

**Test Report  
Application for Certification  
Class II Permissive Change  
On Behalf Of  
First International Computer Inc.  
Notebook Computer**

**Model : Birch 2.0 with DESIGNOTE 5500, DESIGNOTE 5550**

**FCC ID : EUNVINCENT**

Prepared For:  
First International Computer Inc.  
6F., Formosa Plastics Rear Bldg 201, Tung-Hwa N. Road,  
Taipei, Taiwan, R.O.C.

Report By :Global EMC Standard Tech. Corp.  
No.3 Pau-Tou-Tsuo Valley, Chia-Pau  
Tsuen, Lin Kou Hsiang, Taipei Country,  
Taiwan, R.O.C.  
Tel : (02) 603-5321  
Fax : (02) 603-5325

## TABLE OF CONTENTS

Description	Page
<b>1. Test Report Certification .....</b>	<b>3</b>
<b>2. General Information .....</b>	<b>4</b>
2.1 Production Description .....	4
2.2 Tested System Details .....	5
2.3 Test Methodology .....	8
2.4 Test Facility .....	8
<b>3. Conducted Power Line Test .....</b>	<b>9</b>
1 Test Equipments .....	9
Block Diagram of Test Setup .....	9
3.3 Conducted Powerline Emission Limit .....	10
3.4 EUT Configuration on Measurement .....	10
3.5 EUT Exercise Software .....	10
3.6 Conducted Emission Data .....	10
<b>4. Radiation Emission Test .....</b>	<b>13</b>
4.1 Test Equipment .....	13
4.2 Test Setup .....	13
4.3 Radiated Emission Limit .....	14
4.4 EUT Configuration .....	15
4.5 Operating Condition of EUT .....	15
6 Radiated Emission Data .....	15
<b>5. Photographs .....</b>	<b>28</b>
5.1 Test Photographs .....	28
<b>6. EMI Reduction Method During Compliance Testing .....</b>	<b>32</b>
Appendix A .....	33
EUT Detail Photographs .....	33
Appendix B .....	53
Circuit (Block) Diagram .....	53
Appendix C .....	54
User Manual .....	54

GESTEK 98-F009

# 1. Test Report Certification

**Applicant : First International Computer Inc.**

**Manufacturer : First International Computer Inc.**

EUT Description : Notebook Computer

(A) FCC ID : EUNVINCNET

(B) Model No. : Birch 2.0 with DESIGNOTE 5500, DESIGNOTE 5550

(C) Serial No. : N/A

(D) Power : 100~240V , 50/60Hz

**MEASUREMENT PROCEDURE USED :**

CFR 47, Part 15 Radio Frequency Device Subpart B Unintentional Radiators Class B :1996

CISPR 22 Limits and methods of measurement of radio disturbance characteristics of information technology equipment: 1993

ANSI C63.4 Methods of Measurements of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9kHz to 40GHz. :1992

THE MEASUREMENT SHOWN IN THE ATTACHMENT WERE MADE IN ACCORDANCE WITH THE PROCEDURES INDICATED, AND THE MAXIMUM ENERGY EMITTED BY THE EQUIPMENT WAS FOUND TO BE WITHIN THE FCC LIMITS APPLICABLE.



Sample Received Date : Mar. 28, 1998

Final Test Date : Apr. 02, 1998

Documented by : Cindy Chiu

Test Engineer :

Approve & Authorized Signer :

*Jack Huang*  
-----  
JACK HUANG

*Terry Chung*  
-----  
TERRY CHUNG

This test data shown below is traceable to NIST.

## 2. General Information

### 2.1 Production Description

Description : Notebook Computer

Model Number : Birch 2.0 with DESIGNOTE 5500, DESIGNOTE 5550

Serial Number : Prototype

Applicant : First International Computer Inc.

Address : 6F., Formosa Plastics Rear Bldg 201, Tung-Hwa N. Road, Taipei, Taiwan, R.O.C.

Manufacturer : First International Computer Inc.

Address : 6F., Formosa Plastics Rear Bldg 201, Tung-Hwa N. Road, Taipei, Taiwan, R.O.C.

CPU : Intel Tillamook 233MHz (P55CLM-233TCP) . Clock: 66MHz  
Intel Tillamook 166MHz (P55CLM-166TCP) . Clock: 66MHz

AC Adaptor : Liteon, PA-1450-FI

12.1" TFT SVGA Panel : *TECHNIGA Model LTM12068*

#### Model Differences ( If Applicable ) :

##### Mode 1:

Intel Tillamook 233 (P55CLM-233TCP), Clock 66MHz, 12.1" TFT SVGA Panel, 2.1GB HDD.

##### Mode 2:

Intel Tillamook 166 (P55CLM-166TCP), Clock 66MHz, 12.1" TFT SVGA Panel, 3.2GB HDD.

- Note: 1. This test report reflects the worst-case data for each clock frequency/video resolution and for each option listed in Section 2.2.
2. This system is Applying for Class II permissive change because the LCD panel and CPU has been changed & 24X CD-ROM.

## 2.2 Tested System Details

The FCC IDs for all equipment, plus descriptions of all cables used in the tested system ( including inserted cards, which have grants) are:

### Host Notebook Computer (EUT)

Model Number	: Birch 2.0 with DESIGNOTE 5500, DESIGNOTE 5550
Serial Number	: N/A
Manufacturer	: First International Computer Inc.
CPU # 1	: Intel Tillamook 233MHz(TCP) Clock: 66MHz
# 2	: Intel Tillamook 166MHz(TCP) Clock: 66MHz
Floppy Disk Driver	: Citizen, WIDE-31B
2.1 GB Hard Disk Driver	: Hitachi, DK-226A-21U
3.2 GB Hard Disk Driver	: Toshiba, MK3303MAV
12.1" TFT SVGA	: <del>Toshiba</del> <i>Toshiba Model 12018</i>
24 CD-ROM	: Toshiba, XM-1702B
Battery Pack	: Panasonic, CGR-B/811BE
I/O Card	: On Board
VGA Card	: On Board
AC Adaptor	: Liteon, PA-1450-FI
Power Cord	: Non-Shielded, Detachable.

### Monitor

Model Number	: C562DU
Serial Number	: 544FA000E00130
FCC ID	: GKR562DU
Manufacturer	: ATEC
Data Cable	: Shielded, Undetachable, 1.5m
Power Cord	: Shielded, Detachable, 1.8m

### Keyboard(PS2)

Model Number	: 5140
Serial Number	: 867110685
FCC ID	: E5XKBM10410
Manufacturer	: BTC
Data Cable	: Sheiled, Undetachable, 1.2 m

Printer

Model Number : C2642A(DJ-400)  
Serial Number : MY7951C4J5  
FCC ID : B94C2642X  
Manufacturer : HP  
Data Cable : Shielded, Detachable, 1.8m  
Adaptor & Power Cord : AC 110V, 60Hz To DC 30V  
: Non-Shielded, Detachable, 1.9m

 Modem

Model Number : 1414  
Serial Number : 960018052  
FCC ID : IFAXDM1414  
Manufacturer : ACEEX  
Adaptor & Power Cord : Non-Shielded, Detachable, 1.5m  
Data Cable : Shielded, Detachable, 1.2m

 Radio Receiver

Model Number : HS-GS162  
Serial Number : LYJ1084567  
FCC ID : N/A  
Manufacturer : AIWA CO., LTD  
Power Cord : N/A (Battery)

 Earphone

Model Number : PH-12B  
Serial Number : N/A  
Manufacturer : PRO2 International Corp.  
Power Cord : N/A  
Data Cable : Non-Shielded, Undetachable, 1.2 m

 Speaker

Model Number : DS-203  
Serial Number : N/A  
FCC ID : N/A  
Manufacturer : Crocodile  
Power Cord : N/A  
Data Cable : Shielded, Undetachable, 1m

Scanner

Model Number : S-UA1  
Serial Number : LTC74803704  
FCC ID : DZL211089  
Manufacturer : Logitech  
Power with Data cable : Shielded, Undetachable, 1.5m with DC 5V

 Telephone 1

Model Number : ST-203  
Serial Number : 4K03008  
FCC ID : N/A  
Manufacturer : Sinoca  
Power Cord : Non-Shielded, Detachable, 1.5m  
Data Cable : Non-Shielded, Detachable, 1.5m

 Microphone

Model Number : PM-520  
Serial Number : N/A  
FCC ID : N/A  
Manufacturer : KOKA  
Power Cord : N/A  
Data Cable : Shielded, Undetachable, 1m (Bundled)

## 2.3 Test Methodology

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4-1992.

Radiated testing was performed at an antenna to EUT distance of 3 meters.

## 2.4 Test Facility

Site Description : Aug. 10, 1995 File on  
Federal Communication Commission  
FCC Engineering Laboratory  
7435 Oakland Mills Road  
Columbia, MD 21046  
Reference 31040/SIT1300F2

Name of firm : Global EMC Standard Tech. Corp.

Site location : No. 3 Pau-Tou Valley, Chia-Pau Tsuen, Lin Kou  
Tsiang, Taipei Country, Taiwan, R.O.C.



### 3. Conducted Power Line Test

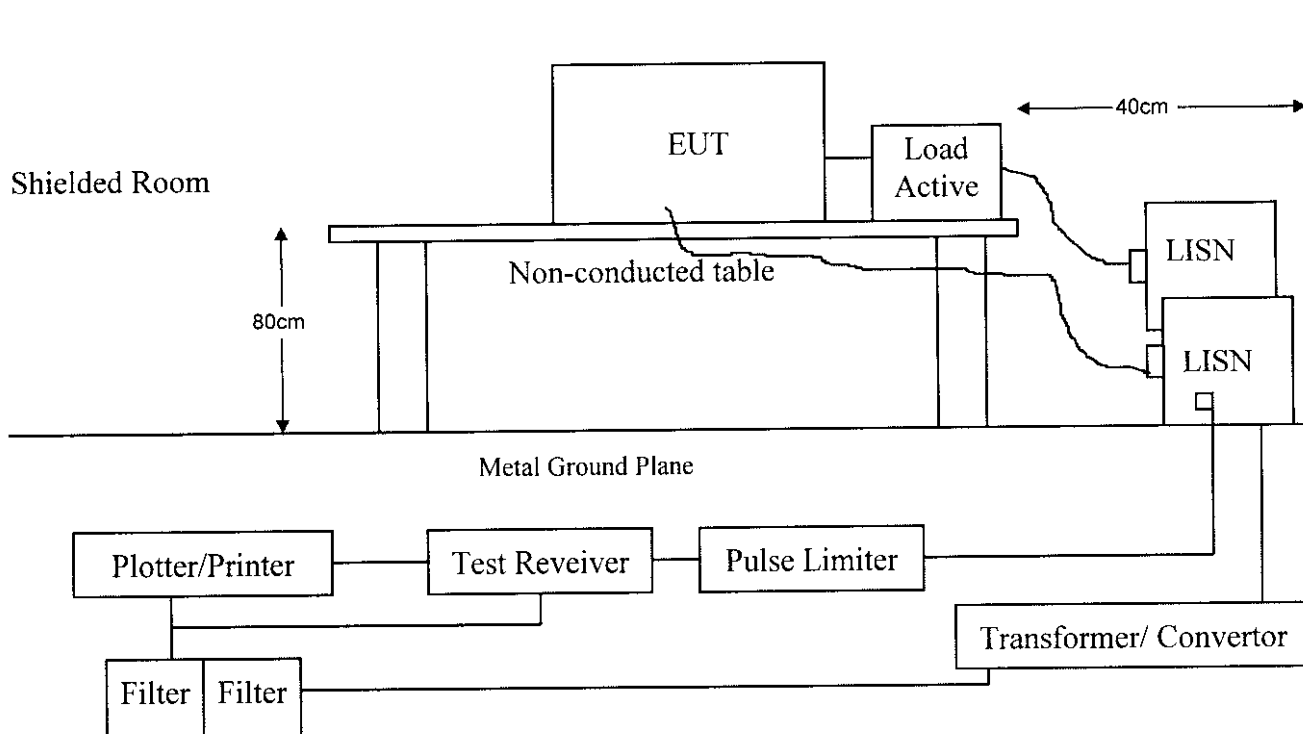
#### 3.1 Test Equipments

The following test equipments are used during the conducted power line tests:

Instrument	Manufacturer	Type /Serial No.	Last Calibration	Location	C.E.
Test Receiver	Rohde & Schwarz	ESHS 30 / 8281091010	Dec. 24, 1997	Shield Room #1	✓
L.I.S.N.	Kyoritsu	KNW-407	Jul.1997	Shield Room #1	
L.I.S.N.	Solar	8012-50-R24 / 90038	Jun. 05, 1997	Shield Room #1	✓
L.I.S.N.	EMCO	3825/2 / 91111-1902	Jul.1997	Shield Room #1	
L.I.S.N.	Rohde & Schwarz	ESH3-Z5 / 840567/002	Jun. 05, 1997	Shield Room #1	✓
L.I.S.N.	Schwarzbeck	NNLK 8121	Apr. 1997	Shield Room #1	
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	Jan. 11, 1998	Shield Room #1	✓

Note: All equipment upon which need to calibrated are with calibration period of 1 year.

#### 3.2 Block Diagram of Test Setup



### 3.3 Conducted Powerline Emission Limit

Frequency	Maximum RF Line Voltage			
	Class A		Class B	
MHz	uV	dBuV	uV	dBuV
0.45 - 1.705	1000	60.0	250	48.0
1.705 - 30	3000	69.5	250	48.0

Remarks : 1. RF Line Voltage (dBuV) = 20 log RF Line Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

### 3.4 EUT Configuration on Measurement

The equipments which is listed 3.2 are installed on Conducted Power Line Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

### 3.5 EUT Exercise Software

The EUT exercise program used during conducted testing was designed to exercise the EUT in a manner similar to a typical use. The exercise sequence is listed as below:

- 3.5.1 Setup the EUT and simulators as shown on 3.2.
- 3.5.2 Turn on the power of all equipments.
- 3.5.3 Boot the PC form Hard Disk.
- 3.5.4 Play CD Disk Music in windows environment.
- 3.5.5 PC sent "H" Pattern to Both LCD Panel And Ext. Monitor.
- 3.5.6 PC sent "H" Pattern to Parallel (printer) port.
- 3.5.7 PC sent "H" Pattern to Serial port.
- 3.5.8 Repeat 3.5.5 to 3.5.7

### 3.6 Conducted Emission Data

The measurement range of conducted emission which is from **0.45 MHz to 30 MHz** was investigated. The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range for all the test modes. Then the worst modes were reported the following data pages.

## CONDUCTED EMISSION DATA

Date of Test	: Apr. 02, 1998	Temperature	: 25 °C
EUT	: Notebook Computer	Humidity	: 67 %
Test Mode	: Mode 1	Display Pattern	: H Pattern

FREQUENCY	READING LEVEL				LIMITS
	LINE 1		LINE 2		
	MHz	dBuV	uV	dBuV	
0.45633	42.0	125.89	41.6	120.23	250
0.78342	41.3	116.14	39.6	95.50	250
2.67068	36.7	68.39	37.8	77.62	250
6.25639	22.3	13.03	22.4	13.18	250
15.35829	30.8	34.67	29.3	29.17	250
<b>**24.00190</b>	<b>42.0</b>	<b>125.89</b>	<b>42.4</b>	<b>131.83</b>	<b>250</b>

Remarks : 1. All readings are Quasi-peak .

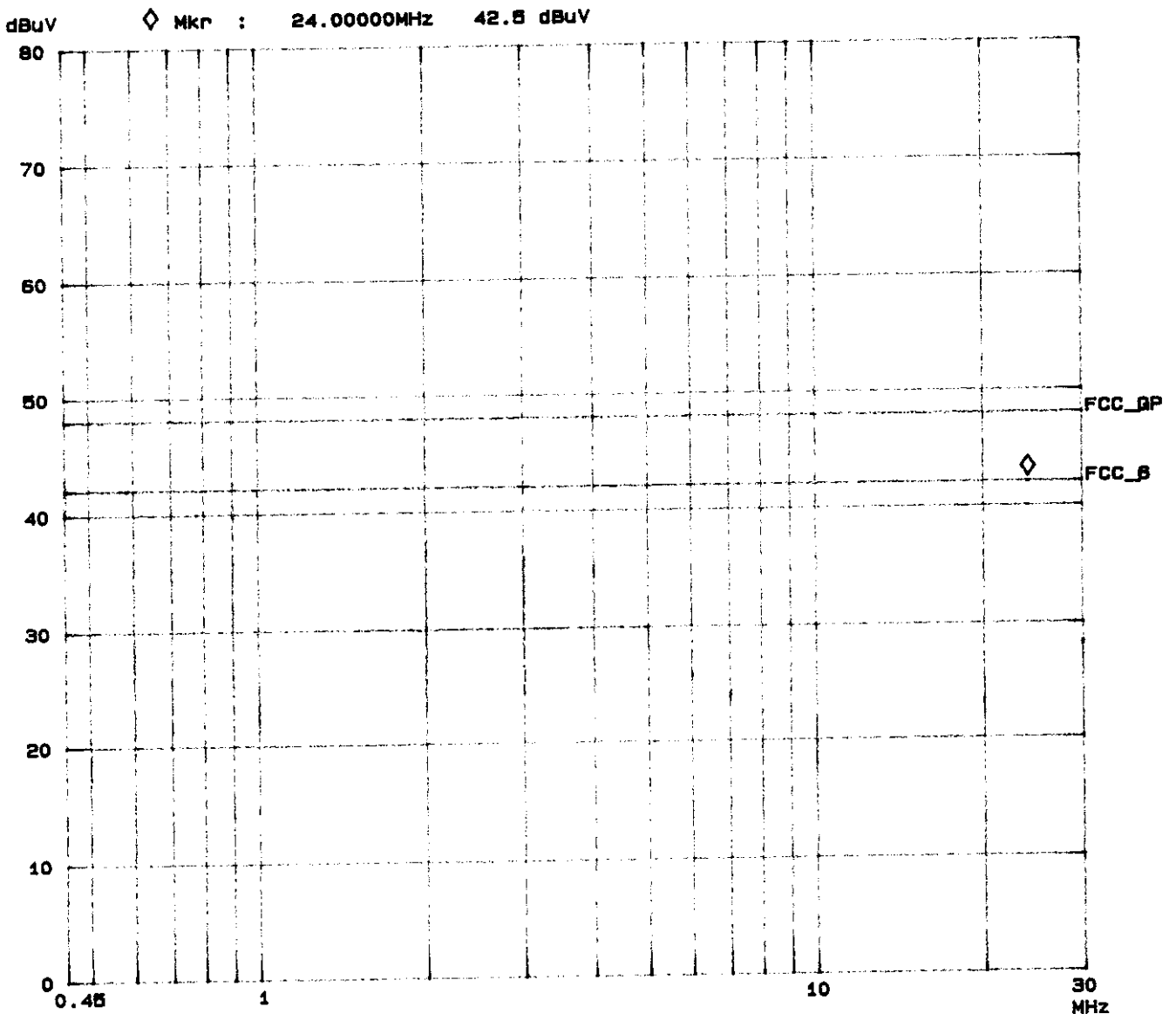
2. " \* " means that the quasi-peak reading level is lower then the average limits, it is not necessary to measure the average level.

3. " \*\* " means that this data is the worse case emission level.

Attached 2 individual pages of peak scan curve data sheets.

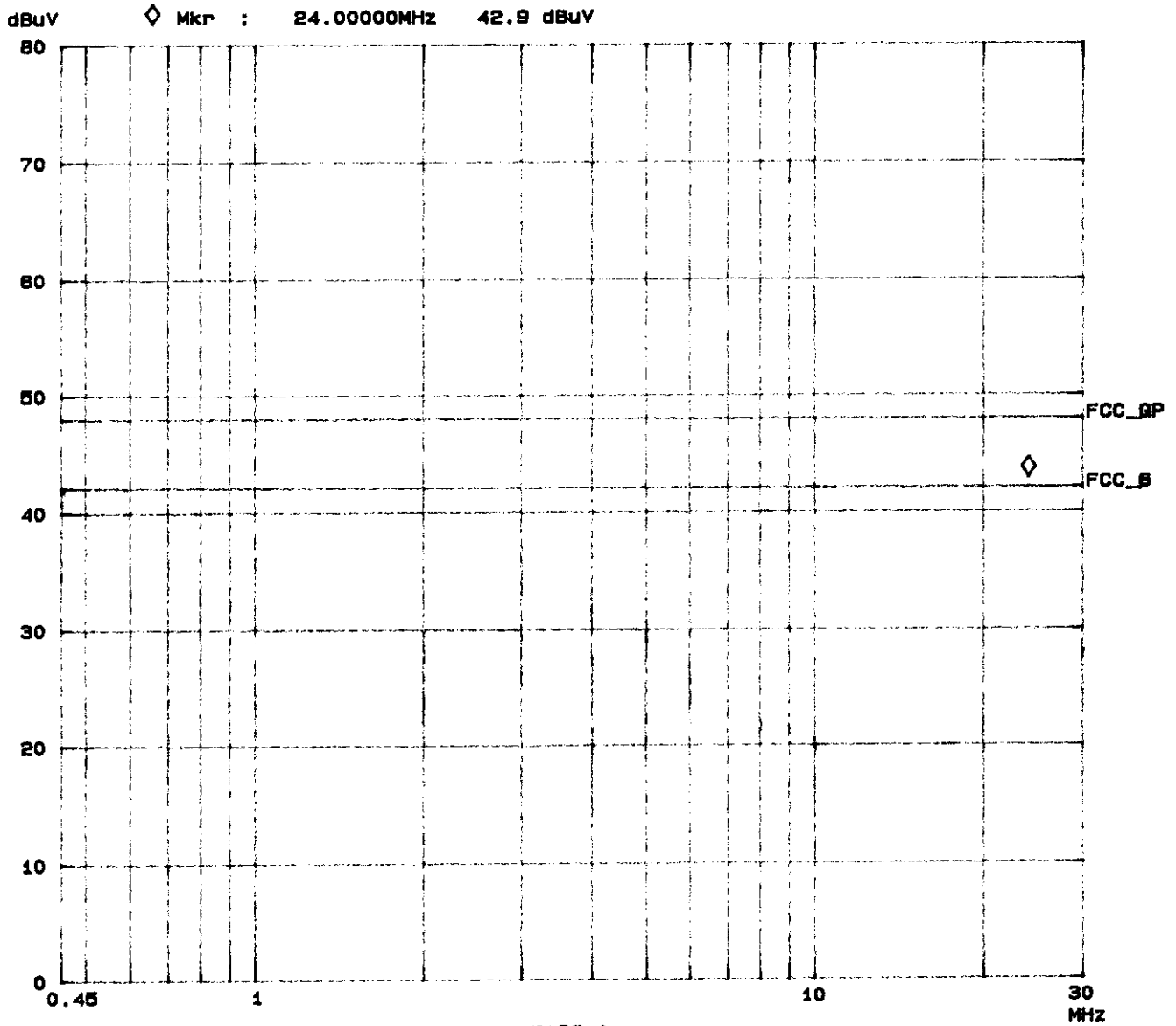
ROHDE & SCHWARZ ESHS 30  
GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK  
Manuf: FIC  
Op Cond: MODE 1  
Operator: JACK  
Test Spec: FCC CLASS B  
Comment: Line 1  
M/N: Birch 2.0



# ROHDE & SCHWARZ ESHS 30 Gestek, PowerLine Conducted Emission

EUT: NOTEBOOK  
Manuf: FIC  
Op Cond: MODE 1  
Operator: JACK  
Test Spec: FCC CLASS B  
Comment: Line 2  
M/N: Birch 2.0



**CONDUCTED EMISSION DATA**

Date of Test : Apr. 02, 1998      Temperature : 25 °C  
 EUT : Notebook Computer      Humidity : 67 %  
 Test Mode : Mode 2      Display Pattern : H Pattern

FREQUENCY	READING LEVEL				LIMITS
	LINE 1		LINE 2		
MHz	dBuV	uV	dBuV	uV	uV
0.58590	42.5	133.35	41.7	121.62	250
0.91385	39.8	97.72	38.4	83.18	250
2.02257	36.3	65.31	36.4	66.07	250
3.12982	32.9	44.16	36.3	65.31	250
7.23037	19.9	9.89	19.8	9.77	250
<b>**24.91866</b>	<b>42.5</b>	<b>133.35</b>	<b>42.8</b>	<b>138.08</b>	<b>250</b>

Remarks : 1. All readings are Quasi-peak.

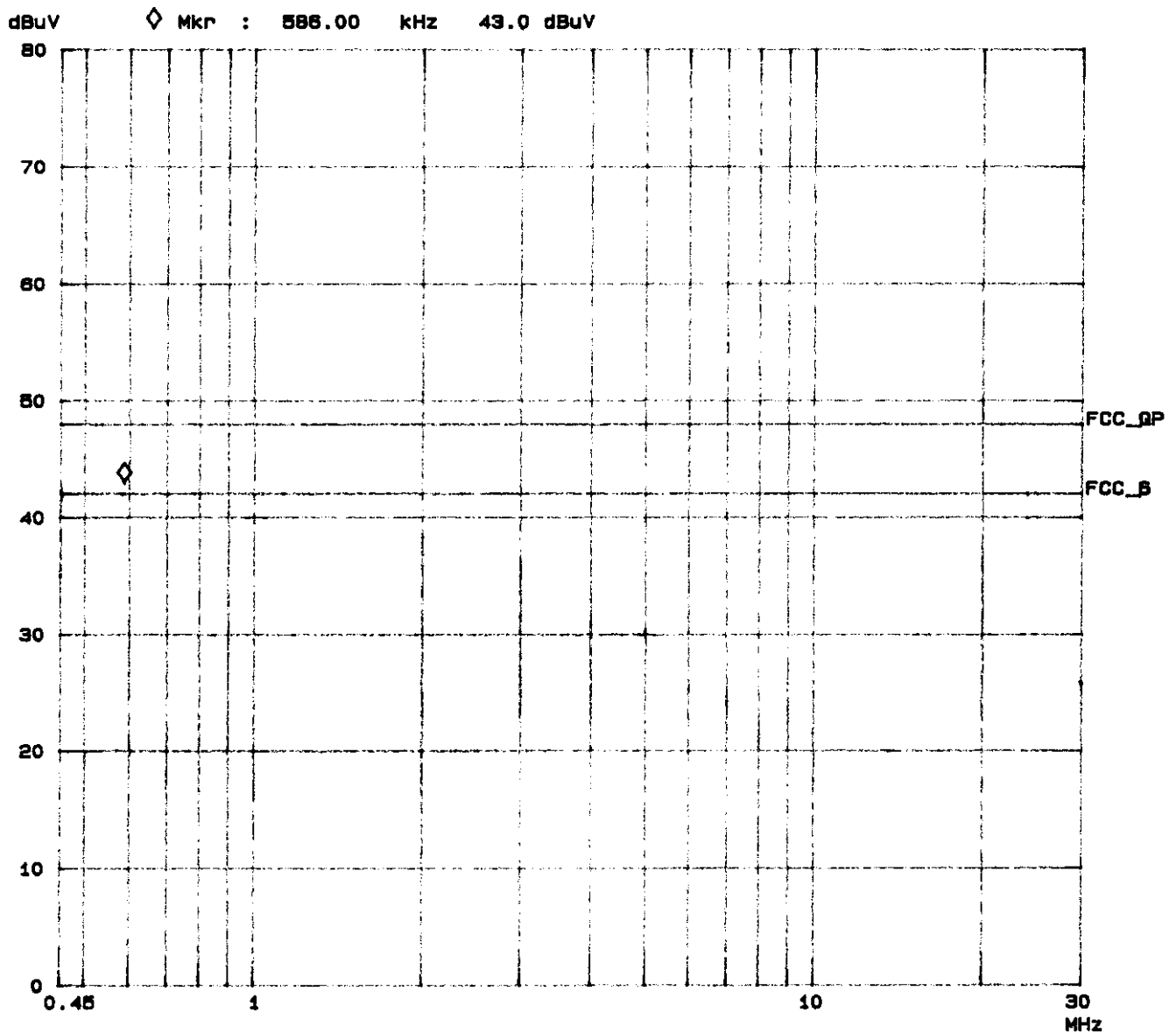
2. “ \* ” means that the quasi-peak reading level is lower then the average limits, it is not necessary to measure the average level.

3. “ \*\* ” means that this data is the worse case emission level.

Attached 2 individual pages of peak scan curve data sheets.

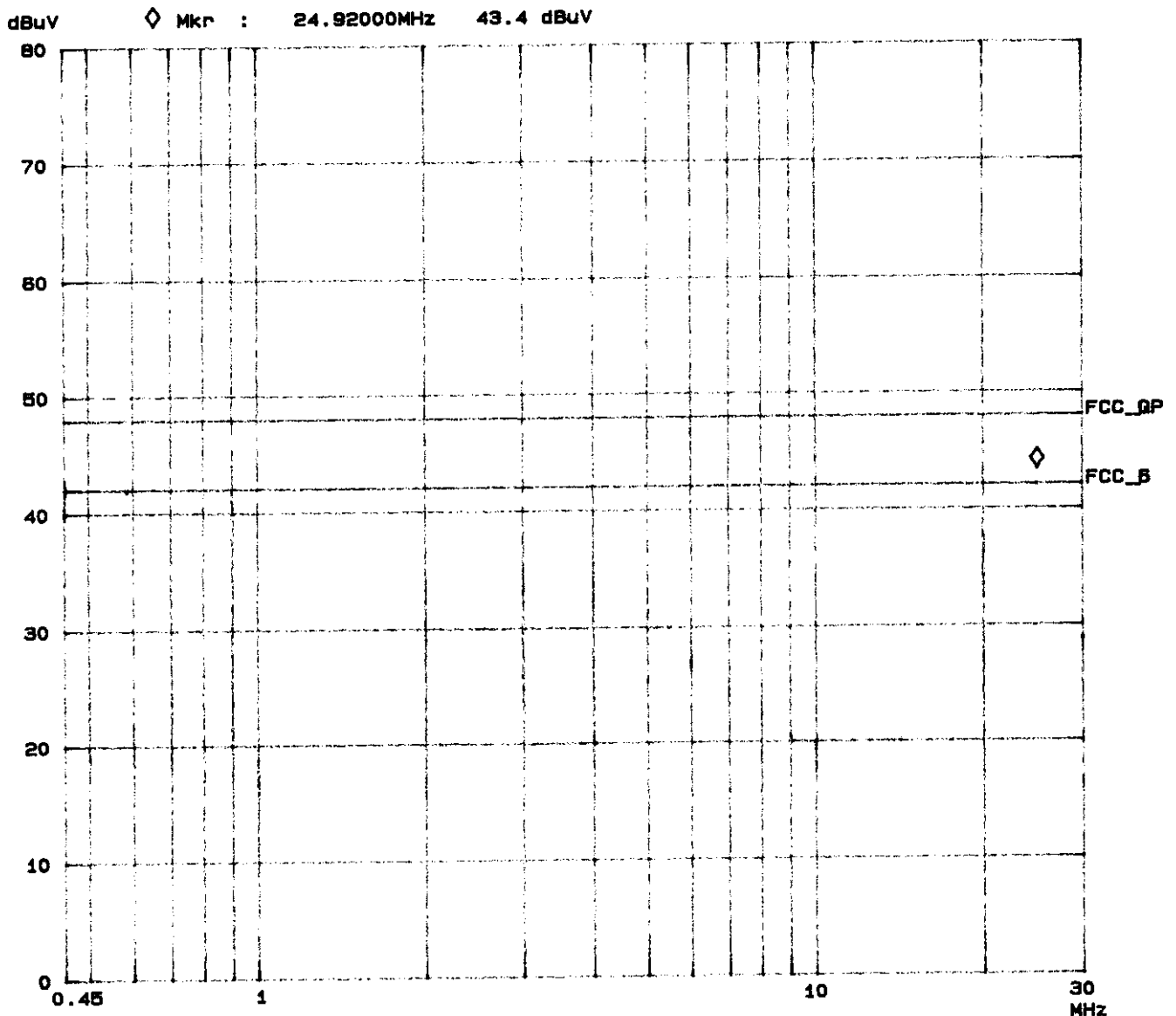
ROHDE & SCHWARZ ESHS 30  
GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK  
Manuf: FIC  
Op Cond: MODE 2  
Operator: JACK  
Test Spec: FCC CLASS B  
Comment: Line 1  
M/N: Birch 2.0



ROHDE & SCHWARZ ESHS 30  
GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK  
Manuf: FIC  
Op Cond: MODE 2  
Operator: JACK  
Test Spec: FCC CLASS B  
Comment: Line 2  
M/N: Birch 2.0





## 4. Radiation Emission Test

### 4.1 Test Equipment

The following test equipments are used during the radiated emission tests:

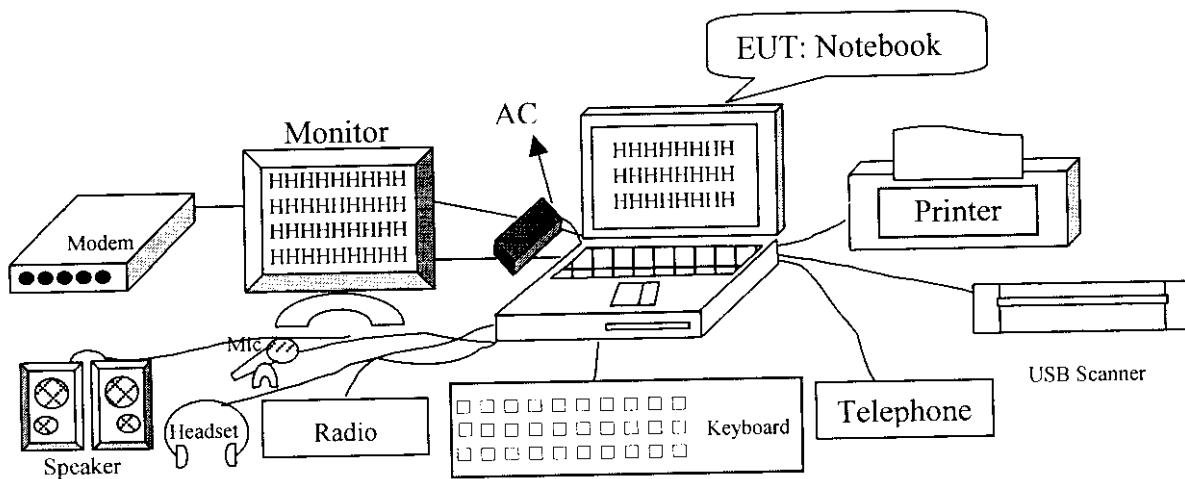
Radiated test was performed on :  Site #1    Site #2

Instrument	Manufacturer	Type /Serial No.	Last Calibration	Site #1	Site #2
Test Receiver	Rohde & Schwarz	ESVS 30/829007/014	Nov. 15,1997	✓	
Spectrum Analyzer	Anristu	MA2601B/MT16442	Jun. 11,1997	✓	
Pre-Amplifier	HP	7447F/3113A04998	Nov. 16,1997	✓	
Test Receiver	Rohde & Schwarz	ESVS 10/8421122/001	Dec. 26,1997		✓
Spectrum Analyzer	HP	8568B/4315B05847	Jan. 05,1998		✓
Pre Amplifier	HP	8447D/3113A04487	Jan. 05,1998		✓
Antenna 30Mhz-2Ghz	Chase	CBL 6112/2039	Jan. 05,1998	✓	
Bilog Antenna	Chase	CBL6111/1380	May. 22,1997		✓
Dipole Antenna	Schwarzbeck	VHAP/719,UHAP/736	Jun.11,1997		

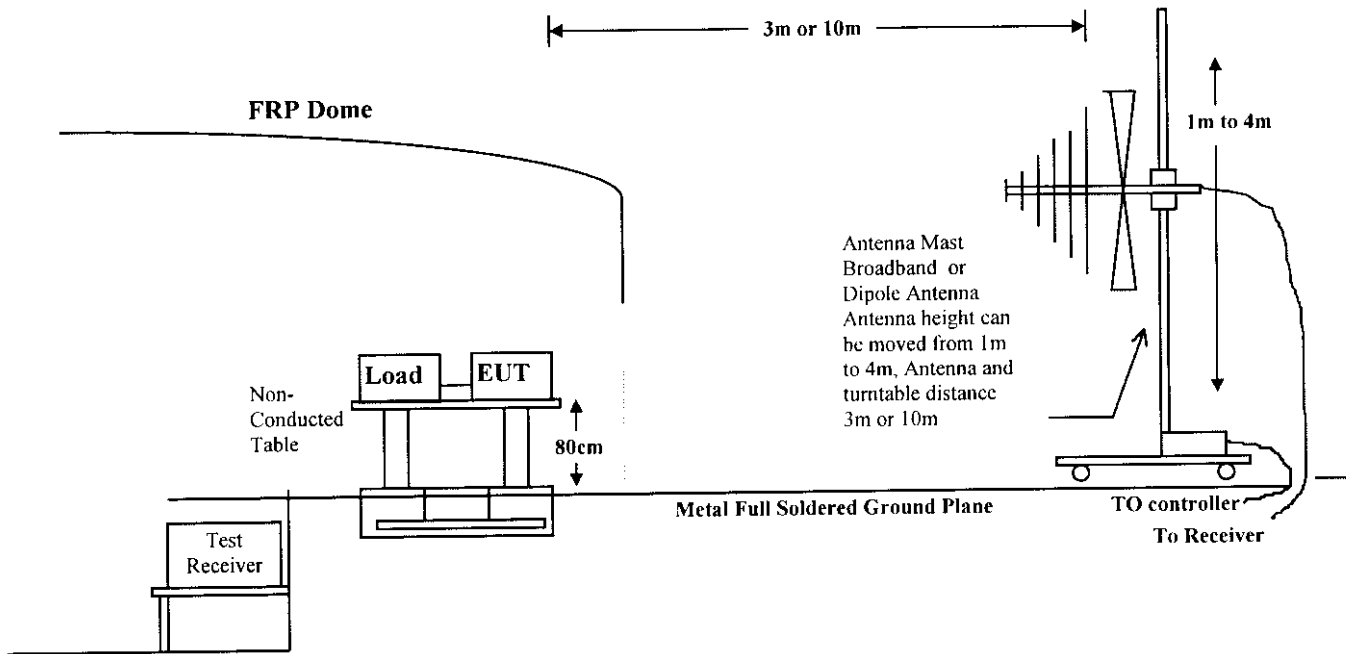
Note: All equipment upon which need to calibrated are with calibration period of 1 year.

### 4.2 Test Setup

#### 4.2.1 Block Diagram of Connections between EUT and simulators



### 4.2.2 Open Test Site Setup Diagram



### 4.3 Radiated Emission Limit

#### 4.3.1 FCC Class B Limits at 3m

Frequency	Distance	Field Strength	
		uV/M	dBuV/M
30 - 88	3	100	40.0
88 - 216	3	150	43.5
216 -960	3	200	46.0
960 - 2000	3	500	54.0

#### 4.3.2 CISPR Class B Limits at 10m

Frequency	Distance	Field Strength
MHz	Meter	dB(uV/M)
30 - 230	10	30
230 - 1000	10	37

Remark : 1. The tighter limit shall apply at the edge between two frequency bands.

2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

#### 4.4 EUT Configuration

The equipments which is listed 4.2.1 are installed on Radiated Emission Test to meet the Commission requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

#### 4.5 Operating Condition of EUT

Same as Conducted Power Line Test which is listed in 3.5.

#### 4.6 Radiated Emission Data

The measurement range of radiated emission which is from 30 MHz to 2 GHz was investigated. All readings are quasi-peak / Average / Peak values with a resolution Bandwidth of 120 KHz. The initial step in collecting radiated emission data is a spectrum analyzer peak scan of the measurement range for all the test modes. Then the worst modes were reported the following data pages.

The total uncertainty for this test is as follows:

- Uncertainty in the field strength measured (3m antenna distance):  $< \pm 4$  dB
- Uncertainty in the field strength measured (10m antenna distance):  $< \pm 4$  dB

The uncertainty is calculated in accordance with NAMAS document NIS 81, and is given as 2 standard deviations.

## Radiated Emission Data

Date of Test :04-02,1998                      Temperature       :25.0 deg/C  
 EUT                   :NOTEBOOK PC                      Humidity           :65 %RH  
 Test Mode.       :Mode 1                              Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level		Emission Level		Limits (uV/m)
			Horizontal (dBuV/m)	Horizontal (dBuV/m)	Horizontal (uV/m)	Horizontal (uV/m)	
128.286	2.62	11.08	22.36	36.07	63.58	150	
152.352	2.73	10.46	22.19	35.39	58.78	150	
168.378	2.80	9.56	24.05	36.41	66.15	150	
199.437	2.94	8.89	25.27	37.10	71.61	150	
200.458	2.94	8.90	21.67	33.51	47.39	150	
232.674	3.09	10.76	25.20	39.04	89.56	200	
* 265.912	3.24	12.11	24.95	40.30	103.57	200	
465.360	3.94	16.58	17.49	38.02	79.57	200	
598.310	4.38	18.90	14.68	37.96	79.02	200	
631.560	4.49	19.55	12.22	36.26	65.01	200	
797.745	5.03	21.67	10.46	37.16	72.14	200	
930.698	5.47	23.09	9.92	38.48	83.98	200	

- Remarks:1. All Readings below 1GHz are Quasi-Peak.  
 2.“ \* ”, means this data is worse case emission level.  
 3.Emission Level = Reading Level + Antenna Factor + Cable loss  
 4.Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998                      Temperature     :25.0 deg/C  
 EUT                 :NOTEBOOK PC            Humidity         :65 %RH  
 Test Mode.        :Mode 1                      Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level Vertical (dBuV/m)	Emission Level Vertical (dBuV/m)	(uV/m)	Limits (uV/m)
128.287	2.62	11.08	22.96	36.67	68.13	150
144.341	2.70	10.92	23.13	36.74	68.74	150
152.357	2.73	10.46	24.70	37.90	78.48	150
168.380	2.80	9.56	25.05	37.41	74.23	150
192.447	2.91	8.83	22.83	34.57	53.52	150
332.397	3.50	13.86	20.62	37.99	79.32	200
* 400.917	3.73	15.81	20.72	40.26	103.07	200

- Remarks:1. All Readings below 1GHz are Quasi-Peak.  
 2.“ \* ”, means this data is worse case emission level.  
 3.Emission Level = Reading Level + Antenna Factor + Cable loss  
 4.Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998	Temperature :25.0 deg/C
EUT :NOTEBOOK PC	Humidity :65 %RH
Test Mode. :Mode 1 (Peak)	Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level Horizontal (dBuV/m)	Emission Level Horizontal (dBuV/m)	Emission Level (uV/m)	Limits (uV/m)
1206.587	6.34	22.16	36.95	30.08	31.93	500
*1425.268	7.02	24.88	38.12	34.99	56.20	500

Remarks:

1. All Readings below 1GHz~2GHz are Quasi-Peak, above are Peak value.
- 2.“ \* ”, means this data is worse case emission level.
- 3.Emission Level = Reading Level + Antenna Factor + Cable loss  
-Amp Factor ( 35.37, 35.02 )
- 4.Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998                      Temperature       :25.0 deg/C  
 EUT                 :NOTEBOOK PC                    Humidity            :65 %RH  
 Test Mode.       :Mode 1 (Peak)                    Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level	Emission Level		Limits (uV/m)
			Vertical (dBuV/m)	Vertical (dBuV/m)	(uV/m)	
1023.942	5.77	22.55	36.42	29.08	28.43	500
1230.574	6.41	22.37	35.88	29.33	29.27	500
1420.028	7.01	24.85	34.86	31.69	38.42	500
*1563.285	7.45	25.97	33.54	32.08	40.18	500

## Remarks:

1. All Readings below 1GHz~2GHz are Quasi-Peak, above are Peak value.
2. " \* ", means this data is worse case emission level.
3. Emission Level = Reading Level + Antenna Factor + Cable loss  
 - Amp Factor ( 35.66, 35.33, 35.03, 34.87 )
4. Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998                      Temperature       :25.0 deg/C  
EUT               :NOTEBOOK PC                Humidity           :65 %RH  
Test Mode.       :Mode 1 (Average)            Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level Horizontal (dBuV/m)	Emission Level Horizontal (dBuV/m)	(uV/m)	Limits (uV/m)
1206.584	6.34	22.16	30.82	23.95	15.76	500
*1425.266	7.02	24.88	33.14	30.01	31.67	500

### Remarks:

1. All Readings below 1GHz~2GHz are Quasi-Peak, above are average value.
2. " \* ", means this data is worse case emission level.
3. Emission Level = Reading Level + Antenna Factor + Cable loss  
- Amp Factor ( 35.37, 35.02 )
4. Deviations from the specifications: None.



## Radiated Emission Data

Date of Test :04-02,1998	Temperature :25.0 deg/C
EUT :NOTEBOOK PC	Humidity :65 %RH
Test Mode. :Mode 1 (Average)	Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level Vertical (dBuV/m)	Emission Level Vertical (dBuV/m)	(uV/m)	Limits (uV/m)
1023.943	5.77	22.55	31.52	24.18	16.17	500
1230.574	6.41	22.37	29.69	23.14	14.35	500
*1420.028	7.01	24.85	30.42	27.25	23.04	500
1563.287	7.45	25.97	27.91	26.45	21.01	500

Remarks:

1. All Readings below 1GHz~2GHz are Quasi-Peak, above are average value.
- 2.“ \* ”, means this data is worse case emission level.
- 3.Emission Level = Reading Level + Antenna Factor + Cable loss  
-Amp Factor ( 35.66, 35.33, 35.03, 34.87 )
- 4.Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998                      Temperature     :25.0 deg/C  
 EUT                 :NOTEBOOK PC            Humidity         :65 %RH  
 Test Mode.        :Mode 2                    Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level		Emission Level		Limits (uV/m)
			Horizontal (dBuV/m)	Horizontal (dBuV/m)	Horizontal (uV/m)	Horizontal (uV/m)	
144.335	2.70	10.92	24.66	38.27	81.98	150	
152.356	2.73	10.46	24.09	37.29	73.16	150	
168.379	2.80	9.56	19.88	32.24	40.93	150	
192.447	2.91	8.83	18.08	29.82	30.97	150	
200.458	2.94	8.90	27.80	39.64	95.98	150	
208.469	2.98	9.35	23.41	35.74	61.23	150	
232.673	3.09	10.76	22.69	36.53	67.08	200	
299.151	3.39	12.77	23.42	39.58	95.23	200	
*332.392	3.50	13.86	25.18	42.55	134.09	200	
398.872	3.72	15.76	20.10	39.58	95.29	200	
465.348	3.94	16.58	21.42	41.95	125.10	200	
598.307	4.38	18.90	15.90	39.18	90.94	200	
731.260	4.81	20.85	10.39	36.05	63.48	200	

- Remarks:1. All Readings below 1GHz are Quasi-Peak.  
 2.“ \* ”, means this data is worse case emission level.  
 3.Emission Level = Reading Level + Antenna Factor + Cable loss  
 4.Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998                      Temperature       :25.0 deg/C  
 EUT                   :NOTEBOOK PC                      Humidity           :65 %RH  
 Test Mode.       :Mode 2                              Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level Vertical (dBuV/m)	Emission Level Vertical (dBuV/m)	(uV/m)	Limits (uV/m)
40.093	1.13	13.59	14.49	29.20	28.84	100
72.166	1.85	5.87	22.07	29.79	30.86	100
144.331	2.70	10.92	24.41	38.02	79.65	150
152.354	2.73	10.46	25.57	38.77	86.75	150
168.378	2.80	9.56	20.35	32.71	43.21	150
200.459	2.94	8.90	25.45	37.29	73.23	150
398.872	3.72	15.76	18.33	37.81	77.72	200
465.349	3.94	16.58	17.68	38.21	81.33	200
531.830	4.16	18.11	17.14	39.42	93.49	200
*598.311	4.38	18.90	17.39	40.67	107.96	200
664.785	4.60	20.08	13.00	37.68	76.55	200
731.262	4.81	20.85	10.54	36.20	64.59	200
864.223	5.25	22.36	9.31	36.93	70.19	200

### Remarks:

1. All Readings below 1GHz are Quasi-Peak.
- 2.“ \* ”, means this data is worse case emission level.
- 3.Emission Level = Reading Level + Antenna Factor + Cable loss
- 4.Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998	Temperature :25.0 deg/C
EUT :NOTEBOOK PC	Humidity :65 %RH
Test Mode. :Mode 2 (Peak)	Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level Horizontal (dBuV/m)	Emission Level Horizontal (dBuV/m)	(uV/m)	Limits (uV/m)
1023.941	5.77	21.09	35.88	27.08	22.60	500
1206.585	6.34	22.16	35.91	29.04	28.33	500
*1425.266	7.02	24.88	37.92	34.79	54.92	500

Remarks:

1. All Readings below 1GHz~2GHz are Quasi-Peak, above are Peak value.
- 2.“ \* ”, means this data is worse case emission level.
- 3.Emission Level = Reading Level + Antenna Factor + Cable loss  
- Amp Factor(35.66, 35.37, 35.02)
- 4.Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998	Temperature	:25.0 deg/C
EUT :NOTEBOOK PC	Humidity	:65 %RH
Test Mode. :Mode 2 (Peak)	Display Pattern:	H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level	Emission Level		Limits (uV/m)
			Vertical (dBuV/m)	Vertical (dBuV/m)	(uV/m)	
1230.577	6.41	22.37	34.19	27.64	24.09	500
1420.025	7.01	24.85	36.96	33.79	48.92	500
*1563.287	7.45	25.97	35.92	34.46	52.84	500

**Remarks:**

1. All Readings below 1GHz~2GHz are Quasi-Peak, above are Peak value.
2. “ \* ”, means this data is worse case emission level.
3. Emission Level = Reading Level + Antenna Factor + Cable loss  
 - Amp Factor(35.33, 35.03, 34.87)
4. Deviations from the specifications: None.

## Radiated Emission Data

Date of Test :04-02,1998                      Temperature       :25.0 deg/C  
 EUT                   :NOTEBOOK PC                      Humidity             :65 %RH  
 Test Mode.       :Mode 2 (Average)            Display Pattern:H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level Horizontal (dBuV/m)	Emission Level Horizontal (dBuV/m)	(uV/m)	Limits (uV/m)
1023.942	5.77	21.09	30.58	21.78	12.28	500
1206.585	6.34	22.16	31.26	24.39	16.58	500
*1425.265	7.02	24.88	29.86	26.73	21.71	500

## Remarks:

1. All Readings below 1GHz~2GHz are Quasi-Peak, above are average value.
- 2.“ \* ”, means this data is worse case emission level.
- 3.Emission Level = Reading Level + Antenna Factor + Cable loss  
                                   - Amp Factor(35.66, 35.37, 35.02)
- 4.Deviations from the specifications: None.

## Radiated Emission Data

Date of Test : 04-02, 1998                      Temperature      : 25.0 deg/C  
 EUT                : NOTEBOOK PC                  Humidity          : 65 %RH  
 Test Mode.      : Mode 2 (Average)              Display Pattern: H Pattern

Frequency (MHz)	Cable Loss (dB)	Antenna Factor (dB)	Reading Level Vertical (dBuV/m)	Emission Level Vertical (dBuV/m)	(uV/m)	Limits (uV/m)
1230.577	6.41	22.37	30.02	23.47	14.91	500
1420.025	7.01	24.85	29.28	26.11	20.21	500
*1563.288	7.45	25.97	29.98	28.52	26.67	500

### Remarks:

1. All Readings below 1GHz~2GHz are Quasi-Peak, above are average value.
2. " \* ", means this data is worse case emission level.
3. Emission Level = Reading Level + Antenna Factor + Cable loss  
- Amp Factor(35.33, 35.03, 34.87)
4. Deviations from the specifications: None.

## 6. EMI Reduction Method During Compliance Testing

No modification was made during testing.