

GESTEK Lab.

FCC ID: EUNDESIGNOTE70

Report #: 984063F

No. 3, Pau-Tou-Tsuo Valley, Chia-Pau Tsuen, Lin Kou Hsiang, Taipei County, Taiwan, R.O.C. Tel: 886-2-2603-5321 Fax: 886-2-2603-5325

PENTIUM-266 @ 66 MHz
2 TYPE LCDs

Test Report
Application for Certification
On Behalf Of
First International Computer Inc.
Notebook Computer

Model: 7100, 7100XT1D3

FCC ID: EUNDESIGNOTE70

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.**
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1. Test Report Certification

Applicant : First International Computer Inc.

Manufacturer : First International Computer Inc.

EUT Description : Notebook Computer

(A) FCC ID : EUNDESIGNOTE70

(B) Model No. : 7100, 7100XT1D3

(C) Serial No. : ProtoType

(D) Power : 110V/60Hz

(E) Rating DC-O/P : 20V

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 ABOVE LIMITS APPLICABLE.



Sample Received Date : Apr. 28, 1998

Final Test Date : May, 05, 1998

Documented by : May Tseng

Test Engineer :

Approve & Authorized Signer :

Jackie Lin

Terry Chung

JACKIE LIN

TERRY CHUNG

This test data shown below is traceable to NIST.

2. General Information

1.1 Production Description

Description : Notebook Computer

Model Number : 7100, 7100XT1D3

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.

FCC ID : EUNDESIGNOTE70

CPU : Pentium 233/266MHz , Clock: 66/66MHz

Power Adaptor : I-LAN, 50W/ M/N: F1700C
AC-100~240V 1.8A/50-60Hz, DC O/P: 20V 2.8A

Mode 1: Model:7100, Pentium 233MHz, Clock: 66MHz, LCD 12.1" DSTN, Resolution 800x600.
Mode 2: Model: 7100XT1D3, Pentium 266MHz, Clock: 66MHz, LCD 14.1"TFT, Resolution
1024X768.

Note: 1.This Notebook computer can support different CPU/Clock frequency modes and can support different types of LCD panel. The test data of 233 MHz/Clock and 266MHz were investigated. The data in this test report reflects the worst-case data for each frequency/video resolution.

1.2 Tested System Details

The FCC IDs/Types 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 | : 7100, 7100XT1D3 |
| Serial Number | : N/A |
| FCC ID | : EUNDESIGNOTE70 |
| Manufacturer | : First International Computer Inc. |
| CPU | : INTEL Pentium 233/266MHz, , Clock: 66/66MHz |
| L2 CACHE | : 512KB |
| SDRAM SO DIMM | : 16MB |
| 1.44MB Floppy Disk Driver | : TEAC, FD-05HG-5661 |
| 2.1 GB Hard Disk Driver | : Hitachi, DK226A-21U (Mode 1) |
| 3.2GB Hard Disk Driver | : Hitachi, DK226-32 (Mode 2) |
| 12.1" FAST DSTN LCD | : HITACHI, SX31S003 (Mode 1) |
| 14.1" TFT | : HITACHI, TX36D61VC (Mode 2) |
| CCD Camera | : AXIS, PCAM-QU (Mode 2) |
| DVD ROM | : Toshiba, SD-C2002X (Mode 1) |
| 24X CD-ROM | : Toshiba, XM-1702B (Mode 2) |
| NIMH Battery Pack | : Simplo, SMP-36S |
| Power Adaptor | : I-LAN, 50W |
| Power Cord | : Non-Shielded, Detachable. |

Monitor

| | |
|---------------|--------------------------------|
| Model Number | : 4500DC |
| Serial Number | : 3652100181 |
| FCC ID | : GWGMULTI82 |
| Manufacturer | : OPTIQUEST, INC. |
| Data Cable | : Shielded, Undetachable, 1.2m |
| Power Cord | : Shielded, Detachable, 1.5m |

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 : 960018041
FCC ID : IFAXDM1414
Manufacturer : ACEEX
Adaptor & Power Cord : Non-Shielded, Detachable, 1.5m
Data Cable : Shielded, Detachable, 1.2m

 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

 Microphone

Model Number : N/A
Serial Number : N/A
FCC ID : N/A
Manufacturer : AIWA
Data Cable : Non-Shielded, Undetachable, 1m

 Joystick

Model Number : 3001
Serial Number : AE62901417
FCC ID : N/A
Manufacturer : Logitech
Data Cable : Shielded, Undetachable, 0.8m

Speaker

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

 Radio Receiver

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

 LCD PROJECTOR

Model Number : CPJ-200
Serial Number : 87881
FCC ID : N/A
Manufacturer : SONY
Power Cord : Non-Shielded, Detachable, 1.8m
Data Cable : Shielded, Detachable, 1.2m*4

 Scanner (USB)

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

1.3 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.

1.4 Test Facility

Ambient conditions in the laboratory:

| Items | Required (IEC 68-1) | Actual |
|----------------------------|---------------------|----------|
| Temperature (°C) | 15-35 | 21-27 |
| Humidity (%RH) | 25-75 | 60-65 |
| Barometric pressure (mbar) | 860-1060 | 950-1000 |

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

NVLAP Lab Code : 200085-0
United States Department of commerce
National Institute of Standards and Technology
National Voluntary Laboratory Accreditation Program

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

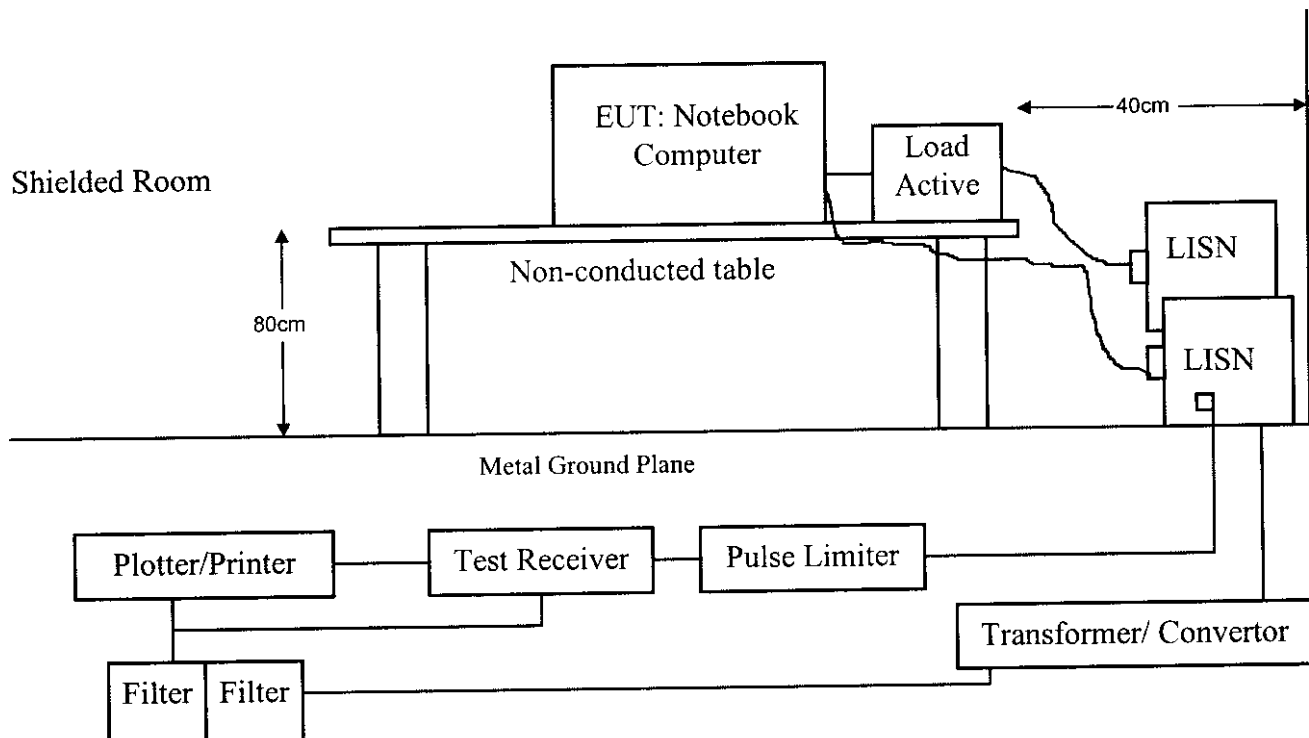
1.5 Test Equipments

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. 10, 1998 | 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.

1.6 Block Diagram of Test Setup



1.7 Conducted Powerline Emission Limit

1.7.1 FCC Limits

| 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.

1.7.2 CISPR Limits

| Frequency | Maximum RF Line Voltage dB(uV) | | | |
|-------------|--------------------------------|---------|------------|---------|
| | Class A | | Class B | |
| MHz | QUASI-PEAK | AVERAGE | QUASI-PEAK | AVERAGE |
| 0.15 - 0.50 | 79 | 66 | 66-56 | 56-46 |
| 0.50-5.0 | 73 | 60 | 56 | 46 |
| 5.0 - 30 | 73 | 60 | 60 | 50 |

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

1.8 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.

1.9 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 from Hard Disk.
- 3.5.4 Play CD Disk Music in windows environment.
- 3.5.5 Active CCD Camera operated program. (Mode 2)
- 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

1.10 Conducted Emission Data

The measurement range of conducted emission which is from **0.45 MHz to 30 MHz** was investigated. All readings are quasi-peak and average values with a resolution Bandwidth of 9 KHz. 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. 29, 1998 | Temperature | : 25.3 °C |
| EUT | : Notebook Computer | Humidity | : 62.0 % |
| Test Mode | : Mode 1 | Display Pattern | : H Pattern |

| FREQUENCY | READING LEVEL | | | | LIMITS | |
|------------------|---------------|-------|--------|-------|--------|--|
| | LINE 1 | | LINE 2 | | | |
| MHz | dBuV | uV | dBuV | uV | uV | |
| 0.46366 | 31.2 | 36.31 | 33.9 | 49.55 | 250 | |
| 3.31589 | 32.4 | 41.69 | 31.4 | 37.15 | 250 | |
| 4.13374 | 36.0 | 63.10 | 32.4 | 41.69 | 250 | |
| **4.48353 | 37.0 | 70.79 | 38.0 | 79.43 | 250 | |
| 6.23373 | 30.1 | 31.99 | 27.0 | 22.39 | 250 | |
| 26.04338 | 29.0 | 28.18 | 26.0 | 19.95 | 250 | |

Remarks : 1. All readings are Quasi-peak and average values.

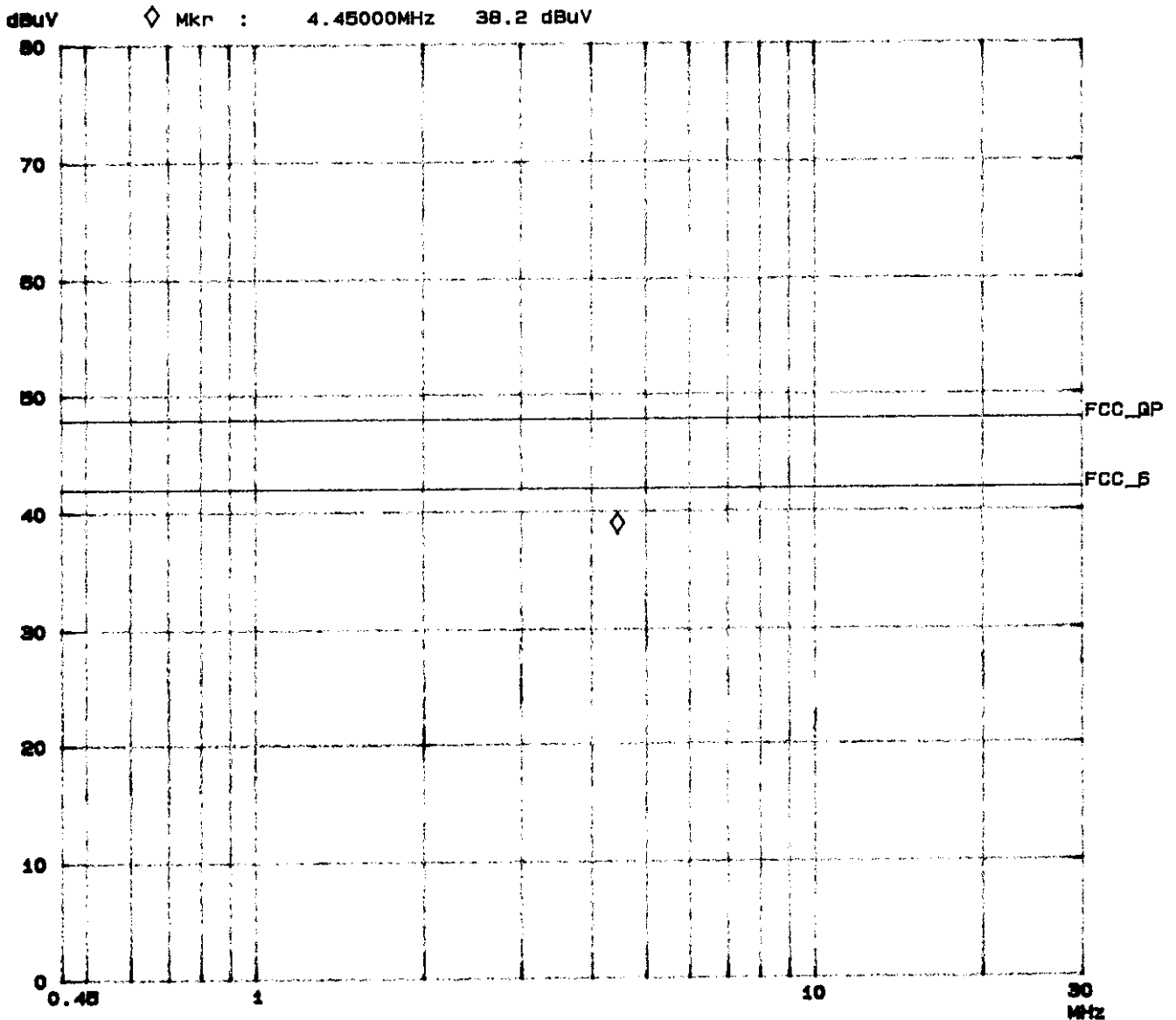
2. “ * ” means that the quasi-peak reading level is lower then the average limits, it is not necessary to measure the average level.

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

Attached 2 individual pages of peak scan curve data sheets.

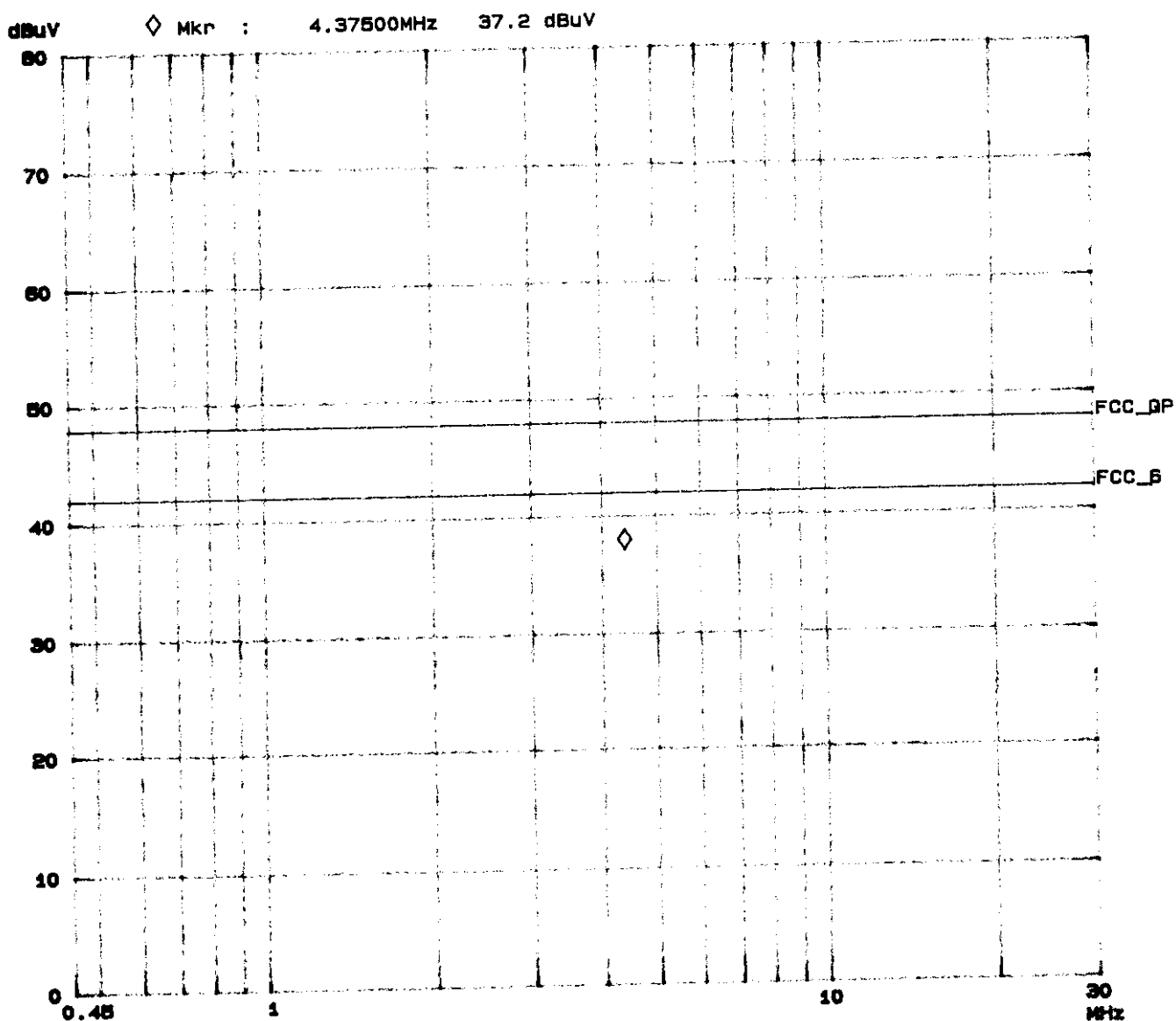
ROHDE & SCHWARZ ESHS 30
GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK COMPUTER
Manuf: FIC
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 1
M/N: 7100



ROHDE & SCHWARZ ESHS 30 GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK COMPUTER
Manuf: FIC
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 2
M/N: 7100



CONDUCTED EMISSION DATA

| | | | |
|--------------|-------------------|-----------------|-----------|
| Date of Test | Apr. 24, 1998 | Temperature | 25.4 °C |
| EUT | Notebook Computer | Humidity | 60.0 % |
| Test Mode | Mode 2 | Display Pattern | H Pattern |

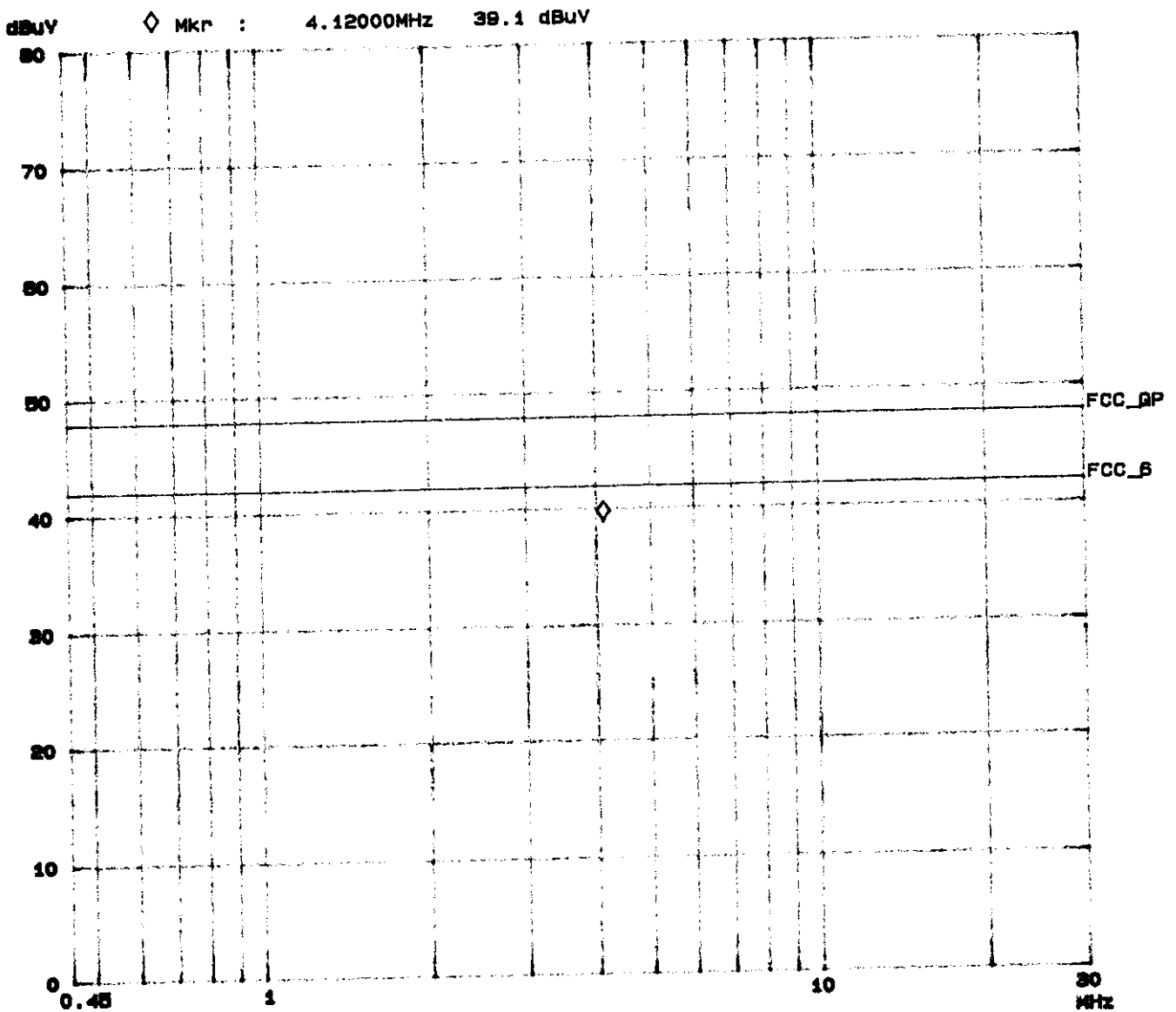
| FREQUENCY | READING LEVEL | | | | LIMITS |
|-----------|---------------|-------|--------|--------|--------|
| | LINE 1 | | LINE 2 | | |
| MHz | DBuV | uV | dBuV | uV | uV |
| 0.48349 | 31.0 | 35.48 | 28.6 | 26.92 | 250 |
| 0.54379 | 28.9 | 27.86 | 36.4 | 66.07 | 250 |
| 3.81881 | 35.0 | 56.23 | 36.1 | 63.83 | 250 |
| **4.12010 | 37.3 | 73.28 | 40.4 | 104.71 | 250 |
| 6.23587 | 28.6 | 26.92 | 29.1 | 28.51 | 250 |
| 25.51830 | 35.0 | 56.23 | 32.0 | 39.81 | 250 |

- Remarks :
1. All readings are Quasi-peak and average values.
 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.

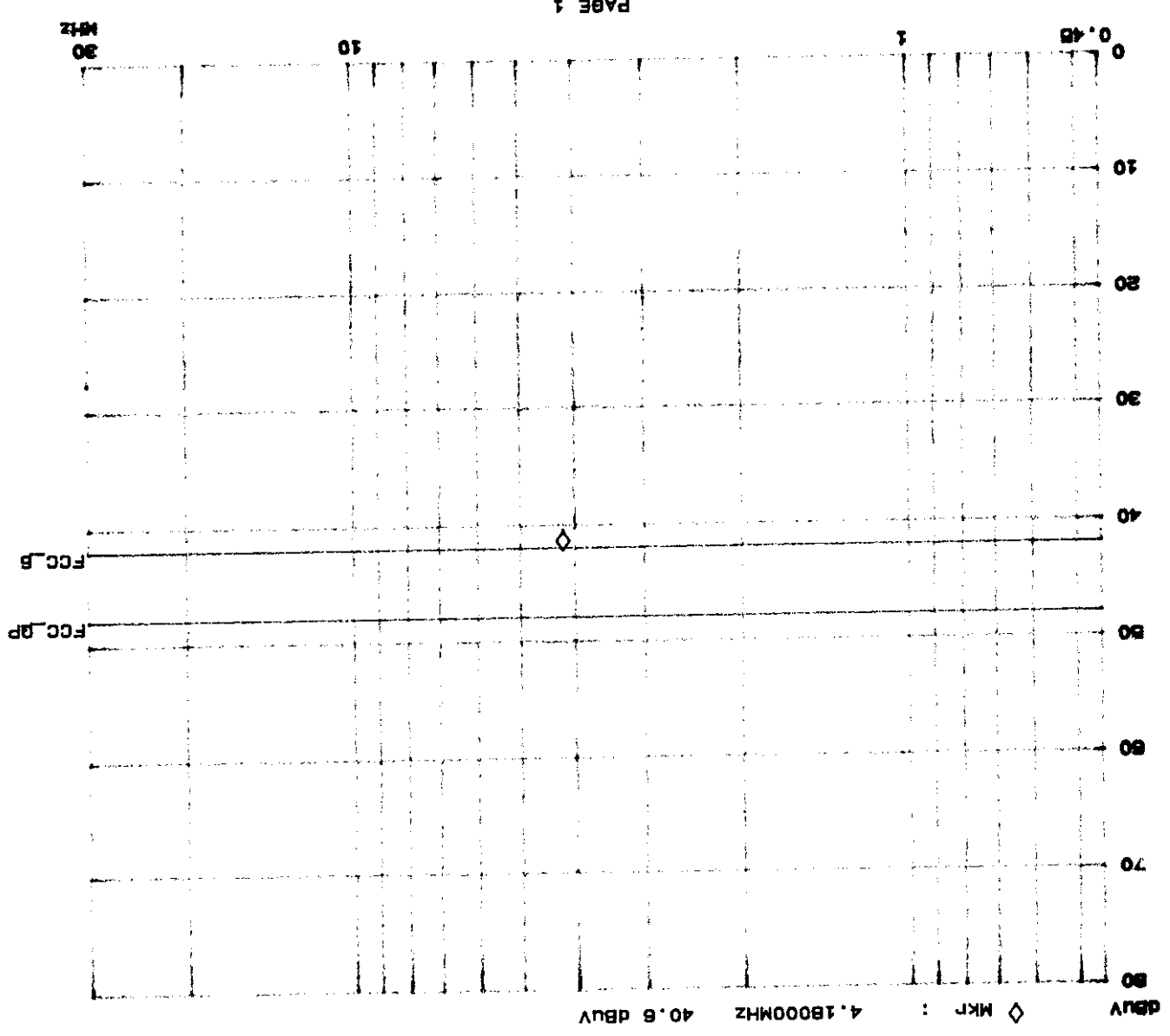
ROHDE & SCHWARZ ESHS 30
GESTEK, PowerLine Conducted Emission

EUT: NOTEBOOK COMPUTER
Manuf: FIC
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 1
M/N: 7100XT1D3



ROHDE & SCHWARZ ESHS 30
 GESTEK, Powerline Conducted Emission

EUT:
 Manuf: NOTEBOOK COMPUTER
 FIC
 Operator: JACKIE
 Test Spec: FCC CLASS B
 Line 2
 Comment: M/N: 7100XT1D3



4. Radiation Emission Test

1.11 Test Equipment

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

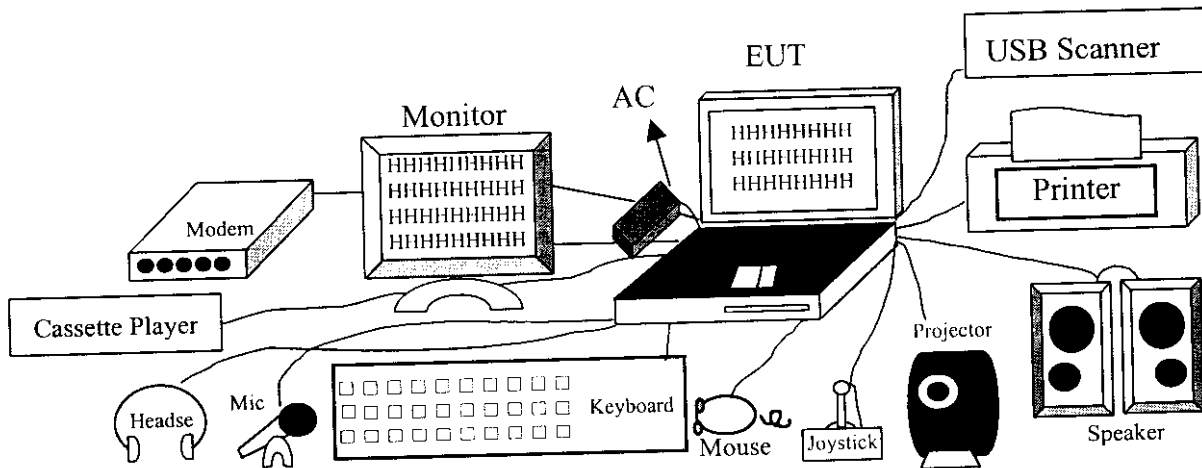
Radiated test was performed on : Site #1 Site #2

| 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 | | |

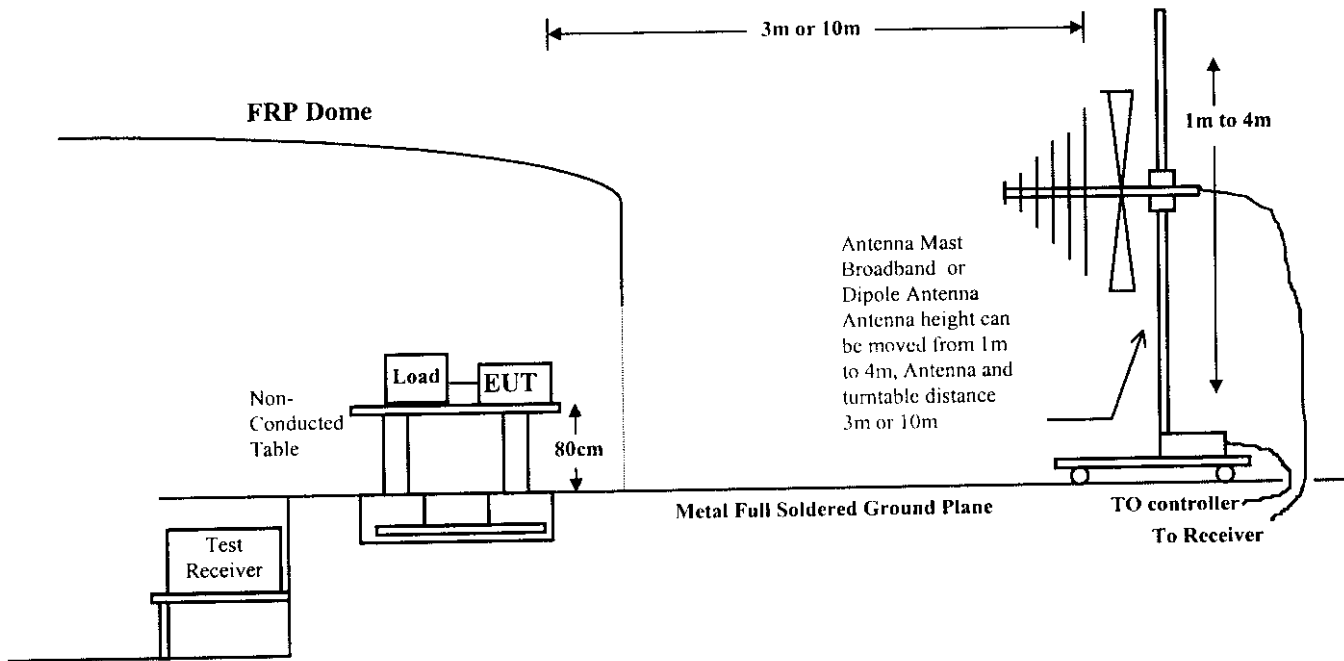
Note: All equipment upon which need to calibrated are with calibration period of 1 year.

1.12 Test Setup

1.12.1 Block Diagram of Connections between EUT and simulators



1.12.2 Open Test Site Setup Diagram



1.13 Radiated Emission Limit

1.13.1 FCC Class B Limits at 3m

| Frequency MHz | Distance Meter | 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 |

1.13.2 CISPR Class B Limits at 10m

| Frequency MHz | Distance Meter | Field Strength |
|------------------|-------------------|----------------|
| | | 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.

1.14 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.

1.15 Operating Condition of EUT

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

1.16 Radiated Emission Data

The measurement range of radiated emission which is from 30 MHz to 2 GHz was investigated. All readings are quasi-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.

Radiated Emission Data

Date of Test :04-29,1998 Wed Temperature :25.6 deg/C
 EUT :NOTEBOOK Humidity :63 %RH
 Test Mode :Mode 1 Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level | Emission Level | | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|------------------------|------------------------|--------|-----------------|
| | | | Horizontal (dBuV/m) | Horizontal (dBuV/m) | (uV/m) | |
| 66.835 | 1.71 | 6.45 | 25.81 | 33.97 | 49.96 | 100 |
| * 86.012 | 2.16 | 7.82 | 24.26 | 34.25 | 51.55 | 100 |
| 110.594 | 2.54 | 11.62 | 22.76 | 36.93 | 70.20 | 150 |
| 200.025 | 2.94 | 9.32 | 25.87 | 38.13 | 80.62 | 150 |
| 216.000 | 3.01 | 10.45 | 24.16 | 37.62 | 76.06 | 150 |
| 336.098 | 3.52 | 13.99 | 23.19 | 40.70 | 108.34 | 200 |
| 368.650 | 3.63 | 14.69 | 21.17 | 39.48 | 94.24 | 200 |
| 383.996 | 3.67 | 14.96 | 19.98 | 38.61 | 85.23 | 200 |
| 466.969 | 3.95 | 17.34 | 15.69 | 36.98 | 70.63 | 200 |
| 712.709 | 4.75 | 19.41 | 14.05 | 38.21 | 81.40 | 200 |

- Remarks: 1. All Readings below 1GHz 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
 4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test : 04-29, 1998 Wed
 EUT : NOTEBOOK
 Humidity : 63 %RH
 Temperature : 25.6 deg/C
 Display Pattern: H Pattern
 Test Mode : Mode 1

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level Vertical (dBuV/m) | Emission Level Vertical (dBuV/m) | Limit (uV/m) |
|-----------------|-----------------|-----------------------|---------------------------------|----------------------------------|--------------|
|-----------------|-----------------|-----------------------|---------------------------------|----------------------------------|--------------|

| | | | | | |
|-----------|------|-------|-------|-------|--------|
| 33.361 | 0.95 | 16.65 | 8.09 | 25.68 | 19.23 |
| 66.673 | 1.71 | 6.78 | 20.39 | 28.88 | 27.80 |
| 86.019 | 2.16 | 8.40 | 24.24 | 34.81 | 54.99 |
| 110.585 * | 2.54 | 11.74 | 26.19 | 40.48 | 105.65 |
| 128.875 | 2.62 | 12.04 | 19.13 | 33.80 | 48.96 |
| 145.348 | 2.70 | 11.70 | 18.97 | 33.37 | 46.59 |
| 200.018 | 2.94 | 10.00 | 22.52 | 35.46 | 59.31 |
| 216.000 | 3.01 | 10.95 | 23.49 | 37.45 | 74.56 |
| 221.188 | 3.04 | 11.30 | 22.07 | 36.41 | 66.15 |
| 368.640 | 3.63 | 16.03 | 17.83 | 37.49 | 74.90 |
| 436.600 | 3.85 | 17.20 | 18.96 | 40.00 | 100.04 |
| 467.975 | 3.95 | 17.86 | 21.01 | 42.82 | 138.38 |
| 600.831 | 4.39 | 19.32 | 7.80 | 31.51 | 37.63 |

Remarks: 1. All Readings below 1GHz 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
 4. Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-29,1998 Wed Temperature :25.6 deg/C
 EUT :NOTEBOOK Humidity :63 %RH
 Test Mode :Mode 2 Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level | Emission Level | | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|------------------------|------------------------|--------|-----------------|
| | | | Horizontal (dBuV/m) | Horizontal (dBuV/m) | (uV/m) | |
| 33.307 | 0.95 | 16.71 | 9.62 | 27.28 | 23.11 | 100 |
| * 66.780 | 1.71 | 6.45 | 24.30 | 32.46 | 41.99 | 100 |
| 111.345 | 2.54 | 11.62 | 14.07 | 28.24 | 25.81 | 150 |
| 129.413 | 2.62 | 11.92 | 15.40 | 29.94 | 31.41 | 150 |
| 194.111 | 2.92 | 9.37 | 19.17 | 31.46 | 37.41 | 150 |
| 200.450 | 2.94 | 9.32 | 21.00 | 33.26 | 46.02 | 150 |
| 221.184 | 3.04 | 10.95 | 19.38 | 33.37 | 46.62 | 200 |
| 258.821 | 3.21 | 13.03 | 19.08 | 35.32 | 58.37 | 200 |
| 270.337 | 3.26 | 13.08 | 17.34 | 33.68 | 48.33 | 200 |
| 319.495 | 3.46 | 13.65 | 16.09 | 33.20 | 45.72 | 200 |
| 467.975 | 3.95 | 17.34 | 11.87 | 33.16 | 45.50 | 200 |
| 712.715 | 4.75 | 19.41 | 9.65 | 33.81 | 49.05 | 200 |

- Remarks: 1. All Readings below 1GHz 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
 4. Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-29,1998 Wed Temperature :25.6 deg/C
 EUT :NOTEBOOK Humidity :63 %RH
 Test Mode :Mode 2 Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level Vertical (dBuV/m) | Emission Level Vertical (dBuV/m) | (uV/m) | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|---------------------------------------|--|--------|-----------------|
| 66.673 | 1.71 | 6.78 | 17.37 | 25.86 | 19.64 | 100 |
| * 77.254 | 1.98 | 7.25 | 25.70 | 34.93 | 55.80 | 100 |
| 122.887 | 2.60 | 12.16 | 16.71 | 31.47 | 37.45 | 150 |
| 157.518 | 2.76 | 11.36 | 19.32 | 33.43 | 46.96 | 150 |
| 194.116 | 2.92 | 9.97 | 20.96 | 33.85 | 49.24 | 150 |
| 200.425 | 2.94 | 10.00 | 18.80 | 31.74 | 38.65 | 150 |
| 226.499 | 3.06 | 11.54 | 16.55 | 31.15 | 36.08 | 200 |
| 258.810 | 3.21 | 13.20 | 17.13 | 33.54 | 47.56 | 200 |
| 270.340 | 3.26 | 13.51 | 20.02 | 36.79 | 69.14 | 200 |
| 368.640 | 3.63 | 16.03 | 21.00 | 40.66 | 107.89 | 200 |
| 712.715 | 4.75 | 19.97 | 10.29 | 35.01 | 56.29 | 200 |

Remarks: 1. All Readings below 1GHz 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
 4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-30,1998 Thu Temperature :26.1 deg/C
 EUT :NOTEBOOK Humidity :64 %RH
 Test Mode :Mode 1 (Peak) Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level | Emission Level | | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|------------------------|------------------------|--------|-----------------|
| | | | Horizontal (dBuV/m) | Horizontal (dBuV/m) | (uV/m) | |
| 1062.520 | 5.90 | 21.25 | 30.23 | 21.78 | 12.27 | 500 |
| 1195.335 | 6.30 | 22.07 | 28.32 | 21.30 | 11.61 | 500 |
| 1328.150 | 6.72 | 23.49 | 30.13 | 25.17 | 18.13 | 500 |

- Remarks:
1. All Readings below 1GHz 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(35.60, 35.39, 35.18)
 - 4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-30,1998 Thu Temperature :26.1 deg/C
 EUT :NOTEBOOK Humidity :64 %RH
 Test Mode :Mode 1 (Peak) Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level Vertical (dBuV/m) | Emission Level Vertical (dBuV/m) | (uV/m) | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|---------------------------------------|--|--------|-----------------|
| 1062.340 | 5.90 | 21.95 | 29.63 | 21.88 | 12.42 | 500 |
| 1195.132 | 6.30 | 22.06 | 28.61 | 21.59 | 12.01 | 500 |
| 1327.925 | 6.71 | 23.44 | 30.33 | 25.30 | 18.41 | 500 |

- Remarks: 1. All Readings below 1GHz 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(35.60, 35.39, 35.18)
 4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-30,1998 Thu Temperature :26.1 deg/C
 EUT :NOTEBOOK Humidity :64 %RH
 Test Mode :Mode 1 (Average) Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level | Emission Level | | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|------------------------|------------------------|----------------------|-----------------|
| | | | Horizontal (dBuV/m) | Horizontal (dBuV/m) | Horizontal (uV/m) | |
| 1062.520 | 5.90 | 21.25 | 24.31 | 15.86 | 6.21 | 500 |
| 1195.335 | 6.30 | 22.07 | 23.25 | 16.23 | 6.48 | 500 |
| 1328.150 | 6.72 | 23.49 | 24.11 | 19.15 | 9.07 | 500 |

- Remarks:
1. All Readings below 1GHz 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(35.60, 35.39, 35.18)
 4. Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-30,1998 Thu Temperature :26.1 deg/C
 EUT :NOTEBOOK Humidity :64 %RH
 Test Mode :Mode 1 (Average) Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level Vertical (dBuV/m) | Emission Level Vertical (dBuV/m) | (uV/m) | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|---------------------------------------|--|--------|-----------------|
| 1062.340 | 5.90 | 21.95 | 23.70 | 15.95 | 6.27 | 500 |
| 1195.132 | 6.30 | 22.06 | 25.39 | 18.37 | 8.29 | 500 |
| 1327.925 | 6.71 | 23.44 | 24.87 | 19.84 | 9.82 | 500 |

- Remarks: 1. All Readings below 1GHz 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(35.60, 35.39, 35.18)
 4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-30,1998 Thu Temperature :26.1 deg/C
 EUT :NOTEBOOK Humidity :64 %RH
 Test Mode :Mode 2 (Peak) Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level | Emission Level | | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|------------------------|------------------------|--------|-----------------|
| | | | Horizontal (dBuV/m) | Horizontal (dBuV/m) | (uV/m) | |
| 1030.927 | 5.80 | 21.12 | 30.92 | 22.19 | 12.87 | 500 |
| 1145.475 | 6.15 | 21.72 | 30.42 | 22.83 | 13.85 | 500 |
| 1260.022 | 6.51 | 22.64 | 30.65 | 24.51 | 16.81 | 500 |

- Remarks: 1. All Readings below 1GHz 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(35.65, 35.47, 35.28)
 4.Deviations from the specifications: None.

Radiated Emission Data

| | |
|------------------------------|---------------------------|
| Date of Test :04-30,1998 Thu | Temperature :26.1 deg/C |
| EUT :NOTEBOOK | Humidity :64 %RH |
| Test Mode :Mode 2 (Peak) | Display Pattern:H Pattern |

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level Vertical (dBuV/m) | Emission Level Vertical (dBuV/m) | (uV/m) | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|---------------------------------------|--|--------|-----------------|
| 1066.914 | 5.91 | 21.90 | 29.34 | 21.55 | 11.95 | 500 |
| 1185.460 | 6.27 | 21.99 | 30.17 | 23.03 | 14.17 | 500 |
| 1304.006 | 6.65 | 23.07 | 29.65 | 24.15 | 16.13 | 500 |

- Remarks:
1. All Readings below 1GHz 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(35.59, 35.40, 35.21)
 - 4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-30,1998 Thu Temperature :26.1 deg/C
 EUT :NOTEBOOK Humidity :64 %RH
 Test Mode :Mode 2 (Average) Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level Horizontal (dBuV/m) | Emission Level Horizontal (dBuV/m) | (uV/m) | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|---|--|--------|-----------------|
| 1030.927 | 5.80 | 21.12 | 24.32 | 15.59 | 6.02 | 500 |
| 1140.475 | 6.13 | 21.68 | 24.74 | 17.08 | 7.14 | 500 |
| 1260.022 | 6.51 | 22.64 | 25.23 | 19.09 | 9.01 | 500 |

- Remarks: 1. All Readings below 1GHz 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(35.65, 35.48, 35.28)
 4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :04-30,1998 Thu Temperature :26.1 deg/C
 EUT :NOTEBOOK Humidity :64 %RH
 Test Mode :Mode 2 (Average) Display Pattern:H Pattern

| Frequency (MHz) | Cable Loss (dB) | Antenna Factor (dB/m) | Reading Level Vertical (dBuV/m) | Emission Level Vertical (dBuV/m) | (uV/m) | Limit (uV/m) |
|--------------------|-----------------------|-----------------------------|---------------------------------------|--|--------|-----------------|
| 1185.460 | 6.27 | 21.99 | 23.66 | 16.52 | 6.70 | 500 |
| 1304.006 | 6.65 | 23.07 | 23.15 | 17.65 | 7.63 | 500 |
| 1500.000 | 7.25 | 25.40 | 22.29 | 20.04 | 10.05 | 500 |

- Remarks: 1. All Readings below 1GHz 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(35.40, 35.21, 34.90)
 4.Deviations from the specifications: None.

7. EMI Reduction Method During Compliance Testing

1. The gasket of eight pieces is addition between the backside of LCD panel and LCD holder. And the backside of LCD needs a sheet of Metal and conduct with LCD chassis.
2. The gasket of three pieces is addition between the aluminum sheet of L-type and the bottom of notebook PC.
3. The copper sheet of two pieces is stamping between the LCD panel and hinge.
4. The gasket of one piece is addition between the first cooling fan and the bottom of notebook PC. The first cooling fan at right side of notebook PC. The second cooling fan at up side of CPU.
5. The LCD cable requests a ferrite core and addition at near LVDS board.
6. For 12.1" CD panel, the LCD cable requests a ferrite core and addition at near LCD side.