



PCTEST ENGINEERING LABORATORY, INC.

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MEASUREMENT REPORT

FCC Part 22, 24, 27

Applicant Name:

Samsung Electronics Co., Ltd.
129, Samsung-ro, Yeongtong-gu
Suwon-city, Gyeonggi-do, 443-803
Republic of Korea

Date of Testing:

March 14 - 22, 2013

Test Site/Location:

PCTEST Lab., Columbia, MD, USA

Test Report Serial No.:

0Y1303110473.A3L

FCC ID:

A3LSCHR480C

APPLICANT:

SAMSUNG ELECTRONICS CO., LTD.

Application Type:

Certification

Model(s):

SCH-R480C

EUT Type:

Portable Handset

FCC Classification:

PCS Licensed Transmitter Held to Ear (PCE)

FCC Rule Part(s):

§2 §22(H) §24(E) §27(L)

Test Procedure(s):

ANSI/TIA-603-C-2004, KDB 971168

Test Device Serial No.:

identical prototype [S/N: FK-063-A]

Mode	Tx Frequency (MHz)	Emission Designator	ERP/EIRP	
			Max. Power (W)	Max. Power (dBm)
CDMA850	824.70 - 848.31	1M27F9W	0.201	23.03
CDMA1700	1711.25 - 1753.75	1M27F9W	0.305	24.84
CDMA1900	1851.25 - 1908.75	1M27F9W	0.349	25.43

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in §2.947. Test results reported herein relate only to the item(s) tested.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.


Randy Ortanez
President

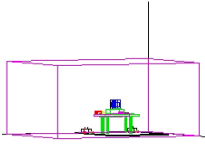


FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 1 of 49

TABLE OF CONTENTS

FCC PART 22, 24, 27 MEASUREMENT REPORT.....	3
1.0 INTRODUCTION	4
1.1 SCOPE	4
1.2 TESTING FACILITY.....	4
2.0 PRODUCT INFORMATION.....	5
2.1 EQUIPMENT DESCRIPTION	5
2.2 DEVICE CAPABILITIES.....	5
2.3 TEST CONFIGURATION.....	5
2.4 EMI SUPPRESSION DEVICE(S)/MODIFICATIONS	5
3.0 DESCRIPTION OF TESTS	6
3.1 EVALUATION PROCEDURE	6
3.2 CELLULAR - BASE FREQUENCY BLOCKS.....	6
3.3 CELLULAR - MOBILE FREQUENCY BLOCKS.....	6
3.4 PCS - BASE FREQUENCY BLOCKS.....	6
3.5 PCS - MOBILE FREQUENCY BLOCKS.....	7
3.6 AWS - BASE FREQUENCY BLOCKS	7
3.7 AWS - MOBILE FREQUENCY BLOCKS	7
3.8 OCCUPIED BANDWIDTH	7
3.9 SPURIOUS AND HARMONIC EMISSIONS AT ANTENNA TERMINAL.....	8
3.10 RADIATED POWER AND RADIATED SPURIOUS EMISSIONS	8
3.11 PEAK-AVERAGE RATIO	9
3.12 FREQUENCY STABILITY / TEMPERATURE VARIATION	9
4.0 TEST EQUIPMENT CALIBRATION DATA	10
5.0 SAMPLE CALCULATIONS	11
6.0 TEST RESULTS.....	12
6.1 SUMMARY.....	12
6.2 CELLULAR EFFECTIVE RADIATED POWER (ERP)	13
6.3 AWS EFFECTIVE RADIATED POWER (EIRP).....	14
6.4 PCS EFFECTIVE RADIATED POWER (EIRP).....	15
6.5 CELLULAR CDMA RADIATED MEASUREMENTS.....	16
6.6 AWS CDMA RADIATED MEASUREMENTS	19
6.7 PCS CDMA RADIATED MEASUREMENTS.....	22
6.8 CELLULAR CDMA FREQUENCY STABILITY MEASUREMENTS	25
6.9 AWS CDMA FREQUENCY STABILITY MEASUREMENTS.....	27
6.10 PCS CDMA FREQUENCY STABILITY MEASUREMENTS.....	29
7.0 PLOTS OF EMISSIONS.....	31
8.0 CONCLUSION.....	49

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 2 of 49



MEASUREMENT REPORT

FCC Part 22, 24, 27

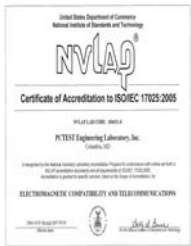
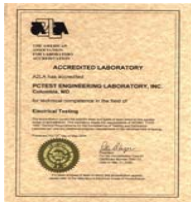


§2.1033 General Information

APPLICANT: Samsung Electronics Co., Ltd.
APPLICANT ADDRESS: 129, Samsung-ro, Yeongtong-gu
 Suwon-city, Gyeonggi-do, 443-803, Republic of Korea
TEST SITE: PCTEST ENGINEERING LABORATORY, INC.
TEST SITE ADDRESS: 6660-B Dobbin Road, Columbia, MD 21045 USA
FCC RULE PART(S): §2 §22(H) §24(E) §27(L)
BASE MODEL: SCH-R480C
FCC ID: A3LSCHR480C
FCC CLASSIFICATION: PCS Licensed Transmitter Held to Ear (PCE)
MODE: CDMA
FREQUENCY TOLERANCE: ± 0.00025 % (2.5 ppm)
Test Device Serial No.: FK-063-A ☐ Production ☒ Pre-Production ☐ Engineering
DATE(S) OF TEST: March 14 - 22, 2013
TEST REPORT S/N: 0Y1303110473.A3L

Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab located in Columbia, MD 21046, U.S.A.



- PCTEST facility is an FCC registered (PCTEST Reg. No. 159966) test facility with the site description report on file and has met all the requirements specified in Section 2.948 of the FCC Rules and Industry Canada (2451B-1).
- PCTEST Lab is accredited to ISO 17025 by U.S. National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP Lab code: 100431-0) in EMC, FCC and Telecommunications.
- PCTEST Lab is accredited to ISO 17025-2005 by the American Association for Laboratory Accreditation (A2LA) in Specific Absorption Rate (SAR) testing, Hearing Aid Compatibility (HAC) testing, CTIA Test Plans, and wireless testing for FCC and Industry Canada Rules.
- PCTEST Lab is a recognized U.S. Conformity Assessment Body (CAB) in EMC and R&TTE (n.b. 0982) under the U.S.-EU Mutual Recognition Agreement (MRA).
- PCTEST TCB is a Telecommunication Certification Body (TCB) accredited to ISO/IEC Guide 65 by the American National Standards Institute (ANSI) in all scopes of FCC Rules and Industry Canada Standards (RSS).
- PCTEST facility is an IC registered (2451B-1) test laboratory with the site description on file at Industry Canada.
- PCTEST is a CTIA Authorized Test Laboratory (CATL) for A-MPS, CDMA, and Ev-DO wireless devices and for Over-the-Air (OTA) Antenna Performance testing for A-MPS, CDMA, GSM, GPRS, EGPRS, UMTS (W-CDMA), CDMA 1xEVDO, and CDMA 1xRTT.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 3 of 49

1.0 INTRODUCTION

1.1 Scope

Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission and the Industry Canada Certification and Engineering Bureau.

1.2 Testing Facility

The map below shows the location of the PCTEST LABORATORY, its proximity to the FCC Laboratory, the Columbia vicinity, the Baltimore -Washington Intern't'l (BWI) airport, the city of Baltimore and the Washington, DC area. (See Figure 1-1).

These measurement tests were conducted at the PCTEST Engineering Laboratory, Inc. facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The site coordinates are 39° 11'15" N latitude and 76° 49'38" W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2009 on February 15, 2012.

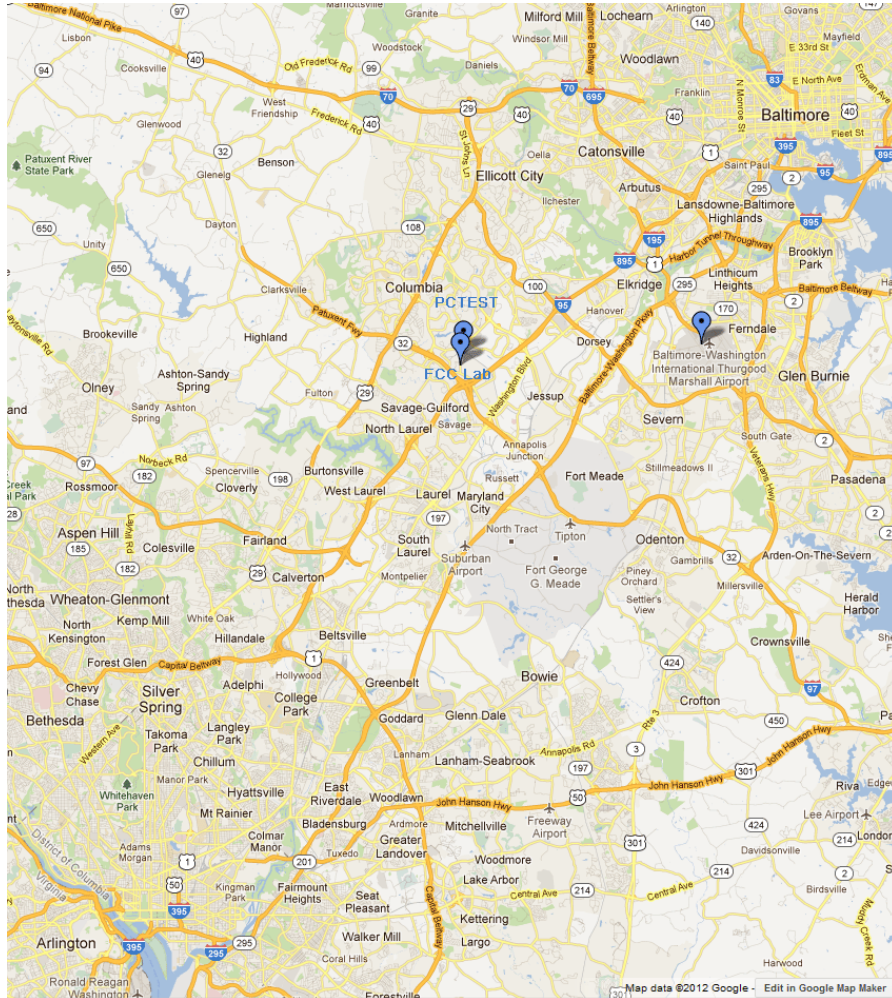


Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 4 of 49

2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSCHR480C**. The test data contained in this report pertains only to the emissions due to the EUT's 2G/3G licensed transmitters.

2.2 Device Capabilities

This device contains the following capabilities:

850/1700/1900 CDMA (BC0, BC1, BC15), Bluetooth (1x,EDR)

2.3 Test Configuration

The Samsung Portable Handset FCC ID: A3LSCHR480 C was tested per the guidance of ANSI/TIA-603-C-2004 and KDB 971168. See Section 3.0 of this test report for a description of the radiated and antenna port conducted emissions tests.

2.4 EMI Suppression Device(s)/Modifications

No EMI suppression device(s) were added and no modifications were made during testing.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 5 of 49

3.0 DESCRIPTION OF TESTS

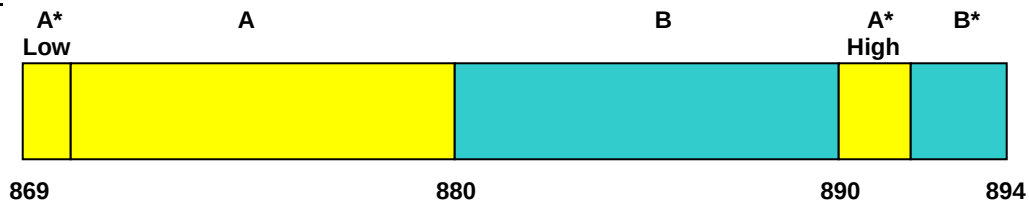
3.1 Evaluation Procedure

The measurement procedures described in the “Land Mobile FM or PM – Communications Equipment – Measurements and Performance Standards” (ANSI/TIA-603-C-2004) and “Procedures for Compliance Measurement of the Fundamental Emission Power of Licensed Wideband (> 1 MHz) Digital Transmission Systems” were used in the measurement of the **Samsung Portable Handset** FCC ID: A3LSCHR480C.

Deviation from Measurement Procedure.....None

3.2 Cellular - Base Frequency Blocks

§22.905



BLOCK 1: 869 – 880 MHz (A* Low + A)

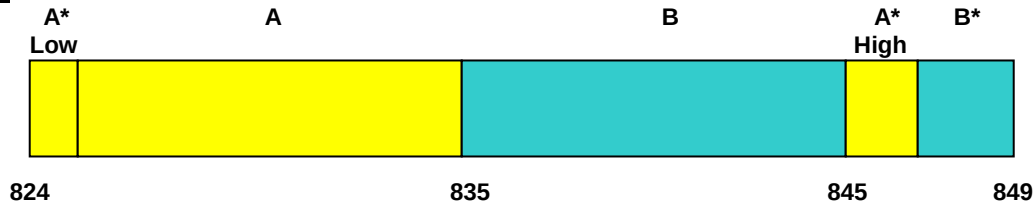
BLOCK 3: 890 – 891.5 MHz (A* High)

BLOCK 2: 880 – 890 MHz (B)

BLOCK 4: 891.5 – 894 MHz (B*)

3.3 Cellular - Mobile Frequency Blocks

§22.905



BLOCK 1: 824 – 835 MHz (A* Low + A)

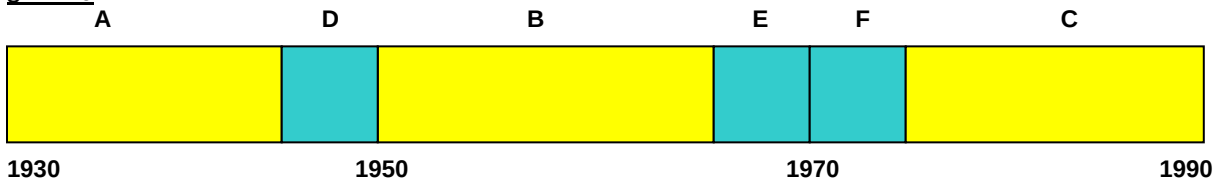
BLOCK 3: 845 – 846.5 MHz (A* High)

BLOCK 2: 835 – 845 MHz (B)

BLOCK 4: 846.5 – 849 MHz (B*)

3.4 PCS - Base Frequency Blocks

§24.229



BLOCK 1: 1930 – 1945 MHz (A)

BLOCK 4: 1965 – 1970 MHz (E)

BLOCK 2: 1945 – 1950 MHz (D)

BLOCK 5: 1970 – 1975 MHz (F)

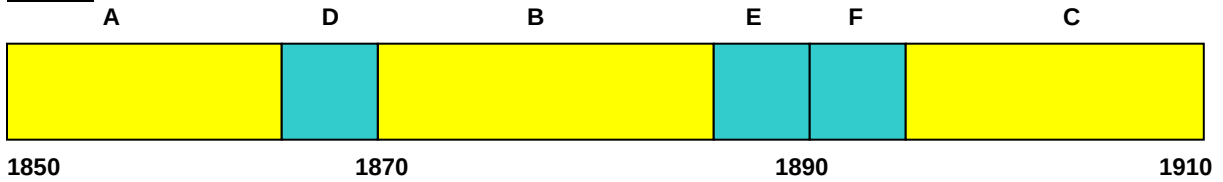
BLOCK 3: 1950 – 1965 MHz (B)

BLOCK 6: 1975 – 1990 MHz (C)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 6 of 49

3.5 PCS - Mobile Frequency Blocks

§24.229



BLOCK 1: 1850 – 1865 MHz (A)

BLOCK 4: 1885 – 1890 MHz (E)

BLOCK 2: 1865 – 1870 MHz (D)

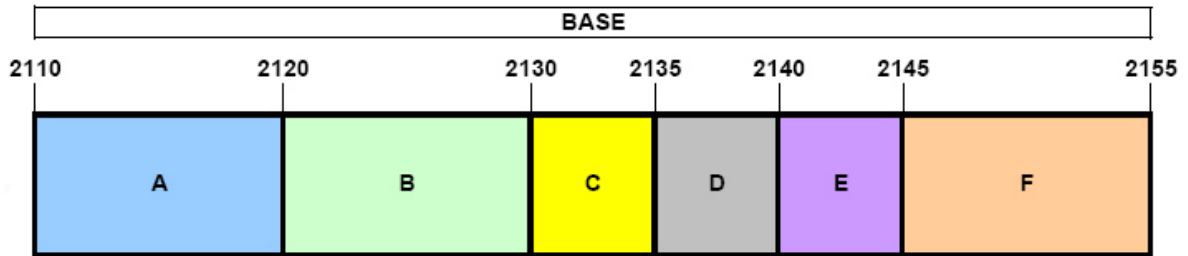
BLOCK 5: 1890 – 1895 MHz (F)

BLOCK 3: 1870 – 1885 MHz (B)

BLOCK 6: 1895 – 1910 MHz (C)

3.6 AWS - Base Frequency Blocks

§27.5(h)



BLOCK 1: 2110 – 2120 MHz (A)

BLOCK 4: 2135 – 2140 MHz (D)

BLOCK 2: 2120 – 2130 MHz (B)

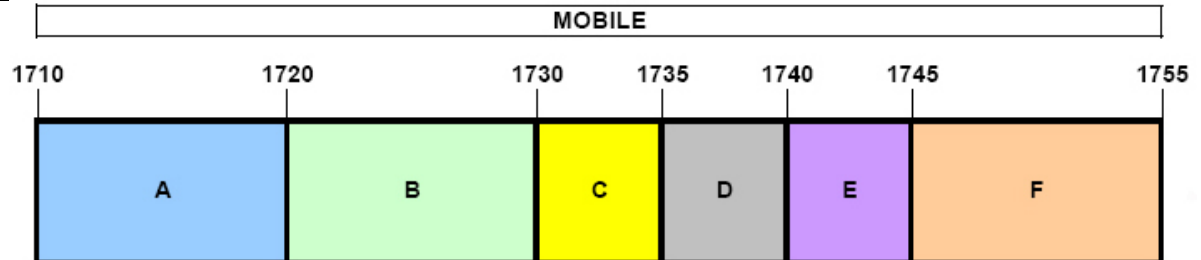
BLOCK 5: 2140 – 2145 MHz (E)

BLOCK 3: 2130 – 2135 MHz (C)

BLOCK 6: 2145 – 2155 MHz (F)

3.7 AWS - Mobile Frequency Blocks

§27.5(h)



BLOCK 1: 1710 – 1720 MHz (A)

BLOCK 4: 1735 – 1740 MHz (D)

BLOCK 2: 1720 – 1730 MHz (B)

BLOCK 5: 1740 – 1745 MHz (E)

BLOCK 3: 1730 – 1735 MHz (C)

BLOCK 6: 1745 – 1755 MHz (F)

3.8 Occupied Bandwidth

§2.1049 RSS-Gen(4.6.1) RSS-133(2.3) RSS-139(2.3)

The occupied bandwidth, that 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 shall be measured. The spectrum analyzers' "occupied bandwidth" measurement function was used to record the occupied bandwidth in accordance with KDB 971168.

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 7 of 49

3.9 Spurious and Harmonic Emissions at Antenna Terminal

§2.1051 §22.917(a) §24.238(a) §27.53(h) RSS-132(4.5.1) RSS-133(6.5.1) RSS-139(6.5.1)

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least 43 + 10 log(P) dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater for Part 22 and 1 MHz or greater for Part 24, Part 27. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

3.10 Radiated Power and Radiated Spurious Emissions

§2.1053 §22.913(a.2) §22.917(a) §24.232(c) §24.238(a) §27.50(d.10) §27.53(h) RSS-132(4.4) RSS-132(4.5.1) RSS-133(6.4) RSS-133(6.5.1) RSS-139(6.5.2)

Radiated power measurements are performed on the 3 meter OATS per the guidelines of ANSI/TIA-603-C-2004. The measurement area is situated on an 18 meter x 20 meter galvanized 1/2" hardware cloth as the conducting ground plane. This material is sewn together in sections 4 feet wide and 60 feet long. A total of eighteen sections are required to cover the entire measurement area. Sections are laid across the width of the pad, overlapped 1" and sewn and soldered together at intervals of 3" (7.6 cm.) The terrain of the test site is reasonably flat and level. Power and cable to the test site are buried 18" deep into the ground outside the perimeter of the site. An all-weather non-metallic housing is situated on a 2 x 3 meter area adjacent to the measurement area to house the test equipment. The equipment under test was transmitting while connected to its integral antenna and is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height is adjusted between 1 and 4 meter height, the turntable is rotated through 360 degrees, and the EUT is manipulated through all orthogonal planes representative of its typical use to achieve the highest reading on the receive spectrum analyzer. Radiated power levels are also investigated with the receive antenna horizontally and vertically polarized. The maximized power level is recorded using the spectrum analyzer "Channel Power" function with the integration bandwidth set to the emissions' occupied bandwidth, a RMS detector, RBW = 100 kHz, VBW = 300 kHz, and a 1 second sweep time over a minimum of 10 sweeps, per the guidelines of KDB 971168.

Per the guidance of ANSI/TIA-603-C-2004, a half-wave dipole is then substituted in place of the EUT. For emissions above 1GHz, a horn antenna is substituted in place of the EUT. The substitute antenna is driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer level previously recorded from the spurious emission from the EUT. The power of the emission is calculated using the following formula:

$$P_d \text{ [dBm]} = P_g \text{ [dBm]} - \text{cable loss [dB]} + \text{antenna gain [dBd/dBi]}$$

Where, P_d is the dipole equivalent power, P_g is the generator output into the substitution antenna, and the antenna gain is the gain of the substitute antenna used relative to either a half-wave dipole (dBd) or an isotropic source (dBi). The substitute level is equal to $P_g \text{ [dBm]} - \text{cable loss [dB]}$.

The calculated P_d levels are then compared to the absolute spurious emission limit of -13 dBm which is equivalent to the required minimum attenuation of 43 + 10log₁₀(Power [Watts]) specified in 22.917(a) and 24.238(a).

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 8 of 49

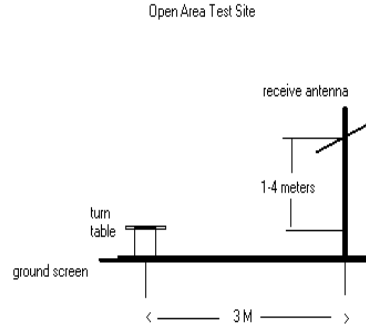


Figure 3-1. Diagram of 3-meter outdoor test range

3.11 Peak-Average Ratio

§24.232(d) §27.50(d.5) RSS-132(5.4) RSS-133(6.4) RSS-139(6.4)

A peak to average ratio measurement is performed at the conducted port of the EUT. The spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level.

For continuous signals, the trigger is set to “free run” in the CCDF measurement mode.

3.12 Frequency Stability / Temperature Variation

§2.1055 §22.355 §22.863 §22.905 §24.229 §24.235 §27.5(h) §27.54 RSS-132(4.3) RSS-133(6.3) RSS-139(6.3)

Frequency stability testing is performed in accordance with the guidelines of ANSI/TIA-603-C-2004. The frequency stability of the transmitter is measured by:

- a.) **Temperature:** The temperature is varied from -30°C to +50°C in 10°C increments using an environmental chamber.
- b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the nominal value for non hand-carried battery and AC powered equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacturer.

Specification – For Part 22, the frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ (± 2.5 ppm) of the center frequency. For Part 24 and Part 27, the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Time Period and Procedure:

1. The carrier frequency of the transmitter is measured at room temperature (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for fifteen minutes before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 9 of 49

4.0 TEST EQUIPMENT CALIBRATION DATA

Test Equipment Calibration is traceable to the National Institute of Standards and Technology (NIST).

Manufacturer	Model	Description	Cal Date	Cal Interval	Cal Due	Serial Number
-	RE1	Radiated Emissions Cable Set (UHF/EHF)	6/7/2012	Annual	6/7/2013	N/A
-	LTx2	Licensed Transmitter Cable Set	2/17/2013	Annual	2/17/2014	N/A
Agilent	8447D	Broadband Amplifier	5/8/2013	Annual	5/8/2014	1937A03348
Agilent	8449B	(1-26.5GHz) Pre-Amplifier	2/15/2013	Annual	2/15/2014	3008A00985
Agilent	8648D	(9kHz-4GHz) Signal Generator	10/10/2012	Annual	10/10/2013	3613A00315
Agilent	N9038A	MXE EMI Receiver	8/5/2012	Annual	8/5/2013	MY51210133
Agilent	N9030A	PXA Signal Analyzer	2/23/2013	Annual	2/23/2014	MY49432391
Anritsu	MA2411B	Power Sensor	3/5/2013	Annual	3/5/2014	846215
Anritsu	ML2495A	Power Meter	10/13/2012	Annual	10/13/2013	1039008
Emco	3115	Horn Antenna (1-18GHz)	1/12/2012	Biennial	1/12/2014	9704-5182
Espec	ESX-2CA	Environmental Chamber	5/21/2013	Annual	5/21/2013	17620
Mini-Circuits	VHF-1300+	High Pass Filter	1/21/2013	Annual	1/21/2014	30716
Mini-Circuits	VHF-3100+	High Pass Filter	2/7/2013	Annual	2/7/2014	31144
Pasternack	PE2208-6	Bidirectional Coupler	6/3/2012	Annual	6/3/2013	N/A
Rohde & Schwarz	CMU200	Base Station Simulator	N/A		N/A	107826
Schwarzbeck	UHA 9105	Dipole Antenna (400 - 1GHz) Rx	11/14/2011	Biennial	11/14/2013	9105-2404
Schwarzbeck	UHA 9105	Dipole Antenna (400 - 1GHz) Tx	11/14/2011	Biennial	11/14/2013	9105-2403
Seekonk	NC-100	Torque Wrench (8" lb)	3/5/2012	Triennial	3/5/2015	N/A
Sunol	DRH-118	Horn Antenna (1 - 18GHz)	7/5/2011	Biennial	7/5/2013	A050307
Sunol	DRH-118	Horn Antenna (1-18 GHz)	6/17/2011	Biennial	6/17/2013	A042511

Table 4-1. Test Equipment

Note:

Equipment used for signaling with a calibration date of "N/A" shown in this list was only used for maintaining a link between the piece of equipment and the EUT. This equipment was not used to make direct calibrated measurements.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 10 of 49

5.0 SAMPLE CALCULATIONS

CDMA Emission Designator

Emission Designator = 1M25F9W

CDMA BW = 1.25 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data) (Measured at the 99.75% power bandwidth)

Spurious Radiated Emission - PCS Band

Example: Channel 25 PCS Mode 2nd Harmonic (3702.50 MHz)

The average receive power meter reading at 3 meters with the EUT on the turntable was -81.0 dBm. The gain of the substituted antenna is 8.1 dBi. The signal generator connected to the substituted antenna terminals is adjusted to produce a reading of -81.0 dBm on the power meter. The loss of the cable between the signal generator and the terminals of the substituted antenna is 2.0 dB at 3702.50 MHz. So 6.1 dB is added to the signal generator reading of -30.9 dBm yielding -24.80 dBm. The fundamental EIRP was 25.501 dBm so this harmonic was 25.501 dBm - (-24.80) = 50.3 dBc.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 11 of 49

6.0 TEST RESULTS

6.1 Summary

Company Name: Samsung Electronics Co., Ltd.
 FCC ID: A3LSCHR480C
 FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)
 Mode(s): CDMA

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
TRANSMITTER MODE (TX)					
2.1049	Occupied Bandwidth	N/A	CONDUCTED	PASS	Section 7.0
2.1051 22.917(a) 24.238(a) 27.53(h)	Band Edge / Conducted Spurious Emissions	$> 43 + \log_{10}(P[\text{Watts}])$ at Band Edge and for all out-of-band emissions		PASS	Section 7.0
24.232(d) 27.50(d.5)	Peak-Average Ratio	$< 13 \text{ dB}$		PASS	Section 7.0
2.1046	Transmitter Conducted Output Power	N/A		PASS	RF Exposure Report
22.913(a.2)	Effective Radiated Power	$< 7 \text{ Watts max. ERP}$	RADIATED	PASS	Section 6.2
24.232(c)	Equivalent Isotropic Radiated Power	$< 2 \text{ Watts max. EIRP}$		PASS	Section 6.4
27.50(d.4)	Equivalent Isotropic Radiated Power (AWS)	$< 1 \text{ Watts max. EIRP}$		PASS	Section 6.3
2.1053 22.917(a) 24.238(a) 27.53(h)	Undesirable Emissions	$> 43 + \log_{10}(P[\text{Watts}])$ for all out-of-band emissions		PASS	Sections, 6.5, 6.6, 6.7
2.1055 22.355 22.863 22.905 24.229 24.235 27.5(h) 27.54	Frequency Stability	$< 2.5 \text{ ppm}$ (Part 22) Emission must remain in band (Part 24, 27)		PASS	Sections, 6.8, 6.9, 6.10

Table 6-1. Summary of Test Results

Notes:

- 1) All modes of operation and data rates were investigated. The test results shown in the following sections represent the worst case emissions.
- 2) The analyzer plots shown in Section 7.0 were all taken with a correction table loaded into the analyzer. The correction table was used to account for the losses of the cables, directional couplers, and attenuators used as part of the system to maintain a link between the call box and the EUT at all frequencies of interest.
- 3) All antenna port conducted emissions testing was performed on a test bench with the antenna port of the EUT connected to the spectrum analyzer through calibrated cables, attenuators, and couplers.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset	Page 12 of 49	

6.2 Cellular Effective Radiated Power (ERP)

§22.913(a)(2) RSS-132(4.4) [SRSP-503(5.1.3)]

Frequency [MHz]	Mode	Battery Type	Substitute Level [dBm]	Antenna Gain [dBd]	Pol [H/V]	ERP [dBm]	ERP [Watts]	ERP Limit [dBm]	Margin [dB]
824.70	CDMA850	Standard	23.88	-0.85	V	23.03	0.201	38.45	-15.42
836.52	CDMA850	Standard	23.56	-0.80	V	22.76	0.189	38.45	-15.69
848.31	CDMA850	Standard	23.46	-0.76	V	22.70	0.186	38.45	-15.75

Table 6-2. ERP (Cellular CDMA)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 13 of 49

6.3 AWS Effective Radiated Power (EIRP)

§22.913(a)(2) RSS-132(4.4) [SRSP-503(5.1.3)]

Frequency [MHz]	Mode	Battery Type	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1711.25	CDMA1700	Standard	16.10	8.09	H	24.19	0.262	30.00	-5.81
1732.50	CDMA1700	Standard	16.03	7.97	H	24.00	0.251	30.00	-6.00
1753.75	CDMA1700	Standard	16.98	7.86	H	24.84	0.305	30.00	-5.16

Table 6-3. EIRP (AWS CDMA)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 14 of 49

6.4 PCS Effective Radiated Power (EIRP)

§22.913(a)(2) RSS-132(4.4) [SRSP-503(5.1.3)]

Frequency [MHz]	Mode	Battery Type	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	EIRP Limit [dBm]	Margin [dB]
1851.25	CDMA1900	Standard	17.68	7.75	H	25.43	0.349	33.01	-7.58
1880.00	CDMA1900	Standard	16.29	7.83	H	24.12	0.258	33.01	-8.89
1908.75	CDMA1900	Standard	17.39	7.93	H	25.32	0.340	33.01	-7.69

Table 6-4. EIRP (PCS CDMA)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 15 of 49

6.5 Cellular CDMA Radiated Measurements

§2.1053 §22.917(a) RSS-132(4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 824.70 MHz
 CHANNEL: 1013
 MEASURED OUTPUT POWER: 23.03 dBm = 0.201 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 36.03 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1649.40	-56.51	6.16	-50.35	V	73.4
2474.10	-42.38	6.34	-36.03	V	59.1
3298.80	-82.54	6.71	-75.84	V	98.9
4123.50	-80.79	7.39	-73.40	V	96.4
4948.20	-80.87	8.91	-71.97	V	95.0

Table 6-5. Radiated Spurious Data (Cellular CDMA Mode – Ch. 1013)

NOTES:

- 4) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 5) This unit was tested with its standard battery.
- 6) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 16 of 49

Cellular CDMA Radiated Measurements (Cont'd)

§2.1053 §22.917(a) RSS-132(4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 836.52 MHz
 CHANNEL: 384
 MEASURED OUTPUT POWER: 22.76 dBm = 0.189 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 35.76 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1673.04	-55.32	6.09	-49.24	V	72.0
2509.56	-52.12	6.38	-45.74	V	68.5
3346.08	-82.75	6.90	-75.85	V	98.6
4182.60	-81.41	7.79	-73.62	V	96.4
5019.12	-80.47	8.83	-71.64	V	94.4

Table 6-6. Radiated Spurious Data (Cellular CDMA Mode – Ch. 384)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 1) This unit was tested with its standard battery.
- 2) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 17 of 49

Cellular CDMA Radiated Measurements (Cont'd)

§2.1053 §22.917(a) RSS-132(4.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 848.31 MHz
 CHANNEL: 777
 MEASURED OUTPUT POWER: 22.70 dBm = 0.186 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 35.70 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1696.62	-51.56	6.01	-45.54	V	68.2
2544.93	-53.94	6.47	-47.47	V	70.2
3393.24	-82.95	7.10	-75.86	V	98.6
4241.55	-81.82	8.09	-73.73	V	96.4
5089.86	-80.20	8.86	-71.34	V	94.0

Table 6-7. Radiated Spurious Data (Cellular CDMA Mode – Ch. 777)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 18 of 49

6.6 AWS CDMA Radiated Measurements

§2.1053 §24.238(a) RSS-139(6.5.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1711.25 MHz
 CHANNEL: 25
 MEASURED OUTPUT POWER: 24.19 dBm = 0.262 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 37.19 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3422.50	-51.47	9.34	-42.12	H	66.3
5133.75	-83.19	10.96	-72.23	H	96.4
6845.00	-77.91	10.52	-67.39	H	91.6
8556.25	-75.16	11.07	-64.09	H	88.3
10267.50	-74.80	12.47	-62.32	H	86.5

Table 6-8. Radiated Spurious Data (AWS CDMA Mode – Ch. 25)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 19 of 49

AWS CDMA Radiated Measurements (Cont'd)

§2.1053 §24.238(a) RSS-139(6.5.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1732.50 MHz
 CHANNEL: 450
 MEASURED OUTPUT POWER: 24.00 dBm = 0.251 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 37.00 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3465.00	-51.09	9.47	-41.62	H	65.6
5197.50	-56.70	10.87	-45.83	H	69.8
6930.00	-78.07	10.68	-67.39	H	91.4
8662.50	-75.34	11.25	-64.09	H	88.1
10395.00	-74.85	12.52	-62.32	H	86.3

Table 6-9. Radiated Spurious Data (AWS CDMA Mode – Ch. 600)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 20 of 49

AWS CDMA Radiated Measurements (Cont'd)

§2.1053 §24.238(a) RSS-139(6.5.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1753.75 MHz
 CHANNEL: 875
 MEASURED OUTPUT POWER: 24.84 dBm = 0.305 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 37.84 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3507.50	-52.56	9.58	-42.98	H	67.8
5261.25	-82.79	10.56	-72.23	H	97.1
7015.00	-78.24	10.86	-67.39	H	92.2
8768.75	-75.60	11.50	-64.09	H	88.9
10522.50	-74.88	12.55	-62.32	H	87.2

Table 6-10. Radiated Spurious Data (AWS CDMA Mode – Ch. 1175)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 1) This unit was tested with its standard battery.
- 2) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 21 of 49

6.7 PCS CDMA Radiated Measurements

§2.1053 §24.238(a) RSS-133(6.5.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1851.25 MHz
 CHANNEL: 25
 MEASURED OUTPUT POWER: 25.43 dBm = 0.349 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 38.43 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3702.50	-48.04	9.62	-38.42	H	63.9
5553.75	-79.11	10.61	-68.50	H	93.9
7405.00	-75.14	10.84	-64.29	H	89.7
9256.25	-73.86	12.20	-61.66	H	87.1
11107.50	-71.01	12.86	-58.16	H	83.6

Table 6-11. Radiated Spurious Data (PCS CDMA Mode – Ch. 25)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 22 of 49

PCS CDMA Radiated Measurements (Cont'd)

§2.1053 §24.238(a) RSS-133(6.5.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz
 CHANNEL: 600
 MEASURED OUTPUT POWER: 24.12 dBm = 0.258 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 37.12 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3760.00	-45.86	9.30	-36.56	H	60.7
5640.00	-79.39	10.89	-68.50	H	92.6
7520.00	-75.14	10.85	-64.29	H	88.4
9400.00	-73.83	12.17	-61.66	H	85.8
11280.00	-71.20	13.05	-58.16	H	82.3

Table 6-12. Radiated Spurious Data (PCS CDMA Mode – Ch. 600)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 23 of 49

PCS CDMA Radiated Measurements (Cont'd)

§2.1053 §24.238(a) RSS-133(6.5.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1908.75 MHz
 CHANNEL: 1175
 MEASURED OUTPUT POWER: 25.32 dBm = 0.340 W
 MODULATION SIGNAL: CDMA
 DISTANCE: 3 meters
 LIMIT: $43 + 10 \log_{10} (W) =$ 38.32 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3817.50	-39.32	9.05	-30.27	H	55.6
5726.25	-79.57	11.07	-68.50	H	93.8
7635.00	-75.40	11.11	-64.29	H	89.6
9543.75	-74.01	12.36	-61.66	H	87.0
11452.50	-71.38	13.23	-58.16	H	83.5

Table 6-13. Radiated Spurious Data (PCS CDMA Mode – Ch. 1175)

NOTES:

- 1) This device was tested under all R.C.s and S.O.s and the worst case is reported with RC3/SO55 with "All Up" power control bits.
- 2) This unit was tested with its standard battery.
- 3) The EUT was tested in three orthogonal planes and in all possible test configurations and positioning. The worst case test configuration was found in the vertical polarity for cellular band and horizontal polarity for AWS and PCS bands. The data reported in the table above was measured in this test setup.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 24 of 49

6.8 Cellular CDMA Frequency Stability Measurements

\$2.1055 \$22.355 \$22.863 \$22.905 RSS-132(4.3)

OPERATING FREQUENCY: 836,520,000 Hz

CHANNEL: 384

REFERENCE VOLTAGE: 3.7 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	836,519,981	-19	-0.0000023
100 %		- 30	836,520,012	12	0.0000014
100 %		- 20	836,519,984	-16	-0.0000019
100 %		- 10	836,519,978	-22	-0.0000026
100 %		0	836,520,018	18	0.0000022
100 %		+ 10	836,519,986	-14	-0.0000017
100 %		+ 20	836,519,981	-19	-0.0000023
100 %		+ 30	836,519,978	-22	-0.0000026
100 %		+ 40	836,519,982	-18	-0.0000022
100 %		+ 50	836,519,983	-17	-0.0000020
115 %	4.26	+ 20	836,519,977	-23	-0.0000027
BATT. ENDPOINT	3.40	+ 20	836,519,974	-26	-0.0000031

Table 6-14. Frequency Stability Data (Cellular CDMA Mode – Ch. 384)

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 25 of 49

Cellular CDMA Frequency Stability Measurements (Cont'd)

§2.1055 §22.355 §22.863 §22.905 RSS-132(4.3)

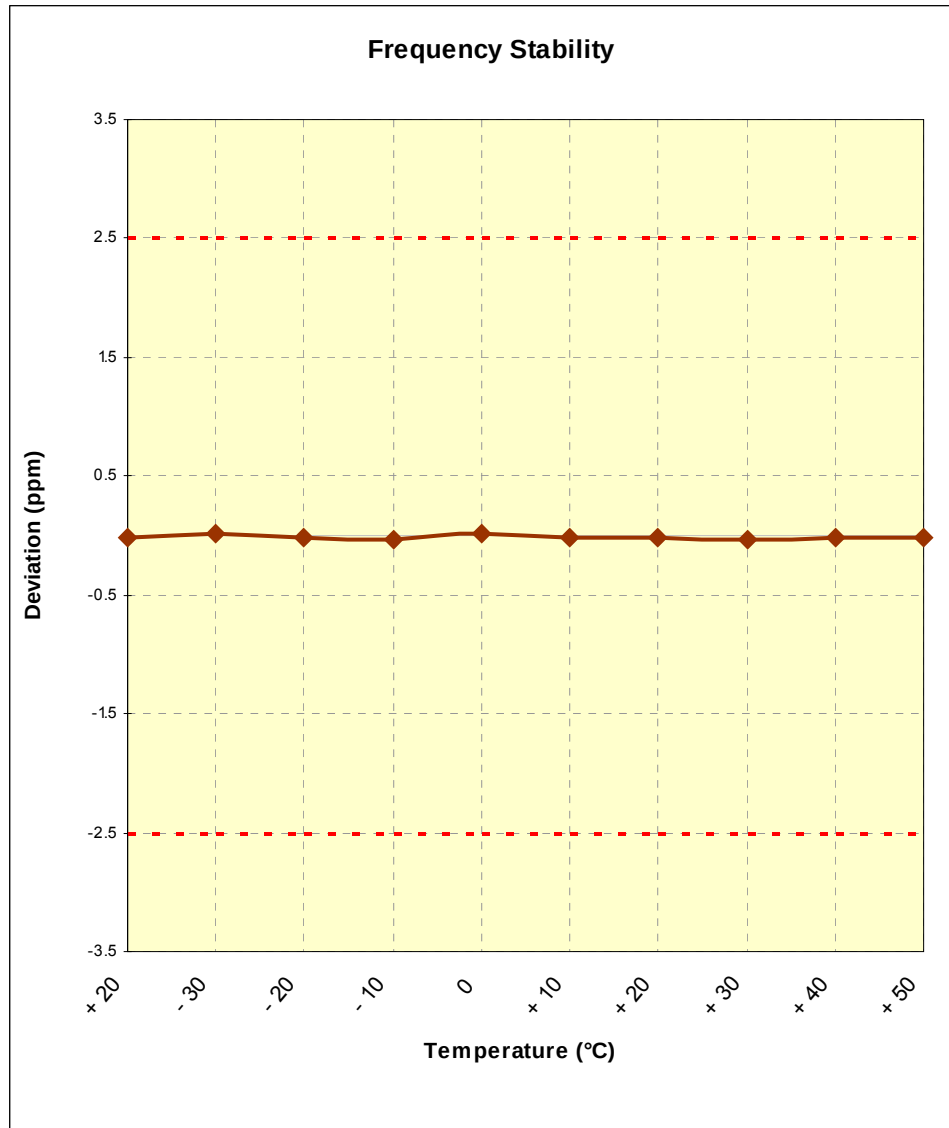


Figure 6-1. Frequency Stability Graph (Cellular CDMA Mode – Ch. 384)

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 26 of 49

6.9 AWS CDMA Frequency Stability Measurements

§2.1055 §22.355 §27.5(h) §27.54 RSS-139(6.3)

OPERATING FREQUENCY: 1,732,500,000 Hz
 CHANNEL: 450
 REFERENCE VOLTAGE: 3.7 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	1,732,499,984	-16	-0.0000009
100 %		- 30	1,732,499,986	-14	-0.0000008
100 %		- 20	1,732,500,017	17	0.0000010
100 %		- 10	1,732,499,979	-21	-0.0000012
100 %		0	1,732,499,976	-24	-0.0000014
100 %		+ 10	1,732,499,980	-20	-0.0000012
100 %		+ 20	1,732,499,984	-16	-0.0000009
100 %		+ 30	1,732,499,981	-19	-0.0000011
100 %		+ 40	1,732,499,977	-23	-0.0000013
100 %		+ 50	1,732,499,982	-18	-0.0000010
115 %	4.26	+ 20	1,732,499,976	-24	-0.0000014
BATT. ENDPOINT	3.40	+ 20	1,732,499,973	-27	-0.0000016

Table 6-15. Frequency Stability Data (AWS CDMA Mode – Ch. 450)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 27 of 49

AWS CDMA Frequency Stability Measurements (Cont'd)

§2.1055 §22.355 §27.5(h) §27.54 RSS-139(6.3)

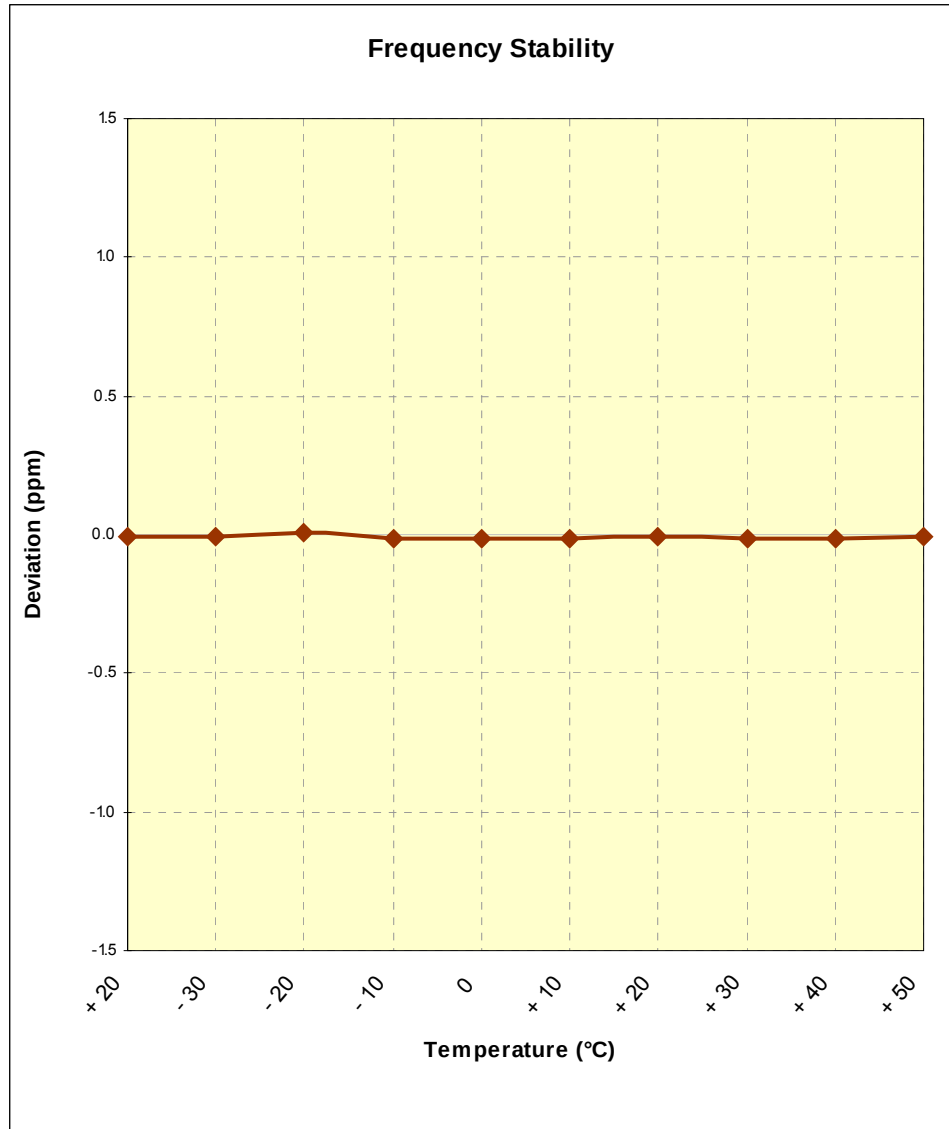


Figure 6-2. Frequency Stability Graph (AWS CDMA Mode – Ch. 450)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 28 of 49

6.10 PCS CDMA Frequency Stability Measurements

§2.1055 §22.355 §24.229 §24.235 RSS-139(6.3)

OPERATING FREQUENCY: 1,880,000,000 Hz
 CHANNEL: 600
 REFERENCE VOLTAGE: 3.7 VDC

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	3.70	+ 20 (Ref)	1,879,999,980	-20	-0.0000011
100 %		- 30	1,879,999,986	-14	-0.0000007
100 %		- 20	1,879,999,983	-17	-0.0000009
100 %		- 10	1,879,999,978	-22	-0.0000012
100 %		0	1,879,999,976	-24	-0.0000013
100 %		+ 10	1,879,999,981	-19	-0.0000010
100 %		+ 20	1,879,999,980	-20	-0.0000011
100 %		+ 30	1,879,999,978	-22	-0.0000012
100 %		+ 40	1,879,999,976	-24	-0.0000013
100 %		+ 50	1,879,999,979	-21	-0.0000011
115 %	4.26	+ 20	1,879,999,980	-20	-0.0000011
BATT. ENDPOINT	3.40	+ 20	1,879,999,975	-25	-0.0000013

Table 6-16. Frequency Stability Data (PCS CDMA Mode – Ch. 600)

Note:

Based on the results of the frequency stability test at the center channel the frequency deviation results measured are very small. As such it is determined that the channels at the band edge would remain in-band when the maximum measured frequency deviation noted during the frequency stability tests is applied. Therefore the device is determined to remain operating in band over the temperature and voltage range as tested.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 29 of 49

PCS CDMA Frequency Stability Measurements (Cont'd)

§2.1055 §22.355 §24.229 §24.235 RSS-139(6.3)

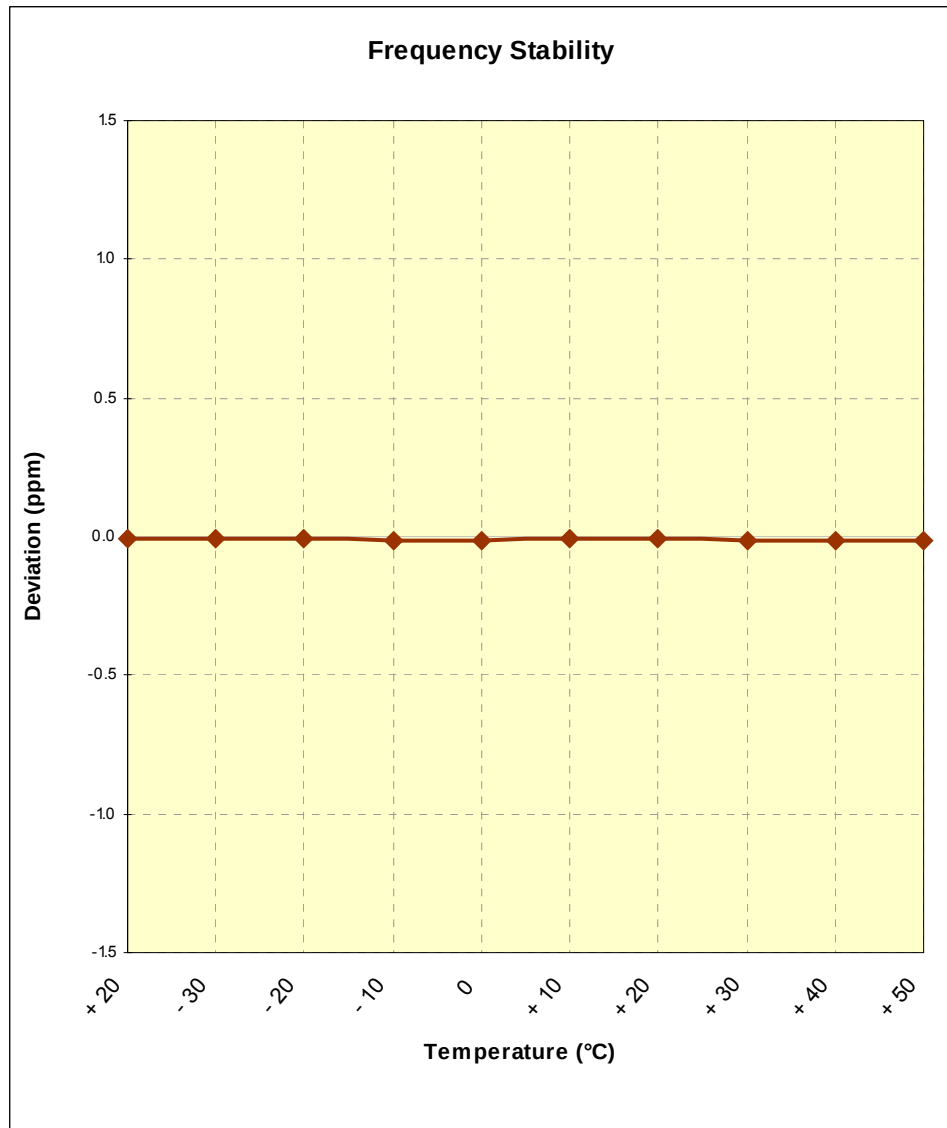
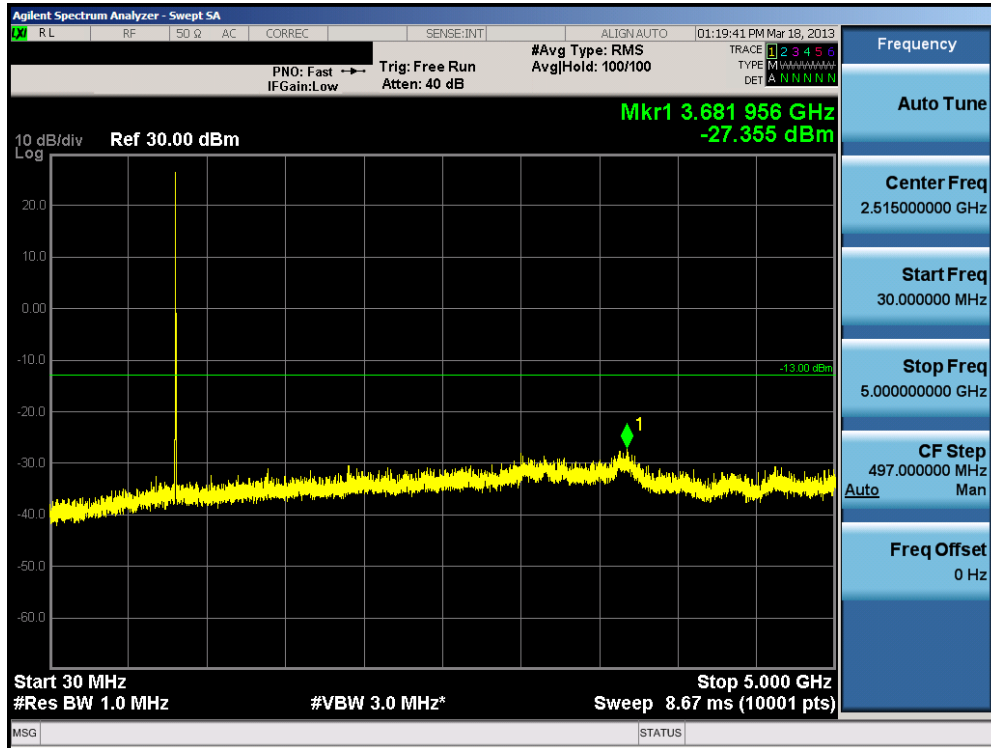


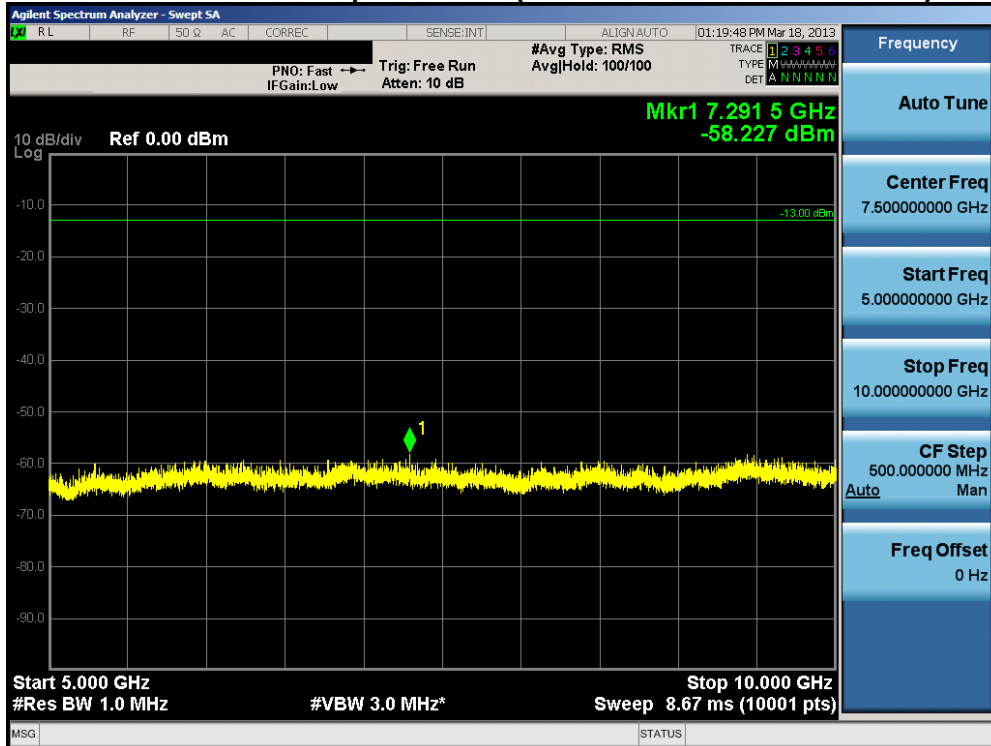
Figure 6-3. Frequency Stability Graph (PCS CDMA Mode – Ch. 600)

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 30 of 49

7.0 PLOTS OF EMISSIONS



Plot 7-1. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 1013)



Plot 7-2. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 1013)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 31 of 49

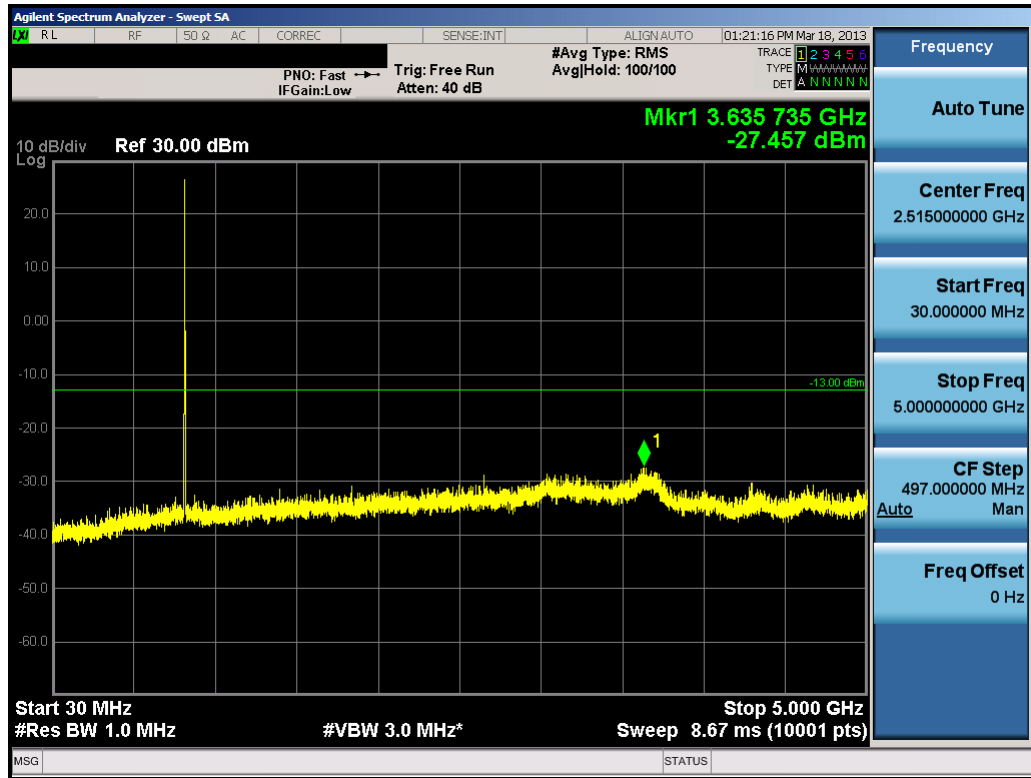


Plot 7-3. Band Edge Plot (Cellular CDMA Mode – Ch. 1013)

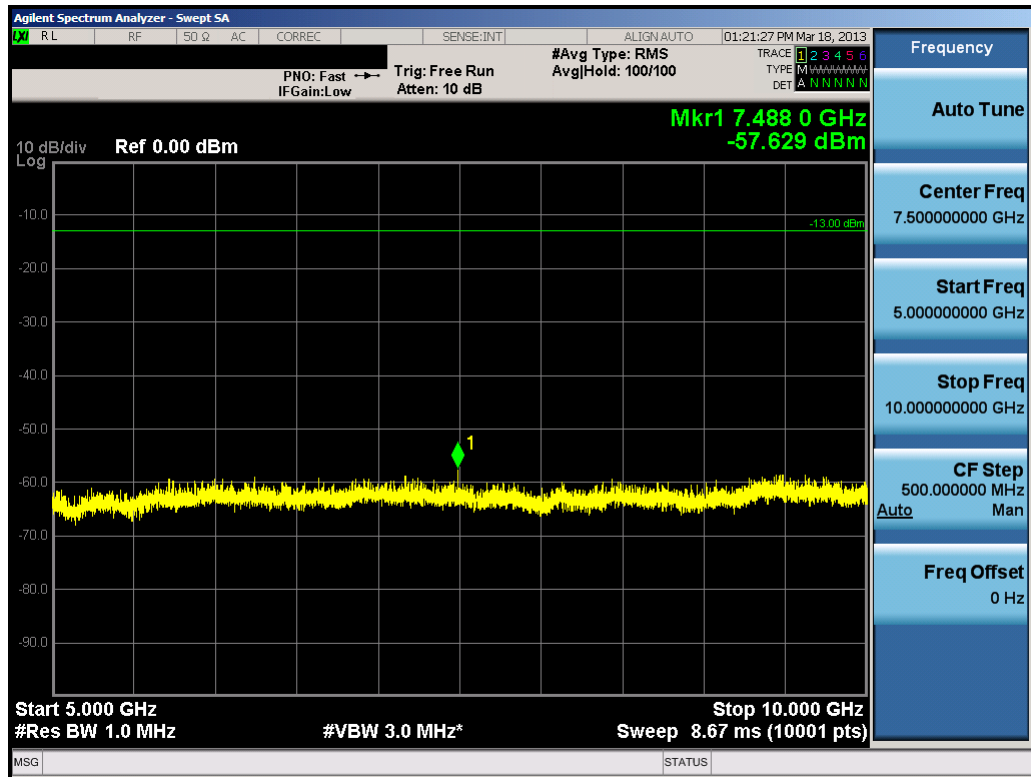


Plot 7-4. 4MHz Span Plot (Cellular CDMA Mode – Ch. 1013)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 32 of 49

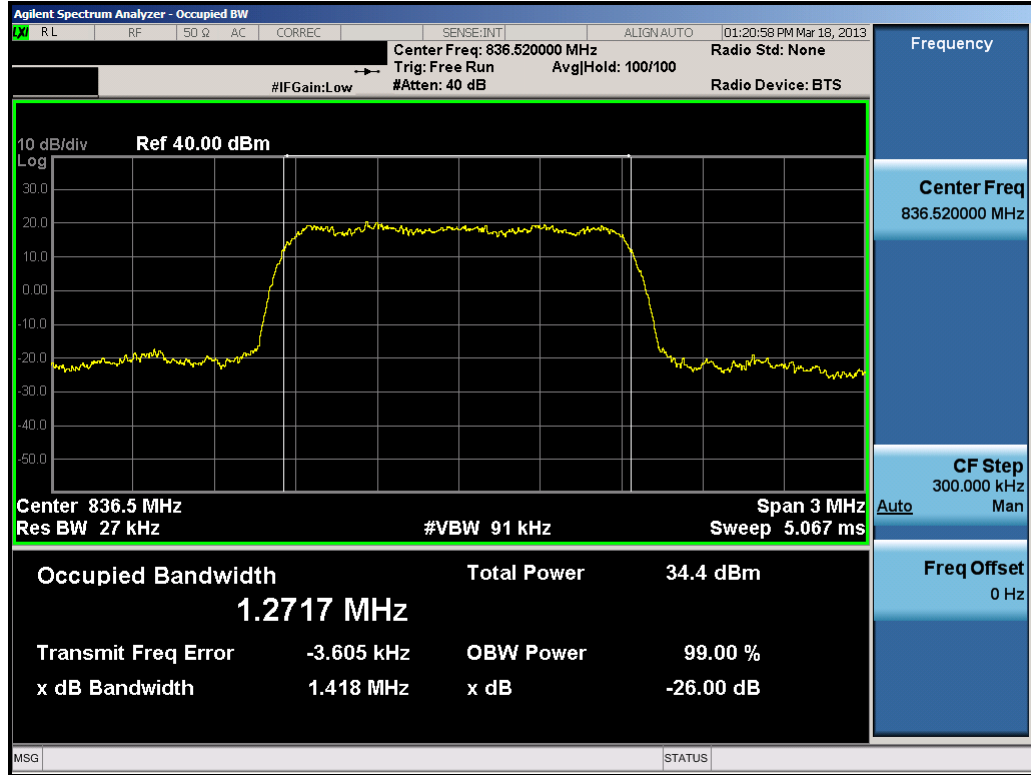


Plot 7-5. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 384)

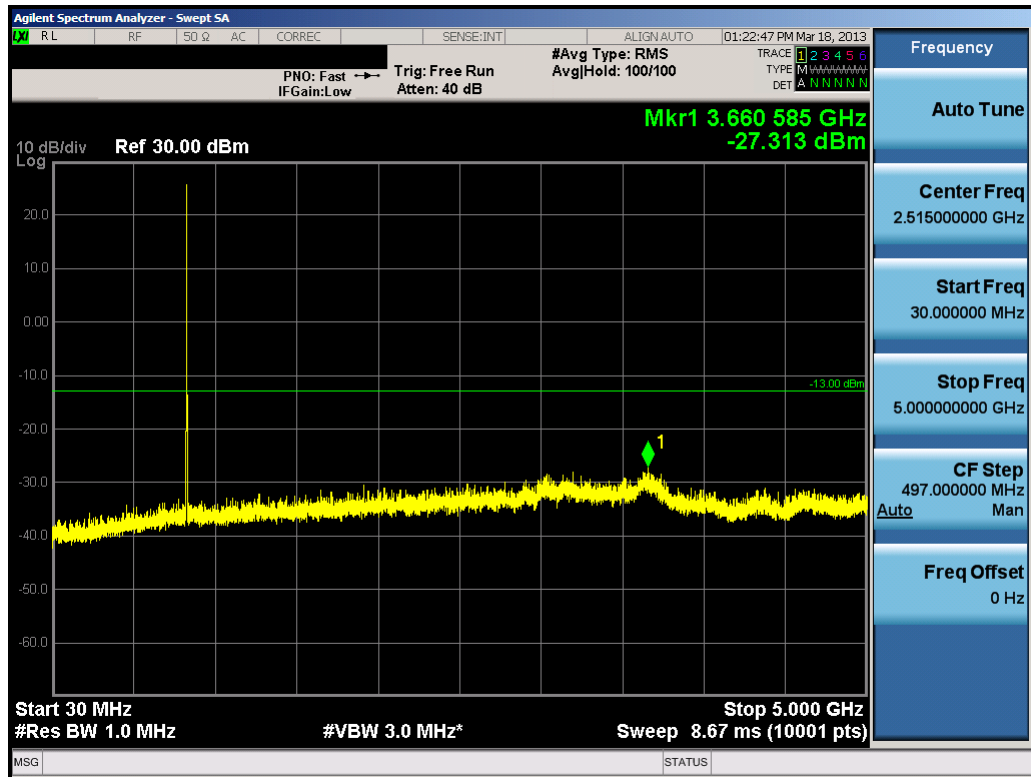


Plot 7-6. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 384)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 33 of 49

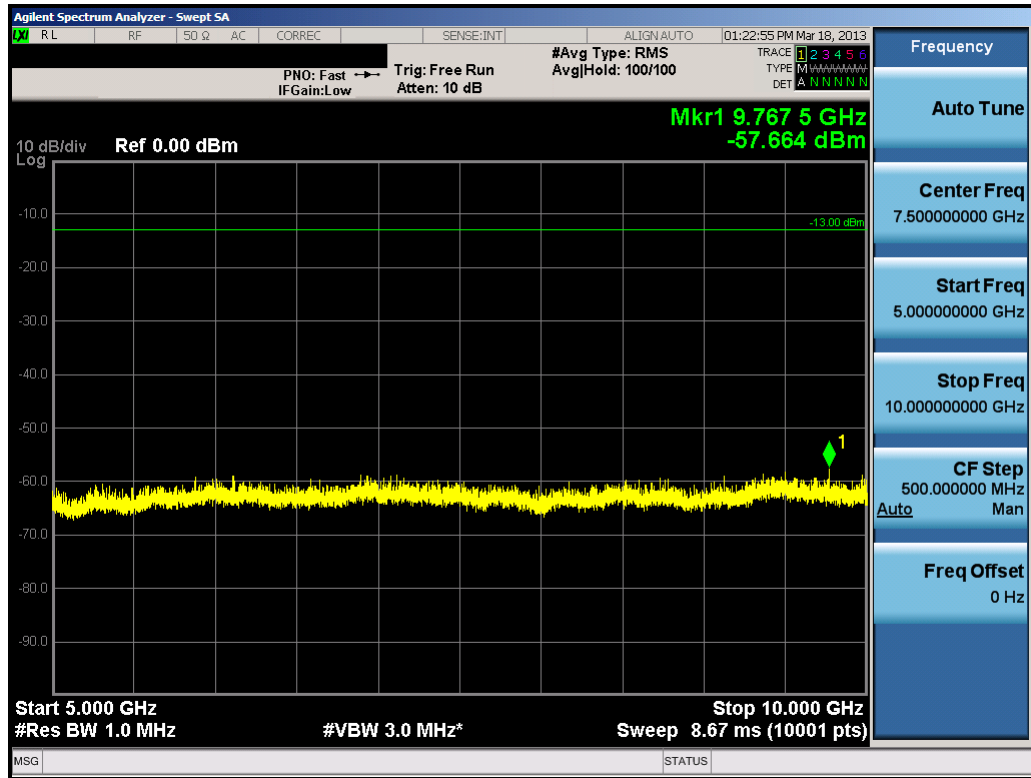


Plot 7-7. Occupied Bandwidth Plot (Cellular CDMA Mode – Ch. 384)

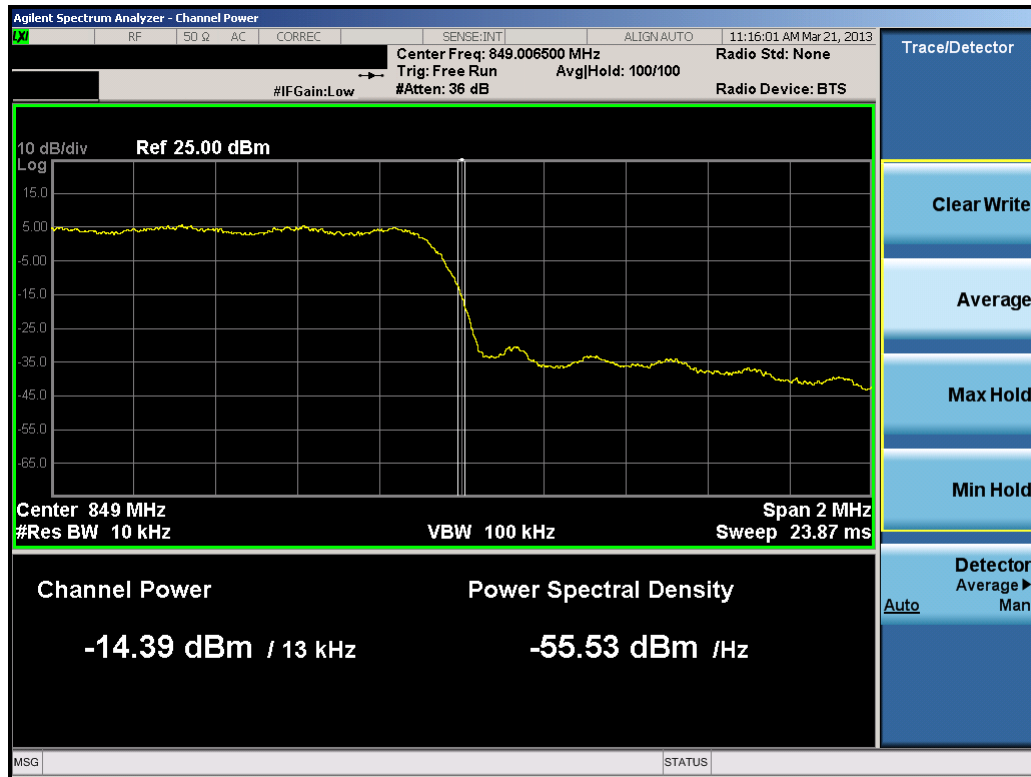


Plot 7-8. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 777)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 34 of 49



Plot 7-9. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 777)

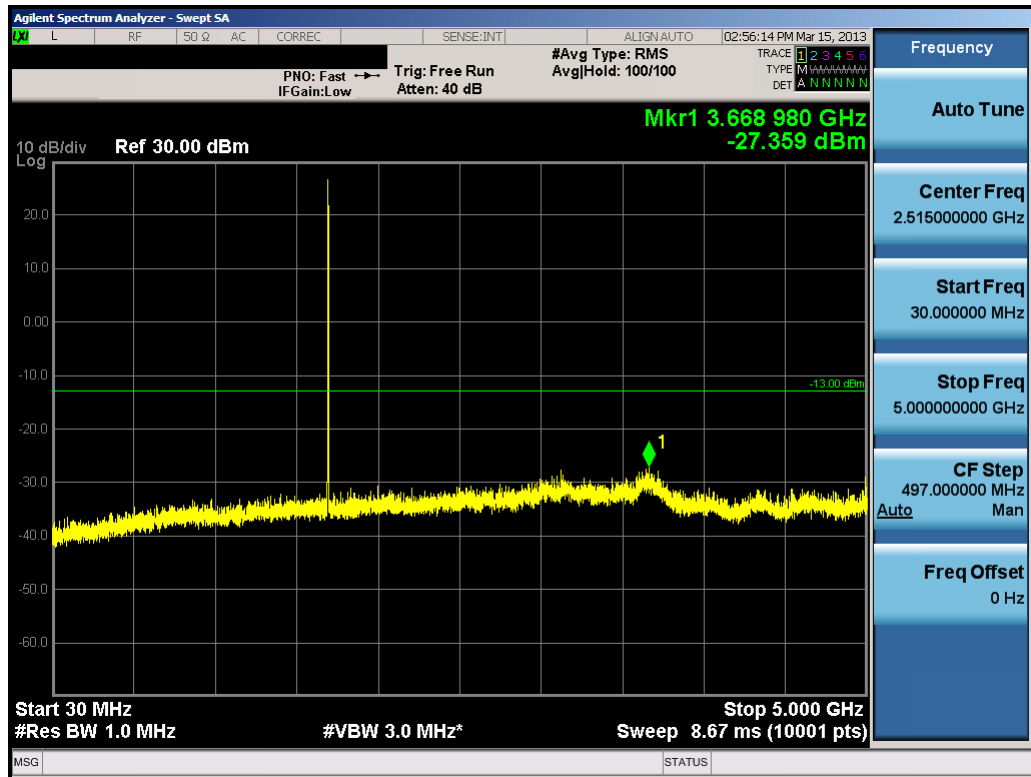


Plot 7-10. Band Edge Plot (Cellular CDMA Mode – Ch. 777)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 35 of 49

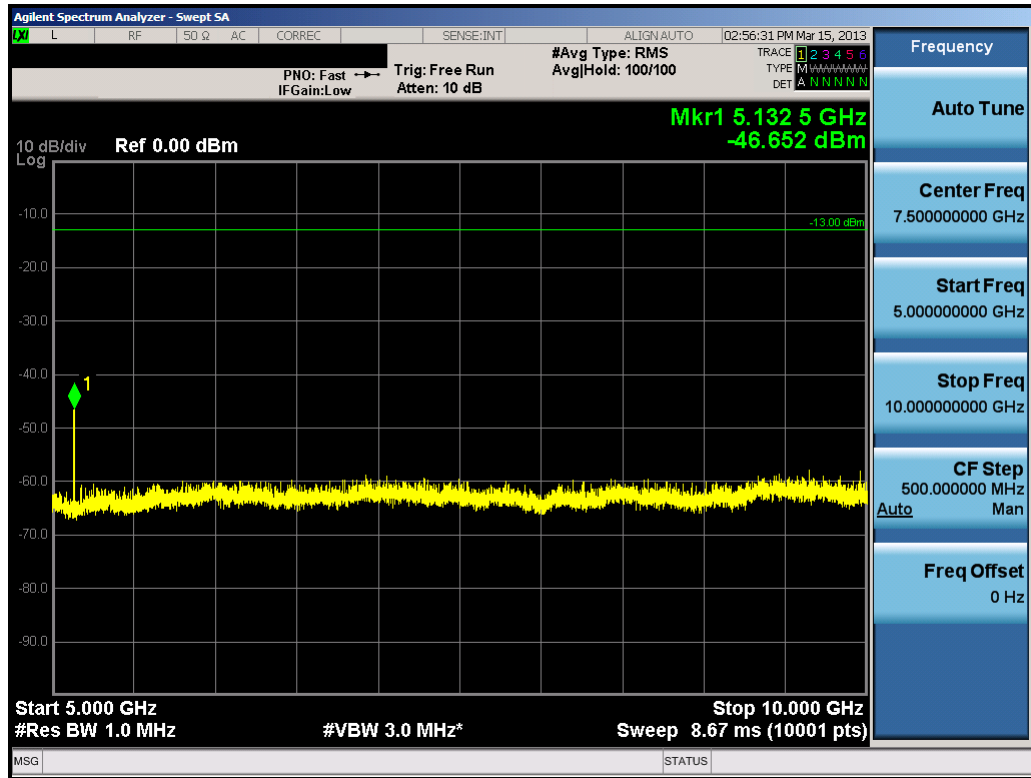


Plot 7-11. 4MHz Span Plot (Cellular CDMA Mode – Ch. 777)



Plot 7-12. Conducted Spurious Plot (AWS CDMA Mode – Ch. 25)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 36 of 49

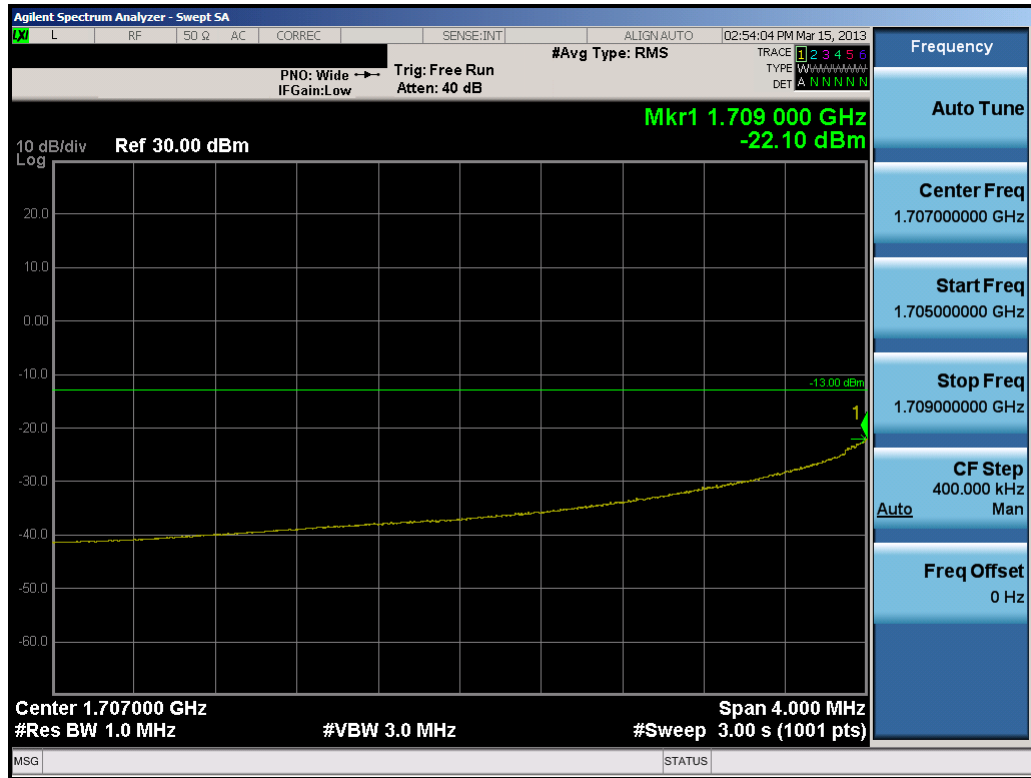


Plot 7-13. Conducted Spurious Plot (AWS CDMA Mode – Ch. 25)

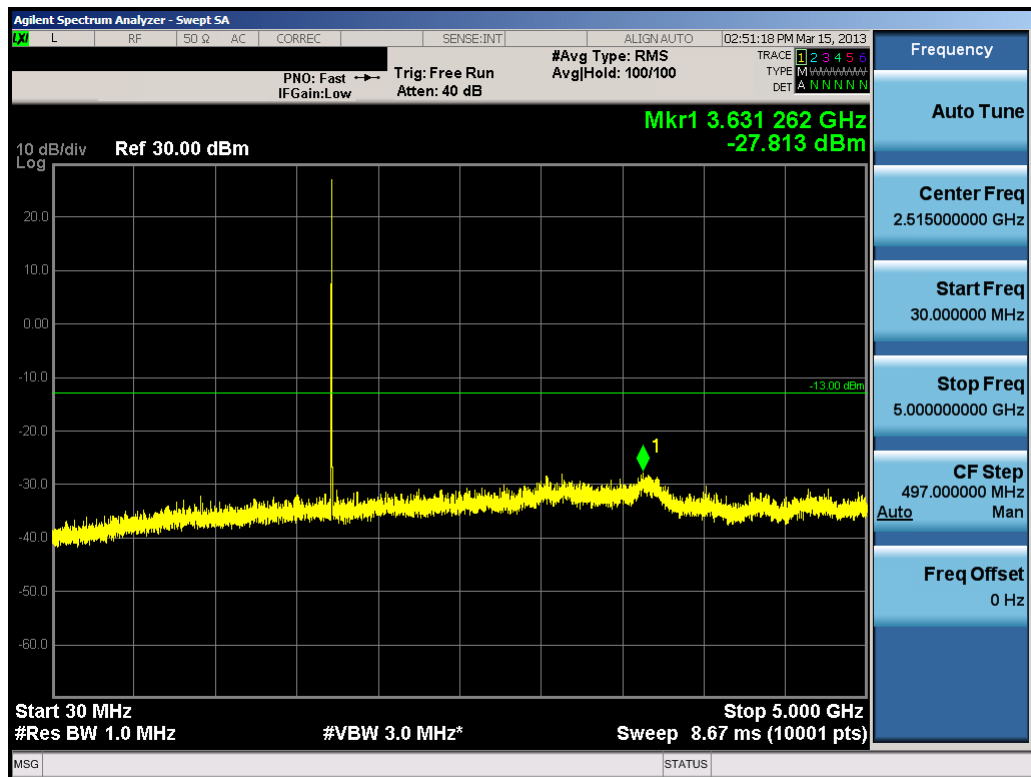


Plot 7-14. Band Edge Plot (AWS CDMA Mode – Ch. 25)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 37 of 49

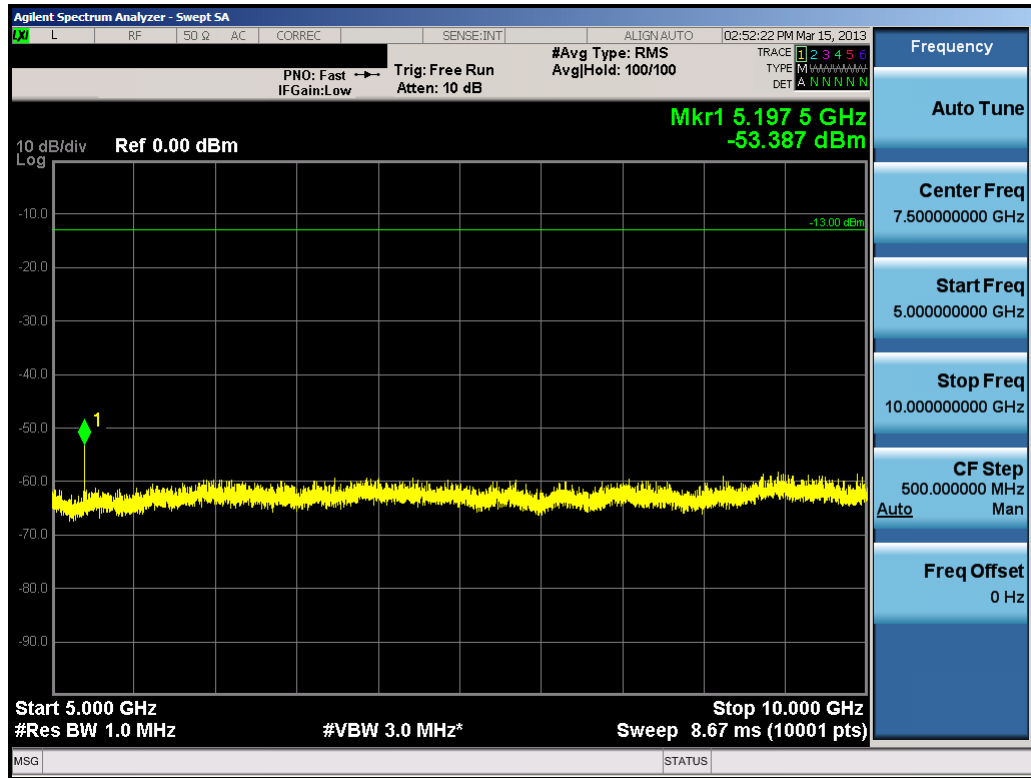


Plot 7-15. 4MHz Span Plot (AWS CDMA Mode – Ch. 25)

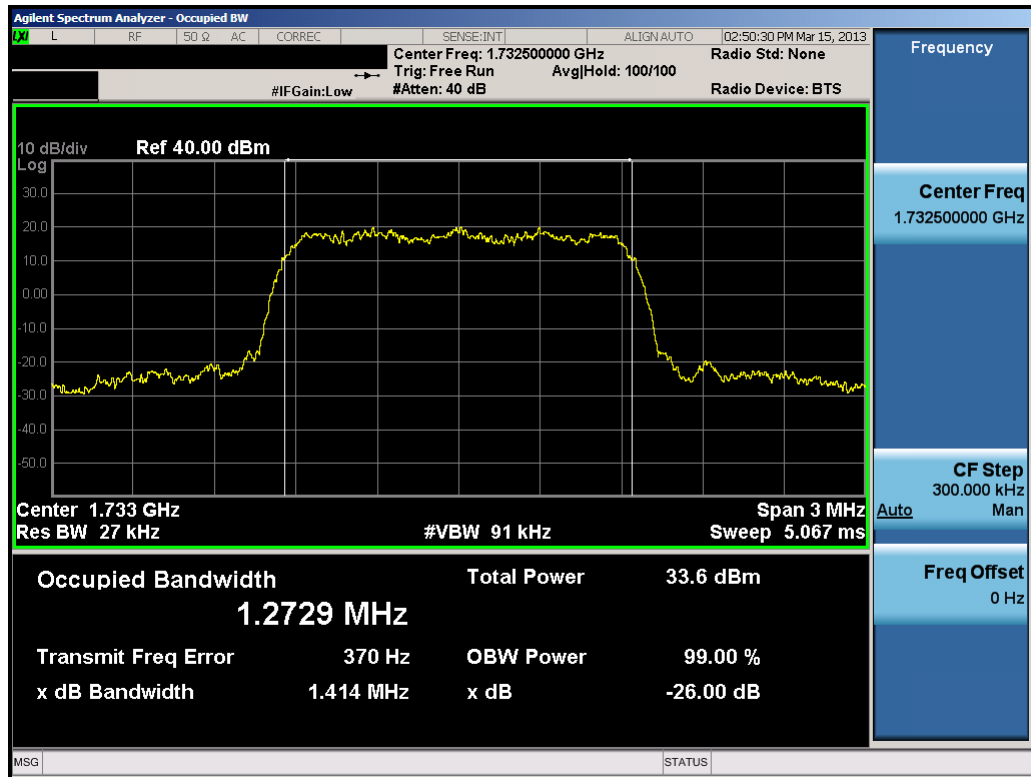


Plot 7-16. Conducted Spurious Plot (AWS CDMA Mode – Ch. 450)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 38 of 49

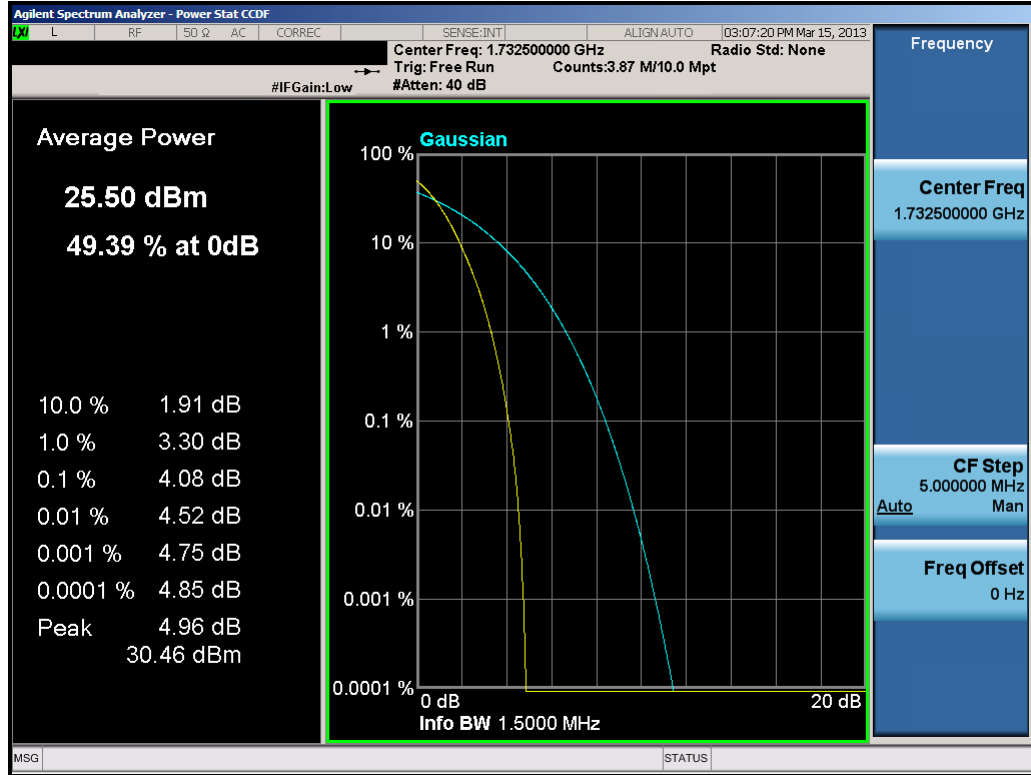


Plot 7-17. Conducted Spurious Plot (AWS CDMA Mode – Ch. 450)

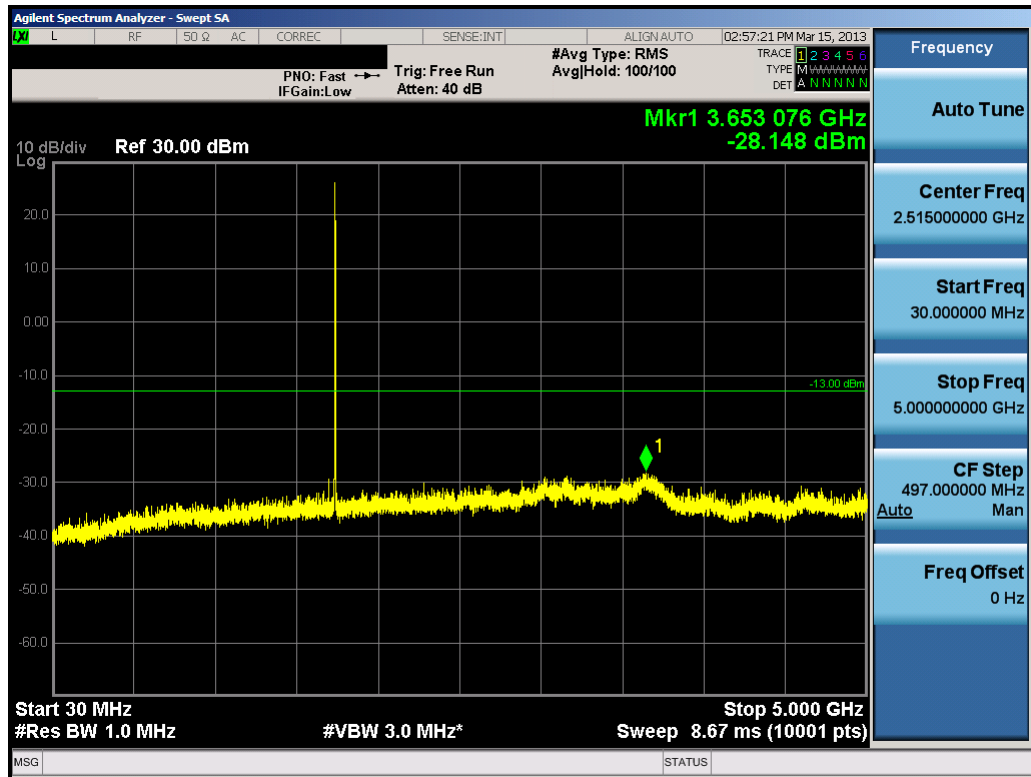


Plot 7-18. Occupied Bandwidth Plot (AWS CDMA Mode – Ch. 450)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 39 of 49

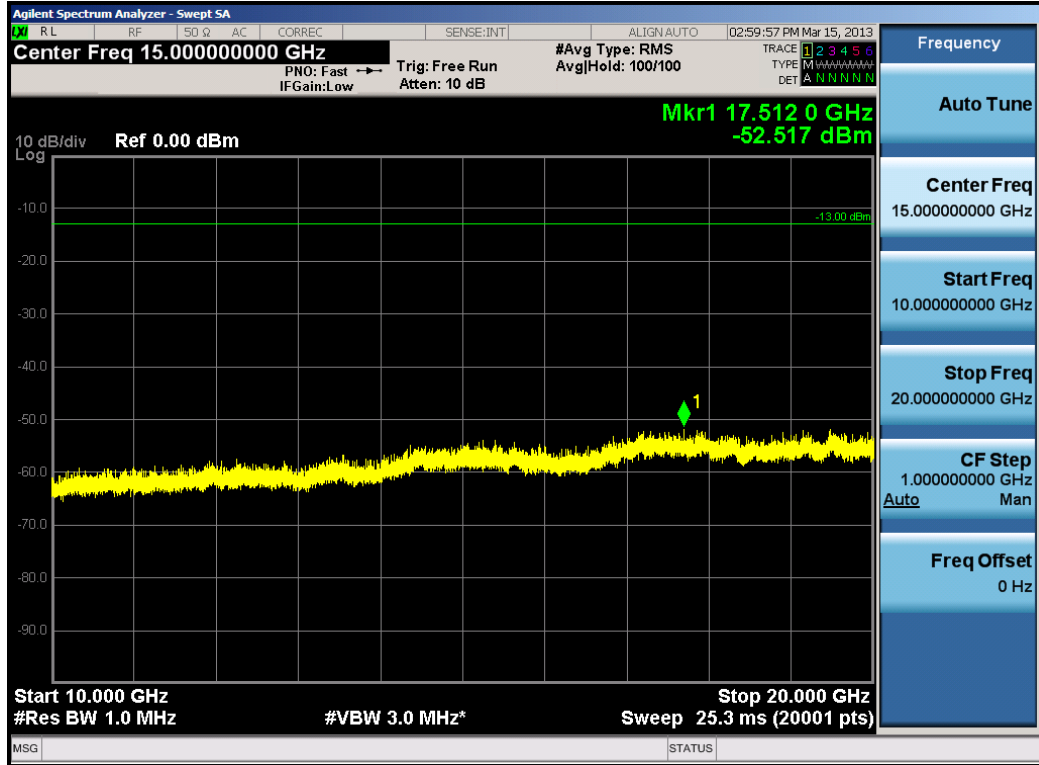


Plot 7-19. Peak-Average Ratio Plot (AWS CDMA Mode – Ch. 450)



Plot 7-20. Conducted Spurious Plot (AWS CDMA Mode – Ch. 875)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 40 of 49



Plot 7-21. Conducted Spurious Plot (AWS CDMA Mode – Ch. 875)

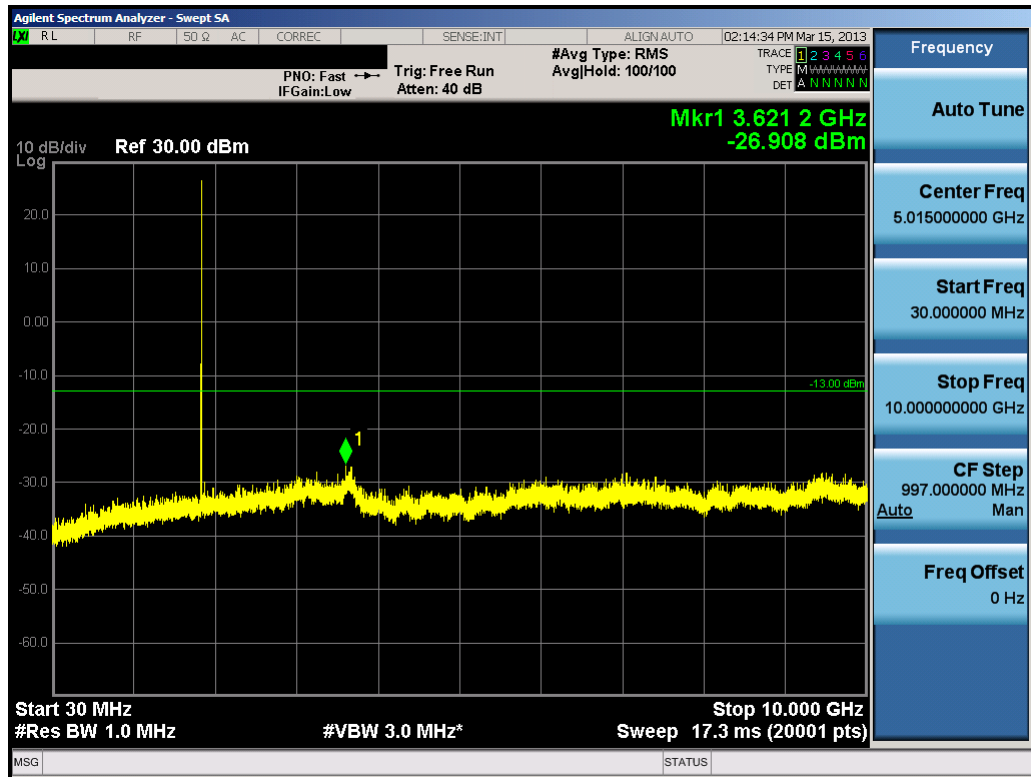


Plot 7-22. Band Edge Plot (AWS CDMA Mode – Ch. 875)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 41 of 49

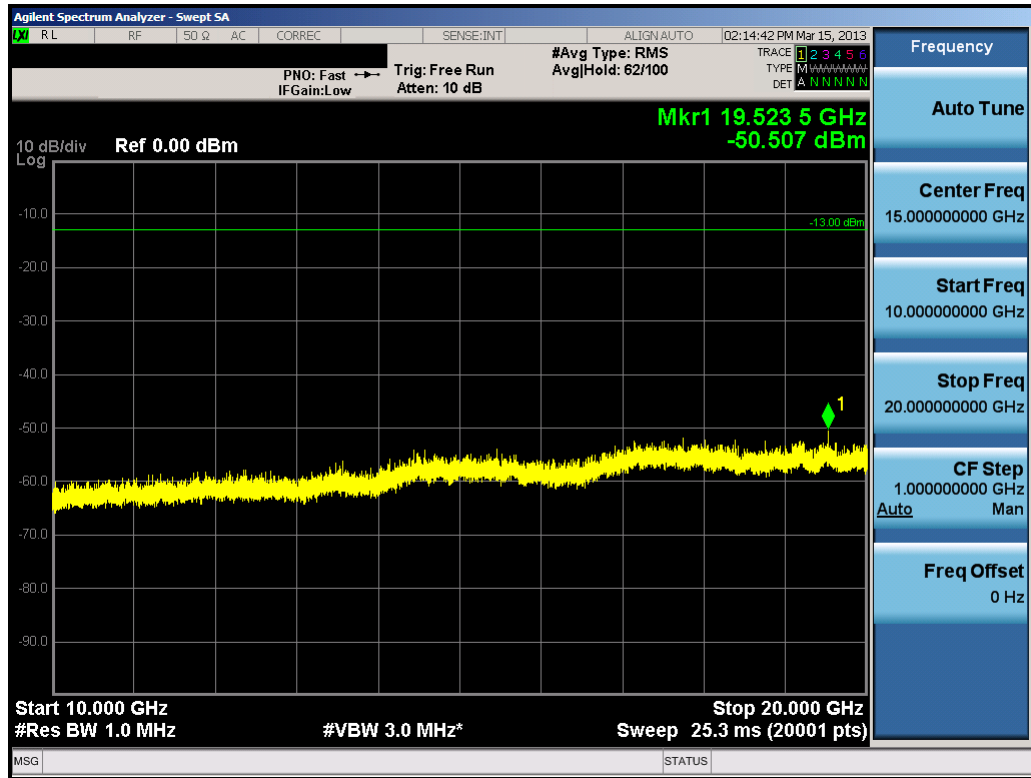


Plot 7-23. 4MHz Span Plot (AWS CDMA Mode – Ch. 875)

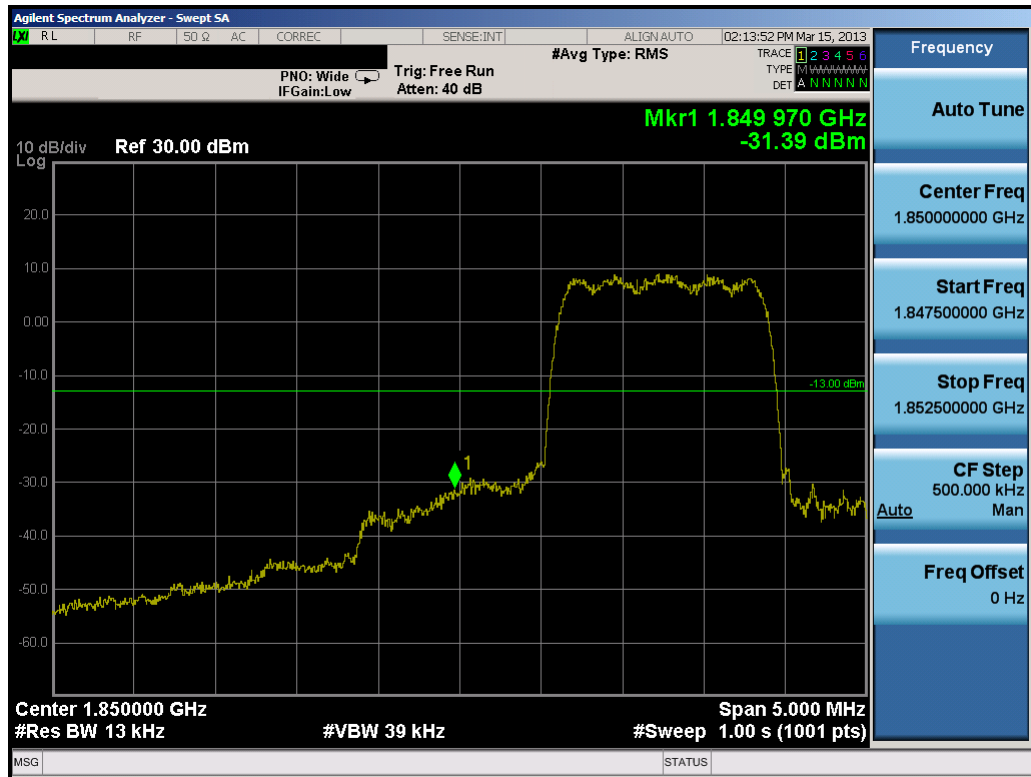


Plot 7-24. Conducted Spurious Plot (PCS CDMA Mode – Ch. 25)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 42 of 49



Plot 7-25. Conducted Spurious Plot (PCS CDMA Mode – Ch. 25)

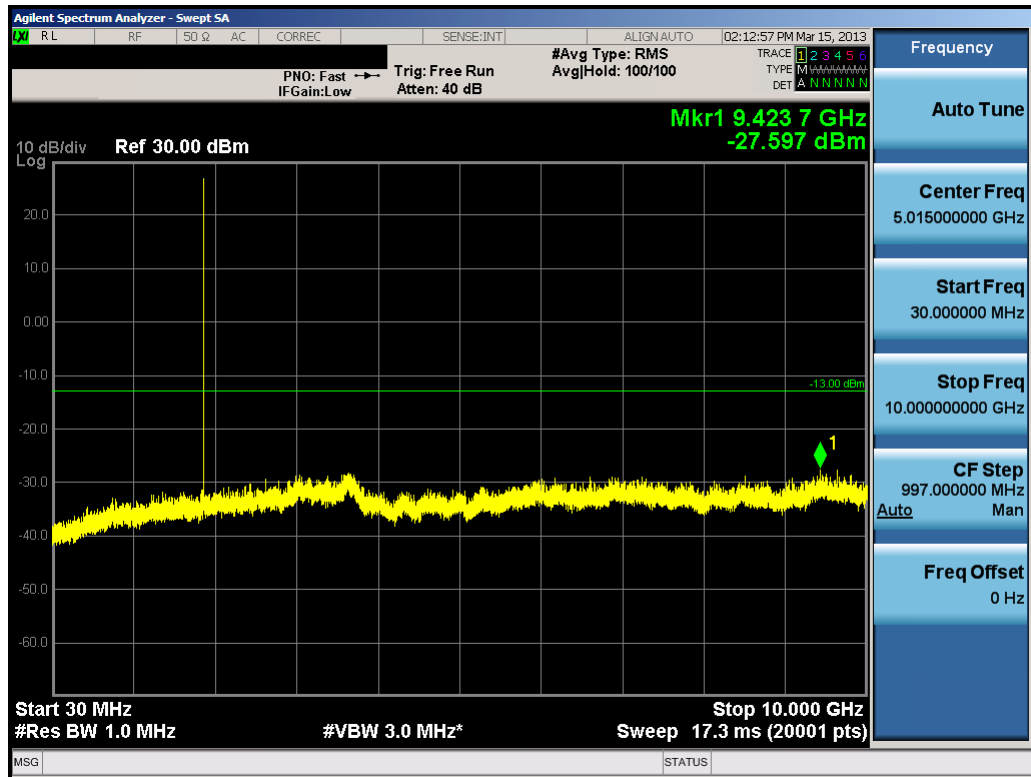


Plot 7-26. Band Edge Plot (PCS CDMA Mode – Ch. 25)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 43 of 49

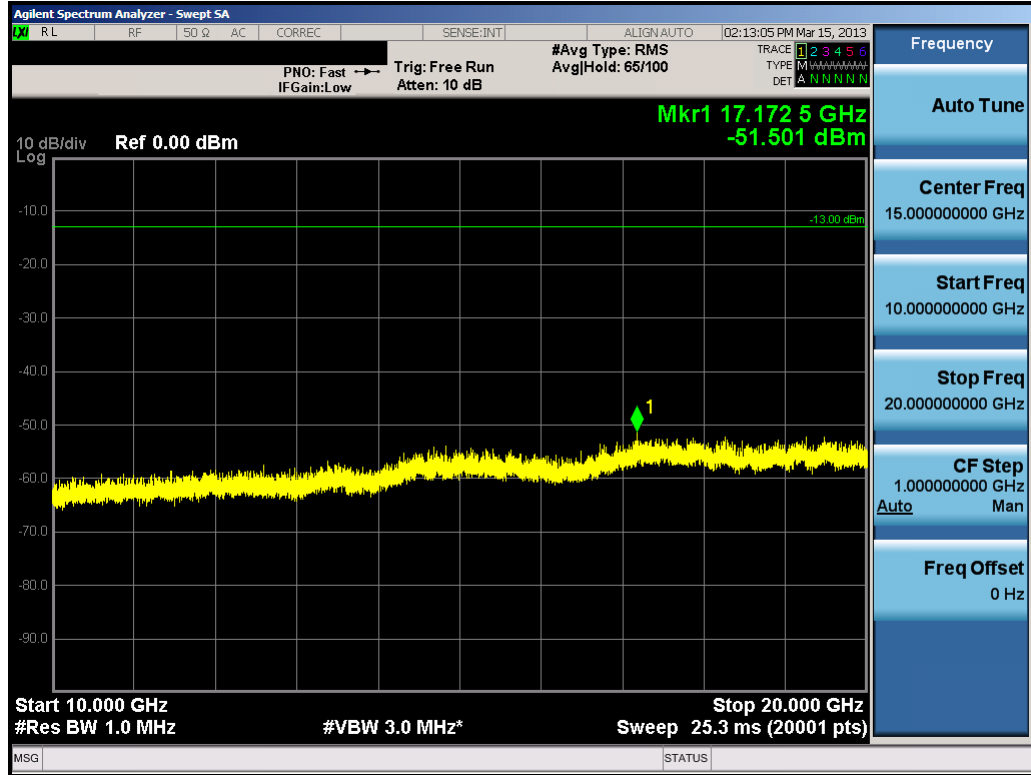


Plot 7-27. 4MHz Span Plot (PCS CDMA Mode – Ch. 25)

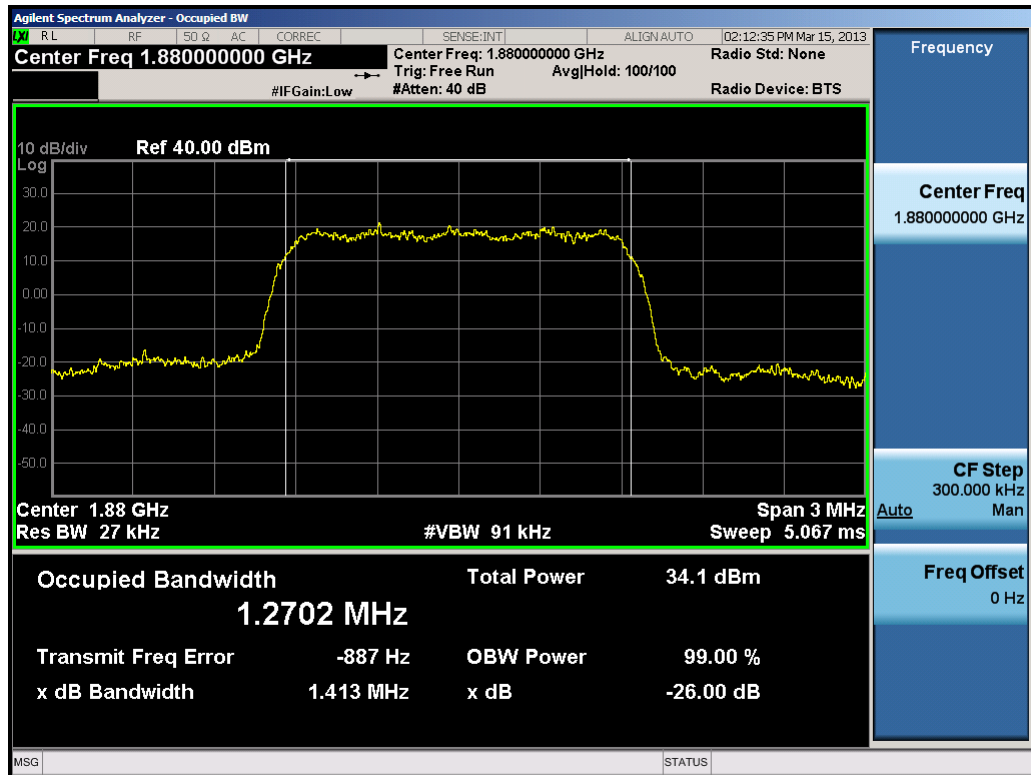


Plot 7-28. Conducted Spurious Plot (PCS CDMA Mode – Ch. 600)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 44 of 49

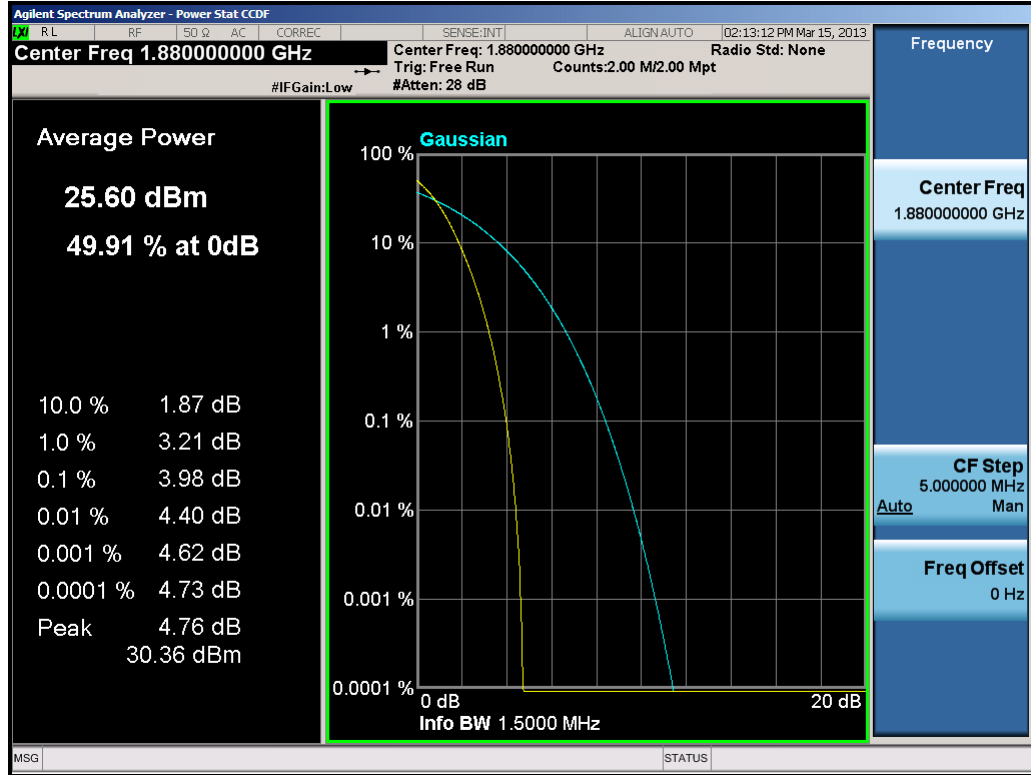


Plot 7-29. Conducted Spurious Plot (PCS CDMA Mode – Ch. 600)

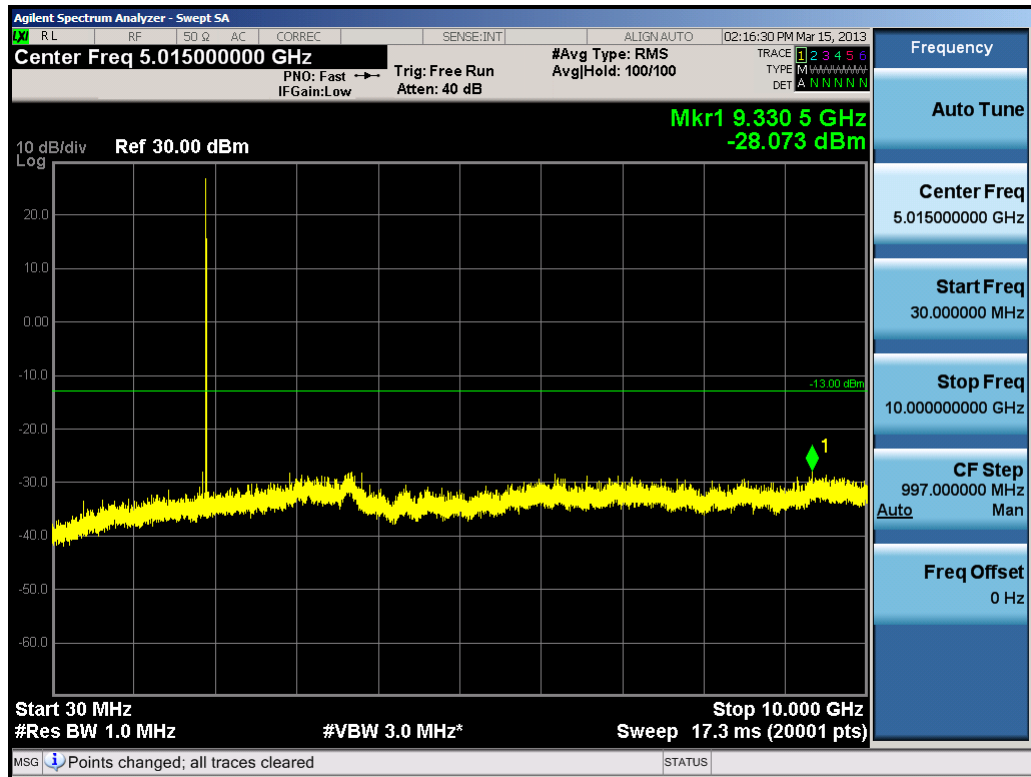


Plot 7-30. Occupied Bandwidth Plot (PCS CDMA Mode – Ch. 600)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 45 of 49

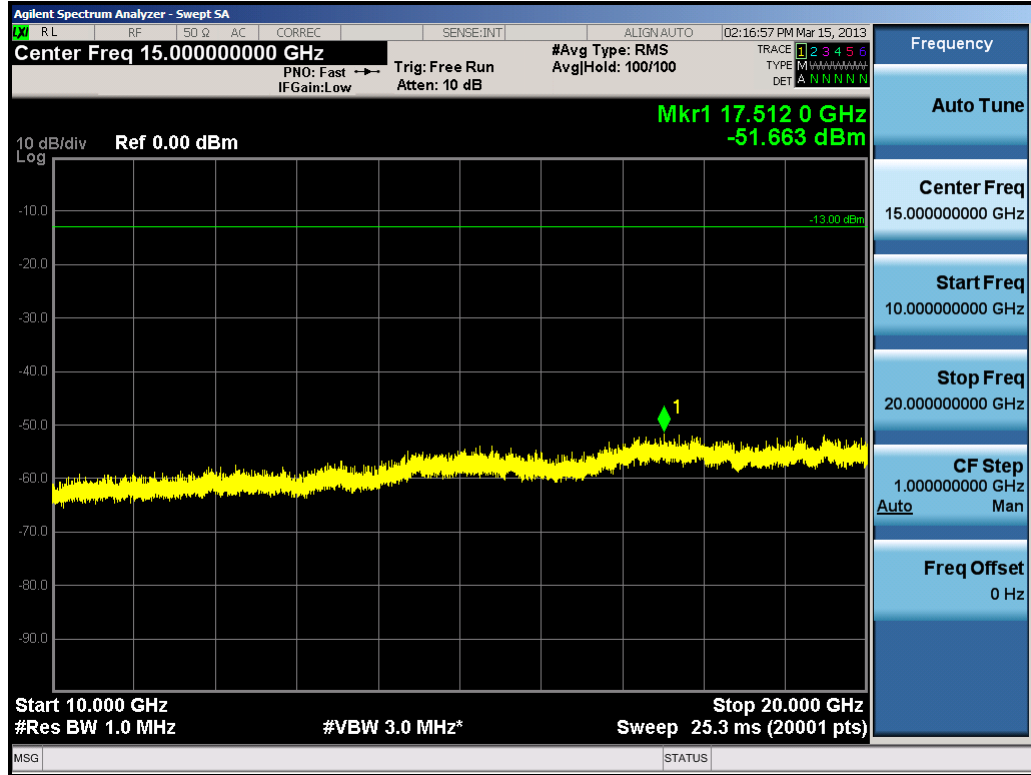


Plot 7-31. Peak-Average Ratio Plot (PCS CDMA Mode – Ch. 600)



Plot 7-32. Conducted Spurious Plot (PCS CDMA Mode – Ch. 1175)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 46 of 49

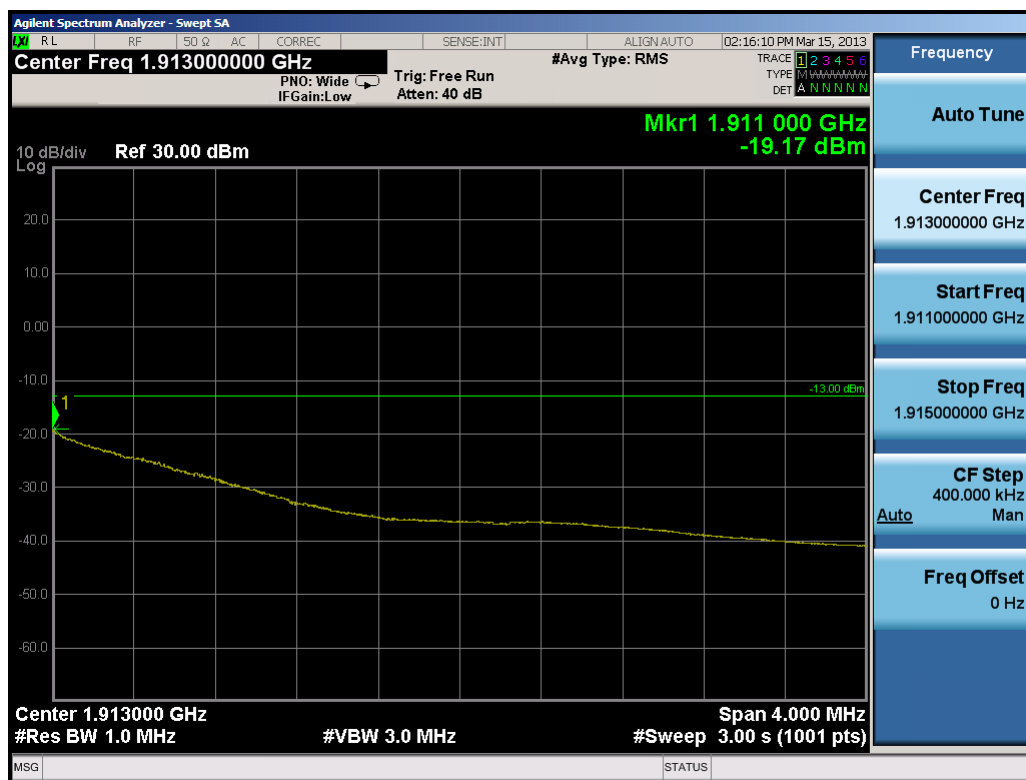


Plot 7-33. Conducted Spurious Plot (PCS CDMA Mode – Ch. 1175)



Plot 7-34. Band Edge Plot (PCS CDMA Mode – Ch. 1175)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 47 of 49



Plot 7-35. 4MHz Span Plot (PCS CDMA Mode – Ch. 1175)

FCC ID: A3LSCHR480C	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)	SAMSUNG	Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 48 of 49

8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSCHR480C** complies with all the requirements of Parts 2, 22, 24, 27 of the FCC rules.

FCC ID: A3LSCHR480C		FCC Pt. 22, 24, 27 CDMA MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0Y1303110473.A3L	Test Dates: March 14 - 22, 2013	EUT Type: Portable Handset		Page 49 of 49