



EMC TEST REPORT

Authorized under Declaration of Conformity

According to

EN 55022 : 2010 (Class B)

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

EN 61000-3-3 : 2008

CISPR 22 : 2008

AS/NZS CISPR 22 : 2009

EN 55024 : 2010

IEC 61000-4-2 : 2008

IEC 61000-4-3 : 2010

IEC 61000-4-4 : 2011

IEC 61000-4-5 : 2005

IEC 61000-4-6 : 2008

IEC 61000-4-8 : 2009

IEC 61000-4-11 : 2004

Applicant	:	TPV Electronics (Fujian) Co., Ltd.
Address	:	Shangzheng, Yuanhong Road, Fuqing City, Fujian Province, P.R.China
Equipment	:	LCD Monitor
Model No.	:	215LM00036; *2267**

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History of this test report

☒ ORIGINAL.

☐ Additional attachment as following record:

Attachment No.	Date	Description



CERTIFICATE OF COMPLIANCE

According to

EN 55022 : 2010 (Class B)

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

EN 61000-3-3 : 2008

CISPR 22 : 2008

AS/NZS CISPR 22 : 2009

EN 55024 : 2010

IEC 61000-4-2 : 2008

IEC 61000-4-3 : 2010

IEC 61000-4-4 : 2011

IEC 61000-4-5 : 2005

IEC 61000-4-6 : 2008

IEC 61000-4-8 : 2009

IEC 61000-4-11 : 2004

Applicant : TPV Electronics (Fujian) Co., Ltd.

Address : Shangzheng, Yuanhong Road, Fuqing City, Fujian
Province, P.R.China

Equipment : LCD Monitor

Model No. : 215LM00036; *2267**

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **EUROPEAN COUNCIL DIRECTIVE 2004/108/EC**.

The test was carried out on Jul 11, 2012 at **Cerpass Technology(Suzhou) Corp.**

Signature


Miro Chueh/ Technical director



1. Summary of Test Procedure and Test Results

Test Item	Normative References	Test Result	Remarks
Conducted Emission	EN 55022:2010	PASS	Meets Class B Limit Minimum passing margin(AV) is -8.50 dB at 0.5899 MHz
Radiated Emission	EN 55022:2010	PASS	Meets Class B Limit Minimum passing margin(QP) is -5.65 dB at 131.8500 MHz
Harmonics	EN 61000-3-2 : 2006 +A2:2009	PASS	Meets the requirements.
Voltage Fluctuations	EN 61000-3-3: 2008	PASS	Meets the requirements.
Electrostatic Discharge Immunity Test (ESD)	IEC 61000-4-2 :2008	PASS	Meets the requirements of performance criterion B
Radio Frequency electromagnetic field immunity test (RS)	IEC 61000-4-3 : 2010	PASS	Meets the requirements of performance criterion A
Electrical Fast Transient/ Burst Immunity Test (EFT)	IEC 61000-4-4 : 2011	PASS	Meets the requirements of performance criterion B
Surge Immunity Test	IEC 61000-4-5 : 2005	PASS	Meets the requirements of performance criterion B
Conduction Disturbances induced by Radio-Frequency Fields	IEC 61000-4-6 : 2008	PASS	Meets the requirements of performance criterion A
Power Frequency Magnetic Field Immunity Test	IEC 61000-4-8 : 2009	PASS	Meets the requirements of performance criterion A
Voltage Dips and Voltage Interruptions Immunity Test	IEC 61000-4-11 : 2004	PASS	Meets the requirements: Voltage Dips: 1) >95% reduction – Performance Criterion B 2) 30% reduction – Performance Criterion C Voltage Interruptions: 1) >95% reduction – Performance Criterion C



2. Immunity Testing Performance Criteria Definition

- A. Normal performance within limits specified by the manufacture, requestor or purchaser;
- B. Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the equipment under test recovers its normal performance, without operator intervention;
- C. Temporary loss of function or degradation of performance, the correction of which requires operation intervention;
- D. Loss of function or degradation of performance which is not recoverable, owing to damage to hardware or software, or loss of data.



3. Test Configuration of Equipment under Test

3.1. Feature of Equipment under Test

LCD Monitor	Model No:	215LM00036; *2267** (The "*" could be any alphanumeric character including blank for marketing differentiation.)
Adapter #1	Manufacturer:	TPV ELECTRONICS(FUJIAN) CO.,LTD.
	Model No :	ADPC1236
	Input rating:	100-240V~1.3 A 50-60Hz
	Output rating:	12V --- 3.0A
DC Cable	Non-shielding, 1.0m, with one ferrite core bonded	
Adapter #2	Manufacturer:	SHENZHEN HONOR ELECTRONIC CO.,LTD.
	Model No :	ADS-45NP-12-1 12036G
	Input rating:	100-240V~50/60Hz 1.2A max.
	Output rating:	12V --- 3.0A
DC Cable	Non-shielding, 1.0m, with one ferrite core bonded	
Power Cable	Non-shielding, 1.2m&1.5m&1.8m	

3.2. Test Mode and Test Manner

Test Manner

- During testing, the interface cables and equipment positions were varied according to Europe Standard.
- Running "H" pattern.
- During the test, connect the PC, USB Keyboard, USB Mouse and EUT, make the EUT at the test mode.
- Adjust the EUT, then test.

The pre-test modes

Mode 1: Full system (VGA mode 1920*1080@60Hz) with Adapter 1

Mode 2: Full system (VGA mode 1280*1024@75Hz) with Adapter 1

Mode 3: Full system (VGA mode 640*480@60Hz) with Adapter 1

Mode 4: Full system (DVI mode 1920*1080@60Hz) with Adapter 1

Mode 5: Full system (VGA mode 1920*1080@60Hz) with Adapter 2

Mode 6: Full system (DVI mode 1920*1080@60Hz) with Adapter 2

The worse case was selected as the final test mode and record in the report

Mode 1: Full system (VGA mode 1920*1080@60Hz) with Adapter 1



Mode 4: Full system (DVI mode 1920*1080@60Hz) with Adapter 1

Mode 5: Full system (VGA mode 1920*1080@60Hz) with Adapter 2

Mode 6: Full system (DVI mode 1920*1080@60Hz) with Adapter 2

3.3. Description of Support Unit

No.	Device	Manufacturer	Model No.	Description
1	PC	Dell	DCSM	N/A
2	USB Keyboard	DELL	SK-8115	N/A
3	USB Mouse	DELL	G0K02XYK	N/A

No.	Cable	Quantity	Description
A	VGA Cable	1	Shielded, 1.2m&1.5m&1.8m, with two ferrites core bonded
B	DVI Cable	1	Shielded, 1.2m&1.5m&1.8m, with two ferrites core bonded
C	USB Cable	1	Shielded, 1.8m, with one ferrite core bonded
D	USB Cable	1	Shielded, 1.2m



3.4. General Information of Test

Test Site:	Cerpass Technology (Suzhou) Co.,Ltd
Test Site Location :	No.66,Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China
NVLAP LAB Code :	200814-0
FCC Registration Number :	916572, 331395
IC Registration Number :	7290A-1, 7290A-2
VCCI Registration Number :	T-1945 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test below 1GHz G-227 for Radiated emission test above 1GHz
Frequency Range Investigated :	Conducted Emission Test: from 150kHz to 30 MHz Radiated Emission Test: from 30 MHz to 1,000 MHz Radiated Emission Test: from 1GHz to 6GHz
Test Distance :	The test distance of radiated emission below 1GHz from antenna to EUT is 10 M. The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.

LABORATORY ACCREDITATION



3.5. Measurement Uncertainty

Conducted Emission		
The measurement uncertainty is evaluated as ± 2.71 dB.		
Radiated Emission		
(30MHz -1000MHz)	Horizontal	The measurement uncertainty is evaluated as ± 3.59 dB.
	Vertical	The measurement uncertainty is evaluated as ± 3.89 dB
(1GHz-6GHz)	Horizontal	The measurement uncertainty is evaluated as ± 2.31 dB.
	Vertical	The measurement uncertainty is evaluated as ± 2.15 dB.



4. Test of Conducted Emission

4.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in European Standard EN 55022. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in standard. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position producing maximum conducted emissions.

Table 1 Class B Line Conducted Emission Limits:

Frequency range (MHz)	Limits (dB μ V)	
	Quasi Peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5. to 30.	60	50
Note 1: The lower limits shall apply at the transition frequencies.		
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to .50MHz.		

Table 2 - Limits of conducted common mode (asymmetric mode) disturbance at telecommunication ports in the frequency range 0.15 MHz to 30 MHz for class B equipment.

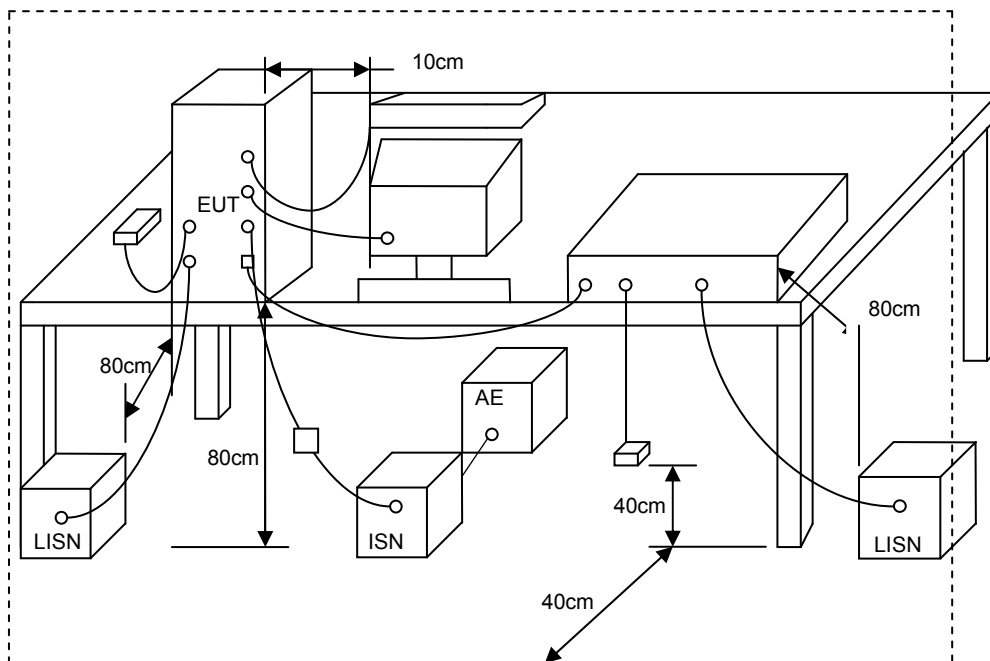
Frequency range (MHz)	Voltage limits dB(μ V)		Current limits dB(μ A)	
	Quasi-peak	Average	Quasi-peak	Average
0.15 to 0.5	84 to 74	74 to 64	40 to 30	30 to 20
0.5 to 30	74	64	30	20
Note 1: The limits decrease linearly with the logarithm of the frequency in the range 0.15 to 0.5 MHz.				
Note 2: The current and voltage disturbance limits are derived for use with an impedance stabilization network (ISN) which presents a common mode (asymmetric mode) impedance of 150 Ω to the telecommunication under test (conversion factor is 20 log10 150/1 = 44dB).				



4.2. Test Procedures

- The EUT was placed on a desk 0.8 meters height from the metal ground plane and 0.4 meter from the conducting wall of the shielding room and it was kept at least 0.8 meters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The CISPR states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

4.3. Typical Test Setup



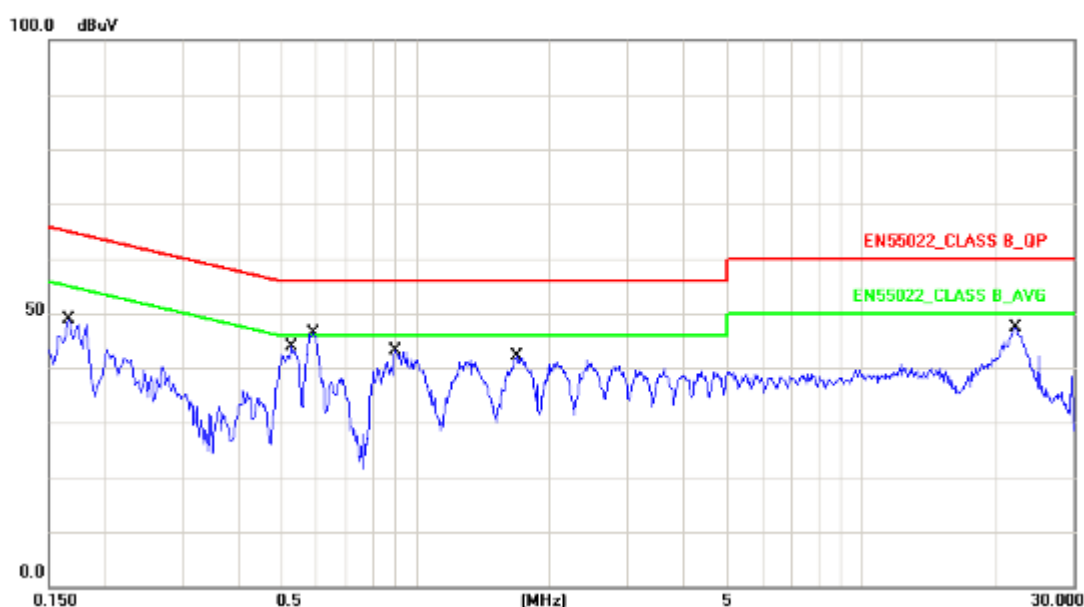
**4.4. Measurement equipment**

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2012.03.12	2013.03.11
AMN	R&S	ESH2-Z5	100182	2012.03.12	2013.03.11
Two-Line V-Network	R&S	ENV216	100325	2012.03.12	2013.03.11
ISN	FCC	FCC-TLISN-T2-02	20379	2011.12.09	2012.12.08
ISN	FCC	FCC-TLISN-T4-02	20380	2011.12.09	2012.12.08
ISN	FCC	FCC-TLISN-T8-02	20381	2011.12.09	2012.12.08
ISN	TESEQ	ISN ST08	30175	2011.09.14	2012.09.13
Current Probe	R&S	EZ-17	100303	2012.03.12	2013.03.11
Passive Voltage Probe	R&S	ESH2-Z3	100026	2012.03.12	2013.03.11
Attenuator	R&S	ESH3-Z2	100529	2012.03.12	2013.03.11
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2012.03.12	2013.03.11



4.5. Test Data and Result

Test Mode :	Mode 1: Full system (VGA mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Phase :	LINE
Equipment :	LCD Monitor	Model No :	215LM00036
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2012/07/06

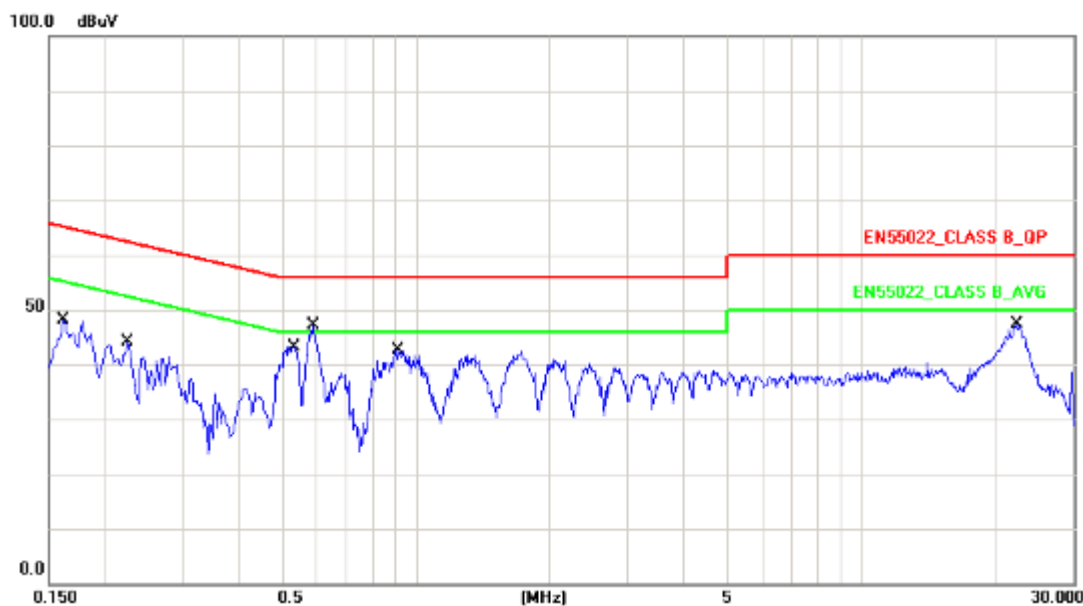


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1660	9.87	33.93	43.80	65.15	-21.35	QP
2	0.1660	9.87	22.85	32.72	55.15	-22.43	AVG
3	0.5260	9.85	30.61	40.46	56.00	-15.54	QP
4	0.5260	9.85	26.39	36.24	46.00	-9.76	AVG
5	0.5899	9.85	33.27	43.12	56.00	-12.88	QP
6	0.5899	9.85	27.57	37.42	46.00	-8.58	AVG
7	0.9020	9.78	28.60	38.38	56.00	-17.62	QP
8	0.9020	9.78	23.31	33.09	46.00	-12.91	AVG
9	1.6860	9.72	28.08	37.80	56.00	-18.20	QP
10	1.6860	9.72	22.72	32.44	46.00	-13.56	AVG
11	22.2060	9.56	32.99	42.55	60.00	-17.45	QP
12	22.2060	9.56	27.94	37.50	50.00	-12.50	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system (VGA mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Equipment :	LCD Monitor	Model No :	215LM00036
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2012/07/06

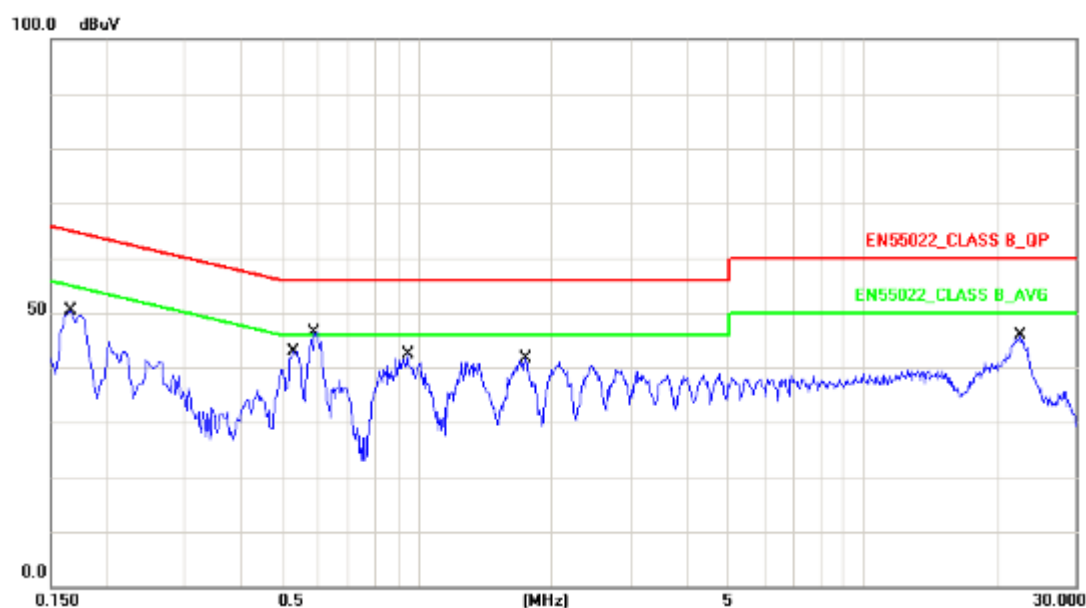


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1620	9.50	34.38	43.88	65.36	-21.48	QP
2	0.1620	9.50	20.91	30.41	55.36	-24.95	AVG
3	0.2260	9.50	29.14	38.64	62.59	-23.95	QP
4	0.2260	9.50	17.59	27.09	52.59	-25.50	AVG
5	0.5340	9.50	30.89	40.39	56.00	-15.61	QP
6	0.5340	9.50	26.90	36.40	46.00	-9.60	AVG
7	0.5899	9.50	33.94	43.44	56.00	-12.56	QP
8	0.5899	9.50	28.00	37.50	46.00	-8.50	AVG
9	0.9140	9.45	29.38	38.83	56.00	-17.17	QP
10	0.9140	9.45	23.76	33.21	46.00	-12.79	AVG
11	22.5020	9.88	32.57	42.45	60.00	-17.55	QP
12	22.5020	9.88	27.66	37.54	50.00	-12.46	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4:Full system (DVI mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Phase :	LINE
Equipment :	LCD Monitor	Model No :	215LM00036
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2012/07/06

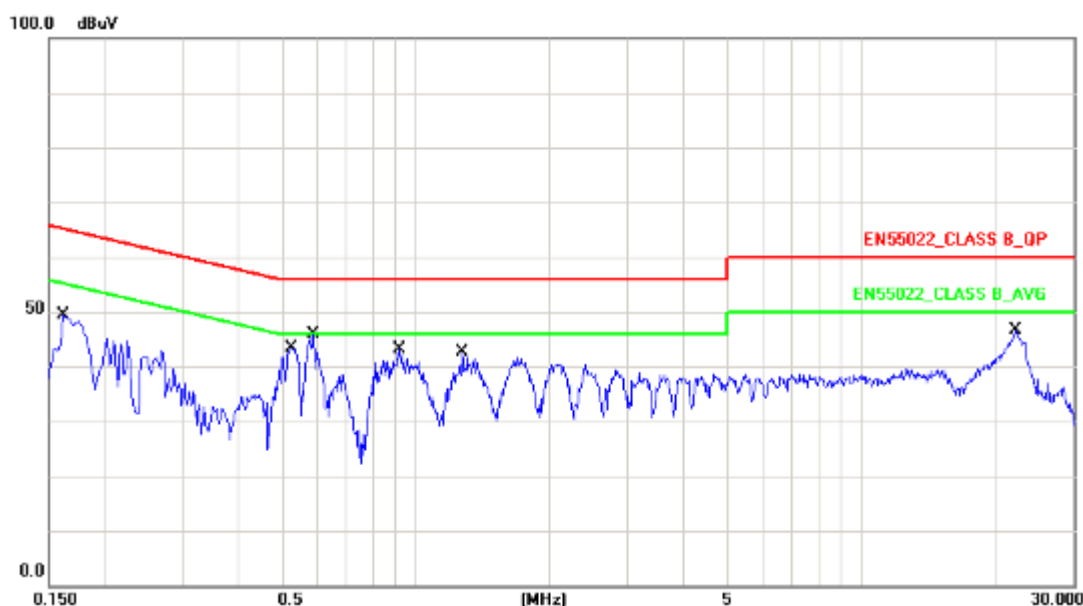


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1660	9.87	37.00	46.87	65.15	-18.28	QP
2	0.1660	9.87	24.46	34.33	55.15	-20.82	AVG
3	0.5260	9.85	30.35	40.20	56.00	-15.80	QP
4	0.5260	9.85	27.11	36.96	46.00	-9.04	AVG
5	0.5860	9.85	33.26	43.11	56.00	-12.89	QP
6	0.5860	9.85	26.43	36.28	46.00	-9.72	AVG
7	0.9500	9.76	28.08	37.84	56.00	-18.16	QP
8	0.9500	9.76	22.81	32.57	46.00	-13.43	AVG
9	1.7460	9.72	27.43	37.15	56.00	-18.85	QP
10	1.7460	9.72	22.55	32.27	46.00	-13.73	AVG
11	22.5459	9.57	31.45	41.02	60.00	-18.98	QP
12	22.5459	9.57	26.53	36.10	50.00	-13.90	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4:Full system (DVI mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Equipment :	LCD Monitor	Model No :	215LM00036
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2012/07/06

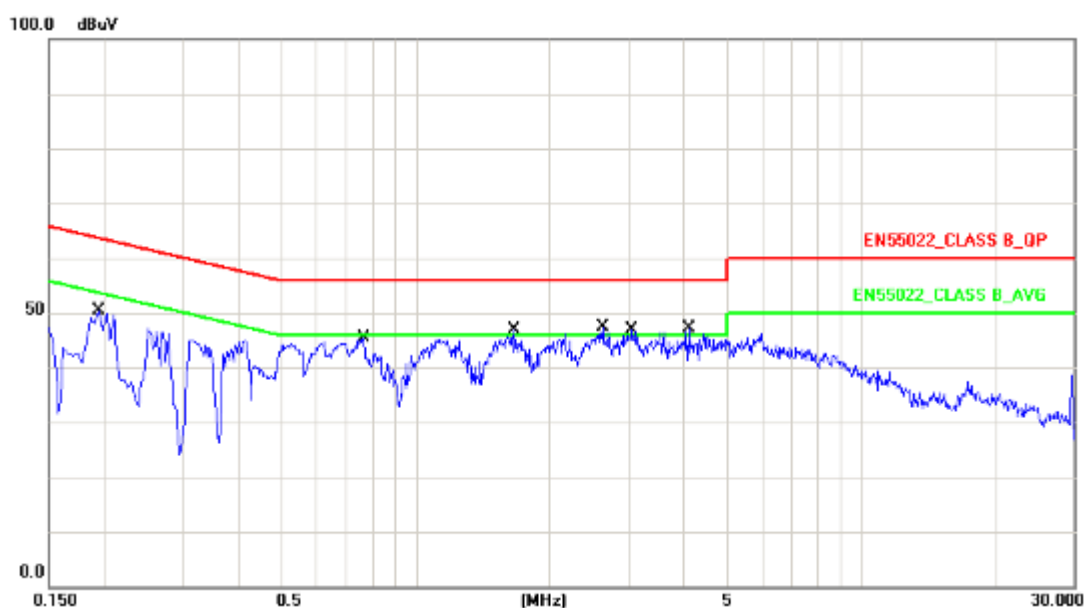


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1620	9.50	34.98	44.48	65.36	-20.88	QP
2	0.1620	9.50	21.26	30.76	55.36	-24.60	AVG
3	0.5260	9.50	31.04	40.54	56.00	-15.46	QP
4	0.5260	9.50	27.71	37.21	46.00	-8.79	AVG
5	0.5899	9.50	33.59	43.09	56.00	-12.91	QP
6	0.5899	9.50	26.40	35.90	46.00	-10.10	AVG
7	0.9220	9.45	29.23	38.68	56.00	-17.32	QP
8	0.9220	9.45	24.33	33.78	46.00	-12.22	AVG
9	1.2700	9.46	27.44	36.90	56.00	-19.10	QP
10	1.2700	9.46	22.61	32.07	46.00	-13.93	AVG
11	22.2700	9.89	31.32	41.21	60.00	-18.79	QP
12	22.2700	9.89	26.43	36.32	50.00	-13.68	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5:Full system (VGA mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Phase :	LINE
Equipment :	LCD Monitor	Model No :	215LM00036
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2012/07/06

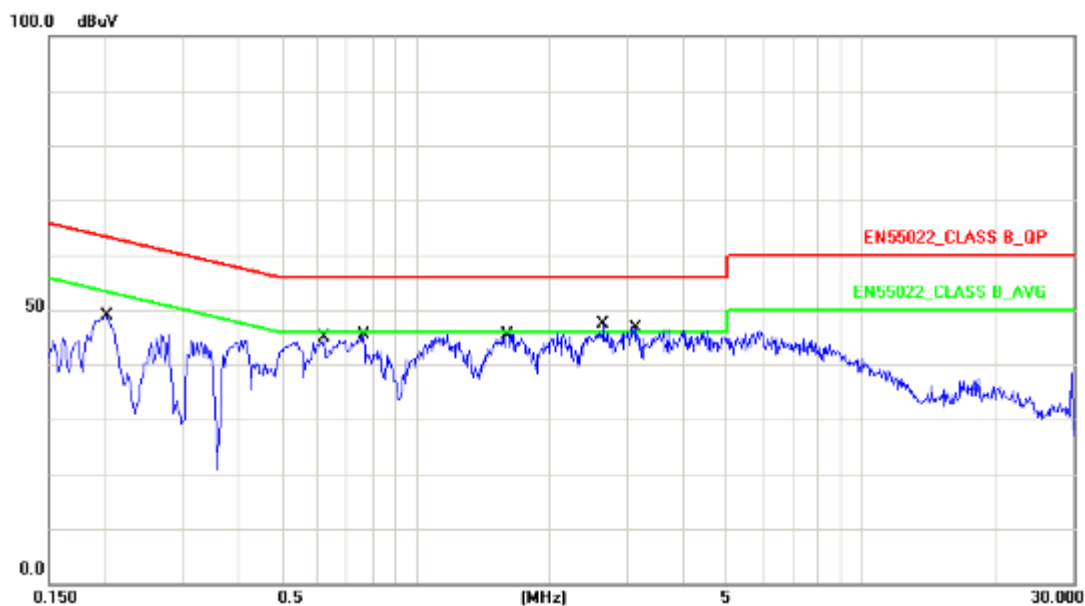


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1940	9.87	36.79	46.66	63.86	-17.20	QP
2	0.1940	9.87	24.51	34.38	53.86	-19.48	AVG
3	0.7660	9.82	34.41	44.23	56.00	-11.77	QP
4	0.7660	9.82	19.71	29.53	46.00	-16.47	AVG
5	1.6700	9.72	35.21	44.93	56.00	-11.07	QP
6	1.6700	9.72	22.93	32.65	46.00	-13.35	AVG
7	2.6460	9.71	33.33	43.04	56.00	-12.96	QP
8	2.6460	9.71	21.87	31.58	46.00	-14.42	AVG
9	3.0620	9.71	34.37	44.08	56.00	-11.92	QP
10	3.0620	9.71	20.89	30.60	46.00	-15.40	AVG
11	4.1060	9.70	32.02	41.72	56.00	-14.28	QP
12	4.1060	9.70	19.85	29.55	46.00	-16.45	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5:Full system (VGA mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Equipment :	LCD Monitor	Model No :	215LM00036
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2012/07/06

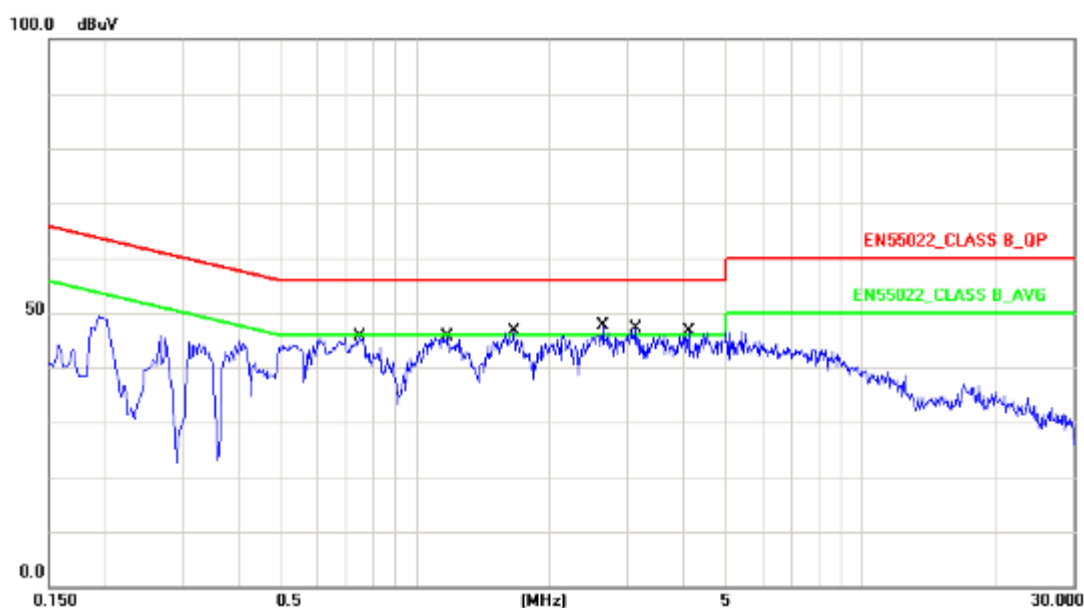


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2020	9.50	35.64	45.14	63.52	-18.38	QP
2	0.2020	9.50	23.38	32.88	53.52	-20.64	AVG
3	0.6260	9.50	33.35	42.85	56.00	-13.15	QP
4	0.6260	9.50	19.97	29.47	46.00	-16.53	AVG
5	0.7660	9.48	34.23	43.71	56.00	-12.29	QP
6	0.7660	9.48	19.55	29.03	46.00	-16.97	AVG
7	1.6019	9.48	32.80	42.28	56.00	-13.72	QP
8	1.6019	9.48	21.91	31.39	46.00	-14.61	AVG
9	2.6420	9.54	36.04	45.58	56.00	-10.42	QP
10	2.6420	9.54	22.95	32.49	46.00	-13.51	AVG
11	3.1300	9.56	34.21	43.77	56.00	-12.23	QP
12	3.1300	9.56	20.29	29.85	46.00	-16.15	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6:Full system (DVI mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Phase :	LINE
Equipment :	LCD Monitor	Model No :	215LM00036
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2012/07/06

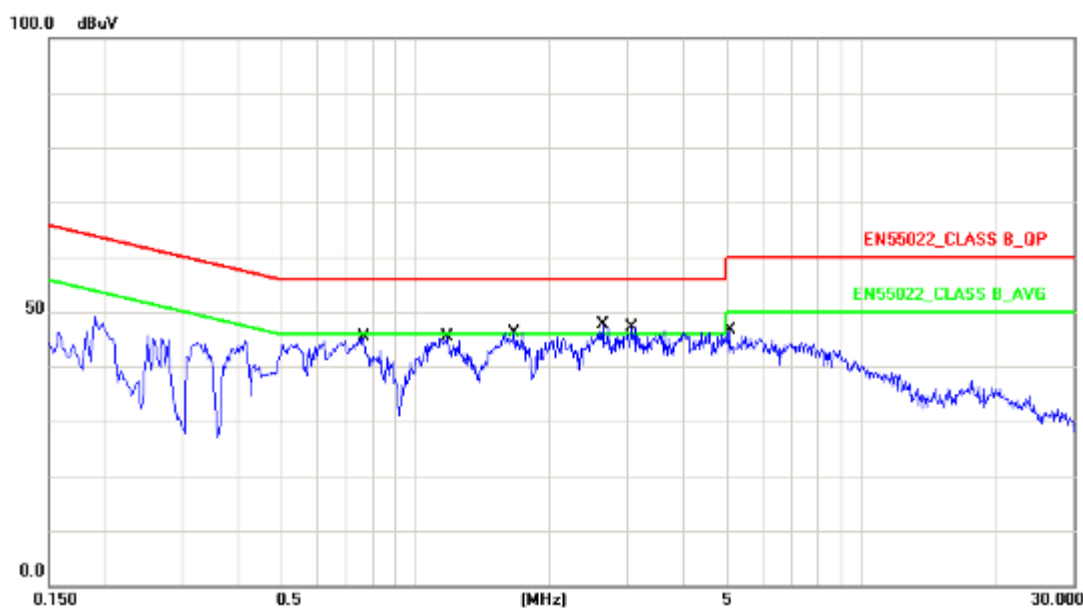


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.7500	9.82	33.27	43.09	56.00	-12.91	QP
2	0.7500	9.82	21.13	30.95	46.00	-15.05	AVG
3	1.1820	9.74	34.12	43.86	56.00	-12.14	QP
4	1.1820	9.74	21.50	31.24	46.00	-14.76	AVG
5	1.6660	9.72	35.61	45.33	56.00	-10.67	QP
6	1.6660	9.72	23.38	33.10	46.00	-12.90	AVG
7	2.6420	9.71	33.37	43.08	56.00	-12.92	QP
8	2.6420	9.71	22.15	31.86	46.00	-14.14	AVG
9	3.1260	9.71	34.96	44.67	56.00	-11.33	QP
10	3.1260	9.71	20.44	30.15	46.00	-15.85	AVG
11	4.0980	9.70	33.45	43.15	56.00	-12.85	QP
12	4.0980	9.70	20.42	30.12	46.00	-15.88	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6:Full system (DVI mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Equipment :	LCD Monitor	Model No :	215LM00036
Temperature :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date:	2012/07/06



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.7660	9.48	33.85	43.33	56.00	-12.67	QP
2	0.7660	9.48	19.50	28.98	46.00	-17.02	AVG
3	1.1820	9.45	34.53	43.98	56.00	-12.02	QP
4	1.1820	9.45	21.75	31.20	46.00	-14.80	AVG
5	1.6660	9.49	35.52	45.01	56.00	-10.99	QP
6	1.6660	9.49	23.30	32.79	46.00	-13.21	AVG
7	2.6420	9.54	34.94	44.48	56.00	-11.52	QP
8	2.6420	9.54	22.81	32.35	46.00	-13.65	AVG
9	3.0579	9.55	35.06	44.61	56.00	-11.39	QP
10	3.0579	9.55	21.47	31.02	46.00	-14.98	AVG
11	5.0739	9.65	31.49	41.14	60.00	-18.86	QP
12	5.0739	9.65	20.31	29.96	50.00	-20.04	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Seben



4.6. Test Photographs

Front View



Rear View





5. Test of Radiated Emission

5.1. Test Limit

The EUT shall meet the limits of below Table when measured at the measuring distance R in accordance with the methods described in European Standard EN 55022. If the reading on the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the highest reading shall be recorded, with the exception of any brief isolated high reading, which shall be ignored.

Table – Limits for radiated disturbance of class B ITE at a measuring distance of 10 m

Frequency range MHz	Quasi-peak limits dB(μ V/m)
30 to 230	30
230 to 1000	37
NOTE 1 The lower limit shall apply at the transition frequency. NOTE 2 Additional provisions may be required for cases where interference occurs.	

The EUT shall meet the limits of below Table when measured in accordance with the method described in European Standard EN 55022 and the conditional testing procedure described below.

Table – Limits for radiated disturbance of class B ITE at a measuring distance of 3 m

Frequency range GHz	Average limit dB(μ V/m)	Peak limits dB(μ V/m)
1 to 3	50	70
3 to 6	54	74
NOTE The lower limit applies at the transition frequency.		

• Conditional testing procedure:

The highest internal source of an EUT is defined as the highest frequency generated or used within the EUT or on which the EUT operates or tunes.

If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz.

If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz.

If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, the measurement shall only be made up to 5 GHz.

If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 6 GHz, whichever is less.



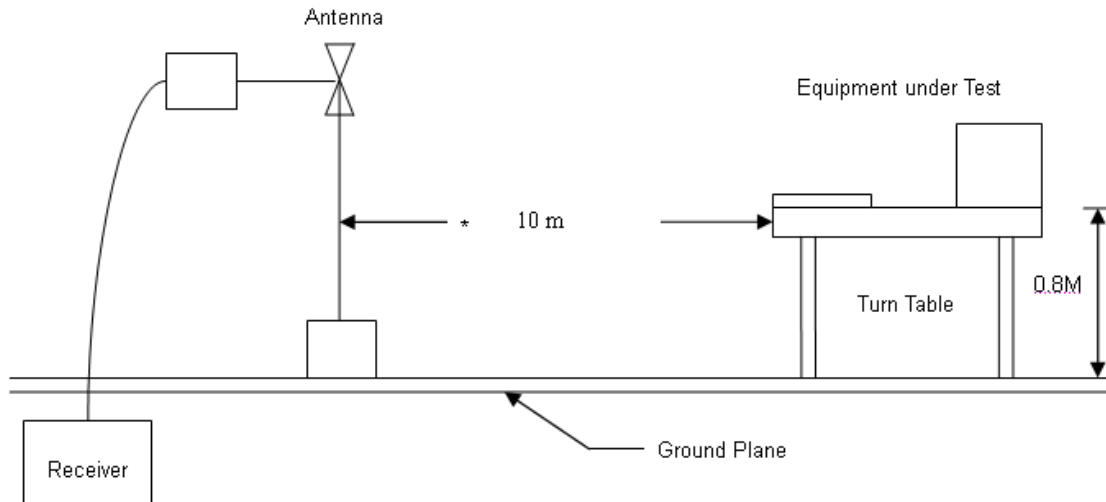
5.2. Test Procedures

- a. The EUT was placed on a relatable table top 0.8 meter above ground.
- b. The EUT was set 10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- c. The table was rotated 360 degrees to determine the position of the highest radiation.
- d. The antenna is a half wave dipole and its height is varied between one meter and four meters above ground to find the maximum value of the field strength both horizontal polarization and vertical polarization of the antenna are set to make the measurement.
- e. For each suspected emission the EUT was arranged to its worst case and then tune the antenna tower (from 1 M to 4 M) and turn table (from 0 degree to 360 degrees) to find the maximum reading.
- f. Set the test-receiver system to Peak Detect Function and specified bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method and reported.

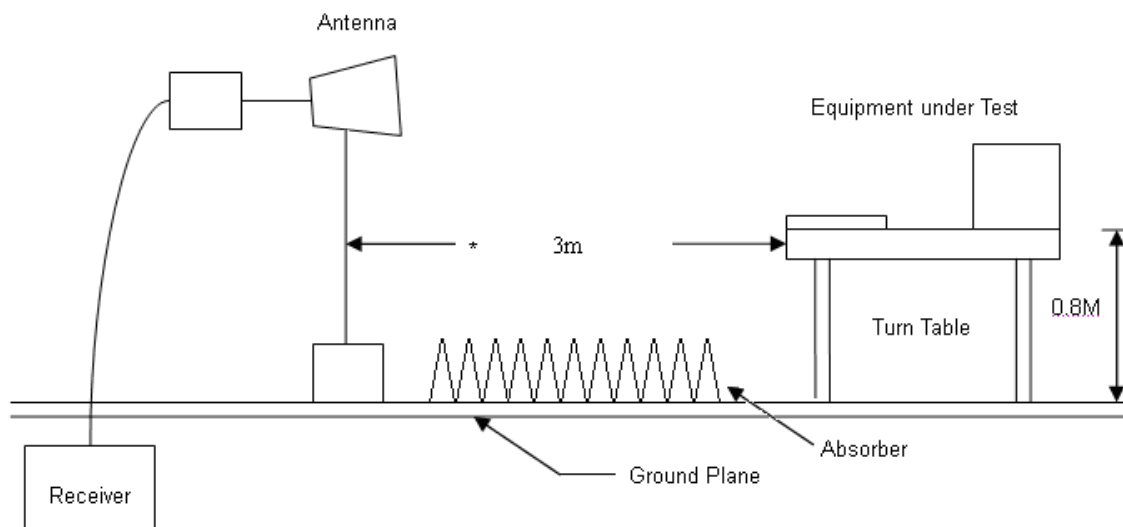


5.3. Typical test Setup

Below 1GHz Test Setup



Above 1GHz Test Setup

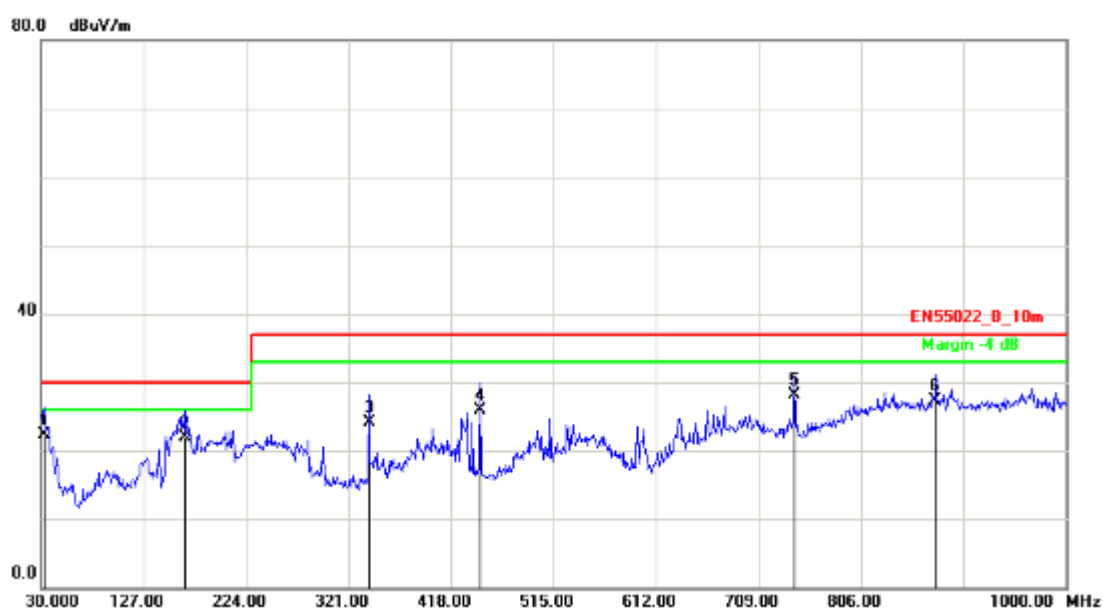


**5.4. Measurement equipment**

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI	101183	2012.03.12	2013.03.11
Preamplifier	Agilent	87405B	My39500554	2012.03.12	2013.03.11
Preamplifier	Agilent	8449B	3008A02342	2012.03.12	2013.03.11
Ultra Broadband Antenna	R&S	HL562	100363	2012.05.03	2013.05.02
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-618	2012.05.03	2013.05.02
Spectrum Analyzer	R&S	FSP40	100324	2012.03.12	2013.03.11
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-001	2012.03.12	2013.03.11

**5.5. Test Result and Data (30MHz ~ 1000MHz)**

Test Mode :	Mode 1: Full system (VGA mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/09

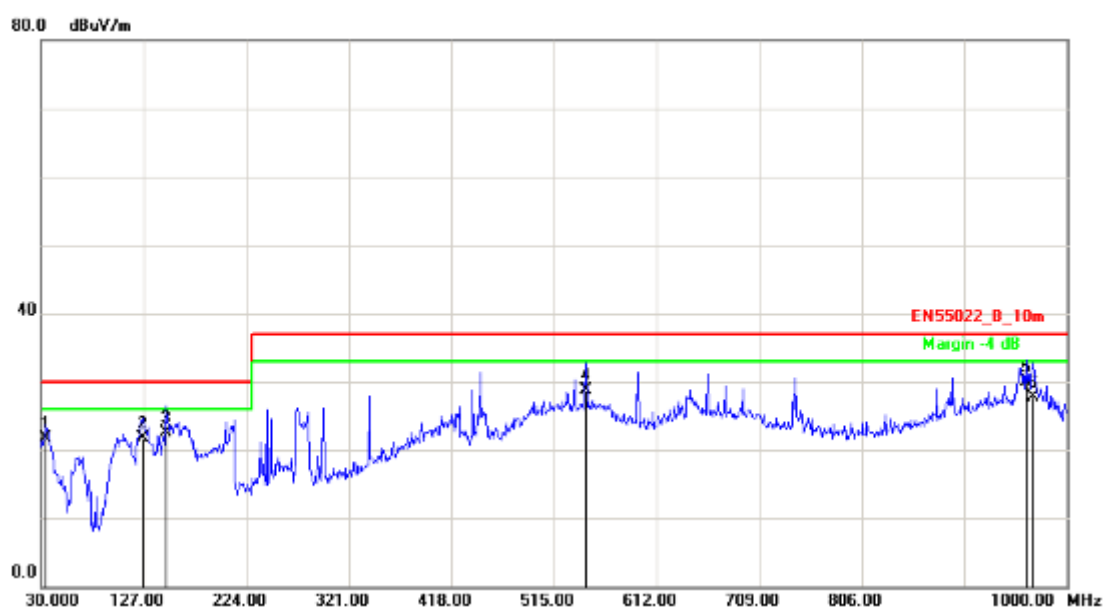


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9099	-1.14	23.38	22.24	30.00	-7.76	QP	400	63
2	166.7700	-14.24	36.22	21.98	30.00	-8.02	QP	300	147
3	340.4000	-9.56	33.71	24.15	37.00	-12.85	QP	200	27
4	445.1600	-7.97	33.95	25.98	37.00	-11.02	QP	200	360
5	742.9500	-2.22	30.23	28.01	37.00	-8.99	QP	300	24
6	876.8100	1.54	25.67	27.21	37.00	-9.79	QP	101	360

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system (VGA mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/09

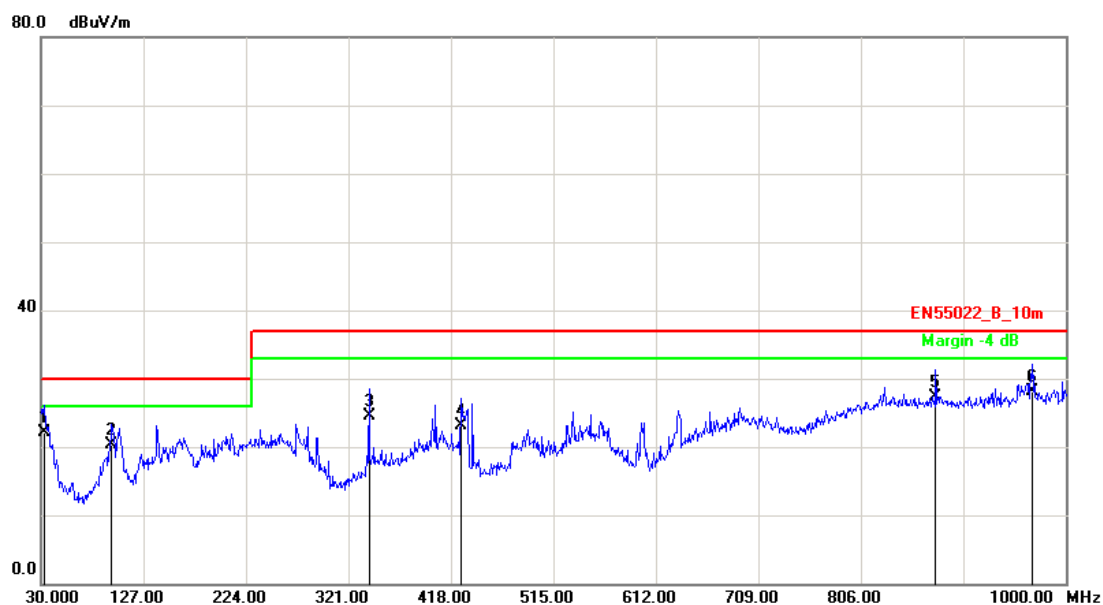


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	33.8800	-12.76	34.45	21.69	30.00	-8.31	QP	100	4
2	126.0300	-15.51	37.18	21.67	30.00	-8.33	QP	100	94
3	148.3400	-16.65	39.19	22.54	30.00	-7.46	QP	100	179
4	545.0700	1.64	26.99	28.63	37.00	-8.37	QP	302	360
5	961.2000	1.46	28.54	30.00	37.00	-7.00	QP	186	360
6	967.9900	1.05	26.57	27.62	37.00	-9.38	QP	133	360

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4:Full system (DVI mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/09

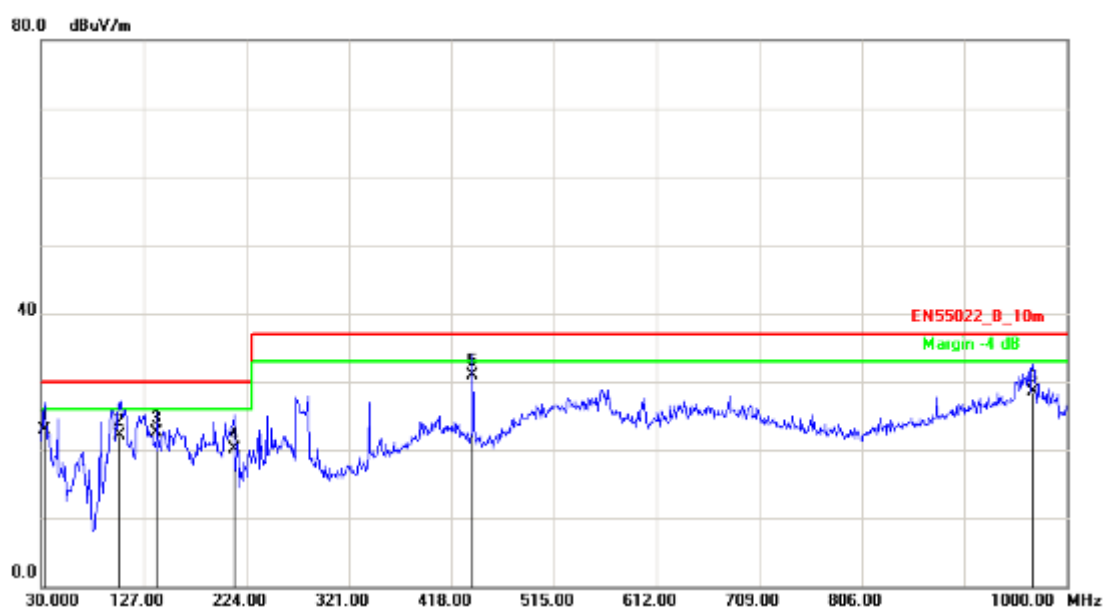


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9099	-1.14	23.30	22.16	30.00	-7.84	QP	100	269
2	96.9300	-10.83	31.18	20.35	30.00	-9.65	QP	400	257
3	340.4000	-9.56	34.08	24.52	37.00	-12.48	QP	200	22
4	427.7000	-6.94	30.12	23.18	37.00	-13.82	QP	200	218
5	876.8100	1.54	25.76	27.30	37.00	-9.70	QP	100	357
6	967.9900	1.64	26.52	28.16	37.00	-8.84	QP	100	359

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4:Full system (DVI mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/09

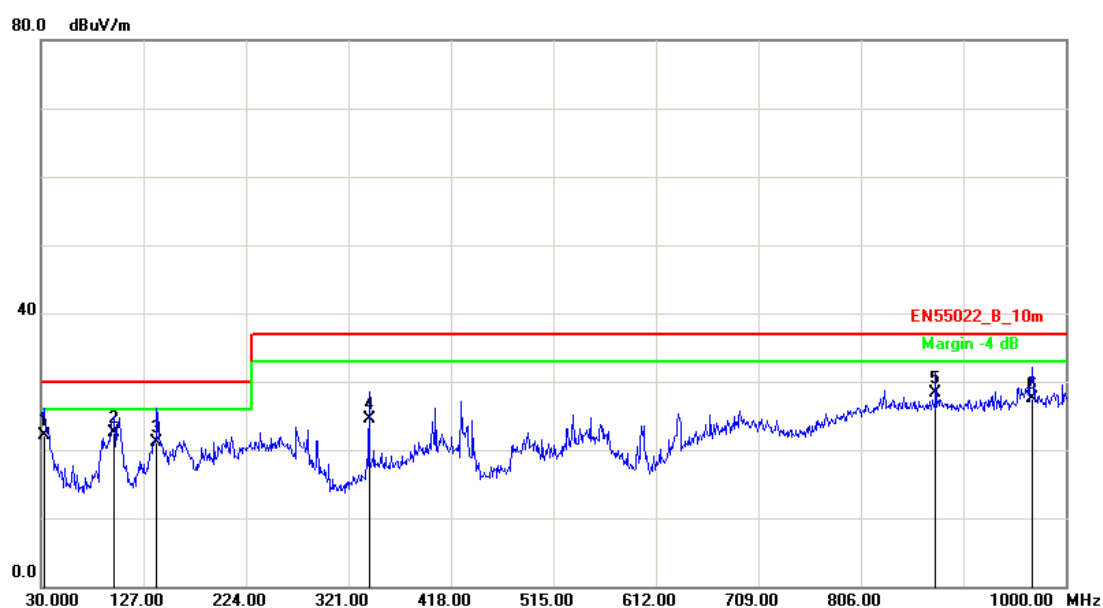


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9100	-12.37	35.21	22.84	30.00	-7.16	QP	100	4
2	103.8600	-14.38	36.46	22.08	30.00	-7.92	QP	100	273
3	139.6100	-16.21	38.71	22.50	30.00	-7.50	QP	100	267
4	212.3600	-19.05	39.24	20.19	30.00	-9.81	QP	111	360
5	438.3700	-2.92	33.83	30.91	37.00	-6.09	QP	378	360
6	967.9900	1.05	27.53	28.58	37.00	-8.42	QP	130	360

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5:Full system (VGA mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/09

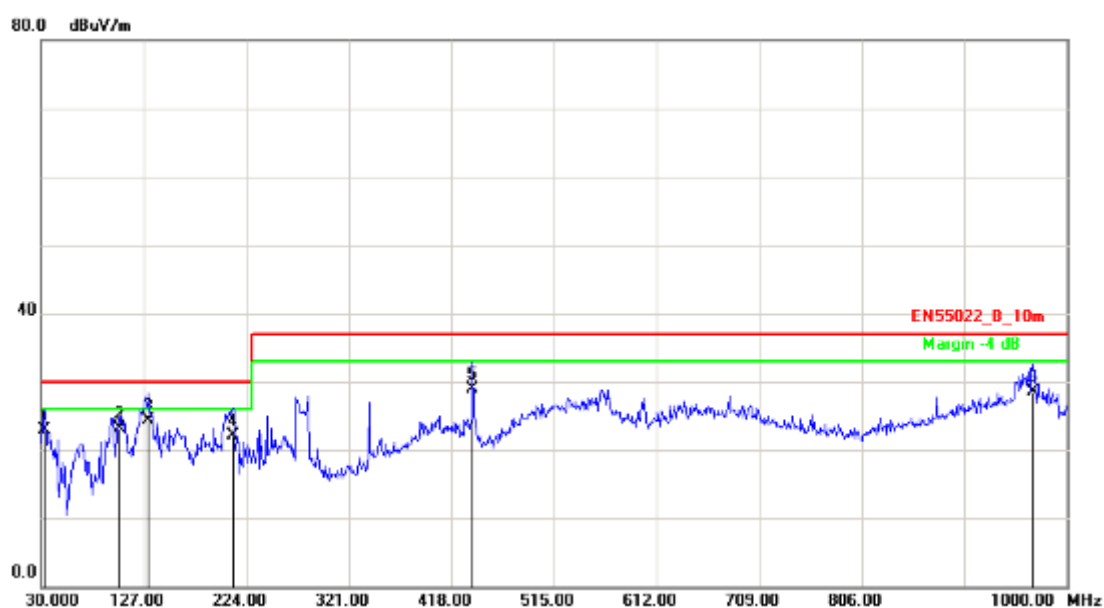


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9099	-1.14	23.30	22.16	30.00	-7.84	QP	100	95
2	98.8700	-10.95	33.48	22.53	30.00	-7.47	QP	400	256
3	139.6100	-13.33	34.47	21.14	30.00	-8.86	QP	200	231
4	340.4000	-9.56	34.09	24.53	37.00	-12.47	QP	300	84
5	876.8100	1.54	26.76	28.30	37.00	-8.70	QP	200	153
6	967.9900	1.64	25.85	27.49	37.00	-9.51	QP	100	39

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5:Full system (VGA mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/09

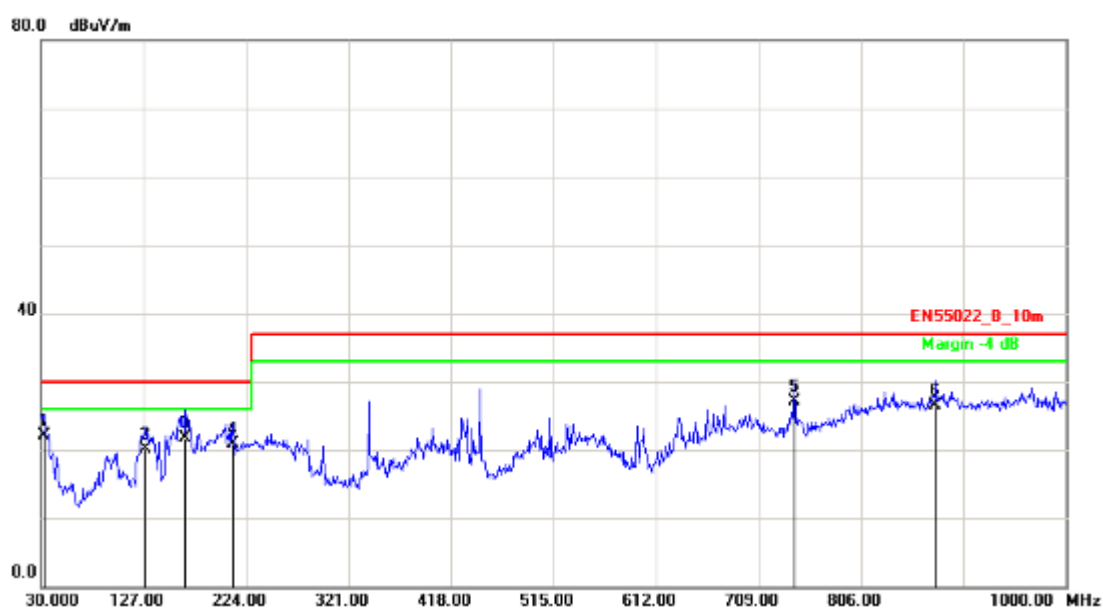


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9099	-12.37	35.21	22.84	30.00	-7.16	QP	100	356
2	103.8600	-14.38	37.46	23.08	30.00	-6.92	QP	100	273
3	131.8500	-15.81	40.16	24.35	30.00	-5.65	QP	100	126
4	211.3900	-19.22	41.33	22.11	30.00	-7.89	QP	100	62
5	438.3700	-2.92	31.83	28.91	37.00	-8.09	QP	200	145
6	967.9900	1.05	27.53	28.58	37.00	-8.42	QP	300	89

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6:Full system (DVI mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/09

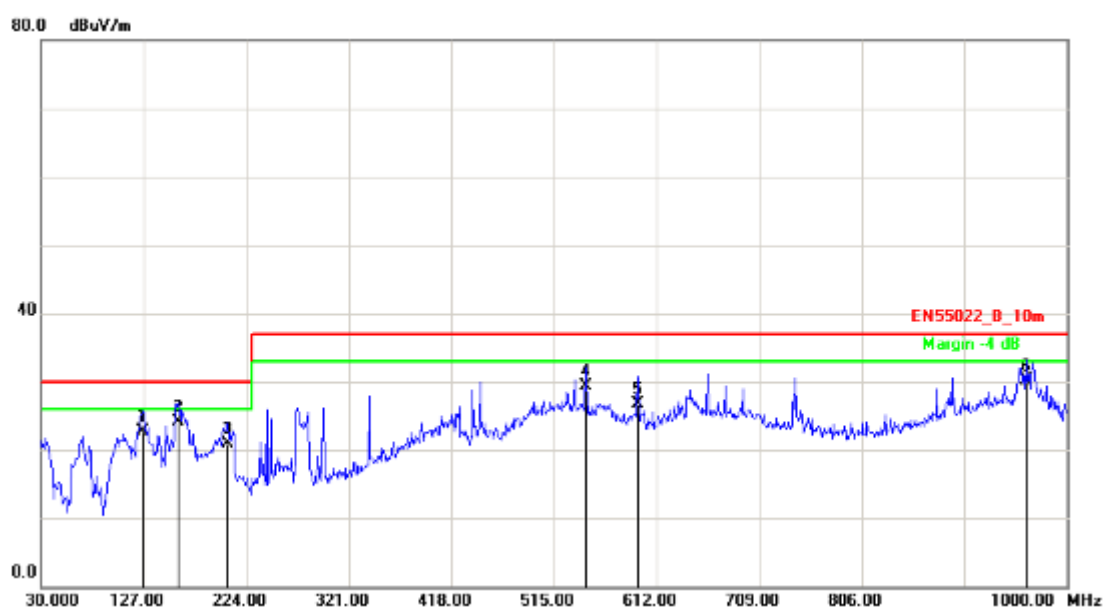


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	32.9099	-1.14	23.28	22.14	30.00	-7.86	QP	200	87
2	128.9400	-12.70	32.90	20.20	30.00	-9.80	QP	100	59
3	166.7700	-14.24	35.85	21.61	30.00	-8.39	QP	300	80
4	211.3900	-14.41	35.37	20.96	30.00	-9.04	QP	100	132
5	742.9500	-2.22	29.25	27.03	37.00	-9.97	QP	400	360
6	876.8100	1.54	25.04	26.58	37.00	-10.42	QP	100	246

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6:Full system (DVI mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/09

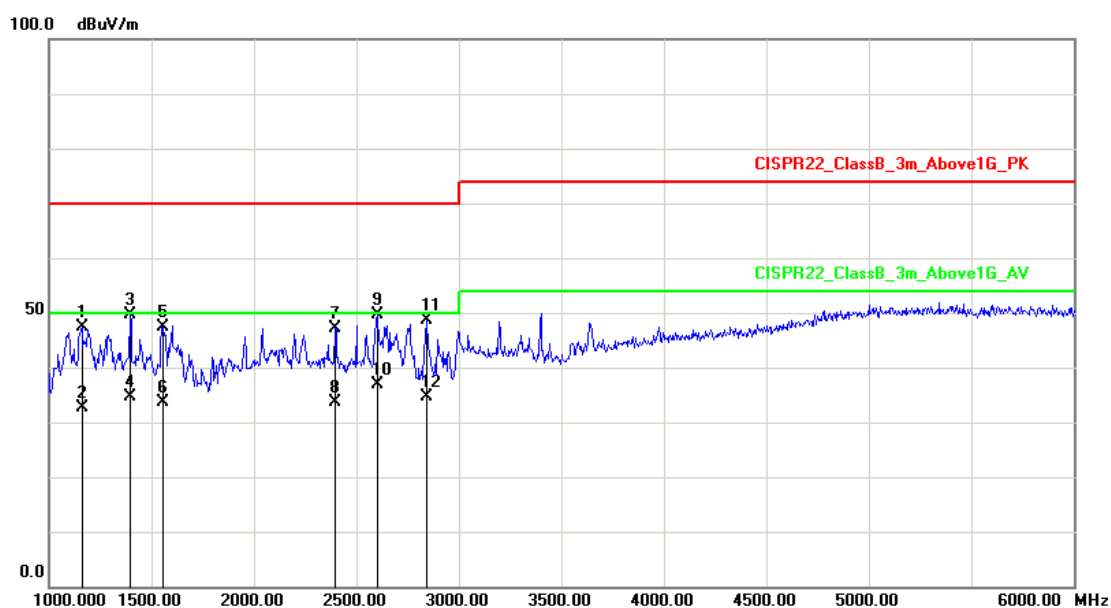


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	126.0300	-15.51	38.18	22.67	30.00	-7.33	QP	100	50
2	159.9800	-17.64	41.79	24.15	30.00	-5.85	QP	100	124
3	206.5400	-20.09	41.06	20.97	30.00	-9.03	QP	100	65
4	545.0700	1.64	27.72	29.36	37.00	-7.64	QP	200	95
5	594.5400	-0.75	27.53	26.78	37.00	-10.22	QP	300	132
6	961.2000	1.46	28.58	30.04	37.00	-6.96	QP	200	228

Note: Measurement Level = Reading Level + Correct Factor

**5.6. Test Result and Data (1000MHz ~ 6000MHz)**

Test Mode :	Mode 1: Full system (VGA mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/10

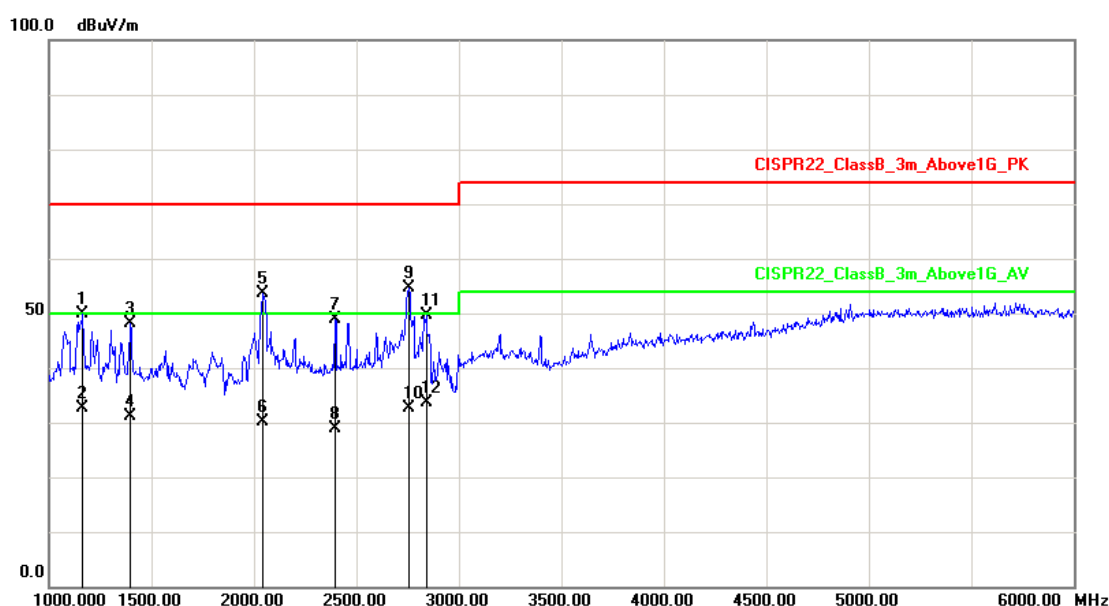


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1160.000	-13.30	60.72	47.42	70.00	-22.58	peak	200	251
2	1160.000	-13.30	45.93	32.63	50.00	-17.37	AVG	200	251
3	1395.000	-11.39	60.98	49.59	70.00	-20.41	peak	100	41
4	1395.000	-11.39	45.97	34.58	50.00	-15.42	AVG	100	41
5	1555.000	-10.33	57.68	47.35	70.00	-22.65	peak	100	63
6	1555.000	-10.33	43.98	33.65	50.00	-16.35	AVG	100	63
7	2395.000	-4.22	51.38	47.16	70.00	-22.84	peak	200	256
8	2395.000	-4.22	37.74	33.52	50.00	-16.48	AVG	200	256
9	2600.000	-3.57	53.09	49.52	70.00	-20.48	peak	202	20
10	2600.000	-3.57	40.42	36.85	50.00	-13.15	AVG	202	20
11	2845.000	-3.23	51.89	48.66	70.00	-21.34	peak	100	0
12	2845.000	-3.23	37.97	34.74	50.00	-15.26	AVG	100	0

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system (VGA mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/10

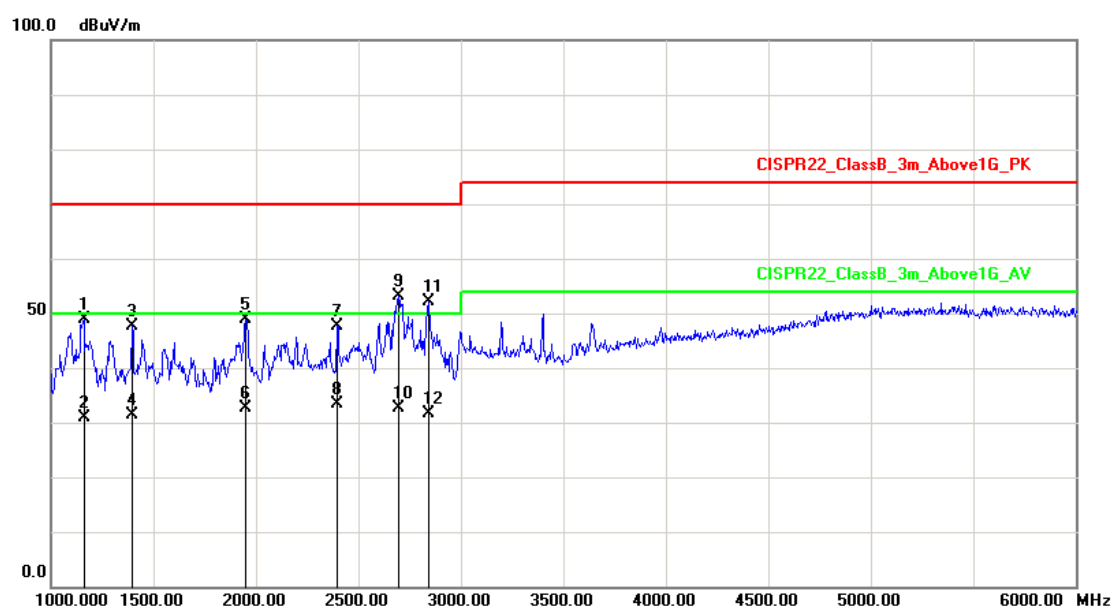


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1165.000	-13.27	63.11	49.84	70.00	-20.16	peak	100	121
2	1165.000	-13.27	45.84	32.57	50.00	-17.43	AVG	100	121
3	1395.000	-11.39	59.40	48.01	70.00	-21.99	peak	100	34
4	1395.000	-11.39	42.43	31.04	50.00	-18.96	AVG	100	34
5	2045.000	-5.91	59.53	53.62	70.00	-16.38	peak	100	65
6	2045.000	-5.91	36.13	30.22	50.00	-19.78	AVG	100	65
7	2395.000	-4.22	53.01	48.79	70.00	-21.21	peak	100	90
8	2395.000	-4.22	33.01	28.79	50.00	-21.21	AVG	100	90
9	2755.000	-3.36	58.06	54.70	70.00	-15.30	peak	100	142
10	2755.000	-3.36	36.05	32.69	50.00	-17.31	AVG	100	142
11	2840.000	-3.24	52.77	49.53	70.00	-20.47	peak	100	56
12	2840.000	-3.24	36.82	33.58	50.00	-16.42	AVG	100	56

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4:Full system (DVI mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/10

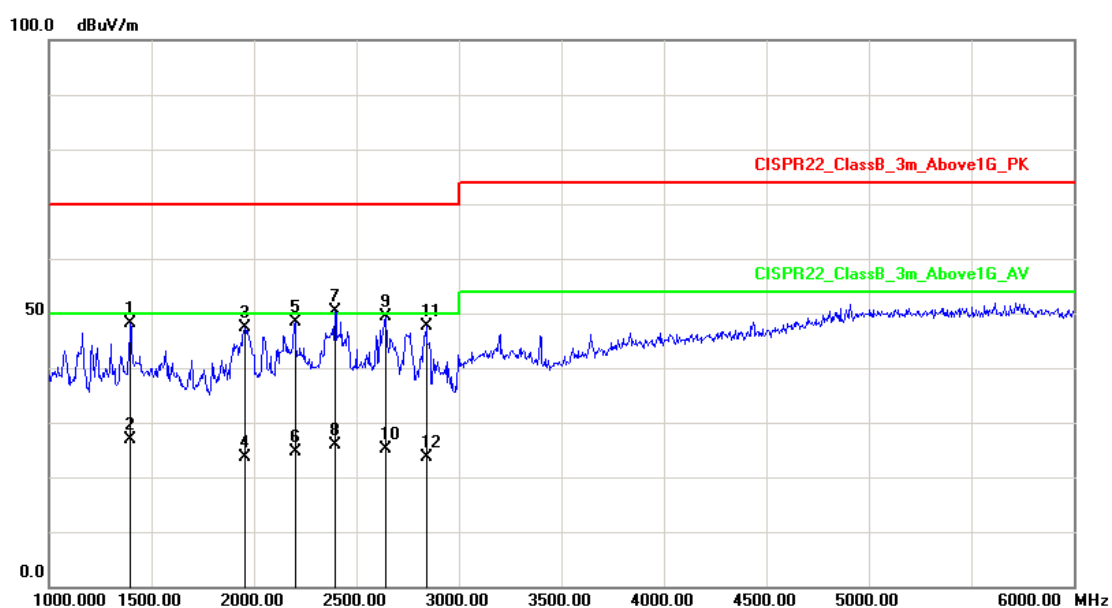


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1160.000	-13.30	62.22	48.92	70.00	-21.08	peak	100	45
2	1160.000	-13.30	44.29	30.99	50.00	-19.01	AVG	100	45
3	1395.000	-11.39	58.98	47.59	70.00	-22.41	peak	100	175
4	1395.000	-11.39	42.84	31.45	50.00	-18.55	AVG	100	175
5	1950.000	-7.35	56.31	48.96	70.00	-21.04	peak	100	89
6	1950.000	-7.35	40.03	32.68	50.00	-17.32	AVG	100	89
7	2395.000	-4.22	51.88	47.66	70.00	-22.34	peak	100	62
8	2395.000	-4.22	37.69	33.47	50.00	-16.53	AVG	100	62
9	2695.000	-3.44	56.47	53.03	70.00	-16.97	peak	100	231
10	2695.000	-3.44	36.01	32.57	50.00	-17.43	AVG	100	231
11	2845.000	-3.23	55.39	52.16	70.00	-17.84	peak	100	263
12	2845.000	-3.23	34.97	31.74	50.00	-18.26	AVG	100	263

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4:Full system (DVI mode 1920*1080@60Hz) with Adapter1		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/10

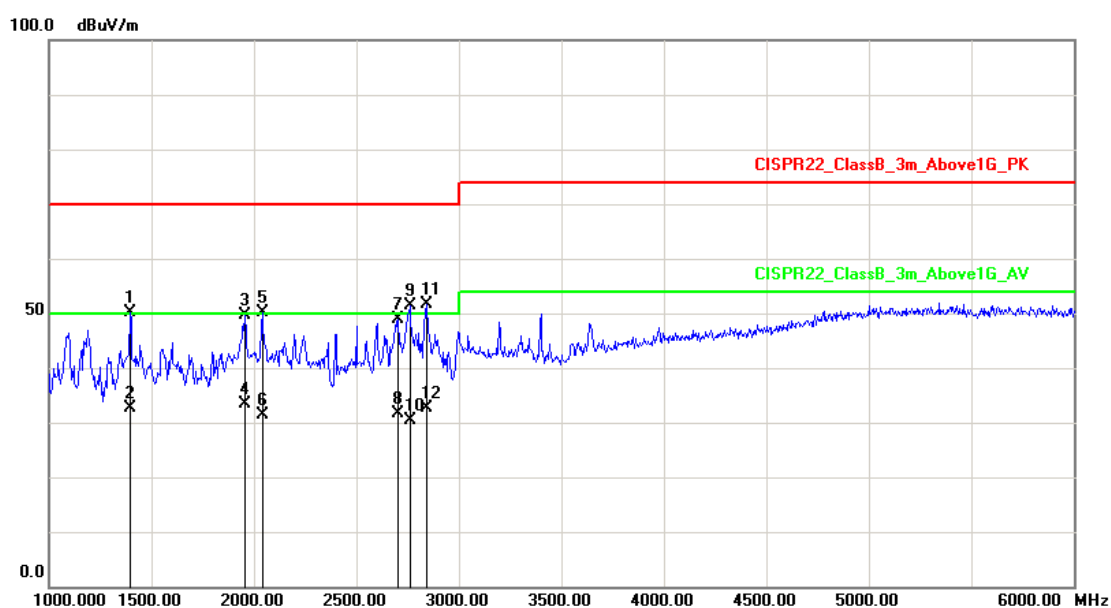


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1395.000	-11.39	59.40	48.01	70.00	-21.99	peak	100	22
2	1395.000	-11.39	38.35	26.96	50.00	-23.04	AVG	100	22
3	1955.000	-7.23	54.68	47.45	70.00	-22.55	peak	100	152
4	1955.000	-7.23	30.86	23.63	50.00	-26.37	AVG	100	152
5	2200.000	-5.16	53.50	48.34	70.00	-21.66	peak	120	41
6	2200.000	-5.16	29.74	24.58	50.00	-25.42	AVG	120	41
7	2395.000	-4.22	54.51	50.29	70.00	-19.71	peak	100	85
8	2395.000	-4.22	30.18	25.96	50.00	-24.04	AVG	100	85
9	2645.000	-3.51	52.97	49.46	70.00	-20.54	peak	200	96
10	2645.000	-3.51	28.69	25.18	50.00	-24.82	AVG	200	96
11	2840.000	-3.24	50.77	47.53	70.00	-22.47	peak	100	0
12	2840.000	-3.24	26.89	23.65	50.00	-26.35	AVG	100	0

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5:Full system (VGA mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/10

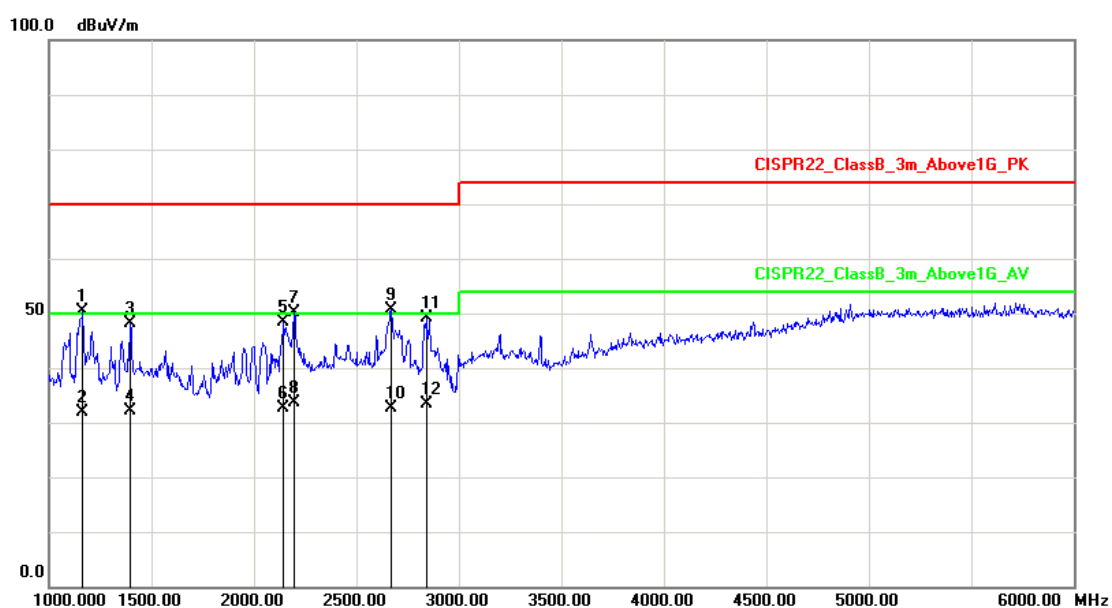


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1395.000	-11.39	61.48	50.09	70.00	-19.91	peak	100	278
2	1395.000	-11.39	43.93	32.54	50.00	-17.46	AVG	100	278
3	1955.000	-7.23	56.82	49.59	70.00	-20.41	peak	100	94
4	1955.000	-7.23	40.52	33.29	50.00	-16.71	AVG	100	94
5	2040.000	-5.94	56.00	50.06	70.00	-19.94	peak	100	57
6	2040.000	-5.94	37.42	31.48	50.00	-18.52	AVG	100	57
7	2705.000	-3.43	52.31	48.88	70.00	-21.12	peak	100	114
8	2705.000	-3.43	35.17	31.74	50.00	-18.26	AVG	100	114
9	2760.000	-3.35	54.83	51.48	70.00	-18.52	peak	100	253
10	2760.000	-3.35	33.62	30.27	50.00	-19.73	AVG	100	253
11	2845.000	-3.23	54.89	51.66	70.00	-18.34	peak	100	360
12	2845.000	-3.23	35.92	32.69	50.00	-17.31	AVG	100	360

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5:Full system (VGA mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/10

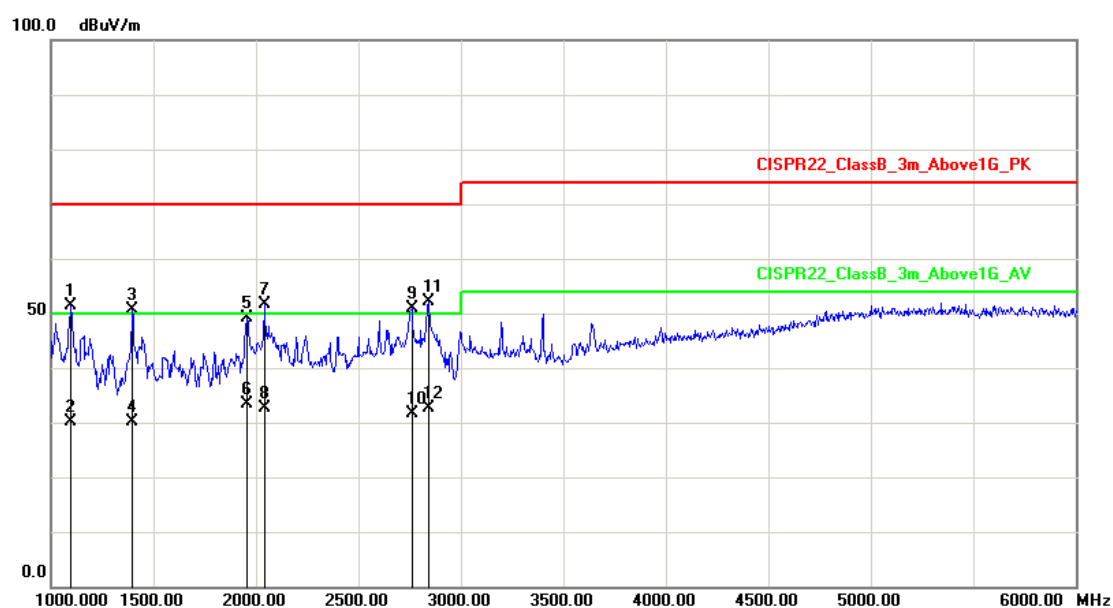


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1165.000	-13.27	63.61	50.34	70.00	-19.66	peak	100	241
2	1165.000	-13.27	45.14	31.87	50.00	-18.13	AVG	100	241
3	1395.000	-11.39	59.40	48.01	70.00	-21.99	peak	100	57
4	1395.000	-11.39	43.58	32.19	50.00	-17.81	AVG	100	57
5	2145.000	-5.43	53.74	48.31	70.00	-21.69	peak	100	89
6	2145.000	-5.43	38.01	32.58	50.00	-17.42	AVG	100	89
7	2195.000	-5.19	55.35	50.16	70.00	-19.84	peak	100	256
8	2195.000	-5.19	38.77	33.58	50.00	-16.42	AVG	100	256
9	2670.000	-3.48	54.04	50.56	70.00	-19.44	peak	100	312
10	2670.000	-3.48	36.13	32.65	50.00	-17.35	AVG	100	312
11	2840.000	-3.24	52.27	49.03	70.00	-20.97	peak	100	0
12	2840.000	-3.24	36.68	33.44	50.00	-16.56	AVG	100	0

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6:Full system (DVI mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/10

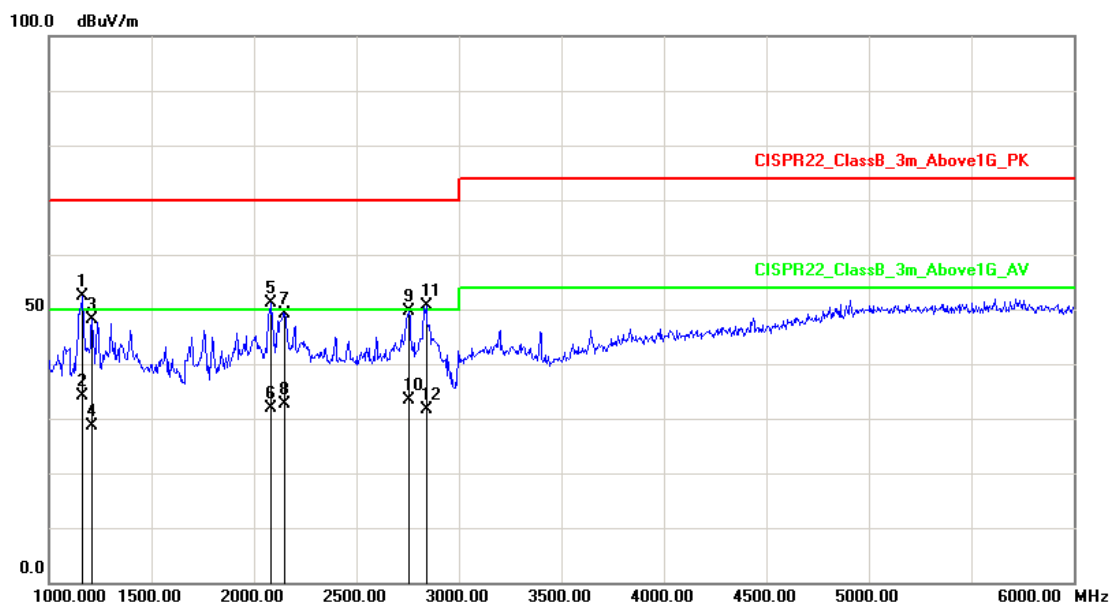


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1095.000	-13.68	65.13	51.45	70.00	-18.55	peak	100	147
2	1095.000	-13.68	43.69	30.01	50.00	-19.99	AVG	100	147
3	1395.000	-11.39	61.98	50.59	70.00	-19.41	peak	100	59
4	1395.000	-11.39	41.61	30.22	50.00	-19.78	AVG	100	59
5	1955.000	-7.23	56.32	49.09	70.00	-20.91	peak	100	62
6	1955.000	-7.23	40.71	33.48	50.00	-16.52	AVG	100	62
7	2040.000	-5.94	57.50	51.56	70.00	-18.44	peak	100	163
8	2040.000	-5.94	38.63	32.69	50.00	-17.31	AVG	100	163
9	2760.000	-3.35	54.33	50.98	70.00	-19.02	peak	100	236
10	2760.000	-3.35	34.92	31.57	50.00	-18.43	AVG	100	236
11	2845.000	-3.23	55.39	52.16	70.00	-17.84	peak	100	92
12	2845.000	-3.23	35.91	32.68	50.00	-17.32	AVG	100	92

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6:Full system (DVI mode 1920*1080@60Hz) with Adapter2		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	LCD Monitor	Model No :	215LM00036
Temp :	23℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2012/07/10



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1165.000	-13.27	65.61	52.34	70.00	-17.66	peak	100	325
2	1165.000	-13.27	47.44	34.17	50.00	-15.83	AVG	100	325
3	1210.000	-12.98	61.23	48.25	70.00	-21.75	peak	100	61
4	1210.000	-12.98	41.64	28.66	50.00	-21.34	AVG	100	61
5	2080.000	-5.74	56.82	51.08	70.00	-18.92	peak	100	249
6	2080.000	-5.74	37.61	31.87	50.00	-18.13	AVG	100	249
7	2150.000	-5.40	54.63	49.23	70.00	-20.77	peak	100	83
8	2150.000	-5.40	38.08	32.68	50.00	-17.32	AVG	100	83
9	2755.000	-3.36	53.06	49.70	70.00	-20.30	peak	100	61
10	2755.000	-3.36	36.85	33.49	50.00	-16.51	AVG	100	61
11	2840.000	-3.24	53.77	50.53	70.00	-19.47	peak	100	50
12	2840.000	-3.24	34.80	31.56	50.00	-18.44	AVG	100	50

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: _____



5.7. Test Photographs (30MHz ~ 1000MHz)

Front View



Rear View



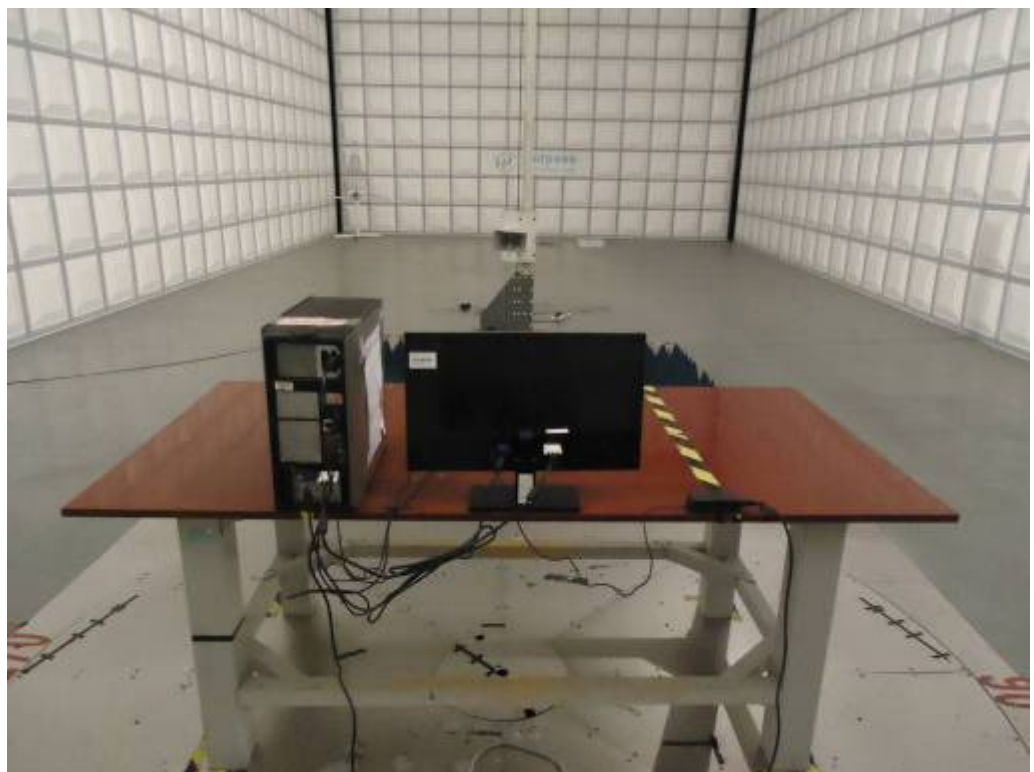


5.8. Test Photographs (1000MHz ~ 6000MHz)

Front View



Rear View





6. Harmonics Test

6.1. Limits Of Harmonics Current Measurement

Limits for Class A equipment		Limits for Class D equipment		
Harmonics Order n	Max. Permissible harmonics current A	Harmonics Order n	Max. Permissible harmonics current per watt mA/W	Max. Permissible harmonics current A
Odd harmonics		Odd Harmonics only		
3	2.30	3	3.4	2.30
5	1.14	5	1.9	1.14
7	0.77	7	1.0	0.77
9	0.40	9	0.5	0.40
11	0.33	11	0.35	0.33
13	0.21	13	0.30	0.21
15≤n≤39	0.15 × 15/n	15≤n≤39	3.85/n	0.15 x15/n
Even harmonics				
2	1.08			
4	0.43			
6	0.30			
8≤n≤40	0.23 × 8/n			

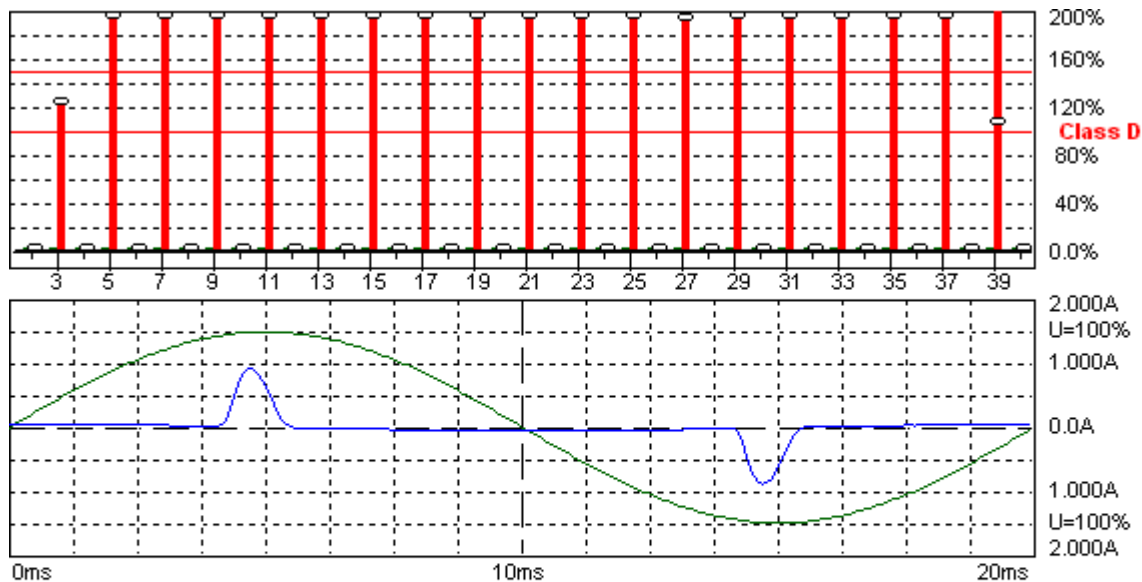
6.2. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMC Emission Tester	EMCPARTNER	Harmonics-1000	159	2012.04.20	2013.04.19
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2012.03.12	2013.03.11



6.3. Test Result and Data

Basic Standard	:	EN 61000-3-2
Final Test Result	:	PASS
Test Mode	:	Mode 1
Model No.	:	215LM00036
Temperature	:	21°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jul 05, 2012



Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2)

2012-7-5 16:21:38 harmonic.hsu

Urms = 230.3 V P = 21.55 W THC = 0.196 A
Irms = 0.216 A pf = 0.434 Pmax = 21.66 W

Range: 2 A
V-nom: 230 V
TestTime: 5 min (100%)

215LM00036

ADPC1236 V/GA

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Blue : Current , Green : Voltage , Red : Failed

Urms = 230.3V Freq = 50.026 Range: 2 A
Irms = 0.216A Ipk = 0.931A cf = 4.312
P = 21.55W S = 49.70VA pf = 0.434
THDi = 88.8 % THDu = 0.20 % Class D
Test - Time : 5min (100 %)
Limit Reference: Pmax = 21.660W
Test completed, Result: N/L

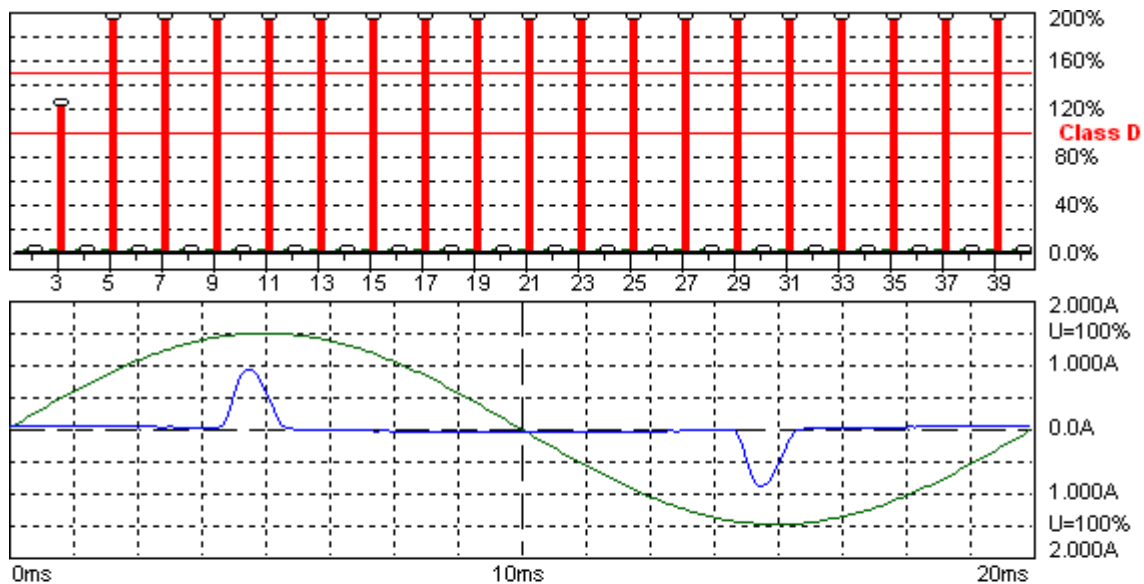


Order	Freq. [Hz]	Irms [A]	Irms%L [%]	I _{max} [A]	I _{max} %L [%]	Limit [A]	Status
1	50	0.1018		0.1023			
2	100	0.0031		0.0031			
3	150	0.0892	121.17	0.0897	121.83	0.00	N/L
4	200	0.0024		0.0024			
5	250	0.0853	207.33	0.0859	208.82	0.00	N/L
6	300	0.0024		0.0027			
7	350	0.0795	366.88	0.0801	369.70	0.00	N/L
8	400	0.0023		0.0024			
9	450	0.0724	668.39	0.0724	668.39	0.00	N/L
10	500	0.0021		0.0022			
11	550	0.0636	838.91	0.0637	840.52	0.00	N/L
12	600	0.0018		0.0020			
13	650	0.0544	848.72	0.0544	848.72	0.00	N/L
14	700	0.0015		0.0017			
15	750	0.0446	801.44	0.0446	801.44	0.00	N/L
16	800	0.0010		0.0012			
17	850	0.0350	714.20	0.0350	714.20	0.00	N/L
18	900	0.0009		0.0011			
19	950	0.0261	595.19	0.0261	595.19	0.00	N/L
20	1000	0.0009		0.0009			
21	1050	0.0183	461.10	0.0183	461.10	0.00	N/L
22	1100	0.0007		0.0009			
23	1150	0.0118	326.58	0.0118	326.58	0.00	N/L
24	1200	0.0007		0.0009			
25	1250	0.0072	215.91	0.0073	219.57	0.00	N/L
26	1300	0.0007		0.0009			
27	1350	0.0060	193.66	0.0060	193.66	0.00	N/L
28	1400	0.0007		0.0009			
29	1450	0.0067	233.48	0.0071	246.21	0.00	N/L
30	1500	0.0006		0.0007			
31	1550	0.0076	281.35	0.0081	299.50	0.00	N/L
32	1600	0.0006		0.0007			
33	1650	0.0081	318.82	0.0083	328.48	0.00	N/L
34	1700	0.0007		0.0007			
35	1750	0.0077	322.77	0.0079	333.02	0.00	N/L
36	1800	0.0006		0.0007			
37	1850	0.0066	292.47	0.0067	297.89	0.00	N/L
38	1900	0.0006		0.0007			
39	1950	0.0051	239.77	0.0052	245.48	0.00	N/L
40	2000	0.0006		0.0006			

The power of EUT is less than 75W after the testing. According the standard, the equipment with a rated power of 75W or less, other than lighting equipment, limits are not specified in this standard. So the test data needn't list.



Basic Standard	:	EN 61000-3-2
Final Test Result	:	PASS
Test Mode	:	Mode 4
Model No.	:	215LM00036
Temperature	:	21°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jul 05, 2012

**Harmonic Emission - IEC 61000-3-2, EN 61000-3-2, (EN60555-2)**

2012-7-5 16:45:20 harmonic.hsu

Urms = 230.3 V P = 21.16 W THC = 0.198 A
Irms = 0.216 A pf = 0.426 Pmax = 21.17 W

Range: 2 A
V-nom: 230 V
TestTime: 5 min (100%)

215LM00036
ADPC1236 DVI

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Blue : Current , Green : Voltage , Red : Failed

Urms = 230.3V Freq = 50.013 Range: 2 A
Irms = 0.216A Ipk = 0.958A cf = 4.439
P = 21.16W S = 49.70VA pf = 0.426
THDi = 89.2 % THDu = 0.20 % Class D
Test - Time : 5min (100 %)
Limit Reference: Pmax = 21.172W
Test completed, Result: N/L

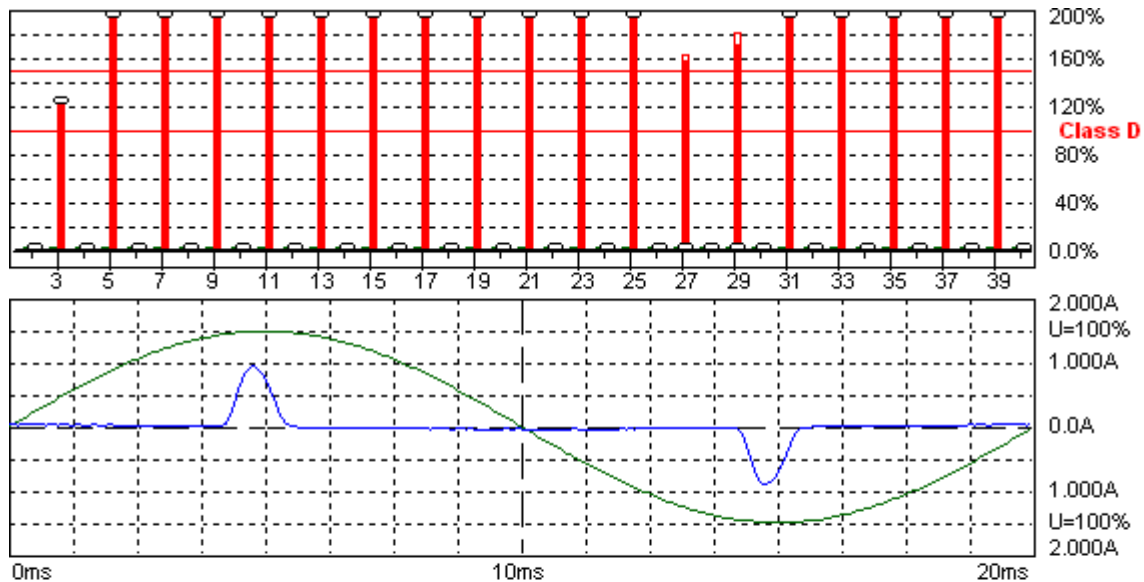


Order	Freq. [Hz]	Irms [A]	Irms%L [%]	I _{max} [A]	I _{max} %L [%]	Limit [A]	Status
1	50	0.1001		0.1003			
2	100	0.0033		0.0034			
3	150	0.0878	121.93	0.0880	122.27	0.00	N/L
4	200	0.0027		0.0028			
5	250	0.0842	209.38	0.0845	209.99	0.00	N/L
6	300	0.0027		0.0028			
7	350	0.0790	373.04	0.0790	373.04	0.00	N/L
8	400	0.0024		0.0026			
9	450	0.0723	682.65	0.0724	683.80	0.00	N/L
10	500	0.0021		0.0022			
11	550	0.0642	866.49	0.0643	868.14	0.00	N/L
12	600	0.0018		0.0020			
13	650	0.0558	889.70	0.0558	889.70	0.00	N/L
14	700	0.0016		0.0018			
15	750	0.0466	858.10	0.0466	858.10	0.00	N/L
16	800	0.0011		0.0013			
17	850	0.0376	784.12	0.0376	784.12	0.00	N/L
18	900	0.0010		0.0012			
19	950	0.0291	677.20	0.0291	677.20	0.00	N/L
20	1000	0.0009		0.0010			
21	1050	0.0211	544.07	0.0212	547.21	0.00	N/L
22	1100	0.0007		0.0010			
23	1150	0.0144	406.44	0.0145	409.88	0.00	N/L
24	1200	0.0007		0.0010			
25	1250	0.0093	284.54	0.0093	284.54	0.00	N/L
26	1300	0.0009		0.0010			
27	1350	0.0063	210.26	0.0065	214.30	0.00	N/L
28	1400	0.0009		0.0009			
29	1450	0.0060	212.80	0.0061	217.15	0.00	N/L
30	1500	0.0007		0.0007			
31	1550	0.0068	259.98	0.0071	269.26	0.00	N/L
32	1600	0.0006		0.0007			
33	1650	0.0076	306.40	0.0078	316.29	0.00	N/L
34	1700	0.0007		0.0009			
35	1750	0.0078	335.45	0.0079	340.70	0.00	N/L
36	1800	0.0007		0.0009			
37	1850	0.0073	332.46	0.0073	332.46	0.00	N/L
38	1900	0.0006		0.0007			
39	1950	0.0061	292.03	0.0062	297.87	0.00	N/L
40	2000	0.0005		0.0006			

The power of EUT is less than 75W after the testing. According the standard, the equipment with a rated power of 75W or less, other than lighting equipment, limits are not specified in this standard. So the test data needn't list.



Basic Standard	:	EN 61000-3-2
Final Test Result	:	PASS
Test Mode	:	Mode 5
Model No.	:	215LM00036
Temperature	:	21°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jul 05, 2012

**Harmonic Emission - IEC 61000-3-2 , EN 61000-3-2 , (EN60555-2)**

2012-7-5 17:21:21 harmonic.hsu

Urms = 230.3 V P = 21.40 W THC = 0.200 A
Irms = 0.216 A pf = 0.431 Pmax = 21.45 W

Range: 2 A
V-nom: 230 V
TestTime: 5 min (100%)

215LM00036

ADS-45NP-12-1 V/GA

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Blue : Current , Green : Voltage , Red : Failed

Urms = 230.3V Freq = 49.987 Range: 2 A
Irms = 0.216A Ipk = 0.952A cf = 4.412
P = 21.40W S = 49.70VA pf = 0.431
THDi = 89.9 % THDu = 0.20 % Class D
Test - Time : 5min (100 %)
Limit Reference: Pmax = 21.450W
Test completed, Result: N/L

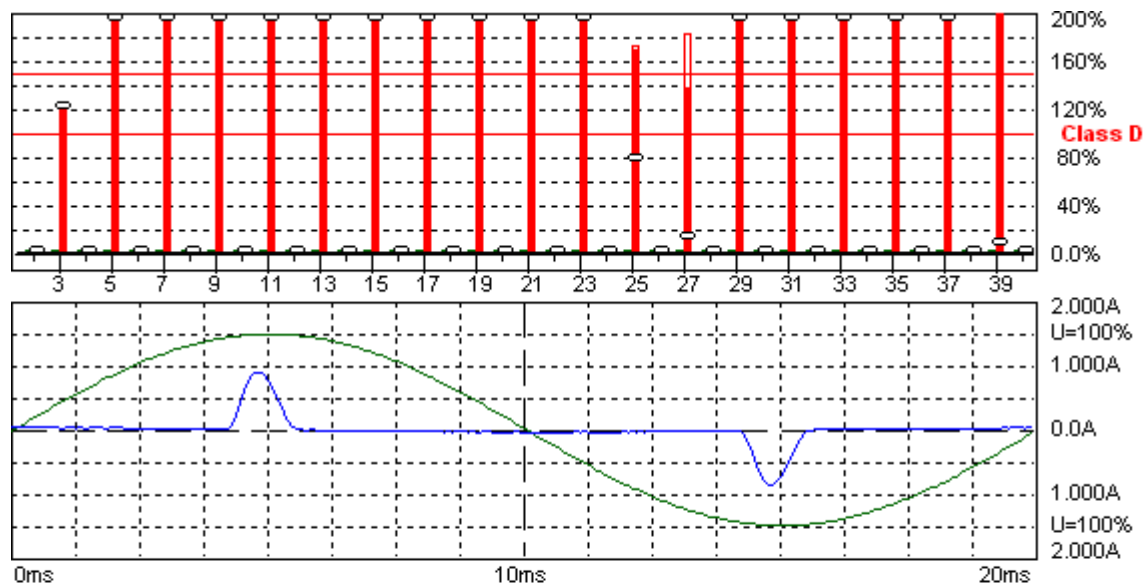


Order	Freq. [Hz]	Irms [A]	Irms%L [%]	I _{max} [A]	I _{max} %L [%]	Limit [A]	Status
1	50	0.0975		0.0977			
2	100	0.0034		0.0035			
3	150	0.0890	122.02	0.0892	122.36	0.00	N/L
4	200	0.0034		0.0034			
5	250	0.0853	209.37	0.0854	209.67	0.00	N/L
6	300	0.0031		0.0032			
7	350	0.0800	372.76	0.0801	373.33	0.00	N/L
8	400	0.0027		0.0028			
9	450	0.0731	681.78	0.0731	681.78	0.00	N/L
10	500	0.0022		0.0024			
11	550	0.0649	865.02	0.0651	866.65	0.00	N/L
12	600	0.0018		0.0021			
13	650	0.0562	883.94	0.0563	885.87	0.00	N/L
14	700	0.0016		0.0018			
15	750	0.0470	853.64	0.0470	853.64	0.00	N/L
16	800	0.0012		0.0015			
17	850	0.0377	776.48	0.0378	778.99	0.00	N/L
18	900	0.0009		0.0011			
19	950	0.0289	665.62	0.0291	668.43	0.00	N/L
20	1000	0.0009		0.0011			
21	1050	0.0210	533.91	0.0210	533.91	0.00	N/L
22	1100	0.0007		0.0009			
23	1150	0.0138	384.18	0.0138	384.18	0.00	N/L
24	1200	0.0006		0.0007			
25	1250	0.0081	243.90	0.0081	243.90	0.00	N/L
26	1300	0.0007		0.0009			
27	1350	0.0048	155.65	0.0049	159.64	0.00	N/L
28	1400	0.0009		0.0009			
29	1450	0.0048	167.18	0.0050	175.75	0.00	N/L
30	1500	0.0007		0.0009			
31	1550	0.0061	229.12	0.0065	242.86	0.00	N/L
32	1600	0.0006		0.0007			
33	1650	0.0071	282.92	0.0074	297.56	0.00	N/L
34	1700	0.0006		0.0006			
35	1750	0.0073	310.42	0.0077	325.94	0.00	N/L
36	1800	0.0005		0.0006			
37	1850	0.0070	311.75	0.0072	322.68	0.00	N/L
38	1900	0.0005		0.0006			
39	1950	0.0060	282.48	0.0061	288.24	0.00	N/L
40	2000	0.0005		0.0006			

The power of EUT is less than 75W after the testing. According the standard, the equipment with a rated power of 75W or less, other than lighting equipment, limits are not specified in this standard. So the test data needn't list.



Basic Standard	:	EN 61000-3-2
Final Test Result	:	PASS
Test Mode	:	Mode 6
Model No.	:	215LM00036
Temperature	:	21°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jul 05, 2012

**Harmonic Emission - IEC 61000-3-2, EN 61000-3-2, (EN60555-2)**

2012-7-5 17:03:14 harmonic.hsu

Urms = 230.3 V P = 21.30 W THC = 0.193 A
 Irms = 0.210 A pf = 0.441 Pmax = 21.55 W

Range: 2 A
 V-nom: 230 V
 TestTime: 5 min (100%)

215LM00036

ADS-45NP-12-1 DVI

HAR-1000 EMC-Parber

Full Bar : Actual Values

Empty Bar : Maximum Values

Blue : Current , Green : Voltage , Red : Failed

Urms = 230.3V Freq = 50.039 Range: 2 A
 Irms = 0.210A Ipk = 0.905A cf = 4.312
 P = 21.30W S = 48.35VA pf = 0.441
 THDi = 89.4 % THDu = 0.20 % Class D
 Test - Time : 5min (100 %)
 Limit Reference: Pmax = 21.546W
 Test completed, Result: N/L



Order	Freq. [Hz]	Irms [A]	Irms%L [%]	I _{max} [A]	I _{max} %L [%]	Limit [A]	Status
1	50	0.0969		0.0979			
2	100	0.0032		0.0033			
3	150	0.0881	120.31	0.0890	121.48	0.00	N/L
4	200	0.0032		0.0032			
5	250	0.0842	205.75	0.0846	206.65	0.00	N/L
6	300	0.0028		0.0029			
7	350	0.0784	363.74	0.0785	364.30	0.00	N/L
8	400	0.0024		0.0024			
9	450	0.0710	659.48	0.0710	659.48	0.00	N/L
10	500	0.0021		0.0021			
11	550	0.0625	828.80	0.0625	828.80	0.00	N/L
12	600	0.0016		0.0017			
13	650	0.0532	834.10	0.0532	834.10	0.00	N/L
14	700	0.0013		0.0015			
15	750	0.0436	788.04	0.0436	788.04	0.00	N/L
16	800	0.0011		0.0012			
17	850	0.0342	700.48	0.0341	697.98	0.00	N/L
18	900	0.0009		0.0009			
19	950	0.0253	578.78	0.0253	578.78	0.00	N/L
20	1000	0.0009		0.0010			
21	1050	0.0172	435.74	0.0172	435.74	0.00	N/L
22	1100	0.0007		0.0009			
23	1150	0.0105	291.08	0.0105	291.08	0.00	N/L
24	1200	0.0007		0.0007			
25	1250	0.0055	165.55	0.0056	169.23	0.00	N/L
26	1300	0.0007		0.0009			
27	1350	0.0042	135.09	0.0055	178.80	0.00	N/L
28	1400	0.0009		0.0009			
29	1450	0.0056	196.31	0.0070	243.26	0.00	N/L
30	1500	0.0007		0.0007			
31	1550	0.0070	260.03	0.0076	282.84	0.00	N/L
32	1600	0.0006		0.0006			
33	1650	0.0076	301.09	0.0076	301.09	0.00	N/L
34	1700	0.0005		0.0006			
35	1750	0.0072	303.89	0.0073	309.04	0.00	N/L
36	1800	0.0005		0.0006			
37	1850	0.0063	283.14	0.0063	283.14	0.00	N/L
38	1900	0.0005		0.0006			
39	1950	0.0049	229.57	0.0050	235.31	0.00	N/L
40	2000	0.0005		0.0006			

The power of EUT is less than 75W after the testing. According the standard, the equipment with a rated power of 75W or less, other than lighting equipment, limits are not specified in this standard. So the test data needn't list.

Test engineer: _____



6.4. Test Photographs





7. Voltage Fluctuations Test

7.1. Test Procedure

The equipment shall be tested under the conditions of **Clause 5**.

The total impedance of the test circuit, excluding the appliance under test, but including the internal impedance of the supply source, shall be equal to the reference impedance. The stability and tolerance of the reference impedance shall be adequate to ensure that the overall accuracy of $\pm 8\%$ is achieved during the whole assessment procedure.

7.2. Measurement equipment

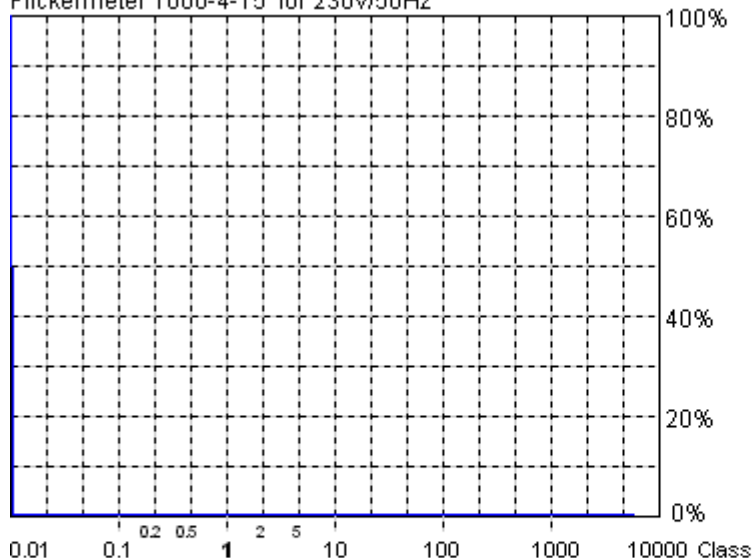
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMC Emission Tester	EMCPARTNER	Harmonics-1000	159	2012.04.20	2013.04.19
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2012.03.12	2013.03.11



7.3. Test Result and Data

Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 1
Model No.	:	215LM00036
Temperature	:	21°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Data	:	Jul 05, 2012

Flickermeter 1000-4-15 for 230V/50Hz



Actual Flicker (Fli):	0.00
Short-term Flicker (Pst):	0.07
Limit (Pst):	1.00
Long-term Flicker (Plt):	0.07
Limit (Plt):	0.65
Maximum Relative Volt. Change (dmax):	0.00%
Limit (dmax):	4.00%
Relative Steady-state Voltage Change (dc):	0.00%
Limit (dc):	3.30%
Maximum Interval exceeding 3.30% (dt):	0.00ms
Limit (dt>Lim):	500ms

Flicker Emission - IEC 61000-3-3 , EN 61000-3-3 , (EN60555-3)

Urms = 230.3 V P = 21.35 W
 Irms = 0.211 A pf = 0.440

215LM00036

ADPC1236 VGA

Test completed, Result: PASSED

2012-7-5 16:36:48 harmonic.hsu

Range: 2 A
 V-nom: 230 V
 TestTime: 10 min (100%)

HAR-1000 EMC-Parber

Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current , Green : Voltage , Red : Failed



Urms = 230.3V Freq = 50.013 Range: 2 A
Irms = 0.211A Ipk = 0.909A cf = 4.310
P = 21.35W S = 48.58VA pf = 0.440

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : L: 0.24ohm +j0.15ohm N: 0.16ohm +j0.10ohm

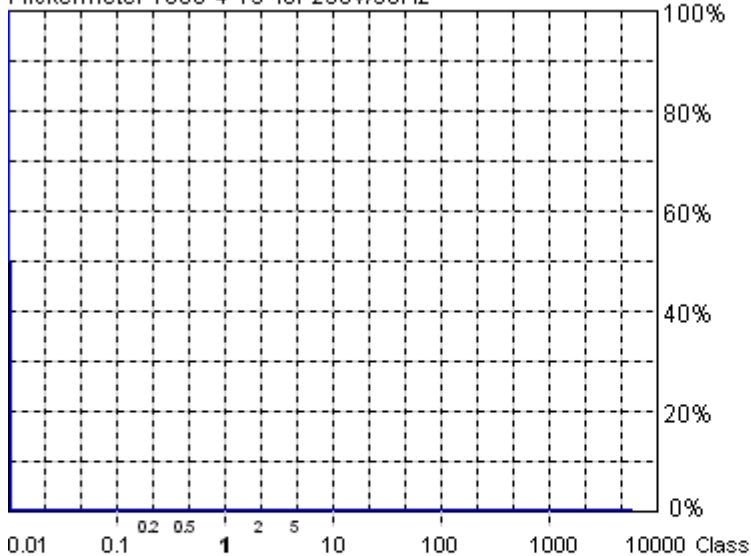
Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED



Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 4
Model No.	:	215LM00036
Temperature	:	21°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Data	:	Jul 05, 2012

Flickermeter 1000-4-15 for 230V/50Hz

**Actual Flicker (Fli): 0.00****Short-term Flicker (Pst): 0.07**

Limit (Pst): 1.00

Long-term Flicker (Plt): 0.07

Limit (Plt): 0.65

Maximum Relative Volt. Change (dmax): 0.00%

Limit (dmax): 4.00%

Relative Steady-state Voltage Change (dc): 0.00%

Limit (dc): 3.30%

Maximum Interval exceeding 3.30% (dt): 0.00ms

Limit (dt>Lim): 500ms

Flicker Emission - IEC 61000-3-3, EN 61000-3-3, (EN60555-3)

Urms = 230.3 V P = 21.11 W

Irms = 0.210 A pf = 0.436

215LM00036

ADPC1236 DVI

Test completed, Result: PASSED

2012-7-5 16:56:18 harmonic.hsu

Range: 2 A

V-nom: 230 V

TestTime: 10 min (100%)

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current , Green : Voltage , Red : Failed



Urms = 230.3V Freq = 50.013 Range: 2 A
Irms = 0.210A Ipk = 0.913A cf = 4.349
P = 21.11W S = 48.35VA pf = 0.436

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : L: 0.24ohm +j0.15ohm N: 0.16ohm +j0.10ohm

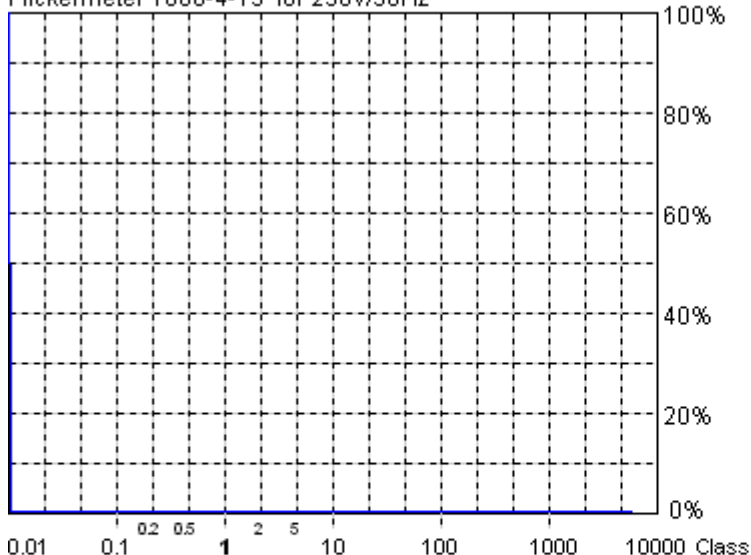
Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED



Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 5
Model No.	:	215LM00036
Temperature	:	21°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Data	:	Jul 05, 2012

Flickermeter 1000-4-15 for 230V/50Hz

**Actual Flicker (Fli):** 0.00**Short-term Flicker (Pst):** 0.07

Limit (Pst): 1.00

Long-term Flicker (Plt): 0.07

Limit (Plt): 0.65

Maximum Relative Volt. Change (dmax): 0.00%

Limit (dmax): 4.00%

Relative Steady-state Voltage Change (dc): 0.00%

Limit (dc): 3.30%

Maximum Interval exceeding 3.30% (dt): 0.00ms

Limit (dt>Lim): 500ms

Flicker Emission - IEC 61000-3-3 , EN 61000-3-3 , (EN60555-3)

Urms = 230.3 V P = 21.40 W

Irms = 0.210 A pf = 0.443

215LM00036

ADS-45NP-12-1 VGA

Test completed, Result: PASSED

2012-7-5 17:32:07 harmonic.hsu

Range: 2 A

V-nom: 230 V

TestTime: 10 min (100%)

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current , Green : Voltage , Red : Failed



Urms = 230.3V Freq = 50.013 Range: 2 A
Irms = 0.210A Ipk = 0.911A cf = 4.340
P = 21.40W S = 48.35VA pf = 0.443

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : L: 0.24ohm +j0.15ohm N: 0.16ohm +j0.10ohm

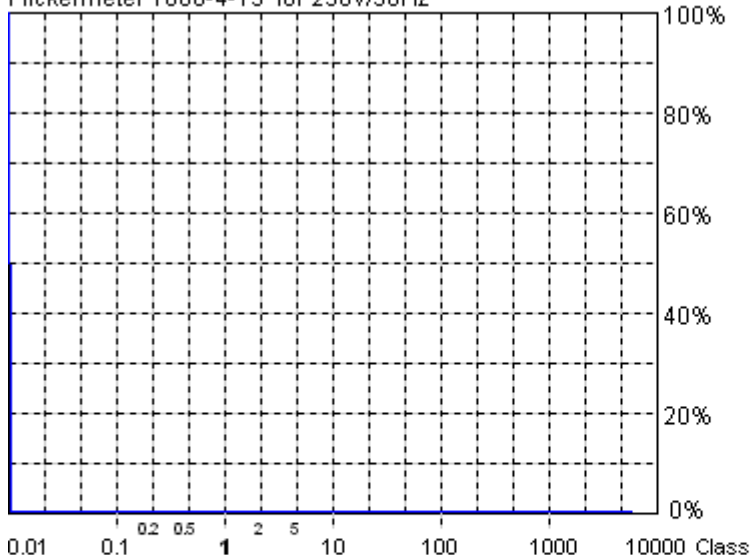
Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED



Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 6
Model No.	:	215LM00036
Temperature	:	21°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Data	:	Jul 05, 2012

Flickermeter 1000-4-15 for 230V/50Hz

**Actual Flicker (Fli): 0.00****Short-term Flicker (Pst): 0.07**

Limit (Pst): 1.00

Long-term Flicker (Plt): 0.07

Limit (Plt): 0.65

Maximum Relative Volt. Change (dmax): 0.00%

Limit (dmax): 4.00%

Relative Steady-state Voltage Change (dc): 0.01%

Limit (dc): 3.30%

Maximum Interval exceeding 3.30% (dt): 0.00ms

Limit (dt>Lim): 500ms

Flicker Emission - IEC 61000-3-3 , EN 61000-3-3 , (EN60555-3)

Urms = 230.3 V P = 21.25 W

Irms = 0.207 A pf = 0.446

215LM00036

ADS-45NP-12-1 DVI

Test completed, Result: PASSED

2012-7-5 17:14:38 harmonic.hsu

Range: 2 A

V-nom: 230 V

TestTime: 10 min (100%)

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current , Green : Voltage , Red : Failed



Urms = 230.3V Freq = 50.000 Range: 2 A
Irms = 0.207A Ipk = 0.884A cf = 4.269
P = 21.25W S = 47.68VA pf = 0.446

Test - Time : 1 x 10min = 10min (100 %)

LIN (Line Impedance Network) : L: 0.24ohm +j0.15ohm N: 0.16ohm +j0.10ohm

Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED

Test engineer: _____



7.4. Test Photographs



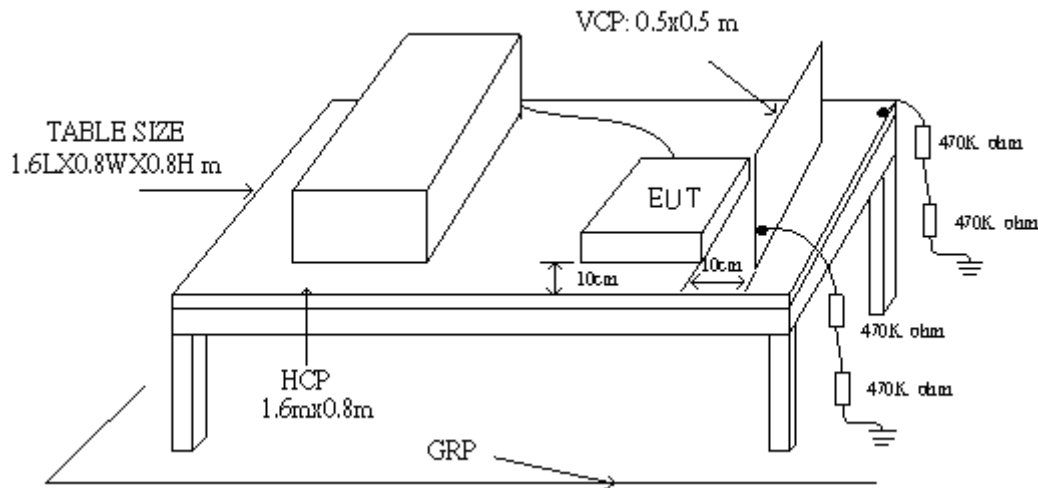


8. Electrostatic Discharge Immunity Test

8.1. Test Procedure

- a. In the case of air discharge testing the climatic conditions shall be within the following ranges:
 - ambient temperature: 15°C to 35°C;
 - relative humidity : 30% to 60%;
 - atmospheric pressure : 86 KPa (860 hPa) to 106 KPa (1060 hPa).
- b. Test programs and software shall be chosen so as to exercise all normal modes of operation of the EUT. The use of special exercising software is encouraged, but permitted only where it can be shown that the EUT is being comprehensively exercised.
- c. The test voltage shall be increased from the minimum to the selected test severity level, in order to determine any threshold of failure. The final severity level should not exceed the product specification value in order to avoid damage to the equipment.
- d. The test shall be performed with both air discharge and contact discharge. On reselected points at least 10 single discharges (in the most sensitive polarity) shall be applied on air discharge. On reselected points at least 25 single discharges (in the most sensitive polarity) shall be applied on contact discharge.
- e. For the time interval between successive single discharges an initial value of one second is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.
- f. In the case of contact discharges, the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.
- g. In the case of painted surface covering a conducting substrate, the following procedure shall be adopted :
 - ✧ If the coating is not declared to be an insulating coating by the equipment manufacturer, then the pointed tip of the generator shall penetrate the coating so as to make contact with the conducting substrate.
 - ✧ Coating declared as insulating by the manufacturer shall only be submitted to the air discharge.
 - ✧ The contact discharge test shall not be applied to such surfaces.
- h. In the case of air discharges, the round discharge tip of the discharge electrode shall be approached as fast as possible (without causing mechanical damage) to touch the EUT . After each discharge, the ESD generator (discharge electrode) shall be removed from the EUT. The generator is then retriggered for a new single discharge. This procedure shall be repeated until the discharges are completed. In the case of an air discharge test, the discharge switch, which is used for contact discharge, shall be closed.

8.2. Test Setup for Tests Performed in Laboratory



The test setup consists of the test generator, EUT and auxiliary instrumentation necessary to perform DIRECT and INDIRECT application of discharges to the EUT as applicable, in the follow manner :

- a. Contact Discharge to the conductive surfaces and to coupling plane;
- b. Air Discharge at insulating surfaces.

The preferred test method is that of type tests performed in laboratories and the only accepted method of demonstrating conformance with this standard. The EUT was arranged as closely as possible to arrangement in final installed conditions.

A ground reference plane was provided on the floor of the test site. It was a metallic sheet (copper or aluminum) of 0.25 mm, minimum thickness; other metallic may be used but they shall have at least 0.65 mm thickness. In the Exclusive Certification Corp., we provided 1 mm thickness stainless steel ground reference plane. The minimum size of the ground reference plane is 2.5 m x 2.5 m, the exact size depending on the dimensions of the EUT. It was connected to the protective grounding system.

The EUT was arranged and connected according to its functional requirements. A distance of 1m minimum was provided between the EUT and the wall of the lab. and any other metallic structure. In cases where this length exceeds the length necessary to apply the discharges to the selected points, the excess length shall, where possible, be placed non-inductively off the ground reference plane and shall not come closer than 0.2m to other conductive parts in the test setup.

Where the EUT is installed on a metal table, the table was connected to the reference plane via a cable with a 470k ohm resistor located at each end, to prevent a build-up of charge. The test setup



was consist a wooden table, 0.8m high, standing on the ground reference plane. A HCP, 1.6 m x 0.8 m, was placed on the table. The EUT and cables was isolated from the HCP by an insulating support 0.5 mm thick. The VCP size, 0.5 m x 0.5 m.

8.3. Test Severity Levels

Contact Discharge		Air Discharge	
Level	Test Voltage (kV) of Contact discharge	Level	Test Voltage (kV) of Air Discharge
1	± 2	1	± 2
2	± 4	2	± 4
3	± 6	3	± 8
4	± 8	4	± 15
X	Specified	X	Specified
Remark: "X" is an open level.			

8.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
ESD Simulator	EM Test	ditto	V0714102399	2012.03.12	2013.03.11
ESD Simulator	EMC PARTNER	ESD3000	292	2012.02.17	2013.02.16
Tonometer	shanghaifengyun	DYM3	3251	2012.03.20	2013.03.19
Dehumidifier	ZEDO	ZD-220LB	CEP-TH-01	N/A	N/A
Humidifier	YADU	YZ-DS251C	CEP-TH-02	N/A	N/A
Temperature/ Humidity Meter	feiyang	N/A	102	2011.09.14	2012.09.13



8.5. Test Result and Data

Basic Standard : IEC 61000-4-2
Final Test Result : PASS
Model No. : 215LM00036
Pass performance criteria : B
Test Voltage : $\pm 2 / \pm 4 / \pm 8$ kV for air discharge,
 $\pm 2 / \pm 4$ kV for contact discharge
Temperature : 20°C
Relative Humidity : 50 %
Atmospheric Pressure : 100 kPa
Test Date : Jul 11, 2012

Test Mode: Mode 1, Mode 4, Mode 5, Mode 6

	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
HCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
Case	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
Light	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
Panel	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
Button	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
VGA Port	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
DVI Port	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
DC Port	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

Test engineer: Seben



8.6. Test Photographs





9. Radio Frequency electromagnetic field immunity test

9.1. Test Procedure

- a. The equipment to be tested is placed in the center of the enclosure on a wooden table. The equipment is then connected to power and signal leads according to pertinent installation instructions.
- b. The antenna which is enabling the complete frequency range of 80-1000 MHz is placed 3m away from the equipment. The required field strength is determined by placing the field strength meter(s) on top of or directly alongside the equipment under test and monitoring the field strength meter via a remote field strength indicator outside the enclosure while adjusting the continuous-wave to the applicable antennae.
- c. The test is normally performed with the antenna facing the most sensitive side of the EUT. The polarization of the field generated by the bucolical antenna necessitates testing each position twice, once with the antenna positioned vertically and again with the antenna positioned horizontally. The circular polarization of the field from the log-spiral antenna makes a change of position of the antenna unnecessary.
- d. At each of the above conditions, the frequency range is swept 80-1000 MHz, pausing to adjust the R.F. signal level or to switch oscillators and antenna. The rate of sweep is in the order of 1.5×10^{-3} decades/s. The sensitive frequencies or frequencies of dominant interest may be discretely analyzed.



9.2. Test Severity Levels

Frequency Band	
Level	Test field strength (V/m)
1	1
2	3
3	10
X	Specified
Remark: "X" is an open class.	

9.3. Measurement equipment

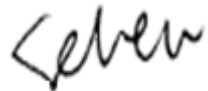
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Signal Generator	R&S	SML03	103287	2012.03.12	2013.03.11
Power Sensor	R&S	NR P-Z91	100383	2012.03.12	2013.03.11
Power Sensor	R&S	NRP-Z91	100384	2012.03.12	2013.03.11
Power Meter	R&S	NRP	101206	2012.03.12	2013.03.11
Power Amplifier	BONN	BLWA0830-16 0/100/40D	076659	2012.03.12	2013.03.11
Istropic Electric Field Probe	EST.LINDGRE N	HI-6105	137445	2011.12.07	2012.12.06
EMS Antenna	R&S	HL046E	100028	N/A	N/A
Temperature/ Humidity Meter	feiyang	N/A	101	2011.09.14	2012.09.13

**9.4. Test Result and Data**

Basic Standard : IEC 61000-4-3
Final Test Result : PASS
Model No. : 215LM00036
Pass performance criteria : A
Frequency Range : 80~1000 MHz
Temperature : 22°C
Relative Humidity : 52 %
Atmospheric Pressure : 100 kPa
Test Date : Jul 11, 2012

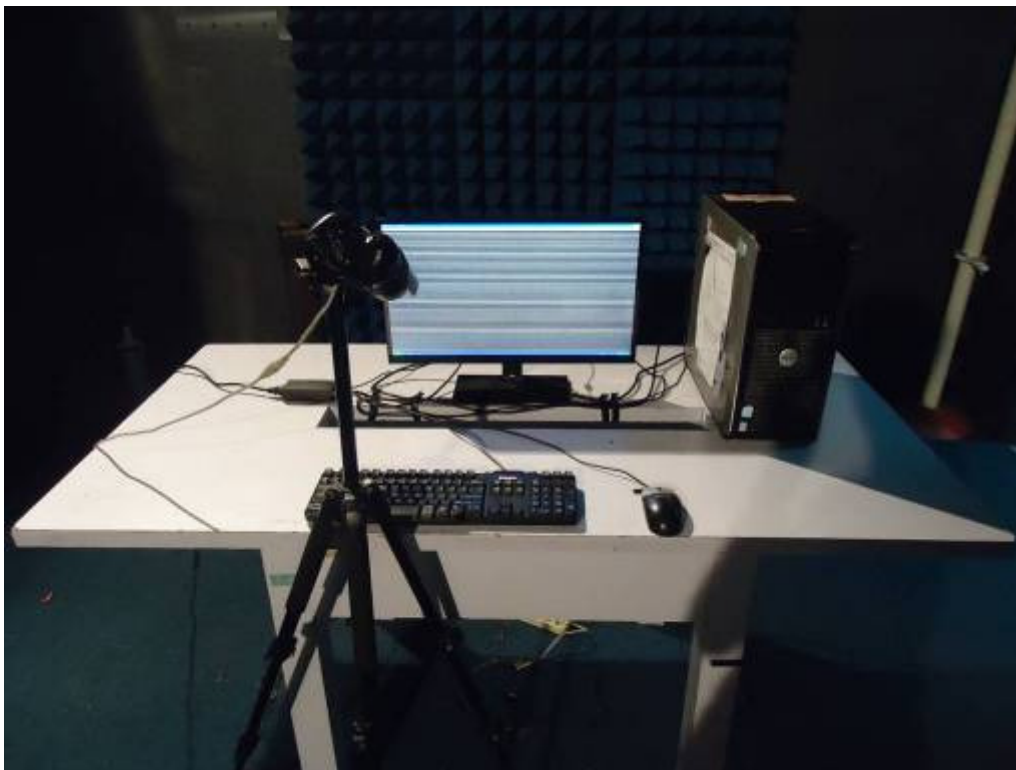
Test Mode: Mode 1, Mode 4, Mode 5, Mode 6

Modulation : AM 80% , 1KHz sine wave , Dwell time: 2.9 S				
Frequency Step Size : 1 % of preceding frequency value				
Frequency (MHz)	Antenna Polarization	face	Field strength (V/m)	Result
80~1000	Vertical	Front	3 V/m	A
80~1000	Vertical	Rear	3 V/m	A
80~1000	Vertical	Left	3 V/m	A
80~1000	Vertical	Right	3 V/m	A
80~1000	Horizontal	Front	3 V/m	A
80~1000	Horizontal	Rear	3 V/m	A
80~1000	Horizontal	Left	3 V/m	A
80~1000	Horizontal	Right	3 V/m	A

Test engineer: 



9.5. Test Photographs





10. Electrical Fast Transient/ Burst Immunity Test

10.1. Test Procedure

- a. In order to minimize the effect of environmental parameters on test results, the climatic conditions when test is carrying out shall comply with the following requirements:
 - ✧ ambient temperature: 15°C to 35°C;
 - ✧ relative humidity : 45% to 75%;
 - ✧ Atmospheric pressure: 86 Kpa (860 hPa) to 106 Kpa (1060 hPa).
- b. In order to minimize the effect of environmental parameters on test results, the electromagnetic environment of the laboratory shall not influence the test results.
- c. The variety and diversity of equipment and systems to be tested make it difficult to establish general criteria for the evaluation of the effects of fast transients/bursts on equipment and systems.
- d. Test on Power Line:
 - ✧ The EFT/B-generator was located on the GRP.. The length from the EFT/B-generator to the EUT is not exceeding 1 m.
 - ✧ The EFT/B-generator provides the ability to apply the test voltage in a non-symmetrical condition to the power supply input terminals of the EUT.
- e. Test on Communication Lines
 - ✧ The coupling clamp is composed of a clamp unit for housing the cable (length more than 3 m), and was placed on the GRP.
 - ✧ The coupling clamp provides the ability of coupling the fast transient/bursts to the cable under test.
- f. The test results may be classified on the basic of the operating conditions and the functional specification of the equipment under test, according to the following performance criteria :
 - ✧ Normal performance within the specification limits.
 - ✧ Temporary degradation or loss of function or performance which is self-recoverable.
 - ✧ Temporary degradation or loss of function or performance which requires operator intervention or system reset.
 - ✧ Degradation or loss of function which is not recoverable due to damage of equipment (components).



10.2. Test Severity Levels

The following test severity levels are recommended for the fast transient/burst test :

Open circuit output test voltage $\pm 10\%$		
Level	On Power Supply	On I/O signal, data and control line
1	0.5 kV	0.25 kV
2	1.0 kV	0.50 kV
3	2.0 kV	1.00 kV
4	4.0 kV	2.00 kV
X	Specified	Specified

Remark : “ X ” is an open level. The level is subject to negotiation between the user and the manufacturer or is specified by the manufacturer.

10.3. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2012.03.12	2013.03.11
CDN	EMCPARTNER	CDN200-06-32	121	2012.03.12	2013.03.11
Coupling clamp	EMCPARTNER	CN-EFT1000	547	2012.03.12	2013.03.12
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2012.03.12	2013.03.11



10.4. Test Result and Data

Basic Standard : IEC 61000-4-4
Final Test Result : PASS
Model No. : 215LM00036
Pass performance criteria : B
Test Voltage : On Power Supply -- ± 1.0 kV
On I/O signal, data and control line -- ± 0.5 kV
Temperature : 21°C
Relative Humidity : 51 %
Atmospheric Pressure : 100 kPa
Test Date : Jul 11, 2012

Test Mode: Mode 1, Mode 4, Mode 5, Mode 6

Pulse : 5/50 ns		Repetition Rate: <u>5 kHz</u> above 2.0 kV			
Burst : 15m/300ms		5 <u>kHz</u> below and equal 2.0 kV			
Test time : 1 min/each condition					
Voltage/ Mode/ Polarity/ Result/ Phase		<u>0.5 kV</u>		<u>1.0 kV</u>	
		+	—	+	—
Power Line	L	---	---	A	A
	N	---	---	A	A
	L-N	---	---	A	A
	PE	---	---	A	A
	L-PE	---	---	A	A
	N-PE	---	---	A	A
	L-N-PE	---	---	A	A

Test engineer:



10.5. Test Photographs





11. Surge Immunity Test

11.1. Test Procedure

a. Climatic conditions

The climatic conditions shall comply with the following requirements :

- ✧ ambient temperature : 15 °C to 35 °C
- ✧ relative humidity : 10 % to 75 %
- ✧ atmospheric pressure : 86 kPa to 106 kPa (860 hPa to 1060 hPa)

b. Electromagnetic conditions

the electromagnetic environment of the laboratory shall not influence the test results.

c. The test shall be performed according the test plan that shall specify the test set-up with

- ✧ generator and other equipment utilized;
- ✧ test level (voltage/current);
- ✧ generator source impedance;
- ✧ internal or external generator trigger;
- ✧ number of tests : at least five positive and five negative at the selected points;
- ✧ repetition rate : maximum 1/min.
- ✧ inputs and outputs to be tested;
- ✧ representative operating conditions of the EUT;
- ✧ sequence of application of the surge to the circuit;
- ✧ phase angle in the case of AC. power supply;
- ✧ actual installation conditions, for example :

AC : neutral earthed,

DC : (+) or (-) earthed to simulated the actual earthing conditions.

- d. If not otherwise specified the surges have to be applied synchronized to the voltage phase at the zero-crossing and the peak value of the AC. voltage wave (positive and negative).
- e. The surges have to be applied line to line and line(s) and earth. When testing line to earth, the test voltage has to be applied successively between each of the lines and earth, if there is no other specification.
- f. The test procedure shall also consider the non-linear current-voltage characteristics of the equipment under test. Therefore the test voltage has to be increased by steps up to the test level specified in the product standard or test plan.
- g. All lower levels including the selected test level shall be satisfied. For testing the secondary protection, the output voltage of the generator shall be increased up to the worst-case voltage breakdown level (let-through level) of the primary protection.
- h. If the actual operating signal sources are not available, that may be simulated. Under no circumstances may the test level exceed the product specification. The test shall be carried out according to a test plan.
- i. To find all critical points of the duty cycle of the equipment, a sufficient number of positive and negative test pulses shall be applied. For acceptance test previously unstressed equipment shall be used to the protection devices shall be replaced.



11.2. Test Severity Level

Level	Open-circuit test voltage, $\pm 10\%$, kV
1	0.5
2	1.0
3	2.0
4	4.0
X	Specified
NOTE: "X" is an open class. This level can be specified in the product specification.	

11.3. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2012.03.12	2013.03.11
CDN	EMCPARTNER	CDN-UTP8	021	2012.03.12	2013.03.11
CDN	EMCPARTNER	CDN200-06-32	121	2012.03.12	2013.03.11
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2012.03.12	2013.03.11



11.4. Test Result and Data

Basic Standard : IEC 61000-4-5
Final Test Result : PASS
Model No. : 215LM00036
Pass performance criteria : B
Test Voltage : Input AC Power Port -- $\pm 0.5/1.0$ kV for Line to Line
 $\pm 0.5/1.0/2.0$ kV for Line to Ground
Temperature : 21°C
Relative Humidity : 51 %
Atmospheric Pressure : 100 kPa
Test Date : Jul 11, 2012

Power Port

Test Mode: Mode 1, Mode 4, Mode 5, Mode 6

Waveform : 1.2/50 μ s(8/20 μ s) Repetition rate : 60 sec Time : 20 time/each condition						
/Phase Voltage / Mode / Polarity / Result			0°	90°	180°	270°
<u>0.5/1.0</u> kV	L-N	+	A	A	A	A
		—	A	A	A	A
<u>0.5/1.0/2.0</u> kV	L-PE	+	A	A	A	A
		—	A	A	A	A
	N-PE	+	A	A	A	A
		—	A	A	A	A

Test engineer



11.5. Test Photographs





12. Conduction Disturbances induced by Radio-Frequency Fields

12.1. Test Procedure

- a. The EUT shall be operated within its intended climatic conditions. The temperature and relative humidity should be recorded.
- b. This test method test can be performed without using a sell shielded enclosure. This is because the disturbance levels applied and the geometry of the setups are not likely to radiated a high amount of energy, especially at the lower frequencies. If under certain circumstances the radiated energy is too high, a shielded enclosure has to be used.
- c. The test shall be performed with the test generator connected to each of the coupling and decoupling devices in turn while the other non-excited RF-input ports of the coupling devices are terminated by a 50 ohm load resistor.
- d. The frequency range is swept from 150 KHz to 80 MHz, using the signal levels established during the setting process, and with the disturbance signal 80% amplitude modulated with a 1KHz sign wave, pausing to adjust the RF-signal level or to switch coupling devices as necessary. The rate of sweep shall no exceed 1.5×10^{-3} decades/s. Where the frequency is swept incrementally, the step size shall no exceed 1% of the start and thereafter 1% of the preceding frequency value.
- e. The dwell time at each frequency shall not be less than the time necessary for the EUT to be exercised, and able to respond. Sensitive frequencies e.g. clock frequency (ies) and harmonics or frequencies of dominant interest shall be analyzed separately.
- f. An alternative test procedure may be adopted, wherein the frequency range is swept incrementally, with a step size not exceeding 4% of the start ad thereafter 4% of the preceding frequency value. The test level should be at least twice the value of the specified test level.
- g. In cases of dispute, the test procedure using a step size not exceeding 1% of the start and thereafter 1% of preceding frequency value shall take precedence.
- h. Attempts should be made to fully exercise the EUT during testing, and to fully interrogate all exercise modes selected for susceptibility.
- i. The use of special exercising programs is recommended.
- j. Testing shall be performed according to a Test Plan, which shall be included in the test report.
- k. It may be necessary to carry out some investigatory testing in order to establish some aspects of the test plan.



12.2. Test Severity Levels

Level	Voltage Level (EMF),
1	1 V
2	3 V
3	10 V
x	Specified
NOTE - x is an open class. This level can be specified in the product specification.	

12.3. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Conducted immunity test system	FRANKONIA	CIT-10/75	102D1294	2012.03.12	2013.03.11
EM Injection clamp	FCC	F-203I-23MM	536	2012.03.12	2013.03.11
CDN	FRANKONIA	CDN-T2	A3010029	2012.03.12	2013.03.11
CDN	FRANKONIA	CDN-T4	A3015017	2012.03.12	2013.03.11
CDN	FRANKONIA	CDN-T8	A3022010	2012.03.12	2013.03.11
CDN	FRANKONIA	CDN-M2	A3002037	2012.03.12	2013.03.11
CDN	FRANKONIA	CDN-M2+M3	A3011102	2012.03.12	2013.03.11
CDN	FCC	CDN-M5/32	A3013024	2012.03.12	2013.03.11
6 dB Attenuator	FRANKONIA	N/A	N/A	2012.03.12	2013.03.11
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2012.03.12	2013.03.11



12.4. Test Result and Data

Basic Standard : IEC 61000-4-6
Final Test Result : PASS
Model No. : 215LM00036
Pass performance criteria : A
Coupling mode : CDN-(M2+M3) for AC power ports
CDN-T4 for signal ports
EM-Clamp for signal ports
Temperature : 21 °C
Relative Humidity : 51 %
Atmospheric Pressure : 100 kPa
Test Date : Jul 11, 2012

Test Mode: Mode 1, Mode 4, Mode 5, Mode 6

Frequency : 0.15~80MHz, Modulation : AM 80%,1KHz sine wave, Dwell time: 2.9s Frequency Step Size : 1 % of preceding frequency value			
Frequency	Test mode	Voltage(V)	Result
0.15 ~ 80MHz	Power(M3)	3	A

Test engineer: Seben



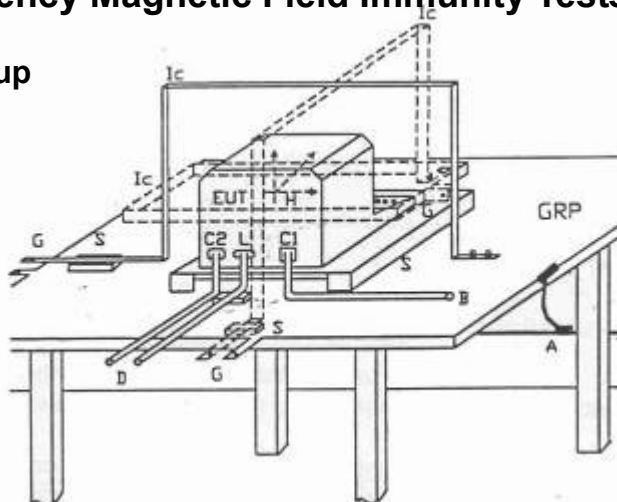
12.5. Test Photographs





13. Power Frequency Magnetic Field Immunity Tests

13.1. Test Setup



GPR	:	Ground plane	C1	:	Power supply circuit
A	:	Safety earth	C2	:	Signal circuit
S	:	Insulating support	L	:	Communication line
EUT	:	Equipment under test	B	:	To power supply source
Lc	:	Induction coil	D	:	To signal source, simulator
E	:	Earth terminal	G	:	To the test generator

13.2. Test Severity Levels

Level	Magnetic field strength A/m
1	1
2	3
3	10
4	30
5	100
X ¹⁾	special
NOTE 1 "X" is an open level. This level can be given in the product specification.	

13.3. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2012.03.12	2013.03.11
H-Filed-Loop	EMCPARTNER	MF1000-1	144	2012.03.12	2013.03.11
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2012.03.12	2013.03.11



13.4. Test Result and Data

Basic Standard : IEC 61000-4-8
Final Test Result : PASS
Model No. : 215LM00036
Pass performance criteria : A
Temperature : 21°C
Relative Humidity : 51 %
Atmospheric Pressure : 100 kPa
Test Date : Jul 11, 2012

Test Mode: Mode 1, Mode 4, Mode 5, Mode 6

Power Frequency Magnetic Field : <u>50</u> Hz, <u>1</u> A/m		
Coil Orientation	Testing duration	Results
X-axis	1.0 Min	A
Y-axis	1.0 Min	A
Z-axis	1.0 Min	A

Test engineer: _____



13.5. Test Photographs





14. Voltage Dips and Voltage Interruptions Immunity Test Setup

14.1. Test Conditions

1. Source voltage and frequency : 230V / 50Hz, Single phase.
2. Test of interval : 10 sec.
3. Level and duration : Sequence of 3 dips/interrupts.
4. Voltage rise (and fall) time : 1 ~ 5 μ s.
5. Test severity :

Voltage dips and Interrupt reduction (%)	Test Duration (period)
>95%	250
30%	25
>95%	0.5

14.2. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2012.03.12	2013.03.11
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2012.03.12	2013.03.11



14.3. Test Result and Data

Basic Standard : IEC 61000-4-11
Final Test Result : PASS
Model No. : 215LM00036
Pass performance Criteria : C for voltage interruption, B for voltage dips
Temperature : 21°C
Relative Humidity : 51 %
Atmospheric Pressure : 100 kPa
Test Date : Jul 11, 2012

Test Mode: Mode 1, Mode 4, Mode 5, Mode 6										
Voltage(UT): AC 230 V 50 Hz Interval(s) : 10s Times : 3										
Test mod	Test level UT %	Durations (period / ms)	Phase / Result							
			0	45	90	135	180	225	270	315
Voltage interruptions	>95%	250	C	C	C	C	C	C	C	C
Voltage dips	30%	25	B	B	B	B	B	B	B	B
	>95%	0.5	B	B	B	B	B	B	B	B

Test engineer: 



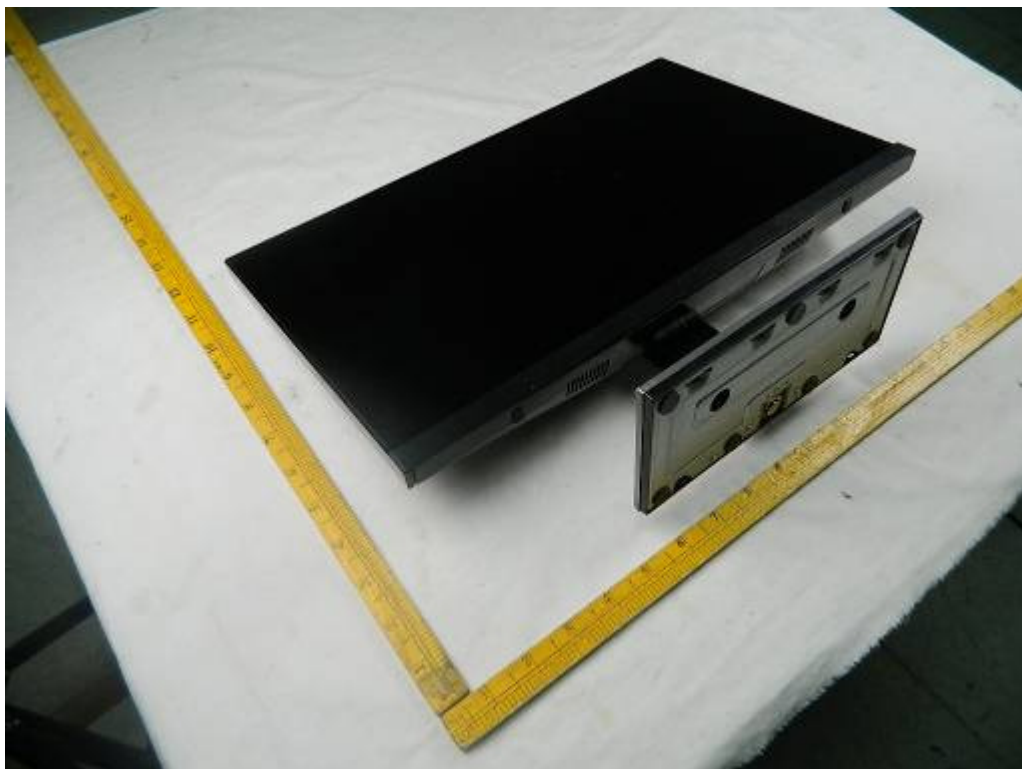
14.4. Test Photographs



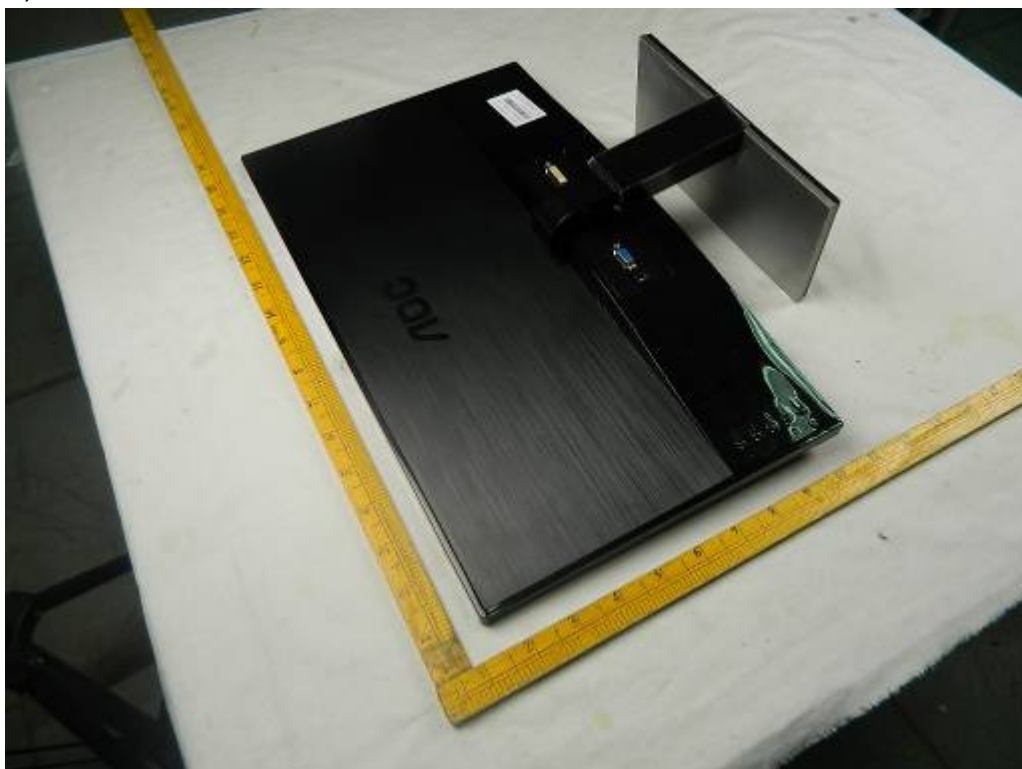


15. Photographs of EUT

1) EUT Photo



2) EUT Photo





3) EUT Photo

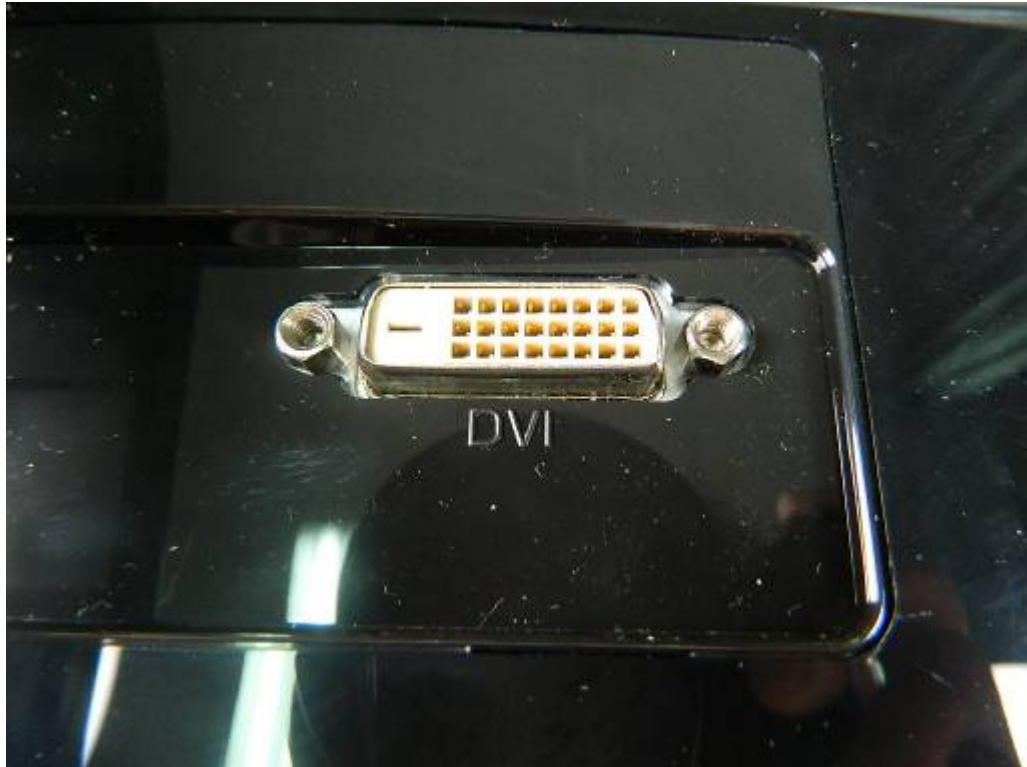


4) EUT Photo

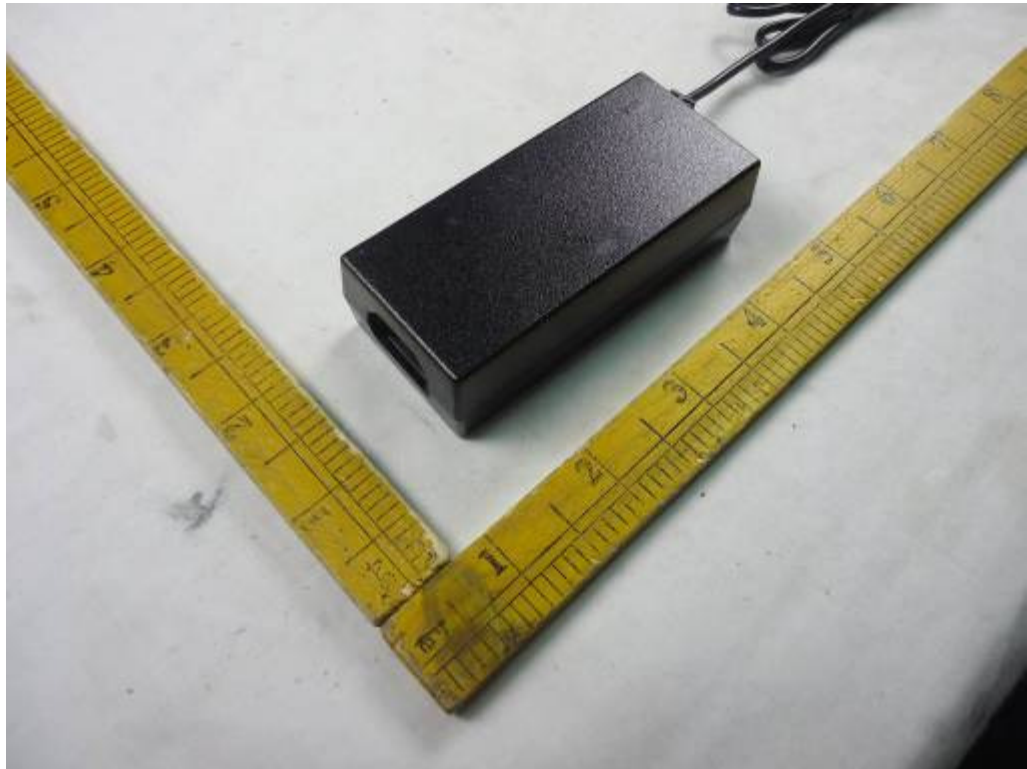




5) EUT Photo



6) EUT Photo(Adapter #1)





7) EUT Photo(Adapter #1)



8) EUT Photo(Adapter #1)





9) EUT Photo(Adapter #1)



10) EUT Photo(Adapter #1)





11) EUT Photo(Adapter #2)



12) EUT Photo(Adapter #2)





13) EUT Photo(Adapter #2)



14) EUT Photo(Adapter #2)





15) EUT Photo(Adapter #2)

