



CERTIFICATE

Issued Date: Jan. 18, 2012
Report No.: 11C338R-ITCEP11V04

This is to certify that the following designated product

Product : Network Camera
Trade name : VIVOTEK
Model Number : PT8133,PT8133W
Company Name : VIVOTEK INC.

This product, which has been issued the test report listed as above in QuietTek Laboratory, is based on a single evaluation of one sample and confirmed to comply with the requirements of the following EMC standard.

EN 55022: 2010, Class B

EN 55024: 2010

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

IEC 61000-4-2: 2008

EN 61000-3-3: 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

AS/NZS CISPR 22: 2009

IEC 61000-4-11: 2004

TEST LABORATORY

Vincent Lin / Manager



Test Report

Product Name : Network Camera

Model No. : PT8133,PT8133W

Applicant : VIVOTEK INC.

Address : 6F, No.192, Lien-Cheng Rd., Chung-Ho, New Taipei City,
235, Taiwan, R.O.C.

Date of Receipt : 2011/12/16

Issued Date : 2012/01/18

Report No. : 11C338R-ITCEP11V04

Report Version : V1.0



The test results relate only to the samples tested.

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

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

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.



Declaration of Conformity

We herewith confirm the following designated products to comply with the requirements set out in the Council Directive on the approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive (2004/108/EC) with applicable standards listed below.

Product : Network Camera
Trade name : VIVOTEK
Model Number : PT8133,PT8133W
Applicable Harmonized : EN 55022: 2010, Class B
Standards under Directive : EN 55024: 2010
2004/108/EC : EN 61000-3-2: 2006+A2: 2009
EN 61000-3-3:2008
AS/NZS CISPR 22: 2009

Company Name : _____

Company Address : _____

Telephone : _____ Facsimile : _____

Person in responsible for marking this declaration:

Name (Full Name)

Title/ Department

Date

Legal Signature



Quietek Corporation

Date : Jan. 18, 2012
QTK No.: 11C338R-ITCEP11V04



Statement of Conformity

This statement is to certify that the designated product below.

Product : Network Camera
Trade name : VIVOTEK
Model Number : PT8133,PT8133W
Company Name : VIVOTEK INC.
Applicable Standards : EN 55022: 2010, Class B
EN 55024: 2010
EN 61000-3-2: 2006+A2: 2009
EN 61000-3-3:2008
AS/NZS CISPR 22: 2009

One sample of the designated product has been tested and evaluated in our laboratory to find in compliance with the applicable standards above. The issued test report(s) show(s) it in detail.

Report Number : 11C338R-ITCEP11V04

TEST LABORATORY

Vincent Lin / Manager

The verification is based on a single evaluation of one sample of above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. Logo.

Test Report Certification

Issued Date : 2012/01/18
 Report No. : 11C338R-ITCEP11V04



Product Name : Network Camera
 Applicant : VIVOTEK INC.
 Address : 6F, No.192, Lien-Cheng Rd., Chung-Ho, New Taipei City, 235,
 Taiwan, R.O.C.
 Manufacturer : VIVOTEK INC.
 Model No. : PT8133,PT8133W
 EUT Rated Voltage : AC 100-240V, 50-60Hz
 By POE
 EUT Test Voltage : AC 230 V / 50 Hz
 By POE
 Trade Name : VIVOTEK
 Applicable Standard : EN 55022: 2010, Class B
 EN 55024: 2010
 EN 61000-3-2: 2006+A2: 2009
 EN 61000-3-3: 2008
 AS/NZS CISPR 22: 2009
 Test Result : Complied
 Performed Location : Quietek Corporation (Linkou Laboratory)
 No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451,
 Taiwan, R.O.C.
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Laboratory Information

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

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

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://tw.quietek.com/tw/emc/accreditations/accreditations.htm>
The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : <http://www.quietek.com/>
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

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1. General Information

1.1. EUT Description

Product Name	Network Camera
Trade Name	VIVOTEK
Model No.	PT8133,PT8133W

Component	
Power Adapter	MFR: ENG, M/N: 3A-183WP12 Input: AC 100-240V ~,50-60Hz,0.6A Output: DC 12V=1.5A Cable Out: Non-Shielded, 1.6m

Note:

The different of each model is shown as below:

Model Number	PT8133	PT8133W
POE	YES	NO
WLAN	NO	YES

1.2. Mode of Operation

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

Pre-Test Mode	
Mode 1: Normal Operation (PT8133W, Adapter)	
Mode 2: Normal Operation (PT8133, POE)	
Mode 3: Normal Operation (PT8133W, Wireless)	
Final Test Mode	
Conducted Emission	Mode 1: Normal Operation (PT8133W, Adapter)
Impedance Stabilization Network	Mode 1: Normal Operation (PT8133W, Adapter)
	Mode 2: Normal Operation (PT8133, POE)
Radiated Emission	Mode 1: Normal Operation (PT8133W, Adapter)
	Mode 2: Normal Operation (PT8133, POE)
Immunity	Mode 1: Normal Operation (PT8133W, Adapter)
	Mode 2: Normal Operation (PT8133, POE)

1.3. Tested System Details

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

Test Mode		Mode 1: Normal Operation (PT8133W, Adapter)			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	D630	00144-023-351-283	Non-Shielded, 1.8m

Test Mode		Mode 2: Normal Operation (PT8133, POE)			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	D630	00144-023-351-283	Non-Shielded, 1.8m
2	POE	Linksys	WAPPOE12	S5F3601130	Non-Shielded, 1.8m

1.4. Configuration of Tested System

Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Connection Diagram			
<pre> graph TD PC[Notebook PC (1)] --- A --- EUT[EUT] subgraph Box [] EUT end </pre>			
Signal Cable Type		Signal cable Description	
A	LAN Cable	Non-Shielded, 3.0m	

Test Mode		Mode 2: Normal Operation (PT8133, POE)	
Connection Diagram			
<p>The diagram shows a central box labeled 'EUT' enclosed in a dashed rectangular boundary. To the right of the EUT box, a solid line labeled 'A' extends upwards and then rightwards to a box labeled 'POE (2)'. From the right side of the 'POE (2)' box, another solid line labeled 'A' extends rightwards to a box labeled 'Notebook PC (1)'.</p>			
Signal Cable Type		Signal cable Description	
A	LAN Cable	Non-Shielded, 3.0m, two PCS	

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipment.
3	Connecting NB to the EUT as shown on figure to full load the EUT.
4	All the peripheral devices will be accessed during the test.
5	Repeat the above procedure (3) to (4).

2. Technical Test

2.1. Summary of Test Result

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

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	EN 55022:2010	Yes	No
Impedance Stabilization Network	EN 55022:2010	Yes	No
Radiated Emission	EN 55022:2010	Yes	No
Power Harmonics	EN 61000-3-2: 2006+A2: 2009	Yes	No
Voltage Fluctuation and Flicker	EN 61000-3-3:2008	Yes	No

Immunity			
Performed Item	Normative References	Test Performed	Deviation
Electrostatic Discharge	IEC 61000-4-2: 2008	Yes	No
Radiated susceptibility	IEC 61000-4-3: 2010	Yes	No
Electrical fast transient/burst	IEC 61000-4-4: 2011	Yes	No
Surge	IEC 61000-4-5: 2005	Yes	No
Conducted susceptibility	IEC 61000-4-6: 2008	Yes	No
Power frequency magnetic field	IEC 61000-4-8: 2009	Yes	No
Voltage dips and interruption	IEC 61000-4-11: 2004	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	100366	2011/11/15
LISN	R&S	ESH3-Z5	836679/020	2011/02/10
LISN	R&S	ENV216	100085	2011/02/10
Pulse Limiter	R&S	ESH3-Z2	357.8810.52-1	2011/09/16

Impedance Stabilization Network / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Capacitive Voltage Probe	Schaffner	CVP2200A	18331	2011/11/14
EMI Test Receiver	R&S	ESCS 30	100366	2011/11/15
LISN	R&S	ENV216	100085	2011/02/10
LISN	R&S	ESH3-Z5	836679/020	2011/02/10
Pulse Limiter	R&S	ESH3-Z2	100324	2011/04/06
RF Current Probe	FCC	F-65 10KHz~1GHz	198	2011/10/25
BALANCED TELECOM ISN	FCC	FCC-TLISN-T2-02	20316	2011/07/08
Impedance Stabilization Network	Teseq	ISN T800	30303	2011/03/04

Radiated Emission / Site1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2918	2011/07/28
EMI Test Receiver	R&S	ESCS 30	100121	2011/12/06
Pre-Amplifier	QTK	N/A	N/A	2011/07/07
CXA Signal Analyzer	Agilent	N9000A	MY50510072	2011/02/10
Site1 NSA	QTK	N/A	N/A	2011/07/06

Radiated Emission / CB7

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	Agilent	E4440A	MY46185846	2011/12/12
Horn Antenna	Schwarzbeck	9120D	576	2011/11/14
Pre-Amplifier	Quietek	AP-180C	CHM/071920	2011/07/12
CB7 VSWR	QTK	N/A	N/A	2011/08/25

Power Harmonics / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source(Harmonic)	Schaffner	NSG 1007	HK54148	2011/09/13
IEC1000-4-X Analyzer(Flicker)	Schaffner	CCN 1000-1	X7 1887	2011/09/13

Voltage Fluctuation and Flicker / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source(Harmonic)	Schaffner	NSG 1007	HK54148	2011/09/13
IEC1000-4-X Analyzer(Flicker)	Schaffner	CCN 1000-1	X7 1887	2011/09/13

Electrostatic Discharge / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
ESD Simulator System	Noiseken	TC-815R	ESS0929097	2011/06/16
Horizontal Coupling Plane(HCP)	Quietek	HCP AL50	N/A	N/A
Vertical Coupling Plane(VCP)	Quietek	VCP AL50	N/A	N/A

Radiated susceptibility / CB5

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AF-BOX	R&S	AF-BOX ACCUST	100007	N/A
Audio Analyzer	R&S	UPL 16	100137	2011/05/09
Biconilog Antenna	EMCO	3149	00071675	N/A
Directional Coupler	A&R	DC 6180	22735	N/A
Dual Microphone Supply	B&K	5935	2426784	2011/04/21
Mouth Simulator	B&K	4227	2439692	2011/04/21
Power Amplifier	A&R	30S1G3	309453	N/A
Power Amplifier	A&R	100W10000M7	A285000010	N/A
Power Amplifier	SCHAFFNER	CBA9413B	4020	N/A
Power Amplifier	AR	75A250A	0325371	N/A
Power Meter	R&S	NRVD(P.M)	100219	2011/05/09
Pre-Amplifier	A&R	150A220	23067	N/A
Probe Microphone	B&K	4182	2278070	2011/04/21
Signal Generator	R&S	SMT03	100170	2011/05/09
Calibration of field	QTK	N/A	N/A	2011/05/12

Electrical fast transient/burst / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
TRANSIENT TEST SYSTEM	EMC PARTNER	TRA2000IN6	1138	2011/11/30

Surge / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
TRANSIENT TEST SYSTEM	EMC PARTNER	TRA2000IN6	1138	2011/11/30

Conducted susceptibility / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Schaffner NSG 2070 RF-Generator	Schaffner	N/A	N/A	2011/04/07

Power frequency magnetic field / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Induction Coil Interface	Schaffner	INA 2141	6002	N/A
Magnetic Loop Coil	Schaffner	INA 702	160	N/A

Voltage dips and interruption / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
TRANSIENT TEST SYSTEM	EMC PARTNER	TRA2000IN6	1138	2011/11/30

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Impedance Stabilization Network

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

Harmonic Current Emission

The measurement uncertainty is evaluated as 4.7 (mA/A).

Voltage Fluctuation and Flicker

The measurement uncertainty is evaluated as 0.27 (mV/V).

Electrostatic Discharge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in ESD testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant ESD standards. The immunity test signal from the ESD system meet the required specifications in IEC 61000-4-2 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 3.0 % and 3.8%.

Radiated susceptibility

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in RS testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant RS standards. The immunity test signal from the RS system meet the required specifications in IEC 61000-4-3 through the calibration for the uniform field strength and monitoring for the test level with the uncertainty evaluation report for the electrical filed strength as being 3.57 dB.

Electrical fast transient/burst

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in EFT/Burst testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant EFT/Burst standards. The immunity test signal from the EFT/Burst system meet the required specifications in IEC 61000-4-4 through the calibration report with the calibrated uncertainty for the waveform of voltage, frequency and timing as being 4 %, and 2.5%.

Surge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in Surge testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant Surge standards. The immunity test signal from the Surge system meet the required specifications in IEC

61000-4-5 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 3.5 % and 0.1%.

Conducted susceptibility

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in CS testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant CS standards. The immunity test signal from the CS system meet the required specifications in IEC 61000-4-6 through the calibration for unmodulated signal and monitoring for the test level with the uncertainty evaluation report for the injected modulated signal level through CDN and EM Clamp/Direct Injection as being 2.0 dB and 2.61 dB.

Power frequency magnetic field

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in PFM testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant PFM standards. The immunity test signal from the PFM system meet the required specifications in IEC 61000-4-8 through the calibration report with the calibrated uncertainty for the Gauss Meter to verify the output level of magnetic field strength as being 2.0 %.

Voltage dips and interruption

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, the requirements for measurement uncertainty in DIP testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant DIP standards. The immunity test signal from the DIP system meet the required specifications in IEC 61000-4-11 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 3.5 % and 0.1%.

2.4. Test Environment

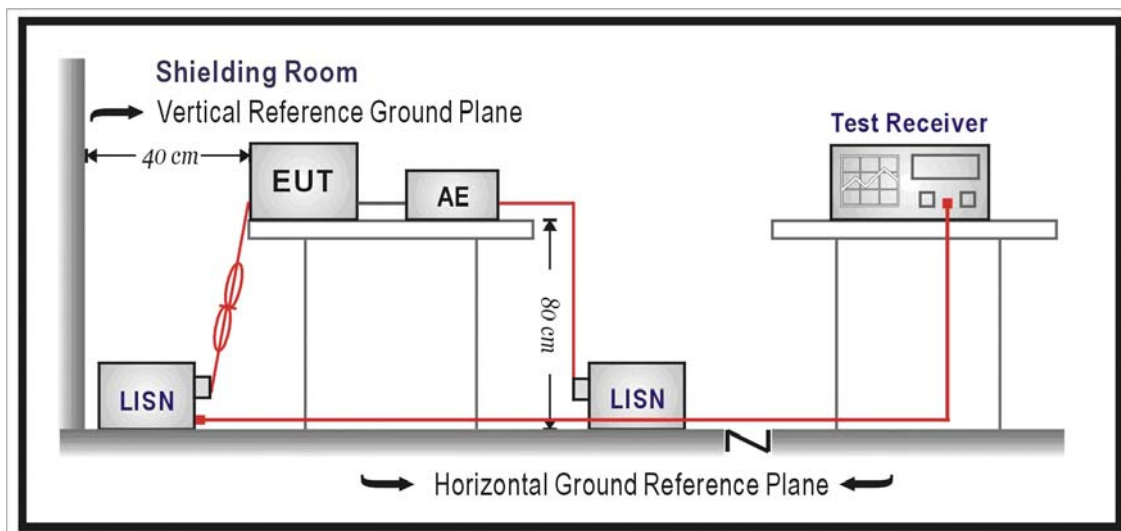
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	15
	Humidity (%RH)	25-75	66
	Barometric pressure (mbar)	860-1060	950-1000
Impedance Stabilization Network	Temperature (°C)	15-35	15
	Humidity (%RH)	25-75	66
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	15
	Humidity (%RH)	25-75	59
	Barometric pressure (mbar)	860-1060	950-1000
Electrostatic Discharge	Temperature (°C)	15-35	21
	Humidity (%RH)	30-60	51
	Barometric pressure (mbar)	860-1060	950-1000
Radiated susceptibility	Temperature (°C)	15-35	22
	Humidity (%RH)	25-75	52
	Barometric pressure (mbar)	860-1060	950-1000
Electrical fast transient/burst	Temperature (°C)	15-35	21
	Humidity (%RH)	25-75	53
	Barometric pressure (mbar)	860-1060	950-1000
Surge	Temperature (°C)	15-35	21
	Humidity (%RH)	10-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Conducted susceptibility	Temperature (°C)	15-35	22
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Power frequency magnetic field	Temperature (°C)	15-35	23
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Voltage dips and interruption	Temperature (°C)	15-35	22
	Humidity (%RH)	25-75	53
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission (Main Terminals)

3.1. Test Specification

According to EMC Standard : EN 55022

3.2. Test Setup



3.3. Limit

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

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

3.4. Test Procedure

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

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

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

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

3.5. Deviation from Test Standard

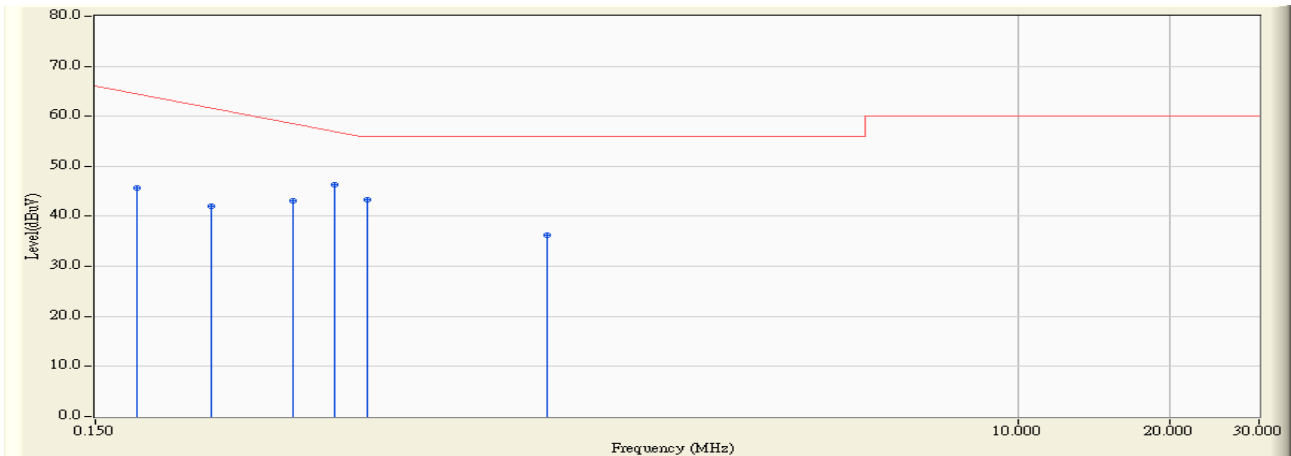
No deviation.

3.6. Test Result

Site : SR1	Time : 2012/01/11 - 23:01
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 1



Site : SR1	Time : 2012/01/11 - 23:01
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 1

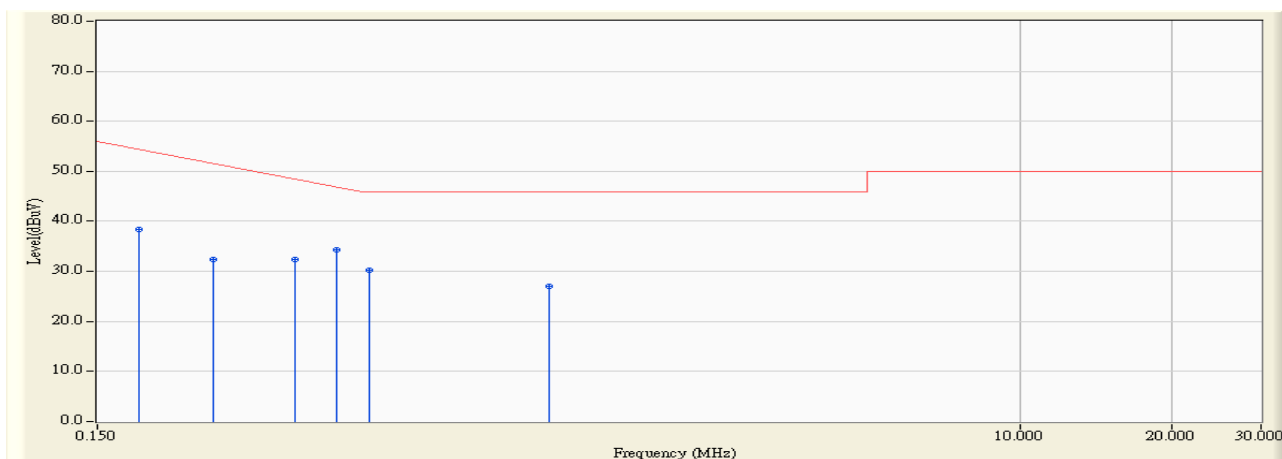


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.181	9.770	35.950	45.720	-19.394	65.114	QUASIPeAK
2		0.255	9.770	32.310	42.080	-20.920	63.000	QUASIPeAK
3		0.369	9.780	33.250	43.030	-16.713	59.743	QUASIPeAK
4	*	0.447	9.780	36.530	46.310	-11.204	57.514	QUASIPeAK
5		0.517	9.780	33.470	43.250	-12.750	56.000	QUASIPeAK
6		1.170	9.780	26.510	36.290	-19.710	56.000	QUASIPeAK

Note:

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

Site : SR1	Time : 2012/01/11 - 23:01
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : ENV_216_L1 - Line1
Power : AC 230V/50Hz	Note : Mode 1



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.181	9.770	28.570	38.340	-16.774	55.114	AVERAGE
2		0.255	9.770	22.650	32.420	-20.580	53.000	AVERAGE
3		0.369	9.780	22.700	32.480	-17.263	49.743	AVERAGE
4	*	0.447	9.780	24.440	34.220	-13.294	47.514	AVERAGE
5		0.517	9.780	20.460	30.240	-15.760	46.000	AVERAGE
6		1.170	9.780	17.190	26.970	-19.030	46.000	AVERAGE

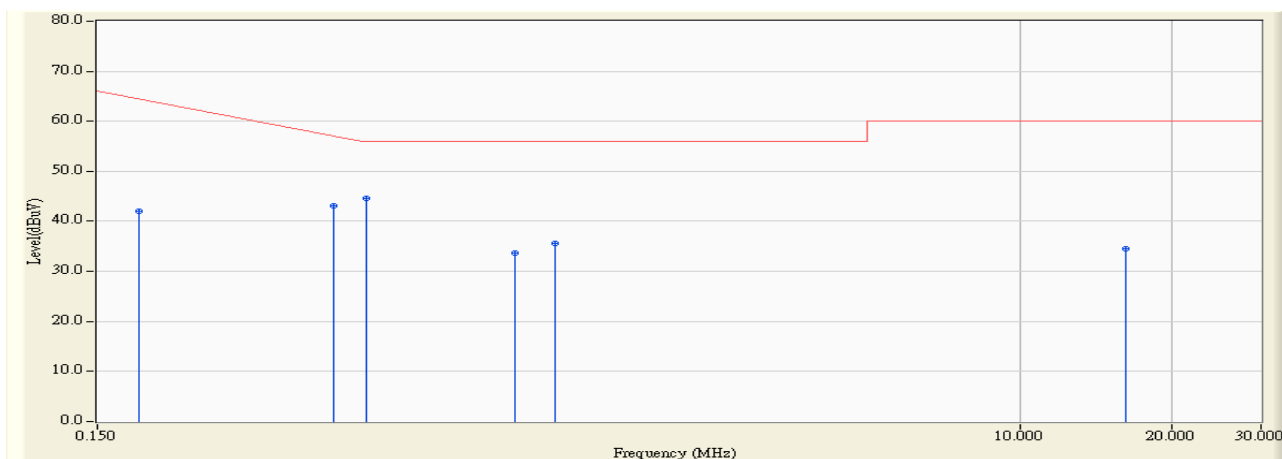
Note:

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

Site : SR1	Time : 2012/01/11 - 23:02
Limit : CISPR_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 1



Site : SR1	Time : 2012/01/11 - 23:05
Limit : CISPR_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 1

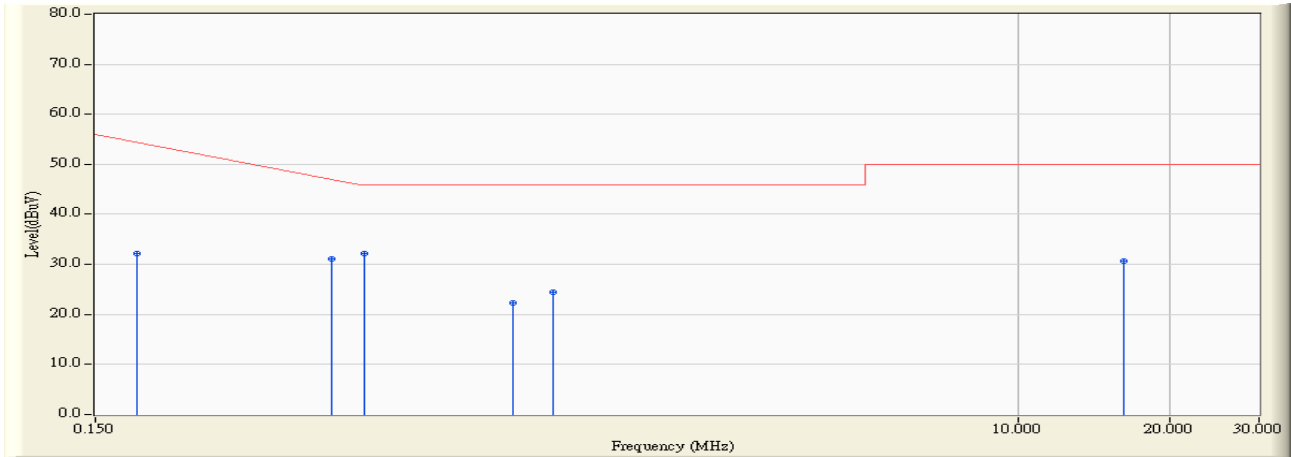


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.181	9.760	32.350	42.110	-23.004	65.114	QUASIPeAK
2		0.439	9.760	33.370	43.130	-14.613	57.743	QUASIPeAK
3	*	0.509	9.760	34.950	44.710	-11.290	56.000	QUASIPeAK
4		1.002	9.770	23.990	33.760	-22.240	56.000	QUASIPeAK
5		1.205	9.770	25.910	35.680	-20.320	56.000	QUASIPeAK
6		16.228	10.102	24.330	34.432	-25.568	60.000	QUASIPeAK

Note:

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

Site : SR1	Time : 2012/01/11 - 23:05
Limit : CISPR_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : ENV_216_N - Line2
Power : AC 230V/50Hz	Note : Mode 1



	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.181	9.760	22.390	32.150	-22.964	55.114	AVERAGE
2	0.439	9.760	21.360	31.120	-16.623	47.743	AVERAGE
3	* 0.509	9.760	22.330	32.090	-13.910	46.000	AVERAGE
4	1.002	9.770	12.570	22.340	-23.660	46.000	AVERAGE
5	1.205	9.770	14.710	24.480	-21.520	46.000	AVERAGE
6	16.228	10.102	20.600	30.702	-19.298	50.000	AVERAGE

Note:

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

3.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Front View of Conducted Test



Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Back View of Conducted Test

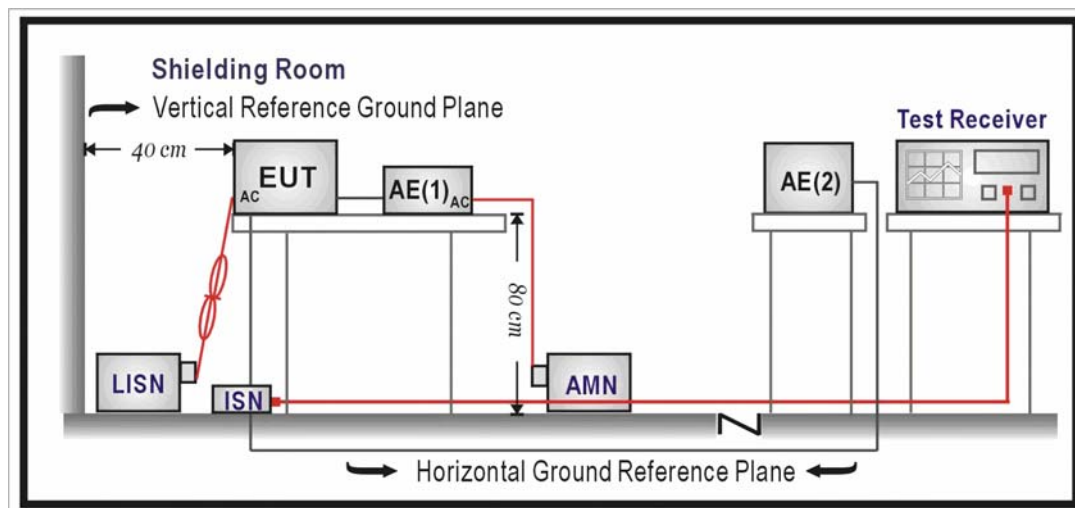


4. Conducted Emissions (Telecommunication Ports)

4.1. Test Specification

According to EMC Standard : EN 55022

4.2. Test Setup



4.3. Limit

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

Remarks:

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

4.4. Test Procedure

Telecommunication Port:

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

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

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

4.5. Deviation from Test Standard

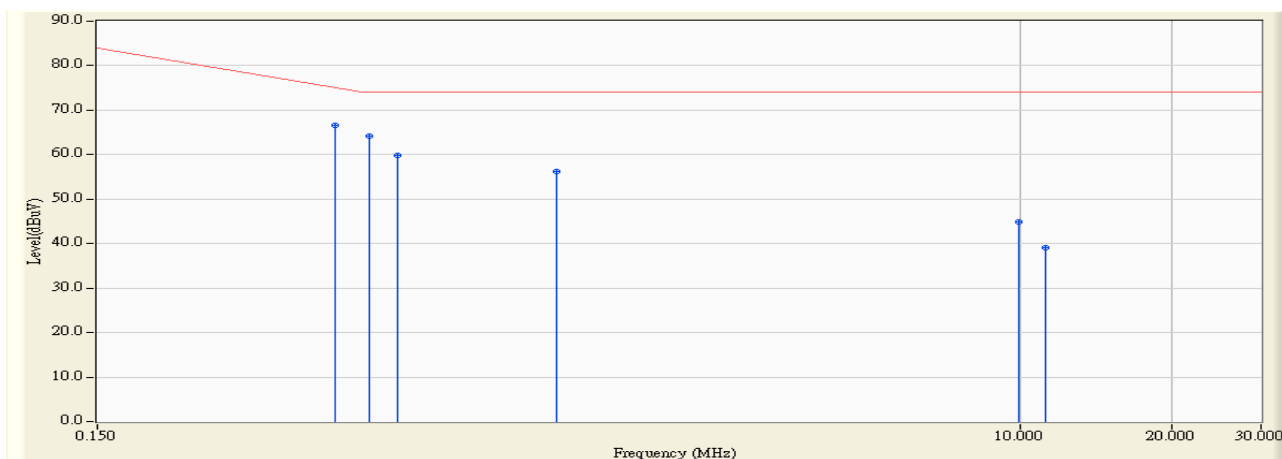
No deviation.

4.6. Test Result

Site : SR1	Time : 2012/01/11 - 22:55
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 10M



Site : SR1	Time : 2012/01/11 - 22:56
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 10M

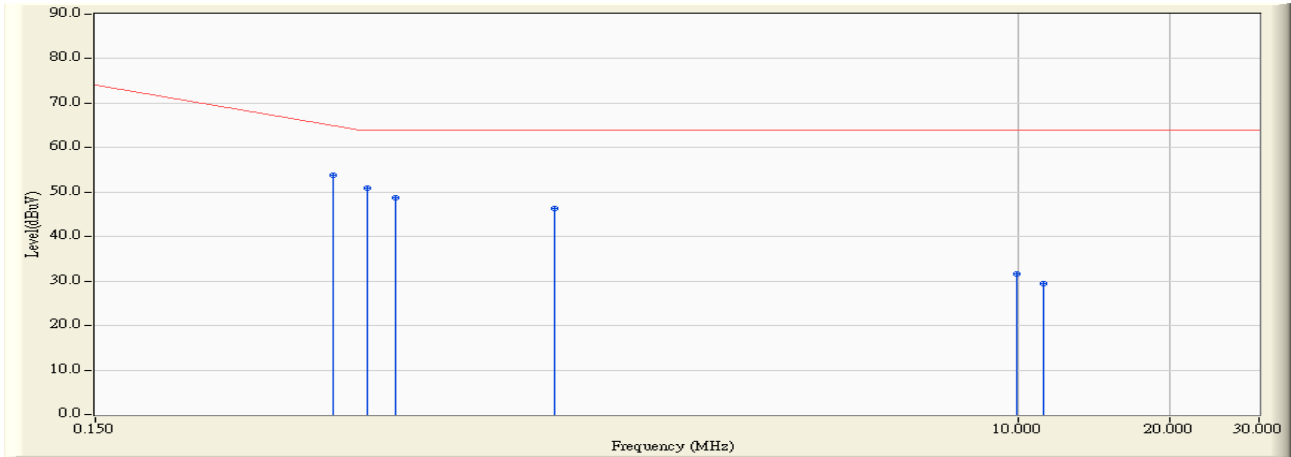


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.443	10.200	56.350	66.550	-9.079	75.629	QUASIPeAK
2		0.517	10.200	53.910	64.110	-9.890	74.000	QUASIPeAK
3		0.588	10.200	49.530	59.730	-14.270	74.000	QUASIPeAK
4		1.212	10.200	46.030	56.230	-17.770	74.000	QUASIPeAK
5		9.990	10.289	34.590	44.879	-29.121	74.000	QUASIPeAK
6		11.252	10.300	28.830	39.130	-34.870	74.000	QUASIPeAK

Note:

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

Site : SR1	Time : 2012/01/11 - 22:56
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 10M

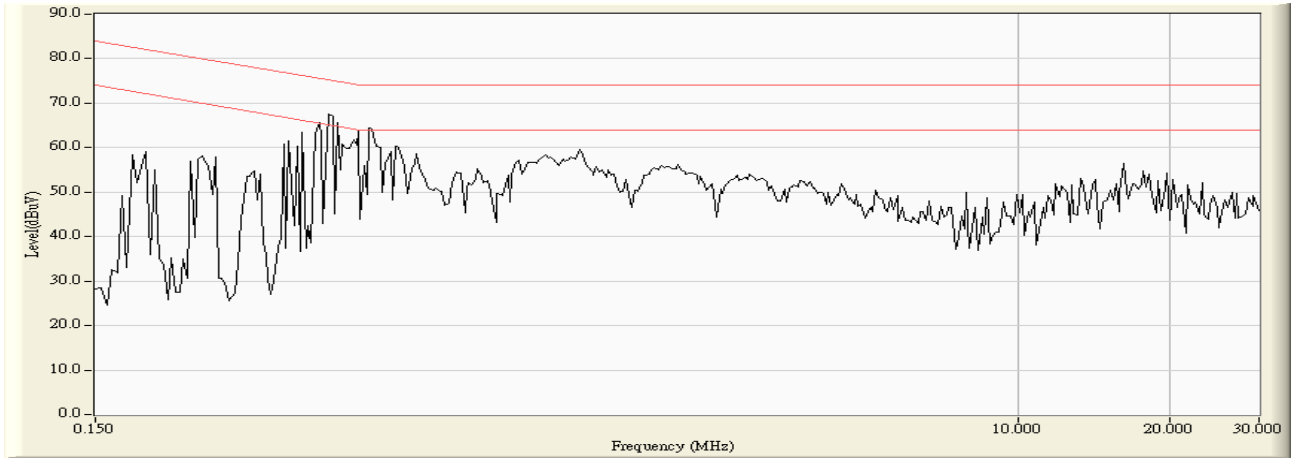


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.443	10.200	43.620	53.820	-11.809	65.629	AVERAGE
2		0.517	10.200	40.760	50.960	-13.040	64.000	AVERAGE
3		0.588	10.200	38.590	48.790	-15.210	64.000	AVERAGE
4		1.212	10.200	36.090	46.290	-17.710	64.000	AVERAGE
5		9.990	10.289	21.360	31.649	-32.351	64.000	AVERAGE
6		11.252	10.300	19.230	29.530	-34.470	64.000	AVERAGE

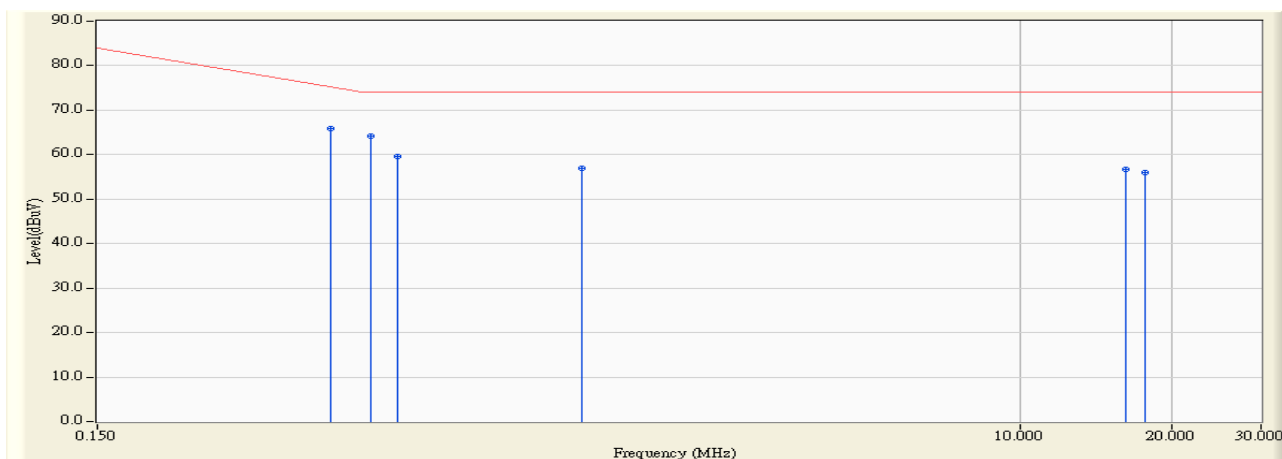
Note:

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

Site : SR1	Time : 2012/01/11 - 22:57
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 100M



Site : SR1	Time : 2012/01/11 - 22:59
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 100M

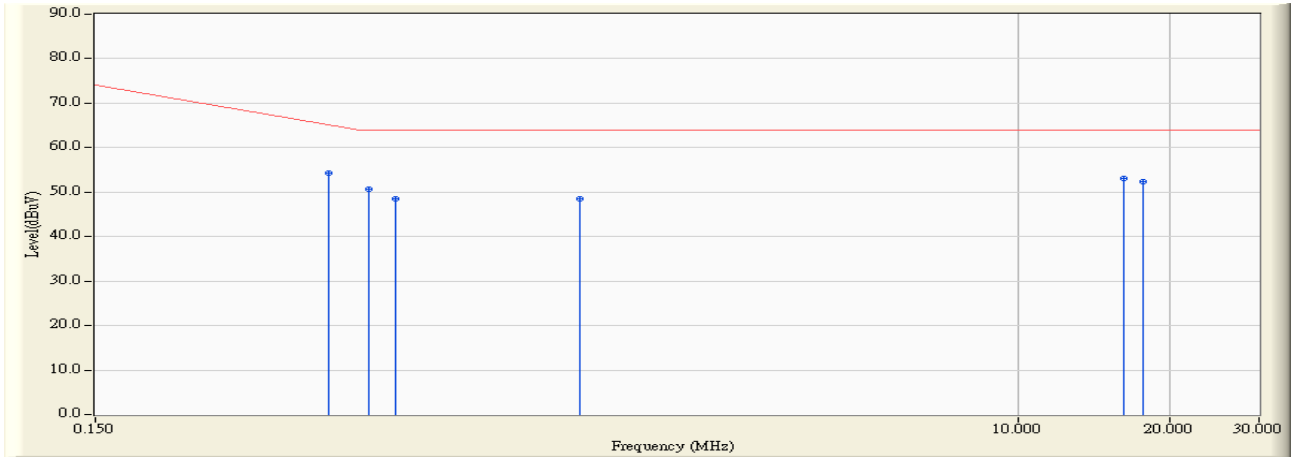


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.435	10.200	55.690	65.890	-9.967	75.857	QUASIPeAK
2	*	0.521	10.200	53.970	64.170	-9.830	74.000	QUASIPeAK
3		0.588	10.200	49.370	59.570	-14.430	74.000	QUASIPeAK
4		1.361	10.200	46.650	56.850	-17.150	74.000	QUASIPeAK
5		16.228	10.322	46.270	56.592	-17.408	74.000	QUASIPeAK
6		17.693	10.349	45.510	55.859	-18.141	74.000	QUASIPeAK

Note:

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

Site : SR1	Time : 2012/01/11 - 22:59
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : AC 230V/50Hz	Note : Mode 1, ISN 100M

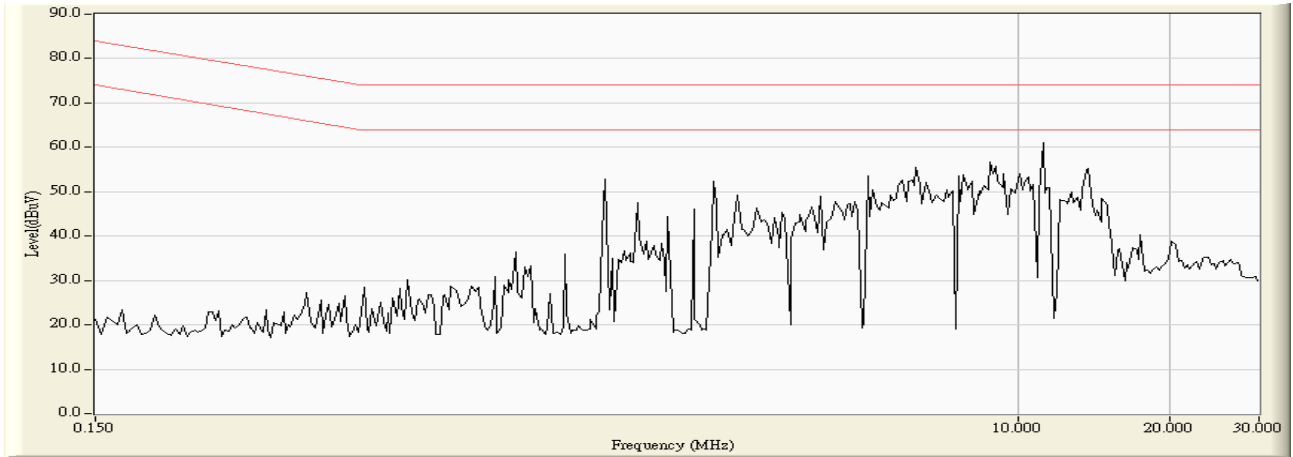


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.435	10.200	44.130	54.330	-11.527	65.857	AVERAGE
2		0.521	10.200	40.390	50.590	-13.410	64.000	AVERAGE
3		0.588	10.200	38.390	48.590	-15.410	64.000	AVERAGE
4		1.361	10.200	38.390	48.590	-15.410	64.000	AVERAGE
5	*	16.228	10.322	42.750	53.072	-10.928	64.000	AVERAGE
6		17.693	10.349	41.890	52.239	-11.761	64.000	AVERAGE

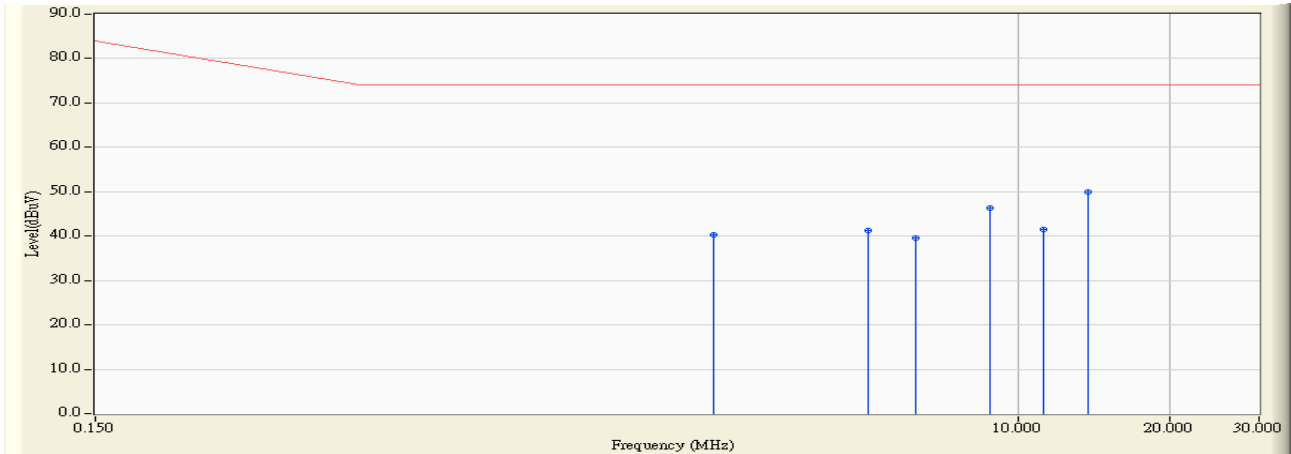
Note:

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

Site : SR1	Time : 2012/01/13 - 00:30
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : By POE	Note : Mode 2, ISN 10M



Site : SR1	Time : 2012/01/13 - 00:32
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : By POE	Note : Mode 2, ISN 10M

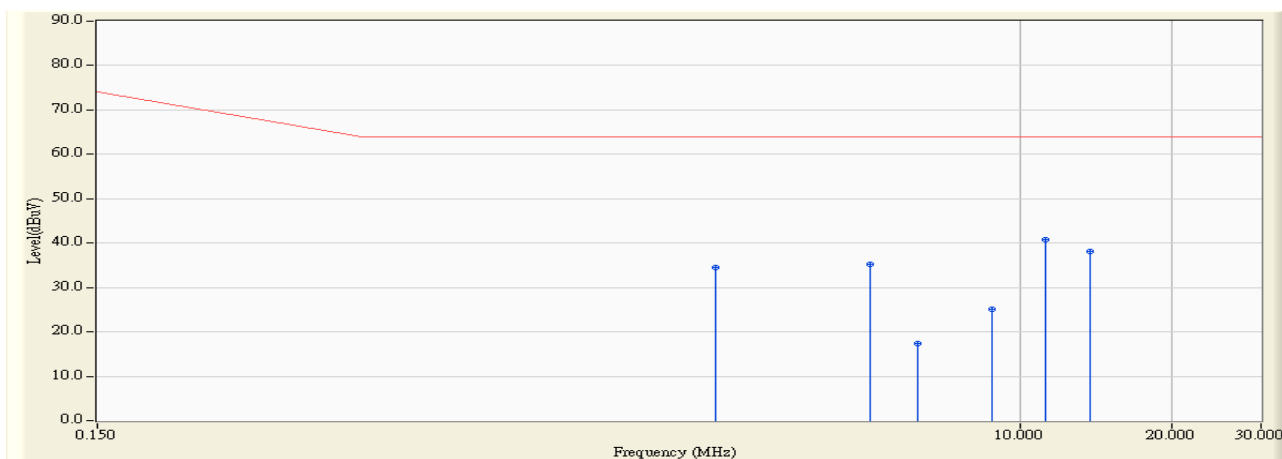


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		2.502	10.200	30.050	40.250	-33.750	74.000	QUASIPeAK
2		5.052	10.207	31.110	41.317	-32.683	74.000	QUASIPeAK
3		6.302	10.224	29.390	39.614	-34.386	74.000	QUASIPeAK
4		8.806	10.277	36.090	46.367	-27.633	74.000	QUASIPeAK
5		11.252	10.300	31.090	41.390	-32.610	74.000	QUASIPeAK
6	*	13.752	10.302	39.650	49.952	-24.048	74.000	QUASIPeAK

Note:

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

Site : SR1	Time : 2012/01/13 - 00:32
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : By POE	Note : Mode 2, ISN 10M

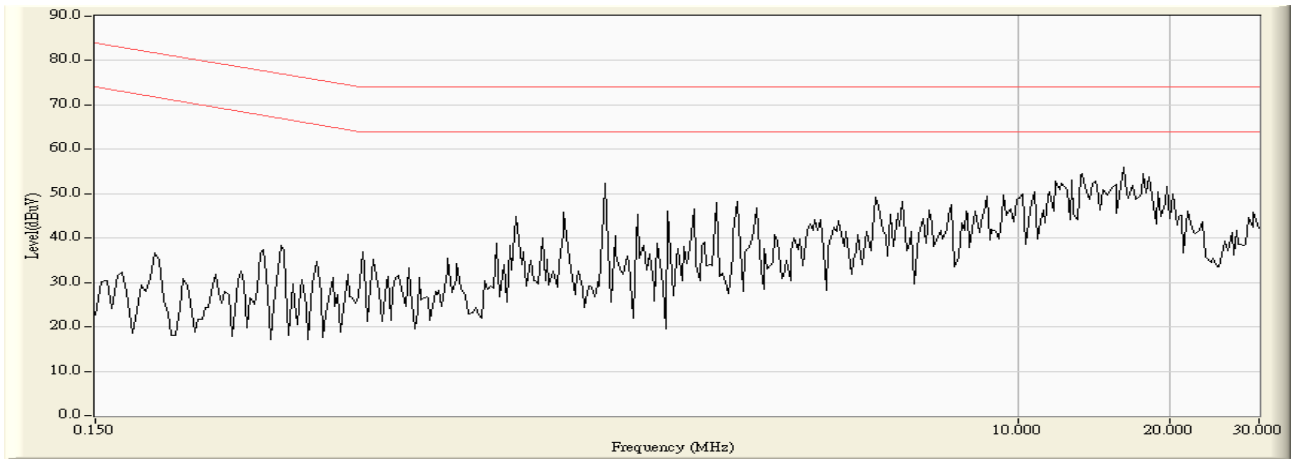


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		2.502	10.200	24.270	34.470	-29.530	64.000	AVERAGE
2		5.052	10.207	25.100	35.307	-28.693	64.000	AVERAGE
3		6.302	10.224	7.120	17.344	-46.656	64.000	AVERAGE
4		8.806	10.277	14.840	25.117	-38.883	64.000	AVERAGE
5	*	11.252	10.300	30.550	40.850	-23.150	64.000	AVERAGE
6		13.752	10.302	27.790	38.092	-25.908	64.000	AVERAGE

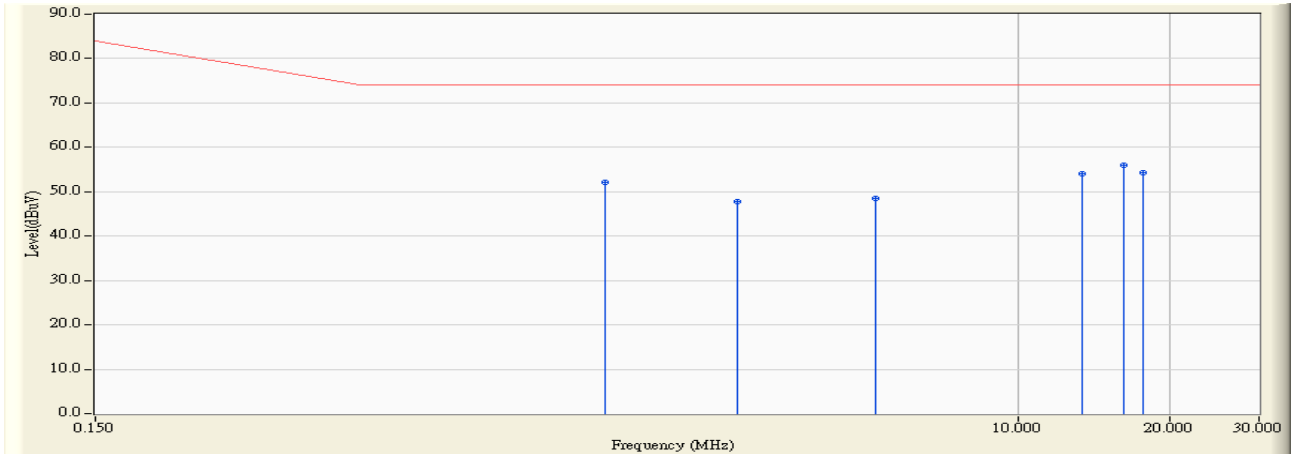
Note:

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

Site : SR1	Time : 2012/01/13 - 00:33
Limit : ISN_Voltage_B_00M_QP	Margin : 10
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : By POE	Note : Mode 2, ISN 100M



Site : SR1	Time : 2012/01/13 - 00:34
Limit : ISN_Voltage_B_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : By POE	Note : Mode 2, ISN 100M

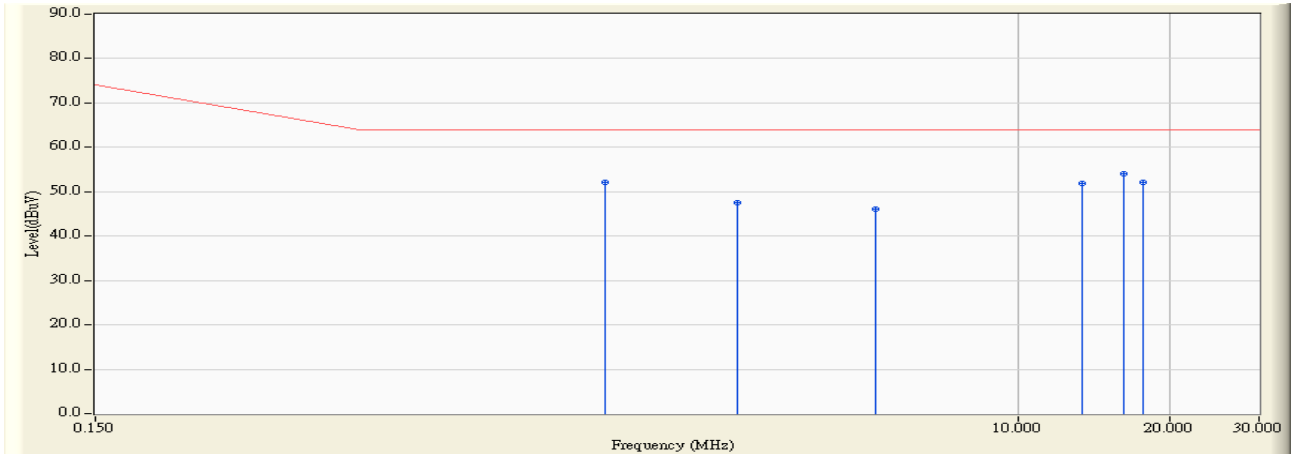


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.525	10.200	41.970	52.170	-21.830	74.000	QUASIPeAK
2		2.798	10.200	37.590	47.790	-26.210	74.000	QUASIPeAK
3		5.236	10.209	38.270	48.479	-25.521	74.000	QUASIPeAK
4		13.420	10.300	43.790	54.090	-19.910	74.000	QUASIPeAK
5	*	16.228	10.322	45.610	55.932	-18.068	74.000	QUASIPeAK
6		17.693	10.349	43.910	54.259	-19.741	74.000	QUASIPeAK

Note:

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

Site : SR1	Time : 2012/01/13 - 00:34
Limit : ISN_Voltage_B_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8 - Line1
Power : By POE	Note : Mode 2, ISN 100M



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.525	10.200	41.890	52.090	-11.910	64.000	AVERAGE
2		2.798	10.200	37.220	47.420	-16.580	64.000	AVERAGE
3		5.236	10.209	35.820	46.029	-17.971	64.000	AVERAGE
4		13.420	10.300	41.510	51.810	-12.190	64.000	AVERAGE
5	*	16.228	10.322	43.770	54.092	-9.908	64.000	AVERAGE
6		17.693	10.349	41.840	52.189	-11.811	64.000	AVERAGE

Note:

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

4.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Front View of ISN Test



Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Back View of ISN Test



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : Front View of ISN Test



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : Back View of ISN Test



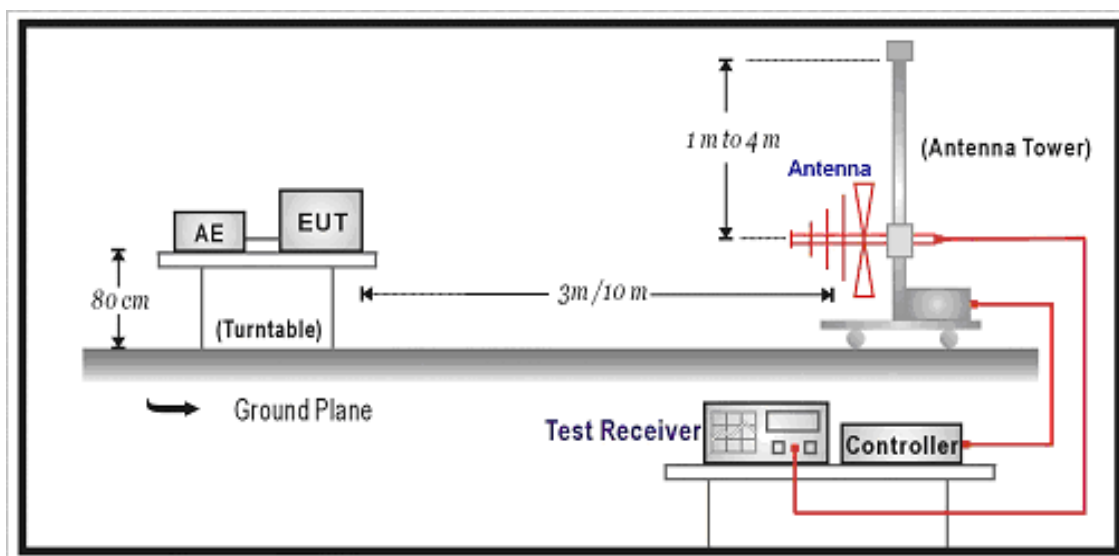
5. Radiated Emission

5.1. Test Specification

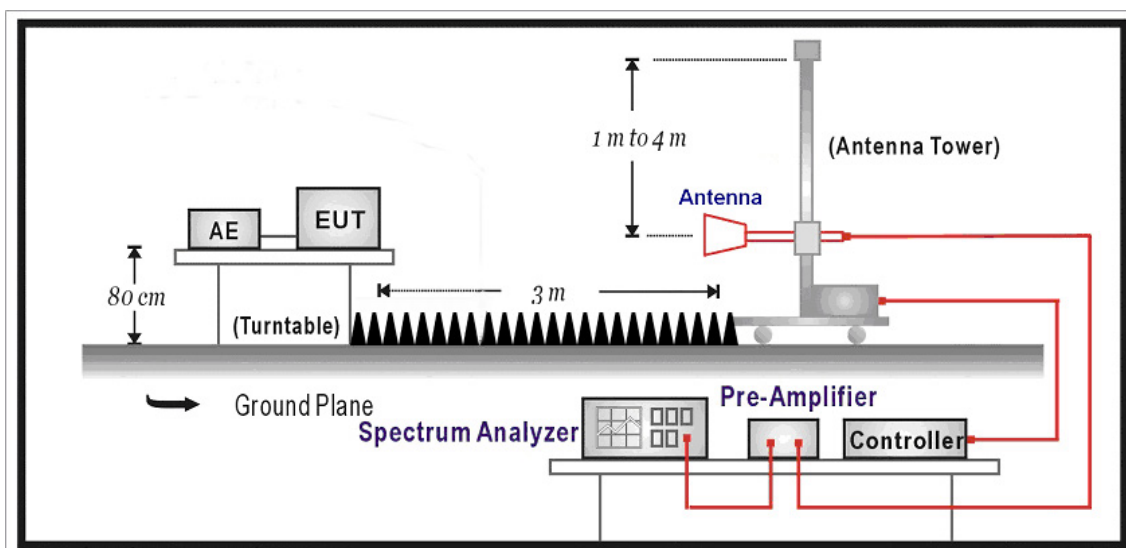
According to EMC Standard : EN 55022

5.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



5.3. Limit

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

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

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

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

5.4. Test Procedure

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

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

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

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

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

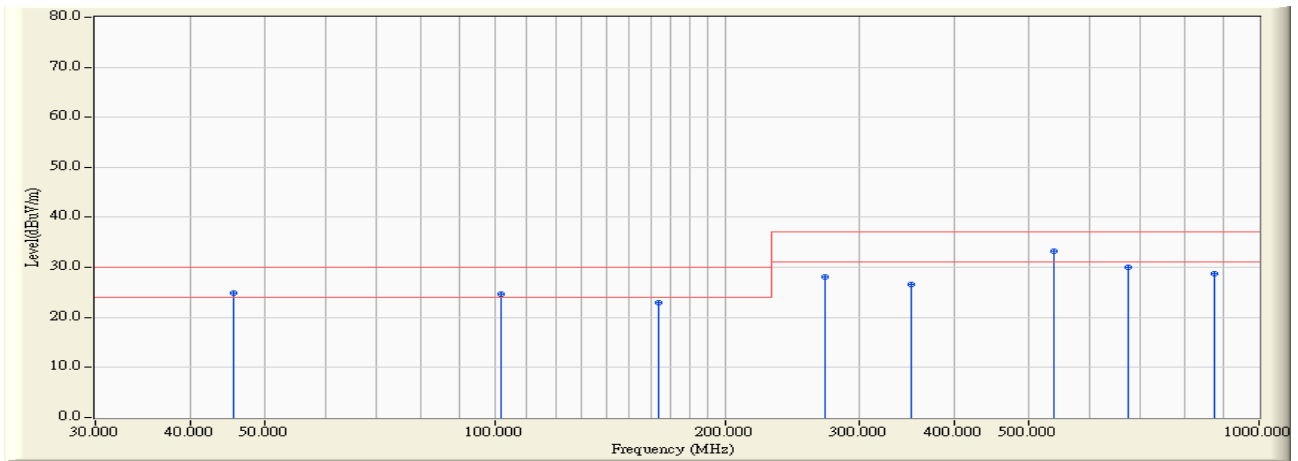
It is placed with absorb on the ground between EUT and Antenna.

5.5. Deviation from Test Standard

No deviation.

5.6. Test Result

Site : Site1	Time : 2012/01/13 - 13:25
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site1_CBL6112_10M_0726 - HORIZONTAL
Power : AC 230V/50Hz	Note : Mode 1

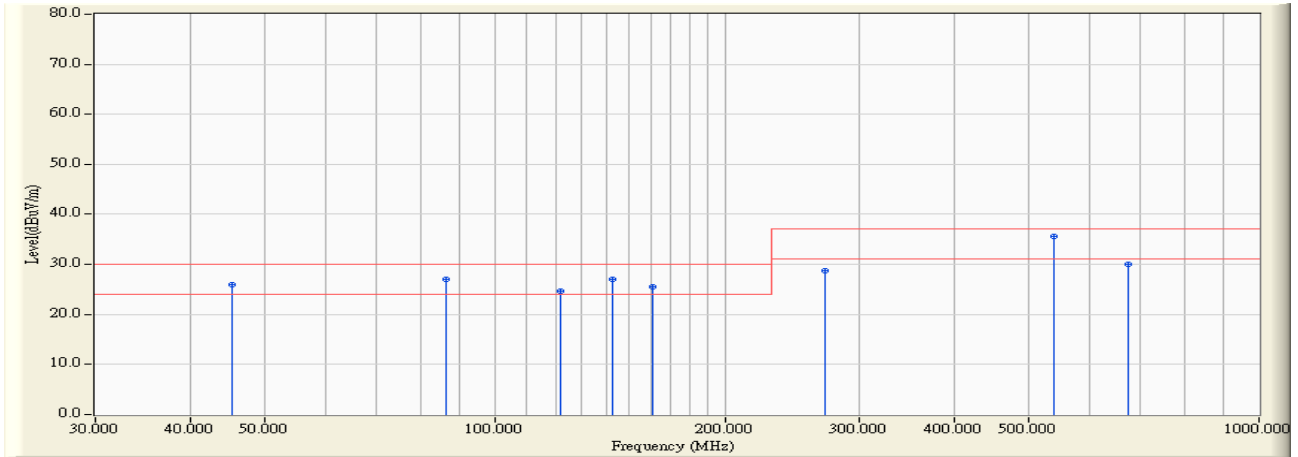


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		45.520	11.149	13.800	24.949	-5.051	30.000	QUASPEAK
2		101.780	12.754	12.000	24.754	-5.246	30.000	QUASPEAK
3		163.800	12.147	10.800	22.948	-7.052	30.000	QUASPEAK
4		270.000	15.902	12.300	28.202	-8.798	37.000	QUASPEAK
5		350.000	18.695	7.800	26.495	-10.505	37.000	QUASPEAK
6	*	540.000	23.937	9.200	33.137	-3.863	37.000	QUASPEAK
7		675.000	24.973	5.100	30.074	-6.926	37.000	QUASPEAK
8		875.000	27.800	0.900	28.700	-8.300	37.000	QUASPEAK

Note:

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

Site : Site1	Time : 2012/01/13 - 13:40
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site1_CBL6112_10M_0726 - VERTICAL
Power : AC 230V/50Hz	Note : Mode 1

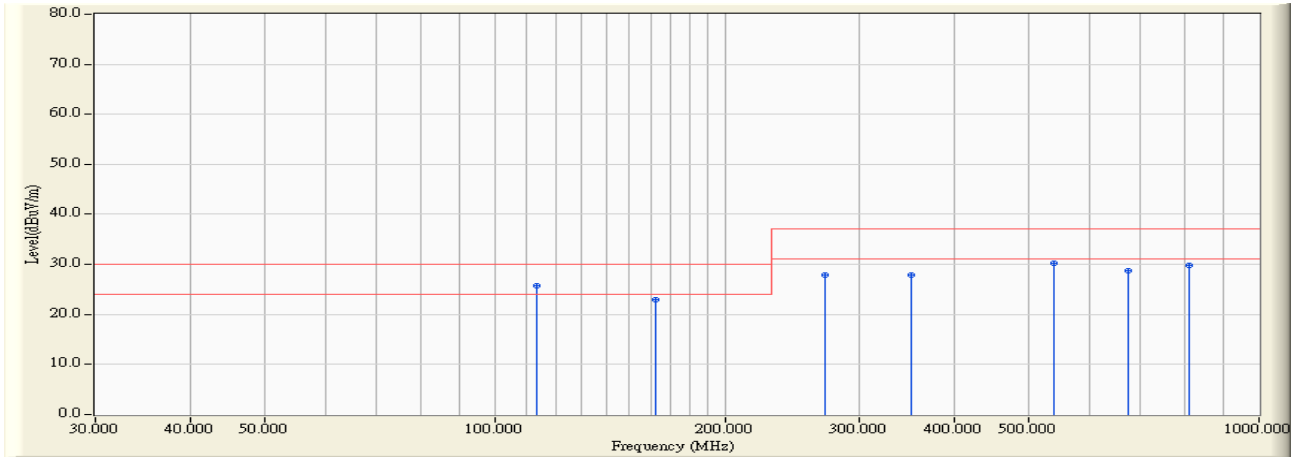


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	45.220	11.293	14.700	25.992	-4.008	30.000	QUASIPeAK
2	86.420	10.018	16.900	26.917	-3.083	30.000	QUASIPeAK
3	121.660	13.877	10.700	24.577	-5.423	30.000	QUASIPeAK
4	142.470	13.234	13.700	26.935	-3.065	30.000	QUASIPeAK
5	160.640	12.276	13.200	25.475	-4.525	30.000	QUASIPeAK
6	270.000	15.902	12.800	28.702	-8.298	37.000	QUASIPeAK
7	* 540.000	23.937	11.700	35.637	-1.363	37.000	QUASIPeAK
8	675.000	24.973	5.000	29.974	-7.026	37.000	QUASIPeAK

Note:

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

Site : Site1	Time : 2012/01/13 - 05:11
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site1_CBL6112_10M_0726 - HORIZONTAL
Power : By POE	Note : Mode 2

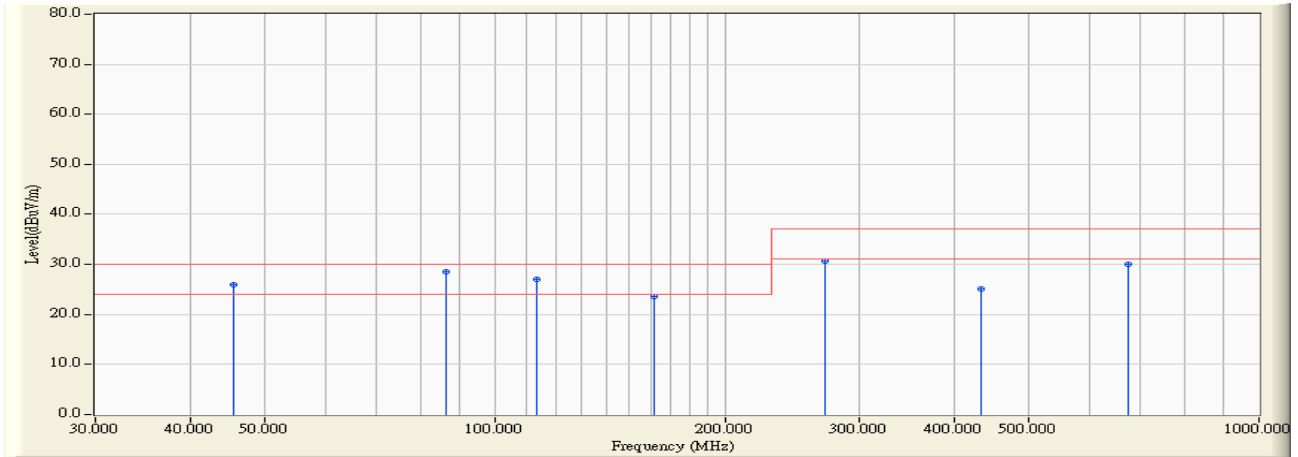


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	113.400	13.593	12.200	25.793	-4.207	30.000	QUASIPeAK
2		162.200	12.212	10.800	23.012	-6.988	30.000	QUASIPeAK
3		270.000	15.902	12.000	27.902	-9.098	37.000	QUASIPeAK
4		350.000	18.695	9.100	27.795	-9.205	37.000	QUASIPeAK
5		540.000	23.937	6.200	30.137	-6.863	37.000	QUASIPeAK
6		675.000	24.973	3.800	28.774	-8.226	37.000	QUASIPeAK
7		809.600	27.104	2.800	29.904	-7.096	37.000	QUASIPeAK

Note:

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

Site : Site1	Time : 2012/01/13 - 04:58
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site1_CBL6112_10M_0726 - VERTICAL
Power : By POE	Note : Mode 2

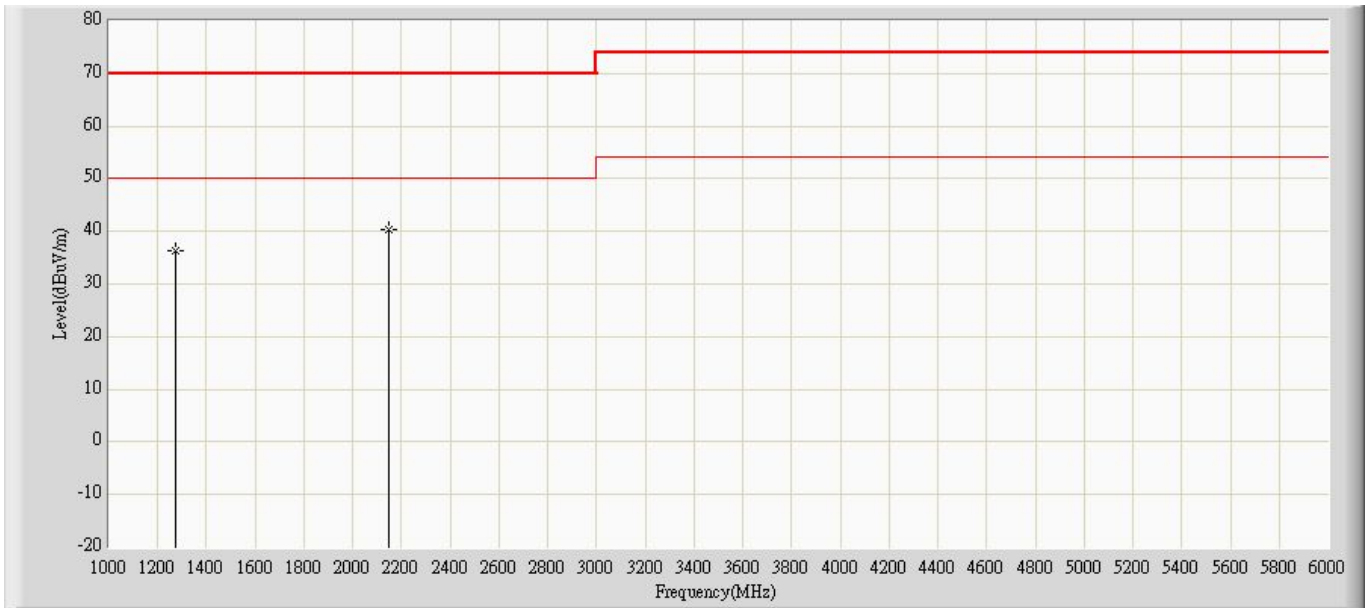


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		45.500	11.159	14.800	25.959	-4.041	30.000	QUASPEAK
2	*	86.300	9.991	18.500	28.492	-1.508	30.000	QUASPEAK
3		113.400	13.593	13.400	26.993	-3.007	30.000	QUASPEAK
4		161.910	12.224	11.300	23.524	-6.476	30.000	QUASPEAK
5		270.000	15.902	14.800	30.702	-6.298	37.000	QUASPEAK
6		432.000	21.194	3.800	24.994	-12.006	37.000	QUASPEAK
7		675.000	24.973	5.000	29.974	-7.026	37.000	QUASPEAK

Note:

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

Site: CB7	Time: 2011/12/20 - 04:50
Limit: EN55022_B_(Above_1G)	Margin: 0
Probe: CB7_Horn_3117_0325	Polarity: Horizontal
EUT: Network Camera	Power: AC 230V/50Hz
Note: Mode 1	

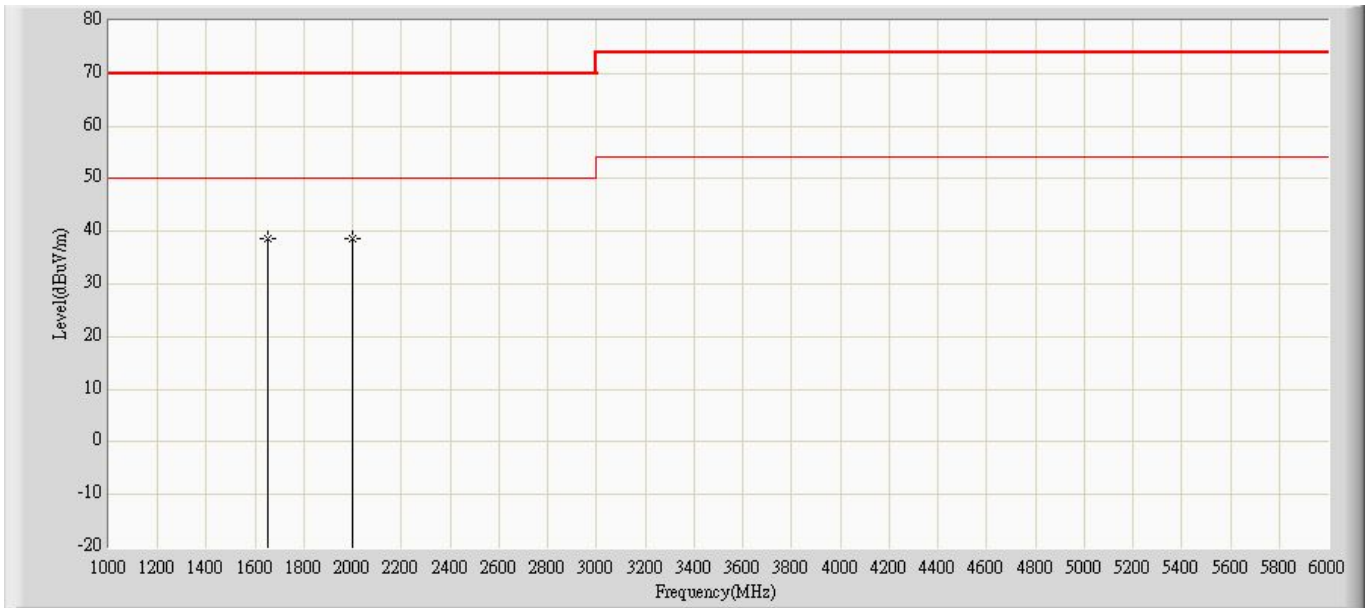


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			1275.000	36.460	41.370	-33.540	70.000	-4.909	PK
2		*	2150.000	40.326	41.720	-29.674	70.000	-1.394	PK

Note:

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

Site: CB7	Time: 2011/12/20 - 04:53
Limit: EN55022_B_(Above_1G)	Margin: 0
Probe: CB7_Horn_3117_0325	Polarity: Vertical
EUT: Network Camera	Power: AC 230V/50Hz
Note: Mode 1	

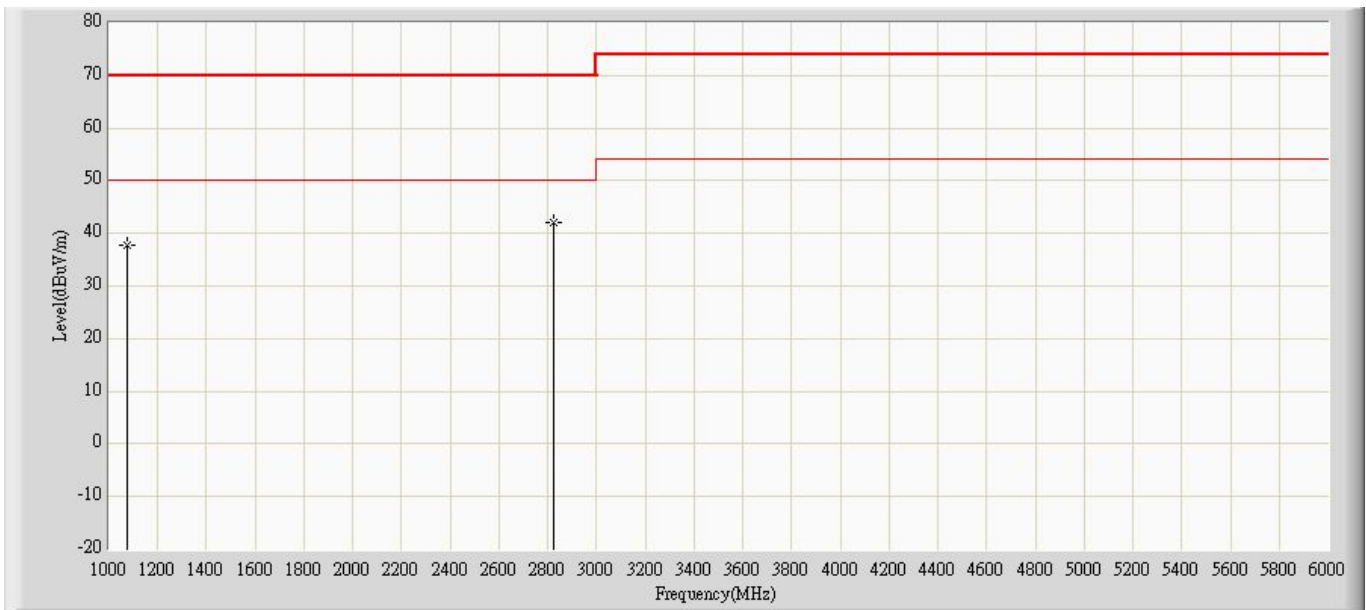


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			1650.000	38.564	41.910	-31.436	70.000	-3.346	PK
2		*	2000.000	38.717	39.720	-31.283	70.000	-1.003	PK

Note:

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

Site: CB7	Time: 2011/12/20 - 05:17
Limit: EN55022_B_(Above_1G)	Margin: 0
Probe: CB7_Horn_3117_0325	Polarity: Horizontal
EUT: Network Camera	Power : By POE
Note: Mode 2	

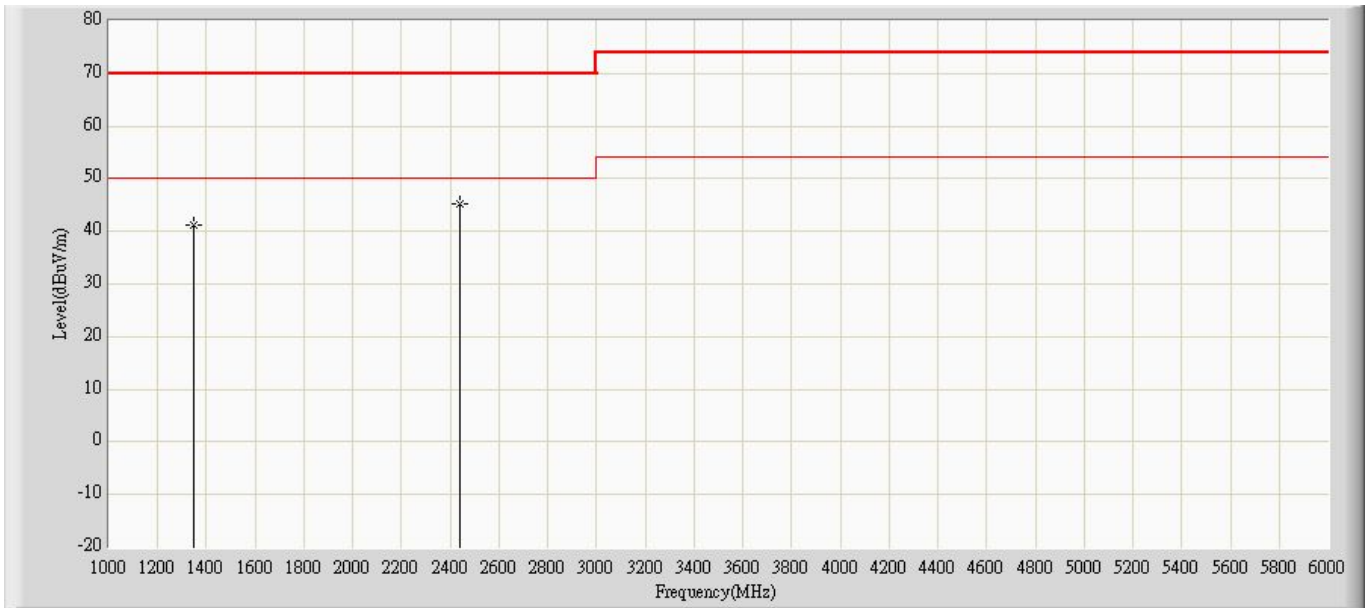


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			1075.000	37.769	42.340	-32.231	70.000	-4.572	PK
2		*	2825.000	41.990	41.380	-28.010	70.000	0.610	PK

Note:

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

Site: CB7	Time: 2011/12/20 - 05:20
Limit: EN55022_B_(Above_1G)	Margin: 0
Probe: CB7_Horn_3117_0325	Polarity: Vertical
EUT: Network Camera	Power : By POE
Note: Mode 2	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1			1350.000	41.187	45.710	-28.813	70.000	-4.523	PK
2		*	2437.500	45.155	45.150	-24.845	70.000	0.005	PK

Note:

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

5.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Front View of Radiated Test



Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Back View of Radiated Test



Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Front View of High Frequency Radiated Test



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : Front View of Radiated Test



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : Back View of Radiated Test



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : Front View of High Frequency Radiated Test

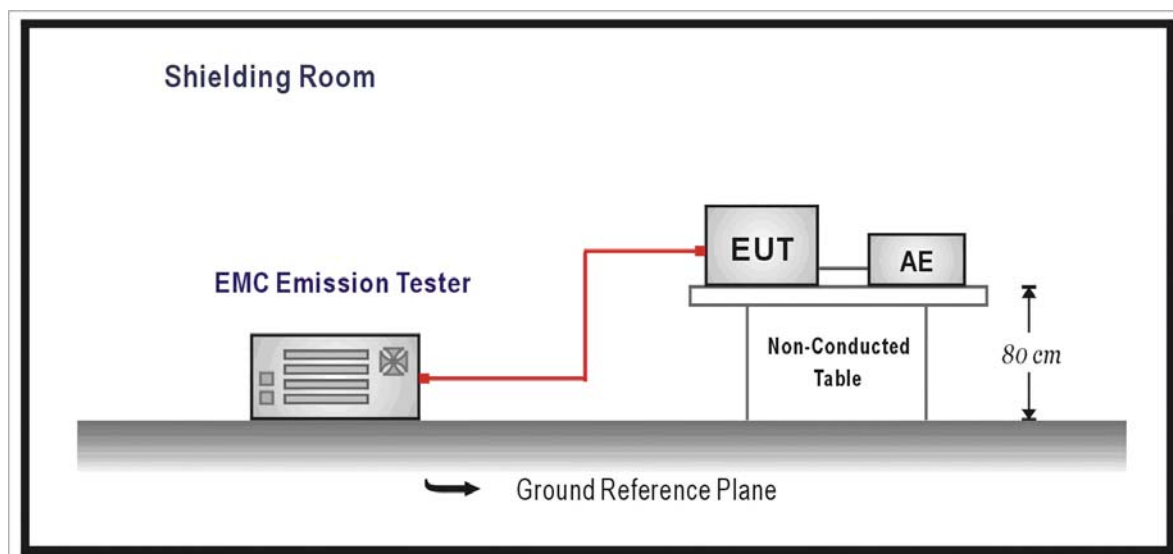


6. Harmonic Current Emission

6.1. Test Specification

According to EMC Standard : EN 61000-3-2

6.2. Test Setup



6.3. Limit

(a) Limits of Class A Harmonics Currents

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

(b) Limits of Class B Harmonics Currents

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

(c) Limits of Class C Harmonics Currents

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

(d) Limits of Class D Harmonics Currents

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

6.4. Test Procedure

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

6.5. Deviation from Test Standard

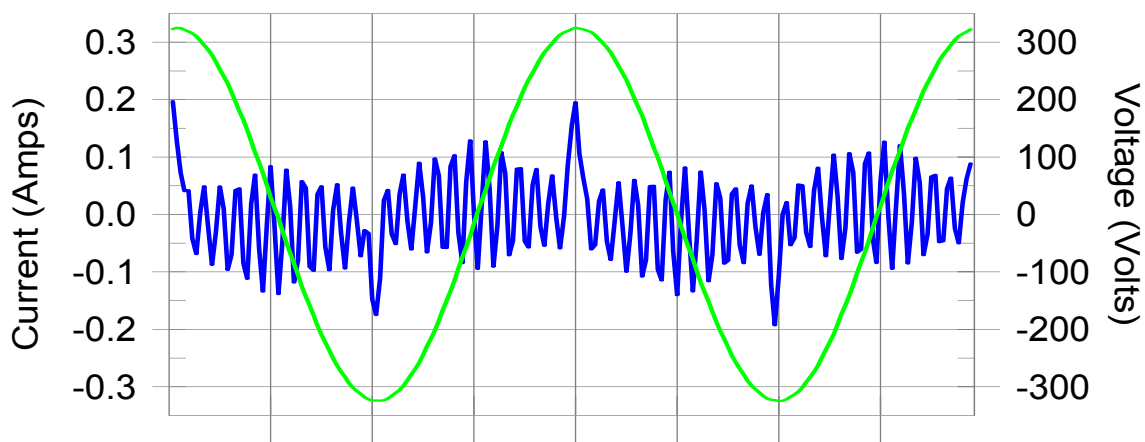
No deviation.

6.6. Test Result

Product	Network Camera		
Test Item	Power Harmonics		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	No.3 Shielded Room

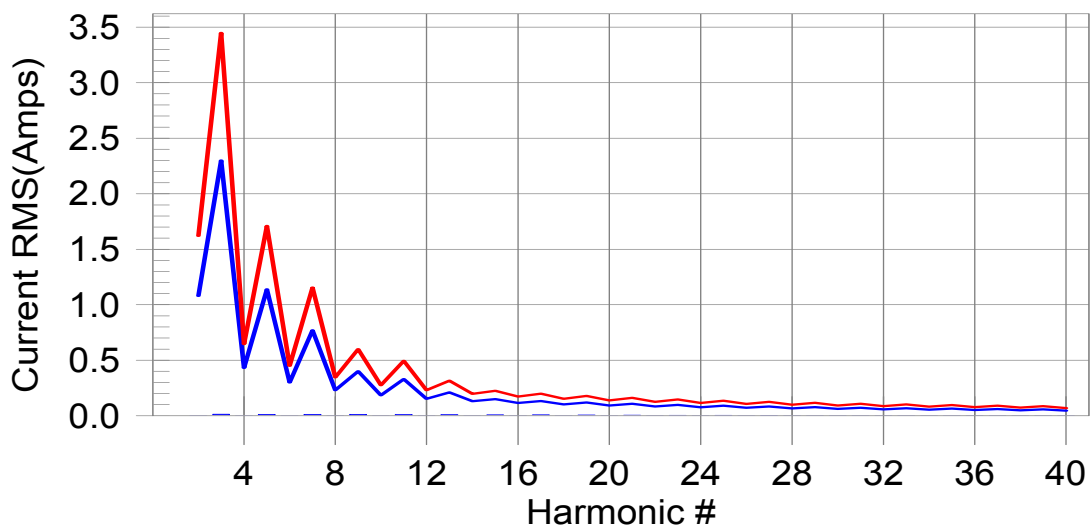
Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line

European Limits



Test result: Pass Worst harmonic was #15 with 5.72% of the limit.

Test Result: Pass Source qualification: Normal
 THC(A): 0.03 I-THD(%): 153.11 POHC(A): 0.008 POHC Limit(A): 0.251
 Highest parameter values during test:

V_RMS (Volts):	229.57	Frequency(Hz):	50.00
I_Peak (Amps):	0.247	I_RMS (Amps):	0.073
I_Fund (Amps):	0.022	Crest Factor:	3.377
Power (Watts):	3.3	Power Factor:	0.198

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	1.080	0.0	0.001	1.620	0.04	Pass
3	0.014	2.300	0.6	0.014	3.450	0.40	Pass
4	0.001	0.430	0.1	0.001	0.645	0.11	Pass
5	0.013	1.140	1.1	0.013	1.710	0.77	Pass
6	0.001	0.300	0.2	0.001	0.450	0.19	Pass
7	0.012	0.770	1.6	0.013	1.155	1.09	Pass
8	0.001	0.230	0.2	0.001	0.345	0.22	Pass
9	0.012	0.400	2.9	0.012	0.600	1.95	Pass
10	0.001	0.184	0.3	0.001	0.276	0.28	Pass
11	0.011	0.330	3.2	0.011	0.495	2.17	Pass
12	0.001	0.153	0.4	0.001	0.230	0.36	Pass
13	0.010	0.210	4.6	0.010	0.315	3.09	Pass
14	0.001	0.131	0.5	0.001	0.197	0.39	Pass
15	0.009	0.150	5.7	0.009	0.225	3.83	Pass
16	0.001	0.115	0.5	0.001	0.173	0.44	Pass
17	0.007	0.132	5.6	0.007	0.199	3.76	Pass
18	0.001	0.102	0.6	0.001	0.153	0.50	Pass
19	0.006	0.118	5.3	0.006	0.178	3.58	Pass
20	0.001	0.092	0.6	0.001	0.138	0.52	Pass
21	0.005	0.107	4.9	0.005	0.161	3.29	Pass
22	0.001	0.084	0.7	0.001	0.125	0.56	Pass
23	0.004	0.098	4.3	0.004	0.147	2.94	Pass
24	0.001	0.077	0.7	0.001	0.115	0.58	Pass
25	0.003	0.090	3.7	0.003	0.135	2.51	Pass
26	0.001	0.071	0.7	0.001	0.106	0.58	Pass
27	0.003	0.083	3.1	0.003	0.125	2.09	Pass
28	0.000	0.066	0.7	0.001	0.099	0.59	Pass
29	0.002	0.078	2.4	0.002	0.116	1.68	Pass
30	0.000	0.061	0.7	0.001	0.092	0.63	Pass
31	0.001	0.073	1.9	0.001	0.109	1.31	Pass
32	0.000	0.058	0.7	0.001	0.086	0.61	Pass
33	0.001	0.068	1.5	0.001	0.102	1.03	Pass
34	0.000	0.054	0.7	0.000	0.081	0.59	Pass
35	0.001	0.064	1.2	0.001	0.096	0.86	Pass
36	0.000	0.051	0.7	0.000	0.077	0.60	Pass
37	0.001	0.061	1.1	0.001	0.091	0.79	Pass
38	0.000	0.048	0.7	0.000	0.073	0.59	Pass
39	0.001	0.058	1.0	0.001	0.087	0.75	Pass
40	0.000	0.046	0.7	0.000	0.069	0.61	Pass

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

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

6.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Power Harmonics Test Setup

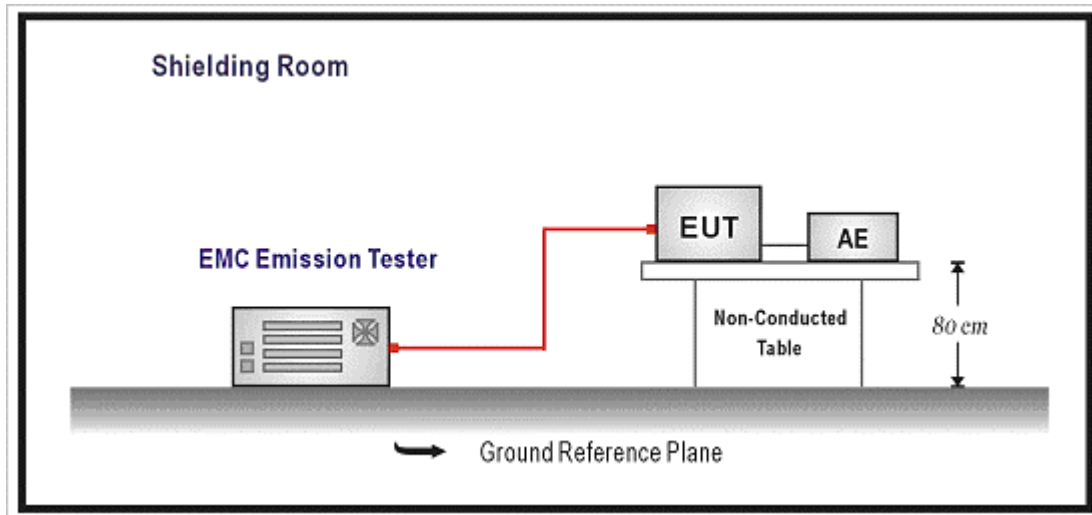


7. Voltage Fluctuation and Flicker

7.1. Test Specification

According to EMC Standard : EN 61000-3-3

7.2. Test Setup



7.3. Limit

The following limits apply:

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

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

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

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

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

7.4. Test Procedure

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

7.5. Deviation from Test Standard

No deviation.

7.6. Test Result

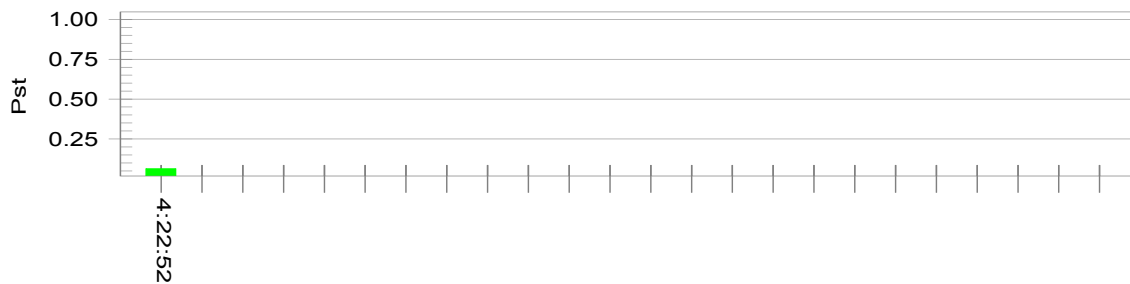
Product	Network Camera		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	No.3 Shielded Room

Test Result: Pass

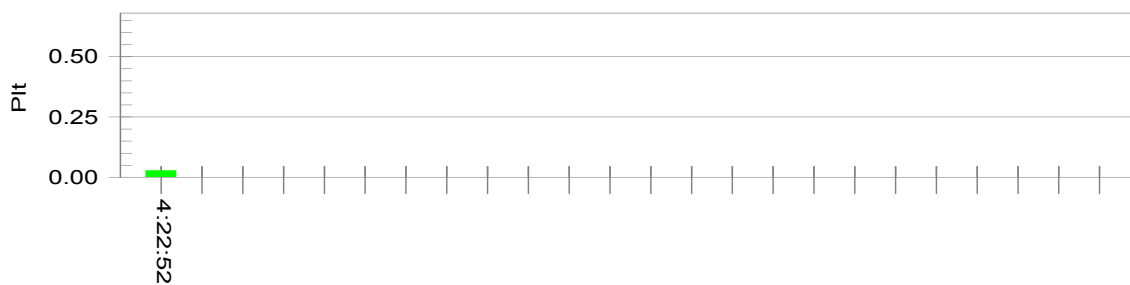
Status: Test Completed

Pstj and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.55			
Highest dt (%):	0.00	Test limit (%):	3.30	Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.064	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.028	Test limit:	0.650	Pass

7.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Flicker Test Setup

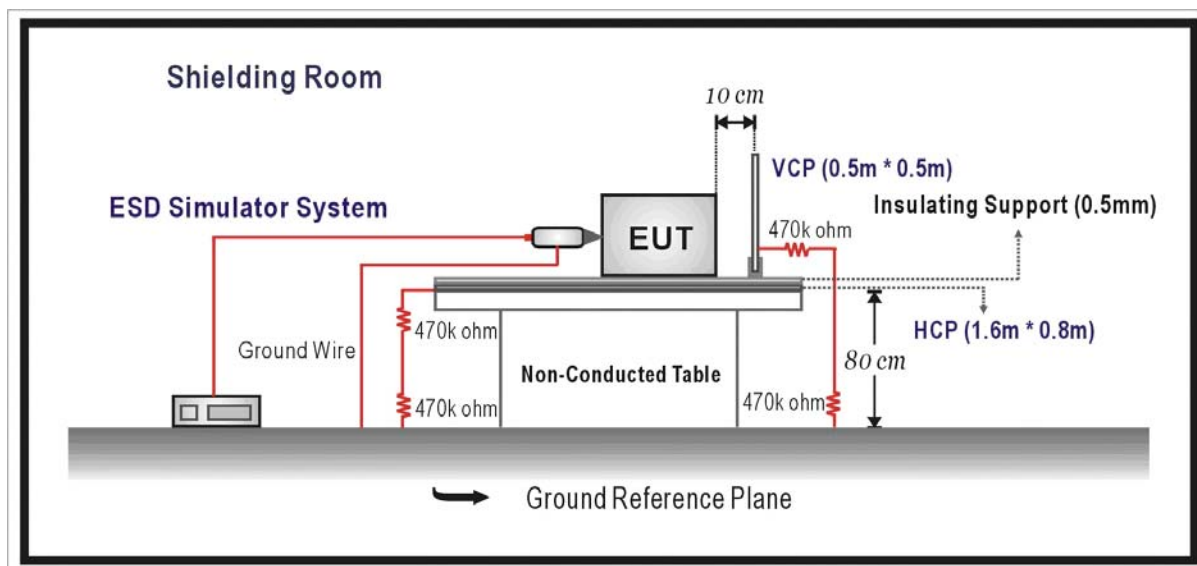


8. Electrostatic Discharge

8.1. Test Specification

According to Standard : IEC 61000-4-2

8.2. Test Setup



8.3. Limit

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

8.4. Test Procedure

Direct application of discharges to the EUT:

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

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

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

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

Indirect application of discharges to the EUT:

Vertical Coupling Plane (VCP):

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

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

Horizontal Coupling Plane (HCP):

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

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

8.5. Deviation from Test Standard

No deviation.

8.6. Test Result

Product	Network Camera		
Test Item	Electrostatic Discharge		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	No.6 Shielded Room

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

Note:

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

NR: No Requirement

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

Remark:

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

Product	Network Camera		
Test Item	Electrostatic Discharge		
Test Mode	Mode 2: Normal Operation (PT8133, POE)		
Date of Test	2012/01/14	Test Site	No.6 Shielded Room

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

Note:

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

NR: No Requirement

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

Remark:

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

8.7. Test Photograph

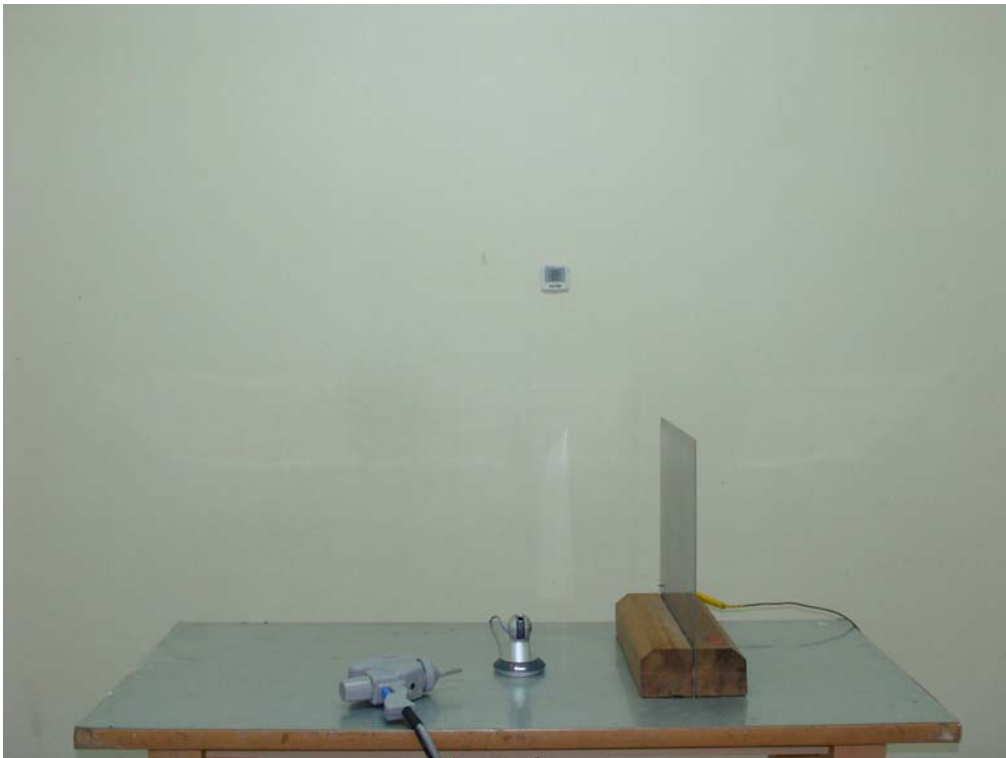
Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : ESD Test Setup



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : ESD Test Setup

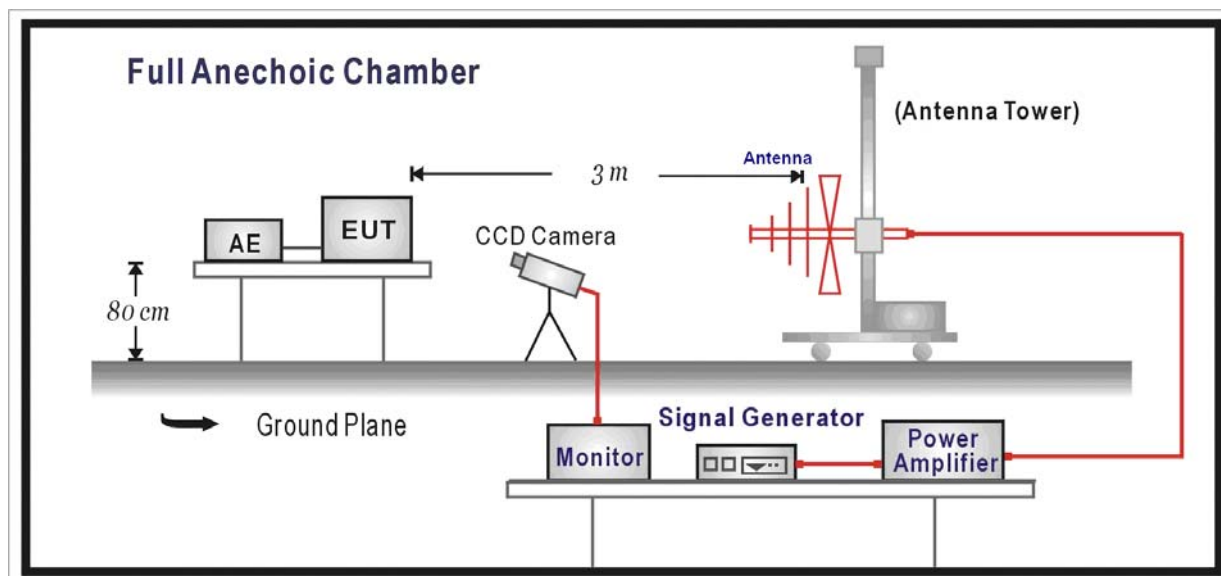


9. Radiated Susceptibility

9.1. Test Specification

According to Standard : IEC 61000-4-3

9.2. Test Setup



9.3. Limit

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

9.4. Test Procedure

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

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

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

All the scanning conditions are as follows:

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

9.5. Deviation from Test Standard

No deviation.

9.6. Test Result

Product	Network Camera		
Test Item	Radiated susceptibility		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	Chamber5

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

Note:

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

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

Product	Network Camera		
Test Item	Radiated susceptibility		
Test Mode	Mode 2: Normal Operation (PT8133, POE)		
Date of Test	2012/01/14	Test Site	Chamber5

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

Note:

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

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

9.7. Test Photograph

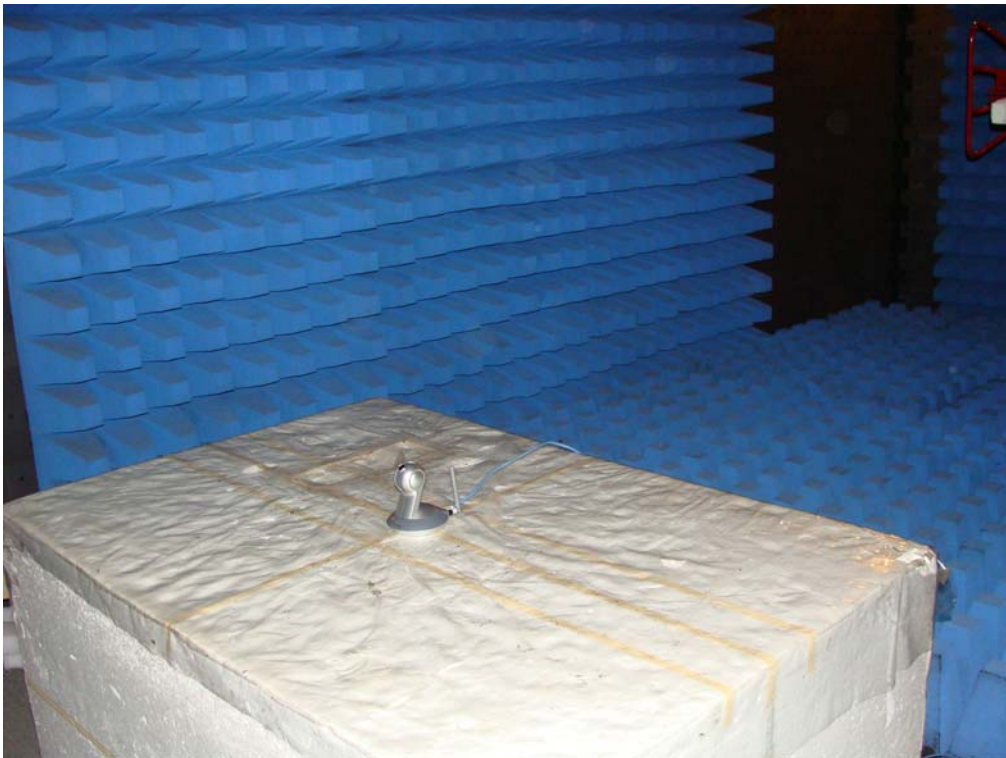
Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Radiated Susceptibility Test Setup



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : Radiated Susceptibility Test Setup

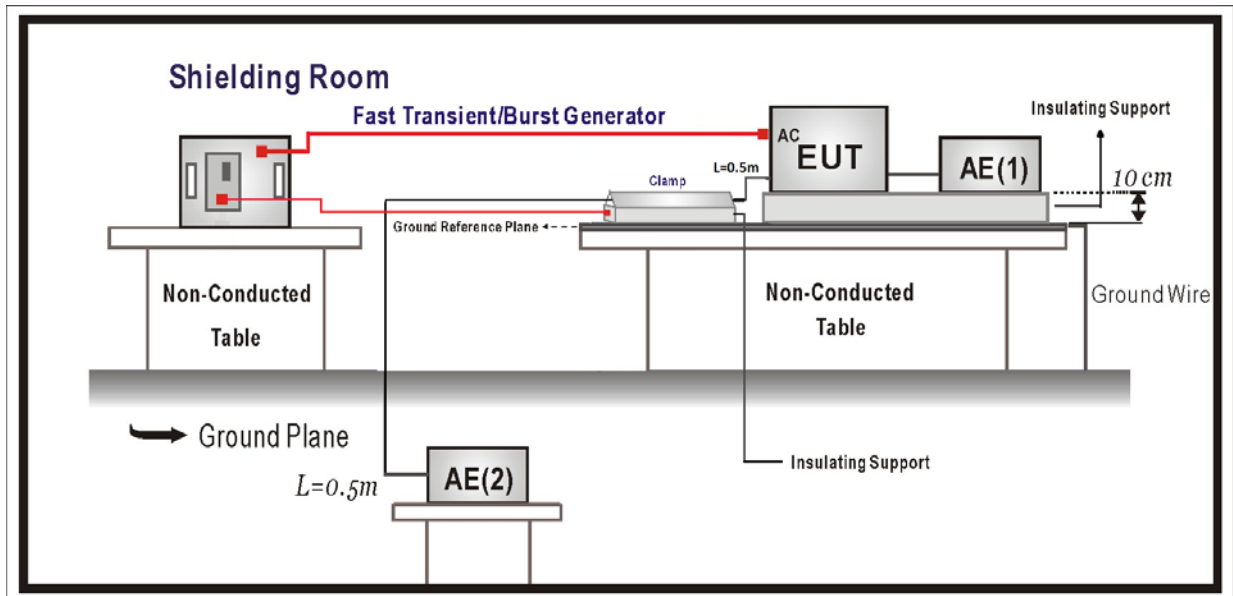


10. Electrical Fast Transient/Burst

10.1. Test Specification

According to Standard : IEC 61000-4-4

10.2. Test Setup



10.3. Limit

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

10.4. Test Procedure

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

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

Test on I/O and communication ports:

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

Test on power supply ports:

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

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

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

10.5. Deviation from Test Standard

No deviation.

10.6. Test Result

Product	Network Camera		
Test Item	Electrical fast transient/burst		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	No.3 Shielded Room

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

Note:

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

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

Product	Network Camera		
Test Item	Electrical fast transient/burst		
Test Mode	Mode 2: Normal Operation (PT8133, POE)		
Date of Test	2012/01/14	Test Site	No.3 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
LAN	±	0.5kV	60	Clamp	B	A	PASS

Note:

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

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

10.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : EFT/B Test Setup



Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : EFT/B Test Setup-Clamp



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : EFT/B Test Setup-Clamp

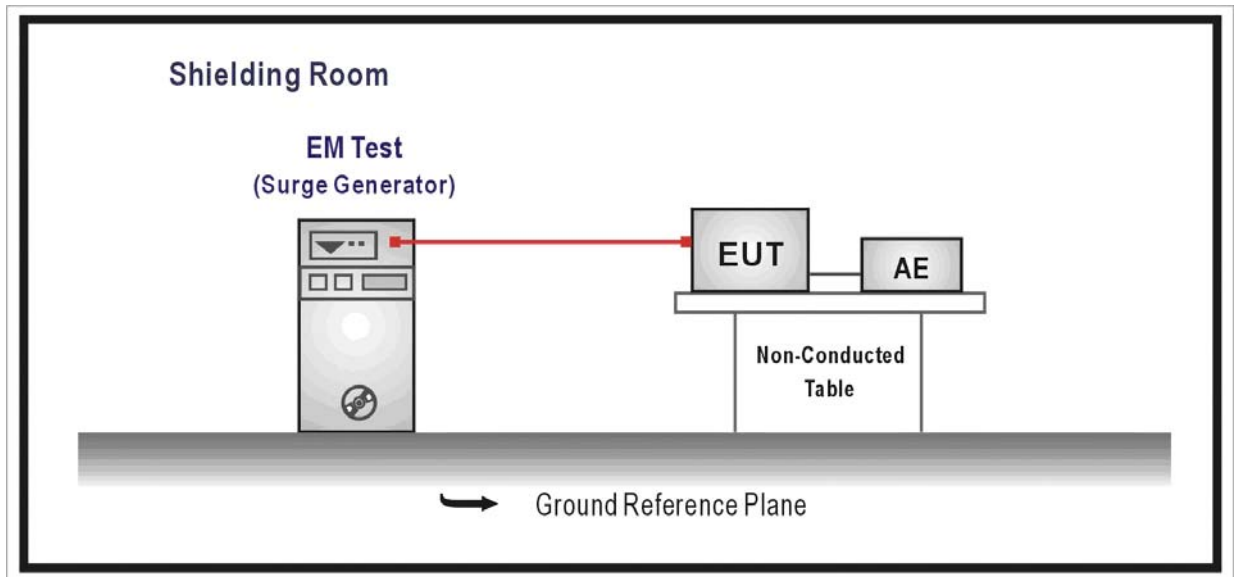


11. Surge

11.1. Test Specification

According to Standard : IEC 61000-4-5

11.2. Test Setup



11.3. Limit

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

Notes:

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

11.4. Test Procedure

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

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

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

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

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

11.5. Deviation from Test Standard

No deviation.

11.6. Test Result

Product	Network Camera		
Test Item	Surge		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	No.3 Shielded Room

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

Note:

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

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

11.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : SURGE Test Setup



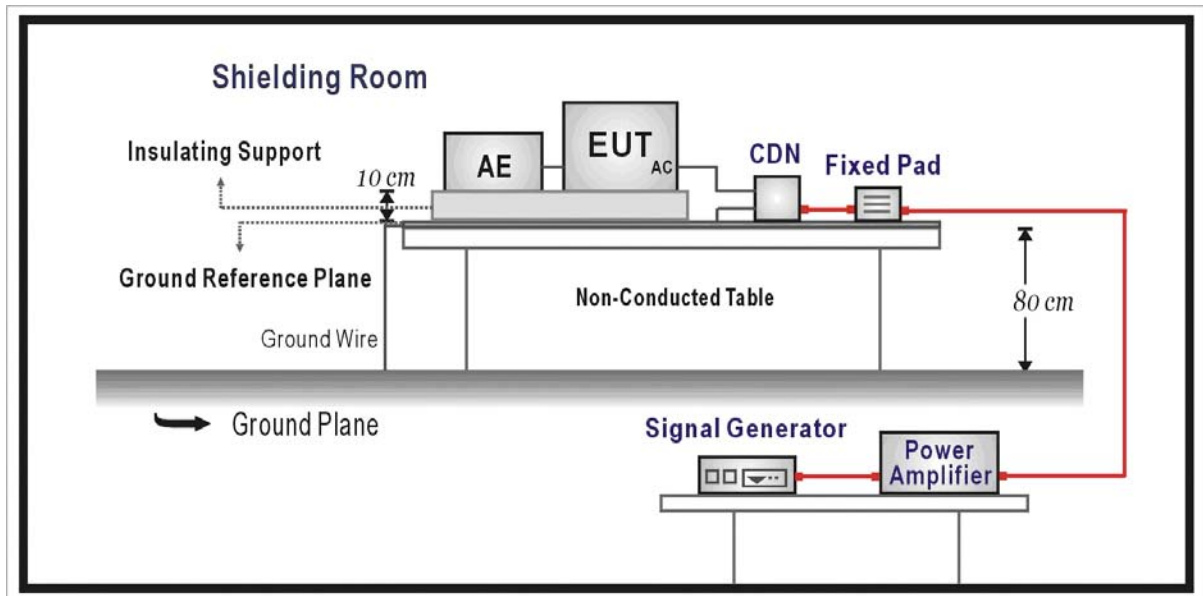
12. Conducted Susceptibility

12.1. Test Specification

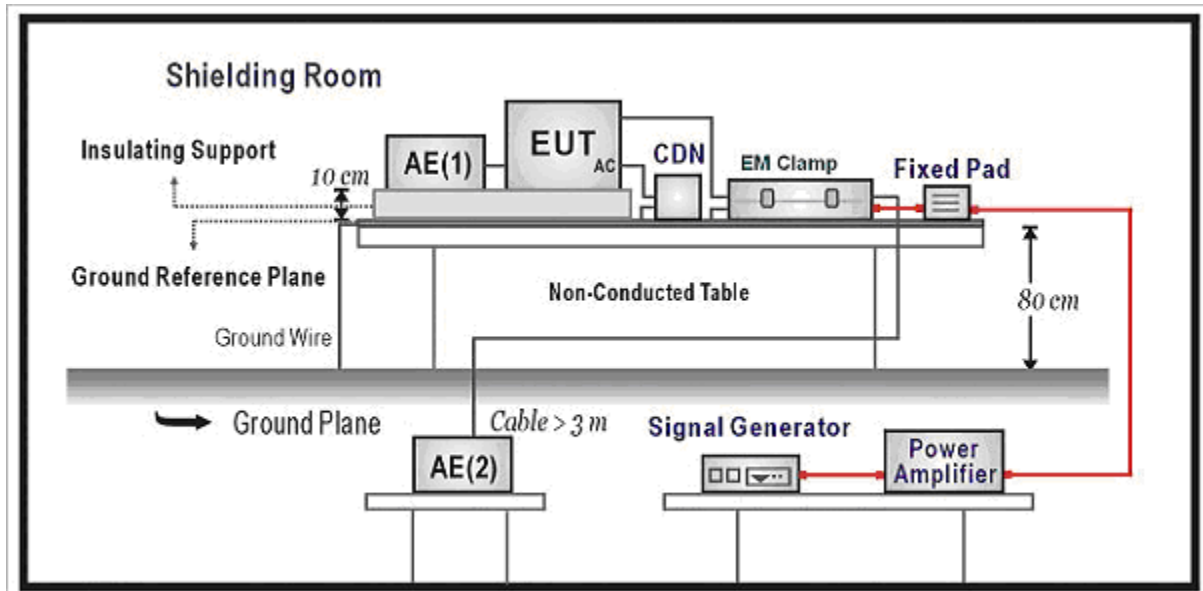
According to Standard : IEC 61000-4-6

12.2. Test Setup

CDN Inject Method



EM Clamp Inject Method



12.3. Limit

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

12.4. Test Procedure

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

For Signal Ports and Telecommunication Ports

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

For Input DC and AC Power Ports

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

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

All the scanning conditions are as follows:

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

12.5. Deviation from Test Standard

No deviation.

12.6. Test Result

Product	Network Camera		
Test Item	Conducted susceptibility		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	No.6 Shielded Room

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

Note:

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

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

Product	Network Camera		
Test Item	Conducted susceptibility		
Test Mode	Mode 2: Normal Operation (PT8133, POE)		
Date of Test	2012/01/14	Test Site	No.6 Shielded Room

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

Note:

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

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

12.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Conducted Susceptibility Test Setup



Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Conducted Susceptibility Test Setup-CDN



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : Conducted Susceptibility Test Setup-Clamp

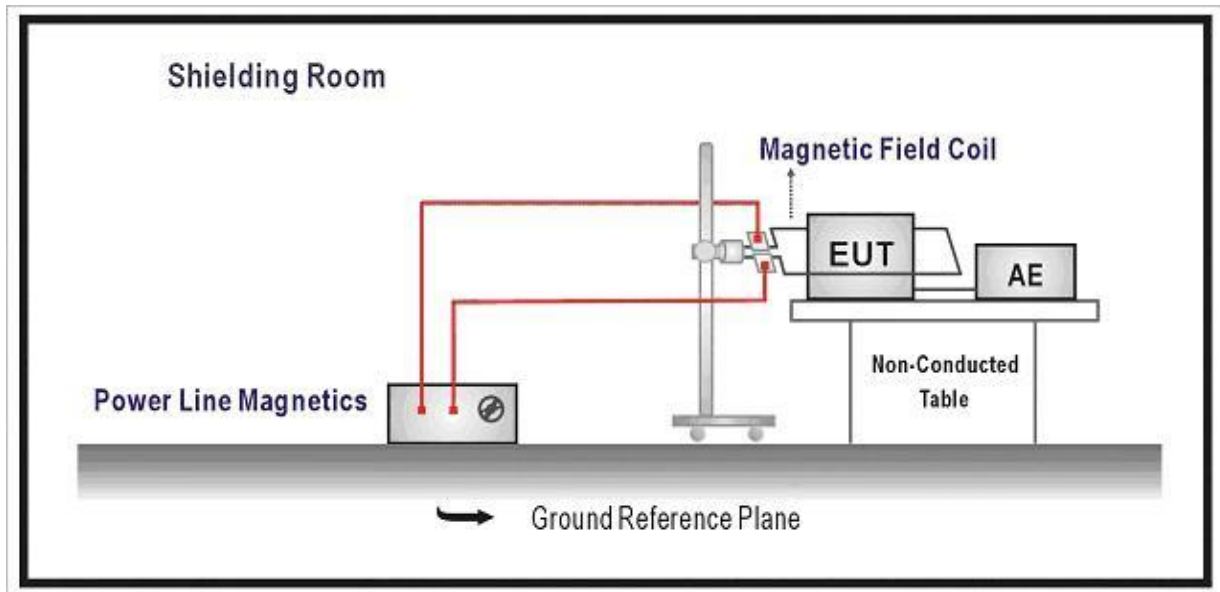


13. Power Frequency Magnetic Field

13.1. Test Specification

According to Standard : IEC 61000-4-8

13.2. Test Setup



13.3. Limit

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

13.4. Test Procedure

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

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

13.5. Deviation from Test Standard

No deviation.

13.6. Test Result

Product	Network Camera		
Test Item	Power frequency magnetic field		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	No.3 Shielded Room

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

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

Product	Network Camera		
Test Item	Power frequency magnetic field		
Test Mode	Mode 2: Normal Operation (PT8133, POE)		
Date of Test	2012/01/14	Test Site	No.3 Shielded Room

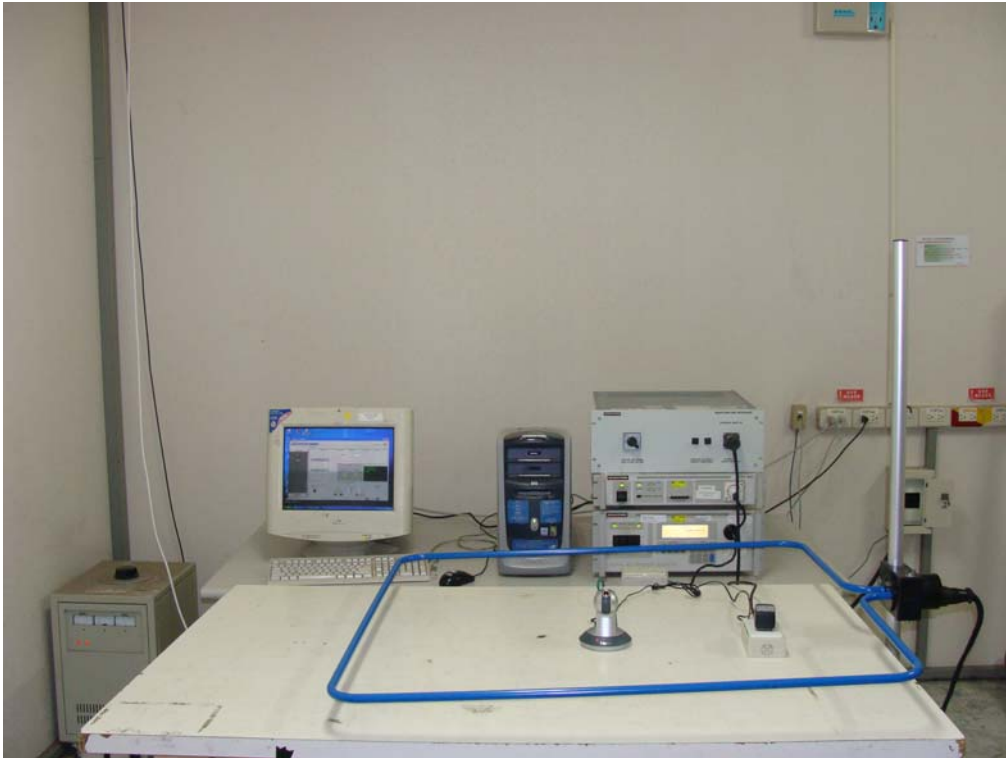
Polarization	Frequency (Hz)	Magnetic Strength (A/m)	Required Performance Criteria	Performance Criteria Complied To	Test Result
X Orientation	50	1	A	A	PASS
Y Orientation	50	1	A	A	PASS
Z Orientation	50	1	A	A	PASS

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

13.7. Test Photograph

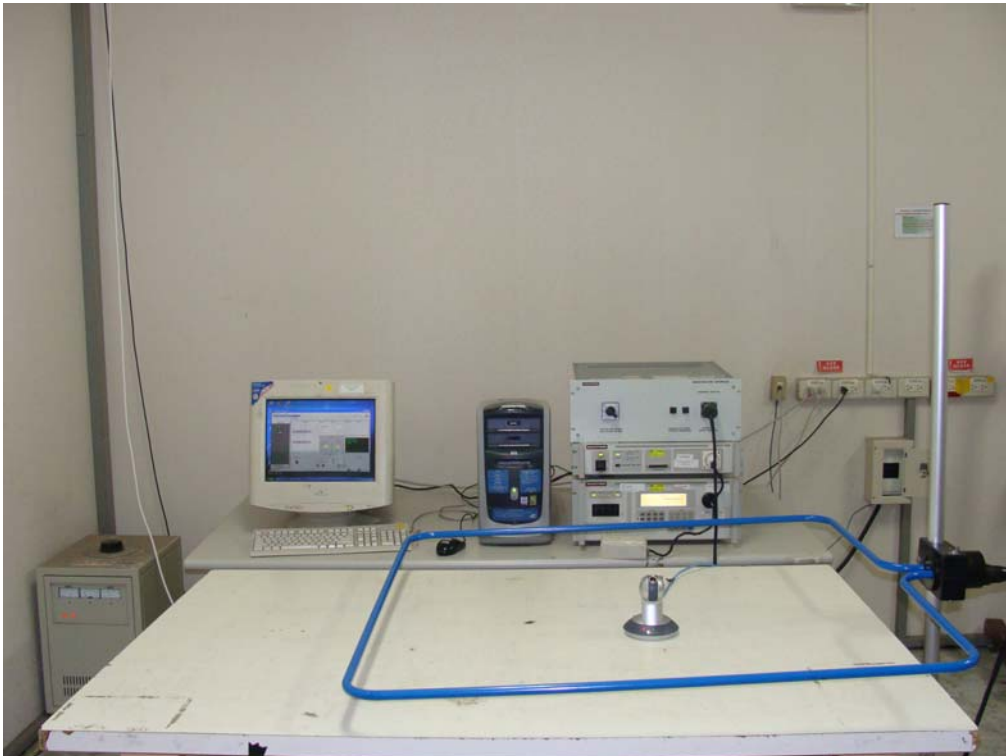
Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Power Frequency Magnetic Field Test Setup



Test Mode : Mode 2: Normal Operation (PT8133, POE)

Description : Power Frequency Magnetic Field Test Setup

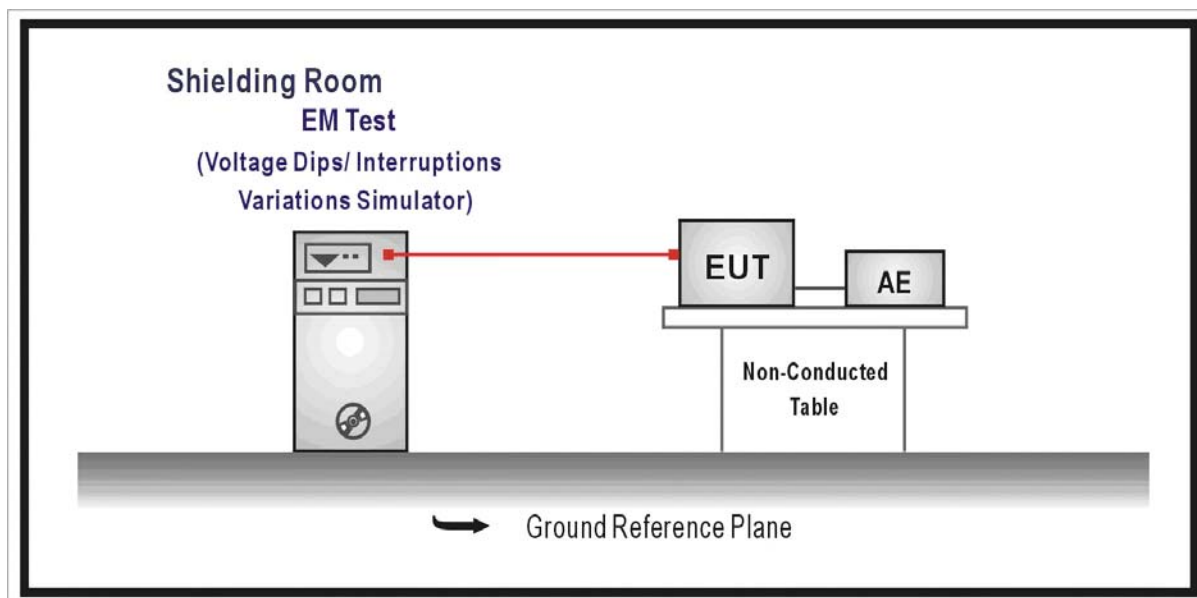


14. Voltage Dips and Interruption

14.1. Test Specification

According to Standard : IEC 61000-4-11

14.2. Test Setup



14.3. Limit

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

14.4. Test Procedure

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

For Voltage Dips/ Interruptions test:

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

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

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

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

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

14.5. Deviation from Test Standard

No deviation.

14.6. Test Result

Product	Network Camera		
Test Item	Voltage dips and interruption		
Test Mode	Mode 1: Normal Operation (PT8133W, Adapter)		
Date of Test	2012/01/14	Test Site	No.3 Shielded Room

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

- Meet criteria A: Operate as intended during and after the test
- Meet criteria B: Operate as intended after the test
- Meet criteria C: Loss/Error of function
- Additional Information
 - The nominal voltage of EUT is 230V.
 - EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
- No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

14.7. Test Photograph

Test Mode : Mode 1: Normal Operation (PT8133W, Adapter)

Description : Voltage Dips Test Setup



15. Attachment

➤ EUT Photograph

(1) EUT Photo (M/N:PT8133)



(2) EUT Photo



(3) EUT Photo



(4) EUT Photo



(5) EUT Photo (M/N:PT8133W)



(6) EUT Photo



(7) EUT Photo



(8) EUT Photo



(9) EUT Photo



(10) EUT Photo



(11) EUT Photo



(12) EUT Photo

