

CFR 47 Part 2, 22, and 24 Test Report

Test Report Number: WR600.003 Amendment A

Terminal device:FCC ID: QMNRM-66 Model: 6265i Type: RM-66 HW: 3000 SW: HL100_05w19.nbr
(Detailed information is listed in section 4).

Originator: Michael Sundstrom
Function: TCC - Dallas – EMC
Version/Status: 2.0 Approved
Location: TCC Directories
Date: 02 Sep 2005

Change History:

Version	Date	Status	Handled By	Comments
0.1	13 July, 2005	Draft	Hai To	Fcc Official
0.2	18 July, 2005	Review	Mark Severson	
1.0	29 July 2005	Approved	Nerina Walton	
1.1	02 Sep 05	Retest	Michael Sundstrom	
1.2	02 Sep 05	Review	Michael Sundstrom	
2.0	02 Sep 05	Approved	Nerina Walton	

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For the contents:

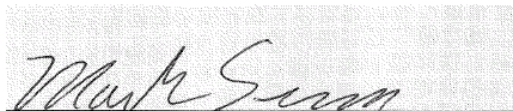
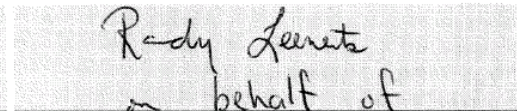
Mark Severson
Technical ReviewNerina Walton
Manager Review

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Test & Certification Center (TCC) - Dallas

FCC ID: QMNRM-66
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 July 29, 2005

Accredited Laboratory
 Certificate Number: 1819-01

Ver 1.0

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1. GENERAL

1.1 Quality System

The quality system in place for TCC-Dallas conforms to ISO/IEC 17025 and has been audited to the standard by A2LA (American Association of Laboratory Accreditation). TCC - Dallas has also been audited using the ISO 9000 Quality System, as part of Nokia Mobile Phones, Inc., by ABS (American Bureau of Shipping) Quality Evaluations Inc.

TCC-Dallas is a recognized laboratory with the Federal Communications Commission in filing applications for Certification under Parts 15 and 18, Registration Number 100060, and Industry Canada, Registration Number IC 661.

1.2 List of General Information Required for Certification

This list is in accordance with FCC Rules and Regulations, CFR 47, Part 2, and to 22H, 24E, Confidentiality.

1.2.1 Sub-part 2.1033(c) (1)

Name and Address of Applicant:

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1.2.2 Sub-part 2.1033(c) (2)

FCC ID: QMNRM-66

Model No: 6265i

1.2.3 Sub-part 2.1033(c) (3)

Instruction Manual(s): Refer to attached EXHIBITS

1.2.4 Sub-part 2.1033(c) (4)

Type of Emission: 40K0F8W / 40K0F1D / 1M25F9W

1.2.5 Sub-part 2.1033(c) (5)

Frequency Range, MHz: 824.04MHz – 848.97MHz

1851.25MHz – 1908.75MHz

1.2.6 Sub-part 2.1033(c) (6)

Power Rating, Watts: 0.246 W AMPS
0.107 W CDMA Cellular
0.302 W CDMA PCS

☐ Switchable ☒ Variable ☐ N/A

FCC Grant Note: BC- The output power is continuously variable from the value listed in this entry to 5%-10% of the value listed.

1.2.7 Sub-part 2.1033(c) (7)

Maximum Power Rating, Watts: 0.302 W

1.2.8 Sub-part 2.1033(c) (8)

Voltages & Currents in all elements in final R.F. Stage, including final transistor or solid-state device:

Collector Current, A = 0.82

Collector Voltage, Vdc = 3.7

Supply Voltage, Vdc = 3.7

1.2.9 Sub-part 2.1033(c)(9)

Tune-up Procedure: Refer to attached EXHIBITS

1.2.10 Sub-part 2.1033(c)(10)

Circuit Diagram/Circuit Description:

Including description of circuitry & devices provided for determining and stabilizing frequency, for suppression of spurious radiation, for limiting modulation and limiting power.

Refer to attached EXHIBITS

1.2.11 Sub-part 2.1033(c)(11)

Label Information: Refer to attached EXHIBITS

1.2.12 Sub-part 2.1033(c)(12)

Photographs: Refer to attached EXHIBITS

1.2.13 Sub-part 2.1033(c)(13)

Digital Modulation Description: N/A

1.2.14 Sub-part 2.1033(c)(14)

Test and Measurement Data: FOLLOWS

1.3 Objective

All tests and measurement data shown was performed to determine whether the selected handset was in compliance as specified in FCC: CFR47 Parts 2.947, 2.1033(c), 2.1041, 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055, 2.1057, Part 22, and Part 24.

1.4 Test Summary

Test Results: *The test result relates only to those tested devices mentioned in Section 4 of this test report.*

Test Performed	Reference	Section of Report	Complies / Does not comply / Not Tested
RF Power Output (Conducted)	FCC Part 2.1046(a) / 22.913(a) / 24.232(b)(c)	6	Complies
RF Power Output (Radiated)	FCC Part 22.913(a) / 24.232(b)	7	Complies
Occupied Bandwidth: Transmitter Conducted Measurements	FCC Part 2.1049(c)(1), 24.238(a)(b)	8	Complies
Spurious Emissions at Antenna Terminals	FCC Part 2.1051	9	Complies
Field Strength of Spurious Radiation	FCC Part 2.1053	10	Complies
Frequency Stability (Temperature Variation)	FCC Part 2.1055(a)(1)(b), 24.235	11	Complies
Frequency Stability (Voltage Variation)	FCC Part 2.1055(d)(1)(2), 24.235	12	Complies

2. STANDARDS BASIS

Testing has been carried out in accordance with:

REF.	Code of the standard	Name of the standard
1	ANSI C63.4	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz.
2	FCC: CFR 47 Part 2	Code of Federal Regulations (CFR) Title 47, Part 2 – Frequency Allocations and Radio Treaty Matters; General Rules and Regulations: Subpart J – Equipment Authorization Procedures
3	FCC: CFR 47 Part 22	Code of Federal Regulations (CFR) Title 47, Part 22 – Public Mobile Services: Subpart H – Cellular Radiotelephone Service
4	FCC: CFR 47 Part 24	Code of Federal Regulations (CFR) Title 47, Part 24 – Personal Communications Services: Subpart E – Broadband PCS
5	RSS-128	800 MHz Dual-Mode TDMA Cellular Telephones
6	RSS-132	800 MHz Cellular Telephones Employing New Technologies
7	RSS-133	2 GHz Personal Communications Services, Industry Canada
8	RSS-212	Test Facilities and Test Methods for Radio Equipment, Industry Canada (Provisional)
9	RSP-100	Radio Equipment Certification Procedure

Note: Unless otherwise stated, (by reference to a version number and a publication date), the latest version of the above documents applies.

Deviations:

Not Applicable.

3. LIST OF ABBREVIATIONS, ACRONYMS AND TERMS

3.1 Abbreviations

- dB - decibel
- dBc - decibels from carrier
- dBm - decibels per milliwatt (absolute measurement)
- GHz - gigahertz or 1000000000 hertz
- kHz - kilohertz or 1000 hertz
- MHz - megahertz or 1000000 hertz

3.2 Acronyms

- AMPS - Advanced Mobile Phone System
- BSS - Base Station Simulator
- CDMA - Code Division Multiple Access
- EDRP - Effective Dipole Radiated Power
- EIRP - Effective Isotropic Radiated Power
- EMC - Electromagnetic Compatibility
- EMI - Electromagnetic Interference
- ERP - Effective Radiated Power
- EUT - Equipment under Test
- GSM - Global System for Mobile communications
- PCS - Personal Communications Services
- RF - Radio Frequency
- TDMA - Time Division Multiple Access

3.3 Terms

Base Station Simulator (BSS) - simulates all the necessary signals that a phone would experience while on a live network. There are many types of base station simulators catering for all current protocols, i.e., GSM, AMPS, TDMA, and CDMA.

Cellular - refers to a frequency in the 800MHz band.

PCS - refers to a frequency in the 1900MHz band.

4. EQUIPMENT-UNDER-TEST (EUT)

The results in this report relate only to the items listed below:

4.1 Description of Tested Device(s):

Test Performed	Mode of Operation	Date of Receipt	Condition of Sample	Item	Identifying Information
FCC Parts 2.1047(a)(b), 22.915(a)(b)(c)(d)(1), 2.1049(c)(1),24.238(a)(b), 2.1051, 22.917(f), 2.1055(a)(1)(b)(d)(1)(2)	Amps, CDMA 800/1900	July 18, 2005	Good	Phone	FCC ID: QMNRM-66 Type: RM-66 HW: 3000 SW: HL100_05w19.nbr ESN: 04414029762
FCC Parts 2.1046(a), 22.913(a), 24.232(b)(c), FCC Part 2.1053	Amps, CDMA 800/1900	July 18, 2005	Good	Phone	FCC ID: QMNRM-66 Type: RM-66 HW: 3000 SW: HL100_05w19.nbr ESN: 044/14030388
FCC Parts 2.1047(a)(b), 22.915(a)(b)(c)(d)(1), 2.1049(c)(1),24.238(a)(b), 2.1051, 22.917(f), 2.1046(a), 22.913(a), 24.232(b)(c), 2.1053	Amps, CDMA 800/1900	July 18, 2005	Good	Battery	Type: BL-6C Other: 3.7 Vdc
FCC Parts 2.1046(a), 22.913(a), 24.232(b)(c), FCC Part 2.1053	Amps, CDMA 800/1900	July 18, 2005	Good	Headset	Type: HS-1C
FCC Parts 2.1046(a), 22.913(a), 24.232(b)(c), FCC Part 2.1053	Amps, CDMA 800/1900	July 18, 2005	Good	Headset	Type: HS-9
FCC Parts 2.1046(a), 22.913(a), 24.232(b)(c), FCC Part 2.1053	Amps, CDMA 800/1900	July 18, 2005	Good	Charger	Type: AC-3U

4.2 Photograph of Tested Device(s):



5. TEST EQUIPMENT LIST

The listing below indicates the test equipment utilized for the test (s). Calibration interval on all items listed can be obtained from the Engineering Services Group within NMP, Product Creation - Dallas. Where relevant, measuring equipment is subjected to in-service checks between testing. TCC - Dallas shall notify clients promptly, in writing, of identification of defective measuring equipment that casts doubt on the validity of results given in this report.

Section of Report	NMP#	Test Equipment	Mfr. #	Model #	Calibration Due Date	Calibration Interval
6, 8, 12, 11	02664 02665	EMI Receiver	Agilent	8546A / 85460A	2/09/2006	12 months
6, 8, 12, 11	N/A	6dB Attenuator	Weinshcel	Model 2	2/09/2006	12 months
6, 8, 12, 11	02666	Base Station	R&S	CMU200	6/25/2006	12 months
11	00837	Temperature Chamber	Tenney Environmental	N/A	1/20/2006	12 months
6	02549	Power Meter	Agilent	E4418B	10/06/2005	12 months
6	02672	Power Sensor	Agilent	E9304A	10/06/2005	12 months
7, 10	00367	EMI Receiver	Agilent	8546A / 85460A	8/13/2005	12 months
7, 10	03461	Base Station	R&S	CMU200	8/29/2005	12 months
7, 10	02679	Spectrum Analyzer	Agilent	E7405A	6/01/2006	12 months
7, 10	02868	Biconilog Antenna	ETS	3142B	8/10/2005	12 months
10	0064	Horn Antenna	EMCO	3115	4/27/06	12 months
7, 10	02846	Turntable and Tower Controller	Sunol	FM2022 & 2846	NCR	12 months

6. RF POWER OUTPUT (CONDUCTED)

Specification: FCC Part 2.1046(a), 22.913(a), 24.232(b)(c)

6.1 Setup

Testing was performed with the EUT connected to a 6dB splitter and then to the RF Power Meter to measure the conducted RF power output. The base station simulator was connected to the other port of the splitter to establish a call.

6.2 Pass/Fail Criteria

Not Applicable

6.3 Detailed Test Results

Test Technician / Engineer	Hai To
Date of Measurement	12-Jul-05
Temperature	22.0°C
Humidity	55.0%RH
Test Result	Was operated at max power and tested in accordance with FCC Part 2.1046(a), 22.913(a), 24.232(b)(c).

AMPS

Channel	Freq Max (MHz)	Max (mW)	Max (dBm)
991	824.04 MHz	407	26.1
384	836.52 MHz	324	25.1
799	848.97 MHz	331	25.2

CDMA 800

Channel	Freq Max (MHz)	Max (mW)	Max (dBm)
1013	824.70 MHz	331	25.2
384	836.52 MHz	295	24.7
777	848.31 MHz	295	24.7

CDMA 1900

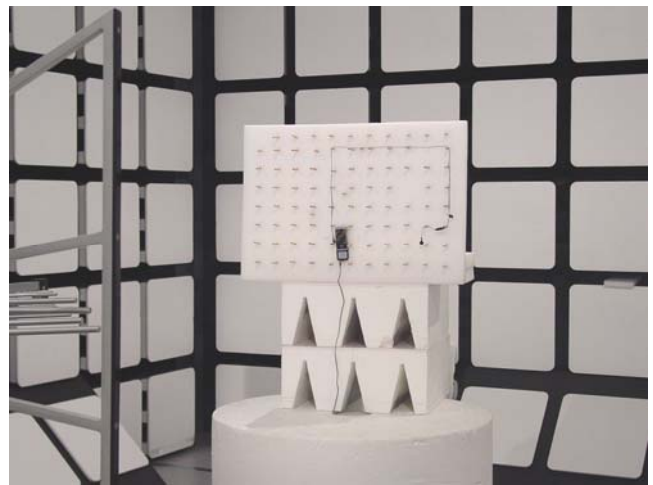
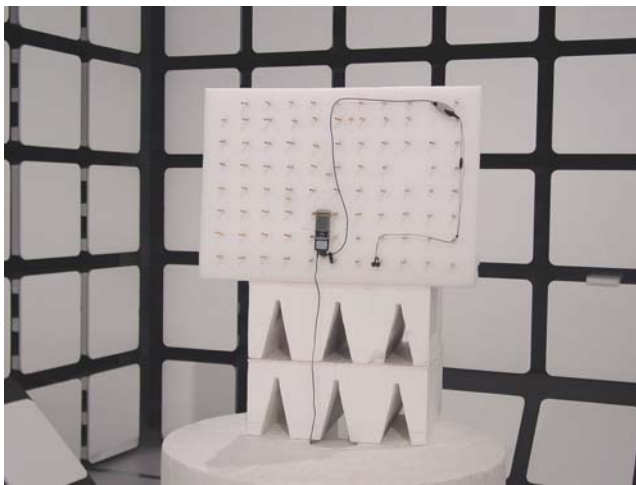
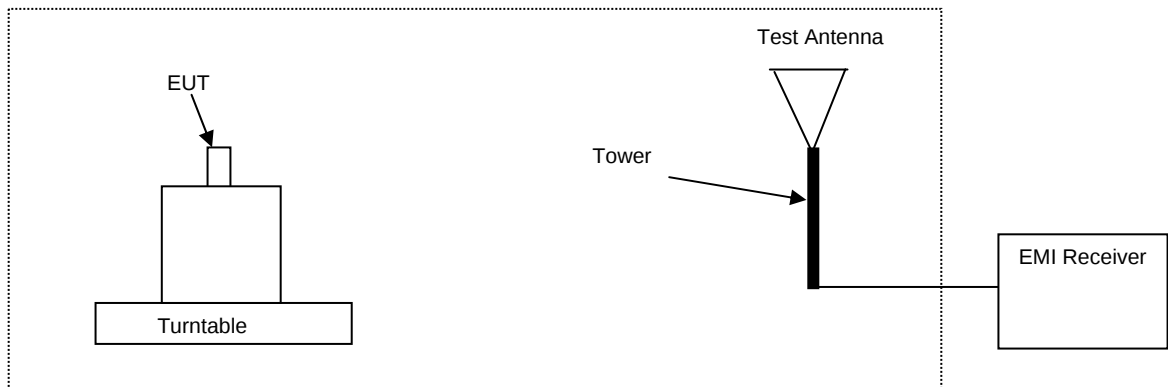
Channel	Freq Max (MHz)	Max (mW)	Max (dBm)
25	1851.25 MHz	191	22.8
600	1880.00 MHz	214	23.3
1175	1908.75 MHz	209	23.2

7. RF POWER OUTPUT (RADIATED)

Specification: FCC Part 22.913(a), 24.232(b)(c)

7.1 Setup

ERP values are calculated using the substitution method in accordance with TIA 603. The phone is set to transmit maximum power and the maximum measured level is recorded. A signal generator is then used to drive a substitute transmit antenna until the equivalent level is measured. The power into the transmit antenna is then measured.



7.2 Pass/Fail Criteria

Band	FCC Limit (dBm)
Cellular	38.5 (EDRP)
PCS	33.0 (EIRP)

7.3 Detailed Test Results

Test Technician / Engineer	Bob Alexander
Date of Measurement	July 13, 2005
Temperature	24 °C
Humidity	44 %RH
Test Result	Complies with FCC Part 22.913(a) and FCC Part 24.232(b)

Note: measurements were performed with 3MHz RBW/VBW.

AMPS

Channel	Freq Max (MHz)	EDRP EMI (mW)	EDRP EMI (dBm)	Pol.
991	824.04 MHz	162	22.1	V
384	836.52 MHz	222	23.6	V
799	848.97 MHz	246	23.9	V

CDMA 800

Channel	Freq Max (MHz)	EDRP EMI (mW)	EDRP EMI (dBm)	Pol.
1013	824.70 MHz	83	19.2	H
384	836.52 MHz	98	19.9	V
777	848.31 MHz	107	20.3	V

CDMA 1900

Channel	Freq Max (MHz)	EIRP EMI (mW)	EIRP EMI (dBm)	Pol.
25	1851.25 MHz	269	24.3	H
600	1880.00 MHz	302	24.8	H
1175	1908.75 MHz	263	24.2	H

7.4 Measurement Uncertainty

The measurement uncertainty for this test is +/- 2.4dB for 800 to 2000 MHz.

8. OCCUPIED BANDWIDTH (TRANSMITTER CONDUCTED MEASUREMENTS)

Specification: FCC Part 2.1049(c)(1), 24.238(a)(b)

8.1 Setup

Testing was performed with the EUT connected to a 6dB attenuator, 6dB splitter, filter bank and then to the EMI receiver. The base station simulator was connected to the other port of the splitter to establish a call.



8.2 Pass/Fail Criteria

Occupied Bandwidth, Out of Band

Band	Frequency Range (MHz)	FCC Limits (dBm)
Cellular 800, Low Channel	< 824	-13
Cellular 800, High Channel	> 849	-13
PCS 1900, Low Channel	< 1850	-13
PCS 1900, High Channel	> 1910	-13

Occupied Bandwidth, In Band

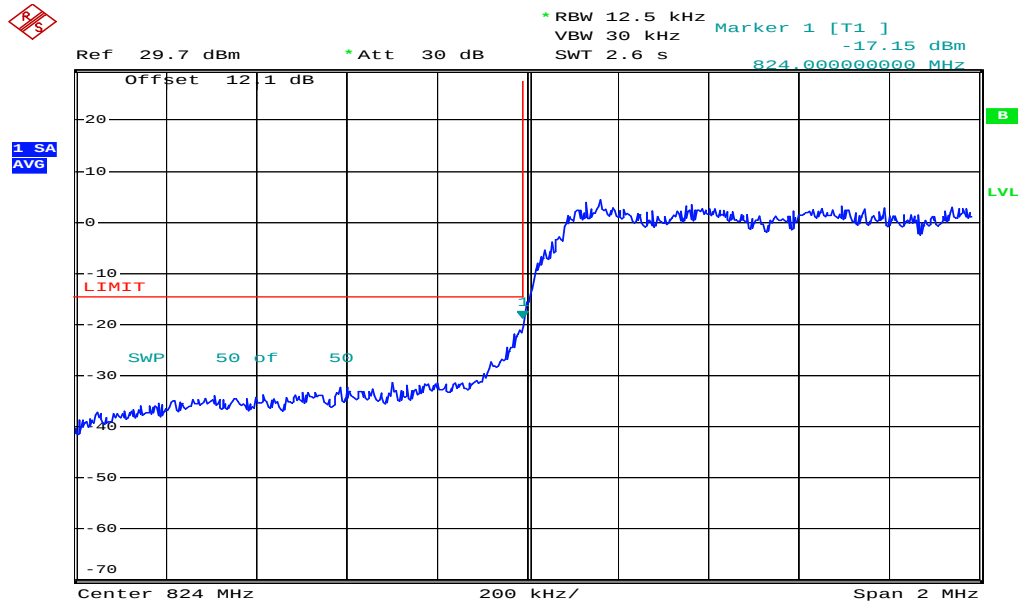
No pass/fail, these plots are used to determine the emission designators.

8.3 Detailed Test Results

Test Technician / Engineer	Hai To / Michael Sundstrom
Date of Measurement	July 15, 02 Sep 2005
Temperature	19-22.0°C
Humidity	35-44.0 %RH
Test Result	Complies with FCC Part 2.1049(c)(1), 24.238(a)(b)

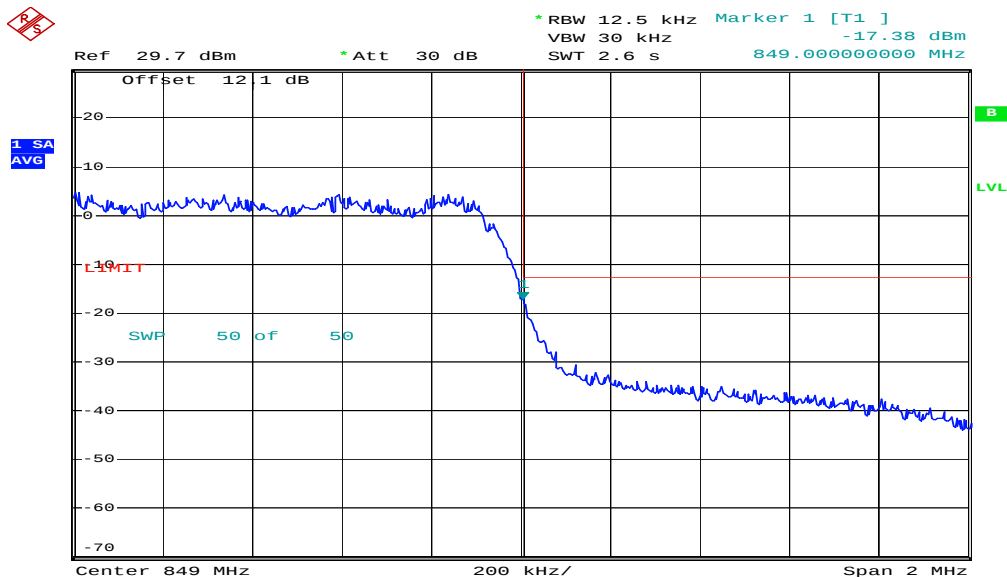
Occupied Bandwidth, Out of Band

CDMA 800, Max Power - Channel 1013 (824.70 MHz)



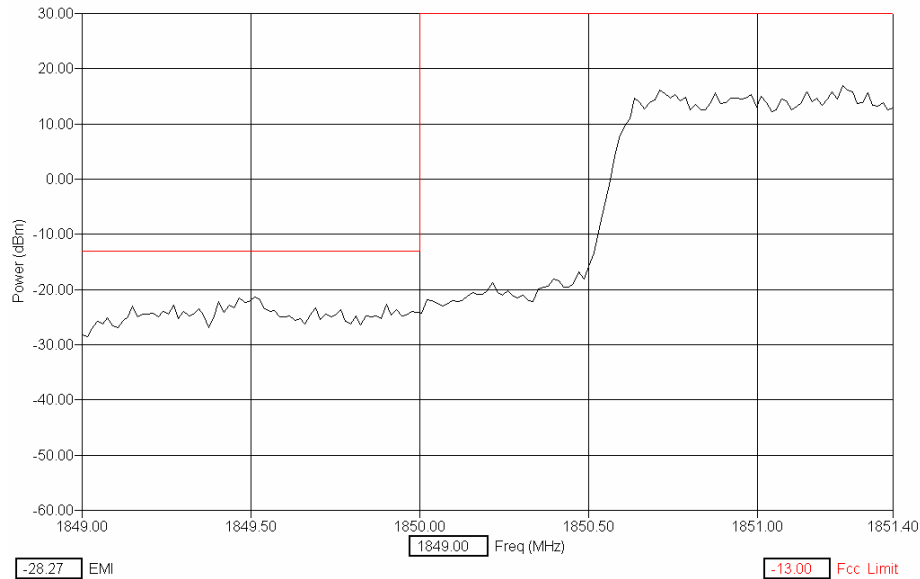
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CDMA 800, Max Power - Channel 777 (848.31 MHz)

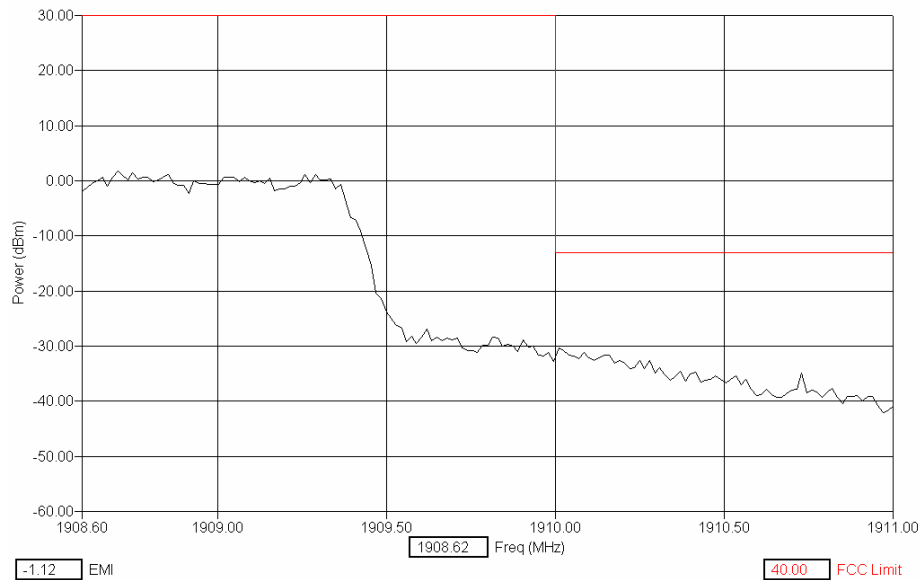


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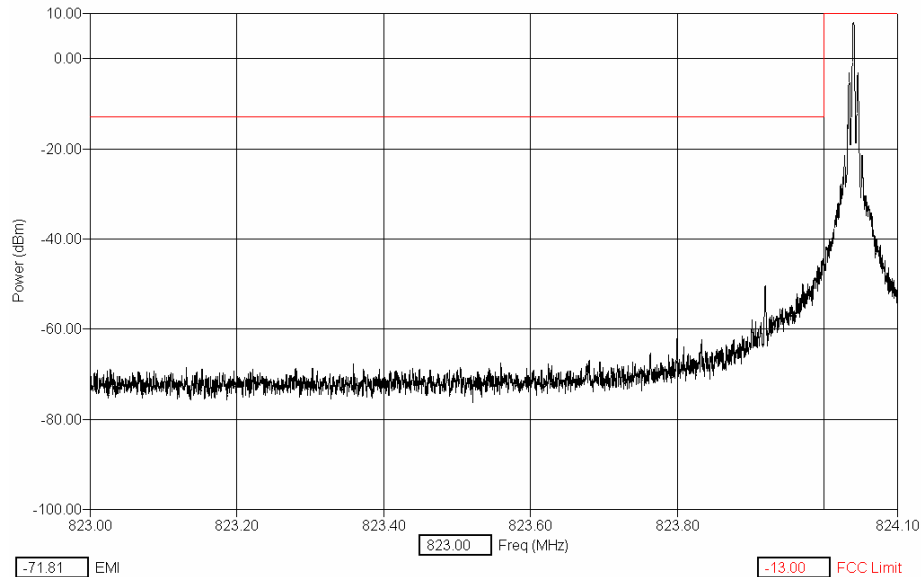
CDMA 1900, Max Power - Channel 25 (1851.25 MHz)



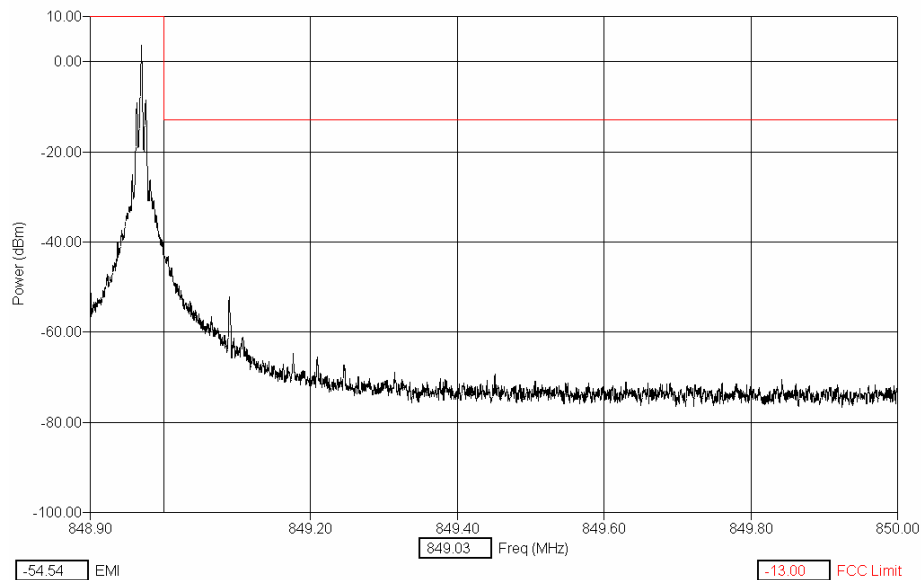
CDMA 1900 PCS, Max Power - Channel 1175 (1908.75 MHz)



AMPS, Max Power - Channel 991 (824.04 MHz)

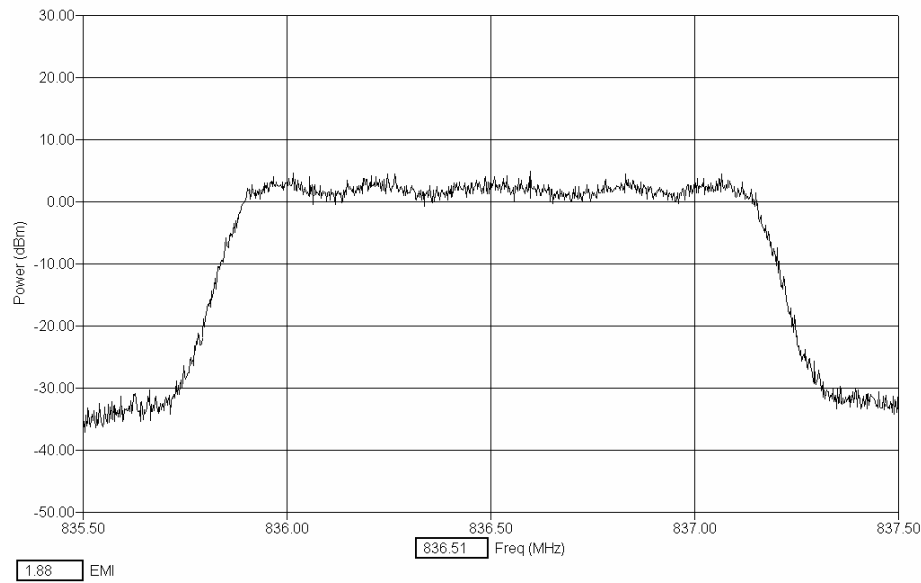


AMPS, Max Power - Channel 799 (848.97 MHz)

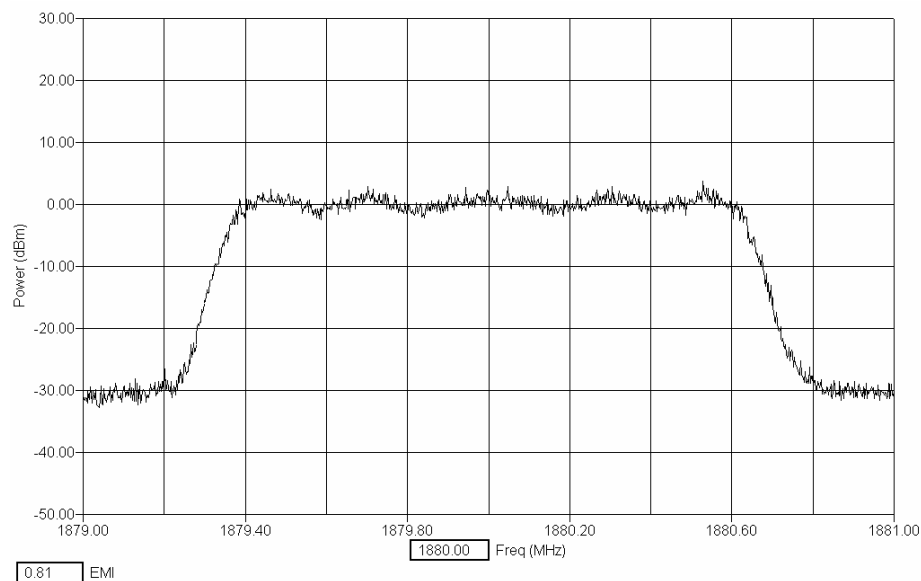


Occupied Bandwidth, In Band

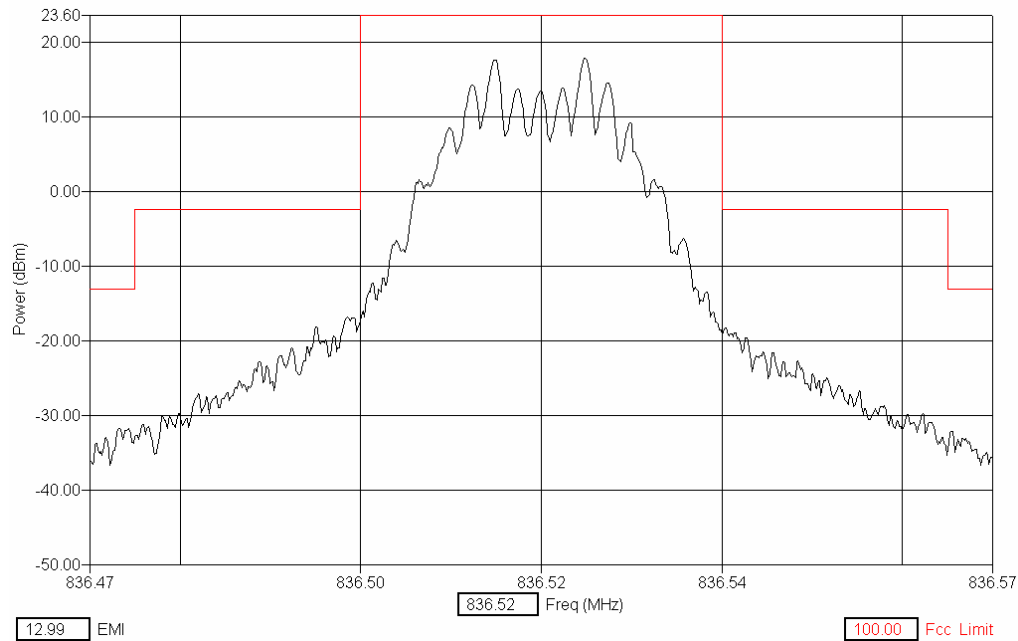
CDMA 800



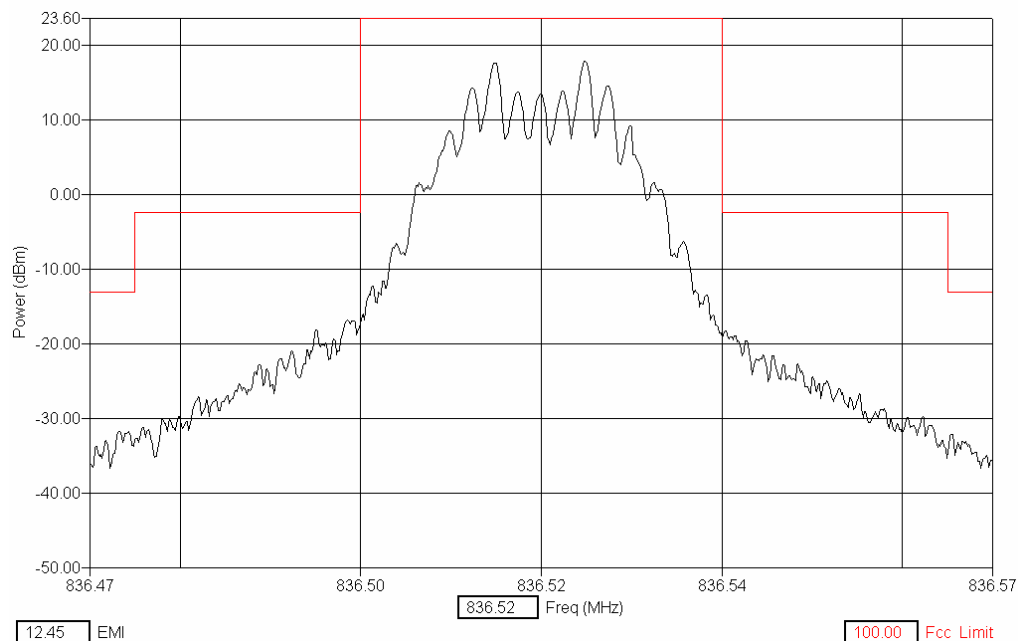
CDMA PCS1900



AMPS – Voice & SAT Modulation:



AMPS – SAT Modulation:





8.4 Measurement Uncertainty

The measurement uncertainty for this test is +/- 3.7dB for 100kHz - 1000MHz and +/- 5.3dB for 1 - 20GHz.

9. SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Specification: FCC Part 2.1051

9.1 Setup

Testing was performed with the EUT connected to a 6dB attenuator, 6dB splitter, filter bank and then to the EMI receiver. The base station simulator was connected to the other port of the splitter to establish a call. Filters were introduced to reduce or eliminate spurious emission, which could be generated internally in the EMI receiver.



9.2 Pass/Fail Criteria

Band	Frequency Range (MHz)	FCC Limits (dBm)
Cellular / PCS	30 – 20000 *	-13

* Frequency to be investigated up to the 10th harmonic of the highest clock or frequency used.

9.3 Detailed Test Results

Test Technician / Engineer	Hai To
Date of Measurement	July 18, 2005
Temperature	22.0°C
Humidity	44.0 %RH
Test Result	Complies with FCC Part 2.1051

Note 1: EMI (dBm) = trace (dBuV) + cable loss (dB) + filter loss (dB).

Note 2: measurements were performed with 3MHz RBW/VBW.

Test & Certification Center (TCC) - Dallas

CDMA 800 - Channel 777, (848.31 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
1698.0	-60.8	0.4	14.59	-45.8	-13.0
2545.3	-59.0	0.6	15.50	-42.9	-13.0
3394.1	-60.7	0.8	16.03	-43.9	-13.0
4243.6	-62.7	0.9	16.38	-45.3	-13.0
5092.3	-61.7	1.1	17.25	-43.4	-13.0
5941.3	-62.4	1.2	22.10	-39.1	-13.0
6790.9	-59.1	1.3	17.90	-39.9	-13.0
7638.6	-58.9	1.3	17.97	-39.6	-13.0
8489.9	-60.0	1.4	18.54	-40.1	-13.0

CDMA 800 - Channel 384, (836.52 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
1672.8	-61.1	0.4	14.60	-46.1	-13.0
2510.4	-59.2	0.6	15.65	-42.9	-13.0
3344.7	-62.0	0.8	16.09	-45.2	-13.0
4184.6	-63.0	0.9	16.13	-45.9	-13.0
5017.8	-61.8	1.1	17.17	-43.5	-13.0
5856.2	-62.6	1.2	21.34	-40.1	-13.0
6692.1	-62.1	1.3	17.75	-43.1	-13.0
7529.7	-58.4	1.3	18.05	-39.0	-13.0
8367.4	-60.8	1.4	18.99	-40.4	-13.0

CDMA 800 - Channel 1013, (824.70 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
1648.1	-60.7	0.4	14.67	-45.7	-13.0
2474.3	-60.3	0.6	15.45	-44.3	-13.0
3296.9	-60.9	0.8	16.00	-44.2	-13.0
4120.5	-62.9	0.9	16.12	-45.9	-13.0
4944.7	-62.5	1.1	17.03	-44.5	-13.0
5768.5	-62.3	1.2	19.94	-41.2	-13.0
6592.5	-61.7	1.2	18.06	-42.4	-13.0
7418.1	-58.1	1.3	18.08	-38.7	-13.0
8243.2	-59.4	1.4	18.94	-39.1	-13.0

CDMA 1900– Channel 600, (1880.00 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
3601.0	-62.1	0.83	16.3	-44.9	-13.0
5399.2	-60.9	1.11	17.3	-42.4	-13.0
7200.0	-58.4	1.31	17.9	-39.2	-13.0
9000.2	-59.6	1.46	19.1	-39.1	-13.0
10800.8	-59.9	1.58	19.8	-38.5	-13.0
12599.7	-59.9	1.69	21.9	-36.3	-13.0
14399.7	-56.7	1.78	22.4	-32.5	-13.0
16200.5	-57.8	1.86	23.3	-32.6	-13.0
17999.1	-57.3	1.93	24.7	-30.7	-13.0

CDMA 1900– Channel 25, (1851.25 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
3702.6	-63.2	0.85	16.2	-46.1	-13.0
5553.5	-55.4	1.13	18.4	-35.8	-13.0
7405.1	-58.2	1.32	18.4	-38.5	-13.0
9255.7	-58.8	1.48	19.5	-37.8	-13.0
11106.3	-60.1	1.60	20.2	-38.3	-13.0
12959.1	-60.2	1.71	22.6	-35.9	-13.0
14810.1	-57.3	1.80	22.8	-32.7	-13.0
16662.2	-57.1	1.88	23.8	-31.4	-13.0
18512.2	-58.4	1.95	24.9	-31.6	-13.0

CDMA 1900– Channel 1175, (1908.75 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
3818.3	-59.0	0.87	16.7	-41.4	-13.0
5726.4	-57.9	1.15	19.4	-37.4	-13.0
7634.1	-56.4	1.35	18.0	-37.1	-13.0
9543.8	-59.6	1.50	20.3	-37.8	-13.0
11454.2	-60.1	1.62	20.5	-37.9	-13.0
13361.5	-56.4	1.73	22.0	-32.6	-13.0
15271.4	-57.3	1.82	23.3	-32.2	-13.0
17179.1	-57.9	1.90	24.3	-31.7	-13.0
19086.5	-57.7	1.97	26.3	-29.4	-13.0

Test & Certification Center (TCC) - Dallas

AMPS- Channel 384 (836.52 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
1672.9	-60.2	0.4	14.60	-45.3	-13.0
2509.0	-60.7	0.6	15.65	-44.4	-13.0
3346.1	-61.0	0.8	16.10	-44.2	-13.0
4182.8	-62.1	0.9	16.12	-45.1	-13.0
5018.0	-62.8	1.1	17.16	-44.6	-13.0
5855.2	-62.8	1.2	21.33	-40.3	-13.0
6692.3	-62.3	1.3	17.75	-43.3	-13.0
7528.0	-59.0	1.3	18.06	-39.6	-13.0
8365.6	-59.9	1.4	19.00	-39.5	-13.0

AMPS- Channel 991, (824.04 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
1648.1	-60.4	0.4	14.67	-45.3	-13.0
2472.1	-58.3	0.6	15.45	-42.3	-13.0
3296.2	-60.6	0.8	16.01	-43.9	-13.0
4119.9	-61.8	0.9	16.13	-44.7	-13.0
4944.9	-62.2	1.1	17.03	-44.1	-13.0
5768.1	-62.6	1.2	19.93	-41.5	-13.0
6590.7	-61.6	1.2	18.06	-42.3	-13.0
7416.2	-58.8	1.3	18.11	-39.4	-13.0
8240.4	-59.3	1.4	18.93	-39.0	-13.0

AMPS- Channel 799, (848.97 MHz)

Freq (Max) (MHz)	(PEAK) Trace (dBm)	Cable (dB)	Filter (dB)	(PEAK) EMI (dBm)	Limit (dBm)
1696.4	-59.8	0.4	14.59	-44.8	-13.0
2547.2	-59.2	0.6	15.49	-43.1	-13.0
3395.9	-59.8	0.8	16.02	-43.0	-13.0
4244.6	-62.6	0.9	16.39	-45.2	-13.0
5094.5	-62.7	1.1	17.25	-44.4	-13.0
5942.8	-62.6	1.2	22.11	-39.3	-13.0
6792.5	-59.4	1.3	17.87	-40.3	-13.0
7640.2	-59.3	1.3	17.97	-40.0	-13.0
8490.1	-59.8	1.4	18.55	-39.8	-13.0

9.4 Measurement Uncertainty

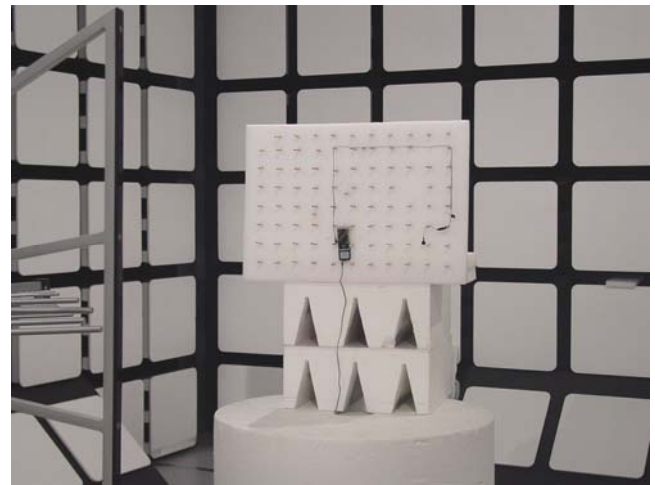
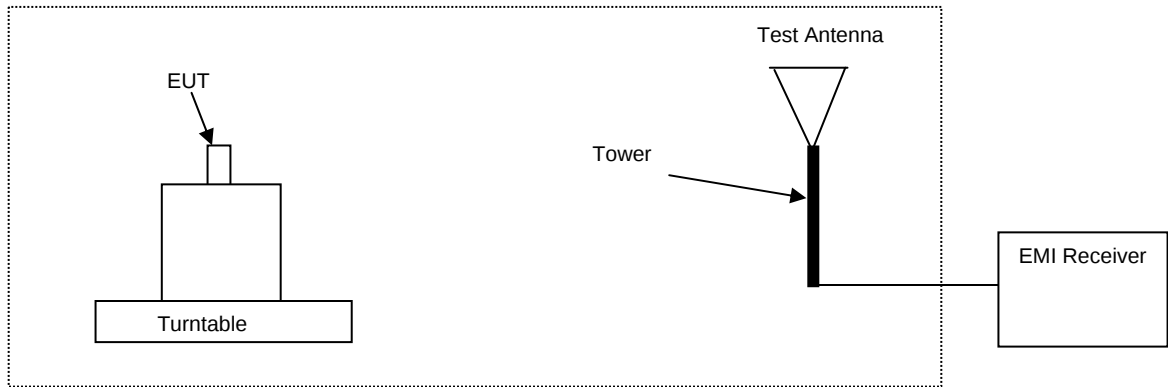
The measurement uncertainty for this test is +/- 3.7dB for 100kHz - 1000MHz and +/- 5.3dB for 1 - 20GHz.

10. FIELD STRENGTH OF SPURIOUS RADIATION

Specification: FCC Part 2.1053

10.1 Setup

Test equipment set-up.



10.2 Pass/Fail Criteria

Band	Frequency Range (MHz)	FCC Limit (dBm)
Cellular / PCS	30 – 20000*	-13

- Frequency to be investigated up to the 10th harmonic of the highest clock or frequency used.

Substitution method according to ANSI/TIA/EIA 603-1 was used for final measurements.

10.3 Detailed Test Results

Test Technician / Engineer	Bob Alexander
Date of Measurement	July 12-15, 2005
Temperature	22-23 °C
Humidity	44-46 %RH
Test Result	Complies with FCC Part 2.1053

Note: 30MHz to 1GHz was performed with 1MHz RBW/VBW. 1GHz to 3GHz was performed with 1MHz RBW/VBW. 3GHz to 6GHz was performed with 3MHz RBW/VBW. 6GHz to 18GHz was performed with 1MHz RBW/VBW.

AMPS, Channel 384, phone vertical, RM-66, AC-3U, HS-9

		EDRP= 23.6 dBm		
Freq	(PEAK) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
1673.04	-37.92	-61.52	-13	V
1673.04	-37.03	-60.63	-13	H
2509.56	-32.47	-56.07	-13	V
2509.56	-30.75	-54.35	-13	H
3346.08	-46.59	-70.19	-13	V
3346.08	-38.36	-61.96	-13	H
4182.6	-49.87	-73.47	-13	V
4182.6	-50.17	-73.77	-13	H
5019.12	-48.37	-71.97	-13	V
5019.12	-47.91	-71.51	-13	H
5855.64	-50.1	-73.7	-13	V
5855.64	-52.56	-76.16	-13	H
6692.16	-54.51	-78.11	-13	V
6692.16	-45.03	-68.63	-13	H
7528.68	-52.46	-76.06	-13	V
7528.68	-46.05	-69.65	-13	H
8365.2	-55.11	-78.71	-13	V
8365.2	-52.15	-75.75	-13	H

AMPS, Channel 384, phone horizontal, RM-66, AC-3U, HS-9

		EDRP= 21.2 dBm		
Freq	(PEAK) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
1673.04	-37.43	-58.63	-13	V
1673.04	-37.2	-58.4	-13	H
2509.56	-31.23	-52.43	-13	V
2509.56	-31.96	-53.16	-13	H
3346.08	-38.24	-59.44	-13	V
3346.08	-43.74	-64.94	-13	H
4182.6	-53.22	-74.42	-13	V
4182.6	-53.84	-75.04	-13	H
5019.12	-48.97	-70.17	-13	V
5019.12	-48.44	-69.64	-13	H
5855.64	-55.6	-76.8	-13	V
5855.64	-48.79	-69.99	-13	H
6692.16	-45.42	-66.62	-13	V
6692.16	-57.78	-78.98	-13	H
7528.68	-44.1	-65.3	-13	V
7528.68	-45.56	-66.76	-13	H
8365.2	-54.1	-75.3	-13	V
8365.2	-56.21	-77.41	-13	H

CDMA 800, Channel 384, phone vertical, RM-66, AC-3U, hs9

		EDRP= 19.9		dBm
Freq	(AVG) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
1673.04	-49.21	-69.11	-13	V
1673.04	-49.1	-69	-13	H
2509.56	-43.64	-63.54	-13	V
2509.56	-43.65	-63.55	-13	H
3346.08	-56.2	-76.1	-13	V
3346.08	-53.55	-73.45	-13	H
4182.6	-61.54	-81.44	-13	V
4182.6	-61.84	-81.74	-13	H
5019.12	-63.67	-83.57	-13	V
5019.12	-66.49	-86.39	-13	H
5855.64	-65.64	-85.54	-13	V
5855.64	-65.62	-85.52	-13	H
6692.16	-65.04	-84.94	-13	V
6692.16	-63.73	-83.63	-13	H
7528.68	-65.61	-85.51	-13	V
7528.68	-65.46	-85.36	-13	H
8365.2	-64.62	-84.52	-13	V
8365.2	-64.68	-84.58	-13	H

CDMA 800, Channel 384, phone horizontal, RM-66, AC-3U, HS-9

		EDRP= 19.7		dBm
Freq	(AVG) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
1673.04	-49.29	-68.99	-13	V
1673.04	-49.28	-68.98	-13	H
2509.56	-43.8	-63.5	-13	V
2509.56	-43.74	-63.44	-13	H
3346.08	-52.55	-72.25	-13	V
3346.08	-60.29	-79.99	-13	H
4182.6	-62.19	-81.89	-13	V
4182.6	-62.28	-81.98	-13	H
5019.12	-63.86	-83.56	-13	V
5019.12	-64.33	-84.03	-13	H
5855.64	-66.08	-85.78	-13	V
5855.64	-65.2	-84.9	-13	H
6692.16	-64.88	-84.58	-13	V
6692.16	-63.1	-82.8	-13	H
7528.68	-64.61	-84.31	-13	V
7528.68	-65.6	-85.3	-13	H
8365.2	-64.83	-84.53	-13	V
8365.2	-64.82	-84.52	-13	H

CDMA 1900, Channel 600, phone vertical, RM-66, AC-3U, HS-9

		EIRP= 24		dBm
Freq	(AVG) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
3760	-59.55	-83.55	-13	V
3760	-57.42	-81.42	-13	H
5640	-45.75	-69.75	-13	V
5640	-47.39	-71.39	-13	H
7520	-32.87	-56.87	-13	V
7520	-25.87	-49.87	-13	H
9400	-52.17	-76.17	-13	V
9400	-49.68	-73.68	-13	H
11280	-50.63	-74.63	-13	V
11280	-51.37	-75.37	-13	H
13160	-56.75	-80.75	-13	V
13160	-54.17	-78.17	-13	H
15040	-56.8	-80.8	-13	V
15040	-56.48	-80.48	-13	H
16920	-56.11	-80.11	-13	V
16920	-56.06	-80.06	-13	H
18800	-59.41	-83.41	-13	V
18800	-59.25	-83.25	-13	H

CDMA 1900, Channel 600, phone horizontal, RM-66, AC-3U, HS-9

		EIRP= 24.8		dBm
Freq	(AVG) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
3760	-58.3	-83.1	-13	V
3760	-57.3	-82.1	-13	H
5640	-50.36	-75.16	-13	V
5640	-45.51	-70.31	-13	H
7520	-28.68	-53.48	-13	V
7520	-28.26	-53.06	-13	H
9400	-50.82	-75.62	-13	V
9400	-48.89	-73.69	-13	H
11280	-49.09	-73.89	-13	V
11280	-46.1	-70.9	-13	H
13160	-56.8	-81.6	-13	V
13160	-56.78	-81.58	-13	H
15040	-57.73	-82.53	-13	V
15040	-55.34	-80.14	-13	H
16920	-56.13	-80.93	-13	V
16920	-56.16	-80.96	-13	H
18800	-59.48	-84.28	-13	V
18800	-58.89	-83.69	-13	H

AMPS, Channel 384, phone vertical, RM-66, AC-3U, HS-1C

		EDRP= 19.8 dBm		
Freq	(PEAK) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
1673.04	-37.8	-57.6	-13	V
1673.04	-37.69	-57.49	-13	H
2509.56	-32.63	-52.43	-13	V
2509.56	-30.69	-50.49	-13	H
3346.08	-54.81	-74.61	-13	V
3346.08	-55.48	-75.28	-13	H
4182.6	-53.14	-72.94	-13	V
4182.6	-53.5	-73.3	-13	H
5019.12	-61.42	-81.22	-13	V
5019.12	-60.19	-79.99	-13	H
5855.64	-57.7	-77.5	-13	V
5855.64	-58.05	-77.85	-13	H
6692.16	-56.45	-76.25	-13	V
6692.16	-57.52	-77.32	-13	H
7528.68	-57.55	-77.35	-13	V
7528.68	-57.44	-77.24	-13	H
8365.2	-55.31	-75.11	-13	V
8365.2	-56.52	-76.32	-13	H

AMPS, Channel 384, phone horizontal, RM-66, AC-3U, HS-1C

		EDRP= 18.8 dBm		
Freq	(PEAK) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
1673.04	-37.32	-56.12	-13	V
1673.04	-37.6	-56.4	-13	H
2509.56	-31.52	-50.32	-13	V
2509.56	-32.79	-51.59	-13	H
3346.08	-42.36	-61.16	-13	V
3346.08	-43.63	-62.43	-13	H
4182.6	-52.17	-70.97	-13	V
4182.6	-53.91	-72.71	-13	H
5019.12	-45.5	-64.3	-13	V
5019.12	-46.84	-65.64	-13	H
5855.64	-50.23	-69.03	-13	V
5855.64	-49.12	-67.92	-13	H
6692.16	-42.77	-61.57	-13	V
6692.16	-51.02	-69.82	-13	H
7528.68	-44.63	-63.43	-13	V
7528.68	-44	-62.8	-13	H
8365.2	-53.42	-72.22	-13	V
8365.2	-56.44	-75.24	-13	H

CDMA 800, Channel 384, phone vertical, RM-66, AC-3U, HS-1C

		EDRP= 18.5 dBm		
Freq	(AVG) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
1673.04	-49.19	-67.69	-13	V
1673.04	-49.22	-67.72	-13	H
2509.56	-43.64	-62.14	-13	V
2509.56	-43.67	-62.17	-13	H
3346.08	-60.72	-79.22	-13	V
3346.08	-52.87	-71.37	-13	H
4182.6	-61.93	-80.43	-13	V
4182.6	-61.86	-80.36	-13	H
5019.12	-62.06	-80.56	-13	V
5019.12	-62.6	-81.1	-13	H
5855.64	-65.75	-84.25	-13	V
5855.64	-65.86	-84.36	-13	H
6692.16	-62.46	-80.96	-13	V
6692.16	-62.94	-81.44	-13	H
7528.68	-65.57	-84.07	-13	V
7528.68	-65.09	-83.59	-13	H
8365.2	-64.77	-83.27	-13	V
8365.2	-64.81	-83.31	-13	H

CDMA 800, Channel 384, phone horizontal, RM-66, AC-3U, HS-1C

		EDRP= 15.7 dBm		
Freq	(AVG) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
1673.04	-49.12	-64.82	-13	V
1673.04	-49.05	-64.75	-13	H
2509.56	-43.68	-59.38	-13	V
2509.56	-43.62	-59.32	-13	H
3346.08	-52.65	-68.35	-13	V
3346.08	-56.1	-71.8	-13	H
4182.6	-62.09	-77.79	-13	V
4182.6	-62.01	-77.71	-13	H
5019.12	-63.22	-78.92	-13	V
5019.12	-63.52	-79.22	-13	H
5855.64	-65.89	-81.59	-13	V
5855.64	-64.4	-80.1	-13	H
6692.16	-60.52	-76.22	-13	V
6692.16	-62.86	-78.56	-13	H
7528.68	-65.61	-81.31	-13	V
7528.68	-65.64	-81.34	-13	H
8365.2	-64.83	-80.53	-13	V
8365.2	-64.8	-80.5	-13	H

CDMA 1900, Channel 600, phone vertical, RM-66, AC-3U, HS-1C

		EIRP= 22.1 dBm		
Freq	(AVG) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
3760	-58.8	-80.9	-13	V
3760	-57.68	-79.78	-13	H
5640	-47.64	-69.74	-13	V
5640	-47.68	-69.78	-13	H
7520	-39.22	-61.32	-13	V
7520	-27.24	-49.34	-13	H
9400	-54.8	-76.9	-13	V
9400	-51.09	-73.19	-13	H
11280	-51.19	-73.29	-13	V
11280	-47.12	-69.22	-13	H
13160	-55.43	-77.53	-13	V
13160	-54.9	-77	-13	H
15040	-57.67	-79.77	-13	V
15040	-55.86	-77.96	-13	H
16920	-56.02	-78.12	-13	V
16920	-55.99	-78.09	-13	H
18800	-59.41	-81.51	-13	V
18800	-59.22	-81.32	-13	H

CDMA 1900, Channel 600, phone horizontal, RM-66, AC-3U, HS-1C

		EIRP= 23.3 dBm		
Freq	(avg) EMI			
(MHz)	(dBm)	dBc	FCC limit	Pol
3760	-59.18	-82.48	-13	V
3760	-55.66	-78.96	-13	H
5640	-49.14	-72.44	-13	V
5640	-46.21	-69.51	-13	H
7520	-28.27	-51.57	-13	V
7520	-29.21	-52.51	-13	H
9400	-50.71	-74.01	-13	V
9400	-47.76	-71.06	-13	H
11280	-50.98	-74.28	-13	V
11280	-50.83	-74.13	-13	H
13160	-55.47	-78.77	-13	V
13160	-52.43	-75.73	-13	H
15040	-57.49	-80.79	-13	V
15040	-55.37	-78.67	-13	H
16920	-56.02	-79.32	-13	V
16920	-56.03	-79.33	-13	H
18800	-59.18	-82.48	-13	V
18800	-59.32	-82.62	-13	H

10.4 Measurement Uncertainty

The measurement uncertainty for this test is +/- 5.2dB for 30-300MHz; +/- 5.2dB for 300-1000MHz, +/- 5.6dB for 1-6GHz and +/-6.8 for 6-18GHz.

11. FREQUENCY STABILITY (TEMPERATURE VARIATION)

Specification: FCC Part 2.1055(a)(1)(b), 24.235

11.1 Setup

The EUT was connected to the base station simulator to measure the RF power output.

11.2 Pass/Fail Criteria

Not Applicable

11.3 Detailed Test Results

Test Technician / Engineer	Hai To
Date of Measurement	July 13-14, 2005
Temperature	21 °C
Humidity	60 %RH
Test Result	Tested in accordance with 2.1055(a)(1)(b), 24.235 at maximum power setting.

Temp. (°C)	CDMA CELL, Channel 384	AMPS, Channel 384	CDMA PCS, Channel 600
	Change (Hz)	Change (Hz)	Change (Hz)
-30	11	240	24
-20	14	229	31
-10	13	236	31
0	13	254	27
10	13	203	30
20	15	232	30
30	15	226	31
40	13	235	30
50	15	245	33

12. FREQUENCY STABILITY (VOLTAGE VARIATION)

Specification: FCC Part 2.1055(d)(1)(2), 24.235

12.1 Setup

The EUT was connected to the base station simulator to measure the RF power output.

12.2 Pass/Fail Criteria

Not Applicable

12.3 Detailed Test Results

Test Technician / Engineer	Hai To
Date of Measurement	July 12, 2005
Temperature	21.0°C
Humidity	60.0%RH
Test Result	Tested in accordance with 2.1055(d)(1)(2), 24.235 at maximum power setting.

CDMA 800, Call Mode, Channel 384

% of STV	Voltage	Change (Hz)
85	N/A	N/A
100 (Nominal)	3.7	14
115	4.2	12
Battery End Point	3.3	12

CDMA PCS, Call Mode, Channel 600

% of STV	Voltage	Change (Hz)
85	N/A	N/A
100 (Nominal)	3.7	27
115	4.2	28
Battery End Point	3.3	30

AMPS, Call Mode, Channel 384

% of STV	Voltage	Change (Hz)
85	N/A	N/A
100 (Nominal)	3.7	171
115	4.2	170
Battery End Point	3.3	170