Test Report

Product Name ： Network Camera

Model No. ： IP8133, IP8133W

Applicant ： VIVOTEK INC.

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

Date of Receipt ： 2011/09/19

Issued Date ： 2011/09/30

Report No. ： 119338R-ITCEP11V04

Report Version ： V1.0

CE

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	:	IP8133, IP8133W
Applicable Harmonized Standards under Directive 2004/108/EC	:	EN 55022:2006+A1: 2007, Class B EN 55024: 1998+A1: 2001+A2: 2003 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

Accredited by NVLAP, TAF-CNLA, DNV, TUV, Nemko

Date : Sep. 30, 2011
QTK No.: 119338R-ITCEP11V04

CE

Statement of Conformity

This statement is to certify that the designated product below.

Product	:	Network Camera
Trade name	:	VIVOTEK
Model Number	:	IP8133, IP8133W
Company Name	:	VIVOTEK INC.
Applicable Standards	:	EN 55022:2006+A1: 2007, Class B
		EN 55024: 1998+A1: 2001+A2: 2003
		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 : 119338R-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.

Quietek Corporation / No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
Tel: 866-2-8601-3788, Fax: +886-2-8601-3789, E-mail: service@quietek.com

Test Report Certification

Issued Date : 2011/09/30
Report No. : 119338R-ITCEP11V04

QuieTek

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.	:	IP8133, IP8133W
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: 2006+A1: 2007, Class B EN 55024: 1998+A1: 2001+A2: 2003 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. TEL:+866-2-8601-3788 / FAX:+886-2-8601-3789

Documented By : Anita Chou
(Senior Engineering Adm. Specialist / Anita Chou)

Reviewed By : Mark Lu
(Engineer / Mark Lu)

Approved By :
(Manager / Vincent Lin)

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:

HsinChu Testing Laboratory :
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0

Testing Laboratory 1313

LinKou Testing Laboratory :
No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0

Testing Laboratory 0914

Suzhou (China) Testing Laboratory :
No. 99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., Suzhou,China.
TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098 E-Mail : service@quietek.com

NVLAP Lab Code : 200743-0

Testing Laboratory 1596

TABLE OF CONTENTS

1. General Information

1.1. EUT Description

Product Name	Network Camera
Trade Name	VIVOTEK
Model No.	IP8133, IP8133W

Component	
Power Adapter	MFR: JENTEC, M/N: CF1205-C Input: AC 100-240V ~ 0.4A, 50-60Hz Output: DC +5V, 2A Cable Out: Non-Shielded, 1.6m
Power Adapter	MFR: JENTEC, M/N: CF1205-E Input: AC 100-240V ~ 0.4A, 50-60Hz Output: DC +5V, 2A Cable Out: Non-Shielded, 1.6m

Note:

The different of each model is shown as below:

Model Number	IP8133	IP8133W
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 (IP8133W, LAN) Mode 2: Normal Operation (IP8133W, WLAN) Mode 3: Normal Operation (IP8133, POE)	
Final Test Mode	
Conducted Emission	Mode 1: Normal Operation (IP8133W, LAN) Mode 2: Normal Operation (IP8133W, WLAN)
Impedance Stabilization Network	Mode 1: Normal Operation (IP8133W, LAN) Mode 3: Normal Operation (IP8133, POE)
Radiated Emission	Mode 1: Normal Operation (IP8133W, LAN) Mode 2: Normal Operation (IP8133W, WLAN) Mode 3: Normal Operation (IP8133, POE)
Immunity	Mode 1: Normal Operation (IP8133W, LAN) Mode 2: Normal Operation (IP8133W, WLAN) Mode 3: Normal Operation (IP8133, 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:

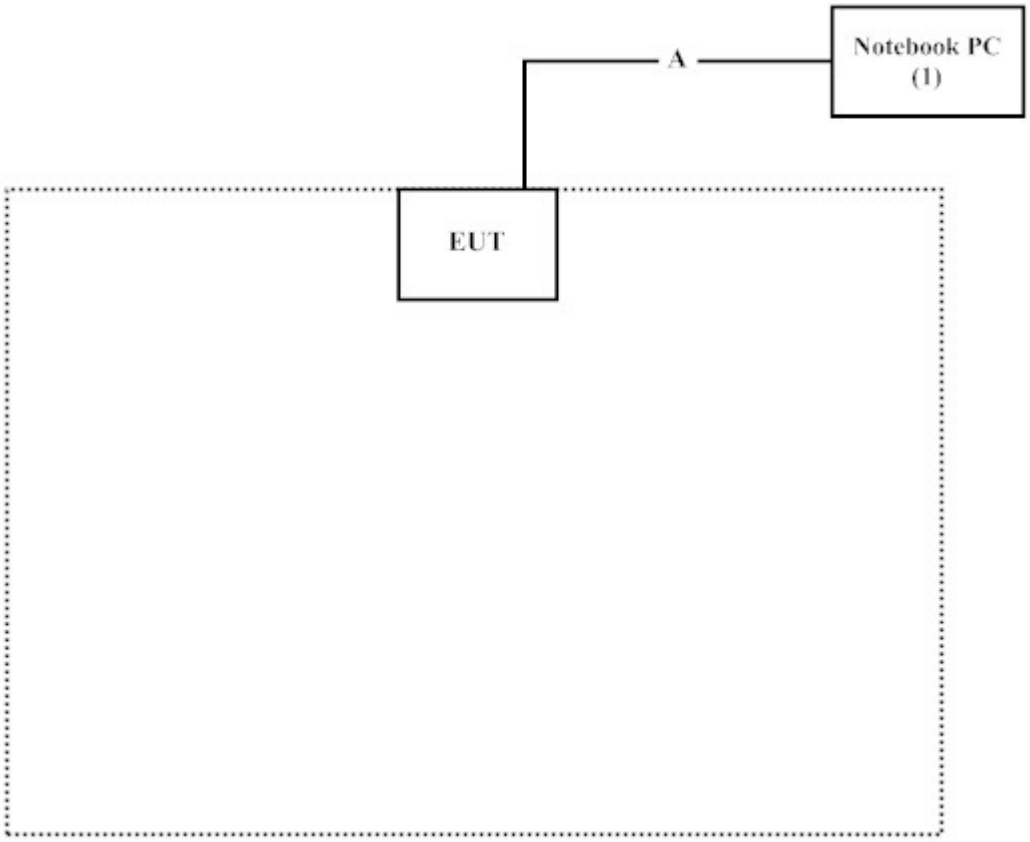
Test Mode		Mode 1: Normal Operation (IP8133W, LAN)			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	D630	00144-023-351-283	Non-Shielded, 0.8m

Test Mode		Mode 2: Normal Operation (IP8133W, WLAN)			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	D630	00144-023-351-283	Non-Shielded, 0.8m
2	Wireless Router	ZyXEL	P-330W	S5F3601130	Shielded, 1.8m

Test Mode		Mode 3: Normal Operation (IP8133, POE)			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	D630	00144-023-351-283	Non-Shielded, 0.8m
2	POE	Linksys	WAPPOE12	N/A	Non-Shielded, 1.8m

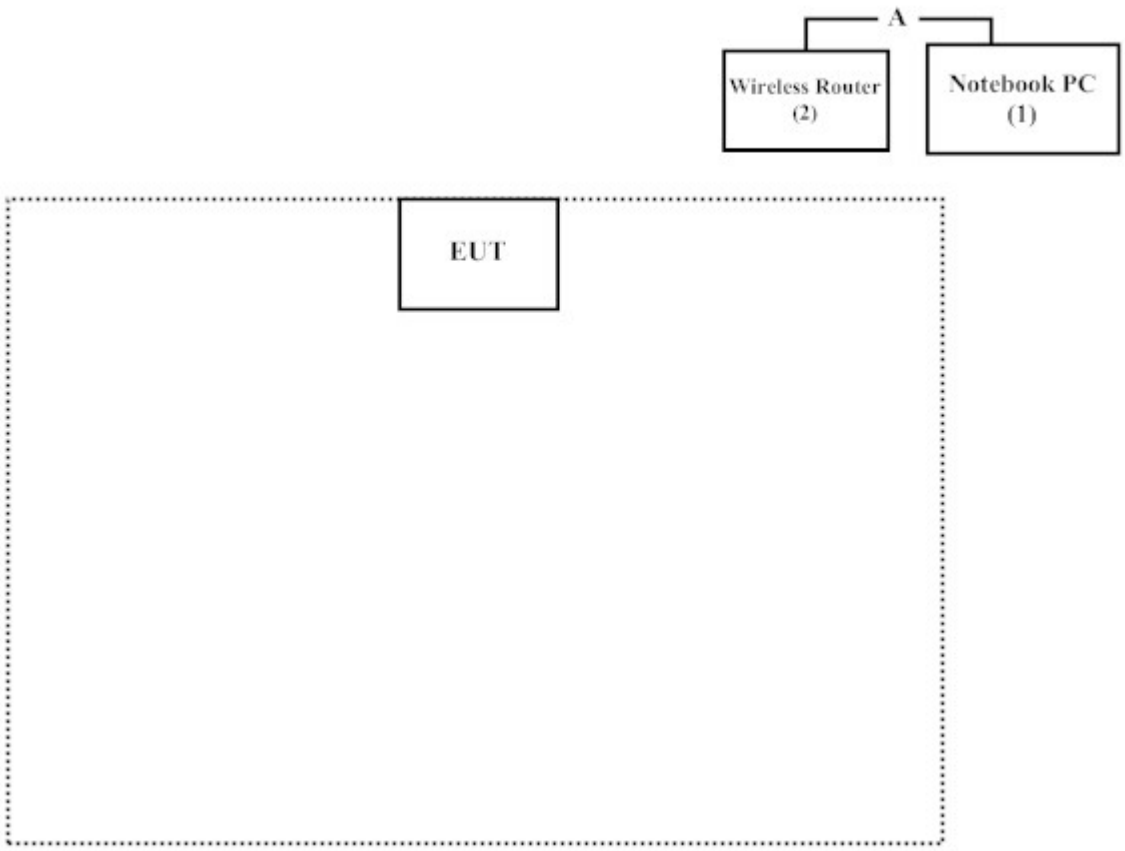
1.4. Configuration of Tested System

Test Mode	Mode 1: Normal Operation (IP8133W, LAN)
Connection Diagram	



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 3.0m

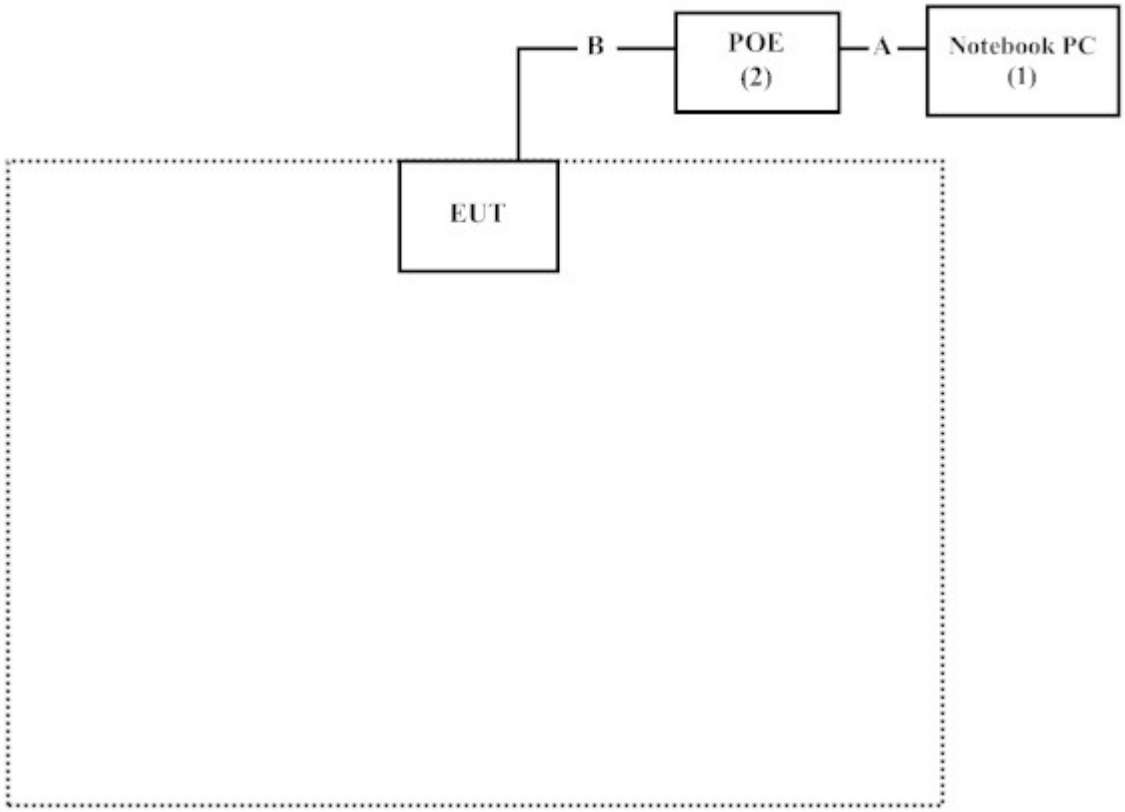
Test Mode	Mode 2: Normal Operation (IP8133W, WLAN)
Connection Diagram	



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 3.0m

Test Mode	Mode 3: Normal Operation (IP8133, POE)

Connection Diagram



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 0.3m
B	LAN Cable	Non-Shielded, 3m

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 55022:2006+A1: 2007	Yes	No
Impedance Stabilization Network	EN 55022:2006+A1: 2007	Yes	No
Radiated Emission	EN 55022:2006+A1: 2007	Yes	No
Power Harmonics	EN 61000-3-2: 2006+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	2010/11/10
LISN	R&S	ESH3-Z5	836679/020	2011/02/10
LISN	R&S	ENV216	100085	2011/02/10
Pulse Limiter	R&S	ESH3-Z2	100324	2011/04/06

Impedance Stabilization Network / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Capacitive Voltage Probe	Schaffner	CVP2200A	18331	2010/11/15
EMI Test Receiver	R&S	ESCS 30	100366	2010/11/10
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	2010/11/08
BALANCED TELECOM ISN	FCC	FCC-TLISN-T2-02	20316	2011/07/08
BALANCED TELECOM ISN	FCC	FCC-TLISN-T4-02	20317	2011/07/08
BALANCED TELECOM ISN	FCC	FCC-TLISN-T8-02	20319	2011/07/08

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	2010/12/06
Pre-Amplifier	QTK	N/A	N/A	2011/07/07
CXA Signal Analyzer	Agilent	N9000A	MY50510072	2011/02/10

Radiated Emission / 9x6x6_Chamber

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESIB26	838786/004	2011/06/29
Horn Antenna	Schwarzbeck	9120D	576	2010/11/12
Pre-Amplifier	QuieTek	AP-025C	CHM/071919	2011/07/12

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	ESS09Z9758	2011/03/28
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

Electrical fast transient/burst / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
TRANSIENT TEST SYSTEM	EMC PARTNER	TRA2000IN6	1138	2010/12/09

Surge / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
TRANSIENT TEST SYSTEM	EMC PARTNER	TRA2000IN6	1138	2010/12/09

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	2010/12/09

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Impedance Stabilization Network

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

Electrostatic Discharge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025, 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

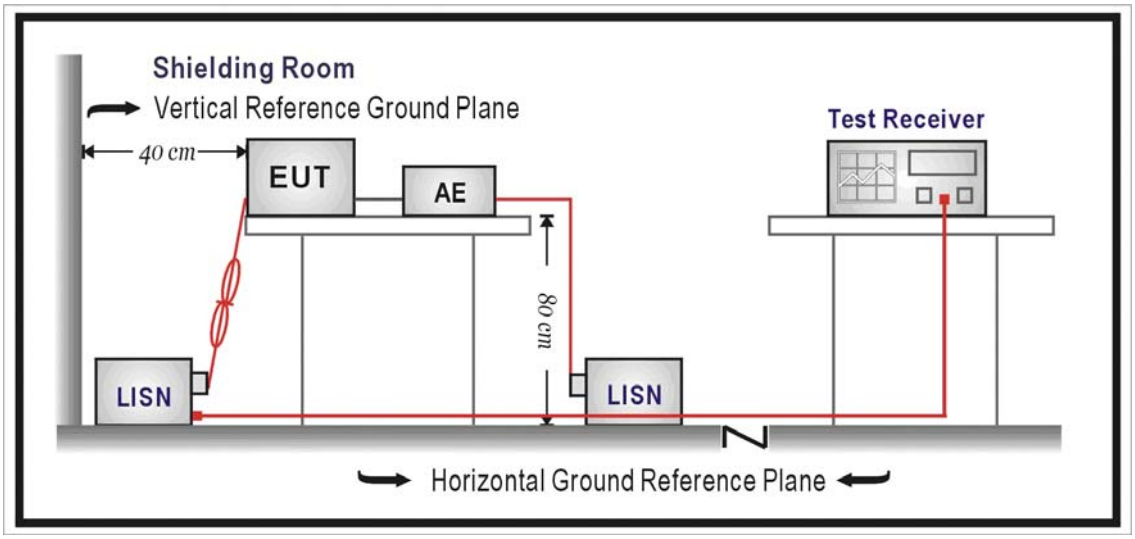
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Impedance Stabilization Network	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Electrostatic Discharge	Temperature (°C)	15-35	24
	Humidity (%RH)	30-60	55
	Barometric pressure (mbar)	860-1060	950-1000
Radiated susceptibility	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Electrical fast transient/burst	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Surge	Temperature (°C)	15-35	24
	Humidity (%RH)	10-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Conducted susceptibility	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Power frequency magnetic field	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Voltage dips and interruption	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	55
	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

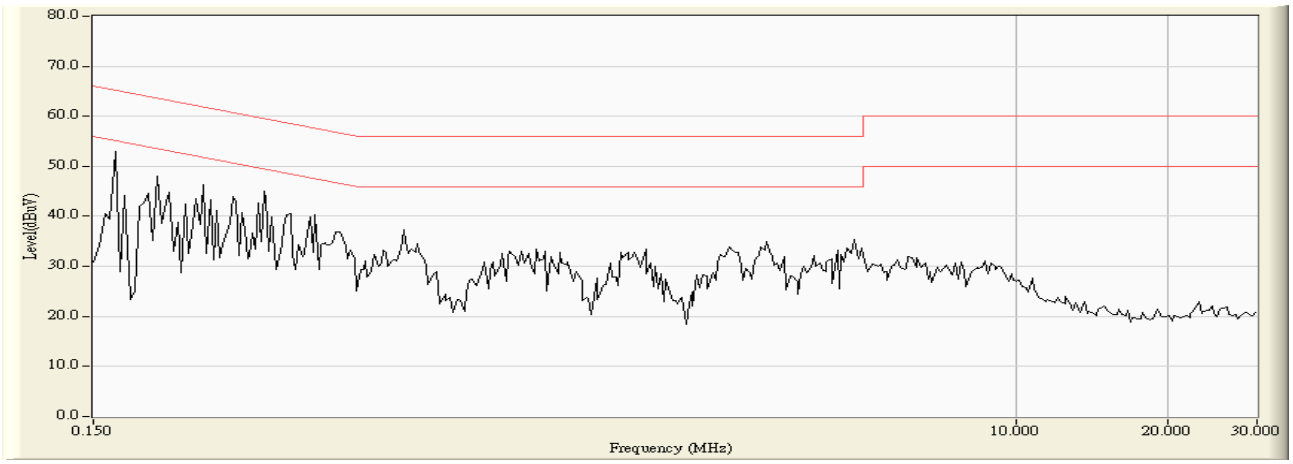
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling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

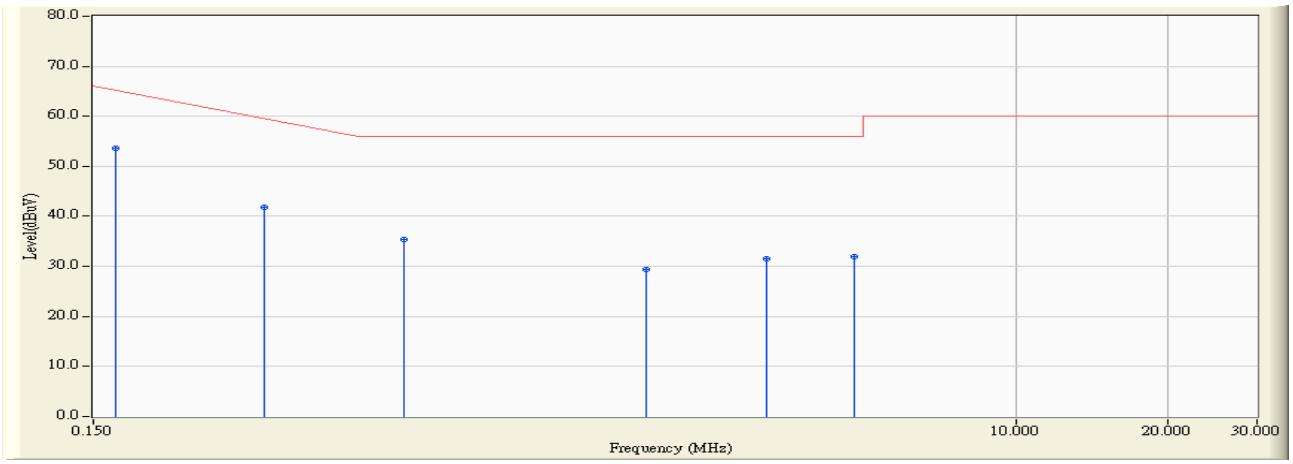
No deviation.

3.6. Test Result

Site : SR_1	**Time : 2011/09/22 - 00:41**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Network Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1**



Site : SR_1	**Time : 2011/09/22 - 00:42**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1**

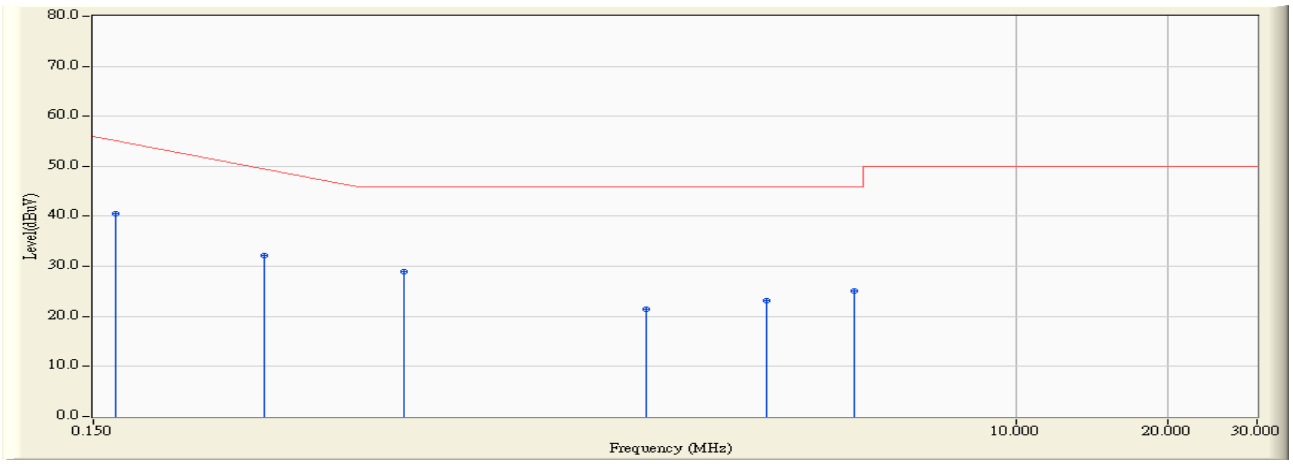


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.166	9.790	43.890	53.680	-11.863	65.543	QUASIPEAK
2		0.326	9.790	31.990	41.780	-19.191	60.971	QUASIPEAK
3		0.619	9.790	25.570	35.360	-20.640	56.000	QUASIPEAK
4		1.857	9.810	19.470	29.280	-26.720	56.000	QUASIPEAK
5		3.220	9.820	21.710	31.530	-24.470	56.000	QUASIPEAK
6		4.783	9.830	22.210	32.040	-23.960	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 : SR_1	**Time : 2011/09/22 - 00:42**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1**

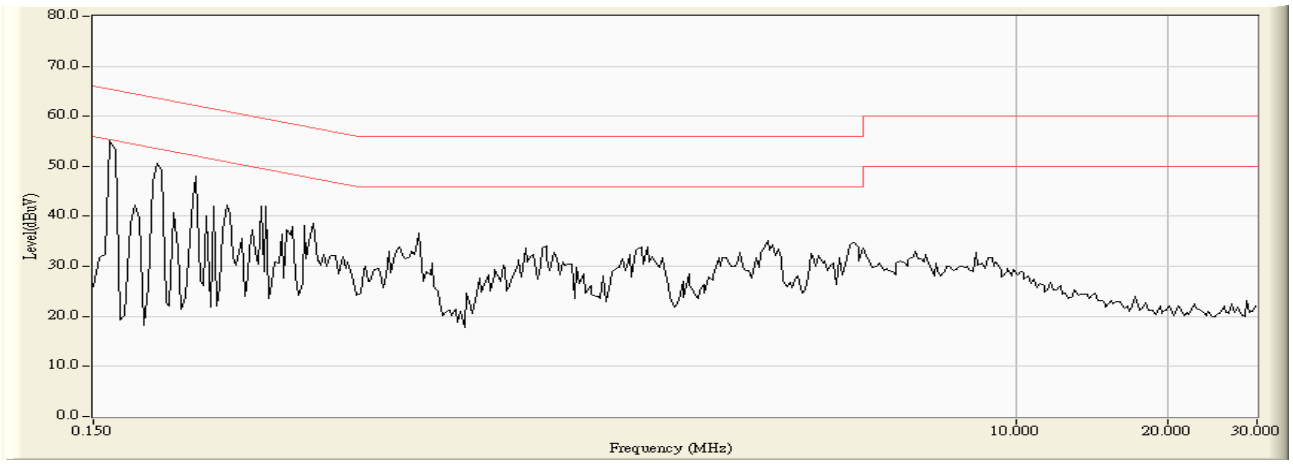


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.166	9.790	30.800	40.590	-14.953	55.543	AVERAGE
2		0.326	9.790	22.440	32.230	-18.741	50.971	AVERAGE
3		0.619	9.790	19.230	29.020	-16.980	46.000	AVERAGE
4		1.857	9.810	11.600	21.410	-24.590	46.000	AVERAGE
5		3.220	9.820	13.440	23.260	-22.740	46.000	AVERAGE
6		4.783	9.830	15.280	25.110	-20.890	46.000	AVERAGE

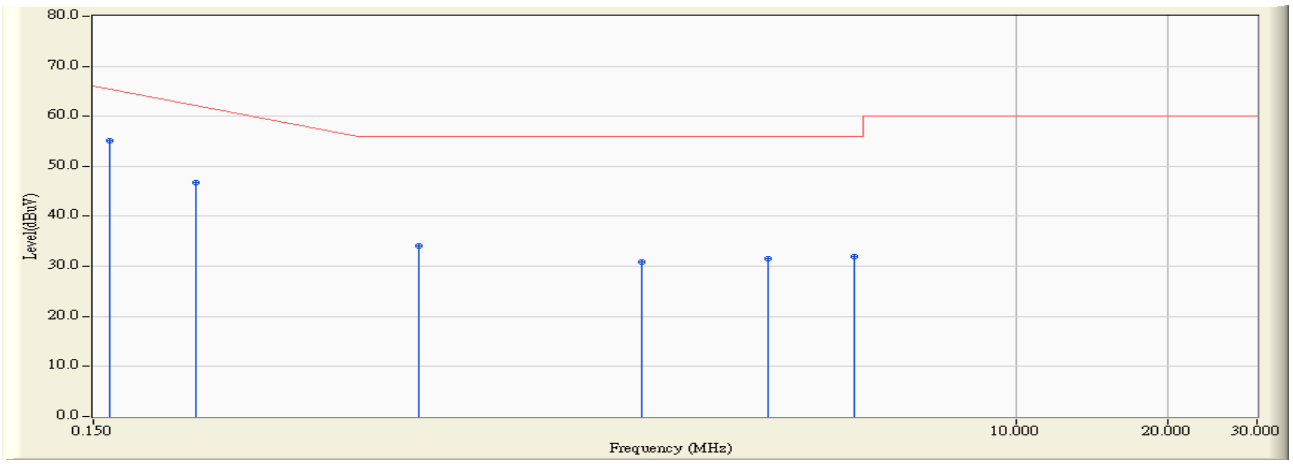
Note:

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 : SR_1	**Time : 2011/09/22 - 00:42**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Network Camera	**Probe : ENV_216_N - Line2**
Power : AC 230V/50Hz	**Note : Mode 1**



Site : SR_1	**Time : 2011/09/22 - 00:43**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ENV_216_N - Line2**
Power : AC 230V/50Hz	**Note : Mode 1**

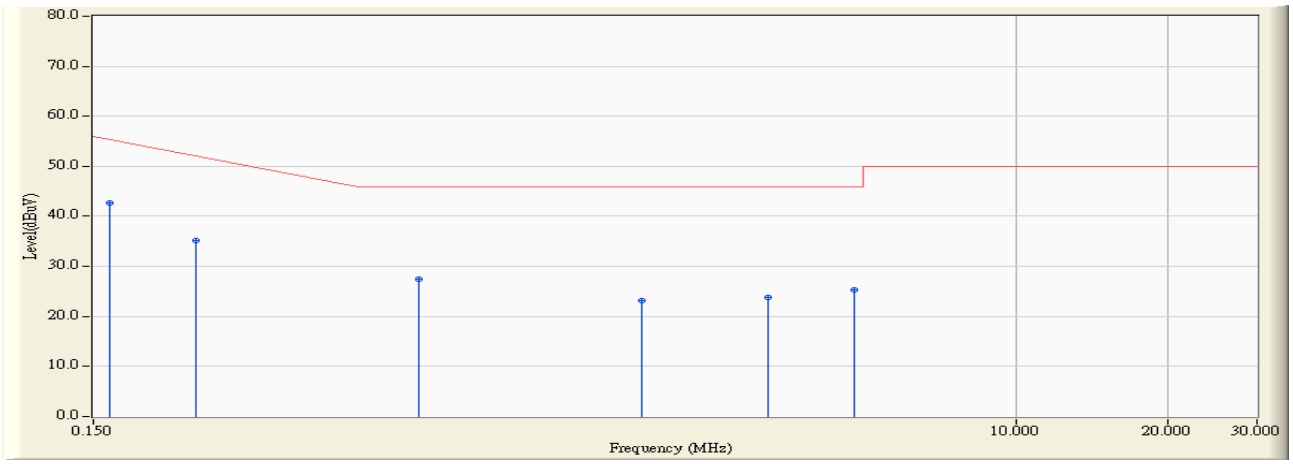


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.162	9.780	45.270	55.050	-10.607	65.657	QUASIPEAK
2		0.240	9.780	36.970	46.750	-16.679	63.429	QUASIPEAK
3		0.662	9.790	24.230	34.020	-21.980	56.000	QUASIPEAK
4		1.822	9.800	21.010	30.810	-25.190	56.000	QUASIPEAK
5		3.236	9.810	21.750	31.560	-24.440	56.000	QUASIPEAK
6		4.802	9.830	22.150	31.980	-24.020	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 : SR_1	**Time : 2011/09/22 - 00:43**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ENV_216_N - Line2**
Power : AC 230V/50Hz	**Note : Mode 1**

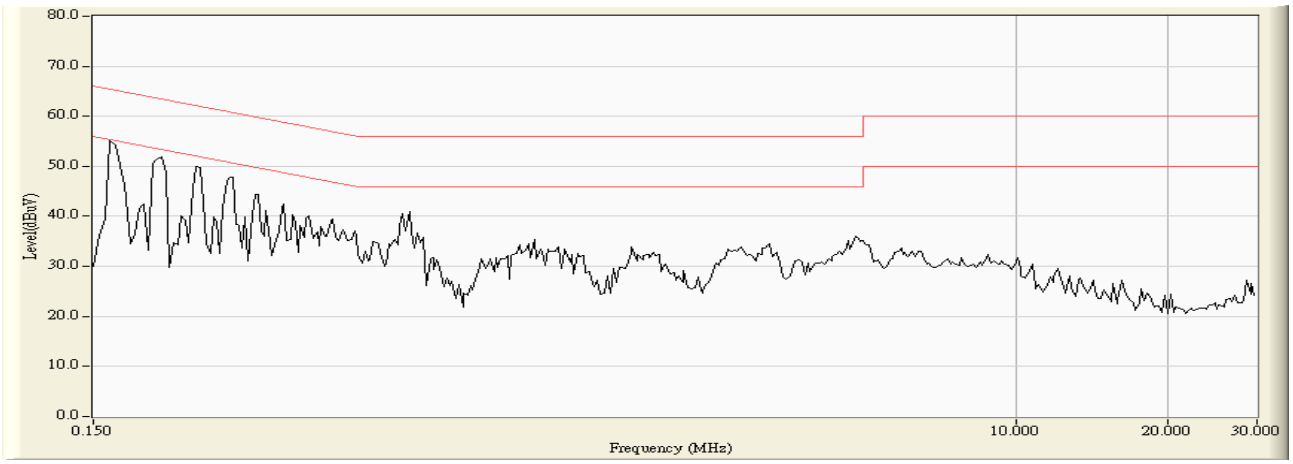


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.162	9.780	32.960	42.740	-12.917	55.657	AVERAGE
2		0.240	9.780	25.480	35.260	-18.169	53.429	AVERAGE
3		0.662	9.790	17.620	27.410	-18.590	46.000	AVERAGE
4		1.822	9.800	13.370	23.170	-22.830	46.000	AVERAGE
5		3.236	9.810	13.890	23.700	-22.300	46.000	AVERAGE
6		4.802	9.830	15.520	25.350	-20.650	46.000	AVERAGE

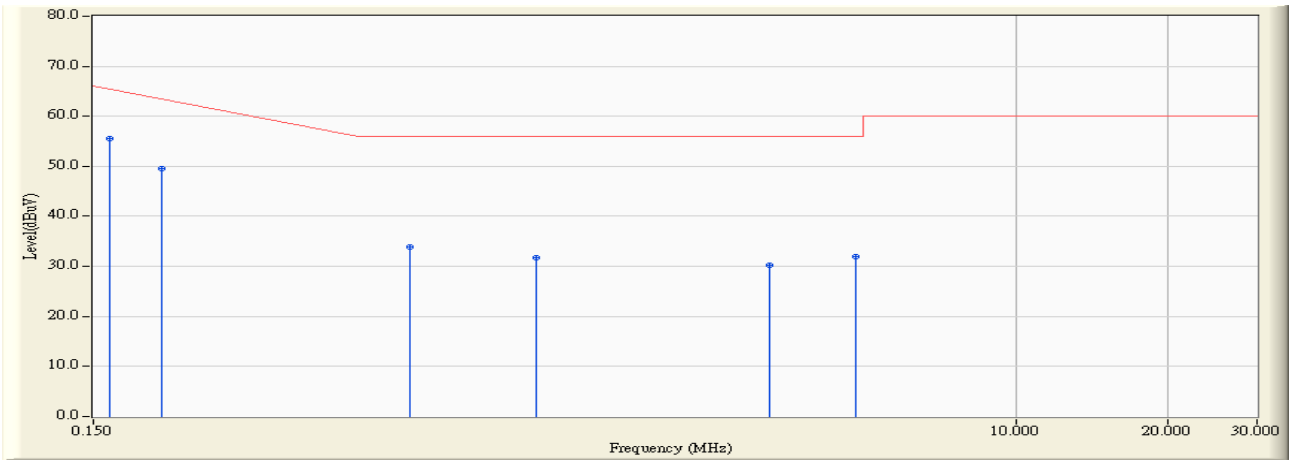
Note:

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 : SR_1	**Time : 2011/09/22 - 01:14**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Network Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 2**



Site : SR_1	**Time : 2011/09/22 - 01:15**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 2**

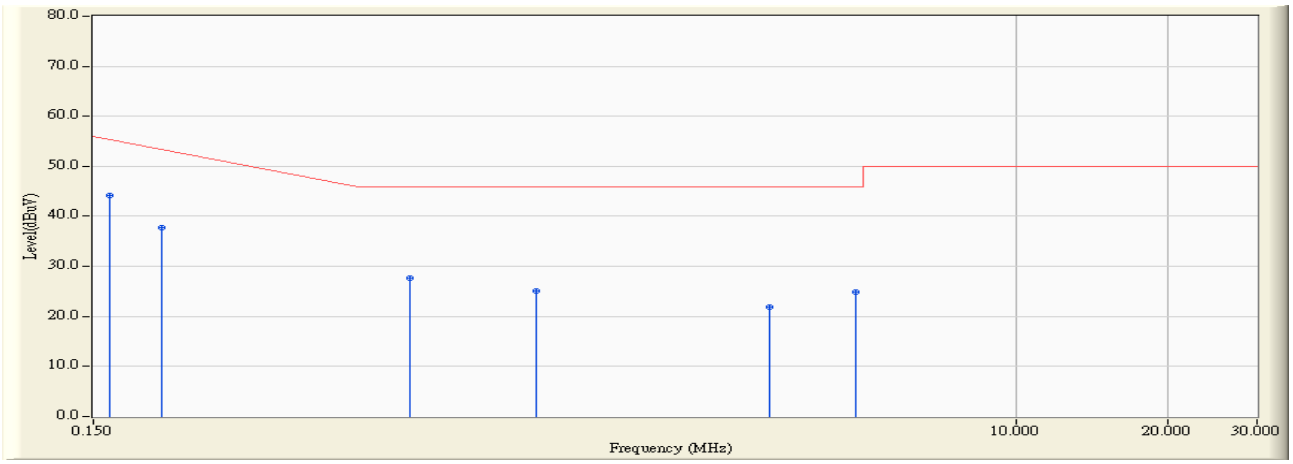


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.162	9.790	45.710	55.500	-10.157	65.657	QUASIPEAK
2		0.205	9.790	39.710	49.500	-14.929	64.429	QUASIPEAK
3		0.634	9.790	24.090	33.880	-22.120	56.000	QUASIPEAK
4		1.123	9.800	21.870	31.670	-24.330	56.000	QUASIPEAK
5		3.259	9.820	20.470	30.290	-25.710	56.000	QUASIPEAK
6		4.814	9.830	22.210	32.040	-23.960	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 : SR_1	**Time : 2011/09/22 - 01:15**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 2**

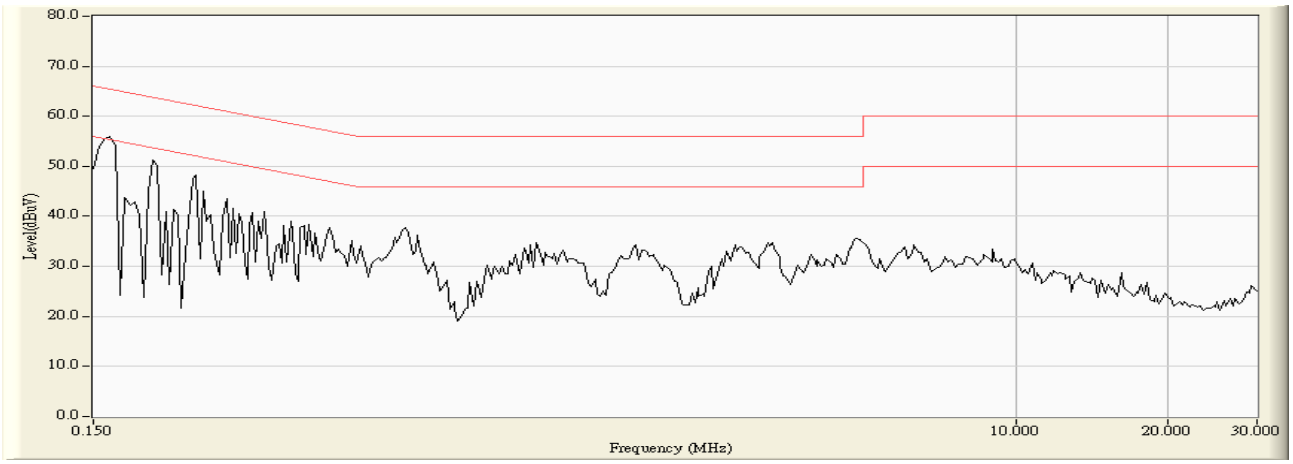


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.162	9.790	34.370	44.160	-11.497	55.657	AVERAGE
2		0.205	9.790	28.020	37.810	-16.619	54.429	AVERAGE
3		0.634	9.790	17.900	27.690	-18.310	46.000	AVERAGE
4		1.123	9.800	15.400	25.200	-20.800	46.000	AVERAGE
5		3.259	9.820	12.100	21.920	-24.080	46.000	AVERAGE
6		4.814	9.830	15.150	24.980	-21.020	46.000	AVERAGE

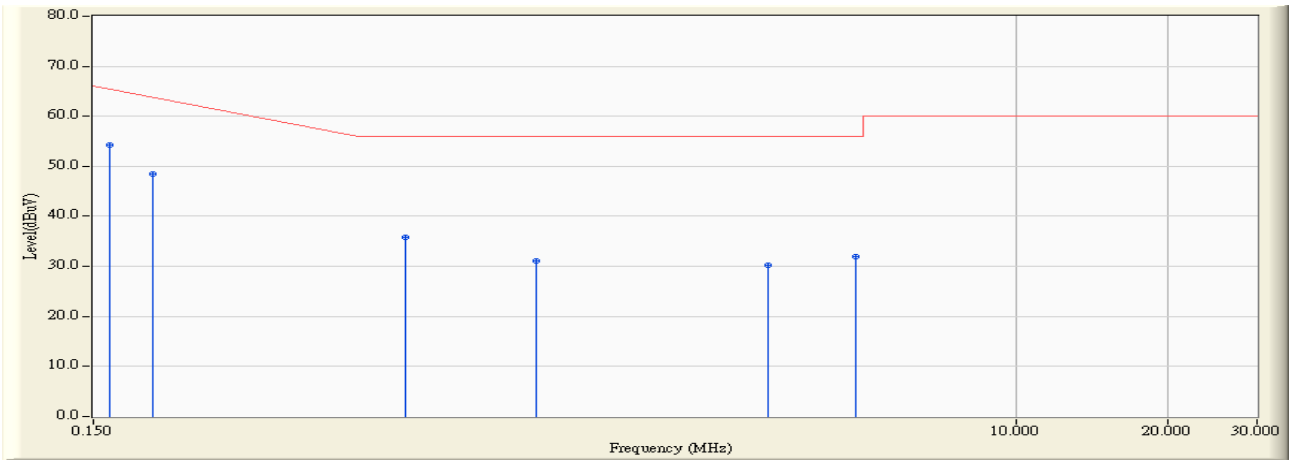
Note:

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 : SR_1	**Time : 2011/09/22 - 01:16**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Network Camera	**Probe : ENV_216_N - Line2**
Power : AC 230V/50Hz	**Note : Mode 2**



Site : SR_1	**Time : 2011/09/22 - 01:18**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ENV_216_N - Line2**
Power : AC 230V/50Hz	**Note : Mode 2**

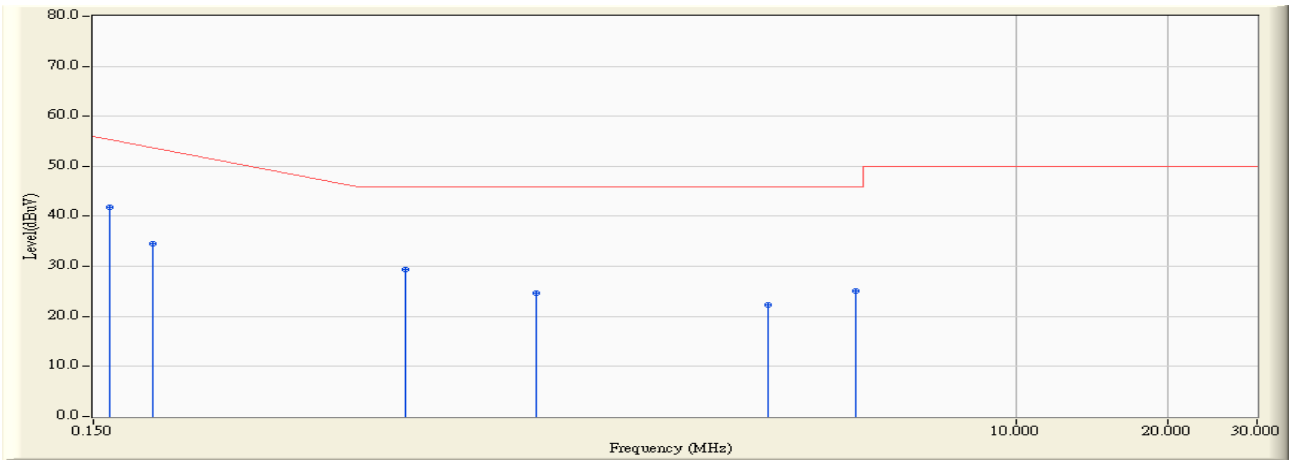


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.162	9.780	44.470	54.250	-11.407	65.657	QUASIPEAK
2		0.197	9.780	38.590	48.370	-16.287	64.657	QUASIPEAK
3		0.623	9.790	25.950	35.740	-20.260	56.000	QUASIPEAK
4		1.130	9.790	21.350	31.140	-24.860	56.000	QUASIPEAK
5		3.236	9.810	20.510	30.320	-25.680	56.000	QUASIPEAK
6		4.841	9.830	22.090	31.920	-24.080	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 : SR_1	**Time : 2011/09/22 - 01:18**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ENV_216_N - Line2**
Power : AC 230V/50Hz	**Note : Mode 2**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.162	9.780	32.090	41.870	-13.787	55.657	AVERAGE
2		0.197	9.780	24.780	34.560	-20.097	54.657	AVERAGE
3		0.623	9.790	19.540	29.330	-16.670	46.000	AVERAGE
4		1.130	9.790	14.900	24.690	-21.310	46.000	AVERAGE
5		3.236	9.810	12.490	22.300	-23.700	46.000	AVERAGE
6		4.841	9.830	15.210	25.040	-20.960	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

3.7. Test Photograph

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Front View of Conducted Test

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Back View of Conducted Test

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Front View of Conducted Test

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

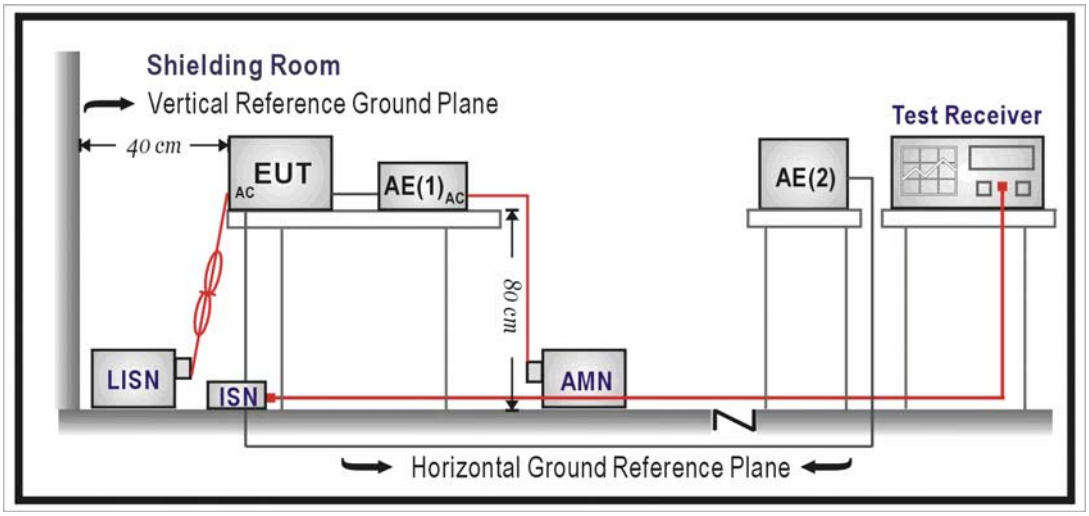
Description : Back View of Conducted Test

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:

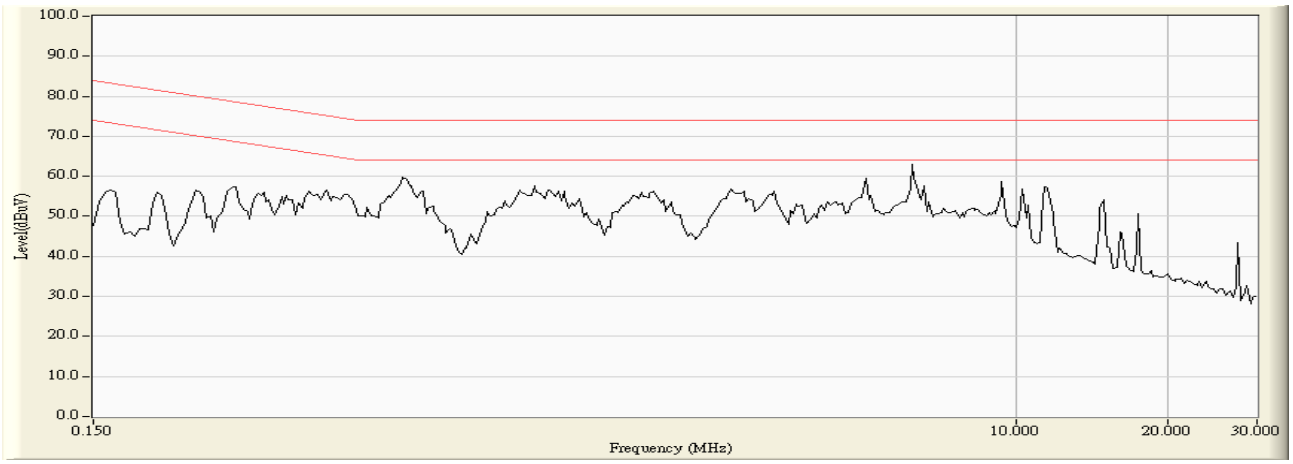
The mains voltage shall be supplied to the EUT via the LISN when the measurement of telecommunication port is performed. The common mode disturbances at the telecommunication port shall be connected to the ISN, which is 150 ohm impedance.
Both alternative cables are tested related to the LCL requested. 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

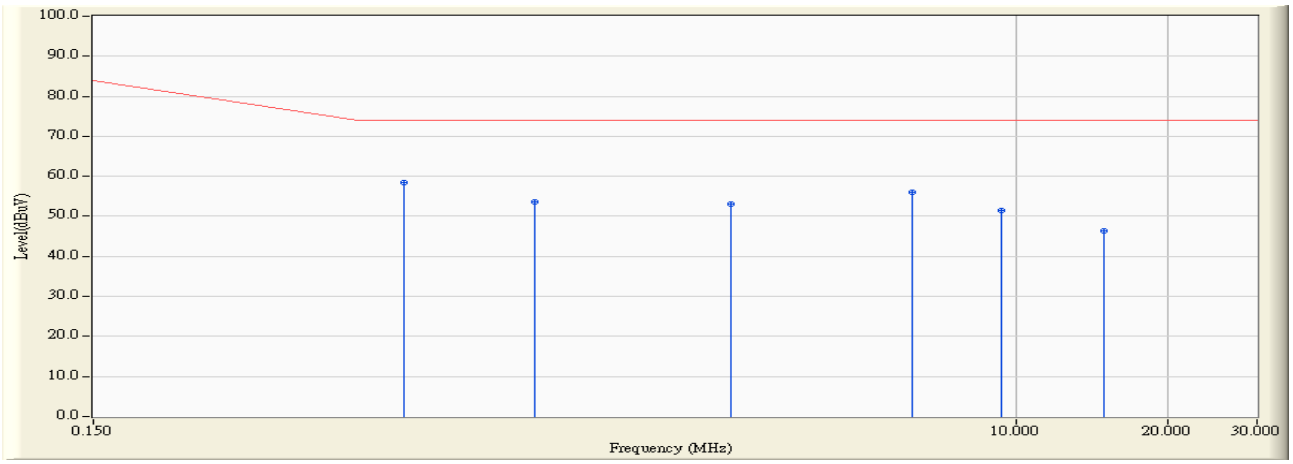
No deviation.

4.6. Test Result

Site : SR_1	**Time : 2011/09/22 - 00:51**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Network Camera	**Probe : ISN_T4 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1, ISN 10M**



Site : SR_1	**Time : 2011/09/22 - 00:52**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ISN_T4 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1, ISN 10M**

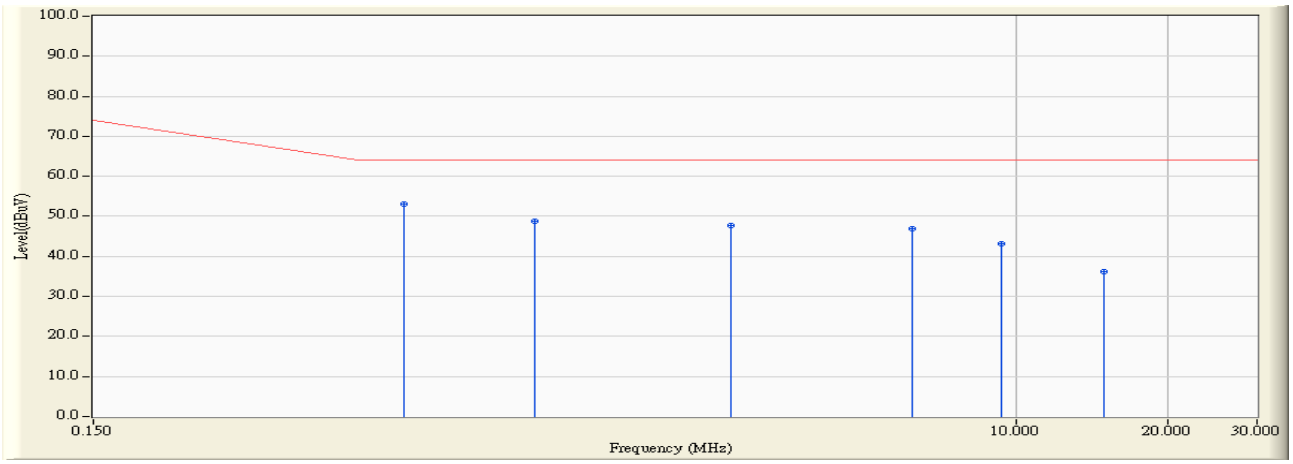


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.615	9.990	48.350	58.340	-15.660	74.000	QUASIPEAK
2		1.119	9.980	43.630	53.610	-20.390	74.000	QUASIPEAK
3		2.740	10.000	43.030	53.030	-20.970	74.000	QUASIPEAK
4		6.252	9.976	45.930	55.906	-18.094	74.000	QUASIPEAK
5		9.400	9.960	41.630	51.590	-22.410	74.000	QUASIPEAK
6		14.947	10.140	36.130	46.270	-27.730	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 : SR_1	**Time : 2011/09/22 - 00:52**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ISN_T4 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1, ISN 10M**

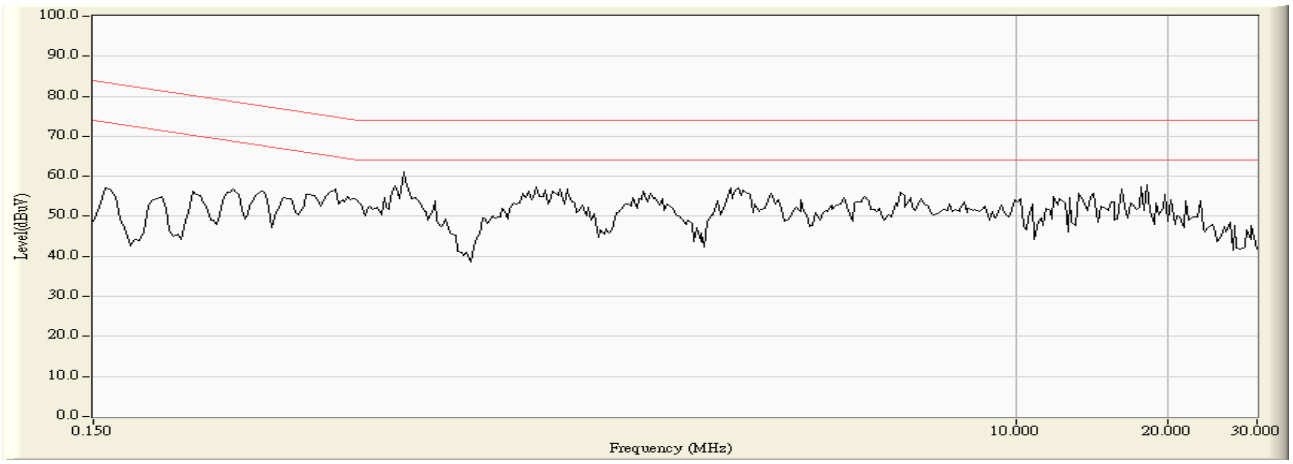


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.615	9.990	43.000	52.990	-11.010	64.000	AVERAGE
2		1.119	9.980	38.790	48.770	-15.230	64.000	AVERAGE
3		2.740	10.000	37.600	47.600	-16.400	64.000	AVERAGE
4		6.252	9.976	36.900	46.876	-17.124	64.000	AVERAGE
5		9.400	9.960	33.150	43.110	-20.890	64.000	AVERAGE
6		14.947	10.140	26.000	36.140	-27.860	64.000	AVERAGE

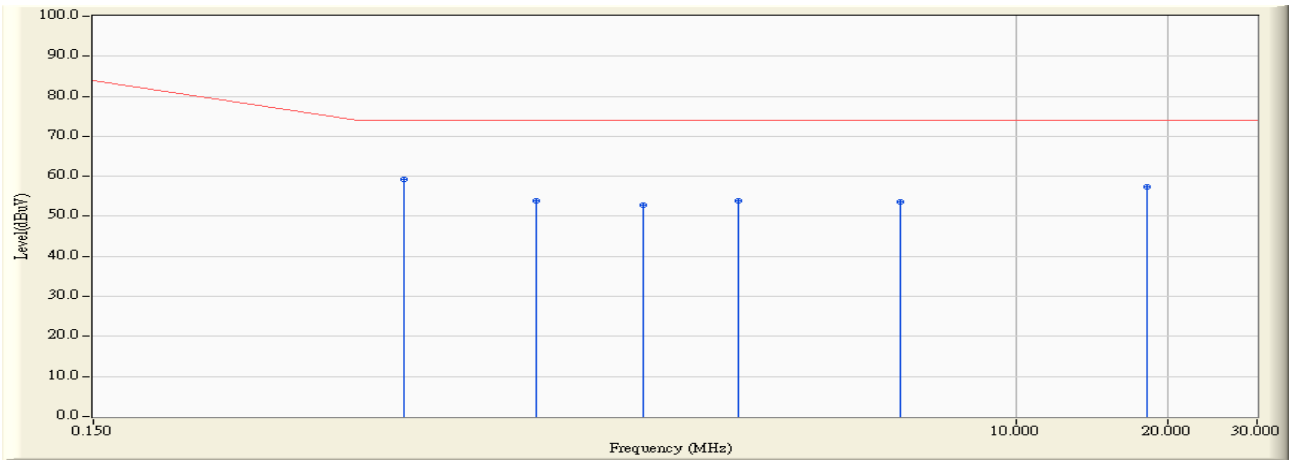
Note:

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 : SR_1	**Time : 2011/09/22 - 00:49**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Network Camera	**Probe : ISN_T4 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1, ISN 100M**



Site : SR_1	**Time : 2011/09/22 - 00:49**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ISN_T4 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1, ISN 100M**

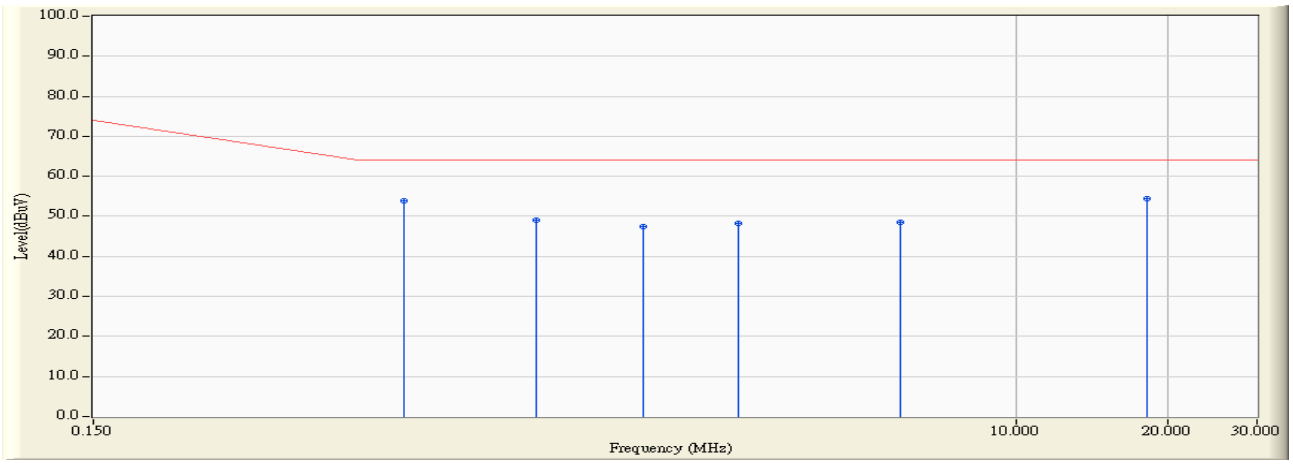


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.619	9.990	49.150	59.140	-14.860	74.000	QUASIPEAK
2		1.130	9.980	43.810	53.790	-20.210	74.000	QUASIPEAK
3		1.837	10.000	42.930	52.930	-21.070	74.000	QUASIPEAK
4		2.830	9.990	43.770	53.760	-20.240	74.000	QUASIPEAK
5		5.908	9.980	43.770	53.750	-20.250	74.000	QUASIPEAK
6		18.244	10.120	47.290	57.410	-16.590	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 : SR_1	**Time : 2011/09/22 - 00:49**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ISN_T4 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1, ISN 100M**

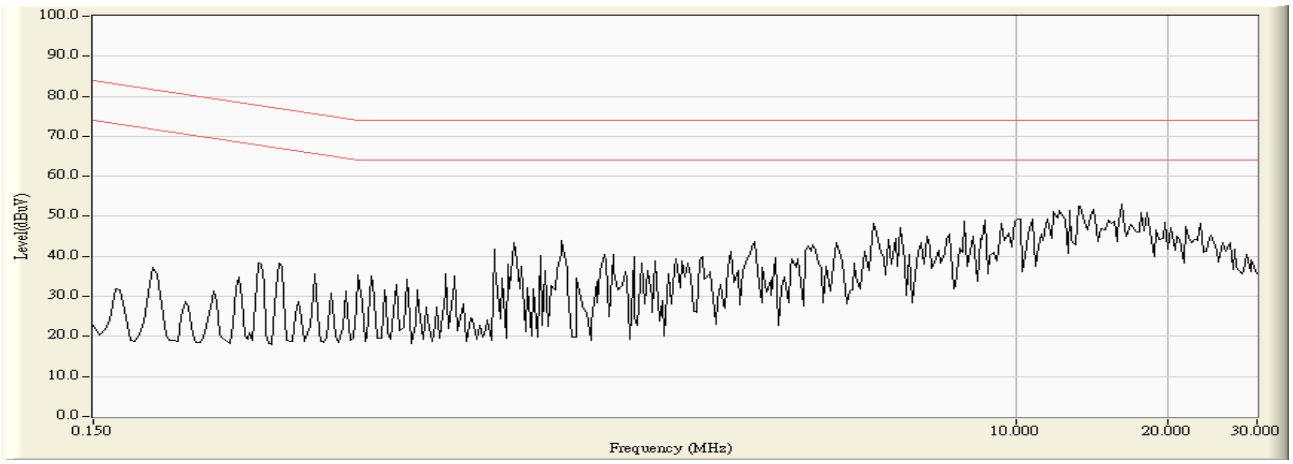


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.619	9.990	43.910	53.900	-10.100	64.000	AVERAGE
2		1.130	9.980	38.980	48.960	-15.040	64.000	AVERAGE
3		1.837	10.000	37.450	47.450	-16.550	64.000	AVERAGE
4		2.830	9.990	38.390	48.380	-15.620	64.000	AVERAGE
5		5.908	9.980	38.590	48.570	-15.430	64.000	AVERAGE
6	*	18.244	10.120	44.410	54.530	-9.470	64.000	AVERAGE

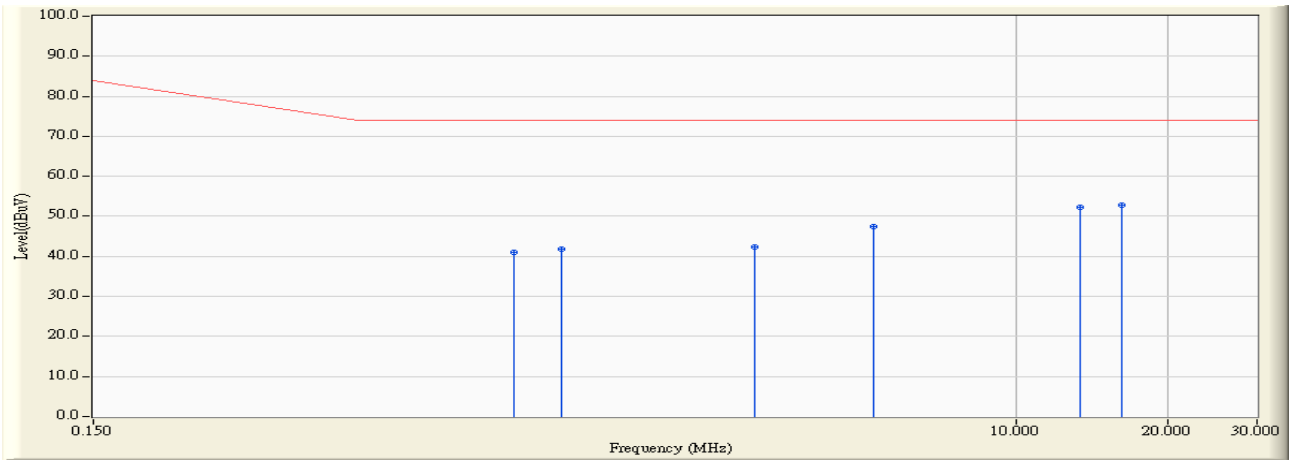
Note:

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 : SR_1	**Time : 2011/09/22 - 01:31**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Network Camera	**Probe : ISN_T8 - Line1**
Power : By POE	**Note : Mode 3**



Site : SR_1	**Time : 2011/09/22 - 01:32**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ISN_T8 - Line1**
Power : By POE	**Note : Mode 3**

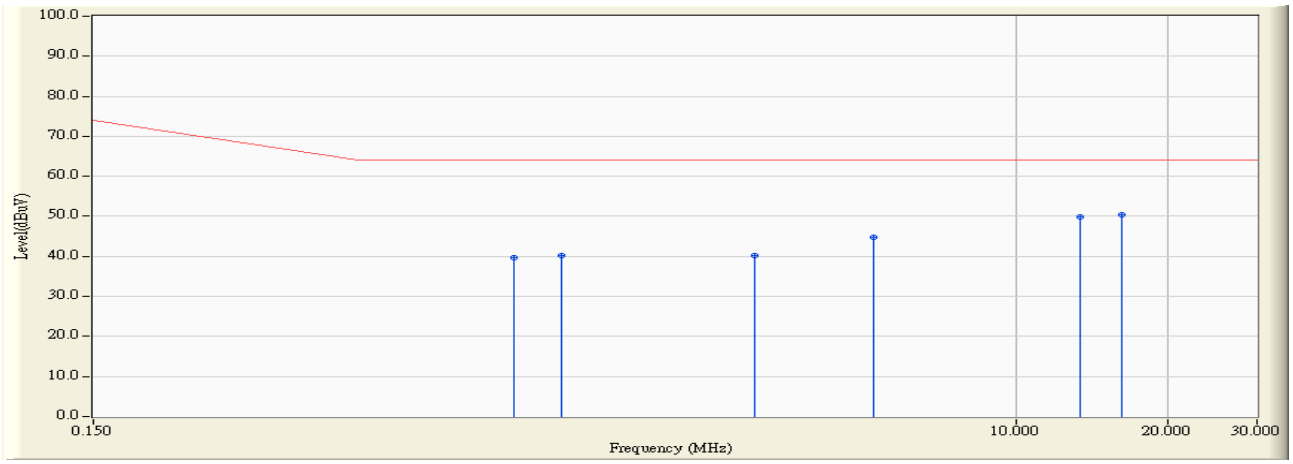


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.021	10.110	30.890	41.000	-33.000	74.000	QUASIPEAK
2		1.267	10.100	31.670	41.770	-32.230	74.000	QUASIPEAK
3		3.037	10.060	32.370	42.430	-31.570	74.000	QUASIPEAK
4		5.236	10.050	37.290	47.340	-26.660	74.000	QUASIPEAK
5		13.420	10.280	41.870	52.150	-21.850	74.000	QUASIPEAK
6	*	16.228	10.280	42.490	52.770	-21.230	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 : SR_1	**Time : 2011/09/22 - 01:32**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ISN_T8 - Line1**
Power : By POE	**Note : Mode 3**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.021	10.110	29.570	39.680	-24.320	64.000	AVERAGE
2		1.267	10.100	30.160	40.260	-23.740	64.000	AVERAGE
3		3.037	10.060	30.200	40.260	-23.740	64.000	AVERAGE
4		5.236	10.050	34.740	44.790	-19.210	64.000	AVERAGE
5		13.420	10.280	39.600	49.880	-14.120	64.000	AVERAGE
6	*	16.228	10.280	40.000	50.280	-13.720	64.000	AVERAGE

Note:

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

4.7. Test Photograph

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Front View of ISN Test

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Back View of ISN Test

Test Mode : Mode 3: Normal Operation (IP8133, POE)

Description : Front View of ISN Test

Test Mode : Mode 3: Normal Operation (IP8133, POE)

Description : Back View of ISN Test

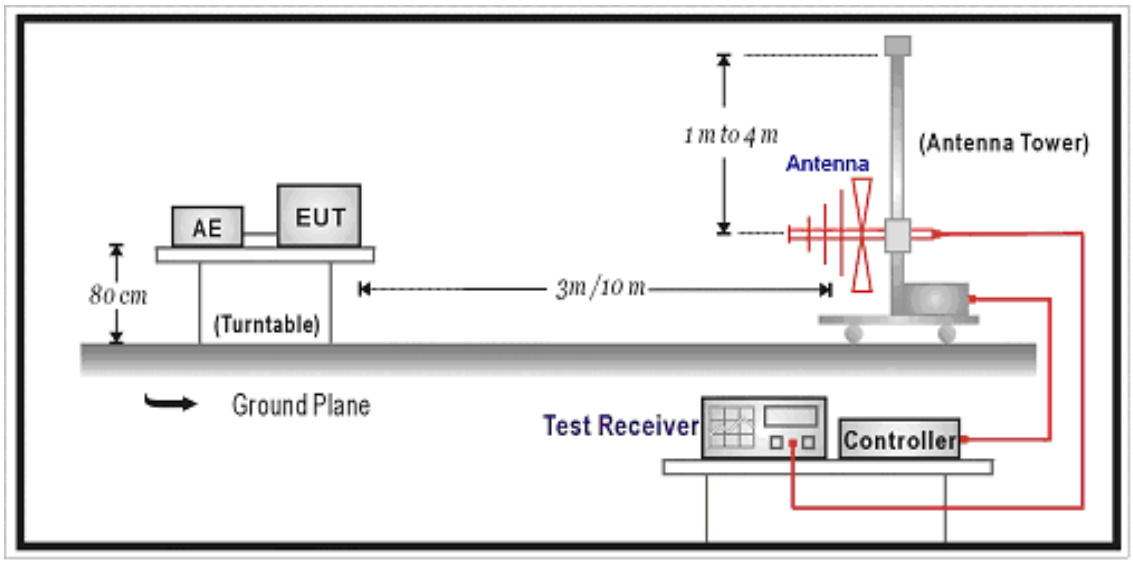
5. Radiated Emission

5.1. Test Specification

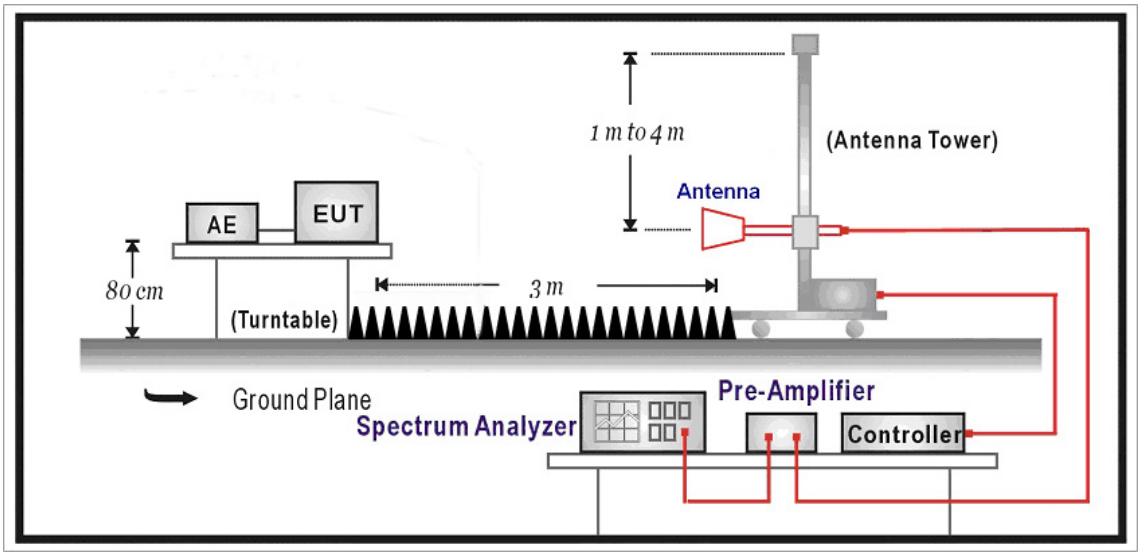
According to EMC Standard : EN 55022

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

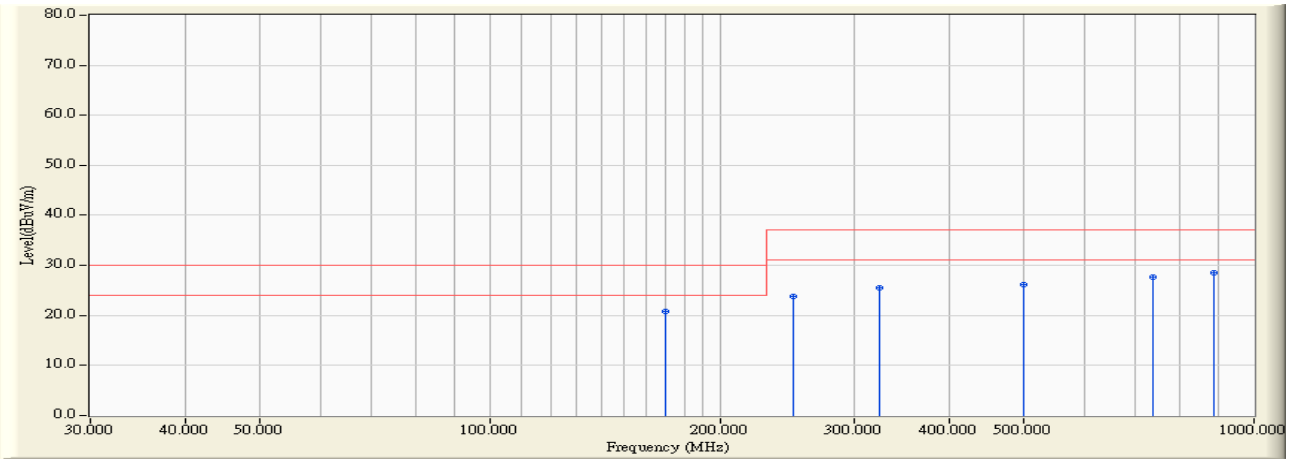
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
The EUT was positioned such that the distance from antenna to the EUT was 3/10 meters.
The antenna can move up and down 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 invested over the frequency range from 30MHz to1GHz using a receiver bandwidth of 120kHz and above 1GHz using a receiver bandwidth of 1MHz.
30MHz to1GHz Radiated was performed at an antenna to EUT distance of 10 meters.
Above1GHz 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 : OATS-1	**Time : 2011/09/23 - 18:08**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site1_CBL6112_10M_0726 - HORIZONTAL**
Power : AC 230V/50Hz	**Note : Mode 1**

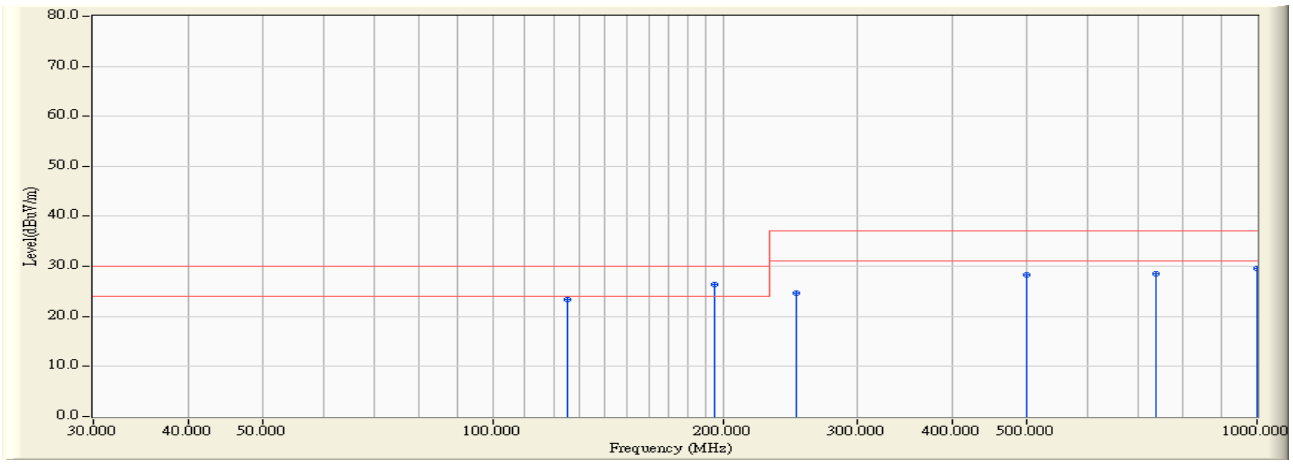


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		169.900	11.910	9.000	20.910	-9.090	30.000	QUASIPEAK
2		250.000	15.386	8.400	23.786	-13.214	37.000	QUASIPEAK
3		324.000	17.872	7.600	25.472	-11.528	37.000	QUASIPEAK
4		500.000	22.512	3.700	26.212	-10.788	37.000	QUASIPEAK
5		737.288	26.463	1.200	27.663	-9.337	37.000	QUASIPEAK
6	*	884.750	27.929	0.600	28.529	-8.471	37.000	QUASIPEAK

Note:

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

Site : OATS-1	**Time : 2011/09/23 - 18:09**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site1_CBL6112_10M_0726 - VERTICAL**
Power : AC 230V/50Hz	**Note : Mode 1**

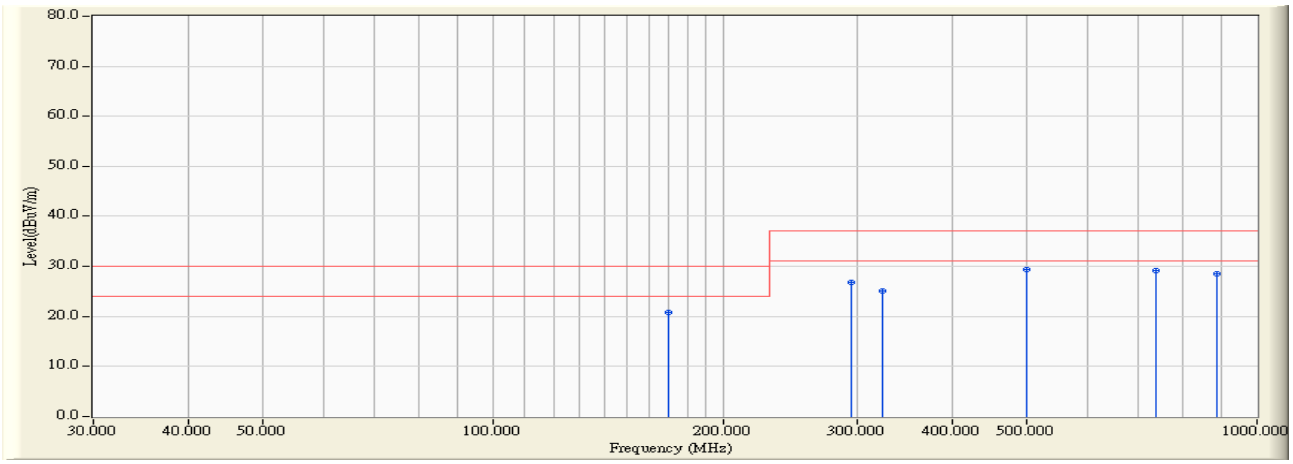


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		125.000	14.019	9.300	23.319	-6.681	30.000	QUASIPEAK
2	*	194.900	11.574	14.700	26.274	-3.726	30.000	QUASIPEAK
3		250.000	15.386	9.200	24.586	-12.414	37.000	QUASIPEAK
4		500.000	22.512	5.700	28.212	-8.788	37.000	QUASIPEAK
5		737.290	26.463	2.100	28.563	-8.437	37.000	QUASIPEAK
6		999.940	29.007	0.500	29.507	-7.493	37.000	QUASIPEAK

Note:

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

Site : OATS-1	**Time : 2011/09/23 - 18:12**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site1_CBL6112_10M_0726 - HORIZONTAL**
Power : AC 230V/50Hz	**Note : Mode 2**

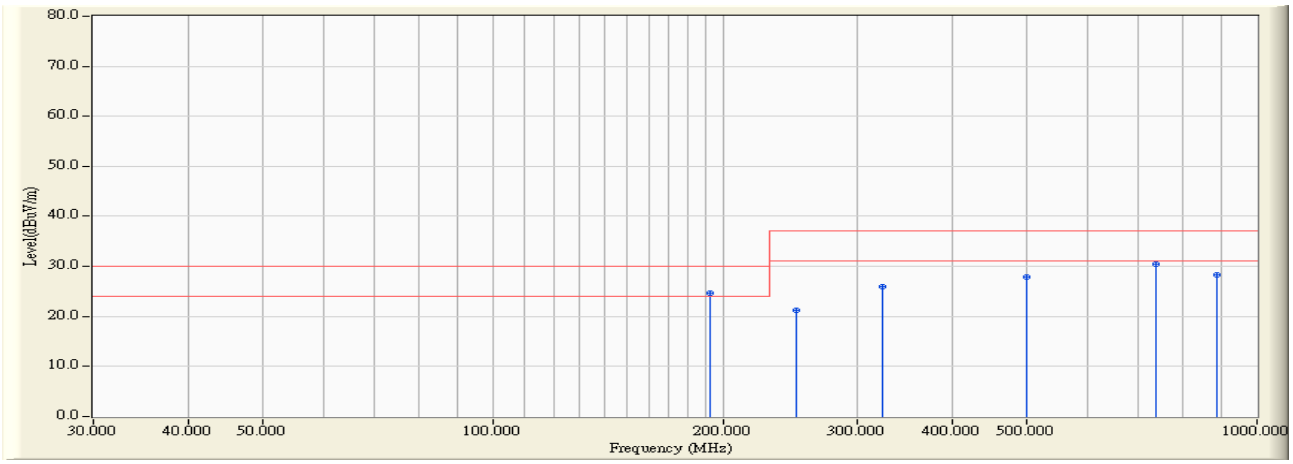


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		169.900	11.910	8.800	20.710	-9.290	30.000	QUASIPEAK
2		294.997	16.763	10.100	26.863	-10.137	37.000	QUASIPEAK
3		324.000	17.872	7.200	25.072	-11.928	37.000	QUASIPEAK
4	*	500.000	22.512	6.900	29.412	-7.588	37.000	QUASIPEAK
5		737.290	26.463	2.600	29.063	-7.937	37.000	QUASIPEAK
6		884.750	27.929	0.700	28.629	-8.371	37.000	QUASIPEAK

Note:

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

Site : OATS-1	**Time : 2011/09/23 - 18:12**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site1_CBL6112_10M_0726 - VERTICAL**
Power : AC 230V/50Hz	**Note : Mode 2**

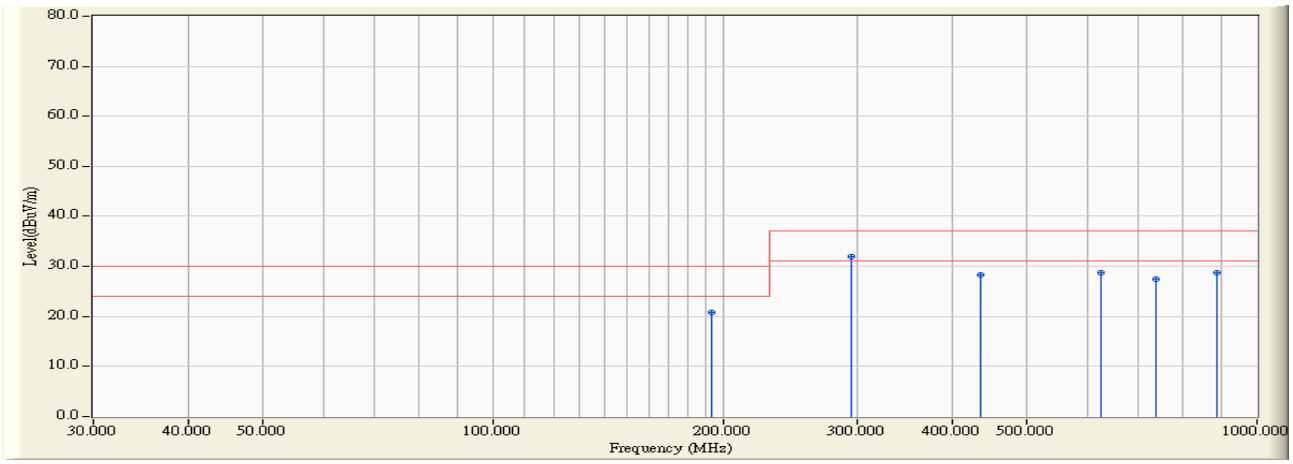


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	192.300	11.420	13.300	24.720	-5.280	30.000	QUASIPEAK
2		250.000	15.386	5.900	21.286	-15.714	37.000	QUASIPEAK
3		324.000	17.872	8.000	25.872	-11.128	37.000	QUASIPEAK
4		500.000	22.512	5.400	27.912	-9.088	37.000	QUASIPEAK
5		737.291	26.463	3.900	30.363	-6.637	37.000	QUASIPEAK
6		884.750	27.929	0.400	28.329	-8.671	37.000	QUASIPEAK

Note:

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

Site : OATS-1	**Time : 2011/09/23 - 18:19**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site1_CBL6112_10M_0726 - HORIZONTAL**
Power : By POE	**Note : Mode 3**

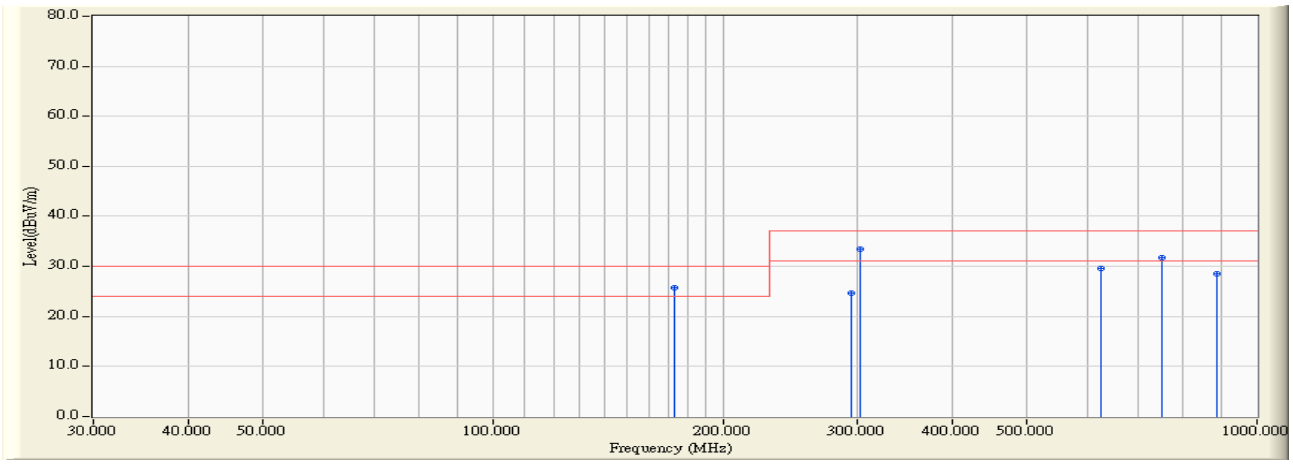


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		193.281	11.488	9.300	20.788	-9.212	30.000	QUASIPEAK
2	*	294.910	16.760	15.300	32.060	-4.940	37.000	QUASIPEAK
3		435.200	21.210	7.100	28.310	-8.690	37.000	QUASIPEAK
4		625.000	24.804	4.000	28.804	-8.196	37.000	QUASIPEAK
5		737.300	26.463	1.000	27.463	-9.537	37.000	QUASIPEAK
6		884.750	27.929	0.900	28.829	-8.171	37.000	QUASIPEAK

Note:

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

Site : OATS-1	**Time : 2011/09/23 - 18:20**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site1_CBL6112_10M_0726 - VERTICAL**
Power : By POE	**Note : Mode 3**

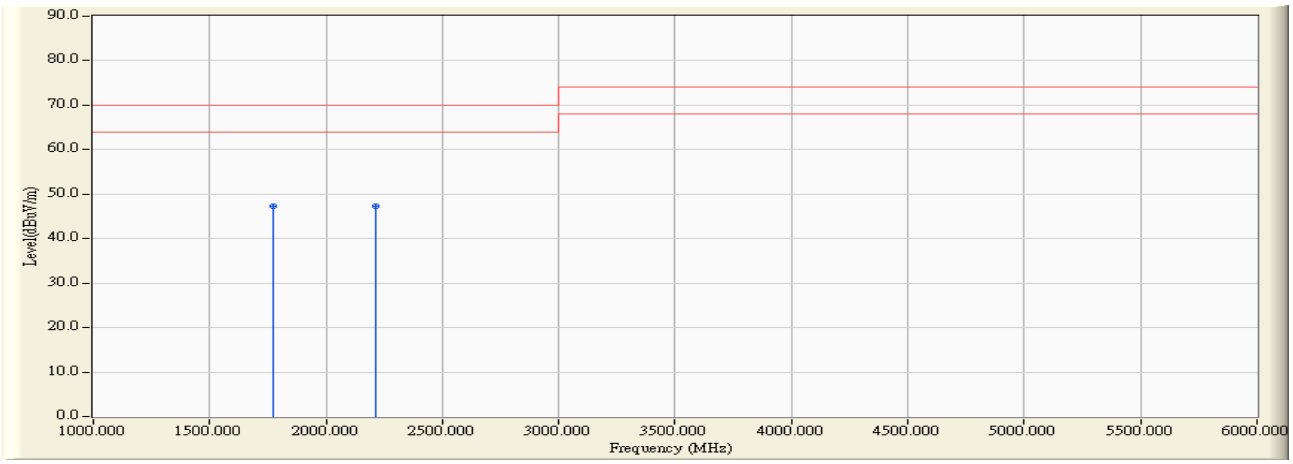


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		173.200	11.682	14.100	25.783	-4.217	30.000	QUASIPEAK
2		294.922	16.760	8.000	24.760	-12.240	37.000	QUASIPEAK
3	*	302.200	17.000	16.400	33.400	-3.600	37.000	QUASIPEAK
4		625.000	24.804	4.800	29.604	-7.396	37.000	QUASIPEAK
5		750.000	26.505	5.300	31.805	-5.195	37.000	QUASIPEAK
6		884.760	27.929	0.500	28.429	-8.571	37.000	QUASIPEAK

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 10:55**
Limit : CISPR_22_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - HORIZONTAL**
Power : AC 230V/50Hz	**Note : Mode 1**

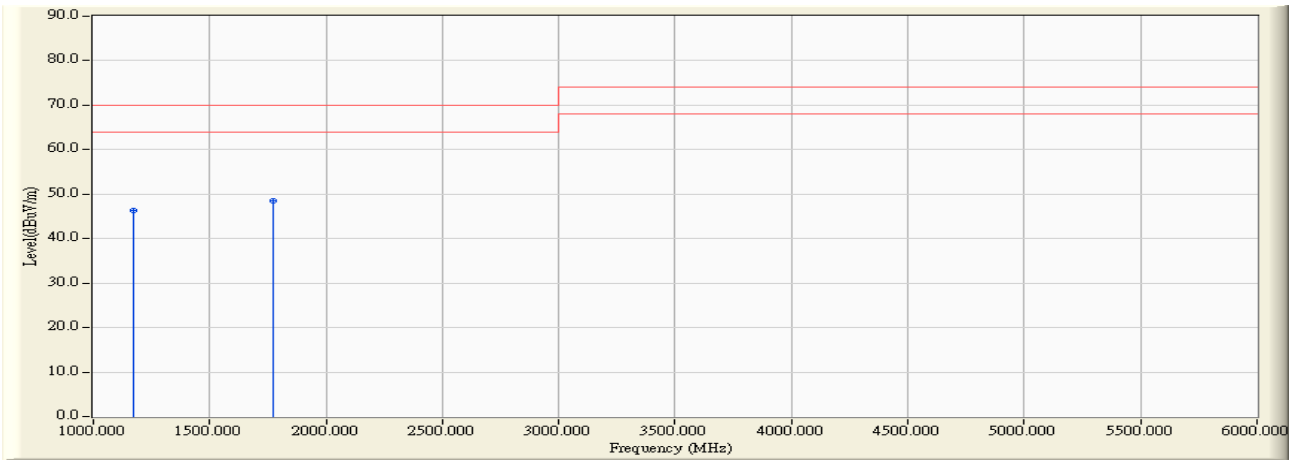


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1770.000	-5.695	52.880	47.185	-22.815	70.000	PEAK
2	*	2211.000	-4.059	51.250	47.190	-22.810	70.000	PEAK

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 11:00**
Limit : CISPR_22_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - VERTICAL**
Power : AC 230V/50Hz	**Note : Mode 1**

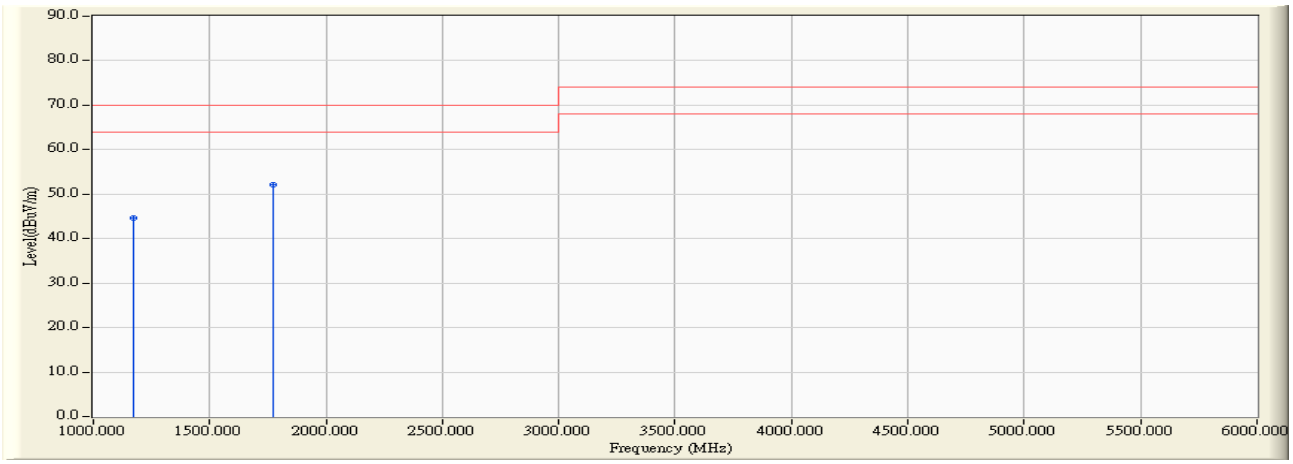


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1170.000	-7.908	54.200	46.293	-23.707	70.000	PEAK
2	*	1770.000	-5.695	54.200	48.505	-21.495	70.000	PEAK

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 11:50**
Limit : CISPR_22_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - HORIZONTAL**
Power : AC 230V/50Hz	**Note : Mode 2**

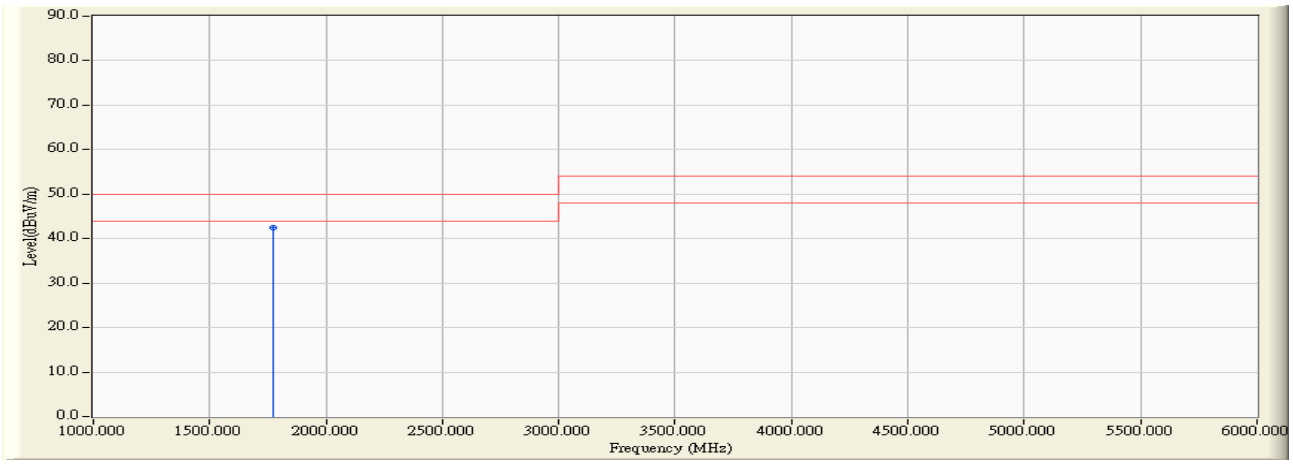


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1170.000	-7.908	52.640	44.733	-25.267	70.000	PEAK
2	*	1770.000	-5.695	57.700	52.005	-17.995	70.000	PEAK

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 11:50**
Limit : CISPR_22_B_(Above_1G)_03M_AV	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - HORIZONTAL**
Power : AC 230V/50Hz	**Note : Mode 2**

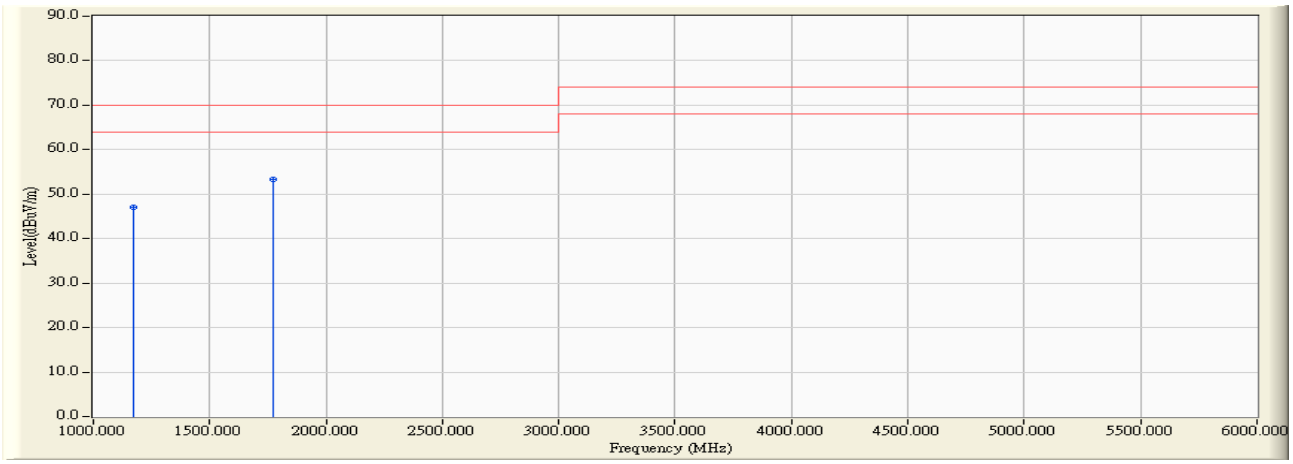


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1770.000	-5.695	48.280	42.585	-7.415	50.000	AVERAGE

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 11:55**
Limit : CISPR_22_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - VERTICAL**
Power : AC 230V/50Hz	**Note : Mode 2**

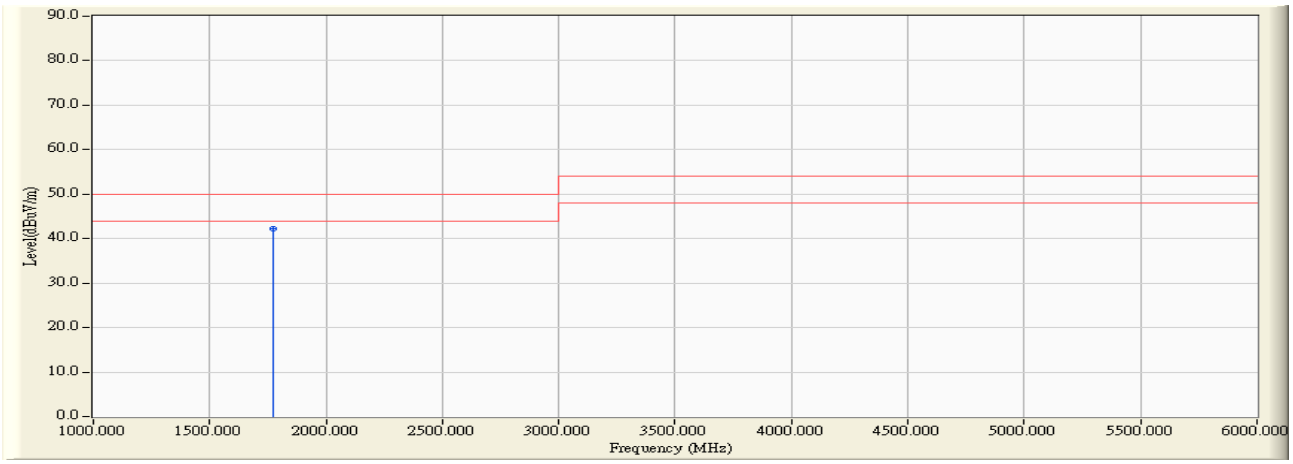


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1170.000	-7.908	54.850	46.943	-23.057	70.000	PEAK
2	*	1770.000	-5.695	58.920	53.225	-16.775	70.000	PEAK

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 11:55**
Limit : CISPR_22_B_(Above_1G)_03M_AV	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - VERTICAL**
Power : AC 230V/50Hz	**Note : Mode 2**

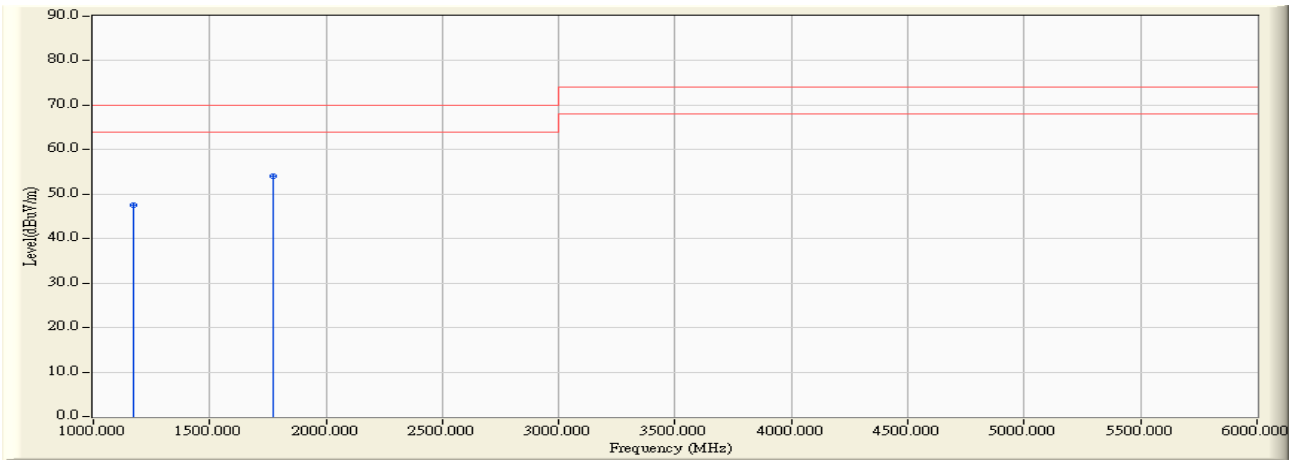


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1770.000	-5.695	47.910	42.215	-7.785	50.000	AVERAGE

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 13:07**
Limit : CISPR_22_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - HORIZONTAL**
Power : By POE	**Note : Mode 3**

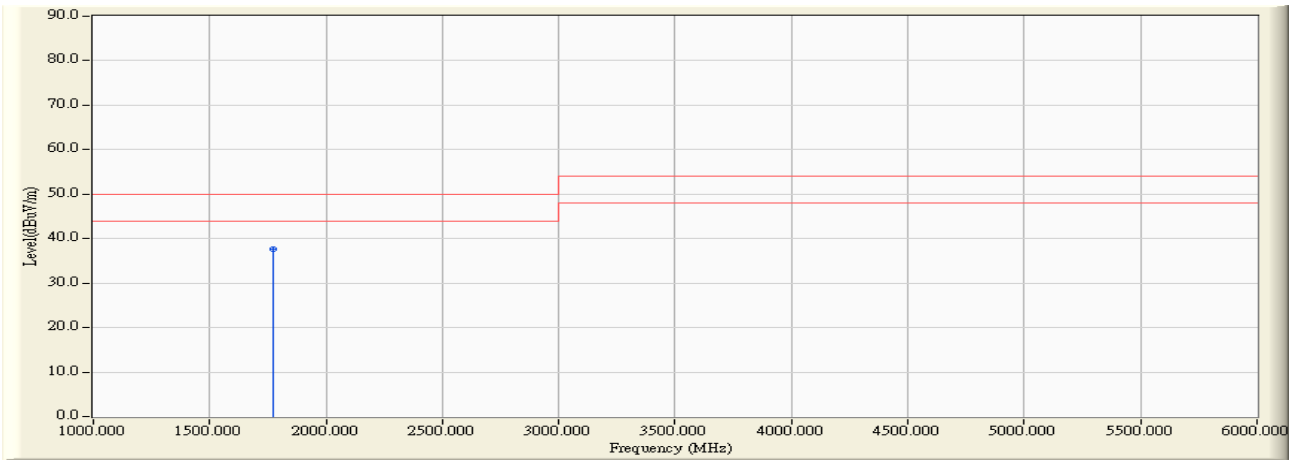


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1175.000	-7.920	55.430	47.510	-22.490	70.000	PEAK
2	*	1775.000	-5.646	59.780	54.133	-15.867	70.000	PEAK

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 13:07**
Limit : CISPR_22_B_(Above_1G)_03M_AV	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - HORIZONTAL**
Power : By POE	**Note : Mode 3**

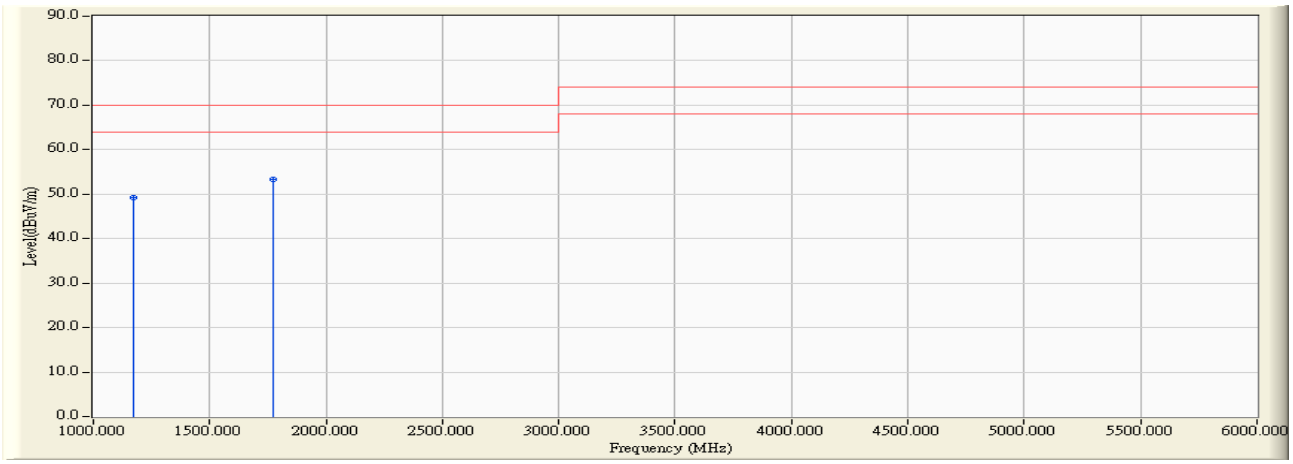


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1775.000	-5.646	43.260	37.613	-12.387	50.000	AVERAGE

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 13:10**
Limit : CISPR_22_B_(Above_1G)_03M_PK	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - VERTICAL**
Power : By POE	**Note : Mode 3**

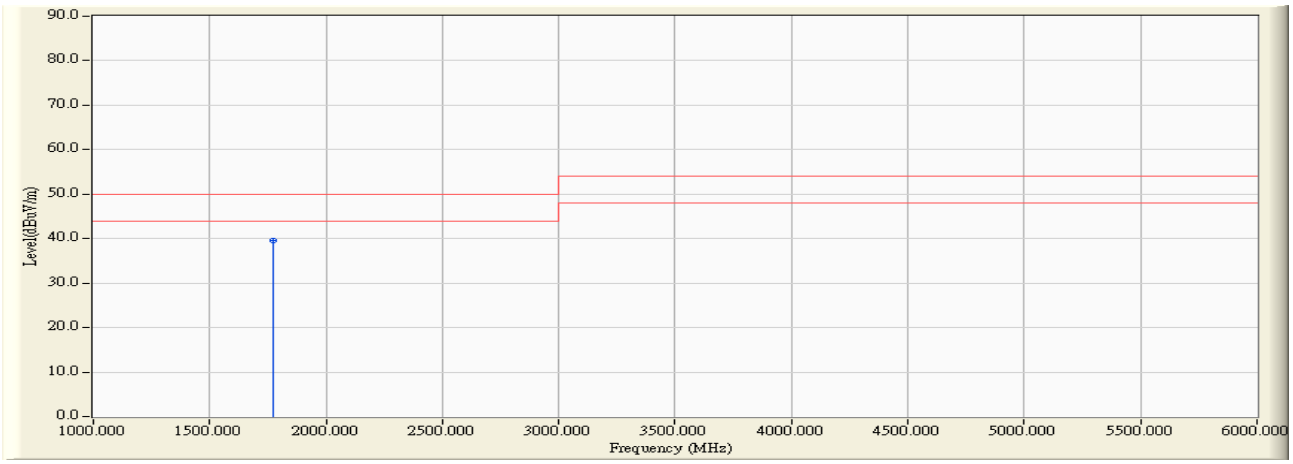


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		1175.000	-7.920	57.260	49.340	-20.660	70.000	PEAK
2	*	1775.000	-5.646	58.890	53.243	-16.757	70.000	PEAK

Note:

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

Site: 9x6x6_Chamber	**Time : 2011/09/21 - 13:11**
Limit : CISPR_22_B_(Above_1G)_03M_AV	**Margin : 6**
EUT : Network Camera	**Probe : CB8_Horn_1-18G_0726 - VERTICAL**
Power : By POE	**Note : Mode 3**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	1775.000	-5.646	45.200	39.553	-10.447	50.000	AVERAGE

Note:

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

5.7. Test Photograph

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Front View of Radiated Test

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Back View of Radiated Test

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

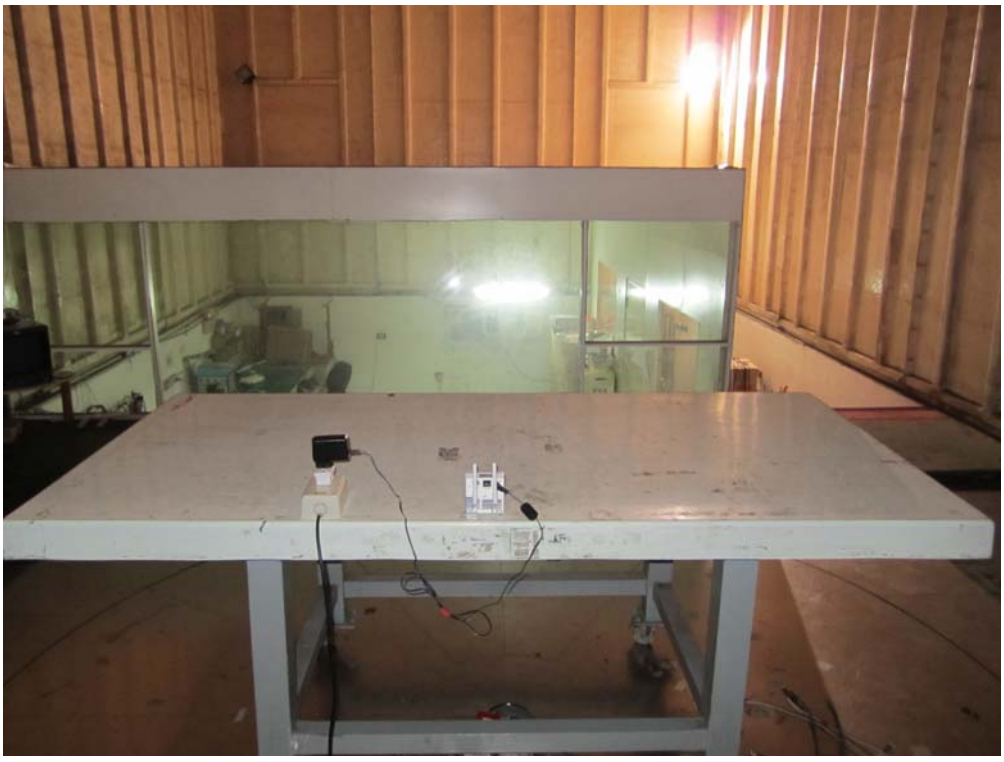
Description : Front View of High Frequency Radiated Test

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Front View of Radiated Test

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Back View of Radiated Test



Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Front View of High Frequency Radiated Test

Test Mode : Mode 3: Normal Operation (IP8133, POE)

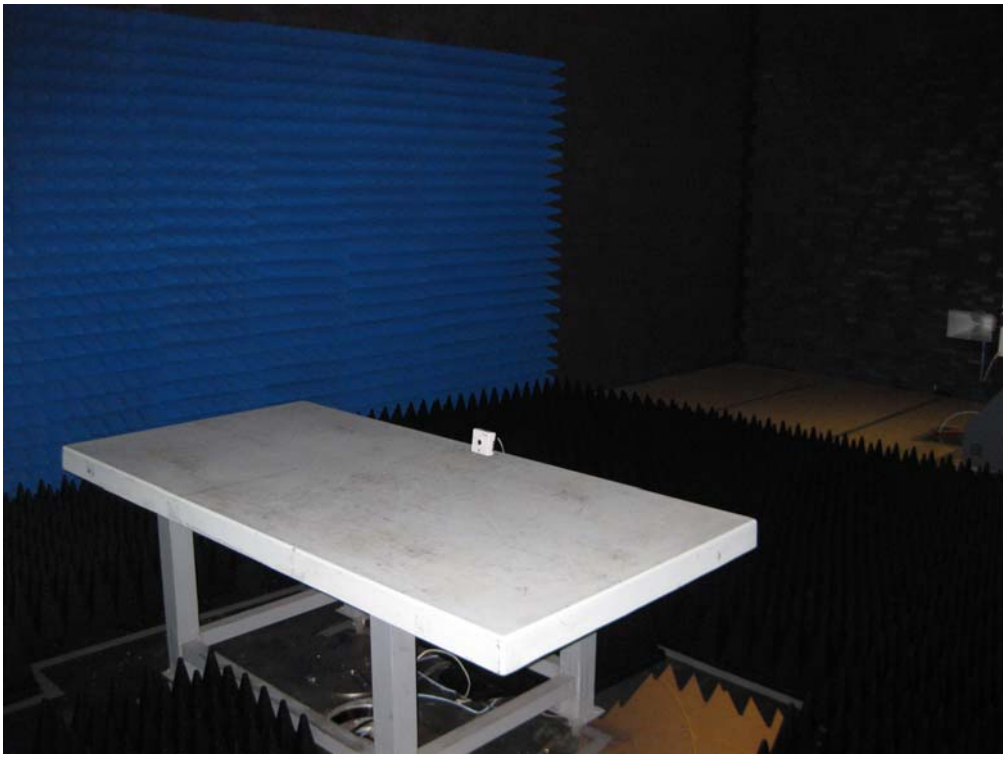
Description : Front View of Radiated Test

Test Mode : Mode 3: Normal Operation (IP8133, POE)

Description : Back View of Radiated Test

Test Mode : Mode 3: Normal Operation (IP8133, POE)

Description : Front View of High Frequency Radiated Test

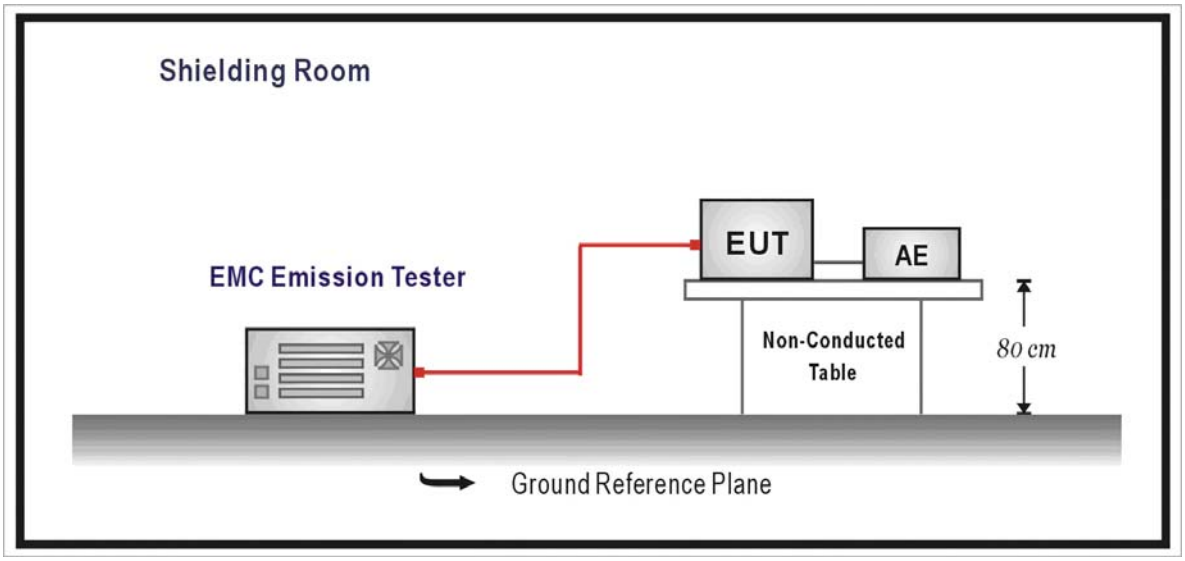


6. Harmonic Current Emission

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 ≤ n ≤ 40	0.23 * 8/n
11	0.33		
13	0.21		
15 ≤ n ≤ 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

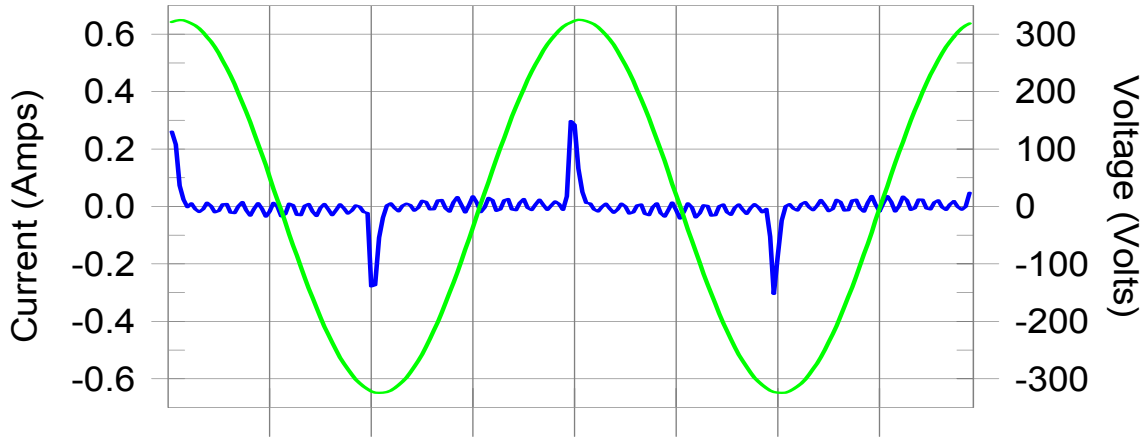
No deviation.

6.6. Test Result

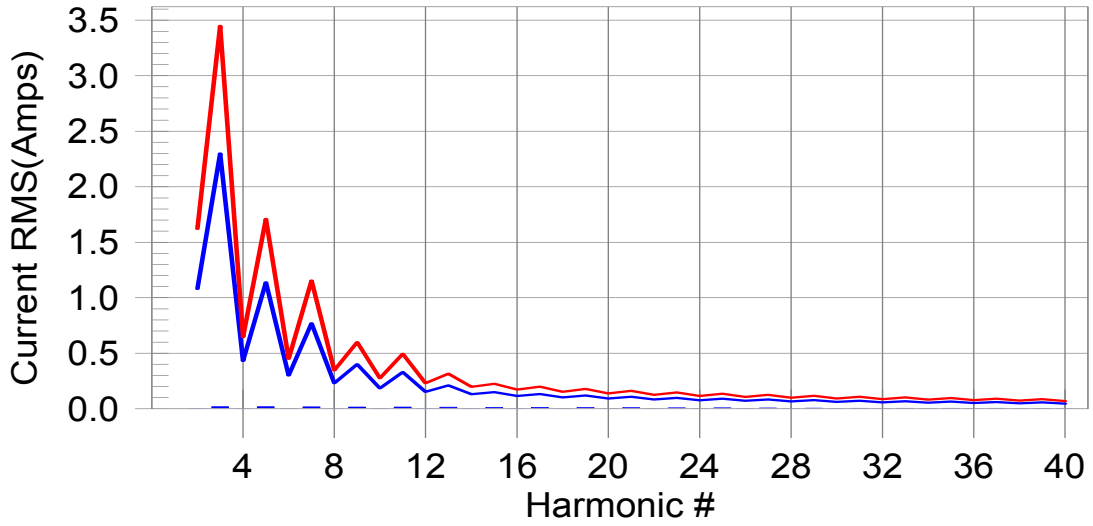
Product	Network Camera		
Test Item	Power Harmonics		
Test Mode	Mode 1: Normal Operation (IP8133W, LAN)		
Date of Test	2011/09/26	Test Site	No.3 Shielded Room

Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line European Limits



Test result: Pass Worst harmonic was #19 with 8.52% of the limit.

Test Result: Pass Source qualification: Normal
THC(A): 0.05 I-THD(%): 238.71 POHC(A): 0.018 POHC Limit(A): 0.251
Highest parameter values during test:

V_RMS (Volts):	229.59	Frequency(Hz):	50.00
I_Peak (Amps):	0.360	I_RMS (Amps):	0.060
I_Fund (Amps):	0.021	Crest Factor:	6.540
Power (Watts):	4.7	Power Factor:	0.345

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.000	1.080	0.0	0.000	1.620	0.03	Pass
3	0.017	2.300	0.8	0.019	3.450	0.54	Pass
4	0.000	0.430	0.1	0.001	0.645	0.08	Pass
5	0.017	1.140	1.5	0.018	1.710	1.06	Pass
6	0.000	0.300	0.2	0.001	0.450	0.15	Pass
7	0.016	0.770	2.1	0.017	1.155	1.50	Pass
8	0.000	0.230	0.2	0.001	0.345	0.17	Pass
9	0.016	0.400	3.9	0.017	0.600	2.75	Pass
10	0.001	0.184	0.3	0.001	0.276	0.22	Pass
11	0.015	0.330	4.4	0.015	0.495	3.12	Pass
12	0.001	0.153	0.4	0.001	0.230	0.31	Pass
13	0.014	0.210	6.4	0.014	0.315	4.53	Pass
14	0.001	0.131	0.4	0.001	0.197	0.33	Pass
15	0.012	0.150	8.3	0.013	0.225	5.80	Pass
16	0.001	0.115	0.5	0.001	0.173	0.37	Pass
17	0.011	0.132	8.5	0.012	0.199	5.92	Pass
18	0.001	0.102	0.6	0.001	0.153	0.43	Pass
19	0.010	0.118	8.5	0.011	0.178	5.94	Pass
20	0.001	0.092	0.6	0.001	0.138	0.45	Pass
21	0.009	0.107	8.4	0.009	0.161	5.83	Pass
22	0.001	0.084	0.6	0.001	0.125	0.49	Pass
23	0.008	0.098	8.1	0.008	0.147	5.65	Pass
24	0.000	0.077	0.6	0.001	0.115	0.51	Pass
25	0.007	0.090	7.8	0.007	0.135	5.41	Pass
26	0.000	0.071	0.7	0.001	0.106	0.51	Pass
27	0.006	0.083	7.4	0.006	0.125	5.16	Pass
28	0.000	0.066	0.6	0.001	0.099	0.53	Pass
29	0.005	0.078	7.1	0.006	0.116	4.90	Pass
30	0.000	0.061	0.7	0.000	0.092	0.54	Pass
31	0.005	0.073	6.7	0.005	0.109	4.65	Pass
32	0.000	0.058	0.7	0.000	0.086	0.54	Pass
33	0.004	0.068	6.3	0.004	0.102	4.41	Pass
34	0.000	0.054	0.7	0.000	0.081	0.56	Pass
35	0.004	0.064	5.9	0.004	0.096	4.15	Pass
36	0.000	0.051	0.7	0.000	0.077	0.57	Pass
37	0.003	0.061	5.6	0.004	0.091	3.86	Pass
38	0.000	0.048	0.7	0.000	0.073	0.57	Pass
39	0.003	0.058	5.2	0.003	0.087	3.56	Pass
40	0.000	0.046	0.7	0.000	0.069	0.64	Pass

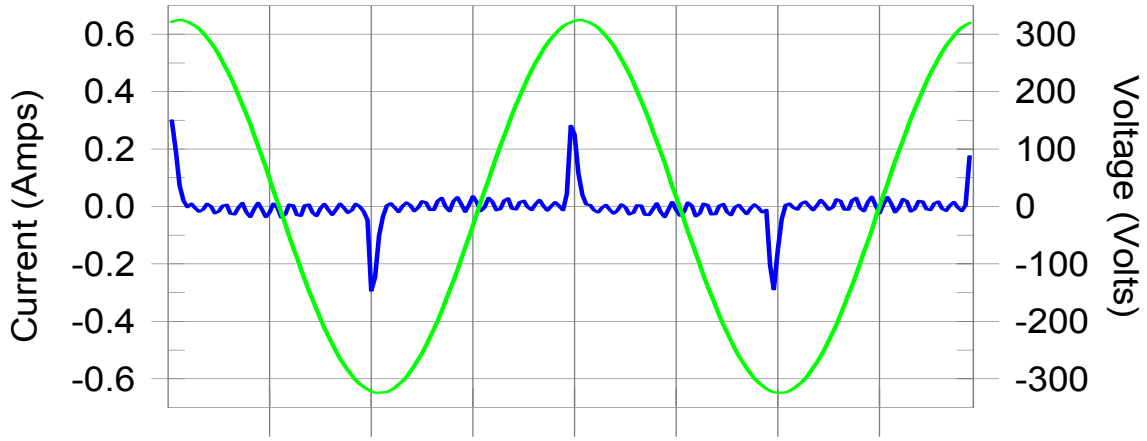
1.Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

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.

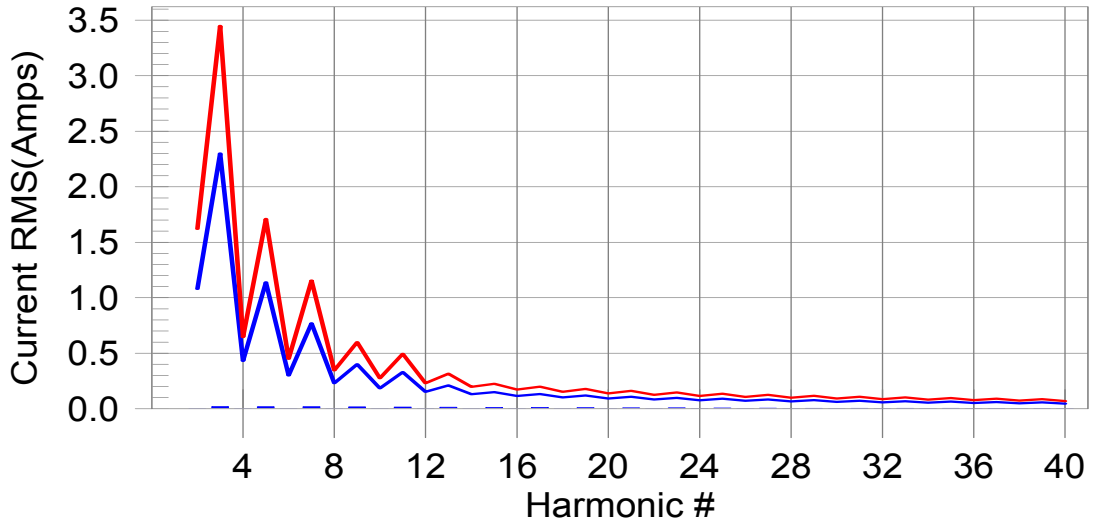
Product	Network Camera		
Test Item	Power Harmonics		
Test Mode	Mode 2: Normal Operation (IP8133W, WLAN)		
Date of Test	2011/09/26	Test Site	No.3 Shielded Room

Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line European Limits



Test result: Pass Worst harmonic was #17 with 8.05% of the limit.

Test Result: Pass Source qualification: Normal
THC(A): 0.04 I-THD(%): 234.38 POHC(A): 0.016 POHC Limit(A): 0.251
Highest parameter values during test:

V_RMS (Volts):	229.59	Frequency(Hz):	50.00
I_Peak (Amps):	0.323	I_RMS (Amps):	0.057
I_Fund (Amps):	0.021	Crest Factor:	6.095
Power (Watts):	4.5	Power Factor:	0.348

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.000	1.080	0.0	0.000	1.620	0.03	Pass
3	0.017	2.300	0.7	0.019	3.450	0.55	Pass
4	0.000	0.430	0.1	0.001	0.645	0.08	Pass
5	0.016	1.140	1.4	0.018	1.710	1.07	Pass
6	0.001	0.300	0.2	0.001	0.450	0.15	Pass
7	0.016	0.770	2.0	0.018	1.155	1.53	Pass
8	0.000	0.230	0.2	0.001	0.345	0.16	Pass
9	0.015	0.400	3.7	0.017	0.600	2.77	Pass
10	0.001	0.184	0.3	0.001	0.276	0.21	Pass
11	0.014	0.330	4.2	0.016	0.495	3.15	Pass
12	0.001	0.153	0.4	0.001	0.230	0.28	Pass
13	0.013	0.210	6.1	0.014	0.315	4.54	Pass
14	0.001	0.131	0.4	0.001	0.197	0.31	Pass
15	0.012	0.150	7.8	0.013	0.225	5.77	Pass
16	0.001	0.115	0.5	0.001	0.173	0.35	Pass
17	0.011	0.132	8.1	0.012	0.199	5.87	Pass
18	0.001	0.102	0.5	0.001	0.153	0.44	Pass
19	0.009	0.118	8.0	0.010	0.178	5.80	Pass
20	0.001	0.092	0.5	0.001	0.138	0.44	Pass
21	0.008	0.107	7.8	0.009	0.161	5.65	Pass
22	0.000	0.084	0.6	0.001	0.125	0.48	Pass
23	0.007	0.098	7.5	0.008	0.147	5.38	Pass
24	0.000	0.077	0.6	0.001	0.115	0.51	Pass
25	0.006	0.090	7.1	0.007	0.135	5.08	Pass
26	0.000	0.071	0.6	0.001	0.106	0.51	Pass
27	0.006	0.083	6.7	0.006	0.125	4.75	Pass
28	0.000	0.066	0.6	0.001	0.099	0.51	Pass
29	0.005	0.078	6.2	0.005	0.116	4.43	Pass
30	0.000	0.061	0.6	0.000	0.092	0.51	Pass
31	0.004	0.073	5.8	0.004	0.109	4.11	Pass
32	0.000	0.058	0.6	0.000	0.086	0.51	Pass
33	0.004	0.068	5.4	0.004	0.102	3.83	Pass
34	0.000	0.054	0.6	0.000	0.081	0.51	Pass
35	0.003	0.064	5.0	0.003	0.096	3.56	Pass
36	0.000	0.051	0.6	0.000	0.077	0.50	Pass
37	0.003	0.061	4.7	0.003	0.091	3.30	Pass
38	0.000	0.048	0.6	0.000	0.073	0.51	Pass
39	0.002	0.058	4.3	0.003	0.087	2.99	Pass
40	0.000	0.046	0.6	0.000	0.069	0.52	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 (IP8133W, LAN)

Description : Power Harmonics Test Setup

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

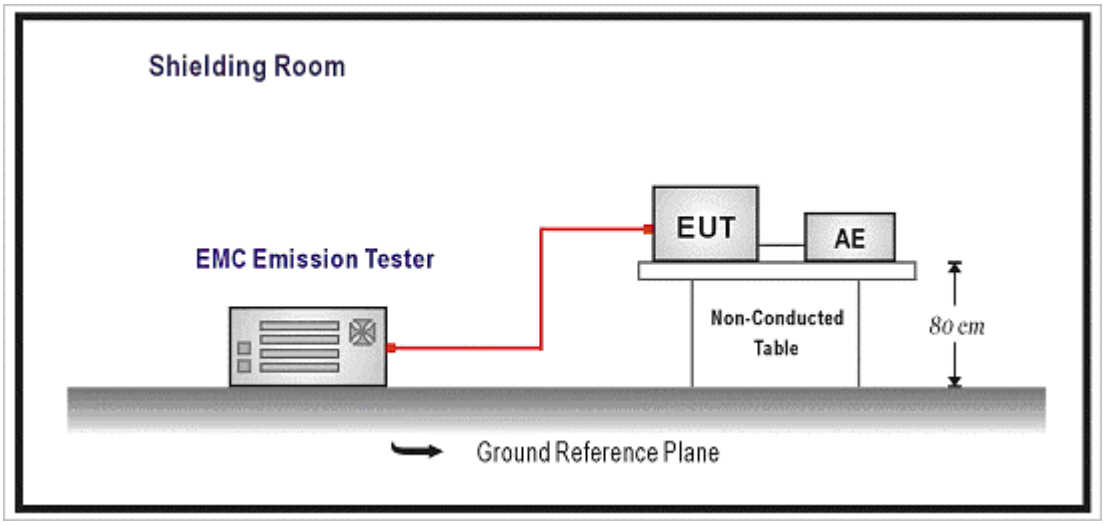
Description : Power Harmonics Test Setup

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_{lt} 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.

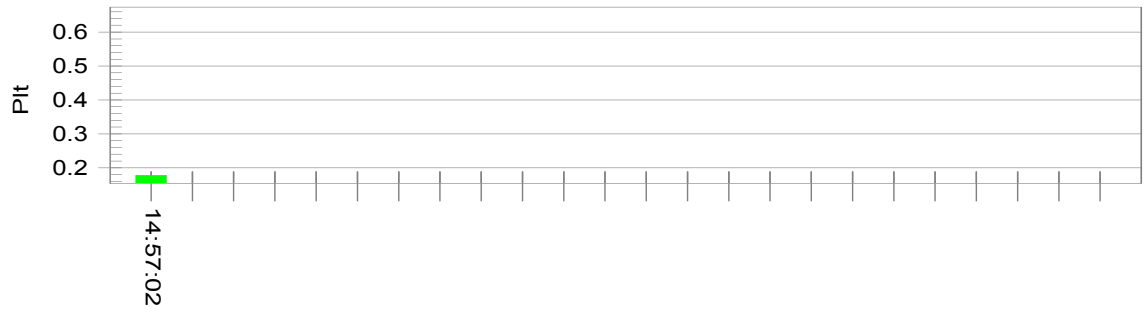
7.6. Test Result

Product	Network Camera		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 1: Normal Operation (IP8133W, LAN)		
Date of Test	2011/09/26	Test Site	No.3 Shielded Room

Test Result: Pass Status: Test Completed

Pst and limit line European Limits

Plt and limit line



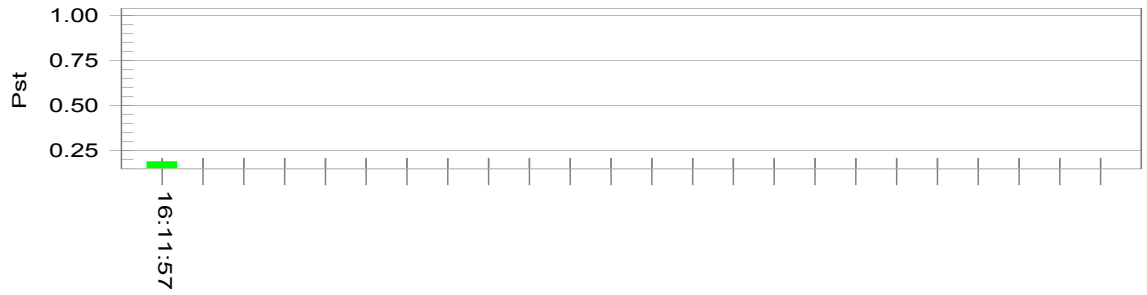
Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.57			
Highest dt (%):	2.09	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 (%):	2.07	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.407	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.178	Test limit:	0.650	Pass

Product	Network Camera		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 2: Normal Operation (IP8133W, WLAN)		
Date of Test	2011/09/26	Test Site	No.3 Shielded Room

Test Result: Pass Status: Test Completed

Pst_1 and limit line European Limits



Plt and limit line

Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.49			
Highest dt (%):	1.08	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 (%):	1.09	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.188	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.082	Test limit:	0.650	Pass

7.7. Test Photograph

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Flicker Test Setup

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

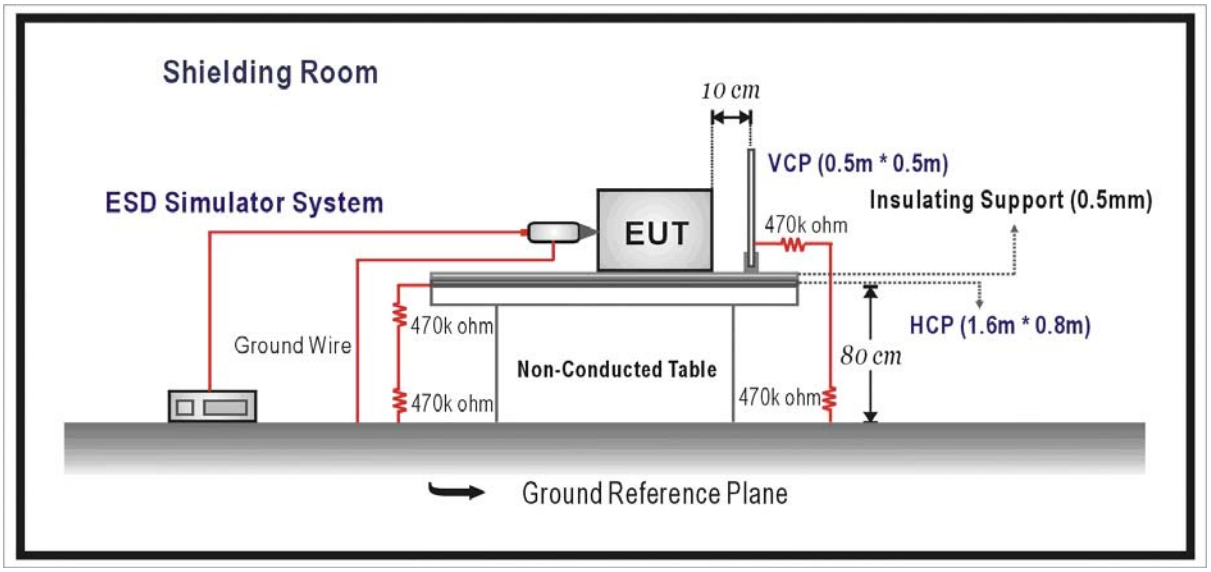
Description : Flicker Test Setup

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 (IP8133W, LAN)		
Date of Test	2011/09/28	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	B	Pass
	10	-8kV	B	B	Pass
Contact Discharge	25	+4kV	B	B	Pass
	25	-4kV	B	B	Pass
Indirect Discharge (HCP)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Front)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Left)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Back)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Right)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass

Note:

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

NR: No Requirement

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

☒ Meet criteria B: Operate as intended after the test

☐ Meet criteria C: Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at ____ kV.

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

Remark:

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

Product	Network Camera		
Test Item	Electrostatic Discharge		
Test Mode	Mode 2: Normal Operation (IP8133W, WLAN)		
Date of Test	2011/09/28	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	B	Pass
	10	-8kV	B	B	Pass
Contact Discharge	25	+4kV	B	B	Pass
	25	-4kV	B	B	Pass
Indirect Discharge (HCP)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Front)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Left)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Back)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Right)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass

Note:

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

NR: No Requirement

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

☒ Meet criteria B: Operate as intended after the test

☐ Meet criteria C: Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at ____ kV.

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

Remark:

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

Product	Network Camera		
Test Item	Electrostatic Discharge		
Test Mode	Mode 3: Normal Operation (IP8133, POE)		
Date of Test	2011/09/28	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	B	Pass
	10	-8kV	B	B	Pass
Contact Discharge	25	+4kV	B	B	Pass
	25	-4kV	B	B	Pass
Indirect Discharge (HCP)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Front)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Left)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Back)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (VCP Right)	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass

Note:

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

NR: No Requirement

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

☒ Meet criteria B: Operate as intended after the test

☐ Meet criteria C: Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at ____ kV.

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

Remark:

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

8.7. Test Photograph

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : ESD Test Setup

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : ESD Test Setup

Test Mode　: Mode 3: Normal Operation (IP8133, POE)

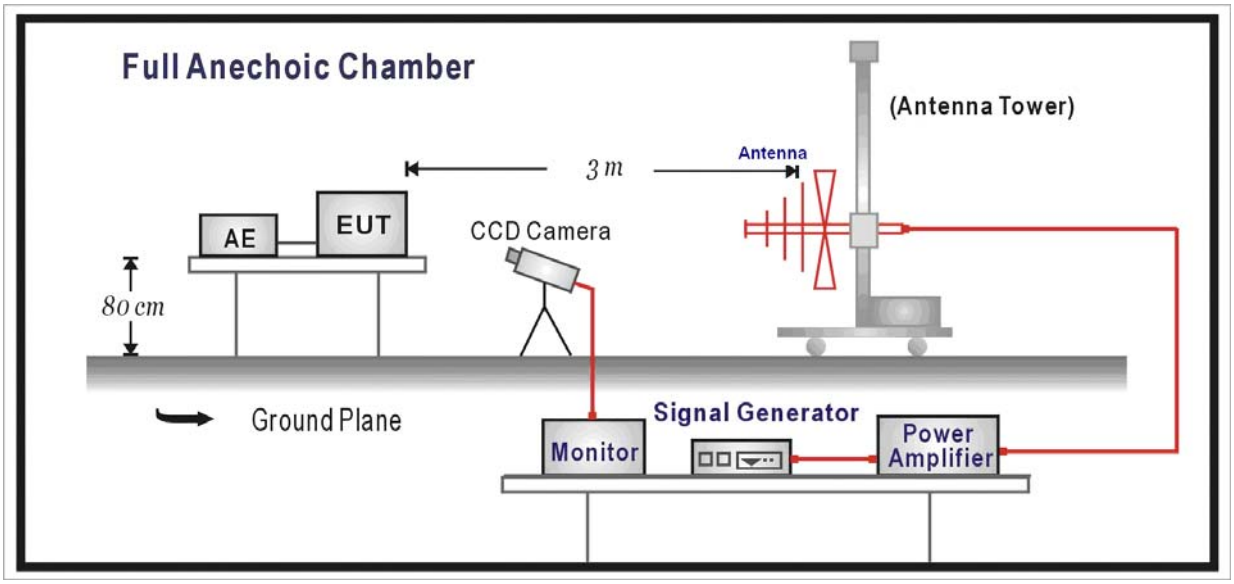
Description　: ESD Test Setup

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 x 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 (IP8133W, LAN)		
Date of Test	2011/09/27	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 (IP8133W, WLAN)		
Date of Test	2011/09/27	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 3: Normal Operation (IP8133, POE)		
Date of Test	2011/09/27	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.

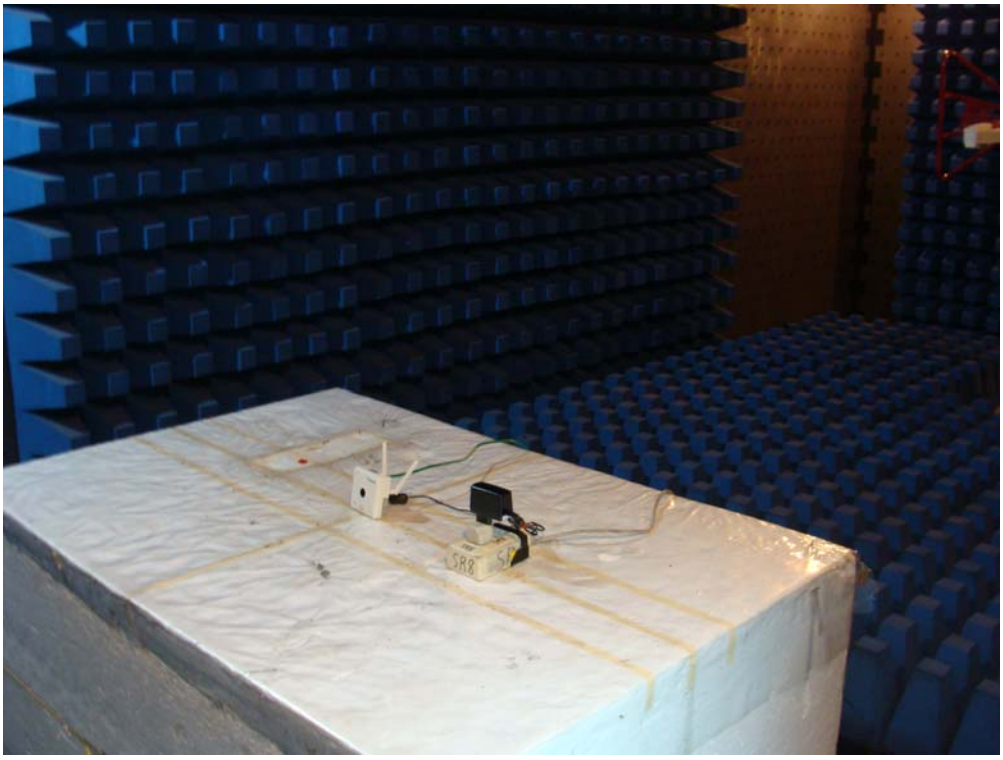
☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ There was no observable degradation in performance.
  ☐ EUT stopped operation and could / could not be reset by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

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

9.7. Test Photograph

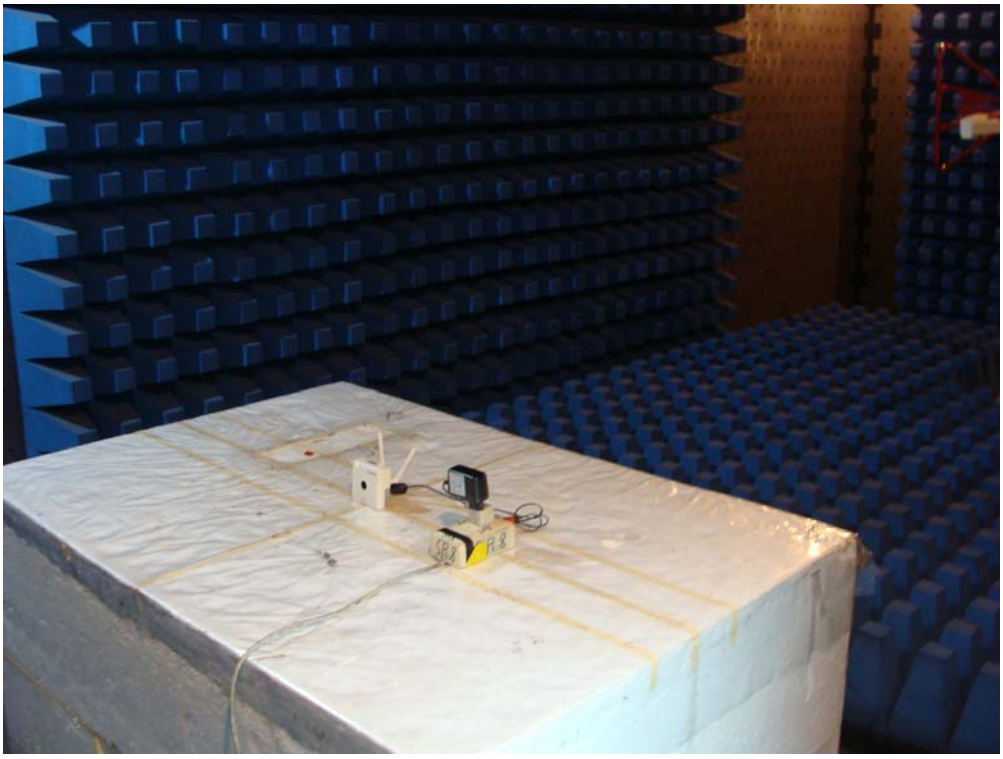
Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Radiated Susceptibility Test Setup



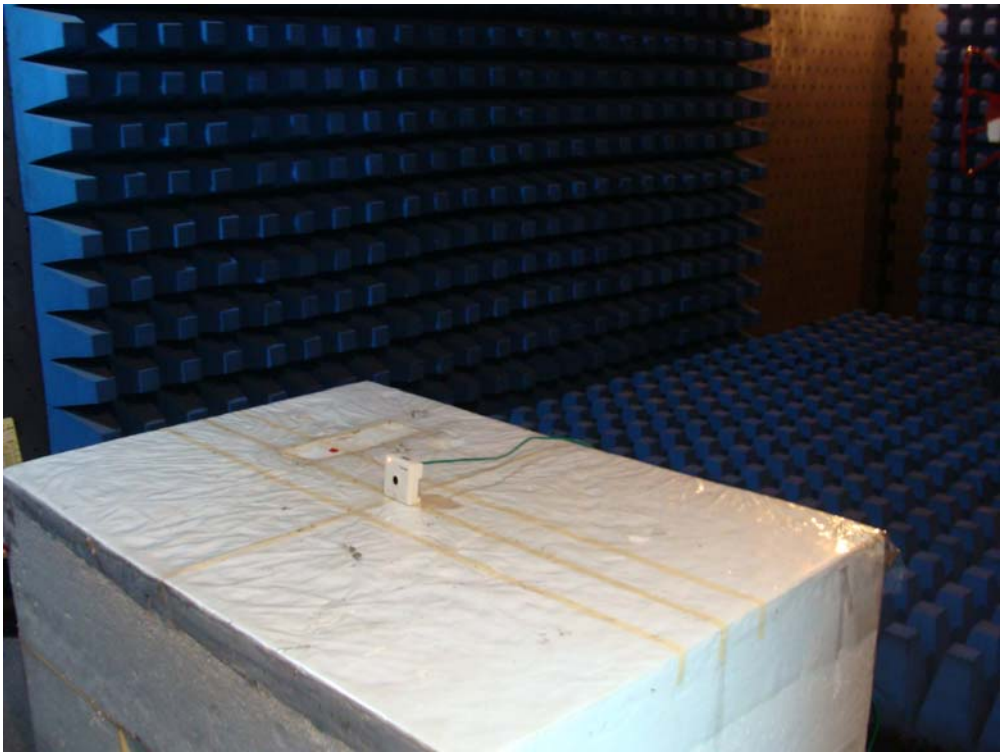
Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Radiated Susceptibility Test Setup



Test Mode : Mode 3: Normal Operation (IP8133, POE)

Description : Radiated Susceptibility Test Setup

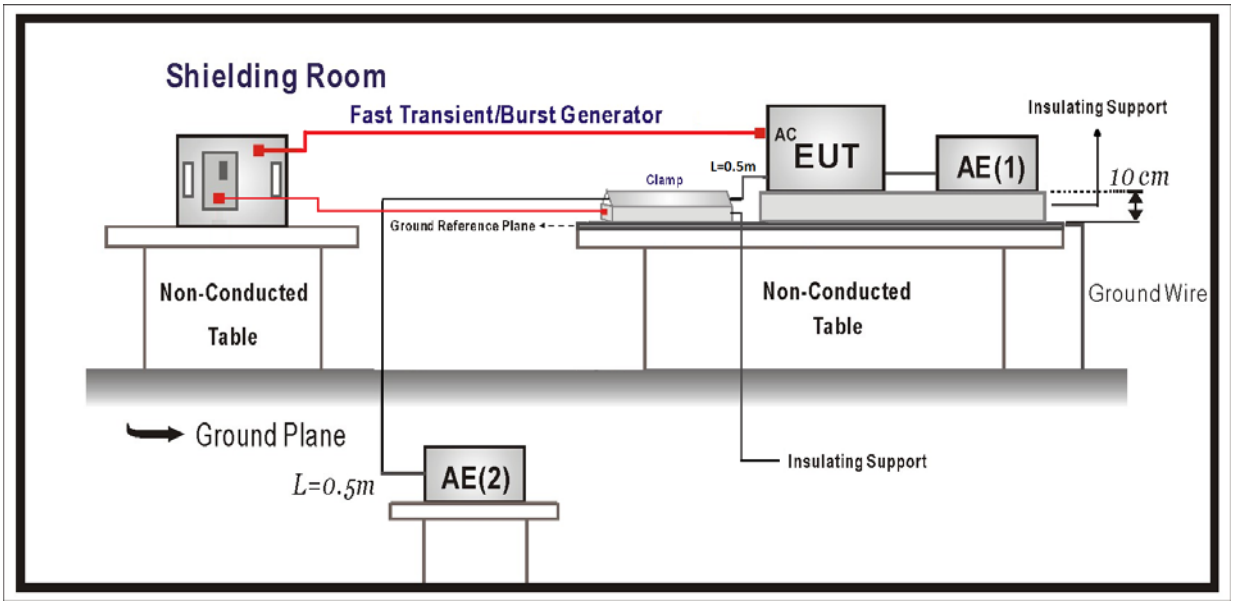


10. Electrical Fast Transient/Burst

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 1minute.

Test on power supply ports:
The EUT is connected to the power mains through a coupling device that directly couples the EFT/B interference signal.
Each of the Line and Neutral conductors is impressed with burst noise for 1 minute.

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

10.5. Deviation from Test Standard

No deviation.

10.6. Test Result

Product	Network Camera		
Test Item	Electrical fast transient/burst		
Test Mode	Mode 1: Normal Operation (IP8133W, LAN)		
Date of Test	2011/09/26	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	B	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 (IP8133W, WLAN)		
Date of Test	2011/09/26	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	B	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 3: Normal Operation (IP8133, POE)		
Date of Test	2011/09/26	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 (IP8133W, LAN)

Description : EFT/B Test Setup

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : EFT/B Test Setup-Clamp

Test Mode　: Mode 2: Normal Operation (IP8133W, WLAN)

Description　: EFT/B Test Setup

Test Mode　: Mode 2: Normal Operation (IP8133W, WLAN)

Description　: EFT/B Test Setup-Clamp

Test Mode　: Mode 3: Normal Operation (IP8133, POE)

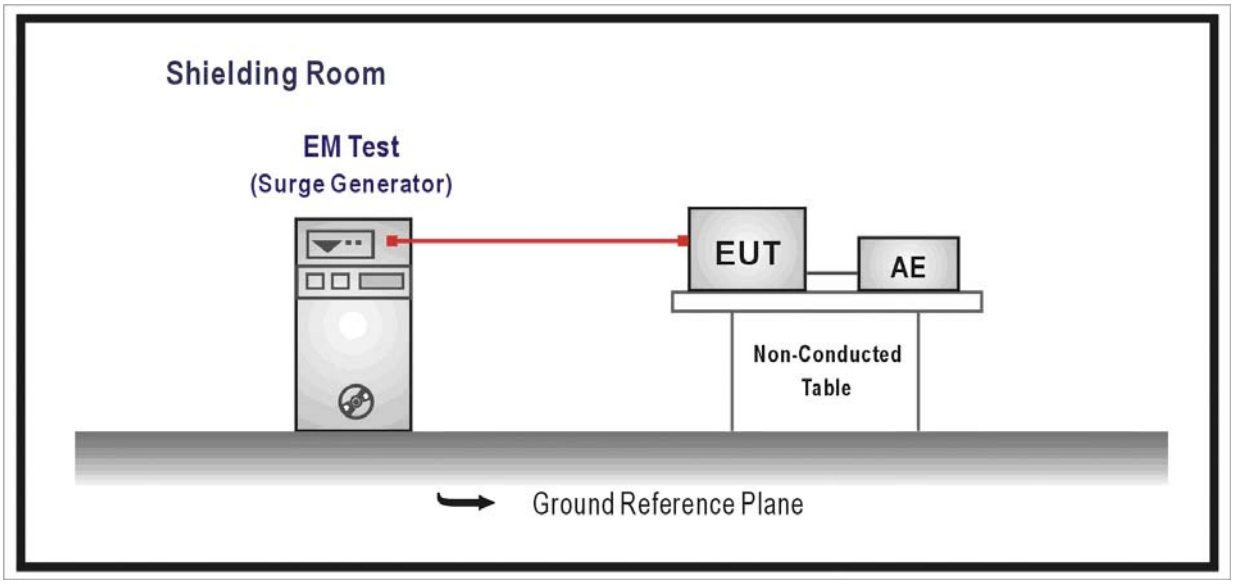
Description　: EFT/B Test Setup-Clamp

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 0^0, 90^0, 180^0, 270^0 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 (IP8133W, LAN)		
Date of Test	2011/09/26	Test Site	No.3 Shielded Room

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

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	Surge		
Test Mode	Mode 2: Normal Operation (IP8133W, WLAN)		
Date of Test	2011/09/26	Test Site	No.3 Shielded Room

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

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 (IP8133W, LAN)

Description : SURGE Test Setup

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : SURGE Test Setup

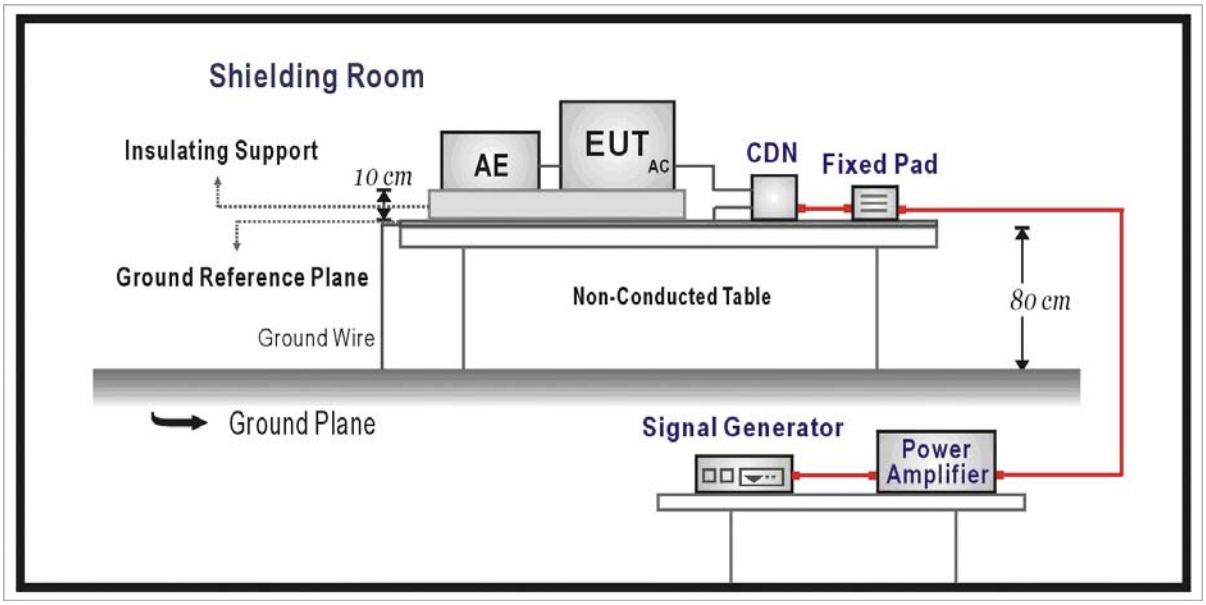
12. Conducted Susceptibility

12.1. Test Specification

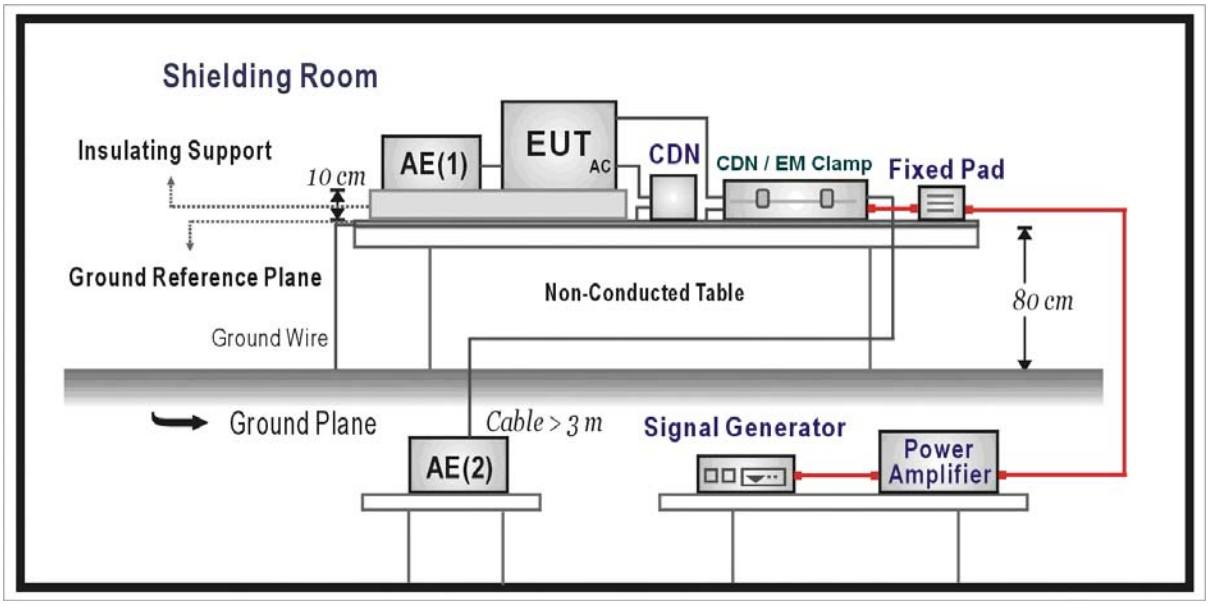
According to Standard : IEC 61000-4-6

12.2. Test Setup

CDN Test Mode



EM Clamp Test Mode



12.3. Limit

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

12.4. Test Procedure

The EUT are placed on a table that is 0.8 meter height, and a Ground reference plane on the table, EUT are placed upon table and use a 10cm insulation between the EUT and Ground reference plane.
For Signal Ports and Telecommunication Ports
The disturbance signal is through a coupling and decoupling networks (CDN) or EM-clamp device couples to the signal and Telecommunication lines of the EUT.
For Input DC and AC Power Ports
The EUT is connected to the power mains through a coupling and decoupling networks for power supply lines. And directly couples the disturbances signal into EUT.
Used CDN-M2 for two wires or CDN-M3 for three wires.

All the scanning conditions are as follows:

	Condition of Test	Remarks
1.	Field Strength	130dBuV(3V) Level 2
2.	Radiated Signal	AM 80% Modulated with 1kHz
3.	Scanning Frequency	0.15MHz – 80MHz
4	Dwell Time	3 Seconds
5.	Frequency step size Δf :	1%
6.	The rate of Swept of Frequency	1.5 x 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 (IP8133W, LAN)		
Date of Test	2011/09/27	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 (IP8133W, WLAN)		
Date of Test	2011/09/27	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 3: Normal Operation (IP8133, POE)		
Date of Test	2011/09/28	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	LAN	A	A	PASS

Note:

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

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

12.7. Test Photograph

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Conducted Susceptibility Test Setup

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Conducted Susceptibility Test Setup-CDN

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Conducted Susceptibility Test Setup

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Conducted Susceptibility Test Setup-CDN

Test Mode : Mode 3: Normal Operation (IP8133, POE)

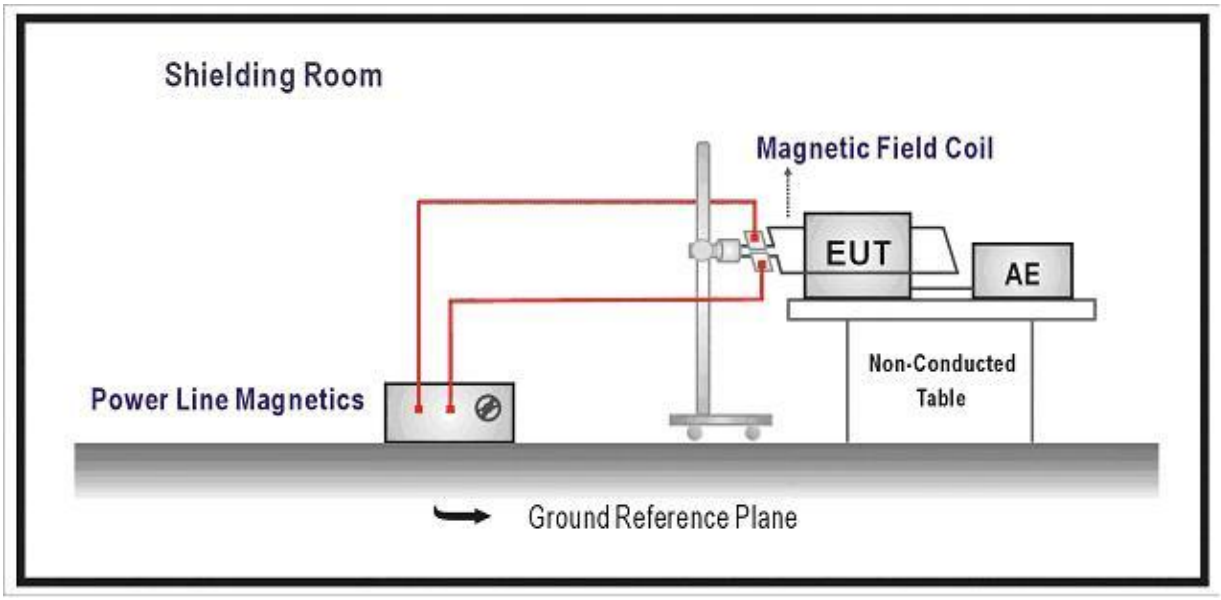
Description : Conducted Susceptibility Test Setup-Clamp

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 (IP8133W, LAN)		
Date of Test	2011/09/26	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 (IP8133W, WLAN)		
Date of Test	2011/09/26	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 3: Normal Operation (IP8133, POE)		
Date of Test	2011/09/27	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.

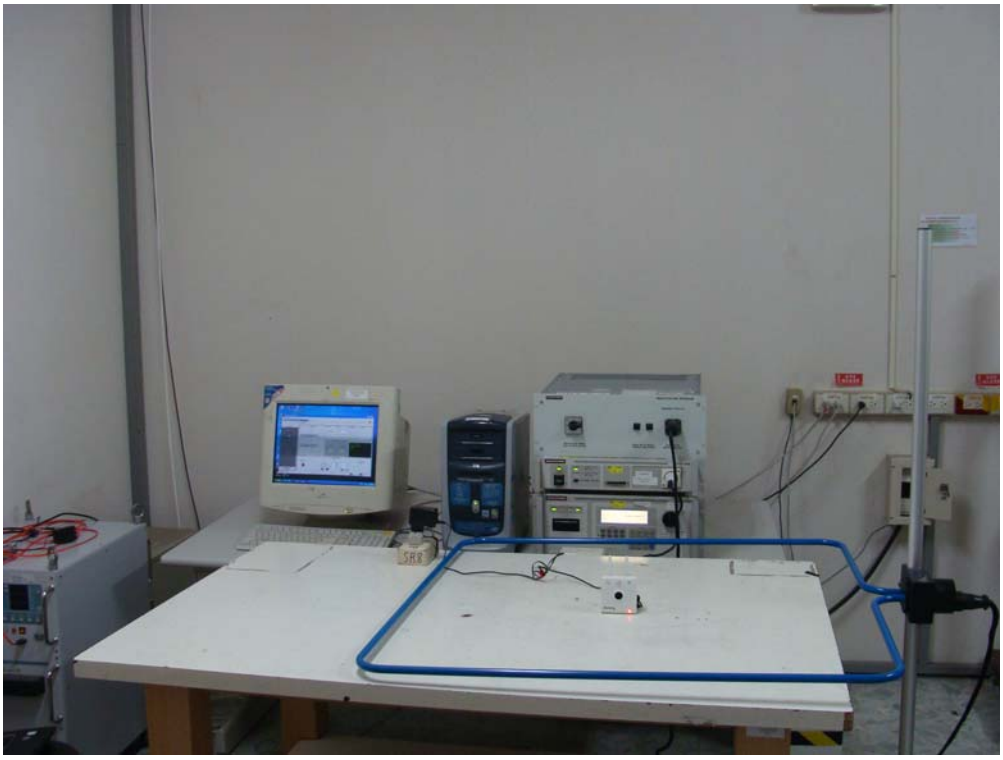
13.7. Test Photograph

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Power Frequency Magnetic Field Test Setup

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Power Frequency Magnetic Field Test Setup



Test Mode : Mode 3: Normal Operation (IP8133, POE)

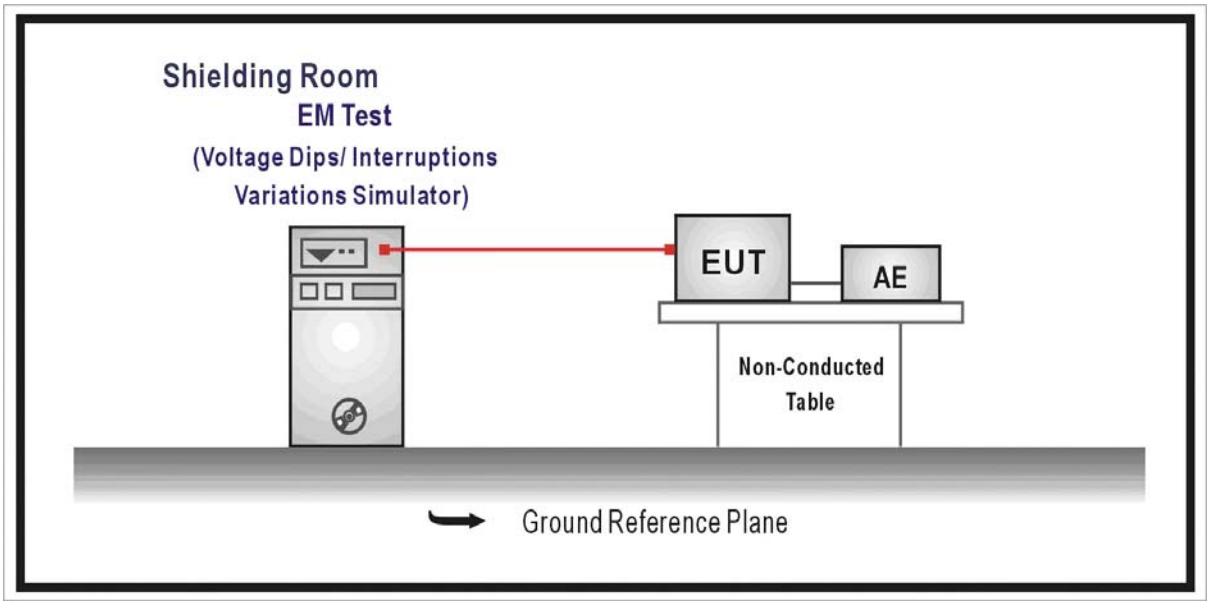
Description : Power Frequency Magnetic Field Test Setup

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 Period	30 25	C
		% Reduction Period	>95 0.5	B
	Voltage Interruptions	% Reduction Period	> 95 250	C

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 0^0, 45^0, 90^0 ,135^0 ,180^0 ,225^0, 270^0 ,315^0 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 (IP8133W, LAN)		
Date of Test	2011/09/26	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	B	PASS
>95	45	250	C	B	PASS
>95	90	250	C	B	PASS
>95	135	250	C	B	PASS
>95	180	250	C	B	PASS
>95	225	250	C	B	PASS
>95	270	250	C	B	PASS
>95	315	250	C	B	PASS

☒ Meet criteria A: Operate as intended during and after the test
☒ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ The nominal voltage of EUT is 230V.
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

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

Product	Network Camera		
Test Item	Voltage dips and interruption		
Test Mode	Mode 2: Normal Operation (IP8133W, WLAN)		
Date of Test	2011/09/26	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	B	PASS
>95	45	250	C	B	PASS
>95	90	250	C	B	PASS
>95	135	250	C	B	PASS
>95	180	250	C	B	PASS
>95	225	250	C	B	PASS
>95	270	250	C	B	PASS
>95	315	250	C	B	PASS

☒ Meet criteria A: Operate as intended during and after the test
☒ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ The nominal voltage of EUT is 230V.
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

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

14.7. Test Photograph

Test Mode : Mode 1: Normal Operation (IP8133W, LAN)

Description : Voltage Dips Test Setup

Test Mode : Mode 2: Normal Operation (IP8133W, WLAN)

Description : Voltage Dips Test Setup

15. Attachment

➢ EUT Photograph

(1) EUT Photo (M/N: IP8133)

(2) EUT Photo

(3) EUT Photo

(4) EUT Photo (M/N: IP8133W)

(5) EUT Photo

(6) EUT Photo

(7) EUT Photo

(8) EUT Photo

(9) EUT Photo

(10) EUT Photo