DECLARATION OF COMPLIANCE

Test Lab

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Applicant Information

ITRONIX CORPORATION
801 South Stevens Street
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United States

FCC IDENTIFIER:	**KBCIX260PROA775BT**
IC IDENTIFIER:	**1943A-IX260Pe**
Model(s):	**IX260PROA775BT**

FCC Rule Part(s):	**FCC 47 CFR §24(E), §22(H), §2**
IC Rule Part(s):	**RSS-133 Issue 2, RSS-132 Issue 1 (Provisional)**
Test Procedure(s):	**FCC 47 CFR §24(E), §22(H), §2** **IC RSS-133 Issue 2, IC RSS-132 Issue 1 (Provisional)** **ANSI TIA/EIA-603-B-2002**
FCC Device Classification:	**PCS Licensed Transmitter (PCB)**
IC Device Classification:	**2 GHz Personal Communication Services (RSS-133)** **800 MHz Cellular Telephones Employing New Technologies (RSS-132)**
Device Description:	**Rugged Laptop PC with Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem (with External Swivel Dipole Antenna, Vehicle-Mount Antenna, and Vehicle Cradle)**
Co-located Transmitter(s):	**Intel Pro 2200BG 802.11b/g WLAN (with internal surface-mount antenna)** **Cirronet BT2022 Bluetooth (with internal surface-mount antenna)**
Tx Frequency Range(s):	**1850.2 - 1909.8 MHz (PCS GSM)** **824.2 - 848.8 MHz (Cellular GSM)**
Rx Frequency Range(s):	**1930.2 - 1990.8 MHz (PCS GSM)** **869.2 - 894.8 MHz (Cellular GSM)**
Max. ERP/EIRP Measured:	**0.936 Watts (29.71 dBm) EIRP - PCS GSM (Itronix Swivel Dipole Antenna)** **2.54 Watts (34.05 dBm) ERP - Cellular GSM (Itronix Swivel Dipole Antenna)** **0.261 Watts (24.17 dBm) EIRP - PCS GSM (MaxRad Vehicle-Mount Antenna)** **0.512 Watts (27.09 dBm) ERP - Cellular GSM (MaxRad Vehicle-Mount Antenna)**
Max. Conducted Power Measured:	**28.9 dBm Peak (PCS GSM) / 32.0 dBm Peak (Cellular GSM)**
Max. No. of Time Slots Tested:	**4 (Class 12)**
Source-Based Time-Av. Duty Cycle:	**50 %**
Source-Based Time-Av. Cond. Pwr:	**25.9 dBm Peak (PCS GSM) / 29.0 dBm Peak (Cellular GSM)**
Modulation(s) Tested:	**GMSK**
Emission Designator(s):	**238KGXW, 242KGXW, 240KG7W, 242KG7W**
Frequency Tolerance(s):	**2.5 PPM**
Antenna Type(s) Tested:	**Itronix IX260+ External Swivel Dipole (Dual-Band GSM)** **MaxRad 3 dBi Gain Vehicle-Mount P/N: WMLPVDB800/1900 (Dual-Band GSM)**
Power Source(s) Tested:	**11.1 V Lithium-ion Battery, 6.0 Ah (Model: A2121-2)** **12 V Vehicle Battery (for Vehicle Cradle)**

This mobile 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 (Provisional); and ANSI TIA/EIA-603-B-2002.

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.

Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.

Duane M. Friesen
EMC Manager
Celltech Labs Inc.

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FCC PART 24(E) & 22(H) EMC MEASUREMENT REPORT

1.1 SCOPE

This report describes the measurements made and results collected during the Electromagnetic emissions testing of the Itronix Corporation Model: IX260PROA775BT Rugged Laptop PC incorporating the internal Sierra Wireless AirCard 775 Dual-Band PCS/Cellular GSM GPRS/EDGE PCMCIA Modem with external swivel dipole antenna, vehicle-mount antenna, and vehicle cradle. Co-located within the DUT is an Intel Pro 2200BG 802.11b/g Mini-PCI Card utilizing an internal surface-mount antenna located in the upper right side rear edge of the LCD display. **The Sierra Wireless AirCard 775 GSM GPRS/EDGE Modem and Intel Pro 2200BG 802.11b/g WLAN do not transmit simultaneously.** Also co-located within the DUT is a Cirronet BT2022 Bluetooth Transmitter utilizing an internal surface-mount antenna located in the upper left side rear edge of the LCD display. **The Sierra Wireless AirCard 775 GSM GPRS/EDGE Modem and Cirronet BT2022 Bluetooth Transmitter can transmit simultaneously. Please refer to the Co-Transmit Supplementary EMC test report for simultaneous transmit test results.** The measurement results were applied against the EMC requirements and limits outlined in the technical rules and regulations set forth in the Federal Communication Commission Code of Federal Regulations Title 47 Parts 24(E), 22(H), 2; and Industry Canada Radio Standards Specification RSS-133 Issue 2, RSS-132 Issue 1 (Provisional).

2.1 GENERAL INFORMATION & DEVICE DESCRIPTION

APPLICANT	**ITRONIX CORPORATION**					**801 South Stevens Street, Spokane, WA 99204**		
IDENTIFIER(S)	FCC ID: KBCIX260PROA775BT					IC ID: 1943A-IX260Pe		
Model(s)	IX260PROA775BT							
Serial No.(s)	ZZGEG4112ZZ9810			Production Unit		Rugged Laptop PC		
	X04060400690004			Production Unit		AirCard 775 PCMCIA Modem		
Device Description	Rugged Laptop PC with internal transmitter(s) and vehicle cradle							
Internal Transmitter(s)	Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem							
	Intel Pro 2200BG 802.11b/g WLAN Mini-PCI Card							
	Cirronet BT2022 Bluetooth							
Co-Transmit Operation	**GSM and Bluetooth co-located transmitters can transmit simultaneously**							
	GSM and WLAN co-located transmitters do not transmit simultaneously							
FCC Rule Part(s)	§24(E)			§22(H)		§2		
IC Rule Part(s)	RSS-133 Issue 2					RSS-132 Issue 1 (Provisional)		
FCC Classification	PCS Licensed Transmitter (PCB)							
IC Classification	2 GHz Personal Communication Services (RSS-133)							
	800 MHz Cellular Telephones Employing New Technologies (RSS-132)							
Tx Frequency Range(s)	1850.2 - 1909.8 MHz			GSM GPRS/EDGE		PCS Band		
	824.2 - 848.8 MHz			GSM GPRS/EDGE		Cellular Band		
Rx Frequency Range(s)	1930.2 - 1990.8 MHz			GSM GPRS/EDGE		PCS Band		
	869.2 - 894.8 MHz			GSM GPRS/EDGE		Cellular Band		
Antenna Type(s) Tested	Operating Band(s)	Description	Max. RF Output Power Measured (EIRP/ERP)					Length
	Dual-Band GSM/GPRS/EDGE	External Swivel Dipole	0.936	W	29.71	dBm	EIRP PCS	4.7 “
			2.54	W	34.05	dBm	ERP Cellular	
	Dual-Band GSM/GPRS/EDGE	3 dBi-Gain Vehicle-Mount	0.261	W	24.17	dBm	EIRP PCS	2.7 “
			0.512	W	27.09	dBm	ERP Cellular	
Max. RF Conducted Output Power Tested	28.9 dBm Peak	PCS GSM	Source-Based Time-Averaged Conducted Power					25.9 dBm Peak
	32.0 dBm Peak	Cellular GSM	Source-Based Time-Averaged Conducted Power					29.0 dBm Peak
Operating Mode(s) Tested	GSM GPRS/EDGE	4 Time Slots (Class 12)			50% Duty Cycle (Source-Based Time-Averaged)			
Modulation Type(s)	GMSK							
Emission Designator(s)	238KGXW, 242KGXW, 240KG7W, 242KG7W							
Frequency Tolerance(s)	2.5 PPM (PCS GSM)				2.5 PPM (Cellular GSM)			
Power Source(s) Tested	Lithium-ion Battery			11.1 V, 6.0 Ah		Model: A2121-2		
	Vehicle Battery			12 V		(For Vehicle Cradle)		

FCC PART 24(E) & 22(H) EMC MEASUREMENT REPORT (Continued)

3.1 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

APPENDIX A - RF OUTPUT POWER MEASUREMENT - §2.1046

A.1. MEASUREMENT PROCEDURE

The peak conducted power levels for PCS and cellular bands were measured at the Sierra Wireless AirCard 775 PCMCIA Modem antenna connector port using a Gigatronics 8652A Universal Power Meter in burst average power mode. An offset was entered into the power meter to correct for the losses of the attenuator and cable installed between the transmitter output port and the power sensor input. The Sierra Wireless AC775 test software was used to set the DUT to transmit at a maximum rated power and data rate as defined by the manufacturer. All subsequent tests were performed using the same power measurement procedures.

A.2. MEASUREMENT DATA

RF CONDUCTED OUTPUT POWER MEASUREMENTS
(measured at the AirCard 775 PCMCIA Modem Antenna Port)

Frequency (MHz)	Channel No.	Peak Power (dBm)	Frequency (MHz)	Channel No.	Peak Power (dBm)
824.2	**128**	31.9	**1850.2**	**512**	28.9
836.6	**190**	31.9	**1880.0**	**661**	28.9
848.8	**251**	32.0	**1909.8**	**810**	28.9

APPENDIX B - EFFECTIVE ISOTROPIC RADIATED POWER OUTPUT - §24.232(b)

B.1. MEASUREMENT PROCEDURE

EIRP measurements were made on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-B-2002. The Sierra Wireless AirCard 775 test software installed in the IX260+ Laptop PC was used to set the DUT to transmit at a maximum rated power and data rate, as defined by the manufacturer. The DUT was placed on a turntable 3 meters from the receive antenna. For the swivel dipole evaluation, the DUT was placed on a Styrofoam support at the center of the turntable, 1 meter above the ground plane. For the vehicle-mount antenna evaluation, the 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, and connected to the transmitter via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. The IX260+ Laptop PC was installed in the vehicle cradle placed on the turntable below the 50 cm x 50 cm ground plane. 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.

(See next page for measurement data)

B.2. MEASUREMENT SETUP

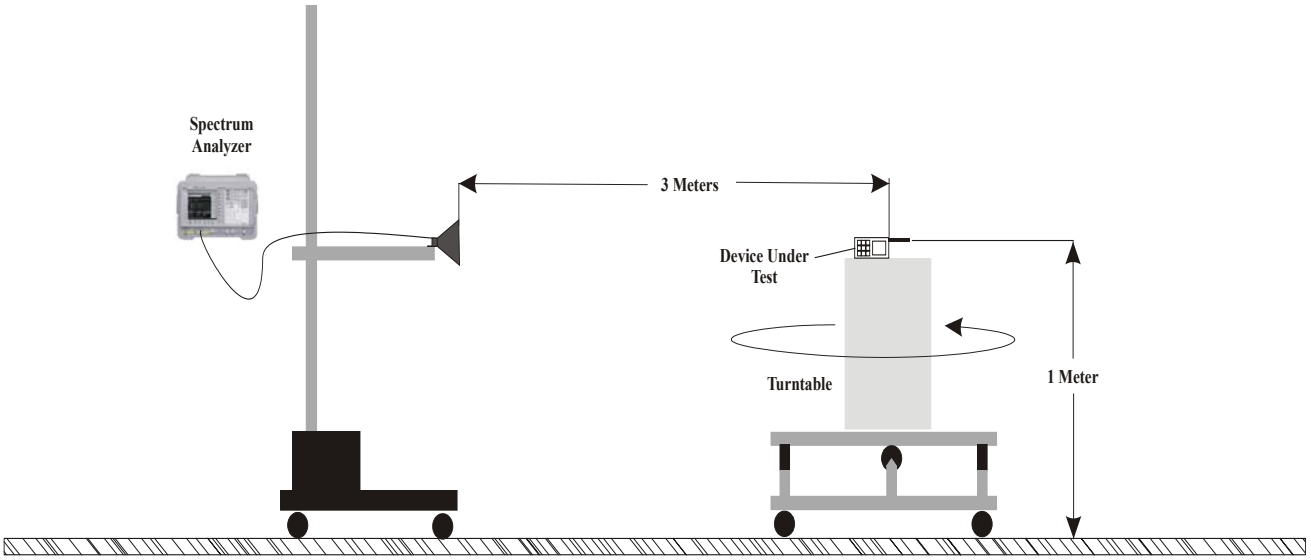

Figure 1. Radiated Power Measurement Test Setup Diagram

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

B.3. MEASUREMENT DATA

Project Number:	072804-540aKBC			Standard:	FCC24.232b
Company:	Itronix			Test Start Date:	8-Sep-04
Product:	IX260+ with AC775			Test End Date:	9-Sep-04

Swivel Dipole Antenna Carrier Power Levels

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
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
H	3	Horn SN6267	512	1850.20	130.75	98.80	22.00	6.55	28.55	0.717	33.01	2.00	4.46	PASS
H	3	Horn SN6267	661	1880.00	130.99	98.90	22.62	6.58	29.20	0.832	33.01	2.00	3.81	PASS
H	3	Horn SN6267	810	1909.80	131.05	98.80	23.10	6.61	29.71	0.936	33.01	2.00	3.30	PASS
V	3	Horn SN6267	512	1850.20	125.35	93.40	17.83	6.55	24.38	0.274	33.01	2.00	8.63	PASS
V	3	Horn SN6267	661	1880.00	125.19	93.10	17.32	6.58	23.90	0.245	33.01	2.00	9.11	PASS
V	3	Horn SN6267	810	1909.80	124.95	92.70	16.87	6.61	23.48	0.223	33.01	2.00	9.53	PASS

Note:
Horn Antenna used for substitution

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

Project Number:	072804-540aKBC			Standard:	FCC24.232b
Company:	Itronix			Test Start Date:	8-Sep-04
Product:	IX260+ with AC775			Test End Date:	9-Sep-04

Mobile Antenna Carrier Power Levels

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
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
H	3	Horn SN6267	512	1850.20	119.05	87.10	10.17	6.55	16.72	0.047	33.01	2.00	16.29	PASS
H	3	Horn SN6267	661	1880.00	116.09	84.00	7.74	6.58	14.32	0.027	33.01	2.00	18.69	PASS
H	3	Horn SN6267	810	1909.80	116.95	84.70	8.95	6.61	15.56	0.036	33.01	2.00	17.45	PASS
V	3	Horn SN6267	512	1850.20	125.05	93.10	17.62	6.55	24.17	0.261	33.01	2.00	8.84	PASS
V	3	Horn SN6267	661	1880.00	123.59	91.50	15.59	6.58	22.17	0.165	33.01	2.00	10.84	PASS
V	3	Horn SN6267	810	1909.80	124.45	92.20	16.34	6.61	22.95	0.197	33.01	2.00	10.06	PASS

Note:
Horn Antenna used for substitution

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

APPENDIX C - EFFECTIVE RADIATED POWER OUTPUT - §22.913

C.1. MEASUREMENT PROCEDURE

ERP measurements were made on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-B-2002. The Sierra Wireless AirCard 775 test software installed in the IX260+ Laptop PC was used to set the DUT to transmit at a maximum rated power and data rate, as defined by the manufacturer. The DUT was placed on a turntable 3 meters from the receive antenna. For the swivel dipole evaluation, the DUT was placed on a Styrofoam support at the center of the turntable, 1 meter above the ground plane. For the vehicle-mount antenna evaluation, the 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, and connected to the transmitter via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. The IX260+ Laptop PC was installed in the vehicle cradle placed on the turntable below the 50 cm x 50 cm ground plane. 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.

(See next page for measurement data)

C.2. MEASUREMENT SETUP

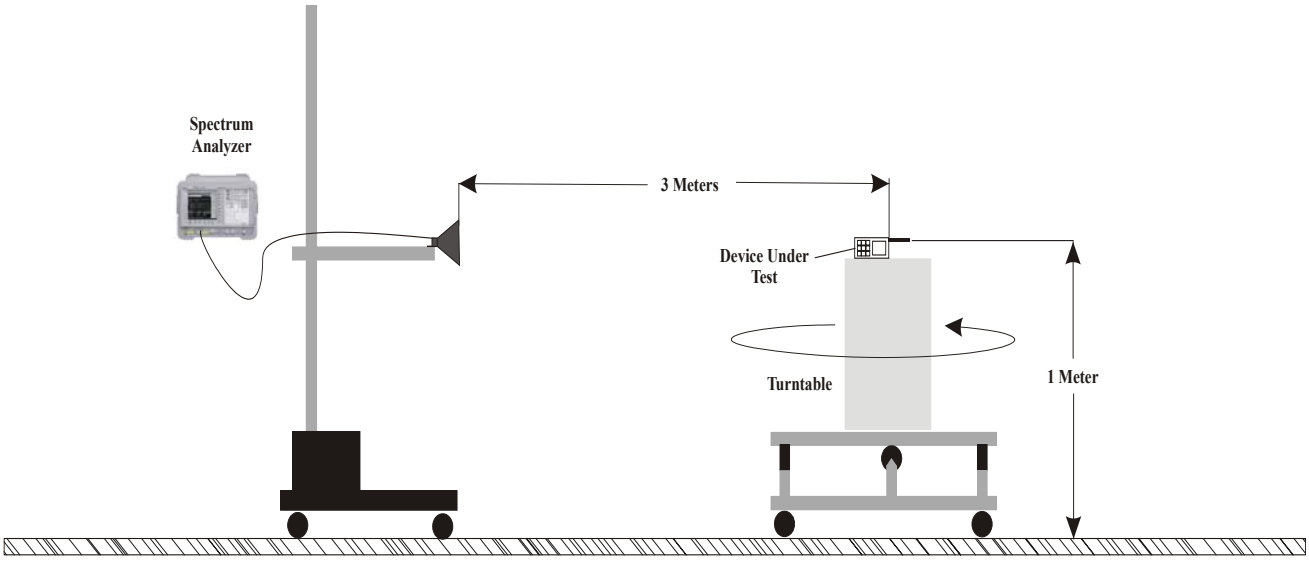

Figure 2. Radiated Power Measurement Test Setup Diagram

EFFECTIVE RADIATED POWER OUTPUT - §22.913 (Continued)

C.3. MEASUREMENT DATA

Project Number:	072804-540aKBC	Standard:	FCC22.913
Company:	Itronix	Test Start Date:	8-Sep-04
Product:	IX260+ with AC775	Test End Date:	9-Sep-04

Swivel Dipole Antenna Carrier Power Levels

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
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
H	3	B_3121C	128	824.20	126.05	100.90	34.90	1.29	34.05	2.54	38.45	7.00	4.40	PASS
H	3	B_3121C	190	836.60	126.28	100.80	34.72	1.44	34.02	2.52	38.45	7.00	4.43	PASS
H	3	B_3121C	251	848.80	126.29	100.70	34.50	1.59	33.94	2.48	38.45	7.00	4.51	PASS
V	3	B_3121C	128	824.20	123.85	98.70	32.95	1.29	32.10	1.62	38.45	7.00	6.35	PASS
V	3	B_3121C	190	836.60	124.38	98.90	32.57	1.44	31.87	1.54	38.45	7.00	6.58	PASS
V	3	B_3121C	251	848.80	123.99	98.40	32.62	1.59	32.07	1.61	38.45	7.00	6.38	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)

Project Number:	072804-540aKBC	Standard:	FCC22.913
Company:	Itronix	Test Start Date:	8-Sep-04
Product:	IX260+ with AC775	Test End Date:	9-Sep-04

Mobile Antenna Carrier Power Levels

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
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	Watts	dBm	Watts	dB	
H	3	B_3121C	128	824.20	114.25	89.10	19.02	1.29	18.17	0.066	38.45	7.00	20.28	PASS
H	3	B_3121C	190	836.60	114.98	89.50	19.54	1.44	18.84	0.077	38.45	7.00	19.61	PASS
H	3	B_3121C	251	848.80	113.99	88.40	18.99	1.59	18.44	0.070	38.45	7.00	20.01	PASS
V	3	B_3121C	128	824.20	119.05	93.90	27.49	1.29	26.64	0.461	38.45	7.00	11.81	PASS
V	3	B_3121C	190	836.60	120.28	94.80	27.79	1.44	27.09	0.512	38.45	7.00	11.36	PASS
V	3	B_3121C	251	848.80	119.49	93.90	26.87	1.59	26.32	0.428	38.45	7.00	12.13	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)

APPENDIX D - FIELD STRENGTH OF SPURIOUS RADIATION - §24.238, 22.917

D.1. MEASUREMENT PROCEDURE

EIRP measurements were made on a 3-meter open area test site using the Signal Substitution Method in accordance with ANSI TIA/EIA-603-B-2002. The Sierra Wireless AirCard 775 test software installed in the IX260+ Laptop PC was used to set the DUT to transmit at a maximum rated power and data rate, as defined by the manufacturer. The DUT was placed on a turntable 3 meters from the receive antenna. For the swivel dipole evaluation, the DUT was placed on a Styrofoam support at the center of the turntable, 1 meter above the ground plane. For the vehicle-mount antenna evaluation, the 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, and connected to the transmitter via a 17-foot LMR-195 cable representing a typical vehicle-mount installation. The IX260+ Laptop PC was installed in the vehicle cradle placed on the turntable below the 50 cm x 50 cm ground plane. 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.

D.2. MEASUREMENT SETUP

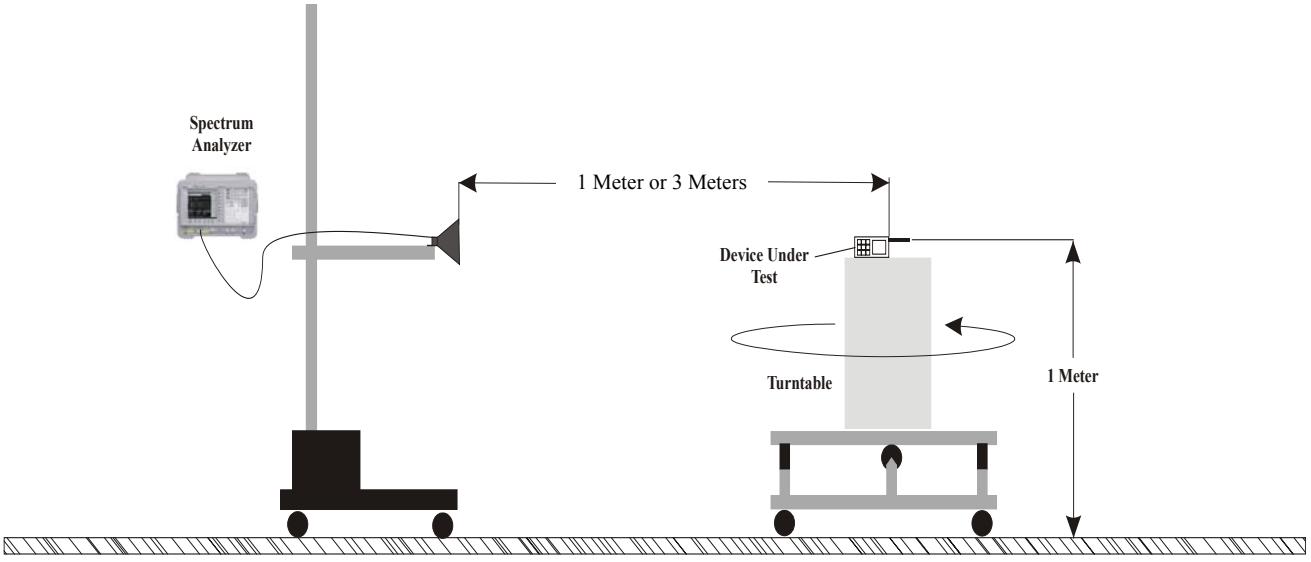

Figure 3. Radiated Spurious Measurement Test Setup Diagram
(3 Meters for Frequencies < 10 GHz - 1 Meter for Frequencies ≥ 10 GHz)

FIELD STRENGTH OF SPURIOUS RADIATION - §24.238 (Continued)

D.3. MEASUREMENT DATA - PCS Band

Project Number:	072804-540aKBC	Standard:	FCC24.238
Company:	Itronix	Test Start Date:	30-Aug-04
Product:	IX260+ with AC775	Test End Date:	8-Sep-04

Swivel Dipole Antenna Spurious Emissions

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	512	1072.00	69.45	40.50	-35.76	4.06	-31.70	-13.00	18.70	PASS
H	3	Horn SN6267	512	3702.00	56.61	54.50	-41.77	8.06	-33.71	-13.00	20.71	PASS
H	3	Horn SN6267	512	7402.00	53.07	43.70	-51.88	8.98	-42.90	-13.00	29.90	PASS
H	3	Horn SN6267	512	9252.00	54.12	42.10	-51.19	9.05	-42.14	-13.00	29.14	PASS
H	1	Horn SN6267	512	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
H	1	3160-09	512	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	512	1950.00	66.13	33.70	-42.68	6.65	-36.03	-13.00	23.03	PASS
V	3	Horn SN6267	512	2420.00	61.07	64.10	-32.13	7.62	-24.50	-13.00	11.50	PASS
V	3	Horn SN6267	512	3702.00	59.41	57.30	-38.73	8.06	-30.67	-13.00	17.67	PASS
V	3	Horn SN6267	512	7402.00	54.27	44.90	-50.36	8.98	-41.38	-13.00	28.38	PASS
V	3	Horn SN6267	512	9252.00	55.72	43.70	-48.02	9.05	-38.96	-13.00	25.96	PASS
V	1	Horn SN6267	512	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	512	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
H	3	Horn SN6267	661	1999.00	66.38	33.70	-42.89	6.70	-36.19	-13.00	23.19	PASS
H	3	Horn SN6267	661	3762.00	59.47	57.20	-38.79	8.05	-30.74	-13.00	17.74	PASS
H	3	Horn SN6267	661	3762.00	59.47	57.20	-38.20	8.05	-30.15	-13.00	17.15	PASS
H	3	Horn SN6267	661	7522.00	52.76	43.10	-47.21	8.92	-38.29	-13.00	25.29	PASS
H	3	Horn SN6267	661	9400.00	53.77	41.70	-44.32	9.20	-35.12	-13.00	22.12	PASS
H	1	Horn SN6267	661	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
H	1	3160-09	661	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	661	1851.00	64.90	32.90	-44.18	6.55	-37.63	-13.00	24.63	PASS
V	3	Horn SN6267	661	2462.00	64.83	67.70	-28.05	7.72	-20.33	-13.00	7.33	PASS
V	3	Horn SN6267	661	3762.00	58.37	56.10	-39.64	8.05	-31.59	-13.00	18.59	PASS
V	3	Horn SN6267	661	7522.00	52.76	43.10	-52.08	8.92	-43.16	-13.00	30.16	PASS
V	3	Horn SN6267	661	9402.00	52.57	40.50	-48.69	9.20	-39.48	-13.00	26.48	PASS
V	1	Horn SN6267	661	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	661	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
H	3	Horn SN6267	810	1991.00	66.74	34.10	-43.06	6.69	-36.37	-13.00	23.37	PASS
H	3	Horn SN6267	810	3820.00	73.36	70.90	-24.23	8.04	-16.19	-13.00	3.19	PASS
H	3	Horn SN6267	810	5730.00	67.34	60.90	-31.01	8.88	-22.13	-13.00	9.13	PASS
H	3	Horn SN6267	810	7638.00	52.49	42.70	-51.24	9.01	-42.23	-13.00	29.23	PASS
H	3	Horn SN6267	810	9550.00	54.01	41.90	-45.99	9.36	-36.63	-13.00	23.63	PASS
H	1	Horn SN6267	810	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
H	1	3160-09	810	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	810	1129.00	69.93	40.80	-37.28	4.35	-32.94	-13.00	19.94	PASS
V	3	Horn SN6267	810	3820.00	65.66	63.20	-32.39	8.04	-24.36	-13.00	11.36	PASS
V	3	Horn SN6267	810	5730.00	54.34	47.90	-45.63	8.88	-36.75	-13.00	23.75	PASS
V	3	Horn SN6267	810	7638.00	53.69	43.90	-51.44	9.01	-42.43	-13.00	29.43	PASS
V	3	Horn SN6267	810	9550.00	53.61	41.50	-48.99	9.36	-39.63	-13.00	26.63	PASS
V	1	Horn SN6267	810	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	810	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	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(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 - §24.238 (Continued)

D.3. MEASUREMENT DATA - PCS Band (Cont.)

Project Number:	072804-540aKBC	Standard:	FCC24.238
Company:	Itronix	Test Start Date:	30-Aug-04
Product:	IX260+ with AC775	Test End Date:	8-Sep-04

Mobile Antenna Spurious Emissions

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	512	1140.00	64.47	35.30	-41.69	4.40	-37.29	-13.00	24.29	PASS
H	3	Horn SN6267	512	7402.00	53.47	44.10	-49.87	8.98	-40.89	-13.00	27.89	PASS
H	3	Horn SN6267	512	8000.00	54.51	44.50	-50.85	9.30	-41.55	-13.00	28.55	PASS
H	3	Horn SN6267	512	9252.00	53.12	41.10	-48.70	9.05	-39.64	-13.00	26.64	PASS
H	1	Horn SN6267	512	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
H	1	3160-09	512	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	512	1129.00	64.03	34.90	-43.18	4.35	-38.84	-13.00	25.84	PASS
V	3	Horn SN6267	512	2454.00	59.91	62.80	-32.69	7.70	-24.99	-13.00	11.99	PASS
V	3	Horn SN6267	512	7402.00	56.87	47.50	-43.99	8.98	-35.01	-13.00	22.01	PASS
V	3	Horn SN6267	512	9252.00	55.32	43.30	-48.14	9.05	-39.09	-13.00	26.09	PASS
V	1	Horn SN6267	512	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	512	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
H	3	Horn SN6267	661	1998.00	66.37	33.70	-42.89	6.70	-36.19	-13.00	23.19	PASS
H	3	Horn SN6267	661	7520.00	52.56	42.90	-50.87	8.92	-41.95	-13.00	28.95	PASS
H	3	Horn SN6267	661	9402.00	52.17	40.10	-42.42	9.20	-33.22	-13.00	20.22	PASS
H	3	Horn SN6267	661	9706.00	54.74	42.70	-45.95	9.55	-36.40	-13.00	23.40	PASS
H	1	Horn SN6267	661	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
H	1	3160-09	661	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	661	1129.00	63.83	34.70	-43.27	4.35	-38.93	-13.00	25.93	PASS
V	3	Horn SN6267	661	7444.00	55.05	45.50	-49.04	8.94	-40.09	-13.00	27.09	PASS
V	3	Horn SN6267	661	7522.00	53.76	44.10	-50.26	8.92	-41.34	-13.00	28.34	PASS
V	3	Horn SN6267	661	9402.00	53.57	41.50	-44.96	9.20	-35.76	-13.00	22.76	PASS
V	1	Horn SN6267	661	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	661	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	PASS
H	3	Horn SN6267	810	1888.00	63.85	31.70	-45.66	6.59	-39.07	-13.00	26.07	PASS
H	3	Horn SN6267	810	2458.00	54.42	57.30	-40.11	7.71	-32.40	-13.00	19.40	PASS
H	3	Horn SN6267	810	3820.00	52.46	50.00	-45.74	8.04	-37.71	-13.00	24.71	PASS
H	3	Horn SN6267	810	7638.00	53.29	43.50	-50.68	9.01	-41.67	-13.00	28.67	PASS
H	3	Horn SN6267	810	9550.00	53.61	41.50	-46.77	9.36	-37.41	-13.00	24.41	PASS
H	1	Horn SN6267	810	17992.00	67.54	45.70	-41.33	7.94	-33.39	-13.00	20.39	PASS
H	1	3160-09	810	19882.00	61.52	45.90	-38.54	15.95	-22.59	-13.00	9.59	PASS
V	3	Horn SN6267	810	1107.00	72.77	43.70	-34.60	4.24	-30.37	-13.00	17.37	PASS
V	3	Horn SN6267	810	3820.00	64.16	61.70	-33.83	8.04	-25.79	-13.00	12.79	PASS
V	3	Horn SN6267	810	3822.00	65.66	63.20	-32.28	8.04	-24.24	-13.00	11.24	PASS
V	3	Horn SN6267	810	9550.00	53.81	41.70	-49.93	9.36	-40.57	-13.00	27.57	PASS
V	1	Horn SN6267	810	17976.00	67.19	45.50	-39.24	8.01	-31.23	-13.00	18.23	PASS
V	1	3160-09	810	19706.00	60.68	45.30	-39.36	15.88	-23.48	-13.00	10.48	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(Fundamental Power Level, in watts) below the Fundamental peak power gives -13 dBm
EIRP Level (dBm) = Power applied to Antenna (dBm) + Antenna Gain (dB)
Margin (dB) = Limit (dBm) - Level (dBm)

FIELD STRENGTH OF SPURIOUS RADIATION - §22.917 (Continued)

D.3. MEASUREMENT DATA - Cellular Band

Project Number:	072804-540aKBC	**Standard:**	FCC22.917
Company:	Itronix	**Test Start Date:**	30-Aug-04
Product:	IX260+ with AC775	**Test End Date:**	8-Sep-04

Swivel Dipole Antenna Spurious Emissions

Polarity	Distance	Substitution Antenna Type	Channe	Frequency	Corrected Field Strength	Substituted SA Signal Level (uncorrected)	Power Applied to Antenna	Antenna Gain	Emission ERP Level	ERP Limit	Margin	Pass/Fail
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm*	dB	
H	3	B_3121C	128	847.20	58.48	32.90	-37.83	1.57	-36.26	-13.00	23.26	PASS
H	3	Horn SN6267	128	1777.00	63.94	32.30	-45.54	6.48	-39.06	-13.00	26.06	PASS
H	3	Horn SN6267	128	4946.00	51.19	46.10	-50.37	8.61	-41.76	-13.00	28.76	PASS
V	3	B_3121C	128	813.20	60.90	36.00	-31.00	1.11	-29.89	-13.00	16.89	PASS
V	3	Horn SN6267	128	1030.00	63.31	34.50	-43.91	3.85	-40.06	-13.00	27.06	PASS
V	3	Horn SN6267	128	2428.00	56.60	59.60	-35.45	7.64	-27.81	-13.00	14.81	PASS
H	3	B_3121C	190	815.20	56.24	31.30	-39.96	1.14	-38.82	-13.00	25.82	PASS
H	3	Horn SN6267	190	1674.00	68.24	37.10	-40.56	6.37	-34.19	-13.00	21.19	PASS
H	3	Horn SN6267	190	2418.00	52.66	55.70	-41.40	7.62	-33.78	-13.00	20.78	PASS
H	3	Horn SN6267	190	7528.00	53.16	43.50	-50.71	8.92	-41.79	-13.00	28.79	PASS
H	3	Horn SN6267	190	8366.00	52.44	41.90	-52.32	9.30	-43.02	-13.00	30.02	PASS
V	3	B_3121C	190	811.00	53.65	28.80	-38.47	1.08	-37.40	-13.00	24.40	PASS
V	3	Horn SN6267	190	1954.00	66.55	34.10	-42.32	6.65	-35.67	-13.00	22.67	PASS
V	3	Horn SN6267	190	2422.00	58.68	61.70	-34.96	7.63	-27.33	-13.00	14.33	PASS
V	3	Horn SN6267	190	5020.00	54.46	49.20	-47.52	8.60	-38.92	-13.00	25.92	PASS
V	3	Horn SN6267	190	8368.00	52.85	42.30	-52.65	9.30	-43.35	-13.00	30.35	PASS
H	3	B_3121C	251	810.20	50.13	25.30	-45.10	1.06	-44.03	-13.00	31.03	PASS
H	3	Horn SN6267	251	1565.00	59.97	29.30	-49.22	6.27	-42.96	-13.00	29.96	PASS
H	3	Horn SN6267	251	2418.00	51.86	54.90	-43.80	7.62	-36.18	-13.00	23.18	PASS
H	3	Horn SN6267	251	7640.00	53.08	43.30	-52.45	9.01	-43.44	-13.00	30.44	PASS
H	3	Horn SN6267	251	8490.00	51.59	40.90	-53.00	9.30	-43.70	-13.00	30.70	PASS
V	3	B_3121C	251	842.40	53.48	27.90	-40.24	1.51	-38.73	-13.00	25.73	PASS
V	3	Horn SN6267	251	1698.00	71.65	40.40	-37.33	6.40	-30.94	-13.00	17.94	PASS
V	3	Horn SN6267	251	2428.00	55.80	58.80	-38.35	7.64	-30.71	-13.00	17.71	PASS
V	3	Horn SN6267	251	5094.00	54.23	48.80	-50.02	8.60	-41.42	-13.00	28.42	PASS
V	3	Horn SN6267	251	7638.00	53.89	44.10	-51.90	9.01	-42.89	-13.00	29.89	PASS

Note:
Dipole Antenna used for substitution 1000 MHz and below, Horn Antenna used for substitution 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)

FIELD STRENGTH OF SPURIOUS RADIATION - §22.917 (Continued)

D.3. MEASUREMENT DATA - Cellular Band (Cont.)

Project Number:	072804-540aKBC	**Standard:**	FCC22.917
Company:	Itronix	**Test Start Date:**	30-Aug-04
Product:	IX260+ with AC775	**Test End Date:**	8-Sep-04

Mobile Antenna Spurious Emissions

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
	m			MHz	dBuV/m	dBuV	dBm	dBi	dBm	dBm*	dB	
H	3	B_3121C	128	841.60	61.27	35.70	-35.57	1.50	-34.07	-13.00	21.07	PASS
H	3	Horn SN6267	128	1993.00	65.75	33.10	-55.15	6.69	-48.46	-13.00	35.46	PASS
H	3	Horn SN6267	128	7418.00	54.54	45.10	-47.88	8.97	-38.91	-13.00	25.91	PASS
H	3	Horn SN6267	128	7928.00	55.30	45.30	-50.77	9.24	-41.53	-13.00	28.53	PASS
V	3	B_3121C	128	925.80	47.30	20.50	-48.18	1.99	-46.19	-13.00	33.19	PASS
V	3	Horn SN6267	128	1073.00	66.25	37.30	-39.96	4.07	-35.90	-13.00	22.90	PASS
V	3	Horn SN6267	128	7416.00	54.13	44.70	-49.66	8.97	-40.69	-13.00	27.69	PASS
V	3	Horn SN6267	128	7510.00	54.55	44.90	-48.53	8.91	-39.62	-13.00	26.62	PASS
H	3	B_3121C	190	827.00	51.13	25.90	-44.12	1.32	-42.80	-13.00	29.80	PASS
H	3	Horn SN6267	190	1122.00	62.01	32.90	-44.16	4.31	-39.85	-13.00	26.85	PASS
H	3	Horn SN6267	190	2390.00	56.94	60.10	-37.09	7.56	-29.53	-13.00	16.53	PASS
H	3	Horn SN6267	190	7528.00	53.16	43.50	-50.72	8.92	-41.79	-13.00	28.79	PASS
V	3	B_3121C	190	825.80	49.10	23.90	-43.00	1.31	-41.69	-13.00	28.69	PASS
V	3	Horn SN6267	190	1949.00	63.92	31.50	-44.45	6.65	-37.80	-13.00	24.80	PASS
V	3	Horn SN6267	190	2454.00	58.71	61.60	-34.45	7.70	-26.75	-13.00	13.75	PASS
V	3	Horn SN6267	190	7530.00	52.76	43.10	-51.88	8.92	-42.96	-13.00	29.96	PASS
H	3	B_3121C	251	827.40	50.14	24.90	-45.18	1.33	-43.85	-13.00	30.85	PASS
H	3	Horn SN6267	251	1988.00	66.92	34.30	-42.48	6.69	-35.80	-13.00	22.80	PASS
H	3	Horn SN6267	251	2418.00	52.26	55.30	-42.40	7.62	-34.78	-13.00	21.78	PASS
H	3	Horn SN6267	251	7638.00	53.09	43.30	-51.07	9.01	-42.05	-13.00	29.05	PASS
H	3	Horn SN6267	251	8490.00	51.39	40.70	-52.71	9.30	-43.41	-13.00	30.41	PASS
V	3	B_3121C	251	924.40	58.75	32.00	-37.04	2.01	-35.03	-13.00	22.03	PASS
V	3	Horn SN6267	251	1886.00	74.14	42.00	-55.09	6.59	-48.50	-13.00	35.50	PASS
V	3	Horn SN6267	251	7638.00	52.69	42.90	-52.33	9.01	-43.32	-13.00	30.32	PASS
V	3	Horn SN6267	251	7940.00	55.53	45.50	-51.03	9.25	-41.78	-13.00	28.78	PASS

Noto:
Dipole Antenna used for substitution 1000 MHz and below, Horn Antenna used for substitution 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)