1908.75	27.90	616.60

NOTE: RBW=VBW=8MHz.

PORTABLE CONFIGURATION

CDMA Output Power (ERP)

10/05/06 High Frequency Substitution Measurement
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr: Chin Pang
Project #: 06U10632
Company: Sierra Wireless
EUT Descrip.: Express Mini-PCI USB Wireless CDMA Modem Module
EUT M/N: MC5720
Test Target: CDMA Cell
Mode Oper: TX, Fundamental, Portable Configuration (.(1xRTT CDMA)

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
Portable Config									
Low Ch									
824.70	93.5	V	16.6	0.5	0.0	16.1	38.5	-22.4	
824.70	98.0	H	19.7	0.5	0.0	19.2	38.5	-19.3	
Mid ZCh									
836.50	95.0	V	19.0	0.6	0.0	18.4	38.5	-20.0	
836.50	99.0	H	20.8	0.6	0.0	20.2	38.5	-18.2	
High Ch									
848.31	94.0	V	18.6	0.7	0.0	17.9	38.5	-20.5	
848.31	98.8	H	20.7	0.7	0.0	20.0	38.5	-18.4	

MOBILE CONFIGURATION

CDMA Output Power (ERP)

10/05/06 High Frequency Substitution Measurement
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr: Chin Pang
Project #: 06U10632
Company: Sierra Wireless
EUT Descrip.: Express Mini-PCI USB Wireless CDMA Modem Module in DL-note Tablet
EUT M/N: MC5720,
Test Target: CDMA Cell
Mode Oper: TX, Fundamental, Mobile Configuration .(1xRTT CDMA)

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
Mobile Cofig, MC5720									
Low Ch									
824.70	99.3	V	22.4	0.5	0.0	21.9	38.5	-16.6	
824.70	99.4	H	21.1	0.5	0.0	20.6	38.5	-17.9	
Mid Ch									
836.50	98.5	V	22.5	0.6	0.0	21.9	38.5	-16.5	
836.50	97.0	H	18.8	0.6	0.0	18.2	38.5	-20.2	
High Ch									
848.30	99.0	V	23.6	0.7	0.0	22.9	38.5	-15.5	
848.30	98.5	H	20.4	0.7	0.0	19.7	38.5	-18.7	

PORTABLE CONFIGURATION

PCS Output Power (EIRP)

10/05/06 **High Frequency Fundamental Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr: Chin Pang
Project #: 06U310632
Company: Sierra Wireless
EUT Descrip.: Express Mini-PCI USB Wireless CDMA Modem Module.
EUT M/N: MC5720
Test Target: CDMA 1900MHz
Mode Oper: TX, Fundamental Portable (1xRTT CDMA)
X Position (Worst Case)
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									
1.851	98.0	H	20.8	0.9	8.3	28.2	33.0	-4.8	
1.851	91.8	V	14.4	0.9	8.3	21.8	33.0	-11.2	
Mid Ch									
1.880	99.5	H	22.6	0.9	8.3	30.1	33.0	-3.0	
1.880	91.0	V	13.3	0.9	8.3	20.8	33.0	-12.3	
High Ch									
1.909	97.5	H	20.9	0.9	8.4	28.4	33.0	-4.6	
1.909	90.0	V	13.0	0.9	8.4	20.5	33.0	-12.5	

MOBILE CONFIGURATION

PCS Output Power (EIRP)

10/05/06 **High Frequency Fundamental Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr: Chin Pang
Project #: 06U310632
Company: Sierra Wireless
EUT Descrip.: Express Mini-PCI USB Wireless CDMA Modem Module.
EUT M/N: MC5720
Test Target: CDMA 1900MHz
Mode Oper: TX, Fundamental Mobile Config.(1xRTT CDMA)

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									
1.851	98.2	H	21.0	0.9	8.3	28.4	33.0	-4.6	
1.851	93.0	V	15.6	0.9	8.3	23.0	33.0	-10.0	
Mid Ch									
1.880	98.5	H	21.6	0.9	8.3	29.1	33.0	-4.0	
1.880	91.0	V	13.3	0.9	8.3	20.8	33.0	-12.3	
High Ch									
1.909	97.0	H	20.4	0.9	8.4	27.9	33.0	-5.1	
1.909	90.0	V	13.0	0.9	8.4	20.5	33.0	-12.5	

7.2. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (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.
§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 (b)
ANSI / TIA / EIA 603 Clause 3.2.12 & FCC 24.238 (b)

RESULTS

No non-compliance noted.

PORTABLE CONIFIGURATION

CDMA Spurious & Harmonic (ERP)

10/04/06 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:06U10632
Company:Sierra Wireless
EUT Descrip.:Express Mini-PCI USB Wireless CDMA Modem Module
EUT M/N:MC5720
Test Target:Part 22
Mode Oper:TX, Potable Configuration (Worst Case)

Test Equipment:

EMCO Horn 1-18GHz: T119; S/N: 29301 @3m
Horn > 18GHz:
Limit: FCC 22
☑ High Pass Filter
Hi Frequency Cables: ☐ (2 ft) ☑ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)
Pre-amplifer 1-26GHz: T145 Agilent 3008A
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, 824.7MHz										
1.649	50.0	V	-52.6	1.6	4.0	1.9	-52.3	-13.0	-39.3	
2.474	51.0	V	-50.5	1.9	6.1	4.0	-48.5	-13.0	-35.5	
3.299	50.6	V	-50.5	2.3	7.5	5.4	-47.4	-13.0	-34.4	
1.649	52.0	H	-49.9	1.6	4.0	1.9	-49.6	-13.0	-36.6	
2.474	50.0	H	-51.3	1.9	6.1	4.0	-49.3	-13.0	-36.3	
3.299	51.0	H	-50.0	2.3	7.5	5.4	-46.9	-13.0	-33.9	
Mid Ch, 836.52MHz										
1.673	53.0	V	-49.5	1.6	4.1	1.9	-49.2	-13.0	-36.2	
2.510	54.0	V	-47.5	1.9	6.2	4.0	-45.4	-13.0	-32.4	
3.346	52.6	V	-48.5	2.3	7.6	5.4	-45.4	-13.0	-32.4	
1.673	54.0	H	-47.8	1.6	4.1	1.9	-47.5	-13.0	-34.5	
2.510	50.0	H	-51.3	1.9	6.2	4.0	-49.2	-13.0	-36.2	
3.346	50.0	H	-51.0	2.3	7.6	5.4	-47.9	-13.0	-34.9	
High Ch, 848.31MHz										
1.697	53.5	V	-48.9	1.6	4.1	2.0	-48.6	-13.0	-35.6	
2.545	53.4	V	-48.1	2.0	6.2	4.1	-45.9	-13.0	-32.9	
3.393	49.6	V	-51.5	2.3	7.7	5.5	-48.3	-13.0	-35.3	
1.697	52.0	H	-49.7	1.6	4.1	2.0	-49.4	-13.0	-36.4	
2.545	54.0	H	-47.3	2.0	6.2	4.1	-45.1	-13.0	-32.1	
3.393	50.0	H	-51.0	2.3	7.7	5.5	-47.8	-13.0	-34.8	

Note: No other emissions were detected above the system noise floor.

MOBILE CONFIGURATION

CDMA Spurious & Harmonic (ERP)

10/04/06 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:06U10632
Company:Sierra Wireless
EUT Descrip.:Express Mini-PCI USB Wireless CDMA Modem Module
EUT M/N:MC5720
Test Target:Part 22
Mode Oper:TX, Mobile Configuration

Test Equipment:

EMCO Horn 1-18GHz: T119; S/N: 29301 @3m
Horn > 18GHz:
Limit: FCC 22
☑ High Pass Filter
Hi Frequency Cables: ☐ (2 ft) ☑ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)
Pre-amplifer 1-26GHz: T145 Agilent 3008A
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, 824.7MHz										
1.649	61.0	V	-41.6	1.6	4.0	1.9	-41.3	-13.0	-28.3	
2.474	55.0	V	-46.5	1.9	6.1	4.0	-44.5	-13.0	-31.5	
3.299	52.0	V	-49.1	2.3	7.5	5.4	-46.0	-13.0	-33.0	
1.649	60.0	H	-41.9	1.6	4.0	1.9	-41.6	-13.0	-28.6	
2.474	53.0	H	-48.3	1.9	6.1	4.0	-46.3	-13.0	-33.3	
3.299	51.0	H	-50.0	2.3	7.5	5.4	-46.9	-13.0	-33.9	
Mid Ch, 836.52MHz										
1.673	55.0	V	-47.5	1.6	4.1	1.9	-47.2	-13.0	-34.2	
2.510	48.0	V	-53.5	1.9	6.2	4.0	-51.4	-13.0	-38.4	
3.346	50.0	V	-51.1	2.3	7.6	5.4	-48.0	-13.0	-35.0	
1.673	60.7	H	-41.1	1.6	4.1	1.9	-40.8	-13.0	-27.8	
2.510	50.0	H	-51.3	1.9	6.2	4.0	-49.2	-13.0	-36.2	
3.346	52.0	H	-49.0	2.3	7.6	5.4	-45.9	-13.0	-32.9	
High Ch, 848.31MHz										
1.697	65.0	V	-37.4	1.6	4.1	2.0	-37.1	-13.0	-24.1	
2.545	54.0	V	-47.5	2.0	6.2	4.1	-45.3	-13.0	-32.3	
3.393	50.0	V	-51.1	2.3	7.7	5.5	-47.9	-13.0	-34.9	
1.697	63.0	H	-38.7	1.6	4.1	2.0	-38.4	-13.0	-25.4	
2.545	54.5	H	-46.8	2.0	6.2	4.1	-44.6	-13.0	-31.6	
3.393	52.0	H	-49.0	2.3	7.7	5.5	-45.8	-13.0	-32.8	

Note: No other emissions were detected above the system noise floor.

PORTABLE CONFIGURATION

PCS Spurious & Harmonic (EIRP):

10/04/06 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:06U10632
Company:Sierra Wireless
EUT Descrip.:Express Mini-PCI USB Wireless CDMA Modem Module
EUT M/N:MC5720
Test Target:Part 24
Mode Oper:TX, Portable Configuration (X pos worst Case)

Test Equipment:

EMCO Horn 1-18GHz: T119; S/N: 29301 @3m
Horn > 18GHz:
Limit: FCC 24
☑ High Pass Filter
Hi Frequency Cables: ☐ (2 ft) ☑ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)
Pre-amplifer 1-26GHz: T145 Agilent 3008A
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, 824.7MHz										
3.703	53.0	V	-48.1	2.4	8.3	6.1	-42.3	-13.0	-29.3	
5.554	59.0	V	-40.6	3.2	10.7	8.5	-33.1	-13.0	-20.1	
7.405	49.0	V	-49.1	3.7	11.9	9.8	-40.9	-13.0	-27.9	
3.703	52.0	H	-49.0	2.4	8.3	6.1	-43.2	-13.0	-30.2	
5.554	56.0	H	-42.6	3.2	10.7	8.5	-35.1	-13.0	-22.1	
7.405	48.0	H	-49.3	3.7	11.9	9.8	-41.1	-13.0	-28.1	
Mid Ch, 836.52MHz										
3.760	57.0	V	-44.1	2.5	8.4	6.2	-38.2	-13.0	-25.2	
5.640	61.0	V	-38.5	3.3	10.7	8.5	-31.0	-13.0	-18.0	
7.520	52.0	V	-46.1	3.7	12.0	9.9	-37.8	-13.0	-24.8	
3.760	58.0	H	-43.0	2.5	8.4	6.2	-37.1	-13.0	-24.1	
5.640	54.0	H	-44.5	3.3	10.7	8.5	-37.0	-13.0	-24.0	
7.520	48.0	H	-49.3	3.7	12.0	9.9	-41.0	-13.0	-28.0	
High Ch, 848.31MHz										
3.817	58.0	V	-43.1	2.5	8.5	6.3	-37.2	-13.0	-24.2	
5.726	57.0	V	-42.3	3.3	10.7	8.5	-34.9	-13.0	-21.9	
7.635	53.0	V	-45.1	3.8	12.1	10.0	-36.7	-13.0	-23.7	
3.817	61.0	H	-40.0	2.5	8.5	6.3	-34.1	-13.0	-21.1	
5.726	53.0	H	-45.3	3.3	10.7	8.5	-37.9	-13.0	-24.9	
7.635	50.0	H	-47.3	3.8	12.1	10.0	-38.9	-13.0	-25.9	
Note: No other emissions were detected above the system noise floor.										

MOBILE CONFIGURATION

PCS Spurious & Harmonic (EIRP):

10/04/06 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:06U10632
Company:Sierra Wireless
EUT Descrip.:Express Mini-PCI USB Wireless CDMA Modem Module
EUT M/N:MC5720
Test Target:Part 24
Mode Oper:TX, Mobile Configuration

Test Equipment:

EMCO Horn 1-18GHz: T119; S/N: 29301 @3m
Horn > 18GHz:
Limit: FCC 24
☑ High Pass Filter
Hi Frequency Cables: ☐ (2 ft) ☑ (2 ~ 3 ft) ☐ (4 ~ 6 ft) ☑ (12 ft)
Pre-amplifer 1-26GHz: T145 Agilent 3008A
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, 824.7MHz										
3.703	54.0	V	-47.1	2.4	8.3	6.1	-41.3	-13.0	-28.3	
5.554	62.0	V	-37.6	3.2	10.7	8.5	-30.1	-13.0	-17.1	
7.405	52.0	V	-46.1	3.7	11.9	9.8	-37.9	-13.0	-24.9	
3.703	53.5	H	-47.5	2.4	8.3	6.1	-41.7	-13.0	-28.7	
5.554	56.0	H	-42.6	3.2	10.7	8.5	-35.1	-13.0	-22.1	
7.405	52.0	H	-45.3	3.7	11.9	9.8	-37.1	-13.0	-24.1	
Mid Ch, 836.52MHz										
3.760	55.0	V	-46.1	2.5	8.4	6.2	-40.2	-13.0	-27.2	
5.640	53.0	V	-46.5	3.3	10.7	8.5	-39.0	-13.0	-26.0	
7.520	52.0	V	-46.1	3.7	12.0	9.9	-37.8	-13.0	-24.8	
3.760	58.0	H	-43.0	2.5	8.4	6.2	-37.1	-13.0	-24.1	
5.640	54.8	H	-43.7	3.3	10.7	8.5	-36.2	-13.0	-23.2	
7.520	53.0	H	-44.3	3.7	12.0	9.9	-36.0	-13.0	-23.0	
High Ch, 848.31MHz										
3.817	55.6	V	-45.5	2.5	8.5	6.3	-39.6	-13.0	-26.6	
5.726	53.6	V	-45.7	3.3	10.7	8.5	-38.3	-13.0	-25.3	
7.635	54.0	V	-44.1	3.8	12.1	10.0	-35.7	-13.0	-22.7	
3.817	62.5	H	-38.5	2.5	8.5	6.3	-32.6	-13.0	-19.6	
5.726	53.0	H	-45.3	3.3	10.7	8.5	-37.9	-13.0	-24.9	
7.635	56.0	H	-41.3	3.8	12.1	10.0	-32.9	-13.0	-19.9	
Note: No other emissions were detected above the system noise floor.										