CE Appendix Report

Product Name ： Network Camera

Model No. ： FD9367-HV, FD9367-HTV, FD9367-EHTV

Applicant ： VIVOTEK INC.

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

Date of Receipt ： 2017/09/19

Issued Date ： 2017/10/30

Report No. ： 1790255R-ITCEP01V01

Report Version ： V1.0

Test Report

Issued Date : 2017/10/30
Report No. : 1790255R-ITCEP01V01

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.	:	FD9367-HV, FD9367-HTV, FD9367-EHTV
EUT Rated Voltage	:	DC 12V, By PoE
EUT Test Voltage	:	AC 230V/50Hz, By PoE
Trade Name	:	VIVOTEK
Applicable Standard	:	EN 55032: 2012+AC: 2013, Class A EN 55024: 2010+A1: 2015 EN 61000-3-2: 2014 EN 61000-3-3: 2013 CISPR 22: 2008 CISPR 24: 2010 AS/NZS CISPR 32: 2013
Test Result	:	Complied
Performed Location	:	DEKRA Testing and Certification Co., Ltd. Linkou Laboratory No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan TEL:+866-2-8601-3788 / FAX:+886-2-8601-3789

Documented By : Jessie Ciou
(Adm. Assistant / Jessie Ciou)

Reviewed By : Sam Lin
(Engineer / Sam Lin)

Approved By :
(Director / Vincent Lin)

Laboratory Information

We, **DEKRA Testing and Certification Co., Ltd.**, 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**
Norway	**:**	**DNV**
USA	**:**	**FCC**
Japan	**:**	**VCCI**

The related certificate for our laboratories about the test site and management system can be downloaded from DEKRA Testing and Certification Co., Ltd.Web Site :
http://www.dekra.com.tw/english/about/certificates.aspx?bval=5
The address and introduction of DEKRA Testing and Certification Co., Ltd.laboratories can be founded in our Web site : http://www.dekra.com.tw/index_en.aspx
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

Hsin Chu Laboratory:

No.75-2, 3rd Lin, WangYe Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan (R.O.C.)
No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan
No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 310, Taiwan
TEL:+886-3-592-8858 / FAX:+886-3-592-8859
TEL:+886-3-582-8001 / FAX:+886-3-5828-958 E-Mail : info.tw@dekra.com

Lin Kou 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 : info.tw@dekra.com

Suzhou (China) Testing Laboratory :

No.99 Hongye Rd., Suzhou Industrial Park, Suzhou,215006, Jiangsu,China
TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098 E-Mail : info.tw@dekra.com

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1. General Information

1.1. EUT Description

Product Name	Network Camera
Trade Name	VIVOTEK
Model No.	FD9367-HV, FD9367-HTV, FD9367-EHTV

Note:

1. This appendix report was based on DEKRA report No.: 1780565R-ITCEP01V01.
2. The different is Forward to Class A
3. The EUT is including three models for different marketing requirement.

1.2. Mode of Operation

DEKRA 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: FD9367-EHTV, Adapter Mode 2: FD9367-EHTV, PoE	
Final Test Mode	
Emission	Mode 1: FD9367-EHTV, Adapter Mode 2: FD9367-EHTV, PoE
Immunity	Mode 1: FD9367-EHTV, Adapter Mode 2: FD9367-EHTV, PoE

Note:

According to pre-test data, we choose the worst case mode 1, 2 as the final and full testing.

1.3. Tested System Details

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

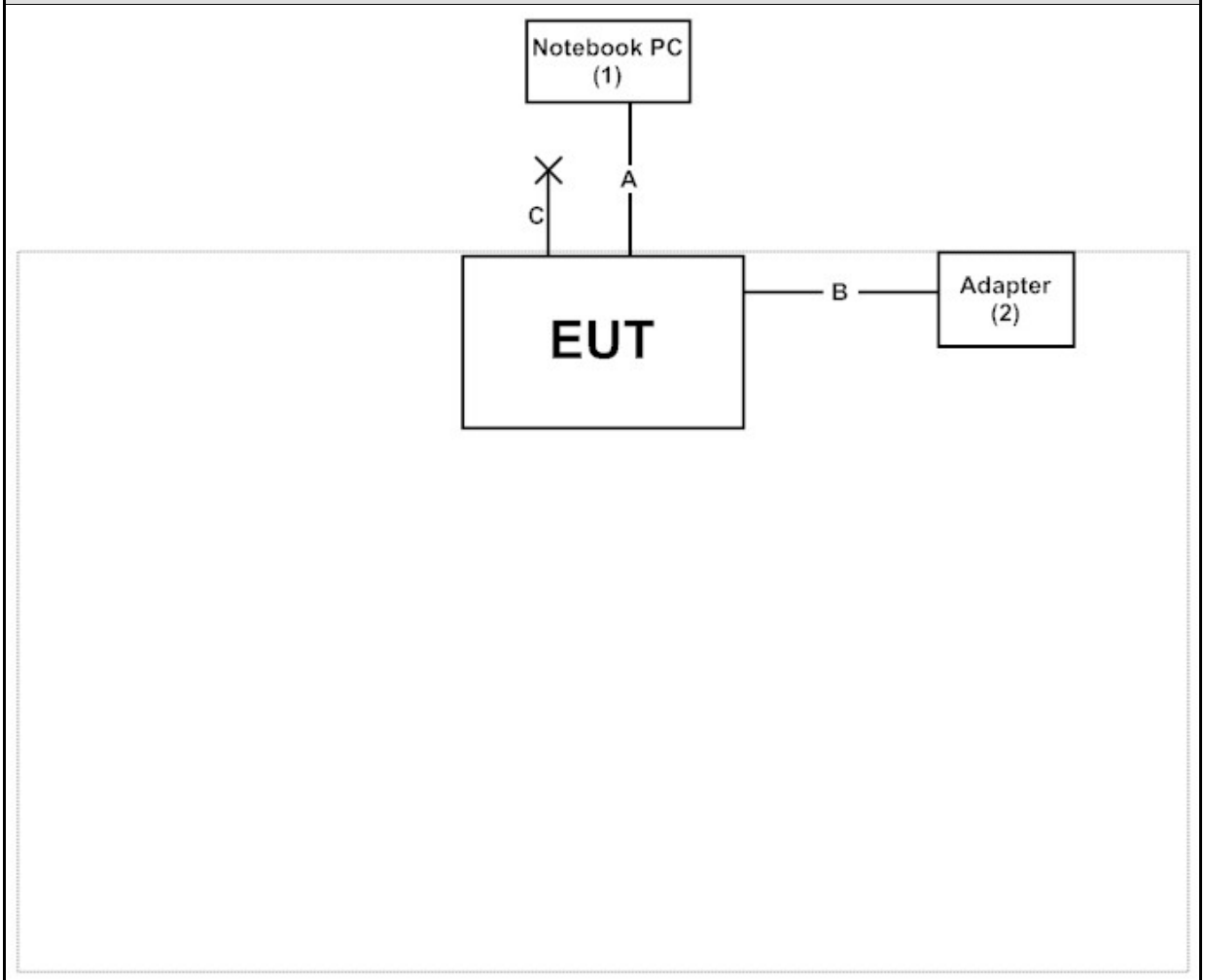
Test Mode		Mode 1			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	E5530	24QPXW1	Non-Shielded, 0.8m
2	Adapter	N/A	N/A	N/A	N/A

Test Mode		Mode 2			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	E5530	24QPXW1	Non-Shielded, 0.8m
2	PoE	N/A	N/A	N/A	N/A

1.4. Configuration of Tested System

Test Mode	Mode 1

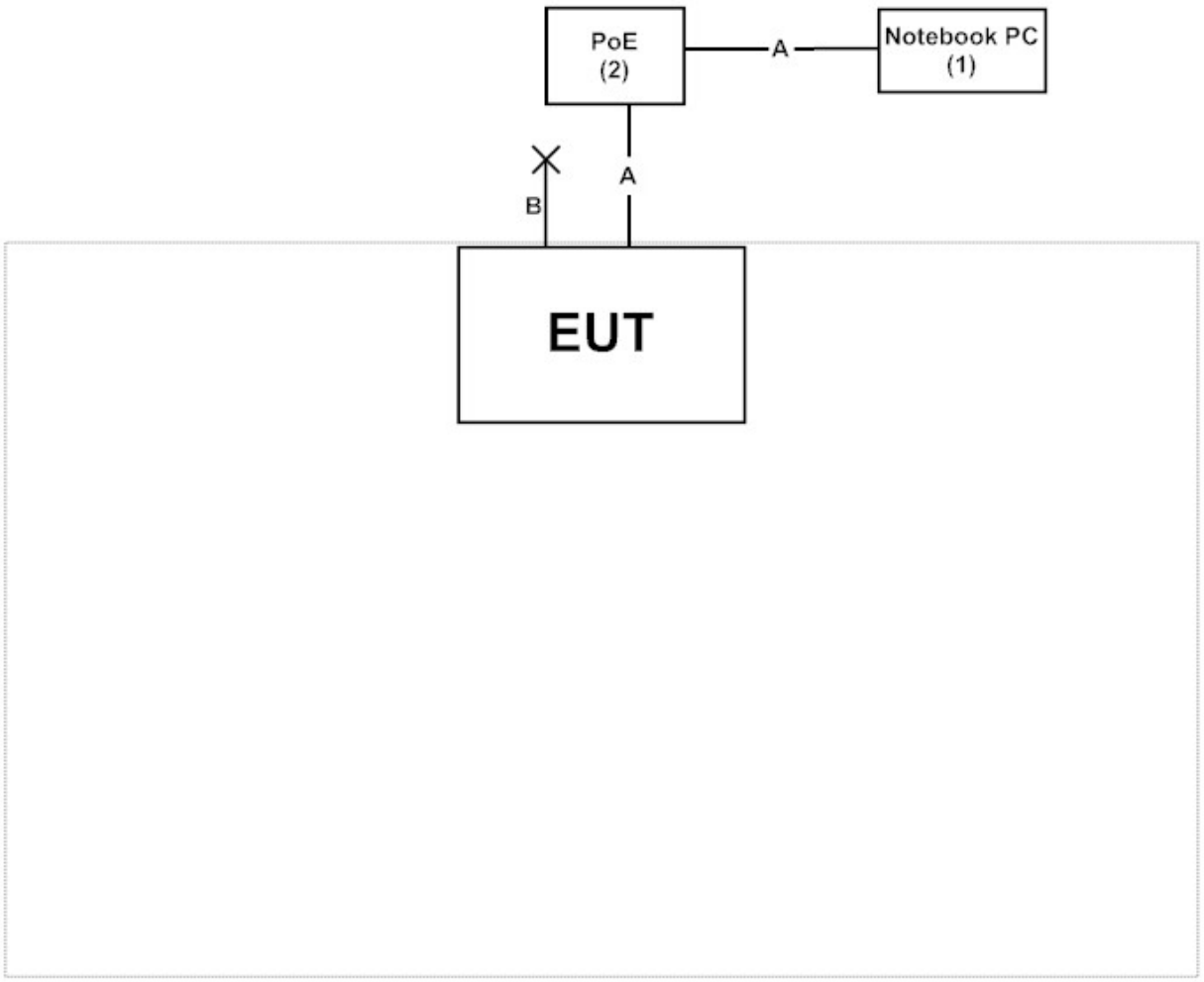
Connection Diagram



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 6.0m
B	Power Cable	Non-Shielded, 1.8m
C	DI/DO Cable	Non-Shielded, 0.3m

Test Mode	Mode 2

Connection Diagram



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 6.0m, two PCS
B	DI/DO Cable	Non-Shielded, 0.3m

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	The EUT will start to operate and display the video figure from the signal source.
4	The EUT will display “video figure” on monitor.
5	SD card works while the EUT is recording.
6	Repeat the above procedure (3) to (5).

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 55032: 2012+AC: 2013	Yes	No
Impedance Stabilization Network	EN 55032: 2012+AC: 2013	Yes	No
Radiated Emission	EN 55032: 2012+AC: 2013	Yes	No
Power Harmonics	EN 61000-3-2: 2014	Yes	No
Voltage Fluctuation and Flicker	EN 61000-3-3: 2013	Yes	No

Immunity			
Performed Item	Normative References	Test Performed	Deviation
Electrostatic Discharge	IEC 61000-4-2 Ed. 2.0: 2008	Yes	No
Radiated susceptibility	IEC 61000-4-3 Ed. 3.2: 2010	Yes	No
Electrical fast transient/burst	IEC 61000-4-4 Ed. 3.0: 2012	Yes	No
Surge	IEC 61000-4-5 Ed. 3.0: 2014	Yes	No
Conducted susceptibility	IEC 61000-4-6 Ed. 4.0: 2013	Yes	No
Power frequency magnetic field	IEC 61000-4-8 Ed. 2.0: 2009	Yes	No
Voltage dips and interruption	IEC 61000-4-11 Ed. 2.0: 2004	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR8

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	100369	2017/10/13
LISN	R&S	ESH3-Z5	836679/017	2017/01/18
LISN	R&S	ENV216	100097	2017/01/18
Coaxial Cable	DEKRA	RG 400	LC018-RG	2017/06/22

Impedance Stabilization Network / SR8

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Capacitive Voltage Probe	Schaffner	CVP2200A	18331	2016/11/08
EMI Test Receiver	R&S	ESCS 30	100369	2017/10/13
LISN	R&S	ESH3-Z5	836679/017	2017/01/18
LISN	R&S	ENV216	100097	2017/01/18
RF Current Probe	FCC	F-65 10KHz~1GHz	198	2016/11/08
Impedance Stabilization Network	Teseq	ISN T800	42815	2017/06/30
Coaxial Cable	DEKRA	RG 400	LC018-RG	2017/06/22
BALANCED TELECOM ISN	FCC	FCC-TLISN-T2-02	20316	2017/08/29

Radiated Emission / Site 7

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2930	2017/06/25
EMI Test Receiver	R&S	ESCI	100649	2017/07/04
Coaxial Cable	DEKRA	RG 214	LC007-RG	2017/06/19
Pre-Amplifier	DEKRA	AP/0100A	CHM/1009094	2017/06/19
Site7 NSA	DEKRA	N/A	N/A	2017/06/19

Radiated Emission / CB8

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESR26	101385	2017/09/29
Horn Antenna	ETS-Lindgren	3117	00135205	2017/04/28
Pre-Amplifier	EMCI	EMC012630SE	980210	2017/02/24
CB8 VSWR	DEKRA	N/A	N/A	2017/06/12

Power Harmonics / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source (Harmonic)	TESEQ	NSG 1007-5	1530A00015	2017/08/01
Signal conditioning unit (Flicker)	TESEQ	CCN 1000-1	1530A00015	2017/08/01

Voltage Fluctuation and Flicker / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source (Harmonic)	TESEQ	NSG 1007-5	1530A00015	2017/08/01
Signal conditioning unit (Flicker)	TESEQ	CCN 1000-1	1530A00015	2017/08/01

Electrostatic Discharge / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
ESD Simulator System	Noiseken	ESS-B3011	ESS1233479	2017/05/19
ESD GUN	Noiseken	GT-30R	ESS1233499	2017/05/19
Horizontal Coupling	QuieTek	HCP AL50	N/A	N/A

Plane(HCP)				
Vertical Coupling Plane(VCP)	QuieTek	VCP AL50	N/A	N/A

Radiated susceptibility / CB9

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Signal Generator	Keysight	N5171B	MY53051650	2017/08/20
Power Meter	Keysight	N1912A	MY55480006	2017/08/23
Stacked double Log.-Per.-Broadband Antenna	SCHWARZBECK	STLP 9129	9129 011	N/A
Power Amplifier	MILMEGA	80RF1000-300	1071481	N/A
Power Amplifier	MILMEGA	AS0860B-50/50	1071482	N/A

Electrical fast transient/burst / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMS TEST System	TESEQ	NSG 3060	1823	2016/12/21

Surge / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMS TEST System	TESEQ	NSG 3060	1823	2016/12/21

Conducted susceptibility / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
TESEQ RF-Generator	TESEQ	NSG 4070B-30	37490	2017/05/30

Power frequency magnetic field / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source (Harmonic)	TESEQ	NSG 1007-5	1530A00015	2017/08/01
Magnetic Loop Coil	Schaffner	INA 702	160	2017/07/20
Magnetic Loop Coil	TESEQ	INA 703	2007	2017/07/20

Voltage dips and interruption / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMS TEST System	TESEQ	NSG 3060	1823	2016/12/21

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 3.44 dB.

Impedance Stabilization Network

The measurement uncertainty is evaluated as ± 3.88 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 4.22 dB.

Radiated Emission Above 1GHz

The measurement uncertainty is evaluated as ± 5.08 dB.

Harmonic Current Emission / Voltage Fluctuation and Flicker

The measurement uncertainty is evaluated as 2 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 current and timing as being 4.6 % and 6.7 %

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 and timing as being 8.4 % and 4.7%.

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 4.1 % and 3.9%

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 2.15 dB and 3.3 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 1.0 %

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 1.6 % and 2.8%.

2.4. Test Environment

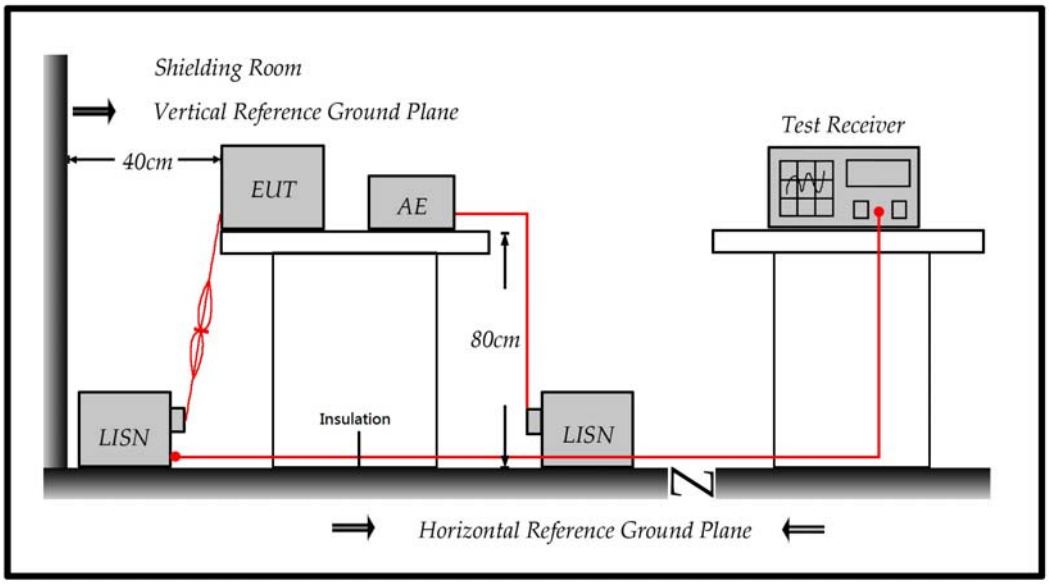
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Impedance Stabilization Network	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	31.1
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Electrostatic Discharge	Temperature (°C)	15-35	24
	Humidity (%RH)	30-60	50
	Barometric pressure (mbar)	860-1060	950-1000
Radiated susceptibility	Temperature (°C)	15-35	23
	Humidity (%RH)	25-75	56
	Barometric pressure (mbar)	860-1060	950-1000
Electrical fast transient/burst	Temperature (°C)	15-35	22
	Humidity (%RH)	25-75	68
	Barometric pressure (mbar)	860-1060	950-1000
Surge	Temperature (°C)	15-35	22
	Humidity (%RH)	10-75	68
	Barometric pressure (mbar)	860-1060	950-1000
Conducted susceptibility	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Power frequency magnetic field	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Voltage dips and interruption	Temperature (°C)	15-35	22
	Humidity (%RH)	25-75	68
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission (Main Terminals)

3.1. Test Specification

According to EMC Standard : EN 55032 & AS/NZS CISPR 32

3.2. Test Setup



3.3. Limit

Applicable to AC mains power ports			
Frequency range MHz	Coupling device	Detector type/ Bandwidth	Class A limits dB(μV)
0.15 – 0.5	AMN	Quasi Peak / 9 KHz	79
0.5 – 30			73
0.15 – 0.5	AMN	Average / 9 KHz	66
0.5 – 30			60
Both apply across the entire frequency range.			

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

3.4. Test Procedure

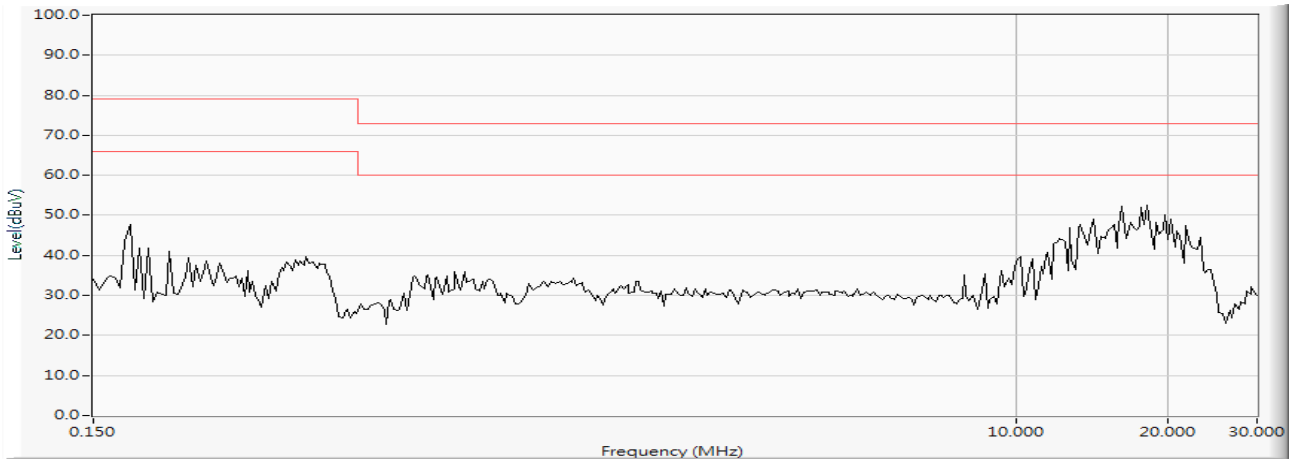
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50Uh coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50Uh coupling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

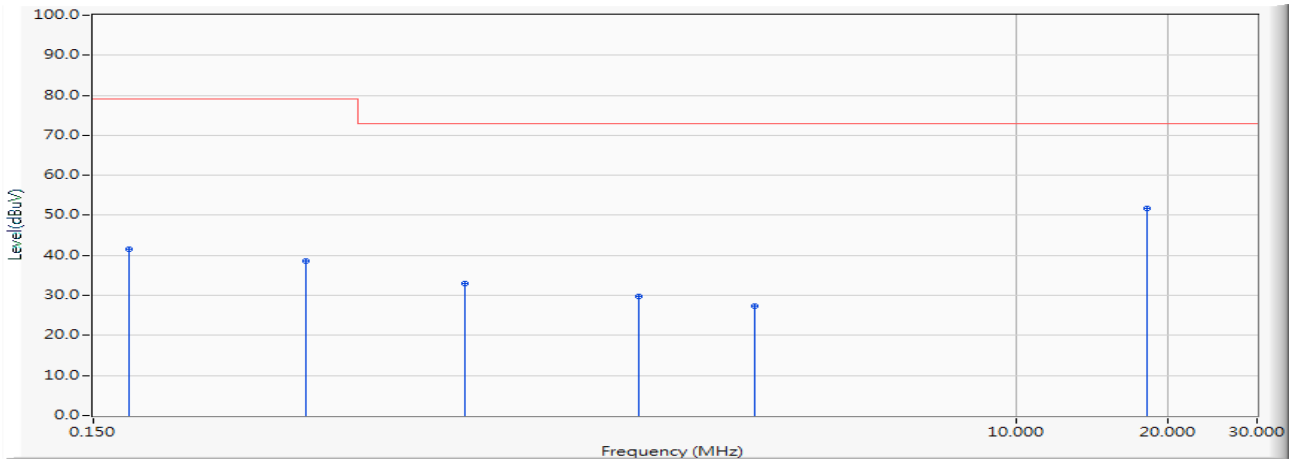
No deviation.

3.6. Test Result

Site : SR8	**Time : 2017/09/27 - 16:47**
Limit : CISPR_A_00M_QP	**Margin : 13**
EUT : Network Camera	**Probe : ENV216_L1 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1**



Site : SR8	**Time : 2017/09/27 - 16:49**
Limit : CISPR_A_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ENV216_L1 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1**

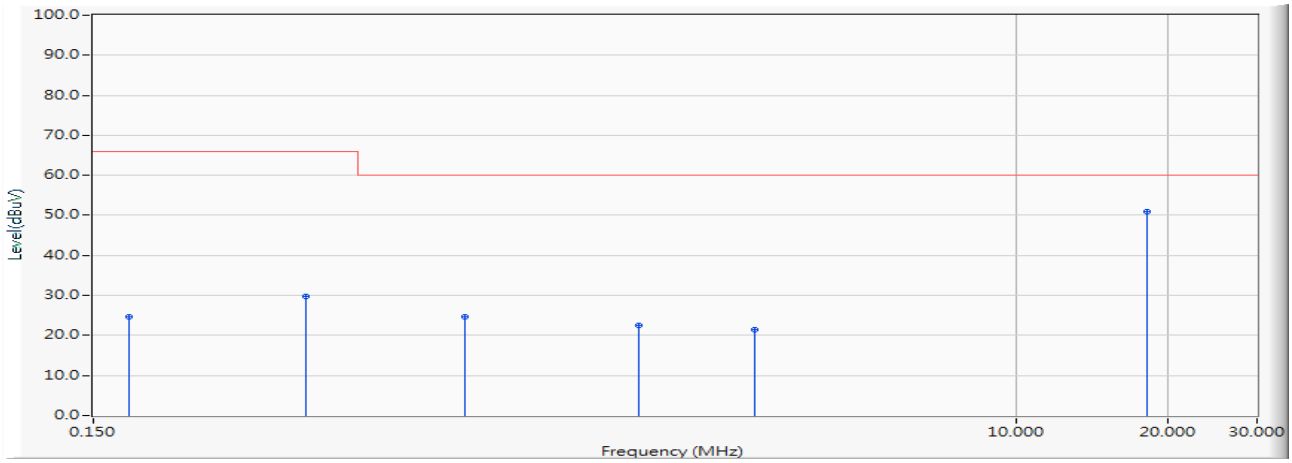


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.177	9.763	31.840	41.603	-37.397	79.000	QUASIPEAK
2		0.396	9.736	28.800	38.536	-40.464	79.000	QUASIPEAK
3		0.814	9.761	23.160	32.921	-40.079	73.000	QUASIPEAK
4		1.798	9.717	20.130	29.847	-43.153	73.000	QUASIPEAK
5		3.037	9.819	17.540	27.359	-45.641	73.000	QUASIPEAK
6	*	18.244	10.066	41.640	51.706	-21.294	73.000	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 : SR8	**Time : 2017/09/27 - 16:49**
Limit : CISPR_A_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ENV216_L1 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1**

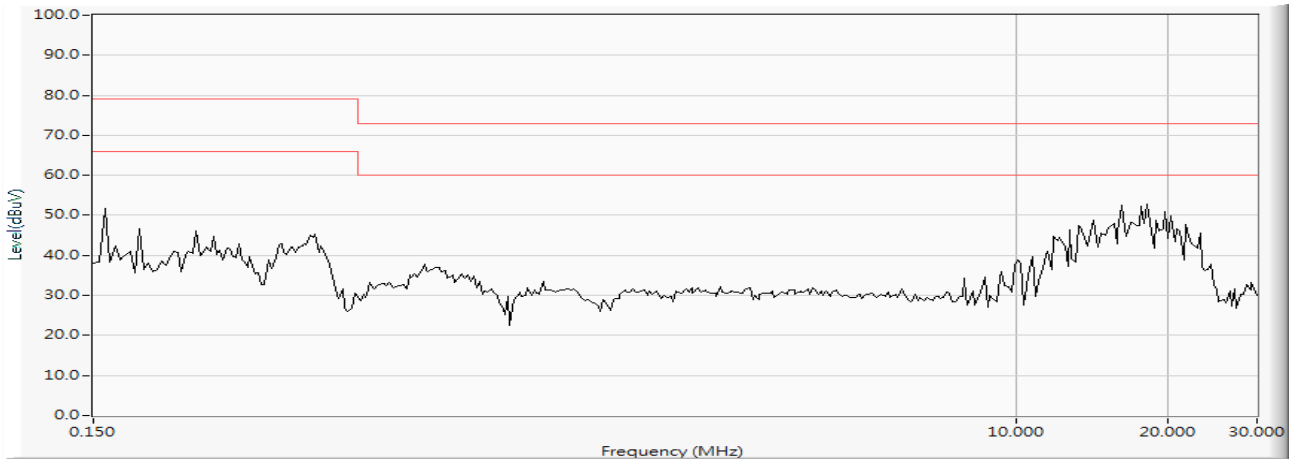


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.177	9.763	14.950	24.713	-41.287	66.000	AVERAGE
2		0.396	9.736	19.930	29.666	-36.334	66.000	AVERAGE
3		0.814	9.761	14.820	24.581	-35.419	60.000	AVERAGE
4		1.798	9.717	12.750	22.467	-37.533	60.000	AVERAGE
5		3.037	9.819	11.550	21.369	-38.631	60.000	AVERAGE
6	*	18.244	10.066	40.810	50.876	-9.124	60.000	AVERAGE

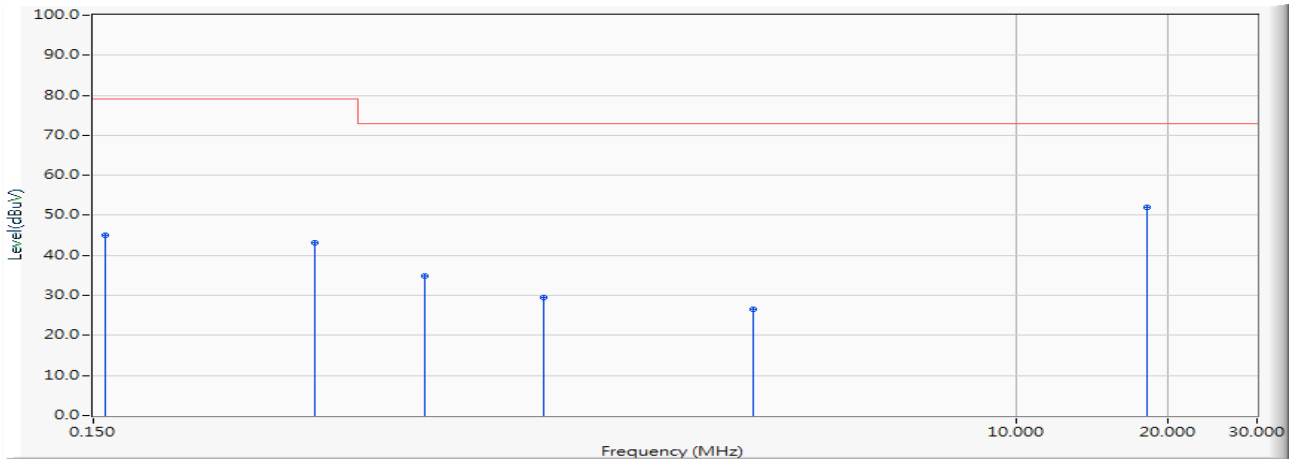
Note:

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 : SR8	**Time : 2017/09/27 - 16:52**
Limit : CISPR_A_00M_QP	**Margin : 13**
EUT : Network Camera	**Probe : ENV216_N - Line2**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1**



Site : SR8	**Time : 2017/09/27 - 16:53**
Limit : CISPR_A_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : ENV216_N - Line2**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1**

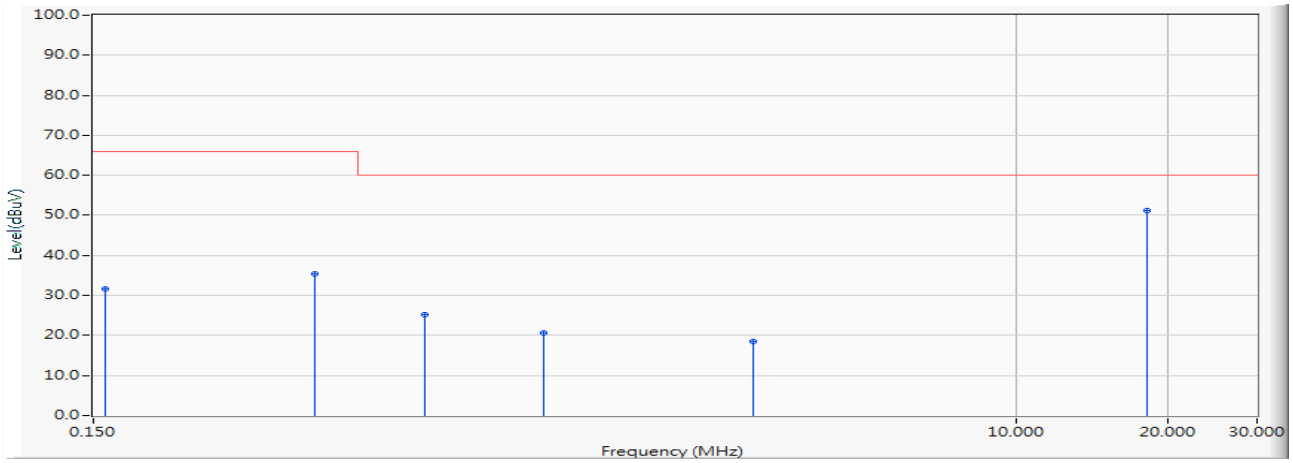


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.158	9.701	35.270	44.972	-34.028	79.000	QUASIPEAK
2		0.412	9.766	33.510	43.276	-35.724	79.000	QUASIPEAK
3		0.677	9.823	24.930	34.753	-38.247	73.000	QUASIPEAK
4		1.166	9.878	19.670	29.548	-43.452	73.000	QUASIPEAK
5		3.017	9.898	16.750	26.648	-46.352	73.000	QUASIPEAK
6	*	18.244	10.216	41.900	52.116	-20.884	73.000	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 : SR8	**Time : 2017/09/27 - 16:53**
Limit : CISPR_A_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : ENV216_N - Line2**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.158	9.701	22.050	31.752	-34.248	66.000	AVERAGE
2		0.412	9.766	25.650	35.416	-30.584	66.000	AVERAGE
3		0.677	9.823	15.420	25.243	-34.757	60.000	AVERAGE
4		1.166	9.878	10.760	20.638	-39.362	60.000	AVERAGE
5		3.017	9.898	8.560	18.458	-41.542	60.000	AVERAGE
6	*	18.244	10.216	41.080	51.296	-8.704	60.000	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: FD9367-EHTV, Adapter

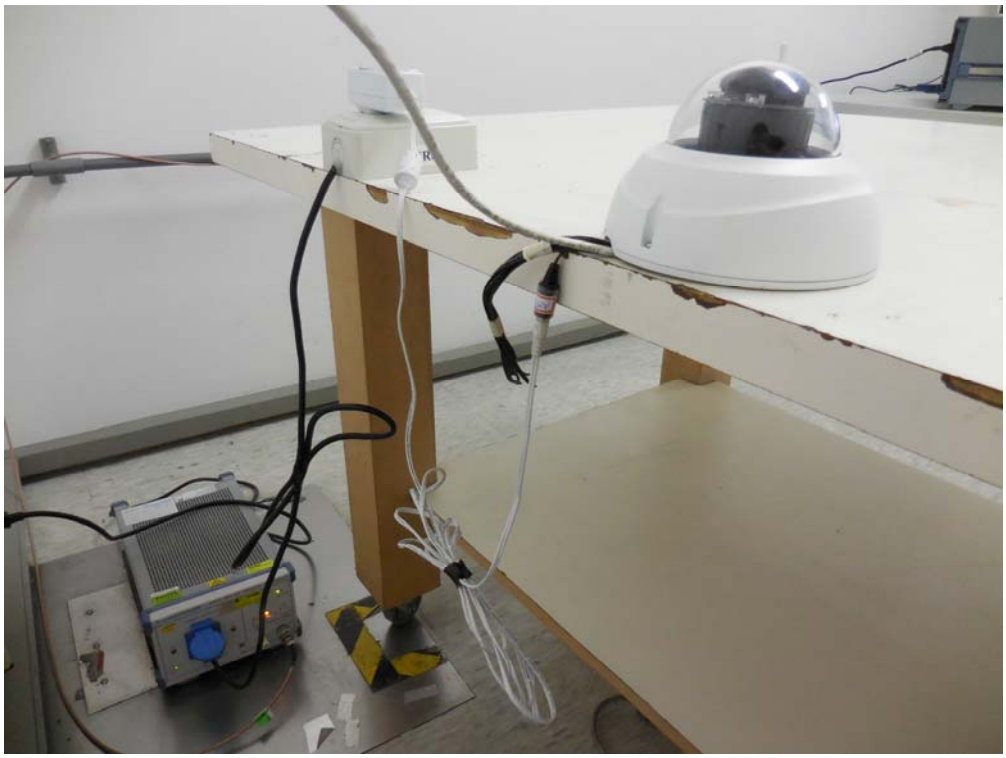
Description : Front View of Conducted Test

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Back View of Conducted Test

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Back View of Conducted Test

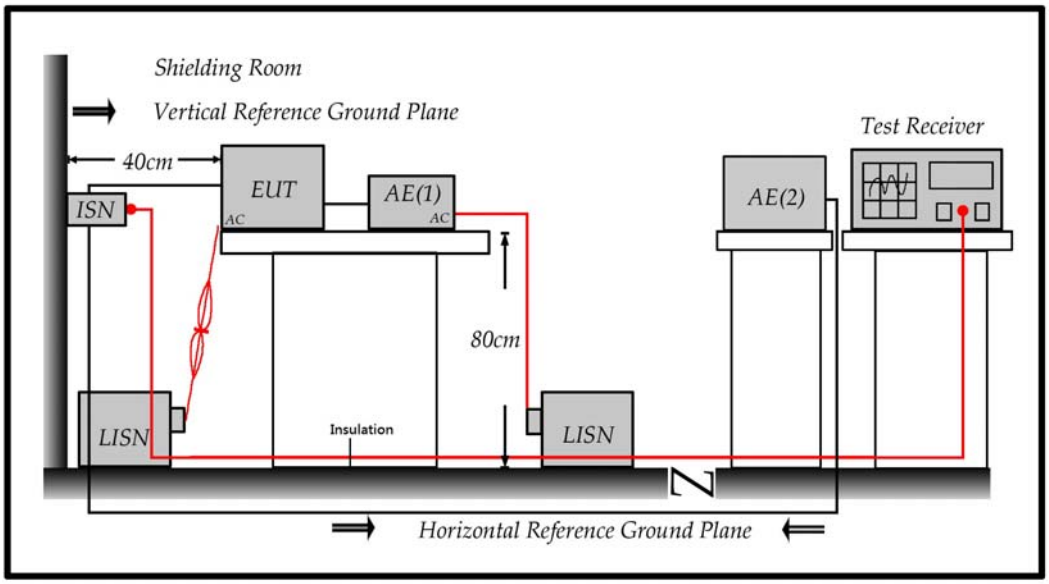


4. Conducted Emissions (Telecommunication Ports)

4.1. Test Specification

According to EMC Standard : EN 55032 & AS/NZS CISPR 32

4.2. Test Setup



4.3. Limit

Applicable to 1. wired network ports 2. optical fibre port with metallic shield or tension members 3. antenna ports				
Frequency range MHz	Coupling device	Detector type/ Bandwidth	Class A voltage limits dB(μV)	Class A current limits dB(μA)
0.15 – 0.5	AAN	Quasi Peak / 9 KHz	97 – 87	N / A
0.5 – 30			87	
0.15 – 0.5	AAN	Average / 9 KHz	84 – 74	
0.5 – 30			74	
0.15 – 0.5	CVP And current probe	Quasi Peak / 9 KHz	97 – 87	53 – 43
0.5 – 30			87	43
0.15 – 0.5	CVP And current probe	Average / 9 KHz	84 – 74	40 – 30
0.5 – 30			74	30
0.15 – 0.5	Current Probe	Quasi Peak / 9 KHz	N / A	53 – 43
0.5 – 30				43
0.15 – 0.5	Current Probe	Average / 9 KHz		40 – 30
0.5 – 30				30
The choice of coupling device and measurement procedure is defined in EN55032: 2012 Annex C. Screened ports including TV broadcast receiver tuner ports are tested with a common-mode impedance of 150 Ω. This is typically accomplished with the screen terminated by 150 Ω to earth. AC mains ports that also have the function of a wired network port shall meet the limits given in EN55032: 2012+AC 2013 Table A.9. The test shall cover the entire frequency range. The application of the voltage and/or current limits is dependent on the measurement procedure used. Refer to EN55032: 2012+AC 2013 Table C.1 for applicability. Testing is required at only one EUT supply voltage and frequency. Applicable to ports listed above and intended to connect to cables longer than 3 m				

4.4. Test Procedure

Telecommunication Port:

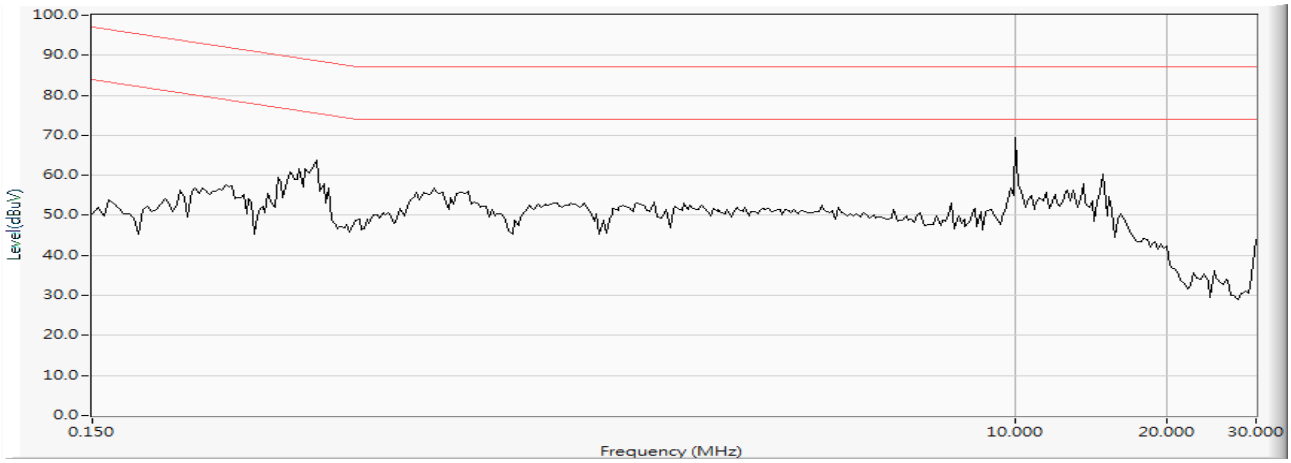
The mains voltage shall be supplied to the EUT via the LISN when the measurement of telecommunication port is performed. The common mode disturbances at the telecommunication port shall be connected to the ISN, which is 150 ohm impedance.
Both alternative cables are tested related to the LCL requested.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

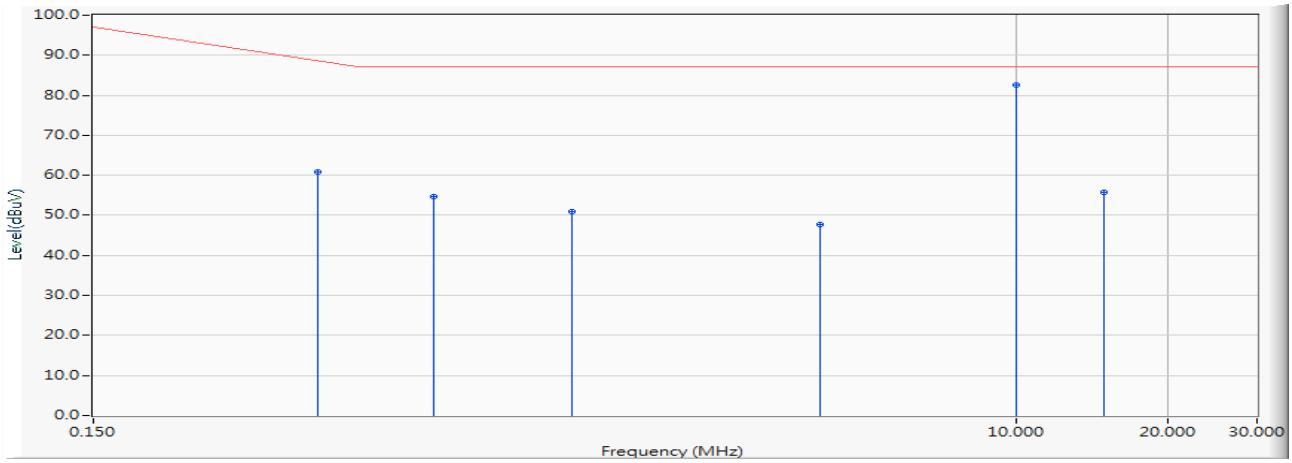
No deviation.

4.6. Test Result

Site : SR8	**Time : 2017/09/27 - 17:02**
Limit : ISN_Voltage_A_00M_QP	**Margin : 13**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1,ISN 10M**



Site : SR8	**Time : 2017/09/27 - 17:03**
Limit : ISN_Voltage_A_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1,ISN 10M**

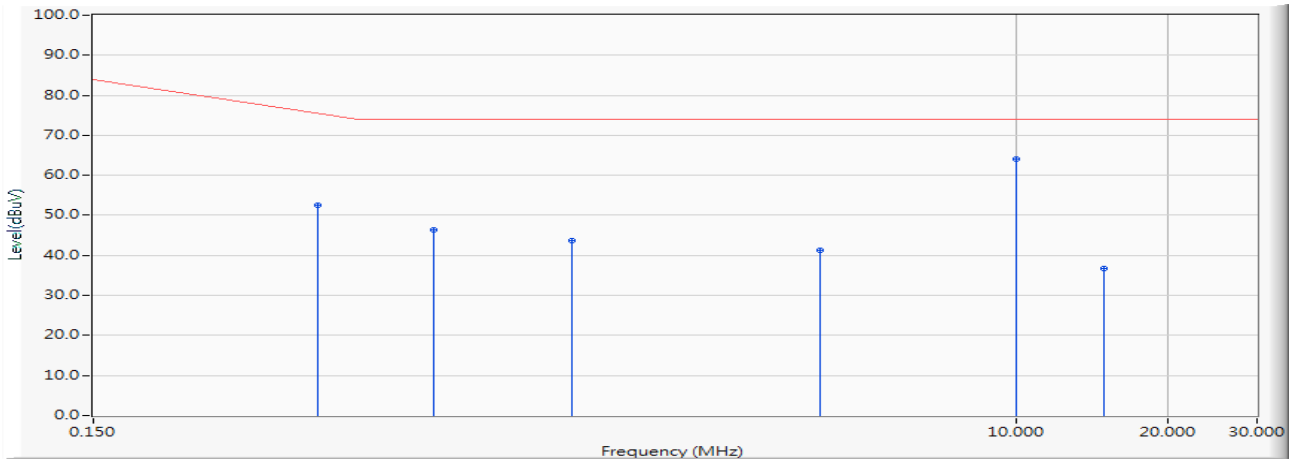


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.416	9.808	50.950	60.758	-28.642	89.400	QUASIPEAK
2		0.705	9.724	44.930	54.654	-32.346	87.000	QUASIPEAK
3		1.322	9.694	41.240	50.934	-36.066	87.000	QUASIPEAK
4		4.107	9.703	38.100	47.803	-39.197	87.000	QUASIPEAK
5	*	10.000	9.741	72.770	82.511	-4.489	87.000	QUASIPEAK
6		14.939	9.846	45.830	55.676	-31.324	87.000	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 : SR8	**Time : 2017/09/27 - 17:03**
Limit : ISN_Voltage_A_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1,ISN 10M**

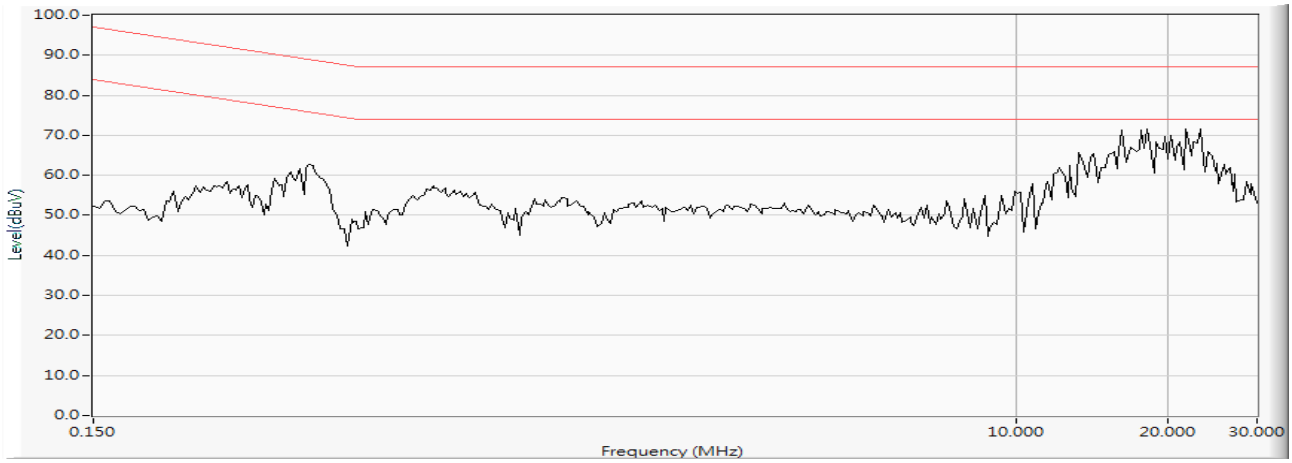


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.416	9.808	42.760	52.568	-23.832	76.400	AVERAGE
2		0.705	9.724	36.750	46.474	-27.526	74.000	AVERAGE
3		1.322	9.694	33.950	43.644	-30.356	74.000	AVERAGE
4		4.107	9.703	31.590	41.293	-32.707	74.000	AVERAGE
5	*	10.000	9.741	54.450	64.191	-9.809	74.000	AVERAGE
6		14.939	9.846	26.820	36.666	-37.334	74.000	AVERAGE

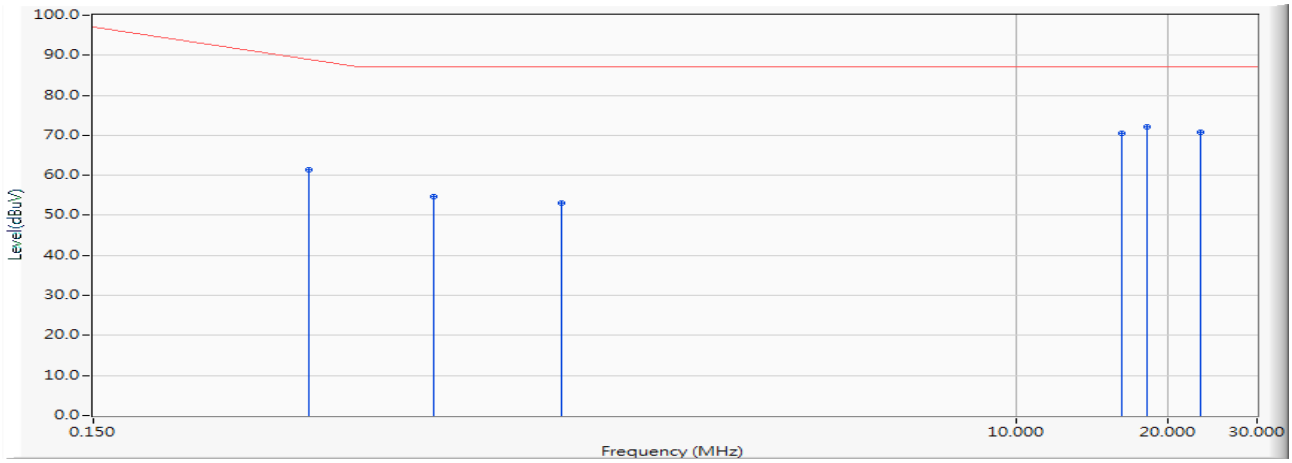
Note:

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 : SR8	**Time : 2017/09/27 - 16:55**
Limit : ISN_Voltage_A_00M_QP	**Margin : 13**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1,ISN 100M**



Site : SR8	**Time : 2017/09/27 - 16:57**
Limit : ISN_Voltage_A_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1,ISN 100M**

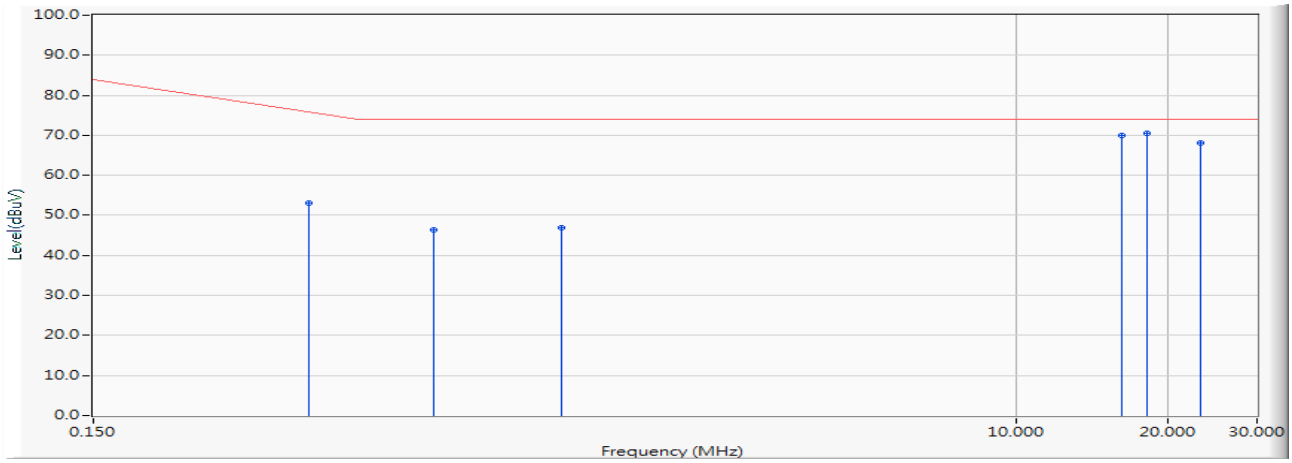


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.400	9.817	51.490	61.307	-28.550	89.857	QUASIPEAK
2		0.705	9.724	44.930	54.654	-32.346	87.000	QUASIPEAK
3		1.267	9.700	43.420	53.120	-33.880	87.000	QUASIPEAK
4		16.228	9.877	60.570	70.447	-16.553	87.000	QUASIPEAK
5	*	18.244	9.916	62.070	71.986	-15.014	87.000	QUASIPEAK
6		23.127	10.052	60.830	70.882	-16.118	87.000	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 : SR8	**Time : 2017/09/27 - 16:57**
Limit : ISN_Voltage_A_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1,ISN 100M**

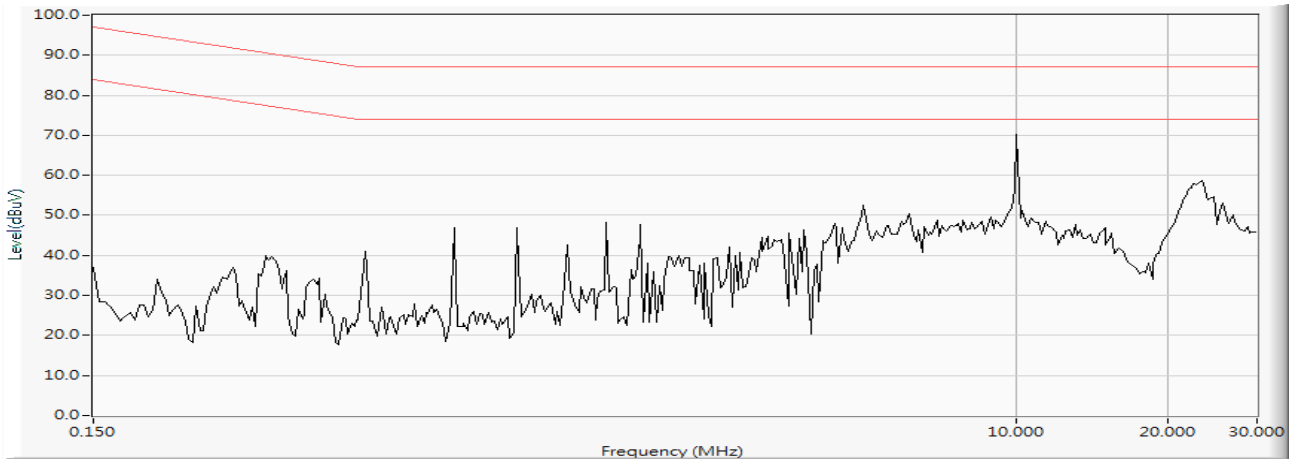


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.400	9.817	43.220	53.037	-23.820	76.857	AVERAGE
2		0.705	9.724	36.590	46.314	-27.686	74.000	AVERAGE
3		1.267	9.700	37.210	46.910	-27.090	74.000	AVERAGE
4		16.228	9.877	60.020	69.897	-4.103	74.000	AVERAGE
5	*	18.244	9.916	60.640	70.556	-3.444	74.000	AVERAGE
6		23.127	10.052	58.040	68.092	-5.908	74.000	AVERAGE

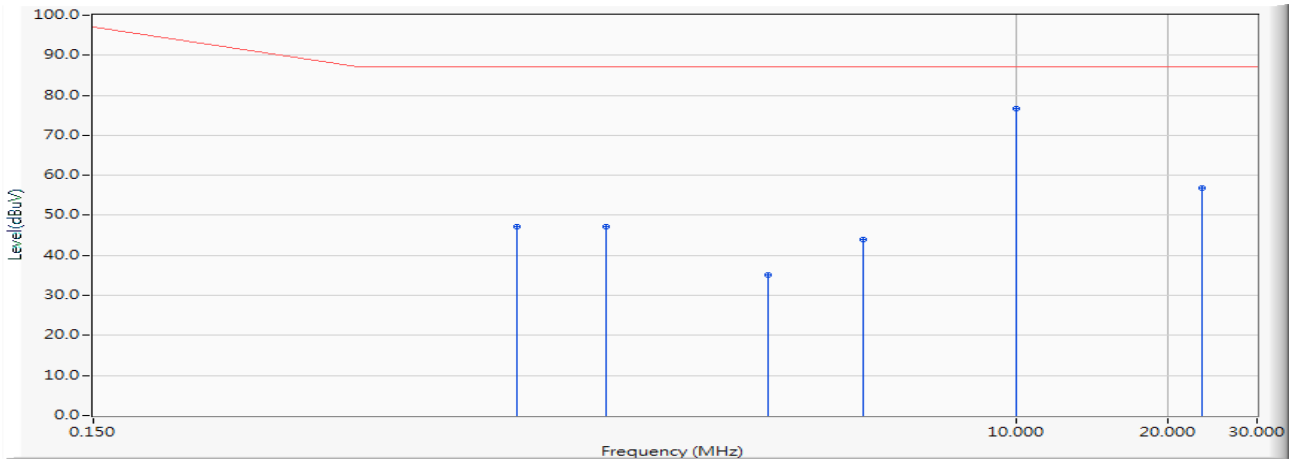
Note:

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 : SR8	**Time : 2017/09/27 - 17:31**
Limit : ISN_Voltage_A_00M_QP	**Margin : 13**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : Power By PoE	**Note : Mode 2,ISN 10M**



Site : SR8	**Time : 2017/09/27 - 17:34**
Limit : ISN_Voltage_A_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : Power By PoE	**Note : Mode 2,ISN 10M**

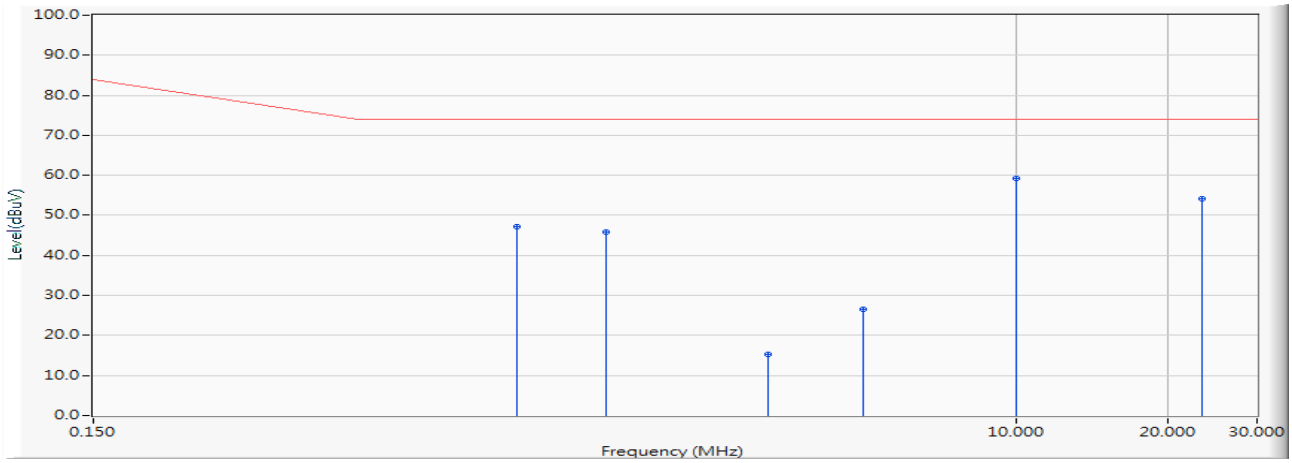


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.034	9.705	37.410	47.115	-39.885	87.000	QUASIPEAK
2		1.552	9.698	37.530	47.228	-39.772	87.000	QUASIPEAK
3		3.228	9.693	25.400	35.093	-51.907	87.000	QUASIPEAK
4		4.990	9.708	34.160	43.868	-43.132	87.000	QUASIPEAK
5	*	10.000	9.741	66.870	76.611	-10.389	87.000	QUASIPEAK
6		23.283	10.056	46.860	56.916	-30.084	87.000	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 : SR8	**Time : 2017/09/27 - 17:34**
Limit : ISN_Voltage_A_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : Power By PoE	**Note : Mode 2,ISN 10M**

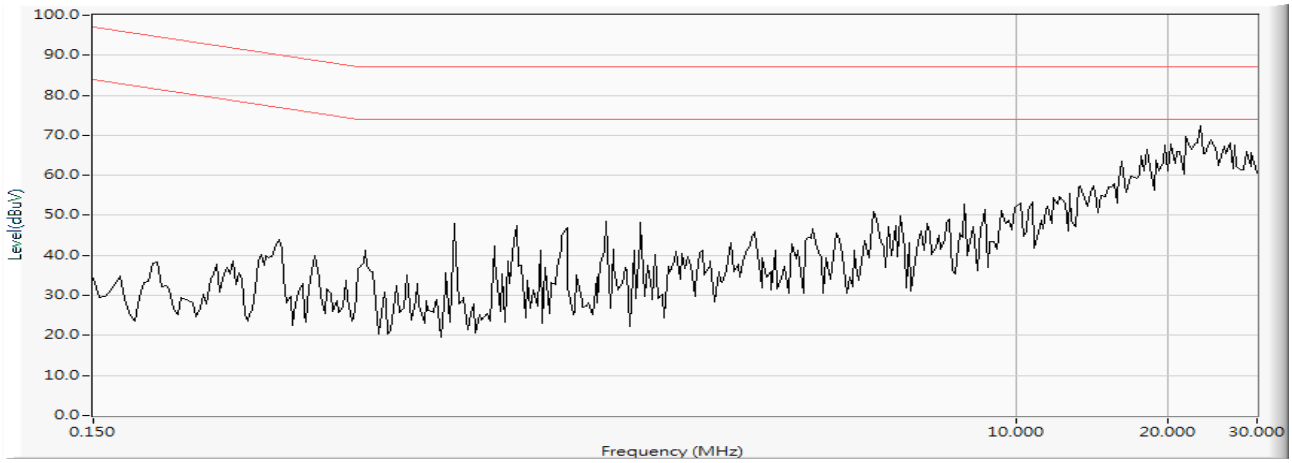


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.034	9.705	37.350	47.055	-26.945	74.000	AVERAGE
2		1.552	9.698	36.250	45.948	-28.052	74.000	AVERAGE
3		3.228	9.693	5.640	15.333	-58.667	74.000	AVERAGE
4		4.990	9.708	16.800	26.508	-47.492	74.000	AVERAGE
5	*	10.000	9.741	49.440	59.181	-14.819	74.000	AVERAGE
6		23.283	10.056	44.040	54.096	-19.904	74.000	AVERAGE

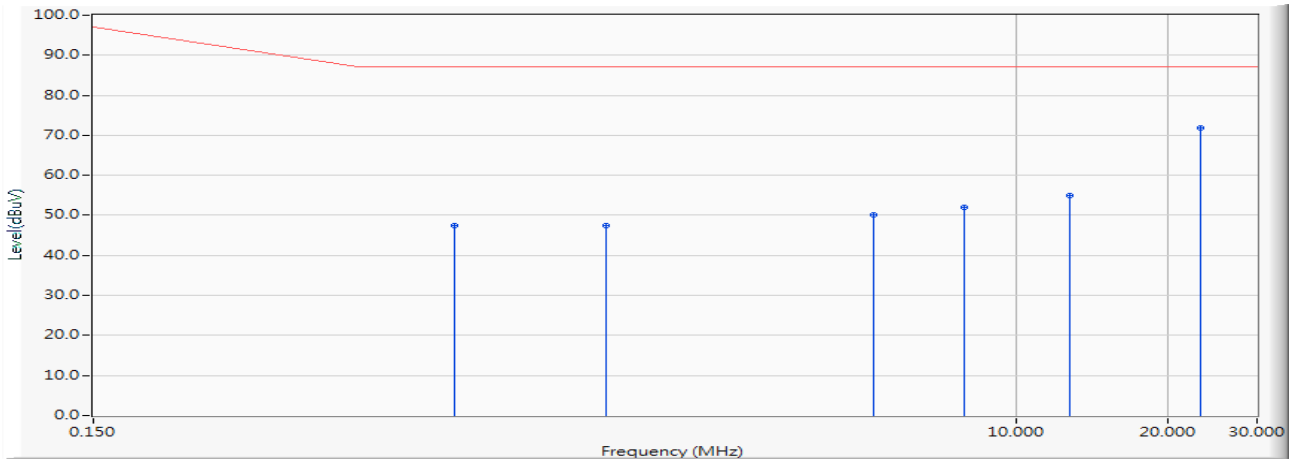
Note:

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 : SR8	**Time : 2017/09/27 - 17:27**
Limit : ISN_Voltage_A_00M_QP	**Margin : 13**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : Power By PoE	**Note : Mode 2,ISN 100M**



Site : SR8	**Time : 2017/09/27 - 17:29**
Limit : ISN_Voltage_A_00M_QP	**Margin : 0**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : Power By PoE	**Note : Mode 2,ISN 100M**

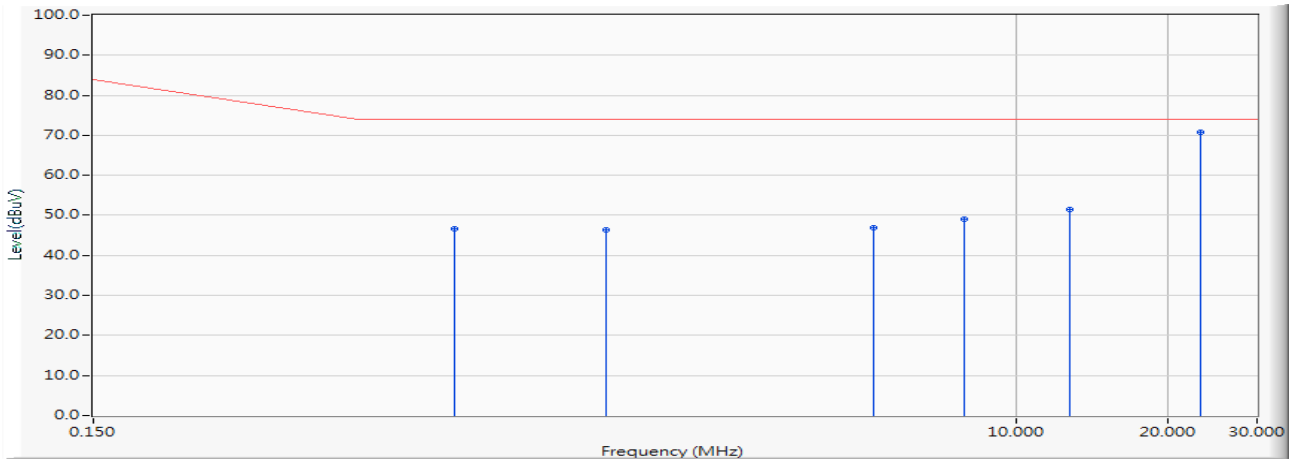


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.776	9.709	37.640	47.349	-39.651	87.000	QUASIPEAK
2		1.552	9.698	37.820	47.518	-39.482	87.000	QUASIPEAK
3		5.236	9.711	40.520	50.231	-36.769	87.000	QUASIPEAK
4		7.923	9.722	42.240	51.962	-35.038	87.000	QUASIPEAK
5		12.748	9.804	45.130	54.934	-32.066	87.000	QUASIPEAK
6	*	23.130	10.054	61.790	71.844	-15.156	87.000	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 : SR8	**Time : 2017/09/27 - 17:29**
Limit : ISN_Voltage_A_00M_AV	**Margin : 0**
EUT : Network Camera	**Probe : TESEQ_T8_42815 - Line1**
Power : Power By PoE	**Note : Mode 2,ISN 100M**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.776	9.709	36.810	46.519	-27.481	74.000	AVERAGE
2		1.552	9.698	36.670	46.368	-27.632	74.000	AVERAGE
3		5.236	9.711	37.280	46.991	-27.009	74.000	AVERAGE
4		7.923	9.722	39.320	49.042	-24.958	74.000	AVERAGE
5		12.748	9.804	41.600	51.404	-22.596	74.000	AVERAGE
6	*	23.130	10.053	60.760	70.814	-3.186	74.000	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: FD9367-EHTV, Adapter

Description : Front View of ISN Test

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Back View of ISN Test

Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Front View of ISN Test

Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Back View of ISN Test

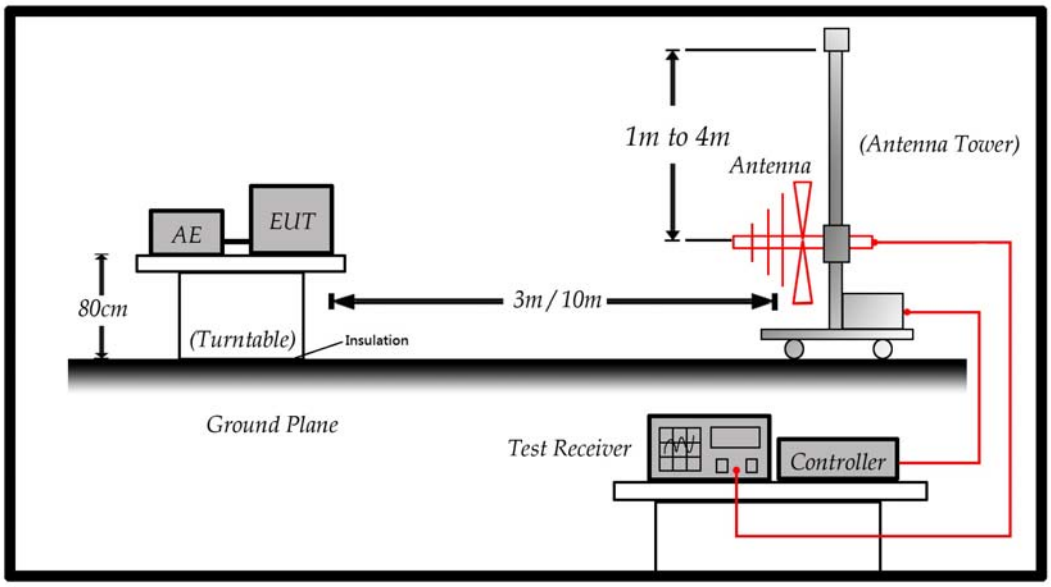
5. Radiated Emission

5.1. Test Specification

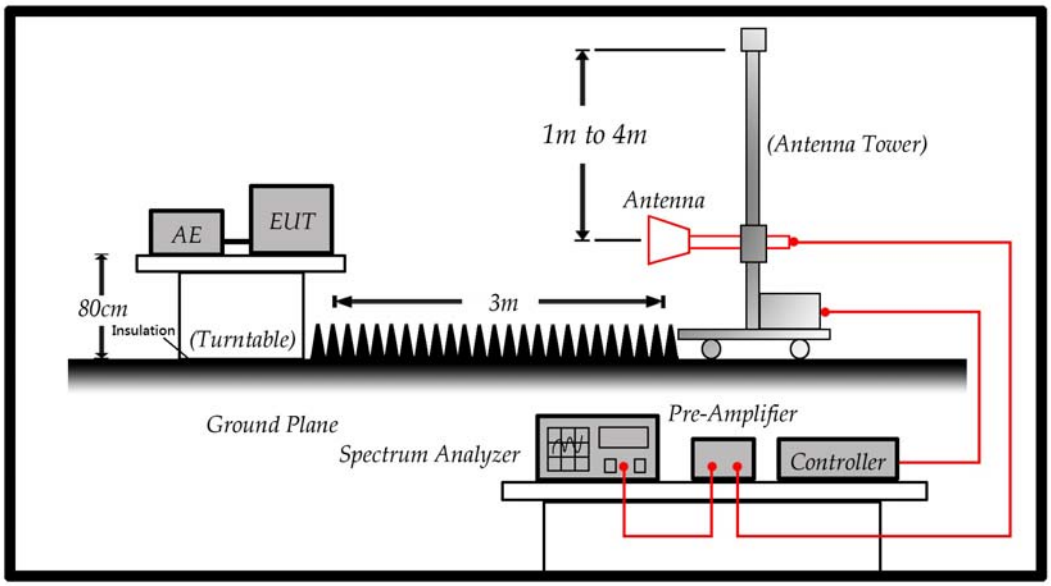
According to EMC Standard : EN 55032 & AS/NZS CISPR 32

5.2. Test Setup

Under 1GHz



Above 1GHz



5.3. Limit

Radiated emissions at frequencies up to 1 GHz

for Class A equipment

Frequency range MHz	Measurement		Class A limits dB(μV/m)
	Distance m	Detector type/ Bandwidth	OATS / SAC
30-230	10	Quasi Peak / 120 KHz	40
230-1000			47
30-230	3		50
230-1000			57
Apply only 3m or 10m across the entire frequency range			

Radiated emissions at frequencies above 1 GHz

for Class A equipment

Frequency range MHz	Measurement		Class A limits dB(μV/m)
	Distance m	Detector type/ Bandwidth	OATS / SAC
1000-3000	3	Average / 1 MHz	56
3000-6000			60
1000-3000		Peak / 1 MHz	76
3000-6000			80
Both apply across the frequency range from 1000 MHz to the highest required frequency of measurement derived from			

Required highest frequency for radiated measurement

Highest internal frequency (*F*x)	Highest measured frequency
*F*x ≤ 108 MHz	1 GHz
108 MHz < *F*x ≤ 500 MHz	2 GHz
500 MHz < *F*x ≤ 1 GHz	5 GHz
*F*x> 1 GHz	5 × *F*x up to a maximum of 6 GHz
NOTE 1 For FM and TV broadcast receivers, *F*x is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies. NOTE 2 *F*x is defined in 3.1.19.	

5.4. Test Procedure

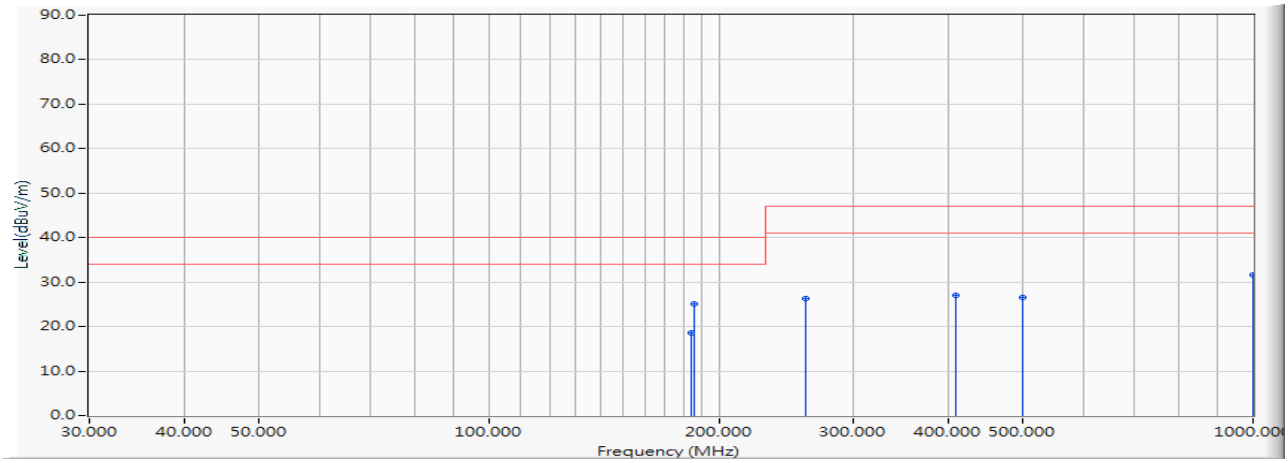
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
The EUT was positioned such that the distance from antenna to the EUT was 3/10 meters.
The antenna can move up and down 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 : SITE7	**Time : 2017/09/20 - 17:45**
Limit : CISPR_A_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site7_CBL6112B_10M_1706 - HORIZONTAL**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1**

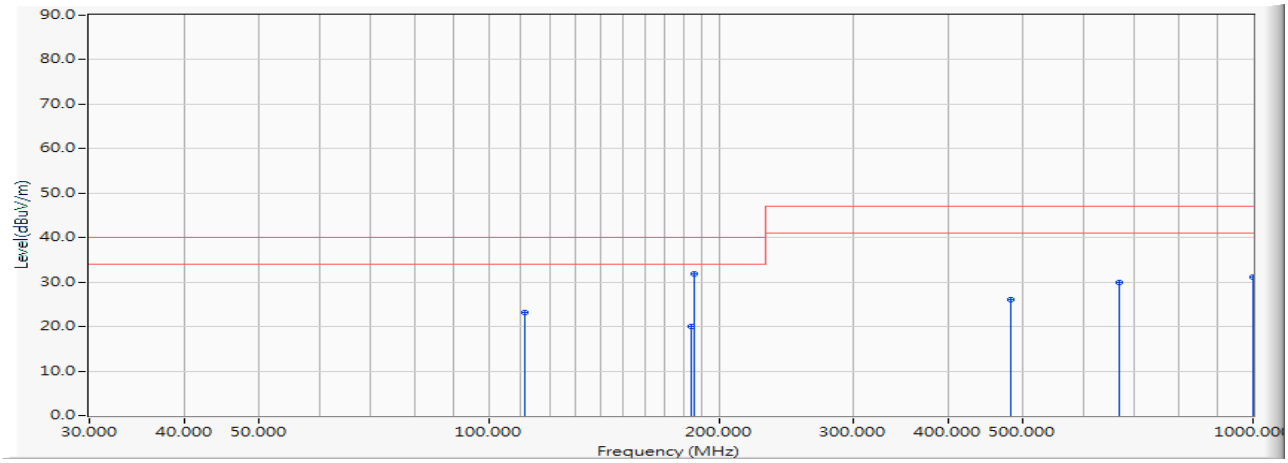


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		184.240	-14.350	33.000	18.650	-21.350	40.000	QUASIPEAK	390.000	-128.000
2	*	185.620	-14.351	39.400	25.050	-14.950	40.000	QUASIPEAK	400.000	98.000
3		259.870	-8.912	35.200	26.288	-20.712	47.000	QUASIPEAK	390.000	128.000
4		408.400	-4.937	32.000	27.063	-19.937	47.000	QUASIPEAK	220.000	-126.000
5		500.000	-2.549	29.000	26.451	-20.549	47.000	QUASIPEAK	200.000	13.000
6		1000.000	5.300	26.400	31.700	-15.300	47.000	QUASIPEAK	100.000	134.000

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 : SITE7	**Time : 2017/09/20 - 17:45**
Limit : CISPR_A_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site7_CBL6112B_10M_1706 - VERTICAL**
Power : AC 230V/50Hz to DC12V	**Note : Mode 1**

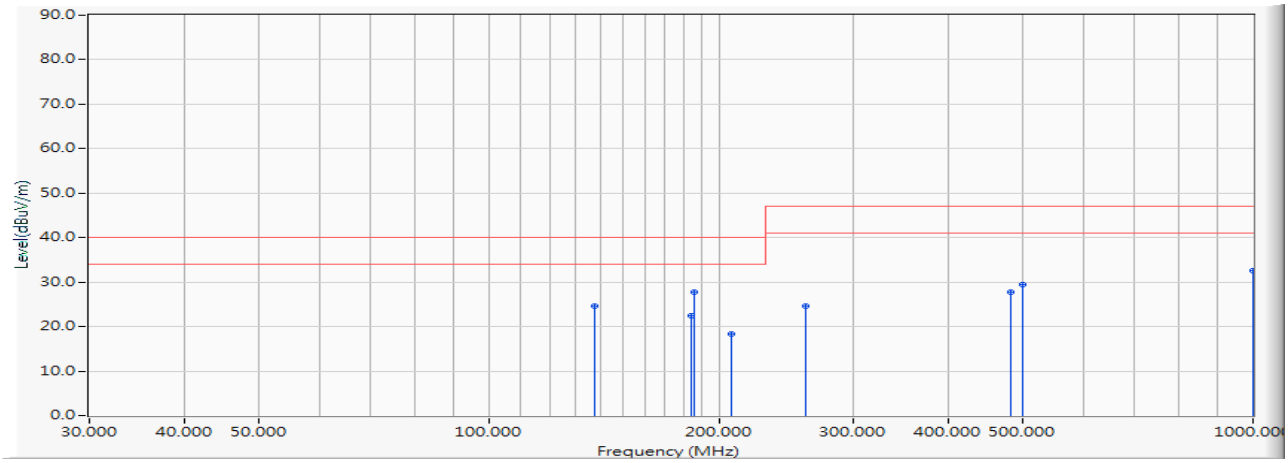


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		111.600	-12.498	35.600	23.102	-16.898	40.000	QUASIPEAK	100.000	132.000
2		184.260	-14.350	34.400	20.050	-19.950	40.000	QUASIPEAK	100.000	138.000
3	*	185.620	-14.351	46.100	31.750	-8.250	40.000	QUASIPEAK	100.000	131.000
4		482.630	-2.958	28.900	25.943	-21.057	47.000	QUASIPEAK	300.000	142.000
5		668.260	0.470	29.500	29.970	-17.030	47.000	QUASIPEAK	260.000	134.000
6		1000.000	5.300	25.800	31.100	-15.900	47.000	QUASIPEAK	168.000	131.000

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 : SITE7	**Time : 2017/09/20 - 17:46**
Limit : CISPR_A_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site7_CBL6112B_10M_1706 - HORIZONTAL**
Power : Power By PoE	**Note : Mode 2**

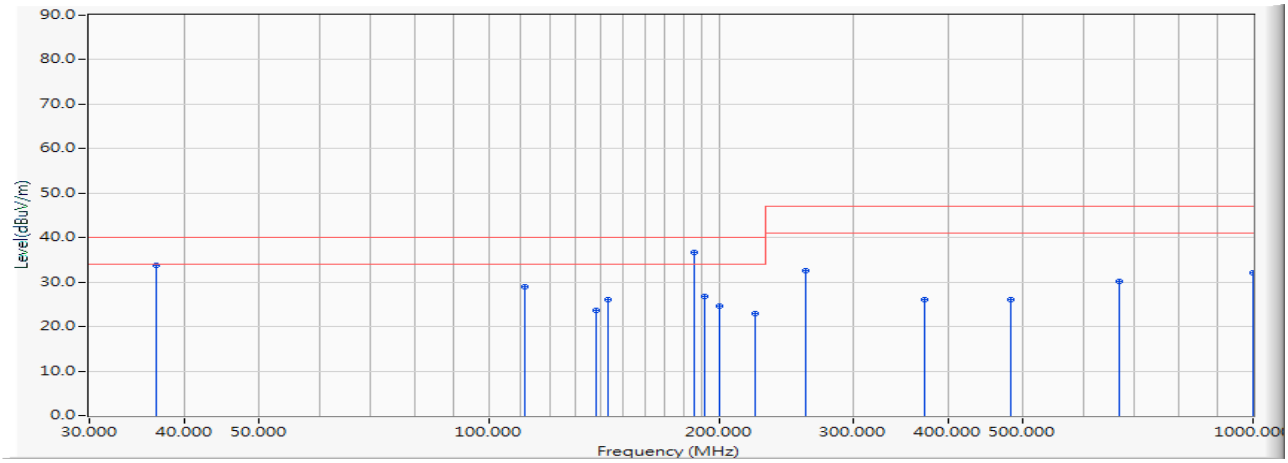


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		137.460	-12.505	37.000	24.494	-15.506	40.000	QUASIPEAK	400.000	-182.000
2		184.240	-14.350	36.800	22.450	-17.550	40.000	QUASIPEAK	400.000	-114.000
3	*	185.620	-14.351	42.200	27.850	-12.150	40.000	QUASIPEAK	400.000	-114.000
4		207.200	-13.847	32.200	18.353	-21.647	40.000	QUASIPEAK	390.000	16.000
5		259.880	-8.911	33.500	24.589	-22.411	47.000	QUASIPEAK	400.000	-102.000
6		482.640	-2.958	30.600	27.643	-19.357	47.000	QUASIPEAK	210.000	134.000
7		500.000	-2.549	32.000	29.451	-17.549	47.000	QUASIPEAK	200.000	116.000
8		1000.000	5.300	27.200	32.500	-14.500	47.000	QUASIPEAK	100.000	134.000

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 : SITE7	**Time : 2017/09/20 - 17:47**
Limit : CISPR_A_10M_QP	**Margin : 6**
EUT : Network Camera	**Probe : Site7_CBL6112B_10M_1706 - VERTICAL**
Power : Power By PoE	**Note : Mode 2**

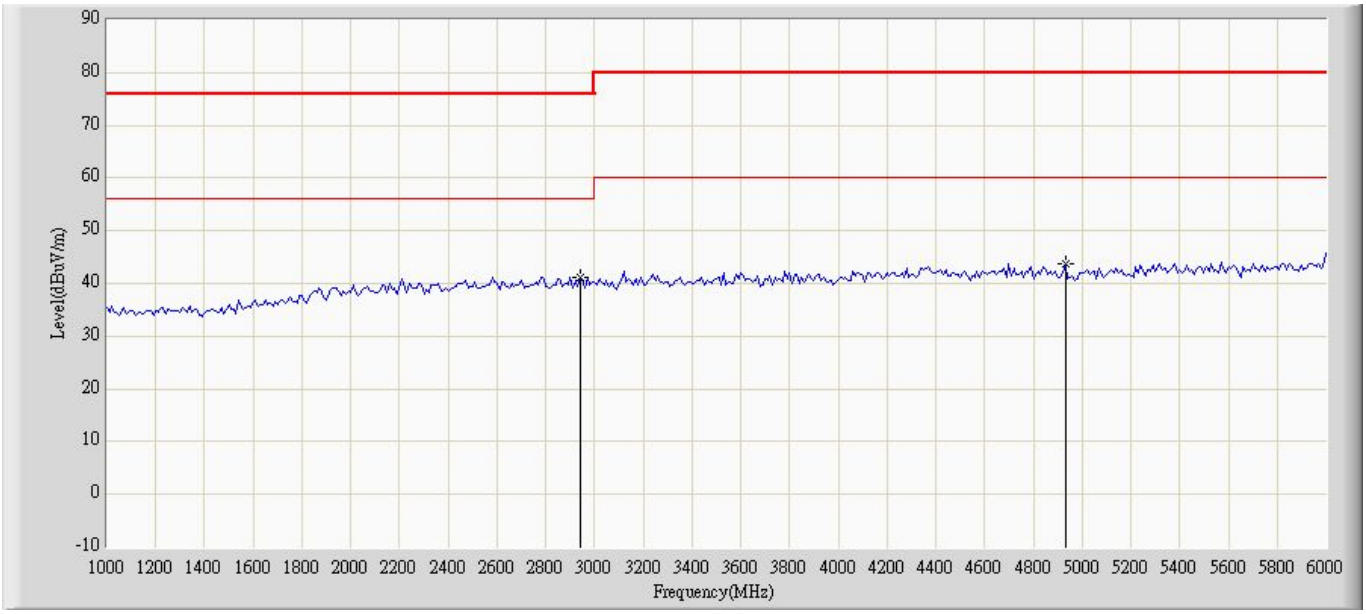


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1		36.700	-9.921	43.800	33.879	-6.121	40.000	QUASIPEAK	100.000	152.000
2		111.570	-12.498	41.500	29.002	-10.998	40.000	QUASIPEAK	100.000	-198.000
3		138.420	-12.533	36.200	23.667	-16.333	40.000	QUASIPEAK	100.000	-184.000
4		143.300	-12.818	38.900	26.082	-13.918	40.000	QUASIPEAK	100.000	186.000
5	*	185.620	-14.351	51.000	36.650	-3.350	40.000	QUASIPEAK	100.000	-34.000
6		191.190	-14.291	41.000	26.709	-13.291	40.000	QUASIPEAK	100.000	121.000
7		200.000	-13.787	38.400	24.613	-15.387	40.000	QUASIPEAK	100.000	126.000
8		222.760	-13.375	36.300	22.925	-17.075	40.000	QUASIPEAK	100.000	-42.000
9		259.880	-8.911	41.400	32.489	-14.511	47.000	QUASIPEAK	100.000	-6.000
10		371.250	-6.258	32.300	26.042	-20.958	47.000	QUASIPEAK	100.000	-191.000
11		482.630	-2.958	29.000	26.043	-20.957	47.000	QUASIPEAK	330.000	-46.000
12		668.260	0.470	29.600	30.070	-16.930	47.000	QUASIPEAK	250.000	179.000
13		1000.000	5.300	26.800	32.100	-14.900	47.000	QUASIPEAK	165.000	120.000

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: CB8	Time: 2017/09/27 - 22:27
Limit: EN55032_A_(Above_1G)	Margin: 0
Probe: CB8_Horn_3117_1704	Polarity: Horizontal
EUT: Network Camera	Power : AC 230V/50Hz to DC12V
Note: Mode 1	

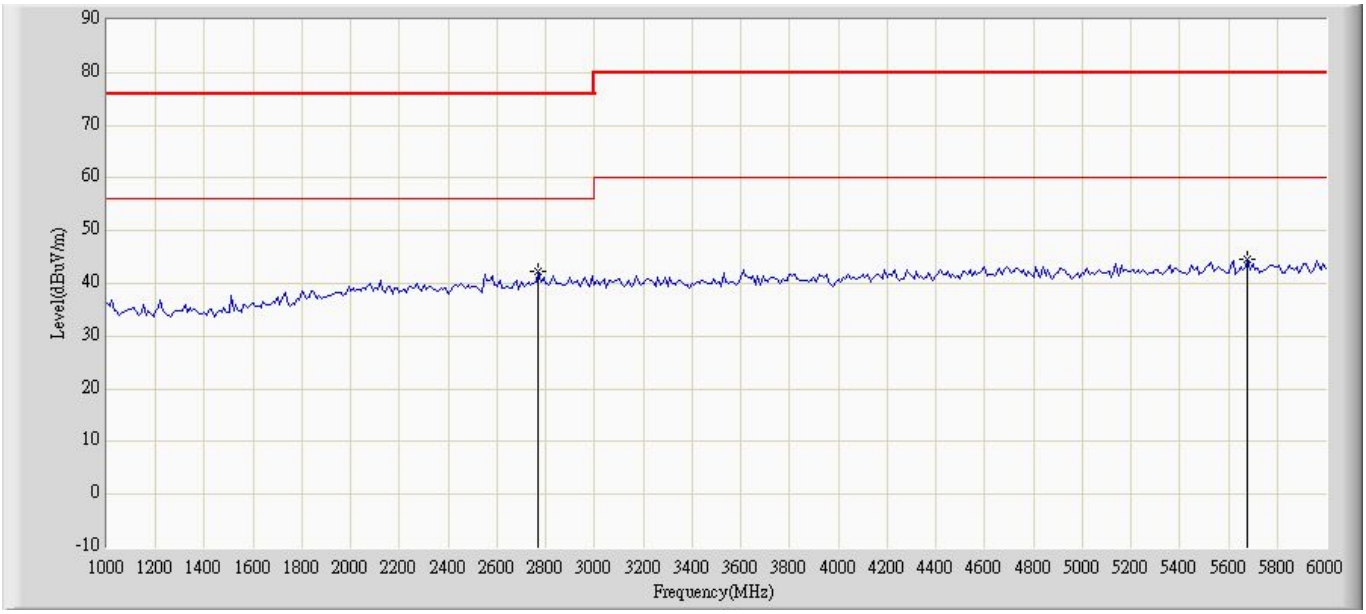


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2940.000	41.161	37.534	-34.839	76.000	3.627	PK
2			4930.000	43.723	36.558	-36.277	80.000	7.165	PK

Note:

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

Site: CB8	Time: 2017/09/27 - 22:28
Limit: EN55032_A_(Above_1G)	Margin: 0
Probe: CB8_Horn_3117_1704	Polarity: Vertical
EUT: Network Camera	Power : AC 230V/50Hz to DC12V
Note: Mode 1	

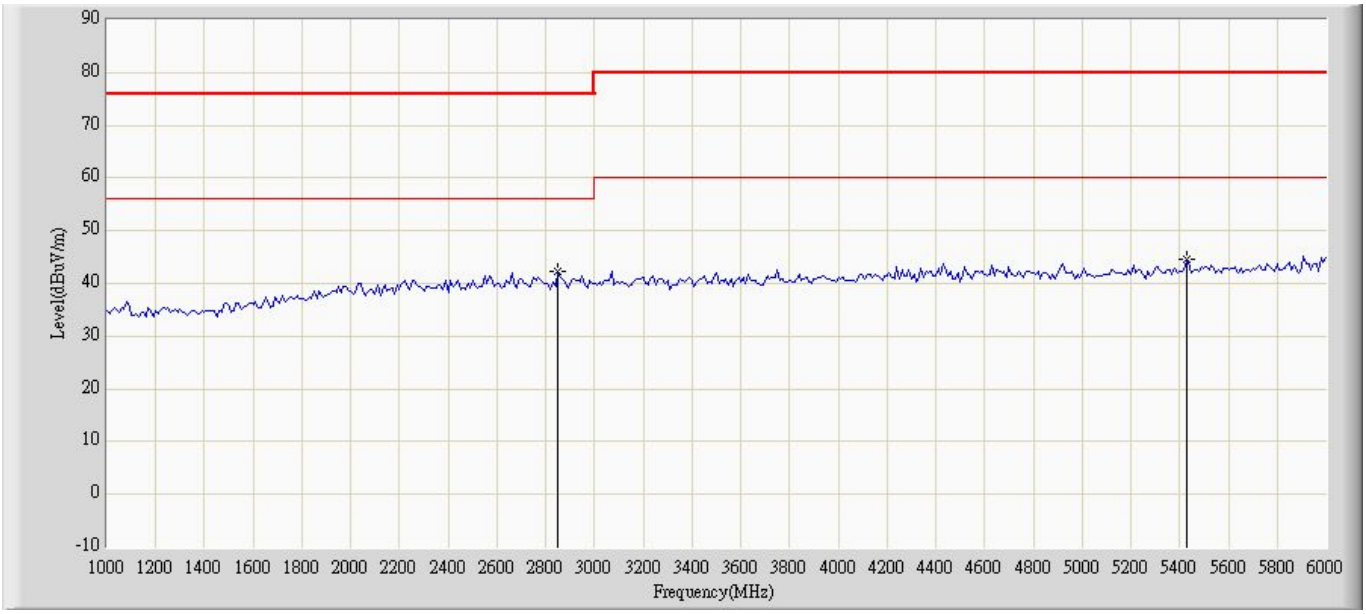


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2770.000	42.349	39.053	-33.651	76.000	3.295	PK
2			5680.000	44.460	35.776	-35.540	80.000	8.684	PK

Note:

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

Site: CB8	Time: 2017/09/27 - 22:32
Limit: EN55032_A_(Above_1G)	Margin: 0
Probe: CB8_Horn_3117_1704	Polarity: Horizontal
EUT: Network Camera	Power : Power By PoE
Note: Mode 2	

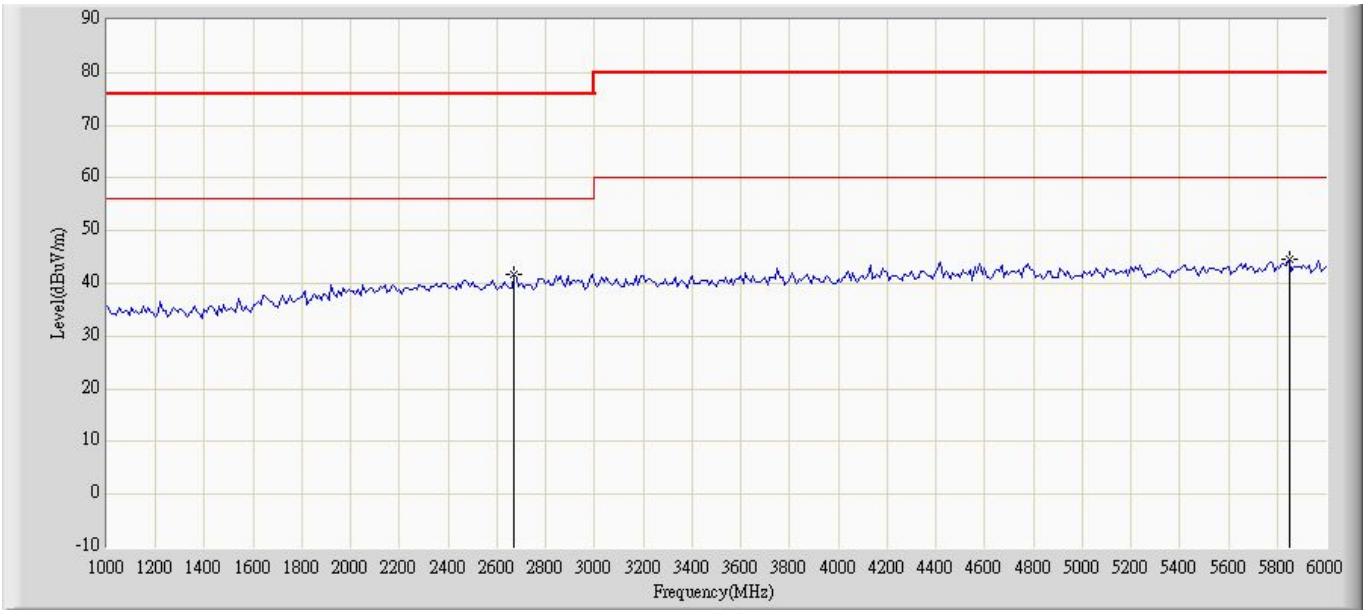


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2850.000	42.282	38.971	-33.718	76.000	3.310	PK
2			5430.000	44.573	36.309	-35.427	80.000	8.264	PK

Note:

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

Site: CB8	Time: 2017/09/27 - 22:32
Limit: EN55032_A_(Above_1G)	Margin: 0
Probe: CB8_Horn_3117_1704	Polarity: Vertical
EUT: Network Camera	Power : Power By PoE
Note: Mode 2	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2670.000	41.763	38.868	-34.237	76.000	2.895	PK
2			5850.000	44.613	35.637	-35.387	80.000	8.976	PK

Note:

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

5.7. Test Photograph

Test Mode: Mode 1: FD9367-EHTV, Adapter

Description: Front View of Radiated Test

Test Mode: Mode 1: FD9367-EHTV, Adapter

Description: Back View of Radiated Test

Test Mode: Mode 1: FD9367-EHTV, Adapter

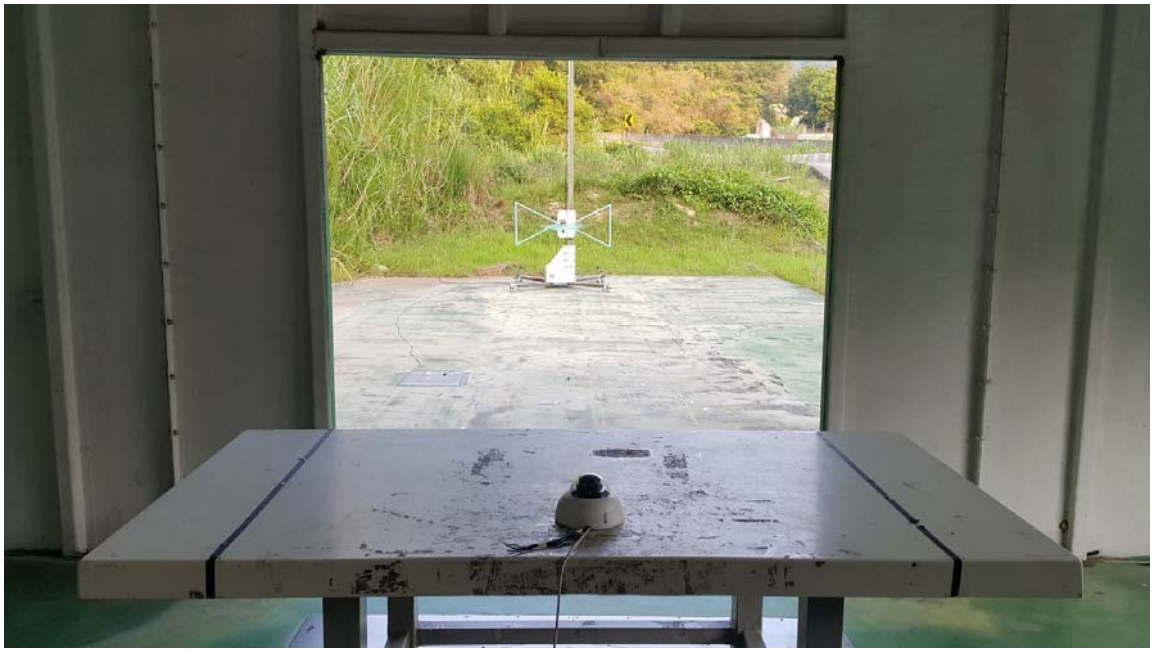
Description : Front View of High Frequency Radiated Test

Test Mode: Mode 2: FD9367-EHTV, PoE

Description: Front View of Radiated Test

Test Mode: Mode 2: FD9367-EHTV, PoE

Description: Back View of Radiated Test



Test Mode: Mode 2: FD9367-EHTV, PoE

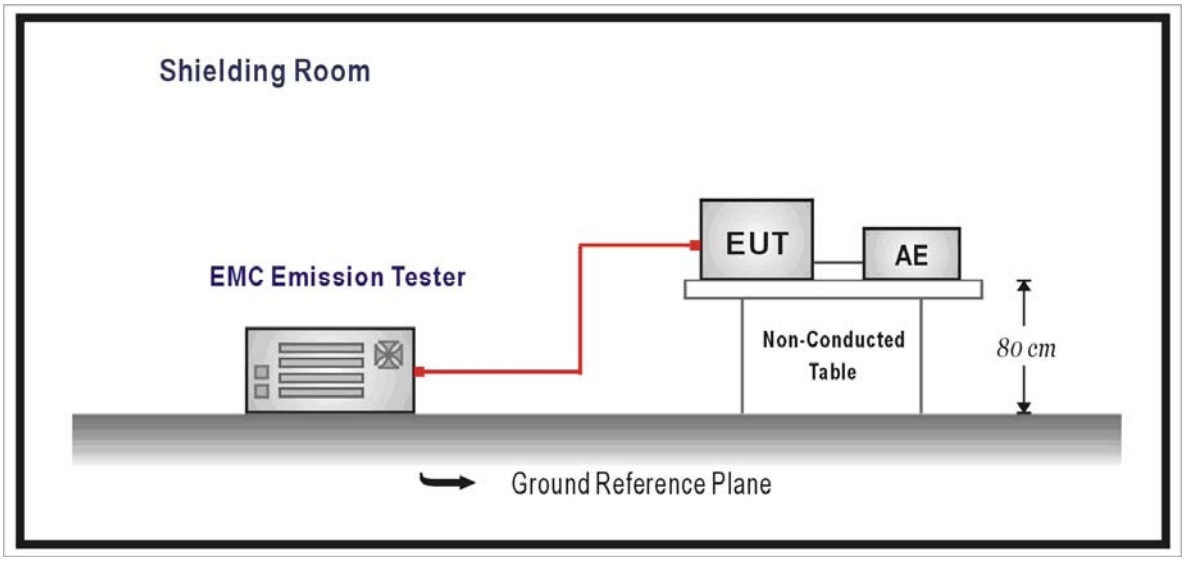
Description : Front View of High Frequency Radiated Test

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 · λ*
5	10
7	7
9	5
11 ≤ n ≤ 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 ≤ n ≤ 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

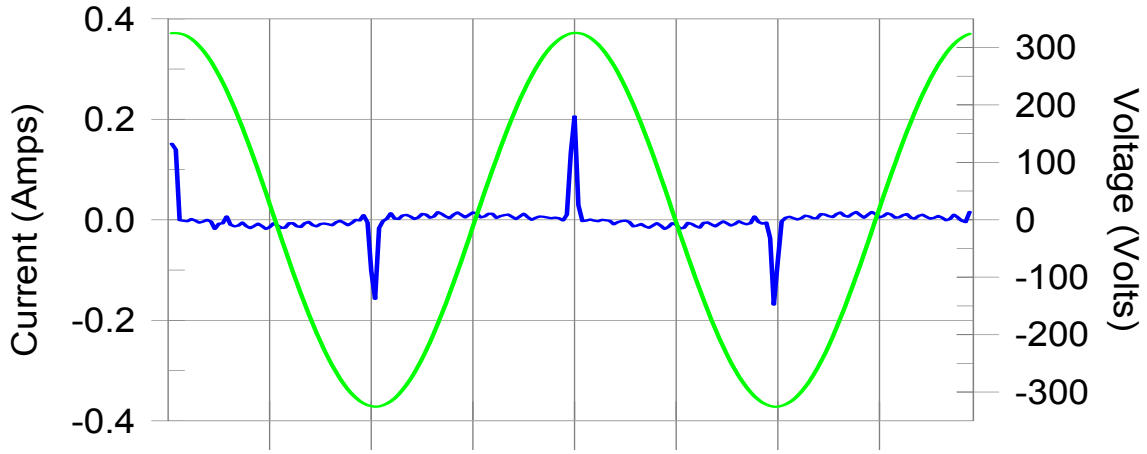
No deviation.

6.6. Test Result

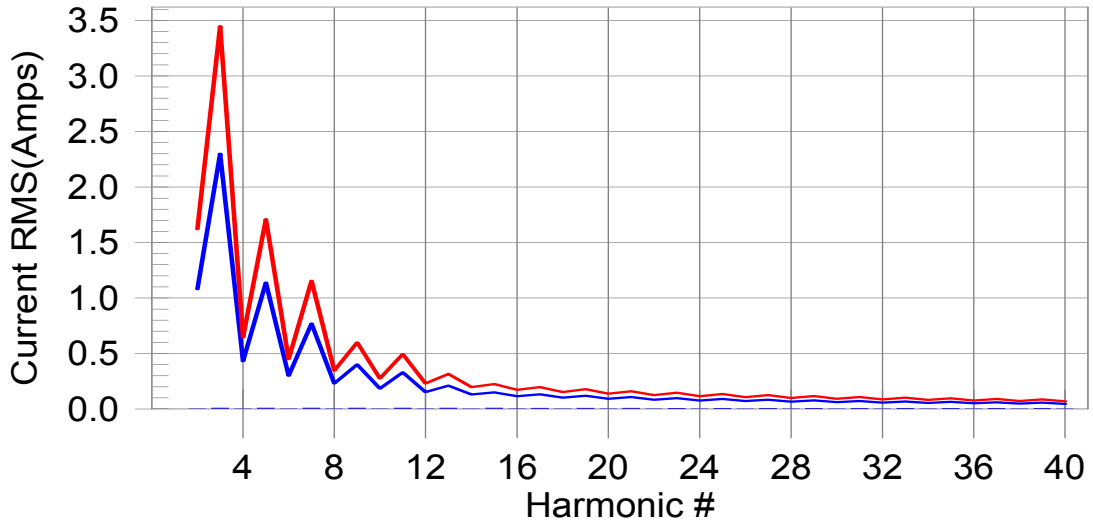
Product	Network Camera		
Test Item	Power Harmonics		
Test Mode	Mode 1: FD9367-EHTV, Adapter		
Date of Test	2017/10/13	Test Site	No.3 Shielded Room

Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class A limit line European Limits



Test result: Pass Worst harmonic was #27 with 6.2% of the limit.

Test Result: Pass Source qualification: Normal
THC(A): 0.028 I-THD(%): 242.8 POHC(A): 0.012 POHC Limit(A): 0.251
Highest parameter values during test:

V_RMS (Volts):	230.25	Frequency(Hz):	50.00
I_Peak (Amps):	0.243	I_RMS (Amps):	0.032
I_Fund (Amps):	0.012	Crest Factor:	7.889
Power (Watts):	2.1	Power Factor:	0.302

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.001	1.080	N/A	0.001	1.620	N/A	Pass
3	0.009	2.300	0.4	0.009	3.450	0.3	Pass
4	0.001	0.430	N/A	0.001	0.645	N/A	Pass
5	0.008	1.140	0.7	0.009	1.710	0.5	Pass
6	0.000	0.300	N/A	0.001	0.450	N/A	Pass
7	0.008	0.770	1.1	0.008	1.155	0.7	Pass
8	0.000	0.230	N/A	0.001	0.345	N/A	Pass
9	0.008	0.400	2.0	0.008	0.600	1.4	Pass
10	0.000	0.184	N/A	0.001	0.276	N/A	Pass
11	0.008	0.330	2.4	0.008	0.495	1.6	Pass
12	0.000	0.153	N/A	0.001	0.230	N/A	Pass
13	0.008	0.210	3.7	0.008	0.315	2.5	Pass
14	0.000	0.131	N/A	0.001	0.197	N/A	Pass
15	0.007	0.150	4.9	0.008	0.225	3.4	Pass
16	0.000	0.115	N/A	0.001	0.173	N/A	Pass
17	0.007	0.132	5.4	0.007	0.198	3.7	Pass
18	0.000	0.102	N/A	0.000	0.153	N/A	Pass
19	0.007	0.118	5.7	0.007	0.178	3.9	Pass
20	0.000	0.092	N/A	0.000	0.138	N/A	Pass
21	0.006	0.107	6.0	0.007	0.161	4.1	Pass
22	0.000	0.084	N/A	0.000	0.125	N/A	Pass
23	0.006	0.098	6.1	0.006	0.147	4.2	Pass
24	0.000	0.077	N/A	0.000	0.115	N/A	Pass
25	0.006	0.090	6.2	0.006	0.135	4.2	Pass
26	0.000	0.071	N/A	0.000	0.107	N/A	Pass
27	0.005	0.083	6.2	0.005	0.125	4.3	Pass
28	0.000	0.066	N/A	0.000	0.099	N/A	Pass
29	0.005	0.078	N/A	0.005	0.116	N/A	Pass
30	0.000	0.061	N/A	0.000	0.092	N/A	Pass
31	0.004	0.073	N/A	0.004	0.109	N/A	Pass
32	0.000	0.058	N/A	0.000	0.086	N/A	Pass
33	0.004	0.068	N/A	0.004	0.102	N/A	Pass
34	0.000	0.054	N/A	0.000	0.081	N/A	Pass
35	0.004	0.064	N/A	0.004	0.096	N/A	Pass
36	0.000	0.051	N/A	0.000	0.077	N/A	Pass
37	0.003	0.061	N/A	0.003	0.091	N/A	Pass
38	0.000	0.048	N/A	0.000	0.073	N/A	Pass
39	0.003	0.058	N/A	0.003	0.087	N/A	Pass
40	0.000	0.046	N/A	0.000	0.069	N/A	Pass

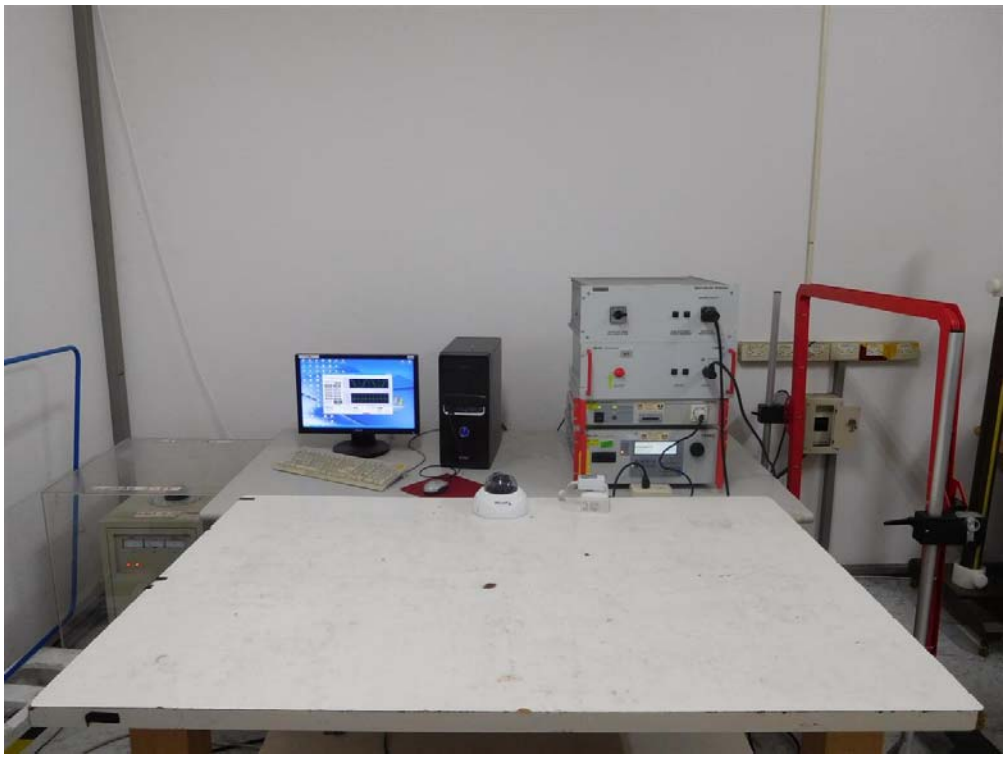
1.Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

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: FD9367-EHTV, Adapter

Description : Power Harmonics Test Setup

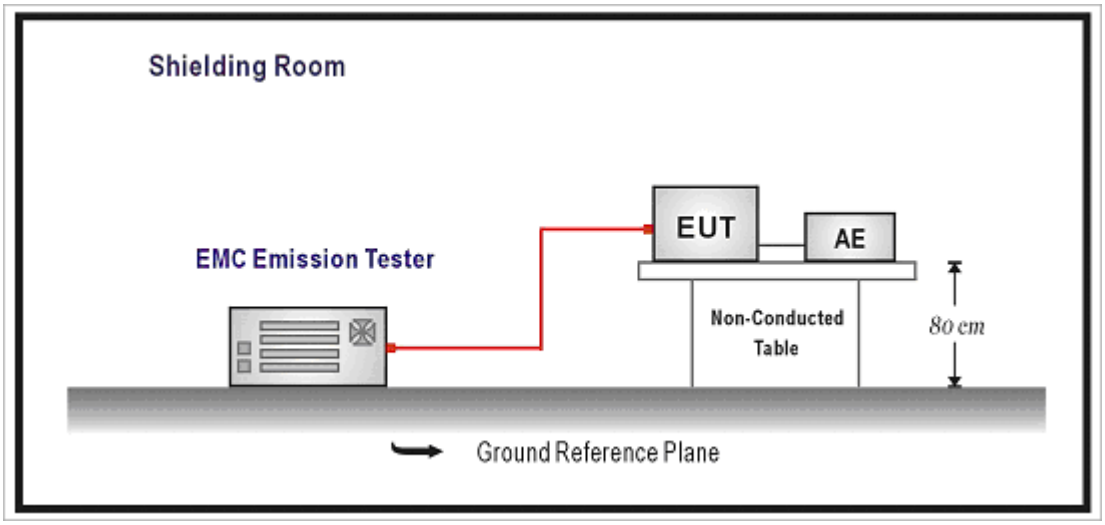


7. Voltage Fluctuation and Flicker

7.1. Test Specification

According to EMC Standard : EN 61000-3-3

7.2. Test Setup



7.3. Limit

The following limits apply:

- the value of P_{st} shall not be greater than 1.0;
- the value of P_{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

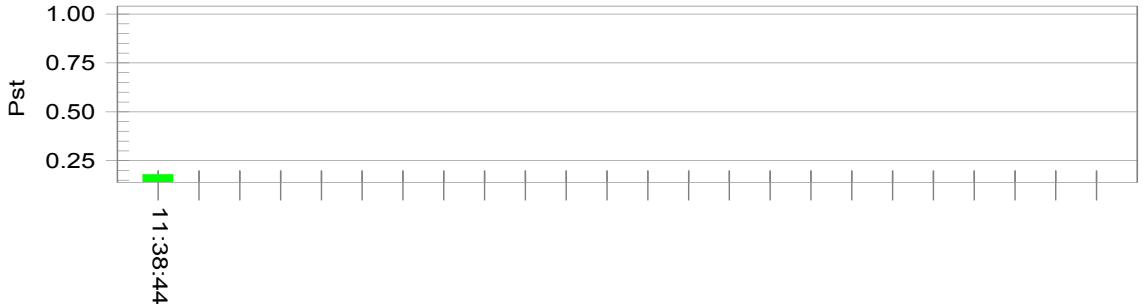
No deviation.

7.6. Test Result

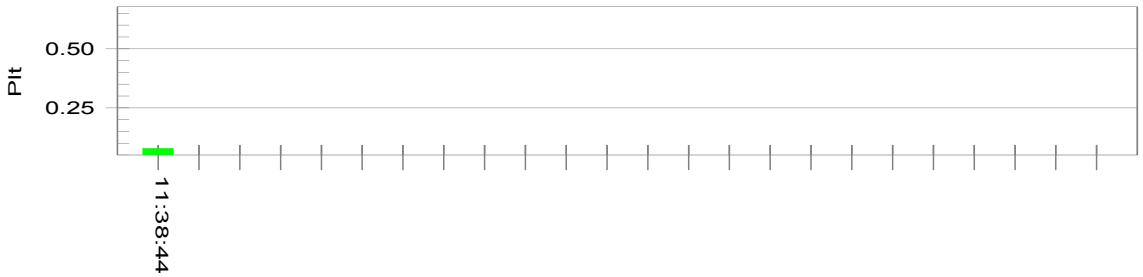
Product	Network Camera		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 1: FD9367-EHTV, Adapter		
Date of Test	2017/10/13	Test Site	No.3 Shielded Room

Test Result: Pass Status: Test Completed

Pst_1 and limit line European Limits



Plt and limit line



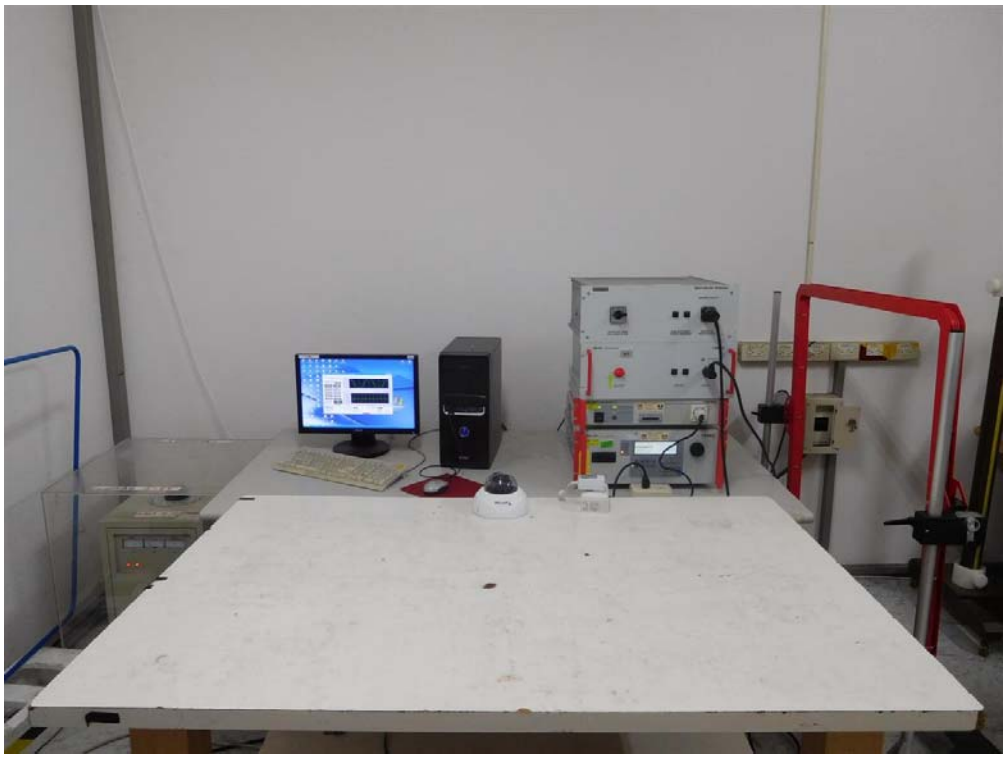
Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.19			
Highest dt (%):	0.00	Test limit (%):	N/A	N/A
T-max (mS):	0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.03	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.180	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.079	Test limit:	0.650	Pass

7.7. Test Photograph

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Flicker Test Setup

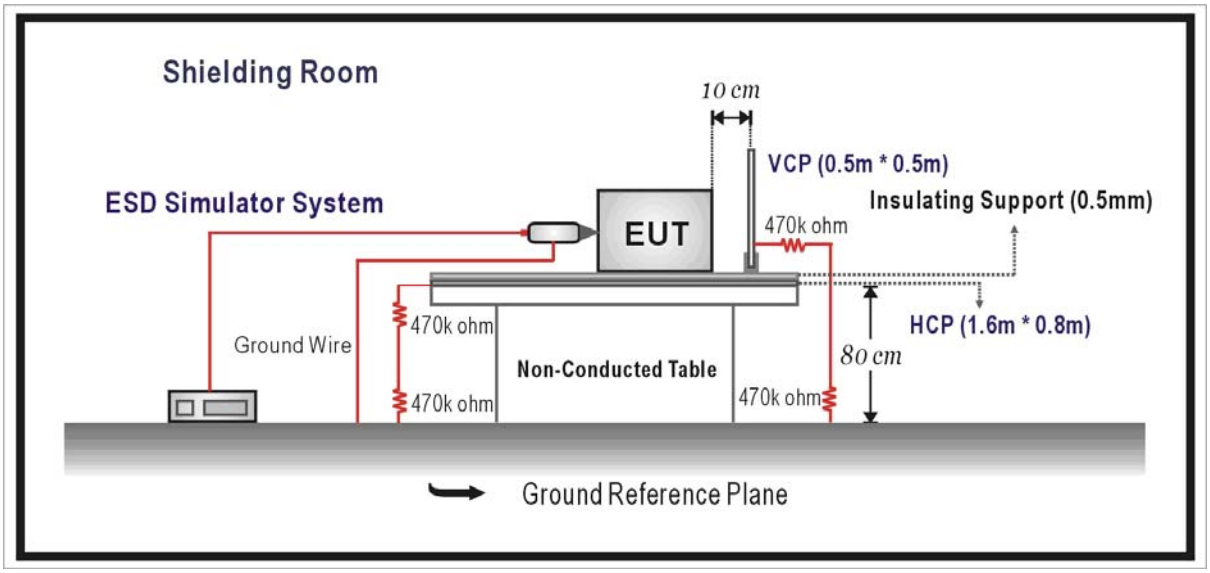


8. Electrostatic Discharge

8.1. Test Specification

According to Standard : IEC 61000-4-2

8.2. Test Setup



8.3. Limit

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

8.4. Test Procedure

Direct application of discharges to the EUT:

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

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

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

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: FD9367-EHTV, Adapter		
Date of Test	2017/10/16	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	+8kV	B	B	Pass
	25	-8kV	B	B	Pass
Indirect Discharge (HCP)	25	+8kV	B	A	Pass
	25	-8kV	B	A	Pass
Indirect Discharge (VCP)	25	+8kV	B	A	Pass
	25	-8kV	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: FD9367-EHTV, PoE		
Date of Test	2017/10/16	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	+8kV	B	B	Pass
	25	-8kV	B	B	Pass
Indirect Discharge (HCP)	25	+8kV	B	A	Pass
	25	-8kV	B	A	Pass
Indirect Discharge (VCP)	25	+8kV	B	A	Pass
	25	-8kV	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: FD9367-EHTV, Adapter

Description : ESD Test Setup

Test Mode : Mode 2: FD9367-EHTV, PoE

Description : ESD Test Setup

8.8. EUT to dot photo for ESD test

Test dot : (CONTACT DISCHARGE)

Test dot : (CONTACT DISCHARGE)

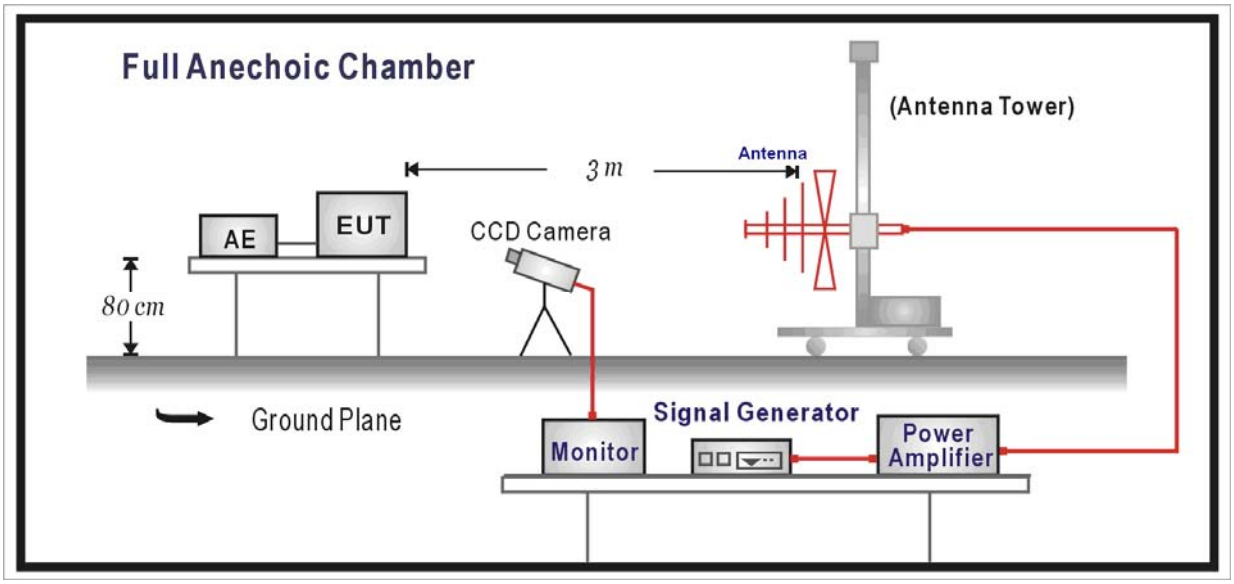
Test dot : (CONTACT DISCHARGE)

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 Electromagnetic Field Amplitude Modulated	MHz V/m(Un-modulated, rms) % AM (1kHz)	80-1000 3 80	A

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: FD9367-EHTV, Adapter		
Date of Test	2017/10/16	Test Site	Chamber9

Frequency (MHz)	Position (Angle)	Polarity (H or V)	Field Strength (V/m)	Required Criteria	Complied To Criteria (A,B,C)	Results
80-1000	0°	H	3	A	A	PASS
80-1000	0°	V	3	A	A	PASS
80-1000	90°	H	3	A	A	PASS
80-1000	90°	V	3	A	A	PASS
80-1000	180°	H	3	A	A	PASS
80-1000	180°	V	3	A	A	PASS
80-1000	270°	H	3	A	A	PASS
80-1000	270°	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: FD9367-EHTV, PoE		
Date of Test	2017/10/16	Test Site	Chamber9

Frequency (MHz)	Position (Angle)	Polarity (H or V)	Field Strength (V/m)	Required Criteria	Complied To Criteria (A,B,C)	Results
80-1000	0°	H	3	A	A	PASS
80-1000	0°	V	3	A	A	PASS
80-1000	90°	H	3	A	A	PASS
80-1000	90°	V	3	A	A	PASS
80-1000	180°	H	3	A	A	PASS
80-1000	180°	V	3	A	A	PASS
80-1000	270°	H	3	A	A	PASS
80-1000	270°	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.

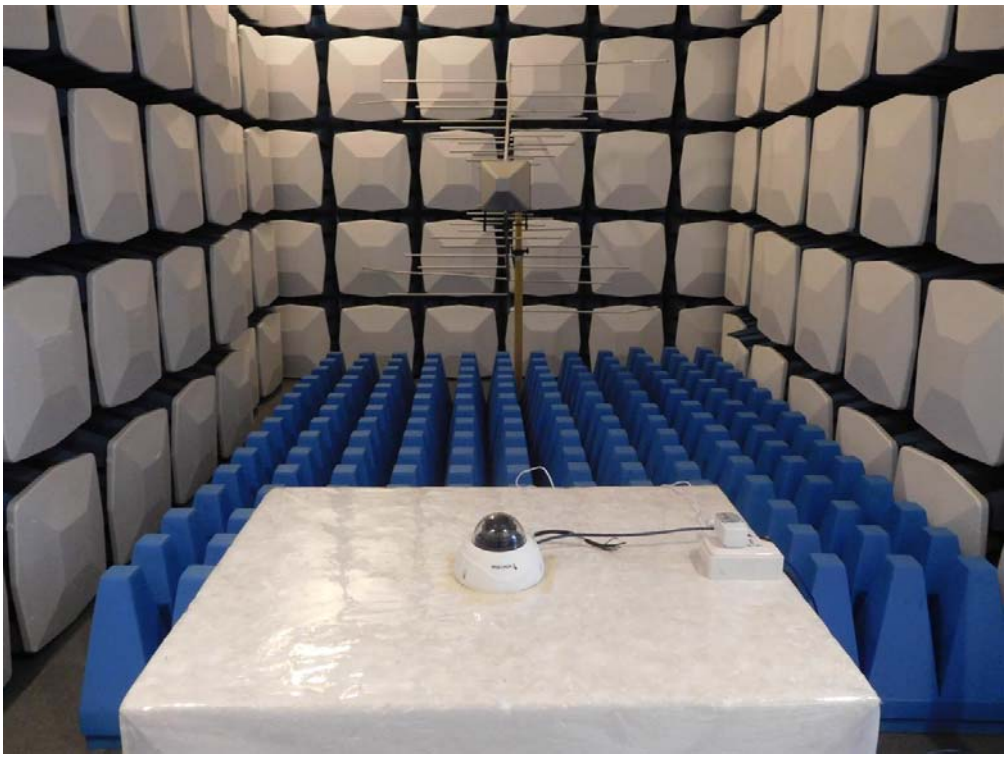
☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ There was no observable degradation in performance.
  ☐ EUT stopped operation and could / could not be reset by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

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

9.7. Test Photograph

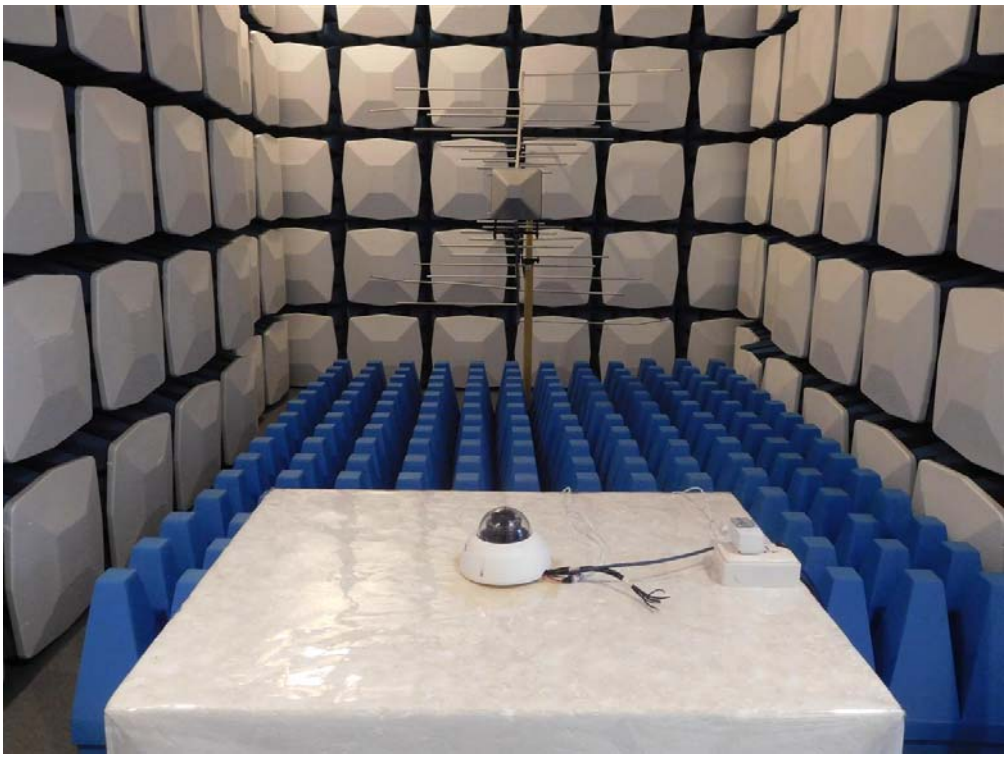
Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Radiated Susceptibility Test Setup



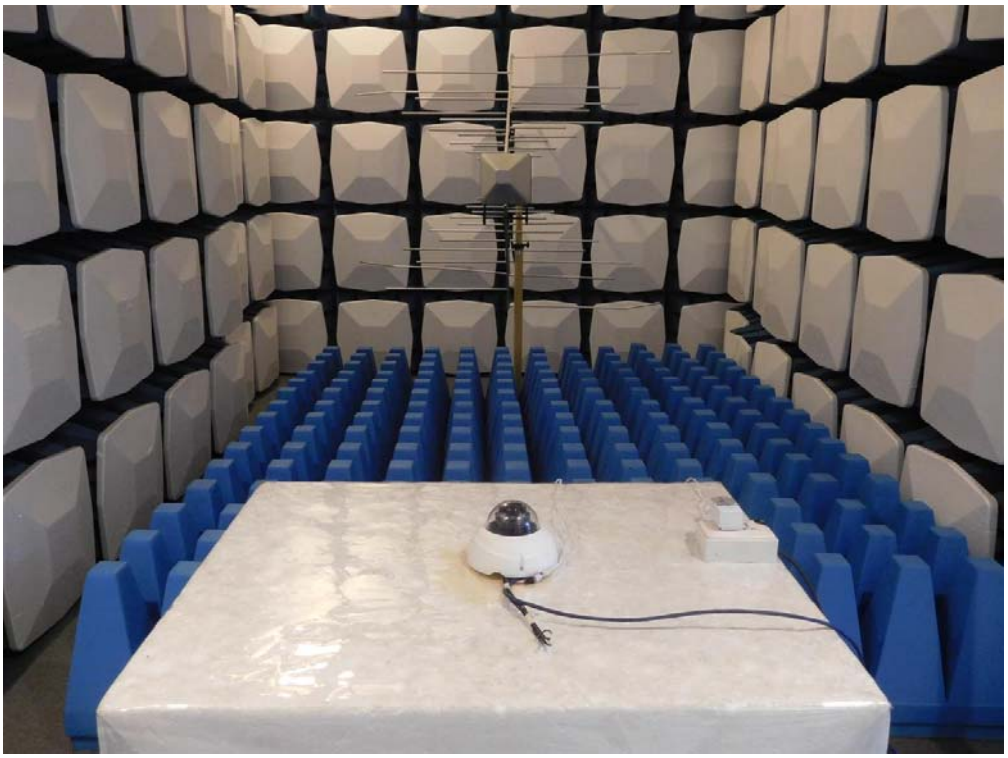
Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Radiated Susceptibility Test Setup



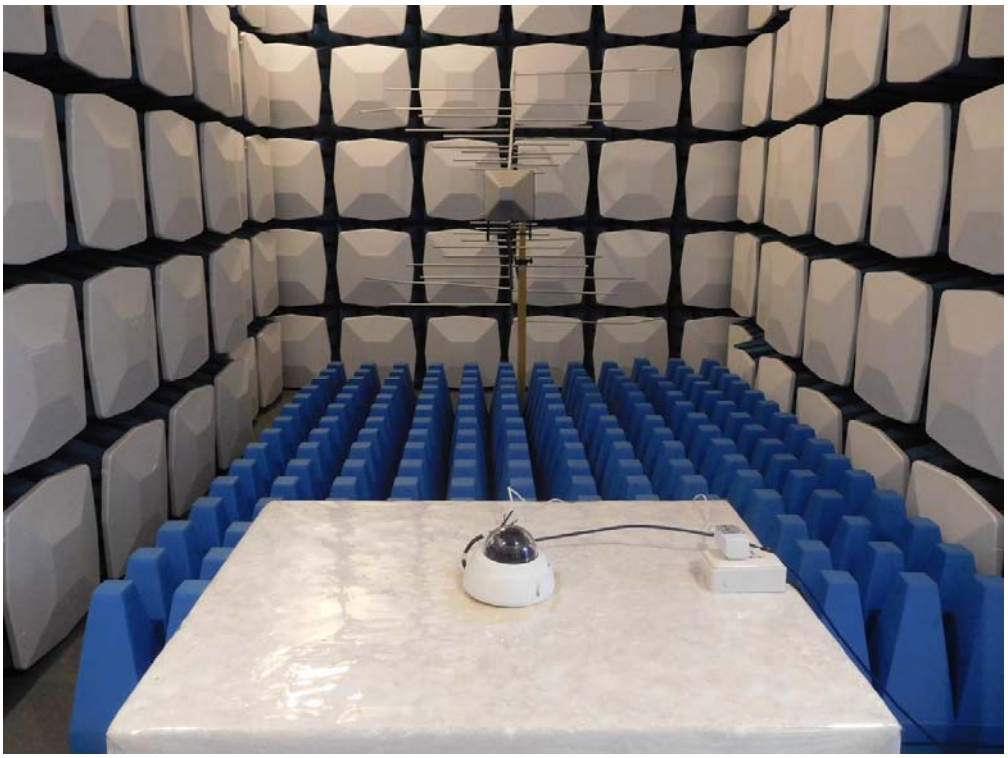
Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Radiated Susceptibility Test Setup



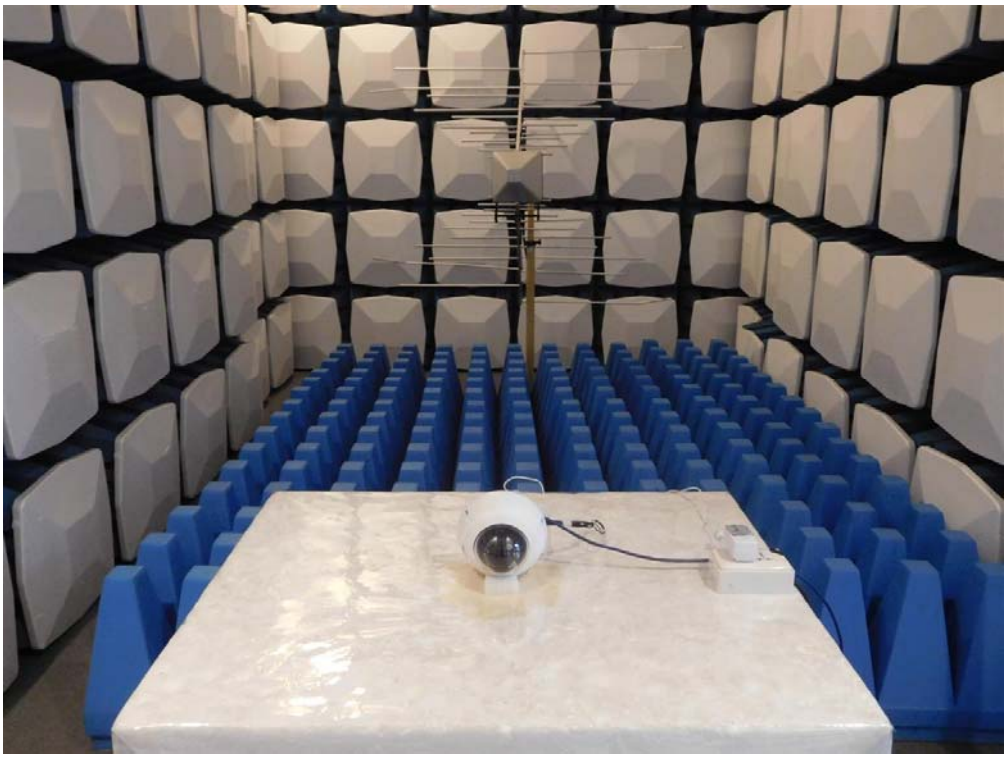
Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Radiated Susceptibility Test Setup



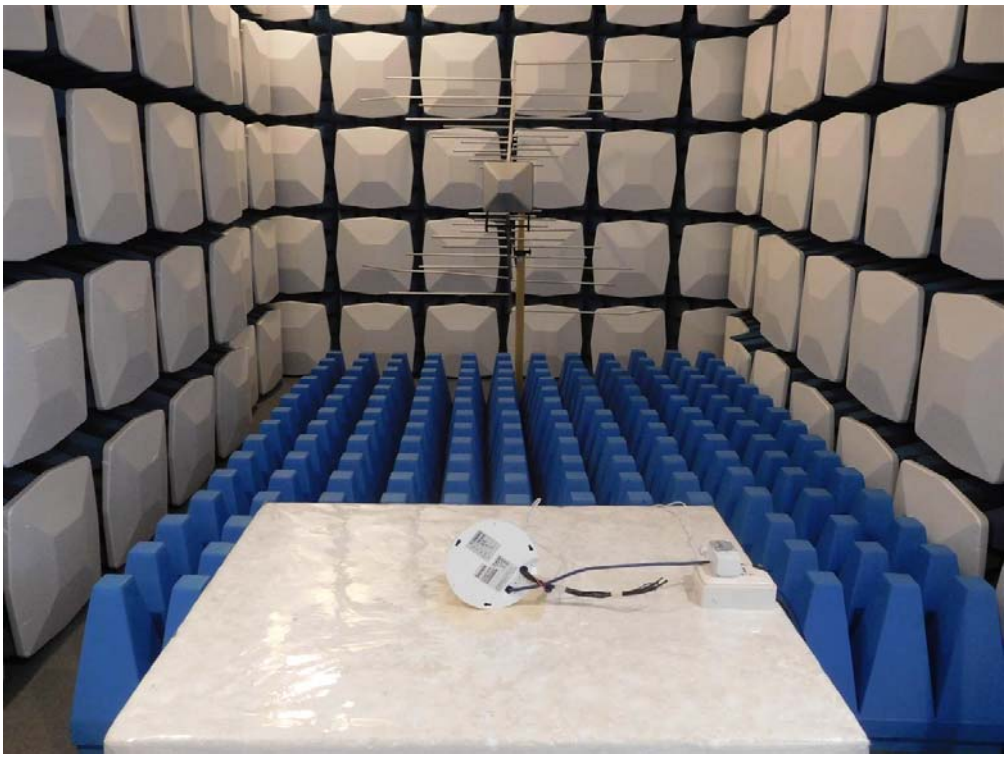
Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Radiated Susceptibility Test Setup



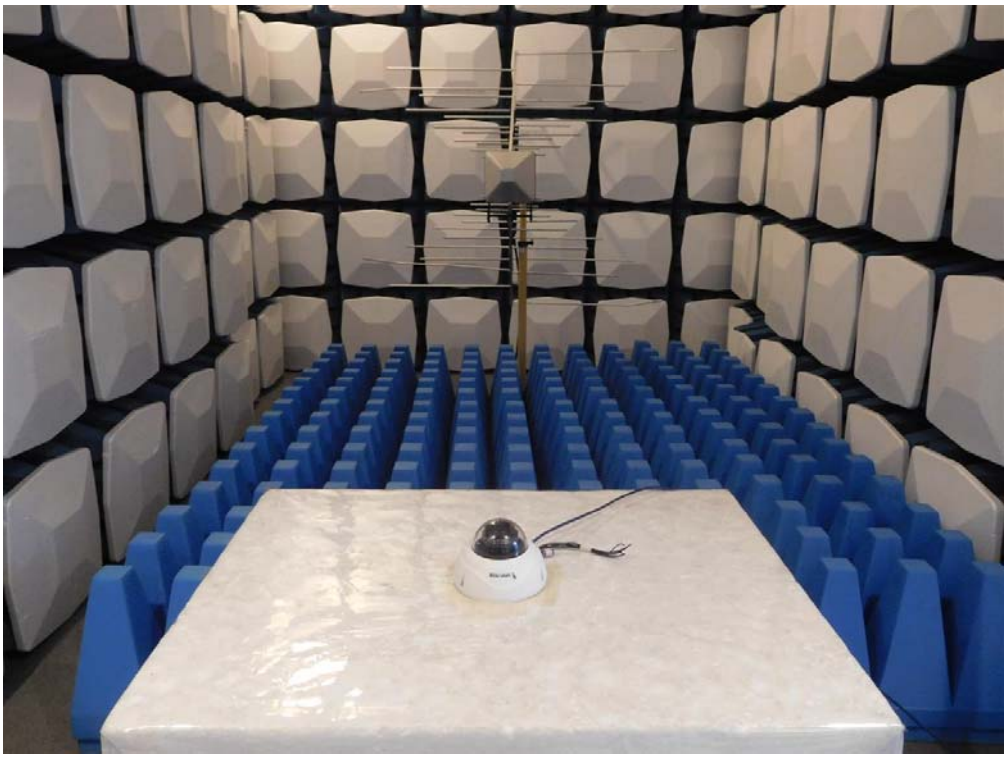
Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Radiated Susceptibility Test Setup



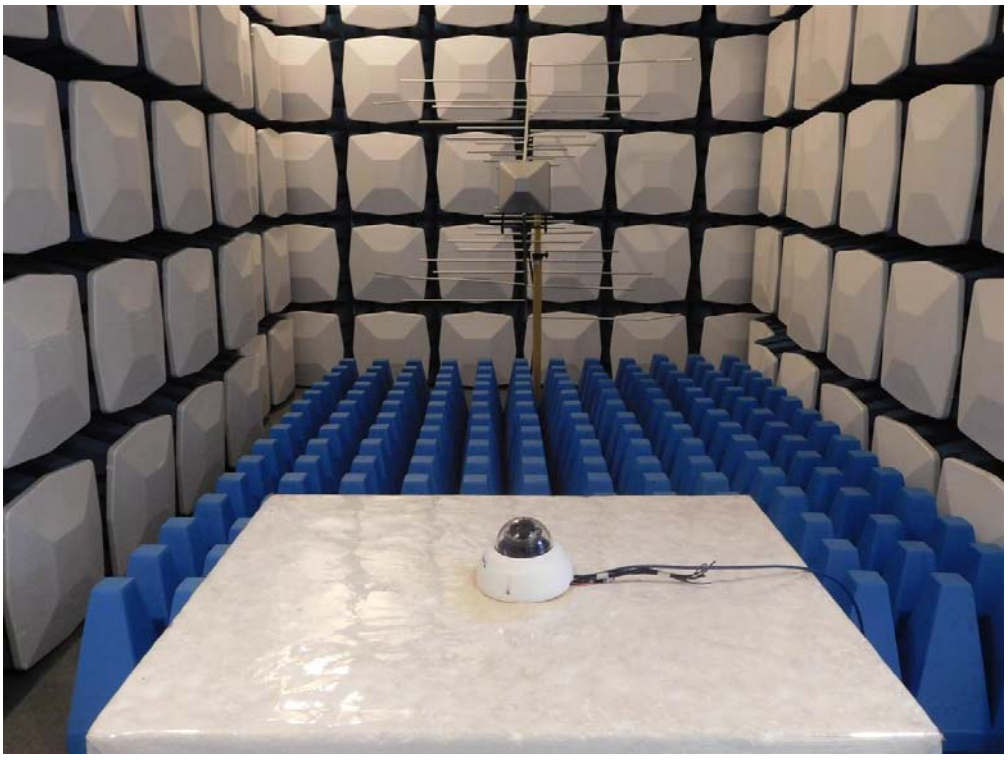
Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Radiated Susceptibility Test Setup



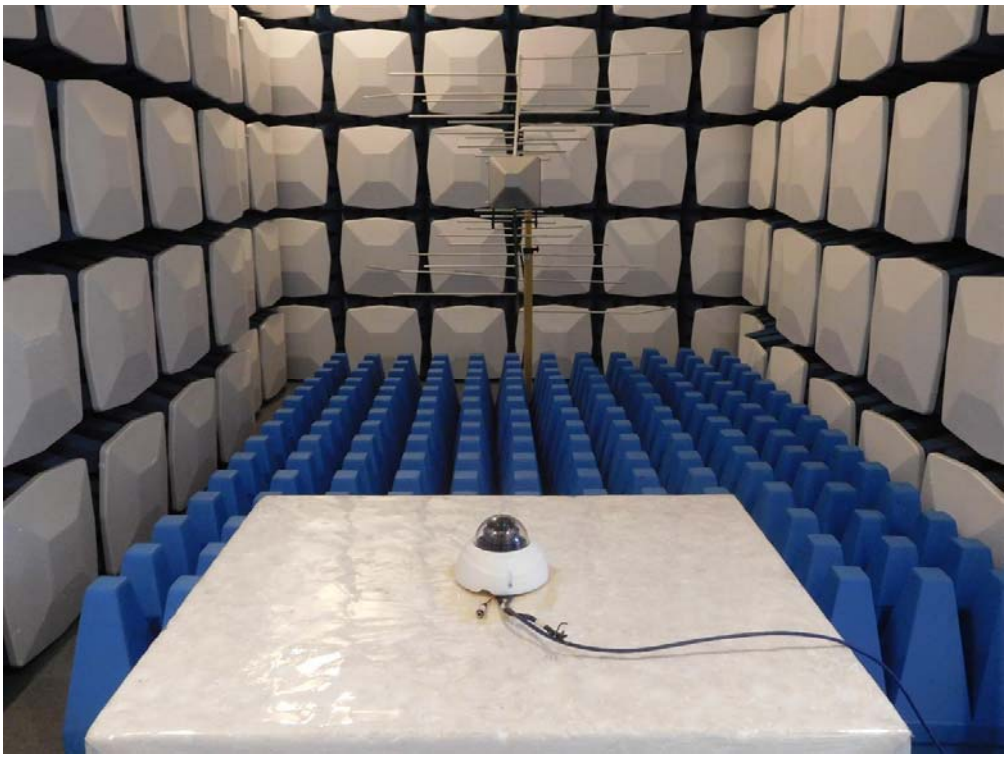
Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Radiated Susceptibility Test Setup



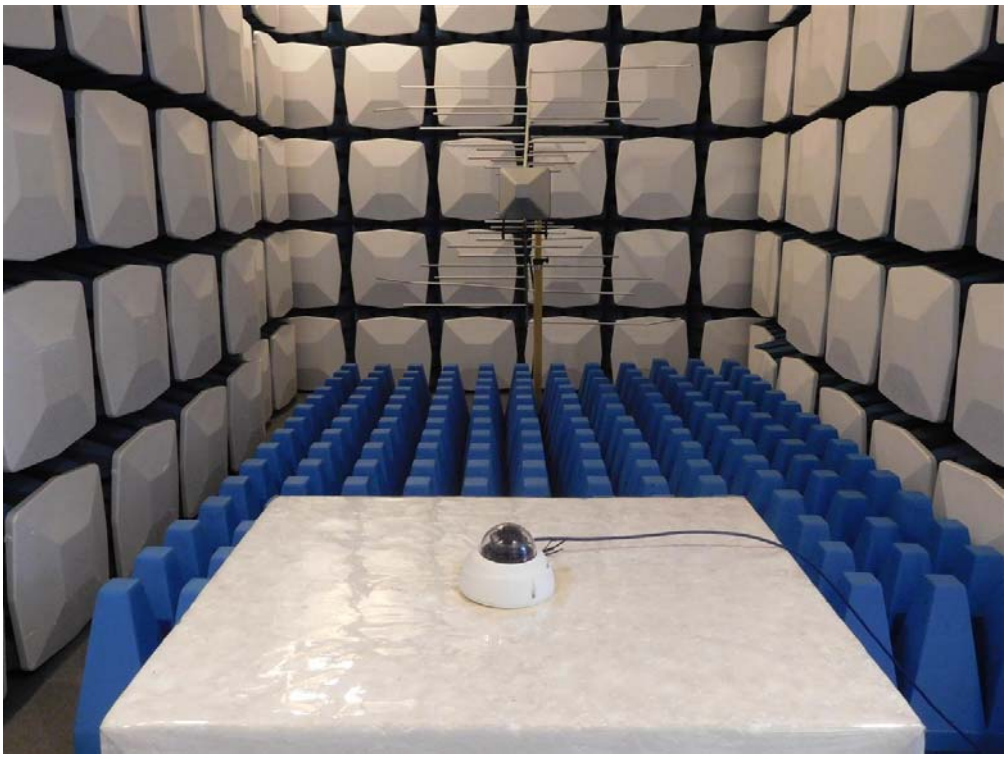
Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Radiated Susceptibility Test Setup



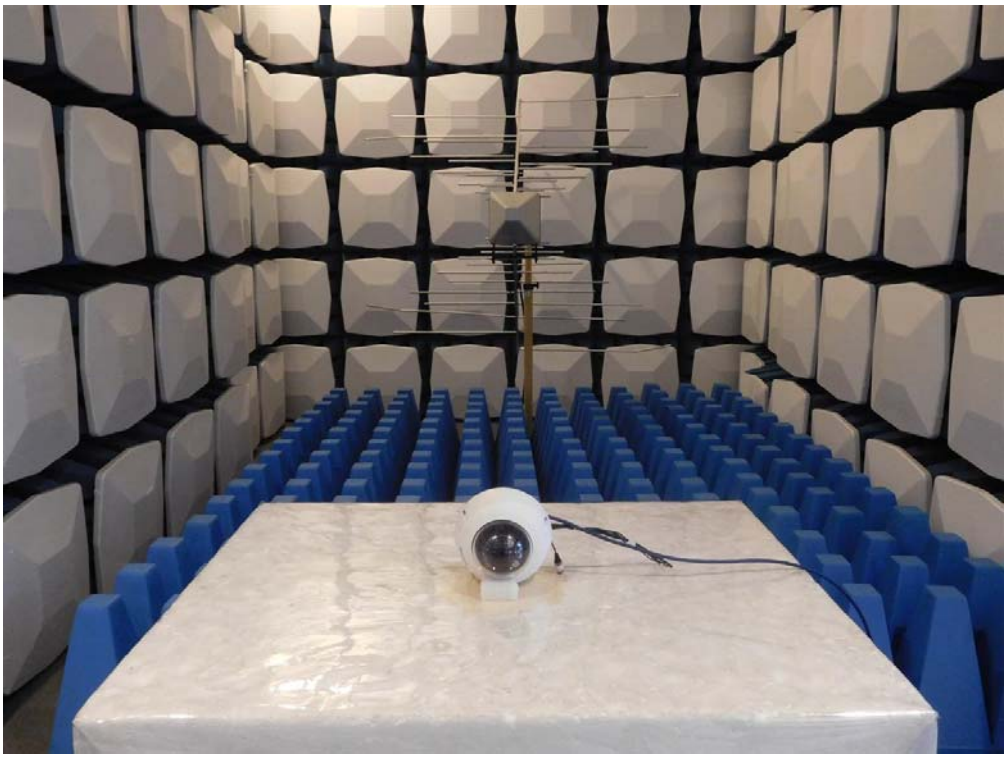
Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Radiated Susceptibility Test Setup



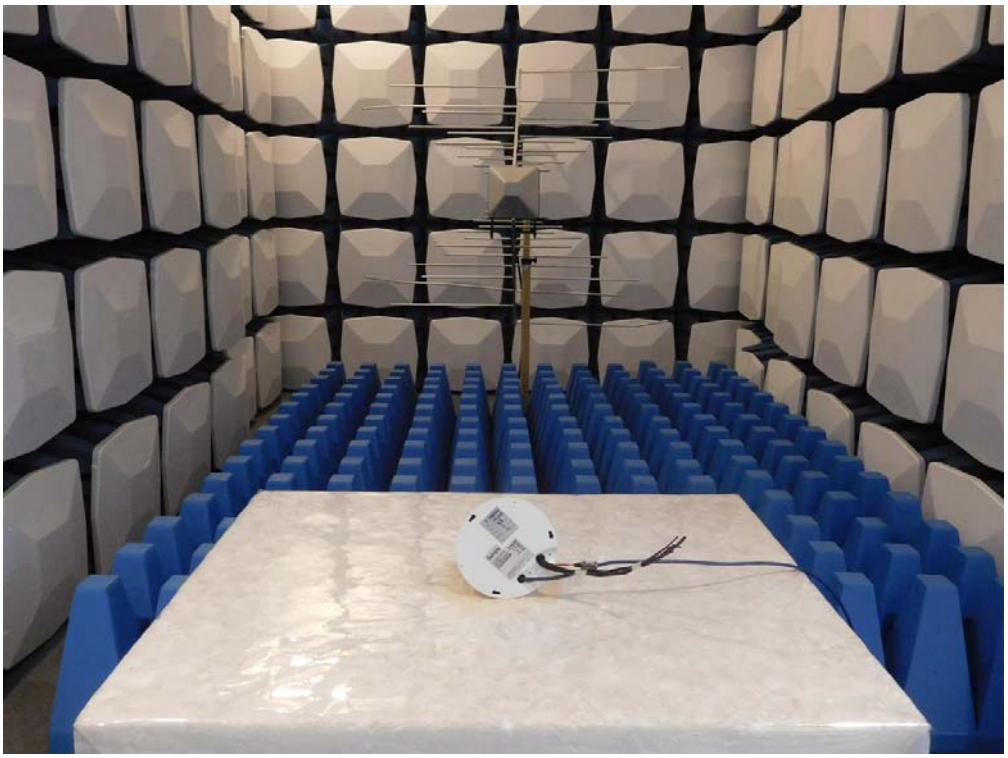
Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Radiated Susceptibility Test Setup



Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Radiated Susceptibility Test Setup

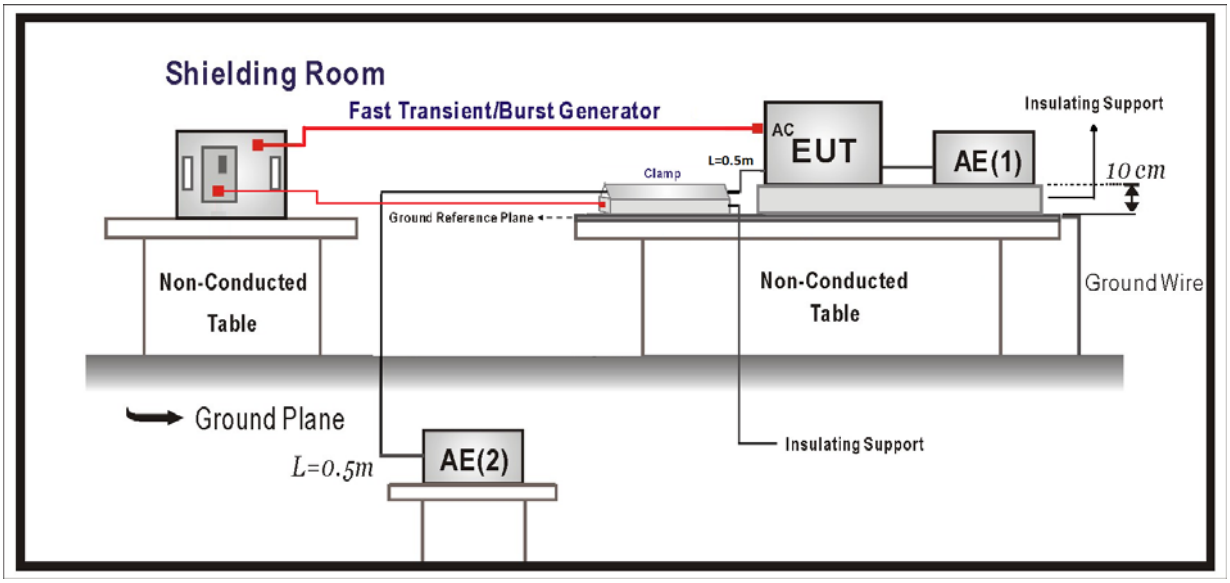


10. Electrical Fast Transient/Burst

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: FD9367-EHTV, Adapter		
Date of Test	2017/10/17	Test Site	No.3 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L	±	1kV	60	Direct	B	A	PASS
N	±	1kV	60	Direct	B	A	PASS
L-N	±	1kV	60	Direct	B	A	PASS
LAN	±	0.5kV	60	Clamp	B	A	PASS
DI/DO	±	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: FD9367-EHTV, PoE		
Date of Test	2017/10/17	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
DI/DO	±	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: FD9367-EHTV, Adapter

Description : EFT/B Test Setup

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : EFT/B Test Setup - Clamp

Test Mode : Mode 2: FD9367-EHTV, PoE

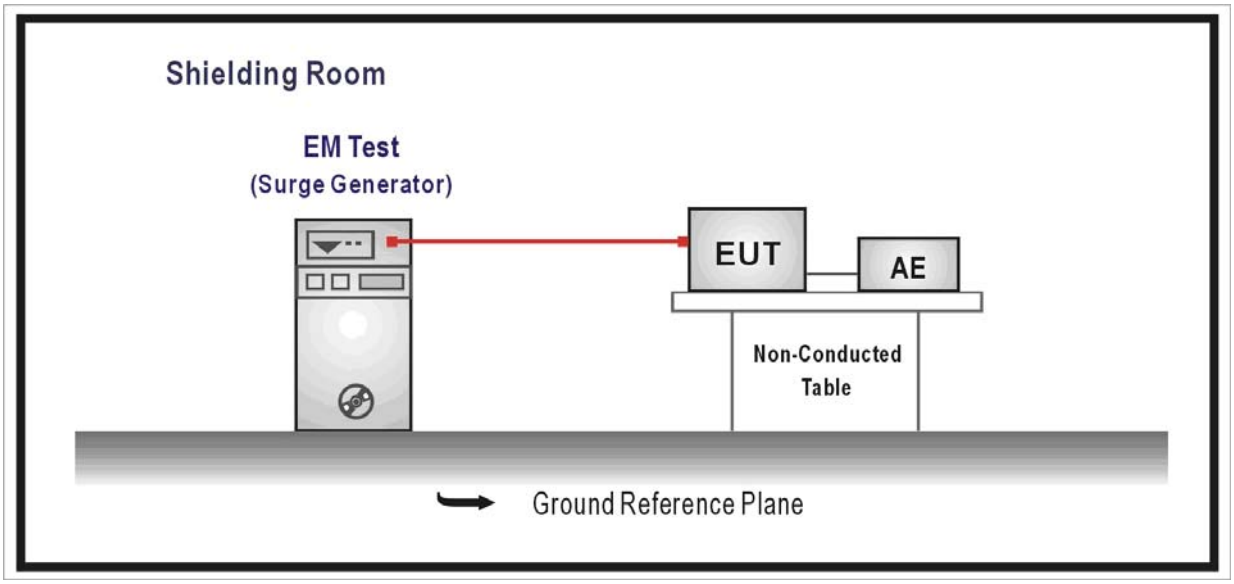
Description : EFT/B Test Setup - Clamp

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	10/700 ± 1	C
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 specification may connect directly to outdoor cables.
2) Where the coupling network for the 10/700 µs waveform affects the functioning of high speed data ports, the test shall be carried out using a 1,2/50 (8/20) µs waveform and appropriate coupling network.

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: FD9367-EHTV, Adapter		
Date of Test	2017/10/17	Test Site	No.3 Shielded Room

Inject Line	Polarity	Voltage kV	Angle	Time Interval (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N	±	1kV	0	60	Direct	B	A	PASS
L-N	±	1kV	90	60	Direct	B	A	PASS
L-N	±	1kV	180	60	Direct	B	A	PASS
L-N	±	1kV	270	60	Direct	B	A	PASS
LAN	±	1kV	--	60	Direct	B	B	PASS
LAN	±	2kV	--	60	Direct	B	B	PASS
LAN	±	3kV	--	60	Direct	B	B	PASS
LAN	±	4kV	--	60	Direct	B	B	PASS
DI/DO	±	1kV	--	60	Direct	B	B	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: FD9367-EHTV, PoE		
Date of Test	2017/10/17	Test Site	No.3 Shielded Room

Inject Line	Polarity	Voltage kV	Angle	Time Interval (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
LAN	±	1kV	--	60	Direct	B	B	PASS
LAN	±	2kV	--	60	Direct	B	B	PASS
LAN	±	3kV	--	60	Direct	B	B	PASS
LAN	±	4kV	--	60	Direct	B	B	PASS
DI/DO	±	1kV	--	60	Direct	B	B	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: FD9367-EHTV, Adapter

Description : SURGE Test Setup

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : SURGE Test Setup _Signal Surge

Test Mode : Mode 2: FD9367-EHTV, PoE

Description : SURGE Test Setup_ Signal Surge

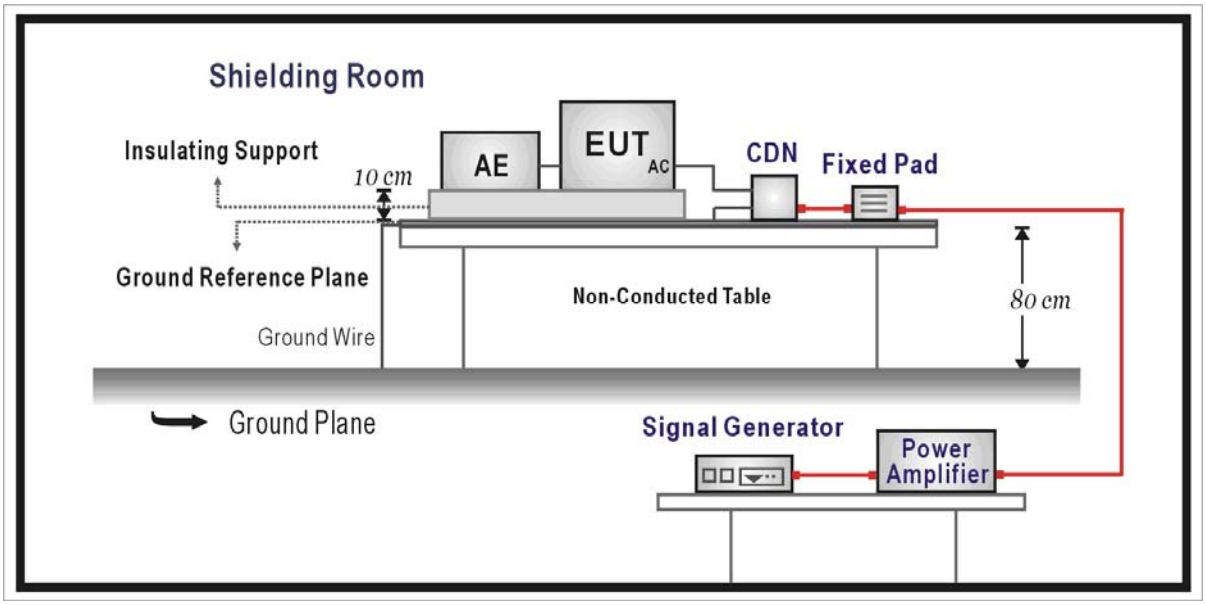
12. Conducted Susceptibility

12.1. Test Specification

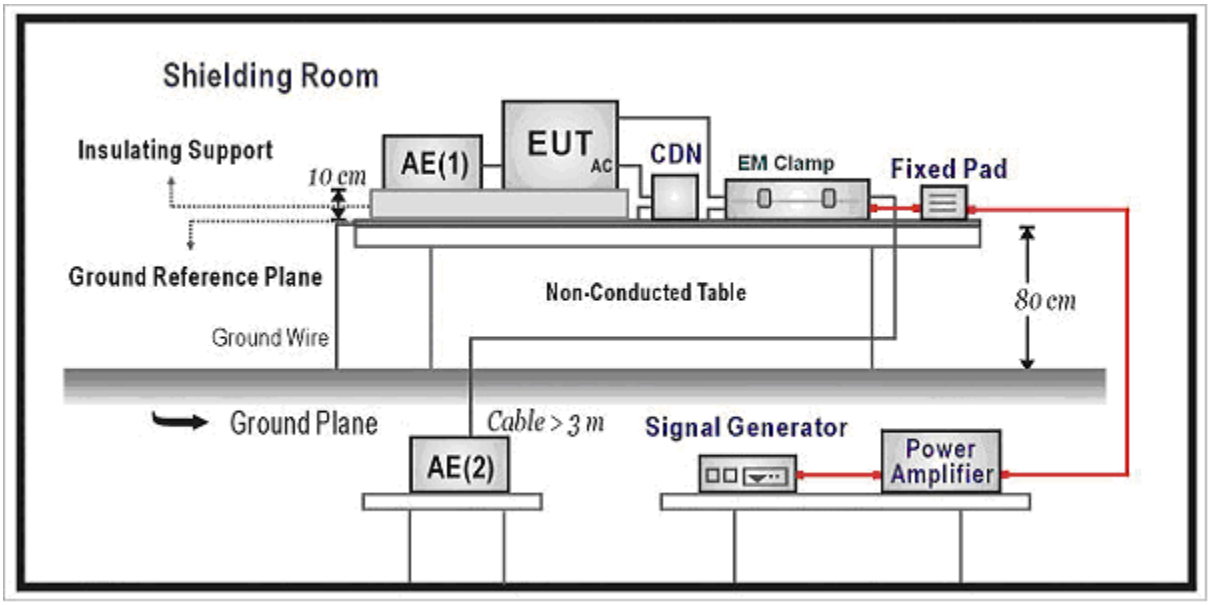
According to Standard : IEC 61000-4-6

12.2. Test Setup

CDN Inject Method



EM Clamp Inject Method



12.3. Limit

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

12.4. Test Procedure

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

All the scanning conditions are as follows:

	Condition of Test	Remarks
1.	Field Strength	130dBuV(3V) Level 2
2.	Radiated Signal	AM 80% Modulated with 1kHz
3.	Scanning Frequency	0.15MHz – 80MHz
4	Dwell Time	3 Seconds
5.	Frequency step size Δf :	1%
6.	The rate of Swept of Frequency	1.5 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: FD9367-EHTV, Adapter		
Date of Test	2017/10/13	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
0.15~80	130 (3V)	CDN	DI/DO	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: FD9367-EHTV, PoE		
Date of Test	2017/10/13	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	LAN	A	A	PASS
0.15~80	130 (3V)	CDN	DI/DO	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: FD9367-EHTV, Adapter

Description : Conducted Susceptibility Test Setup

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Conducted Susceptibility Test Setup - CDN

Test Mode : Mode 2: FD9367-EHTV, PoE

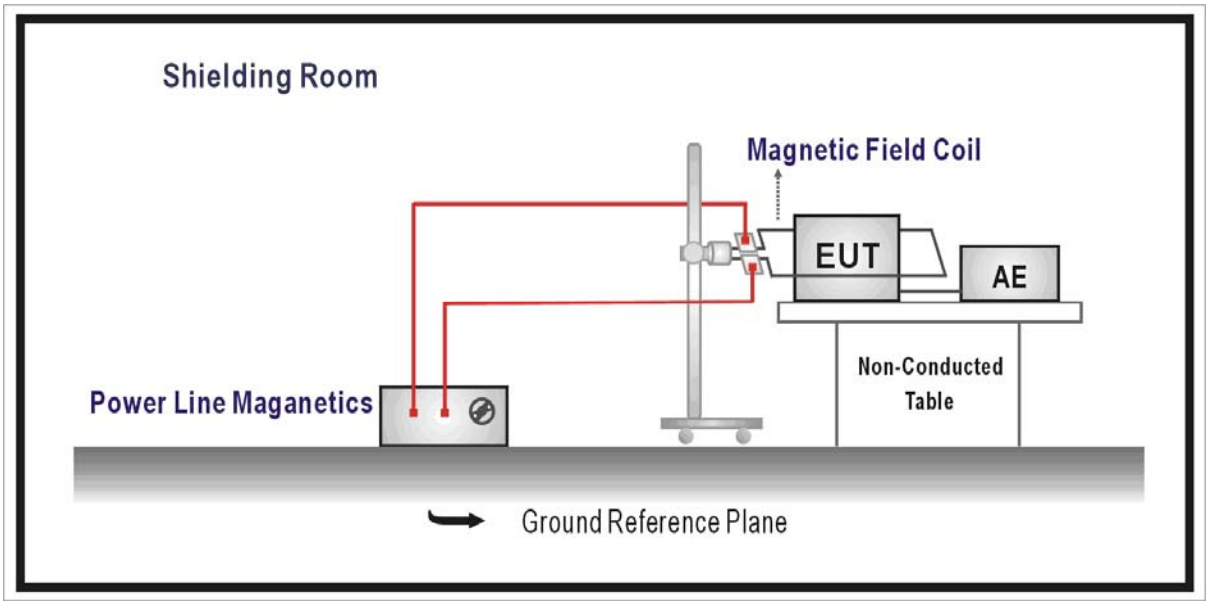
Description : Conducted Susceptibility Test Setup - CDN

13. Power Frequency Magnetic Field

13.1. Test Specification

According to Standard : IEC 61000-4-8

13.2. Test Setup



13.3. Limit

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

13.4. Test Procedure

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

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

13.5. Deviation from Test Standard

No deviation.

13.6. Test Result

Product	Network Camera		
Test Item	Power frequency magnetic field		
Test Mode	Mode 1: FD9367-EHTV, Adapter		
Date of Test	2017/10/13	Test Site	No.3 Shielded Room

Polarization	Frequency (Hz)	Inject Time(s)	Magnetic Strength (A/m)	Required Performance Criteria	Performance Criteria Complied To	Test Result
X Orientation	50	60	1	A	A	PASS
Y Orientation	50	60	1	A	A	PASS
Z Orientation	50	60	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: FD9367-EHTV, PoE		
Date of Test	2017/10/13	Test Site	No.3 Shielded Room

Polarization	Frequency (Hz)	Inject Time(s)	Magnetic Strength (A/m)	Required Performance Criteria	Performance Criteria Complied To	Test Result
X Orientation	50	60	1	A	A	PASS
Y Orientation	50	60	1	A	A	PASS
Z Orientation	50	60	1	A	A	PASS

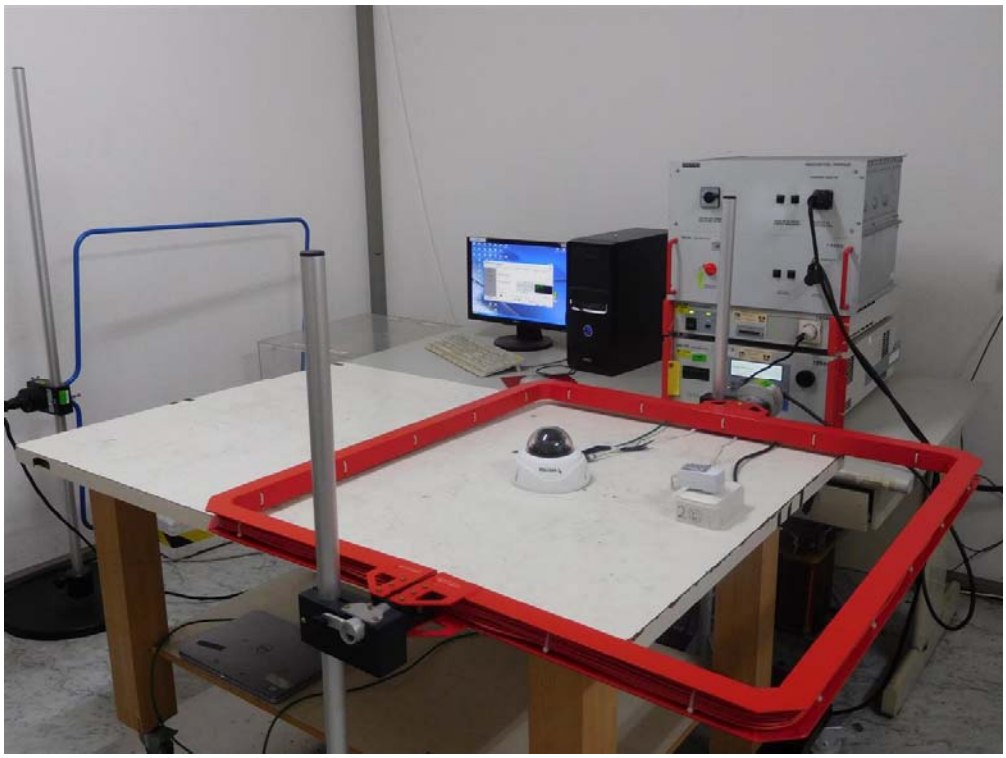
☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ 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: FD9367-EHTV, Adapter

Description : Power Frequency Magnetic Field Test Setup



Test Mode : Mode 2: FD9367-EHTV, PoE

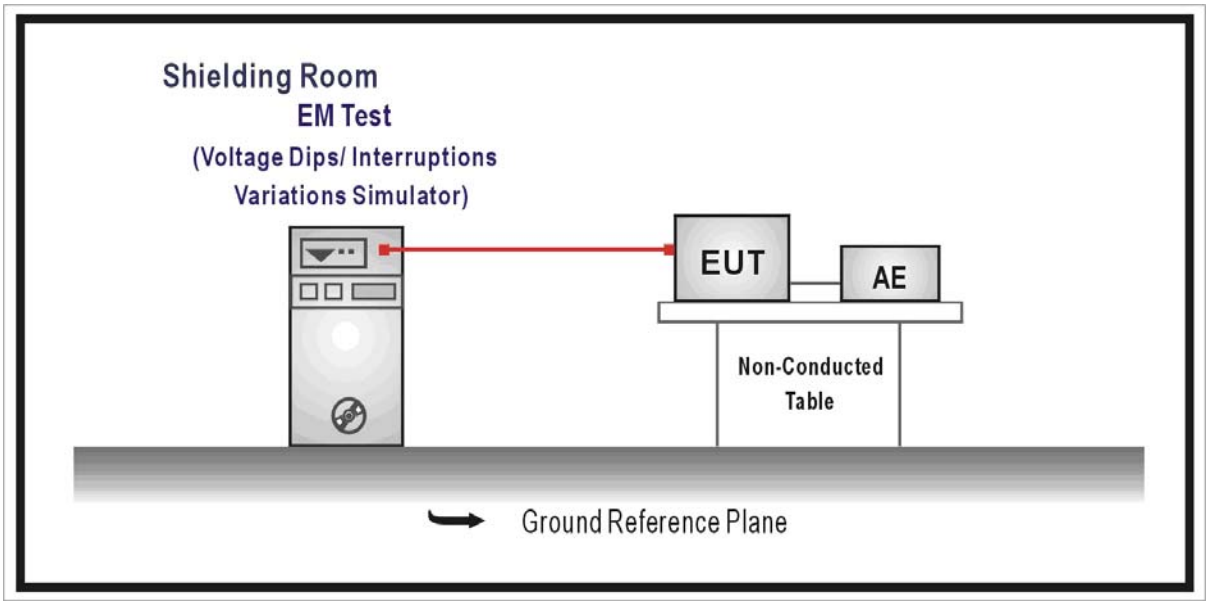
Description : Power Frequency Magnetic Field Test Setu

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: FD9367-EHTV, Adapter		
Date of Test	2017/10/17	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: FD9367-EHTV, Adapter

Description : Voltage Dips Test Setup

15. Attachment

➢ EUT Photograph

(1) EUT Photo

(2) EUT Photo