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| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

FCC PART 15.247 EMC TEST REPORT
FOR THE
ITRONIX RUGGED LAPTOP PC MODEL: IX260PROAC775
INCLUDING THE
INTEL PRO 2200BG 802.11B/G 2.4 GHz DSSS WLAN MINI-PCI CARD
WITH THE **RANGESTAR INTERNAL DUAL SURFACE-MOUNT ANTENNA**
CO-LOCATED WITH
SIERRA WIRELESS AIRCARD 775 DUAL-BAND GSM GPRS/EDGE PCMCIA MODEM
& **EXTERNAL SWIVEL DIPOLE ANTENNA**

TRSN 072804-540cKBC
Issue 1.0

Celltech Compliance Testing & Engineering Lab
(Celltech Labs Inc.)
1955 Moss Court
Kelowna, BC
Canada
V1Y 9L3

September 8, 2004

(In accordance with FCC Part 15.247)



| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

DECLARATION OF COMPLIANCE

| | | | |
|--|--|------------------|--|
| Test Lab | CELLTECH LABS INC. Testing and Engineering Services 1955 Moss Court Kelowna, B.C. Canada V1Y 9L3 | Applicant | ITRONIX CORPORATION 801 South Stevens Street Spokane, WA 99210 United States |
| Phone: | 250-448-7047 | | |
| Fax: | 250-448-7048 | | |
| e-mail: | info@celltechlabs.com | | |
| web site: | www.celltechlabs.com | | |
| Laboratory Registration No.(s): | FCC: 714830 | IC | IC 3874 |
| Rule Part(s): | FCC: §15.247; §2.1091; §1.1310 | | |
| Device Classification: | FCC: Digital Transmission System (DTS) | | |
| Device Identification: | FCC ID: KBCIX260PROAC775 | | |
| DUT Description: | | | |
| Model: | IX260+ | | |
| Device Type: | IX260+ Rugged Laptop PC including the Intel Pro 2200BG 802.11b/g 2.4 GHz DSSS WLAN Mini-PCI Card with the RangeStar internal dual surface-mount antenna, co-located with the Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem & dipole antenna | | |
| TX Frequency Range: | WLAN: 2412 - 2462 MHz | | |
| Max. RF Output Power: | 17.48 dBm Peak Conducted - 802.11b 16.15 dBm Peak Conducted - 802.11g | | |
| Modulation(s): | WLAN: DBPSK, DQPSK, CCK | | |
| Antenna Type(s): | WLAN: RangeStar P/N: 100929 Internal Surface-Mount DUAL-BAND GSM GPRS/EDGE: External Swivel Dipole | | |
| Power Supply: | Stationary: 90 Watt AC Power Adapter/11.1V Lithium-ion Battery, 6.0Ah (Model: A2121-2) | | |

This wireless 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 Part 15.247.

I attest to the accuracy of the data. All measurements reported herein were performed by me or were 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.

This test report shall not be reproduced partially, or in full, without the prior written approval of Celltech Labs Inc. The results and statements contained in this report pertain only to the device(s) evaluated.

Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.


Duane M. Friesen
EMC Manager
Celltech Labs Inc.

| | | | | | |
|--|---------------------|---------------|---------------|----------------|------------------|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | | |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

TABLE OF CONTENTS

| | |
|---|----|
| 1.0 SCOPE | 7 |
| 2.0 REFERENCES | 7 |
| 2.1 Normative References | 7 |
| 3.0 TERMS AND DEFINITIONS | 8 |
| 4.0 FACILITIES AND ACCREDITATIONS | 9 |
| 5.0 GENERAL INFORMATION | 9 |
| 5.1 Applicant Information | 9 |
| 5.2 DUT Description..... | 9 |
| 5.3 Co-Located Equipment | 10 |
| 5.4 Cable Descriptions..... | 10 |
| 5.5 Support Equipment | 10 |
| 5.6 Clock Frequencies | 11 |
| 5.7 Mode(s) of Operation Tested | 11 |
| 5.8 Configuration Description | 12 |
| 6.0 PASS/FAIL CRITERIA..... | 12 |
| APPENDIX..... | 13 |
| Appendix A - DUT Photographs | 14 |
| Appendix B - Peak Conducted Power Measurement | 24 |
| Appendix C - Maximum Permissible Exposure Calculation..... | 27 |
| Appendix D - Radiated Spurious Emissions Measurement..... | 30 |
| Appendix E - Restricted Band Emissions Measurement | 49 |
| Appendix F - Peak Power Spectral Density Measurement..... | 64 |
| Appendix G - Conducted Powerline Emissions Measurement..... | 73 |
| END OF DOCUMENT..... | 79 |

| | | | | | |
|--|----------------------------|--|----------------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

FIGURES

| | |
|----------------------------------|----|
| Figure A-1 – Setup Drawing..... | 16 |
| Figure B-1 – Setup Drawing..... | 25 |
| Figure D-1 – Setup Drawing | 31 |
| Figure E-1 – Setup Drawing..... | 51 |
| Figure F-1 – Setup Drawing..... | 65 |
| Figure G-1 – Setup Drawing | 75 |


PLOTS

| | |
|---|----|
| Plot A-1 - 6 dB Bandwidth Low Channel (802.11b)..... | 17 |
| Plot A-2 - 6 dB Bandwidth Mid Channel (802.11b)..... | 18 |
| Plot A-3 - 6 dB Bandwidth High Channel (802.11b)..... | 19 |
| Plot A-4 - 6 dB Bandwidth Low Channel (802.11g)..... | 20 |
| Plot A-5 - 6 dB Bandwidth Mid Channel (802.11g)..... | 21 |
| Plot A-6 - 6 dB Bandwidth High Channel (802.11g)..... | 22 |
| Plot F-1 - PPSD Low Channel (802.11b)..... | 66 |
| Plot F-2 - PPSD Mid Channel (802.11b)..... | 67 |
| Plot F-3 - PPSD High Channel (802.11b)..... | 68 |
| Plot F-4 - PPSD Low Channel (802.11g)..... | 69 |
| Plot F-5 - PPSD Mid Channel (802.11g)..... | 70 |
| Plot F-6 - PPSD High Channel (802.11g)..... | 71 |
| Plot G-1 - Line 1 Peak Conducted Powerline Emissions..... | 77 |
| Plot G-2 - Line 2 Peak Conducted Powerline Emissions..... | 77 |

| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

PHOTOGRAPHS

| | |
|---|----|
| Photograph A-1 - Front of Open IX260+ Laptop PC..... | 14 |
| Photograph A-2 - Back of Open IX260+ Laptop PC..... | 14 |
| Photograph A-3 - Left Side of Open IX260+ Laptop PC..... | 14 |
| Photograph A-4 - Right Side of Open IX260+ Laptop PC..... | 14 |
| Photograph D-1 - Vertical Polarization (1-18 GHz)..... | 32 |
| Photograph D-2 - Vertical Polarization (18-26 GHz)..... | 32 |
| Photograph D-3 - Front of Radiated Emission Configuration..... | 32 |
| Photograph D-4 - Back of Radiated Emission Configuration..... | 32 |
| Photograph E-1 - Horizontal Polarization (30MHz - 1 GHz)..... | 52 |
| Photograph E-2 - Vertical Polarization (1-18 GHz)..... | 52 |
| Photograph E-3 - Front of Radiated Emission Configuration..... | 52 |
| Photograph E-4 - Back of Radiated Emission Configuration..... | 52 |
| Photograph G-1 – AC Powerline Conducted Emission Configuration..... | 74 |
| Photograph G-2 – AC Powerline Conducted Emission Cable Placement..... | 74 |

| | | | | | |
|--|----------------------------|--|----------------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

TEST SUMMARY



Referenced Standard: CFR Title 47 Part 15


| <u>Appendix</u> | <u>Test Description</u> | <u>Procedure Reference</u> | <u>Limit Reference</u> | <u>Test Start Date</u> | <u>Test End Date</u> | <u>Result</u> |
|-----------------|-------------------------------|--|---------------------------------|------------------------|----------------------|---------------|
| B | 6 dB Bandwidth | FCC 97-114 | §15.247(2) | 26Jul04 | 26Jul04 | Pass |
| C | Peak Conducted Power | FCC 97-114 | §15.247 (b) (3) | 28Jun04 | 26Jul04 | Pass |
| D | Maximum Permissible Exposure | FCC CFR 47 § 2.1091 IEEE Std C95.1-1992 | §1.1310 Table 1 (b) | 28Jun04 | 28Jun04 | Pass |
| E | Radiated Spurious Emissions | FCC 97-114 | §15.247(c) | 26Jul04 | 29Jul04 | Pass |
| F | Restricted Band Emissions | FCC 97-114 | §15.205 (a), (b) §15.209 (a) | 26Jul04 | 29Jul04 | Pass |
| G | Peak Power Spectral Density | FCC 97-114 | §15.247(d) | 27Jul04 | 27Jul04 | Pass |
| H | Powerline Conducted Emissions | ANSI C63.4 | §15.207 | 29Jun04 | 5Jul04 | Pass |

REVISION LOG

| Issue | Description | Implemented By | Implementation Date |
|--------------|--------------------|-----------------------|----------------------------|
| 1.0 | Initial Release | Jon Hughes | 08Sept04 |

SIGNATORIES

| | | |
|---------------------|---|----------------|
| Prepared By: |  | Sept. 08, 2004 |
| Name/Title | Jon Hughes / General Manager | Date |
| Approved By: |  | Sept. 08, 2004 |
| Name/Title | Duane M. Friesen, C.E.T. / EMC Manager | Date |

| | | | | | |
|--|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |


1.0 SCOPE

This report outlines the measurements made and results collected during the Electromagnetic emissions testing of the Itronix Corporation IX260+ Rugged Laptop PC including the internal Intel Pro 2200BG 802.11b/g 2.4 GHz DSSS WLAN Mini-PCI Card with the Rangestar internal dual surface-mount antenna, co-located with the Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem with external swivel dipole antenna & mobile vehicle-mount antenna and cradle. **The Intel Pro 2200BG 802.11b/g WLAN and the Sierra Wireless AirCard 775 GSM GPRS/EDGE Modem do not transmit simultaneously.** The 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 Part 15 subpart J.

2.0 REFERENCES

2.1 Normative References


| | |
|---------------------------|--|
| ANSI/ISO 17025:1999 | General Requirements for competence of testing and calibration laboratories |
| CFR Title 47 Part 2:2003 | Code of Federal Regulations Title 47: Telecommunication Part 2: Frequency Allocations and Radio Treaty Matters; General Rules and Regulations |
| CFR Title 47 Part 15:2003 | Code of Federal Regulations Title 47: Telecommunication Part 15: Radio Frequency Devices |

| | | | | | |
|--|--|---------------|----------------------|----------------|---|
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

3.0 TERMS AND DEFINITIONS

| | |
|------|----------------------------------|
| AVG | Average |
| CFR | Code of Federal Regulations |
| dB | decibel |
| dBm | dB referenced to 1 mW |
| dBuV | dB referenced to 1 uV |
| DUT | Device under Test |
| dBc | dB down from carrier |
| EBW | Emission Bandwidth |
| EMC | Electromagnetic Compatibility |
| FCC | Federal Communication Commission |
| HP | Hewlett Packard |
| HPF | High Pass Filter |
| Hpol | Horizontal Polarization |
| IC | Industry Canada |
| kHz | kilohertz |
| LNA | Low Noise Amplifier |
| m | meter |
| MHz | Megahertz |
| Mbps | megabits per second |
| na | not applicable |
| n/a | not available |
| PK | Peak |
| PPSD | Peak Power Spectral Density |
| QP | Quasi-peak |
| RBW | Resolution Bandwidth |
| R&S | Rohde & Schwarz |
| RSS | Radio Standard Specification |
| SA | Spectrum Analyzer |
| VBW | Video Bandwidth |
| Vpol | Vertical Polarization |
| WLAN | Wireless Local Area Network |

| | | | | | |
|--|--|---------------|----------------------|----------------|---|
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

4.0 FACILITIES AND ACCREDITATIONS

The facilities used in collecting the test results outlined in this report are located at 1955 Moss Court, Kelowna, British Columbia, Canada, V1Y 9L3. The radiated and conducted emissions sites conform with the requirements set forth in ANSI C63.4 and are filed and listed with the FCC under Registration Number 714830 and Industry Canada under File Number IC 3874.

5.0 GENERAL INFORMATION

5.1 Applicant Information

| | |
|----------------------|--|
| Company Name: | Itronix Corporation |
| Address: | 801 South Stevens Street Spokane, WA 99210 USA |


5.2 DUT Description

The DUT consisted of the IX260+ Rugged Laptop PC with Intel Pro 2200BG 802.11b/g 2.4 GHz DSSS WLAN Mini-PCI Card installed in the Mini-PCI slot, and Internal Dual Surface-Mount Antenna installed in the upper LCD display. Co-located within the IX260+ Rugged Laptop PC is a Sierra Wireless AirCard 775 Dual-Band GSM GPRS/EDGE PCMCIA Modem with external swivel dipole antenna mounted to the upper right side of the LCD display. Photographs of the DUT placement and construction are shown in Appendix A.

| | | | |
|-----------------------|---|------------------|--|
| Device: | Rugged Laptop PC | | |
| Model: | IX260PROAC775 | | |
| Serial Number: | ZZGEG4112ZZ9810 | | |
| Identifier: | FCC ID: | KBCIX260PROAC775 | |
| Power Source: | Delta Electronics Model ADP-90AB Rev B 90 Watt AC-DC power supply | | |

| | | | |
|------------------------|--|-----------------------------------|--|
| Device: | 2.4GHz DSSS WLAN Mini-PCI Card (802.11b/g) | | |
| Model: | Intel Pro2200BG | | |
| Serial Number: | 06036C074ADC54906006 | | |
| Rule Part(s): | FCC: | §15.247; §2.1091; §1.1310 | |
| Classification: | FCC: | Digital Transmission System (DTS) | |
| Power Source: | Powered from the internal PC power supply | | |

| | | | |
|----------------|-------------------------------------|--|--|
| Device: | Internal Dual Surface-Mount Antenna | | |
| Model: | RangeStar P/N: 100929 | | |
| Gain: | 4.5 dBi | | |

| | | | | | |
|--|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

5.3 Co-Located Equipment

| | |
|-----------------------|--------------------------------------|
| Device: | Dual-Band GSM GPRS/EDGE PCMCIA Modem |
| Model: | Sierra Wireless AirCard 775 |
| Serial Number: | X04060400690004 |

| | |
|----------------|--|
| Device: | Dual-Band GSM GPRS/EDGE External Mounted Swivel Dipole Antenna |
| Model: | IX260+ |
| Gain: | 2.6 dBi |


5.4 Cable Descriptions

| ROUTING | | Length m | Model | Terminations | | Shield Type | Shield Termination | | Suppression |
|-------------------|--------------|-------------|-------------------|--------------|-----------|-------------|--------------------|-------|-------------|
| From | To | | | End 1 | End 2 | | End 1 | End 2 | |
| PC Fire Wire Port | Unterminated | 1.0 | Copartner E119932 | IEEE-1528 | Fire wire | n/a | n/a | n/a | None |
| PC modem port | Unterminated | 1.0 | n/a | RJ-11 | RJ-11 | None | na | na | None |

5.5 Support Equipment

The following equipment was used in support of the DUT.

| CO-LOCATED SUPPORT EQUIPMENT LIST | | |
|-----------------------------------|-----------|--------------------|
| MANUFACTURER | MODEL | DESCRIPTION |
| D-Link | DE-809TC/ | Ethernet hub |
| YNG YUH | YP-040 | Hub power supply |
| MLi | 699 | Speakers |
| Polk Audio | n/a | Speaker-microphone |
| DeLorme | Tripmate | GPS Receiver |
| Intel | CS-430 | Camera |
| Logitech | M-S34 | Mouse |

| | | | | | |
|--|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

5.6 Clock Frequencies

5.6.1 DUT Clock Frequencies

| | |
|----------------|---|
| Device: | Rugged Laptop PC |
| Clocks: | 1.6 GHz processor |
| Name: | 2.4GHz DSSS WLAN Mini-PCI Card |
| Clocks: | 40 MHz, f _o /1.5 (Low – 1608.000 MHz, Mid – 1624.667 MHz, High – 1641.333 MHz) |
| Name: | Internal Dual Surface-Mount Antenna (WLAN) |
| Clocks: | None |


5.6.2 Co-Located Clock Frequencies

| | |
|----------------|-------------------------|
| Device: | Peripherals |
| Clocks: | n/a |
| Name: | AirCard 775 Radio Modem |
| Clocks: | n/a |

5.7 Mode(s) of Operation Tested

Customer supplied software was used to place the WLAN card in the appropriate mode, channel and power level for the specific measurement. **As described by the client, PC installed firmware would insure that the AirCard 775 Radio Modem transmit mode would be disabled whenever the WLAN was active, therefore the radio modem was placed in receive mode during the measurements described herein.**

| | | |
|--|---|--|
| TX Frequency Range: | 2412 – 2462 MHz Ch. 1 (2412 MHz), Ch. 6 (2437 MHz) & Ch. 11 (2462 MHz) measured unless otherwise noted | |
| Software Power Gain Settings: | 802.11b set to 29 802.11g set to 24.5 | |
| RF Peak Conducted Output Power Tested | 802.11b 2412 MHz(1 Mbps) = 16.28 dBm 802.11b 2437 MHz(1 Mbps) = 16.79 dBm 802.11b 2462 MHz(1 Mbps) = 17.48 dBm | 802.11g 2412 MHz(6 Mbps) = 15.14 dBm 802.11g 2437 MHz(6 Mbps) = 15.55 dBm 802.11g 2462 MHz(6 Mbps) = 16.15 dBm |
| Modes / Data Rates Tested: | 802.11b (1, 5.5, 11 Mbps checked in prescan) (1 Mbps determined to be worse case and used unless otherwise noted) | |
| | 802.11g (6, 36, 54 Mbps checked in prescan) (6 Mbps determined to be worse case and used unless otherwise noted) | |
| Battery Type(s) | 11.1V Lithium-ion, 6.0Ah (Model: A2121-2) | |
| Modulation Type: | OFDM with BPSK, QPSK, 16QAM, 64QAM, DBPSK, DQPSK, CCK | |

| | | | | | |
|--|---------------------|--|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

5.7.1 DUT Exercising Software Description

The DUT was configured and exercised using customer supplied test software that allowed an operator to set the parameters of the WLAN operation. The settings used are described in each appendix. Unless otherwise noted the power gain settings were set for 29 for 802.11b and 24.5 for 802.11g and the data rate set for 1 Mbps for 802.11b and 6 Mbps for 802.11g.

5.8 Configuration Description

The DUT was configured, as described by the client as being representative of what would be delivered to a final customer. This configuration included the radio modem and external antenna as described in section 5.2 installed in a typical manner. More specific details may be included in each appendix.


5.8.1 Configuration Justification

The DUT was tested in a configuration described by the client as being worse case but typical of normal use.

Prescan measurements were made with the WLAN in each of the two available modes (b & g), lowest, medium and highest bit rates and each of the lowest, highest and mid-band frequencies. From this preliminary data, it was determined that Channel 11, Mode b Rate 1 Mbps resulted in the highest emissions. When a measurement of Mode g was required, its data rate was set for a worse case setting of 6 Mbps. Unless otherwise specified in the applicable appendices, these settings were used for the measurements described in this report.


6.0 PASS/FAIL CRITERIA

Unless otherwise noted in the Appendices, the pass/fail criteria is the limit set forth in the reference standards. A DUT is considered to have passed the requirements, if the data collected during the described measurement procedure is less than or equal to the specified limits as defined. The pass/fail statements made in this report only apply to the unit tested.

| | | | | | |
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| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

APPENDIX

| | | | | | |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Appendix A - DUT Photographs

Photograph A-1 - Front of Open IX260+ Laptop PC



Photograph A-2 - Back of Open IX260+ Laptop PC




Photograph A-3 - Left Side of Open IX260+ Laptop PC



Photograph A-4 - Right Side of Open IX260+ Laptop PC



| | | | | | |
|---|----------------------------|---------------|----------------------|----------------|---|
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |


- 6 dB Bandwidth Measurement

| A.1. REFERENCES | |
|-------------------------------------|------------------------|
| Normative Reference Standard | FCC CFR 47 §15.247 (2) |
| Procedure Reference | FCC 97-114 |

| A.2. LIMITS | |
|--------------------|---|
| A.2.1. FCC CFR 47 | |
| FCC CFR 47 §15.247 | (2) <i>Systems using digital modulation techniques may operate in the 902 – 928, 2400 – 2483.5 MHz, and 5725 – 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz</i> |

| A.3. ENVIRONMENTAL CONDITIONS | |
|--------------------------------------|---------------|
| Temperature | 25.2 +/- 2 °C |
| Humidity | 35 +/- 2 % |
| Barometric Pressure | 96.34 kPa |

| A.4. EQUIPMENT LIST | | | | | |
|----------------------------|--------------|--------|--------------------------|----------|---------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 00072 | EMCO | 2075 | Mini-mast | n/a | n/a |
| 00073 | EMCO | 2080 | Turn Table | n/a | n/a |
| 00071 | EMCO | 2090 | Multi-Device Controller | n/a | n/a |
| 00035 | ETS | 3115 | Double Ridged Guide Horn | 24Mar04 | 24Mar05 |
| 00015 | Agilent | E4408B | Spectrum Analyzer | 29Dec03 | 29Dec04 |
| 00048 | Gore | 65474 | Microwave Cable | 20May04 | 20May05 |

| | | | | | |
|--|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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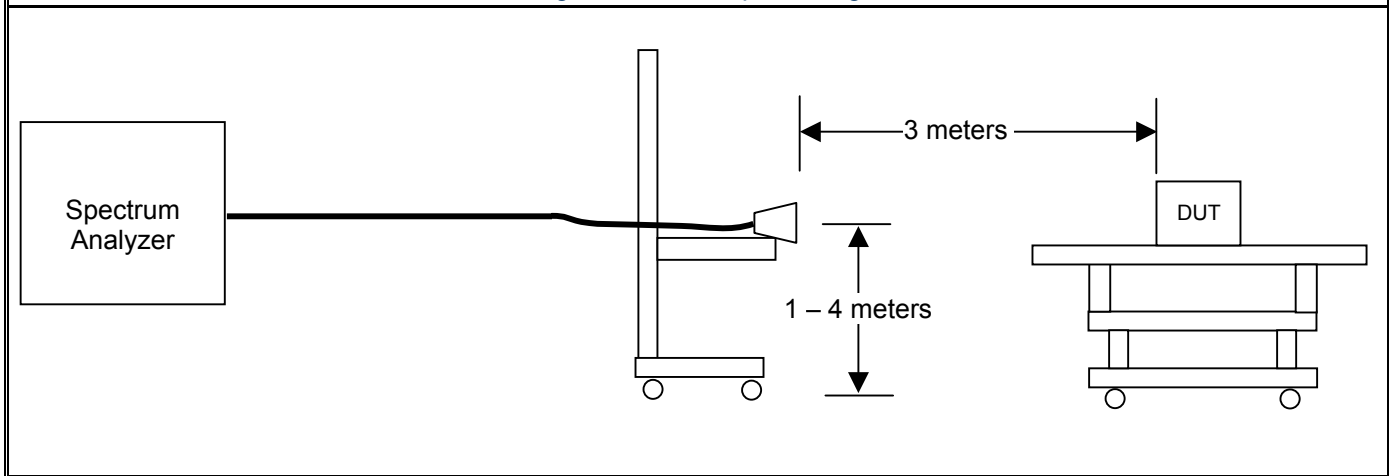
| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

A.5. MEASUREMENT EQUIPMENT SETUP

| | |
|--|--|
| Measurement Equipment Connections | The equipment was connected as shown in the setup drawing in B.6. |
| Measurement Equipment Settings | The following spectrum analyzer settings were use for these measurements: RBW – 100 kHz VBW – 300 kHz Span – 30 MHz |

A.6. SETUP DRAWING

Figure A-1 – Setup Drawing




A.7. DUT OPERATING DESCRIPTION

The worst-case data rate was determined from prescan investigations. Measurements were made at three channels throughout the band, Low Channel (2412 MHz), Mid Channel (2437 MHz), High Channel (2462 MHz) and for both Modes b and g.

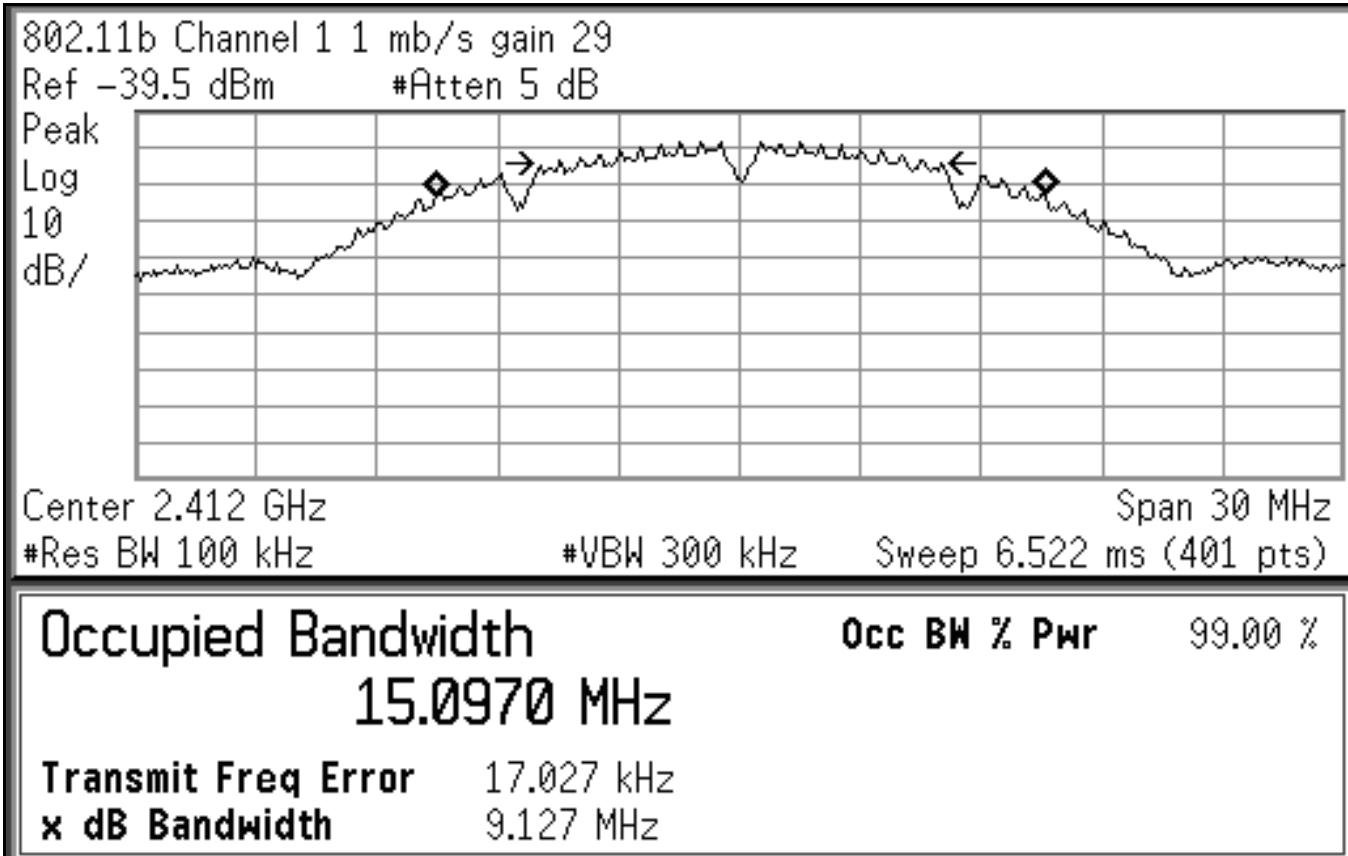
A.8. TEST RESULTS


| Channel | Frequency | 802.11b | | | 802.11g | | |
|---------|-----------|----------------|-------|-----------|----------------|-------|-----------|
| | | 6 dB Bandwidth | Limit | Data Rate | 6 dB Bandwidth | Limit | Data Rate |
| | MHz | kHz | kHz | Mbps | kHz | kHz | Mbps |
| Low | 2412 | 9127 | >500 | 1 | 16444 | >500 | 6 |
| Mid | 2437 | 9553 | >500 | 1 | 16379 | >500 | 6 |
| High | 2462 | 9169 | >500 | 1 | 16402 | >500 | 6 |

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

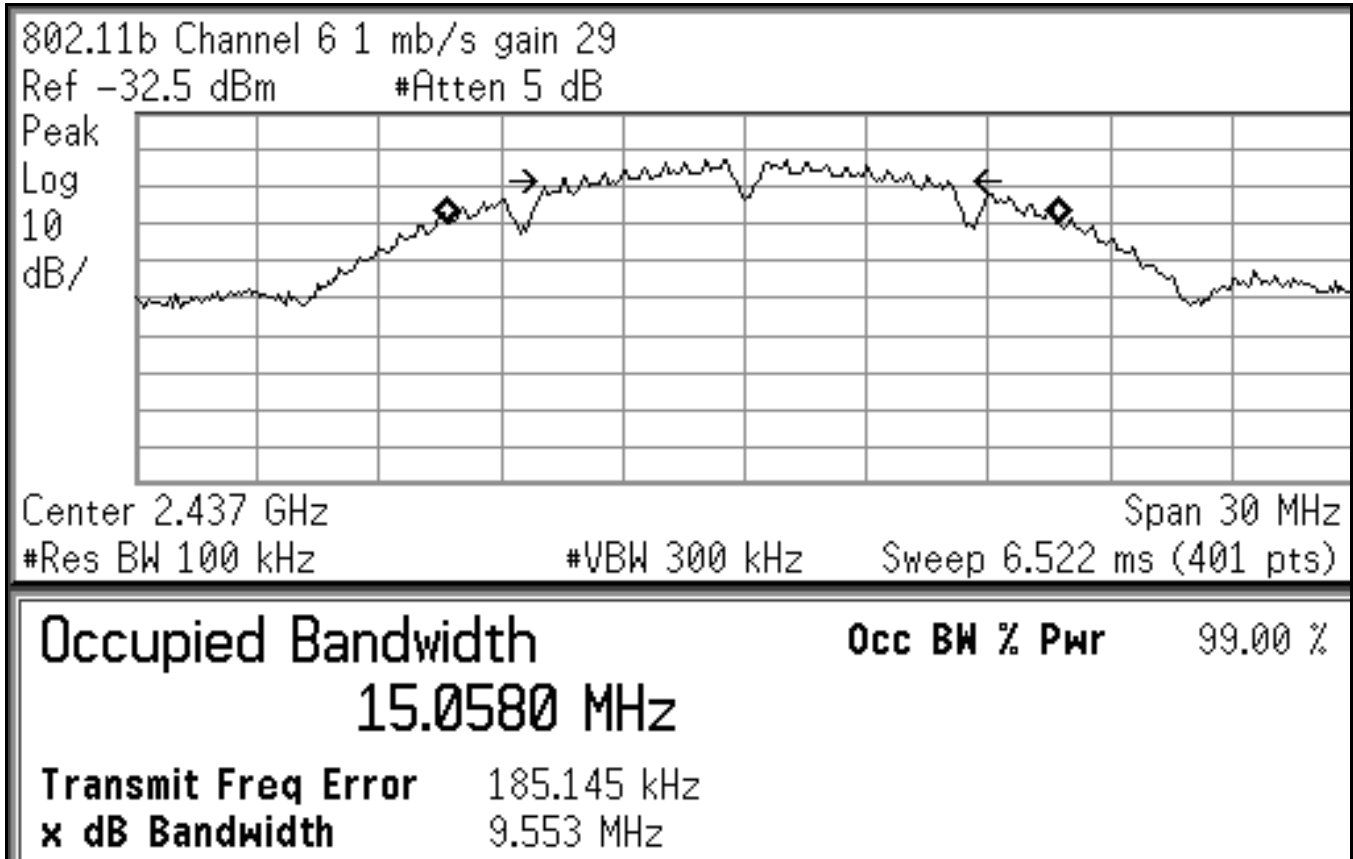
Plot A-1 - 6 dB Bandwidth Low Channel (802.11b)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

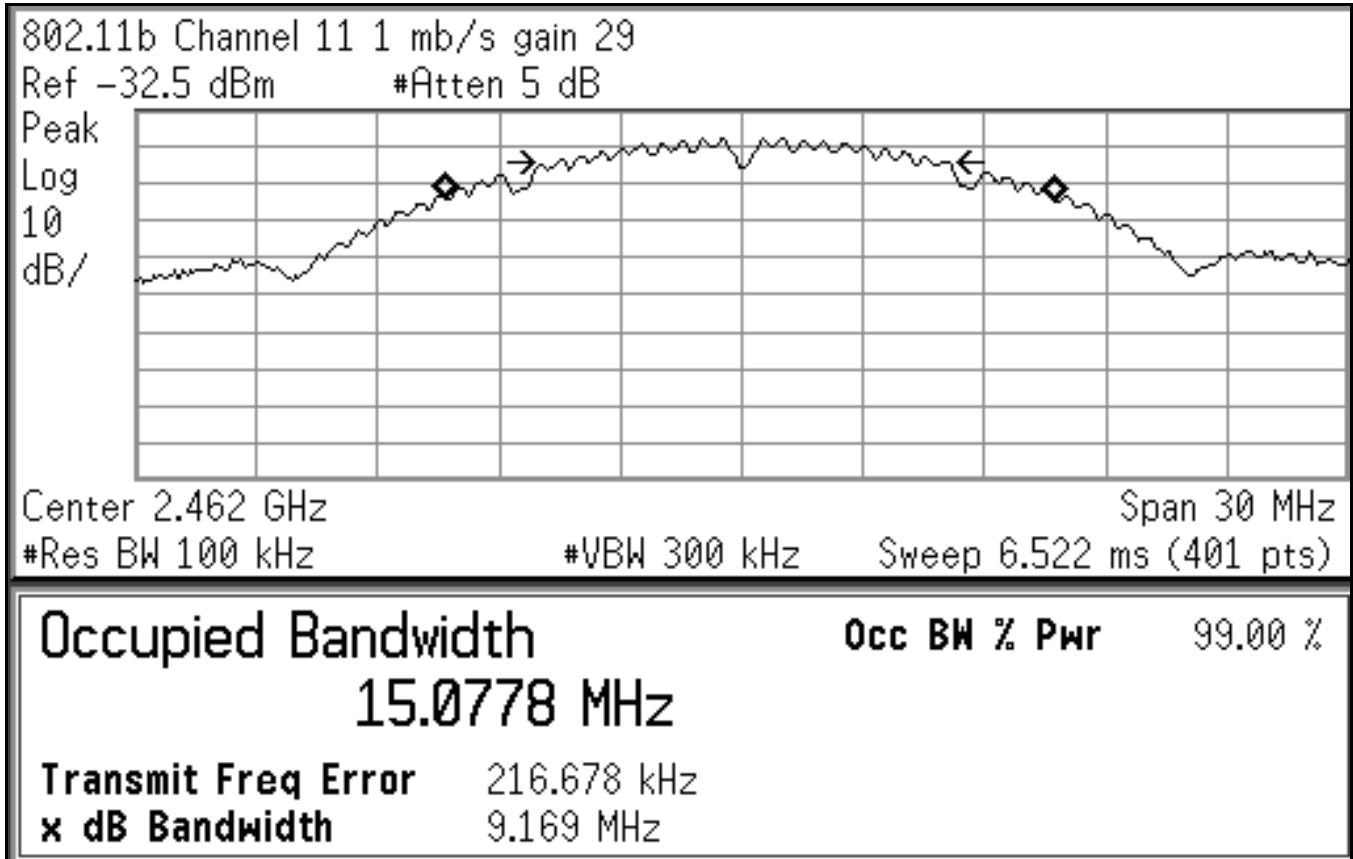
Plot A-2 - 6 dB Bandwidth Mid Channel (802.11b)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

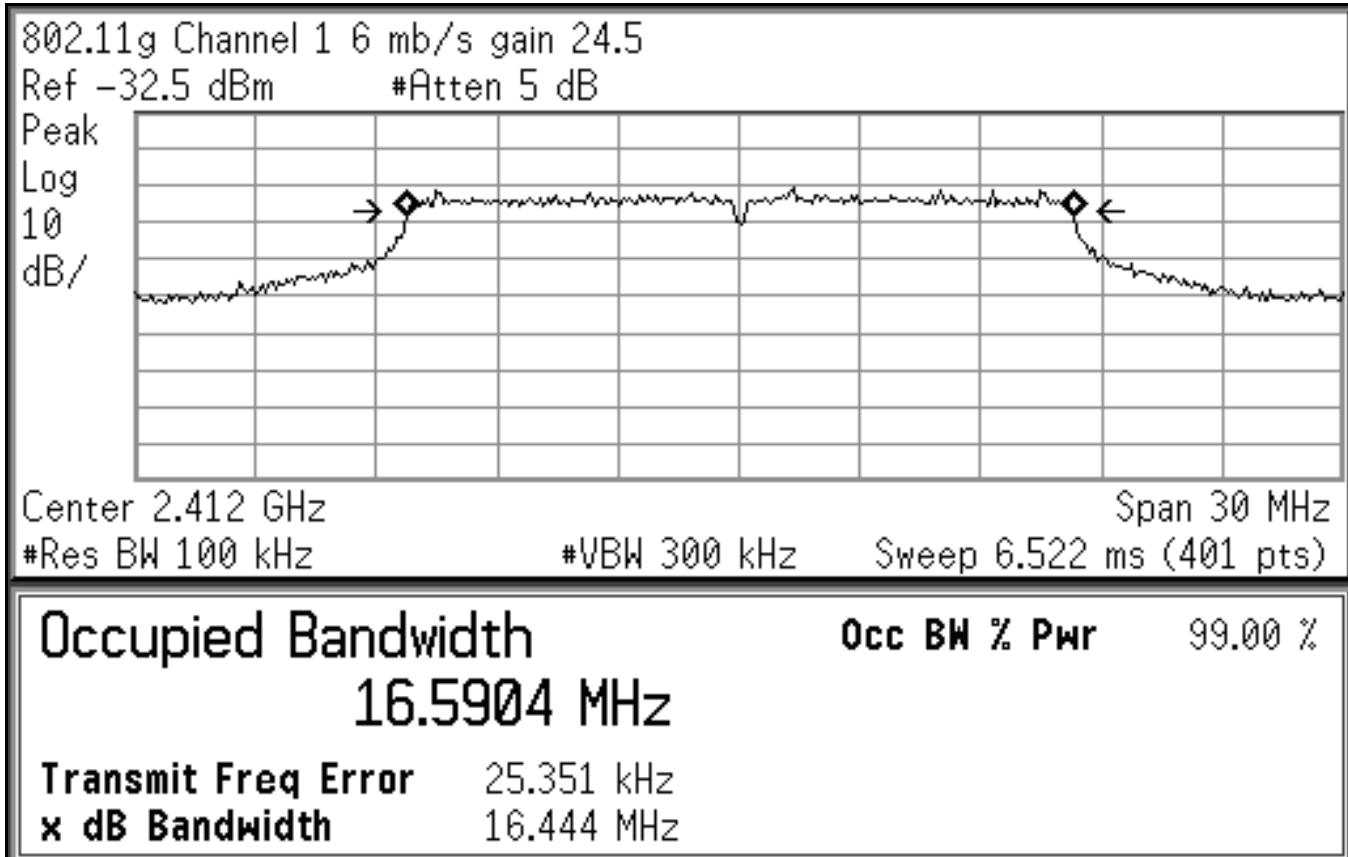
Plot A-3 - 6 dB Bandwidth High Channel (802.11b)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

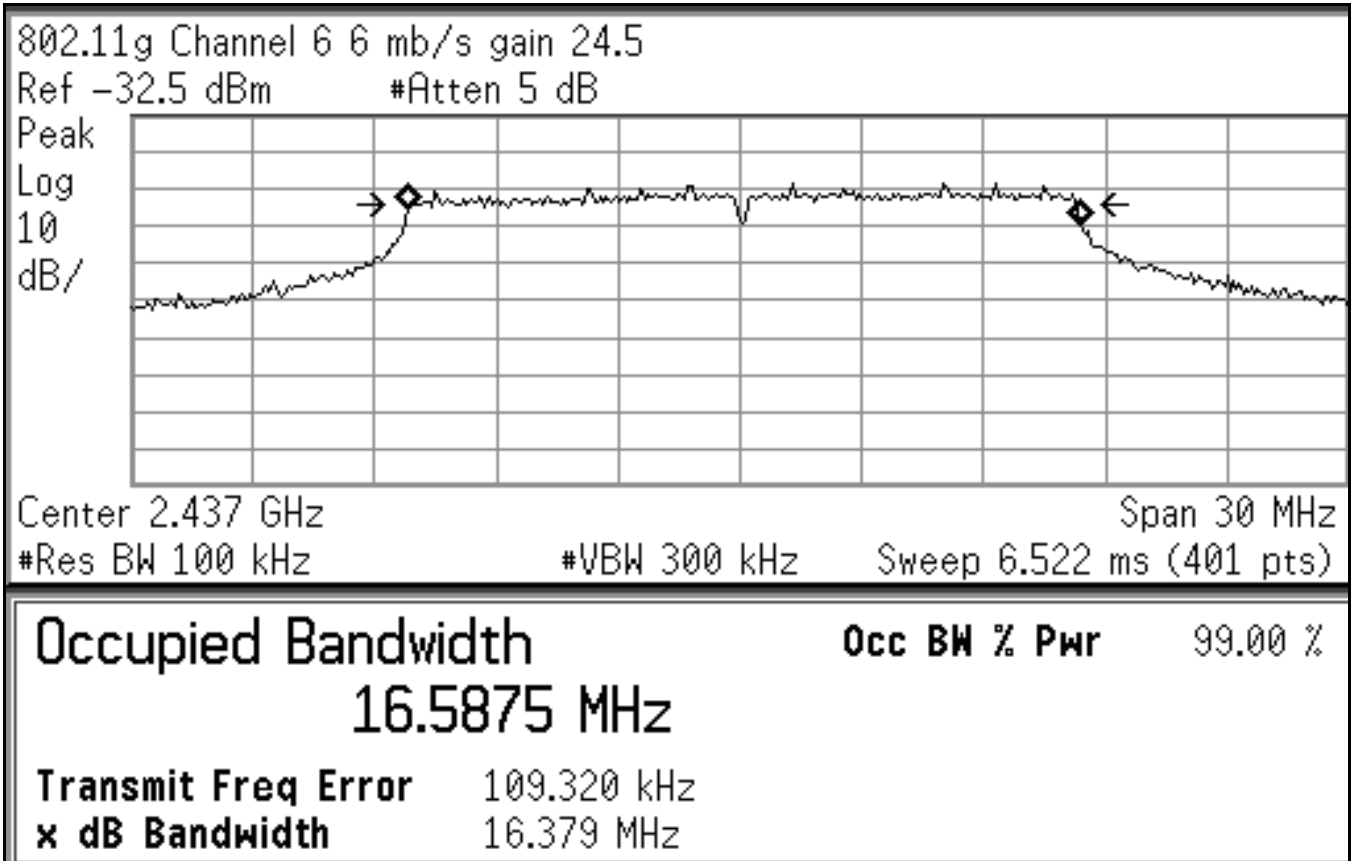
Plot A-4 - 6 dB Bandwidth Low Channel (802.11g)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

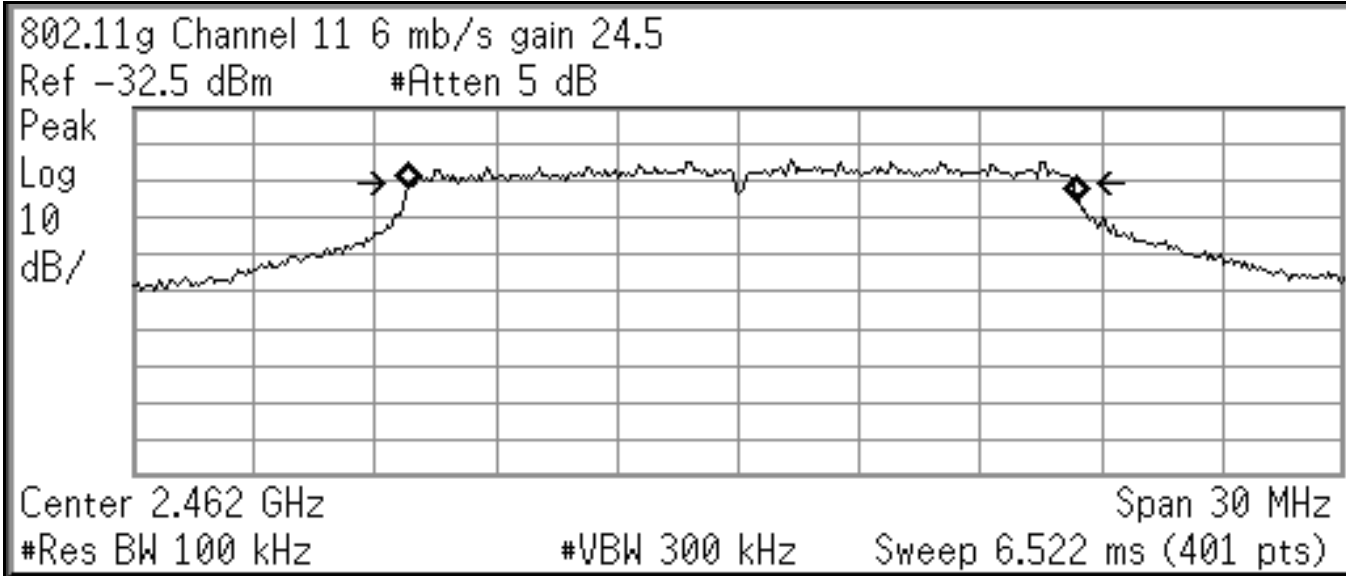
Plot A-5 - 6 dB Bandwidth Mid Channel (802.11g)



| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Plot A-6 - 6 dB Bandwidth High Channel (802.11g)



| | | |
|----------------------------|---------------------|---------|
| Occupied Bandwidth | Occ BW % Pwr | 99.00 % |
| 16.5917 MHz | | |
| Transmit Freq Error | 110.343 kHz | |
| x dB Bandwidth | 16.402 MHz | |

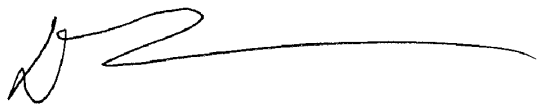
| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

A.9. PASS/FAIL

In reference to the results outlined in B.8 the DUT passes the requirements as stated in the reference standards as follows:
 FCC 15.247 (2): The 6 dB bandwidth as measured meets the minimum 500 kHz bandwidth requirement.

A.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



 Duane M. Friesen, C.E.T.
 EMC Manager
 Celltech Labs Inc.

 04Aug04
 Date

| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Appendix B - Peak Conducted Power Measurement

| B.1. REFERENCES | |
|-------------------------------------|---------------------------|
| Normative Reference Standard | FCC CFR 47 §15.247(b) (3) |
| Procedure Reference | FCC 97-114 |


| B.2. LIMITS | |
|--|--|
| B.2.1. FCC CFR | |
| <p>§15.247(b): The maximum peak output power of the intentional radiator shall not exceed the following: §15.247(b) (3) For system using digital modulation in the 902 – 928 MHz, 2400 – 2483.5 MHz, and 5725 – 5850 MHz bands: 1 Watt.</p> | |

| B.3. ENVIRONMENTAL CONDITIONS | |
|-------------------------------|---------------|
| Temperature | 25.2 +/- 2 °C |
| Humidity | 35 +/- 2 % |
| Barometric Pressure | 96.34 kPa |

| B.4. EQUIPMENT LIST | | | | | |
|---------------------|--------------|-----------|------------------------|----------|---------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 00015 | Agilent | E4408B | Spectrum Analyzer | 29Dec03 | 29Dec04 |
| 00075 | Alpha Wire-J | 9223 | 2ft. RG223/U RF Cable | 08Jul04* | 24Jun05 |
| 00076 | Pasternack | PE7014-30 | 30dB 2 Watt Attenuator | 08Jul04* | 24Jun05 |

*Cable and attenuator verified with power meter prior to use

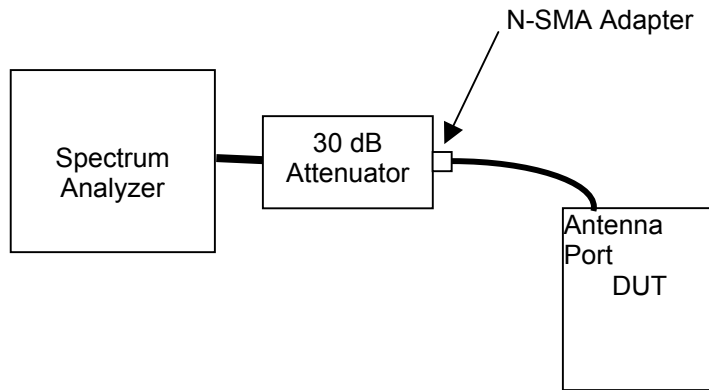
| B.5. MEASUREMENT EQUIPMENT SETUP | |
|--|--|
| Measurement Equipment Connections | The equipment was connected as shown in the setup drawing in C.6. |
| Measurement Equipment Settings | <p>To evaluate the maximum peak power, the 26 dB bandwidth needs to be determined. This is performed with the spectrum analyzer using the following setting:</p> <p>RBW – 300 kHz VBW – 1MHz Span – 50 MHz Detector – Peak Average – Power Trace Average – 100</p> <p>Once the 26 dB bandwidth is determined, the power is measured within the band with the following spectrum analyzer settings:</p> <p>RBW – 1 MHz VBW – 3 MHz Detector – Peak Average – Power Integrate BW – equal to specific –26 dB EBW</p> |

| | | | | | |
|--|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

B.6. SETUP DRAWING

Figure B-1 – Setup Drawing




B.7. DUT OPERATING DESCRIPTION

The worst-case data rate was determined from prescan investigations. Measurements were made at three channels throughout the band, Low Channel (2412 MHz), Mid Channel (2437 MHz), High Channel (2462 MHz) and for both Modes b and g.

B.8. TEST RESULTS

| Channel | Frequency | 802.11b | | | | 802.11g | | | |
|---------|-----------|----------------------|-------|-------|------------|----------------------|-------|-------|------------|
| | | Peak Conducted Power | | Limit | -26 dB EBW | Peak Conducted Power | | Limit | -26 dB EBW |
| | | dBm | Watts | Watts | MHz | dBm | Watts | Watts | MHz |
| Low | 2412 | 16.28 | .0424 | 1 | 19.53 | 15.14 | .0327 | 1 | 23.55 |
| Mid | 2437 | 16.79 | .0478 | 1 | 19.45 | 15.55 | .0359 | 1 | 23.17 |
| High | 2462 | 17.48 | .0560 | 1 | 19.43 | 16.15 | .0412 | 1 | 23.05 |

| | | | | | | |
|--|---------------------|--|---------------|----------------|---|----------|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 | |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  | |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

B.9. PASS/FAIL

In reference to the results outlined in C.8 the DUT passes the requirements as stated in the reference standards as follows:
 FCC 15.247 (b) (3): The peak power did not exceed 1 Watt.


B.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



 Russell Pipe
 Senior Compliance Technologist
 Celltech Labs Inc.

 04Aug04
 Date

| | | | | | |
|--|---------------------|--|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Appendix C - Maximum Permissible Exposure Calculation

| C.1. REFERENCES | |
|-------------------------------------|--|
| Normative Reference Standard | FCC CFR 47§1.1310 IEEE Std C95.1-1992 |
| Procedure Reference | FCC CFR 47§2.1091 |

| C.2. LIMITS | |
|------------------------------|------------------------|
| FCC CFR 47§1.1310 Table 1(b) | 1.0 mW/cm ² |

| C.3. ENVIRONMENTAL CONDITIONS | |
|-------------------------------|----|
| Temperature | na |
| Humidity | na |
| Barometric Pressure | na |


| C.4. EQUIPMENT LIST | | | | | |
|---------------------|--------------|-------|-------------|----------|---------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| na | | | | | |

| C.5. MEASUREMENT EQUIPMENT SETUP | |
|--|--|
| MEASUREMENT EQUIPMENT CONNECTIONS | The results described herein were determined by the following calculation, so no measurement equipment was used. |
| MEASUREMENT EQUIPMENT SETTINGS | na |

| C.6. SETUP PHOTOS | |
|-------------------|--|
| na | |

| C.7. SETUP DRAWINGS | |
|---------------------|--|
| na | |

| C.8. DUT OPERATING DESCRIPTION | |
|--------------------------------|--|
| na | |

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

C.9. TEST RESULTS

Calculation:

Rangestar Internal Antenna (802.11b mode):

Tx Frequency: 2462.00 (MHz)
 Power at Antenna Input Terminal: 17.48 (dBm)
 Antenna gain: 4.50 (dBi)

$S = \frac{1.00}{4\pi R^2}$ (mW/cm²)
 $P = 55.9758$ (mW)
 $G = 2.82$ (numeric)

R = 3.54 (cm)

S (mw/cm²) at 20cm = 0.031351575

Rangestar Internal Antenna (802.11g mode):

Tx Frequency: 2462.00 (MHz)
 Power at Antenna Input Terminal: 16.15 (dBm)
 Antenna gain: 4.50 (dBi)

$S = \frac{1.00}{4\pi R^2}$ (mW/cm²)
 $P = 41.2098$ (mW)
 $G = 2.82$ (numeric)

R = 3.04 (cm)

S (mw/cm²) at 20cm = 0.023081252


Formulae:

$S = \frac{PG}{4\pi R^2}$ where: S = Power Density Limit
 $R = \sqrt{\frac{P}{4\pi S}}$ P = Power Applied to the Antenna
 G = Numeric Antenna Gain
 R = Distance from Antenna

Results:

| Mode | Power Density Limit | Output Power | Antenna Gain | MPE Distance |
|---------|---------------------|--------------|--------------|--------------|
| | mW/cm ² | dBm | dBi | cm |
| 802.11b | 1.0 | 17.48 | 4.5 | 3.54 |
| 802.11g | 1.0 | 16.15 | 4.5 | 3.04 |

NOTE: The required minimum separation distance is 20 cm, even if the resulting MPE compliance distance was less than 20 cm.

| | | | | | |
|---|---------------------|--------|---------------|---------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

C.10. PASS/FAIL

In reference to the results outlined in D.9 the DUT passes the requirements as stated in the reference standards as follows:
 1) The DUT spacing must be kept at 20 cm to insure an exposure not more than 1 mW/cm².

C.11. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



 Russell Pipe
 Senior Compliance Technologist
 Celltech Labs Inc.

 04Aug04
 Date

| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |


Appendix D - Radiated Spurious Emissions Measurement

| D.1. REFERENCES | |
|-------------------------------------|------------------------|
| Normative Reference Standard | FCC CFR 47 §15.247(c) |
| Procedure Reference | ANSI C63.4; FCC 97-114 |

| D.2. LIMITS | |
|--|--|
| D.2.1. FCC CFR 47 | |
| <p>§15.247 (c): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in 15.209 (a) is not required.</p> | |
| <p>Note: Spurious emissions within the restricted bands are reported in Appendix F.</p> | |

| D.3. ENVIRONMENTAL CONDITIONS | |
|-------------------------------|-------------------|
| Temperature | 27.4 +/- 2 °C |
| Humidity | 33 +/- 2 % |
| Barometric Pressure | 96.24 +/- 0.2 kPa |

| D.4. EQUIPMENT LIST | | | | | |
|---------------------|--------------|-----------|------------------------------|----------|---------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 00072 | EMCO | 2075 | Mini-mast | n/a | n/a |
| 00073 | EMCO | 2080 | Turn Table | n/a | n/a |
| 00071 | EMCO | 2090 | Multi-Device Controller | n/a | n/a |
| 00050 | Chase | CBL-6111A | Bilog Antenna | 30Apr04 | 30Apr05 |
| 00035 | ETS | 3115 | Double Ridged Guide Horn | 24Mar04 | 24Mar05 |
| 00202 | ETS | 3160-09 | Small Horn Antenna | 27May04 | 27Jun05 |
| 00015 | Agilent | E4408B | Spectrum Analyzer | 29Dec03 | 29Dec04 |
| 00049 | HP | 8566B | Spectrum Analyzer RF Section | 18May04 | 18May05 |
| 00049 | HP | 85650A | Quasi-peak Adapter | 18May04 | 18May05 |
| 00047 | HP | 85685A | RF Preselector | 18May04 | 18May05 |
| 00048 | Gore | 65474 | Microwave Cable | 20May04 | 20May05 |
| 00030 | HP | 83017A | LNA | 20May04 | 20May05 |

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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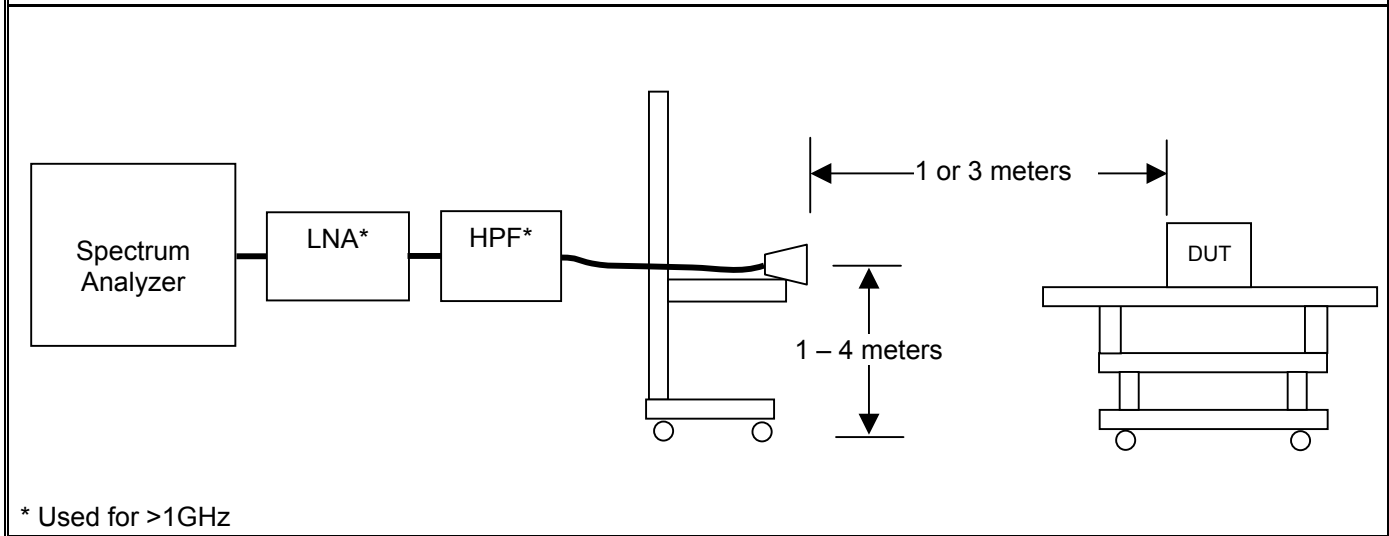
| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.5. MEASUREMENT EQUIPMENT SETUP

| | | | | |
|---|---|------------------|------|----------|
| MEASUREMENT EQUIPMENT CONNECTIONS | The measurement equipment was connected as shown in the E.6. A number of antennas were used to cover the applicable frequency range test. The ranges in which each antenna was used are as follows: | | | |
| | Frequency Range | Antenna | | |
| | 30 MHz – 1 GHz | CBL-6111A Bilog | | |
| | 1 GHz – 18 GHz | ETS 3115 Horn | | |
| | 18 GHz – 26 GHz | ETS 3160-09 Horn | | |
| MEASUREMENT EQUIPMENT SETTINGS | The spectrum analyzer was set to the following settings: | | | |
| | Frequency Range | RBW | VBW | Detector |
| | MHz | kHz | kHz | |
| | 30 – 1000 | 100 | 300 | Peak* |
| | > 1000 | 1000* | 1000 | Peak* |
| *As a worse case measurement, the average limit was applied to measurements made with a peak detector using a RBW of 1 MHz (vs the specified 100 kHz), when possible. | | | | |

D.6. SETUP DRAWING

Figure D-1 – Setup Drawing



* Used for >1GHz

| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.7. SETUP PHOTOGRAPHS

Photograph D-1 - Vertical Polarization (1-18 GHz)



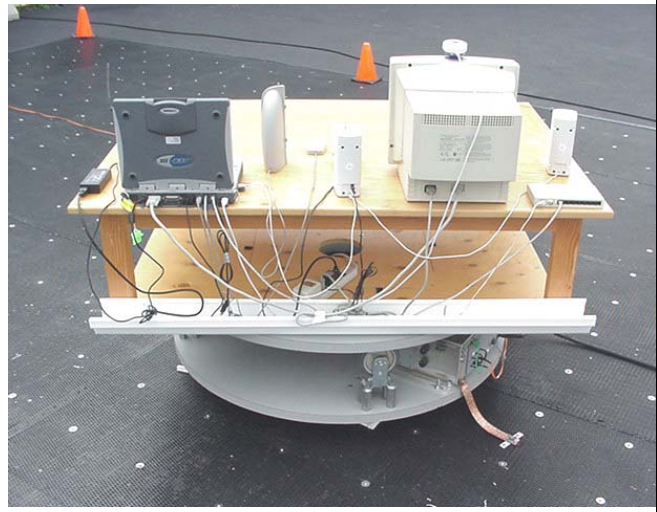
Photograph D-2 - Vertical Polarization (18-26 GHz)




Photograph D-3 - Front of Radiated Emission Configuration



Photograph D-4 - Back of Radiated Emission Configuration



| | | | | | |
|--|--|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.8. DUT OPERATING DESCRIPTION

The worst-case data rate was determined from prescan investigations. Measurements were made at three channels throughout the band, Low Channel (2412 MHz), Mid Channel (2437 MHz), High Channel (2462 MHz) and for both Modes b and g for the band-edge measurements and for Mode b for the remaining measurements. The configuration used was Mode b, 1 mbps with a gain setting of 29 and Mode g, 6 mbps with a gain setting of 24.5.

D.9. TEST RESULTS

D.9.1. Mode b - Fundamental Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | *Calculated Limit |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|-------------------|
| | | | | | | | | | | | | | m | m | dB |
| 1 | H | 3 | Horn SN6276 | 2412.00 | 70.11 | | 28.11 | 3.49 | 0.00 | 31.59 | 101.70 | PK | 3 | 0.00 | 81.70 |
| 6 | H | 3 | Horn SN6276 | 2437.00 | 70.00 | | 28.16 | 3.51 | 0.00 | 31.67 | 101.67 | PK | 3 | 0.00 | 81.67 |
| 11 | H | 3 | Horn SN6276 | 2462.00 | 70.50 | | 28.22 | 3.52 | 0.00 | 31.73 | 102.23 | PK | 3 | 0.00 | 82.23 |

D.9.2. Mode b - Fundamental Field Strengths @ Specified Distance – Vertical Polarization

| | | | | | | | | | | | | | | | |
|----|---|---|-------------|---------|-------|--|-------|------|------|-------|-------|----|---|------|-------|
| 1 | V | 3 | Horn SN6276 | 2412.00 | 64.50 | | 28.11 | 3.49 | 0.00 | 31.59 | 96.09 | PK | 3 | 0.00 | 76.09 |
| 6 | V | 3 | Horn SN6276 | 2437.00 | 63.70 | | 28.16 | 3.51 | 0.00 | 31.67 | 95.37 | PK | 3 | 0.00 | 75.37 |
| 11 | V | 3 | Horn SN6276 | 2462.00 | 64.91 | | 28.22 | 3.52 | 0.00 | 31.73 | 96.64 | PK | 3 | 0.00 | 76.64 |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz :
where d1 is the measurement distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

Calculated Limit (-20 dBc) = Field Strength -20

*Calculated Limit used for spurious emission evaluation

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

| D.9.3. Mode b - Band-edge Emission Field Strengths @ Specified Distance – Horizontal Polarization (not near restricted band) | | | | | | | | | | | | | | | | | |
|--|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
| | | | | | | | | | | | | | m | dB | dB | dBuV/m | Δ dB |
| 1 | H | 3 | Horn SN6276 | 2400.00 | 30.60 | | 28.08 | 3.48 | 0.00 | 31.56 | 62.16 | PK | 3.00 | 0.00 | 81.70 | 19.54 | PASS |
| 1 | H | 3 | Horn SN6276 | 2400.00 | 20.30 | | 28.08 | 3.48 | 0.00 | 31.56 | 51.86 | AV | 3.00 | 0.00 | 81.70 | 29.84 | PASS |

| D.9.4. Mode b - Band-edge Emission Field Strengths @ Specified Distance - Vertical Polarization (not near restricted band) | | | | | | | | | | | | | | | | | |
|--|---|---|-------------|---------|-------|--|-------|------|------|-------|-------|----|------|------|-------|-------|------|
| 1 | V | 3 | Horn SN6276 | 2400.00 | 27.60 | | 28.08 | 3.48 | 0.00 | 31.56 | 59.16 | PK | 3.00 | 0.00 | 76.09 | 16.93 | PASS |
| 1 | V | 3 | Horn SN6276 | 2400.00 | 18.70 | | 28.08 | 3.48 | 0.00 | 31.56 | 50.26 | AV | 3.00 | 0.00 | 76.09 | 25.83 | PASS |


Formulae:
 Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)
 Field Strength = SA Reading + Total CF
 Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:
 where d1 is the measurement distance, d2 is the published limit distance
 Limit = Specified Limit + Limit Distance Correction
 Margin = Limit - Field Strength

| D.9.5. Mode g - Band-edge Emission Field Strengths @ Specified Distance – Horizontal Polarization (not near restricted band) | | | | | | | | | | | | | | | | | |
|--|----------|----------------------|-------------|-----------|-----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level* | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
| | | | | | | | | | | | | | m | dB | dB | dBuV/m | Δ dB |
| 1 | H | 3 | Horn SN6276 | 2400.00 | 89.24 | | 28.08 | 7.66 | -37.38 | -1.64 | 87.6 | PK | 3.00 | 0.00 | 88.4 | 0.8 | PASS |
| 1 | H | 3 | Horn SN6276 | 2400.00 | 66.04 | | 28.08 | 7.66 | -37.38 | -1.64 | 64.4 | AV | 3.00 | 0.00 | 88.4 | 24.0 | PASS |

| D.9.6. Mode b - Band-edge Emission Field Strengths @ Specified Distance - Vertical Polarization (not near restricted band) | | | | | | | | | | | | | | | | | |
|--|---|---|-------------|---------|-------|--|-------|------|--------|-------|-------|----|------|------|------|------|------|
| 1 | V | 3 | Horn SN6276 | 2400.00 | 82.84 | | 28.08 | 7.66 | -37.38 | -1.64 | 81.20 | PK | 3.00 | 0.00 | 82.6 | 1.4 | PASS |
| 1 | V | 3 | Horn SN6276 | 2400.00 | 63.54 | | 28.08 | 7.66 | -37.38 | -1.64 | 61.9 | AV | 3.00 | 0.00 | 82.6 | 20.7 | PASS |

Formulae:
 Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)
 Field Strength = SA Reading + Total CF
 Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:
 where d1 is the measurement distance, d2 is the published limit distance
 Limit = Specified Limit + Limit Distance Correction
 Margin = Limit - Field Strength

*Measurements made with a worse case gain setting of 29

| | | | | | |
|---|----------------------------|---------------|----------------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.7. Channel 1 Harmonic Emission Field Strengths @ Specified Distance - Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | | | | | |
| 1 | H | 3 | Horn SN6276 | 1000.00 | 53.90 | | 24.30 | 2.21 | -10.66 | 15.85 | 69.75 | PK | 3.00 | 0.00 | 81.70 | 11.95 | PASS |
| 1 | H | 3 | Horn SN6276 | 2500.00 | 42.60 | | 28.30 | 3.51 | -36.42 | -4.61 | 37.99 | PK | 3.00 | 0.00 | 81.70 | 43.71 | PASS |
| 1 | H | 3 | Horn SN6276 | 17660.00 | 38.00 | | 44.88 | 10.46 | -36.36 | 18.98 | 56.98 | PK | 3.00 | 0.00 | 81.70 | 24.72 | PASS |
| 1 | H | 1 | 3160-09 | 19296.00 | 52.98 | | 40.26 | 11.01 | -35.81 | 15.45 | 68.43 | PK | 3.00 | 9.54 | 91.24 | 22.81 | PASS |
| 1 | H | 1 | 3160-09 | 19296.00 | 34.05 | x | 40.26 | 11.01 | -35.81 | 15.45 | 49.50 | AV | 3.00 | 9.54 | 91.24 | 41.74 | PASS |
| 1 | H | 1 | 3160-09 | 21708.00 | 53.65 | x | 40.30 | 11.91 | -35.73 | 16.48 | 70.13 | PK | 3.00 | 9.54 | 91.24 | 21.11 | PASS |
| 1 | H | 1 | 3160-09 | 21708.00 | 35.74 | x | 40.30 | 11.91 | -35.73 | 16.48 | 52.22 | AV | 3.00 | 9.54 | 91.24 | 39.02 | PASS |
| 1 | H | 1 | 3160-09 | 24120.00 | 56.09 | | 40.40 | 12.81 | -35.73 | 17.48 | 73.57 | PK | 3.00 | 9.54 | 91.24 | 17.67 | PASS |
| 1 | H | 1 | 3160-09 | 24120.00 | 37.57 | | 40.40 | 12.81 | -35.73 | 17.48 | 55.05 | AV | 3.00 | 9.54 | 91.24 | 36.19 | PASS |
| 1 | H | 1 | 3160-09 | 24490.00 | 57.15 | x | 40.40 | 12.95 | -35.73 | 17.62 | 74.77 | PK | 3.00 | 9.54 | 91.24 | 16.47 | PASS |

D.9.8. Channel 1 Harmonic Emission Field Strengths @ Specified Distance - Vertical Polarization

| | | | | | | | | | | | | | | | | | |
|---|---|---|-------------|----------|-------|---|-------|-------|--------|-------|-------|----|------|------|-------|-------|------|
| 1 | V | 3 | Horn SN6276 | 4810.00 | 47.00 | x | 32.88 | 4.96 | -35.30 | 2.54 | 49.54 | PK | 3.00 | 0.00 | 76.09 | 26.55 | PASS |
| 1 | V | 3 | Horn SN6276 | 9610.00 | 36.60 | | 37.59 | 7.37 | -35.71 | 9.25 | 45.85 | AV | 3.00 | 0.00 | 76.09 | 30.24 | PASS |
| 1 | V | 1 | Horn SN6276 | 17770.00 | 37.60 | | 45.70 | 10.30 | -36.35 | 19.65 | 57.25 | PK | 3.00 | 9.54 | 85.63 | 28.39 | PASS |
| 1 | V | 1 | 3160-09 | 18820.00 | 53.92 | x | 40.20 | 11.05 | -35.87 | 15.38 | 69.30 | PK | 3.00 | 9.54 | 85.63 | 16.33 | PASS |
| 1 | V | 1 | 3160-09 | 18820.00 | 33.66 | x | 40.20 | 11.05 | -35.87 | 15.38 | 49.04 | AV | 3.00 | 9.54 | 85.63 | 36.59 | PASS |
| 1 | V | 1 | 3160-09 | 19296.00 | 52.65 | | 40.26 | 11.01 | -35.81 | 15.45 | 68.10 | PK | 3.00 | 9.54 | 85.63 | 17.53 | PASS |
| 1 | V | 1 | 3160-09 | 19296.00 | 33.76 | | 40.26 | 11.01 | -35.81 | 15.45 | 49.21 | AV | 3.00 | 9.54 | 85.63 | 36.42 | PASS |
| 1 | V | 1 | 3160-09 | 21708.00 | 53.27 | | 40.30 | 11.91 | -35.73 | 16.48 | 69.75 | PK | 3.00 | 9.54 | 85.63 | 15.88 | PASS |
| 1 | V | 1 | 3160-09 | 21708.00 | 36.04 | | 40.30 | 11.91 | -35.73 | 16.48 | 52.52 | AV | 3.00 | 9.54 | 85.63 | 33.11 | PASS |
| 1 | V | 1 | 3160-09 | 24120.00 | 56.03 | | 40.40 | 12.81 | -35.73 | 17.48 | 73.51 | PK | 3.00 | 9.54 | 85.63 | 12.12 | PASS |
| 1 | V | 1 | 3160-09 | 24120.00 | 37.21 | | 40.40 | 12.81 | -35.73 | 17.48 | 54.69 | AV | 3.00 | 9.54 | 85.63 | 30.94 | PASS |
| 1 | V | 1 | 3160-09 | 24550.00 | 56.31 | x | 40.40 | 12.97 | -35.73 | 17.64 | 73.95 | PK | 3.00 | 9.54 | 85.63 | 11.68 | PASS |
| 1 | V | 1 | 3160-09 | 24550.00 | 38.30 | x | 40.40 | 12.97 | -35.73 | 17.64 | 55.94 | AV | 3.00 | 9.54 | 85.63 | 29.69 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*No harmonic emission where measured above the field strengths noted

| | | | | | |
|---|----------------------------|---------------|----------------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.9. Channel 6 Harmonic Emission Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | Δ dB | |
| 6 | H | 3 | Horn SN6276 | 5260.00 | 45.20 | x | 33.72 | 5.23 | -35.47 | 3.47 | 48.67 | PK | 3.00 | 0.00 | 81.67 | 33.00 | PASS |
| 6 | H | 3 | Horn SN6276 | 8360.00 | 42.30 | | 37.06 | 6.79 | -35.62 | 8.24 | 50.54 | AV | 3.00 | 0.00 | 81.67 | 31.13 | PASS |
| 6 | H | 3 | Horn SN6276 | 17090.00 | 39.20 | | 41.24 | 10.38 | -36.09 | 15.54 | 54.74 | PK | 3.00 | 0.00 | 81.67 | 26.93 | PASS |
| 6 | H | 1 | 3160-09 | 19496.00 | 52.56 | | 40.30 | 11.28 | -35.79 | 15.79 | 68.35 | PK | 3.00 | 9.54 | 91.21 | 22.86 | PASS |
| 6 | H | 1 | 3160-09 | 19496.00 | 33.91 | | 40.30 | 11.28 | -35.79 | 15.79 | 49.70 | AV | 3.00 | 9.54 | 91.21 | 41.51 | PASS |
| 6 | H | 1 | 3160-09 | 21240.00 | 54.98 | x | 40.30 | 11.73 | -35.73 | 16.31 | 71.29 | PK | 3.00 | 9.54 | 91.21 | 19.93 | PASS |
| 6 | H | 1 | 3160-09 | 21240.00 | 35.72 | x | 40.30 | 11.73 | -35.73 | 16.31 | 52.03 | AV | 3.00 | 9.54 | 91.21 | 39.19 | PASS |
| 6 | H | 1 | 3160-09 | 21933.00 | 54.66 | | 40.30 | 11.99 | -35.73 | 16.57 | 71.23 | PK | 3.00 | 9.54 | 91.21 | 19.99 | PASS |
| 6 | H | 1 | 3160-09 | 21933.00 | 36.27 | | 40.30 | 11.99 | -35.73 | 16.57 | 52.84 | AV | 3.00 | 9.54 | 91.21 | 38.38 | PASS |
| 6 | H | 1 | 3160-09 | 24370.00 | 57.10 | | 40.40 | 12.90 | -35.73 | 17.58 | 74.68 | PK | 3.00 | 9.54 | 91.21 | 16.54 | PASS |
| 6 | H | 1 | 3160-09 | 24370.00 | 37.88 | | 40.40 | 12.90 | -35.73 | 17.58 | 55.46 | AV | 3.00 | 9.54 | 91.21 | 35.76 | PASS |
| 6 | H | 1 | 3160-09 | 24420.00 | 56.93 | x | 40.40 | 12.92 | -35.73 | 17.60 | 74.53 | PK | 3.00 | 9.54 | 91.21 | 16.69 | PASS |
| 6 | H | 1 | 3160-09 | 24420.00 | 37.73 | x | 40.40 | 12.92 | -35.73 | 17.60 | 55.33 | AV | 3.00 | 9.54 | 91.21 | 35.89 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*No harmonic emission where measured above the field strengths noted

| | | | | | |
|--|---------------------|--|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
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| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.10. Channel 6 Harmonic Emission Field Strengths @ Specified Distance - Vertical Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|-------------|-----------|
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | | m | dB | dBuV/m | Δ dB | |
| 6 | V | 3 | Horn SN6276 | 5770.00 | 40.10 | x | 34.21 | 5.45 | -35.50 | 4.16 | 44.26 | PK | 3.00 | 0.00 | 75.37 | 31.11 | PASS |
| 6 | V | 3 | Horn SN6276 | 9720.00 | 36.80 | | 37.68 | 7.34 | -35.71 | 9.31 | 46.11 | PK | 3.00 | 0.00 | 75.37 | 29.26 | PASS |
| 6 | V | 1 | Horn SN6276 | 16480.00 | 38.30 | | 38.45 | 10.25 | -36.46 | 12.24 | 50.54 | PK | 3.00 | 9.54 | 84.91 | 34.37 | PASS |
| 6 | V | 1 | 3160-09 | 19190.00 | 54.26 | x | 40.24 | 10.91 | -35.83 | 15.32 | 69.58 | PK | 3.00 | 9.54 | 84.91 | 15.33 | PASS |
| 6 | V | 1 | 3160-09 | 19190.00 | 33.78 | x | 40.24 | 10.91 | -35.83 | 15.32 | 49.10 | AV | 3.00 | 9.54 | 84.91 | 35.81 | PASS |
| 6 | V | 1 | 3160-09 | 19496.00 | 52.89 | | 40.30 | 11.28 | -35.79 | 15.79 | 68.68 | PK | 3.00 | 9.54 | 84.91 | 16.23 | PASS |
| 6 | V | 1 | 3160-09 | 19496.00 | 33.88 | | 40.30 | 11.28 | -35.79 | 15.79 | 49.67 | AV | 3.00 | 9.54 | 84.91 | 35.24 | PASS |
| 6 | V | 1 | 3160-09 | 21933.00 | 53.99 | | 40.30 | 11.99 | -35.73 | 16.57 | 70.56 | PK | 3.00 | 9.54 | 84.91 | 14.36 | PASS |
| 6 | V | 1 | 3160-09 | 21933.00 | 36.23 | | 40.30 | 11.99 | -35.73 | 16.57 | 52.80 | AV | 3.00 | 9.54 | 84.91 | 32.12 | PASS |
| 6 | V | 1 | 3160-09 | 24370.00 | 55.56 | | 40.40 | 12.90 | -35.73 | 17.58 | 73.14 | PK | 3.00 | 9.54 | 84.91 | 11.78 | PASS |
| 6 | V | 1 | 3160-09 | 24370.00 | 37.88 | | 40.40 | 12.90 | -35.73 | 17.58 | 55.46 | AV | 3.00 | 9.54 | 84.91 | 29.46 | PASS |
| 6 | V | 1 | 3160-09 | 24400.00 | 56.66 | x | 40.40 | 12.91 | -35.73 | 17.59 | 74.25 | PK | 3.00 | 9.54 | 84.91 | 10.66 | PASS |
| 6 | V | 1 | 3160-09 | 24400.00 | 37.87 | x | 40.40 | 12.91 | -35.73 | 17.59 | 55.46 | AV | 3.00 | 9.54 | 84.91 | 29.45 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*No harmonic emission where measured above the field strengths noted

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.11. Channel 11 Harmonic Emission Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | Δ dB | |
| 11 | H | 3 | Horn SN6276 | 5260.00 | 45.80 | x | 33.72 | 5.23 | -35.47 | 3.47 | 49.27 | PK | 3.00 | 0.00 | 82.23 | 32.96 | PASS |
| 11 | H | 3 | Horn SN6276 | 8360.00 | 42.10 | | 37.06 | 6.79 | -35.62 | 8.24 | 50.34 | PK | 3.00 | 0.00 | 82.23 | 31.89 | PASS |
| 11 | H | 1 | Horn SN6276 | 15920.00 | 38.90 | | 37.38 | 9.83 | -36.23 | 10.98 | 49.88 | PK | 3.00 | 9.54 | 91.77 | 41.89 | PASS |
| 11 | H | 1 | 3160-09 | 18810.00 | 53.72 | x | 40.20 | 11.15 | -35.87 | 15.48 | 69.20 | PK | 3.00 | 9.54 | 91.77 | 22.58 | PASS |
| 11 | H | 1 | 3160-09 | 18810.00 | 33.94 | x | 40.20 | 11.15 | -35.87 | 15.48 | 49.42 | AV | 3.00 | 9.54 | 91.77 | 42.36 | PASS |
| 11 | H | 1 | 3160-09 | 19696.00 | 53.67 | | 40.30 | 11.42 | -35.76 | 15.95 | 69.62 | PK | 3.00 | 9.54 | 91.77 | 22.15 | PASS |
| 11 | H | 1 | 3160-09 | 19696.00 | 33.44 | | 40.30 | 11.42 | -35.76 | 15.95 | 49.39 | AV | 3.00 | 9.54 | 91.77 | 42.38 | PASS |
| 11 | H | 1 | 3160-09 | 22158.00 | 53.69 | | 40.33 | 12.08 | -35.73 | 16.68 | 70.37 | PK | 3.00 | 9.54 | 91.77 | 21.40 | PASS |
| 11 | H | 1 | 3160-09 | 22158.00 | 35.90 | | 40.33 | 12.08 | -35.73 | 16.68 | 52.58 | AV | 3.00 | 9.54 | 91.77 | 39.19 | PASS |
| 11 | H | 1 | 3160-09 | 24620.00 | 55.75 | | 40.40 | 13.00 | -35.73 | 17.67 | 73.42 | PK | 3.00 | 9.54 | 91.77 | 18.35 | PASS |
| 11 | H | 1 | 3160-09 | 24620.00 | 37.57 | | 40.40 | 13.00 | -35.73 | 17.67 | 55.24 | AV | 3.00 | 9.54 | 91.77 | 36.53 | PASS |
| 11 | H | 1 | 3160-09 | 24460.00 | 56.88 | x | 40.40 | 12.94 | -35.73 | 17.61 | 74.49 | PK | 3.00 | 9.54 | 91.77 | 17.28 | PASS |
| 11 | H | 1 | 3160-09 | 24460.00 | 37.32 | x | 40.40 | 12.94 | -35.73 | 17.61 | 54.93 | AV | 3.00 | 9.54 | 91.77 | 36.84 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*No harmonic emission where measured above the field strengths noted

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.12. Channel 11 Harmonic Emission Field Strengths @ Specified Distance - Vertical Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dB | dBuV/m | |
| 11 | V | 3 | Horn SN6276 | 5770.00 | 42.50 | x | 34.21 | 5.45 | -35.50 | 4.16 | 46.66 | PK | 3.00 | 0.00 | 76.64 | 29.98 | PASS |
| 11 | V | 1 | Horn SN6276 | 16680.00 | 39.00 | | 39.29 | 10.24 | -36.14 | 13.40 | 52.40 | PK | 3.00 | 9.54 | 86.18 | 33.79 | PASS |
| 11 | V | 1 | 3160-09 | 19696.00 | 53.07 | | 40.30 | 11.42 | -35.76 | 15.95 | 69.02 | PK | 3.00 | 9.54 | 86.18 | 17.16 | PASS |
| 11 | V | 1 | 3160-09 | 19696.00 | 33.28 | | 40.30 | 11.42 | -35.76 | 15.95 | 49.23 | AV | 3.00 | 9.54 | 86.18 | 36.95 | PASS |
| 11 | V | 1 | 3160-09 | 20660.00 | 55.02 | x | 40.30 | 11.74 | -35.73 | 16.31 | 71.33 | PK | 3.00 | 9.54 | 86.18 | 14.85 | PASS |
| 11 | V | 1 | 3160-09 | 20660.00 | 35.18 | x | 40.30 | 11.74 | -35.73 | 16.31 | 51.49 | AV | 3.00 | 9.54 | 86.18 | 34.69 | PASS |
| 11 | V | 1 | 3160-09 | 22158.00 | 54.12 | | 40.33 | 12.08 | -35.73 | 16.68 | 70.80 | PK | 3.00 | 9.54 | 86.18 | 15.38 | PASS |
| 11 | V | 1 | 3160-09 | 22158.00 | 35.80 | | 40.33 | 12.08 | -35.73 | 16.68 | 52.48 | AV | 3.00 | 9.54 | 86.18 | 33.70 | PASS |
| 11 | V | 1 | 3160-09 | 23950.00 | 57.28 | x | 40.40 | 12.75 | -35.73 | 17.42 | 74.70 | PK | 3.00 | 9.54 | 86.18 | 11.48 | PASS |
| 11 | V | 1 | 3160-09 | 23950.00 | 36.43 | x | 40.40 | 12.75 | -35.73 | 17.42 | 53.85 | AV | 3.00 | 9.54 | 86.18 | 32.33 | PASS |
| 11 | V | 1 | 3160-09 | 24620.00 | 55.73 | | 40.40 | 13.00 | -35.73 | 17.67 | 73.40 | PK | 3.00 | 9.54 | 86.18 | 12.78 | PASS |
| 11 | V | 1 | 3160-09 | 24620.00 | 37.92 | | 40.40 | 13.00 | -35.73 | 17.67 | 55.59 | AV | 3.00 | 9.54 | 86.18 | 30.59 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)


Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:
 where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*No harmonic emission where measured above the field strengths noted

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.13. Channel 1 Out-of-Band Spurious Emission Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dB | dBuV/m | |
| 1 | H | 3 | Bilog SN1607 | 57.48 | 49.20 | | 5.53 | 0.53 | 0.00 | 6.06 | 55.26 | PK | 3.00 | 0.00 | 81.70 | 26.44 | PASS |
| 1 | H | 3 | Bilog SN1607 | 99.52 | 35.20 | | 9.90 | 0.84 | 0.00 | 10.75 | 45.95 | PK | 3.00 | 0.00 | 81.70 | 35.75 | PASS |
| 1 | H | 3 | Bilog SN1607 | 107.28 | 36.80 | | 10.65 | 0.89 | 0.00 | 11.55 | 48.35 | PK | 3.00 | 0.00 | 81.70 | 33.35 | PASS |
| 1 | H | 3 | Bilog SN1607 | 167.09 | 32.00 | | 9.40 | 0.98 | 0.00 | 10.39 | 42.39 | PK | 3.00 | 0.00 | 81.70 | 39.31 | PASS |
| 1 | H | 3 | Bilog SN1607 | 208.48 | 27.30 | | 8.25 | 1.04 | 0.00 | 9.29 | 36.59 | PK | 3.00 | 0.00 | 81.70 | 45.11 | PASS |
| 1 | H | 3 | Bilog SN1607 | 245.34 | 30.00 | | 11.79 | 1.10 | 0.00 | 12.89 | 42.89 | PK | 3.00 | 0.00 | 81.70 | 38.81 | PASS |
| 1 | H | 3 | Bilog SN1607 | 380.82 | 35.30 | | 15.43 | 1.30 | 0.00 | 16.73 | 52.03 | PK | 3.00 | 0.00 | 81.70 | 29.67 | PASS |
| 1 | H | 3 | Bilog SN1607 | 787.89 | 20.30 | | 22.46 | 1.90 | 0.00 | 24.36 | 44.66 | PK | 3.00 | 0.00 | 81.70 | 37.04 | PASS |
| 1 | H | 3 | Bilog SN1607 | 855.15 | 31.30 | | 23.55 | 1.99 | 0.00 | 25.54 | 56.84 | PK | 3.00 | 0.00 | 81.70 | 24.86 | PASS |
| 1 | H | 3 | Bilog SN1607 | 931.78 | 36.00 | | 24.89 | 2.11 | 0.00 | 27.00 | 63.00 | PK | 3.00 | 0.00 | 81.70 | 18.70 | PASS |
| 1 | H | 3 | Horn SN6276 | 2500.00 | 42.60 | | 28.30 | 3.51 | -36.42 | -4.61 | 37.99 | PK | 3.00 | 0.00 | 81.70 | 43.71 | PASS |
| 1 | H | 3 | Horn SN6276 | 4810.00 | 22.60 | x | 32.88 | 4.96 | 0.00 | 37.85 | 60.45 | PK | 3.00 | 0.00 | 81.70 | 21.25 | PASS |
| 1 | H | 3 | Horn SN6276 | 5240.00 | 23.30 | x | 33.68 | 5.22 | 0.00 | 38.91 | 62.21 | PK | 3.00 | 0.00 | 81.70 | 19.49 | PASS |
| 1 | H | 3 | Horn SN6276 | 7230.00 | 38.90 | | 35.71 | 6.27 | -35.56 | 6.41 | 45.31 | PK | 3.00 | 0.00 | 81.70 | 36.39 | PASS |
| 1 | H | 3 | Horn SN6276 | 9610.00 | 37.10 | | 37.59 | 7.37 | -35.67 | 9.29 | 46.39 | PK | 3.00 | 0.00 | 81.70 | 35.31 | PASS |
| 1 | H | 3 | Horn SN6276 | 17660.00 | 38.00 | x | 44.88 | 10.46 | -36.02 | 19.33 | 57.33 | PK | 3.00 | 0.00 | 81.70 | 24.37 | PASS |
| 1 | H | 1 | 3160-09 | 19296.00 | 52.98 | | 40.26 | 11.01 | -35.81 | 15.45 | 68.43 | PK | 3.00 | 9.54 | 91.24 | 22.81 | PASS |
| 1 | H | 1 | 3160-09 | 19296.00 | 34.05 | | 40.26 | 11.01 | -35.81 | 15.45 | 49.50 | AV | 3.00 | 9.54 | 91.24 | 41.74 | PASS |
| 1 | H | 1 | 3160-09 | 21708.00 | 53.65 | | 40.30 | 11.91 | -35.73 | 16.48 | 70.13 | PK | 3.00 | 9.54 | 91.24 | 21.11 | PASS |
| 1 | H | 1 | 3160-09 | 21708.00 | 35.74 | | 40.30 | 11.91 | -35.73 | 16.48 | 52.22 | AV | 3.00 | 9.54 | 91.24 | 39.02 | PASS |
| 1 | H | 1 | 3160-09 | 24120.00 | 56.09 | | 40.40 | 12.81 | -35.73 | 17.48 | 73.57 | PK | 3.00 | 9.54 | 91.24 | 17.67 | PASS |
| 1 | H | 1 | 3160-09 | 24120.00 | 37.57 | | 40.40 | 12.81 | -35.73 | 17.48 | 55.05 | AV | 3.00 | 9.54 | 91.24 | 36.19 | PASS |
| 1 | H | 1 | 3160-09 | 24490.00 | 57.15 | | 40.40 | 12.95 | -35.73 | 17.62 | 74.77 | PK | 3.00 | 9.54 | 91.24 | 16.47 | PASS |
| 1 | H | 1 | 3160-09 | 24490.00 | 38.00 | | 40.40 | 12.95 | -35.73 | 17.62 | 55.62 | AV | 3.00 | 9.54 | 91.24 | 35.62 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. Emissions that may be present in the restricted bands are evaluated against the appropriate limits in Appendix F. No out-of-band emissions were measured above the levels noted.

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.14. Channel 1 Out-of-Band Spurious Emission Field Strengths @ Specified Distance - Vertical Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | | | | | |
| 1 | V | 3 | LP-105 | 0.078 | 17.37 | | 48.70 | 0.03 | 0.00 | 48.73 | 66.10 | PK | 3.00 | 0.00 | 76.09 | 9.99 | PASS |
| 1 | V | 3 | LG-105 | 0.203 | 1.41 | | 59.86 | 0.07 | 0.00 | 59.94 | 61.35 | PK | 3.00 | 0.00 | 76.09 | 14.74 | PASS |
| 1 | V | 3 | LG-105 | 0.485 | 2.42 | | 58.03 | 0.09 | 0.00 | 58.12 | 60.54 | PK | 3.00 | 0.00 | 76.09 | 15.55 | PASS |
| 1 | V | 3 | LG-105 | 1.50 | 9.04 | | 53.10 | 0.15 | 0.00 | 53.25 | 62.29 | PK | 3.00 | 0.00 | 76.09 | 13.80 | PASS |
| 1 | V | 3 | LG-105 | 2.62 | 7.21 | | 50.69 | 0.20 | 0.00 | 50.89 | 58.10 | PK | 3.00 | 0.00 | 76.09 | 17.99 | PASS |
| 1 | V | 3 | LG-105 | 5.48 | 11.74 | | 44.38 | 0.31 | 0.00 | 44.68 | 56.42 | PK | 3.00 | 0.00 | 76.09 | 19.67 | PASS |
| 1 | V | 3 | LG-105 | 27.15 | 10.24 | | 40.62 | 0.68 | 0.00 | 41.30 | 51.54 | PK | 3.00 | 0.00 | 76.09 | 24.55 | PASS |
| 1 | V | 3 | Bilog SN1607 | 99.52 | 29.60 | | 9.90 | 0.84 | 0.00 | 10.75 | 40.35 | PK | 3.00 | 0.00 | 76.09 | 35.74 | PASS |
| 1 | V | 3 | Bilog SN1607 | 208.80 | 46.80 | | 8.28 | 1.04 | 0.00 | 9.32 | 56.12 | PK | 3.00 | 0.00 | 76.09 | 19.97 | PASS |
| 1 | V | 3 | Bilog SN1607 | 245.34 | 52.50 | | 11.79 | 1.10 | 0.00 | 12.89 | 65.39 | PK | 3.00 | 0.00 | 76.09 | 10.70 | PASS |
| 1 | V | 3 | Bilog SN1607 | 449.36 | 44.80 | | 17.03 | 1.40 | 0.00 | 18.43 | 63.23 | PK | 3.00 | 0.00 | 76.09 | 12.86 | PASS |
| 1 | V | 3 | Bilog SN1607 | 736.16 | 23.70 | | 22.93 | 1.82 | 0.00 | 24.75 | 48.45 | PK | 3.00 | 0.00 | 76.09 | 27.64 | PASS |
| 1 | V | 3 | Bilog SN1607 | 772.70 | 44.40 | | 22.57 | 1.87 | 0.00 | 24.45 | 68.85 | PK | 3.00 | 0.00 | 76.09 | 7.24 | PASS |
| 1 | V | 3 | Horn SN6276 | 3200.00 | 43.50 | | 30.48 | 4.04 | -35.93 | -1.40 | 42.10 | PK | 3.00 | 0.00 | 76.09 | 33.99 | PASS |
| 1 | V | 3 | Horn SN6276 | 4810.00 | 47.00 | | 32.88 | 4.96 | -35.30 | 2.54 | 49.54 | PK | 3.00 | 0.00 | 76.09 | 26.55 | PASS |
| 1 | V | 3 | Horn SN6276 | 5260.00 | 40.10 | | 33.72 | 5.23 | -35.34 | 3.61 | 43.71 | PK | 3.00 | 0.00 | 76.09 | 32.38 | PASS |
| 1 | V | 3 | Horn SN6276 | 5720.00 | 41.60 | | 34.19 | 5.44 | -35.38 | 4.25 | 45.85 | PK | 3.00 | 0.00 | 76.09 | 30.24 | PASS |
| 1 | V | 3 | Horn SN6276 | 5770.00 | 44.80 | | 34.21 | 5.45 | -35.38 | 4.28 | 49.08 | PK | 3.00 | 0.00 | 76.09 | 27.01 | PASS |
| 1 | V | 3 | Horn SN6276 | 7520.00 | 40.40 | | 36.32 | 6.43 | -35.53 | 7.21 | 47.61 | PK | 3.00 | 0.00 | 76.09 | 28.48 | PASS |
| 1 | V | 3 | Horn SN6276 | 8360.00 | 37.60 | | 37.06 | 6.79 | -35.60 | 8.25 | 45.85 | PK | 3.00 | 0.00 | 76.09 | 30.24 | PASS |
| 1 | V | 3 | Horn SN6276 | 9610.00 | 36.60 | | 37.59 | 7.37 | -35.71 | 9.25 | 45.85 | PK | 3.00 | 0.00 | 76.09 | 30.24 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:


where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. Emissions that may be present in the restricted bands are evaluated against the appropriate limits in Appendix F. No out-of-band emissions were measured above the levels noted.**

Continued

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Continued

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | Δ dB | |
| 1 | V | 3 | Horn SN6276 | 12640.00 | 36.90 | | 38.71 | 8.68 | -36.79 | 10.59 | 47.49 | PK | 3.00 | 0.00 | 76.09 | 28.60 | PASS |
| 1 | V | 3 | Horn SN6276 | 15740.00 | 38.20 | | 37.56 | 9.77 | -36.53 | 10.80 | 49.00 | PK | 3.00 | 0.00 | 76.09 | 27.09 | PASS |
| 1 | V | 3 | Horn SN6276 | 17770.00 | 37.60 | x | 45.70 | 10.30 | -36.35 | 19.65 | 57.25 | PK | 3.00 | 0.00 | 76.09 | 18.84 | PASS |
| 1 | V | 1 | 3160-09 | 18820.00 | 53.92 | x | 40.20 | 11.05 | -35.87 | 15.38 | 69.30 | PK | 3.00 | 9.54 | 85.63 | 16.33 | PASS |
| 1 | V | 1 | 3160-09 | 18820.00 | 33.66 | x | 40.20 | 11.05 | -35.87 | 15.38 | 49.04 | AV | 3.00 | 9.54 | 85.63 | 36.59 | PASS |
| 1 | V | 1 | 3160-09 | 19296.00 | 52.65 | | 40.26 | 11.01 | -35.81 | 15.45 | 68.10 | PK | 3.00 | 9.54 | 85.63 | 17.53 | PASS |
| 1 | V | 1 | 3160-09 | 19296.00 | 33.76 | | 40.26 | 11.01 | -35.81 | 15.45 | 49.21 | AV | 3.00 | 9.54 | 85.63 | 36.42 | PASS |
| 1 | V | 1 | 3160-09 | 21708.00 | 53.27 | | 40.30 | 11.91 | -35.73 | 16.48 | 69.75 | PK | 3.00 | 9.54 | 85.63 | 15.88 | PASS |
| 1 | V | 1 | 3160-09 | 21708.00 | 36.04 | | 40.30 | 11.91 | -35.73 | 16.48 | 52.52 | AV | 3.00 | 9.54 | 85.63 | 33.11 | PASS |
| 1 | V | 1 | 3160-09 | 24120.00 | 56.03 | | 40.40 | 12.81 | -35.73 | 17.48 | 73.51 | PK | 3.00 | 9.54 | 85.63 | 12.12 | PASS |
| 1 | V | 1 | 3160-09 | 24120.00 | 37.21 | | 40.40 | 12.81 | -35.73 | 17.48 | 54.69 | AV | 3.00 | 9.54 | 85.63 | 30.94 | PASS |
| 1 | V | 1 | 3160-09 | 24550.00 | 56.31 | x | 40.40 | 12.97 | -35.73 | 17.64 | 73.95 | PK | 3.00 | 9.54 | 85.63 | 11.68 | PASS |
| 1 | V | 1 | 3160-09 | 24550.00 | 38.30 | x | 40.40 | 12.97 | -35.73 | 17.64 | 55.94 | AV | 3.00 | 9.54 | 85.63 | 29.69 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. Emissions that may be present in the restricted bands are evaluated against the appropriate limits in Appendix F. No out-of-band emissions were measured above the levels noted.**

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.15. Channel 6 Out-of-Band Spurious Emission Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dB | dBuV/m | |
| 6 | H | 3 | Bilog SN1607 | 60.70 | 29.20 | | 5.03 | 0.56 | 0.00 | 5.59 | 34.79 | PK | 3.00 | 0.00 | 81.67 | 46.88 | PASS |
| 6 | H | 3 | Bilog SN1607 | 107.28 | 36.50 | | 10.65 | 0.89 | 0.00 | 11.55 | 48.05 | PK | 3.00 | 0.00 | 81.67 | 33.62 | PASS |
| 6 | H | 3 | Bilog SN1607 | 149.96 | 34.10 | | 10.70 | 0.96 | 0.00 | 11.66 | 45.76 | PK | 3.00 | 0.00 | 81.67 | 35.91 | PASS |
| 6 | H | 3 | Bilog SN1607 | 208.48 | 29.70 | | 8.25 | 1.04 | 0.00 | 9.29 | 38.99 | PK | 3.00 | 0.00 | 81.67 | 42.68 | PASS |
| 6 | H | 3 | Bilog SN1607 | 245.34 | 34.80 | | 11.79 | 1.10 | 0.00 | 12.89 | 47.69 | PK | 3.00 | 0.00 | 81.67 | 33.98 | PASS |
| 6 | H | 3 | Bilog SN1607 | 786.92 | 24.50 | | 22.47 | 1.89 | 0.00 | 24.36 | 48.86 | PK | 3.00 | 0.00 | 81.67 | 32.81 | PASS |
| 6 | H | 3 | Bilog SN1607 | 929.51 | 19.50 | | 24.83 | 2.10 | 0.00 | 26.94 | 46.44 | PK | 3.00 | 0.00 | 81.67 | 35.23 | PASS |
| 6 | H | 3 | Horn SN6276 | 2750.00 | 38.60 | | 29.15 | 3.69 | -36.38 | -3.53 | 35.07 | PK | 3.00 | 0.00 | 81.67 | 46.60 | PASS |
| 6 | H | 3 | Horn SN6276 | 3240.00 | 37.00 | | 30.58 | 4.06 | -36.12 | -1.48 | 35.52 | PK | 3.00 | 0.00 | 81.67 | 46.15 | PASS |
| 6 | H | 3 | Horn SN6276 | 4860.00 | 36.70 | | 32.99 | 5.02 | -35.46 | 2.55 | 39.25 | PK | 3.00 | 0.00 | 81.67 | 42.42 | PASS |
| 6 | H | 3 | Horn SN6276 | 5260.00 | 45.20 | | 33.72 | 5.23 | -35.47 | 3.47 | 48.67 | PK | 3.00 | 0.00 | 81.67 | 33.00 | PASS |
| 6 | H | 3 | Horn SN6276 | 5770.00 | 37.20 | | 34.21 | 5.45 | -35.50 | 4.16 | 41.36 | PK | 3.00 | 0.00 | 81.67 | 40.31 | PASS |
| 6 | H | 3 | Horn SN6276 | 8280.00 | 38.40 | | 36.98 | 6.75 | -35.61 | 8.11 | 46.51 | PK | 3.00 | 0.00 | 81.67 | 35.16 | PASS |
| 6 | H | 3 | Horn SN6276 | 8360.00 | 42.30 | | 37.06 | 6.79 | -35.62 | 8.24 | 50.54 | PK | 3.00 | 0.00 | 81.67 | 31.13 | PASS |
| 6 | H | 3 | Horn SN6276 | 17090.00 | 39.20 | | 41.24 | 10.38 | -36.09 | 15.54 | 54.74 | PK | 3.00 | 0.00 | 81.67 | 26.93 | PASS |
| 6 | H | 1 | 3160-09 | 19496.00 | 52.56 | | 40.30 | 11.28 | -35.79 | 15.79 | 68.35 | PK | 3.00 | 9.54 | 91.21 | 22.86 | PASS |
| 6 | H | 1 | 3160-09 | 19496.00 | 33.91 | | 40.30 | 11.28 | -35.79 | 15.79 | 49.70 | AV | 3.00 | 9.54 | 91.21 | 41.51 | PASS |
| 6 | H | 1 | 3160-09 | 21240.00 | 54.98 | x | 40.30 | 11.73 | -35.73 | 16.31 | 71.29 | PK | 3.00 | 9.54 | 91.21 | 19.93 | PASS |
| 6 | H | 1 | 3160-09 | 21240.00 | 35.72 | x | 40.30 | 11.73 | -35.73 | 16.31 | 52.03 | AV | 3.00 | 9.54 | 91.21 | 39.19 | PASS |
| 6 | H | 1 | 3160-09 | 21933.00 | 54.66 | | 40.30 | 11.99 | -35.73 | 16.57 | 71.23 | PK | 3.00 | 9.54 | 91.21 | 19.99 | PASS |
| 6 | H | 1 | 3160-09 | 21933.00 | 36.27 | | 40.30 | 11.99 | -35.73 | 16.57 | 52.84 | AV | 3.00 | 9.54 | 91.21 | 38.38 | PASS |
| 6 | H | 1 | 3160-09 | 24370.00 | 57.10 | | 40.40 | 12.90 | -35.73 | 17.58 | 74.68 | PK | 3.00 | 9.54 | 91.21 | 16.54 | PASS |
| 6 | H | 1 | 3160-09 | 24370.00 | 37.88 | | 40.40 | 12.90 | -35.73 | 17.58 | 55.46 | AV | 3.00 | 9.54 | 91.21 | 35.76 | PASS |
| 6 | H | 1 | 3160-09 | 24420.00 | 56.93 | x | 40.40 | 12.92 | -35.73 | 17.60 | 74.53 | PK | 3.00 | 9.54 | 91.21 | 16.69 | PASS |
| 6 | H | 1 | 3160-09 | 24420.00 | 37.73 | x | 40.40 | 12.92 | -35.73 | 17.60 | 55.33 | AV | 3.00 | 9.54 | 91.21 | 35.89 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. Emissions that may be present in the restricted bands are evaluated against the appropriate limits in Appendix F. No out-of-band emissions were measured above the levels noted.

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.16. Channel 6 Out-of-Band Spurious Emission Field Strengths @ Specified Distance - Vertical Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | Δ dB | |
| 6 | V | 3 | LP-105 | 0.08 | 17.57 | | 48.71 | 0.05 | 0.00 | 48.76 | 66.33 | PK | 3.00 | 0.00 | 75.37 | 9.04 | PASS |
| 6 | V | 3 | LG-105 | 2.03 | 9.04 | | 52.21 | 0.17 | 0.00 | 52.39 | 61.43 | PK | 3.00 | 0.00 | 75.37 | 13.94 | PASS |
| 6 | V | 3 | LG-105 | 0.83 | 2.38 | | 57.38 | 0.11 | 0.00 | 57.49 | 59.87 | PK | 3.00 | 0.00 | 75.37 | 15.50 | PASS |
| 6 | V | 3 | LG-105 | 1.50 | 8.52 | | 53.11 | 0.15 | 0.00 | 53.26 | 61.78 | PK | 3.00 | 0.00 | 75.37 | 13.59 | PASS |
| 6 | V | 3 | LG-105 | 3.22 | 8.34 | | 49.31 | 0.23 | 0.00 | 49.54 | 57.88 | PK | 3.00 | 0.00 | 75.37 | 17.49 | PASS |
| 6 | V | 3 | LG-105 | 5.63 | 12.44 | | 44.09 | 0.31 | 0.00 | 44.40 | 56.84 | PK | 3.00 | 0.00 | 75.37 | 18.53 | PASS |
| 6 | V | 3 | LG-105 | 17.80 | 9.89 | | 41.04 | 0.55 | 0.00 | 41.59 | 51.48 | PK | 3.00 | 0.00 | 75.37 | 23.89 | PASS |
| 6 | V | 3 | Bilog SN1607 | 57.48 | 30.80 | | 5.53 | 0.53 | 0.00 | 6.06 | 36.86 | PK | 3.00 | 0.00 | 75.37 | 38.51 | PASS |
| 6 | V | 3 | Bilog SN1607 | 99.52 | 28.50 | | 9.90 | 0.84 | 0.00 | 10.75 | 39.25 | PK | 3.00 | 0.00 | 75.37 | 36.12 | PASS |
| 6 | V | 3 | Bilog SN1607 | 103.72 | 27.90 | | 10.33 | 0.88 | 0.00 | 11.21 | 39.11 | PK | 3.00 | 0.00 | 75.37 | 36.26 | PASS |
| 6 | V | 3 | Bilog SN1607 | 138.96 | 37.30 | | 11.14 | 0.94 | 0.00 | 12.08 | 49.38 | PK | 3.00 | 0.00 | 75.37 | 25.99 | PASS |
| 6 | V | 3 | Bilog SN1607 | 166.77 | 24.50 | | 9.43 | 0.98 | 0.00 | 10.41 | 34.91 | PK | 3.00 | 0.00 | 75.37 | 40.46 | PASS |
| 6 | V | 3 | Bilog SN1607 | 196.19 | 31.70 | | 8.47 | 1.03 | 0.00 | 9.49 | 41.19 | PK | 3.00 | 0.00 | 75.37 | 34.18 | PASS |
| 6 | V | 3 | Bilog SN1607 | 196.52 | 29.70 | | 8.44 | 1.03 | 0.00 | 9.47 | 39.17 | PK | 3.00 | 0.00 | 75.37 | 36.20 | PASS |
| 6 | V | 3 | Bilog SN1607 | 244.37 | 56.10 | | 11.68 | 1.10 | 0.00 | 12.78 | 68.88 | PK | 3.00 | 0.00 | 75.37 | 6.49 | PASS |
| 6 | V | 3 | Bilog SN1607 | 246.96 | 28.50 | | 11.97 | 1.10 | 0.00 | 13.07 | 41.57 | PK | 3.00 | 0.00 | 75.37 | 33.80 | PASS |
| 6 | V | 3 | Bilog SN1607 | 306.45 | 27.50 | | 13.40 | 1.19 | 0.00 | 14.58 | 42.08 | PK | 3.00 | 0.00 | 75.37 | 33.29 | PASS |
| 6 | V | 3 | Bilog SN1607 | 772.70 | 37.20 | | 22.57 | 1.87 | 0.00 | 24.45 | 61.65 | PK | 3.00 | 0.00 | 75.37 | 13.72 | PASS |
| 6 | V | 3 | Bilog SN1607 | 952.47 | 34.80 | | 25.36 | 2.14 | 0.00 | 27.50 | 62.30 | PK | 3.00 | 0.00 | 75.37 | 13.07 | PASS |
| 6 | V | 3 | Horn SN6276 | 2830.00 | 37.90 | | 29.42 | 3.75 | -36.33 | -3.16 | 34.74 | PK | 3.00 | 0.00 | 75.37 | 40.63 | PASS |
| 6 | V | 3 | Horn SN6276 | 5240.00 | 37.30 | | 33.68 | 5.22 | -35.47 | 3.43 | 40.73 | PK | 3.00 | 0.00 | 75.37 | 34.64 | PASS |
| 6 | V | 3 | Horn SN6276 | 5770.00 | 40.10 | | 34.21 | 5.45 | -35.50 | 4.16 | 44.26 | PK | 3.00 | 0.00 | 75.37 | 31.11 | PASS |
| 6 | V | 3 | Horn SN6276 | 7520.00 | 37.80 | | 36.32 | 6.43 | -35.58 | 7.17 | 44.97 | PK | 3.00 | 0.00 | 75.37 | 30.40 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:


where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. Emissions that may be present in the restricted bands are evaluated against the appropriate limits in Appendix F. No out-of-band emissions were measured above the levels noted.**

Continued

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Continued

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | Δ dB | |
| 6 | V | 3 | Horn SN6276 | 9720.00 | 36.80 | | 37.68 | 7.34 | -35.71 | 9.31 | 46.11 | PK | 3.00 | 0.00 | 75.37 | 29.26 | PASS |
| 6 | V | 3 | Horn SN6276 | 16480.00 | 38.30 | x | 38.45 | 10.25 | -36.16 | 12.54 | 50.84 | PK | 3.00 | 0.00 | 75.37 | 24.53 | PASS |
| 6 | V | 1 | 3160-09 | 19190.00 | 54.26 | x | 40.24 | 10.91 | -35.83 | 15.32 | 69.58 | PK | 3.00 | 9.54 | 84.91 | 15.33 | PASS |
| 6 | V | 1 | 3160-09 | 19190.00 | 33.78 | x | 40.24 | 10.91 | -35.83 | 15.32 | 49.10 | AV | 3.00 | 9.54 | 84.91 | 35.81 | PASS |
| 6 | V | 1 | 3160-09 | 19496.00 | 52.89 | | 40.30 | 11.28 | -35.79 | 15.79 | 68.68 | PK | 3.00 | 9.54 | 84.91 | 16.23 | PASS |
| 6 | V | 1 | 3160-09 | 19496.00 | 33.88 | | 40.30 | 11.28 | -35.79 | 15.79 | 49.67 | AV | 3.00 | 9.54 | 84.91 | 35.24 | PASS |
| 6 | V | 1 | 3160-09 | 21933.00 | 53.99 | | 40.30 | 11.99 | -35.73 | 16.57 | 70.56 | PK | 3.00 | 9.54 | 84.91 | 14.36 | PASS |
| 6 | V | 1 | 3160-09 | 21933.00 | 36.23 | | 40.30 | 11.99 | -35.73 | 16.57 | 52.80 | AV | 3.00 | 9.54 | 84.91 | 32.12 | PASS |
| 6 | V | 1 | 3160-09 | 24370.00 | 55.56 | | 40.40 | 12.90 | -35.73 | 17.58 | 73.14 | PK | 3.00 | 9.54 | 84.91 | 11.78 | PASS |
| 6 | V | 1 | 3160-09 | 24370.00 | 37.88 | | 40.40 | 12.90 | -35.73 | 17.58 | 55.46 | AV | 3.00 | 9.54 | 84.91 | 29.46 | PASS |
| 6 | V | 1 | 3160-09 | 24400.00 | 56.66 | x | 40.40 | 12.91 | -35.73 | 17.59 | 74.25 | PK | 3.00 | 9.54 | 84.91 | 10.66 | PASS |
| 6 | V | 1 | 3160-09 | 24400.00 | 37.87 | x | 40.40 | 12.91 | -35.73 | 17.59 | 55.46 | AV | 3.00 | 9.54 | 84.91 | 29.45 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)


Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:
 where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. Emissions that may be present in the restricted bands are evaluated against the appropriate limits in Appendix F. No out-of-band emissions were measured above the levels noted.**

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.17. Channel 11 Out-of-Band Spurious Emission Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dB | dBuV/m | |
| 11 | H | 3 | Bilog SN1607 | 57.80 | 48.10 | | 5.45 | 0.54 | 0.00 | 5.99 | 54.09 | PK | 3.00 | 0.00 | 82.23 | 28.14 | PASS |
| 11 | H | 3 | Bilog SN1607 | 101.13 | 38.90 | | 10.10 | 0.86 | 0.00 | 10.96 | 49.86 | PK | 3.00 | 0.00 | 82.23 | 32.37 | PASS |
| 11 | H | 3 | Bilog SN1607 | 141.55 | 31.30 | | 11.07 | 0.95 | 0.00 | 12.01 | 43.31 | PK | 3.00 | 0.00 | 82.23 | 38.92 | PASS |
| 11 | H | 3 | Bilog SN1607 | 208.80 | 31.20 | | 8.28 | 1.04 | 0.00 | 9.32 | 40.52 | PK | 3.00 | 0.00 | 82.23 | 41.71 | PASS |
| 11 | H | 3 | Bilog SN1607 | 297.72 | 29.20 | | 13.28 | 1.17 | 0.00 | 14.45 | 43.65 | PK | 3.00 | 0.00 | 82.23 | 38.58 | PASS |
| 11 | H | 3 | Bilog SN1607 | 381.14 | 44.00 | | 15.45 | 1.30 | 0.00 | 16.74 | 60.74 | PK | 3.00 | 0.00 | 82.23 | 21.49 | PASS |
| 11 | H | 3 | Bilog SN1607 | 772.70 | 28.40 | | 22.57 | 1.87 | 0.00 | 24.45 | 52.85 | PK | 3.00 | 0.00 | 82.23 | 29.38 | PASS |
| 11 | H | 3 | Bilog SN1607 | 944.39 | 31.30 | | 25.21 | 2.13 | 0.00 | 27.34 | 58.64 | PK | 3.00 | 0.00 | 82.23 | 23.59 | PASS |
| 11 | H | 3 | Horn SN6276 | 2810.00 | 37.50 | | 29.35 | 3.74 | -36.34 | -3.25 | 34.25 | PK | 3.00 | 0.00 | 82.23 | 47.98 | PASS |
| 11 | H | 3 | Horn SN6276 | 4900.00 | 39.50 | | 33.08 | 5.05 | -35.46 | 2.68 | 42.18 | PK | 3.00 | 0.00 | 82.23 | 40.05 | PASS |
| 11 | H | 3 | Horn SN6276 | 5260.00 | 45.80 | | 33.72 | 5.23 | -35.47 | 3.47 | 49.27 | PK | 3.00 | 0.00 | 82.23 | 32.96 | PASS |
| 11 | H | 3 | Horn SN6276 | 8280.00 | 39.30 | | 36.98 | 6.75 | -35.61 | 8.11 | 47.41 | PK | 3.00 | 0.00 | 82.23 | 34.82 | PASS |
| 11 | H | 3 | Horn SN6276 | 8360.00 | 42.10 | | 37.06 | 6.79 | -35.62 | 8.24 | 50.34 | PK | 3.00 | 0.00 | 82.23 | 31.89 | PASS |
| 11 | H | 3 | Horn SN6276 | 9820.00 | 39.00 | | 37.76 | 7.44 | -35.77 | 9.42 | 48.42 | PK | 3.00 | 0.00 | 82.23 | 33.81 | PASS |
| 11 | H | 3 | Horn SN6276 | 15920.00 | 38.90 | x | 37.38 | 9.83 | -36.23 | 10.98 | 49.88 | PK | 3.00 | 0.00 | 82.23 | 32.35 | PASS |
| 11 | H | 1 | 3160-09 | 18810.00 | 53.72 | x | 40.20 | 11.15 | -35.87 | 15.48 | 69.20 | PK | 3.00 | 9.54 | 91.77 | 22.58 | PASS |
| 11 | H | 1 | 3160-09 | 18810.00 | 33.94 | x | 40.20 | 11.15 | -35.87 | 15.48 | 49.42 | AV | 3.00 | 9.54 | 91.77 | 42.36 | PASS |
| 11 | H | 1 | 3160-09 | 19696.00 | 53.67 | | 40.30 | 11.42 | -35.76 | 15.95 | 69.62 | PK | 3.00 | 9.54 | 91.77 | 22.15 | PASS |
| 11 | H | 1 | 3160-09 | 19696.00 | 33.44 | | 40.30 | 11.42 | -35.76 | 15.95 | 49.39 | AV | 3.00 | 9.54 | 91.77 | 42.38 | PASS |
| 11 | H | 1 | 3160-09 | 22158.00 | 53.69 | | 40.33 | 12.08 | -35.73 | 16.68 | 70.37 | PK | 3.00 | 9.54 | 91.77 | 21.40 | PASS |
| 11 | H | 1 | 3160-09 | 22158.00 | 35.90 | | 40.33 | 12.08 | -35.73 | 16.68 | 52.58 | AV | 3.00 | 9.54 | 91.77 | 39.19 | PASS |
| 11 | H | 1 | 3160-09 | 24460.00 | 56.88 | x | 40.40 | 12.94 | -35.73 | 17.61 | 74.49 | PK | 3.00 | 9.54 | 91.77 | 17.28 | PASS |
| 11 | H | 1 | 3160-09 | 24460.00 | 37.32 | x | 40.40 | 12.94 | -35.73 | 17.61 | 54.93 | AV | 3.00 | 9.54 | 91.77 | 36.84 | PASS |
| 11 | H | 1 | 3160-09 | 24620.00 | 55.75 | | 40.40 | 13.00 | -35.73 | 17.67 | 73.42 | PK | 3.00 | 9.54 | 91.77 | 18.35 | PASS |
| 11 | H | 1 | 3160-09 | 24620.00 | 37.57 | | 40.40 | 13.00 | -35.73 | 17.67 | 55.24 | AV | 3.00 | 9.54 | 91.77 | 36.53 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. Emissions that may be present in the restricted bands are evaluated against the appropriate limits in Appendix F. No out-of-band emissions were measured above the levels noted.

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.9.18. Channel 11 Out-of-Band Spurious Emission Field Strengths @ Specified Distance – Vertical Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | -20 dBc Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|---------------|--------|-----------|
| | | | | | | | | | | | | | | | | | |
| 11 | V | 3 | LP-105 | 0.08 | 19.50 | | 48.79 | 0.04 | 0.00 | 48.83 | 68.33 | PK | 3.00 | 0.00 | 76.64 | 8.31 | PASS |
| 11 | V | 3 | LG-105 | 0.20 | 1.04 | | 59.88 | 0.07 | 0.00 | 59.95 | 60.99 | PK | 3.00 | 0.00 | 76.64 | 15.65 | PASS |
| 11 | V | 3 | LG-105 | 0.79 | 1.46 | | 57.46 | 0.12 | 0.00 | 57.57 | 59.03 | PK | 3.00 | 0.00 | 76.64 | 17.61 | PASS |
| 11 | V | 3 | LG-105 | 1.44 | 8.37 | | 53.25 | 0.15 | 0.00 | 53.40 | 61.77 | PK | 3.00 | 0.00 | 76.64 | 14.87 | PASS |
| 11 | V | 3 | LG-105 | 4.05 | 10.60 | | 47.10 | 0.26 | 0.00 | 47.36 | 57.96 | PK | 3.00 | 0.00 | 76.64 | 18.68 | PASS |
| 11 | V | 3 | LG-105 | 5.26 | 10.77 | | 44.79 | 0.30 | 0.00 | 45.09 | 55.86 | PK | 3.00 | 0.00 | 76.64 | 20.78 | PASS |
| 11 | V | 3 | LG-105 | 13.95 | 9.95 | | 40.60 | 0.50 | 0.00 | 41.09 | 51.04 | PK | 3.00 | 0.00 | 76.64 | 25.60 | PASS |
| 11 | V | 3 | Bilog SN1607 | 138.96 | 37.30 | | 11.14 | 0.94 | 0.00 | 12.08 | 49.38 | PK | 3.00 | 0.00 | 76.64 | 27.26 | PASS |
| 11 | V | 3 | Bilog SN1607 | 149.63 | 56.50 | | 10.72 | 0.96 | 0.00 | 11.68 | 68.18 | PK | 3.00 | 0.00 | 76.64 | 8.46 | PASS |
| 11 | V | 3 | Bilog SN1607 | 164.83 | 39.20 | | 9.57 | 0.98 | 0.00 | 10.54 | 49.74 | PK | 3.00 | 0.00 | 76.64 | 26.90 | PASS |
| 11 | V | 3 | Bilog SN1607 | 208.48 | 44.90 | | 8.25 | 1.04 | 0.00 | 9.29 | 54.19 | PK | 3.00 | 0.00 | 76.64 | 22.45 | PASS |
| 11 | V | 3 | Bilog SN1607 | 245.02 | 44.80 | | 11.75 | 1.10 | 0.00 | 12.85 | 57.65 | PK | 3.00 | 0.00 | 76.64 | 18.99 | PASS |
| 11 | V | 3 | Bilog SN1607 | 794.04 | 35.60 | | 22.51 | 1.90 | 0.00 | 24.42 | 60.02 | PK | 3.00 | 0.00 | 76.64 | 16.62 | PASS |
| 11 | V | 3 | Horn SN6276 | 2810.00 | 37.20 | | 29.35 | 3.74 | -36.34 | -3.25 | 33.95 | PK | 3.00 | 0.00 | 76.64 | 42.69 | PASS |
| 11 | V | 3 | Horn SN6276 | 5270.00 | 36.40 | | 33.73 | 5.24 | -35.47 | 3.49 | 39.89 | PK | 3.00 | 0.00 | 76.64 | 36.75 | PASS |
| 11 | V | 3 | Horn SN6276 | 5770.00 | 42.50 | | 34.21 | 5.45 | -35.50 | 4.16 | 46.66 | PK | 3.00 | 0.00 | 76.64 | 29.98 | PASS |
| 11 | V | 3 | Horn SN6276 | 9820.00 | 36.60 | | 37.76 | 7.44 | -35.77 | 9.42 | 46.02 | PK | 3.00 | 0.00 | 76.64 | 30.62 | PASS |
| 11 | V | 3 | Horn SN6276 | 16680.00 | 39.00 | x | 39.29 | 10.24 | -36.14 | 13.40 | 52.40 | PK | 3.00 | 0.00 | 76.64 | 24.24 | PASS |
| 11 | V | 1 | 3160-09 | 19696.00 | 53.07 | | 40.30 | 11.42 | -35.76 | 15.95 | 69.02 | PK | 3.00 | 9.54 | 86.18 | 17.16 | PASS |
| 11 | V | 1 | 3160-09 | 19696.00 | 33.28 | | 40.30 | 11.42 | -35.76 | 15.95 | 49.23 | AV | 3.00 | 9.54 | 86.18 | 36.95 | PASS |
| 11 | V | 1 | 3160-09 | 20660.00 | 55.02 | x | 40.30 | 11.74 | -35.73 | 16.31 | 71.33 | PK | 3.00 | 9.54 | 86.18 | 14.85 | PASS |
| 11 | V | 1 | 3160-09 | 20660.00 | 35.18 | x | 40.30 | 11.74 | -35.73 | 16.31 | 51.49 | AV | 3.00 | 9.54 | 86.18 | 34.69 | PASS |
| 11 | V | 1 | 3160-09 | 22158.00 | 54.12 | | 40.33 | 12.08 | -35.73 | 16.68 | 70.80 | PK | 3.00 | 9.54 | 86.18 | 15.38 | PASS |
| 11 | V | 1 | 3160-09 | 22158.00 | 35.80 | | 40.33 | 12.08 | -35.73 | 16.68 | 52.48 | AV | 3.00 | 9.54 | 86.18 | 33.70 | PASS |
| 11 | V | 1 | 3160-09 | 23950.00 | 57.28 | x | 40.40 | 12.75 | -35.73 | 17.42 | 74.70 | PK | 3.00 | 9.54 | 86.18 | 11.48 | PASS |
| 11 | V | 1 | 3160-09 | 23950.00 | 36.43 | x | 40.40 | 12.75 | -35.73 | 17.42 | 53.85 | AV | 3.00 | 9.54 | 86.18 | 32.33 | PASS |
| 11 | V | 1 | 3160-09 | 24620.00 | 55.73 | | 40.40 | 13.00 | -35.73 | 17.67 | 73.40 | PK | 3.00 | 9.54 | 86.18 | 12.78 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. Emissions that may be present in the restricted bands are evaluated against the appropriate limits in Appendix F. No out-of-band emissions were measured above the levels noted.**

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

D.10. PASS/FAIL

In reference to the results outlined in E.9, the DUT passes the requirements as stated in the reference standards as follows: FCC 15.247 (c): All emissions within any 100 kHz bandwidth outside the operating frequency band are greater than 20 dB below the maximum 100 kHz bandwidth signal within the operating band.


D.11. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.

04Aug04
Date


| | | | | | |
|--|---------------------|--|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Appendix E - Restricted Band Emissions Measurement

| E.1. REFERENCES | |
|-------------------------------------|--|
| Normative Reference Standard | FCC CFR 47 §15.205 (a) (b), FCC CFR 47 §15.209 (a) |
| Procedure Reference | FCC 97-114 |


| E.2. LIMITS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--|----------------------|------------------|----------------------|-----|-------------|--------------|--------------|-------------|--------------|-------------------|--------------|-----------|---------------|-------------------|----------|-----------|-------------|------------|-----------|-----------|-----------------|------------|-------------|---------|-----------------|---------|---------------|---------|-------------|-----------|-----------|-----------|-----------------|------------|---------------|------------|-----------------|---------|-----------|------------|-------------|--------------|-----------|------------|-------------|---------------------|-------------|-----------|-----------------|-------------|-----------|-------------|-----------------|-----------------|-----------|-----------|--------------|--------------|-----------|-----------|-------------------|---------|-------------|------------|-------------------|-----------|-----------|------------------|-------------|--|--|--|
| FCC CFR 47 §15.205 | <p>(a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">MHz</th> <th style="text-align: center;">MHz</th> <th style="text-align: center;">MHz</th> <th style="text-align: center;">GHz</th> </tr> </thead> <tbody> <tr><td>0.090–0.110</td><td>16.42–16.423</td><td>399.9–410</td><td>4.5–5.15</td></tr> <tr><td>1.0495–0.505</td><td>16.69475–16.69525</td><td>608–614</td><td>5.35–5.46</td></tr> <tr><td>2.1735–2.1905</td><td>16.80425–16.80475</td><td>960–1240</td><td>7.25–7.75</td></tr> <tr><td>4.125–4.128</td><td>25.5–25.67</td><td>1300–1427</td><td>8.025–8.5</td></tr> <tr><td>4.17725–4.17775</td><td>37.5–38.25</td><td>1435–1626.5</td><td>9.0–9.2</td></tr> <tr><td>4.20725–4.20775</td><td>73–74.6</td><td>1645.5–1646.5</td><td>9.3–9.5</td></tr> <tr><td>6.215–6.218</td><td>74.8–75.2</td><td>1660–1710</td><td>10.6–12.7</td></tr> <tr><td>6.26775–6.26825</td><td>108–121.94</td><td>1718.8–1722.2</td><td>13.25–13.4</td></tr> <tr><td>6.31175–6.31225</td><td>123–138</td><td>2200–2300</td><td>14.47–14.5</td></tr> <tr><td>8.291–8.294</td><td>149.9–150.05</td><td>2310–2390</td><td>15.35–16.2</td></tr> <tr><td>8.362–8.366</td><td>156.52475–156.52525</td><td>2483.5–2500</td><td>17.7–21.4</td></tr> <tr><td>8.37625–8.38675</td><td>156.7–156.9</td><td>2655–2900</td><td>22.01–23.12</td></tr> <tr><td>8.41425–8.41475</td><td>162.0125–167.17</td><td>3260–3267</td><td>23.6–24.0</td></tr> <tr><td>12.29–12.293</td><td>167.72–173.2</td><td>3332–3339</td><td>31.2–31.8</td></tr> <tr><td>12.51975–12.52025</td><td>240–285</td><td>3345.8–3358</td><td>36.43–36.5</td></tr> <tr><td>12.57675–12.57725</td><td>322–335.4</td><td>3600–4400</td><td>(²)</td></tr> <tr><td>13.36–13.41</td><td></td><td></td><td></td></tr> </tbody> </table> <p>¹Until February 1, 1999, this restricted band shall be 0.490–0.510 MHz. ²Above 38.6</p> <p>(b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions of 15.35 apply to these measurements.</p> | MHz | MHz | MHz | GHz | 0.090–0.110 | 16.42–16.423 | 399.9–410 | 4.5–5.15 | 1.0495–0.505 | 16.69475–16.69525 | 608–614 | 5.35–5.46 | 2.1735–2.1905 | 16.80425–16.80475 | 960–1240 | 7.25–7.75 | 4.125–4.128 | 25.5–25.67 | 1300–1427 | 8.025–8.5 | 4.17725–4.17775 | 37.5–38.25 | 1435–1626.5 | 9.0–9.2 | 4.20725–4.20775 | 73–74.6 | 1645.5–1646.5 | 9.3–9.5 | 6.215–6.218 | 74.8–75.2 | 1660–1710 | 10.6–12.7 | 6.26775–6.26825 | 108–121.94 | 1718.8–1722.2 | 13.25–13.4 | 6.31175–6.31225 | 123–138 | 2200–2300 | 14.47–14.5 | 8.291–8.294 | 149.9–150.05 | 2310–2390 | 15.35–16.2 | 8.362–8.366 | 156.52475–156.52525 | 2483.5–2500 | 17.7–21.4 | 8.37625–8.38675 | 156.7–156.9 | 2655–2900 | 22.01–23.12 | 8.41425–8.41475 | 162.0125–167.17 | 3260–3267 | 23.6–24.0 | 12.29–12.293 | 167.72–173.2 | 3332–3339 | 31.2–31.8 | 12.51975–12.52025 | 240–285 | 3345.8–3358 | 36.43–36.5 | 12.57675–12.57725 | 322–335.4 | 3600–4400 | (²) | 13.36–13.41 | | | |
| MHz | MHz | MHz | GHz | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.090–0.110 | 16.42–16.423 | 399.9–410 | 4.5–5.15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.0495–0.505 | 16.69475–16.69525 | 608–614 | 5.35–5.46 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.1735–2.1905 | 16.80425–16.80475 | 960–1240 | 7.25–7.75 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.125–4.128 | 25.5–25.67 | 1300–1427 | 8.025–8.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.17725–4.17775 | 37.5–38.25 | 1435–1626.5 | 9.0–9.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.20725–4.20775 | 73–74.6 | 1645.5–1646.5 | 9.3–9.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.215–6.218 | 74.8–75.2 | 1660–1710 | 10.6–12.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.26775–6.26825 | 108–121.94 | 1718.8–1722.2 | 13.25–13.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.31175–6.31225 | 123–138 | 2200–2300 | 14.47–14.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.291–8.294 | 149.9–150.05 | 2310–2390 | 15.35–16.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.362–8.366 | 156.52475–156.52525 | 2483.5–2500 | 17.7–21.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.37625–8.38675 | 156.7–156.9 | 2655–2900 | 22.01–23.12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8.41425–8.41475 | 162.0125–167.17 | 3260–3267 | 23.6–24.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.29–12.293 | 167.72–173.2 | 3332–3339 | 31.2–31.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.51975–12.52025 | 240–285 | 3345.8–3358 | 36.43–36.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12.57675–12.57725 | 322–335.4 | 3600–4400 | (²) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13.36–13.41 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FCC CFR 47 §15.209 | <p>(a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Frequency</th> <th style="text-align: center;">Field Strength</th> <th style="text-align: center;">Measurement Distance</th> </tr> <tr> <th style="text-align: center;">MHz</th> <th style="text-align: center;">uV/m</th> <th style="text-align: center;">Meters</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">.009 – 0.490</td><td style="text-align: center;">2400/F(kHz)</td><td style="text-align: center;">300</td></tr> <tr><td style="text-align: center;">0.490 – 1.705</td><td style="text-align: center;">24000/F(kHz)</td><td style="text-align: center;">30</td></tr> <tr><td style="text-align: center;">1.705 – 30.0</td><td style="text-align: center;">30</td><td style="text-align: center;">30</td></tr> <tr><td style="text-align: center;">30 – 88</td><td style="text-align: center;">100</td><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">88 – 216</td><td style="text-align: center;">150</td><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">216 - 960</td><td style="text-align: center;">200</td><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">Above 960</td><td style="text-align: center;">500</td><td style="text-align: center;">3</td></tr> </tbody> </table> <p>(b) In the emission table above, the tighter limit applies at the band edges.</p> | Frequency | Field Strength | Measurement Distance | MHz | uV/m | Meters | .009 – 0.490 | 2400/F(kHz) | 300 | 0.490 – 1.705 | 24000/F(kHz) | 30 | 1.705 – 30.0 | 30 | 30 | 30 – 88 | 100 | 3 | 88 – 216 | 150 | 3 | 216 - 960 | 200 | 3 | Above 960 | 500 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Frequency | Field Strength | Measurement Distance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MHz | uV/m | Meters | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| .009 – 0.490 | 2400/F(kHz) | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.490 – 1.705 | 24000/F(kHz) | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.705 – 30.0 | 30 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 – 88 | 100 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 88 – 216 | 150 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 216 - 960 | 200 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Above 960 | 500 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

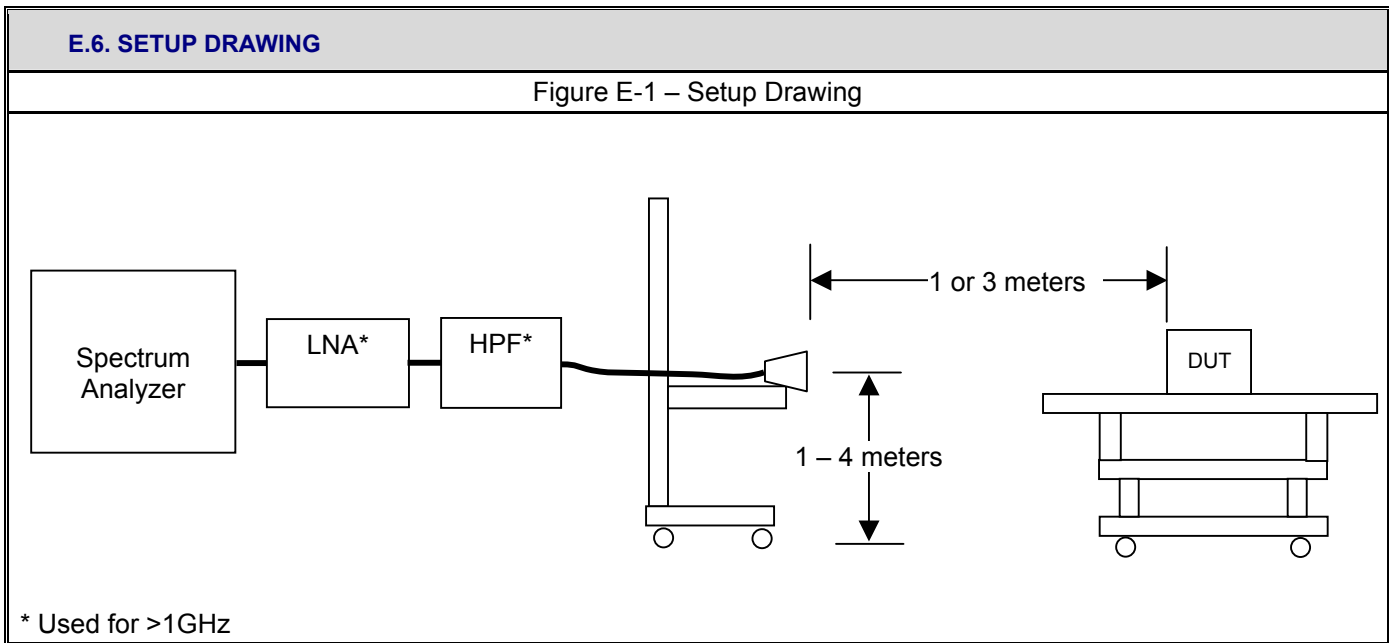
| E.3. ENVIRONMENTAL CONDITIONS | |
|--------------------------------------|-------------------|
| Temperature | 27.4 +/- 2 °C |
| Humidity | 33 +/- 2 % |
| Barometric Pressure | 96.24 +/- 0.2 kPa |


| E.4. EQUIPMENT LIST | | | | | |
|----------------------------|---------------------|--------------|------------------------------|-----------------|----------------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 00072 | EMCO | 2075 | Mini-mast | n/a | n/a |
| 00073 | EMCO | 2080 | Turn Table | n/a | n/a |
| 00071 | EMCO | 2090 | Multi-Device Controller | n/a | n/a |
| 00200 | Empire | LG-105 | Large Loop Antenna | 30Apr04 | 30Apr05 |
| 00201 | Empire | LC-105 | Small Loop Antenna | 30Apr04 | 30Apr05 |
| 00050 | Chase | CBL-6111A | Bilog Antenna | 30Apr04 | 30Apr05 |
| 00035 | ETS | 3115 | Double Ridged Guide Horn | 24Mar04 | 24Mar05 |
| 00202 | ETS | 3160-09 | Small Horn Antenna | 27May04 | 27Jun05 |
| 00015 | Agilent | E4408B | Spectrum Analyzer | 29Dec03 | 29Dec04 |
| 00049 | HP | 8566B | Spectrum Analyzer RF Section | 18May04 | 18May05 |
| 00049 | HP | 85650A | Quasi-peak Adapter | 18May04 | 18May05 |
| 00047 | HP | 85685A | RF Preselector | 18May04 | 18May05 |
| 00048 | Gore | 65474 | Microwave Cable | 20May04 | 20May05 |
| 00030 | HP | 83017A | LNA | 20May04 | 20May05 |

| | | | | | |
|--|----------------------------|--|----------------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

| E.5. MEASUREMENT EQUIPMENT SETUP | | | | |
|---|---|------------------|-------|----------|
| MEASUREMENT EQUIPMENT CONNECTIONS | The measurement equipment was connected as shown in the F.6. A number of antennas were used to cover the applicable frequency range test. The ranges in which each antenna was used are as follows: | | | |
| | Frequency Range | Antenna | | |
| | 9 kHz – 150 kHz | LP-105 Loop | | |
| | 150 kHz – 30 MHz | LG-105 Loop | | |
| | 30 MHz – 1 GHz | CBL-6111A Bilog | | |
| | 1 GHz – 18 GHz | ETS 3115 Horn | | |
| | 18 GHz– 26GHz | ETS 3160-09 Horn | | |
| MEASUREMENT EQUIPMENT SETTINGS | The spectrum analyzer was set to the following settings: | | | |
| | Frequency Range | RBW | VBW | Detector |
| | MHz | kHz | kHz | |
| | 0.009 - 0.150 | 0.200 | 10 | Peak* |
| | 0.150 - 30 | 9 | 30 | Peak* |
| | 30 – 1000 | 100 | 300 | Peak* |
| > 1000 | 1000* | 1000 | Peak* | |
| *As a worse case measurement, the average/quasi-peak limits were applied to measurements made with a peak detector. | | | | |



| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.7. SETUP PHOTOGRAPHS

Photograph E-1 - Horizontal Polarization (30MHz - 1 GHz)



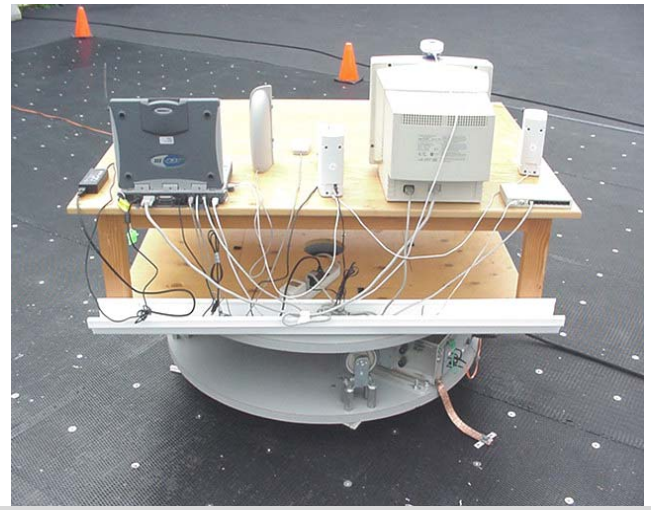
Photograph E-2 - Vertical Polarization (1-18 GHz)




Photograph E-3 - Front of Radiated Emission Configuration



Photograph E-4 - Back of Radiated Emission Configuration



| | | | | | |
|--|--|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.8. DUT OPERATING DESCRIPTION

The worst-case data rate was determined from prescan investigations. Measurements were made at three channels throughout the band, Low Channel (2412 MHz), Mid Channel (2437 MHz), High Channel (2462 MHz) and for both Modes b and g for the band-edge measurements and for Mode b for the remaining measurements.

E.9. TEST RESULTS

E.9.1. Mode b - Band-edge Emission Field Strengths @ Specified Distance – Horizontal Polarization (near restricted band)

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|--------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | Δ dB | |
| 1 | H | 3 | Horn SN6276 | 2390.00 | 28.40 | | 28.06 | 3.47 | 0.00 | 31.53 | 59.93 | PK | 3.00 | 0.00 | 73.98 | 14.05 | PASS |
| 1 | H | 3 | Horn SN6276 | 2390.00 | 17.00 | | 28.06 | 3.47 | 0.00 | 31.53 | 48.53 | AV | 3.00 | 0.00 | 53.98 | 5.45 | PASS |
| 11 | H | 3 | Horn SN6276 | 2483.50 | 27.20 | | 28.26 | 3.51 | 0.00 | 31.78 | 58.98 | PK | 3.00 | 0.00 | 73.98 | 15.00 | PASS |
| 11 | H | 3 | Horn SN6276 | 2483.50 | 17.30 | | 28.26 | 3.51 | 0.00 | 31.78 | 49.08 | AV | 3.00 | 0.00 | 53.98 | 4.90 | PASS |

E.9.2. Mode b - Band-edge Emission Field Strengths @ Specified Distance - Vertical Polarization (near restricted band)

| | | | | | | | | | | | | | | | | | |
|----|---|---|-------------|---------|-------|--|-------|------|------|-------|-------|----|------|------|-------|-------|------|
| 1 | V | 3 | Horn SN6276 | 2390.00 | 28.40 | | 28.06 | 3.47 | 0.00 | 31.53 | 59.93 | PK | 3.00 | 0.00 | 73.98 | 14.05 | PASS |
| 1 | V | 3 | Horn SN6276 | 2390.00 | 17.00 | | 28.06 | 3.47 | 0.00 | 31.53 | 48.53 | AV | 3.00 | 0.00 | 53.98 | 5.45 | PASS |
| 11 | V | 3 | Horn SN6276 | 2483.50 | 26.50 | | 28.26 | 3.51 | 0.00 | 31.78 | 58.28 | PK | 3.00 | 0.00 | 73.98 | 15.70 | PASS |
| 11 | V | 3 | Horn SN6276 | 2483.50 | 16.80 | | 28.26 | 3.51 | 0.00 | 31.78 | 48.58 | AV | 3.00 | 0.00 | 53.98 | 5.40 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)


Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.9.3. Mode g - Band-edge Emission Field Strengths @ Specified Distance – Horizontal Polarization (near restricted band)

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|-------|--------|-----------|
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | | m | dB | | | |
| 1 | H | 3 | Horn SN6276 | 2390.00 | 31.20 | | 28.06 | 3.47 | 0.00 | 31.53 | 62.73 | PK | 3.00 | 0.00 | 73.98 | 11.25 | PASS |
| 1 | H | 3 | Horn SN6276 | 2390.00 | 18.90 | | 28.06 | 3.47 | 0.00 | 31.53 | 50.43 | AV | 3.00 | 0.00 | 53.98 | 3.55 | PASS |
| 11 | H | 3 | Horn SN6276 | 2483.50 | 35.20 | | 28.26 | 3.51 | 0.00 | 31.78 | 66.98 | PK | 3.00 | 0.00 | 73.98 | 7.00 | PASS |
| 11 | H | 3 | Horn SN6276 | 2483.50 | 20.90 | | 28.26 | 3.51 | 0.00 | 31.78 | 52.68 | AV | 3.00 | 0.00 | 53.98 | 1.30 | PASS |

E.9.4. Mode g - Band-edge Emission Field Strengths @ Specified Distance - Vertical Polarization (near restricted band)

| | | | | | | | | | | | | | | | | | |
|----|---|---|-------------|---------|-------|--|-------|------|------|-------|-------|----|------|------|-------|-------|------|
| 1 | V | 3 | Horn SN6276 | 2390.00 | 28.10 | | 28.06 | 3.47 | 0.00 | 31.53 | 59.63 | PK | 3.00 | 0.00 | 73.98 | 14.35 | PASS |
| 1 | V | 3 | Horn SN6276 | 2390.00 | 17.40 | | 28.06 | 3.47 | 0.00 | 31.53 | 48.93 | AV | 3.00 | 0.00 | 53.98 | 5.05 | PASS |
| 11 | V | 3 | Horn SN6276 | 2483.50 | 31.10 | | 28.26 | 3.51 | 0.00 | 31.78 | 62.88 | PK | 3.00 | 0.00 | 73.98 | 11.10 | PASS |
| 11 | V | 3 | Horn SN6276 | 2483.50 | 18.30 | | 28.26 | 3.51 | 0.00 | 31.78 | 50.08 | AV | 3.00 | 0.00 | 53.98 | 3.90 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)


Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
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| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.9.5. Channel 1 Restricted Band Spurious Emission Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | | |
| 1 | H | 3 | Bilog SN1607 | 57.48 | 49.20 | | 5.53 | 0.53 | 0.00 | 6.06 | 55.26 | PK | 3.00 | 0.00 | 60.00 | 4.74 | PASS |
| 1 | H | 3 | Bilog SN1607 | 99.52 | 35.20 | | 9.90 | 0.84 | 0.00 | 10.75 | 45.95 | PK | 3.00 | 0.00 | 63.52 | 17.57 | PASS |
| 1 | H | 3 | Bilog SN1607 | 107.28 | 36.80 | | 10.65 | 0.89 | 0.00 | 11.55 | 48.35 | PK | 3.00 | 0.00 | 63.52 | 15.17 | PASS |
| 1 | H | 3 | Bilog SN1607 | 167.09 | 32.00 | | 9.40 | 0.98 | 0.00 | 10.39 | 42.39 | PK | 3.00 | 0.00 | 63.52 | 21.14 | PASS |
| 1 | H | 3 | Bilog SN1607 | 208.48 | 27.30 | | 8.25 | 1.04 | 0.00 | 9.29 | 36.59 | PK | 3.00 | 0.00 | 63.52 | 26.93 | PASS |
| 1 | H | 3 | Bilog SN1607 | 245.34 | 30.00 | | 11.79 | 1.10 | 0.00 | 12.89 | 42.89 | PK | 3.00 | 0.00 | 66.02 | 23.14 | PASS |
| 1 | H | 3 | Bilog SN1607 | 380.82 | 35.30 | | 15.43 | 1.30 | 0.00 | 16.73 | 52.03 | PK | 3.00 | 0.00 | 66.02 | 13.99 | PASS |
| 1 | H | 3 | Bilog SN1607 | 787.89 | 20.30 | | 22.46 | 1.90 | 0.00 | 24.36 | 44.66 | PK | 3.00 | 0.00 | 66.02 | 21.36 | PASS |
| 1 | H | 3 | Bilog SN1607 | 855.15 | 31.30 | | 23.55 | 1.99 | 0.00 | 25.54 | 56.84 | PK | 3.00 | 0.00 | 66.02 | 9.18 | PASS |
| 1 | H | 3 | Bilog SN1607 | 931.78 | 36.00 | | 24.89 | 2.11 | 0.00 | 27.00 | 63.00 | PK | 3.00 | 0.00 | 66.02 | 3.02 | PASS |
| 1 | H | 3 | Horn SN6276 | 2500.00 | 42.60 | | 28.30 | 3.51 | -36.42 | -4.61 | 37.99 | PK | 3.00 | 0.00 | 73.98 | 35.99 | PASS |
| 1 | H | 3 | Horn SN6276 | 4810.00 | 22.60 | x | 32.88 | 4.96 | 0.00 | 37.85 | 60.45 | PK | 3.00 | 0.00 | 73.98 | 13.53 | PASS |
| 1 | H | 3 | Horn SN6276 | 5240.00 | 23.30 | x | 33.68 | 5.22 | 0.00 | 38.91 | 62.21 | PK | 3.00 | 0.00 | 73.98 | 11.77 | PASS |
| 1 | H | 3 | Horn SN6276 | 7230.00 | 38.90 | x | 35.71 | 6.27 | -35.51 | 6.47 | 45.37 | PK | 3.00 | 0.00 | 73.98 | 28.61 | PASS |
| 1 | H | 3 | Horn SN6276 | 9610.00 | 37.10 | | 37.59 | 7.37 | -35.71 | 9.25 | 46.35 | PK | 3.00 | 0.00 | 73.98 | 27.63 | PASS |
| 1 | H | 3 | Horn SN6276 | 17660.00 | 38.00 | x | 44.88 | 10.46 | -36.36 | 18.98 | 56.98 | PK | 3.00 | 0.00 | 73.98 | 17.00 | PASS |
| 1 | H | 1 | 3160-09 | 19296.00 | 52.98 | | 40.26 | 11.01 | -35.81 | 15.45 | 68.43 | PK | 3.00 | 9.54 | 83.52 | 15.09 | PASS |
| 1 | H | 1 | 3160-09 | 19296.00 | 34.05 | | 40.26 | 11.01 | -35.81 | 15.45 | 49.50 | AV | 3.00 | 9.54 | 63.52 | 14.02 | PASS |
| 1 | H | 1 | 3160-09 | 21708.00 | 53.65 | | 40.30 | 11.91 | -35.73 | 16.48 | 70.13 | PK | 3.00 | 9.54 | 83.52 | 13.39 | PASS |
| 1 | H | 1 | 3160-09 | 21708.00 | 35.74 | | 40.30 | 11.91 | -35.73 | 16.48 | 52.22 | AV | 3.00 | 9.54 | 63.52 | 11.30 | PASS |
| 1 | H | 1 | 3160-09 | 24120.00 | 56.09 | | 40.40 | 12.81 | -35.73 | 17.48 | 73.57 | PK | 3.00 | 9.54 | 83.52 | 9.95 | PASS |
| 1 | H | 1 | 3160-09 | 24120.00 | 37.57 | | 40.40 | 12.81 | -35.73 | 17.48 | 55.05 | AV | 3.00 | 9.54 | 63.52 | 8.47 | PASS |
| 1 | H | 1 | 3160-09 | 24490.00 | 57.15 | | 40.40 | 12.95 | -35.73 | 17.62 | 74.77 | PK | 3.00 | 9.54 | 83.52 | 8.75 | PASS |
| 1 | H | 1 | 3160-09 | 24490.00 | 38.00 | | 40.40 | 12.95 | -35.73 | 17.62 | 55.62 | AV | 3.00 | 9.54 | 63.52 | 7.90 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.**

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
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| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.9.6. Channel 1 Restricted Band Spurious Emission Field Strengths @ Specified Distance – Vertical Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | | |
| 1 | V | 3 | LP-105 | 0.08 | 17.37 | | 48.70 | 0.03 | 0.00 | 48.73 | 66.10 | PK | 300.00 | 80.00 | 143.54 | 77.44 | PASS |
| 1 | V | 3 | LG-105 | 0.20 | 1.41 | | 59.86 | 0.07 | 0.00 | 59.94 | 61.35 | PK | 300.00 | 80.00 | 134.52 | 73.17 | PASS |
| 1 | V | 3 | LG-105 | 0.49 | 2.42 | | 58.03 | 0.09 | 0.00 | 58.12 | 60.54 | PK | 300.00 | 80.00 | 114.16 | 53.62 | PASS |
| 1 | V | 3 | LG-105 | 1.50 | 9.04 | | 53.10 | 0.15 | 0.00 | 53.25 | 62.29 | PK | 30.00 | 40.00 | 84.80 | 22.51 | PASS |
| 1 | V | 3 | LG-105 | 2.62 | 7.21 | | 50.69 | 0.20 | 0.00 | 50.89 | 58.10 | PK | 30.00 | 40.00 | 89.54 | 31.44 | PASS |
| 1 | V | 3 | LG-105 | 5.48 | 11.74 | | 44.38 | 0.31 | 0.00 | 44.68 | 56.42 | PK | 30.00 | 40.00 | 89.54 | 33.12 | PASS |
| 1 | V | 3 | LG-105 | 27.15 | 10.24 | | 40.62 | 0.68 | 0.00 | 41.30 | 51.54 | PK | 30.00 | 40.00 | 89.54 | 38.00 | PASS |
| 1 | V | 3 | Bilog SN1607 | 99.52 | 29.60 | | 9.90 | 0.84 | 0.00 | 10.75 | 40.35 | PK | 3.00 | 0.00 | 63.52 | 23.17 | PASS |
| 1 | V | 3 | Bilog SN1607 | 208.80 | 46.80 | | 8.28 | 1.04 | 0.00 | 9.32 | 56.12 | PK | 3.00 | 0.00 | 63.52 | 7.40 | PASS |
| 1 | V | 3 | Bilog SN1607 | 245.34 | 52.50 | | 11.79 | 1.10 | 0.00 | 12.89 | 65.39 | PK | 3.00 | 0.00 | 66.02 | 0.64 | PASS |
| 1 | V | 3 | Bilog SN1607 | 449.36 | 44.80 | | 17.03 | 1.40 | 0.00 | 18.43 | 63.23 | PK | 3.00 | 0.00 | 66.02 | 2.79 | PASS |
| 1 | V | 3 | Bilog SN1607 | 736.16 | 23.70 | | 22.93 | 1.82 | 0.00 | 24.75 | 48.45 | PK | 3.00 | 0.00 | 66.02 | 17.57 | PASS |
| 1 | V | 3 | Horn SN6276 | 3200.00 | 43.50 | | 30.48 | 4.04 | -35.93 | -1.40 | 42.10 | PK | 3.00 | 0.00 | 73.98 | 31.88 | PASS |
| 1 | V | 3 | Horn SN6276 | 4810.00 | 47.00 | | 32.88 | 4.96 | -35.30 | 2.54 | 49.54 | PK | 3.00 | 0.00 | 73.98 | 24.44 | PASS |
| 1 | V | 3 | Horn SN6276 | 5260.00 | 40.10 | | 33.72 | 5.23 | -35.34 | 3.61 | 43.71 | PK | 3.00 | 0.00 | 73.98 | 30.27 | PASS |
| 1 | V | 3 | Horn SN6276 | 5720.00 | 41.60 | | 34.19 | 5.44 | -35.38 | 4.25 | 45.85 | PK | 3.00 | 0.00 | 73.98 | 28.13 | PASS |
| 1 | V | 3 | Horn SN6276 | 5770.00 | 44.80 | | 34.21 | 5.45 | -35.38 | 4.28 | 49.08 | PK | 3.00 | 0.00 | 73.98 | 24.90 | PASS |
| 1 | V | 3 | Horn SN6276 | 7520.00 | 40.40 | | 36.32 | 6.43 | -35.53 | 7.21 | 47.61 | PK | 3.00 | 0.00 | 73.98 | 26.37 | PASS |
| 1 | V | 3 | Horn SN6276 | 8360.00 | 37.60 | | 37.06 | 6.79 | -35.60 | 8.25 | 45.85 | PK | 3.00 | 0.00 | 73.98 | 28.13 | PASS |
| 1 | V | 3 | Horn SN6276 | 9610.00 | 36.60 | | 37.59 | 7.37 | -35.71 | 9.25 | 45.85 | PK | 3.00 | 0.00 | 73.98 | 28.13 | PASS |
| 1 | V | 3 | Horn SN6276 | 12640.00 | 36.90 | | 38.71 | 8.68 | -36.79 | 10.59 | 47.49 | PK | 3.00 | 0.00 | 73.98 | 26.49 | PASS |
| 1 | V | 3 | Horn SN6276 | 15740.00 | 38.20 | | 37.56 | 9.77 | -36.53 | 10.80 | 49.00 | PK | 3.00 | 0.00 | 73.98 | 24.98 | PASS |
| 1 | V | 3 | Horn SN6276 | 17770.00 | 37.60 | | 45.70 | 10.30 | -36.35 | 19.65 | 57.25 | PK | 3.00 | 0.00 | 73.98 | 16.73 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:


where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.**

Continued

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Continued

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|---------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | | |
| 1 | V | 1 | 3160-09 | 18820.00 | 53.92 | | 40.20 | 11.05 | -35.87 | 15.38 | 69.30 | PK | 3.00 | 9.54 | 83.52 | 14.22 | PASS |
| 1 | V | 1 | 3160-09 | 18820.00 | 33.66 | | 40.20 | 11.05 | -35.87 | 15.38 | 49.04 | AV | 3.00 | 9.54 | 63.52 | 14.48 | PASS |
| 1 | V | 1 | 3160-09 | 19296.00 | 52.65 | | 40.26 | 11.01 | -35.81 | 15.45 | 68.10 | PK | 3.00 | 9.54 | 83.52 | 15.42 | PASS |
| 1 | V | 1 | 3160-09 | 19296.00 | 33.76 | | 40.26 | 11.01 | -35.81 | 15.45 | 49.21 | AV | 3.00 | 9.54 | 63.52 | 14.31 | PASS |
| 1 | V | 1 | 3160-09 | 21708.00 | 53.27 | | 40.30 | 11.91 | -35.73 | 16.48 | 69.75 | PK | 3.00 | 9.54 | 83.52 | 13.77 | PASS |
| 1 | V | 1 | 3160-09 | 21708.00 | 36.04 | | 40.30 | 11.91 | -35.73 | 16.48 | 52.52 | AV | 3.00 | 9.54 | 63.52 | 11.00 | PASS |
| 1 | V | 1 | 3160-09 | 24120.00 | 56.03 | | 40.40 | 12.81 | -35.73 | 17.48 | 73.51 | PK | 3.00 | 9.54 | 83.52 | 10.01 | PASS |
| 1 | V | 1 | 3160-09 | 24120.00 | 37.21 | | 40.40 | 12.81 | -35.73 | 17.48 | 54.69 | AV | 3.00 | 9.54 | 63.52 | 8.83 | PASS |
| 1 | V | 1 | 3160-09 | 24550.00 | 56.31 | | 40.40 | 12.97 | -35.73 | 17.64 | 73.95 | PK | 3.00 | 9.54 | 83.52 | 9.57 | PASS |
| 1 | V | 1 | 3160-09 | 24550.00 | 38.30 | | 40.40 | 12.97 | -35.73 | 17.64 | 55.94 | AV | 3.00 | 9.54 | 63.52 | 7.58 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.**

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.9.7. Channel 6 Restricted Band Spurious Emission Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | | |
| 6 | H | 3 | Bilog SN1607 | 60.70 | 29.20 | | 5.03 | 0.56 | 0.00 | 5.59 | 34.79 | PK | 3.00 | 0.00 | 60.00 | 25.21 | PASS |
| 6 | H | 3 | Bilog SN1607 | 107.28 | 36.50 | | 10.65 | 0.89 | 0.00 | 11.55 | 48.05 | PK | 3.00 | 0.00 | 63.52 | 15.47 | PASS |
| 6 | H | 3 | Bilog SN1607 | 149.96 | 34.10 | | 10.70 | 0.96 | 0.00 | 11.66 | 45.76 | PK | 3.00 | 0.00 | 63.52 | 17.76 | PASS |
| 6 | H | 3 | Bilog SN1607 | 208.48 | 29.70 | | 8.25 | 1.04 | 0.00 | 9.29 | 38.99 | PK | 3.00 | 0.00 | 63.52 | 24.53 | PASS |
| 6 | H | 3 | Bilog SN1607 | 245.34 | 34.80 | | 11.79 | 1.10 | 0.00 | 12.89 | 47.69 | PK | 3.00 | 0.00 | 66.02 | 18.34 | PASS |
| 6 | H | 3 | Bilog SN1607 | 786.92 | 24.50 | | 22.47 | 1.89 | 0.00 | 24.36 | 48.86 | PK | 3.00 | 0.00 | 66.02 | 17.16 | PASS |
| 6 | H | 3 | Bilog SN1607 | 929.51 | 19.50 | | 24.83 | 2.10 | 0.00 | 26.94 | 46.44 | PK | 3.00 | 0.00 | 66.02 | 19.58 | PASS |
| 6 | H | 3 | Horn SN6276 | 2750.00 | 38.60 | | 29.15 | 3.69 | -36.38 | -3.53 | 35.07 | PK | 3.00 | 0.00 | 73.98 | 38.91 | PASS |
| 6 | H | 3 | Horn SN6276 | 3240.00 | 37.00 | | 30.58 | 4.06 | -36.12 | -1.48 | 35.52 | PK | 3.00 | 0.00 | 73.98 | 38.46 | PASS |
| 6 | H | 3 | Horn SN6276 | 4860.00 | 36.70 | | 32.99 | 5.02 | -35.46 | 2.55 | 39.25 | PK | 3.00 | 0.00 | 73.98 | 34.73 | PASS |
| 6 | H | 3 | Horn SN6276 | 5260.00 | 45.20 | | 33.72 | 5.23 | -35.47 | 3.47 | 48.67 | PK | 3.00 | 0.00 | 73.98 | 25.31 | PASS |
| 6 | H | 3 | Horn SN6276 | 5770.00 | 37.20 | | 34.21 | 5.45 | -35.50 | 4.16 | 41.36 | PK | 3.00 | 0.00 | 73.98 | 32.61 | PASS |
| 6 | H | 3 | Horn SN6276 | 8280.00 | 38.40 | | 36.98 | 6.75 | -35.61 | 8.11 | 46.51 | PK | 3.00 | 0.00 | 73.98 | 27.47 | PASS |
| 6 | H | 3 | Horn SN6276 | 8360.00 | 42.30 | | 37.06 | 6.79 | -35.62 | 8.24 | 50.54 | PK | 3.00 | 0.00 | 73.98 | 23.44 | PASS |
| 6 | H | 3 | Horn SN6276 | 17090.00 | 39.20 | | 41.24 | 10.38 | -36.09 | 15.54 | 54.74 | PK | 3.00 | 0.00 | 73.98 | 19.24 | PASS |
| 6 | H | 1 | 3160-09 | 19496.00 | 52.56 | | 40.30 | 11.28 | -35.79 | 15.79 | 68.35 | PK | 3.00 | 9.54 | 83.52 | 15.17 | PASS |
| 6 | H | 1 | 3160-09 | 19496.00 | 33.91 | | 40.30 | 11.28 | -35.79 | 15.79 | 49.70 | AV | 3.00 | 9.54 | 63.52 | 13.82 | PASS |
| 6 | H | 1 | 3160-09 | 21240.00 | 54.98 | | 40.30 | 11.73 | -35.73 | 16.31 | 71.29 | PK | 3.00 | 9.54 | 83.52 | 12.23 | PASS |
| 6 | H | 1 | 3160-09 | 21240.00 | 35.72 | | 40.30 | 11.73 | -35.73 | 16.31 | 52.03 | AV | 3.00 | 9.54 | 63.52 | 11.49 | PASS |
| 6 | H | 1 | 3160-09 | 21933.00 | 54.66 | | 40.30 | 11.99 | -35.73 | 16.57 | 71.23 | PK | 3.00 | 9.54 | 83.52 | 12.30 | PASS |
| 6 | H | 1 | 3160-09 | 21933.00 | 36.27 | | 40.30 | 11.99 | -35.73 | 16.57 | 52.84 | AV | 3.00 | 9.54 | 63.52 | 10.69 | PASS |
| 6 | H | 1 | 3160-09 | 24370.00 | 57.10 | | 40.40 | 12.90 | -35.73 | 17.58 | 74.68 | PK | 3.00 | 9.54 | 83.52 | 8.84 | PASS |
| 6 | H | 1 | 3160-09 | 24370.00 | 37.88 | | 40.40 | 12.90 | -35.73 | 17.58 | 55.46 | AV | 3.00 | 9.54 | 63.52 | 8.06 | PASS |
| 6 | H | 1 | 3160-09 | 24420.00 | 56.93 | | 40.40 | 12.92 | -35.73 | 17.60 | 74.53 | PK | 3.00 | 9.54 | 83.52 | 9.00 | PASS |
| 6 | H | 1 | 3160-09 | 24420.00 | 37.73 | | 40.40 | 12.92 | -35.73 | 17.60 | 55.33 | AV | 3.00 | 9.54 | 63.52 | 8.20 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.9.8. Channel 6 Restricted Band Spurious Emission Field Strengths @ Specified Distance – Vertical Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | Δ dB | |
| 6 | V | 3 | LP-105 | 0.08 | 17.57 | | 48.71 | 0.05 | 0.00 | 48.76 | 66.33 | PK | 300.00 | 80.00 | 143.55 | 77.22 | PASS |
| 6 | V | 3 | LG-105 | 2.03 | 9.04 | | 52.21 | 0.17 | 0.00 | 52.39 | 61.43 | PK | 30.00 | 40.00 | 89.54 | 28.11 | PASS |
| 6 | V | 3 | LG-105 | 0.83 | 2.38 | | 57.38 | 0.11 | 0.00 | 57.49 | 59.87 | PK | 30.00 | 40.00 | 90.77 | 30.90 | PASS |
| 6 | V | 3 | LG-105 | 1.50 | 8.52 | | 53.11 | 0.15 | 0.00 | 53.26 | 61.78 | PK | 30.00 | 40.00 | 84.82 | 23.04 | PASS |
| 6 | V | 3 | LG-105 | 3.22 | 8.34 | | 49.31 | 0.23 | 0.00 | 49.54 | 57.88 | PK | 30.00 | 40.00 | 89.54 | 31.66 | PASS |
| 6 | V | 3 | LG-105 | 5.63 | 12.44 | | 44.09 | 0.31 | 0.00 | 44.40 | 56.84 | PK | 30.00 | 40.00 | 89.54 | 32.70 | PASS |
| 6 | V | 3 | LG-105 | 17.80 | 9.89 | | 41.04 | 0.55 | 0.00 | 41.59 | 51.48 | PK | 30.00 | 40.00 | 89.54 | 38.06 | PASS |
| 6 | V | 3 | Bilog SN1607 | 57.48 | 30.80 | | 5.53 | 0.53 | 0.00 | 6.06 | 36.86 | PK | 3.00 | 0.00 | 60.00 | 23.14 | PASS |
| 6 | V | 3 | Bilog SN1607 | 99.52 | 28.50 | | 9.90 | 0.84 | 0.00 | 10.75 | 39.25 | PK | 3.00 | 0.00 | 63.52 | 24.27 | PASS |
| 6 | V | 3 | Bilog SN1607 | 103.72 | 27.90 | | 10.33 | 0.88 | 0.00 | 11.21 | 39.11 | PK | 3.00 | 0.00 | 63.52 | 24.41 | PASS |
| 6 | V | 3 | Bilog SN1607 | 138.96 | 37.30 | | 11.14 | 0.94 | 0.00 | 12.08 | 49.38 | PK | 3.00 | 0.00 | 63.52 | 14.14 | PASS |
| 6 | V | 3 | Bilog SN1607 | 166.77 | 24.50 | | 9.43 | 0.98 | 0.00 | 10.41 | 34.91 | PK | 3.00 | 0.00 | 63.52 | 28.61 | PASS |
| 6 | V | 3 | Bilog SN1607 | 196.19 | 31.70 | | 8.47 | 1.03 | 0.00 | 9.49 | 41.19 | PK | 3.00 | 0.00 | 63.52 | 22.33 | PASS |
| 6 | V | 3 | Bilog SN1607 | 196.52 | 29.70 | | 8.44 | 1.03 | 0.00 | 9.47 | 39.17 | PK | 3.00 | 0.00 | 63.52 | 24.35 | PASS |
| 6 | V | 3 | Bilog SN1607 | 246.96 | 28.50 | | 11.97 | 1.10 | 0.00 | 13.07 | 41.57 | PK | 3.00 | 0.00 | 66.02 | 24.46 | PASS |
| 6 | V | 3 | Bilog SN1607 | 306.45 | 27.50 | | 13.40 | 1.19 | 0.00 | 14.58 | 42.08 | PK | 3.00 | 0.00 | 66.02 | 23.94 | PASS |
| 6 | V | 3 | Bilog SN1607 | 772.70 | 37.20 | | 22.57 | 1.87 | 0.00 | 24.45 | 61.65 | PK | 3.00 | 0.00 | 66.02 | 4.37 | PASS |
| 6 | V | 3 | Bilog SN1607 | 952.47 | 34.80 | | 25.36 | 2.14 | 0.00 | 27.50 | 62.30 | PK | 3.00 | 0.00 | 66.02 | 3.72 | PASS |
| 6 | V | 3 | Horn SN6276 | 2830.00 | 37.90 | | 29.42 | 3.75 | -36.33 | -3.16 | 34.74 | PK | 3.00 | 0.00 | 73.98 | 39.24 | PASS |
| 6 | V | 3 | Horn SN6276 | 5240.00 | 37.30 | | 33.68 | 5.22 | -35.47 | 3.43 | 40.73 | PK | 3.00 | 0.00 | 73.98 | 33.24 | PASS |
| 6 | V | 3 | Horn SN6276 | 5770.00 | 40.10 | | 34.21 | 5.45 | -35.50 | 4.16 | 44.26 | PK | 3.00 | 0.00 | 73.98 | 29.71 | PASS |
| 6 | V | 3 | Horn SN6276 | 7520.00 | 37.80 | | 36.32 | 6.43 | -35.58 | 7.17 | 44.97 | PK | 3.00 | 0.00 | 73.98 | 29.01 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:


where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.**

Continued

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Continued

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|-------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | | |
| 6 | V | 3 | Horn SN6276 | 9720.00 | 36.80 | | 37.68 | 7.34 | -35.71 | 9.31 | 46.11 | PK | 3.00 | 0.00 | 73.98 | 27.87 | PASS |
| 6 | V | 3 | Horn SN6276 | 16480.00 | 38.30 | | 38.45 | 10.25 | -36.16 | 12.54 | 50.84 | PK | 3.00 | 0.00 | 73.98 | 23.14 | PASS |
| 6 | V | 1 | 3160-09 | 19190.00 | 54.26 | | 40.24 | 10.91 | -35.83 | 15.32 | 69.58 | PK | 3.00 | 9.54 | 83.52 | 13.94 | PASS |
| 6 | V | 1 | 3160-09 | 19190.00 | 33.78 | | 40.24 | 10.91 | -35.83 | 15.32 | 49.10 | AV | 3.00 | 9.54 | 63.52 | 14.42 | PASS |
| 6 | V | 1 | 3160-09 | 19496.00 | 52.89 | | 40.30 | 11.28 | -35.79 | 15.79 | 68.68 | PK | 3.00 | 9.54 | 83.52 | 14.84 | PASS |
| 6 | V | 1 | 3160-09 | 19496.00 | 33.88 | | 40.30 | 11.28 | -35.79 | 15.79 | 49.67 | AV | 3.00 | 9.54 | 63.52 | 13.85 | PASS |
| 6 | V | 1 | 3160-09 | 21933.00 | 53.99 | | 40.30 | 11.99 | -35.73 | 16.57 | 70.56 | PK | 3.00 | 9.54 | 83.52 | 12.97 | PASS |
| 6 | V | 1 | 3160-09 | 21933.00 | 36.23 | | 40.30 | 11.99 | -35.73 | 16.57 | 52.80 | AV | 3.00 | 9.54 | 63.52 | 10.73 | PASS |
| 6 | V | 1 | 3160-09 | 24370.00 | 55.56 | | 40.40 | 12.90 | -35.73 | 17.58 | 73.14 | PK | 3.00 | 9.54 | 83.52 | 10.38 | PASS |
| 6 | V | 1 | 3160-09 | 24370.00 | 37.88 | | 40.40 | 12.90 | -35.73 | 17.58 | 55.46 | AV | 3.00 | 9.54 | 63.52 | 8.06 | PASS |
| 6 | V | 1 | 3160-09 | 24400.00 | 56.66 | | 40.40 | 12.91 | -35.73 | 17.59 | 74.25 | PK | 3.00 | 9.54 | 83.52 | 9.27 | PASS |
| 6 | V | 1 | 3160-09 | 24400.00 | 37.87 | | 40.40 | 12.91 | -35.73 | 17.59 | 55.46 | AV | 3.00 | 9.54 | 63.52 | 8.06 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)


Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:
 where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.**

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.9.9. Channel 11 Restricted Band Spurious Emission Field Strengths @ Specified Distance – Horizontal Polarization

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | | |
| 11 | H | 3 | Bilog SN1607 | 57.80 | 48.10 | | 5.45 | 0.54 | 0.00 | 5.99 | 54.09 | PK | 3.00 | 0.00 | 60.00 | 5.91 | PASS |
| 11 | H | 3 | Bilog SN1607 | 101.13 | 38.90 | | 10.10 | 0.86 | 0.00 | 10.96 | 49.86 | PK | 3.00 | 0.00 | 63.52 | 13.66 | PASS |
| 11 | H | 3 | Bilog SN1607 | 141.55 | 31.30 | | 11.07 | 0.95 | 0.00 | 12.01 | 43.31 | PK | 3.00 | 0.00 | 63.52 | 20.21 | PASS |
| 11 | H | 3 | Bilog SN1607 | 208.80 | 31.20 | | 8.28 | 1.04 | 0.00 | 9.32 | 40.52 | PK | 3.00 | 0.00 | 63.52 | 23.00 | PASS |
| 11 | H | 3 | Bilog SN1607 | 297.72 | 29.20 | | 13.28 | 1.17 | 0.00 | 14.45 | 43.65 | PK | 3.00 | 0.00 | 66.02 | 22.37 | PASS |
| 11 | H | 3 | Bilog SN1607 | 381.14 | 44.00 | | 15.45 | 1.30 | 0.00 | 16.74 | 60.74 | PK | 3.00 | 0.00 | 66.02 | 5.28 | PASS |
| 11 | H | 3 | Bilog SN1607 | 772.70 | 28.40 | | 22.57 | 1.87 | 0.00 | 24.45 | 52.85 | PK | 3.00 | 0.00 | 66.02 | 13.17 | PASS |
| 11 | H | 3 | Bilog SN1607 | 944.39 | 31.30 | | 25.21 | 2.13 | 0.00 | 27.34 | 58.64 | PK | 3.00 | 0.00 | 66.02 | 7.38 | PASS |
| 11 | H | 3 | Horn SN6276 | 2810.00 | 37.50 | | 29.35 | 3.74 | -36.34 | -3.25 | 34.25 | PK | 3.00 | 0.00 | 73.98 | 39.73 | PASS |
| 11 | H | 3 | Horn SN6276 | 4900.00 | 39.50 | | 33.08 | 5.05 | -35.46 | 2.68 | 42.18 | PK | 3.00 | 0.00 | 73.98 | 31.80 | PASS |
| 11 | H | 3 | Horn SN6276 | 5260.00 | 45.80 | | 33.72 | 5.23 | -35.47 | 3.47 | 49.27 | PK | 3.00 | 0.00 | 73.98 | 24.71 | PASS |
| 11 | H | 3 | Horn SN6276 | 8280.00 | 39.30 | | 36.98 | 6.75 | -35.61 | 8.11 | 47.41 | PK | 3.00 | 0.00 | 73.98 | 26.57 | PASS |
| 11 | H | 3 | Horn SN6276 | 8360.00 | 42.10 | | 37.06 | 6.79 | -35.62 | 8.24 | 50.34 | PK | 3.00 | 0.00 | 73.98 | 23.64 | PASS |
| 11 | H | 3 | Horn SN6276 | 9820.00 | 39.00 | | 37.76 | 7.44 | -35.77 | 9.42 | 48.42 | PK | 3.00 | 0.00 | 73.98 | 25.56 | PASS |
| 11 | H | 3 | Horn SN6276 | 15920.00 | 38.90 | | 37.38 | 9.83 | -36.23 | 10.98 | 49.88 | PK | 3.00 | 0.00 | 73.98 | 24.10 | PASS |
| 11 | H | 1 | 3160-09 | 18810.00 | 53.72 | | 40.20 | 11.15 | -35.87 | 15.48 | 69.20 | PK | 3.00 | 9.54 | 83.52 | 14.33 | PASS |
| 11 | H | 1 | 3160-09 | 18810.00 | 33.94 | | 40.20 | 11.15 | -35.87 | 15.48 | 49.42 | AV | 3.00 | 9.54 | 63.52 | 14.11 | PASS |
| 11 | H | 1 | 3160-09 | 19696.00 | 53.67 | | 40.30 | 11.42 | -35.76 | 15.95 | 69.62 | PK | 3.00 | 9.54 | 83.52 | 13.90 | PASS |
| 11 | H | 1 | 3160-09 | 19696.00 | 33.44 | | 40.30 | 11.42 | -35.76 | 15.95 | 49.39 | AV | 3.00 | 9.54 | 63.52 | 14.13 | PASS |
| 11 | H | 1 | 3160-09 | 22158.00 | 53.69 | | 40.33 | 12.08 | -35.73 | 16.68 | 70.37 | PK | 3.00 | 9.54 | 83.52 | 13.15 | PASS |
| 11 | H | 1 | 3160-09 | 22158.00 | 35.90 | | 40.33 | 12.08 | -35.73 | 16.68 | 52.58 | AV | 3.00 | 9.54 | 63.52 | 10.94 | PASS |
| 11 | H | 1 | 3160-09 | 24460.00 | 56.88 | | 40.40 | 12.94 | -35.73 | 17.61 | 74.49 | PK | 3.00 | 9.54 | 83.52 | 9.03 | PASS |
| 11 | H | 1 | 3160-09 | 24460.00 | 37.32 | | 40.40 | 12.94 | -35.73 | 17.61 | 54.93 | AV | 3.00 | 9.54 | 63.52 | 8.59 | PASS |
| 11 | H | 1 | 3160-09 | 24620.00 | 55.75 | | 40.40 | 13.00 | -35.73 | 17.67 | 73.42 | PK | 3.00 | 9.54 | 83.52 | 10.10 | PASS |
| 11 | H | 1 | 3160-09 | 24620.00 | 37.57 | | 40.40 | 13.00 | -35.73 | 17.67 | 55.24 | AV | 3.00 | 9.54 | 63.52 | 8.28 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF


Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

*The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

E.9.10. Channel 11 Restricted Band Spurious Emission Field Strengths @ Specified Distance – Vertical Polarization


| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|--------------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | Δ dB | |
| 11 | V | 3 | LP-105 | 0.08 | 19.50 | | 48.79 | 0.04 | 0.00 | 48.83 | 68.33 | PK | 300.00 | 80.00 | 143.60 | 75.27 | PASS |
| 11 | V | 3 | LG-105 | 0.20 | 1.04 | | 59.88 | 0.07 | 0.00 | 59.95 | 60.99 | PK | 300.00 | 80.00 | 134.59 | 73.60 | PASS |
| 11 | V | 3 | LG-105 | 0.79 | 1.46 | | 57.46 | 0.12 | 0.00 | 57.57 | 59.03 | PK | 30.00 | 40.00 | 91.16 | 32.13 | PASS |
| 11 | V | 3 | LG-105 | 1.44 | 8.37 | | 53.25 | 0.15 | 0.00 | 53.40 | 61.77 | PK | 30.00 | 40.00 | 85.34 | 23.57 | PASS |
| 11 | V | 3 | LG-105 | 4.05 | 10.60 | | 47.10 | 0.26 | 0.00 | 47.36 | 57.96 | PK | 30.00 | 40.00 | 89.54 | 31.58 | PASS |
| 11 | V | 3 | LG-105 | 5.26 | 10.77 | | 44.79 | 0.30 | 0.00 | 45.09 | 55.86 | PK | 30.00 | 40.00 | 89.54 | 33.68 | PASS |
| 11 | V | 3 | LG-105 | 13.95 | 9.95 | | 40.60 | 0.50 | 0.00 | 41.09 | 51.04 | PK | 30.00 | 40.00 | 89.54 | 38.50 | PASS |
| 11 | V | 3 | Bilog SN1607 | 138.96 | 37.30 | | 11.14 | 0.94 | 0.00 | 12.08 | 49.38 | PK | 3.00 | 0.00 | 63.52 | 14.14 | PASS |
| 11 | V | 3 | Bilog SN1607 | 164.83 | 39.20 | | 9.57 | 0.98 | 0.00 | 10.54 | 49.74 | PK | 3.00 | 0.00 | 63.52 | 13.78 | PASS |
| 11 | V | 3 | Bilog SN1607 | 208.48 | 44.90 | | 8.25 | 1.04 | 0.00 | 9.29 | 54.19 | PK | 3.00 | 0.00 | 63.52 | 9.33 | PASS |
| 11 | V | 3 | Bilog SN1607 | 245.02 | 44.80 | | 11.75 | 1.10 | 0.00 | 12.85 | 57.65 | PK | 3.00 | 0.00 | 66.02 | 8.37 | PASS |
| 11 | V | 3 | Bilog SN1607 | 794.04 | 35.60 | | 22.51 | 1.90 | 0.00 | 24.42 | 60.02 | PK | 3.00 | 0.00 | 66.02 | 6.01 | PASS |
| 11 | V | 3 | Horn SN6276 | 2810.00 | 37.20 | | 29.35 | 3.74 | -36.34 | -3.25 | 33.95 | PK | 3.00 | 0.00 | 73.98 | 40.03 | PASS |
| 11 | V | 3 | Horn SN6276 | 5270.00 | 36.40 | | 33.73 | 5.24 | -35.47 | 3.49 | 39.89 | PK | 3.00 | 0.00 | 73.98 | 34.09 | PASS |
| 11 | V | 3 | Horn SN6276 | 5770.00 | 42.50 | | 34.21 | 5.45 | -35.50 | 4.16 | 46.66 | PK | 3.00 | 0.00 | 73.98 | 27.31 | PASS |
| 11 | V | 3 | Horn SN6276 | 9820.00 | 36.60 | | 37.76 | 7.44 | -35.77 | 9.42 | 46.02 | PK | 3.00 | 0.00 | 73.98 | 27.96 | PASS |
| 11 | V | 3 | Horn SN6276 | 16680.00 | 39.00 | | 39.29 | 10.24 | -36.14 | 13.40 | 52.40 | PK | 3.00 | 0.00 | 73.98 | 21.58 | PASS |
| 11 | V | 1 | 3160-09 | 19696.00 | 53.07 | | 40.30 | 11.42 | -35.76 | 15.95 | 69.02 | PK | 3.00 | 9.54 | 83.52 | 14.50 | PASS |
| 11 | V | 1 | 3160-09 | 19696.00 | 33.28 | | 40.30 | 11.42 | -35.76 | 15.95 | 49.23 | AV | 3.00 | 9.54 | 63.52 | 14.29 | PASS |
| 11 | V | 1 | 3160-09 | 20660.00 | 55.02 | | 40.30 | 11.74 | -35.73 | 16.31 | 71.33 | PK | 3.00 | 9.54 | 83.52 | 12.19 | PASS |
| 11 | V | 1 | 3160-09 | 20660.00 | 35.18 | | 40.30 | 11.74 | -35.73 | 16.31 | 51.49 | AV | 3.00 | 9.54 | 63.52 | 12.03 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)
 Field Strength = SA Reading + Total CF
 Limit Distance Correction = 40*log(d1/d2) for F<30 MHz, 20*log(d1/d2) for F> 30 MHz:
 where d1 is the measurement distance, d2 is the published limit distance
 Limit = Specified Limit + Limit Distance Correction
 Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.**

Continued

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Continued

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | Antenna Factor | Cable Factor | Other Factors | Total CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | 15.209 (a) Limit | Margin | Pass/Fail |
|---------|----------|----------------------|---------|-----------|----------|-------------|----------------|--------------|---------------|----------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | m | dB | dBuV/m | | |
| 11 | V | 1 | 3160-09 | 22158.00 | 54.12 | | 40.33 | 12.08 | -35.73 | 16.68 | 70.80 | PK | 3.00 | 9.54 | 83.52 | 12.72 | PASS |
| 11 | V | 1 | 3160-09 | 22158.00 | 33.80 | | 40.33 | 12.08 | -35.73 | 16.68 | 50.48 | AV | 3.00 | 9.54 | 63.52 | 13.04 | PASS |
| 11 | V | 1 | 3160-09 | 23950.00 | 57.28 | | 40.40 | 12.75 | -35.73 | 17.42 | 74.70 | PK | 3.00 | 9.54 | 83.52 | 8.82 | PASS |
| 11 | V | 1 | 3160-09 | 23950.00 | 36.43 | | 40.40 | 12.75 | -35.73 | 17.42 | 53.85 | AV | 3.00 | 9.54 | 63.52 | 9.67 | PASS |
| 11 | V | 1 | 3160-09 | 24620.00 | 55.73 | | 40.40 | 13.00 | -35.73 | 17.67 | 73.40 | PK | 3.00 | 9.54 | 83.52 | 10.12 | PASS |
| 11 | V | 1 | 3160-09 | 24620.00 | 37.92 | | 40.40 | 13.00 | -35.73 | 17.67 | 55.59 | AV | 3.00 | 9.54 | 63.52 | 7.93 | PASS |

Formulae:

Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier Gain, filter loss, etc)

Field Strength = SA Reading + Total CF

Limit Distance Correction = $40 \cdot \log(d1/d2)$ for $F < 30$ MHz, $20 \cdot \log(d1/d2)$ for $F > 30$ MHz:

where d1 is the measurement distance, d2 is the published limit distance

Limit = Specified Limit + Limit Distance Correction

Margin = Limit - Field Strength

***The frequency points reported describe the highest emission measured in each of the ranges tested and are used to describe the measured spectrum as a whole. It is shown that the highest emissions measured within the spectrum pass the appropriate restricted limits; therefore all emissions within the restricted bands would also meet the requirements. No out-of-band emissions were measured above the levels noted.**

E.10. PASS/FAIL

In reference to the results outlined in F.9, the DUT passes the requirements as stated in the reference standards as follows: FCC 15.205 (a) (b) and 15.209 (a): No emissions were measured within the restricted bands as outlined in 15.205 that exceeded the limits stated in 15.209.

E.11. SIGN-OFF


I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.

04Aug04

Date

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Appendix F - Peak Power Spectral Density Measurement

| F.1. REFERENCES | |
|-------------------------------------|-----------------------|
| Normative Reference Standard | FCC CFR 47 §15.247(d) |
| Procedure Reference | FCC 97-114 |


| F.2. LIMITS | |
|--|--|
| F.2.1. FCC CFR | |
| <p>§15.247(d): For digitally modulated systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than +8 dBm in any 3 kHz band during any time interval of continuous transmission.</p> | |

| F.3. ENVIRONMENTAL CONDITIONS | |
|-------------------------------|---------------|
| Temperature | 25.2 +/- 2 °C |
| Humidity | 35 +/- 2 % |
| Barometric Pressure | 96.34 kPa |

| F.4. EQUIPMENT LIST | | | | | |
|---------------------|--------------|-----------|------------------------|----------|---------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 00015 | Agilent | E4408B | Spectrum Analyzer | 29Dec03 | 29Dec04 |
| 00075 | Alpha Wire-J | 9223 | 2ft. RG223/U RF Cable | 08Jul04* | 24Jun05 |
| 00076 | Pasternack | PE7014-30 | 30dB 2 Watt Attenuator | 08Jul04* | 24Jun05 |

*Cable and attenuator verified with power meter prior to use

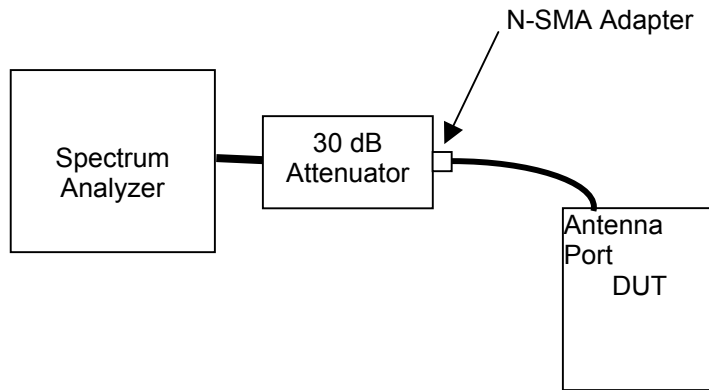
| F.5. MEASUREMENT EQUIPMENT SETUP | |
|--|---|
| Measurement Equipment Connections | The equipment was connected as shown in the setup drawing in G.6. |
| Measurement Equipment Settings | <p>The spectrum analyzer was configured with the following settings:</p> <p>RBW – 3 kHz VBW – 10 kHz Sweep time – 500 seconds Span – 1.5 MHz</p> |

| | | | | | |
|--|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

F.6. SETUP DRAWING

Figure F-1 – Setup Drawing




F.7. DUT OPERATING DESCRIPTION

The worst-case data rate was determined from prescan investigations. Measurements were made at three channels throughout the band, Low Channel (2412 MHz), Mid Channel (2437 MHz), High Channel (2462 MHz) and for both Modes b and g.

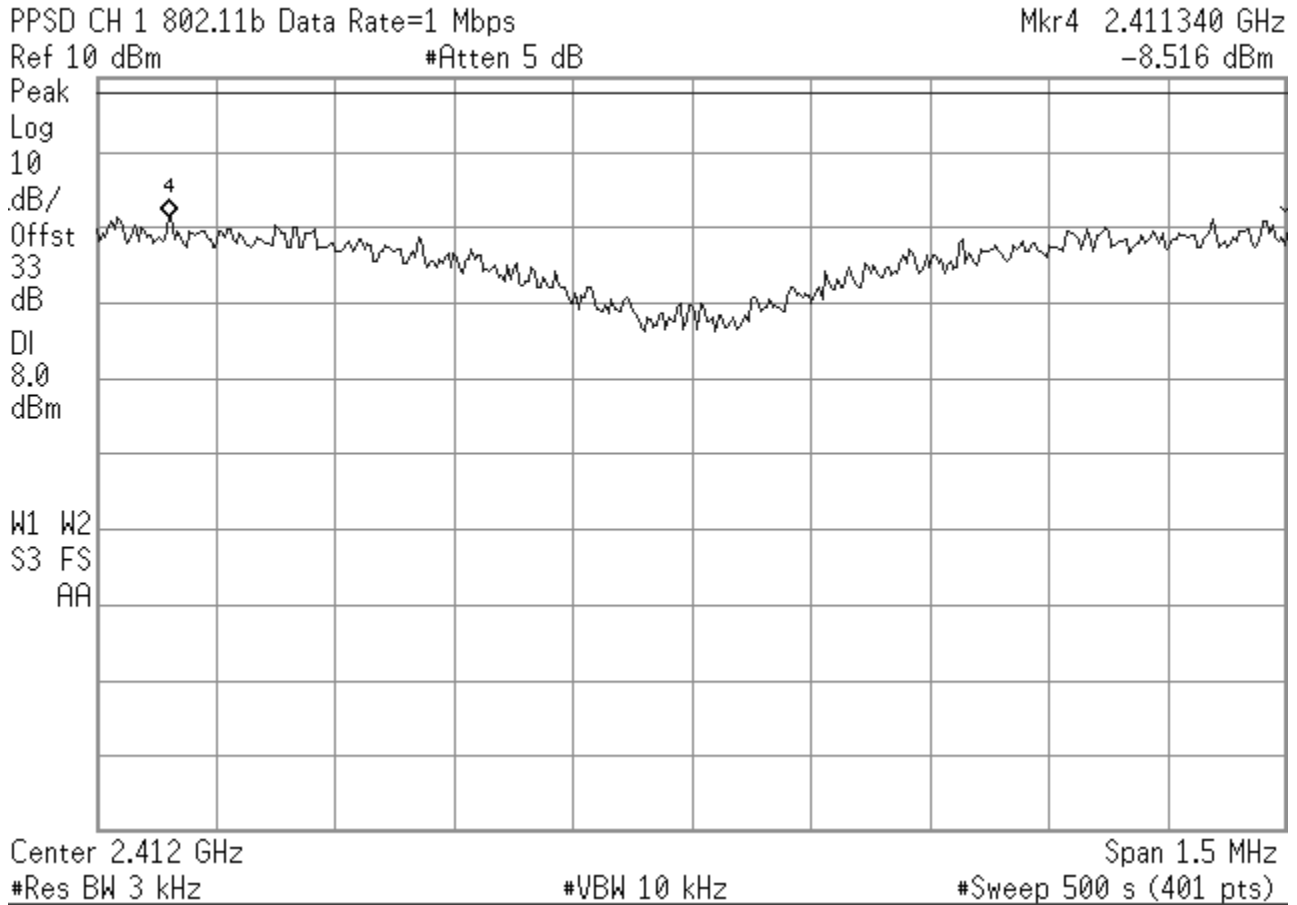
F.8. TEST RESULTS


| Channel | 802.11b | | | 802.11g | | |
|---------|-----------------|------------|----------------|-----------------|------------|----------------|
| | Frequency (GHz) | PPSD (dBm) | Data Rate Mb/s | Frequency (GHz) | PPSD (dBm) | Data Rate Mb/s |
| Low | 2.411340 | -8.516 | 1 | 2.411374 | -11.69 | 6 |
| Mid | 2.437589 | -8.287 | 1 | 2.436670 | -12.35 | 6 |
| High | 2.461261 | -7.351 | 1 | 2.462623 | -12.05 | 6 |

| | | | | | |
|--|---------------------|--|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
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| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

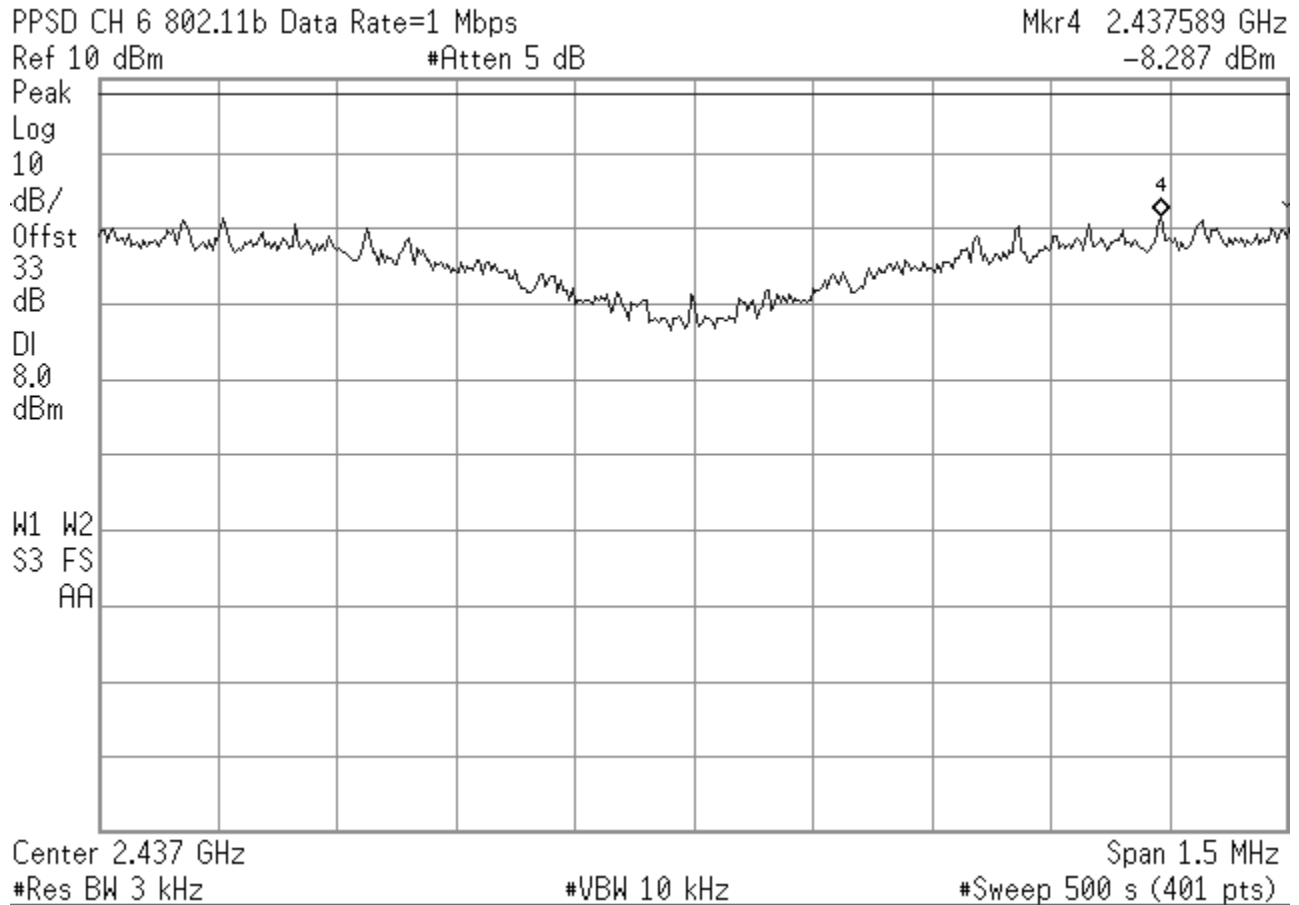
Plot F-1 - PPSD Low Channel (802.11b)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

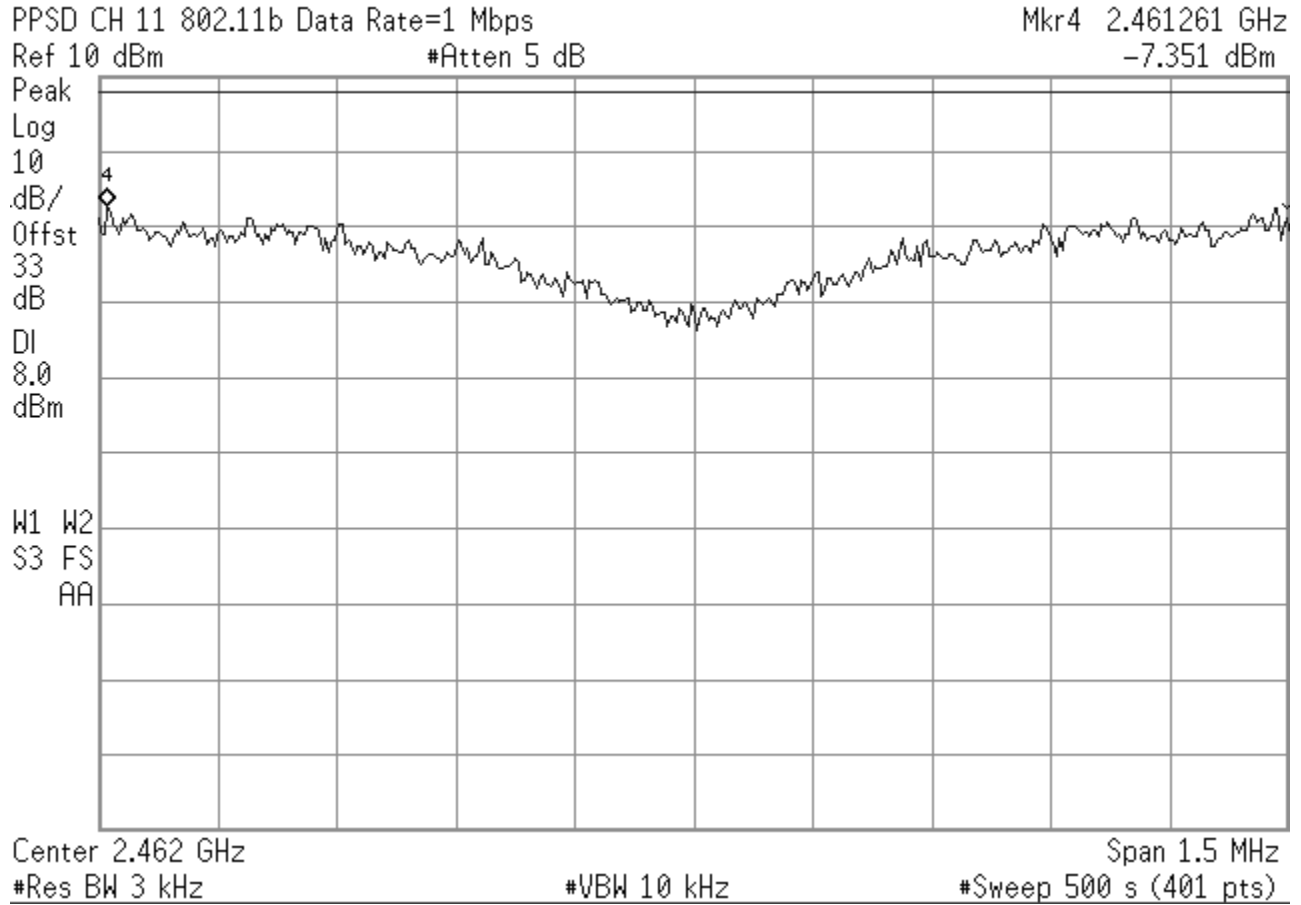
Plot F-2 - PSD Mid Channel (802.11b)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

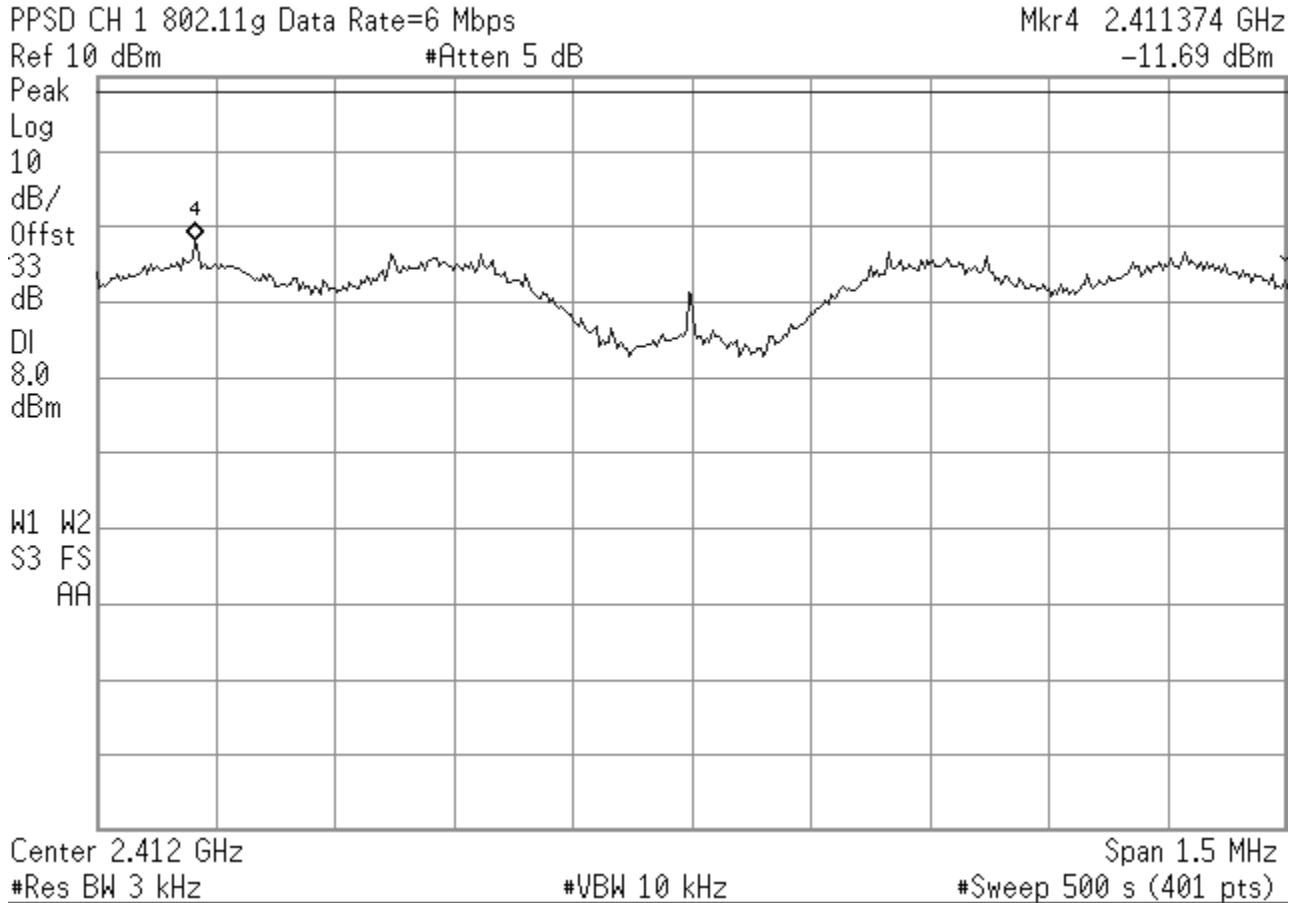
Plot F-3 - PPSD High Channel (802.11b)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
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| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

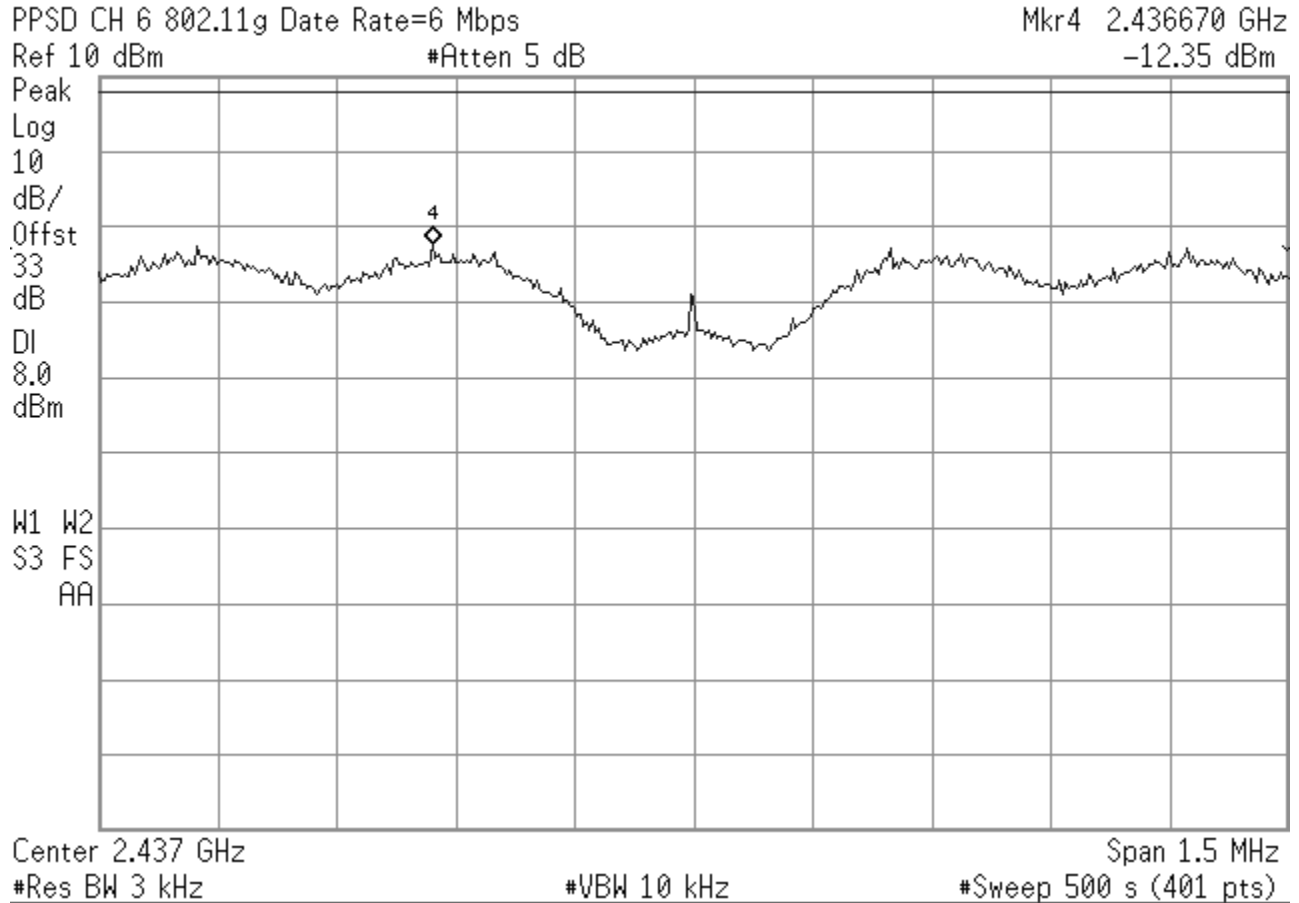
Plot F-4 - PPSD Low Channel (802.11g)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

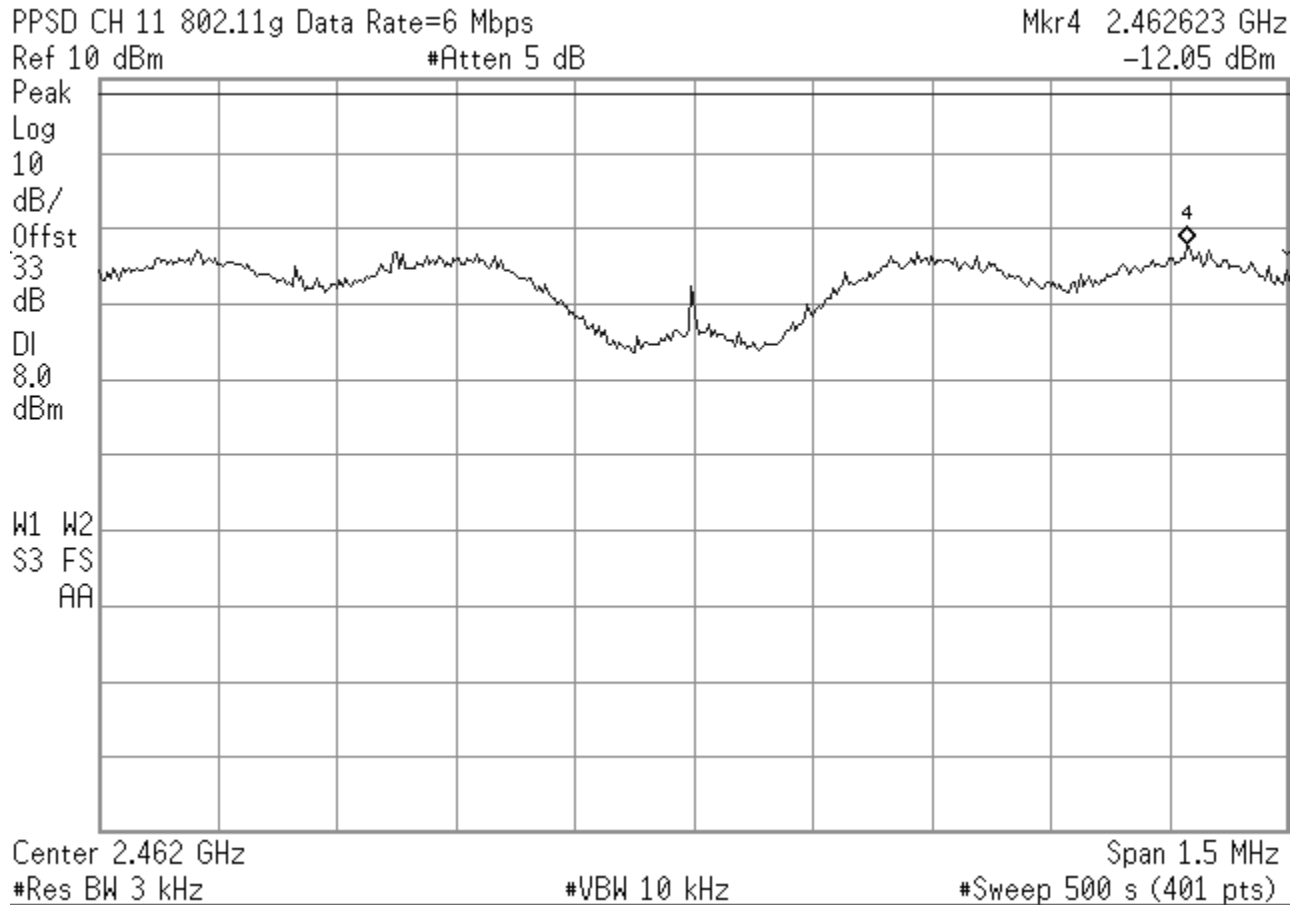
Plot F-5 - PSD Mid Channel (802.11g)




| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
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| Test Type: | FCC Part 15.247 |

Plot F-6 - PPSD High Channel (802.11g)



| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

F.9. PASS/FAIL

In reference to the results outlined in G.8 the DUT passes the requirements as stated in the reference standards as follows:
 FCC 15.247 (d): The peak power spectral density did not exceed +8 dBm in any 3 kHz band.


F.10. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.



 Russell Pipe
 Senior Compliance Technologist
 Celltech Labs Inc.

 04Aug04
 Date

| | | | | | |
|--|----------------------------|--|----------------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
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| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Appendix G - Conducted Powerline Emissions Measurement


| G.1. REFERENCES | |
|-------------------------------------|----------------------------|
| Normative Reference Standard | CFR 47 FCC Part 15 §15.207 |
| Procedure Reference | ANSI C63.4 |

| G.2. LIMITS | | |
|--|------------------------|----------|
| <p>§15.207: Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each powerline and ground at the power terminal.</p> | | |
| Frequency of Emission (MHz) | Conducted Limit (dBuV) | |
| | Quasi-Peak | Average |
| 0.15 – 0.5 | 66 to 56* | 56 o 46* |
| 0.50 – 5.0 | 56 | 46 |
| 5.0 – 30.0 | 60 | 50 |

| G.3. ENVIRONMENTAL CONDITIONS | |
|-------------------------------|---------------|
| Temperature | +26 ± 5 °C |
| Humidity | 31 % ± 10% RH |
| Barometric Pressure | 101.4 kpa |

| G.4. EQUIPMENT LIST | | | | | |
|---------------------|--------------|--------|--------------------------------------|----------|---------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 00063 | HP | 85662A | Spectrum Analyzer Display | na | na |
| 00051 | HP | 8566B | Spectrum Analyzer RF Section | 18May04 | 18May05 |
| 00049 | HP | 85650A | Quasi-Peak Adapter | 18May04 | 18May05 |
| 00047 | HP | 85685A | Preselector | 18May04 | 18May05 |
| 00083 | EMCO | 3825/2 | Line Impedance Stabilization Network | 29Apr04 | 29Apr05 |
| 00084 | EMCO | 3825/2 | Line Impedance Stabilization Network | 29Apr04 | 29Apr05 |

| G.5. MEASUREMENT EQUIPMENT SETUP | |
|--|--|
| MEASUREMENT EQUIPMENT CONNECTIONS | The conducted emissions were measured on each of the two AC powerline leads connected to the DUT's power supply brick. A two line LISN was used to make this measurement. A drawing of the equipment setup is shown in H.6 |
| MEASUREMENT EQUIPMENT SETTINGS | <p>Each of the monitor ports from the 2-line LISN was connected in turn to the spectrum analyzer. The port not connected to the analyzer was terminated in a 50-ohm load. A prescan of the peak emission levels was made of the 150 kHz – 30 MHz range split into 4 equal frequency bands. The following were the spectrum analyzer settings:</p> <p>Start Frequency and Stop Frequency set by software for each of the four bands RBW: 100 kHz VBW: 300 kHz Sweep: 500 mS</p> <p>The resulting data from each band was corrected and collected by software and presented in the graphical representations shown in H.8 for the two leads. The frequency points with the highest 10 levels on each lead were used by software to optimize a set of 20 readings for each type of detector (peak, quasi-peak and average). This data was corrected by the software is presented in the tables shown in section H.8.</p> |

| | | | | | |
|---|---------------------|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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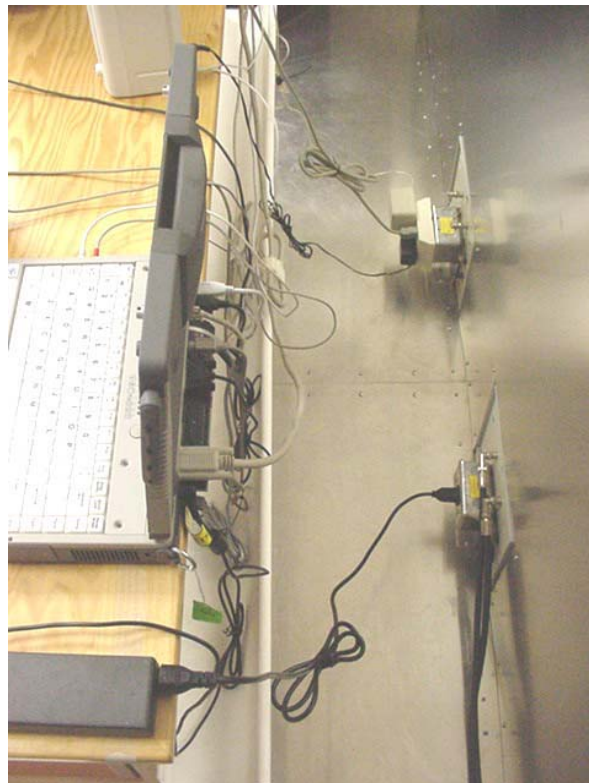
| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |


G.6. SETUP PHOTOS

Photograph G-1 – AC Powerline Conducted Emission Configuration



Photograph G-2 – AC Powerline Conducted Emission Cable Placement

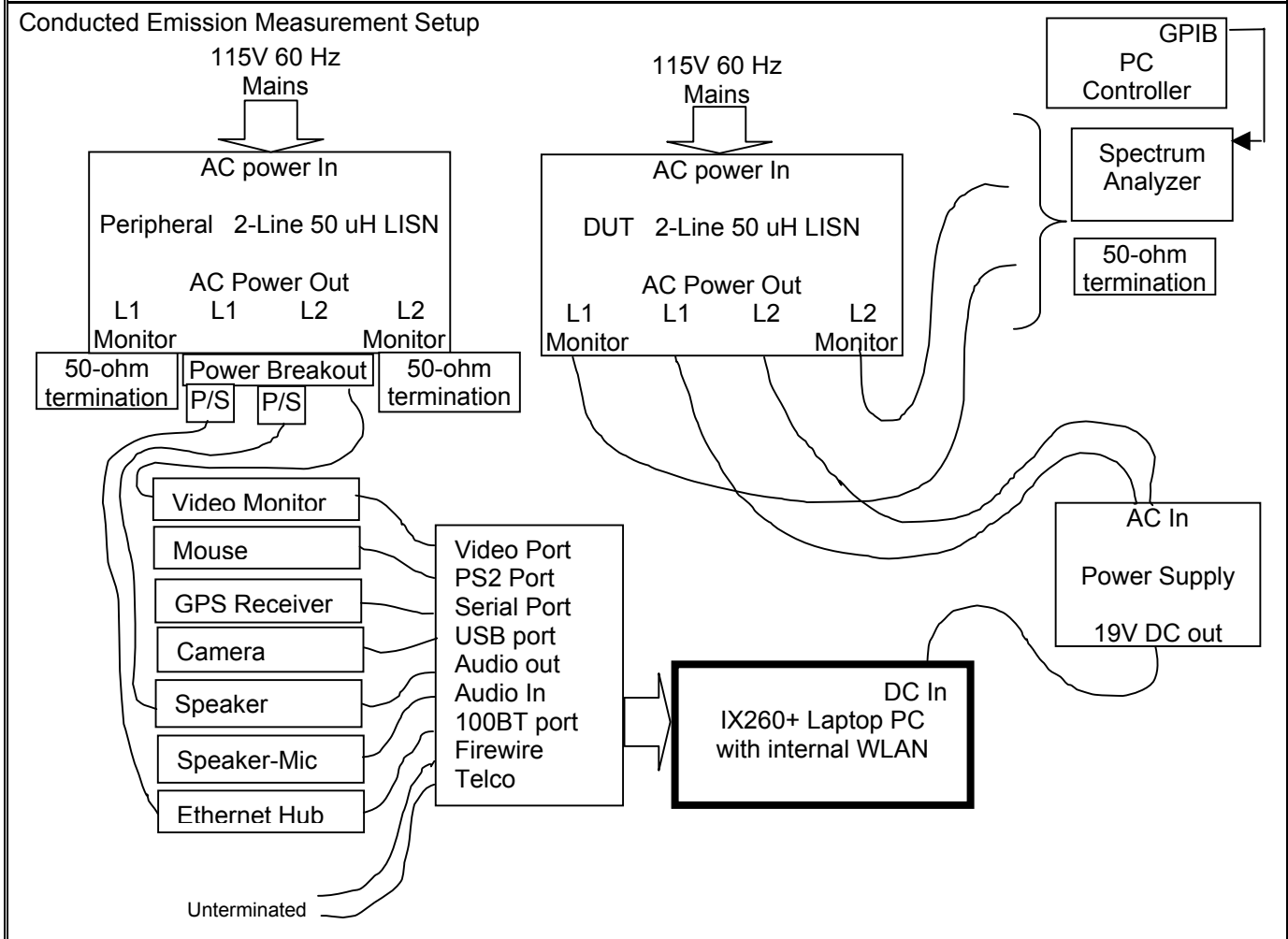


| | | | | | |
|--|--|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

G.7. SETUP DRAWING

Figure G-1 – Setup Drawing




G.8. DUT OPERATING DESCRIPTION

| | |
|---------------------|--|
| WLAN: | The WLAN was set to transmit at full power on Channel 1, Mode g 6 Mb/s |
| PC: | Other than operating the WLAN software and running MS windows, no PC exercising was performed. |
| Peripherals: | All peripherals were active, but no specific traffic was initiated. |

| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

G.9. TEST RESULTS

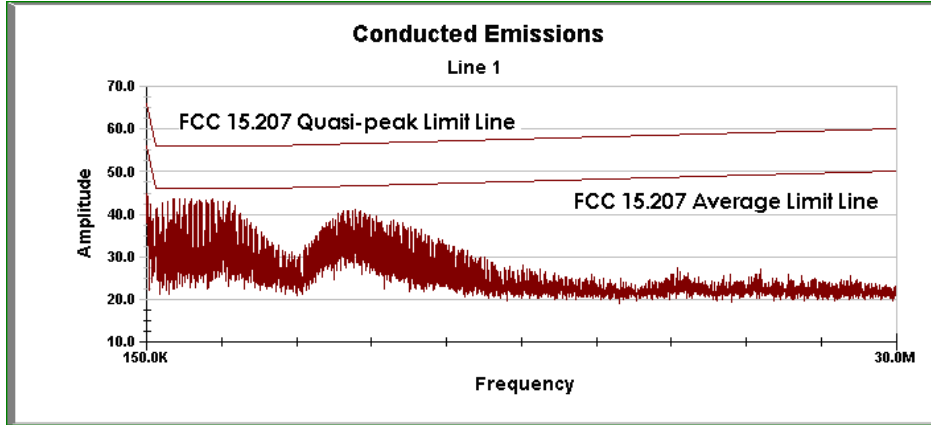
|  | | Standard: FCC15.207 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------|--|------|----------------|-----------|-------|--------|-----------|--|--|------|-----------|----------|----|----------------|----------|-------|--------|-----------|-----|------|----|------|-----------|------|----|--|----|-------|--------|------|-------|----|-------|-------|------|----|-------|--------|------|-------|-----|-------|-------|------|----|-------|--------|------|-------|----|-------|-------|------|----|-------|--------|------|-------|-----|-------|------|------|----|-------|--------|------|-------|----|-------|-------|------|----|-------|--------|------|-------|-----|-------|------|------|----|--------|--------|------|-------|----|-------|-------|------|----|--------|--------|------|-------|-----|-------|-------|------|----|-------|--------|------|-------|----|-------|-------|------|----|-------|--------|------|-------|-----|-------|-------|------|----|-------|--------|------|-------|----|-------|-------|------|----|-------|--------|------|-------|-----|-------|------|------|----|-------|--------|------|-------|----|-------|-------|------|----|-------|--------|------|-------|-----|-------|------|------|----|--------|--------|------|-------|----|-------|-------|------|----|--------|--------|------|-------|-----|-------|
| | | <table border="1"> <thead> <tr> <th rowspan="2">Lead</th> <th>Frequency</th> <th>SA Level</th> <th>CF</th> <th>Emission Level</th> <th>Detector</th> <th>Limit</th> <th>Margin</th> <th>Pass/Fail</th> </tr> <tr> <th>MHz</th> <th>dBuV</th> <th>dB</th> <th>dBuV</th> <th>PK/QP/AVG</th> <th>dBuV</th> <th>dB</th> <th></th> </tr> </thead> <tbody> <tr><td>L1</td><td>0.150</td><td>39.600</td><td>2.13</td><td>41.73</td><td>QP</td><td>66.00</td><td>24.27</td><td>PASS</td></tr> <tr><td>L1</td><td>0.150</td><td>37.400</td><td>2.13</td><td>39.53</td><td>AVG</td><td>56.00</td><td>16.47</td><td>PASS</td></tr> <tr><td>L1</td><td>2.737</td><td>41.800</td><td>0.28</td><td>42.08</td><td>QP</td><td>56.00</td><td>13.92</td><td>PASS</td></tr> <tr><td>L1</td><td>2.737</td><td>41.900</td><td>0.28</td><td>42.18</td><td>AVG</td><td>46.00</td><td>3.82</td><td>PASS</td></tr> <tr><td>L1</td><td>8.666</td><td>40.200</td><td>0.89</td><td>41.09</td><td>QP</td><td>56.59</td><td>15.49</td><td>PASS</td></tr> <tr><td>L1</td><td>8.666</td><td>36.600</td><td>0.89</td><td>37.49</td><td>AVG</td><td>46.59</td><td>9.09</td><td>PASS</td></tr> <tr><td>L1</td><td>24.575</td><td>22.400</td><td>2.88</td><td>25.28</td><td>PK</td><td>49.13</td><td>23.85</td><td>PASS</td></tr> <tr><td>L1</td><td>24.575</td><td>20.000</td><td>2.88</td><td>22.88</td><td>AVG</td><td>49.13</td><td>26.25</td><td>PASS</td></tr> <tr><td>L2</td><td>0.154</td><td>43.300</td><td>2.07</td><td>45.37</td><td>QP</td><td>65.89</td><td>20.52</td><td>PASS</td></tr> <tr><td>L2</td><td>0.154</td><td>43.100</td><td>2.07</td><td>45.17</td><td>AVG</td><td>55.89</td><td>10.72</td><td>PASS</td></tr> <tr><td>L2</td><td>3.191</td><td>42.500</td><td>0.29</td><td>42.79</td><td>QP</td><td>56.00</td><td>13.21</td><td>PASS</td></tr> <tr><td>L2</td><td>3.191</td><td>42.400</td><td>0.29</td><td>42.69</td><td>AVG</td><td>46.00</td><td>3.31</td><td>PASS</td></tr> <tr><td>L2</td><td>8.358</td><td>40.300</td><td>0.86</td><td>41.16</td><td>QP</td><td>56.54</td><td>15.38</td><td>PASS</td></tr> <tr><td>L2</td><td>8.358</td><td>39.100</td><td>0.86</td><td>39.96</td><td>AVG</td><td>46.54</td><td>6.58</td><td>PASS</td></tr> <tr><td>L2</td><td>24.575</td><td>23.400</td><td>2.89</td><td>26.29</td><td>QP</td><td>59.13</td><td>32.84</td><td>PASS</td></tr> <tr><td>L2</td><td>24.575</td><td>20.200</td><td>2.89</td><td>23.09</td><td>AVG</td><td>49.13</td><td>26.04</td><td>PASS</td></tr> </tbody> </table> | | | | | | | | | Lead | Frequency | SA Level | CF | Emission Level | Detector | Limit | Margin | Pass/Fail | MHz | dBuV | dB | dBuV | PK/QP/AVG | dBuV | dB | | L1 | 0.150 | 39.600 | 2.13 | 41.73 | QP | 66.00 | 24.27 | PASS | L1 | 0.150 | 37.400 | 2.13 | 39.53 | AVG | 56.00 | 16.47 | PASS | L1 | 2.737 | 41.800 | 0.28 | 42.08 | QP | 56.00 | 13.92 | PASS | L1 | 2.737 | 41.900 | 0.28 | 42.18 | AVG | 46.00 | 3.82 | PASS | L1 | 8.666 | 40.200 | 0.89 | 41.09 | QP | 56.59 | 15.49 | PASS | L1 | 8.666 | 36.600 | 0.89 | 37.49 | AVG | 46.59 | 9.09 | PASS | L1 | 24.575 | 22.400 | 2.88 | 25.28 | PK | 49.13 | 23.85 | PASS | L1 | 24.575 | 20.000 | 2.88 | 22.88 | AVG | 49.13 | 26.25 | PASS | L2 | 0.154 | 43.300 | 2.07 | 45.37 | QP | 65.89 | 20.52 | PASS | L2 | 0.154 | 43.100 | 2.07 | 45.17 | AVG | 55.89 | 10.72 | PASS | L2 | 3.191 | 42.500 | 0.29 | 42.79 | QP | 56.00 | 13.21 | PASS | L2 | 3.191 | 42.400 | 0.29 | 42.69 | AVG | 46.00 | 3.31 | PASS | L2 | 8.358 | 40.300 | 0.86 | 41.16 | QP | 56.54 | 15.38 | PASS | L2 | 8.358 | 39.100 | 0.86 | 39.96 | AVG | 46.54 | 6.58 | PASS | L2 | 24.575 | 23.400 | 2.89 | 26.29 | QP | 59.13 | 32.84 | PASS | L2 | 24.575 | 20.200 | 2.89 | 23.09 | AVG | 49.13 |
| Lead | Frequency | SA Level | CF | Emission Level | Detector | Limit | Margin | Pass/Fail | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MHz | dBuV | dB | dBuV | PK/QP/AVG | dBuV | dB | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 | 0.150 | 39.600 | 2.13 | 41.73 | QP | 66.00 | 24.27 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 | 0.150 | 37.400 | 2.13 | 39.53 | AVG | 56.00 | 16.47 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 | 2.737 | 41.800 | 0.28 | 42.08 | QP | 56.00 | 13.92 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 | 2.737 | 41.900 | 0.28 | 42.18 | AVG | 46.00 | 3.82 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 | 8.666 | 40.200 | 0.89 | 41.09 | QP | 56.59 | 15.49 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 | 8.666 | 36.600 | 0.89 | 37.49 | AVG | 46.59 | 9.09 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 | 24.575 | 22.400 | 2.88 | 25.28 | PK | 49.13 | 23.85 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 | 24.575 | 20.000 | 2.88 | 22.88 | AVG | 49.13 | 26.25 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L2 | 0.154 | 43.300 | 2.07 | 45.37 | QP | 65.89 | 20.52 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L2 | 0.154 | 43.100 | 2.07 | 45.17 | AVG | 55.89 | 10.72 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L2 | 3.191 | 42.500 | 0.29 | 42.79 | QP | 56.00 | 13.21 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L2 | 3.191 | 42.400 | 0.29 | 42.69 | AVG | 46.00 | 3.31 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L2 | 8.358 | 40.300 | 0.86 | 41.16 | QP | 56.54 | 15.38 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L2 | 8.358 | 39.100 | 0.86 | 39.96 | AVG | 46.54 | 6.58 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L2 | 24.575 | 23.400 | 2.89 | 26.29 | QP | 59.13 | 32.84 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L2 | 24.575 | 20.200 | 2.89 | 23.09 | AVG | 49.13 | 26.04 | PASS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>Formulae: CF (dB) = Cable Loss (dB) + LISN Correction Factor (dB) Emission Level (dBuV) = SA Level (dBuV) + CF (dB) Margin (dB) = Limit (dBuV) - Emission Level (dBuV)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Calculations

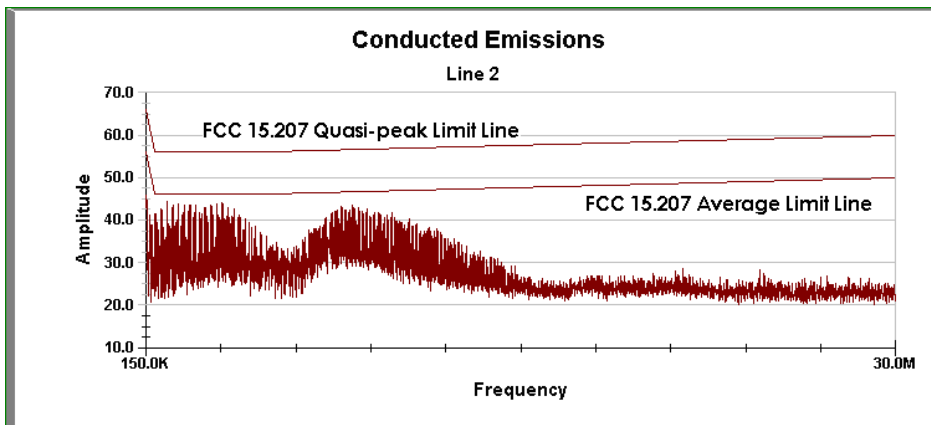
CF = Correction Factor
 Emission Level = Measured Level + correction factor
 Margin = Limit – Emission Level


| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

Plot G-1 - Line 1 Peak Conducted Powerline Emissions



Plot G-2 - Line 2 Peak Conducted Powerline Emissions



| | | | | | |
|--|--|---------------|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

G.10. PASS/FAIL

In reference to the results outlined in H.8 the DUT passes the requirements as stated in the reference standards as follows:
 1) The pass-band gain does not exceed the nominal gain of +10.0 dB stated by the manufacturer by more than 1.0 dB.
 2) The gain outside the 20dB bandwidth does not exceed the gain at the 20 dB point (-10.0 dB).


G.11. SIGN-OFF

I attest to the accuracy of the data. All measurements reported herein were performed by me and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements.




 Duane M. Friesen, C.E.T.
 EMC Manager
 Celltech Labs Inc.

 04Aug04
 Date

| | | | | | |
|--|---------------------|--|---------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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| | |
|-------------------------|-------------------|
| Test Report S/N: | 072804-540cKBC |
| Test Date(s): | 28Jun04 - 29Jul04 |
| Test Type: | FCC Part 15.247 |

END OF DOCUMENT

| | | | | | |
|--|----------------------------|--|----------------------|----------------|---|
| Applicant: | Itronix Corporation | Model: | IX260PROAC775 | FCC ID: | KBCIX260PROAC775 |
| Rugged Laptop PC with internal WLAN (802.11b/g) & AC775 Dual-Band GSM GPRS/EDGE Modem | | | | |  |
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