FCC CFR47 PART 22H AND 24E
&
INDUSTRY CANADA RSS-132 AND RSS-133
CERTIFICATION
TEST REPORT

FOR

850/900/1800/1900/2100 MHZ MULTI-BAND MODULE

MODEL NUMBER: MC8790

FCC ID: N7NMC8790

IC: 2417C-MC8790

REPORT NUMBER: 08U11743-1

ISSUE DATE: APRIL 29, 2008

Prepared for

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

Prepared by

COMPLIANCE CERTIFICATION SERVICES
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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
--	04/29/08	Initial Issue	T. Chan

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1. ATTESTATION OF TEST RESULTS

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

EUT DESCRIPTION: 850/900/1800/1900/2100 MHz MULTI-BAND MODULE

MODEL: MC8790

SERIAL NUMBER: S6607680403E2-0E

DATE TESTED: APRIL 14, 2007

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22H and 24E AND IC RSS-132 ISSUE 2 and RSS-133 ISSUE 3	No Non-Compliance Noted (Radiated Portion)

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 603C (2004), FCC CFR 47 Part 2, and FCC CFR 47 Part 22H, 24E, RSS-GEN, RSS132, & RSS133.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

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
Radiated Emission, Above 2000 MHz	+/- 4.3 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 an 850/900/1800/1900/2100 MHz multi-band module and manufactured by Sierra Wireless, Inc.

The module supports GSM, GPRS, EGPRS and UMTS. Device capabilities are documented in the theory of operation

Only the 850/1900 MHz frequency bands were investigated under this project, and the test result documented in this report only applies to EUT operating in the 850/1900 MHz frequency bands. This device contains 900 MHz /1800 MHz/2100 MHz functions but these frequency bands are not operational in the U.S. territories.

5.2. MODEL DIFFERENCES

Please see attachment “MC8785V vs MC8790 v1 model differences” for more details.

5.3. ENGINEERING JUSTIFICATION

The test results from the base model (MC8785V) are also applicable to the variant module (MC8790). The base model (MC8785V) test results were taken from CCS document 07U11543.

5.4. WORST-CASE CONFIGURATION AND MODE

Based on the above results from the different modulations, GPRS is the worst-case scenario for all measurements.

The worst-case channel is determined as the channel with the highest output power.

5.5. SOFTWARE AND FIRMWARE

PROCEDURE USED TO ESTABLISH TEST SIGNAL

This procedure assumes the Agilent 8960 Test Set has the following applications installed and with valid license.

GPRS Mode

- Call Setup > Shift & Preset
- Active Cell > Active Cell (GPRS)
- Connection Type > ETSI Type A
- BCH Parameters > Cell Band > PCS or GSM850 (US band)
- TCH Parameters > Traffic Band > PCS or GSM850 (US band)
  > MS TX Level > 3 (33dBm for Cell band); 3 (30dBm for PCS band)
- PDTCH > Multislot Config > 1 Down, 4 Up
  > MS TX Level > 3 (33dBm Cell band); 3 (30dBm PCS band)
  > Coding Scheme > CS-4
- Press “Start Data Connection”

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	ELPAC	FW1805	37727	NA
Communications Test Set	Agilent	E5515C	10092	DoC
Test Fixture	Sierra Wireles	Mini Card Dev Boa	1201102 Rev 2.X	NA

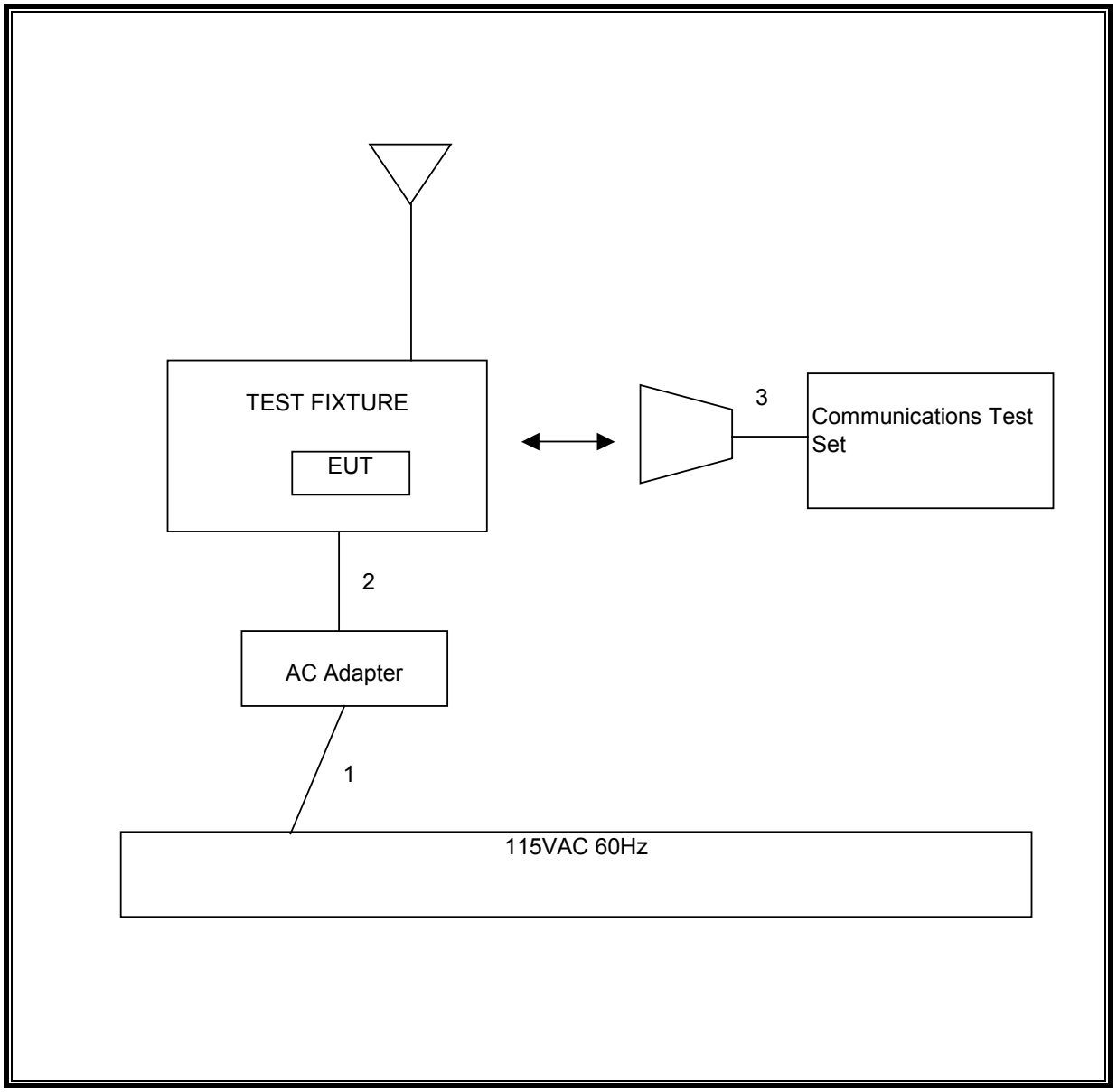
I/O CABLES

Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1/1/1900	US 115V	Un-shielded	2m	NA
2	DC	1/1/1900	DC	Un-shielded	2m	NA
3	RF In/Out	1/1/1900	SMA	Shielded	2m	NA

TEST SETUP

The EUT module is installed in a test fixture during the tests. The Wireless Communication test set exercised the EUT.

SETUP DIAGRAM FOR TESTS



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**	**Asset**	**Cal Date**	**Cal Due**
Spectrum Analyzer, 44 GHz	Agilent / HP	E4446A	C01012	5/2/2007	8/7/2008
Antenna, Horn, 18 GHz	EMCO	3115	C00945	4/15/2007	4/15/2008
Antenna, Horn 1 ~ 18 GHz	ETS	3117	35234	4/15/2007	4/15/2008
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	9/27/2007	9/27/2008
Communication Test Set	Agilent	E5515C	6B46160222	6/29/2007	6/29/2008
2.7GHz HPF	MicroTronic	HPM13194	N02689`	CNR	CNR
1.5GHz HPF	MicroTronic	HPM13195	N02687	CNR	CNR
Signal Generator	R & S	SMP04	C00953	11/16/07	02/16/09
Signal Generator	R & S	SMY01	C00979	11/28/07	05/28/09
Horn	EMCO	3115	C00945	04/15/07	04/15/08
Dipole	Speag	D900V2	NA	11/16/07	11/16/08

7. LIMITS AND RESULTS

7.1. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§§22.917 (e) and §24.238 (a), RSS-132 § 4.5.1, & RSS-133 § 6.5.1 (a) (i) & (b): 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 603C Clause 2.2.12, FCC 22.917 (h), FCC 24.238 (b), RSS-132, & RSS-133

RESULTS

CELL, GPRS Spurious & Harmonic (ERP)

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

Company: Sierra Wireless
Project #: 08U11743
Date: 4/14/2008
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: CELL TX, GPRS

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-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										
1.648	67.0	V	-40.7	3.8	8.0	5.8	-38.7	-13.0	-25.7	
2.473	61.0	V	-42.6	4.9	9.5	7.4	-40.1	-13.0	-27.1	
3.297	47.6	V	-51.9	5.6	9.8	7.6	-49.9	-13.0	-36.9	
1.648	69.4	H	-37.6	3.8	8.0	5.8	-35.6	-13.0	-22.6	
2.473	62.3	H	-41.1	4.9	9.5	7.4	-38.6	-13.0	-25.6	
3.297	44.6	H	-54.8	5.6	9.8	7.6	-52.8	-13.0	-39.8	
Mid CH.										
1.674	69.5	V	-38.1	3.9	8.0	5.9	-36.1	-13.0	-23.1	
2.511	60.5	V	-42.9	4.9	9.6	7.4	-40.4	-13.0	-27.4	
3.348	48.0	V	-51.3	5.6	9.8	7.6	-49.3	-13.0	-36.3	
1.674	70.0	H	-36.9	3.9	8.0	5.9	-34.8	-13.0	-21.8	
2.511	61.5	H	-41.7	4.9	9.6	7.4	-39.2	-13.0	-26.2	
3.348	45.0	H	-54.2	5.6	9.8	7.6	-52.2	-13.0	-39.2	
Hi CH.										
1.698	64.5	V	-42.9	3.9	8.1	5.9	-40.9	-13.0	-27.9	
2.546	60.6	V	-42.7	4.9	9.6	7.4	-40.2	-13.0	-27.2	
3.395	44.0	V	-55.0	5.7	9.7	7.6	-53.1	-13.0	-40.1	
1.698	66.0	H	-40.7	3.9	8.1	5.9	-38.7	-13.0	-25.7	
2.546	56.4	H	-46.7	4.9	9.6	7.4	-44.2	-13.0	-31.2	
3.395	45.0	H	-53.9	5.7	9.7	7.6	-52.0	-13.0	-39.0	

Rev. 4.12.7
Note: No other emissions till 10 times the oscilator frequency range were detected.

PCS, GPRS Spurious & Harmonic (EIRP)

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

Company: Sierra Wireless
Project #: 08U11743
Date: 4/14/2008
Test Engineer: Chin Pang
Configuration: EUT only
Mode: GPRS, PCS TX

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @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: 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										
3.700	49.6	V	-47.8	5.9	9.7	7.6	-44.1	-13.0	-31.1	
5.550	42.0	V	-50.3	7.4	11.3	9.1	-46.4	-13.0	-33.4	
3.700	47.0	H	-50.3	5.9	9.7	7.6	-46.6	-13.0	-33.6	
5.550	51.6	H	-39.8	7.4	11.3	9.1	-35.9	-13.0	-22.9	
Mid CH.										
3.760	50.0	V	-47.1	6.0	9.7	7.6	-43.4	-13.0	-30.4	
5.640	42.6	V	-49.9	7.4	11.5	9.3	-45.9	-13.0	-32.9	
3.760	49.6	H	-47.4	6.0	9.7	7.6	-43.7	-13.0	-30.7	
5.640	42.0	H	-49.5	7.4	11.5	9.3	-45.5	-13.0	-32.5	
Hi Ch										
3.820	49.0	V	-47.8	6.0	9.7	7.5	-44.1	-13.0	-31.1	
5.729	40.5	V	-52.3	7.5	11.7	9.5	-48.1	-13.0	-35.1	
3.820	49.5	H	-47.2	6.0	9.7	7.5	-43.5	-13.0	-30.5	
5.729	41.0	H	-50.8	7.5	11.7	9.5	-46.6	-13.0	-33.6	

Rev. 4.12.7
Note: No other emissions till 10 times the oscilator frequency range were detected.

CELL, EGPRS Spurious & Harmonic (ERP)

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

Company: Sierra Wireless
Project #: 07U11543
Date: 1/3/2008
Test Engineer: Mengistu Mekuria
Configuration: EUT and Supporting Devices
Mode: CELL TX, EGPRS

Test Equipment:

EMCO Horn 1-18GHz: T59; S/N: 3245 @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: T144 Miteq 3008A0(
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										
1.648	61.5	V	-54.5	0.0	7.7	5.5	-49.0	-13.0	-36.0	
2.473	59.9	V	-54.3	0.0	9.4	7.2	-47.1	-13.0	-34.1	
3.297	53.7	V	-58.4	0.0	9.7	7.5	-50.9	-13.0	-37.9	
4.121	46.2	V	-63.8	0.0	9.9	7.8	-56.0	-13.0	-43.0	
1.648	66.3	H	-49.0	0.0	7.7	5.5	-43.5	-13.0	-30.5	
2.473	56.5	H	-57.5	0.0	9.4	7.2	-50.3	-13.0	-37.3	
3.297	51.7	H	-60.2	0.0	9.7	7.5	-52.7	-13.0	-39.7	
4.121	45.0	H	-64.7	0.0	9.9	7.8	-56.9	-13.0	-43.9	
Mid CH.										
1.674	60.9	V	-55.0	0.0	7.7	5.6	-49.4	-13.0	-36.4	
2.511	58.4	V	-55.7	0.0	9.4	7.2	-48.5	-13.0	-35.5	
3.348	50.9	V	-61.0	0.0	9.7	7.5	-53.5	-13.0	-40.5	
4.185	44.6	V	-65.4	0.0	10.0	7.9	-57.5	-13.0	-44.5	
1.674	65.6	H	-49.6	0.0	7.7	5.6	-44.0	-13.0	-31.0	
2.511	53.8	H	-60.1	0.0	9.4	7.2	-52.9	-13.0	-39.9	
3.348	45.4	H	-66.4	0.0	9.7	7.5	-58.9	-13.0	-45.9	
4.185	41.3	H	-68.4	0.0	10.0	7.9	-60.5	-13.0	-47.5	
Hi CH.										
1.698	61.3	V	-54.5	0.0	7.8	5.6	-48.9	-13.0	-35.9	
2.546	56.1	V	-57.9	0.0	9.4	7.3	-50.6	-13.0	-37.6	
3.395	51.5	V	-60.3	0.0	9.7	7.5	-52.8	-13.0	-39.8	
4.244	47.3	V	-62.7	0.0	10.1	7.9	-54.8	-13.0	-41.8	
1.698	64.0	H	-51.0	0.0	7.8	5.6	-45.4	-13.0	-32.4	
2.546	55.6	H	-58.3	0.0	9.4	7.3	-51.0	-13.0	-38.0	
3.395	47.1	H	-64.5	0.0	9.7	7.5	-57.0	-13.0	-44.0	
4.244	44.4	H	-65.3	0.0	10.1	7.9	-57.3	-13.0	-44.3	

Rev. 4.12.7
Note: No other emissions till 10 times the oscilator frequency range were detected.

PCS, EGPRS Spurious & Harmonic (EIRP)

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

Company: Sierra Wireless
Project #: 07U11543
Date: 3/2/2008
Test Engineer: Mengistu Mekuria
Configuration: EUT and Supporting Devices
Mode: PCS TX, EGPRS

Test Equipment:

EMCO Horn 1-18GHz: T59; S/N: 3245 @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: T144 Miteq 3008A0(
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										
3.700	50.3	V	-48.8	5.9	9.7	7.6	-45.0	-13.0	-32.0	
3.700	50.7	H	-48.3	5.9	9.7	7.6	-44.4	-13.0	-31.4	
Mid CH.										
3.760	48.5	V	-50.3	6.0	9.8	7.6	-46.6	-13.0	-33.6	
3.760	48.8	H	-50.0	6.0	9.8	7.6	-46.2	-13.0	-33.2	
Hi Ch										
3.820	48.0	V	-50.6	6.0	9.8	7.6	-46.8	-13.0	-33.8	
3.820	48.2	H	-50.2	6.0	9.8	7.6	-46.5	-13.0	-33.5	

Rev. 4.12.7
Note: No other emissions till 10 times the oscilator frequency range were detected.

CELL, WCDMA Spurious & Harmonic (ERP)

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

Company:	Sierra Wireless
Project #:	07U11543
Date:	3/2/2008
Test Engineer:	Mengistu Mekuria
Configuration:	EUT and Supporting Devices
Mode:	CELL TX, WCDMA

Test Equipment:

EMCO Horn 1-18GHz: T59; S/N: 3245 @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: T144 Miteq 3008A0(
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										
1.653	51.4	V	-56.8	3.8	7.7	5.5	-55.2	-13.0	-42.2	
2.479	47.5	V	-56.9	4.9	9.4	7.2	-54.6	-13.0	-41.6	
1.653	50.4	H	-57.1	3.8	7.7	5.5	-55.4	-13.0	-42.4	
2.479	45.0	H	-59.2	4.9	9.4	7.2	-56.9	-13.0	-43.9	
Mid Ch										
1.673	53.1	V	-55.1	3.9	7.7	5.6	-53.4	-13.0	-40.4	
2.509	46.2	V	-58.1	4.9	9.4	7.2	-55.8	-13.0	-42.8	
1.673	52.0	H	-55.5	3.9	7.7	5.6	-53.8	-13.0	-40.8	
2.509	45.6	H	-58.5	4.9	9.4	7.2	-56.2	-13.0	-43.2	
High Ch										
1.693	52.1	V	-55.9	3.9	7.7	5.6	-54.2	-13.0	-41.2	
2.540	46.5	V	-57.6	4.9	9.4	7.2	-55.3	-13.0	-42.3	
1.693	51.0	H	-56.3	3.9	7.7	5.6	-54.6	-13.0	-41.6	
2.540	45.7	H	-58.3	4.9	9.4	7.2	-56.0	-13.0	-43.0	

Rev. 4.12.7
Note: No other emissions till 10 times the oscilator frequency range were detected.

PCS, WCDMA Spurious & Harmonic (EIRP)

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

Company:	Sierra Wireless
Project #:	07U11543
Date:	3/2/2008
Test Engineer:	Mengistu Mekuria
Configuration:	EUT and Supporting Devices
Mode:	PCS TX, WCDMA

Test Equipment:

EMCO Horn 1-18GHz: T59; S/N: 3245 @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: T144 Miteq 3008A0(
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	52.9	V	-46.2	5.9	9.7	7.6	-42.4	-13.0	-29.4	
3.705	50.5	H	-48.5	5.9	9.7	7.6	-44.7	-13.0	-31.7	
Mid CH.										
3.760	48.5	V	-50.3	6.0	9.8	7.6	-46.5	-13.0	-33.5	
3.760	45.9	H	-52.8	6.0	9.8	7.6	-49.0	-13.0	-36.0	
Hi Ch										
3.815	51.5	V	-47.1	6.0	9.8	7.6	-43.4	-13.0	-30.4	
3.815	49.1	H	-49.3	6.0	9.8	7.6	-45.6	-13.0	-32.6	

Rev. 4.12.7
Note: No other emissions till 10 times the oscilator frequency range were detected.

CELL, WCDMA + HSDPA Spurious & Harmonic (ERP)

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

Company: Sierra Wireless
Project #: 07U11543
Date: 3/2/2008
Test Engineer: Mengistu Mekuria
Configuration: EUT and Supporting Devices
Mode: CELL TX, WCDMA + H

Test Equipment:

EMCO Horn 1-18GHz: T59; S/N: 3245 @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: T144 Miteq 3008A0(
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										
1.653	53.8	V	-54.5	3.8	7.7	5.5	-52.8	-13.0	-39.8	
2.479	49.1	V	-55.3	4.9	9.4	7.2	-53.0	-13.0	-40.0	
1.653	50.8	H	-56.7	3.8	7.7	5.5	-55.0	-13.0	-42.0	
2.479	45.8	H	-58.4	4.9	9.4	7.2	-56.1	-13.0	-43.1	
Mid Ch										
1.673	56.0	V	-52.2	3.9	7.7	5.6	-50.5	-13.0	-37.5	
2.509	49.4	V	-54.9	4.9	9.4	7.2	-52.6	-13.0	-39.6	
1.673	51.0	H	-56.4	3.9	7.7	5.6	-54.7	-13.0	-41.7	
2.509	46.2	H	-57.9	4.9	9.4	7.2	-55.6	-13.0	-42.6	
High Ch										
1.693	53.0	V	-55.0	3.9	7.7	5.6	-53.3	-13.0	-40.3	
2.540	51.2	V	-53.0	4.9	9.4	7.2	-50.7	-13.0	-37.7	
1.693	51.1	H	-56.2	3.9	7.7	5.6	-54.5	-13.0	-41.5	
2.540	44.6	H	-59.3	4.9	9.4	7.2	-57.0	-13.0	-44.0	

Rev. 4.12.7
Note: No other emissions till 10 times the oscilator frequency range were detected.

PCS, WCDMA + HSDPA Spurious & Harmonic (EIRP)

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

Company:	Sierra Wireless
Project #:	07U11543
Date:	3/2/2008
Test Engineer:	Mengistu Mekuria
Configuration:	EUT and Supporting Devices
Mode:	PCS TX, WCDMA + H

Test Equipment:

EMCO Horn 1-18GHz: T59; S/N: 3245 @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: T144 Miteq 3008A0(
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	52.1	V	-47.0	5.9	9.7	7.6	-43.1	-13.0	-30.1	
3.705	50.0	H	-49.0	5.9	9.7	7.6	-45.2	-13.0	-32.2	
Mid CH.										
3.760	48.1	V	-50.7	6.0	9.8	7.6	-46.9	-13.0	-33.9	
3.760	47.4	H	-51.4	6.0	9.8	7.6	-47.6	-13.0	-34.6	
Hi Ch										
3.815	51.6	V	-47.0	6.0	9.8	7.6	-43.2	-13.0	-30.2	
3.815	49.6	H	-48.9	6.0	9.8	7.6	-45.2	-13.0	-32.2	

Rev. 4.12.7
Note: No other emissions till 10 times the oscilator frequency range were detected.