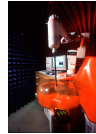




# PCTEST ENGINEERING LABORATORY, INC.

6660-B Dobbin Road, Columbia, MD 21045 USA  
Tel. 410.290.6652 / Fax 410.290.6554  
<http://www.pctestlab.com>



## CERTIFICATE OF COMPLIANCE FCC Part 22 & 24 Certification

**Applicant Name:**  
Panasonic Corporation of North America  
One Panasonic Way, 4B-8  
Secaucus, NJ 07094  
United States

**Date of Testing:**  
February 7 - 8, 2008  
**Test Site/Location:**  
PCTEST Lab., Columbia, MD, USA  
**Test Report Serial No.:**  
0801230082.ACJ

**FCC ID:** ACJ9TGCF-29DB

**APPLICANT:** PANASONIC CORPORATION OF NORTH AMERICA


**Application Type:** Certification  
**FCC Classification:** PCS Licensed Transmitter (PCB)  
**FCC Rule Part(s):** §2; §22(H), §24(E)  
**EUT Type:** Toughbook Model: CF-29  
**Model(s):** CF-29  
**Tx Frequency Range:** 824.70 - 848.31MHz (Cell. CDMA) / 1851.25 - 1908.75MHz (PCS CDMA)  
**Max. RF Output Power:** 0.082 W ERP Cell. CDMA (19.15 dBm)  
0.178 W EIRP PCS CDMA (22.51 dBm)  
**Emission Designator(s):** 1M27F9W (CDMA) / 1M27F9W (PCS)  
**Test Device Serial No.:** *identical prototype* [S/N: 5KKSA00023]

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.



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.

**Grant Conditions:** Power output listed is ERP for Part 22 and EIRP for Part 24.

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



  
Randy Ortanez  
President

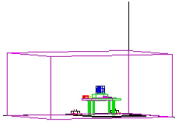


<b>FCC ID:</b> ACJ9TGCF-29DB		<b>FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)</b>		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0801230082.ACJ	<b>Test Dates:</b> February 7 - 8, 2008	<b>EUT Type:</b> Toughbook Model: CF-29	Page 1 of 35	

# T A B L E O F C O N T E N T S

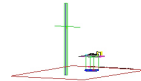
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<b>Test Report S/N:</b> 0801230082.ACJ	<b>Test Dates:</b> February 7 - 8, 2008	<b>EUT Type:</b> Toughbook Model: CF-29		Page 2 of 35



# MEASUREMENT REPORT

## FCC Part 22 & 24



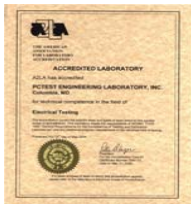
### §2.1033 General Information



**APPLICANT:** Panasonic Corporation of North America  
**APPLICANT ADDRESS:** One Panasonic Way, 4B-8  
 Secaucus, NJ 07094  
**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)  
**BASE MODEL:** CF-29  
**FCC ID:** ACJ9TGCF-29DB  
**FCC CLASSIFICATION:** PCS Licensed Transmitter (PCB)  
**EMISSION DESIGNATOR(S):** 1M27F9W (CDMA) / 1M27F9W (PCS)  
**MODE:** CDMA / EvDO  
**FREQUENCY TOLERANCE:** ±0.00025 % (2.5 ppm)  
**Test Device Serial No.:** 5KKSA00023     Production     Pre-Production     Engineering  
**DATE(S) OF TEST:** February 7 - 8, 2008  
**TEST REPORT S/N:** 0801230082.ACJ

### 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 (IC-2451).
- 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 (IC-2451) 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.



<b>FCC ID:</b> ACJ9TGCF-29DB	 <b>PCTEST</b> ENGINEERING LABORATORY, INC.	<b>FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT</b> (CERTIFICATION)		<b>Reviewed by:</b> Quality Manager
<b>Test Report S/N:</b> 0801230082.ACJ	<b>Test Dates:</b> February 7 - 8, 2008	<b>EUT Type:</b> Toughbook Model: CF-29	Page 3 of 35	

# 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.

## 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 27, 2006 and Industry Canada.

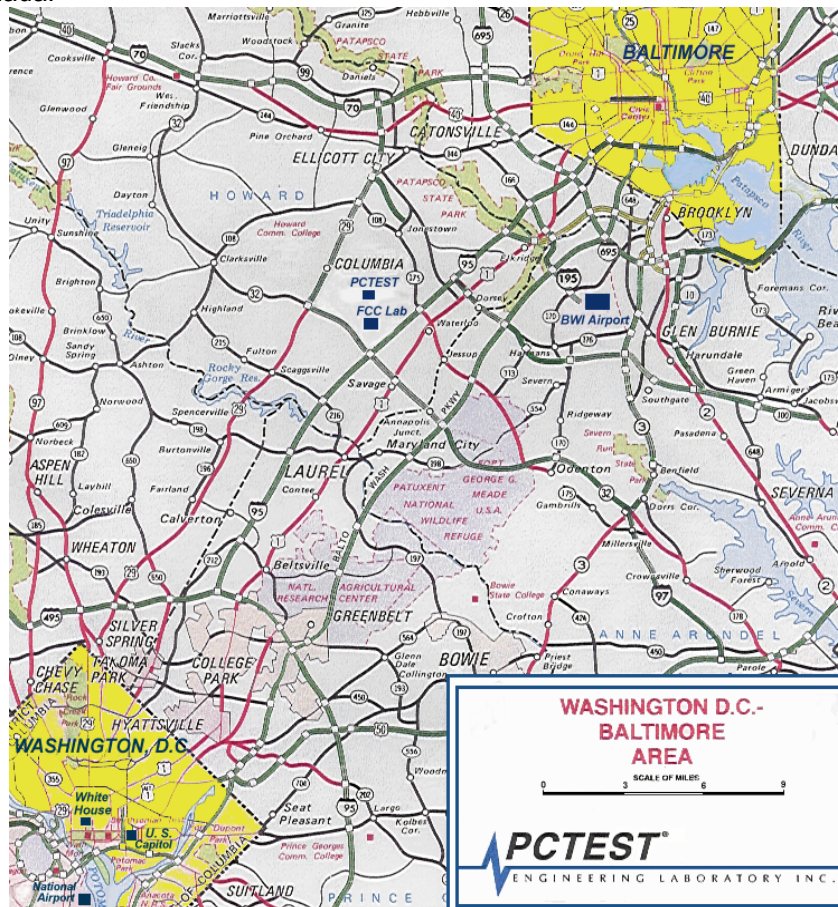




Figure 1-1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area

FCC ID: ACJ9TGCF-29DB	 PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	 Panasonic	Reviewed by: Quality Manager
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## 2.0 PRODUCT INFORMATION

### 2.1 Equipment Description

The Equipment Under Test (EUT) is the **Panasonic Toughbook Model: CF-29** **FCC ID: ACJ9TGCF-29DB**. The EUT consisted of the following component(s):

Trade Name / Base Model	FCC ID	Description
Panasonic / Model: CF-29	ACJ9TGCF-29DB	Toughbook Model: CF-29
Sierra Wireless / Model: MC5725	N7N-MC5725	CDMA/EvDO Module
Alps / Model: UGXZ5	N/A	Bluetooth Module
Intel / Model: WM3B2915ABG	PD9WM3B2915ABG	802.11abg Module

Table 2-1. EUT Equipment Description

### 2.2 EMI Suppression Device(s)/Modifications

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

### 2.3 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).

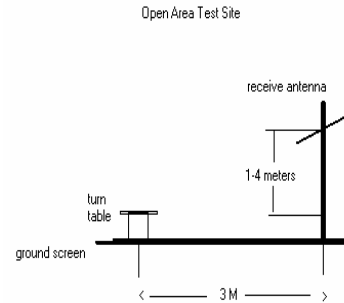
Please see attachment for FCC ID label and label location.

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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 3-meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. 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. 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**

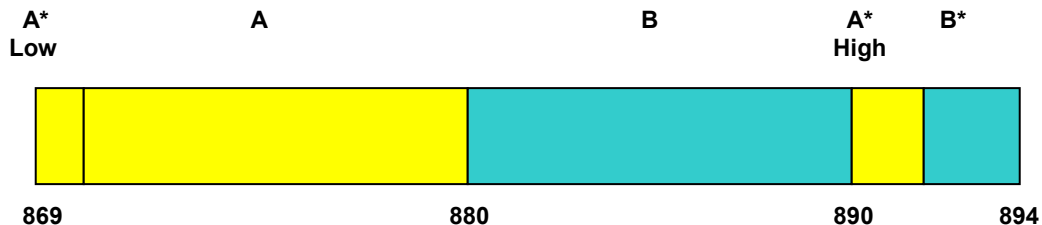
**Deviation from Measurement Procedure.....None**

### 3.2 Occupied Bandwidth Emission Limits

§2.1049, 22.917(a), 24.238(a)

- a. 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.
- b. 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.
- c. When measuring the emission limits, the nominal carrier frequency shall be adjusted as close to the licensee's frequency block edges, both upper and lower, as the design permits.
- d. The measurement of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.

### 3.3 Cellular - Base Frequency Blocks



**BLOCK 1: 869 – 880 MHz (A\* Low + A)**

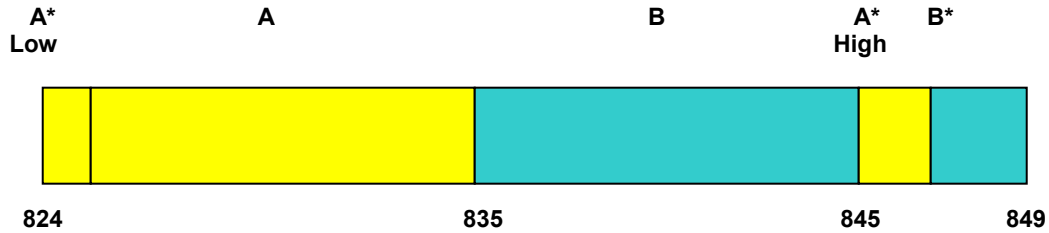
**BLOCK 3: 890 – 891.5 MHz (A\* High)**

**BLOCK 2: 880 – 890 MHz (B)**

**BLOCK 4: 891.5 – 894 MHz (B\*)**

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Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29	Page 6 of 35	

### 3.4 Cellular - Mobile Frequency Blocks



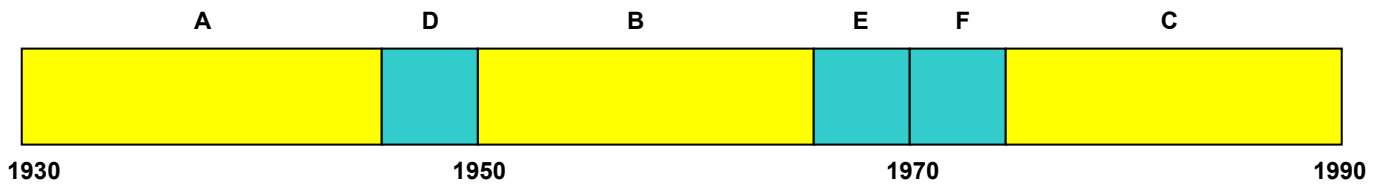
BLOCK 1: 824 – 835 MHz (A\* Low + A)

BLOCK 3: 845 – 846.5 MHz (A\* High)

BLOCK 2: 835 – 845 MHz (B)

BLOCK 4: 846.5 – 849 MHz (B\*)

### 3.5 PCS - Base Frequency Blocks



BLOCK 1: 1930 – 1945 MHz (A)

BLOCK 4: 1965 – 1970 MHz (E)

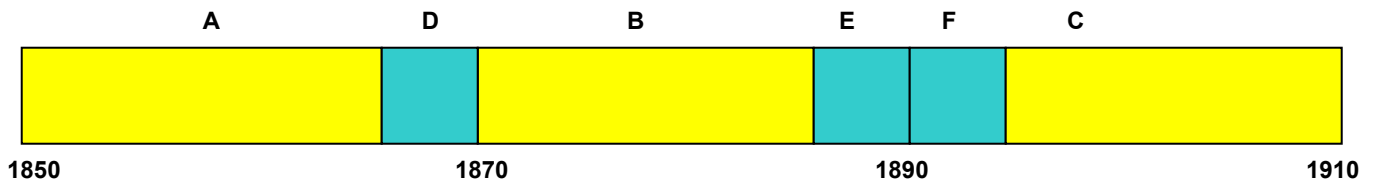
BLOCK 2: 1945 – 1950 MHz (D)

BLOCK 5: 1970 – 1975 MHz (F)

BLOCK 3: 1950 – 1965 MHz (B)

BLOCK 6: 1975 – 1990 MHz (C)

### 3.6 PCS - Mobile Frequency Blocks



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)

### 3.7 Spurious and Harmonic Emissions at Antenna Terminal

§2.1051, 22.917(a), 24.238(a)

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 10<sup>th</sup> harmonic.

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### 3.8 Radiated Spurious and Harmonic Emissions

§2.1053, 22.917(a), 24.238(a)

Spurious and harmonic radiated emissions are measured outdoors at our 3-meter test range. The equipment under test is placed on a wooden turntable 3-meters from the receive antenna. The receive antenna height and turntable rotations were adjusted for the highest reading on the receive spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10<sup>th</sup> 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 spectrum analyzer reading. This level is recorded. 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. This device was tested under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits.

### 3.9 Frequency Stability / Temperature Variation

§2.1055, 22.355, 24.235



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 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.



FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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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 / Equipment	Calibration Date	Cal Interval	Calibration Due	Serial No.
Agilent	E4407B ESA Spectrum Analyzer	04/29/07	Annual	04/28/08	US39210313
Agilent	E5515C Wireless Communications Test Set	08/31/07	Biennial	08/30/09	GB41450275
Agilent	E5515C Wireless Communications Test Set	10/06/06	Biennial	10/05/08	GB43193972
Agilent	E5515C Wireless Communications Test Set	06/08/07	Biennial	06/07/09	GB46310798
EMCO	Model 3115 (1-18GHz) Horn Antenna	10/04/07	Biennial	10/03/09	9205-3874
EMCO	Model 3115 (1-18GHz) Horn Antenna	09/24/07	Biennial	09/23/09	9704-5182
Rohde & Schwarz	NRVS Power Meter	07/03/07	Biennial	07/02/09	835360/079
Rohde & Schwarz	NRV-Z53 Power Sensor	07/03/07	Biennial	07/02/09	846076/007
Rohde & Schwarz	CMU200 Base Station Simulator	12/06/07	Annual	12/05/08	107826
Rohde & Schwarz	CMU200 Base Station Simulator	09/07/07	Annual	09/06/08	833855/010
Rohde & Schwarz	CMU200 Base Station Simulator	05/24/07	Annual	05/23/08	836371/079
Agilent	E8257D (250kHz-20GHz) Signal Generator	03/08/07	Biennial	03/07/09	MY45470194
Agilent	HP 8449B (1-26.5GHz) Pre-Amplifier	12/13/07	Annual	12/12/08	3008A00985
Agilent	HP 8449B (1-26.5GHz) Pre-Amplifier	12/13/07	Annual	12/12/08	3008A00985
Agilent	HP 11713A Attenuation/Switch Driver	12/13/07	Annual	12/12/08	3439A02645
Agilent	HP 8566B Opt. 462 Impulse Bandwidth	12/13/07	Annual	12/12/08	3701A22204
EMCO	Dipole Pair	09/20/06	Biennial	09/19/08	23951
SOLAR	8012-50 LISN (2)	11/08/07	Biennial	11/07/09	0310233, 0310234
K & L	11SH10 Band Pass Filter	N/A	Annual	N/A	1300/4000
K & L	11SH10 Band Pass Filter	N/A	Annual	N/A	4000/12000
Agilent	HP 8495A (0-70dB) DC-4GHz Attenuator	N/A		N/A	N/A
-	263-10dB (DC-18GHz) 10 dB Attenuator	N/A		N/A	N/A
Pasternack	PE2208-6 Bidirectional Coupler	N/A		N/A	N/A
-	No.165 (30MHz - 1000MHz) RG58 Coax Cable	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
Rohde & Schwarz	NRVD Dual Channel Power Meter	12/11/06	Biennial	12/10/08	101695
Rohde & Schwarz	NRV-Z33 Peak Power Sensor (1mW-20W)	11/28/06	Biennial	11/27/08	100004

**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 2<sup>nd</sup> Harmonic (3702.50 MHz)**

The receive 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 receive 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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Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29		Page 10 of 35



## 6.0 TEST RESULTS

### 6.1 Summary

Company Name: Panasonic Corporation of North America  
 FCC ID: ACJ9TGCF-29DB  
 FCC Classification: PCS Licensed Transmitter (PCB)  
 Mode(s): CDMA / EvDO

FCC Part Section(s)	Test Description	Test Limit	Test Condition	Test Result	Reference
<b>TRANSMITTER MODE (TX)</b>					
2.1049, 22.917(a), 24.238(a)	Occupied Bandwidth	N/A	CONDUCTED	PASS	Section 7.0
2.1051, 22.917(a), 24.238(a)	Band Edge / Conducted Spurious Emissions	< 43 + 10log <sub>10</sub> (P[Watts]) at Band Edge and for all out-of-band emissions		PASS	Section 7.0
SAR Measurement Procedures for 3G Devices, June '06	Conducted Power Measurements for 3G Devices	N/A		PASS	FCC 3G Power Table
22.913(a)(2)	Effective Radiated Power	< 7 Watts max. ERP	RADIATED	PASS	Section 6.2
24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts max. EIRP		PASS	Section 6.3
2.1053, 22.917(a), 24.238(a)	Undesirable Emissions	< 43 + 10log <sub>10</sub> (P[Watts]) for all out-of-band emissions		PASS	Sections 6.4, 6.5
2.1055, 22.355, 24.235	Frequency Stability	< 2.5 ppm		PASS	Sections 6.6, 6.7
<b>RECEIVER MODE (RX) / DIGITAL EMISSIONS</b>					
15.107	AC Conducted Emissions 150kHz – 30MHz	< FCC 15.207 limits or	LINE CONDUCTED	PASS	Pt. 15B Test Report
15.109	General Field Strength Limits (Restricted Bands and Radiated Emissions Limits)	< FCC 15.209 limits or	RADIATED (30MHz-1GHz) (1-25 GHz)	PASS	Pt. 15B Test Report
<b>RF EXPOSURE</b>					
2.1091 / 2.1093	MPE Test	1 mW/cm <sup>2</sup> (MPE Limit) @ 20 cm	MPE	PASS	MPE Report

**Table 6-1. Summary of Test Results**

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29	Page 11 of 35	

## 6.2 Effective Radiated Power Output Data

### §22.913(a)(2)

POWER: "All Up" Bits (Cellular CDMA Mode)

Frequency [MHz]	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBd]	PoI [H/V]	ERP [dBm]	ERP [Watts]	Battery Type
824.70	-20.350	17.28	0.00	H	17.28	0.053	Standard
836.52	-18.480	19.15	0.00	H	19.15	0.082	Standard
848.31	-21.330	16.30	0.00	H	16.30	0.043	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 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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. The conducted power at the terminals of the dipole is measured. The ERP is recorded.

This device was tested under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits. This unit was tested with its standard battery.

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29	Page 12 of 35	

### 6.3 Equivalent Isotropic Radiated Power Output Data

§24.232(c)

POWER: "All Up" Bits (PCS CDMA Mode)

Frequency [MHz]	Measured Level [dBm]	Substitute Level [dBm]	Antenna Gain [dBi]	PoI [H/V]	EIRP [dBm]	EIRP [Watts]	Battery Type
1851.25	-21.690	13.73	8.00	V	21.73	0.149	Standard
1880.00	-20.910	14.51	8.00	V	22.51	0.178	Standard
1908.75	-23.840	11.58	8.00	V	19.58	0.091	Standard



Table 6-3. 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 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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 receive spectrum analyzer reading. 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.

This device was tested under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits. This unit was tested with its standard battery.

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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## 6.4 Cellular CDMA Radiated Measurements

§2.1053, 22.917(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 824.70 MHz  
 CHANNEL: 1013  
 MEASURED OUTPUT POWER: 19.150 dBm = 0.082 W  
 MODULATION SIGNAL: CDMA (Internal)  
 DISTANCE: 3 meters  
 LIMIT:  $43 + 10 \log_{10}(W) =$  32.15 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
1649.40	-68.48	6.08	-62.40	V	81.5
2474.10	-72.91	6.08	-66.83	V	86.0
3298.80	-73.64	6.53	-67.10	V	86.3
4123.50	-92.14	6.87	-85.26	V	104.4
4948.20	-89.64	7.21	-82.42	V	101.6



**Table 6-4. 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 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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 spurious level is recorded. 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 under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits. This unit was tested with its standard battery.

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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**Cellular CDMA Radiated Measurements (Cont'd)**  
**§2.1053, 22.917(a)**

**Field Strength of SPURIOUS Radiation**

OPERATING FREQUENCY: 836.52 MHz  
 CHANNEL: 384  
 MEASURED OUTPUT POWER: 19.150 dBm = 0.082 W  
 MODULATION SIGNAL: CDMA (Internal)  
 DISTANCE: 3 meters  
 LIMIT:  $43 + 10 \log_{10}(W) =$  32.15 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
1673.04	-66.10	6.09	-60.01	V	79.2
2509.56	-69.53	6.55	-62.98	V	82.1
3346.08	-70.95	6.89	-64.06	V	83.2
4182.60	-89.83	7.43	-82.40	V	101.5
5019.12	-88.39	8.35	-80.05	V	99.2



**Table 6-5. 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 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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 spurious level is recorded. 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 under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits. This unit was tested with its standard battery.

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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**Cellular CDMA Radiated Measurements (Cont'd)**  
§2.1053, 22.917(a)

**Field Strength of SPURIOUS Radiation**

OPERATING FREQUENCY: 848.31 MHz  
 CHANNEL: 777  
 MEASURED OUTPUT POWER: 19.150 dBm = 0.082 W  
 MODULATION SIGNAL: CDMA (Internal)  
 DISTANCE: 3 meters  
 LIMIT:  $43 + 10 \log_{10}(W) =$  32.15 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
1696.62	-68.51	6.09	-62.41	V	81.6
2544.93	-70.93	6.57	-64.36	V	83.5
3393.24	-71.65	6.91	-64.74	V	83.9
4241.55	-90.02	7.65	-82.37	V	101.5
5089.86	-88.01	8.33	-79.68	V	98.8



**Table 6-6. 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 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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 spurious level is recorded. 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 under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits. This unit was tested with its standard battery.

FCC ID: ACJ9TGCF-29DB	 PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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## 6.5 PCS CDMA Radiated Measurements

§2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1851.25 MHz  
 CHANNEL: 25  
 MEASURED OUTPUT POWER: 22.510 dBm = 0.178 W  
 MODULATION SIGNAL: CDMA (Internal)  
 DISTANCE: 3 meters  
 LIMIT:  $43 + 10 \log_{10}(W) =$  35.51 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
3702.50	-66.00	9.02	-56.98	V	79.5
5553.75	-66.75	10.40	-56.35	V	78.9
7405.00	-82.37	10.51	-71.86	V	94.4
9256.25	-80.79	11.84	-68.95	V	91.5
11107.50	-77.72	12.76	-64.97	V	87.5



**Table 6-7. 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 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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 spurious level is recorded. 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 under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits. This unit was tested with its standard battery.

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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## PCS CDMA Radiated Measurements (Cont'd)

§2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1880.00 MHz  
 CHANNEL: 600  
 MEASURED OUTPUT POWER: 22.510 dBm = 0.178 W  
 MODULATION SIGNAL: CDMA (Internal)  
 DISTANCE: 3 meters  
 LIMIT:  $43 + 10 \log_{10}(W) =$  35.51 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
3760.00	-64.52	8.99	-55.52	V	78.0
5640.00	-65.07	10.40	-54.67	V	77.2
7520.00	-82.31	10.62	-71.70	V	94.2
9400.00	-80.52	11.70	-68.82	V	91.3
11280.00	-76.95	12.69	-64.27	V	86.8



**Table 6-8. 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 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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 spurious level is recorded. 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 under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits. This unit was tested with its standard battery.

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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## PCS CDMA Radiated Measurements (Cont'd)

§2.1053, 24.238(a)

### Field Strength of SPURIOUS Radiation

OPERATING FREQUENCY: 1908.75 MHz  
 CHANNEL: 1175  
 MEASURED OUTPUT POWER: 22.510 dBm = 0.178 W  
 MODULATION SIGNAL: CDMA (Internal)  
 DISTANCE: 3 meters  
 LIMIT:  $43 + 10 \log_{10}(W) =$  35.51 dBc

FREQUENCY (MHz)	LEVEL @ ANTENNA TERMINALS (dBm)	SUBSTITUTE ANTENNA GAIN (dBd)	CORRECT GENERATOR LEVEL (dBm)	POL (H/V)	(dBc)
3817.50	-65.29	8.97	-56.32	V	78.8
5726.25	-66.93	10.40	-56.53	V	79.0
7635.00	-82.16	10.71	-71.45	V	94.0
9543.75	-80.27	11.64	-68.63	V	91.1
11452.50	-76.19	12.62	-63.58	V	86.1



**Table 6-9. 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 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the receive spectrum analyzer. For CDMA signals, a peak detector is used, with RBW = VBW = 3 MHz. For WCDMA signals, a peak detector is used, with RBW = VBW = 5 MHz. For AMPS, GSM, and NADC TDMA signals, a peak detector is used, with RBW = VBW = 1 MHz. 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 spurious level is recorded. 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 under all R.C.s and S.O.s and the worst case is reported with EvDO RETAP with "All Up" power control bits. This unit was tested with its standard battery.

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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## 6.6 Cellular CDMA Frequency Stability Measurements

**§2.1055, 22.355**

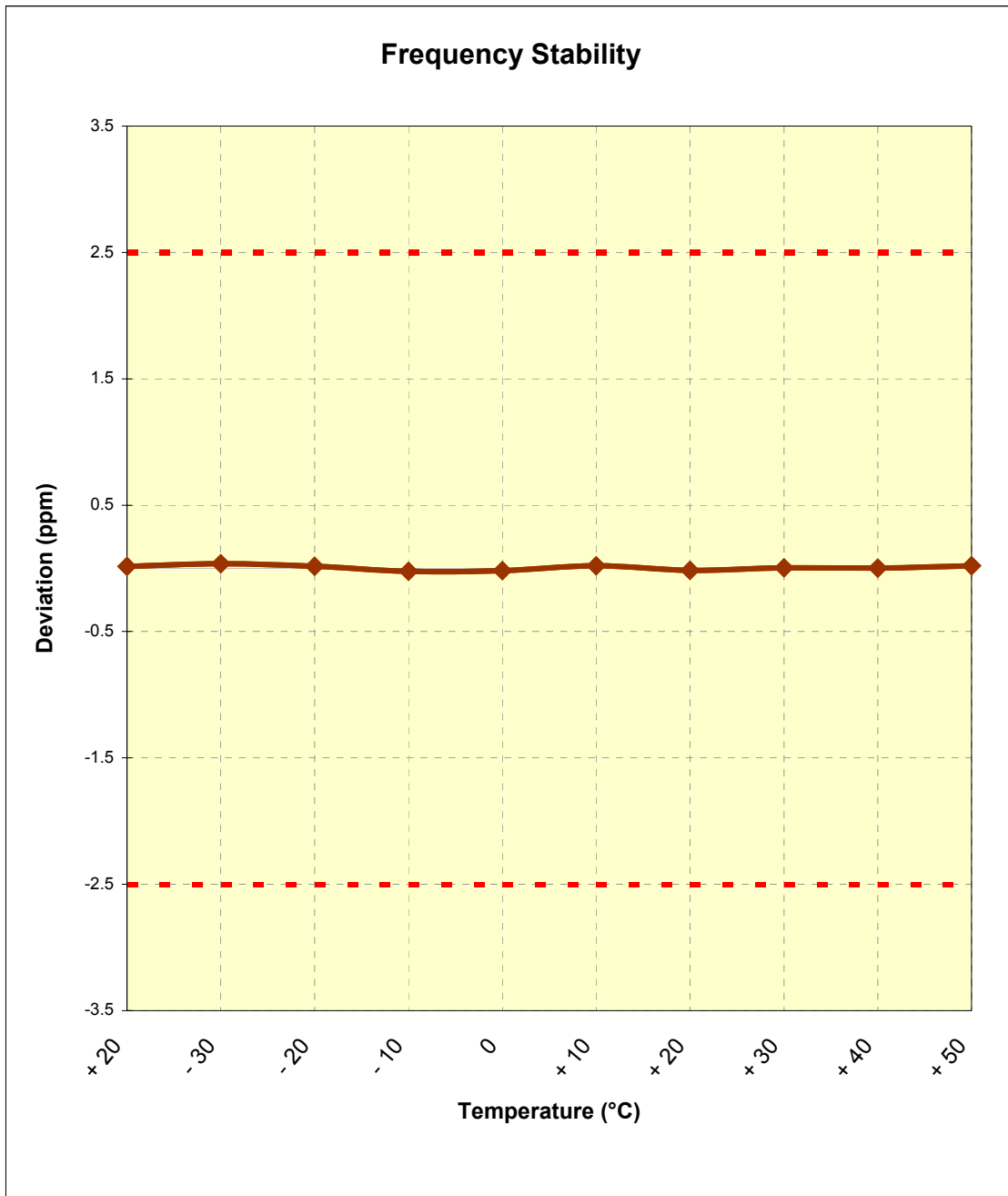
OPERATING FREQUENCY: 836,520,000 Hz  
 CHANNEL: 384  
 REFERENCE VOLTAGE: 11.1 VDC  
 DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	11.10	+ 20 (Ref)	836,520,013	13	0.000002
100 %		- 30	836,520,031	31	0.000004
100 %		- 20	836,520,014	14	0.000002
100 %		- 10	836,519,981	-19	-0.000002
100 %		0	836,519,985	-15	-0.000002
100 %		+ 10	836,520,017	17	0.000002
100 %		+ 20	836,519,988	-12	-0.000001
100 %		+ 30	836,520,003	3	0.000000
100 %		+ 40	836,520,002	2	0.000000
100 %		+ 50	836,520,017	17	0.000002
115 %		12.77	+ 20	836,520,022	22
BATT. ENDPOINT	9.72	+ 20	836,520,010	10	0.000001

**Table 6-10. Frequency Stability Data (Cellular CDMA Mode – Ch. 384)**

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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**Cellular CDMA Frequency Stability Measurements (Cont'd)**  
**§2.1055, 22.355**



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

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29		Page 21 of 35

## 6.7 PCS CDMA Frequency Stability Measurements

### §2.1055, 24.235

OPERATING FREQUENCY: 1,880,000,000 Hz



CHANNEL: 600

REFERENCE VOLTAGE: 11.1 VDC

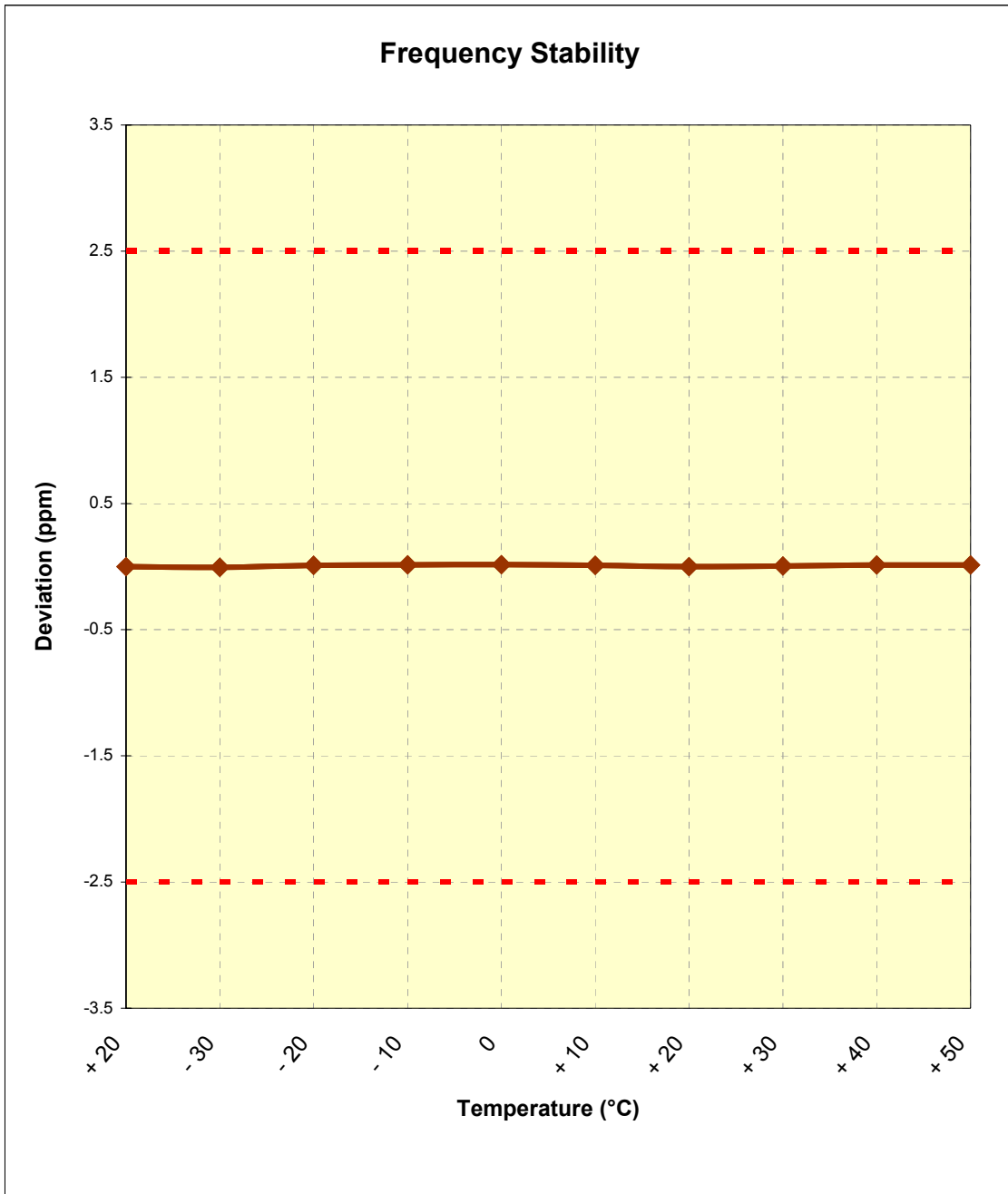
DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (°C)	FREQUENCY (Hz)	Freq. Dev. (Hz)	Deviation (%)
100 %	11.10	+ 20 (Ref)	1,879,999,999	-1	0.000000
100 %		- 30	1,879,999,989	-11	-0.000001
100 %		- 20	1,880,000,019	19	0.000001
100 %		- 10	1,880,000,026	26	0.000001
100 %		0	1,880,000,028	28	0.000001
100 %		+ 10	1,880,000,020	20	0.000001
100 %		+ 20	1,879,999,999	-1	0.000000
100 %		+ 30	1,880,000,009	9	0.000000
100 %		+ 40	1,880,000,024	24	0.000001
100 %		+ 50	1,880,000,025	25	0.000001
115 %		12.77	+ 20	1,880,000,019	19
BATT. ENDPOINT	9.72	+ 20	1,880,000,009	9	0.000000

**Table 6-11. Frequency Stability Data (PCS CDMA Mode – Ch. 600)**

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
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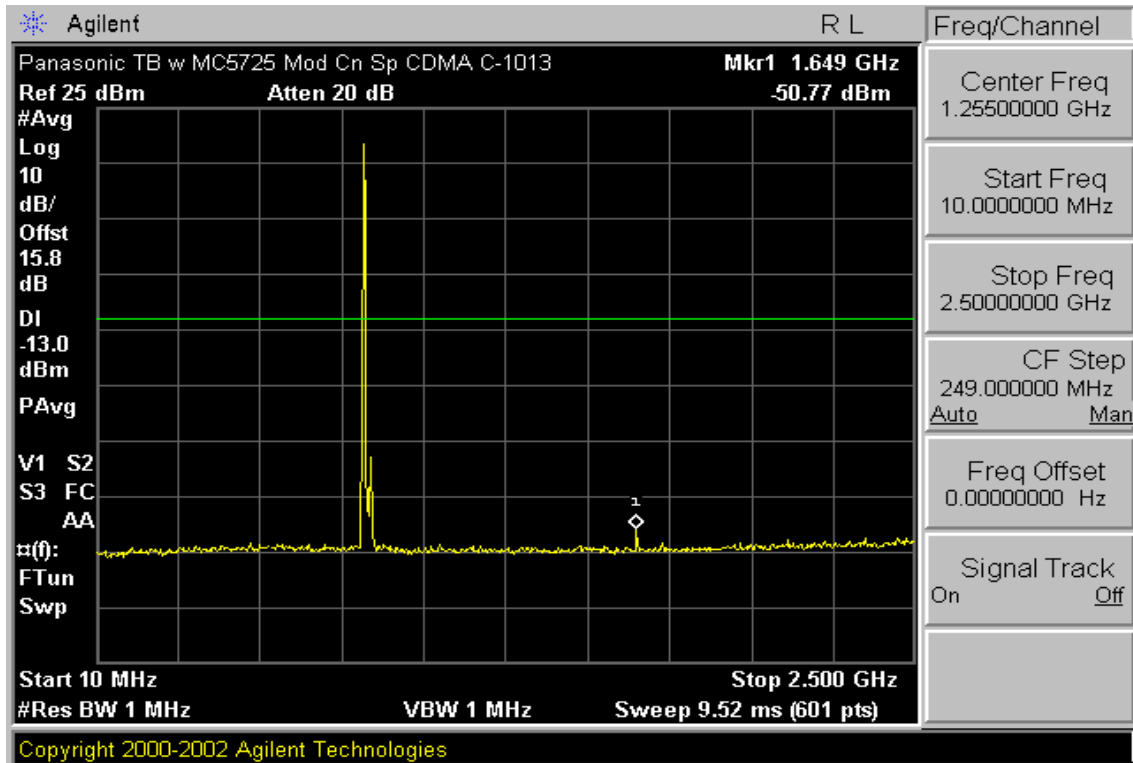
**PCS CDMA Frequency Stability Measurements (Cont'd)**  
**§2.1055, 24.235**



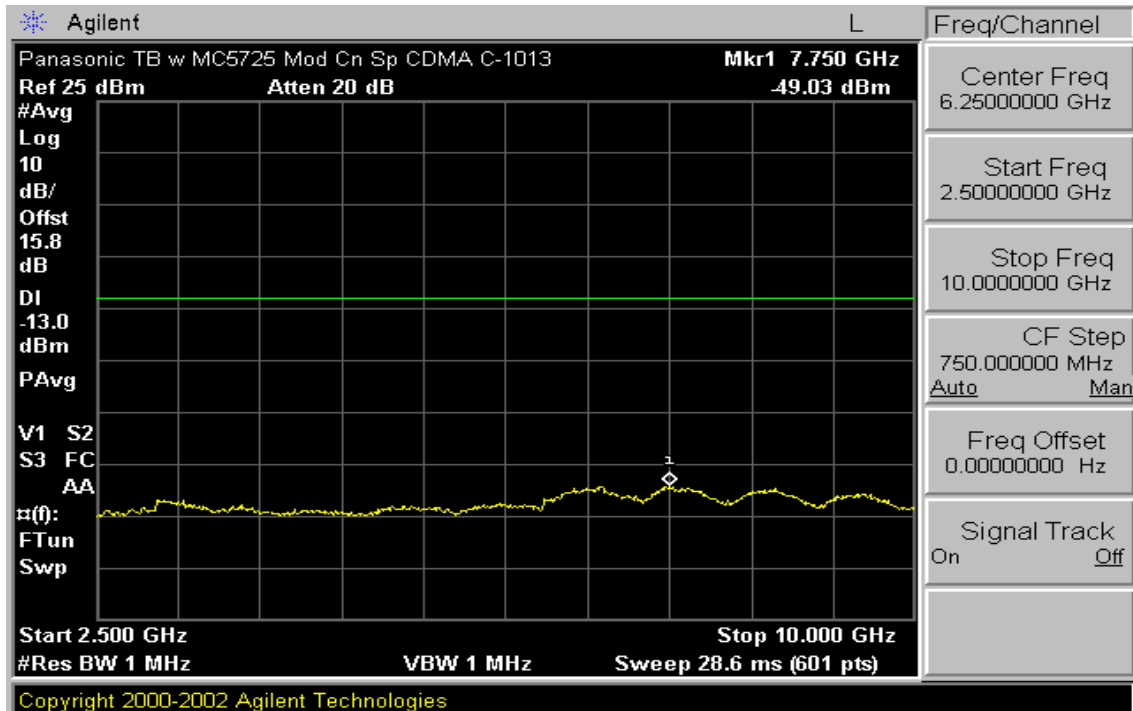
**Figure 6-2. Frequency Stability Graph (PCS CDMA Mode – Ch. 600)**

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29		Page 23 of 35

## 7.0 PLOT(S) OF EMISSIONS

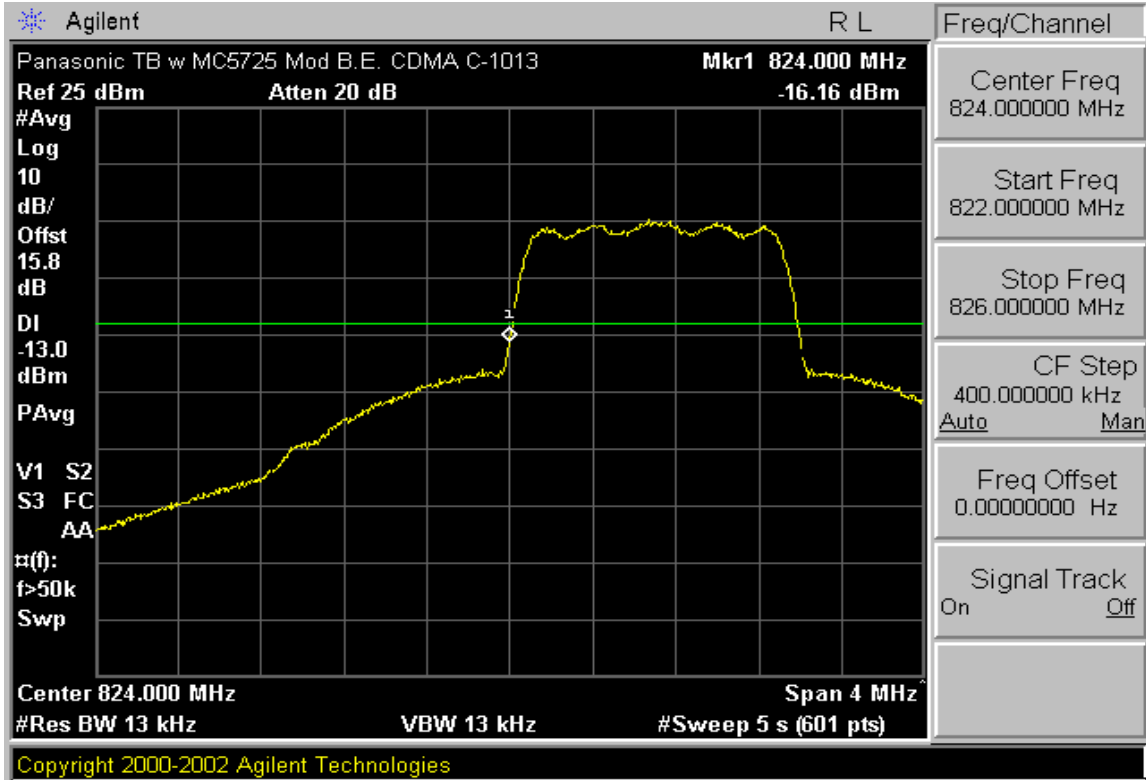


**Plot 7-1. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 1013)**

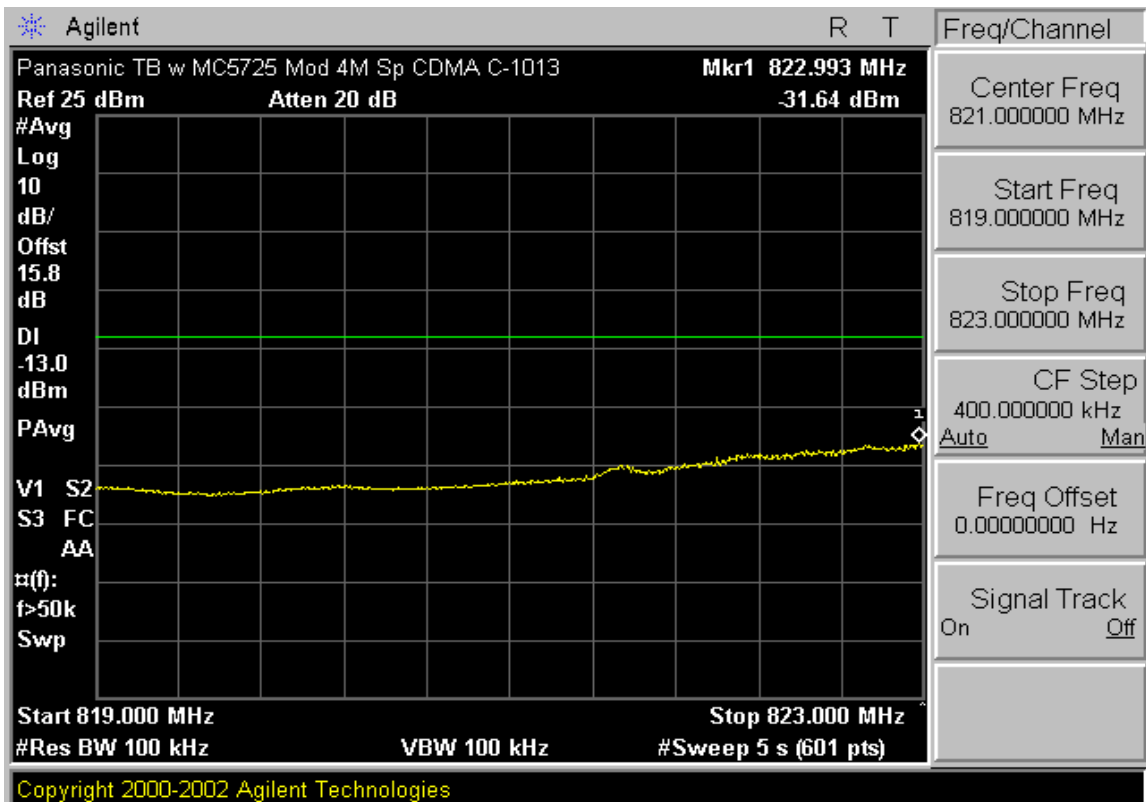


**Plot 7-2. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 1013)**

FCC ID: ACJ9TGCF-29DB		FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)		Reviewed by: Quality Manager
Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29		Page 24 of 35

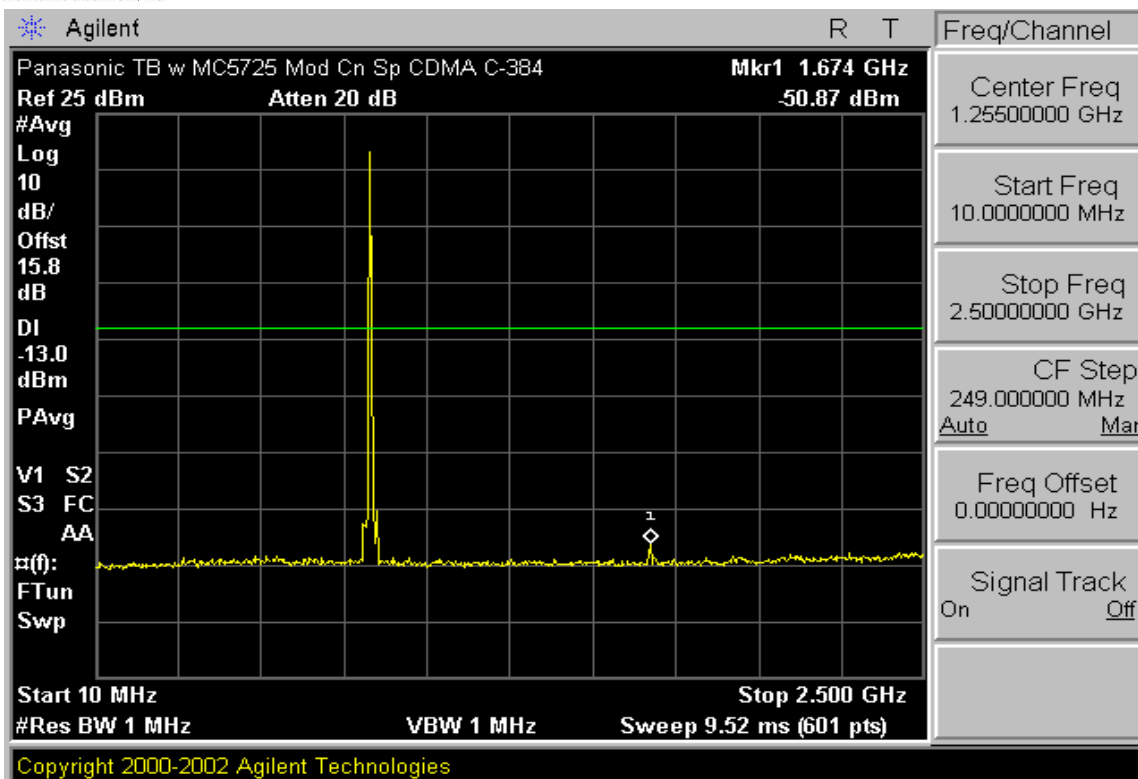


Plot 7-3. Band Edge Plot (Cellular CDMA Mode – Ch. 1013)

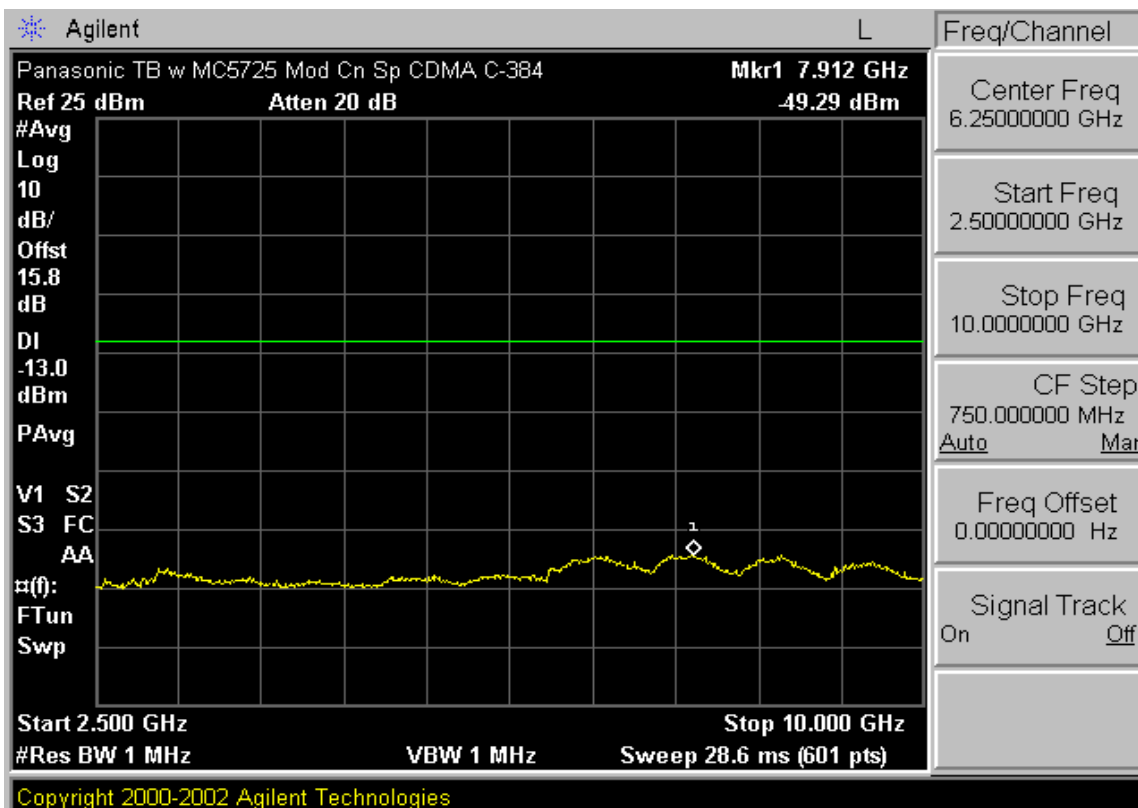


Plot 7-4. 4MHz Span Plot (Cellular CDMA Mode – Ch. 1013)

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29		Page 25 of 35

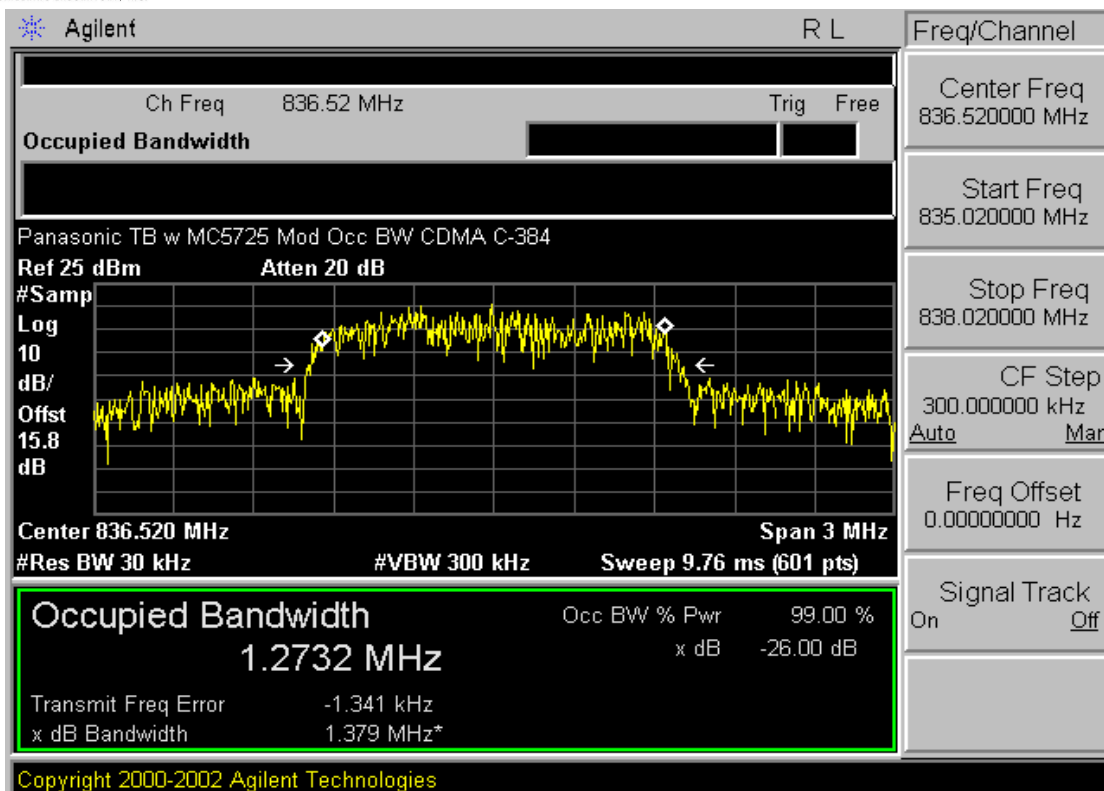


Plot 7-5. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 384)

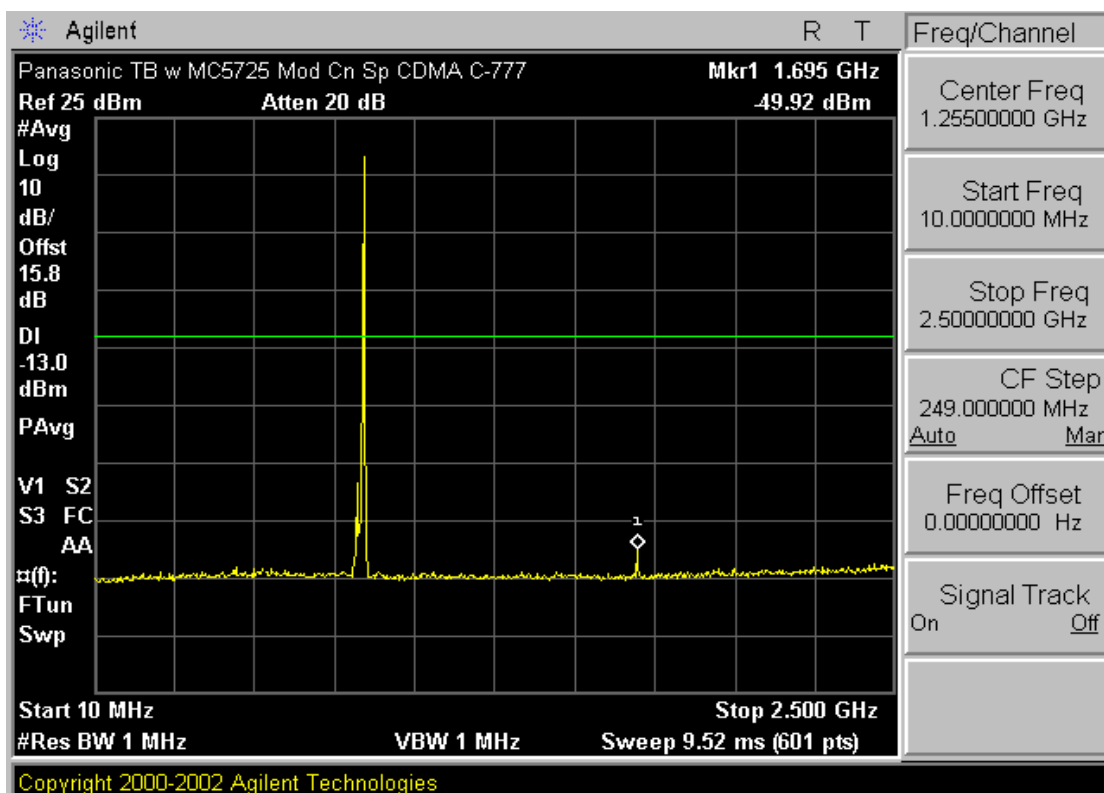


Plot 7-6. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 384)

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
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Plot 7-7. Occupied Bandwidth Plot (Cellular CDMA Mode – Ch. 384)

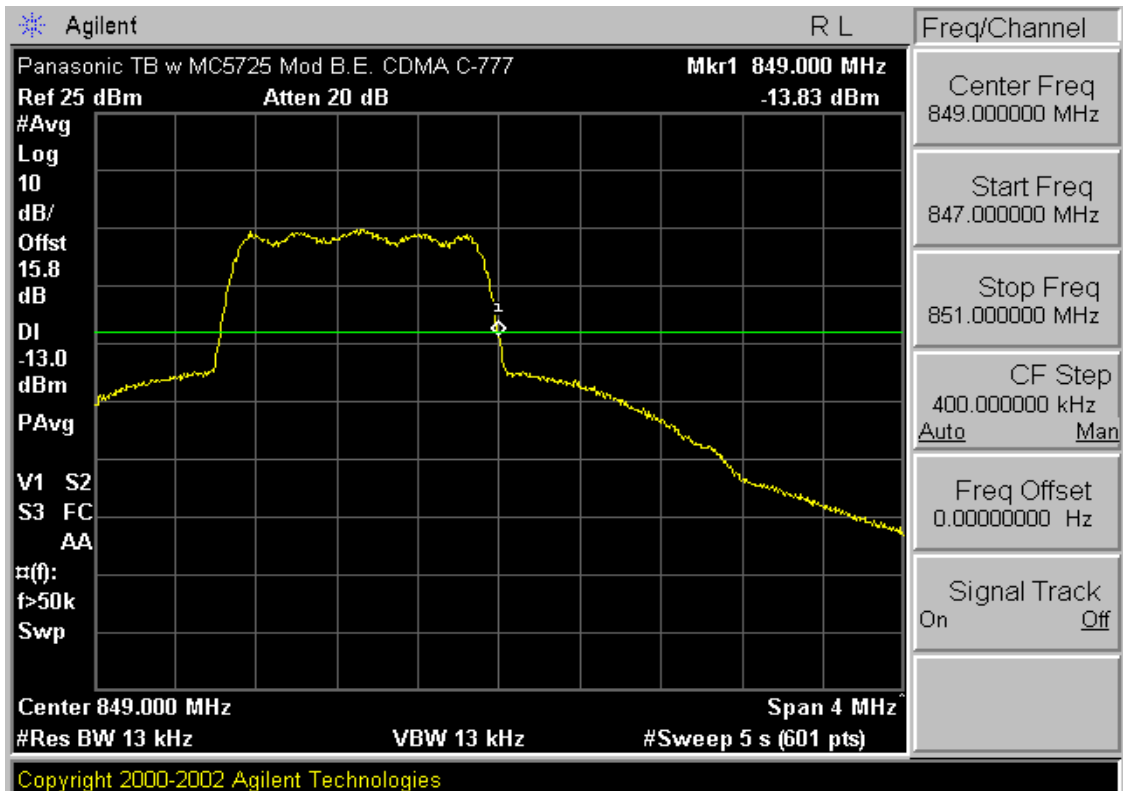


Plot 7-8. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 777)

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
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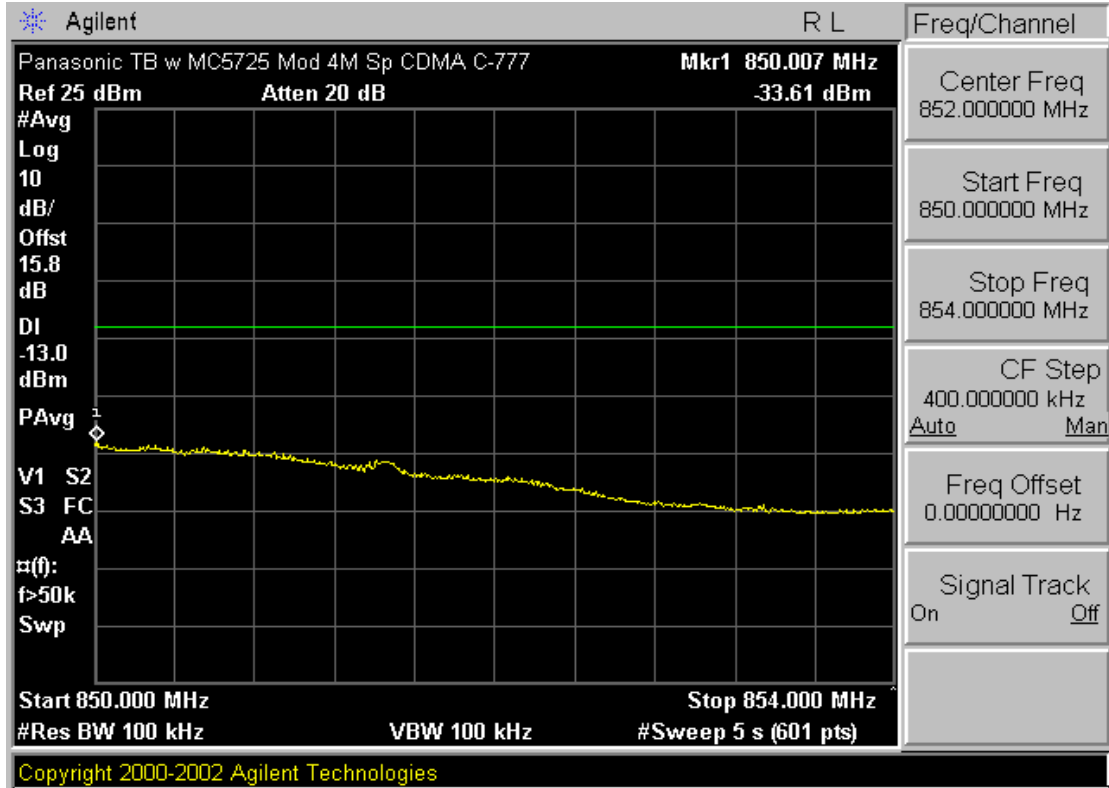


Plot 7-9. Conducted Spurious Plot (Cellular CDMA Mode – Ch. 777)

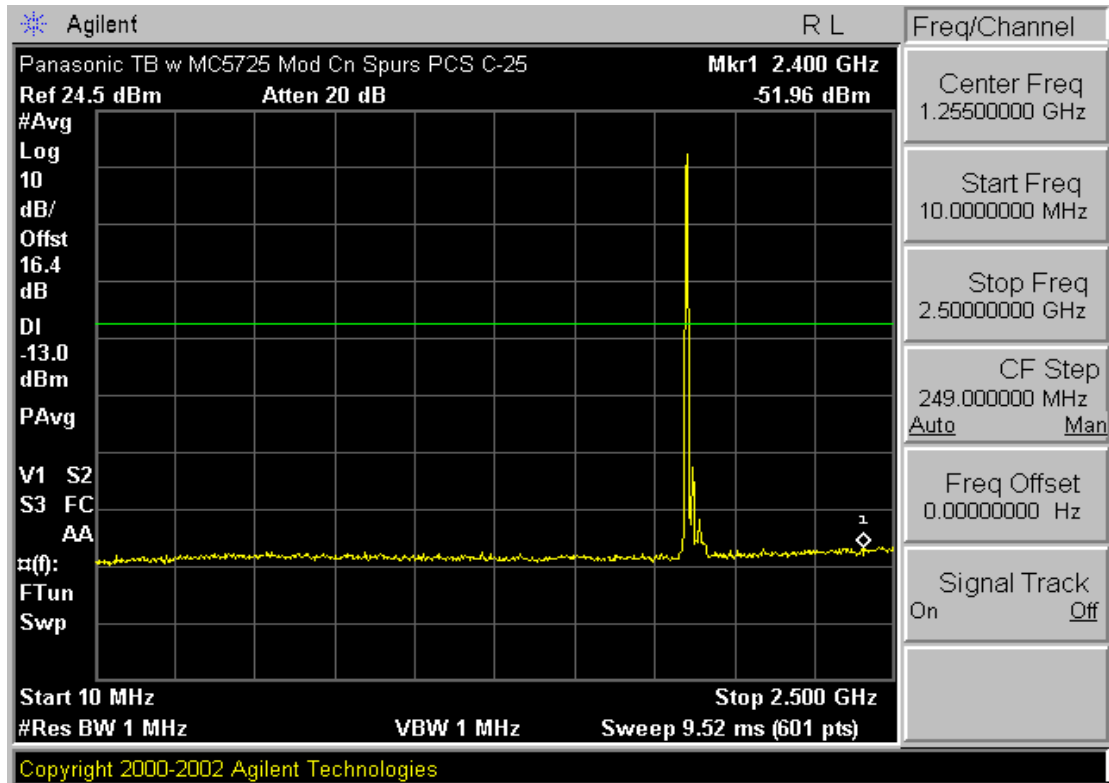


Plot 7-10. Band Edge Plot (Cellular CDMA Mode – Ch. 777)

FCC ID: ACJ9TGCF-29DB	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
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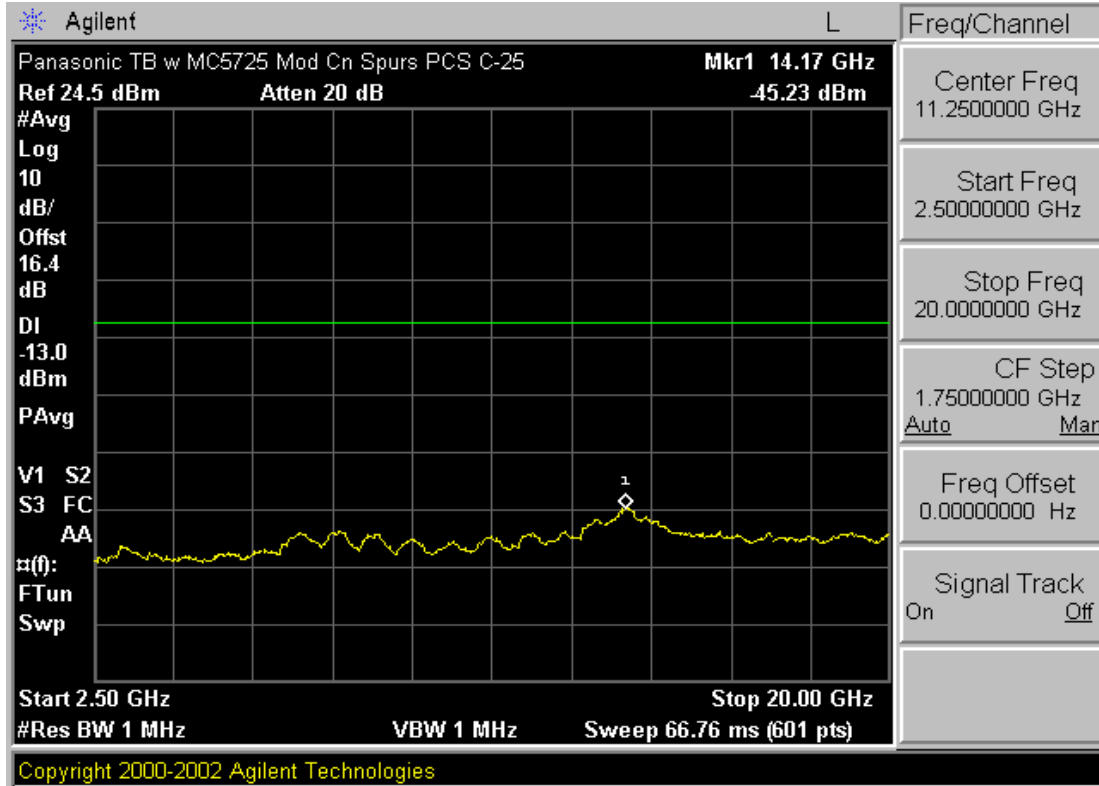


Plot 7-11. 4MHz Span Plot (Cellular CDMA Mode – Ch. 777)

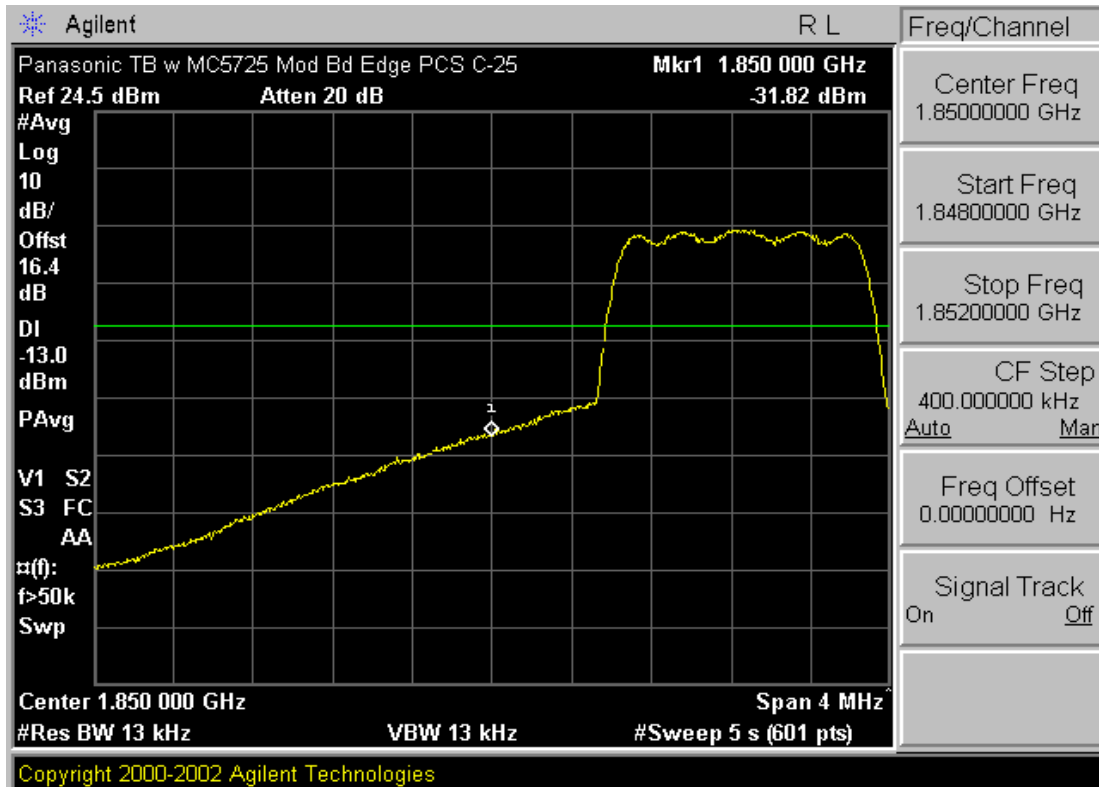


Plot 7-12. Conducted Spurious Plot (PCS CDMA Mode – Ch. 25)

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
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Plot 7-13. Conducted Spurious Plot (PCS CDMA Mode – Ch. 25)

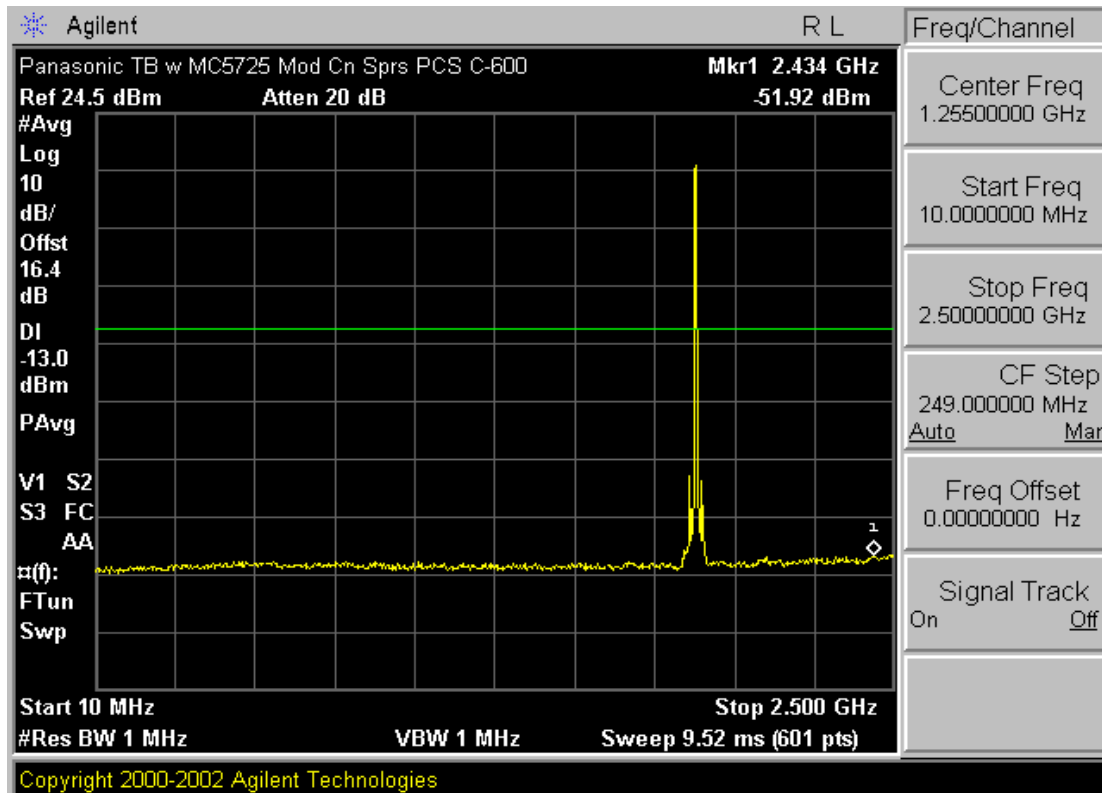


Plot 7-14. Band Edge Plot (PCS CDMA Mode – Ch. 25)

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
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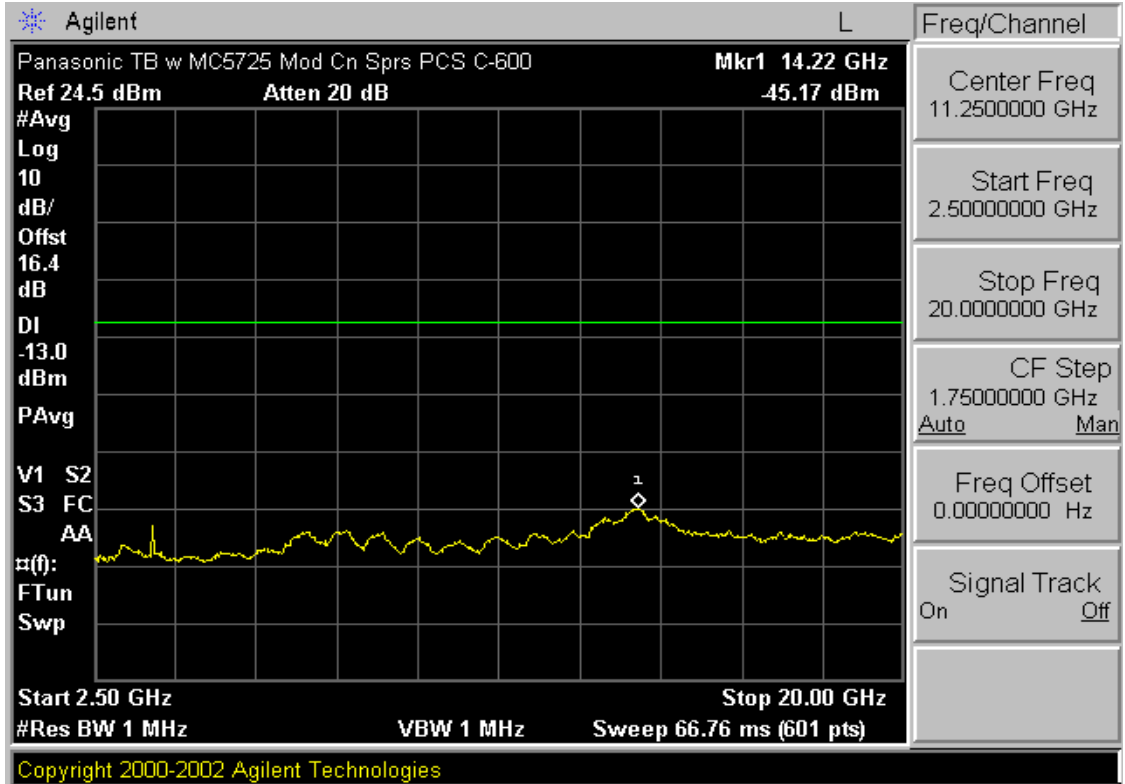


Plot 7-15. 4MHz Span Plot (PCS CDMA Mode – Ch. 25)

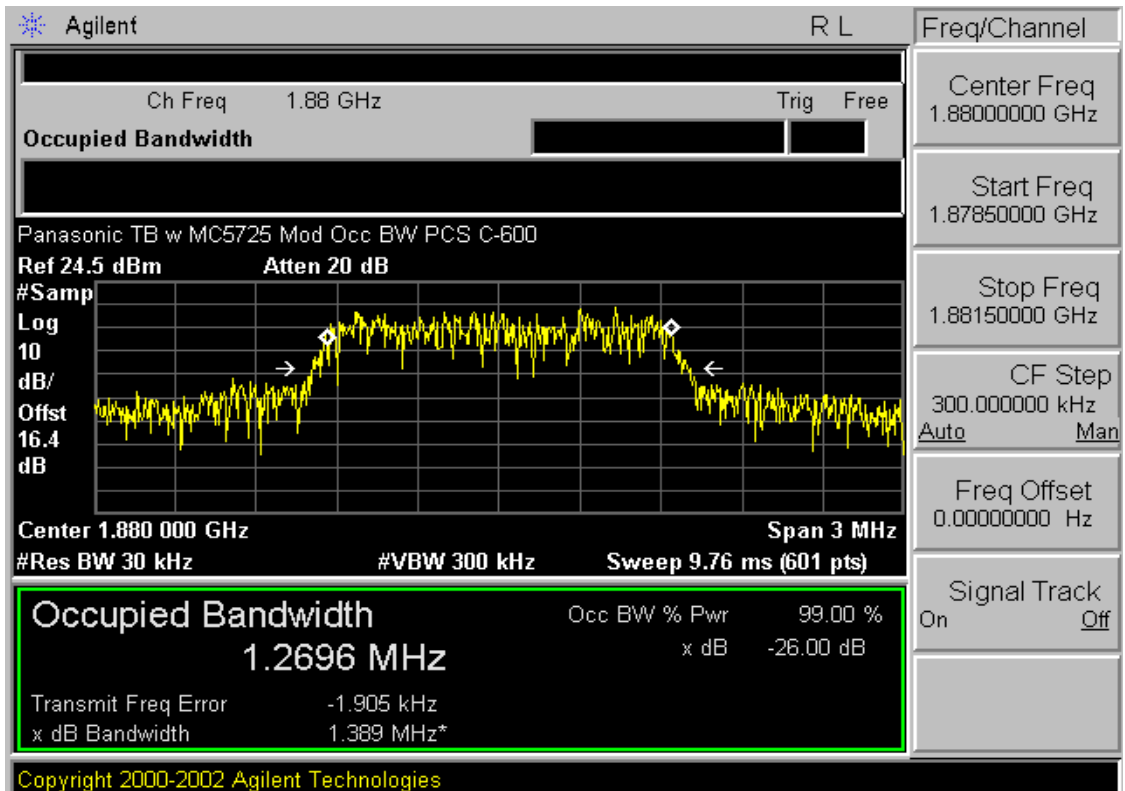


Plot 7-16. Conducted Spurious Plot (PCS CDMA Mode – Ch. 600)

FCC ID: ACJ9TGCF-29DB	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
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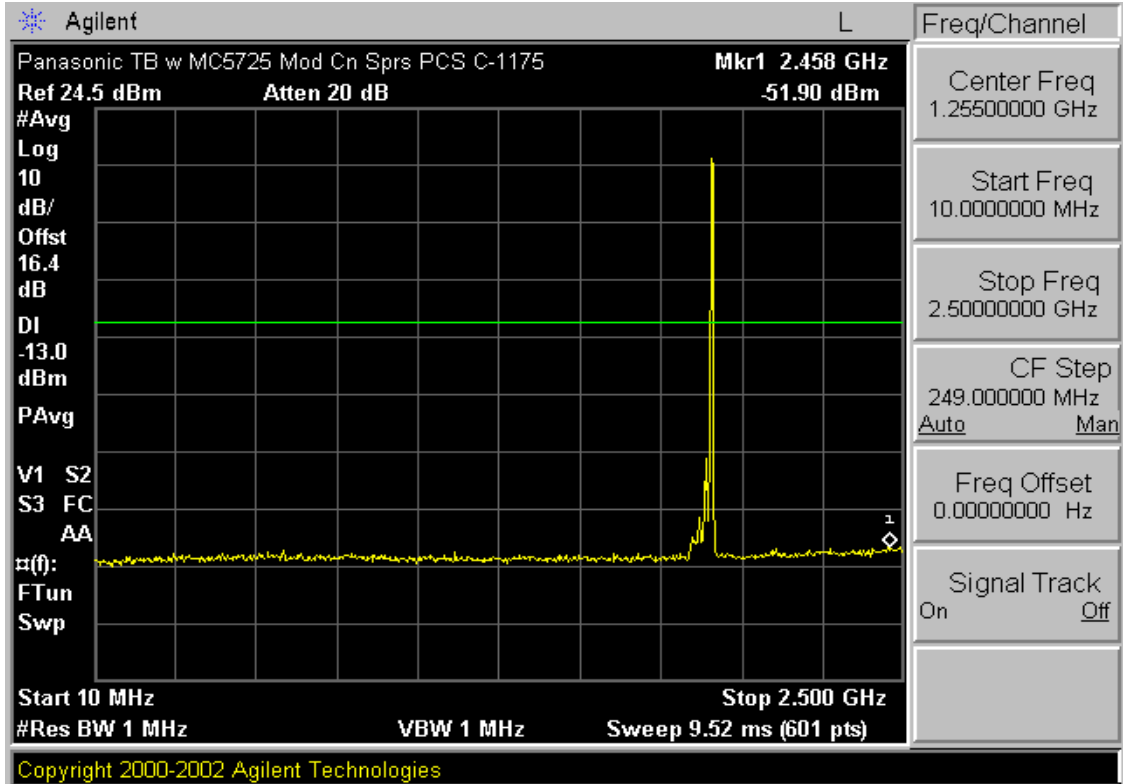


Plot 7-17. Conducted Spurious Plot (PCS CDMA Mode – Ch. 600)

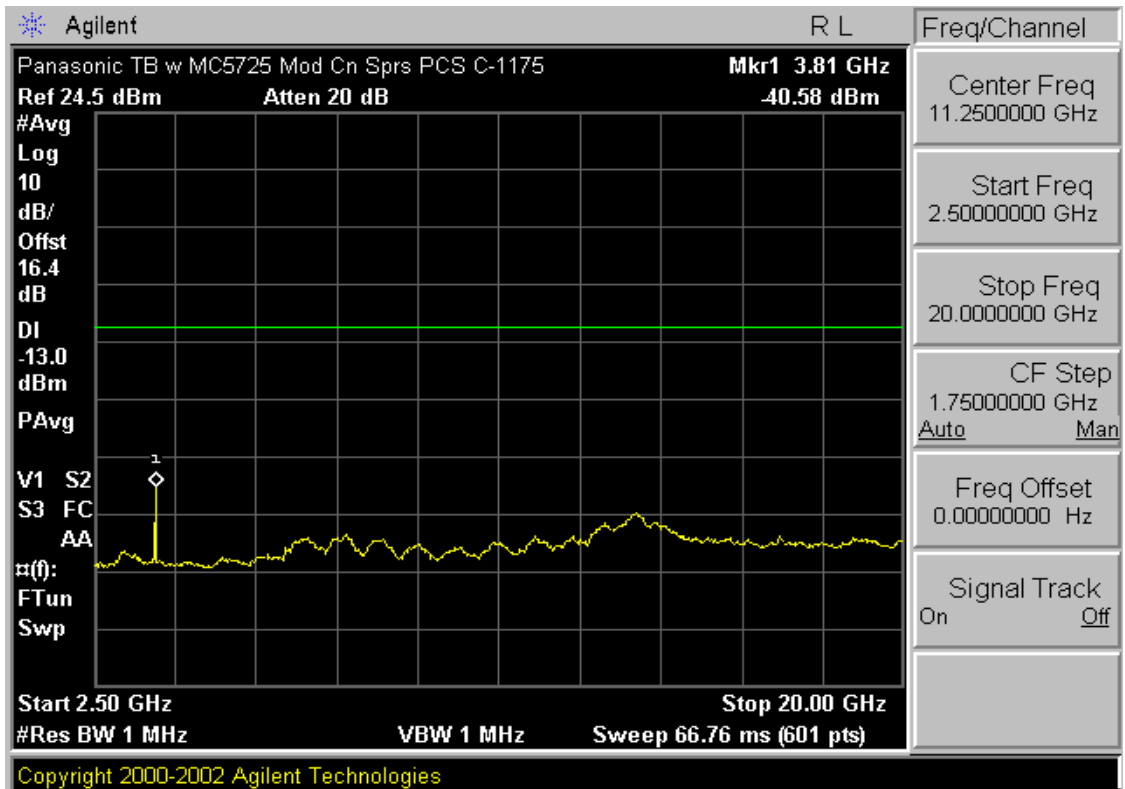


Plot 7-18. Occupied Bandwidth Plot (PCS CDMA Mode – Ch. 600)

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
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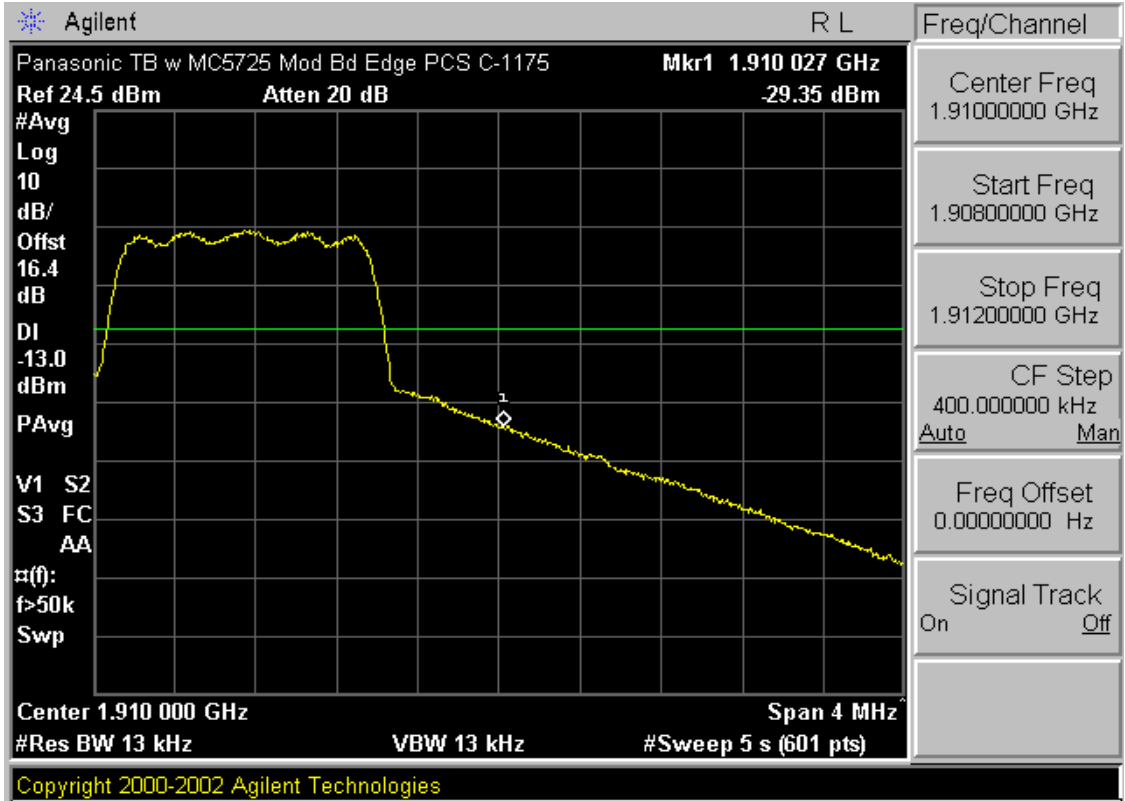


Plot 7-19. Conducted Spurious Plot (PCS CDMA Mode – Ch. 1175)



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

FCC ID: ACJ9TGCF-29DB	PCTEST ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	Panasonic	Reviewed by: Quality Manager
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Plot 7-21. Band Edge Plot (PCS CDMA Mode – Ch. 1175)




Plot 7-22. 4MHz Span Plot (PCS CDMA Mode – Ch. 1175)

FCC ID: ACJ9TGCF-29DB	<b>PCTEST</b> ENGINEERING LABORATORY, INC.	FCC Pt. 22/24 CDMA / EvDO MEASUREMENT REPORT (CERTIFICATION)	<b>Panasonic</b>	Reviewed by: Quality Manager
Test Report S/N: 0801230082.ACJ	Test Dates: February 7 - 8, 2008	EUT Type: Toughbook Model: CF-29		Page 34 of 35

## 8.0 CONCLUSION

The data collected show that the **Panasonic Toughbook Model: CF-29 FCC ID: ACJ9TGCF-29DB** complies with all the requirements of Parts 2, 22, and 24 of the FCC rules.

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<b>Test Report S/N:</b> 0801230082.ACJ	<b>Test Dates:</b> February 7 - 8, 2008	<b>EUT Type:</b> Toughbook Model: CF-29	Page 35 of 35