



Appendix Report

Product Name : Notebook PC

Model No. : K72xxx, X7Axxx, PRO7Axxx, P72xxx, A72xxx, X72xxx,
K72D, X72D, A72D, PRO7AD (x can be 0-9, A-Z or a-z or
blank)

Applicant : ASUSTeK COMPUTER INC.

Address : No. 150, Li-Te Rd., Peitou, Taipei, Taiwan, R.O.C.

Date of Receipt : 2010/04/01

Issued Date : 2010/04/23

Report No. : 104223R-ITCEP07V04

Report Version : V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, NVLAP or any agency of the Government.

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Test Report Certification

Issued Date : 2010/04/23

Report No. : 104223R-ITCEP07V04



Product Name : Notebook PC

Applicant : ASUSTeK COMPUTER INC.

Address : No. 150, Li-Te Rd., Peitou, Taipei, Taiwan, R.O.C.

Manufacturer : 1. PEGATRON CORPORATION Taoyuan Mfg
2. Protek (Shanghai) Limited.
3. NorthTec Asia (Shanghai) Limited.
4. FULIN ELECTRONICAL TECHONOLOGY (CHANGSHU) CO LTD
5. FUXIANG PRECISION INDUSTRIAL(KUNSHAN) CO LTD

Model No. : K72xxx, X7Axxx, PRO7Axxx, P72xxx, A72xxx, X72xxx, K72D, X72D, A72D, PRO7AD (x can be 0-9, A-Z or a-z or blank)

EUT Rated Voltage : AC 100-240V, 50-60Hz

EUT Test Voltage : AC 230 V / 50 Hz

Trade Name : ASUS

Applicable Standard : EN 55022: 2006+A1: 2007, Class B
EN 55024: 1998+A1: 2001+A2: 2003
EN 61000-3-2:2006
EN 61000-3-3:2008

Test Result : Complied

Performed Location : Quietek Corporation (Linkou Laboratory)
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We , **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scopes:

Taiwan R.O.C.	:	BSMI, NCC, TAF
Germany	:	TUV Rheinland
Norway	:	Nemko, DNV
USA	:	FCC, NVLAP
Japan	:	VCCI

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://tw.quietek.com/tw/emc/accreditations/accreditations.htm>
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1. General Information

1.1. EUT Description

Product Name	Notebook PC
Trade Name	ASUS
Model No.	K72xxx, X7Axxx, PRO7Axxx, P72xxx, A72xxx, X72xxx, K72D, X72D, A72D, PRO7AD (x can be 0-9, A-Z or a-z or blank)

Component	
Power Adapter (1)	MFR : LITEON, M/N : PA-1900-36 Input : 100-240V, 50-60Hz, 1.5A Output : 19VDC, 4.74A Cable : Non-shielded, 1.8M, with one ferrite core bonded.
Power Adapter (2)	MFR : Enertronix, M/N : EXA0904YH Input : 100-240V, 50-60Hz, 1.5A Output : 19VDC, 4.74A Cable : Non-shielded, 1.8M, with one ferrite core bonded.
Power Adapter (3)	MFR : DELTA, M/N : ADP-90CD DB Input : 100-240V, 50-60Hz, 1.5A Output : 19VDC, 4.74A Cable : Non-shielded, 1.8M, with one ferrite core bonded.

Keyparts List		
DEVICE	MODEL	SPEC
CPU (Socket: uOL638)	AMD N830 2.1GHZ/1.5M (3 cores)	CPU HMN830DCR32GM 35W (3 cores)
	AMD P520 2.3GHZ/2M (2 cores)	CPU TMP520SGR23GM 25W (2 cores)
	AMD P320 2.1GHZ/1M (2 cores)	CPU AMP320SGR22GM 25W (2 cores)
	AMD V120 2.2GHZ/2M DVT (1cores)	CPU VMV120SGR12GM 25W (1cores)

- Note: 1. The model number K72xxx, X7Axxx, PRO7Axxx, P72xxx, A72xxx, X72xxx, K72D, X72D, A72D, PRO7AD(x can be 0-9, A-Z or a-z or blank), "x" is refer 0-9, A-Z or a-z or blank.
The variation of model number is for different trade and marketing area.
2. This appendix report was based on Quietek report No. 09B240R-ITCEP07V04.
The different is add Model number and CPU.

1.2. Mode of Operation

Quietek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode		
Mode 1	Mode 5	Mode 9
Mode 2	Mode 6	Mode 10
Mode 3	Mode 7	
Mode 4	Mode 8	
Final Test Mode		
Emission	Mode 1	
	Mode 2	
	Mode 3	

	Mode 1 LCD+D-SUB (1600*900/60Hz)	Mode 2 LCD+HDMI (1600*900/60Hz)
Motherboard	ASUS, K72DR	ASUS, K72DR
CPU	AMD N930 2.0GHZ/2M DVT (4 cores)	AMD P920 1.6GHZ/2M DVT (4cores)
LCD	LGD/LP173WD1-TLC1 OMEGA	CMO/N173O6-L02 ZBD
Camera	AZUREWAVE/AM-VS011	AZUREWAVE/AM-VS011
Memory	KINGSTON/ASU1333D3S9DR8G	KINGSTON/ASU1333D3S9DR8G/4G
HDD	SEAGATE/ST9500420AS 500G	SEAGATE/ST9320423AS 320G
	HGST/HTS725050A9A364 500G	HGST/HTS725032A9A364 320G
ODD	HLDS/CT21N	TSST/TS-L633C
WLAN	INTEL/ 112BNHMMW	Atheros/ AR5B95 (AW-NE785H)
Bluetooth	Broadcom/ BCM92070MD_REF (AW-BT270)	Broadcom/ BCM92070MD_REF (AW-BT270)
Adapter	DELTA/ ADP-90CD DB	ENERTRONIX/ EXA0904YH

	Mode 3 LCD+D-SUB (1600*900/60Hz)	Mode 4 LCD+HDMI (1600*900/60Hz)
Motherboard	ASUS, K72DR	ASUS, K72DR
CPU	AMD N620 2.8GHZ/2M DVT	AMD N530 2.5GHZ/2M (2 cores)
LCD	CMO/N173O6-L02 ZBD (2C)	LGD/LP173WD1-TLC1 OMEGA
Camera	CHICONY/CNF9085	AZUREWAVE/AM-VS011
Memory	HYNIX/HMT125S6TFR8C-H9	KINGSTON/ASU1333D3S9DR8G
HDD	SEAGATE/ST9500325AS 500G	SEAGATE/ST9640320AS
	HGST/HTS545050B9A300 500G	SEAGATE/ST9320325AS
ODD	PANASONIC/UJ890A	PLDS/DS-8A4S
WLAN	Atheros/ AR5B195 (AW-NB037H)	NTEL/ 112BNHMMW
Bluetooth		Broadcom/ BCM92070MD_REF (AW-BT270)
Adapter	LITEON/ PA-1900-36	DELTA/ ADP-90CD DB

	Mode 5 LCD+D-SUB (1600*900/60Hz)	Mode 6 LCD+HDMI (1600*900/60Hz)
Motherboard	ASUS, K72DR	ASUS, K72DR
CPU	AMD N330 2.3GHZ/1M (2 cores)	AMD N830 2.1GHZ/1.5M (3 cores)
LCD	CMO/N173O6-L02 ZBD	CMO/N173O6-L02 ZBD (2C)
Camera	AZUREWAVE/AM-VS011	CHICONY/CNF9085
Memory	KINGSTON/ASU1333D3S9DR8G/4G	HYNIX/HMT125S6TFR8C-H9
HDD	SAMSUNG/HM501II	SEAGATE/ST9250315AS
	WD/6400BEVT	SAMSUNG/HM321HI
ODD	OPTIARC/AD-7580S	PANASONIC/UJ130A
WLAN	Atheros/ AR5B95 (AW-NE785H)	Atheros/ AR5B195 (AW-NB037H)
Bluetooth	Broadcom/ BCM92070MD_REF (AW-BT270)	
Adapter	ENERTRONIX/ EXA0904YH	LITEON/ PA-1900-36

	Mode 7 LCD+D-SUB (1600*900/60Hz)	Mode 8 LCD+HDMI (1600*900/60Hz)
Motherboard	ASUS, K72DR	ASUS, K72DR
CPU	AMD P520 2.3GHZ/2M (2 cores)	AMD P320 2.1GHZ/1M (2 cores)
LCD	LGD/LP173WD1-TLC1 OMEGA	CMO/N173O6-L02 ZBD
Camera	AZUREWAVE/AM-VS011	AZUREWAVE/AM-VS011
Memory	KINGSTON/ASU1333D3S9DR8G	KINGSTON/ASU1333D3S9DR8G/4G
HDD	WD/5000BEVT	WD3200BEVT
	SAMSUNG/HM251HI	SAMSUNG/HM641JI
ODD	PANASONIC/UJ141A	TSST/TS-L633C
WLAN	NTEL/ 112BNHMMW	Atheros/ AR5B95 (AW-NE785H)
Bluetooth	Broadcom/ BCM92070MD_REF (AW-BT270)	Broadcom/ BCM92070MD_REF (AW-BT270)
Adapter	DELTA/ ADP-90CD DB	ENERTRONIX/ EXA0904YH

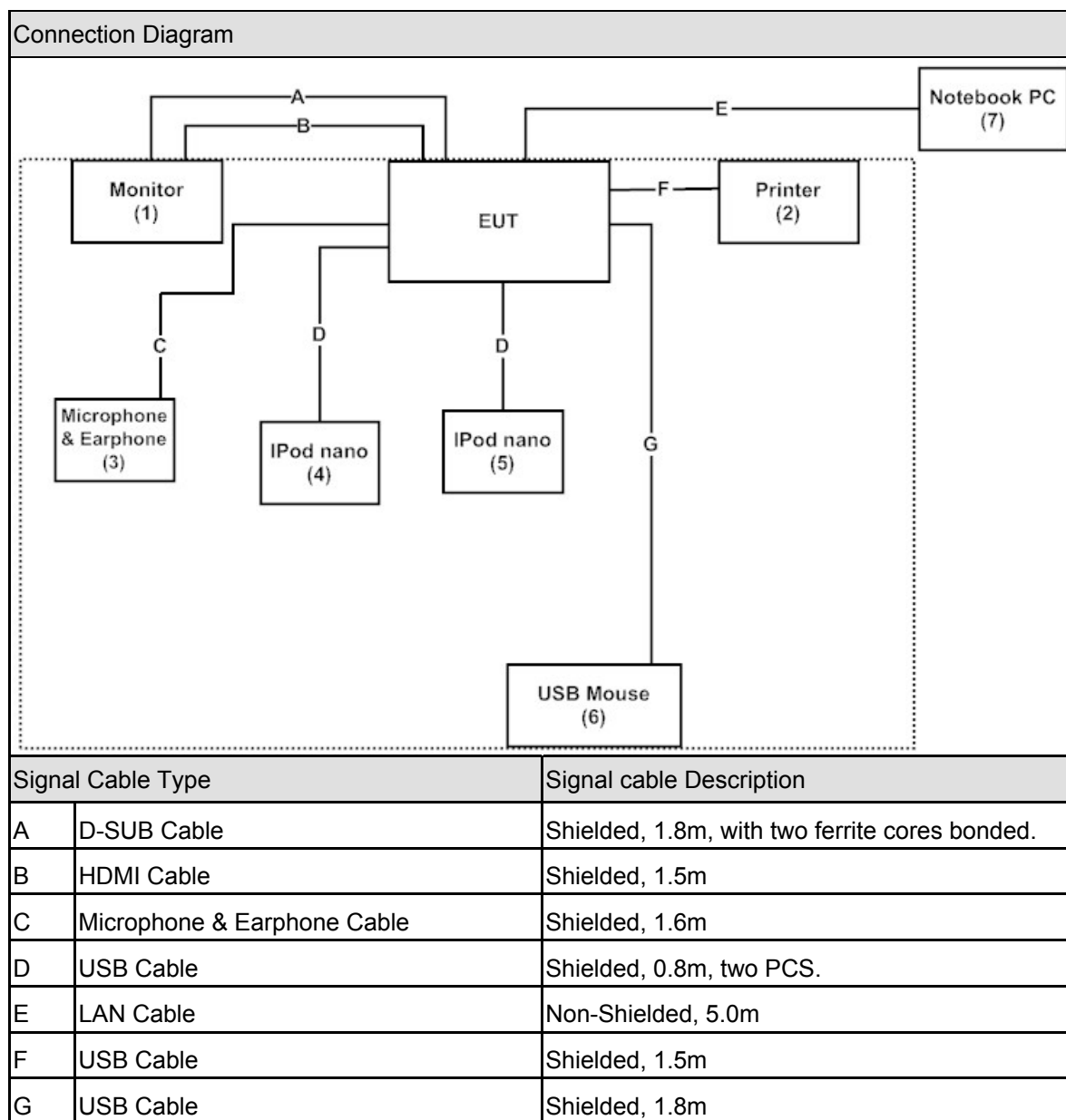
	Mode 9 LCD+D-SUB (1600*900/60Hz)	Mode 10 LCD+HDMI (1600*900/60Hz)
Motherboard	ASUS, K72DR	ASUS, K72DR
CPU	AMD P820 1.8GHZ/1.5M (3 cores)	AMD V120 2.2GHZ/2M DVT (1cores)
LCD	CMO/N173O6-L02 ZBD (2C)	LGD/LP173WD1-TLC1 OMEGA
Camera	CHICONY/CNF9085	AZUREWAVE/AM-VS011
Memory	HYNIX/HMT125S6TFR8C-H9	KINGSTON/ASU1333D3S9DR8G
HDD	WD/WD2500BEVT	SEAGATE/ST9500420AS 500G
	TOSHIBA/MK6465GSX	HGST/HTS725050A9A364 500G
ODD	PANASONIC/UJ890A	HLDS/CT21N
WLAN	Atheros/ AR5B195 (AW-NB037H)	NTEL/ 112BNHMMW
Bluetooth		Broadcom/ BCM92070MD_REF (AW-BT270)
Adapter	LITEON/ PA-1900-36	DELTA/ ADP-90CD DB

1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Monitor(EMI)	DELL	U2410	CN-0J257M-728-01I-04ML	Non-Shielded, 1.8m
	Monitor(EMS)	LG	W2261VT	907YHED07356	Non-Shielded, 1.8m
2	Printer	EPSON	StyLus C63	FAPY094331	Non-Shielded, 1.9m
3	Microphone & Earphone(EMI)	Lobos	LB-EW020	N/A	N/A
	Microphone & Earphone(EMS)	Ergotech	ET-E201	N/A	N/A
4	iPod nano(EMI)	Apple	A1236	7K818WQRY0P	N/A
	iPod nano(EMS)	Apple	A1199	YM708A72VQ5	N/A
5	iPod nano(EMI)	Apple	A1236	7K818WX3Y0P	N/A
	iPod nano(EMS)	Apple	A1199	YM706LSCVQ5	N/A
6	USB Mouse(EMI)	DELL	M056U0A	F0Y01YEK	N/A
	USB Mouse(EMS)	Logitech	M-UV83	LNA34515600	N/A
7	Notebook PC	DELL	D630	00144-023-351-375	Non-Shielded, 0.8m

1.4. Configuration of Tested System



1.5. EUT Exercise Software

1	Setup the EUT and peripheral as shown on Figure
2	Connect the power to EUT and peripherals, then turn on the power of all equipments.
3	Waiting for EUT to enter Windows System, and adjust the display resolution to the test mode.
4	Connect LAN and Telecom to Notebook PC for transmitting data.
5	Activate Wireless & Bluetooth interface function, and perform the wireless data communication with the other Notebook (write/delete action).
6	Personal Computer sends “H” pattern to printer, the printer will print “H” pattern on paper.
7	Run “H” pattern.
8	Begin to test and repeat the above procedure (4)~(7)

2. Technical Test

2.1. Summary of Test Result

- ☒ No deviations from the test standards
- ☐ Deviations from the test standards as below description:

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	EN 55022:2006+A1: 2007	Yes	No
Impedance Stabilization Network	EN 55022:2006+A1: 2007	Yes	No
Radiated Emission	EN 55022:2006+A1: 2007	Yes	No
Power Harmonics	EN 61000-3-2:2006	Yes	No
Voltage Fluctuation and Flicker	EN 61000-3-3:2008	Yes	No

Immunity			
Performed Item	Normative References	Test Performed	Deviation
Electrostatic Discharge	IEC 61000-4-2: 2008	Yes	No
Radiated susceptibility	IEC 61000-4-3: 2008	Yes	No
Electrical fast transient/burst	IEC 61000-4-4: 2004	Yes	No
Surge	IEC 61000-4-5: 2005	Yes	No
Conducted susceptibility	IEC 61000-4-6: 2008	Yes	No
Power frequency magnetic field	IEC 61000-4-8: 2009	Yes	No
Voltage dips and interruption	IEC 61000-4-11: 2004	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	100366	2009/10/20
LISN	R&S	ENV4200	833209/007	2009/08/14
LISN	R&S	ENV216	100085	2010/02/17
Pulse Limiter	R&S	ESH3-Z2	357.88.10.52	2009/09/10

Impedance Stabilization Network / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Capacitive Voltage Probe	Schaffner	CVP2200A	18331	2009/11/16
EMI Test Receiver	R&S	ESCS 30	100366	2009/10/29
LISN	R&S	ENV216	100085	2010/02/17
LISN	R&S	ENV4200	833209/007	2009/08/14
Pulse Limiter	R&S	ESH3-Z2	357.88.10.52	2009/09/10
RF Current Probe	FCC	F-65 10KHz~1GHz	198	2009/11/13
BALANCED TELECOM ISN	FCC	FCC-TLISN-T2-02	20316	2009/11/22
BALANCED TELECOM ISN	FCC	FCC-TLISN-T4-02	20317	2009/11/22
BALANCED TELECOM ISN	FCC	FCC-TLISN-T8-02	20319	2009/11/22

Radiated Emission / Site3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2704	2009/08/01
Broadband Horn Antenna	Schwarzbeck	BBHA9170	209	2009/07/25
EMI Test Receiver	R&S	ESCS 30	100149	2010/01/14
Horn Antenna	Schwarzbeck	BBHA9120D	305	2009/08/26
Pre-Amplifier	QTK	N/A	N/A	2009/08/01
Spectrum Analyzer	Advantest	R3162	100803470	2009/11/24
EMI Test Receiver	R&S	ESI 26	838786/004	2009/06/26
Pre-Amplifier	MITEQ	QMF-4D-18040 0-45-6P	925974	2010/01/03

Radiated Emission / 9x6x6 Chamber

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Spectrum Analyzer (9K-26.5GHz)	Agilent	E4408B	MY45102743	2009/08/12
Horn Antenna	Schwarzbeck	9120D	576	2009/10/21
Pre-Amplifier	Quietek	AP-180C	CHM/071920	2009/08/01

Power Harmonics / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source(Harmonic)	Schaffner	NSG 1007	HK54148	2009/08/11
IEC1000-4-X Analyzer(Flicker)	Schaffner	CCN 1000-1	X7 1887	2009/08/11

Voltage Fluctuation and Flicker / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source(Harmonic)	Schaffner	NSG 1007	HK54148	2009/08/11
IEC1000-4-X Analyzer(Flicker)	Schaffner	CCN 1000-1	X7 1887	2009/08/11

Electrostatic Discharge / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
ESD Simulator System	Noiseken	TC-815R	ESS0929097	2009/07/06
Horizontal Coupling Plane(HCP)	QuieTek	HCP AL50	N/A	N/A
Vertical Coupling Plane(VCP)	QuieTek	VCP AL50	N/A	N/A

Radiated susceptibility / CB5

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AF-BOX	R&S	AF-BOX ACCUST	100007	N/A
Audio Analyzer	R&S	UPL 16	100137	2010/04/15
Biconilog Antenna	EMCO	3149	00071675	N/A
Directional Coupler	A&R	DC 6180	22735	N/A
Dual Microphone Supply	B&K	5935	2426784	2010/04/16
Mouth Simulator	B&K	4227	2439692	2010/04/16
Power Amplifier	A&R	30S1G3	309453	N/A
Power Amplifier	A&R	100W10000M7	A285000010	N/A
Power Amplifier	SCHAFFNER	CBA9413B	4020	N/A
Power Amplifier	AR	75A250A	0325371	N/A
Power Meter	R&S	NRVD(P.M)	100219	2010/04/16
Pre-Amplifier	A&R	150A220	23067	N/A
Probe Microphone	B&K	4182	2278070	2010/04/16
Signal Generator	R&S	SML03	103330	2009/09/08

Electrical fast transient/burst / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMC immunity system	Thermo	EMCPRO PLUS	0411225	2010/03/10

Surge / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMC immunity system	Thermo	EMCPRO PLUS	0411225	2010/03/10

Conducted susceptibility / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Schaffner NSG 2070 RF-Generator	Schaffner	N/A	N/A	2010/04/21

Power frequency magnetic field / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Induction Coil Interface	Schaffner	INA 2141	6002	N/A
Magnetic Loop Coil	Schaffner	INA 702	160	N/A
Triaxial ELF Magnetic Field Meter	F.B.BELL	4090	114135	2010/03/27

Voltage dips and interruption / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMC immunity system	Thermo	EMCPRO PLUS	0411225	2010/03/10

Schaffner NSG 2070 RF-Generator				
Instrument	Manufacturer	Type No.	Serial No	Cal. Date
CDN	Schaffner	CAL U100A	20405	N/A
CDN	Schaffner	TRA U150	20454	N/A
CDN M016S	Schaffner	CAL U100A	20410	N/A
CDN M016S	Schaffner	TRA U150	21167	N/A
CDN T002	Schaffner	CAL U100	20491	N/A
CDN T002	Schaffner	TRA U150	21169	N/A
CDN T400	Schaffner	CAL U100	17735	N/A
CDN T400	Schaffner	TRA U150	21166	N/A
Coupling Decoupling Network	Schaffner	CDN M016S	20823	2010/04/02
Coupling Decoupling Network	Schaffner	CDN T002	19018	2010/04/02
Coupling Decoupling Network	Schaffner	CDN T400	21226	2010/04/02
EM-CLAMP	Schaffner	KEMZ 801	21024	2010/04/02

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Impedance Stabilization Network

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

Electrostatic Discharge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in ESD testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant ESD standards. The immunity test signal from the ESD system meet the required specifications in IEC 61000-4-2 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 1.63 % and 2.76%.

Radiated susceptibility

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in RS testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant RS standards. The immunity test signal from the RS system meet the required specifications in IEC 61000-4-3 through the calibration for the uniform field strength and monitoring for the test level with the uncertainty evaluation report for the electrical field strength as being 2.72 dB.

Electrical fast transient/burst

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in EFT/Burst testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant EFT/Burst standards. The immunity test signal from the EFT/Burst system meet the required specifications in IEC 61000-4-4 through the calibration report with the calibrated uncertainty for the waveform of voltage, frequency and timing as being 1.63 % and 2.76%.

Surge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in Surge testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant Surge standards. The immunity test signal from the Surge system meet the required specifications in IEC 61000-4-5 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 1.63 % and 2.76%.

Conducted susceptibility

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in CS testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant CS standards. The immunity test signal from the CS system meet the required specifications in IEC 61000-4-6 through the calibration for unmodulated signal and monitoring for the test level with the uncertainty evaluation report for the injected modulated signal level through CDN and EM Clamp/Direct Injection as being 3.72 dB and 2.78 dB.

Power frequency magnetic field

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in PFM testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant PFM standards. The immunity test signal from the PFM system meet the required specifications in IEC 61000-4-8 through the calibration report with the calibrated uncertainty for the Gauss Meter to verify the output level of magnetic field strength as being 2 %.

Voltage dips and interruption

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in DIP testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant DIP standards. The immunity test signal from the DIP system meet the required specifications in IEC 61000-4-11 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 1.63 % and 2.76%.

2.4. Test Environment

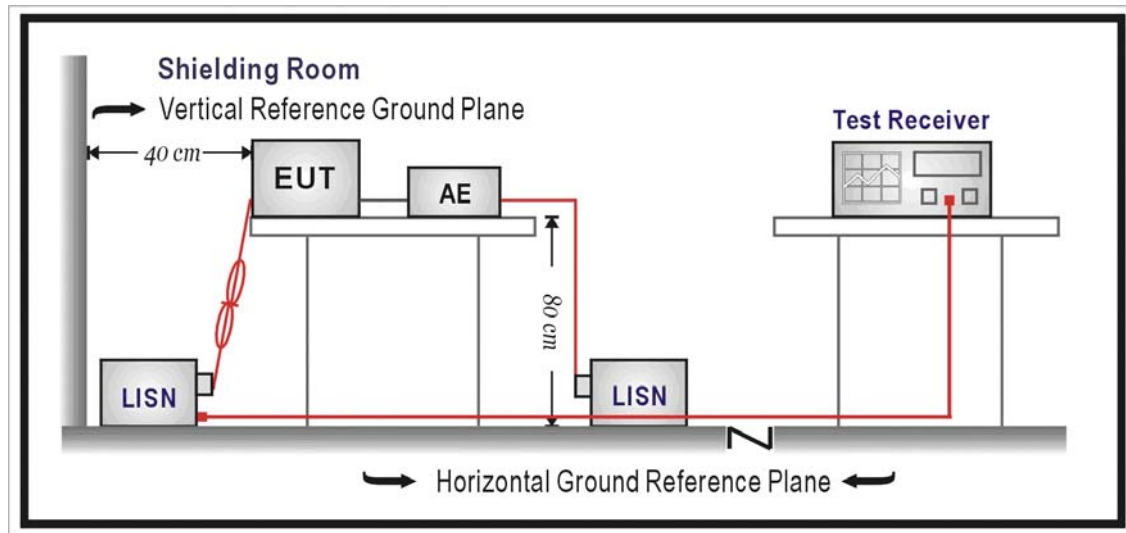
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Impedance Stabilization Network	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Electrostatic Discharge	Temperature (°C)	15-35	21
	Humidity (%RH)	30-60	51
	Barometric pressure (mbar)	860-1060	950-1000
Radiated susceptibility	Temperature (°C)	15-35	21
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Electrical fast transient/burst	Temperature (°C)	15-35	20
	Humidity (%RH)	25-75	45
	Barometric pressure (mbar)	860-1060	950-1000
Surge	Temperature (°C)	15-35	20
	Humidity (%RH)	10-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Conducted susceptibility	Temperature (°C)	15-35	20
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Power frequency magnetic field	Temperature (°C)	15-35	21
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Voltage dips and interruption	Temperature (°C)	15-35	20
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission (Main Terminals)

3.1. Test Specification

According to EMC Standard : EN 55022

3.2. Test Setup



3.3. Limit

Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 - 46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

3.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.

(Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed on conducted measurement.

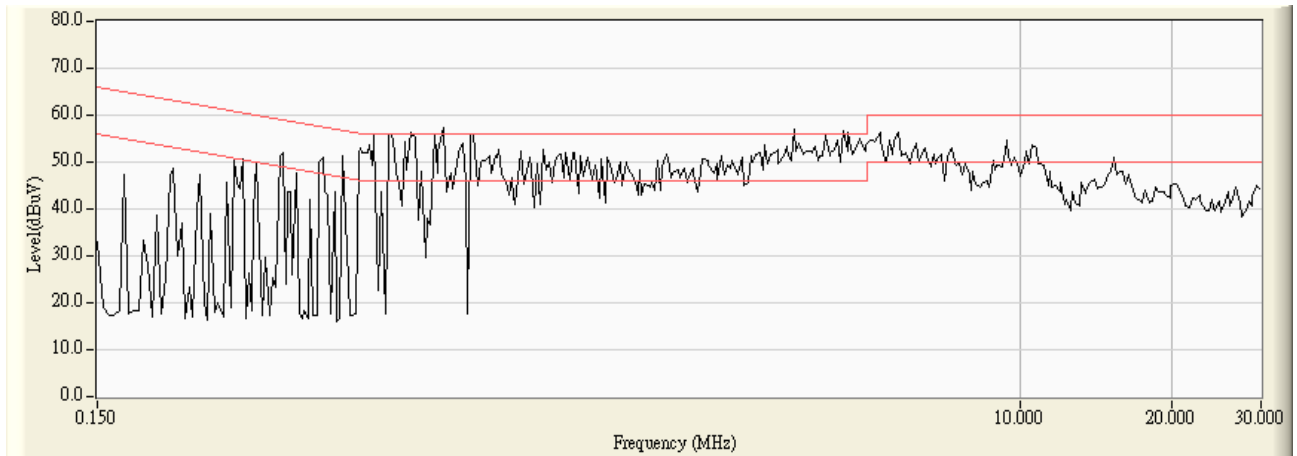
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Deviation from Test Standard

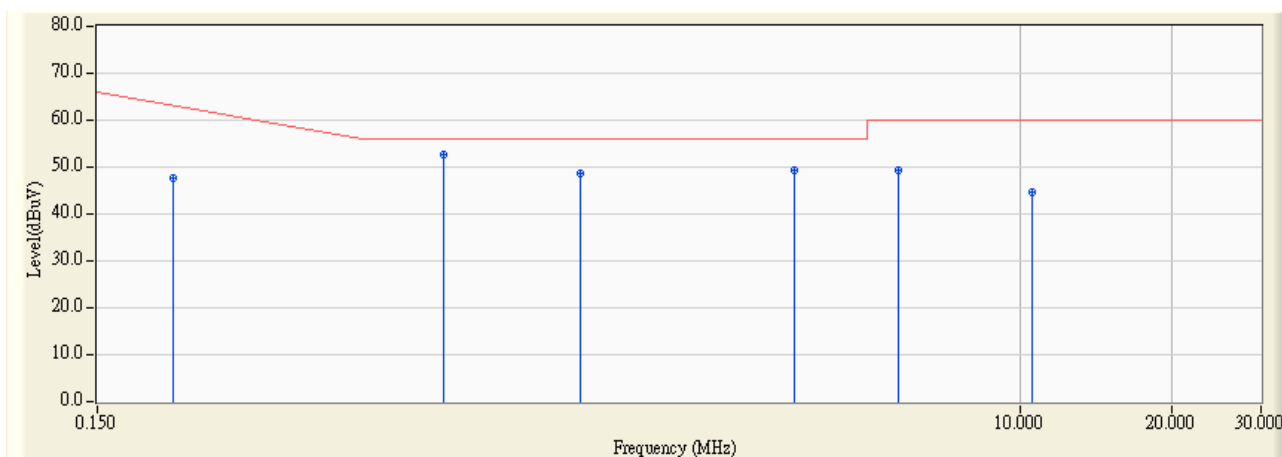
No deviation.

3.6. Test Result

Site : SR1	Time : 2010/04/14 - 00:53
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 1



Site : SR1	Time : 2010/04/14 - 00:53
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 1

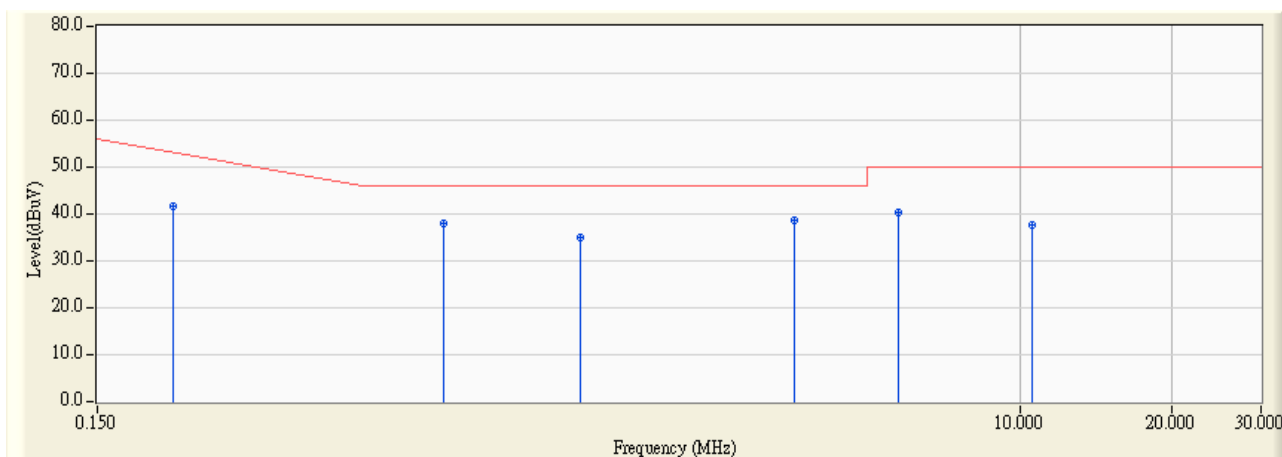


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.212	9.790	37.940	47.730	-16.499	64.229	QUASIPeAK
2	*	0.724	9.798	42.930	52.728	-3.272	56.000	QUASIPeAK
3		1.357	9.800	38.980	48.780	-7.220	56.000	QUASIPeAK
4		3.576	9.820	39.640	49.460	-6.540	56.000	QUASIPeAK
5		5.771	9.840	39.640	49.480	-10.520	60.000	QUASIPeAK
6		10.588	9.880	34.790	44.670	-15.330	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:53
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 1

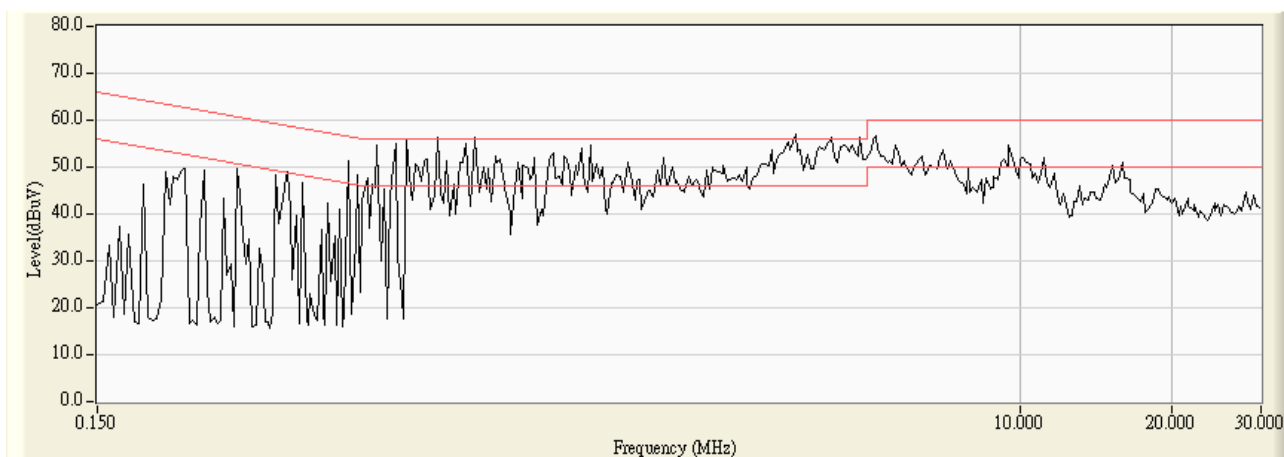


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.212	9.790	31.930	41.720	-12.509	54.229	AVERAGE
2		0.724	9.798	28.340	38.138	-7.862	46.000	AVERAGE
3		1.357	9.800	25.150	34.950	-11.050	46.000	AVERAGE
4	*	3.576	9.820	28.840	38.660	-7.340	46.000	AVERAGE
5		5.771	9.840	30.410	40.250	-9.750	50.000	AVERAGE
6		10.588	9.880	27.930	37.810	-12.190	50.000	AVERAGE

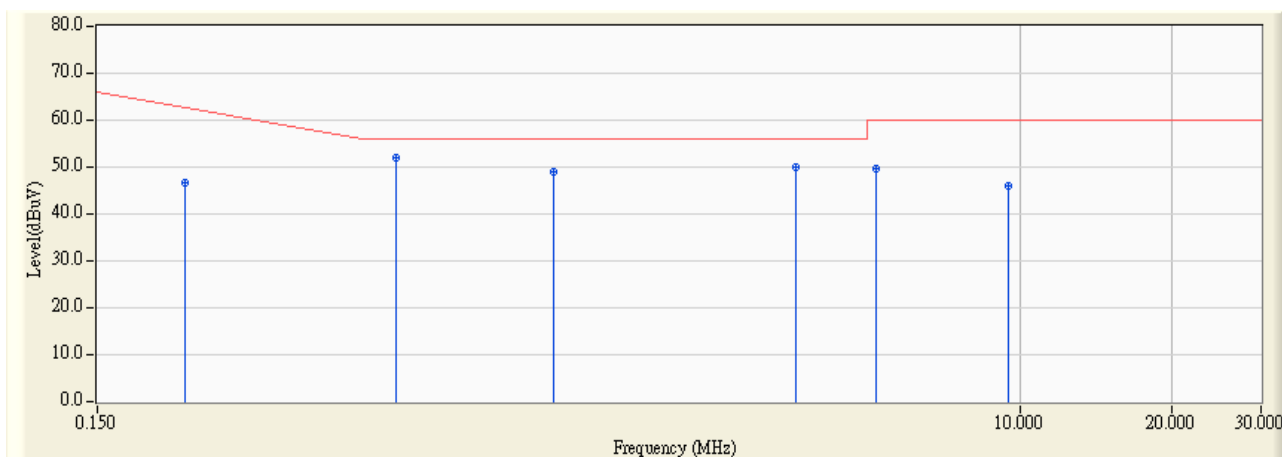
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:54
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 1



Site : SR1	Time : 2010/04/14 - 00:55
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 1

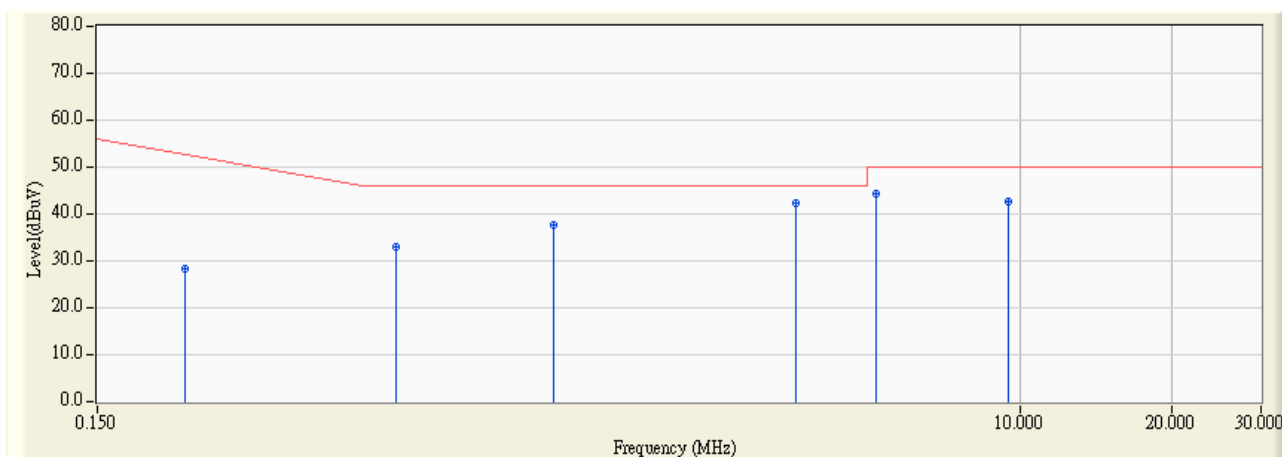


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.224	9.780	36.830	46.610	-17.276	63.886	QUASIPeAK
2	*	0.584	9.790	42.360	52.150	-3.850	56.000	QUASIPeAK
3		1.197	9.790	39.070	48.860	-7.140	56.000	QUASIPeAK
4		3.603	9.820	40.050	49.870	-6.130	56.000	QUASIPeAK
5		5.185	9.840	39.810	49.650	-10.350	60.000	QUASIPeAK
6		9.525	9.890	36.190	46.080	-13.920	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:55
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 1

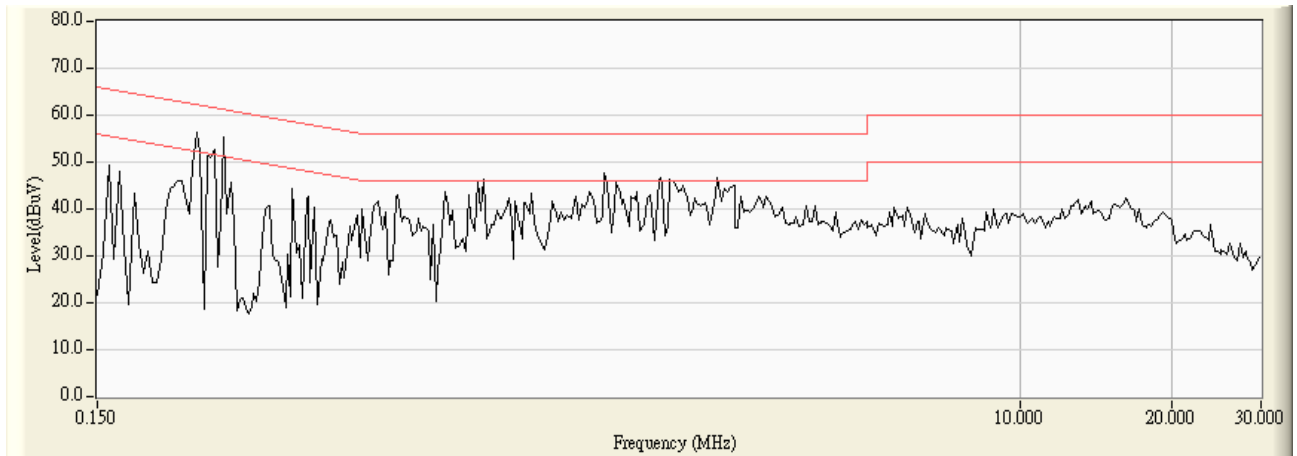


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.224	9.780	18.400	28.180	-25.706	53.886	AVERAGE
2		0.584	9.790	23.110	32.900	-13.100	46.000	AVERAGE
3		1.197	9.790	27.770	37.560	-8.440	46.000	AVERAGE
4	*	3.603	9.820	32.500	42.320	-3.680	46.000	AVERAGE
5		5.185	9.840	34.460	44.300	-5.700	50.000	AVERAGE
6		9.525	9.890	32.870	42.760	-7.240	50.000	AVERAGE

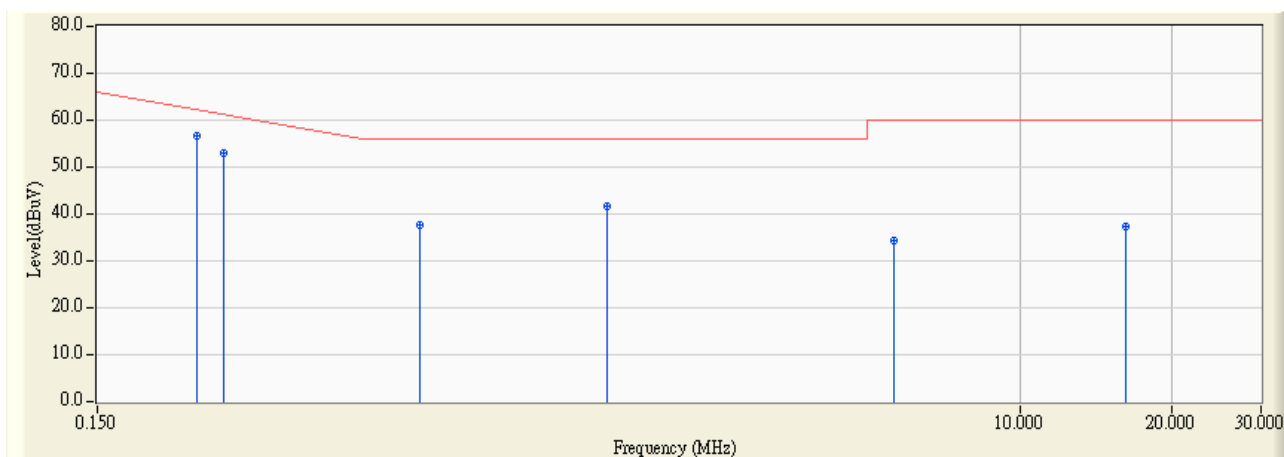
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:14
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 2



Site : SR1	Time : 2010/04/14 - 00:15
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 2

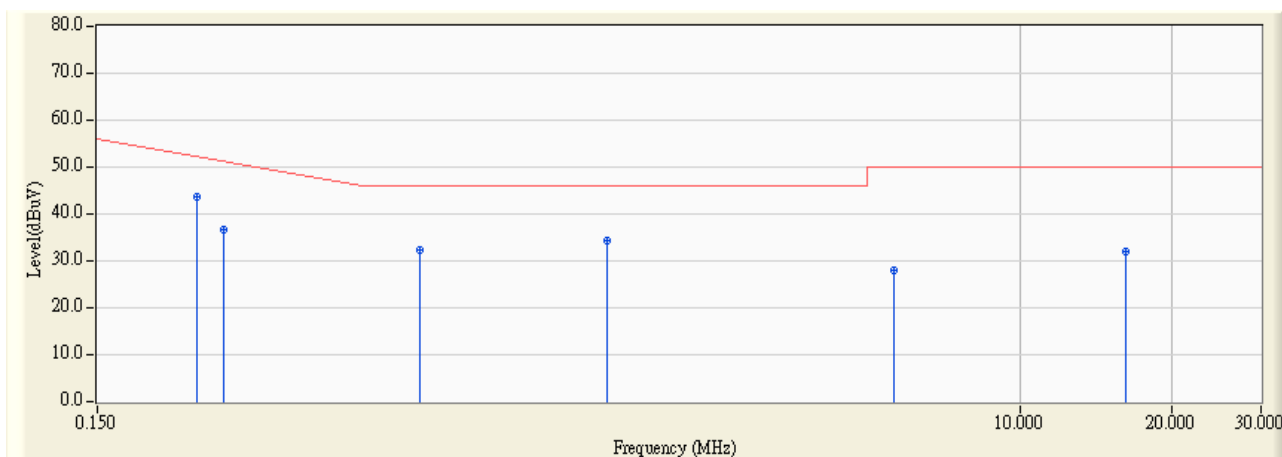


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.236	9.790	46.890	56.680	-6.863	63.543	QUASIPeAK
2		0.267	9.790	43.100	52.890	-9.767	62.657	QUASIPeAK
3		0.652	9.790	27.870	37.660	-18.340	56.000	QUASIPeAK
4		1.533	9.810	31.690	41.500	-14.500	56.000	QUASIPeAK
5		5.654	9.840	24.420	34.260	-25.740	60.000	QUASIPeAK
6		16.244	10.110	27.300	37.410	-22.590	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:15
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 2

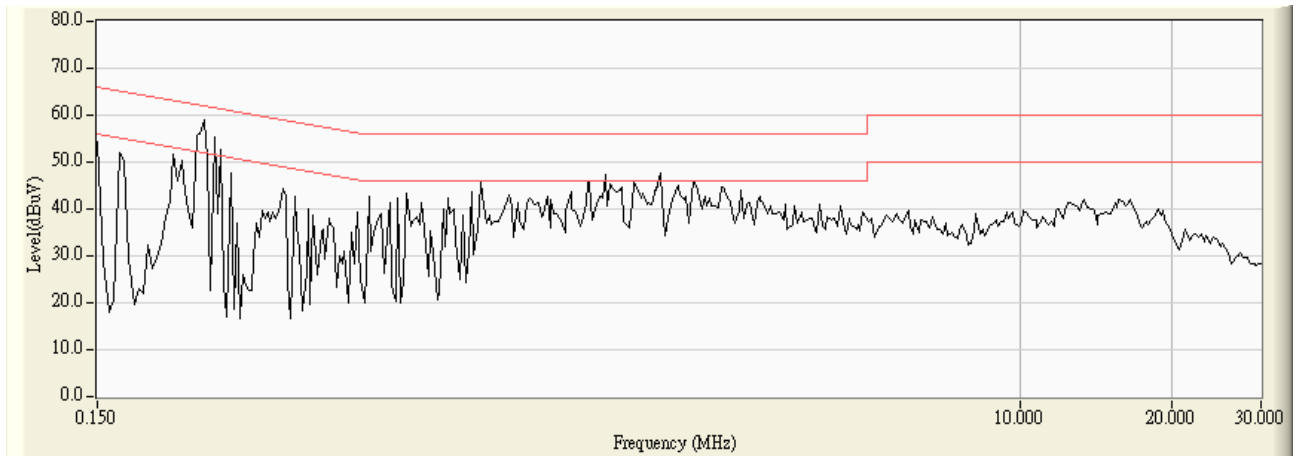


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.236	9.790	33.860	43.650	-9.893	53.543	AVERAGE
2		0.267	9.790	26.790	36.580	-16.077	52.657	AVERAGE
3		0.652	9.790	22.580	32.370	-13.630	46.000	AVERAGE
4		1.533	9.810	24.680	34.490	-11.510	46.000	AVERAGE
5		5.654	9.840	18.290	28.130	-21.870	50.000	AVERAGE
6		16.244	10.110	21.990	32.100	-17.900	50.000	AVERAGE

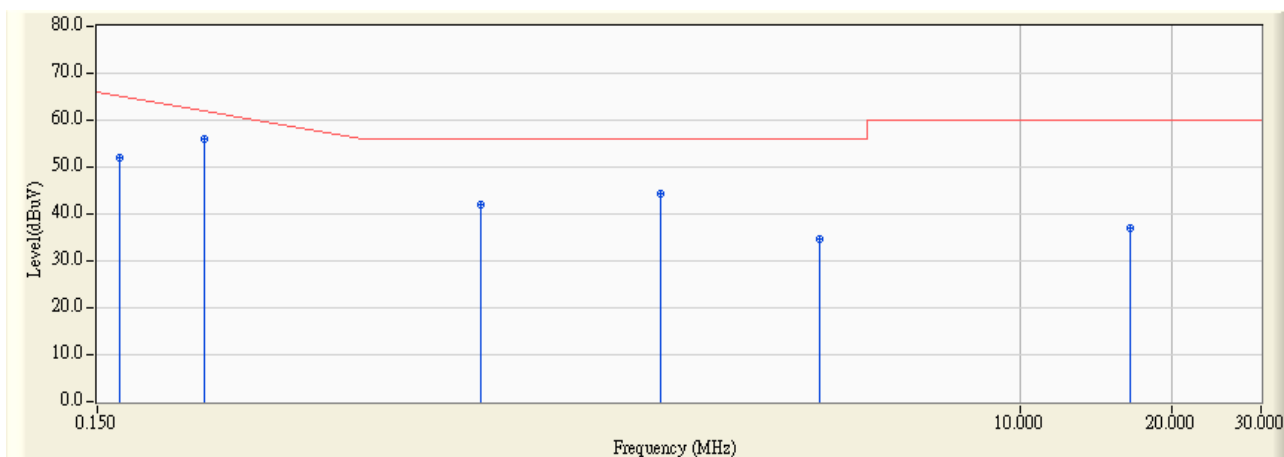
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:16
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 2



Site : SR1	Time : 2010/04/14 - 00:17
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 2

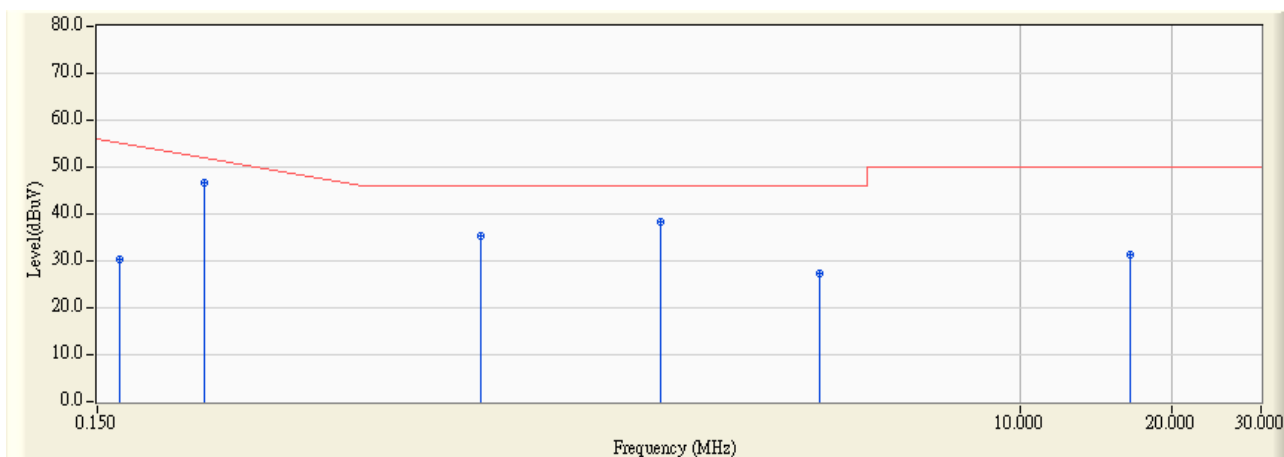


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.780	42.080	51.860	-13.683	65.543	QUASIPeAK
2	*	0.244	9.780	46.240	56.020	-7.294	63.314	QUASIPeAK
3		0.861	9.790	32.300	42.090	-13.910	56.000	QUASIPeAK
4		1.943	9.800	34.690	44.490	-11.510	56.000	QUASIPeAK
5		4.013	9.820	24.760	34.580	-21.420	56.000	QUASIPeAK
6		16.545	10.190	26.730	36.920	-23.080	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:17
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 2

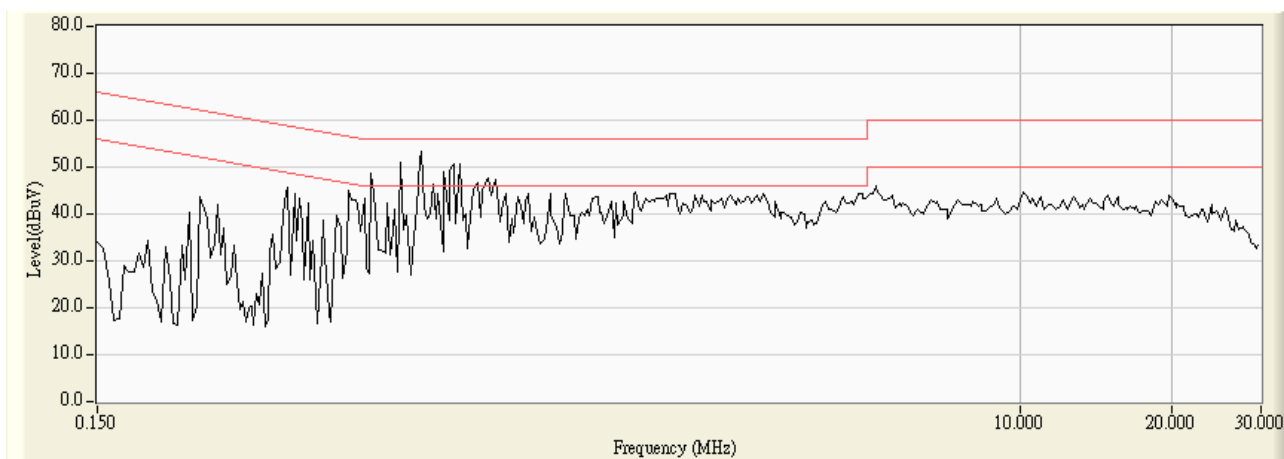


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.166	9.780	20.710	30.490	-25.053	55.543	AVERAGE
2	*	0.244	9.780	37.050	46.830	-6.484	53.314	AVERAGE
3		0.861	9.790	25.410	35.200	-10.800	46.000	AVERAGE
4		1.943	9.800	28.580	38.380	-7.620	46.000	AVERAGE
5		4.013	9.820	17.570	27.390	-18.610	46.000	AVERAGE
6		16.545	10.190	21.270	31.460	-18.540	50.000	AVERAGE

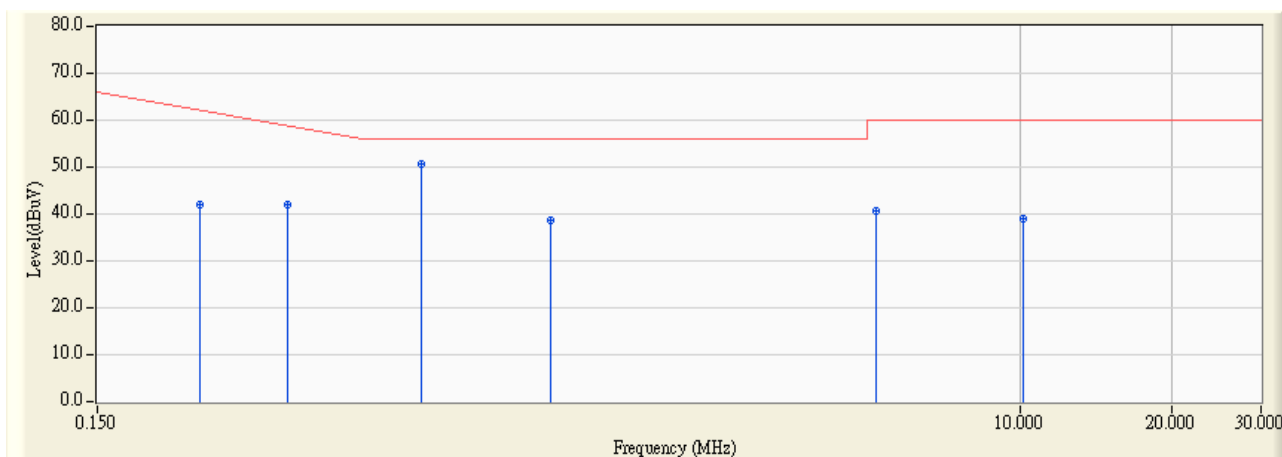
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:11
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 3



Site : SR1	Time : 2010/04/14 - 01:11
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 3

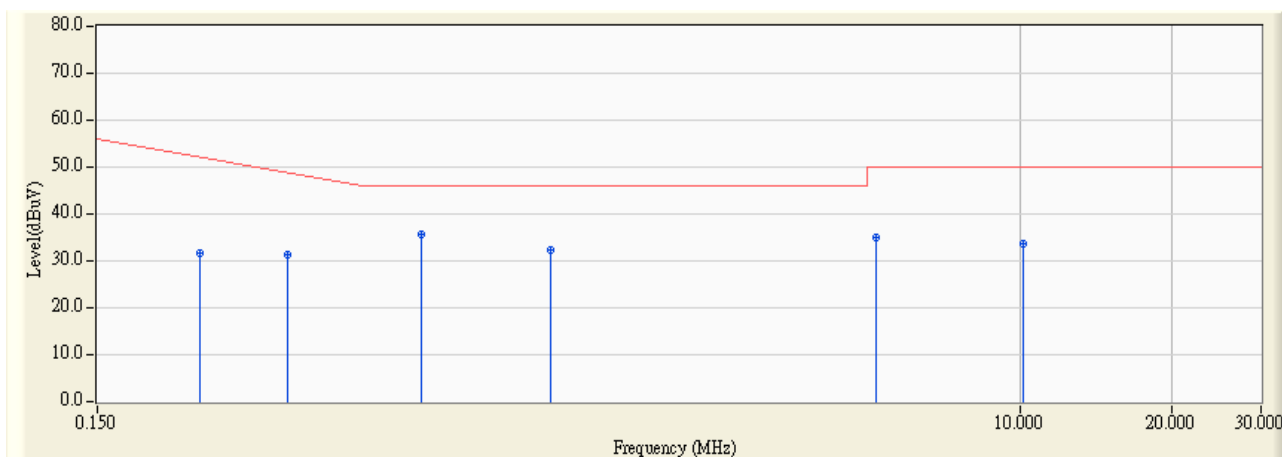


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.240	9.790	32.120	41.910	-21.519	63.429	QUASIPeAK
2		0.357	9.790	32.340	42.130	-17.956	60.086	QUASIPeAK
3	*	0.654	9.790	40.800	50.590	-5.410	56.000	QUASIPeAK
4		1.181	9.800	29.010	38.810	-17.190	56.000	QUASIPeAK
5		5.193	9.830	30.970	40.800	-19.200	60.000	QUASIPeAK
6		10.138	9.880	29.040	38.920	-21.080	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:11
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 3

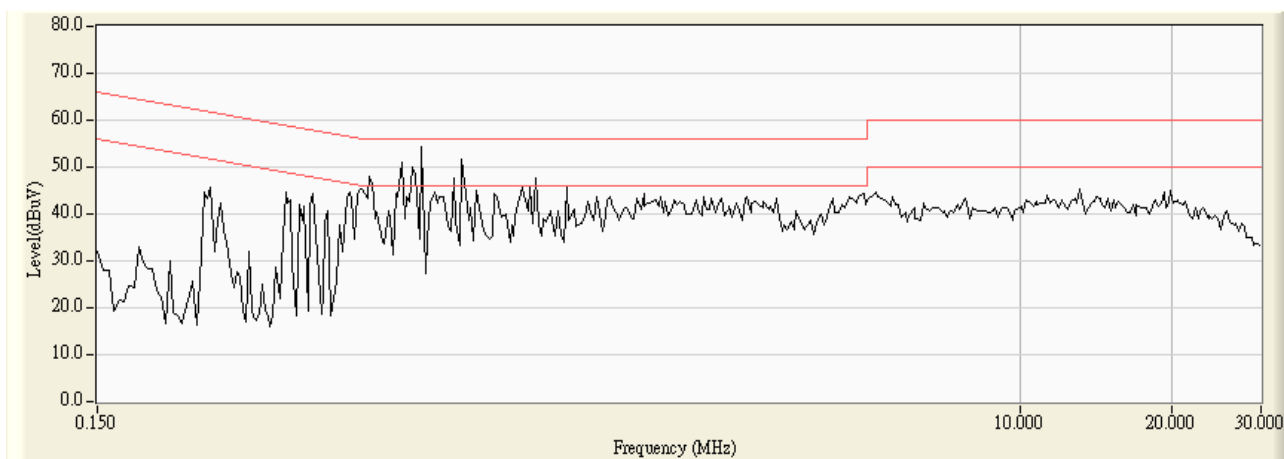


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.240	9.790	21.950	31.740	-21.689	53.429	AVERAGE
2		0.357	9.790	21.540	31.330	-18.756	50.086	AVERAGE
3	*	0.654	9.790	25.770	35.560	-10.440	46.000	AVERAGE
4		1.181	9.800	22.560	32.360	-13.640	46.000	AVERAGE
5		5.193	9.830	25.310	35.140	-14.860	50.000	AVERAGE
6		10.138	9.880	23.780	33.660	-16.340	50.000	AVERAGE

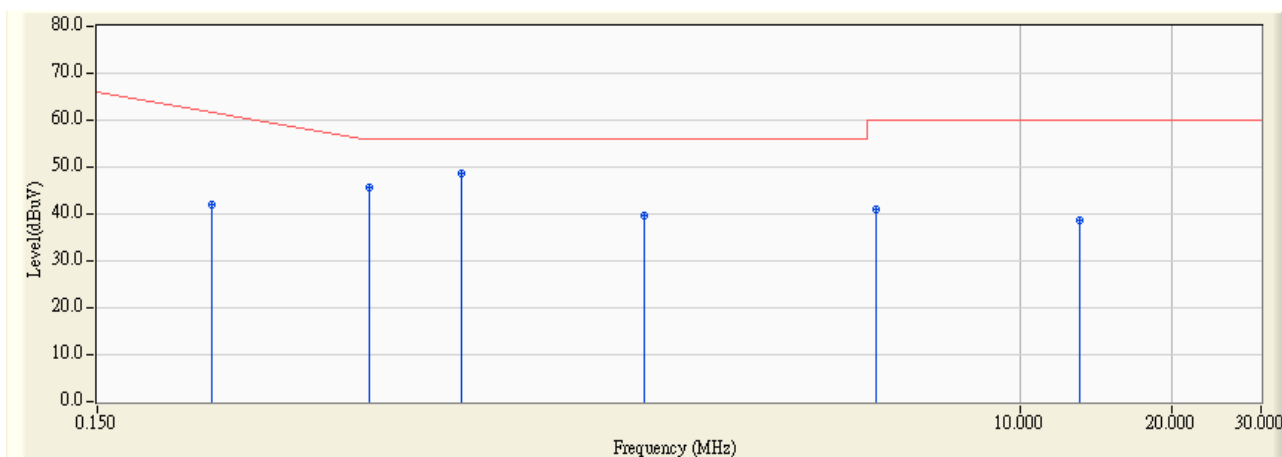
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:12
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 3



Site : SR1	Time : 2010/04/14 - 01:12
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 3

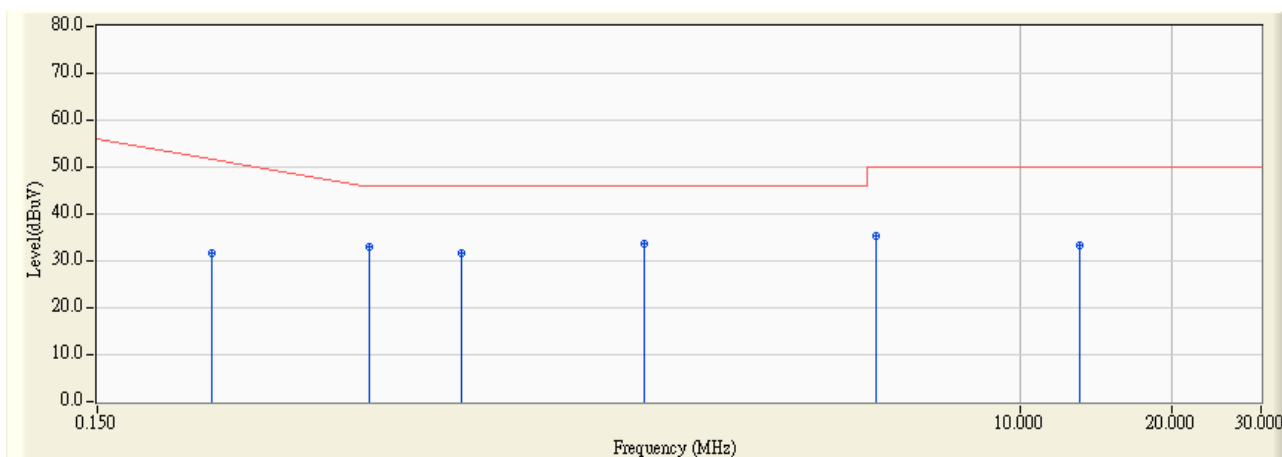


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.252	9.780	32.180	41.960	-21.126	63.086	QUASIPeAK
2		0.517	9.790	35.840	45.630	-10.370	56.000	QUASIPeAK
3	*	0.787	9.790	38.890	48.680	-7.320	56.000	QUASIPeAK
4		1.806	9.800	29.750	39.550	-16.450	56.000	QUASIPeAK
5		5.193	9.840	31.010	40.850	-19.150	60.000	QUASIPeAK
6		13.154	10.122	28.450	38.572	-21.428	60.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:12
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 3



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.252	9.780	21.840	31.620	-21.466	53.086	AVERAGE
2		0.517	9.790	23.140	32.930	-13.070	46.000	AVERAGE
3		0.787	9.790	21.930	31.720	-14.280	46.000	AVERAGE
4	*	1.806	9.800	23.820	33.620	-12.380	46.000	AVERAGE
5		5.193	9.840	25.540	35.380	-14.620	50.000	AVERAGE
6		13.154	10.122	23.100	33.222	-16.778	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3.7. Test Photograph

Test Mode : Mode 1

Description : Front View of Conducted Test



Test Mode : Mode 1

Description : Back View of Conducted Test



Test Mode : Mode 2

Description : Front View of Conducted Test



Test Mode : Mode 2

Description : Back View of Conducted Test



Test Mode : Mode 3

Description : Front View of Conducted Test



Test Mode : Mode 3

Description : Back View of Conducted Test

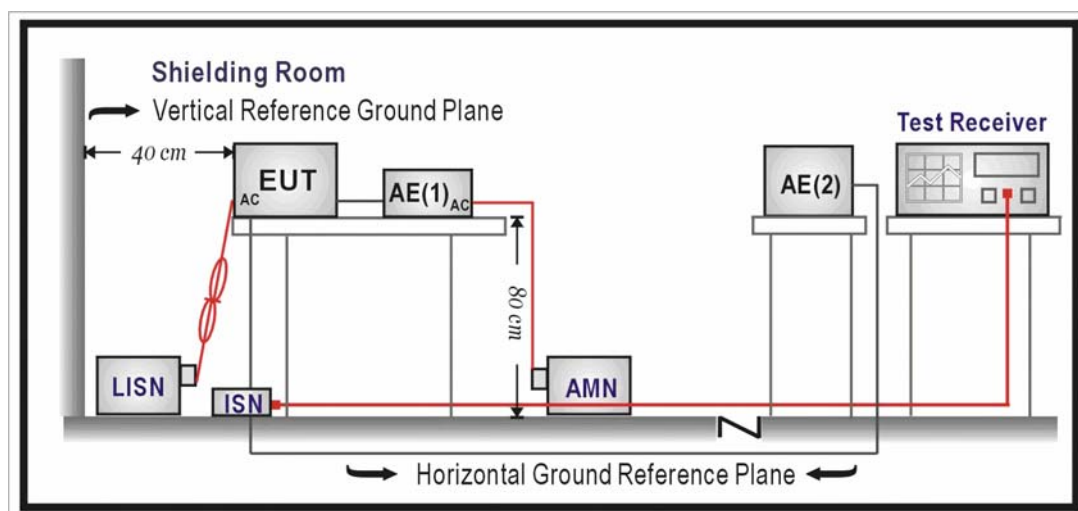


4. Conducted Emissions (Telecommunication Ports)

4.1. Test Specification

According to EMC Standard : EN 55022

4.2. Test Setup



4.3. Limit

Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	84 – 74	74 – 64
0.50 - 30	74	64

Remarks:

The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz.

4.4. Test Procedure

Telecommunication Port:

The mains voltage shall be supplied to the EUT via the LISN when the measurement of telecommunication port is performed. The common mode disturbances at the telecommunication port shall be connected to the ISN, which is 150 ohm impedance.

Both alternative cables are tested related to the LCL requested. The measurement range is from 150kHz to 30MHz. The bandwidth of measurement is set to 9kHz.

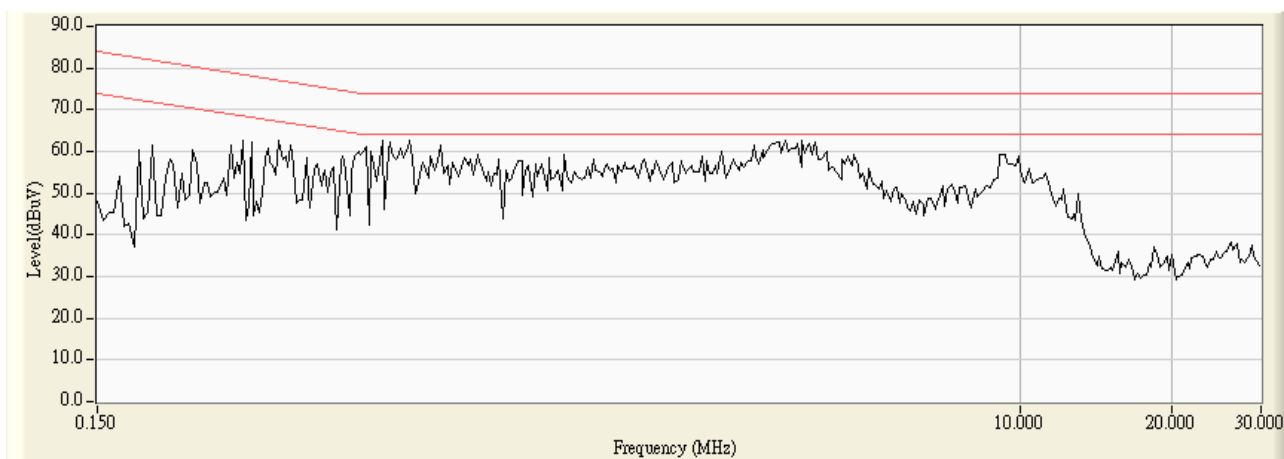
The 75dB LCL ISN is used for cat. 6 cable, the 65dB LCL ISN is used for cat. 5 cable, 55dB LCL ISN is used for cat. 3.

4.5. Deviation from Test Standard

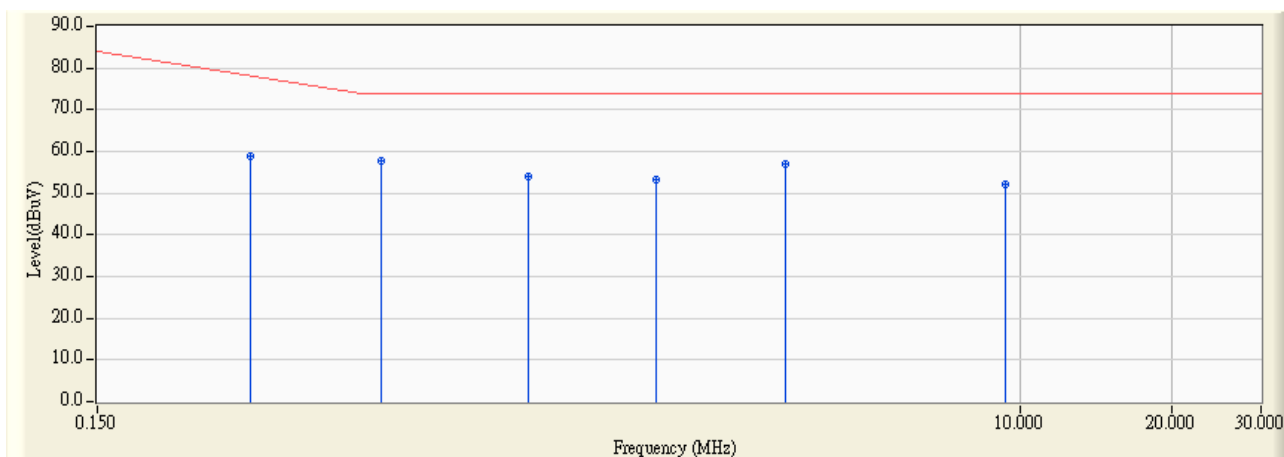
No deviation.

4.6. Test Result

Site : SR1	Time : 2010/04/14 - 00:56
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 10M



Site : SR1	Time : 2010/04/14 - 00:57
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 10M

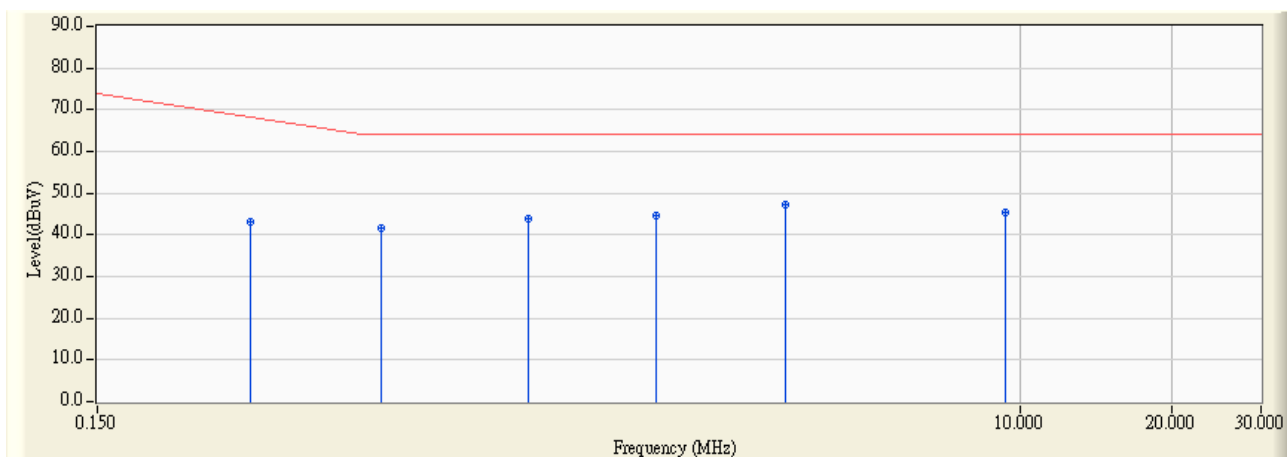


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.302	10.019	48.740	58.759	-20.898	79.657	QUASIPeAK
2	*	0.548	9.990	47.610	57.600	-16.400	74.000	QUASIPeAK
3		1.068	9.980	43.950	53.930	-20.070	74.000	QUASIPeAK
4		1.912	10.000	43.350	53.350	-20.650	74.000	QUASIPeAK
5		3.447	9.990	46.900	56.890	-17.110	74.000	QUASIPeAK
6		9.341	9.960	42.350	52.310	-21.690	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:57
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 10M

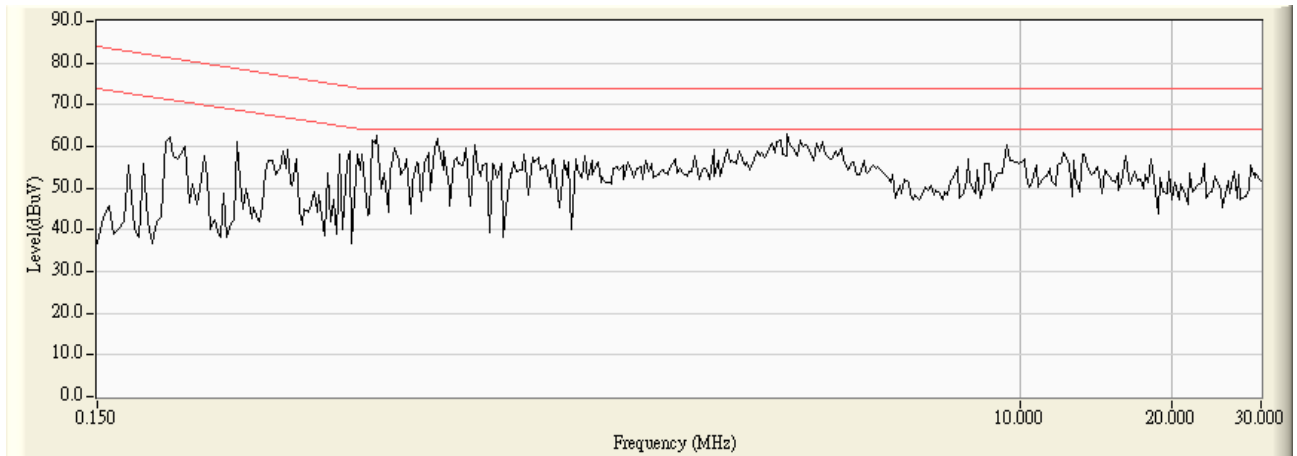


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.302	10.019	33.210	43.229	-26.428	69.657	AVERAGE
2		0.548	9.990	31.570	41.560	-22.440	64.000	AVERAGE
3		1.068	9.980	33.750	43.730	-20.270	64.000	AVERAGE
4		1.912	10.000	34.450	44.450	-19.550	64.000	AVERAGE
5	*	3.447	9.990	37.210	47.200	-16.800	64.000	AVERAGE
6		9.341	9.960	35.280	45.240	-18.760	64.000	AVERAGE

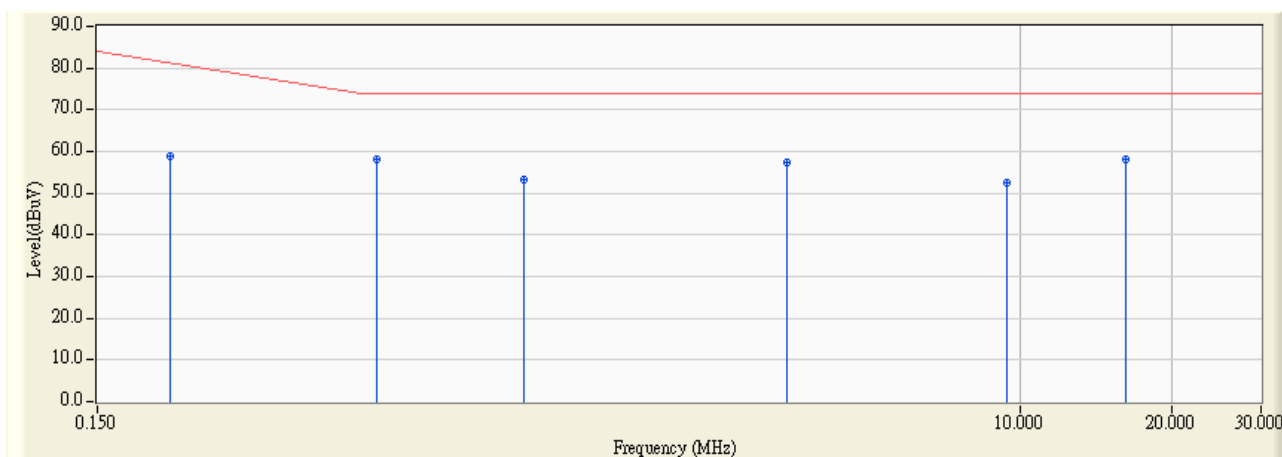
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:58
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 100M



Site : SR1	Time : 2010/04/14 - 00:59
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 100M

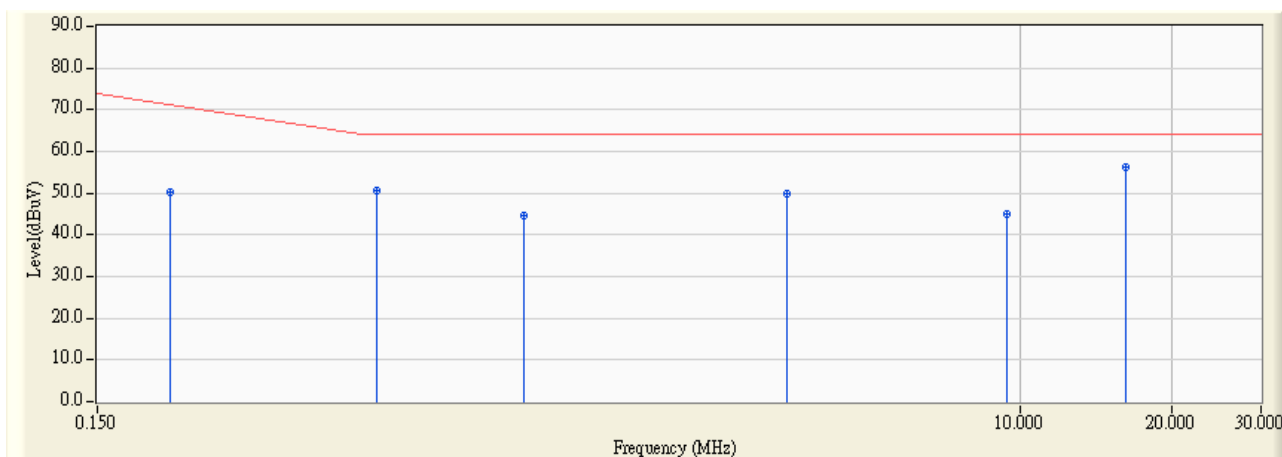


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.209	10.030	48.910	58.940	-23.374	82.314	QUASIPeAK
2		0.537	9.990	48.180	58.170	-15.830	74.000	QUASIPeAK
3		1.048	9.980	43.200	53.180	-20.820	74.000	QUASIPeAK
4		3.466	9.990	47.450	57.440	-16.560	74.000	QUASIPeAK
5		9.435	9.960	42.400	52.360	-21.640	74.000	QUASIPeAK
6	*	16.228	10.130	48.180	58.310	-15.690	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:59
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 100M

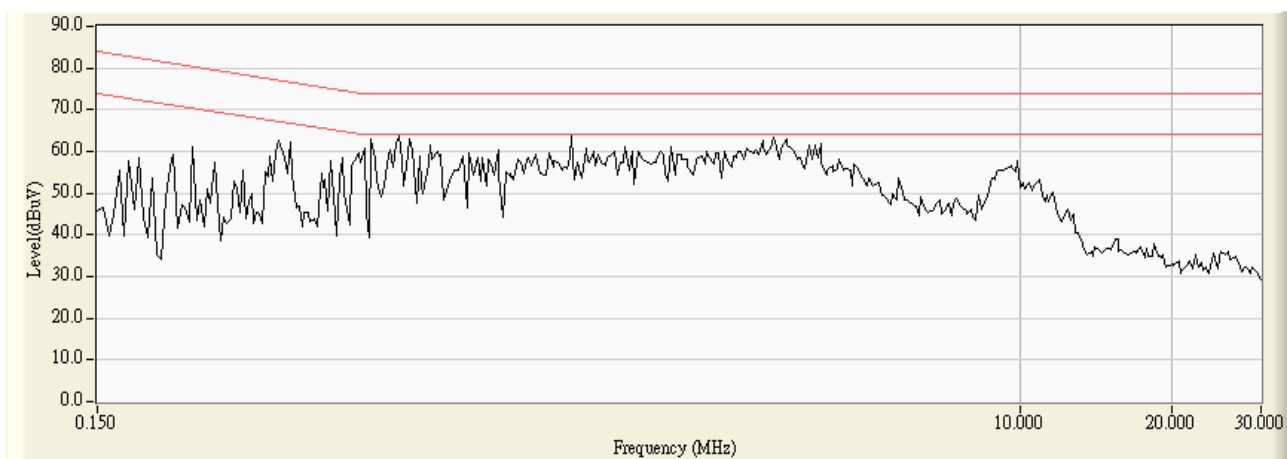


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.209	10.030	40.240	50.270	-22.044	72.314	AVERAGE
2		0.537	9.990	40.620	50.610	-13.390	64.000	AVERAGE
3		1.048	9.980	34.710	44.690	-19.310	64.000	AVERAGE
4		3.466	9.990	39.820	49.810	-14.190	64.000	AVERAGE
5		9.435	9.960	34.980	44.940	-19.060	64.000	AVERAGE
6	*	16.228	10.130	46.150	56.280	-7.720	64.000	AVERAGE

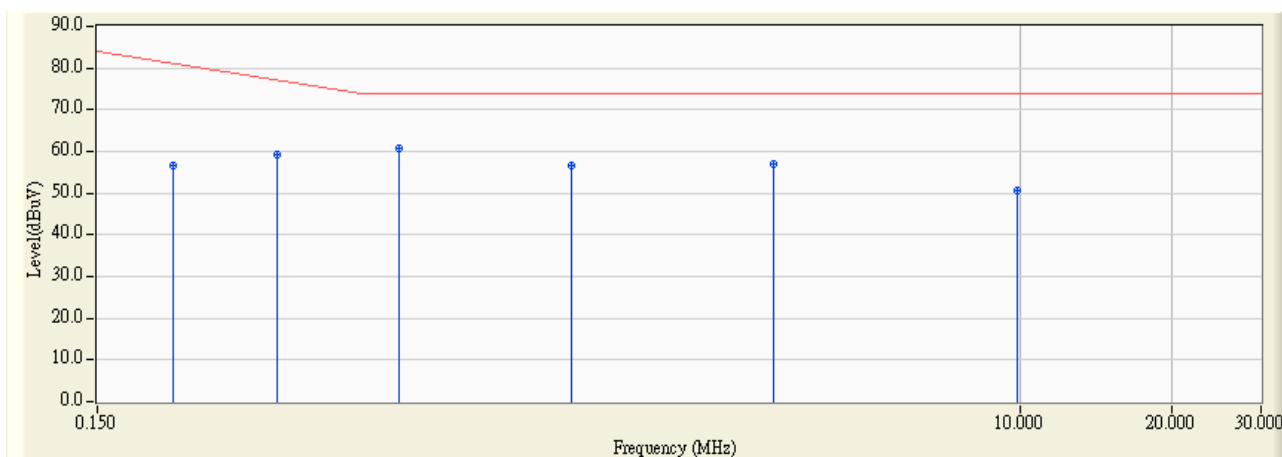
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:00
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN GIGA



Site : SR1	Time : 2010/04/14 - 01:00
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN GIGA

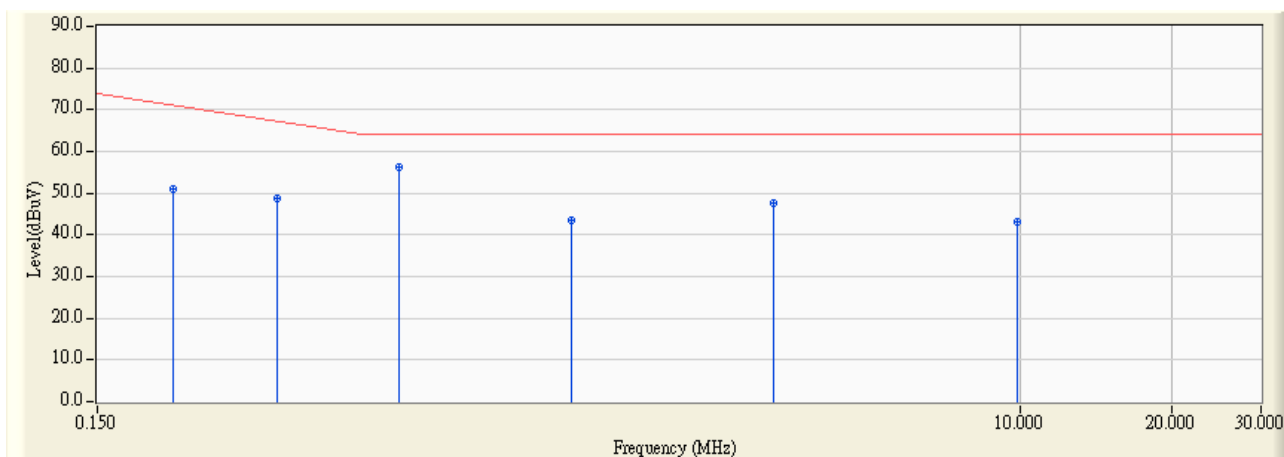


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.212	10.229	46.490	56.719	-25.510	82.229	QUASIPeAK
2		0.341	10.196	48.980	59.176	-19.367	78.543	QUASIPeAK
3	*	0.591	10.150	50.680	60.830	-13.170	74.000	QUASIPeAK
4		1.302	10.100	46.530	56.630	-17.370	74.000	QUASIPeAK
5		3.263	10.060	46.820	56.880	-17.120	74.000	QUASIPeAK
6		9.908	10.070	40.710	50.780	-23.220	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:00
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN GIGA

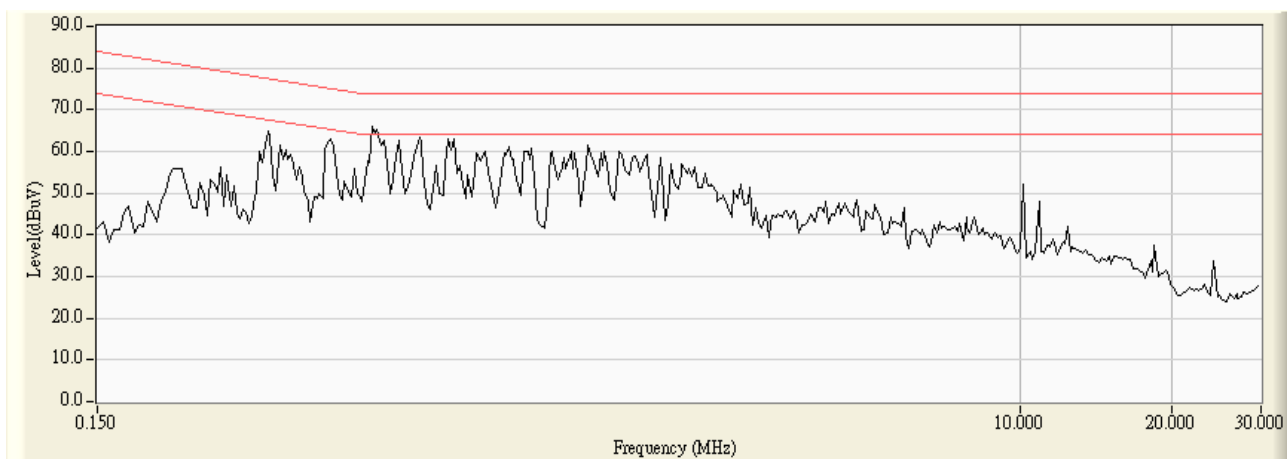


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.212	10.229	40.770	50.999	-21.230	72.229	AVERAGE
2		0.341	10.196	38.370	48.566	-19.977	68.543	AVERAGE
3	*	0.591	10.150	45.970	56.120	-7.880	64.000	AVERAGE
4		1.302	10.100	33.580	43.680	-20.320	64.000	AVERAGE
5		3.263	10.060	37.510	47.570	-16.430	64.000	AVERAGE
6		9.908	10.070	33.090	43.160	-20.840	64.000	AVERAGE

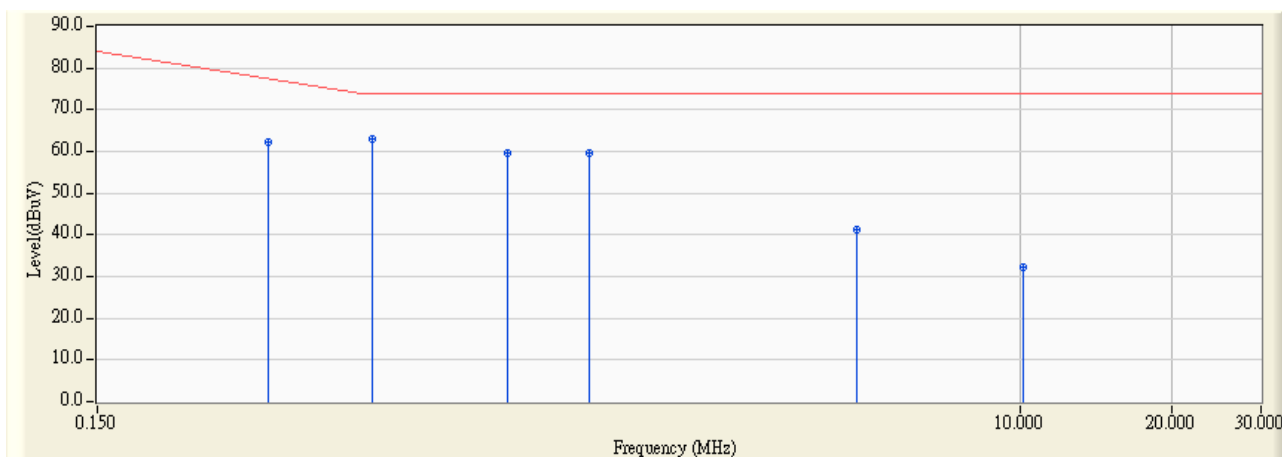
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:23
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN 10M



Site : SR1	Time : 2010/04/14 - 00:24
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN 10M

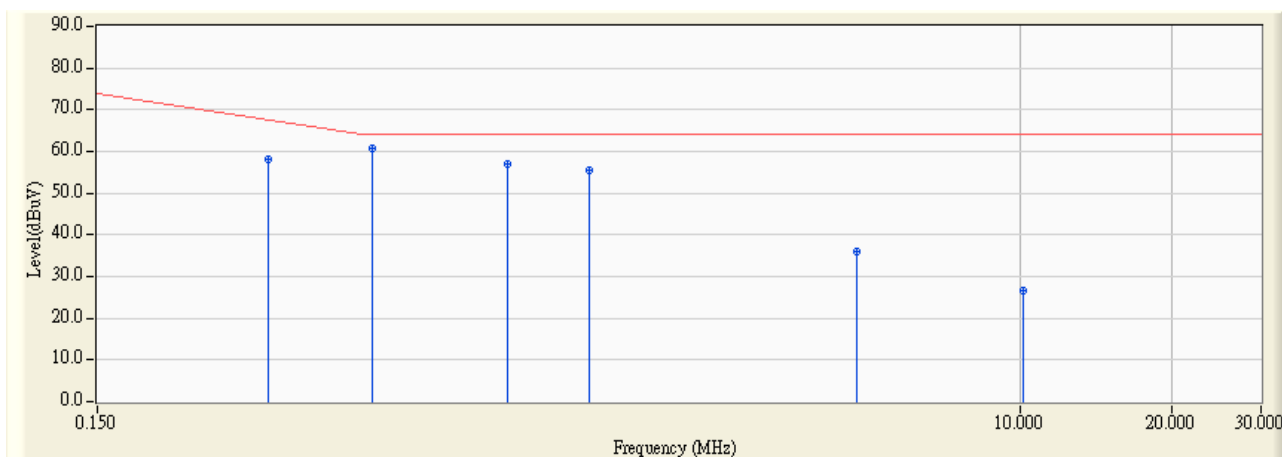


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.326	10.011	52.340	62.351	-16.620	78.971	QUASIPeAK
2	*	0.525	9.990	53.060	63.050	-10.950	74.000	QUASIPeAK
3		0.974	9.980	49.650	59.630	-14.370	74.000	QUASIPeAK
4		1.404	9.990	49.740	59.730	-14.270	74.000	QUASIPeAK
5		4.759	9.980	31.280	41.260	-32.740	74.000	QUASIPeAK
6		10.185	9.960	22.460	32.420	-41.580	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:24
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN 10M

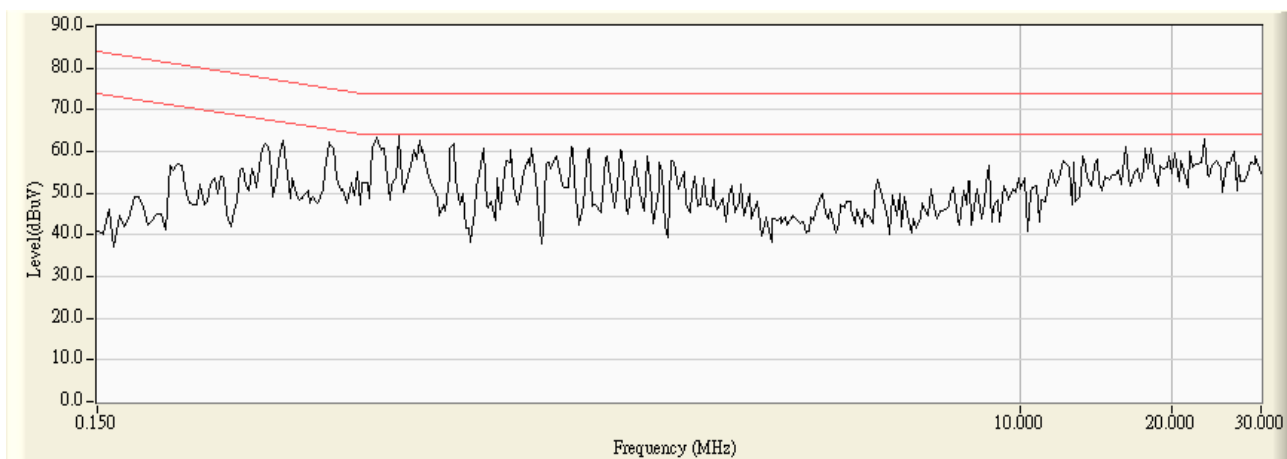


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.326	10.011	48.060	58.071	-10.900	68.971	AVERAGE
2	*	0.525	9.990	50.700	60.690	-3.310	64.000	AVERAGE
3		0.974	9.980	46.890	56.870	-7.130	64.000	AVERAGE
4		1.404	9.990	45.620	55.610	-8.390	64.000	AVERAGE
5		4.759	9.980	25.890	35.870	-28.130	64.000	AVERAGE
6		10.185	9.960	16.670	26.630	-37.370	64.000	AVERAGE

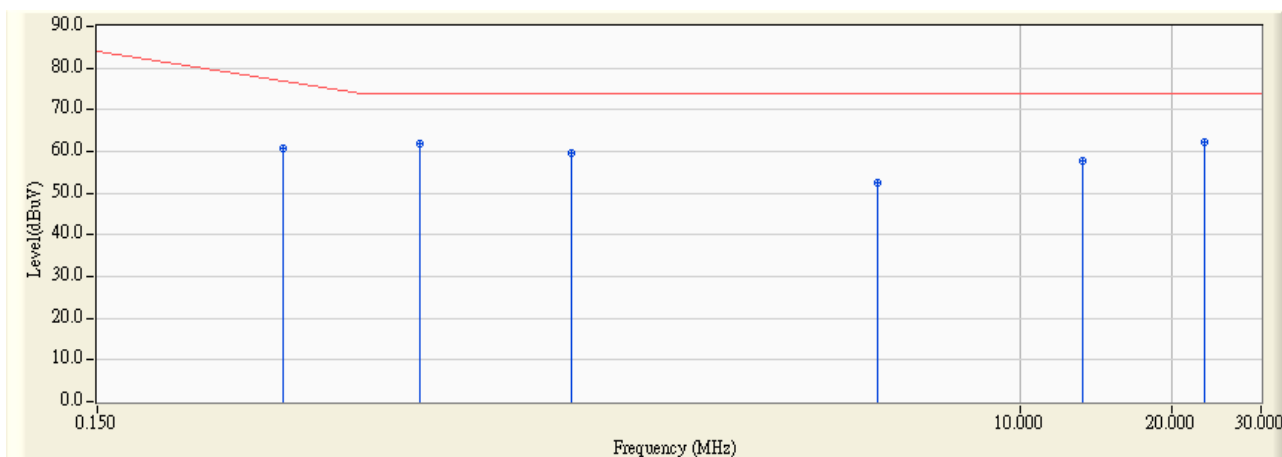
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:27
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN 100M



Site : SR1	Time : 2010/04/14 - 00:28
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN 100M

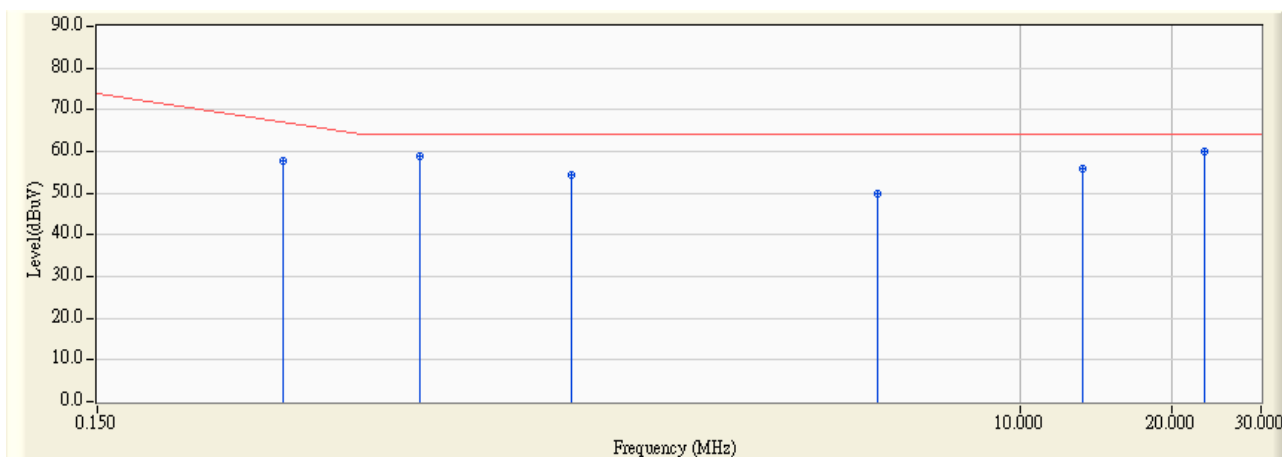


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.349	10.010	50.800	60.810	-17.504	78.314	QUASIPeAK
2		0.650	9.990	51.900	61.890	-12.110	74.000	QUASIPeAK
3		1.295	9.990	49.520	59.510	-14.490	74.000	QUASIPeAK
4		5.236	9.980	42.510	52.490	-21.510	74.000	QUASIPeAK
5		13.357	10.150	47.770	57.920	-16.080	74.000	QUASIPeAK
6	*	23.127	10.100	52.250	62.350	-11.650	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:28
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN 100M

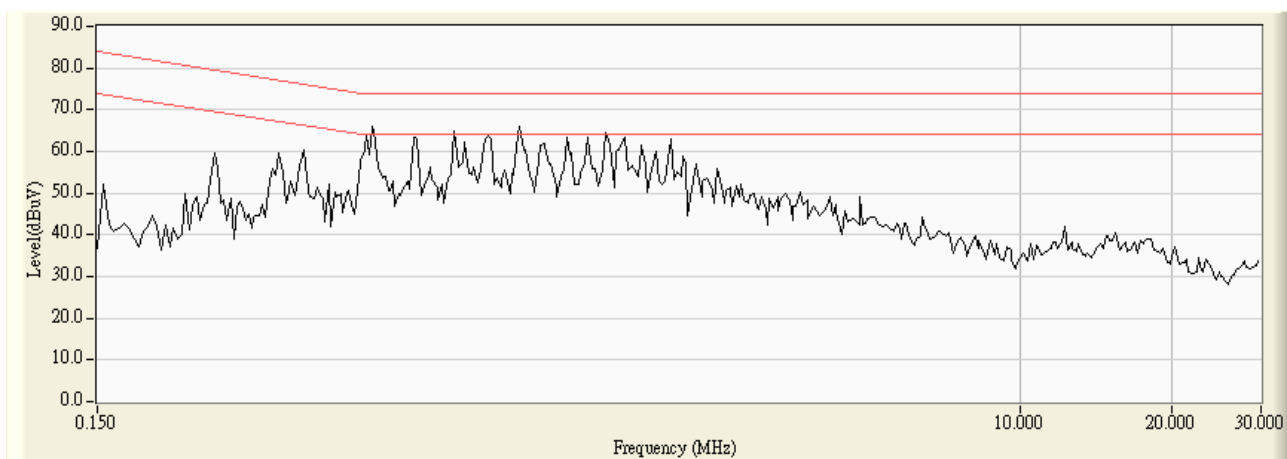


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.349	10.010	47.560	57.570	-10.744	68.314	AVERAGE
2		0.650	9.990	48.830	58.820	-5.180	64.000	AVERAGE
3		1.295	9.990	44.510	54.500	-9.500	64.000	AVERAGE
4		5.236	9.980	40.050	50.030	-13.970	64.000	AVERAGE
5		13.357	10.150	45.820	55.970	-8.030	64.000	AVERAGE
6	*	23.127	10.100	50.070	60.170	-3.830	64.000	AVERAGE

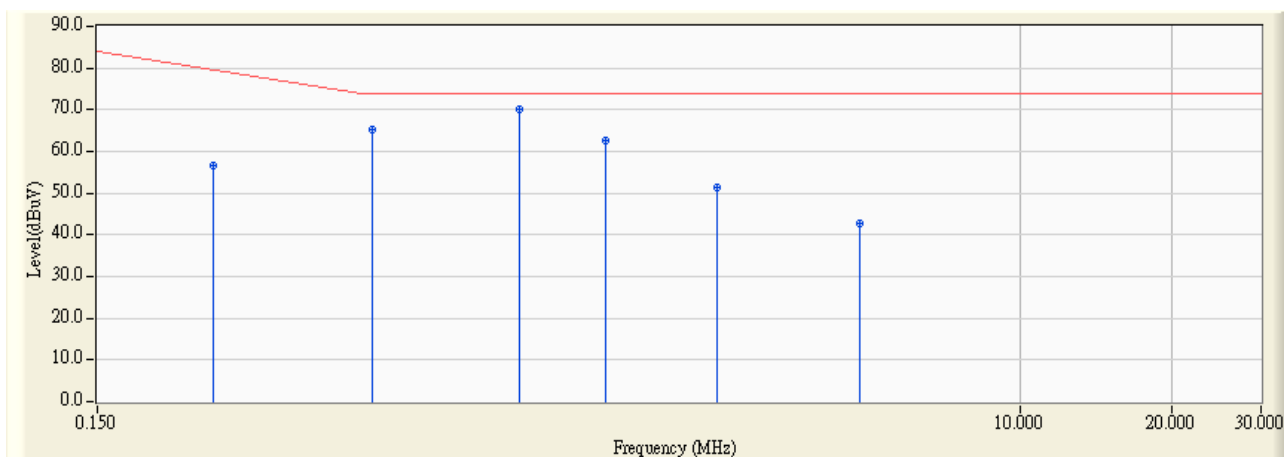
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:34
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN GIGA



Site : SR1	Time : 2010/04/14 - 00:34
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN GIGA

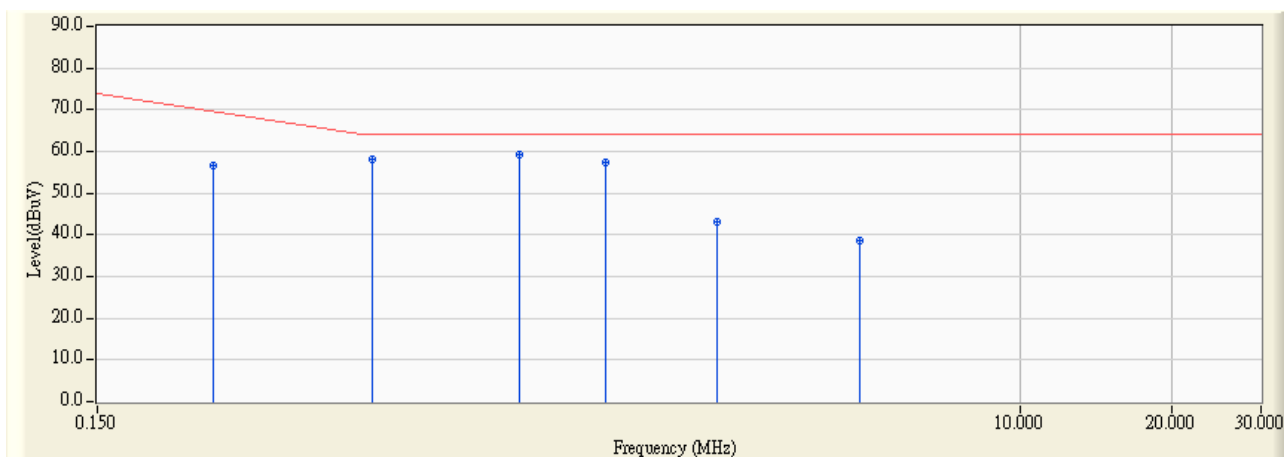


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.255	10.215	46.320	56.535	-24.465	81.000	QUASIPeAK
2		0.525	10.160	55.110	65.270	-8.730	74.000	QUASIPeAK
3	*	1.025	10.110	60.120	70.230	-3.770	74.000	QUASIPeAK
4		1.521	10.090	52.450	62.540	-11.460	74.000	QUASIPeAK
5		2.525	10.070	41.140	51.210	-22.790	74.000	QUASIPeAK
6		4.830	10.050	32.690	42.740	-31.260	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 00:34
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 2, ISN GIGA

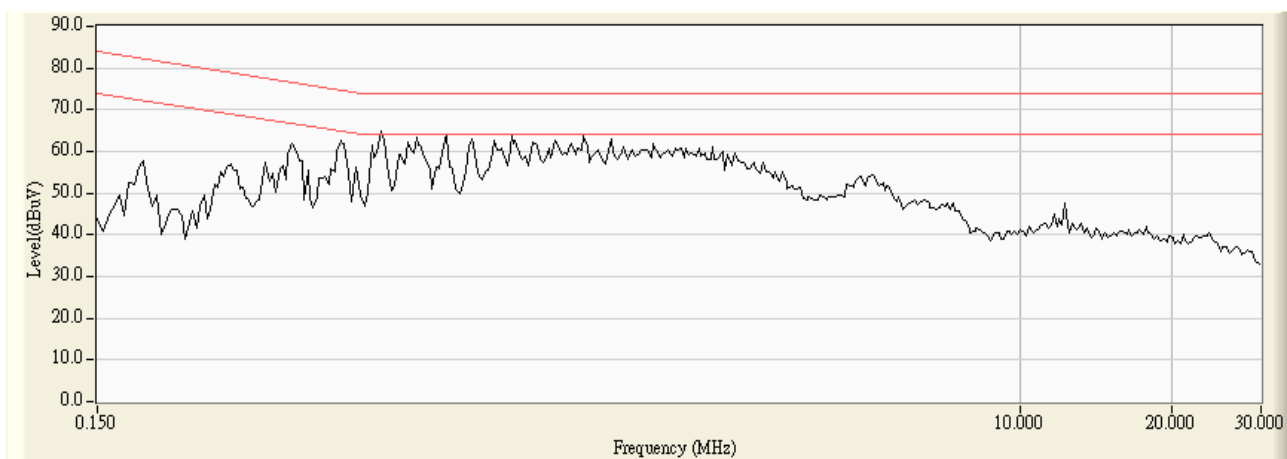


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.255	10.215	46.250	56.465	-14.535	71.000	AVERAGE
2		0.525	10.160	47.830	57.990	-6.010	64.000	AVERAGE
3	*	1.025	10.110	49.110	59.220	-4.780	64.000	AVERAGE
4		1.521	10.090	47.110	57.200	-6.800	64.000	AVERAGE
5		2.525	10.070	33.000	43.070	-20.930	64.000	AVERAGE
6		4.830	10.050	28.630	38.680	-25.320	64.000	AVERAGE

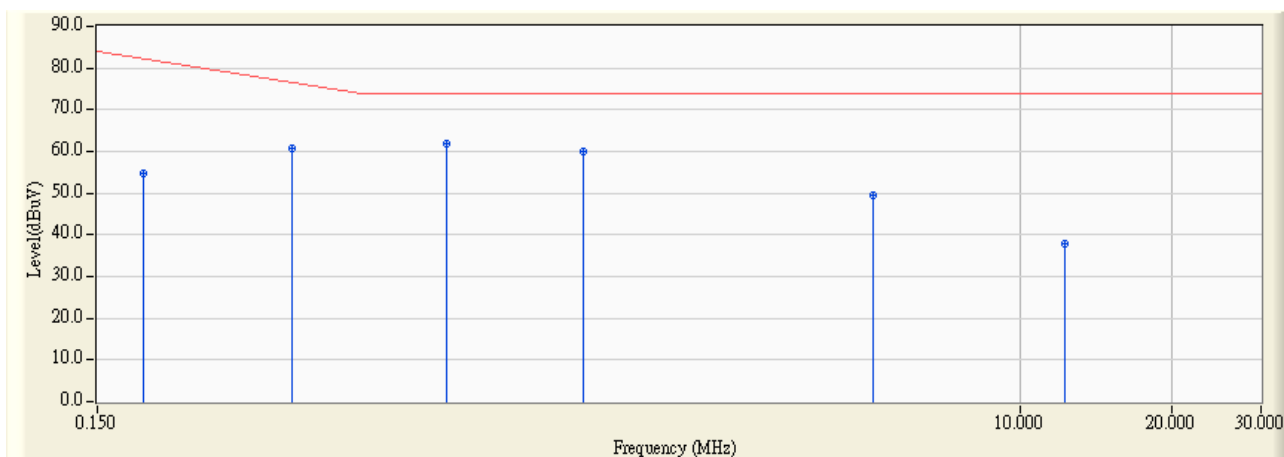
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:13
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN 10M



Site : SR1	Time : 2010/04/14 - 01:13
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN 10M

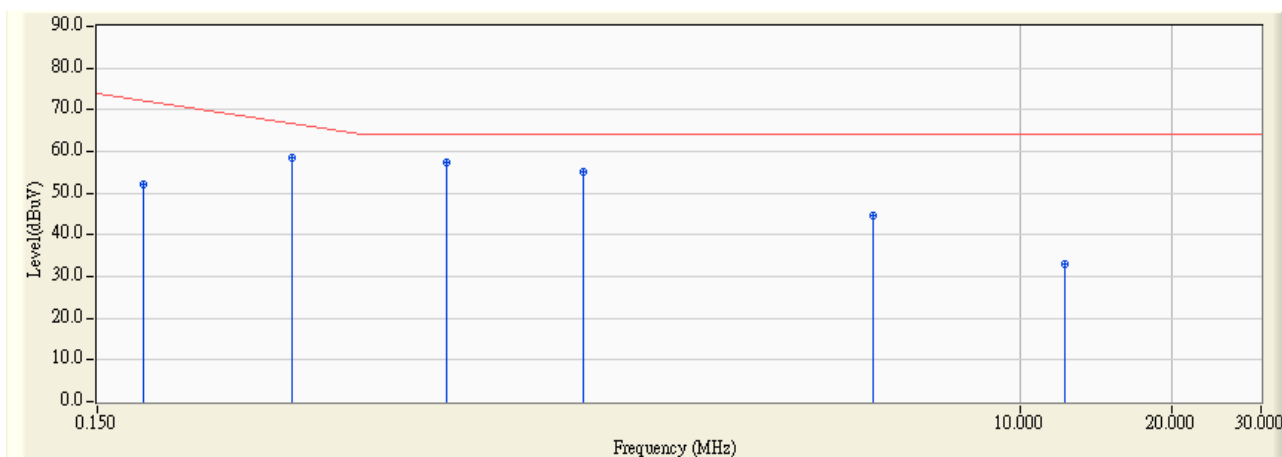


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.185	10.038	44.560	54.598	-28.402	83.000	QUASIPeAK
2		0.365	10.008	50.580	60.588	-17.269	77.857	QUASIPeAK
3	*	0.736	9.990	51.780	61.770	-12.230	74.000	QUASIPeAK
4		1.373	9.990	50.070	60.060	-13.940	74.000	QUASIPeAK
5		5.146	9.980	39.540	49.520	-24.480	74.000	QUASIPeAK
6		12.275	10.052	27.980	38.032	-35.968	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:15
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN 10M

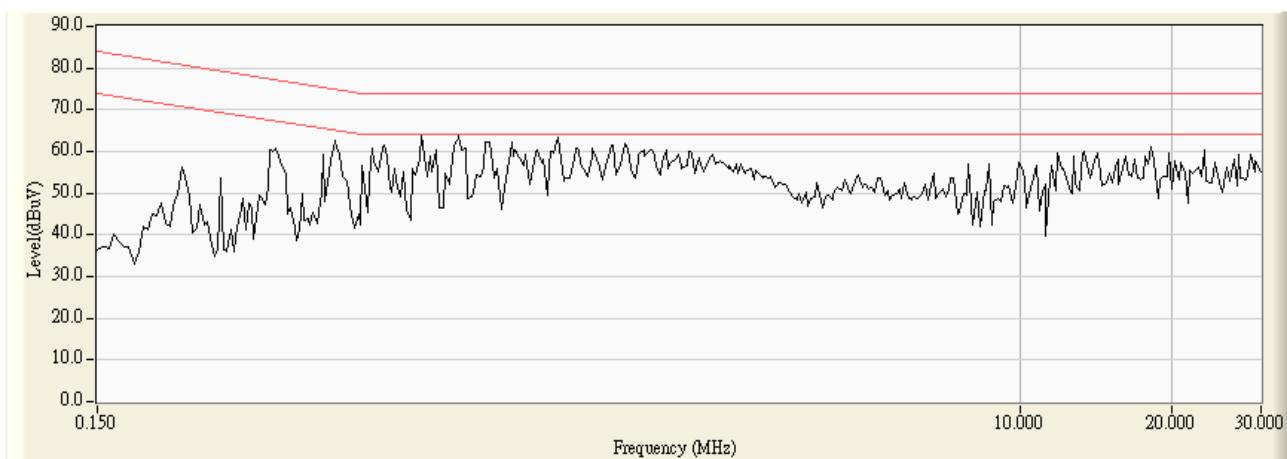


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.185	10.038	42.010	52.048	-20.952	73.000	AVERAGE
2		0.365	10.008	48.430	58.438	-9.419	67.857	AVERAGE
3	*	0.736	9.990	47.360	57.350	-6.650	64.000	AVERAGE
4		1.373	9.990	45.020	55.010	-8.990	64.000	AVERAGE
5		5.146	9.980	34.530	44.510	-19.490	64.000	AVERAGE
6		12.275	10.052	23.120	33.172	-30.828	64.000	AVERAGE

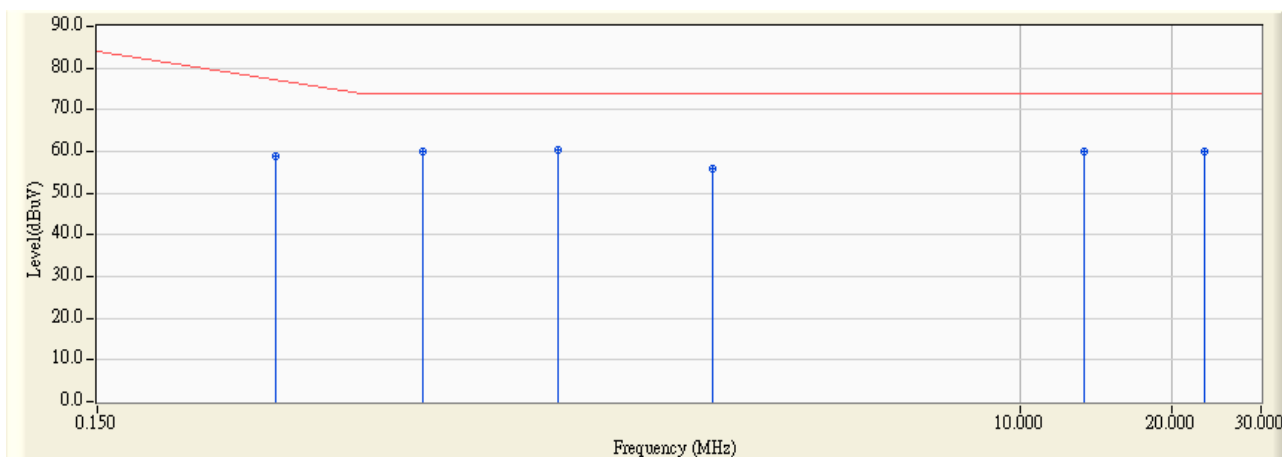
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:16
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN 100M



Site : SR1	Time : 2010/04/14 - 01:16
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN 100M

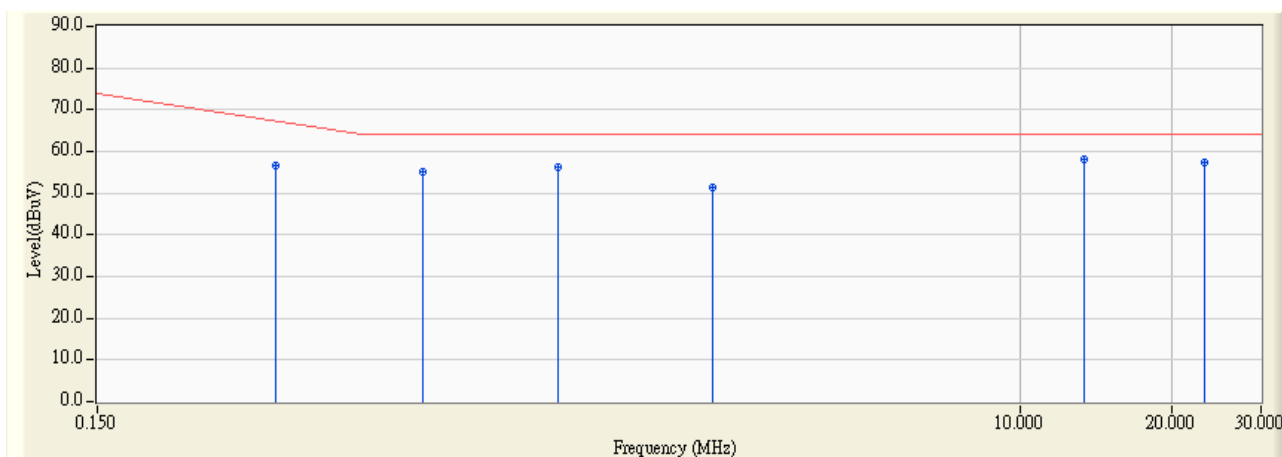


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.338	10.010	48.780	58.790	-19.839	78.629	QUASIPeAK
2		0.658	9.990	49.840	59.830	-14.170	74.000	QUASIPeAK
3	*	1.220	9.980	50.530	60.510	-13.490	74.000	QUASIPeAK
4		2.462	10.000	45.870	55.870	-18.130	74.000	QUASIPeAK
5		13.420	10.150	49.850	60.000	-14.000	74.000	QUASIPeAK
6		23.127	10.100	49.770	59.870	-14.130	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:16
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T4 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN 100M

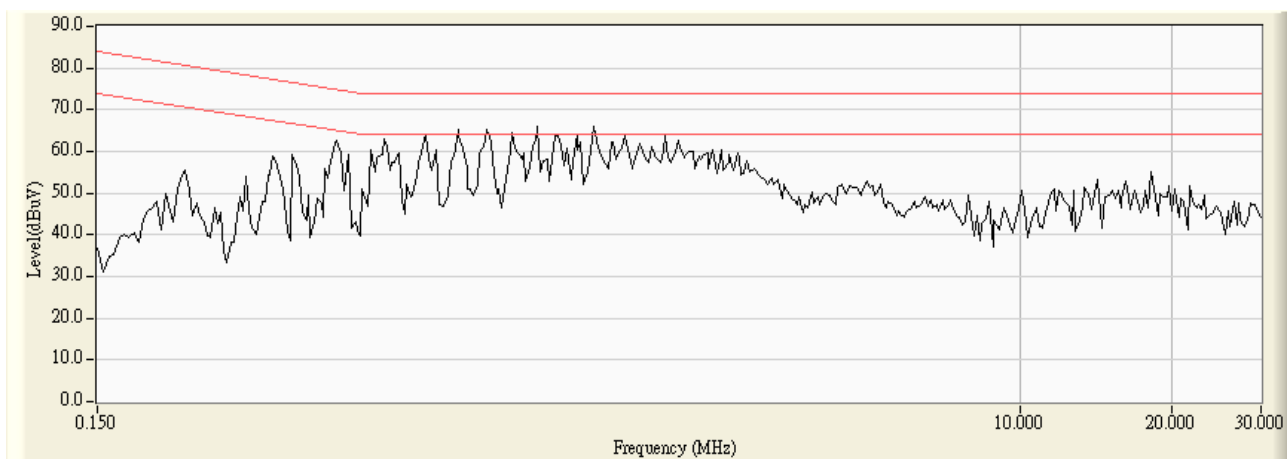


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.338	10.010	46.490	56.500	-12.129	68.629	AVERAGE
2		0.658	9.990	44.980	54.970	-9.030	64.000	AVERAGE
3		1.220	9.980	46.180	56.160	-7.840	64.000	AVERAGE
4		2.462	10.000	41.310	51.310	-12.690	64.000	AVERAGE
5	*	13.420	10.150	48.000	58.150	-5.850	64.000	AVERAGE
6		23.127	10.100	47.160	57.260	-6.740	64.000	AVERAGE

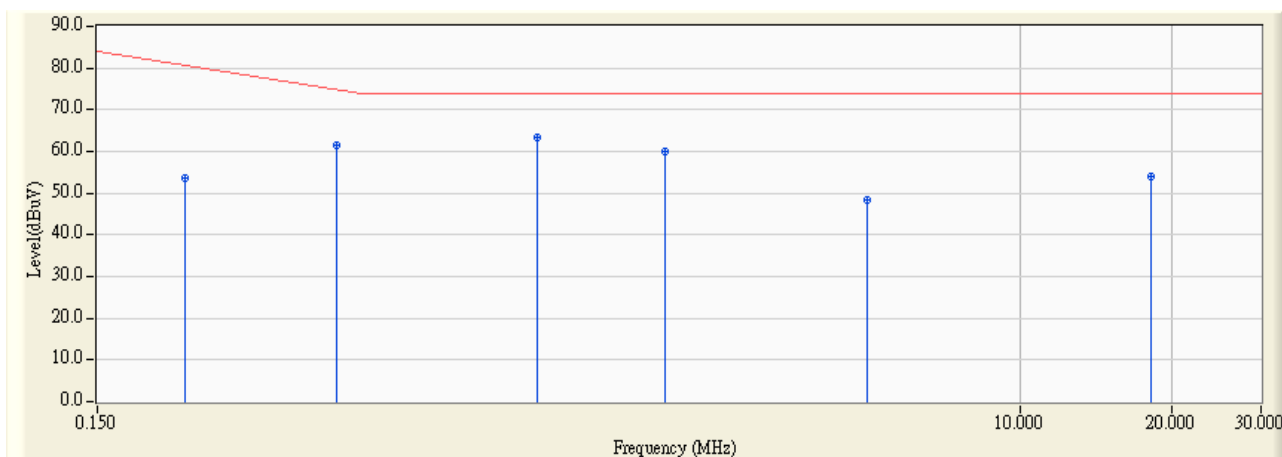
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:17
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN GIGA



Site : SR1	Time : 2010/04/14 - 01:18
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN GIGA

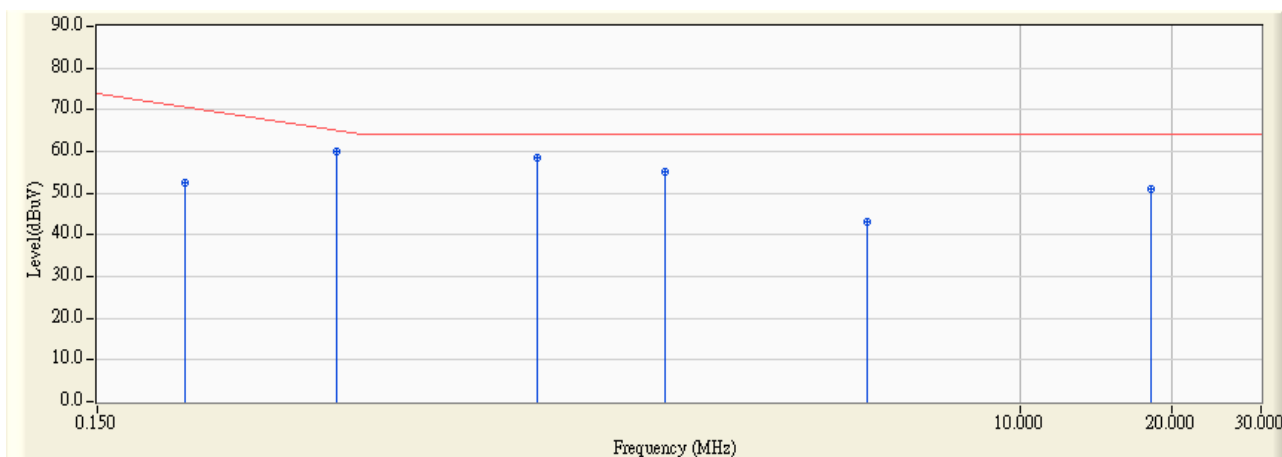


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.224	10.225	43.250	53.475	-28.411	81.886	QUASIPeAK
2		0.447	10.171	51.250	61.421	-14.093	75.514	QUASIPeAK
3	*	1.115	10.107	53.230	63.337	-10.663	74.000	QUASIPeAK
4		1.990	10.070	49.810	59.880	-14.120	74.000	QUASIPeAK
5		4.978	10.050	38.480	48.530	-25.470	74.000	QUASIPeAK
6		18.244	10.260	43.710	53.970	-20.030	74.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR1	Time : 2010/04/14 - 01:18
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Notebook PC	Probe : ISN_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 3, ISN GIGA



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.224	10.225	42.420	52.645	-19.241	71.886	AVERAGE
2	*	0.447	10.171	49.910	60.081	-5.433	65.514	AVERAGE
3		1.115	10.107	48.400	58.507	-5.493	64.000	AVERAGE
4		1.990	10.070	45.080	55.150	-8.850	64.000	AVERAGE
5		4.978	10.050	33.230	43.280	-20.720	64.000	AVERAGE
6		18.244	10.260	40.920	51.180	-12.820	64.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

4.7. Test Photograph

Test Mode : Mode 1

Description : Front View of ISN Test



Test Mode : Mode 1

Description : Back View of ISN Test



Test Mode : Mode 2

Description : Front View of ISN Test



Test Mode : Mode 2

Description : Back View of ISN Test



Test Mode : Mode 3

Description : Front View of ISN Test



Test Mode : Mode 3

Description : Back View of ISN Test



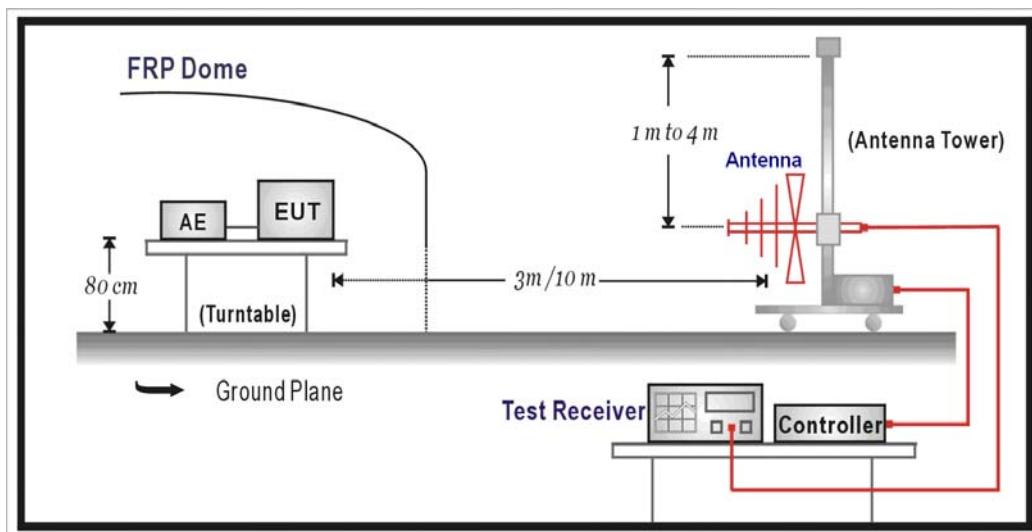
5. Radiated Emission

5.1. Test Specification

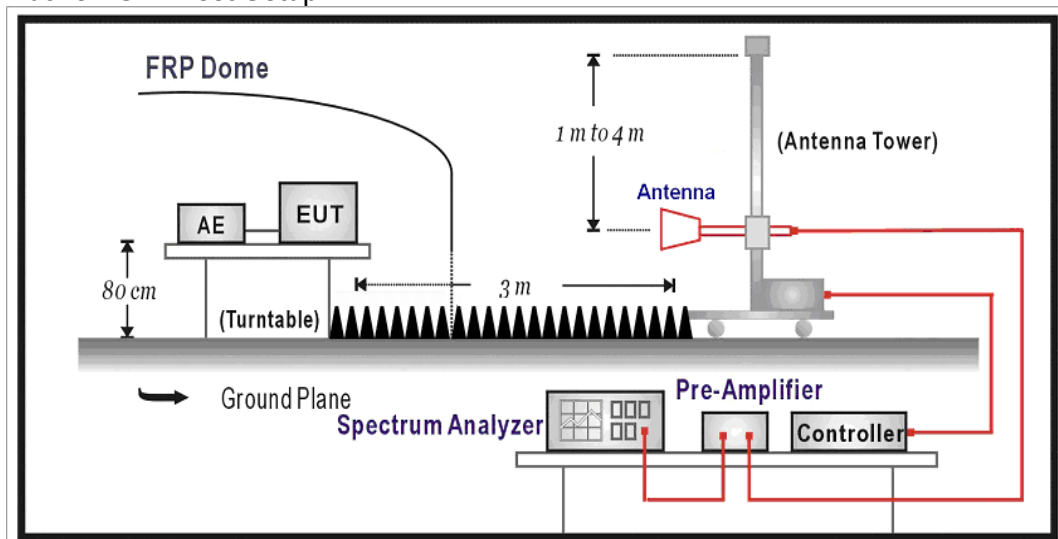
According to EMC Standard : EN 55022

5.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



5.3. Limit

Limits		
Frequency (MHz)	Distance (m)	dBuV/m
30 – 230	10	30
230 – 1000	10	37

Limits			
Frequency (GHz)	Distance (m)	Peak (dBuV/m)	Average (dBuV/m)
1 – 3	3	70	50
3 – 6	3	74	54

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.

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 108	1000
108 – 500	2000
500 – 1000	5000
Above 1000	5 th harmonic of the highest frequency or 6 GHz, whichever is lower

5.4. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3/10 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.

Radiated emissions were investigated over the frequency range from 30MHz to 1GHz using a receiver bandwidth of 120kHz and above 1GHz using a receiver bandwidth of 1MHz.

30MHz to 1GHz Radiated was performed at an antenna to EUT distance of 10 meters.

Above 1GHz Radiated was performed at an antenna to EUT distance of 3 meters.

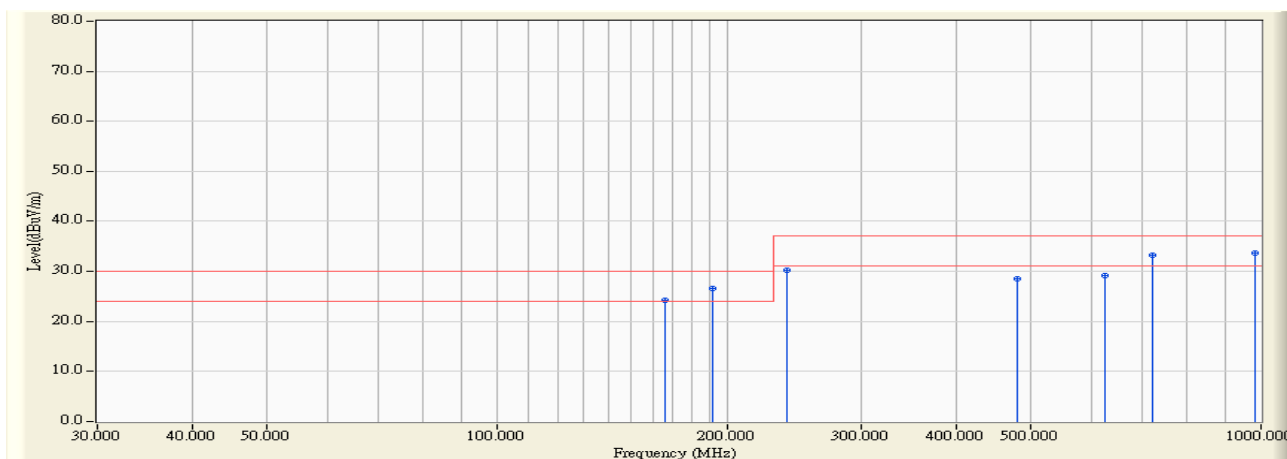
It is placed with absorber on the ground between EUT and Antenna.

5.5. Deviation from Test Standard

No deviation.

5.6. Test Result

Site : OATS-3	Time : 2010/04/12 - 12:00
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Notebook PC	Probe : Site3_CBL6112_10M_0811 - HORIZONTAL
Power : AC 230V/50Hz	Note : Mode 1

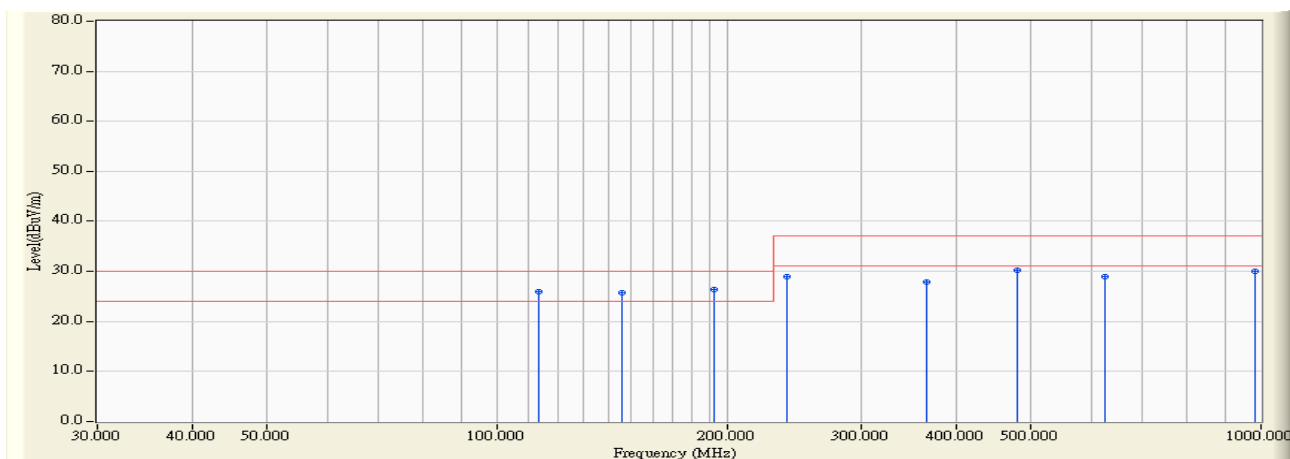


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		165.920	12.975	11.300	24.275	-5.725	30.000	QUASIPeAK
2		191.600	12.596	13.900	26.496	-3.504	30.000	QUASIPeAK
3		240.000	15.590	14.700	30.290	-6.710	37.000	QUASIPeAK
4		480.024	21.668	6.900	28.569	-8.431	37.000	QUASIPeAK
5		625.037	24.054	5.100	29.154	-7.846	37.000	QUASIPeAK
6		720.000	25.170	8.000	33.170	-3.830	37.000	QUASIPeAK
7	*	984.055	28.812	4.800	33.611	-3.389	37.000	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-3	Time : 2010/04/12 - 11:54
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Notebook PC	Probe : Site3_CBL6112_10M_0811 - VERTICAL
Power : AC 230V/50Hz	Note : Mode 1

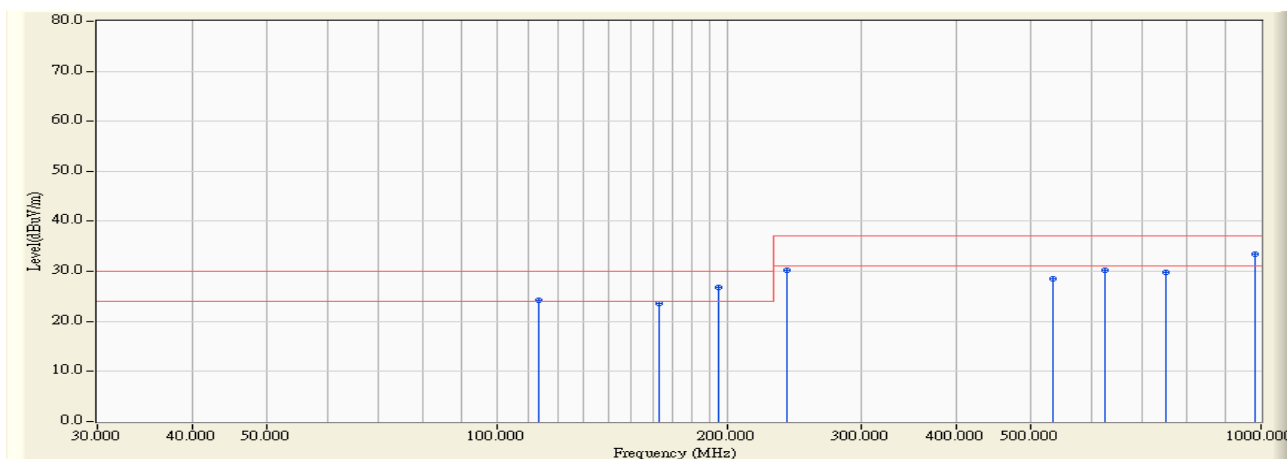


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		113.400	14.990	11.000	25.989	-4.011	30.000	QUASIPeAK
2		145.800	14.071	11.600	25.671	-4.329	30.000	QUASIPeAK
3	*	192.120	12.601	13.700	26.301	-3.699	30.000	QUASIPeAK
4		240.000	15.590	13.400	28.990	-8.010	37.000	QUASIPeAK
5		364.600	19.138	8.700	27.838	-9.162	37.000	QUASIPeAK
6		480.003	21.668	8.500	30.168	-6.832	37.000	QUASIPeAK
7		625.040	24.054	4.900	28.954	-8.046	37.000	QUASIPeAK
8		984.056	28.812	1.200	30.011	-6.989	37.000	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-3	Time : 2010/04/12 - 13:49
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Notebook PC	Probe : Site3_CBL6112_10M_0811 - HORIZONTAL
Power : AC 230V/50Hz	Note : Mode 2

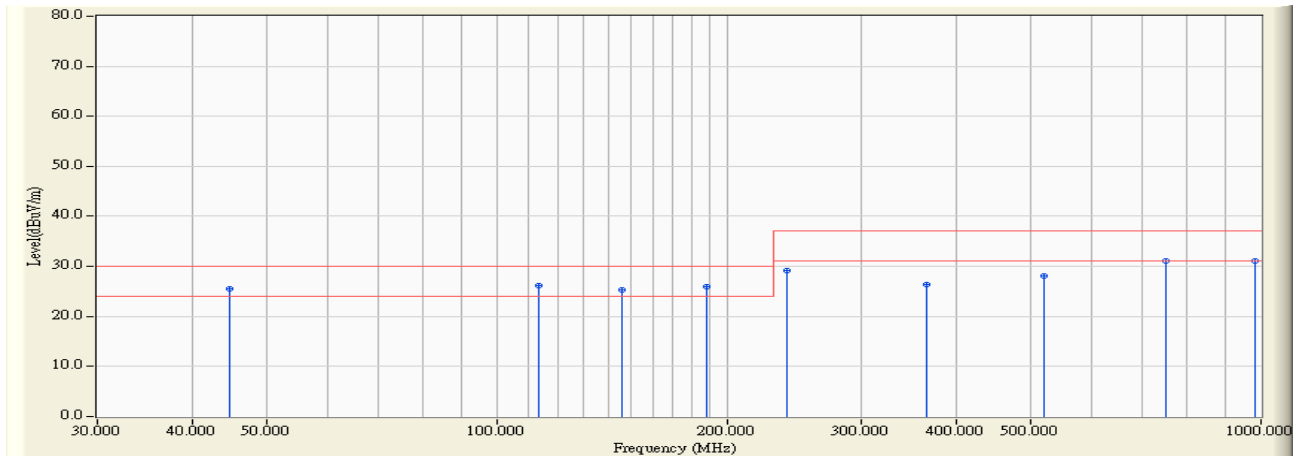


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		113.400	14.990	9.200	24.189	-5.811	30.000	QUASIPeAK
2		162.750	13.105	10.500	23.604	-6.396	30.000	QUASIPeAK
3	*	195.200	12.646	14.200	26.846	-3.154	30.000	QUASIPeAK
4		240.000	15.590	14.600	30.190	-6.810	37.000	QUASIPeAK
5		533.155	22.634	5.900	28.534	-8.466	37.000	QUASIPeAK
6		625.038	24.054	6.200	30.254	-6.746	37.000	QUASIPeAK
7		750.046	25.603	4.300	29.903	-7.097	37.000	QUASIPeAK
8		984.052	28.812	4.600	33.411	-3.589	37.000	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-3	Time : 2010/04/12 - 13:37
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Notebook PC	Probe : Site3_CBL6112_10M_0811 - VERTICAL
Power : AC 230V/50Hz	Note : Mode 2

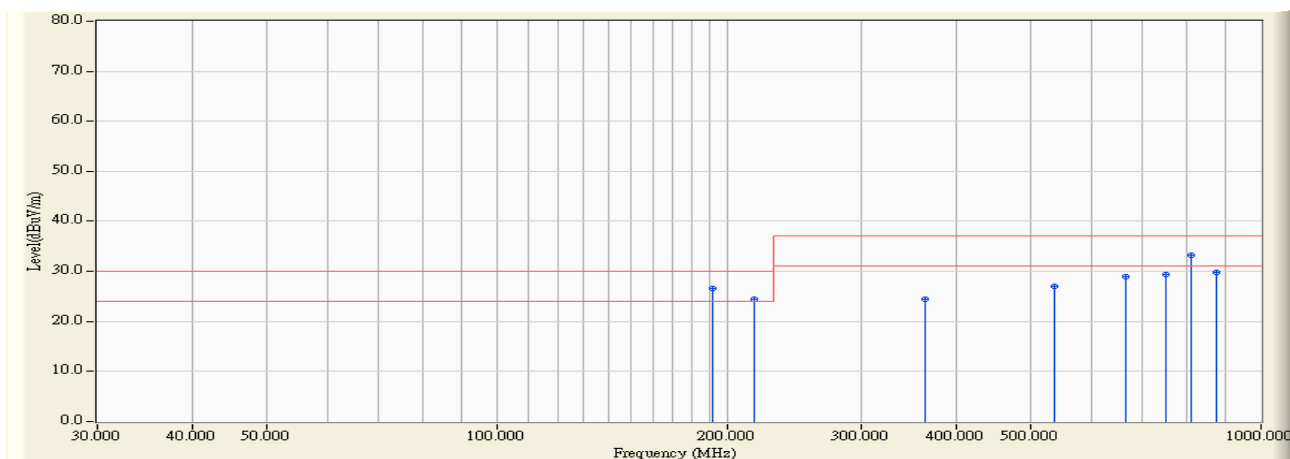


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		44.630	14.358	11.200	25.558	-4.442	30.000	QUASIPeAK
2	*	113.398	14.990	11.100	26.089	-3.911	30.000	QUASIPeAK
3		145.800	14.071	11.200	25.271	-4.729	30.000	QUASIPeAK
4		188.440	12.546	13.400	25.947	-4.053	30.000	QUASIPeAK
5		240.000	15.590	13.600	29.190	-7.810	37.000	QUASIPeAK
6		365.000	19.144	7.200	26.344	-10.656	37.000	QUASIPeAK
7		519.940	22.411	5.600	28.011	-8.989	37.000	QUASIPeAK
8		750.050	25.603	5.600	31.203	-5.797	37.000	QUASIPeAK
9		984.058	28.812	2.200	31.011	-5.989	37.000	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-3	Time : 2010/04/07 - 11:53
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Notebook PC	Probe : Site3_CBL6112_10M_0811 - HORIZONTAL
Power : AC 230V/50Hz	Note : Mode 3

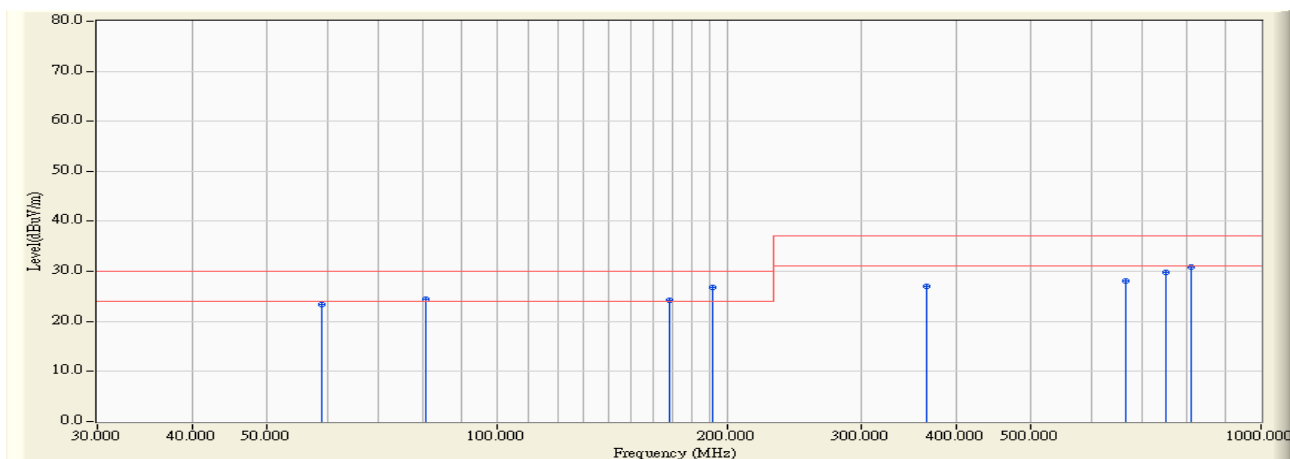


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	191.994	12.600	14.100	26.700	-3.300	30.000	QUASIPeAK
2		216.830	13.922	10.500	24.423	-5.577	30.000	QUASIPeAK
3		363.300	19.098	5.300	24.398	-12.602	37.000	QUASIPeAK
4		535.580	22.674	4.400	27.074	-9.926	37.000	QUASIPeAK
5		666.445	24.511	4.500	29.011	-7.989	37.000	QUASIPeAK
6		749.990	25.603	3.700	29.303	-7.697	37.000	QUASIPeAK
7		809.988	26.451	6.700	33.151	-3.849	37.000	QUASIPeAK
8		874.990	27.322	2.400	29.722	-7.278	37.000	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : OATS-3	Time : 2010/04/07 - 11:55
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Notebook PC	Probe : Site3_CBL6112_10M_0811 - VERTICAL
Power : AC 230V/50Hz	Note : Mode 3

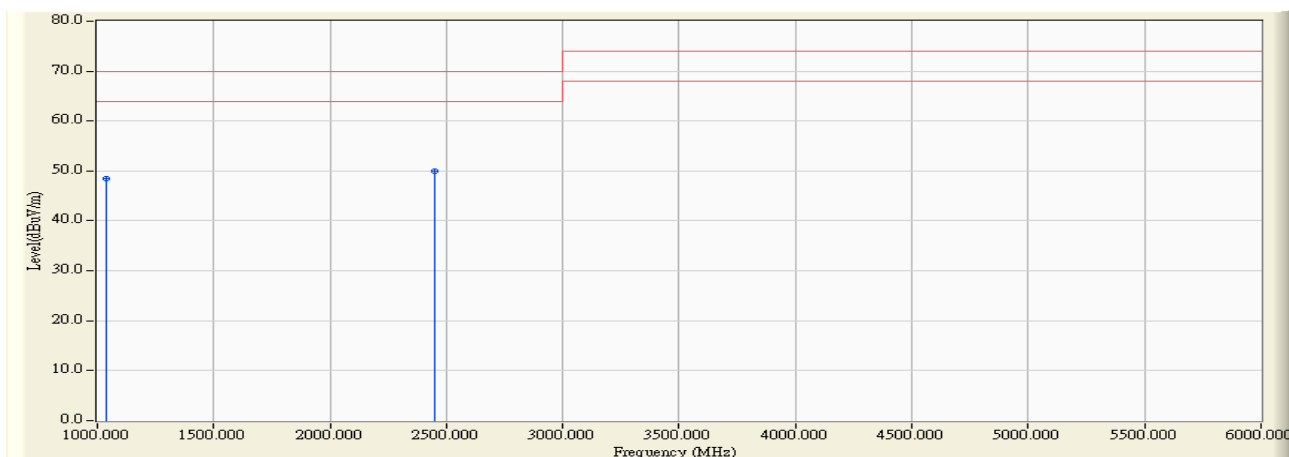


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		58.915	7.959	15.500	23.459	-6.541	30.000	QUASIPeAK
2		80.540	11.011	13.500	24.511	-5.489	30.000	QUASIPeAK
3		167.998	12.890	11.400	24.289	-5.711	30.000	QUASIPeAK
4	*	191.996	12.600	14.300	26.900	-3.100	30.000	QUASIPeAK
5		365.700	19.153	7.800	26.952	-10.048	37.000	QUASIPeAK
6		666.463	24.511	3.500	28.011	-8.989	37.000	QUASIPeAK
7		749.991	25.603	4.300	29.903	-7.097	37.000	QUASIPeAK
8		809.988	26.451	4.500	30.951	-6.049	37.000	QUASIPeAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6_Chamber	Time : 2010/04/13 - 22:59
Limit : VCCI_B_(Above_1G)_3M_PK	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - HORIZONTAL
Power : AC 230V/50Hz	Note : Mode 1

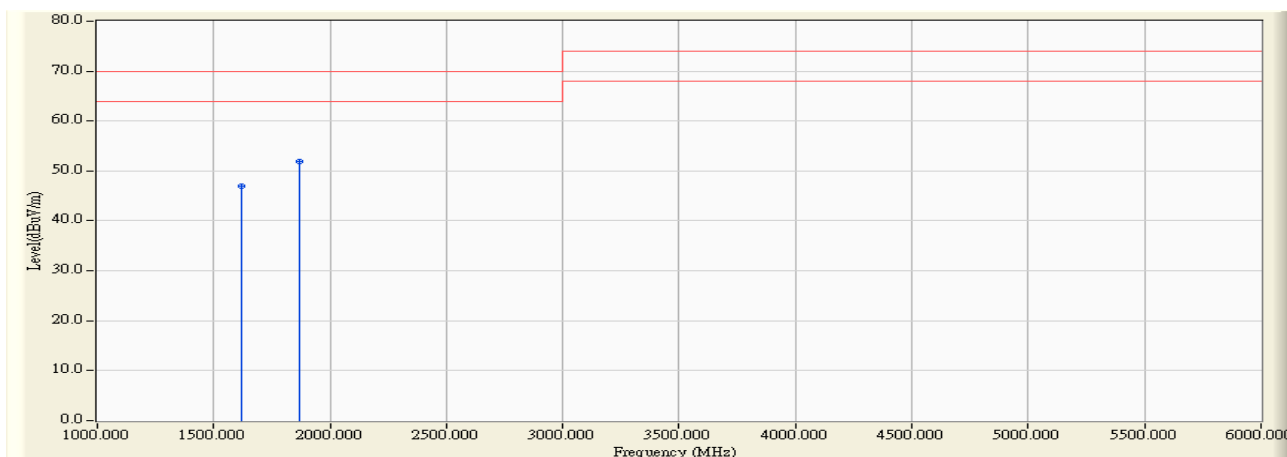


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1040.000	-6.455	54.860	48.405	-21.595	70.000	PEAK
2	*	2452.010	-1.757	51.650	49.893	-20.107	70.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6_Chamber	Time : 2010/04/13 - 22:54
Limit : VCCI_B_(Above_1G)_3M_PK	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - VERTICAL
Power : AC 230V/50Hz	Note : Mode 1

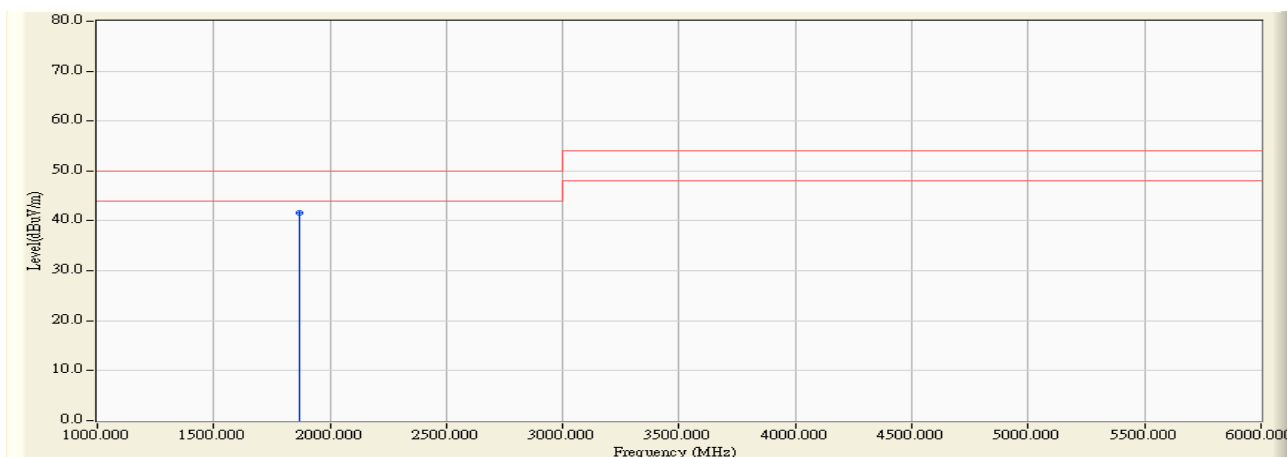


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1617.000	-4.440	51.460	47.020	-22.980	70.000	PEAK
2	*	1869.002	-4.028	55.840	51.812	-18.188	70.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6 Chamber	Time : 2010/04/13 - 22:54
Limit : VCCI_B_(Above_1G)_3M_AV	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - VERTICAL
Power : AC 230V/50Hz	Note : Mode 1

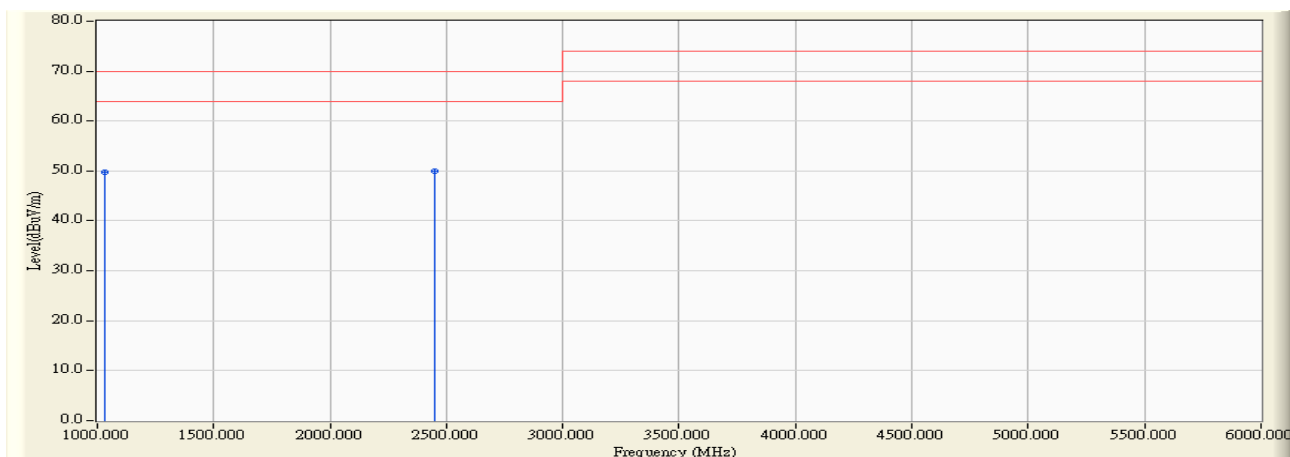


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1869.002	-4.028	45.630	41.602	-8.398	50.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6_Chamber	Time : 2010/04/13 - 23:03
Limit : VCCI_B_(Above_1G)_3M_PK	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - HORIZONTAL
Power : AC 230V/50Hz	Note : Mode 2

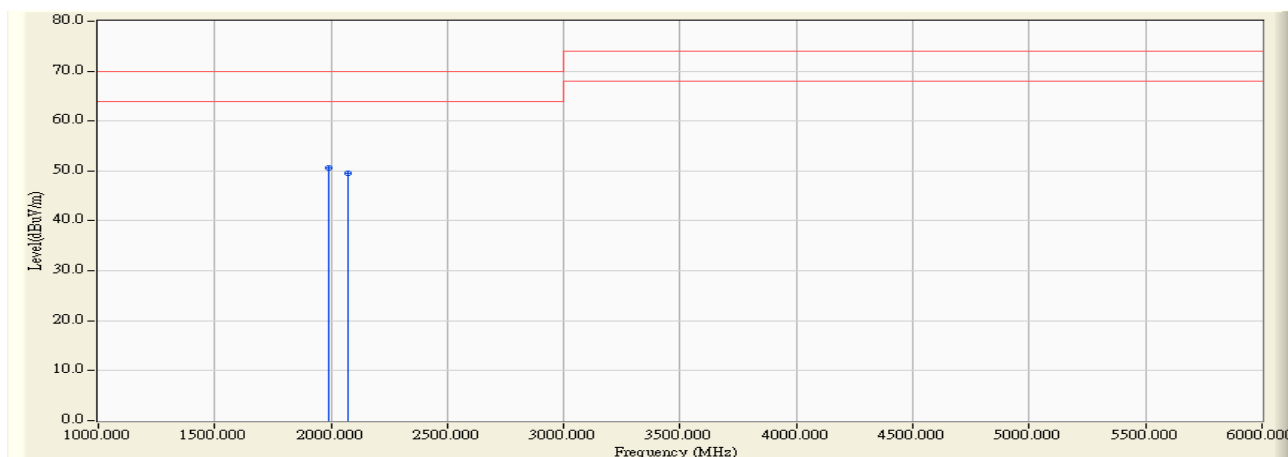


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1030.000	-6.492	56.220	49.728	-20.272	70.000	PEAK
2	*	2452.000	-1.757	51.650	49.893	-20.107	70.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6_Chamber	Time : 2010/04/13 - 23:08
Limit : VCCI_B_(Above_1G)_3M_PK	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - VERTICAL
Power : AC 230V/50Hz	Note : Mode 2

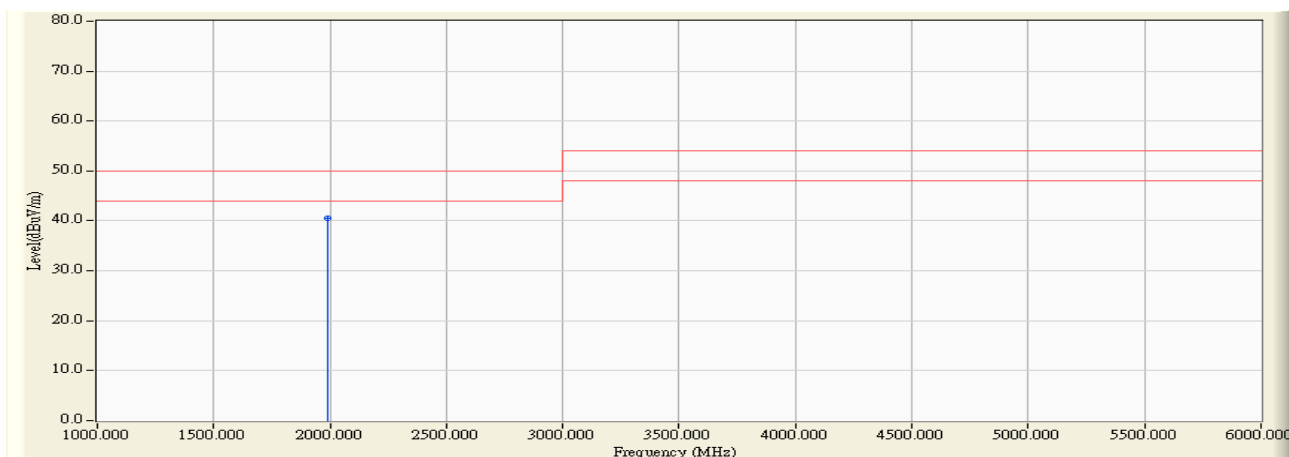


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1991.000	-3.799	54.490	50.691	-19.309	70.000	PEAK
2		2072.000	-3.493	52.960	49.466	-20.534	70.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6_Chamber	Time : 2010/04/13 - 23:08
Limit : VCCI_B_(Above_1G)_3M_PK	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - VERTICAL
Power : AC 230V/50Hz	Note : Mode 2

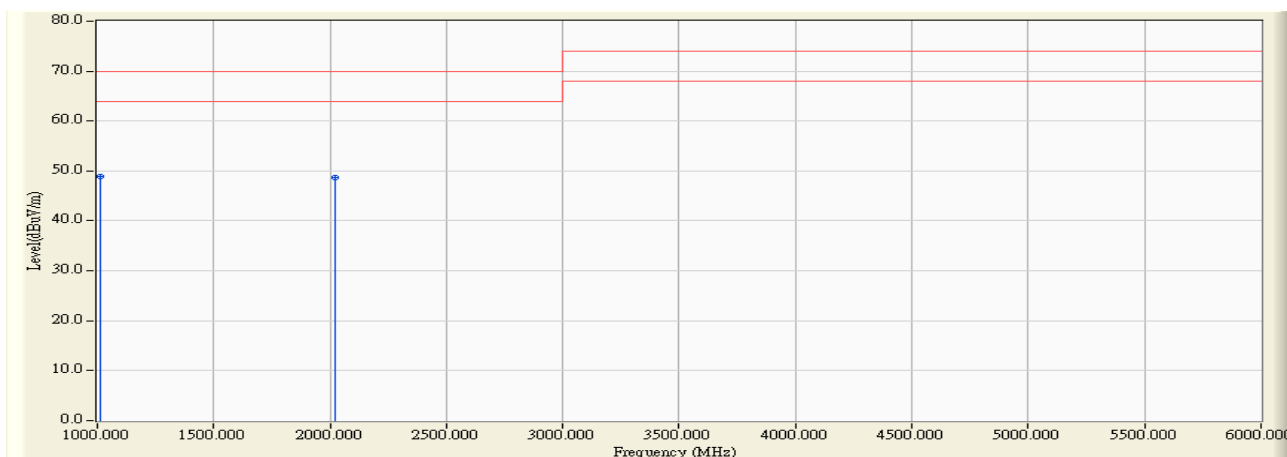


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1991.000	-3.799	44.260	40.461	-9.539	50.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6_Chamber	Time : 2010/04/13 - 23:12
Limit : VCCI_B_(Above_1G)_3M_PK	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - HORIZONTAL
Power : AC 230V/50Hz	Note : Mode 3

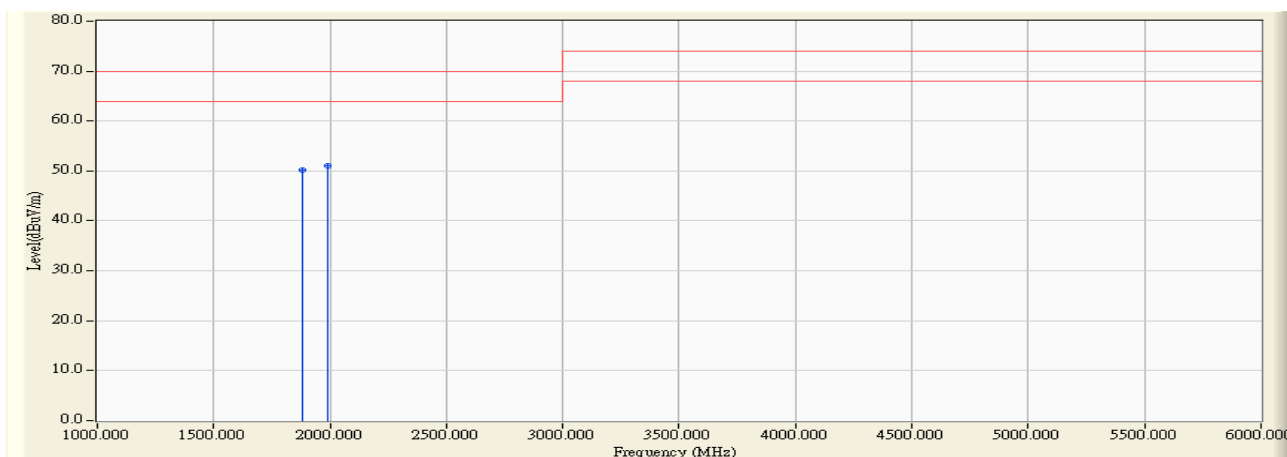


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1010.000	-6.566	55.390	48.823	-21.177	70.000	PEAK
2		2022.000	-3.698	52.400	48.702	-21.298	70.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6_Chamber	Time : 2010/04/13 - 23:18
Limit : VCCI_B_(Above_1G)_3M_PK	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - VERTICAL
Power : AC 230V/50Hz	Note : Mode 3

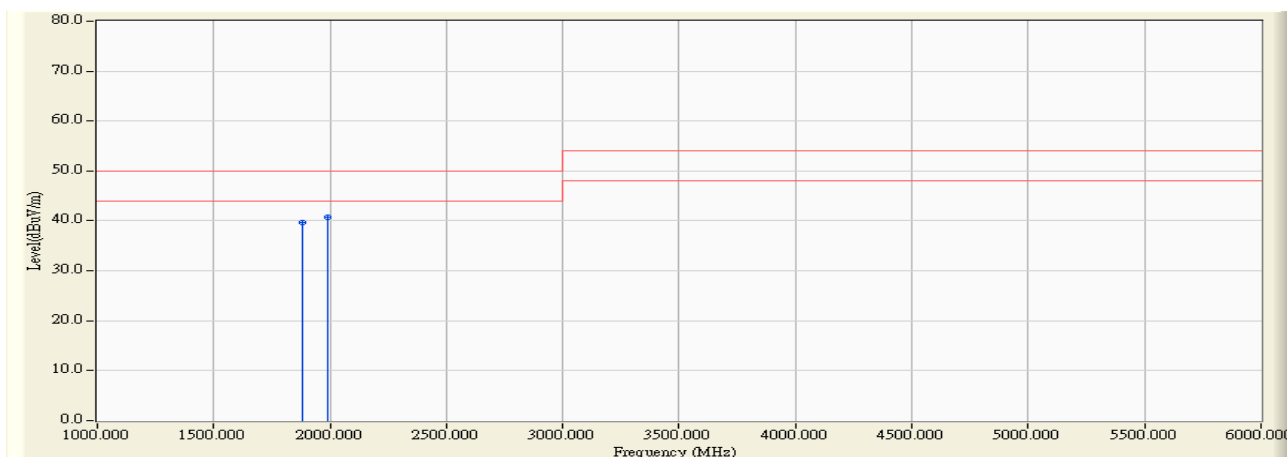


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1881.000	-4.009	54.270	50.261	-19.739	70.000	PEAK
2	*	1991.001	-3.799	54.830	51.031	-18.969	70.000	PEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : 9x6x6_Chamber	Time : 2010/04/13 - 23:18
Limit : VCCI_B_(Above_1G)_3M_PK	Margin : 6
EUT : Notebook PC	Probe : 9120D_1-18G_Horn - VERTICAL
Power : AC 230V/50Hz	Note : Mode 3



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1881.000	-4.009	43.650	39.641	-10.359	50.000	AVERAGE
2	*	1991.001	-3.799	44.510	40.711	-9.289	50.000	AVERAGE

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

5.7. Test Photograph

Test Mode : Mode 1

Description : Front View of Radiated Test



Test Mode : Mode 1

Description : Back View of Radiated Test



Test Mode : Mode 1

Description : Front View of High Frequency Radiated Test



Test Mode : Mode 2

Description : Front View of Radiated Test



Test Mode : Mode 2

Description : Back View of Radiated Test



Test Mode : Mode 2

Description : Front View of High Frequency Radiated Test



Test Mode : Mode 3

Description : Front View of Radiated Test



Test Mode : Mode 3

Description : Back View of Radiated Test



Test Mode : Mode 3

Description : Front View of High Frequency Radiated Test

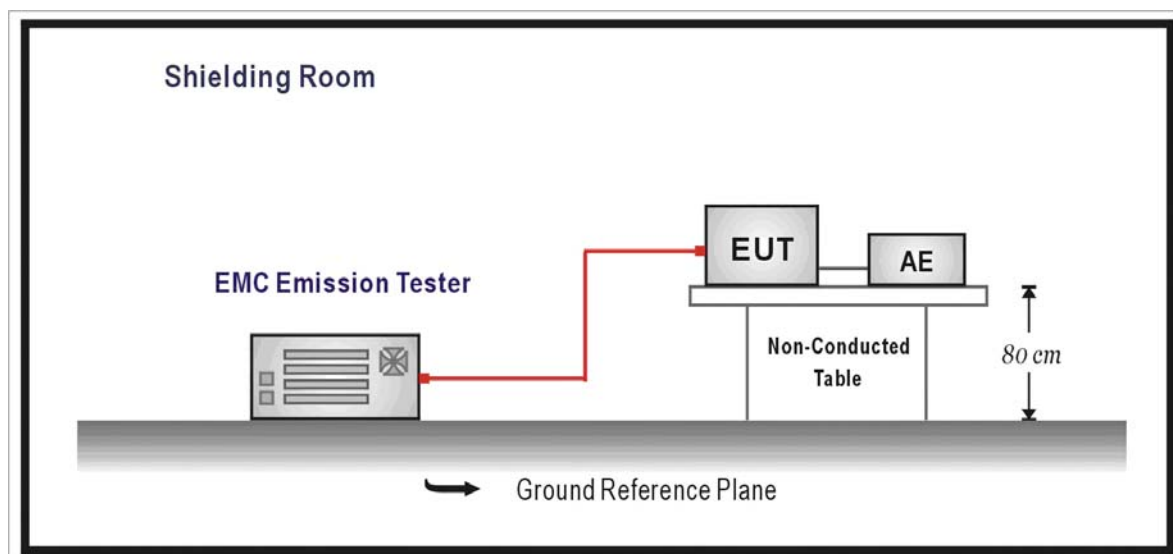


6. Harmonic Current Emission

6.1. Test Specification

According to EMC Standard : EN 61000-3-2

6.2. Test Setup



6.3. Limit

(a) Limits of Class A Harmonics Currents

Harmonics Order n	Maximum Permissible harmonic current A	Harmonics Order n	Maximum Permissible harmonic current A
Odd harmonics		Even harmonics	
3	2.30	2	1.08
5	1.14	4	0.43
7	0.77	6	0.30
9	0.40	$8 \leq n \leq 40$	$0.23 * 8/n$
11	0.33		
13	0.21		
$15 \leq n \leq 39$	$0.15 * 15/n$		

(b) Limits of Class B Harmonics Currents

For Class B equipment, the harmonic of the input current shall not exceed the maximum permissible values given in table that is the limit of Class A multiplied by a factor of 1.5.

(c) Limits of Class C Harmonics Currents

Harmonics Order n	Maximum Permissible harmonic current Expressed as a percentage of the input current at the fundamental frequency %
2	2
3	$30 \cdot \lambda^*$
5	10
7	7
9	5
$11 \leq n \leq 39$ (odd harmonics only)	3
* λ is the circuit power factor	

(d) Limits of Class D Harmonics Currents

Harmonics Order n	Maximum Permissible harmonic current per watt mA/W	Maximum Permissible harmonic current A
3	3.4	2.30
5	1.9	1.14
7	1.0	0.77
9	0.5	0.40
11	0.35	0.33
$11 \leq n \leq 39$ (odd harmonics only)	$3.85/n$	See limit of Class A

6.4. Test Procedure

The EUT is supplied in series with power analyzer from a power source having the same normal voltage and frequency as the rated supply voltage and the equipment under test. And the rated voltage at the supply voltage of EUT of 0.94 times and 1.06 times shall be performed.

6.5. Deviation from Test Standard

No deviation.

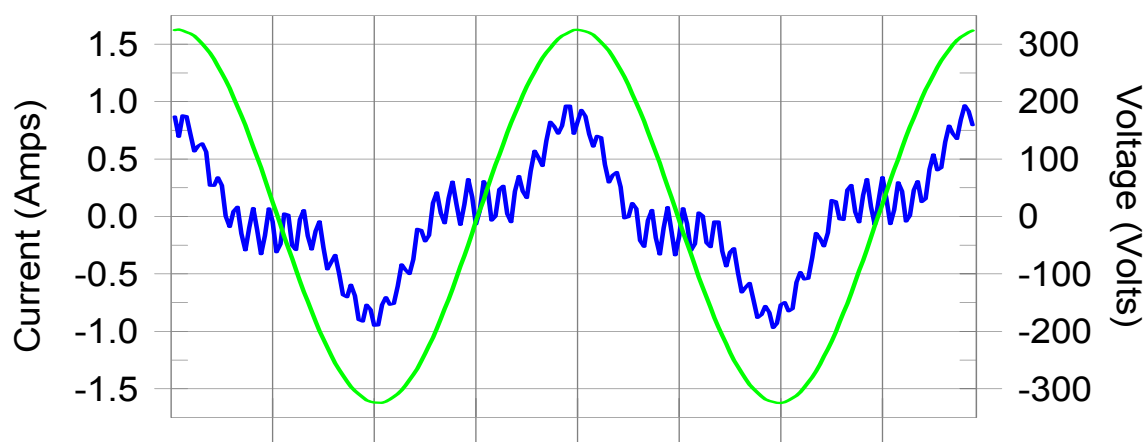
6.6. Test Result

Product	Notebook PC		
Test Item	Power Harmonics		
Test Mode	Mode 1		
Date of Test	2010/04/17	Test Site	No.3 Shielded Room

Test Result: Pass

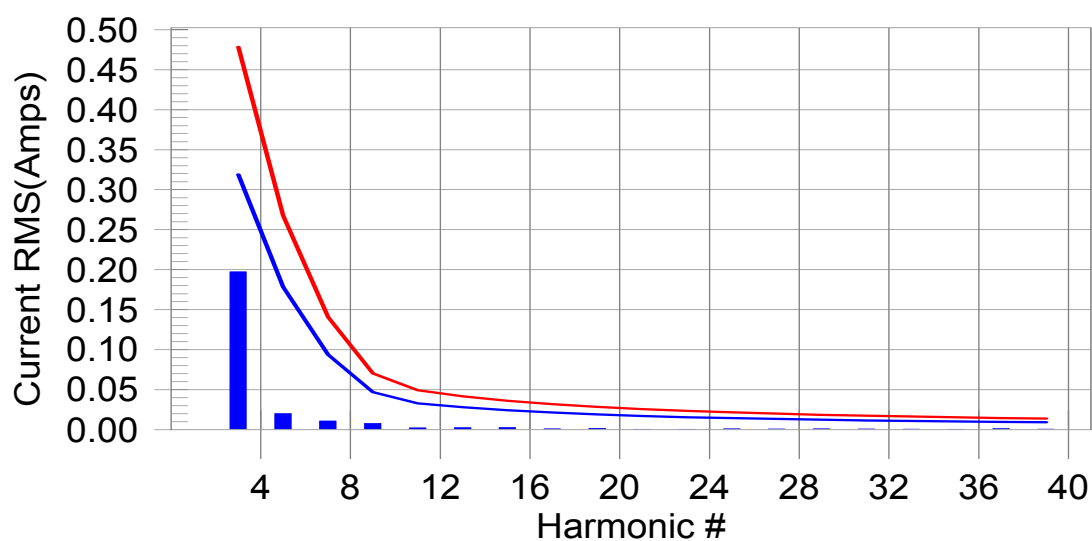
Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line

European Limits



Test result: Pass Worst harmonic was #3 with 61.85% of the limit.

Test Result: Pass Source qualification: Normal
 THC(A): 0.20 I-THD(%): 47.11 POHC(A): 0.003 POHC Limit(A): 0.040
 Highest parameter values during test:
 V_RMS (Volts): 229.65 Frequency(Hz): 50.00
 I_Peak (Amps): 1.070 I_RMS (Amps): 0.480
 I_Fund (Amps): 0.422 Crest Factor: 2.233
 Power (Watts): 93.9 Power Factor: 0.852

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.000						
3	0.197	0.319	61.8	0.197	0.479	41.24	Pass
4	0.000						
5	0.020	0.178	11.1	0.020	0.268	7.50	Pass
6	0.000						
7	0.011	0.094	11.5	0.011	0.141	7.77	Pass
8	0.000						
9	0.008	0.047	16.9	0.008	0.070	11.41	Pass
10	0.000						
11	0.002	0.033	6.9	0.002	0.049	4.72	Pass
12	0.000						
13	0.002	0.028	8.7	0.003	0.042	6.18	Pass
14	0.000						
15	0.003	0.024	10.5	0.003	0.036	7.42	Pass
16	0.000						
17	0.001	0.022	4.0	0.001	0.032	3.22	Pass
18	0.000						
19	0.002	0.019	8.9	0.002	0.029	6.42	Pass
20	0.000						
21	0.000	0.017	2.6	0.001	0.026	2.27	Pass
22	0.000						
23	0.001	0.016	3.2	0.001	0.024	2.81	Pass
24	0.000						
25	0.001	0.014	6.5	0.001	0.022	5.18	Pass
26	0.000						
27	0.001	0.013	6.3	0.001	0.020	4.87	Pass
28	0.000						
29	0.001	0.012	8.4	0.001	0.019	6.36	Pass
30	0.000						
31	0.001	0.012	6.1	0.001	0.017	4.98	Pass
32	0.000						
33	0.001	0.011	6.0	0.001	0.016	5.08	Pass
34	0.000						
35	0.000	0.010	4.6	0.001	0.015	3.85	Pass
36	0.000						
37	0.001	0.010	12.9	0.001	0.015	9.36	Pass
38	0.000						
39	0.001	0.009	7.4	0.001	0.014	5.95	Pass
40	0.000						

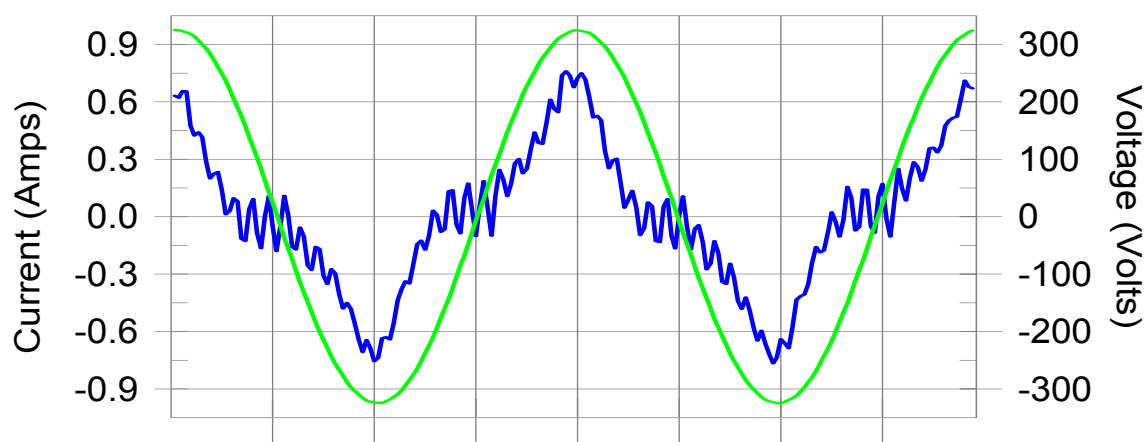
1.Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

2:According to EN61000-3-2 paragraph 7 the note 1 and 2 are valid for all applications having an active input power >75W. Others the result should be pass.

Product	Notebook PC		
Test Item	Power Harmonics		
Test Mode	Mode 2		
Date of Test	2010/04/17	Test Site	No.3 Shielded Room

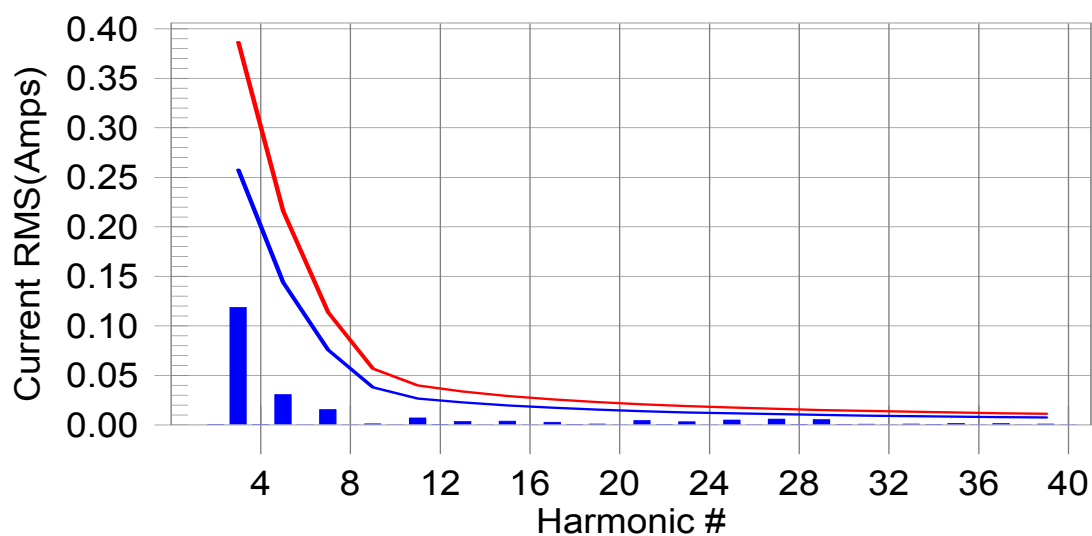
Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line

European Limits



Test result: Pass Worst harmonic was #27 with 53.36% of the limit.

Test Result: Pass Source qualification: Normal
 THC(A): 0.12 I-THD(%): 38.64 POHC(A): 0.011 POHC Limit(A): 0.033
 Highest parameter values during test:
 V_RMS (Volts): 229.65 Frequency(Hz): 50.00
 I_Peak (Amps): 0.785 I_RMS (Amps): 0.368
 I_Fund (Amps): 0.331 Crest Factor: 2.290
 Power (Watts): 75.8 Power Factor: 0.898

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.000						
3	0.119	0.258	0.0	0.119	0.387	0.00	Pass
4	0.000						
5	0.031	0.144	0.0	0.031	0.216	0.00	Pass
6	0.000						
7	0.016	0.076	0.0	0.016	0.114	0.00	Pass
8	0.000						
9	0.001	0.038	0.0	0.001	0.057	0.00	Pass
10	0.000						
11	0.007	0.027	0.0	0.007	0.040	0.00	Pass
12	0.000						
13	0.003	0.023	0.0	0.004	0.034	0.00	Pass
14	0.000						
15	0.004	0.020	0.0	0.004	0.029	0.00	Pass
16	0.000						
17	0.003	0.017	0.0	0.003	0.026	0.00	Pass
18	0.000						
19	0.001	0.015	0.0	0.001	0.023	0.00	Pass
20	0.000						
21	0.004	0.014	0.0	0.004	0.021	0.00	Pass
22	0.000						
23	0.004	0.013	0.0	0.003	0.019	0.00	Pass
24	0.000						
25	0.005	0.012	0.0	0.005	0.018	0.00	Pass
26	0.000						
27	0.006	0.011	0.0	0.006	0.016	0.00	Pass
28	0.000						
29	0.005	0.010	0.0	0.005	0.015	0.00	Pass
30	0.000						
31	0.001	0.009	0.0	0.001	0.014	0.00	Pass
32	0.000						
33	0.001	0.009	0.0	0.001	0.013	0.00	Pass
34	0.000						
35	0.002	0.008	0.0	0.002	0.013	0.00	Pass
36	0.000						
37	0.002	0.008	0.0	0.001	0.012	0.00	Pass
38	0.000						
39	0.001	0.008	0.0	0.001	0.011	0.00	Pass
40	0.000						

1.Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

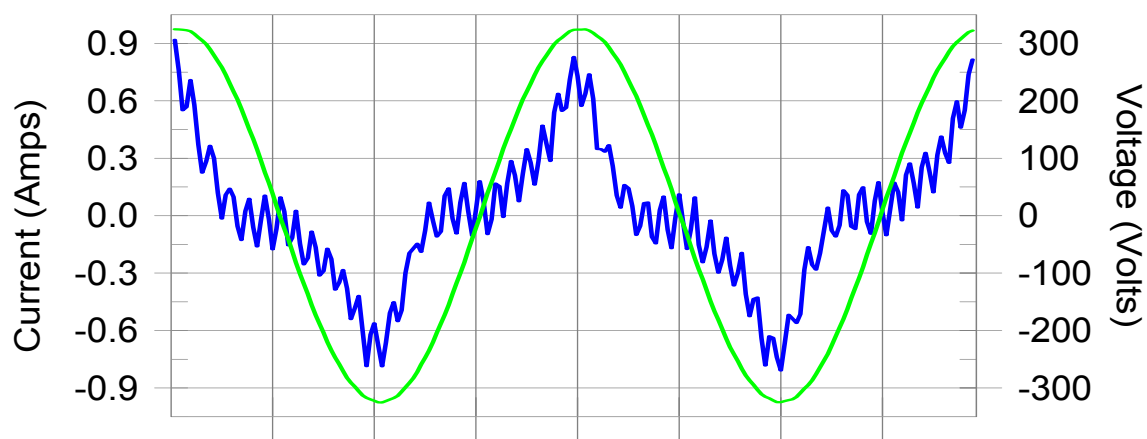
2:According to EN61000-3-2 paragraph 7 the note 1 and 2 are valid for all applications having an active input power >75W. Others the result should be pass.

Product	Notebook PC		
Test Item	Power Harmonics		
Test Mode	Mode 3		
Date of Test	2010/04/17	Test Site	No.3 Shielded Room

Test Result: Pass

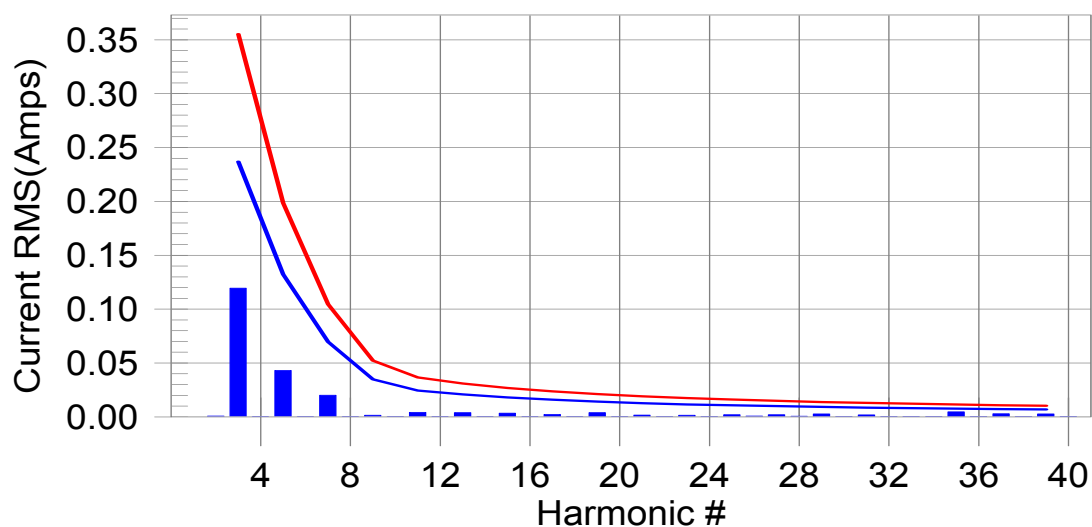
Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line

European Limits



Test result: Pass Worst harmonic was #27 with 0.00% of the limit.

Test Result: Pass Source qualification: Normal
 THC(A): 0.00 I-THD(%): 0.00 POHC(A): 0.000 POHC Limit(A): 0.000
 Highest parameter values during test:
 V_RMS (Volts): 229.64 Frequency(Hz): 50.00
 I_Peak (Amps): 0.918 I_RMS (Amps): 0.351
 I_Fund (Amps): 0.303 Crest Factor: 2.678
 Power (Watts): 69.7 Power Factor: 0.865

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001						
3	0.119	0.237	0.0	0.120	0.355	0.00	Pass
4	0.000						
5	0.043	0.132	0.0	0.043	0.199	0.00	Pass
6	0.000						
7	0.020	0.070	0.0	0.020	0.105	0.00	Pass
8	0.000						
9	0.002	0.035	0.0	0.002	0.052	0.00	Pass
10	0.000						
11	0.004	0.024	0.0	0.004	0.037	0.00	Pass
12	0.000						
13	0.004	0.021	0.0	0.004	0.031	0.00	Pass
14	0.000						
15	0.004	0.018	0.0	0.004	0.027	0.00	Pass
16	0.000						
17	0.002	0.016	0.0	0.002	0.024	0.00	Pass
18	0.000						
19	0.004	0.014	0.0	0.004	0.021	0.00	Pass
20	0.000						
21	0.002	0.013	0.0	0.002	0.019	0.00	Pass
22	0.000						
23	0.002	0.012	0.0	0.002	0.017	0.00	Pass
24	0.000						
25	0.002	0.011	0.0	0.002	0.016	0.00	Pass
26	0.001						
27	0.002	0.010	0.0	0.002	0.015	0.00	Pass
28	0.001						
29	0.003	0.009	0.0	0.003	0.014	0.00	Pass
30	0.001						
31	0.002	0.009	0.0	0.002	0.013	0.00	Pass
32	0.000						
33	0.001	0.008	0.0	0.001	0.012	0.00	Pass
34	0.000						
35	0.005	0.008	0.0	0.005	0.011	0.00	Pass
36	0.000						
37	0.003	0.007	0.0	0.003	0.011	0.00	Pass
38	0.000						
39	0.003	0.007	0.0	0.003	0.010	0.00	Pass
40	0.000						

1.Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

2:According to EN61000-3-2 paragraph 7 the note 1 and 2 are valid for all applications having an active input power >75W. Others the result should be pass.

6.7. Test Photograph

Test Mode : Mode 1

Description : Power Harmonics Test Setup



Test Mode : Mode 2

Description : Power Harmonics Test Setup



Test Mode : Mode 3

Description : Power Harmonics Test Setup

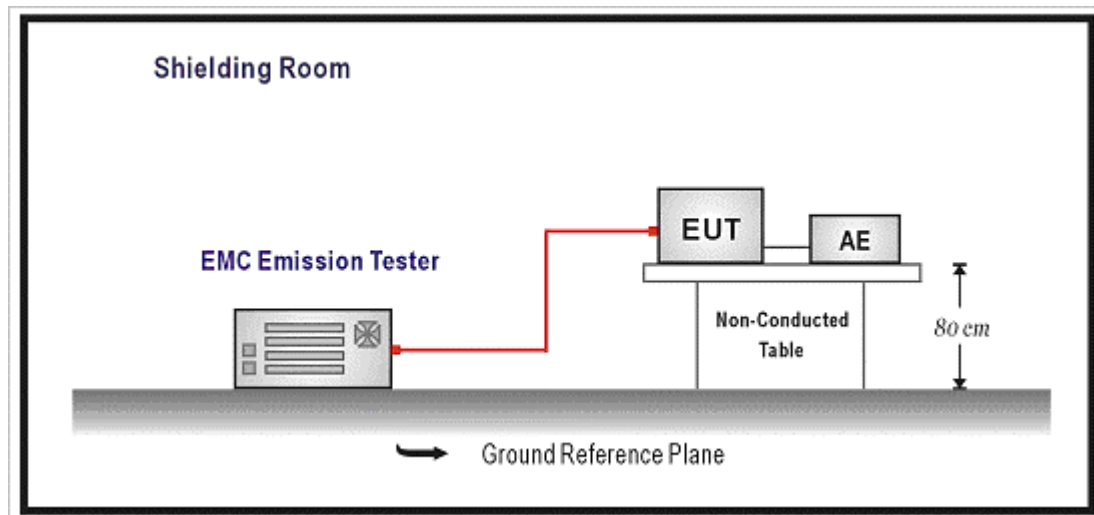


7. Voltage Fluctuation and Flicker

7.1. Test Specification

According to EMC Standard : EN 61000-3-3

7.2. Test Setup



7.3. Limit

The following limits apply:

- the value of P_{st} shall not be greater than 1.0;
 - the value of P_{1t} shall not be greater than 0.65;
 - the value of $d(t)$ during a voltage change shall not exceed 3.3 % for more than 500 ms;
 - the relative steady-state voltage change, d_c , shall not exceed 3.3 %;
 - the maximum relative voltage change, d_{max} , shall not exceed;
- a) 4 % without additional conditions;
 - b) 6 % for equipment which is:
 - switched manually, or
 - switched automatically more frequently than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds), or manual restart, after a power supply interruption.

NOTE The cycling frequency will be further limited by the P_{st} and P_{1t} limit.

For example: a d_{max} of 6% producing a rectangular voltage change characteristic twice per hour will give a P_{1t} of about 0.65.

- c) 7 % for equipment which is:
 - attended whilst in use (for example: hair dryers, vacuum cleaners, kitchen equipment such as mixers, garden equipment such as lawn mowers, portable tools such as electric drills), or
 - switched on automatically, or is intended to be switched on manually, no more than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds) or manual restart, after a power supply interruption.

P_{st} and P_{1t} requirements shall not be applied to voltage changes caused by manual switching.

7.4. Test Procedure

The EUT is supplied in series with power analyzer from a power source having the same normal voltage and frequency as the rated supply voltage and the equipment under test. And the rated voltage at the supply voltage of EUT of 0.94 times and 1.06 times shall be performed.

7.5. Deviation from Test Standard

No deviation.

7.6. Test Result

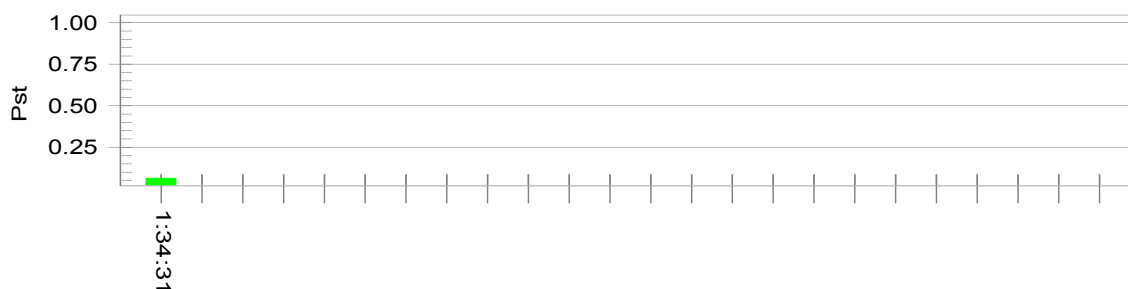
Product	Notebook PC		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 1		
Date of Test	2010/04/17	Test Site	No.3 Shielded Room

Test Result: Pass

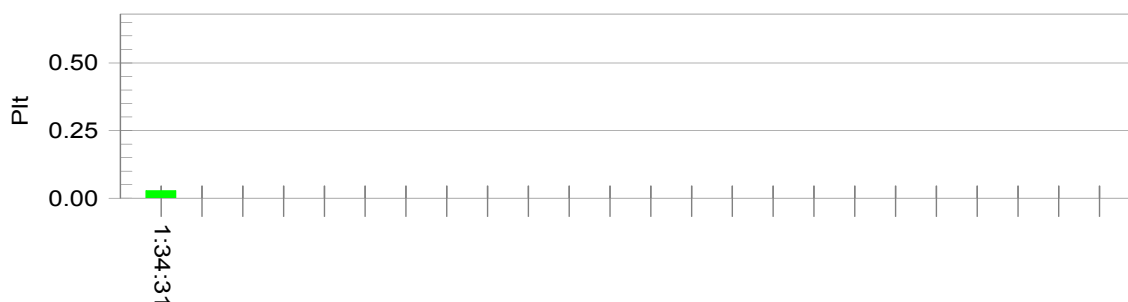
Status: Test Completed

Pst_i and limit line

European Limits



Plt and limit line



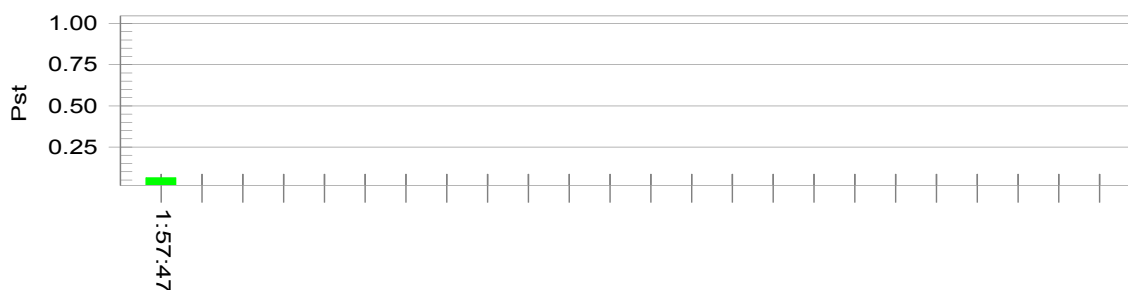
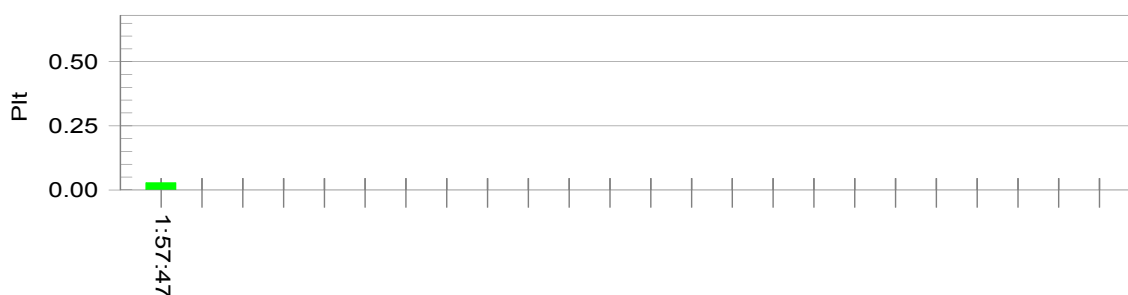
Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.45		
Highest dt (%):	0.00	Test limit (%):	3.30 Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	0.00	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000 Pass
Highest Plt (2 hr. period):	0.028	Test limit:	0.650 Pass

Product	Notebook PC		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 2		
Date of Test	2010/04/17	Test Site	No.3 Shielded Room

Test Result: Pass

Status: Test Completed

Pstj and limit line
European Limits

Plt and limit line


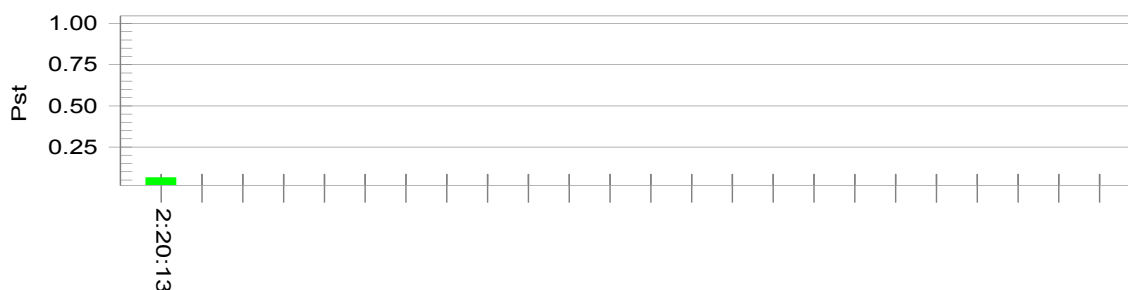
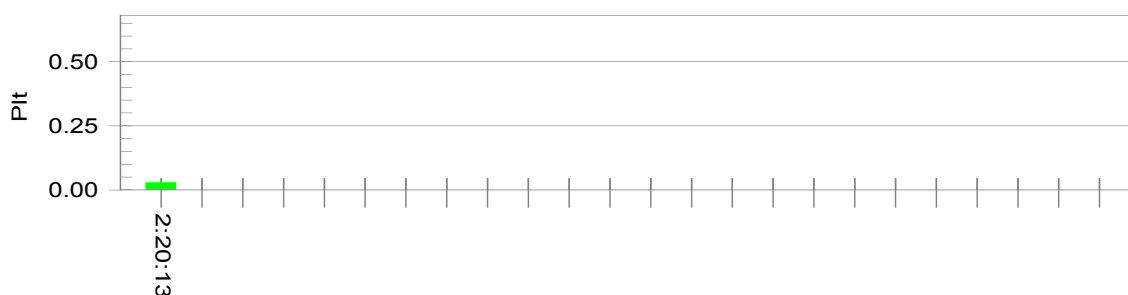
Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.46		
Highest dt (%):	0.00	Test limit (%):	3.30 Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	0.00	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000 Pass
Highest Plt (2 hr. period):	0.028	Test limit:	0.650 Pass

Product	Notebook PC		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 3		
Date of Test	2010/04/17	Test Site	No.3 Shielded Room

Test Result: Pass

Status: Test Completed

Pstj and limit line
European Limits

Plt and limit line


Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.52		
Highest dt (%):	0.00	Test limit (%):	3.30 Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0 Pass
Highest dc (%):	0.00	Test limit (%):	3.30 Pass
Highest dmax (%):	0.00	Test limit (%):	4.00 Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000 Pass
Highest Plt (2 hr. period):	0.028	Test limit:	0.650 Pass

7.7. Test Photograph

Test Mode : Mode 1

Description : Flicker Test Setup



Test Mode : Mode 2

Description : Flicker Test Setup



Test Mode : Mode 3

Description : Flicker Test Setup

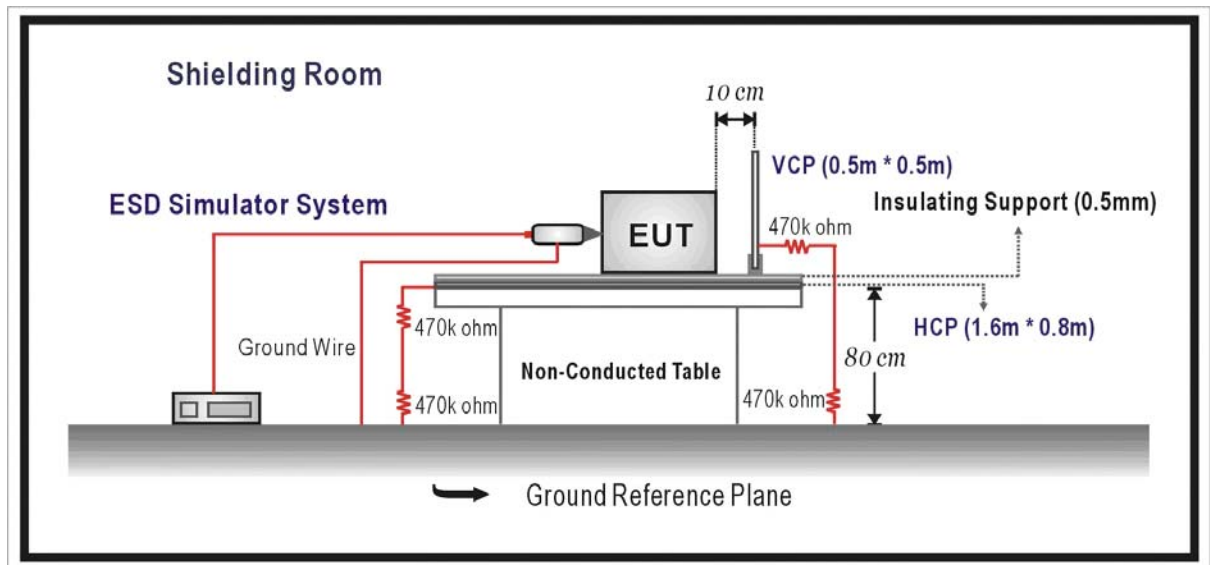


8. Electrostatic Discharge

8.1. Test Specification

According to Standard : IEC 61000-4-2

8.2. Test Setup



8.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Enclosure Port				
	Electrostatic Discharge	kV(Charge Voltage)	±8 Air Discharge ±4 Contact Discharge	B

8.4. Test Procedure

Direct application of discharges to the EUT:

Contact discharge was applied only to conductive surfaces of the EUT.

Air discharges were applied only to non-conductive surfaces of the EUT.

During the test, it was performed with single discharges. For the single discharge time between successive single discharges will be keep longer 1 second. It was at least ten single discharges with positive and negative at the same selected point.

The selected point, which was performed with electrostatic discharge, was marked on the red label of the EUT.

Indirect application of discharges to the EUT:

Vertical Coupling Plane (VCP):

The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge. It was at least ten single discharges with positive and negative at the same selected point.

Horizontal Coupling Plane (HCP):

The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge. It was at least ten single discharges with positive and negative at the same selected point.

8.5. Deviation from Test Standard

No deviation.

8.6. Test Result

Product	Notebook PC		
Test Item	Electrostatic Discharge		
Test Mode	Mode 1		
Date of Test	2010/04/16	Test Site	No.3 Shielded Room

Item	Amount of Discharge	Voltage	Required Criteria	Complied To Criteria (A,B,C)	Results
Air Discharge	10	+8kV	B	A	Pass
	10	-8kV	B	A	Pass
Contact Discharge	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (HCP)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Front)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Left)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Back)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Right)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

NR: No Requirement

- ☒ Meet criteria A: Operate as intended during and after the test
- ☐ Meet criteria B: Operate as intended after the test
- ☐ Meet criteria C: Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at ____ kV.
 - ☒ No false alarms or other malfunctions were observed during or after the test.

Remark:

The Contact discharges were applied at least total 200 discharges at a minimum of four test points.

8.7. Test Photograph

Test Mode : Mode 1

Description : ESD Test Setup

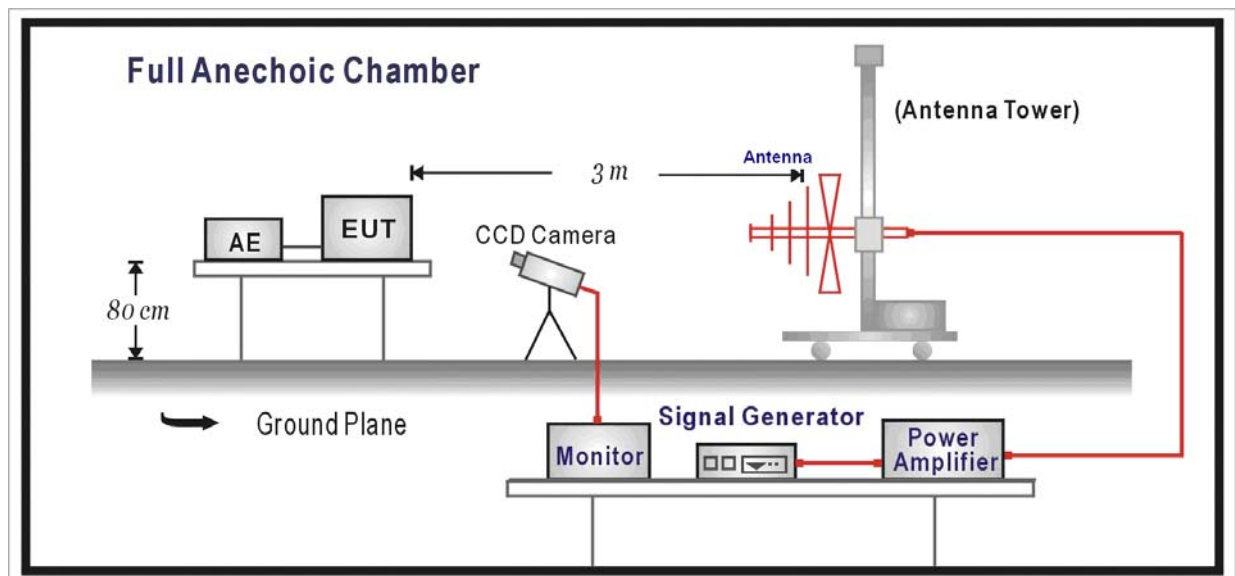


9. Radiated Susceptibility

9.1. Test Specification

According to Standard : IEC 61000-4-3

9.2. Test Setup



9.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Enclosure Port				
	Radio-Frequency	MHz	80-1000	A
	Electromagnetic Field	V/m(Un-modulated, rms)	3	
	Amplitude Modulated	% AM (1kHz)	80	

9.4. Test Procedure

The EUT and load, which are placed on a table that is 0.8 meter above ground, are placed with one coincident with the calibration plane such that the distance from antenna to the EUT was 3 meters.

Both horizontal and vertical polarization of the antenna and four sides of the EUT are set on measurement.

In order to judge the EUT performance, a CCD camera is used to monitor EUT screen.

All the scanning conditions are as follows:

Condition of Test	Remarks
1. Field Strength	3 V/m Level 2
2. Radiated Signal	AM 80% Modulated with 1kHz
3. Scanning Frequency	80MHz - 1000MHz
4. Dwell Time	3 Seconds
5. Frequency step size Δf :	1%
6. The rate of Swept of Frequency	1.5×10^{-3} decades/s

9.5. Deviation from Test Standard

No deviation.

9.6. Test Result

Product	Notebook PC		
Test Item	Radiated susceptibility		
Test Mode	Mode 1		
Date of Test	2010/04/16	Test Site	Chamber5

Frequency (MHz)	Position (Angle)	Polarity (H or V)	Field Strength (V/m)	Required Criteria	Complied To Criteria (A,B,C)	Results
80-1000	FRONT	H	3	A	A	PASS
80-1000	FRONT	V	3	A	A	PASS
80-1000	BACK	H	3	A	A	PASS
80-1000	BACK	V	3	A	A	PASS
80-1000	RIGHT	H	3	A	A	PASS
80-1000	RIGHT	V	3	A	A	PASS
80-1000	LEFT	H	3	A	A	PASS
80-1000	LEFT	V	3	A	A	PASS
80-1000	UP	H	3	A	A	PASS
80-1000	UP	V	3	A	A	PASS
80-1000	DOWN	H	3	A	A	PASS
80-1000	DOWN	V	3	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A: Operate as intended during and after the test
- ☐ Meet criteria B: Operate as intended after the test
- ☐ Meet criteria C: Loss/Error of function
- ☐ Additional Information
 - ☐ There was no observable degradation in performance.
 - ☐ EUT stopped operation and could / could not be reset by operator at _____ V/m at frequency _____ MHz.
- ☒ No false alarms or other malfunctions were observed during or after the test.

9.7. Test Photograph

Test Mode : Mode 1

Description : Radiated Susceptibility Test Setup

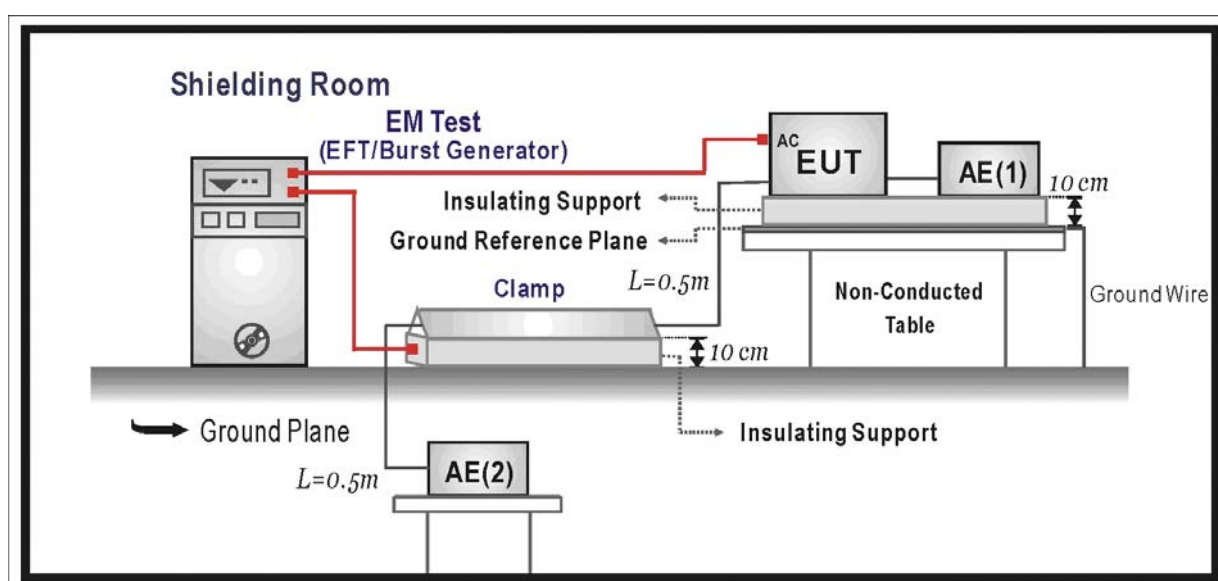


10. Electrical Fast Transient/Burst

10.1. Test Specification

According to Standard : IEC 61000-4-4

10.2. Test Setup



10.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
I/O and communication ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	± 0.5 5/50 5	B
Input DC Power Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	± 0.5 5/50 5	B
Input AC Power Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	± 1 5/50 5	B

10.4. Test Procedure

The EUT is placed on a table that is 0.8 meter height. A ground reference plane is placed on the table, and uses a 0.1m insulation between the EUT and ground reference plane.

The minimum area of the ground reference plane is 1m*1m, and 0.65mm thick min, and projected beyond the EUT by at least 0.1m on all sides.

Test on I/O and communication ports:

The EFT interference signal is through a coupling clamp device couples to the signal and control lines of the EUT with burst noise for 1minute.

Test on power supply ports:

The EUT is connected to the power mains through a coupling device that directly couples the EFT/B interference signal.

Each of the Line and Neutral conductors is impressed with burst noise for 1 minute.

The length of the signal and power lines between the coupling device and the EUT is 0.5m.

10.5. Deviation from Test Standard

No deviation.

10.6. Test Result

Product	Notebook PC		
Test Item	Electrical fast transient/burst		
Test Mode	Mode 1		
Date of Test	2010/04/15	Test Site	No.6 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L+N+PE	±	1kV	60	Direct	B	A	PASS
LAN	±	0.5kV	60	Clamp	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A : Operate as intended during and after the test
- ☐ Meet criteria B : Operate as intended after the test
- ☐ Meet criteria C : Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
- ☒ No false alarms or other malfunctions were observed during or after the test.

10.7. Test Photograph

Test Mode : Mode 1

Description : EFT/B Test Setup



Test Mode : Mode 1

Description : EFT/B Test Setup - Clamp

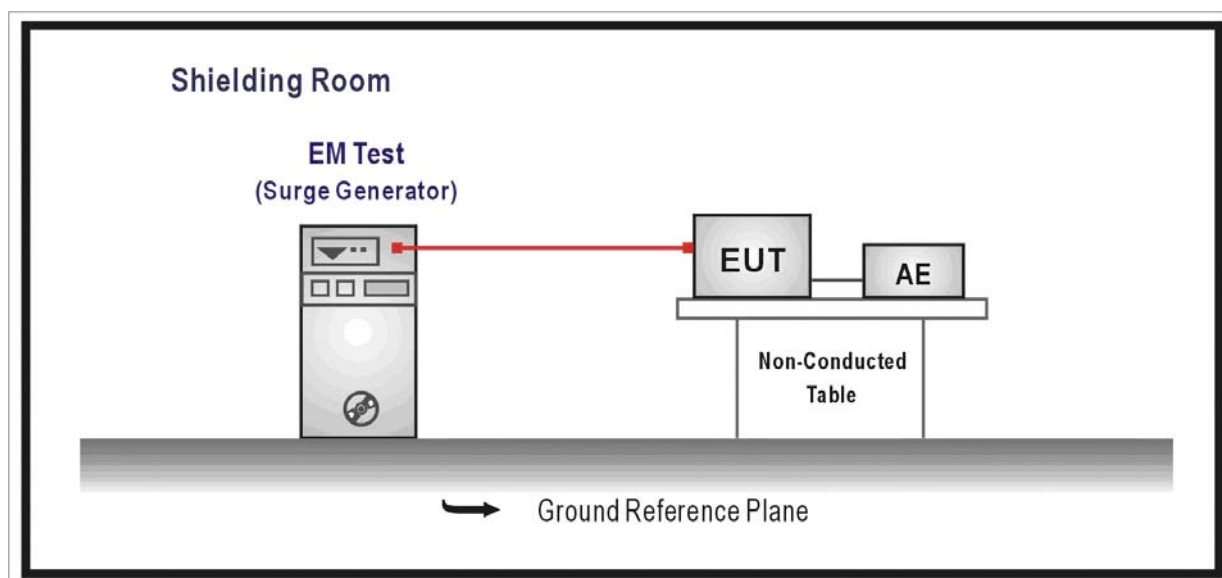


11. Surge

11.1. Test Specification

According to Standard : IEC 61000-4-5

11.2. Test Setup



11.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Signal Ports and Telecommunication Ports(See 1) and 2))				
Surges	Line to Ground	Tr/Th us kV	1.2/50 (8/20) ± 1	B
Input DC Power Ports				
Surges	Line to Ground	Tr/Th us kV	1.2/50 (8/20) ± 0.5	B
AC Input and AC Output Power Ports				
Surges	Line to Line Line to Ground	Tr/Th us kV kV	1.2/50 (8/20) ± 1 ± 2	B

Notes:

- 1) Applicable only to ports which according to the manufacturer's may directly to outdoor cables.
- 2) Where normal functioning cannot be achieved because of the impact of the CDN on the EUT, no immunity test shall be required.

11.4. Test Procedure

The EUT and its load are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min. And projected beyond the EUT by at least 0.1m on all sides. The length of power cord between the coupling device and the EUT shall be 2m or less.

For Input and Output AC Power or DC Input and DC Output Power Ports:

The EUT is connected to the power mains through a coupling device that directly couples the Surge interference signal.

The surge noise shall be applied synchronized to the voltage phase at 0⁰, 90⁰, 180⁰, 270⁰ and the peak value of the a.c. voltage wave. (Positive and negative)

Each of Line-Earth and Line-Line is impressed with a sequence of five surge voltages with interval of 1 min.

11.5. Deviation from Test Standard

No deviation.

11.6. Test Result

Product	Notebook PC		
Test Item	Surge		
Test Mode	Mode 1		
Date of Test	2010/04/15	Test Site	No.6 Shielded Room

Inject Line	Polarity	Angle	Voltage kV	Time Interval (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N	±	0	1kV	60	Direct	B	A	PASS
L-N	±	90	1kV	60	Direct	B	A	PASS
L-N	±	180	1kV	60	Direct	B	A	PASS
L-N	±	270	1kV	60	Direct	B	A	PASS
L-PE	±	0	2kV	60	Direct	B	A	PASS
L-PE	±	90	2kV	60	Direct	B	A	PASS
L-PE	±	180	2kV	60	Direct	B	A	PASS
L-PE	±	270	2kV	60	Direct	B	A	PASS
N-PE	±	0	2kV	60	Direct	B	A	PASS
N-PE	±	90	2kV	60	Direct	B	A	PASS
N-PE	±	180	2kV	60	Direct	B	A	PASS
N-PE	±	270	2kV	60	Direct	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test

☐ Meet criteria B : Operate as intended after the test

☐ Meet criteria C : Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test.

11.7. Test Photograph

Test Mode : Mode 1

Description : SURGE Test Setup



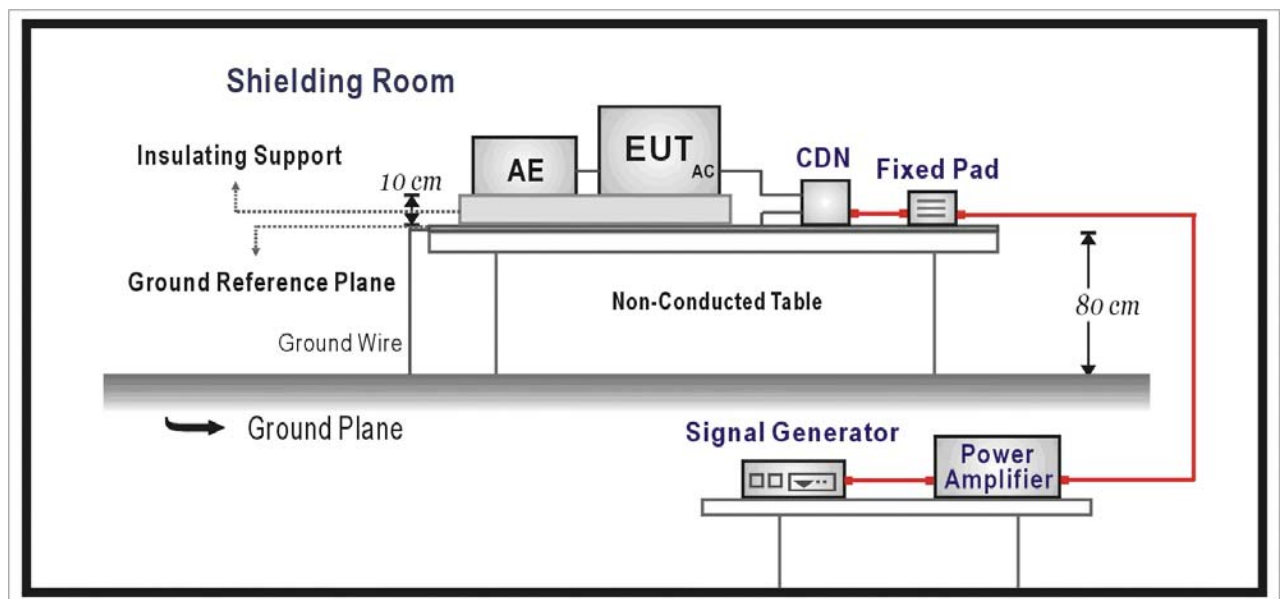
12. Conducted Susceptibility

12.1. Test Specification

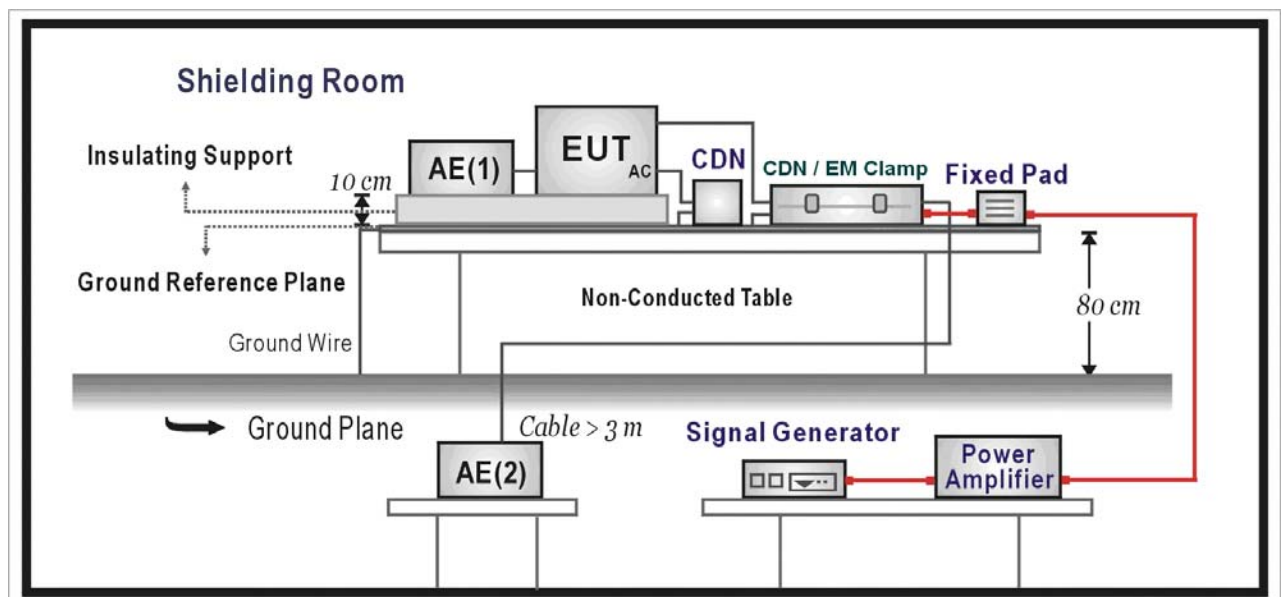
According to Standard : IEC 61000-4-6

12.2. Test Setup

CDN Test Mode



EM Clamp Test Mode



12.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Signal Ports and Telecommunication Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 3 80	A
Input DC Power Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 3 80	A
Input AC Power Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 3 80	A

12.4. Test Procedure

The EUT are placed on a table that is 0.8 meter height, and a Ground reference plane on the table, EUT are placed upon table and use a 10cm insulation between the EUT and Ground reference plane.

For Signal Ports and Telecommunication Ports

The disturbance signal is through a coupling and decoupling networks (CDN) or EM-clamp device couples to the signal and Telecommunication lines of the EUT.

For Input DC and AC Power Ports

The EUT is connected to the power mains through a coupling and decoupling networks for power supply lines. And directly couples the disturbances signal into EUT.

Used CDN-M2 for two wires or CDN-M3 for three wires.

All the scanning conditions are as follows:

Condition of Test	Remarks
1. Field Strength	130dBuV(3V) Level 2
2. Radiated Signal	AM 80% Modulated with 1kHz
3. Scanning Frequency	0.15MHz – 80MHz
4. Dwell Time	3 Seconds
5. Frequency step size Δf :	1%
6. The rate of Swept of Frequency	1.5×10^{-3} decades/s

12.5. Deviation from Test Standard

No deviation.

12.6. Test Result

Product	Notebook PC		
Test Item	Conducted susceptibility		
Test Mode	Mode 1		
Date of Test	2010/04/15	Test Site	No.6 Shielded Room

Frequency Range (MHz)	Voltage Applied dBuV(V)	Inject Method	Tested Port of EUT	Required Criteria	Performance Criteria Complied To	Result
0.15~80	130 (3V)	CDN	AC IN	A	A	PASS
0.15~80	130 (3V)	CDN	GIGA LAN	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

- ☒ Meet criteria A : Operate as intended during and after the test
- ☐ Meet criteria B : Operate as intended after the test
- ☐ Meet criteria C : Loss/Error of function
- ☐ Additional Information
 - ☐ EUT stopped operation and could / could not be reset by operator at ____ dBuV(V) at frequency ____MHz.
 - ☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

12.7. Test Photograph

Test Mode : Mode 1

Description : Conducted Susceptibility Test Setup



Test Mode : Mode 1

Description : Conducted Susceptibility Test Setup-CDN

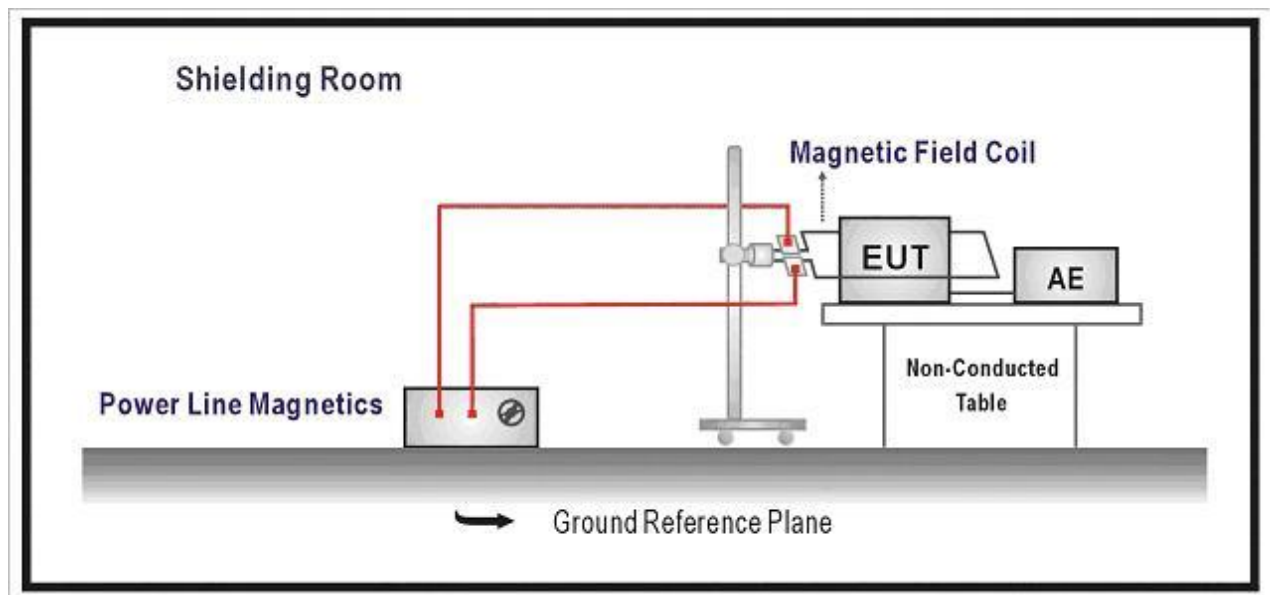


13. Power Frequency Magnetic Field

13.1. Test Specification

According to Standard : IEC 61000-4-8

13.2. Test Setup



13.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Enclosure Port				
	Power-Frequency Magnetic Field	Hz A/m (r.m.s.)	50 1	A

13.4. Test Procedure

The EUT and its load are placed on a table which is 0.8 meter above a metal ground plane measured at least 1m*1m min. The test magnetic field shall be placed at central of the induction coil.

The test magnetic Field shall be applied 10 minutes by the immersion method to the EUT. And the induction coil shall be rotated by 90° in order to expose the EUT to the test field with different orientation (X, Y, Z Orientations).

13.5. Deviation from Test Standard

No deviation.

13.6. Test Result

Product	Notebook PC		
Test Item	Power frequency magnetic field		
Test Mode	Mode 1		
Date of Test	2010/04/16	Test Site	No.3 Shielded Room

Polarization	Frequency (Hz)	Magnetic Strength (A/m)	Required Performance Criteria	Performance Criteria Complied To	Test Result
X Orientation	50	1	A	A	PASS
Y Orientation	50	1	A	A	PASS
Z Orientation	50	1	A	A	PASS

- ☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
 ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
- ☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

13.7. Test Photograph

Test Mode : Mode 1

Description : Power Frequency Magnetic Field Test Setup

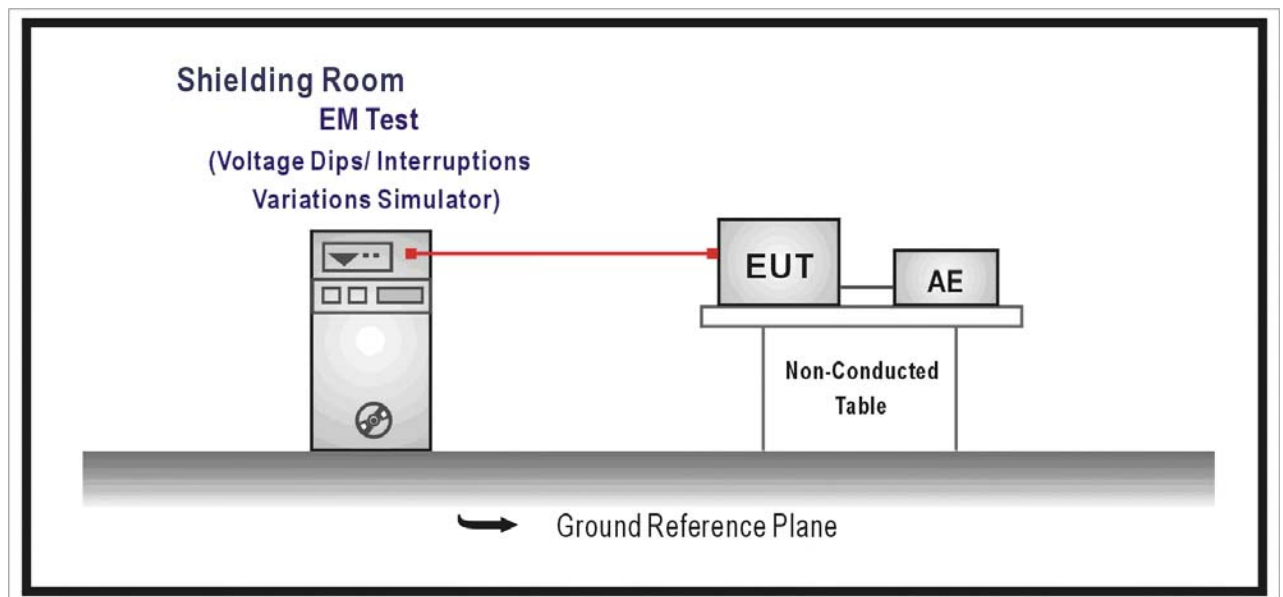


14. Voltage Dips and Interruption

14.1. Test Specification

According to Standard : IEC 61000-4-11

14.2. Test Setup



14.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Input AC Power Ports				
Voltage Dips		% Reduction	30	C
		Period	25	
Voltage Interruptions		% Reduction	>95	B
		Period	0.5	
Voltage Interruptions		% Reduction	> 95	C
		Period	250	

14.4. Test Procedure

The EUT and its load are placed on a table which is 0.8 meter above a metal ground plane measured 1m*1m min. And 0.65mm thick min. And projected beyond the EUT by at least 0.1m on all sides. The power cord shall be used the shortest power cord as specified by the manufacturer.

For Voltage Dips/ Interruptions test:

The selection of test voltage is based on the rated power range. If the operation range is large than 20% of lower power range, both end of specified voltage shall be tested.

Otherwise, the typical voltage specification is selected as test voltage.

The EUT is connected to the power mains through a coupling device that directly couples to the Voltage Dips and Interruption Generator.

The EUT shall be tested for 30% voltage dip of supplied voltage and duration 25 Periods, for 95% voltage dip of supplied voltage and duration 0.5 Periods with a sequence of three voltage dips with intervals of 10 seconds, and for 95% voltage interruption of supplied voltage and duration 250 Periods with a sequence of three voltage interruptions with intervals of 10 seconds.

Voltage phase shifting are shall occur at 0° , 45° , 90° , 135° , 180° , 225° , 270° , 315° of the voltage.

14.5. Deviation from Test Standard

No deviation.

14.6. Test Result

Product	Notebook PC		
Test Item	Voltage dips and interruption		
Test Mode	Mode 1		
Date of Test	2010/04/15	Test Site	No.6 Shielded Room

Voltage Dips and Interruption Reduction(%)	Angle	Test Duration (Periods)	Required Performance Criteria	Performance Criteria Complied To	Test Result
30	0	25	C	A	PASS
30	45	25	C	A	PASS
30	90	25	C	A	PASS
30	135	25	C	A	PASS
30	180	25	C	A	PASS
30	225	25	C	A	PASS
30	270	25	C	A	PASS
30	315	25	C	A	PASS
>95	0	0.5	B	A	PASS
>95	45	0.5	B	A	PASS
>95	90	0.5	B	A	PASS
>95	135	0.5	B	A	PASS
>95	180	0.5	B	A	PASS
>95	225	0.5	B	A	PASS
>95	270	0.5	B	A	PASS
>95	315	0.5	B	A	PASS
>95	0	250	C	B	PASS
>95	45	250	C	B	PASS
>95	90	250	C	B	PASS
>95	135	250	C	B	PASS
>95	180	250	C	B	PASS
>95	225	250	C	B	PASS
>95	270	250	C	B	PASS
>95	315	250	C	B	PASS

☒ Meet criteria A: Operate as intended during and after the test

☒ Meet criteria B: Operate as intended after the test

☐ Meet criteria C: Loss/Error of function

☐ Additional Information

☐ The nominal voltage of EUT is 230V.

☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

14.7. Test Photograph

Test Mode : Mode 1

Description : Voltage Dips Test Setup



15. Attachment**➤ EUT Photograph**

(1) EUT Photo



(2) EUT Photo



(3) EUT Photo



(4) EUT Photo



(5) EUT Photo



(6) EUT Photo



(7) EUT Photo



(8) EUT Photo



(9) EUT Photo



(10) EUT Photo



(11) EUT Photo



(12) EUT Photo



(13) EUT Photo



(14) EUT Photo



(15) EUT Photo



(16) EUT Photo



(17) EUT Photo



(18) EUT Photo

