

GTK99-F008

1. Test Report Certification

Applicant : First International Computer Inc.

Manufacturer : First International Computer Inc.

EUT Description : Notebook PC

(A) Model No. : EUN5750
(B) Serial No. : N/A
(C) Power : 110V/60Hz
(D) Rating DC-O/P : 19V

MEASUREMENT PROCEDURE / STANDARD 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.

NVLAP[®]

Sample Received Date : May 13, 1999
Final Test Date : June 05, 1999
Documented by : Joan Chein

Test Engineer :

Jackie Lin

JACKIE LIN

Approve & Authorized Signer :

Raymond Chang
RAYMOND CHANG

This test data shown below is traceable to National or international standard such as NIST/USA, etc.
The laboratory's NVLAP accreditation in no way constitutes or implies product certification, approval, or endorsement by NVLAP or the United States government.

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2. General Information

2.1 Production Description

Description	:	Notebook PC
Model Number	:	EUN5750
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.
Power Cord (Adaptor to AC)	:	1.8m, Detachable, Non-Shielded.
Power Cord (EUT to Adaptor)	:	1.2m, Non-Detachable, Non-Shielded.
Adaptor	:	Manufacturer:Delta, M/N:ADP-50MB I/P : 100~240V, 50~60Hz, 1.5A. O/P: 19V---2.64A.

2.2 Results:

2.2.1 The EUT(s) met the FCC Part 15 Class B requirements.

The Worst Emission data was found as following,

	Worst Emission Frequency (MHz)	Emission Level	Limit	Height of Antenna, Angel of Turntable
Conduction Mode 5	22.68069	41.5 dBuV Line 1, Q.P.	48.0dBuV	N/A
Radiation Mode 3	666.943	43.84[dB(uV/m)], Vertical	46.00 [dB(uV/m)]	1M, 180°

2.2.2 Test Mode:

Mode	CPU	LCD Panel	HDD	CD-ROM	Battery	FDD	Adapter	DVD-ROM	CARD
1	Celeron 266MHz	LG 12.1" M/N:LP121S 3-A	TOSHIBA 6.4GB M/N:MK6409MAV		Panasonic 3800mAh 9.6V Ni-MH	NEC M/N:FD-1238T	Delta ADP-50MB	MKE SR-8171-C	LAN
2	Celeron 300MHz	Panasonic 14.1" M/N:EDTCB 21-QAF	HITACHI 10GB M/N:DK229A-10	Toshiba M/N:XM-1902B	Sanyo 2800mAh 14.4V Li-Ion	Mitsubishi M/N:MF355H-48MN	Delta ADP-50MB		MODEM
3	Celeron 333MHz	LG 14.1" LP141X5-BNC	FUJITSU 4.3GB M/N: MHF2043AT		Sanyo 2800mAh 14.4V Li-Ion	Mitsubishi M/N:MF355H-48MN	Delta ADP-50MB	Toshiba SD-C2202	MODEM
4	Dixon 300MHz	Sanyo 12.1" M/N:TM121 SV-02L03A	IBM 4.8GB M/N:DBCA-204860	TEAC M/N:CD-224E	Sanyo 2800mAh 14.4V Li-Ion	Mitsubishi M/N:MF355H-48MN	Delta ADP-50MB		MODEM
5	Dixon 366MHz	LG 14.1" LP141X5-BNC	IBM 10GB M/N:DCXA-210000	TEAC M/N:CD-224E	Panasonic 3800mAh 9.6V Ni-MH	NEC M/N:FD-1238T-020	Delta ADP-50MB		LAN
6	Dixon 333MHz	LG 14.1" LP141X5-BNC	IBM 10GB M/N:DCXA-21000	TEAC M/N:CD-224E	Panasonic 3800mAh 9.6V Ni-MH	NEC M/N:FD-1238T-020	Delta ADP-50MB		LAN

Note:

1. Each different CPU/PANEL has been investigated to find the maximum emission situation, and all the components listed at section 2.3 were investigated. During the performance of the testing, peripherals were connected to all available ports. The data shown in this test report reflects the worst-case data for each frequency/video resolution.
2. The Notebook have one USB port, LAN, Modem, it can use different panel and go with CD-ROM and DVD-ROM.

2.3 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:

☒ Notebook PC (EUT)

NO.	Category	Model No.	Vendor
1.	CPU#1	Celeron 266MHz	Intel
2.	CPU#2	Celeron 300MHz	Intel
3.	CPU#3	Celeron 333MHz	Intel
4.	CPU#4	Dixon 300MHz	Intel
5.	CPU#5	Dixon 366MHz	Intel
6.	CPU#6	Dixon 333MHz	Intel
7.	12.1"Panel#1	LP121S3-A	LG
8.	12.1"Panel#2	TM121SV-02L03A	Sanyo
9.	14.1" Panel#3	LP141X5-B1NC	LG
10.	14.1" Panel#4	EDTCB21-QAF	Panasonic
11.	CD-ROM#1	XM-1902B	Toshiba
12.	CD-ROM#2	CD-224E	TEAC
13.	2.1GB HDD #1	MHG2102AT	Fujitsu
14.	3.2GB HDD#2	DK237A-32	Hitachi
15.	3.2GB HDD#3	DBCA-203240	IBM
16.	4.3GB HDD#4	MHF2043AT	Fujitsu
17.	4.8GB HDD#5	DBCA-204860	IBM
18.	4.8GB HDD#6	MHH2048AT	Fujitsu
19.	6.4GB HDD#7	DK228A-65	Hitachi
20.	6.4GB HDD#8	MK6409MAV	Toshiba
21.	6.4GB HDD#9	DK239A-65	Hitachi
22.	6.4GB HDD#10	DBCA-206480	IBM
23.	6.4GB HDD#11	MHH2064AT	Fujitsu
24.	10GB HDD#12	DK229A-10	Hitachi
25.	10GB HDD#13	DCXA-210000	IBM
26.	DVD-ROM#1	SR-8171-C	MKE
27.	DVD-ROM#2	SD-C2202	Toshiba
28.	NiMH Battery	3800mAh 9.6V	Panasonic
29.	Li-Ion Battery	2800mAh 14.4V	Sanyo
30.	3.5" FDD#1	FD1238T	NEC
31.	3.5" FDD#2	MF355H-347MN	Mitsubishi
32.	AC Adapter	ADP-50MB	Delta
33.	D to D Board	Amber 2.5A25DC Ver:0	
34.	Charger Board#1	Amber A10 Ver:0.8	
35.	Charger Board#2	Amber 2.0 ACG Ver:0.8, 50-70364-07	
36.	Modem Convertor Board	80-319V237-2	
37.	Modem Board	80-319V236-2A	
38.	LAN Board	PL3400018002	
39.	LAN Convertor Board	9905	
40.	14.1" Inverter	T90.003.C.00 Ambit Rev:5	
41.	12.1" Inverter	3811064302	
42.	Inverter Convertor Board	Amber 2.0 ALCLD Ver:0.3, GX. 211-V0A	

☒ Monitor M01-012

Model Number : SyncMaster 700p
Serial Number : H3MH903257V
Manufacturer : SAMSUNG
FCC ID : A3LCGH760
BCIQ No. : 3872A230
Data Cable : Shielded, Undetachable, 1.5m
Power Cord : Non-Shielded, Detachable, 1.8m

☒ Keyboard K01-033

Model Number : KB-5923
Serial Number : 8060032215
FCC ID : E8HKB-5923
Manufacturer : TATUNG
BCIQ No. : 3862A177
Data Cable : Sheiled, Undetachable, 2.0 m
Purchase Date : 8/6/1998

☒ Printer P01-009

Model Number : C2642A(DJ-400)
Serial Number : MY7951C4RW
FCC ID : B94C2642X
Manufacturer : HP
Adaptor,Power Cord : Non-Shielded, Detachable, 1.9m
Data Cable : Shielded, Detachable, 1.8m

☒ Modem M03-004

Model Number : 1414
Serial Number : 960018047
FCC ID : IFAXDM1414
Manufacturer : ACEEX
Adaptor, Power Cord : Non-Shielded, Detachable, 1.5m
Data Cable : Shielded, Detachable, 1.2m

☒ Headset&Microphone E01-022

Model Number : SX-M1
Serial Number : N/A
Manufacturer : TOKYO
Power Cord : N/A
Data Cable : Non-Shielded, Undetachable, 1.8 m
Purchase Date : 2/22/1999

- ☒ **Cassette Player R02-011**
Model Number : HS-GS162
Serial Number : LYJ1084567
FCC ID : N/A
Manufacturer : AIWA CO., LTD
Power Cord : N/A (Battery)
Data Cable : Non-Shielded, Detachable, 1.5m
- ☒ **Electronic Private Automatic Branch Exchange O01-003**
Model Number : EASYSWITCH PX-4
Serial Number : 95030015
FCC ID : N/A
Manufacturer : VIDAR CO., LTD.
Power Cord : Non-Shielded, Detachable, 1.5m
- ☒ **Mouse M02-043 (USB)**
Model Number : M-UB48
Serial Number : LZB81900646
FCC ID : DZL211137
Manufacturer : Logitech Inc..
Data Cable : Shielded, Undetachable, 1.5m
BSMI ID : 4872A001
- ☒ **Hub H01-001**
Model Number : DE-816TP (10BASE-T Ethernet Hub)
Serial Number : AN68900072
FCC ID : KA2OPCH16
Manufacturer : D-Link.
Data Cable : Non-Shielded, Detachable, 12 m
Power Cord : Non-Shielded, Detachable, 1.5m

☒ **Cassette Player** R02-010 ~014

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

☒ **Mouse** M02-042 (USB)

Model Number :M-UB48
Serial Number :LZB81900215
FCC ID :DZL211137
Manufacturer :Logitech Inc..
Data Cable :Shielded, Undetachable, 1.5m
BCIQ ID : 4872A001

☒ **Headset&Microphone** E01-018~ 027

Model Number :SX-M1
Serial Number :N/A
Manufacturer :TOKYO
Power Cord :N/A
Data Cable :Non-Shielded, Undetachable, 1.8 m
Purchase Date :2/22/1999

2.4 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.

2.5 Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	22-26
Humidity (%RH)	25-75	50-60
Barometric pressure (mbar)	860-1060	950-1000

FCC Site Description : Aug. 10, 1995/Aug. 25, 1998 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
Hsiang, Taipei County, Taiwan, R.O.C.

3. Conducted Emission Test

3.1 Test Equipments

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

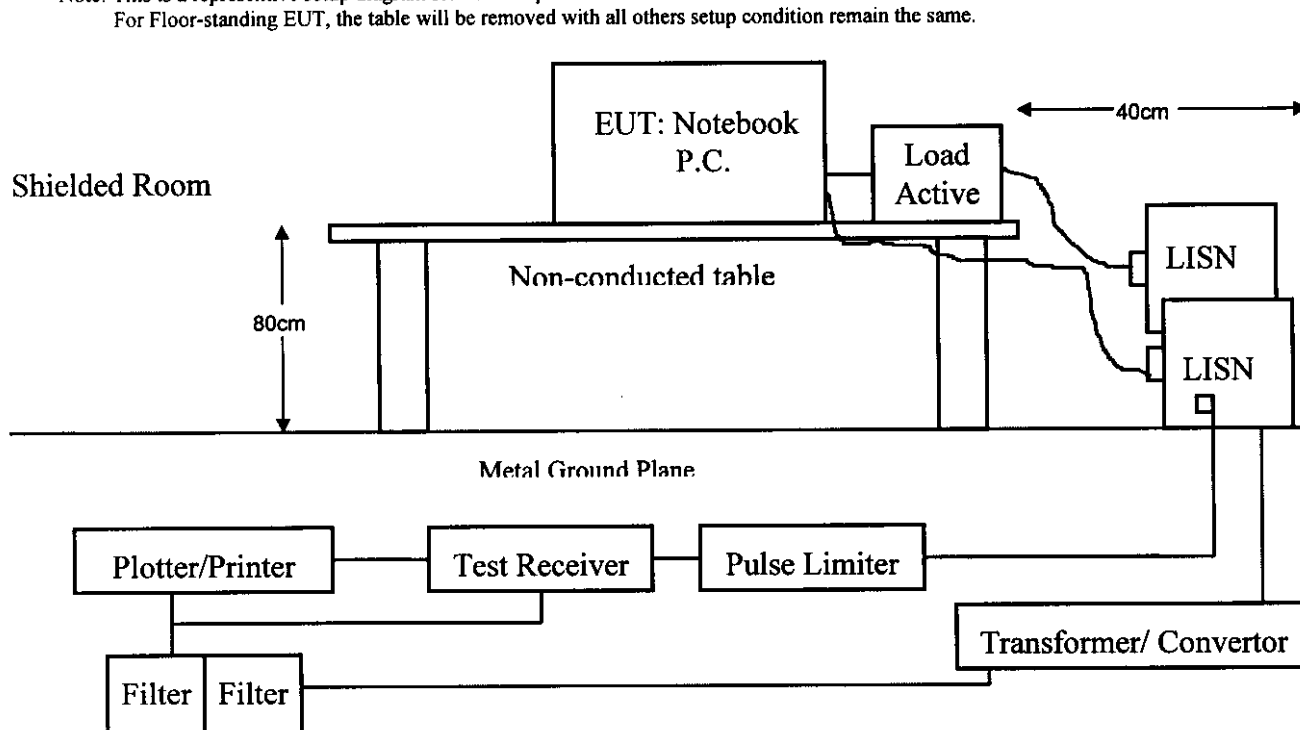
Item	Instrument	Manufacturer	Type /Serial No.	Last Calibration	Location	C.E.
1	Test Receiver	Rohde & Schwarz	ESHS 30 / 828109/010	Dec. 15, 1998	Shield Room #1	✓
2	L.I.S.N.	Kyoritsu	KNW-407	Oct. 03, 1998	Shield Room #1	✓
3	L.I.S.N.	Solar	8012-50-R24 / 90038	May 20, 1999	Shield Room #1	
4	L.I.S.N.	Rohde & Schwarz	ESH3-Z5 / 840567/002	Oct. 02, 1998	Shield Room #1	✓
5	L.I.S.N.	Schwarzbeck	NNLK 8121/8121358	May 20, 1999	Shield Room #1	
6	Pulse Limiter	Rohde & Schwarz	ESH3-Z2/357.8810.52	Jun. 02, 1999	Shield Room #1	✓
7	Shielded Room	GesTek	GTK-RF-S04	Sep. 17, 1998	Shield Room #1	✓
8	RF CABLE	GesTek	GTK-RF-C07	Sep. 17, 1998	Shield Room #1	✓
9	50 Ohm Terminator	GesTek	GTK-RF-T01	Oct. 03, 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

Note: This is a representative setup diagram for Table-top EUT.

For Floor-standing EUT, the table will be removed with all others setup condition remain the same.



3.3 Conducted Emission Limit

3.3.1 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.

3.3.2 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.

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.

The device under test, installed in a representative system as described in section 3.2, was placed on a non-conductive table whose total height equaled 80 CM. Powered from one LISN which signal output to receiver, and the other peripherals was powered from another LISN which signal output was terminated by 50Ω .

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:

Mode 2,3,4

- 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 Run windows 98.
- 3.5.4 Adjust to appropriate video Resolution.
- 3.5.5 Run EMI.EXE.
- 3.5.6 The EUT exchange the information with the GesTek server via HUB
- 3.5.7 Run CD Player.(Mode 3 play DVD-ROM program)
- 3.5.8 PC sent "H" Pattern to Monitor.
- 3.5.9 PC sent "H" Pattern to Printer Port.
- 3.5.10 PC sent "H" Pattern to Modem Port.
- 3.5.11 Repeat the above procedure 3.5.5 to 3.5.10

Mode 1,5,6

- 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 Run windows 98.
- 3.5.4 Adjust to appropriate video Resolution.
- 3.5.5 Run EMI.EXE.
- 3.5.6 The EUT exchange the information with the Network via an exchange board.
- 3.5.7 Run CD Player.(Mode 1 play DVD-ROM program)
- 3.5.8 PC sent "H" Pattern to Monitor.
- 3.5.9 PC sent "H" Pattern to Printer Port.
- 3.5.10 PC sent "H" Pattern to Modem Port.
- 3.5.11 Repeat the above procedure 3.5.5 to 3.5.10

3.6 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, unless otherwise noted. The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range for all the test modes. The two different lines were each measured separately, and the worst modes datas were reported on the following data pages. The final measurement equal to Receiver reading plus Correction factor if available. When LISN insertion loss bigger than 0.5dB then the receiver will add correction factor to reading level automatically.

The total uncertainty for this test is as follows:

- Uncertainty in the field strength measured: $< \pm 2.0 \text{ dB}$

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

CONDUCTED EMISSION DATA

Date of Test	:	June 04, 1999	Temperature	:	27 °C
EUT	:	Notebook PC	Humidity	:	53 %
Test Mode	:	Mode 1	Display Pattern	:	H Pattern

FREQUENCY	READING LEVEL				LIMIT
	LINE 1		LINE 2		
	MHz	dBuV	uV	dBuV	
0.48147	27.3	23.17	28.7	27.23	250
0.54937	26.2	20.42	31.0	35.48	250
3.64856	37.0	70.79	35.6	60.26	250
**3.92195	37.3	73.28	37.2	72.44	250
14.79597	28.0	25.12	29.0	28.18	250
22.82761	36.2	64.57	35.4	58.88	250

Remarks : 1. All readings are Quasi-peak.

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

3. Deviations from the specifications: None.

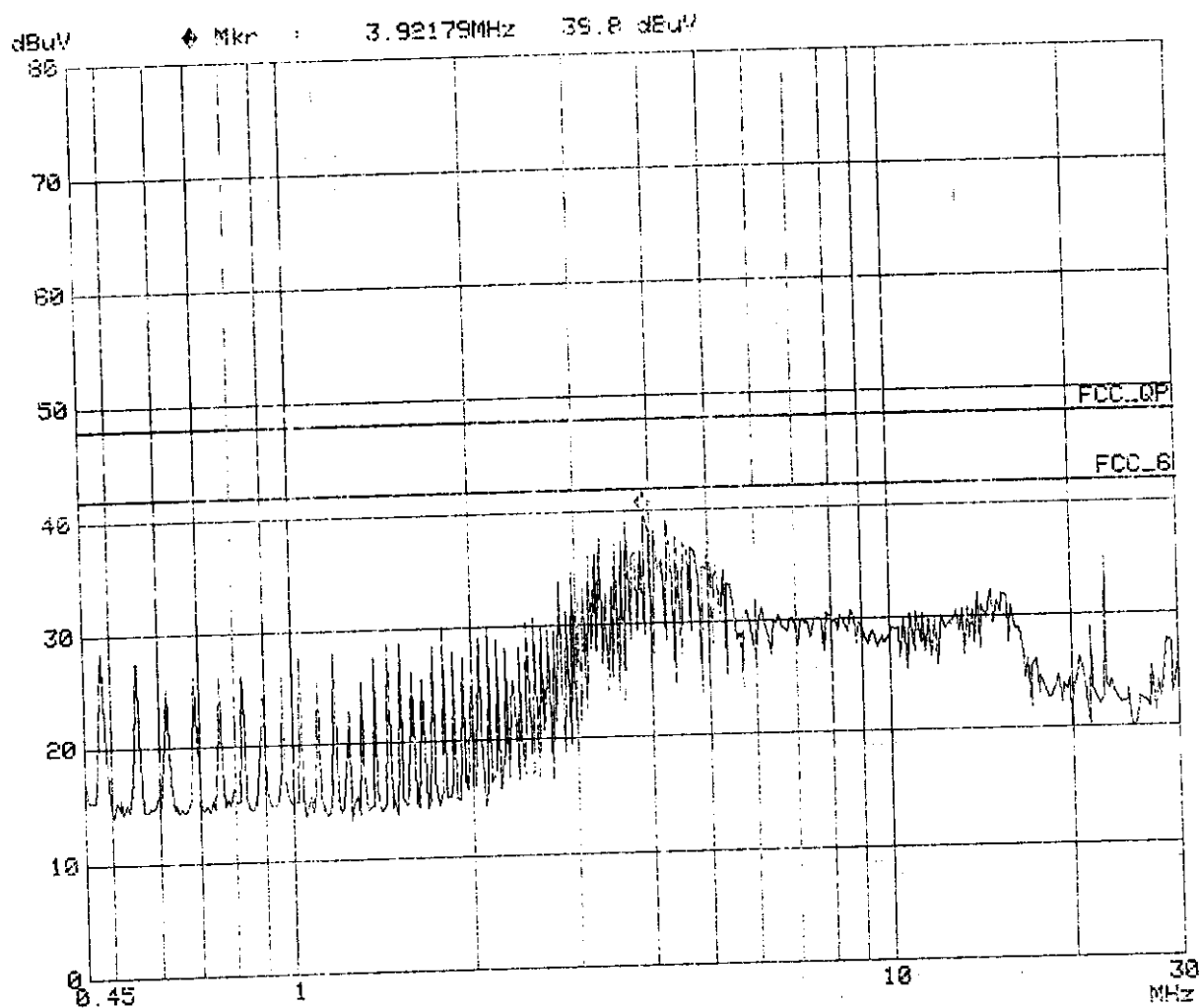
4. Final measurement = (Receiver reading) + (Correction factor if available)

Attached 2 individual pages of peak scan curve data sheets.

ROHDE & SCHWARZ ESHS 30.

GesTek, PowerLine Conducted Emission

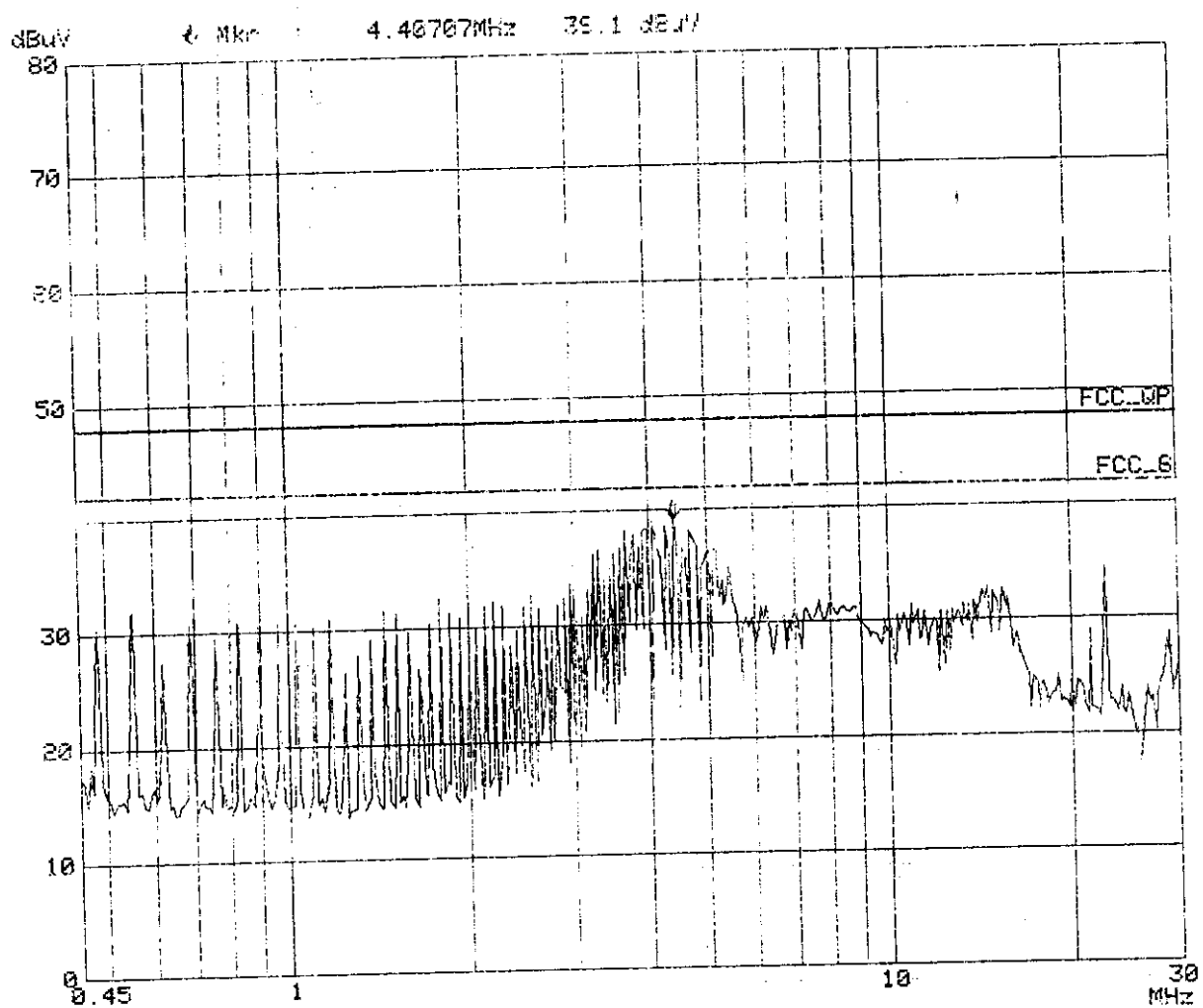
EUT: NOTEBOOK PC
Manuf: FIC
Op Cond: MODE:1
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 1
M/F: RUBY 3.5+DESIGNOTE 5750
Date: 04. Jun 99 20:29



ROHDE & SCHWARZ ESHS 30

GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK PC
Manuf: FIC
Op Cond: MODE:1
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 2
M/F: RUBY 3.5-DESIGNNOTE 5750
Date: 04. Jun 99 20:33



CONDUCTED EMISSION DATA

Date of Test	:	June 04, 1999	Temperature	:	27.0 °C
EUT	:	Notebook PC	Humidity	:	56 %
Test Mode	:	Mode 2	Display Pattern	:	H Pattern

FREQUENCY	READING LEVEL				LIMIT
	LINE 1		LINE 2		
	MHz	dBuV	uV	dBuV	
0.48167	28.0	25.12	28.9	27.86	250
0.55112	26.3	20.65	31.7	38.46	250
3.51735	36.2	64.57	35.3	58.21	250
**4.27654	38.0	79.43	38.6	85.11	250
4.54958	35.5	59.57	36.8	69.18	250
22.81367	37.6	75.86	37.4	74.13	250

Remarks : 1. All readings are Quasi-peak.

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

3. Deviations from the specifications: None.

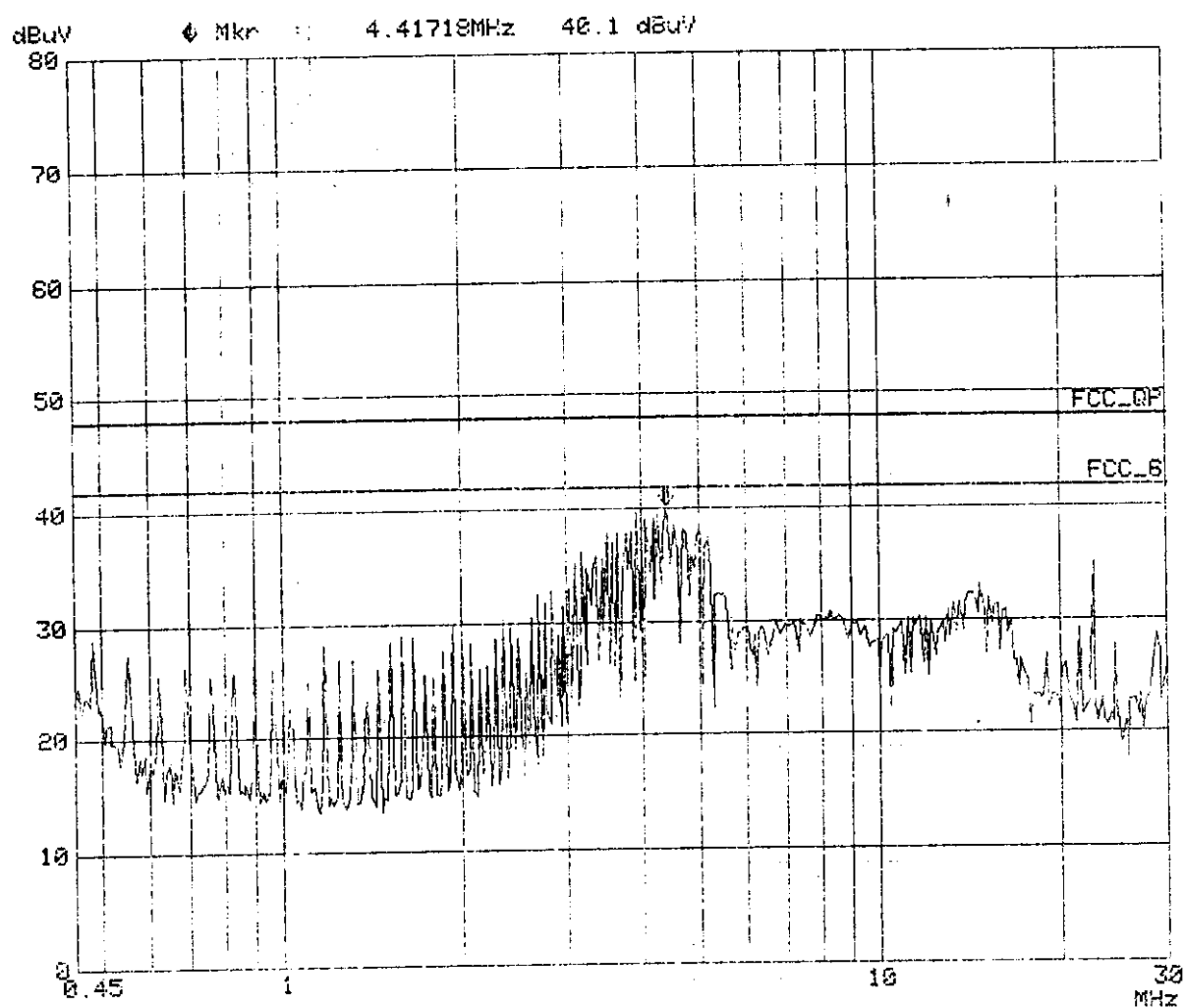
4. Final measurement = (Receiver reading) + (Correction factor if available)

Attached 2 individual pages of peak scan curve data sheets.

ROHDE & SCHWARZ ESHS 30

GesTek, PowerLine Conducted Emission

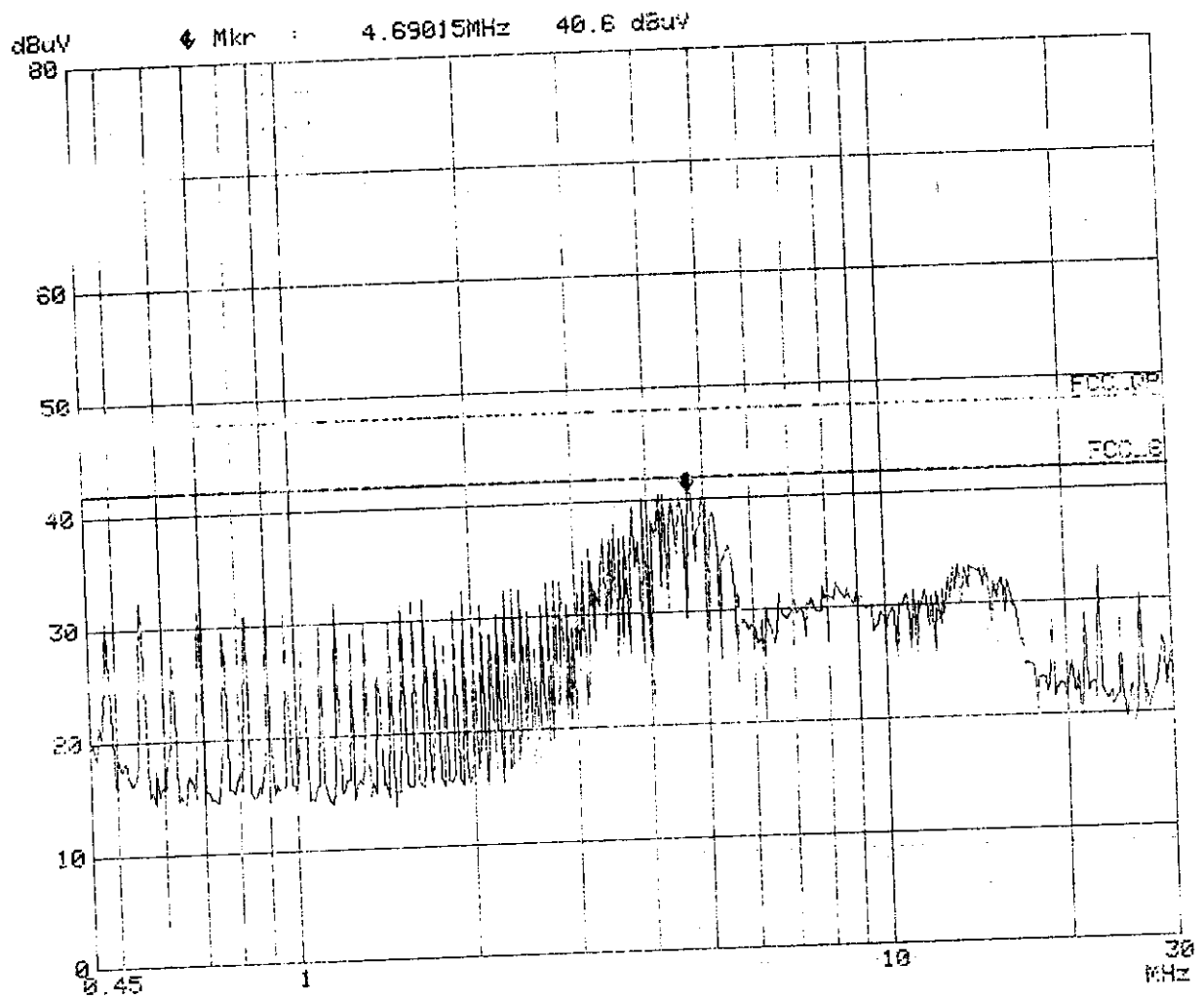
EUT: NOTEBOOK PC
Manuf: FIC
Op Cond: MODE:2
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 1
M/N RUBY 3.5+DESIGNOTE 5750
Date: 04. Jun 99 21:10



ROHDE & SCHWARZ ESHS 30

GestTek, PowerLine Conducted Emission

EUT: NOTEBOOK PC
Manuf: FIC
Op Cond: MODE:2
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 2
M/N: RUBY 3.5+DESIGNOTE 5750
Date: 04. Jun 99 21:13



CONDUCTED EMISSION DATA

Date of Test	:	June 03, 1999	Temperature	:	25.1 °C
EUT	:	Notebook PC	Humidity	:	54 %
Test Mode	:	Mode 3	Display Pattern	:	H Pattern

FREQUENCY	READING LEVEL				LIMIT
	LINE 1		LINE 2		
MHz	dBuV	uV	dBuV	uV	uV
0.48409	28.6	26.92	25.2	18.20	250
3.80068	35.0	56.23	34.5	53.09	250
4.55909	36.1	63.83	33.6	47.86	250
13.81672	31.0	35.48	25.1	17.99	250
18.89725	38.0	79.43	36.3	65.31	250
**22.68096	41.2	114.82	41.0	112.20	250

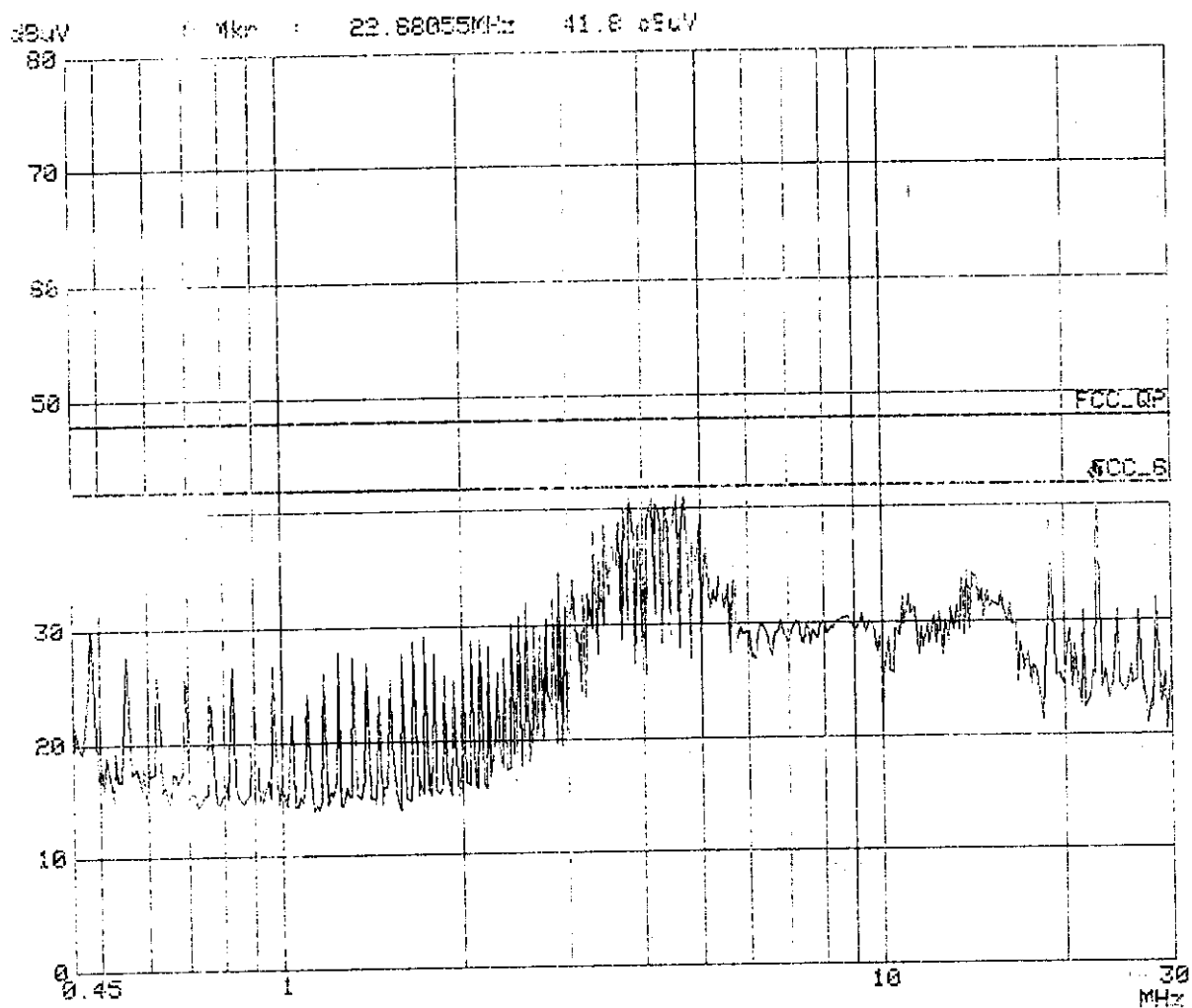
- Remarks :
1. All readings are Quasi-peak.
 2. “ ** ” means that this data is the worse case emission level.
 3. Deviations from the specifications: None.
 4. Final measurement = (Receiver reading) + (Correction factor if available)

Attached 2 individual pages of peak scan curve data sheets.

ROHDE & SCHWARZ ESHS 30

GesTek, PowerLine Conducted Emission

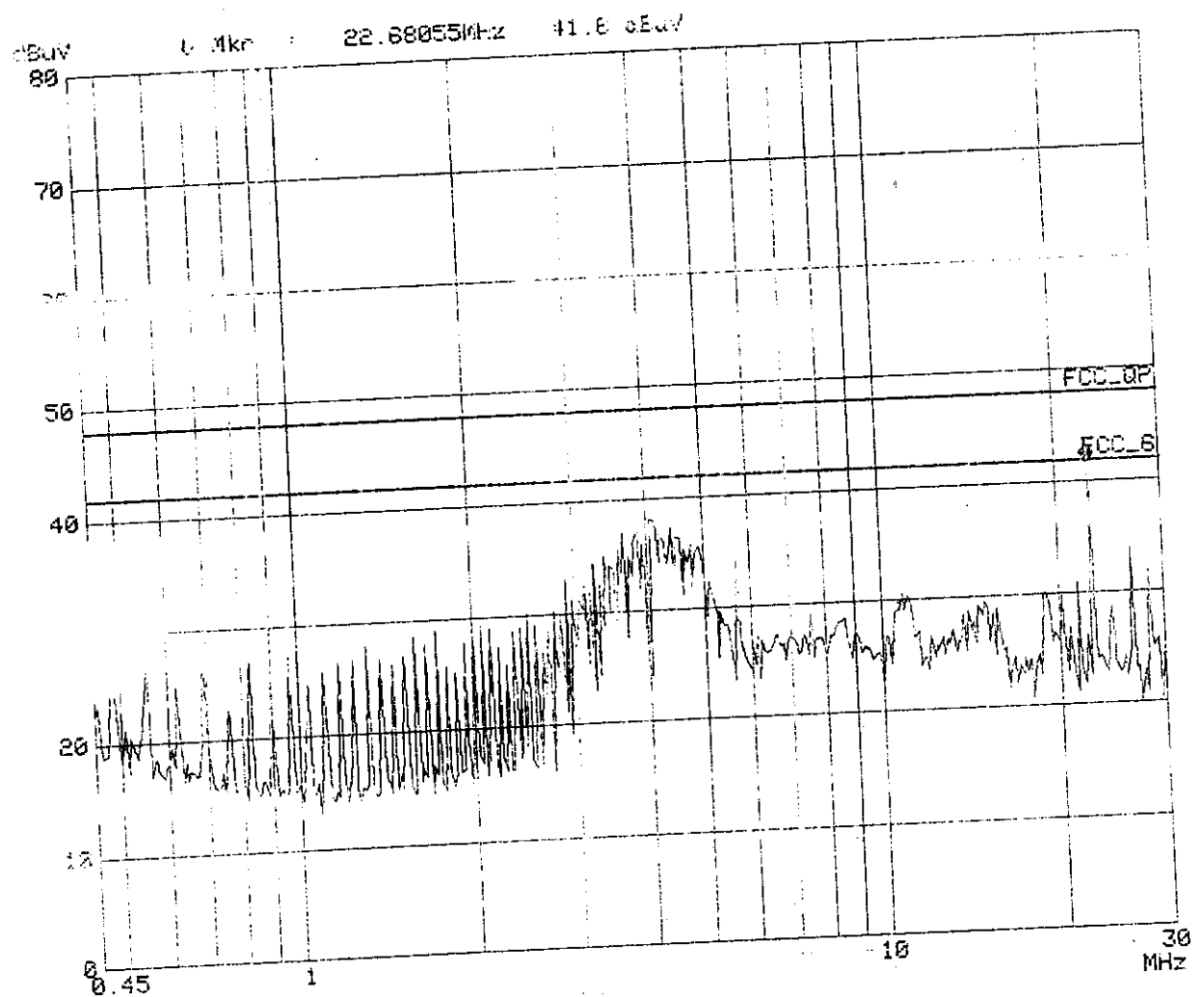
EUT: NOTEBOOK PC
Maruf: FIC
Op Cond: MODE:3
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 1
M/K: RUBY 3.5+DESIGN011 5750
Date: 03. Jun 99 11:07



ROHDE & SCHWARZ ESHS 30

GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK PC
Manuf: FIC
Op Cond: MODE:3
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 2
M/N: RUBY 3.5+DESIGNOTE 5750
Date: 03. Jun 99 11:15



CONDUCTED EMISSION DATA

Date of Test	:	June 04, 1999	Temperature	:	26.8 °C
EUT	:	Notebook PC	Humidity	:	51 %
Test Mode	:	Mode 4	Display Pattern	:	H Pattern

FREQUENCY	READING LEVEL				LIMIT
	LINE 1		LINE 2		
MHz	dBuV	uV	dBuV	uV	uV
0.48192	27.2	22.91	28.5	26.61	250
3.57734	37.3	73.28	36.5	66.83	250
**3.92179	38.6	85.11	38.4	83.18	250
4.53897	37.0	70.79	36.4	66.07	250
14.99806	30.0	31.62	29.8	30.90	250
22.82977	35.6	60.26	35.3	58.21	250

Remarks : 1. All readings are Quasi-peak.

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

3. Deviations from the specifications: None.

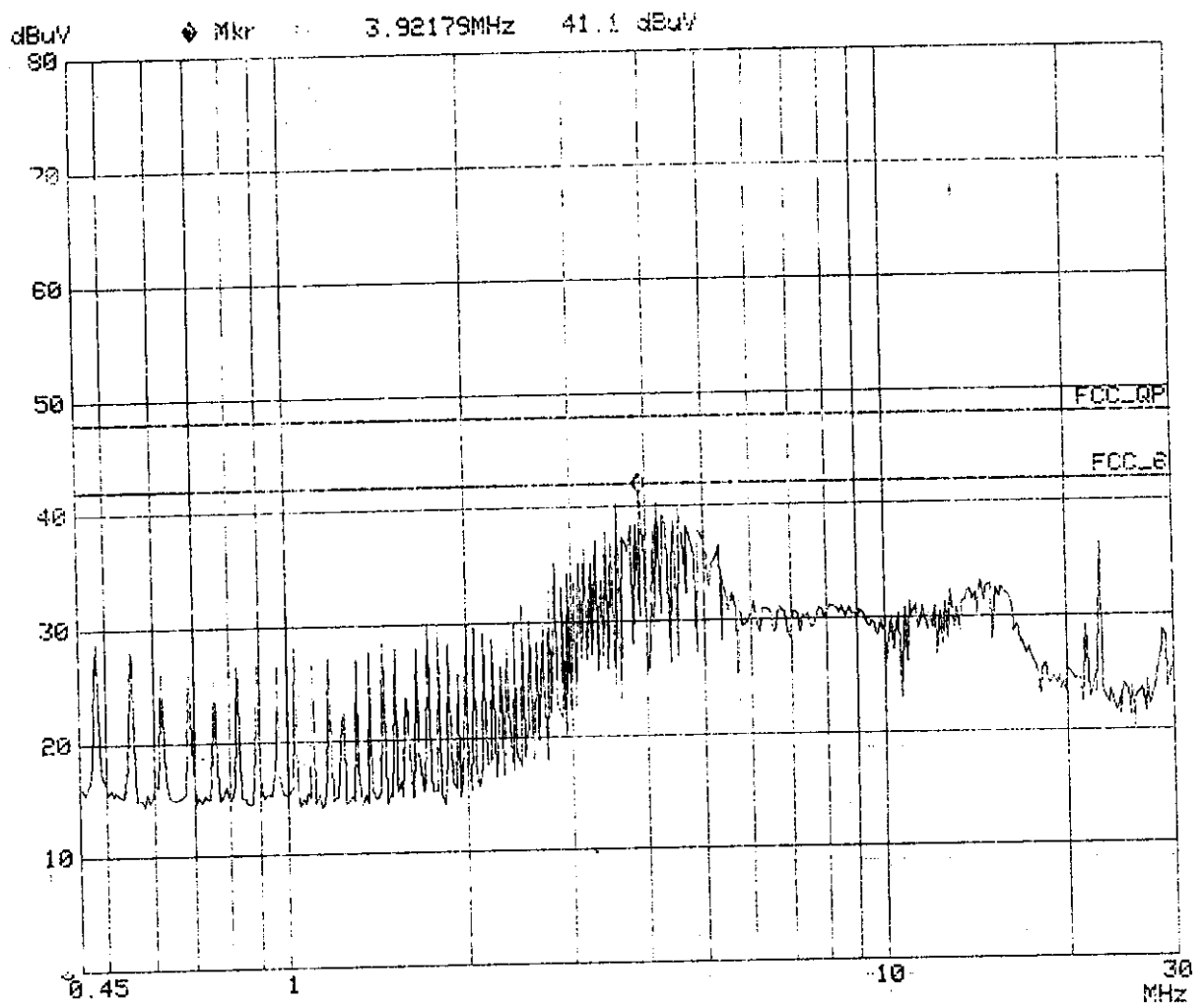
4. Final measurement = (Receiver reading) + (Correction factor if available)

Attached 2 individual pages of peak scan curve data sheets.

ROHDE & SCHWARZ ESHS 30

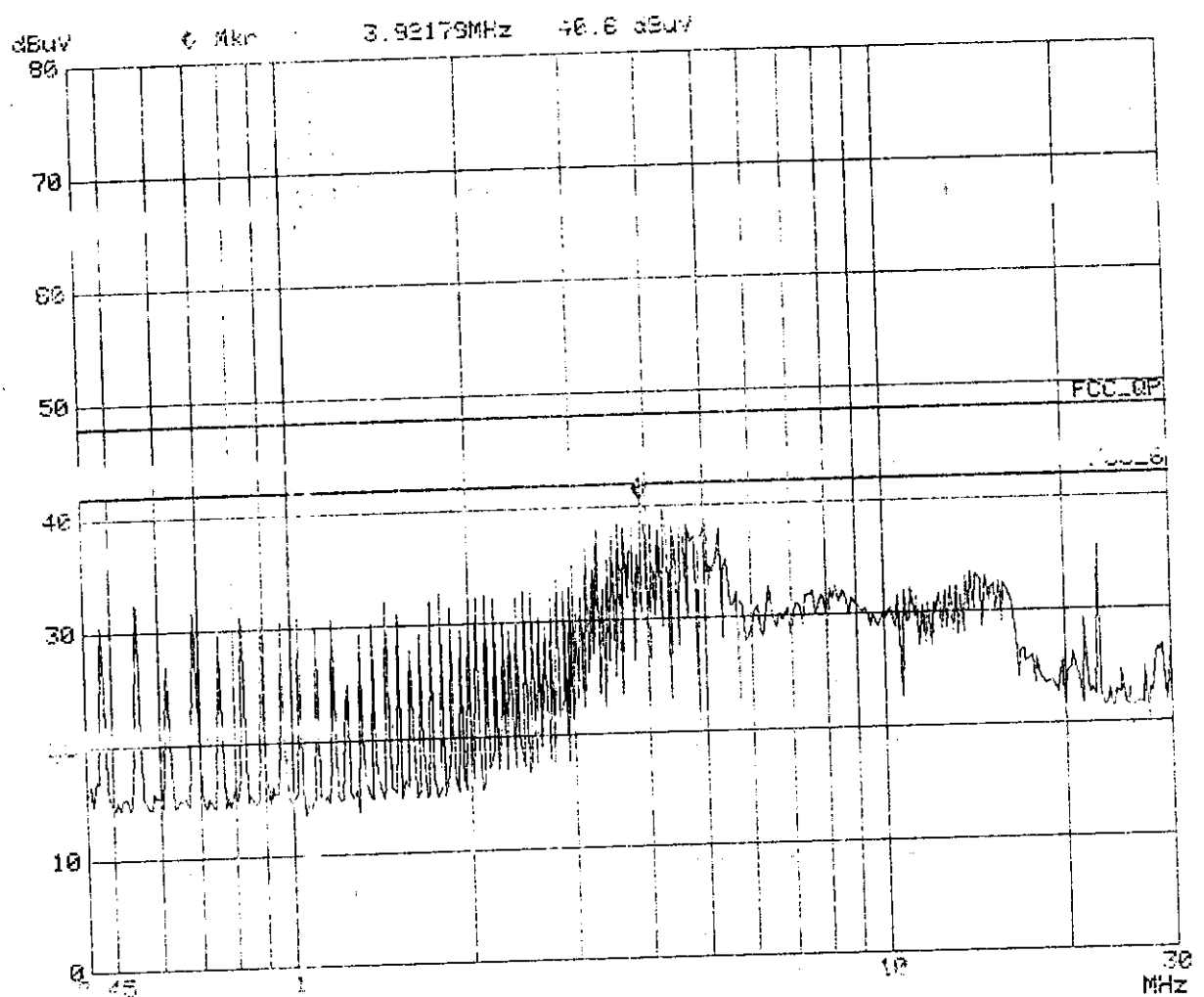
GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK PC
Manuf: FIC
Op Cond: MODE:4
Operator: JACKIE
Test Spec: FCC CLASS B
Line 1
M/F: RUBY 3.5+DESIGNOTE 5750
Date: 04. Jun 99 20:21



FILE: SCHWARTZ ESHS 30
Gestek, PowerLine Conducted Emission

EUT: NOTEBOOK PC
Manuf: FIC
Op Cond: MODE:4
Operator: JACKIE
Test Spec: FCC CLASS B
M/N: RUBY 3.5+DESIGNOTE 5750
Date: CAL Jun 99 20:26



CONDUCTED EMISSION DATA

Date of Test	:	June 03, 1999	Temperature	:	25.1 °C
EUT	:	Notebook PC	Humidity	:	53 %
Test Mode	:	Mode 5	Display Pattern	:	H Pattern

FREQUENCY	READING LEVEL				LIMIT
	LINE 1		LINE 2		
	MHz	DBuV	uV	dBuV	
0.55131	29.4	29.51	25.0	17.78	250
0.87380	30.1	31.99	25.9	19.72	250
3.65938	33.8	48.98	32.6	42.66	250
4.55864	36.1	63.83	33.8	48.98	250
14.36910	26.6	21.38	24.1	16.03	250
**22.68069	41.5	118.85	41.2	114.82	250

Remarks : 1. All readings are Quasi-peak.

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

3. Deviations from the specifications: None.

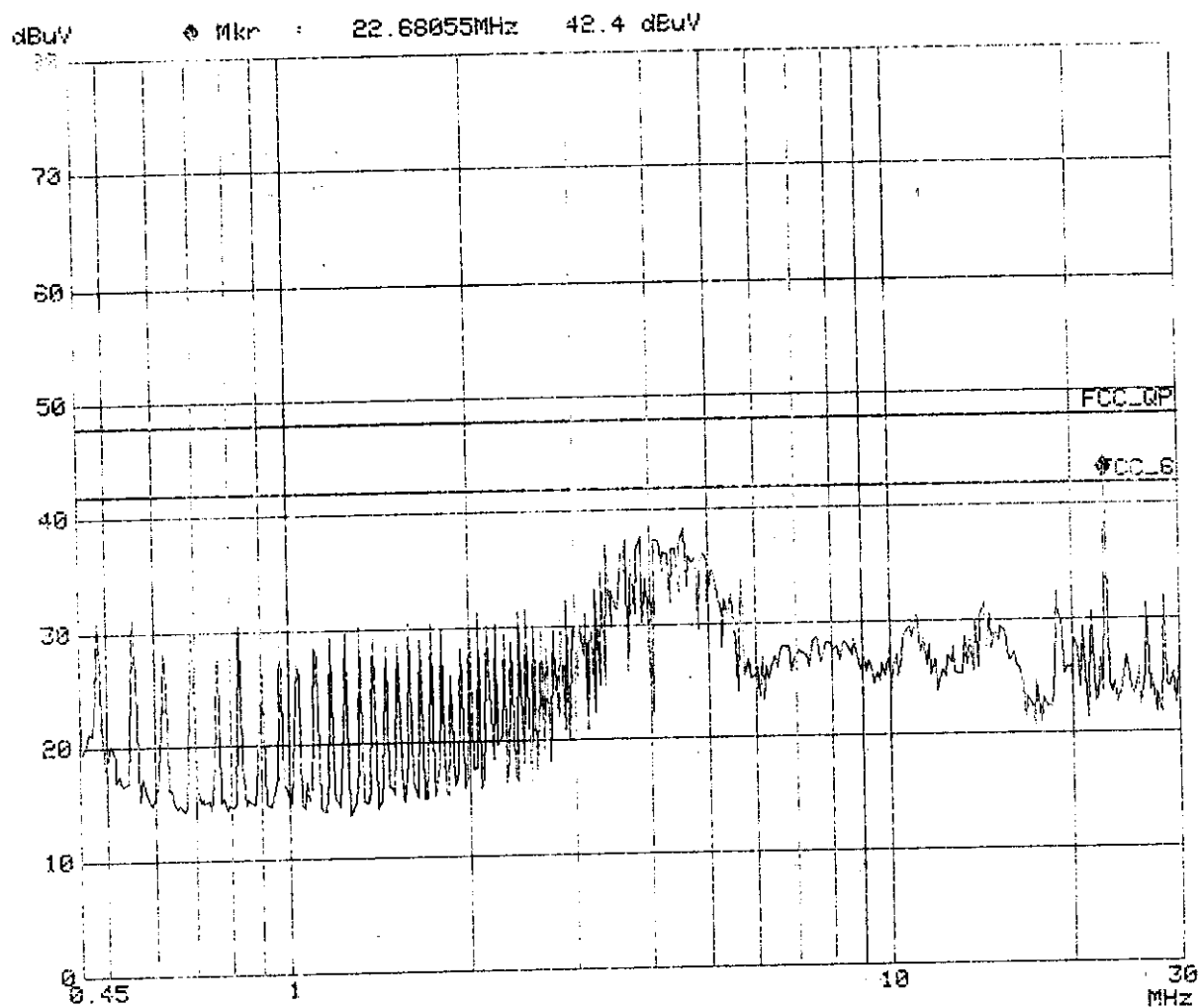
4. Final measurement = (Receiver reading) + (Correction factor if available)

Attached 2 individual pages of peak scan curve data sheets.

ROHDE & SCHWARZ ESHS 30

Gestek, PowerLine Conducted Emission

Manuf: NOTEBOOK PC
Op Cond: FIC
Operator: MODE:5
Test Spec: JACKIE
Comment: FCC CLASS B
M/N: RUBY 3.5+DESIGNOTE 5750
Date: 03. Jun 99 11:19



ROHDE & SCHWARZ ESHS 30

GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK PC

Manuf: FIC

Op Cond: MODE:5

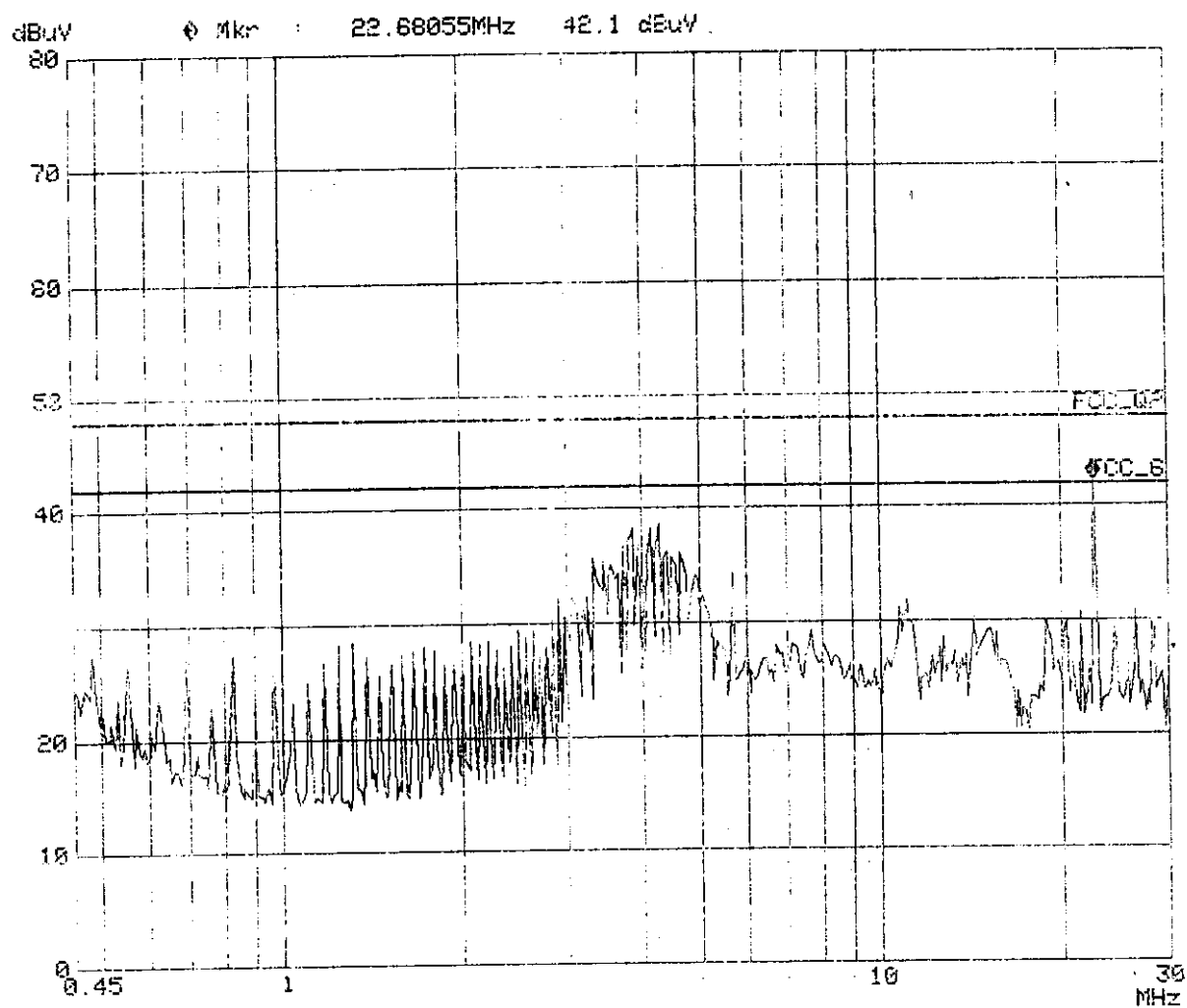
Operator: JACKIE

Test Spec: FCC CLASS B

Comment: Line 2

M/N: RUBY 3.5+DESIGNOTE 5750

Date: 03. Jun 99 11:23



CONDUCTED EMISSION DATA

Date of Test	:	Juen 02, 1999	Temperature	:	26.2 °C
EUT	:	Notebook PC	Humidity	:	57 %
Test Mode	:	Mode 6	Display Pattern	:	H Pattern

FREQUENCY	READING LEVEL				LIMIT
	LINE 1		LINE 2		
MHz	dBuV	uV	dBuV	uV	uV
0.48365	26.6	21.38	29.9	31.26	250
3.81119	33.4	46.77	32.5	42.17	250
4.49867	31.8	38.90	33.5	47.32	250
15.12139	36.6	67.61	38.6	85.11	250
18.89534	37.1	71.61	36.9	69.98	250
**22.67735	40.3	103.51	39.2	91.20	250

Remarks : 1. All readings are Quasi-peak.

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

3. Deviations from the specifications: None.

4. Final measurement = (Receiver reading) + (Correction factor if available)

Attached 2 individual pages of peak scan curve data sheets.

ROHDE & SCHWARZ ESHS 30

GesTek, PowerLine Conducted Emission

EUT: NOTEBOOK PC

FIC

Op Cond: MODE:6

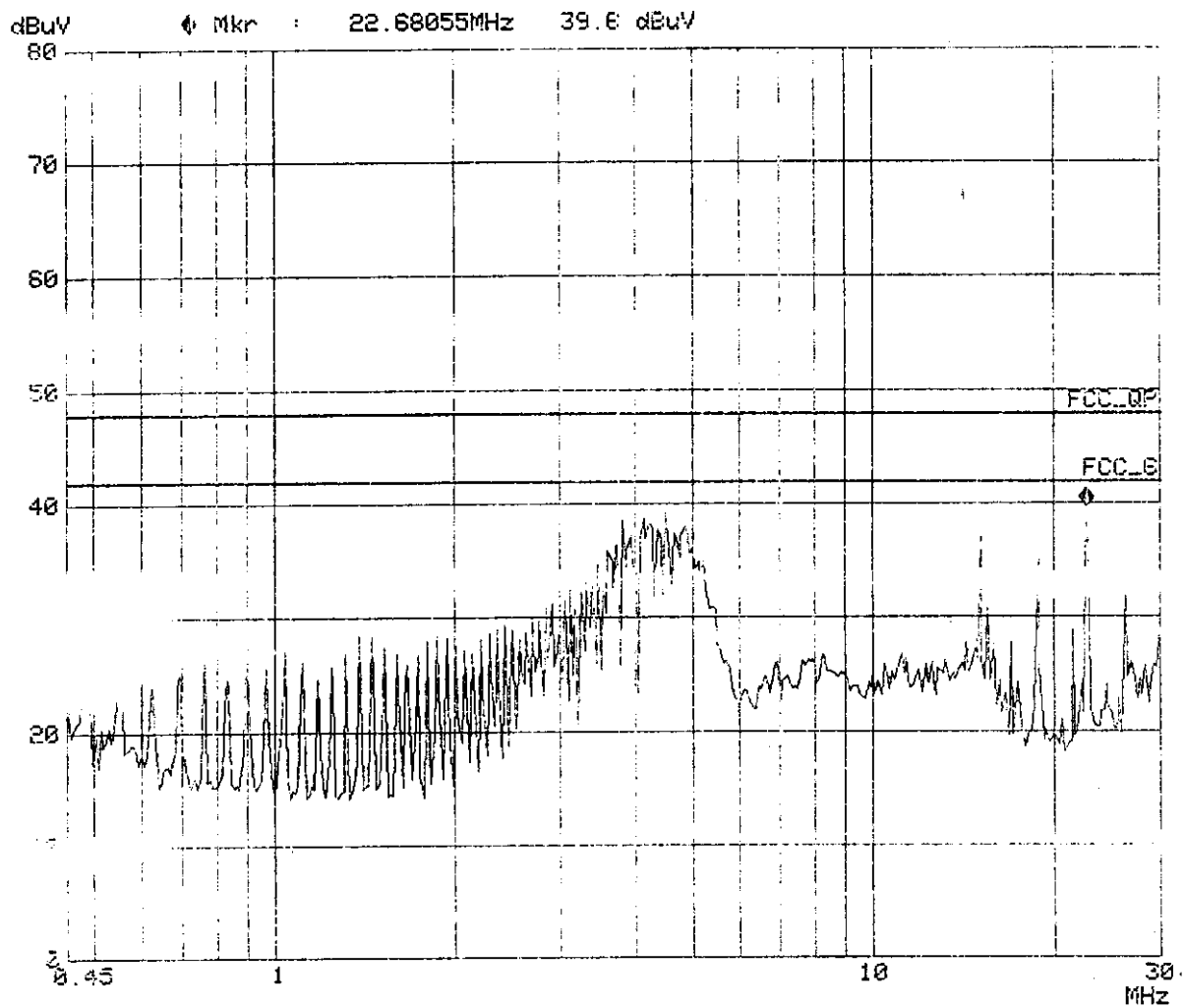
Operator: JACKIE

Test Spec: FCC CLASS B

Comment: Line 1

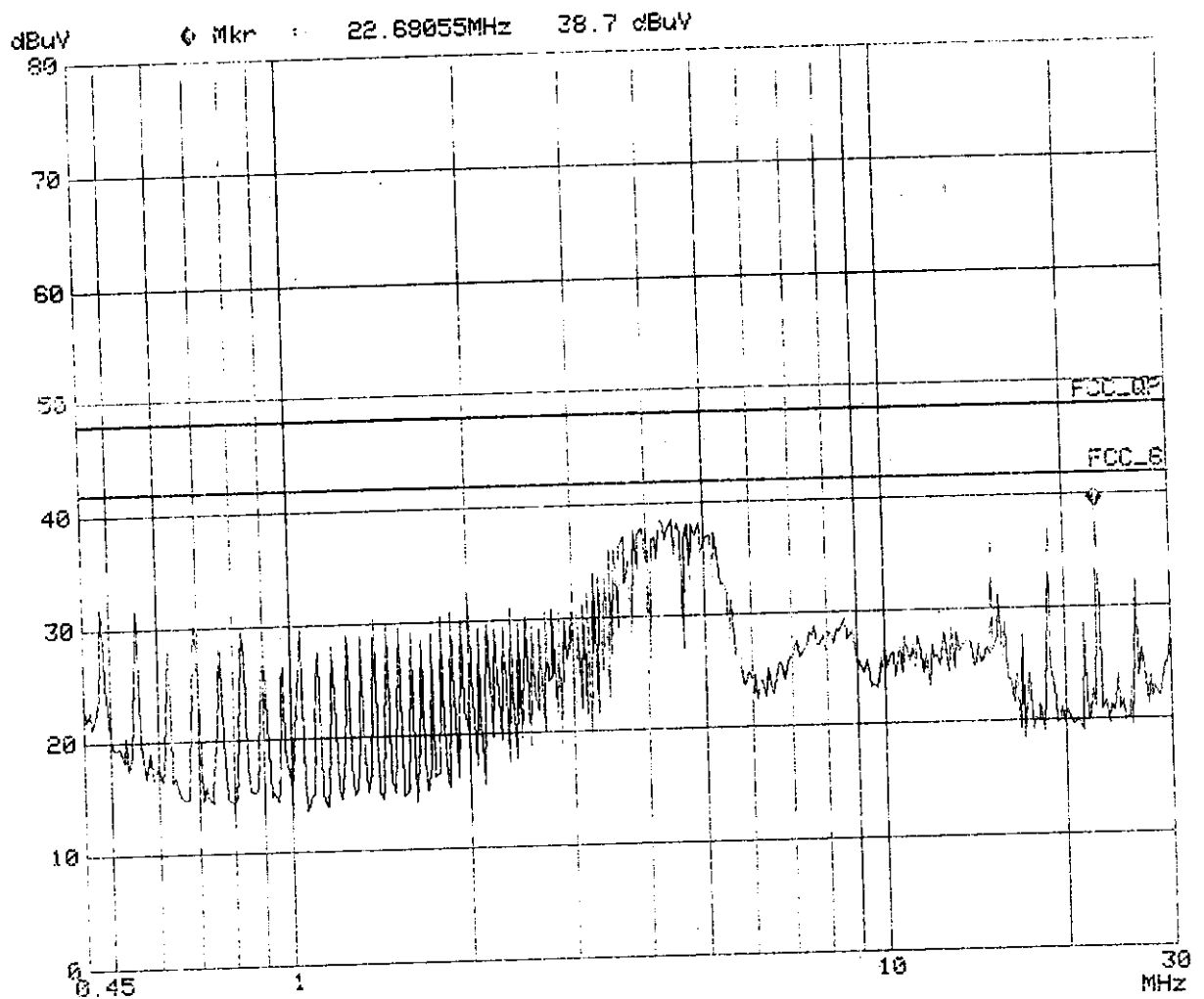
M/N:RUBY 3.5+DESIGNOTE 5750

Date: 02. Jun 99 20:39



ROHDE & SCHWARZ ESHS 30
GestTek, PowerLine Conducted Emission

EUT: NOTEBOOK PC
Manuf: FIC
Op Cond: MODE:6
Operator: JACKIE
Test Spec: FCC CLASS B
Comment: Line 2
M/N: RUBY 3.5+DESIGNOTE 5750
Date: 02. Jun 99 20:43



4. Radiation Emission Test

4.1 Test Equipment

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

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

Item	Instrument	Manufacturer	Type /Serial No.	Last Cal.	Site #1	Site #2
1	Test Receiver	Rohde & Schwarz	ESVS 30 / 829007/014	Nov. 23,1998	✓	
2	Spectrum Analyzer	HP	8594E / 3543A02689	N/A	✓	
3	Pre-Amplifier	HP	8447D / 2944A08272	N/A	✓	
4	Test Receiver	Rohde & Schwarz	ESCS 30/825022/003	Jul. 08,1998		✓
5	Spectrum Analyzer	HP	8591E/3543A05040	N/A		✓
6	Pre Amplifier	HP	8447D/2944A08273	N/A		✓
7	BILOG ANTENNA	Chase	CBL6112B/2417	May. 15,1999	✓	
8	BILOG ANTENNA	Chase	CBL6112B/2416	May. 15,1999		✓
9	Pre Amplifier	HP	8347A/3307A01401	N/A	✓	✓
10	Open Site	GesTek	GTK-RF-S01	Jan. 05, 1999	✓	
11	Open Site	GesTek	GTK-RF-S02	Jan. 03, 1999		✓
12	RF Cable	GesTek	GTK-RF-C01	May. 15,1999	✓	
13	RF Cable	GesTek	GTK-RF-C02	May. 15,1999	✓	
14	RF Cable	GesTek	GTK-RF-C03	Mar. 26,1999		✓
15	Test Program Software	GesTek	GTK-RF-P01	N/A	✓	
16	Test Program Software	GesTek	GTK-RF-P02	N/A		✓

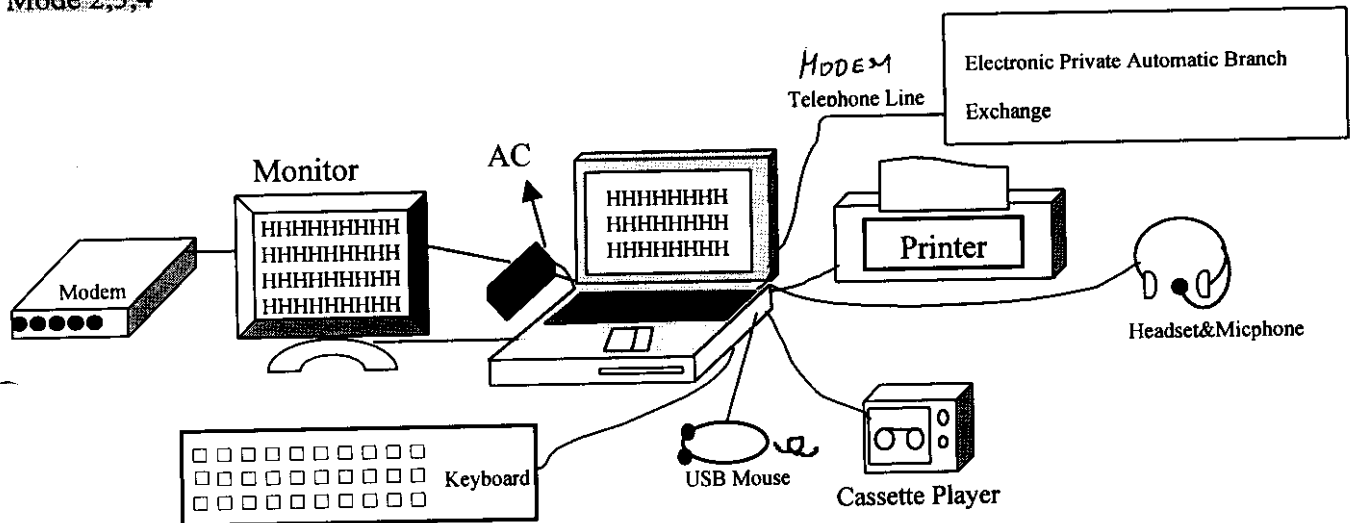
Note: All equipment upon which need to calibrated are with calibration period of 1 year.

GTK99-F008

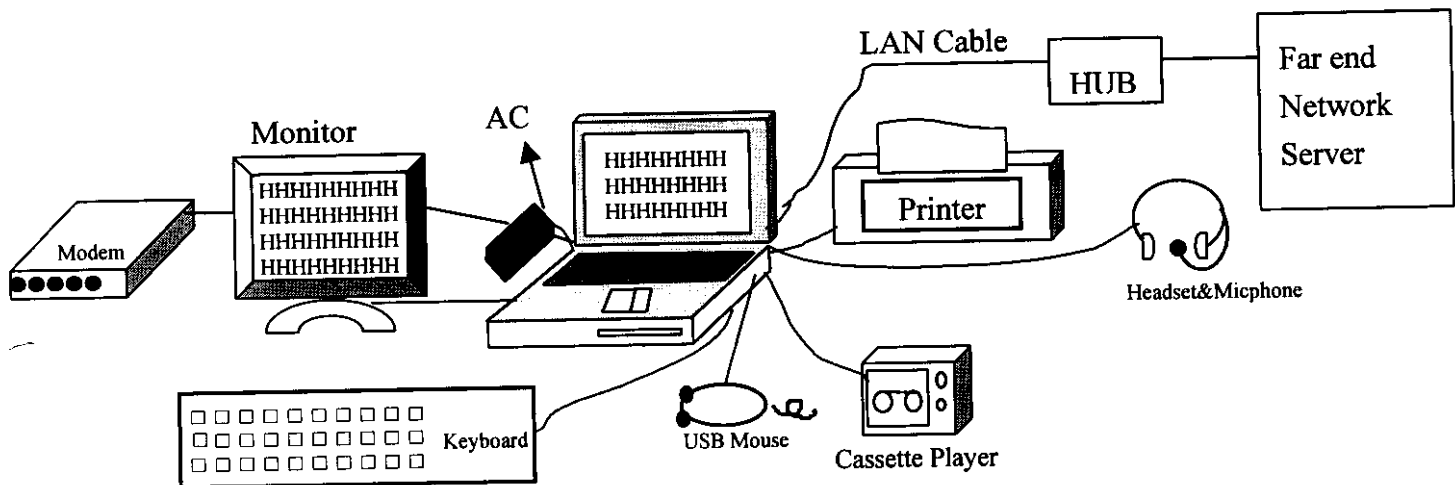
4.2 Test Setup

4.2.1 Block Diagram of Connections between EUT and simulators

Mode 2,3,4



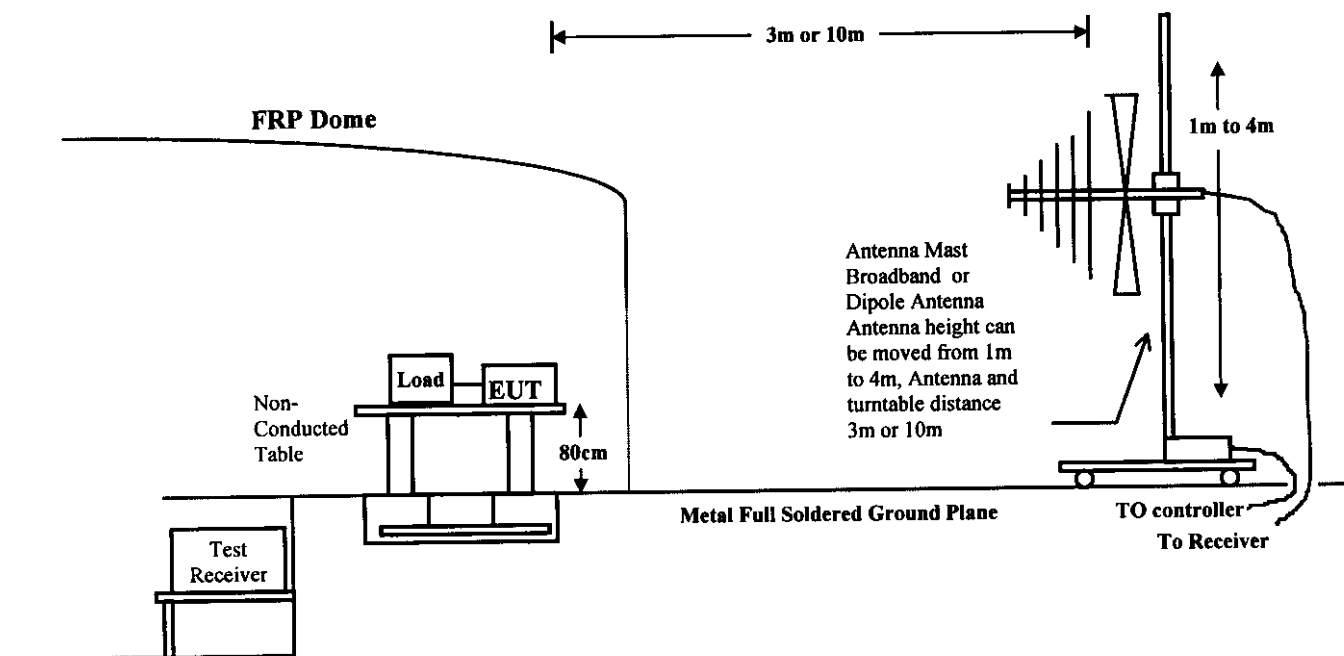
Mode 1,5,6



4.2.2 Open Test Site Setup Diagram

Note: This is a representative setup diagram for Table-top EUT.

For Floor-standing EUT, the table will be removed with all others setup condition remain the same.



4.3 Radiated Emission Limit

4.3.1 FCC Class B Limits at 3m

Frequency	Distance	Field Strength	
MHz	Meter	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 2.3 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.

The device under test, installed in a representative system as described in section 4.2.2, was placed on a non-conductive table whose total height equaled 80 CM. This table can be rotated 360 degree. The measurement antenna was mounted to a non-conductive mast capable of moving the antenna vertically. Antenna height was varied from 1 meter to 4 meters and the system under test was rotated from 0 degree through 360 degrees relative to the antenna position and polarization (Horizontal and Vertical). Also the I/O cable position was investigated to find the maximum emission condition.

4.5 Operating Condition of EUT

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

4.6 Radiated Emission Data

Radiated emission were investigated over the frequency range of **30 MHz to 2 GHz**. All readings below 1GHz are quasi-peak values with a resolution Bandwidth of 120 KHz, unless otherwise noted. From 1-2GHz was investigated use both peak and average detector use bandwidth 1MHz. 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 reading was measured use a test receiver and reported in the following data pages.

The total uncertainty for this test is as follows:

- Uncertainty in the field strength measured (3m antenna distance): $< \pm 4.0$ dB
- Uncertainty in the field strength measured (10m antenna distance): $< \pm 4.0$ 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 :06-01,1999

Temperature :26 deg/C

EUT :NOTEBOOK PC

Humidity :54 %RH

Working Cond.:Mode 1

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
	Loss	Factor	Horizontal	Horizontal		
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)	(uV/m)
46.687	0.04	10.60	6.17	16.81	6.93	100
75.016	0.60	6.95	21.98	29.53	29.96	100
109.380	0.85	11.71	9.89	22.45	13.26	150
133.277	0.84	11.67	18.15	30.66	34.14	150
171.612	1.10	9.96	9.52	20.58	10.69	150
*199.981	1.20	10.00	24.15	35.35	58.55	150
328.366	1.67	13.81	16.75	32.23	40.86	200
393.243	2.06	16.47	12.89	31.42	37.22	200
460.030	2.28	17.28	12.25	31.81	38.95	200
600.021	2.89	19.00	15.52	37.41	74.26	200
857.217	3.83	20.56	12.77	37.17	72.16	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 :06-01,1999 Temperature :25 deg/C
 EUT :NOTEBOOK PC Humidity :54 %RH
 Working Cond.:Mode 1 Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Vertical	Vertical	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)] (uV/m)	(uV/m)
45.900	0.04	10.60	16.28	26.92	22.18 100
74.030	0.60	6.73	14.68	22.01	12.61 100
142.000	0.84	11.03	11.46	23.33	14.68 150
197.094	1.19	9.94	19.79	30.92	35.16 150
225.014	1.30	11.28	15.45	28.04	25.22 200
275.023	1.45	12.83	12.79	27.07	22.57 200
375.009	1.95	15.58	18.90	36.43	66.33 200
*428.662	2.19	17.02	19.53	38.74	86.48 200
500.009	2.40	17.59	17.56	37.55	75.45 200
533.201	2.56	18.23	15.14	35.93	62.59 200
593.289	2.87	18.95	7.99	29.80	30.91 200
853.625	3.81	20.53	10.89	35.23	57.78 200
924.990	4.15	21.14	8.73	34.02	50.22 200
1000.000	7.70	21.30	15.76	44.76	172.98 500

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 :05-31,1999

Temperature :25 deg/C

EUT :NOTEBOOK PC

Humidity :55 %RH

Working Cond.:Mode 2

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
83.930	0.66	7.99	11.50	20.15	10.17 100
131.308	0.85	11.81	16.22	28.88	27.80 150
196.840	1.18	9.89	23.88	34.95	55.92 150
200.087	1.20	10.00	23.76	34.96	55.98 150
287.721	1.47	13.00	23.10	37.57	75.60 200
328.000	1.67	13.81	21.30	36.78	68.99 200
333.474	1.70	13.94	23.50	39.14	90.58 200
390.859	2.05	16.37	15.62	34.04	50.32 200
417.797	2.15	16.93	15.83	34.91	55.64 200
456.004	2.27	17.25	19.06	38.58	84.88 200
571.539	2.76	18.77	14.33	35.86	62.10 200
600.343	2.89	19.00	13.87	35.76	61.41 200
733.865	3.53	19.67	5.88	29.08	28.45 200
781.714	3.58	19.99	13.10	36.67	68.15 200
*857.315	3.83	20.56	16.28	40.68	108.09 200
983.725	4.50	21.33	8.57	34.40	52.50 500

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 :05-31,1999

Temperature :25 deg/C

EUT :NOTEBOOK PC

Humidity :54 %RH

Working Cond.:Mode 2

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Vertical	Vertical	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
38.065	0.08	15.46	10.57	26.11	20.21 100
51.882	0.18	7.91	20.36	28.45	26.45 100
66.239	0.52	6.22	19.05	25.78	19.46 100
114.006	0.87	11.97	20.82	33.66	48.17 150
141.148	0.81	11.10	23.31	35.22	57.71 150
195.425	1.18	9.89	25.42	36.49	66.77 150
260.574	1.42	12.64	17.27	31.33	36.85 200
276.860	1.45	12.86	18.56	32.87	44.01 200
287.718	1.47	13.00	22.60	37.07	71.37 200
333.508	1.70	13.94	22.66	38.30	82.23 200
456.003	2.27	17.25	19.19	38.71	86.16 200
521.146	2.50	17.99	13.95	34.45	52.76 200
571.530	2.76	18.77	10.47	32.00	39.82 200
*586.288	2.83	18.88	18.75	40.46	105.44 200
721.425	3.52	19.57	9.42	32.51	42.24 200
857.309	3.83	20.56	13.26	37.66	76.35 200
983.725	4.50	21.33	8.29	34.12	50.84 500

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 :06-01,1999

Temperature :23 deg/C

EUT :NOTEBOOK PC

Humidity :64 %RH

Working Cond.:Mode 3

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
57.758	0.36	6.46	22.60	29.42	29.59 100
59.271	0.40	6.10	14.08	20.58	10.69 100
73.730	0.60	6.73	18.73	26.06	20.10 100
108.937	0.85	11.71	13.36	25.92	19.77 150
172.031	1.10	9.87	13.59	24.56	16.90 150
196.809	1.18	9.89	22.61	33.68	48.31 150
200.071	1.20	10.00	21.94	33.14	45.39 150
227.989	1.31	11.38	22.00	34.69	54.27 200
260.573	1.42	12.64	22.63	36.69	68.31 200
287.029	1.47	13.00	20.80	35.27	58.01 200
*333.457	1.70	13.94	27.28	42.92	139.97 200
466.939	2.30	17.34	15.86	35.51	59.60 200
600.421	2.91	19.02	11.17	33.10	45.16 200
857.307	3.83	20.56	17.97	42.37	131.31 200
1000.000	7.70	21.30	11.13	40.13	101.51 500

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 :06-01,1999

Temperature :25 deg/C

EUT :NOTEBOOK PC

Humidity :55 %RH

Working Cond.:Mode 3

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
	Loss	Factor	Vertical	Vertical		
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)	(uV/m)
56.255	0.32	6.70	15.41	22.43	13.23	100
133.368	0.84	11.67	23.64	36.15	64.23	150
200.013	1.20	10.00	16.53	27.73	24.35	150
281.600	1.46	12.94	17.89	32.30	41.19	200
455.980	2.27	17.25	22.99	42.51	133.45	200
*666.943	3.30	19.47	21.07	43.84	155.60	200
721.656	3.52	19.57	8.44	31.53	37.73	200
857.250	3.83	20.56	15.59	39.99	99.84	200
1000.000	7.70	21.30	11.25	40.25	102.92	500

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 :05-29,1999

Temperature :25 deg/C

EUT :NOTEBOOK PC

Humidity :55 %RH

Working Cond.:Mode 4

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)] (uV/m)	(uV/m)
83.790	1.04	8.01	12.50	21.55 11.95	100
116.000	1.27	12.40	13.32	26.99 22.37	150
131.308	1.30	12.11	16.00	29.41 29.55	150
196.915	1.97	10.11	19.72	31.80 38.88	150
200.025	2.00	10.20	22.96	35.16 57.28	150
285.763	2.47	13.24	19.74	35.44 59.19	200
*328.099	2.79	14.10	26.72	43.61 151.52	200
333.376	2.83	14.20	25.51	42.55 134.08	200
459.210	3.48	17.60	15.85	36.92 70.18	200
571.570	4.24	19.12	9.98	33.33 46.42	200
600.227	4.50	19.40	8.17	32.07 40.13	200
733.672	5.20	20.27	6.68	32.15 40.50	200
857.430	5.77	21.48	12.78	40.03 100.35	200
983.942	6.15	22.10	10.47	38.72 86.27	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
 4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :05-29,1999

Temperature :23 deg/C

EUT :NOTEBOOK PC

Humidity :63 %RH

Working Cond.:Mode 4

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
	Loss	Factor	Vertical	Vertical		
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)	(uV/m)
44.550	0.60	10.80	11.60	23.00	14.13	100
84.125	1.04	8.01	20.95	30.00	31.62	100
119.600	1.29	12.72	22.79	36.80	69.16	150
142.916	1.34	11.16	18.73	31.23	36.44	150
196.913	1.97	10.11	19.09	31.17	36.16	150
270.232	2.36	12.93	18.10	33.39	46.73	200
331.800	2.82	14.17	15.72	32.71	43.19	200
466.948	3.50	17.75	11.96	33.22	45.79	200
571.571	4.24	19.12	12.52	35.87	62.19	200
600.232	4.50	19.40	12.40	36.30	65.31	200
714.442	5.08	20.11	7.25	32.44	41.89	200
*857.355	5.77	21.48	15.28	42.53	133.82	200
983.942	6.15	22.10	13.45	41.70	121.58	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

4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-02,1999

Temperature :25 deg/C

EUT :NOTEBOOK PC

Humidity :55 %RH

Working Cond.:Mode 5

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
30.000	0.30	19.70	-1.40	18.60	8.51 100
131.300	1.30	12.11	16.95	30.36	32.97 150
167.925	1.65	9.70	19.04	30.40	33.10 150
199.930	2.00	10.20	22.64	34.84	55.21 150
217.139	2.07	11.02	22.24	35.33	58.39 200
260.586	2.28	12.72	23.16	38.16	80.87 200
331.788	2.82	14.17	18.09	35.08	56.74 200
466.613	3.50	17.75	19.29	40.55	106.48 200
571.573	4.24	19.12	10.73	34.08	50.61 200
590.635	4.40	19.29	15.91	39.60	95.52 200
*733.305	5.20	20.27	14.53	40.00	99.99 200
853.150	5.76	21.44	11.57	38.77	86.79 200

- 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 :06-02,1999
 EUT :NOTEBOOK PC
 Working Cond.:Mode 5

Temperature :25 deg/C
 Humidity :55 %RH
 Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Vertical	Vertical	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
43.430	0.60	11.55	15.00	27.15	22.78 100
60.100	0.90	5.90	18.90	25.70	19.28 100
76.450	0.96	6.85	23.06	30.87	34.95 100
108.788	1.24	11.93	24.36	37.53	75.25 150
119.375	1.29	12.72	20.80	34.81	55.00 150
131.465	1.30	12.11	20.73	34.14	50.94 150
150.733	1.50	10.61	18.76	30.87	34.96 150
196.788	1.94	10.03	26.53	38.50	84.11 150
*200.163	2.00	10.20	27.92	40.12	101.39 150
217.153	2.07	11.02	23.27	36.36	65.74 200
228.025	2.11	11.47	19.02	32.60	42.65 200
333.275	2.83	14.20	19.85	36.89	69.88 200
456.000	3.47	17.52	18.58	39.56	95.10 200
459.450	3.48	17.60	17.55	38.62	85.35 200
571.550	4.24	19.12	11.73	35.08	56.79 200
590.700	4.42	19.31	15.62	39.35	92.78 200
722.000	5.13	20.17	12.69	37.99	79.37 200

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 :06-02,1999

Temperature :23 deg/C

EUT :NOTEBOOK PC

Humidity :67 %RH

Working Cond.:Mode 6

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
	Loss	Factor	Horizontal	Horizontal		
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)	(uV/m)
80.370	1.00	7.30	12.52	20.82	10.99	100
113.930	1.26	12.25	11.41	24.91	17.61	150
131.307	1.30	12.11	19.06	32.47	42.03	150
173.308	1.68	9.60	14.29	25.57	19.00	150
195.438	1.94	10.03	24.02	35.99	63.00	150
196.917	1.97	10.11	24.11	36.19	64.46	150
240.034	2.16	12.01	21.05	35.22	57.68	200
260.560	2.28	12.72	23.51	38.51	84.19	200
328.101	2.79	14.10	19.52	36.41	66.14	200
456.030	3.47	17.52	15.00	35.98	62.98	200
571.521	4.24	19.12	7.89	31.24	36.50	200
*600.140	4.50	19.40	17.35	41.25	115.48	200
666.688	4.83	20.00	14.61	39.44	93.81	200
721.783	5.13	20.17	14.18	39.48	94.23	200
984.348	6.15	22.10	8.89	37.14	71.92	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

4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-02,1999

Temperature :25 deg/C

EUT :NOTEBOOK PC

Humidity :55 %RH

Working Cond.:Mode 6

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
	Loss	Factor	Vertical	Vertical		
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)	(uV/m)
59.540	0.90	5.90	21.87	28.67	27.13	100
78.841	1.00	7.30	22.30	30.60	33.88	100
109.970	1.24	11.93	24.87	38.04	79.80	150
131.309	1.30	12.11	21.45	34.86	55.35	150
152.028	1.52	10.47	15.49	27.48	23.67	150
195.439	1.94	10.03	17.07	29.04	28.30	150
196.939	1.97	10.11	18.65	30.73	34.38	150
333.341	2.83	14.20	20.09	37.13	71.84	200
456.030	3.47	17.52	16.36	37.34	73.65	200
586.321	4.36	19.25	12.50	36.12	63.95	200
651.420	4.76	20.00	11.40	36.16	64.24	200
666.721	4.83	20.00	18.21	43.04	141.99	200
721.840	5.13	20.17	10.86	36.16	64.29	200
857.351	5.77	21.48	8.34	35.59	60.19	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 :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:1

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
1000.002	7.70	21.30	42.31	35.61	60.33 500 PK
1000.004	7.70	21.30	38.79	32.09	40.23 500 AV
1575.592	8.33	25.43	24.23	23.13	14.33 500 AV
1575.592	8.33	25.43	30.41	29.31	29.19 500 PK
1805.399	8.59	26.66	37.50	37.97	79.15 500 PK
1805.402	8.59	26.66	23.90	24.37	16.54 500 AV

Date of Test :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:1

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Vertical	Vertical	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
1000.000	7.70	21.30	44.35	37.65	76.30 500 AV
1000.000	7.70	21.30	54.89	48.19	256.74 500 PK
1051.000	7.76	21.90	38.42	32.46	41.96 500 AV
1051.000	7.76	21.90	53.04	47.08	225.88 500 PK
1336.000	8.07	24.07	50.77	47.74	243.89 500 PK
1336.000	8.07	24.07	37.42	34.39	52.44 500 AV

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(35.70,34.87,34.78)(35.70,35.62, 35.16)

4. Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:2

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)] (uV/m)	(uV/m)
1001.145	7.70	21.32	35.60	28.93 27.95	500 PK
1001.145	7.70	21.32	27.10	20.43 10.50	500 AV
1576.682	8.33	25.44	25.70	24.61 17.00	500 AV
1576.682	8.33	25.44	31.11	30.02 31.69	500 PK
1809.183	8.59	26.70	36.08	36.59 67.53	500 PK
1809.183	8.59	26.70	25.54	26.05 20.07	500 AV

Date of Test :06-01,1999

Temperature :23 deg/C

EUT :N/B PK+AV

Humidity :65 %RH

Working Cond.:MODE:2

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Vertical	Vertical	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)] (uV/m)	(uV/m)
1000.178	7.70	21.30	38.18	31.48 37.50	500 PK
1000.215	7.70	21.30	30.11	23.41 14.81	500 AV
1259.778	7.99	23.58	32.98	29.26 29.04	500 PK
1259.778	7.99	23.58	23.74	20.02 10.02	500 AV
1587.453	8.35	25.49	32.41	31.38 37.07	500 PK
1587.453	8.35	25.49	19.84	18.81 8.72	500 AV

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(35.70,34.87, 34.78)(35.70,35.29, 34.87)

4. Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:3

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
	Loss	Factor	Horizontal	Horizontal		
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)	(uV/m)
1000.178	7.70	21.30	31.41	24.71	17.20	500 AV
1000.230	7.70	21.30	41.59	34.89	55.53	500 PK
1329.900	8.06	24.02	22.38	19.29	9.21	500 AV
1329.900	8.06	24.02	32.53	29.44	29.64	500 PK
1805.421	8.59	26.66	30.32	30.79	34.63	500 AV
1805.421	8.59	26.66	38.38	38.85	87.59	500 PK

Date of Test :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:3

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
	Loss	Factor	Vertical	Vertical		
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m)	(uV/m)
1000.173	7.70	21.30	32.95	26.25	20.54	500 AV
1000.173	7.70	21.30	42.58	35.88	62.23	500 PK
1143.120	7.86	23.09	28.35	23.83	15.53	500 AV
1143.120	7.86	23.09	38.69	34.17	51.09	500 PK

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 (35.70, 35.17,34.78)(35.70, 35.47)

4.Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:4

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
1000.171	7.70	21.30	42.15	35.45	59.22 500 PK
1000.171	7.70	21.30	34.02	27.32	23.23 500 AV
1530.320	8.28	25.21	31.74	30.35	32.92 500 PK
1530.320	8.28	25.21	20.83	19.44	9.37 500 AV
1805.433	8.59	26.66	37.55	38.02	79.61 500 PK
1805.433	8.59	26.66	28.77	29.24	28.97 500 AV

Date of Test :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:4

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Vertical	Vertical	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]	(uV/m) (uV/m)
1050.045	7.76	21.90	36.45	30.49	33.44 500 PK
1050.045	7.76	21.90	24.36	18.40	8.31 500 AV
1468.420	8.22	25.01	32.78	31.06	35.73 500 PK
1468.420	8.22	25.01	20.92	19.20	9.12 500 AV
1699.820	8.47	25.95	32.44	32.04	39.98 500 PK
1699.820	8.47	25.95	20.45	20.05	10.05 500 AV
1820.610	8.60	26.80	36.25	36.88	69.84 500 PK
1820.610	8.60	26.80	30.11	30.74	34.44 500 AV

- 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(35.70,34.89,34.78)(35.62,34.95,34.82, 4.77)
 4. Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:5

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
[MHz]	Loss	Factor	Horizontal	Horizontal	(uV/m)	(uV/m)
	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]		
1000.008	7.70	21.30	38.63	31.93	39.49	500 PK
1000.008	7.70	21.30	34.10	27.40	23.44	500 AV
1618.870	8.38	25.65	32.43	31.61	38.04	500 PK
1618.870	8.38	25.65	23.91	23.09	14.27	500 AV
1809.200	8.59	26.70	35.02	35.53	59.77	500 PK
1809.200	8.59	26.70	27.04	27.55	23.85	500 AV

Date of Test :06-01,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:5

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit	
[MHz]	Loss	Factor	Vertical	Vertical	(uV/m)	(uV/m)
	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)]		
1050.030	7.76	21.90	39.75	33.79	48.90	500 PK
1050.030	7.76	21.90	29.89	23.93	15.71	500 AV
1699.903	8.47	25.95	32.42	32.02	39.89	500 PK
1699.903	8.47	25.95	21.02	20.62	10.74	500 AV

- 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(35.70,34.85,34.78)(35.62,34.82)
 4. Deviations from the specifications: None.

Radiated Emission Data

Date of Test :06-02,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:6

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Horizontal	Horizontal	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)] (uV/m)	(uV/m)
1000.010	0.00	21.30	56.84	42.44 132.43	500 PK
1000.010	0.00	21.30	46.47	32.07 40.13	500 AV
1115.530	0.00	22.92	50.16	37.56 75.52	500 PK
1115.530	0.00	22.92	38.83	26.23 20.49	500 AV
1247.230	0.00	23.50	46.94	35.14 57.12	500 PK
1247.230	0.00	23.50	37.79	25.99 19.92	500 AV

Date of Test :06-02,1999

Temperature :25 deg/C

EUT :N/B PK+AV

Humidity :55 %RH

Working Cond.:MODE:6

Display Pattern:H Pattern

Frequency	Cable	Antenna	Reading Level	Emission Level	Limit
	Loss	Factor	Vertical	Vertical	
[MHz]	[dB]	[dB/m]	[dB(uV)]	[dB(uV/m)] (uV/m)	(uV/m)
1000.160	0.00	21.30	54.51	40.11 101.27	500 PK
1000.160	0.00	21.30	43.10	28.70 27.23	500 AV
1115.450	0.00	22.92	52.87	40.27 103.18	500 PK
1115.450	0.00	22.92	36.31	23.71 15.33	500 AV
1200.250	0.00	23.33	49.36	37.31 73.37	500 PK
1200.250	0.00	23.33	35.22	23.17 14.40	500 AV

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(35.70, 35.52, 35.20) (35.70, 35.52, 35.38)

4.Deviations from the specifications: None.