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|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

ELECTROMAGNETIC COMPATIBILITY

EMC TEST REPORT

FOR

ITRONIX CORPORATION

MODEL: IX325-AC580IWL

IX325 SERIES RUGGED TABLET PC

INCLUDING

802.11b/g WLAN MINI-PCI CARD

WITH

DUAL INTERNAL PIFA ANTENNA

FCC ID: KBCIX325-AC580IWL

IC: 1943A-IX325F

Test Report Serial Number


100305KBC-T673-E15W

Test Report Issue No.

E673W-021306-R0

Test Lab

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

| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
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| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |





DECLARATION OF COMPLIANCE


| | | | |
|---|--|--|--|
| Test Lab CELLTECH LABS INC. Testing and Engineering Services 1955 Moss Court Kelowna, B.C. Canada V1Y 9L3 Phone: 250-448-7047 Fax: 250-448-7048 e-mail: info@celltechlabs.com web site: www.celltechlabs.com | | Applicant ITRONIX CORPORATION 12825 E. Mirabeau Parkway Spokane Valley, WA 99216 United States | |
| Lab Registration No.(s): | FCC: 714830 | IC: 3874 | |
| Rule Part(s): | FCC: §15.247; §2.1091; §1.1310 | IC: RSS-210 Issue 5 - A1. 11/30/02 | |
| Device Classification: | FCC: Digital Transmission System (DTS) | IC: Low Power Licence-Exempt Transmitter | |
| Device Identification: | FCC ID: KBCIX325-AC580IWL | IC: 1943A-IX325f | |
| DUT Description: | | | |
| Model: | IX325-AC580IWL | | |
| Device Description: | Rugged Tablet PC | | |
| Internal Transmitter(s): | Intel PRO2200BG 802.11b/g 2.4 GHz DSSS WLAN Mini-PCI Card | | |
| TX Frequency Range: | 2412 - 2462 MHz | | |
| Max. RF Output Power: | 0.112 Watts - 20.49 dBm - Peak Conducted - 802.11b 0.048 Watts - 16.77 dBm - Peak Conducted - 802.11g | | |
| Modulation Type(s): | OFDM with BPSK, QPSK, 16QAM, 64QAM, DBPSK, DQPSK, CCK | | |
| Antenna Type(s): | Well Green Technology PIFA WLAN Dual Internal Antenna (Primary Transmit & Receive - upper right side edge of LCD Display) (Auxiliary Receive only - upper left side edge of LCD Display) | | |
| Power Source(s): | Stationary: 75 Watt AC Power Adapter | | |
| | 11.1 V Internal Lithium-ion Battery, 3600 mAh (Model: T8M-E) | | |
| | 11.1 V External Second Lithium-ion Battery, 3600 mAh (Model: T8S-E) | | |

This wireless device has demonstrated compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in FCC 47 CFR Part 15C and Industry Canada RSS-210 Issue 5.

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. |  |
|  | Alex Yuan EMC Technologist Celltech Labs Inc. | |
|  | Duane M. Friesen, C.E.T. EMC Manager Celltech Labs Inc. | |

| | | | |
|--|--|----------------------------------|---|
| Applicant: Itronix Corporation | Model: IX325-AC580IWL | FCC ID: KBCIX325-AC580IWL | IC ID: 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | |  |
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| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |



TEST SUMMARY


| Appendix | Test Description | Procedure Reference | Limit Reference | Test Start Date | Test End Date | Result |
|--|-------------------------------|--|--|-----------------|---------------|--------|
| Referenced Standard: FCC CFR Title 47 Part 15 | | | | | | |
| B | 6 dB Bandwidth | FCC 97-114 | §15.247(2) | 14Jul05 | 14Jul05 | Pass |
| C | Peak Conducted Output Power | FCC 97-114 | §15.247 (b) (3) | 14Jul05 | 14Jul05 | Pass |
| D | Maximum Permissible Exposure | FCC CFR 47 § 2.1091 IEEE Std C95.1-1992 | §1.1310 Table 1 (b) | 15Jul05 | 15Jul05 | Pass |
| E | Radiated Spurious Emissions | FCC 97-114 | §15.247(c) | 4Jul05 | 13Jul05 | Pass |
| F | Restricted Band Emissions | FCC 97-114 | §15.205 (a), (b) §15.209 (a) | 4Jul05 | 13Jul05 | Pass |
| G | Peak Power Spectral Density | FCC 97-114 | §15.247(d) | 20Jul05 | 20Jul05 | Pass |
| H | Powerline Conducted Emissions | ANSI C63.4 | §15.207 | 20Jul05 | 20Jul05 | Pass |
| Referenced Standard: IC RSS-210 Issue 5 | | | | | | |
| B | 6 dB Bandwidth | RSS-210 § 10 | RSS-210 A1 §(l)(iv) | 14Jul05 | 14Jul05 | Pass |
| C | Peak Conducted Output Power | RSS-210 § 10 | RSS-210 A1 §(l)(iv) RSS-210 §6.2.2 (o)(b) | 14Jul05 | 14Jul05 | Pass |
| D | Maximum Permissible Exposure | RSS-102 | RSS-210 §14 Safety Code 6 2.2.1(a) Table 5 | 15Jul05 | 15Jul05 | Pass |
| E | Radiated Spurious Emissions | RSS-212, ANSI C63.4 | RSS-210 §6.2.2 (o)(e1) | 4Jul05 | 13Jul05 | Pass |
| F | Restricted Band Emissions | RSS-212, ANSI C63.4 | RSS-210 §6.3 | 4Jul05 | 13Jul05 | Pass |
| G | Peak Power Spectral Density | RSS-210 § 10 | RSS-210 §6.2.2 (o)(b) | 20Jul05 | 20Jul05 | Pass |
| H | Powerline Conducted Emissions | RSS-212, ANSI C63.4 | RSS-210 §6.6 | 20Jul05 | 20Jul05 | Pass |


REVISION LOG

| Revision | Description | Implemented By | Implementation Date |
|----------|-----------------|-----------------|---------------------|
| 0 | Initial Release | Jonathan Hughes | 13Feb06 |

SIGNATORIES

| | | |
|-------------|---|-------------------|
| Prepared By |  | February 13, 2006 |
| Name/Title | Duane M. Friesen, C.E.T. / EMC Manager | Date |
| Reviewed By |  | February 13, 2006 |
| Name/Title | Jonathan Hughes / General Manager | Date |

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
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1.0 SCOPE


This report outlines the measurements made and results collected during the electromagnetic emissions testing of the Itronix Corporation Model: IX325-AC580IWL Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g DSSS WLAN Mini-PCI Card and dual internal Well Green Technology PIFA WLAN antennas. 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 C and Industry Canada RSS-210 Issue 5.

2.0 REFERENCES

2.1 Normative References


| | |
|--|--|
| ANSI/ISO 17025:1999 | General Requirements for competence of testing and calibration laboratories |
| IEEE/ANSI C63.4-2003 | Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz |
| IEEE/ANSI Std C95.1-1999 | American National Standard Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields |
| CFR Title 47 Part 2:2004 | Code of Federal Regulations Title 47: Telecommunication Part 2: Frequency Allocations and Radio Treaty Matters; General Rules and Regulations |
| CFR Title 47 Part 15:2004 | Code of Federal Regulations Title 47: Telecommunication Part 15: Radio Frequency Devices |
| FCC Public Notice DA 00-705 | Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems March 30, 2000 |
| FCC Knowledge Database Pub. | 558074 (May 10, 2005) |
| IC Spectrum Management & Telecommunications Policy | Radio Standards Specification RSS-212 Issue 1 (Provisional) - Test Facilities & Test Methods for Radio Equipment RSS-210 Issue 5 - Low Power Licence-Exempt Radiocommunication Devices: Amendment November 30, 2002 RSS-102 Issue 1 (Provisional) - Evaluation Procedure for Mobile and Portable Radio Transmitters with respect to Health Canada's Safety Code 6 for Exposure of Humans to Radio Frequency Fields |


| | | | | | | | |
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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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3.0 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 are listed with the FCC under Registration Number 714830 and Industry Canada under File Number IC 3874.

4.0 GENERAL INFORMATION

4.1 Applicant Information

| | |
|----------------------|--|
| Company Name: | Itronix Corporation |
| Address: | 12825 E. Mirabeau Parkway Spokane Valley, WA 99216 United States |


4.2 DUT Description


The DUT consisted of the Itronix Rugged Tablet PC Model: IX325-AC580IWL with internal Intel PRO2200BG 802.11b/g DSSS WLAN Mini-PCI Card installed in the Mini-PCI slot, and internal PIFA antenna installed in the upper right side edge of the LCD display. Photographs of the DUT placement and construction are shown in Appendix A.

| | | | |
|-------------------------|--|-------------------|-------------------------|
| Device: | Rugged Tablet PC | | |
| Model: | IX325-AC580IWL | | |
| Serial Number: | ZZGEG5074ZZ9799 | | |
| Identifier(s): | FCC ID: | KBCIX325-AC580IWL | IC: 1943A-IX325f |
| Power Source(s): | Delta Electronics 75 Watt AC-DC Power Supply Model: ADP-75 FB B Rev 00 (S/N: UCT030200307) | | |
| | Internal Lithium-ion 11.1 V 3600 mAh Battery Model: T8M-E | | |
| | External Second Lithium-ion 11.1 V 3600 mAh Battery Model: T8S-E | | |

| | | | |
|------------------------|--|-----------------------------------|---|
| 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 | IC: RSS-210 Issue 5 - A1. 11/30/02 |
| Classification: | FCC: | Digital Transmission System (DTS) | IC: Low Power Licence-Exempt Transmitter |
| Power Source: | Powered from the internal PC power supply | | |

| | | | |
|----------------|---|--|--|
| Device: | Internal PIFA WLAN Antenna 2 (diversity antenna for Transmit and Receive) - upper right side of LCD | | |
| Model: | Well Green Technology WLAN Antenna | | |
| Gain: | 1.65 dBi | | |

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
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| | |
|----------------|--|
| Device: | Internal PIFA WLAN Antenna 1 (diversity antenna for Receive only) - upper left side of LCD |
| Model: | Well Green Technology WLAN Antenna |
| Gain: | 2.41 dBi |

4.3 Co-Located Equipment

| | |
|----------------|----------------------|
| Device: | GPS Receiver Module |
| Model: | Leadtek Model LR9805 |

| | |
|----------------|----------------------------|
| Device: | GPS Antenna (Receive only) |
| Model: | Sarantel 101401040/2004UK |


4.4 Cable Descriptions


| ROUTING | | Length m | Model | Terminations | | Shield Type | Shield Termination | | Suppression |
|---------------|--------------|-------------|-------|--------------|-------|-------------|--------------------|-------|-------------|
| From | To | | | End 1 | End 2 | | End 1 | End 2 | |
| PC modem port | Unterminated | 1.0 | n/a | RJ-11 | RJ-11 | None | na | na | None |

4.5 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 |
| | K8255 | Keyboard |
| Sanwa Supply | MA-MBUSB | Mouse |

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
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4.6 Clock Frequencies

4.6.1 DUT Clock Frequencies

| | |
|----------------|--------------------------------|
| Device: | Rugged Tablet PC |
| Clocks: | n/a |
| Name: | 2.4GHz DSSS WLAN Mini-PCI Card |
| Clocks: | n/a |
| Name: | Internal PIFA Antenna (WLAN) |
| Clocks: | None |

4.6.2 Co-Located Clock Frequencies

| | |
|----------------|-------------|
| Device: | Peripherals |
| Clocks: | n/a |


4.7 Mode(s) of Operation Tested


Customer supplied the software which was used to set the WLAN card in the appropriate mode, channel, and power level for the specific measurement.

| | | | | | | |
|---|--|-----------|-----------|----------------|-----------|-----------|
| 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 power setting of 27 802.11g set to power setting of 20 | | | | | |
| RF Peak Conducted Output Power Tested:¹ | 802.11b | 1 Mbps | 11 Mbps | 802.11g | 6 Mbps | 54 Mbps |
| | 2412 MHz | 18.20 dBm | 19.63 dBm | 2412 MHz | 16.24 dBm | 15.96 dBm |
| | 2437 MHz | 18.56 dBm | 20.49 dBm | 2437 MHz | 16.67 dBm | 16.30 dBm |
| | 2462 MHz | 19.04 dBm | 20.41 dBm | 2462 MHz | 16.77 dBm | 16.54 dBm |
| Modes / Data Rates Tested:² | 802.11b (1, 5.5, 11 Mbps checked in prescan) (1 Mbps short determined to be worst-case spurious and used unless otherwise noted) | | | | | |
| | 802.11g (6, 36, 54 Mbps checked in prescan) (6 Mbps determined to be worst-case spurious and used unless otherwise noted) | | | | | |
| Modulation Type(s): | OFDM with BPSK, QPSK, 16QAM, 64QAM, DBPSK, DQPSK, CCK | | | | | |
| Power Source(s) Tested: | All tests were performed with the AC Power Adapter powering the DUT. | | | | | |

Note 1: Peak power measured and corrected per FCC Document KDB Pub. No. 558074 Power Output Option 2 Method 1

Note 2: Turbo mode available at module level but not enabled when installed in DUT

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
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4.7.1 DUT Exercising Software Description

The DUT was configured and exercised using customer supplied test software that allows 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 as described in section 5.6 with the worst-case data rate as described in the same section. Software power settings were set as defined by the manufacturer for typical operation.

4.8 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 WLAN and internal antenna as described in section 5.2 installed in a typical manner. More specific details may be included in each appendix.


4.8.1 Configuration Justification


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

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


5.0 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.

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

APPENDICES

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
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|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

Appendix A - DUT Photographs

Photograph A-1 - Front of IX325 Tablet PC



Photograph A-2 - Back of IX325 Tablet PC



Photograph A-3 - Edge of IX325 Tablet PC



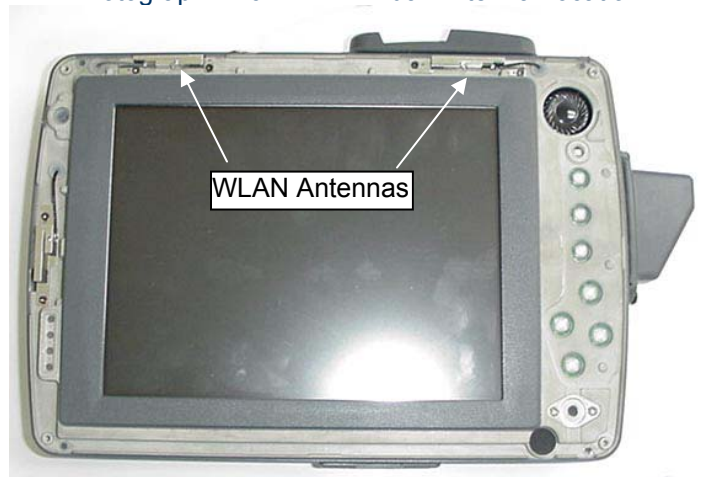
Photograph A-4 - Side of IX325 Tablet PC





Photograph A-5 - WLAN Mini-PCI Card Location



Photograph A-6 - WLAN Dual Antenna Location



| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

Appendix B - 6 dB Bandwidth Measurement


| B.1. REFERENCES | |
|-------------------------------------|--|
| Normative Reference Standard | FCC CFR 47 §15.247 (2) |
| Procedure Reference | FCC Document KDB Publication Number 558074 |


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

| B.3. ENVIRONMENTAL CONDITIONS | |
|-------------------------------|-------------|
| Temperature | 25 +/- 2 °C |
| Humidity | 35 +/- 2 % |
| Barometric Pressure | 96 kPa |

| B.4. EQUIPMENT LIST | | | | | |
|---------------------|--------------|-----------|------------------------|----------|---------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 00015 | Agilent | E4408B | Spectrum Analyzer | 24Jan05 | 24Jan06 |
| 00075 | Alpha Wire-J | 9223 | 1ft. RG223/U RF Cable | na* | na |
| 00076 | Pasternack | PE7014-30 | 30dB 2 Watt Attenuator | na* | na |

*Cable and attenuator verified with power meter prior to use

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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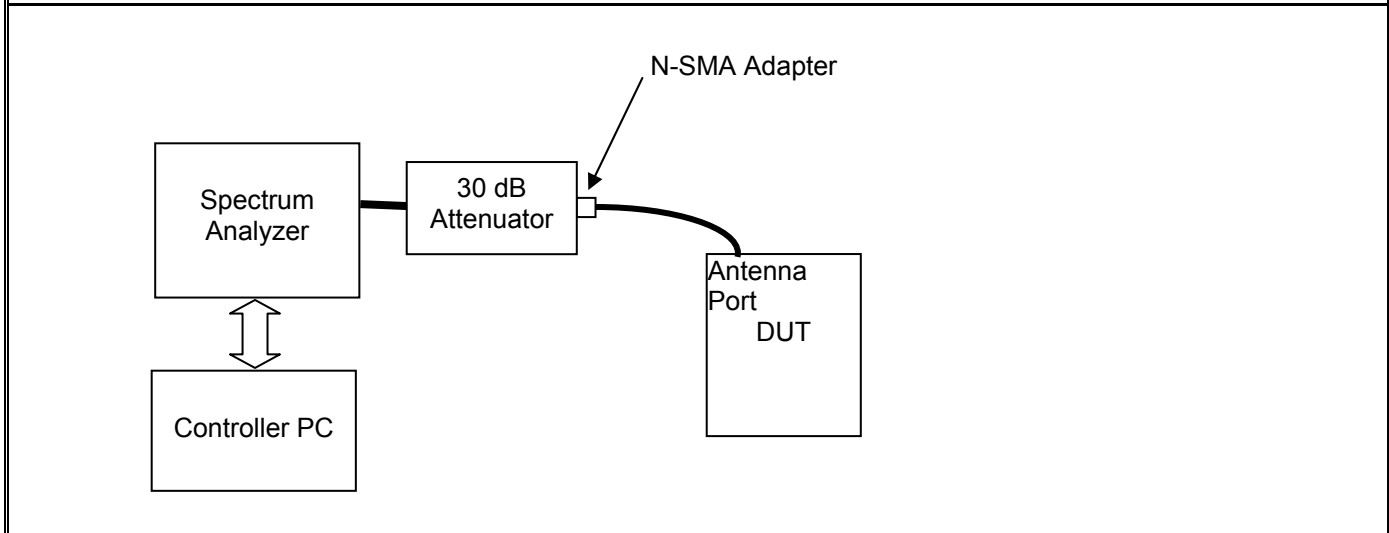
| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

B.5. MEASUREMENT EQUIPMENT SETUP

| | |
|--|---|
| Measurement Equipment Connections | The equipment was connected as shown in the setup drawing in B.6. |
| Measurement Equipment Settings | To evaluate the occupied bandwidth, software and a PC controller were used to set the spectrum analyzer using the following setting: RBW – 100 kHz VBW – 100kHz Span – 50 MHz Detector – Sample Average – Power Average Count – 100 Offset – appropriate for external attenuation (-31.4 dB) |


B.6. SETUP DRAWING

Figure B.6-1 - 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) for both Modes b and g.

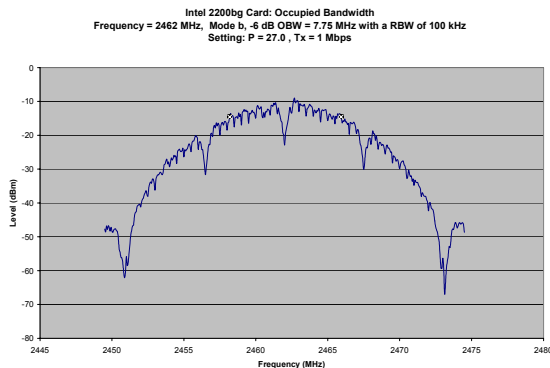
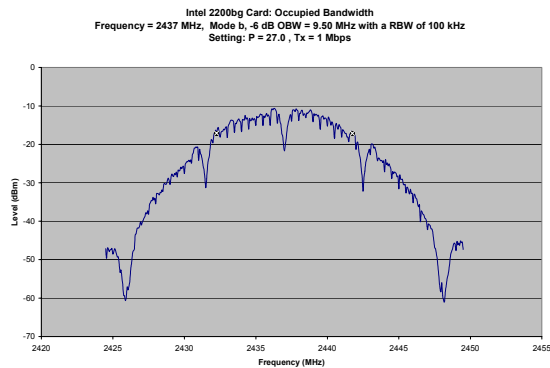
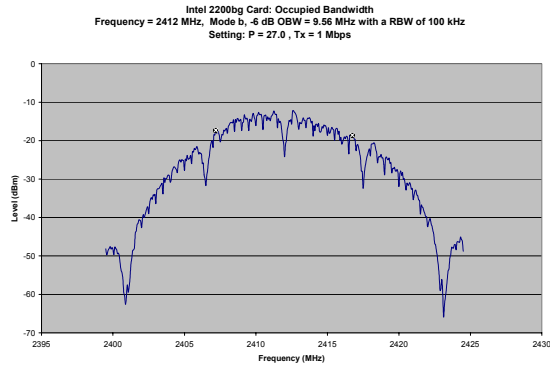
| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | |
|--------------------------------|-----------------------|---------------------------------|-------------------|
| Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

B.8. TEST RESULTS

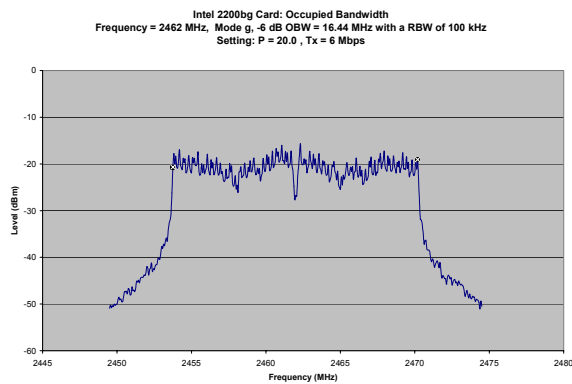
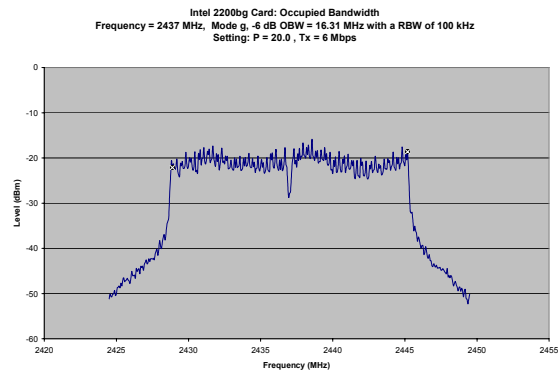
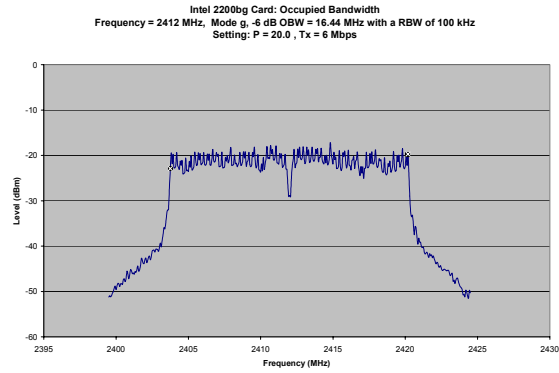
B.8.1. Mode b Occupied Bandwidth




| Channel | Channel Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass/Fail |
|---------|-------------------------|----------------------|---------------------|-----------|
| 1 | 2412 | 9.56 | 0.5 | PASS |
| 6 | 2437 | 9.50 | 0.5 | PASS |
| 11 | 2462 | 7.75 | 0.5 | PASS |

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---------------|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | | |
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B.8.2. Mode g Occupied Bandwidth



| Channel | Channel Frequency (MHz) | 6 dB Bandwidth (MHz) | Minimum Limit (MHz) | Pass/Fail |
|---------|-------------------------|----------------------|---------------------|-----------|
| 1 | 2412 | 16.44 | 0.5 | PASS |
| 6 | 2437 | 16.31 | 0.5 | PASS |
| 11 | 2462 | 16.44 | 0.5 | PASS |

| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

B.9. PASS/FAIL

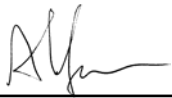
In reference to the results outlined in B.8, the DUT passes the requirements as stated in the reference standards as follows:

FCC 15.247 (2): The 6 dB bandwidth as measured meets the minimum 500 kHz bandwidth requirement.

The minimum 6 dB bandwidth measured for Mode b was 7.75 MHz and for Mode g was 16.31 MHz.

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.




 Alex Yuan
 EMC Technologist
 Celltech Labs Inc.

 14Jul05

Date

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

Appendix C - Peak Conducted RMS Power Measurement

| | |
|-------------------------------------|--|
| C.1. REFERENCES | |
| Normative Reference Standard | FCC CFR 47 §15.247(b) (3) |
| Procedure Reference | FCC Document KDB Publication Number 558074 |


| | |
|--|--|
| C.2. LIMITS | |
| C.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> | |


| | |
|--------------------------------------|-------------|
| C.3. ENVIRONMENTAL CONDITIONS | |
| Temperature | 25 +/- 2 °C |
| Humidity | 35 +/- 2 % |
| Barometric Pressure | 96 kPa |

| C.4. EQUIPMENT LIST | | | | | |
|----------------------------|--------------|-----------|------------------------|----------|---------|
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 00015 | Agilent | E4408B | Spectrum Analyzer | 24Jan05 | 24Jan06 |
| 00075 | Alpha Wire-J | 9223 | 1ft. RG223/U RF Cable | na* | na |
| 00076 | Pasternack | PE7014-30 | 30dB 2 Watt Attenuator | na* | na |

*Cable and attenuator verified with power meter prior to use

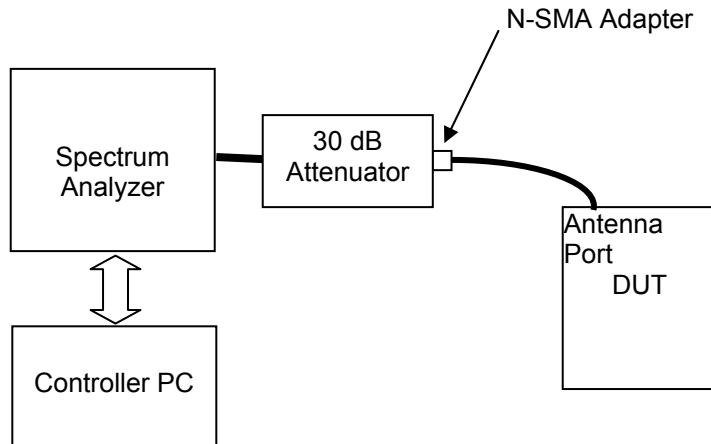
| | |
|--|---|
| C.5. MEASUREMENT EQUIPMENT SETUP | |
| Measurement Equipment Connections | The equipment was connected as shown in the setup drawing in C.6. |
| Measurement Equipment Settings | To evaluate the maximum peak power, with the following spectrum analyzer settings were used: RBW – 3 MHz VBW – 3 MHz Detector – Peak Trace – Max Hold Span -25 MHz |
| Measurement Procedure | A PC controller was used to record the spectrum analyzer display and pick the maximum level and to determine the emission bandwidth (EBW). It then corrected the peak level recorded with a bandwidth correction factor of $10 * \log (EBW/RBW)$. The corrected peak value was recorded and reported herein. |

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

C.6. SETUP DRAWING

Figure C.6-1 - Setup Drawing



C.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) for both Modes b and g. The measurements were made for both the lowest and highest data rate available for the mode.


C.8. TEST RESULTS

| Channel | Frequency | 802.11b | | | | | 802.11g | | | | |
|---------|-----------|-----------|-----------------------|-------|-------|------------|-----------|-----------------------|-------|-------|------------|
| | | Data Rate | Peak Conducted Power* | | Limit | -26 dB EBW | Data Rate | Peak Conducted Power* | | Limit | -26 dB EBW |
| | MHz | Mb/s | dBm | Watts | Watts | MHz | Mb/s | dBm | Watts | Watts | MHz |
| Low | 2412 | 1 | 18.20 | 0.066 | 1 | 19.25 | 6 | 16.24 | 0.042 | 1 | 19.88 |
| | | 11 | 19.63 | 0.092 | 1 | 19.25 | 54 | 15.96 | 0.039 | 1 | 19.75 |
| Mid | 2437 | 1 | 18.56 | 0.072 | 1 | 19.25 | 6 | 16.67 | 0.046 | 1 | 20.00 |
| | | 11 | 20.49 | 0.112 | 1 | 19.38 | 54 | 16.30 | 0.043 | 1 | 19.88 |
| High | 2462 | 1 | 19.04 | 0.080 | 1 | 19.50 | 6 | 16.77 | 0.048 | 1 | 19.88 |
| | | 11 | 20.41 | 0.110 | 1 | 19.50 | 54 | 16.54 | 0.045 | 1 | 19.88 |

*Corrected Peak Power (corrected for BW),

Peak Conducted Power (dBm) = Measured Conducted Power (dBm) + 10 * log (EBW / 3 MHz)

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

C.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.

The maximum peak power measured for Mode b was 0.112 watts, and for Mode g was 0.048 watts.

C.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.




Alex Yuan
EMC Technologist
Celltech Labs Inc.

14Jul05

Date

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

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

§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.


Note: Spurious emissions within the restricted bands are reported in Appendix F.

D.3. ENVIRONMENTAL CONDITIONS

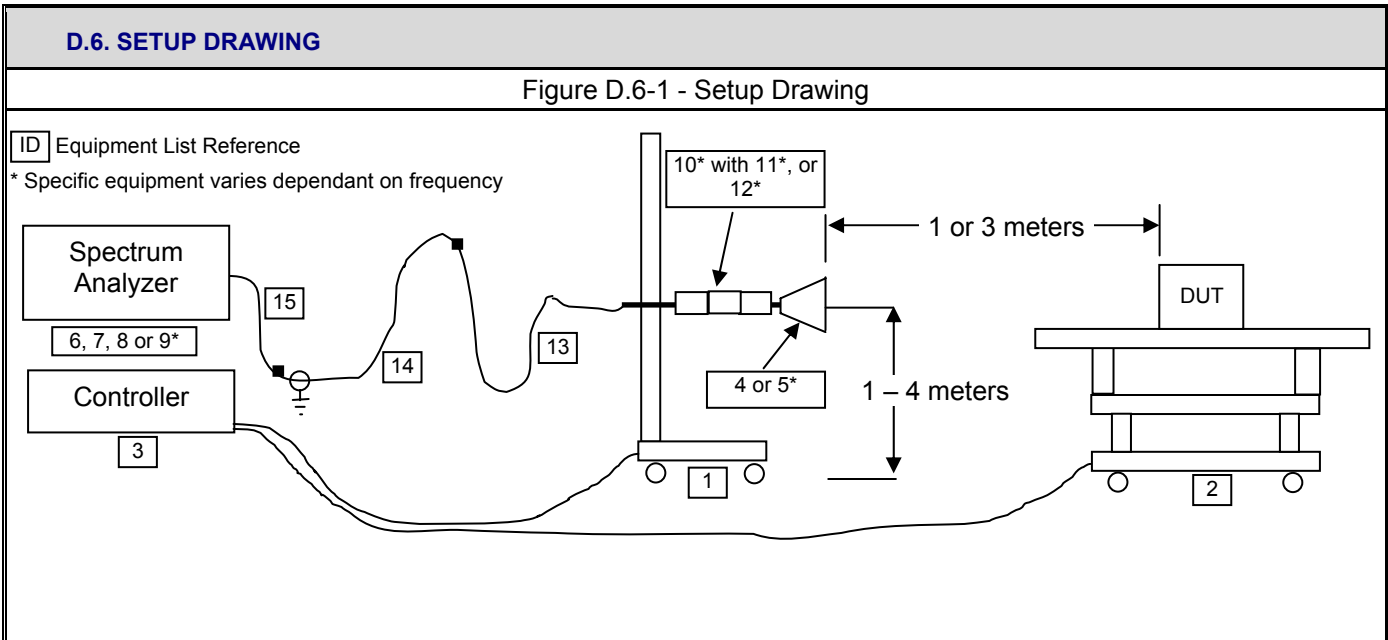
| | |
|----------------------------|----------------|
| Temperature | 27 +/- 2 °C |
| Humidity | 33 +/- 2 % |
| Barometric Pressure | 96 +/- 0.2 kPa |


D.4. EQUIPMENT LIST

| RECEIVING EQUIPMENT | | | | | | |
|---------------------|--------------|--------------|--------------------|------------------------------|----------|---------|
| ID | ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 1 | 00072 | EMCO | 2075 | Mini-mast | na | na |
| 2 | 00073 | EMCO | 2080 | Turn Table | na | na |
| 3 | 00071 | EMCO | 2090 | Multi-Device Controller | na | na |
| 4 | 00035 | ETS | 3115 | Double Ridged Guide Horn | 24Mar04 | 24Mar06 |
| 5 | 00161/00166 | Waveline | 899/801-KF | Standard Gain Horn | na | na |
| 6 | 00051 | HP | 8566B | Spectrum Analyzer RF Section | 12Apr05 | 12Apr06 |
| 7 | 00049 | HP | 85650A | Quasi-Peak Adapter | 13Apr05 | 13Apr06 |
| 8 | 00047 | HP | 85685A | RF Preselector | 13Apr05 | 13Apr06 |
| 9 | 00015 | Agilent | 4408B | Spectrum Analyzer | 24Jan05 | 24Jan06 |
| 10 | 00115 | Miteq | J54-00102600-35-5A | LNA | 08Jun04 | 08Jun06 |
| 11 | 00093 | Microtronics | HPM50111 | High Pass Filter | 8Jun04 | 8Dec05 |
| 12 | 00119 | INMAT | 18AH-10 | 10dB attenuator | 8Jun04 | 8Dec05 |
| 13 | 00120 | Celltech | n/a | Microwave Cable (RX) | 25Mar05 | 25Mar06 |
| 14 | 00121 | Andrew | FSJ4-50B | Microwave Cable (RX) | 25Mar05 | 25Mar06 |
| 15 | 00130 | Andrew | FSJ1-50A | Microwave Cable (RX) | 25Mar05 | 25Mar06 |

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| 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 | Spectrum Analyzer Asset # | LNA/Filter/Attenuator Asset # | Antenna Asset # |
| | 2 GHz – 10 GHz | 00051 | 00093/00115 | 00035 |
| | 10 GHz – 20 GHz | 00015 | 00093/00115 | 00161/00166 |
| | 20 GHz – 26 GHz | 00015 | 00093 | 00161/00166 |
| MEASUREMENT EQUIPMENT SETTINGS | The spectrum analyzer was set to the following settings: | | | |
| | Frequency Range | RBW | VBW | Detector |
| | MHz | kHz | kHz | |
| | > 1000 | 1000* | 1000 | Peak* |
| | *As a worst-case measurement, the average/QP limit was applied to measurements made with a peak detector using a RBW of 1 MHz (vs the specified 100 kHz), unless otherwise noted. Average measurements were performed with video averaging using a VBW of 30 Hz. | | | |



| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

D.7. SETUP PHOTOGRAPHS

Photograph D-1 - 3115 Horn @ 3 m



Photograph D-2 - 3115 Horn with LNA/Filter @ 1m




Photograph D-3 - Waveline Horn with LNA @ 1m




Intentionally Left Blank

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) for both Modes b and g.

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

D.9. TEST RESULTS

D.9.1. Mode b - Fundamental Field Strengths @ Specified Distance (100 kHz RBW)



Project Numb 060605KBC-T643-E15W
Company: Itronix
Product: IX325 with Intel PRO 2200BG

Standard: FCC15.247a
Test Start Date: 4-Jul-05
Test End Date: 13-Jul-05


IX325 with Intel WLAN Mode b with Setting 27, Tx = 1 Mbps Carrier Field Strengths


| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | AF | CL | Other | Total CF | Field Strength | Detector | RBW |
|-----------|----------|----------------------|-------------|-----------|----------|-------------|-------|------|--------|----------|----------------|----------|-----|
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | | |
| WLAN-CH1 | H | 3 | Horn SN6276 | 2412.00 | 77.90 | | 30.26 | 5.10 | -23.13 | 12.23 | 90.13 | PK | 100 |
| WLAN-CH1 | H | 3 | Horn SN6276 | 2412.00 | 66.90 | | 30.26 | 5.10 | -23.13 | 12.23 | 79.13 | AV | 100 |
| WLAN-CH1 | V | 3 | Horn SN6276 | 2412.00 | 80.50 | | 30.26 | 5.10 | -23.13 | 12.23 | 92.73 | PK | 100 |
| WLAN-CH1 | V | 3 | Horn SN6276 | 2412.00 | 69.50 | | 30.26 | 5.10 | -23.13 | 12.23 | 81.73 | AV | 100 |
| WLAN-CH6 | H | 3 | Horn SN6276 | 2437.00 | 78.40 | | 30.30 | 5.14 | -23.12 | 12.31 | 90.71 | PK | 100 |
| WLAN-CH6 | H | 3 | Horn SN6276 | 2437.00 | 67.20 | | 30.30 | 5.14 | -23.12 | 12.31 | 79.51 | AV | 100 |
| WLAN-CH6 | V | 3 | Horn SN6276 | 2437.00 | 81.15 | | 30.30 | 5.14 | -23.12 | 12.31 | 93.46 | PK | 100 |
| WLAN-CH6 | V | 3 | Horn SN6276 | 2437.00 | 70.00 | | 30.30 | 5.14 | -23.12 | 12.31 | 82.31 | AV | 100 |
| WLAN-CH11 | H | 3 | Horn SN6276 | 2462.00 | 78.65 | | 30.34 | 5.16 | -23.12 | 12.38 | 91.03 | PK | 100 |
| WLAN-CH11 | H | 3 | Horn SN6276 | 2462.00 | 67.30 | | 30.34 | 5.16 | -23.12 | 12.38 | 79.68 | AV | 100 |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2462.00 | 81.75 | | 30.34 | 5.16 | -23.12 | 12.38 | 94.13 | PK | 100 |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2462.00 | 70.50 | | 30.34 | 5.16 | -23.12 | 12.38 | 82.88 | AV | 100 |

Formulae:

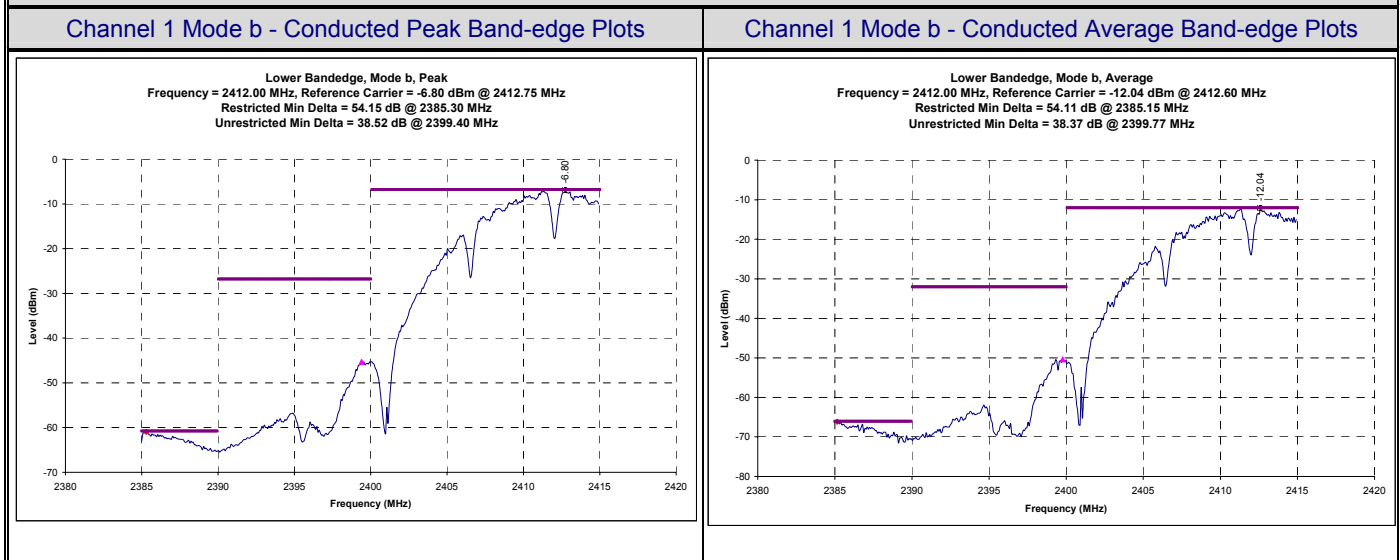
Total CF = AF + CL + Other

Field Strength = SA Level + Total CF

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

D.9.2. Mode b - Lower Band-edge Emission Field Strengths @ Specified Distance




Channel 1 b - Calculated Band-edge (Unrestricted) Field Strengths


| IX325 with Intel WLAN Mode b with Setting 27.0, Tx = 1 Mbps | | | | | | | | | | | | | | | |
|---|----------|----------|-----------|---------------------------------|--------------|----------|------------------------------------|-----------------------|-----------------------------------|-----------------|--------------------------|---------------------------|------------------|--------|-----------|
| Channel | Polarity | Distance | Frequency | Carrier Radiated Field Strength | Delta Marker | Detector | Calculated Bandedge Field Strength | Duty Cycle Correction | Corrected Bandedge Field Strength | Specified Limit | Specified Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
| | | | | | | | | | | | | | | | |
| WLAN-CH1 | H | 3 | 2399.40 | 90.13 | 38.52 | PK | 51.61 | 0.00 | 51.61 | 71.03 | 3.00 | 0.00 | 71.03 | 19.42 | PASS |
| WLAN-CH1 | H | 3 | 2399.77 | 79.13 | 38.37 | AV | 40.76 | 0.00 | 40.76 | 59.68 | 3.00 | 0.00 | 59.68 | 18.92 | PASS |
| WLAN-CH1 | V | 3 | 2399.40 | 92.73 | 38.52 | PK | 54.21 | 0.00 | 54.21 | 74.13 | 3.00 | 0.00 | 74.13 | 19.92 | PASS |
| WLAN-CH1 | V | 3 | 2399.77 | 81.73 | 38.37 | AV | 43.36 | 0.00 | 43.36 | 62.88 | 3.00 | 0.00 | 62.88 | 19.52 | PASS |

Formulae:

- Calculated Bandedge Field Strength (dBuV/m) = Carrier Radiated Field Strength (dBuV/m) + Delta Marker (dB)
- Duty Cycle Correction (dB) = 20 * log (time on / total time)
- Corrected Bandedge Field Strength (dBuV/m) = Calculated Bandedge Field Strength (dBuV/m) + Duty Cycle Correction (dB)
- Limit Distance Correction = 20 * log (measurement distance / limit distance)
- Calculated Limit (dBuV/m) = Specified Limit (dBuV/m) + Limit Distance Correction (dB)
- Margin (dB) = Corrected Limit (dBuV/m) - Corrected Bandedge Field Strength (dBuV/m)

**Note: Measurements and calculation reference the Marker-Delta Method described in FCC Public Notice DA 00-705
 Limit based on highest radiated carrier**

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  Testing and Engineering Services Lab | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

D.9.3. Mode b - Out-of-Band Spurious Emission Field Strengths @ Specified Distance (not within restricted bands)

Channel 1 - Mode b



Project Number: 060605KBC-T643-E15W
Company: Itronix
Product: IX325 with Intel PRO 2200BG
Standard: FCC15.247c
Test Start Date: 4-Jul-05
Test End Date: 13-Jul-05

| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|----------|----------|----------|--------------|-----------------|----------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | (PK/QP/AV) | m | dB | dBuV/m | dB | |
| WLAN-CH1 | H | 3 | Horn SN6276 | 5768.07 | 33.70 | | 36.61 | 8.45 | -30.96 | 14.09 | 47.79 | PK* | 3.00 | 0.00 | 59.68 | 11.89 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 7236.00 | 33.80 | x | 38.22 | 9.72 | -30.84 | 17.10 | 50.90 | PK* | 3.00 | 0.00 | 59.68 | 8.77 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 9648.00 | 33.80 | x | 40.30 | 12.00 | -30.71 | 21.58 | 55.38 | PK | 3.00 | 0.00 | 71.03 | 15.64 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 9648.00 | 22.20 | x | 40.30 | 12.00 | -30.71 | 21.58 | 43.78 | AV | 3.00 | 0.00 | 59.68 | 15.89 | PASS |
| WLAN-CH1 | H | 1 | Horn SN6276 | 16891.85 | 40.86 | x | 42.76 | 10.76 | -32.06 | 21.46 | 62.32 | PK* | 3.00 | 9.54 | 69.22 | 6.90 | PASS |
| WLAN-CH1 | H | 1 | Waveline_899 | 21708.00 | 37.49 | | 40.30 | 12.52 | -35.58 | 17.25 | 54.74 | PK* | 3.00 | 9.54 | 69.22 | 14.48 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 4441.43 | 32.00 | x | 34.70 | 7.17 | -31.07 | 10.80 | 42.80 | PK* | 3.00 | 0.00 | 62.88 | 20.08 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 5255.02 | 37.30 | | 36.11 | 8.17 | -31.00 | 13.27 | 50.57 | PK* | 3.00 | 0.00 | 62.88 | 12.30 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 7236.00 | 34.10 | x | 38.22 | 9.72 | -30.84 | 17.10 | 51.20 | PK* | 3.00 | 0.00 | 62.88 | 11.67 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 9648.00 | 33.70 | x | 40.30 | 12.00 | -30.71 | 21.58 | 55.28 | PK | 3.00 | 0.00 | 74.13 | 18.84 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 9648.00 | 22.30 | x | 40.30 | 12.00 | -30.71 | 21.58 | 43.88 | AV | 3.00 | 0.00 | 62.88 | 18.99 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 14340.75 | 39.96 | x | 42.44 | 9.67 | -30.71 | 21.40 | 61.36 | PK* | 3.00 | 9.54 | 72.42 | 11.06 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 14460.40 | 40.07 | x | 42.56 | 9.73 | -30.77 | 21.51 | 61.58 | PK* | 3.00 | 9.54 | 72.42 | 10.84 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 16874.05 | 39.68 | x | 42.72 | 10.75 | -32.05 | 21.42 | 61.10 | PK* | 3.00 | 9.54 | 72.42 | 11.32 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 17677.60 | 39.94 | x | 44.93 | 11.05 | -32.48 | 23.50 | 63.44 | PK | 3.00 | 9.54 | 83.67 | 20.23 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 17677.60 | 34.25 | x | 44.93 | 11.05 | -32.48 | 23.50 | 57.75 | AV | 3.00 | 9.54 | 72.42 | 14.67 | PASS |
| WLAN-CH1 | V | 1 | Waveline_899 | 21708.00 | 36.78 | | 40.30 | 12.52 | -35.58 | 17.25 | 54.03 | PK* | 3.00 | 9.54 | 72.42 | 18.39 | PASS |

Notes:

*PK denotes QP or Average limits applied to emissions measured with a peak detector

BOLD signifies the highest signal measured near a carrier harmonic frequency

No EUT emissions levels were measured above those reported

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

Limit based on highest radiated carrier

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

Channel 6 - Mode b

| | | | | |
|---|------------------------|-----------------------------|-------------------------|------------|
|  | Project Number: | 060605KBC-T643-E15W | Standard: | FCC15.247c |
| | Company: | Itronix | Test Start Date: | 4-Jul-05 |
| | Product: | IX325 with Intel PRO 2200BG | Test End Date: | 13-Jul-05 |

| Channel | Polarity | Distance m | Rx Antenna | Frequency MHz | SA Level dBuV | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|----------|----------|---------------|--------------|------------------|------------------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | (PK/QP/AV) | m | dB | dBuV/m | dB | |
| WLAN-CH6 | H | 3 | Horn SN6276 | 3249.32 | 34.90 | | 32.65 | 5.96 | -31.17 | 7.44 | 42.34 | PK* | 3.00 | 0.00 | 59.68 | 17.33 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 5764.06 | 39.60 | | 36.61 | 8.41 | -30.96 | 14.06 | 53.66 | PK* | 3.00 | 0.00 | 59.68 | 6.02 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 9748.00 | 33.40 | x | 40.30 | 12.18 | -30.71 | 21.77 | 55.17 | PK | 3.00 | 0.00 | 71.03 | 15.85 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 9748.00 | 22.30 | x | 40.30 | 12.18 | -30.71 | 21.77 | 44.07 | AV | 3.00 | 0.00 | 59.68 | 15.60 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 14185.20 | 40.24 | x | 42.29 | 9.60 | -30.63 | 21.26 | 61.50 | PK* | 3.00 | 9.54 | 69.22 | 7.72 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 14619.85 | 40.00 | x | 42.58 | 9.80 | -30.86 | 21.52 | 61.52 | PK* | 3.00 | 9.54 | 69.22 | 7.70 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 17061.05 | 39.80 | x | 43.17 | 10.82 | -32.15 | 21.84 | 61.64 | PK* | 3.00 | 9.54 | 69.22 | 7.58 | PASS |
| WLAN-CH6 | H | 1 | Waveline 899 | 21933.00 | 38.57 | x | 40.30 | 12.61 | -35.58 | 17.33 | 55.90 | PK* | 3.00 | 9.54 | 69.22 | 13.32 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 3249.00 | 34.30 | | 32.65 | 5.96 | -31.17 | 7.44 | 41.74 | PK* | 3.00 | 0.00 | 62.88 | 21.13 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 5254.32 | 36.90 | | 36.11 | 8.17 | -31.00 | 13.27 | 50.17 | PK* | 3.00 | 0.00 | 62.88 | 12.71 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 5255.78 | 35.50 | | 36.11 | 8.18 | -31.00 | 13.28 | 48.78 | PK* | 3.00 | 0.00 | 62.88 | 14.09 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 9748.00 | 33.30 | x | 40.30 | 12.18 | -30.71 | 21.77 | 55.07 | PK* | 3.00 | 0.00 | 62.88 | 7.80 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 14108.15 | 40.63 | x | 42.21 | 9.56 | -30.59 | 21.18 | 61.81 | PK* | 3.00 | 9.54 | 72.42 | 10.60 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 14622.00 | 38.43 | x | 42.58 | 9.80 | -30.86 | 21.52 | 59.95 | PK* | 3.00 | 9.54 | 72.42 | 12.47 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 17059.00 | 37.39 | x | 43.17 | 10.82 | -32.15 | 21.83 | 59.22 | PK* | 3.00 | 9.54 | 72.42 | 13.19 | PASS |
| WLAN-CH6 | V | 1 | Waveline_899 | 21933.00 | 39.09 | x | 40.30 | 12.61 | -35.58 | 17.33 | 56.42 | PK* | 3.00 | 9.54 | 72.42 | 16.00 | PASS |


Notes:


*PK denotes QP or Average limits applied to emissions measured with a peak detector
BOLD signifies the highest signal measured near a carrier harmonic frequency
 No EUT emissions levels were measured above those reported


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

Limit based on highest radiated carrier


| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

| Channel 11 - Mode b | | | | | | | | | | | | | | | | | |
|---|----------|------------------------|-------------|-----------------------------|----------|-------------|-------|-------------------------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|--------|-----------|
|  | | Project Number: | | 060605KBC-T643-E15W | | | | Standard: | | FCC15.247c | | | | | | | |
| | | Company: | | Itronix | | | | Test Start Date: | | 4-Jul-05 | | | | | | | |
| | | Product: | | IX325 with Intel PRO 2200BG | | | | Test End Date: | | 13-Jul-05 | | | | | | | |
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
| | | m | | MHz | dBuV | | dB/m | dB | dB | dB/m | dBuV/m | (PK/QP/AV) | m | dB | dBuV/m | dB | |
| WLAN-CH11 | H | 3 | Horn SN6276 | 5751.28 | 35.40 | | 36.60 | 8.39 | -30.96 | 14.02 | 49.42 | PK* | 3.00 | 0.00 | 59.68 | 10.25 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 9848.00 | 33.30 | x | 40.30 | 12.42 | -30.70 | 22.02 | 55.32 | PK | 3.00 | 0.00 | 71.03 | 15.70 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 9848.00 | 22.40 | x | 40.30 | 12.42 | -30.70 | 22.02 | 44.42 | AV | 3.00 | 0.00 | 59.68 | 15.25 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 14772.00 | 38.03 | x | 42.55 | 9.87 | -30.94 | 21.48 | 59.51 | PK* | 3.00 | 9.54 | 69.22 | 9.71 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 17234.00 | 38.38 | x | 43.66 | 10.88 | -32.24 | 22.30 | 60.68 | PK* | 3.00 | 9.54 | 69.22 | 8.54 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 5336.43 | 30.40 | x | 36.24 | 8.47 | -31.00 | 13.71 | 44.11 | PK* | 3.00 | 0.00 | 62.88 | 18.76 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 9848.00 | 34.00 | x | 40.30 | 12.42 | -30.70 | 22.02 | 56.02 | PK* | 3.00 | 0.00 | 62.88 | 6.85 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 14772.00 | 38.32 | x | 42.55 | 9.87 | -30.94 | 21.48 | 59.80 | PK* | 3.00 | 9.54 | 72.42 | 12.62 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 17234.00 | 38.13 | x | 43.66 | 10.88 | -32.24 | 22.30 | 60.43 | PK* | 3.00 | 9.54 | 72.42 | 11.99 | PASS |

Notes:
*PK denotes QP or Average limits applied to emissions measured with a peak detector
BOLD signifies the highest signal measured near a carrier harmonic frequency
No EUT emissions levels were measured above those reported
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

Limit based on highest radiated carrier

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |


D.9.4. Mode g - Fundamental Field Strengths @ Specified Distance (100 kHz RBW)

| | | | | |
|---|---------------------|-----------------------------|-------------------------|------------|
|  | Project Num: | 060605KBC-T643-E15W | Standard: | FCC15.247a |
| | Company: | Itronix | Test Start Date: | 4-Jul-05 |
| | Product: | IX325 with Intel PRO 2200BG | Test End Date: | 13-Jul-05 |

IX325 with Intel WLAN Mode g with Setting 20, Tx = 6 Mbps Carrier Field Strengths

| Channel | Polarity | Measurement Distance | Antenna | Frequency | SA Level | Noise Floor | AF | CL | Other | Total CF | Field Strength | Detector | RBW |
|-----------|----------|----------------------|-------------|-----------|----------|-------------|-------|------|--------|----------|----------------|----------|-----|
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | | kHz |
| WLAN-CH1 | H | 3 | Horn SN6276 | 2412.00 | 71.45 | | 30.26 | 5.10 | -23.13 | 12.23 | 83.68 | PK | 100 |
| WLAN-CH1 | H | 3 | Horn SN6276 | 2412.00 | 61.50 | | 30.26 | 5.10 | -23.13 | 12.23 | 73.73 | AV | 100 |
| WLAN-CH1 | V | 3 | Horn SN6276 | 2412.00 | 69.40 | | 30.26 | 5.10 | -23.13 | 12.23 | 81.63 | PK | 100 |
| WLAN-CH1 | V | 3 | Horn SN6276 | 2412.00 | 59.35 | | 30.26 | 5.10 | -23.13 | 12.23 | 71.58 | AV | 100 |
| WLAN-CH6 | H | 3 | Horn SN6276 | 2437.00 | 72.55 | | 30.30 | 5.14 | -23.12 | 12.31 | 84.86 | PK | 100 |
| WLAN-CH6 | H | 3 | Horn SN6276 | 2437.00 | 62.20 | | 30.30 | 5.14 | -23.12 | 12.31 | 74.51 | AV | 100 |
| WLAN-CH6 | V | 3 | Horn SN6276 | 2437.00 | 69.35 | | 30.30 | 5.14 | -23.12 | 12.31 | 81.66 | PK | 100 |
| WLAN-CH6 | V | 3 | Horn SN6276 | 2437.00 | 59.55 | | 30.30 | 5.14 | -23.12 | 12.31 | 71.86 | AV | 100 |
| WLAN-CH11 | H | 3 | Horn SN6276 | 2462.00 | 73.70 | | 30.34 | 5.16 | -23.12 | 12.38 | 86.08 | PK | 100 |
| WLAN-CH11 | H | 3 | Horn SN6276 | 2462.00 | 63.45 | | 30.34 | 5.16 | -23.12 | 12.38 | 75.83 | AV | 100 |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2462.00 | 71.20 | | 30.34 | 5.16 | -23.12 | 12.38 | 83.58 | PK | 100 |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2462.00 | 61.00 | | 30.34 | 5.16 | -23.12 | 12.38 | 73.38 | AV | 100 |

Formulae:
Total CF = AF + CL + Other
Field Strength = SA Level + Total CF

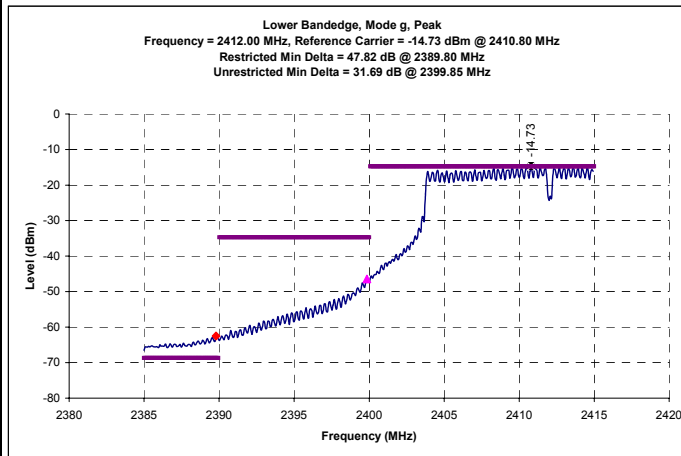
| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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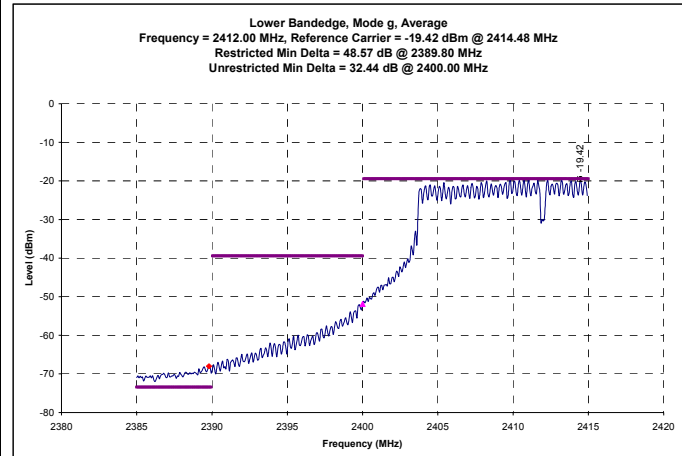
| | | | |
|--------------------------------|-----------------------|---------------------------------|-------------------|
| Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

D.9.5. Mode g - Lower Band-edge Emission Field Strengths @ Specified Distance

Channel 1 Mode g - Conducted Peak Band-edge Plots



Channel 1 Mode g - Conducted Average Band-edge Plots



Channel 1 g – Calculated Band-edge (Unrestricted) Field Strengths

IX325 with Intel WLAN Mode g with Setting 20, Tx = 6 Mbps


| Channel | Polarity | Distance | Frequency | Carrier Radiated Field Strength | Delta Marker | Detector | Calculated Bandedge Field Strength | Duty Cycle Correction | Corrected Bandedge Field Strength | Specified Limit | Specified Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|----------|----------|----------|-----------|---------------------------------|--------------|----------|------------------------------------|-----------------------|-----------------------------------|-----------------|--------------------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | | | |
| WLAN-CH1 | H | 3 | 2399.85 | 83.68 | 31.69 | PK | 51.99 | 0.00 | 51.99 | 66.08 | 3.00 | 0.00 | 66.08 | 14.09 | PASS |
| WLAN-CH1 | H | 3 | 2400.00 | 73.73 | 32.44 | AV | 41.29 | 0.00 | 41.29 | 55.83 | 3.00 | 0.00 | 55.83 | 14.54 | PASS |
| WLAN-CH1 | V | 3 | 2399.85 | 81.63 | 31.69 | PK | 49.94 | 0.00 | 49.94 | 63.58 | 3.00 | 0.00 | 63.58 | 13.64 | PASS |
| WLAN-CH1 | V | 3 | 2400.00 | 71.58 | 32.44 | AV | 39.14 | 0.00 | 39.14 | 53.38 | 3.00 | 0.00 | 53.38 | 14.24 | PASS |

Formulae:

- Calculated Bandedge Field Strength (dBuV/m) = Carrier Radiated Field Strength (dBuV/m) + Delta Marker (dB)
- Duty Cycle Correction (dB) = 20 * log (time on / total time)
- Corrected Bandedge Field Strength (dBuV/m) = Calculated Bandedge Field Strength (dBuV/m) + Duty Cycle Correction (dB)
- Limit Distance Correction = 20 * log (measurement distance / limit distance)
- Calculated Limit (dBuV/m) = Specified Limit (dBuV/m) + Limit Distance Correction (dB)
- Margin (dB) = Corrected Limit (dBuV/m) – Corrected Bandedge Field Strength (dBuV/m)

**Note: Measurements and calculation reference the Marker-Delta Method described in FCC Public Notice DA 00-705
 Limit based on highest radiated carrier**

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---------------|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | | |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

D.9.6. Mode g - Out-of-Band Spurious Emission Field Strengths @ Specified Distance (not within restricted bands)

Channel 1 - Mode g

| | | | | |
|---|------------------------|-----------------------------|-------------------------|-----------|
|  | Project Number: | 060605KBC-T643-E15W | Standard: | FCC15.209 |
| | Company: | Itronix | Test Start Date: | 4-Jul-05 |
| | Product: | IX325 with Intel PRO 2200BG | Test End Date: | 13-Jul-05 |

| Channel | Polarity | Distance m | Rx Antenna | Frequency MHz | SA Level dBuV | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|----------|----------|---------------|--------------|------------------|------------------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | (PK/QP/AV) | m | dB | dBuV/m | dB | |
| WLAN-CH1 | H | 3 | Horn SN6276 | 5763.87 | 33.40 | | 36.61 | 8.41 | -30.96 | 14.06 | 47.46 | PK* | 3.00 | 0.00 | 53.98 | 6.52 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 7236.00 | 33.80 | x | 38.22 | 9.72 | -30.84 | 17.10 | 50.90 | PK* | 3.00 | 0.00 | 53.98 | 3.08 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 9648.00 | 33.00 | x | 40.30 | 12.00 | -30.71 | 21.58 | 54.58 | PK | 3.00 | 0.00 | 73.98 | 19.40 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 9648.00 | 22.00 | x | 40.30 | 12.00 | -30.71 | 21.58 | 43.58 | AV | 3.00 | 0.00 | 53.98 | 10.40 | PASS |
| WLAN-CH1 | H | 1 | Horn SN6276 | 14139.50 | 39.67 | x | 42.24 | 9.58 | -30.60 | 21.21 | 60.88 | PK* | 3.00 | 9.54 | 63.52 | 2.64 | PASS |
| WLAN-CH1 | H | 1 | Horn SN6276 | 16884.00 | 40.07 | x | 42.74 | 10.76 | -32.06 | 21.44 | 61.51 | PK* | 3.00 | 9.54 | 63.52 | 2.01 | PASS |
| WLAN-CH1 | H | 1 | Waveline_899 | 21708.00 | 38.08 | x | 40.30 | 12.52 | -35.58 | 17.25 | 55.33 | PK* | 3.00 | 9.54 | 63.52 | 8.20 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 5786.75 | 30.10 | x | 36.61 | 8.53 | -30.96 | 14.18 | 44.28 | PK* | 3.00 | 0.00 | 53.98 | 9.70 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 7236.00 | 34.20 | x | 38.22 | 9.72 | -30.84 | 17.10 | 51.30 | PK* | 3.00 | 0.00 | 53.98 | 2.68 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 9648.00 | 33.60 | x | 40.30 | 12.00 | -30.71 | 21.58 | 55.18 | PK | 3.00 | 0.00 | 73.98 | 18.80 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 9648.00 | 22.30 | x | 40.30 | 12.00 | -30.71 | 21.58 | 43.88 | AV | 3.00 | 0.00 | 53.98 | 10.10 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 14402.80 | 40.17 | x | 42.50 | 9.70 | -30.74 | 21.46 | 61.63 | PK* | 3.00 | 9.54 | 63.52 | 1.89 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 16884.00 | 37.81 | x | 42.74 | 10.76 | -32.06 | 21.44 | 59.25 | PK* | 3.00 | 9.54 | 63.52 | 4.27 | PASS |
| WLAN-CH1 | V | 1 | Waveline_899 | 21708.00 | 38.59 | x | 40.30 | 12.52 | -35.58 | 17.25 | 55.84 | PK* | 3.00 | 9.54 | 63.52 | 7.69 | PASS |

Notes:

*PK denotes QP or Average limits applied to emissions measured with a peak detector

BOLD signifies the highest signal measured near a carrier harmonic frequency

No EUT emissions levels were measured above those reported

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

Limit based on highest radiated carrier

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |


Channel 6 - Mode g

|  | | Project Number: 060605KBC-T643-E15W Company: Itronix Product: IX325 with Intel PRO 2200BG | Standard: FCC15.209 Test Start Date: 4-Jul-05 Test End Date: 13-Jul-05 | | | | | | | | | | | | | | |
|---|----------|--|---|------------------|------------------|-------------|---------------|-------------|----------------|---------------------|--------------------------|------------------------|---------------------|---------------------------------|----------------------------|--------------|-----------|
| Channel | Polarity | Distance m | Rx Antenna | Frequency MHz | SA Level dBuV | Noise Floor | Rx AF dB/m | Rx CL dB | Other Rx dB | Total Rx CF dB/m | Field Strength dBuV/m | Detector (PK/QP/AV) | Limit Distance m | Limit Distance Correction dB | Calculated Limit dBuV/m | Margin dB | Pass/Fail |
| WLAN-CH6 | H | 3 | Horn SN6276 | 5766.72 | 36.30 | | 36.61 | 8.43 | -30.96 | 14.08 | 50.38 | PK* | 3.00 | 0.00 | 53.98 | 3.60 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 9748.00 | 33.50 | x | 40.30 | 12.18 | -30.71 | 21.77 | 55.27 | PK | 3.00 | 0.00 | 73.98 | 18.71 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 9748.00 | 22.10 | x | 40.30 | 12.18 | -30.71 | 21.77 | 43.87 | AV | 3.00 | 0.00 | 53.98 | 10.11 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 14622.00 | 37.80 | x | 42.58 | 9.80 | -30.86 | 21.52 | 59.32 | PK* | 3.00 | 9.54 | 63.52 | 4.21 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 15037.35 | 39.56 | x | 42.37 | 9.99 | -31.08 | 21.28 | 60.84 | PK* | 3.00 | 9.54 | 63.52 | 2.68 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 17059.00 | 39.75 | x | 43.17 | 10.82 | -32.15 | 21.83 | 61.58 | PK | 3.00 | 9.54 | 63.52 | 21.94 | PASS |
| WLAN-CH6 | H | 1 | Waveline_899 | 21933.00 | 38.48 | | 40.30 | 12.61 | -35.58 | 17.33 | 55.81 | PK* | 3.00 | 9.54 | 63.52 | 7.71 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 3254.00 | 31.30 | x | 32.66 | 5.97 | -31.17 | 7.46 | 38.76 | PK* | 3.00 | 0.00 | 53.98 | 15.22 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 9748.00 | 34.90 | x | 40.30 | 12.18 | -30.71 | 21.77 | 56.67 | PK | 3.00 | 0.00 | 73.98 | 17.31 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 9748.00 | 22.50 | x | 40.30 | 12.18 | -30.71 | 21.77 | 44.27 | AV | 3.00 | 0.00 | 53.98 | 9.71 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 14622.00 | 37.23 | x | 42.58 | 9.80 | -30.86 | 21.52 | 58.75 | PK* | 3.00 | 9.54 | 63.52 | 4.78 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 17059.00 | 36.81 | x | 43.17 | 10.82 | -32.15 | 21.83 | 58.64 | PK* | 3.00 | 9.54 | 63.52 | 4.88 | PASS |
| WLAN-CH6 | V | 1 | Waveline_899 | 21933.00 | 37.75 | | 40.30 | 12.61 | -35.58 | 17.33 | 55.08 | PK* | 3.00 | 9.54 | 63.52 | 8.44 | PASS |


Notes:
 *PK denotes QP or Average limits applied to emissions measured with a peak detector
BOLD signifies the highest signal measured near a carrier harmonic frequency
 No EUT emissions levels were measured above those reported
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

Limit based on highest radiated carrier


| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

Channel 11 - Mode g

|  | | Project Number: 060605KBC-T643-E15W Company: Itronix Product: IX325 with Intel PRO 2200BG | Standard: FCC15.209 Test Start Date: 4-Jul-05 Test End Date: 13-Jul-05 | | | | | | | | | | | | | | |
|---|----------|--|---|-----------------|----------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
| | | m | | MHz | dBuV | | dB/m | dB | dB | dB/m | dBuV/m | (PK/QP/AV) | m | dB | dBuV/m | dB | |
| WLAN-CH11 | H | 3 | Horn SN6276 | 2524.31 | 34.10 | x | 30.48 | 5.24 | -23.12 | 12.60 | 46.70 | PK* | 3.00 | 0.00 | 53.98 | 7.28 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 5750.93 | 33.20 | | 36.60 | 8.39 | -30.96 | 14.02 | 47.22 | PK* | 3.00 | 0.00 | 53.98 | 6.76 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 9848.00 | 34.00 | x | 40.30 | 12.42 | -30.70 | 22.02 | 56.02 | PK | 3.00 | 0.00 | 73.98 | 17.96 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 9848.00 | 22.30 | x | 40.30 | 12.42 | -30.70 | 22.02 | 44.32 | AV | 3.00 | 0.00 | 53.98 | 9.66 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 14317.05 | 38.98 | x | 42.42 | 9.66 | -30.70 | 21.38 | 60.36 | PK* | 3.00 | 9.54 | 63.52 | 3.16 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 14772.00 | 37.03 | x | 42.55 | 9.87 | -30.94 | 21.48 | 58.51 | PK* | 3.00 | 9.54 | 63.52 | 5.02 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 17234.00 | 36.84 | x | 43.66 | 10.88 | -32.24 | 22.30 | 59.14 | PK* | 3.00 | 9.54 | 63.52 | 4.39 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 8993.84 | 35.90 | x | 40.19 | 10.96 | -30.74 | 20.41 | 56.31 | PK | 3.00 | 0.00 | 73.98 | 17.67 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 8993.84 | 22.00 | x | 40.19 | 10.96 | -30.74 | 20.41 | 42.41 | AV | 3.00 | 0.00 | 53.98 | 11.57 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 9848.00 | 35.50 | x | 40.30 | 12.42 | -30.70 | 22.02 | 57.52 | PK | 3.00 | 0.00 | 73.98 | 16.46 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 9848.00 | 22.70 | x | 40.30 | 12.42 | -30.70 | 22.02 | 44.72 | AV | 3.00 | 0.00 | 53.98 | 9.26 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 14772.00 | 36.79 | x | 42.55 | 9.87 | -30.94 | 21.48 | 58.27 | PK* | 3.00 | 9.54 | 63.52 | 5.26 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 17234.00 | 37.45 | x | 43.66 | 10.88 | -32.24 | 22.30 | 59.75 | PK* | 3.00 | 9.54 | 63.52 | 3.78 | PASS |

Notes:
 *PK denotes QP or Average limits applied to emissions measured with a peak detector
BOLD signifies the highest signal measured near a carrier harmonic frequency
 No EUT emissions levels were measured above those reported
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
Limit based on highest radiated carrier

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

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.

 13Jul05

Date


| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

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 | (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 25%;">MHz</th> <th style="width: 25%;">MHz</th> <th style="width: 25%;">MHz</th> <th style="width: 25%;">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>10.495-0.505</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>¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. ² Above 38.6</p> | MHz | MHz | MHz | GHz | 0.090-0.110 | 16.42-16.423 | 399.9-410 | 4.5-5.15 | 10.495-0.505 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.495-0.505 | 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | (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. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FCC CFR 47 §15.209 | (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: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Frequency</th> <th colspan="2">Field Strength</th> <th rowspan="2">Measurement Distance</th> </tr> <tr> <th>MHz</th> <th>uV/m</th> <th>dBuv/m</th> </tr> </thead> <tbody> <tr> <td>.009 - 0.490</td> <td>2400/F(kHz)</td> <td>48.52 - 13.80</td> <td>300</td> </tr> <tr> <td>0.490 - 1.705</td> <td>24000/F(kHz)</td> <td>33.80 - 22.97</td> <td>30</td> </tr> <tr> <td>1.705 - 30.0</td> <td>30</td> <td>29.54</td> <td>30</td> </tr> <tr> <td>30 - 88</td> <td>100</td> <td>40.00</td> <td>3</td> </tr> <tr> <td>88 - 216</td> <td>150</td> <td>43.52</td> <td>3</td> </tr> <tr> <td>216 - 960</td> <td>200</td> <td>46.02</td> <td>3</td> </tr> <tr> <td>Above 960</td> <td>500</td> <td>53.98</td> <td>3</td> </tr> </tbody> </table> | Frequency | Field Strength | | Measurement Distance | MHz | uV/m | dBuv/m | .009 - 0.490 | 2400/F(kHz) | 48.52 - 13.80 | 300 | 0.490 - 1.705 | 24000/F(kHz) | 33.80 - 22.97 | 30 | 1.705 - 30.0 | 30 | 29.54 | 30 | 30 - 88 | 100 | 40.00 | 3 | 88 - 216 | 150 | 43.52 | 3 | 216 - 960 | 200 | 46.02 | 3 | Above 960 | 500 | 53.98 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Frequency | Field Strength | | Measurement Distance | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | MHz | uV/m | | dBuv/m | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| .009 - 0.490 | 2400/F(kHz) | 48.52 - 13.80 | 300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.490 - 1.705 | 24000/F(kHz) | 33.80 - 22.97 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.705 - 30.0 | 30 | 29.54 | 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 - 88 | 100 | 40.00 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 88 - 216 | 150 | 43.52 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 216 - 960 | 200 | 46.02 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Above 960 | 500 | 53.98 | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | (b) In the emission table above, the tighter limit applies at the band edges. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.3. ENVIRONMENTAL CONDITIONS

| | |
|----------------------------|----------------|
| Temperature | 274 +/- 2 °C |
| Humidity | 33 +/- 2 % |
| Barometric Pressure | 96 +/- 0.2 kPa |

E.4. EQUIPMENT LIST

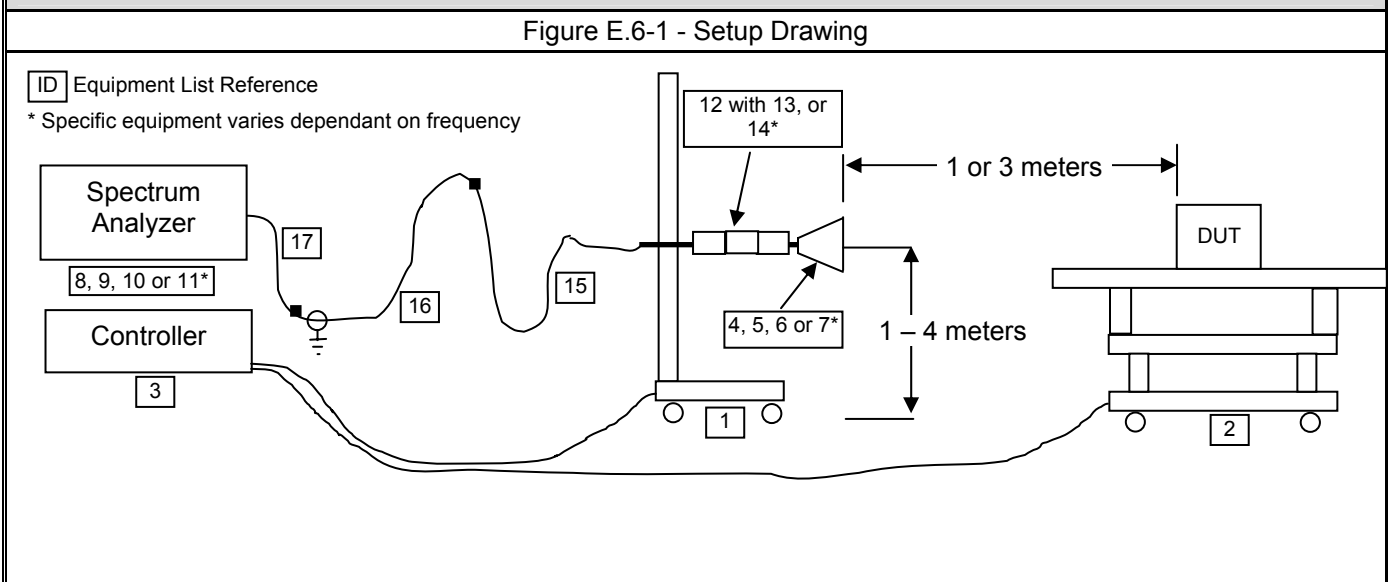
| RECEIVING EQUIPMENT | | | | | | |
|---------------------|--------------|--------------|--------------------|------------------------------|----------|---------|
| ID | ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
| 1 | 00072 | EMCO | 2075 | Mini-mast | na | na |
| 2 | 00073 | EMCO | 2080 | Turn Table | na | na |
| 3 | 00071 | EMCO | 2090 | Multi-Device Controller | na | na |
| 4 | 00085 | EMCO | 6502 | Loop Antenna | 10Aug04 | 10Aug05 |
| 5 | 00050 | Chase | CBL-6111A | Bilog Antenna | 08Feb05 | 08Feb06 |
| 6 | 00035 | ETS | 3115 | Double Ridged Guide Horn | 24Mar04 | 24Mar06 |
| 7 | 00161/00166 | Waveline | 899/801-KF | Standard Gain Horn | na | na |
| 8 | 00051 | HP | 8566B | Spectrum Analyzer RF Section | 12Apr05 | 12Apr06 |
| 9 | 00049 | HP | 85650A | Quasi-Peak Adapter | 13Apr05 | 13Apr06 |
| 10 | 00047 | HP | 85685A | RF Preselector | 13Apr05 | 13Apr06 |
| 11 | 00015 | Agilent | 4408B | Spectrum Analyzer | 24Jan05 | 24Jan06 |
| 12 | 00115 | Miteq | J54-00102600-35-5A | LNA | 08Jun04 | 08Jun06 |
| 13 | 00093 | Microtronics | HPM50111 | High Pass Filter | 8Jun04 | 8Dec05 |
| 14 | 00119 | INMAT | 18AH-10 | 10dB attenuator | 8Jun04 | 8Dec05 |
| 15 | 00120 | Celltech | n/a | Microwave Cable (RX) | 25Mar05 | 25Mar06 |
| 16 | 00121 | Andrew | FSJ4-50B | Microwave Cable (RX) | 25Mar05 | 25Mar06 |
| 17 | 00130 | Andrew | FSJ1-50A | Microwave Cable (RX) | 25Mar05 | 25Mar06 |


| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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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 | Spectrum Analyzer Asset # | LNA/Filter/Attenuator Asset # | Antenna Asset # |
| | 10kHz - 30 MHz | 00051/00049/00047 | none | 00085 |
| | 30 MHz – 1 GHz | 00051/00049/00047 | none | 00050 |
| | 1 GHz – 2 GHz | 00051/00047 | 00119/00115 | 00035 |
| | 1 GHz – 18 GHz | 00051 | 00093/00115 | 00035 |
| | 18 GHz – 22 GHz | 00051 | 00093/00115 | 00161/00166 |
| | 22 GHz – 26 GHz | 00015 | 00093/00115 | 00161/00166 |
| 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 worst-case measurement, the average/QP limit was applied to measurements made with a peak detector, unless otherwise noted. | | | |

E.6. SETUP DRAWING



| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.7. SETUP PHOTOGRAPHS

Photograph E-1 - Loop Antenna (10kHz - 30 MHz) @ 3m



Photograph E-2 - Bilog Antenna (30 MHz - 1 GHz) @ 3m



Photograph E-3 - 3115 Horn (1G - 2G) @ 3 m




Photograph E-4 - 3115 Horn with LNA/Filter @ 1m




Photograph E-5 - Waveline Horn with LNA @ 1m



Left Intentionally Blank

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

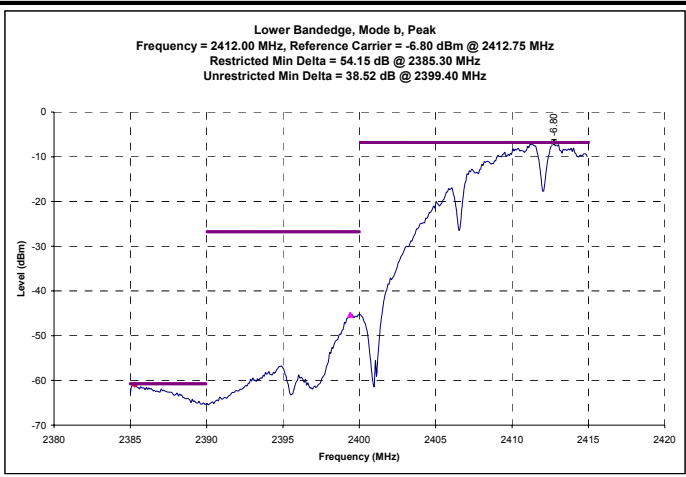
E.8. DUT OPERATING DESCRIPTION

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 both Modes b and g.

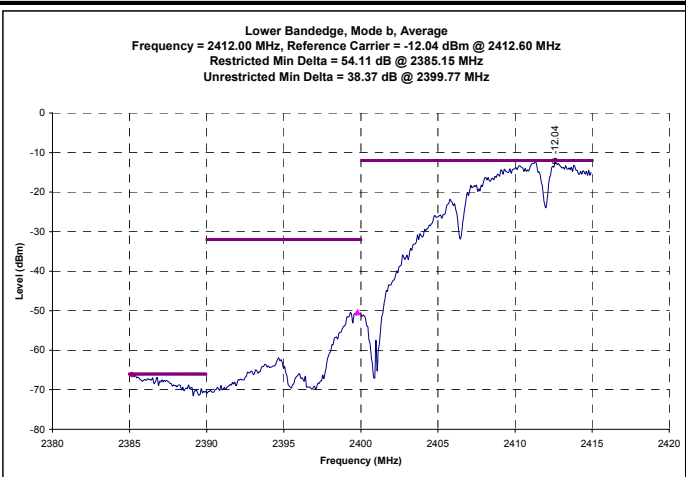
E.9. TEST RESULTS

E.9.1. Mode b - Lower Band-edge Emission Field Strengths @ Specified Distance

Channel 1 Mode b - Conducted Peak Band-edge Plots



Channel 1 Mode b - Conducted Average Band-edge Plots




Channel 1 b - Calculated Band-edge (Restricted) Field Strengths

IX325 with Intel WLAN Mode b with Setting 27.0, Tx = 1 Mbps

| Channel | Polarity | Distance | Frequency | Carrier Radiated Field Strength | Delta Marker | Detector | Calculated Bandedge Field Strength | Duty Cycle Correction | Corrected Bandedge Field Strength | Specifeid Limit | Specified Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|----------|----------|----------|-----------|---------------------------------|--------------|----------|------------------------------------|-----------------------|-----------------------------------|-----------------|--------------------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | | | |
| WLAN-CH1 | H | 3 | 2385.30 | 93.33 | 54.15 | PK | 39.18 | 0.00 | 39.18 | 73.98 | 3.00 | 0.00 | 73.98 | 34.80 | PASS |
| WLAN-CH1 | H | 3 | 2385.15 | 89.13 | 54.11 | AV | 35.02 | 0.00 | 35.02 | 53.98 | 3.00 | 0.00 | 53.98 | 18.96 | PASS |
| WLAN-CH1 | V | 3 | 2385.30 | 96.03 | 54.15 | PK | 41.88 | 0.00 | 41.88 | 73.98 | 3.00 | 0.00 | 73.98 | 32.10 | PASS |
| WLAN-CH1 | V | 3 | 2385.15 | 91.53 | 54.11 | AV | 37.42 | 0.00 | 37.42 | 53.98 | 3.00 | 0.00 | 53.98 | 16.56 | PASS |

Formulae:
 Calculated Bandedge Field Strength (dBuV/m) = Carrier Radiated Field Strength (dBuV/m) + Delta Marker (dB)
 Duty Cycle Correction (dB) = 20 * log (time on / total time)
 Corrected Bandedge Field Strength (dBuV/m) = Calculated Bandedge Field Strength (dBuV/m) + Duty Cycle Correction (dB)
 Limit Distance Correction = 20 * log (measurement distance / limit distance)
 Calculated Limit (dBuV/m) = Specified Limit (dBuV/m) + Limit Distance Correction (dB)
 Margin (dB) = Corrected Limit (dBuV/m) - Corrected Bandedge Field Strength (dBuV/m)

Note: Measurements and calculation reference the Marker-Delta Method described in FCC Public Notice DA 00-705

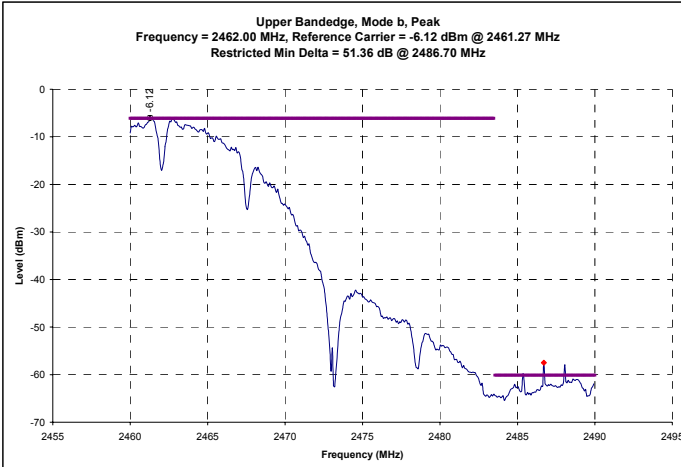
| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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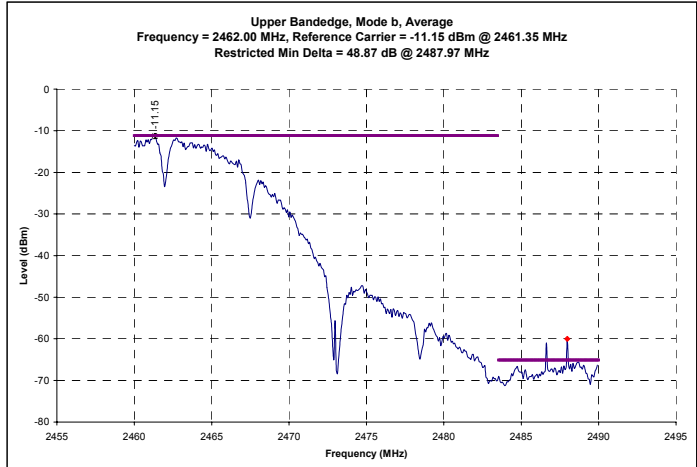
| | | | |
|--------------------------------|-----------------------|---------------------------------|-------------------|
| Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.9.2. Mode b - Upper Band-edge Emission Field Strengths @ Specified Distance

Channel 11 Mode b - Conducted Peak Band-edge Plots



Channel 11 Mode b - Conducted Average Band-edge Plots



Channel 11 b - Calculated Band-edge (Restricted) Field Strengths

IX325 with Intel WLAN Mode b with Setting 27.0, Tx = 1 Mbps


| Channel | Polarity | Distance | Frequency | Carrier Radiated Field Strength | Delta Marker | Detector | Calculated Bandedge Field Strength | Duty Cycle Correction | Corrected Bandedge Field Strength | Specified Limit | Specified Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|-----------|----------|----------|-----------|---------------------------------|--------------|----------|------------------------------------|-----------------------|-----------------------------------|-----------------|--------------------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | | | |
| WLAN-CH11 | H | 3 | 2486.70 | 93.98 | 51.36 | PK | 42.62 | 0.00 | 42.62 | 73.98 | 3.00 | 0.00 | 73.98 | 31.36 | PASS |
| WLAN-CH11 | H | 3 | 2487.97 | 89.73 | 48.87 | AV | 40.86 | 0.00 | 40.86 | 53.98 | 3.00 | 0.00 | 53.98 | 13.12 | PASS |
| WLAN-CH11 | V | 3 | 2486.70 | 97.58 | 51.36 | PK | 46.22 | 0.00 | 46.22 | 73.98 | 3.00 | 0.00 | 73.98 | 27.76 | PASS |
| WLAN-CH11 | V | 3 | 2487.97 | 93.13 | 48.87 | AV | 44.26 | 0.00 | 44.26 | 53.98 | 3.00 | 0.00 | 53.98 | 9.72 | PASS |

Formulae:


- Calculated Bandedge Field Strength (dBuV/m) = Carrier Radiated Field Strength (dBuV/m) + Delta Marker (dB)
- Duty Cycle Correction (dB) = 20 * log (time on / total time)
- Corrected Bandedge Field Strength (dBuV/m) = Calculated Bandedge Field Strength (dBuV/m) + Duty Cycle Correction (dB)
- Limit Distance Correction = 20 * log (measurement distance / limit distance)
- Calculated Limit (dBuV/m) = Specified Limit (dBuV/m) + Limit Distance Correction (dB)
- Margin (dB) = Corrected Limit (dBuV/m) - Corrected Bandedge Field Strength (dBuV/m)

Note: Measurements and calculation reference the Marker-Delta Method described in FCC Public Notice DA 00-705

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---------------|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | | |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.9.3. Mode b - Channel 1 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)

|  | | Project Number: 060605KBC-T643-E15W Company: Itronix Product: IX325 with Intel PRO 2200BG | Standard: FCC15.247c Test Start Date: 4-Jul-05 Test End Date: 13-Jul-05 | | | | | | | | | | | | | | |
|---|----------|--|--|------------------|------------------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|--------|-----------|
| Channel | Polarity | Distance m | Rx Antenna | Frequency MHz | SA Level dBuV | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | (PK/QP/AV) | m | dB | dBuV/m | dB | |
| WLAN-CH1 | H | 3 | Bilog SN1607 | 129.04 | 13.00 | | 12.16 | 1.14 | 0.00 | 13.30 | 26.30 | PK* | 3.00 | 0.00 | 43.52 | 17.22 | PASS |
| WLAN-CH1 | H | 3 | Hom SN6276 | 1590.00 | 16.70 | x | 27.63 | 4.14 | 0.00 | 31.77 | 48.47 | PK* | 3.00 | 0.00 | 53.98 | 5.51 | PASS |
| WLAN-CH1 | H | 3 | Hom SN6276 | 2274.96 | 34.00 | x | 30.04 | 4.94 | -23.14 | 11.84 | 45.84 | PK* | 3.00 | 0.00 | 53.98 | 8.14 | PASS |
| WLAN-CH1 | H | 3 | Hom SN6276 | 4824.00 | 29.20 | x | 35.35 | 7.40 | -31.04 | 11.71 | 40.91 | PK* | 3.00 | 0.00 | 53.98 | 13.07 | PASS |
| WLAN-CH1 | H | 3 | Hom SN6276 | 9376.41 | 35.40 | x | 40.28 | 11.52 | -30.72 | 21.08 | 56.48 | PK | 3.00 | 0.00 | 73.98 | 17.50 | PASS |
| WLAN-CH1 | H | 3 | Hom SN6276 | 9376.41 | 21.90 | x | 40.28 | 11.52 | -30.72 | 21.08 | 42.98 | AV | 3.00 | 0.00 | 53.98 | 11.00 | PASS |
| WLAN-CH1 | H | 1 | Hom SN6276 | 11572.20 | 39.05 | x | 40.41 | 8.40 | -30.63 | 18.18 | 57.23 | PK* | 3.00 | 9.54 | 63.52 | 6.29 | PASS |
| WLAN-CH1 | H | 1 | Hom SN6276 | 12054.80 | 38.25 | x | 40.58 | 8.62 | -30.61 | 18.58 | 56.83 | PK* | 3.00 | 9.54 | 63.52 | 6.69 | PASS |
| WLAN-CH1 | H | 1 | Hom SN6276 | 12586.35 | 39.39 | x | 41.27 | 8.86 | -30.59 | 19.54 | 58.93 | PK* | 3.00 | 9.54 | 63.52 | 4.59 | PASS |
| WLAN-CH1 | H | 1 | Hom SN6276 | 16074.85 | 39.74 | x | 40.79 | 10.46 | -31.63 | 19.62 | 59.36 | PK* | 3.00 | 9.54 | 63.52 | 4.16 | PASS |
| WLAN-CH1 | H | 1 | Hom SN6276 | 17953.05 | 40.02 | x | 45.76 | 11.15 | -32.63 | 24.28 | 64.30 | PK | 3.00 | 9.54 | 83.52 | 19.22 | PASS |
| WLAN-CH1 | H | 1 | Hom SN6276 | 17953.05 | 34.49 | x | 45.76 | 11.15 | -32.63 | 24.28 | 58.77 | AV | 3.00 | 9.54 | 63.52 | 4.75 | PASS |
| WLAN-CH1 | H | 1 | Waveline 899 | 18259.03 | 39.60 | | 40.20 | 11.26 | -34.68 | 16.78 | 56.38 | PK* | 3.00 | 9.54 | 63.52 | 7.14 | PASS |
| WLAN-CH1 | H | 1 | Waveline 899 | 19296.00 | 38.58 | | 40.26 | 11.64 | -35.23 | 16.67 | 55.25 | PK* | 3.00 | 9.54 | 63.52 | 8.27 | PASS |
| WLAN-CH1 | H | 1 | Waveline 899 | 21182.23 | 40.68 | | 40.30 | 12.33 | -35.59 | 17.05 | 57.73 | PK* | 3.00 | 9.54 | 63.52 | 5.80 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 1137.91 | 15.30 | x | 26.69 | 3.49 | 0.00 | 30.19 | 45.49 | PK* | 3.00 | 0.00 | 53.98 | 8.49 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 1591.34 | 16.10 | x | 27.64 | 4.14 | 0.00 | 31.78 | 47.88 | PK* | 3.00 | 0.00 | 53.98 | 6.10 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 2241.88 | 34.10 | x | 29.99 | 4.96 | -23.14 | 11.81 | 45.91 | PK* | 3.00 | 0.00 | 53.98 | 8.07 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 2277.80 | 33.60 | x | 30.04 | 4.94 | -23.14 | 11.85 | 45.45 | PK* | 3.00 | 0.00 | 53.98 | 8.53 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 2495.00 | 34.30 | | 30.39 | 5.23 | -23.12 | 12.50 | 46.80 | PK* | 3.00 | 0.00 | 53.98 | 7.18 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 3814.62 | 30.90 | x | 34.18 | 6.53 | -31.12 | 9.59 | 40.49 | PK* | 3.00 | 0.00 | 53.98 | 13.49 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 4101.79 | 32.10 | x | 34.70 | 6.79 | -31.10 | 10.39 | 42.49 | PK* | 3.00 | 0.00 | 53.98 | 11.49 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 4532.79 | 31.10 | x | 34.77 | 7.17 | -31.06 | 10.87 | 41.97 | PK* | 3.00 | 0.00 | 53.98 | 12.00 | PASS |
| WLAN-CH1 | V | 3 | Hom SN6276 | 4824.00 | 29.60 | x | 35.35 | 7.40 | -31.04 | 11.71 | 41.31 | PK* | 3.00 | 0.00 | 53.98 | 12.67 | PASS |
| WLAN-CH1 | V | 1 | Hom SN6276 | 11495.45 | 39.13 | x | 40.40 | 8.36 | -30.63 | 18.13 | 57.26 | PK* | 3.00 | 9.54 | 63.52 | 6.26 | PASS |
| WLAN-CH1 | V | 1 | Hom SN6276 | 12069.45 | 38.79 | | 40.60 | 8.62 | -30.61 | 18.61 | 57.40 | PK* | 3.00 | 9.54 | 63.52 | 6.12 | PASS |
| WLAN-CH1 | V | 1 | Hom SN6276 | 15747.35 | 39.47 | x | 40.70 | 10.32 | -31.46 | 19.56 | 59.03 | PK* | 3.00 | 9.54 | 63.52 | 4.49 | PASS |
| WLAN-CH1 | V | 1 | Waveline 899 | 18070.05 | 38.98 | | 40.20 | 11.19 | -34.58 | 16.81 | 55.79 | PK* | 3.00 | 9.54 | 63.52 | 7.73 | PASS |
| WLAN-CH1 | V | 1 | Waveline 899 | 19296.00 | 36.96 | | 40.26 | 11.64 | -35.23 | 16.67 | 53.63 | PK* | 3.00 | 9.54 | 63.52 | 9.89 | PASS |
| WLAN-CH1 | V | 1 | Waveline 899 | 23817.08 | 40.39 | | 40.40 | 13.30 | -35.55 | 18.14 | 58.53 | PK* | 3.00 | 9.54 | 63.52 | 4.99 | PASS |

Notes:

*PK denotes QP or Average limits applied to emissions measured with a peak detector

BOLD signifies the highest signal measured near a carrier harmonic frequency

No EUT emissions levels were measured above those reported

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 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: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.9.4. Mode b - Channel 6 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)

| | | | | |
|---|------------------------|-----------------------------|-------------------------|------------|
|  | Project Number: | 060605KBC-T643-E15W | Standard: | FCC15.247c |
| | Company: | Itronix | Test Start Date: | 4-Jul-05 |
| | Product: | IX325 with Intel PRO 2200BG | Test End Date: | 13-Jul-05 |

| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|----------|----------|----------|--------------|-----------------|----------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|--------|-----------|
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | (PK/QP/AV) | m | dB | dBuV/m | dB | |
| WLAN-CH6 | H | 3 | Horn SN6276 | 1587.56 | 17.90 | x | 27.62 | 4.14 | 0.00 | 31.76 | 49.66 | PK* | 3.00 | 0.00 | 53.98 | 4.32 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 2797.10 | 33.60 | x | 31.35 | 5.52 | -23.09 | 13.78 | 47.38 | PK* | 3.00 | 0.00 | 53.98 | 6.60 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 4874.00 | 28.90 | x | 35.45 | 7.60 | -31.04 | 12.01 | 40.91 | PK* | 3.00 | 0.00 | 53.98 | 13.07 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 7311.00 | 34.00 | x | 38.36 | 9.93 | -30.84 | 17.46 | 51.46 | PK* | 3.00 | 0.00 | 53.98 | 2.52 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 12190.30 | 38.74 | x | 40.77 | 8.68 | -30.61 | 18.84 | 57.58 | PK* | 3.00 | 9.54 | 63.52 | 5.94 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 17797.90 | 39.60 | x | 45.29 | 11.09 | -32.54 | 23.84 | 63.44 | PK | 3.00 | 9.54 | 83.52 | 20.08 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 17797.90 | 29.70 | x | 45.29 | 11.09 | -32.54 | 23.84 | 53.54 | AV | 3.00 | 9.54 | 63.52 | 9.98 | PASS |
| WLAN-CH6 | H | 1 | Waveline 899 | 18169.50 | 39.41 | x | 40.20 | 11.23 | -34.63 | 16.80 | 56.21 | PK* | 3.00 | 9.54 | 63.52 | 7.31 | PASS |
| WLAN-CH6 | H | 1 | Waveline 899 | 19496.00 | 37.69 | x | 40.30 | 11.71 | -35.33 | 16.68 | 54.37 | PK* | 3.00 | 9.54 | 63.52 | 9.15 | PASS |
| WLAN-CH6 | H | 1 | Waveline 899 | 23945.08 | 40.33 | x | 40.40 | 13.35 | -35.55 | 18.19 | 58.52 | PK* | 3.00 | 9.54 | 63.52 | 5.00 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 1058.00 | 17.20 | x | 26.58 | 3.35 | 0.00 | 29.93 | 47.13 | PK* | 3.00 | 0.00 | 53.98 | 6.85 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 1109.65 | 19.70 | x | 26.65 | 3.43 | 0.00 | 30.08 | 49.78 | PK* | 3.00 | 0.00 | 53.98 | 4.20 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 1587.03 | 15.70 | x | 27.62 | 4.14 | 0.00 | 31.76 | 47.46 | PK* | 3.00 | 0.00 | 53.98 | 6.52 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 2317.35 | 36.60 | x | 30.11 | 4.99 | -23.13 | 11.96 | 48.56 | PK* | 3.00 | 0.00 | 53.98 | 5.42 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 3801.48 | 31.00 | x | 34.14 | 6.51 | -31.12 | 9.53 | 40.53 | PK* | 3.00 | 0.00 | 53.98 | 13.45 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 4029.12 | 31.00 | x | 34.70 | 6.70 | -31.10 | 10.30 | 41.30 | PK* | 3.00 | 0.00 | 53.98 | 12.68 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 4874.00 | 30.50 | x | 35.45 | 7.60 | -31.04 | 12.01 | 42.51 | PK* | 3.00 | 0.00 | 53.98 | 11.47 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 7311.00 | 34.60 | x | 38.36 | 9.93 | -30.84 | 17.46 | 52.06 | PK* | 3.00 | 0.00 | 53.98 | 1.92 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 12185.00 | 37.78 | x | 40.76 | 8.68 | -30.61 | 18.83 | 56.61 | PK* | 3.00 | 9.54 | 63.52 | 6.91 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 17739.40 | 40.07 | x | 45.12 | 11.07 | -32.51 | 23.68 | 63.75 | PK | 3.00 | 9.54 | 83.52 | 19.78 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 17739.40 | 29.39 | x | 45.12 | 11.07 | -32.51 | 23.68 | 53.07 | AV | 3.00 | 9.54 | 63.52 | 10.46 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 17910.10 | 39.56 | x | 45.63 | 11.13 | -32.60 | 24.16 | 63.72 | PK | 3.00 | 9.54 | 83.52 | 19.80 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 17910.10 | 29.61 | x | 45.63 | 11.13 | -32.60 | 24.16 | 53.77 | AV | 3.00 | 9.54 | 63.52 | 9.75 | PASS |
| WLAN-CH6 | V | 1 | Waveline 899 | 18616.33 | 39.00 | x | 40.20 | 11.39 | -34.87 | 16.72 | 55.72 | PK* | 3.00 | 9.54 | 63.52 | 7.80 | PASS |
| WLAN-CH6 | V | 1 | Waveline 899 | 19496.00 | 37.32 | x | 40.30 | 11.71 | -35.33 | 16.68 | 54.00 | PK* | 3.00 | 9.54 | 63.52 | 9.52 | PASS |
| WLAN-CH6 | V | 1 | Waveline 899 | 23955.20 | 40.10 | x | 40.40 | 13.35 | -35.55 | 18.20 | 58.30 | PK* | 3.00 | 9.54 | 63.52 | 5.23 | PASS |


Notes:


*PK denotes QP or Average limits applied to emissions measured with a peak detector
BOLD signifies the highest signal measured near a carrier harmonic frequency
 No EUT emissions levels were measured above those reported

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 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: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.9.5. Mode b - Channel 11 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)

|  | | Project Number: 060605KBC-T643-E15W Company: Itronix Product: IX325 with Intel PRO 2200BG | Standard: FCC15.247c Test Start Date: 4-Jul-05 Test End Date: 13-Jul-05 | | | | | | | | | | | | | | |
|---|----------|--|--|-----------|----------|-------------|-------|-------|----------|-------------|----------------|------------|----------------|---------------------------|------------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
| | | m | | MHz | dBuV | | dB/m | dB | dB | dB/m | dBuV/m | (PK/QP/AV) | m | dB | dBuV/m | dB | |
| WLAN-CH11 | H | 3 | Horn SN6276 | 1049.19 | 16.40 | x | 26.57 | 3.34 | 0.00 | 29.90 | 46.30 | PK* | 3.00 | 0.00 | 53.98 | 7.67 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 1587.59 | 15.70 | x | 27.62 | 4.14 | 0.00 | 31.76 | 47.46 | PK* | 3.00 | 0.00 | 53.98 | 6.52 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 2893.42 | 32.80 | x | 31.66 | 5.63 | -23.09 | 14.20 | 47.00 | PK* | 3.00 | 0.00 | 53.98 | 6.98 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 4284.12 | 33.90 | | 34.70 | 6.94 | -31.08 | 10.56 | 44.46 | PK* | 3.00 | 0.00 | 53.98 | 9.52 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 4924.00 | 30.10 | x | 35.55 | 7.53 | -31.03 | 12.05 | 42.15 | PK* | 3.00 | 0.00 | 53.98 | 11.83 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 7386.00 | 33.70 | x | 38.49 | 9.94 | -30.83 | 17.61 | 51.31 | PK* | 3.00 | 0.00 | 53.98 | 2.67 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 12310.00 | 36.79 | x | 40.93 | 8.74 | -30.60 | 19.07 | 55.86 | PK* | 3.00 | 9.54 | 63.52 | 7.66 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 17918.85 | 40.10 | x | 45.66 | 11.14 | -32.61 | 24.18 | 64.28 | PK | 3.00 | 9.54 | 83.52 | 19.24 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 17918.85 | 29.36 | x | 45.66 | 11.14 | -32.61 | 24.18 | 53.54 | AV | 3.00 | 9.54 | 63.52 | 9.98 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 18230.68 | 39.24 | x | 40.20 | 11.25 | -34.66 | 16.79 | 56.03 | PK* | 3.00 | 9.54 | 63.52 | 7.49 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 19696.00 | 38.81 | x | 40.30 | 11.79 | -35.44 | 16.65 | 55.46 | PK* | 3.00 | 9.54 | 63.52 | 8.06 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 20102.65 | 40.03 | x | 40.30 | 11.94 | -35.60 | 16.64 | 56.67 | PK* | 3.00 | 9.54 | 63.52 | 6.85 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 20997.08 | 39.78 | x | 40.30 | 12.26 | -35.59 | 16.98 | 56.76 | PK* | 3.00 | 9.54 | 63.52 | 6.77 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 22158.00 | 38.56 | x | 40.33 | 12.69 | -35.57 | 17.45 | 56.01 | PK* | 3.00 | 9.54 | 63.52 | 7.51 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 22246.03 | 39.78 | x | 40.35 | 12.72 | -35.57 | 17.50 | 57.28 | PK* | 3.00 | 9.54 | 63.52 | 6.24 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 23962.35 | 40.76 | x | 40.40 | 13.35 | -35.55 | 18.20 | 58.96 | PK* | 3.00 | 9.54 | 63.52 | 4.56 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 1089.79 | 19.20 | | 26.63 | 3.39 | 0.00 | 30.01 | 49.21 | PK* | 3.00 | 0.00 | 53.98 | 4.77 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 1109.61 | 26.10 | | 26.65 | 3.43 | 0.00 | 30.08 | 56.18 | PK | 3.00 | 0.00 | 73.98 | 17.80 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 1109.61 | 2.50 | | 26.65 | 3.43 | 0.00 | 30.08 | 32.58 | AV | 3.00 | 0.00 | 53.98 | 21.40 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 1130.13 | 18.30 | | 26.68 | 3.47 | 0.00 | 30.15 | 48.45 | PK* | 3.00 | 0.00 | 53.98 | 5.53 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 1512.91 | 16.10 | x | 27.26 | 4.02 | 0.00 | 31.28 | 47.38 | PK* | 3.00 | 0.00 | 53.98 | 6.60 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2317.33 | 36.00 | | 30.11 | 4.99 | -23.13 | 11.96 | 47.96 | PK* | 3.00 | 0.00 | 53.98 | 6.02 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2795.09 | 36.40 | | 31.34 | 5.53 | -23.10 | 13.77 | 50.17 | PK* | 3.00 | 0.00 | 53.98 | 3.80 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 4924.00 | 31.00 | | 35.55 | 7.53 | -31.03 | 12.05 | 43.05 | PK* | 3.00 | 0.00 | 53.98 | 10.93 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 7386.00 | 34.60 | x | 38.49 | 9.94 | -30.83 | 17.61 | 52.21 | PK* | 3.00 | 0.00 | 53.98 | 1.77 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 11643.40 | 38.32 | x | 40.43 | 8.43 | -30.63 | 18.23 | 56.55 | PK* | 3.00 | 9.54 | 63.52 | 6.97 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 12310.00 | 36.00 | x | 40.93 | 8.74 | -30.60 | 19.07 | 55.07 | PK* | 3.00 | 9.54 | 63.52 | 8.45 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 16180.80 | 39.65 | x | 41.02 | 10.49 | -31.68 | 19.83 | 59.48 | PK* | 3.00 | 9.54 | 63.52 | 4.04 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 17978.15 | 39.69 | x | 45.83 | 11.16 | -32.64 | 24.35 | 64.04 | PK | 3.00 | 9.54 | 83.52 | 19.48 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 17978.15 | 29.64 | x | 45.83 | 11.16 | -32.64 | 24.35 | 53.99 | AV | 3.00 | 9.54 | 63.52 | 9.53 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 18335.93 | 39.67 | x | 40.20 | 11.29 | -34.72 | 16.77 | 56.44 | PK* | 3.00 | 9.54 | 63.52 | 7.08 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 19696.00 | 37.48 | x | 40.30 | 11.79 | -35.44 | 16.65 | 54.13 | PK* | 3.00 | 9.54 | 63.52 | 9.39 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 20534.48 | 40.41 | x | 40.30 | 12.09 | -35.59 | 16.80 | 57.21 | PK* | 3.00 | 9.54 | 63.52 | 6.31 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 21199.00 | 40.29 | x | 40.30 | 12.34 | -35.59 | 17.05 | 57.34 | PK* | 3.00 | 9.54 | 63.52 | 6.18 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 22082.15 | 39.87 | x | 40.32 | 12.66 | -35.58 | 17.40 | 57.27 | PK* | 3.00 | 9.54 | 63.52 | 6.25 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 22158.00 | 37.41 | x | 40.33 | 12.69 | -35.57 | 17.45 | 54.86 | PK* | 3.00 | 9.54 | 63.52 | 8.66 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 22951.08 | 39.60 | x | 40.40 | 12.98 | -35.57 | 17.82 | 57.42 | PK* | 3.00 | 9.54 | 63.52 | 6.11 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 23951.40 | 40.91 | | 40.40 | 13.35 | -35.55 | 18.19 | 59.10 | PK* | 3.00 | 9.54 | 63.52 | 4.42 | PASS |

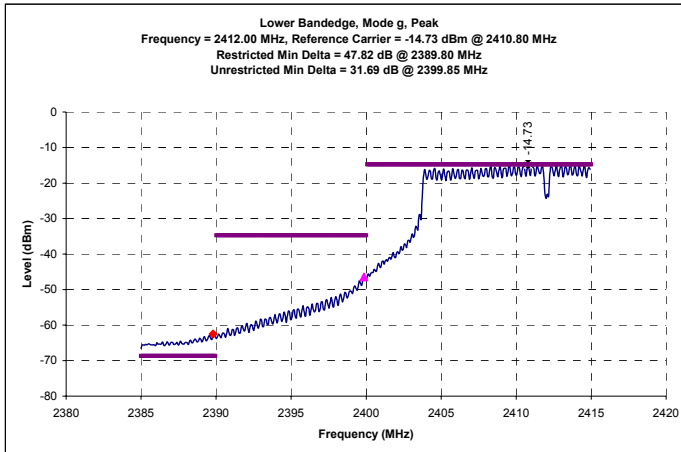
Notes:
 *PK denotes QP or Average limits applied to emissions measured with a peak detector
BOLD signifies the highest signal measured near a carrier harmonic frequency
 No EUT emissions levels were measured above those reported
Formulae:
 Total CF = Antenna Factor + Cable Factor + Other Factor (Amplifier 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 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..**



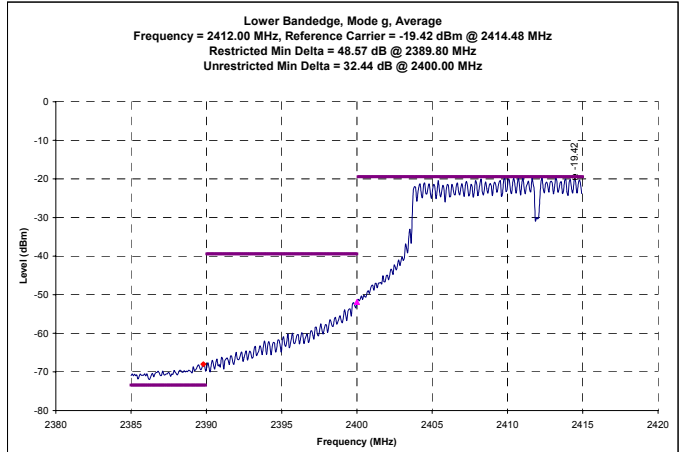
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|--------------------------------|-----------------------|---------------------------------|-------------------|
| Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.9.6. Mode g - Lower Band-edge Emission Field Strengths @ Specified Distance

Channel 1 Mode g - Conducted Peak Band-edge Plots



Channel 1 Mode g - Conducted Average Band-edge Plots



Channel 1 g - Calculated Band-edge (Restricted) Field Strengths

IX325 with Intel WLAN Mode g with Setting 20, Tx = 6 Mbps

| Channel | Polarity | Distance | Frequency | Carrier Radiated Field Strength | Delta Marker | Detector | Calculated Bandedge Field Strength | Duty Cycle Correction | Corrected Bandedge Field Strength | Specified Limit | Specified Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|----------|----------|----------|-----------|---------------------------------|--------------|----------|------------------------------------|-----------------------|-----------------------------------|-----------------|--------------------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | | | |
| WLAN-CH1 | H | 3 | 2389.80 | 92.83 | 47.82 | PK | 45.01 | 0.00 | 45.01 | 73.98 | 3.00 | 0.00 | 73.98 | 28.97 | PASS |
| WLAN-CH1 | H | 3 | 2389.80 | 80.33 | 48.57 | AV | 31.76 | 0.00 | 31.76 | 53.98 | 3.00 | 0.00 | 53.98 | 22.22 | PASS |
| WLAN-CH1 | V | 3 | 2389.80 | 91.63 | 47.82 | PK | 43.81 | 0.00 | 43.81 | 73.98 | 3.00 | 0.00 | 73.98 | 30.17 | PASS |
| WLAN-CH1 | V | 3 | 2389.80 | 78.48 | 48.57 | AV | 29.91 | 0.00 | 29.91 | 53.98 | 3.00 | 0.00 | 53.98 | 24.07 | PASS |

Formulae:

- Calculated Bandedge Field Strength (dBuV/m) = Carrier Radiated Field Strength (dBuV/m) + Delta Marker (dB)
- Duty Cycle Correction (dB) = 20 * log (time on / total time)
- Corrected Bandedge Field Strength (dBuV/m) = Calculated Bandedge Field Strength (dBuV/m) + Duty Cycle Correction (dB)
- Limit Distance Correction = 20 * log (measurement distance / limit distance)
- Calculated Limit (dBuV/m) = Specified Limit (dBuV/m) + Limit Distance Correction (dB)
- Margin (dB) = Corrected Limit (dBuV/m) – Corrected Bandedge Field Strength (dBuV/m)

Note: Measurements and calculation reference the Marker-Delta Method described in FCC Public Notice DA 00-705

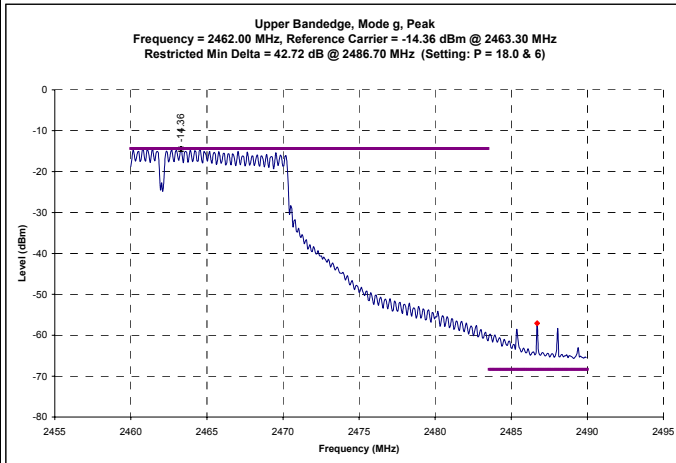
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|---|--|---------------|----------------|----------------|-------------------|---------------|---------------|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | | |
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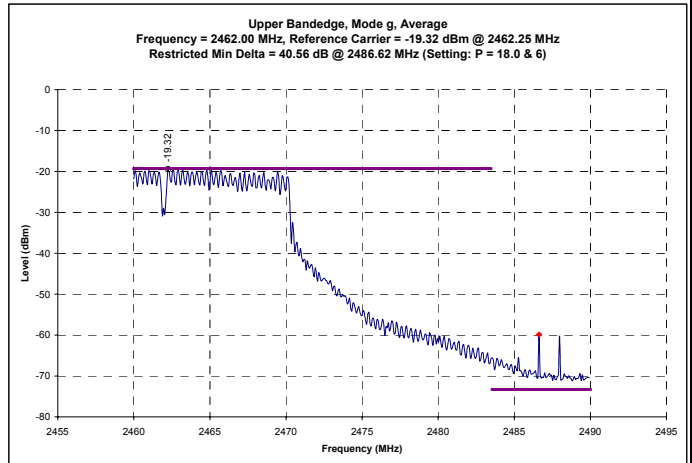
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|--------------------------------|-----------------------|---------------------------------|-------------------|
| Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.9.7. Mode g - Upper Band-edge Emission Field Strengths @ Specified Distance

Channel 11 Mode g - Conducted Peak Band-edge Plots



Channel 11 Mode g - Conducted Average Band-edge Plots



Channel 11 g - Calculated Band-edge (Restricted) Field Strengths

IX325 with Intel WLAN Mode g with Setting 20, Tx = 6 Mbps


| Channel | Polarity | Distance | Frequency | Carrier Radiated Field Strength | Delta Marker | Detector | Calculated Bandedge Field Strength | Duty Cycle Correction | Corrected Bandedge Field Strength | Specified Limit | Specified Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|-----------|----------|----------|-----------|---------------------------------|--------------|----------|------------------------------------|-----------------------|-----------------------------------|-----------------|--------------------------|---------------------------|------------------|--------|-----------|
| | | | | | | | | | | | | | | | |
| WLAN-CH11 | H | 3 | 2486.70 | 95.18 | 42.72 | PK | 52.46 | 0.00 | 52.46 | 73.98 | 3.00 | 0.00 | 73.98 | 21.52 | PASS |
| WLAN-CH11 | H | 3 | 2486.62 | 82.53 | 40.56 | AV | 41.97 | 0.00 | 41.97 | 53.98 | 3.00 | 0.00 | 53.98 | 12.01 | PASS |
| WLAN-CH11 | V | 3 | 2486.70 | 92.98 | 42.72 | PK | 50.26 | 0.00 | 50.26 | 73.98 | 3.00 | 0.00 | 73.98 | 23.72 | PASS |
| WLAN-CH11 | V | 3 | 2486.62 | 80.43 | 40.56 | AV | 39.87 | 0.00 | 39.87 | 53.98 | 3.00 | 0.00 | 53.98 | 14.11 | PASS |

Formulae:


- Calculated Bandedge Field Strength (dBuV/m) = Carrier Radiated Field Strength (dBuV/m) + Delta Marker (dB)
- Duty Cycle Correction (dB) = 20 * log (time on / total time)
- Corrected Bandedge Field Strength (dBuV/m) = Calculated Bandedge Field Strength (dBuV/m) + Duty Cycle Correction (dB)
- Limit Distance Correction = 20 * log (measurement distance / limit distance)
- Calculated Limit (dBuV/m) = Specified Limit (dBuV/m) + Limit Distance Correction (dB)
- Margin (dB) = Corrected Limit (dBuV/m) – Corrected Bandedge Field Strength (dBuV/m)

Note: Measurements and calculation reference the Marker-Delta Method described in FCC Public Notice DA 00-705

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---------------|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | | |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.9.8. Mode g - Channel 1 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)

|  | | Project Number: 060605KBC-T643-E15W Company: Itronix Product: IX325 with Intel PRO 2200BG | Standard: FCC15.209 Test Start Date: 4-Jul-05 Test End Date: 13-Jul-05 | | | | | | | | | | | | | | |
|---|----------|--|---|------------------|------------------|------------------|-------|-------|----------|-------------|----------------|------------------------|----------------|---------------------------|------------------|--------|-----------|
| Channel | Polarity | Distance m | Rx Antenna | Frequency MHz | SA Level dBuV | Noise Floor x | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector (PK/QP/AV) | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | | m | dB | dBuV/m | dB | |
| WLAN-CH1 | H | 3 | Horn SN6276 | 1125.65 | 20.20 | x | 28.68 | 3.45 | 0.00 | 30.13 | 50.33 | PK* | 3.00 | 0.00 | 53.98 | 3.65 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 1585.44 | 15.80 | x | 27.61 | 4.14 | 0.00 | 31.75 | 47.55 | PK* | 3.00 | 0.00 | 53.98 | 6.43 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 2311.00 | 35.10 | x | 30.10 | 4.97 | -23.13 | 11.94 | 47.04 | PK* | 3.00 | 0.00 | 53.98 | 6.94 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 4245.42 | 30.80 | x | 34.70 | 6.90 | -31.09 | 10.52 | 41.32 | PK* | 3.00 | 0.00 | 53.98 | 12.66 | PASS |
| WLAN-CH1 | H | 3 | Horn SN6276 | 4824.00 | 29.20 | x | 35.35 | 7.40 | -31.04 | 11.71 | 40.91 | PK* | 3.00 | 0.00 | 53.98 | 13.07 | PASS |
| WLAN-CH1 | H | 1 | Horn SN6276 | 12061.65 | 37.95 | x | 40.59 | 8.62 | -30.61 | 18.60 | 56.55 | PK* | 3.00 | 9.54 | 63.52 | 6.98 | PASS |
| WLAN-CH1 | H | 1 | Horn SN6276 | 14472.00 | 37.92 | x | 42.57 | 9.73 | -30.78 | 21.52 | 59.44 | PK* | 3.00 | 9.54 | 63.52 | 4.08 | PASS |
| WLAN-CH1 | H | 1 | Waveline_899 | 18291.08 | 39.30 | x | 40.20 | 11.27 | -34.69 | 16.78 | 56.08 | PK* | 3.00 | 9.54 | 63.52 | 7.44 | PASS |
| WLAN-CH1 | H | 1 | Waveline_899 | 19296.00 | 37.70 | x | 40.26 | 11.64 | -35.23 | 16.67 | 54.37 | PK* | 3.00 | 9.54 | 63.52 | 9.15 | PASS |
| WLAN-CH1 | H | 1 | Waveline_899 | 23751.23 | 40.96 | x | 40.40 | 13.27 | -35.56 | 18.12 | 59.08 | PK* | 3.00 | 9.54 | 63.52 | 4.44 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 1374.94 | 15.80 | x | 27.02 | 3.81 | 0.00 | 30.84 | 46.64 | PK* | 3.00 | 0.00 | 53.98 | 7.34 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 2316.75 | 36.50 | | 30.11 | 4.99 | -23.13 | 11.96 | 48.46 | PK* | 3.00 | 0.00 | 53.98 | 5.52 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 2356.00 | 37.30 | | 30.17 | 5.06 | -23.13 | 12.10 | 49.40 | PK* | 3.00 | 0.00 | 53.98 | 4.58 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 2796.00 | 33.70 | | 31.35 | 5.53 | -23.09 | 13.78 | 47.48 | PK* | 3.00 | 0.00 | 53.98 | 6.50 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 4293.95 | 31.50 | x | 34.70 | 6.94 | -31.08 | 10.56 | 42.06 | PK* | 3.00 | 0.00 | 53.98 | 11.92 | PASS |
| WLAN-CH1 | V | 3 | Horn SN6276 | 4824.00 | 29.10 | x | 35.35 | 7.40 | -31.04 | 11.71 | 40.81 | PK* | 3.00 | 0.00 | 53.98 | 13.17 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 12060.00 | 37.59 | x | 40.58 | 8.62 | -30.61 | 18.59 | 56.18 | PK* | 3.00 | 9.54 | 63.52 | 7.34 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 14472.00 | 38.22 | x | 42.57 | 9.73 | -30.78 | 21.52 | 59.74 | PK* | 3.00 | 9.54 | 63.52 | 3.78 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 17955.65 | 38.67 | x | 45.77 | 11.15 | -32.63 | 24.29 | 62.96 | PK | 3.00 | 9.54 | 83.52 | 20.56 | PASS |
| WLAN-CH1 | V | 1 | Horn SN6276 | 17955.65 | 29.40 | x | 45.77 | 11.15 | -32.63 | 24.29 | 53.69 | AV | 3.00 | 9.54 | 63.52 | 9.83 | PASS |
| WLAN-CH1 | V | 1 | Waveline_899 | 19296.00 | 37.61 | x | 40.26 | 11.64 | -35.23 | 16.67 | 54.28 | PK* | 3.00 | 9.54 | 63.52 | 9.24 | PASS |
| WLAN-CH1 | V | 1 | Waveline_899 | 19915.15 | 39.39 | x | 40.30 | 11.87 | -35.56 | 16.61 | 56.00 | PK* | 3.00 | 9.54 | 63.52 | 7.52 | PASS |
| WLAN-CH1 | V | 1 | Waveline_899 | 23865.70 | 40.18 | x | 40.40 | 13.32 | -35.55 | 18.16 | 58.34 | PK* | 3.00 | 9.54 | 63.52 | 5.18 | PASS |

Notes:

*PK denotes QP or Average limits applied to emissions measured with a peak detector
BOLD signifies the highest signal measured near a carrier harmonic frequency
 No EUT emissions levels were measured above those reported

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 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: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

E.9.9. Mode g - Channel 6 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)

|  | | Project Number: 060605KBC-T643-E15W Company: Itronix Product: IX325 with Intel PRO 2200BG | Standard: FCC15.209 Test Start Date: 4-Jul-05 Test End Date: 13-Jul-05 | | | | | | | | | | | | | | |
|---|----------|--|---|-----------------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
| | | | | | | | dB/m | dB | dB | dB/m | dBuV/m | | (PK/QP/AV) | m | | | |
| WLAN-CH6 | H | 3 | Bilog SN1607 | 131.55 | 23.70 | | 12.23 | 1.15 | 0.00 | 13.38 | 37.08 | PK* | 3.00 | 0.00 | 43.52 | 6.44 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 1058.92 | 15.10 | x | 26.58 | 3.35 | 0.00 | 29.94 | 45.04 | PK* | 3.00 | 0.00 | 53.98 | 8.94 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 1584.98 | 15.90 | | 27.61 | 4.14 | 0.00 | 31.75 | 47.65 | PK* | 3.00 | 0.00 | 53.98 | 6.33 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 4874.00 | 29.60 | x | 35.45 | 7.60 | -31.04 | 12.01 | 41.61 | PK* | 3.00 | 0.00 | 53.98 | 12.37 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 7311.00 | 34.90 | x | 38.36 | 9.93 | -30.84 | 17.46 | 52.36 | PK | 3.00 | 0.00 | 73.98 | 21.62 | PASS |
| WLAN-CH6 | H | 3 | Horn SN6276 | 7311.00 | 23.20 | x | 38.36 | 9.93 | -30.84 | 17.46 | 40.66 | AV | 3.00 | 0.00 | 53.98 | 13.32 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 17940.00 | 38.89 | x | 45.72 | 11.14 | -32.62 | 24.24 | 63.13 | PK | 3.00 | 9.54 | 83.52 | 20.39 | PASS |
| WLAN-CH6 | H | 1 | Horn SN6276 | 17940.00 | 29.40 | x | 45.72 | 11.14 | -32.62 | 24.24 | 53.64 | AV | 3.00 | 9.54 | 63.52 | 9.88 | PASS |
| WLAN-CH6 | H | 1 | Waveline_899 | 19496.00 | 37.51 | | 40.30 | 11.71 | -35.33 | 16.68 | 54.19 | PK* | 3.00 | 9.54 | 63.52 | 9.33 | PASS |
| WLAN-CH6 | H | 1 | Waveline_899 | 23800.23 | 40.59 | | 40.40 | 13.29 | -35.56 | 18.14 | 58.73 | PK* | 3.00 | 9.54 | 63.52 | 4.79 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 1081.94 | 20.10 | | 26.61 | 3.37 | 0.00 | 29.98 | 50.08 | PK* | 3.00 | 0.00 | 53.98 | 3.90 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 1089.96 | 22.30 | | 26.63 | 3.39 | 0.00 | 30.01 | 52.31 | PK | 3.00 | 0.00 | 73.98 | 21.66 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 1089.96 | 22.50 | | 26.63 | 3.39 | 0.00 | 30.01 | 52.51 | AV | 3.00 | 0.00 | 53.98 | 1.46 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 1586.99 | 15.90 | | 27.62 | 4.14 | 0.00 | 31.76 | 47.66 | PK* | 3.00 | 0.00 | 53.98 | 6.32 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 2317.57 | 37.30 | | 30.11 | 4.99 | -23.13 | 11.96 | 49.26 | PK* | 3.00 | 0.00 | 53.98 | 4.72 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 2754.04 | 34.40 | | 31.21 | 5.50 | -23.10 | 13.61 | 48.01 | PK* | 3.00 | 0.00 | 53.98 | 5.97 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 2751.48 | 33.60 | | 31.20 | 5.49 | -23.10 | 13.59 | 47.19 | PK* | 3.00 | 0.00 | 53.98 | 6.79 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 3758.09 | 30.90 | x | 34.02 | 6.46 | -31.13 | 9.36 | 40.26 | PK* | 3.00 | 0.00 | 53.98 | 13.72 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 4874.00 | 29.40 | x | 35.45 | 7.60 | -31.04 | 12.01 | 41.41 | PK* | 3.00 | 0.00 | 53.98 | 12.57 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 7311.00 | 34.00 | x | 38.36 | 9.93 | -30.84 | 17.46 | 51.46 | PK | 3.00 | 0.00 | 73.98 | 22.52 | PASS |
| WLAN-CH6 | V | 3 | Horn SN6276 | 7311.00 | 23.30 | x | 38.36 | 9.93 | -30.84 | 17.46 | 40.76 | AV | 3.00 | 0.00 | 53.98 | 13.22 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 12185.00 | 36.17 | x | 40.76 | 8.68 | -30.61 | 18.83 | 55.00 | PK* | 3.00 | 9.54 | 63.52 | 8.52 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 14489.10 | 39.04 | x | 42.59 | 9.74 | -30.79 | 21.54 | 60.58 | PK* | 3.00 | 9.54 | 63.52 | 2.94 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 17824.13 | 39.12 | x | 45.37 | 11.10 | -32.56 | 23.92 | 63.04 | PK | 3.00 | 9.54 | 83.52 | 20.49 | PASS |
| WLAN-CH6 | V | 1 | Horn SN6276 | 17824.13 | 29.70 | x | 45.37 | 11.10 | -32.56 | 23.92 | 53.62 | AV | 3.00 | 9.54 | 63.52 | 9.91 | PASS |
| WLAN-CH6 | V | 1 | Waveline_899 | 19496.00 | 37.10 | | 40.30 | 11.71 | -35.33 | 16.68 | 53.78 | PK* | 3.00 | 9.54 | 63.52 | 9.74 | PASS |
| WLAN-CH6 | V | 1 | Waveline_899 | 19952.95 | 39.47 | | 40.30 | 11.88 | -35.58 | 16.61 | 56.08 | PK* | 3.00 | 9.54 | 63.52 | 7.45 | PASS |
| WLAN-CH6 | V | 1 | Waveline_899 | 23969.63 | 40.56 | | 40.40 | 13.36 | -35.55 | 18.20 | 58.76 | PK* | 3.00 | 9.54 | 63.52 | 4.76 | PASS |

Notes:

*PK denotes QP or Average limits applied to emissions measured with a peak detector

BOLD signifies the highest signal measured near a carrier harmonic frequency

No EUT emissions levels were measured above those reported

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 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: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |


E.9.10. Mode g - Channel 11 Out-of-Band Spurious Emission Field Strengths @ Specified Distance (within restricted bands)

| Channel | Polarity | Distance | Rx Antenna | Frequency | SA Level | Noise Floor | Rx AF | Rx CL | Other Rx | Total Rx CF | Field Strength | Detector | Limit Distance | Limit Distance Correction | Calculated Limit | Margin | Pass/Fail |
|-----------|----------|----------|--------------|-----------------|----------|-------------|-------|-------|----------|-------------|----------------|----------|----------------|---------------------------|------------------|--------|-----------|
| WLAN-CH11 | H | 3 | Horn SN6276 | 1126.08 | 17.60 | | 26.68 | 3.46 | 0.00 | 30.13 | 47.73 | PK* | 3.00 | 0.00 | 53.98 | 6.25 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 1181.11 | 15.50 | | 26.75 | 3.53 | 0.00 | 30.29 | 45.79 | PK* | 3.00 | 0.00 | 53.98 | 8.19 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 1589.26 | 17.10 | | 27.63 | 4.14 | 0.00 | 31.77 | 48.87 | PK* | 3.00 | 0.00 | 53.98 | 5.11 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 2321.74 | 34.00 | | 30.11 | 5.00 | -23.13 | 11.98 | 45.98 | PK* | 3.00 | 0.00 | 53.98 | 8.00 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 4924.00 | 29.50 | | 35.55 | 7.53 | -31.03 | 12.05 | 41.55 | PK* | 3.00 | 0.00 | 53.98 | 12.43 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 7386.00 | 33.80 | | 38.49 | 9.94 | -30.83 | 17.61 | 51.41 | PK* | 3.00 | 0.00 | 53.98 | 2.57 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 9317.12 | 35.60 | | 40.26 | 11.62 | -30.73 | 21.16 | 56.76 | PK | 3.00 | 0.00 | 73.98 | 17.22 | PASS |
| WLAN-CH11 | H | 3 | Horn SN6276 | 9317.12 | 22.40 | | 40.26 | 11.62 | -30.73 | 21.16 | 43.56 | AV | 3.00 | 0.00 | 53.98 | 10.42 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 12310.00 | 37.65 | | 40.93 | 8.74 | -30.60 | 19.07 | 56.72 | PK* | 3.00 | 9.54 | 63.52 | 6.80 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 17920.10 | 39.03 | | 45.66 | 11.14 | -32.61 | 24.19 | 63.22 | PK | 3.00 | 9.54 | 83.52 | 20.30 | PASS |
| WLAN-CH11 | H | 1 | Horn SN6276 | 17920.10 | 29.50 | | 45.66 | 11.14 | -32.61 | 24.19 | 53.69 | AV | 3.00 | 9.54 | 63.52 | 9.83 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 19696.00 | 37.48 | | 40.30 | 11.79 | -35.44 | 16.65 | 54.13 | PK* | 3.00 | 9.54 | 63.52 | 9.39 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 19933.15 | 38.15 | | 40.30 | 11.87 | -35.56 | 16.61 | 54.76 | PK* | 3.00 | 9.54 | 63.52 | 8.76 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 22158.00 | 37.73 | | 40.33 | 12.69 | -35.57 | 17.45 | 55.18 | PK* | 3.00 | 9.54 | 63.52 | 8.34 | PASS |
| WLAN-CH11 | H | 1 | Waveline_899 | 23754.20 | 39.67 | | 40.40 | 13.28 | -35.56 | 18.12 | 57.79 | PK | 3.00 | 9.54 | 83.52 | 25.73 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 1030.17 | 15.60 | | 28.54 | 3.39 | 0.00 | 29.94 | 45.54 | PK* | 3.00 | 0.00 | 53.98 | 8.44 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 1061.03 | 15.80 | | 26.59 | 3.36 | 0.00 | 29.94 | 45.74 | PK* | 3.00 | 0.00 | 53.98 | 8.24 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 1590.66 | 15.60 | | 27.64 | 4.14 | 0.00 | 31.78 | 47.38 | PK* | 3.00 | 0.00 | 53.98 | 6.60 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2713.72 | 35.20 | | 31.08 | 5.43 | -23.10 | 13.41 | 48.61 | PK* | 3.00 | 0.00 | 53.98 | 5.37 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2754.68 | 35.80 | | 31.21 | 5.50 | -23.10 | 13.61 | 49.41 | PK* | 3.00 | 0.00 | 53.98 | 4.56 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2795.16 | 37.60 | | 31.34 | 5.53 | -23.10 | 13.78 | 51.38 | PK | 3.00 | 0.00 | 73.98 | 22.60 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 2795.16 | 23.80 | | 31.34 | 5.53 | -23.10 | 13.78 | 37.58 | AV | 3.00 | 0.00 | 53.98 | 16.40 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 4296.53 | 37.90 | | 34.70 | 6.95 | -31.08 | 10.56 | 48.46 | PK* | 3.00 | 0.00 | 53.98 | 5.52 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 4924.00 | 29.60 | | 35.55 | 7.53 | -31.03 | 12.05 | 41.65 | PK* | 3.00 | 0.00 | 53.98 | 12.33 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 7386.00 | 33.60 | | 38.49 | 9.94 | -30.83 | 17.61 | 51.21 | PK | 3.00 | 0.00 | 73.98 | 22.77 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 7386.00 | 23.00 | | 38.49 | 9.94 | -30.83 | 17.61 | 40.61 | AV | 3.00 | 0.00 | 53.98 | 13.37 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 8321.27 | 35.10 | | 39.29 | 10.43 | -30.77 | 18.96 | 54.06 | PK | 3.00 | 0.00 | 73.98 | 19.92 | PASS |
| WLAN-CH11 | V | 3 | Horn SN6276 | 8321.27 | 21.90 | | 39.29 | 10.43 | -30.77 | 18.96 | 40.86 | AV | 3.00 | 0.00 | 53.98 | 13.12 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 12310.00 | 37.37 | | 40.93 | 8.74 | -30.60 | 19.07 | 56.44 | PK* | 3.00 | 9.54 | 63.52 | 7.08 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 13286.80 | 40.26 | | 41.83 | 9.19 | -30.56 | 20.45 | 60.71 | PK | 3.00 | 9.54 | 83.52 | 22.81 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 13286.80 | 27.20 | | 41.83 | 9.19 | -30.56 | 20.45 | 47.65 | AV | 3.00 | 9.54 | 63.52 | 15.87 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 17987.78 | 39.04 | | 45.86 | 11.16 | -32.64 | 24.38 | 63.42 | PK | 3.00 | 9.54 | 83.52 | 20.10 | PASS |
| WLAN-CH11 | V | 1 | Horn SN6276 | 17987.78 | 29.30 | | 45.86 | 11.16 | -32.64 | 24.38 | 53.68 | AV | 3.00 | 9.54 | 63.52 | 9.84 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 19342.25 | 38.74 | | 40.27 | 11.66 | -35.25 | 16.67 | 55.41 | PK* | 3.00 | 9.54 | 63.52 | 8.11 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 19696.00 | 37.00 | | 40.30 | 11.79 | -35.44 | 16.65 | 53.65 | PK* | 3.00 | 9.54 | 63.52 | 9.87 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 22158.00 | 36.82 | | 40.33 | 12.69 | -35.57 | 17.45 | 54.27 | PK* | 3.00 | 9.54 | 63.52 | 9.25 | PASS |
| WLAN-CH11 | V | 1 | Waveline_899 | 23952.15 | 40.54 | | 40.40 | 13.35 | -35.55 | 18.19 | 58.73 | PK* | 3.00 | 9.54 | 63.52 | 4.79 | PASS |

Notes:
*PK denotes QP or Average limits applied to emissions measured with a peak detector
BOLD signifies the highest signal measured near a carrier harmonic frequency
No EUT emissions levels were measured above those reported
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 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: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

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.

13Jul05

Date

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
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| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

Appendix F - Peak Power Spectral Density Measurement

F.1. REFERENCES

| | |
|-------------------------------------|--|
| Normative Reference Standard | FCC CFR 47 §15.247(d) |
| Procedure Reference | FCC Bulletin KDB Publication No 558074 |

F.2. LIMITS

F.2.1. FCC CFR

§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.


F.3. ENVIRONMENTAL CONDITIONS


| | |
|----------------------------|-------------|
| Temperature | 25 +/- 2 °C |
| Humidity | 35 +/- 2 % |
| Barometric Pressure | 96 kPa |

F.4. EQUIPMENT LIST

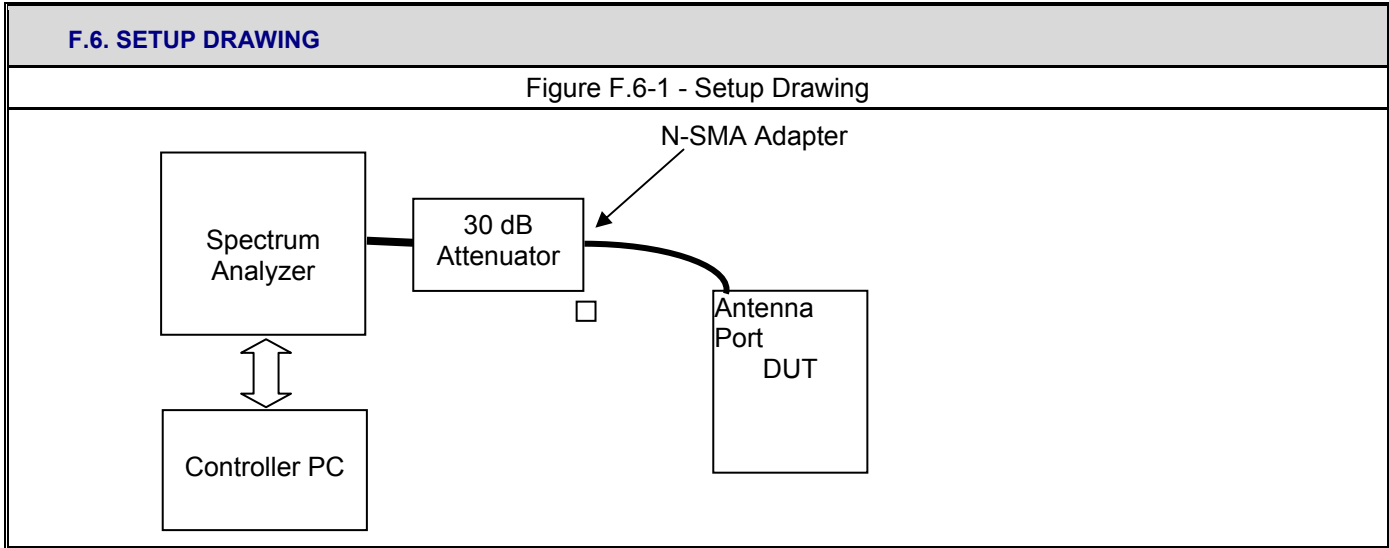
| ASSET NUMBER | MANUFACTURER | MODEL | DESCRIPTION | LAST CAL | CAL DUE |
|--------------|--------------|-----------|------------------------|----------|---------|
| 00015 | Agilent | E4408B | Spectrum Analyzer | 24Jan05 | 24Jan06 |
| 00075 | Alpha Wire-J | 9223 | 1ft. RG223/U RF Cable | na* | na |
| 00076 | Pasternack | PE7014-30 | 30dB 2 Watt Attenuator | na* | na |


*Cable and attenuator verified with power meter prior to use


| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

| F.5. MEASUREMENT EQUIPMENT SETUP | |
|--|--|
| Measurement Equipment Connections | The equipment was connected as shown in the setup drawing in G.6. |
| Measurement Equipment Settings | To evaluate the occupied bandwidth, software and a PC controller were used to set the spectrum analyzer using the following setting: RBW – 3 kHz VBW – 30 kHz Detector – Sample Average – Power Trace Average – 100 Offset – appropriate for external attenuation (-31.4 dB) |
| Measurement Procedure | The power spectral density measurement was performed using the PSD Option 2 method described in the FCC document KDB Publication No. 558074. |



| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

F.7. TEST RESULTS

| Channel | 802.11b | | | 802.11g | | |
|---------|-----------------|------------|----------------|-----------------|------------|----------------|
| | Frequency (GHz) | PPSD (dBm) | Data Rate Mb/s | Frequency (GHz) | PPSD (dBm) | Data Rate Mb/s |
| Low | 2.412 | -11.97 | 1 | 2.412 | -18.35 | 6 |
| Mid | 2.437 | -10.54 | 1 | 2.437 | -18.02 | 6 |
| High | 2.462 | -11.37 | 1 | 2.462 | -17.06 | 6 |

F.8. PASS/FAIL

In reference to the results outlined in G.5, 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.9. 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.




Alex Yuan
EMC Technologist
Celltech Labs Inc.

17Jul05

Date

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

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

§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.

| Frequency of Emission (MHz) | Conducted Limit (dBuV) | |
|-----------------------------|------------------------|-----------|
| | Quasi-Peak | Average |
| 0.15 – 0.5 | 66 to 56* | 56 to 46* |
| 0.50 – 5.0 | 56 | 46 |
| 5.0 – 30.0 | 60 | 50 |

*Decreases logarithmically with frequency.

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 |
|--------------|--------------|--------|--------------------------------------|----------|---------|
| 00049 | HP | 85650A | Quasi-Peak Adapter | 13Apr05 | 13Apr06 |
| 00047 | HP | 85685A | RF Preselector | 13Apr05 | 13Apr06 |
| 00051 | HP | 8566B | Spectrum Analyzer RF Section | 12Apr05 | 12Apr06 |
| 00083 | EMCO | 3825/2 | Line Impedance Stabilization Network | 26Apr05 | 26Apr06 |
| 00084 | EMCO | 3825/2 | Line Impedance Stabilization Network | 26Apr05 | 26Apr06 |

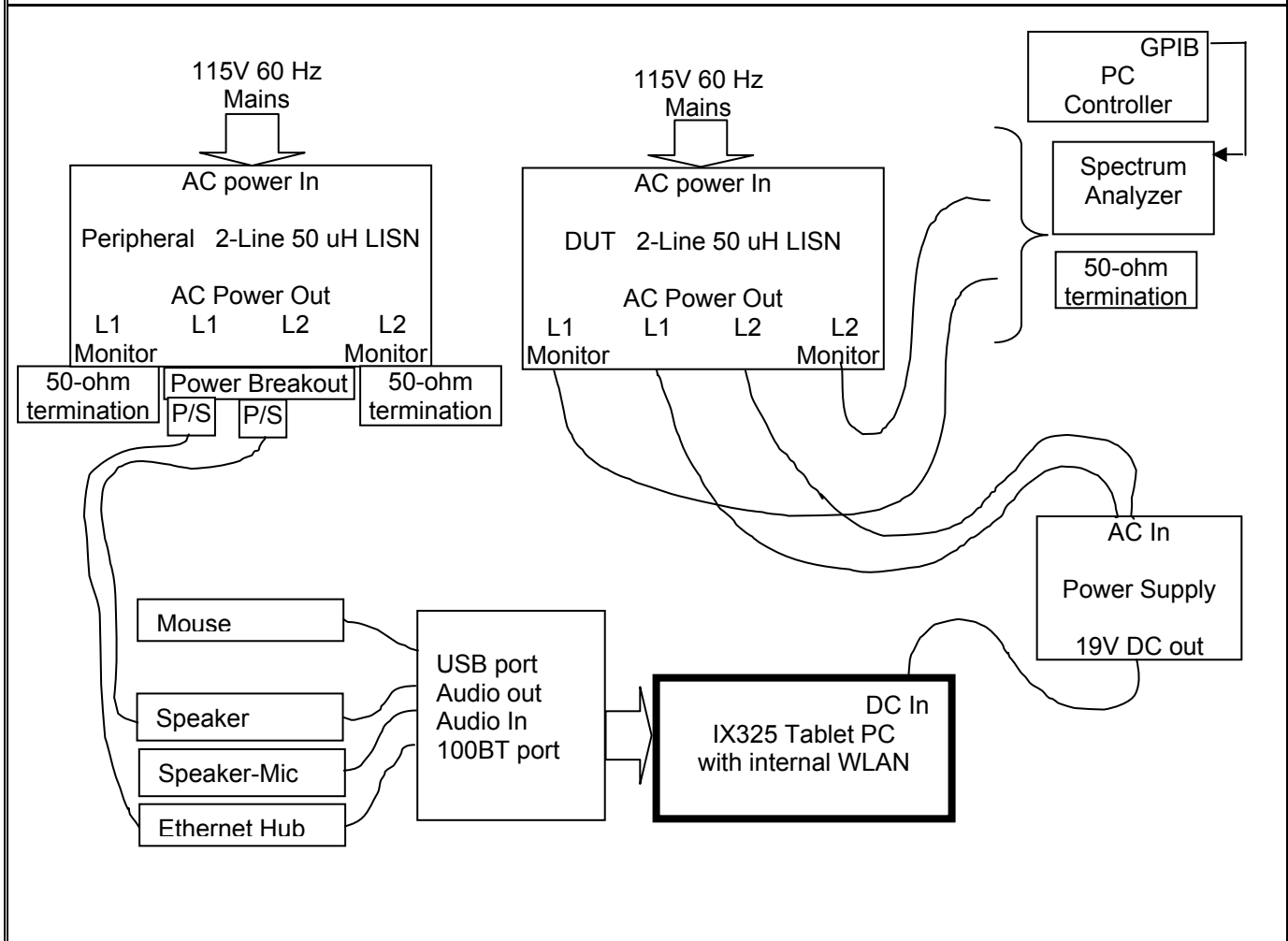
G.5. MEASUREMENT EQUIPMENT SETUP


| | |
|--|--|
| 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.7 |
| 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.9 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.9.</p> |

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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G.6. SETUP DRAWING

Figure G.6-1 - Setup Drawing



| | | | | |
|---|--------------------------------|-----------------------|---------------------------------|-------------------|
|  | Test Report Serial No.: | 100305KBC-T673-E15W | Report Issue No.: | E673W-021306-R0 |
| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

G.7. SETUP PHOTOS


Photograph G-1 - AC Powerline Conducted Emission Cable Placement

Photograph G-2 - AC Powerline Conducted Emission Configuration



G.8. DUT OPERATING DESCRIPTION

| | |
|---------------------|--|
| WLAN: | The WLAN was set to transmit at full power on Channel 1, Mode b 1 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. |

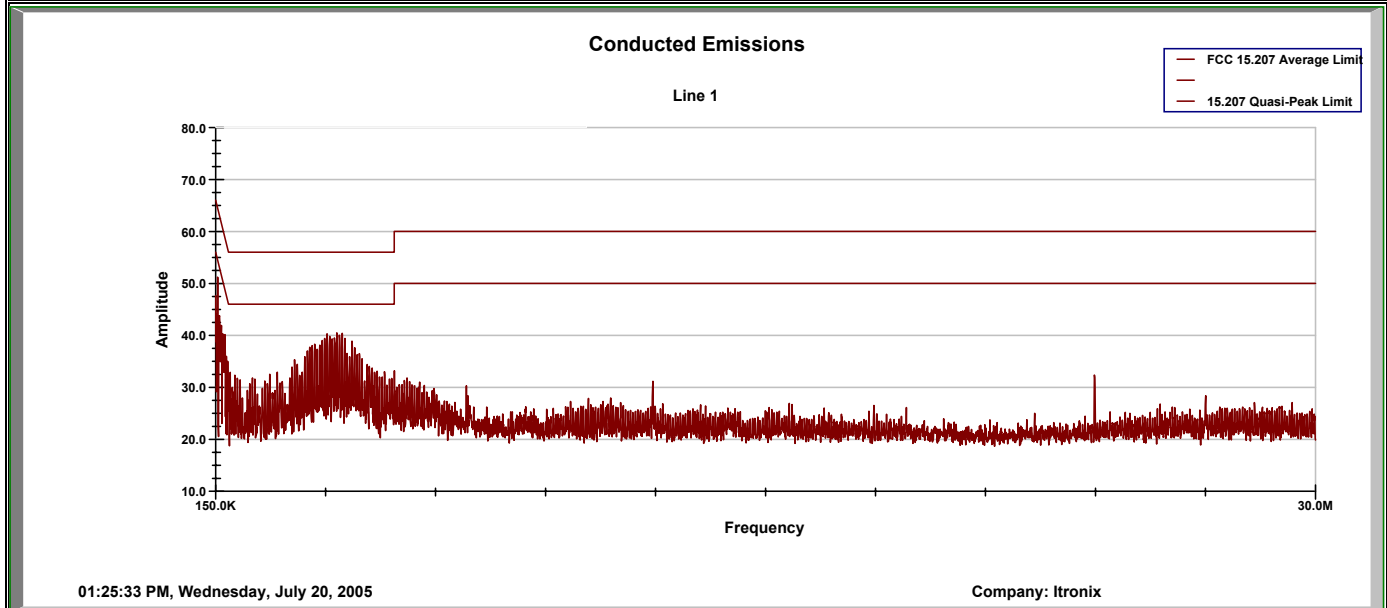
| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | | | |
|--------------------------------|-----------------------|---------------------------------|-------------------|
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| Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

G.9. TEST RESULTS

G.9.1. Line 1 Conducted Emissions



Project Number: 060605KBC-T643-E15W
Company: Itronix
Product: IX325 with INTEL PRO2200BG WLAN

Standard: FCC 15.207
Test Start Date: 20-Jul-05
Test End Date: 20-Jul-05


| Line 1 Conducted Emissions | | | | | | | | | | | | |
|----------------------------|---------------------|--------------------|-----------------|----------------------------|--------------------------|--------------------|-----------------|-----------------------------|----------------------------|--------------------------|-------------------------|-----------|
| Frequency MHz | Uncorrected Reading | | | Correction Factor dB | Corrected Emission Level | | | Quasi-Peak Limit dBuV | Quasi-Peak Margin dB | Average Limit dBuV | Average Margin dB | Pass/Fail |
| | Peak dBuV | Quasi-Peak dBuV | Average dBuV | | Peak dBuV | Quasi-Peak dBuV | Average dBuV | | | | | |
| 0.151 | 64.20 | 55.89 | 32.34 | -2.13 | 62.07 | 53.76 | 30.21 | 65.96 | 12.20 | 55.96 | 25.75 | Pass |
| 0.165 | 63.20 | 52.62 | 27.98 | -1.88 | 61.32 | 50.74 | 26.10 | 65.19 | 14.45 | 55.19 | 29.09 | Pass |
| 0.201 | 58.50 | 48.70 | 28.60 | -1.43 | 57.07 | 47.27 | 27.17 | 63.59 | 16.31 | 53.59 | 26.41 | Pass |
| 0.210 | 58.10 | 47.70 | 21.27 | -1.34 | 56.76 | 46.36 | 19.93 | 63.22 | 16.86 | 53.22 | 33.29 | Pass |
| 0.239 | 55.10 | 44.81 | 19.03 | -1.12 | 53.98 | 43.69 | 17.91 | 62.15 | 18.46 | 52.15 | 34.24 | Pass |
| 0.247 | 54.00 | 42.69 | 19.23 | -1.07 | 52.93 | 41.62 | 18.16 | 61.85 | 20.23 | 51.85 | 33.69 | Pass |
| 0.255 | 52.30 | 42.32 | 16.90 | -1.02 | 51.28 | 41.30 | 15.88 | 61.58 | 20.28 | 51.58 | 35.70 | Pass |
| 0.261 | 52.80 | 41.93 | 17.17 | -0.98 | 51.82 | 40.95 | 16.19 | 61.39 | 20.44 | 51.39 | 35.20 | Pass |
| 0.274 | 51.20 | 41.79 | 18.52 | -0.93 | 50.27 | 40.86 | 17.59 | 60.99 | 20.12 | 50.99 | 33.40 | Pass |
| 0.406 | 45.80 | 40.18 | 38.22 | -0.58 | 45.22 | 39.60 | 37.64 | 57.72 | 18.12 | 47.72 | 10.08 | Pass |
| 3.443 | 41.70 | 39.99 | 38.40 | -0.30 | 41.40 | 39.69 | 38.10 | 56.00 | 16.31 | 46.00 | 7.90 | Pass |
| 3.579 | 42.40 | 39.93 | 38.72 | -0.31 | 42.10 | 39.63 | 38.41 | 56.00 | 16.38 | 46.00 | 7.59 | Pass |
| 4.992 | 34.60 | 30.32 | 27.34 | -0.31 | 34.29 | 30.01 | 27.03 | 56.00 | 25.99 | 46.00 | 18.97 | Pass |
| 24.000 | 35.00 | 33.39 | 31.98 | -0.45 | 34.55 | 32.94 | 31.53 | 60.00 | 27.06 | 50.00 | 18.47 | Pass |

Corrected Emission Level (dBuV) = Uncorrected Reading (dBuV) + Correction Factor (dB)
 Margin (dB) = Limit (dBuV) - Corrected Emission Level (dBuV)

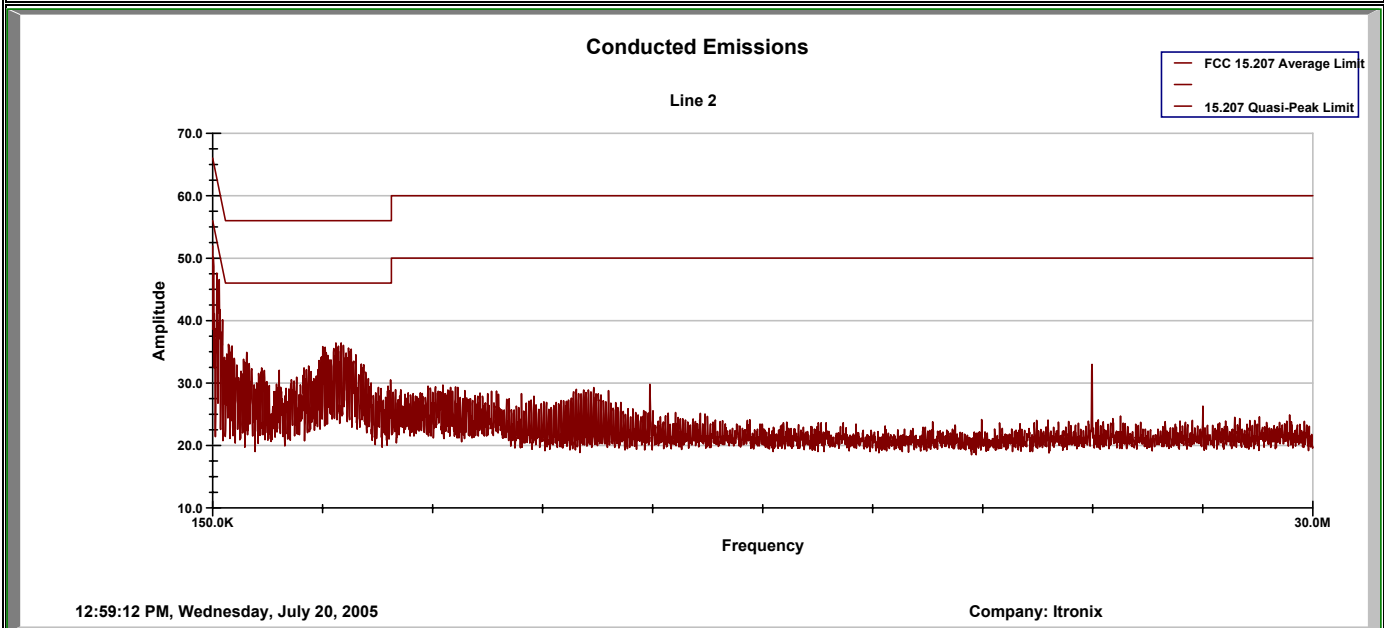
Calculations

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

| | | | |
|---|--|----------------------------------|----------------------------|
| Applicant: Itronix Corporation | Model: IX325-AC580IWL | FCC ID: KBCIX325-AC580IWL | IC ID: 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | |
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| | Test Standard(s): | FCC 47 CFR §15.247 | Industry Canada RSS-210 Issue 5 | |
| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

G.9.2. Line 2 Conducted Emissions



Project Number: 060605KBC-T643-E15W
Company: Itronix
Product: IX325 with INTEL PRO2200BG WLAN


Standard: FCC 15.207
Test Start Date: 20-Jul-05
Test End Date: 20-Jul-05


| Line 2 Conducted Emissions | | | | | | | | | | | | |
|----------------------------|---------------------|--------------------|-----------------|----------------------------|--------------------------|--------------------|-----------------|-----------------------------|----------------------------|--------------------------|-------------------------|-----------|
| Frequency MHz | Uncorrected Reading | | | Correction Factor dB | Corrected Emission Level | | | Quasi-Peak Limit dBuV | Quasi-Peak Margin dB | Average Limit dBuV | Average Margin dB | Pass/Fail |
| | Peak dBuV | Quasi-Peak dBuV | Average dBuV | | Peak dBuV | Quasi-Peak dBuV | Average dBuV | | | | | |
| 0.150 | 64.80 | 55.57 | 33.03 | -2.14 | 62.66 | 53.43 | 30.88 | 65.98 | 12.55 | 55.98 | 25.10 | Pass |
| 0.165 | 63.20 | 54.10 | 29.12 | -1.88 | 61.32 | 52.22 | 27.23 | 65.18 | 12.97 | 55.18 | 27.95 | Pass |
| 0.172 | 61.70 | 53.85 | 27.48 | -1.79 | 59.91 | 52.06 | 25.69 | 64.88 | 12.81 | 54.88 | 29.18 | Pass |
| 0.181 | 61.60 | 51.27 | 24.59 | -1.67 | 59.93 | 49.60 | 22.92 | 64.46 | 14.86 | 54.46 | 31.54 | Pass |
| 0.194 | 58.80 | 49.58 | 22.96 | -1.50 | 57.30 | 48.08 | 21.45 | 63.86 | 15.78 | 53.86 | 32.40 | Pass |
| 0.263 | 54.60 | 42.73 | 20.67 | -0.99 | 53.61 | 41.74 | 19.68 | 61.34 | 19.60 | 51.34 | 31.67 | Pass |
| 0.331 | 48.50 | 38.38 | 28.81 | -0.73 | 47.78 | 37.66 | 28.08 | 59.41 | 21.76 | 49.41 | 21.33 | Pass |
| 0.335 | 50.50 | 40.79 | 37.43 | -0.72 | 49.78 | 40.07 | 36.71 | 59.32 | 19.25 | 49.32 | 12.61 | Pass |
| 3.501 | 38.80 | 35.67 | 34.20 | -0.30 | 38.50 | 35.37 | 33.91 | 56.00 | 20.63 | 46.00 | 12.09 | Pass |
| 23.998 | 34.40 | 32.50 | 30.83 | -0.43 | 33.97 | 32.07 | 30.40 | 60.00 | 27.93 | 50.00 | 19.60 | Pass |

Corrected Emission Level (dBuV) = Uncorrected Reading (dBuV) + Correction Factor (dB)
 Margin (dB) = Limit (dBuV) - Corrected Emission Level (dBuV)

Calculations

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

| | | | | | | | |
|--|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
| IX325 Rugged Tablet PC with internal Intel PRO2200BG 802.11b/g WLAN & Well Green Dual Internal Antenna | | | | | | |  |
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| | Test Date(s): | 04Jul05 - 20Jul05 | Report Issue Date: | February 13, 2006 |
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G.10. PASS/FAIL

In reference to the results outlined in H.9 the DUT passes the requirements as stated in the reference standards as follows:

The RF voltage measured in reference to ground on each of the power line conductors does not exceed the limits as outline in FCC 15.207.

The emission measured on Line 1 with the least margin to the limit measured with an AV detector at 3.579 MHz and a margin of 7.59 dB. The emission measured on Line 2 with the least margin to the limit was measured with a QP detector at 150 kHz with a margin of 12.55 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.




Russell Pipe
Senior Compliance Technologist
Celltech Labs Inc.


20Jul05

Date

| | | | | | | | |
|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
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| | Lab Registration(s): | FCC Lab Reg. # 714830 | Industry Canada Lab File #3874 | |

END OF DOCUMENT

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|---|--|---------------|----------------|----------------|-------------------|---------------|---|
| Applicant: | Itronix Corporation | Model: | IX325-AC580IWL | FCC ID: | KBCIX325-AC580IWL | IC ID: | 1943A-IX325f |
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