



**FCC CFR47 PART 15 SUBPART C
CLASS II PERMISSIVE CHANGE CERTIFICATION
TEST REPORT**

FOR

802.11bg WLAN MODULE

MODEL NUMBER: PA3440U-1MPC

FCC ID: CJ6UPA3440WL

REPORT NUMBER: 06U10100-1, REVISION B

ISSUE DATE: MARCH 17, 2006

Prepared for

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Prepared by

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LAB CODE:200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
A	3/01/06	Initial Issue	Thu
B	3/17/06	Updated section 5.3; updated the host laptop reference in the report; added section 5.3 to show average power readings.	Thu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: TOSHIBA CORPORATION
DIGITAL MEDIA NETWORK COMPANY
2-9 SUEHIRO-CHO, OME
TOKYO, 198-8710, JAPAN

EUT DESCRIPTION: 802.11bg WLAN Module

MODEL: PA3440U-1MPC

SERIAL NUMBER: BGXTOS 3945 (bg Card); 05B-011 (Laptop)

DATE TESTED: FEBRUARY 21, 2006

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC PART 15 SUBPART C	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

Tested By:



THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

THANH NGUYEN
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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2 and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://www.ccsemc.com>.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is an 802.11 b/g transceiver.

The radio module is manufactured by Intel Corporation.

5.2. CLASS II PERMISSIVE CHANGE DESCRIPTION

The EUT module was originally granted by FCC on 03/01/2006. The major changes filed under this application include:

Change #1: The EUT module is being used in a different host;
Change #2: Additional antennas and antenna types are added;
Change #3: Collocation with Bluetooth module.

5.3. AVERAGE OUTPUT POWER

The transmitter has an average conducted output power as follows:

2400 to 2483.5 MHz Authorized Band

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2412 - 2462	802.11b	18.50	70.79
2412 - 2462	802.11g	17.37	54.58

5.4. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes five PIFA type antennas: HFT40, HTL017, TBN001, TIAN001 and WNC001. Among them, WNC001 has the highest maximum gain which is 1.76 dBi.

5.5. SOFTWARE AND FIRMWARE

The EUT driver software installed in the host support equipment during testing was CRTUSetup.msi
The test utility software used during testing was CRTU, rev. 4.0.18.0000

5.6. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power. The highest measured output power was at 2462MHz.

Mobile position and portable X, Y and Z positions have been investigated, and the portable Y position was determined as the worst-case position.

The worst-case data rate for this channel is determined to be 1 Mb/s for b-mode, and 6 Mb/s for g-mode based on previous original project.

5.7. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	FCC ID
LAPTOP	TOSHIBA	Portege M400	05B-011	DoC
AC/DC ADAPTER	TOSHIBA	PA3283U-1ACA	03X19218	N/A

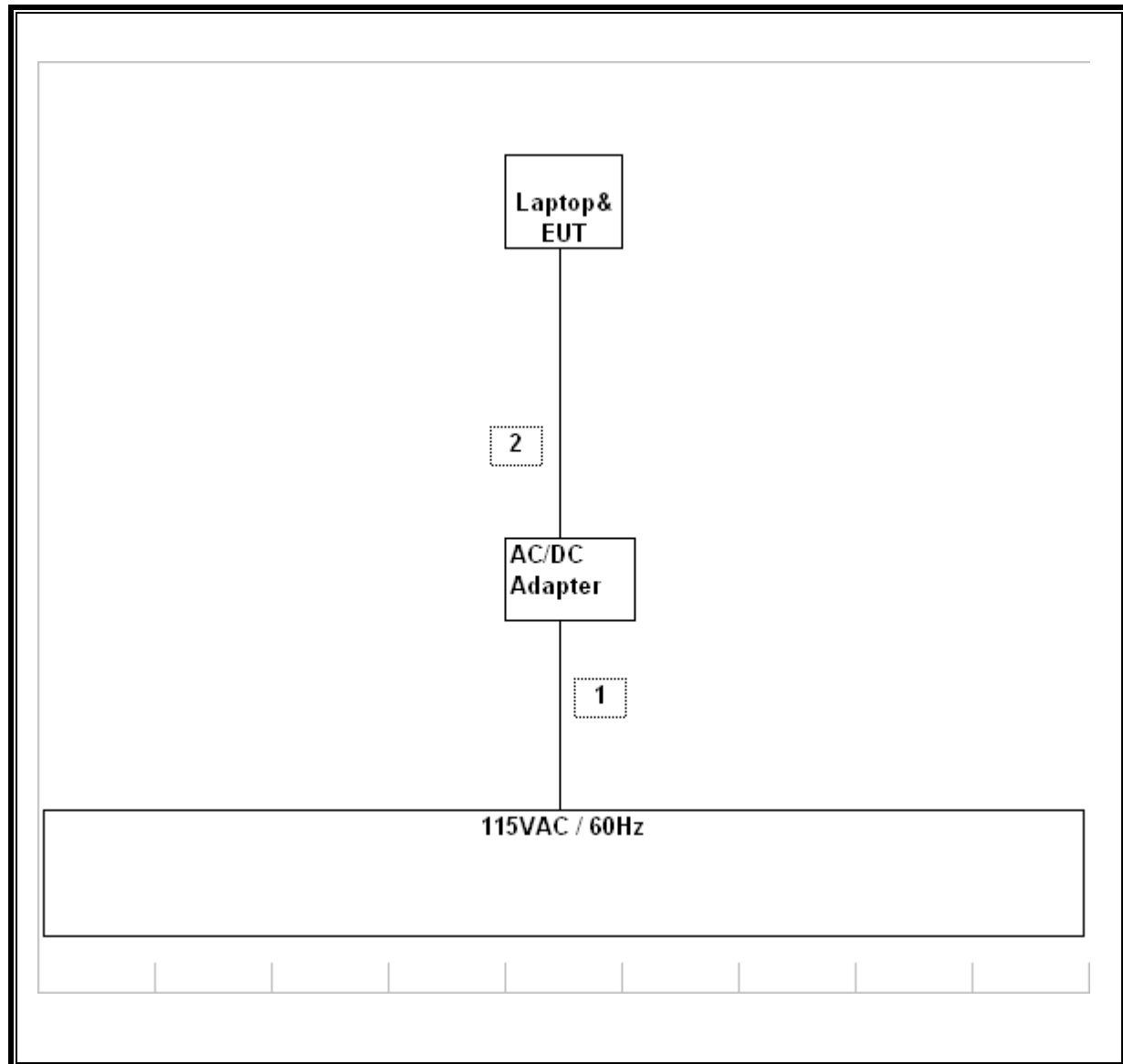
I/O CABLES

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US 115V	Un-shielded	2m	No
2	DC	1	DC Plug	Un-shielded	1.8m	No

TEST SETUP

The EUT is installed in a host laptop computer. Test software exercised the radio card.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	Manufacturer	Model	Serial Number	Cal Due
EMI Receiver, 9 kHz ~ 2.9 GHz	HP	8542E	3942A00286	3/29/2006
RF Filter Section	HP	85420E	3705A00256	3/29/2006
Antenna, Bilog 30 MHz ~ 2 Ghz	Sunol Sciences	JB1	A121003	3/3/2006
Preamplifier, 1 ~ 26.5 GHz	HP	8449B	3008A00369	8/17/2006
Antenna, Horn 1 ~ 18 GHz	ETS	3117	29301	4/22/2006
Spectrum Analyzer 3 Hz ~ 44 GHz	Agilent	E4446A	US42510266	10/19/2006
LISN, 10 kHz ~ 30 MHz	FCC	LISN-50/250-25-2	2023	8/30/2006
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	8379443	8/30/2006
EMI Test Receiver	R & S	ESHS 20	827129/006	6/3/2006
Power Meter	Giga-tronics	8651A	8651404	12/27/2006
Power Sensor 0.05 - 18 Ghz	Giga-tronics	80701A	1834588	3/27/2007
4.0 High Pass Filter	Micro Tronics	HPM13351	3	N/A

7. LIMITS AND RESULTS

7.1. CHANNEL TESTS

Note: all the channel tests were waived under this project because the EUT has been tested on the channel testing items under previous certification process with same output power.

7.2. RADIATED EMISSIONS

7.2.1. TRANSMITTER RADIATED SPURIOUS EMISSIONS

LIMITS

§15.205 (a) Except as shown in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 - 0.110	16.42 - 16.423	399.9 - 410	4.5 - 5.15
¹ 0.495 - 0.505	16.69475 - 16.69525	608 - 614	5.35 - 5.46
2.1735 - 2.1905	16.80425 - 16.80475	960 - 1240	7.25 - 7.75
4.125 - 4.128	25.5 - 25.67	1300 - 1427	8.025 - 8.5
4.17725 - 4.17775	37.5 - 38.25	1435 - 1626.5	9.0 - 9.2
4.20725 - 4.20775	73 - 74.6	1645.5 - 1646.5	9.3 - 9.5
6.215 - 6.218	74.8 - 75.2	1660 - 1710	10.6 - 12.7
6.26775 - 6.26825	108 - 121.94	1718.8 - 1722.2	13.25 - 13.4
6.31175 - 6.31225	123 - 138	2200 - 2300	14.47 - 14.5
8.291 - 8.294	149.9 - 150.05	2310 - 2390	15.35 - 16.2
8.362 - 8.366	156.52475 - 156.52525	2483.5 - 2500	17.7 - 21.4
8.37625 - 8.38675	156.7 - 156.9	2655 - 2900	22.01 - 23.12
8.41425 - 8.41475	162.0125 - 167.17	3260 - 3267	23.6 - 24.0
12.29 - 12.293	167.72 - 173.2	3332 - 3339	31.2 - 31.8
12.51975 - 12.52025	240 - 285	3345.8 - 3358	36.43 - 36.5
12.57675 - 12.57725	322 - 335.4	3600 - 4400	(²)
13.36 - 13.41			

¹ Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

² Above 38.6

§15.205 (b) Except as provided in paragraphs (d) and (e), the field strength of emissions appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000 MHz, compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000 MHz, compliance with the emission limits in Section 15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

§15.209 (a) Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 - 88	100 **	3
88 - 216	150 **	3
216 - 960	200 **	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

§15.209 (b) In the emission table above, the tighter limit applies at the band edges.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.4. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and 10 Hz for average measurements.

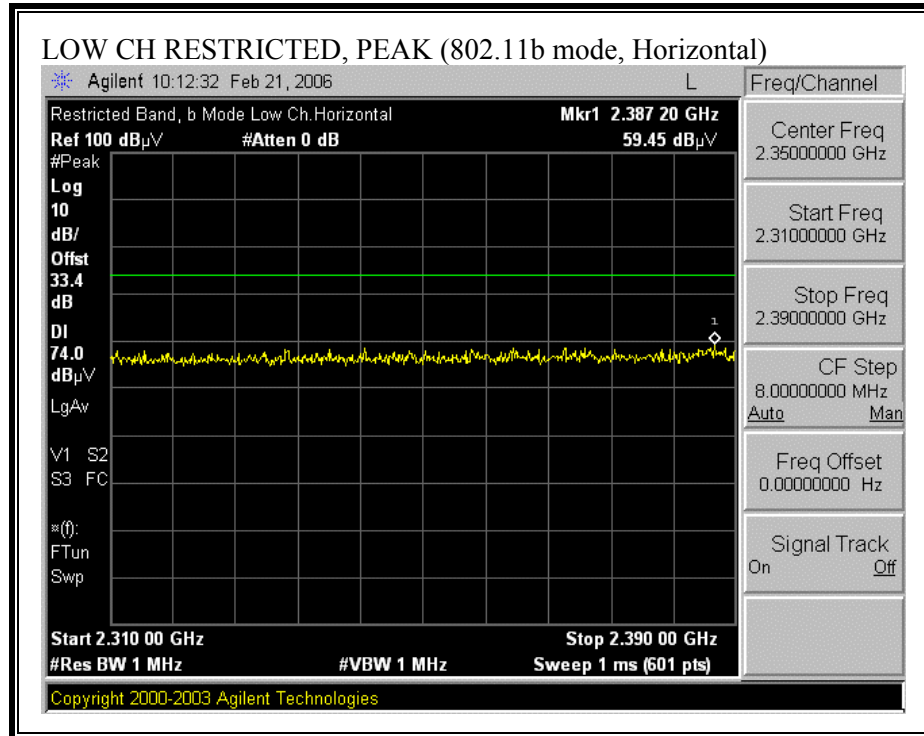
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

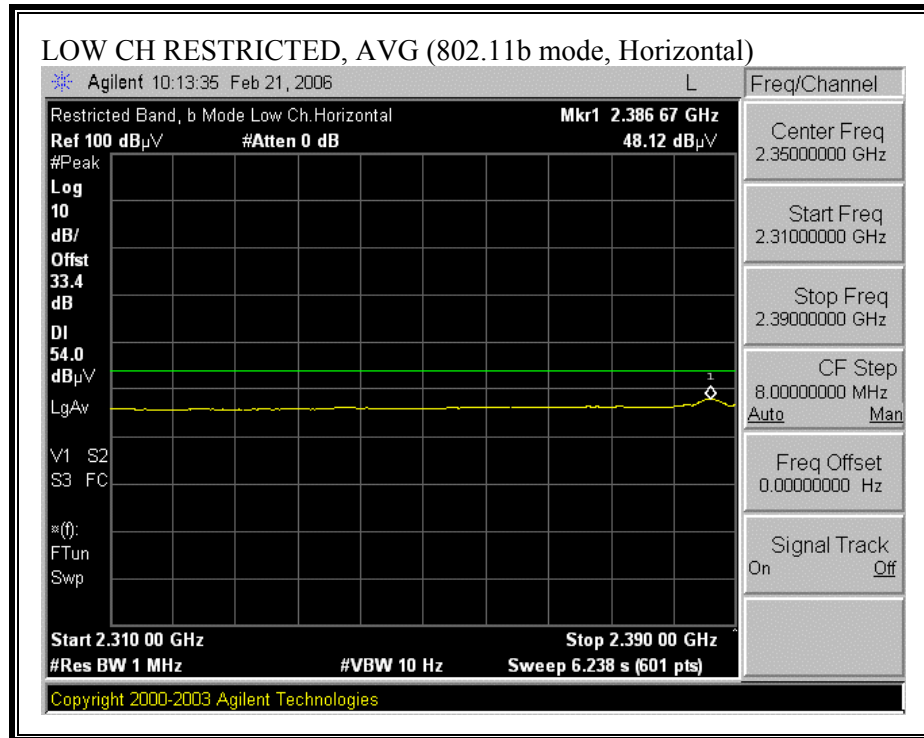
The spectrum from 30 MHz to 40 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each 5 GHz band.

The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

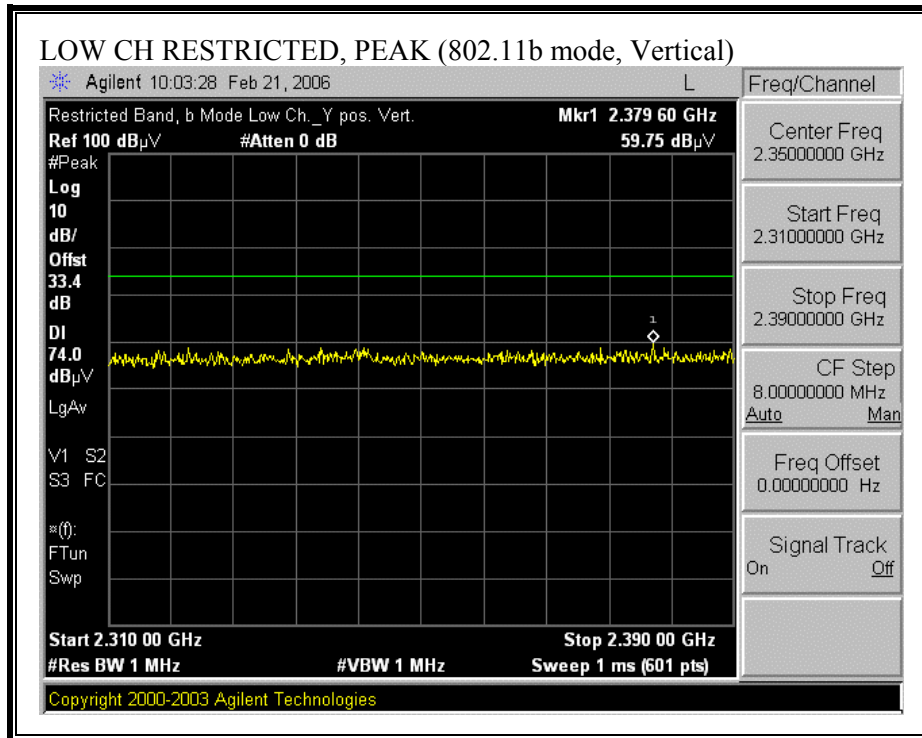
7.2.2. TRANSMITTER ABOVE 1 GHz

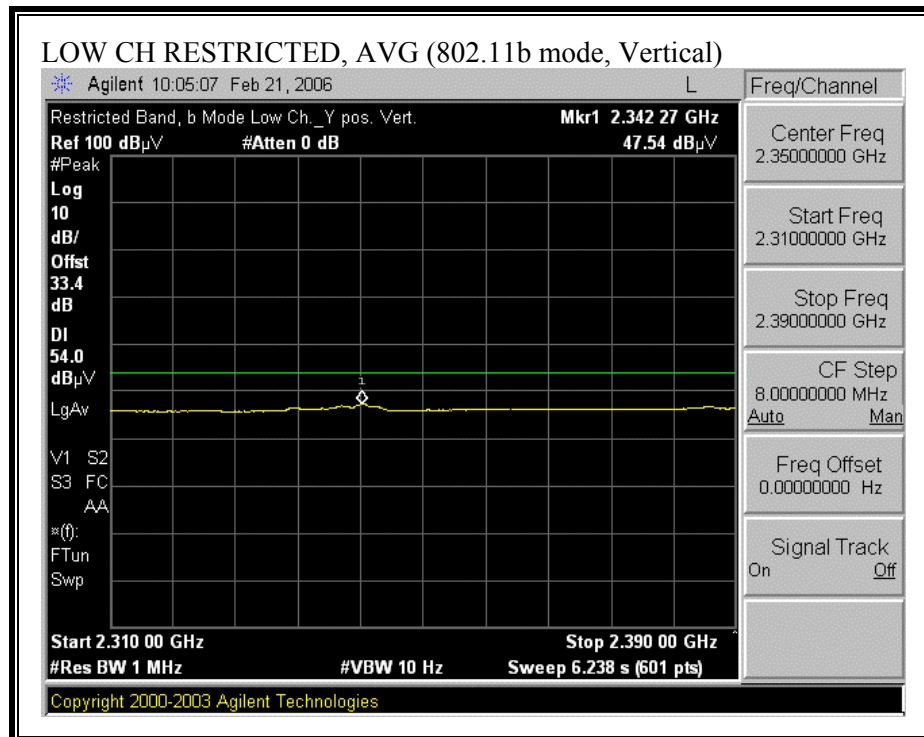
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, HORIZONTAL)



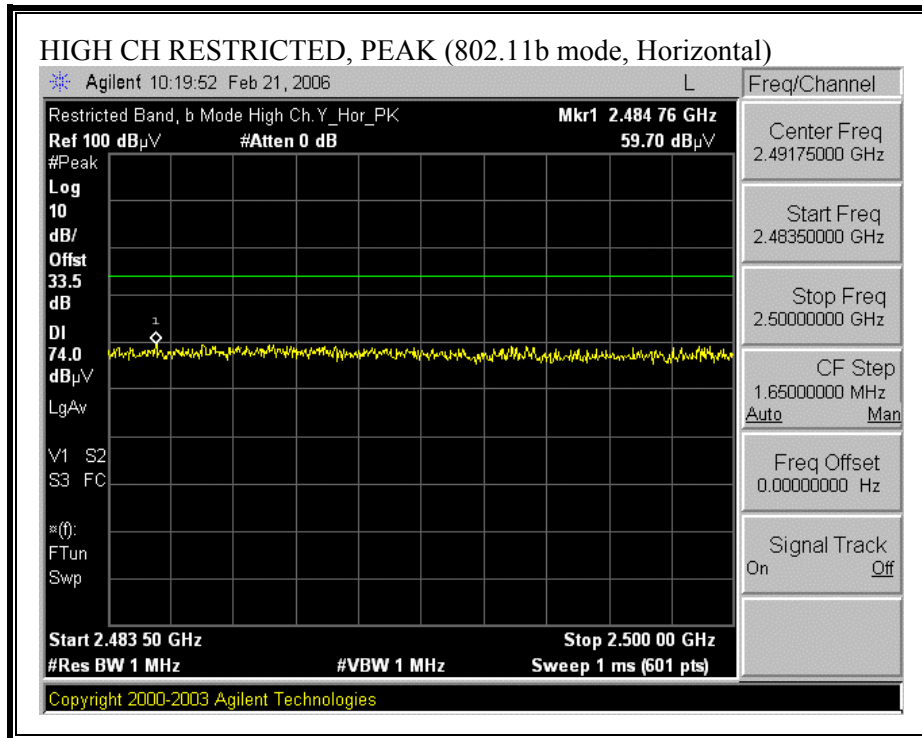


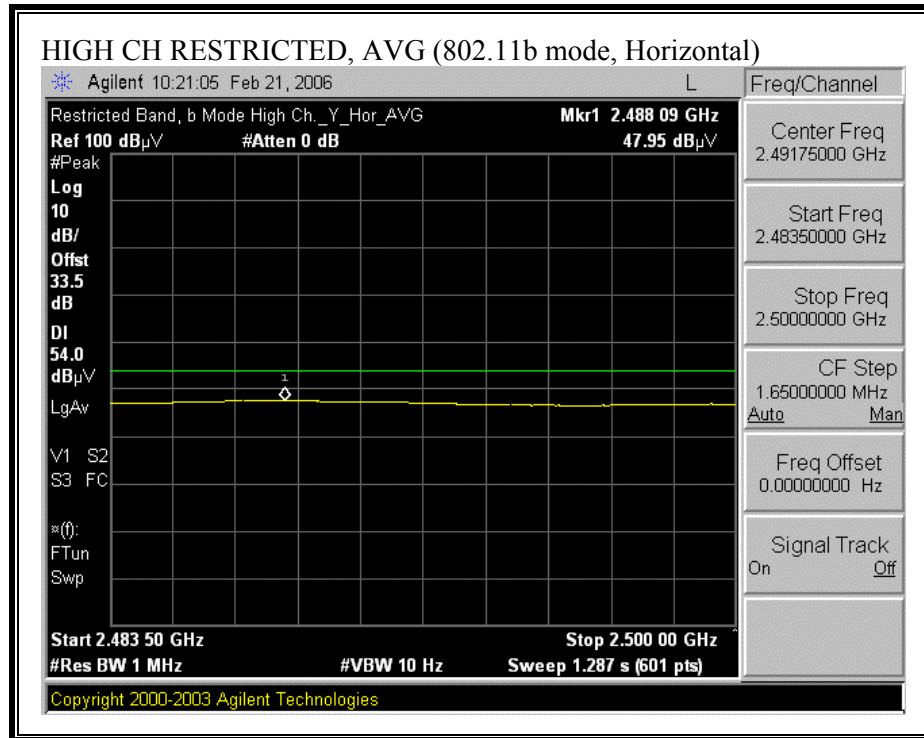
RESTRICTED BANDEDGE (b MODE, LOW CHANNEL, VERTICAL)



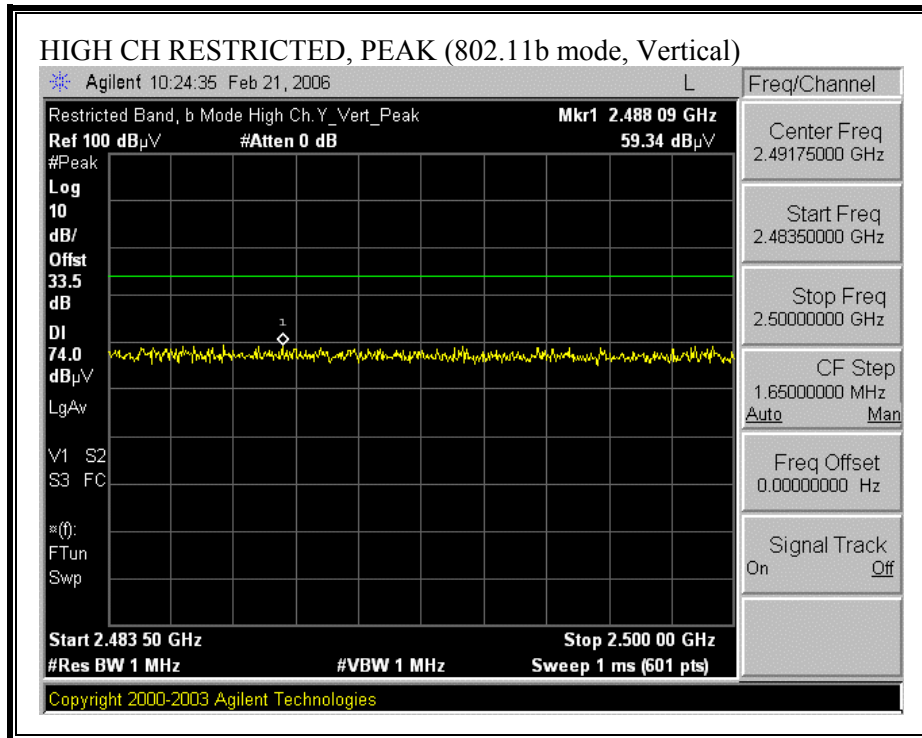


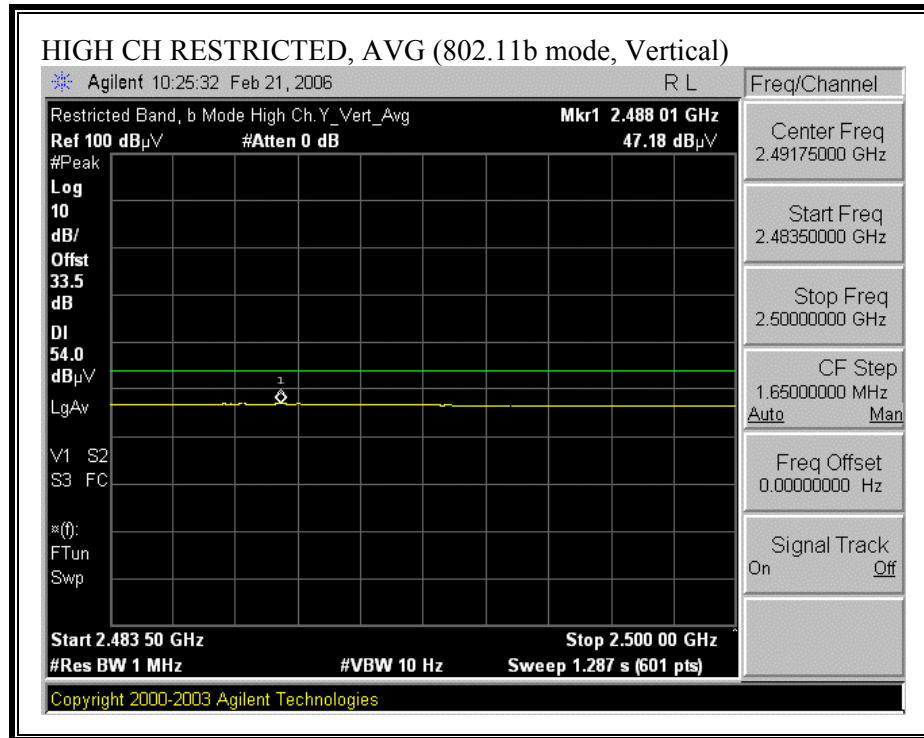
RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (b MODE, HIGH CHANNEL, VERTICAL)





02/21/06 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engineer: Thanh Nguyen
Project #: 06U10100
Company: Intel_Toshiba
EUT Description: 802.11 b/g with Portege M400 Laptop
EUT M/N: PA3440U-IMPC
Test Target: FCC part 15.27, RSS210
Mode Of Operation: Tx b Mode

Horn 1-18GHz	Pre-amplifier 1-26GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T119; S/N: 29301 @3m	T34 HP 8449B			FCC 15.209

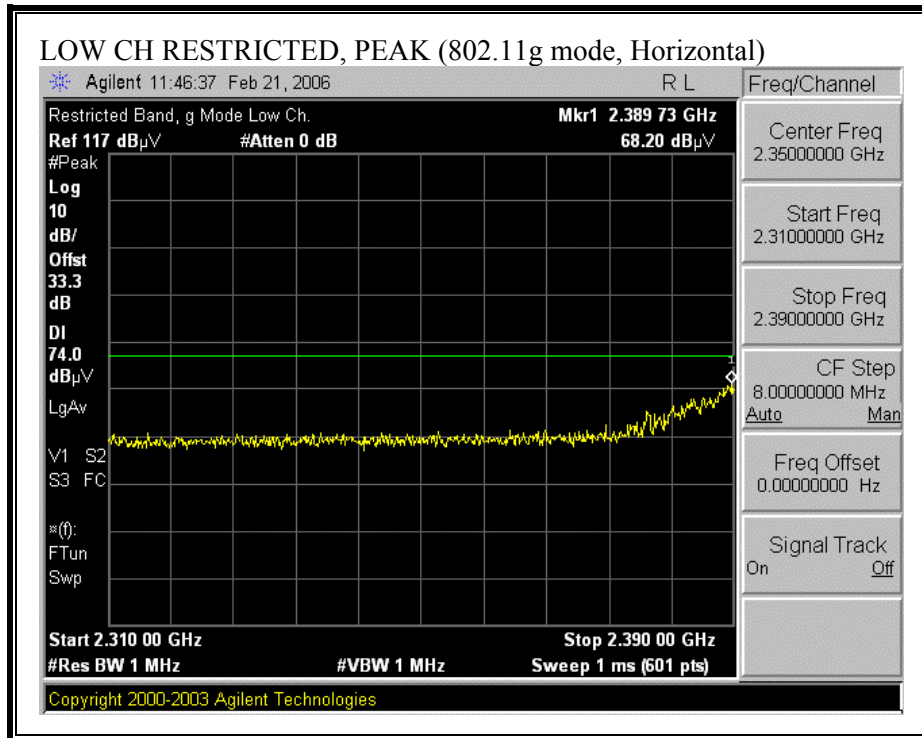
HI Frequency Cables				
2 foot cable	3 foot cable	12 foot cable	HPF	Reject Filter
Thanh 177079008		Thanh 208946003	HPF_4.0GHz	

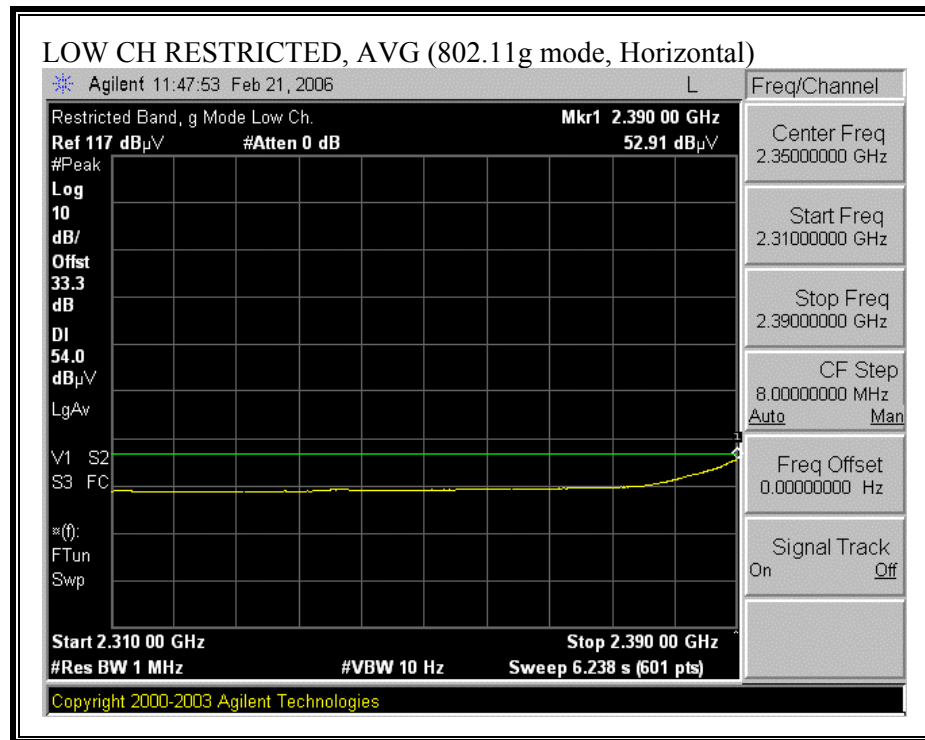
<u>Peak Measurements</u> RBW=VBW=1MHz
<u>Average Measurements</u> RBW=1MHz ; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Flr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
Low Channel															
Harmonics Emissions															
4.824	3.0	41.8	30.4	30.4	2.8	-34.8	0.0	0.6	40.7	29.3	74	54	-33.3	-24.7	H
7.236	3.0	43.0	30.2	35.6	3.3	-34.1	0.0	0.6	48.4	35.6	74	54	-25.6	-18.4	H
9.648	3.0	45.7	39.3	37.1	3.7	-33.6	0.0	0.8	53.8	47.4	74	54	-20.2	-6.6	H
4.824	3.0	42.9	33.3	34.0	2.8	-34.8	0.0	0.6	45.5	35.9	74	54	-28.5	-18.1	V
7.236	3.0	44.2	36.0	35.6	3.3	-34.1	0.0	0.6	49.6	41.5	74	54	-24.4	-12.5	V
9.648	3.0	41.5	31.7	37.1	3.7	-33.6	0.0	0.8	49.6	39.8	74	54	-24.4	-14.2	V
Spurious Emissions															
1.063	3.0	54.6	43.3	30.4	1.3	-38.2	0.0	0.0	48.1	36.8	74	54	-25.9	-17.2	V
1.600	3.0	57.6	46.1	29.9	1.6	-37.4	0.0	0.0	51.6	40.2	74	54	-22.4	-13.8	V
1.853	3.0	53.3	44.3	30.9	1.7	-37.1	0.0	0.0	48.9	39.8	74	54	-25.1	-14.2	V
1.086	3.0	53.3	41.2	30.4	1.3	-38.1	0.0	0.0	46.8	34.8	74	54	-27.2	-19.2	H
1.595	3.0	54.4	44.2	29.8	1.6	-37.4	0.0	0.0	48.4	38.2	74	54	-25.6	-15.8	H
1.836	3.0	50.5	41.4	30.9	1.7	-37.1	0.0	0.0	46.0	36.8	74	54	-28.0	-17.2	H
Mid Channel															
Harmonics Emissions															
4.874	3.0	41.6	30.6	34.1	2.8	-34.8	0.0	0.6	44.2	33.2	74	54	-29.8	-20.8	V
7.311	3.0	42.8	34.1	35.6	3.3	-34.1	0.0	0.6	48.3	39.6	74	54	-25.7	-14.4	V
9.748	3.0	43.0	31.9	37.3	3.7	-33.3	0.0	0.8	51.5	40.4	74	54	-22.5	-13.6	V
4.874	3.0	42.3	30.1	34.1	2.8	-34.8	0.0	0.6	44.9	32.8	74	54	-29.1	-21.2	H
7.311	3.0	41.4	30.1	35.6	3.3	-34.1	0.0	0.6	46.9	35.6	74	54	-27.1	-18.4	H
9.748	3.0	45.7	38.8	37.3	3.7	-33.3	0.0	0.8	54.2	47.3	74	54	-19.8	-6.7	H
12.185	3.0	42.9	35.3	38.5	4.3	-32.5	0.0	0.9	54.2	46.5	74	54	-19.8	-7.5	H
Spurious Emissions															
1.068	3.0	55.3	44.2	30.4	1.3	-38.2	0.0	0.0	48.8	37.7	74	54	-25.2	-16.3	V
1.587	3.0	56.9	46.6	29.8	1.6	-37.4	0.0	0.0	50.8	40.5	74	54	-23.2	-13.5	V
1.745	3.0	55.4	45.8	30.5	1.7	-37.2	0.0	0.0	50.3	40.7	74	54	-23.7	-13.3	V
1.063	3.0	53.2	42.4	30.4	1.3	-38.2	0.0	0.0	46.7	35.8	74	54	-27.3	-18.2	H
1.600	3.0	52.3	44.2	29.9	1.6	-37.4	0.0	0.0	46.4	38.2	74	54	-27.6	-15.8	H
1.824	3.0	52.6	43.3	30.8	1.7	-37.1	0.0	0.0	48.0	38.7	74	54	-26.0	-15.3	H
High Channel															
Harmonics Emissions															
4.924	3.0	41.1	31.0	34.1	2.8	-34.8	0.0	0.6	43.8	33.7	74	54	-30.2	-20.3	H
7.386	3.0	42.4	32.5	35.7	3.3	-34.1	0.0	0.6	47.9	38.0	74	54	-26.1	-16.0	H
9.848	3.0	44.6	36.8	37.5	3.7	-33.1	0.0	0.8	53.6	45.7	74	54	-20.4	-8.3	H
4.924	3.0	42.0	32.7	34.1	2.8	-34.8	0.0	0.6	44.8	35.4	74	54	-29.2	-18.6	V
7.386	3.0	43.3	34.0	35.7	3.3	-34.1	0.0	0.6	48.8	39.5	74	54	-25.2	-14.5	V
9.848	3.0	42.9	33.6	37.5	3.7	-33.1	0.0	0.8	51.9	42.5	74	54	-22.1	-11.5	V
Spurious Emissions															
1.190	3.0	54.8	45.6	28.1	1.4	-38.0	0.0	0.0	46.3	37.1	74	54	-27.7	-16.9	V
2.100	3.0	53.3	44.8	31.6	1.9	-36.7	0.0	0.0	50.0	41.5	74	54	-24.0	-12.5	V
1.850	3.0	54.2	43.6	30.9	1.7	-37.1	0.0	0.0	49.7	39.2	74	54	-24.3	-14.8	H
2.110	3.0	55.7	46.8	31.6	1.9	-36.7	0.0	0.0	52.5	43.5	74	54	-21.5	-10.5	H
No other emissions were detected above 12.20GHz															

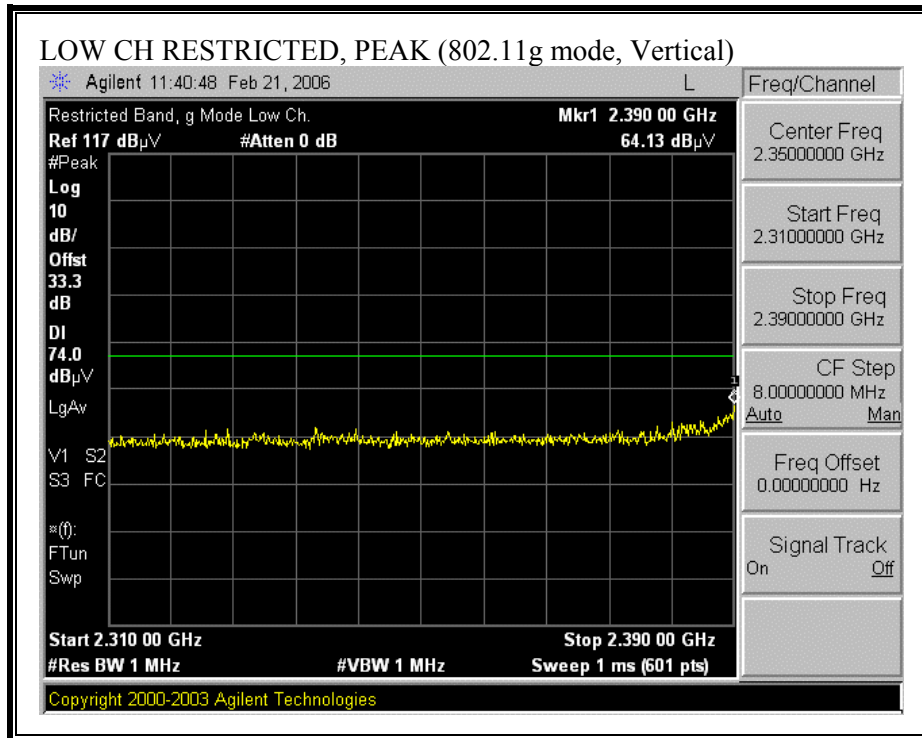
f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

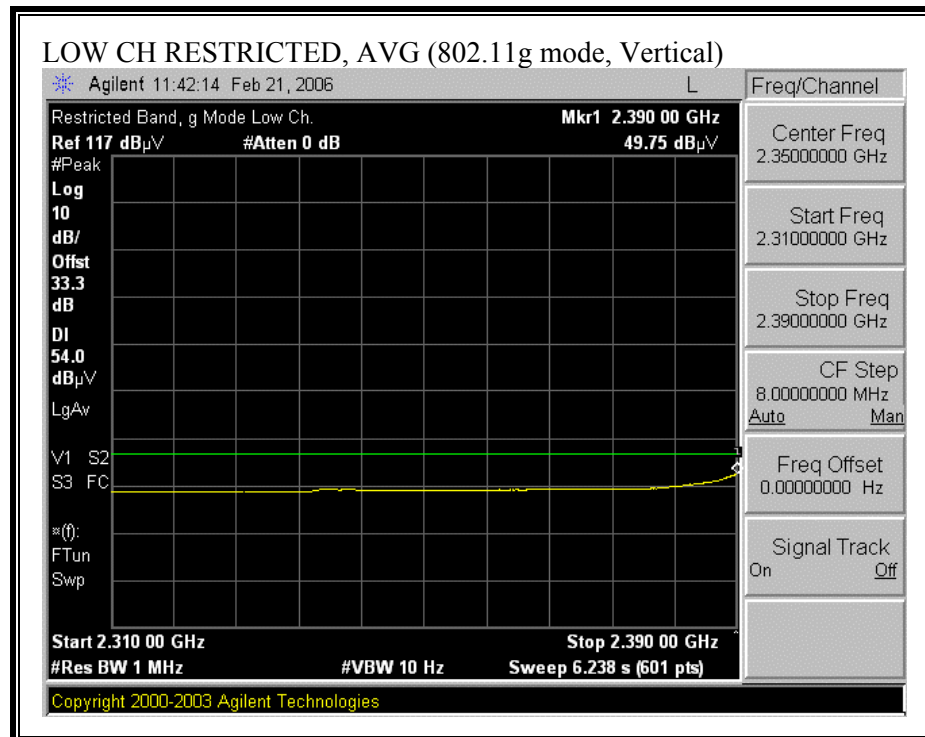
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, HORIZONTAL)



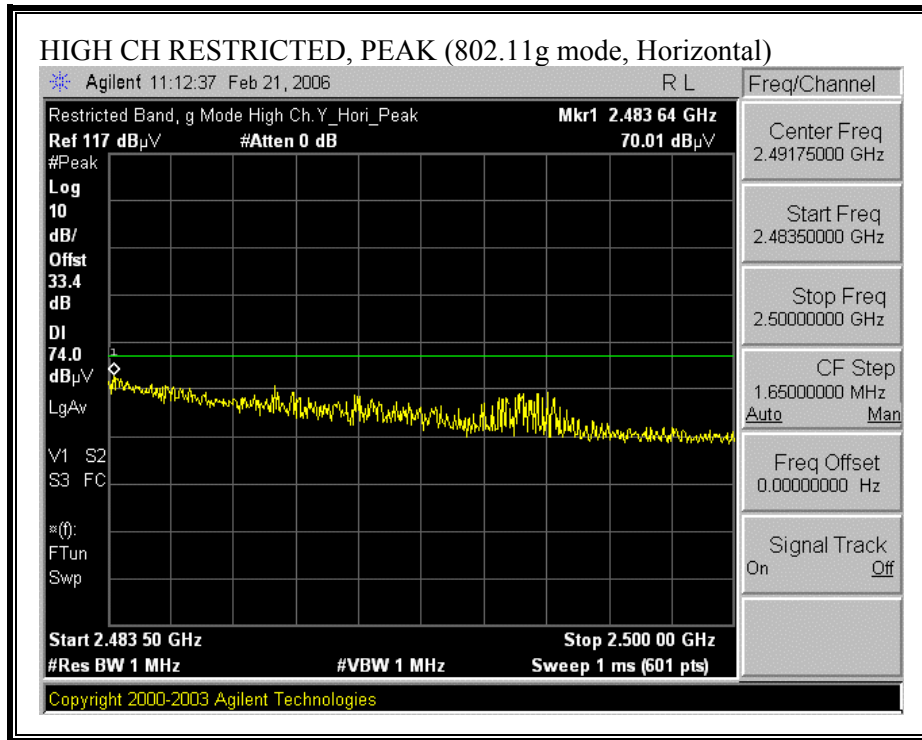


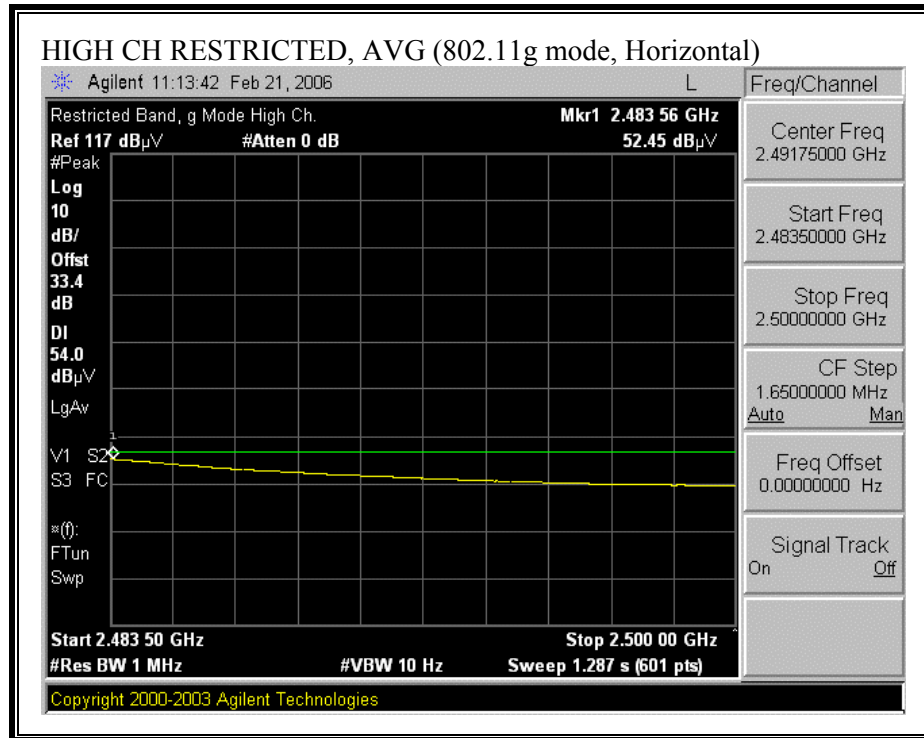
RESTRICTED BANDEDGE (g MODE, LOW CHANNEL, VERTICAL)



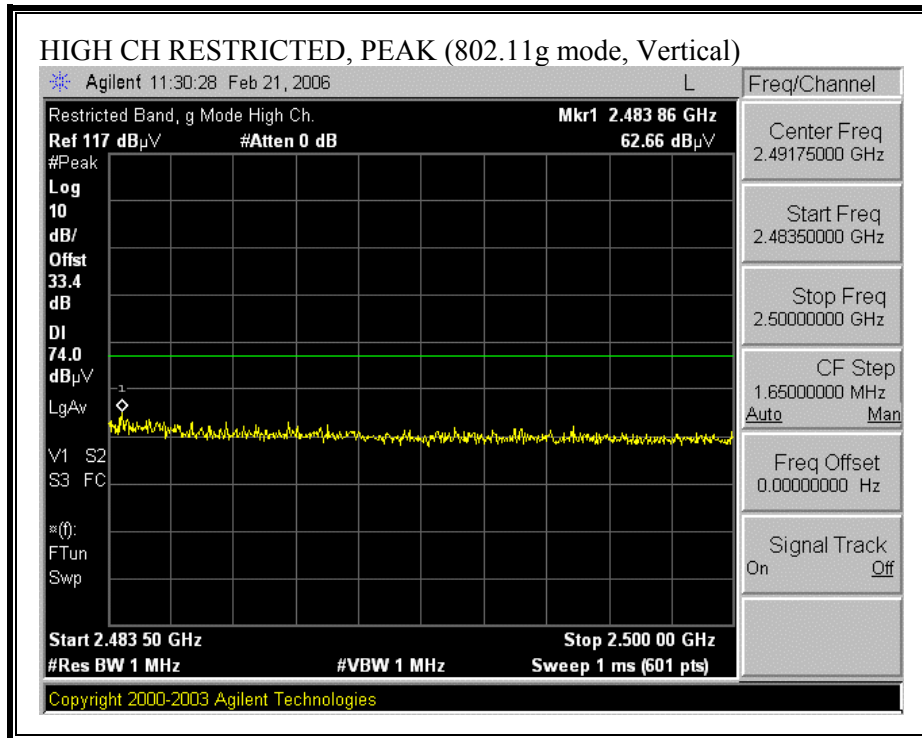


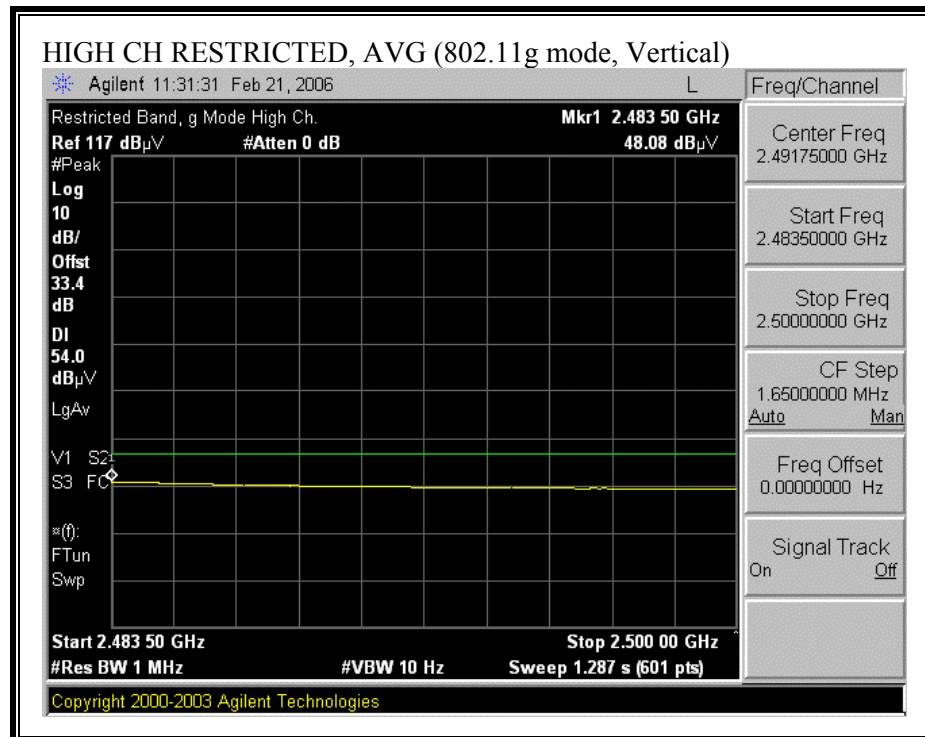
RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, HORIZONTAL)





RESTRICTED BANDEDGE (g MODE, HIGH CHANNEL, VERTICAL)





f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

7.2.3. WORST-CASE RADIATED EMISSIONS BELOW 1 GHz

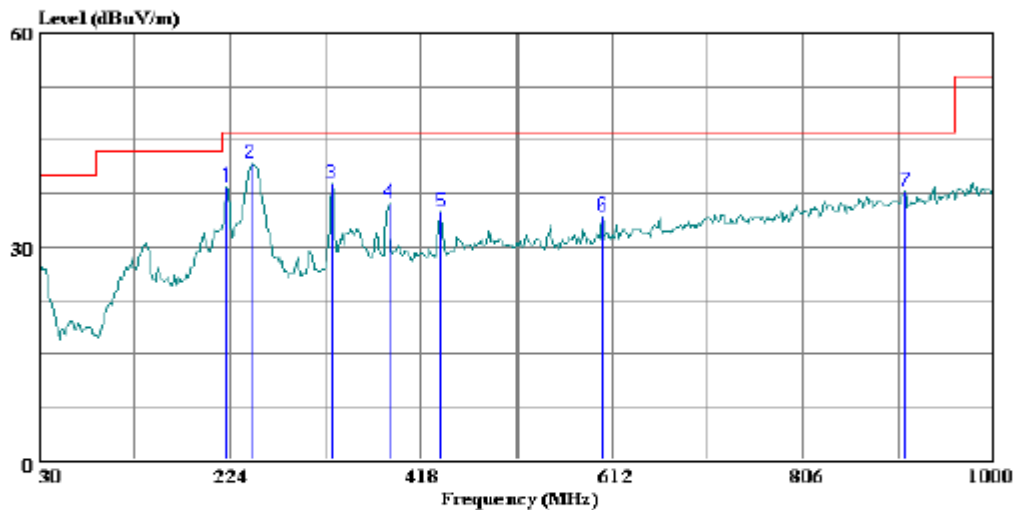
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



561F Monterey Road
Morgan Hill, CA 95037
Tel: (408) 463-0888
Fax: (408) 463-0885

Data#: 8 File#: below 1GHz.EMI Date: 02-21-2006 Time: 14:13:28



(Auxiliary ATC)

Trace: 7

Ref Trace:

Condition: FCC CLASS-B HORIZONTAL
Test Operator : Thanh Nguyen
Project # : 06U10100
Company : INTEL_TOSHIBA
EUT : 802.11 bg Module and BT w/Portege M400
: Laptop
Model No : PA3440U-1MPC
Configuration : Laptop with EUT inside.
Mode of operation: Transmit worst case
Target of Test : FCC15.247; RSS210 Class B

HORIZONTAL DATA

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	221.090	25.85	12.67	38.52	46.00	-7.48	Peak
2	245.340	28.09	13.72	41.81	46.00	-4.19	Peak
3	327.790	22.54	16.35	38.89	46.00	-7.11	Peak
4	385.990	18.39	17.73	36.12	46.00	-9.88	Peak
5	439.340	15.88	18.96	34.84	46.00	-11.16	Peak
6	601.330	12.75	21.50	34.25	46.00	-11.75	Peak
7	909.790	11.85	26.01	37.86	46.00	-8.14	Peak

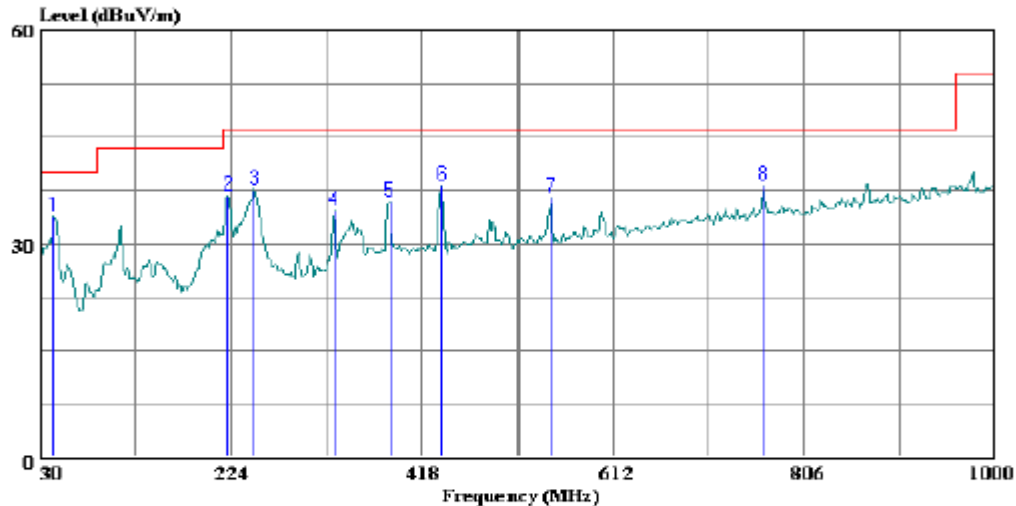
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

VERTICAL PLOT



561F Monterey Road
Morgan Hill, CA 95037
Tel: (408) 463-0888
Fax: (408) 463-0885

Data#: 6 File#: below 1GHz.EMI Date: 02-21-2006 Time: 14:10:06



(Auxiliary ATC)

Trace: 5

Ref Trace:

Condition: FCC CLASS-B VERTICAL
Test Operator : Thanh Nguyen
Project # : 06U10100
Company : INTEL_TOSHIBA
EUT : 802.11 bg Module and BT w/Portege M400
 : Laptop
Model No : PA3440U-1MPC
Configuration : Laptop with EUT inside.
Mode of operation: Transmit worst case
Target of Test : FCC15.247; RSS210 Class B

VERTICAL DATA

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	43.580	20.75	13.02	33.77	40.00	-6.23	Peak
2	221.090	24.08	12.67	36.75	46.00	-9.25	Peak
3	248.250	23.71	13.83	37.54	46.00	-8.46	Peak
4	329.730	18.21	16.44	34.65	46.00	-11.35	Peak
5	385.990	18.25	17.73	35.98	46.00	-10.02	Peak
6	439.340	19.19	18.96	38.15	46.00	-7.85	Peak
7	547.980	15.64	20.86	36.50	46.00	-9.50	Peak
8	764.290	14.03	24.09	38.12	46.00	-7.88	Peak

7.3. POWERLINE CONDUCTED EMISSIONS

LIMIT

§15.207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal.

The lower limit applies at the boundary between the frequency ranges.

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
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.

TEST PROCEDURE

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The resolution bandwidth is set to 9 kHz for both peak detection and quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

No non-compliance noted:

6 WORST EMISSIONS

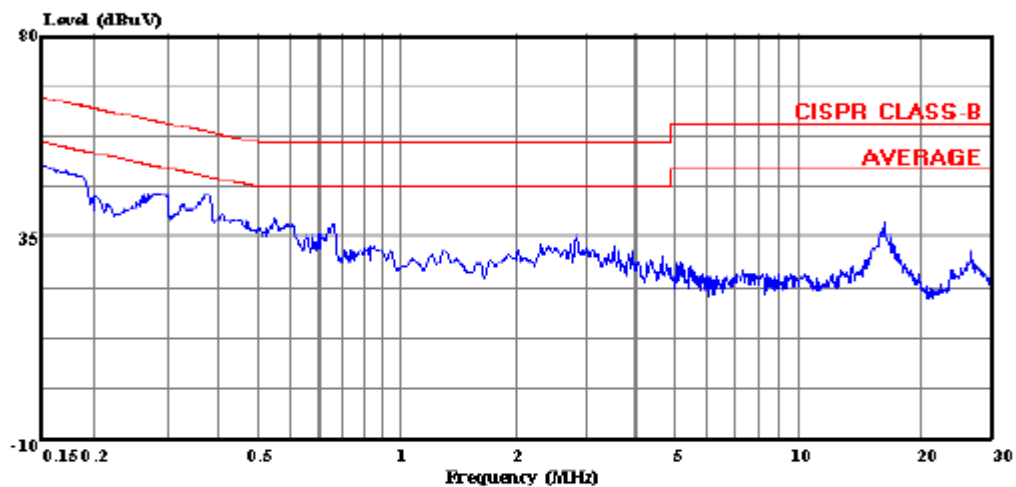
CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.15	50.92	--	--	0.00	65.89	55.89	-14.97	-4.97	L1
0.37	44.12	--	--	0.00	58.50	48.50	-14.38	-4.38	L1
16.31	37.90	--	--	0.00	60.00	50.00	-22.10	-12.10	L1
0.15	52.60	--	--	0.00	66.00	56.00	-13.40	-3.40	L2
0.32	41.58	--	--	0.00	59.79	49.79	-18.21	-8.21	L2
16.31	35.78	--	--	0.00	60.00	50.00	-24.22	-14.22	L2
6 Worst Data									

LINE 1 RESULTS



Compliance Certification Services
561F Monterey Road
Morgan Hill, CA 95037
Tel: (408) 463-0885
Fax: (408) 463-0888

Data#: 7 File#: Lc.emi Date: 02-21-2006 Time: 14:31:22



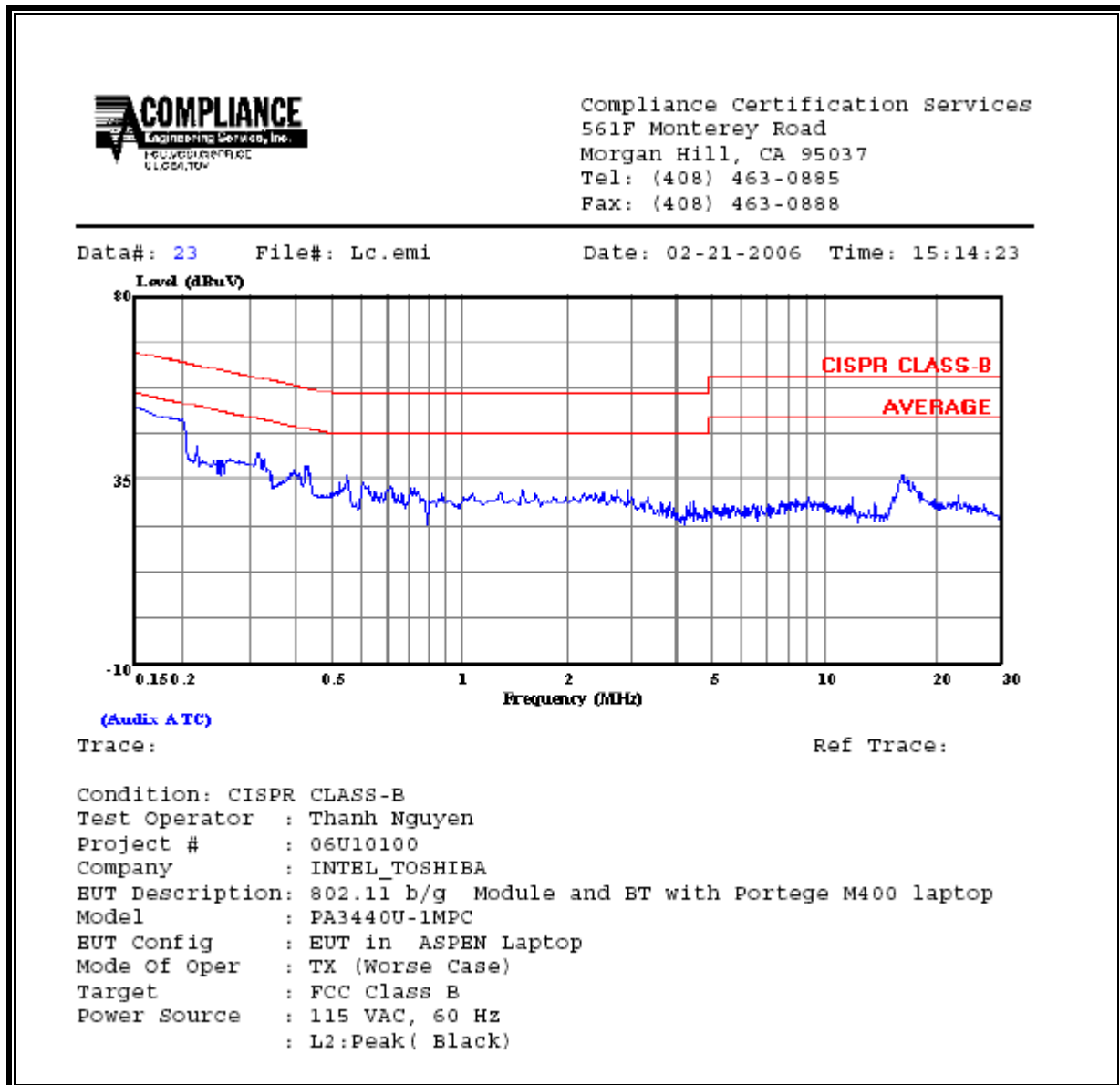
(Auxiliary A TC)

Trace:

Ref Trace:

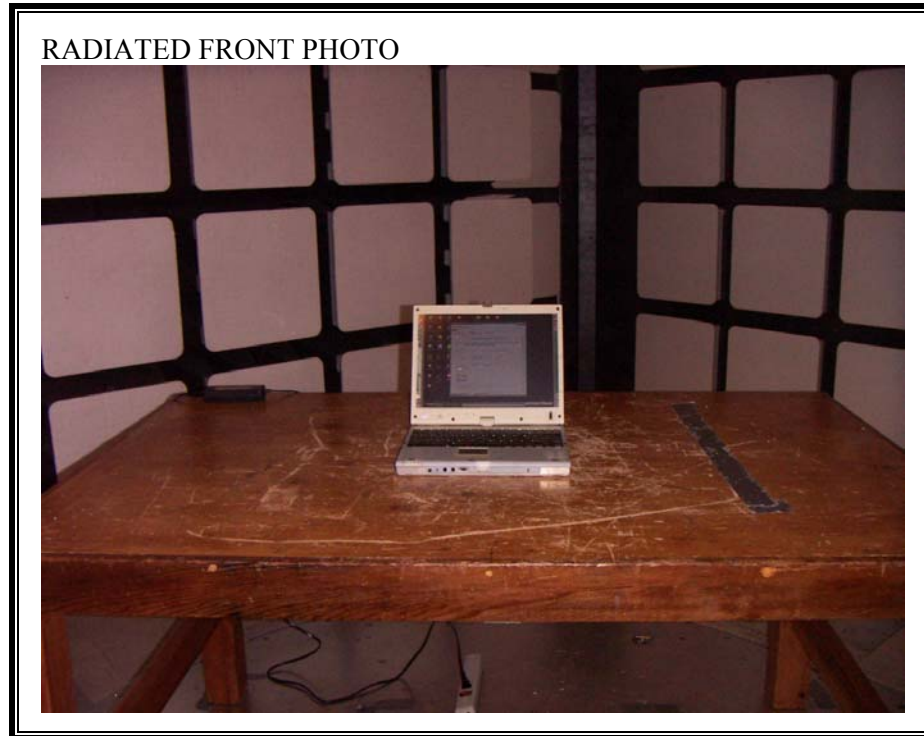
Condition: CISPR CLASS-B
Test Operator : Thanh Nguyen
Project # : 06U10100
Company : INTEL_TOSHIBA
EUT Description: 802.11 b/g Module and BT with Portege M400 laptop
Model : PA3440U-1MPC
EUT Config : EUT in ASPEN Laptop
Mode of Oper : TX (Worse Case)
Target : FCC Class B
Power Source : 115 VAC, 60 Hz
Peak : L1(Black)

LINE 2 RESULTS

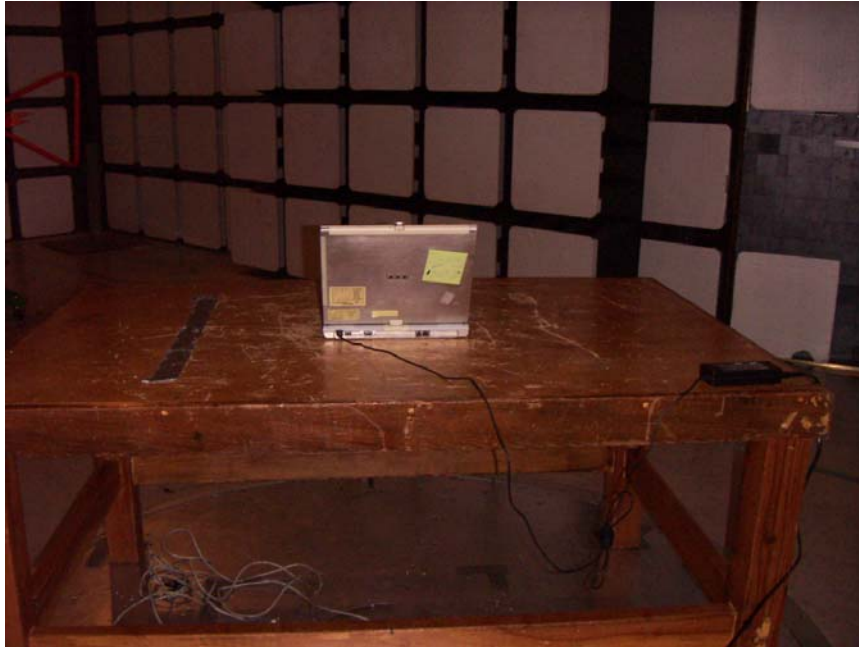


8. SETUP PHOTOS

RADIATED RF MEASUREMENT SETUP FOR MOBILE CONFIGURATION



RADIATED BACK PHOTO



RADIATED RF MEASUREMENT SETUP FOR PORTABLE CONFIGURATION

X-AXIS FRONT PHOTO



X-AXIS BACK PHOTO



Y-AXIS FRONT PHOTO



Y-AXIS BACK PHOTO



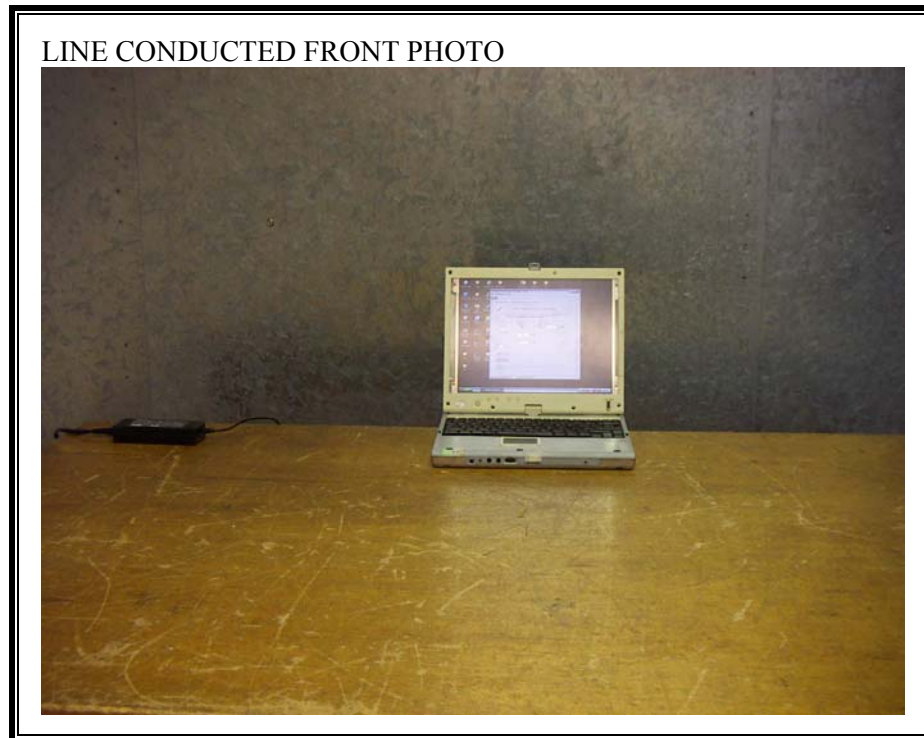
Z-AXIS FRONT PHOTO



Z-AXIS BACK PHOTO



POWERLINE CONDUCTED EMISSIONS MEASUREMENT SETUP



LINE CONDUCTED BACK PHOTO



END OF REPORT