EMC Test Report

Application No.	:	TB10119029
Applicant	:	POINT OF VIEW B.V.
Equipment Under Test (EUT)		
EUT Name	:	PC SYSTEM MOBII
Model No.	:	CS-G41
Serial No.	:	CS-G41-XXXX (XXXX ranges from 0 to 9)
Brand Name	:	No supplied by client
Receipt Date	:	2010-11-17
Test Date	:	2010-11-17 to 2010-11-22
Issue Date	:	2010-11-25
Standards	:	EN55022:2006+A1:2007 EN55024:1998+A1:2001+A2:2003 EN61000-3-2:2006+A1:2009+A2:2009 EN61000-3-3: 2008
Conclusions	:	**PASS** In the configuration tested, the EUT complied with the standards specified above The EUT technically complies with the 2004/108/EC directive requirements
Test/Witness Engineer	:	
Approved & Authorized	:	

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in the report.

10/F., A Block, Jiada R & D Bldg., No.5 Songpingshan Road, Science & Technology Park,
Nanshan District, Shenzhen, China
Tel: +86 75526509301 Fax: +86 75526509195

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1. General Information

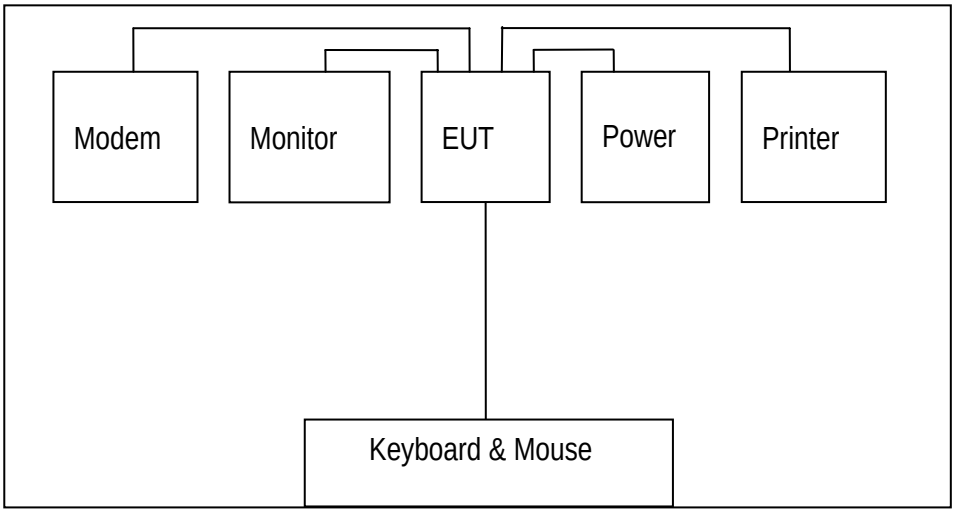
1.1. Client Information

Applicant	:	POINT OF VIEW B.V.
Address	:	ACHTSEWEG NOORD 9, 5651 GG EINDHOVEN THE NETHERLANDS
Manufacturer	:	POINT OF VIEW B.V.
Address	:	ACHTSEWEG NOORD 9, 5651 GG EINDHOVEN THE NETHERLANDS

1.2. General Description of EUT (Equipment Under Test)

EUT Name	:	PC SYSTEM MOBII
Model No.	:	CS-G41
Serial No.	:	CS-G41-XXXX (XXXX ranges from 0 to 9)
Brand Name	:	No supplied by client
Power Supply	:	AC 220V～240V, 50HZ/60Hz
Remark: All above models are identical in schematic, structure and critical components except for CPU capacity, therefore, EMI and EMS testing were performed with CS-G41 only.		

1.3. Block Diagram Showing The Configuration of System Tested



1.4. Description of Support Units

Name	Model	S/N	Manufacturer	Used " √ "
Printer	HP1505n	VNF3G06957	HP	√
Modem	RX304Xv2	----	ASUS	√
Adaptor for Modem	PWR-075-U12	----	NE-7GEAR	
LCD Monitor	E170Sc	----	DELL	√
PC	OPTIPLEX380	----	DELL	
Keyboard	L100	U01C	DELL	√
Mouse	M-UARDEL7	----	DELL	√

1.5. Performance Criterion

Criterion A: The equipment shall continue to operate as intended without operator intervention. No degradation of performance of loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended.

Criterion B: After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended.

Criterion C: Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions.

1.6. Test Facility

The testing report were performed by the Shenzhen Toby Technology Co., Ltd., in their facilities located at 10/F., A Block, Jiada R & D Bldg., No.5 Songpingshan Road, Science & Technology Park, Nanshan District, Shenzhen, China. At the time of testing, the following bodies accredited the Laboratory:

The Laboratory is listed in the United States of American Federal Communications Commission (FCC), and the registration number is 811562.

Jun. 04, 2010 certificated by TUV Rheinland, Shenzhen (Audit Report:17015407-001). The certificate is valid until the next scheduled inspection or up to 18 months, at the discretion of TUV Rhineland.

2. TEST Results Summary

EMISSION		
Description of test items	**Standards**	**Results**
Conducted disturbance at mains terminals	EN 55022: 2006+A1: 2007	Pass
Radiated Disturbance	EN 55022: 2006+A1: 2007	Pass
Harmonic current emissions	EN 61000-3-2: 2006+A1: 2009+A2:2009	Pass
Voltage fluctuation and flicker	EN 61000-3-3: 2008	Pass
IMMUNITY		
Description of test items	**Standards**	**Results**
Electrostatic Discharge (ESD)	EN 61000-4-2: 2009	Pass
Radio-frequency, Continuous radiated disturbance	EN 61000-4-3: 2006+A1: 2008	Pass
EFT/B Immunity	EN 61000-4-4: 2004+A1:2010	Pass
Surge Immunity	EN 61000-4-5: 2006	Pass
Conducted RF Immunity	EN 61000-4-6: 2009	Pass
Power frequency magnetic field	EN 61000-4-8: 1993+A1:2001	N/A
Voltage dips, >95% reduction	EN 61000-4-11: 2004	Pass
Voltage dips, 30% reduction		
Voltage interruptions		
Note: N/A is an abbreviation for Not Applicable.		

3. Test Equipment Used

3.1. Test Equipment Used to Measure Conducted Emission

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC001	EMI Test Receiver	Rohde & Schwarz	ESCS30	Jan.30, 2010	1 Year
TB-EMC002	AMN	Rohde & Schwarz	ENV216	Jan.30, 2010	1 Year
TB-EMC003	AMN	SCHWARZBECK	NNBL 8226-2	Jan.30, 2010	1 Year

3.2. Test Equipment Used to Measure Radiated Emission

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC004	EMI Test Receiver	Rohde & Schwarz	ESI26	Jan.30, 2010	1 Year
TB-EMC005	Bilog Antenna	SCHWARZBECK	VULB9163	Jan.30, 2010	1 Year
TB-EMC006	Positioning Controller	C&C	CC-C-1F	N/A	N/A

3.3. Test Equipment Used to Measure Harmonic Current/ Voltage Fluctuation and Flicker

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC007	Harmonic Flicker Test System	CI	5001ix-CTS-400	Jan.30, 2010	1 Year

3.4. Test Equipment Used to Measure Electrostatic Discharge Immunity

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC008	ESD Tester	TESEQ	NSG437	Jan.30, 2010	1 Year

3.5. Test Equipment Used to Measure Conducted Immunity

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC009	RF Generator	FRANKONIA	CIT-10/75	Jan.30, 2010	1 Year
TB-EMC010	Attenuator	FRANKONIA	59-6-33	Jan.30, 2010	1 Year
TB-EMC011	M-CDN	LUTHI	M2/M3	Jan.30, 2010	1 Year
TB-EMC012	CDN	LUTHI	AF2	Jan.30, 2010	1 Year
TB-EMC013	EM Injection Clamp	LUTHI	EM101	Jan.30, 2010	1 Year

3.6. Test Equipment Used to Measure Radio Frequency Electromagnetic Fields Immunity

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC014	Signal Generator	Rohde & Schwarz	SMT03	Jan.30, 2010	1 Year
TB-EMC015	Power Meter	Rohde & Schwarz	NRVD	Jan.30, 2010	1 Year
TB-EMC016	Voltage Probe	Rohde & Schwarz	URV5-Z2	Jan.30, 2010	1 Year
TB-EMC017	Voltage Probe	Rohde & Schwarz	URV5-Z2	Jan.30, 2010	1 Year
TB-EMC018	Power Amplifier	AR	150W1000	Jan.30, 2010	1 Year
TB-EMC019	Bilog Antenna	Chase	CBL6111C	Jan.30, 2010	1 Year

3.7. Test Equipment Used to Measure Electrical Fast Transient/Burst Immunity

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC020	Simulator	EMTEST	UCS500N5	Jan.30, 2010	1 Year
TB-EMC021	Auto-transformer	EMTEST	V4780S2	Jan.30, 2010	1 Year

3.8. Test Equipment Used to Measure Surge Immunity

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC022	Simulator	EMTEST	UCS500N5	Jan.30, 2010	1 Year
TB-EMC023	Coupling Clamp	EMTEST	HFK	Jan.30, 2010	1 Year

3.9. Test Equipment Used to Measure Voltage Dips and Interruptions Immunity

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC024	Simulator	EMTEST	UCS500N5	Jan.30, 2010	1 Year
TB-EMC025	Auto-transformer	EMTEST	V4780S2	Jan.30, 2010	1 Year

3.10. Test Equipment Used to Measure Power frequency magnetic field

No.	Equipment	Manufacturer	Model No.	Last Cal.	Cal. Interval
TB-EMC026	Power Frequency Magnetic Field Generator	EVERFINE	EMS61000-8K	Jan.30, 2010	1 Year

4. Conducted Emission Test

4.1. Test Standard and Limit

4.1.1. Test Standard

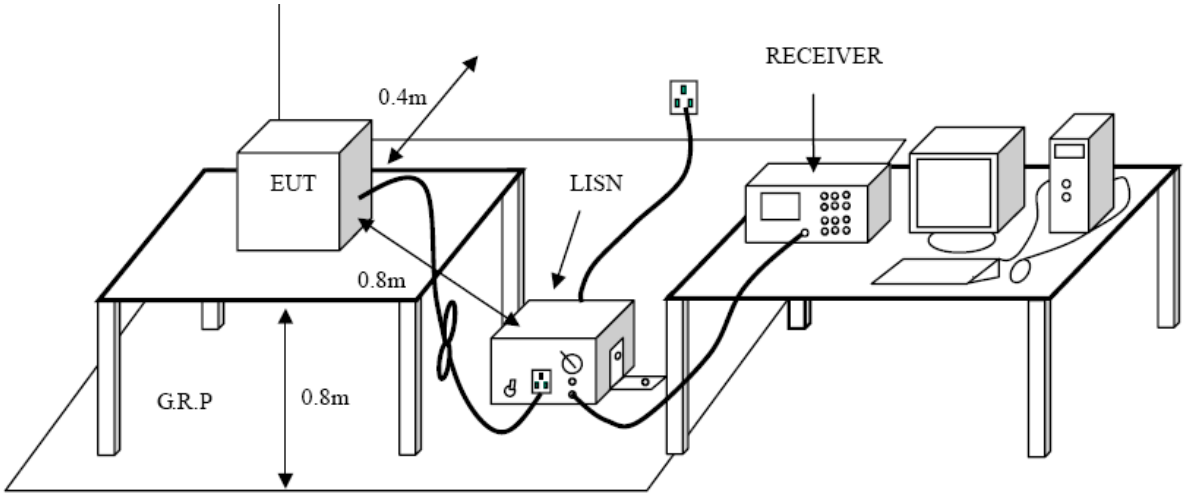
EN 55022:2006+A1:2007.

4.1.2. Test Limit

Conducted Disturbance Test Limit (Class B)

Frequency	Maximum RF Line Voltage (dBμV)	
	Quasi-peak Level	Average Level
150kHz~500kHz	66~56*	56~46 *
500kHz~5MHz	56	46
5MHz~30MHz	60	50
*Decreasing linearly with logarithm of the frequency		

4.2. Test Setup



4.3. Test Procedure

The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.

Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The

overall length shall not exceed 1 m.

LISN at least 80 cm from nearest part of EUT chassis.
The bandwidth of EMI test receiver is set at 9kHz, and the test frequency band is from 0.15MHz to 30MHz.

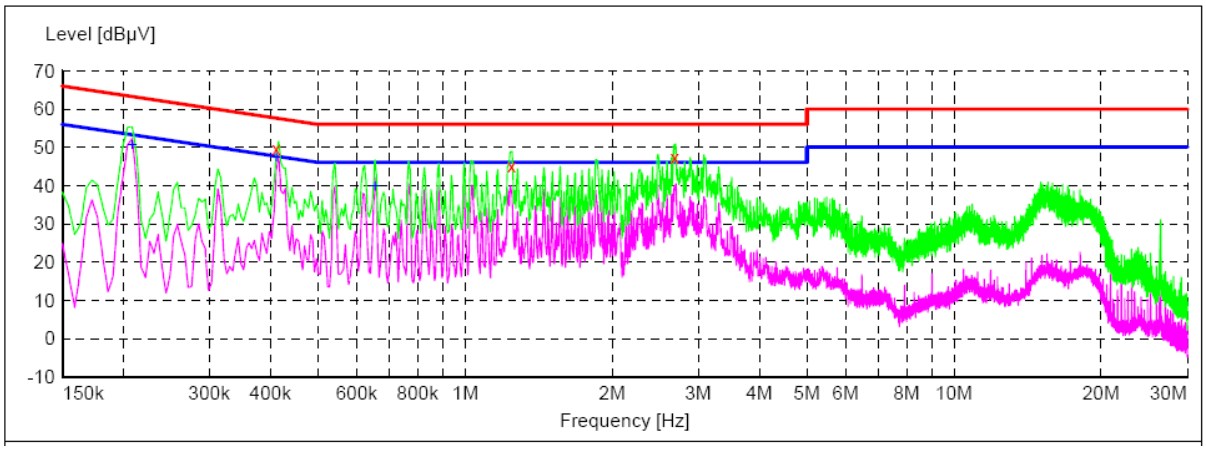
4.4. Test Condition

Temperature	:	25 ℃
Relative Humidity	:	48 %
Pressure	:	1010 hPa
Test Power	:	AC 230V/50Hz

4.5. Test Data

Please refer to the following pages.

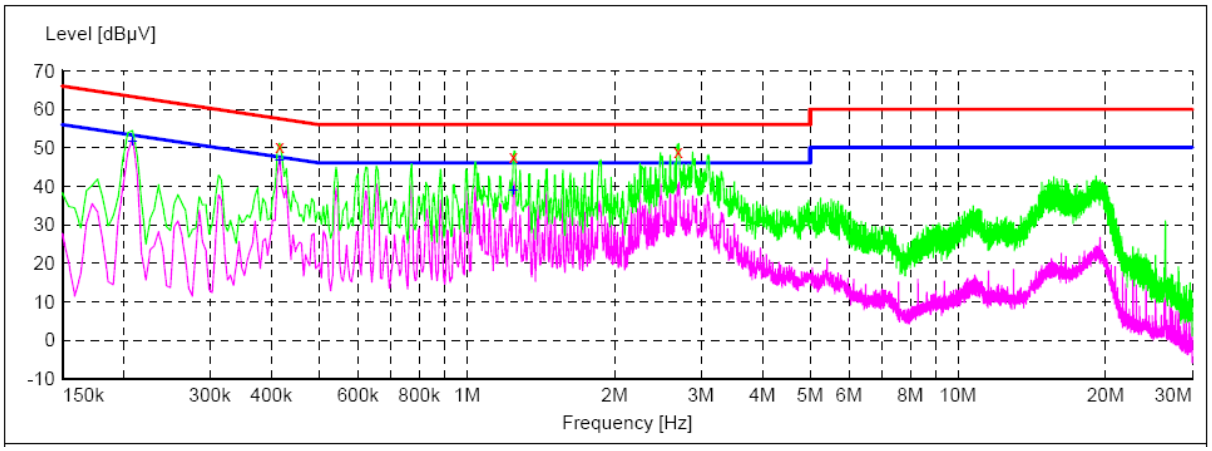
Operating Condition: Normal
Test Specification: L



Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.411000	50.30	9.9	58	7.7	QP	L1	GND
1.243500	45.90	9.9	56	10.1	QP	L1	GND
2.683500	48.10	9.9	56	7.9	QP	L1	GND

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.208500	51.40	9.9	53	1.6	AV	L1	GND
0.411000	47.20	9.9	48	0.8	AV	L1	GND
0.654000	40.50	9.9	46	5.5	AV	L1	GND

Operating Condition: Normal
Test Specification: N



Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.415500	50.40	9.9	58	7.6	QP	N	GND
1.243500	47.70	9.9	56	8.3	QP	N	GND
2.692500	48.90	9.9	56	7.1	QP	N	GND

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.208500	51.80	9.9	53	1.2	AV	N	GND
0.415500	46.80	9.9	48	0.7	AV	N	GND
1.243500	38.80	9.9	46	7.2	AV	N	GND

5. Radiated Emission Test

5.1. Test Standard and Limit

5.1.1. Test Standard

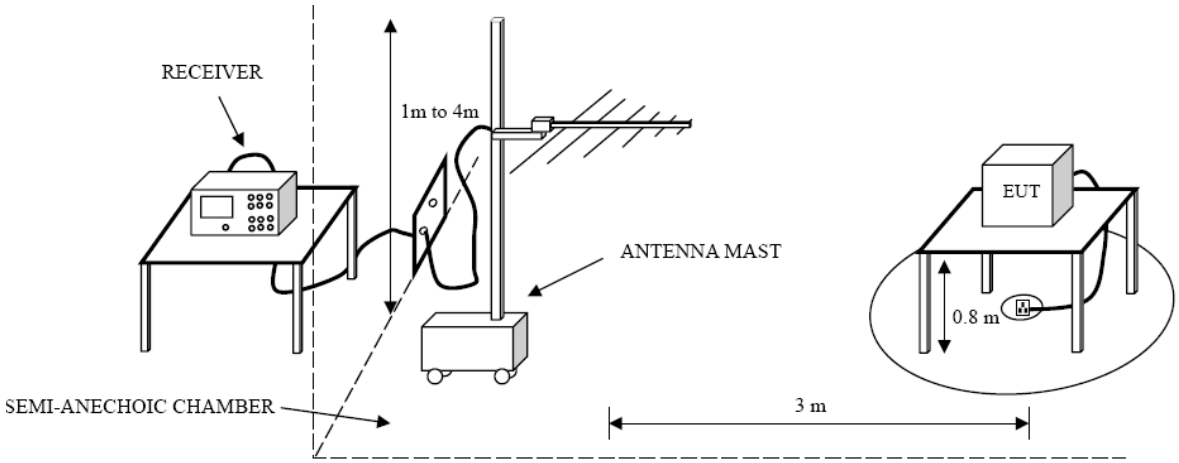
EN 55022:2006+A1:2007

5.1.2. Test Limit

Radiated Disturbance Test Limit (Class B)

Frequency	Limit (dBμV/m)
	Quasi-peak Level
30MHz~230MHz	40
230MHz~1000MHz	47
Remark: 1. The lower limit shall apply at the transition frequency. 2. The test distance is 3m.	

5.2. Test Setup



5.3. Test Procedure

The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m. The table was rotated 360 degrees to determine the position of the highest radiation.

The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

The initial step in collecting radiated emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range.

If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.

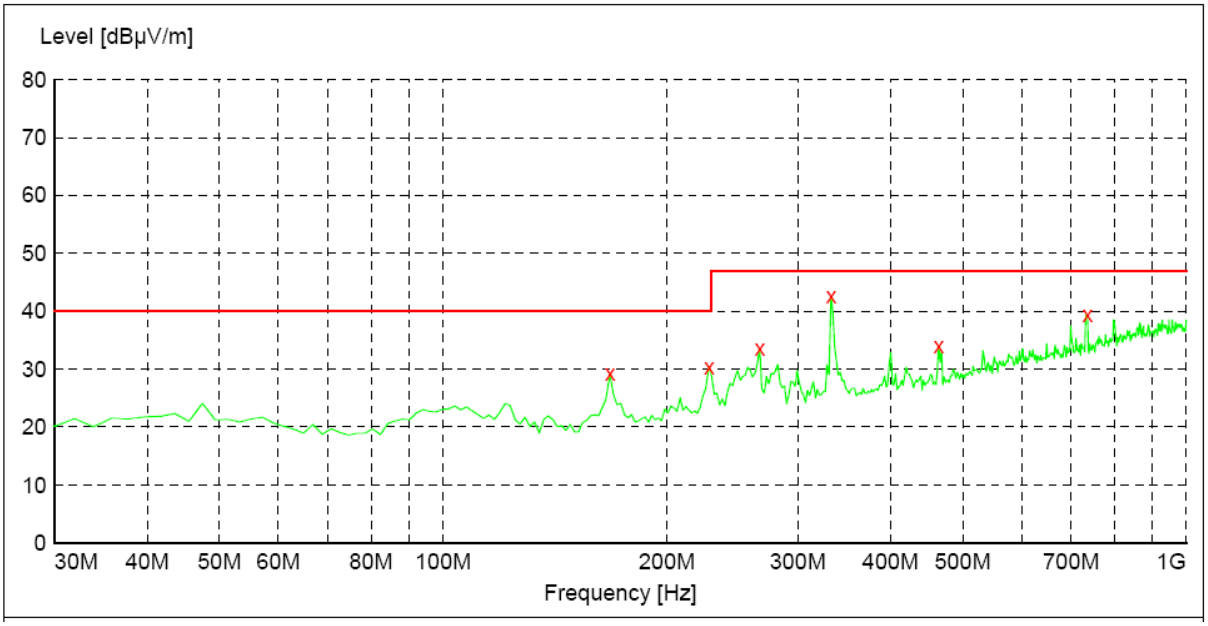
5.4. Test Condition

Temperature	:	25 ℃
Relative Humidity	:	48 %
Pressure	:	1010 hPa
Test Power	:	AC 230V/50Hz

5.5. Test Data

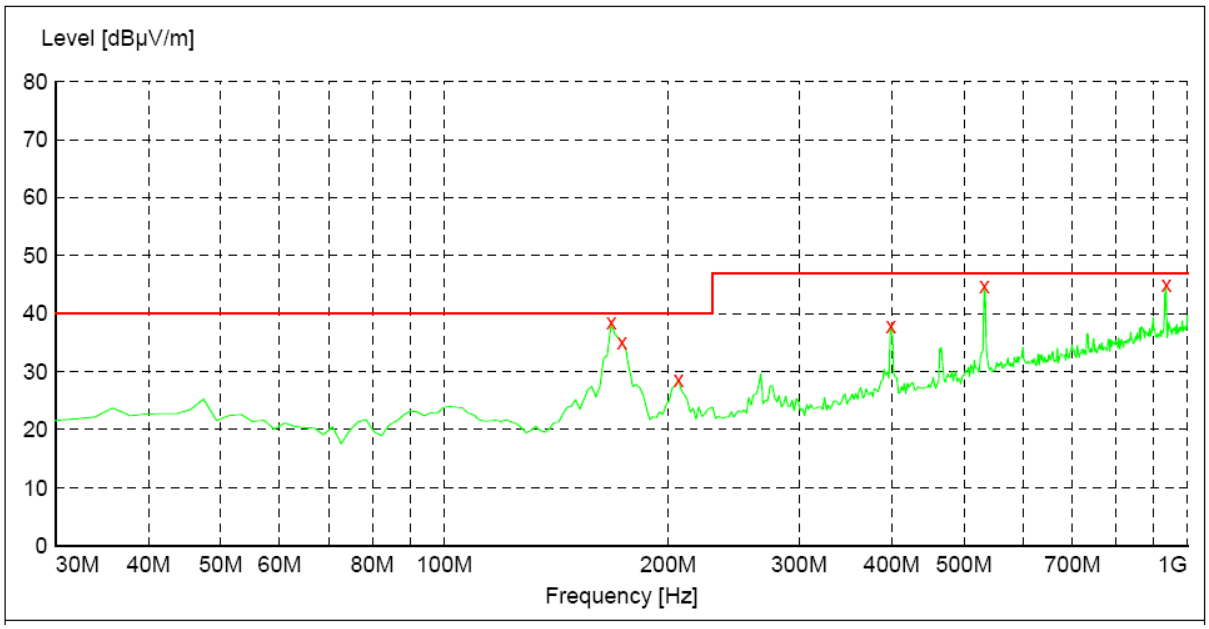
Please refer to the following pages.

Operating Condition: DVD Mode
Test Specification: Horizontal



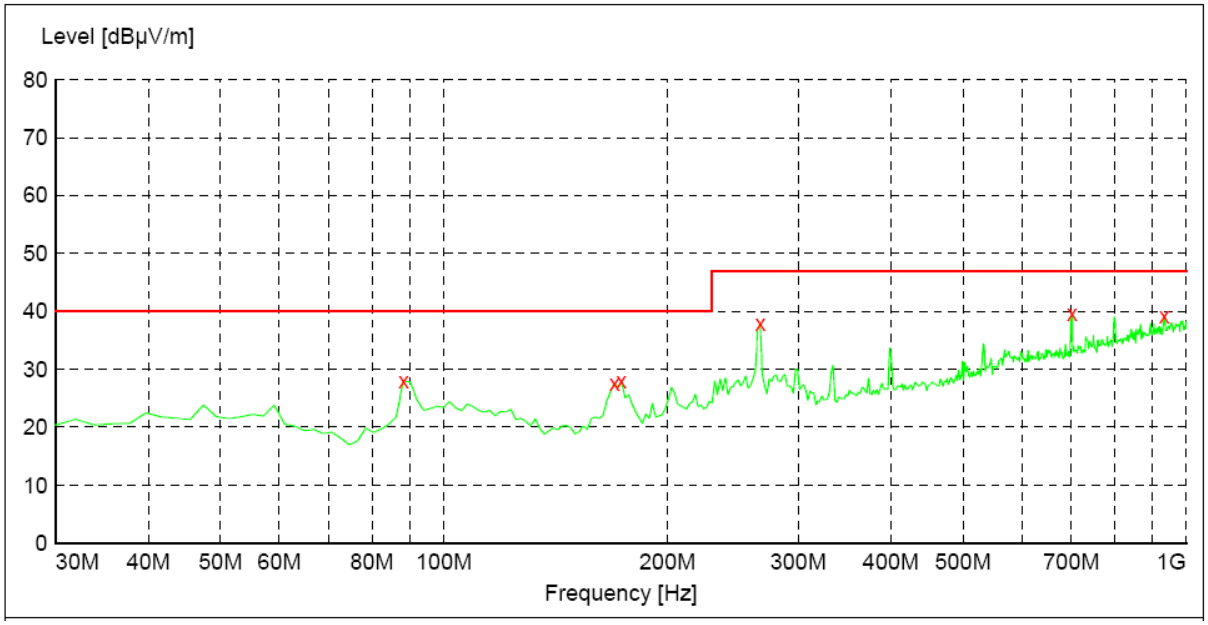
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
167.740000	29.30	14.2	40.0	10.7	---	100.0	0.00	HORIZONTAL
227.880000	30.40	16.5	40.0	9.6	---	100.0	0.00	HORIZONTAL
266.680000	33.70	17.6	47.0	13.3	---	100.0	0.00	HORIZONTAL
332.640000	42.60	19.8	47.0	4.4	---	100.0	0.00	HORIZONTAL
464.560000	34.10	22.5	47.0	12.9	---	100.0	0.00	HORIZONTAL
736.160000	39.40	28.3	47.0	7.6	---	100.0	0.00	HORIZONTAL

Operating Condition: DVD Mode
Test Specification: Vertical



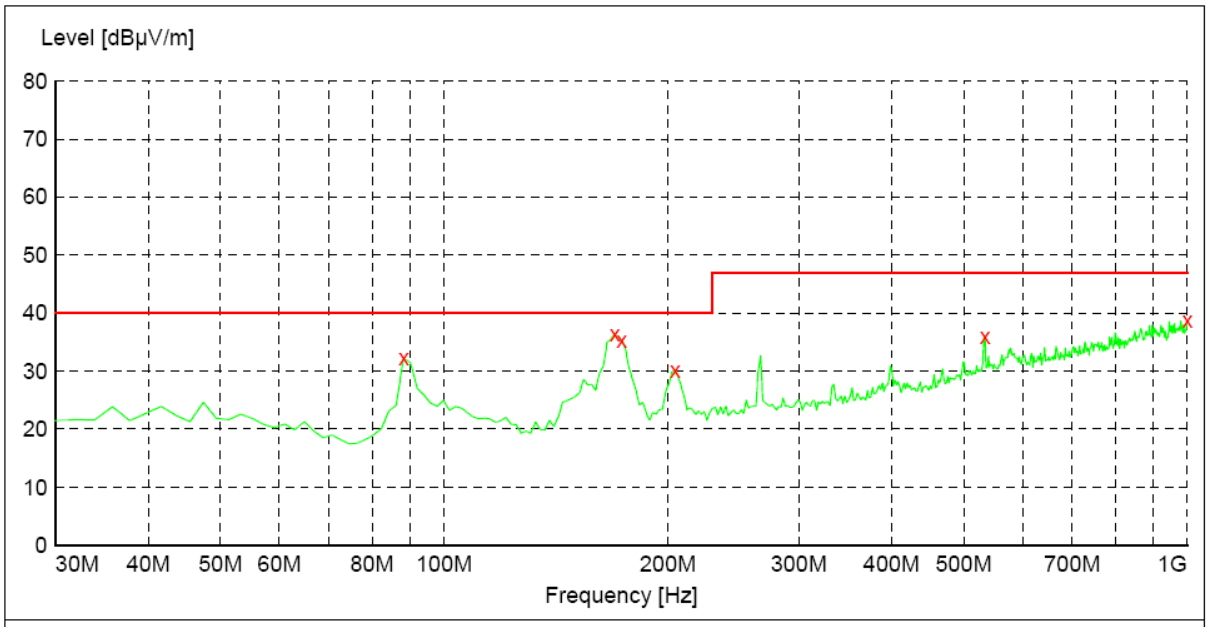
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
167.740000	38.50	14.2	40.0	1.5	---	100.0	0.00	VERTICAL
173.560000	35.10	14.5	40.0	4.9	---	100.0	0.00	VERTICAL
206.540000	28.60	16.1	40.0	11.4	---	100.0	0.00	VERTICAL
398.600000	37.80	21.4	47.0	9.2	---	100.0	0.00	VERTICAL
532.460000	44.80	24.7	47.0	2.2	---	100.0	0.00	VERTICAL
935.980000	45.00	31.6	47.0	2.0	---	100.0	0.00	VERTICAL

Operating Condition: Reading Card Mode
Test Specification: Horizontal



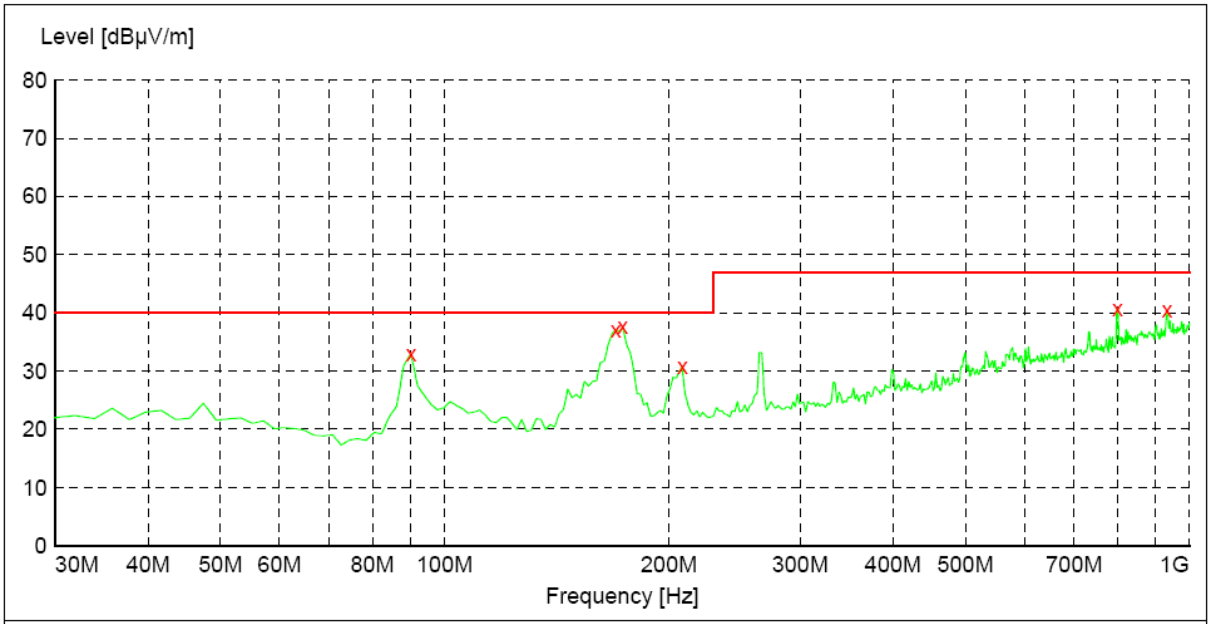
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
88.200000	27.90	15.5	40.0	12.1	---	100.0	0.00	HORIZONTAL
169.680000	27.60	14.2	40.0	12.4	---	100.0	0.00	HORIZONTAL
173.560000	27.90	14.5	40.0	12.1	---	100.0	0.00	HORIZONTAL
266.680000	37.90	17.6	47.0	9.1	---	100.0	0.00	HORIZONTAL
701.240000	39.60	27.6	47.0	7.4	---	100.0	0.00	HORIZONTAL
934.040000	39.20	31.6	47.0	7.8	---	100.0	0.00	HORIZONTAL

Operating Condition: Reading Card Mode
Test Specification: Vertical



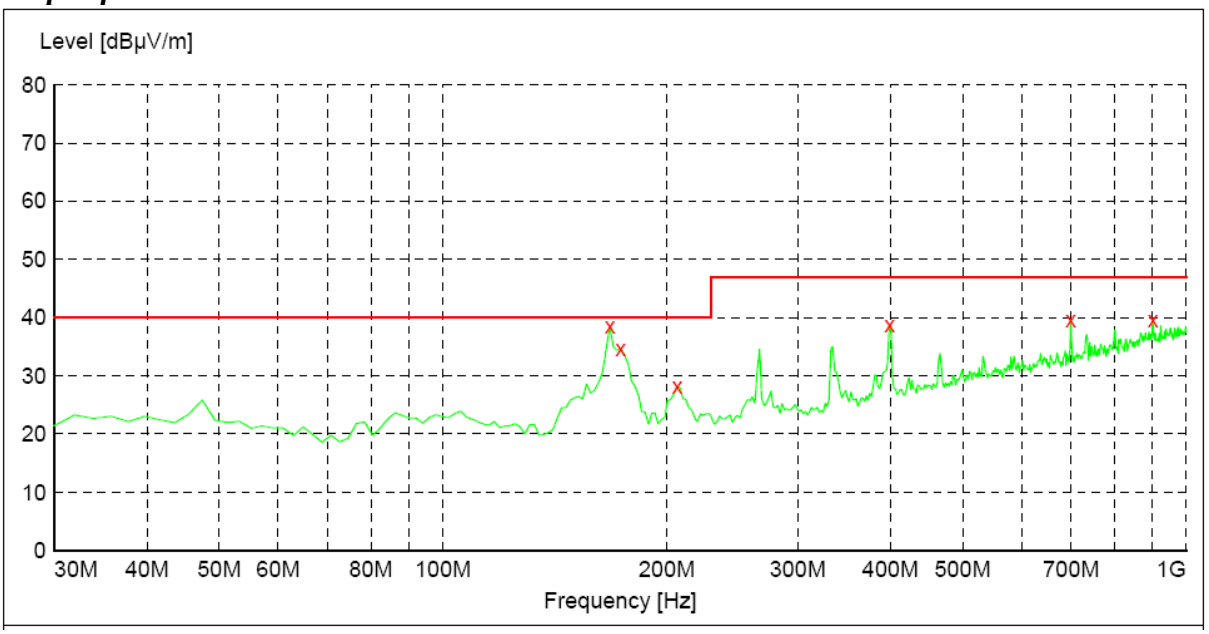
Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
88.200000	32.20	15.5	40.0	7.8	---	100.0	0.00	VERTICAL
169.680000	36.50	14.2	40.0	3.5	---	100.0	0.00	VERTICAL
173.560000	35.30	14.5	40.0	4.7	---	100.0	0.00	VERTICAL
204.600000	30.20	16.1	40.0	9.8	---	100.0	0.00	VERTICAL
534.400000	36.10	24.8	47.0	10.9	---	100.0	0.00	VERTICAL
1000.000000	38.80	32.3	47.0	8.2	---	100.0	0.00	VERTICAL

Operating Condition: PC Mode
Test Specification: Horizontal



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
90.140000	33.00	16.1	40.0	7.0	---	100.0	0.00	HORIZONTAL
169.680000	37.10	14.2	40.0	2.9	---	100.0	0.00	HORIZONTAL
173.560000	37.60	14.5	40.0	2.4	---	100.0	0.00	HORIZONTAL
208.480000	30.90	16.1	40.0	9.1	---	100.0	0.00	HORIZONTAL
800.180000	40.80	29.5	47.0	6.2	---	100.0	0.00	HORIZONTAL
932.100000	40.50	31.6	47.0	6.5	---	100.0	0.00	HORIZONTAL

Operating Condition: PC Mode
Test Specification: Vertical



Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
167.740000	38.60	14.2	40.0	1.4	---	100.0	0.00	VERTICAL
173.560000	34.70	14.5	40.0	5.3	---	100.0	0.00	VERTICAL
206.540000	28.30	16.1	40.0	11.7	---	100.0	0.00	VERTICAL
398.600000	38.80	21.4	47.0	8.2	---	100.0	0.00	VERTICAL
699.300000	39.60	27.6	47.0	7.4	---	100.0	0.00	VERTICAL
901.060000	39.70	31.2	47.0	7.3	---	100.0	0.00	VERTICAL

6. Harmonic Current Emission Test

6.1. Test Standard and Limit

6.1.1. Test Standard

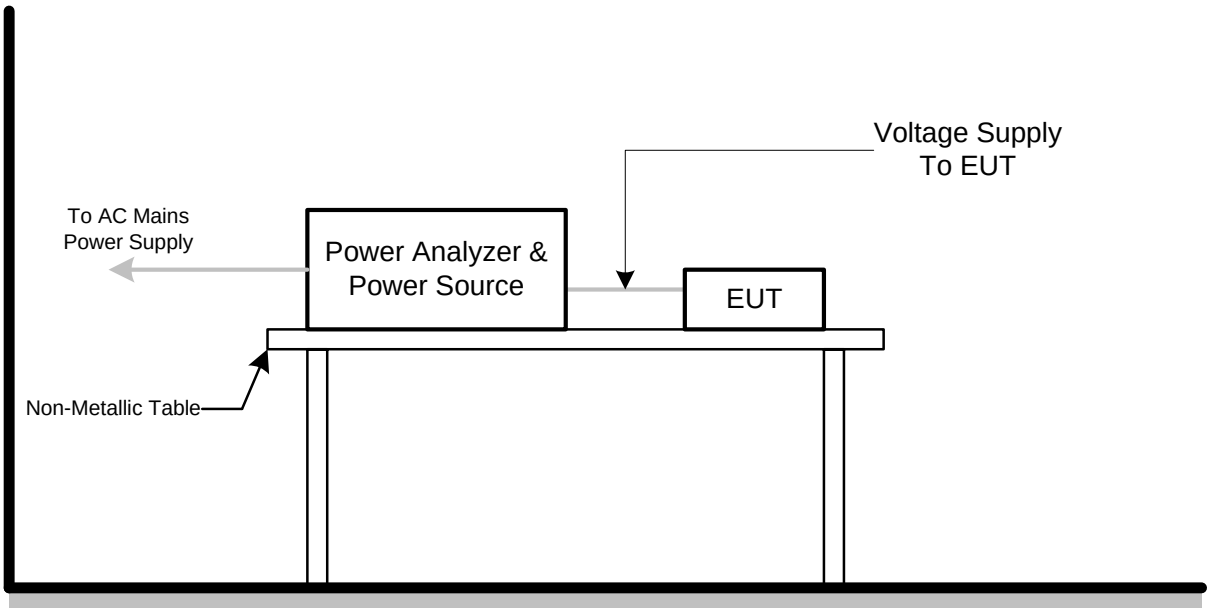
EN 61000-3-2: 2006+A1: 2009+A2:2009

6.1.2. Limits

Harmonic Current Test Limit (Class D)

Harmonic 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
13≤n≤39 (odd harmonics only)	3.86/n	0.15×15/n

6.2. Test Setup



6.3. Test Procedure

The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions.

The classification of EUT is according to section 5 of EN 61000-3-2.The EUT is classified as follows:

Class A: Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.

Class B: Portable tools. Arc welding equipment which is not professional equipment.

Class C: Lighting equipment.

Class D: Equipment having a specified power less than or equal to 600 W of the following types: Personal computers and personal computer monitors and television receivers.

6.4. Test Condition

Temperature	:	25 ℃
Relative Humidity	:	48 %
Pressure	:	1010 hPa
Test Power	:	AC 230V/50Hz

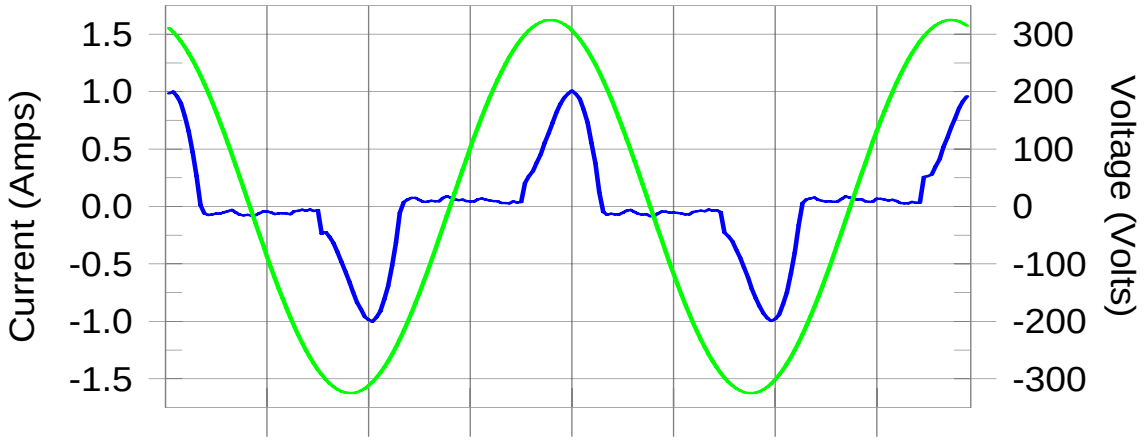
6.5. Test Data

Harmonics – Class-D per Ed. 3.0 (Run time)

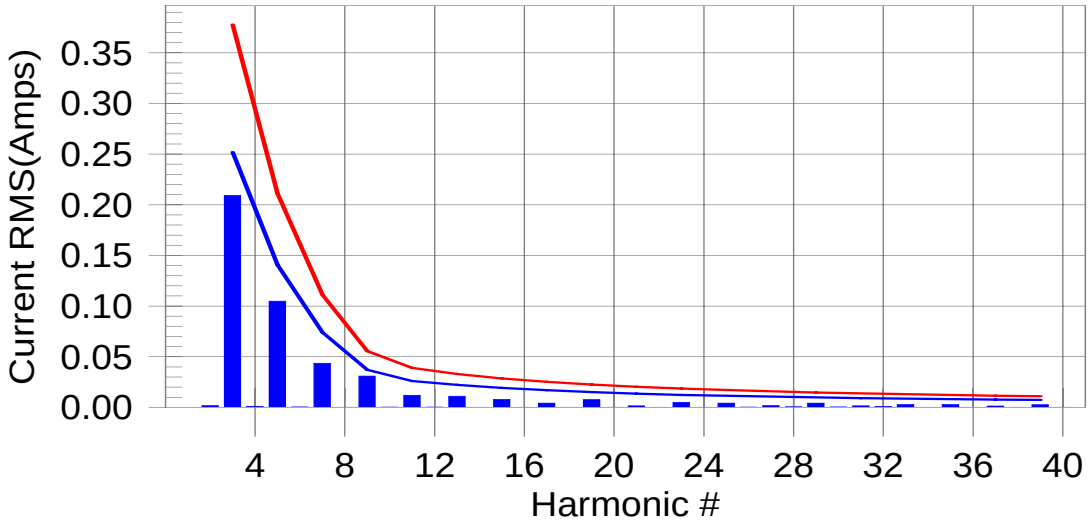
EUT: Computer **Tested by: STY**
Test category: Class-D per Ed. 3.0 (European limits) **Test Margin: 100**
Test date: 2010-11-20 **Start time: 9:33:21** **End time: 9:38:42**
Test duration (min): 5 **Data file name: H-000601.cts_data**
Comment: CS-G41
Customer: Customer

Test Result: N/L **Source qualification: Normal**

Current & voltage waveforms



Harmonics and Class D limit line **European Limits**



Test result: N/L **Worst harmonic was #0 with 0.00% of the limit.**

Current Test Result Summary (Run time)

EUT: Computer Tested by: STY
Test category: Class-D per Ed. 3.0 (European limits) Test Margin: 100
Test date: 2010-11-20 Start time: 9:33:21 End time: 9:38:42
Test duration (min): 5 Data file name: H-000601.cts_data
Comment: CS-G41
Customer: Customer

Test Result: N/L 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): 229.98 Frequency(Hz): 50.00
I_Peak (Amps): 1.011 I_RMS (Amps): 0.433
I_Fund (Amps): 0.324 Crest Factor: 3.193
Power (Watts): 74.1 Power Factor: 0.765

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002						
3	0.208	0.252	0.0	0.209	0.378	0.00	N/L
4	0.001						
5	0.105	0.141	0.0	0.105	0.211	0.00	N/L
6	0.001						
7	0.044	0.074	0.0	0.044	0.111	0.00	N/L
8	0.000						
9	0.031	0.037	0.0	0.031	0.056	0.00	N/L
10	0.000						
11	0.012	0.026	0.0	0.012	0.039	0.00	N/L
12	0.000						
13	0.011	0.022	0.0	0.011	0.033	0.00	N/L
14	0.000						
15	0.008	0.019	0.0	0.008	0.029	0.00	N/L
16	0.000						
17	0.004	0.017	0.0	0.004	0.025	0.00	N/L
18	0.000						
19	0.008	0.015	0.0	0.008	0.023	0.00	N/L
20	0.000						
21	0.002	0.014	0.0	0.002	0.020	0.00	N/L
22	0.000						
23	0.005	0.012	0.0	0.005	0.019	0.00	N/L
24	0.000						
25	0.004	0.011	0.0	0.004	0.017	0.00	N/L
26	0.000						
27	0.002	0.011	0.0	0.002	0.016	0.00	N/L
28	0.001						
29	0.004	0.010	0.0	0.004	0.015	0.00	N/L
30	0.000						
31	0.002	0.009	0.0	0.002	0.014	0.00	N/L
32	0.001						
33	0.003	0.009	0.0	0.003	0.013	0.00	N/L
34	0.000						
35	0.003	0.008	0.0	0.003	0.012	0.00	N/L
36	0.000						
37	0.001	0.008	0.0	0.001	0.012	0.00	N/L
38	0.000						
39	0.003	0.007	0.0	0.003	0.011	0.00	N/L
40	0.000						

Note: The EUT power level is below 75.0 Watts and therefore has no defined limits

Voltage Source Verification Data (Run time)

EUT: Computer **Tested by: STY**
Test category: Class-D per Ed. 3.0 (European limits) **Test Margin: 100**
Test date: 2010-11-20 **Start time: 9:33:21** **End time: 9:38:42**
Test duration (min): 5 **Data file name: H-000601.cts_data**
Comment: CS-G41
Customer: Customer

Test Result: N/L **Source qualification: Normal**

Highest parameter values during test:

Voltage (Vrms):	229.98	Frequency(Hz):	50.00
I_Peak (Amps):	1.011	I_RMS (Amps):	0.433
I_Fund (Amps):	0.324	Crest Factor:	3.193
Power (Watts):	74.1	Power Factor:	0.765

Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.068	0.460	14.68	OK
3	0.566	2.070	27.34	OK
4	0.062	0.460	13.56	OK
5	0.048	0.920	5.24	OK
6	0.021	0.460	4.65	OK
7	0.041	0.690	5.92	OK
8	0.015	0.460	3.24	OK
9	0.046	0.460	9.98	OK
10	0.014	0.460	3.07	OK
11	0.018	0.230	7.75	OK
12	0.011	0.230	4.78	OK
13	0.014	0.230	6.14	OK
14	0.005	0.230	2.13	OK
15	0.020	0.230	8.56	OK
16	0.007	0.230	3.20	OK
17	0.009	0.230	3.79	OK
18	0.011	0.230	4.70	OK
19	0.014	0.230	5.89	OK
20	0.008	0.230	3.69	OK
21	0.008	0.230	3.64	OK
22	0.005	0.230	2.01	OK
23	0.009	0.230	3.99	OK
24	0.004	0.230	1.55	OK
25	0.008	0.230	3.27	OK
26	0.004	0.230	1.67	OK
27	0.007	0.230	3.22	OK
28	0.003	0.230	1.27	OK
29	0.006	0.230	2.45	OK
30	0.003	0.230	1.48	OK
31	0.005	0.230	2.01	OK
32	0.003	0.230	1.25	OK
33	0.006	0.230	2.69	OK
34	0.003	0.230	1.29	OK
35	0.006	0.230	2.54	OK
36	0.002	0.230	1.08	OK
37	0.005	0.230	2.26	OK
38	0.003	0.230	1.12	OK
39	0.006	0.230	2.54	OK
40	0.005	0.230	2.34	OK

7. Voltage Fluctuation and Flicker Test

7.1. Test Standard and Limit

7.1.1. Test Standard

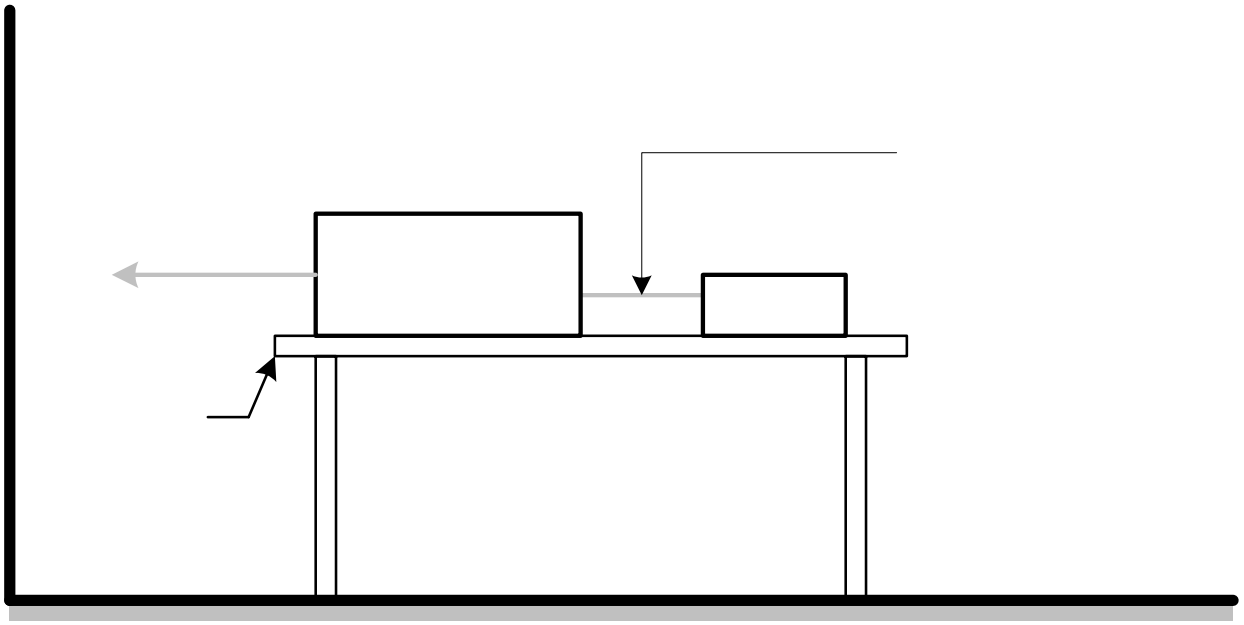
EN 61000-3-3:2008

7.1.2. Limit

Voltage Fluctuation and Flicker Test Limit

Test Items	Limits
Pst	1.0
dc	3.3%
dmax	4.0%
dt	Not exceed 3.3% for 500ms

7.2. Test Setup



7.3. Test Procedure

7.3.1 Harmonic Current Test

Test was performed according to the procedures specified in Clause 5.0 of IEC555-2 and/or Sub-clause 6.2 of IEC/EN 61000-3-2 depends on which standard adopted for compliance measurement.

7.3.2 Fluctuation and Flickers Test:

Tests was performed according to the Test Conditions/Assessment of Voltage Fluctuations specified in Clause 5.0/6.0 of IEC555-3 and/or Clause 6.0/4.0 of IEC/EN 61000-3-3 depend on which standard adopted for compliance measurement.

All types of harmonic current and/or voltage fluctuation in this report are assessed by direct measurement using flicker-meter.

For the actual test configuration, please refer to the related Item –Block Diagram of system tested (please refer to 1.3).

7.4. Test Condition

Temperature	:	25 ℃
Relative Humidity	:	48 %
Pressure	:	1010 hPa
Test Power	:	AC 230V/50Hz

7.5. Test Data

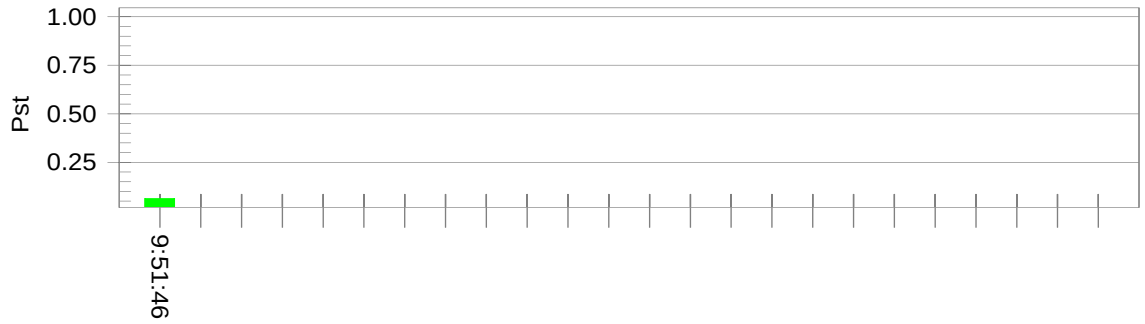
Please refer to the following pages.

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

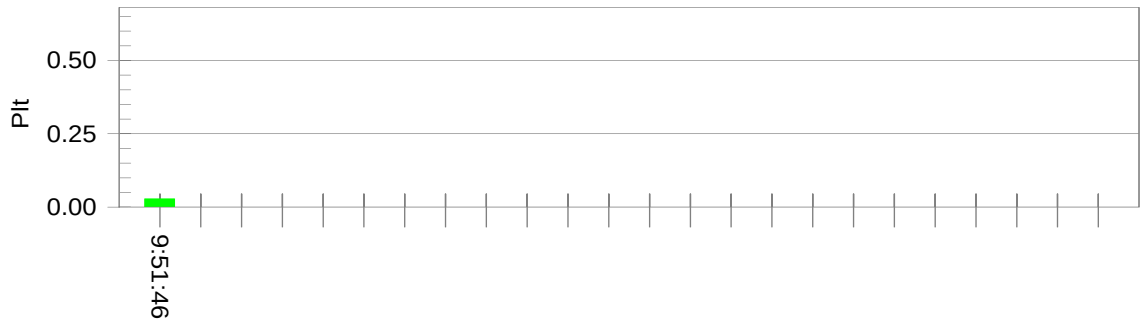
EUT: Computer **Tested by: STY**
Test category: All parameters (European limits) **Test Margin: 100**
Test date: 2010-11-20 **Start time: 9:41:26** **End time: 9:51:47**
Test duration (min): 10 **Data file name: F-000602.cts_data**
Comment: CS-G41
Customer: Customer

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):	**229.80**			
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**

8. Electrostatic Discharge Immunity Test

8.1. Test Requirements

8.1.1. Test Standard

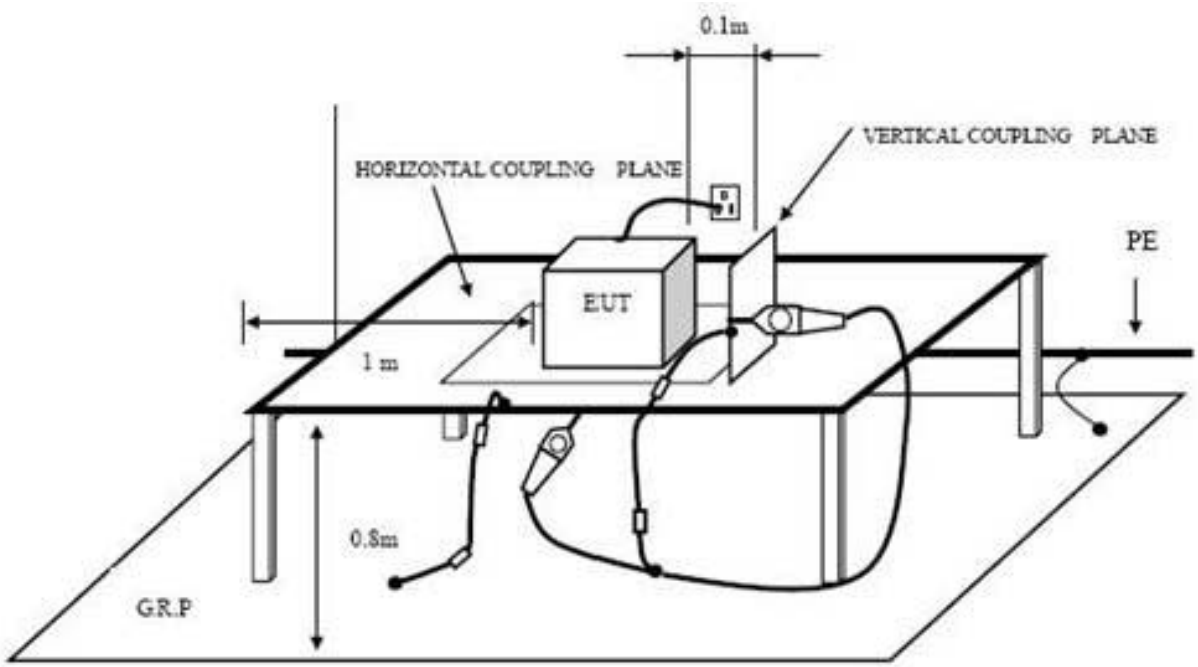
EN 55024:1998+A1:2001+A2:2003 (EN 61000-4-2:2009)

8.1.2. Test Level

Level	Test Voltage Contact Discharge (kV)	Test Voltage Air Discharge (kV)
1	±2	±2
2	±4	±4
3	±6	±8
4	±8	±15
X	Special	Special

8.1.3. Performance criterion: **B**

8.2. Test Setup



INDIRECT DISCHARGE SETUP

8.3. Test Procedure

8.3.1. Air Discharge:

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

8.3.2. Contact Discharge:

All the procedure shall be same as air discharge. Except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

8.3.3. Indirect discharge for horizontal coupling plane

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the center point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

8.3.4. Indirect discharge for vertical coupling plane

At least 10 single discharges (in the most sensitive polarity) shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

8.4. Test Data

Please refer to the following pages.

Electrostatic Discharge Test Result

EUT :	PC SYSTEM MOBII	M/N :	CS-G41
Temperature :	22℃	Humidity :	50%
Power supply :	AC 230V/50Hz	Test Mode :	Normal

Criterion: B

Air Discharge: ±8kV Contact Discharge: ±4kV

For each point positive 10 times and negative 10 times discharge.

Location	**Kind** A-Air Discharge C-Contact Discharge	**Result**
Enclosure	A	PASS
Enclosure	C	PASS
Slot of the EUT	A	PASS
Button	A	PASS
Port	A	PASS
Screw	C	PASS
HCP	C	PASS
VCP of front	C	PASS
VCP of rear	C	PASS
VCP of left	C	PASS
VCP of right	C	PASS

9. Radiated Electromagnetic Field Immunity Test

9.1. Test Requirements

9.1.1. Test Standard

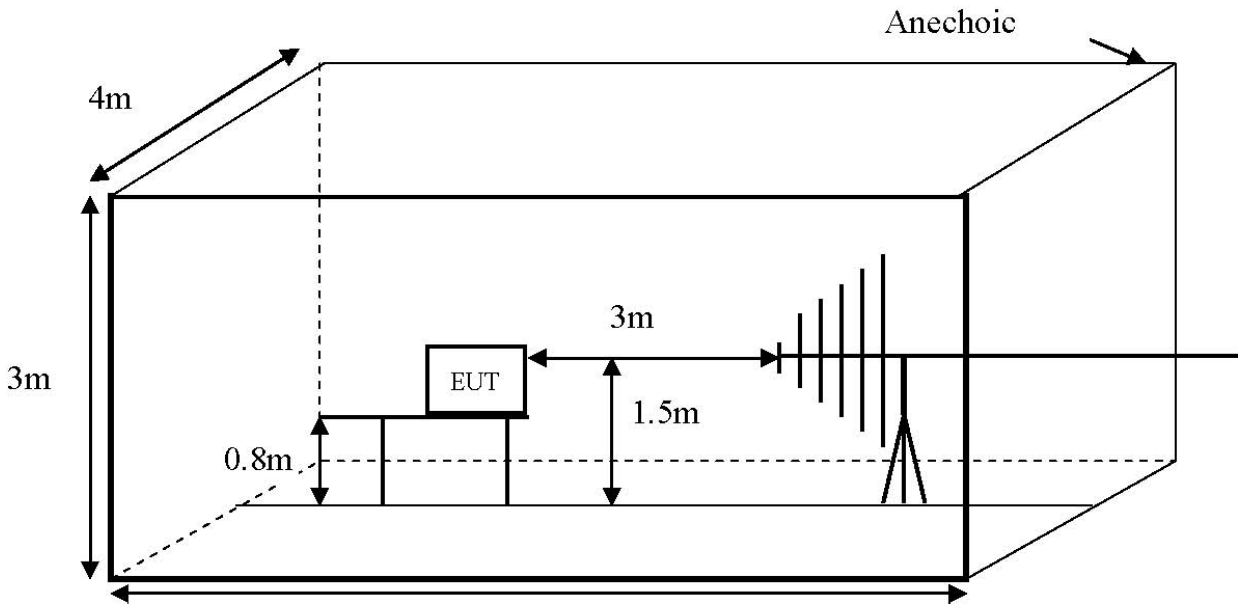
EN 55024:1998+A1:2001+A2:2003 (EN 61000-4-3:2006+A1:2008)

9.1.2. Test Level

Level	Field Strength V/m
1	1
2	3
3	10
X	Special

9.1.3. Performance criterion: **A**

9.2. Test Setup



9.3. Test Procedure

The EUT are placed on a table, which is 0.8 meter high above the ground. The EUT is set 3 meters away from the transmitting antenna, which is mounted on an antenna tower. Both horizontal and vertical polarization of the antenna is set on test. Each of the four sides of the EUT must be faced this transmitting antenna and measured individually.

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

All the scanning conditions are as following:

Condition of Test	Remark
Fielded strength	3V/m (Severity Level 2)
Radiated signal	Modulated
Scanning frequency	80-1000MHz
Sweep time of radiated	0.0015 Decade/s
Dwell time	1 Sec.

9.4. Test Data

Please refer to the following pages.

RF Field Strength Susceptibility Test Results

EUT	:	PC SYSTEM MOBII	M/N	:	CS-G41
Temperature	:	22℃	Humidity	:	50%
Power supply	:	AC 230V/50Hz	Test Mode	:	Normal

Criterion: A

Modulation: Unmodulated

Pulse: AM 1KHz 80%

	Frequency Range 1		Frequency Range 2	
	80~1000MHz			
	Horizontal	Vertical	Horizontal	Vertical
Front	PASS	PASS	/	/
Right	PASS	PASS	/	/
Rear	PASS	PASS	/	/
Left	PASS	PASS	/	/

Remark:

10. Electrical Fast Transient/Burst Test

10.1. Test Requirements

10.1.1. Test Standard

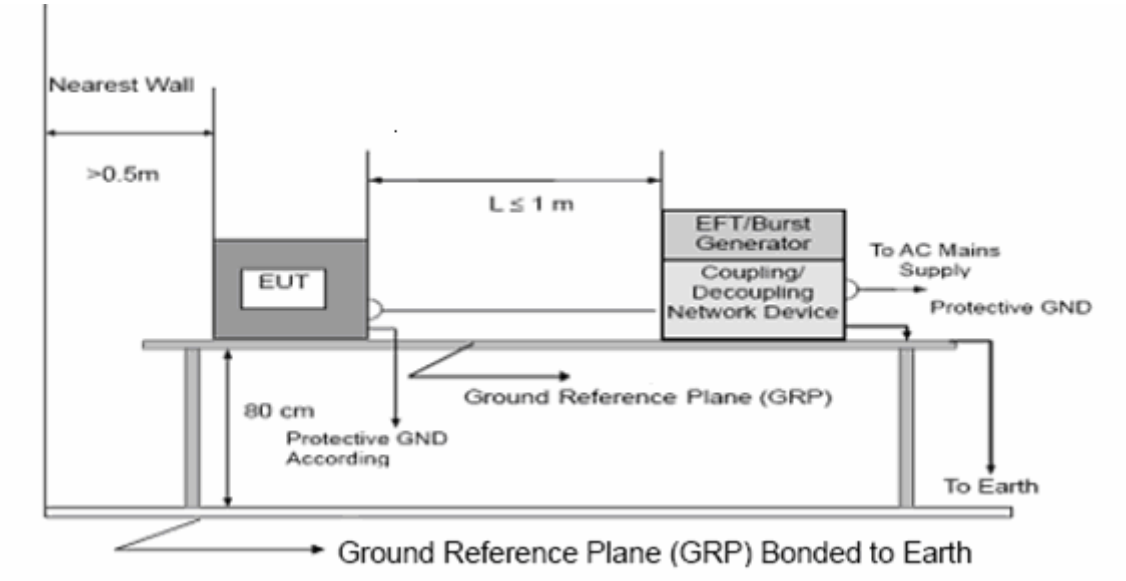
EN 55024:1998+A1:2001+A2:2003 (EN 61000-4-4:2004+A1:2010)

10.1.2. Level

Open Circuit Output Test Voltage ±10%		
Level	**On Switching Adapter Lines**	**On I/O (Input/Output) Signal data and control lines**
1	0.5 KV	0.25 KV
2	1 KV	0.5 KV
3	2 KV	1 KV
4	4 KV	2 KV
X	Special	Special

10.1.3. Performance criterion: **B**

10.2. Test Setup



10.3. Test Procedure

10.3.1 For input and output AC power ports:

The EUT is connected to the power mains by using a coupling device which couples the EFT interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test is 1minute.

10.3.2 For signal lines and control lines ports:

A coupling clamp is use to couple the EFT interference signal to the signal and control lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test is 1 minute.

10.3.3For DC input and DC output power ports:

The EUT is connected to the power mains by using a coupling device which couples the EFT interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test is 1 minute.

10.4. Test Data

Please refer to the following pages.

Electrical Fast Transient/Burst Test Results

EUT :	PC SYSTEM MOBII	M/N :	CS-G41
Temperature :	22℃	Humidity :	50%
Power supply :	AC 230V/50Hz	Test Mode :	Normal

Criterion: B

Line : ☒ AC Mains Coupling : ☒ Direct

Line : ☐ Signal ☐ I/O Cable Coupling : ☐ Capacitive

Line	Voltage(kV)	Result(+)	Result(-)
L	1	PASS	PASS
N	1	PASS	PASS
L-N	1	PASS	PASS
PE	1	PASS	PASS
L-PE	1	PASS	PASS
N-PE	1	PASS	PASS
L-N-PE	1	PASS	PASS

11. Surge Immunity Test

11.1. Test Requirements

11.1.1. Test Standard

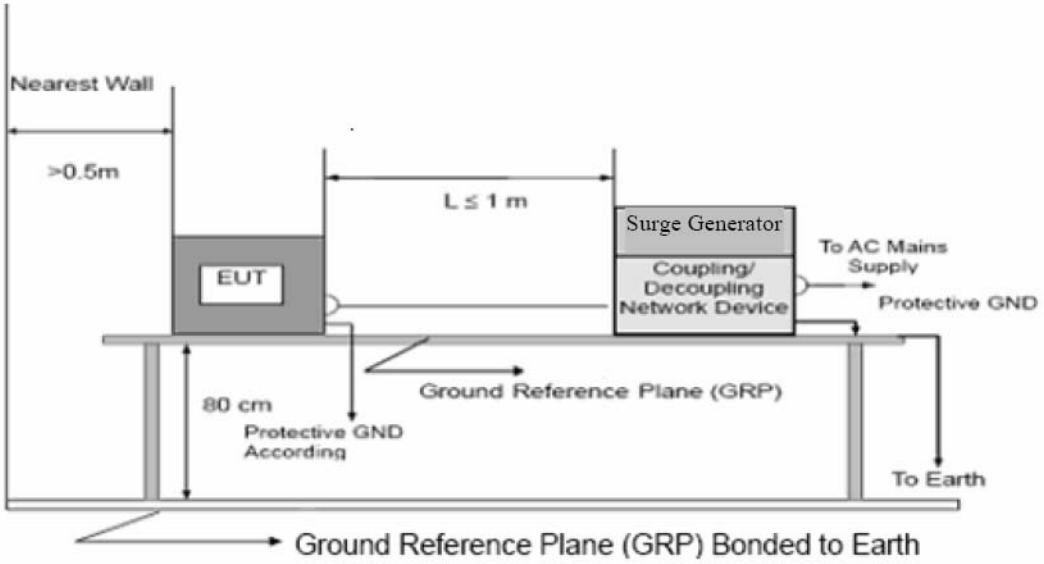
EN 55024:1998+A1:2001+A2:2003 (EN 61000-4-5:2006)

11.1.2. Level

Severity Level	Open-Circuit Test Voltage kV
1	0.5
2	1.0
3	2.0
4	4.0
*	Special

11.1.3. Performance criterion: **B**

11.2. Test Setup



11.3. Test Procedure

11.3.1. Set up the EUT and test generator as shown on Section 11.1.2.

11.3.2. For line to line coupling mode, provide a 1.0 KV 1.2/50us voltage surge

(at open-circuit condition) and 8/20us current surge to EUT selected points.

11.3.3. At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.

11.3.4. Different phase angles are done individually.

11.3.5. Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

11.4. Test Data

Please refer to the following pages.

Surge Immunity Test Results

EUT	:	PC SYSTEM MOBII	M/N	:	CS-G41
Temperature	:	22℃	Humidity	:	50%
Power supply	:	AC 230V/50Hz	Test Mode	:	Normal

Criterion: B

Injected Line	Voltage(kV)	Phase	Result	
			(+)	(-)
L-N	1	0°	PASS	PASS
		90°	PASS	PASS
		180°	PASS	PASS
		270°	PASS	PASS
L-PE	2	0°	PASS	PASS
		90°	PASS	PASS
		180°	PASS	PASS
		270°	PASS	PASS
N-PE	2	0°	PASS	PASS
		90°	PASS	PASS
		180°	PASS	PASS
		270°	PASS	PASS
L-N-PE	2	0°	PASS	PASS
		90°	PASS	PASS
		180°	PASS	PASS
		270°	PASS	PASS

12. Conducted Immunity Test

12.1. Test Requirements

12.1.1. Test Standard

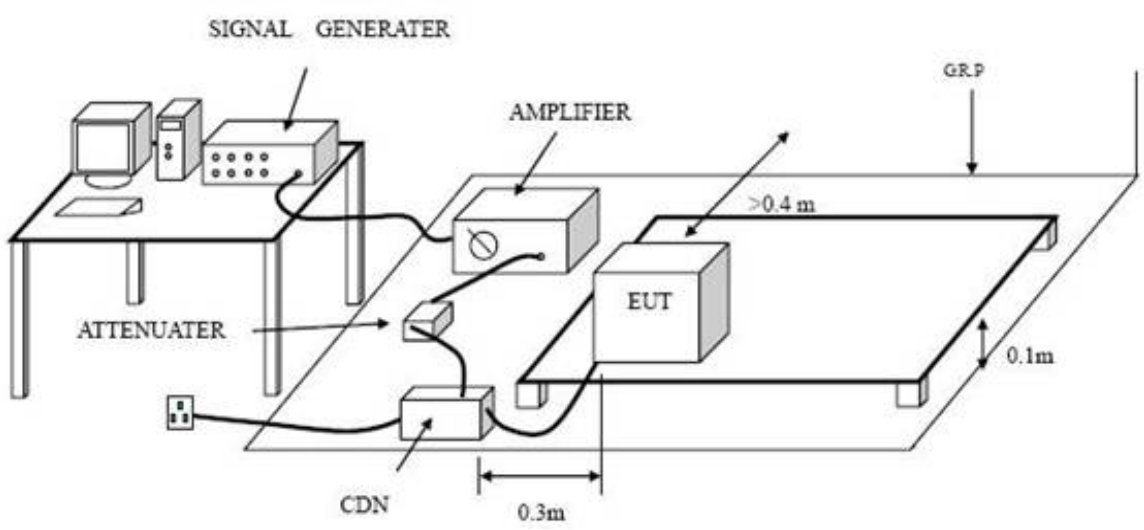
EN 55024:1998+A1:2001+A2:2003 (EN 61000-4-6:2009)

12.1.2. Level

Level	Voltage Level (e.m.f.) V
1	1
2	3
3	10
X	Special

12.1.3. Performance criterion: **A**

12.2. Test Setup



12.3. Test Procedure

12.3.1. Set up the EUT, CDN and test generators.

12.3.2. Let the EUT work in test mode and test it.

12.3.3. The EUT are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible).

12.3.4. The disturbance signal description below is injected to EUT through CDN.

12.3.5. The EUT operates within its operational mode(s) under intended climatic conditions after power on.

12.3.6. The frequency range is swept from 0.150MHz to 80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1KHz sine wave.

12.3.7. The rate of sweep shall not exceed 1.5*10-3decades/s. Where the frequency is swept incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.

12.3.8. Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion.

12.4. Test Data

Please refer to the following pages.

Injected Currents Susceptibility Test Results

EUT	:	PC SYSTEM MOBII	M/N	:	CS-G41
Temperature	:	22℃	Humidity	:	50%
Power supply	:	AC 230V/50Hz	Test Mode	:	Normal

Criterion: B

Frequency Range (MHz)	Injected Position	Voltage Level (e.m.f.)	Result
0.15 ~ 80	AC Mains	3V(rms), Unmodulated	PASS
0.15 ~ 80	DC Mains	/	/
0.15 ~ 80	Signal Line	3V(rms), Unmodulated	PASS

13. Magnetic Field Immunity Test

13.1. Test Requirements

13.1.1.Test Standard

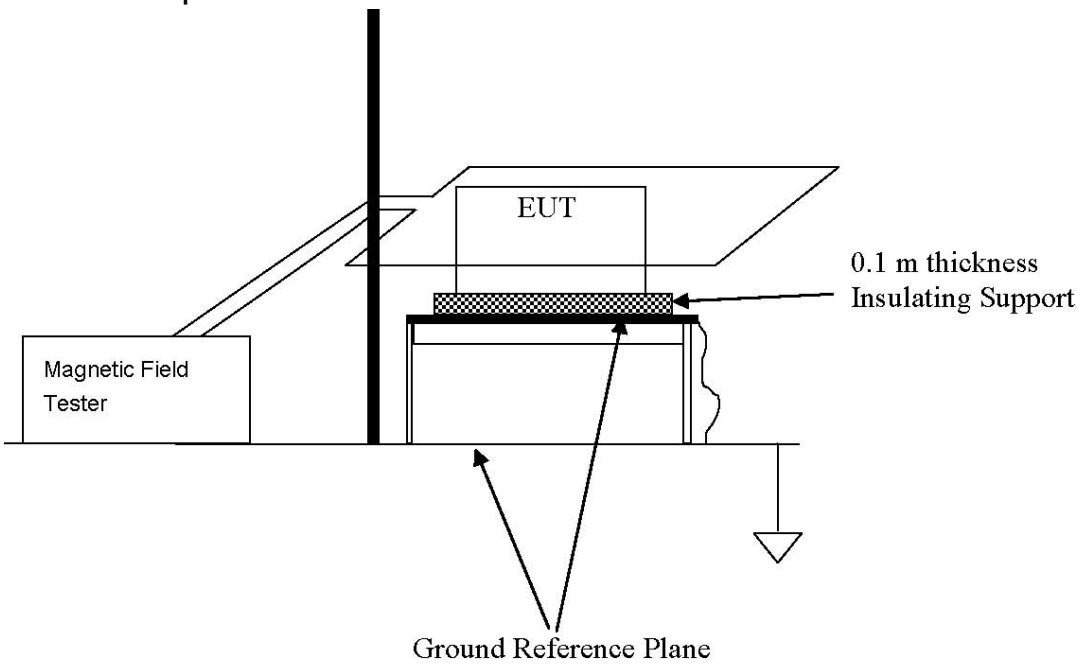
EN55024: 1998+A1: 2001+A2: 2003 (EN61000-4-8:1993+A:2001)

13.1.2.Level

Level	Field Strength A/m
1	1
2	3
3	10
4	30
5	100
X	Special

13.1.3.Performance criterion : **A**

13.2. Test Setup



13.3. Test Procedure

The EUT is placed in the middle of a induction coil (1*1m), under which is a 1*1*0.1m (high) table, this small table is also placed on a larger table, 0.8 m above the ground. The X, Y and Z polarization of the induction coil is set on test, so that each side of the EUT is affected by the magnetic field. Also can reach the same aim by change the position of the EUT.

13.4. Test Data

This item is not applicant.

14. Voltage Dips and Interruptions Immunity Test

14.1. Test Requirements

14.1.1. Test Standard

EN 55024:1998+A1:2001+A2:2003 (EN 61000-4-11:2004)

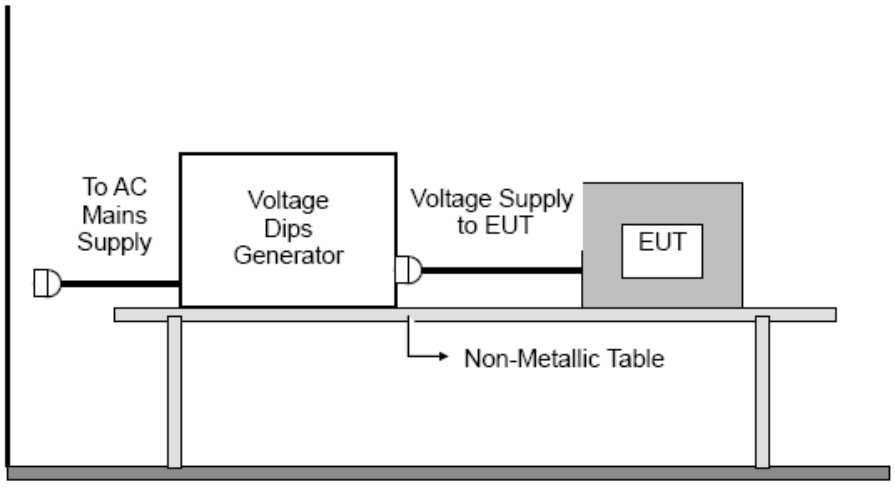
14.1.2. Level

Test Level for Voltage Dips and Interruptions

Test Level %U_T	Voltage dip and short interruptions %U_T	Duration (in period)
0	100	250
0	100	0.5
70	30	25
40	60	5

14.1.3. Performance criterion: **B&C**

14.2. Test Setup



14.3. Test Procedure

Set up the EUT and test generator as shown above. The EUT is tested for each selected combination of test level and duration with a sequence of three dips/interruptions with intervals of 10s minimum.

14.4. Test Data

Voltage Dips and Interruptions Test Results

EUT	:	PC SYSTEM MOBII	M/N	:	CS-G41
Temperature	:	22℃	Humidity	:	50%
Power supply	:	AC 230V/50Hz	Test Mode	:	Normal

Criterion: A

Test Level % U_T	Voltage Dips & Short Interruptions % U_T	Duration (in period)	Phase Angle	Result
0	100	250P	0°~360°	PASS
70	30	25P	0°~360°	PASS
0	100	0.5P	0°~360°	PASS

Remark: U_T is the rated voltage for the equipment.

15. Photographs - Constructional Details

Photo 1 Appearance of EUT

Photo 2 Appearance of EUT

Photo 3 Internal of EUT

16. Photographs – Test Setup

Photo 1 Conducted Emission Test Setup

Photo 2 Radiated Emission Test Setup

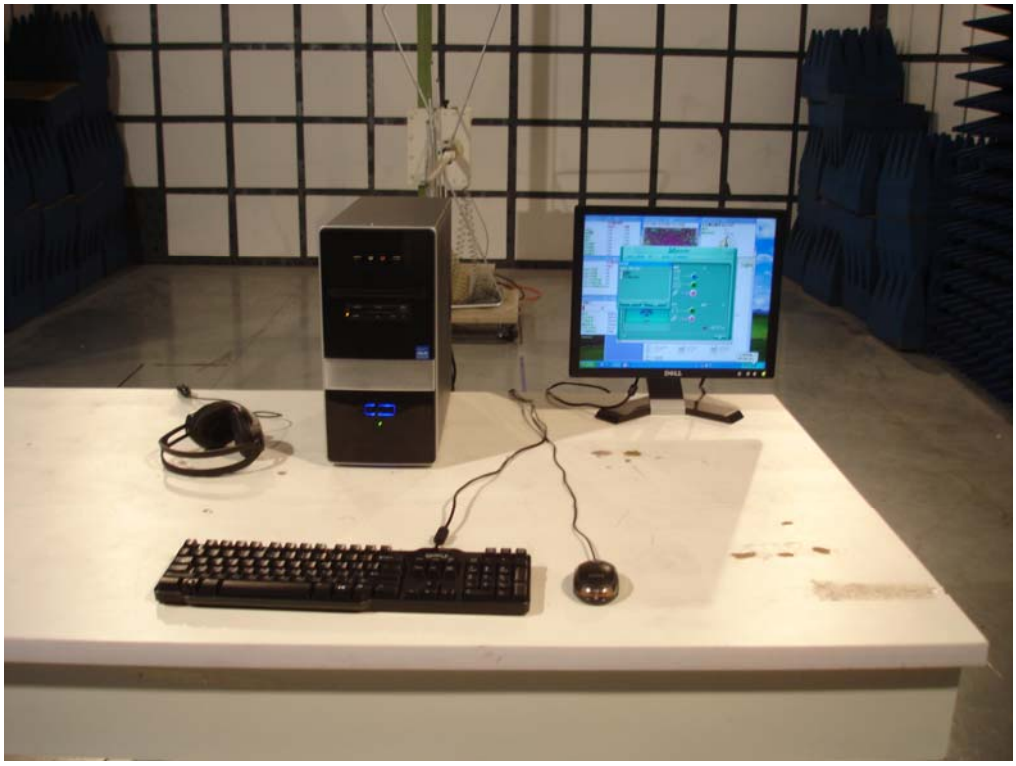


Photo 3 Harmonic current emissions and Voltage fluctuations & flicker Test Setup

Photo 4 Electrostatic Discharge Test Setup

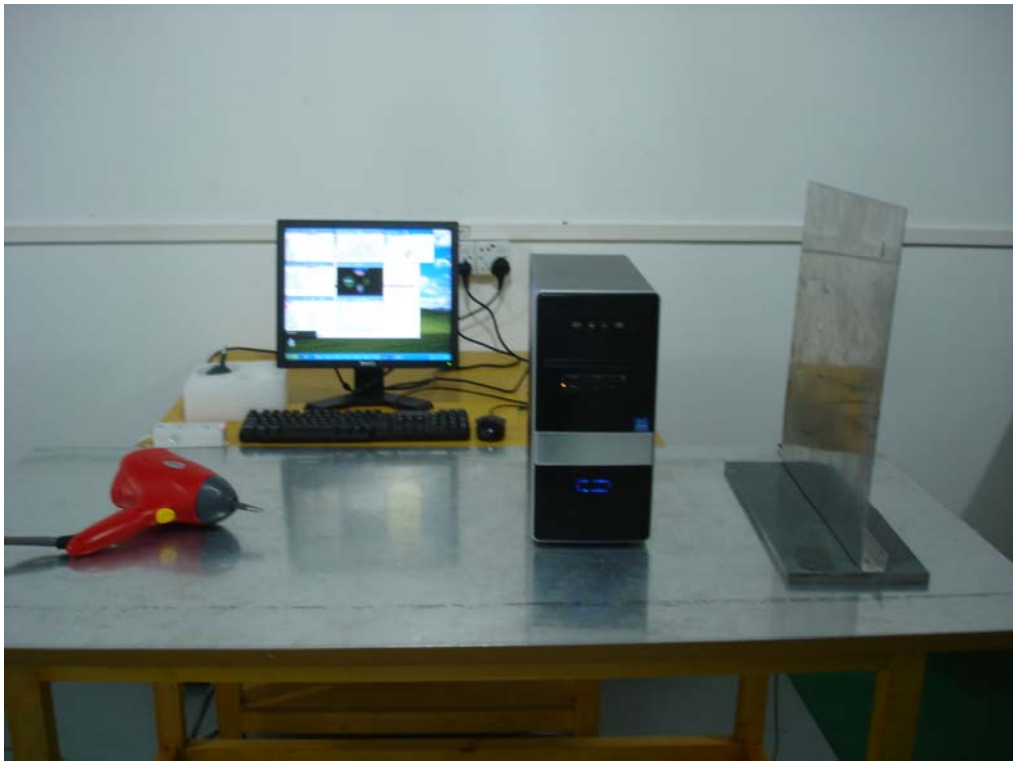


Photo 5 EFT, Surge, Test Setup

Photo 6 Radio-frequency, Continuous Conducted Disturbance Test Setup