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MEASUREMENT REPORT
FCC Part 22 & 24 / IC RSS-132/RSS-133

Applicant Name:
Samsung Electronics, Co. Ltd.
18600 Broadwick St.
Rancho Dominguez, CA 90220
United States

Date of Testing:
October 25-31, 2011
Test Site/Location:
PCTEST Lab., Columbia, MD, USA
Test Report Serial No.:
0Y1110211850.A3L

FCC ID:	**A3LSCHI929**
APPLICANT:	**SAMSUNG ELECTRONICS, CO. LTD.**

Application Type:	Certification
FCC Classification:	PCS Licensed Transmitter Held to Ear (PCE)
FCC Rule Part(s):	§2; §22(H), §24(E)
IC Specification(s):	RSS-132 Issue 2; RSS-133 Issue 5
EUT Type:	Portable Handset
Model(s):	SCH-I929
Test Device Serial No.:	*identical prototype* [S/N: FI-256-B]

Mode	Tx Frequency (MHz)	Emission Designator	ERP/EIRP	
			Max. Power (W)	Max. Power (dBm)
CDMA850	824.70 - 848.31	1M28F9W	0.102	20.10
CDMA1900	1851.25 - 1908.75	1M26F9W	0.121	20.83
GSM1900	1850.20 - 1909.80	242KGXW	0.610	27.85
EDGE1900	1850.20 - 1909.80	246KG7W	0.313	24.95

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.

PCTEST certifies that no party to this application has been subject to a denial of Federal benefits that includes FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.

Randy Ortanez
President

ACCREDITED
TESTING LABORATORY
CERTIFICATE #2041.01

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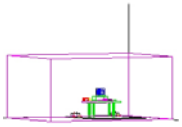
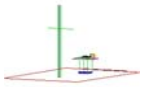


MEASUREMENT REPORT
FCC Part 22 & 24



§2.1033 General Information

APPLICANT:	Samsung Electronics, Co. Ltd.
APPLICANT ADDRESS:	18600 Broadwick St. Rancho Dominguez, CA 90220, United States
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)
IC SPECIFICATION(S):	RSS-132 Issue 2; RSS-133 Issue 5
BASE MODEL:	SCH-I929
FCC ID:	A3LSCHI929
FCC CLASSIFICATION:	PCS Licensed Transmitter Held to Ear (PCE)
MODE:	CDMA / EvDO / GSM / EDGE
FREQUENCY TOLERANCE:	±0.00025 % (2.5 ppm)
Test Device Serial No.:	FI-256-B ☐ Production ☒ Pre-Production ☐ Engineering
DATE(S) OF TEST:	October 25-31, 2011
TEST REPORT S/N:	0Y1110211850.A3L

Test Facility / Accreditations

Measurements were performed at PCTEST Engineering Lab. located in Columbia, MD 21045, U.S.A.

- PCTEST facility is an FCC registered (PCTEST Reg. No. 90864) 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 (2451A-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 (2451A-1) test laboratory with the site description on file at Industry Canada.
- PCTEST is a CTIA Authorized Test Laboratory (CATL) for AMPS, CDMA, and EvDO wireless devices and for Over-the-Air (OTA) Antenna Performance testing for AMPS, CDMA, GSM, GPRS, EGPRS, UMTS (W-CDMA), CDMA 1xEVDO, and CDMA 1xRTT.

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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 area, the Baltimore-Washington Internt'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 test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. 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. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4-2003 on January 28, 2009.

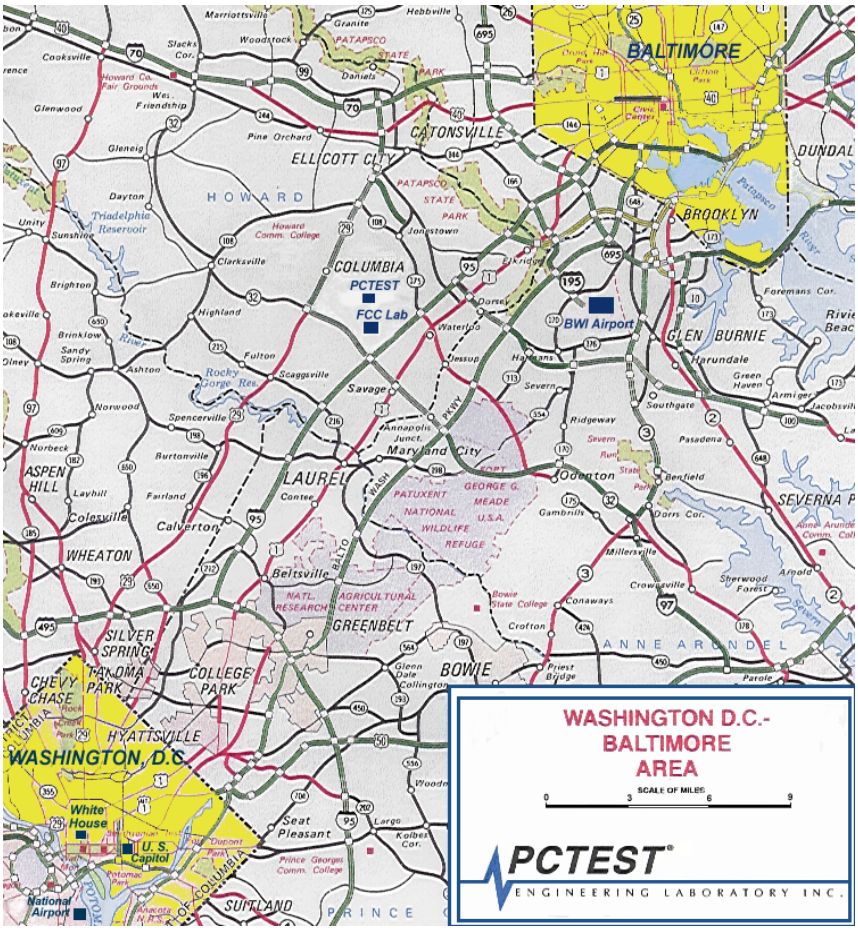

Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

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2.0 PRODUCT INFORMATION

2.1 Equipment Description

The Equipment Under Test (EUT) is the **Samsung Portable Handset FCC ID: A3LSCHI929**. The EUT consisted of the following component(s):

Trade Name / Base Model	FCC ID	Description
Samsung / Model: SCH-I929	A3LSCHI929	Portable Handset

Table 2-1. EUT Equipment Description

2.2 Device Capabilities

This device contains the following capabilities:

850/1900 CDMA/EvDO (BC0, BC1), 1900 GSM/GPRS/EDGE, 802.11a/b/g/n WLAN, 802.11a/n UNII, Bluetooth

2.3 EMI Suppression Device(s)/Modifications

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

2.4 Labeling Requirements

Per 2.925

The FCC identifier shall be permanently affixed to the equipment and shall be readily visible to the purchaser at the time of purchase.

Per 15.19; Docket 95-19

In addition to this requirement, a device subject to certification shall be labeled as follows:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The label shall be permanently affixed at a conspicuous location on the device; instruction manual or pamphlet supplied to the user and be readily visible to the purchaser at the time of purchase. However, when the device is so small wherein placement of the label with specified statement is not practical, only the trade name and FCC ID must be displayed on the device per Section 15.19(b)(2).

Please see attachment for FCC ID label and label location.

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3.0 DESCRIPTION OF TESTS

3.1 Measurement Procedure

The radiated spurious measurements were made outdoors at a 3-meter test range (See Figure 3-1). The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This power level was recorded using a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same receive spectrum analyzer reading. This level is recorded with the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic antenna are taken into consideration.

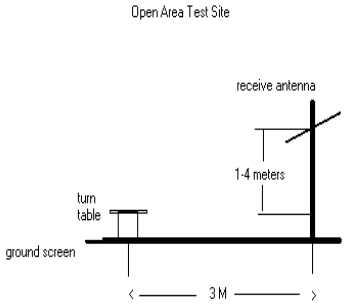


Figure 3-1. Diagram of 3-meter outdoor test range

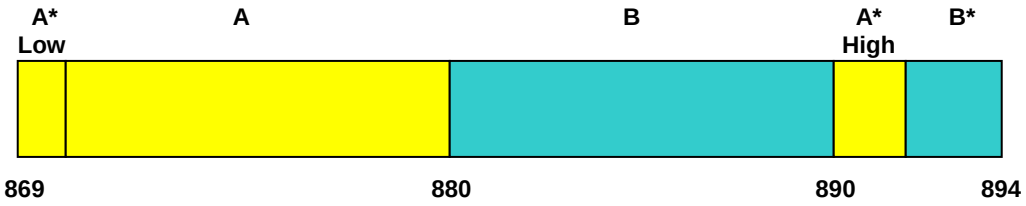
Deviation from Measurement Procedure……..None

3.2 Occupied Bandwidth

§2.1049, RSS-Gen (4.6.1)

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 span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1 percent of the selected span as is possible without being below 1 percent. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual. The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 percent of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth.

3.3 Cellular - Base Frequency Blocks



BLOCK 1: 869 – 880 MHz (A* Low + A)

BLOCK 2: 880 – 890 MHz (B)

BLOCK 3: 890 – 891.5 MHz (A* High)

BLOCK 4: 891.5 – 894 MHz (B*)

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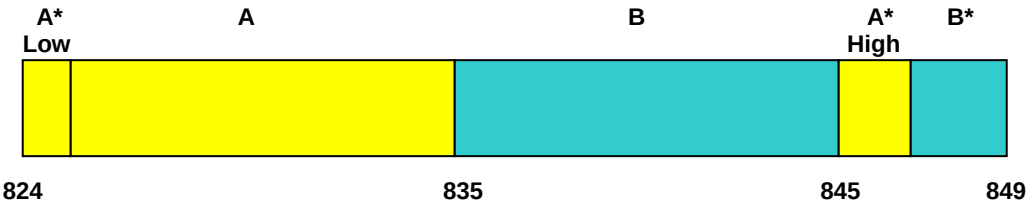
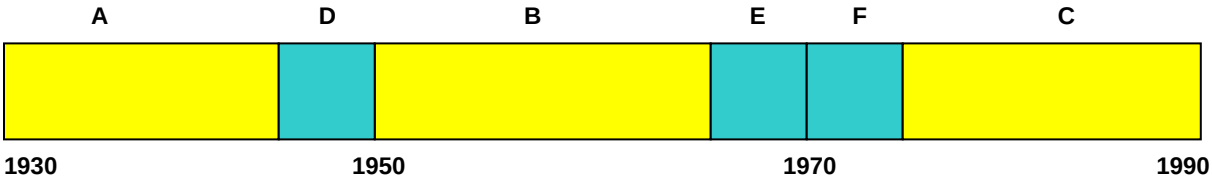
3.4 Cellular - Mobile Frequency Blocks



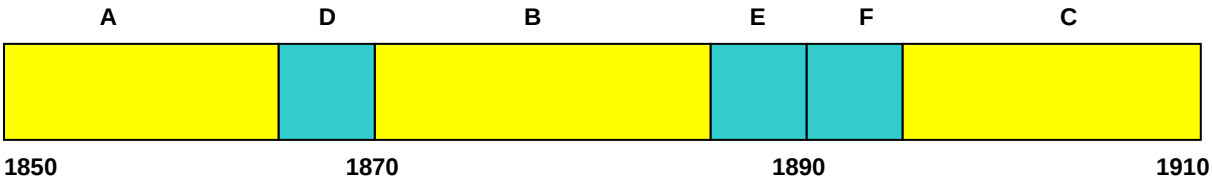
BLOCK 1: 824 – 835 MHz (A* Low + A)
BLOCK 2: 835 – 845 MHz (B)
BLOCK 3: 845 – 846.5 MHz (A* High)
BLOCK 4: 846.5 – 849 MHz (B*)

3.5 PCS - Base Frequency Blocks



BLOCK 1: 1930 – 1945 MHz (A)
BLOCK 2: 1945 – 1950 MHz (D)
BLOCK 3: 1950 – 1965 MHz (B)
BLOCK 4: 1965 – 1970 MHz (E)
BLOCK 5: 1970 – 1975 MHz (F)
BLOCK 6: 1975 – 1990 MHz (C)

3.6 PCS - Mobile Frequency Blocks



BLOCK 1: 1850 – 1865 MHz (A)
BLOCK 2: 1865 – 1870 MHz (D)
BLOCK 3: 1870 – 1885 MHz (B)
BLOCK 4: 1885 – 1890 MHz (E)
BLOCK 5: 1890 – 1895 MHz (F)
BLOCK 6: 1895 – 1910 MHz (C)

3.7 Spurious and Harmonic Emissions at Antenna Terminal

§2.1051, 22.917(a), 24.238(a)(b); RSS-132 (4.5.1), RSS-133 (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 1 MHz or greater. 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.

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3.8 Radiated Power and Radiated Spurious Emissions

§2.1053, 22.913(a)(2), 22.917(a), 24.232(c), 24.238(a), RSS-132 (4.5.1.2), RSS-133 (6.5.1)

Radiated power and radiated spurious emissions are measured outdoors at our 3-meter test range. The equipment under test is placed on a wooden turntable 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. This level is then measured with a broadband average power meter. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator with the level of the signal generator being adjusted to obtain the same receive average power meter reading. This spurious level is recorded with the power meter. For readings above 1 GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration. For CDMA mode, 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.

3.9 Peak-Average Ratio

§24.232(d), RSS-133 (6.4)

A peak to average ratio measurement is performed at the conducted port of the EUT. For CDMA signals, 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.

3.10 Frequency Stability / Temperature Variation

§2.1055, 22.355, 24.235, RSS-132 (4.3), RSS-133 (6.3)

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 – The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5 ppm) of the center frequency.

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 one minute 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 sufficient stabilization period at each temperature shall be used prior to each frequency requirement.

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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
-	263-10dB	(DC-18GHz) 10 dB Attenuator	N/A		N/A	N/A
-	No.166	(1000-26500MHz) Microwave RF Cable	N/A		N/A	N/A
-	No.167	(100kHz - 100MHz) RG58 Coax Cable	N/A		N/A	N/A
Agilent	8449B	(1-26.5GHz) Pre-Amplifier	2/8/2011	Annual	2/8/2012	3008A00985
Agilent	85650A	Quasi-Peak Adapter	4/7/2011	Annual	4/7/2012	3303A01872
Agilent	85650A	Quasi-Peak Adapter	4/7/2011	Annual	4/7/2012	2043A00301
Agilent	8566B	(100Hz-22GHz) Spectrum Analyzer	4/7/2011	Annual	4/7/2012	3638A08713
Agilent	E4407B	ESA Spectrum Analyzer	4/5/2011	Annual	4/5/2012	US39210313
Agilent	E4448A	PSA (3Hz-50GHz) Spectrum Analyzer	11/30/2010	Annual	11/30/2011	US42510244
Agilent	E5515C	Wireless Communications Test Set	7/6/2011	Annual	7/6/2012	GB41450275
Agilent	E8257D	(250kHz-20GHz) Signal Generator	4/8/2011	Annual	4/8/2012	MY45470194
Agilent	E5515C	Wireless Communications Test Set	2/8/2011	Annual	2/8/2012	GB45360985
Agilent	N9038A	MXE EMI Receiver	8/5/2011	Annual	8/5/2012	MY51210133
Compliance Design	Roberts	Dipole Set	4/7/2010	Biennial	4/7/2012	146
Compliance Design	Roberts	Dipole Set	4/7/2010	Biennial	4/7/2012	147
Emco	3115	Horn Antenna (1-18GHz)	4/8/2010	Biennial	4/8/2012	9205-3874
Espec	ESX-2CA	Environmental Chamber	4/21/2011	Annual	4/21/2012	17620
K & L	11SH10	Band Pass Filter	N/A		N/A	1300/4000
K & L	11SH10	Band Pass Filter	N/A		N/A	4000/12000
MiniCircuits	VHF-1300+	High Pass Filter	N/A		N/A	30716
MiniCircuits	VHF-3100+	High Pass Filter	N/A		N/A	30721
Pasternack	PE2208-6	Bidirectional Coupler	N/A		N/A	N/A
Rohde & Schwarz	CMU200	Base Station Simulator	6/1/2011	Annual	6/1/2012	833855/0010
Rohde & Schwarz	CMU200	Base Station Simulator	4/19/2011	Annual	4/19/2012	107826
Rohde & Schwarz	CMU200	Base Station Simulator	N/A		N/A	836536/0005
Rohde & Schwarz	CMW500	LTE Radio Communication Tester	3/11/2011	Annual	3/11/2012	103962
Rohde & Schwarz	CMW500	LTE Radio Communication Tester	8/5/2011	Annual	8/5/2012	112347
Sunol	DRH-118	Horn Antenna (1 - 18GHz)	7/5/2011	Biennial	7/5/2013	A050307
Sunol	JB5	Bi-Log Antenna (30M - 5GHz)	12/17/2009	Biennial	12/17/2011	A051107
Sunol	DRH-118	Horn Antenna (1-18 GHz)	6/17/2011	Biennial	6/17/2013	A042511

Table 4-1. Test Equipment

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5.0 SAMPLE CALCULATIONS

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 spectrum analyzer 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 spectrum analyzer. 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.

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6.0 TEST RESULTS

6.1 Summary

Company Name: Samsung Electronics, Co. Ltd.

FCC ID: A3LSCHI929

FCC Classification: PCS Licensed Transmitter Held to Ear (PCE)

Mode(s): CDMA / EvDO / GSM / EDGE

FCC Part Section(s)	RSS Sections	Test Description	Test Limit	Test Condition	Test Result	Reference
TRANSMITTER MODE (TX)						
2.1049, 22.917(a), 24.238(a)	RSS-Gen (4.6.1) RSS-133 (2.3)	Occupied Bandwidth	N/A	CONDUCTED	PASS	Section 7.0
2.1051, 22.917(a), 24.238(a)	RSS-132 (4.5.1.2) RSS-133 (6.5.1)	Band Edge / Conducted Spurious Emissions	< 43 + 10log$_{10}$ (P[Watts]) at Band Edge and for all out-of-band emissions		PASS	Section 7.0
24.232(d)	RSS-133 (6.4)	Peak-Average Ratio	< 13 dB		PASS	Section 7.0
2.1046	RSS-132 (4.4) RSS-133 (4.1)	Transmitter Conducted Output Power	N/A		PASS	RF Exposure Report
22.913(a)(2)	RSS-132 (4.4)	Effective Radiated Power	< 7 Watts max. ERP	RADIATED	PASS	Section 6.2
24.232(c)	RSS-133 (6.4) [SRSP-510 (5.1.2)]	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP		PASS	Section 6.3
2.1053, 22.917(a), 24.238(a)	RSS-132 (4.5.1.2) RSS-133 (6.5.1)	Undesirable Emissions	< 43 + 10log$_{10}$ (P[Watts]) for all out-of-band emissions		PASS	Sections 6.4, 6.5, 6.6
2.1055, 22.355, 24.235	RSS-132 (4.3) RSS-133 (6.3)	Frequency Stability	< 2.5 ppm		PASS	Sections 6.7, 6.8, 6.9
RECEIVER MODE (RX) / DIGITAL EMISSIONS						
N/A	RSS-132 (4.6) RSS-133 (6.6)	Receiver Spurious Emissions Limits	< RSS-Gen limits [Section 6; Table 1]	RADIATED	PASS	Section 6.10

Table 6-1. Summary of Test Results

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6.2 Effective Radiated Power Output Data

§22.913(a)(2), RSS-132 (4.4)

Frequency [MHz]	Mode	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBd]	Pol [H/V]	ERP [dBm]	ERP [Watts]	Battery Type
824.70	CDMA850	-18.900	18.60	0.00	H	18.60	0.072	Standard
836.52	CDMA850	-17.500	20.00	0.00	H	20.00	0.100	Standard
848.31	CDMA850	-17.400	20.10	0.00	H	20.10	0.102	Standard

Table 6-2. Effective Radiated Power Output Data

NOTES:

Effective Radiated Power Output Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This level is recorded using the power meter. The conducted power at the terminals of the dipole is measured. The ERP is recorded.

For CDMA mode, 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. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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6.3 Equivalent Isotropic Radiated Power Output Data

§24.232(c), RSS-133 (6.4) [SRSP-510 (5.1.2)]

Frequency [MHz]	Mode	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	Battery Type
1851.25	CDMA1900	-22.600	9.60	7.75	H	17.35	0.054	Standard
1880.00	CDMA1900	-22.500	9.70	7.83	H	17.53	0.057	Standard
1908.75	CDMA1900	-19.300	12.90	7.93	H	20.83	0.121	Standard

Table 6-3. Equivalent Isotropic Radiated Power Output Data

Frequency [MHz]	Mode	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	Pol [H/V]	EIRP [dBm]	EIRP [Watts]	Battery Type
1850.20	GSM1900	-12.100	20.10	7.75	H	27.85	0.610	Standard
1880.00	GSM1900	-13.500	18.70	7.83	H	26.53	0.450	Standard
1909.80	GSM1900	-13.800	18.40	7.93	H	26.33	0.429	Standard
1850.20	EDGE1900	-15.000	17.20	7.75	H	24.95	0.313	Standard

Table 6-4. Equivalent Isotropic Radiated Power Output Data

NOTES:

Equivalent Isotropic Radiated Power Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A Horn antenna was substituted in place of the EUT. This Horn antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This level is recorded using the power meter. The conducted power at the terminals of the Horn antenna is measured. The difference between the gain of the horn and an isotropic antenna is taken into consideration and the EIRP is recorded.

For CDMA mode, 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. For GSM mode, this device was tested in all configurations and the highest power is reported in GPRS mode with one uplink slot active. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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6.4 Cellular CDMA Radiated Measurements

§2.1053, 22.917(a), RSS-132 (4.5.1.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	824.70	MHz		
CHANNEL:	1013			
MEASURED OUTPUT POWER:	18.60	dBm	=	0.072 W
MODULATION SIGNAL:	CDMA			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	31.60	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1649.40	-52.11	6.16	-45.95	H	64.5
2474.10	-54.28	6.34	-47.94	H	66.5
3298.80	-92.37	6.71	-85.66	H	104.3
4123.50	-90.54	7.39	-83.15	H	101.8
4948.20	-90.07	8.91	-81.16	H	99.8

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

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

For CDMA mode, 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. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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Cellular CDMA Radiated Measurements (Cont'd)

§2.1053, 22.917(a), RSS-132 (4.5.1.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	836.52	MHz		
CHANNEL:	384			
MEASURED OUTPUT POWER:	20.00	dBm	=	0.100 W
MODULATION SIGNAL:	CDMA			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	33.00	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1673.04	-43.57	6.09	-37.48	H	57.5
2509.56	-52.86	6.38	-46.48	H	66.5
3346.08	-92.58	6.90	-85.67	H	105.7
4182.60	-91.13	7.79	-83.34	H	103.3
5019.12	-89.62	8.83	-80.79	H	100.8

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

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

For CDMA mode, 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. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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Cellular CDMA Radiated Measurements (Cont'd)

§2.1053, 22.917(a), RSS-132 (4.5.1.2)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	848.31	MHz		
CHANNEL:	777			
MEASURED OUTPUT POWER:	20.10	dBm	=	0.102 W
MODULATION SIGNAL:	CDMA			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	33.10	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
1696.62	-35.44	6.01	-29.42	H	49.5
2544.93	-51.14	6.47	-44.66	H	64.8
3393.24	-92.78	7.10	-85.69	H	105.8
4241.55	-91.51	8.09	-83.42	H	103.5
5089.86	-89.37	8.86	-80.51	H	100.6

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

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

For CDMA mode, 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. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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6.5 PCS CDMA Radiated Measurements

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	1851.25	MHz		
CHANNEL:	25			
MEASURED OUTPUT POWER:	17.35	dBm	=	0.054 W
MODULATION SIGNAL:	CDMA			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	30.35	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3702.50	-50.41	9.62	-40.80	H	58.1
5553.75	-50.69	10.61	-40.08	H	57.4
7405.00	-84.50	10.84	-73.65	H	91.0
9256.25	-82.72	12.20	-70.52	H	87.9
11107.50	-77.98	12.86	-65.12	H	82.5

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

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

For CDMA mode, 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. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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PCS CDMA Radiated Measurements (Cont'd)

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	1880.00	MHz		
CHANNEL:	600			
MEASURED OUTPUT POWER:	17.53	dBm	=	0.057 W
MODULATION SIGNAL:	CDMA			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	30.53	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3760.00	-46.09	9.30	-36.79	H	54.3
5640.00	-51.81	10.89	-40.92	H	58.4
7520.00	-84.23	10.85	-73.38	H	90.9
9400.00	-82.63	12.17	-70.46	H	88.0
11280.00	-77.73	13.05	-64.68	H	82.2

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

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

For CDMA mode, 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. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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PCS CDMA Radiated Measurements (Cont'd)

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	1908.75	MHz		
CHANNEL:	1175			
MEASURED OUTPUT POWER:	20.83	dBm	=	0.121 W
MODULATION SIGNAL:	CDMA			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	33.83	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3817.50	-40.89	9.05	-31.84	H	52.7
5726.25	-52.14	11.07	-41.06	H	61.9
7635.00	-45.12	11.11	-34.01	H	54.8
9543.75	-82.85	12.36	-70.50	H	91.3
11452.50	-77.72	13.23	-64.49	H	85.3

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

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

For CDMA mode, 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. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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6.6 PCS GSM Radiated Measurements

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	1850.20	MHz		
CHANNEL:	512			
MEASURED OUTPUT POWER:	27.85	dBm	=	0.610 W
MODULATION SIGNAL:	GSM (Internal)			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	40.85	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3700.40	-45.15	9.63	-35.52	H	63.4
5550.60	-50.68	10.60	-40.08	H	67.9
7400.80	-84.51	10.85	-73.66	H	101.5
9251.00	-82.72	12.20	-70.52	H	98.4
11101.20	-77.99	12.85	-65.14	H	93.0

Table 6-11. Radiated Spurious Data (PCS GSM Mode – Ch. 512)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested in all configurations and the highest power is reported in GPRS mode with one uplink slot active. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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PCS GSM Radiated Measurements (Cont'd)

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	1880.00	MHz		
CHANNEL:	661			
MEASURED OUTPUT POWER:	26.53	dBm	=	0.450 W
MODULATION SIGNAL:	GSM (Internal)			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	40.85	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3760.00	-44.09	9.30	-34.79	H	61.3
5640.00	-50.71	10.89	-39.82	H	66.3
7520.00	-84.23	10.85	-73.38	H	99.9
9400.00	-82.63	12.17	-70.46	H	97.0
11280.00	-77.73	13.05	-64.68	H	91.2

Table 6-12. Radiated Spurious Data (PCS GSM Mode – Ch. 661)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested in all configurations and the highest power is reported in GPRS mode with one uplink slot active. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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PCS GSM Radiated Measurements (Cont'd)

§2.1053, 24.238(a), RSS-133 (6.5.1)

Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY:	1909.80	MHz		
CHANNEL:	810			
MEASURED OUTPUT POWER:	26.33	dBm	=	0.429 W
MODULATION SIGNAL:	GSM (Internal)			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	40.85	dBc	

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBi)	SPURIOUS EMISSION LEVEL (dBm)	POL (H/V)	(dBc)
3819.60	-44.18	9.05	-35.13	H	61.5
5729.40	-50.93	11.08	-39.85	H	66.2
7639.20	-84.41	11.11	-73.30	H	99.6
9549.00	-41.35	12.37	-28.99	H	55.3
11458.80	-77.72	13.23	-64.49	H	90.8

Table 6-13. Radiated Spurious Data (PCS GSM Mode – Ch. 810)

NOTES:

Radiated Spurious Emission Measurements by Substitution Method according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden turn table 80cm above the ground plane and 3 meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. Final power measurements are made with a broadband average power meter. A half-wave dipole was substituted in place of the EUT. This dipole antenna was driven by a signal generator and the level of the signal generator was adjusted to obtain the same spectrum analyzer reading. This spurious level is recorded using the power meter. For readings above 1GHz, the above procedure is repeated using horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

This device was tested in all configurations and the highest power is reported in GPRS mode with one uplink slot active. This unit was tested with its standard battery. 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 horizontally flat setup. The data reported in the table above was measured in this test setup.

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6.7 Cellular CDMA Frequency Stability Measurements

§2.1055, 22.355, 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)	836,520,005	5	0.000001
100 %		- 30	836,519,993	-7	-0.000001
100 %		- 20	836,519,999	-1	0.000000
100 %		- 10	836,519,987	-13	-0.000002
100 %		0	836,520,001	1	0.000000
100 %		+ 10	836,519,995	-5	-0.000001
100 %		+ 20	836,519,996	-4	-0.000001
100 %		+ 30	836,520,009	9	0.000001
100 %		+ 40	836,520,006	6	0.000001
100 %		+ 50	836,519,994	-6	-0.000001
115 %	4.26	+ 20	836,519,989	-11	-0.000001
BATT. ENDPOINT	3.40	+ 20	836,520,010	10	0.000001

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

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Cellular CDMA Frequency Stability Measurements (Cont'd)

§2.1055, 22.355, RSS-132 (4.3)

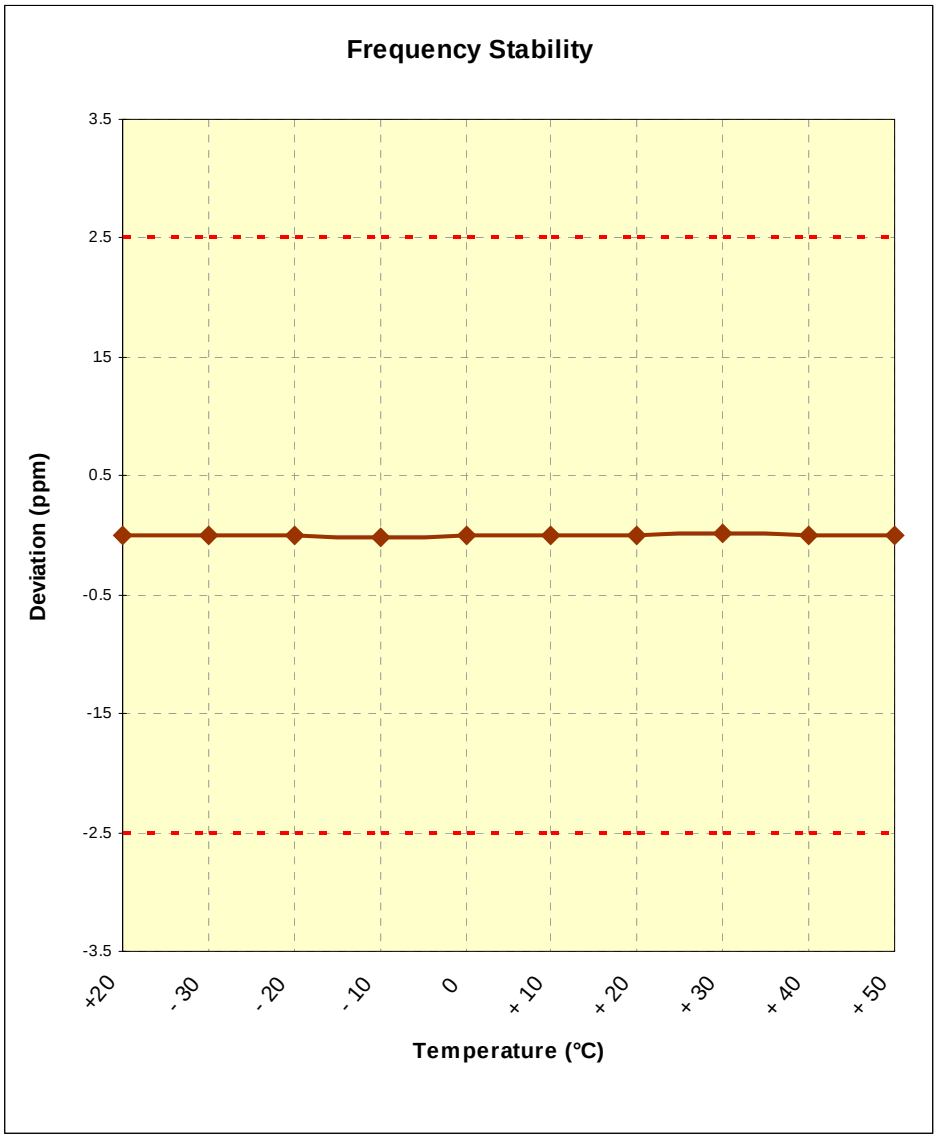

Figure 6-1. Frequency Stability Graph (Cellular CDMA Mode – Ch. 384)

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6.8 PCS CDMA Frequency Stability Measurements

§2.1055, 24.235, RSS-133 (6.3)

OPERATING FREQUENCY: 1,880,000,000 Hz

CHANNEL: 600

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)	1,880,000,010	10	0.000001
100 %		- 30	1,880,000,012	12	0.000001
100 %		- 20	1,880,000,013	13	0.000001
100 %		- 10	1,879,999,999	-1	0.000000
100 %		0	1,880,000,010	10	0.000001
100 %		+ 10	1,879,999,990	-10	-0.000001
100 %		+ 20	1,879,999,992	-8	0.000000
100 %		+ 30	1,880,000,013	13	0.000001
100 %		+ 40	1,880,000,001	1	0.000000
100 %		+ 50	1,879,999,989	-11	-0.000001
115 %	4.26	+ 20	1,880,000,001	1	0.000000
BATT. ENDPOINT	3.40	+ 20	1,879,999,993	-7	0.000000

Table 6-15. Frequency Stability Data (PCS CDMA Mode – Ch. 600)

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PCS CDMA Frequency Stability Measurements (Cont'd)

§2.1055, 24.235, RSS-133 (6.3)

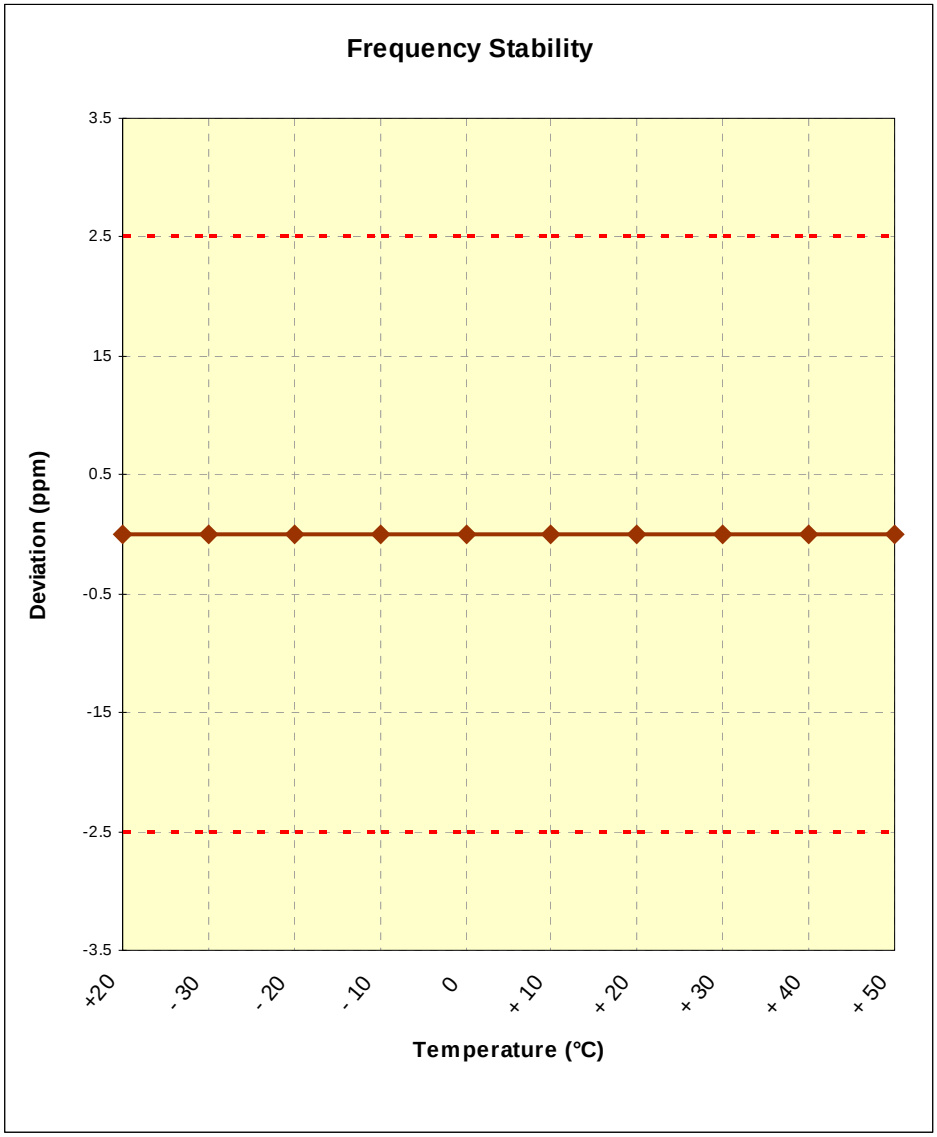

Figure 6-2. Frequency Stability Graph (PCS CDMA Mode – Ch. 600)

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6.9 PCS GSM Frequency Stability Measurements

§2.1055, 24.235, RSS-133 (6.3)

OPERATING FREQUENCY: 1,880,000,000 Hz

CHANNEL: 661

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)	1,879,999,997	-3	0.000000
100 %		- 30	1,879,999,991	-9	0.000000
100 %		- 20	1,879,999,990	-10	-0.000001
100 %		- 10	1,880,000,016	16	0.000001
100 %		0	1,879,999,981	-19	-0.000001
100 %		+ 10	1,880,000,011	11	0.000001
100 %		+ 20	1,880,000,001	1	0.000000
100 %		+ 30	1,879,999,997	-3	0.000000
100 %		+ 40	1,879,999,996	-4	0.000000
100 %		+ 50	1,879,999,985	-15	-0.000001
115 %	4.26	+ 20	1,879,999,986	-14	-0.000001
BATT. ENDPOINT	3.40	+ 20	1,879,999,984	-16	-0.000001

Table 6-16. Frequency Stability Data (PCS GSM Mode – Ch. 661)

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PCS GSM Frequency Stability Measurements (Cont'd)

§2.1055, 24.235, RSS-133 (6.3)

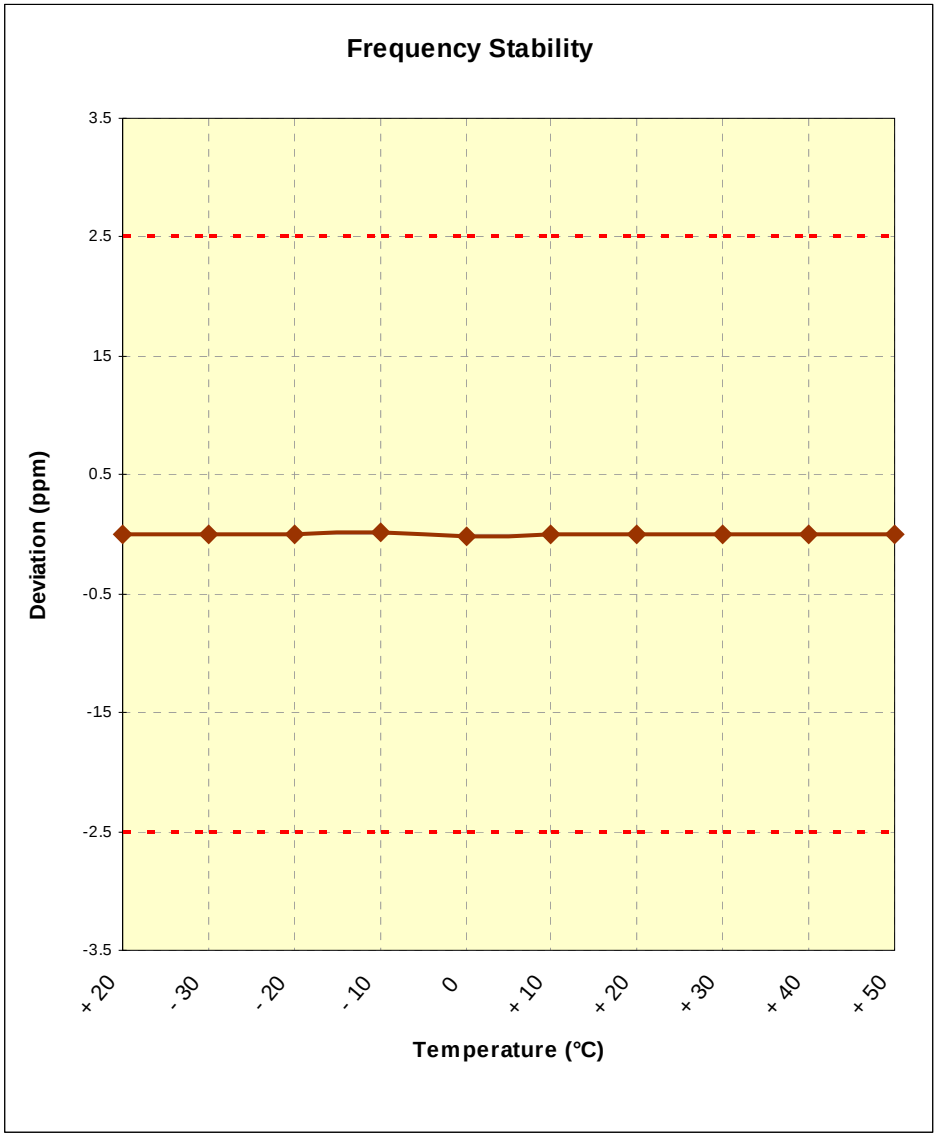

Figure 6-3. Frequency Stability Graph (PCS GSM Mode – Ch. 661)

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6.10 Receiver Spurious Emissions

RSS-132 (4.6), RSS-133 (6.6)

Frequency [MHz]	Level [dBm]	AFCL [dB]	Pol [H/V]	Height [m]	Azimuth [degrees]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
43.50	-91.04	12.37	H	1.2	10	28.34	40.00	-11.66
47.46	-97.44	10.40	V	1.5	0	19.96	40.00	-20.04
103.70	-96.68	11.65	V	1.5	320	21.97	43.52	-21.55
110.50	-97.38	12.03	V	1.5	90	21.65	43.52	-21.87
162.80	-97.80	14.05	H	1.5	80	23.25	43.52	-20.27
227.80	-102.36	14.06	H	1.4	80	18.71	46.02	-27.31

Table 6-17. Radiated Measurements at 3-meters

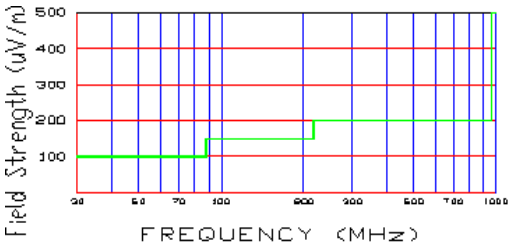

Figure 6-4. 3-Meter Limits

NOTES:

1. All modes of operation were investigated and the worst-case emissions are reported.
2. The EUT was set to "receive" mode in the middle channel of operation while registered to a call box simulating a GSM cellular band network as these produced the worst case radiated emissions.
3. Radiated emissions were measured from 30MHz to 5GHz.
4. The radiated limits are shown on Figure 6-4. Above 960MHz the limit is 500µV/m.

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1. All readings are calibrated by a Signal Generator with accuracy traceable to the National Institute of Standards and Technology (NIST).
2. AFCL = Antenna Factor and Cable Loss
3. Measurements are made using CISPR quasi-peak mode. Average measurements are recorded above 1GHz.

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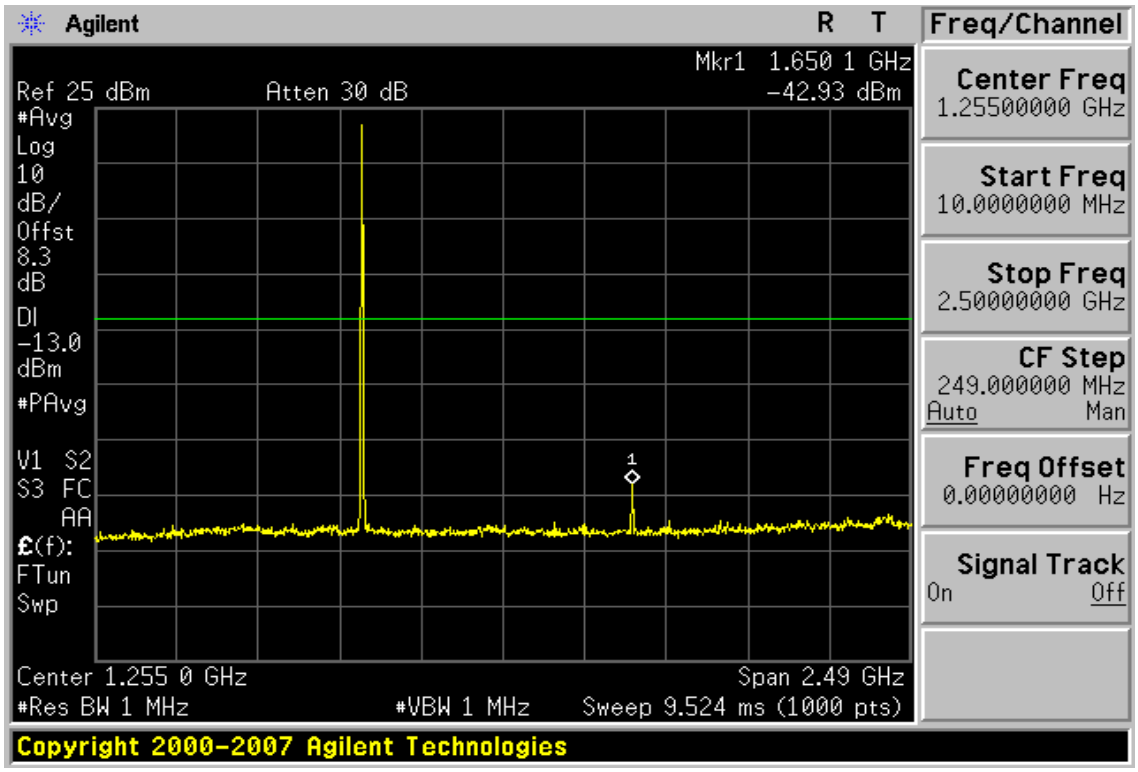
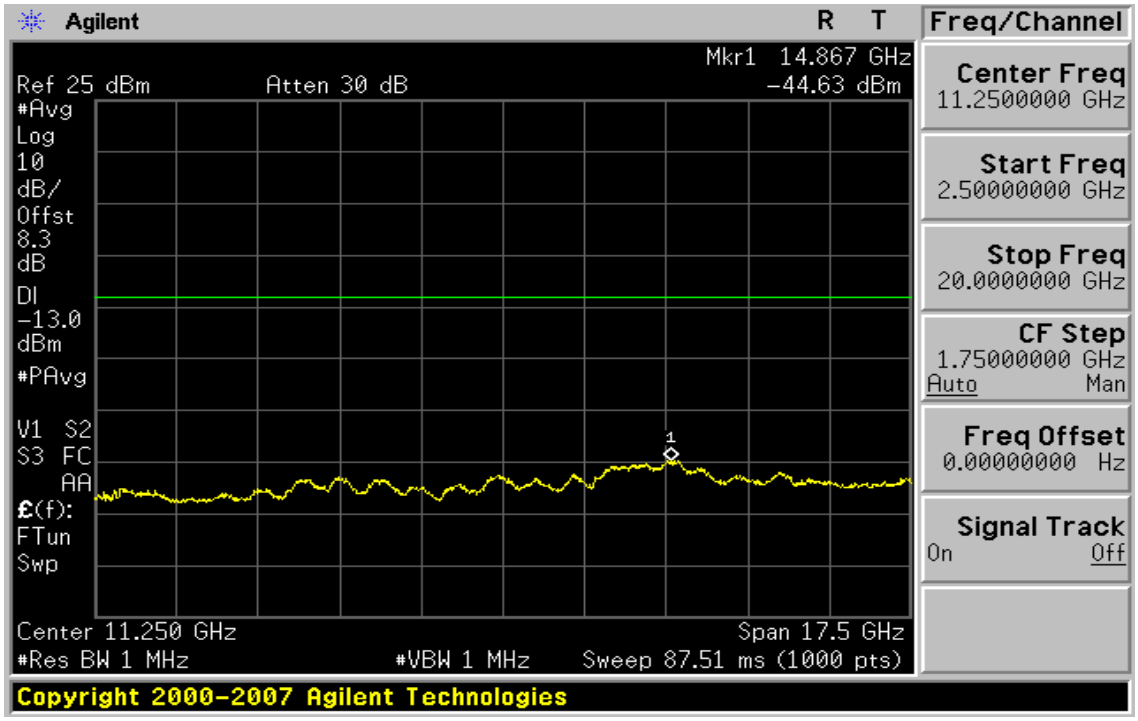
7.0 PLOT(S) OF EMISSIONS



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



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

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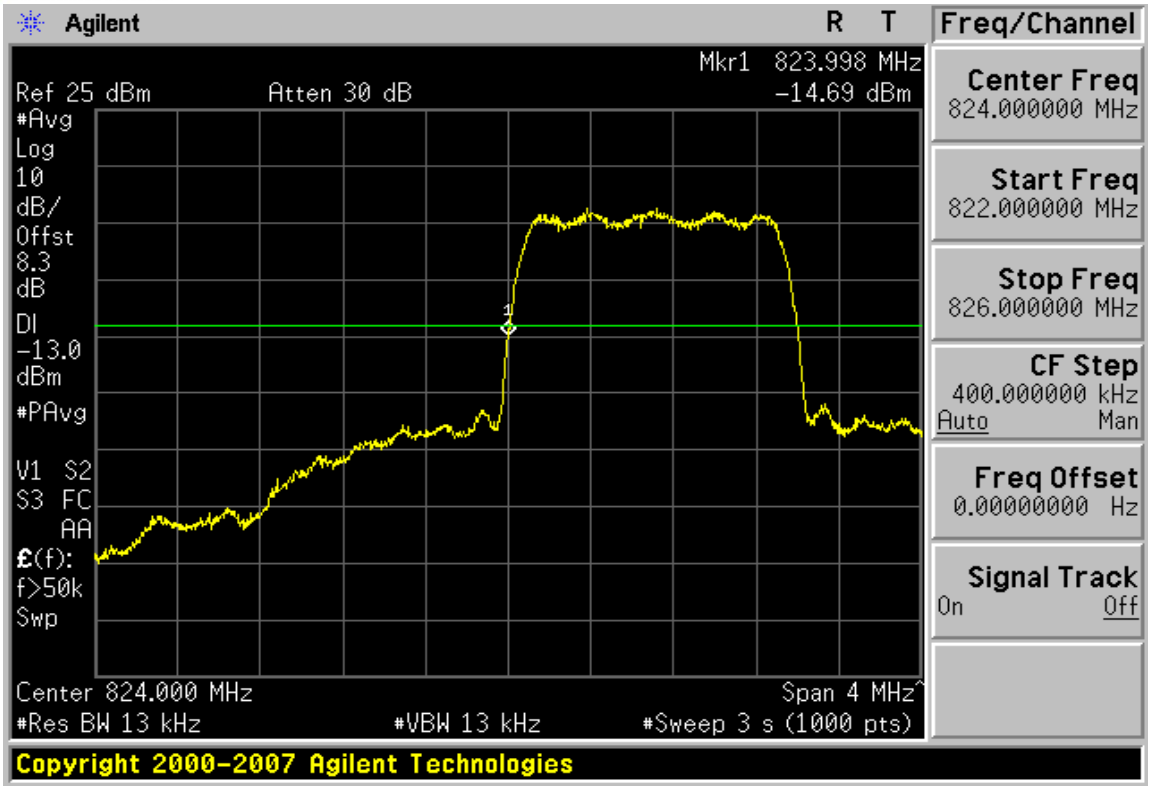

Plot 7-3. Band Edge Plot (Cellular CDMA Mode – Ch. 1013)

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

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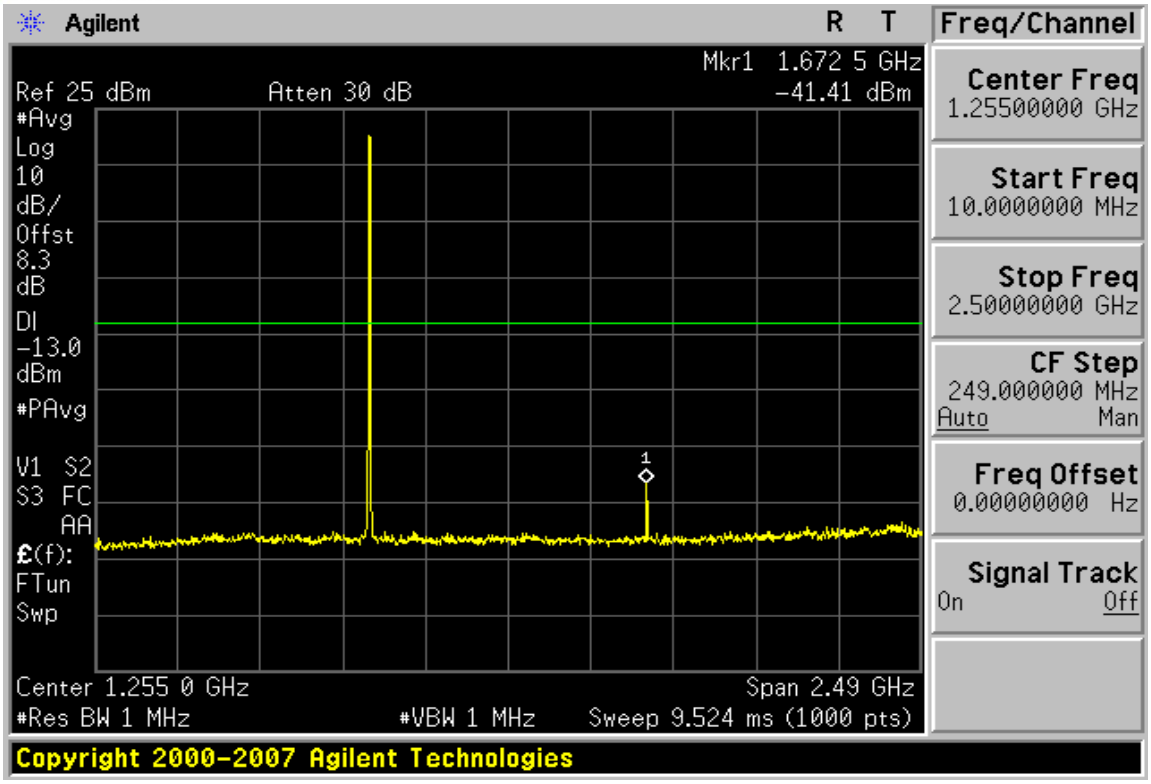
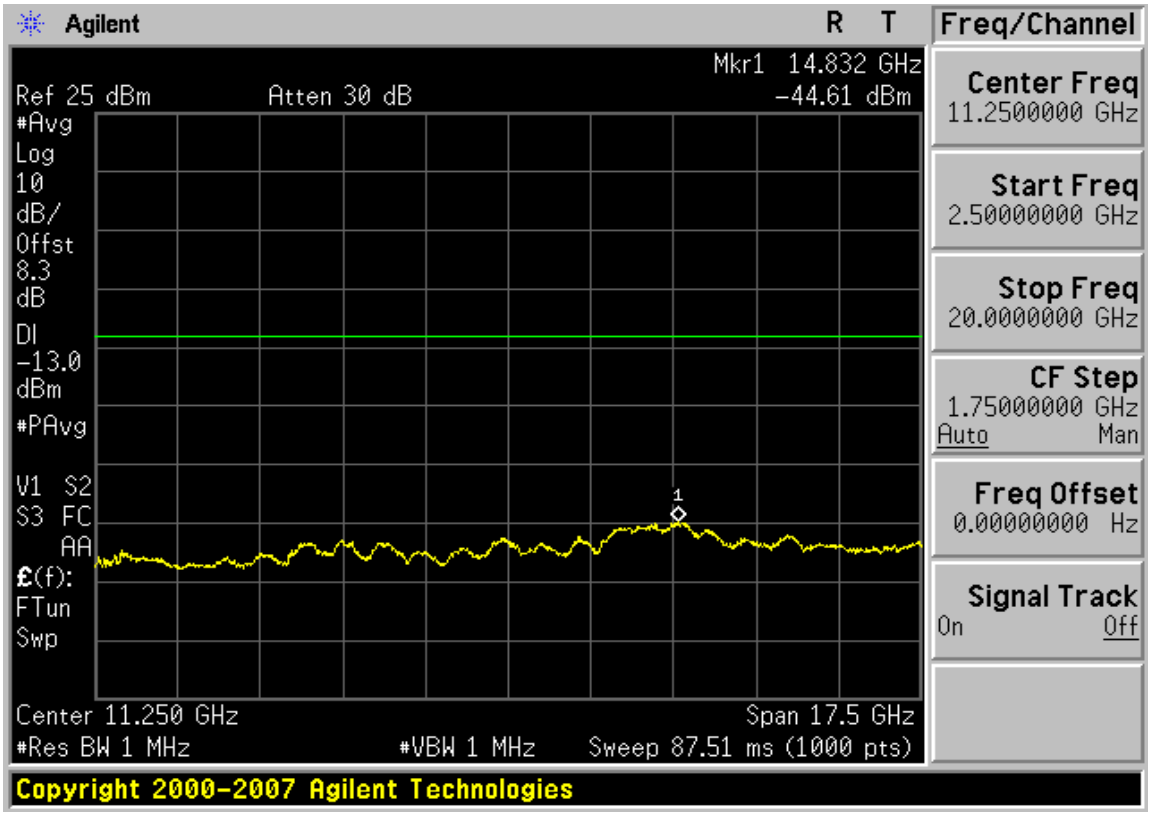


Plot 7-5. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 384)



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

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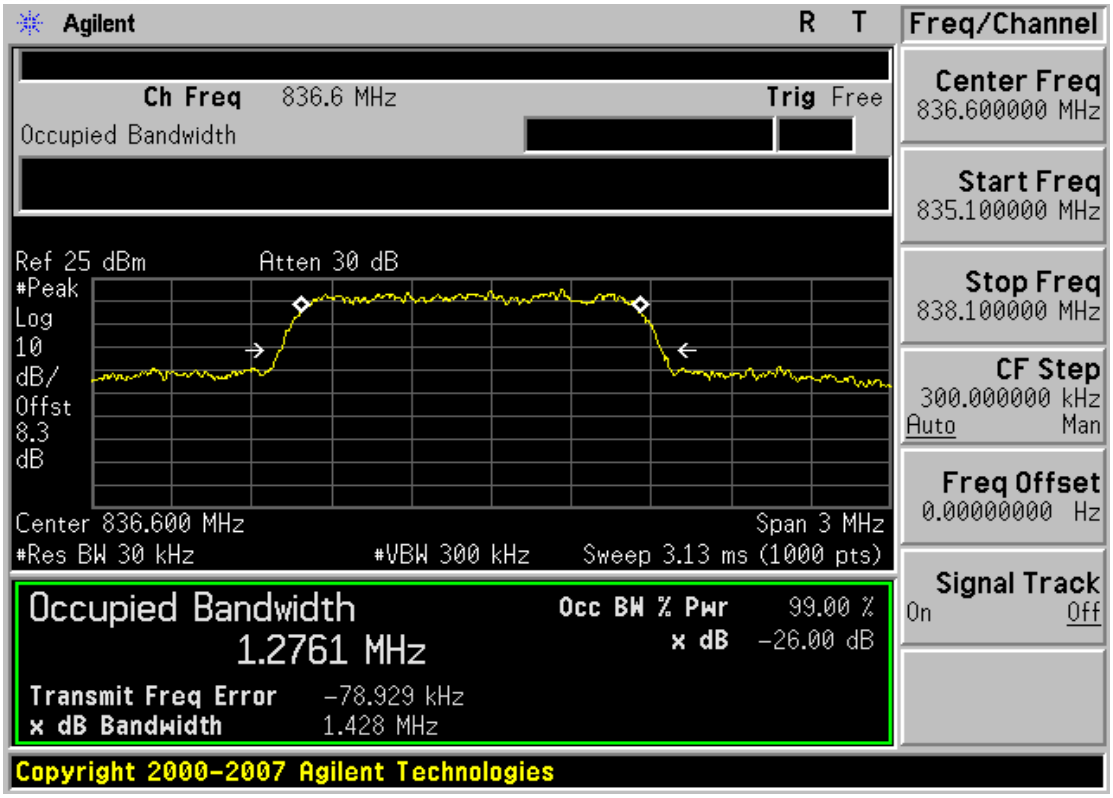
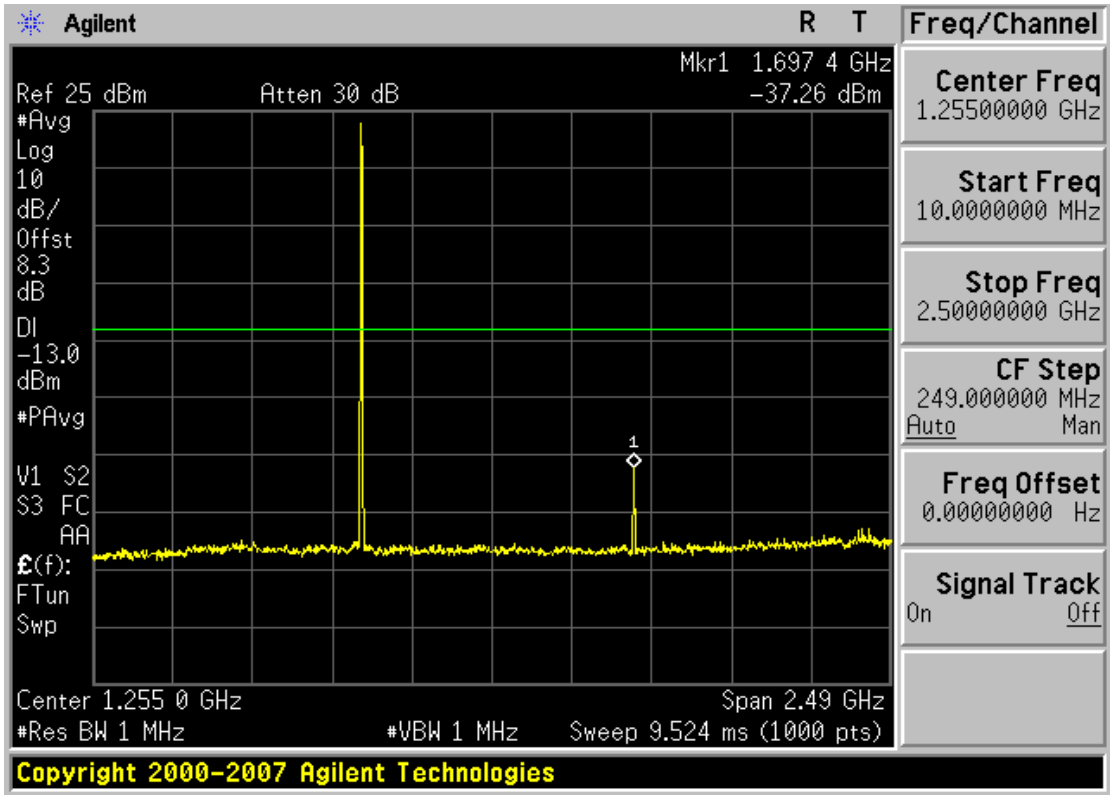


Plot 7-7. Occupied Bandwidth Plot (Cellular CDMA Mode – Ch. 384)



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

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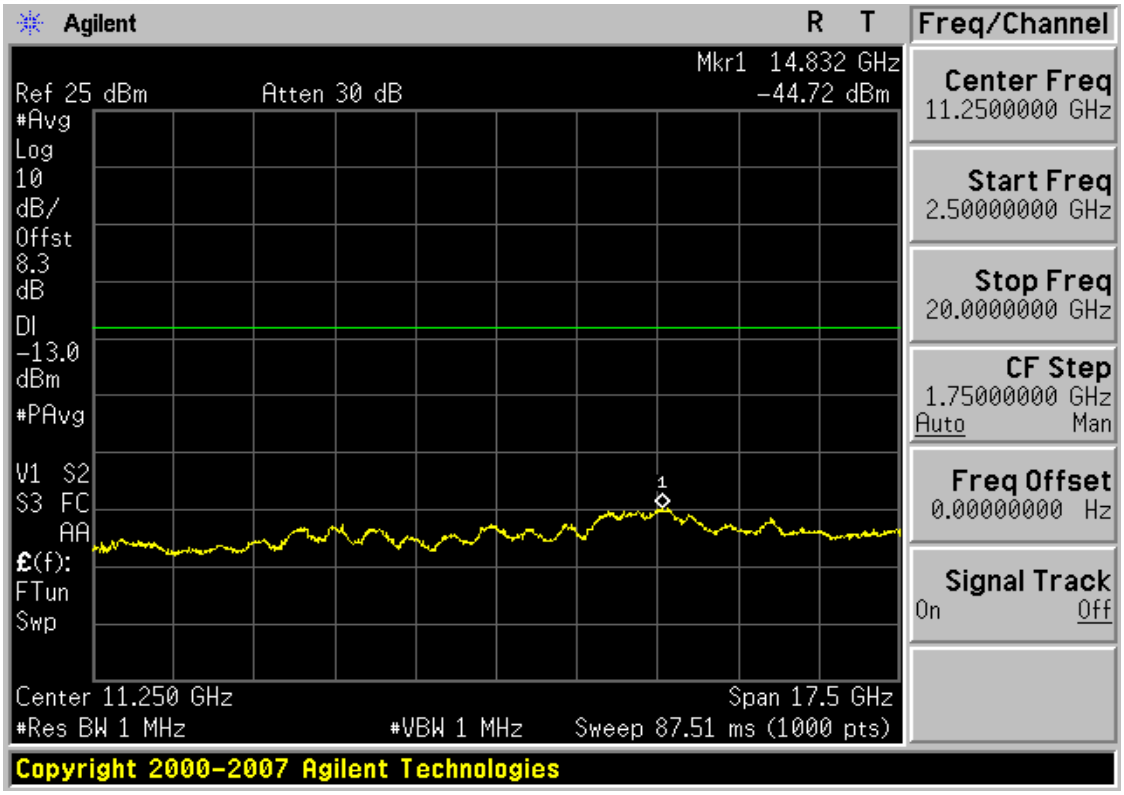
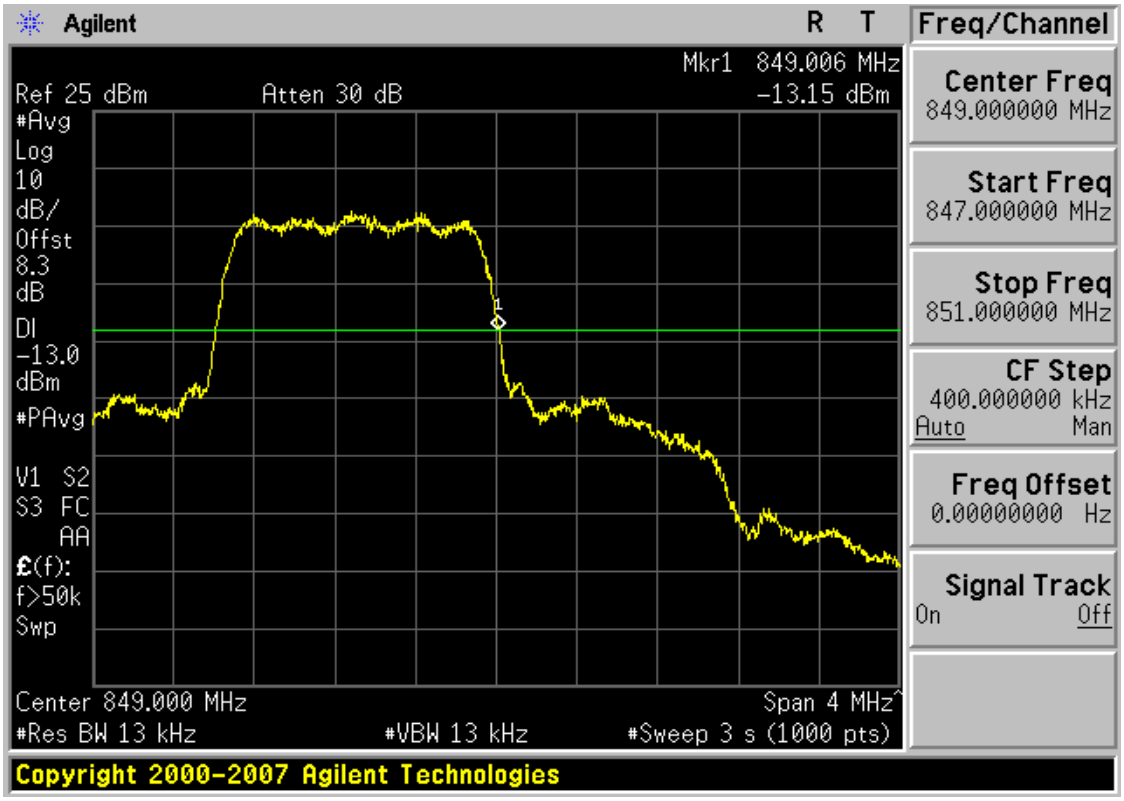


Plot 7-9. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 777)



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

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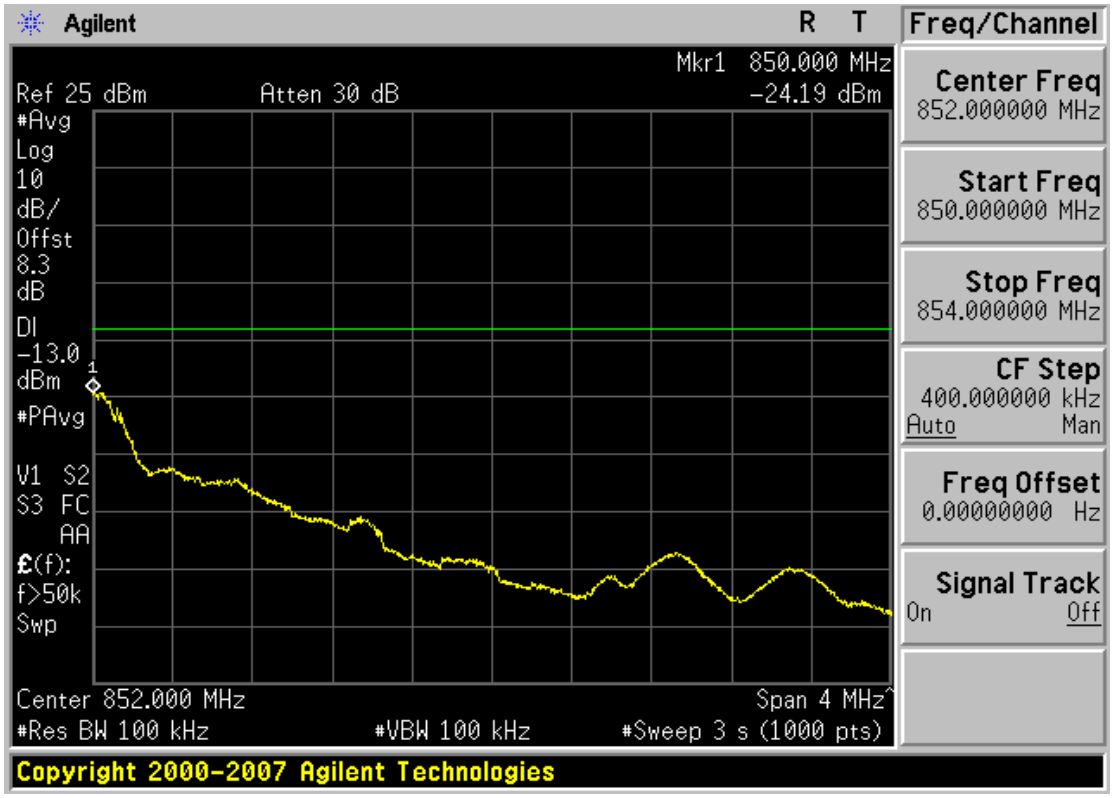
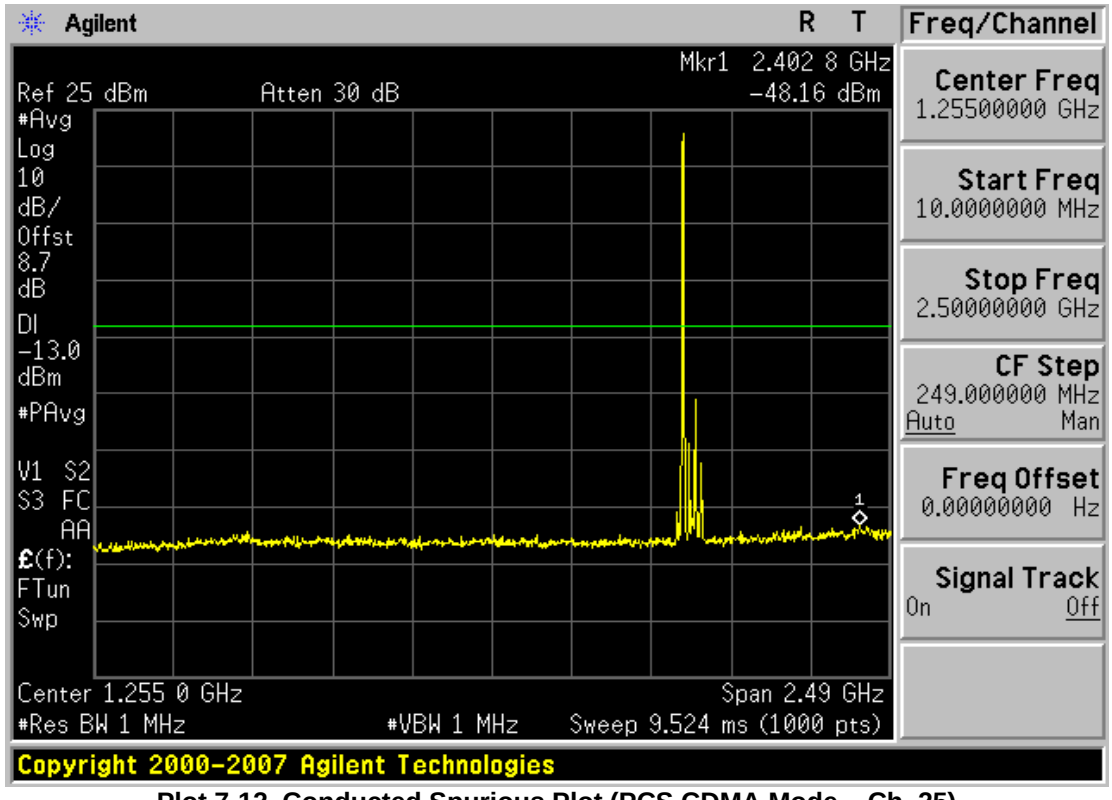


Plot 7-11. 4MHz Span Plot (Cellular CDMA Mode – Ch. 777)



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

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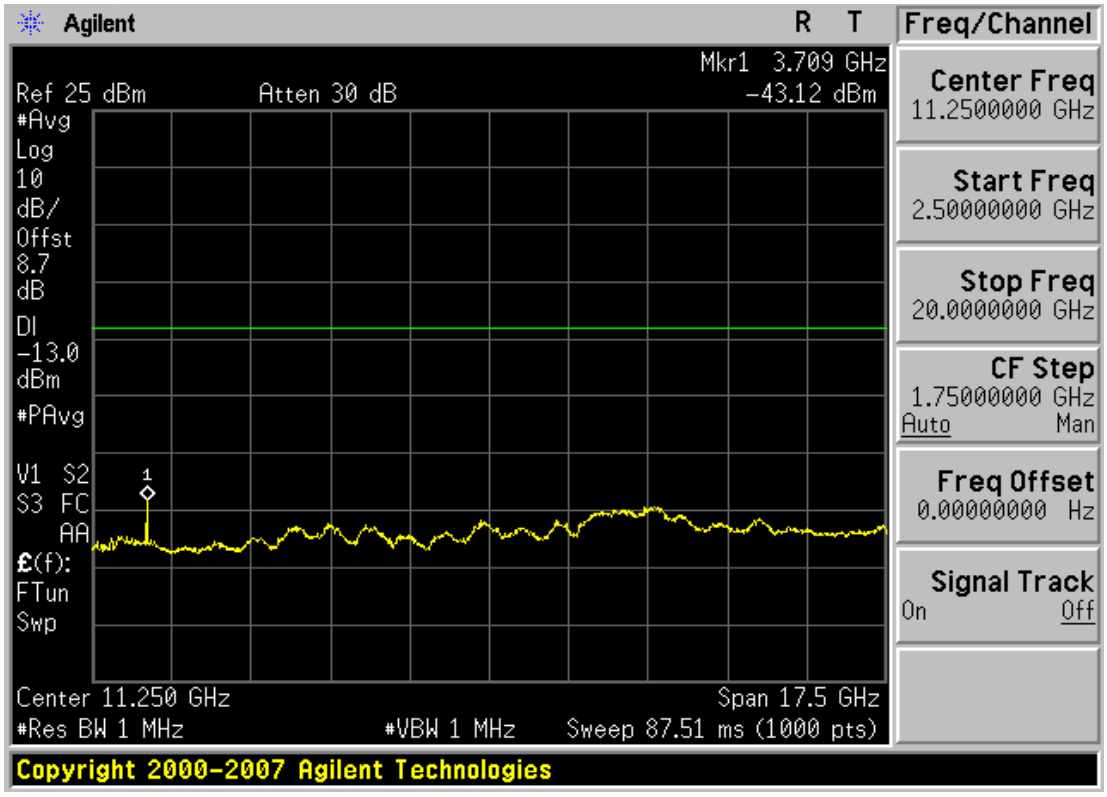
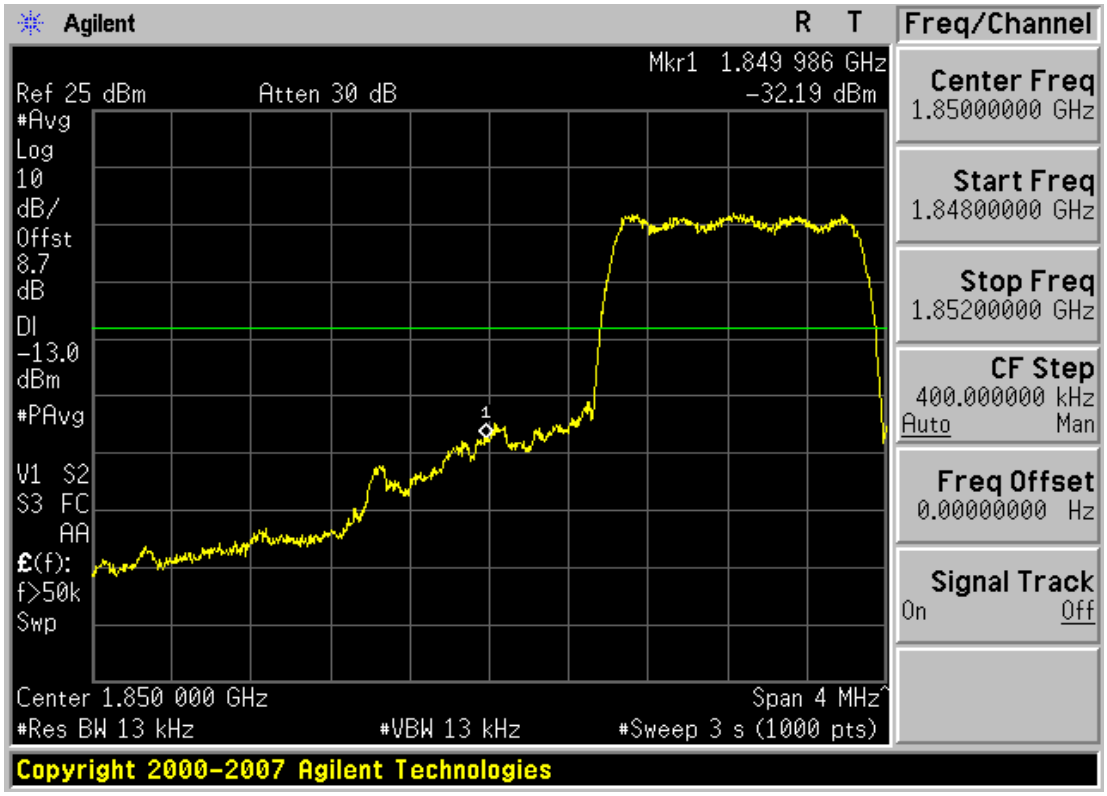


Plot 7-13. Conducted Spurious Plot (PCS CDMA Mode – Ch. 25)



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

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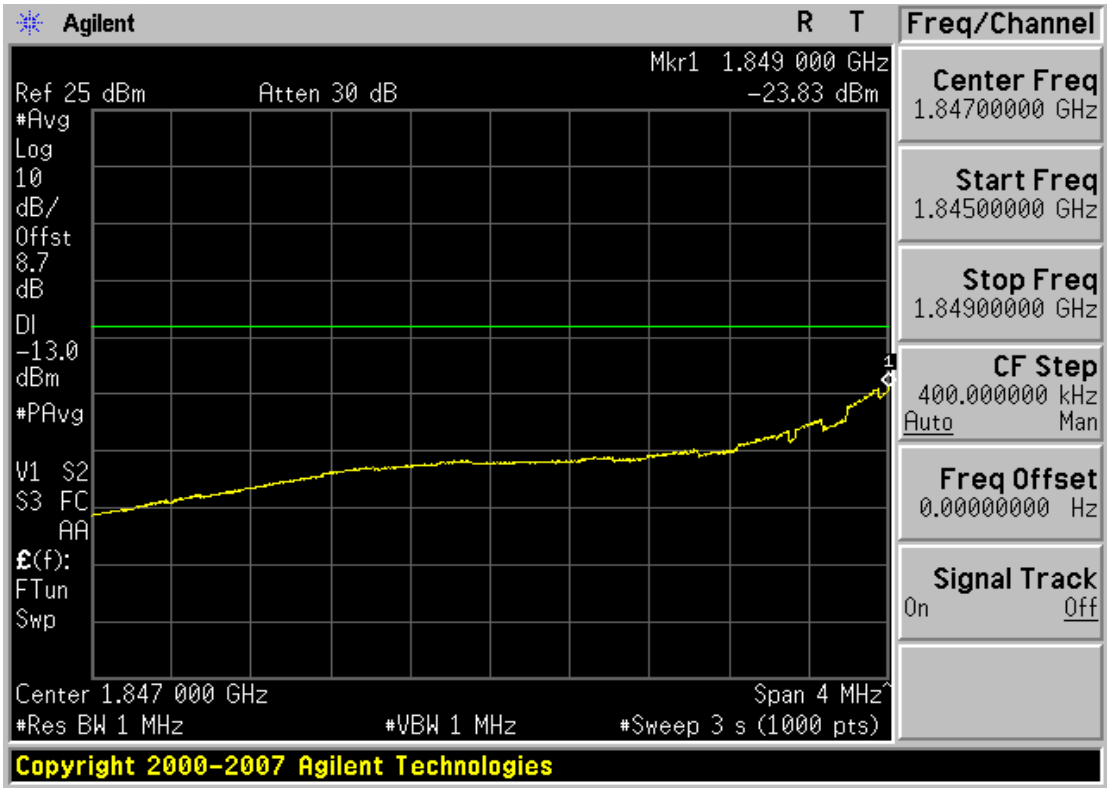
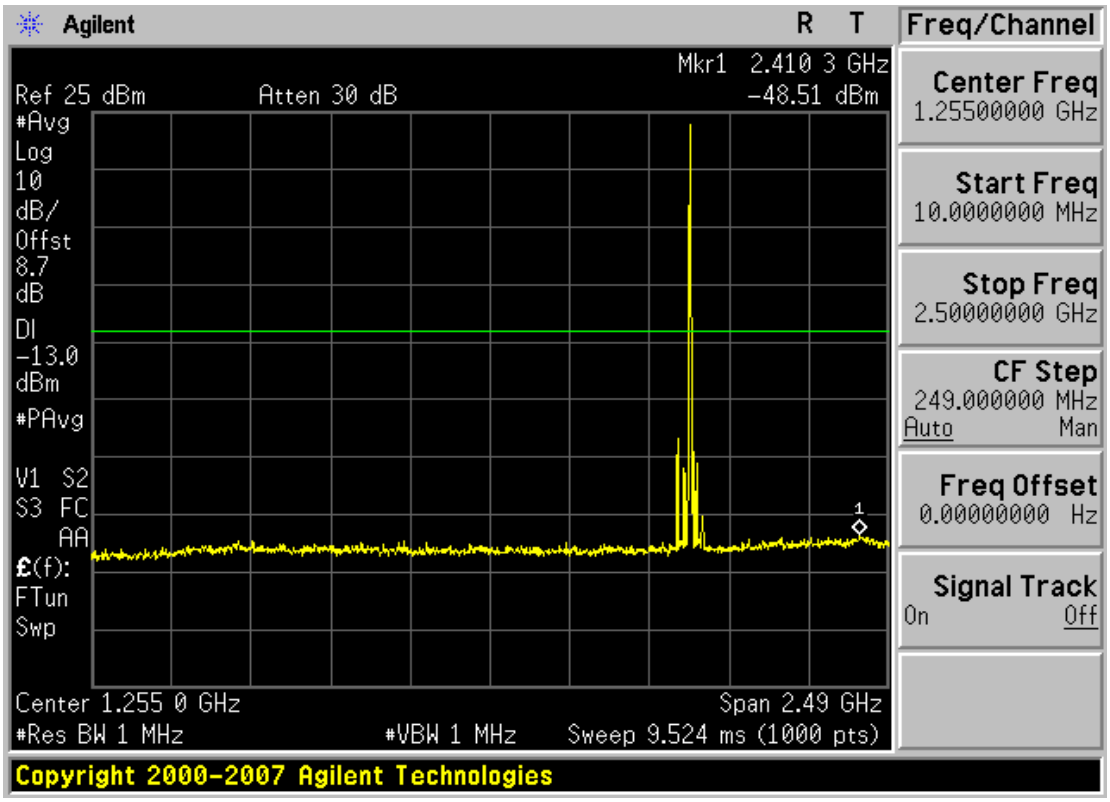


Plot 7-15. 4MHz Span Plot (PCS CDMA Mode – Ch. 25)



Plot 7-16. Conducted Spurious Plot (PCS CDMA Mode – Ch. 600)

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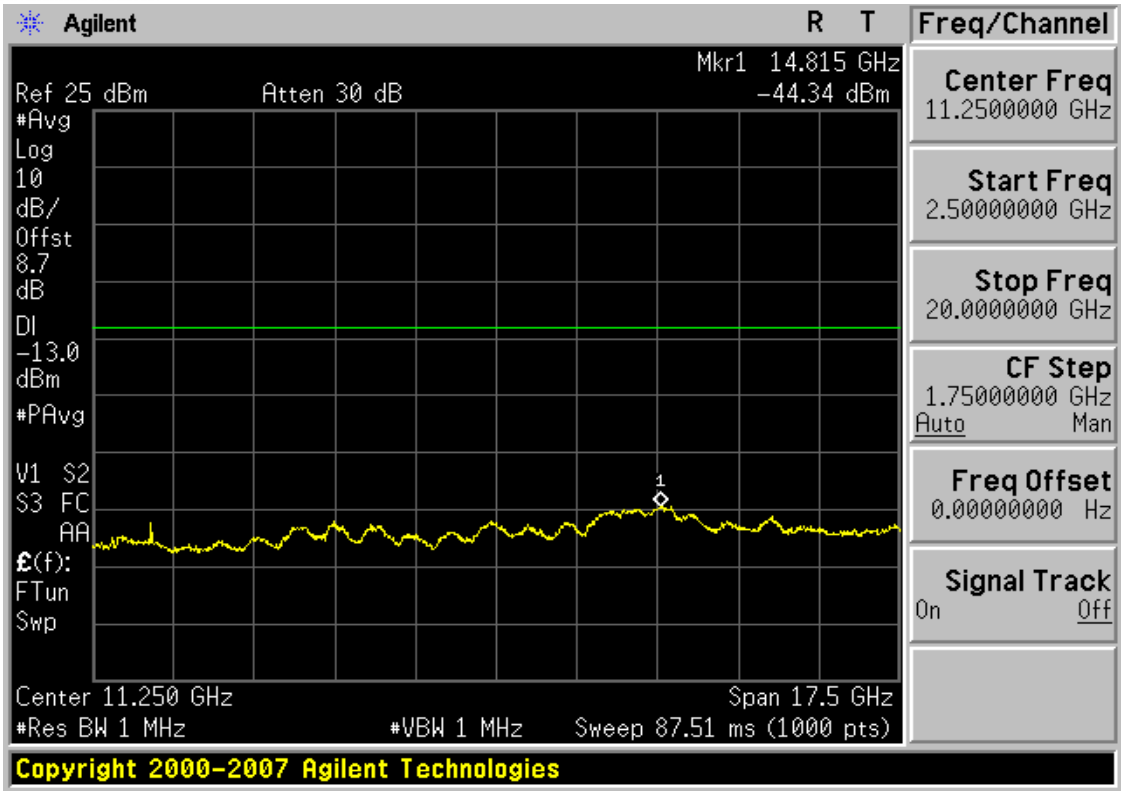
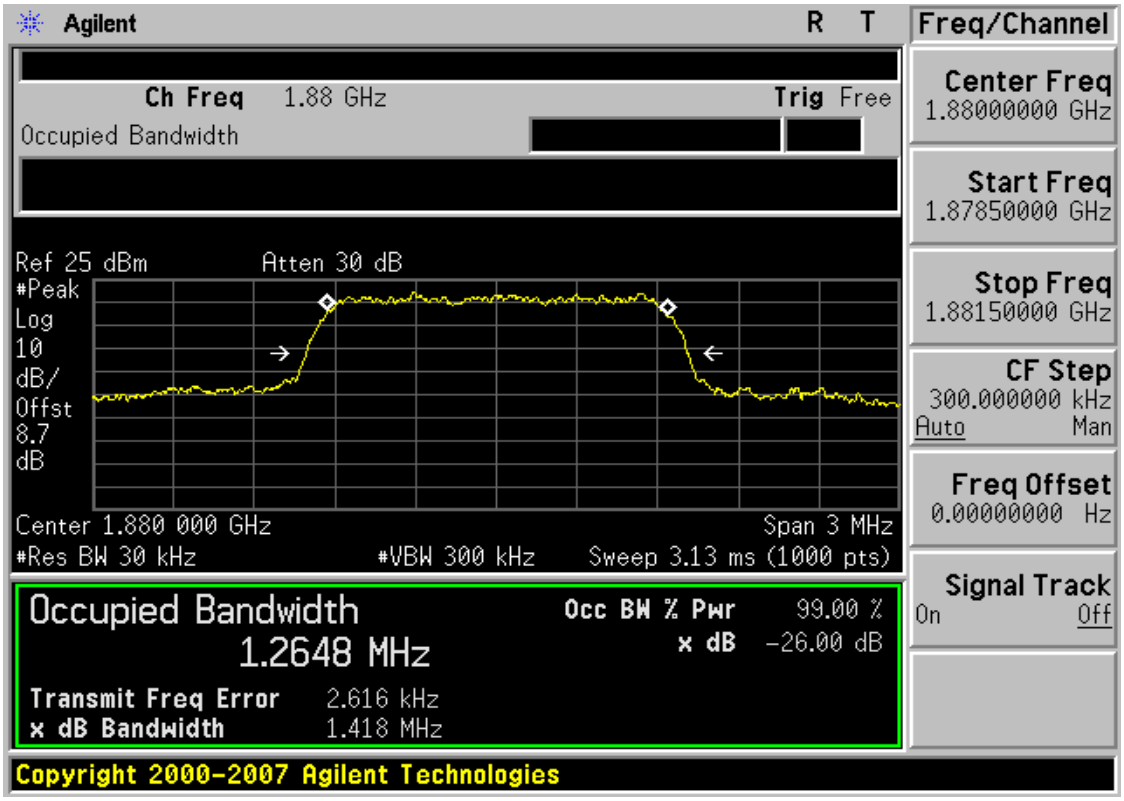


Plot 7-17. Conducted Spurious Plot (PCS CDMA Mode – Ch. 600)



Plot 7-18. Occupied Bandwidth Plot (PCS CDMA Mode – Ch. 600)

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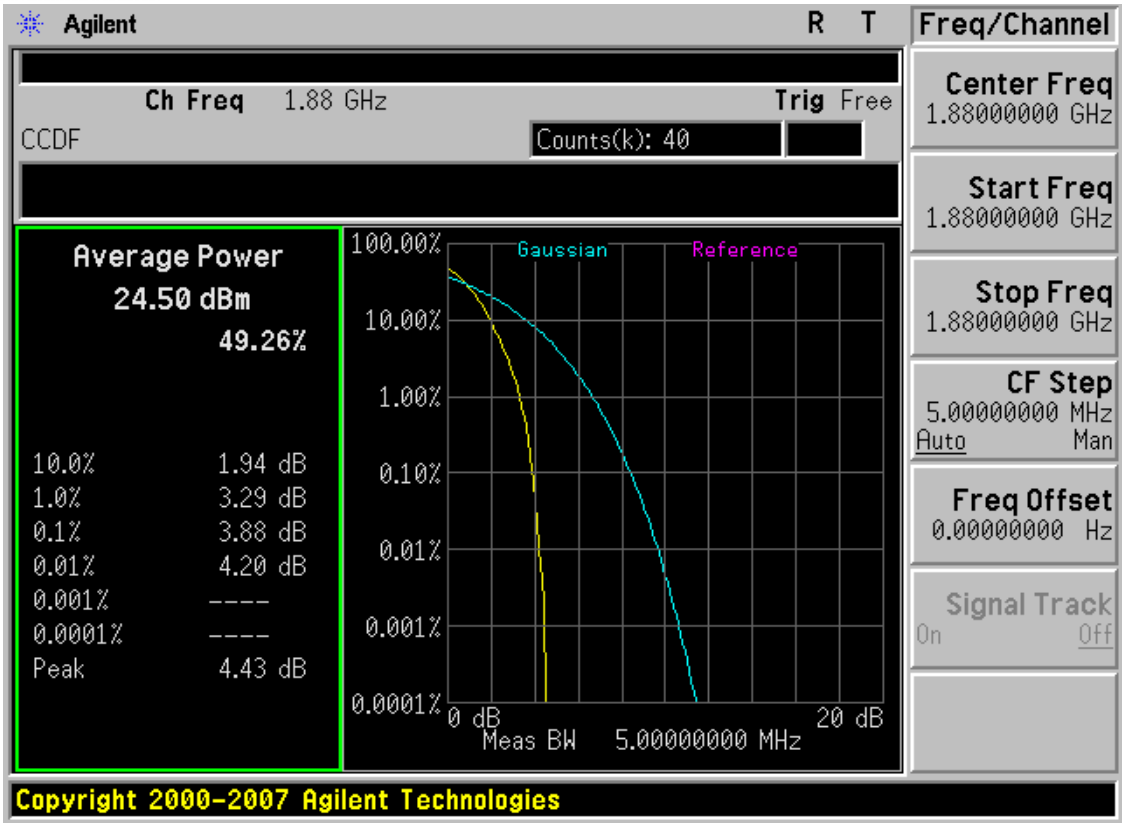
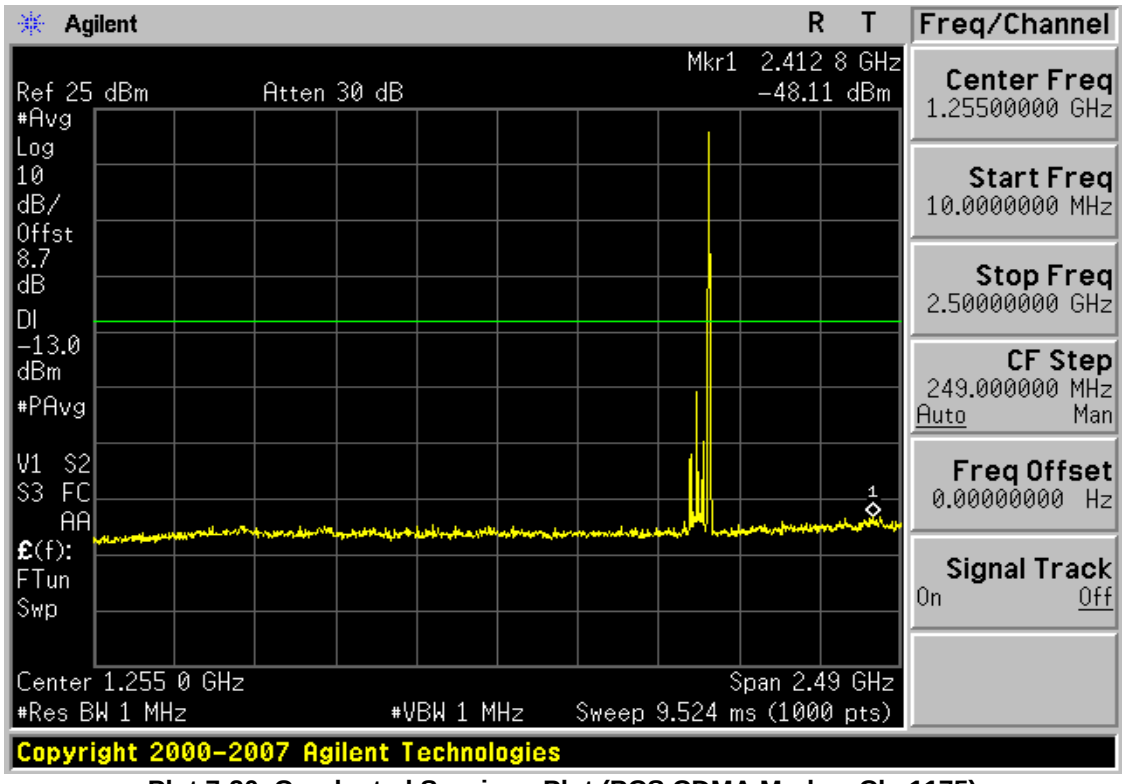


Plot 7-19. Peak-Average Ratio Plot (PCS CDMA Mode – Ch. 600)



Plot 7-20. Conducted Spurious Plot (PCS CDMA Mode – Ch. 1175)

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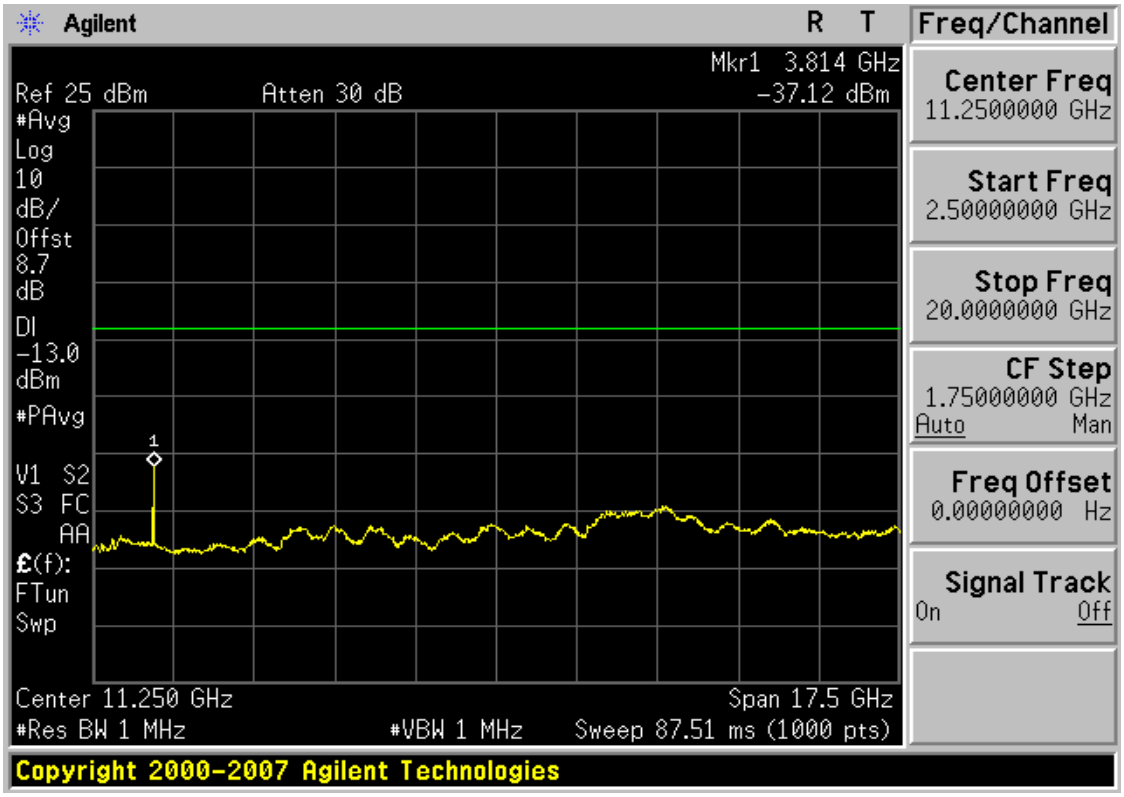
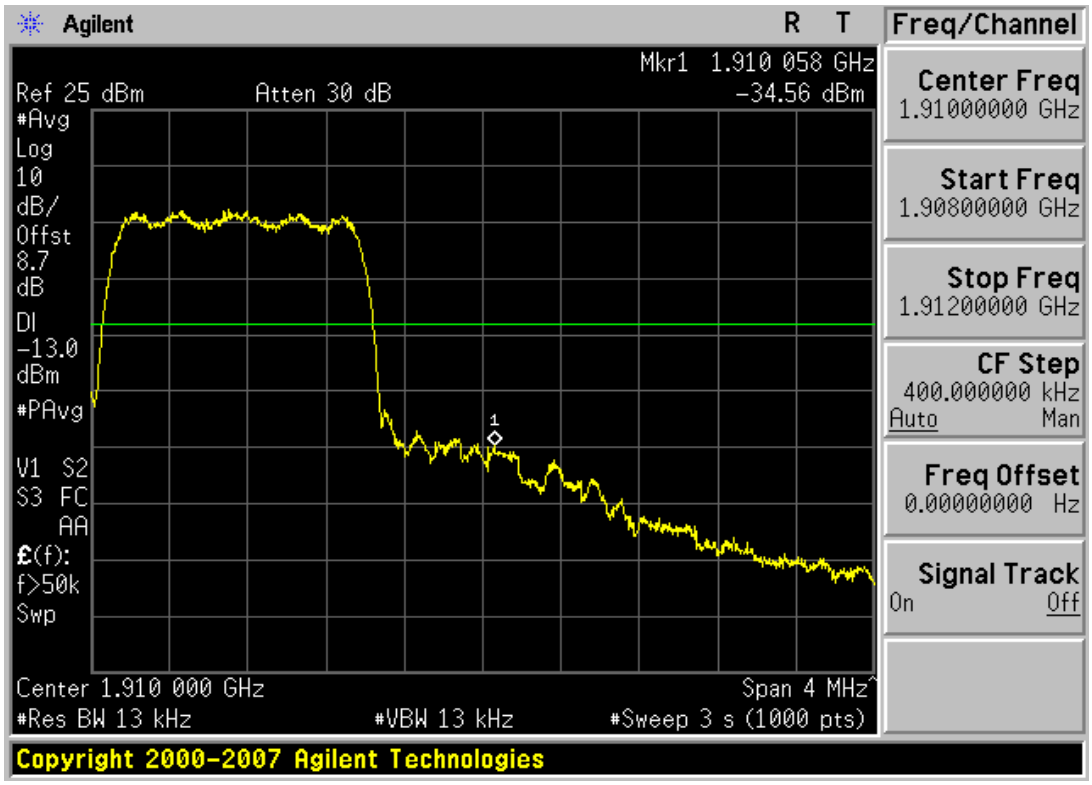


Plot 7-21. Conducted Spurious Plot (PCS CDMA Mode – Ch. 1175)



Plot 7-22. Band Edge Plot (PCS CDMA Mode – Ch. 1175)

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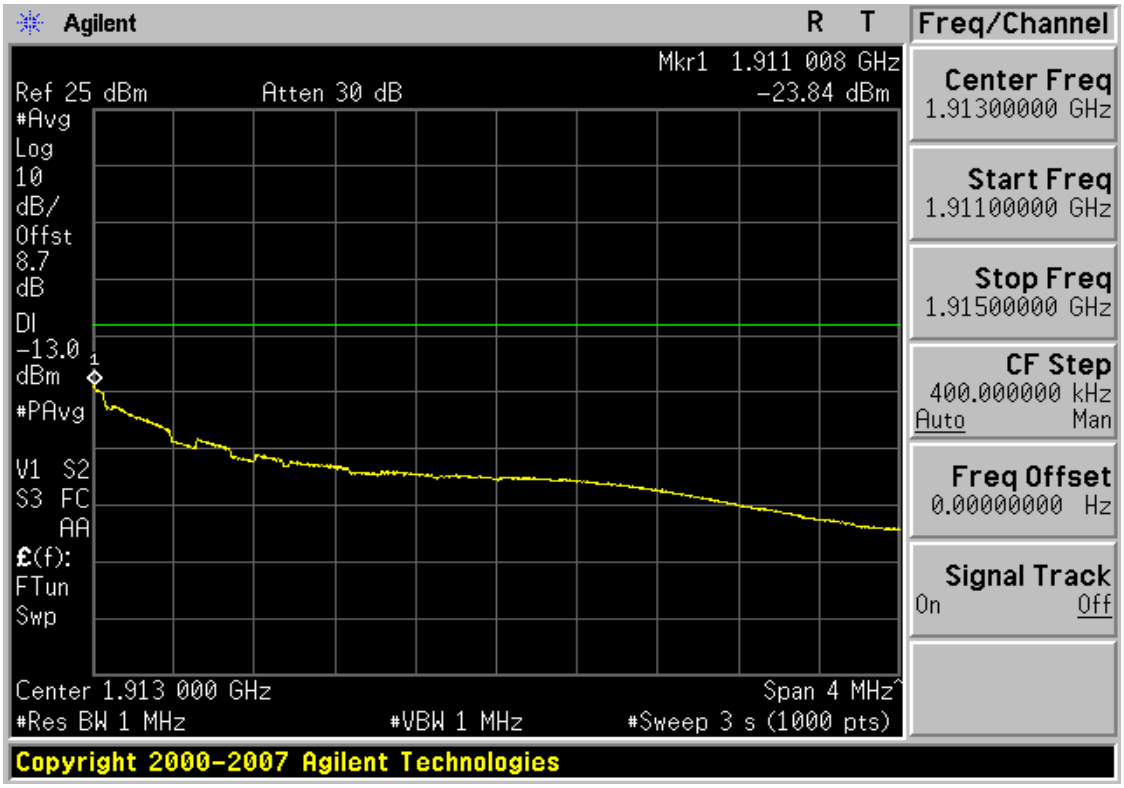
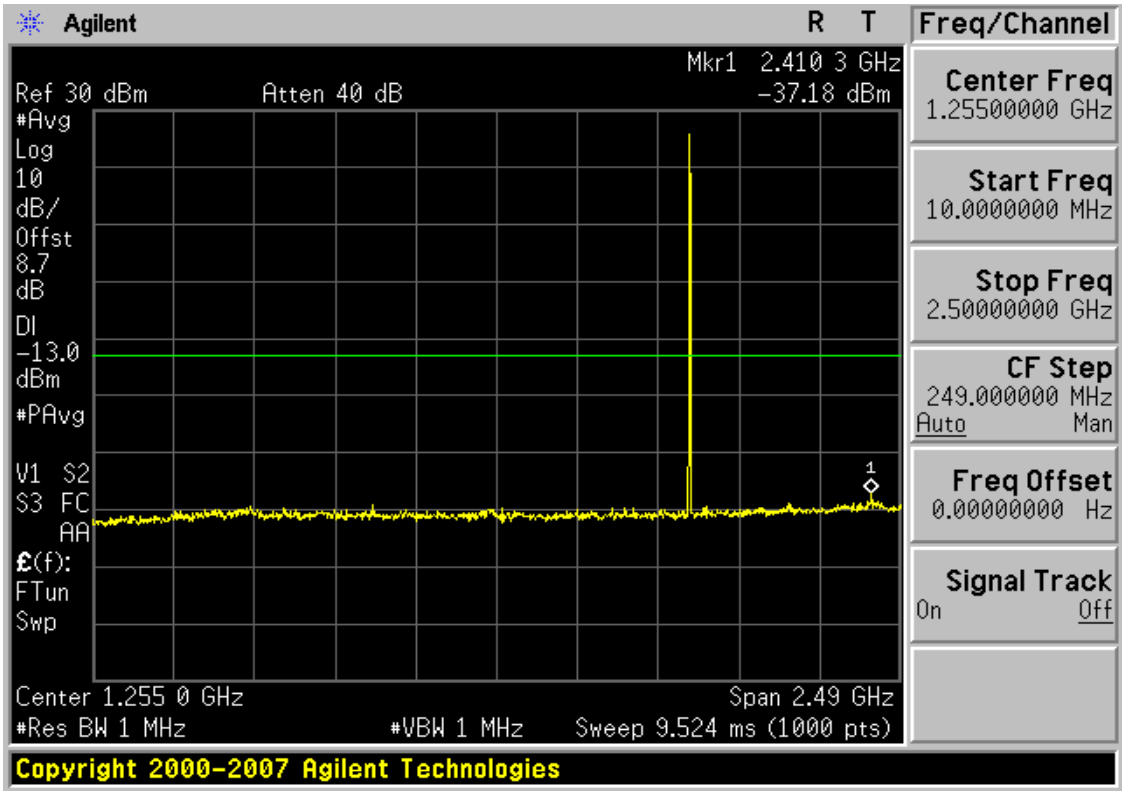


Plot 7-23. 4MHz Span Plot (PCS CDMA Mode – Ch. 1175)



Plot 7-24. Conducted Spurious Plot (PCS GSM Mode – Ch. 512)

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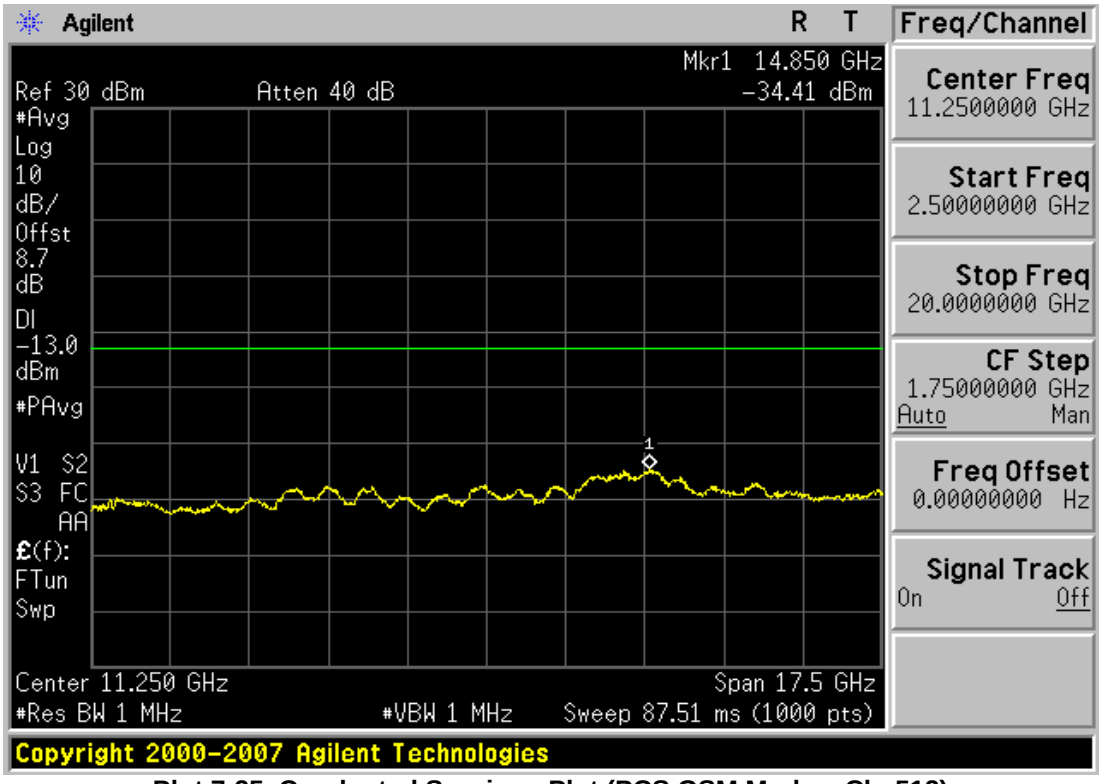
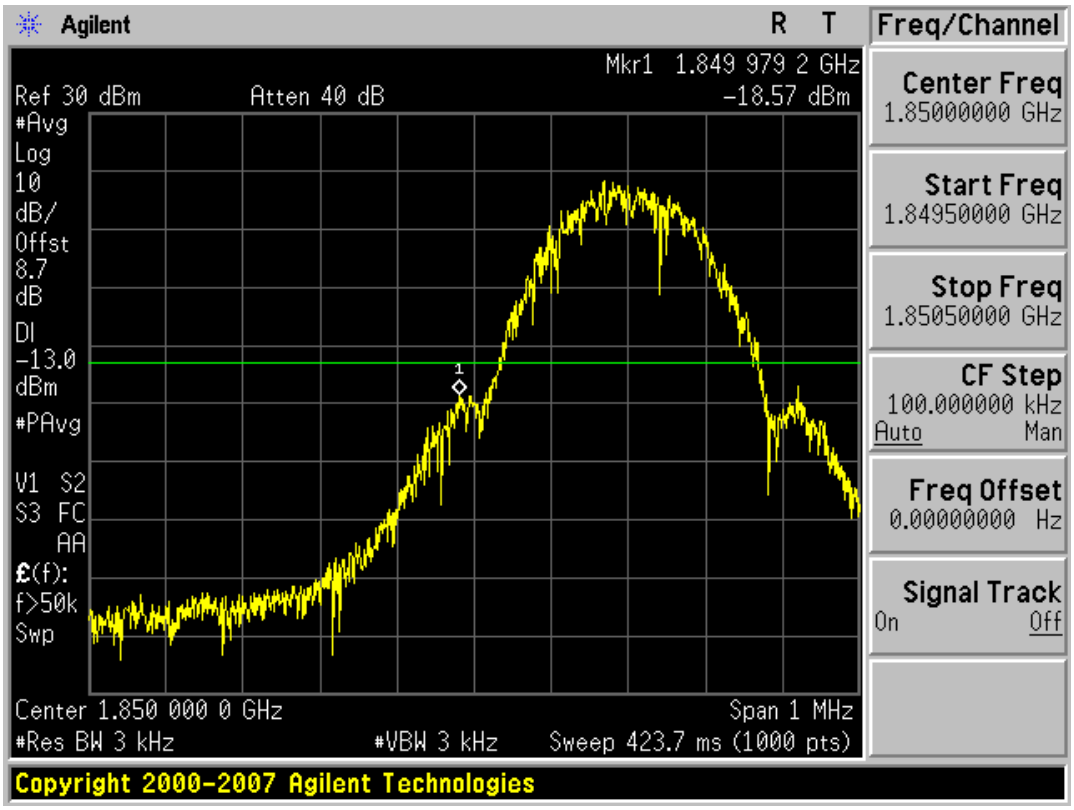


Plot 7-25. Conducted Spurious Plot (PCS GSM Mode – Ch. 512)



Plot 7-26. Band Edge Plot (PCS GSM Mode – Ch. 512)

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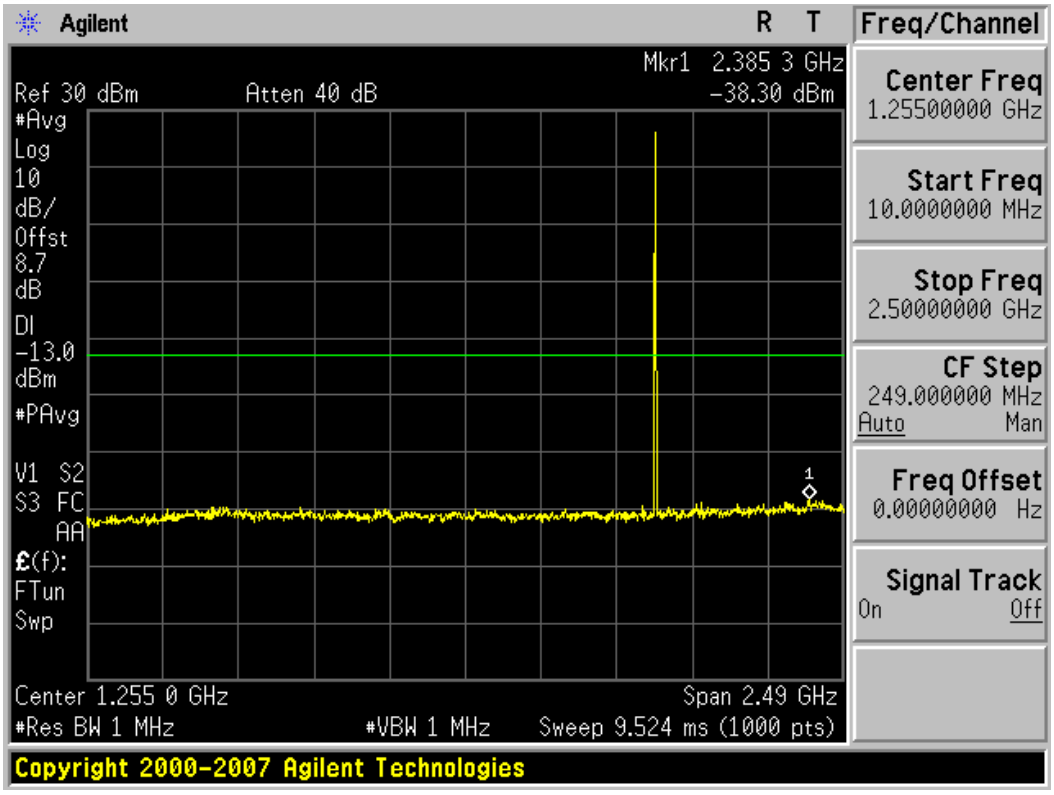
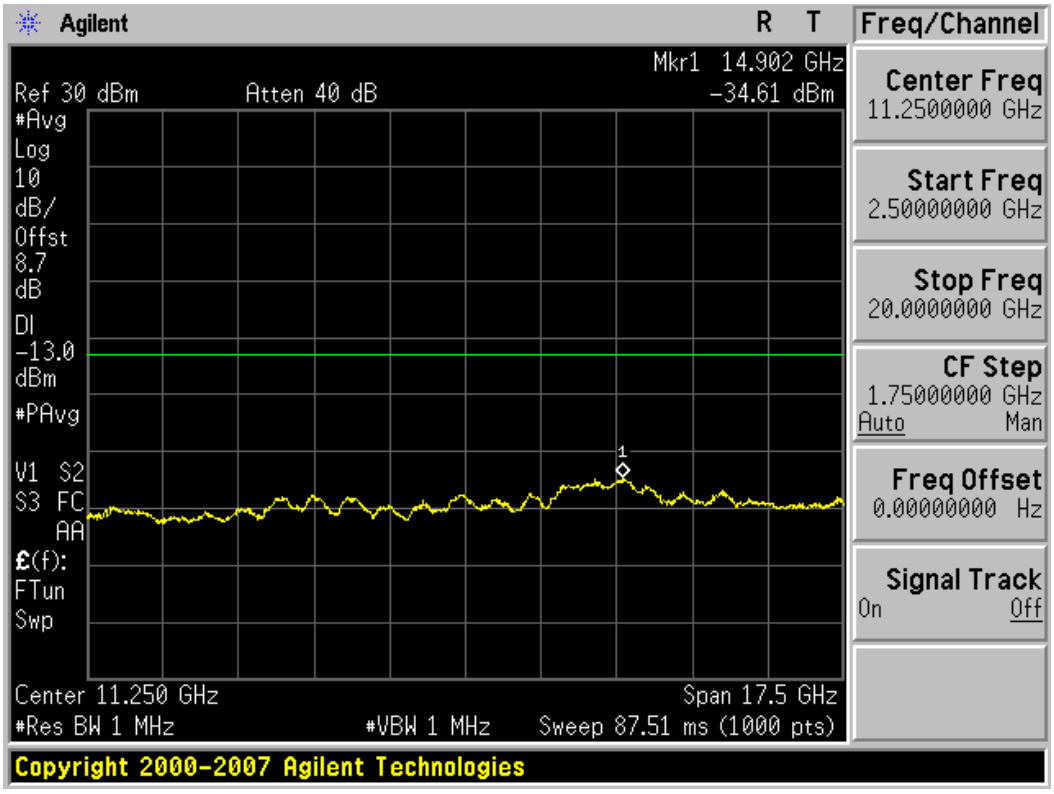


Plot 7-27. Conducted Spurious Plot (PCS GSM Mode – Ch. 661)



Plot 7-28. Conducted Spurious Plot (PCS GSM Mode – Ch. 661)

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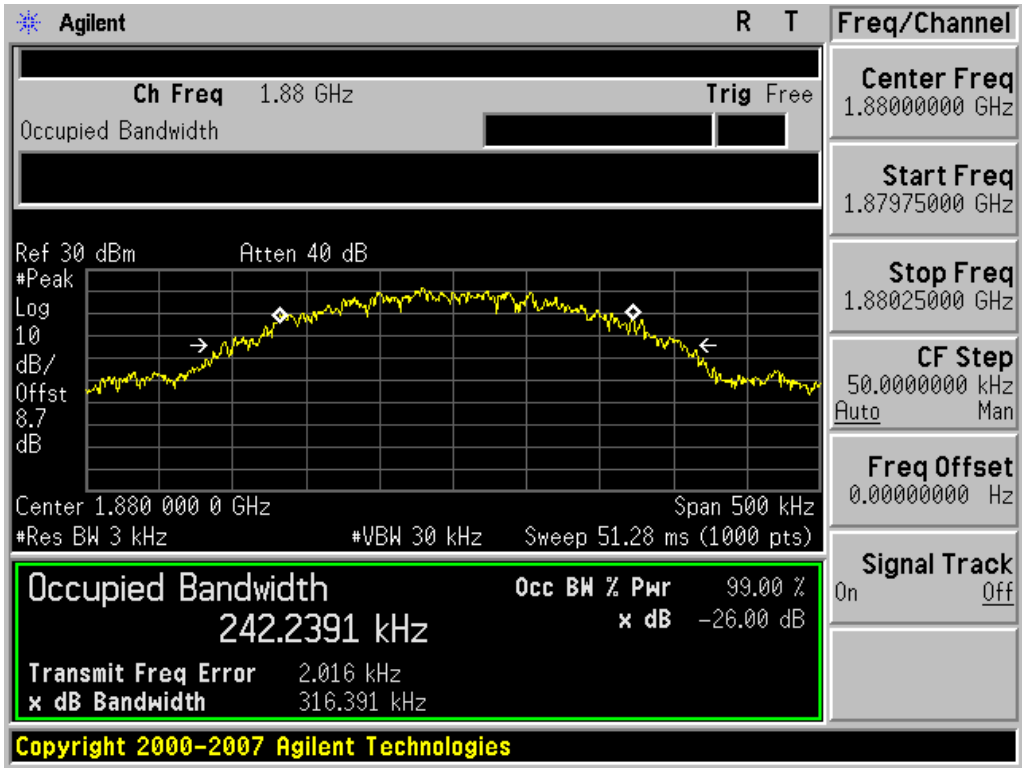
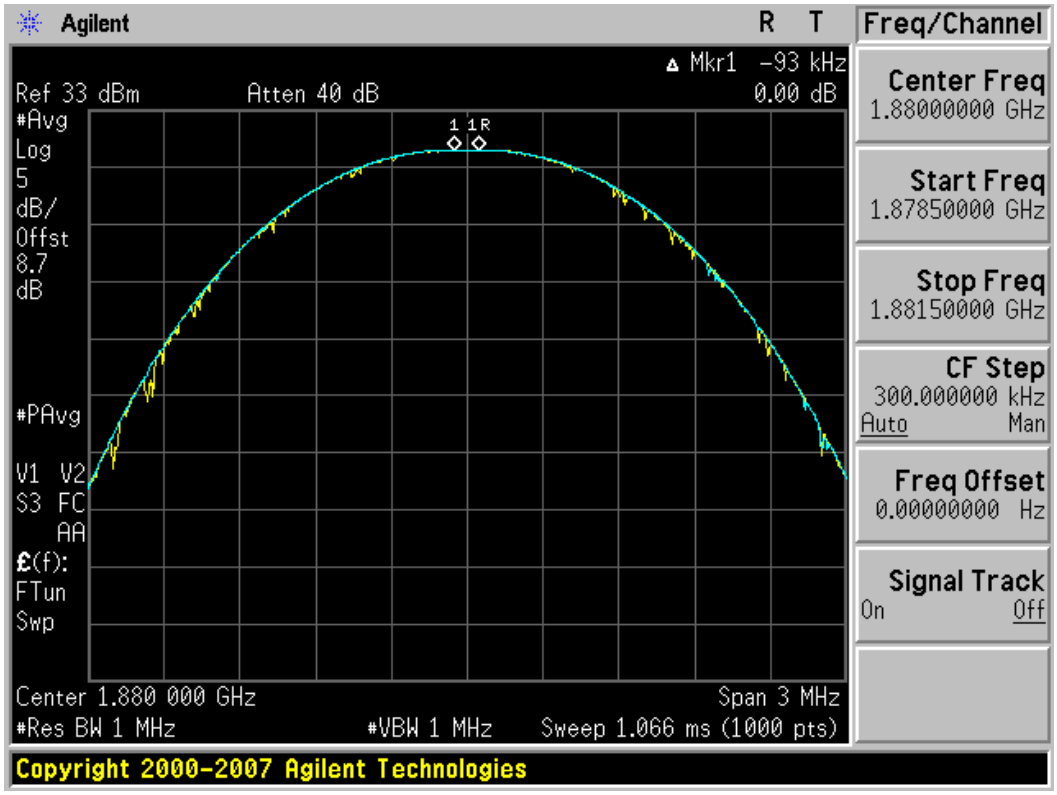


Plot 7-29. Occupied Bandwidth Plot (PCS GSM Mode – Ch. 661)



Plot 7-30. Peak-Average Ratio Plot (PCS GSM Mode – Ch. 661)

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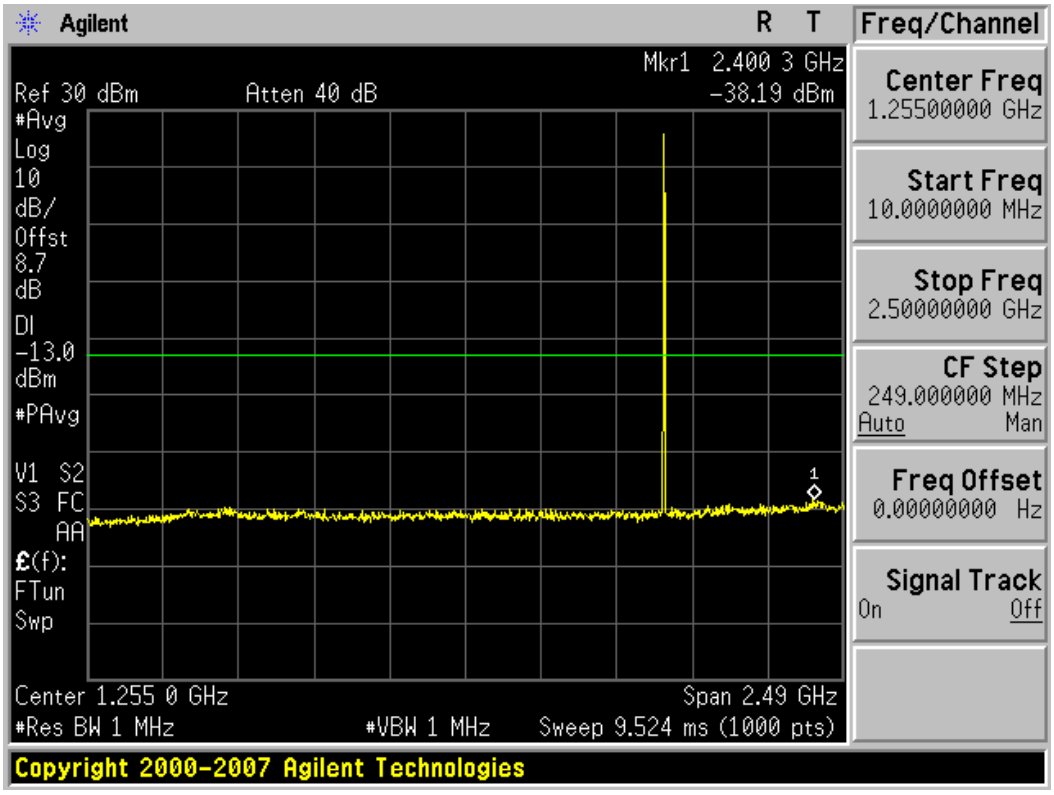
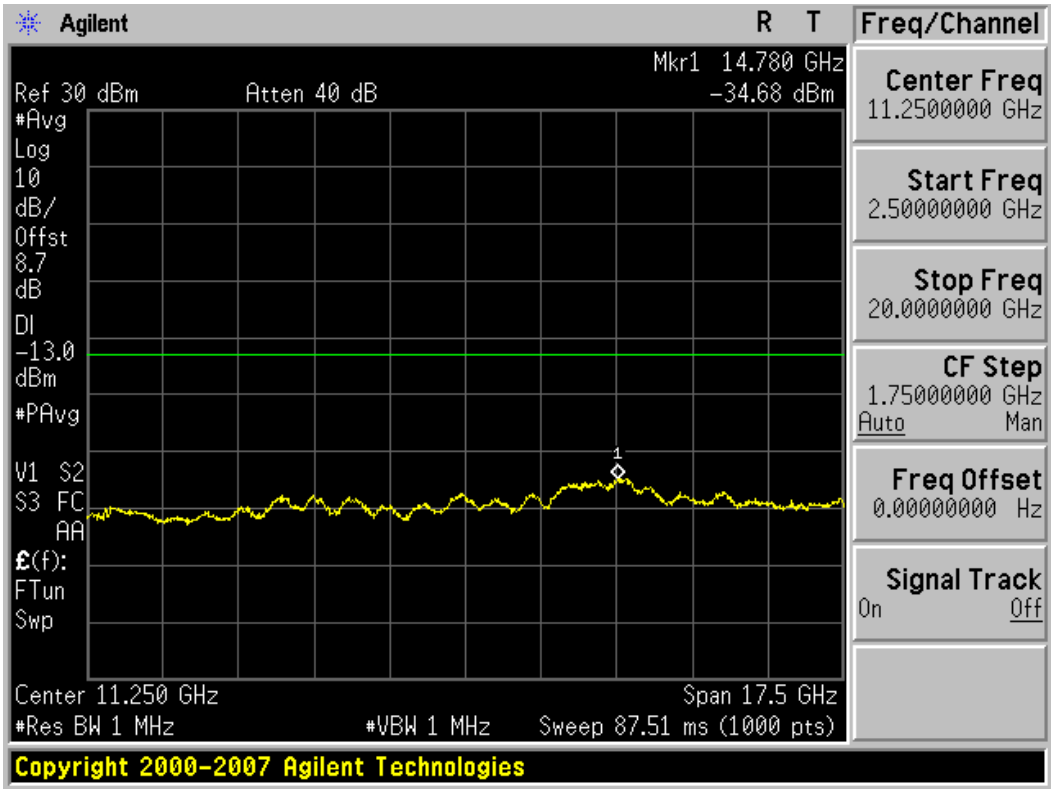


Plot 7-31. Conducted Spurious Plot (PCS GSM Mode – Ch. 810)



Plot 7-32. Conducted Spurious Plot (PCS GSM Mode – Ch. 810)

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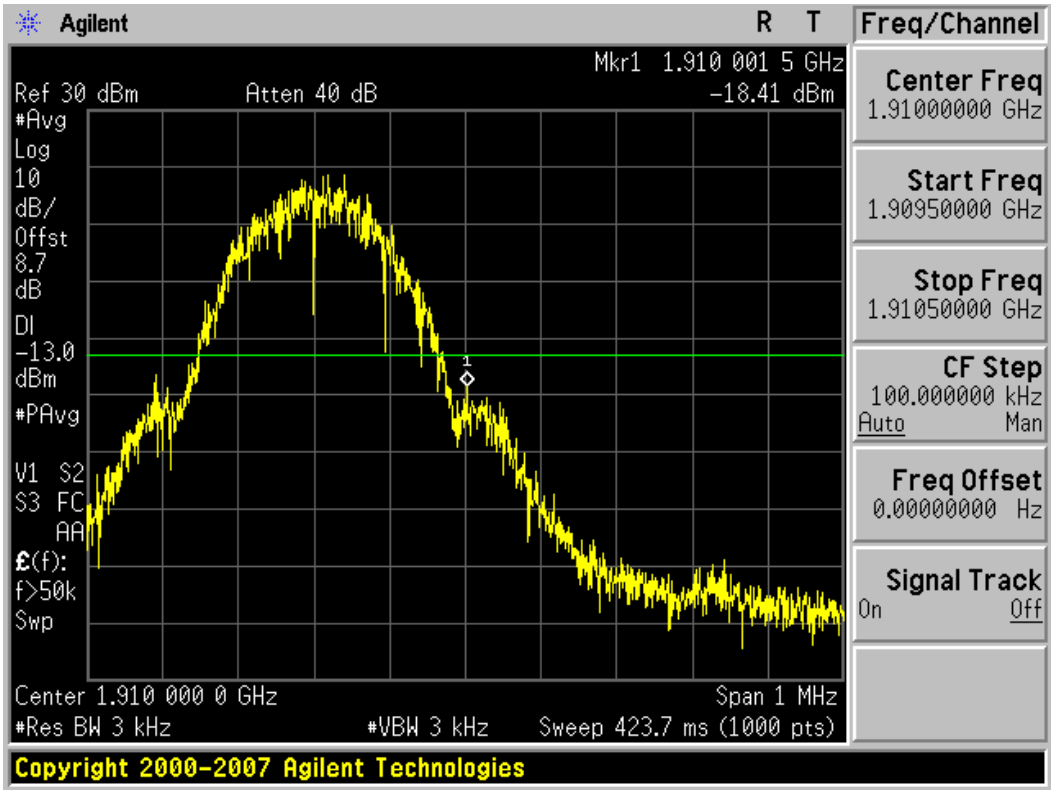
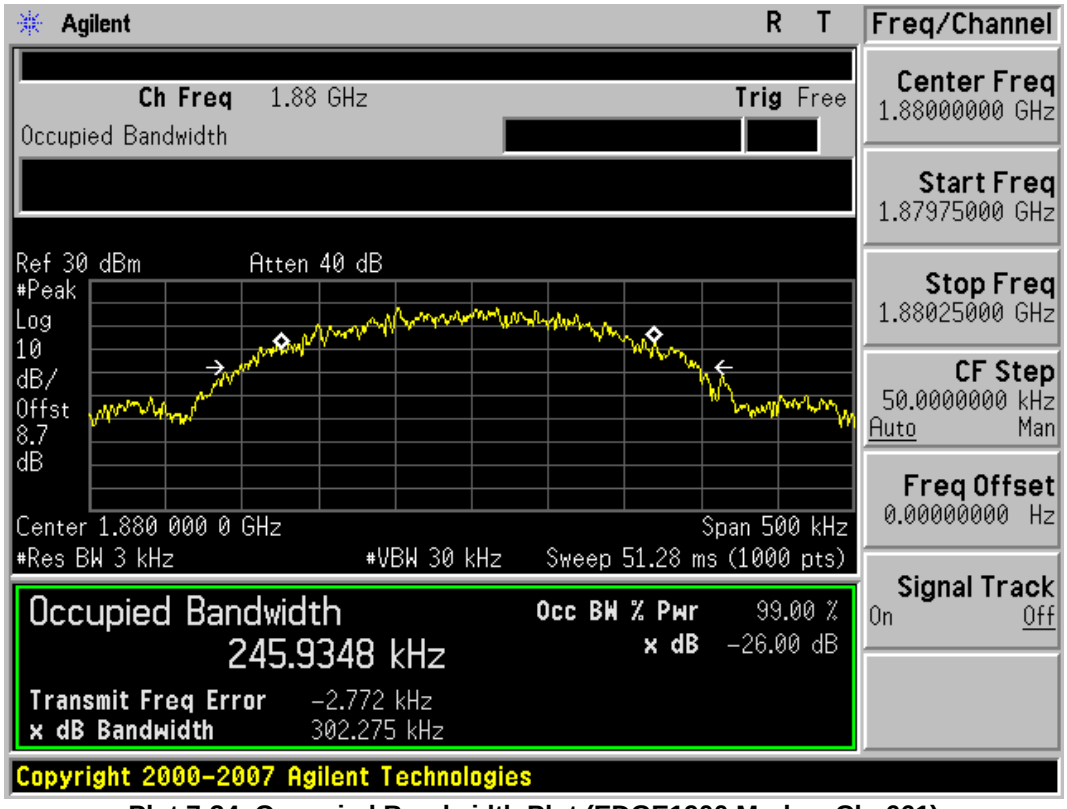


Plot 7-33. Band Edge Plot (PCS GSM Mode – Ch. 810)



Plot 7-34. Occupied Bandwidth Plot (EDGE1900 Mode – Ch. 661)

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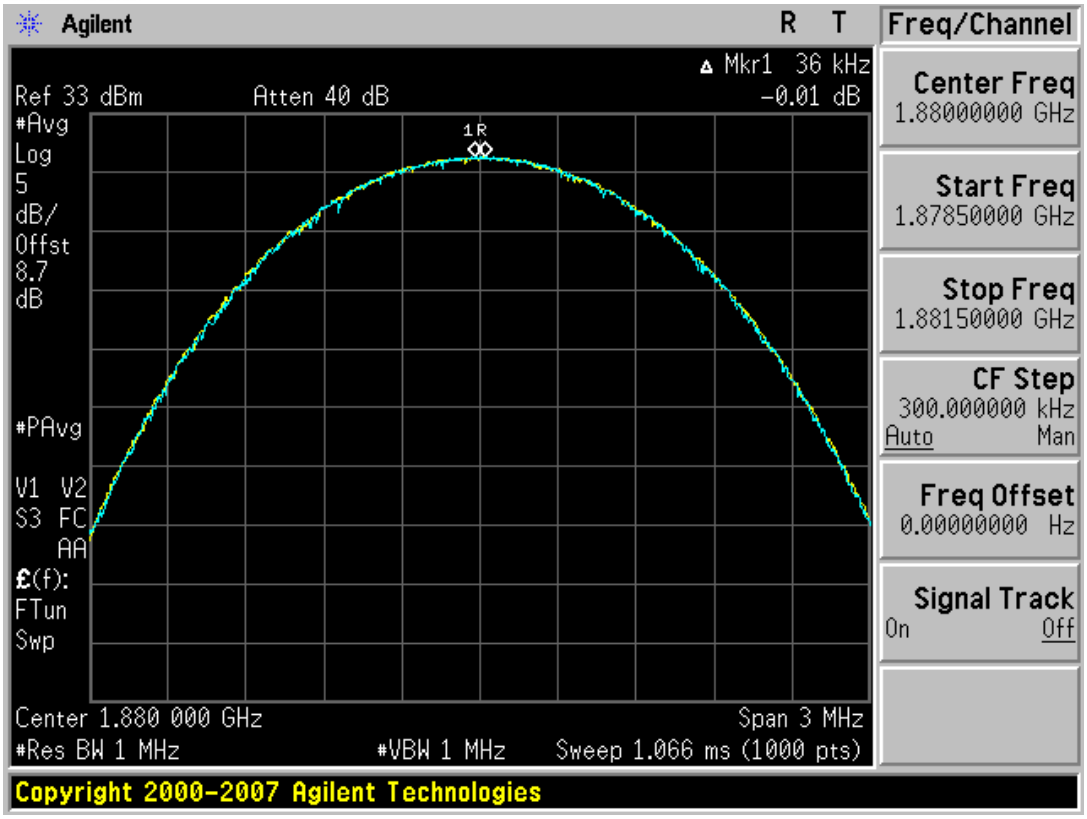

Plot 7-35. Peak-Average Ratio Plot (EDGE1900 Mode – Ch. 661)

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8.0 CONCLUSION

The data collected relate only to the item(s) tested and show that the **Samsung Portable Handset FCC ID: A3LSCHI929** complies with all the requirements of Parts 2, 22, and 24 of the FCC rules and RSS-132 and RSS-133 of the Industry Canada rules.

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