

DECLARATION OF COMPLIANCE FCC PARTS 24(E) & 22(H) EMC MEASUREMENTS

<p><u>Test Lab</u></p> <p>CELLTECH LABS INC. Testing and Engineering Services 1955 Moss Court Kelowna, B.C. Canada V1Y 9L3 Phone: 250-448-7047 Fax: 250-448-7046 e-mail: info@celltechlabs.com web site: www.celltechlabs.com</p>	<p><u>Applicant Information</u></p> <p>ITRONIX CORPORATION 801 South Stevens Street Spokane, WA 99204 United States</p>
<p>FCC IDENTIFIER: KBCIX100XAC555 IC IDENTIFIER: 1943A-IX100Xb Model(s): IX100XAC555</p>	
<p>FCC Rule Part(s): 47 CFR §24(E), §22(H), §2 IC Rule Part(s): RSS-133 Issue 2, RSS-132 Issue 1 Test Procedure(s): FCC 47 CFR §24(E), §22(H), §2; ANSI TIA/EIA-603-A-2001 IC RSS-133 Issue 2, RSS-132 Issue 1 FCC Device Classification: PCS Licensed Transmitter worn on body (PCT) IC Device Classification: 2GHz Personal Communication Services (RSS-133 Issue 2) 800MHz Cellular Telephones Employing New Technologies (RSS-132 Issue 1)</p>	
<p>Device Type: Rugged Handheld PC with AirCard 555/550 PCS/Cellular CDMA PCMCIA Modem, with ¼-Wave Helix Antenna, 3 dBi Gain Vehicle-Mount Antenna, & Vehicle Cradle Tx Frequency Range(s): 1851.25 - 1908.75 MHz (PCS CDMA) 824.70 - 848.31 MHz (Cellular CDMA) Max. ERP/EIRP Measured: 0.313 Watts (24.96 dBm) EIRP - PCS CDMA (Nearson ¼-Wave Helix Antenna) 0.338 Watts (25.29 dBm) ERP - Cellular CDMA (Nearson ¼-Wave Helix Antenna) 0.078 Watts (18.93 dBm) EIRP - PCS CDMA (MaxRad Vehicle-Mount Antenna) 0.080 Watts (19.05 dBm) ERP - Cellular CDMA (MaxRad Vehicle-Mount Antenna) Max. Conducted Power Tested: 23.0 dBm (PCS CDMA) 23.0 dBm (Cellular CDMA) Emission Designator(s): 1M25F9W Frequency Tolerance(s): 150 Hz (PCS CDMA) 300 Hz (Cellular CDMA) Antenna Type(s) Tested: Nearson ¼-Wave Helix P/N: P/N: 47-0180-003 (Dual-Band CDMA) MaxRad 3 dBi Gain Vehicle-Mount P/N: WMLPVDB800/1900 (Dual-Band CDMA) Power Source(s) Tested: Lithium-ion Battery 7.4 V, 3.0 Ah (P/N: 46-0136-001) 12V AC Adapter (Magic Power Model: MPE-C045-12-R-1)</p>	

This wireless device has demonstrated compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in FCC 47 CFR §24(E), §22(H), §2, Industry Canada RSS-133 Issue 2, RSS-132 Issue 1, and ANSI TIA/EIA-603-A-2001.

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.

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Duane Friesen
EMC Manager
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EMC MEASUREMENT REPORT

1.1 SCOPE

Measurement and determination of electromagnetic emissions (EME) from radio frequency devices for compliance with the technical rules and regulations of the Federal Communications Commission and Industry Canada.

1.2 GENERAL INFORMATION

APPLICANT		ITRONIX CORPORATION		801 South Stevens Street Spokane, WA 99210			
FCC IDENTIFER		KBCIX100XAC555					
IC IDENTIFIER		1943A-IX100Xb					
Model(s)		IX100XAC555					
Device(s) Under Test		Itronix IX100X PC	S/N	510495001-U5103-0025	Identical Prototype		
		Nearson ¼-Wave Helix	S/N	n/a	P/N	47-0180-003	
		Itronix IX100X Vehicle Cradle	S/N	05	P/N	50-0107-001	
		MaxRad 3 dBi Gain Vehicle-Mount Antenna	S/N	n/a	P/N	WMLPVDB800/1900	
Device Description		Rugged Handheld PC with Sierra Wireless AirCard 555/550 PCS/Cellular CDMA Modem and ¼-Wave Helix Antenna, Itronix Vehicle Cradle and MaxRad Vehicle-Mount Antenna					
FCC	Rule Part(s)	§24(E)		§22(H)		§2	
	Classification(s)	PCS Licensed Transmitter worn on body (PCT)					
IC	Rule Part(s)	RSS-133 Issue 2			RSS-132 Issue 1		
	Classification(s)	2GHz Personal Communication Services			800MHz CDMA Cellular Transmitter		
Tx Frequency Range(s)		1851.25 - 1908.75 MHz			PCS CDMA		
		824.70 - 848.31 MHz			Cellular CDMA		
Max. ERP/EIRP Levels Measured		0.313	Watts	24.96	dBm	EIRP	PCS CDMA
		0.338	Watts	25.29	dBm	ERP	Cellular CDMA
		0.078	Watts	18.93	dBm	EIRP	PCS CDMA
		0.080	Watts	19.05	dBm	ERP	Cellular CDMA
RF Conducted Output Power Level(s) Tested		23.0 dBm			PCS CDMA		
		23.0 dBm			Cellular CDMA		
Frequency Tolerance(s)		150 Hz			PCS CDMA		
		300 Hz			Cellular CDMA		
Emission Designator(s)		1M25F9W					
Power Source(s) Tested		Lithium-ion Battery		7.4 V, 3.0 Ah		P/N: 46-0136-001	
		Magic Power AC Adapter		12 V		Model: MPE-C045-12-R-1	

2.1 MEASUREMENT PROCEDURES

2.2 RF OUTPUT POWER MEASUREMENT - §2.1046

The average conducted power levels were measured with a Gigatronics 8652A Universal Power Meter using modulated average power mode. An offset was entered into the power meter to correct for the losses of the attenuator and cable installed before the sensor input. The transmitter terminal was coupled to the power meter and the DUT was placed into test mode via internal software. All subsequent tests were performed using the same tune-up procedures.

Conducted Power Measurements			
Frequency (MHz)	Measured at the Antenna Connector		Measured at the PCMCIA Card
	Average Power	Cable Loss	Average Power
	(dBm)	(dB)	(dBm)
824.70	22.2	0.8	23.0
835.89	22.4	0.6	23.0
848.31	22.5	0.5	23.0
1851.25	22.2	0.8	23.0
1880.00	22.2	0.8	23.0
1908.75	22.3	0.7	23.0

2.3 SPURIOUS EMISSIONS AT ANTENNA TERMINAL - §2.1051

The DUT was placed in test mode via internal software in the “always up” power control mode. An offset was entered into the power meter to correct for all losses of the attenuator and cable installed before the sensor input. The DUT was placed into test mode via internal software. The level of the carrier and the various conducted spurious frequencies were measured by means of a calibrated spectrum analyzer. The resolution bandwidth and video bandwidth were set to 1MHz. The spectrum was scanned from 10MHz to 20GHz at the low, mid, and high channels. The radio transmitter was operating at maximum output power. The antenna output terminal of the DUT was connected to the input of a 50Ω spectrum analyzer through a matched 30dB attenuator and coaxial cable. The reported emissions were below the specified limit of -13dBm. The test plots are shown in Appendix A.

2.4 FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053

EIRP measurements were performed on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-A-2001. The Sierra Wireless AirCard 555 test software was used to set the DUT to transmit in the CDMA “always up” power control mode. For the ¼-wave helix antenna evaluation, the DUT was placed in the center of the turntable, on a Styrofoam support, 1 meter above the ground plane at a distance of 3 meters from the receive antenna. For the vehicle-mount antenna evaluation, the DUT was placed in the vehicle cradle and positioned on the turntable. The vehicle-mount antenna was fixed on a 50 cm x 50 cm ground plane placed on a Styrofoam support at a distance of 3 meters from the receive antenna. The vehicle-mount antenna was connected to the vehicle cradle via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. A frequency band from just above the highest transmitted frequency to just above the 10th harmonic of the highest transmitted frequency was divided into smaller bands corresponding to measurement equipment setups and capabilities. The measurement equipment including carrier blocking filters, was optimized for maximum sensitivity for each band while ensuring no saturation occurred in any gain stages that may be present. It was also necessary to measure the bands above 10 GHz at a distance of 1 meter versus the 3-meter measurement distance used for the lower bands. The applicable bands were chosen from: 800 MHz to 1 GHz, 1 GHz to 5 GHz, 5 GHz to 10 GHz, 10 GHz to 18 GHz and 18 GHz to 20 GHz. The maximum field intensity in each of these bands were determined by rotating the DUT approximately 360 degrees and changing the height of the receive antenna from 1 to 4 meters while maintaining the spectrum analyzer trace in max hold. The stored trace was then evaluated to determine any significant emissions that should be evaluated by substitution. The frequency and uncorrected field strength level for each significant emission was recorded. To describe the noise floor, the maximum level associated with a number of frequencies within the band were also recorded. The DUT was then substituted with a transmit antenna. A signal simulating the DUT emission was generated for each of the signals recorded; it was amplified and fed through a directional coupler to the substitution antenna. The height and direction of the receive antenna as well as the direction of the substitution horn was adjusted for a maximum received signal. The power applied to the transmit antenna was then adjusted to give the same field strength reading as previously recorded for the DUT and the power at the forward coupler port recorded. The substitution antenna was then replaced with a calibrated power sensor, the forward coupler port power level confirmed and the power applied to the horn antenna recorded. The radiated power level was determined by correcting the applied feed point power with the addition of the antenna gain. The radiated spurious emissions test data is shown on pages 9-11.

2.5 EMISSION DESIGNATOR - §2.202

CDMA BW = 1.25 MHz
F = Frequency Modulation
9 = Composite Digital Info
W = Combination Audio/Data Transmission

2.6 OCCUPIED BANDWIDTH - §2.1049, §22.917, §24.238

The DUT was placed in test mode via internal software in the “always up” power control mode. The DUT was connected to the input of a 50Ω spectrum analyzer through a matched 30 dB attenuator. For both PCS CDMA and cellular CDMA modes the resolution bandwidth was set to 30 kHz and the video bandwidth was set to 300 kHz. Spectrum analyzer plots for 99% occupied bandwidth and -26 dBc emission bandwidth are shown in Appendix A.

Frequency (MHz)	99% Occupied Bandwidth (MHz)	-26 dBc Emission Bandwidth (MHz)
1851.25	1.266	1.473
1880.00	1.269	1.483
1908.75	1.260	1.499
824.70	1.254	1.424
835.89	1.258	1.432
848.31	1.267	1.442

Specified Limits:

§22.917

- (a) Out of band emissions. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB.
- (b) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. 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. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). 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 emissions are attenuated at least 26 dB below the transmitter power.
- (c) Alternative out of band emission limit. Licensees in this service may establish an alternative out of band emission limit to be used at specified band edge(s) in specified geographical areas, in lieu of that set forth in this section, pursuant to a private contractual arrangement of all affected licensees and applicants. In this event, each party to such contract shall maintain a copy of the contract in their station files and disclose it to prospective assignees or transferees and, upon request, to the FCC.
- (d) Interference caused by out of band emissions. If any emission from a transmitter operating in this service results in interference to users of another radio service, the FCC may require a greater attenuation of that emission than specified in this section.

§24.238

- (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 emissions 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 measurements of emission power can be expressed in peak or average values, provided they are expressed in the same parameters as the transmitter power.
- (e) When an emission outside of the authorized bandwidth causes harmful interference, the Commission may, at its discretion, require greater attenuation than specified in this section.

2.7 EFFECTIVE ISOTROPIC RADIATED POWER OUTPUT - §24.232(b)

EIRP measurements were performed on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-A-2001. The Sierra Wireless AirCard 555 test software was used to set the DUT to transmit in the CDMA “always up” power control mode. For the ¼-wave helix antenna evaluation, the DUT was placed in the center of the turntable, on a Styrofoam support, 1 meter above the ground plane at a distance of 3 meters from the receive antenna. For the vehicle-mount antenna evaluation, The DUT was placed in the vehicle cradle and positioned on the turntable. The vehicle-mount antenna was fixed on a 50 cm x 50 cm ground plane placed on a Styrofoam support at a distance of 3 meters from the receive antenna. The vehicle-mount antenna was connected to the vehicle cradle via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. The maximum field intensity was determined by rotating the DUT approximately 360 degrees and changing the height of the receive antenna from 1 to 4 meters. Once the maximum emission was found, the spectrum analyzer was set to peak hold and the uncorrected emission value recorded for each of the low, mid and high channels tested. The DUT was then substituted with a horn antenna. A signal, simulating the DUT emission was generated, amplified, and fed through a directional coupler to the substitution antenna. The height and direction of the receive antenna as well as the direction of the substitution horn was adjusted for a maximum received signal. The power applied to the horn was then adjusted to give the same field strength reading as previously recorded for the DUT and the power at the forward coupler port recorded. The substitution antenna was then replaced with a calibrated power sensor, the forward coupler port power level confirmed and the power applied to the horn antenna recorded. The EIRP level was determined by correcting the applied feed point power with the addition of the horn gain. The EIRP measurement data is shown on page 8.

2.8 EFFECTIVE RADIATED POWER OUTPUT - §22.913

ERP measurements were performed on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-A-2001. The Sierra Wireless AirCard 555 test software was used to set the DUT to transmit in the CDMA “always up” power control mode. For the ¼-wave helix antenna evaluation, the DUT was placed in the center of the turntable, on a Styrofoam support, 1 meter above the ground plane at a distance of 3 meters from the receive antenna. For the vehicle-mount antenna evaluation, The DUT was placed in the vehicle cradle and positioned on the turntable. The vehicle-mount antenna was fixed on a 50 cm x 50 cm ground plane placed on a Styrofoam support at a distance of 3 meters from the receive antenna. The vehicle-mount antenna was connected to the vehicle cradle via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. The maximum field intensity was determined by rotating the DUT approximately 360 degrees and changing the height of the receive antenna from 1 to 4 meters. Once the maximum emission was found, the spectrum analyzer was set to peak hold and the uncorrected emission value recorded for each of the low, mid and high channels tested. The DUT was then substituted with a dipole antenna. A signal, simulating the DUT emission was generated, amplified, and fed through a directional coupler to the substitution antenna. The height and direction of the receive antenna as well as the direction of the substitution dipole was adjusted for a maximum received signal. The power applied to the dipole was then adjusted to give the same field strength reading as previously recorded for the DUT and the power at the forward coupler port recorded. The substitution antenna was then replaced with a calibrated power sensor, the forward coupler port power level confirmed and the power applied to the dipole antenna recorded. The ERP level was determined by correcting the applied feed point power with the addition of the dipole gain. The ERP measurement data is shown on page 9.

2.9 RADIATED MEASUREMENT TEST SETUP

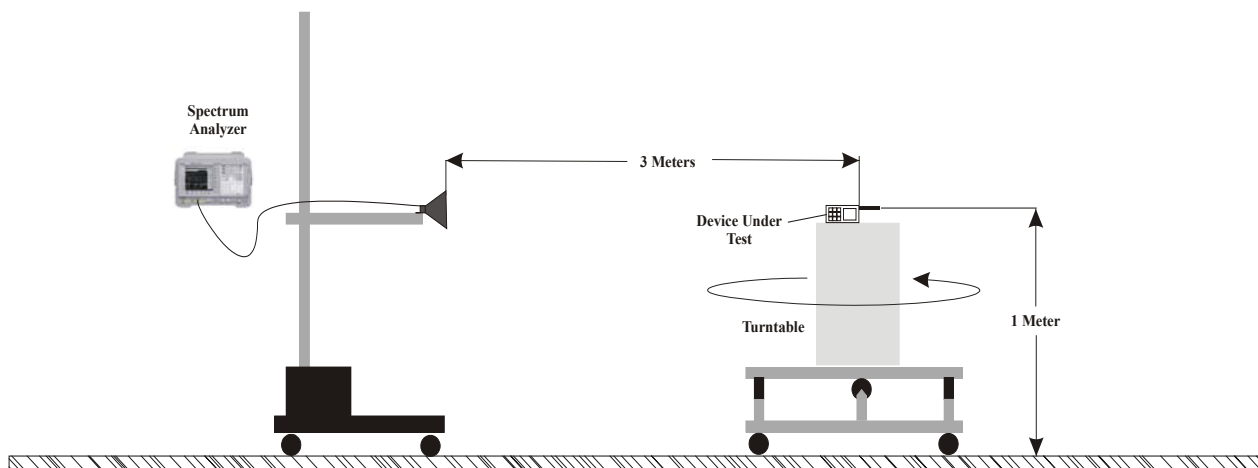


Figure 1. Radiated Measurement Test Setup Diagram - Horn Antenna

3.0 FREQUENCY STABILITY / TEMPERATURE VARIATION - §2.1055, §24.235

The minimum frequency stability shall be $\pm 300\text{Hz}$ (Cellular CDMA) and $\pm 150\text{Hz}$ (PCS CDMA) referenced to a received carrier frequency. This meets the requirement for operational accuracy of 0.00005% for digital mode. An HP 53181A Frequency Counter was used to measure the error in the fundamental frequency. The transmitter was set to maximum power at the center frequency of the band. The DUT was placed inside the temperature chamber. The test data is shown on pages 18-19.

Measurement Method:

The frequency stability of the transmitter was measured by:

1. Temperature:

The temperature was varied from -30°C to $+60^{\circ}\text{C}$ at intervals no more than 10°C throughout the temperature range using an environmental chamber. A period of time sufficient to stabilize all of the components in the equipment was allowed prior to each frequency measurement.

2. Primary Supply Voltage:

The primary supply voltage was set at the specified nominal rating and reduced to the battery operating endpoint specified by the manufacturer. The voltage was measured at the terminals of the power supply or at the input to the cable normally provided with the equipment.


Time Period and Procedure:

1. The carrier frequency of the transmitter was measured at room temperature (25°C to 27°C to provide a reference).
2. The equipment was subjected to an overnight "soak" at -30°C without any power applied.
3. After the overnight "soak" at -30°C , the measurement of the carrier frequency of the transmitter was made within a three-minute interval after applying power to the transmitter.
4. Frequency measurements were made at 10°C intervals up to $+60^{\circ}\text{C}$, then back to room temperature. A minimum period of one hour was provided to allow stabilization of the equipment at each temperature level.

3.1 TEST DATA

3.2 EFFECTIVE ISOTROPIC RADIATED POWER OUTPUT - §24.232(b)

Test Date: 03/17/04 - PCS CDMA Mode - Nearson ¼-Wave Helix Antenna						
Freq. Tuned	Maximum Field Strength of DUT	Antenna Polarization	Horn Gain	Horn Forward Conducted Power	EIRP of DUT Horn Gain + Horn Forward Conducted Power	
MHz	dBm	H/V	dBi	dBm	dBm	Watts
1851.25	- 13.27	H	6.55	17.89	24.44	0.278
1880.00	- 14.66	H	6.58	16.99	23.57	0.228
1908.75	- 13.99	H	6.61	18.35	24.96	0.313
1851.25	- 16.39	V	6.55	13.78	20.33	0.108
1880.00	- 17.78	V	6.58	12.39	18.97	0.079
1908.75	- 17.13	V	6.61	13.04	19.65	0.092

		Project Number: 073004-547KBC	Standard: FCC24 232b
		Company: Itronix	Test Start Date: 18-Aug-04
		Product: IX100 with AC555	Test End Date: 27-Aug-04

Polarity	Distance	Substitution Antenna Type	Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Carrier EIRP Level		EIRP Limit		Margin	Pass/Fail
				MHz	dRuV/m	dRuV	dRm	dBi	dRm	Watts	dBm	Watts		
H	3	Horn SN6276	25	1851.25	110.69	78.69	2.77	6.67	9.44	0.009	33.01	2.00	23.57	PASS
H	3	Horn SN6276	600	1880.00	108.32	76.21	2.96	6.68	9.64	0.009	33.01	2.00	23.37	PASS
H	3	Horn SN6276	1175	1908.75	107.74	75.51	3.61	6.68	10.29	0.011	33.01	2.00	22.72	PASS
V	3	Horn SN6276	25	1851.25	117.22	85.22	10.34	6.67	17.01	0.050	33.01	2.00	16.00	PASS
V	3	Horn SN6276	600	1880.00	118.19	86.08	10.94	6.68	17.62	0.058	33.01	2.00	15.39	PASS
V	3	Horn SN6276	1175	1908.75	119.33	87.10	12.25	6.68	18.93	0.078	33.01	2.00	14.08	PASS


Note:
Horn Antenna used for substitution

Formulae:
 EIRP Level (dBm) = Power applied to Antenna (dBm) + Antenna Gain (dB)
 Margin (dB) = Limit (dBm) - Level (dBm)

PCS CDMA Mode - MaxRad 3 dBi Gain Vehicle-Mount Antenna

3.3 EFFECTIVE RADIATED POWER OUTPUT - §22.913

Test Date: 03/17/04 - Cellular CDMA Mode - Nearson ¼-Wave Helix Antenna						
Freq. Tuned	Maximum Field Strength of DUT	Antenna Polarization	Dipole Gain	Dipole Forward Conducted Power	ERP of DUT Dipole Gain + Dipole Forward Conducted Power	
MHz	dBm	H/V	dBd	dBm	dBm	Watts
824.70	- 12.09	H	- 0.84	23.61	22.77	0.189
835.89	- 10.60	H	- 0.71	26.00	25.29	0.338
848.31	- 11.06	H	- 0.56	25.48	24.92	0.310
824.70	- 14.64	V	- 0.84	21.08	20.24	0.106
835.89	- 13.12	V	- 0.71	23.45	22.74	0.188
848.31	- 13.69	V	- 0.56	22.85	22.29	0.169

		Project Number: 073004-547KBC	Standard: FCC22.913
		Company: Itronix	Test Start Date: 18-Aug-04
		Product: IX100 with AC555	Test End Date: 27-Aug-04

Polarity	Distance	Substitution Antenna Type	Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Carrier ERP Level		ERP Limit		Margin	Pass/Fail
				MHz	dBiV/m	dBiV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
H	3	B_3121C	1013	824.70	106.63	81.46	9.92	1.30	9.08	0.008	38.45	7.00	29.37	PASS
H	3	B_3121C	363	835.89	104.72	79.26	8.39	1.43	7.68	0.006	38.45	7.00	30.77	PASS
H	3	B_3121C	777	848.31	105.86	80.28	9.35	1.58	8.79	0.008	38.45	7.00	29.66	PASS
V	3	B_3121C	1013	824.70	112.95	87.78	19.89	1.30	19.05	0.080	38.45	7.00	19.40	PASS
V	3	B_3121C	363	835.89	113.14	87.68	18.47	1.43	17.76	0.060	38.45	7.00	20.69	PASS
V	3	B_3121C	777	848.31	112.83	87.25	18.48	1.58	17.92	0.062	38.45	7.00	20.53	PASS

Note:
Dipole Antenna used for substitution

Formulae:
 ERP Level (dBm) = Power applied to Antenna (dBm) + Antenna Gain (dBi) - 2.14
 Margin (dB) = Limit (dBm) - Level (dBm)

Cellular CDMA Mode - MaxRad 3 dBi Gain Vehicle-Mount Antenna

3.4 FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053

DUT with Nearson 1/4-Wave Helix Antenna

Test Date: 03/19/04
 Operating Frequency (MHz): 1851.25
 Channel: 25 (Low)
 DUT Conducted Pwr. (dBm): 23.0
 Measured EIRP (dBm): 24.44
 Mode: PCS CDMA
 Distance: 3 Meters
 Limit: $43 + 10 \log (W) = 37.44 \text{ dBc}$

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
3702.50	-74.07	-41.18	6.6	H	-34.58	-36.72	61.16
5553.75	-75.04	-37.24	7.8	H	-29.44	-31.58	56.02
7405.00	-73.44	-36.86	7.8	H	-29.06	-31.20	55.64
9256.25	-74.43	-36.41	7.6	H	-28.81	-30.95	55.39
11107.50	-72.58	-36.22	8.5	H	-27.72	-29.86	54.30
12958.75	-73.82	-35.94	8.8	H	-27.14	-29.28	53.72
14810.00	-69.94	-32.06	9.6	H	-22.46	-24.60	49.04
16661.25	-71.28	-33.45	9.0	H	-24.45	-26.59	51.03
18512.50	-72.22	-36.01	9.3	H	-26.71	-28.85	53.29

Test Date: 03/19/04
 Operating Frequency (MHz): 1880.00
 Channel: 600 (Mid)
 DUT Conducted Pwr. (dBm): 23.0
 Measured EIRP (dBm): 23.57
 Mode: PCS CDMA
 Distance: 3 Meters
 Limit: $43 + 10 \log (W) = 36.58 \text{ dBc}$

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
3760.00	-73.29	-40.40	6.6	H	-33.80	-35.94	59.51
5640.00	-74.91	-37.11	7.8	H	-29.31	-31.45	55.02
7520.00	-74.14	-37.56	7.8	H	-29.76	-31.90	55.47
9400.00	-74.33	-36.31	7.6	H	-28.71	-30.85	54.42
11280.00	-74.14	-37.78	8.5	H	-29.28	-31.42	54.99
13160.00	-73.90	-36.02	8.8	H	-27.22	-29.36	52.93
15040.00	-71.40	-33.52	9.6	H	-23.92	-26.06	49.63
16920.00	-71.04	-33.21	9.0	H	-24.21	-26.35	49.92
18800.00	-72.49	-36.28	9.3	H	-26.98	-29.12	52.69

FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053 (Cont.)

DUT with Nearson ¼-Wave Helix Antenna

Test Date: 03/19/04
 Operating Frequency (MHz): 1908.75
 Channel: 1175 (High)
 DUT Conducted Pwr. (dBm): 23.0
 Measured EIRP (dBm): 24.96
 Mode: PCS CDMA
 Distance: 3 Meters
 Limit: $43 + 10 \log (W) = 37.96 \text{ dBc}$

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
3817.50	-73.10	-40.21	6.6	H	-33.61	-35.75	60.71
5726.25	-76.00	-38.20	7.8	H	-30.40	-32.54	57.50
7635.00	-73.57	-36.99	7.8	H	-29.19	-31.33	56.29
9543.75	-73.86	-35.84	7.6	H	-28.24	-30.38	55.34
11452.50	-73.86	-37.50	8.5	H	-29.00	-31.14	56.10
13361.25	-69.68	-31.80	8.8	H	-23.00	-25.14	50.10
15270.00	-71.17	-33.29	9.6	H	-23.69	-25.83	50.79
17178.75	-71.77	-33.94	9.0	H	-24.94	-27.08	52.04
19087.50	-71.95	-35.74	9.3	H	-26.44	-28.58	53.54

Test Date: 03/18/04
 Operating Frequency (MHz): 824.70
 Channel: 1013 (Low)
 DUT Conducted Pwr. (dBm): 23.0
 Measured ERP (dBm): 22.77
 Mode: Cellular CDMA
 Distance: 3 Meters
 Limit: $43 + 10 \log (W) = 35.76 \text{ dBc}$

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
1649.40	-72.83	-39.94	6.6	H	-33.34	-35.48	58.25
2474.10	-74.20	-36.40	7.8	H	-28.60	-30.74	53.51
3298.80	-76.03	-39.45	7.8	H	-31.65	-33.79	56.56
4123.50	-77.32	-39.30	7.6	H	-31.70	-33.84	56.61
4948.20	-76.03	-39.67	8.5	H	-31.17	-33.31	56.08
5772.90	-76.05	-38.17	8.8	H	-29.37	-31.51	54.28
6597.60	-75.81	-37.93	9.6	H	-28.33	-30.47	53.24
7422.30	-73.95	-36.12	9.0	H	-27.12	-29.26	52.03
8247.00	-74.75	-38.54	9.3	H	-29.24	-31.38	54.15

FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053 (Cont.)

DUT with Nearson ¼-Wave Helix Antenna

Test Date: 03/18/04
 Operating Frequency (MHz): 835.89
 Channel: 363 (Mid)
 DUT Conducted Pwr. (dBm): 23.0
 Measured ERP (dBm): 25.29
 Mode: Cellular CDMA
 Distance: 3 Meters
 Limit: $43 + 10 \log (W) = 38.29 \text{ dBc}$

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
1671.78	-71.28	-38.39	6.6	H	-31.79	-33.93	59.22
2507.67	-74.89	-37.09	7.8	H	-29.29	-31.43	56.72
3343.56	-76.57	-39.99	7.8	H	-32.19	-34.33	59.62
4179.45	-76.57	-38.55	7.6	H	-30.95	-33.09	58.38
5015.34	-76.94	-40.58	8.5	H	-32.08	-34.22	59.51
5851.23	-76.16	-38.28	8.8	H	-29.48	-31.62	56.91
6687.12	-75.17	-37.29	9.6	H	-27.69	-29.83	55.12
7523.01	-73.80	-35.97	9.0	H	-26.97	-29.11	54.40
8358.90	-74.92	-38.71	9.3	H	-29.41	-31.55	56.84

Test Date: 03/18/04
 Operating Frequency (MHz): 848.31
 Channel: 777 (High)
 DUT Conducted Pwr. (dBm): 23.0
 Measured ERP (dBm): 24.92
 Mode: Cellular CDMA
 Distance: 3 Meters
 Limit: $43 + 10 \log (W) = 37.91 \text{ dBc}$

Frequency	Field Strength of Spurious Radiation	Horn Forward Conducted Power	Standard Gain Horn Antenna Gain	POL	EIRP	ERP	dBc
MHz	dBm	dBm	dBi	H/V	dBm	dBm	
1696.62	-71.95	-39.06	6.6	H	-32.46	-34.60	59.52
2544.93	-74.18	-36.38	7.8	H	-28.58	-30.72	55.64
3393.24	-75.40	-38.82	7.8	H	-31.02	-33.16	58.08
4241.55	-76.58	-38.56	7.6	H	-30.96	-33.10	58.02
5089.86	-76.88	-40.52	8.5	H	-32.02	-34.16	59.08
5938.17	-76.58	-38.70	8.8	H	-29.90	-32.04	56.96
6786.48	-72.02	-34.14	9.6	H	-24.54	-26.68	51.60
7634.79	-74.27	-36.44	9.0	H	-27.44	-29.58	54.50
8483.10	-74.72	-38.51	9.3	H	-29.21	-31.35	56.27

FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053 (Cont.)

DUT with Itronix IX100X Vehicle Cradle & MaxRad 3 dBi Gain Vehicle-Mount Antenna - PCS CDMA

Celltech Testing and Engineering Services Lab		Project Number:		073004-547KBC		Standard:		FCC24.238				
		Company:		Itronix		Test Start Date:		18-Aug-04				
		Product:		IX100 with AC555		Test End Date:		27-Aug-04				
Polarity	Distance	Substitution Antenna Type	Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Emission EIRP Level	EIRP Limit	Margin	Pass/Fail
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm*	dB	
H	3	Horn SN6267	25	2000.00	67.38	34.70	-41.84	6.70	-35.14	-13.00	22.14	PASS
H	3	Horn SN6267	25	3701.88	49.71	47.57	-52.69	8.06	-44.63	-13.00	31.63	PASS
H	3	Horn SN6267	25	4952.50	49.25	44.10	-52.10	8.61	-43.49	-13.00	30.49	PASS
H	3	Horn SN6267	25	7129.37	54.08	45.30	-48.00	9.20	-38.80	-13.00	25.80	PASS
H	1	Horn SN6267	25	14740.00	60.53	44.90	-52.80	11.05	-41.76	-13.00	28.76	PASS
H	1	Horn SN6267	25	17960.00	67.29	45.50	-43.41	8.08	-35.33	-13.00	22.33	PASS
H	1	3160-09	25	19800.00	61.16	45.70	-42.12	15.92	-26.20	-13.00	13.20	PASS
V	3	Horn SN6267	25	1871.00	67.18	35.10	-41.39	6.57	-34.82	-13.00	21.82	PASS
V	3	Horn SN6267	25	2116.00	42.63	46.90	-49.67	6.96	-42.71	-13.00	29.71	PASS
V	3	Horn SN6267	25	3703.75	56.14	54.00	-42.26	8.06	-34.20	-13.00	21.20	PASS
V	3	Horn SN6267	25	4840.38	48.30	43.50	-53.19	8.63	-44.56	-13.00	31.56	PASS
V	3	Horn SN6267	25	8372.50	55.35	44.70	-50.16	9.30	-40.86	-13.00	27.86	PASS
V	1	Horn SN6267	25	11108.00	64.43	52.10	-54.38	10.45	-43.93	-13.00	30.93	PASS
V	1	Horn SN6267	25	17994.00	67.01	44.90	-40.52	7.93	-32.59	-13.00	19.59	PASS
V	1	3160-09	25	19902.00	60.41	44.70	-40.28	15.96	-24.32	-13.00	11.32	PASS
H	3	Horn SN6267	600	1998.00	67.17	34.50	-41.93	6.70	-35.24	-13.00	22.24	PASS
H	3	Horn SN6267	600	5616.25	53.48	47.10	-46.63	8.74	-37.89	-13.00	24.89	PASS
H	1	Horn SN6267	600	17930.00	66.90	45.30	-42.08	8.21	-33.87	-13.00	20.87	PASS
H	1	3160-09	600	19892.00	60.97	45.30	-39.34	15.96	-23.38	-13.00	10.38	PASS
V	3	Horn SN6267	600	1999.00	67.38	34.70	-41.39	6.70	-34.69	-13.00	21.69	PASS
V	3	Horn SN6267	600	3761.88	57.19	54.90	-41.14	8.05	-33.09	-13.00	20.09	PASS
V	1	Horn SN6267	600	17976.00	67.04	45.10	-39.75	8.01	-31.74	-13.00	18.74	PASS
V	1	3160-09	600	19706.00	60.68	45.30	-38.94	15.88	-23.06	-13.00	10.06	PASS
H	3	Horn SN6267	1175	1984.00	66.90	34.30	-41.80	6.68	-35.11	-13.00	22.11	PASS
H	3	Horn SN6267	1175	5618.13	51.88	45.50	-48.69	8.74	-39.95	-13.00	26.95	PASS
H	3	Horn SN6267	1175	9295.00	55.84	43.70	-51.35	9.10	-42.26	-13.00	29.26	PASS
H	1	Horn SN6267	1175	17990.00	67.17	45.10	-43.20	7.94	-35.26	-13.00	22.26	PASS
H	1	3160-09	1175	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	1175	1891.00	66.46	34.30	-42.36	6.59	-35.77	-13.00	22.77	PASS
V	3	Horn SN6267	1175	8113.75	53.79	43.50	-52.53	9.30	-43.23	-13.00	30.23	PASS
V	1	Horn SN6267	1175	17978.00	66.86	44.90	-39.39	8.00	-31.40	-13.00	18.40	PASS
V	1	3160-09	1175	19974.00	60.68	44.90	-40.95	15.99	-24.96	-13.00	11.96	PASS

Note:
 Horn Antenna used for substitution
 All applicable frequency ranges were investigated up to the carrier tenth harmonic and any significant emissions or noise floor level reported for each range.

Formulae:
 Limit = $43 + 10 \log(\text{Fundamental Power Level, in watts})$ below the Fundamental peak power gives -13 dBm
 EIRP Level (dBm) = Power applied to Antenna (dBm) + Antenna Gain (dBi)
 Margin (dB) = Limit (dBm) - Level (dBm)

FIELD STRENGTH OF SPURIOUS RADIATION - §2.1053 (Cont.)

DUT with Itronix IX100X Vehicle Cradle & MaxRad 3 dBi Gain Vehicle-Mount Antenna - Cellular CDMA

Celltech Testing and Engineering Services Lab		Project Number:	073004-547KBC		Standard:	FCC22.917						
		Company:	Itronix		Test Start Date:	18-Aug-04						
		Product:	IX100 with AC555		Test End Date:	27-Aug-04						
Polarity	Distance	Substitution Antenna Type	Channel	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Emission ERP Level	ERP Limit	Margin	Pass/Fail
				MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm*	dB	
H	3	B_3121C	1013	854.00	68.35	42.80	-27.94	1.66	-26.27	-13.00	13.27	PASS
H	3	Horn SN6267	1013	1078.00	67.15	56.90	-46.68	4.09	-42.59	-13.00	29.59	PASS
H	3	Horn SN6267	1013	5792.50	55.34	48.80	-45.62	8.95	-36.67	-13.00	23.67	PASS
V	3	B_3121C	1013	839.00	68.35	42.80	-25.09	1.47	-23.62	-13.00	10.62	PASS
V	3	Horn SN6267	1013	1001.50	62.40	44.50	-45.51	3.71	-41.80	-13.00	28.80	PASS
V	3	Horn SN6267	1013	8421.25	54.60	43.90	-51.31	9.30	-42.01	-13.00	29.01	PASS
H	3	B_3121C	363	810.40	66.84	42.00	-27.74	1.07	-26.67	-13.00	13.67	PASS
H	3	Horn SN6267	363	1127.50	60.60	55.30	-54.26	4.34	-49.92	-13.00	36.92	PASS
H	3	Horn SN6267	363	8100.00	55.15	44.90	-51.60	9.30	-42.30	-13.00	29.30	PASS
V	3	B_3121C	363	859.00	67.91	42.40	-24.56	1.74	-22.82	-13.00	9.82	PASS
V	3	Horn SN6267	363	1073.50	60.40	49.70	-52.15	4.07	-48.08	-13.00	35.08	PASS
V	3	Horn SN6267	363	7570.00	54.11	44.30	-50.38	8.96	-41.42	-13.00	28.42	PASS
H	3	B_3121C	777	854.20	67.25	41.70	-26.95	1.67	-25.28	-13.00	12.28	PASS
H	3	Horn SN6267	777	1000.00	60.55	42.50	-48.34	3.70	-44.64	-13.00	31.64	PASS
H	3	Horn SN6267	777	5783.13	55.37	48.80	-51.35	8.94	-42.41	-13.00	29.41	PASS
H	3	Horn SN6267	777	8698.75	55.76	44.70	-57.07	9.10	-47.97	-13.00	34.97	PASS
V	3	B_3121C	777	920.80	64.22	37.60	-29.52	2.05	-27.47	-13.00	14.47	PASS
V	3	Horn SN6267	777	1129.00	64.85	59.70	-51.56	4.35	-47.22	-13.00	34.22	PASS
V	3	Horn SN6267	777	8785.00	55.17	43.90	-56.73	9.01	-47.72	-13.00	34.72	PASS

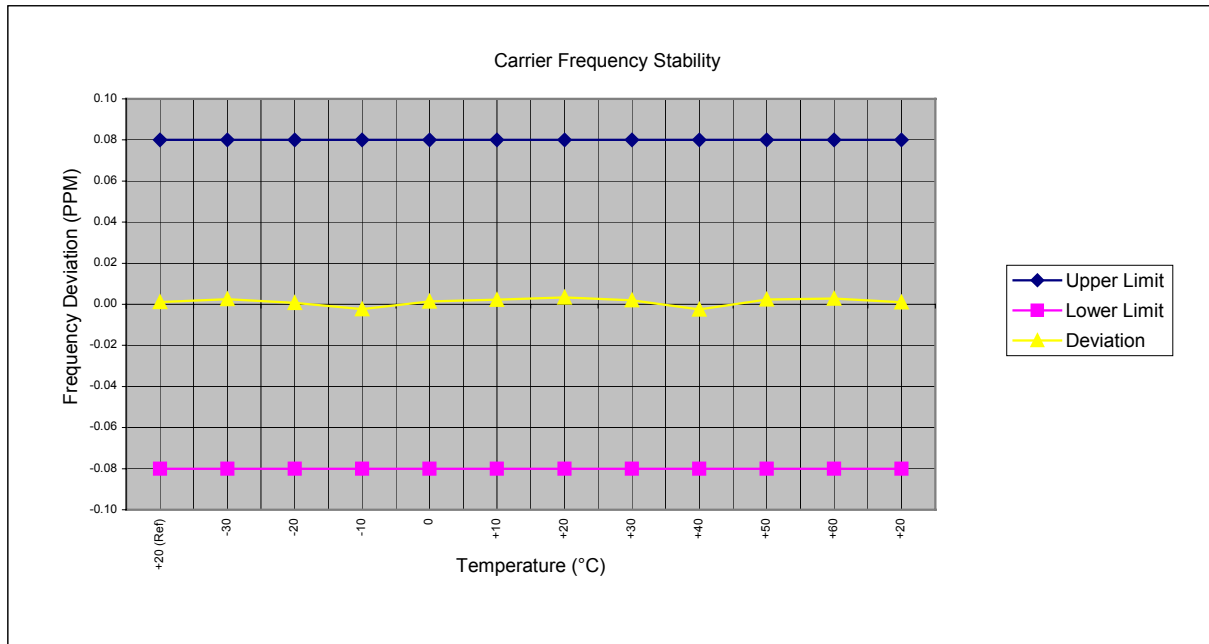
Note:
 Dipole Antenna used for substitution for 1000 MHz and below. Horn Antenna used above 1000 MHz
 All applicable frequency ranges were investigated up to the carrier tenth harmonic and any significant emissions or noise floor level reported for each range.

Formulae:
 Limit = 43 + 10*log(Fundamental Power Level, in watts) below the Fundamental peak power gives -13 dBm
 ERP Level (dBm) = Power applied to Antenna (dBm) + Antenna Gain (dBi) - 2.14
 Margin (dB) = Limit (dBm) - Level (dBm)

3.5 FREQUENCY STABILITY / TEMPERATURE VARIATION - §24.235

Carrier Frequency (GHz): 1.88
Channel: 600
Mode: PCS CDMA
Deviation Limit (PPM): 0.08

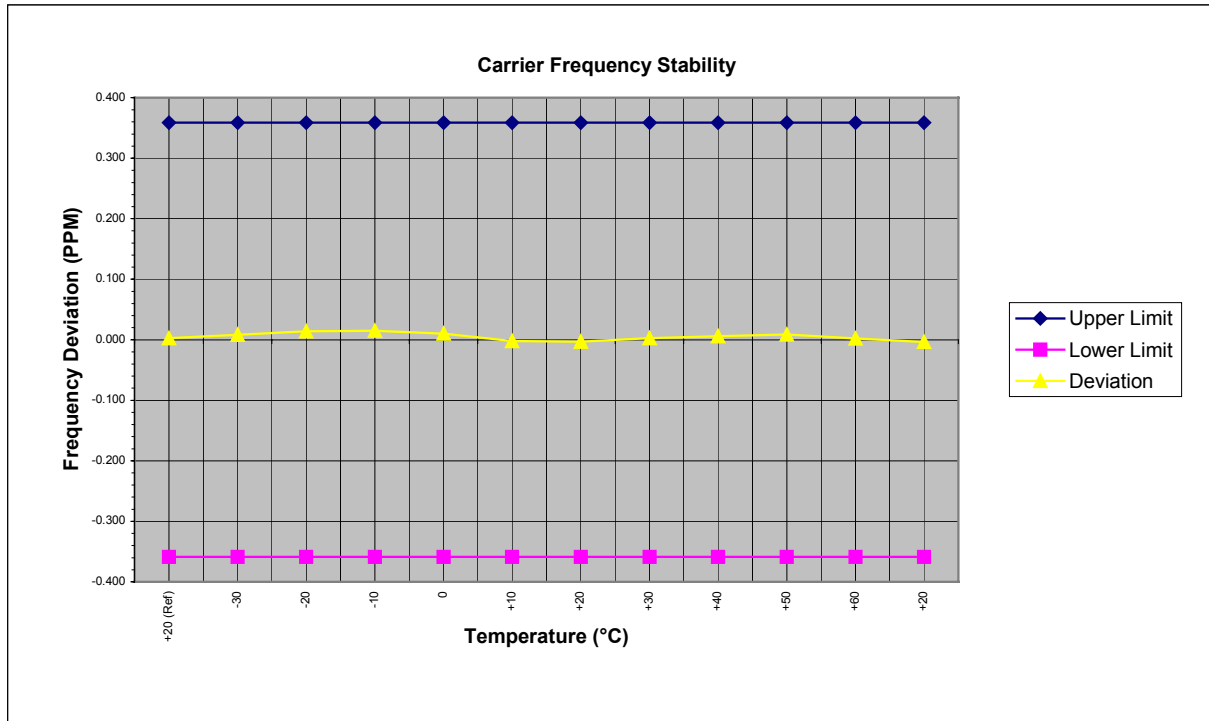
Temperature (°C)	Voltage (%)	Power (VDC)	Carrier Frequency Deviation		Specification	
			(Hz)	(PPM)	Lower Limit (PPM)	Upper Limit (PPM)
+20 (Ref)	100	7.4	2.17	0.001	0.08	-0.08
-30	100	7.4	4.60	0.002	0.08	-0.08
-20	100	7.4	1.36	0.001	0.08	-0.08
-10	100	7.4	-4.55	-0.002	0.08	-0.08
0	100	7.4	2.68	0.001	0.08	-0.08
+10	100	7.4	4.14	0.002	0.08	-0.08
+20	100	7.4	6.30	0.003	0.08	-0.08
+30	100	7.4	3.78	0.002	0.08	-0.08
+40	100	7.4	-4.71	-0.003	0.08	-0.08
+50	100	7.4	4.43	0.002	0.08	-0.08
+60	100	7.4	5.26	0.003	0.08	-0.08
+20	Battery Endpoint	6.1	1.80	0.001	0.08	-0.08



3.6 FREQUENCY STABILITY / TEMPERATURE VARIATION - §2.1055

Carrier Frequency (MHz): 835.89
Channel: 363
Mode: Cellular CDMA
Deviation Limit (PPM): 0.359

Temperature (°C)	Voltage (%)	Power (VDC)	Carrier Frequency Deviation		Specification	
			(Hz)	(PPM)	Lower Limit (PPM)	Upper Limit (PPM)
+20 (Ref)	100	7.4	2.15	0.003	0.359	-0.359
-30	100	7.4	6.93	0.008	0.359	-0.359
-20	100	7.4	11.52	0.014	0.359	-0.359
-10	100	7.4	12.33	0.015	0.359	-0.359
0	100	7.4	8.60	0.010	0.359	-0.359
+10	100	7.4	-1.81	-0.002	0.359	-0.359
+20	100	7.4	-2.43	-0.003	0.359	-0.359
+30	100	7.4	2.11	0.003	0.359	-0.359
+40	100	7.4	5.08	0.006	0.359	-0.359
+50	100	7.4	7.47	0.009	0.359	-0.359
+60	100	7.4	1.97	0.002	0.359	-0.359
+20	Battery Endpoint	6.1	-2.80	-0.003	0.359	-0.359



4.1 TEST EQUIPMENT LIST

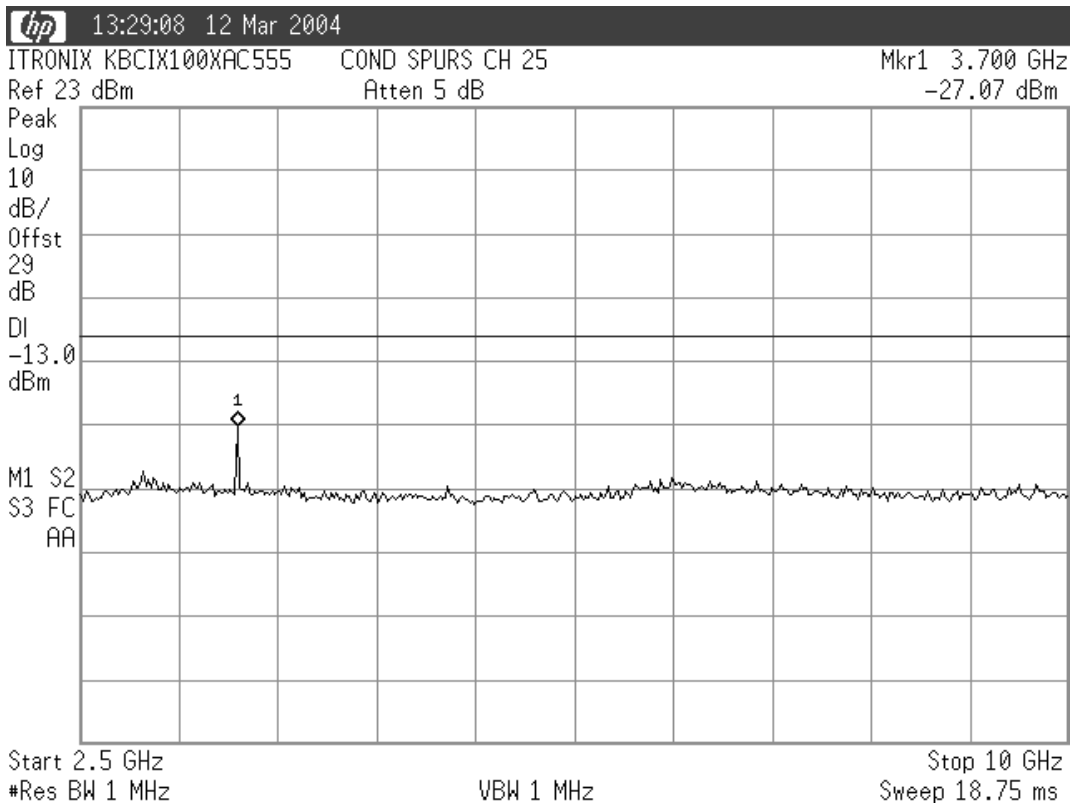
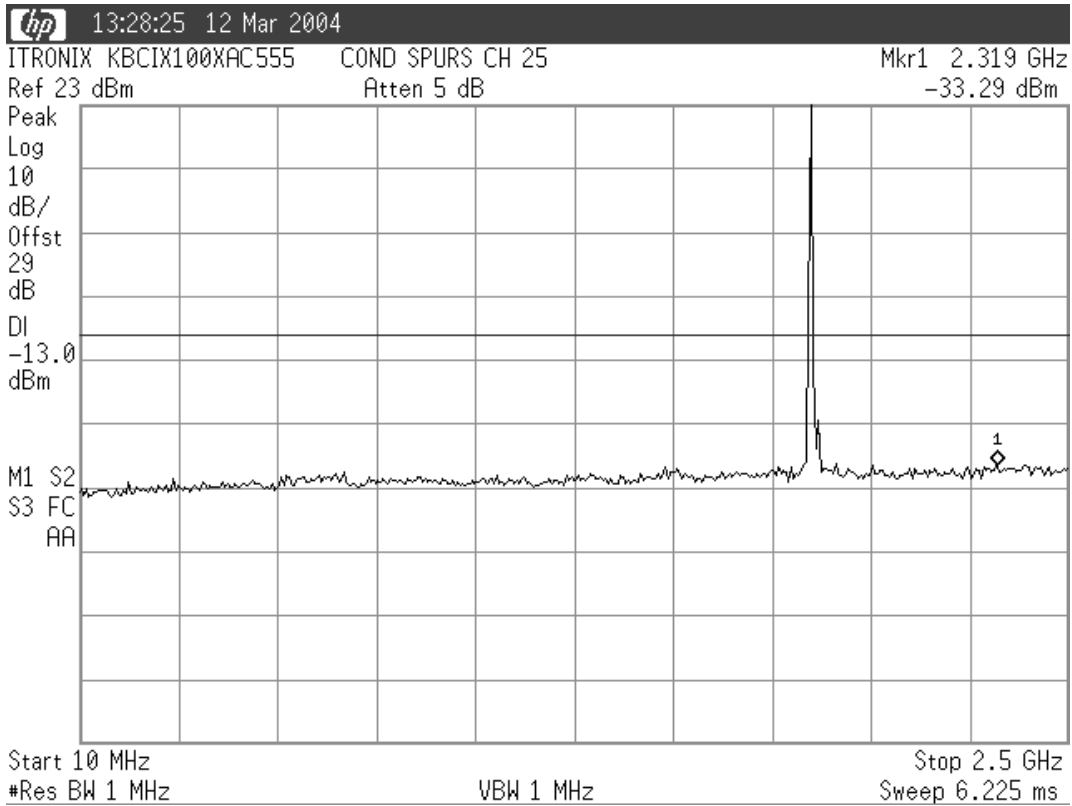
Equipment Type	Model	Serial No.	Calibration Due Date
HP Signal Generator	8648D (9kHz-4.0GHz)	3847A00611	April 2005
Rohde & Schwarz Signal Generator	SMR 20 (10MHz-40GHz)	100104	April 2005
Gigatronics Power Meter	8651A	8650137	April 2005
Gigatronics Power Meter	8652A	1835267	April 2005
Gigatronics Power Sensor	80701A (0.05-18GHz)	1833535	April 2005
Gigatronics Power Sensor	80701A (0.05-18GHz)	1833542	April 2005
Gigatronics Power Sensor	80701A (0.05-18GHz)	1834350	April 2005
Amplifier Research Power Amp.	5S1G4 (5W, 800MHz-4.2GHz)	26235	N/A
Amplifier Research Power Amp.	10W1000C (0.5 – 1 GHz)	27887	N/A
Microwave System Amplifier	HP 83017A (0.5-26.5GHz)	3123A00587	N/A
Network Analyzer	HP 8753E (30kHz-3GHz)	US38433013	April 2005
Frequency Counter	HP 53181A (3GHz)	3736A05175	April 2005
DC Power Supply	HP E3611A	KR83015294	N/A
Multi-Device Controller	EMCO 2090	9912-1484	N/A
Mini Mast	EMCO 2075	0001-2277	N/A
Turntable	EMCO 2080-1.2/1.5	0002-1002	N/A
Double Ridged Horn Antenna	ETS 3115 (1-18GHz) TX Substitution Antenna (Horn SN6267)	6267	Oct 2004
Double Ridged Horn Antenna	ETS 3115 (1-18GHz)	6276	Oct 2004
Standard Gain Horn Antenna	ETS 3160-09 TX Substitution Antenna (3160-09)	9810-1123	N/A
Standard Gain Horn Antenna	ETS 3160-09	1263	N/A
Bilog Antenna	Schaffner CBL6111A	1607	Jan 2005
Roberts Dipole Antenna	3121C-DB4 TX Substitution Antenna (B_3121C)	0003-1494	Dec 2004
Roberts Dipole Antenna	3121C-DB4	0003-1498	Dec 2004
Spectrum Analyzer	HP 8594E	3543A02721	April 2005
Spectrum Analyzer	HP E4408B	US39240170	Dec 2004
Shielded Screen Room	Lindgren R.F. 18W-2/2-0	16297	N/A
Environmental Chamber	ESPEC ECT-2 (Temperature/Humidity)	0510154-B	Feb 2005
Directional Coupler	Amplifier Research DC7154 (0.8-4.2 GHz)	26197	N/A
Directional Coupler	Pasternack PE2214-20	00078	N/A
High Pass Filter	Microwave Circuits HIG318G1	0001DC0020	N/A
High Pass Filter	Microwave Circuits H02G18G1	0001DC0020	N/A
30 dB Attenuator	Pasternack PE7019-30	00065	N/A
Itronix Laptop PC	IX260+	ZZGEG4112ZZ9777	N/A

5.1 CONCLUSION

The data in this measurement report demonstrates that the ITRONIX CORPORATION Model: IX100XAC555 FCC ID: KBCIX100XAC555 Rugged Handheld PC with Sierra Wireless AirCard 555/550 Dual-Band PCS/Cellular CDMA PCMCIA Modem and Nearson $\frac{1}{4}$ -wave Helix Antenna, Itronix IX100X Vehicle Cradle and MaxRad 3 dBi Gain Vehicle-Mount Antenna, complies with the requirements of FCC Rule Parts §24(E), §22(H), and §2.

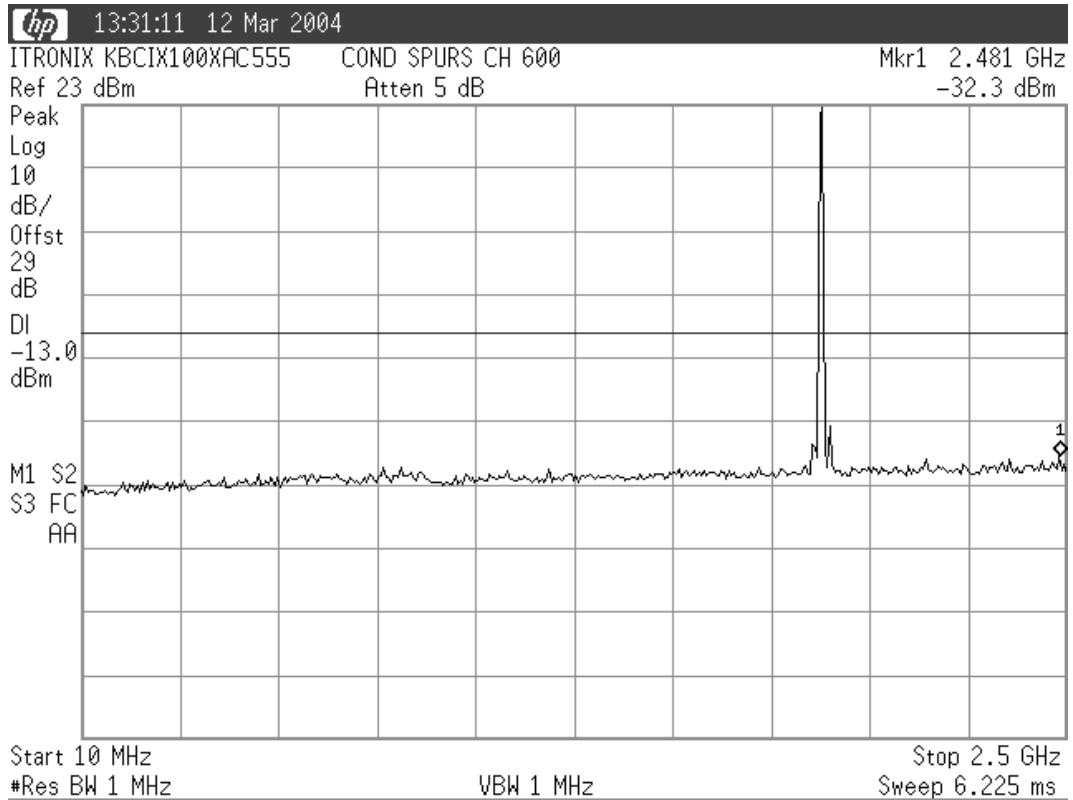
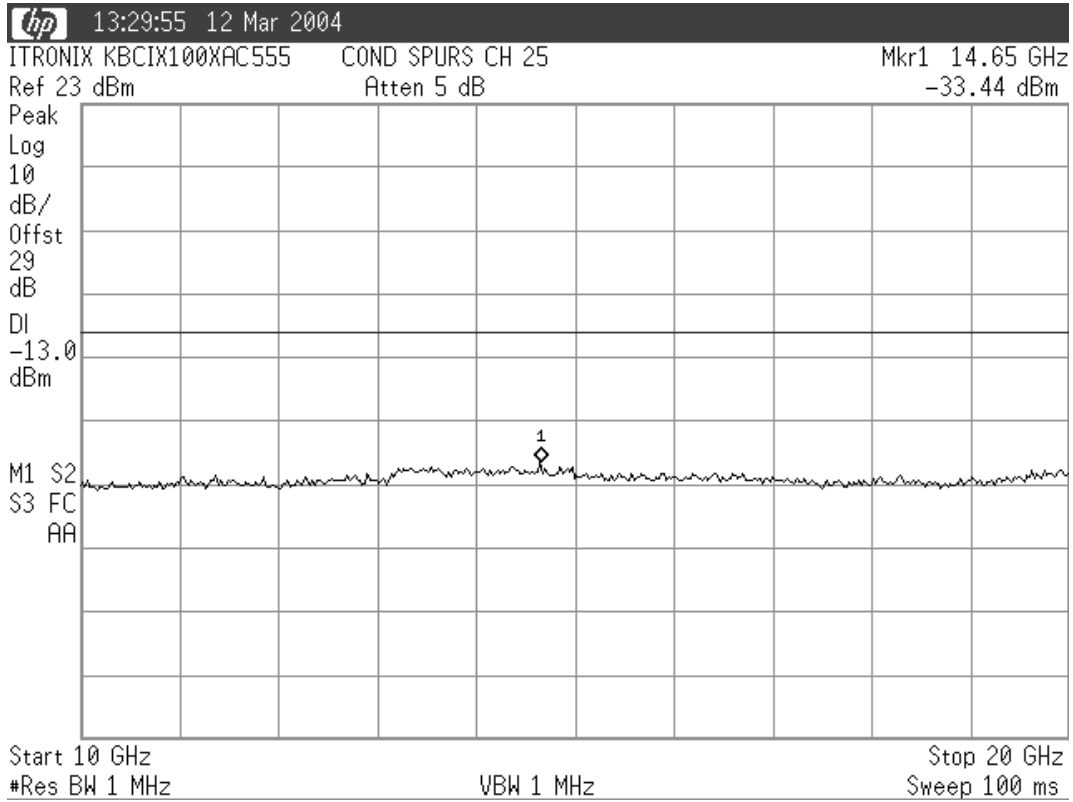
APPENDIX A - TEST PLOTS

PCS Band



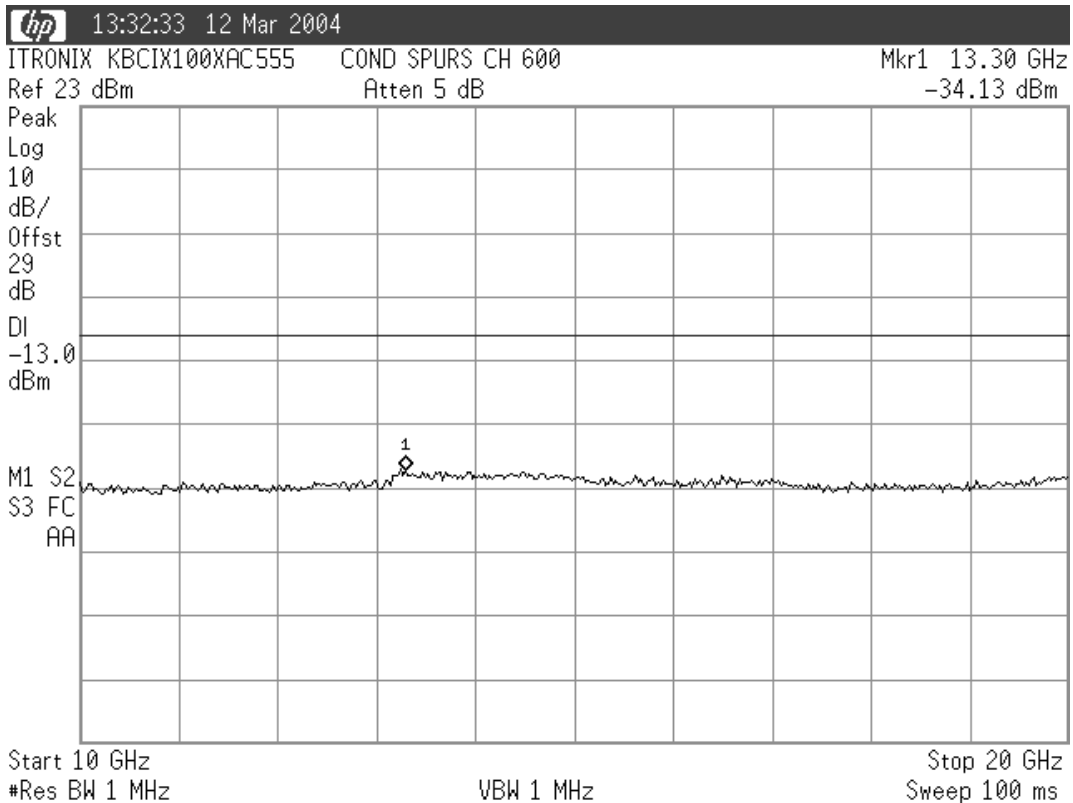
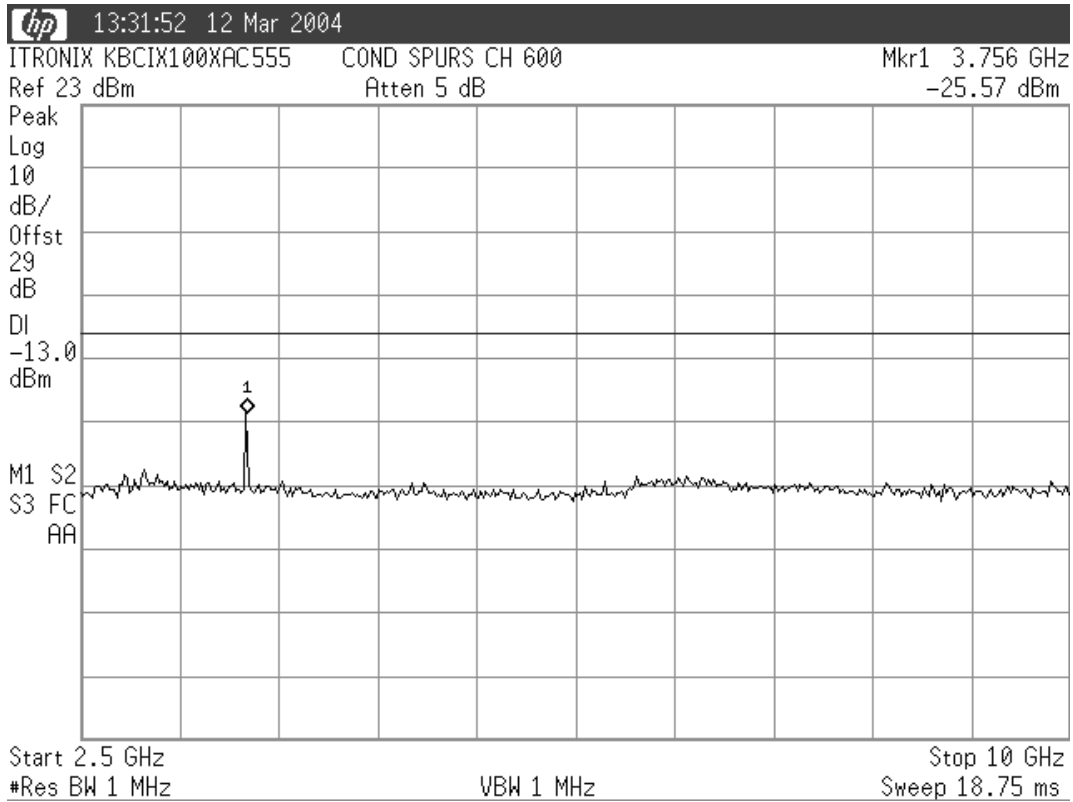
TEST PLOTS (Cont.)

PCS Band



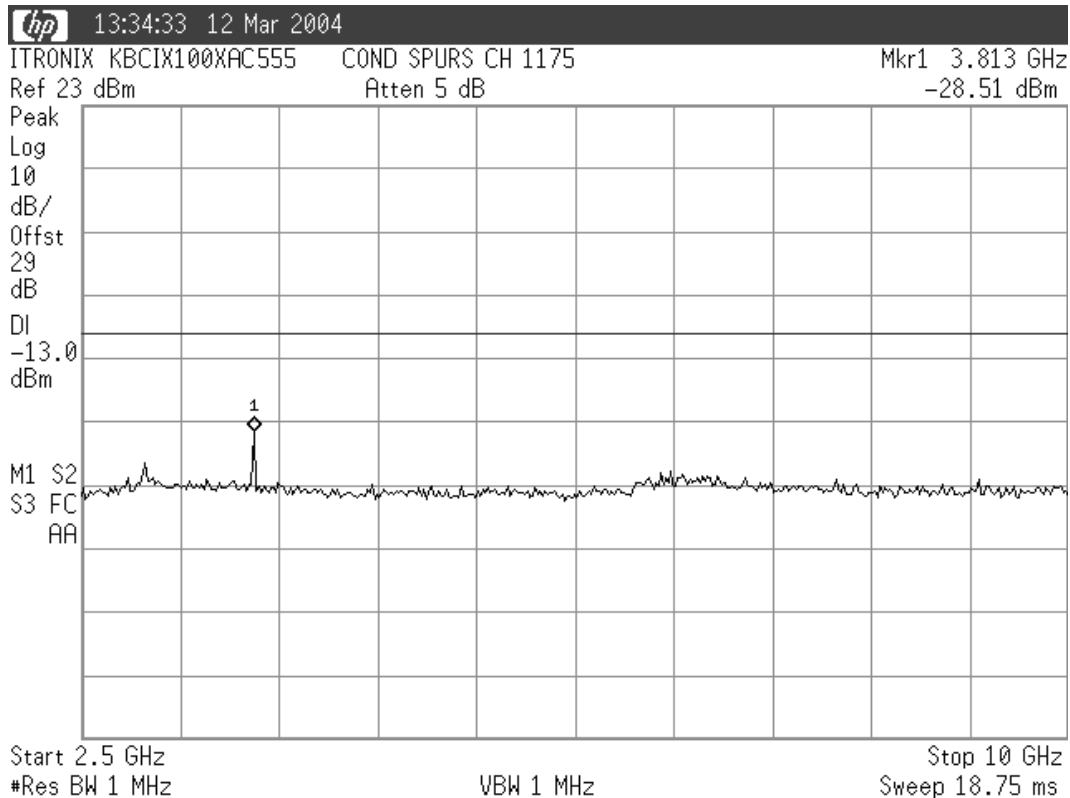
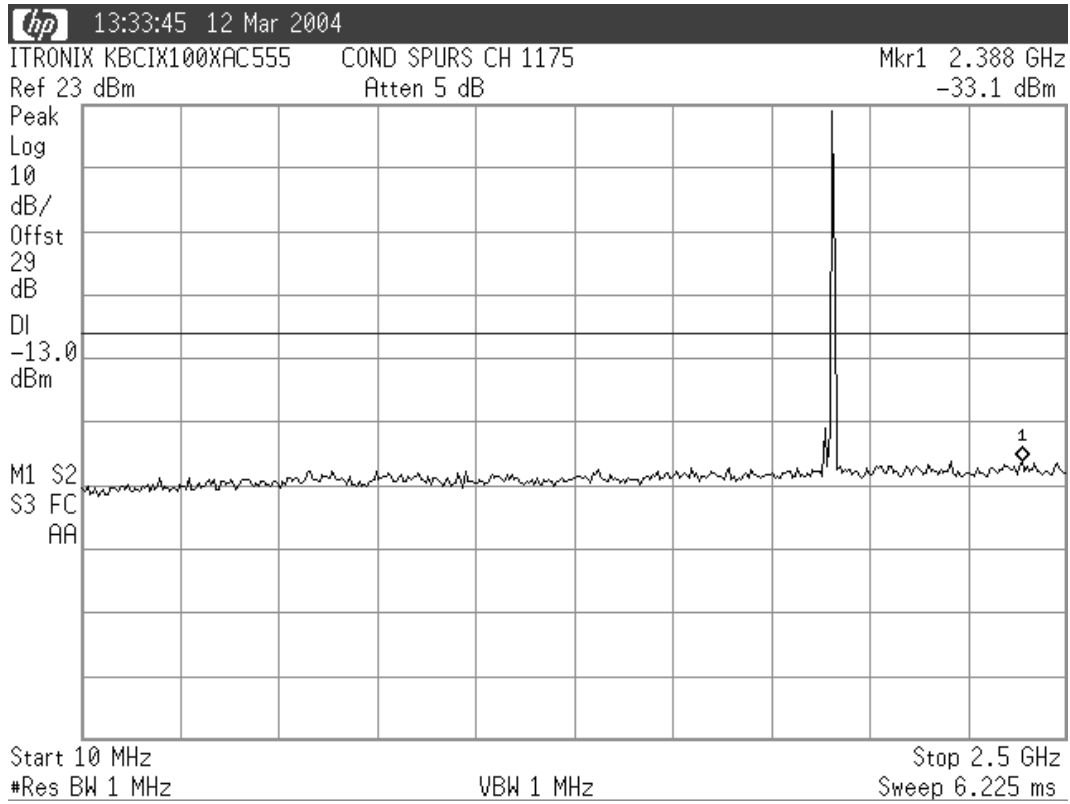
TEST PLOTS (Cont.)

PCS Band



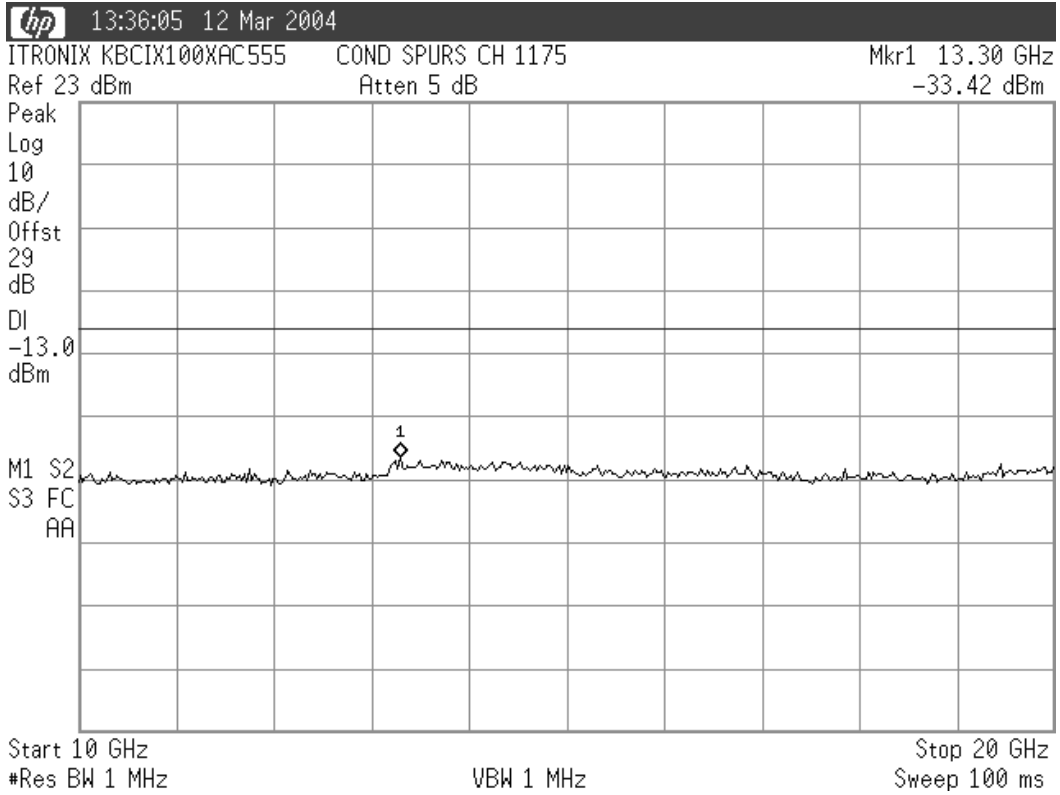
TEST PLOTS (Cont.)

PCS Band



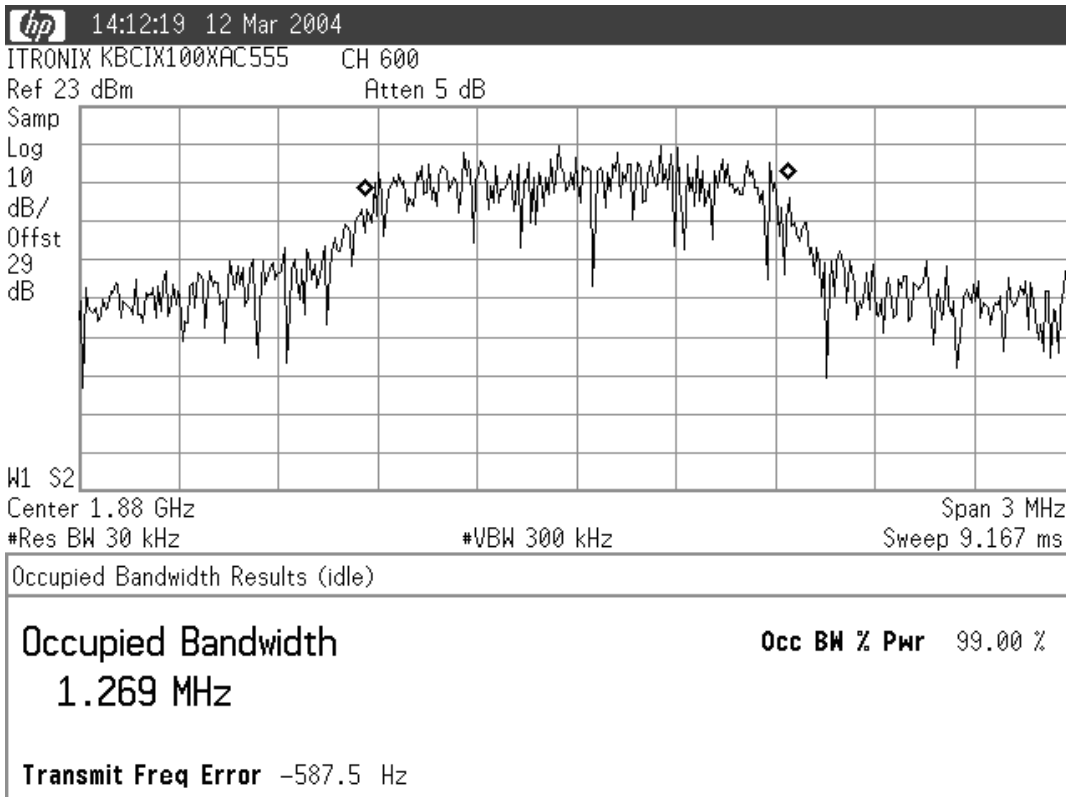
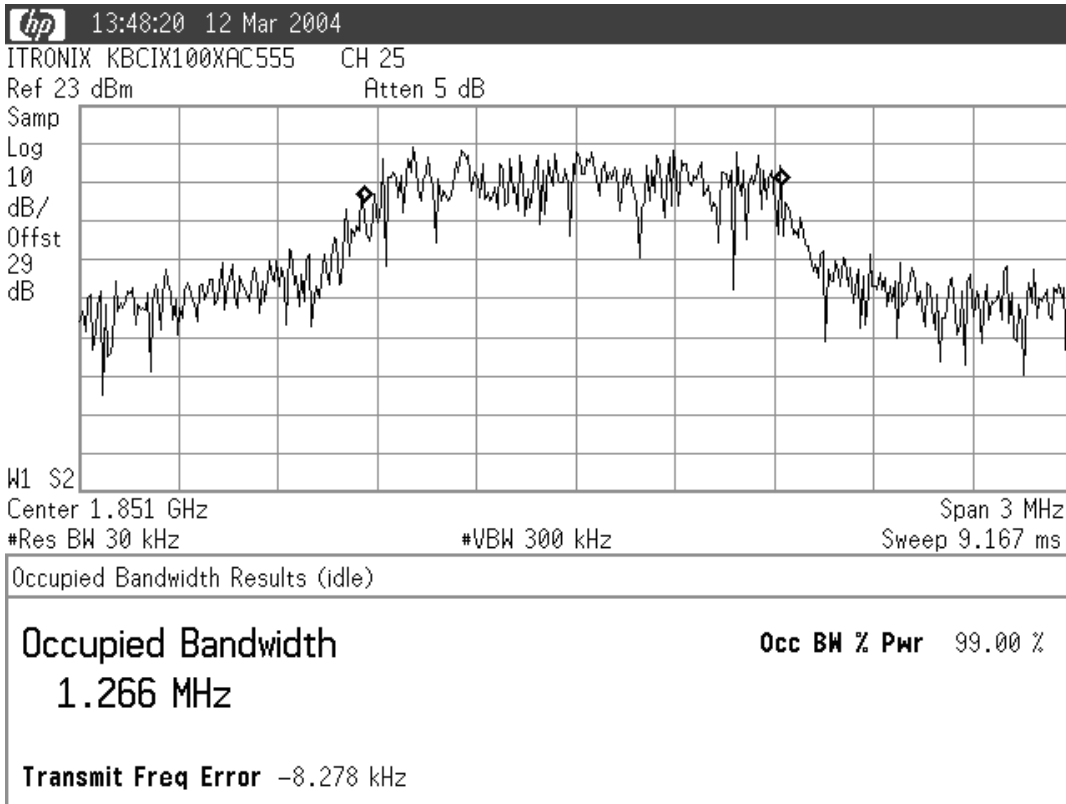
TEST PLOTS (Cont.)

PCS Band



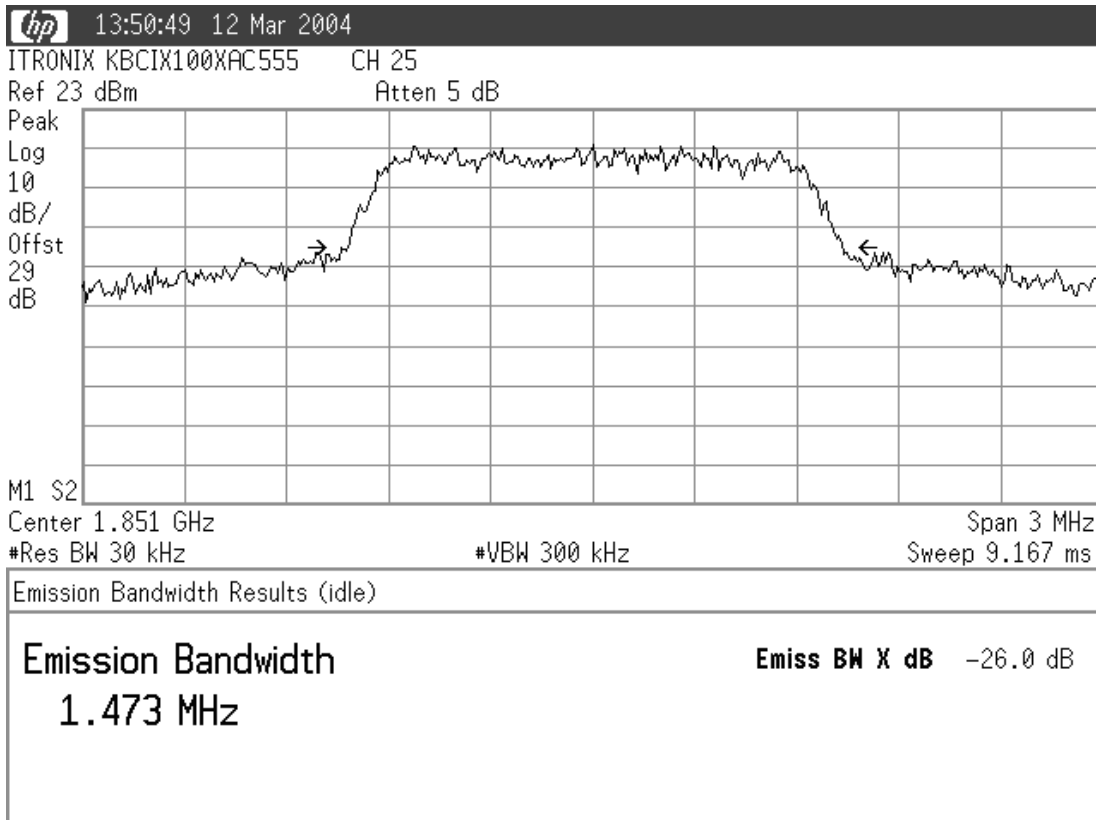
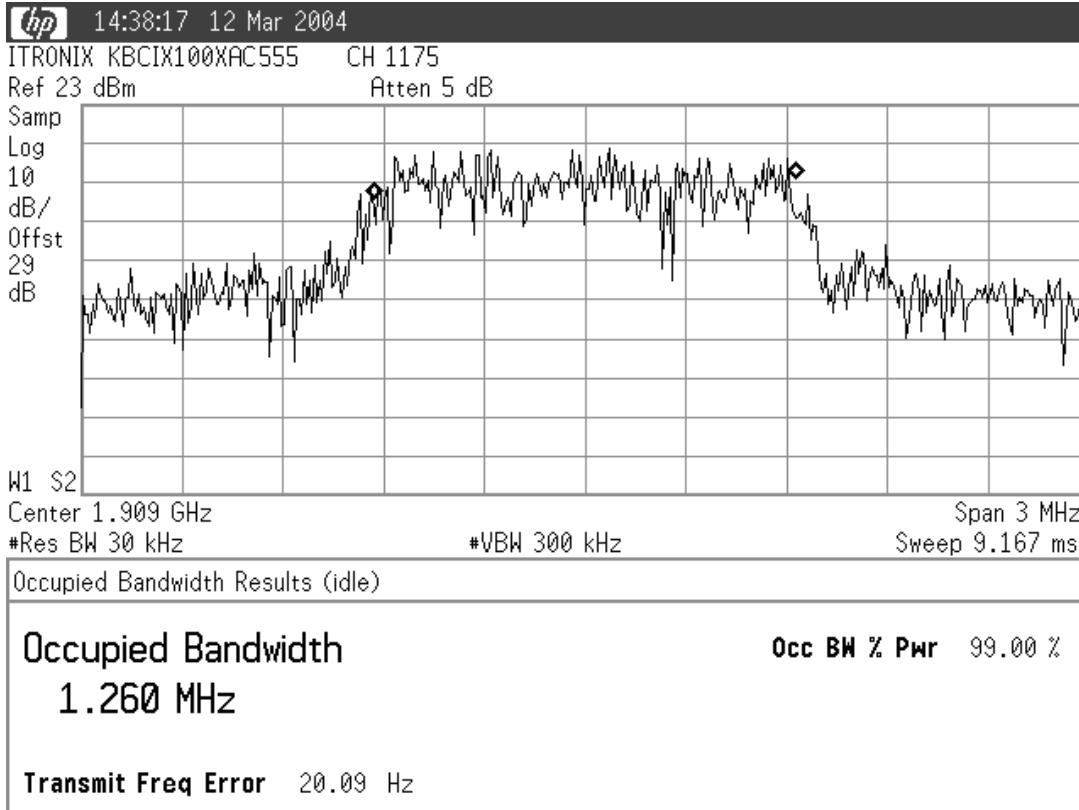
TEST PLOTS (Cont.)

PCS Band



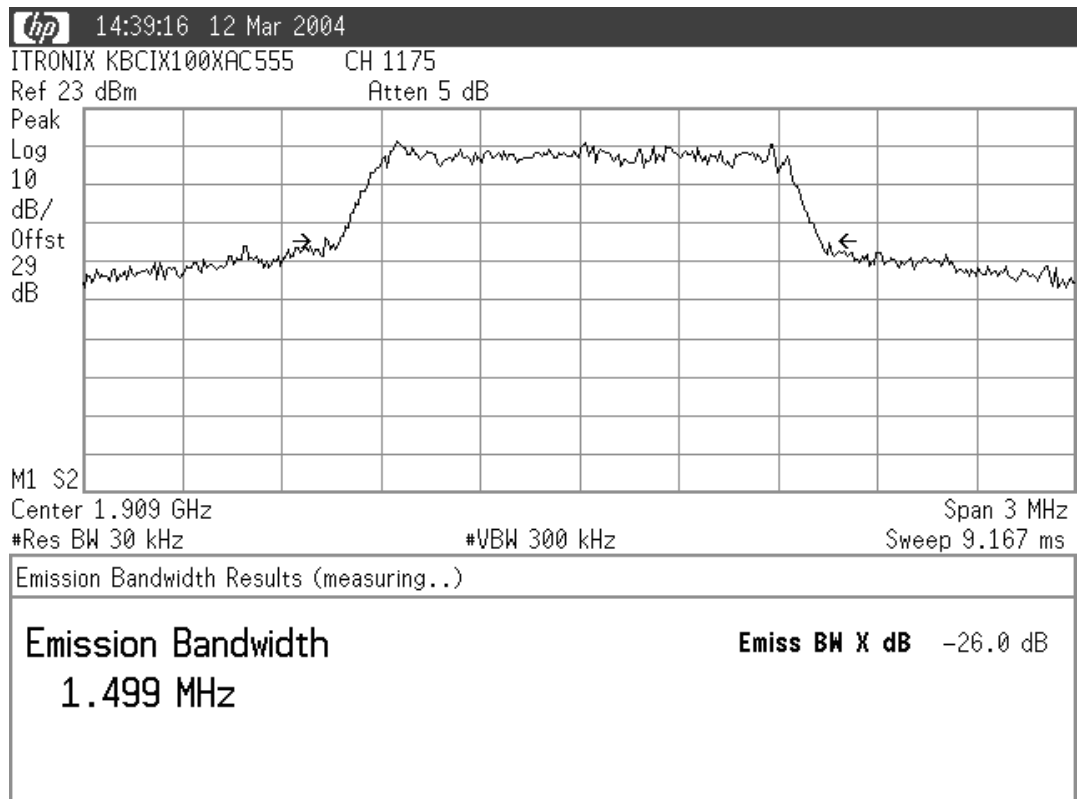
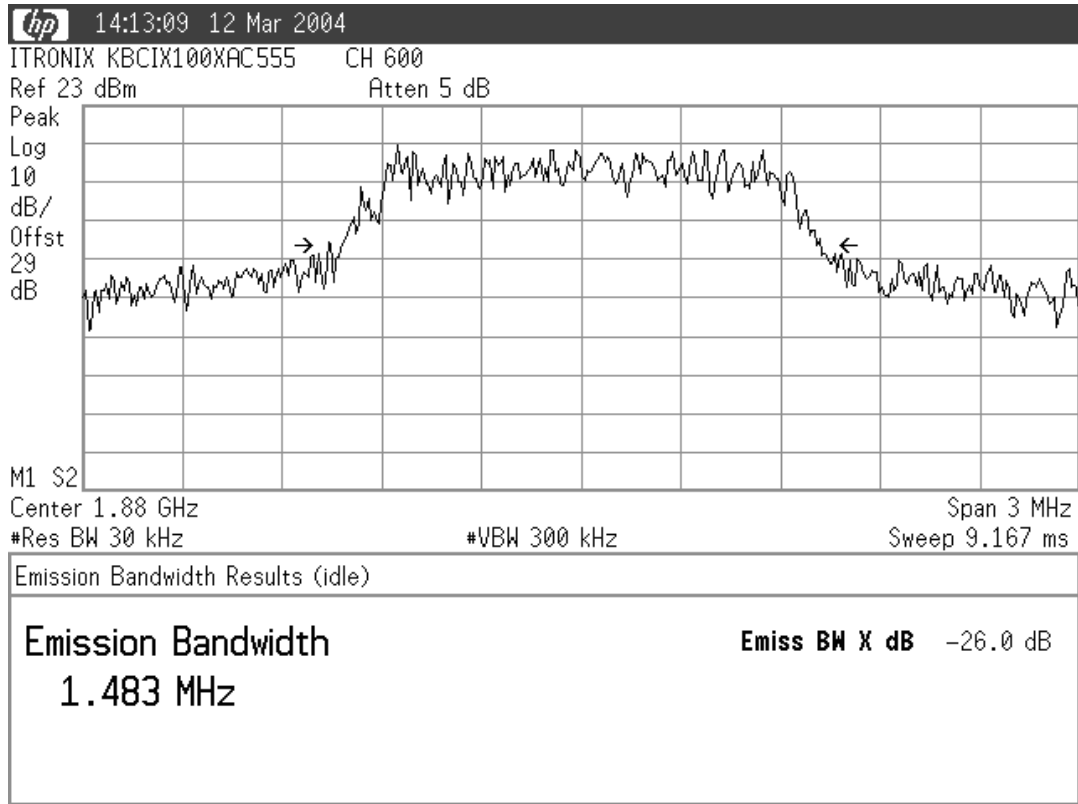
TEST PLOTS (Cont.)

PCS Band



TEST PLOTS (Cont.)

PCS Band



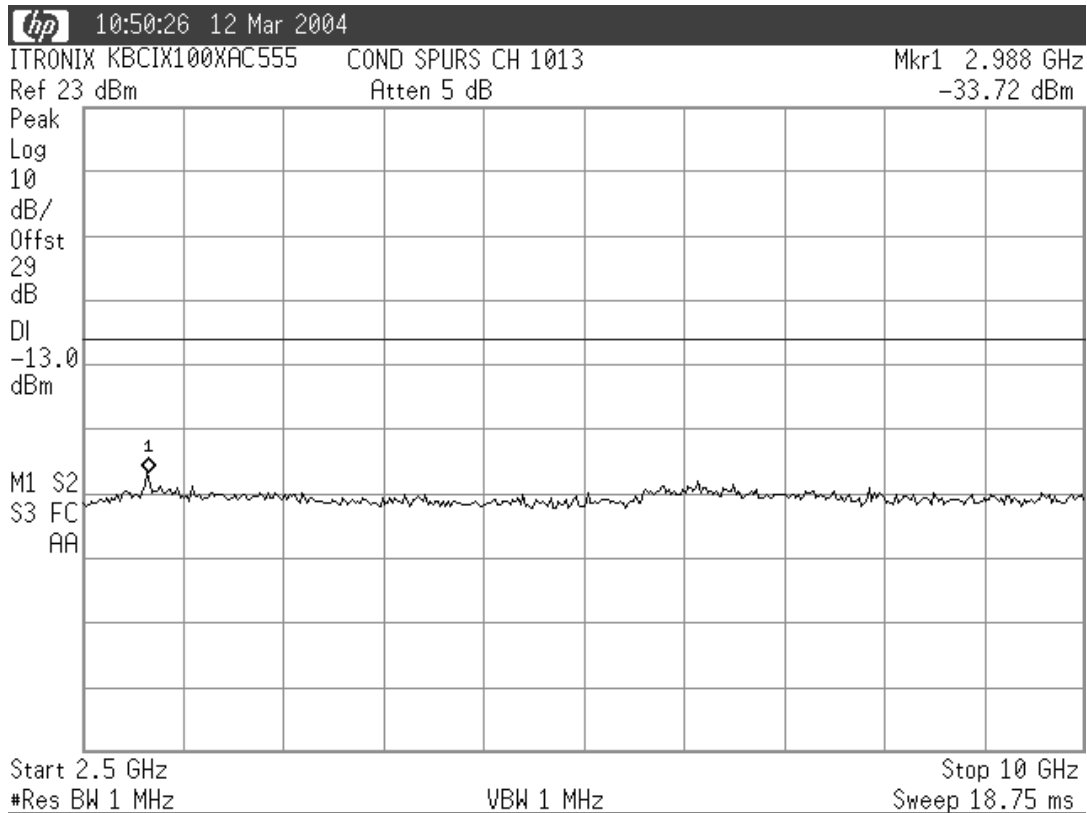
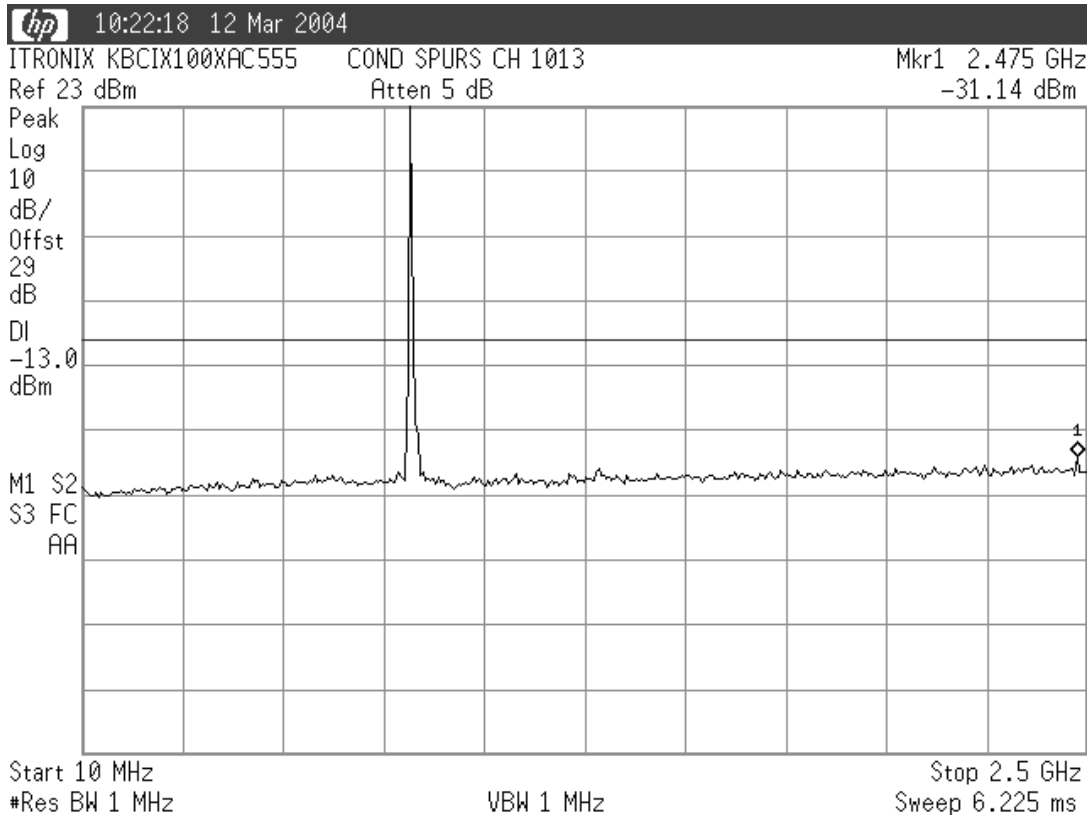
TEST PLOTS (Cont.)

PCS Band



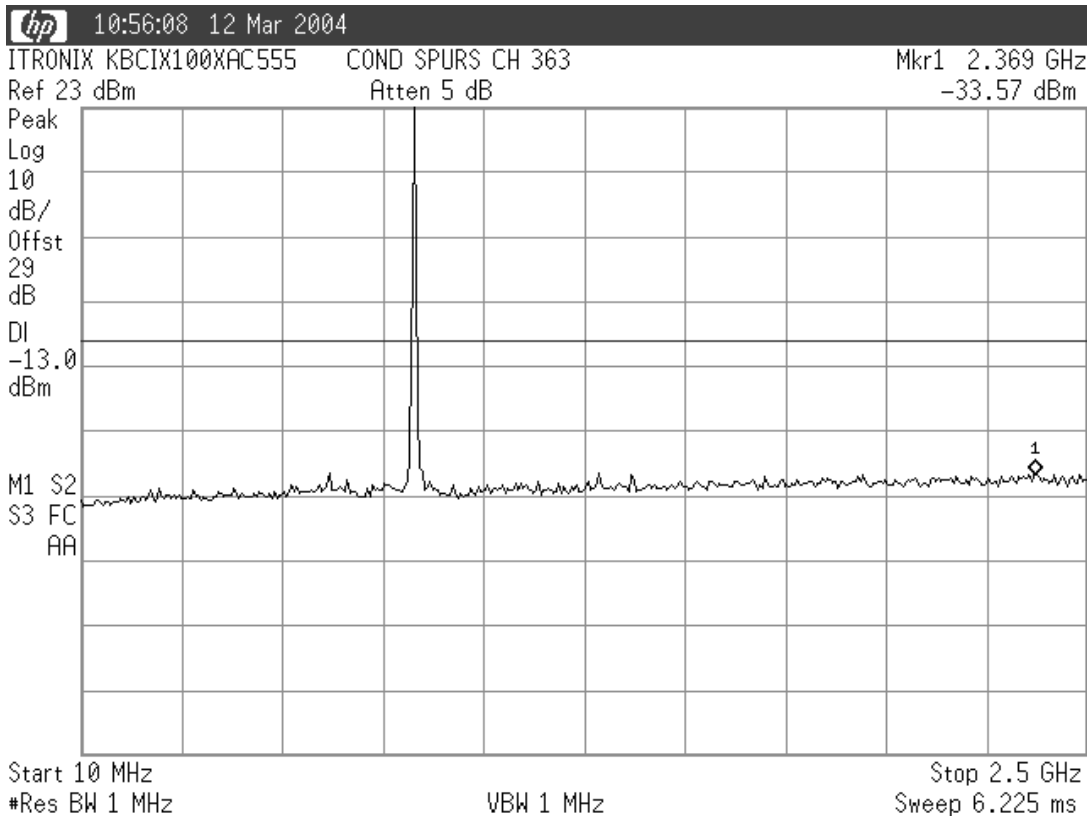
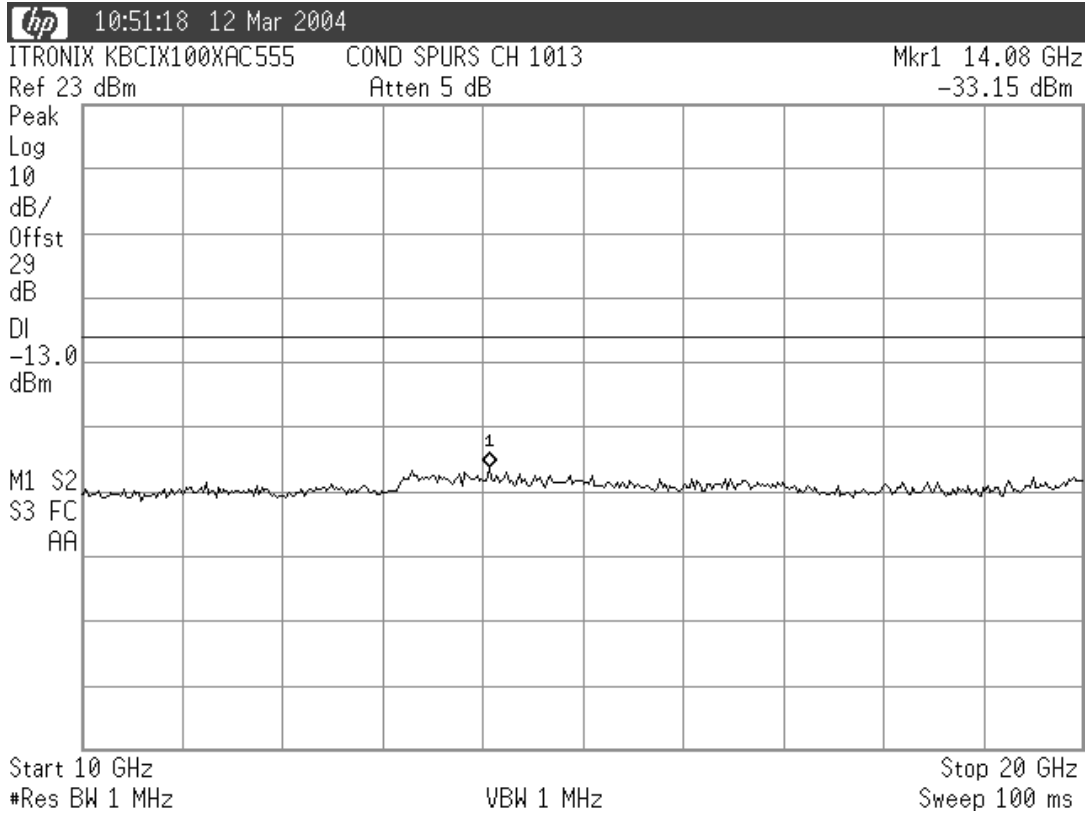
TEST PLOTS (Cont.)

Cellular Band



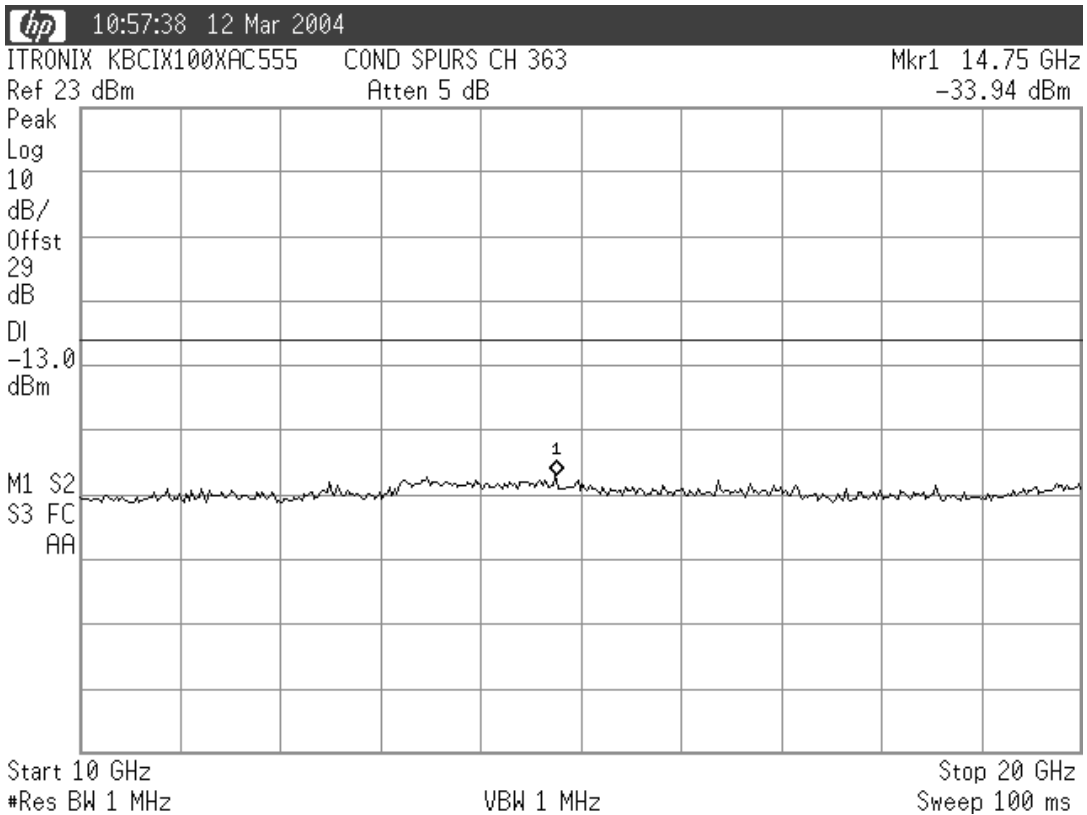
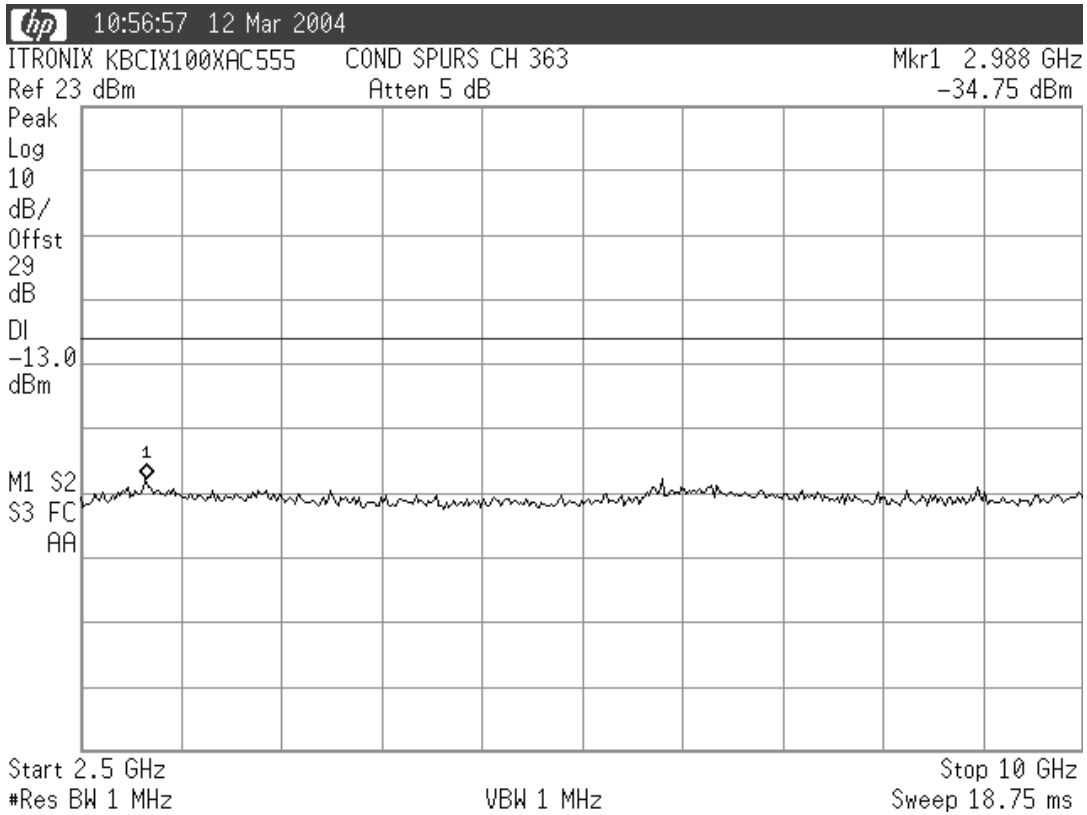
TEST PLOTS (Cont.)

Cellular Band



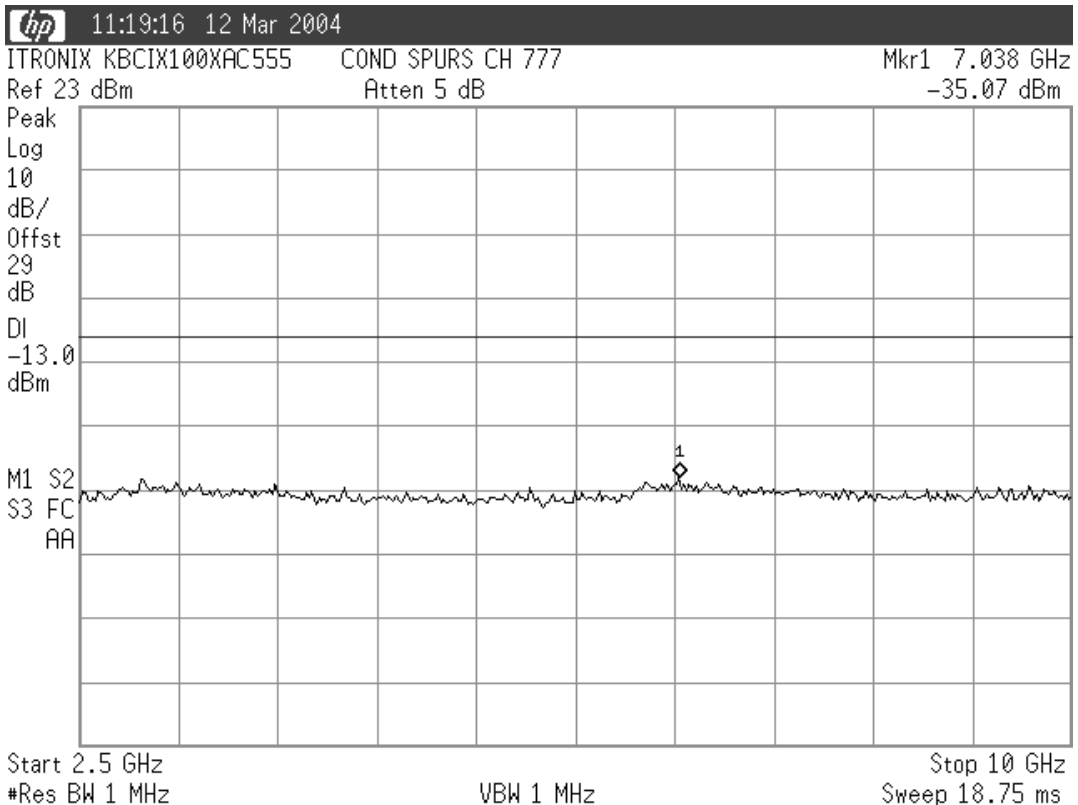
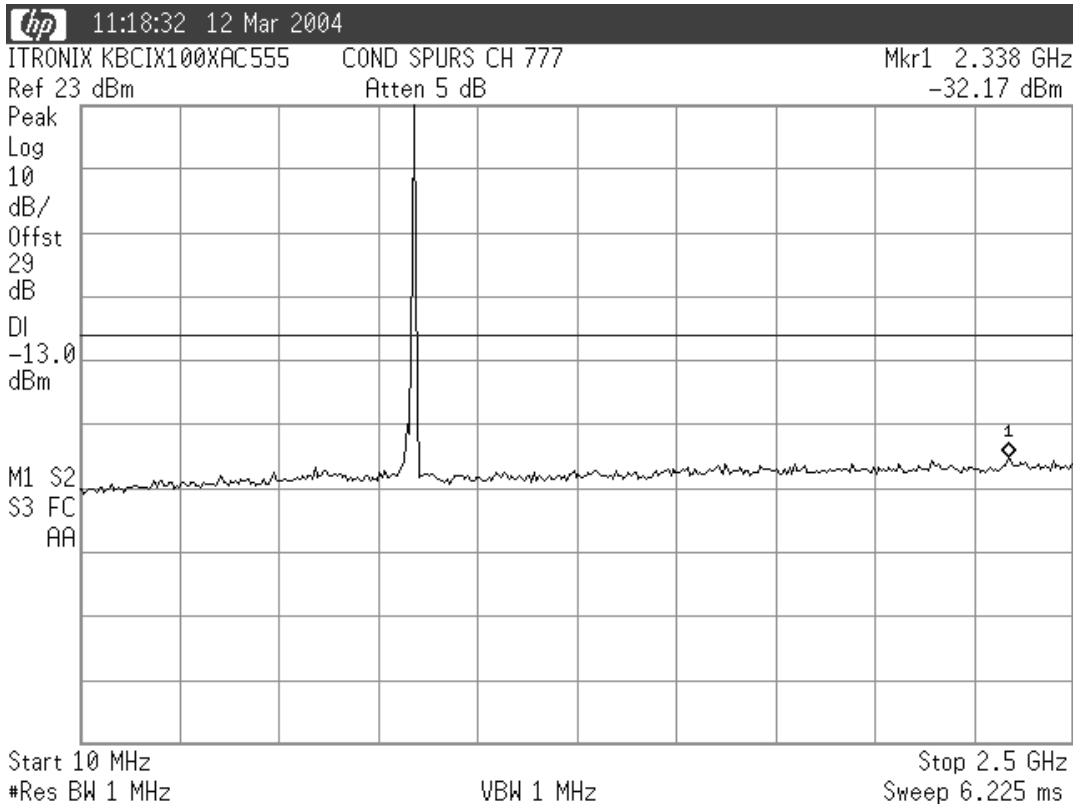
TEST PLOTS (Cont.)

Cellular Band



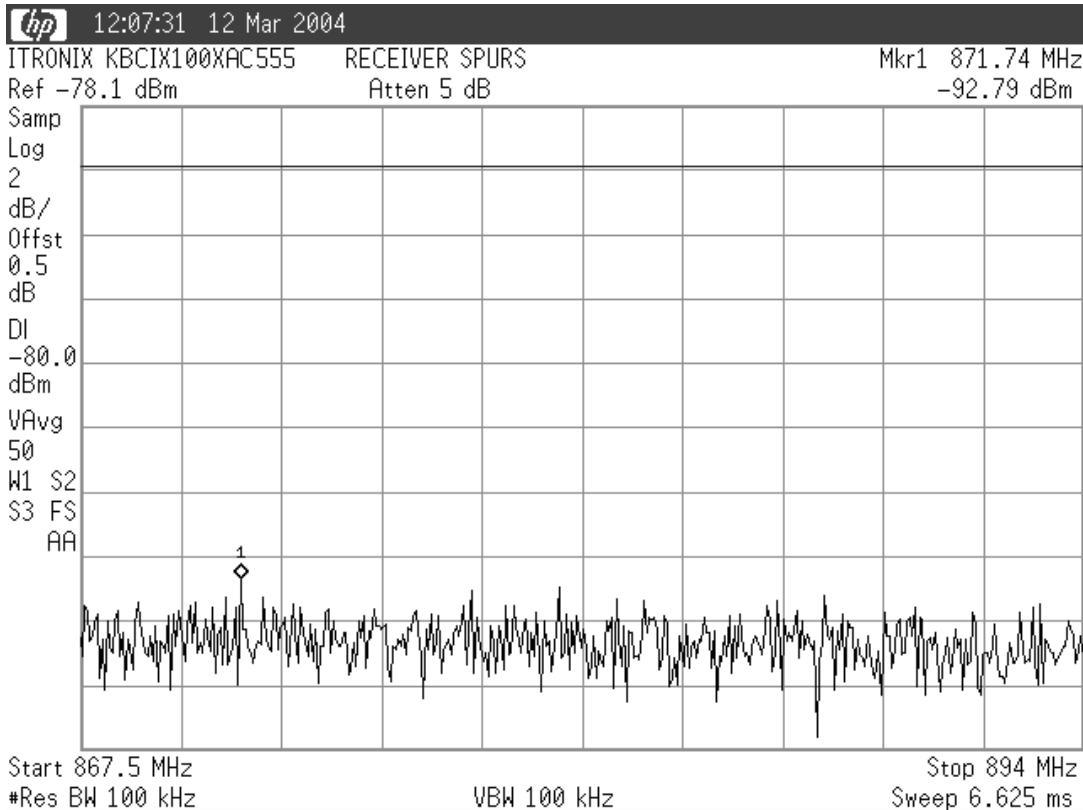
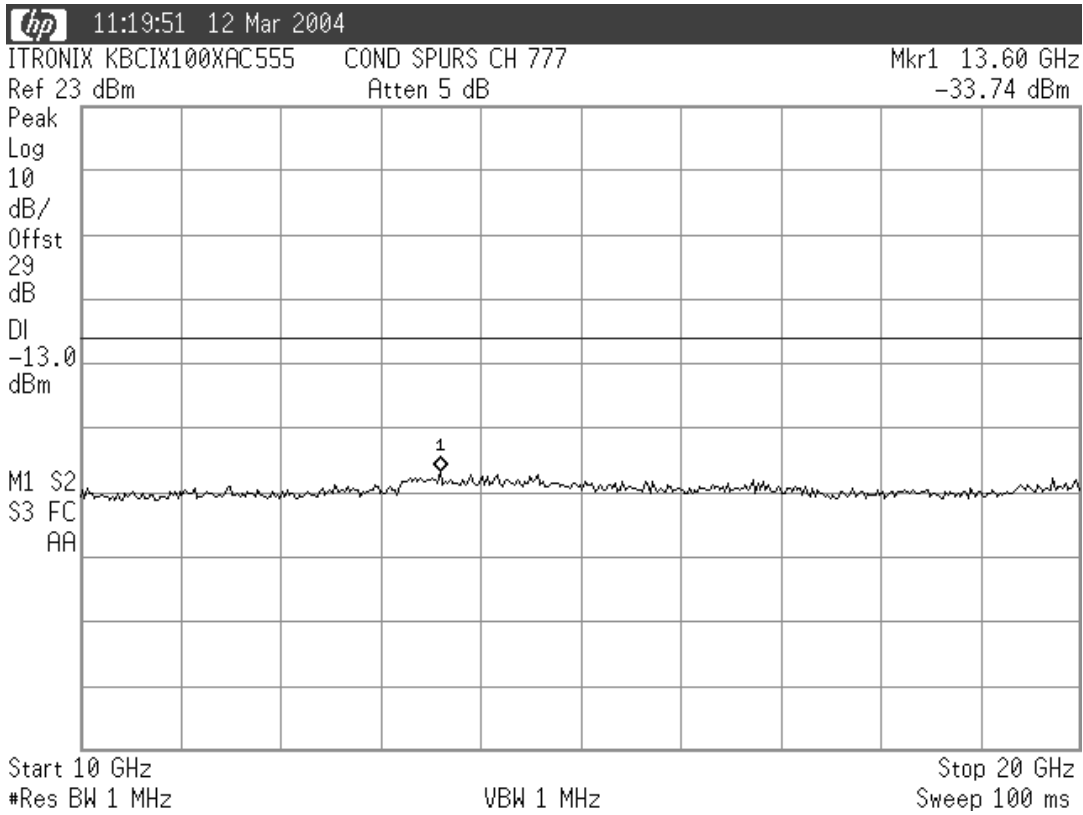
TEST PLOTS (Cont.)

Cellular Band



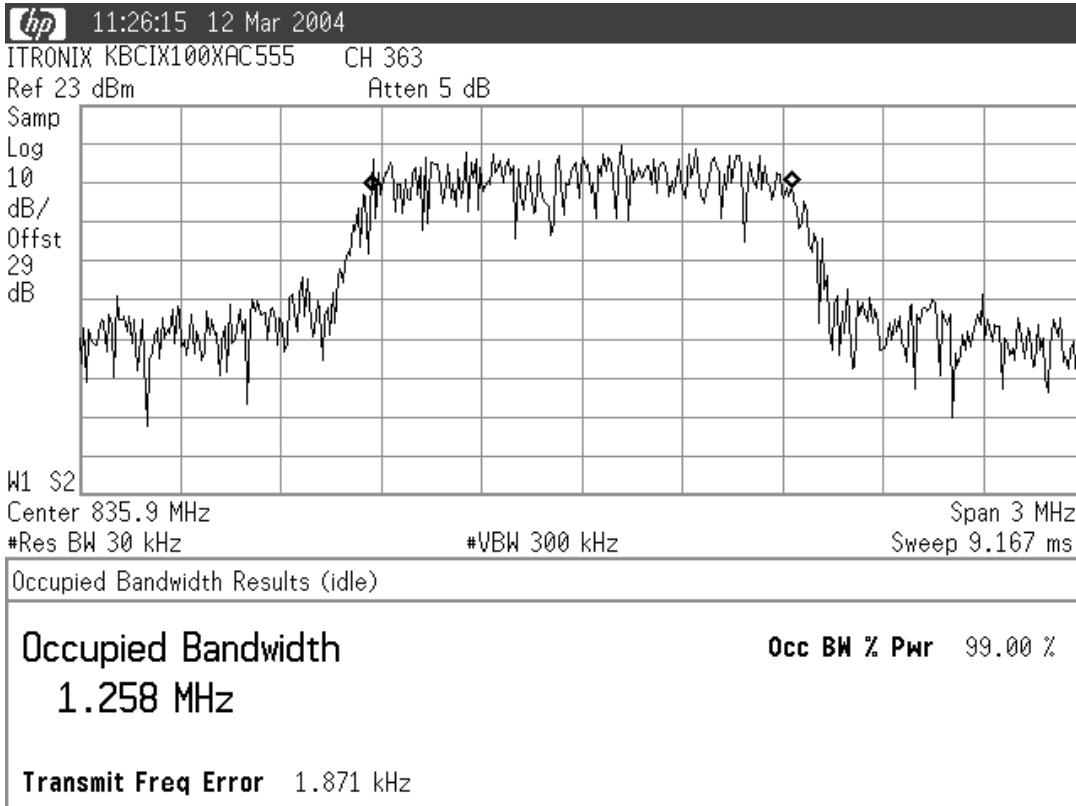
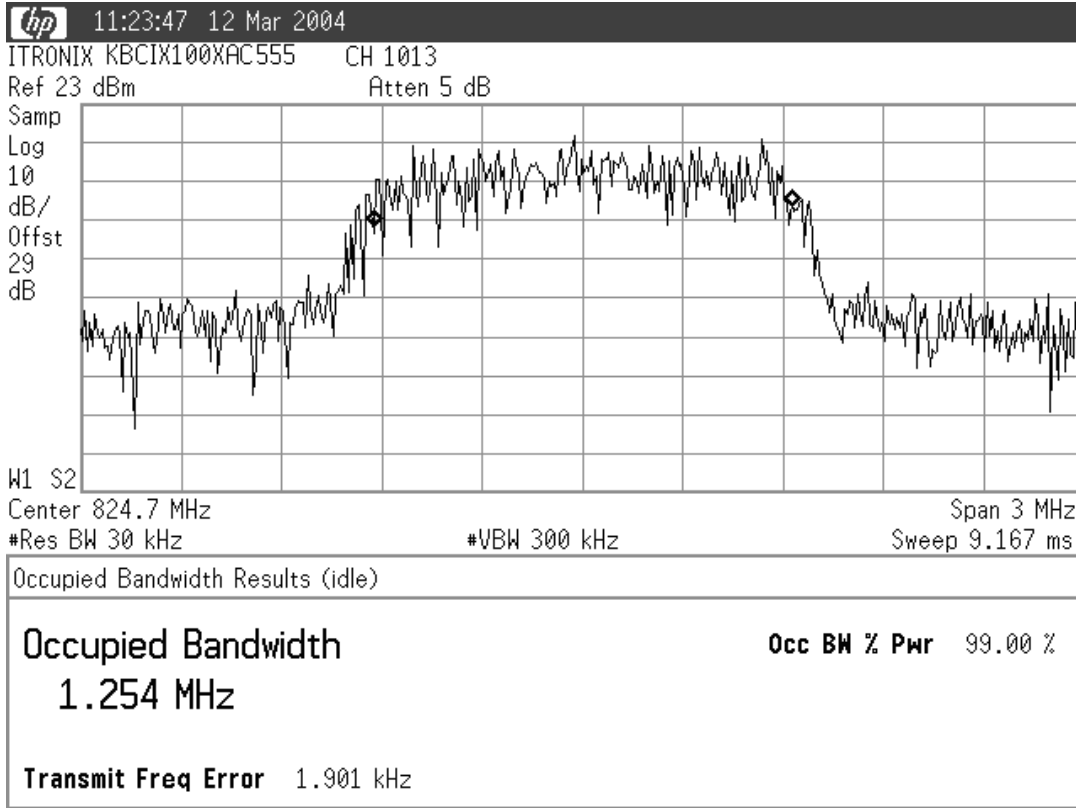
TEST PLOTS (Cont.)

Cellular Band



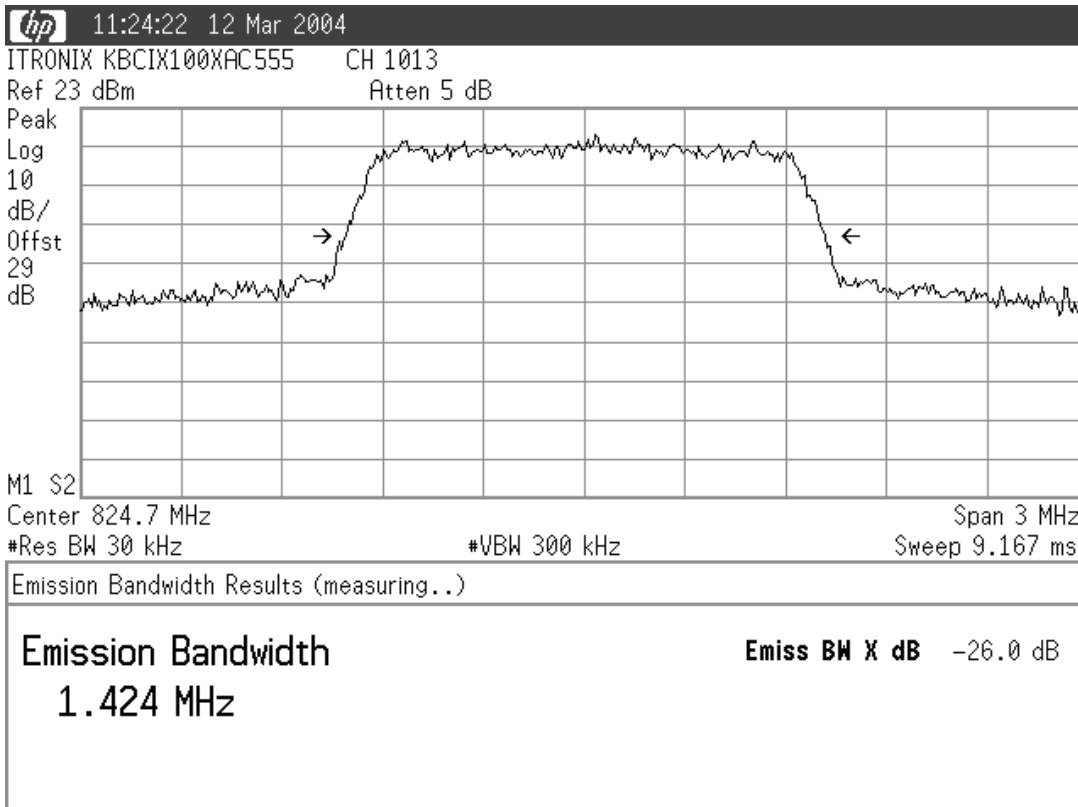
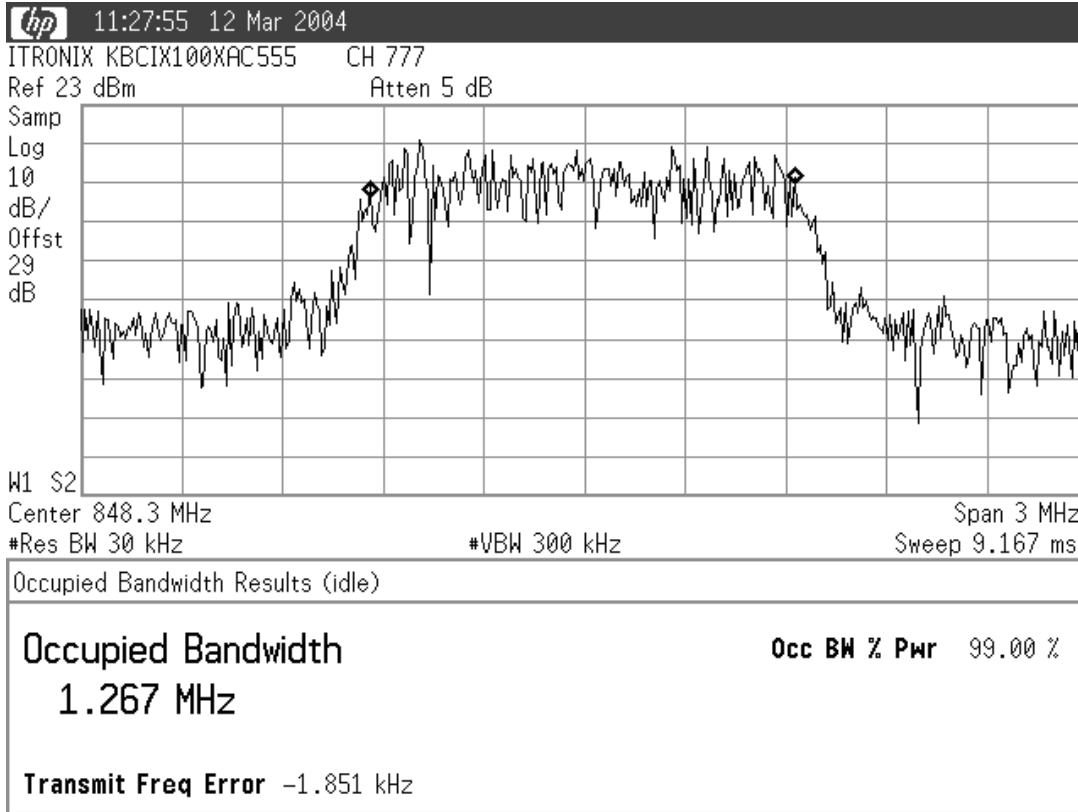
TEST PLOTS (Cont.)

Cellular Band



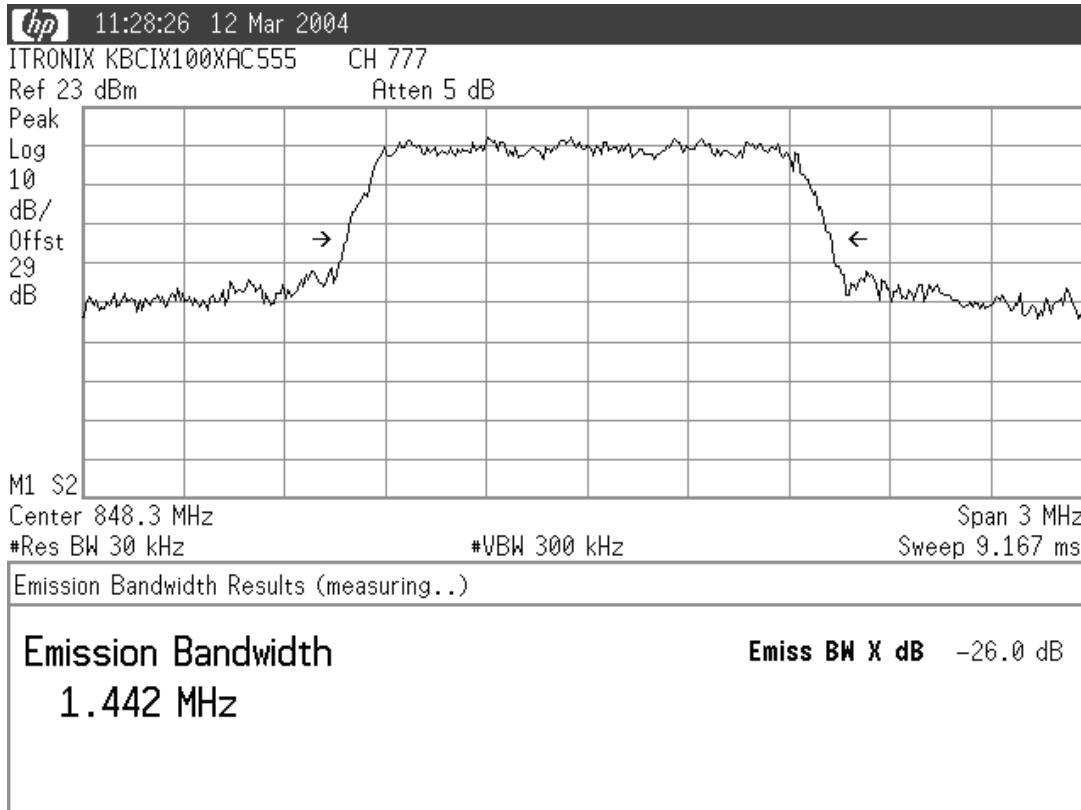
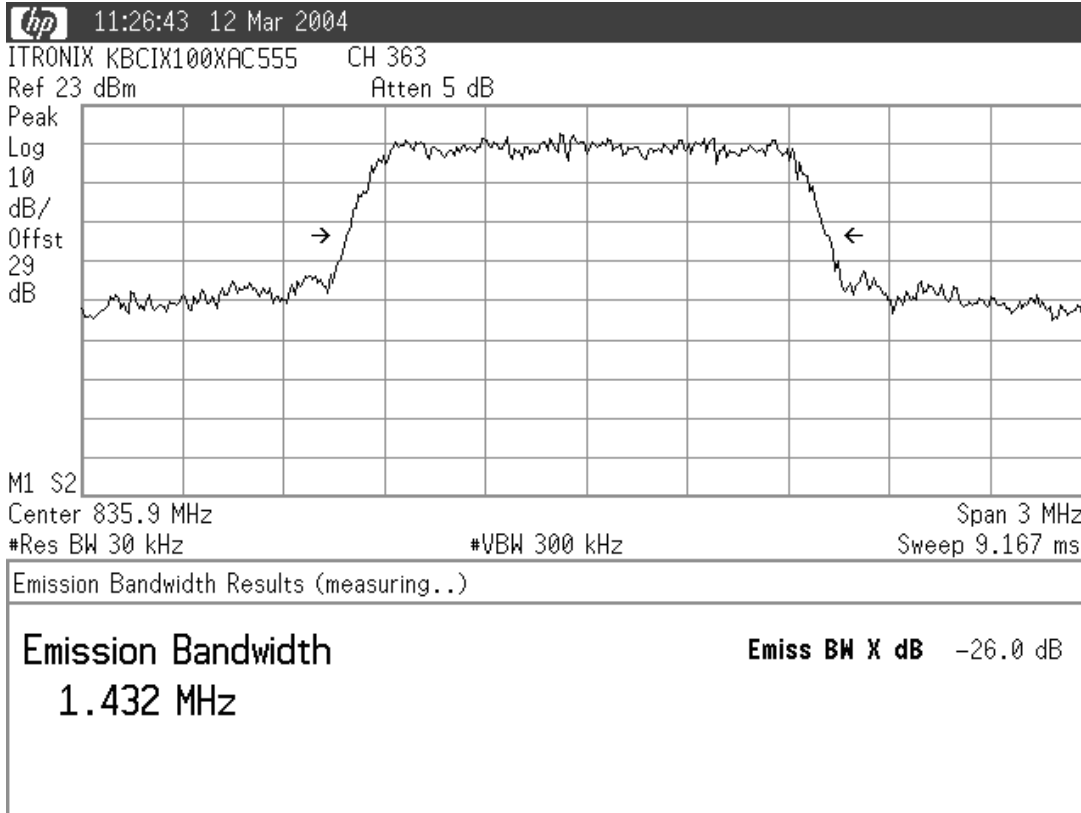
TEST PLOTS (Cont.)

Cellular Band



TEST PLOTS (Cont.)

Cellular Band



TEST PLOTS (Cont.)

Cellular Band

