Verification of Conformity

Issued Date: Jul. 30, 2012
Report No.: 127181R-ITCEP27V01

This is to certify that the following designated product

Product	**: Outdoor Supreme Fisheye Lens Dome Camera**
Trade name	**: VIVOTEK**
Model Number	**: FE8172V**
Company Name	**: VIVOTEK INC.**

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

Applicable Standards **EN 50155: 2007, for EMC, Electric service condition and Environmental test.**
EN 50121-3-2: 2006 for EMC test
EN 60068-2-1: 2007 for Environmental test
EN 60068-2-2: 2007 for Environmental test
EN 61373:1999 for Environmental test

TEST LABORATORY

Vincent Lin / Manager

QuieTek No. 5-22, Rueishu Keng, Linkou Dist., New Taipei City 24451, Taiwan. R.O.C.
TEL:+886-2-8601-3788 FAX:+886-2-8601-3789 Email:service@quietek.com http://www.quietek.com

Test Report

Product Name ： Outdoor Supreme Fisheye Lens Dome Camera

Model No. ： FE8172V

Applicant ： VIVOTEK INC.

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

Date of Receipt ： 2012/07/05

Issued Date ： 2012/07/30

Report No. ： 127181R-ITCEP27V01

Report Version ： V1.0

Test Report Verification

Issued Date : 2012/07/30
Report No. : 127181R-ITCEP27V01

Product Name	:	Outdoor Supreme Fisheye Lens Dome 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.	:	FE8172V
EUT Rated Voltage	:	DC 12V, by POE
EUT Test Voltage	:	AC 230V/50Hz, by POE
Trade Name	:	VIVOTEK
Applicable Standard	:	EN 50155: 2007, for EMC, Electric service condition and Environmental test EN 50121-3-2: 2006 for EMC test EN 60068-2-1: 2007 for Environmental test EN 60068-2-2: 2007 for Environmental test EN 61373:1999 for Environmental test
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 : Jinn Chen
(Senior Adm. Specialist / Jinn Chen)

Reviewed By : Kakira Wu
(Assistant Engineer / Kakira Wu)

Approved By :
(Manager / Vincent Lin)

TABLE OF CONTENTS

Description Page

1. General Information

1.1 EUT Description

Product Name	Outdoor Supreme Fisheye Lens Dome Camera
Trade Name	VIVOTEK
Model No.	FE8172V

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

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: Adapter Mode 2: POE	
Final Test Mode	
Emission	Mode 1: Adapter Mode 2: POE
Immunity	Mode 1: Adapter Mode 2: POE

1.3 Tested System Details

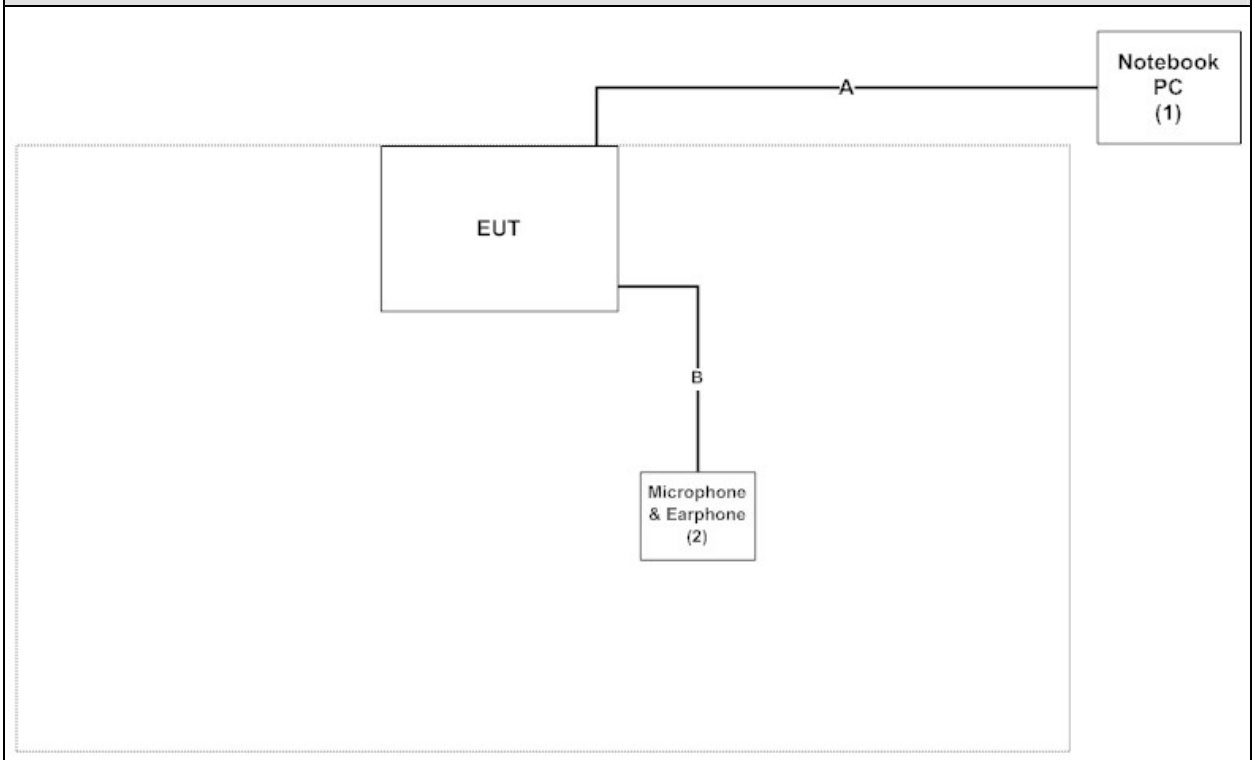
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Test Mode		Mode 1: Adapter			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	PP04X	C8YYM1S	Non-Shielded, 1.8m
2	Microphone & Earphone	Ergotech	ET-E201	N/A	N/A

Test Mode		Mode 2: POE			
Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Notebook PC	DELL	PP04X	C8YYM1S	Non-Shielded, 1.8m
2	POE	VIVOTEK	POE-IJ-1748NDN	N/A	Non-Shielded, 1.8m
3	Microphone & Earphone	Ergotech	ET-E201	N/A	N/A

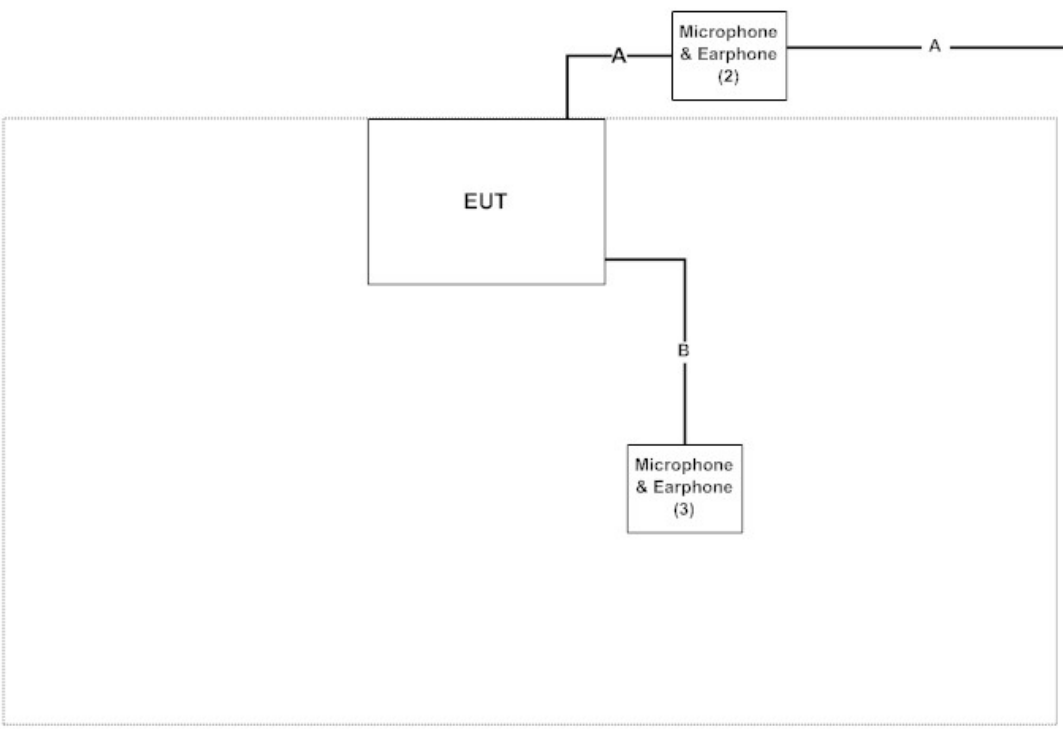
1.4 Configuration of Tested System

Test Mode	Mode 1: Adapter
Connection Diagram	



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 3m
B	Microphone & Earphone Cable	Non-Shielded, 1.6m

Test Mode	Mode 2: POE
Connection Diagram	



Signal Cable Type		Signal cable Description
A	LAN Cable	Non-Shielded, 3m, two PCS.
B	Microphone & Earphone Cable	Non-Shielded, 1.6m

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	All the features of the EUT operation normally.

2. Technical Test

2.1 Summary of Test Result

Report Clause	Test	EN 50155 Reference Clause	Reference Standard	Result
3.	Visual inspection	12.2.1	—	Pass
4.	**Electrical services conditions**			
4.1	Variations of voltage supply (Performance test)	12.2.2 a) 5.1.1.1	—	Pass
4.2	Interruptions of voltage supply (Performance test)	12.2.2 b) 5.1.1.2	—	Pass
4.3	Supply change over (Performance test)	12.2.2 5.1.3	—	Pass
4.4.	Supply overvoltages	12.2.6	—	Pass
5.	**Insulation test**	12.2.9	—	Pass
6.	**Electromagnetic compatibility test**			
6.1	Conducted Emissions	12.2.8.2	EN 50121-3-2 EN 55011	Pass
6.2	Radiated Emission	12.2.8.2	EN 50121-3-2 EN 55011	Pass
6.3	Electrostatic Discharge	12.2.7.2	EN 50121-3-2 EN 61000-4-2	Pass
6.4	Radiated Susceptibility	12.2.8.1	EN 50121-3-2 EN 61000-4-3	Pass
6.5	Transient Burst Susceptibility	12.2.7.3	EN 50121-3-2 EN 61000-4-4	Pass
6.6	Surge	12.2.7.1	EN 50121-3-2 EN 61000-4-5	Pass
6.7	Conducted Susceptibility	12.2.8.1	EN 50121-3-2 EN 61000-4-6	Pass
8.Environmental Tests				
Appendix A	Product Environmental Test Report	--	--	Pass

2.2 List of Test Equipment

Conducted Emission / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	838251/001	2012/06/05
LISN	R&S	ESH3-Z5	836679/023	2012/01/12
LISN	R&S	ENV216	100085	2012/02/13
Pulse Limiter	R&S	ESH3-Z2	357.8810.52-1	2011/09/16

Radiated Emission / Site1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2918	2012/07/22
EMI Test Receiver	R&S	ESCS 30	100121	2012/03/07
Pre-Amplifier	QTK	N/A	N/A	2012/07/06
CXA Signal Analyzer	Agilent	N9000A	MY50510072	2012/02/24
Site1 NSA	QTK	N/A	N/A	2012/07/06

Electrostatic Discharge / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
ESD Simulator System	Noiseken	TC-815R	ESS0929097	2012/06/21
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	2012/05/15
Biconilog Antenna	EMCO	3149	00071675	N/A
Directional Coupler	A&R	DC 6180	22735	N/A
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	2012/05/18
Pre-Amplifier	A&R	150A220	23067	N/A
Signal Generator	R&S	SMT03	100170	2012/05/16

Electrical fast transient/burst / SR3

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

Surge / SR3

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

Conducted susceptibility / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Schaffner NSG 2070 RF-Generator	Schaffner	N/A	N/A	2012/05/18

2.3 Measurement Uncertainty

Conducted Emission

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.

2.4 Test Environment

Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25.9
	Humidity (%RH)	25-75	60
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	35.9
	Humidity (%RH)	25-75	25
	Barometric pressure (mbar)	860-1060	950-1000
Electrostatic Discharge	Temperature (°C)	15-35	24
	Humidity (%RH)	30-60	51
	Barometric pressure (mbar)	860-1060	950-1000
Radiated susceptibility	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Electrical fast transient/burst	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	53
	Barometric pressure (mbar)	860-1060	950-1000
Surge	Temperature (°C)	15-35	24
	Humidity (%RH)	10-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Conducted susceptibility	Temperature (°C)	15-35	23
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000

3. Visual Inspection

Inspection Requirement

The visual inspection shall be carried out to ensure that the equipment is of sound construction and meets its specified requirements.

Inspection Procedures

Reference to EN 50155 Clause 12.2.1

Inspection Result

Pass.

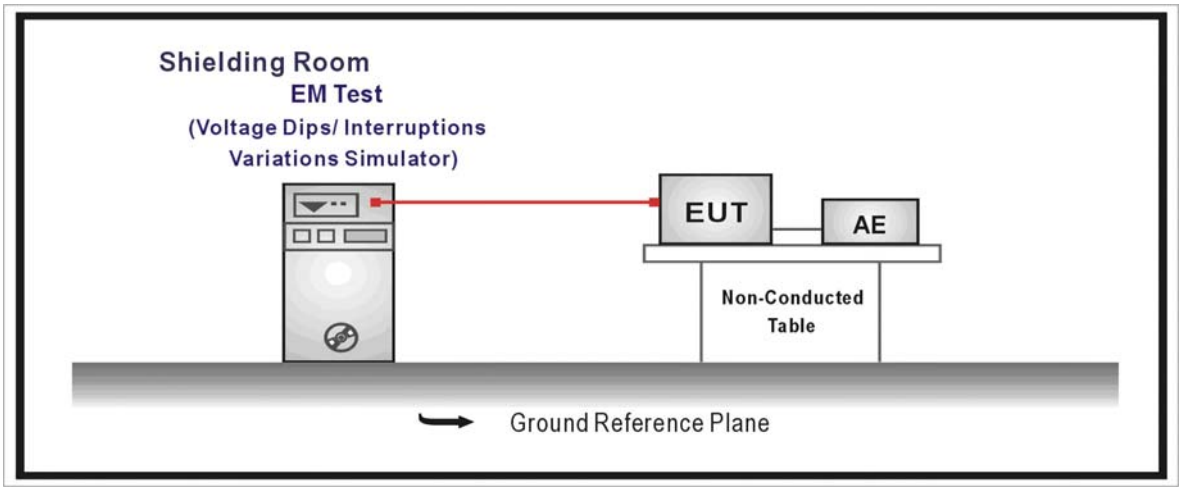
4. Electrical service conditions

4.1. Variations of Voltage Supply

Test Specification

According to EN 50155 clause 5.

Test Setup



Limit

Item	Variation of Voltage Supply	Test Specification
Minimum voltage		0.7 Un
Nominal voltage		Un
Rated voltage		1.15 Un
Maximum voltage:		1.25 Un

Test acceptance requirements:

- No failure shall occur.

Test Procedure

Reference to EN 50155 clause 12.2.2

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Variations of Voltage Supply		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/20	Test Site	No.3 Shielded Room

Voltage	Voltage fluctuations	Finally
AC 230V	0.7 Un	PASS
AC 230V	1 Un	PASS
AC 230V	1.15 Un	PASS
AC 230V	1.25 Un	PASS

Test Photograph

Test Mode : Mode 1: Adapter

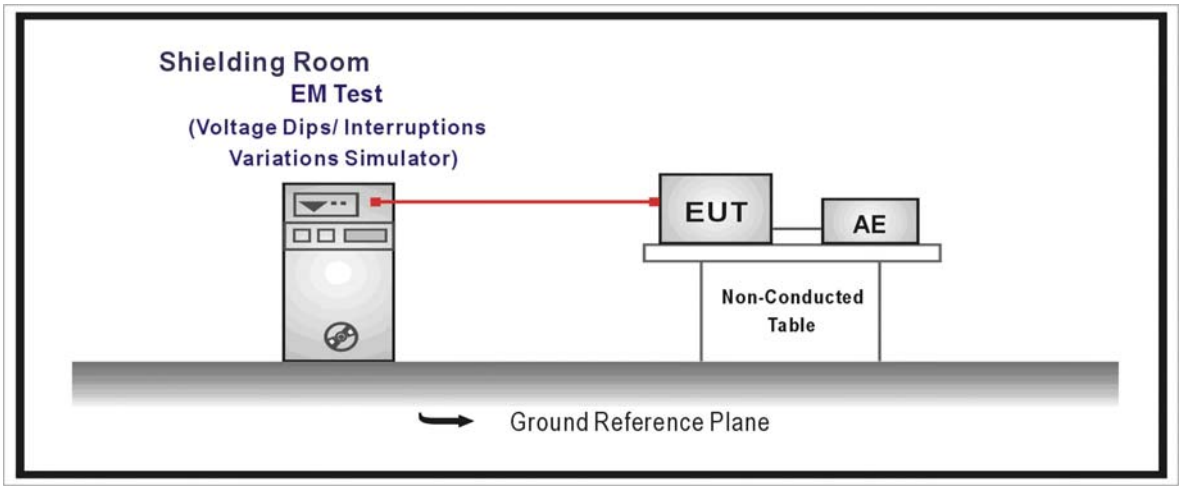
Description : Variations of Voltage Supply

4.2. Interruption of Voltage Supply

Test Specification

According to EN 50155 Clause 5.

Test Setup



Limit

Item	Interruption of Voltage Supply	Performance Criteria
	No interruptions	Class S1
	10 ms interruptions	Class S2

Test acceptance requirements:

- Class S1: no interruptions
- Class S2: 10 ms interruptions

The equipment shall continue to function and indicate correctly without intervention or need for resetting by the operator.

Test Procedure

Reference to EN 50155 clause 12.2.2

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Interruption of Voltage Supply		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/20	Test Site	No.3 Shielded Room

voltage	Result
Class S2: 10 ms interruptions	PASS

Test Photograph

Test Mode : Mode 1: Adapter

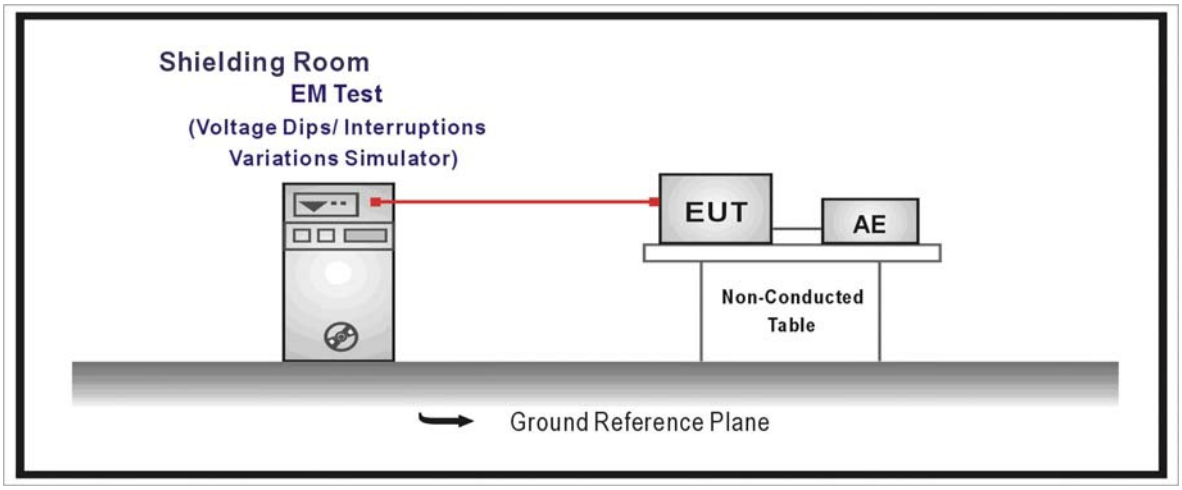
Description : Interruption of Voltage Supply

4.3. Supply Change Over

Test Specification

According to EN 50155 Clause 5.

Test Setup



Limit

Item	Supply Change Over	Units	Test Specification	Performance Criteria
Voltage Reduction		% Reduction Period	40% 100 ms	Class C1
Voltage Interruptions		% Reduction Period	100% 30ms	Class C2

Test acceptance requirements:

- no failure shall occur

Test Procedure

Reference to EN 50155 clause 5.

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Supply Change Over		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/20	Test Site	No.3 Shielded Room

voltage	Result
Class C1: at 0,6 Un during 100 ms (without interruptions)	PASS
Class C2 during a supply break of 30 ms	PASS

Test Photograph

Test Mode : Mode 1: Adapter

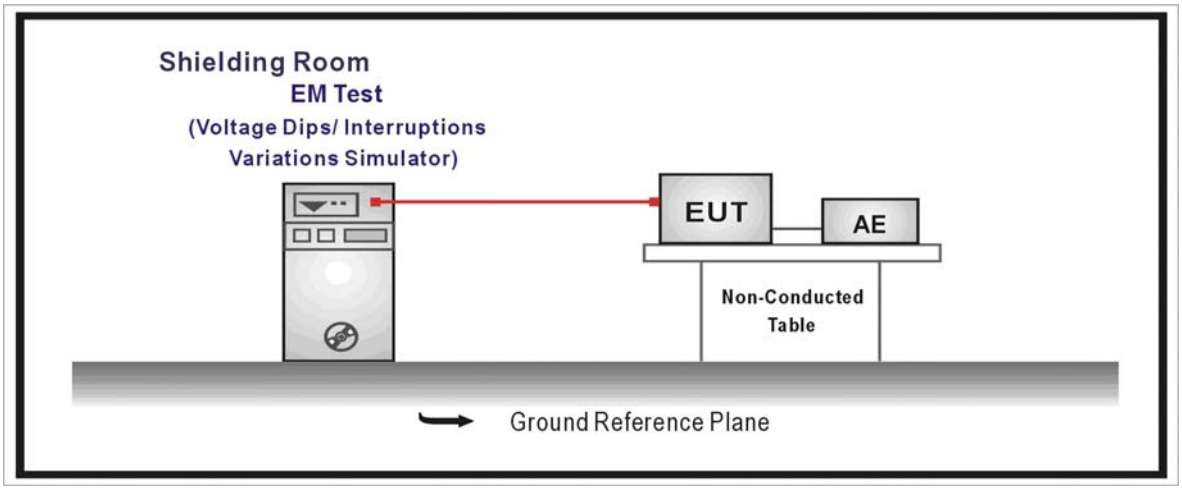
Description : Supply Change Over

4.4. Supply Overvoltages

Test Specification

According to EN 50155 Clause 5.

Test Setup



Limit

Item	Supply Overvoltages	Units	Test Specification
Voltage level minimum		V	1.4 Un
Duration d (maximum)		Second	0.1
Duration D (maximum)		Second	1.0
Series resistor RS		Ω	1

Test acceptance requirements:

- no failure shall occur

Test Procedure

Reference to EN 50155 clause 12.2.6

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Supply Overvoltages		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/20	Test Site	No.3 Shielded Room

Test Item	Result
Supply Overvoltages	PASS

Test Photograph

Test Mode : Mode 1: Adapter

Description : Supply Overvoltages

5. Insulation test

Test Instrument

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Dielectric Analyzer	EXTECH	7410	1270708	2012.6.15

Test requirement

Insulation measurement test

The insulation resistance test shall be carried out at 500 V d.c. and the values recorded. The test shall then be repeated after the voltage withstand test

Test acceptance requirements:

There shall be no fundamental deterioration from the initial measurement.

Voltage withstand test

- 500 V for nominal battery voltages below 72 V (or 50 volts a.c.)
- 1000 V for nominal battery voltages from 72 V up to 125 V, (or from 50 to 90 V a.c.), and
- 1500 V for nominal battery voltages above 125 V and up to 315 V, (or from 90 to 225 V a.c.)

Test acceptance requirements:

Neither disruptive discharge nor flashover shall occur.

Test Procedure

According to EN 50155 clause 12.2.9

Test Results

Insulation measurement Test: 500Vdc

Test Item	Resistance (MΩ)	Result
output connector (Lan1)	1000	PASS
output connector (Lan2)	1000	PASS
metal enclosure	1000	PASS
Supplementary information :Connect adapter(3A-183WP12)for testing		
Test Item	**Resistance (MΩ)**	**Result**
output connector (Lan1)	1000	PASS
output connector (Lan2)	1000	PASS
metal enclosure	1000	PASS
Supplementary information :Connect POE-IJ-1748NDN for testing		

Voltage withstand test: 1500Vac

Test was performed after initial insulation measurement

Test Item	Test Time	Current (mA)	Result
output connector (Lan1)	1 min	0.499	PASS
output connector (Lan2)	1 min	0.497	PASS
metal enclosure	1 min	0.498	PASS
Supplementary information Connect adapter(3A-183WP12)for testing			
Test Item	**Test Time**	**Current (mA)**	**Result**
output connector (Lan1)	1 min	1.610	PASS
output connector (Lan2)	1 min	1.611	PASS
metal enclosure	1 min	1.611	PASS
Supplementary information :Connect POE-IJ-1748NDN for testing			

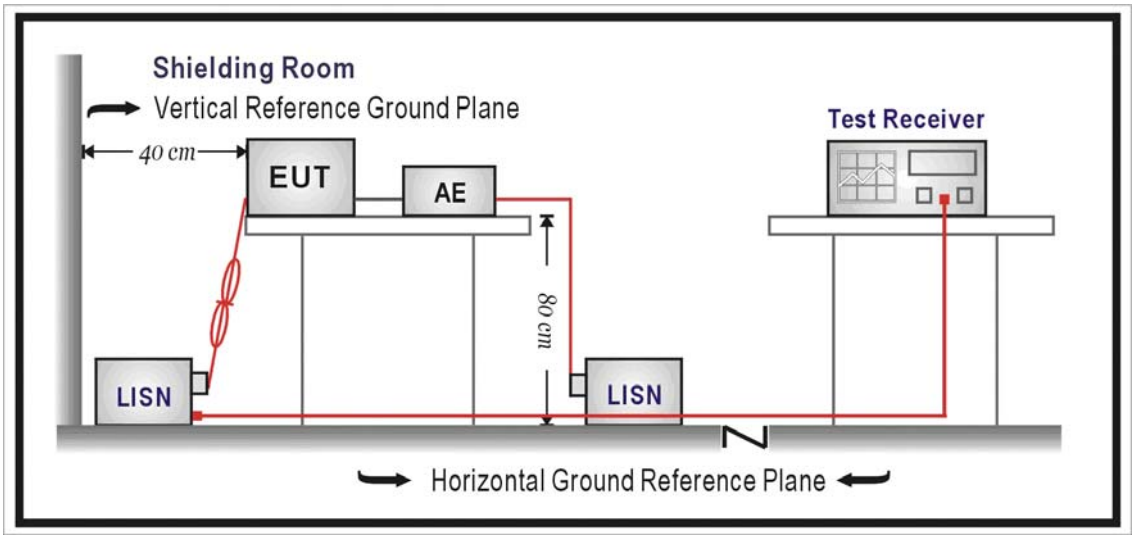
6. Electromagnetic Compatibility test

6.1. Radio frequency interference emission test(Conducted emission) Main Terminals

Test Specification

According to EN 50121-3-2 standard (Table 4 and Table 5).

Test Setup



EN 61000-6-4 Table 1 Limit

Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	79	66
0.50-5.0	73	60
5.0 - 30	73	60

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

Test Procedure

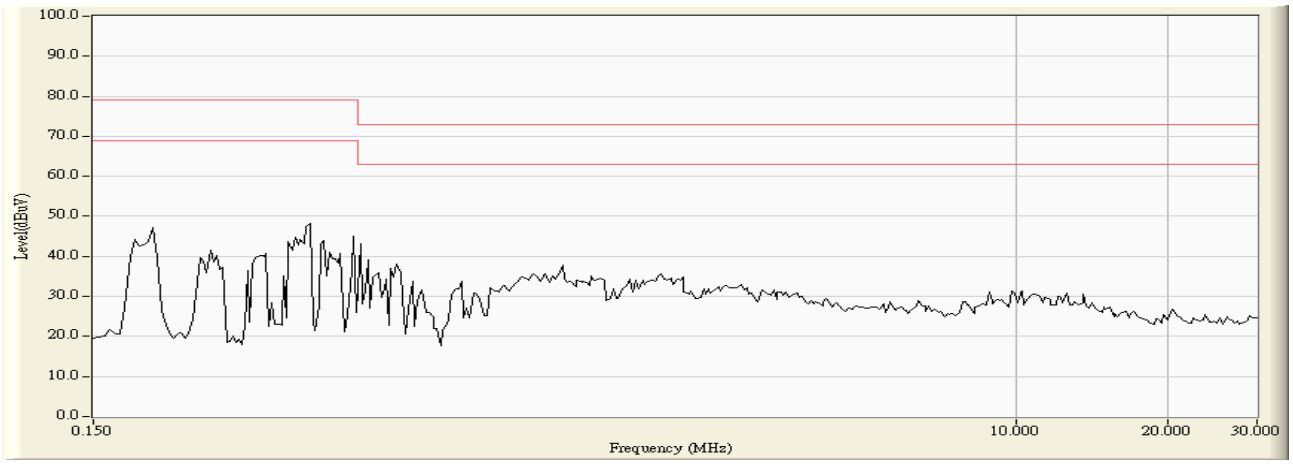
According to CISPR 16-2-1 Clause 7.4.1 and CISPR 16-1-2 Clause 4.3

Deviation from Test Standard

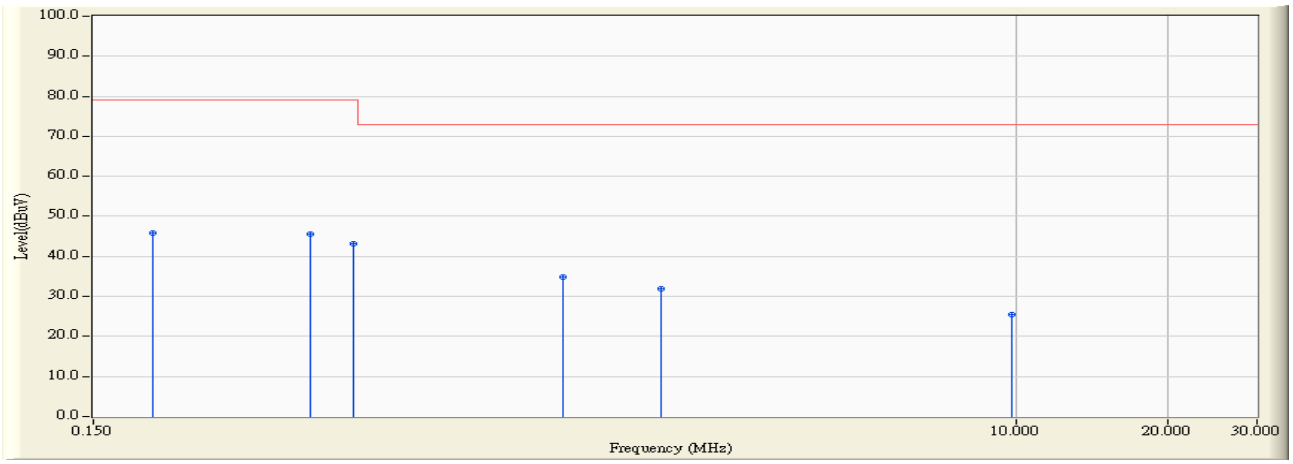
No deviation.

Test Result

Site : SR1	**Time : 2012/07/07 - 11:31**
Limit : CISPR_A_00M_QP	**Margin : 10**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1**



Site : SR1	**Time : 2012/07/07 - 11:32**
Limit : CISPR_A_00M_QP	**Margin : 0**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1**

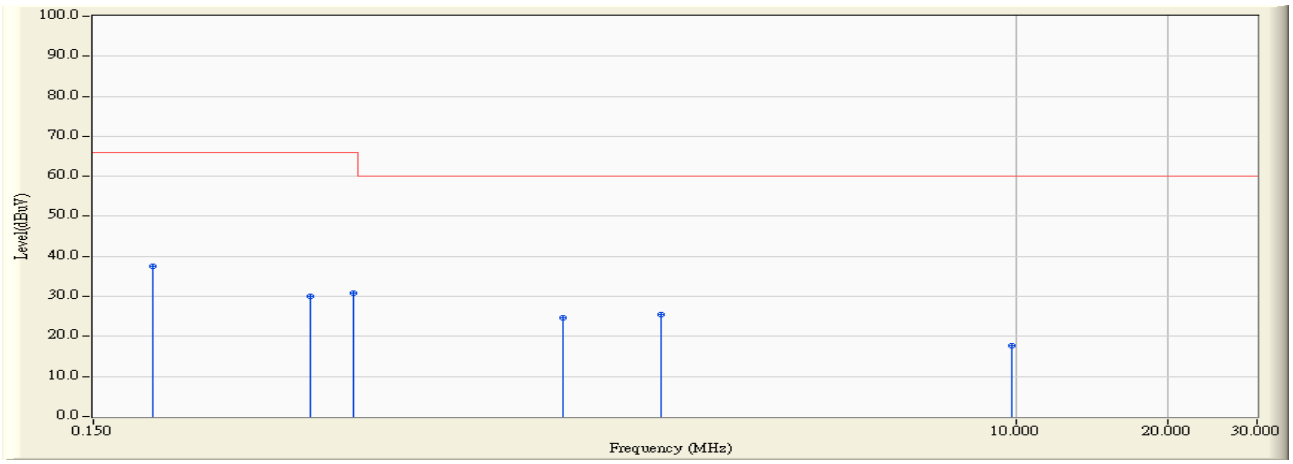


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.197	9.820	36.020	45.840	-33.160	79.000	QUASIPEAK
2		0.404	9.820	35.820	45.640	-33.360	79.000	QUASIPEAK
3		0.490	9.820	33.400	43.220	-35.780	79.000	QUASIPEAK
4		1.275	9.820	25.090	34.910	-38.090	73.000	QUASIPEAK
5		1.986	9.830	22.050	31.880	-41.120	73.000	QUASIPEAK
6		9.810	9.998	15.460	25.458	-47.542	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 : SR1	**Time : 2012/07/07 - 11:32**
Limit : CISPR_A_00M_AV	**Margin : 0**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : ENV_216_L1 - Line1**
Power : AC 230V/50Hz	**Note : Mode 1**

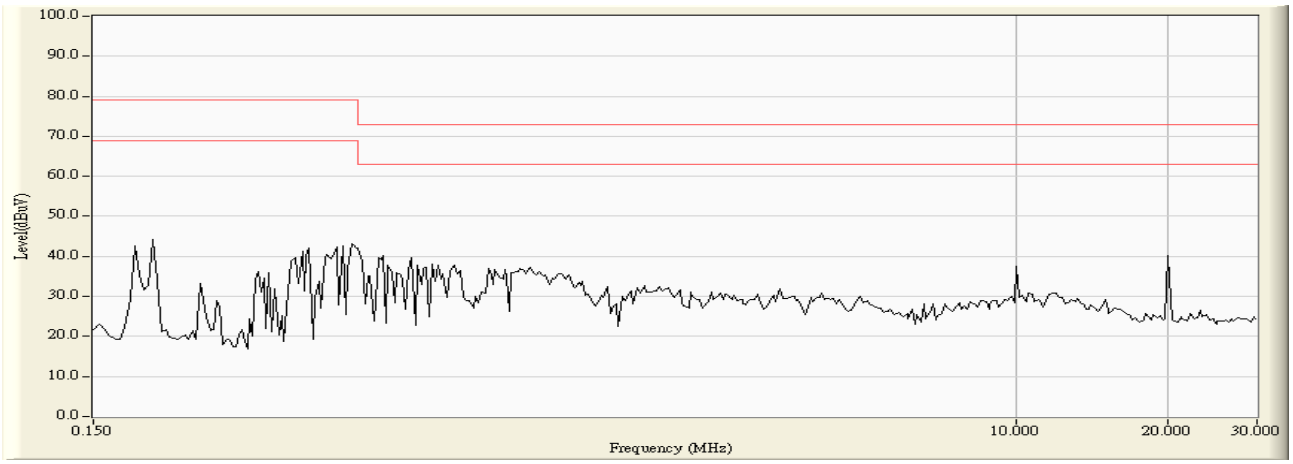


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.197	9.820	27.800	37.620	-28.380	66.000	AVERAGE
2		0.404	9.820	20.100	29.920	-36.080	66.000	AVERAGE
3		0.490	9.820	20.920	30.740	-35.260	66.000	AVERAGE
4		1.275	9.820	14.880	24.700	-35.300	60.000	AVERAGE
5		1.986	9.830	15.720	25.550	-34.450	60.000	AVERAGE
6		9.810	9.998	7.650	17.648	-42.352	60.000	AVERAGE

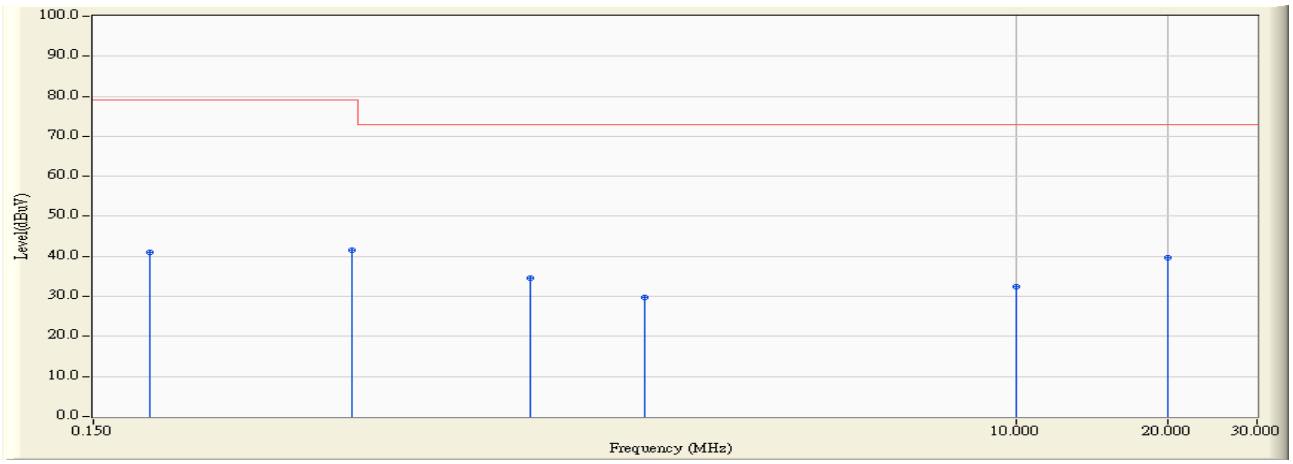
Note:

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 : SR1	**Time : 2012/07/07 - 11:33**
Limit : CISPR_A_00M_QP	**Margin : 10**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : ENV_216_N - Line2**
Power : AC 230V/50Hz	**Note : Mode 1**



Site : SR1	**Time : 2012/07/07 - 11:35**
Limit : CISPR_A_00M_QP	**Margin : 0**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : ENV_216_N - Line2**
Power : AC 230V/50Hz	**Note : Mode 1**

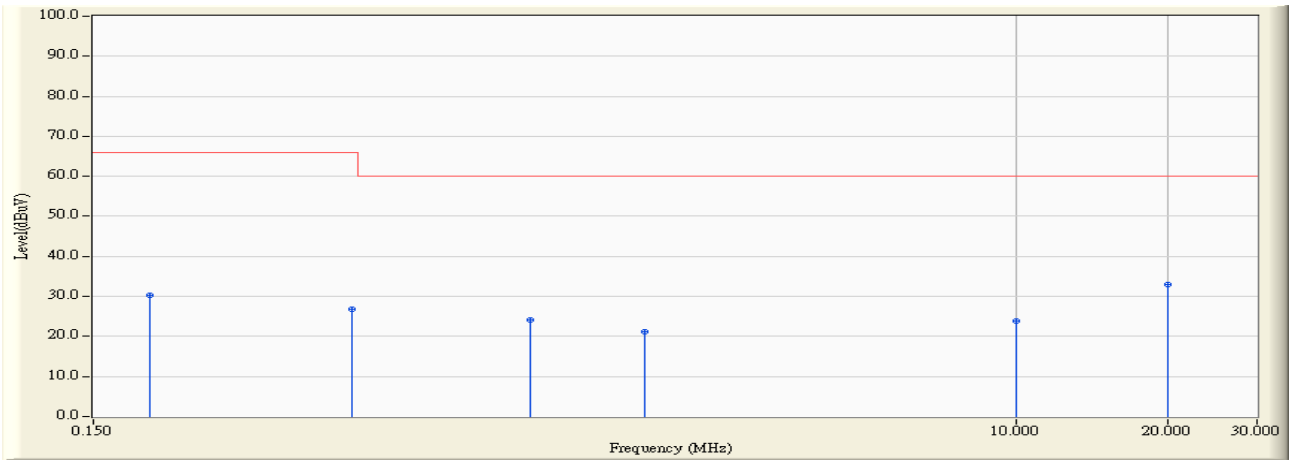


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.194	9.860	31.280	41.140	-37.860	79.000	QUASIPEAK
2		0.486	9.870	31.750	41.620	-37.380	79.000	QUASIPEAK
3		1.099	9.870	24.720	34.590	-38.410	73.000	QUASIPEAK
4		1.841	9.880	19.800	29.680	-43.320	73.000	QUASIPEAK
5		9.996	10.060	22.380	32.440	-40.560	73.000	QUASIPEAK
6	*	20.002	10.280	29.460	39.740	-33.260	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 : SR1	**Time : 2012/07/07 - 11:35**
Limit : CISPR_A_00M_AV	**Margin : 0**
EUT : Outdoor Supreme Fisheye Lens Dome 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		0.194	9.860	20.490	30.350	-35.650	66.000	AVERAGE
2		0.486	9.870	16.890	26.760	-39.240	66.000	AVERAGE
3		1.099	9.870	14.330	24.200	-35.800	60.000	AVERAGE
4		1.841	9.880	11.370	21.250	-38.750	60.000	AVERAGE
5		9.996	10.060	13.840	23.900	-36.100	60.000	AVERAGE
6	*	20.002	10.280	22.720	33.000	-27.000	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

Test Photograph

Test Mode : Mode 1: Adapter

Description : Front View of Conducted Test

Test Mode : Mode 1: Adapter

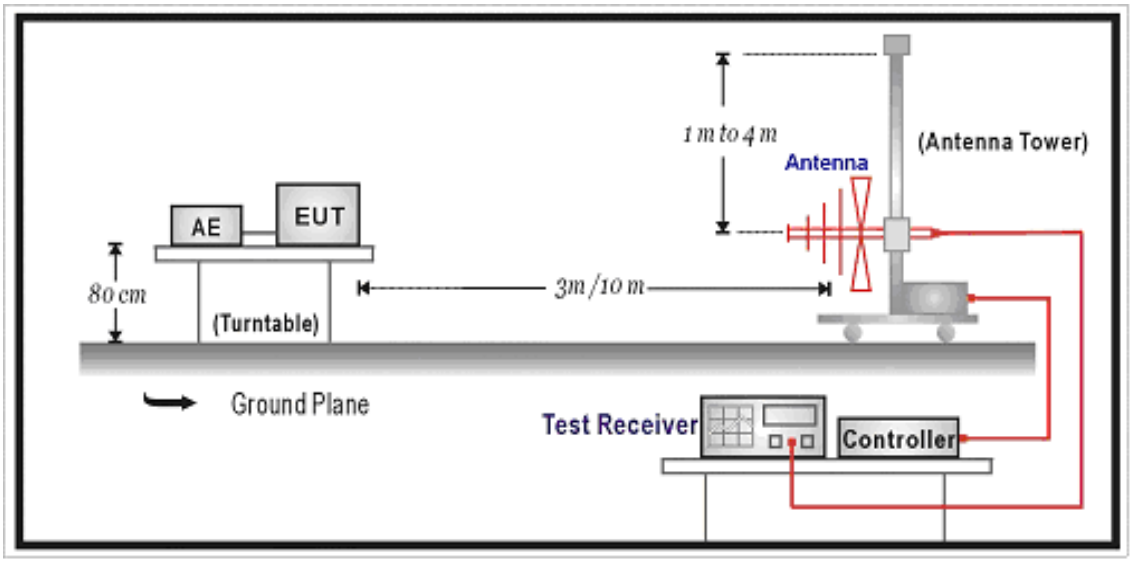
Description : Back View of Conducted Test

6.2. Radio frequency interference emission test (Radiated Emission)

Test Specification

According to EN 50121-3-2 standard (Table 6).

Test Setup



Limit

Limits		
Frequency MHz	Distance (m)	dBuV/m
30 – 230	10	40
230 – 1000	10	47

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.

Test Procedure

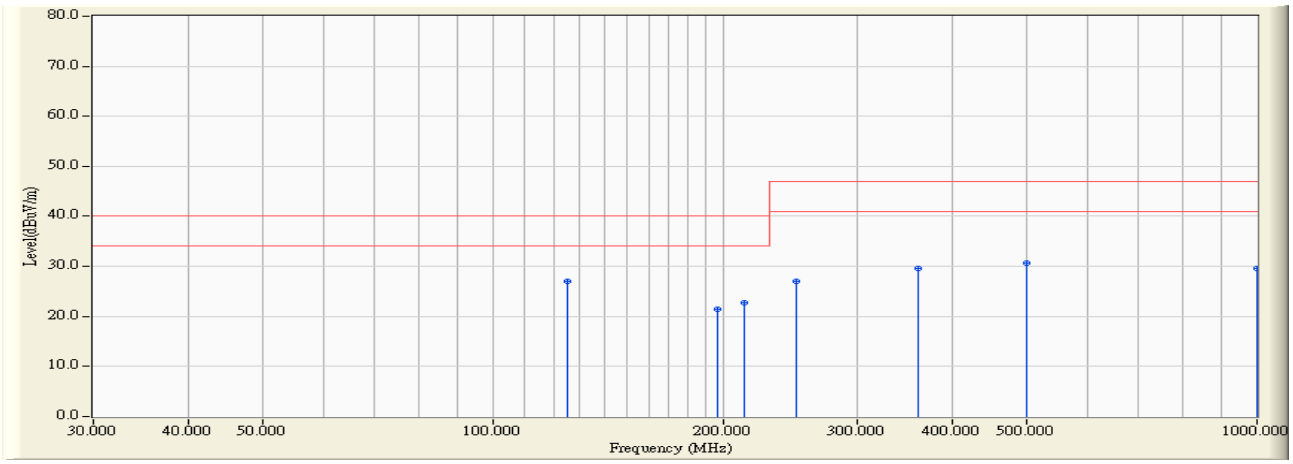
According to EN 55011 basic standard.

Deviation from Test Standard

No deviation.

Test Result

Site : Site1	**Time : 2012/07/08 - 12:46**
Limit : CISPR_A_10M_QP	**Margin : 6**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : Site1_CBL6112_10M_0726 - HORIZONTAL**
Power : AC 230V/50Hz	**Note : Mode 1**

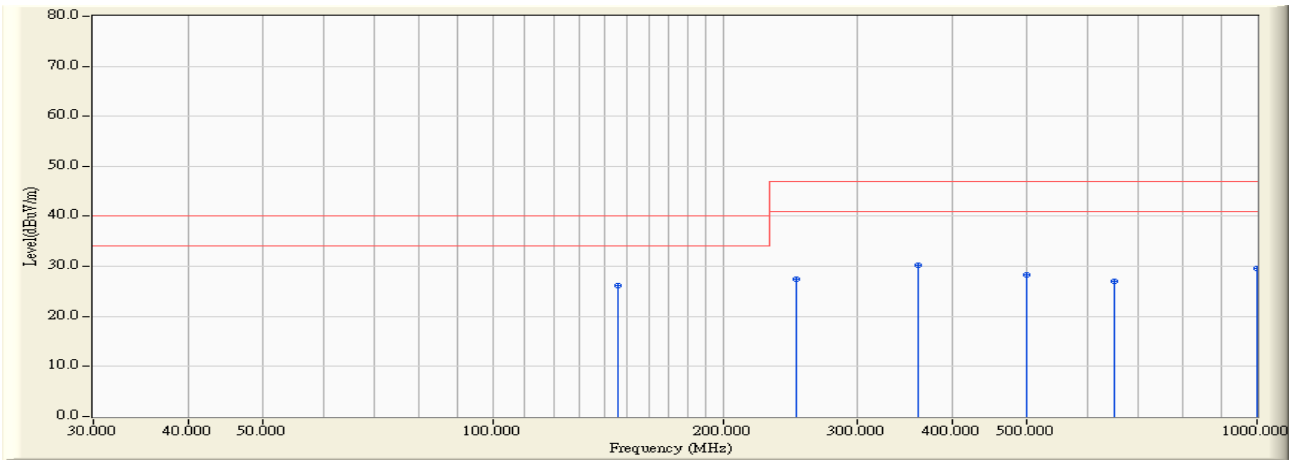


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	125.000	14.019	13.100	27.119	-12.881	40.000	QUASIPEAK
2		196.650	11.610	9.800	21.410	-18.590	40.000	QUASIPEAK
3		213.700	11.424	11.300	22.724	-17.276	40.000	QUASIPEAK
4		250.000	15.386	11.600	26.986	-20.014	47.000	QUASIPEAK
5		360.000	19.063	10.600	29.663	-17.337	47.000	QUASIPEAK
6		500.000	22.512	8.200	30.712	-16.288	47.000	QUASIPEAK
7		1000.000	29.008	0.600	29.608	-17.392	47.000	QUASIPEAK

Note:

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

Site : Site1	**Time : 2012/07/08 - 12:46**
Limit : CISPR_A_10M_QP	**Margin : 6**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : Site1_CBL6112_10M_0726 - VERTICAL**
Power : AC 230V/50Hz	**Note : Mode 1**

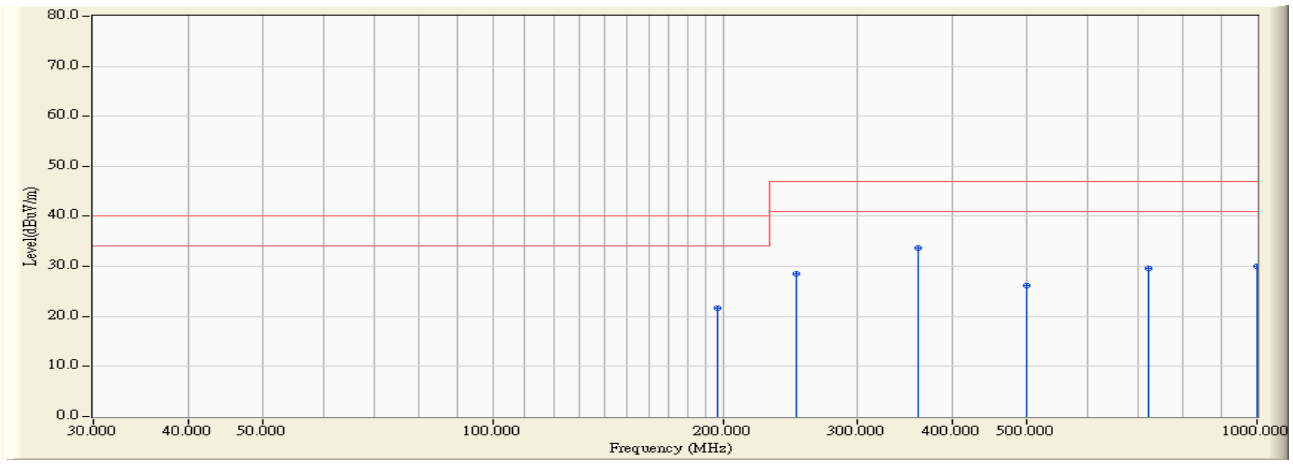


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	145.900	12.982	13.100	26.082	-13.918	40.000	QUASIPEAK
2		250.000	15.386	12.100	27.486	-19.514	47.000	QUASIPEAK
3		360.000	19.063	11.100	30.163	-16.837	47.000	QUASIPEAK
4		500.000	22.512	5.900	28.412	-18.588	47.000	QUASIPEAK
5		651.000	24.872	2.200	27.072	-19.928	47.000	QUASIPEAK
6		1000.000	29.008	0.600	29.608	-17.392	47.000	QUASIPEAK

Note:

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

Site : Site1	**Time : 2012/07/08 - 13:26**
Limit : CISPR_A_10M_QP	**Margin : 6**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : Site1_CBL6112_10M_0726 - HORIZONTAL**
Power : POE	**Note : Mode 2**

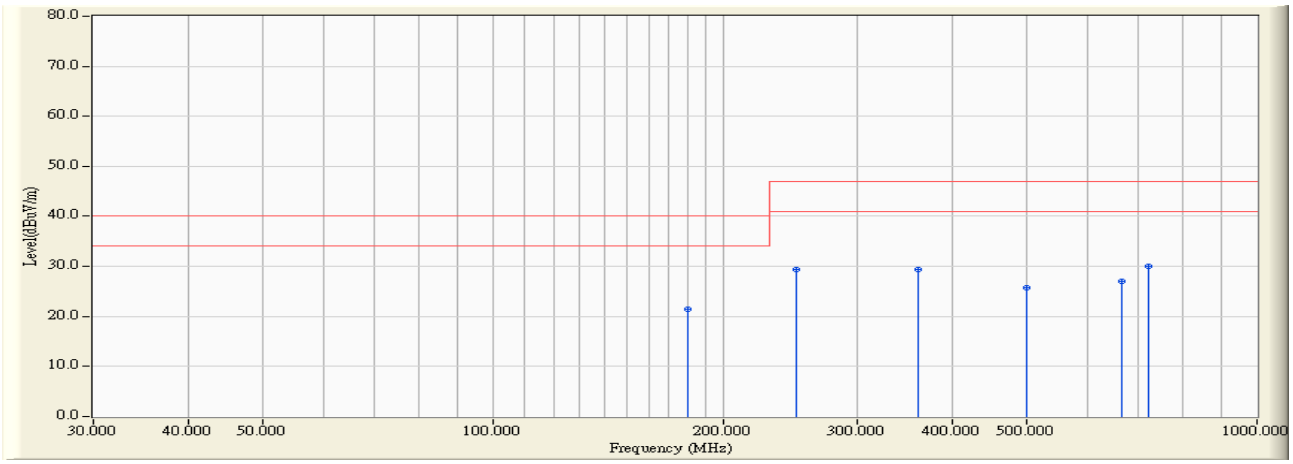


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		196.650	11.610	10.100	21.710	-18.290	40.000	QUASIPEAK
2		250.000	15.386	13.100	28.486	-18.514	47.000	QUASIPEAK
3	*	360.000	19.063	14.600	33.663	-13.337	47.000	QUASIPEAK
4		500.000	22.512	3.600	26.112	-20.888	47.000	QUASIPEAK
5		720.000	26.020	3.600	29.620	-17.380	47.000	QUASIPEAK
6		1000.000	29.008	1.100	30.108	-16.892	47.000	QUASIPEAK

Note:

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

Site : Site1	**Time : 2012/07/08 - 13:26**
Limit : CISPR_A_10M_QP	**Margin : 6**
EUT : Outdoor Supreme Fisheye Lens Dome Camera	**Probe : Site1_CBL6112_10M_0726 - VERTICAL**
Power : POE	**Note : Mode 2**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		180.000	11.219	10.200	21.419	-18.581	40.000	QUASIPEAK
2		250.000	15.386	14.100	29.486	-17.514	47.000	QUASIPEAK
3		360.000	19.063	10.300	29.363	-17.637	47.000	QUASIPEAK
4		500.000	22.512	3.300	25.812	-21.188	47.000	QUASIPEAK
5		664.520	24.921	2.200	27.121	-19.879	47.000	QUASIPEAK
6	*	720.000	26.020	3.900	29.920	-17.080	47.000	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

Test Photograph

Test Mode : Mode 1: Adapter

Description : Front View of Radiated Test

Test Mode : Mode 1: Adapter

Description : Back View of Radiated Test

Test Mode : Mode 2: POE

Description : Front View of Radiated Test

Test Mode : Mode 2: POE

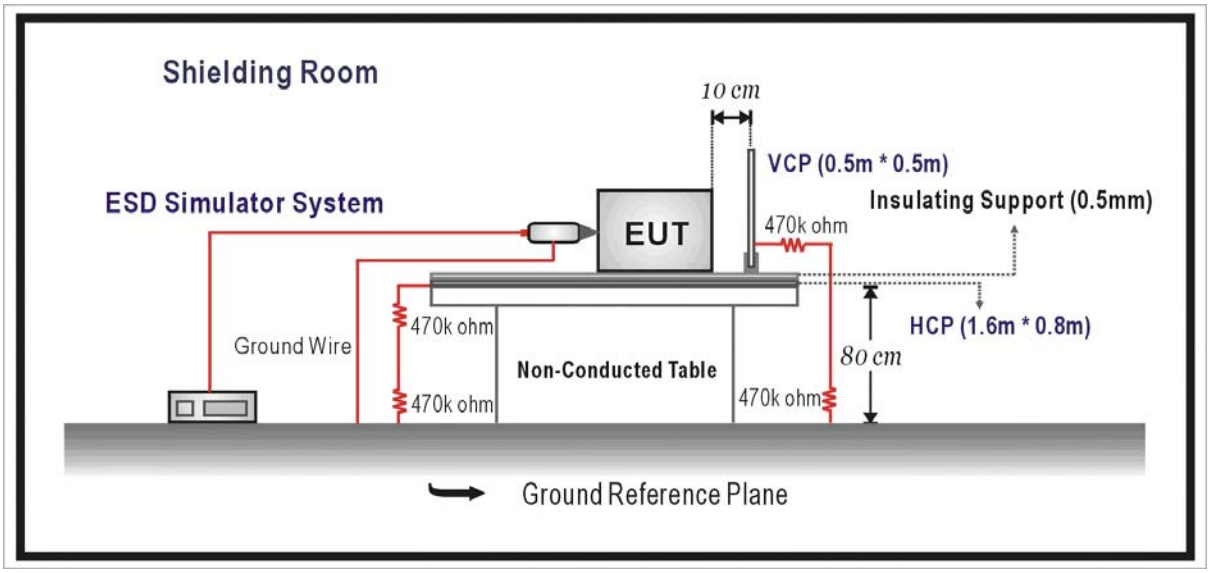
Description : Back View of Radiated Test

6.3. Electrostatic Discharge

Test Specification

According to EN 50121-3-2 standard (Table 9).

Test Setup



Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Enclosure Port				
	Electrostatic Discharge	kV(Charge Voltage)	±8 Air Discharge ±6 Contact Discharge	A

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.

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Electrostatic Discharge		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/19	Test Site	No.6 Shielded Room

Item	Amount of Discharge	Voltage	Required Criteria	Complied To Criteria (A,B,C)	Results
Air Discharge	10	+8kV	B	A	Pass
	10	-8kV	B	A	Pass
Contact Discharge	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass
Indirect Discharge (HCP)	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass
Indirect Discharge (VCP Front)	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass
Indirect Discharge (VCP Left)	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass
Indirect Discharge (VCP Back)	25	+6kV	B	A	Pass
	25	-6kV	B	A	Pass
Indirect Discharge (VCP Right)	25	+6kV	B	A	Pass
	25	-6kV	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	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Electrostatic Discharge		
Test Mode	Mode 2: POE		
Date of Test	2012/07/19	Test Site	No.6 Shielded Room

Item	Amount of Discharge	Voltage	Required Criteria	Complied To Criteria (A,B,C)	Results
Air Discharge	10	+8kV	B	A	Pass
	10	-8kV	B	A	Pass
Contact Discharge	25	+6kV	B	B	Pass
	25	-6kV	B	B	Pass
Indirect Discharge (HCP)	25	+6kV	B	B	Pass
	25	-6kV	B	B	Pass
Indirect Discharge (VCP Front)	25	+6kV	B	B	Pass
	25	-6kV	B	B	Pass
Indirect Discharge (VCP Left)	25	+6kV	B	B	Pass
	25	-6kV	B	B	Pass
Indirect Discharge (VCP Back)	25	+6kV	B	B	Pass
	25	-6kV	B	B	Pass
Indirect Discharge (VCP Right)	25	+6kV	B	B	Pass
	25	-6kV	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.

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.

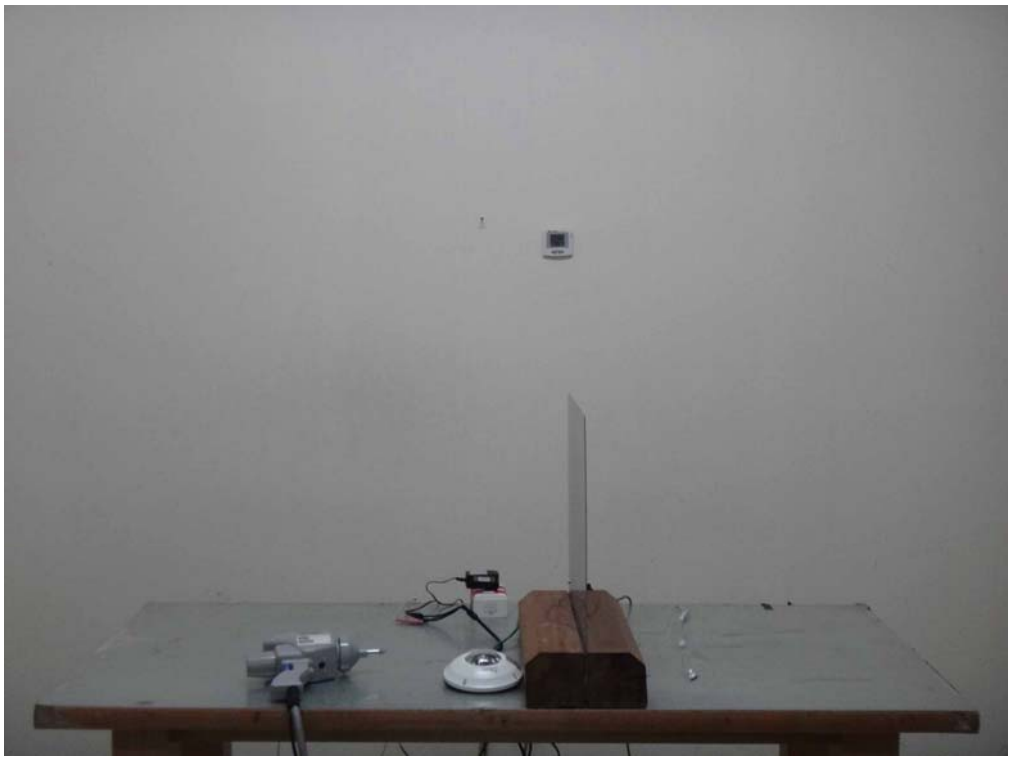
Remark:

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

Test Photograph

Test Mode : Mode 1: Adapter

Description : ESD Test Setup



Test Mode : Mode 2: POE

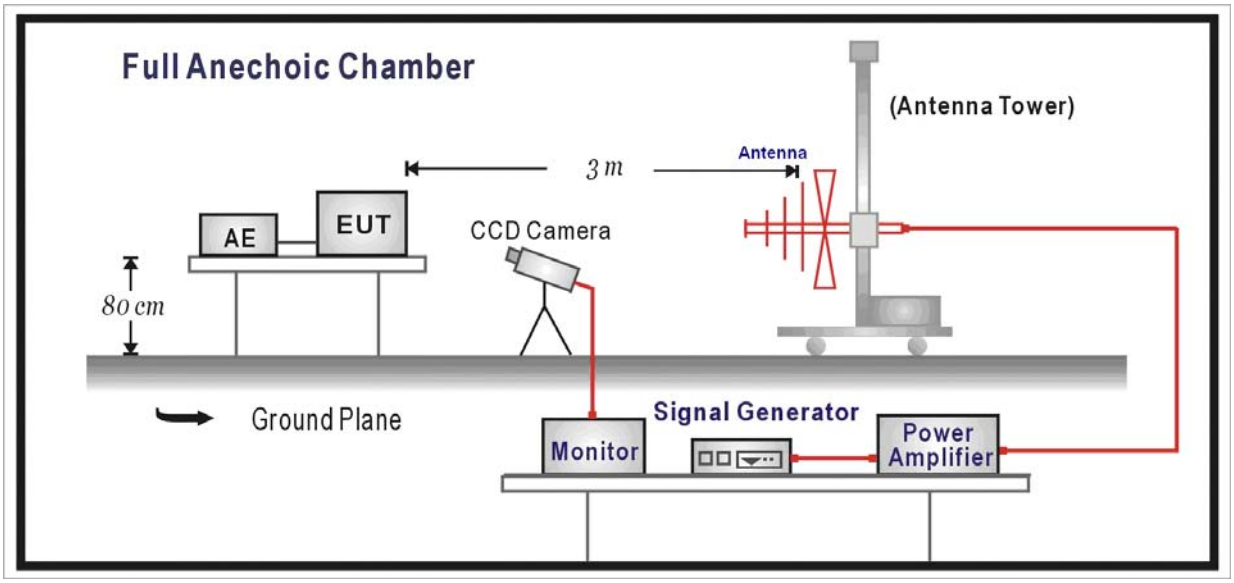
Description : ESD Test Setup

6.4. Radio frequency interference susceptibility test (Radiated Susceptibility)

Test Specification

According to EN 50121-3-2 standard (Table 9)

Test Setup



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 20 80	A
	Radio-Frequency Electromagnetic Field Amplitude Modulated	MHz V/m(Un-modulated, rms) % AM (1kHz)	1400-2100 10 80	A
	Radio-Frequency Electromagnetic Field Amplitude Modulated	MHz V/m(Un-modulated, rms) % AM (1kHz)	2100-2500 5 80	A

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	5,10,20V/m
2.	Radiated Signal	AM 80% Modulated with 1kHz
3.	Scanning Frequency	80MHz-1000MHz for 20V/m
		1400MHz-2100MHz for 10V/m
		2100MHz-2700MHz for 5V/m
4	Dwell Time	3 Seconds

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Radiated susceptibility		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/19	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	20	A	A	PASS
80-1000	FRONT	V	20	A	A	PASS
80-1000	BACK	H	20	A	A	PASS
80-1000	BACK	V	20	A	A	PASS
80-1000	RIGHT	H	20	A	A	PASS
80-1000	RIGHT	V	20	A	A	PASS
80-1000	LEFT	H	20	A	A	PASS
80-1000	LEFT	V	20	A	A	PASS
80-1000	UP	H	20	A	A	PASS
80-1000	UP	V	20	A	A	PASS
80-1000	DOWN	H	20	A	A	PASS
80-1000	DOWN	V	20	A	A	PASS
1400-2100	FRONT	H	10	A	A	PASS
1400-2100	FRONT	V	10	A	A	PASS
1400-2100	BACK	H	10	A	A	PASS
1400-2100	BACK	V	10	A	A	PASS
1400-2100	RIGHT	H	10	A	A	PASS
1400-2100	RIGHT	V	10	A	A	PASS
1400-2100	LEFT	H	10	A	A	PASS
1400-2100	LEFT	V	10	A	A	PASS
1400-2100	UP	H	10	A	A	PASS
1400-2100	UP	V	10	A	A	PASS
1400-2100	DOWN	H	10	A	A	PASS
1400-2100	DOWN	V	10	A	A	PASS

2100-2500	FRONT	H	5	A	A	PASS
2100-2500	FRONT	V	5	A	A	PASS
2100-2500	BACK	H	5	A	A	PASS
2100-2500	BACK	V	5	A	A	PASS
2100-2500	RIGHT	H	5	A	A	PASS
2100-2500	RIGHT	V	5	A	A	PASS
2100-2500	LEFT	H	5	A	A	PASS
2100-2500	LEFT	V	5	A	A	PASS
2100-2500	UP	H	5	A	A	PASS
2100-2500	UP	V	5	A	A	PASS
2100-2500	DOWN	H	5	A	A	PASS
2100-2500	DOWN	V	5	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	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Radiated susceptibility		
Test Mode	Mode 2: POE		
Date of Test	2012/07/19	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	20	A	A	PASS
80-1000	FRONT	V	20	A	A	PASS
80-1000	BACK	H	20	A	A	PASS
80-1000	BACK	V	20	A	A	PASS
80-1000	RIGHT	H	20	A	A	PASS
80-1000	RIGHT	V	20	A	A	PASS
80-1000	LEFT	H	20	A	A	PASS
80-1000	LEFT	V	20	A	A	PASS
80-1000	UP	H	20	A	A	PASS
80-1000	UP	V	20	A	A	PASS
80-1000	DOWN	H	20	A	A	PASS
80-1000	DOWN	V	20	A	A	PASS
1400-2100	FRONT	H	10	A	A	PASS
1400-2100	FRONT	V	10	A	A	PASS
1400-2100	BACK	H	10	A	A	PASS
1400-2100	BACK	V	10	A	A	PASS
1400-2100	RIGHT	H	10	A	A	PASS
1400-2100	RIGHT	V	10	A	A	PASS
1400-2100	LEFT	H	10	A	A	PASS
1400-2100	LEFT	V	10	A	A	PASS
1400-2100	UP	H	10	A	A	PASS
1400-2100	UP	V	10	A	A	PASS
1400-2100	DOWN	H	10	A	A	PASS
1400-2100	DOWN	V	10	A	A	PASS

2100-2500	FRONT	H	5	A	A	PASS
2100-2500	FRONT	V	5	A	A	PASS
2100-2500	BACK	H	5	A	A	PASS
2100-2500	BACK	V	5	A	A	PASS
2100-2500	RIGHT	H	5	A	A	PASS
2100-2500	RIGHT	V	5	A	A	PASS
2100-2500	LEFT	H	5	A	A	PASS
2100-2500	LEFT	V	5	A	A	PASS
2100-2500	UP	H	5	A	A	PASS
2100-2500	UP	V	5	A	A	PASS
2100-2500	DOWN	H	5	A	A	PASS
2100-2500	DOWN	V	5	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.

Test Photograph

Test Mode : Mode 1: Adapter

Description : Radiated Susceptibility Test Setup

Test Mode : Mode 2: POE

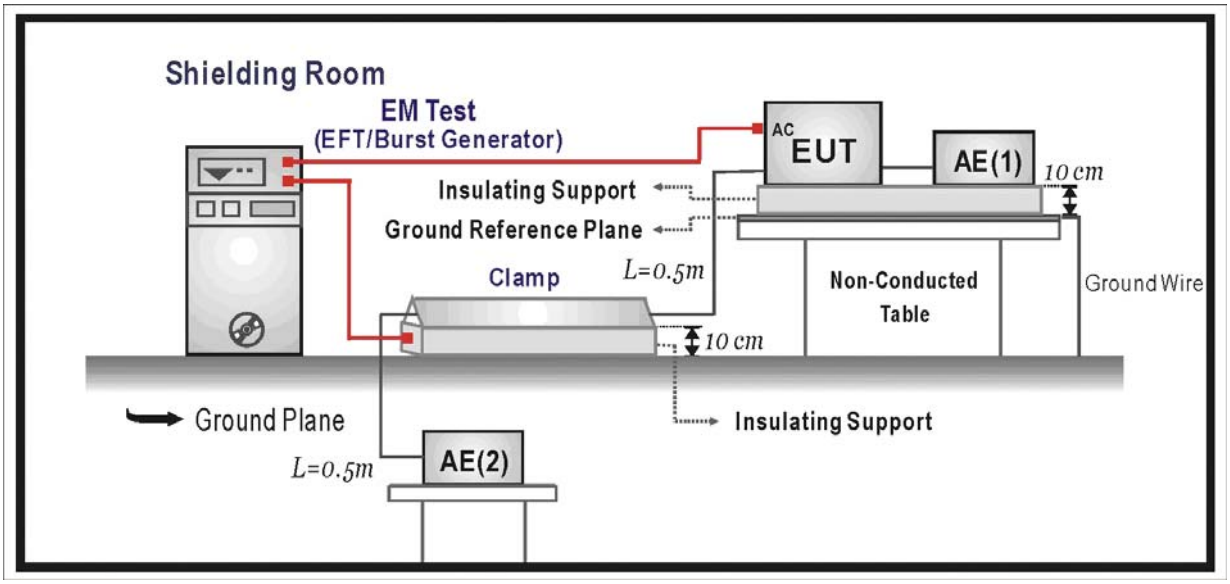
Description : Radiated Susceptibility Test Setup

6.5. Transient Burst

Test Specification

According to EN 50121-3-2 standard (Table 7 and Table 8).

Test Setup



Limit

Item	Environmental Phenomena	Units	Test Specificatio	Performance Criteria
Signal and Telecommunication Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	±2 1.2/50 5	B
Input DC Power Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	±2 1.2/50 5	B
Input AC Power Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	±2 1.2/50 5	B

Test Procedure

According to EN 61000-4-4 basic standard Clause 8.

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Transient Burst		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/17	Test Site	No.3 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N	±	2 kV	60	Direct	A	A	PASS
LAN	±	2 kV	60	Clamp	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 _____ kV of Line _____.
☒ No false alarms or other malfunctions were observed during or after the test.

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Transient Burst		
Test Mode	Mode 2: POE		
Date of Test	2012/07/17	Test Site	No.3 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
LAN	±	2 kV	60	Clamp	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 _____ kV of Line _____.
☒ No false alarms or other malfunctions were observed during or after the test.

Test Photograph

Test Mode : Mode 1: Adapter

Description : Transient Burst Test Setup

Test Mode : Mode 1: Adapter

Description : Transient Burst Test Setup-Clamp

Test Mode : Mode 2: POE

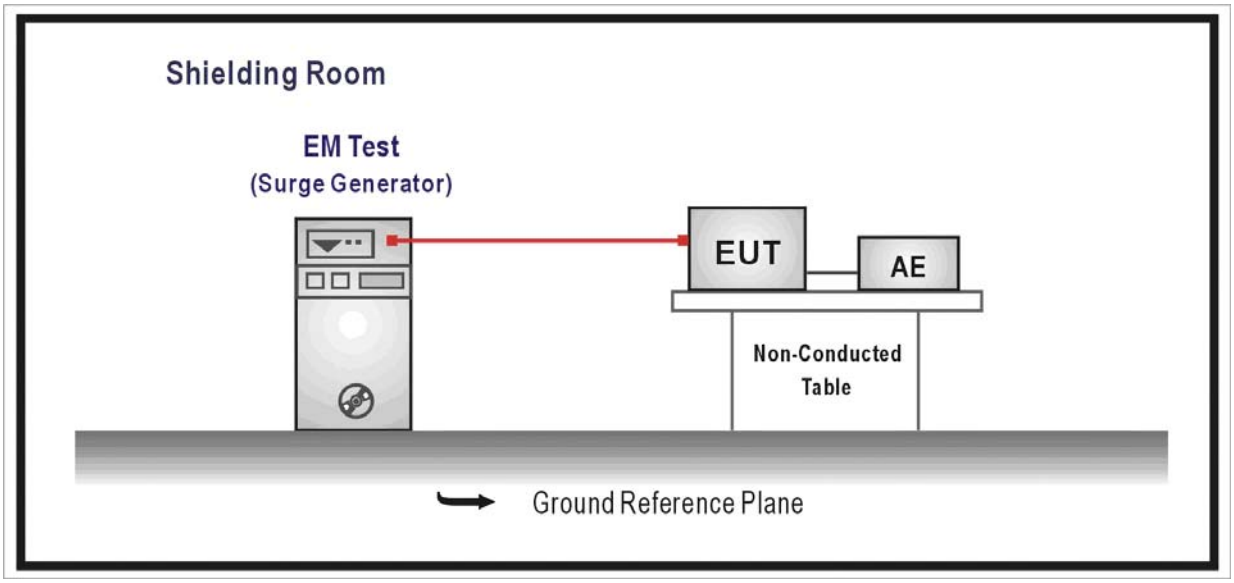
Description : Transient Burst Test Setup-Clamp

6.6. Surges

Test Specification

According to EN 50121-3-2 standard (Table 7).

Test Setup



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 Output Impedance Ω Coupling Capacitance μF	1.2/50 (8/20) ± 1 42 0.5	B
Input DC Power Ports				
	Surges Line to Ground	Tr/Th us kV Output Impedance Ω Coupling Capacitance μF	1.2/50 (8/20) ± 1 42 0.5	B
Input AC Power Ports				
	Surges Line to Line Line to Ground	Tr/Th us kV kV Output Impedance Ω Coupling Capacitance μF	1.2/50 (8/20) ± 1 ± 2 42 0.5	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.

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.

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Surge		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/18	Test Site	No.3 Shielded Room

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

Note:

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

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

☐ Meet criteria B : Operate as intended after the test

☐ Meet criteria C : Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

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

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Surge		
Test Mode	Mode 2: POE		
Date of Test	2012/07/18	Test Site	No.3 Shielded Room

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

Note:

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

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

☐ Meet criteria B : Operate as intended after the test

☐ Meet criteria C : Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

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

Test Photograph

Test Mode : Mode 1: Adapter

Description : SURGE Test Setup

Test Mode : Mode 2: POE

Description : SURGE Test Setup

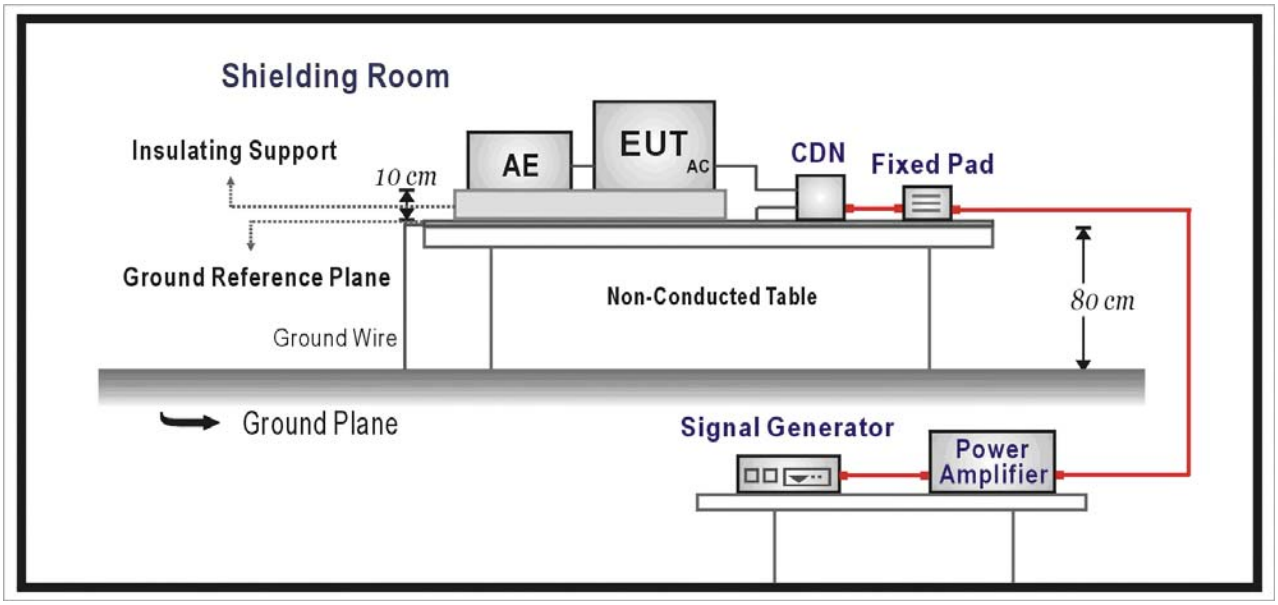
6.7. Radio frequency interference susceptibility test (Conducted susceptibility)

Test Specification

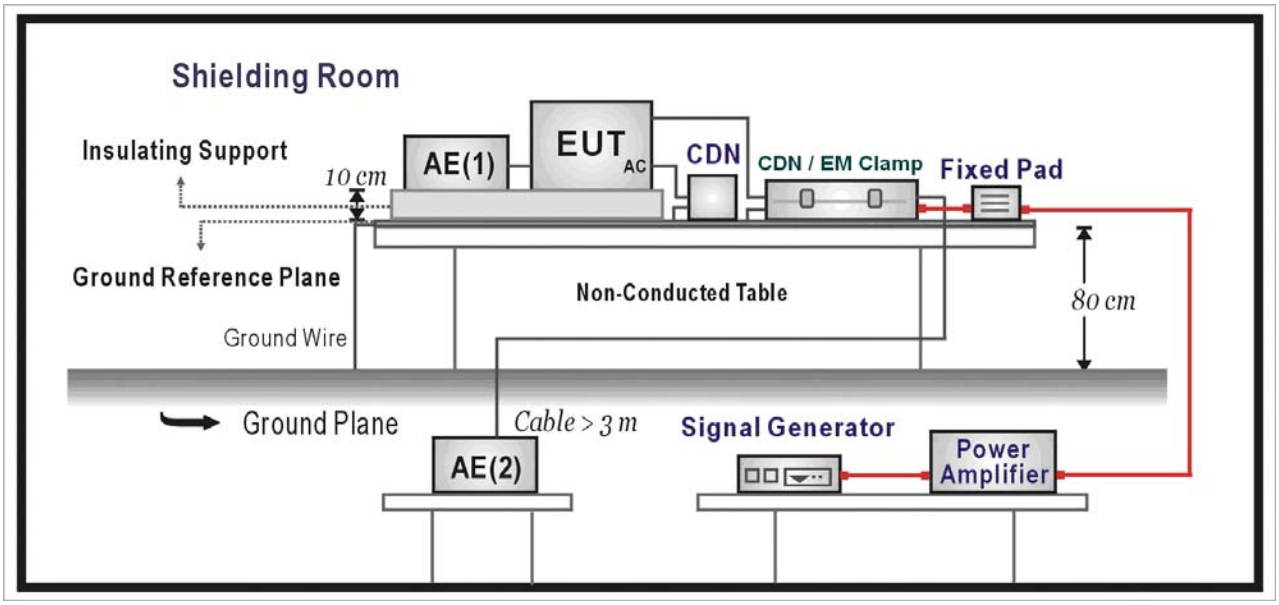
According to EN 50121-3-2 standard (Table 7 and Table 8)..

Test Setup

CDN Test Mode



EM Clamp Test Mode



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 10 80	A
Input DC Power Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 10 80	A
Input AC Power Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 10 80	A

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	140dBuV(10V) Level 3
2.	Radiated Signal	AM 80% Modulated with 1kHz
3.	Scanning Frequency	0.15MHz – 80MHz
4	Dwell Time	3 Seconds

Deviation from Test Standard

No deviation.

Test Result

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Conducted susceptibility		
Test Mode	Mode 1: Adapter		
Date of Test	2012/07/18	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	140 (10V)	CDN	AC IN	A	A	PASS
0.15~80	140 (10V)	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.

Product	Outdoor Supreme Fisheye Lens Dome Camera		
Test Item	Conducted susceptibility		
Test Mode	Mode 2: POE		
Date of Test	2012/07/18	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	140 (10V)	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.

Test Photograph

Test Mode : Mode 1: Adapter

Description : Conducted Susceptibility Test Setup

Test Mode : Mode 1: Adapter

Description : Conducted Susceptibility Test Setup-Clamp

Test Mode : Mode 2: POE

Description : Conducted Susceptibility Test Setup-Clamp

7. Attachment

➢ EUT Photograph

(1) EUT Photo

(2) EUT Photo

(3) EUT Photo

(4) EUT Photo

(5) EUT Photo

(6) EUT Photo

8. Environmental Tests

- **Appendix A**

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-01

TEST REPORT

Case No.	VS010808-01		
Applicant	VIVOTEK INC.		
Specimen	FE8172V		
Quantity	1 PCS		
Date Of Test	AUG., 03 ~ 06,2012		
Random Vibration Testing Condition **Functional Test**			
Waveform	Random Wave		
Frequency Range	5 ~ 150Hz		
Axial	Vertical (Z Axis)	Transverse (Y Axis)	Longitudinal (X Axis)
PSD	$0.0310(m/s^2)^2/Hz$ (5~20Hz)	$0.0062(m/s^2)^2/Hz$ (5~20Hz)	$0.0151(m/s^2)^2/Hz$ (5~20Hz)
	-6dB /octave (20~150Hz)	-6dB /octave (20~150Hz)	-6dB /octave (20~150Hz)
Acceleration	1.00 m/s^2 RMS	0.45 m/s^2 RMS	0.70 m/s^2 RMS
Vibration Axial	X、Y、Z Axis		
Direction	FIG.1.1 ~ 1.4：X Axis direction mounted. FIG.2：X Axis test screen. FIG.3.1 ~ 3.4：Y Axis direction mounted. FIG.4：Y Axis test screen. FIG.5.1 ~ 5.4：Z Axis direction mounted. FIG.6：Z Axis test screen.		
Test Duration	10 minutes for each Axis, 30 minutes in total.		
Test Results	Appearance Check：OK.		
	Function Check：OK.		

Approved By	Test Prepared By	Report Prepared By
W. S.WANG	JACK CHUANG	L. Y. LEE

VIBRATION SOURCE TECHNOLOGY CO, LTD.
TEL:(02)2688-0999
FAX:(02)2688-0977
TAIPEI HSIEN
NO.29, LANE 65, SANJYUN ST., SHULIN CITY

VIBRATION SOURCE TECHNOLOGY CO, LTD.
TEL:(02)2688-0999

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-01

TEST REPORT

Note：

1. Standard Vibration meter and Accelerometer (monitor)：

	Vibration meter	Accelerometer
Brand	SHINKEN	SHINKEN
Model	V-1107	V11-101S
Serial No.	SG-5021	1371

2. Calibration Date：JAN., 05 ~ 06, 2012。
3. Calibration Report SER. No.：V120001A
4. Traceability：NATIONAL MEASUREMENT LABORATORY R.O.C.
5. Test Equipment ：
   Manufacturer：VIBRATION SOURCE TECHNOLOGY CO., LTD.
   Equipment Name：ELECTRODYNAMIC TYPE VIBRATION TESTER
   MODEL / SERIAL NO.： VS-600VH / 6693。

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-01

TEST REPORT

FIG.1.1：X Axis direction mounted.

FIG.1.2：X Axis direction mounted.

FIG.1.3：X Axis direction mounted.

FIG.1.4：X Axis direction mounted.

NO.29, LANE 65, SANJYUN ST., SHULIN CITY
VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-01

TEST REPORT

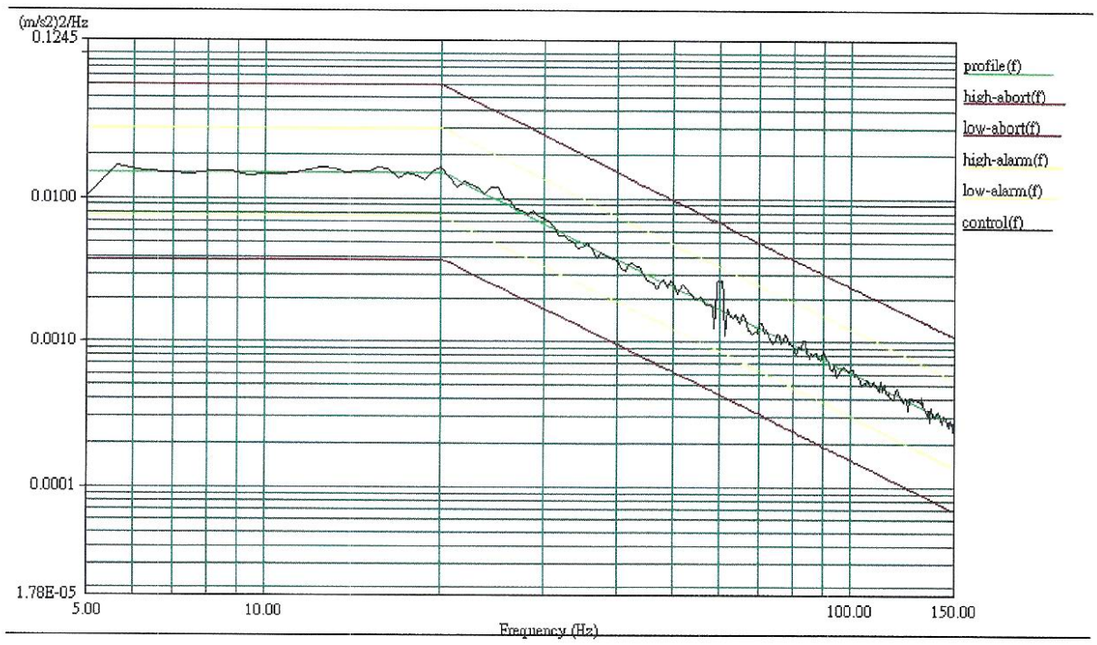
FIG.2：X Axis test screen.

Level: 100 %

Control RMS:0.709411 m/s^2 Full Level Elapsed Time:00:10:00 Lines:400 Frame Time:1.600000 Seconds

Demand RMS: 0.702269 m/s^2 Remaining Time: 00:00:00 DOF: 154 dF: 0.625000 Hz

Data saved at 04:03:40 PM, Friday, August 03, 2012 Report created at 04:03:41 PM, Friday, August 3, 2012



VIBRATION SOURCE TECHNOLOGY CO,LTD
TEL:(02)2688-0999
FAX:(02)2688-0977
TAIPEI HSIEN

NO.29, LANE 65, SANJYUN ST, SHULIN CITY
VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-01

TEST REPORT

FIG.3.1：Y Axis direction mounted.

FIG.3.2：Y Axis direction mounted.

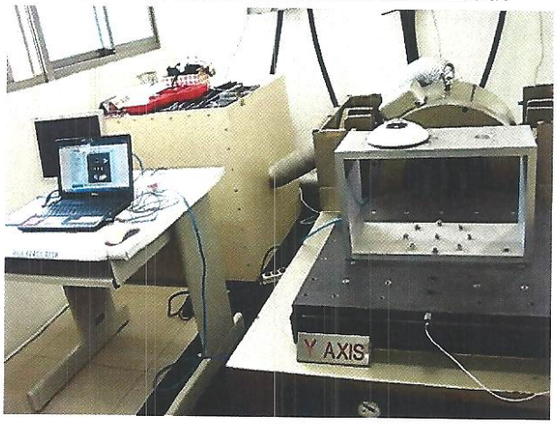
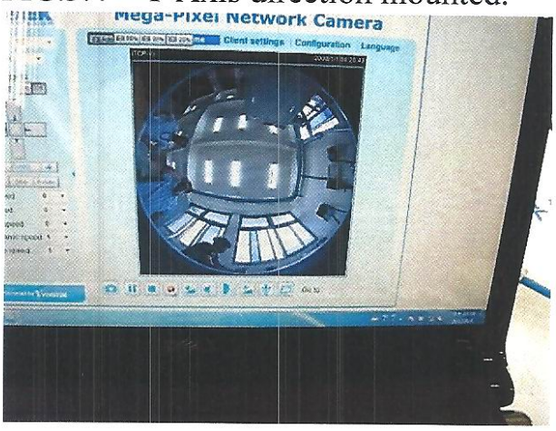


FIG.3.3：Y Axis direction mounted.

FIG.3.4：Y Axis direction mounted.



VIBRATION SOURCE TECHNOLOGY CO,LTD
TEL:(02)2688-0999
FAX:(02)2688-0977

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-01

TEST REPORT

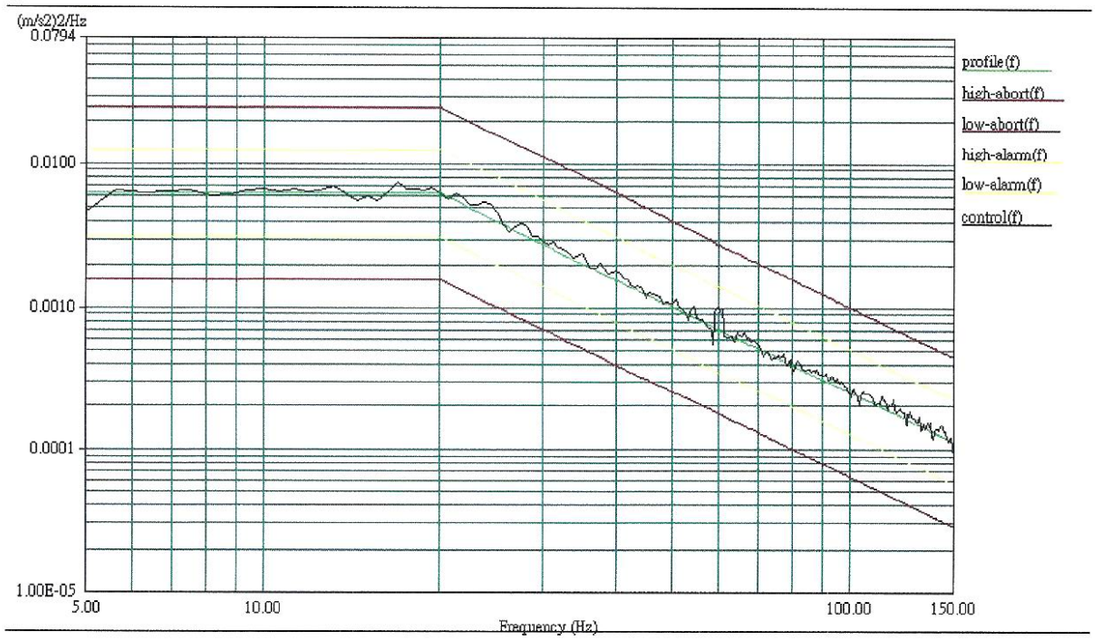
FIG.4：Y Axis test screen.

Level: 100 %

Control RMS:0.474975 m/s^2 Full Level Elapsed Time:00:10:00 Lines:400 Frame Time:1.600000 Seconds

Demand RMS: 0.451459 m/s^2 Remaining Time: 00:00:00 DOF: 154 dF: 0.625000 Hz

Data saved at 03:24:56 PM, Friday, August 03, 2012 Report created at 03:25:01 PM, Friday, August 3, 2012



VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-01

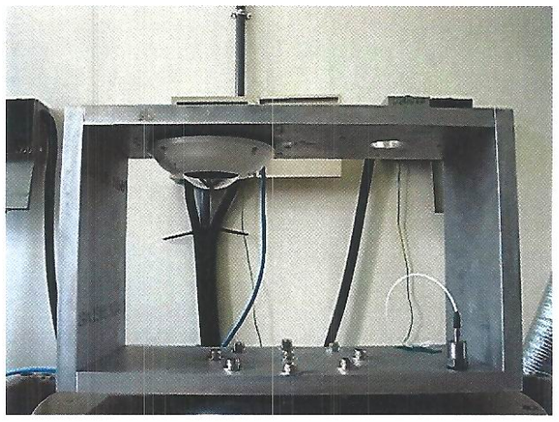
TEST REPORT

FIG.5.1：Z Axis direction mounted.

FIG.5.2：Z Axis direction mounted.

FIG.5.3：Z Axis direction mounted.

FIG.5.4：Z Axis direction mounted.



VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-01

TEST REPORT

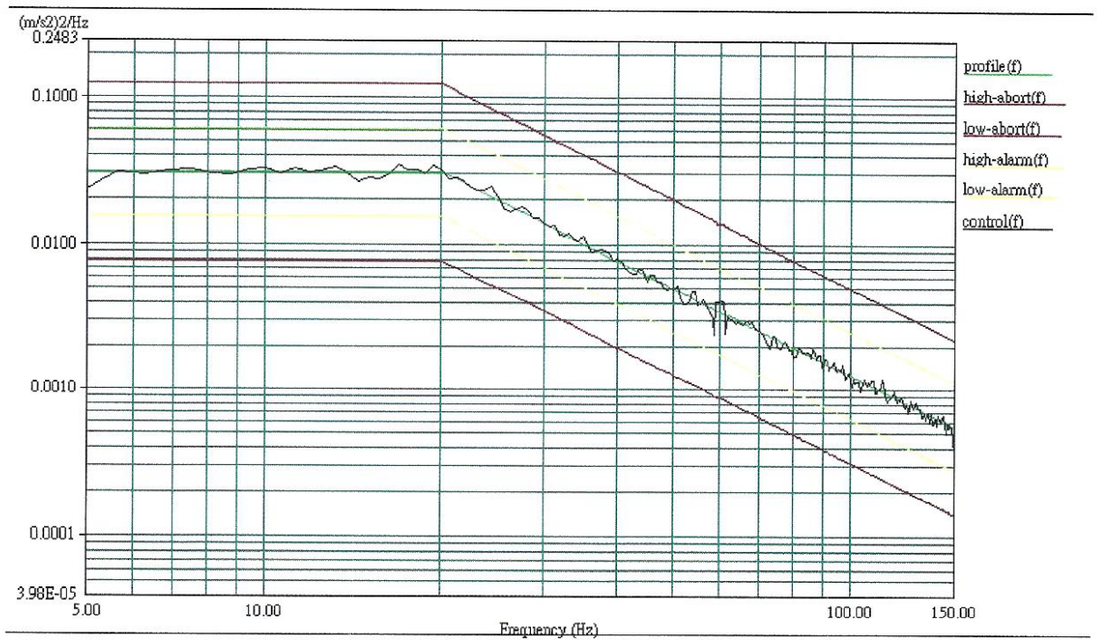
FIG.6：Z Axis test screen.

Level: 100 %

Control RMS:1.024653 m/s^2 Full Level Elapsed Time:00:10:00 Lines:400 Frame Time:1.600000 Seconds

Demand RMS: 1.003242 m/s^2 Remaining Time: 00:00:00 DOF: 154 dF: 0.625000 Hz

Data saved at 11:52:56 AM, Monday, August 06, 2012 Report created at 11:52:57 AM, Monday, August 6, 2012



VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-02

TEST REPORT

Case No.	VS010808-02		
Applicant	VIVOTEK INC.		
Specimen	FE8172V		
Quantity	1 PCS		
Date Of Test	AUG.,06 ~ 07,2012		
Random Vibration Testing Condition **Long Life Test**			
Waveform	Random Wave		
Frequency Range	5 ~ 150Hz		
Axial	Vertical (Z Axis)	Transverse (Y Axis)	Longitudinal (X Axis)
PSD	$1.931(m/s^2)^2/Hz$ (5~20Hz)	$0.379(m/s^2)^2/Hz$ (5~20Hz)	$0.936(m/s^2)^2/Hz$ (5~20Hz)
	-6dB /octave (20~150Hz)	-6dB /octave (20~150Hz)	-6dB /octave (20~150Hz)
Acceleration	7.9 m/s^2 RMS	3.5 m/s^2 RMS	5.5 m/s^2 RMS
Vibration Axial	X、Y、Z Axis		
Direction	FIG.1.1 ~ 1.6：X Axis direction mounted. FIG.2：X Axis test screen. FIG.3.1 ~ 3.6：Y Axis direction mounted. FIG.4：Y Axis test screen. FIG.5.1 ~ 5.6：Z Axis direction mounted. FIG.6：Z Axis test screen.		
Test Duration	5 hour for each Axis, 15 hours in total.		
Test Results	Appearance Check：OK.		
	Function Check：OK.		

Approved By	Test Prepared By	Report Prepared By
W. S.WANG	JACK CHUANG	L. Y. LEE
W.S.Wang 8/8	Jack. Chuang	L.Y.Lee 2012/8/8

VIBRATION SOURCE TECHNOLOGY CO,LTD TEL:(02)2688-0999 FAX:(02)2688-0977 TAIPEI HSIEN NO.29, LANE 65, SANJYUN ST., SHULIN CITY

VIBRATION SOURCE TECHNOLOGY CO,LTD TEL:(02)2688-0999 FAX:(02)2688-0977

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-02

TEST REPORT

Note：

1. Standard Vibration meter and Accelerometer (monitor)：

	Vibration meter	Accelerometer
Brand	SHINKEN	SHINKEN
Model	V-1107	V11-101S
Serial No.	SG-5021	1371

2. Calibration Date：JAN., 05 ~ 06, 2012。
3. Calibration Report SER. No.：V120001A
4. Traceability：NATIONAL MEASUREMENT LABORATORY R.O.C.
5. Test Equipment ：

Manufacturer：VIBRATION SOURCE TECHNOLOGY CO., LTD.
Equipment Name：ELECTRODYNAMIC TYPE VIBRATION TESTER
MODEL / SERIAL NO.： VS-600VH / 6693。

VIBRATION SOURCE TECHNOLOGY CO, LTD
TEL:(02)2688-0999
FAX:(02)2688-0977
TAIPEI HSIEN

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-02

TEST REPORT

FIG.1.1：X Axis direction mounted.

FIG.1.2：X Axis direction mounted.

FIG.1.3：X Axis direction mounted.

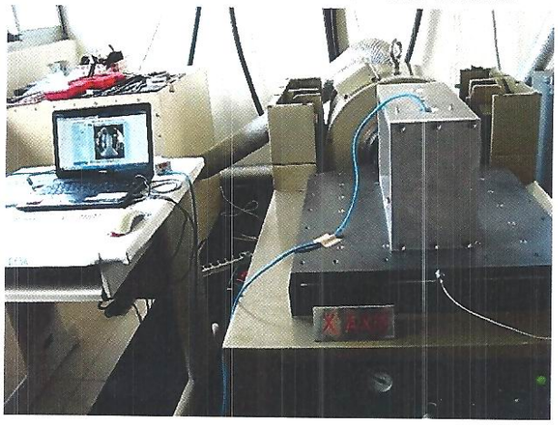


FIG.1.4：X Axis direction mounted.

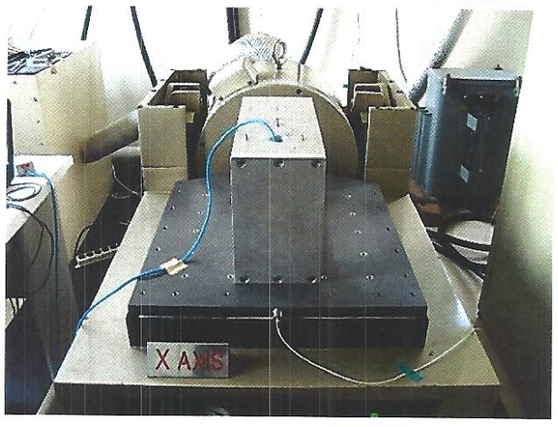


FIG.1.5：X Axis direction mounted.

FIG.1.6：X Axis direction mounted.

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-02

TEST REPORT

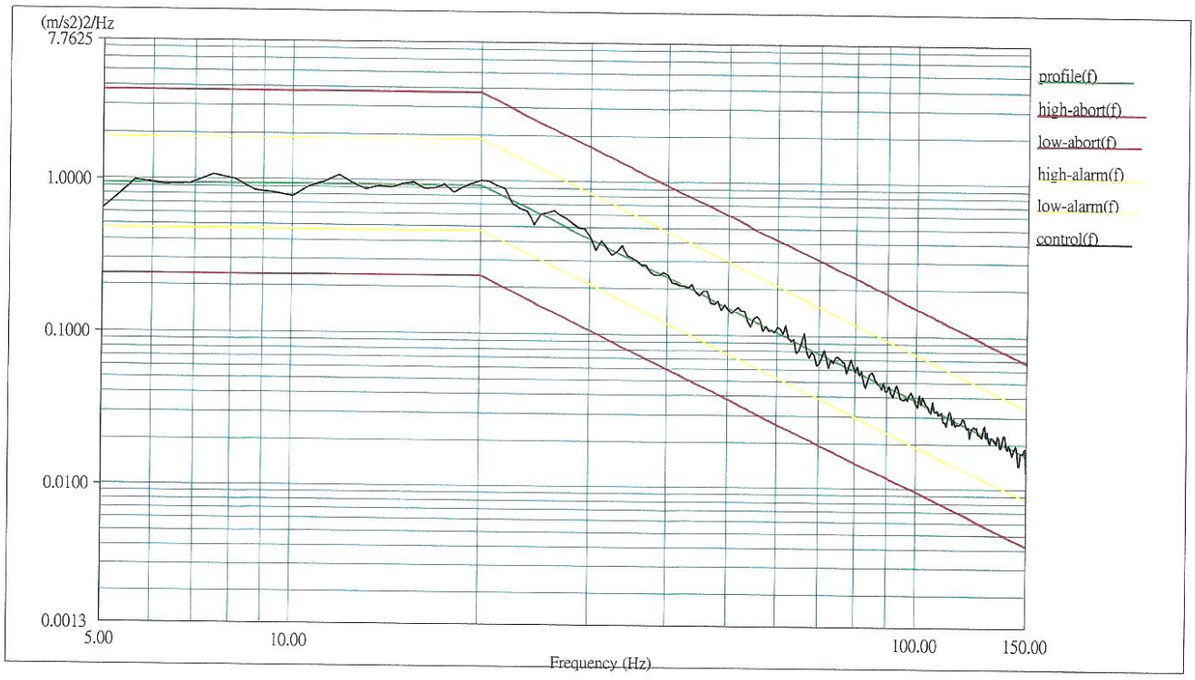
FIG.2：X Axis test screen.

Level: 100 %

Control RMS:5.553996 m/s^2 Full Level Elapsed Time:05:00:00 Lines:400 Frame Time:1.600000 Seconds

Demand RMS:5.517827 m/s^2 Remaining Time:00:00:00 DOF: 154 dF: 0.625000 Hz

Data saved at 01:49:17 PM, Tuesday, August 07, 2012 Report created at 01:49:17 PM, Tuesday, August 7, 2012



VIBRATION SOURCE TECHNOLOGY CO, LTD.
TEL:(02)2688-0999
FAX:(02)2688-0977
TAIPEI HSIEN

NO.29, LANE 65, SANJYUN ST., SHULIN CITY
VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-02

TEST REPORT

FIG.3.1：Y Axis direction mounted.

FIG.3.2：Y Axis direction mounted.

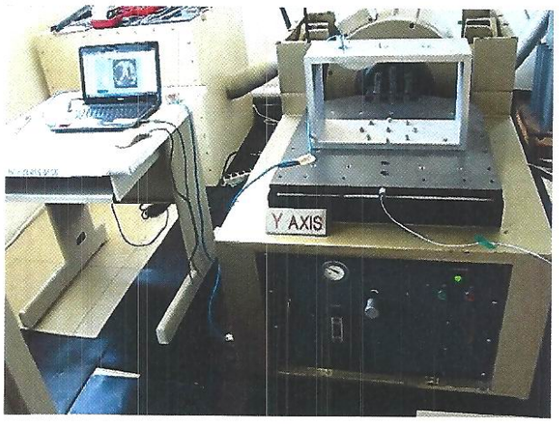


FIG.3.3：Y Axis direction mounted.

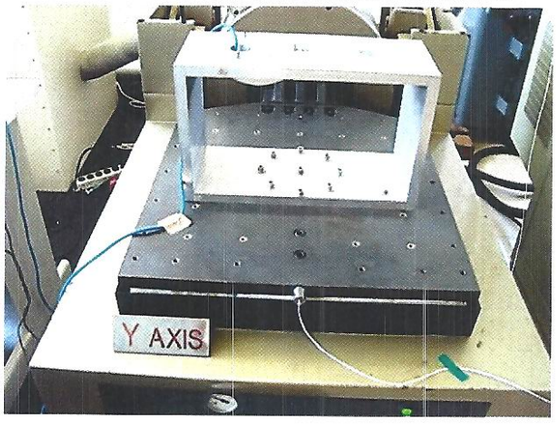


FIG.3.4：Y Axis direction mounted.

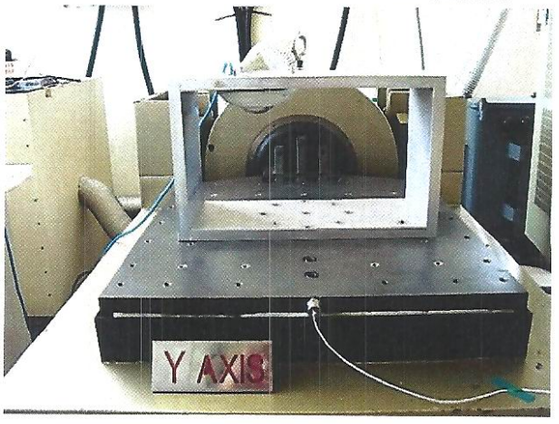


FIG.3.5：Y Axis direction mounted.

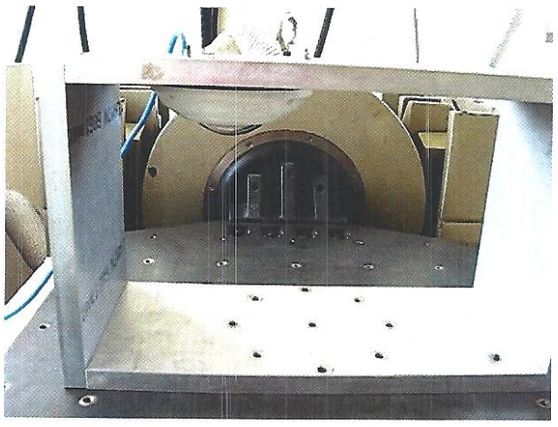


FIG.3.6：Y Axis direction mounted.

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-02

TEST REPORT

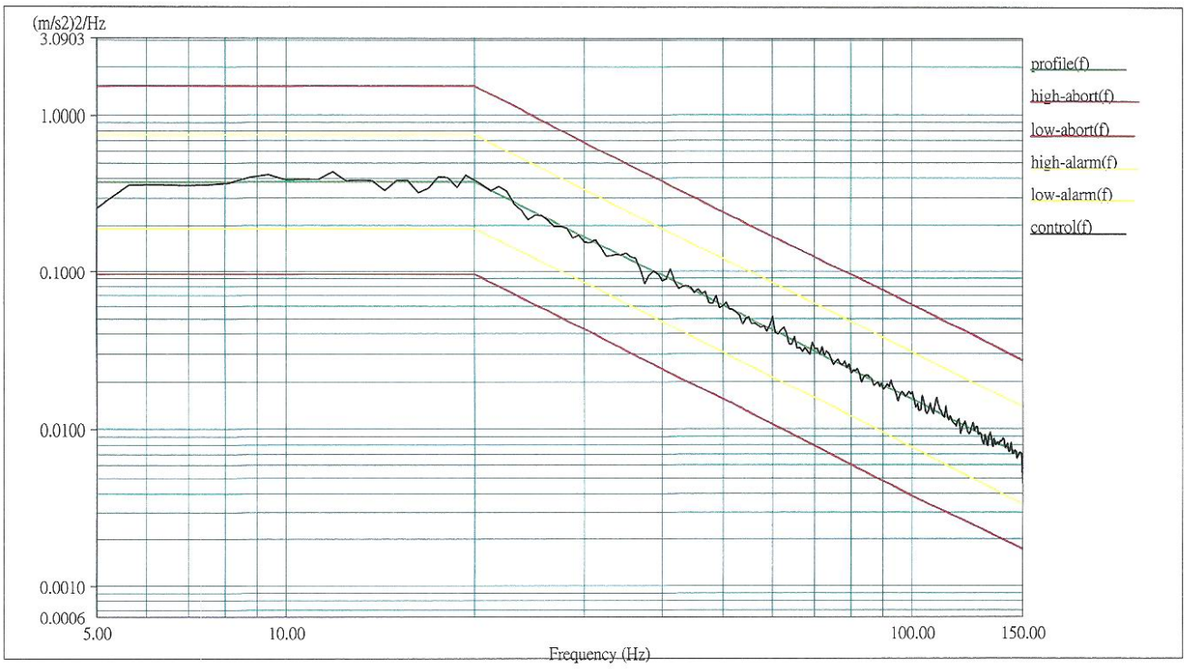
FIG.4：Y Axis test screen.

Level: 100 %

Control RMS:3.525804 m/s^2 Full Level Elapsed Time:05:00:00 Lines:400 Frame Time:1.600000 Seconds

Demand RMS: 3.511353 m/s^2 Remaining Time: 00:00:00 DOF: 154 dF: 0.625000 Hz

Data saved at 01:07:22 AM, Tuesday, August 07, 2012 Report created at 01:07:23 AM, Tuesday, August 7, 2012



VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw
Case No.：VS010808-02

TEST REPORT

FIG.5.1：Z Axis direction mounted.

FIG.5.2：Z Axis direction mounted.

FIG.5.3：Z Axis direction mounted.

FIG.5.4：Z Axis direction mounted.

FIG.5.5：Z Axis direction mounted.

FIG.5.6：Z Axis direction mounted.

VIBRATION SOURCE TECHNOLOGY CO,LTD.
TEL:(02)2688-0999
FAX:(02)2688-0977

VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-02

TEST REPORT

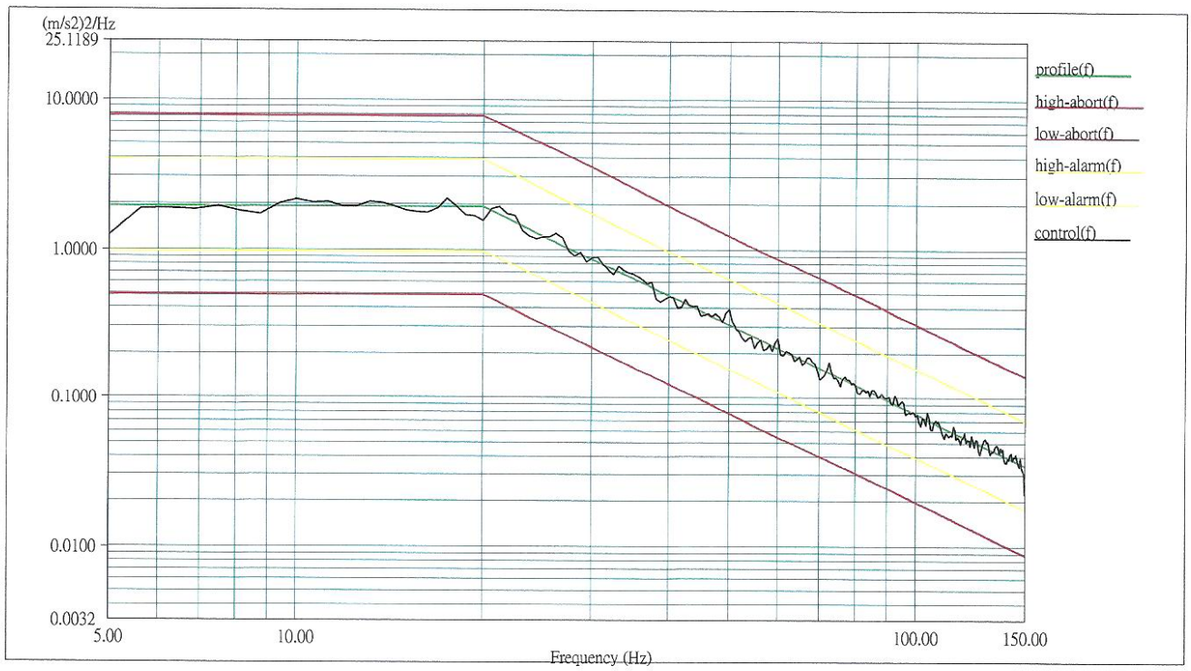
FIG.6：Z Axis test screen.

Level: 100 %

Control RMS:7.925422 m/s^2 Full Level Elapsed Time:05:00:00 Lines:400 Frame Time:1.600000 Seconds

Demand RMS: 7.925612 m/s^2 Remaining Time: 00:00:00 DOF: 154 dF: 0.625000 Hz

Data saved at 05:03:40 PM, Monday, August 06, 2012 Report created at 05:03:41 PM, Monday, August 6, 2012



VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

Case No.	VS010808-03		
Applicant	VIVOTEK INC.		
Specimen	FE8172V		
Quantity	1 PCS		
Date Of Test	AUG.,06,2012		
Shock Testing Condition			
Shock Waveform	Half Sine Wave		
Axial	Vertical (Z Axis)	Transverse (Y Axis)	Longitudinal (X Axis)
Shock Peak Acceleration	30 m/s^2	30 m/s^2	50 m/s^2
Duration Time	30 ms	30 ms	30 ms
Shock Direction	3 Axis，6 Faces FIG. 1.1 ~ 1.2：+X Axis direction mounted. FIG. 2.1 ~ 2.2：-X Axis direction mounted. FIG. 3.1 ~ 3.2：+Y Axis direction mounted. FIG. 4.1 ~ 4.2：-Y Axis direction mounted. FIG. 5.1 ~ 5.2：+Z Axis direction mounted. FIG. 6.1 ~ 6.2：-Z Axis direction mounted. FIG.7：+X Axis test screen. FIG.8：-X Axis test screen. FIG.9：+Y Axis test screen. FIG.10：-Y Axis test screen. FIG.11：+Z Axis test screen. FIG.12：-Z Axis test screen.		
Shock Time	3 times for each Face, 18 times in total.		
Test Result	Appearance Check：OK.		
	Function Check：OK.		

VIBRATION SOURCE TECHNOLOGY CO, LTD
TEL:(02)2688-0999
FAX:(02)2688-0977
TAIPEI HSIEN
NO.29, LANE 65, SANJYUN ST., SHULIN CITY

Approved By	Test Prepared By	Report Prepared By
W. S.WANG	JACK CHUANG	L. Y. LEE
W.S.Wang 8/8	Jack.Chuang	L.Y.LEE 2012/8/8

VIBRATION SOURCE TECHNOLOGY CO, LTD
TEL:(02)2688-0999

FAX:(02)2688-0977
TAIPEI HSIEN
NO.29, LANE 65, SANJYUN ST., SHULIN CITY

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

Note：

1. Standard Vibration Meter and Accelerometer (monitor)：

	Vibration meter	Accelerometer
MILL	SHINKEN	SHINKEN
MODEL	V-1107	V11-101
SERIAL No.	SG-3407	7896

2.Calibration Date： OCT .12, 2011

3.Calibration Report SER. No.：10007C03596-1-1-01

4. Traceable：NATIONAL MEASUREMENT LABORATORY R.O.C.

5. Test Equipment ：

Manufacturer：VIBRATION SOURCE TECHNOLOGY CO., LTD.

Equipment Name：ELECTRODYNAMIC TYPE VIBRATION TESTER

MODEL / SERIAL NO.： VS-600VH / 6693。

VIBRATION SOURCE TECHNOLOGY CO, LTD
TEL:(02)2688-0999
FAX:(02)2688-0977

NO.29, LANE 65, SANJUN ST., SHULIN CITY

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

FIG.1.1： +X Axis direction mounted.

FIG.1.2： +X Axis direction mounted.

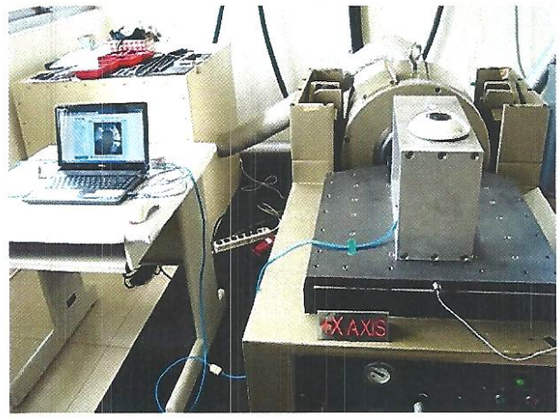


FIG.2.1： -X Axis direction mounted.

FIG.2.2： -X Axis direction mounted.

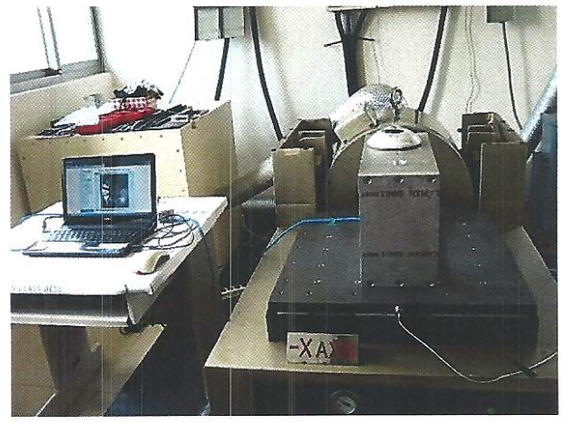


FIG.3.1： +Y Axis direction mounted.

FIG.3.2： +Y Axis direction mounted.

VIBRATION SOURCE TECHNOLOGY CO.,LTD.
TEL:(02)2688-0999

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

FIG.4.1： -Y Axis direction mounted.

FIG.4.2： -Y Axis direction mounted.

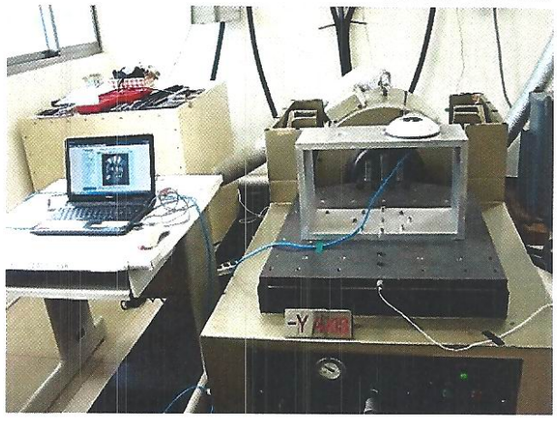


FIG.5.1： +Z Axis direction mounted.

FIG.5.2： +Z Axis direction mounted.

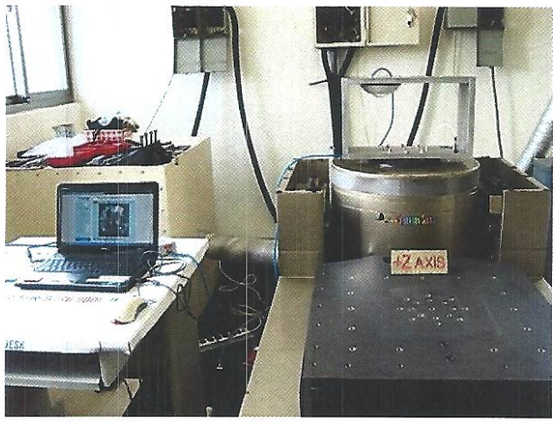


FIG.6.1： -Z Axis direction mounted.

FIG.6.2： -Z Axis direction mounted.

TAIPEI HSIEN
NO.29, LANE 65, SANJYUN ST., SHULIN CITY

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

FIG. 7：+X Axis test screen.

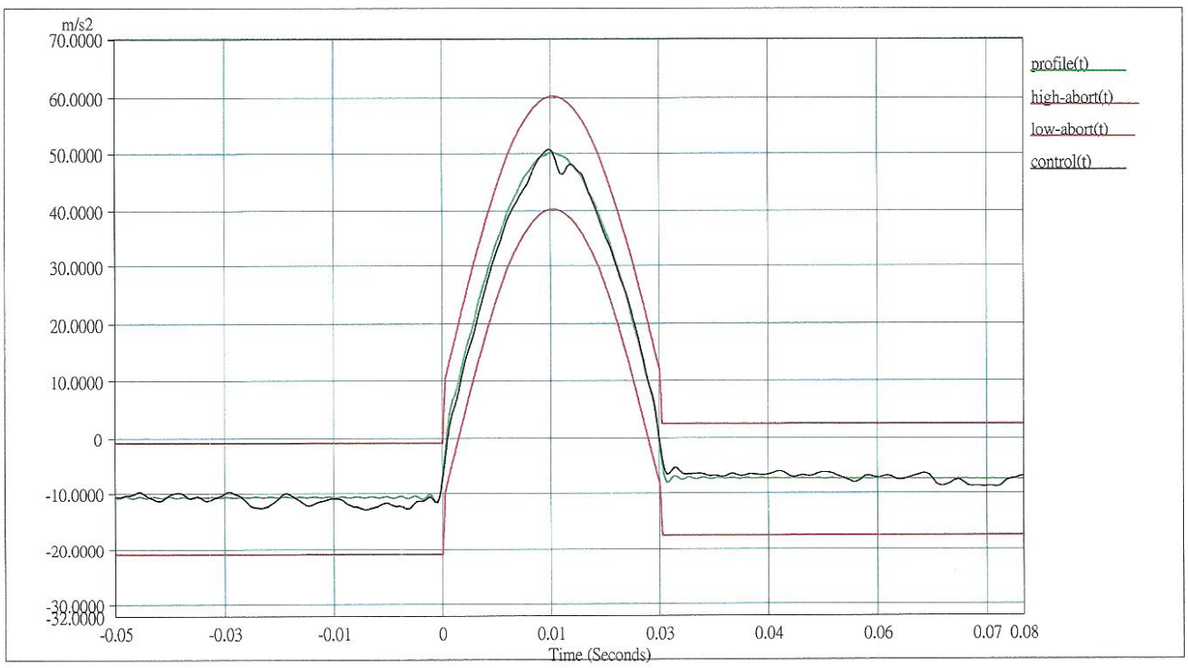
Level: 100 % Block Size: 2048 Elapsed Pulses: 9

Frame Time:0.682667 Seconds Control Peak:50.585907 m/s^2 Control RMS:8.427235 m/s^2 Full Level Elapsed Pulses: 3

dT: 0.000333 Seconds Demand Peak:50.000000 m/s^2 Demand RMS: 8.514232 m/s^2 Remaining Pulses: 0

Pulse Type:Half Sine Amplitude: 50.000000 m/s^2

Data saved at 08:49:17 AM, Monday, August 06, 2012 Report created at 08:49:22 AM, Monday, August 6, 2012



VIBRATION SOURCE TECHNOLOGY CO., LTD.
TEL:(02)2688-0999
FAX:(02)2688-0977

NO.29. LANE 65, SANJYUN ST., SHULIN CITY

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

FIG. 8：-X Axis test screen.

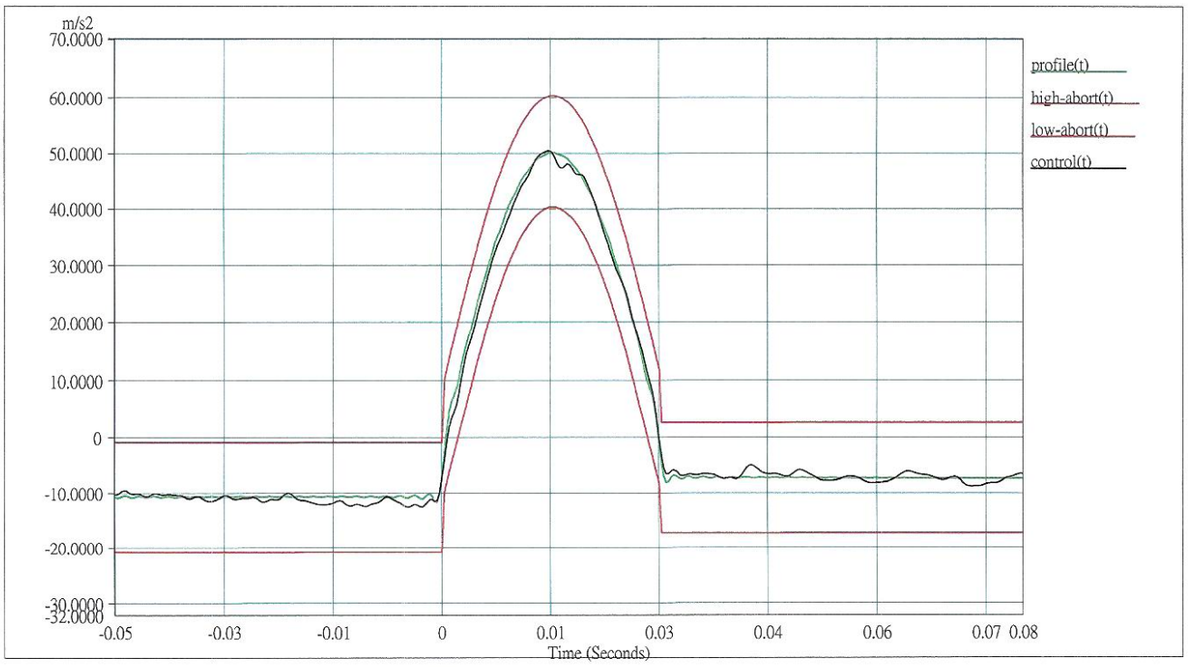
Level: 100 % Block Size: 2048 Elapsed Pulses: 9

Frame Time:0.682667 Seconds Control Peak:50.295547 m/s^2 Control RMS:8.435595 m/s^2 Full Level Elapsed Pulses: 3

dT: 0.000333 Seconds Demand Peak:50.000000 m/s^2 Demand RMS: 8.514232 m/s^2 Remaining Pulses: 0

Pulse Type: Half Sine Amplitude: 50.000000 m/s^2

Data saved at 08:59:30 AM, Monday, August 06, 2012 Report created at 08:59:31 AM, Monday, August 6, 2012



VIBRATION SOURCE TECHNOLOGY CO.,LTD.
TEL:(02)2688-0999
FAX:(02)2688-0977

NO.29, LANE 65, SANJYUN ST., SHULIN CITY

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

FIG. 9：+Y Axis test screen.

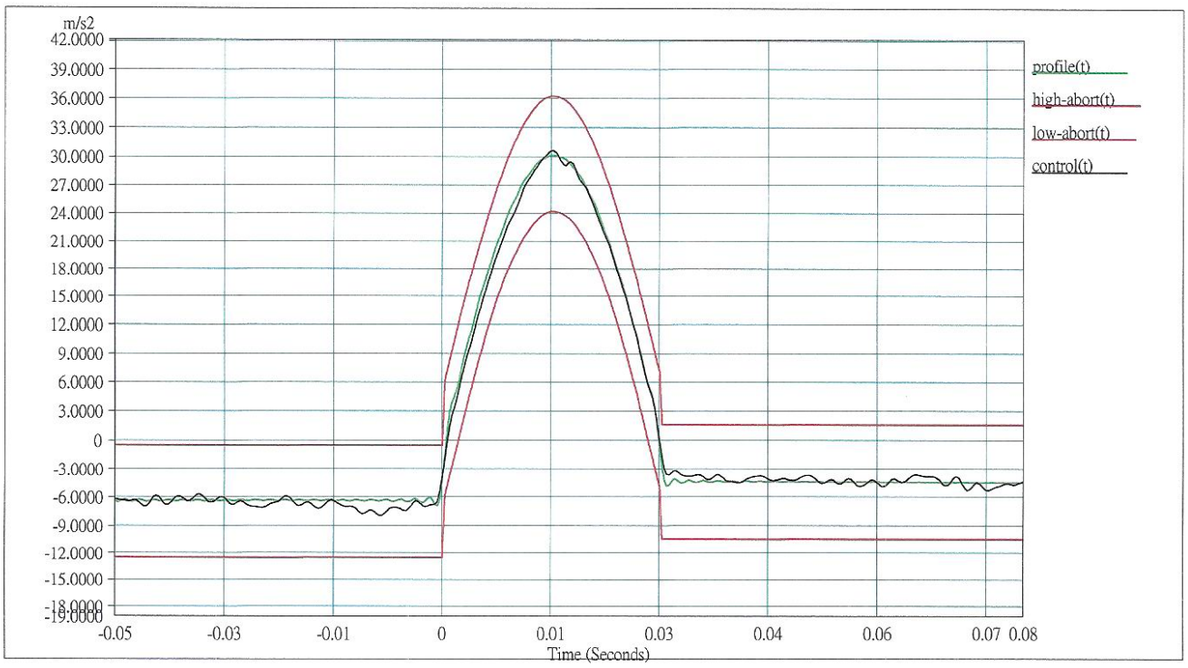
Level: 100 % Block Size: 2048 Elapsed Pulses: 9

Frame Time:0.682667 Seconds Control Peak:30.480856 m/s^2 Control RMS:5.057690 m/s^2 Full Level Elapsed Pulses: 3

dT: 0.000333 Seconds Demand Peak:30.000000 m/s^2 Demand RMS:5.108539 m/s^2 Remaining Pulses: 0

Pulse Type:Half Sine Amplitude: 30.000000 m/s^2

Data saved at 09:11:09 AM, Monday, August 06, 2012 Report created at 09:11:11 AM, Monday, August 6, 2012



VIBRATION SOURCE TECHNOLOGY CO, LTD.
TEL:(02)2688-0999
FAX:(02)2688-0977

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

FIG.10：-Y Axis test screen.

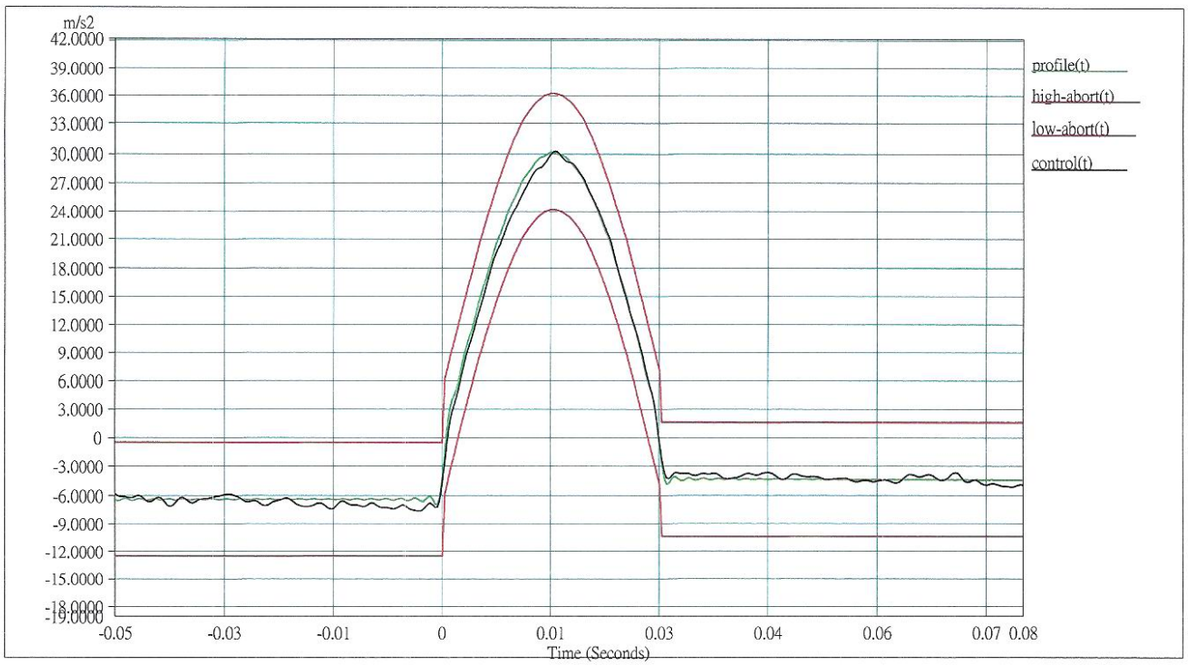
Level: 100 % Block Size: 2048 Elapsed Pulses: 9

Frame Time:0.682667 Seconds Control Peak:30.128838 m/s^2 Control RMS:5.057659 m/s^2 Full Level Elapsed Pulses: 3

dT: 0.000333 Seconds Demand Peak: 30.000000 m/s^2 Demand RMS:5.108539 m/s^2 Remaining Pulses: 0

Pulse Type:Half Sine Amplitude: 30.000000 m/s^2

Data saved at 09:52:49 AM, Monday, August 06, 2012 Report created at 09:52:51 AM, Monday, August 6, 2012



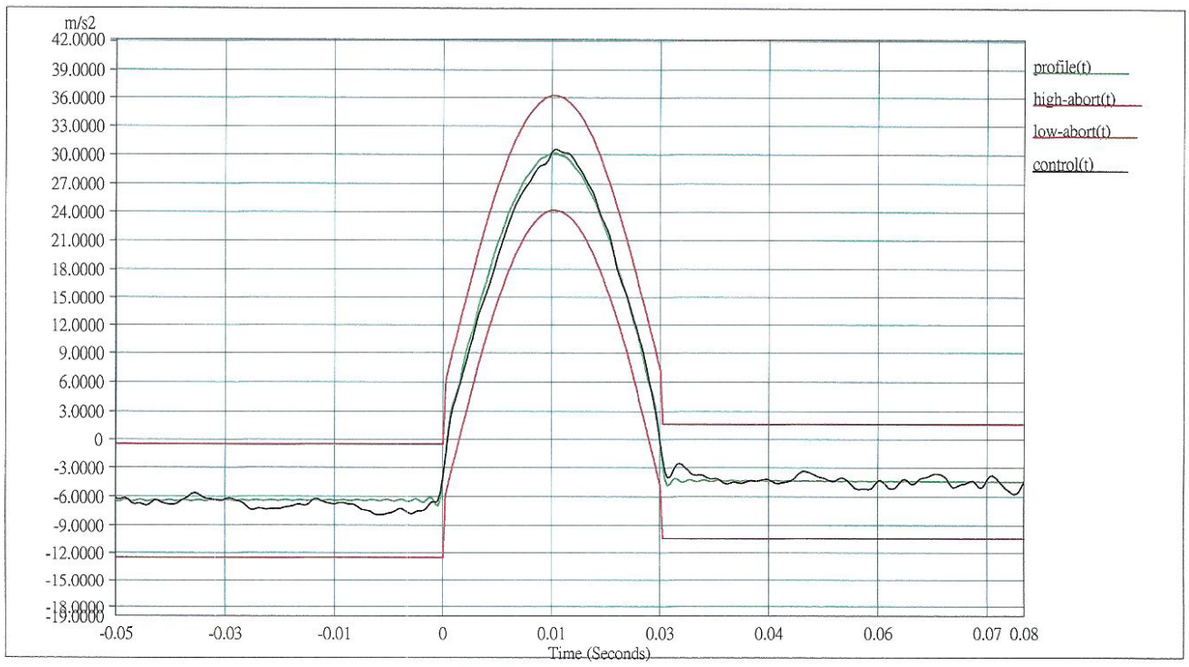
VIBRATION SOURCE TECHNOLOGY CO., LTD.
Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)
Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

FIG.11：+Z Axis test screen.

Level: 100 % Block Size: 2048 Elapsed Pulses: 9
Frame Time:0.682667 Seconds Control Peak:30.448063 m/s^2 Control RMS:5.105286 m/s^2 Full Level Elapsed Pulses: 3
dT: 0.000333 Seconds Demand Peak:30.000000 m/s^2 Demand RMS: 5.108539 m/s^2 Remaining Pulses: 0
Pulse Type:Half Sine Amplitude: 30.000000 m/s^2
Data saved at 11:36:26 AM, Monday, August 06, 2012 Report created at 11:36:28 AM, Monday, August 6, 2012



TAIPEI HSIEN
NO.29, LANE 65, SANJYUN ST., SHULIN CITY

VIBRATION SOURCE TECHNOLOGY CO., LTD.

Add： No.29, Lane 65, Sanjun St., Shulin Dist., New Taipei City 23864, Taiwan (R.O.C.)

Tel：886-2-2688-0999 Fax：886-2-2688-0977 E-mail:visource@mail.mold.net.tw

Case No.：VS010808-03

TEST REPORT

FIG.12：-Z Axis test screen.

Level: 100 % Block Size: 2048 Elapsed Pulses: 9

Frame Time:0.682667 Seconds Control Peak:30.432083 m/s^2 Control RMS:5.126294 m/s^2 Full Level Elapsed Pulses: 3

dT: 0.000333 Seconds Demand Peak: 30.000000 m/s^2 Demand RMS:5.108539 m/s^2 Remaining Pulses: 0

Pulse Type:Half Sine Amplitude: 30.000000 m/s^2

Data saved at 11:08:39 AM, Monday, August 06, 2012 Report created at 11:08:41 AM, Monday, August 6, 2012