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

FOR

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

MODEL NUMBER: MC8775

FCC ID: N7NMC8775-L

REPORT NUMBER: 07U10964-1

ISSUE DATE: APRIL 10, 2007

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

Prepared by
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Revision History

Rev.	Issue Date	Revisions	Revised By
---	04/10/07	Initial Issue	T. Chan

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1. ATTESTATION OF TEST RESULTS

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

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

MODEL: MC8775

SERIAL NUMBER: LV-00757

DATE TESTED: MARCH 28-APRIL 04, 2007

APPLICABLE STANDARDS	
STANDARD	**STANDARD**
FCC PART 22 SUBPART H	FCC PART 22 SUBPART H
FCC PART 24 SUBPART E	FCC PART 24 SUBPART E

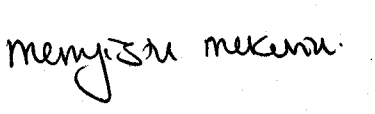
Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

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:



MENGISTU MEKURIA
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
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 WCDMA, WCDMA+HSPDA. 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. DESCRIPTION OF CLASS II CHANGE

Add ThinkPad X61 Tablet Series (DL2).

5.3. MAXIMUM OUTPUT POWER

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	29.30	851.14
824.2 - 848.75	EGPRS	27.50	562.34
826.5 - 846.6	WCDMA	22.60	181.97
826.5 - 846.6	WCDMA+HSDPA	23.50	223.87

Frequency Range (MHz)	Modulation	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
1850.25 - 1909.8	GPRS	29.50	891.25
1850.25 - 1909.8	EGPRS	28.00	630.96
1852.4 - 1907.6	WCDMA	25.80	380.19
1852.4 - 1907.6	WCDMA+HSDPA	27.40	549.54

NOTE: RBW=VBW=8MHz

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an Inverted F antenna with a maximum gain of 1.76dBi for Cellular band and 1.30 dBi for PCS bands.

5.5. SOFTWARE AND FIRMWARE

The following setting is used to configure the CMU200 to establish the link for testing.

GSM850/1900 GPRS & EGPRS Mode

Service selection	Test Mode A – Auto Slot Config: off
Main Service	Packet Data
Network Support	GSM+GPRS
Slot Config	33 dBm for GSM850 and 30 dBm for GSM1900 (for GSM/GPRS modes) 27 dBm for GSM850 and 26 dBm for GSM1900 (for EGPRS mode)

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

Application	Rev, License
WCDMA Mobile Test	A.09.06

WCDMA
Call Setup > Shift & Preset
Cell Parameters: PS Domain Information > Present
ATT (IMSI Attach) Flag State > Set
Security Parameter - System Operations > None
Channel Type:
RMC: 12.2k, 64k, 144k, or 384k
AMC: 12.2 UL / 64/ DL AM RMC, 12.2 UL / 144/ DL AM RMC, or
12.2 UL / 384/ DL AM RMC,

Paging Service: RB Test Mode
Channel (UARFCN) Parms:

	PCS band	Cell band
DL Channel:	9662 / 9800 / 9938	4357 / 4407 / 4458
UL Channel:	9262 / 9400 / 9538	4132 / 4182 / 4233

DL DTCH Data: All Ones
RLC Reestablish: Off
Call Limit State: Off
Call Drop Timer: Off
SRB Config.: 13.6k DCCH
UE Target Power: 25 dBm
UL CL Power Ctrl Parameters
UL CL Power Ctrl Mode: All Up Bits

WCDMA + HSDPA
Uplink Parameter:
UPLINK DPCH Bc / Bd Control: Manual
Manual Uplink DPCH Bc: 9
Manual Uplink DPCH Bd: 15
Channel Type: 12.2k + HSDPA
HSDPA Parameters:
HSDPA RB Test Mode Setup
HS–DSCH Configuration Type: FRC
FRC Type: H-Set 3
CN Domain: CS Domain
Uplink 64k DTCH for HSDPA Loopback State: On
HS-DSCH Data Pattern: All Ones
RLC Header on HS-DSCH: Present
HSDPA Uplink Parameters
DelatACK: 5
DeltaNACK: 5
DeltaCQI: 2

5.6. WORST-CASE CONFIGURATION AND MODE

Based on previous experiment, GPRS 1 slot has the worst case between GSM & GPRS modulations, and the HSDPA mode for WCDMA modulation, also the worst-case at mobile position of both mobile & portable configurations has been evaluated for both bands 850MHz and 1900MHz by comparing the fundamental ERP / EIRP output power.
The worst-case configuration has been evaluated the EUT @ mobile position has the worst configuration by comparing the fundamental output power.

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	Lenovo	92P1158	11S92P1158Z1ZBGG6BW1YP	DoC
Communications Test Set	Agilent	E5515C	10092	DoC
Laptop	Ienovo	ThinkPad X61 Tablet Series	LV-00757	DoC

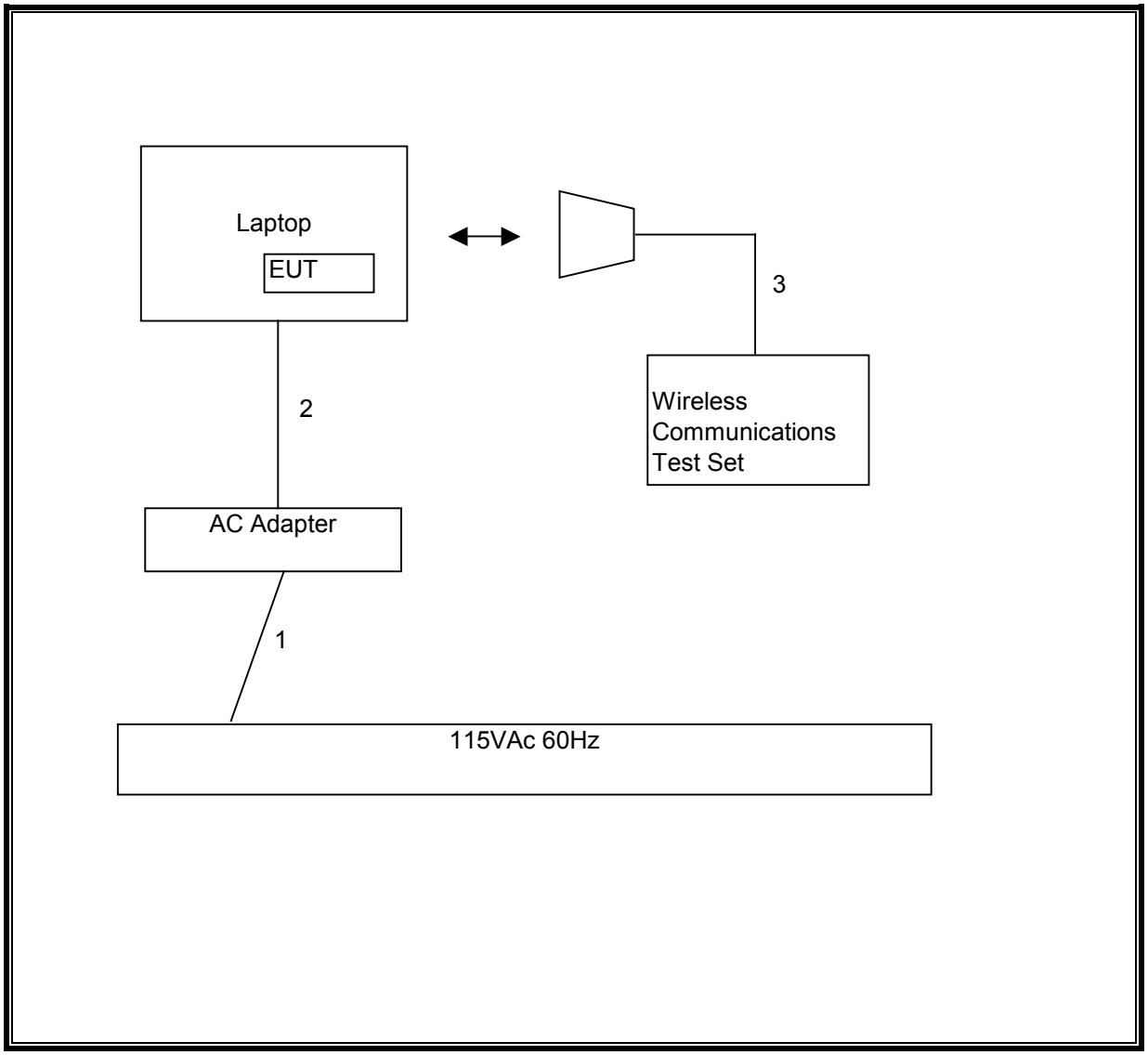
I/O CABLES

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

TEST SETUP

The EUT is installed in a Lenovo ThinkPad X61 Tablet Series during the test. 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**	**Serial Number**	**Cal Due**
Antenna, Horn 1 ~ 18 GHz	ETS	3117	29301	04/22/07
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	04/22/07
Preamplifier, 1 ~ 26.5 GHz	Agilent / HP	8449B	3008A00561	10/03/07
Spectrum Analyzer 3 Hz ~ 44 GHz	Agilent / HP	E4446A	MY43360112	05/03/07
Antenna, Bilog 30 MHz ~ 2 Ghz	Sunol Sciences	JB1	A0022704	09/03/07
Wireless Communications Test Set	Agilent	E5515C	10092	10/19/07
2.7GHz HPF	MicroTronic	HPM13194	2	CNR
1.5GHz HPF	MicroTronic	HPM13195	1	CNR
Signal Generator 2 -40 GHz	R & S	SMP04	DE 34210	06/02/07
Signal Generator 1024 MHz	R & S	SMY01	DE 12311	05/11/07

7. LIMITS AND RESULTS

7.1. RADIATED OUTPUT POWER

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	28.50	707.95
Middle	837	29.30	851.14
High	848.8	28.30	676.08

850 MHz EGPRS Mode

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.2	26.80	478.63
Middle	837	27.50	562.34
High	848.8	26.30	426.58

850 MHz WCDMA Modulation

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	826.4	22.20	165.96
Middle	836.4	22.60	181.97
High	846.6	22.60	181.97

850 MHz WCDMA+HSPDA Modulation

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	826.4	22.90	194.98
Middle	836.4	23.50	223.87
High	848.6	23.10	204.17

1900 MHz GPRS Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1850.2	29.50	891.25
Middle	1880.00	29.30	851.14
High	1909.8	29.20	831.76

1900 MHz EGPRS Mode

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1850.2	28.00	630.96
Middle	1880.00	27.80	602.56
High	1909.8	28.70	741.31

1900 MHz WCDMA Modulation

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1852.4	25.50	354.81
Middle	1880.00	25.30	338.84
High	1907.6	25.80	380.19

1900 MHz WCDMA+HSPDA Modulation

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1852.40	27.20	524.81
Middle	1880.00	26.20	416.87
High	1907.60	27.40	549.54

GSM850 GPRS Output Power (ERP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 3/30/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: Cell Tx, GPRS (Worst Case--Mobile Configuration)

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
824.20	102.6	V	29.0	0.5	0.0	28.5	38.5	-9.9	
824.20	100.3	H	25.0	0.5	0.0	24.5	38.5	-13.9	
837.00	102.9	V	29.9	0.6	0.0	29.3	38.5	-9.1	
837.00	101.7	H	26.6	0.6	0.0	26.0	38.5	-12.4	
848.80	102.2	V	29.0	0.7	0.0	28.3	38.5	-10.1	
848.80	98.4	H	22.9	0.7	0.0	22.2	38.5	-16.2	

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GSM850 EGPRS Output Power (ERP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 3/30/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: Cell Tx, EGPRS (Worst Case--Mobile Configuration)

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
824.20	100.9	V	27.3	0.5	0.0	26.8	38.5	-11.6	
824.20	98.5	H	23.2	0.5	0.0	22.7	38.5	-15.8	
837.00	101.1	V	28.1	0.6	0.0	27.5	38.5	-10.9	
837.00	98.0	H	22.9	0.6	0.0	22.3	38.5	-16.2	
848.80	100.2	V	27.0	0.7	0.0	26.3	38.5	-12.1	
848.80	96.8	H	21.3	0.7	0.0	20.6	38.5	-17.8	

Rev. 1.24.7

Cell Band WCDMA Output Power (ERP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 3/30/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: Cell Tx, WCDMA (Worst Case--Mobile Configuration)

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
826.40	96.3	V	22.7	0.5	0.0	22.2	38.5	-16.2	
826.40	94.6	H	19.3	0.5	0.0	18.8	38.5	-19.7	
836.40	96.2	V	23.2	0.6	0.0	22.6	38.5	-15.9	
836.40	94.9	H	19.8	0.6	0.0	19.2	38.5	-19.2	
846.60	96.5	V	23.3	0.7	0.0	22.6	38.5	-15.8	
846.60	92.6	H	17.1	0.7	0.0	16.4	38.5	-22.0	

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Cell Band WCDMA+HSPDA Output Power (ERP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 3/30/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: Cell Tx, WCDMA + H (Worst Case--Mobile Configuration)

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
826.40	97.0	V	23.4	0.5	0.0	22.9	38.5	-15.5	
826.40	94.0	H	18.7	0.5	0.0	18.2	38.5	-20.3	
836.40	97.1	V	24.1	0.6	0.0	23.5	38.5	-14.9	
836.40	93.7	H	18.6	0.6	0.0	18.0	38.5	-20.5	
846.60	97.0	V	23.8	0.7	0.0	23.1	38.5	-15.4	
846.60	94.4	H	18.9	0.7	0.0	18.2	38.5	-20.2	

Rev. 1.24.7

GSM1900 Band GPRS Output Power (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services, Fremont Chamber Site

Company: Sierra Wireless
Project #: 07U10964
Date: 3/29/2007
Test Engineer: Tom Chen
Configuration: EUT Only
Mode: GSM1900 GPRS , Worst Case (Mobile Configuration)

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
1.850	90.6	V	17.2	0.9	8.3	24.6	33.0	-8.4	
1.850	96.0	H	22.1	0.9	8.3	29.5	33.0	-3.5	
1.880	90.1	V	15.8	0.9	8.3	23.3	33.0	-9.7	
1.880	96.7	H	21.9	0.9	8.3	29.3	33.0	-3.7	
1.910	89.5	V	16.2	0.9	8.4	23.7	33.0	-9.3	
1.910	94.5	H	21.7	0.9	8.4	29.2	33.0	-3.9	

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GSM1900 Band EGPRS Output Power (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services, Fremont 5m Chamber Site

Company: Sierra Wireless
Project #: 07U10964
Date: 3/29/2007
Test Engineer: Tom Chen
Configuration: EUT Only
Mode: GSM1900 EGPRS Worst Case (Mobile Configuration)

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
1.850	85.3	V	11.9	0.9	8.3	19.3	33.0	-13.7	
1.850	94.5	H	20.6	0.9	8.3	28.0	33.0	-5.0	
1.880	88.6	V	14.3	0.9	8.3	21.7	33.0	-11.3	
1.880	95.2	H	20.4	0.9	8.3	27.8	33.0	-5.2	
1.910	86.7	V	13.4	0.9	8.4	20.9	33.0	-12.1	
1.910	94.0	H	21.2	0.9	8.4	28.7	33.0	-4.4	

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PCS Band WCDMA Output Power (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services, Fremont 5m Chamber Site

Company: Sierra Wireless
Project #: 07U10964
Date: 3/30/2007
Test Engineer: Tom Chen
Configuration: EUT Only
Mode: WCDMA 1900MHz Worst Case (Mobile Configuration)

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
1.852	88.1	V	14.7	0.9	8.3	22.1	33.0	-10.9	
1.852	92.0	H	18.1	0.9	8.3	25.5	33.0	-7.5	
1.880	87.9	V	13.6	0.9	8.3	21.0	33.0	-12.0	
1.880	92.7	H	17.9	0.9	8.3	25.3	33.0	-7.7	
1.908	86.0	V	12.7	0.9	8.4	20.2	33.0	-12.8	
1.908	91.1	H	18.3	0.9	8.4	25.8	33.0	-7.3	

Rev. 1.24.7

PCS Band WCDMA + HSPDA Output Power (EIRP)

High Frequency Fundamental Measurement
Compliance Certification Services, Fremont 5m Chamber Site

Company: Sierra Wireless
Project #: 07U10964
Date: 3/30/2007
Test Engineer: Tom Chen
Configuration: EUT Only
Mode: WCDMA+HSDPA 1900MHz Worst Case (Mobile Configuration)

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
1.852	87.7	V	14.3	0.9	8.3	21.7	33.0	-11.3	
1.852	93.7	H	19.8	0.9	8.3	27.2	33.0	-5.8	
1.880	87.5	V	13.2	0.9	8.3	20.6	33.0	-12.4	
1.880	93.6	H	18.8	0.9	8.3	26.2	33.0	-6.8	
1.908	85.6	V	12.3	0.9	8.4	19.8	33.0	-13.2	
1.908	92.7	H	19.9	0.9	8.4	27.4	33.0	-5.7	

Rev. 1.24.7

7.2. MAXIMUM PERMISSIBLE EXPOSURE

LIMITS

§1.1310 The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f^2)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f^2)	30

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)—Continued

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
30–300	27.5	0.073	0.2	30
300–1500			f/1500	30
1500–100,000			1.0	30

f = frequency in MHz
* = Plane-wave equivalent power density

NOTE 1 TO TABLE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2 TO TABLE 1: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

CALCULATIONS

Given

E = √ (30 * P * G) / d

and

S = E ^ 2 / 3770

where

E = Field Strength in Volts/meter
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power Density in milliwatts/square centimeter

Combining equations and rearranging the terms to express the distance as a function of the remaining variables yields:

d = √ ((30 * P * G) / (3770 * S))

Changing to units of Power to mW and Distance to cm, using:

P (mW) = P (W) / 1000 and
d (cm) =100 * d (m)

yields

d = 100 * √ ((30 * (P / 1000) * G) / (3770 * S))
d = 0.282 * √ (P * G / S)

where

d = distance in cm
P = Power in mW
G = Numeric antenna gain
S = Power Density in mW/cm^2

Substituting the logarithmic form of power and gain using:

P (mW) = 10 ^ (P (dBm) / 10) and
G (numeric) = 10 ^ (G (dBi) / 10)

yields

d = 0.282 * 10 ^ ((P + G) / 20) / √ S Equation (1)

where

d = MPE distance in cm
P = Power in dBm
G = Antenna Gain in dBi
S = Power Density Limit in mW/cm^2

Equation (1) and the measured peak power is used to calculate the MPE distance.

LIMITS

From §1.1310 Table 1 (B), S = 1.0 mW/cm^2

RESULTS

No non-compliance noted: (MPE distance equals 20 cm)

Mode	MPE Distance (cm)	Output Power (dBm)	Antenna Gain (dBi)	Power Density (mW/cm^2)
GSM850 GPRS	20.0	29.30	1.76	0.25
GSM1900 GPRS	20.0	29.50	1.30	0.24
WCDMA+HSPDA Celllar	20.0	23.50	1.76	0.07
WCDMA+HSPDA PCS	20.0	27.40	1.30	0.15

NOTE: For mobile or fixed location transmitters, the minimum separation distance is 20 cm, even if calculations indicate that the MPE distance would be less.

7.3. FIELD STRENGTH OF SPURIOUS RADIATION

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.

GSM850 GPRS Spurious & Harmonic (ERP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 4/2/2007
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: Cell TX, GSM850, GPRS Mode
Mobile Configuration-Worst Case

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.										
1.649	73.0	V	-34.7	3.8	8.0	5.8	-32.7	-13.0	-19.7	
2.473	74.0	V	-29.6	4.9	9.5	7.4	-27.1	-13.0	-14.1	
3.297	63.1	V	-36.4	5.6	9.8	7.6	-34.4	-13.0	-21.4	
4.122	53.0	V	-42.5	6.3	9.8	7.7	-41.1	-13.0	-28.1	
1.649	76.3	H	-30.7	3.8	8.0	5.8	-28.7	-13.0	-15.7	
2.473	71.6	H	-31.8	4.9	9.5	7.4	-29.3	-13.0	-16.3	
3.297	57.2	H	-42.2	5.6	9.8	7.6	-40.2	-13.0	-27.2	
4.122	52.6	H	-42.6	6.3	9.8	7.7	-41.2	-13.0	-28.2	
Mid Ch										
1.674	73.1	V	-34.5	3.9	8.0	5.9	-32.5	-13.0	-19.5	
2.511	74.0	V	-29.4	4.9	9.6	7.4	-26.9	-13.0	-13.9	
3.348	62.6	V	-36.7	5.6	9.8	7.6	-34.7	-13.0	-21.7	
4.185	50.0	V	-45.4	6.4	9.9	7.7	-44.0	-13.0	-31.0	
1.674	76.5	H	-30.4	3.9	8.0	5.9	-28.3	-13.0	-15.3	
2.511	70.4	H	-32.8	4.9	9.6	7.4	-30.3	-13.0	-17.3	
3.348	56.0	H	-43.2	5.6	9.8	7.6	-41.2	-13.0	-28.2	
4.185	52.6	H	-42.5	6.4	9.9	7.7	-41.1	-13.0	-28.1	
High Ch										
1.698	76.0	V	-31.4	3.9	8.1	5.9	-29.4	-13.0	-16.4	
2.546	70.7	V	-32.6	4.9	9.6	7.4	-30.1	-13.0	-17.1	
3.395	55.0	V	-44.0	5.7	9.7	7.6	-42.1	-13.0	-29.1	
4.244	52.4	V	-42.9	6.4	9.9	7.8	-41.5	-13.0	-28.5	
1.698	76.8	H	-29.9	3.9	8.1	5.9	-27.9	-13.0	-14.9	
2.546	71.0	H	-32.1	4.9	9.6	7.4	-29.6	-13.0	-16.6	
3.395	56.0	H	-42.9	5.7	9.7	7.6	-41.0	-13.0	-28.0	
4.244	52.1	H	-42.9	6.4	9.9	7.8	-41.5	-13.0	-28.5	

Rev. 5.1.6
Note: No other emissions were detected above the system noise floor.

GSM850 EGPRS Spurious & Harmonic (ERP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 4/2/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: Cell TX, GSM850, EGPRS Mode
Mobile Configuration-Worst Case

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.										
1.649	68.4	V	-39.3	3.8	8.0	5.8	-37.3	-13.0	-24.3	
2.473	67.1	V	-36.5	4.9	9.5	7.4	-34.0	-13.0	-21.0	
3.297	52.7	V	-46.9	5.6	9.8	7.6	-44.8	-13.0	-31.8	
4.122	51.9	V	-43.6	6.3	9.8	7.7	-42.2	-13.0	-29.2	
1.649	71.2	H	-35.8	3.8	8.0	5.8	-33.8	-13.0	-20.8	
2.473	62.6	H	-40.8	4.9	9.5	7.4	-38.2	-13.0	-25.2	
3.297	50.7	H	-48.7	5.6	9.8	7.6	-46.7	-13.0	-33.7	
4.122	51.8	H	-43.3	6.3	9.8	7.7	-42.0	-13.0	-29.0	
Mid Ch										
1.674	68.9	V	-38.7	3.9	8.0	5.9	-36.7	-13.0	-23.7	
2.511	64.7	V	-38.7	4.9	9.6	7.4	-36.2	-13.0	-23.2	
3.348	53.3	V	-45.9	5.6	9.8	7.6	-44.0	-13.0	-31.0	
4.185	50.8	V	-44.6	6.4	9.9	7.7	-43.3	-13.0	-30.3	
1.674	71.2	H	-35.7	3.9	8.0	5.9	-33.7	-13.0	-20.7	
2.511	62.3	H	-41.0	4.9	9.6	7.4	-38.5	-13.0	-25.5	
3.348	50.4	H	-48.8	5.6	9.8	7.6	-46.8	-13.0	-33.8	
4.185	50.9	H	-44.2	6.4	9.9	7.7	-42.8	-13.0	-29.8	
High Ch										
1.698	68.9	V	-38.6	3.9	8.1	5.9	-36.5	-13.0	-23.5	
2.546	62.3	V	-41.0	4.9	9.6	7.4	-38.5	-13.0	-25.5	
3.395	51.4	V	-47.6	5.7	9.7	7.6	-45.7	-13.0	-32.7	
4.244	48.2	V	-47.1	6.4	9.9	7.8	-45.7	-13.0	-32.7	
1.698	70.7	H	-36.0	3.9	8.1	5.9	-33.9	-13.0	-20.9	
2.546	60.1	H	-42.9	4.9	9.6	7.4	-40.5	-13.0	-27.5	
3.395	48.8	H	-50.1	5.7	9.7	7.6	-48.2	-13.0	-35.2	
4.244	47.8	H	-47.2	6.4	9.9	7.8	-45.8	-13.0	-32.8	

Rev. 5.1.6
Note: No other emissions were detected above the system noise floor.

CELL Band WCDMA Spurious & Harmonic (ERP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 4/2/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: Tx 850MHz, WCDMA (Worst case Configuration)

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: 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										
1.652	59.5	V	-46.5	3.8	8.0	5.8	-44.5	-13.0	-31.5	
2.479	57.4	V	-45.0	4.9	9.6	7.4	-42.5	-13.0	-29.5	
3.305	48.4	V	-50.6	5.6	9.8	7.6	-48.6	-13.0	-35.6	
1.652	56.3	H	-49.0	3.8	8.0	5.8	-47.0	-13.0	-34.0	
2.479	52.0	H	-50.2	4.9	9.6	7.4	-47.7	-13.0	-34.7	
3.305	47.2	H	-51.7	5.6	9.8	7.6	-49.7	-13.0	-36.7	
Mid CH										
1.672	60.8	V	-45.1	3.9	8.0	5.9	-43.1	-13.0	-30.1	
2.509	54.6	V	-47.7	4.9	9.6	7.4	-45.2	-13.0	-32.2	
3.346	47.5	V	-51.3	5.6	9.8	7.6	-49.3	-13.0	-36.3	
1.672	57.8	H	-47.4	3.9	8.0	5.9	-45.4	-13.0	-32.4	
2.509	52.8	H	-49.3	4.9	9.6	7.4	-46.8	-13.0	-33.8	
3.346	46.5	H	-52.2	5.6	9.8	7.6	-50.2	-13.0	-37.2	
High CH										
1.693	60.4	V	-45.4	3.9	8.1	5.9	-43.4	-13.0	-30.4	
2.540	55.6	V	-46.6	4.9	9.6	7.4	-44.1	-13.0	-31.1	
3.386	48.0	V	-50.6	5.7	9.7	7.6	-48.6	-13.0	-35.6	
1.693	58.0	H	-47.1	3.9	8.1	5.9	-45.0	-13.0	-32.0	
2.540	54.6	H	-47.4	4.9	9.6	7.4	-44.9	-13.0	-31.9	
3.386	47.2	H	-51.3	5.7	9.7	7.6	-49.3	-13.0	-36.3	

Rev. 5.1.6
Note: No other emissions were detected above the system noise floor.

CELL Band WCDMA+HSPDA Spurious & Harmonic (ERP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 3/30/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: CELL TX, WCDMA HSDPA
Worse Case--Mobile Configuration
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: 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 ERP	Limit (dBm)	Margin (dB)	Notes
Low CH										
1.652	60.4	V	-45.6	3.8	8.0	5.8	-41.5	-13.0	-28.5	
2.479	58.7	V	-43.8	4.9	9.6	7.4	-39.1	-13.0	-26.1	
3.305	51.0	V	-48.0	5.6	9.8	7.6	-43.9	-13.0	-30.9	
1.652	57.1	H	-48.2	3.8	8.0	5.8	-44.1	-13.0	-31.1	
2.479	54.6	H	-47.7	4.9	9.6	7.4	-43.0	-13.0	-30.0	
3.305	48.0	H	-50.9	5.6	9.8	7.6	-46.8	-13.0	-33.8	
Mid CH										
1.672	61.3	V	-44.6	3.9	8.0	5.9	-40.5	-13.0	-27.5	
2.509	55.2	V	-47.2	4.9	9.6	7.4	-42.5	-13.0	-29.5	
3.346	50.7	V	-48.1	5.6	9.8	7.6	-44.0	-13.0	-31.0	
1.672	56.8	H	-48.4	3.9	8.0	5.9	-44.3	-13.0	-31.3	
2.509	54.0	H	-48.2	4.9	9.6	7.4	-43.5	-13.0	-30.5	
3.346	47.6	H	-51.1	5.6	9.8	7.6	-47.0	-13.0	-34.0	
High CH										
1.693	60.8	V	-45.0	3.9	8.1	5.9	-40.9	-13.0	-27.9	
2.540	56.0	V	-46.2	4.9	9.6	7.4	-41.6	-13.0	-28.6	
3.386	51.3	V	-47.3	5.7	9.7	7.6	-43.2	-13.0	-30.2	
1.693	58.6	H	-46.5	3.9	8.1	5.9	-42.3	-13.0	-29.3	
2.540	55.4	H	-46.6	4.9	9.6	7.4	-42.0	-13.0	-29.0	
3.386	47.7	H	-50.8	5.7	9.7	7.6	-46.7	-13.0	-33.7	

Rev. 5.1.6
Note: No other emissions were detected above the system noise floor.

GSM1900 Band GPRS Spurious & Harmonic (EIRP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 4/2/2007
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: PCS TX, GSM1900, GPRS Mode
Mobile Configuration-Worst Case

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: 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.										
3.700	47.8	V	-49.3	5.9	9.7	7.6	-45.5	-13.0	-32.5	
5.551	46.2	V	-46.3	7.4	11.3	9.1	-42.4	-13.0	-29.4	
3.700	46.6	H	-50.4	5.9	9.7	7.6	-46.6	-13.0	-33.6	
5.551	45.2	H	-46.3	7.4	11.3	9.1	-42.4	-13.0	-29.4	
Mid Ch										
3.761	48.5	V	-48.3	6.0	9.7	7.6	-44.5	-13.0	-31.5	
5.640	46.6	V	-46.1	7.4	11.5	9.3	-42.0	-13.0	-29.0	
3.761	50.0	H	-46.7	6.0	9.7	7.6	-42.9	-13.0	-29.9	
5.640	45.3	H	-46.4	7.4	11.5	9.3	-42.3	-13.0	-29.3	
High Ch										
3.818	46.2	V	-50.3	6.0	9.7	7.5	-46.6	-13.0	-33.6	
5.726	45.1	V	-47.8	7.5	11.6	9.5	-43.6	-13.0	-30.6	
3.818	49.5	H	-46.9	6.0	9.7	7.5	-43.2	-13.0	-30.2	
5.726	44.7	H	-47.2	7.5	11.6	9.5	-43.0	-13.0	-30.0	
Note: No emission were observed above noise floor										

Rev. 5.1.6

GSM1900 Band EGPRS Spurious & Harmonic (EIRP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 4/2/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: PCS TX, GSM1900, EGPRS Mode
Mobile Configuration-Worst Case

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: 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.										
3.700	47.2	V	-49.9	5.9	9.7	7.6	-46.1	-13.0	-33.1	
5.551	43.6	V	-48.9	7.4	11.3	9.1	-45.0	-13.0	-32.0	
3.700	48.0	H	-49.0	5.9	9.7	7.6	-45.2	-13.0	-32.2	
5.551	44.0	H	-47.5	7.4	11.3	9.1	-43.6	-13.0	-30.6	
Mid Ch										
3.761	48.3	V	-48.5	6.0	9.7	7.6	-44.7	-13.0	-31.7	
5.640	44.3	V	-48.4	7.4	11.5	9.3	-44.3	-13.0	-31.3	
3.761	49.2	H	-47.5	6.0	9.7	7.6	-43.7	-13.0	-30.7	
5.640	45.0	H	-46.7	7.4	11.5	9.3	-42.6	-13.0	-29.6	
High Ch										
3.818	48.5	V	-48.0	6.0	9.7	7.5	-44.3	-13.0	-31.3	
5.726	45.0	V	-47.9	7.5	11.6	9.5	-43.7	-13.0	-30.7	
3.818	49.4	H	-47.0	6.0	9.7	7.5	-43.3	-13.0	-30.3	
5.726	45.5	H	-46.4	7.5	11.6	9.5	-42.2	-13.0	-29.2	
Note: No other emission were observed above noise floor										

Rev. 5.1.6

PCS Band WCDMA Spurious & Harmonic (EIRP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 4/2/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: Tx 1900MHz, WCDMA
Wosrt Case--Mobile Configuration.
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: 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										
3.705	49.2	V	-47.9	5.9	9.7	7.6	-44.1	-13.0	-31.1	
5.557	47.0	V	-45.5	7.4	11.3	9.1	-41.6	-13.0	-28.6	
3.705	51.0	H	-45.9	5.9	9.7	7.6	-42.2	-13.0	-29.2	
5.557	47.3	H	-44.2	7.4	11.3	9.1	-40.3	-13.0	-27.3	
Mid CH										
3.760	56.9	V	-39.9	6.0	9.7	7.6	-36.1	-13.0	-23.1	
5.640	47.2	V	-45.5	7.4	11.5	9.3	-41.4	-13.0	-28.4	
3.760	58.1	H	-38.6	6.0	9.7	7.6	-34.9	-13.0	-21.9	
5.640	47.0	H	-44.7	7.4	11.5	9.3	-40.7	-13.0	-27.7	
High CH										
3.815	67.0	V	-29.5	6.0	9.7	7.5	-25.8	-13.0	-12.8	
5.723	47.1	V	-45.8	7.5	11.6	9.5	-41.6	-13.0	-28.6	
3.815	69.7	H	-26.7	6.0	9.7	7.5	-23.0	-13.0	-10.0	
5.723	47.0	H	-44.9	7.5	11.6	9.5	-40.7	-13.0	-27.7	

e: No
Rev. 5.1.6
Note: No other emissions were detected above the system noise floor.

PCS Band WCDMA+HSPDA Spurious & Harmonic (EIRP)

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

Company: Sierra Wireless
Project #: 07U10964
Date: 3/30/2007
Test Engineer: Mengistu Mekuria
Configuration: EUT Only
Mode: PCS TX, WCDMA HSDPA
Worst Case--Mobile configuration
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: 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										
3.705	50.0	V	-47.1	5.9	9.7	7.6	-43.3	-13.0	-30.3	
5.557	47.5	V	-45.0	7.4	11.3	9.1	-41.1	-13.0	-28.1	
3.705	52.1	H	-44.8	5.9	9.7	7.6	-41.0	-13.0	-28.0	
5.557	47.8	H	-43.7	7.4	11.3	9.1	-39.8	-13.0	-26.8	
Mid CH										
3.760	58.0	V	-38.8	6.0	9.7	7.6	-35.1	-13.0	-22.1	
5.640	49.4	V	-43.3	7.4	11.5	9.3	-39.2	-13.0	-26.2	
3.760	60.0	H	-36.7	6.0	9.7	7.6	-32.9	-13.0	-19.9	
5.640	50.0	H	-41.7	7.4	11.5	9.3	-37.6	-13.0	-24.6	
High CH										
3.815	63.0	V	-33.5	6.0	9.7	7.5	-29.8	-13.0	-16.8	
5.723	47.4	V	-45.5	7.5	11.6	9.5	-41.3	-13.0	-28.3	
3.815	65.0	H	-31.4	6.0	9.7	7.5	-27.7	-13.0	-14.7	
5.723	47.7	H	-44.1	7.5	11.6	9.5	-40.0	-13.0	-27.0	

Rev. 5.1.6
Note: No other emissions were detected above the system noise floor.