

47 CFR PART 22 SUBPART H & 24 SUBPART E

TEST REPORT

of

CDMA/GSM dual mode mobile phone

Model Name:

CG 100

Brand Name:

TechFaith

Report No.:

SZ08040102E02

FCC ID:

UJQ-11855T

prepared for

TechFaith Wireless Communication Technology (Shanghai) Limited.
Floor 6, Building 8, No. 3000 LongDong Avenue, Pudong District, Shanghai(201203)













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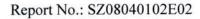
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1. TEST CERTIFICATION

Equipment under Test: CDMA/GSM dual mode mobile phone

Brand Name: TechFaith Model Name: CG 100

FCC ID: UJQ-11855T

Applicant: TechFaith Wireless Communication Technology (Shanghai)

Limited.

Floor 6, Building 8, No. 3000 LongDong Avenue, Pudong District,

Shanghai(201203)

Manufacturer: Techfaith Wireless Communication Technology (Shanghai) Limited

Floor 6, Building 8, No. 3000 Long Dong Avenue, Pudong District,

Shanghai (201203)

Test Standards: 47 CFR Part 2

47 CFR Part 22 Subpart H 47 CFR Part 24 Subpart E

Test Date(s): June 17, 2008 - July 10, 2008

Test Result: PASS

* We Hereby Certify That:

The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by: Ni Youg 2008, 07. 14

Reviewed by: Wei Yanguan Certif Ratetin

Approved by: Sur luan Dated 2008.07.14

Shu Luan



2. GENERAL INFORMATION

2.1 EUT Description

EUT Type.....: CDMA/GSM dual mode mobile phone

Model Name CG 100

Serial No...... (n.a, marked #1 by test site)

IMEI: 00000000000000

Hardware Version P2

Software Version: HACG100MT01

Frequency Range: CDMA 1X:

Tx: 825.25-847.75MHz; Rx: 870.25-8992.75MHz;

GSM 1900MHz:

Tx: 1850.20 - 1909.80MHz (at intervals of 200kHz); Rx: 1930.20 - 1989.80MHz (at intervals of 200kHz)

Modulation Type..... CDMA 1X and GMSK

Power Supply.....: Battery

Model Name: XWODA
Mode no.: 523450
Capacitance: 950mAh
Rated voltage: 3.7V
Manufacturer: XWORD

Manufacturer Address: Building C, Tong fu kang industrial Zone,

Shiyan Town, Baoan District, Shenzhen, China [518108]

Ancillary Equipments...... AC Adapter (Charger for Battery)

Model Name: STC-A22O50U5-A

Brand Name: RuiDe

Serial No.: (n.a. marked #1 by test site)

Rated Input: $\sim 100-240 \text{V}, 0.15 \text{A},$

Rated Output: = 5V, 700mA

Manufacturer: SHENZHEN RUIDE ELECTRONICAL

INDUSTRIAL CO., LTD

Manufacturer Address: 2ND floor, block 2, MinQi Scientific Zone,

HongHua Mountain, NanShan District, Shenzhen.

Wire Length: 120cm

Note 1: The EUT is a CDMA/GSM dual mode phone; it supports GSM900, 1800MHz, 1900MHza and CDMA 800MHz. Only GSM1900MHz and CDMA 800MHz bands are tested in this report.



| The transmitter (Tx) frequency arrangement of the PCS 1900MHz band used by the EUT can be represented with the formula F(n)=1850.2+0.2*(n-512), 512<=n<=810; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 512 (1850.2MHz), 661 (1880.0MHz) and 810 (1909.8MHz). |
|--|
| For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer. |
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2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 2, Part 22 and Part 24 for the EUT FCC ID Certification:

| No. | Identity | Document Title |
|-----|-------------------|---|
| 1 | 47 CFR Part 2 | Frequency Allocations and Radio Treaty Matters; General |
| | (10-1-05 Edition) | Rules and Regulations |
| 2 | 47 CFR Part 22 | Public Mobile Services |
| | (10-1-05 Edition) | |
| 3 | 47 CFR Part 24 | Personal Communications Services |
| | (10-1-05 Edition) | |

Test detailed items/section required by FCC rules and results are as below:

| No. | Section | Description | Result |
|-----|---------|---------------------------------------|--------|
| 1 | 2.106 | Frequencies | PASS |
| | 22.905 | | |
| | 24.229 | | |
| 2 | 2.1046 | Conducted RF Output Power | PASS |
| 3 | 2.1049 | 20dB Occupied Bandwidth | PASS |
| 4 | 2.1055 | Frequency Stability | PASS |
| | 22.355 | | |
| | 24.235 | | |
| 5 | 2.1051 | Conducted Out of Band Emissions | PASS |
| | 2.1057 | | |
| | 22.917 | | |
| | 24.238 | | |
| 6 | 2.1051 | Band Edge | PASS |
| | 2.1057 | | |
| | 22.917 | | |
| | 24.238 | | |
| 7 | 22.913 | Transmitter Radiated Power (EIPR/ERP) | PASS |
| | 24.232 | | |
| 8 | 2.1053 | Radiated Out of Band Emissions | PASS |
| | 2.1057 | | |
| | 22.917 | | |
| | 24.238 | | |



2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

| Temperature (°C): | 20 - 25 |
|-----------------------------|---------|
| Relative Humidity (%): | 40 - 60 |
| Atmospheric Pressure (kPa): | 96 |



3. 47 CFR PART 2, PART 22H REQUIREMENTS

3.1 Frequencies

3.1.1 Requirement

According to FCC section 22.905, the frequency blocks assignment for the cellular radiotelephone service is listed as below:

(a) Channel Block A:

Mobile 824 - 835MHz, Base 869 - 880MHz;

Mobile 845 - 846.5MHz, Base 890 - 891.5MHz

(b) Channel Block B:

Mobile 835 - 845 MHz, Base 880 - 890MHz;

Mobile 846.5 - 849 MHz, Base 891.5 - 894MHz

According to FCC section 24.229, the frequencies available in the Broadband PCS services are listed as below, in accordance with the frequency allocations table of FCC section 2.106.

(a) The following frequency blocks are available for assignment on an MTA basis:

Block A: 1850 - 1865MHz paired with 1930 - 1945MHz;

Block B: 1870 - 1885MHz paired with 1950 - 1965MHz.

(b) The following frequency blocks are available for assignment on a BTA basis:

Block C: 1895 - 1910 MHz paired with 1975 - 1990MHz;

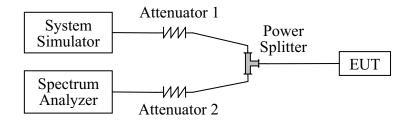
Block D: 1865 - 1870 MHz paired with 1945 - 1950MHz;

Block E: 1885 - 1890 MHz paired with 1965 - 1970MHz;

Block F: 1890 - 1895 MHz paired with 1970 - 1975MHz.

3.1.2 Test Description

1. Test Setup:



The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna



terminal is 500hm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. Power Control Level (PCL) = 0 and Power Class = 4 for PCS. A call is established between the EUT and the SS.

2. Equipments List:

| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due |
|-------------------|--------------|--------|------------|-----------|----------|
| System Simulator | Agilent | E5515C | GB43130131 | 2008.06 | 1year |
| Spectrum Analyzer | Agilent | E7405A | US44210471 | 2008.06 | 1year |
| Power Splitter | Weinschel | 1506A | NW521 | (n.a.) | (n.a.) |
| Attenuator 1 | Resnet | 20dB | (n.a.) | (n.a.) | (n.a.) |
| Attenuator 2 | Resnet | 3dB | (n.a.) | (n.a.) | (n.a.) |

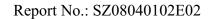
3.1.3 Test Result

The Tx frequency arrangement of the Cellular 800MHz band employed by the EUT should be from 825.27MHz to 847.74MHz, and Tx frequency arrangement of the PCS 1900MHz band employed by the EUT should be from 1850.2MHz to 1909.8MHz (the corresponding frequency block is from 1850MHz to 1910MHz). Here the lowest and highest channels are tested to verify the EUT's using the frequency block required.

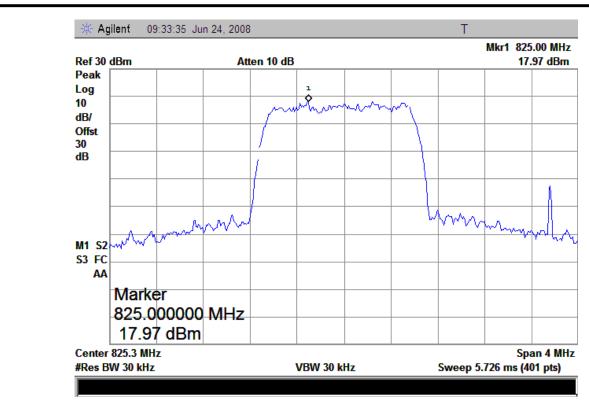
1. Test Verdict:

The required frequency block is employed legally, the verdict is PASS.

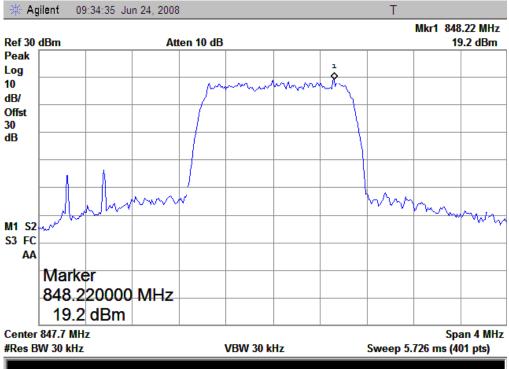
| Band Channel Frequency (MHz) | | Measured Carrier (dBm) | Refer to Plot | |
|------------------------------|-----|------------------------|---------------|--------|
| CDMA | 9 | 825.27 | 17.97 | Plot A |
| 800MHz | 758 | 847.74 | 19.20 | Plot B |
| GSM | 512 | 1850.2 | 20.20 | Plot C |
| 1900MHz | 810 | 1909.8 | 20.97 | Plot D |







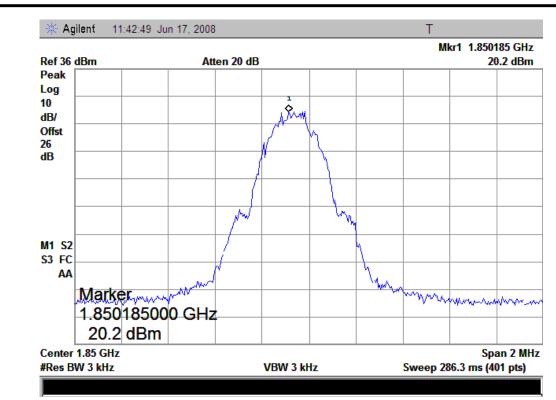




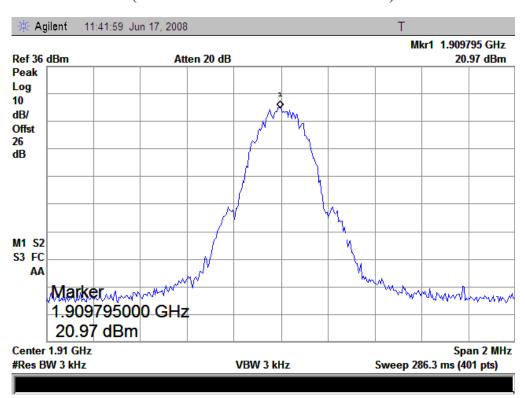
(Plot B: CDMA 800MHz Channel = 758)







(Plot C: GSM 1900MHz Channel = 512)



(Plot D: GSM 1900MHz Channel = 810)



3.2 Conducted RF Output Power

3.2.1 Requirement

According to FCC section 2.1046(a), for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified in FCC section 2.1033(c)(8).

3.2.2 Test Description

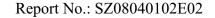
See section 3.1.2 of this report.

3.2.3 Test Result

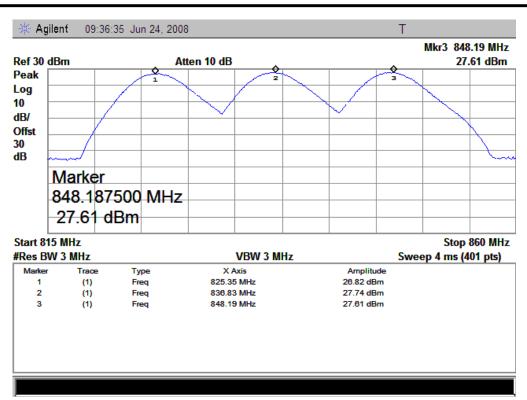
Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT. For the CDMA 800MHz operates at max radiated condition. For the GSM 1900MHz operates at PCL=0 (where Power Class is 1), the rated conducted RF output power is 30dBm within the tolerance of ±3dB.

1. Test Verdict:

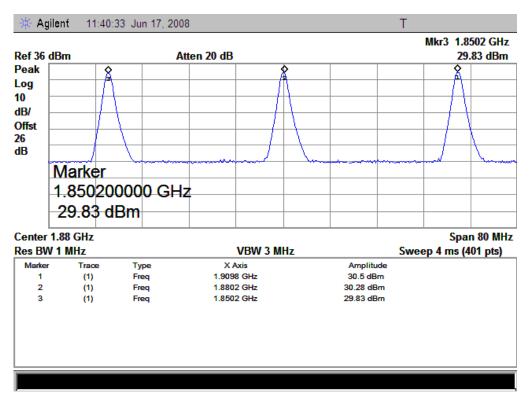
| | | | Measured Output | | Rated Output | | | |
|-----------------|-------------------------|---------------------|-------------------------|--------|-----------------|----|---------|------|
| Band | Channel Frequency (MHz) | nel Frequency (MHz) | Power | | Power Tolerance | | Verdict | |
| | | dBm | dBm Refer to Plot d | dBm | (dB) | | | |
| CDMA | 9 | 825.27 | 26.8 | Plot A | | | | PASS |
| CDMA 8000MHz | 384 | 836.52 | 27.7 | | 33 | ±3 | PASS | |
| OUUUNITIZ | 758 | 847.74 | 27.6 | | | | PASS | |
| CCM | 512 | 1850.2 | 30.5 | | | | PASS | |
| GSM 1000MHz | 661 | 1880.0 | 30.28 | Plot B | 30 | ±3 | PASS | |
| 1900MHz | 810 | 1909.8 | 29.83 | | | | PASS | |







(Plot A: CDMA 800MHz Channel = 9, 384, 758)



(Plot B: GSM 1900MHz Channel = 512, 661, 810)



3.3 20dB Occupied Bandwidth

3.3.1 Definition

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied bandwidth is also known as the 99% emission bandwidth, or 20dB bandwidth (10*log1% = 20dB) taking the total RF output power as reference.

3.3.2 Test Description

See section 3.1.2 of this report.

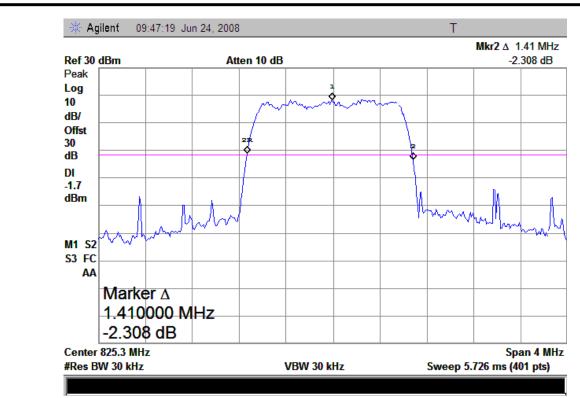
3.3.3 Test Verdict

Here the lowest, middle and highest channels are tested to record the 20dB occupied bandwidth.

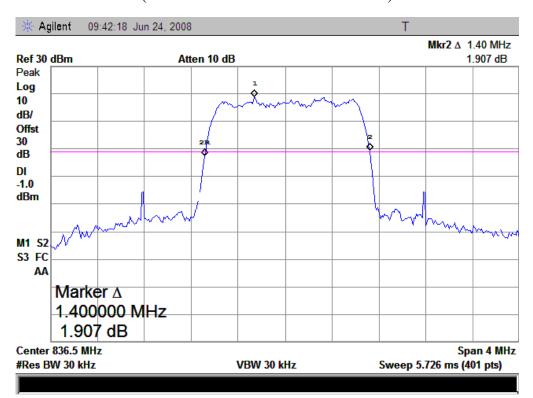
1. Test Verdict:

| Band | Channel | Frequency (MHz) | Measured 20dB Occupied Bandwidth | Refer to Plot |
|-------------|---------|-----------------|----------------------------------|---------------|
| CDMA | 9 | 825.27 | 1.41MHz | Plot A |
| 800MHz | 384 | 836.52 | 1.40MHz | Plot B |
| 800WITIZ | 758 | 847.74 | 1.40MHz | Plot C |
| GSM | 512 | 1850.2 | 295KHz | Plot D |
| 1900MHz | 661 | 1880.0 | 285 KHz | Plot E |
| 1 900IVITIZ | 810 | 1909.8 | 300 KHz | Plot F |

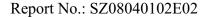




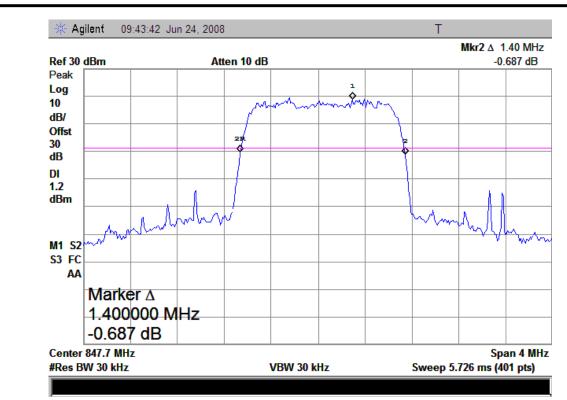
(Plot A: CDMA 800MHz Channel = 9)



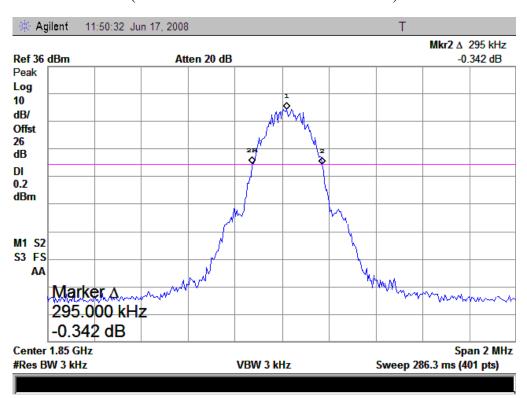
(Plot B: CDMA 800MHz Channel = 384)





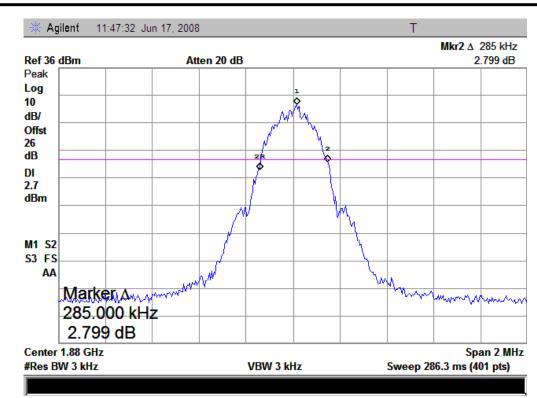


(Plot C: CDMA 800MHz Channel = 758)

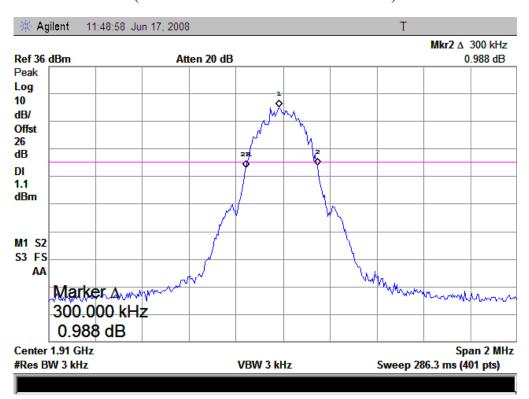


(Plot D: GSM 1900MHz Channel = 512)





(Plot E: GSM 1900MHz Channel = 661)



(Plot F: GSM 1900MHz Channel = 810)



3.4 Frequency Stability

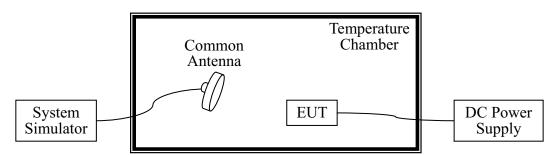
3.4.1 Requirement

According to FCC section 22.355 and FCC section 24.235, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. According to FCC section 2.1055, the test conditions are:

- (a) The temperature is varied from -30° C to $+50^{\circ}$ C at intervals of not more than 10° C.
- (b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

3.4.2 Test Description

1. Test Setup:



The EUT, which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power i.e. A call is established between the EUT and the SS via a Common Antenna.

2. Equipments List:

| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due |
|------------------|--------------------|------------|------------|-----------|----------|
| System Simulator | Agilent | E5515C | GB43130131 | 2008.06 | 1year |
| DC Power Supply | Good Will | GPS-3030DD | EF920938 | 2007.06 | 2year |
| Temperature | YinHe Experimental | HL4003T | (n.a.) | 2008.03 | 1year |
| Chamber | Equip. | | | | |

3.4.3 Test Verdict

The nominal, highest and lowest extreme voltages are separately 3.7VDC, 4.2VDC and 3.6VDC, which are specified by the applicant; the normal temperature here used is 25°C. The frequency deviation limit of CDMA 800MHz band is ± 2.5 ppm, and GSM 1900MHz is ± 1 ppm





When the battery operating below 3.6VDC or above 4.2VDC, the phone can not work normally.

| | | | , 1 | | | | | | | |
|-----------|-----------------|------------|---------------------|----------|---------------|---------------|---------------|---------------|---------|--|
| | Test Conditions | | Frequency Deviation | | | | | | | |
| Band | Power | Temperatur | Chan | inel = 9 | Chann | Channel = 384 | | Channel = 758 | | |
| | (VDC) | e (°C) | Hz | Limits | Hz | Limits | Hz | Limits | | |
| | | -30°C | -12.3 | | 10.25 | | 4.67 | | | |
| | | -30 C | 2 | | 10.23 | | 7.07 | | | |
| | | -20°C | -9.56 | | 3.24 | | 3.74 | | | |
| | | -10°C | -9.85 | | -3.02 | | -7.41 | | | |
| CDMA | 3.7 | 0°C | 3.54 | | 8.41 | | 7.47 | | | |
| | 3.7 | +10°C | 4.78 | ±300Hz | 6.74 | ±300Hz | 2.39 | ±300Hz | PASS | |
| 800MHz | | +20°C | 5.35 | ±30011Z | 7.48 | ±300112 | -2.24 | ±300112 | | |
| | | +30°C | 10.17 | - | -6.81 | | 3.47 | | | |
| | | +40°C | 10.25 | | -5.36 | | 3.76 | | | |
| | | +50°C | 10.67 | | 2.43 | | -0.15 | | | |
| | 4.2 | +22°C | 10.14 | | -6.36 | | 1.75 | | | |
| | 3.6 | +22°C | -3.71 | | 6.01 | | 2.69 | | | |
| | Test (| Conditions | Frequency Deviation | | | | | | | |
| Band | Power (VDC) | Temperatur | Channel = 512 | | Channel = 661 | | Channel = 810 | | Verdict | |
| Dand | | e (°C) | (1850.2MHz) | | (1880.0MHz) | | (1909.8MHz) | | Volume | |
| | | 0(0) | Hz | Limits | Hz | Limits | Hz | Limits | | |
| | | -30 | 35.26 | | -24.35 | | 24.26 | | | |
| | | -20 | 33.54 | | 21.54 | | -25.35 | | | |
| | | -10 | 32.74 | | 26.28 | | 32.47 | | | |
| | | 0 | -26.8 | | -13.43 | -13 //3 | | 32.57 | | |
| | | | 5 | | -13.43 | | 32.31 | | | |
| | | +10 | -24.2 | | 29.51 | | -26.27 | | | |
| GSM | 3.7 | | 8 | | | ±1880. | +1909 | ±1909. | PASS | |
| 1900MHz | | +20 | 24.69 | ±1850.2 | 23.57 | 0 | -33.47 | 8 | | |
| 170011112 | | +30 | -34.6 | | -23.84 | | 26.54 | | | |
| | | . 50 | 8 | | 23.01 | 22 | 20.51 | | | |
| | | +40 | -31.0 | | 23.18 | | 22.16 | | | |
| | | | 1 | | | | | | | |
| | | +50 | 26.37 | | -23.24 | | -33.26 | | | |
| | 4.2 | +25 | 25.27 | | 13.64 | _ | 21.46 | | | |
| | 3.6 | +25 | 26.36 | | -22.35 | | -30.38 | | | |



3.5 Conducted Out of Band Emissions

3.5.1 Requirement

According to FCC section 22.917(a) and FCC section 24.238(a), 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. This calculated to be -13dBm.

3.5.2 Test Description

See section 3.1.2 of this report.

3.5.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

1. Test Verdict:

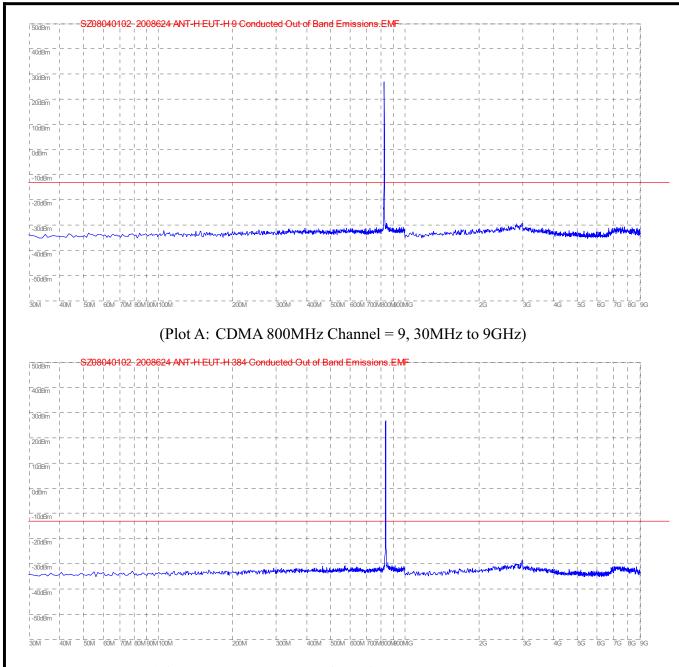
| Band | Channe 1 | Frequency (MHz) | Measured Max. Spurious Emission (dBm) | Refer to Plot | Limit (dBm) | Verdic t |
|-----------|----------|--------------------|---------------------------------------|---------------|-------------|----------|
| CDMA | 9 | 825.27 | <-20 | Plot A | | PASS |
| 800MHz | 384 | 836.52 | <-20 | Plot B | -13 | PASS |
| OUUIVIIIZ | 758 | 847.74 | <-20 | Plot C | | PASS |
| GSM | 512 | 1850.2 | | Plot D | | PASS |
| 1900MHz | 661 | 1880.0 | | Plot E | -13 | PASS |
| | 810 | 1909.8 | | Plot F | | PASS |

2. Test Plot for the Whole Measurement Frequency Range:

Note: the power of the EUT transmitting frequency should be ignored.



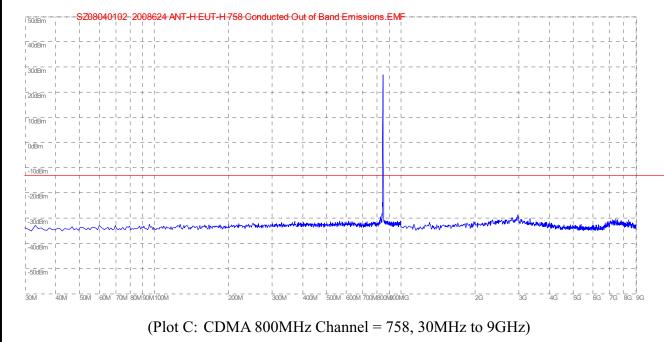


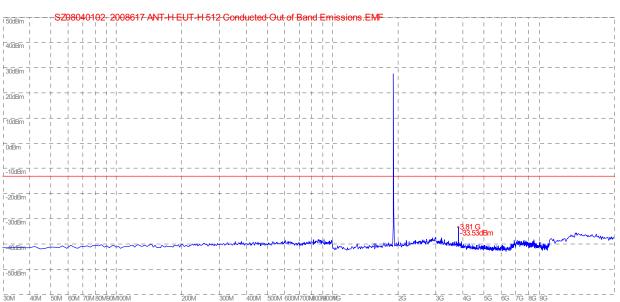


(Plot B: CDMA 800MHz Channel = 384, 30MHz to 9GHz)

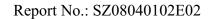




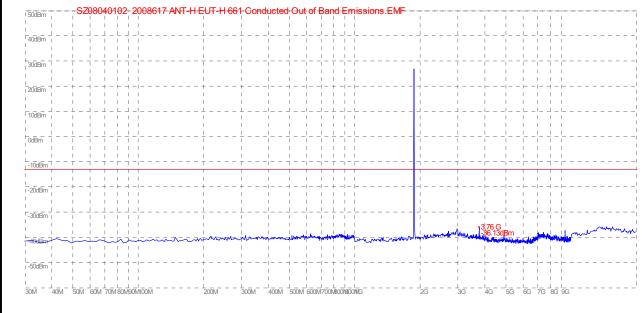




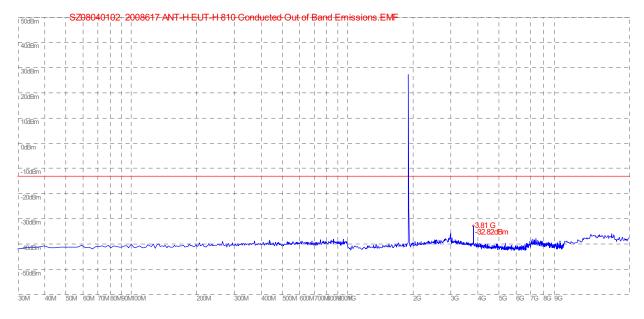
(Plot D: GSM 1900MHz Channel = 512, 30MHz to 20GHz)







(Plot E: GSM 1900MHz Channel = 661, 30MHz to 20GHz)



(Plot F: GSM 1900MHz Channel = 810, 30MHz to 20GHz)



3.6 Band Edge

3.6.1 Requirement

According to FCC section 22.917(b) and FCC section 24.238(b), in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth (26dB emission bandwidth) of the fundamental emission of the transmitter may be employed.

3.6.2 Test Description

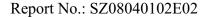
See section 3.1.2 of this report.

3.6.3 Test Result

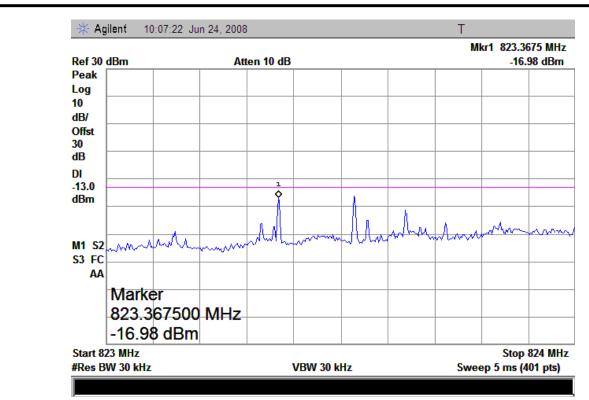
The lowest and highest channels are tested to verify the band edge emissions.

1. Test Verdict:

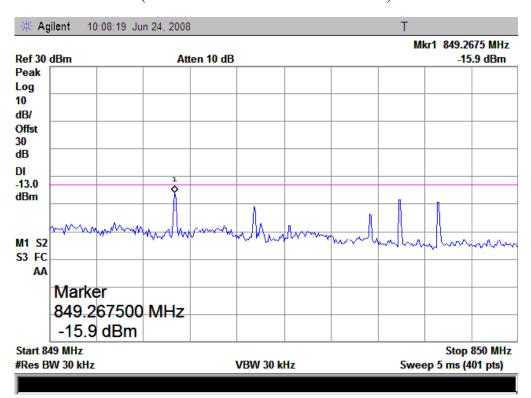
| Band | Channe Frequency | | Measured Max. Band | Refer to | Limit (dBm) | Verdict |
|---------|------------------|--------|---------------------|----------|-----------------|---------|
| Band | 1 | (MHz) | Edge Emission (dBm) | Plot | Lillili (dbill) | vertice |
| CDMA | 9 | 825.27 | -16.98 | Plat A | -13 | PASS |
| 800MHz | 758 | 847.74 | -15.90 | Plot B | -13 | PASS |
| GSM | 512 | 1850.2 | -15.10 | Plat C | -13 | PASS |
| 1900MHz | 810 | 1909.8 | -14.85 | Plot D | -13 | PASS |



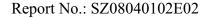




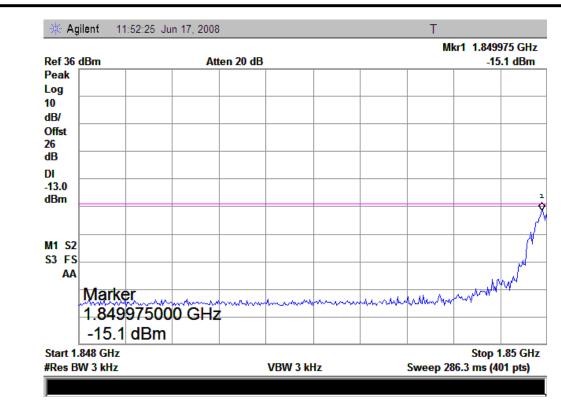
(Plot A: CDMA 800MHz Channel = 9)



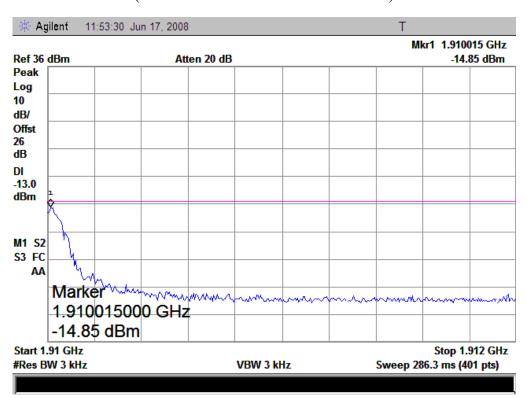
(Plot B: CDMA 800MHz Channel = 758)



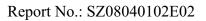




(Plot C: DCS 1900MHz Channel = 512)



(Plot D: DCS 1900MHz Channel = 810)





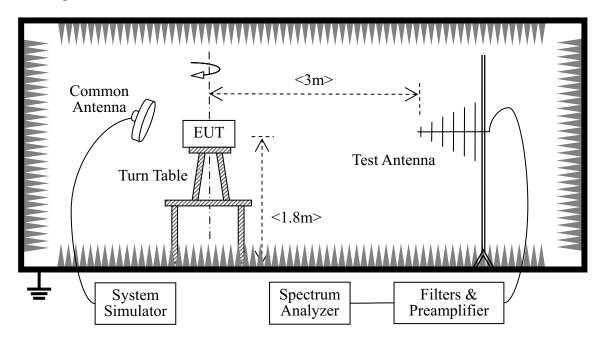
3.7 Transmitter Radiated Power (EIRP/ERP)

3.7.1 Requirement

According to FCC section 22.913, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7Watts, and FCC section 24.232, the broadband PCS mobile station is limited to 2Watts e.i.r.p. peak power.

3.7.2 Test Description

1. Test Setup:



The EUT, which is powered by the Battery charged with the AC Adapter, is located in a 3m Full-Anechoic Chamber; the cable loss, air loss and so on of the site as factors are pre-calibrated using the "Substitution" method, and calculated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. CDMA 800MHz band (All Up Bits) GSM1900MHz band Power Control Level (PCL) = 0 and Power Class = 1. A call is established between the EUT and the SS via a Common Antenna.

The Test Antenna is a Bi-Log one (used for 30MHz to 1GHz) or a Horn one (used for above 3GHz), and it's located at the same height as the EUT. The Filters consists of Notch Filters and High Pass Filter.

2. Equipments List:

| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due |
|------------------|--------------|--------|------------|-----------|----------|
| System Simulator | Agilent | E5515C | GB43130131 | 2007.06 | 1year |



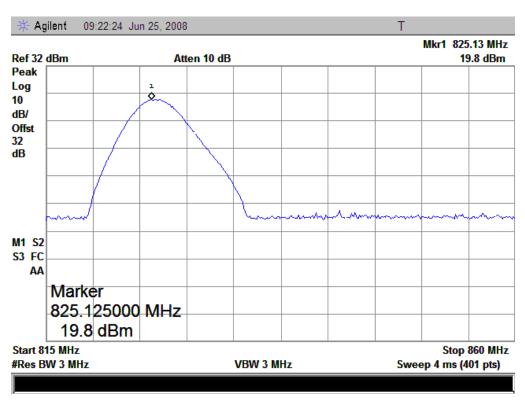
| Description | Manufacturer | Model | Serial No. | Cal. Date | Cal. Due |
|-----------------------|--------------|------------|------------|-----------|----------|
| Spectrum Analyzer | Agilent | E7405A | US44210471 | 2008.06 | 1year |
| Full-Anechoic Chamber | Albatross | 9m*6m*6m | (n.a.) | 2006.08 | 2year |
| Test Antenna - Bi-Log | Schwarzbeck | VULB 9163 | 9163-274 | 2007.07 | 1year |
| Test Antenna - Horn | Schwarzbeck | BBHA 9120C | 9120C-384 | 2007.07 | 1year |

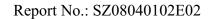
3.7.3 Test Result

The Turn Table is actuated to turn from 0° to 360° , and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested.

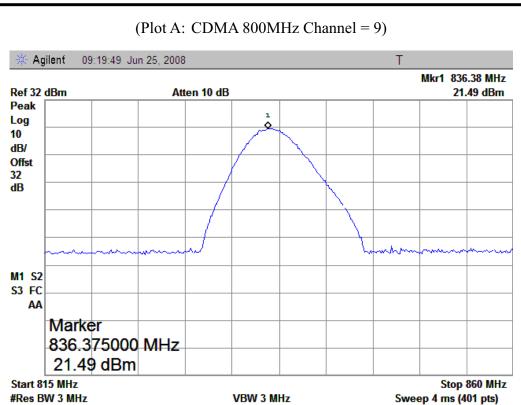
1. Test Verdict:

| Band | Chann | Frequency | Me | Measured ERP/EIRP | | | it | Verdict | |
|---------|-------|-----------|-------|-------------------|---------------|-------|----|---------|------|
| | el | (MHz) | dBm | W | Refer to Plot | dBm | W | verdict | |
| CDMA | 9 | 825.27 | 19.80 | 0.10 | Plot A | | 7 | PASS | |
| 800MHz | 384 | 836.52 | 21.49 | 0.14 | Plot B | 38.45 | | PASS | |
| | 758 | 847.74 | 22.91 | 0.20 | Plot C | | | PASS | |
| GSM | 512 | 1850.2 | 28.70 | 0.74 | 0.74 | | | | PASS |
| 1900MHz | 661 | 1880.0 | 30.12 | 1.03 | Plot D | 33 | 2 | PASS | |
| | 810 | 1909.8 | 30.16 | 1.04 | | | | PASS | |

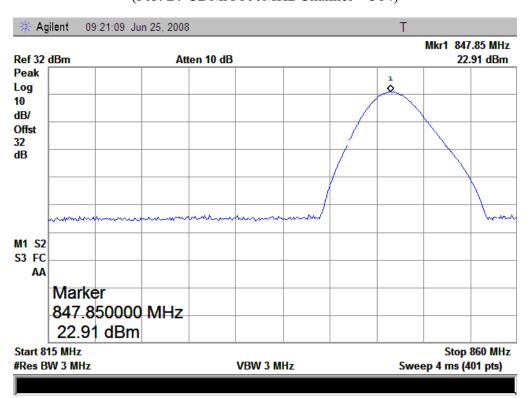






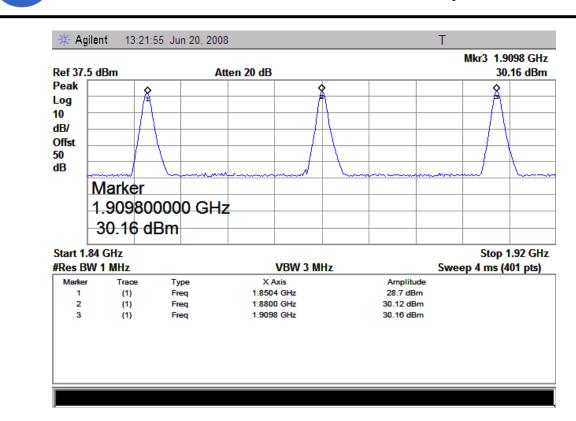


(Plot B: CDMA 800MHz Channel = 384)



(Plot C: CDMA 800MHz Channel = 758)





(Plot D: GSM 1900MHz Channel = 512, 661, 810)



3.8 Radiated Out of Band Emissions

3.8.1 Requirement

According to FCC section 22.917(a) and section 24.238(a), 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. This calculated to be -13dBm.

3.8.2 Test Description

See section 3.7.2 of this report.

3.8.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

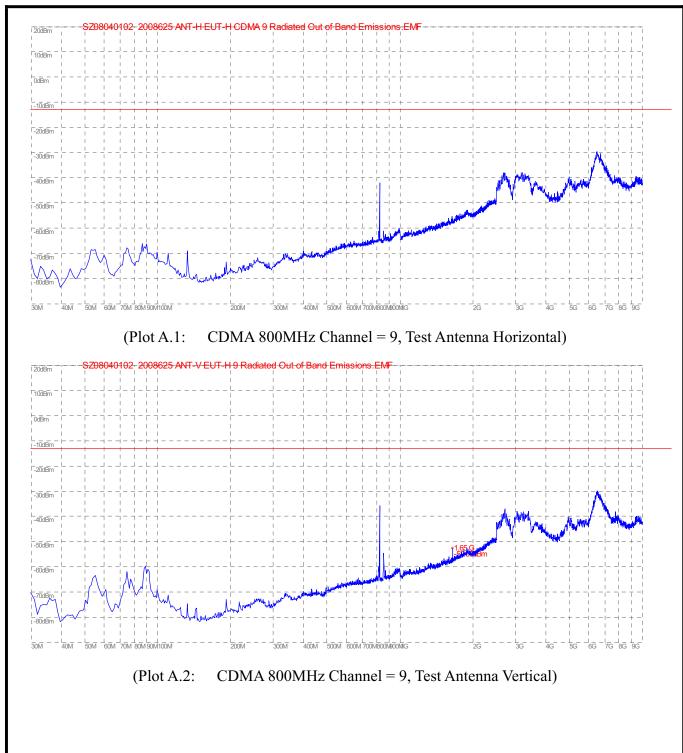
1. Test Verdict:

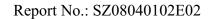
| Band | Channe 1 | Frequenc y (MHz) | | ax. Spurious n (dBm) | | T ::4 | Verdict |
|----------------|----------|---------------------|-----------------------|----------------------|---------------|----------------|---------|
| | | | Test | Test | Refer to Plot | Limit (dBm) | |
| | | | Antenna Horizontal | Antenna Vertical | | | |
| CDMA | 9 | 825.27 | < -30 | < -30 | Plot A.1/A.2 | | PASS |
| CDMA 800MHz | 384 | 836.52 | < -30 | < -30 | Plot B.1/B.2 | -13 | PASS |
| 800MHZ | 758 | 847.74 | < -30 | < -30 | Plot C.1/C.2 | | PASS |
| GSM 1900MHz | 512 | 1850.2 | < -25 | < -25 | Plot D.1/D.2 | | PASS |
| | 661 | 1880.0 | < -25 | < -25 | Plot E.1/E.2 | -13 | PASS |
| | 810 | 1909.8 | < -25 | < -25 | Plot F.1/F.2 | | PASS |

2. Test Plot for the Whole Measurement Frequency Range:

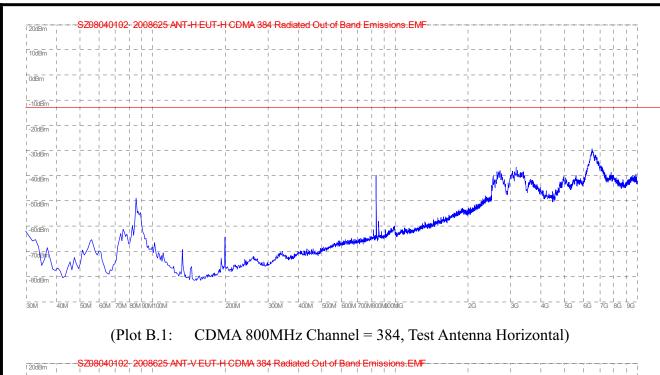
Note: the power of the EUT transmitting frequency should be ignored.

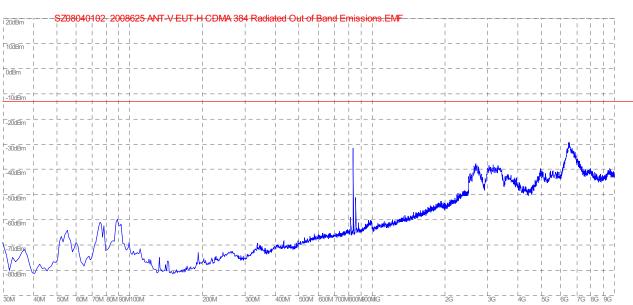






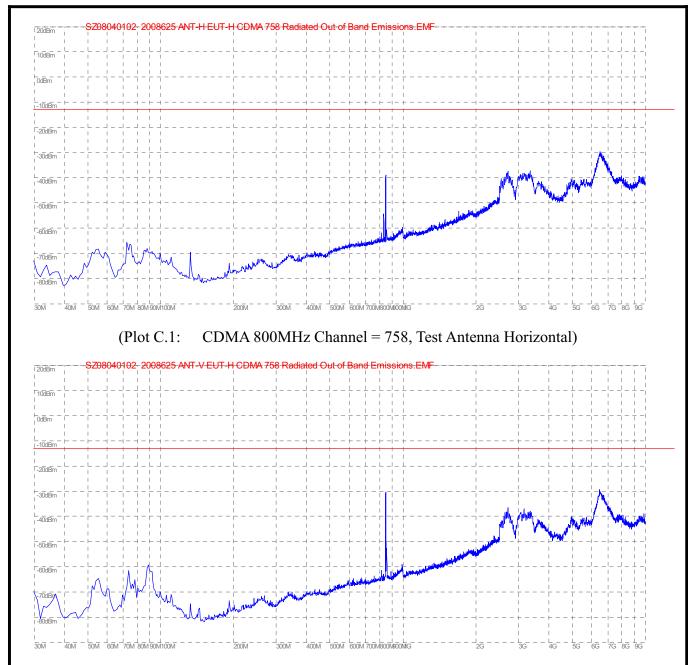






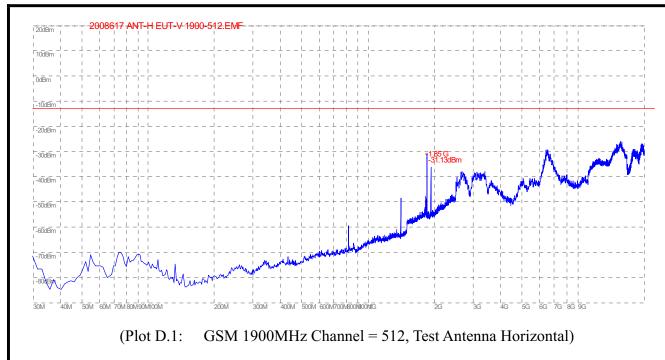
(Plot B.2: CDMA 800MHz Channel = 384, Test Antenna Vertical)





(Plot C.2: CDMA 800MHz Channel = 758, Test Antenna Vertical)

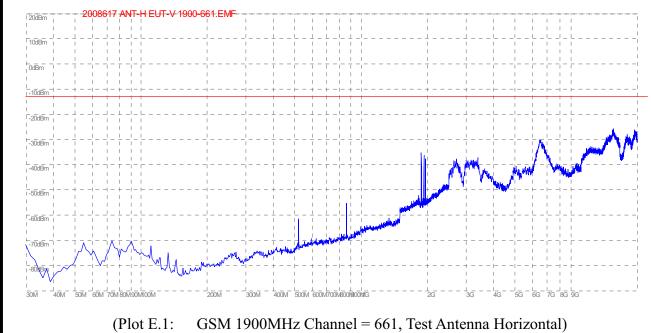


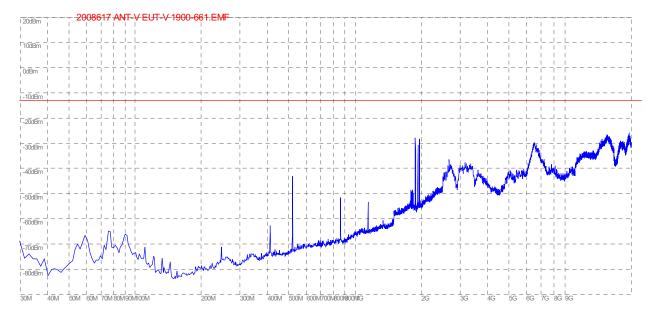




(Plot D.2: GSM 1900MHz Channel = 512, Test Antenna Vertical)

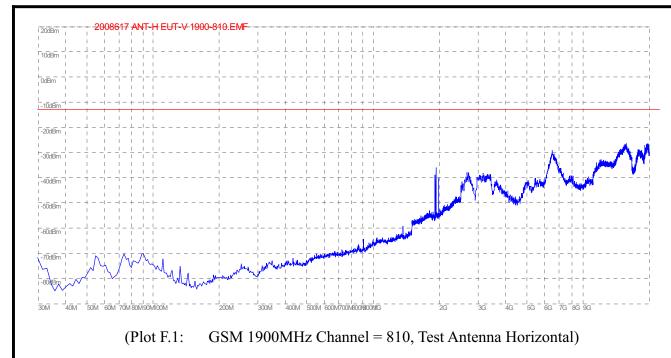


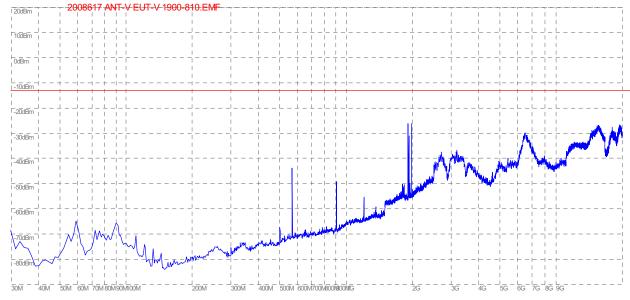




GSM 1900MHz Channel = 661, Test Antenna Vertical) (Plot E.2:







(Plot F.2: GSM 1900MHz Channel = 810, Test Antenna Vertical)
** END OF REPORT **