



**AEGIS LABS INC.**



Test Report  
And Application for Grant of Equipment Authorization

Pertaining To:

| EUT                                                               | FCC ID:          |
|-------------------------------------------------------------------|------------------|
| <b>Dell Computer Corporation Notebook Computer,<br/>MN: PP05L</b> | <b>E2K24GBRL</b> |

| Configuration                                                                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tested with an Intel PRO/Wireless 2200BG Network Connection,<br/>MN: WM3A2200BG</b><br>With a set of Wistron NeWeb Corp. and Hitachi Antennas |

*MEASUREMENTS PERFORMED IN ACCORDANCE WITH*

| Regulatory Standard(s)                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>47 CFR Part 15, Subpart C Section 15.247</b><br><br>Test Method:<br>ANSI C63.4: 1992 American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz |



Certificate Number: 1111.01

**APPLICANT:**

Dell Computer Corporation  
One Dell Way  
Round Rock, TX 78682

Contact(s): Mr. Jason Limoges

**PREPARED BY:**

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Mr. Rick Candelas

|       | REPORT<br>BODY | APPENDICES | TOTAL<br>PAGES |
|-------|----------------|------------|----------------|
|       |                | <i>A</i>   |                |
| PAGES | 15             | 69         | 84             |

Test Report #: INTEL-031125F  
Test Report Revision: None

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| A | Test Data |
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## 1.0 CERTIFICATION OF TEST DATA

Aegis Labs, Inc. operates as both a Nevada and California Corporation with no organizational or financial relationship with any company, institution, or private individual.

Testing and engineering functions provided by Aegis Labs are furnished through the use of part-time, full-time or consulting engineers with the appropriate qualifications to carry out their duties. The intended purpose of this test report is to describe the measurement procedure and to determine whether the equipment under test "EUT" complies with both the conducted and radiated limits. Limits for emissions testing are described under Subpart C of Part 15 of the FCC rules.

The data, data evaluation and equipment configuration represented herein are a true and accurate representation of the Equipment Under Test (EUT) under the requirements specified in the emissions standard as described below. The test results contained in this report are only representative of the test sample tested as described in Section 3.0 of this report. Certification of the EUT is required as a prerequisite to marketing as defined in Part 2 of the FCC Rules.

**Prepared By:**

**01/14/04**

**Rick Candelas  
Staff Engineer  
Aegis Labs, Inc.**

**Report Approved By:**

**01/14/04**

**Steve J. Kuiper  
Quality Assurance Manager  
Aegis Labs, Inc.**

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## 2.0 SUMMARY OF TEST RESULTS

The test results provided within this report, indicate that the EUT has been found to be in **COMPLIANCE** with the test specifications based upon the following RF compliance standards:

Pass/Fail determination is based upon the nominal values of the test data.

| EMISSIONS STANDARD  |                                                                                                                                                                                                                                                                                                                              |         |                           |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------|
| FCC Part 15 Section | Description                                                                                                                                                                                                                                                                                                                  | Results | Comments                  |
| 15.247(a)(2)        | The minimum 6dB bandwidth shall be at least 500 kHz.                                                                                                                                                                                                                                                                         | PASSED  | See Data Sheets           |
| 15.247(b)(1)        | The maximum peak output power of the intentional radiator shall not exceed 1 watt.                                                                                                                                                                                                                                           | PASSED  | See Data Sheets           |
| 15.247(b)(4)        | The intentional radiator shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the FCC guidelines per Section 1.1307(b)(1).                                                                                                                                | PASSED  | Refer to SAR Test Reports |
| 15.247(c)           | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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 the desired power. | PASSED  | See Data Sheets           |
| 15.247(c)           | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc.                                                                                                                           | PASSED  | See Data Sheets           |
| 15.247(d)           | 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.                                                                                                                                | PASSED  | See Data Sheets           |
| 15.207              | AC Conducted Emissions                                                                                                                                                                                                                                                                                                       | PASSED  | See Data Sheets           |
| 15.209              | Radiated Emissions (30-1000 MHz)                                                                                                                                                                                                                                                                                             | PASSED  | See Data Sheets           |

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### 3.0 ADMINISTRATIVE DATA AND TEST DESCRIPTION

|                                  |                                                                                                                                                 |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DEVICE TESTED:</b>            | ITE Type: Dell Computer Corporation Notebook Computer<br>Model Number(s): PP05L<br>Serial Number: CN-0C3038-48643-3AD-9430<br>FCC ID: E2K24GBRL |
|                                  |                                                                                                                                                 |
| <b>TEST DATE(S):</b>             | November 25-December 17, 2003                                                                                                                   |
| <b>DATE EUT RECEIVED:</b>        | November 19, 2003                                                                                                                               |
|                                  |                                                                                                                                                 |
| <b>ORIGIN OF TEST SAMPLE(S):</b> | Production Unit                                                                                                                                 |
|                                  |                                                                                                                                                 |
| <b>RESPONSIBLE PARTY:</b>        | Dell Computer Corporation<br>One Dell Way<br>Round Rock, TX 78682                                                                               |
|                                  |                                                                                                                                                 |
| <b>CLIENT CONTACT:</b>           | Mr. Jason Limoges                                                                                                                               |
| <b>MANUFACTURER:</b>             | Dell Computer Corporation                                                                                                                       |
|                                  |                                                                                                                                                 |
| <b>TEST LOCATION:</b>            | Aegis Labs, Inc.<br>32231 Trabuco Creek Road<br>Trabuco Canyon, CA 92678<br>Conducted Site #2<br>Radiated Site #2                               |
|                                  |                                                                                                                                                 |
| <b>A2LA CERTIFICATE:</b>         | 1111.01, Valid through February 28, 2004                                                                                                        |
|                                  |                                                                                                                                                 |
| <b>PURPOSE OF TEST:</b>          | To demonstrate compliance with the relevant standards described in Section 2.0 of this report.                                                  |
|                                  |                                                                                                                                                 |
| <b>TEST(S) PERFORMED:</b>        | Refer to Table in Section 2.0 of this report.                                                                                                   |

All calibration vendors were responsible for certifying Aegis Labs, Inc. test equipment as per the manufacturer's specifications and that the equipment is calibrated using instruments and standards where the accuracy is traceable to the National Institute of Standards and Technology (NIST). Calibration of all test equipment conforms to ANSI/NCSL Z540-1 and ISO 10012-1 and/or ISO/IEC Guide 17025 compliance (Additionally, other pertinent test equipment will carry MIL-STD-45662A). All calibration documents are on file with Aegis Labs, Inc., with copies provided upon request.

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## 4.0 DESCRIPTION OF EUT

### 4.1 EUT Description

| Equipment Under Test (EUT)               |                                                                                                                                        |                                                                                    |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Trade Name:                              | Dell Computer Corporation Notebook Computer MN: PP05L                                                                                  |                                                                                    |
| Model Number:                            | PP05L tested with an Intel PRO/Wireless 2200BG Network Connection, MN: WM3A2200BG                                                      |                                                                                    |
| Frequency Range:                         | 2.412 – 2.462 GHz                                                                                                                      |                                                                                    |
| Type of Transmission:                    | Direct Sequence Spread Spectrum                                                                                                        |                                                                                    |
| Transfer Rate:                           | 1/2/5.5/11 Mbps for 802.11b mode<br>6/36/54 Mbps for 802.11g mode                                                                      |                                                                                    |
| Number of Channels:                      | 11                                                                                                                                     |                                                                                    |
| Modulation Type:                         | DBPSK, DQPSK, CCK                                                                                                                      |                                                                                    |
| Antenna Type (See Note 1):               | Wistron: PCB IFA (Main), TIFA (Aux)<br>Hitachi: Monopole Type – MFJ (Multi Frame Joiner)                                               |                                                                                    |
| Antenna Gain (See Note 2):               | Wistron:<br>Main = 1.87dBi – 0.80dB = 1.07dBi<br>Aux = 2.09dBi – 1.39dB = 0.70dBi                                                      | Hitachi:<br>Main = 1.20dBi – 0.60dB = 0.60dBi<br>Aux = 0.90dBi – 1.30dB = -0.40dBi |
| Transmit Output Power:                   | 17 dBm (Typical) for 802.11b mode<br>16 dBm (Typical) for 802.11g mode<br>Please see Appendix A (Data Sheets) for actual output power. |                                                                                    |
| Power Supply:                            | 3.3VDC from computer MPCPI slot.                                                                                                       |                                                                                    |
| Number of External Test Ports Exercised: | 2 Antenna Ports (1 Main & 1 Auxiliary)                                                                                                 |                                                                                    |

The Dell Computer Corporation Notebook Computer MN: PP05L was tested with an Intel PRO/Wireless 2200BG Network Connection as an embedded 2.4 GHz Wireless Local Area Network Mini-PCI adapter. The Mini-PCI Type 3A form factor is designed for notebook computer systems where overall thickness must be kept to an absolute minimum and connect to antennas internal to the notebook computer. It is capable of a data rate of up to 11 Mbps in 802.11b mode and 54Mbps in 802.11g mode. Please refer to section 4.2 of this report for a further description.

**NOTE 1:** For a more detailed description, please refer to the manufacture's specifications or User's Manual.

**NOTE 2:** Refer to the antenna specifications for a further description of the antennas. Antennas will be professionally installed inside the laptop computer by the laptop vendor. The antenna gain was subtracted from the antenna cable loss to come up with the total antenna gain.

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#### 4.1.1 Channel Number and Frequencies

Eleven channels are provided for the EUT.

| Channel | Frequency (MHz) |
|---------|-----------------|
| 1       | 2412            |
| 2       | 2417            |
| 3       | 2422            |
| 4       | 2427            |
| 5       | 2432            |
| 6       | 2437            |
| 7       | 2442            |
| 8       | 2447            |
| 9       | 2452            |
| 10      | 2457            |
| 11      | 2462            |



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## 4.2 EUT Configuration

The EUT was tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot and was connected to a set of Wistron NeWeb Corp. triple band antennas via its main and auxiliary antenna ports. Data can be found in Appendix A. Also a set of Hitachi Multi band antennas were tested for and the data can also be found in Appendix A

For conducted emissions at the AC mains port and radiated emissions, the EUT was connected to a Zoom modem, Canon printer, Dell monitor, and Logitech mouse via its serial, parallel, video, and USB ports respectively.

The low (channel 1), middle (channel 6), and high (channel 11) were tested in 802.11b & g modes. Also, the EUT was tested once transmitting from the MAIN antenna port and once transmitting from the AUX antenna port. The EUT was transmitting and receiving on a continuous basis.



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#### 4.3 List of EUT, Sub-Assemblies, and Host Equipment

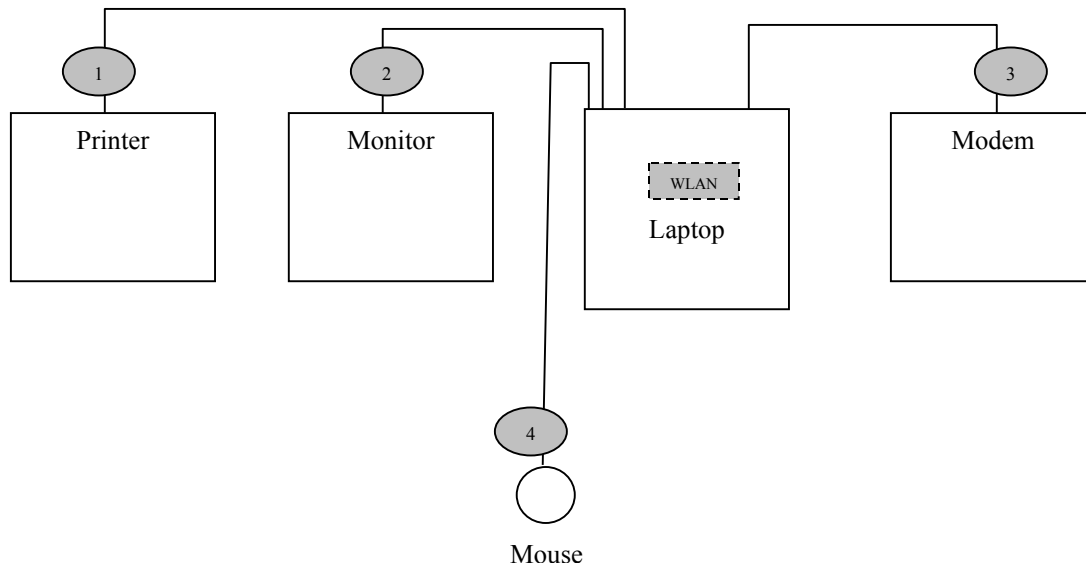
| LIST OF EUT AND SUB-ASSEMBLIES               |                           |              |                          |
|----------------------------------------------|---------------------------|--------------|--------------------------|
| Equipment Name                               | Manufacturer              | Model Number | Serial Number            |
| Notebook Computer                            | Dell Computer Corporation | PP05L        | CN-0C3038-48643-3AD-9430 |
| <b>EUT Sub-Assemblies</b>                    |                           |              |                          |
| Intel PRO/Wireless 2200BG Network Connection | Intel Corporation         | WM3A2200BG   | 0058AA463ADC54980203     |
| Auxiliary Triple Band Antenna                | Winstron NeWeb Corp.      | CA5-Q        | N/A                      |
| Main Triple Band Antenna                     | Winstron NeWeb Corp.      | CA5-Q        | N/A                      |
| Auxiliary Multi Band Antenna                 | Hitachi                   | HFT01-DL01   | N/A                      |
| Main Multi Band Antenna                      | Hitachi                   | HFT01-DL01   | N/A                      |

| HOST EQUIPMENT LIST |              |              |                          |
|---------------------|--------------|--------------|--------------------------|
| Equipment Name      | Manufacturer | Model Number | Serial Number            |
| LCD Monitor         | Dell         | E151FPp      | CN-06R644-47804-34R-LATL |
| Mouse               | Logitech     | M-BJ58       | LNA22802012              |
| Printer             | Canon        | S400         | 0A28A                    |
| Modem               | Zoom         | 2498         | 0623-2948-00-02C-0249    |

NOTE: All the power cords of the above support equipment are standard non-shielded, 1.8 meters long.



#### 4.4 I/O Cabling Diagram and Description



- Cable 1: This is a 6-foot braid and foil shielded round cable connecting the Dell Computer Corporation notebook computer to the Canon Printer. It has a metallic DB-25 type connector at the computer end and a metallic centronics type connector at the printer end. The cable is bundled to a length of one meter and the shield of the cable is grounded to the chassis of both devices via the connector shells.
- Cable 2: This is a 6-foot braid and foil shielded round cable connecting the Dell Computer Corporation notebook computer with the Dell LCD monitor. It has metallic DB-15 type connector at the computer end and is hardwired to the monitor. The cable is bundled to a length of one meter and the shield of the cable is grounded to the chassis of both devices via the connector shells.
- Cable 3: This is a 6-foot braid and foil shielded round cable connecting the Dell Computer Corporation notebook computer with the Zoom modem. It has metallic DB-9 type connector at the computer end and a metallic DB-25 type connector at the modem end. The cable is bundled to a length of one meter and the shield of the cable is grounded to the chassis of both devices via the connector shells.
- Cable 4: This is a 6-foot braid and foil shielded round cable connecting the Dell Computer Corporation notebook computer to the Logitech mouse. It has a metallic USB-B type connector at the computer end and is hardwired to the mouse. The shield of the cable is grounded to the chassis of the computer via the connector shell.



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## 5.0 TEST EQUIPMENT AND TEST SETUPS

The test equipment settings and functions are selected using the guidance of ANSI C63.4-1992. All test equipment setups and operations during conducted and radiated emissions testing are in accordance with this reference document.

### 5.1 AC Power Line Conducted Emissions

During conducted emissions measurements, a spectrum analyzer was used as the measuring instrument along with a preselector and quasi-peak detector. A 10 dB attenuation pad was used for the protection of the spectrum analyzer input stage. The conducted emissions from the EUT in the frequency range from 150 kHz to 30 MHz were captured for graphical display through the use of automated LABVIEW EMI measurement software. All graphical readings were measured in the “Peak” mode only to reduce testing time. Upon completion of the graphical scan, the test lab personnel performed the conducted measurement scan manually using the spectrum analyzer front panel keys. All peak measurements coming within 3 dB of the limit line were “Averaged” and/or “Quasi-Peaked” and denoted appropriately in the EXCEL spreadsheet.

The Equipment Under Test (EUT) was configured as a system with peripherals connected, so that at least one interface port of each type is connected to one external peripheral when tested for conducted emissions according to ANSI C63.4: 1992. Excess power cord length was wrapped in a bundle 30 to 40 centimeters in length near the center of the cord. The EUT was tested in a tabletop configuration.

The emission readings for Line 1 and Line 2 are highlighted on the data sheets in Appendix A. The graphical scans only reflects peak readings while the tabulated data sheets reflect peak, average, and/or quasi-peak readings which ever applies.



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## 5.2 Spurious Radiated Emissions

A spectrum analyzer was used as the measuring instrumentation along with a preselector and quasi-peak-detector. The pre-amplifiers were used to increase the sensitivity of the instrument. The spectrum analyzer was used in the peak detector mode with the “max-hold” feature activated and in Positive Peak mode. In this mode, the spectrum analyzer records the highest measured reading over all the sweeps. The quasi-peak detector was used only for those readings, which are marked accordingly in the data sheet. The effective measurement bandwidth used for the radiated emissions test was 120 kHz for (30 MHz- 1000 MHz). The spectrum analyzer operated such that the modulation of the signal was filtered out to set the analyzer in linear mode. For testing beyond 1000 MHz a spectrum analyzer capable of taking reading above 1000 MHz was connected to the high frequency amplifier, where these measurement readings were taken with the transducer placed at a 3-meter test distance from the EUT.

The Open Area Test Sites (OATS) was used for radiated emission testing. These test sites are designed according to ANSI C63.4: 1992 and ANSI C63.7: 1992 guidelines. The Measurements were conducted in accordance with ANSI C63.4: 1992 and ANSI C63.7: 1992 requirements.

Broadband biconical, log periodic, and horn antennas were used as transducers during the measurement reading phase. The frequency spans were wide (30 MHz-88 MHz, 88 MHz- 216 MHz, 216 MHz- 300 MHz, and 300 MHz- 1000 MHz). After 1000 MHz the horn antenna was used to measure emissions. The emission readings in both horizontal and vertical polarities are highlighted on the data sheets in Appendix A.

## 5.3 Conducted Emissions at the Antenna Port

A spectrum analyzer or power meter was used as the measuring instrumentation along with an attenuator and/or filter connected to the EUT antenna port. The attenuator and filters are used to ensure that the front end of the measurement instrument is not overloaded by the fundamental transmission. . The instruments recorded the measured readings with the bandwidths (video and resolution) set in accordance with the FCC Rules and regulations.

The measured readings are on the data sheets in Appendix A.



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#### 5.4 Test and Measurement Equipment Used

| TEST EQUIPMENT USED              |                          |                      |                                |                      |                   |
|----------------------------------|--------------------------|----------------------|--------------------------------|----------------------|-------------------|
| Equipment Name                   | Manufacturer             | Model Number         | Serial Number                  | Calibration Due Date | Calibration Cycle |
| EMI Receiver - RF Section        | Hewlett Packard          | 85462A               | 3325A00137                     | 12/12/04             | 1 Year            |
| EMI Receiver - RF Filter Section | Hewlett Packard          | 85460A               | 3330A00138                     | 12/12/04             | 1 Year            |
| Attenuator - 5W-10dB             | Pasternack               | PE7014-10            | N/A                            | 03/30/04             | 1 Year            |
| LISN (EUT)                       | FCC                      | FCC-LISN-50-25-2     | 9931                           | 02/20/04             | 1 Year            |
| LISN (Access)                    | Com-Power                | LI-200               | 12019                          | 01/25/04             | 1 Year            |
| LISN (Access)                    | Com-Power                | LI-200               | 12018                          | 01/25/04             | 1 Year            |
| Spectrum Analyzer                | Agilent                  | 8564EC               | 4046A00387                     | 02/28/04             | 2 Years           |
| Preamplifier                     | Miteq                    | JS42-01001800-25-10P | 815980 -<br>884968 -<br>885090 | 12/09/04             | 2 Years           |
| High Pass Filter                 | Microwave Circuits, Inc. | H3G020G2             | 0301DC0132                     | 04/29/04             | 2 Years           |
| Antenna - Biconical              | EMCO                     | 3110                 | 9108-1421                      | 02/11/04             | 1 Year            |
| Antenna - Log Periodic           | EMCO                     | 3148                 | 4947                           | 02/11/04             | 1 Year            |
| 1-18 GHz Antenna - Horn          | Com-Power                | AH-118               | 10069                          | 12/09/04             | 2 Years           |
| 18-26.5 GHz Antenna – Horn       | Custom Microwave         | H042                 | 001                            | 05/09/04             | 1 Year            |
| Power Meter                      | Rohde & Schwarz          | NRVS                 | DE30863                        | 07/21/05             | 2 Years           |
| Power Sensor                     | Leistungsmesskoph        | NRV-Z5               | 844855/012                     | 07/21/05             | 2 Years           |
| Oscilloscope                     | Tektronix                | TDS3012B             | B028086                        | 08/21/04             | 1 Year            |
| Schottkey Detector Diode         | Narda                    | 4503A                | 0209                           | None                 | None              |
| 12dB Attenuator                  | Narda                    | 4779-12              | 0203                           | None                 | None              |
| Signal Generator                 | Hewlett Packard          | 83752A               | 3610A01906                     | 01/22/04             | 1 Year            |
| Temperature/Humidity Monitor     | Dickson                  | TH550                | 7255185                        | 01/18/04             | 1 Year            |

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## 6.0 SAMPLE CALCULATIONS

If a preamplifier is used during the Radiated Emissions Testing, it is required that the amplifier gain be subtracted from the Spectrum Analyzer (Meter) Reading. In addition, a correction factor for the antenna, cable and a distance factor, if any, must be applied to the Meter Reading before a true field strength reading can be obtained. In the Automatic Mode of A.R.M.S. measurements, these considerations are automatically presented as a part of the printout. In the case of manual measurements and for greater efficiency and convenience, usage of the calibration correction factors in the Appendices is necessary to calculate the Corrected Meter Reading. These correlation factors for each meter reading, shall be modified to reflect these correlation factors at each frequency value so that the meter readings can be compared directly to the modified specification limit. This modified specification limit is referred to as the "Corrected Meter Reading Limit" (CML).

The equation shall be derived in the following manner:

$$\text{Corrected Meter Reading} = \text{Meter Reading} + F + C - G - D$$

Where, F = Antenna Factor

C = Cable Factor

G = Amplifier Gain

D = Distance Factor

Therefore, the equation for determining the Corrected Meter Reading Limit (CML) is:

$$\text{CML} = \text{Specification Limit} - F - C + G + D$$

For the manual mode of measurement, a table of corrected meter reading limits shall be used to permit immediate comparison of the meter reading to determine if the measured emission amplitude exceeded the specification limit at that specific frequency. There shall be two calculation sheets done, one for three meter and one for ten-meter measurement distances, where applicable. The correction factors for the antenna and the amplifier gain are attached in the Appendices.



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## **7.0 MODIFICATIONS AND RECOMMENDATIONS**

No modifications were made to the EUT.



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## **APPENDIX A**

### ***TEST DATA***

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## AC POWER LINE CONDUCTED EMISSIONS TEST RESULTS

|                       |                                                                                             |                        |                 |
|-----------------------|---------------------------------------------------------------------------------------------|------------------------|-----------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                   | <b>DATE:</b>           | 12/02/03        |
| <b>EUT:</b>           | Notebook Computer                                                                           | <b>PROJECT NUMBER:</b> | INTEL-031125-09 |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                       | <b>TEST ENGINEER:</b>  | Rick Candelas   |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                    | <b>SITE #:</b>         | 2               |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot. | <b>TEMPERATURE:</b>    | 18 C            |
|                       |                                                                                             | <b>HUMIDITY:</b>       | 35% RH          |
|                       |                                                                                             | <b>TIME:</b>           | 3:00 PM         |

|                     |                                                  |
|---------------------|--------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.207                          |
| <b>Description:</b> | AC Power Line Conducted Emissions                |
| <b>Results:</b>     | Passes the conducted limits by -3.17@ 0.1650 MHz |

| Conducted Limits |                         |                      |
|------------------|-------------------------|----------------------|
| Frequency (MHz)  | Quasi-Peak Limit (dBuV) | Average Limit (dBuV) |
| 0.15-0.5         | 66 to 56*               | 56 to 46*            |
| 0.5-5            | 56                      | 46                   |
| 5-30             | 60                      | 50                   |

\*Decreases with the logarithm of the frequency.

NOTE: During preliminary scans, there wasn't any difference which channel or data rate was used with the EUT; therefore only Channel 1 at a data rate of 1 Mbps was used for final testing. Also, the scan was only done with the Wistron set of antennas.

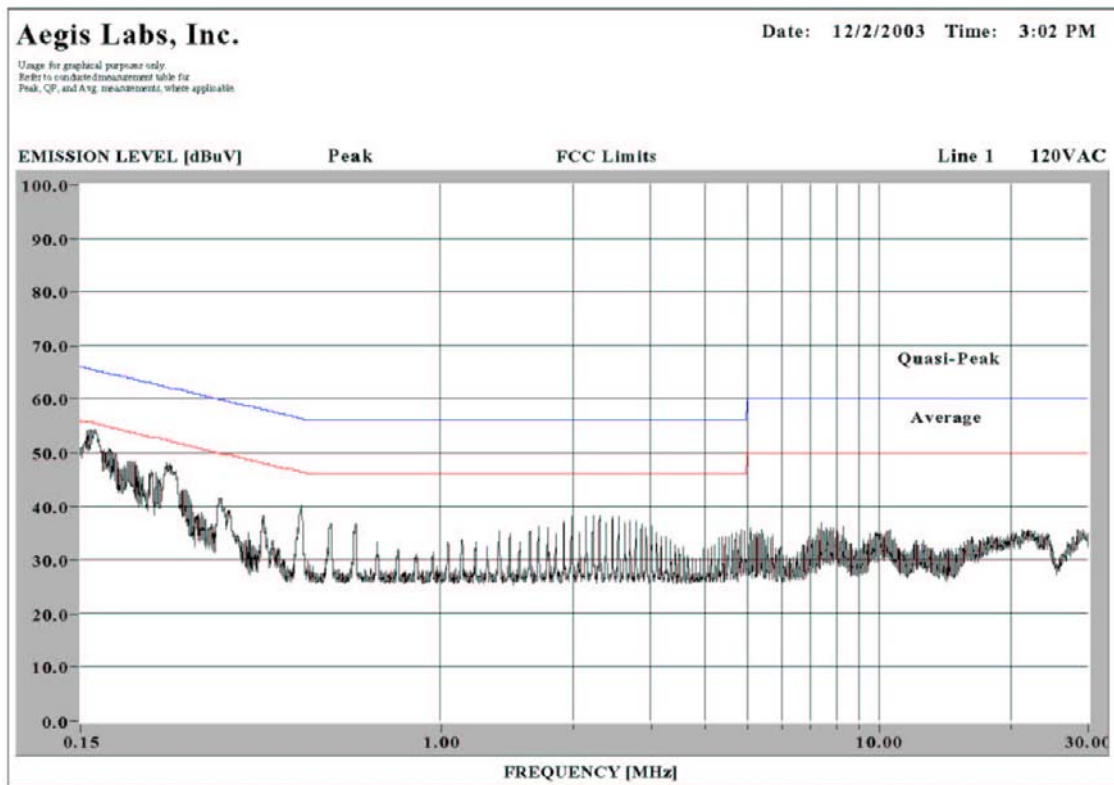
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## AC Power Line Conducted Emissions Test Results (Continued)

| CONDUCTED EMISSIONS – LINE 1 |                         |                        |                         |                      |                            |                         |
|------------------------------|-------------------------|------------------------|-------------------------|----------------------|----------------------------|-------------------------|
| Freq.<br>(MHz)               | Meter<br>Reading (dBuV) | Detector<br>(PK/QP/AV) | Average<br>Limit (dBuV) | Average<br>Delta(dB) | Quasi-Peak<br>Limit (dBuV) | Quasi-Peak<br>Delta(dB) |
| 0.1650                       | 52.40                   | PK                     | 55.57                   | -3.17                | 65.57                      | -13.17                  |
| 0.2397                       | 49.90                   | PK                     | 53.44                   | -3.54                | 63.44                      | -13.54                  |
| 0.3165                       | 43.90                   | PK                     | 51.24                   | -7.34                | 61.24                      | -17.34                  |
| 0.4815                       | 41.50                   | PK                     | 46.53                   | -5.03                | 56.53                      | -15.03                  |
| 2.2300                       | 40.40                   | PK                     | 46.00                   | -5.60                | 56.00                      | -15.60                  |
| 4.9550                       | 39.40                   | PK                     | 46.00                   | -6.60                | 56.00                      | -16.60                  |



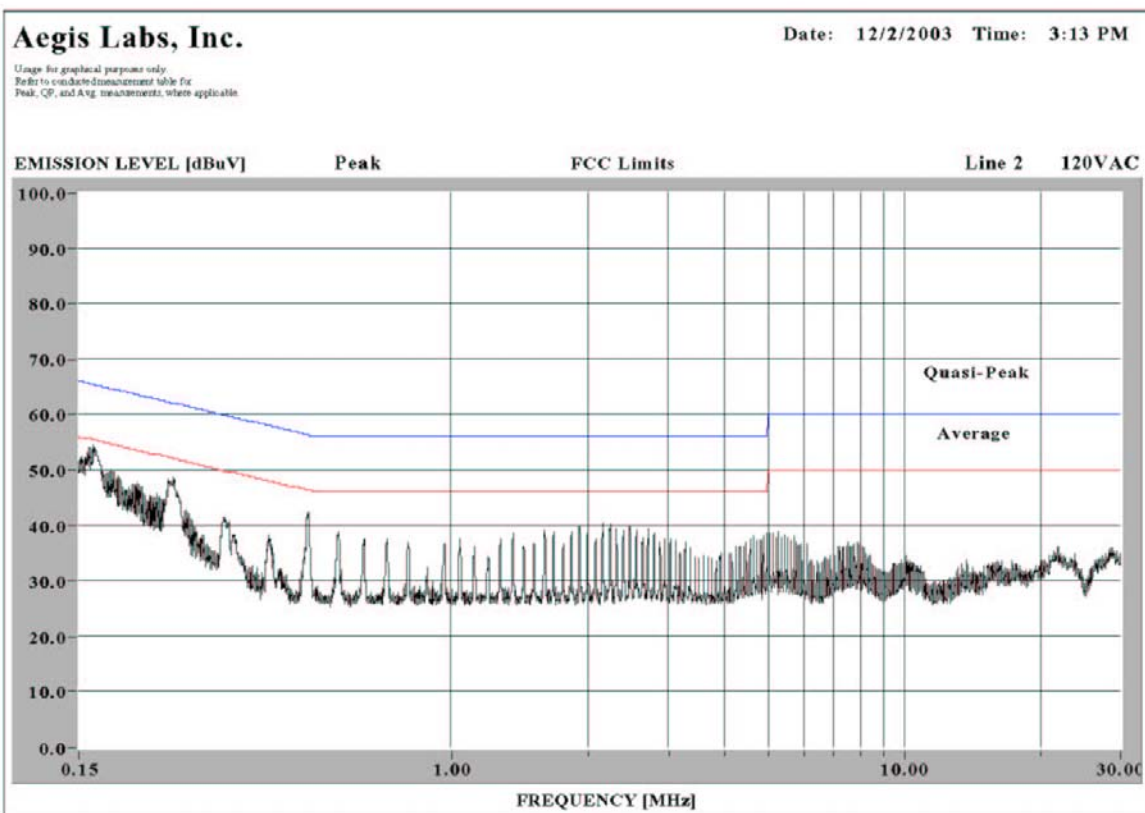
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AEGIS LABS INC.

## AC Power Line Conducted Emissions Test Results (Continued)

| CONDUCTED EMISSIONS - LINE 2 |                         |                        |                         |                      |                            |                         |
|------------------------------|-------------------------|------------------------|-------------------------|----------------------|----------------------------|-------------------------|
| Freq.<br>(MHz)               | Meter<br>Reading (dBuV) | Detector<br>(PK/QP/AV) | Average<br>Limit (dBuV) | Average<br>Delta(dB) | Quasi-Peak<br>Limit (dBuV) | Quasi-Peak<br>Delta(dB) |
| 0.1551                       | 51.50                   | PK                     | 55.85                   | -4.35                | 65.85                      | -14.35                  |
| 0.2421                       | 49.90                   | PK                     | 53.37                   | -3.47                | 63.37                      | -13.47                  |
| 0.3165                       | 44.10                   | PK                     | 51.24                   | -7.14                | 61.24                      | -17.14                  |
| 0.4023                       | 45.50                   | PK                     | 48.79                   | -3.29                | 58.79                      | -13.29                  |
| 2.1550                       | 41.40                   | PK                     | 46.00                   | -4.60                | 56.00                      | -14.60                  |
| 5.0350                       | 40.90                   | PK                     | 50.00                   | -9.10                | 60.00                      | -19.10                  |



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AEGIS LABS INC.

## SPURIOUS RADIATED EMISSIONS TEST RESULTS

|                       |                                                                                             |                        |                 |
|-----------------------|---------------------------------------------------------------------------------------------|------------------------|-----------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                   | <b>DATE:</b>           | 12/02/03        |
| <b>EUT:</b>           | Notebook Computer                                                                           | <b>PROJECT NUMBER:</b> | INTEL-031125-08 |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                       | <b>TEST ENGINEER:</b>  | Rick Candelas   |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                    | <b>SITE #:</b>         | 2               |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot. | <b>TEMPERATURE:</b>    | 21 C            |
|                       |                                                                                             | <b>HUMIDITY:</b>       | 44% RH          |
|                       |                                                                                             | <b>TIME:</b>           | 1:00 PM         |

|                     |                                                                                                             |
|---------------------|-------------------------------------------------------------------------------------------------------------|
| <b>Standard:</b>    | FCC Pt. 15.209                                                                                              |
| <b>Description:</b> | Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in Sec. 15.209. |
| <b>Results:</b>     | Passes the radiated limits by -5.53@ 65.53 MHz (Vertical antenna polarization)                              |

| Radiated Limits |                               |
|-----------------|-------------------------------|
| Frequency (MHz) | Quasi-Peak Limit (dBuV) @ 10m |
| 30-230          | 30                            |
| 230-1000        | 37                            |

NOTE: During preliminary scans, there wasn't any difference which channel or data rate was used with the EUT; therefore only Channel 1 at a data rate of 1 Mbps was used for final testing. Also, the scan was only done with the Wistron set of antennas.

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

### RADIATED EMISSIONS - Horizontal Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk<br>or AVG<br>(dBuV) |  | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | 10 Meter<br>Distance<br>Factor (dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|------------------------------|--|--------------------------|-------------------------|------------------------|-------------------------------------|--------------------------------|------------------|---------------------|
| 54.50          | 32.10                      | 300                       | 270                  |                              |  | 34.40                    | 1.15                    | 10.22                  | 10.46                               | 19.52                          | 40.00            | -20.48              |
| 66.51          | 36.80                      | 350                       | 180                  |                              |  | 34.40                    | 1.33                    | 7.16                   | 10.46                               | 21.36                          | 40.00            | -18.64              |
| 119.80         | 37.60                      | 400                       | 180                  |                              |  | 34.39                    | 1.80                    | 13.37                  | 10.46                               | 28.84                          | 43.50            | -14.66              |
| 231.97         | 36.00                      | 400                       | 180                  |                              |  | 34.24                    | 2.63                    | 17.48                  | 10.46                               | 32.33                          | 46.00            | -13.67              |
| 315.60         | 35.60                      | 300                       | 180                  |                              |  | 34.12                    | 3.09                    | 14.37                  | 10.46                               | 29.40                          | 46.00            | -16.60              |
| 322.07         | 43.40                      | 300                       | 180                  |                              |  | 34.11                    | 3.13                    | 14.77                  | 10.46                               | 37.65                          | 46.00            | -8.35               |
| 331.95         | 33.70                      | 300                       | 225                  |                              |  | 34.10                    | 3.19                    | 15.02                  | 10.46                               | 28.27                          | 46.00            | -17.73              |

### RADIATED EMISSIONS - Vertical Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk<br>or AVG<br>(dBuV) |  | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | 10 Meter<br>Distance<br>Factor (dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|------------------------------|--|--------------------------|-------------------------|------------------------|-------------------------------------|--------------------------------|------------------|---------------------|
| 58.60          | 47.20                      | 100                       | 180                  |                              |  | 34.40                    | 1.19                    | 9.02                   | 10.46                               | 33.47                          | 40.00            | -6.53               |
| 65.53          | 49.50                      | 100                       | 270                  |                              |  | 34.40                    | 1.31                    | 7.59                   | 10.46                               | 34.47                          | 40.00            | -5.53               |
| 119.66         | 42.20                      | 100                       | 270                  |                              |  | 34.39                    | 1.80                    | 11.86                  | 10.46                               | 31.92                          | 43.50            | -11.58              |
| 250.08         | 37.20                      | 100                       | 180                  |                              |  | 34.22                    | 2.70                    | 19.10                  | 10.46                               | 35.24                          | 46.00            | -10.76              |
| 313.15         | 37.30                      | 100                       | 180                  |                              |  | 34.13                    | 3.08                    | 14.77                  | 10.46                               | 31.49                          | 46.00            | -14.51              |
| 321.30         | 40.70                      | 100                       | 180                  |                              |  | 34.12                    | 3.13                    | 15.38                  | 10.46                               | 35.55                          | 46.00            | -10.45              |
| 333.04         | 37.50                      | 100                       | 315                  |                              |  | 34.10                    | 3.20                    | 15.57                  | 10.46                               | 32.62                          | 46.00            | -13.38              |

NOTE: The measurements were taken at 10 meters and extrapolated to 3 meters.



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## Spurious Radiated Emissions Test Results (Continued)

|                       |                                                                                                                                               |                        |               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                                                                     | <b>DATE:</b>           | 11/26/03      |
| <b>EUT:</b>           | Notebook Computer                                                                                                                             | <b>PROJECT NUMBER:</b> | INTEL-031125  |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                                                                         | <b>TEST ENGINEER:</b>  | Rick Candelas |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                                                                      | <b>SITE #:</b>         | 2             |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot using the <b>Wistron antennas in 802.11b mode.</b> | <b>TEMPERATURE:</b>    | 11 C          |
|                       |                                                                                                                                               | <b>HUMIDITY:</b>       | 63% RH        |
|                       |                                                                                                                                               | <b>TIME:</b>           | 11:00 AM      |

|                     |                                                                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.247(c)                                                                                                                                                                         |
| <b>Description:</b> | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc. |
| <b>Results:</b>     | Passes (See Data Sheets)                                                                                                                                                                           |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11b mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Wistron Antennas**  
*Aegis Labs, Inc. File #: INTEL-031125-14*

### RADIATED EMISSIONS - Horizontal Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| 2412.00        | 71.83                      | 100                       | 225                  |                           |   |                          | 3.30                    | 31.11                  | 106.24                         |                  |                     |
| 2412.00        |                            |                           |                      | 66.50                     | A |                          | 3.30                    | 31.11                  | 100.91                         |                  |                     |
| 2437.00        | 73.00                      | 100                       | 225                  |                           |   |                          | 3.32                    | 31.05                  | 107.37                         |                  |                     |
| 2437.00        |                            |                           |                      | 67.67                     | A |                          | 3.32                    | 31.05                  | 102.04                         |                  |                     |
| 2462.00        | 70.00                      | 100                       | 225                  |                           |   |                          | 3.34                    | 30.99                  | 104.33                         |                  |                     |
| 2462.00        |                            |                           |                      | 64.67                     | A |                          | 3.34                    | 30.99                  | 99.00                          |                  |                     |

### RADIATED EMISSIONS – Vertical Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| 2412.00        | 74.83                      | 100                       | 0                    |                           |   |                          | 3.30                    | 31.24                  | 109.37                         |                  |                     |
| 2412.00        |                            |                           |                      | 69.17                     | A |                          | 3.30                    | 31.24                  | 103.71                         |                  |                     |
| 2437.00        | 74.33                      | 100                       | 0                    |                           |   |                          | 3.32                    | 31.20                  | 108.85                         |                  |                     |
| 2437.00        |                            |                           |                      | 68.00                     | A |                          | 3.32                    | 31.20                  | 102.52                         |                  |                     |
| 2462.00        | 71.33                      | 100                       | 180                  |                           |   |                          | 3.34                    | 31.16                  | 105.83                         |                  |                     |
| 2462.00        |                            |                           |                      | 65.83                     | A |                          | 3.34                    | 31.16                  | 100.33                         |                  |                     |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Band Edge Field Strength Measurements in 802.11b mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Wistron Antennas**  
*Aegis Labs, Inc. File #: INTEL-031125-14*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                            |                           |                      |                           |   |                                |                         |                        |                                |                  |                     |
|------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamplifier<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 2390.00                                              |                            |                           |                      |                           |   |                                |                         |                        | 53.07                          | 74.00            | -20.93              |
| 2390.00                                              |                            |                           |                      |                           | A |                                |                         |                        | 42.41                          | 54.00            | -11.59              |
| 2385.20                                              |                            |                           |                      |                           |   |                                |                         |                        | 56.41                          | 74.00            | -17.59              |
| 2385.20                                              |                            |                           |                      |                           | A |                                |                         |                        | 48.08                          | 54.00            | -5.92               |
| 2400.00                                              | 38.13                      | 100                       | 270                  |                           |   |                                | 3.29                    | 31.14                  | 72.56                          | 86.24            | -13.68              |
| 2483.50                                              |                            |                           |                      |                           |   |                                |                         |                        | 51.33                          | 74.00            | -22.67              |
| 2483.50                                              |                            |                           |                      |                           | A |                                |                         |                        | 41.50                          | 54.00            | -12.50              |
| 2487.36                                              |                            |                           |                      |                           |   |                                |                         |                        | 53.16                          | 74.00            | -20.84              |
| 2487.36                                              |                            |                           |                      |                           | A |                                |                         |                        | 45.00                          | 54.00            | -9.00               |
| RADIATED EMISSIONS – Vertical Antenna Polarization   |                            |                           |                      |                           |   |                                |                         |                        |                                |                  |                     |
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamplifier<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 2390.00                                              |                            |                           |                      |                           |   |                                |                         |                        | 56.20                          | 74.00            | -17.80              |
| 2390.00                                              |                            |                           |                      |                           | A |                                |                         |                        | 45.21                          | 54.00            | -8.79               |
| 2385.20                                              |                            |                           |                      |                           |   |                                |                         |                        | 59.54                          | 74.00            | -14.46              |
| 2385.20                                              |                            |                           |                      |                           | A |                                |                         |                        | 50.88                          | 54.00            | -3.12               |
| 2400.00                                              | 40.00                      | 100                       | 0                    |                           |   |                                | 3.29                    | 31.26                  | 74.55                          | 89.37            | -14.82              |
| 2483.50                                              |                            |                           |                      |                           |   |                                |                         |                        | 52.83                          | 74.00            | -21.17              |
| 2483.50                                              |                            |                           |                      |                           | A |                                |                         |                        | 42.83                          | 54.00            | -11.17              |
| 2487.36                                              |                            |                           |                      |                           |   |                                |                         |                        | 54.66                          | 74.00            | -19.34              |
| 2487.36                                              |                            |                           |                      |                           | A |                                |                         |                        | 46.33                          | 54.00            | -7.67               |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

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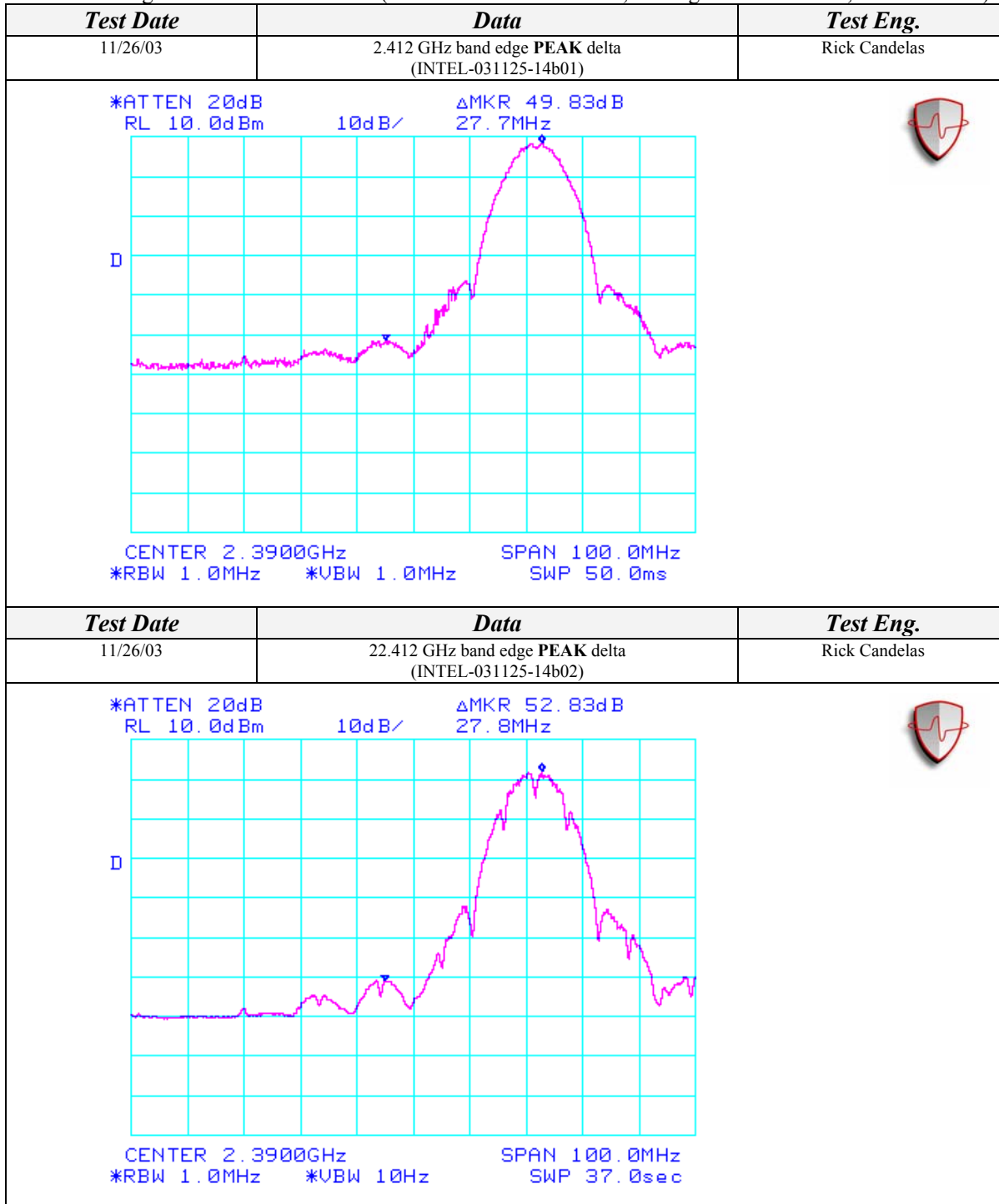


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## Spurious Radiated Emissions Test Results (Continued)

### (Marker Delta Conducted Band Edge Plots)

Plots Showing Out-Of-Band Emissions (Peak RBW=VBW=1MHz; Average RBW = 1MHz, VBW = 10Hz)



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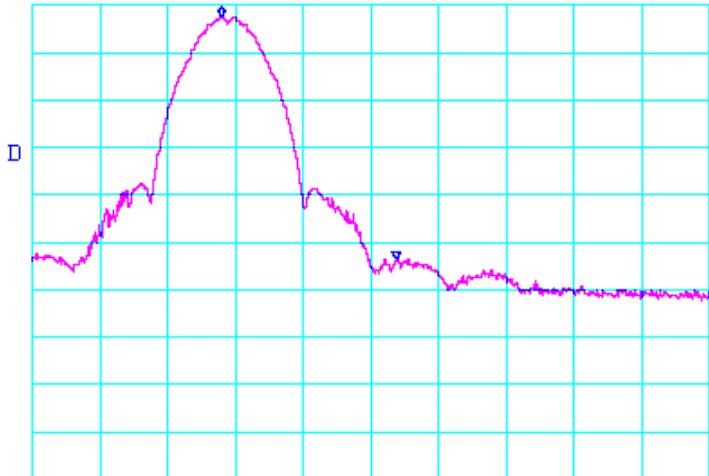


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## Spurious Radiated Emissions Test Results (Continued)

### (Marker Delta Conducted Band Edge Plots)

Plots Showing Out-Of-Band Emissions (Peak RBW=VBW=1MHz; Average RBW = 1MHz, VBW = 10Hz)

| Test Date                                                                                                                                                                                                                                   | Data                                                           | Test Eng.     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|
| 11/26/03                                                                                                                                                                                                                                    | 2.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031125-14b07)  | Rick Candelas |
| <div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/ ΔMKR 51.17dB<br/>-25.8MHz</p><p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p></div>  |                                                                |               |
| Test Date                                                                                                                                                                                                                                   | Data                                                           | Test Eng.     |
| 11/26/03                                                                                                                                                                                                                                    | 22.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031125-14b08) | Rick Candelas |
| <div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/ ΔMKR 54.00dB<br/>-27.2MHz</p><p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p></div> |                                                                |               |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11b mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Wistron Antennas**  
*Aegis Labs, Inc. File #: INTEL-031125-12*

| RADIATED EMISSIONS - Horizontal Antenna Polarization      |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
|-----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|---------------------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | 1 Meter<br>Distance<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2312.00                                                   | 32.17                      | 100                       | 225                  |                           |   | 9.54                                  | 3.23                    | 31.35                  | 57.21                          | 74.00            | -16.79              |
| 2312.00                                                   |                            |                           |                      | 20.17                     | A | 9.54                                  | 3.23                    | 31.35                  | 45.21                          | 54.00            | -8.79               |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2336.00                                                   | 33.33                      | 100                       | 225                  |                           |   | 9.54                                  | 3.25                    | 31.29                  | 58.33                          | 74.00            | -15.67              |
| 2336.00                                                   |                            |                           |                      | 21.00                     | A | 9.54                                  | 3.25                    | 31.29                  | 46.00                          | 54.00            | -8.00               |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2360.00                                                   | 32.33                      | 100                       | 225                  |                           |   | 9.54                                  | 3.26                    | 31.24                  | 57.29                          | 74.00            | -16.71              |
| 2360.00                                                   |                            |                           |                      | 19.83                     | A | 9.54                                  | 3.26                    | 31.24                  | 44.79                          | 54.00            | -9.21               |
| RADIATED EMISSIONS - Vertical Antenna Polarization        |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | 1 Meter<br>Distance<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2312.00                                                   | 32.17                      | 100                       | 0                    |                           |   | 9.54                                  | 3.23                    | 31.40                  | 57.26                          | 74.00            | -16.74              |
| 2312.00                                                   |                            |                           |                      | 20.67                     | A | 9.54                                  | 3.23                    | 31.40                  | 45.76                          | 54.00            | -8.24               |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2336.00                                                   | 32.67                      | 100                       | 0                    |                           |   | 9.54                                  | 3.25                    | 31.36                  | 57.74                          | 74.00            | -16.26              |
| 2336.00                                                   |                            |                           |                      | 21.67                     | A | 9.54                                  | 3.25                    | 31.36                  | 46.74                          | 54.00            | -7.26               |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2360.00                                                   | 32.50                      | 100                       | 0                    |                           |   | 9.54                                  | 3.26                    | 31.32                  | 57.55                          | 74.00            | -16.45              |
| 2360.00                                                   |                            |                           |                      | 21.00                     | A | 9.54                                  | 3.26                    | 31.32                  | 46.05                          | 54.00            | -7.95               |

NOTE: These spurious emissions measurements were taken without a preamp at a distance on 1 meter to avoid saturating the preamp and analyzer because the signals were close to the fundamental frequency. The readings were extrapolated to 1 meter.

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## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11b mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Wistron Antennas**  
*Aegis Labs, Inc. File #: INTEL-031125-07*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| <i>Freq.<br/>(MHz)</i>                                    | <i>Meter<br/>Reading<br/>(dBuV)</i> | <i>Antenna<br/>Height<br/>(cm)</i> | <i>Azimuth<br/>(degrees)</i> | <i>Quasi pk or<br/>AVG (dBuV)</i> |   | <i>Preamp<br/>Factor<br/>(dB)</i> | <i>Cable<br/>Factor<br/>(dB)</i> | <i>Ant.<br/>Factor<br/>(dB)</i> | <i>Corrected<br/>Reading<br/>(dBuV)</i> | <i>Limits<br/>(dBuV)</i> | <i>Diff (dB)<br/>+=FAIL</i> |
|-----------------------------------------------------------|-------------------------------------|------------------------------------|------------------------------|-----------------------------------|---|-----------------------------------|----------------------------------|---------------------------------|-----------------------------------------|--------------------------|-----------------------------|
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                   | 64.17                               | 100                                | 0                            |                                   |   | 42.66                             | 2.07                             | 25.50                           | 49.08                                   | 74.00                    | -24.92                      |
| 1000.00                                                   |                                     |                                    |                              | 46.00                             | A | 42.66                             | 2.07                             | 25.50                           | 30.91                                   | 54.00                    | -23.09                      |
| 1217.30                                                   | 57.50                               | 100                                | 180                          |                                   |   | 42.59                             | 2.38                             | 26.85                           | 44.14                                   | 74.00                    | -29.86                      |
| 1217.30                                                   |                                     |                                    |                              | 42.83                             | A | 42.59                             | 2.38                             | 26.85                           | 29.47                                   | 54.00                    | -24.53                      |
| 3216.00                                                   | 50.33                               | 100                                | 270                          |                                   |   | 43.07                             | 3.89                             | 30.24                           | 41.39                                   | 86.24                    | -44.85                      |
| 4824.00                                                   | 48.50                               | 100                                | 180                          |                                   |   | 43.27                             | 4.73                             | 34.53                           | 44.49                                   | 74.00                    | -29.51                      |
| 4824.00                                                   |                                     |                                    |                              | 35.00                             | A | 43.27                             | 4.73                             | 34.53                           | 30.99                                   | 54.00                    | -23.01                      |
| 6431.91                                                   | 52.67                               | 100                                | 135                          |                                   |   | 43.82                             | 5.73                             | 36.64                           | 51.23                                   | 86.24                    | -35.01                      |
| 9648.22                                                   | 53.50                               | 100                                | 225                          |                                   |   | 43.22                             | 6.95                             | 38.88                           | 56.11                                   | 86.24                    | -30.13                      |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                   | 62.50                               | 100                                | 0                            |                                   |   | 42.66                             | 2.07                             | 25.50                           | 47.41                                   | 74.00                    | -26.59                      |
| 1000.00                                                   |                                     |                                    |                              | 45.83                             | A | 42.66                             | 2.07                             | 25.50                           | 30.74                                   | 54.00                    | -23.26                      |
| 1217.10                                                   | 57.33                               | 100                                | 180                          |                                   |   | 42.59                             | 2.38                             | 26.85                           | 43.96                                   | 74.00                    | -30.04                      |
| 1217.10                                                   |                                     |                                    |                              | 41.67                             | A | 42.59                             | 2.38                             | 26.85                           | 28.30                                   | 54.00                    | -25.70                      |
| 3249.87                                                   | 51.17                               | 100                                | 270                          |                                   |   | 43.08                             | 3.91                             | 30.25                           | 42.24                                   | 87.37                    | -45.13                      |
| 4874.58                                                   | 48.33                               | 100                                | 180                          |                                   |   | 43.29                             | 4.77                             | 34.72                           | 44.54                                   | 74.00                    | -29.46                      |
| 4874.58                                                   |                                     |                                    |                              | 35.00                             | A | 43.29                             | 4.77                             | 34.72                           | 31.21                                   | 54.00                    | -22.79                      |
| 6498.72                                                   | 54.83                               | 100                                | 135                          |                                   |   | 43.84                             | 5.78                             | 36.90                           | 53.66                                   | 87.37                    | -33.71                      |
| 9747.83                                                   | 53.33                               | 100                                | 270                          |                                   |   | 43.25                             | 6.99                             | 39.00                           | 56.06                                   | 87.37                    | -31.31                      |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                   | 62.83                               | 100                                | 0                            |                                   |   | 42.66                             | 2.07                             | 25.50                           | 47.74                                   | 74.00                    | -26.26                      |
| 1000.00                                                   |                                     |                                    |                              | 45.17                             | A | 42.66                             | 2.07                             | 25.50                           | 30.08                                   | 54.00                    | -23.92                      |
| 1217.13                                                   | 56.50                               | 100                                | 135                          |                                   |   | 42.59                             | 2.38                             | 26.85                           | 43.13                                   | 74.00                    | -30.87                      |
| 1217.13                                                   |                                     |                                    |                              | 43.83                             | A | 42.59                             | 2.38                             | 26.85                           | 30.46                                   | 54.00                    | -23.54                      |
| 3282.55                                                   | 49.67                               | 100                                | 270                          |                                   |   | 43.10                             | 3.91                             | 30.26                           | 40.74                                   | 84.33                    | -43.59                      |
| 4923.98                                                   | 48.67                               | 100                                | 180                          |                                   |   | 43.30                             | 4.81                             | 34.91                           | 45.08                                   | 74.00                    | -28.92                      |
| 4923.98                                                   |                                     |                                    |                              | 35.33                             | A | 43.30                             | 4.81                             | 34.91                           | 31.74                                   | 54.00                    | -22.26                      |
| 6565.46                                                   | 52.67                               | 100                                | 135                          |                                   |   | 43.84                             | 5.83                             | 37.32                           | 51.98                                   | 84.33                    | -32.35                      |
| 9848.08                                                   | 52.33                               | 100                                | 225                          |                                   |   | 43.29                             | 7.03                             | 39.12                           | 55.19                                   | 84.33                    | -29.14                      |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization        |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|-----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 59.67                      | 100                       | 225                  |                           |   | 42.66                    | 2.07                    | 25.70                  | 44.78                          | 74.00            | -29.22              |
| 1000.00                                                   |                            |                           |                      | 43.00                     | A | 42.66                    | 2.07                    | 25.70                  | 28.11                          | 54.00            | -25.89              |
| 1217.53                                                   | 54.33                      | 100                       | 45                   |                           |   | 42.59                    | 2.38                    | 27.01                  | 41.12                          | 74.00            | -32.88              |
| 1217.53                                                   |                            |                           |                      | 39.33                     | A | 42.59                    | 2.38                    | 27.01                  | 26.12                          | 54.00            | -27.88              |
| 3215.80                                                   | 51.00                      | 100                       | 45                   |                           |   | 43.07                    | 3.89                    | 30.44                  | 42.26                          | 89.37            | -47.11              |
| 4824.20                                                   | 51.33                      | 100                       | 270                  |                           |   | 43.27                    | 4.73                    | 34.53                  | 47.33                          | 74.00            | -26.67              |
| 4824.20                                                   |                            |                           |                      | 42.33                     | A | 43.27                    | 4.73                    | 34.53                  | 38.33                          | 54.00            | -15.67              |
| 6431.89                                                   | 54.50                      | 100                       | 225                  |                           |   | 43.82                    | 5.73                    | 36.64                  | 53.06                          | 89.37            | -36.31              |
| 9648.00                                                   | 56.00                      | 100                       | 225                  |                           |   | 43.22                    | 6.95                    | 38.97                  | 58.70                          | 89.37            | -30.67              |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 58.67                      | 100                       | 180                  |                           |   | 42.66                    | 2.07                    | 25.70                  | 43.78                          | 74.00            | -30.22              |
| 1000.00                                                   |                            |                           |                      | 42.83                     | A | 42.66                    | 2.07                    | 25.70                  | 27.94                          | 54.00            | -26.06              |
| 1217.73                                                   | 55.17                      | 100                       | 0                    |                           |   | 42.59                    | 2.38                    | 27.01                  | 41.97                          | 74.00            | -32.03              |
| 1217.73                                                   |                            |                           |                      | 40.33                     | A | 42.59                    | 2.38                    | 27.01                  | 27.13                          | 54.00            | -26.87              |
| 3249.23                                                   | 50.83                      | 100                       | 270                  |                           |   | 43.08                    | 3.91                    | 30.45                  | 42.10                          | 88.85            | -46.75              |
| 4874.00                                                   | 48.67                      | 100                       | 270                  |                           |   | 43.29                    | 4.77                    | 34.72                  | 44.87                          | 74.00            | -29.13              |
| 4874.00                                                   |                            |                           |                      | 36.83                     | A | 43.29                    | 4.77                    | 34.72                  | 33.03                          | 54.00            | -20.97              |
| 6498.65                                                   | 55.83                      | 100                       | 135                  |                           |   | 43.84                    | 5.78                    | 36.89                  | 54.66                          | 88.85            | -34.19              |
| 9748.03                                                   | 54.83                      | 100                       | 180                  |                           |   | 43.25                    | 6.99                    | 39.15                  | 57.71                          | 88.85            | -31.14              |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 59.67                      | 100                       | 180                  |                           |   | 42.66                    | 2.07                    | 25.70                  | 44.78                          | 74.00            | -29.22              |
| 1000.00                                                   |                            |                           |                      | 42.17                     | A | 42.66                    | 2.07                    | 25.70                  | 27.28                          | 54.00            | -26.72              |
| 1217.60                                                   | 55.17                      | 100                       | 45                   |                           |   | 42.59                    | 2.38                    | 27.01                  | 41.96                          | 74.00            | -32.04              |
| 1217.60                                                   |                            |                           |                      | 39.50                     | A | 42.59                    | 2.38                    | 27.01                  | 26.29                          | 54.00            | -27.71              |
| 3282.77                                                   | 50.67                      | 100                       | 225                  |                           |   | 43.10                    | 3.91                    | 30.46                  | 41.94                          | 85.83            | -43.89              |
| 4923.95                                                   | 49.17                      | 100                       | 225                  |                           |   | 43.30                    | 4.81                    | 34.91                  | 45.58                          | 74.00            | -28.42              |
| 4923.95                                                   |                            |                           |                      | 35.17                     | A | 43.30                    | 4.81                    | 34.91                  | 31.58                          | 54.00            | -22.42              |
| 6565.35                                                   | 55.00                      | 100                       | 225                  |                           |   | 43.84                    | 5.83                    | 37.38                  | 54.37                          | 85.83            | -31.46              |
| 9848.05                                                   | 55.33                      | 100                       | 225                  |                           |   | 43.29                    | 7.03                    | 39.33                  | 58.40                          | 85.83            | -27.43              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11b mode*  
*Channels 1, 6, & 11*  
**Continuous RX at MAIN Antenna port with Wistron Antennas**  
*Aegis Labs, Inc. File #: INTEL-031125-07*

| RADIATED EMISSIONS - Horizontal Antenna Polarization            |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|-----------------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                                  | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| <b>EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)</b>  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 57.83                      | 100                       | 0                    |                           |   | 42.66                    | 2.07                    | 25.50                  | 42.74                          | 74.00            | -31.26              |
| 1000.00                                                         |                            |                           |                      | 42.00                     | A | 42.66                    | 2.07                    | 25.50                  | 26.91                          | 54.00            | -27.09              |
| 1215.83                                                         | 53.30                      | 100                       | 135                  |                           |   | 42.59                    | 2.38                    | 26.84                  | 39.92                          | 74.00            | -34.08              |
| 1215.83                                                         |                            |                           |                      | 41.83                     | A | 42.59                    | 2.38                    | 26.84                  | 28.45                          | 54.00            | -25.55              |
| 3215.93                                                         | 49.50                      | 100                       | 135                  |                           |   | 43.07                    | 3.89                    | 30.24                  | 40.56                          | 80.00            | -39.44              |
| 3215.93                                                         |                            |                           |                      | 41.50                     | A | 43.07                    | 3.89                    | 30.24                  | 32.56                          | 60.00            | -27.44              |
| 6431.93                                                         | 51.50                      | 100                       | 225                  |                           |   | 43.82                    | 5.73                    | 36.64                  | 50.06                          | 80.00            | -29.94              |
| 6431.93                                                         |                            |                           |                      | 43.17                     | A | 43.82                    | 5.73                    | 36.64                  | 41.73                          | 60.00            | -18.27              |
| <b>EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)</b>  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 59.33                      | 100                       | 45                   |                           |   | 42.66                    | 2.07                    | 25.50                  | 44.24                          | 74.00            | -29.76              |
| 1000.00                                                         |                            |                           |                      | 42.83                     | A | 42.66                    | 2.07                    | 25.50                  | 27.74                          | 54.00            | -26.26              |
| 1217.77                                                         | 53.67                      | 100                       | 135                  |                           |   | 42.59                    | 2.38                    | 26.85                  | 40.31                          | 74.00            | -33.69              |
| 1217.77                                                         |                            |                           |                      | 41.83                     | A | 42.59                    | 2.38                    | 26.85                  | 28.47                          | 54.00            | -25.53              |
| 3249.23                                                         | 50.50                      | 100                       | 270                  |                           |   | 43.08                    | 3.91                    | 30.25                  | 41.57                          | 80.00            | -38.43              |
| 3249.23                                                         |                            |                           |                      | 42.00                     | A | 43.08                    | 3.91                    | 30.25                  | 33.07                          | 60.00            | -26.93              |
| 6498.54                                                         | 52.67                      | 100                       | 225                  |                           |   | 43.84                    | 5.78                    | 36.89                  | 51.50                          | 80.00            | -28.50              |
| 6498.54                                                         |                            |                           |                      | 43.00                     | A | 43.84                    | 5.78                    | 36.89                  | 41.83                          | 60.00            | -18.17              |
| <b>EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)</b> |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 59.67                      | 100                       | 0                    |                           |   | 42.66                    | 2.07                    | 25.50                  | 44.58                          | 74.00            | -29.42              |
| 1000.00                                                         |                            |                           |                      | 42.67                     | A | 42.66                    | 2.07                    | 25.50                  | 27.58                          | 54.00            | -26.42              |
| 1217.20                                                         | 54.50                      | 100                       | 135                  |                           |   | 42.59                    | 2.38                    | 26.85                  | 41.13                          | 74.00            | -32.87              |
| 1217.20                                                         |                            |                           |                      | 41.67                     | A | 42.59                    | 2.38                    | 26.85                  | 28.30                          | 54.00            | -25.70              |
| 3282.75                                                         | 50.83                      | 100                       | 270                  |                           |   | 43.10                    | 3.91                    | 30.26                  | 41.90                          | 80.00            | -38.10              |
| 3282.75                                                         |                            |                           |                      | 41.87                     | A | 43.10                    | 3.91                    | 30.26                  | 32.94                          | 60.00            | -27.06              |
| 6565.39                                                         | 52.00                      | 100                       | 225                  |                           |   | 43.84                    | 5.83                    | 37.32                  | 51.31                          | 80.00            | -28.69              |
| 6565.39                                                         |                            |                           |                      | 43.17                     | A | 43.84                    | 5.83                    | 37.32                  | 42.48                          | 60.00            | -17.52              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization              |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|-----------------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                                  | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| <b>EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)</b>  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 61.83                      | 100                       | 0                    |                           |   | 42.66                    | 2.07                    | 25.70                  | 46.94                          | 74.00            | -27.06              |
| 1000.00                                                         |                            |                           |                      | 45.17                     | A | 42.66                    | 2.07                    | 25.70                  | 30.28                          | 54.00            | -23.72              |
| 1217.87                                                         | 58.17                      | 100                       | 180                  |                           |   | 42.59                    | 2.38                    | 27.01                  | 44.97                          | 74.00            | -29.03              |
| 1217.87                                                         |                            |                           |                      | 42.33                     | A | 42.59                    | 2.38                    | 27.01                  | 29.13                          | 54.00            | -24.87              |
| 3215.94                                                         | 51.17                      | 100                       | 270                  |                           |   | 43.07                    | 3.89                    | 30.44                  | 42.43                          | 80.00            | -37.57              |
| 3215.94                                                         |                            |                           |                      | 42.00                     | A | 43.07                    | 3.89                    | 30.44                  | 33.26                          | 60.00            | -26.74              |
| 6431.90                                                         | 54.17                      | 100                       | 225                  |                           |   | 43.82                    | 5.73                    | 36.64                  | 52.73                          | 80.00            | -27.27              |
| 6431.90                                                         |                            |                           |                      | 43.33                     | A | 43.82                    | 5.73                    | 36.64                  | 41.89                          | 60.00            | -18.11              |
| <b>EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)</b>  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 60.50                      | 100                       | 0                    |                           |   | 42.66                    | 2.07                    | 25.70                  | 45.61                          | 74.00            | -28.39              |
| 1000.00                                                         |                            |                           |                      | 44.33                     | A | 42.66                    | 2.07                    | 25.70                  | 29.44                          | 54.00            | -24.56              |
| 1217.43                                                         | 56.83                      | 100                       | 180                  |                           |   | 42.59                    | 2.38                    | 27.00                  | 43.62                          | 74.00            | -30.38              |
| 1217.43                                                         |                            |                           |                      | 41.83                     | A | 42.59                    | 2.38                    | 27.00                  | 28.62                          | 54.00            | -25.38              |
| 3249.39                                                         | 52.00                      | 100                       | 270                  |                           |   | 43.08                    | 3.91                    | 30.45                  | 43.27                          | 80.00            | -36.73              |
| 3249.39                                                         |                            |                           |                      | 42.17                     | A | 43.08                    | 3.91                    | 30.45                  | 33.44                          | 60.00            | -26.56              |
| 6498.65                                                         | 54.83                      | 100                       | 225                  |                           |   | 43.84                    | 5.78                    | 36.89                  | 53.66                          | 80.00            | -26.34              |
| 6498.65                                                         |                            |                           |                      | 42.87                     | A | 43.84                    | 5.78                    | 36.89                  | 41.70                          | 60.00            | -18.30              |
| <b>EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)</b> |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 61.00                      | 100                       | 0                    |                           |   | 42.66                    | 2.07                    | 25.70                  | 46.11                          | 74.00            | -27.89              |
| 1000.00                                                         |                            |                           |                      | 44.00                     | A | 42.66                    | 2.07                    | 25.70                  | 29.11                          | 54.00            | -24.89              |
| 1212.77                                                         | 57.33                      | 100                       | 180                  |                           |   | 42.59                    | 2.37                    | 26.98                  | 44.09                          | 74.00            | -29.91              |
| 1212.77                                                         |                            |                           |                      | 41.17                     | A | 42.59                    | 2.37                    | 26.98                  | 27.93                          | 54.00            | -26.07              |
| 3282.63                                                         | 51.00                      | 100                       | 270                  |                           |   | 43.10                    | 3.91                    | 30.46                  | 42.27                          | 80.00            | -37.73              |
| 3282.63                                                         |                            |                           |                      | 40.00                     | A | 43.10                    | 3.91                    | 30.46                  | 31.27                          | 60.00            | -28.73              |
| 6565.34                                                         | 53.83                      | 100                       | 225                  |                           |   | 43.84                    | 5.83                    | 37.38                  | 53.20                          | 80.00            | -26.80              |
| 6565.34                                                         |                            |                           |                      | 42.54                     | A | 43.84                    | 5.83                    | 37.38                  | 41.91                          | 60.00            | -18.09              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

|                       |                                                                                                                                               |                        |               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                                                                     | <b>DATE:</b>           | 12/02/03      |
| <b>EUT:</b>           | Notebook Computer                                                                                                                             | <b>PROJECT NUMBER:</b> | INTEL-031125  |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                                                                         | <b>TEST ENGINEER:</b>  | Rick Candelas |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                                                                      | <b>SITE #:</b>         | 2             |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot using the <b>Wistron antennas in 802.11g mode.</b> | <b>TEMPERATURE:</b>    | 15 C          |
|                       |                                                                                                                                               | <b>HUMIDITY:</b>       | 53% RH        |
|                       |                                                                                                                                               | <b>TIME:</b>           | 9:00 AM       |

|                     |                                                                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.247(c)                                                                                                                                                                         |
| <b>Description:</b> | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc. |
| <b>Results:</b>     | Passes (See Data Sheets)                                                                                                                                                                           |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11g mode  
Channels 1, 6, & 11  
Continuous TX at MAIN Antenna port with Wistron Antennas  
Aegis Labs, Inc. File #: INTEL-031125-14*

### RADIATED EMISSIONS - Horizontal Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| 2412.00        | 73.17                      | 100                       | 225                  |                           |   |                          | 3.30                    | 31.11                  | 107.58                         |                  |                     |
| 2412.00        |                            |                           |                      | 59.50                     | A |                          | 3.30                    | 31.11                  | 93.91                          |                  |                     |
| 2437.00        | 72.33                      | 100                       | 225                  |                           |   |                          | 3.32                    | 31.05                  | 106.70                         |                  |                     |
| 2437.00        |                            |                           |                      | 59.17                     | A |                          | 3.32                    | 31.05                  | 93.54                          |                  |                     |
| 2462.00        | 71.83                      | 100                       | 225                  |                           |   |                          | 3.34                    | 30.99                  | 106.16                         |                  |                     |
| 2462.00        |                            |                           |                      | 58.67                     | A |                          | 3.34                    | 30.99                  | 93.00                          |                  |                     |

### RADIATED EMISSIONS – Vertical Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| 2412.00        | 74.67                      | 100                       | 0                    |                           |   |                          | 3.30                    | 31.24                  | 109.21                         |                  |                     |
| 2412.00        |                            |                           |                      | 61.00                     | A |                          | 3.30                    | 31.24                  | 95.54                          |                  |                     |
| 2437.00        | 73.33                      | 100                       | 180                  |                           |   |                          | 3.32                    | 31.20                  | 107.85                         |                  |                     |
| 2437.00        |                            |                           |                      | 59.83                     | A |                          | 3.32                    | 31.20                  | 94.35                          |                  |                     |
| 2462.00        | 72.83                      | 100                       | 180                  |                           |   |                          | 3.34                    | 31.16                  | 107.33                         |                  |                     |
| 2462.00        |                            |                           |                      | 59.00                     | A |                          | 3.34                    | 31.16                  | 93.50                          |                  |                     |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Band Edge Field Strength Measurements in 802.11g mode  
Channels 1, 6, & 11  
Continuous TX at MAIN Antenna port with Wistron Antennas  
Aegis Labs, Inc. File #: INTEL-031125-14*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 2390.00                                              |                            |                           |                      |                           |   |                          |                         |                        | 66.58                          | 74.00            | -7.42               |
| 2390.00                                              |                            |                           |                      |                           | A |                          |                         |                        | 50.91                          | 54.00            | -3.09               |
| 2400.00                                              | 49.33                      | 100                       | 270                  |                           |   |                          | 3.29                    | 31.14                  | 83.76                          | 87.58            | -3.82               |
| 2483.50                                              |                            |                           |                      |                           |   |                          |                         |                        | 69.66                          | 74.00            | -4.34               |
| 2483.50                                              |                            |                           |                      |                           | A |                          |                         |                        | 52.50                          | 54.00            | -1.50               |
| RADIATED EMISSIONS - Vertical Antenna Polarization   |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 2390.00                                              |                            |                           |                      |                           |   |                          |                         |                        | 68.21                          | 74.00            | -5.79               |
| 2390.00                                              |                            |                           |                      |                           | A |                          |                         |                        | 52.54                          | 54.00            | -1.46               |
| 2400.00                                              | 49.83                      | 100                       | 0                    |                           |   |                          | 3.29                    | 31.26                  | 84.38                          | 89.21            | -4.83               |
| 2483.50                                              |                            |                           |                      |                           |   |                          |                         |                        | 70.83                          | 74.00            | -3.17               |
| 2483.50                                              |                            |                           |                      |                           | A |                          |                         |                        | 53.00                          | 54.00            | -1.00               |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)

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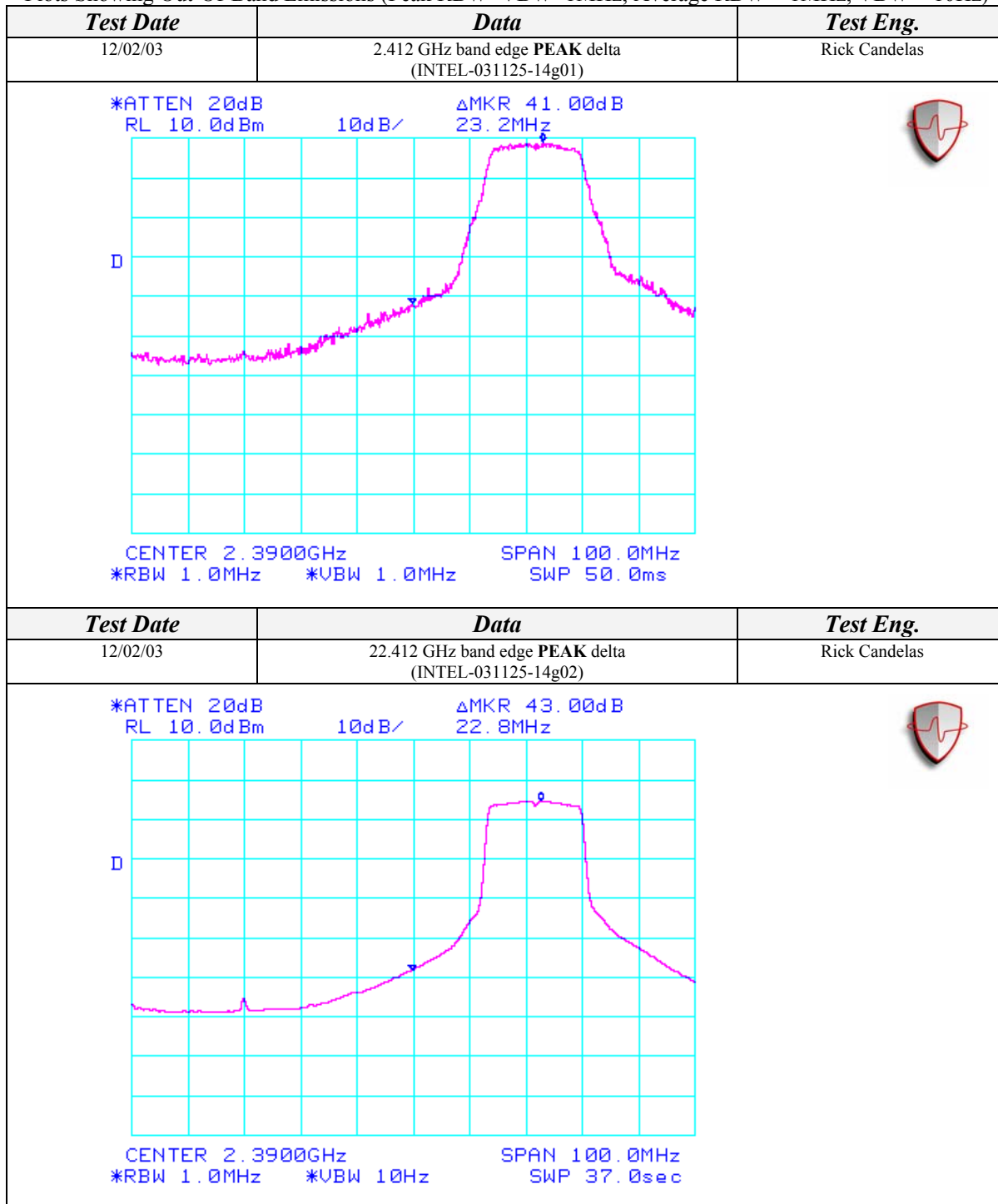


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## Spurious Radiated Emissions Test Results (Continued)

### (Marker Delta Conducted Band Edge Plots)

Plots Showing Out-Of-Band Emissions (Peak RBW=VBW=1MHz; Average RBW = 1MHz, VBW = 10Hz)



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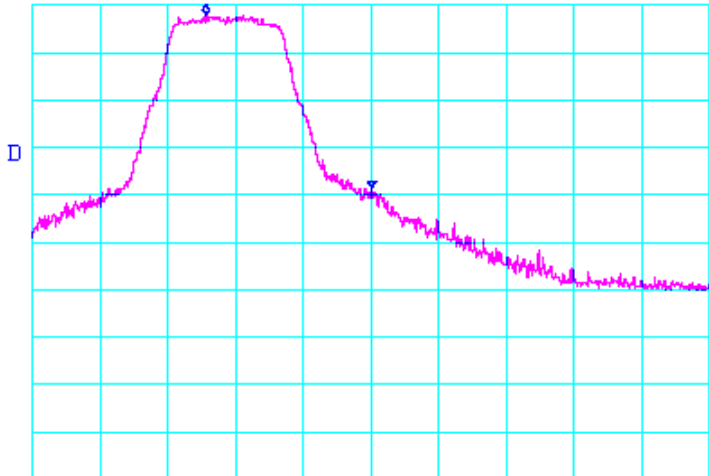
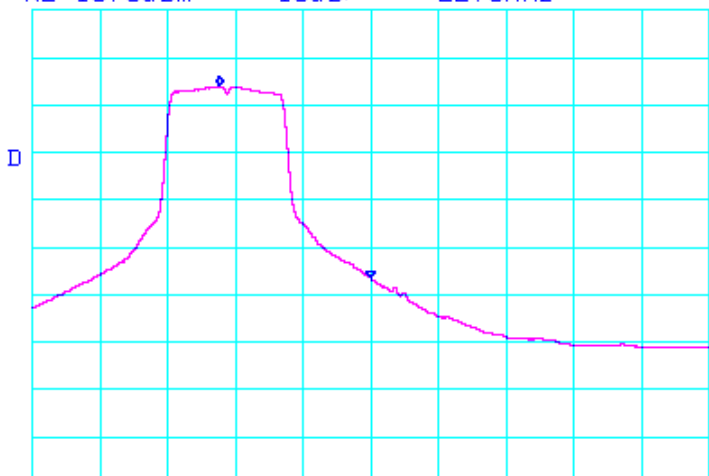


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## Spurious Radiated Emissions Test Results (Continued)

### (Marker Delta Conducted Band Edge Plots)

Plots Showing Out-Of-Band Emissions (Peak RBW=VBW=1MHz; Average RBW = 1MHz, VBW = 10Hz)

| Test Date                                                                                                                                                                                                                                   | Data                                                           | Test Eng.     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|
| 12/02/03                                                                                                                                                                                                                                    | 2.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031125-14g03)  | Rick Candelas |
| <div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/ ΔMKR 36.50dB<br/>-24.5MHz</p><p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p></div>  |                                                                |               |
| Test Date                                                                                                                                                                                                                                   | Data                                                           | Test Eng.     |
| 12/02/03                                                                                                                                                                                                                                    | 22.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031125-14g04) | Rick Candelas |
| <div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/ ΔMKR 40.50dB<br/>-22.3MHz</p><p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p></div> |                                                                |               |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11g mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Wistron Antennas**  
*Aegis Labs, Inc. File #: INTEL-031125-12*

| RADIATED EMISSIONS - Horizontal Antenna Polarization      |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
|-----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|---------------------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | 1 Meter<br>Distance<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2312.00                                                   | 34.33                      | 100                       | 225                  |                           |   | 9.54                                  | 3.23                    | 31.35                  | 59.37                          | 74.00            | -14.63              |
| 2312.00                                                   |                            |                           |                      | 24.50                     | A | 9.54                                  | 3.23                    | 31.35                  | 49.54                          | 54.00            | -4.46               |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2336.00                                                   | 34.50                      | 100                       | 225                  |                           |   | 9.54                                  | 3.25                    | 31.29                  | 59.50                          | 74.00            | -14.50              |
| 2336.00                                                   |                            |                           |                      | 24.67                     | A | 9.54                                  | 3.25                    | 31.29                  | 49.67                          | 54.00            | -4.33               |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2360.00                                                   | 33.83                      | 100                       | 225                  |                           |   | 9.54                                  | 3.26                    | 31.24                  | 58.79                          | 74.00            | -15.21              |
| 2360.00                                                   |                            |                           |                      | 22.17                     | A | 9.54                                  | 3.26                    | 31.24                  | 47.13                          | 54.00            | -6.87               |
| RADIATED EMISSIONS - Vertical Antenna Polarization        |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | 1 Meter<br>Distance<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2312.00                                                   | 34.50                      | 100                       | 0                    |                           |   | 9.54                                  | 3.23                    | 31.40                  | 59.59                          | 74.00            | -14.41              |
| 2312.00                                                   |                            |                           |                      | 24.83                     | A | 9.54                                  | 3.23                    | 31.40                  | 49.92                          | 54.00            | -4.08               |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2336.00                                                   | 35.17                      | 100                       | 0                    |                           |   | 9.54                                  | 3.25                    | 31.36                  | 60.24                          | 74.00            | -13.76              |
| 2336.00                                                   |                            |                           |                      | 25.83                     | A | 9.54                                  | 3.25                    | 31.36                  | 50.90                          | 54.00            | -3.10               |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2360.00                                                   | 34.50                      | 100                       | 0                    |                           |   | 9.54                                  | 3.26                    | 31.32                  | 59.55                          | 74.00            | -14.45              |
| 2360.00                                                   |                            |                           |                      | 25.00                     | A | 9.54                                  | 3.26                    | 31.32                  | 50.05                          | 54.00            | -3.95               |

NOTE: These spurious emissions measurements were taken without a preamp at a distance on 1 meter to avoid saturating the preamp and analyzer because the signals were close to the fundamental frequency. The readings were extrapolated to 1 meter.

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11g mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Wistron Antennas**  
*Aegis Labs, Inc. File #: INTEL-031125-07*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| <i>Freq.<br/>(MHz)</i>                                           | <i>Meter<br/>Reading<br/>(dBuV)</i> | <i>Antenna<br/>Height<br/>(cm)</i> | <i>Azimuth<br/>(degrees)</i> | <i>Quasi pk or<br/>AVG (dBuV)</i> | <i>Preamp<br/>Factor<br/>(dB)</i> | <i>Cable<br/>Factor<br/>(dB)</i> | <i>Ant.<br/>Factor<br/>(dB)</i> | <i>Corrected<br/>Reading<br/>(dBuV)</i> | <i>Limits<br/>(dBuV)</i> | <i>Diff (dB)<br/>+=FAIL</i> |        |
|------------------------------------------------------------------|-------------------------------------|------------------------------------|------------------------------|-----------------------------------|-----------------------------------|----------------------------------|---------------------------------|-----------------------------------------|--------------------------|-----------------------------|--------|
| <b>EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)</b>  |                                     |                                    |                              |                                   |                                   |                                  |                                 |                                         |                          |                             |        |
| 1000.00                                                          | 62.83                               | 100                                | 0                            |                                   |                                   | 42.66                            | 2.07                            | 25.50                                   | 47.74                    | 74.00                       | -26.26 |
| 1000.00                                                          |                                     |                                    |                              | 46.17                             | A                                 | 42.66                            | 2.07                            | 25.50                                   | 31.08                    | 54.00                       | -22.92 |
| 1216.97                                                          | 57.00                               | 100                                | 180                          |                                   |                                   | 42.59                            | 2.38                            | 26.85                                   | 43.63                    | 74.00                       | -30.37 |
| 1216.97                                                          |                                     |                                    |                              | 42.83                             | A                                 | 42.59                            | 2.38                            | 26.85                                   | 29.46                    | 54.00                       | -24.54 |
| 3216.16                                                          | 50.00                               | 100                                | 180                          |                                   |                                   | 43.07                            | 3.89                            | 30.24                                   | 41.06                    | 87.58                       | -46.52 |
| 4824.43                                                          | 49.00                               | 100                                | 180                          |                                   |                                   | 43.27                            | 4.73                            | 34.53                                   | 45.00                    | 74.00                       | -29.00 |
| 4824.43                                                          |                                     |                                    |                              | 34.33                             | A                                 | 43.27                            | 4.73                            | 34.53                                   | 30.33                    | 54.00                       | -23.67 |
| 6431.96                                                          | 52.50                               | 100                                | 135                          |                                   |                                   | 43.82                            | 5.73                            | 36.64                                   | 51.06                    | 87.58                       | -36.52 |
| 9648.09                                                          | 51.33                               | 100                                | 180                          |                                   |                                   | 43.22                            | 6.95                            | 38.88                                   | 53.94                    | 87.58                       | -33.64 |
| <b>EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)</b>  |                                     |                                    |                              |                                   |                                   |                                  |                                 |                                         |                          |                             |        |
| 1000.00                                                          | 63.83                               | 100                                | 0                            |                                   |                                   | 42.66                            | 2.07                            | 25.50                                   | 48.74                    | 74.00                       | -25.26 |
| 1000.00                                                          |                                     |                                    |                              | 45.50                             | A                                 | 42.66                            | 2.07                            | 25.50                                   | 30.41                    | 54.00                       | -23.59 |
| 1217.07                                                          | 56.67                               | 100                                | 180                          |                                   |                                   | 42.59                            | 2.38                            | 26.85                                   | 43.30                    | 74.00                       | -30.70 |
| 1217.07                                                          |                                     |                                    |                              | 42.67                             | A                                 | 42.59                            | 2.38                            | 26.85                                   | 29.30                    | 54.00                       | -24.70 |
| 3249.36                                                          | 49.50                               | 100                                | 180                          |                                   |                                   | 43.08                            | 3.91                            | 30.25                                   | 40.57                    | 86.70                       | -46.13 |
| 4873.74                                                          | 47.17                               | 100                                | 180                          |                                   |                                   | 43.29                            | 4.77                            | 34.72                                   | 43.37                    | 74.00                       | -30.63 |
| 4873.74                                                          |                                     |                                    |                              | 33.67                             | A                                 | 43.29                            | 4.77                            | 34.72                                   | 29.87                    | 54.00                       | -24.13 |
| 6498.73                                                          | 54.67                               | 100                                | 135                          |                                   |                                   | 43.84                            | 5.78                            | 36.90                                   | 53.50                    | 86.70                       | -33.20 |
| 9747.80                                                          | 50.50                               | 100                                | 180                          |                                   |                                   | 43.25                            | 6.99                            | 39.00                                   | 53.23                    | 86.70                       | -33.47 |
| <b>EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)</b> |                                     |                                    |                              |                                   |                                   |                                  |                                 |                                         |                          |                             |        |
| 1000.00                                                          | 62.00                               | 100                                | 315                          |                                   |                                   | 42.66                            | 2.07                            | 25.50                                   | 46.91                    | 74.00                       | -27.09 |
| 1000.00                                                          |                                     |                                    |                              | 46.83                             | A                                 | 42.66                            | 2.07                            | 25.50                                   | 31.74                    | 54.00                       | -22.26 |
| 1202.92                                                          | 56.33                               | 100                                | 180                          |                                   |                                   | 42.60                            | 2.36                            | 26.76                                   | 42.85                    | 74.00                       | -31.15 |
| 1202.92                                                          |                                     |                                    |                              | 42.83                             | A                                 | 42.60                            | 2.36                            | 26.76                                   | 29.35                    | 54.00                       | -24.65 |
| 3282.51                                                          | 49.67                               | 100                                | 270                          |                                   |                                   | 43.10                            | 3.91                            | 30.26                                   | 40.74                    | 86.16                       | -45.42 |
| 4923.82                                                          | 49.17                               | 100                                | 135                          |                                   |                                   | 43.30                            | 4.81                            | 34.91                                   | 45.58                    | 74.00                       | -28.42 |
| 4923.82                                                          |                                     |                                    |                              | 34.33                             | A                                 | 43.30                            | 4.81                            | 34.91                                   | 30.74                    | 54.00                       | -23.26 |
| 6565.25                                                          | 52.67                               | 100                                | 135                          |                                   |                                   | 43.84                            | 5.83                            | 37.32                                   | 51.98                    | 86.16                       | -34.18 |
| 9847.83                                                          | 50.83                               | 100                                | 135                          |                                   |                                   | 43.29                            | 7.03                            | 39.12                                   | 53.69                    | 86.17                       | -32.48 |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization        |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|-----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 59.17                      | 100                       | 225                  |                           |   | 42.66                    | 2.07                    | 25.70                  | 44.28                          | 74.00            | -29.72              |
| 1000.00                                                   |                            |                           |                      | 41.83                     | A | 42.66                    | 2.07                    | 25.70                  | 26.94                          | 54.00            | -27.06              |
| 1212.83                                                   | 55.67                      | 100                       | 45                   |                           |   | 42.59                    | 2.37                    | 26.98                  | 42.43                          | 74.00            | -31.57              |
| 1212.83                                                   |                            |                           |                      | 40.50                     | A | 42.59                    | 2.37                    | 26.98                  | 27.26                          | 54.00            | -26.74              |
| 3216.10                                                   | 50.00                      | 100                       | 270                  |                           |   | 43.07                    | 3.89                    | 30.44                  | 41.26                          | 89.21            | -47.95              |
| 4824.00                                                   | 47.50                      | 100                       | 180                  |                           |   | 43.27                    | 4.73                    | 34.53                  | 43.49                          | 74.00            | -30.51              |
| 4824.00                                                   |                            |                           |                      | 34.33                     | A | 43.27                    | 4.73                    | 34.53                  | 30.32                          | 54.00            | -23.68              |
| 6431.94                                                   | 54.83                      | 100                       | 135                  |                           |   | 43.82                    | 5.73                    | 36.64                  | 53.39                          | 89.21            | -35.82              |
| 9648.06                                                   | 52.67                      | 100                       | 270                  |                           |   | 43.22                    | 6.95                    | 38.97                  | 55.37                          | 89.21            | -33.84              |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 59.33                      | 100                       | 180                  |                           |   | 42.66                    | 2.07                    | 25.70                  | 44.44                          | 74.00            | -29.56              |
| 1000.00                                                   |                            |                           |                      | 42.83                     | A | 42.66                    | 2.07                    | 25.70                  | 27.94                          | 54.00            | -26.06              |
| 1217.67                                                   | 55.00                      | 100                       | 0                    |                           |   | 42.59                    | 2.38                    | 27.01                  | 41.80                          | 74.00            | -32.20              |
| 1217.67                                                   |                            |                           |                      | 41.50                     | A | 42.59                    | 2.38                    | 27.01                  | 28.30                          | 54.00            | -25.70              |
| 3249.39                                                   | 51.50                      | 100                       | 225                  |                           |   | 43.08                    | 3.91                    | 30.45                  | 42.77                          | 87.85            | -45.08              |
| 4873.79                                                   | 48.00                      | 100                       | 180                  |                           |   | 43.29                    | 4.77                    | 34.72                  | 44.20                          | 74.00            | -29.80              |
| 4873.79                                                   |                            |                           |                      | 33.67                     | A | 43.29                    | 4.77                    | 34.72                  | 29.87                          | 54.00            | -24.13              |
| 6498.75                                                   | 55.83                      | 100                       | 225                  |                           |   | 43.84                    | 5.78                    | 36.90                  | 54.66                          | 87.85            | -33.19              |
| 9748.07                                                   | 52.83                      | 100                       | 135                  |                           |   | 43.25                    | 6.99                    | 39.15                  | 55.71                          | 87.85            | -32.14              |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 59.00                      | 100                       | 180                  |                           |   | 42.66                    | 2.07                    | 25.70                  | 44.11                          | 74.00            | -29.89              |
| 1000.00                                                   |                            |                           |                      | 43.17                     | A | 42.66                    | 2.07                    | 25.70                  | 28.28                          | 54.00            | -25.72              |
| 1217.47                                                   | 54.67                      | 100                       | 45                   |                           |   | 42.59                    | 2.38                    | 27.00                  | 41.46                          | 74.00            | -32.54              |
| 1217.47                                                   |                            |                           |                      | 38.83                     | A | 42.59                    | 2.38                    | 27.00                  | 25.62                          | 54.00            | -28.38              |
| 3282.53                                                   | 50.67                      | 100                       | 270                  |                           |   | 43.10                    | 3.91                    | 30.46                  | 41.94                          | 87.33            | -45.39              |
| 4824.46                                                   | 48.33                      | 100                       | 135                  |                           |   | 43.27                    | 4.73                    | 34.53                  | 44.33                          | 74.00            | -29.67              |
| 4824.46                                                   |                            |                           |                      | 34.17                     | A | 43.27                    | 4.73                    | 34.53                  | 30.17                          | 54.00            | -23.83              |
| 6565.38                                                   | 55.50                      | 100                       | 225                  |                           |   | 43.84                    | 5.83                    | 37.38                  | 54.87                          | 87.33            | -32.46              |
| 9848.08                                                   | 51.83                      | 100                       | 225                  |                           |   | 43.29                    | 7.03                    | 39.33                  | 54.90                          | 87.33            | -32.43              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11g mode  
Channels 1, 6, & 11  
Continuous RX at MAIN Antenna port with Wistron Antennas  
Aegis Labs, Inc. File #: INTEL-031125-07*

| RADIATED EMISSIONS - Horizontal Antenna Polarization     |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                           | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 58.67                      | 100                       | 225                  |                           |   | 42.66                    | 2.07                    | 25.50                  | 43.58                          | 74.00            | -30.42              |
| 1000.00                                                  |                            |                           |                      | 42.83                     | A | 42.66                    | 2.07                    | 25.50                  | 27.74                          | 54.00            | -26.26              |
| 1217.43                                                  | 55.00                      | 100                       | 0                    |                           |   | 42.59                    | 2.38                    | 26.85                  | 41.64                          | 74.00            | -32.36              |
| 1217.43                                                  |                            |                           |                      | 39.17                     | A | 42.59                    | 2.38                    | 26.85                  | 25.81                          | 54.00            | -28.19              |
| 3216.09                                                  | 48.17                      | 100                       | 225                  |                           |   | 43.07                    | 3.89                    | 30.24                  | 39.23                          | 80.00            | -40.77              |
| 3216.09                                                  |                            |                           |                      | 39.17                     | A | 43.07                    | 3.89                    | 30.24                  | 30.23                          | 60.00            | -29.77              |
| 6432.00                                                  | 51.00                      | 100                       | 225                  |                           |   | 43.82                    | 5.73                    | 36.64                  | 49.56                          | 80.00            | -30.44              |
| 6432.00                                                  |                            |                           |                      | 42.33                     | A | 43.82                    | 5.73                    | 36.64                  | 40.89                          | 60.00            | -19.11              |
| EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 58.17                      | 100                       | 180                  |                           |   | 42.66                    | 2.07                    | 25.50                  | 43.08                          | 74.00            | -30.92              |
| 1000.00                                                  |                            |                           |                      | 42.17                     | A | 42.66                    | 2.07                    | 25.50                  | 27.08                          | 54.00            | -26.92              |
| 1214.97                                                  | 54.50                      | 100                       | 45                   |                           |   | 42.59                    | 2.38                    | 26.83                  | 41.12                          | 74.00            | -32.88              |
| 1214.97                                                  |                            |                           |                      | 39.00                     | A | 42.59                    | 2.38                    | 26.83                  | 25.62                          | 54.00            | -28.38              |
| 3249.41                                                  | 49.33                      | 100                       | 270                  |                           |   | 43.08                    | 3.91                    | 30.25                  | 40.40                          | 80.00            | -39.60              |
| 3249.41                                                  |                            |                           |                      | 39.33                     | A | 43.08                    | 3.91                    | 30.25                  | 30.40                          | 60.00            | -29.60              |
| 6498.59                                                  | 53.00                      | 100                       | 225                  |                           |   | 43.84                    | 5.78                    | 36.89                  | 51.83                          | 80.00            | -28.17              |
| 6498.59                                                  |                            |                           |                      | 42.87                     | A | 43.84                    | 5.78                    | 36.89                  | 41.70                          | 60.00            | -18.30              |
| EUT in Continuous Receive Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 59.33                      | 100                       | 180                  |                           |   | 42.66                    | 2.07                    | 25.50                  | 44.24                          | 74.00            | -29.76              |
| 1000.00                                                  |                            |                           |                      | 42.67                     | A | 42.66                    | 2.07                    | 25.50                  | 27.58                          | 54.00            | -26.42              |
| 1217.85                                                  | 54.33                      | 100                       | 45                   |                           |   | 42.59                    | 2.38                    | 26.85                  | 40.97                          | 74.00            | -33.03              |
| 1217.85                                                  |                            |                           |                      | 39.33                     | A | 42.59                    | 2.38                    | 26.85                  | 25.97                          | 54.00            | -28.03              |
| 3282.76                                                  | 50.00                      | 100                       | 225                  |                           |   | 43.10                    | 3.91                    | 30.26                  | 41.07                          | 80.00            | -38.93              |
| 3282.76                                                  |                            |                           |                      | 41.00                     | A | 43.10                    | 3.91                    | 30.26                  | 32.07                          | 60.00            | -27.93              |
| 6565.10                                                  | 51.33                      | 100                       | 225                  |                           |   | 43.84                    | 5.83                    | 37.32                  | 50.64                          | 80.00            | -29.36              |
| 6565.10                                                  |                            |                           |                      | 42.17                     | A | 43.84                    | 5.83                    | 37.32                  | 41.48                          | 60.00            | -18.52              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization       |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                           | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 62.50                      | 100                       | 0                    |                           |   | 42.66                    | 2.07                    | 25.70                  | 47.61                          | 74.00            | -26.39              |
| 1000.00                                                  |                            |                           |                      | 45.33                     | A | 42.66                    | 2.07                    | 25.70                  | 30.44                          | 54.00            | -23.56              |
| 1217.40                                                  | 56.33                      | 100                       | 315                  |                           |   | 42.59                    | 2.38                    | 27.00                  | 43.12                          | 74.00            | -30.88              |
| 1217.40                                                  |                            |                           |                      | 41.17                     | A | 42.59                    | 2.38                    | 27.00                  | 27.96                          | 54.00            | -26.04              |
| 3216.05                                                  | 50.17                      | 100                       | 270                  |                           |   | 43.07                    | 3.89                    | 30.44                  | 41.43                          | 80.00            | -38.57              |
| 3216.05                                                  |                            |                           |                      | 39.00                     | A | 43.07                    | 3.89                    | 30.44                  | 30.26                          | 60.00            | -29.74              |
| 6432.06                                                  | 53.67                      | 100                       | 225                  |                           |   | 43.82                    | 5.73                    | 36.64                  | 52.23                          | 80.00            | -27.77              |
| 6432.06                                                  |                            |                           |                      | 41.17                     | A | 43.82                    | 5.73                    | 36.64                  | 39.73                          | 60.00            | -20.27              |
| EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 62.33                      | 100                       | 0                    |                           |   | 42.66                    | 2.07                    | 25.70                  | 47.44                          | 74.00            | -26.56              |
| 1000.00                                                  |                            |                           |                      | 45.00                     | A | 42.66                    | 2.07                    | 25.70                  | 30.11                          | 54.00            | -23.89              |
| 1217.20                                                  | 56.83                      | 100                       | 0                    |                           |   | 42.59                    | 2.38                    | 27.00                  | 43.62                          | 74.00            | -30.38              |
| 1217.20                                                  |                            |                           |                      | 41.00                     | A | 42.59                    | 2.38                    | 27.00                  | 27.79                          | 54.00            | -26.21              |
| 3249.39                                                  | 50.33                      | 100                       | 225                  |                           |   | 43.08                    | 3.91                    | 30.45                  | 41.60                          | 80.00            | -38.40              |
| 3249.39                                                  |                            |                           |                      | 41.17                     | A | 43.08                    | 3.91                    | 30.45                  | 32.44                          | 60.00            | -27.56              |
| 6498.55                                                  | 54.67                      | 100                       | 225                  |                           |   | 43.84                    | 5.78                    | 36.89                  | 53.50                          | 80.00            | -26.50              |
| 6498.55                                                  |                            |                           |                      | 42.00                     | A | 43.84                    | 5.78                    | 36.89                  | 40.83                          | 60.00            | -19.17              |
| EUT in Continuous Receive Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 62.00                      | 100                       | 45                   |                           |   | 42.66                    | 2.07                    | 25.70                  | 47.11                          | 74.00            | -26.89              |
| 1000.00                                                  |                            |                           |                      | 45.33                     | A | 42.66                    | 2.07                    | 25.70                  | 30.44                          | 54.00            | -23.56              |
| 1217.27                                                  | 57.33                      | 100                       | 0                    |                           |   | 42.59                    | 2.38                    | 27.00                  | 44.12                          | 74.00            | -29.88              |
| 1217.27                                                  |                            |                           |                      | 41.33                     | A | 42.59                    | 2.38                    | 27.00                  | 28.12                          | 54.00            | -25.88              |
| 3282.68                                                  | 51.00                      | 100                       | 225                  |                           |   | 43.10                    | 3.91                    | 30.46                  | 42.27                          | 80.00            | -37.73              |
| 3282.68                                                  |                            |                           |                      | 40.00                     | A | 43.10                    | 3.91                    | 30.46                  | 31.27                          | 60.00            | -28.73              |
| 6565.34                                                  | 54.33                      | 100                       | 225                  |                           |   | 43.84                    | 5.83                    | 37.38                  | 53.70                          | 80.00            | -26.30              |
| 6565.34                                                  |                            |                           |                      | 42.00                     | A | 43.84                    | 5.83                    | 37.38                  | 41.37                          | 60.00            | -18.63              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

|                       |                                                                                                                                               |                        |               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                                                                     | <b>DATE:</b>           | 12/16/03      |
| <b>EUT:</b>           | Notebook Computer                                                                                                                             | <b>PROJECT NUMBER:</b> | INTEL-031216  |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                                                                         | <b>TEST ENGINEER:</b>  | Rick Candelas |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                                                                      | <b>SITE #:</b>         | 2             |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot using the <b>Hitachi antennas in 802.11b mode.</b> | <b>TEMPERATURE:</b>    | 21 C          |
|                       |                                                                                                                                               | <b>HUMIDITY:</b>       | 18% RH        |
|                       |                                                                                                                                               | <b>TIME:</b>           | 2:30 PM       |

|                     |                                                                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.247(c)                                                                                                                                                                         |
| <b>Description:</b> | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc. |
| <b>Results:</b>     | Passes (See Data Sheets)                                                                                                                                                                           |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11b mode  
Channels 1, 6, & 11  
Continuous TX at MAIN Antenna port with Hitachi Antennas  
Aegis Labs, Inc. File #: INTEL-031216-02*

### RADIATED EMISSIONS - Horizontal Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| 2412.00        | 66.50                      | 100                       | 225                  |                           |   |                          | 3.30                    | 31.11                  | 100.91                         |                  |                     |
| 2412.00        |                            |                           |                      | 61.17                     | A |                          | 3.30                    | 31.11                  | 95.58                          |                  |                     |
| 2437.00        | 69.00                      | 100                       | 225                  |                           |   |                          | 3.32                    | 31.05                  | 103.37                         |                  |                     |
| 2437.00        |                            |                           |                      | 62.67                     | A |                          | 3.32                    | 31.05                  | 97.04                          |                  |                     |
| 2462.00        | 68.50                      | 100                       | 225                  |                           |   |                          | 3.34                    | 30.99                  | 102.83                         |                  |                     |
| 2462.00        |                            |                           |                      | 62.83                     | A |                          | 3.34                    | 30.99                  | 97.16                          |                  |                     |

### RADIATED EMISSIONS – Vertical Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| 2412.00        | 74.67                      | 100                       | 0                    |                           |   |                          | 3.30                    | 31.24                  | 109.21                         |                  |                     |
| 2412.00        |                            |                           |                      | 69.17                     | A |                          | 3.30                    | 31.24                  | 103.71                         |                  |                     |
| 2437.00        | 74.00                      | 100                       | 0                    |                           |   |                          | 3.32                    | 31.20                  | 108.52                         |                  |                     |
| 2437.00        |                            |                           |                      | 68.33                     | A |                          | 3.32                    | 31.20                  | 102.85                         |                  |                     |
| 2462.00        | 72.17                      | 100                       | 0                    |                           |   |                          | 3.34                    | 31.16                  | 106.67                         |                  |                     |
| 2462.00        |                            |                           |                      | 67.33                     | A |                          | 3.34                    | 31.16                  | 101.83                         |                  |                     |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Band Edge Field Strength Measurements in 802.11b mode*  
*Channels 1, 6, & 11*  
*Continuous TX at MAIN Antenna port with Hitachi Antennas*  
*Aegis Labs, Inc. File #: INTEL-031216-02*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 2390.00                                              |                            |                           |                      |                           |   |                          |                         |                        | 46.91                          | 74.00            | -27.09              |
| 2390.00                                              |                            |                           |                      |                           | A |                          |                         |                        | 36.91                          | 54.00            | -17.09              |
| 2385.20                                              |                            |                           |                      |                           |   |                          |                         |                        | 51.75                          | 74.00            | -22.25              |
| 2385.20                                              |                            |                           |                      |                           | A |                          |                         |                        | 44.74                          | 54.00            | -9.26               |
| 2400.00                                              | 34.17                      | 100                       | 225                  |                           |   |                          | 3.29                    | 31.14                  | 68.60                          | 80.91            | -12.31              |
| 2483.50                                              |                            |                           |                      |                           |   |                          |                         |                        | 50.50                          | 74.00            | -23.50              |
| 2483.50                                              |                            |                           |                      |                           | A |                          |                         |                        | 39.16                          | 54.00            | -14.84              |
| 2488.00                                              |                            |                           |                      |                           |   |                          |                         |                        | 52.83                          | 74.00            | -21.17              |
| 2488.00                                              |                            |                           |                      |                           | A |                          |                         |                        | 45.83                          | 54.00            | -8.17               |
| RADIATED EMISSIONS – Vertical Antenna Polarization   |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 2390.00                                              |                            |                           |                      |                           |   |                          |                         |                        | 55.21                          | 74.00            | -18.79              |
| 2390.00                                              |                            |                           |                      |                           | A |                          |                         |                        | 45.04                          | 54.00            | -8.96               |
| 2385.20                                              |                            |                           |                      |                           |   |                          |                         |                        | 60.05                          | 74.00            | -13.95              |
| 2385.20                                              |                            |                           |                      |                           | A |                          |                         |                        | 52.87                          | 54.00            | -1.13               |
| 2400.00                                              | 39.67                      | 100                       | 0                    |                           |   |                          | 3.29                    | 31.26                  | 74.22                          | 89.21            | -14.99              |
| 2483.50                                              |                            |                           |                      |                           |   |                          |                         |                        | 54.34                          | 74.00            | -19.66              |
| 2483.50                                              |                            |                           |                      |                           | A |                          |                         |                        | 43.83                          | 54.00            | -10.17              |
| 2488.00                                              |                            |                           |                      |                           |   |                          |                         |                        | 56.67                          | 74.00            | -17.33              |
| 2488.00                                              |                            |                           |                      |                           | A |                          |                         |                        | 50.50                          | 54.00            | -3.50               |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δm = Measured Conducted Band Edge Delta (Peak or Average)

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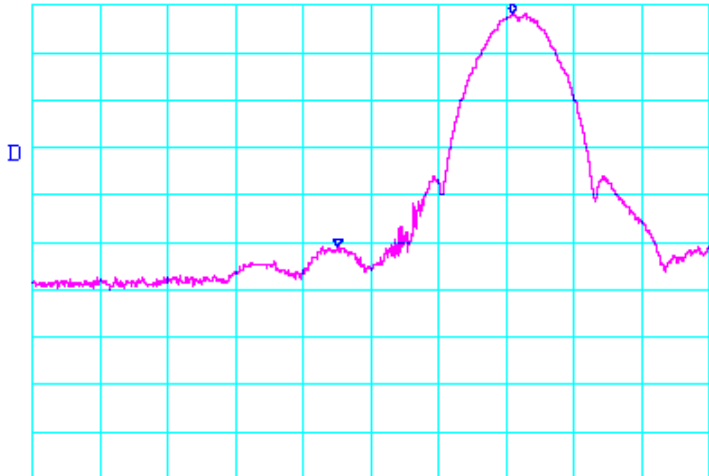
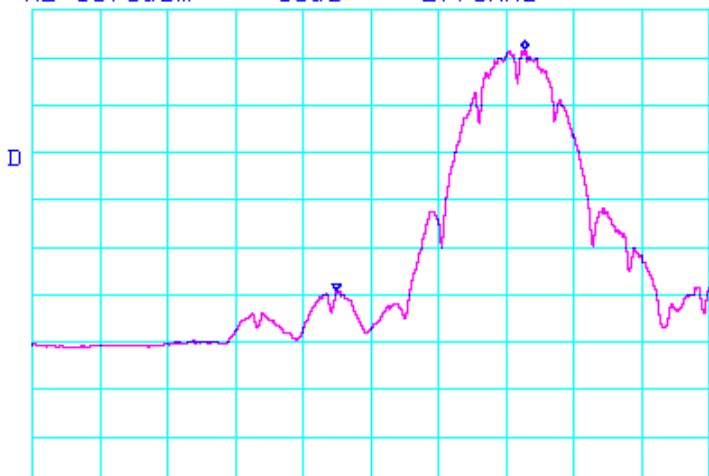


AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

### (Marker Delta Conducted Band Edge Plots)

Plots Showing Out-Of-Band Emissions (Peak RBW=VBW=1MHz; Average RBW = 1MHz, VBW = 10Hz)

| Test Date                                                                                                                                                                                                                                  | Data                                                           | Test Eng.     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|
| 12/16/03                                                                                                                                                                                                                                   | 2.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031216-02b01)  | Rick Candelas |
| <div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/ ΔMKR 49.16dB<br/>25.8MHz</p><p>CENTER 2.3900GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p></div>  |                                                                |               |
| Test Date                                                                                                                                                                                                                                  | Data                                                           | Test Eng.     |
| 12/16/03                                                                                                                                                                                                                                   | 22.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031216-02b02) | Rick Candelas |
| <div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/ ΔMKR 50.84dB<br/>27.8MHz</p><p>CENTER 2.3900GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p></div> |                                                                |               |

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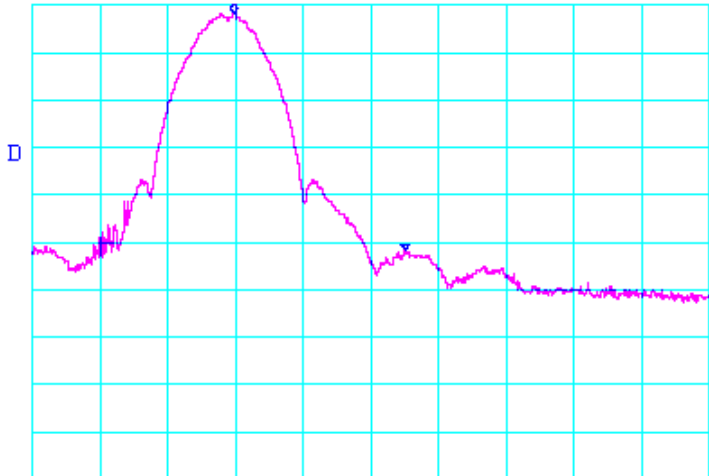
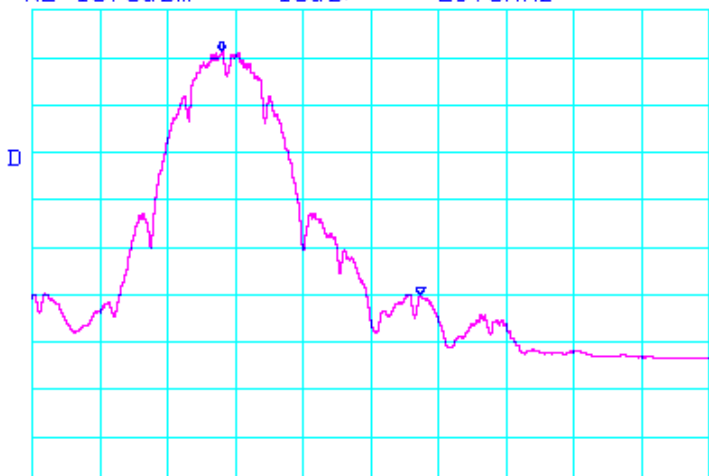


AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

### (Marker Delta Conducted Band Edge Plots)

Plots Showing Out-Of-Band Emissions (Peak RBW=VBW=1MHz; Average RBW = 1MHz, VBW = 10Hz)

| Test Date                                                                                                                                                                                                                                   | Data                                                           | Test Eng.     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|
| 12/16/03                                                                                                                                                                                                                                    | 2.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031216-02b07)  | Rick Candelas |
| <div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/ ΔMKR 50.00dB<br/>-25.3MHz</p><p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p></div>  |                                                                |               |
| Test Date                                                                                                                                                                                                                                   | Data                                                           | Test Eng.     |
| 12/16/03                                                                                                                                                                                                                                    | 22.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031216-02b08) | Rick Candelas |
| <div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/ ΔMKR 51.33dB<br/>-29.3MHz</p><p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p></div> |                                                                |               |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11b mode*  
*Channels 1, 6, & 11*  
*Continuous TX at MAIN Antenna port with Hitachi Antennas*  
*Aegis Labs, Inc. File #: INTEL-031216-03*

| RADIATED EMISSIONS - Horizontal Antenna Polarization      |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
|-----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|---------------------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | 1 Meter<br>Distance<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2312.00                                                   | 31.83                      | 100                       | 225                  |                           |   | 9.54                                  | 3.23                    | 31.35                  | 56.87                          | 74.00            | -17.13              |
| 2312.00                                                   |                            |                           |                      | 19.50                     | A | 9.54                                  | 3.23                    | 31.35                  | 44.54                          | 54.00            | -9.46               |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2336.00                                                   | 32.50                      | 100                       | 225                  |                           |   | 9.54                                  | 3.25                    | 31.29                  | 57.50                          | 74.00            | -16.50              |
| 2336.00                                                   |                            |                           |                      | 20.83                     | A | 9.54                                  | 3.25                    | 31.29                  | 45.83                          | 54.00            | -8.17               |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2360.00                                                   | 32.17                      | 100                       | 225                  |                           |   | 9.54                                  | 3.26                    | 31.24                  | 57.13                          | 74.00            | -16.87              |
| 2360.00                                                   |                            |                           |                      | 19.00                     | A | 9.54                                  | 3.26                    | 31.24                  | 43.96                          | 54.00            | -10.04              |
| RADIATED EMISSIONS - Vertical Antenna Polarization        |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | 1 Meter<br>Distance<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2312.00                                                   | 33.67                      | 100                       | 225                  |                           |   | 9.54                                  | 3.23                    | 31.40                  | 58.76                          | 74.00            | -15.24              |
| 2312.00                                                   |                            |                           |                      | 22.17                     | A | 9.54                                  | 3.23                    | 31.40                  | 47.26                          | 54.00            | -6.74               |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2336.00                                                   | 35.33                      | 100                       | 225                  |                           |   | 9.54                                  | 3.25                    | 31.36                  | 60.40                          | 74.00            | -13.60              |
| 2336.00                                                   |                            |                           |                      | 25.33                     | A | 9.54                                  | 3.25                    | 31.36                  | 50.40                          | 54.00            | -3.60               |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2360.00                                                   | 33.33                      | 100                       | 225                  |                           |   | 9.54                                  | 3.26                    | 31.32                  | 58.38                          | 74.00            | -15.62              |
| 2360.00                                                   |                            |                           |                      | 22.00                     | A | 9.54                                  | 3.26                    | 31.32                  | 47.05                          | 54.00            | -6.95               |

NOTE: These spurious emissions measurements were taken without a preamp at a distance on 1 meter to avoid saturating the preamp and analyzer because the signals were close to the fundamental frequency. The readings were extrapolated to 1 meter.

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11b mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Hitachi Antennas**  
*Aegis Labs, Inc. File #: INTEL-031216-04*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| <i>Freq.<br/>(MHz)</i>                                           | <i>Meter<br/>Reading<br/>(dBuV)</i> | <i>Antenna<br/>Height<br/>(cm)</i> | <i>Azimuth<br/>(degrees)</i> | <i>Quasi pk or<br/>AVG (dBuV)</i> |   | <i>Preamp<br/>Factor<br/>(dB)</i> | <i>Cable<br/>Factor<br/>(dB)</i> | <i>Ant.<br/>Factor<br/>(dB)</i> | <i>Corrected<br/>Reading<br/>(dBuV)</i> | <i>Limits<br/>(dBuV)</i> | <i>Diff (dB)<br/>+=FAIL</i> |
|------------------------------------------------------------------|-------------------------------------|------------------------------------|------------------------------|-----------------------------------|---|-----------------------------------|----------------------------------|---------------------------------|-----------------------------------------|--------------------------|-----------------------------|
| <b>EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)</b>  |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                          | 51.00                               | 100                                | 0                            |                                   |   | 36.20                             | 2.07                             | 25.50                           | 42.37                                   | 74.00                    | -31.63                      |
| 1000.00                                                          |                                     |                                    |                              | 36.33                             | A | 36.20                             | 2.07                             | 25.50                           | 27.70                                   | 54.00                    | -26.30                      |
| 1215.88                                                          | 50.50                               | 100                                | 135                          |                                   |   | 35.86                             | 2.38                             | 26.84                           | 43.85                                   | 74.00                    | -30.15                      |
| 1215.88                                                          |                                     |                                    |                              | 38.33                             | A | 35.86                             | 2.38                             | 26.84                           | 31.68                                   | 54.00                    | -22.32                      |
| 3215.97                                                          | 46.00                               | 100                                | 225                          |                                   |   | 35.77                             | 3.89                             | 30.24                           | 44.36                                   | 80.91                    | -36.55                      |
| 4824.00                                                          | 45.83                               | 100                                | 180                          |                                   |   | 36.14                             | 4.73                             | 34.53                           | 48.96                                   | 74.00                    | -25.04                      |
| 4824.00                                                          |                                     |                                    |                              | 32.33                             | A | 36.14                             | 4.73                             | 34.53                           | 35.46                                   | 54.00                    | -18.54                      |
| 6431.91                                                          | 48.00                               | 100                                | 225                          |                                   |   | 36.18                             | 5.73                             | 36.64                           | 54.19                                   | 80.91                    | -26.72                      |
| 9648.00                                                          | 49.83                               | 100                                | 225                          |                                   |   | 36.79                             | 6.95                             | 38.88                           | 58.87                                   | 80.91                    | -22.04                      |
| <b>EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)</b>  |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                          | 52.00                               | 100                                | 135                          |                                   |   | 36.20                             | 2.07                             | 25.50                           | 43.37                                   | 74.00                    | -30.63                      |
| 1000.00                                                          |                                     |                                    |                              | 36.33                             | A | 36.20                             | 2.07                             | 25.50                           | 27.70                                   | 54.00                    | -26.30                      |
| 1217.10                                                          | 57.33                               | 100                                | 180                          |                                   |   | 35.86                             | 2.38                             | 26.85                           | 50.69                                   | 74.00                    | -23.31                      |
| 1217.10                                                          |                                     |                                    |                              | 41.67                             | A | 35.86                             | 2.38                             | 26.85                           | 35.03                                   | 54.00                    | -18.97                      |
| 3249.35                                                          | 44.17                               | 100                                | 180                          |                                   |   | 35.84                             | 3.91                             | 30.25                           | 42.49                                   | 83.37                    | -40.88                      |
| 4874.58                                                          | 44.83                               | 100                                | 180                          |                                   |   | 36.26                             | 4.77                             | 34.72                           | 48.06                                   | 74.00                    | -25.94                      |
| 4874.58                                                          |                                     |                                    |                              | 31.50                             | A | 36.26                             | 4.77                             | 34.72                           | 34.73                                   | 54.00                    | -19.27                      |
| 6498.53                                                          | 48.00                               | 100                                | 180                          |                                   |   | 36.18                             | 5.78                             | 36.89                           | 54.49                                   | 83.37                    | -28.88                      |
| 9747.96                                                          | 51.17                               | 100                                | 225                          |                                   |   | 36.75                             | 6.99                             | 39.00                           | 60.41                                   | 83.37                    | -22.96                      |
| <b>EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)</b> |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                          | 51.00                               | 100                                | 135                          |                                   |   | 36.20                             | 2.07                             | 25.50                           | 42.37                                   | 74.00                    | -31.63                      |
| 1000.00                                                          |                                     |                                    |                              | 36.17                             | A | 36.20                             | 2.07                             | 25.50                           | 27.54                                   | 54.00                    | -26.46                      |
| 1217.13                                                          | 56.50                               | 100                                | 135                          |                                   |   | 35.86                             | 2.38                             | 26.85                           | 49.86                                   | 74.00                    | -24.14                      |
| 1217.13                                                          |                                     |                                    |                              | 43.83                             | A | 35.86                             | 2.38                             | 26.85                           | 37.19                                   | 54.00                    | -16.81                      |
| 3282.55                                                          | 45.83                               | 100                                | 225                          |                                   |   | 35.90                             | 3.91                             | 30.26                           | 44.10                                   | 82.83                    | -38.73                      |
| 4923.98                                                          | 44.17                               | 100                                | 135                          |                                   |   | 36.39                             | 4.81                             | 34.91                           | 47.50                                   | 74.00                    | -26.50                      |
| 4923.98                                                          |                                     |                                    |                              | 31.33                             | A | 36.39                             | 4.81                             | 34.91                           | 34.66                                   | 54.00                    | -19.34                      |
| 6565.46                                                          | 46.83                               | 100                                | 225                          |                                   |   | 36.14                             | 5.83                             | 37.32                           | 53.84                                   | 82.83                    | -28.99                      |
| 9848.05                                                          | 53.17                               | 100                                | 225                          |                                   |   | 36.71                             | 7.03                             | 39.12                           | 62.60                                   | 82.83                    | -20.23                      |

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## Spurious Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization        |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|-----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 53.83                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.70                  | 45.40                          | 74.00            | -28.60              |
| 1000.00                                                   |                            |                           |                      | 37.67                     | A | 36.20                    | 2.07                    | 25.70                  | 29.24                          | 54.00            | -24.76              |
| 1206.00                                                   | 52.50                      | 100                       | 225                  |                           |   | 35.88                    | 2.36                    | 26.94                  | 45.92                          | 74.00            | -28.08              |
| 1206.00                                                   |                            |                           |                      | 39.83                     | A | 35.88                    | 2.36                    | 26.94                  | 33.25                          | 54.00            | -20.75              |
| 3216.20                                                   | 46.67                      | 100                       | 135                  |                           |   | 35.78                    | 3.89                    | 30.44                  | 45.23                          | 89.21            | -43.98              |
| 4823.86                                                   | 46.17                      | 100                       | 225                  |                           |   | 36.14                    | 4.73                    | 34.53                  | 49.30                          | 74.00            | -24.70              |
| 4823.86                                                   |                            |                           |                      | 33.50                     | A | 36.14                    | 4.73                    | 34.53                  | 36.63                          | 54.00            | -17.37              |
| 6432.03                                                   | 49.17                      | 100                       | 225                  |                           |   | 36.18                    | 5.73                    | 36.64                  | 55.36                          | 89.21            | -33.85              |
| 9648.00                                                   | 50.67                      | 100                       | 270                  |                           |   | 36.79                    | 6.95                    | 38.97                  | 59.80                          | 89.21            | -29.41              |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 51.67                      | 100                       | 45                   |                           |   | 36.20                    | 2.07                    | 25.70                  | 43.24                          | 74.00            | -30.76              |
| 1000.00                                                   |                            |                           |                      | 36.67                     | A | 36.20                    | 2.07                    | 25.70                  | 28.24                          | 54.00            | -25.76              |
| 1208.83                                                   | 53.00                      | 100                       | 0                    |                           |   | 35.87                    | 2.37                    | 26.95                  | 46.44                          | 74.00            | -27.56              |
| 1208.83                                                   |                            |                           |                      | 39.00                     | A | 35.87                    | 2.37                    | 26.95                  | 32.44                          | 54.00            | -21.56              |
| 3249.23                                                   | 45.17                      | 100                       | 225                  |                           |   | 35.84                    | 3.91                    | 30.45                  | 43.69                          | 88.52            | -44.83              |
| 4874.00                                                   | 44.83                      | 100                       | 180                  |                           |   | 36.26                    | 4.77                    | 34.72                  | 48.06                          | 74.00            | -25.94              |
| 4874.00                                                   |                            |                           |                      | 31.83                     | A | 36.26                    | 4.77                    | 34.72                  | 35.06                          | 54.00            | -18.94              |
| 6498.78                                                   | 50.00                      | 100                       | 225                  |                           |   | 36.18                    | 5.78                    | 36.90                  | 56.49                          | 88.52            | -32.03              |
| 9748.03                                                   | 51.83                      | 100                       | 225                  |                           |   | 36.75                    | 6.99                    | 39.15                  | 61.21                          | 88.52            | -27.31              |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 52.17                      | 100                       | 45                   |                           |   | 36.20                    | 2.07                    | 25.70                  | 43.74                          | 74.00            | -30.26              |
| 1000.00                                                   |                            |                           |                      | 36.50                     | A | 36.20                    | 2.07                    | 25.70                  | 28.07                          | 54.00            | -25.93              |
| 1217.60                                                   | 52.67                      | 100                       | 45                   |                           |   | 35.86                    | 2.38                    | 27.01                  | 46.19                          | 74.00            | -27.81              |
| 1217.60                                                   |                            |                           |                      | 38.33                     | A | 35.86                    | 2.38                    | 27.01                  | 31.85                          | 54.00            | -22.15              |
| 3282.64                                                   | 44.33                      | 100                       | 180                  |                           |   | 35.90                    | 3.91                    | 30.46                  | 42.80                          | 86.67            | -43.87              |
| 4923.95                                                   | 43.83                      | 100                       | 180                  |                           |   | 36.39                    | 4.81                    | 34.91                  | 47.16                          | 74.00            | -26.84              |
| 4923.95                                                   |                            |                           |                      | 31.50                     | A | 36.39                    | 4.81                    | 34.91                  | 34.83                          | 54.00            | -19.17              |
| 6565.57                                                   | 48.50                      | 100                       | 225                  |                           |   | 36.14                    | 5.83                    | 37.39                  | 55.58                          | 86.67            | -31.09              |
| 9848.06                                                   | 51.17                      | 100                       | 225                  |                           |   | 36.71                    | 7.03                    | 39.33                  | 60.81                          | 86.67            | -25.86              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11b mode  
Channels 1, 6, & 11  
Continuous RX at MAIN Antenna port with Hitachi Antennas  
Aegis Labs, Inc. File #: INTEL-031216-04*

| RADIATED EMISSIONS - Horizontal Antenna Polarization            |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|-----------------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                                  | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| <b>EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)</b>  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 54.00                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.50                  | 45.37                          | 74.00            | -28.63              |
| 1000.00                                                         |                            |                           |                      | 38.00                     | A | 36.20                    | 2.07                    | 25.50                  | 29.37                          | 54.00            | -24.63              |
| 1204.00                                                         | 49.50                      | 100                       | 135                  |                           |   | 35.88                    | 2.36                    | 26.76                  | 42.74                          | 74.00            | -31.26              |
| 1204.00                                                         |                            |                           |                      | 37.83                     | A | 35.88                    | 2.36                    | 26.76                  | 31.07                          | 54.00            | -22.93              |
| 3216.01                                                         | 44.17                      | 100                       | 180                  |                           |   | 35.77                    | 3.89                    | 30.24                  | 42.53                          | 80.00            | -37.47              |
| 3216.01                                                         |                            |                           |                      | 31.67                     | A | 35.77                    | 3.89                    | 30.24                  | 30.03                          | 60.00            | -29.97              |
| 6431.95                                                         | 46.33                      | 100                       | 180                  |                           |   | 36.18                    | 5.73                    | 36.64                  | 52.52                          | 80.00            | -27.48              |
| 6431.95                                                         |                            |                           |                      | 37.00                     | A | 36.18                    | 5.73                    | 36.64                  | 43.19                          | 60.00            | -16.81              |
| <b>EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)</b>  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 51.83                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.50                  | 43.20                          | 74.00            | -30.80              |
| 1000.00                                                         |                            |                           |                      | 36.67                     | A | 36.20                    | 2.07                    | 25.50                  | 28.04                          | 54.00            | -25.96              |
| 1208.42                                                         | 49.67                      | 100                       | 135                  |                           |   | 35.87                    | 2.37                    | 26.79                  | 42.95                          | 74.00            | -31.05              |
| 1208.42                                                         |                            |                           |                      | 37.67                     | A | 35.87                    | 2.37                    | 26.79                  | 30.95                          | 54.00            | -23.05              |
| 3249.30                                                         | 43.17                      | 100                       | 180                  |                           |   | 35.84                    | 3.91                    | 30.25                  | 41.49                          | 80.00            | -38.51              |
| 3249.30                                                         |                            |                           |                      | 31.50                     | A | 35.84                    | 3.91                    | 30.25                  | 29.82                          | 60.00            | -30.18              |
| 6498.65                                                         | 46.33                      | 100                       | 180                  |                           |   | 36.18                    | 5.78                    | 36.89                  | 52.82                          | 80.00            | -27.18              |
| 6498.65                                                         |                            |                           |                      | 37.50                     | A | 36.18                    | 5.78                    | 36.89                  | 43.99                          | 60.00            | -16.01              |
| <b>EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)</b> |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 51.67                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.50                  | 43.04                          | 74.00            | -30.96              |
| 1000.00                                                         |                            |                           |                      | 36.83                     | A | 36.20                    | 2.07                    | 25.50                  | 28.20                          | 54.00            | -25.80              |
| 1206.50                                                         | 48.83                      | 100                       | 135                  |                           |   | 35.88                    | 2.36                    | 26.78                  | 42.09                          | 74.00            | -31.91              |
| 1206.50                                                         |                            |                           |                      | 38.00                     | A | 35.88                    | 2.36                    | 26.78                  | 31.26                          | 54.00            | -22.74              |
| 3282.75                                                         | 41.83                      | 100                       | 180                  |                           |   | 35.90                    | 3.91                    | 30.26                  | 40.10                          | 80.00            | -39.90              |
| 3282.75                                                         |                            |                           |                      | 30.33                     | A | 35.90                    | 3.91                    | 30.26                  | 28.60                          | 60.00            | -31.40              |
| 6565.37                                                         | 44.50                      | 100                       | 180                  |                           |   | 36.14                    | 5.83                    | 37.32                  | 51.51                          | 80.00            | -28.49              |
| 6565.37                                                         |                            |                           |                      | 43.17                     | A | 36.14                    | 5.83                    | 37.32                  | 50.18                          | 60.00            | -9.82               |

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## Spurious Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization              |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|-----------------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                                  | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| <b>EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)</b>  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 55.17                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.70                  | 46.74                          | 74.00            | -27.26              |
| 1000.00                                                         |                            |                           |                      | 38.33                     | A | 36.20                    | 2.07                    | 25.70                  | 29.90                          | 54.00            | -24.10              |
| 1203.58                                                         | 52.50                      | 100                       | 90                   |                           |   | 35.88                    | 2.36                    | 26.92                  | 45.90                          | 74.00            | -28.10              |
| 1203.58                                                         |                            |                           |                      | 38.33                     | A | 35.88                    | 2.36                    | 26.92                  | 31.73                          | 54.00            | -22.27              |
| 3216.05                                                         | 44.50                      | 100                       | 270                  |                           |   | 35.77                    | 3.89                    | 30.44                  | 43.06                          | 80.00            | -36.94              |
| 3216.05                                                         |                            |                           |                      | 32.83                     | A | 35.77                    | 3.89                    | 30.44                  | 31.39                          | 60.00            | -28.61              |
| 6431.95                                                         | 50.83                      | 100                       | 225                  |                           |   | 36.18                    | 5.73                    | 36.64                  | 57.02                          | 80.00            | -22.98              |
| 6431.95                                                         |                            |                           |                      | 46.33                     | A | 36.18                    | 5.73                    | 36.64                  | 52.52                          | 60.00            | -7.48               |
| <b>EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)</b>  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 53.50                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.70                  | 45.07                          | 74.00            | -28.93              |
| 1000.00                                                         |                            |                           |                      | 36.00                     | A | 36.20                    | 2.07                    | 25.70                  | 27.57                          | 54.00            | -26.43              |
| 1200.00                                                         | 53.00                      | 100                       | 90                   |                           |   | 35.89                    | 2.35                    | 26.90                  | 46.36                          | 74.00            | -27.64              |
| 1200.00                                                         |                            |                           |                      | 37.00                     | A | 35.89                    | 2.35                    | 26.90                  | 30.36                          | 54.00            | -23.64              |
| 3249.31                                                         | 42.83                      | 100                       | 270                  |                           |   | 35.84                    | 3.91                    | 30.45                  | 41.35                          | 80.00            | -38.65              |
| 3249.31                                                         |                            |                           |                      | 31.50                     | A | 35.84                    | 3.91                    | 30.45                  | 30.02                          | 60.00            | -29.98              |
| 6498.73                                                         | 50.50                      | 100                       | 225                  |                           |   | 36.18                    | 5.78                    | 36.90                  | 56.99                          | 80.00            | -23.01              |
| 6498.73                                                         |                            |                           |                      | 46.33                     | A | 36.18                    | 5.78                    | 36.90                  | 52.82                          | 60.00            | -7.18               |
| <b>EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)</b> |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                         | 53.00                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.70                  | 44.57                          | 74.00            | -29.43              |
| 1000.00                                                         |                            |                           |                      | 36.67                     | A | 36.20                    | 2.07                    | 25.70                  | 28.24                          | 54.00            | -25.76              |
| 1199.08                                                         | 53.17                      | 100                       | 90                   |                           |   | 35.89                    | 2.35                    | 26.89                  | 46.53                          | 74.00            | -27.47              |
| 1199.08                                                         |                            |                           |                      | 37.17                     | A | 35.89                    | 2.35                    | 26.89                  | 30.53                          | 54.00            | -23.47              |
| 3282.68                                                         | 41.83                      | 100                       | 225                  |                           |   | 35.90                    | 3.91                    | 30.46                  | 40.30                          | 80.00            | -39.70              |
| 3282.68                                                         |                            |                           |                      | 30.67                     | A | 35.90                    | 3.91                    | 30.46                  | 29.14                          | 60.00            | -30.86              |
| 6565.33                                                         | 48.67                      | 100                       | 225                  |                           |   | 36.14                    | 5.83                    | 37.38                  | 55.75                          | 80.00            | -24.25              |
| 6565.33                                                         |                            |                           |                      | 43.33                     | A | 36.14                    | 5.83                    | 37.38                  | 50.41                          | 60.00            | -9.59               |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

|                       |                                                                                                                                               |                        |               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                                                                     | <b>DATE:</b>           | 12/17/03      |
| <b>EUT:</b>           | Notebook Computer                                                                                                                             | <b>PROJECT NUMBER:</b> | INTEL-031216  |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                                                                         | <b>TEST ENGINEER:</b>  | Rick Candelas |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                                                                      | <b>SITE #:</b>         | 2             |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot using the <b>Hitachi</b> antennas in 802.11g mode. | <b>TEMPERATURE:</b>    | 25 C          |
|                       |                                                                                                                                               | <b>HUMIDITY:</b>       | 63% RH        |
|                       |                                                                                                                                               | <b>TIME:</b>           | 8:00 AM       |

|                     |                                                                                                                                                                                                    |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.247(c)                                                                                                                                                                         |
| <b>Description:</b> | Radiated emissions, which fall in the restricted bands, as defined in Sec. 15.205(a), must also comply with the radiated emission limits specified in Sec. 15.209(a). All others must be < -20dBc. |
| <b>Results:</b>     | Passes (See Data Sheets)                                                                                                                                                                           |

| Unwanted Spurious Emissions Limits |                       |                                                                |                                                                      |
|------------------------------------|-----------------------|----------------------------------------------------------------|----------------------------------------------------------------------|
| Frequency (MHz)                    | Field Strength (uV/m) | Field Strength (dBuV/m)<br>(Emissions in the restricted bands) | Field Strength (dBm/MHz)<br>(Emissions outside the restricted bands) |
| Above 960                          | 500                   | 54.00 (Average)<br>74.00 (Peak)                                | < -20 dBc                                                            |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Fundamental Measurements in 802.11g mode  
Channels 1, 6, & 11  
Continuous TX at MAIN Antenna port with Hitachi Antennas  
Aegis Labs, Inc. File #: INTEL-031216-02*

### RADIATED EMISSIONS - Horizontal Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| 2412.00        | 67.00                      | 100                       | 225                  |                           |   |                          | 3.30                    | 31.11                  | 101.41                         |                  |                     |
| 2412.00        |                            |                           |                      | 54.00                     | A |                          | 3.30                    | 31.11                  | 88.41                          |                  |                     |
| 2437.00        | 67.50                      | 100                       | 225                  |                           |   |                          | 3.32                    | 31.05                  | 101.87                         |                  |                     |
| 2437.00        |                            |                           |                      | 54.83                     | A |                          | 3.32                    | 31.05                  | 89.20                          |                  |                     |
| 2462.00        | 67.83                      | 100                       | 225                  |                           |   |                          | 3.34                    | 30.99                  | 102.16                         |                  |                     |
| 2462.00        |                            |                           |                      | 54.67                     | A |                          | 3.34                    | 30.99                  | 89.00                          |                  |                     |

### RADIATED EMISSIONS – Vertical Antenna Polarization

| Freq.<br>(MHz) | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
|----------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| 2412.00        | 74.00                      | 100                       | 0                    |                           |   |                          | 3.30                    | 31.24                  | 108.54                         |                  |                     |
| 2412.00        |                            |                           |                      | 60.17                     | A |                          | 3.30                    | 31.24                  | 94.71                          |                  |                     |
| 2437.00        | 74.00                      | 100                       | 0                    |                           |   |                          | 3.32                    | 31.20                  | 108.52                         |                  |                     |
| 2437.00        |                            |                           |                      | 60.17                     | A |                          | 3.32                    | 31.20                  | 94.69                          |                  |                     |
| 2462.00        | 71.67                      | 100                       | 0                    |                           |   |                          | 3.34                    | 31.16                  | 106.17                         |                  |                     |
| 2462.00        |                            |                           |                      | 58.33                     | A |                          | 3.34                    | 31.16                  | 92.83                          |                  |                     |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Band Edge Field Strength Measurements in 802.11g mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Hitachi Antennas**  
*Aegis Labs, Inc. File #: INTEL-031125-14*

| RADIATED EMISSIONS - Horizontal Antenna Polarization |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 2390.00                                              |                            |                           |                      |                           |   |                          |                         |                        | 61.08                          | 74.00            | -12.92              |
| 2390.00                                              |                            |                           |                      |                           | A |                          |                         |                        | 46.07                          | 54.00            | -7.93               |
| 2400.00                                              | 42.33                      | 100                       | 225                  |                           |   |                          | 3.29                    | 31.14                  | 76.76                          | 81.41            | -4.65               |
| 2483.50                                              |                            |                           |                      |                           |   |                          |                         |                        | 64.83                          | 74.00            | -9.17               |
| 2483.50                                              |                            |                           |                      |                           | A |                          |                         |                        | 48.83                          | 54.00            | -5.17               |
| RADIATED EMISSIONS – Vertical Antenna Polarization   |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| Freq.<br>(MHz)                                       | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| 2390.00                                              |                            |                           |                      |                           |   |                          |                         |                        | 68.21                          | 74.00            | -5.79               |
| 2390.00                                              |                            |                           |                      |                           | A |                          |                         |                        | 52.37                          | 54.00            | -1.63               |
| 2400.00                                              | 49.00                      | 100                       | 0                    |                           |   |                          | 3.29                    | 31.26                  | 83.55                          | 88.54            | -4.99               |
| 2483.50                                              |                            |                           |                      |                           |   |                          |                         |                        | 68.84                          | 74.00            | -5.16               |
| 2483.50                                              |                            |                           |                      |                           | A |                          |                         |                        | 52.66                          | 54.00            | -1.34               |

NOTE: The “Band Edge Field Strength” was calculated using the “Fundamental” and “Conducted Band Edge” measurements per the “Marker-Delta Method” with the following formula:

$$BE = F_m - \Delta m$$

Where

BE = Band Edge Field Strength

F<sub>m</sub> = Measured Fundamental (Peak or Average)

Δ<sub>m</sub> = Measured Conducted Band Edge Delta (Peak or Average)

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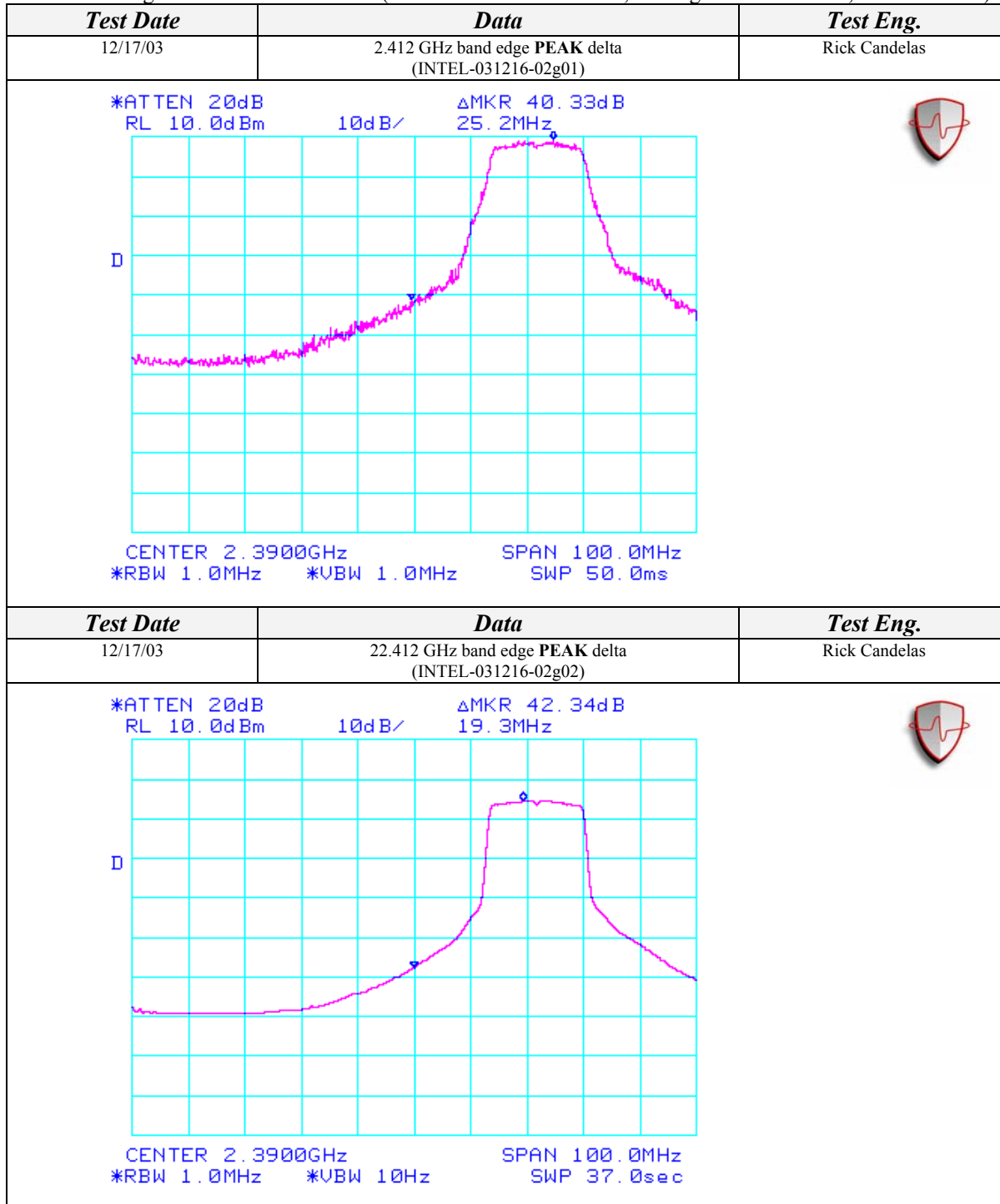


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## Spurious Radiated Emissions Test Results (Continued)

### (Marker Delta Conducted Band Edge Plots)

Plots Showing Out-Of-Band Emissions (Peak RBW=VBW=1MHz; Average RBW = 1MHz, VBW = 10Hz)



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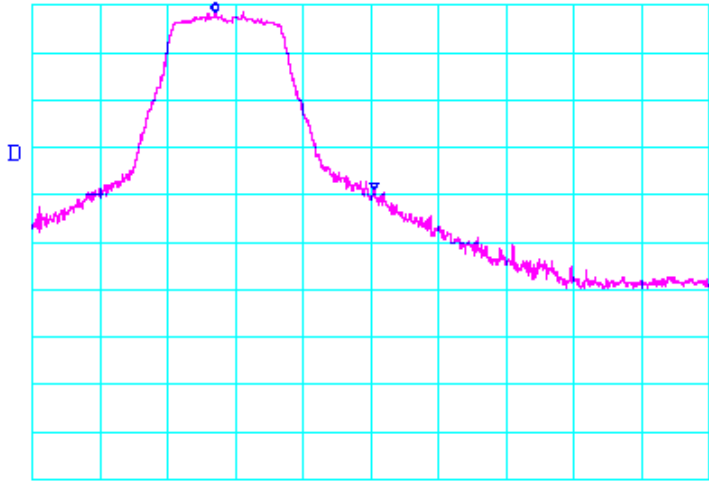
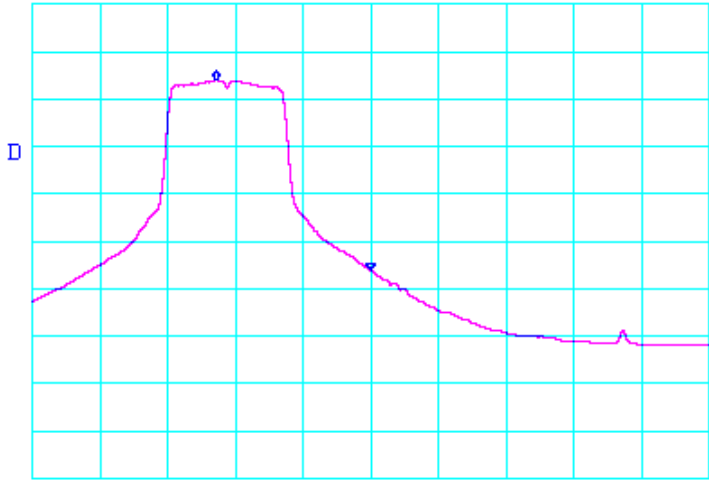


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## Spurious Radiated Emissions Test Results (Continued)

### (Marker Delta Conducted Band Edge Plots)

Plots Showing Out-Of-Band Emissions (Peak RBW=VBW=1MHz; Average RBW = 1MHz, VBW = 10Hz)

| Test Date                                                                                                                                                                                                                                                               | Data                                                           | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|---------------|
| 12/17/03                                                                                                                                                                                                                                                                | 2.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031216-02g03)  | Rick Candelas |
| <div><div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/</p><p>ΔMKR 37.33dB<br/>-23.5MHz</p></div><div><p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p></div></div>  |                                                                |               |
| Test Date                                                                                                                                                                                                                                                               | Data                                                           | Test Eng.     |
| 12/17/03                                                                                                                                                                                                                                                                | 22.412 GHz band edge <b>PEAK</b> delta<br>(INTEL-031216-02g04) | Rick Candelas |
| <div><div><p>*ATTEN 20dB<br/>RL 10.0dBm 10dB/</p><p>ΔMKR 40.17dB<br/>-22.8MHz</p></div><div><p>CENTER 2.4835GHz SPAN 100.0MHz<br/>*RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p></div></div> |                                                                |               |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11g mode  
Channels 1, 6, & 11  
Continuous TX at MAIN Antenna port with Hitachi Antennas  
Aegis Labs, Inc. File #: INTEL-031216-03*

| RADIATED EMISSIONS - Horizontal Antenna Polarization      |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
|-----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|---------------------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | 1 Meter<br>Distance<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2312.00                                                   | 33.67                      | 100                       | 225                  |                           |   | 9.54                                  | 3.23                    | 31.35                  | 58.71                          | 74.00            | -15.29              |
| 2312.00                                                   |                            |                           |                      | 22.50                     | A | 9.54                                  | 3.23                    | 31.35                  | 47.54                          | 54.00            | -6.46               |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2336.00                                                   | 33.83                      | 100                       | 225                  |                           |   | 9.54                                  | 3.25                    | 31.29                  | 58.83                          | 74.00            | -15.17              |
| 2336.00                                                   |                            |                           |                      | 23.50                     | A | 9.54                                  | 3.25                    | 31.29                  | 48.50                          | 54.00            | -5.50               |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2360.00                                                   | 32.17                      | 100                       | 225                  |                           |   | 9.54                                  | 3.26                    | 31.24                  | 57.13                          | 74.00            | -16.87              |
| 2360.00                                                   |                            |                           |                      | 19.83                     | A | 9.54                                  | 3.26                    | 31.24                  | 44.79                          | 54.00            | -9.21               |
| RADIATED EMISSIONS - Vertical Antenna Polarization        |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | 1 Meter<br>Distance<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2312.00                                                   | 35.67                      | 100                       | 225                  |                           |   | 9.54                                  | 3.23                    | 31.40                  | 60.76                          | 74.00            | -13.24              |
| 2312.00                                                   |                            |                           |                      | 27.67                     | A | 9.54                                  | 3.23                    | 31.40                  | 52.76                          | 54.00            | -1.24               |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2336.00                                                   | 36.83                      | 100                       | 225                  |                           |   | 9.54                                  | 3.25                    | 31.36                  | 61.90                          | 74.00            | -12.10              |
| 2336.00                                                   |                            |                           |                      | 27.67                     | A | 9.54                                  | 3.25                    | 31.36                  | 52.74                          | 54.00            | -1.26               |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                                       |                         |                        |                                |                  |                     |
| 2360.00                                                   | 34.50                      | 100                       | 225                  |                           |   | 9.54                                  | 3.26                    | 31.32                  | 59.55                          | 74.00            | -14.45              |
| 2360.00                                                   |                            |                           |                      | 25.33                     | A | 9.54                                  | 3.26                    | 31.32                  | 50.38                          | 54.00            | -3.62               |

NOTE: These spurious emissions measurements were taken without a preamp at a distance on 1 meter to avoid saturating the preamp and analyzer because the signals were close to the fundamental frequency. The readings were extrapolated to 1 meter.

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## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11g mode*  
*Channels 1, 6, & 11*  
**Continuous TX at MAIN Antenna port with Hitachi Antennas**  
*Aegis Labs, Inc. File #: INTEL-031216-04*

**RADIATED EMISSIONS - Horizontal Antenna Polarization**

| <i>Freq.<br/>(MHz)</i>                                           | <i>Meter<br/>Reading<br/>(dBuV)</i> | <i>Antenna<br/>Height<br/>(cm)</i> | <i>Azimuth<br/>(degrees)</i> | <i>Quasi pk or<br/>AVG (dBuV)</i> |   | <i>Preamp<br/>Factor<br/>(dB)</i> | <i>Cable<br/>Factor<br/>(dB)</i> | <i>Ant.<br/>Factor<br/>(dB)</i> | <i>Corrected<br/>Reading<br/>(dBuV)</i> | <i>Limits<br/>(dBuV)</i> | <i>Diff (dB)<br/>+=FAIL</i> |
|------------------------------------------------------------------|-------------------------------------|------------------------------------|------------------------------|-----------------------------------|---|-----------------------------------|----------------------------------|---------------------------------|-----------------------------------------|--------------------------|-----------------------------|
| <b>EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)</b>  |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                          | 50.83                               | 100                                | 135                          |                                   |   | 36.20                             | 2.07                             | 25.50                           | 42.20                                   | 74.00                    | -31.80                      |
| 1000.00                                                          |                                     |                                    |                              | 36.83                             | A | 36.20                             | 2.07                             | 25.50                           | 28.20                                   | 54.00                    | -25.80                      |
| 1216.97                                                          | 57.00                               | 100                                | 180                          |                                   |   | 35.86                             | 2.38                             | 26.85                           | 50.36                                   | 74.00                    | -23.64                      |
| 1216.97                                                          |                                     |                                    |                              | 42.83                             | A | 35.86                             | 2.38                             | 26.85                           | 36.19                                   | 54.00                    | -17.81                      |
| 3216.00                                                          | 45.17                               | 100                                | 180                          |                                   |   | 35.77                             | 3.89                             | 30.24                           | 43.53                                   | 81.41                    | -37.88                      |
| 4824.43                                                          | 45.33                               | 100                                | 180                          |                                   |   | 36.14                             | 4.73                             | 34.53                           | 48.46                                   | 74.00                    | -25.54                      |
| 4824.43                                                          |                                     |                                    |                              | 32.00                             | A | 36.14                             | 4.73                             | 34.53                           | 35.13                                   | 54.00                    | -18.87                      |
| 6431.96                                                          | 47.50                               | 100                                | 225                          |                                   |   | 36.18                             | 5.73                             | 36.64                           | 53.69                                   | 81.41                    | -27.72                      |
| 9648.00                                                          | 48.33                               | 100                                | 225                          |                                   |   | 36.79                             | 6.95                             | 38.88                           | 57.37                                   | 81.41                    | -24.04                      |
| <b>EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)</b>  |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                          | 51.00                               | 100                                | 135                          |                                   |   | 36.20                             | 2.07                             | 25.50                           | 42.37                                   | 74.00                    | -31.63                      |
| 1000.00                                                          |                                     |                                    |                              | 37.00                             | A | 36.20                             | 2.07                             | 25.50                           | 28.37                                   | 54.00                    | -25.63                      |
| 1217.07                                                          | 56.67                               | 100                                | 180                          |                                   |   | 35.86                             | 2.38                             | 26.85                           | 50.03                                   | 74.00                    | -23.97                      |
| 1217.07                                                          |                                     |                                    |                              | 42.67                             | A | 35.86                             | 2.38                             | 26.85                           | 36.03                                   | 54.00                    | -17.97                      |
| 3249.35                                                          | 44.83                               | 100                                | 180                          |                                   |   | 35.84                             | 3.91                             | 30.25                           | 43.15                                   | 81.87                    | -38.72                      |
| 4873.74                                                          | 44.50                               | 100                                | 180                          |                                   |   | 36.26                             | 4.77                             | 34.72                           | 47.73                                   | 74.00                    | -26.27                      |
| 4873.74                                                          |                                     |                                    |                              | 31.50                             | A | 36.26                             | 4.77                             | 34.72                           | 34.73                                   | 54.00                    | -19.27                      |
| 6498.90                                                          | 48.17                               | 100                                | 180                          |                                   |   | 36.18                             | 5.78                             | 36.90                           | 54.67                                   | 81.87                    | -27.20                      |
| 9747.80                                                          | 48.67                               | 100                                | 180                          |                                   |   | 36.75                             | 6.99                             | 39.00                           | 57.91                                   | 81.87                    | -23.96                      |
| <b>EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)</b> |                                     |                                    |                              |                                   |   |                                   |                                  |                                 |                                         |                          |                             |
| 1000.00                                                          | 51.17                               | 100                                | 135                          |                                   |   | 36.20                             | 2.07                             | 25.50                           | 42.54                                   | 74.00                    | -31.46                      |
| 1000.00                                                          |                                     |                                    |                              | 36.17                             | A | 36.20                             | 2.07                             | 25.50                           | 27.54                                   | 54.00                    | -26.46                      |
| 1211.48                                                          | 50.67                               | 100                                | 135                          |                                   |   | 35.87                             | 2.37                             | 26.81                           | 43.98                                   | 74.00                    | -30.02                      |
| 1211.48                                                          |                                     |                                    |                              | 38.33                             | A | 35.87                             | 2.37                             | 26.81                           | 31.64                                   | 54.00                    | -22.36                      |
| 3282.73                                                          | 43.83                               | 100                                | 225                          |                                   |   | 35.90                             | 3.91                             | 30.26                           | 42.10                                   | 82.16                    | -40.06                      |
| 4923.82                                                          | 45.00                               | 100                                | 135                          |                                   |   | 36.39                             | 4.81                             | 34.91                           | 48.33                                   | 74.00                    | -25.67                      |
| 4923.82                                                          |                                     |                                    |                              | 31.33                             | A | 36.39                             | 4.81                             | 34.91                           | 34.66                                   | 54.00                    | -19.34                      |
| 6565.25                                                          | 48.33                               | 100                                | 225                          |                                   |   | 36.14                             | 5.83                             | 37.32                           | 55.34                                   | 82.16                    | -26.82                      |
| 9847.83                                                          | 48.33                               | 100                                | 225                          |                                   |   | 36.71                             | 7.03                             | 39.12                           | 57.76                                   | 82.16                    | -24.40                      |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization        |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|-----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                            | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 51.83                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.70                  | 43.40                          | 74.00            | -30.60              |
| 1000.00                                                   |                            |                           |                      | 36.50                     | A | 36.20                    | 2.07                    | 25.70                  | 28.07                          | 54.00            | -25.93              |
| 1200.00                                                   | 52.00                      | 100                       | 180                  |                           |   | 35.89                    | 2.35                    | 26.90                  | 45.36                          | 74.00            | -28.64              |
| 1200.00                                                   |                            |                           |                      | 38.33                     | A | 35.89                    | 2.35                    | 26.90                  | 31.69                          | 54.00            | -22.31              |
| 3216.01                                                   | 46.50                      | 100                       | 225                  |                           |   | 35.77                    | 3.89                    | 30.44                  | 45.06                          | 88.54            | -43.48              |
| 4824.00                                                   | 44.50                      | 100                       | 180                  |                           |   | 36.14                    | 4.73                    | 34.53                  | 47.63                          | 74.00            | -26.37              |
| 4824.00                                                   |                            |                           |                      | 31.83                     | A | 36.14                    | 4.73                    | 34.53                  | 34.96                          | 54.00            | -19.04              |
| 6431.94                                                   | 49.00                      | 100                       | 225                  |                           |   | 36.18                    | 5.73                    | 36.64                  | 55.19                          | 88.54            | -33.35              |
| 9648.06                                                   | 50.33                      | 100                       | 270                  |                           |   | 36.79                    | 6.95                    | 38.97                  | 59.46                          | 88.54            | -29.08              |
| EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 52.00                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.70                  | 43.57                          | 74.00            | -30.43              |
| 1000.00                                                   |                            |                           |                      | 36.00                     | A | 36.20                    | 2.07                    | 25.70                  | 27.57                          | 54.00            | -26.43              |
| 1198.42                                                   | 51.67                      | 100                       | 180                  |                           |   | 35.89                    | 2.35                    | 26.89                  | 45.02                          | 74.00            | -28.98              |
| 1198.42                                                   |                            |                           |                      | 39.00                     | A | 35.89                    | 2.35                    | 26.89                  | 32.35                          | 54.00            | -21.65              |
| 3249.33                                                   | 44.33                      | 100                       | 225                  |                           |   | 35.84                    | 3.91                    | 30.45                  | 42.85                          | 88.52            | -45.67              |
| 4873.79                                                   | 45.00                      | 100                       | 180                  |                           |   | 36.26                    | 4.77                    | 34.72                  | 48.23                          | 74.00            | -25.77              |
| 4873.79                                                   |                            |                           |                      | 31.33                     | A | 36.26                    | 4.77                    | 34.72                  | 34.56                          | 54.00            | -19.44              |
| 6498.61                                                   | 49.83                      | 100                       | 225                  |                           |   | 36.18                    | 5.78                    | 36.89                  | 56.32                          | 88.52            | -32.20              |
| 9747.87                                                   | 48.83                      | 100                       | 225                  |                           |   | 36.75                    | 6.99                    | 39.15                  | 58.21                          | 88.52            | -30.31              |
| EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                   | 51.33                      | 100                       | 45                   |                           |   | 36.20                    | 2.07                    | 25.70                  | 42.90                          | 74.00            | -31.10              |
| 1000.00                                                   |                            |                           |                      | 36.33                     | A | 36.20                    | 2.07                    | 25.70                  | 27.90                          | 54.00            | -26.10              |
| 1201.67                                                   | 51.17                      | 100                       | 225                  |                           |   | 35.89                    | 2.35                    | 26.91                  | 44.55                          | 74.00            | -29.45              |
| 1201.67                                                   |                            |                           |                      | 38.00                     | A | 35.89                    | 2.35                    | 26.91                  | 31.38                          | 54.00            | -22.62              |
| 3282.68                                                   | 45.17                      | 100                       | 225                  |                           |   | 35.90                    | 3.91                    | 30.46                  | 43.64                          | 86.17            | -42.53              |
| 4824.46                                                   | 44.67                      | 100                       | 135                  |                           |   | 36.14                    | 4.73                    | 34.53                  | 47.80                          | 74.00            | -26.20              |
| 4824.46                                                   |                            |                           |                      | 31.33                     | A | 36.14                    | 4.73                    | 34.53                  | 34.46                          | 54.00            | -19.54              |
| 6565.25                                                   | 48.17                      | 100                       | 225                  |                           |   | 36.14                    | 5.83                    | 37.38                  | 55.25                          | 86.17            | -30.92              |
| 9847.95                                                   | 49.33                      | 100                       | 225                  |                           |   | 36.71                    | 7.03                    | 39.33                  | 58.97                          | 86.17            | -27.20              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

*Spurious Emissions Measurements in 802.11g mode  
Channels 1, 6, & 11  
Continuous RX at MAIN Antenna port with Hitachi Antennas  
Aegis Labs, Inc. File #: INTEL-031216-04*

| RADIATED EMISSIONS - Horizontal Antenna Polarization     |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
|----------------------------------------------------------|----------------------------|---------------------------|----------------------|---------------------------|---|--------------------------|-------------------------|------------------------|--------------------------------|------------------|---------------------|
| Freq.<br>(MHz)                                           | Meter<br>Reading<br>(dBuV) | Antenna<br>Height<br>(cm) | Azimuth<br>(degrees) | Quasi pk or<br>AVG (dBuV) |   | Preamp<br>Factor<br>(dB) | Cable<br>Factor<br>(dB) | Ant.<br>Factor<br>(dB) | Corrected<br>Reading<br>(dBuV) | Limits<br>(dBuV) | Diff (dB)<br>+=FAIL |
| EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 52.33                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.50                  | 43.70                          | 74.00            | -30.30              |
| 1000.00                                                  |                            |                           |                      | 36.33                     | A | 36.20                    | 2.07                    | 25.50                  | 27.70                          | 54.00            | -26.30              |
| 1210.58                                                  | 50.50                      | 100                       | 135                  |                           |   | 35.87                    | 2.37                    | 26.81                  | 43.80                          | 74.00            | -30.20              |
| 1210.58                                                  |                            |                           |                      | 37.50                     | A | 35.87                    | 2.37                    | 26.81                  | 30.80                          | 54.00            | -23.20              |
| 3215.98                                                  | 44.50                      | 100                       | 180                  |                           |   | 35.77                    | 3.89                    | 30.24                  | 42.86                          | 80.00            | -37.14              |
| 3215.98                                                  |                            |                           |                      | 31.83                     | A | 35.77                    | 3.89                    | 30.24                  | 30.19                          | 60.00            | -29.81              |
| 6432.00                                                  | 46.00                      | 100                       | 180                  |                           |   | 36.18                    | 5.73                    | 36.64                  | 52.19                          | 80.00            | -27.81              |
| 6432.00                                                  |                            |                           |                      | 35.83                     | A | 36.18                    | 5.73                    | 36.64                  | 42.02                          | 60.00            | -17.98              |
| EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)  |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 51.67                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.50                  | 43.04                          | 74.00            | -30.96              |
| 1000.00                                                  |                            |                           |                      | 36.67                     | A | 36.20                    | 2.07                    | 25.50                  | 28.04                          | 54.00            | -25.96              |
| 1204.00                                                  | 49.17                      | 100                       | 135                  |                           |   | 35.88                    | 2.36                    | 26.76                  | 42.41                          | 74.00            | -31.59              |
| 1204.00                                                  |                            |                           |                      | 37.83                     | A | 35.88                    | 2.36                    | 26.76                  | 31.07                          | 54.00            | -22.93              |
| 3249.32                                                  | 44.33                      | 100                       | 180                  |                           |   | 35.84                    | 3.91                    | 30.25                  | 42.65                          | 80.00            | -37.35              |
| 3249.32                                                  |                            |                           |                      | 31.50                     | A | 35.84                    | 3.91                    | 30.25                  | 29.82                          | 60.00            | -30.18              |
| 6598.63                                                  | 45.83                      | 100                       | 180                  |                           |   | 36.12                    | 5.86                    | 37.53                  | 53.10                          | 80.00            | -26.90              |
| 6498.63                                                  |                            |                           |                      | 36.67                     | A | 36.18                    | 5.78                    | 36.89                  | 43.16                          | 60.00            | -16.84              |
| EUT in Continuous Receive Mode on Channel 11 (2.462 GHz) |                            |                           |                      |                           |   |                          |                         |                        |                                |                  |                     |
| 1000.00                                                  | 51.17                      | 100                       | 0                    |                           |   | 36.20                    | 2.07                    | 25.50                  | 42.54                          | 74.00            | -31.46              |
| 1000.00                                                  |                            |                           |                      | 36.83                     | A | 36.20                    | 2.07                    | 25.50                  | 28.20                          | 54.00            | -25.80              |
| 1206.58                                                  | 50.00                      | 100                       | 135                  |                           |   | 35.88                    | 2.36                    | 26.78                  | 43.27                          | 74.00            | -30.73              |
| 1206.58                                                  |                            |                           |                      | 37.50                     | A | 35.88                    | 2.36                    | 26.78                  | 30.77                          | 54.00            | -23.23              |
| 3282.76                                                  | 41.67                      | 100                       | 180                  |                           |   | 35.90                    | 3.91                    | 30.26                  | 39.94                          | 80.00            | -40.06              |
| 3282.76                                                  |                            |                           |                      | 30.50                     | A | 35.90                    | 3.91                    | 30.26                  | 28.77                          | 60.00            | -31.23              |
| 6565.10                                                  | 45.50                      | 100                       | 180                  |                           |   | 36.14                    | 5.83                    | 37.32                  | 52.51                          | 80.00            | -27.49              |
| 6565.10                                                  |                            |                           |                      | 34.17                     | A | 36.14                    | 5.83                    | 37.32                  | 41.18                          | 60.00            | -18.82              |

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AEGIS LABS INC.

## Spurious Radiated Emissions Test Results (Continued)

| RADIATED EMISSIONS - Vertical Antenna Polarization              |                      |                     |                   |                        |   |                    |                   |                  |                          |               |                  |
|-----------------------------------------------------------------|----------------------|---------------------|-------------------|------------------------|---|--------------------|-------------------|------------------|--------------------------|---------------|------------------|
| Freq. (MHz)                                                     | Meter Reading (dBuV) | Antenna Height (cm) | Azimuth (degrees) | Quasi pk or AVG (dBuV) |   | Preamp Factor (dB) | Cable Factor (dB) | Ant. Factor (dB) | Corrected Reading (dBuV) | Limits (dBuV) | Diff (dB) +=FAIL |
| <b>EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)</b>  |                      |                     |                   |                        |   |                    |                   |                  |                          |               |                  |
| 1000.00                                                         | 53.33                | 100                 | 0                 |                        |   | 36.20              | 2.07              | 25.70            | 44.90                    | 74.00         | -29.10           |
| 1000.00                                                         |                      |                     |                   | 36.67                  | A | 36.20              | 2.07              | 25.70            | 28.24                    | 54.00         | -25.76           |
| 1198.08                                                         | 52.67                | 100                 | 90                |                        |   | 35.89              | 2.35              | 26.89            | 46.02                    | 74.00         | -27.98           |
| 1198.08                                                         |                      |                     |                   | 37.00                  | A | 35.89              | 2.35              | 26.89            | 30.35                    | 54.00         | -23.65           |
| 3216.03                                                         | 42.67                | 100                 | 270               |                        |   | 35.77              | 3.89              | 30.44            | 41.23                    | 80.00         | -38.77           |
| 3216.03                                                         |                      |                     |                   | 32.17                  | A | 35.77              | 3.89              | 30.44            | 30.73                    | 60.00         | -29.27           |
| 6432.08                                                         | 50.17                | 100                 | 225               |                        |   | 36.18              | 5.73              | 36.64            | 56.36                    | 80.00         | -23.64           |
| 6432.08                                                         |                      |                     |                   | 45.33                  | A | 36.18              | 5.73              | 36.64            | 51.52                    | 60.00         | -8.48            |
| <b>EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)</b>  |                      |                     |                   |                        |   |                    |                   |                  |                          |               |                  |
| 1000.00                                                         | 52.67                | 100                 | 0                 |                        |   | 36.20              | 2.07              | 25.70            | 44.24                    | 74.00         | -29.76           |
| 1000.00                                                         |                      |                     |                   | 37.00                  | A | 36.20              | 2.07              | 25.70            | 28.57                    | 54.00         | -25.43           |
| 1201.00                                                         | 53.00                | 100                 | 90                |                        |   | 35.89              | 2.35              | 26.91            | 46.37                    | 74.00         | -27.63           |
| 1201.00                                                         |                      |                     |                   | 37.17                  | A | 35.89              | 2.35              | 26.91            | 30.54                    | 54.00         | -23.46           |
| 3249.33                                                         | 44.50                | 100                 | 270               |                        |   | 35.84              | 3.91              | 30.45            | 43.02                    | 80.00         | -36.98           |
| 3249.33                                                         |                      |                     |                   | 32.67                  | A | 35.84              | 3.91              | 30.45            | 31.19                    | 60.00         | -28.81           |
| 6498.55                                                         | 50.67                | 100                 | 225               |                        |   | 36.18              | 5.78              | 36.89            | 57.16                    | 80.00         | -22.84           |
| 6498.55                                                         |                      |                     |                   | 45.00                  | A | 36.18              | 5.78              | 36.89            | 51.49                    | 60.00         | -8.51            |
| <b>EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)</b> |                      |                     |                   |                        |   |                    |                   |                  |                          |               |                  |
| 1000.00                                                         | 52.50                | 100                 | 0                 |                        |   | 36.20              | 2.07              | 25.70            | 44.07                    | 74.00         | -29.93           |
| 1000.00                                                         |                      |                     |                   | 36.50                  | A | 36.20              | 2.07              | 25.70            | 28.07                    | 54.00         | -25.93           |
| 1203.75                                                         | 51.17                | 100                 | 90                |                        |   | 35.88              | 2.36              | 26.92            | 44.57                    | 74.00         | -29.43           |
| 1203.75                                                         |                      |                     |                   | 37.33                  | A | 35.88              | 2.36              | 26.92            | 30.73                    | 54.00         | -23.27           |
| 3282.71                                                         | 43.00                | 100                 | 225               |                        |   | 35.90              | 3.91              | 30.46            | 41.47                    | 80.00         | -38.53           |
| 3282.71                                                         |                      |                     |                   | 31.00                  | A | 35.90              | 3.91              | 30.46            | 29.47                    | 60.00         | -30.53           |
| 6565.22                                                         | 49.00                | 100                 | 225               |                        |   | 36.14              | 5.83              | 37.38            | 56.08                    | 80.00         | -23.92           |
| 6565.22                                                         |                      |                     |                   | 43.00                  | A | 36.14              | 5.83              | 37.38            | 50.08                    | 60.00         | -9.92            |

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AEGIS LABS INC.

## PEAK TRANSMIT POWER

|                       |                                                                                             |                        |                 |
|-----------------------|---------------------------------------------------------------------------------------------|------------------------|-----------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                   | <b>DATE:</b>           | 11/25/03        |
| <b>EUT:</b>           | Notebook Computer                                                                           | <b>PROJECT NUMBER:</b> | INTEL-031125-13 |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                       | <b>TEST ENGINEER:</b>  | Rick Candelas   |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                    | <b>SITE #:</b>         | 2               |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot. | <b>TEMPERATURE:</b>    | 16 C            |
|                       |                                                                                             | <b>HUMIDITY:</b>       | 62% RH          |
|                       |                                                                                             | <b>TIME:</b>           | 7:00 PM         |

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.247(b)(1)                                                      |
| <b>Description:</b> | The maximum peak output power of the intentional radiator shall not exceed 1 watt. |
| <b>Results:</b>     | See Data Sheet                                                                     |

| Peak Transmit Power Limits |                  |
|----------------------------|------------------|
| Frequency (MHz)            | Output Power (W) |
| 2412-2462                  | 1                |

**NOTE:** Channels 1 and 11 were set at approximately 16dBm and Channels 2-10 were set at approximately 17dBm in 802.11b mode. In 802.11g mode Channels 1-11 were set to approximately 16dBm.

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FCC ID: E2K24GBRL



## Peak Transmit Power (Continued)

| Mode    | Channel | Frequency (MHz) | Rate (Mbps) | Conducted Power (dBm) | Cable Factor (dB) | Power Corrected (dBm) | Power (mW) |
|---------|---------|-----------------|-------------|-----------------------|-------------------|-----------------------|------------|
| 802.11b | 1       | 2412            | 16.30       | 0.15                  | 16.45             | 44.16                 | 16.30      |
| 802.11b | 1       | 2412            | 15.25       | 0.15                  | 15.40             | 34.67                 | 15.25      |
| 802.11b | 1       | 2412            | 15.20       | 0.15                  | 15.35             | 34.28                 | 15.20      |
| 802.11b | 2       | 2417            | 17.35       | 0.15                  | 17.50             | 56.23                 | 17.35      |
| 802.11b | 2       | 2417            | 16.40       | 0.15                  | 16.55             | 45.19                 | 16.40      |
| 802.11b | 2       | 2417            | 16.34       | 0.15                  | 16.49             | 44.57                 | 16.34      |
| 802.11b | 6       | 2437            | 17.00       | 0.15                  | 17.15             | 51.88                 | 17.00      |
| 802.11b | 6       | 2437            | 15.80       | 0.15                  | 15.95             | 39.36                 | 15.80      |
| 802.11b | 6       | 2437            | 15.86       | 0.15                  | 16.01             | 39.90                 | 15.86      |
| 802.11b | 10      | 2457            | 16.60       | 0.15                  | 16.75             | 47.32                 | 16.60      |
| 802.11b | 10      | 2457            | 15.50       | 0.15                  | 15.65             | 36.73                 | 15.50      |
| 802.11b | 10      | 2457            | 15.35       | 0.15                  | 15.50             | 35.48                 | 15.35      |
| 802.11b | 11      | 2462            | 16.00       | 0.15                  | 16.15             | 41.21                 | 16.00      |
| 802.11b | 11      | 2462            | 15.21       | 0.15                  | 15.36             | 34.36                 | 15.21      |
| 802.11b | 11      | 2462            | 15.15       | 0.15                  | 15.30             | 33.88                 | 15.15      |
|         |         |                 |             |                       |                   |                       |            |
| 802.11g | 1       | 2412            | 16.29       | 0.15                  | 16.44             | 44.06                 | 16.29      |
| 802.11g | 1       | 2412            | 16.10       | 0.15                  | 16.25             | 42.17                 | 16.10      |
| 802.11g | 1       | 2412            | 15.75       | 0.15                  | 15.90             | 38.90                 | 15.75      |
| 802.11g | 6       | 2437            | 15.95       | 0.15                  | 16.10             | 40.74                 | 15.95      |
| 802.11g | 6       | 2437            | 15.70       | 0.15                  | 15.85             | 38.46                 | 15.70      |
| 802.11g | 6       | 2437            | 15.35       | 0.15                  | 15.50             | 35.48                 | 15.35      |
| 802.11g | 11      | 2462            | 15.70       | 0.15                  | 15.85             | 38.46                 | 15.70      |
| 802.11g | 11      | 2462            | 15.40       | 0.15                  | 15.55             | 35.89                 | 15.40      |
| 802.11g | 11      | 2462            | 15.01       | 0.15                  | 15.16             | 32.81                 | 15.01      |

NOTE: The output power measurement is conducted.



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## 6 dB EMISSIONS BANDWIDTH

|                       |                                                                                             |                        |               |
|-----------------------|---------------------------------------------------------------------------------------------|------------------------|---------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                   | <b>DATE:</b>           | 11/25/03      |
| <b>EUT:</b>           | Notebook Computer                                                                           | <b>PROJECT NUMBER:</b> | INTEL-031125  |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                       | <b>TEST ENGINEER:</b>  | Rick Candelas |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                    | <b>SITE #:</b>         | 2             |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot. | <b>TEMPERATURE:</b>    | 17 C          |
|                       |                                                                                             | <b>HUMIDITY:</b>       | 40% RH        |
|                       |                                                                                             | <b>TIME:</b>           | 9:30 AM       |

|                     |                                                      |
|---------------------|------------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.247(a)(2)                        |
| <b>Description:</b> | The minimum 6dB bandwidth shall be at least 500 kHz. |
| <b>Results:</b>     | See Data Sheets                                      |

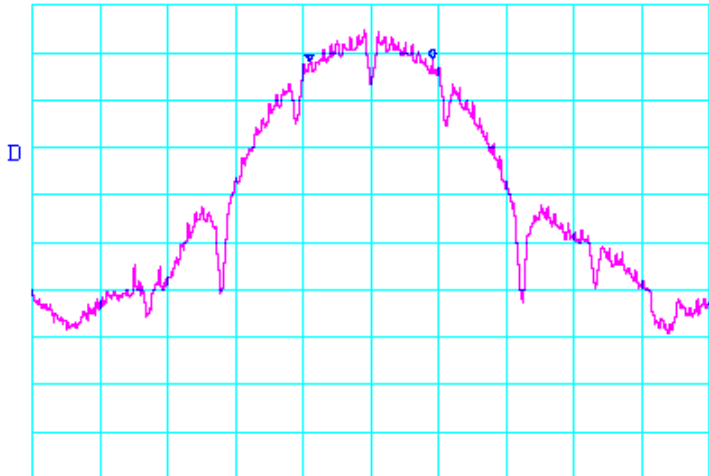
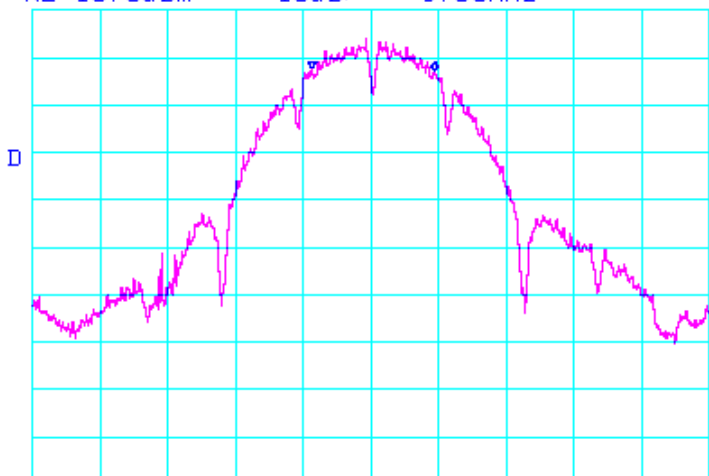
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## 6 dB Emissions Bandwidth (Continued)

### 802.11b Mode

| Test Date                                                                                                                                                                                                                                                                    | Data                             | Test Eng.     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                     | 2.412 GHz<br>(INTEL-031125-02b1) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm<br/>10dB/</div><div>ΔMKR .50dB<br/>9.08MHz</div></div><div>CENTER 2.41200GHz SPAN 50.00MHz<br/>*RBW 100kHz *VBW 300kHz SWP 50.0ms</div></div>    |                                  |               |
| Test Date                                                                                                                                                                                                                                                                    | Data                             | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                     | 2.437 GHz<br>(INTEL-031125-02b2) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm<br/>10dB/</div><div>ΔMKR -.66dB<br/>9.08MHz</div></div><div>CENTER 2.43700GHz SPAN 50.00MHz<br/>*RBW 100kHz *VBW 300kHz SWP 50.0ms</div></div> |                                  |               |

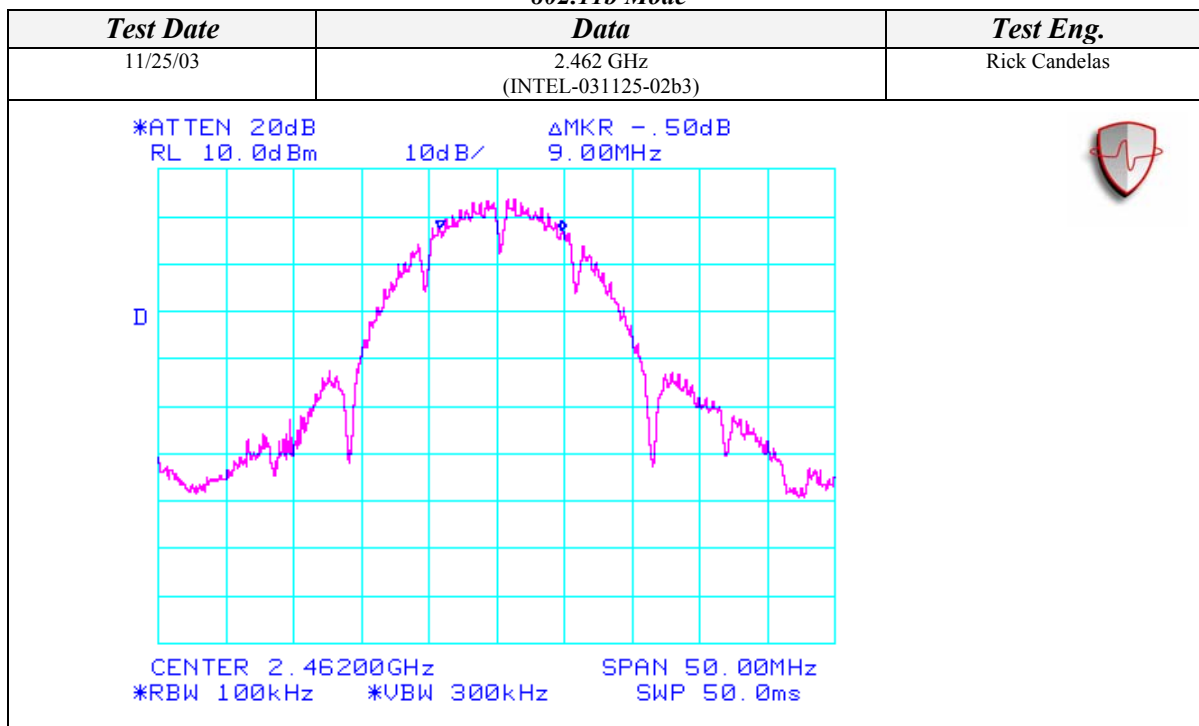
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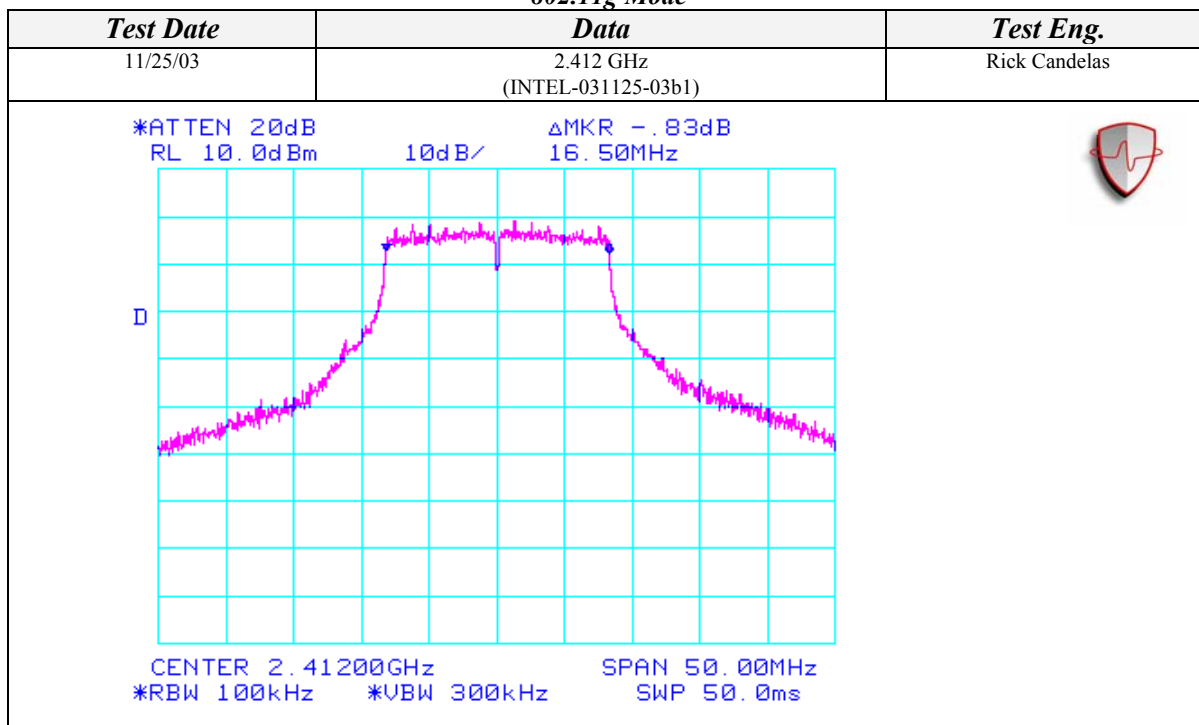
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## 6 dB Emissions Bandwidth (Continued)

### 802.11b Mode



### 802.11g Mode



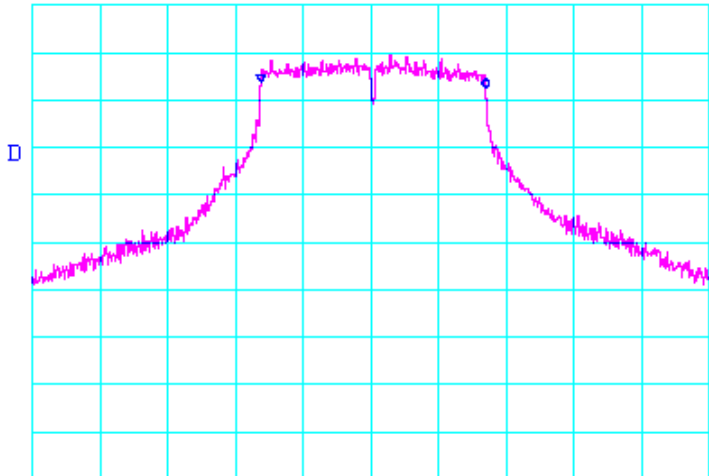
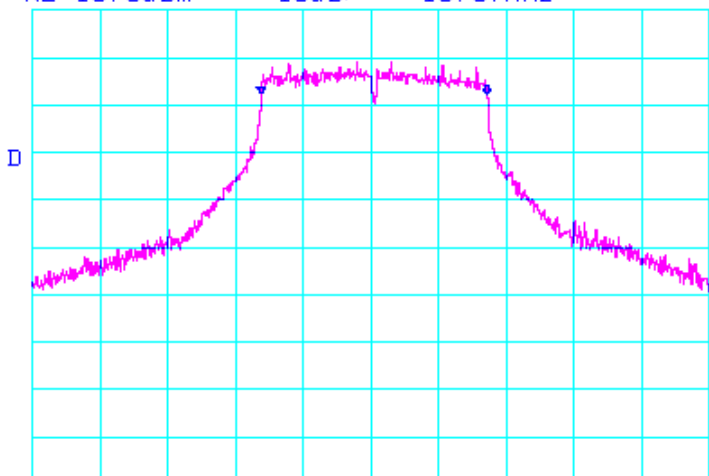
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FCC ID: E2K24GBRL



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## 6 dB Emissions Bandwidth (Continued)

### 802.11g Mode

| Test Date                                                                                                                                                                                                                                                                           | Data                             | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                            | 2.437 GHz<br>(INTEL-031125-03b2) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm</div><div>10dB/</div><div>ΔMKR -1.33dB<br/>16.58MHz</div></div><div>CENTER 2.43700GHz SPAN 50.00MHz<br/>*RBW 100kHz *VBW 300kHz SWP 50.0ms</div></div>  |                                  |               |
| Test Date                                                                                                                                                                                                                                                                           | Data                             | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                            | 2.462 GHz<br>(INTEL-031125-03b3) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm</div><div>10dB/</div><div>ΔMKR -.33dB<br/>16.67MHz</div></div><div>CENTER 2.46200GHz SPAN 50.00MHz<br/>*RBW 100kHz *VBW 300kHz SWP 50.0ms</div></div> |                                  |               |

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## PEAK POWER SPECTRAL DENSITY

|                       |                                                                                             |                        |               |
|-----------------------|---------------------------------------------------------------------------------------------|------------------------|---------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                   | <b>DATE:</b>           | 11/25/03      |
| <b>EUT:</b>           | Notebook Computer                                                                           | <b>PROJECT NUMBER:</b> | INTEL-031125  |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                       | <b>TEST ENGINEER:</b>  | Rick Candelas |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                    | <b>SITE #:</b>         | 2             |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot. | <b>TEMPERATURE:</b>    | 17 C          |
|                       |                                                                                             | <b>HUMIDITY:</b>       | 40% RH        |
|                       |                                                                                             | <b>TIME:</b>           | 9:30 AM       |

|                     |                                                                                                                                                                                              |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.247(d)                                                                                                                                                                   |
| <b>Description:</b> | The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3 kHz band during any time interval of continuous transmission. |
| <b>Results:</b>     | See Data Sheets                                                                                                                                                                              |

| Peak Power Spectral Density Limits |             |
|------------------------------------|-------------|
| Frequency (MHz)                    | Limit (dBm) |
| 2412-2462                          | 8           |

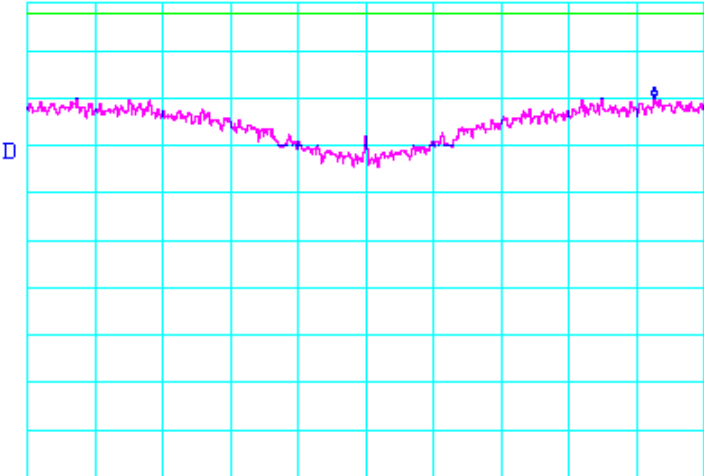
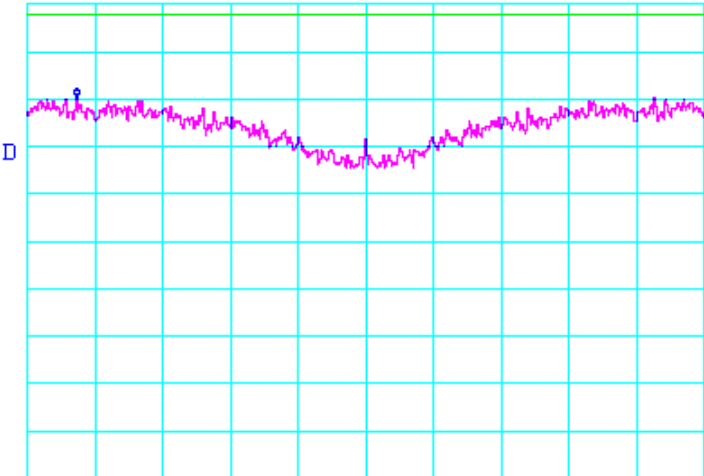
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## Peak Power Spectral Density (Continued)

### 802.11b Mode

| Test Date                                                                                                                                                                                                                                                                                 | Data                             | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                  | 2.412 GHz<br>(INTEL-031125-02d1) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm</div><div>10dB/</div><div>MKR -9.83dBm<br/>2.412640GHz</div></div><div>CENTER 2.412000GHz SPAN 1.500MHz<br/>*RBW 3.0kHz *VBW 3.0kHz *SWP 500sec</div></div>   |                                  |               |
| Test Date                                                                                                                                                                                                                                                                                 | Data                             | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                  | 2.437 GHz<br>(INTEL-031125-02d2) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm</div><div>10dB/</div><div>MKR -9.67dBm<br/>2.436360GHz</div></div><div>CENTER 2.437000GHz SPAN 1.500MHz<br/>*RBW 3.0kHz *VBW 3.0kHz *SWP 500sec</div></div> |                                  |               |

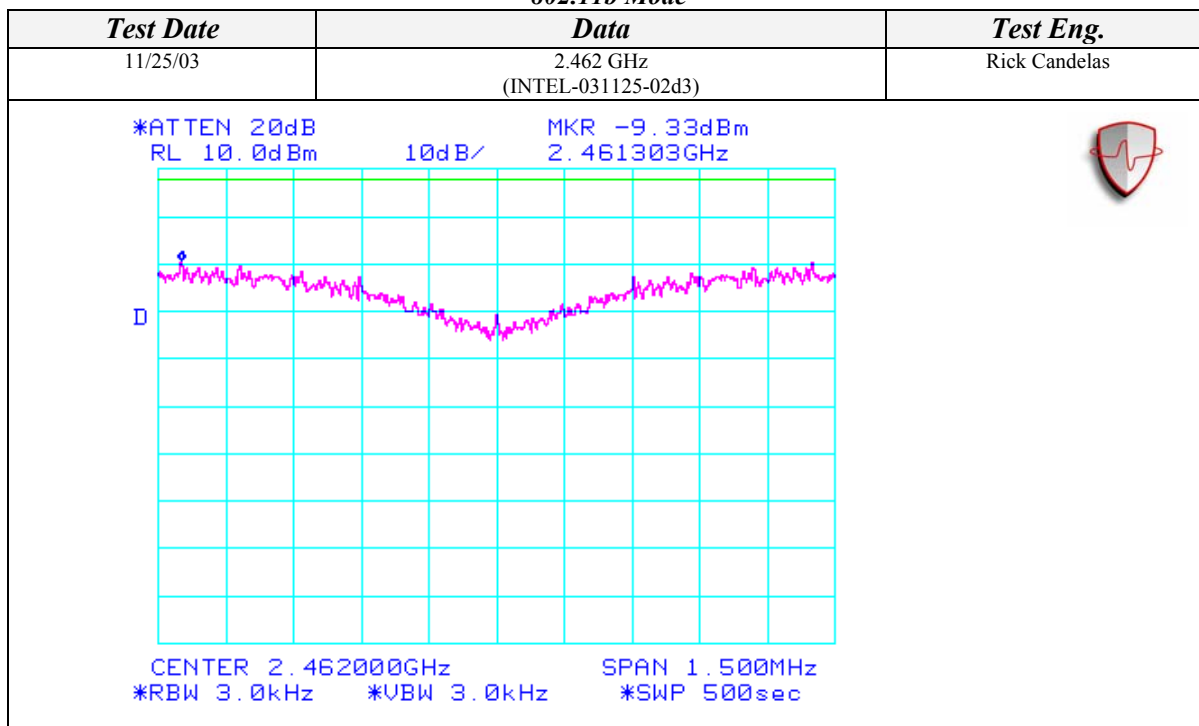
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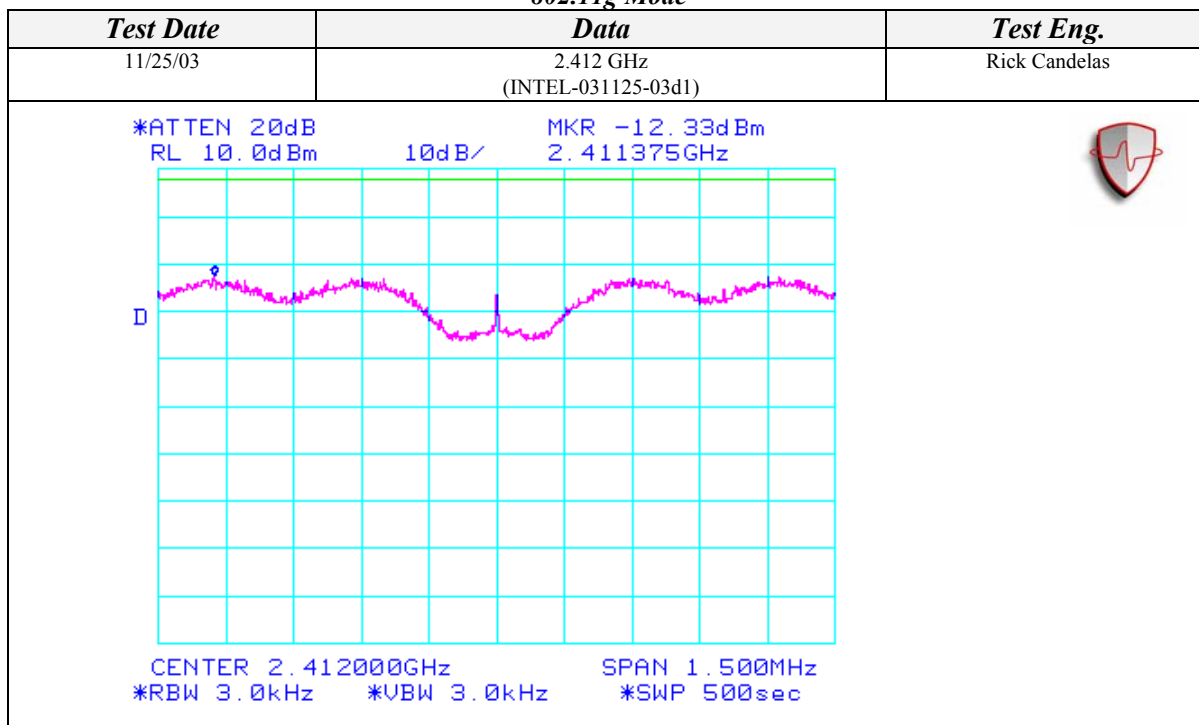
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## Peak Power Spectral Density (Continued)

### 802.11b Mode



### 802.11g Mode



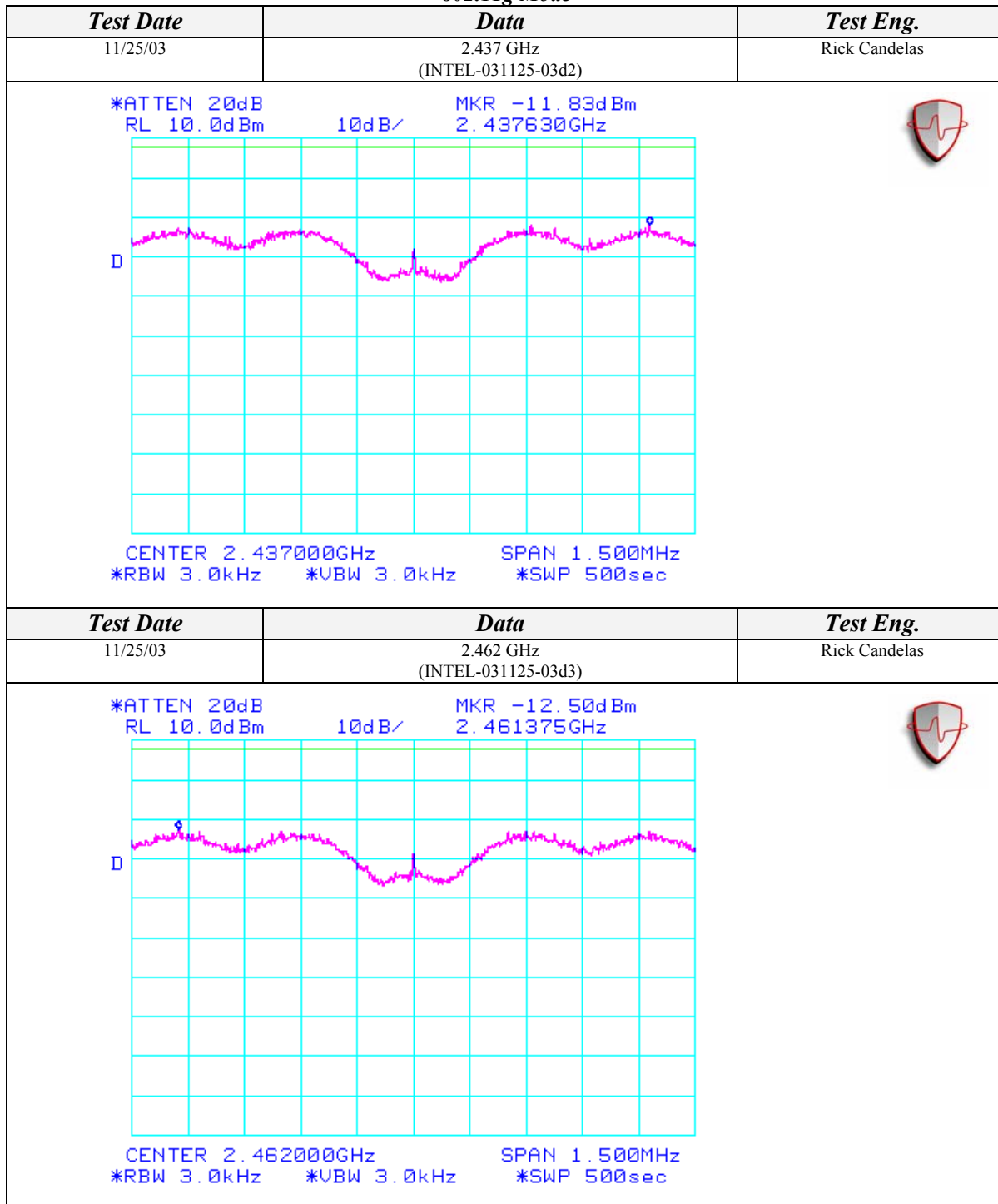
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## Peak Power Spectral Density (Continued)

### 802.11g Mode



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## CONDUCTED OUT OF BAND EMISSIONS

|                       |                                                                                             |                        |               |
|-----------------------|---------------------------------------------------------------------------------------------|------------------------|---------------|
| <b>CLIENT:</b>        | Dell Computer Corporation                                                                   | <b>DATE:</b>           | 11/25/03      |
| <b>EUT:</b>           | Notebook Computer                                                                           | <b>PROJECT NUMBER:</b> | INTEL-031125  |
| <b>MODEL NUMBER:</b>  | PP05L                                                                                       | <b>TEST ENGINEER:</b>  | Rick Candelas |
| <b>SERIAL NUMBER:</b> | CN-0C3038-48643-3AD-9430                                                                    | <b>SITE #:</b>         | 2             |
| <b>CONFIGURATION:</b> | Tested with an Intel PRO/Wireless 2200BG Network Connection installed in its mini PCI slot. | <b>TEMPERATURE:</b>    | 17 C          |
|                       |                                                                                             | <b>HUMIDITY:</b>       | 40% RH        |
|                       |                                                                                             | <b>TIME:</b>           | 9:30 AM       |

|                     |                                                                                                                                                                                                                                                                                                                              |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standard:</b>    | FCC CFR 47, Part 15.407(b)(1) and 15.407(b)(2)                                                                                                                                                                                                                                                                               |
| <b>Description:</b> | In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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 the desired power. |

| Test Results Summary |                         |                 |           |
|----------------------|-------------------------|-----------------|-----------|
| Plot                 | Channel Frequency (MHz) | Data            | Results   |
| INTEL-031125-04e01   | 2412                    | 30MHz – 2GHz    | See Plots |
| INTEL-031125-04e02   |                         | 2GHz – 10GHz    | See Plots |
| INTEL-031125-04e03   |                         | 10GHz – 20GHz   | See Plots |
| INTEL-031125-04e04   |                         | 20GHz – 26.5GHz | See Plots |
| INTEL-031125-04e05   | 2437                    | 30MHz – 2GHz    | See Plots |
| INTEL-031125-04e06   |                         | 2GHz – 10GHz    | See Plots |
| INTEL-031125-04e07   |                         | 10GHz – 20GHz   | See Plots |
| INTEL-031125-04e08   |                         | 20GHz – 26.5GHz | See Plots |
| INTEL-031125-04e09   | 2462                    | 30MHz – 2GHz    | See Plots |
| INTEL-031125-04e10   |                         | 2GHz – 10GHz    | See Plots |
| INTEL-031125-04e11   |                         | 10GHz – 20GHz   | See Plots |
| INTEL-031125-04e12   |                         | 20GHz – 26.5GHz | See Plots |

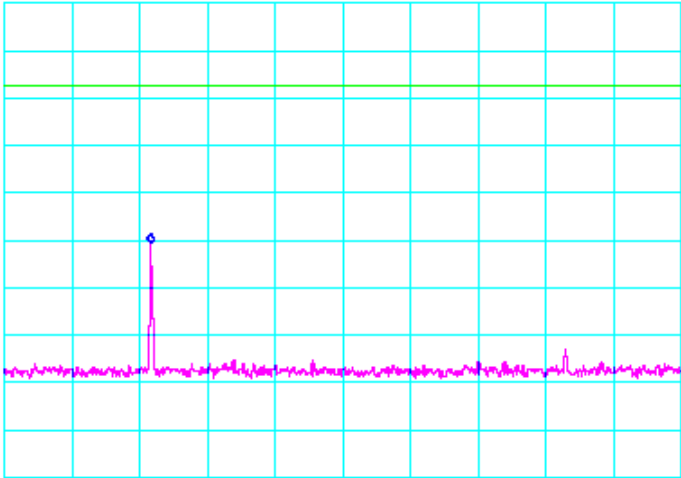
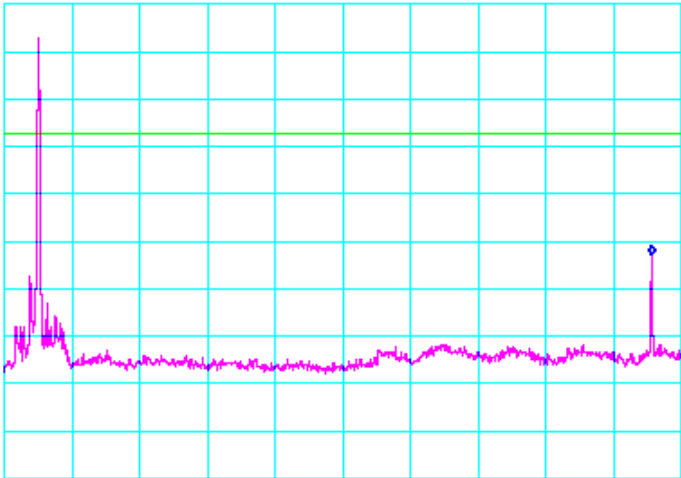
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## Conducted Out Of Band Emissions (Continued)

### 802.11b Mode

| Test Date                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                        | 2.412 GHz<br>(INTEL-031125-02e01) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -50.67dBm<br/>457MHz</div></div><div>START 30MHz      STOP 2.000GHz<br/>*RBW 100kHz    *VBW 300kHz    SWP 1.10sec</div></div>            |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                        | 2.412 GHz<br>(INTEL-031125-02e02) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm</div><div>10dB/</div><div>MKR -42.83dBm<br/>9.653GHz</div></div><div>START 2.000GHz      STOP 10.000GHz<br/>*RBW 100kHz    *VBW 300kHz    SWP 4.40sec</div></div> |                                   |               |

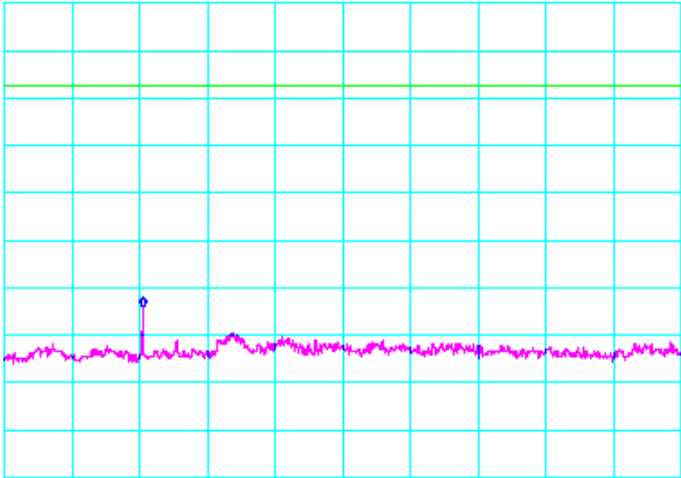
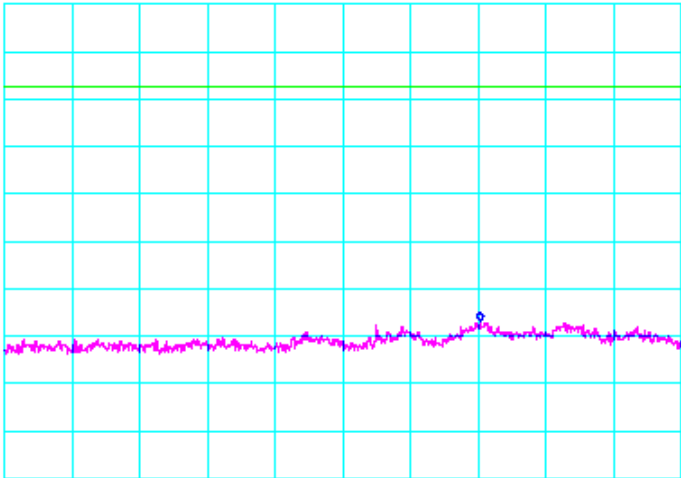
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## Conducted Out Of Band Emissions (Continued)

### 802.11b Mode

| Test Date                                                                                                                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                        | 2.412 GHz<br>(INTEL-031125-02e03) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -64.00dBm<br/>12.05GHz</div></div><div></div><div>START 10.00GHz STOP 20.00GHz<br/>*RBW 100kHz *VBW 300kHz SWP 5.50sec</div></div> <div></div>        |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                        | 2.412 GHz<br>(INTEL-031125-02e04) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -66.83dBm<br/>24.572GHz</div></div><div></div><div>START 20.000GHz STOP 26.500GHz<br/>*RBW 100kHz *VBW 300kHz SWP 3.60sec</div></div> <div></div> |                                   |               |

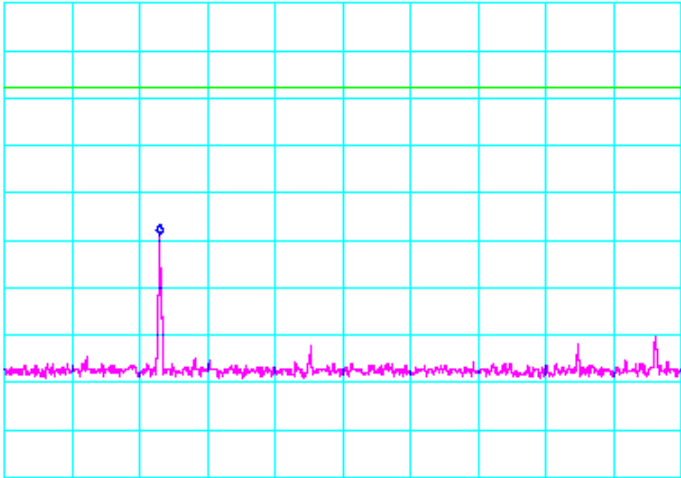
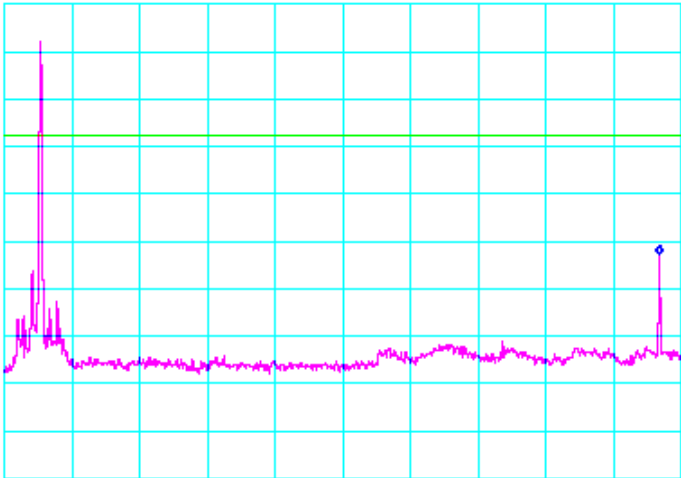
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## Conducted Out Of Band Emissions (Continued)

### 802.11b Mode

| Test Date                                                                                                                                                                                                                                                                                                  | Data                              | Test Eng.     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                                   | 2.437 GHz<br>(INTEL-031125-02e05) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -48.83dBm<br/>483MHz</div></div><div></div><div>START 30MHz      STOP 2.000GHz<br/>*RBW 100kHz    *VBW 300kHz    SWP 1.10sec</div></div>            |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                                  | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                                   | 2.437 GHz<br>(INTEL-031125-02e06) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm</div><div>10dB/</div><div>MKR -42.83dBm<br/>9.747GHz</div></div><div></div><div>START 2.000GHz      STOP 10.000GHz<br/>*RBW 100kHz    *VBW 300kHz    SWP 4.40sec</div></div> |                                   |               |

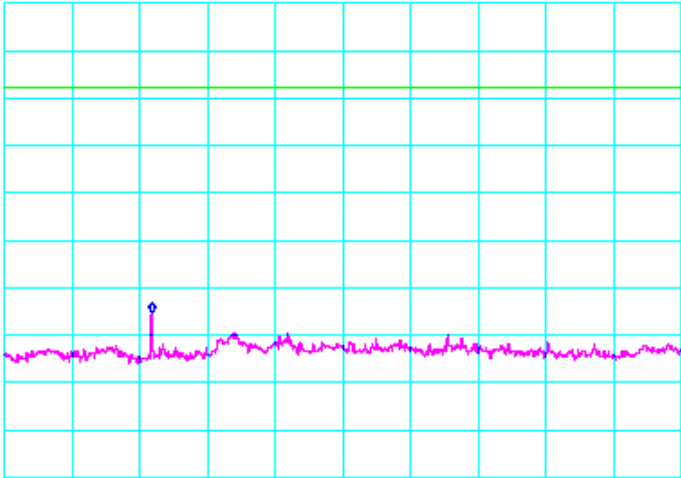
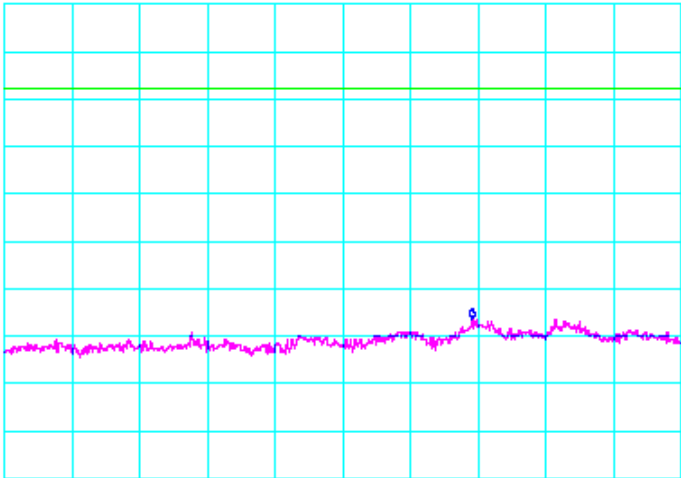
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## Conducted Out Of Band Emissions (Continued)

### 802.11b Mode

| Test Date                                                                                                                                                                                                                                                                                          | Data                              | Test Eng.     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                           | 2.437 GHz<br>(INTEL-031125-02e07) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -65.17dBm<br/>12.18GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div>      |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                          | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                           | 2.437 GHz<br>(INTEL-031125-02e08) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -66.33dBm<br/>24.496GHz</div></div><div>START 20.000GHz      STOP 26.500GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 3.60sec</div></div> |                                   |               |

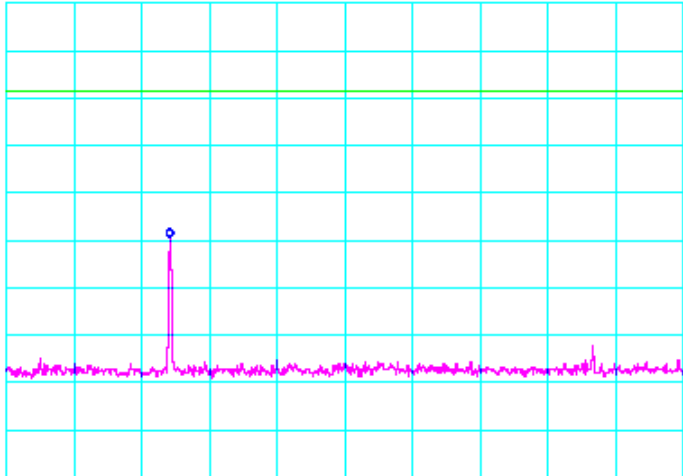
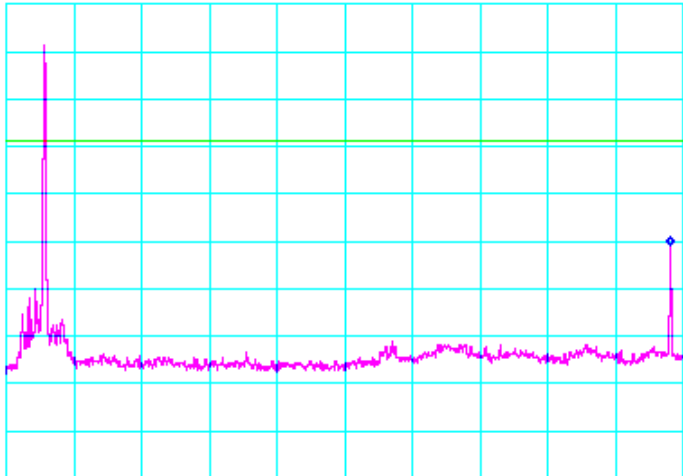
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## Conducted Out Of Band Emissions (Continued)

### 802.11b Mode

| Test Date                                                                                                                                                                                                                                                                                 | Data                              | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                  | 2.462 GHz<br>(INTEL-031125-02e09) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm<br/>10dB/</div><div>MKR -49.50dBm<br/>506MHz</div></div><div></div><div>START 30MHz STOP 2.000GHz<br/>*RBW 100kHz *VBW 300kHz SWP 1.10sec</div></div>            |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                 | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                  | 2.462 GHz<br>(INTEL-031125-02e10) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm<br/>10dB/</div><div>MKR -41.00dBm<br/>9.853GHz</div></div><div></div><div>START 2.000GHz STOP 10.000GHz<br/>*RBW 100kHz *VBW 300kHz SWP 4.40sec</div></div> |                                   |               |

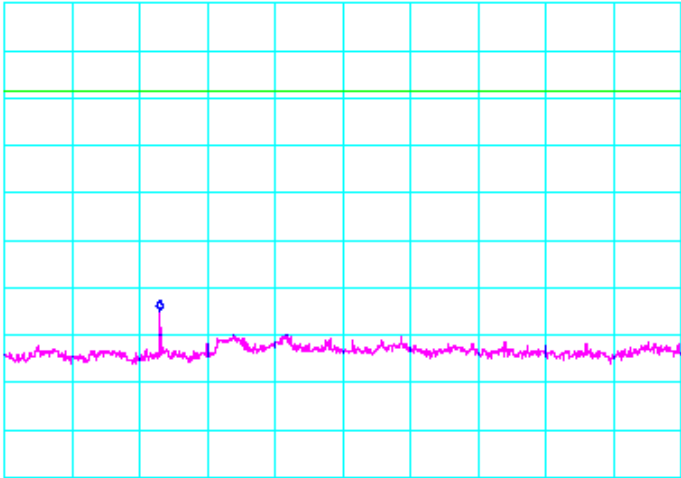
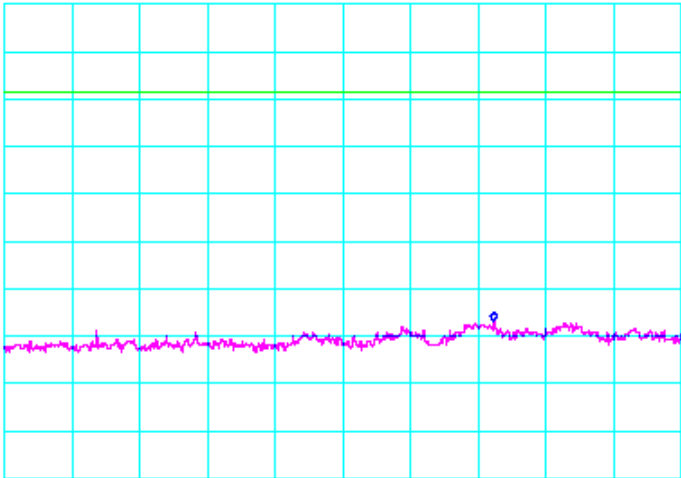
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## Conducted Out Of Band Emissions (Continued)

### 802.11b Mode

| Test Date                                                                                                                                                                                                                                                                                                                                                                            | Data                              | Test Eng.     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                             | 2.462 GHz<br>(INTEL-031125-02e11) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -64.83dBm<br/>12.30GHz</div></div><div>START 10.00GHz STOP 20.00GHz<br/>*RBW 100kHz *VBW 300kHz SWP 5.50sec</div></div> <div></div>        |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                                                                                                            | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                             | 2.462 GHz<br>(INTEL-031125-02e12) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -66.83dBm<br/>24.702GHz</div></div><div>START 20.000GHz STOP 26.500GHz<br/>*RBW 100kHz *VBW 300kHz SWP 3.60sec</div></div> <div></div> |                                   |               |

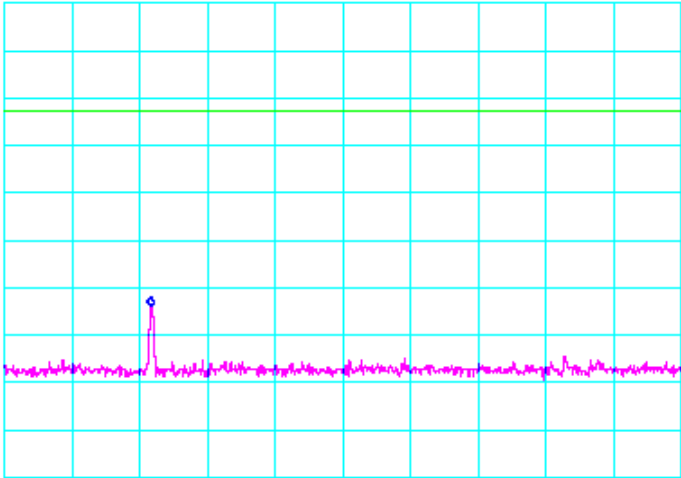
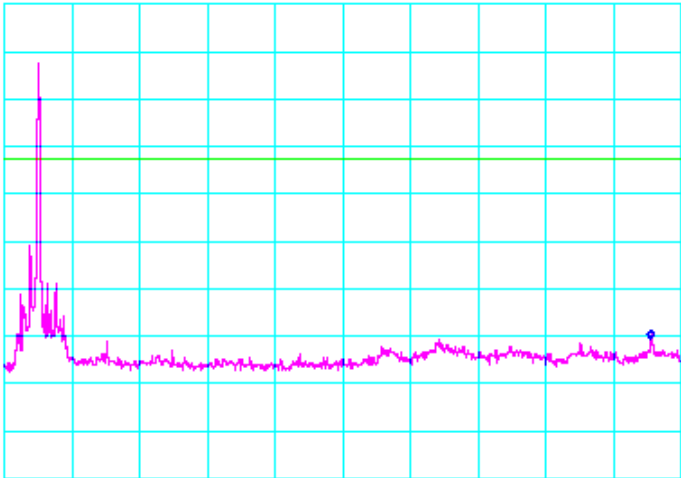
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## Conducted Out Of Band Emissions (Continued)

### 802.11g Mode

| Test Date                                                                                                                                                                                                                                                                                                                                                                                        | Data                              | Test Eng.     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                         | 2.412 GHz<br>(INTEL-031125-03e01) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -64.00dBm<br/>457MHz</div></div><div>START 30MHz      STOP 2.000GHz<br/>*RBW 100kHz    *VBW 300kHz    SWP 1.10sec</div></div> <div></div>              |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                                                                                                                        | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                         | 2.412 GHz<br>(INTEL-031125-03e02) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm</div><div>10dB/</div><div>MKR -60.67dBm<br/>9.640GHz</div></div><div>START 2.000GHz      STOP 10.000GHz<br/>*RBW 100kHz    *VBW 300kHz    SWP 4.40sec</div></div> <div></div> |                                   |               |

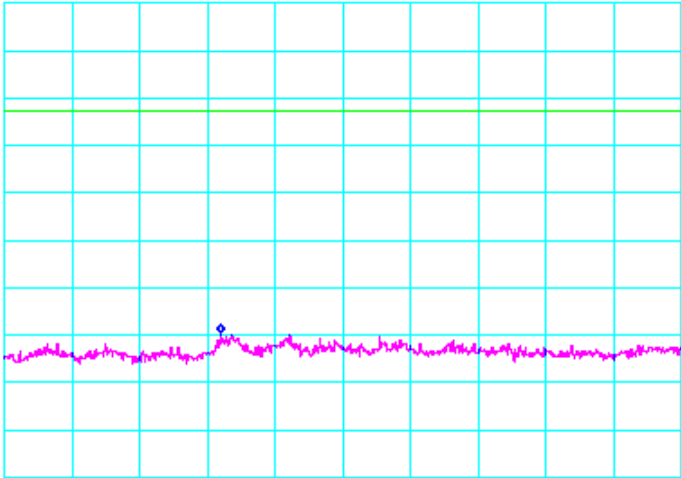
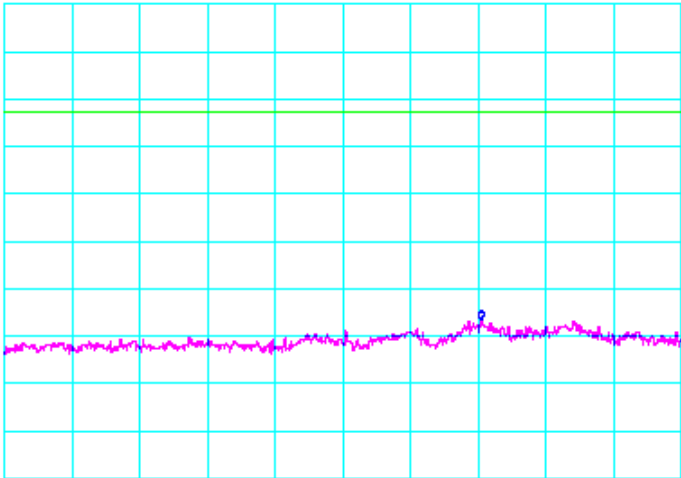
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## Conducted Out Of Band Emissions (Continued)

### 802.11g Mode

| Test Date                                                                                                                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                        | 2.412 GHz<br>(INTEL-031125-03e03) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -69.67dBm<br/>13.20GHz</div></div><div></div><div>START 10.00GHz STOP 20.00GHz<br/>*RBW 100kHz *VBW 300kHz SWP 5.50sec</div></div> <div></div>        |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                        | 2.412 GHz<br>(INTEL-031125-03e04) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -66.50dBm<br/>24.583GHz</div></div><div></div><div>START 20.000GHz STOP 26.500GHz<br/>*RBW 100kHz *VBW 300kHz SWP 3.60sec</div></div> <div></div> |                                   |               |

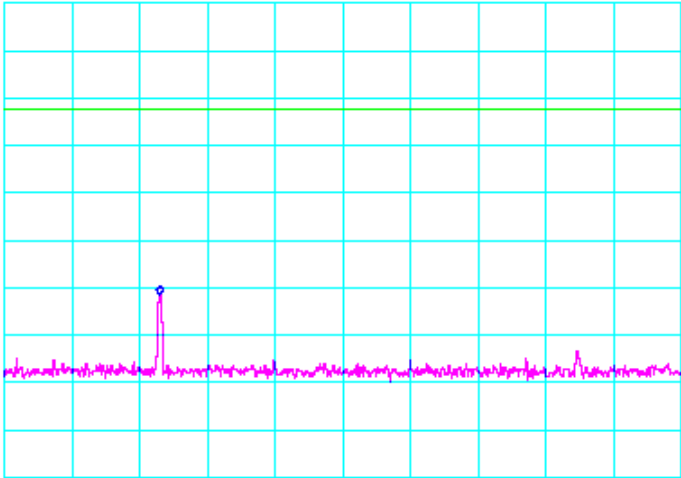
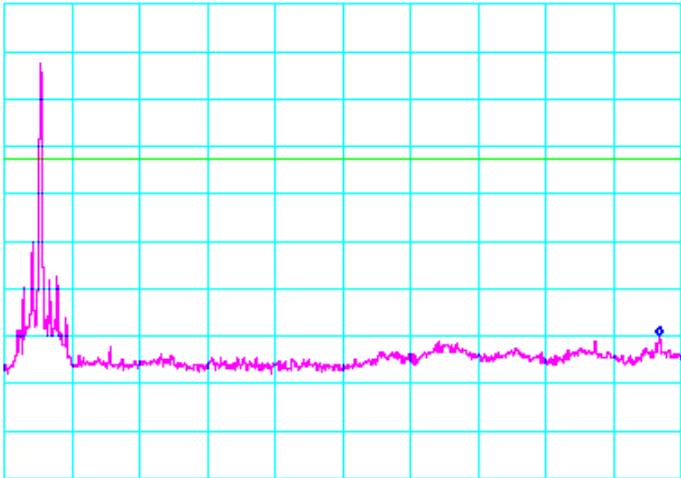
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## Conducted Out Of Band Emissions (Continued)

### 802.11g Mode

| Test Date                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                        | 2.437 GHz<br>(INTEL-031125-03e05) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -61.50dBm<br/>483MHz</div></div><div>START 30MHz      STOP 2.000GHz<br/>*RBW 100kHz    *VBW 300kHz    SWP 1.10sec</div></div>            |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                        | 2.437 GHz<br>(INTEL-031125-03e06) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm</div><div>10dB/</div><div>MKR -60.00dBm<br/>9.747GHz</div></div><div>START 2.000GHz      STOP 10.000GHz<br/>*RBW 100kHz    *VBW 300kHz    SWP 4.40sec</div></div> |                                   |               |

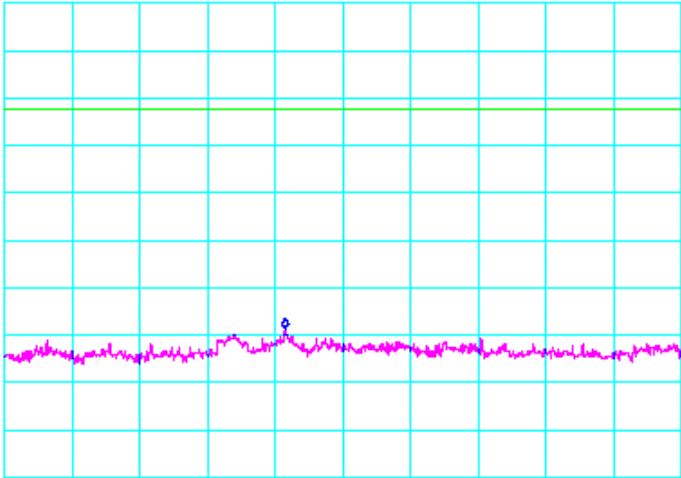
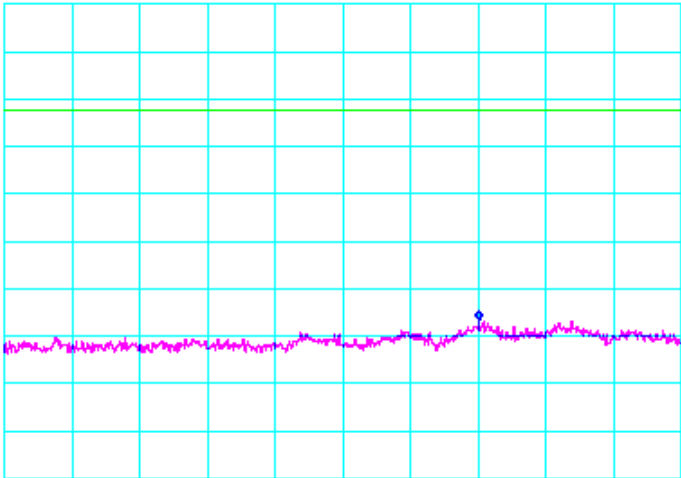
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## Conducted Out Of Band Emissions (Continued)

### 802.11g Mode

| Test Date                                                                                                                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                        | 2.437 GHz<br>(INTEL-031125-03e07) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -68.67dBm<br/>14.15GHz</div></div><div></div><div>START 10.00GHz STOP 20.00GHz<br/>*RBW 100kHz *VBW 300kHz SWP 5.50sec</div></div> <div></div>        |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                                                                                                                       | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                        | 2.437 GHz<br>(INTEL-031125-03e08) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -66.67dBm<br/>24.561GHz</div></div><div></div><div>START 20.000GHz STOP 26.500GHz<br/>*RBW 100kHz *VBW 300kHz SWP 3.60sec</div></div> <div></div> |                                   |               |

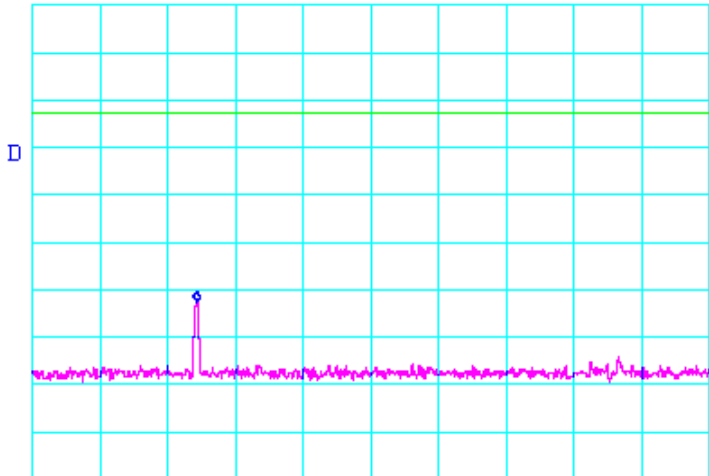
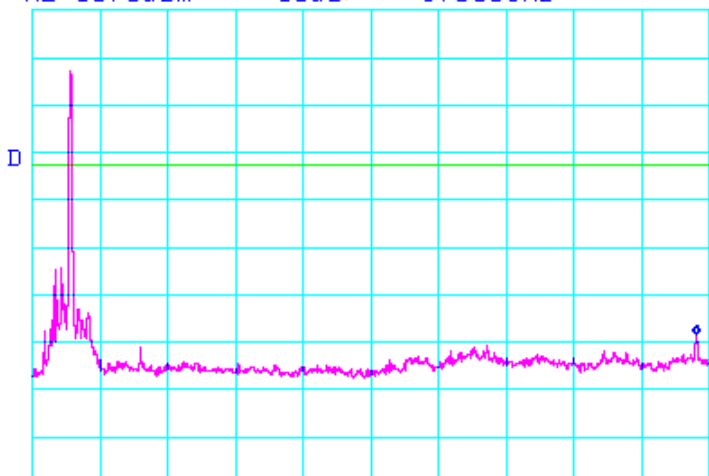
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## Conducted Out Of Band Emissions (Continued)

### 802.11g Mode

| Test Date                                                                                                                                                                                                                                                                                                                                                                                         | Data                              | Test Eng.     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                          | 2.462 GHz<br>(INTEL-031125-03e09) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm<br/>10dB/</div><div>MKR -62.50dBm<br/>509MHz</div></div><div>START 30MHz<br/>*RBW 100kHz</div><div>STOP 2.000GHz<br/>*VBW 300kHz<br/>SWP 1.10sec</div></div> <div></div>              |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                                                                                                                         | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                                                                                                                          | 2.462 GHz<br>(INTEL-031125-03e10) | Rick Candelas |
| <div><div><div>*ATTEN 20dB<br/>RL 10.0dBm<br/>10dB/</div><div>MKR -58.50dBm<br/>9.853GHz</div></div><div>START 2.000GHz<br/>*RBW 100kHz</div><div>STOP 10.000GHz<br/>*VBW 300kHz<br/>SWP 4.40sec</div></div> <div></div> |                                   |               |

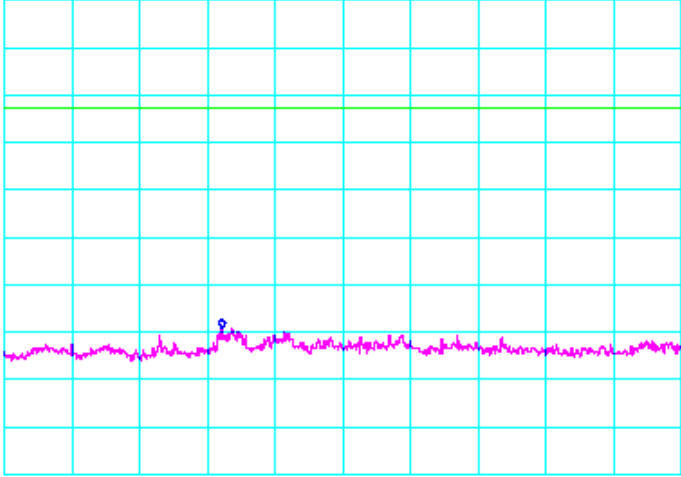
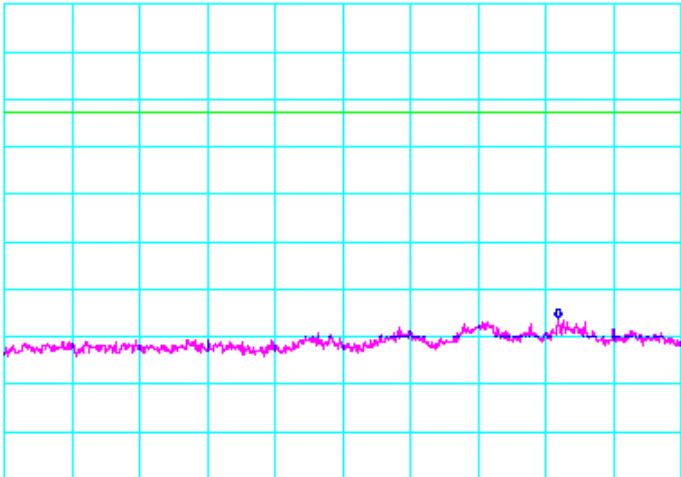
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## Conducted Out Of Band Emissions (Continued)

### 802.11g Mode

| Test Date                                                                                                                                                                                                                                                                                          | Data                              | Test Eng.     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|
| 11/25/03                                                                                                                                                                                                                                                                                           | 2.462 GHz<br>(INTEL-031125-03e11) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -69.17dBm<br/>13.22GHz</div></div><div>START 10.00GHz      STOP 20.00GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 5.50sec</div></div>      |                                   |               |
| Test Date                                                                                                                                                                                                                                                                                          | Data                              | Test Eng.     |
| 11/25/03                                                                                                                                                                                                                                                                                           | 2.462 GHz<br>(INTEL-031125-03e12) | Rick Candelas |
| <div><div><div>*ATTEN 10dB<br/>RL 0dBm</div><div>10dB/</div><div>MKR -66.17dBm<br/>25.319GHz</div></div><div>START 20.000GHz      STOP 26.500GHz<br/>*RBW 100kHz      *VBW 300kHz      SWP 3.60sec</div></div> |                                   |               |

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