



AEGIS LABS INC.



Class II Permissive Change
Test Report
And Application for Grant of Equipment Authorization

Pertaining To:

EUT	FCC ID:
Latitude D400 Notebook Computer, MN: PPT	E2K5HCKT

Configuration
Tested with an Intel PRO/Wireless 2915ABG Network Connection, MN: WM3A2915ABG
With a set of Wistron NeWeb Corp. Antennas

MEASUREMENTS PERFORMED IN ACCORDANCE WITH

Regulatory Standard(s)

47 CFR Part 15, Subpart C Section 15.247

Test Method:

ANSI C63.4: 2001 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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Test Report #: INTEL-040930F
Test Report Revision: Rev. A, 12-29-04

	REPORT BODY	APPENDICES	TOTAL PAGES
PAGES	18	A	121

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*Page 1 of 18
Report Number: INTEL-040930F
FCC ID: E2K5HCKT*



AEGIS LABS INC.

TABLE OF CONTENTS

SECTION	TITLE	PAGE
	COVER SHEET.....	01
	TABLE OF CONTENTS.....	02
1.0	CERTIFICATION OF TEST DATA.....	03
2.0	SUMMARY OF TEST RESULTS.....	06
3.0	ADMINISTRATIVE DATA AND TEST DESCRIPTION.....	07
4.0	DESCRIPTION OF EUT.....	08
4.1	EUT Description.....	08
4.1.1	Channel Number and Frequencies.....	09
4.2	EUT Configuration.....	10
4.3	List of EUT Sub-Assemblies and Host Equipment.....	11
4.4	I/O Cabling Diagram and Description.....	12
5.0	TEST EQUIPMENT AND TEST SETUPS.....	13
5.1	AC Power Line Conducted Emissions.....	13
5.2	Spurious Radiated Emissions.....	14
5.3	Conducted Emissions At The Antenna Port.....	14
5.4	Test and Measurement Equipment Used.....	15
6.0	SAMPLE CALCULATIONS.....	16
7.0	MODIFICATIONS AND RECOMMENDATIONS.....	18

APPENDICES

A

Test Data

Page 2 of 18
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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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:

10/14/04

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Aegis Labs, Inc.

Report Approved By:

10/14/04

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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.

802.11a Mode (5745-5825 MHz)

EMISSIONS STANDARD			
FCC Part 15 Section	Description	Results	Comments
15.247(a)(2)	The minimum 6dB bandwidth shall be at least 500 kHz.	PASSED	5745 MHz = 16.00 MHz 5785 MHz = 16.25 MHz 5825 MHz = 16.17 MHz
15.247(b)(1)	The maximum peak output power of the intentional radiator shall not exceed 1 watt.	PASSED	5745 MHz = 20.90 dBm = 123.03 mW 5785 MHz = 21.00 dBm = 125.89 mW 5825 MHz = 21.01 dBm = 126.18 mW
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 Report
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	5745 MHz = -11.33 dB 5785 MHz = -11.50 dB 5825 MHz = -11.33 dB
15.207	AC Conducted Emissions	PASSED	See Data Sheet
15.209	Radiated Emissions (30-1000 MHz)	PASSED	See Data Sheet



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2.0 Summary of Test Results (Continued)

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.

802.11b Mode (2412-2462 MHz)

EMISSIONS STANDARD			
FCC Part 15 Section	Description	Results	Comments
15.247(a)(2)	The minimum 6dB bandwidth shall be at least 500 kHz.	PASSED	2412 MHz = 10.00 MHz 2437 MHz = 10.08 MHz 2462 MHz = 9.67 MHz
15.247(b)(1)	The maximum peak output power of the intentional radiator shall not exceed 1 watt.	PASSED	2412 MHz = 17.55 dBm = 56.89 mW 2437 MHz = 19.20 dBm = 83.18 mW 2462 MHz = 19.40 dBm = 87.10 mW
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 Report
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	2412 MHz = -8.00 dB 2437 MHz = -6.67 dB 2462 MHz = -7.17 dB
15.207	AC Conducted Emissions	PASSED	See Data Sheet
15.209	Radiated Emissions (30-1000 MHz)	PASSED	See Data Sheet



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2.0 Summary of Test Results (Continued)

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.

802.11g Mode (2412-2462 MHz)

EMISSIONS STANDARD

FCC Part 15 Section	Description	Results	Comments
15.247(a)(2)	The minimum 6dB bandwidth shall be at least 500 kHz.	PASSED	2412 MHz = 16.25 MHz 2437 MHz = 16.08 MHz 2462 MHz = 15.58 MHz
15.247(b)(1)	The maximum peak output power of the intentional radiator shall not exceed 1 watt.	PASSED	2412 MHz = 23.75 dBm = 237.14 mW 2437 MHz = 24.15 dBm = 260.02 mW 2462 MHz = 24.00 dBm = 251.19 mW
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 Report
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	2412 MHz = -10.00 dB 2437 MHz = -10.33 dB 2462 MHz = -9.83 dB
15.207	AC Conducted Emissions	PASSED	See Data Sheet
15.209	Radiated Emissions (30-1000 MHz)	PASSED	See Data Sheet

Page 6 of 18
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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3.0 ADMINISTRATIVE DATA AND TEST DESCRIPTION

DEVICE TESTED:	ITE Type: Latitude D400 Notebook Computer Model Number(s): PPT Serial Number: 8142Y010093260105DM000 FCC ID: E2K5HCKT
TEST DATE(S):	September 30-October 7, 2004
DATE EUT RECEIVED:	September 30, 2004
ORIGIN OF TEST SAMPLE(S):	Production Unit
RESPONSIBLE PARTY:	Dell Computer Corporation One Dell Way Round Rock, TX 78682
CLIENT CONTACT:	Mr. Jason Limoges
MANUFACTURER:	Dell Computer Corporation
TEST LOCATION:	Aegis Labs, Inc. 32231 Trabuco Creek Road Trabuco Canyon, CA 92678 Conducted Site #2 Radiated Site #2
A2LA CERTIFICATE:	1111.01, Valid through February 28, 2006
PURPOSE OF TEST:	To demonstrate compliance with the relevant standards described in Section 2.0 of this report.
TEST(S) PERFORMED:	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.

Page 7 of 18
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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4.0 DESCRIPTION OF EUT

4.1 EUT Description

Equipment Under Test (EUT)

Trade Name:	Latitude D400 Notebook Computer
Model Number:	PPT tested with an Intel PRO/Wireless 2915ABG Network Connection, MN: WM3A2915ABG
Frequency Range:	802.11a = 5745 – 5825 MHz 802.11b/g = 2412 – 2462MHz
Type of Transmission:	Direct Sequence Spread Spectrum
Transfer Rate:	1/5.5/11 Mbps for 802.11b mode 6/36/54 Mbps for 802.11g and 802.11a modes
Number of Channels:	802.11a mode (5725-5850 MHz) = 5 802.11b mode (2400-2483.5 MHz) = 11 802.11g mode (2400-2483.5 MHz)= 11
Modulation Type:	DBPSK, DQPSK, CCK, OFDM
Antenna Type:	PIFA (Main), PIFA (Aux)
Antenna Gain (See Note 2):	Wistron: 2.4 GHz = 2.59dBi 5 GHz = 4.09 dBi
Transmit Output Power:	21 dBm (Typical) for 802.11a mode 17 - 19 dBm (Typical) for 802.11b mode 24 dBm (Typical) for 802.11g mode Please see Appendix A (Data Sheets) for actual output power.
Power Supply:	3.3VDC from computer MPCI slot.
Number of External Test Ports Exercised:	2 Antenna Ports (1 Main & 1 Auxiliary)

The Latitude | D400 Notebook Computer was tested with an Intel PRO/Wireless 2915ABG 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 52 Mbps.

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

NOTE 2: The EUT was tested with a set of antennas. (Refer to the antenna specifications exhibits).



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4.1.1 Channel Number and Frequencies

802.11a Mode		802.11b Mode		802.11g Mode	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	1	2412	1	2412
153	5765	2	2417	2	2417
157	5785	3	2422	3	2422
161	5805	4	2427	4	2427
165	5825	5	2432	5	2432
		6	2437	6	2437
		7	2442	7	2442
		8	2447	8	2447
		9	2452	9	2452
		10	2457	10	2457
		11	2462	11	2462

Page 9 of 18
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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4.2 EUT Configuration

The EUT was tested with an Intel PRO/Wireless 2915ABG 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.

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

The low, middle, and high channels were tested in 802.11a, b, & 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 placed in either continuous transmit or continuous receive mode by a program provided by the manufacturer (*CRTU Version 3.2.14.0000*).

Page 10 of 18
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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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
Latitude D400 Notebook Computer	Dell Computer Corporation	PPT	8142Y0100932 60105DM000
EUT Sub-Assemblies			
Intel PRO/Wireless 2915ABG Network Connection	Intel Corporation	WM3A2915ABG	000E35344050
Auxiliary Triple Band Antenna	Wistron NeWeb Corp.	CAB-A	N/A
Main Triple Band Antenna	Wistron NeWeb Corp.	CAB-A	N/A

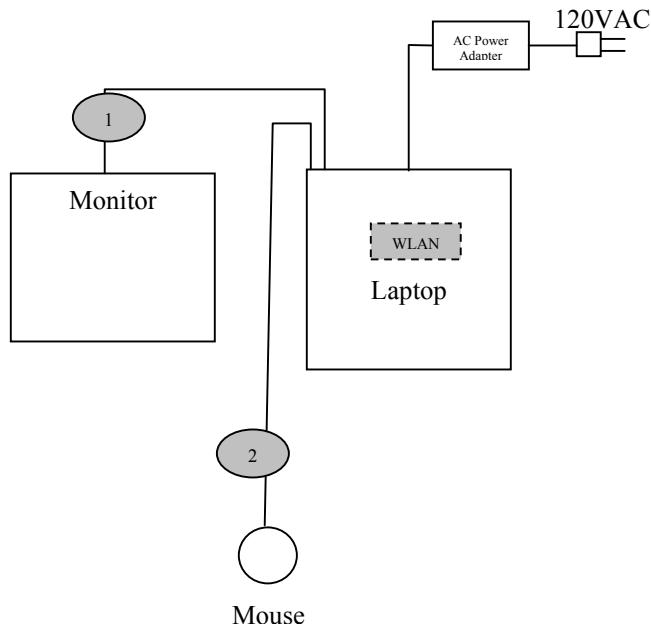
HOST EQUIPMENT LIST			
Equipment Name	Manufacturer	Model Number	Serial Number
LCD Monitor	Dell	E151FPp	CN-06R644-47804-34R-LATL
Mouse	Logitech	M-BJ58	LNA22802012

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



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4.4 I/O Cabling Diagram and Description



Cable 1: This is a 6-foot braid and foil shielded round cable connecting the Latitude | D400 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 2: This is a 6-foot braid and foil shielded round cable connecting the Latitude | D400 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: 2001. 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: 2001 and ANSI C63.7: 1992 guidelines. The Measurements were conducted in accordance with ANSI C63.4: 2001 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.

For the power out measurements in 802.11b and 802.11g modes a peak power meter was used along with a peak power sensor with a wide enough bandwidth to capture the entire fundamental transmission. For 802.11a mode a spectrum analyzer with “Channel Power Measurement” function was used to measure the peak output power.

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	03/29/05	1 Year
EMI Receiver – RF Filter Section	Hewlett Packard	85460A	3330A00138	03/29/05	1 Year
Attenuator - 5W-10dB	Pasternack	PE7014-10	N/A	11/03/04	1 Year
LISN (EUT)	FCC	FCC-LISN-50-25-2	9931	02/06/05	1 Year
LISN (Access)	Com-Power	LI-200	12019	01/25/05	1 Year
LISN (Access)	Com-Power	LI-200	12018	01/25/05	1 Year
Spectrum Analyzer	Agilent	8564EC	4046A00387	02/06/06	2 Years
Preamplifier	Miteq	JS42-01001800-25-10P	815980 & 884968 & 885090	12/09/04	2 Years
2400-2483.5 MHz Notch Filter	Micro-Tronics	BRM50702-02	003	04/21/06	2 Years
5725-5850 MHz Notch Filter	Microwave Circuits, Inc.	N0257881	3173-01	06/27/05	2 Years
Antenna - Biconical	EMCO	3110	9108-1421	02/11/05	1 Year
Antenna - Log Periodic	EMCO	3148	4947	02/11/05	1 Year
1-18 GHz Antenna - Horn	Com-Power	AH-118	10069	12/09/04	2 Years
18-26.5 GHz Preamplified Antenna – Horn	Custom Microwave	H042	001	11/04/04	1 Year
26.5-40 GHz Preamplified Antenna – Horn	Custom Microwave	H028	GM1260-10	11/04/04	1 Year
Power Meter	Anritsu	ML2487A	6K00001785	04/05/05	2 Years
Wide Bandwidth Sensor	Anritsu	MA2491A	31193	04/05/05	2 Years

Page 15 of 18

Report Number: INTEL-040930F

FCC ID: E2K5HCKT



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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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6.0 Sample Calculations (Continued)

Peak Transmit Power Output:

A correction factor for the cable must be applied to the Conducted Power before a true power reading can be obtained. This is referred to as the “Corrected Power” (CP).

The equation shall be derived in the following manner:

$$\text{Corrected Power Reading} = \text{Conducted Power Reading} + C$$

Where, C = Cable Factor

The conducted power is taken in units of dBm. To obtain units of mW the following equation is used:

$$mW = 10^{(dBm/10)}$$



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7.0 MODIFICATIONS AND RECOMMENDATIONS

No modifications were made to the EUT.

*Page 18 of 18
Report Number: INTEL-040930F
FCC ID: E2K5HCKT*



AEGIS LABS INC.

APPENDIX A

TEST DATA

Page 1 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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WLAN = ON, Bluetooth = OFF
TEST DATA

Page 2 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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AC POWER LINE CONDUCTED EMISSIONS TEST RESULTS

CLIENT:	Dell Computer Corporation	DATE:	10/07/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930-11
MODEL NUMBER:	PPT	TEST ENGINEER:	RC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas.	TEMPERATURE:	18 C
		HUMIDITY:	38% RH
		TIME:	4:00 PM

Standard:	FCC CFR 47, Part 15.207
Description:	AC Power Line Conducted Emissions
Results:	Passes the conducted limits by -2.24@ 0.1521 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.

Page 3 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AC Power Line Conducted Emissions Test Results (Continued)

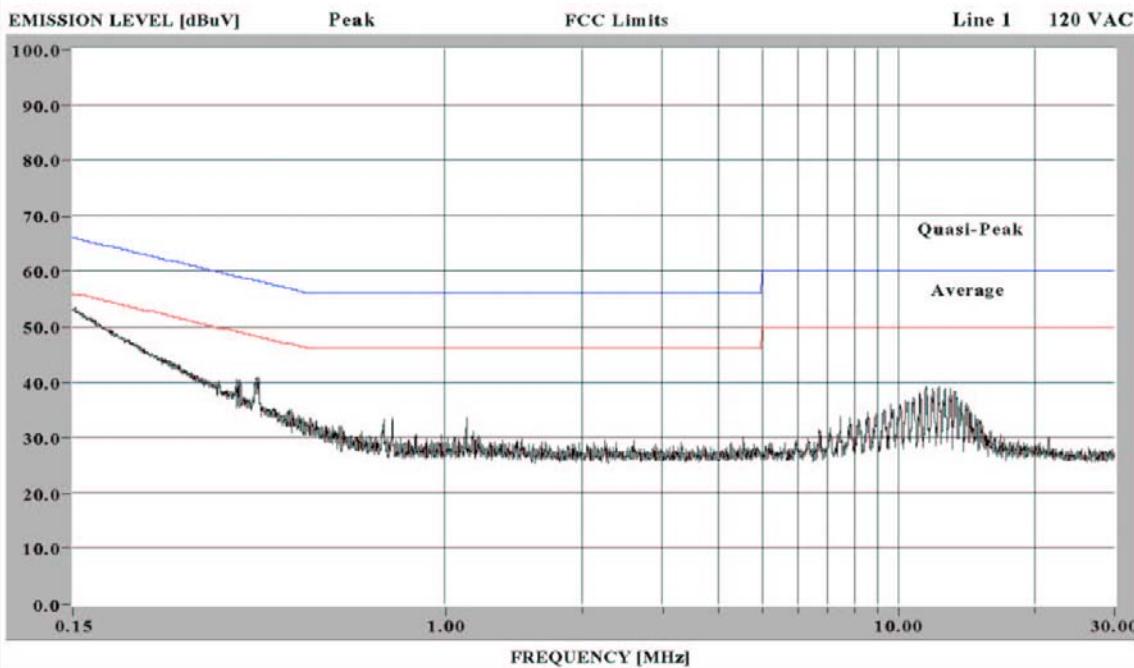
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CONDUCTED EMISSIONS – LINE 1						
Freq. (MHz)	Meter Reading (dBuV)	Detector (PK/QP/AV)	Average Limit (dBuV)	Average Delta (dB)	Quasi-Peak Limit (dBuV)	Quasi-Peak Delta (dB)
0.1521	52.90	PK	55.94	-3.04	65.94	-13.04
0.1650	52.50	PK	55.57	-3.07	65.57	-13.07
0.1902	49.80	PK	54.85	-5.05	64.85	-15.05
0.2412	46.40	PK	53.39	-6.99	63.39	-16.99
5.0600	36.40	PK	50.00	-13.60	60.00	-23.60
13.4450	40.70	PK	50.00	-9.30	60.00	-19.30

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Date: 10/17/2004 Time: 3:46 PM

Usage for graphical purposes only.
Refer to conducted emissions table for
Peak, QP, and Avg. measurements, where applicable.



RBW = 100 kHz, VBW = 100 kHz

Page 4 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AC Power Line Conducted Emissions Test Results (Continued)

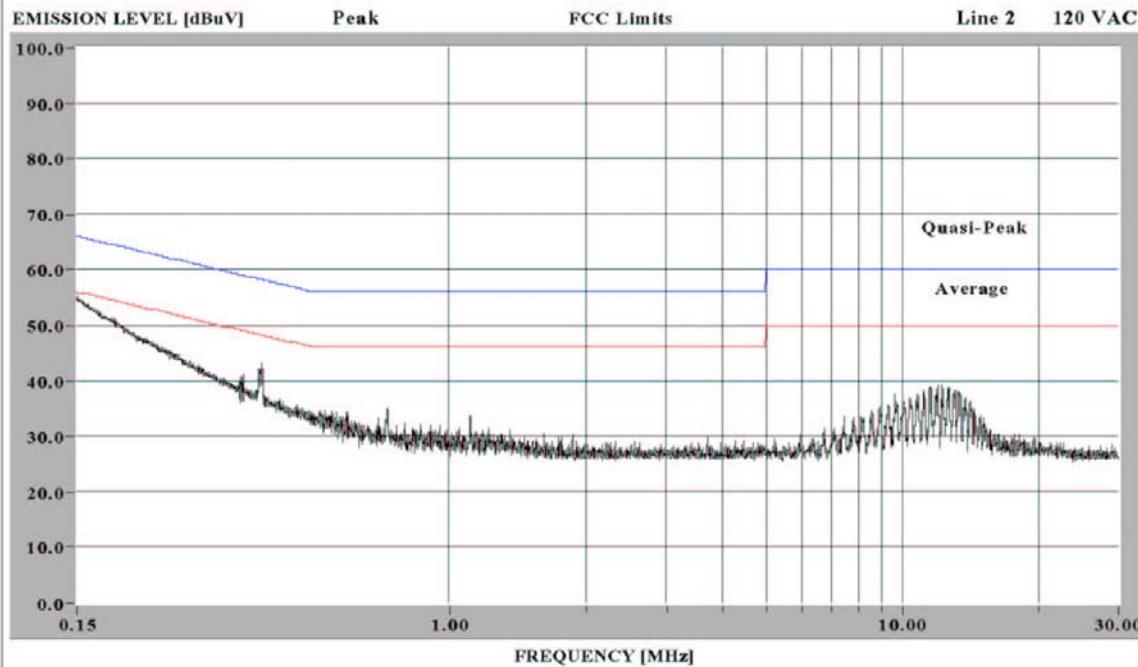
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CONDUCTED EMISSIONS - LINE 2						
Freq. (MHz)	Meter Reading (dBuV)	Detector (PK/QP/AV)	Average Limit (dBuV)	Average Delta (dB)	Quasi-Peak Limit (dBuV)	Quasi-Peak Delta (dB)
0.1521	53.70	PK	55.94	-2.24	65.94	-12.24
0.1650	52.40	PK	55.57	-3.17	65.57	-13.17
0.1803	51.30	PK	55.13	-3.83	65.13	-13.83
0.2028	49.30	PK	54.49	-5.19	64.49	-15.19
1.1150	33.90	PK	46.00	-12.10	56.00	-22.10
11.8600	39.60	PK	50.00	-10.40	60.00	-20.40

Aegis Labs, Inc.

Date: 10/07/2004 Time: 3:51 PM

Usage for graphical purposes only.
Refer to conducted emissions table for
Peak, QP, and Avg. measurements, where applicable.



RBW = 100 kHz, VBW = 100 kHz

Page 5 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

SPURIOUS RADIATED EMISSIONS TEST RESULTS

CLIENT:	Dell Computer Corporation	DATE:	10/07/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930-10
MODEL NUMBER:	PPT	TEST ENGINEER:	Rick Candelas
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas.	TEMPERATURE:	15 C
		HUMIDITY:	34% RH
		TIME:	11:30 AM

Standard:	FCC Pt. 15.209
Description:	Unwanted emissions below 1 GHz must comply with the general field strength limits set forth in Sec. 15.209.
Results:	Passes the radiated limits by -6.33@ 60.50 MHz (Vertical antenna polarization)

Radiated Limits	
Frequency (MHz)	Quasi-Peak Limit (dBuV) @ 10m
30-88	40
88-216	43.5
216-960	46
960-1000	54

NOTE 1: 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.

NOTE 2: RBW/VBW = 1 MHz

Page 6 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

RADIATED EMISSIONS - Horizontal Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Peak, Quasi pk or AVG (dBuV)	Preamp Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	10 Meter Distance Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL	
60.13	34.90	300	180		PK	34.40	1.20	8.38	10.46	20.54	40.00	-19.46
129.67	35.30	400	135		PK	34.35	1.93	14.27	10.46	27.61	43.50	-15.89
144.38	43.00	400	90	40.12	QP	34.32	2.00	14.92	10.46	33.17	43.50	-10.33
336.05	35.20	250	90		PK	34.10	3.22	15.06	10.46	29.84	46.00	-16.16
364.85	35.70	250	135		PK	34.06	3.36	15.11	10.46	30.57	46.00	-15.43
388.73	46.00	200	270	41.56	QP	34.03	3.45	15.13	10.46	36.57	46.00	-9.43

RADIATED EMISSIONS - Vertical Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Peak, Quasi pk or AVG (dBuV)	Preamp Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	10 Meter Distance Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL	
60.50	47.80	100	180		PK	34.40	1.21	8.60	10.46	33.67	40.00	-6.33
129.11	43.80	100	135		PK	34.35	1.92	12.54	10.46	34.37	43.50	-9.13
143.90	43.60	100	90	40.33	QP	34.33	2.00	14.39	10.46	32.85	43.50	-10.65
336.04	35.20	100	0		PK	34.10	3.22	15.54	10.46	30.31	46.00	-15.69
364.58	33.70	100	90		PK	34.06	3.36	15.34	10.46	28.80	46.00	-17.20
388.89	44.40	100	90	39.57	QP	34.03	3.46	15.86	10.46	35.31	46.00	-10.69

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

NOTE 2: The measurements are Peak readings unless otherwise specified.

Page 7 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

CLIENT:	Dell Computer Corporation	DATE:	10/05/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas in 802.11a (5745-5825 MHz) mode.	TEMPERATURE:	22 C
		HUMIDITY:	47% RH
		TIME:	11:15 AM

Standard:	FCC CFR 47, Part 15.247(c)
Description:	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.
Results:	Passes (See Data Sheets)

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

Page 8 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Fundamental Measurements in 802.11a mode (5745-5825 MHz)

Channels 149, 157, & 169

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-06

RADIATED EMISSIONS - Horizontal 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
5745.00	60.83	100	135			5.25	34.85	100.92		
5745.00				51.95	A	5.25	34.85	92.04		
5785.00	60.33	100	135			5.27	34.87	100.47		
5785.00				50.78	A	5.27	34.87	90.92		
5825.00	62.17	125	135			5.30	34.90	102.37		
5825.00				53.37	A	5.30	34.90	93.57		

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
5745.00	63.00	100	180			5.25	34.85	103.09		
5745.00				53.90	A	5.25	34.85	93.99		
5785.00	61.83	100	225			5.27	34.87	101.97		
5785.00				52.86	A	5.27	34.87	93.00		
5825.00	64.00	125	225			5.30	34.90	104.20		
5825.00				55.05	A	5.30	34.90	95.25		

Page 9 of 103 (Appendix A)

Report Number: INTEL-040930F

FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Band Edge Field Strength Measurements in 802.11a mode (5745-5825 MHz)

Channels 149, 157, & 169

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-06

RADIATED EMISSIONS - Horizontal 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
5725.00	33.67	100	135			5.23	34.84	73.74	80.92	-7.19
5850.00	30.83	100	135			5.32	34.91	71.06	82.37	-11.31

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
5725.00	35.17	100	180			5.23	34.84	75.24	83.09	-7.86
5850.00	30.33	100	225			5.32	34.91	70.56	84.20	-13.64

Page 10 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
10/05/04	5.745 GHz band edge PEAK (Horizontal Antenna Polarity) (INTEL-040930-06a05)	JC
	<p>*ATTEN 0dB RL 97.0 dBμV 10dB/</p> <p>MKR 33.67dBμV 5.72500GHz</p> <p>D</p> <p>CENTER 5.74500GHz SPAN 50.00MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	
10/05/04	5.825 GHz band edge PEAK (Horizontal Antenna Polarity) (INTEL-040930-06a06)	JC
	<p>*ATTEN 0dB RL 97.0 dBμV 10dB/</p> <p>MKR 30.83dBμV 5.85000GHz</p> <p>D</p> <p>CENTER 5.82500GHz SPAN 50.00MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	

Page 11 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
10/05/04	5.745 GHz band edge PEAK (Vertical Antenna Polarity) (INTEL-040930-06a07)	JC
	<p>*ATTEN 0dB RL 97.0dBμV 10dB/ MKR 35.17dBμV 5.72500GHz</p> <p>D</p> <p>CENTER 5.74500GHz SPAN 50.00MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	
Test Date	Data	Test Eng.
10/05/04	5.825 GHz band edge PEAK (Vertical Antenna Polarity) (INTEL-040930-06a08)	JC
	<p>*ATTEN 0dB RL 97.0dBμV 10dB/ MKR 30.33dBμV 5.85000GHz</p> <p>D</p> <p>CENTER 5.82500GHz SPAN 50.00MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	

Page 12 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11a mode (5745-5825 MHz)*Channels 149, 157, & 169***Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas**

Aegis Labs, Inc. File #: INTEL-040930-08

RADIATED EMISSIONS - Horizontal 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
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EUT in Continuous Transmit Mode on Channel 149 (5.745 GHz)

3830.00	55.67	100	180		43.17	4.18	31.16	47.84	74.00	-26.16	
3830.00				51.22	A	43.17	4.18	31.16	43.39	54.00	-10.61
7660.00	49.17	100	225		43.62	6.27	40.05	51.87	74.00	-22.13	
7660.00				37.48	A	43.62	6.27	40.05	40.18	54.00	-13.82
11490.00	51.67	200	225		43.50	7.64	41.18	56.99	74.00	-17.01	
11490.00				43.59	A	43.50	7.64	41.18	48.91	54.00	-5.09
15319.89	49.00	100	135		43.39	8.80	41.49	55.90	80.92	-25.02	

EUT in Continuous Transmit Mode on Channel 157 (5.785 GHz)

3856.66	55.50	100	180		43.17	4.21	31.23	47.76	74.00	-26.24	
3856.66				50.64	A	43.17	4.21	31.23	42.90	54.00	-11.10
7713.33	50.00	100	225		43.60	6.29	40.20	52.89	74.00	-21.11	
7713.33				38.95	A	43.60	6.29	40.20	41.84	54.00	-12.16
11569.98	51.00	175	225		43.48	7.66	41.38	56.57	74.00	-17.43	
11569.98				42.23	A	43.48	7.66	41.38	47.80	54.00	-6.20
15426.58	49.33	100	135		43.35	8.80	41.56	56.34	74.00	-17.66	
15426.58				37.58		43.35	8.80	41.56	44.59	54.00	-9.41

EUT in Continuous Transmit Mode on Channel 165 (5.825 GHz)

3883.34	53.50	100	180		43.17	4.23	31.30	45.85	74.00	-28.15	
3883.34				47.69	A	43.17	4.23	31.30	40.04	54.00	-13.96
7766.66	50.00	100	225		43.58	6.32	40.35	53.08	82.37	-29.29	
11650.00	51.17	200	225		43.45	7.69	41.59	57.00	74.00	-17.00	
11650.00				42.87	A	43.45	7.69	41.59	48.70	54.00	-5.30
15533.23	49.83	100	135		43.35	8.82	41.71	57.01	74.00	-16.99	
15533.23				38.09	A	43.35	8.82	41.71	45.27	54.00	-8.73

Page 13 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Transmit Mode on Channel 149 (5.745 GHz)											
3830.00	54.50	100	225		43.17	4.18	31.09	46.61	74.00	-27.39	
3830.00				49.35	A	43.17	4.18	31.09	41.46	54.00	-12.54
7660.00	51.17	150	45		43.62	6.27	40.11	53.94	74.00	-20.06	
7660.00				41.06	A	43.62	6.27	40.11	43.83	54.00	-10.17
11490.00	51.33	100	135		43.50	7.64	41.66	57.13	74.00	-16.87	
11490.00				43.39	A	43.50	7.64	41.66	49.19	54.00	-4.81
EUT in Continuous Transmit Mode on Channel 157 (5.785 GHz)											
3856.66	54.33	100	225		43.17	4.21	31.14	46.51	74.00	-27.49	
3856.66				48.60	A	43.17	4.21	31.14	40.78	54.00	-13.22
7713.33	52.67	200	0		43.60	6.29	40.28	55.65	74.00	-18.35	
7713.33				44.18	A	43.60	6.29	40.28	47.16	54.00	-6.84
11569.98	52.83	100	90		43.48	7.66	41.81	58.83	74.00	-15.17	
11569.98				45.71	A	43.48	7.66	41.81	51.71	54.00	-2.29
EUT in Continuous Transmit Mode on Channel 165 (5.825 GHz)											
3883.33	53.17	100	225		43.17	4.23	31.19	45.42	74.00	-28.58	
3883.33				46.84	A	43.17	4.23	31.19	39.09	54.00	-14.91
7766.66	52.33	200	0		43.58	6.32	40.45	55.52	84.20	-28.68	
11650.00	52.00	100	90		43.45	7.69	41.94	58.18	74.00	-15.82	
11650.00				44.89	A	43.45	7.69	41.94	51.07	54.00	-2.93

Page 14 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11a mode (5745-5825 MHz)***Channels 149, 157, & 169******Continuous RX at MAIN Antenna port with Wistron NeWeb Corp. Antennas***
Aegis Labs, Inc. File #: INTEL-040930-08

RADIATED EMISSIONS - Horizontal 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	
EUT in Continuous Receive Mode on Channel 149 (5.745 GHz)											
3830.00	51.67	100	180		43.17	4.18	31.16	43.84	80.00	-36.16	
3830.00				43.69	A	43.17	4.18	31.16	35.86	60.00	-24.14
7660.00	49.50	100	135		43.62	6.27	40.05	52.20	80.00	-27.80	
7660.00				38.30	A	43.62	6.27	40.05	41.00	60.00	-19.00
11489.92	52.00	200	225		43.50	7.64	41.18	57.32	80.00	-22.68	
11489.92				43.46	A	43.50	7.64	41.18	48.78	60.00	-11.22
EUT in Continuous Receive Mode on Channel 157 (5.785 GHz)											
3856.62	52.00	100	180		43.17	4.21	31.23	44.26	80.00	-35.74	
3856.62				43.42	A	43.17	4.21	31.23	35.68	60.00	-24.32
7713.32	49.50	100	135		43.60	6.29	40.20	52.39	80.00	-27.61	
7713.32				38.22	A	43.60	6.29	40.20	41.11	60.00	-18.89
11569.92	51.00	200	225		43.48	7.66	41.38	56.57	80.00	-23.43	
11569.92				42.42	A	43.48	7.66	41.38	47.99	60.00	-12.01
EUT in Continuous Receive Mode on Channel 165 (5.825 GHz)											
3883.34	50.33	100	180		43.17	4.23	31.30	42.68	80.00	-37.32	
3883.34				41.99	A	43.17	4.23	31.30	34.34	60.00	-25.66
7766.62	49.17	100	135		43.58	6.32	40.35	52.25	80.00	-27.75	
7766.62				37.87	A	43.58	6.32	40.35	40.95	60.00	-19.05
11649.94	51.33	200	225		43.45	7.69	41.59	57.16	80.00	-22.84	
11649.94				43.48	A	43.45	7.69	41.59	49.31	60.00	-10.69

Page 15 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Receive Mode on Channel 149 (5.745 GHz)											
3830.00	53.83	100	225		43.17	4.18	31.09	45.94	80.00	-34.06	
3830.00				48.59	A	43.17	4.18	31.09	40.70	60.00	-19.30
7660.00	49.67	100	180		43.62	6.27	40.11	52.44	80.00	-27.56	
7660.00				40.04	A	43.62	6.27	40.11	42.81	60.00	-17.19
11489.96	52.33	100	90		43.50	7.64	41.66	58.13	80.00	-21.87	
11489.96				44.41	A	43.50	7.64	41.66	50.21	60.00	-9.79
EUT in Continuous Receive Mode on Channel 157 (5.785 GHz)											
3856.65	54.00	100	225		43.17	4.21	31.14	46.18	80.00	-33.82	
3856.65				47.50	A	43.17	4.21	31.14	39.68	60.00	-20.32
7713.29	51.00	100	180		43.60	6.29	40.28	53.98	80.00	-26.02	
7713.29				40.97	A	43.60	6.29	40.28	43.95	60.00	-16.05
11569.91	53.00	125	45		43.48	7.66	41.81	59.00	80.00	-21.00	
11569.91				47.01	A	43.48	7.66	41.81	53.01	60.00	-6.99
EUT in Continuous Receive Mode on Channel 165 (5.825 GHz)											
3883.35	52.00	100	225		43.17	4.23	31.19	44.25	80.00	-35.75	
3883.35				45.85	A	43.17	4.23	31.19	38.10	60.00	-21.90
7766.63	49.33	100	180		43.58	6.32	40.45	52.52	80.00	-27.48	
7766.63				38.67	A	43.58	6.32	40.45	41.86	60.00	-18.14
11649.97	52.00	100	90		43.45	7.69	41.94	58.18	80.00	-21.82	
11649.97				45.36	A	43.45	7.69	41.94	51.54	60.00	-8.46

Page 16 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

CLIENT:	Dell Computer Corporation	DATE:	10/05/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas in 802.11b (2412-2462 MHz) mode.	TEMPERATURE:	25 C
		HUMIDITY:	47% RH
		TIME:	11:15 AM

Standard:	FCC CFR 47, Part 15.247(c)
Description:	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.
Results:	Passes (See Data Sheets)

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

Page 17 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Fundamental Measurements in 802.11b mode (2412-2462 MHz)

Channels 1, 6, & 11

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-06

RADIATED EMISSIONS - Horizontal 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
2412.00	67.17	125	225			3.30	31.11	101.58		
2412.00				63.39	A	3.30	31.11	97.80		
2437.00	68.83	125	225			3.32	31.05	103.20		
2437.00				65.46	A	3.32	31.05	99.83		
2462.00	70.67	150	135			3.34	30.99	105.00		
2462.00				67.19	A	3.34	30.99	101.52		

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
2412.00	66.00	100	225			3.30	31.24	100.54		
2412.00				62.23	A	3.30	31.24	96.77		
2437.00	67.67	100	225			3.32	31.20	102.19		
2437.00				64.41	A	3.32	31.20	98.93		
2462.00	68.83	100	225			3.34	31.16	103.33		
2462.00				65.46	A	3.34	31.16	99.96		

NOTE: Fundamental signals measured to calculate the band edge field strengths using the “Marker Delta Method”.

Page 18 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



Spurious Radiated Emissions Test Results (Continued)

AEGIS LABS INC.

*Band Edge Field Strength Measurements in 802.11b mode (2412-2462 MHz)
Channels 1, 6, & 11*

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas
Aegis Labs, Inc. File #: INTEL-040930-06

RADIATED EMISSIONS - Horizontal 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
2390.00								47.42	74.00	-26.58
2390.00								35.97	54.00	-18.03
2386.30								49.58	74.00	-24.42
2386.30								37.80	54.00	-16.20
2400.00	36.17	125	225		3.29	31.14	70.60	81.58	-10.98	
2483.50								52.00	74.00	-22.00
2483.50								41.02	54.00	-12.98
2487.30								54.67	74.00	-19.33
2487.30								45.19	54.00	-8.81

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
2390.00								46.38	74.00	-27.62
2390.00								34.94	54.00	-19.06
2386.30								48.54	74.00	-25.46
2386.30								36.77	54.00	-17.23
2400.00	35.83	100	225		3.29	31.26	70.38	80.54	-10.16	
2483.50								50.33	74.00	-23.67
2483.50								39.46	54.00	-14.54
2487.30								53.00	74.00	-21.00
2487.30								43.63	54.00	-10.37

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:

$$BE = Fm - \Delta m$$

Where

BE = Band Edge Field Strength

Fm = Measured Fundamental (Peak or Average)

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

Page 19 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
09/30/04	2.412 GHz band edge PEAK DELTA (INTEL-040930-02a01)	JC
	<p>*ATTEN 30dB ΔMKR 52.00 dB RL 20.0 dBm 26.5MHz</p> <p>D</p> <p>CENTER 2.3900GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	
09/30/04	2.412 GHz band edge AVERAGE DELTA (INTEL-040930-02a02)	JC
	<p>*ATTEN 30dB ΔMKR 60.00 dB RL 20.0 dBm 24.3MHz</p> <p>D</p> <p>CENTER 2.3900GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p>	

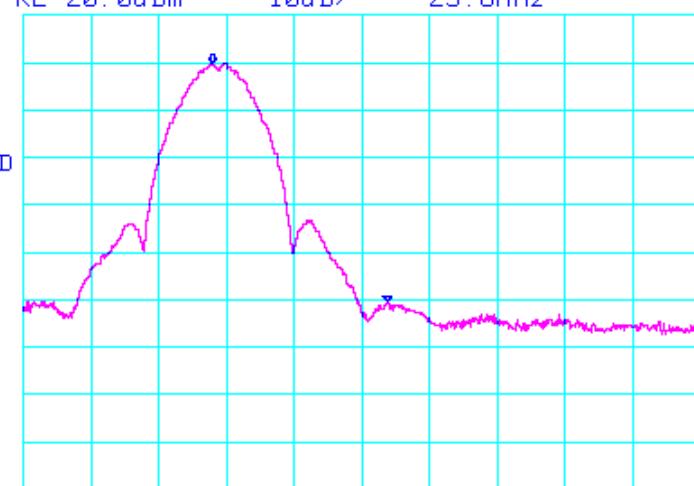
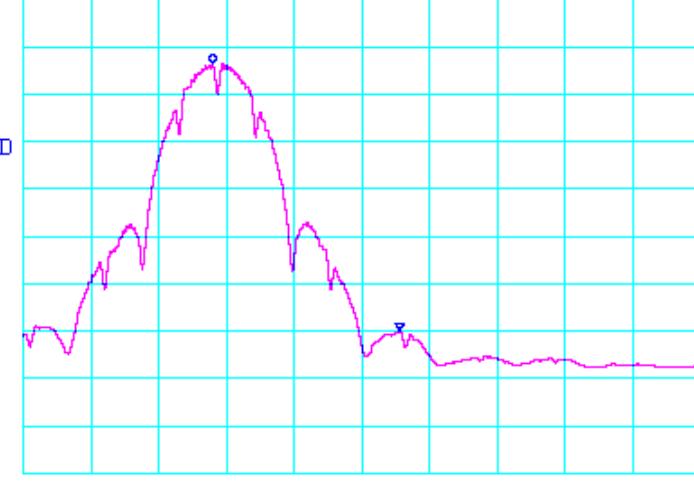
Page 20 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
09/30/04	2.462 GHz band edge PEAK DELTA (INTEL-040930-02a03)	JC
	*ATTEN 30dB RL 20. 0d Bm 10dB/  △MKR 50. 33dB -25. 8MHz	Aegis Labs Inc. logo
	D CENTER 2. 4835GHz SPAN 100. 0MHz *RBW 1. 0MHz *VBW 1. 0MHz SWP 50. 0ms	
Test Date	Data	Test Eng.
09/30/04	2.462 GHz band edge AVERAGE DELTA (INTEL-040930-02a04)	JC
	*ATTEN 30dB RL 20. 0d Bm 10dB/  △MKR 56. 33dB -27. 7MHz	Aegis Labs Inc. logo
	D CENTER 2. 4835GHz SPAN 100. 0MHz *RBW 1. 0MHz *VBW 10Hz SWP 37. 0sec	

Page 21 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11b mode (2412-2462 MHz)*Channels 1, 6, & 11***Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas**

Aegis Labs, Inc. File #: INTEL-040930-07

RADIATED EMISSIONS - Horizontal Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Quasi pk or AVG (dBuV)	1 Meter Distance Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

2312.00	31.17	100	135		9.54	3.23	31.35	56.21	74.00	-17.79	
2312.00				16.63	A	9.54	3.23	31.35	41.67	54.00	-12.33

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

2336.00	31.83	100	135		9.54	3.25	31.29	56.83	74.00	-17.17	
2336.00				17.78	A	9.54	3.25	31.29	42.78	54.00	-11.22

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

2358.66	30.83	100	135		9.54	3.26	31.24	55.79	74.00	-18.21	
2358.66				15.89	A	9.54	3.26	31.24	40.85	54.00	-13.15

RADIATED EMISSIONS - Vertical Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Quasi pk or AVG (dBuV)	1 Meter Distance Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

2312.00	31.67	100	225		9.54	3.23	31.40	56.76	74.00	-17.24	
2312.00				18.03	A	9.54	3.23	31.40	43.12	54.00	-10.88

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

2336.00	31.83	100	225		9.54	3.25	31.36	56.90	74.00	-17.10	
2336.00				18.10	A	9.54	3.25	31.36	43.17	54.00	-10.83

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

2358.66	31.50	100	225		9.54	3.26	31.33	56.55	74.00	-17.45	
2358.66				16.48	A	9.54	3.26	31.33	41.53	54.00	-12.47

NOTE: These spurious emissions measurements were taken without a preamp at a distance of 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.

Page 22 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

<i>Spurious Emissions Measurements in 802.11b mode (2412-2462 MHz)</i>										
<i>Channels 1, 6, & 11</i>										
<i>Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas</i>										
<i>Aegis Labs, Inc. File #: INTEL-040930-08</i>										

RADIATED EMISSIONS - Horizontal 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
EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)										
3216.01	48.83	100	225		43.07	3.89	30.24	39.89	81.58	-41.69
4824.00	58.67	100	180		43.27	4.73	34.53	54.66	74.00	-19.34
4824.00				55.37	A	43.27	4.73	34.53	51.36	54.00
6431.97	52.50	100	225		43.82	5.73	36.64	51.06	81.58	-30.52
9648.01	50.67	100	135		43.22	6.95	38.88	53.28	81.58	-28.30
12864.03	49.17	100	135		43.83	7.95	43.86	57.16	81.58	-24.42
EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)										
3249.32	48.50	100	225		43.08	3.91	30.25	39.57	83.20	-43.63
4873.99	55.00	100	180		43.29	4.77	34.72	51.20	74.00	-22.80
4873.99				51.50	A	43.29	4.77	34.72	47.70	54.00
6498.69	53.33	100	225		43.84	5.78	36.90	52.16	83.20	-31.04
9747.96	50.83	100	135		43.25	6.99	39.00	53.56	83.20	-29.64
12997.37	49.83	100	135		43.83	8.02	44.29	58.31	83.20	-24.89
EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)										
3282.69	49.00	125	225		43.10	3.91	30.26	40.07	85.00	-44.93
4924.00	53.83	100	180		43.30	4.81	34.91	50.24	74.00	-23.76
4924.00				47.97	A	43.30	4.81	34.91	44.38	54.00
6565.34	53.17	100	225		43.84	5.83	37.32	52.48	85.00	-32.52
9848.01	49.67	100	135		43.29	7.03	39.12	52.53	85.00	-32.47
13130.67	49.17	100	135		43.70	8.07	44.25	57.79	85.00	-27.21

Page 23 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)											
3216.00	48.17	100	135		43.07	3.89	30.44	39.43	80.54	-41.11	
4824.00	59.83	100	180		43.27	4.73	34.53	55.82	74.00	-18.18	
4824.00				56.56	A	43.27	4.73	34.53	52.55	54.00	-1.45
6431.95	57.00	125	225		43.82	5.73	36.64	55.56	80.54	-24.98	
9647.97	50.83	100	135		43.22	6.95	38.97	53.53	80.54	-27.01	
12864.01	49.00	100	135		43.83	7.95	44.23	57.35	80.54	-23.19	
EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)											
3249.32	48.50	100	0		43.08	3.91	30.45	39.77	82.19	-42.42	
4874.01	55.33	100	315		43.29	4.77	34.72	51.53	74.00	-22.47	
4874.01				51.68	A	43.29	4.77	34.72	47.88	54.00	-6.12
6498.66	58.67	125	225		43.84	5.78	36.89	57.50	82.19	-24.69	
9748.04	52.17	100	45		43.25	6.99	39.15	55.05	82.19	-27.14	
12997.35	49.67	100	135		43.83	8.02	44.49	58.35	82.19	-23.84	
EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)											
3282.66	48.00	100	0		43.10	3.91	30.46	39.27	83.33	-44.06	
4924.00	54.00	100	315		43.30	4.81	34.91	50.41	74.00	-23.59	
4924.00				48.75	A	43.30	4.81	34.91	45.16	54.00	-8.84
6565.32	57.17	125	225		43.84	5.83	37.38	56.54	83.33	-26.79	
9847.96	51.67	100	45		43.29	7.03	39.33	54.74	83.33	-28.59	
13130.63	49.50	100	135		43.70	8.07	44.45	58.32	83.33	-25.01	

Page 24 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11b mode (2412-2462 MHz)**Channels 1, 6, & 11****Continuous RX at MAIN Antenna port with Wistron NeWeb Corp. Antennas****Aegis Labs, Inc. File #: INTEL-040930-08**

RADIATED EMISSIONS - Horizontal 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
EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)										
3216.02	48.83	100	225		43.07	3.89	30.24	39.89	80.00	-40.11
3216.02				37.91	A	43.07	3.89	30.24	28.97	60.00
6432.00	51.83	100	225		43.82	5.73	36.64	50.39	80.00	-29.61
6432.00				43.86	A	43.82	5.73	36.64	42.42	60.00
9648.03	50.00	100	225		43.22	6.95	38.88	52.61	80.00	-27.39
9648.03				38.68	A	43.22	6.95	38.88	41.29	60.00
EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)										
3249.32	49.33	100	225		43.08	3.91	30.25	40.40	80.00	-39.60
3249.32				39.08	A	43.08	3.91	30.25	30.15	60.00
6498.70	54.17	100	225		43.84	5.78	36.90	53.00	80.00	-27.00
6498.70				48.59	A	43.84	5.78	36.90	47.42	60.00
9747.99	50.33	100	225		43.25	6.99	39.00	53.06	80.00	-26.94
9747.99				38.89	A	43.25	6.99	39.00	41.62	60.00
EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)										
3282.66	49.00	125	225		43.10	3.91	30.26	40.07	80.00	-39.93
3282.66				38.29	A	43.10	3.91	30.26	29.36	60.00
6565.32	56.33	100	225		43.84	5.83	37.32	55.64	80.00	-24.36
6565.32				53.17	A	43.84	5.83	37.32	52.48	60.00
9848.01	49.67	100	225		43.29	7.03	39.12	52.53	80.00	-27.47
9848.01				37.86	A	43.29	7.03	39.12	40.72	60.00

Page 25 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)											
3216.00	48.17	100	0		43.07	3.89	30.44	39.43	80.00	-40.57	
3216.00				38.29	A	43.07	3.89	30.44	29.55	60.00	-30.45
6432.03	55.50	100	315		43.82	5.73	36.64	54.06	80.00	-25.94	
6432.03				51.25	A	43.82	5.73	36.64	49.81	60.00	-10.19
9648.02	49.83	100	135		43.22	6.95	38.97	52.53	80.00	-27.47	
9648.02				37.98	A	43.22	6.95	38.97	40.68	60.00	-19.32
EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)											
3249.32	48.50	100	0		43.08	3.91	30.45	39.77	80.00	-40.23	
3249.32				38.92	A	43.08	3.91	30.45	30.19	60.00	-29.81
6498.67	58.67	150	225		43.84	5.78	36.89	57.50	80.00	-22.50	
6498.67				55.98	A	43.84	5.78	36.89	54.81	60.00	-5.19
9747.96	50.50	100	90		43.25	6.99	39.15	53.38	80.00	-26.62	
9747.96				40.75	A	43.25	6.99	39.15	43.63	60.00	-16.37
EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)											
3282.67	48.00	100	0		43.10	3.91	30.46	39.27	80.00	-40.73	
3282.67				37.73	A	43.10	3.91	30.46	29.00	60.00	-31.00
6565.37	58.17	200	270		43.84	5.83	37.38	57.54	80.00	-22.46	
6565.37				55.71	A	43.84	5.83	37.38	55.08	60.00	-4.92
9847.98	50.00	100	135		43.29	7.03	39.33	53.07	80.00	-26.93	
9847.98				39.48	A	43.29	7.03	39.33	42.55	60.00	-17.45

Page 26 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

CLIENT:	Dell Computer Corporation	DATE:	10/05/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas in 802.11g (2412-2462 MHz) mode.	TEMPERATURE:	25 C
		HUMIDITY:	45% RH
		TIME:	11:15 AM

Standard:	FCC CFR 47, Part 15.247(c)
Description:	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.
Results:	Passes (See Data Sheets)

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

Page 27 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Fundamental Measurements in 802.11g mode (2412-2462 MHz)

Channels 1, 6, & 11

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-06

RADIATED EMISSIONS - Horizontal 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
2412.00	70.83	125	225			3.30	31.11	105.24		
2412.00				60.69	A	3.30	31.11	95.10		
2437.00	71.67	125	225			3.32	31.05	106.04		
2437.00				61.32	A	3.32	31.05	95.69		
2462.00	72.17	150	135			3.34	30.99	106.50		
2462.00				61.98	A	3.34	30.99	96.31		

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
2412.00	69.17	100	225			3.30	31.24	103.71		
2412.00				58.78	A	3.30	31.24	93.32		
2437.00	70.33	100	225			3.32	31.20	104.85		
2437.00				60.29	A	3.32	31.20	94.81		
2462.00	70.67	100	225			3.34	31.16	105.17		
2462.00				60.56	A	3.34	31.16	95.06		

NOTE: Fundamental signals measured to calculate the band edge field strengths using the “Marker Delta Method”.

Page 28 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Band Edge Field Strength Measurements in 802.11g mode (2412-2462 MHz)
Channels 1, 6, & 11
Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas
Aegis Labs, Inc. File #: INTEL-040930-06

RADIATED EMISSIONS - Horizontal 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
2390.00								60.74	74.00	-13.26
2390.00								47.10	54.00	-6.90
2400.00	47.33	125	225			3.29	31.14	81.76	85.24	-3.48
2483.50								62.50	74.00	-11.50
2483.50								46.31	54.00	-7.69

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
2390.00								59.21	74.00	-14.79
2390.00								45.32	54.00	-8.68
2400.00	45.50	100	225			3.29	31.26	80.05	83.71	-3.66
2483.50								61.17	74.00	-12.83
2483.50								45.06	54.00	-8.94

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:

$$BE = Fm - \Delta m$$

Where

BE = Band Edge Field Strength

Fm = Measured Fundamental (Peak or Average)

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

Page 29 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
09/30/04	2.412 GHz band edge PEAK DELTA (INTEL-040930-03a01)	JC
	 *ATTEN 30dB ΔMKR 44.50dB RL 20.0 dBm 10dB/ 16.8MHz D CENTER 2.3900GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms	
Test Date	Data	Test Eng.
09/30/04	2.412 GHz band edge AVERAGE DELTA (INTEL-040930-03a02)	JC
	 *ATTEN 30dB ΔMKR 48.00dB RL 20.0 dBm 10dB/ 20.2MHz D CENTER 2.3900GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 10Hz SWP 37.0sec	

Page 30 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
09/30/04	2.462 GHz band edge PEAK DELTA (INTEL-040930-03a03)	JC
	<p>*ATTEN 30dB ΔMKR 44.00dB RL 20.0 dBm -26.2MHz</p> <p>D</p> <p>CENTER 2.4835GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	
09/30/04	2.462 GHz band edge AVERAGE DELTA (INTEL-040930-03a04)	JC
	<p>*ATTEN 30dB ΔMKR 50.00dB RL 20.0 dBm -22.3MHz</p> <p>D</p> <p>CENTER 2.4835GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p>	

Page 31 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11g mode (2412-2462 MHz)*Channels 1, 6, & 11***Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas**

Aegis Labs, Inc. File #: INTEL-040930-07

RADIATED EMISSIONS - Horizontal Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Quasi pk or AVG (dBuV)	1 Meter Distance Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

2312.00	31.33	100	135		9.54	3.23	31.35	56.37	74.00	-17.63	
2312.00				17.01	A	9.54	3.23	31.35	42.05	54.00	-11.95

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

2336.00	31.83	100	135		9.54	3.25	31.29	56.83	74.00	-17.17	
2336.00				16.97	A	9.54	3.25	31.29	41.97	54.00	-12.03

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

2358.68	31.50	100	135		9.54	3.26	31.24	56.46	74.00	-17.54	
2358.68				18.24	A	9.54	3.26	31.24	43.20	54.00	-10.80

RADIATED EMISSIONS - Vertical Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Quasi pk or AVG (dBuV)	1 Meter Distance Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

2312.00	31.67	100	225		9.54	3.23	31.40	56.76	74.00	-17.24	
2312.00				18.36	A	9.54	3.23	31.40	43.45	54.00	-10.55

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

2336.00	32.00	100	225		9.54	3.25	31.36	57.07	74.00	-16.93	
2336.00				18.86	A	9.54	3.25	31.36	43.93	54.00	-10.07

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

2358.68	31.33	100	225		9.54	3.26	31.33	56.38	74.00	-17.62	
2358.68				18.59	A	9.54	3.26	31.33	43.64	54.00	-10.36

NOTE: These spurious emissions measurements were taken without a preamp at a distance of 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.

Page 32 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11g mode (2412-2462 MHz)

Channels 1, 6, & 11

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-09

RADIATED EMISSIONS - Horizontal 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
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

3216.00	48.50	100	225		43.07	3.89	30.24	39.56	85.24	-45.68
4824.20	57.00	100	180		43.27	4.73	34.53	53.00	74.00	-21.00
4824.20				44.96	A	43.27	4.73	34.53	40.96	54.00
6432.05	53.00	100	225		43.82	5.73	36.64	51.56	85.24	-33.68
9647.97	50.50	200	270		43.22	6.95	38.88	53.11	85.24	-32.13
12864.05	49.33	100	135		43.83	7.95	43.86	57.32	85.24	-27.92

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

3249.37	48.33	100	225		43.08	3.91	30.25	39.40	86.04	-46.64
4874.06	50.67	100	180		43.29	4.77	34.72	46.87	74.00	-27.13
4874.06				38.39	A	43.29	4.77	34.72	34.59	54.00
6498.69	53.83	100	225		43.84	5.78	36.90	52.66	86.04	-33.38
9748.09	50.17	100	225		43.25	6.99	39.00	52.90	86.04	-33.14
12997.35	50.50	100	135		43.83	8.02	44.29	58.98	86.04	-27.06

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

3282.68	48.17	100	225		43.10	3.91	30.26	39.24	86.50	-47.26
4923.82	49.67	100	180		43.30	4.81	34.91	46.08	74.00	-27.92
4923.82				37.68	A	43.30	4.81	34.91	34.09	54.00
6565.42	56.17	100	225		43.84	5.83	37.32	55.48	86.50	-31.02
9847.97	49.83	100	225		43.29	7.03	39.12	52.69	86.50	-33.81
13130.70	49.50	100	135		43.70	8.07	44.25	58.12	86.50	-28.38

Page 33 of 103 (Appendix A)

Report Number: INTEL-040930F

FCC ID: E2K5HCKT



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	
EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)											
3216.01	48.00	100	0		43.07	3.89	30.44	39.26	83.71	-44.45	
4823.97	56.50	200	225		43.27	4.73	34.53	52.49	74.00	-21.51	
4823.97				44.58	A	43.27	4.73	34.53	40.57	54.00	-13.43
6431.99	55.33	100	135		43.82	5.73	36.64	53.89	83.71	-29.82	
9648.08	50.83	100	225		43.22	6.95	38.97	53.53	83.71	-30.18	
12863.98	49.67	100	135		43.83	7.95	44.23	58.02	83.71	-25.69	
EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)											
3249.35	48.50	100	0		43.08	3.91	30.45	39.77	84.85	-45.08	
4874.03	50.83	100	315		43.29	4.77	34.72	47.03	74.00	-26.97	
4874.03				38.73	A	43.29	4.77	34.72	34.93	54.00	-19.07
6498.67	59.67	125	225		43.84	5.78	36.89	58.50	84.85	-26.35	
9748.00	50.17	100	225		43.25	6.99	39.15	53.05	84.85	-31.80	
12997.35	50.50	100	135		43.83	8.02	44.49	59.18	84.85	-25.67	
EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)											
3282.65	47.83	100	0		43.10	3.91	30.46	39.10	85.17	-46.07	
4924.01	52.50	200	315		43.30	4.81	34.91	48.91	74.00	-25.09	
4924.01				41.23	A	43.30	4.81	34.91	37.64	54.00	-16.36
6565.34	59.17	125	225		43.84	5.83	37.38	58.54	85.17	-26.63	
9848.03	50.67	100	225		43.29	7.03	39.33	53.74	85.17	-31.43	
13130.62	49.50	100	135		43.70	8.07	44.45	58.32	85.17	-26.85	

Page 34 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

<i>Spurious Emissions Measurements in 802.11g mode (2412-2462 MHz) Channels 1, 6, & 11 Continuous RX at MAIN Antenna port with Wistron NeWeb Corp. Antennas Aegis Labs, Inc. File #: INTEL-040930-08</i>									
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RADIATED EMISSIONS - Horizontal 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	
EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)											
3215.99	49.00	125	225		43.07	3.89	30.24	40.06	80.00	-39.94	
3215.99				38.69	A	43.07	3.89	30.24	29.75	60.00	-30.25
6431.98	51.33	100	225		43.82	5.73	36.64	49.89	80.00	-30.11	
6431.98				43.50	A	43.82	5.73	36.64	42.06	60.00	-17.94
9648.00	50.00	100	225		43.22	6.95	38.88	52.61	80.00	-27.39	
9648.00				38.94	A	43.22	6.95	38.88	41.55	60.00	-18.45
EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)											
3249.32	49.17	125	225		43.08	3.91	30.25	40.24	80.00	-39.76	
3249.32				39.02	A	43.08	3.91	30.25	30.09	60.00	-29.91
6498.67	54.00	100	225		43.84	5.78	36.89	52.83	80.00	-27.17	
6498.67				48.58	A	43.84	5.78	36.89	47.41	60.00	-12.59
9748.03	50.33	100	225		43.25	6.99	39.00	53.06	80.00	-26.94	
9748.03				39.18	A	43.25	6.99	39.00	41.91	60.00	-18.09
EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)											
3282.66	49.00	150	225		43.10	3.91	30.26	40.07	80.00	-39.93	
3282.66				38.59	A	43.10	3.91	30.26	29.66	60.00	-30.34
6565.32	53.83	100	225		43.84	5.83	37.32	53.14	80.00	-26.86	
6565.32				48.85	A	43.84	5.83	37.32	48.16	60.00	-11.84
9848.03	50.17	100	135		43.29	7.03	39.12	53.03	80.00	-26.97	
9848.03				39.22	A	43.29	7.03	39.12	42.08	60.00	-17.92

Page 35 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)											
3216.00	48.67	100	0		43.07	3.89	30.44	39.93	80.00	-40.07	
3216.00				38.35	A	43.07	3.89	30.44	29.61	60.00	-30.39
6432.00	55.50	100	315		43.82	5.73	36.64	54.06	80.00	-25.94	
6432.00				51.20	A	43.82	5.73	36.64	49.76	60.00	-10.24
9648.00	50.00	100	135		43.22	6.95	38.97	52.70	80.00	-27.30	
9648.00				38.79	A	43.22	6.95	38.97	41.49	60.00	-18.51
EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)											
3249.33	48.50	100	0		43.08	3.91	30.45	39.77	80.00	-40.23	
3249.33				38.68	A	43.08	3.91	30.45	29.95	60.00	-30.05
6498.69	59.00	125	225		43.84	5.78	36.90	57.83	80.00	-22.17	
6498.69				55.82	A	43.84	5.78	36.90	54.65	60.00	-5.35
9748.03	51.33	100	45		43.25	6.99	39.15	54.21	80.00	-25.79	
9748.03				42.28	A	43.25	6.99	39.15	45.16	60.00	-14.84
EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)											
3282.67	48.17	100	0		43.10	3.91	30.46	39.44	80.00	-40.56	
3282.67				37.64	A	43.10	3.91	30.46	28.91	60.00	-31.09
6565.34	57.50	175	225		43.84	5.83	37.38	56.87	80.00	-23.13	
6565.34				54.26	A	43.84	5.83	37.38	53.63	60.00	-6.37
9848.04	50.67	100	135		43.29	7.03	39.33	53.74	80.00	-26.26	
9848.04				42.79	A	43.29	7.03	39.33	45.86	60.00	-14.14

Page 36 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

PEAK TRANSMIT POWER

CLIENT:	Dell Computer Corporation	DATE:	09/30/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930-01
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas.	TEMPERATURE:	18 C
		HUMIDITY:	57% RH
		TIME:	9:00 AM

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

Peak Transmit Power Limits	
Frequency (MHz)	Output Power (W)
5725-5850	1
2412-2462	1

Page 37 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Peak Transmit Power (Continued)

Mode	Channel	Frequency (MHz)	Rate (Mbps)	Average Power (dBm)	Average Power (mW)	Peak Power (dBm)	Peak Power (mW)
802.11a	149	5745	6	14.65	29.17	20.90	123.03
802.11a	157	5785	6	14.70	29.51	21.00	125.89
802.11a	165	5825	6	14.72	29.65	21.01	126.18
802.11b	1	2412	1	15.50	35.48	17.55	56.89
802.11b	6	2437	1	17.00	50.12	19.20	83.18
802.11b	11	2462	1	17.20	52.48	19.40	87.10
802.11g	1	2412	6	15.00	31.62	23.75	237.14
802.11g	6	2437	6	15.50	35.48	24.15	260.02
802.11g	11	2462	6	15.20	33.11	24.00	251.19

NOTE: The output power measurement is conducted.

Page 38 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

6 dB EMISSIONS BANDWIDTH

CLIENT:	Dell Computer Corporation	DATE:	09/30/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas.	TEMPERATURE:	22 C
		HUMIDITY:	50% RH
		TIME:	9:50 AM

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

Page 39 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

6 dB Emissions Bandwidth (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.745 GHz (INTEL-040930-05a1)	JC
	<p>*ATTEN 30dB ΔMKR 0dB RL 20. 0d Bm 10dB/ 16. 00MHz</p> <p>D</p> <p>CENTER 5.74500GHz SPAN 50.00MHz *RBW 100kHz *VBW 300kHz SWP 50.0ms</p>	
Test Date	Data	Test Eng.
09/30/04	5.785 GHz (INTEL-040930-05a2)	JC
	<p>*ATTEN 30dB ΔMKR 0dB RL 20. 0d Bm 10dB/ 16. 25MHz</p> <p>D</p> <p>CENTER 5.78500GHz SPAN 50.00MHz *RBW 100kHz *VBW 300kHz SWP 50.0ms</p>	

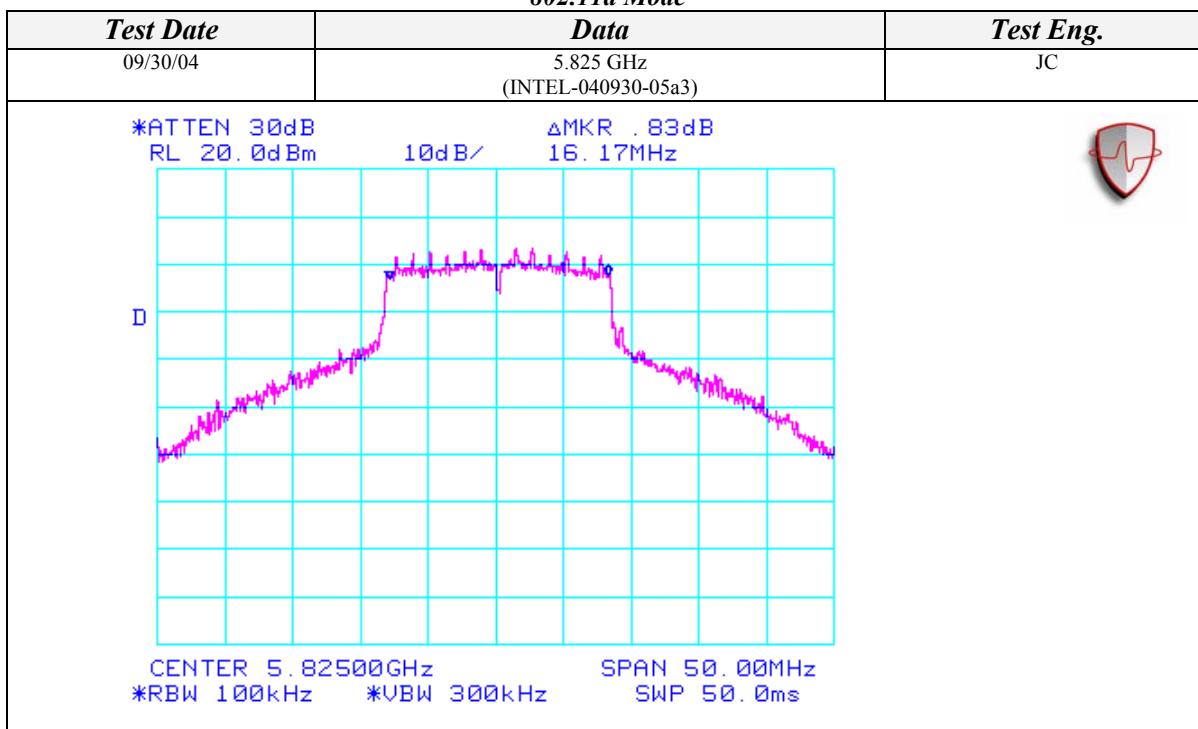
Page 40 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



6 dB Emissions Bandwidth (Continued)

AEGIS LABS INC.

802.11a Mode



Page 41 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

6 dB Emissions Bandwidth (Continued)

802.11b Mode

Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-02b1)	JC
	<p>*ATTEN 30dB RL 20. 0d Bm 10dB/</p> <p>ΔMKR . 17dB 10. 00MHz</p> <p>D</p> <p>CENTER 2.41200GHz SPAN 50.00MHz *RBW 100kHz *VBW 300kHz SWP 50.0ms</p>	
09/30/04	2.437 GHz (INTEL-040930-02b2)	JC
	<p>*ATTEN 30dB RL 20. 0d Bm 10dB/</p> <p>ΔMKR -. 17dB 10. 08MHz</p> <p>D</p> <p>CENTER 2.43700GHz SPAN 50.00MHz *RBW 100kHz *VBW 300kHz SWP 50.0ms</p>	

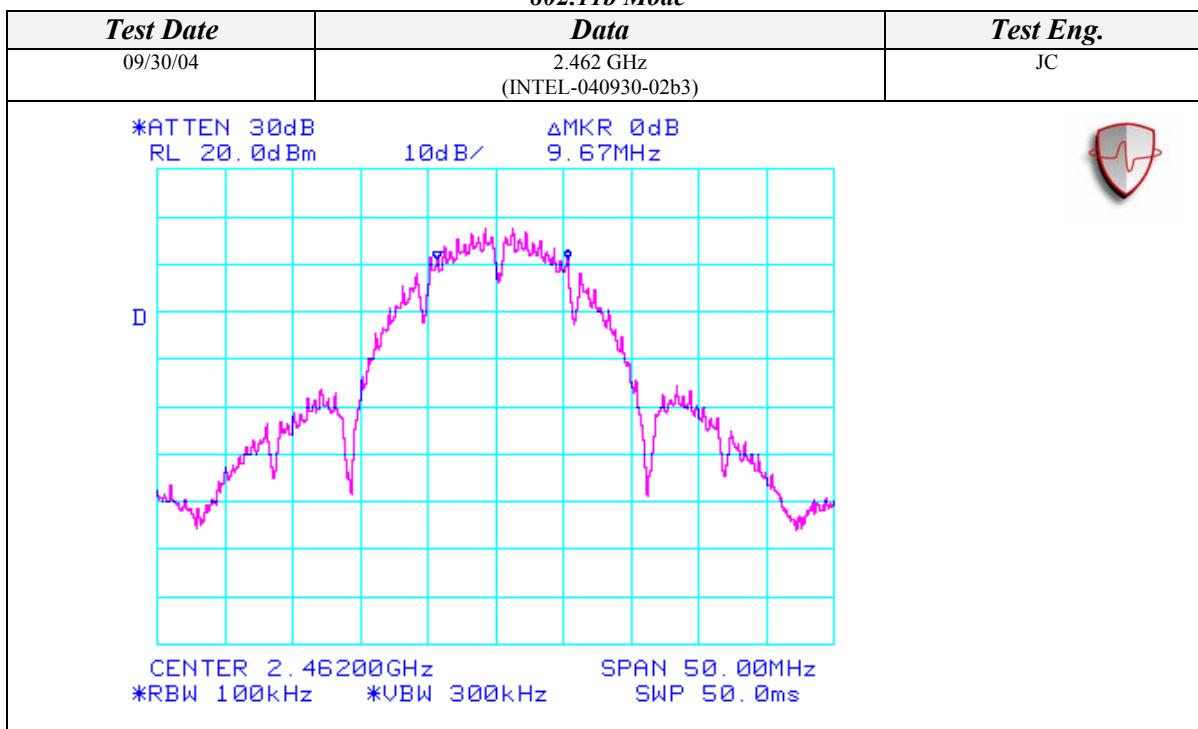
Page 42 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



6 dB Emissions Bandwidth (Continued)

AEGIS LABS INC.

802.11b Mode



Page 43 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

6 dB Emissions Bandwidth (Continued)

802.11g Mode

Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-03b1)	JC
	<p>*ATTEN 20dB RL 10.0 dBm 10dB/ ΔMKR -.50dB 16.25MHz</p> <p>D</p> <p>CENTER 2.41200GHz SPAN 50.00MHz *RBW 100kHz *VBW 300kHz SWP 50.0ms</p>	
Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-03b2)	JC
	<p>*ATTEN 20dB RL 10.0 dBm 10dB/ ΔMKR .17dB 16.08MHz</p> <p>D</p> <p>CENTER 2.43700GHz SPAN 50.00MHz *RBW 100kHz *VBW 300kHz SWP 50.0ms</p>	

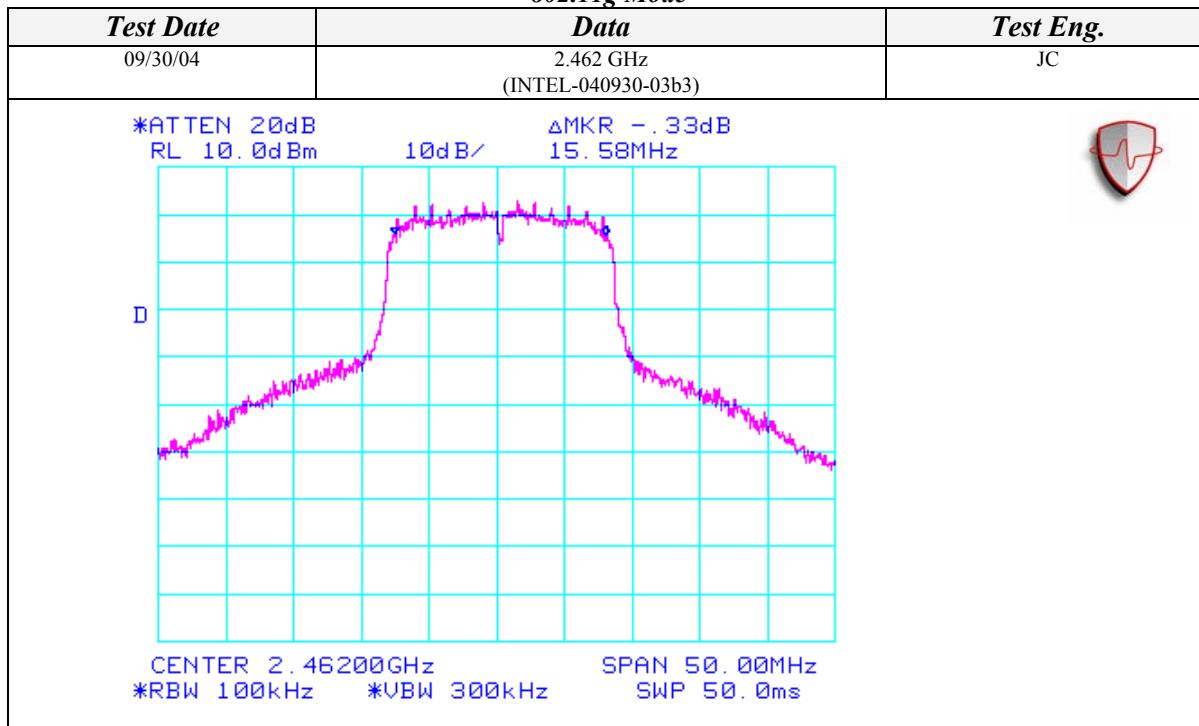
Page 44 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

6 dB Emissions Bandwidth (Continued)

802.11g Mode



Page 45 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

PEAK POWER SPECTRAL DENSITY

CLIENT:	Dell Computer Corporation	DATE:	09/30/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas.	TEMPERATURE:	22 C
		HUMIDITY:	50% RH
		TIME:	9:50 AM

Standard:	FCC CFR 47, Part 15.247(d)
Description:	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.
Results:	See Data Sheets

Peak Power Spectral Density Limits	
Frequency (MHz)	Limit (dBm)
5725-5850	8
2412-2462	8

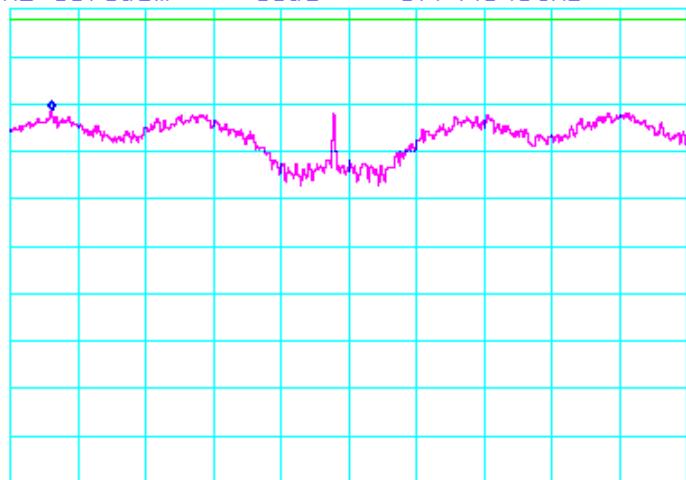
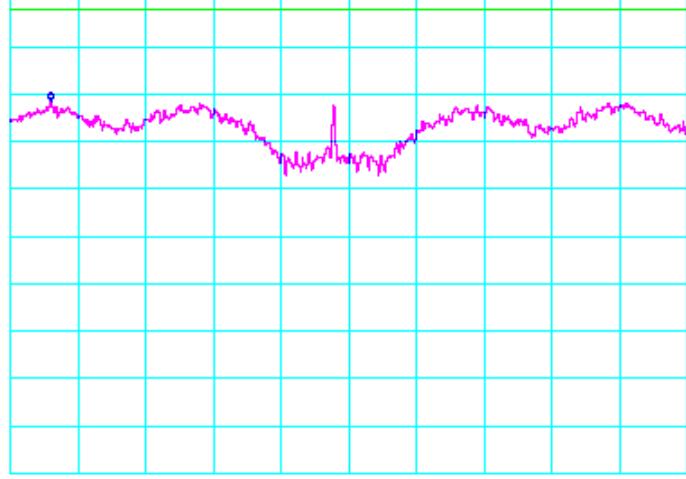
Page 46 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Peak Power Spectral Density (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.745 GHz (INTEL-040930-05c1)	JC
	*ATTEN 20dB RL 10.0 dBm 10dB/ MKR -11.33dBm 5.744343GHz	
		
	CENTER 5.745000GHz SPAN 1.500MHz *RBW 3.0kHz *VBW 3.0kHz *SWP 500sec	
Test Date	Data	Test Eng.
09/30/04	5.785 GHz (INTEL-040930-05c2)	JC
	*ATTEN 20dB RL 10.0 dBm 10dB/ MKR -11.50dBm 5.784340GHz	
		
	CENTER 5.785000GHz SPAN 1.500MHz *RBW 3.0kHz *VBW 3.0kHz *SWP 500sec	

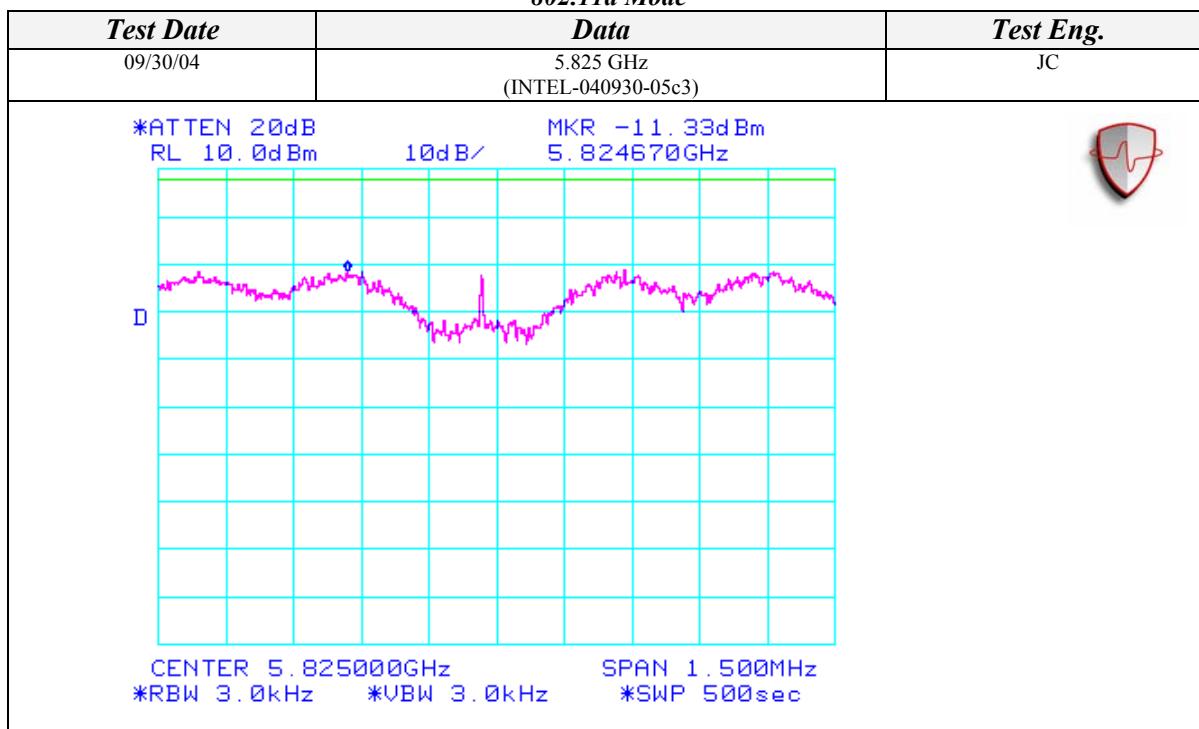
Page 47 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



Peak Power Spectral Density (Continued)

AEGIS LABS INC.

802.11a Mode



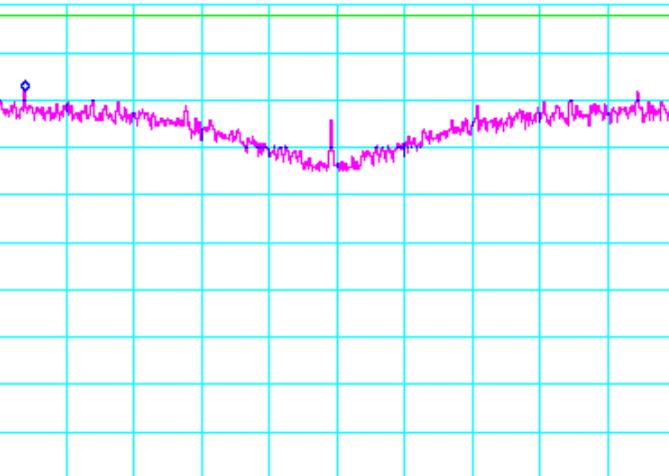
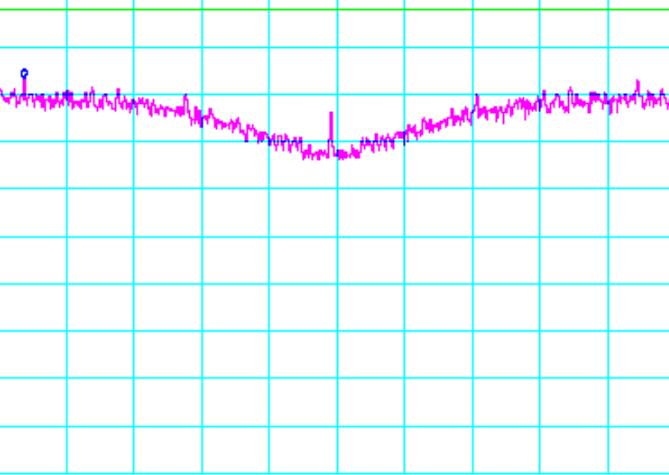
Page 48 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Peak Power Spectral Density (Continued)

802.11b Mode

Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-02d1)	JC
	*ATTEN 20dB RL 10.00 dBm 10dB/ MKR -8.00 dBm 2.411310GHz	
		
	CENTER 2.412000GHz SPAN 1.500MHz *RBW 3.0kHz *VBW 3.0kHz *SWP 500sec	
Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-02d2)	JC
	*ATTEN 20dB RL 10.00 dBm 10dB/ MKR -6.67 dBm 2.436308GHz	
		
	CENTER 2.437000GHz SPAN 1.500MHz *RBW 3.0kHz *VBW 3.0kHz *SWP 500sec	

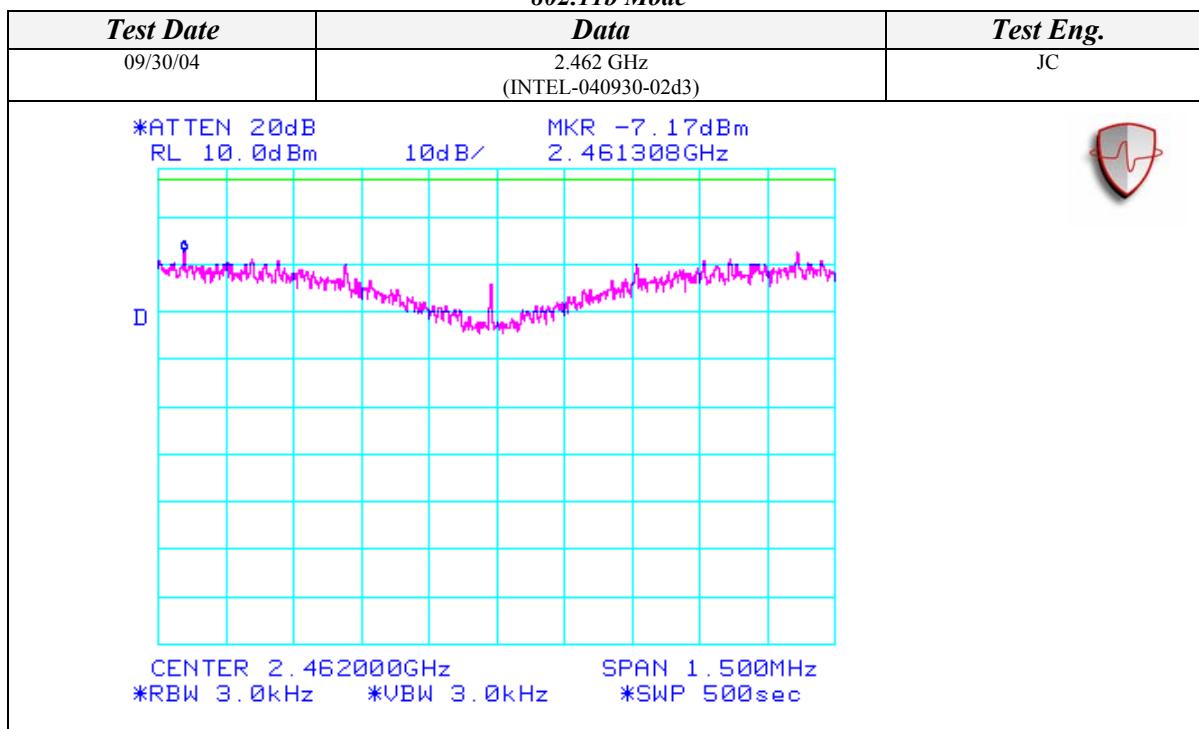
Page 49 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



Peak Power Spectral Density (Continued)

AEGIS LABS INC.

802.11b Mode



Page 50 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



Peak Power Spectral Density (Continued)

AEGIS LABS INC.

802.11g Mode

Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-03d1)	JC
<p>*ATTEN 20dB MKR -10. 00dBm RL 10. 00Bm 10dB/ 2.411373GHz</p> <p>D</p> <p>CENTER 2.412000GHz SPAN 1.500MHz *RBW 3.0kHz *VBW 3.0kHz *SWP 500sec</p>		
<p>*ATTEN 20dB MKR -10. 33dBm RL 10. 00Bm 10dB/ 2.436360GHz</p> <p>D</p> <p>CENTER 2.437000GHz SPAN 1.500MHz *RBW 3.0kHz *VBW 3.0kHz *SWP 500sec</p>		

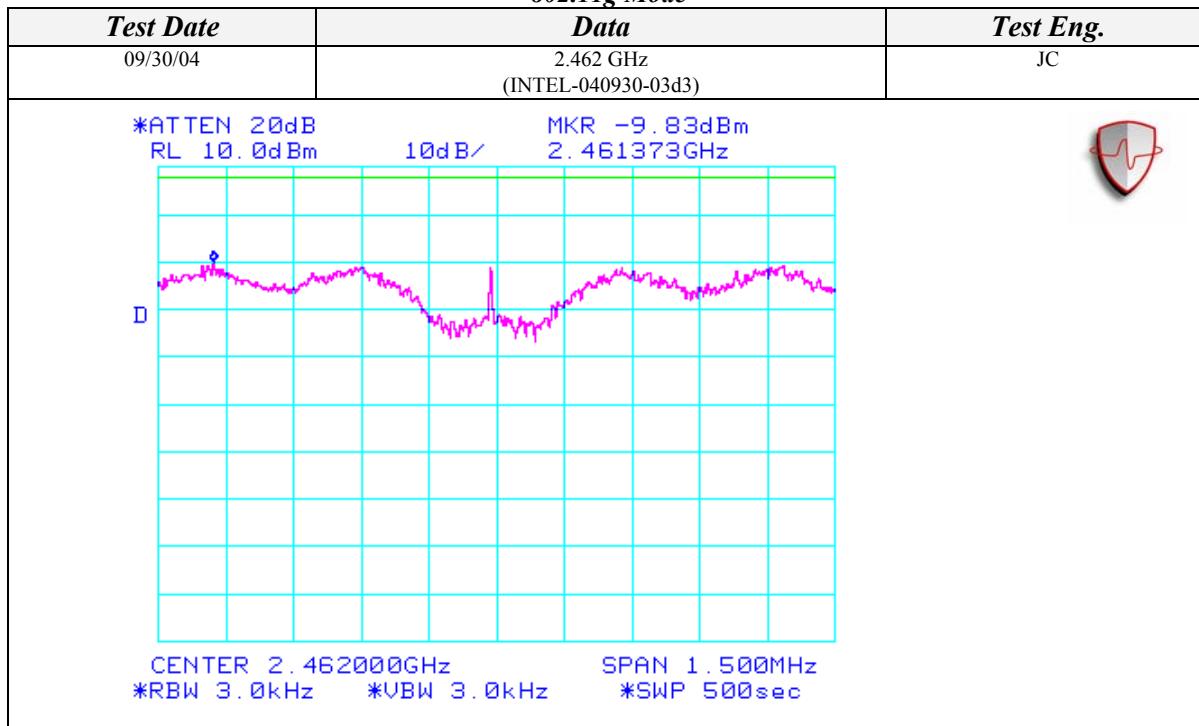
Page 51 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Peak Power Spectral Density (Continued)

802.11g Mode



Page 52 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

CONDUCTED OUT OF BAND EMISSIONS

CLIENT:	Dell Computer Corporation	DATE:	09/30/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas.	TEMPERATURE:	22 C
		HUMIDITY:	50% RH
		TIME:	9:50 AM

Standard:	FCC CFR 47, Part 15.247(c)
Description:	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.

Page 53 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.745 GHz (INTEL-040930-05d01)	JC
	<p>*ATTEN 20dB RL 10.0 dBm 10dB/</p> <p>MKR -64.50dBm 251.5MHz</p> <p>D</p> <p>START 30.0MHz STOP 1.0000GHz *RBW 100kHz *VBW 300kHz SWP 540ms</p>	
Test Date	Data	Test Eng.
09/30/04	5.745 GHz (INTEL-040930-05d02)	JC
	<p>*ATTEN 20dB RL 10.0 dBm 10dB/</p> <p>MKR -40.17dBm 3.827GHz</p> <p>D</p> <p>START 1.000GHz STOP 5.000GHz *RBW 100kHz *VBW 300kHz SWP 2.20sec</p>	

Page 54 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.745 GHz (INTEL-040930-05d03)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -43. 83dBm 5.500GHz</p> <p>D</p> <p>START 5.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 2.80sec</p>	
Test Date	Data	Test Eng.
09/30/04	5.745 GHz (INTEL-040930-05d04)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -58. 83dBm 13.30GHz</p> <p>D</p> <p>START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec</p>	

Page 55 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.745 GHz (INTEL-040930-05d05)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -52.00 dBm 36.23GHz</p> <p>D</p> <p>START 20.00GHz STOP 40.00GHz *RBW 100kHz *VBW 300kHz SWP 11.0sec</p>	
Test Date	Data	Test Eng.
09/30/04	5.785 GHz (INTEL-040930-05d06)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -65.00 dBm 637.9MHz</p> <p>D</p> <p>START 30.0MHz STOP 1.0000GHz *RBW 100kHz *VBW 300kHz SWP 540ms</p>	

Page 56 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.785 GHz (INTEL-040930-05d07)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -40.33 dBm 3.853GHz</p> <p>D</p> <p>START 1.000GHz STOP 5.000GHz *RBW 100kHz *VBW 300kHz SWP 2.20sec</p>	
Test Date	Data	Test Eng.
09/30/04	5.785 GHz (INTEL-040930-05d08)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -44.83 dBm 5.458GHz</p> <p>D</p> <p>START 5.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 2.80sec</p>	

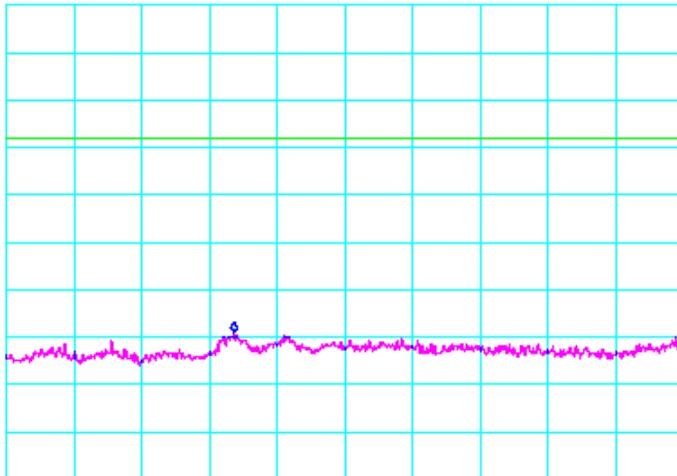
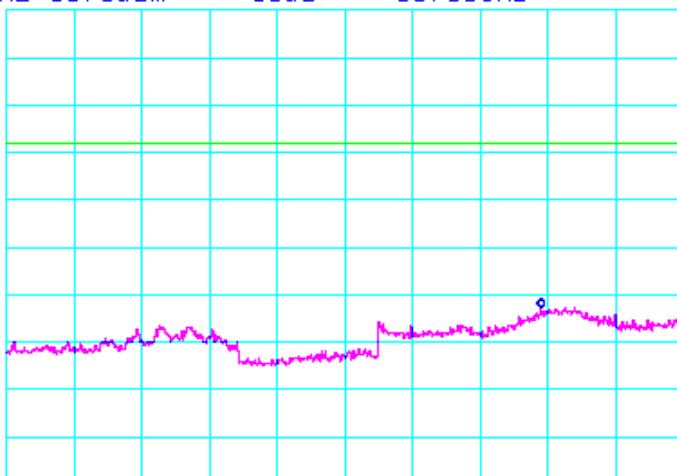
Page 57 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.785 GHz (INTEL-040930-05d09)	JC
	*ATTEN 20dB RL 10. 00 dBm 10dB/ MKR -59. 00 dBm 13. 37GHz	
	 D START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec	
Test Date	Data	Test Eng.
09/30/04	5.785 GHz (INTEL-040930-05d10)	JC
	*ATTEN 20dB RL 10. 00 dBm 10dB/ MKR -52. 83 dBm 35. 80GHz	
	 D START 20.00GHz STOP 40.00GHz *RBW 100kHz *VBW 300kHz SWP 11.0sec	

Page 58 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.825 GHz (INTEL-040930-05d11)	JC
	<p>*ATTEN 20dB RL 10.0 dBm 10dB/</p> <p>MKR -64.67dBm 107.6MHz</p> <p>D</p> <p>START 30.0MHz STOP 1.0000GHz *RBW 100kHz *VBW 300kHz SWP 540ms</p>	
Test Date	Data	Test Eng.
09/30/04	5.825 GHz (INTEL-040930-05d12)	JC
	<p>*ATTEN 20dB RL 10.0 dBm 10dB/</p> <p>MKR -40.50dBm 3.880GHz</p> <p>D</p> <p>START 1.000GHz STOP 5.000GHz *RBW 100kHz *VBW 300kHz SWP 2.20sec</p>	

Page 59 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11a Mode

Test Date	Data	Test Eng.
09/30/04	5.825 GHz (INTEL-040930-05d13)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -44. 17dBm 5.342GHz</p> <p>D</p> <p>START 5.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 2.80sec</p>	
Test Date	Data	Test Eng.
09/30/04	5.825 GHz (INTEL-040930-05d14)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -58. 67dBm 13.42GHz</p> <p>D</p> <p>START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec</p>	

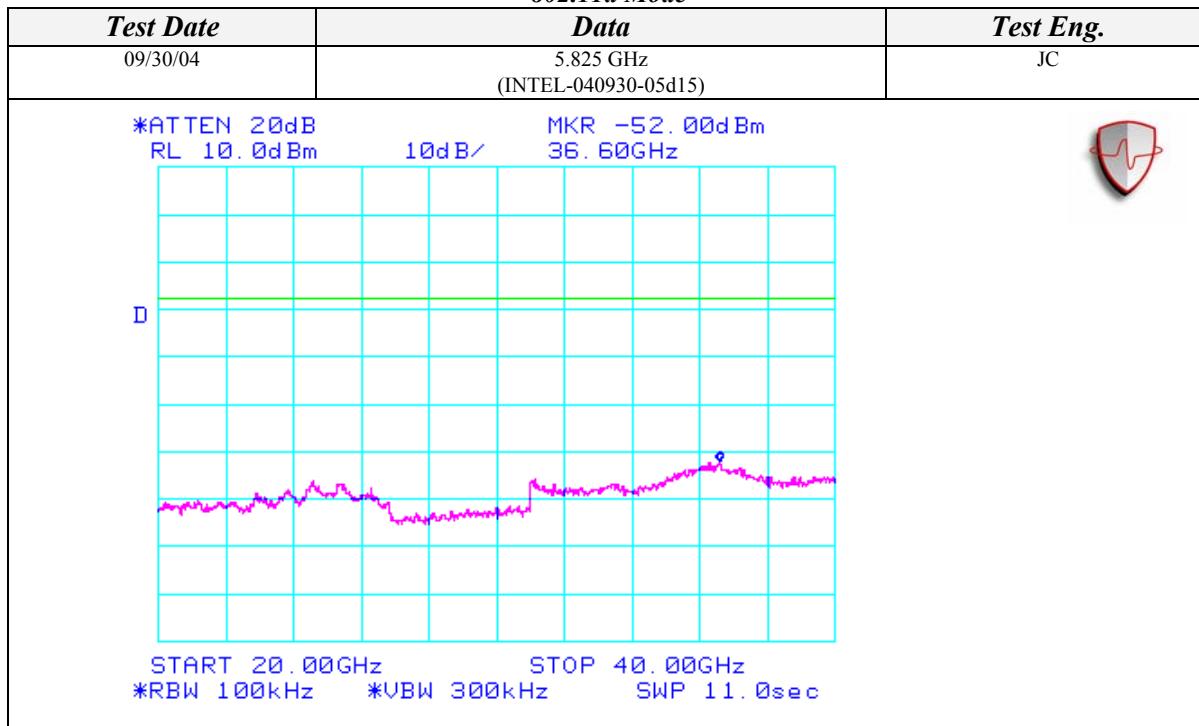
Page 60 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11a Mode



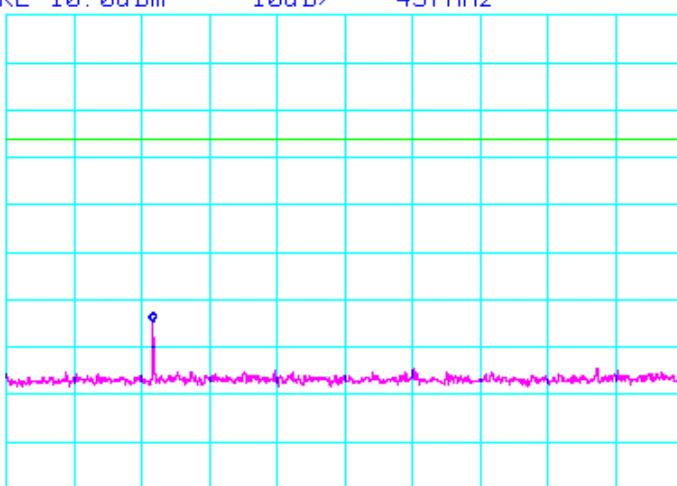
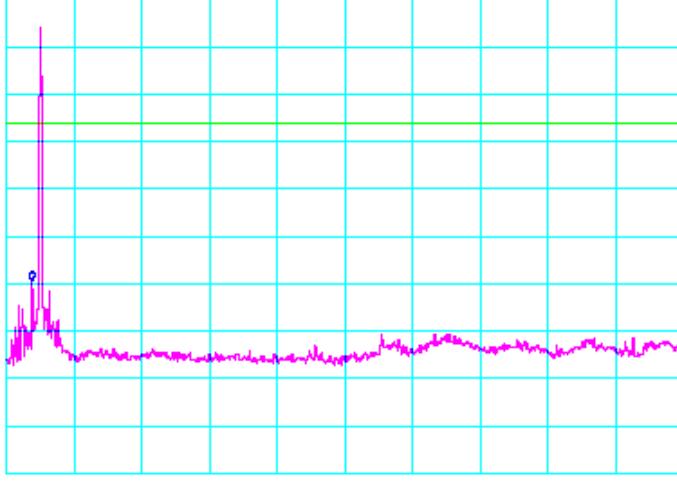
Page 61 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-02e01)	JC
	*ATTEN 20dB RL 10.00 dBm 10dB/ MKR -54.67 dBm 457MHz	
		
	START 30MHz STOP 2.000GHz *RBW 100kHz *VBW 300kHz SWP 1.10sec	
Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-02e02)	JC
	*ATTEN 20dB RL 10.00 dBm 10dB/ MKR -49.33 dBm 2.307GHz	
		
	START 2.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 4.40sec	

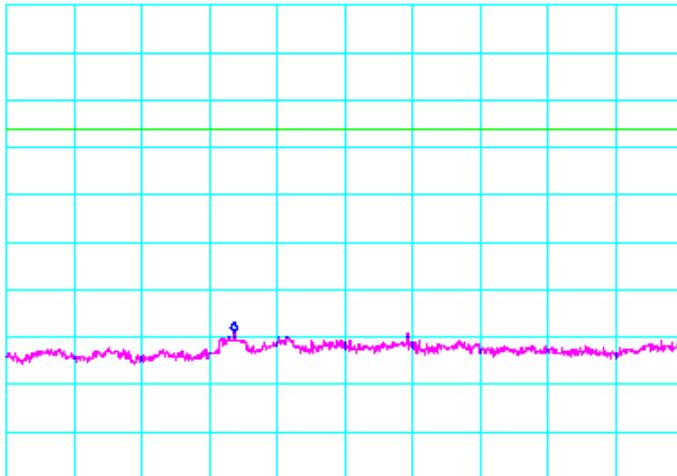
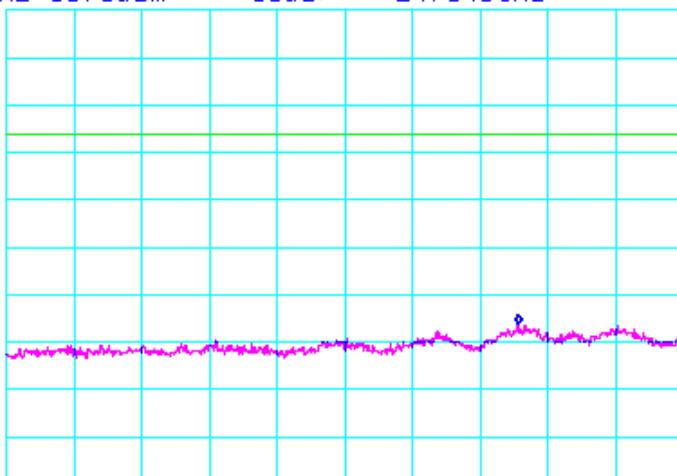
Page 62 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-02e03)	JC
	*ATTEN 20dB RL 10. 00 dBm 10dB/ MKR -59. 00 dBm 13. 37GHz	
	 D START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec	
Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-02e04)	JC
	*ATTEN 20dB RL 10. 00 dBm 10dB/ MKR -56. 17 dBm 24. 540GHz	
	 D START 20.000GHz STOP 26.000GHz *RBW 100kHz *VBW 300kHz SWP 3.30sec	

Page 63 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-02e05)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -49.83 dBm 483MHz</p> <p>D</p> <p>START 30MHz STOP 2.000GHz *RBW 100kHz *VBW 300kHz SWP 1.10sec</p>	
Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-02e06)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -49.17 dBm 2.333GHz</p> <p>D</p> <p>START 2.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 4.40sec</p>	

Page 64 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-02e07)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -59. 17dBm 13. 35GHz</p> <p>D</p> <p>START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec</p>	
Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-02e08)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -56. 33dBm 25. 440GHz</p> <p>D</p> <p>START 20.000GHz STOP 26.000GHz *RBW 100kHz *VBW 300kHz SWP 3.30sec</p>	

Page 65 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	Data	Test Eng.
09/30/04	2.462 GHz (INTEL-040930-02e09)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -50.67 dBm 509MHz</p> <p>D</p> <p>START 30MHz STOP 2.000GHz *RBW 100kHz *VBW 300kHz SWP 1.10sec</p>	
Test Date	Data	Test Eng.
09/30/04	2.462 GHz (INTEL-040930-02e10)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -49.50 dBm 2.347GHz</p> <p>D</p> <p>START 2.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 4.40sec</p>	

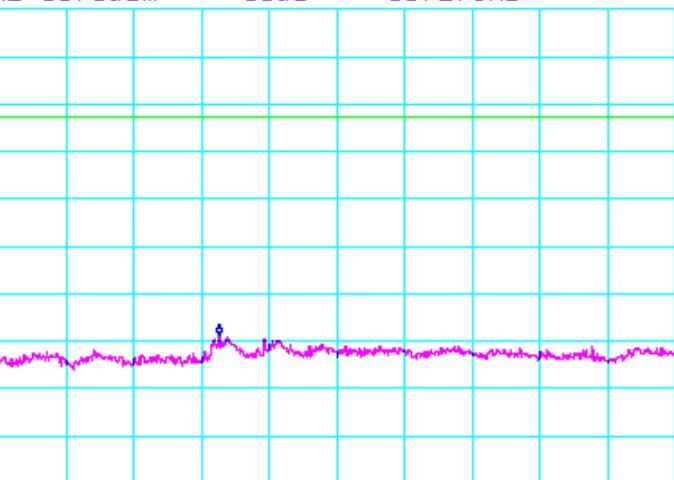
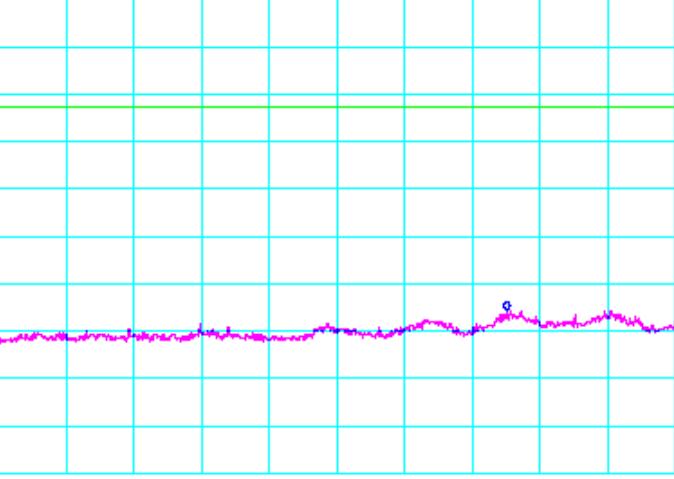
Page 66 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11b Mode

Test Date	Data	Test Eng.
09/30/04	2.462 GHz (INTEL-040930-02e11)	JC
	*ATTEN 20dB RL 10.00 dBm 10dB/ MKR -58.67 dBm 13.27GHz	
		
	START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec	
Test Date	Data	Test Eng.
09/30/04	2.462 GHz (INTEL-040930-02e12)	JC
	*ATTEN 20dB RL 10.00 dBm 10dB/ MKR -55.67 dBm 24.510GHz	
		
	START 20.000GHz STOP 26.000GHz *RBW 100kHz *VBW 300kHz SWP 3.30sec	

Page 67 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11g Mode

Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-03e01)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -62. 00 dBm 460MHz</p> <p>D</p> <p>START 30MHz STOP 2.000GHz *RBW 100kHz *VBW 300kHz SWP 1.10sec</p>	
Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-03e02)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -48. 17dBm 2.307GHz</p> <p>D</p> <p>START 2.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 4.40sec</p>	

Page 68 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11g Mode

Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-03e03)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -59. 67dBm 13. 43GHz</p> <p>D</p> <p>START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec</p>	
Test Date	Data	Test Eng.
09/30/04	2.412 GHz (INTEL-040930-03e04)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -55. 67dBm 25. 440GHz</p> <p>D</p> <p>START 20.000GHz STOP 26.000GHz *RBW 100kHz *VBW 300kHz SWP 3.30sec</p>	

Page 69 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11g Mode

Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-03e05)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -59.83 dBm 483MHz</p> <p>D</p> <p>START 30MHz STOP 2.000GHz *RBW 100kHz *VBW 300kHz SWP 1.10sec</p>	
Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-03e06)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/</p> <p>MKR -48.33 dBm 2.333GHz</p> <p>D</p> <p>START 2.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 4.40sec</p>	

Page 70 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11g Mode

Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-03e07)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -59. 17dBm 14. 22GHz</p> <p>D</p> <p>START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec</p>	
Test Date	Data	Test Eng.
09/30/04	2.437 GHz (INTEL-040930-03e08)	JC
	<p>*ATTEN 20dB RL 10. 00 dBm 10dB/</p> <p>MKR -56. 00dBm 24. 550GHz</p> <p>D</p> <p>START 20.000GHz STOP 26.000GHz *RBW 100kHz *VBW 300kHz SWP 3.30sec</p>	

Page 71 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Conducted Out Of Band Emissions (Continued)

802.11g Mode

Test Date	Data	Test Eng.
09/30/04	2.462 GHz (INTEL-040930-03e09)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/ MKR -61.17 dBm 509MHz</p> <p>START 30MHz STOP 2.000GHz *RBW 100kHz *VBW 300kHz SWP 1.10sec</p>	
Test Date	Data	Test Eng.
09/30/04	2.462 GHz (INTEL-040930-03e10)	JC
	<p>*ATTEN 20dB RL 10.00 dBm 10dB/ MKR -48.83 dBm 2.347GHz</p> <p>START 2.000GHz STOP 10.000GHz *RBW 100kHz *VBW 300kHz SWP 4.40sec</p>	

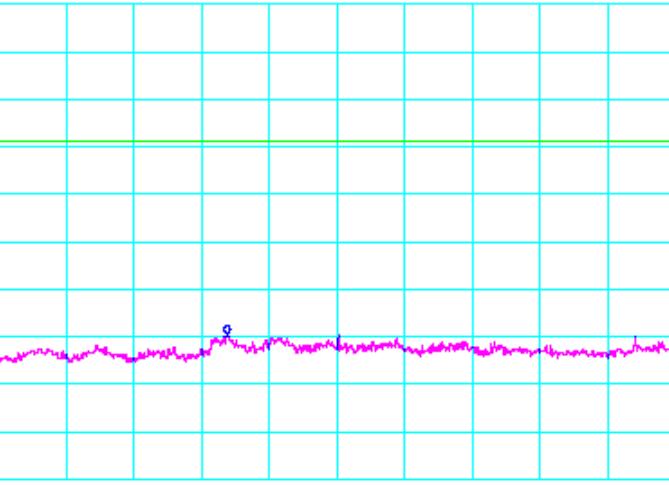
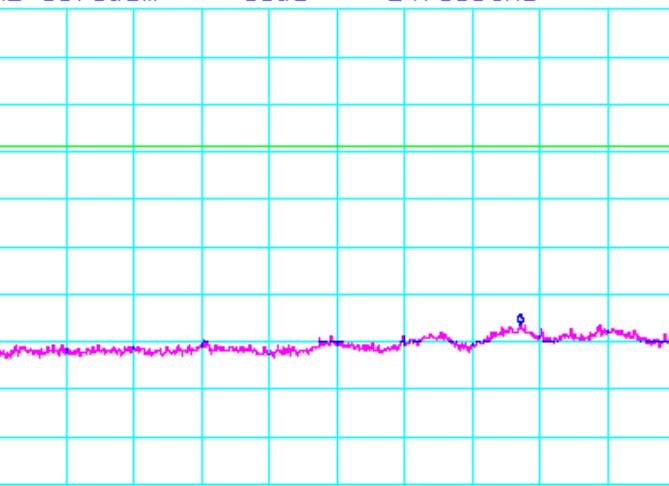
Page 72 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



Conducted Out Of Band Emissions (Continued)

AEGIS LABS INC.

802.11g Mode

Test Date	Data	Test Eng.
09/30/04	2.462 GHz (INTEL-040930-03e11)	JC
	*ATTEN 20dB RL 10.0dBm 10dB/ MKR -59.50dBm 13.38GHz	
		
	START 10.00GHz STOP 20.00GHz *RBW 100kHz *VBW 300kHz SWP 5.50sec	
Test Date	Data	Test Eng.
09/30/04	2.462 GHz (INTEL-040930-03e12)	JC
	*ATTEN 20dB RL 10.0dBm 10dB/ MKR -56.33dBm 24.630GHz	
		
	START 20.000GHz STOP 26.000GHz *RBW 100kHz *VBW 300kHz SWP 3.30sec	

Page 73 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

WLAN = ON, Bluetooth = ON
TEST DATA

Page 74 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

CLIENT:	Dell Computer Corporation	DATE:	12/21/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas in 802.11a (5745-5825 MHz) mode.	TEMPERATURE:	14 C
		HUMIDITY:	62% RH
		TIME:	4:30 PM

Standard:	FCC CFR 47, Part 15.247(c)
Description:	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.
Results:	Passes (See Data Sheets)

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

Page 75 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Fundamental Measurements in 802.11a mode (5745-5825 MHz)

Channels 149, 157, & 169

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-12

RADIATED EMISSIONS - Horizontal 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
5745.00	61.67	125	135			5.25	34.85	101.76		
5745.00				52.73	A	5.25	34.85	92.82		
5785.00	62.17	125	135			5.27	34.87	102.31		
5785.00				53.17	A	5.27	34.87	93.31		
5825.00	62.67	125	135			5.30	34.90	102.87		
5825.00				52.64	A	5.30	34.90	92.84		

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
5745.00	62.17	100	180			5.25	34.85	102.26		
5745.00				53.06	A	5.25	34.85	93.15		
5785.00	62.33	100	180			5.27	34.87	102.47		
5785.00				53.30	A	5.27	34.87	93.44		
5825.00	63.50	150	225			5.30	34.90	103.70		
5825.00				53.36	A	5.30	34.90	93.56		

Page 76 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Band Edge Field Strength Measurements in 802.11a mode (5745-5825 MHz)
Channels 149, 157, & 169

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas
Aegis Labs, Inc. File #: INTEL-040930-12

RADIATED EMISSIONS - Horizontal 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
5725.00	34.17	125	135			5.23	34.84	74.24	81.76	-7.53
5850.00	29.67	125	135			5.32	34.91	69.90	82.87	-12.97

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
5725.00	35.17	100	180			5.23	34.84	75.24	82.26	-7.03
5850.00	30.17	150	225			5.32	34.91	70.40	83.70	-13.30

Page 77 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
12/21/04	5.745 GHz band edge PEAK (Horizontal Antenna Polarity) (INTEL-040930-12a05)	JC
	<p>*ATTEN 0dB RL 97.0dBμV 10dB/ MKR 34.17dBμV 5.72500GHz</p> <p>D</p> <p>CENTER 5.74500GHz SPAN 50.00MHz *RBW 1.0MHz *UBW 1.0MHz SWP 50.0ms</p>	
12/21/04	5.825 GHz band edge PEAK (Horizontal Antenna Polarity) (INTEL-040930-12a06)	JC
	<p>*ATTEN 0dB RL 97.0dBμV 10dB/ MKR 29.67dBμV 5.85000GHz</p> <p>D</p> <p>CENTER 5.82500GHz SPAN 50.00MHz *RBW 1.0MHz *UBW 1.0MHz SWP 50.0ms</p>	

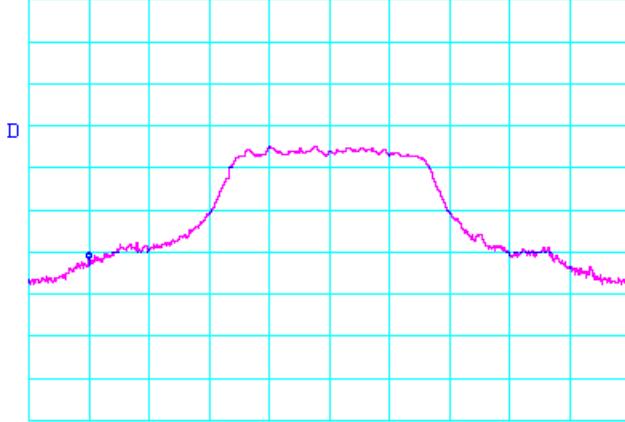
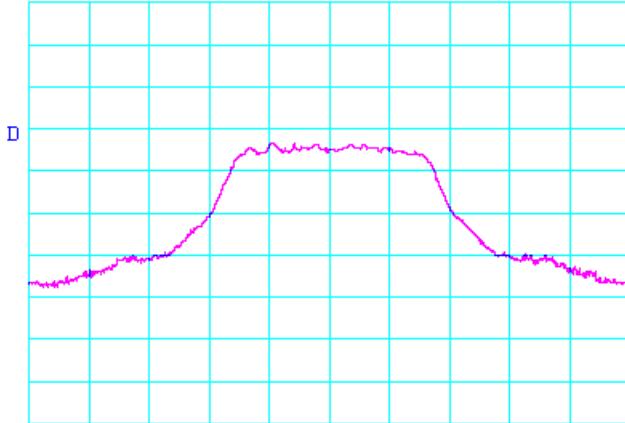
Page 78 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
12/21/04	5.745 GHz band edge PEAK (Vertical Antenna Polarity) (INTEL-040930-12a07)	JC
	*ATTEN 0dB RL 97.0dB μ V 10dB/ MKR 35.17dB μ V 5.72500GHz	
		
	D CENTER 5.74500GHz SPAN 50.00MHz *RBW 1.0MHz *UBW 1.0MHz SWP 50.0ms	
Test Date	Data	Test Eng.
12/21/04	5.825 GHz band edge PEAK (Vertical Antenna Polarity) (INTEL-040930-12a08)	JC
	*ATTEN 0dB RL 97.0dB μ V 10dB/ MKR 30.17dB μ V 5.85000GHz	
		
	D CENTER 5.82500GHz SPAN 50.00MHz *RBW 1.0MHz *UBW 1.0MHz SWP 50.0ms	

Page 79 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11a mode (5745-5825 MHz)**Channels 149, 157, & 169****Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas****Aegis Labs, Inc. File #: INTEL-040930-14****RADIATED EMISSIONS - Horizontal 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
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EUT in Continuous Transmit Mode on Channel 149 (5.745 GHz)

3830.00	52.83	100	225		43.17	4.18	31.16	45.00	74.00	-29.00	
3830.00				45.94	A	43.17	4.18	31.16	38.11	54.00	-15.89
7660.00	51.00	100	180		43.62	6.27	40.05	53.70	74.00	-20.30	
7660.00				41.37	A	43.62	6.27	40.05	44.07	54.00	-9.93
11490.00	49.83	100	135		43.50	7.64	41.18	55.15	74.00	-18.85	
11490.00				38.42	A	43.50	7.64	41.18	43.74	54.00	-10.26
15319.89	49.67	100	135		43.39	8.80	41.49	56.57	81.76	-25.19	

EUT in Continuous Transmit Mode on Channel 157 (5.785 GHz)

3856.66	52.83	100	180		43.17	4.21	31.23	45.09	74.00	-28.91	
3856.66				45.12	A	43.17	4.21	31.23	37.38	54.00	-16.62
7713.33	50.17	100	180		43.60	6.29	40.20	53.06	74.00	-20.94	
7713.33				40.31	A	43.60	6.29	40.20	43.20	54.00	-10.80
11569.98	49.00	100	135		43.48	7.66	41.38	54.57	74.00	-19.43	
11569.98				36.83	A	43.48	7.66	41.38	42.40	54.00	-11.60
15426.58	48.67	100	135		43.35	8.80	41.56	55.68	74.00	-18.32	
15426.58				37.02		43.35	8.80	41.56	44.03	54.00	-9.97

EUT in Continuous Transmit Mode on Channel 165 (5.825 GHz)

3883.34	53.00	100	180		43.17	4.23	31.30	45.35	74.00	-28.65	
3883.34				45.99	A	43.17	4.23	31.30	38.34	54.00	-15.66
7766.66	51.67	100	135		43.58	6.32	40.35	54.75	82.87	-28.12	
11650.00	49.33	100	135		43.45	7.69	41.59	55.16	74.00	-18.84	
11650.00				37.36	A	43.45	7.69	41.59	43.19	54.00	-10.81
15533.23	48.83	100	135		43.35	8.82	41.71	56.01	74.00	-17.99	
15533.23				36.65	A	43.35	8.82	41.71	43.83	54.00	-10.17

Page 80 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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
EUT in Continuous Transmit Mode on Channel 149 (5.745 GHz)										
3830.00	52.67	100	225		43.17	4.18	31.09	44.78	74.00	-29.22
3830.00				45.39	A	43.17	4.18	31.09	37.50	54.00
7660.00	53.33	150	45		43.62	6.27	40.11	56.10	74.00	-17.90
7660.00				47.32	A	43.62	6.27	40.11	50.09	54.00
11490.00	50.00	100	135		43.50	7.64	41.66	55.80	74.00	-18.20
11490.00				38.29	A	43.50	7.64	41.66	44.09	54.00
EUT in Continuous Transmit Mode on Channel 157 (5.785 GHz)										
3856.66	52.83	100	225		43.17	4.21	31.14	45.01	74.00	-28.99
3856.66				44.93	A	43.17	4.21	31.14	37.11	54.00
7713.33	52.33	150	45		43.60	6.29	40.28	55.31	74.00	-18.69
7713.33				45.19	A	43.60	6.29	40.28	48.17	54.00
11569.98	49.33	100	135		43.48	7.66	41.81	55.33	74.00	-18.67
11569.98				36.78	A	43.48	7.66	41.81	42.78	54.00
EUT in Continuous Transmit Mode on Channel 165 (5.825 GHz)										
3883.33	52.33	100	225		43.17	4.23	31.19	44.58	74.00	-29.42
3883.33				43.56	A	43.17	4.23	31.19	35.81	54.00
7766.66	53.00	175	45		43.58	6.32	40.45	56.19	83.70	-27.51
11650.00	49.50	100	135		43.45	7.69	41.94	55.68	74.00	-18.32
11650.00				37.42	A	43.45	7.69	41.94	43.60	54.00

Page 81 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11a mode (5745-5825 MHz)

Channels 149, 157, & 169

Continuous RX at MAIN Antenna port with Wistron NeWeb Corp. Antennas
Aegis Labs, Inc. File #: INTEL-040930-14

RADIATED EMISSIONS - Horizontal 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	
EUT in Continuous Receive Mode on Channel 149 (5.745 GHz)											
3830.00	51.67	100	225		43.17	4.18	31.16	43.84	80.00	-36.16	
3830.00				43.38	A	43.17	4.18	31.16	35.55	60.00	-24.45
7660.00	48.83	100	225		43.62	6.27	40.05	51.53	80.00	-28.47	
7660.00				36.85	A	43.62	6.27	40.05	39.55	60.00	-20.45
11489.92	49.17	100	135		43.50	7.64	41.18	54.49	80.00	-25.51	
11489.92				37.47	A	43.50	7.64	41.18	42.79	60.00	-17.21
EUT in Continuous Receive Mode on Channel 157 (5.785 GHz)											
3856.62	51.50	100	225		43.17	4.21	31.23	43.76	80.00	-36.24	
3856.62				42.83	A	43.17	4.21	31.23	35.09	60.00	-24.91
7713.32	49.00	100	135		43.60	6.29	40.20	51.89	80.00	-28.11	
7713.32				37.68	A	43.60	6.29	40.20	40.57	60.00	-19.43
11569.92	49.17	100	135		43.48	7.66	41.38	54.74	80.00	-25.26	
11569.92				36.89	A	43.48	7.66	41.38	42.46	60.00	-17.54
EUT in Continuous Receive Mode on Channel 165 (5.825 GHz)											
3883.34	50.17	100	225		43.17	4.23	31.30	42.52	80.00	-37.48	
3883.34				40.62	A	43.17	4.23	31.30	32.97	60.00	-27.03
7766.62	49.00	100	225		43.58	6.32	40.35	52.08	80.00	-27.92	
7766.62				37.84	A	43.58	6.32	40.35	40.92	60.00	-19.08
11649.94	49.67	100	135		43.45	7.69	41.59	55.50	80.00	-24.50	
11649.94				37.43	A	43.45	7.69	41.59	43.26	60.00	-16.74

Page 82 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Receive Mode on Channel 149 (5.745 GHz)											
3830.00	54.00	100	225		43.17	4.18	31.09	46.11	80.00	-33.89	
3830.00				47.69	A	43.17	4.18	31.09	39.80	60.00	-20.20
7660.00	48.83	100	315		43.62	6.27	40.11	51.60	80.00	-28.40	
7660.00				38.35	A	43.62	6.27	40.11	41.12	60.00	-18.88
11489.96	49.67	100	135		43.50	7.64	41.66	55.47	80.00	-24.53	
11489.96				37.37	A	43.50	7.64	41.66	43.17	60.00	-16.83
EUT in Continuous Receive Mode on Channel 157 (5.785 GHz)											
3856.65	53.17	100	225		43.17	4.21	31.14	45.35	80.00	-34.65	
3856.65				46.06	A	43.17	4.21	31.14	38.24	60.00	-21.76
7713.29	49.33	100	315		43.60	6.29	40.28	52.31	80.00	-27.69	
7713.29				37.91	A	43.60	6.29	40.28	40.89	60.00	-19.11
11569.91	48.83	100	135		43.48	7.66	41.81	54.83	80.00	-25.17	
11569.91				36.68	A	43.48	7.66	41.81	42.68	60.00	-17.32
EUT in Continuous Receive Mode on Channel 165 (5.825 GHz)											
3883.35	51.83	100	225		43.17	4.23	31.19	44.08	80.00	-35.92	
3883.35				44.46	A	43.17	4.23	31.19	36.71	60.00	-23.29
7766.63	49.83	100	315		43.58	6.32	40.45	53.02	80.00	-26.98	
7766.63				38.82	A	43.58	6.32	40.45	42.01	60.00	-17.99
11649.97	49.67	100	135		43.45	7.69	41.94	55.85	80.00	-24.15	
11649.97				37.19	A	43.45	7.69	41.94	43.37	60.00	-16.63

Page 83 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

CLIENT:	Dell Computer Corporation	DATE:	12/21/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas in 802.11b (2412-2462 MHz) mode.	TEMPERATURE:	14 C
		HUMIDITY:	62% RH
		TIME:	4:30 PM

Standard:	FCC CFR 47, Part 15.247(c)
Description:	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.
Results:	Passes (See Data Sheets)

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

Page 84 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Fundamental Measurements in 802.11b mode (2412-2462 MHz)

Channels 1, 6, & 11

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-12

RADIATED EMISSIONS - Horizontal 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
2412.00	68.00	125	225			3.30	31.11	102.41		
2412.00				64.63	A	3.30	31.11	99.04		
2437.00	70.17	125	225			3.32	31.05	104.54		
2437.00				66.45	A	3.32	31.05	100.82		
2462.00	68.83	125	225			3.34	30.99	103.16		
2462.00				65.71	A	3.34	30.99	100.04		

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
2412.00	67.83	100	225			3.30	31.24	102.37		
2412.00				64.54	A	3.30	31.24	99.08		
2437.00	69.50	100	225			3.32	31.20	104.02		
2437.00				66.17	A	3.32	31.20	100.69		
2462.00	69.00	100	225			3.34	31.16	103.50		
2462.00				65.73	A	3.34	31.16	100.23		

NOTE: Fundamental signals measured to calculate the band edge field strengths using the “Marker Delta Method”.

Page 85 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



Spurious Radiated Emissions Test Results (Continued)

AEGIS LABS INC.

*Band Edge Field Strength Measurements in 802.11b mode (2412-2462 MHz)
Channels 1, 6, & 11*

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas
Aegis Labs, Inc. File #: INTEL-040930-12

RADIATED EMISSIONS - Horizontal 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
2390.00								48.25	74.00	-25.75
2390.00								37.21	54.00	-16.79
2386.30								50.41	74.00	-23.59
2386.30								39.04	54.00	-14.96
2400.00	35.83	125	225		3.29	31.14	70.26	82.41	-12.15	
2483.50								50.16	74.00	-23.84
2483.50								39.54	54.00	-14.46
2487.30								52.83	74.00	-21.17
2487.30								43.71	54.00	-10.29

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
2390.00								48.21	74.00	-25.79
2390.00								37.25	54.00	-16.75
2386.30								50.37	74.00	-23.63
2386.30								39.08	54.00	-14.92
2400.00	35.17	100	225		3.29	31.26	69.72	82.37	-12.65	
2483.50								50.50	74.00	-23.50
2483.50								39.73	54.00	-14.27
2487.30								53.17	74.00	-20.83
2487.30								43.90	54.00	-10.10

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:

$$BE = Fm - \Delta m$$

Where

BE = Band Edge Field Strength

Fm = Measured Fundamental (Peak or Average)

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

Page 86 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
09/30/04	2.412 GHz band edge PEAK DELTA (INTEL-040930-02a01)	JC
	<p>*ATTEN 30dB ΔMKR 52.00 dB RL 20.0 dBm 26.5MHz</p> <p>D</p> <p>CENTER 2.3900GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	
09/30/04	2.412 GHz band edge AVERAGE DELTA (INTEL-040930-02a02)	JC
	<p>*ATTEN 30dB ΔMKR 60.00 dB RL 20.0 dBm 24.3MHz</p> <p>D</p> <p>CENTER 2.3900GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p>	

Page 87 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
09/30/04	2.462 GHz band edge PEAK DELTA (INTEL-040930-02a03)	JC
	<p>*ATTEN 30dB RL 20. 0dBm 10dB/ ΔMKR 50. 33dB -25. 8MHz</p> <p>D</p> <p>CENTER 2.4835GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	
09/30/04	2.462 GHz band edge AVERAGE DELTA (INTEL-040930-02a04)	JC
	<p>*ATTEN 30dB RL 20. 0dBm 10dB/ ΔMKR 56. 33dB -27. 7MHz</p> <p>D</p> <p>CENTER 2.4835GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p>	

Page 88 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11b mode (2412-2462 MHz)**Channels 1, 6, & 11****Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas**

Aegis Labs, Inc. File #: INTEL-040930-13

RADIATED EMISSIONS - Horizontal Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Quasi pk or AVG (dBuV)	1 Meter Distance Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

2312.00	31.33	100	225		9.54	3.23	31.35	56.37	74.00	-17.63	
2312.00				16.59	A	9.54	3.23	31.35	41.63	54.00	-12.37

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

2336.00	31.83	100	225		9.54	3.25	31.29	56.83	74.00	-17.17	
2336.00				16.98	A	9.54	3.25	31.29	41.98	54.00	-12.02

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

2358.66	30.67	100	225		9.54	3.26	31.24	55.63	74.00	-18.37	
2358.66				15.71	A	9.54	3.26	31.24	40.67	54.00	-13.33

RADIATED EMISSIONS - Vertical Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Quasi pk or AVG (dBuV)	1 Meter Distance Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

2312.00	31.67	100	225		9.54	3.23	31.40	56.76	74.00	-17.24	
2312.00				18.14	A	9.54	3.23	31.40	43.23	54.00	-10.77

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

2336.00	31.50	100	225		9.54	3.25	31.36	56.57	74.00	-17.43	
2336.00				17.92	A	9.54	3.25	31.36	42.99	54.00	-11.01

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

2358.66	30.83	100	225		9.54	3.26	31.33	55.88	74.00	-18.12	
2358.66				16.19	A	9.54	3.26	31.33	41.24	54.00	-12.76

NOTE: These spurious emissions measurements were taken without a preamp at a distance of 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.

Page 89 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

<i>Spurious Emissions Measurements in 802.11b mode (2412-2462 MHz)</i>										
<i>Channels 1, 6, & 11</i>										
<i>Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas</i>										
<i>Aegis Labs, Inc. File #: INTEL-040930-14</i>										

RADIATED EMISSIONS - Horizontal 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
EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)										
3216.01	49.00	100	225		43.07	3.89	30.24	40.06	82.41	-42.35
4824.00	59.50	100	180		43.27	4.73	34.53	55.49	74.00	-18.51
4824.00				56.36	A	43.27	4.73	34.53	52.35	54.00
6431.97	52.17	100	225		43.82	5.73	36.64	50.73	82.41	-31.68
9648.01	50.67	100	225		43.22	6.95	38.88	53.28	82.41	-29.13
12864.03	50.17	100	135		43.83	7.95	43.86	58.16	82.41	-24.25
EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)										
3249.32	49.67	100	225		43.08	3.91	30.25	40.74	84.54	-43.80
4873.99	55.67	100	180		43.29	4.77	34.72	51.87	74.00	-22.13
4873.99				51.88	A	43.29	4.77	34.72	48.08	54.00
6498.69	54.17	100	225		43.84	5.78	36.90	53.00	84.54	-31.54
9747.96	51.33	100	225		43.25	6.99	39.00	54.06	84.54	-30.48
12997.37	49.83	100	135		43.83	8.02	44.29	58.31	84.54	-26.23
EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)										
3282.69	48.83	100	225		43.10	3.91	30.26	39.90	83.16	-43.26
4924.00	55.00	100	180		43.30	4.81	34.91	51.41	74.00	-22.59
4924.00				50.12	A	43.30	4.81	34.91	46.53	54.00
6565.34	52.83	100	225		43.84	5.83	37.32	52.14	83.16	-31.02
9848.01	50.83	100	225		43.29	7.03	39.12	53.69	83.16	-29.47
13130.67	49.00	100	135		43.70	8.07	44.25	57.62	83.16	-25.54

Page 90 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)											
3216.00	49.50	100	0		43.07	3.89	30.44	40.76	82.37	-41.61	
4823.96	60.67	100	180		43.27	4.73	34.53	56.66	74.00	-17.34	
4823.96				57.88	A	43.27	4.73	34.53	53.87	54.00	-0.13
6431.95	53.50	100	90		43.82	5.73	36.64	52.06	82.37	-30.31	
9647.97	52.67	125	45		43.22	6.95	38.97	55.37	82.37	-27.00	
12864.01	50.00	100	135		43.83	7.95	44.23	58.35	82.37	-24.02	
EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)											
3249.32	50.33	100	0		43.08	3.91	30.45	41.60	84.02	-42.42	
4874.01	56.50	100	180		43.29	4.77	34.72	52.70	74.00	-21.30	
4874.01				53.30	A	43.29	4.77	34.72	49.50	54.00	-4.50
6498.66	56.17	175	225		43.84	5.78	36.89	55.00	84.02	-29.02	
9748.04	52.33	125	225		43.25	6.99	39.15	55.21	84.02	-28.81	
12997.35	49.50	100	135		43.83	8.02	44.49	58.18	84.02	-25.84	
EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)											
3282.66	50.00	100	0		43.10	3.91	30.46	41.27	83.50	-42.23	
4924.00	54.33	100	180		43.30	4.81	34.91	50.74	74.00	-23.26	
4924.00				48.79	A	43.30	4.81	34.91	45.20	54.00	-8.80
6565.32	55.50	100	225		43.84	5.83	37.38	54.87	83.50	-28.63	
9847.96	51.33	100	225		43.29	7.03	39.33	54.40	83.50	-29.10	
13130.63	49.50	100	135		43.70	8.07	44.45	58.32	83.50	-25.18	

Page 91 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11b mode (2412-2462 MHz)**Channels 1, 6, & 11****Continuous RX at MAIN Antenna port with Wistron NeWeb Corp. Antennas****Aegis Labs, Inc. File #: INTEL-040930-14**

RADIATED EMISSIONS - Horizontal 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
EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)										
3216.02	49.17	175	225		43.07	3.89	30.24	40.23	80.00	-39.77
3216.02				39.47	A	43.07	3.89	30.24	30.53	60.00
6432.00	51.83	100	225		43.82	5.73	36.64	50.39	80.00	-29.61
6432.00				43.78	A	43.82	5.73	36.64	42.34	60.00
9648.03	49.50	100	135		43.22	6.95	38.88	52.11	80.00	-27.89
9648.03				37.29	A	43.22	6.95	38.88	39.90	60.00
EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)										
3249.32	49.67	125	225		43.08	3.91	30.25	40.74	80.00	-39.26
3249.32				39.84	A	43.08	3.91	30.25	30.91	60.00
6498.70	55.50	100	225		43.84	5.78	36.90	54.33	80.00	-25.67
6498.70				49.18	A	43.84	5.78	36.90	48.01	60.00
9747.99	49.00	100	180		43.25	6.99	39.00	51.73	80.00	-28.27
9747.99				37.59	A	43.25	6.99	39.00	40.32	60.00
EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)										
3282.66	49.67	150	225		43.10	3.91	30.26	40.74	80.00	-39.26
3282.66				39.19	A	43.10	3.91	30.26	30.26	60.00
6565.32	56.50	100	225		43.84	5.83	37.32	55.81	80.00	-24.19
6565.32				52.26	A	43.84	5.83	37.32	51.57	60.00
9848.01	49.67	100	135		43.29	7.03	39.12	52.53	80.00	-27.47
9848.01				37.38	A	43.29	7.03	39.12	40.24	60.00

Page 92 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)											
3216.00	49.33	100	0		43.07	3.89	30.44	40.59	80.00	-39.41	
3216.00				38.81	A	43.07	3.89	30.44	30.07	60.00	-29.93
6432.03	56.17	200	315		43.82	5.73	36.64	54.73	80.00	-25.27	
6432.03				52.50	A	43.82	5.73	36.64	51.06	60.00	-8.94
9648.02	49.00	100	135		43.22	6.95	38.97	51.70	80.00	-28.30	
9648.02				37.22	A	43.22	6.95	38.97	39.92	60.00	-20.08
EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)											
3249.32	50.50	100	0		43.08	3.91	30.45	41.77	80.00	-38.23	
3249.32				40.58	A	43.08	3.91	30.45	31.85	60.00	-28.15
6498.67	57.50	200	225		43.84	5.78	36.89	56.33	80.00	-23.67	
6498.67				53.49	A	43.84	5.78	36.89	52.32	60.00	-7.68
9747.96	49.83	100	135		43.25	6.99	39.15	52.71	80.00	-27.29	
9747.96				37.67	A	43.25	6.99	39.15	40.55	60.00	-19.45
EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)											
3282.67	49.33	100	0		43.10	3.91	30.46	40.60	80.00	-39.40	
3282.67				39.45	A	43.10	3.91	30.46	30.72	60.00	-29.28
6565.37	57.33	200	315		43.84	5.83	37.38	56.70	80.00	-23.30	
6565.37				53.97	A	43.84	5.83	37.38	53.34	60.00	-6.66
9847.98	49.17	100	135		43.29	7.03	39.33	52.24	80.00	-27.76	
9847.98				37.71	A	43.29	7.03	39.33	40.78	60.00	-19.22

Page 93 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

CLIENT:	Dell Computer Corporation	DATE:	12/21/04
EUT:	Latitude D400 Notebook Computer	PROJECT NUMBER:	INTEL-040930
MODEL NUMBER:	PPT	TEST ENGINEER:	JC
SERIAL NUMBER:	8142Y010093260105DM000	SITE #:	2
CONFIGURATION:	Tested with an Intel PRO/Wireless 2915ABG Network Connection installed in its mini PCI slot and connected to a set of Wistron NeWeb Corp. antennas in 802.11g (2412-2462 MHz) mode.	TEMPERATURE:	14 C
		HUMIDITY:	62% RH
		TIME:	4:30 PM

Standard:	FCC CFR 47, Part 15.247(c)
Description:	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.
Results:	Passes (See Data Sheets)

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

Page 94 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Fundamental Measurements in 802.11g mode (2412-2462 MHz)

Channels 1, 6, & 11

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-12

RADIATED EMISSIONS - Horizontal 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
2412.00	70.17	100	225			3.30	31.11	104.58		
2412.00				59.98	A	3.30	31.11	94.39		
2437.00	71.17	125	225			3.32	31.05	105.54		
2437.00				61.09	A	3.32	31.05	95.46		
2462.00	70.50	125	225			3.34	30.99	104.83		
2462.00				60.41	A	3.34	30.99	94.74		

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
2412.00	70.33	100	225			3.30	31.24	104.87		
2412.00				61.66	A	3.30	31.24	96.20		
2437.00	70.83	100	225			3.32	31.20	105.35		
2437.00				60.92	A	3.32	31.20	95.44		
2462.00	70.17	100	225			3.34	31.16	104.67		
2462.00				60.23	A	3.34	31.16	94.73		

NOTE: Fundamental signals measured to calculate the band edge field strengths using the “Marker Delta Method”.

Page 95 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Band Edge Field Strength Measurements in 802.11g mode (2412-2462 MHz)
Channels 1, 6, & 11
Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas
Aegis Labs, Inc. File #: INTEL-040930-12

RADIATED EMISSIONS - Horizontal 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
2390.00								60.08	74.00	-13.92
2390.00								46.39	54.00	-7.61
2400.00	46.83	100	225			3.29	31.14	81.26	84.58	-3.32
2483.50								60.83	74.00	-13.17
2483.50								44.74	54.00	-9.26

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
2390.00								60.37	74.00	-13.63
2390.00								48.20	54.00	-5.80
2400.00	45.83	100	225			3.29	31.26	80.38	84.87	-4.49
2483.50								60.67	74.00	-13.33
2483.50								44.73	54.00	-9.27

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:

$$BE = Fm - \Delta m$$

Where

BE = Band Edge Field Strength

Fm = Measured Fundamental (Peak or Average)

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

Page 96 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
09/30/04	2.412 GHz band edge PEAK DELTA (INTEL-040930-03a01)	JC
	 *ATTEN 30dB ΔMKR 44.50dB RL 20.0 dBm 10dB/ 16.8MHz D CENTER 2.3900GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms	
Test Date	Data	Test Eng.
09/30/04	2.412 GHz band edge AVERAGE DELTA (INTEL-040930-03a02)	JC
	 *ATTEN 30dB ΔMKR 48.00dB RL 20.0 dBm 10dB/ 20.2MHz D CENTER 2.3900GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 10Hz SWP 37.0sec	

Page 97 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

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

Test Date	Data	Test Eng.
09/30/04	2.462 GHz band edge PEAK DELTA (INTEL-040930-03a03)	JC
	<p>*ATTEN 30dB ΔMKR 44.00dB RL 20.0 dBm -26.2MHz</p> <p>D</p> <p>CENTER 2.4835GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 1.0MHz SWP 50.0ms</p>	
	<p>*ATTEN 30dB ΔMKR 50.00dB RL 20.0 dBm -22.3MHz</p> <p>D</p> <p>CENTER 2.4835GHz SPAN 100.0MHz *RBW 1.0MHz *VBW 10Hz SWP 37.0sec</p>	

Page 98 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11g mode (2412-2462 MHz)**Channels 1, 6, & 11****Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas**

Aegis Labs, Inc. File #: INTEL-040930-13

RADIATED EMISSIONS - Horizontal Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Quasi pk or AVG (dBuV)	1 Meter Distance Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

2312.00	32.50	100	135		9.54	3.23	31.35	57.54	74.00	-16.46	
2312.00				22.47	A	9.54	3.23	31.35	47.51	54.00	-6.49

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

2336.00	32.17	100	135		9.54	3.25	31.29	57.17	74.00	-16.83	
2336.00				21.23	A	9.54	3.25	31.29	46.23	54.00	-7.77

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

2358.68	31.17	100	135		9.54	3.26	31.24	56.13	74.00	-17.87	
2358.68				18.08	A	9.54	3.26	31.24	43.04	54.00	-10.96

RADIATED EMISSIONS - Vertical Antenna Polarization

Freq. (MHz)	Meter Reading (dBuV)	Antenna Height (cm)	Azimuth (degrees)	Quasi pk or AVG (dBuV)	1 Meter Distance Factor (dB)	Cable Factor (dB)	Ant. Factor (dB)	Corrected Reading (dBuV)	Limits (dBuV)	Diff (dB) +=FAIL
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

2312.00	33.17	100	225		9.54	3.23	31.40	58.26	74.00	-15.74	
2312.00				23.89	A	9.54	3.23	31.40	48.98	54.00	-5.02

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

2336.00	32.67	100	225		9.54	3.25	31.36	57.74	74.00	-16.26	
2336.00				23.71	A	9.54	3.25	31.36	48.78	54.00	-5.22

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

2358.68	31.67	100	225		9.54	3.26	31.33	56.72	74.00	-17.28	
2358.68				19.69	A	9.54	3.26	31.33	44.74	54.00	-9.26

NOTE: These spurious emissions measurements were taken without a preamp at a distance of 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.

Page 99 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

Spurious Emissions Measurements in 802.11g mode (2412-2462 MHz)

Channels 1, 6, & 11

Continuous TX at MAIN Antenna port with Wistron NeWeb Corp. Antennas

Aegis Labs, Inc. File #: INTEL-040930-14

RADIATED EMISSIONS - Horizontal 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
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EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)

3216.00	49.83	125	225		43.07	3.89	30.24	40.89	84.58	-43.69
4824.20	53.50	100	225		43.27	4.73	34.53	49.50	74.00	-24.50
4824.20				42.53	A	43.27	4.73	34.53	38.53	54.00
6432.05	52.67	100	225		43.82	5.73	36.64	51.23	84.58	-33.35
9647.97	49.33	100	135		43.22	6.95	38.88	51.94	84.58	-32.64
12864.05	50.50	100	135		43.83	7.95	43.86	58.49	84.58	-26.09

EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)

3249.31	50.33	150	225		43.08	3.91	30.25	41.40	85.54	-44.14
4874.02	50.83	100	225		43.29	4.77	34.72	47.03	74.00	-26.97
4874.02				38.62	A	43.29	4.77	34.72	34.82	54.00
6498.68	54.67	100	225		43.84	5.78	36.89	53.50	85.54	-32.04
9748.03	49.00	100	135		43.25	6.99	39.00	51.73	85.54	-33.81
12997.34	50.33	100	135		43.83	8.02	44.29	58.81	85.54	-26.73

EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)

3282.68	49.00	100	225		43.10	3.91	30.26	40.07	84.83	-44.76
4923.82	49.17	100	225		43.30	4.81	34.91	45.58	74.00	-28.42
4923.82				37.10	A	43.30	4.81	34.91	33.51	54.00
6565.42	53.00	100	225		43.84	5.83	37.32	52.31	84.83	-32.52
9847.97	50.17	100	135		43.29	7.03	39.12	53.03	84.83	-31.80
13130.70	49.33	100	135		43.70	8.07	44.25	57.95	84.83	-26.88

Page 100 of 103 (Appendix A)

Report Number: INTEL-040930F

FCC ID: E2K5HCKT



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	
EUT in Continuous Transmit Mode on Channel 1 (2.412 GHz)											
3216.01	49.67	100	0		43.07	3.89	30.44	40.93	84.87	-43.94	
4823.97	56.00	100	180		43.27	4.73	34.53	51.99	74.00	-22.01	
4823.97				44.31	A	43.27	4.73	34.53	40.30	54.00	-13.70
6431.99	56.33	200	270		43.82	5.73	36.64	54.89	84.87	-29.98	
9648.08	49.83	100	135		43.22	6.95	38.97	52.53	84.87	-32.34	
12863.98	50.17	100	135		43.83	7.95	44.23	58.52	84.87	-26.35	
EUT in Continuous Transmit Mode on Channel 6 (2.437 GHz)											
3249.35	50.33	100	0		43.08	3.91	30.45	41.60	85.35	-43.75	
4874.03	50.50	100	180		43.29	4.77	34.72	46.70	74.00	-27.30	
4874.03				38.60	A	43.29	4.77	34.72	34.80	54.00	-19.20
6498.67	58.83	200	315		43.84	5.78	36.89	57.66	85.35	-27.69	
9748.00	49.67	100	135		43.25	6.99	39.15	52.55	85.35	-32.80	
12997.35	50.17	100	135		43.83	8.02	44.49	58.85	85.35	-26.50	
EUT in Continuous Transmit Mode on Channel 11 (2.462 GHz)											
3282.65	49.33	100	0		43.10	3.91	30.46	40.60	84.67	-44.07	
4924.01	49.17	100	180		43.30	4.81	34.91	45.58	74.00	-28.42	
4924.01				37.21	A	43.30	4.81	34.91	33.62	54.00	-20.38
6565.34	56.00	125	225		43.84	5.83	37.38	55.37	84.67	-29.30	
9848.03	50.50	100	135		43.29	7.03	39.33	53.57	84.67	-31.10	
13130.62	48.83	100	135		43.70	8.07	44.45	57.65	84.67	-27.02	

Page 101 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



AEGIS LABS INC.

Spurious Radiated Emissions Test Results (Continued)

<i>Spurious Emissions Measurements in 802.11g mode (2412-2462 MHz) Channels 1, 6, & 11 Continuous RX at MAIN Antenna port with Wistron NeWeb Corp. Antennas Aegis Labs, Inc. File #: INTEL-040930-14</i>									
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RADIATED EMISSIONS - Horizontal 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
EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)										
3215.99	49.67	200	225		43.07	3.89	30.24	40.73	80.00	-39.27
3215.99				39.79	A	43.07	3.89	30.24	30.85	60.00
6431.98	51.83	200	225		43.82	5.73	36.64	50.39	80.00	-29.61
6431.98				44.74	A	43.82	5.73	36.64	43.30	60.00
9648.00	49.00	100	135		43.22	6.95	38.88	51.61	80.00	-28.39
9648.00				37.32	A	43.22	6.95	38.88	39.93	60.00
EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)										
3249.32	49.17	175	225		43.08	3.91	30.25	40.24	80.00	-39.76
3249.32				39.09	A	43.08	3.91	30.25	30.16	60.00
6498.67	54.17	200	225		43.84	5.78	36.89	53.00	80.00	-27.00
6498.67				46.50	A	43.84	5.78	36.89	45.33	60.00
9748.03	49.33	100	135		43.25	6.99	39.00	52.06	80.00	-27.94
9748.03				37.61	A	43.25	6.99	39.00	40.34	60.00
EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)										
3282.66	48.67	200	225		43.10	3.91	30.26	39.74	80.00	-40.26
3282.66				38.06	A	43.10	3.91	30.26	29.13	60.00
6565.32	56.17	175	225		43.84	5.83	37.32	55.48	80.00	-24.52
6565.32				51.81	A	43.84	5.83	37.32	51.12	60.00
9848.03	48.83	100	135		43.29	7.03	39.12	51.69	80.00	-28.31
9848.03				37.19	A	43.29	7.03	39.12	40.05	60.00

Page 102 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT



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	
EUT in Continuous Receive Mode on Channel 1 (2.412 GHz)											
3216.00	49.67	100	0		43.07	3.89	30.44	40.93	80.00	-39.07	
3216.00				39.06	A	43.07	3.89	30.44	30.32	60.00	-29.68
6432.00	56.50	200	315		43.82	5.73	36.64	55.06	80.00	-24.94	
6432.00				52.49	A	43.82	5.73	36.64	51.05	60.00	-8.95
9648.00	49.17	100	135		43.22	6.95	38.97	51.87	80.00	-28.13	
9648.00				37.27	A	43.22	6.95	38.97	39.97	60.00	-20.03
EUT in Continuous Receive Mode on Channel 6 (2.437 GHz)											
3249.33	49.50	100	0		43.08	3.91	30.45	40.77	80.00	-39.23	
3249.33				39.22	A	43.08	3.91	30.45	30.49	60.00	-29.51
6498.69	57.00	175	315		43.84	5.78	36.90	55.83	80.00	-24.17	
6498.69				53.03	A	43.84	5.78	36.90	51.86	60.00	-8.14
9748.03	49.67	100	180		43.25	6.99	39.15	52.55	80.00	-27.45	
9748.03				37.75	A	43.25	6.99	39.15	40.63	60.00	-19.37
EUT in Continuous Receive Mode on Channel 11 (2.462 GHz)											
3282.67	49.17	100	0		43.10	3.91	30.46	40.44	80.00	-39.56	
3282.67				39.96	A	43.10	3.91	30.46	31.23	60.00	-28.77
6565.34	57.83	200	315		43.84	5.83	37.38	57.20	80.00	-22.80	
6565.34				54.54	A	43.84	5.83	37.38	53.91	60.00	-6.09
9848.04	49.33	100	135		43.29	7.03	39.33	52.40	80.00	-27.60	
9848.04				37.49	A	43.29	7.03	39.33	40.56	60.00	-19.44

Page 103 of 103 (Appendix A)
Report Number: INTEL-040930F
FCC ID: E2K5HCKT