PCTEST Engineering Laboratory, Inc.

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CERTIFICATE OF COMPLIANCE
FCC Part 24 & 22 Certification

Toshiba Corporation, Product Safety Group
Technical & Quality Management Division
Digital Media Equipment & Service Co.
1-1 Shibaura 1-Chome, Minatoku
Tokyo 105-01 Japan
Attn: Jim Papadopoulos, Audiovox Communications Corp.

Dates of Tests: November 17-30, 2000
Test Report S/N: 24/22.201114577.CJ6
Test Site: PCTEST Lab, Columbia MD

FCC ID	**CJ6DCE42903A**
APPLICANT	**TOSHIBA CORPORATION**

Classification:	**Licensed Portable Transmitter Held to Ear (PCE)**
FCC Rule Part(s):	**§24(E), §22(H), §2**
EUT Type:	**Tri-Mode Dual-Band Analog/PCS Phone (AMPS/CDMA)**
Trade Name/Model:	***AUDIOVOX CDM-9100***
Tx Frequency Range:	**824.04MHz – 848.97MHz (AMPS) / 824.70 – 848.31 (CDMA)** **1851.25MHz – 1908.75MHz (PCS CDMA)**
Rx Frequency Range:	**869.04MHz – 893.97MHz (AMPS) / 869.70 – 893.31 (CDMA)** **1931.25MHz – 1988.75MHz (PCS CDMA)**
Max. RF Output Power:	**0.43 W ERP AMPS (26.3 dBm) / 0.34 W ERP CDMA (25.3 dBM)** **0.25 W EIRP PCS CDMA (23.9 dBm)**
Emission Designator(s):	**40K0F8W, 40K0F1D, 1M25F9W**

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.

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 & Chief Engineer

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NVLAP® LAB CODE 100431-0

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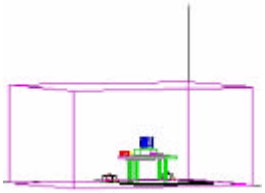


MEASUREMENT REPORT

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.

§2.1033 General Information

Applicant Name:	**TOSHIBA Corporation , Product Safety Group**
Address:	**Technology & Quality Management Division** **Digital Media Equipment & Service Co.** **1-1 Shjobaura 1-Chome, Minatoku** **Tokyo, 105-01, JAPAN**
Attention:	**Jim Papadapoulos, Audiovox Communications Corp.**

- FCC ID: **CJ6DCE42903A**
- Quantity: Quantity production is planned
- Emission Designators: 1M25F9W, 40K0F8W, 40K0F1D
- Tx Freq. Range: 824.04 – 848.97 MHz (AMPS)
824.70 – 848.31 MHz (CDMA)
1851.25 – 1908.75 MHz (PCS CDMA)
- Rx Freq. Range: 869.04 – 893.97 MHz (AMPS)
869.70 – 893.31 MHz (CDMA)
1931.25 – 1988.75 MHz (PCS CDMA)
- Max. Power Rating: 0.43 W ERP AMPS (26.3 dBm) / 0.34 W ERP CDMA (25.3 dBM)
0.25 W EIRP PCS CDMA (23.9 dBm)
- FCC Classification(s): Licensed Portable Tx Held to Ear (PCE)
- Equipment (EUT) Type: Tri-Mode Dual-Band Analog/PCS Phone
- Modulation(s): AMPS / CDMA
- Frequency Tolerance: ± 0.00025% (2.5 ppm)
- FCC Rule Part(s): § 24(E), §22(H), §22.901(d)
- Dates of Tests: November 17-30, 2000
- Place of Tests: PCTEST Lab, Columbia, MD U.S.A.
- Test Report S/N: 24/22.201114577.CJ6

NVLAP Lab Code 100431-0

2.1 INTRODUCTION

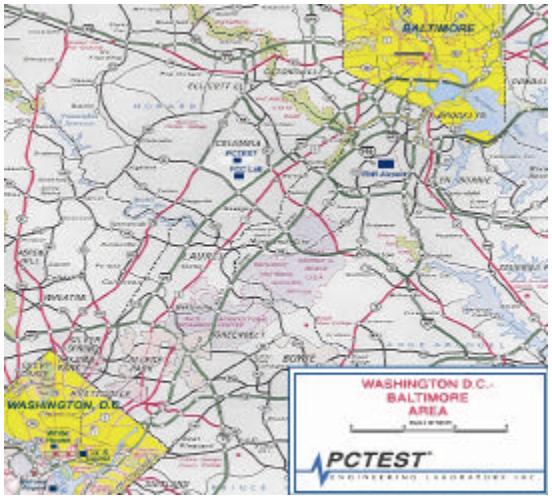


Figure 1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area.

These measurement tests were conducted at ***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 on October 19, 1992.

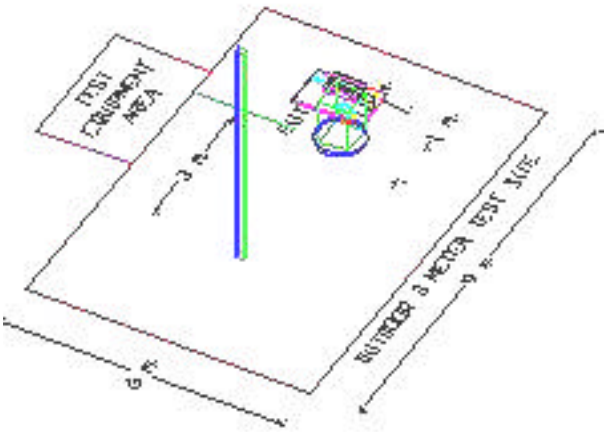


Figure 2. Diagram of 3-meter outdoor test range

Measurement Procedure

The radiated and spurious measurements were made outdoors at 3-meter test range (see Figure2). The equipment under test is placed a wooden turn table 3-meters from the receive antenna. The receive antenna height and turntable rotations was adjusted for the highest reading on the receive spectrum analyzer. A half-wave 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 1 GHz, 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.

3.1 DESCRIPTION OF TESTS

3.2 §2.1047(a) Transmitter Audio Frequency Response

The frequency response of the audio modulating circuit over the frequency range 100 – 5000 Hz is measured. The audio signal generator is connected to the audio input circuit/microphone of the EUT. The audio signal input is adjusted to obtain 50% modulation at 1kHz and this point is taken as the 0dB reference. With the input held constant and below the limit at all frequencies, the audio signal generator is varied from 100 to 50 kHz.

3.3 §22.915(d) Audio Low Pass Filter Frequency Response

The response in dB relative to 1kHz is measured using the HP8901 a Modulation Analyzer. For the frequency response of the audio low-pass filter, the audio input is connected at the input to the modulation limiter and the modulated stage. The audio output is connected at the output of the modulated stage. The corresponding plots are shown herein.

3.4 §2.1047(b) & §22.915(b) Modulation Limiting

The audio signal generator is connected to the audio input circuit/microphone of the EUT. The modulation response is measured for each of the three modulating frequencies (300Hz, 1000 Hz, and 3000Hz), and the input voltage is varied from 30% modulation (±3.6kHz deviation) to at least 20dB higher than the saturation point. Measurements of modulation and the plots are attached herein. Measurements were performed for ST, SAT, and wide-band data modulations. The corresponding results are shown herein.

Note: ST, SAT, & Wide-Band data were internally generated by the EUT.

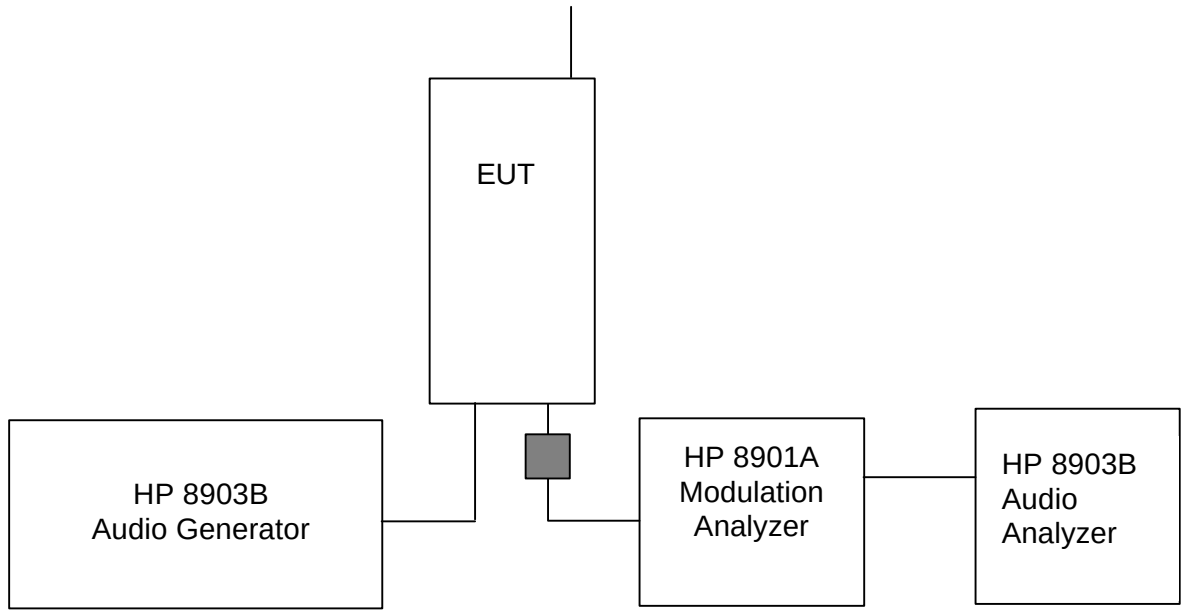


Fig. 3. Transmitter Audio Frequency & Tone Modulation Test Setup.

3.1 DESCRIPTION OF TESTS (CONTINUED)

3.5 §24.238 Occupied Bandwidth Emission Limits

(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.

BLOCK	Freq. Range (MHz) Transmitter (Tx)	Freq. Range (MHz) Receiver (Rx)
A	1850 - 1865	1930 - 1945
B	1870 - 1885	1950 - 1965
C	1895 - 1910	1975 - 1990
D	1865 - 1870	1945 - 1950
E	1885 - 1890	1965 - 1970
F	1890 - 1895	1970 - 1975

Table 1. Broadband PCS Service Frequency Blocks.

3.1 DESCRIPTION OF TESTS (CONTINUED)

3.6 §2.1049(c)(1) Occupied Bandwidth

The audio signal generator is adjusted to 1kHz. The output level is set to ±6kHz deviation. With the level constant, the frequency is set to 2500Hz. Then the audio signal level is increased by 16dB. The occupied bandwidth data is obtained for the SAT (Supervisory Audio Tone), ST (Signaling Tone), WBD (Wideband data), and DTMF (Dual Tone Multi Frequencies). The results are shown on the attached graphs.

Specified Limits:

a. On any frequency removed from the assigned carrier frequency by more than 20 kHz, up to and including 45kHz, the sideband is at least 26dB below the carrier.

b. On any frequency removed from the assigned carrier frequency by more than 45 kHz, up to and including 90kHz, the sideband is at least 45dB below the carrier.

c. On any frequency removed from the assigned carrier frequency by more than 90 kHz, up to the first multiple of the carrier frequency, the sideband is at least 60dB below the carrier or 40 + $\log_{10}$ (mean power output in Watts) dB, whichever is the smaller attenuation.

3.7 §2.1051 Spurious and Harmonic Emissions at Antenna Terminal

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 10 GHz. The transmitter is modulated with a 2500Hz tone at a level of 16dB greater than that required to provided 50% modulation.

At the input terminals of the spectrum analyzer, an isolator (RF circulator with on port terminated with 50 ohms) and an 870 MHz to 890 MHz bandpass filter is connected between the test transceiver (for conducted tests) or the receive antenna (for radiated tests) and the analyzer. The rejection of the bandpass filter to signals in the 825 – 845 MHz range is adequate to limit the transmit energy from the test transceiver which appears to a level which will allow the analyzer to measure signals less than –90dBm. Calibration of the test receiver is performed in the 870 – 890 MHz range to insure accuracy to allow variation in the bandpass filter insertion loss to be calibrated.

3.8 §24.229 Frequencies

At the input terminals of the spectrum analyzer, an isolator (RF pad) and an high-pass filter are connected between the test transceiver (for conducted tests) or the receive antenna (for radiated tests) and the analyzer. The high-pass filter (signals below 2 GHz) is to limit the fundamental frequency from interfering with the measurement of low-level spurious and harmonic emissions and to ensure that the preamplifier is not saturated.

3.9 §2.1053 Radiation Spurious and Harmonic Emissions

Radiation and harmonic emissions above 1 GHz is measured at out 3-meter indoor site. The EUT is placed on the turntable connected to a dummy load in normal operation using the intended power source. A receiving antenna located 3 meters from the turntable receives any signal radiated from the transmitter and its operating accessories. The antenna is varied from 1 to 4 meters and the polarization is varied (horizontal and vertical) to determine the worst-case emission level. To obtain actual radiated signal strength, a signal generator is adjusted in output until a reading identical to that obtained with the actual transmitter is obtained at the receiver. Signal strength is read directly from the generator and recorded on the attached table.3.8 §24.135 Frequency Stability/Temperature Variation.

The frequency stability of the transmitter is measured by:

a.) **Temperature:** The temperature is varied from -30°C to +60°C using an environmental chamber.

b.) **Primary Supply Voltage:** The primary supply voltage is varied from 85% to 115% of the voltage normally at the input to the device or at the power supply terminals if cables are not normally supplied.

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 ±0.0001 (±1 ppm) of the center frequency.

Time Period and Procedure:

1. The carrier frequency of the transmitter and the individual oscillators is measured at room temperature (25°C to 27°C to provide a reference).
2. The equipment is subjected to an overnight “soak” at -30°C without any power applied.
3. After the overnight “soak” at 30°C (usually 14-16 hours), 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 and the individual oscillators is made within a three minute interval after applying power to the transmitter.
4. Frequency measurements are made at 10°C interval up to room temperature. At least a period of one and one half-hour is provided to allow stabilization of the equipment at each temperature level.
5. Again the transmitter carrier frequency and the individual oscillators is measured at room temperature to begin measurement of the upper temperature levels.
6. Frequency were made at 10 intervals starting at 30°C up to +50°C allowing at least two hours at each temperature for stabilization. In all measurements the frequency is measured within three minutes after applying power to the transmitter.
7. The artificial load is mounted external to the temperature chamber.

NOTE: The EUT is tested down to the battery endpoint.

4.1 Test Data

4.2 Effective Radiated Power Output

A. POWER: **Low (Analog Mode)**

Freq. Tuned (MHz)	LEVEL (dBm)	POL (H/V)	ERP (W)	ERP (dBm)
824.04	-34.95	H	0.00430	6.32
836.49	-35.28	H	0.00413	6.15
848.97	-36.00	H	0.00363	5.58

A. POWER: **High (Analog Mode)**

Freq. Tuned (MHz)	LEVEL (dBm)	POL (H/V)	ERP (W)	ERP (dBm)	BATTERY
824.04	-14.95	H	0.42887	26.32	Standard
836.49	-15.28	H	0.41199	26.15	Standard
848.97	-16.00	H	0.36182	25.58	Standard
824.04	-14.98	H	0.42592	26.29	Extended

NOTES:

ERP Measurements by Substitution Method:
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. 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 ERP 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.

4.1 Test Data (Continued)

4.3 Effective Radiated Power Output

B. POWER: **High (CDMA Mode)**

Freq. Tuned (MHz)	LEVEL (dBm)	POL (H/V)	ERP (W)	ERP (dBm)	BATTERY
824.70	-16.00	H	0.33741	25.28	Standard
835.89	-16.10	H	0.34133	25.32	Standard
848.31	-16.40	H	0.32936	25.18	Standard
835.89	-16.13	H	0.33898	25.29	Extended

NOTES:

ERP Measurements by Substitution Method:
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. 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 ERP 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.

5.1 Test Data

5.2 (b) Equivalent Isotropic Radiated Power (E.I.R.P.)

Radiated measurements at 3 meters

Supply Voltage: 3.8 **VDC**

Modulation: PCS CDMA

FREQ. (MHz)	LEVEL (dBm)	POL (H/V)	Azimuth (o angle)	EIRP (dBm)	EIRP (W)	Battery
1851.25	-23.25	H	60	23.83	0.242	Standard
1880.00	-23.32	H	60	23.93	0.247	Standard
1908.75	-23.60	H	60	23.82	0.241	Standard
1880.00	-23.36	H	60	23.89	0.245	Extended

NOTES:

ERP Measurements by Substitution Method:
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. 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 ERP 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.

6.1 Test Data

6.2 Radiated Measurements

Field Strength of SPURIOUS Radiation (CDMA)

OPERATING FREQUENCY:	824.70	MHz	
CHANNEL:	1013 (Low)		
MEASURED OUTPUT POWER:	25.28 dBm =	0.337	W
MODULATION SIGNAL:	CDMA (Internal)		
DISTANCE:	3	meters	
LIMIT:	43 + 10 $\log_{10}$ (W) =	38.28	dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μV/m)	ERP (dBm)	(dBc)
1649.40	-84.7	34.6	H	703.9	-40.43	65.7
2474.10	-88.2	38.8	H	758.6	-39.78	65.1
3298.80	-91.4	42.6	H	817.5	-39.13	64.4
4123.50	-111.7	46.2	H	119.3	-55.85	81.1
4948.20	< -130					

NOTES:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the ERP is calculated using the formula:

   ERP (dBm) = 10 Log_{10} (((r(mV/m)/1 x 10^6)^2 / 49.2/1 x 10^{-3})

   ERP (dBm) = 10 Log_{10} [(3 x FS/1 x 10^6)^2 / (49.2) x 1000]

   ERP (Watts) = {(3 x FS)/1 x 10^6}^{2} / 49.2

6.1 Test Data (Cont)

6.3 Radiated Measurements

Field Strength of SPURIOUS Radiation (CDMA)

OPERATING FREQUENCY:	835.89	MHz	
CHANNEL:	363 (Middle)		
MEASURED OUTPUT POWER:	25.33 dBm =	0.342	W
MODULATION SIGNAL:	CDMA (Internal)		
DISTANCE:	3	meters	
LIMIT:	43 + 10 $\log_{10}$ (W) =	38.34	dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μV/m)	ERP (dBm)	(dBc)
1671.78	-85.30	34.7	H	660.7	-40.98	66.3
2507.67	-88.00	39.0	H	794.3	-39.38	64.7
3343.56	-91.30	42.7	H	831.8	-38.98	64.3
4179.45	-111.50	46.1	H	120.2	-55.78	81.1
5015.34	< -130					

NOTES:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the ERP is calculated using the formula:

   ERP (dBm) = 10 Log_{10} (((r(mV/m)/1 x 10^6)^2 / 49.2/1 x 10^{-3})

   ERP (dBm) = 10 Log_{10} [(3 x FS/1 x 10^6)^2 / (49.2) x 1000]

   ERP (Watts) = {(3 x FS)/1 x 10^6}^{2} / 49.2

6.1 Test Data (Cont)

6.4 Radiated Measurements

Field Strength of SPURIOUS Radiation (CDMA)

OPERATING FREQUENCY:	848.31	MHz		
CHANNEL:	777 (High)			
MEASURED OUTPUT POWER:	25.17	dBm =	0.330	W
MODULATION SIGNAL:	CDMA (Internal)			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$(W) =		38.18	dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μV/m)	ERP (dBm)	(dBc)
1696.62	-88.0	34.8	H	489.8	-43.58	68.7
2544.93	-91.2	39.3	H	567.5	-42.30	67.5
3393.24	-94.9	43.1	H	575.4	-42.18	67.3
4241.55	-111.6	46.2	H	120.2	-55.78	80.9
5089.86	< -130					

NOTES:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the ERP is calculated using the formula:

   ERP (dBm) = $10 \log_{10} (((r(mV/m)/1 \times 10^{6})^2 / 49.2/1 \times 10^{-3})$

   ERP (dBm) = $10 \log_{10} [(3 \times FS/1 \times 10^{6})^2 / (49.2) \times 1000]$

   ERP (Watts) = $\{(3 \times FS)/1 \times 10^{6}\}^2 / 49.2$

6.1 Test Data (Cont)

6.5 Radiated Measurements

Field Strength of SPURIOUS Radiation (AMPS)

OPERATING FREQUENCY:	824.04	MHz		
CHANNEL:	991 (Low)			
MEASURED OUTPUT POWER:	26.32	dBm =	0.43	W
MODULATION SIGNAL:	ST (Signalling Tone)			
DISTANCE:	3	meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	39.33	dBc	

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (µV/m)	ERP (dBm)	(dBc)
1648.08	-83.5	34.5	H	794.3	-39.38	65.7
2472.12	-86.8	38.8	H	896.4	-38.33	64.6
3296.16	-90.0	42.5	H	944.1	-37.88	64.2
4120.20	-109.7	46.1	H	148.4	-53.95	80.3
4944.24	< -130					

NOTES:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the ERP is calculated using the formula:

   ERP (dBm) = 10 Log_{10} (((r(mV/m)/1 x 10^6)^2 / 49.2/1 x 10^{-3})

   ERP (dBm) = 10 Log_{10} [(3 x FS/1 x 10^6)^2 / (49.2) x 1000]

   ERP (Watts) = {(3 x FS)/1 x 10^6}^{2} / 49.2

6.1 Test Data (Cont)

6.6 Radiated Measurements

Field Strength of SPURIOUS Radiation (AMPS)

OPERATING FREQUENCY:	836.49	MHz	
CHANNEL:	383 (Middle)		
MEASURED OUTPUT POWER:	26.15 dBm =	0.41	W
MODULATION SIGNAL:	ST (Signalling Tone)		
DISTANCE:	3	meters	
LIMIT:	43 + 10 $\log_{10}$ (W) =	39.16	dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μV/m)	ERP (dBm)	(dBc)
1672.98	-83.4	34.5	H	803.5	-39.28	65.4
2509.47	-87.0	39.0	H	891.3	-38.38	64.5
3345.96	-90.6	42.7	H	901.6	-38.28	64.4
4182.45	-110.2	46.2	H	141.3	-54.38	80.5
5018.94	< -130					

NOTES:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the ERP is calculated using the formula:

   ERP (dBm) = $10 \text{ Log}_{10} (((r(mV/m)/1 \times 10^6)^2 / 49.2/1 \times 10^{-3})$

   ERP (dBm) = $10 \text{ Log}_{10} [(3 \times FS/1 \times 10^6)^2 / (49.2) \times 1000]$

   ERP (Watts) = $\{(3 \times FS)/1 \times 10^6\}^2 / 49.2$

6.1 Test Data (Cont)

6.7 Radiated Measurements

Field Strength of SPURIOUS Radiation (AMPS)

OPERATING FREQUENCY:	848.97	MHz	
CHANNEL:	799 (High)		
MEASURED OUTPUT POWER:	25.58 dBm =	0.36	W
MODULATION SIGNAL:	ST (Signalling Tone)		
DISTANCE:	3	meters	
LIMIT:	43 + 10 $\log_{10}$ (W) =	38.59	dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μV/m)	ERP (dBm)	(dBc)
1697.94	-84.8	34.9	H	720.3	-40.23	65.8
2546.91	-87.8	39.2	H	831.8	-38.98	64.6
3395.88	-90.3	42.9	H	955.0	-37.78	63.4
4244.85	-109.7	46.1	H	148.6	-53.94	79.5
5093.82	< -130					

NOTES:

1. The bandwidth is set per §22.917 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the ERP is calculated using the formula:

   ERP (dBm) = 10 Log_{10} (((r(mV/m)/1 x 10^6)^2 / 49.2/1 x 10^{-3})

   ERP (dBm) = 10 Log_{10} [(3 x FS/1 x 10^6)^2 / (49.2) x 1000]

   ERP (Watts) = {(3 x FS)/1 x 10^6}^{2} / 49.2

6.1 Test Data (Cont)

6.8 Radiated Measurements

Field Strength of SPURIOUS Radiation (PCS CDMA)

OPERATING FREQUENCY:	1851.25 MHz		
CHANNEL:	025 (Low)		
MEASURED OUTPUT POWER:	23.83 dBm =	0.242	W
MODULATION SIGNAL:	CDMA (Internal)		
DISTANCE:	3 meters		
LIMIT:	43 + 10 $\log_{10}$ (W) =	36.83	dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μV/m)	EIRP (dBm)	(dBc)
3702.50	-84.3	44.4	H	2277.7	-28.08	51.9
5553.75	-89.5	49.7	H	2290.9	-28.03	51.9
7405.00	-116.0	53.7	H	171.8	-50.53	74.4
9256.25	-126.3	57.2	H	78.5	-57.33	81.2
11107.50	< -130					

NOTES:

1. The bandwidth is set per §24.238 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the EIRP is calculated using the formula:

   EIRP (dBm) = 10 Log 10 $(((r(mV/m)/1 \times 10^6)^2 / 30.0/1 \times 10^{-3})$

   EIRP (dBm) = 10 Log 10 $[(3 \times FS/1 \times 10^6)^2 / (30.0) \times 1000]$

   EIRP (Watts) = $\{(3 \times FS)/1 \times 10^6\}^2 / 30.0$

6.1 Test Data (Cont)

6.9 Radiated Measurements

Field Strength of SPURIOUS Radiation (PCS CDMA)

OPERATING FREQUENCY:	1880.00	MHz	
CHANNEL:	600 (Middle)		
MEASURED OUTPUT POWER:	23.93 dBm =	0.247	W
MODULATION SIGNAL:	CDMA (Internal)		
DISTANCE:	3	meters	
LIMIT:	43 + 10 $\log_{10}$ (W) =	36.93	dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μV/m)	EIRP (dBm)	(dBc)
3760.00	-84.1	44.7	H	2398.8	-27.63	51.6
5640.00	-88.9	49.9	H	2526.4	-27.18	51.1
7520.00	-115.3	54.0	H	193.9	-49.48	73.4
9400.00	-125.6	57.4	H	87.1	-56.43	80.4
11280.00	< -130					

NOTES:

1. The bandwidth is set per §24.238 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the EIRP is calculated using the formula:

   EIRP (dBm) = 10 Log 10 $(((r(mV/m)/1 \times 10^{6})^2 / 30.0/1 \times 10^{-3})$

   EIRP (dBm) = 10 Log 10 $[(3 \times FS/1 \times 10^{6})^2 / (30.0) \times 1000]$

   EIRP (Watts) = $\{(3 \times FS)/1 \times 10^{6}\}^2 / 30.0$

6.1 Test Data (Cont)

6.10 Radiated Measurements

Field Strength of SPURIOUS Radiation (PCS CDMA)

OPERATING FREQUENCY:	1908.75	MHz	
CHANNEL:	1175 (High)		
MEASURED OUTPUT POWER:	23.82 dBm =	0.241	W
MODULATION SIGNAL:	CDMA (Internal)		
DISTANCE:	3	meters	
LIMIT:	43 + 10 $\log_{10}$ (W) =	36.82	dBc

FREQ. (MHz)	LEVEL (dBm)	AFCL (dB)	POL (H/V)	F/S (μV/m)	EIRP (dBm)	(dBc)
3817.50	-85.1	45.0	H	2213.1	-28.33	52.1
5726.25	-89.3	50.1	H	2468.9	-27.38	51.2
7635.00	-116.2	54.2	H	177.8	-50.23	74.0
9543.75	-126.5	57.7	H	81.3	-57.03	80.8
11452.50	< -130					

NOTES:

1. The bandwidth is set per §24.238 (RBW = 1MHz, VBW = 1MHz).
2. The spectrum was checked from 25 MHz up to the 10th harmonic.
3. All emissions not listed were found to be more than 20dB below the limit.
4. < -130dBm is below the floor of the spectrum analyzer.
5. The EUT is manipulated through 3 orthogonal axis and the worst-case are reported.
6. The EUT is placed 3m. away from the receiving antenna and the EIRP is calculated using the formula:

EIRP (dBm) = 10 Log 10 (((r(mV/m)/1 x 10^6)^2 / 30.0/1 x 10^{-3})

EIRP (dBm) = 10 Log 10 [(3 x FS/1 x 10^6)^2 / (30.0) x 1000]

EIRP (Watts) = {(3 x FS)/1 x 10^6}^{2} / 30.0

7.1 Test Data

7.2 FREQUENCY STABILITY (AMPS)

OPERATING FREQUENCY: 836,490,012 Hz

CHANNEL: 383

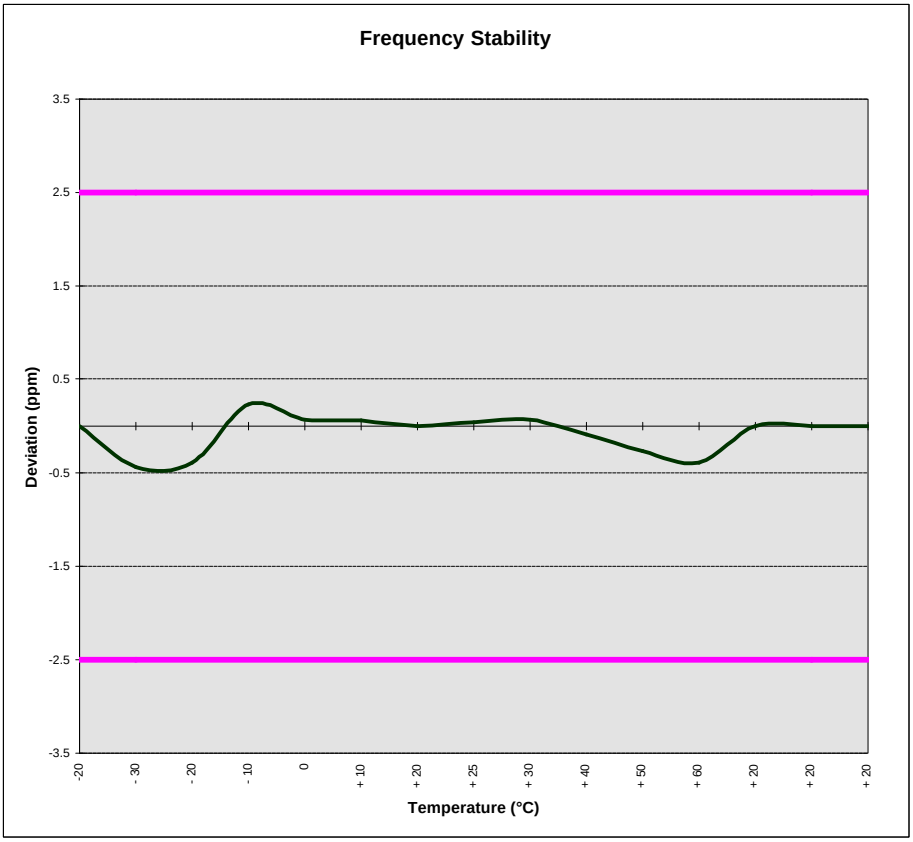
REFERENCE VOLTAGE: 3.8 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (ºC)	FREQ. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	836,490,012	0.000000
100 %		- 30	836,490,380	-0.000044
100 %		- 20	836,490,338	-0.000039
100 %		- 10	836,489,820	0.000023
100 %		0	836,489,953	0.000007
100 %		+ 10	836,489,962	0.000006
100 %		+ 20	836,490,012	0.000000
100 %		+ 25	836,489,979	0.000004
100 %		+ 30	836,489,953	0.000007
100 %		+ 40	836,490,087	-0.000009
100 %		+ 50	836,490,238	-0.000027
100 %		+ 60	836,490,338	-0.000039
85 %	3.23	+ 20	836,490,012	0.000000
115 %	4.37	+ 20	836,490,012	0.000000
BATT. ENDPOINT	2.78	+ 20	836,490,012	0.000000

7.1 Test Data (Continued)

7.3 § 2.995 FREQUENCY STABILITY (AMPS)



7.1 Test Data (Continued)

7.4 FREQUENCY STABILITY (PCS/CDMA)

OPERATING FREQUENCY: 1,880,000,019 Hz

CHANNEL: 600

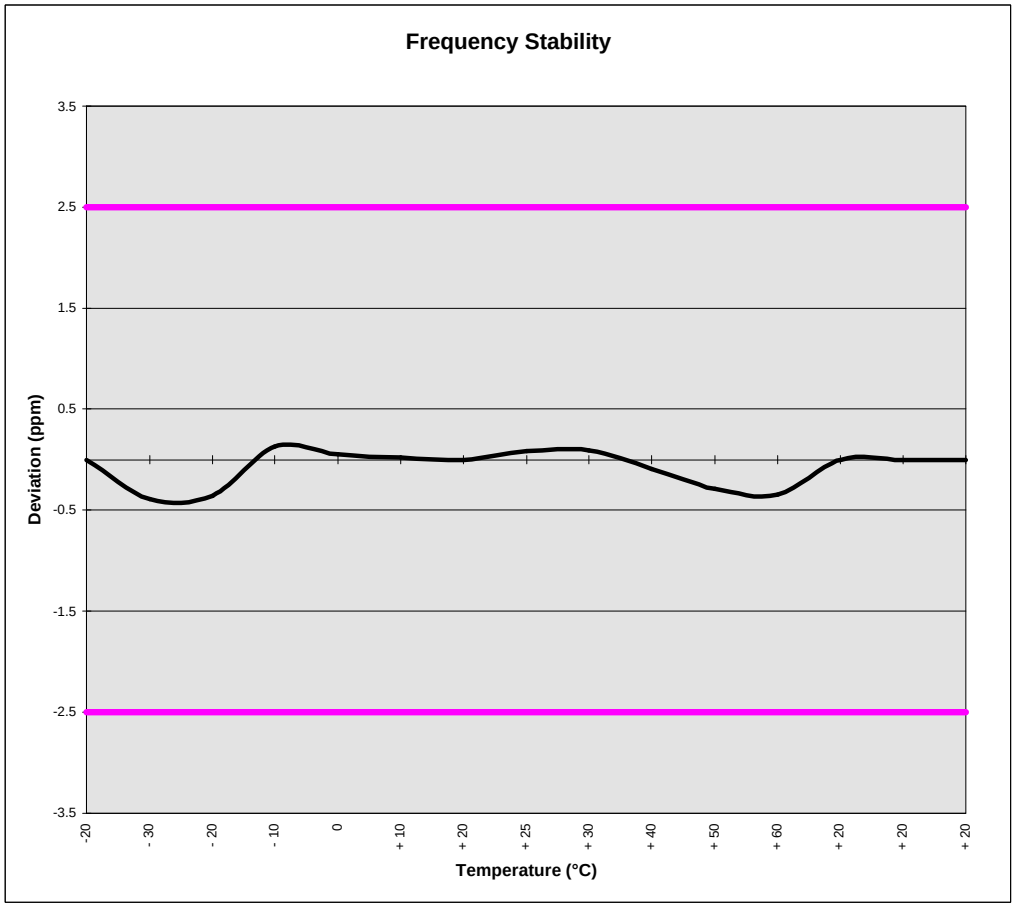
REFERENCE VOLTAGE: 3.8 VDC

DEVIATION LIMIT: ± 0.00025 % or 2.5 ppm

VOLTAGE (%)	POWER (VDC)	TEMP (ºC)	FREQ. (Hz)	Deviation (%)
100 %	3.80	+ 20 (Ref)	1,880,000,019	0.000000
100 %		- 30	1,880,000,752	-0.000039
100 %		- 20	1,880,000,696	-0.000036
100 %		- 10	1,879,999,775	0.000013
100 %		0	1,879,999,925	0.000005
100 %		+ 10	1,879,999,981	0.000002
100 %		+ 20	1,880,000,019	0.000000
100 %		+ 25	1,879,999,869	0.000008
100 %		+ 30	1,879,999,850	0.000009
100 %		+ 40	1,880,000,188	-0.000009
100 %		+ 50	1,880,000,564	-0.000029
100 %		+ 60	1,880,000,677	-0.000035
85 %	3.23	+ 20	1,880,000,019	0.000000
115 %	4.37	+ 20	1,880,000,019	0.000000
BATT. ENDPOINT	2.78	+ 20	1,880,000,019	0.000000

7.1 Test Data (Continued)

7.5 FREQUENCY STABILITY (PCS/CDMA)



8.1 PLOT(S) OF EMISSIONS

(SEE ATTACHMENT A)

9.1 TEST EQUIPMENT

Type	Model	Cal. Due Date	S/N
Microwave Spectrum Analyzer	HP 8566B (100Hz-22GHz)	12/05/00	3638A08713
Microwave Spectrum Analyzer	HP 8566B (100Hz-22GHz)	04/17/01	2542A11898
Spectrum Analyzer/Tracking Gen.	HP 8591A (9kHz-1.8GHz)	06/02/01	3144A02458
Spectrum Analyzer	HP 8591A (9kHz-1.8GHz)	10/15/01	3108A02053
Spectrum Analyzer	HP 8594A (9kHz-2.9GHz)	11/02/01	3051A00187
Signal Generator*	HP 8640B (500Hz-1GHz)	06/02/01	2232A19558
Signal Generator*	HP 8640B (500Hz-1GHz)	06/02/01	1851A09816
Signal Generator*	Rohde & Schwarz (0.1-1000MHz)	09/11/01	894215/012
Ailtech/Eaton Receiver	NM 37/57A-SL (30-1000MHz)	04/12/01	0792-03271
Ailtech/Eaton Receiver	NM 37/57A (30-1000MHz)	03/11/01	0805-03334
Ailtech/Eaton Receiver	NM 17/27A (0.1-32MHz)	09/17/01	0608-03241
Quasi-Peak Adapter	HP 85650A	08/09/01	2043A00301
Ailtech/Eaton Adapter	CCA-7 CISPR/ANSI QP Adapter	03/11/01	0194-04082
RG58 Coax Test Cable	No. 167		n/a
Harmonic/Flicker Test System	HP 6841A (IEC 555-2/3)		3531A00115
Broadband Amplifier (2)	HP 8447D		1145A00470, 1937A03348
Broadband Amplifier	HP 8447F		2443A03784
Transient Limiter	HP 11947A (9kHz-200MHz)		2820A00300
Horn Antenna	EMCO Model 3115 (1-18GHz)		9704-5182
Horn Antenna	EMCO Model 3115 (1-18GHz)		9205-3874
Horn Antenna	EMCO Model 3116 (18-40GHz)		9203-2178
Biconical Antenna (4)	Eaton 94455/Eaton 94455-1/Singer 94455-1/Compliance Design 1295, 1332, 0355		
Log-Spiral Antenna (3)	Ailtech/Eaton 93490-1		0608, 1103, 1104
Roberts Dipoles	Compliance Design (1 set) A100		5118
Ailtech Dipoles	DM-105A (1 set)		33448-111
EMCO LISN (2)	3816/2		1077, 1079
EMCO LISN	3725/2		2009
Microwave Preamplifier 40dB Gain	HP 83017A (0.5-26.5GHz)		3123A00181
Microwave Cables	MicroCoax (1.0-26.5GHz)		
Ailtech/Eaton Receiver	NM37/57A-SL		0792-03271
Spectrum Analyzer	HP 8591A		3034A01395
Modulation Analyzer	HP 8901A		2432A03467
NTSC Pattern Generator	Leader 408		0377433
Noise Figure Meter	HP 8970B		3106A02189
Noise Figure Meter	Ailtech 7510		TE31700
Noise Generator	Ailtech 7010		1473
Microwave Survey Meter	Holaday Model 1501 (2.450GHz)		80931
Digital Thermometer	Extech Instruments 421305		426966
Attenuator	HP 8495A (0-70dB) DC-4GHz		
Bi-Directional Coax Coupler	Narda 3020A (50-1000MHz)		
Shielded Screen Room	RF Lindgren Model 26-2/2-0		6710 (PCT270)
Shielded Semi-Anechoic Chamber	Ray Proof Model S81		R2437 (PCT278)
Environmental Chamber	Associated Systems Model 1025 (Temperature/Humidity)		PCT285

* Calibration traceable to the National Institute of Standards and Technology (NIST).

10.1 SAMPLE CALCULATIONS

A. ERP Sample Calculation

$$\text{Level } \mu\text{/Vm @ 3 meters} = \frac{\text{Log } 10^{-1} (\text{dBm} + 107 + \text{AFCL})}{20}$$

$$\frac{\text{Log } 10^{-1} (-14 + 107 + 31.7)}{20}$$

1717908.4 µ/Vm @ 3 meters

Sample Calculation (relative to a dipole)

ERP (dBm) = 10 Log_{10} (((r(µV/m)1x10^{6})^{2}/49.2/1x10^{-3})

ERP (dBm) = 10 Log_{10}(((3(1717908.4)1x10^{6})^{2}/49.2/1x10^{-3})

ERP (dBm) = 27.32

B. Emission Designator per §2.201

CDMA Sample

2M + 2DK

CDMA BW = 1.25 MHz

F = Frequency Modulation

9 = Composite Digital Info

W = Combination (Audio/Data)

Emission Designator = 1M25F9W

11.1 CONCLUSION

The data collected shows that the **TOSHIBA Tri-Mode Dual-Band Analog/PCS Phone FCC ID: CJ6DCE42903A** complies with all the requirements of Parts 2, 22, and 24 of the FCC rules.

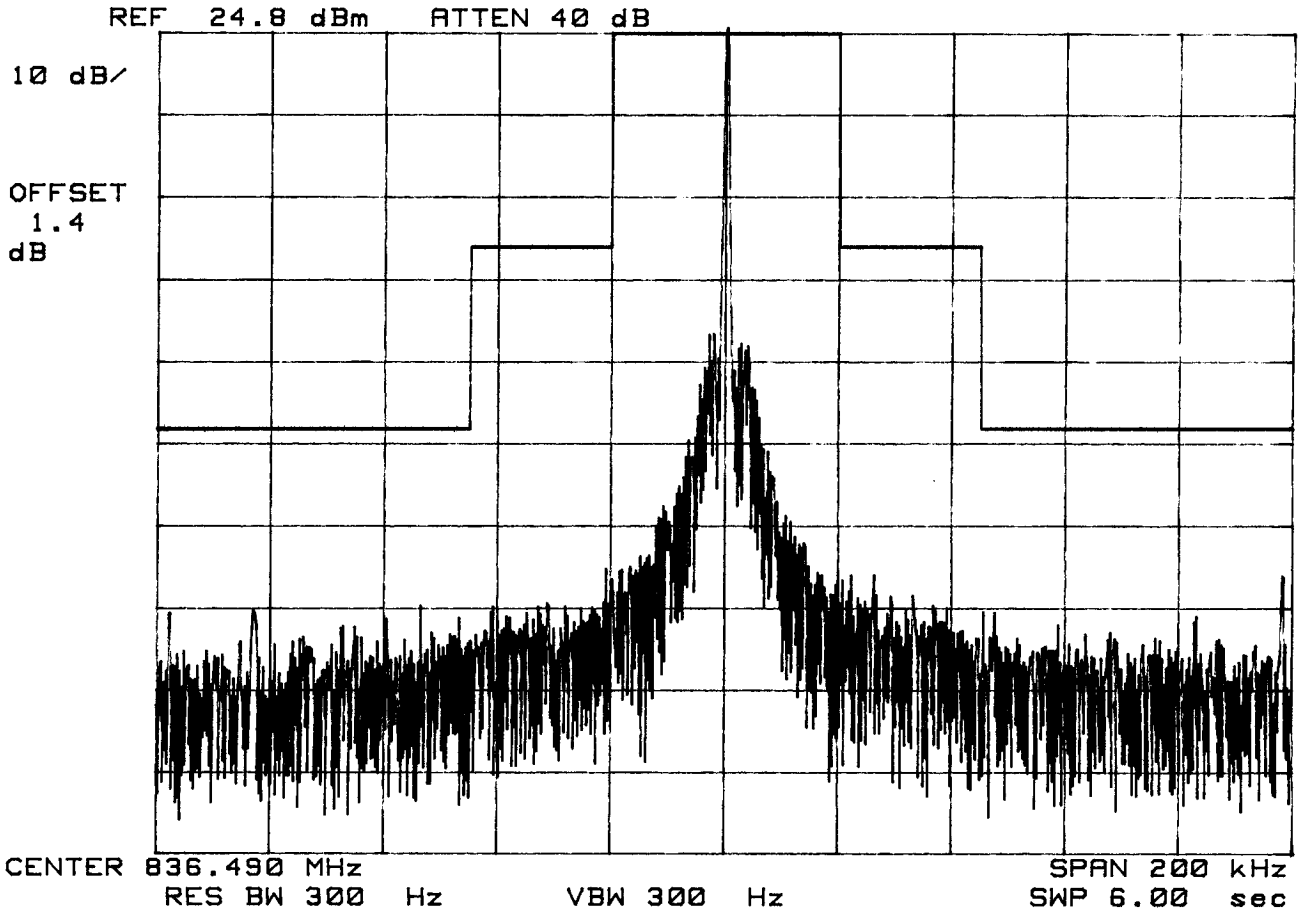
ATTACHMENT A – TEST PLOTS

PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CJ6DCE42903A
TOSHIBA TRI-MODE PHONE
FM MODE
Operating Frequency: 836.490 MHz
Output Power : 24.8 dBm

Test Mode:Unmodulated Signal

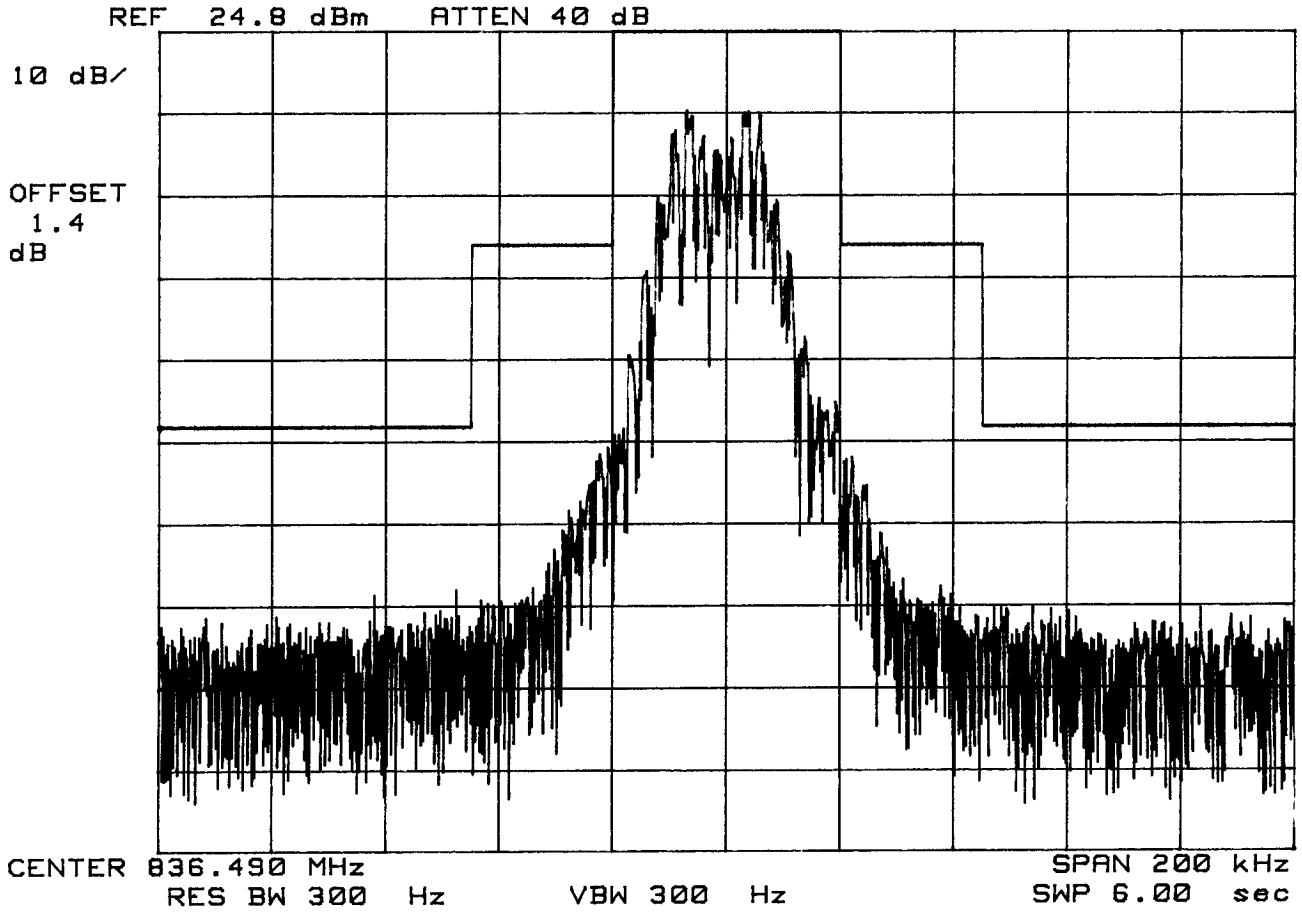


PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CJ6DCE42903A
TOSHIBA TRI-MODE PHONE
FM MODE
Operating Frequency: 836.490 MHz
Output Power : 24.8 dBm

Test Mode:Voice

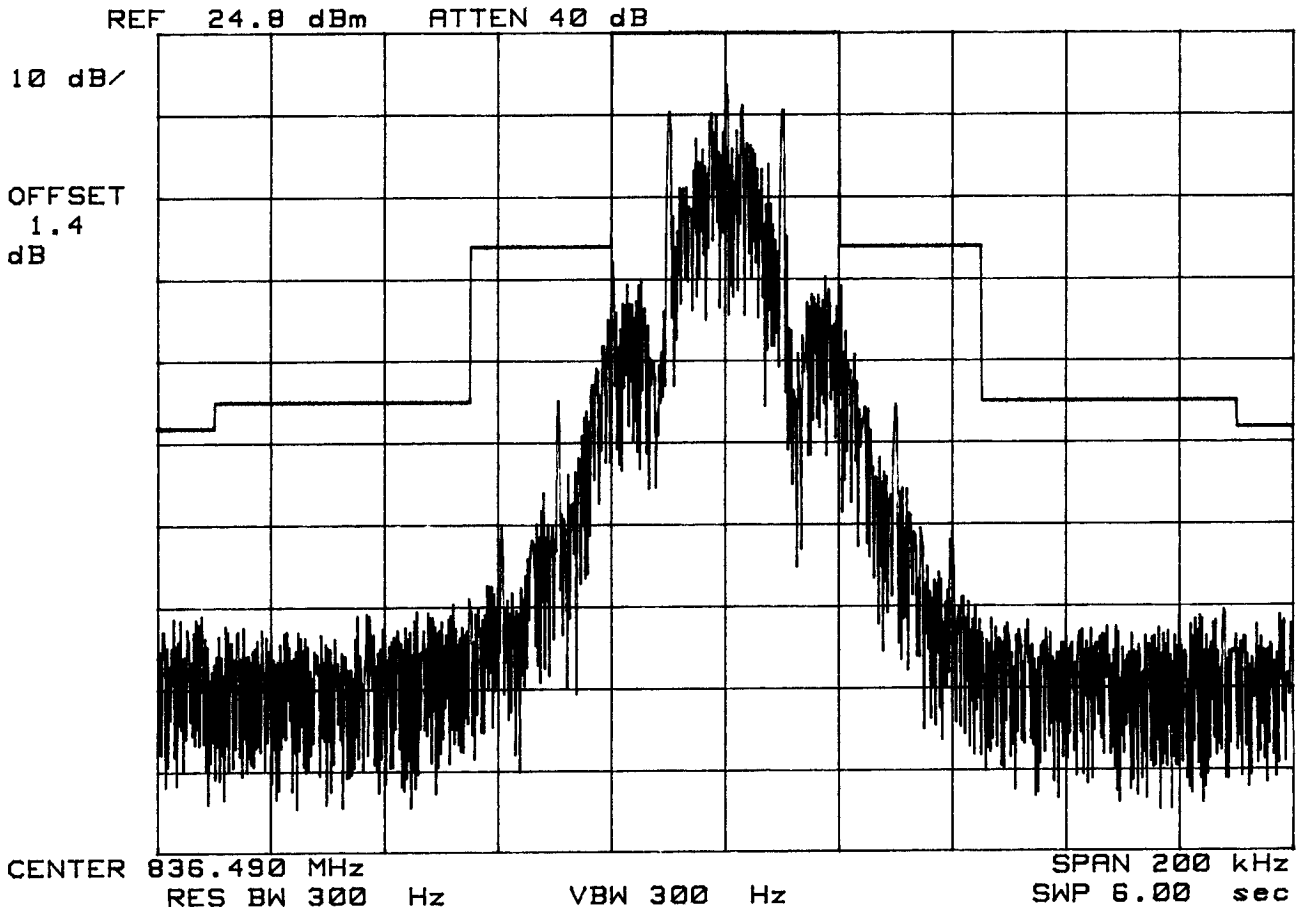


PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CJ6DCE42903A
TOSHIBA TRI-MODE PHONE
FM MODE
Operating Frequency: 836.490 MHz
Output Power : 24.8 dBm

Test Mode:Wide Band Data

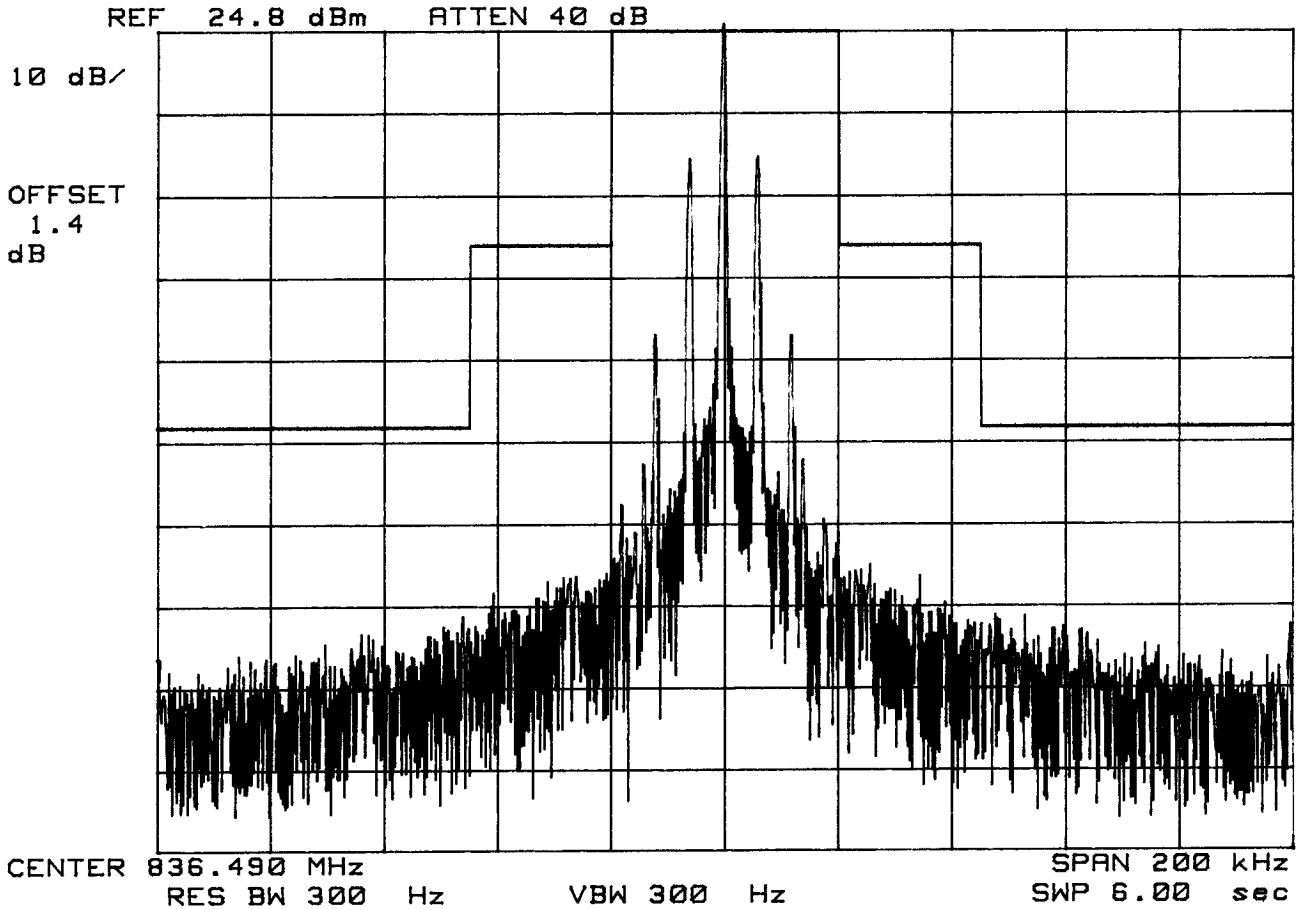


PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CJ6DCE42903A
TOSHIBA TRI-MODE PHONE
FM MODE
Operating Frequency: 836.490 MHz
Output Power : 24.8 dBm

Test Mode:SAT

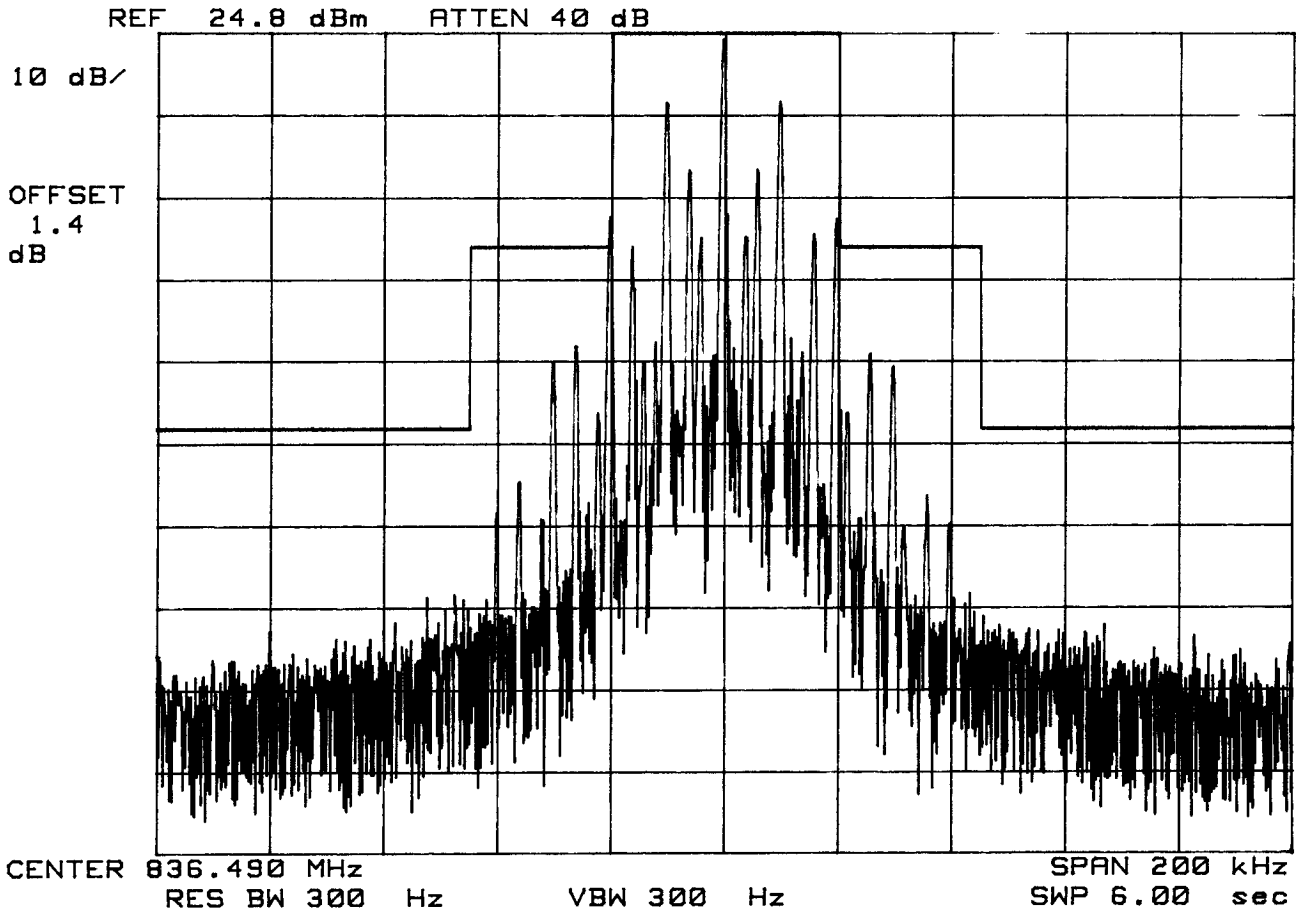


PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CJ6DCE42903A
TOSHIBA TRI-MODE PHONE
FM MODE
Operating Frequency: 836.490 MHz
Output Power : 24.8 dBm

Test Mode:SAT + ST

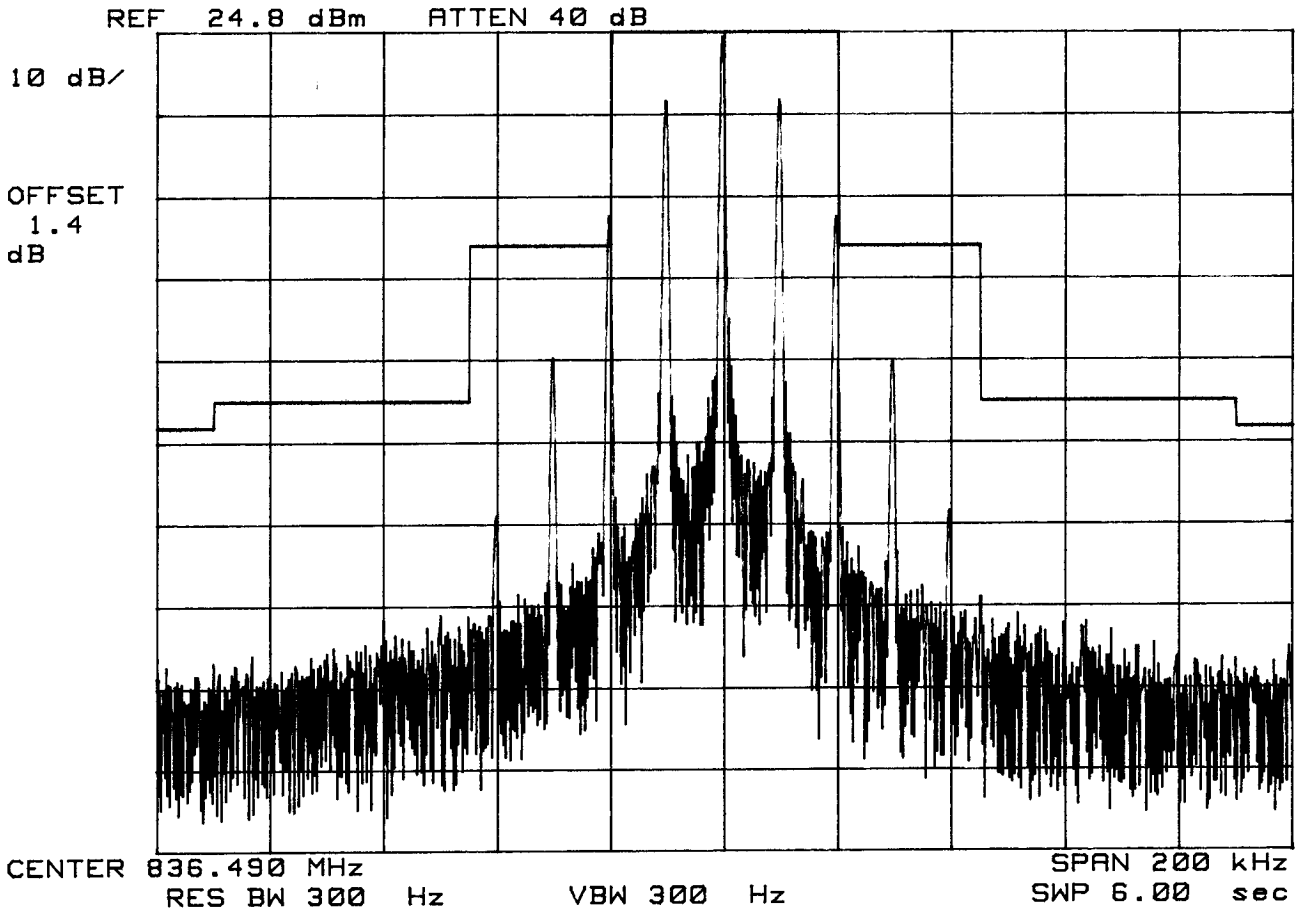


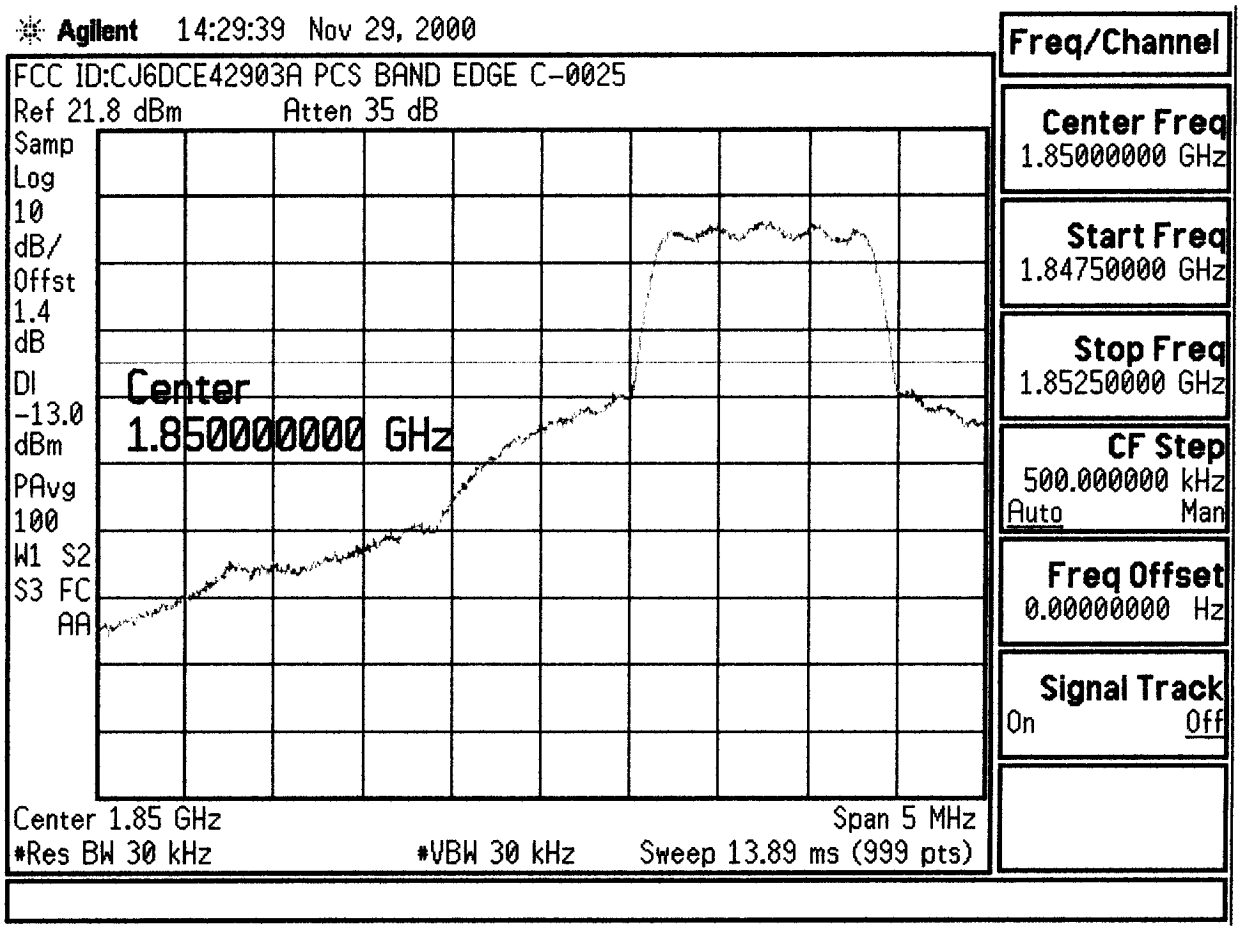
PCTEST Engineering Lab.

SPECTRUM ANALYZER PRESENTATION

FCC ID:CJ6DCE42903A
TOSHIBA TRI-MODE PHONE
FM MODE
Operating Frequency: 836.490 MHz
Output Power : 24.8 dBm

Test Mode:ST

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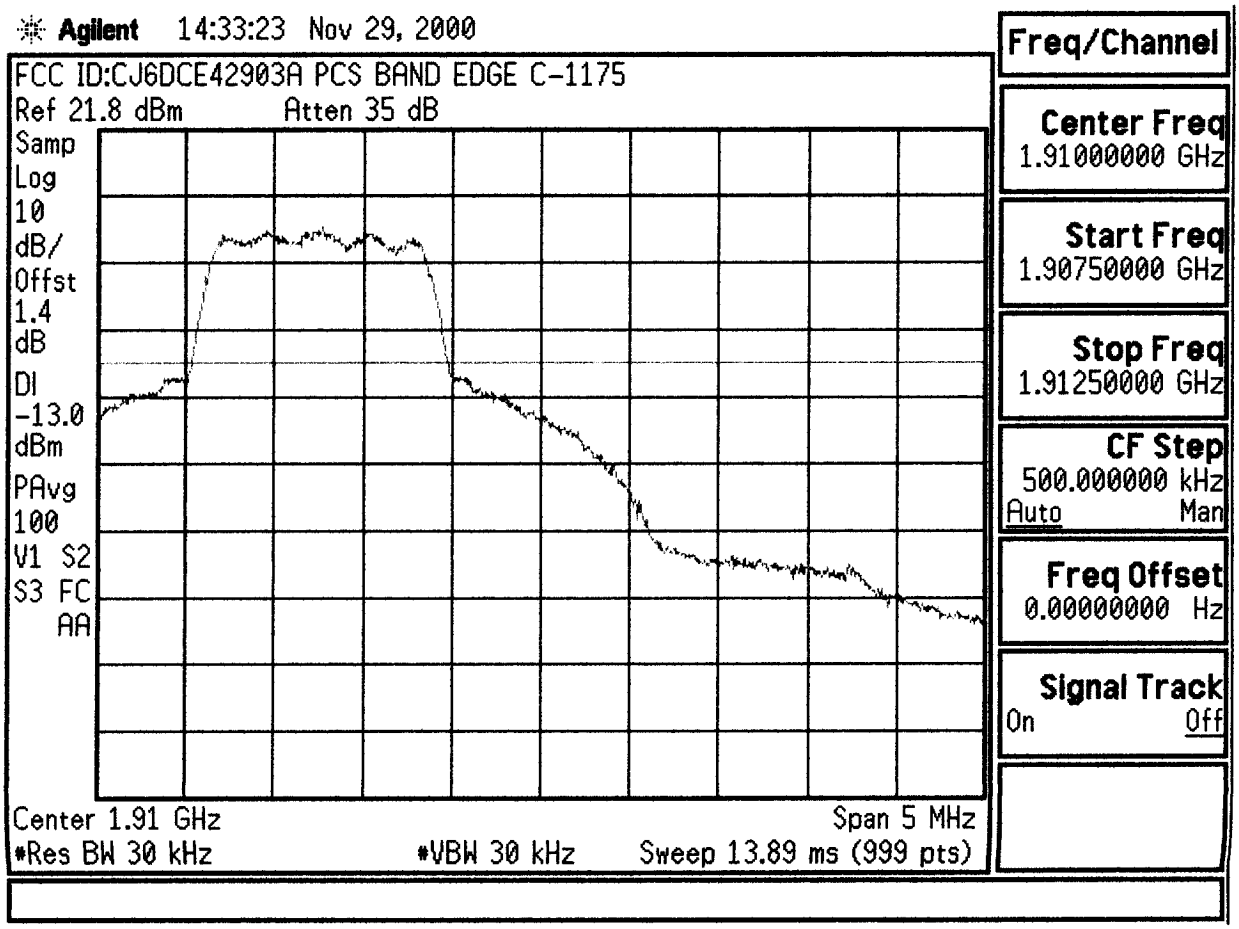
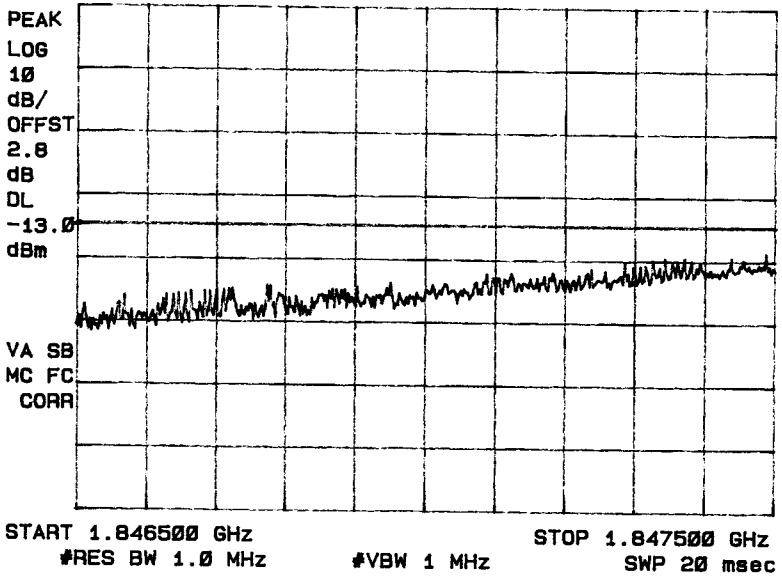
FCC ID:CJ6DCE42903A PCS BAND EDGE C-0025
Ref 21.8 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
PAvg
100
W1 S2
S3 FC
AA
Center
1.850000000 GHz
Center 1.85 GHz
Span 5 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 13.89 ms (999 pts)
Freq/Channel
Center Freq
1.85000000 GHz
Start Freq
1.84750000 GHz
Stop Freq
1.85250000 GHz
CF Step
500.000000 kHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off


Agilent 14:33:23 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS BAND EDGE C-1175
Ref 21.8 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
PAvg
100
V1 S2
S3 FC
AA
Center 1.91 GHz
Span 5 MHz
#Res BW 30 kHz
#VBW 30 kHz
Sweep 13.89 ms (999 pts)
Freq/Channel
Center Freq
1.91000000 GHz
Start Freq
1.90750000 GHz
Stop Freq
1.91250000 GHz
CF Step
500.000000 kHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

FCC ID: CJ6DCE42903A BAND EDGE C-0025



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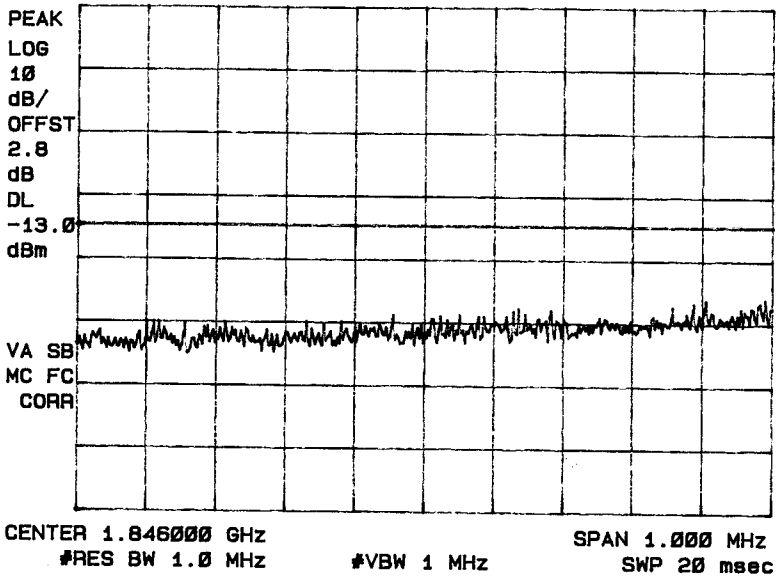

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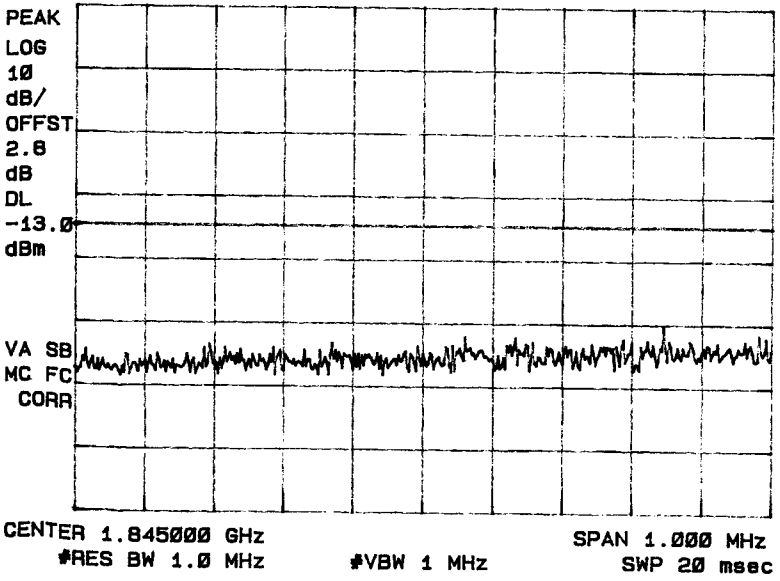

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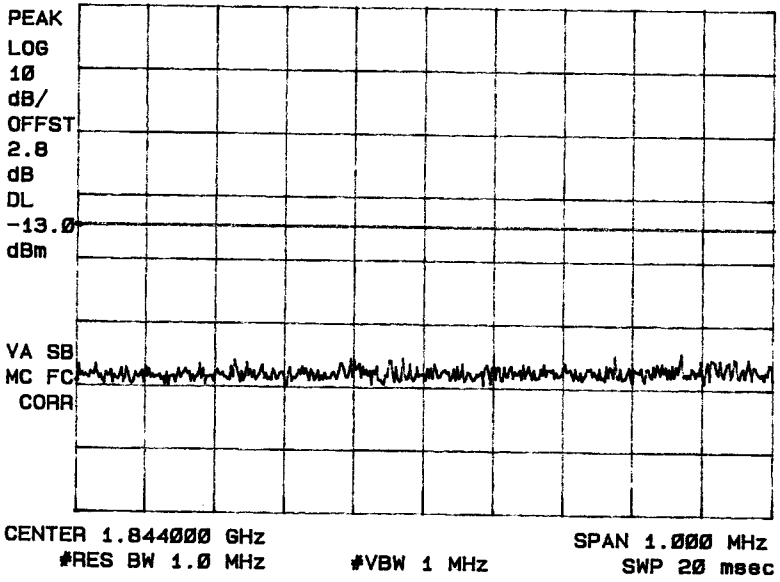
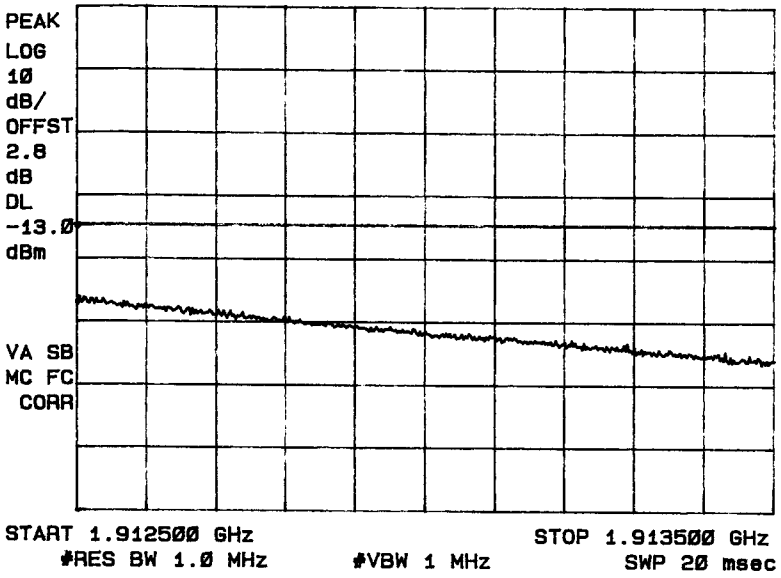


FCC ID: CJ6DCE42903A BAND EDGE C-1175



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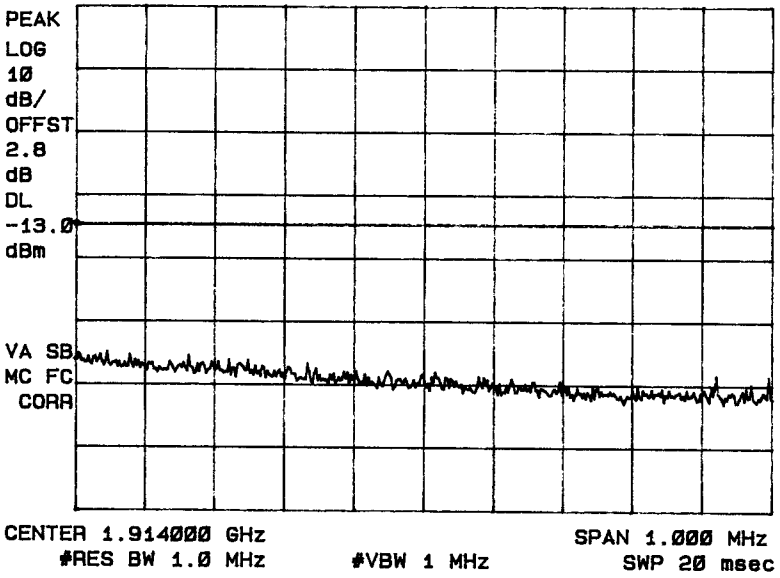

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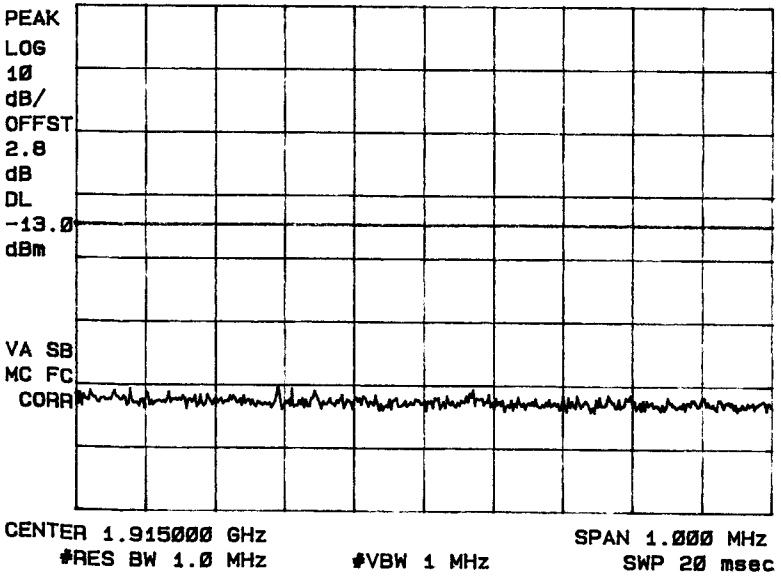

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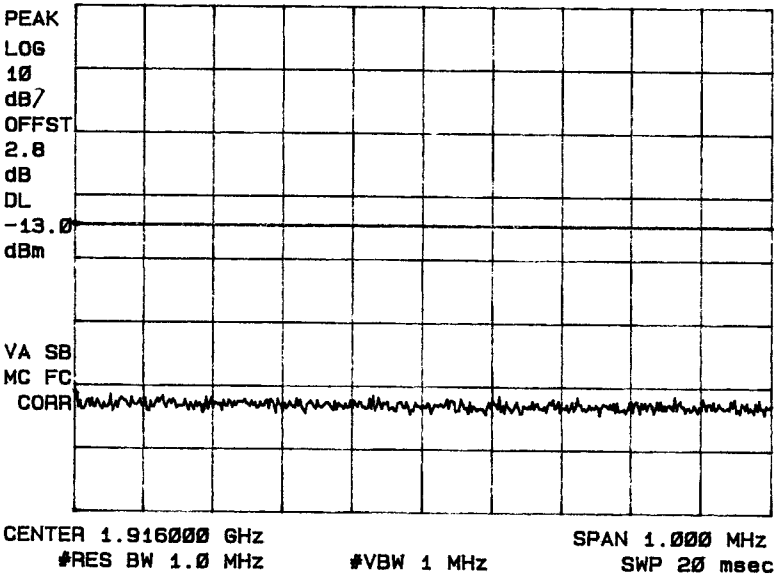
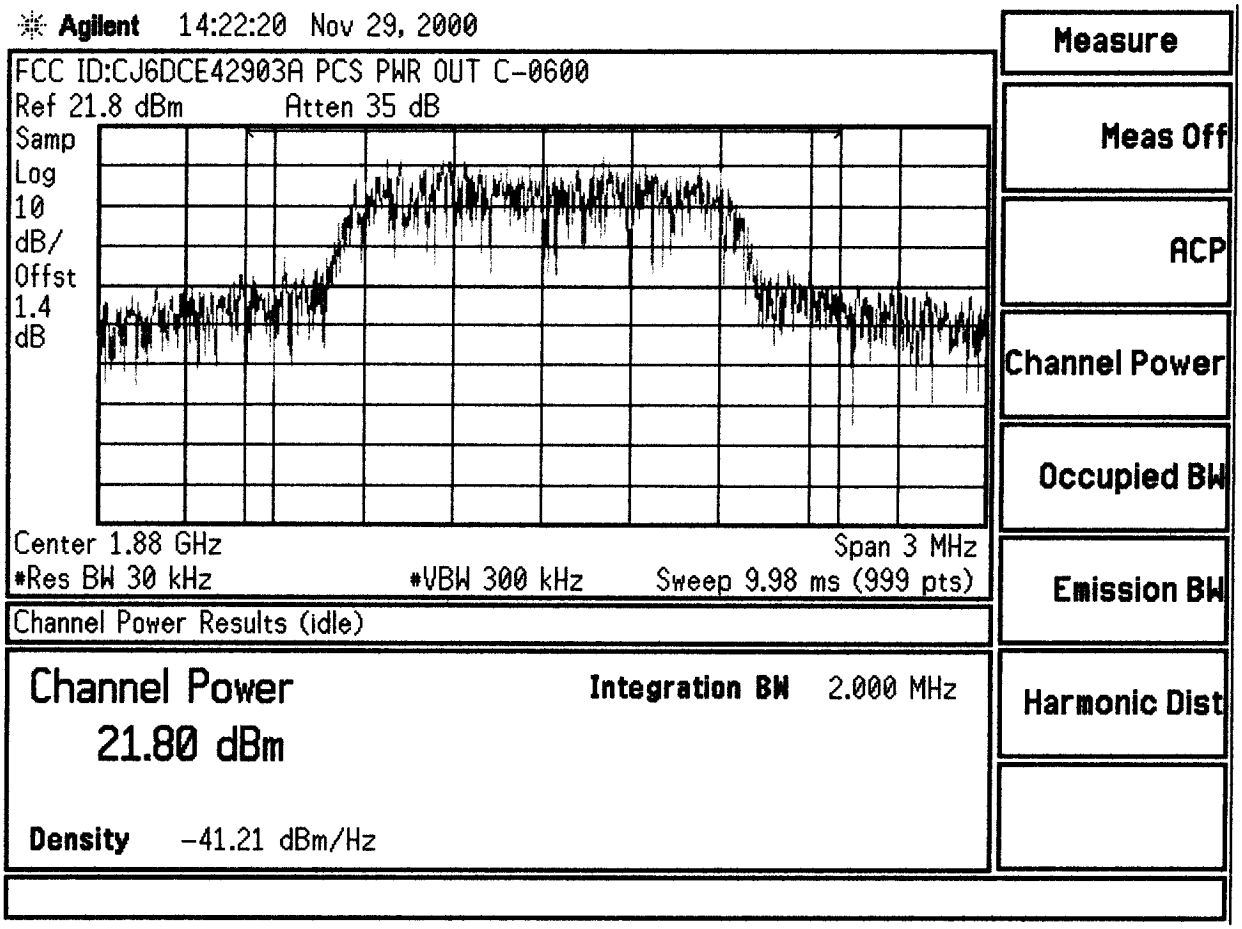
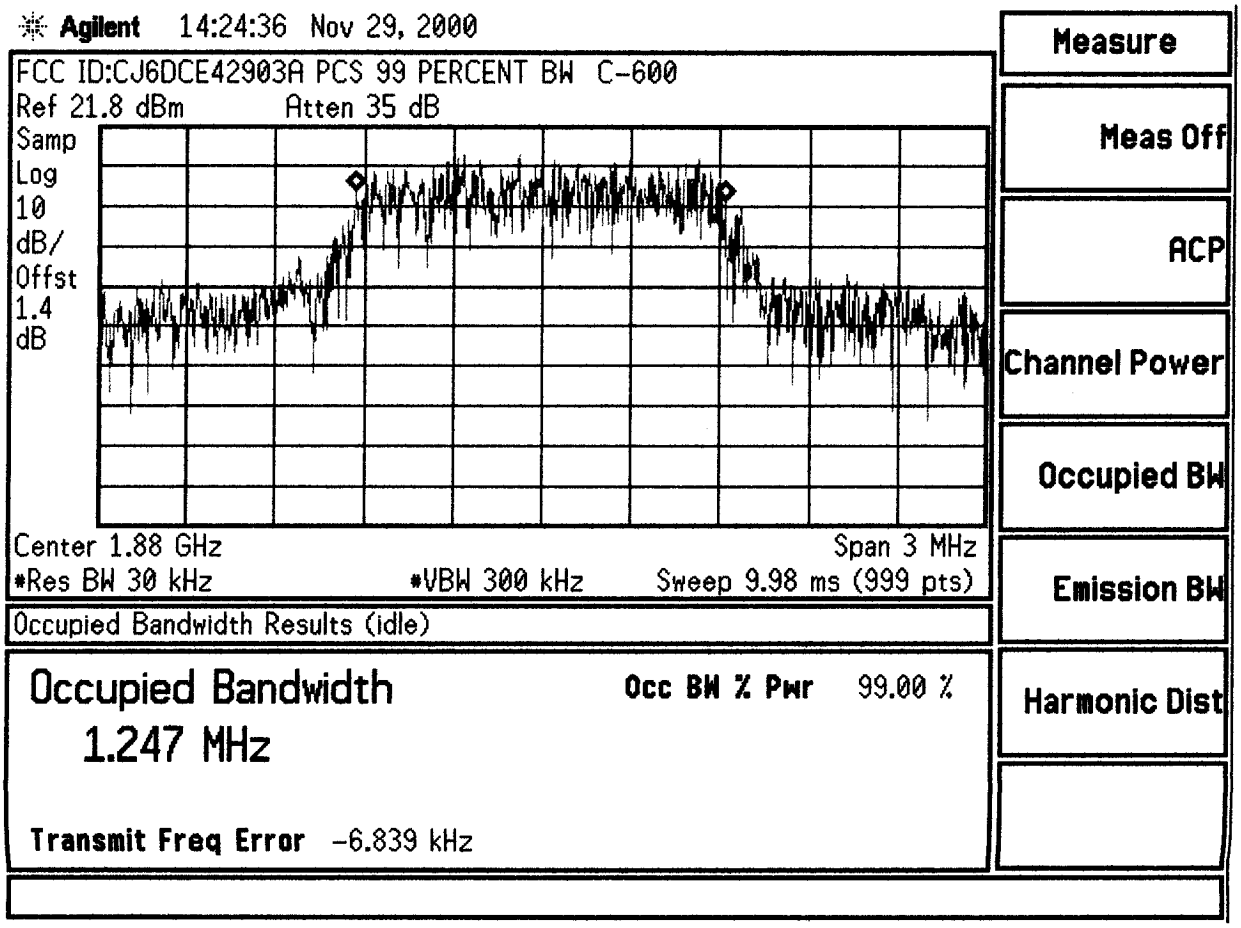
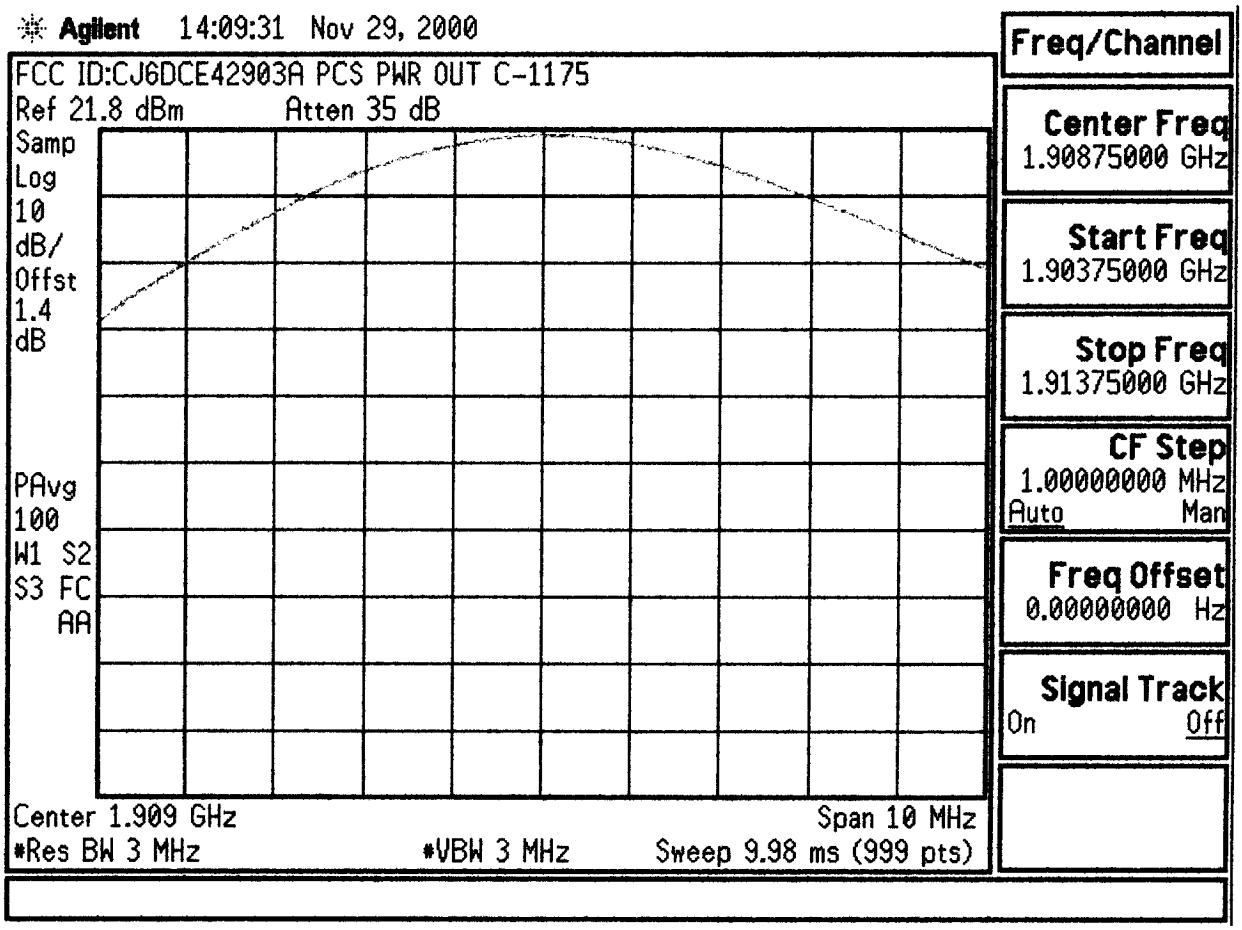
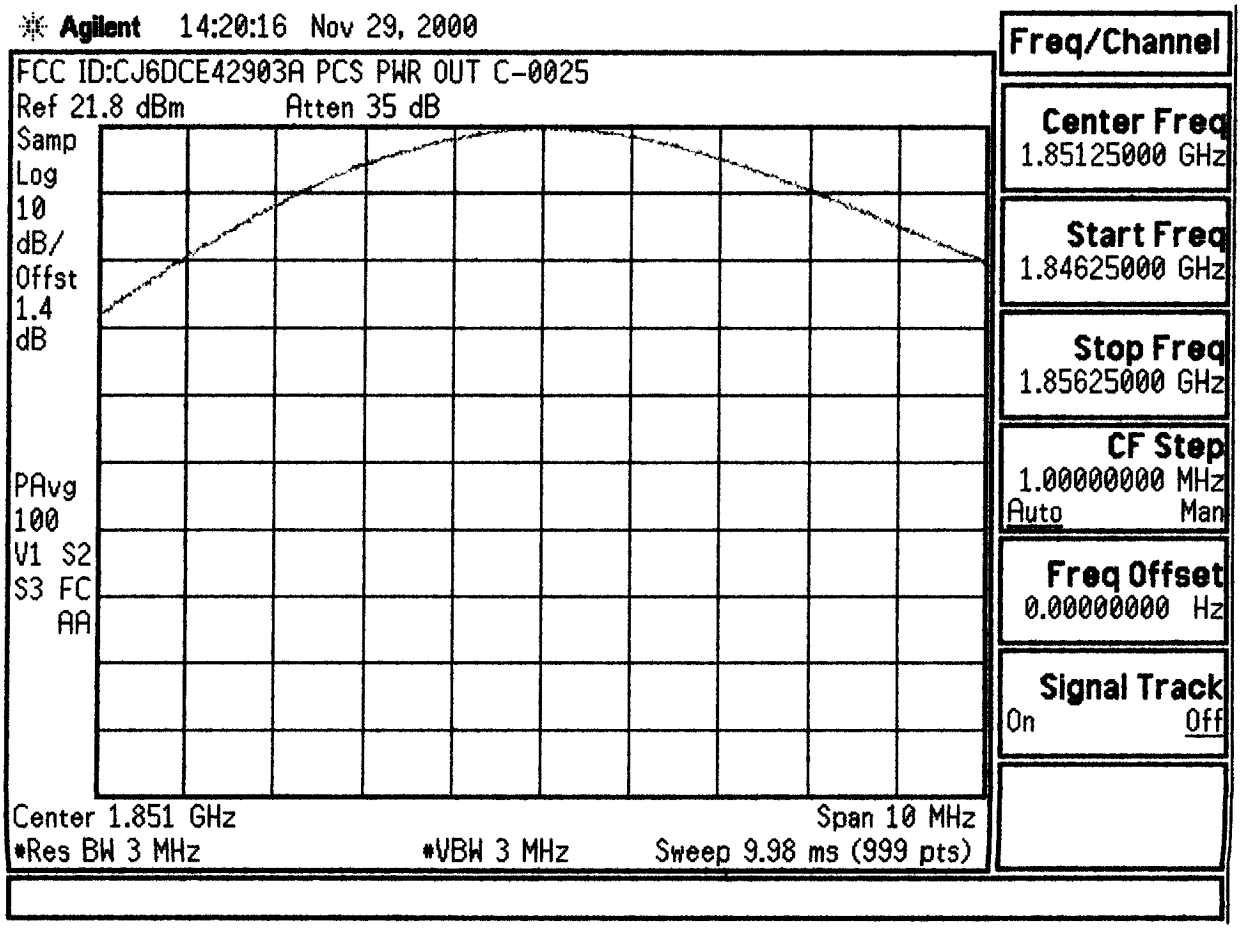
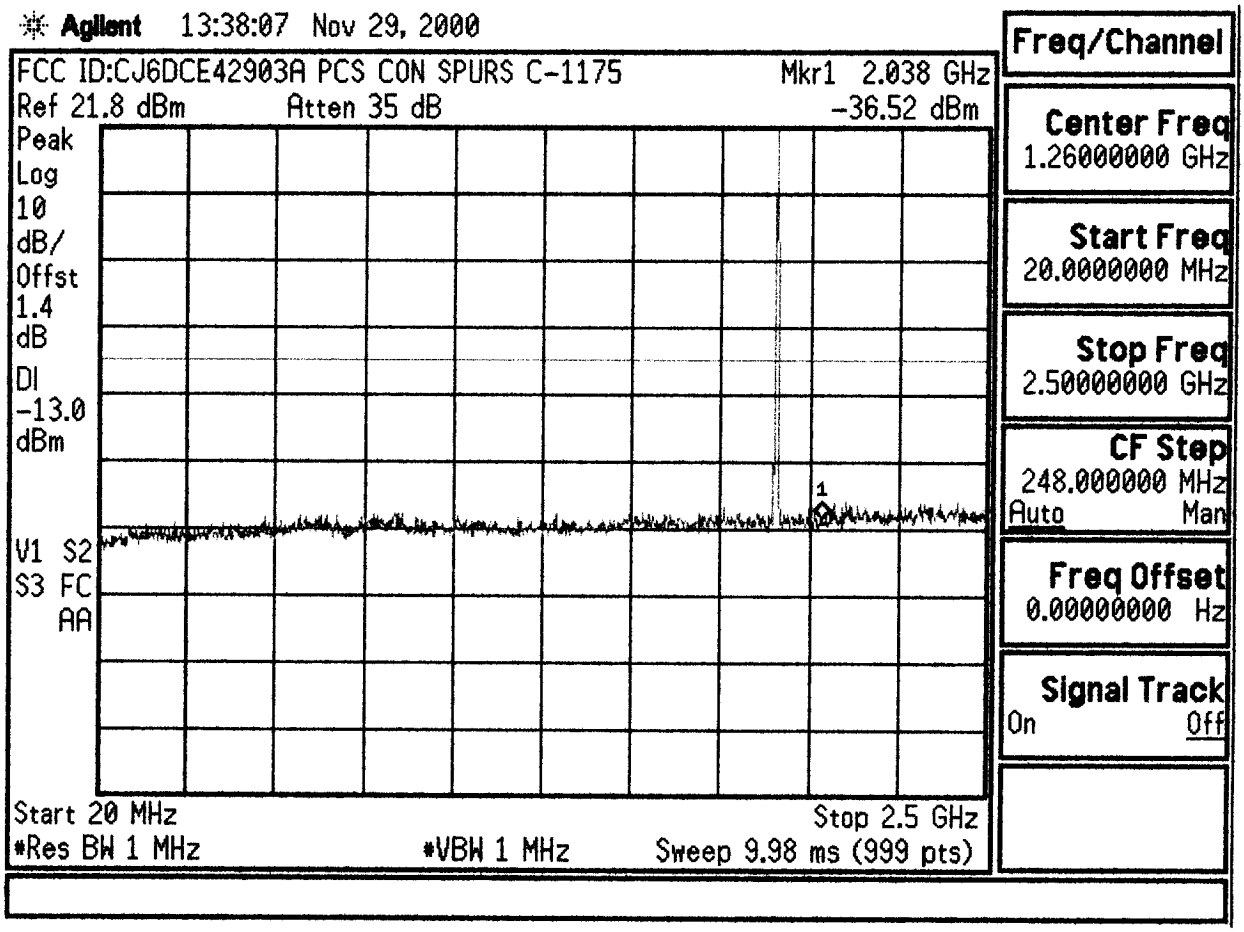


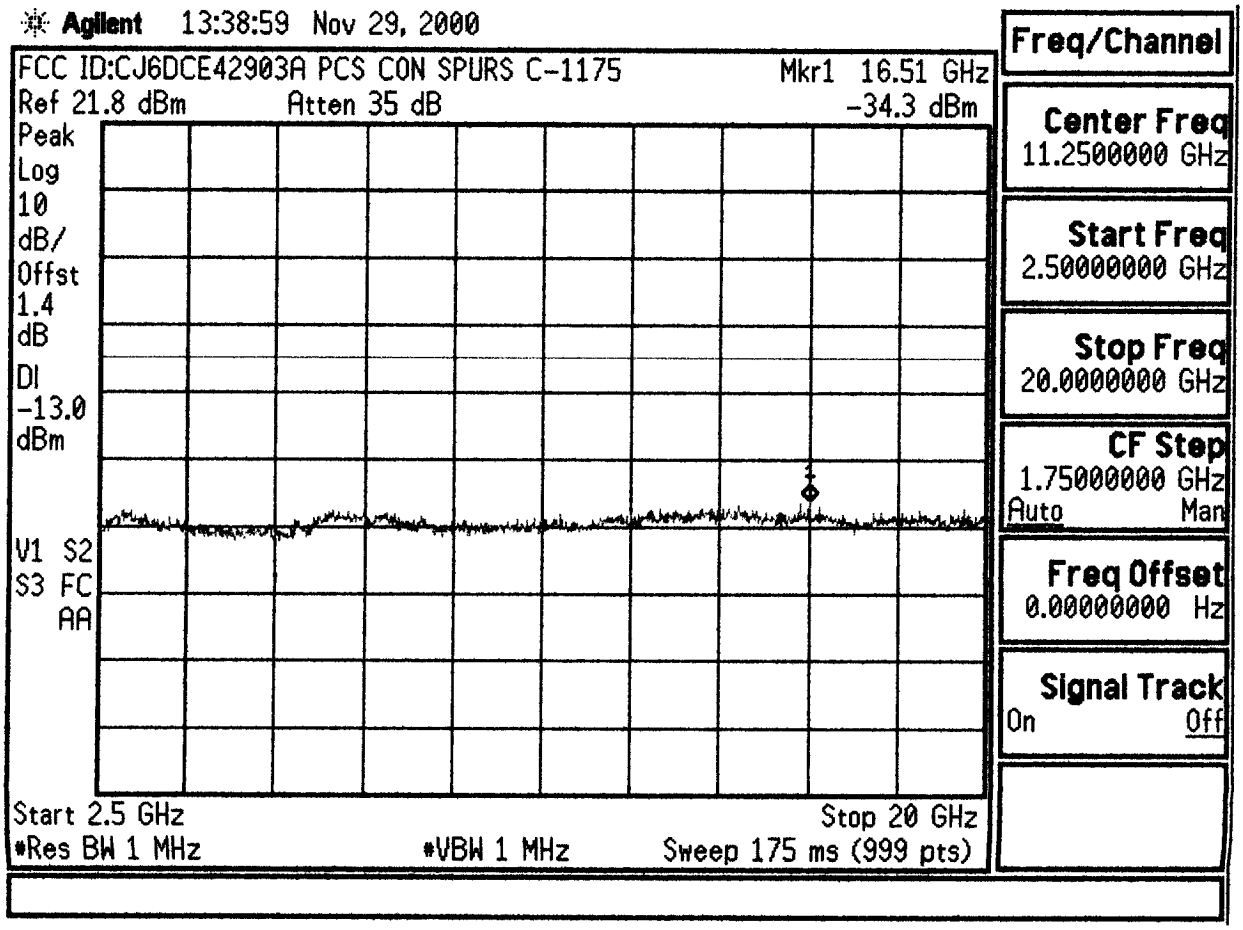

Agilent 14:22:20 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS PWR OUT C-0600
Ref 21.8 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
Center 1.88 GHz
Span 3 MHz
#Res BW 30 kHz
#VBW 300 kHz
Sweep 9.98 ms (999 pts)
Channel Power Results (idle)
Channel Power
21.80 dBm
Integration BW 2.000 MHz
Density -41.21 dBm/Hz
Measure
Meas Off
ACP
Channel Power
Occupied BW
Emission BW
Harmonic Dist

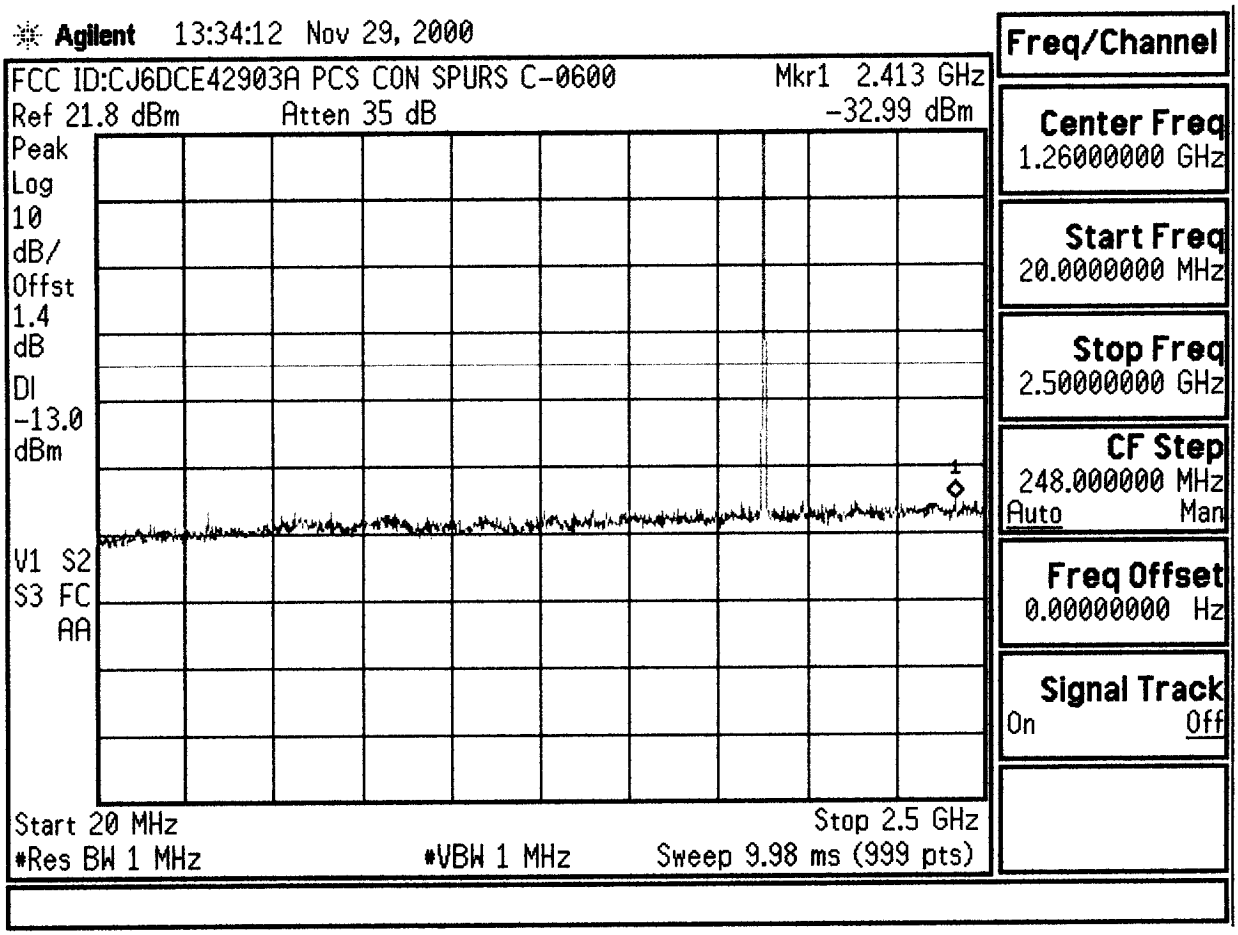

Agilent 14:24:36 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS 99 PERCENT BW C-600
Ref 21.8 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
Center 1.88 GHz
Span 3 MHz
#Res BW 30 kHz
#VBW 300 kHz
Sweep 9.98 ms (999 pts)
Occupied Bandwidth Results (idle)
Occupied Bandwidth
1.247 MHz
Occ BW % Pwr 99.00 %
Transmit Freq Error -6.839 kHz
Measure
Meas Off
ACP
Channel Power
Occupied BW
Emission BW
Harmonic Dist

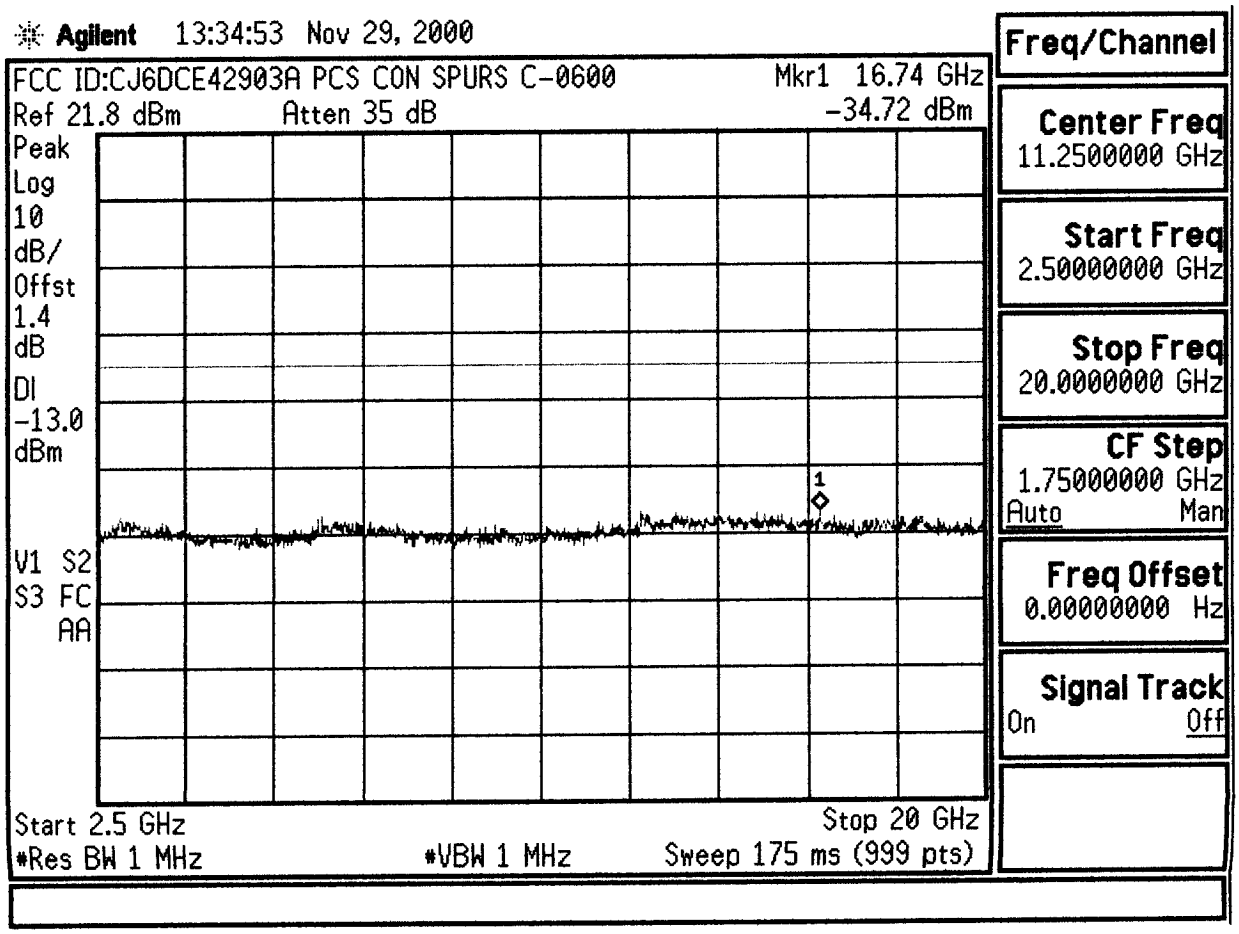

Agilent 14:09:31 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS PWR OUT C-1175
Ref 21.8 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
PAvg
100
W1 S2
S3 FC
AA
Center 1.909 GHz
Span 10 MHz
#Res BW 3 MHz
#VBW 3 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.90875000 GHz
Start Freq
1.90375000 GHz
Stop Freq
1.91375000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

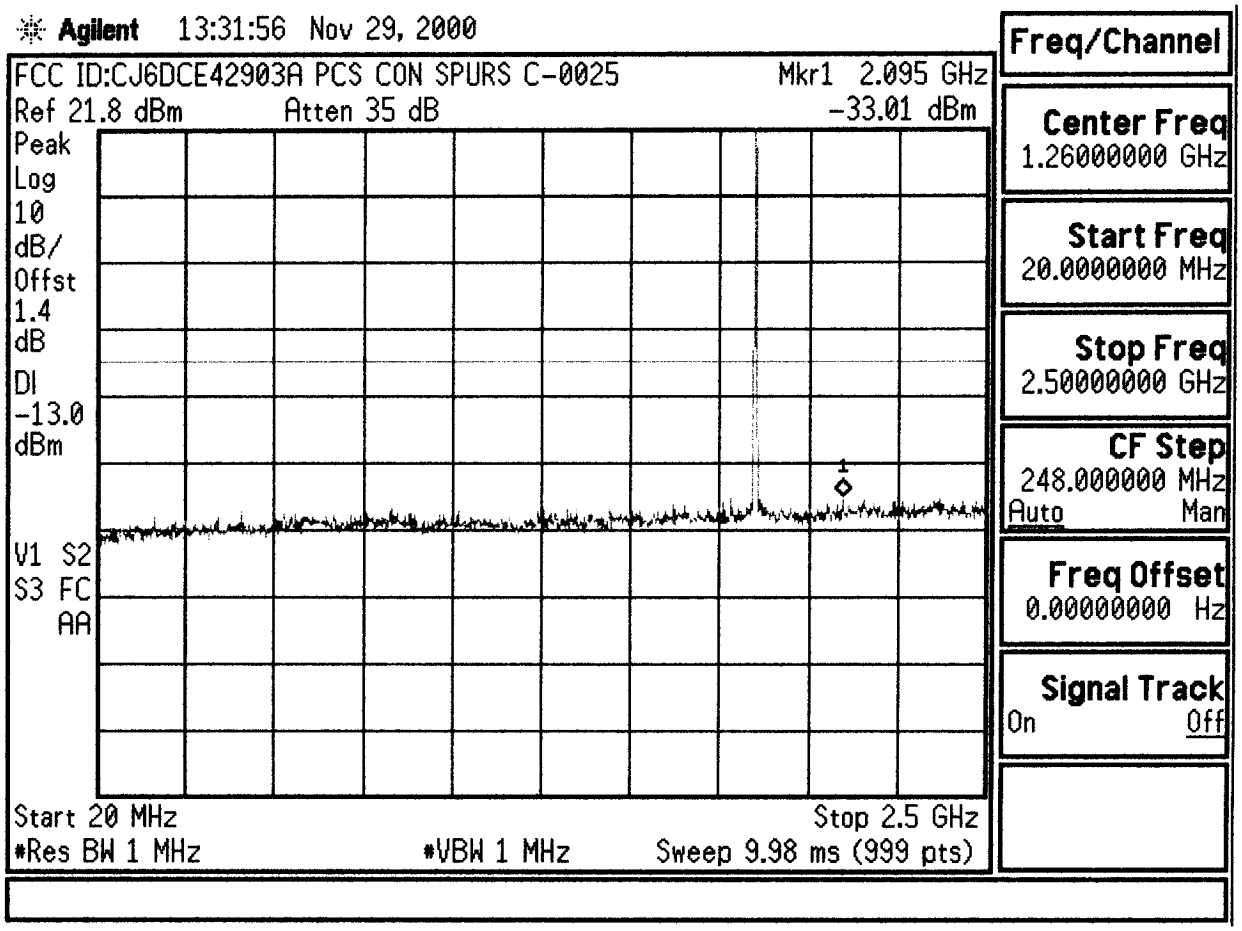

Agilent 14:20:16 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS PWR OUT C-0025
Ref 21.8 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
PAvg
100
V1 S2
S3 FC
AA
Center 1.851 GHz
Span 10 MHz
#Res BW 3 MHz
#VBW 3 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.85125000 GHz
Start Freq
1.84625000 GHz
Stop Freq
1.85625000 GHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

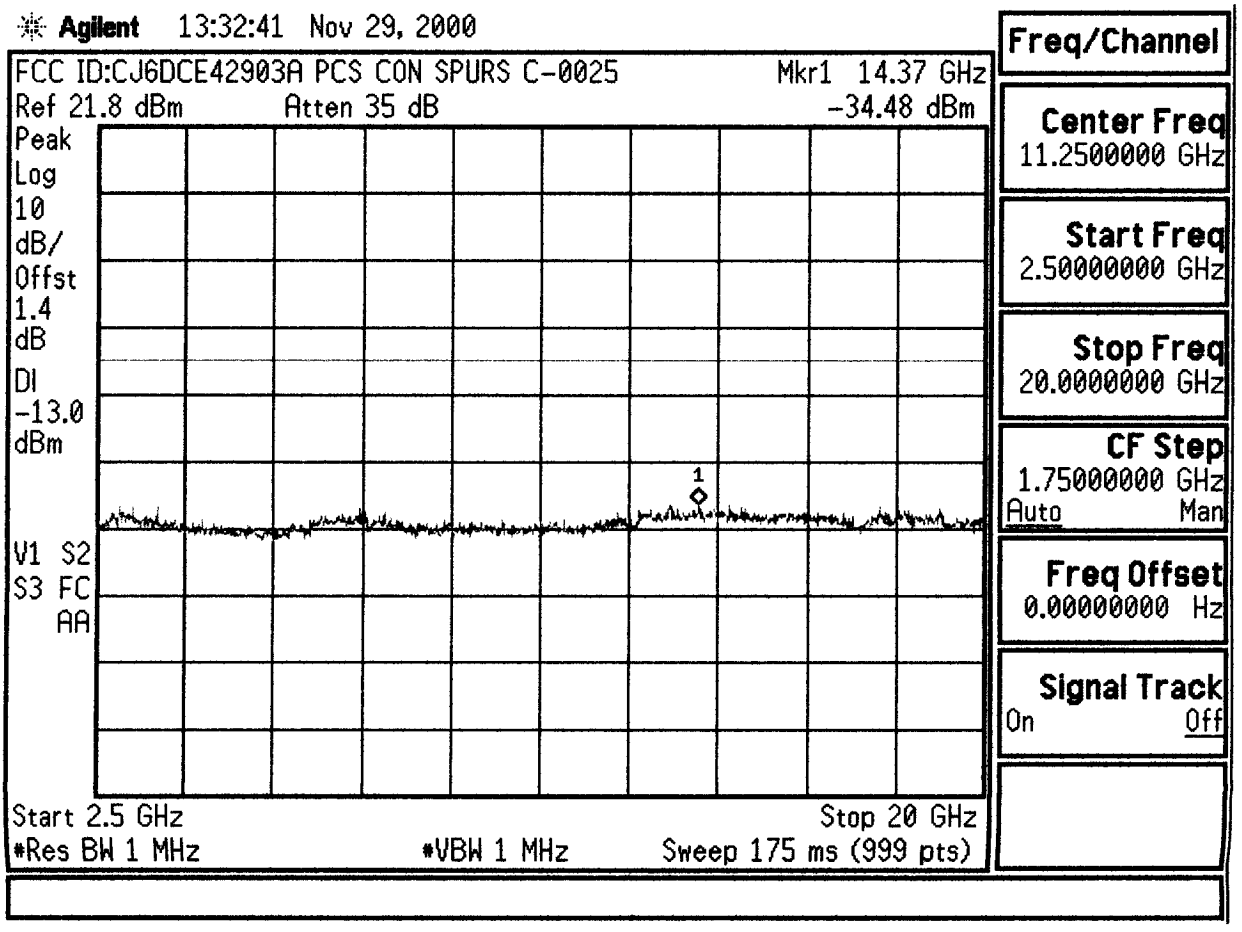

Agilent 13:38:07 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS CON SPURS C-1175
Mkr1 2.038 GHz
Ref 21.8 dBm
Atten 35 dB
-36.52 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

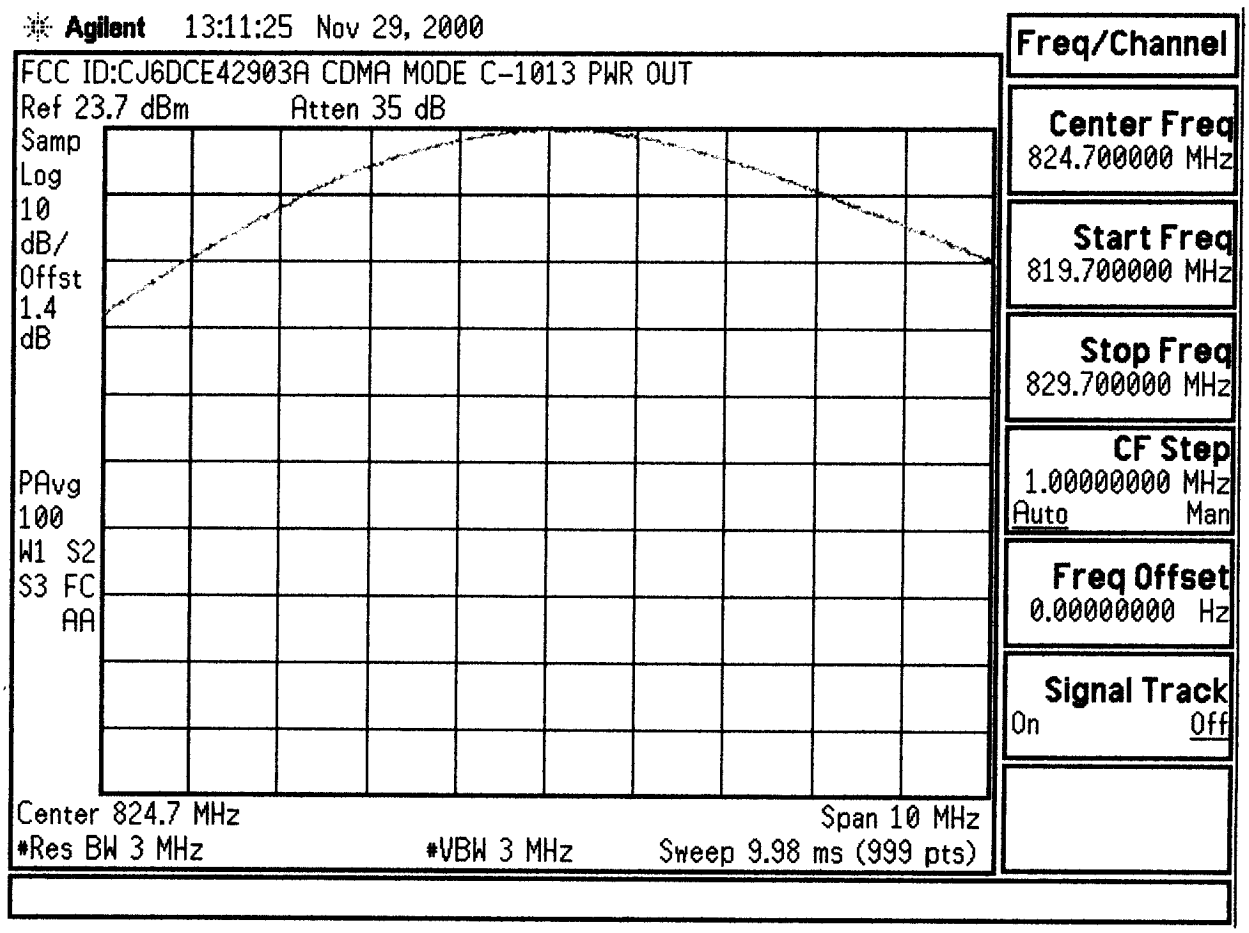

Agilent 13:38:59 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS CON SPURS C-1175
Mkr1 16.51 GHz
Ref 21.8 dBm
Atten 35 dB
-34.3 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 2.5 GHz
Stop 20 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 175 ms (999 pts)
Freq/Channel
Center Freq
11.2500000 GHz
Start Freq
2.50000000 GHz
Stop Freq
20.0000000 GHz
CF Step
1.75000000 GHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

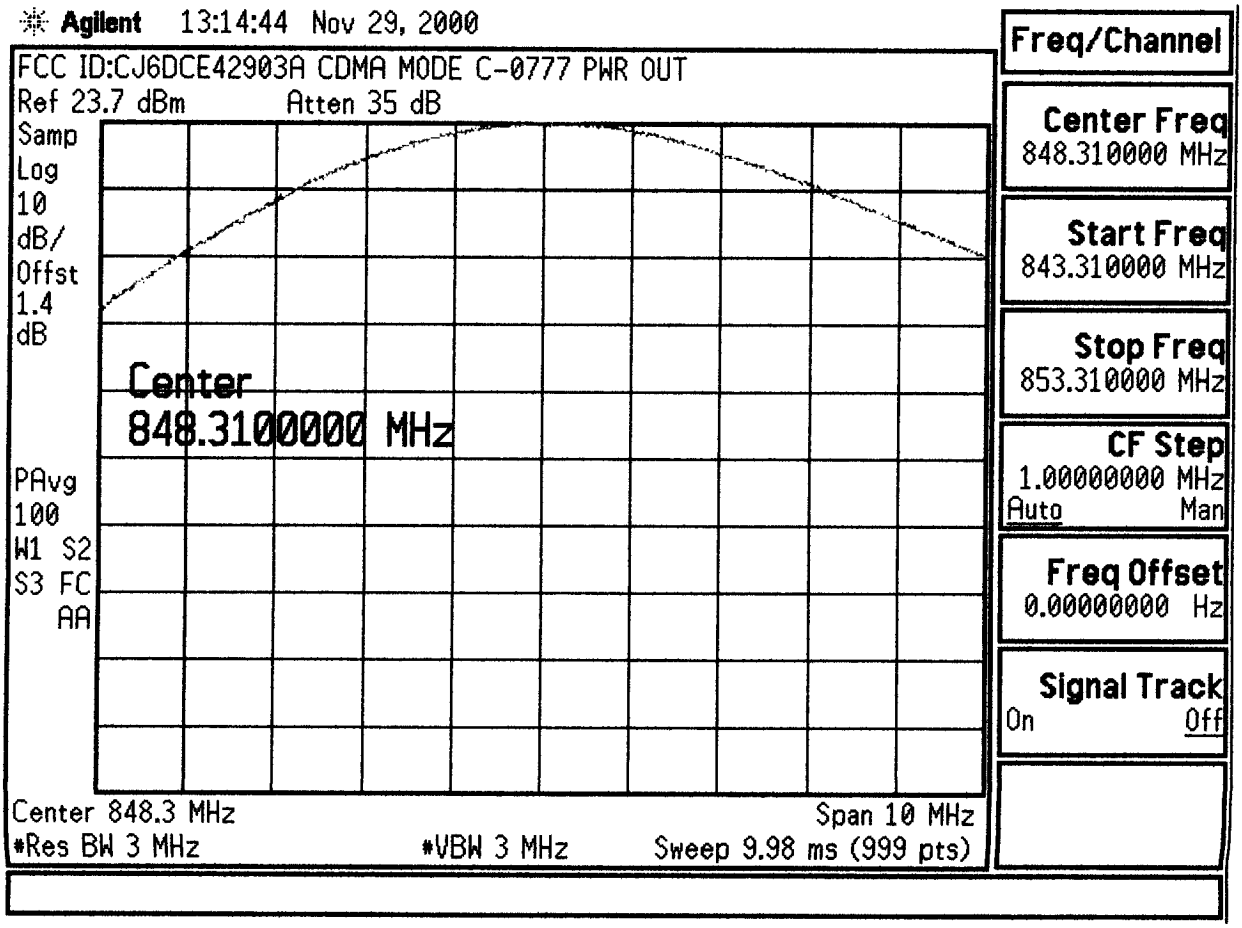

Agilent 13:34:12 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS CON SPURS C-0600
Mkr1 2.413 GHz
Ref 21.8 dBm
Atten 35 dB
-32.99 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

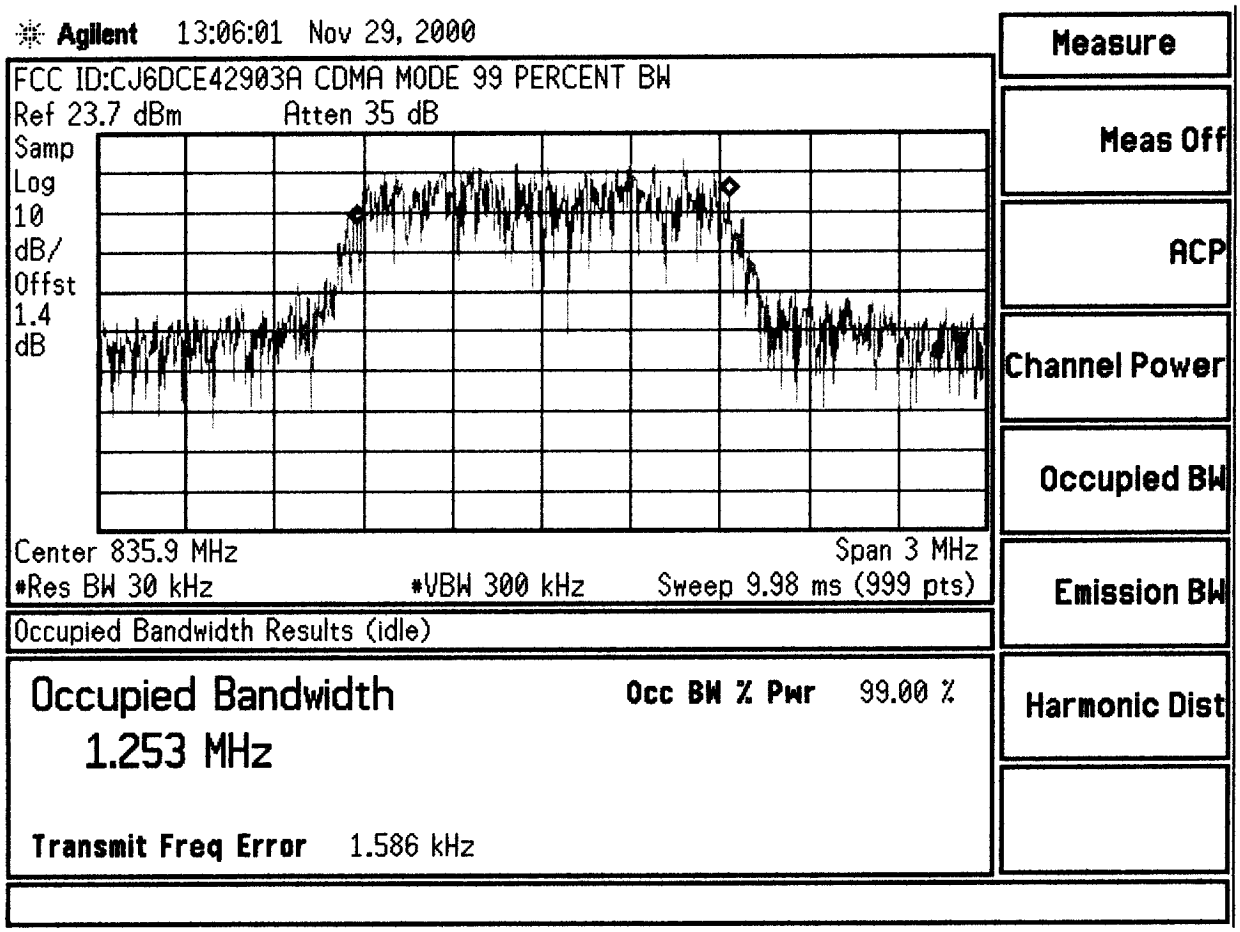

Agilent 13:34:53 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS CON SPURS C-0600
Mkr1 16.74 GHz
Ref 21.8 dBm
Atten 35 dB
-34.72 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 2.5 GHz
Stop 20 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 175 ms (999 pts)
Freq/Channel
Center Freq
11.2500000 GHz
Start Freq
2.50000000 GHz
Stop Freq
20.0000000 GHz
CF Step
1.75000000 GHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

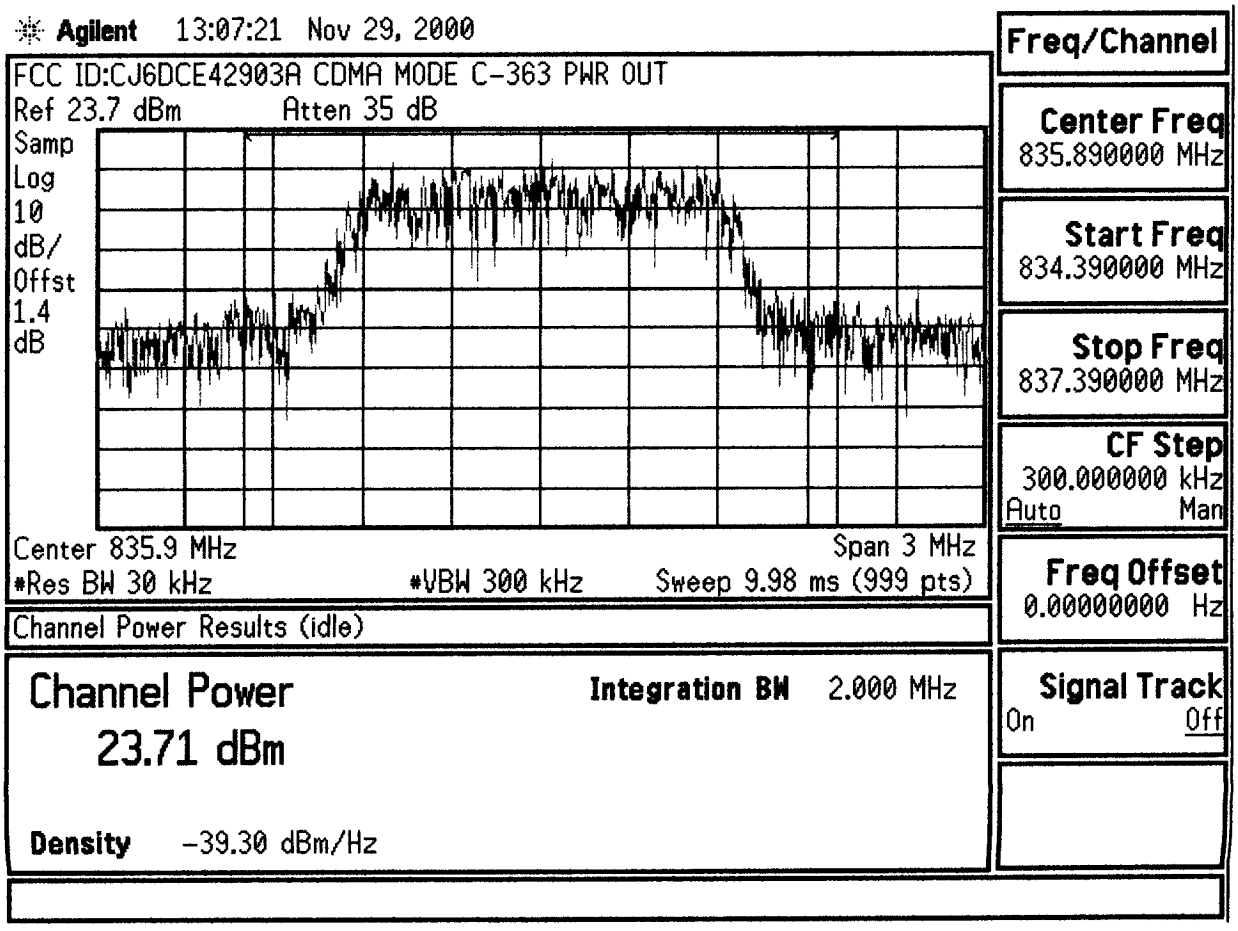

Agilent 13:31:56 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS CON SPURS C-0025
Mkr1 2.095 GHz
Ref 21.8 dBm
Atten 35 dB
-33.01 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

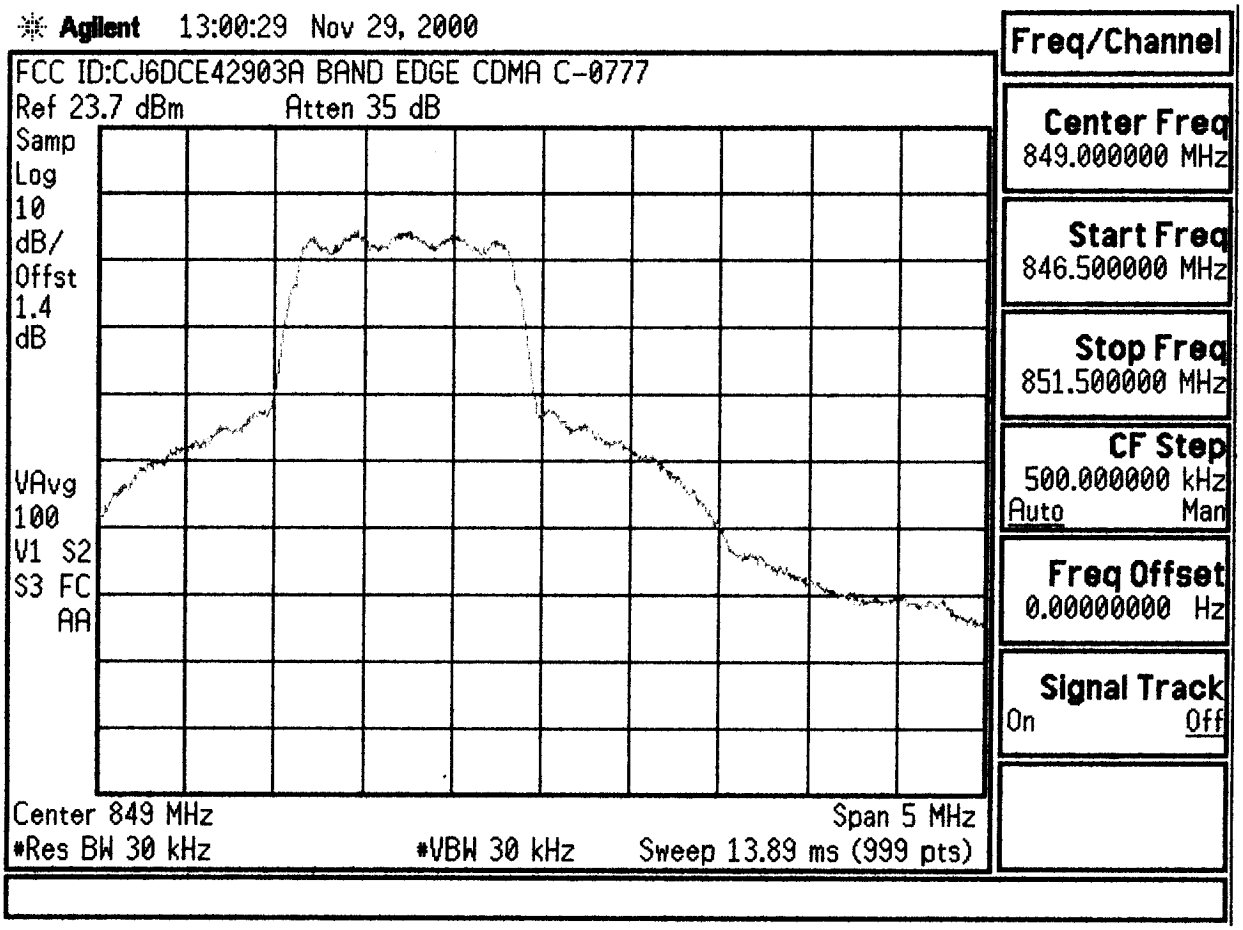

Agilent 13:32:41 Nov 29, 2000
FCC ID:CJ6DCE42903A PCS CON SPURS C-0025
Mkr1 14.37 GHz
Ref 21.8 dBm
Atten 35 dB
-34.48 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 2.5 GHz
Stop 20 GHz
#Res BW 1 MHz
#VBW 1 MHz
Sweep 175 ms (999 pts)
Freq/Channel
Center Freq
11.2500000 GHz
Start Freq
2.50000000 GHz
Stop Freq
20.0000000 GHz
CF Step
1.75000000 GHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

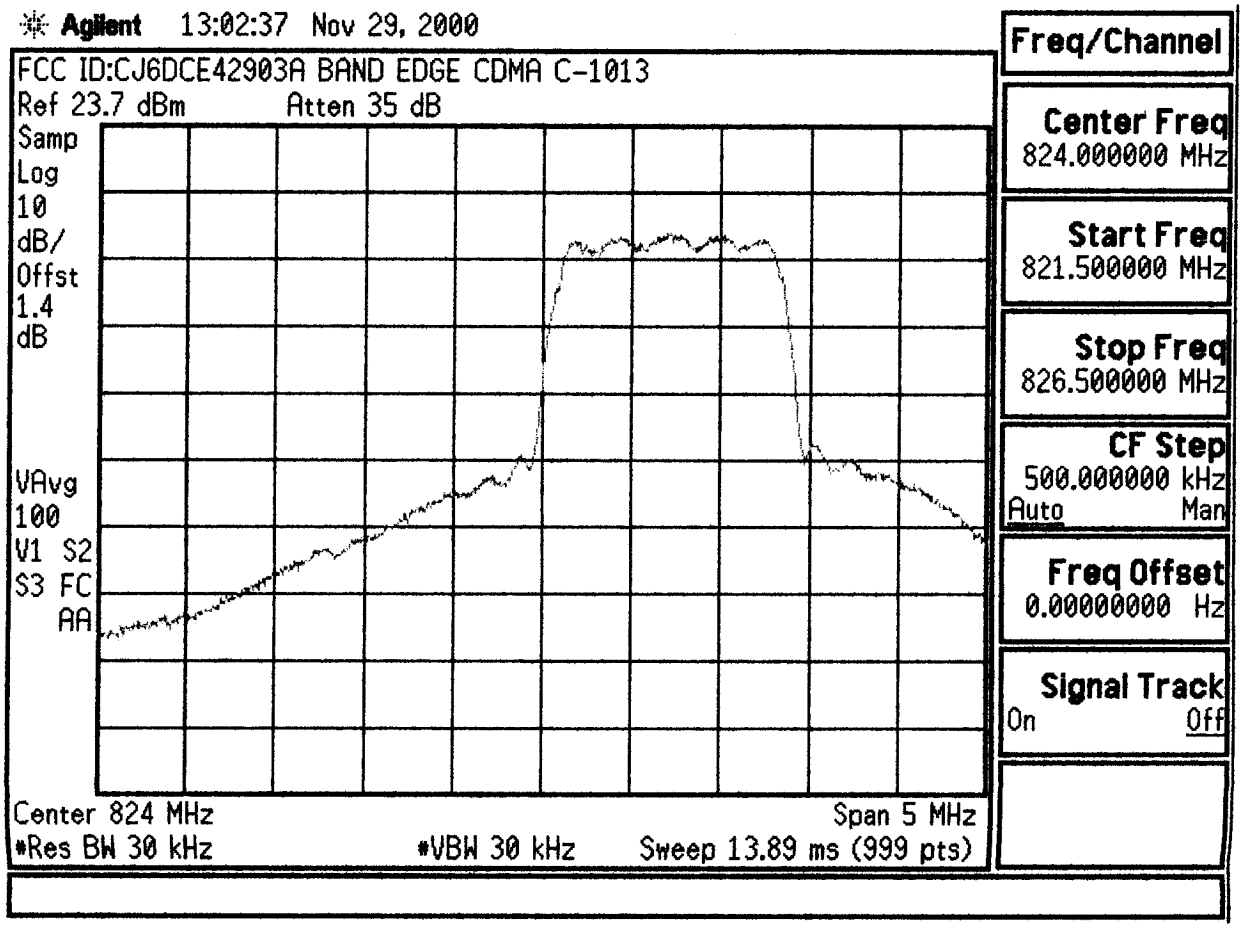

Agilent 13:11:25 Nov 29, 2000
FCC ID:CJ6DCE42903A CDMA MODE C-1013 PWR OUT
Ref 23.7 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
PAvg
100
W1 S2
S3 FC
AA
Center 824.7 MHz
Span 10 MHz
#Res BW 3 MHz
#VBW 3 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
824.700000 MHz
Start Freq
819.700000 MHz
Stop Freq
829.700000 MHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

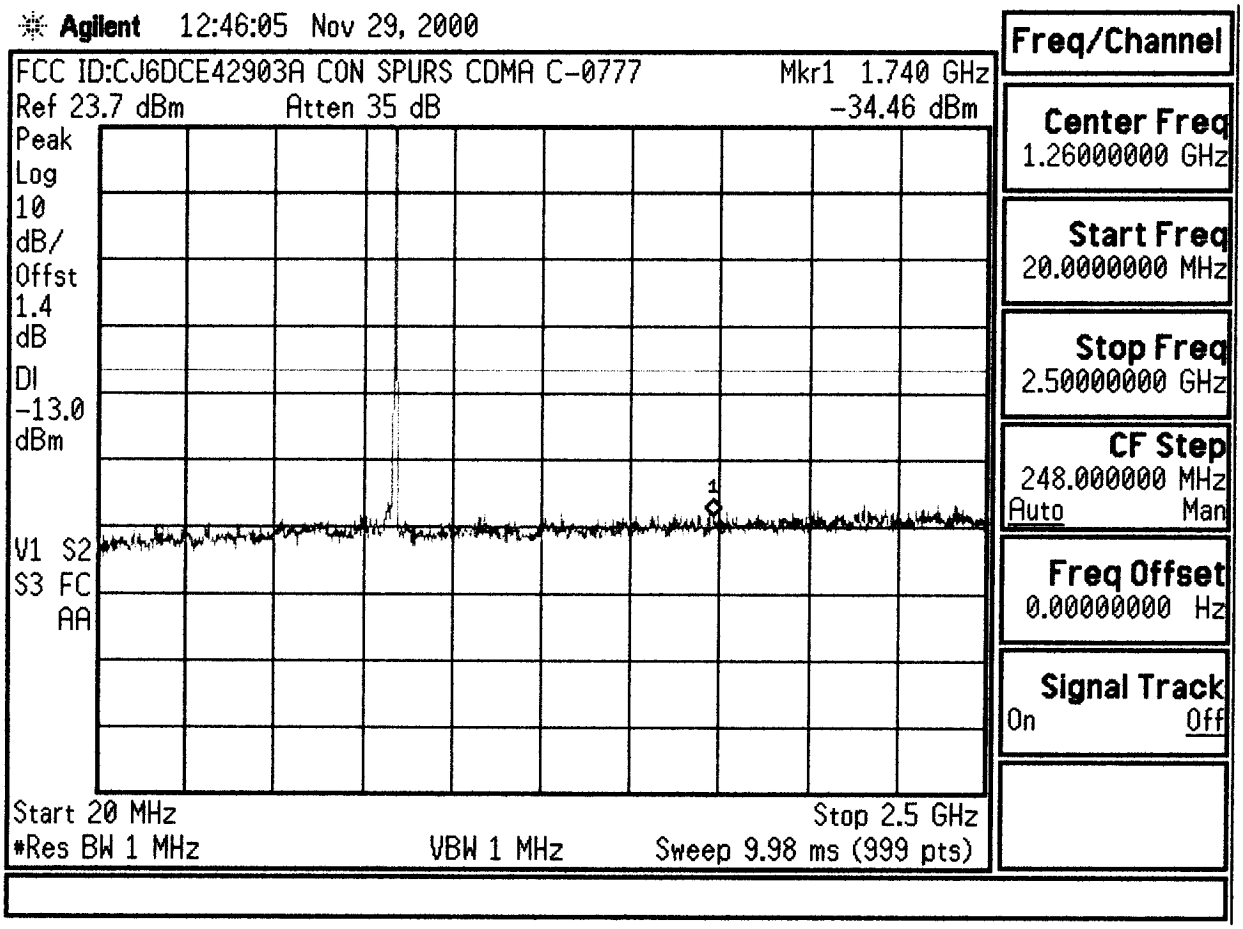

Agilent 13:14:44 Nov 29, 2000
FCC ID:CJ6DCE42903A CDMA MODE C-0777 PWR OUT
Ref 23.7 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
Center
848.3100000 MHz
PAvg
100
W1 S2
S3 FC
AA
Center 848.3 MHz
Span 10 MHz
#Res BW 3 MHz
#VBW 3 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
848.310000 MHz
Start Freq
843.310000 MHz
Stop Freq
853.310000 MHz
CF Step
1.00000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

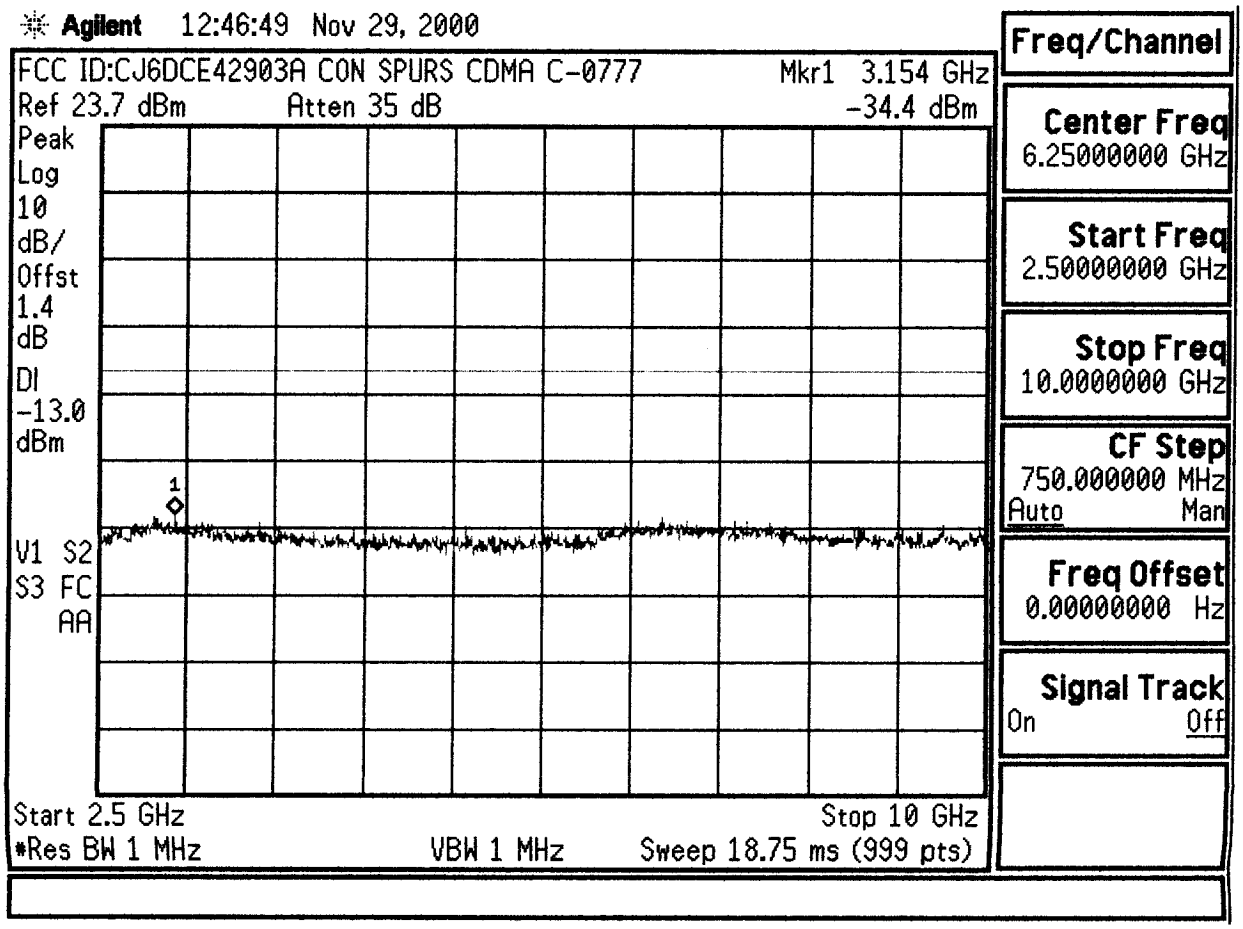

Agilent 13:06:01 Nov 29, 2000
FCC ID:CJ6DCE42903A CDMA MODE 99 PERCENT BW
Ref 23.7 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
Center 835.9 MHz
Span 3 MHz
#Res BW 30 kHz
#VBW 300 kHz
Sweep 9.98 ms (999 pts)
Occupied Bandwidth Results (idle)
Occupied Bandwidth
1.253 MHz
Occ BW % Pwr 99.00 %
Transmit Freq Error 1.586 kHz
Measure
Meas Off
ACP
Channel Power
Occupied BW
Emission BW
Harmonic Dist

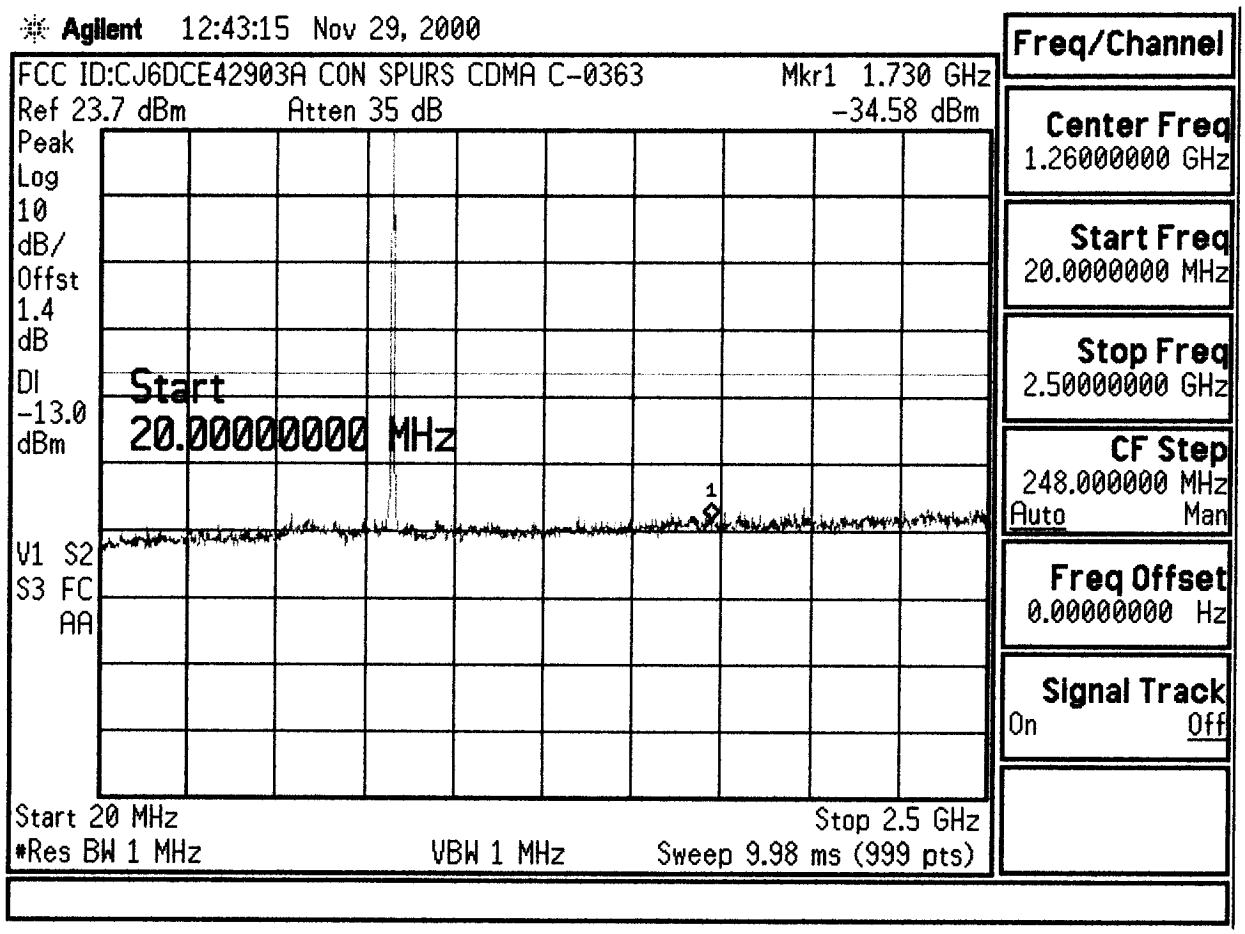

Agilent 13:07:21 Nov 29, 2000
FCC ID:CJ6DCE42903A CDMA MODE C-363 PWR OUT
Ref 23.7 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
Center 835.9 MHz
Span 3 MHz
#Res BW 30 kHz
#VBW 300 kHz
Sweep 9.98 ms (999 pts)
Channel Power Results (idle)
Channel Power
23.71 dBm
Integration BW 2.000 MHz
Density -39.30 dBm/Hz
Freq/Channel
Center Freq
835.890000 MHz
Start Freq
834.390000 MHz
Stop Freq
837.390000 MHz
CF Step
300.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

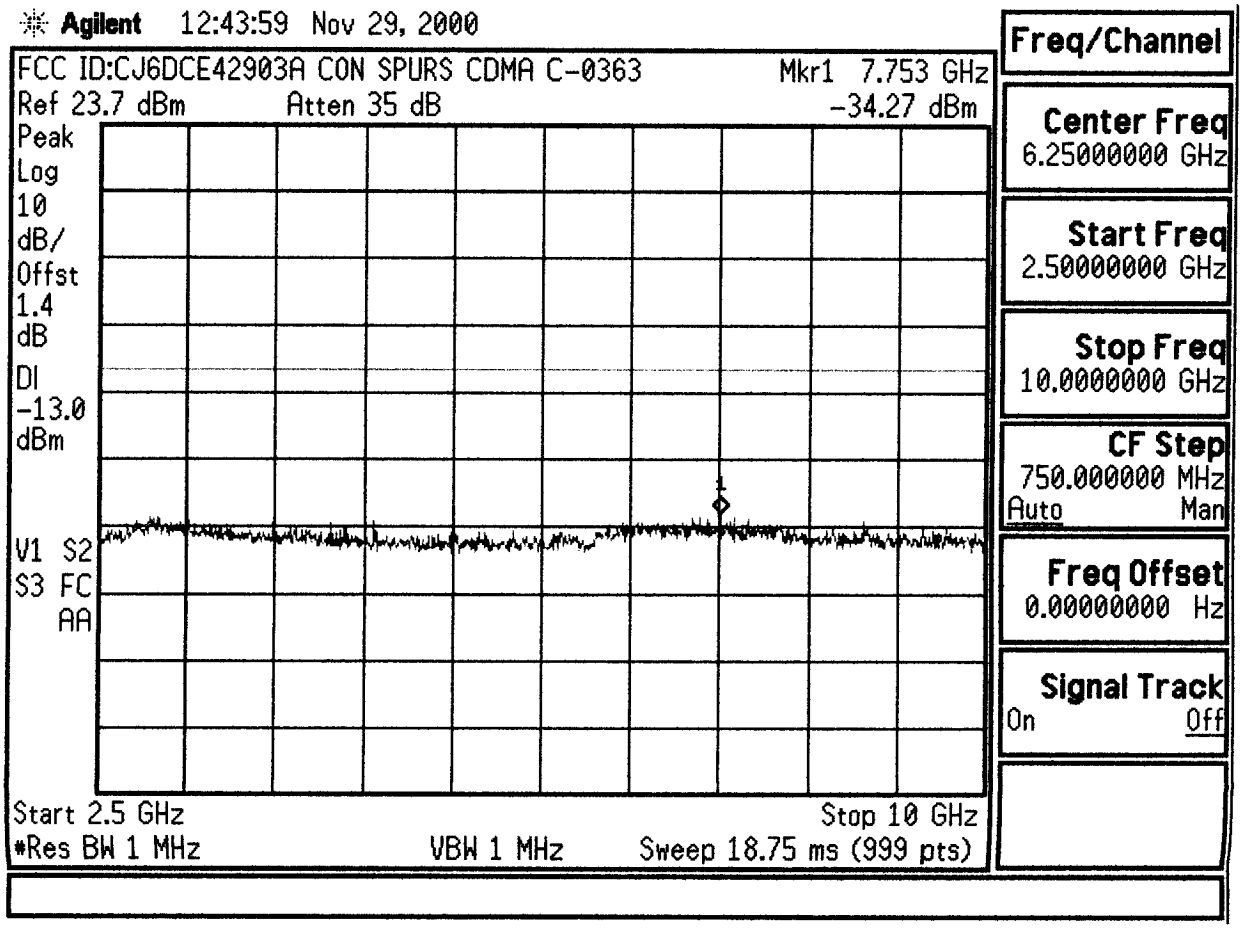

Agilent 13:00:29 Nov 29, 2000
FCC ID:CJ6DCE42903A BAND EDGE CDMA C-0777
Ref 23.7 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
VAvg
100
V1 S2
S3 FC
AA
Center 849 MHz
#Res BW 30 kHz
#VBW 30 kHz
Span 5 MHz
Sweep 13.89 ms (999 pts)
Freq/Channel
Center Freq
849.000000 MHz
Start Freq
846.500000 MHz
Stop Freq
851.500000 MHz
CF Step
500.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

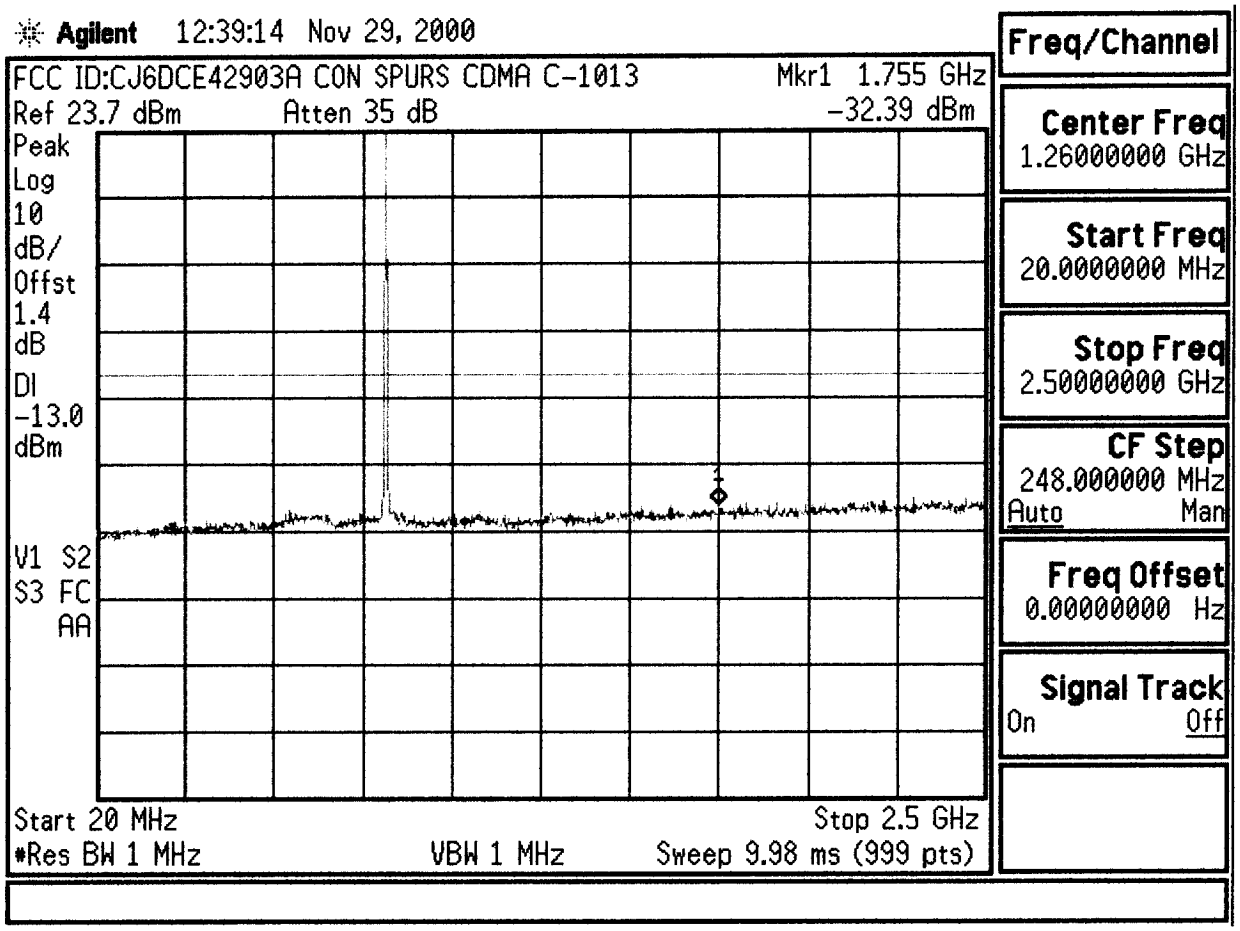

Agilent 13:02:37 Nov 29, 2000
FCC ID:CJ6DCE42903A BAND EDGE CDMA C-1013
Ref 23.7 dBm
Atten 35 dB
Samp
Log
10
dB/
Offst
1.4
dB
VAvg
100
V1 S2
S3 FC
AA
Center 824 MHz
#Res BW 30 kHz
#VBW 30 kHz
Span 5 MHz
Sweep 13.89 ms (999 pts)
Freq/Channel
Center Freq
824.000000 MHz
Start Freq
821.500000 MHz
Stop Freq
826.500000 MHz
CF Step
500.000000 kHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

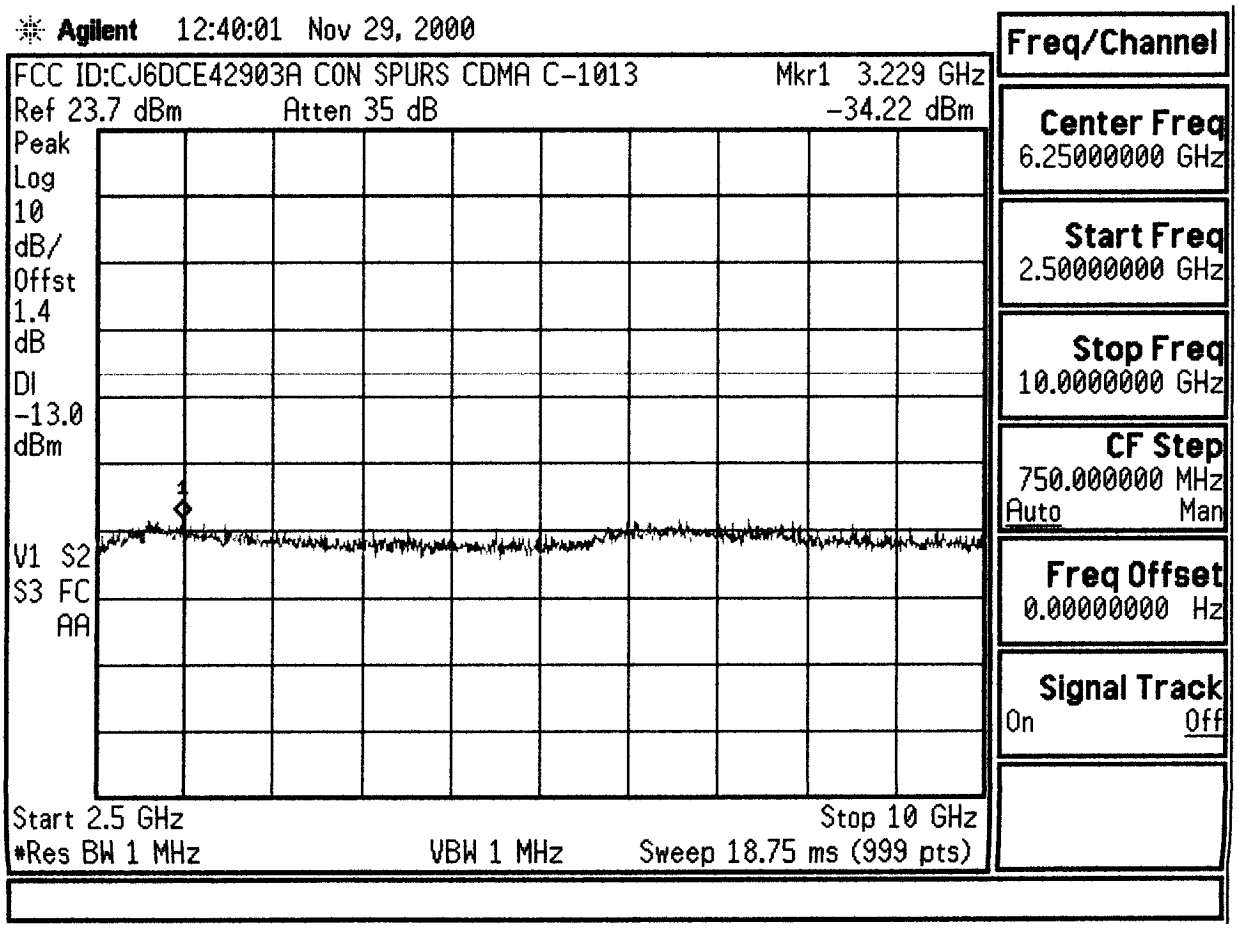

Agilent 12:46:05 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS CDMA C-0777
Mkr1 1.740 GHz
Ref 23.7 dBm
Atten 35 dB
-34.46 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

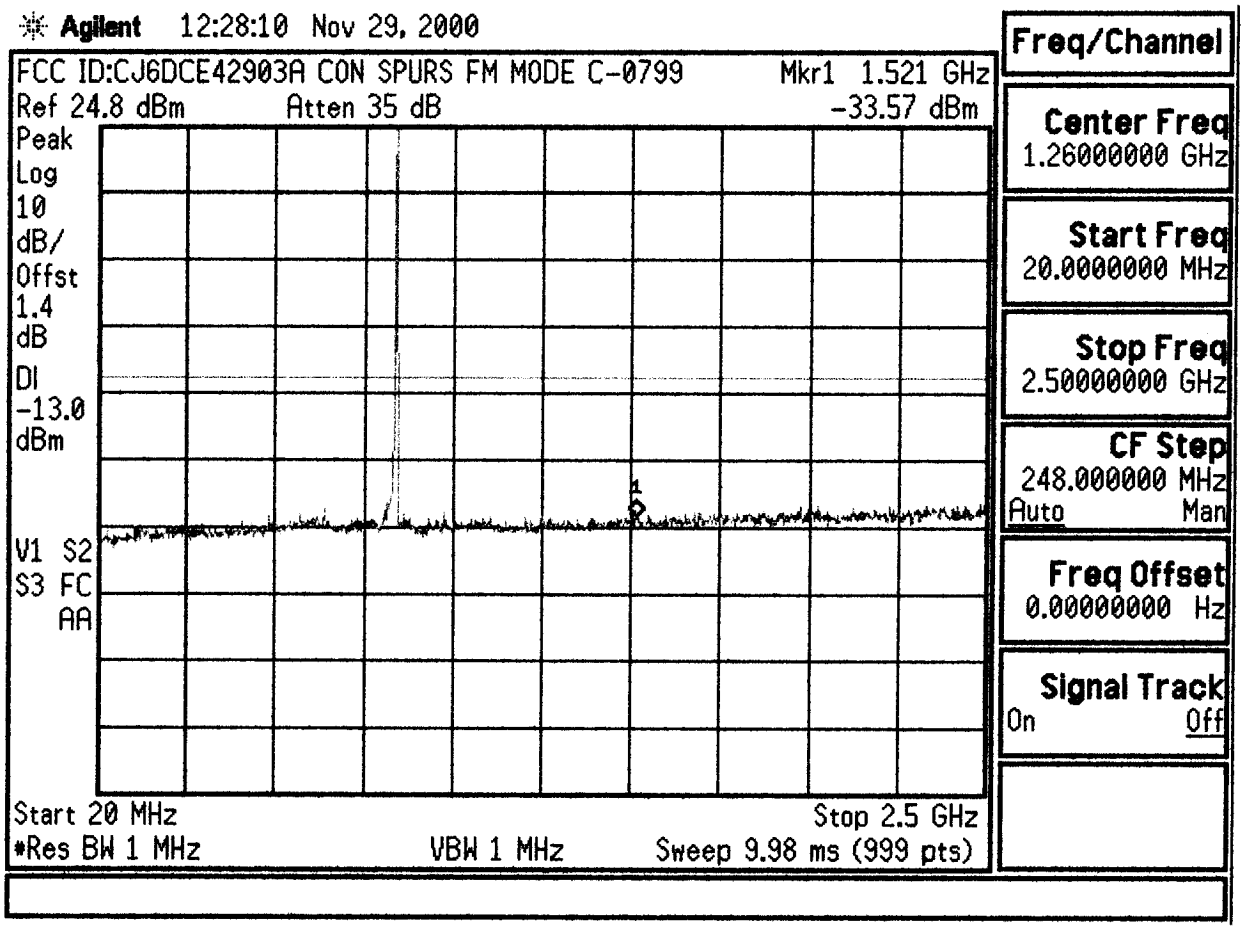

Agilent 12:46:49 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS CDMA C-0777
Mkr1 3.154 GHz
Ref 23.7 dBm
Atten 35 dB
-34.4 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 2.5 GHz
Stop 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 18.75 ms (999 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off

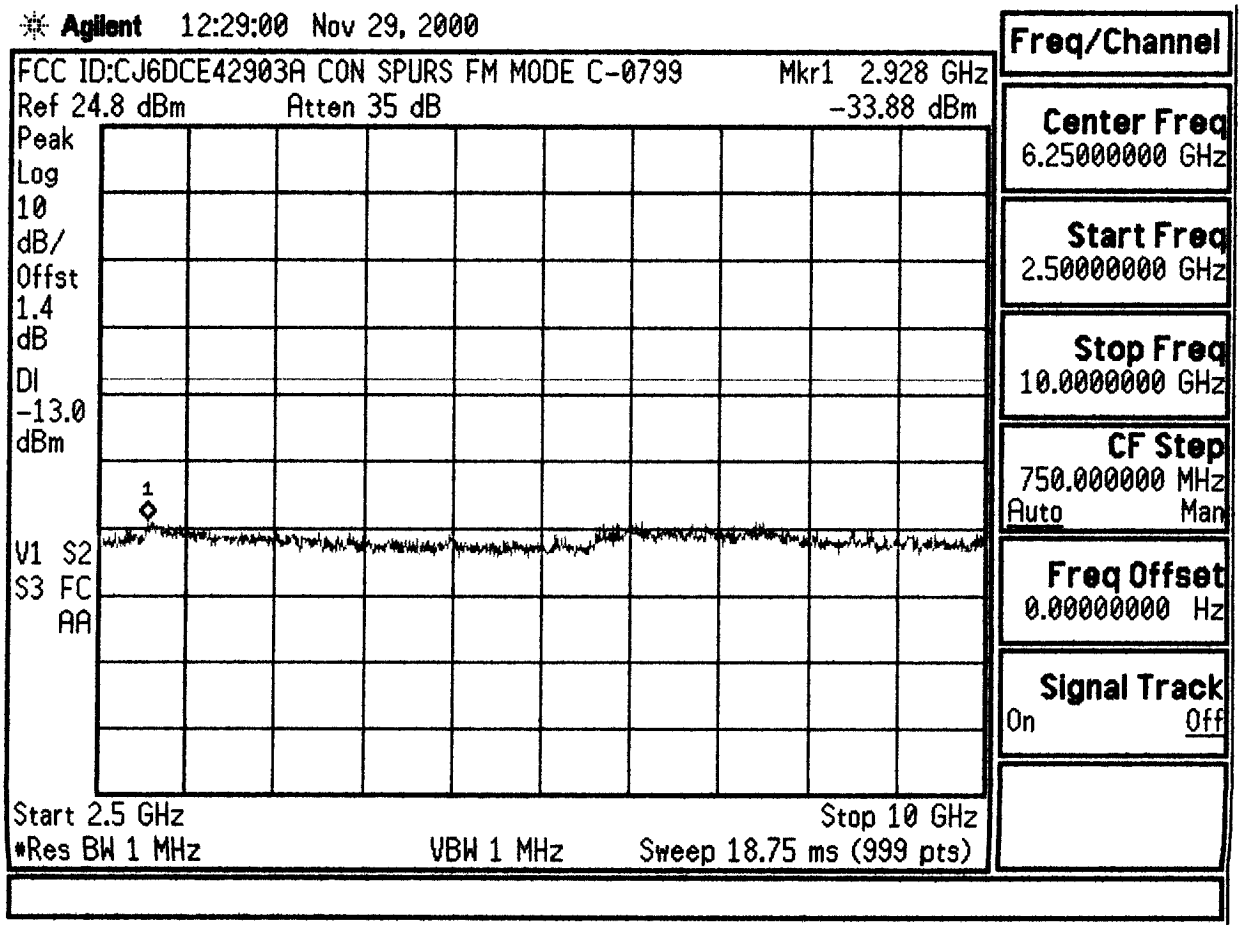

Agilent 12:43:15 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS CDMA C-0363
Mkr1 1.730 GHz
Ref 23.7 dBm
Atten 35 dB
-34.58 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
Start
20.00000000 MHz
V1 S2
S3 FC
AA
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

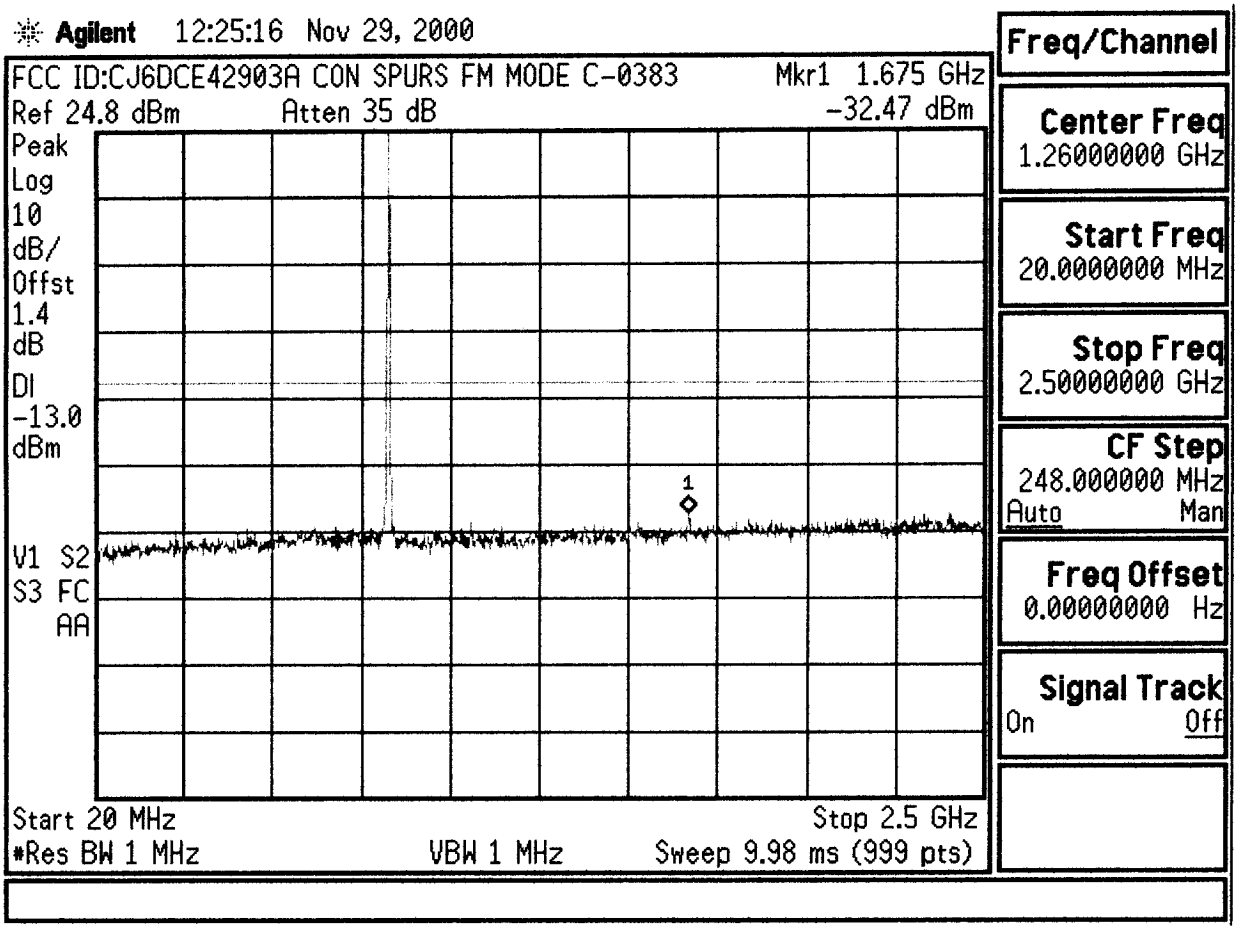

Agilent 12:43:59 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS CDMA C-0363
Mkr1 7.753 GHz
Ref 23.7 dBm
Atten 35 dB
-34.27 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 2.5 GHz
Stop 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 18.75 ms (999 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

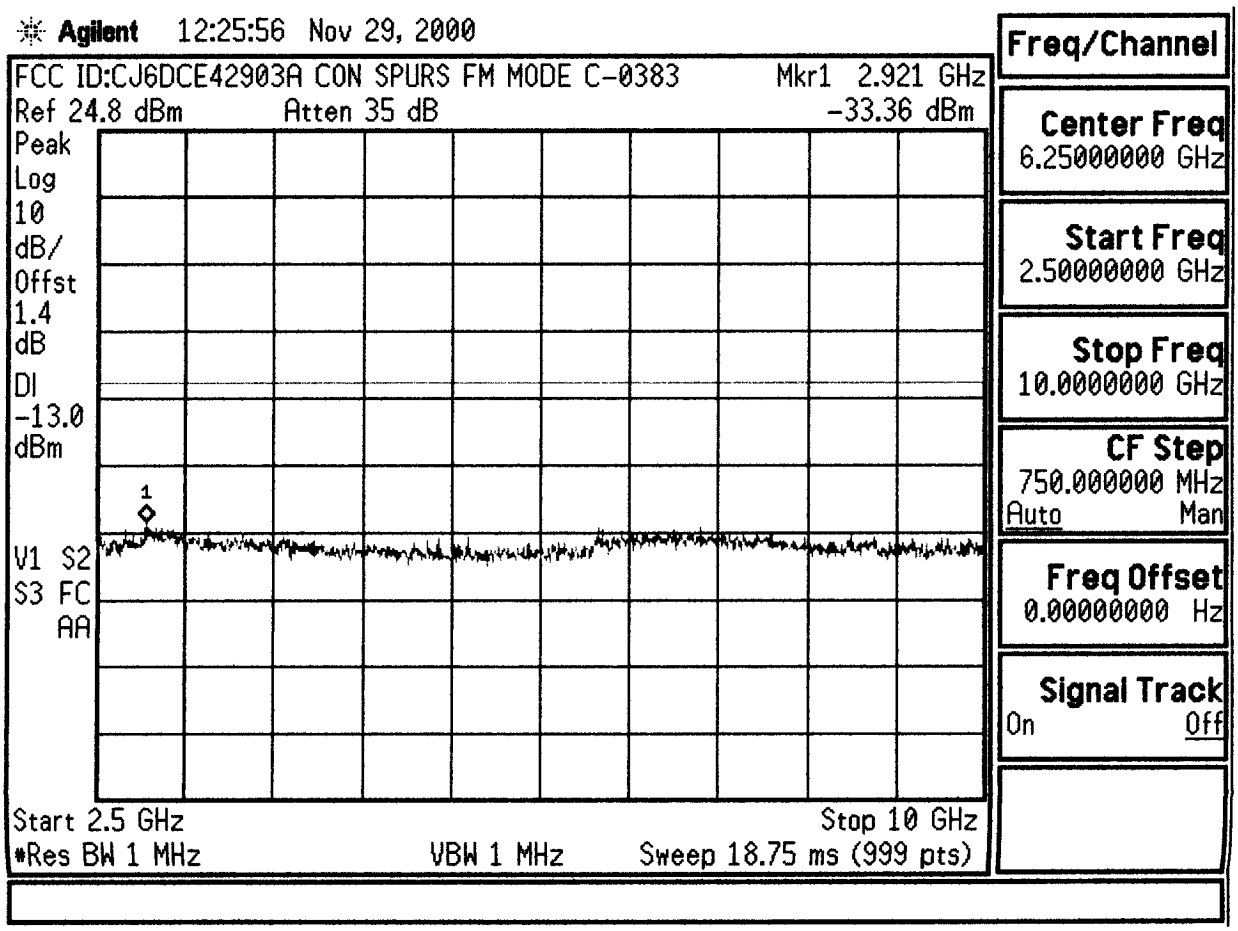

Agilent 12:39:14 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS CDMA C-1013
Mkr1 1.755 GHz
Ref 23.7 dBm
Atten 35 dB
-32.39 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

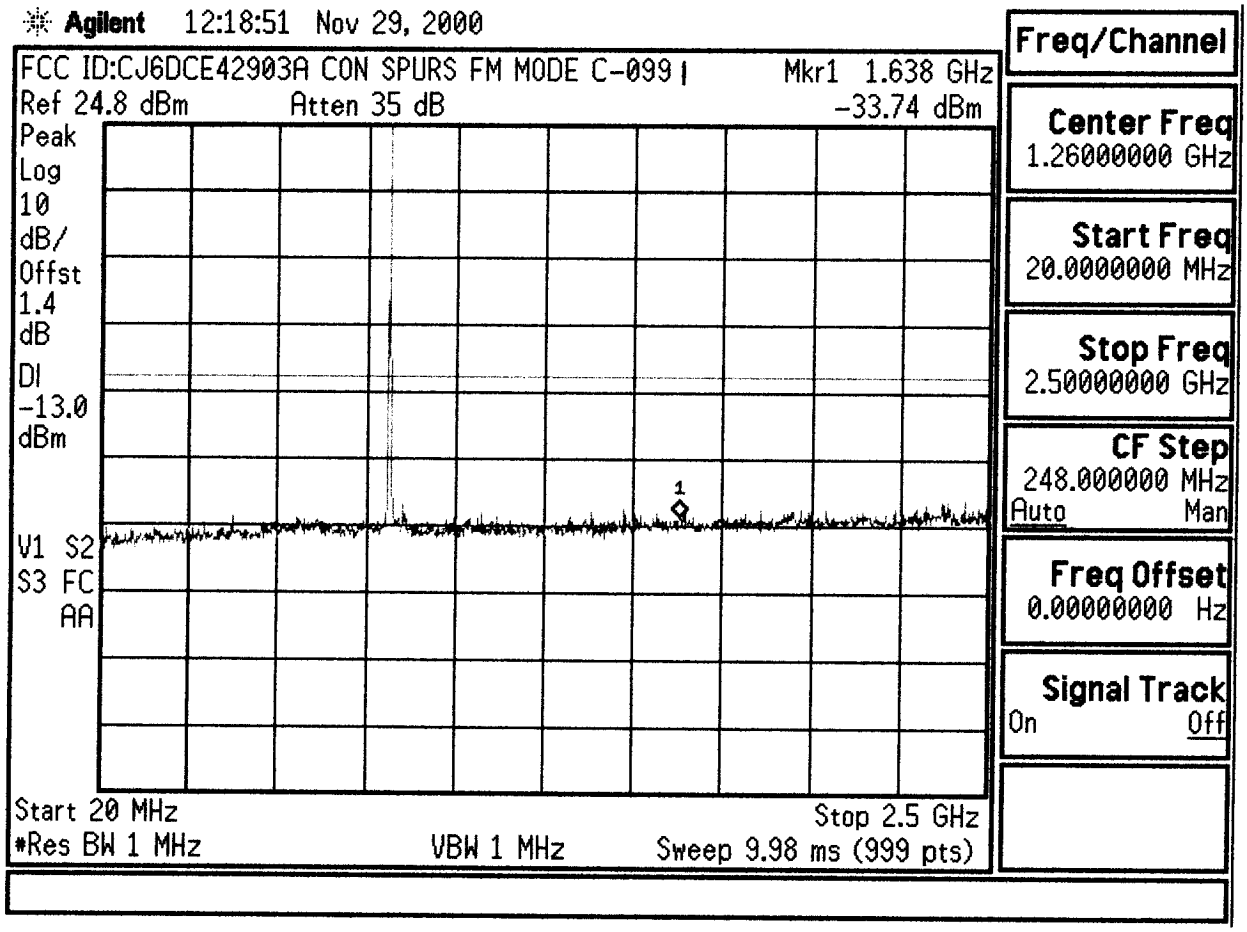

Agilent 12:40:01 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS CDMA C-1013
Mkr1 3.229 GHz
Ref 23.7 dBm
Atten 35 dB
-34.22 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 2.5 GHz
Stop 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 18.75 ms (999 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off

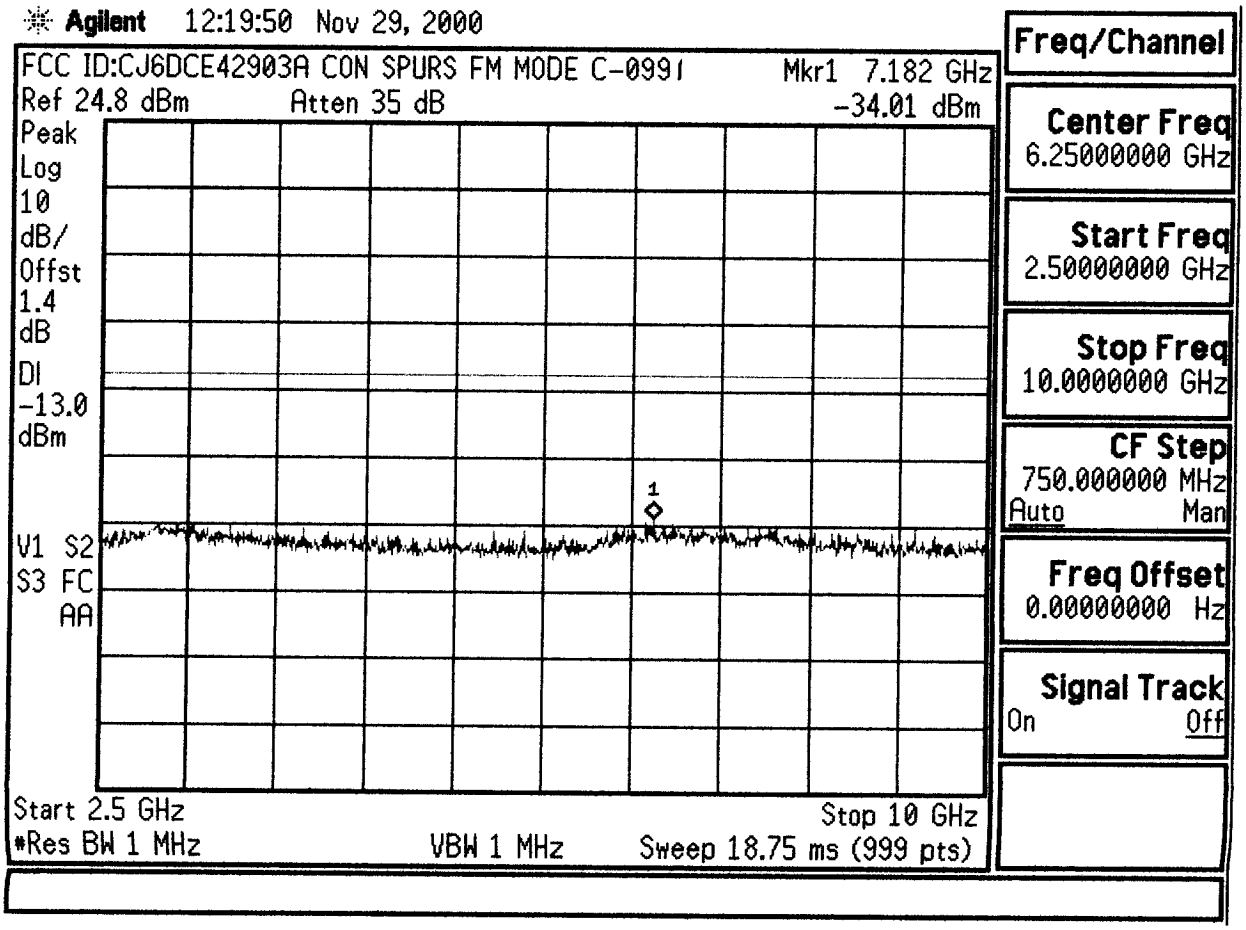

Agilent 12:28:10 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS FM MODE C-0799
Mkr1 1.521 GHz
Ref 24.8 dBm
Atten 35 dB
-33.57 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off


Agilent 12:29:00 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS FM MODE C-0799
Mkr1 2.928 GHz
Ref 24.8 dBm
Atten 35 dB
-33.88 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 2.5 GHz
Stop 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 18.75 ms (999 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off


Agilent 12:25:16 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS FM MODE C-0383
Mkr1 1.675 GHz
Ref 24.8 dBm
Atten 35 dB
-32.47 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
1
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off


Agilent 12:25:56 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS FM MODE C-0383
Mkr1 2.921 GHz
Ref 24.8 dBm
Atten 35 dB
-33.36 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
1
Start 2.5 GHz
Stop 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 18.75 ms (999 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off


Agilent 12:18:51 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS FM MODE C-0991
Mkr1 1.638 GHz
Ref 24.8 dBm
Atten 35 dB
-33.74 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 20 MHz
Stop 2.5 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 9.98 ms (999 pts)
Freq/Channel
Center Freq
1.26000000 GHz
Start Freq
20.0000000 MHz
Stop Freq
2.50000000 GHz
CF Step
248.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off


Agilent 12:19:50 Nov 29, 2000
FCC ID:CJ6DCE42903A CON SPURS FM MODE C-0991
Mkr1 7.182 GHz
Ref 24.8 dBm
Atten 35 dB
-34.01 dBm
Peak
Log
10
dB/
Offst
1.4
dB
Dl
-13.0
dBm
V1 S2
S3 FC
AA
Start 2.5 GHz
Stop 10 GHz
#Res BW 1 MHz
VBW 1 MHz
Sweep 18.75 ms (999 pts)
Freq/Channel
Center Freq
6.25000000 GHz
Start Freq
2.50000000 GHz
Stop Freq
10.0000000 GHz
CF Step
750.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off