



EMC TEST REPORT

Authorized under Declaration of Conformity

According to

EN 55022 : 2010/AC:2011 (Class B)	EN 55024 : 2010
EN 61000-6-3: 2007/A1:2011	EN 50130-4: 2011
EN 61000-3-2 : 2014	IEC 61000-4-2 : 2008
EN 61000-3-3 : 2013	IEC 61000-4-3 : 2006+A1:2007+A2:2010
	IEC 61000-4-4 : 2012
	IEC 61000-4-5 : 2005
	IEC 61000-4-6 : 2008
	IEC 61000-4-8 : 2009
	IEC 61000-4-11 : 2004

Applicant	: Panasonic India Pvt. Ltd.
Address	: 6th Floor, "SPIC BUILDING" Annexe, No. 88, Mount Road, Guindy, Chennai - 600 032.
Equipment	: Network Dome Camera
Model No.	: PI-SFW201L,PI-SFW401L
Trade Name	: Panasonic

I HEREBY CERTIFY THAT :

The sample was received on Jun 02, 2015 and the testing was carried out on Jun 24, 2015 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.



EMC TEST REPORT

Issued by:

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The test record, data evaluation & Equipment Under Test configurations represented herein are true and accurate accounts of the measurements of the samples EMC characteristics under the conditions specified in this report.

The above equipment was tested by CerpPASS Technology Corp. for compliance with the requirements of technical standards specified above under the EMC Directive **2004/108/EC & 2014/30/EU**. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties

Approved by:

Miro Chueh

EMC/RF B.U. Manager

Laboratory Accreditation:

☐ CerpPASS Technology Corporation Test Laboratory

NVLAP LAB Code:	200954-0
TAF LAB Code:	1439

☒ CerpPASS Technology(SuZhou) Co., Ltd.

NVLAP LAB Code:	200814-0
CNAS LAB Code:	L5515



Contents

1. Summary of Test Procedure and Test Results	6
2. Immunity Testing Performance Criteria Definition	7
3. Test Configuration of Equipment under Test	8
3.1. Manufacturer	8
3.2. Feature of Equipment under Test.....	8
3.3. Test Manner	9
3.4. Description of Support Unit	10
3.5. General Information of Test.....	11
3.6. Measurement Uncertainty	12
4. Test of Conducted Emission	14
4.1. Test Limit	14
4.2. Test Procedures	15
4.3. Typical Test Setup	15
4.4. Measurement Equipment.....	16
4.5. Test Result and Data	17
4.6. Test Photographs of Power Port	33
4.7. Test Photographs of Telecommunication Port.....	34
5. Test of Radiated Emission	35
5.1. Test Limit	35
5.2. Test Procedures	36
5.3. Typical Test Setup	36
5.4. Measurement Equipment.....	37
5.5. Test Result and Data (30MHz ~ 1GHz).....	38
5.6. Test Result and Data (1GHz ~ 6GHz).....	50
5.7. Test Photographs (30MHz~1GHz)	62
5.8. Test Photographs (1GHz~6GHz)	63
6. Harmonics Test.....	64
6.1. Limits of Harmonics Current Measurement	64
6.2. Measurement equipment	65
6.3. Test Result and Data	66
6.4. Test Photographs	74
7. Voltage Fluctuations Test	75
7.1. Test Procedure	75
7.2. Measurement Equipment.....	75
7.3. Test Result and Data	76
7.4. Test Photographs	84
8. Electrostatic Discharge Immunity Test	85
8.1. Test Procedure	85
8.2. Test Setup for Tests Performed in Laboratory.....	86
8.3. Test Severity Levels	87
8.4. Measurement Equipment.....	87
8.5. Test Result and Data	88
8.6. Test Photographs	91



9. Radio Frequency electromagnetic field immunity test	98
9.1. Test Procedure	98
9.2. Test Severity Levels	98
9.3. TEST SETUP	99
9.4. Measurement Equipment	100
9.5. Test Result and Data	101
9.6. Test Photographs	103
10. Electrical Fast Transient/ Burst Immunity Test	104
10.1. Test Procedure	104
10.2. Test Severity Levels	104
10.3. TEST SETUP	105
10.4. Measurement Equipment	106
10.5. Test Result and Data	107
10.6. Test Photographs	109
11. Surge Immunity Test	111
11.1. Test Procedure	111
11.2. Test Severity Level	111
11.3. TEST SETUP	112
11.4. Measurement Equipment	112
11.5. Test Result and Data	113
11.6. Test Photographs	117
12. Conduction Disturbances induced by Radio-Frequency Fields	118
12.1. Test Procedure	118
12.2. Test Severity Levels	118
12.3. TEST SETUP	119
12.4. Measurement Equipment	119
12.5. Test Result and Data	120
12.6. Test Photographs	122
13. Power Frequency Magnetic Field Immunity Test	123
13.1. Test Setup	123
13.2. Test Severity Levels	123
13.3. Measurement Equipment	123
13.4. Test Result and Data	124
13.5. Test Photographs	125
14. Voltage Dips and Voltage Interruptions Immunity Test Setup	126
14.1. Test Conditions	126
14.2. TEST SETUP	126
14.3. Measurement Equipment	126
14.4. Test Result and Data	127
15. EUT Photographs	128



History of this test report

■ ORIGINAL.

□ Additional attachment as following record:

Report No	Version	Date	Description
SECE1605055	Rev 01	May 12, 2016	Initial Issue



1. Summary of Test Procedure and Test Results

EMISSION[EN 55022: 2010/AC:2011]			
Standard	Item	Result	Remarks
EN55022: 2010/AC:2011	Conducted (Power Port)	PASS	Meet Class B Limit Minimum passing margin(AV) is -2.31 dB at 0.3260 MHz
	Conducted (Telecom port)	PASS	Meets Class B Limit Minimum passing margin(AV) is -2.00 dB 0.3339 MHz
	Radiated	PASS	Meets Class B Limit Minimum passing margin(QP) is -3.92 dB at 575.1399 MHz
EN 61000-3-2: 2014	Harmonic current emissions	PASS	Meet Class A Limit
EN61000-3-3:2013	Voltage fluctuations & flicker	PASS	Meets the requirements

IMMUNITY[EN 55024:2010]			
Standard	Item	Result	Remarks
IEC 61000-4-2: 2008	ESD	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-3: 2006+A1:2007+A2:2010	RS	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-4: 2012	EFT	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-5:2005	Surge	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-6:2008	CS	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-8:2009	PFMF	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-11:2004	Voltage dips & voltage variations	N/A	N/A



IMMUNITY[EN 50130-4: 2011]			
Standard	Item	Result	Remarks
IEC 61000-4-2: 2008	ESD	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-3: 2006+A1:2007+A2:2010	RS	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-4: 2012	EFT	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-5:2005	Surge	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-6:2008	CS	PASS	Meets the requirements of Performance Criterion A
IEC 61000-4-11:2004	Voltage dips & voltage variations	N/A	N/A

2. Immunity Testing Performance Criteria Definition

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



3. Test Configuration of Equipment under Test

3.1. Manufacturer

Panasonic India Pvt. Ltd.

6th Floor, "SPIC BUILDING" Annexe, No. 88, Mount Road, Guindy, Chennai - 600 032.

3.2. Feature of Equipment under Test

Network Dome Camera	Model No.:	PI-SFW201L,PI-SFW401L
	Input:	12V, 1A/24V~0.8A,50-60Hz POE:48V~0.26A
Remark	1.PI-SFW201L, PI-SFW401L are Only different SENSOR board. 2. PI-SFW401L, PI-SFW201L were selected as the test model and its data have been recorded in this report. They are identical except the sale area or software.	
Adapter 1#	Model No.:	ADS-12B-12 12012Gz
	INPUT:	100-240V~ 50/60Hz Max. 0.3A
	OUTPUT:	12V, 1.0A
Adapter 2#	Model No.:	HKA-A24150-230
	INPUT:	230V~50Hz
	OUTPUT:	24V~1500mA 36VA

I/O PORT:

I/O PORT TYPE	Quantity
1). RJ45 Port	1



3.3. Test Manner

Test Manner

- a During testing, the interface cables and equipment positions were varied according to Europe Standard.
- b Turn on the power of all equipment.
- c The complete test system included Notebook PC, DVR and EUT for EMI test.

The pre-test modes for RE

- Mode 1: Full system for PI-SFW401L with Adapter #1 + POE
- Mode 2: Full system for PI-SFW401L with Adapter #2 + POE
- Mode 3: Full system for PI-SFW401L with POE
- Mode 4: Full system for PI-SFW201L with Adapter #1 + POE
- Mode 5: Full system for PI-SFW201L with Adapter #2 + POE
- Mode 6: Full system for PI-SFW201L with POE

The pre-test modes for CE/EMC/H&F

- Mode 1: Full system for PI-SFW401L with Adapter #1 + POE
- Mode 2: Full system for PI-SFW401L with Adapter #2 + POE
- Mode 3: Full system for PI-SFW201L with Adapter #1 + POE
- Mode 4: Full system for PI-SFW201L with Adapter #2 + POE

The pre-test modes for ISN

- Mode 1: Full system for PI-SFW401L with Adapter #1 (LAN 10Mbps+POE)
- Mode 2: Full system for PI-SFW401L with Adapter #1 (LAN 100Mbps+POE)
- Mode 3: Full system for PI-SFW401L with Adapter #2 (LAN 10Mbps+POE)
- Mode 4: Full system for PI-SFW401L with Adapter #2 (LAN 100Mbps+POE)
- Mode 5: Full system for PI-SFW201L with Adapter #1 (LAN 10Mbps+POE)
- Mode 6: Full system for PI-SFW201L with Adapter #1 (LAN 100Mbps+POE)
- Mode 7: Full system for PI-SFW201L with Adapter #2 (LAN 10Mbps+POE)
- Mode 8: Full system for PI-SFW201L with Adapter #2 (LAN 100Mbps+POE)

Select the worst case of the pre-test modes as the final test mode

For RE

- Mode 1: Full system for PI-SFW401L with Adapter #1 + POE
- Mode 2: Full system for PI-SFW401L with Adapter #2 + POE
- Mode 3: Full system for PI-SFW401L with POE
- Mode 4: Full system for PI-SFW201L with Adapter #1 + POE
- Mode 5: Full system for PI-SFW201L with Adapter #2 + POE
- Mode 6: Full system for PI-SFW201L with POE

For CE/EMC/H&F

- Mode 1: Full system for PI-SFW401L with Adapter #1 + POE



Mode 2: Full system for PI-SFW401L with Adapter #2 + POE

Mode 3: Full system for PI-SFW201L with Adapter #1 + POE

Mode 4: Full system for PI-SFW201L with Adapter #2 + POE

For ISN

Mode 1: Full system for PI-SFW401L with Adapter #1 (LAN 10Mbps+POE)

Mode 2: Full system for PI-SFW401L with Adapter #1 (LAN 100Mbps+POE)

Mode 3: Full system for PI-SFW401L with Adapter #2 (LAN 10Mbps+POE)

Mode 4: Full system for PI-SFW401L with Adapter #2 (LAN 100Mbps+POE)

Mode 5: Full system for PI-SFW201L with Adapter #1 (LAN 10Mbps+POE)

Mode 6: Full system for PI-SFW201L with Adapter #1 (LAN 100Mbps+POE)

Mode 7: Full system for PI-SFW201L with Adapter #2 (LAN 10Mbps+POE)

Mode 7: Full system for PI-SFW201L with Adapter #2 (LAN 100Mbps+POE)

3.4. Description of Support Unit

No.	Device	Manufacturer	Model No.	Description
1	Notebook PC	SONY	PCG-71811P	Non-Shielded,1.5m (R33021)
2	DVR	Dahua	N/A	Non-Shielded,1.5m

No.	Cable	Quantity	Description
A	LAN Cable	1	Non-Shielded>3.0 m
B	LAN Cable	1	Non-Shielded>3.0 m
C	DC Cable	1	Non-Shielded,1.5m



3.5. General Information of Test

☐	Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel: +886-3-3226-888 Fax: +886-3-3226-881 Address: No.68-1, Shihbachongsi, Shihding Township, New Taipei City 223, Taiwan, R.O.C. Tel: +886-2-2663-8582
	FCC	TW1079, TW1061, 390316, 228391, 641184
	IC	4934B-1, 4934E-1, 4934E-2
	VCCI	T-2205 for Telecommunication Test C-4463 for Conducted emission test R-3428, R-4128 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
☒	Test Site	Cerpass Technology (Suzhou) Co., Ltd Address: No.66, Tangzhuang Road, Suzhou Industrial Park, Jiangsu 215006, China Tel: +86-512-6917-5888 Fax: +86-512-6917-5666
	FCC	331395
	IC	7290A-1, 7290A-2
	VCCI	T-1945 for Telecommunication Test C-2919 for Conducted emission test R-2670 for Radiated emission test G-227 for radiated disturbance above 1GHz
Frequency Range Investigated:		Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 6000MHz
Test Distance :		The test distance of radiated emission below 1GHz from antenna to EUT is 10 M. The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.



3.6. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency	Uncertainty
Conducted emissions(LINE)	9KHz-30MHz	+/- 0.6888 dB
Conducted emissions(NEUTRAL)	9KHz-30MHz	+/- 0.7002 dB

Measurement	Polarity	Frequency	Uncertainty
Radiated emissions (below 1GHz)	H	30MHz ~ 200MHz	+/- 4.0677dB
		200MHz ~1000MHz	+/- 3.9131dB
	V	30MHz ~ 200MHz	+/- 4.0678dB
		200MHz ~1000MHz	+/- 3.9142dB
Radiated emissions (above 1GHz)	H	1000MHz ~18000MHz	+/- 3.8904 dB
		18000MHz ~40000MHz	+/-3.9356dB
	V	1000MHz ~18000MHz	+/- 3.8896dB
		18000MHz ~40000MHz	+/- 3.8766dB

Measurement	Uncertainty
ESD—Rise time tr	6.4%
ESD—Peak current Ip	6%
ESD—Current at 30 ns	6%
ESD—Current at 60 ns	6%
ESD- Charging voltage	1%
RS above 1GHz	±2.28dB
RS under 1GHz	±3.62dB
EFT—Rise time tr	4%
EFT—Peak current Ip	4%
EFT—Current	4%
Surge—Rise time tr	4%
Surge—Peak current Ip	4%



Surge—Current	4%
CS-CND	$\pm 0.80\text{dB}$
CS-Clamp	$\pm 1.06\text{dB}$

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Consistent with industry standard (e.g. CISPR 22: 2008, clause 11, Measurement Uncertainty) determining compliance with the limits shall be based on the results of the compliance measurement. Consequently the measured emissions being less than the maximum allowed emission result in this being a compliant test or passing test.



4. Test of Conducted Emission

4.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz and return leads of the EUT according to the methods defined in European Standard EN 55022. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 4.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position producing maximum conducted emissions.

Table 1 Conducted Emission Limits (dB μ V):

Frequency range (MHz)	Class A Equipment		Class B Equipment	
	Quasi Peak	Average	Quasi Peak	Average
0.15 to 0.50	79	66	66 to 56	56 to 46
0.50 to 5	73	60	56	46
5. to 30.	73	60	60	50
Note 1: The lower limits shall apply at the transition frequencies.				
Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5MHz.				

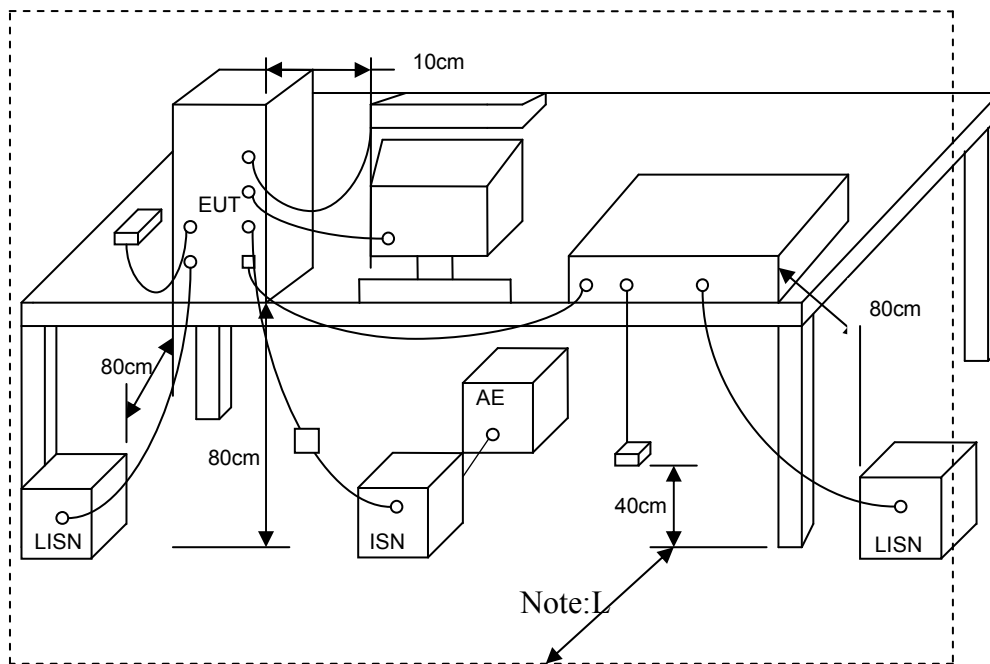
Table 2 - Limits of conducted common mode (asymmetric mode) disturbance at telecommunication ports in the frequency range 0.15 MHz to 30 MHz(dB(μ V)).

Frequency range (MHz)	Class A Equipment				Class B Equipment			
	Voltage		Current		Voltage		Current	
	Quasi Peak	Avg.	Quasi Peak	Avg.	Quasi Peak	Avg.	Quasi Peak	Avg.
0.15 to 0.5	97~ 87	84~74	53~43	40~30	84~74	74~64	40~30	30~20
0.5 to 5	87	74	43	30	74	64	30	20
5 to 30	87	74	43	30	74	64	30	20
Note 1: The limits decrease linearly with the logarithm of the frequency in the range 0.15 to 0.5 MHz.								
Note 2 : The current and voltage disturbance limits are derived for use with an impedance stabilization network (ISN) which presents a common mode (asymmetric mode) impedance of 150 Ω to the telecommunication under test (conversion factor is $20 \log_{10} 150/1 = 44\text{dB}$).								

4.2. Test Procedures

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

4.3. Typical Test Setup





4.4. Measurement Equipment

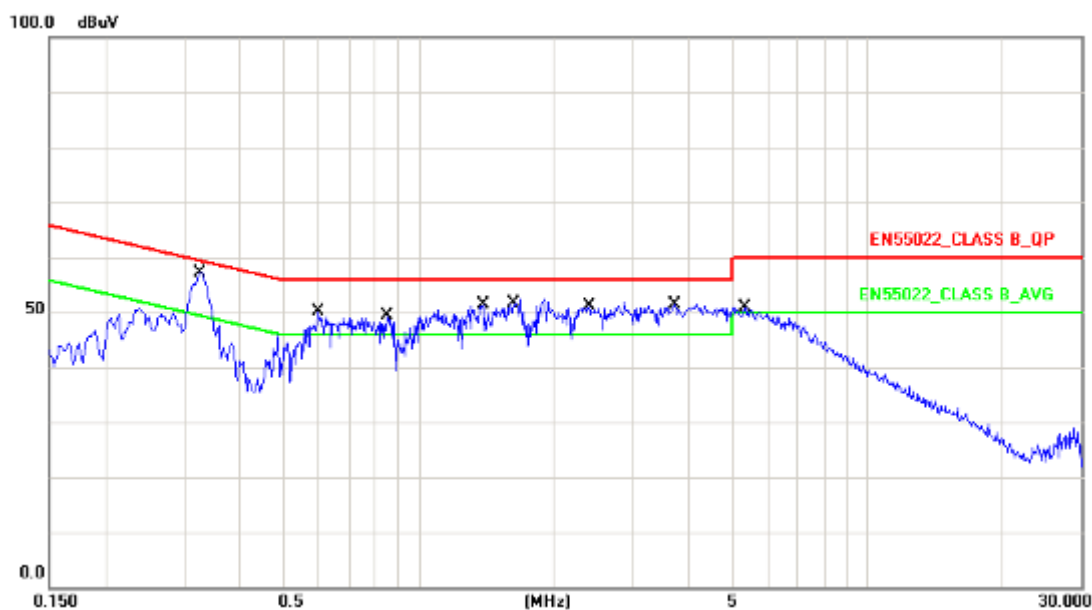
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2015.03.29	2016.03.28
AMN	R&S	ESH2-Z5	100182	2014.09.04	2015.09.03
Two-Line V-Network	R&S	ENV216	100325	/	/
ISN	FCC	FCC-TLISN-T2-02	20379	2015.03.29	2016.03.28
ISN	FCC	FCC-TLISN-T4-02	20380	2015.03.29	2016.03.28
ISN	FCC	FCC-TLISN-T8-02	20381	2015.03.29	2016.03.28
ISN	TESEQ	ISN ST08	30175	2015.03.29	2016.03.28
Current Probe	R&S	EZ-17	100303	2015.03.29	2016.03.28
Passive Voltage Probe	R&S	ESH2-Z3	100026	2015.03.29	2016.03.28
Pulse Limiter	R&S	ESH3-Z2	100529	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2015.04.02	2016.04.01
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A



4.5. Test Result and Data

4.5.1 Conducted Emission for Power Port Test Data

Test Mode :	Mode 1: Full system for PI-SFW401L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Phase :	LINE
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

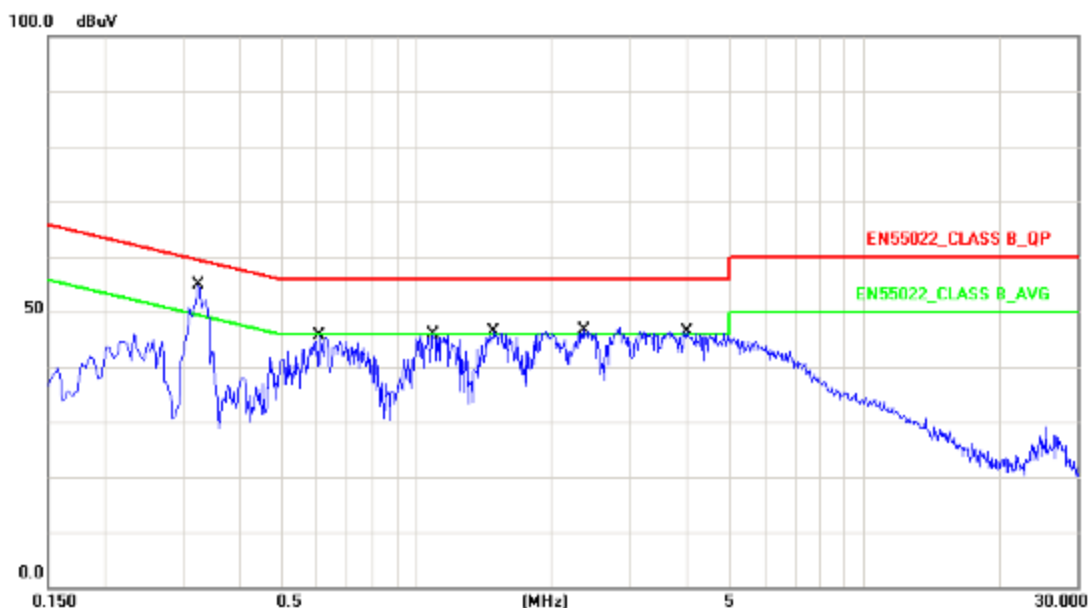


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3260	10.24	46.33	56.57	59.55	-2.98	QP
2	0.3260	10.24	37.00	47.24	49.55	-2.31	AVG
3	0.5980	10.26	36.93	47.19	56.00	-8.81	QP
4	0.5980	10.26	27.74	38.00	46.00	-8.00	AVG
5	0.8500	10.30	28.10	38.40	56.00	-17.60	QP
6	0.8500	10.30	15.03	25.33	46.00	-20.67	AVG
7	1.3779	10.42	33.13	43.55	56.00	-12.45	QP
8	1.3779	10.42	21.84	32.26	46.00	-13.74	AVG
9	1.6300	10.46	36.35	46.81	56.00	-9.19	QP
10	1.6300	10.46	25.18	35.64	46.00	-10.36	AVG
11	2.4020	10.50	37.00	47.50	56.00	-8.50	QP
12	2.4020	10.50	27.20	37.70	46.00	-8.30	AVG
13	3.7260	10.53	36.95	47.48	56.00	-8.52	QP
14	3.7260	10.53	26.73	37.26	46.00	-8.74	AVG
15	5.3420	10.56	35.62	46.18	60.00	-13.82	QP
16	5.3420	10.56	24.86	35.42	50.00	-14.58	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system for PI-SFW401L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

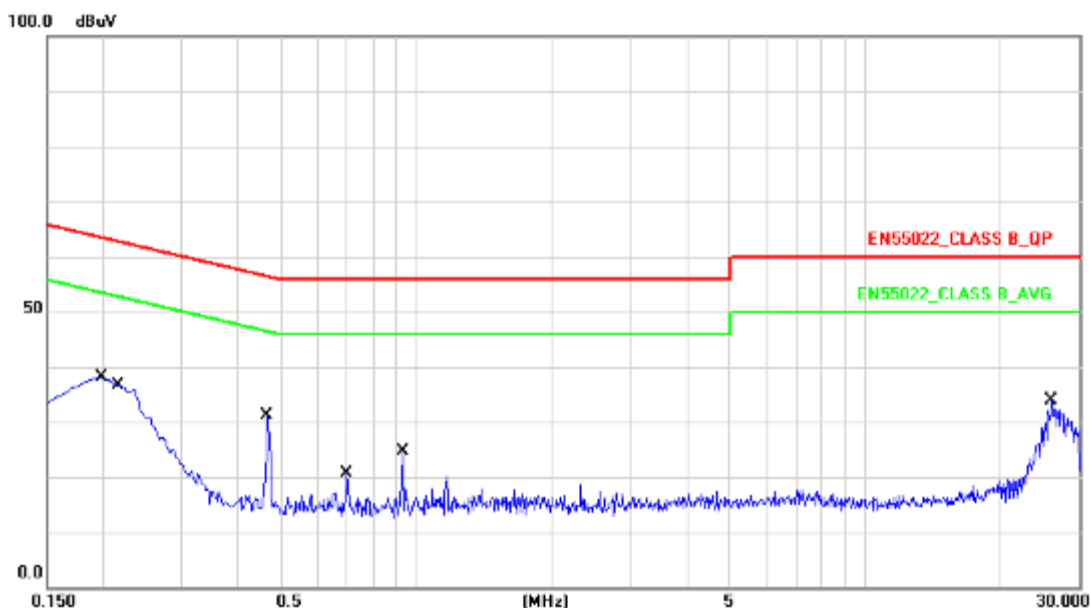


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3260	10.24	42.22	52.46	59.55	-7.09	QP
2	0.3260	10.24	32.53	42.77	49.55	-6.78	AVG
3	0.6060	10.27	31.36	41.63	56.00	-14.37	QP
4	0.6060	10.27	20.98	31.25	46.00	-14.75	AVG
5	1.0900	10.34	32.11	42.45	56.00	-13.55	QP
6	1.0900	10.34	21.33	31.67	46.00	-14.33	AVG
7	1.4900	10.45	32.04	42.49	56.00	-13.51	QP
8	1.4900	10.45	21.02	31.47	46.00	-14.53	AVG
9	2.3620	10.50	31.71	42.21	56.00	-13.79	QP
10	2.3620	10.50	21.24	31.74	46.00	-14.26	AVG
11	4.0180	10.53	30.08	40.61	56.00	-15.39	QP
12	4.0180	10.53	19.96	30.49	46.00	-15.51	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for PI-SFW401L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Phase :	LINE
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

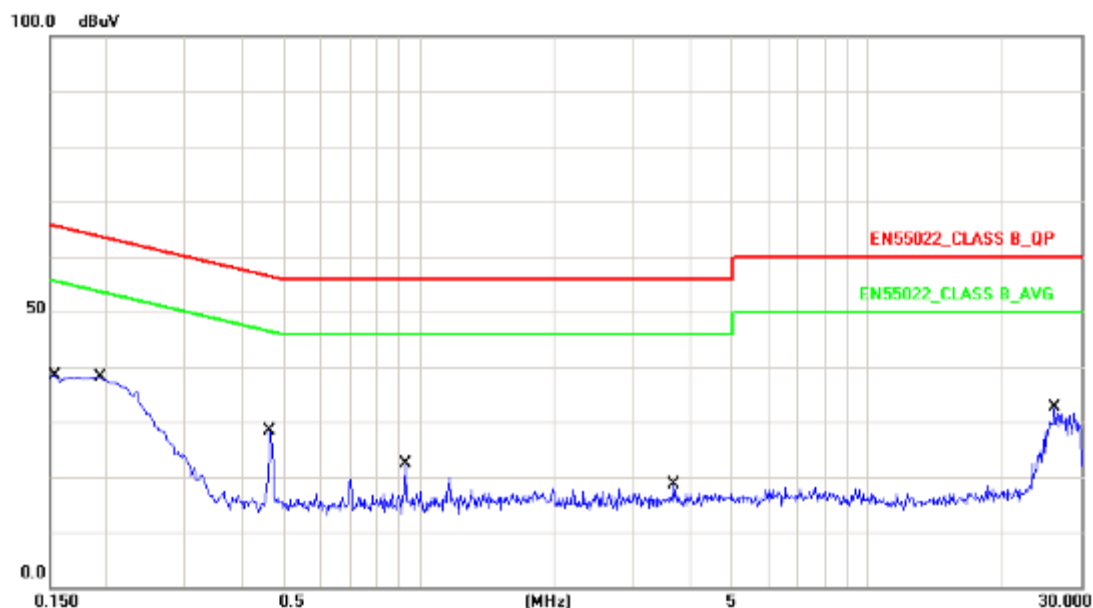


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1980	10.25	20.62	30.87	63.69	-32.82	QP
2	0.1980	10.25	-0.78	9.47	53.69	-44.22	AVG
3	0.2180	10.25	19.04	29.29	62.89	-33.60	QP
4	0.2180	10.25	-1.26	8.99	52.89	-43.90	AVG
5	0.4660	10.29	18.87	29.16	56.58	-27.42	QP
6	0.4660	10.29	18.37	28.66	46.58	-17.92	AVG
7	0.6980	10.32	7.14	17.46	56.00	-38.54	QP
8	0.6980	10.32	4.00	14.32	46.00	-31.68	AVG
9	0.9300	10.31	12.10	22.41	56.00	-33.59	QP
10	0.9300	10.31	11.72	22.03	46.00	-23.97	AVG
11	26.0620	10.51	20.56	31.07	60.00	-28.93	QP
12	26.0620	10.51	16.26	26.77	50.00	-23.23	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for PI-SFW401L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1539	10.20	20.89	31.09	65.78	-34.69	QP
2	0.1539	10.20	-0.10	10.10	55.78	-45.68	AVG
3	0.1940	10.21	20.52	30.73	63.86	-33.13	QP
4	0.1940	10.21	-0.81	9.40	53.86	-44.46	AVG
5	0.4660	10.25	16.38	26.63	56.58	-29.95	QP
6	0.4660	10.25	15.05	25.30	46.58	-21.28	AVG
7	0.9300	10.31	9.60	19.91	56.00	-36.09	QP
8	0.9300	10.31	8.84	19.15	46.00	-26.85	AVG
9	3.7060	10.53	-0.50	10.03	56.00	-45.97	QP
10	3.7060	10.53	-5.01	5.52	46.00	-40.48	AVG
11	26.2620	10.89	16.79	27.68	60.00	-32.32	QP
12	26.2620	10.89	12.17	23.06	50.00	-26.94	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system for PI-SFW201L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Phase :	LINE
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

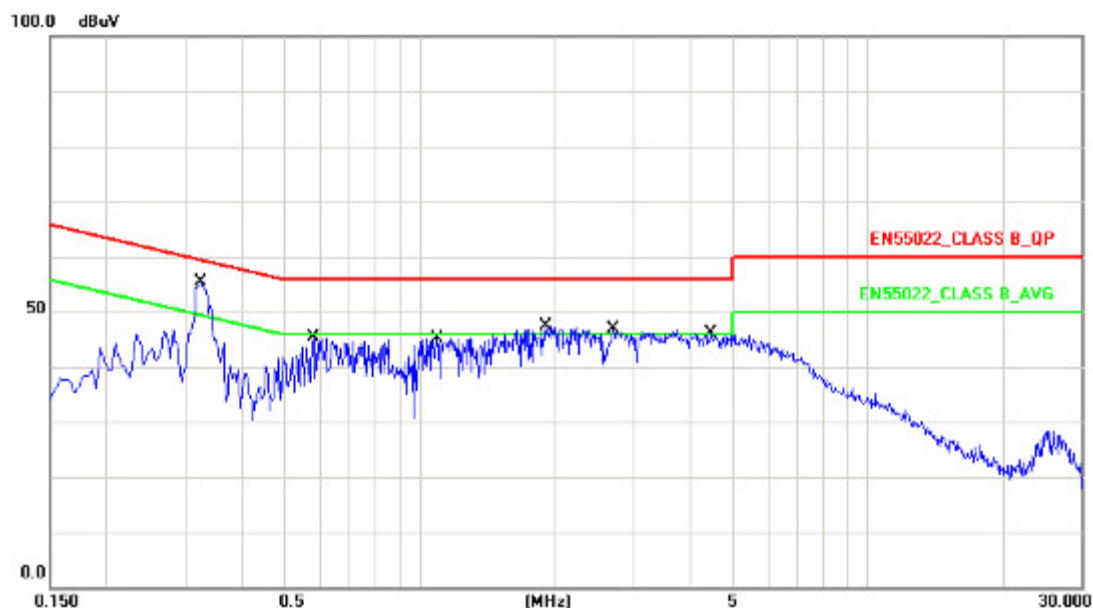


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3220	10.27	46.13	56.40	59.65	-3.25	QP
2	0.3220	10.27	36.29	46.56	49.65	-3.09	AVG
3	0.5899	10.30	36.53	46.83	56.00	-9.17	QP
4	0.5899	10.30	26.57	36.87	46.00	-9.13	AVG
5	1.0780	10.31	37.00	47.31	56.00	-8.69	QP
6	1.0780	10.31	27.06	37.37	46.00	-8.63	AVG
7	1.5220	10.30	36.82	47.12	56.00	-8.88	QP
8	1.5220	10.30	27.26	37.56	46.00	-8.44	AVG
9	2.3900	10.30	36.66	46.96	56.00	-9.04	QP
10	2.3900	10.30	26.50	36.80	46.00	-9.20	AVG
11	3.1380	10.30	35.38	45.68	56.00	-10.32	QP
12	3.1380	10.30	24.43	34.73	46.00	-11.27	AVG
13	3.7140	10.29	35.89	46.18	56.00	-9.82	QP
14	3.7140	10.29	25.44	35.73	46.00	-10.27	AVG
15	5.0100	10.29	35.32	45.61	60.00	-14.39	QP
16	5.0100	10.29	25.24	35.53	50.00	-14.47	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system for PI-SFW201L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

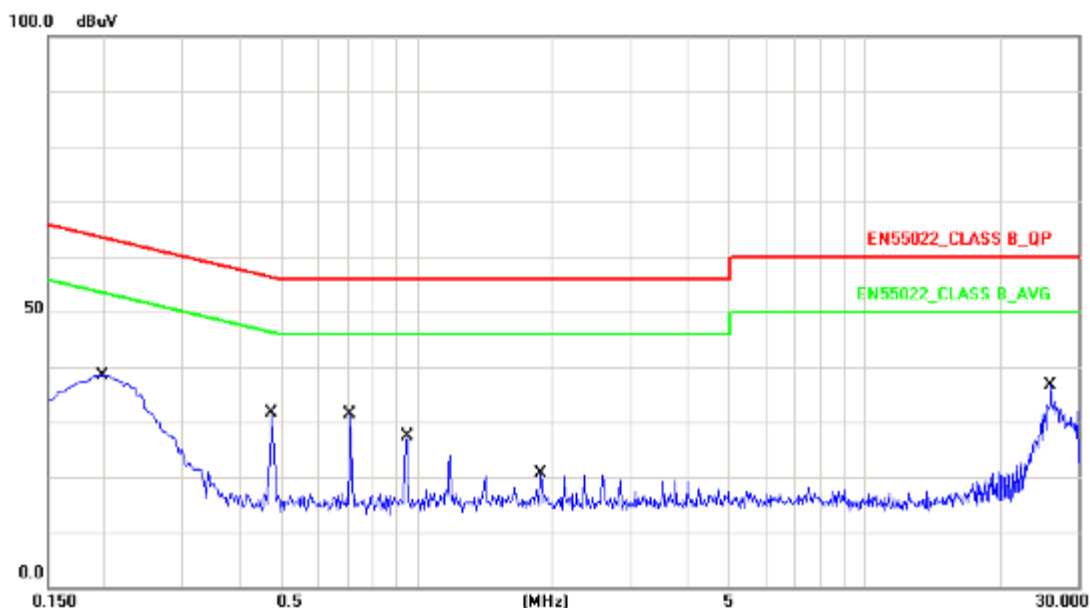


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3260	10.24	42.09	52.33	59.55	-7.22	QP
2	0.3260	10.24	32.23	42.47	49.55	-7.08	AVG
3	0.5820	10.26	31.02	41.28	56.00	-14.72	QP
4	0.5820	10.26	20.95	31.21	46.00	-14.79	AVG
5	1.0980	10.34	31.80	42.14	56.00	-13.86	QP
6	1.0980	10.34	21.19	31.53	46.00	-14.47	AVG
7	1.9260	10.48	31.62	42.10	56.00	-13.90	QP
8	1.9260	10.48	21.03	31.51	46.00	-14.49	AVG
9	2.7180	10.51	30.03	40.54	56.00	-15.46	QP
10	2.7180	10.51	19.54	30.05	46.00	-15.95	AVG
11	4.4860	10.54	30.22	40.76	56.00	-15.24	QP
12	4.4860	10.54	20.70	31.24	46.00	-14.76	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Full system for PI-SFW201L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Phase :	LINE
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

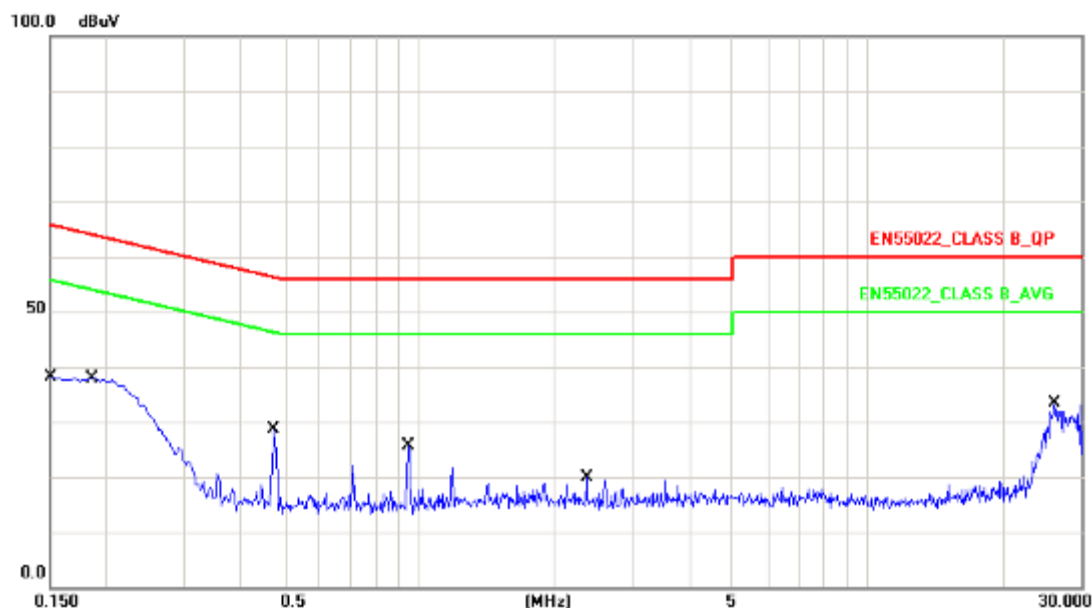


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1980	10.25	20.43	30.68	63.69	-33.01	QP
2	0.1980	10.25	-0.84	9.41	53.69	-44.28	AVG
3	0.4740	10.29	19.24	29.53	56.44	-26.91	QP
4	0.4740	10.29	18.68	28.97	46.44	-17.47	AVG
5	0.7100	10.32	13.64	23.96	56.00	-32.04	QP
6	0.7100	10.32	10.07	20.39	46.00	-25.61	AVG
7	0.9500	10.31	14.31	24.62	56.00	-31.38	QP
8	0.9500	10.31	13.96	24.27	46.00	-21.73	AVG
9	1.8940	10.29	5.13	15.42	56.00	-40.58	QP
10	1.8940	10.29	2.27	12.56	46.00	-33.44	AVG
11	26.0580	10.51	22.13	32.64	60.00	-27.36	QP
12	26.0580	10.51	17.53	28.04	50.00	-21.96	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Full system for PI-SFW201L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Phase :	NEUTRAL
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1500	10.19	20.93	31.12	65.99	-34.87	QP
2	0.1500	10.19	0.20	10.39	55.99	-45.60	AVG
3	0.1860	10.20	20.62	30.82	64.21	-33.39	QP
4	0.1860	10.20	-0.73	9.47	54.21	-44.74	AVG
5	0.4740	10.25	16.37	26.62	56.44	-29.82	QP
6	0.4740	10.25	15.24	25.49	46.44	-20.95	AVG
7	0.9460	10.31	12.68	22.99	56.00	-33.01	QP
8	0.9460	10.31	12.15	22.46	46.00	-23.54	AVG
9	2.3699	10.50	5.98	16.48	56.00	-39.52	QP
10	2.3699	10.50	3.55	14.05	46.00	-31.95	AVG
11	26.2620	10.89	19.19	30.08	60.00	-29.92	QP
12	26.2620	10.89	15.18	26.07	50.00	-23.93	AVG

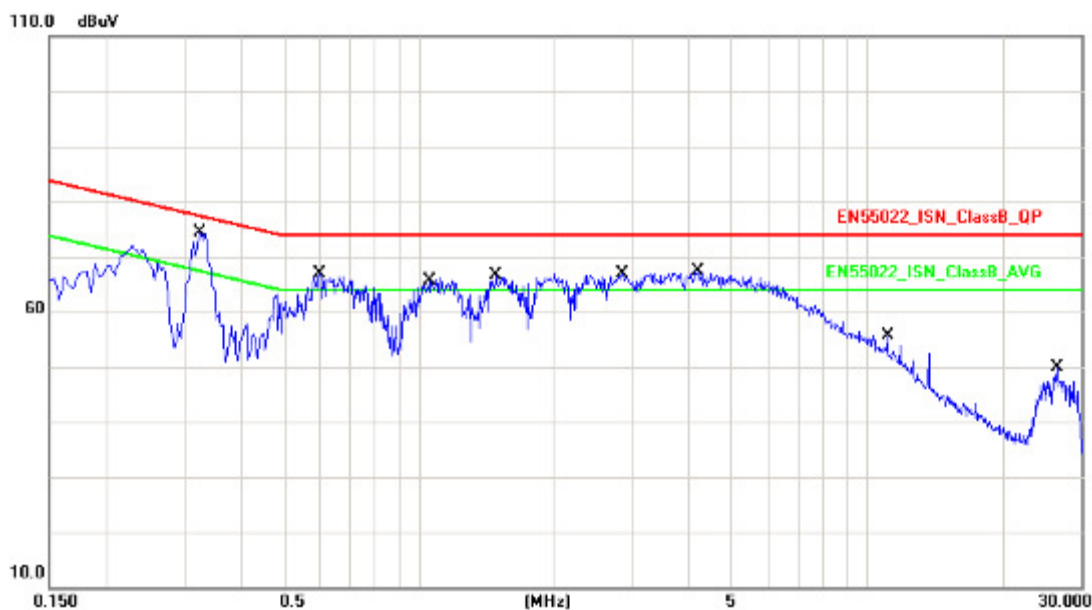
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Seben



4.5.2 Conducted Emission for Telecommunication Port Test Data

Test Mode :	Mode 1: Full system for PI-SFW401L with Adapter #1 (LAN 10Mbps+POE)		
AC Power :	AC 230V/50Hz	Phase :	10Mbps
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3260	19.62	56.58	76.20	78.97	-2.77	QP
2	0.3260	19.62	45.70	65.32	68.97	-3.65	AVG
3	0.6020	19.58	44.76	64.34	74.00	-9.66	QP
4	0.6020	19.58	35.08	54.66	64.00	-9.34	AVG
5	1.0620	19.29	43.50	62.79	74.00	-11.21	QP
6	1.0620	19.29	34.72	54.01	64.00	-9.99	AVG
7	1.4900	19.25	43.65	62.90	74.00	-11.10	QP
8	1.4900	19.25	34.31	53.56	64.00	-10.44	AVG
9	2.8460	19.34	43.67	63.01	74.00	-10.99	QP
10	2.8460	19.34	34.20	53.54	64.00	-10.46	AVG
11	4.2060	19.56	43.49	63.05	74.00	-10.95	QP
12	4.2060	19.56	33.99	53.55	64.00	-10.45	AVG
13	11.0860	19.56	29.62	49.18	74.00	-24.82	QP
14	11.0860	19.56	22.31	41.87	64.00	-22.13	AVG
15	26.4700	19.80	25.53	45.33	74.00	-28.67	QP
16	26.4700	19.80	21.26	41.06	64.00	-22.94	AVG

Note: Measurement Level = Reading Level + Correct Factor



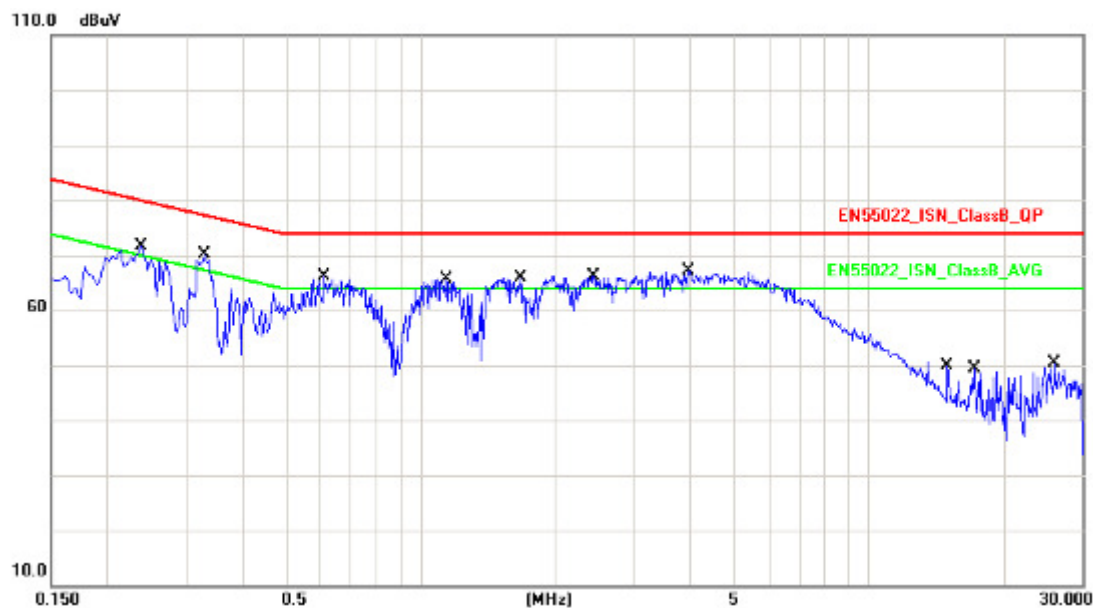
Test Mode : Mode 2: Full system for PI-SFW401L with Adapter #1 (LAN 100Mbps+POE)

AC Power : AC 230V/50Hz Phase : 100Mbps

Equipment : Network Dome Camera Model No : PI-SFW401L

Temperature : 23°C Humidity : 55%

Pressure(mbar) : 1002 Date : 2015/06/10

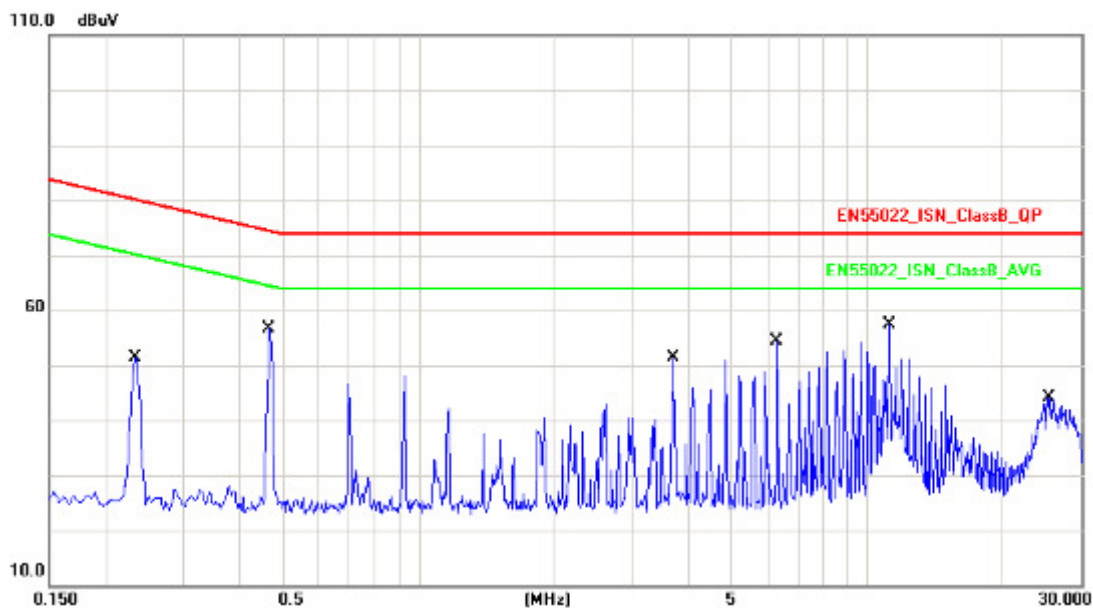


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2380	19.62	49.31	68.93	81.48	-12.55	QP
2	0.2380	19.62	39.51	59.13	71.48	-12.35	AVG
3	0.3300	19.62	56.52	76.14	78.86	-2.72	QP
4	0.3300	19.62	46.88	66.50	68.86	-2.36	AVG
5	0.6100	19.58	44.27	63.85	74.00	-10.15	QP
6	0.6100	19.58	34.83	54.41	64.00	-9.59	AVG
7	1.1460	19.28	43.29	62.57	74.00	-11.43	QP
8	1.1460	19.28	33.70	52.98	64.00	-11.02	AVG
9	1.6740	19.23	40.08	59.31	74.00	-14.69	QP
10	1.6740	19.23	28.81	48.04	64.00	-15.96	AVG
11	2.4420	19.27	43.89	63.16	74.00	-10.84	QP
12	2.4420	19.27	34.52	53.79	64.00	-10.21	AVG
13	3.9820	19.52	41.93	61.45	74.00	-12.55	QP
14	3.9820	19.52	31.72	51.24	64.00	-12.76	AVG
15	15.0260	19.25	22.46	41.71	74.00	-32.29	QP
16	15.0260	19.25	11.71	30.96	64.00	-33.04	AVG
17	17.2220	19.39	22.24	41.63	74.00	-32.37	QP
18	17.2220	19.39	8.99	28.38	64.00	-35.62	AVG
19	26.0140	19.80	27.22	47.02	74.00	-26.98	QP
20	26.0140	19.80	13.64	33.44	64.00	-30.56	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system for PI-SFW401L with Adapter #2 (LAN 10Mbps+POE)		
AC Power :	AC 230V/50Hz	Phase :	10Mbps
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

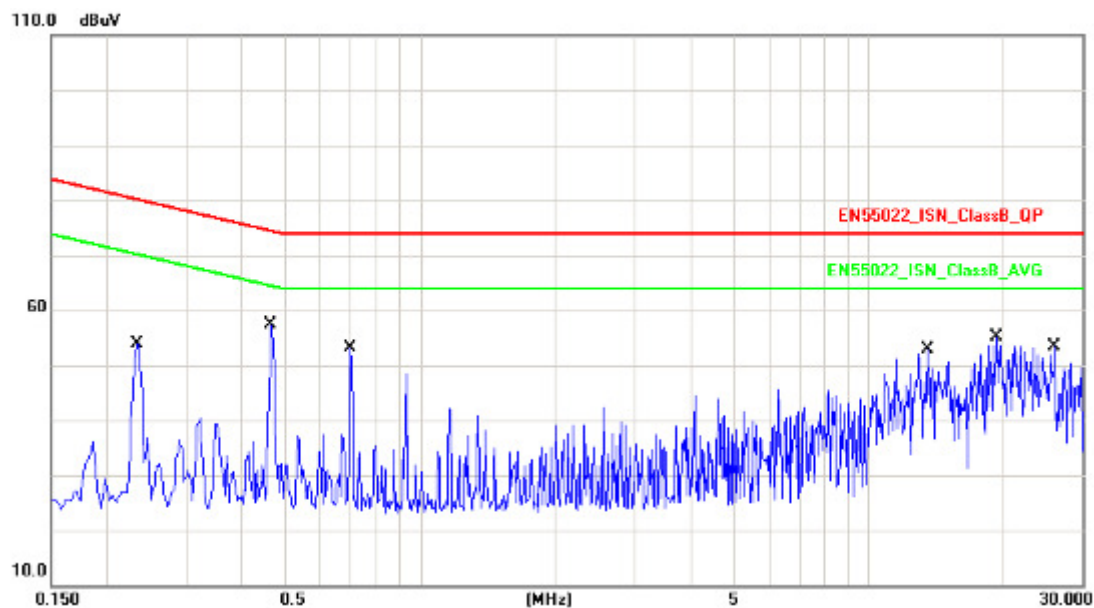


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2340	19.62	30.45	50.07	81.60	-31.53	QP
2	0.2340	19.62	29.39	49.01	71.60	-22.59	AVG
3	0.4660	19.60	36.52	56.12	74.97	-18.85	QP
4	0.4660	19.60	36.40	56.00	64.97	-8.97	AVG
5	3.6940	19.48	24.53	44.01	74.00	-29.99	QP
6	3.6940	19.48	17.29	36.77	64.00	-27.23	AVG
7	6.3060	19.49	28.92	48.41	74.00	-25.59	QP
8	6.3060	19.49	20.90	40.39	64.00	-23.61	AVG
9	11.1980	19.55	20.58	40.13	74.00	-33.87	QP
10	11.1980	19.55	15.56	35.11	64.00	-28.89	AVG
11	25.4660	19.81	18.44	38.25	74.00	-35.75	QP
12	25.4660	19.81	15.61	35.42	64.00	-28.58	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Full system for PI-SFW401L with Adapter #2 (LAN 100Mbps+POE)		
AC Power :	AC 230V/50Hz	Phase :	100Mbps
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2340	19.62	31.20	50.82	81.60	-30.78	QP
2	0.2340	19.62	30.14	49.76	71.60	-21.84	AVG
3	0.4660	19.60	36.96	56.56	74.97	-18.41	QP
4	0.4660	19.60	36.84	56.44	64.97	-8.53	AVG
5	0.6980	19.56	24.79	44.35	74.00	-29.65	QP
6	0.6980	19.56	21.82	41.38	64.00	-22.62	AVG
7	13.5580	19.36	27.88	47.24	74.00	-26.76	QP
8	13.5580	19.36	2.69	22.05	64.00	-41.95	AVG
9	19.3580	19.54	29.21	48.75	74.00	-25.25	QP
10	19.3580	19.54	3.65	23.19	64.00	-40.81	AVG
11	26.0140	19.80	27.55	47.35	74.00	-26.65	QP
12	26.0140	19.80	8.65	28.45	64.00	-35.55	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5: Full system for PI-SFW201L with Adapter #1 (LAN 10Mbps+POE)		
AC Power :	AC 230V/50Hz	Phase :	10Mbps
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2380	19.62	49.94	69.56	81.48	-11.92	QP
2	0.2380	19.62	40.15	59.77	71.48	-11.71	AVG
3	0.3260	19.62	56.89	76.51	78.97	-2.46	QP
4	0.3260	19.62	47.09	66.71	68.97	-2.26	AVG
5	0.6220	19.58	45.63	65.21	74.00	-8.79	QP
6	0.6220	19.58	36.02	55.60	64.00	-8.40	AVG
7	1.0220	19.30	41.72	61.02	74.00	-12.98	QP
8	1.0220	19.30	32.97	52.27	64.00	-11.73	AVG
9	2.4300	19.27	40.72	59.99	74.00	-14.01	QP
10	2.4300	19.27	31.20	50.47	64.00	-13.53	AVG
11	3.9020	19.51	39.46	58.97	74.00	-15.03	QP
12	3.9020	19.51	29.29	48.80	64.00	-15.20	AVG
13	14.9460	19.25	20.93	40.18	74.00	-33.82	QP
14	14.9460	19.25	14.82	34.07	64.00	-29.93	AVG
15	26.6700	19.79	25.77	45.56	74.00	-28.44	QP
16	26.6700	19.79	23.49	43.28	64.00	-20.72	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6: Full system for PI-SFW201L with Adapter #1 (LAN 100Mbps+POE)		
AC Power :	AC 230V/50Hz	Phase :	100Mbps
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

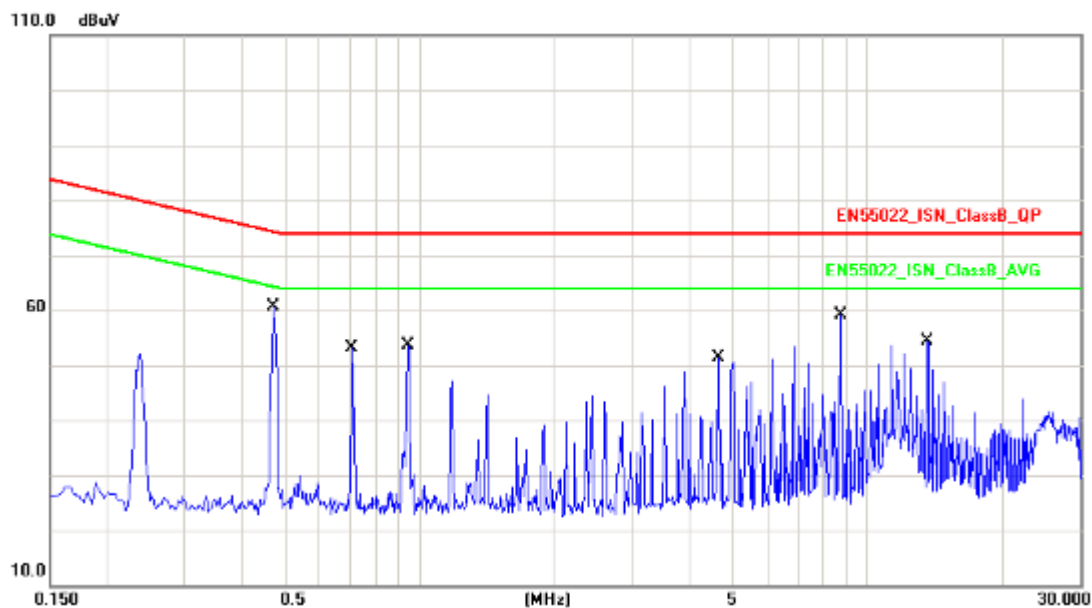


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2380	19.62	49.73	69.35	81.48	-12.13	QP
2	0.2380	19.62	39.98	59.60	71.48	-11.88	AVG
3	0.3300	19.62	56.80	76.42	78.86	-2.44	QP
4	0.3300	19.62	46.83	66.45	68.86	-2.41	AVG
5	0.6020	19.58	46.07	65.65	74.00	-8.35	QP
6	0.6020	19.58	36.06	55.64	64.00	-8.36	AVG
7	1.0300	19.30	41.61	60.91	74.00	-13.09	QP
8	1.0300	19.30	32.07	51.37	64.00	-12.63	AVG
9	3.2580	19.41	40.45	59.86	74.00	-14.14	QP
10	3.2580	19.41	31.12	50.53	64.00	-13.47	AVG
11	15.0220	19.25	24.55	43.80	74.00	-30.20	QP
12	15.0220	19.25	10.40	29.65	64.00	-34.35	AVG
13	25.9540	19.80	23.26	43.06	74.00	-30.94	QP
14	25.9540	19.80	12.14	31.94	64.00	-32.06	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 7: Full system for PI-SFW201L with Adapter #2 (LAN 10Mbps+POE)		
AC Power :	AC 230V/50Hz	Phase :	10Mbps
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10

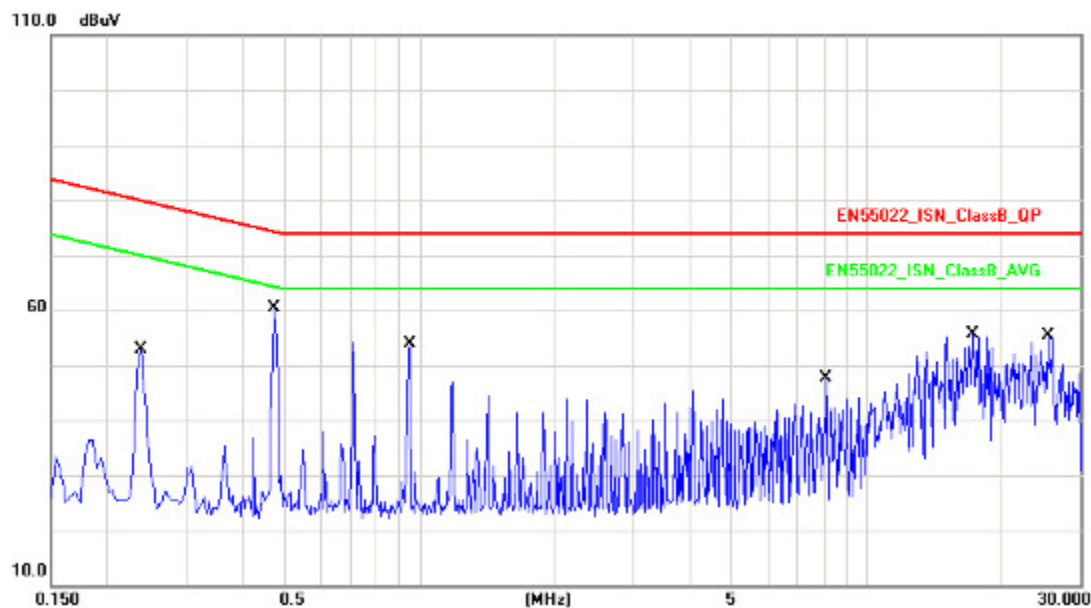


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.4740	19.60	40.39	59.99	74.74	-14.75	QP
2	0.4740	19.60	40.22	59.82	64.74	-4.92	AVG
3	0.7100	19.55	32.62	52.17	74.00	-21.83	QP
4	0.7100	19.55	30.05	49.60	64.00	-14.40	AVG
5	0.9460	19.34	33.67	53.01	74.00	-20.99	QP
6	0.9460	19.34	33.43	52.77	64.00	-11.23	AVG
7	4.6740	19.65	24.04	43.69	74.00	-30.31	QP
8	4.6740	19.65	16.95	36.60	64.00	-27.40	AVG
9	8.7500	19.55	31.70	51.25	74.00	-22.75	QP
10	8.7500	19.55	24.74	44.29	64.00	-19.71	AVG
11	13.6940	19.35	26.68	46.03	74.00	-27.97	QP
12	13.6940	19.35	19.06	38.41	64.00	-25.59	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 8: Full system for PI-SFW201L with Adapter #2 (LAN 100Mbps+POE)		
AC Power :	AC 230V/50Hz	Phase :	100Mbps
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temperature :	23°C	Humidity :	55%
Pressure(mbar) :	1002	Date :	2015/06/10



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2380	19.62	32.01	51.63	81.48	-29.85	QP
2	0.2380	19.62	31.55	51.17	71.48	-20.31	AVG
3	0.4740	19.60	40.46	60.06	74.74	-14.68	QP
4	0.4740	19.60	40.29	59.89	64.74	-4.85	AVG
5	0.9500	19.34	32.64	51.98	74.00	-22.02	QP
6	0.9500	19.34	32.43	51.77	64.00	-12.23	AVG
7	8.1220	19.47	23.15	42.62	74.00	-31.38	QP
8	8.1220	19.47	0.52	19.99	64.00	-44.01	AVG
9	17.2220	19.39	29.18	48.57	74.00	-25.43	QP
10	17.2220	19.39	3.05	22.44	64.00	-41.56	AVG
11	25.3420	19.81	29.58	49.39	74.00	-24.61	QP
12	25.3420	19.81	9.49	29.30	64.00	-34.70	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Seben



4.6. Test Photographs of Power Port

Front View



Rear View



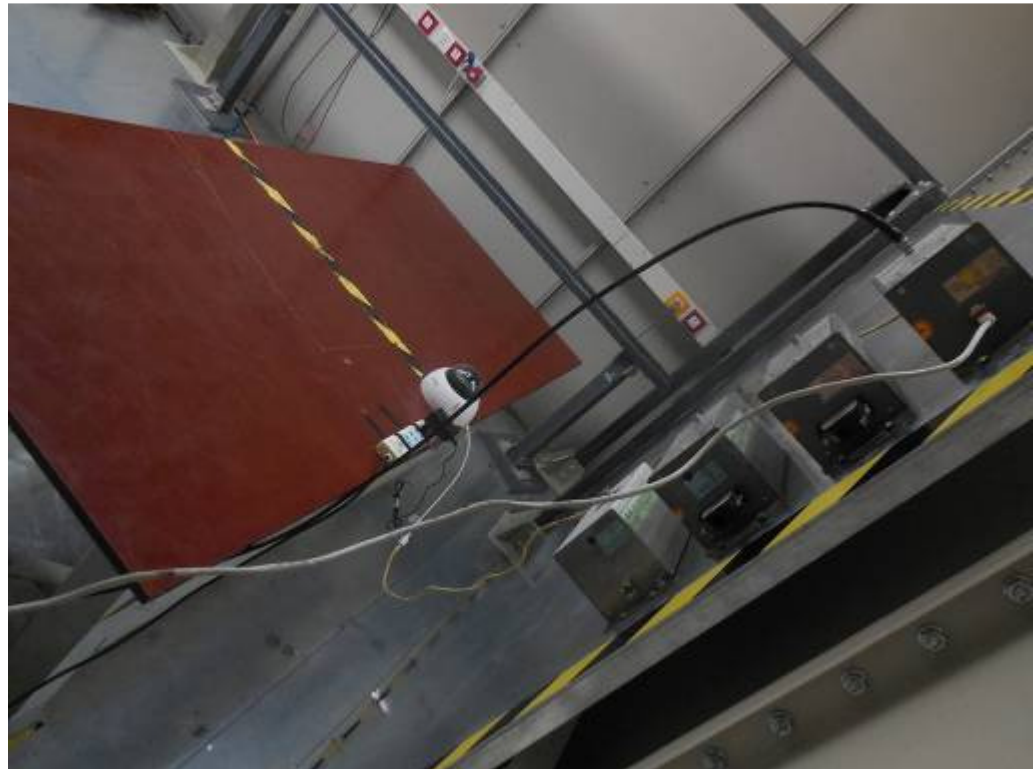


4.7. Test Photographs of Telecommunication Port

Front View



Rear View





5. Test of Radiated Emission

5.1. Test Limit

The EUT shall meet the limits of below Table when measured at the measuring distance R in accordance with the methods described in European Standard EN 55022 Clause 10. If the reading on the measuring receiver shows fluctuations close to the limit, the reading shall be observed for at least 15 s at each measurement frequency; the highest reading shall be recorded, with the exception of any brief isolated high reading, which shall be ignored.

Table 1 – Limits for radiated disturbance at a measuring distance of 10 m (dB(μV/m))

Frequency range(MHz)	Class A Equipment	Class B Equipment
	Quasi-peak	Quasi-peak
30 to 230	40	30
230 to 1000	47	37
NOTE 1 The lower limit shall apply at the transition frequency.		
NOTE 2 Additional provisions may be required for cases where interference occurs.		

The EUT shall meet the limits of below Table when measured in accordance with the method described in European Standard EN 55022 Clause 10 and the conditional testing procedure described below.

Table 2 – Limits for radiated disturbance at a measuring distance of 3 m (dB (μV/m))

Frequency range (MHz)	Class A Equipment		Class B Equipment	
	Avg.	Peak	Avg.	Peak
1 to 3	56	76	50	70
3 to 6	60	80	54	74
NOTE The lower limit applies at the transition frequency.				

• **Conditional testing procedure:**

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

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

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

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

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

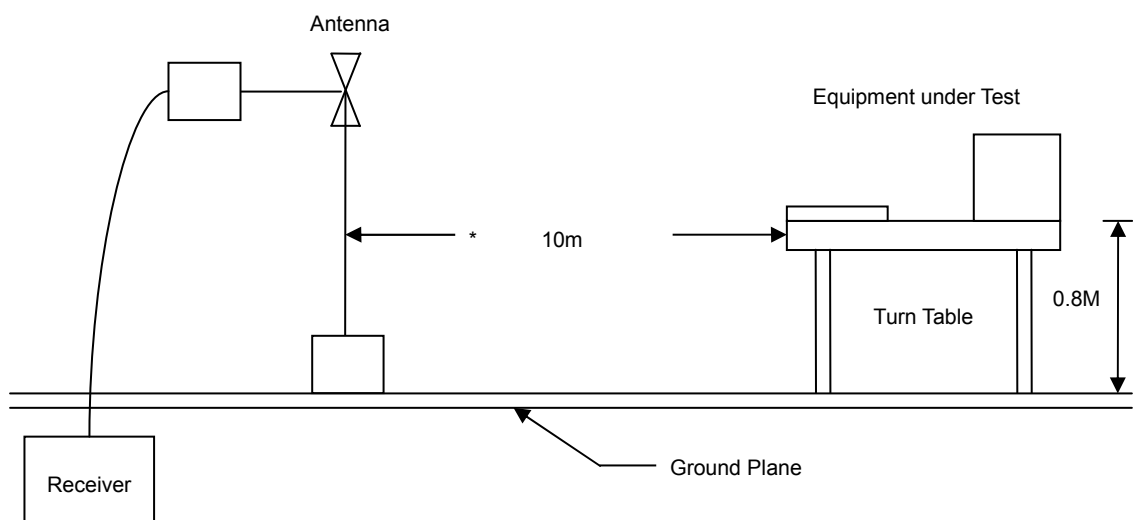


5.2. Test Procedures

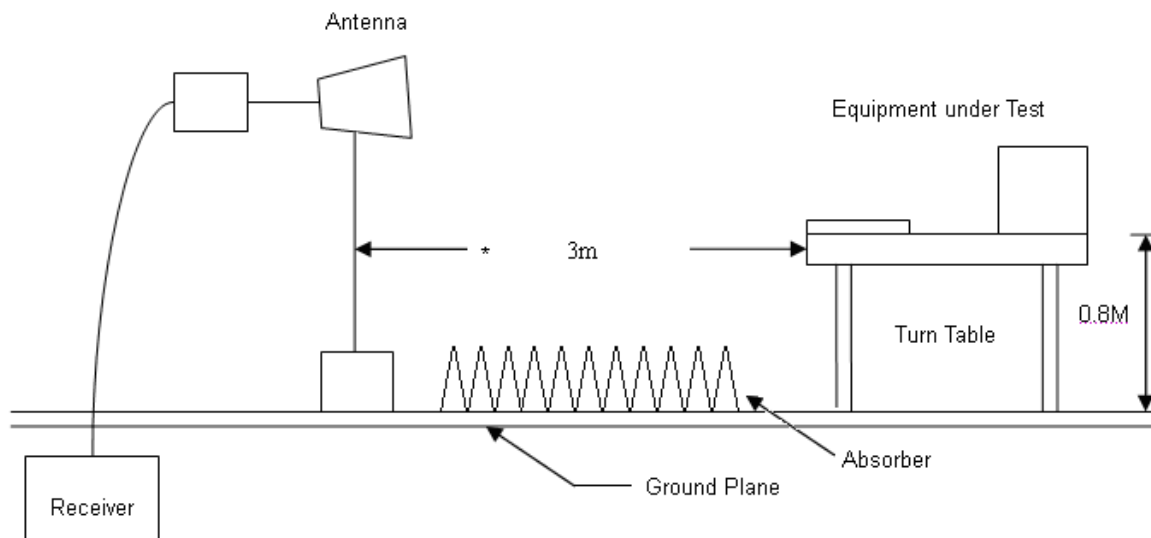
- The EUT was placed on a rotatable table top 0.8 meter above ground.
- The EUT was set 3/10 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
- The table was rotated 360 degrees to determine the position of the highest radiation.
- The antenna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

5.3. Typical Test Setup

Below 1GHz Test Setup



Above 1GHz Test Setup



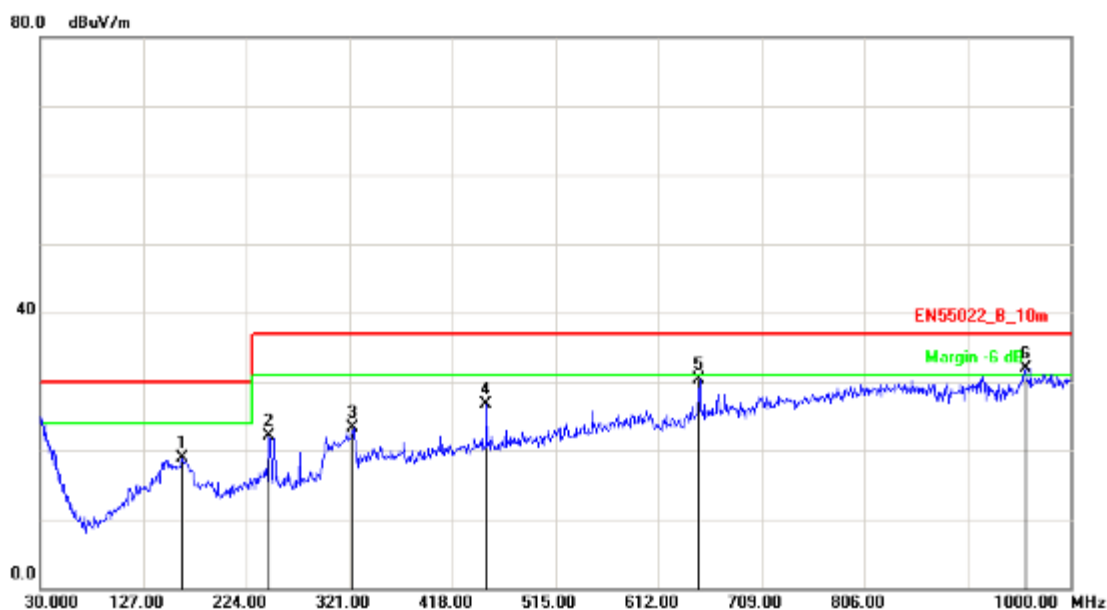
5.4. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI7	100968	2015.03.29	2016.03.28
Preamplifier	Agilent	87405B	My39500554	2015.03.29	2016.03.28
Preamplifier	Agilent	8449B	3008A02342	2015.03.29	2016.03.28
Bilog Antenna	Sunol Science	JB1	A072414-3	2014.08.05	2015.08.04
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2015.04.20	2016.04.19
Spectrum Analyzer	R&S	FSP40	100324	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-001	2015.04.02	2016.04.01
EZ-EMC	Fala	Ver CT3A1	N/A	N/A	N/A



5.5. Test Result and Data (30MHz ~ 1GHz)

Test Mode :	Mode 1: Full system for PI-SFW401L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

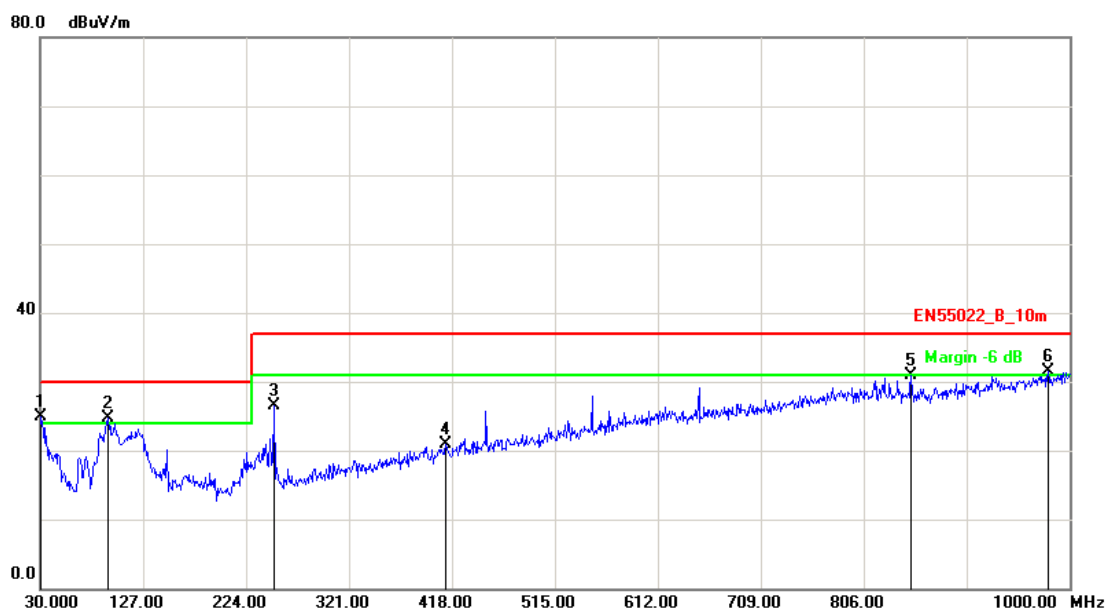


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	163.8600	-11.11	29.97	18.86	30.00	-11.14	QP	100	336
2	245.3400	-9.26	31.32	22.06	37.00	-14.94	QP	100	9
3	324.8799	-7.17	30.51	23.34	37.00	-13.66	QP	200	226
4	450.0099	-3.69	30.37	26.68	37.00	-10.32	QP	200	115
5	650.7998	0.59	29.64	30.23	37.00	-6.77	QP	118	87
6	957.3200	5.12	26.86	31.98	37.00	-5.02	QP	400	124

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system for PI-SFW401L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

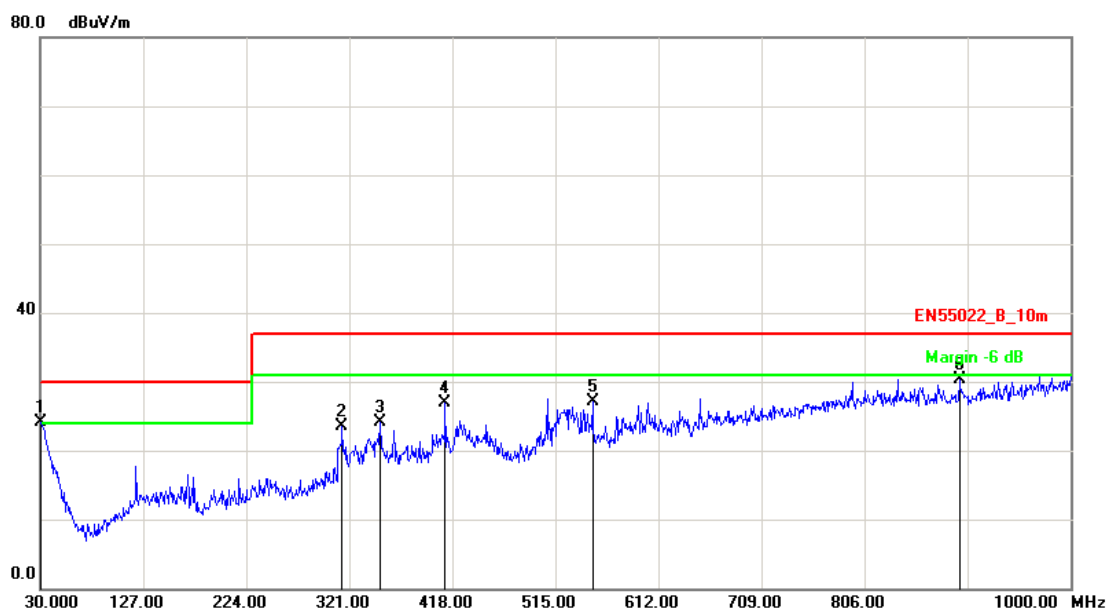


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9699	-1.20	26.11	24.91	30.00	-5.09	QP	400	229
2	94.0199	-14.56	39.21	24.65	30.00	-5.35	QP	100	98
3	250.1899	-9.45	36.02	26.57	37.00	-10.43	QP	205	21
4	412.1800	-4.52	25.35	20.83	37.00	-16.17	QP	200	121
5	850.6200	3.77	27.09	30.86	37.00	-6.14	QP	200	87
6	979.6299	5.52	25.92	31.44	37.00	-5.56	QP	118	124

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for PI-SFW401L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

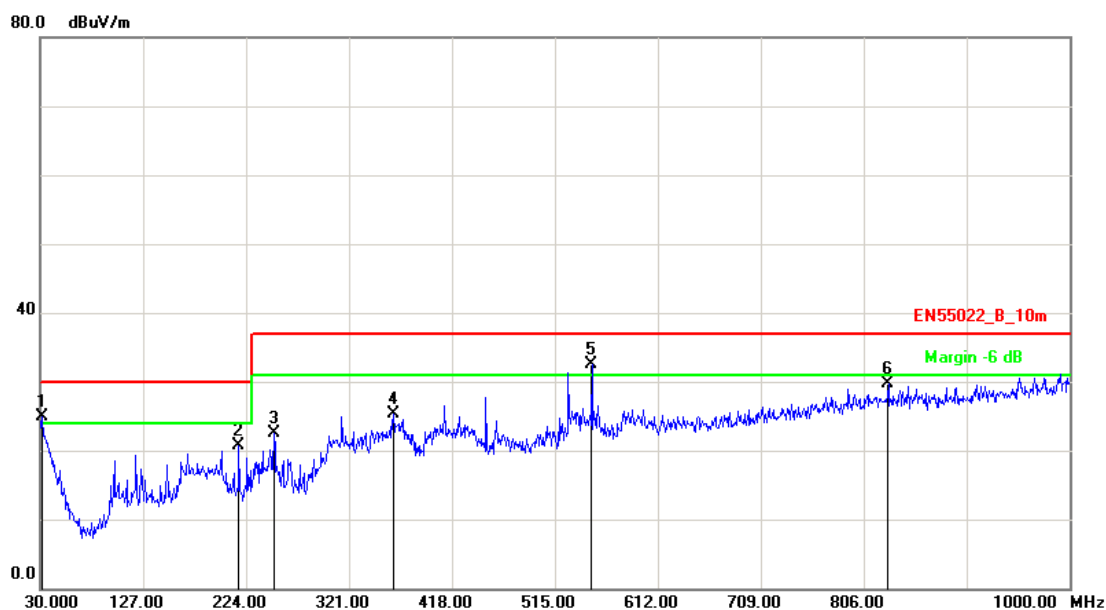


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9700	-1.20	25.28	24.08	30.00	-5.92	QP	100	228
2	314.2100	-7.51	30.96	23.45	37.00	-13.55	QP	100	353
3	350.1000	-6.37	30.45	24.08	37.00	-12.92	QP	100	353
4	411.2100	-4.54	31.35	26.81	37.00	-10.19	QP	100	277
5	549.9200	-1.39	28.51	27.12	37.00	-9.88	QP	100	277
6	895.2400	4.08	26.29	30.37	37.00	-6.63	QP	100	286

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for PI-SFW401L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

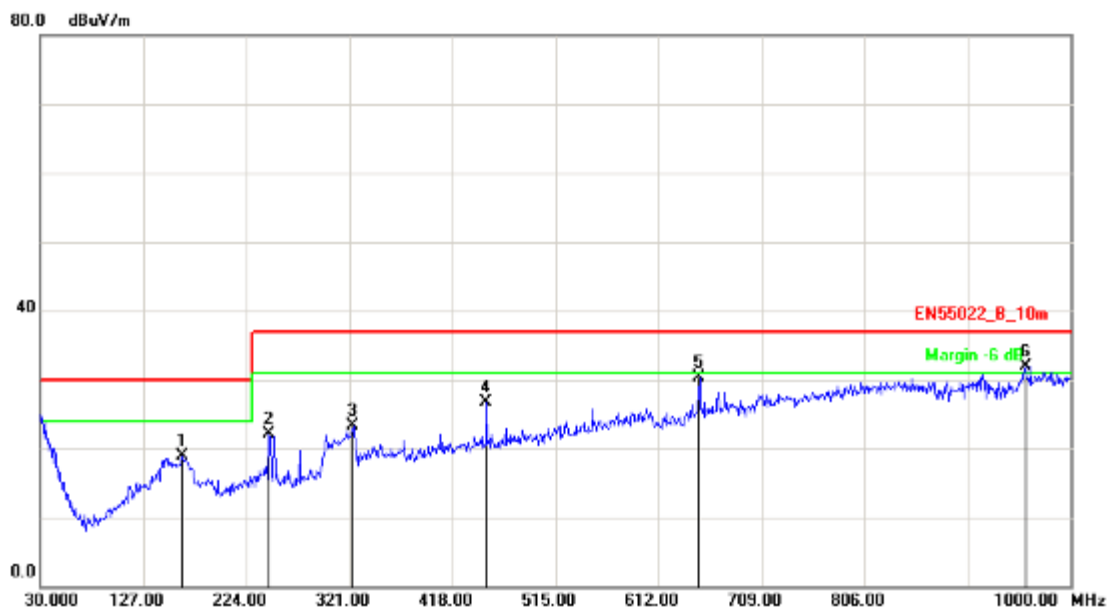


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	31.9400	-1.64	26.52	24.88	30.00	-5.12	QP	100	115
2	217.2100	-10.86	31.50	20.64	30.00	-9.36	QP	100	62
3	250.1899	-9.45	32.01	22.56	37.00	-14.44	QP	200	333
4	362.7099	-5.97	31.20	25.23	37.00	-11.77	QP	200	229
5	549.9199	-1.39	33.87	32.48	37.00	-4.52	QP	114	87
6	829.2799	3.63	26.03	29.66	37.00	-7.34	QP	400	154

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system for PI-SFW401L with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

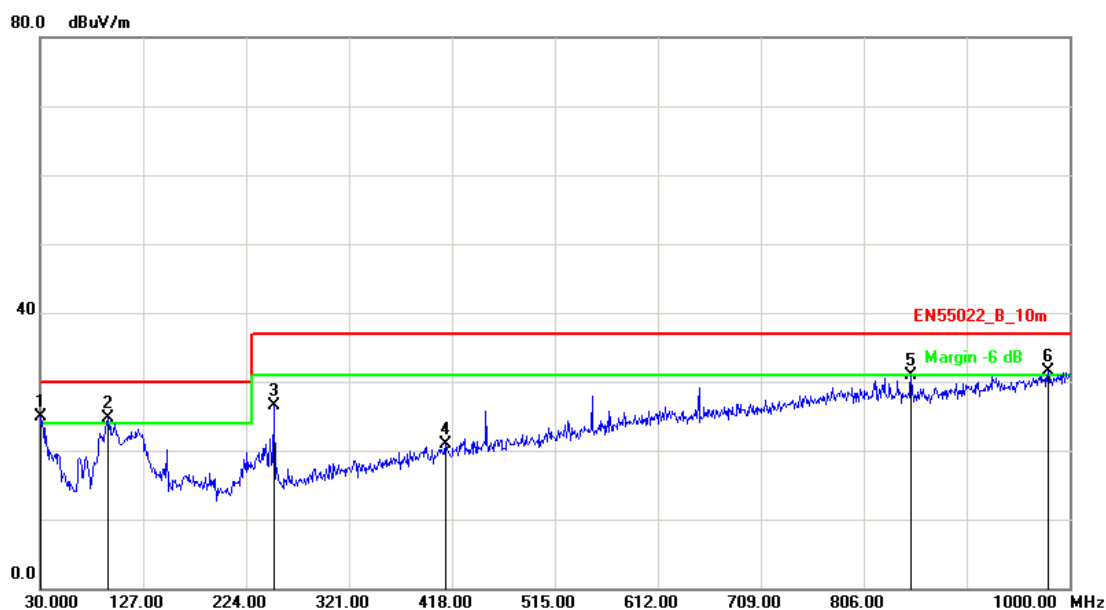


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	163.8600	-11.11	29.97	18.86	30.00	-11.14	QP	100	336
2	245.3400	-9.26	31.32	22.06	37.00	-14.94	QP	100	9
3	324.8798	-7.17	30.51	23.34	37.00	-13.66	QP	200	226
4	450.0099	-3.69	30.37	26.68	37.00	-10.32	QP	200	115
5	650.7998	0.59	29.64	30.23	37.00	-6.77	QP	118	87
6	957.3200	5.12	26.86	31.98	37.00	-5.02	QP	400	124

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system for PI-SFW401L with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

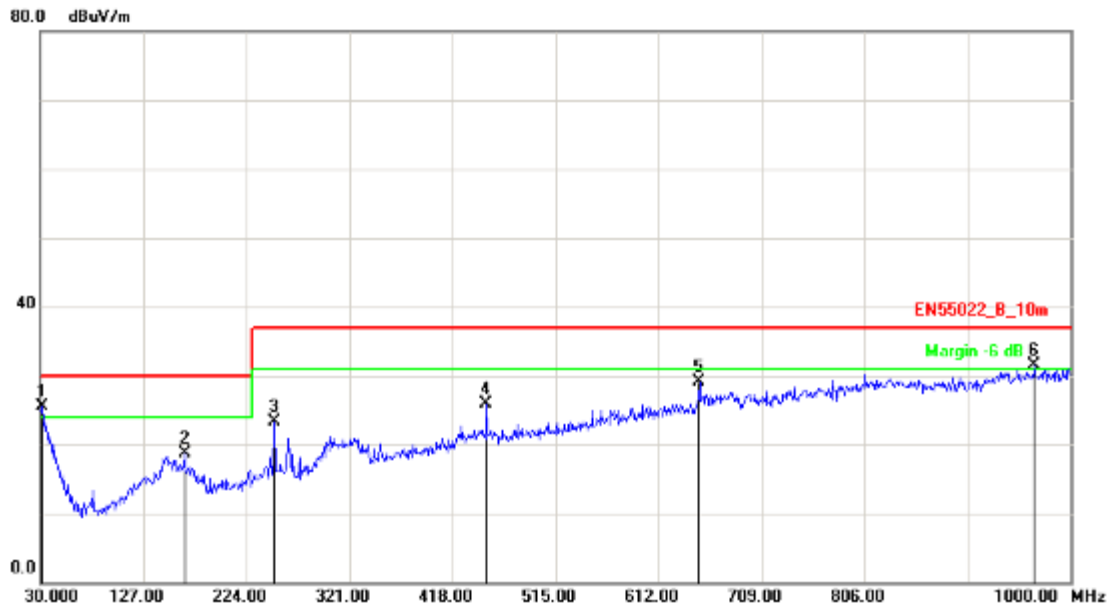


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9699	-1.20	26.11	24.91	30.00	-5.09	QP	400	229
2	94.0199	-14.56	39.21	24.65	30.00	-5.35	QP	100	98
3	250.1899	-9.45	36.02	26.57	37.00	-10.43	QP	205	21
4	412.1800	-4.52	25.35	20.83	37.00	-16.17	QP	200	121
5	850.6200	3.77	27.09	30.86	37.00	-6.14	QP	200	87
6	979.6299	5.52	25.92	31.44	37.00	-5.56	QP	118	124

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Full system for PI-SFW201L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

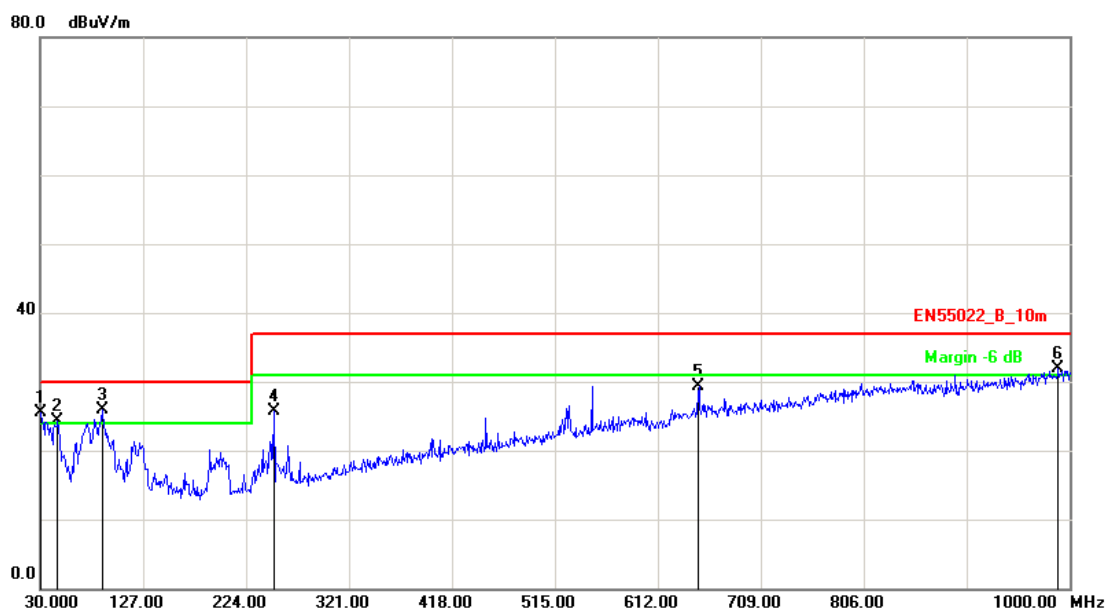


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	31.9400	-1.64	27.07	25.43	30.00	-4.57	QP	400	262
2	165.8000	-11.29	30.02	18.73	30.00	-11.27	QP	100	339
3	250.1897	-9.45	32.67	23.22	37.00	-13.78	QP	200	115
4	450.0099	-3.69	29.51	25.82	37.00	-11.18	QP	100	98
5	650.7998	0.59	28.58	29.17	37.00	-7.83	QP	100	7
6	966.0498	5.28	26.29	31.57	37.00	-5.43	QP	400	124

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Full system for PI-SFW201L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

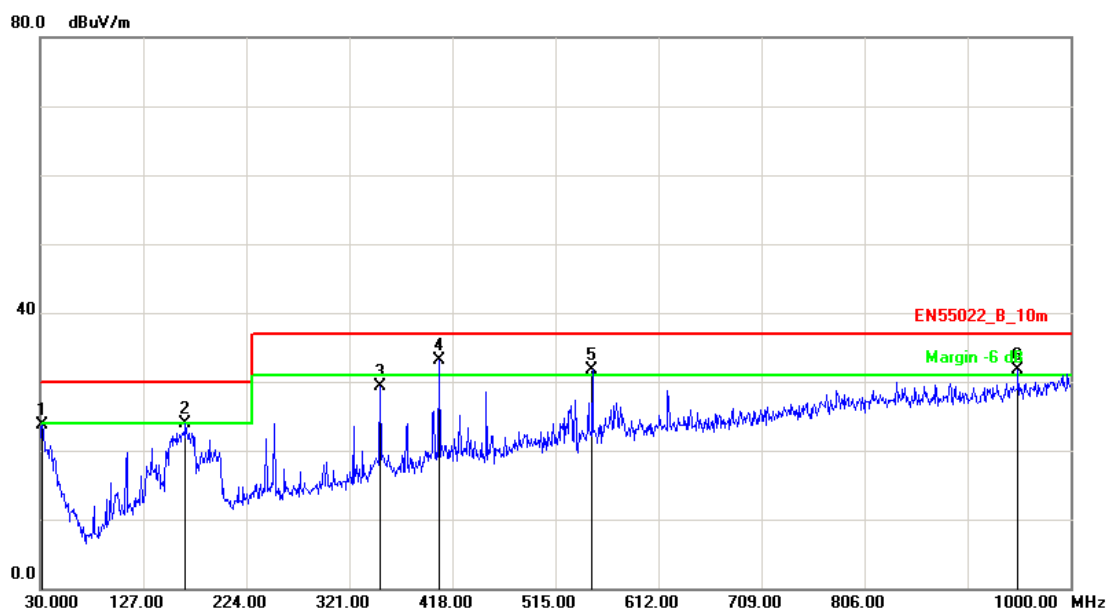


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.0000	-0.76	26.29	25.53	30.00	-4.47	QP	100	99
2	46.4900	-8.49	32.76	24.27	30.00	-5.73	QP	200	125
3	88.2000	-15.31	41.22	25.91	30.00	-4.09	QP	100	87
4	250.1899	-9.45	35.22	25.77	37.00	-11.23	QP	141	118
5	650.7999	0.59	28.79	29.38	37.00	-7.62	QP	200	98
6	989.3300	5.69	26.30	31.99	37.00	-5.01	QP	187	125

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5: Full system for PI-SFW201L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

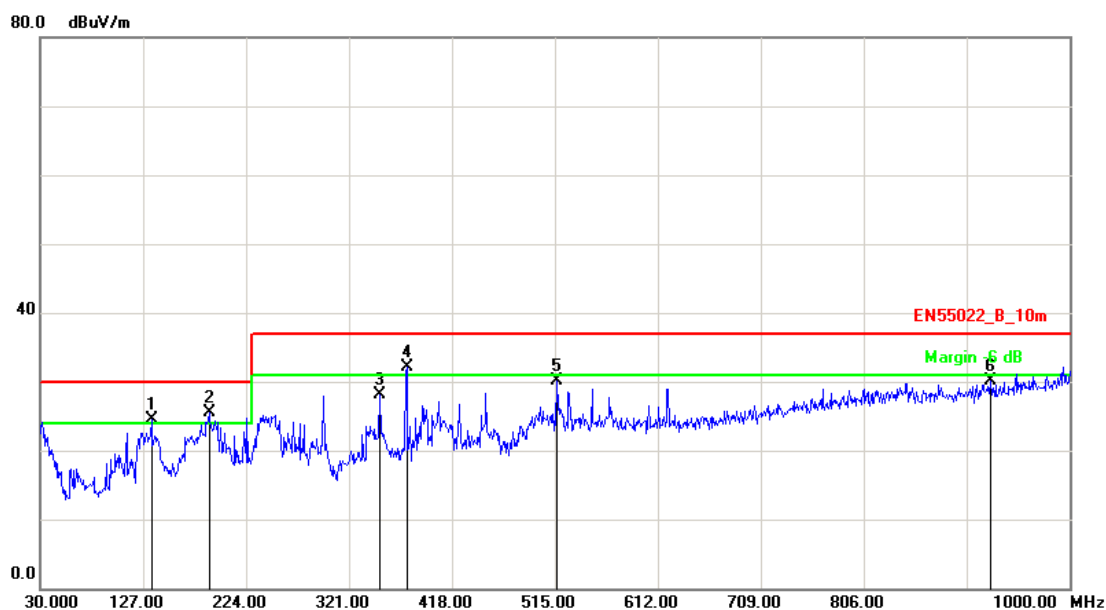


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	31.9400	-1.64	25.33	23.69	30.00	-6.31	QP	200	8
2	166.7700	-11.38	35.36	23.98	30.00	-6.02	QP	100	225
3	350.1000	-6.37	35.75	29.38	37.00	-7.62	QP	100	92
4	405.3899	-4.66	37.74	33.08	37.00	-3.92	QP	400	228
5	549.9199	-1.39	33.03	31.64	37.00	-5.36	QP	100	87
6	950.5299	5.00	26.74	31.74	37.00	-5.26	QP	200	154

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5: Full system for PI-SFW201L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

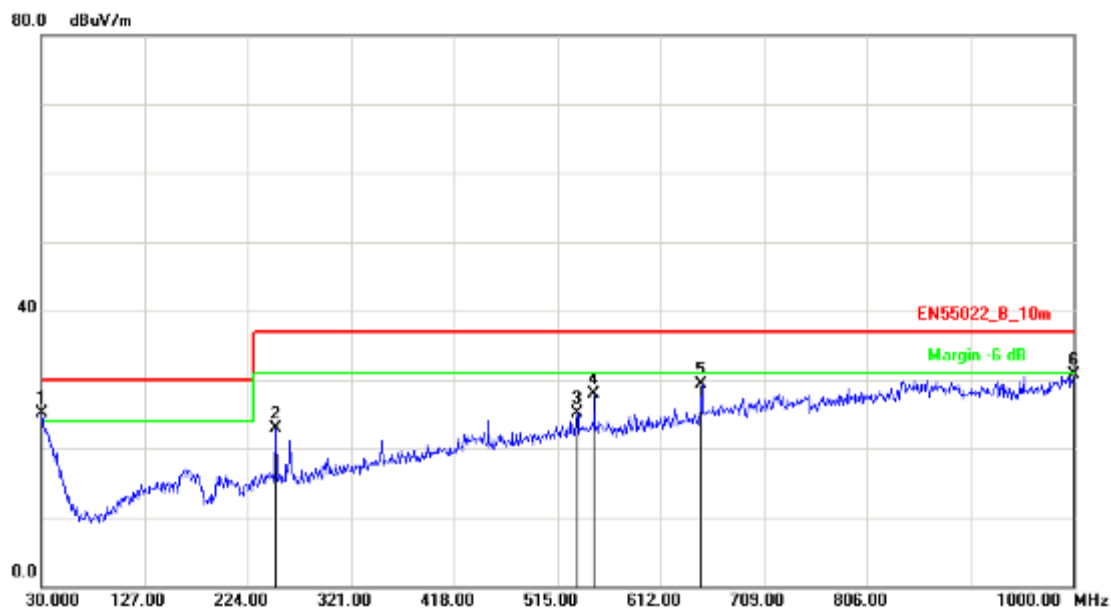


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	134.7600	-10.64	35.05	24.41	30.00	-5.59	QP	100	39
2	189.0800	-11.87	37.31	25.44	30.00	-4.56	QP	100	262
3	350.1000	-6.37	34.45	28.08	37.00	-8.92	QP	200	226
4	375.3200	-5.56	37.66	32.10	37.00	-4.90	QP	228	336
5	516.9400	-2.20	32.31	30.11	37.00	-6.89	QP	115	87
6	925.3100	4.56	25.59	30.15	37.00	-6.85	QP	200	154

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6: Full system for PI-SFW201L with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

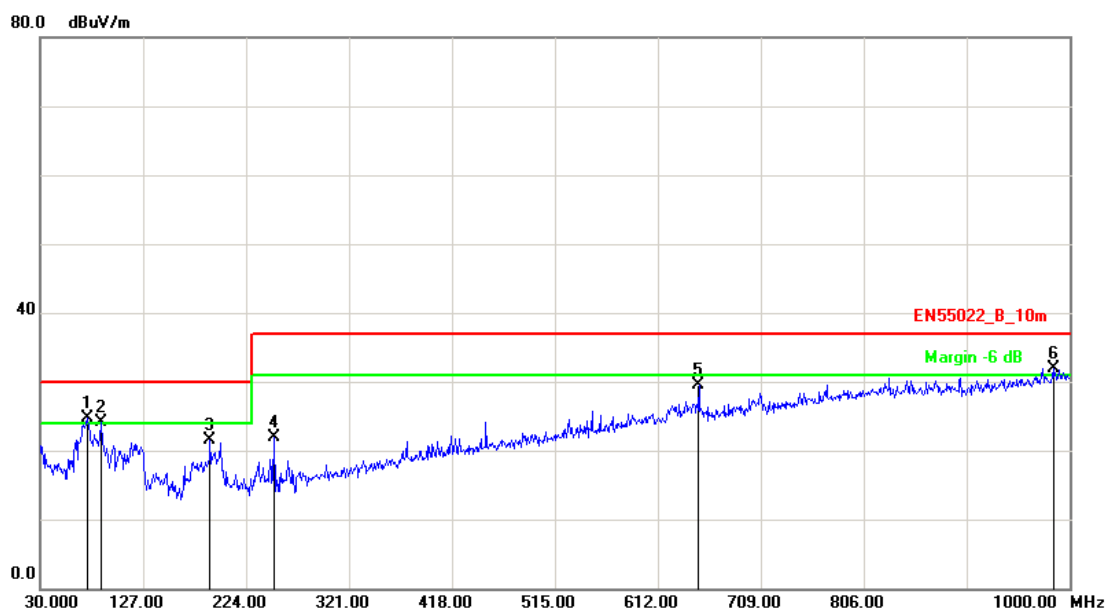


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9698	-1.20	26.35	25.15	30.00	-4.85	QP	100	20
2	250.1898	-9.45	32.33	22.88	37.00	-14.12	QP	100	336
3	533.4298	-1.79	26.83	25.04	37.00	-11.96	QP	100	115
4	549.9198	-1.39	29.39	28.00	37.00	-9.00	QP	200	262
5	650.7998	0.59	28.70	29.29	37.00	-7.71	QP	100	87
6	1000.0000	5.88	24.91	30.79	37.00	-6.21	QP	400	154

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6: Full system for PI-SFW201L with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	74.6200	-16.05	40.66	24.61	30.00	-5.39	QP	100	226
2	87.2300	-15.36	39.51	24.15	30.00	-5.85	QP	400	360
3	190.0500	-11.80	33.32	21.52	30.00	-8.48	QP	100	115
4	250.1898	-9.45	31.41	21.96	37.00	-15.04	QP	200	215
5	650.7998	0.59	28.93	29.52	37.00	-7.48	QP	200	8
6	984.4800	5.61	26.31	31.92	37.00	-5.08	QP	114	124

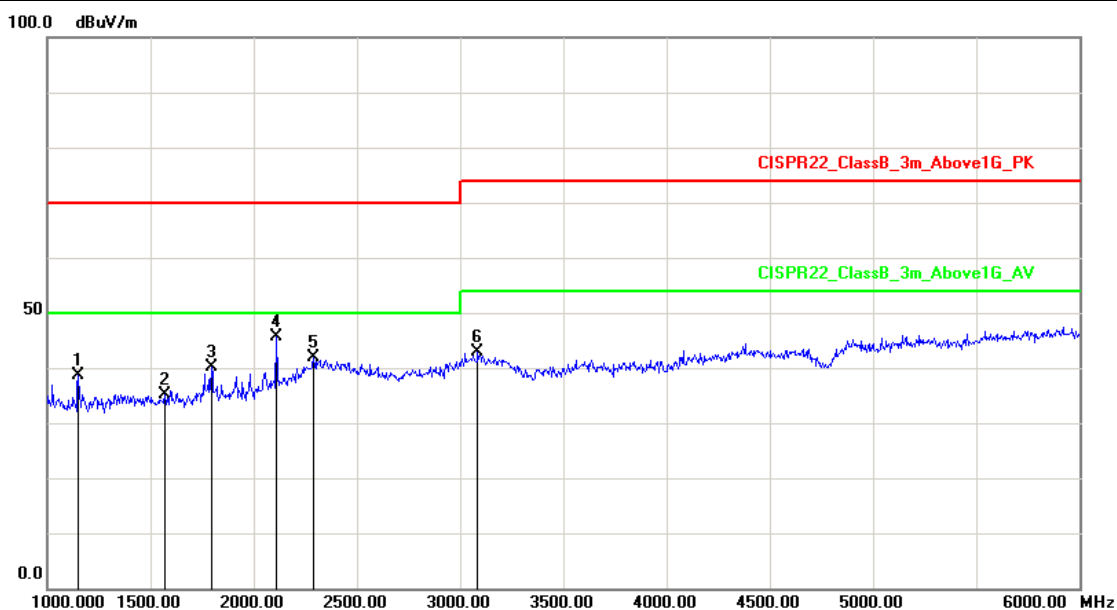
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Seben



5.6. Test Result and Data (1GHz ~ 6GHz)

Test Mode :	Mode 1: Full system for PI-SFW401L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

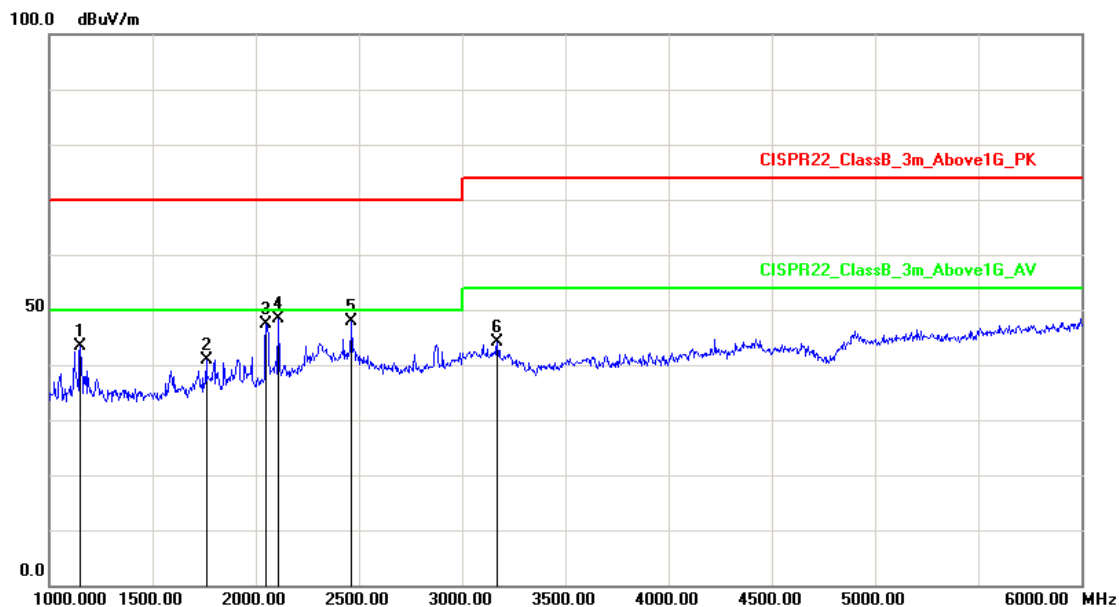


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1150.000	-14.80	53.50	38.70	70.00	-31.30	peak	100	243
2	1570.000	-12.11	47.13	35.02	70.00	-34.98	peak	100	4
3	1795.000	-10.64	50.67	40.03	70.00	-29.97	peak	100	349
4	2110.000	-6.73	52.41	45.68	70.00	-24.32	peak	100	236
5	2290.000	-3.20	44.96	41.76	70.00	-28.24	peak	100	140
6	3085.000	-2.41	45.28	42.87	74.00	-31.13	peak	100	89

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system for PI-SFW401L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

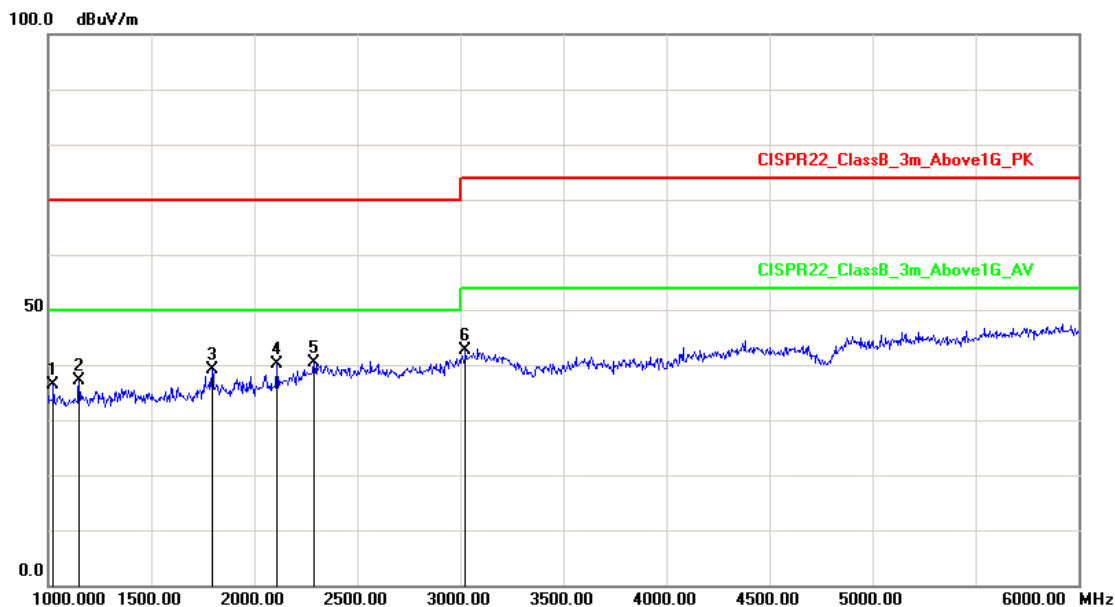


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1150.000	-14.80	58.14	43.34	70.00	-26.66	peak	100	18
2	1760.000	-10.96	51.83	40.87	70.00	-29.13	peak	100	48
3	2050.000	-7.93	55.27	47.34	70.00	-22.66	peak	100	85
4	2110.000	-6.73	55.20	48.47	70.00	-21.53	peak	100	24
5	2465.000	-3.65	51.45	47.80	70.00	-22.20	peak	100	359
6	3170.000	-2.41	46.54	44.13	74.00	-29.87	peak	100	359

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for PI-SFW401L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

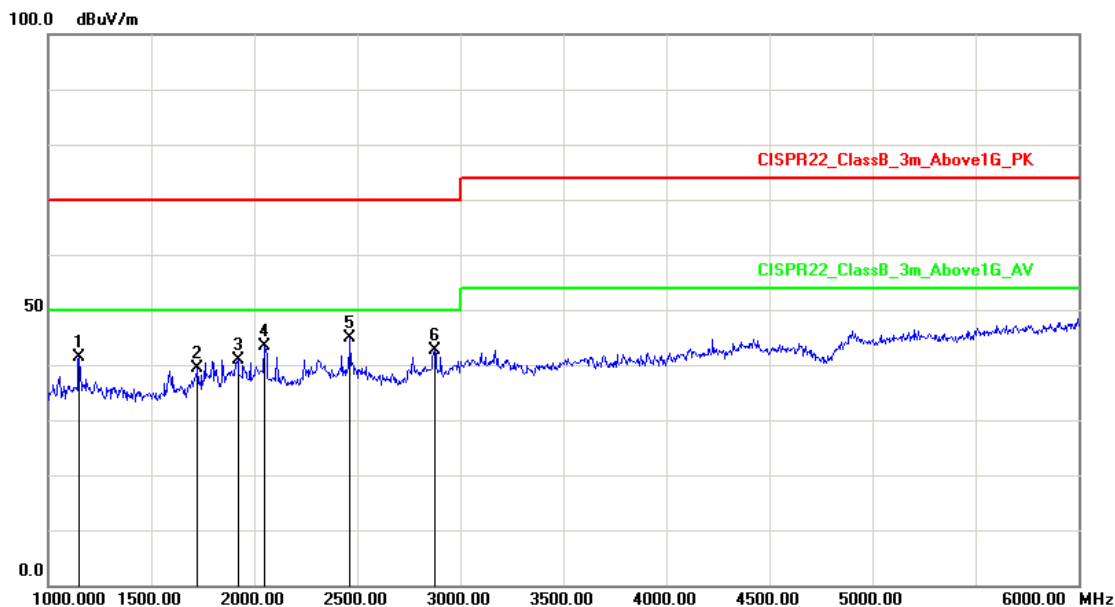


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1025.000	-15.40	51.73	36.33	70.00	-33.67	peak	100	63
2	1150.000	-14.80	52.00	37.20	70.00	-32.80	peak	200	2
3	1795.000	-10.64	49.67	39.03	70.00	-30.97	peak	112	228
4	2110.000	-6.73	46.91	40.18	70.00	-29.82	peak	100	339
5	2290.000	-3.20	43.46	40.26	70.00	-29.74	peak	100	87
6	3025.000	-2.55	45.07	42.52	74.00	-31.48	peak	100	154

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for PI-SFW401L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

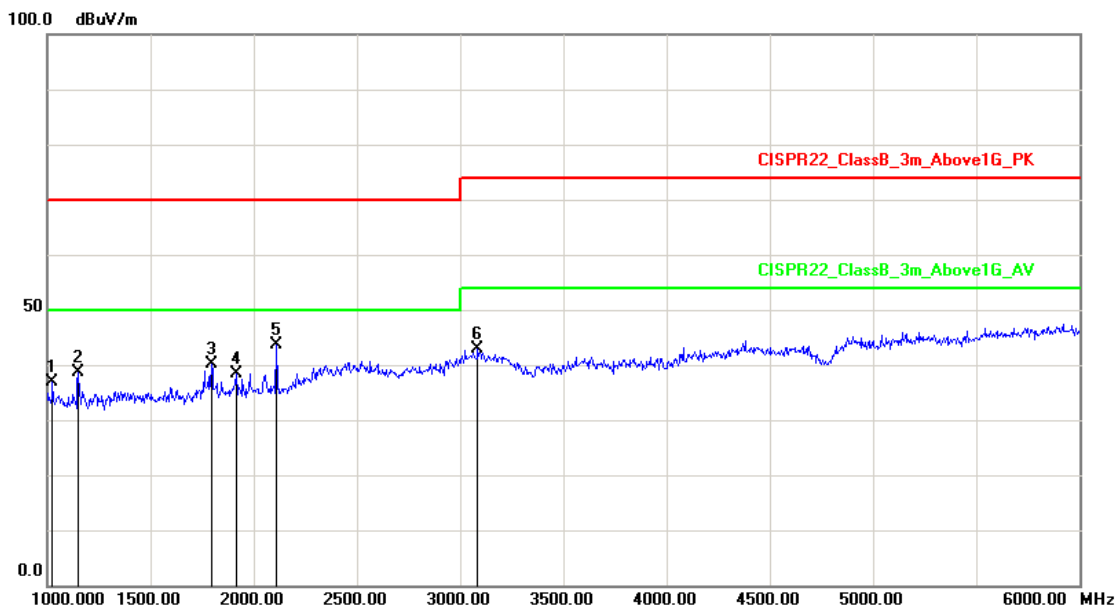


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1150.000	-14.80	56.14	41.34	70.00	-28.66	peak	200	39
2	1725.000	-11.28	50.72	39.44	70.00	-30.56	peak	200	228
3	1920.000	-9.67	50.58	40.91	70.00	-29.09	peak	100	282
4	2050.000	-7.93	51.27	43.34	70.00	-26.66	peak	114	226
5	2465.000	-3.65	48.45	44.80	70.00	-25.20	peak	100	87
6	2875.000	-4.18	46.93	42.75	70.00	-27.25	peak	100	124

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system for PI-SFW401L with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

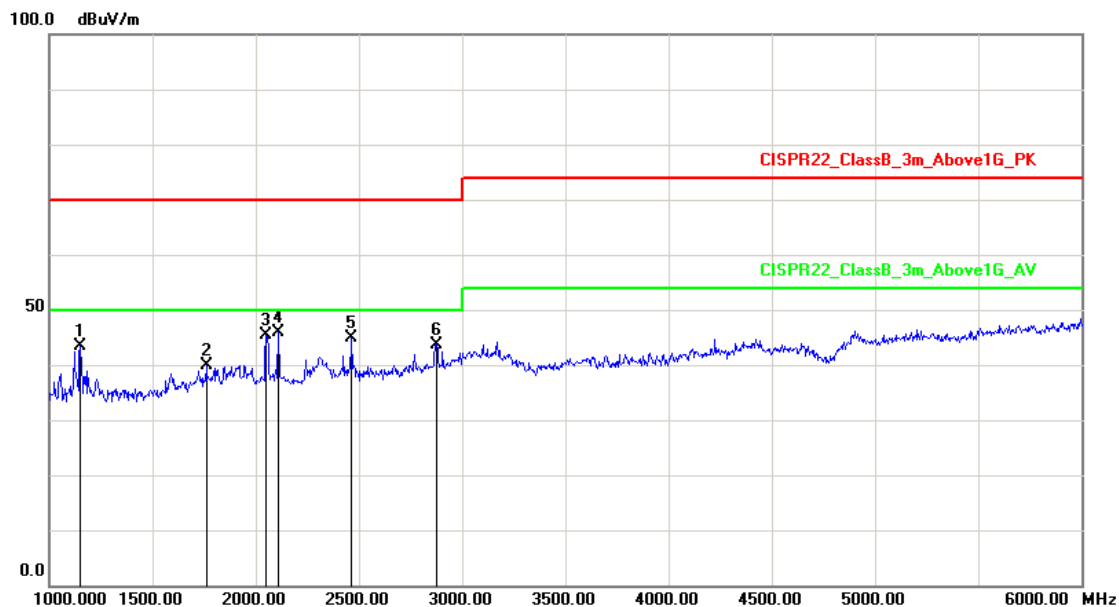


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1025.000	-15.40	52.23	36.83	70.00	-33.17	peak	100	339
2	1150.000	-14.80	53.50	38.70	70.00	-31.30	peak	100	262
3	1795.000	-10.64	50.67	40.03	70.00	-29.97	peak	100	115
4	1915.000	-9.71	48.00	38.29	70.00	-31.71	peak	200	2
5	2110.000	-6.73	50.41	43.68	70.00	-26.32	peak	100	7
6	3085.000	-2.41	45.28	42.87	74.00	-31.13	peak	100	154

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system for PI-SFW401L with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW401L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

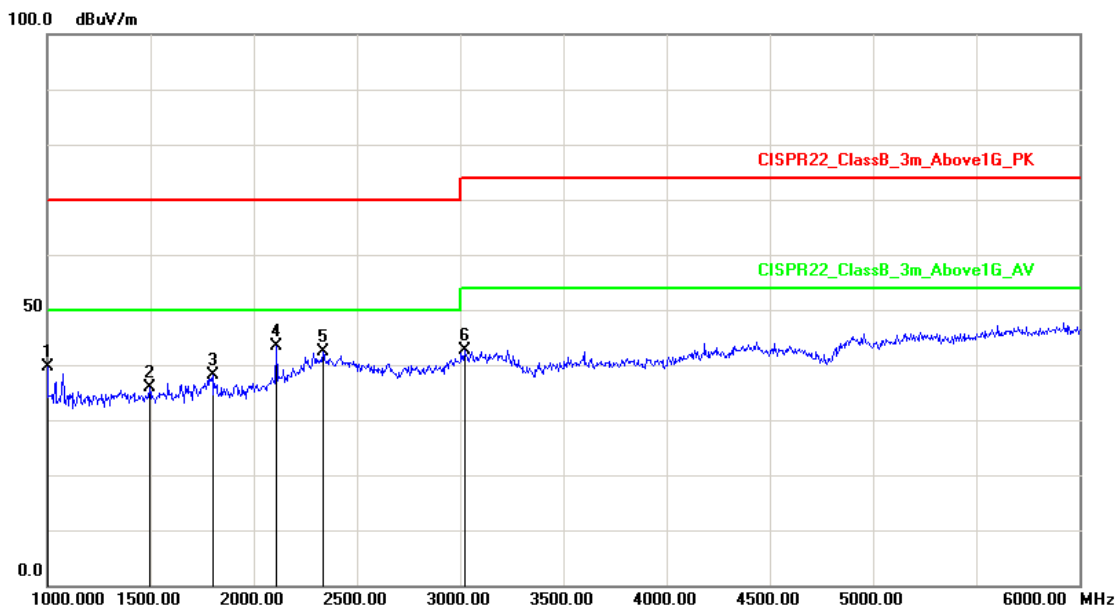


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1150.000	-14.80	58.14	43.34	70.00	-26.66	peak	200	2
2	1760.000	-10.96	50.83	39.87	70.00	-30.13	peak	115	98
3	2050.000	-7.93	53.27	45.34	70.00	-24.66	peak	100	339
4	2110.000	-6.73	52.70	45.97	70.00	-24.03	peak	100	226
5	2465.000	-3.65	48.45	44.80	70.00	-25.20	peak	200	87
6	2875.000	-4.18	47.93	43.75	70.00	-26.25	peak	158	124

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Full system for PI-SFW201L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

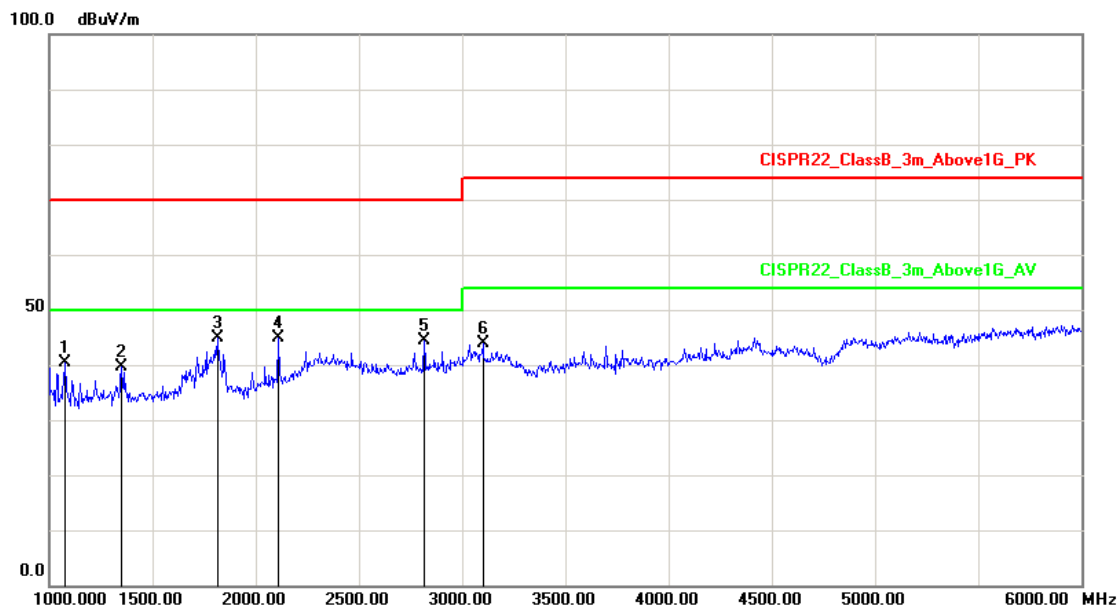


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1000.0000	-15.51	55.13	39.62	70.00	-30.38	peak	100	91
2	1495.000	-12.38	48.33	35.95	70.00	-34.05	peak	100	16
3	1800.000	-10.59	48.83	38.24	70.00	-31.76	peak	100	92
4	2110.000	-6.73	49.99	43.26	70.00	-26.74	peak	100	211
5	2335.000	-3.05	45.46	42.41	70.00	-27.59	peak	100	40
6	3020.000	-2.56	45.17	42.61	74.00	-31.39	peak	100	176

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Full system for PI-SFW201L with Adapter #1 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

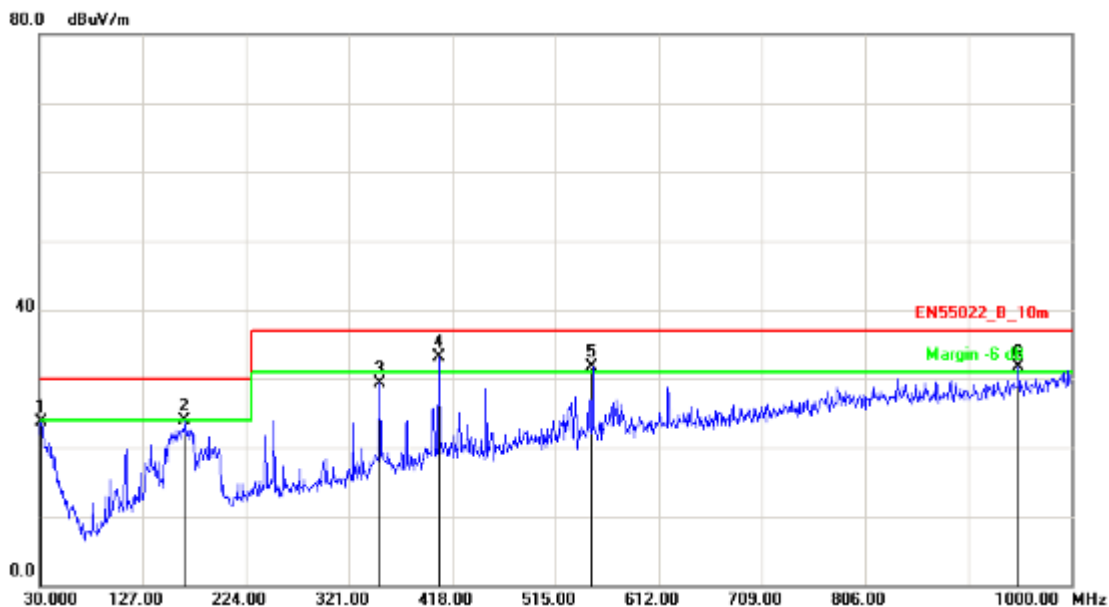


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1075.000	-15.19	55.56	40.37	70.00	-29.63	peak	100	359
2	1350.000	-13.00	52.57	39.57	70.00	-30.43	peak	100	256
3	1815.000	-10.48	55.39	44.91	70.00	-25.09	peak	100	270
4	2110.000	-6.73	51.63	44.90	70.00	-25.10	peak	100	83
5	2815.000	-4.32	48.79	44.47	70.00	-25.53	peak	100	8
6	3100.000	-2.37	46.32	43.95	74.00	-30.05	peak	100	321

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5: Full system for PI-SFW201L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

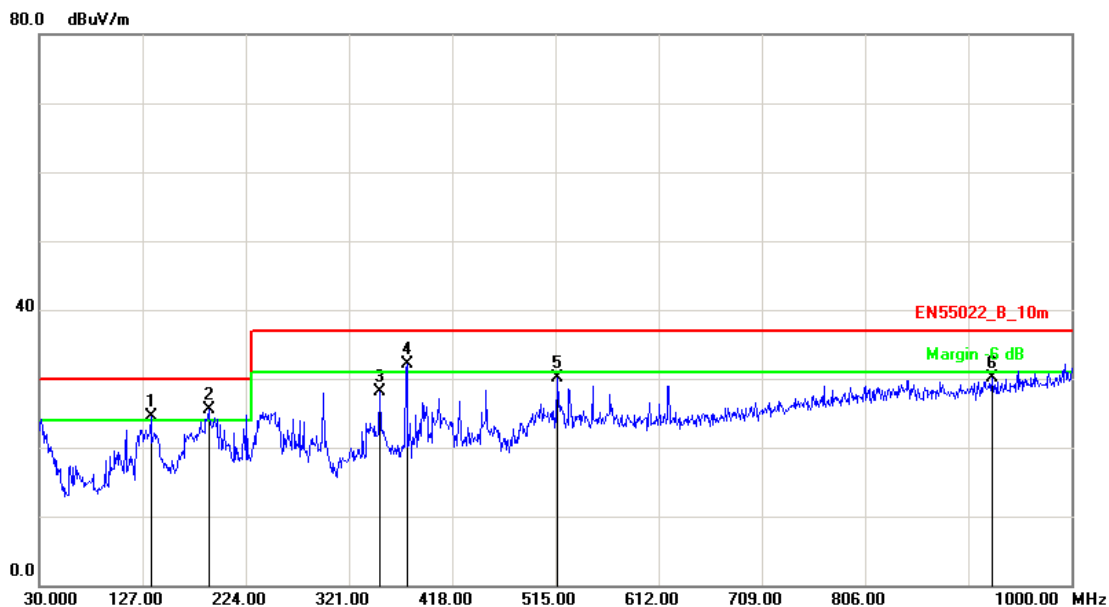


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	31.9400	-1.64	25.33	23.69	30.00	-6.31	QP	200	8
2	166.7700	-11.38	35.36	23.98	30.00	-6.02	QP	100	225
3	350.1000	-6.37	35.75	29.38	37.00	-7.62	QP	100	92
4	405.3899	-4.66	37.74	33.08	37.00	-3.92	QP	400	228
5	549.9199	-1.39	33.03	31.64	37.00	-5.36	QP	100	87
6	950.5299	5.00	26.74	31.74	37.00	-5.26	QP	200	154

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5: Full system for PI-SFW201L with Adapter #2 + POE		
AC Power :	AC 230V/50Hz	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

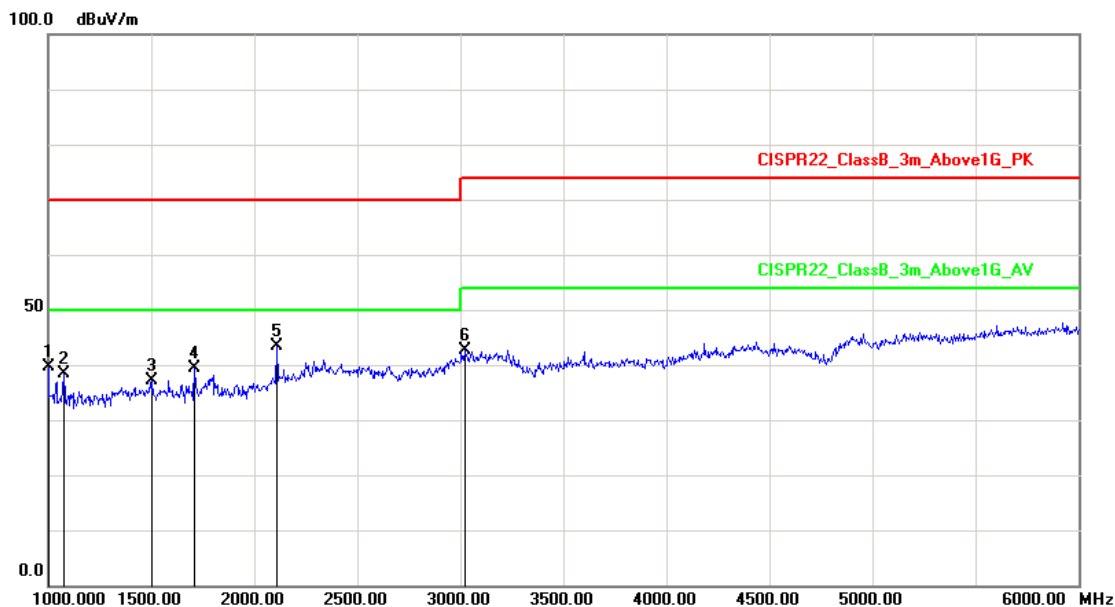


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	134.7600	-10.64	35.05	24.41	30.00	-5.59	QP	100	39
2	189.0800	-11.87	37.31	25.44	30.00	-4.56	QP	100	262
3	350.1000	-6.37	34.45	28.08	37.00	-8.92	QP	200	226
4	375.3200	-5.56	37.66	32.10	37.00	-4.90	QP	228	336
5	516.9400	-2.20	32.31	30.11	37.00	-6.89	QP	115	87
6	925.3100	4.56	25.59	30.15	37.00	-6.85	QP	200	154

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6: Full system for PI-SFW201L with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11

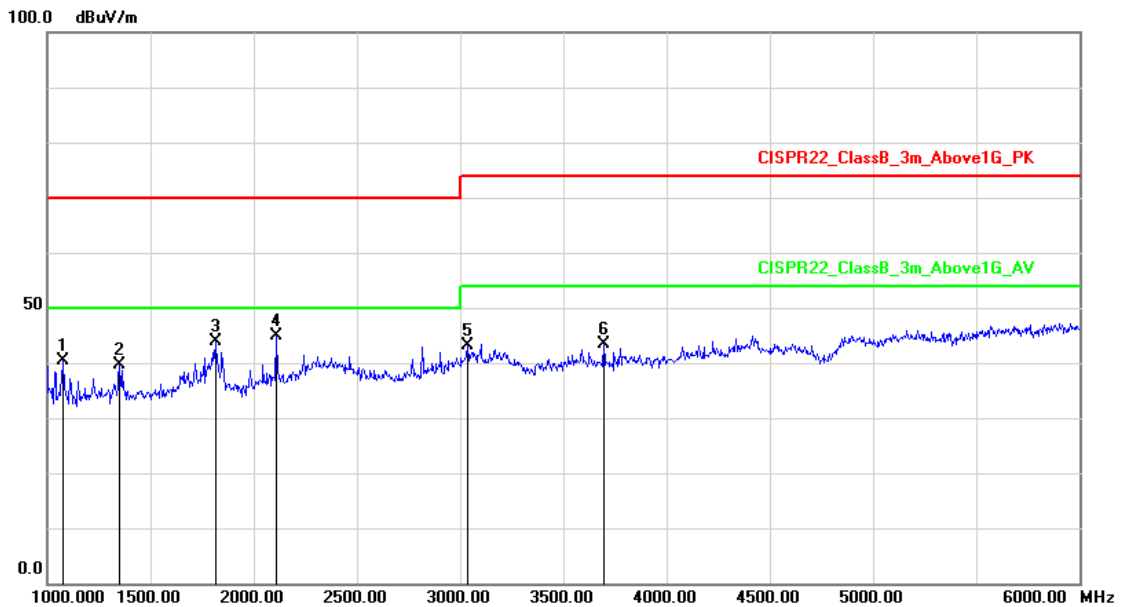


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1000.0000	-15.51	55.13	39.62	70.00	-30.38	peak	100	118
2	1075.000	-15.19	53.50	38.31	70.00	-31.69	peak	200	228
3	1505.000	-12.35	49.44	37.09	70.00	-32.91	peak	100	8
4	1710.000	-11.42	50.77	39.35	70.00	-30.65	peak	100	9
5	2110.000	-6.73	49.99	43.26	70.00	-26.74	peak	200	229
6	3020.000	-2.56	45.17	42.61	74.00	-31.39	peak	114	15

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6: Full system for PI-SFW201L with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	Network Dome Camera	Model No :	PI-SFW201L
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2015/06/11



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1075.000	-15.19	55.56	40.37	70.00	-29.63	peak	100	28
2	1350.000	-13.00	52.57	39.57	70.00	-30.43	peak	200	360
3	1815.000	-10.48	54.39	43.91	70.00	-26.09	peak	114	226
4	2110.000	-6.73	51.63	44.90	70.00	-25.10	peak	200	115
5	3035.000	-2.53	45.57	43.04	74.00	-30.96	peak	200	7
6	3695.000	-2.99	46.47	43.48	74.00	-30.52	peak	100	154

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Seben



5.7. Test Photographs (30MHz~1GHz)

Front View



Rear View



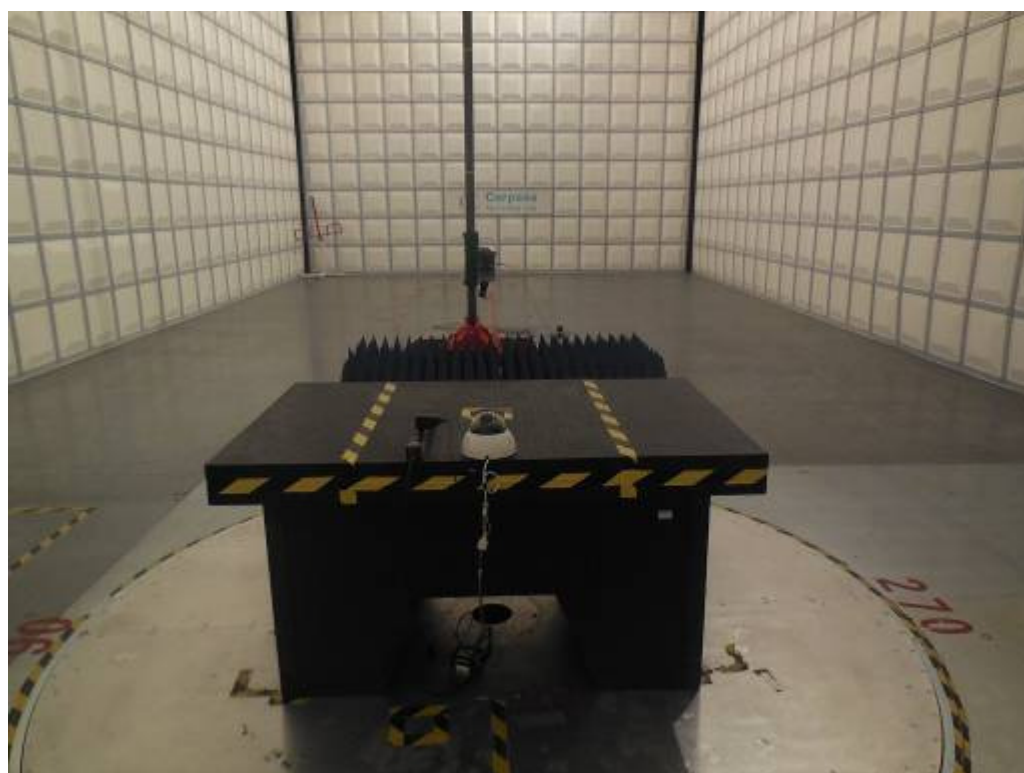


5.8. Test Photographs (1GHz~6GHz)

Front View



Rear View





6. Harmonics Test

6.1. Limits of Harmonics Current Measurement

Limits for Class A equipment

Harmonics Order n	Max. permissible harmonics current A	Harmonics Order n	Max. permissible harmonics 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	0.23x8/n
11	0.33		
13	0.21		
15≤n≤39	0.15x15/n		

(b) Limits for Class B equipment

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

(c) Limits for Class C equipment

Harmonics Order n	Maximum permissible harmonic current expressed as a percentage of the input current at the fundamental frequency %
2	2
3	$30 \cdot \lambda^*$
5	10
7	7
9	5
11<n<39 (odd harmonics only)	3

* λ is the circuit power factor

(d) Limits for Class D equipment

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

NOTE: According to section 7 of EN 61000-3-2, the above limits for all equipment except for lighting equipment having an active input power > 75 W and no limits apply for equipment with an active input power up to and including 75 W.



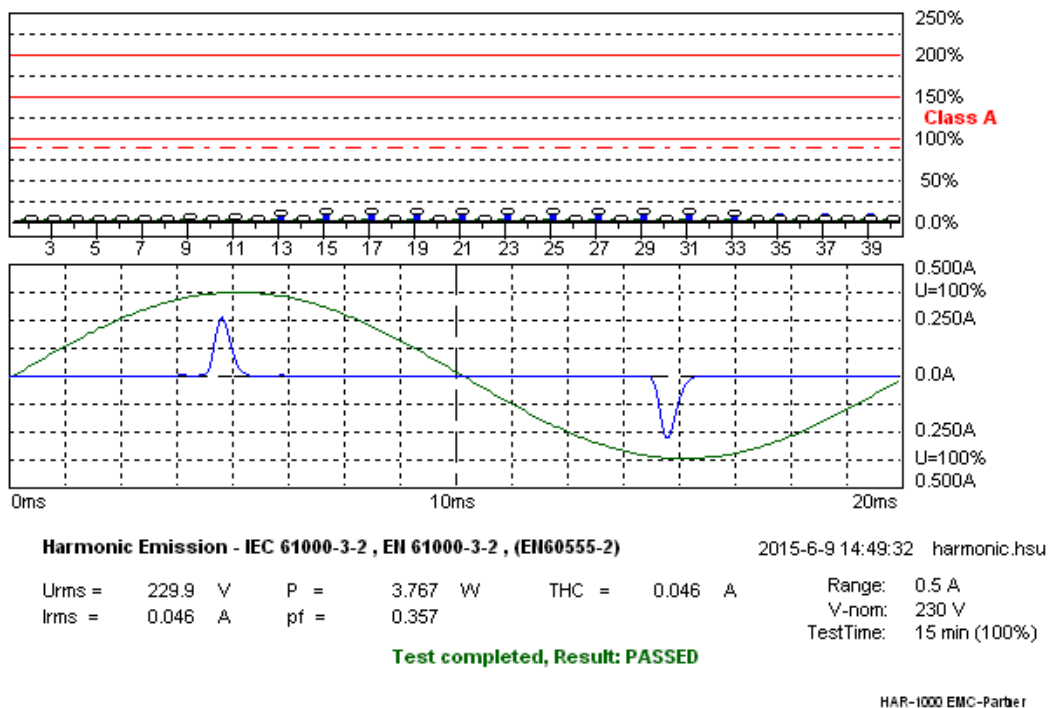
6.2. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMC Emission Tester	EMCPARTNER	Harmonics-1000	159	2015.04.02	2016.04.01
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2015.04.02	2016.04.01
POWER SOURCE	Pacific	140AMX-UP12/S	1792	2014.09.04	2015.09.03
HARCS	EMC Partner AG	Ver 4.18	N/A	N/A	N/A



6.3. Test Result and Data

Basic Standard	:	EN 61000-3-2
Final Test Result	:	PASS
Test Mode	:	Mode 1
Equipment	:	Network Dome Camera
Model No.	:	PI-SFW401L
Temperature	:	20°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jun 09, 2015



Full Bar : Actual Values

Empty Bar : Maximum Values

Blue : Current , Green : Voltage , Red : Failed

Urms = 229.9V Freq = 50.013 Range: 0.5 A
Irms = 0.046A Ipk = 0.277A cf = 6.043
P = 3.767W S = 10.55VA pf = 0.357
THDi = 94.1 % THDu = 0.20 % Class A
Test - Time : 15min (100 %)
Test completed, Result: PASSED



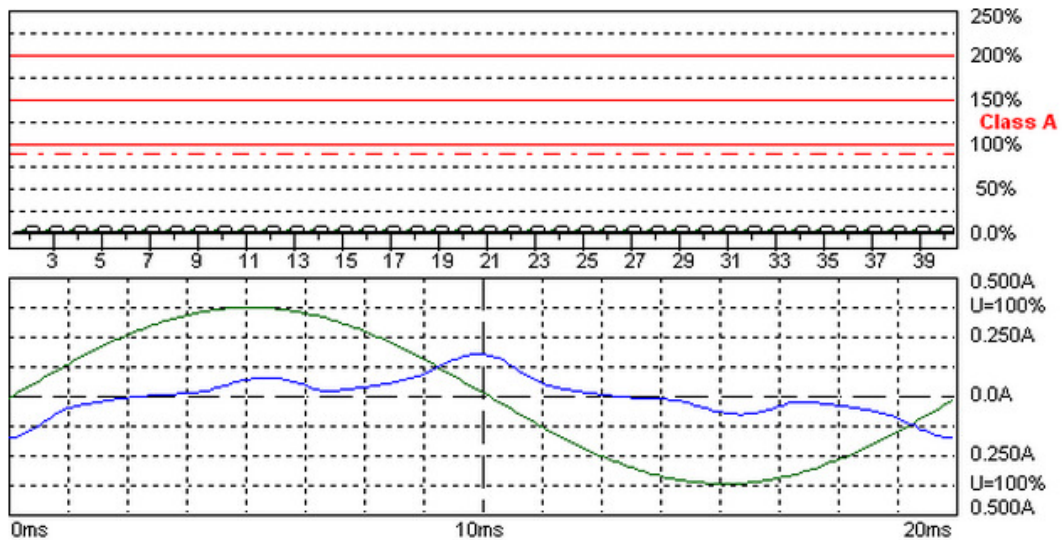
Order	Freq. [Hz]	I _{rms} [A]	I _{rms} %L [%]	I _{max} [A]	I _{max} %L [%]	Limit [A]
1	50	0.0165		0.0167		
2	100	0.0002	0.0170	0.0004	0.0339	1.0800
3	150	0.0153	0.6634	0.0153	0.6661	2.3000
4	200	0.0002	0.0497	0.0003	0.0781	0.4300
5	250	0.0149	1.3090	0.0150	1.3198	1.1400
6	300	0.0002	0.0610	0.0004	0.1322	0.3000
7	350	0.0146	1.8984	0.0148	1.9182	0.7700
8	400	0.0002	0.0929	0.0004	0.1725	0.2300
9	450	0.0142	3.5553	0.0143	3.5706	0.4000
10	500	0.0002	0.1327	0.0004	0.2156	0.1840
11	550	0.0137	4.1430	0.0137	4.1615	0.3300
12	600	0.0002	0.1592	0.0004	0.2587	0.1533
13	650	0.0131	6.2198	0.0131	6.2488	0.2100
14	700	0.0003	0.2090	0.0004	0.3019	0.1314
15	750	0.0123	8.2194	0.0124	8.2601	0.1500
16	800	0.0003	0.2388	0.0004	0.3715	0.1150
17	850	0.0116	8.7389	0.0117	8.8081	0.1324
18	900	0.0003	0.2687	0.0004	0.4180	0.1022
19	950	0.0108	9.0970	0.0109	9.2000	0.1184
20	1000	0.0003	0.3317	0.0004	0.4644	0.0920
21	1050	0.0099	9.2855	0.0100	9.3709	0.1071
22	1100	0.0003	0.3284	0.0004	0.5108	0.0836
23	1150	0.0091	9.2963	0.0092	9.4211	0.0978
24	1200	0.0003	0.3981	0.0004	0.5573	0.0767
25	1250	0.0083	9.2231	0.0084	9.3248	0.0900
26	1300	0.0003	0.4312	0.0005	0.6468	0.0708
27	1350	0.0075	8.9722	0.0076	9.0820	0.0833
28	1400	0.0003	0.4180	0.0004	0.6502	0.0657
29	1450	0.0067	8.6534	0.0068	8.7714	0.0776
30	1500	0.0003	0.4478	0.0004	0.6966	0.0613
31	1550	0.0060	8.2831	0.0061	8.3672	0.0726
32	1600	0.0003	0.4777	0.0004	0.7430	0.0575
33	1650	0.0053	7.8328	0.0054	7.8776	0.0682
34	1700	0.0002	0.4511	0.0004	0.7331	0.0541
35	1750	0.0047	7.3581	0.0048	7.4056	0.0643
36	1800	0.0002	0.4777	0.0004	0.7762	0.0511
37	1850	0.0042	6.8251	0.0042	6.9255	0.0608
38	1900	0.0002	0.5042	0.0004	0.7563	0.0484
39	1950	0.0037	6.4006	0.0038	6.5063	0.0577
40	2000	0.0002	0.4644	0.0003	0.7298	0.0460

EUT is PASSED if:

- all Average values of the Individual Harmonic Currents (I_{avg})
are below 100% of the Individual Limits.
- all Maximum values of the Individual Harmonic Currents (I_{max})
are below 150% of the Individual Limits.



Basic Standard	:	EN 61000-3-2
Final Test Result	:	PASS
Test Mode	:	Mode 2
Equipment	:	Network Dome Camera
Model No.	:	PI-SFW401L
Temperature	:	20°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jun 24, 2015



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

2015-6-24 19:55:15 harmonic.hsu

Urms = 229.9 V P = 6.663 W THC = 0.040 A
Irms = 0.080 A pf = 0.364

Range: 0.5 A
V-nom: 230 V
TestTime: 15 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Blue : Current , Green : Voltage , Red : Failed

Urms = 229.9V Freq = 50.000 Range: 0.5 A
Irms = 0.080A Ipk = 0.181A cf = 2.279
P = 6.663W S = 18.30VA pf = 0.364
THDi = 50.2 % THDu = 0.20 % Class A
Test - Time : 15min (100 %)
Test completed, Result: PASSED



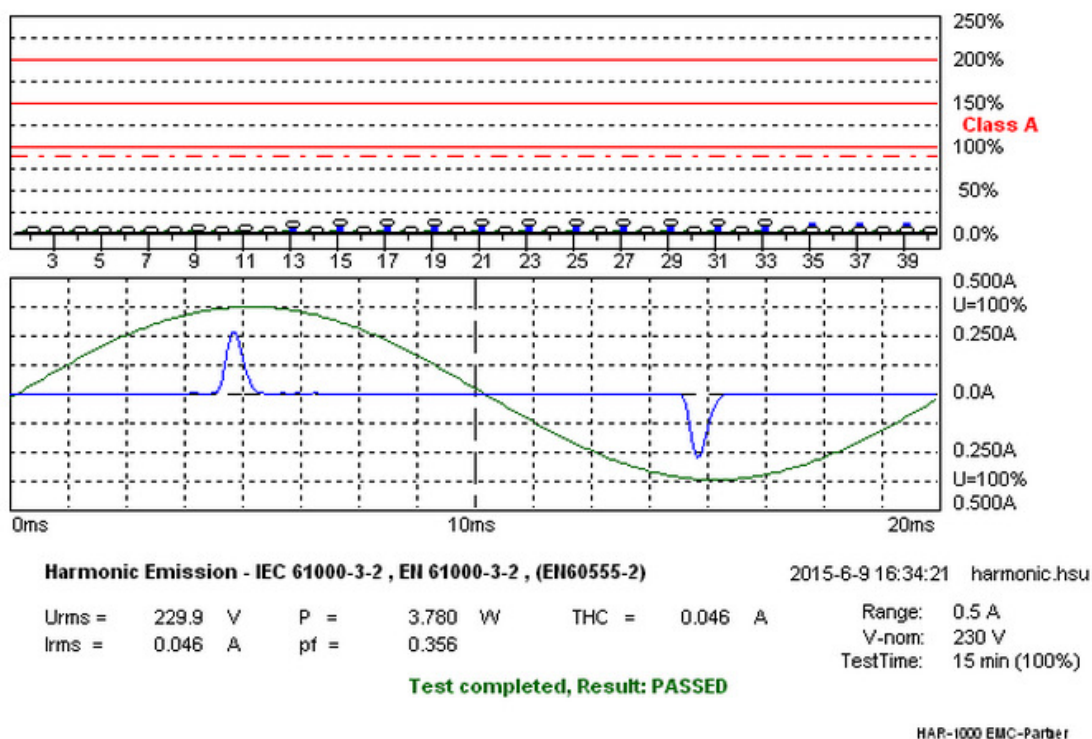
Order	Freq. [Hz]	I _{rms} [A]	I _{rms} %L [%]	I _{max} [A]	I _{max} %L [%]	Limit [A]
1	50	0.0689		0.0827		
2	100	0.0002	0.0226	0.0005	0.0452	1.0800
3	150	0.0312	1.3560	0.0374	1.6254	2.3000
4	200	0.0001	0.0284	0.0004	0.0852	0.4300
5	250	0.0232	2.0372	0.0279	2.4468	1.1400
6	300	0.0001	0.0305	0.0003	0.0916	0.3000
7	350	0.0049	0.6302	0.0058	0.7491	0.7700
8	400	0.0001	0.0265	0.0002	0.0796	0.2300
9	450	0.0075	1.8692	0.0091	2.2659	0.4000
10	500	0.0001	0.0332	0.0002	0.0829	0.1840
11	550	0.0005	0.1480	0.0006	0.1942	0.3300
12	600	0.0001	0.0398	0.0001	0.0796	0.1533
13	650	0.0009	0.4360	0.0012	0.5522	0.2100
14	700	0.0001	0.0464	0.0001	0.0697	0.1314
15	750	0.0007	0.4883	0.0009	0.6104	0.1500
16	800	0.0001	0.0531	0.0001	0.1061	0.1150
17	850	0.0008	0.6226	0.0010	0.7609	0.1324
18	900	0.0001	0.0597	0.0001	0.0896	0.1022
19	950	0.0002	0.2062	0.0004	0.3092	0.1184
20	1000	0.0001	0.0663	0.0001	0.0995	0.0920
21	1050	0.0002	0.2279	0.0003	0.3133	0.1071
22	1100	0.0001	0.0730	0.0001	0.1095	0.0836
23	1150	0.0003	0.3120	0.0004	0.4055	0.0978
24	1200	0.0001	0.0796	0.0001	0.1194	0.0767
25	1250	0.0003	0.3052	0.0003	0.3730	0.0900
26	1300	0.0001	0.0862	0.0001	0.1294	0.0708
27	1350	0.0002	0.2197	0.0002	0.2563	0.0833
28	1400	0.0001	0.0929	0.0001	0.1393	0.0657
29	1450	0.0002	0.1967	0.0002	0.2753	0.0776
30	1500	0.0001	0.0995	0.0001	0.1493	0.0613
31	1550	0.0002	0.2523	0.0002	0.3364	0.0726
32	1600	0.0001	0.1061	0.0001	0.1592	0.0575
33	1650	0.0001	0.1790	0.0002	0.2686	0.0682
34	1700	0.0001	0.1692	0.0001	0.2256	0.0541
35	1750	0.0002	0.2374	0.0002	0.2848	0.0643
36	1800	0.0001	0.1791	0.0001	0.2388	0.0511
37	1850	0.0002	0.2509	0.0002	0.3011	0.0608
38	1900	0.0001	0.1891	0.0001	0.2521	0.0484
39	1950	0.0002	0.2645	0.0002	0.3174	0.0577
40	2000	0.0001	0.2654	0.0001	0.2654	0.0460

EUT is PASSED if:

- all Average values of the Individual Harmonic Currents (I_{avg})
are below 100% of the Individual Limits.
- all Maximum values of the Individual Harmonic Currents (I_{max})
are below 150% of the Individual Limits.



Basic Standard	:	EN 61000-3-2
Final Test Result	:	PASS
Test Mode	:	Mode 3
Equipment	:	Network Dome Camera
Model No.	:	PI-SFW201L
Temperature	:	20°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jun 09, 2015



Full Bar : Actual Values

Empty Bar : Maximum Values

Blue : Current , Green : Voltage , Red : Failed

Urms = 229.9V Freq = 50.013 Range: 0.5 A
Irms = 0.046A Ipk = 0.284A cf = 6.159
P = 3.780W S = 10.61VA pf = 0.356
THDi = 94.1 % THDu = 0.20 % Class A
Test - Time : 15min (100 %)
Test completed, Result: PASSED



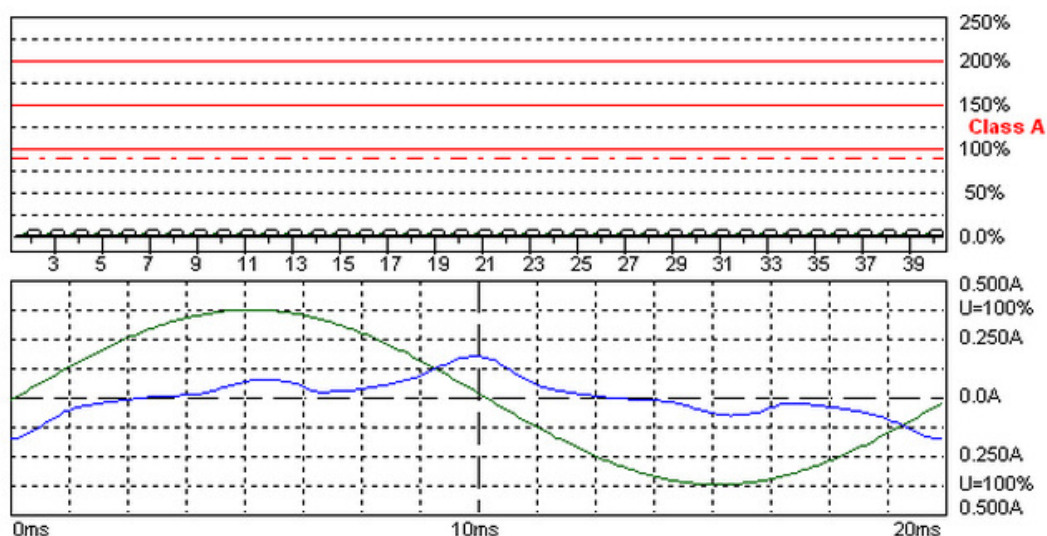
Order	Freq. [Hz]	Irms [A]	Irms%L [%]	I _{max} [A]	I _{max} %L [%]	Limit [A]
1	50	0.0166		0.0236		
2	100	0.0004	0.0396	0.0005	0.0480	1.0800
3	150	0.0153	0.6661	0.0223	0.9686	2.3000
4	200	0.0004	0.0994	0.0005	0.1207	0.4300
5	250	0.0150	1.3171	0.0216	1.8953	1.1400
6	300	0.0005	0.1526	0.0005	0.1831	0.3000
7	350	0.0147	1.9103	0.0208	2.6951	0.7700
8	400	0.0005	0.1990	0.0005	0.2388	0.2300
9	450	0.0143	3.5782	0.0197	4.9133	0.4000
10	500	0.0005	0.2488	0.0005	0.2985	0.1840
11	550	0.0138	4.1707	0.0183	5.5487	0.3300
12	600	0.0005	0.2985	0.0006	0.3782	0.1533
13	650	0.0132	6.2634	0.0168	8.0218	0.2100
14	700	0.0005	0.3715	0.0006	0.4412	0.1314
15	750	0.0124	8.2804	0.0153	10.193	0.1500
16	800	0.0005	0.4246	0.0006	0.5307	0.1150
17	850	0.0117	8.8081	0.0137	10.353	0.1324
18	900	0.0005	0.4777	0.0006	0.5971	0.1022
19	950	0.0109	9.1743	0.0122	10.308	0.1184
20	1000	0.0005	0.5639	0.0006	0.6634	0.0920
21	1050	0.0100	9.3709	0.0108	10.111	0.1071
22	1100	0.0005	0.6203	0.0006	0.7663	0.0836
23	1150	0.0092	9.4211	0.0096	9.8579	0.0978
24	1200	0.0005	0.6767	0.0006	0.8359	0.0767
25	1250	0.0084	9.3248	0.0086	9.5961	0.0900
26	1300	0.0005	0.7331	0.0006	0.9056	0.0708
27	1350	0.0076	9.1187	0.0078	9.4116	0.0833
28	1400	0.0005	0.7895	0.0006	0.9288	0.0657
29	1450	0.0068	8.7714	0.0072	9.2828	0.0776
30	1500	0.0005	0.8459	0.0006	0.9951	0.0613
31	1550	0.0061	8.3672	0.0067	9.1661	0.0726
32	1600	0.0005	0.8492	0.0006	1.0084	0.0575
33	1650	0.0054	7.8776	0.0062	9.0861	0.0682
34	1700	0.0005	0.8459	0.0006	1.0714	0.0541
35	1750	0.0048	7.4056	0.0057	8.8772	0.0643
36	1800	0.0005	0.8956	0.0005	1.0747	0.0511
37	1850	0.0042	6.8753	0.0052	8.6317	0.0608
38	1900	0.0004	0.8824	0.0005	1.0714	0.0484
39	1950	0.0037	6.3477	0.0047	8.1991	0.0577
40	2000	0.0004	0.8625	0.0005	1.0615	0.0460

EUT is PASSED if:

- all Average values of the Individual Harmonic Currents (I_{avg}) are below 100% of the Individual Limits.
- all Maximum values of the Individual Harmonic Currents (I_{max}) are below 150% of the Individual Limits.



Basic Standard	:	EN 61000-3-2
Final Test Result	:	PASS
Test Mode	:	Mode 4
Equipment	:	Network Dome Camera
Model No.	:	PI-SFW201L
Temperature	:	20°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jun 24, 2015



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

2015-6-24 18:44:43 harmonic.hsu

Urms = 229.9 V P = 6.688 W THC = 0.040 A
Irms = 0.079 A pf = 0.368

Range: 0.5 A
V-nom: 230 V
TestTime: 15 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Parier

Full Bar : Actual Values

Empty Bar : Maximum Values

Blue : Current , Green : Voltage , Red : Failed

Urms = 229.9V Freq = 50.000 Range: 0.5 A

Irms = 0.079A Ipk = 0.181A cf = 2.284

P = 6.688W S = 18.19VA pf = 0.368

THDi = 49.9 % THDu = 0.20 % Class A

Test - Time : 15min (100 %)

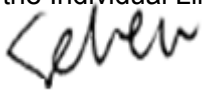
Test completed, Result: PASSED



Order	Freq. [Hz]	Irms [A]	Irms%L [%]	I _{max} [A]	I _{max} %L [%]	Limit [A]
1	50	0.0687		0.0687		
2	100	0.0002	0.0226	0.0003	0.0311	1.0800
3	150	0.0308	1.3375	0.0308	1.3375	2.3000
4	200	0.0002	0.0497	0.0003	0.0639	0.4300
5	250	0.0231	2.0292	0.0231	2.0292	1.1400
6	300	0.0001	0.0407	0.0002	0.0610	0.3000
7	350	0.0047	0.6064	0.0047	0.6064	0.7700
8	400	0.0001	0.0398	0.0001	0.0531	0.2300
9	450	0.0076	1.8921	0.0076	1.9073	0.4000
10	500	0.0001	0.0332	0.0001	0.0663	0.1840
11	550	0.0004	0.1295	0.0005	0.1387	0.3300
12	600	0.0001	0.0398	0.0001	0.0597	0.1533
13	650	0.0009	0.4505	0.0010	0.4650	0.2100
14	700	0.0001	0.0464	0.0001	0.0697	0.1314
15	750	0.0008	0.5086	0.0008	0.5086	0.1500
16	800	0.0001	0.0531	0.0001	0.0796	0.1150
17	850	0.0008	0.6226	0.0009	0.6687	0.1324
18	900	0.0001	0.0597	0.0001	0.0896	0.1022
19	950	0.0003	0.2319	0.0003	0.2577	0.1184
20	1000	0.0001	0.0663	0.0001	0.0995	0.0920
21	1050	0.0003	0.2563	0.0003	0.2848	0.1071
22	1100	0.0001	0.0730	0.0001	0.1095	0.0836
23	1150	0.0003	0.3120	0.0003	0.3432	0.0978
24	1200	0.0001	0.0796	0.0001	0.1194	0.0767
25	1250	0.0002	0.2713	0.0003	0.3391	0.0900
26	1300	0.0001	0.1294	0.0001	0.1294	0.0708
27	1350	0.0002	0.1831	0.0002	0.2563	0.0833
28	1400	0.0001	0.0929	0.0001	0.1393	0.0657
29	1450	0.0002	0.1967	0.0002	0.2360	0.0776
30	1500	0.0001	0.0995	0.0001	0.1493	0.0613
31	1550	0.0002	0.2523	0.0002	0.2943	0.0726
32	1600	0.0001	0.1061	0.0001	0.1592	0.0575
33	1650	0.0002	0.2238	0.0002	0.2686	0.0682
34	1700	0.0001	0.1692	0.0001	0.1692	0.0541
35	1750	0.0001	0.1899	0.0002	0.2374	0.0643
36	1800	0.0001	0.1791	0.0001	0.2388	0.0511
37	1850	0.0001	0.2007	0.0002	0.2509	0.0608
38	1900	0.0001	0.1891	0.0001	0.2521	0.0484
39	1950	0.0001	0.2116	0.0002	0.2645	0.0577
40	2000	0.0001	0.1990	0.0001	0.2654	0.0460

EUT is PASSED if:

- all Average values of the Individual Harmonic Currents (I_{avg}) are below 100% of the Individual Limits.
- all Maximum values of the Individual Harmonic Currents (I_{max}) are below 150% of the Individual Limits.

Test engineer: 



6.4. Test Photographs





7. Voltage Fluctuations Test

7.1. Test Procedure

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

The total impedance of the test circuit, excluding the appliance under test, but including the internal impedance of the supply source, shall be equal to the reference impedance.

The stability and tolerance of the reference impedance shall be adequate to ensure that the overall accuracy of $\pm 8\%$ is achieved during the whole assessment procedure.

7.2. Measurement Equipment

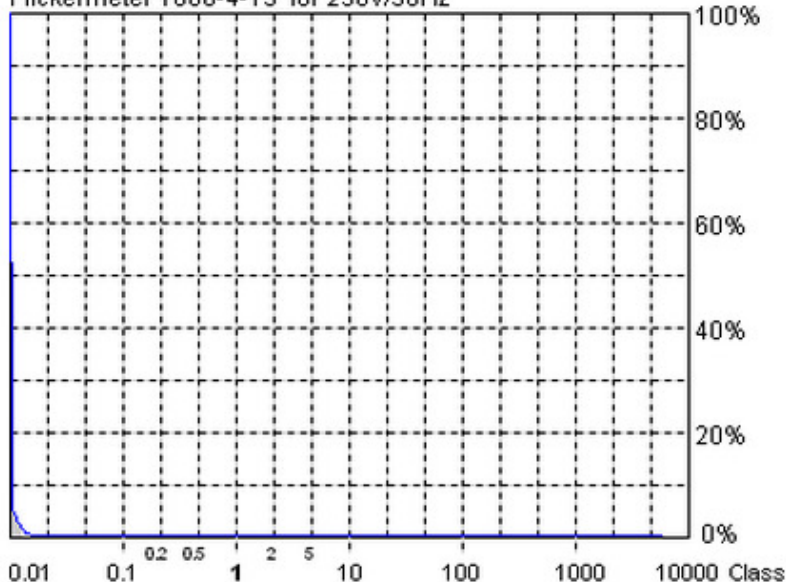
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date
EMC Emission Tester	EMCPARTNER	Harmonics-1000	159	2015.04.02	2016.04.01
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2015.04.02	2016.04.01
POWER SOURCE	Pacific	140AMX-UP12/S	1792	2014.09.04	2015.09.03
HARCS	EMC Partner AG	Ver 4.18	N/A	N/A	N/A



7.3. Test Result and Data

Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 1
Equipment	:	Network Dome Camera
Model No.	:	PI-SFW401L
Temperature	:	20°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jun 09, 2015

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



Actual Flicker (Fli):	0.01
Short-term Flicker (Pst):	0.07
Limit (Pst):	1.00
Long-term Flicker (Plt):	0.07
Limit (Plt):	0.65
Maximum Relative Volt. Change (dmax):	0.00%
Limit (dmax):	4.00%
Relative Steady-state Voltage Change (dc):	0.04%
Limit (dc):	3.30%
Maximum Interval exceeding 3.30% (dt):	0.00ms
Limit (dt>Lim):	500ms

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

Urms = 229.9 V P = 3.767 W
Irms = 0.046 A pf = 0.357

2015-6-9 15:03:20 harmonic.hsu

Range: 0.5 A
V-nom: 230 V
TestTime: 10 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current , Green : Voltage , Red : Failed



Urms = 229.9V Freq = 50.013 Range: 0.5 A
Irms = 0.046A lpk = 0.276A cf = 6.011
P = 3.767W S = 10.55VA pf = 0.357

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

LIN (Line Impedance Network) : No LIN

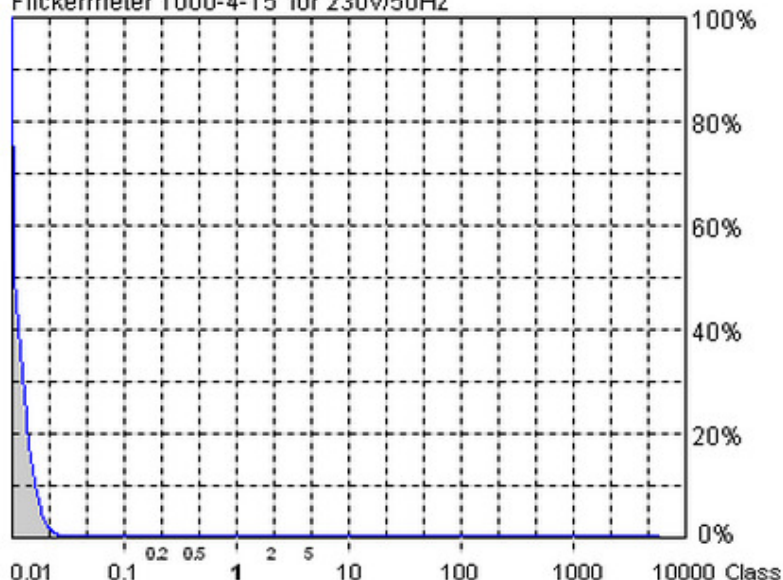
Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED



Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 2
Equipment	:	Network Dome Camera
Model No.	:	PI-SFW401L
Temperature	:	20°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jun 24, 2015

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



Actual Flicker (Fli):	0.01
Short-term Flicker (Pst):	0.09
Limit (Pst):	1.00
Long-term Flicker (Plt):	0.09
Limit (Plt):	0.65
Maximum Relative Volt. Change (dmax):	0.00%
Limit (dmax):	4.00%
Relative Steady-state Voltage Change (dc):	0.07%
Limit (dc):	3.30%
Maximum Interval exceeding 3.30% (dt):	0.00ms
Limit (dt>Lim):	500ms

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

2015-6-24 20:11:26 harmonic.hsu

Urms = 229.9 V P = 6.626 W
Irms = 0.079 A pf = 0.364

Range: 0.5 A
V-nom: 230 V
TestTime: 10 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current , Green : Voltage , Red : Failed



Urms = 229.9V Freq = 50.013 Range: 0.5 A
Irms = 0.079A lpk = 0.181A cf = 2.293
P = 6.626W S = 18.19VA pf = 0.364

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

LIN (Line Impedance Network) : No LIN

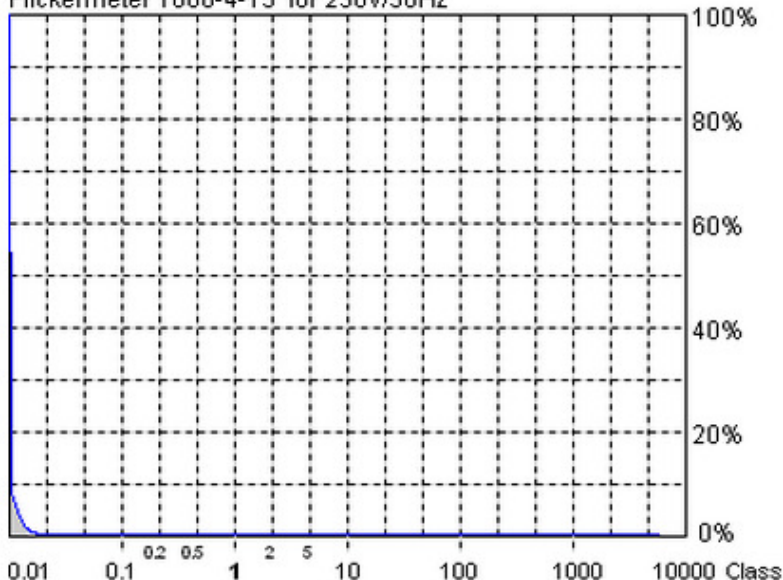
Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED



Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 3
Equipment	:	Network Dome Camera
Model No.	:	PI-SFW201L
Temperature	:	20°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jun 09, 2015

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



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

Urms = 229.9 V P = 3.804 W
Irms = 0.046 A pf = 0.359

Actual Flicker (Fli): 0.01
Short-term Flicker (Pst): 0.08
Limit (Pst): 1.00
Long-term Flicker (Plt): 0.08
Limit (Plt): 0.65
Maximum Relative Volt. Change (dmax): 0.00%
Limit (dmax): 4.00%
Relative Steady-state Voltage Change (dc): 0.03%
Limit (dc): 3.30%
Maximum Interval exceeding 3.30% (dt): 0.00ms
Limit (dt>Lim): 500ms

2015-6-9 17:39:14 harmonic.hsu

Range: 0.5 A
V-nom: 230 V
TestTime: 10 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Parber

Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current, Green : Voltage, Red : Failed



Urms = 229.9V Freq = 50.013 Range: 0.5 A
Irms = 0.046A lpk = 0.283A cf = 6.127
P = 3.804W S = 10.61VA pf = 0.359

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

LIN (Line Impedance Network) : No LIN

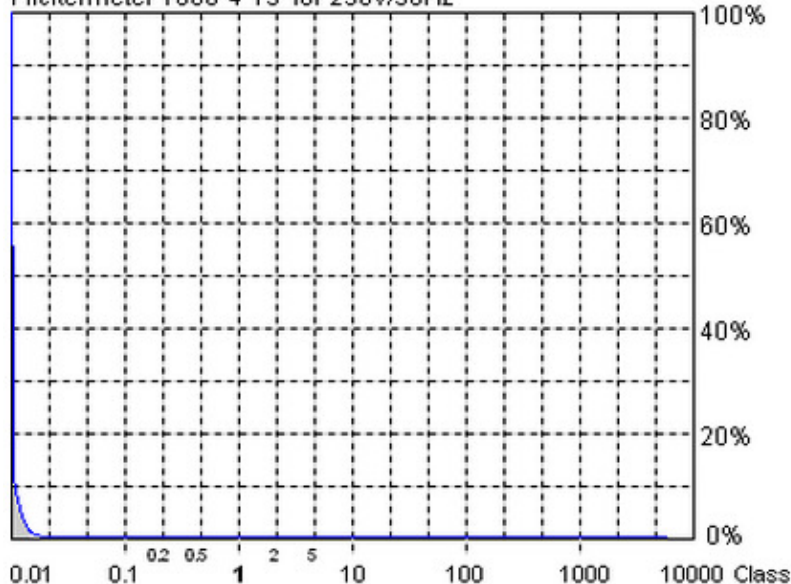
Limits : Plt : 0.65 Pst : 1.00
dmax : 4.00 % dc : 3.30 %
dtLim: 3.30 % dt>Lim: 500ms

Test completed, Result: PASSED



Basic Standard	:	EN 61000-3-3
Final Test Result	:	PASS
Test Mode	:	Mode 4
Equipment	:	Network Dome Camera
Model No.	:	PI-SFW201L
Temperature	:	20°C
Humidity	:	50 %
Atmospheric Pressure	:	100 kPa
Test Date	:	Jun 24, 2015

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



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

Urms = 229.9 V P = 6.688 W
 Irms = 0.079 A pf = 0.367

Actual Flicker (Fli): 0.01
Short-term Flicker (Pst): 0.08
 Limit (Pst): 1.00
Long-term Flicker (Plt): 0.08
 Limit (Plt): 0.65
Maximum Relative Volt. Change (dmax): 0.00%
 Limit (dmax): 4.00%
Relative Steady-state Voltage Change (dc): 0.07%
 Limit (dc): 3.30%
Maximum Interval exceeding 3.30% (dt): 0.00ms
 Limit (dt>Lim): 500ms

2015-6-24 18:58:37 harmonic.hsu

Range: 0.5 A
 V-nom: 230 V
 TestTime: 10 min (100%)

Test completed, Result: PASSED

HAR-1000 EMC-Partner

Full Bar : Actual Values

Empty Bar : Maximum Values

Circles : Average Values

Blue : Current , Green : Voltage , Red : Failed



Urms = 229.9V Freq = 49.987 Range: 0.5 A
Irms = 0.079A lpk = 0.181A cf = 2.283
P = 6.688W S = 18.24VA pf = 0.367

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

LIN (Line Impedance Network) : No LIN

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

Test completed, Result: PASSED

Test engineer: Seben



7.4. Test Photographs



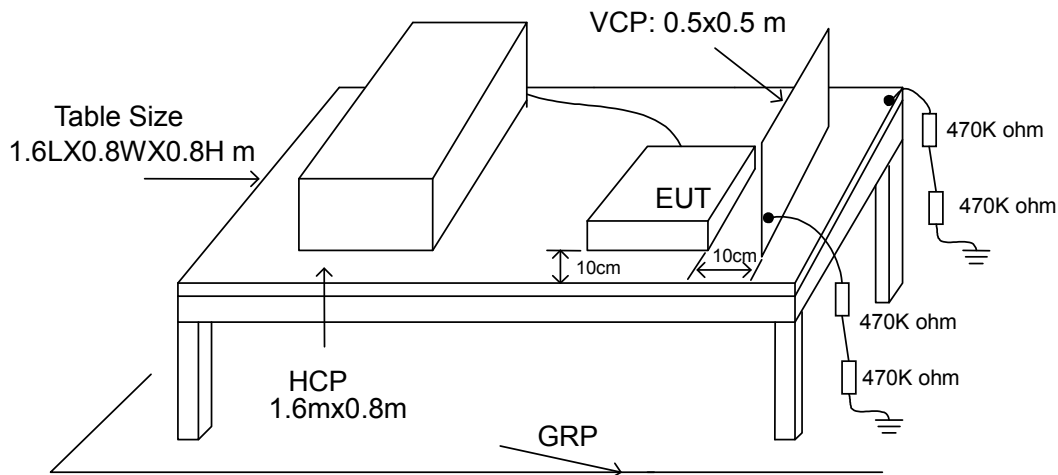


8. Electrostatic Discharge Immunity Test

8.1. Test Procedure

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

8.2. Test Setup for Tests Performed in Laboratory



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

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

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

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

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

Where the EUT is installed on a metal table, the table was connected to the reference plane via a cable with a 470k ohm resistor located at each end, to prevent a build-up of charge. The test setup was consist a wooden table, 0.8m high, standing on the ground reference plane. A HCP, 1.6 m x 0.8 m, was placed on the table. The EUT and cables was isolated from the HCP by an insulating support 0.5 mm thick. The VCP size, 0.5 m x 0.5 m.



8.3. Test Severity Levels

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

8.4. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
ESD Simulator	EM Test	dito	V0714102399	2015.03.29	2016.03.28
Tonometer	shanghaifengyun	DYM3	3251	2014.12.01	2015.11.30
Dehumidifier	ZEDO	ZD-220LB	CEP-TH-01	N/A	N/A
Humidifier	YADU	YZ-DS251C	CEP-TH-02	N/A	N/A
Temperature/ Humidity Meter	feiyang	N/A	102	2015.04.02	2016.04.01

**8.5. Test Result and Data**

Basic Standard : IEC 61000-4-2
 Product Standard : EN 50130-4: 2011
 Product Standard : EN 55024 : 2010
 Equipment : Network Dome Camera
 Model No. : PI-SFW401L, PI-SFW201L
 Final Test Result : PASS
 Temperature : 16 °C
 Relative Humidity : 50 %
 Atmospheric Pressure : 100 kPa
 Test Date : Jun 18, 2015

For EN 55024: 2010

Mode 1& Mode 2

Test Voltage: AC 230V/50Hz																
	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
HCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
1-17	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
18-22	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
23-29	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
30,31	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

Mode 3& Mode 4

Test Voltage: AC 230V/50Hz																
	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
HCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
1-25	A	A	A	A	---	---	---	---	---	---	---	---	---	---	---	---
26-32	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---



For EN 50130-4: 2011

Mode 1& Mode 2

Test Voltage: AC 230V/50Hz																
	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
HCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
1-17	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
18-22	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
23-29	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
30,31	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

Test Voltage: AC 195.5V/50Hz																
	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
HCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
1-17	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
18-22	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
23-29	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
30,31	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

Test Voltage: AC 253V/50Hz																
	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
HCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
1-17	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
18-22	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---
23-29	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
30,31	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---



Mode 3 & Mode 4

Test Voltage: AC 230V/50Hz																
	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	—	+	—	+	—	+	—	+	—	+	—	+	—	+	—
HCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
1-25	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
26-32	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

Test Voltage: AC 195.5V/50Hz																
	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	—	+	—	+	—	+	—	+	—	+	—	+	—	+	—
HCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
1-25	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
26-32	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

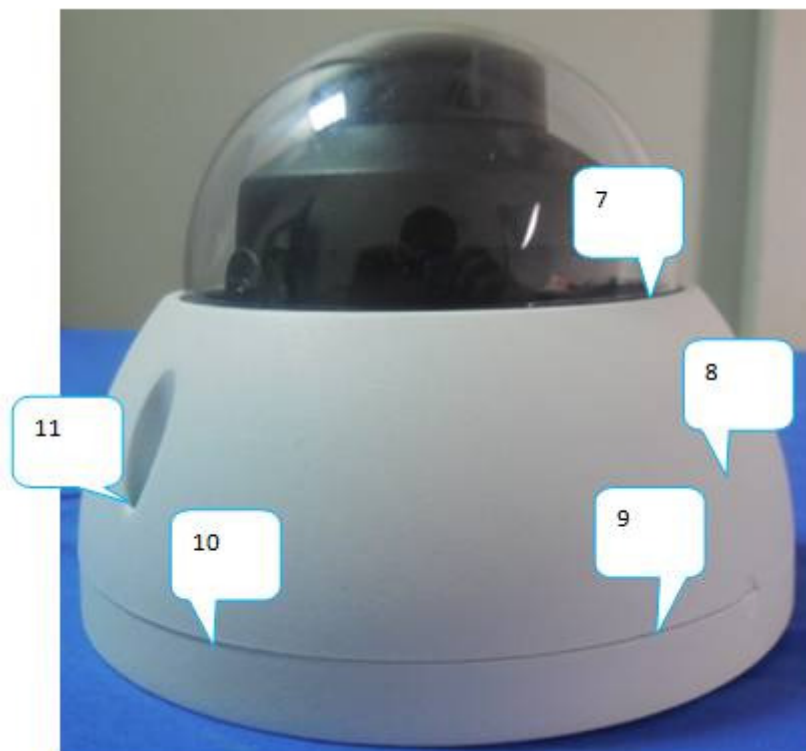
Test Voltage: AC 253V/50Hz																
	Contact Discharge								Air Discharge							
	25 times / each								10 times / each							
Voltage	2 kV		4 kV		6 kV		8 kV		2 kV		4 kV		8 kV		10 kV	
Point\Polarity	+	—	+	—	+	—	+	—	+	—	+	—	+	—	+	—
HCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
VCP	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
1-25	A	A	A	A	A	A	---	---	---	---	---	---	---	---	---	---
26-32	---	---	---	---	---	---	---	---	A	A	A	A	A	A	---	---

Test engineer:

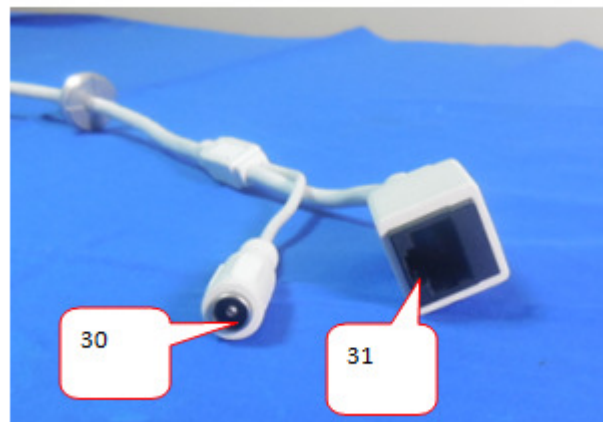
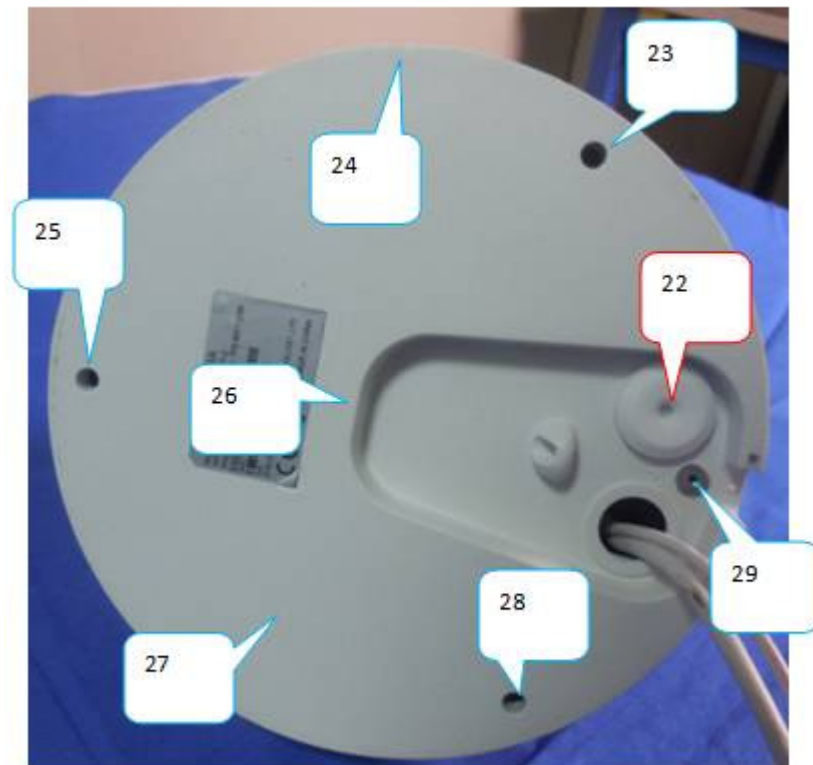




Mode 1 & Mode 2

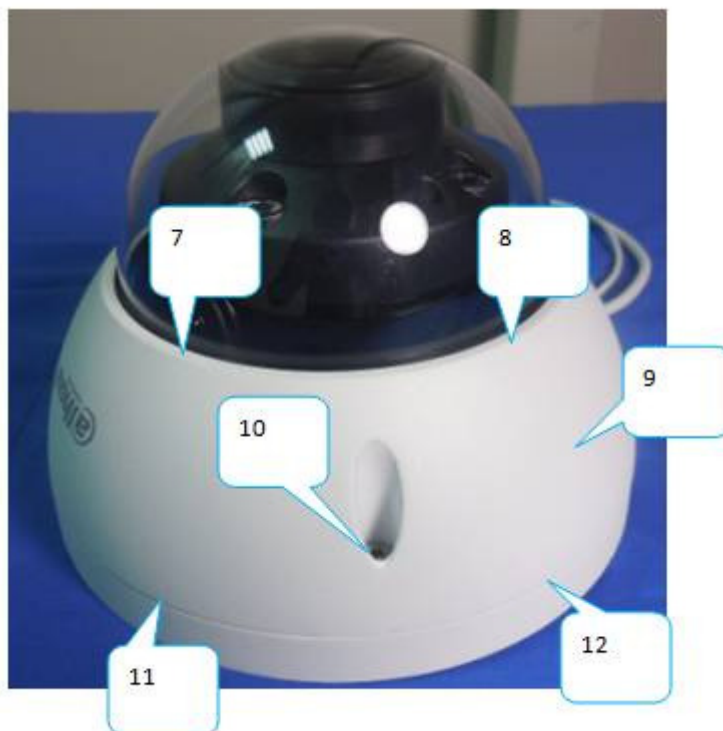


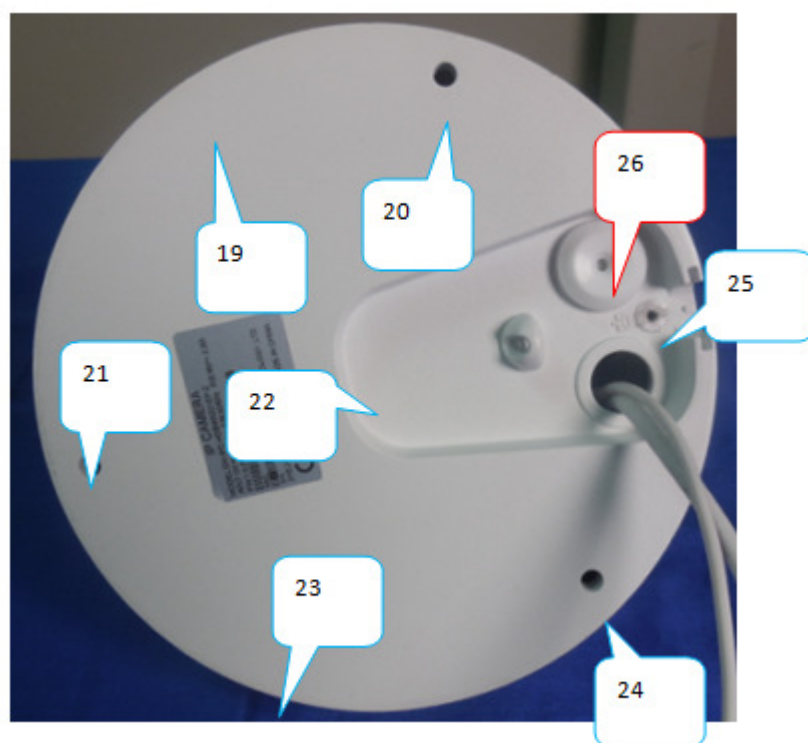






Mode 3 & Mode 4









9. Radio Frequency electromagnetic field immunity test

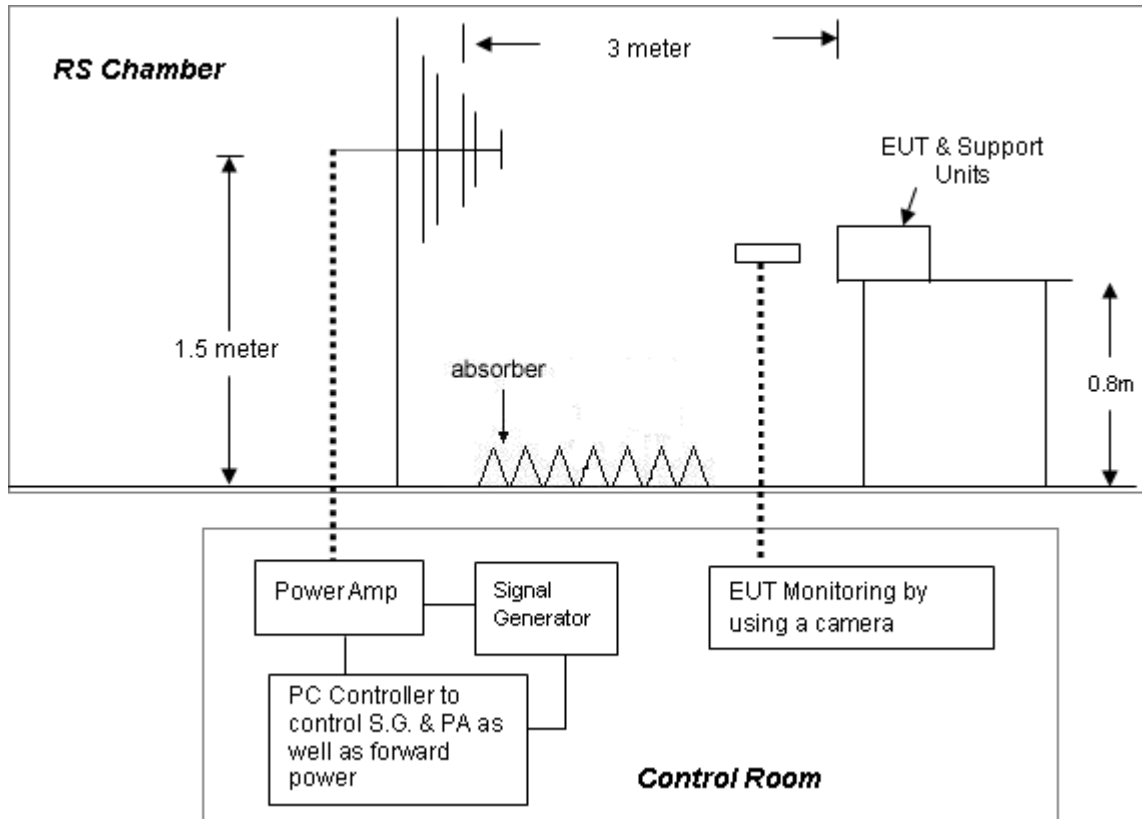
9.1. Test Procedure

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

9.2. Test Severity Levels

Frequency Band : 80-1000 MHz	
Level	Test field strength (V/m)
1	1
2	3
3	10
X	Specified
Remark: "X" is an open class.	

9.3. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

NOTE:

TABLETOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.



9.4. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Signal Generator	R&S	SML03	103287	2015.03.29	2016.03.28
Power Sensor	R&S	NR P-Z91	100383	2015.03.29	2016.03.28
Power Sensor	R&S	NRP-Z91	100384	2015.03.29	2016.03.28
Power Meter	R&S	NRP	101206	2015.03.29	2016.03.28
Power Amplifier	BONN	BLWA0830-16 0/100/40D	076659	2015.03.29	2016.03.28
Istropic Electric Field Probe	EST.LINDGRE N	HI-6105	137445	2014.09.01	2015.09.01
EMS Antenna	R&S	HL046E	100028	N/A	N/A
Temperature/ Humidity Meter	feiyang	N/A	101	2015.04.02	2016.04.01
EMC-32	Rohde&Schwa rz	Ver 6.10.0	N/A	N/A	N/A



9.5. Test Result and Data

Basic Standard : IEC 61000-4-3
Product Standard : EN 50130-4: 2011
Product Standard : EN 55024 : 2010
Equipment : Network Dome Camera
Model No. : PI-SFW401L, PI-SFW201L
Final Test Result : PASS
Temperature : 17°C
Relative Humidity : 50%
Atmospheric Pressure : 100 kPa
Test Date : Jun 19, 2015

Mode 1& Mode 2& Mode 3& Mode 4

For EN 55024: 2010

Modulation : AM 80% , 1KHz sine wave , Dwell time: 3.0 S				
Frequency Step Size : 1 % of preceding frequency value				
Frequency (MHz)	Antenna Polarization	face	Field strength (V/m)	Result
80~1000	Horizontal &Vertical	Front	3 V/m	A
80~1000	Horizontal &Vertical	Rear	3 V/m	A
80~1000	Horizontal &Vertical	Left	3 V/m	A
80~1000	Horizontal &Vertical	Right	3 V/m	A

Mode 1& Mode 2& Mode 3& Mode 4

For EN 50130-4: 2011

Test Voltage: AC 230V/50Hz

Modulation : AM 80% , 1KHz sine wave , Dwell time: 3.0S				
Frequency Step Size : 1 % of preceding frequency value				
Frequency (MHz)	Antenna Polarization	face	Field strength (V/m)	Result
80~2700	Horizontal &Vertical	Front	10 V/m	A
80~2700	Horizontal &Vertical	Rear	10 V/m	A
80~2700	Horizontal &Vertical	Left	10 V/m	A
80~2700	Horizontal &Vertical	Right	10 V/m	A



Test Voltage: AC 195.5V/50Hz

Modulation : AM 80% , 1KHz sine wave , Dwell time: 3.0 S

Frequency Step Size : 1 % of preceding frequency value

Frequency (MHz)	Antenna Polarization	face	Field strength (V/m)	Result
80~2700	Horizontal & Vertical	Front	10 V/m	A
80~2700	Horizontal & Vertical	Rear	10 V/m	A
80~2700	Horizontal & Vertical	Left	10 V/m	A
80~2700	Horizontal & Vertical	Right	10 V/m	A

Test Voltage: AC 253V/50Hz

Modulation : AM 80% , 1KHz sine wave , Dwell time: 3.0 S

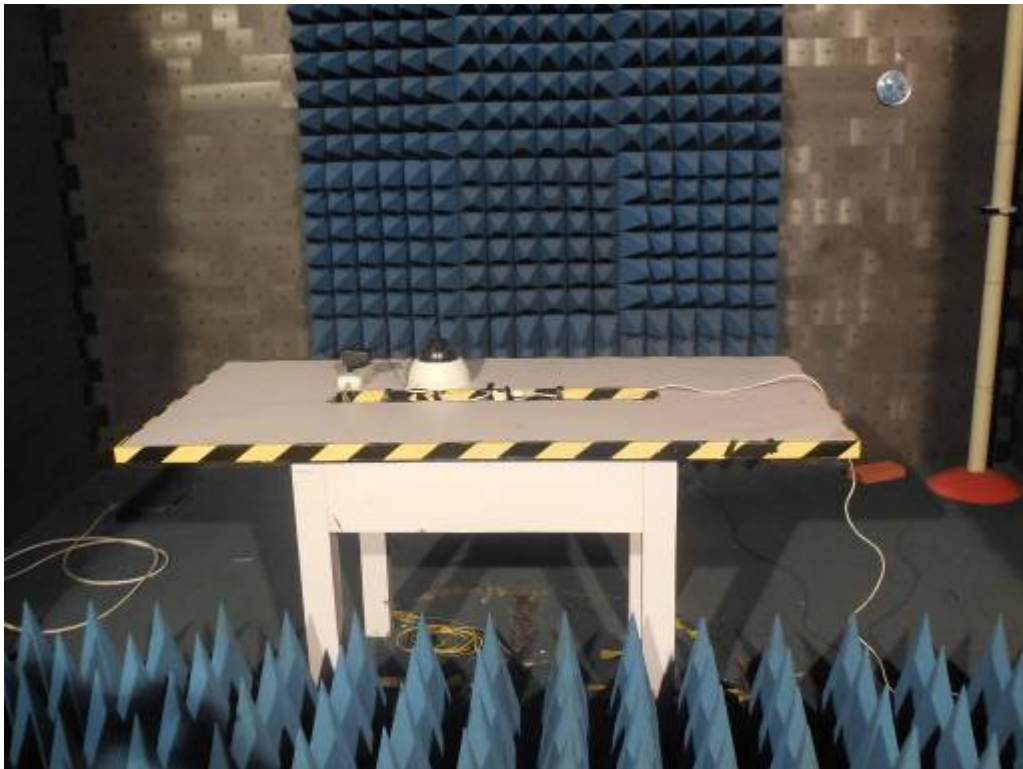
Frequency Step Size : 1 % of preceding frequency value

Frequency (MHz)	Antenna Polarization	face	Field strength (V/m)	Result
80~2700	Horizontal & Vertical	Front	10 V/m	A
80~2700	Horizontal & Vertical	Rear	10 V/m	A
80~2700	Horizontal & Vertical	Left	10 V/m	A
80~2700	Horizontal & Vertical	Right	10 V/m	A

Test engineer: Seben



9.6. Test Photographs





10. Electrical Fast Transient/ Burst Immunity Test

10.1. Test Procedure

- a. In order to minimize the effect of environmental parameters on test results, the climatic conditions when test is carrying out shall comply with the following requirements:
 - ambient temperature: 15°C to 35°C;
 - relative humidity : 45% to 75%;
 - Atmospheric pressure: 86 Kpa (860 mbar) to 106 Kpa (1060 mbar).
- b. In order to minimize the effect of environmental parameters on test results, the electromagnetic environment of the laboratory shall not influence the test results.
- c. The variety and diversity of equipment and systems to be tested make it difficult to establish general criteria for the evaluation of the effects of fast transients/bursts on equipment and systems.
- d. Test on Power Line:
 - The EFT/B-generator was located on the GRP.
For floor standing equipment 1,0 m
For table top equipment 0,5 m
 - The EFT/B-generator provides the ability to apply the test voltage in a non-symmetrical condition to the power supply input terminals of the EUT.
- e. Test on Communication Lines
 - The coupling clamp is composed of a clamp unit for housing the cable (length more than 3 m), and was placed on the GRP.
 - The coupling clamp provides the ability of coupling the fast transient/bursts to the cable under test.
- f. The test results may be classified on the basic of the operating conditions and the functional specification of the equipment under test, according to the following performance criteria :
 - Normal performance within the specification limits.
 - Temporary degradation or loss of function or performance which is self-recoverable.
 - Temporary degradation or loss of function or performance which requires operator intervention or system reset.
 - Degradation or loss of function which is not recoverable due to damage of equipment (components).

10.2. Test Severity Levels

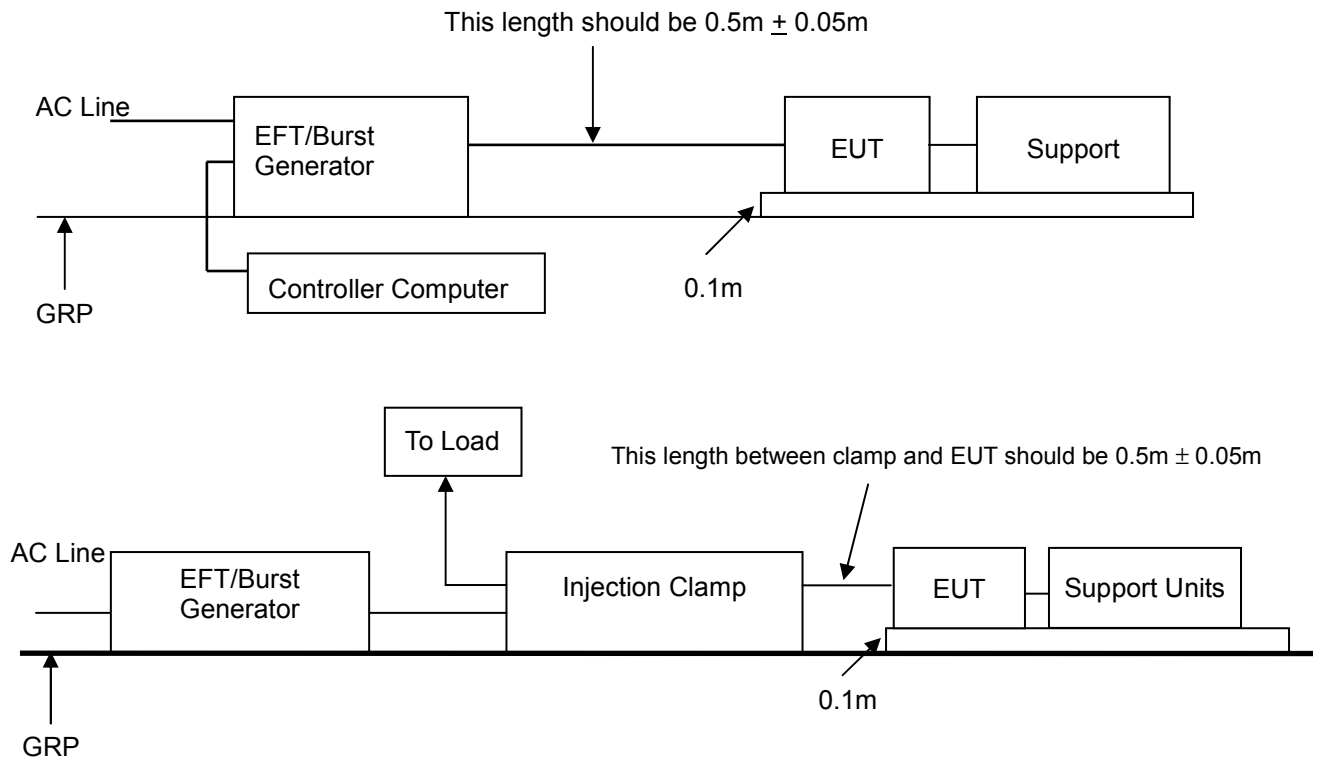
The following test severity levels are recommended for the fast transient/burst test :

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

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



10.3. TEST SETUP



- For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

NOTE:

TABLETOP EQUIPMENT

The configuration consisted of a wooden table (0.1m high) standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system. A minimum distance of 0.5m was provided between the EUT and the walls of the laboratory or any other metallic structure.

FLOOR STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC 61000-4-4 and its cables, were isolated from the Ground Reference Plane by an insulating support that is 0.1-meter thick. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system.

**10.4. Measurement Equipment**

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2015.03.29	2016.03.28
CDN	EMCPARTNER	CDN2000-06-32	121	2015.03.29	2016.03.28
Coupling clamp	EMCPARTNER	CN-EFT1000	547	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2015.04.02	2016.04.01

**10.5. Test Result and Data**

Basic Standard : IEC 61000-4-4
 Product Standard : EN 50130-4: 2011
 Product Standard : EN 55024 : 2010
 Equipment : Network Dome Camera
 Model No. : PI-SFW401L, PI-SFW201L
 Final Test Result : PASS
 Temperature : 18°C
 Relative Humidity : 49 %
 Atmospheric Pressure : 100 kPa
 Test Date : Jun 20, 2015

Mode 1& Mode 2& Mode 3& Mode 4
 For EN 55024: 2010

Pulse : 5/50 ns		Repetition Rate: 5 kHz			
Burst : 15m/300ms					
Test time : 1 min/each condition					
Voltage/ Mode/ Polarity/ Result/ Phase		<u>0.5 kV</u>		<u>1.0 kV</u>	
		+	—	+	—
Power Line	L	---	---	A	A
	N	---	---	A	A
	L-N	---	---	A	A
Signal Line	RJ45(10Mbps+POE)	A	A	---	---
	RJ45(100Mbps+POE)	A	A	---	---



Mode 1& Mode 2& Mode 3& Mode 4

For EN 50130-4: 2011

Test Voltage: AC 230V/50Hz

Pulse : 5/50 ns		Repetition Rate: 5/100 kHz			
Burst : 15m/300ms					
Test time : 1 min/each condition					
Voltage/ Mode/ Polarity/ Result/ Phase		<u>1.0 kV</u>		<u>2.0 kV</u>	
		+	—	+	—
Power Line	L	---	---	A	A
	N	---	---	A	A
	L-N	---	---	A	A
Signal Line	RJ45(10Mbps+POE)	A	A	---	---
	RJ45(100Mbps+POE)	A	A	---	---

Test Voltage: AC 195.5V/50Hz

Pulse : 5/50 ns		Repetition Rate: 5/100 kHz			
Burst : 15m/300ms					
Test time : 1 min/each condition					
Voltage/ Mode/ Polarity/ Result/ Phase		1.0 kV		2.0 kV	
		+	—	+	—
Power Line	L	---	---	A	A
	N	---	---	A	A
	L-N	---	---	A	A
Signal Line	RJ45(10Mbps+POE)	A	A	---	---
	RJ45(100Mbps+POE)	A	A	---	---

Test Voltage: AC 253V/50Hz

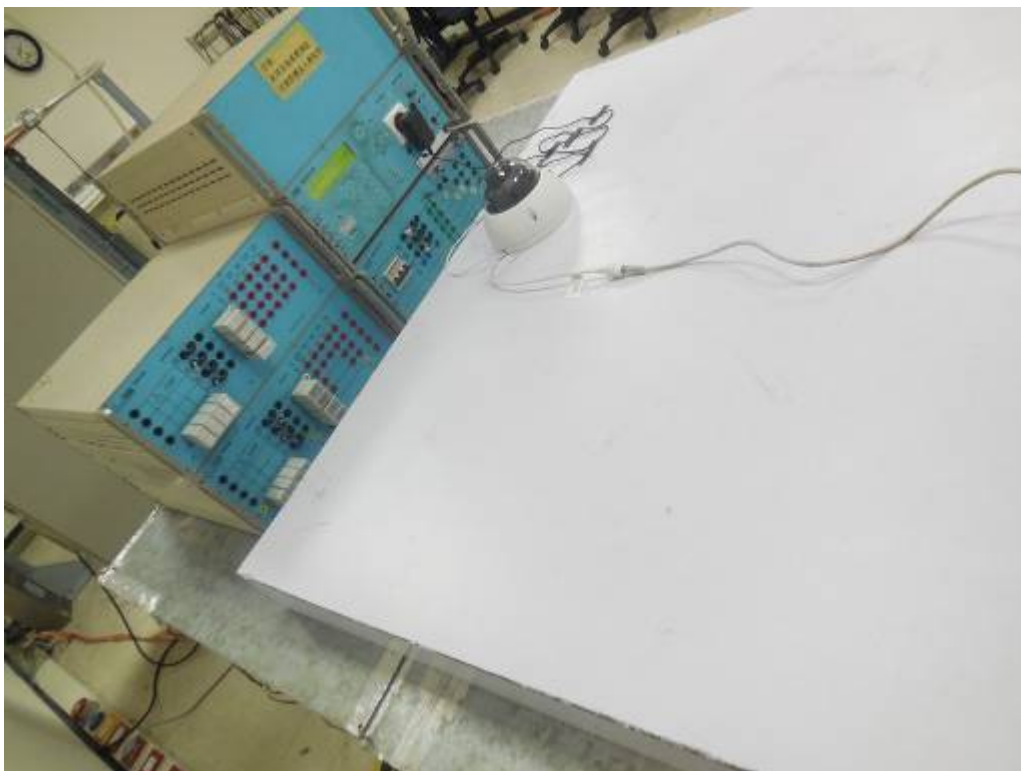
Pulse : 5/50 ns		Repetition Rate: 5/100 kHz			
Burst : 15m/300ms					
Test time : 1 min/each condition					
Voltage/ Mode/ Polarity/ Result/ Phase		1.0 kV		2.0 kV	
		+	—	+	—
Power Line	L	---	---	A	A
	N	---	---	A	A
	L-N	---	---	A	A
Signal Line	RJ45(10Mbps+POE)	A	A	---	---
	RJ45(100Mbps+POE)	A	A	---	---

Test engineer: Ceben



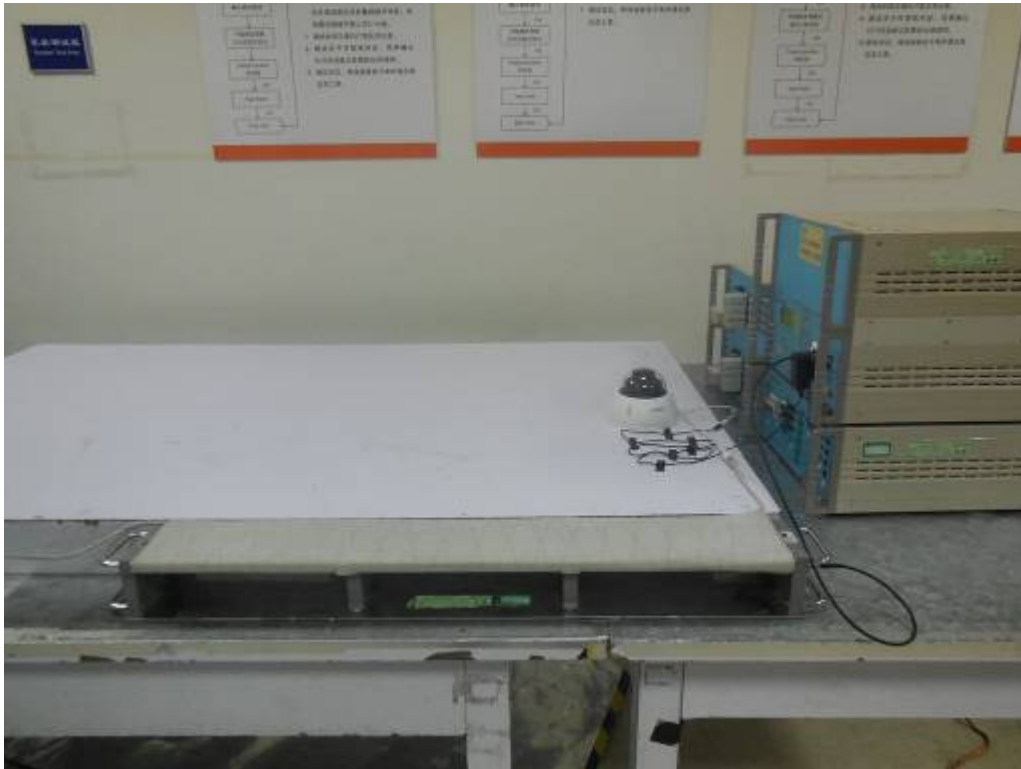
10.6. Test Photographs

Main





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11. Surge Immunity Test

11.1. Test Procedure

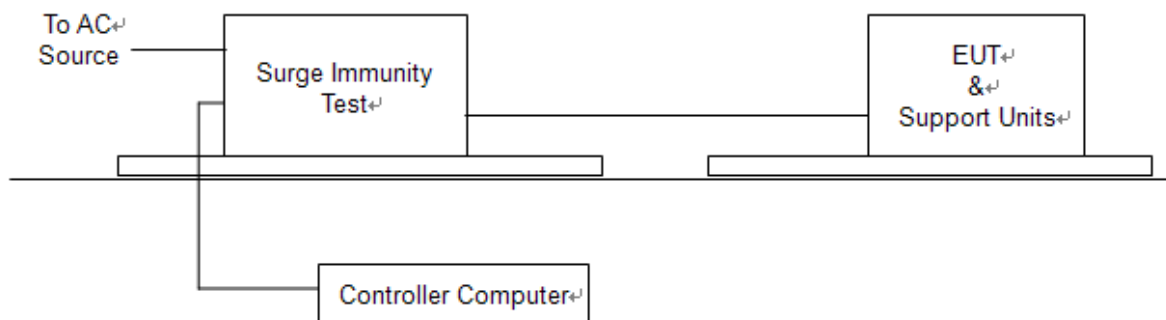
- a. Climatic conditions
The climatic conditions shall comply with the following requirements :
 - ambient temperature : 15 °C to 35 °C
 - relative humidity : 10 % to 75 %
 - atmospheric pressure : 86 kPa to 106 kPa (860 mbar to 1060 mbar)
- b. Electromagnetic conditions
the electromagnetic environment of the laboratory shall not influence the test results.
- c. The test shall be performed according the test plan that shall specify the test set-up with
 - generator and other equipment utilized;
 - test level (voltage/current);
 - generator source impedance;
 - internal or external generator trigger;
 - number of tests : at least five positive and five negative at the selected points;
 - repetition rate : maximum 1/min.
 - inputs and outputs to be tested;
 - representative operating conditions of the EUT;
 - sequence of application of the surge to the circuit;
 - phase angle in the case of AC. power supply;
 - actual installation conditions, for example :
 - AC : neutral earthed,
 - DC : (+) or (-) earthed to simulated the actual earthing conditions.
- d. If not otherwise specified the surges have to be applied synchronized to the voltage phase at the zero-crossing and the peak value of the AC. voltage wave (positive and negative).
- e. The surges have to be applied line to line and line(s) and earth. When testing line to earth, the test voltage has to be applied successively between each of the lines and earth, if there is no other specification.
- f. The test procedure shall also consider the non-linear current-voltage characteristics of the equipment under test. Therefore the test voltage has to be increased by steps up to the test level specified in the product standard or test plan.
- g. All lower levels including the selected test level shall be satisfied. For testing the secondary protection, the output voltage of the generator shall be increased up to the worst-case voltage breakdown level (let-through level) of the primary protection.
- h. If the actual operating signal sources are not available, that may be simulated. Under no circumstances may the test level exceed the product specification. The test shall be carried out according to a test plan.
- i. To find all critical points of the duty cycle of the equipment, a sufficient number of positive and negative test pulses shall be applied. For acceptance test previously unstressed equipment shall be used to the protection devices shall be replaced.

11.2. Test Severity Level

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



11.3. TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

11.4. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2015.03.29	2016.03.28
CDN	EMCPARTNER	CDN-UTP8	021	2015.03.29	2016.03.28
CDN	EMCPARTNER	CDN2000-06-32	121	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2015.04.02	2016.04.01



11.5. Test Result and Data

Basic Standard : IEC 61000-4-5
Product Standard : EN 50130-4: 2011
Product Standard : EN 55024 : 2010
Equipment : Network Dome Camera
Model No. : PI-SFW401L, PI-SFW201L
Final Test Result : PASS
Temperature : 18°C
Relative Humidity : 49 %
Atmospheric Pressure : 100 kPa
Test Date : Jun 20, 2015

Mode 1& Mode 2& Mode 3& Mode 4

For EN 55024: 2010

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

Waveform : 10/700µs Repetition rate : 60 sec Time : 5 time/each condition				
Voltage	<u>0.5</u> kV		<u>1</u> kV	
Mode / Polarity / Result	+	—	+	—
RJ45(10Mbps+POE)	A	A	A	A
RJ45(100Mbps+POE)	A	A	A	A



Mode 1& Mode 2& Mode 3& Mode 4

For EN 50130-4: 2011

Test Voltage: AC 230V/50Hz						
Waveform : 1.2/50µs(8/20µs) Repetition rate : 60 sec Time : 20 time/each condition						
/Phase Voltage / Mode / Polarity / Result			0°	90°	180°	270°
<u>0.5/1.0 kV</u>	L-N	+	A	A	A	A
		—	A	A	A	A

Waveform : 1.2/50µs(8/20µs) Repetition rate : 60 sec Time : 5 time/each condition				
Voltage	<u>0.5 kV</u>		<u>1 kV</u>	
Mode / Polarity / Result	+	—	+	—
RJ45(10Mbps+POE)	A	A	A	A
RJ45(100Mbps+POE)	A	A	A	A

Waveform : 10/700µs Repetition rate : 60 sec Time : 5 time/each condition				
Voltage	<u>0.5 kV</u>		<u>1 kV</u>	
Mode / Polarity / Result	+	—	+	—
RJ45(10Mbps+POE)	A	A	A	A
RJ45(100Mbps+POE)	A	A	A	A

Test Voltage: AC 195.5V/50Hz						
Waveform : 1.2/50µs(8/20µs) Repetition rate : 60 sec Time : 20 time/each condition						
/Phase Voltage / Mode / Polarity / Result			0°	90°	180°	270°
<u>0.5/1.0 kV</u>	L-N	+	A	A	A	A
		—	A	A	A	A



Waveform : 1.2/50μs(8/20μs) Repetition rate : 60 sec Time : 5 time/each condition				
Voltage	<u>0.5</u> kV		<u>1</u> kV	
Mode / Polarity / Result	+	—	+	—
RJ45(10Mbps+POE)	A	A	A	A
RJ45(100Mbps+POE)	A	A	A	A

Waveform : 10/700μs Repetition rate : 60 sec Time : 5 time/each condition				
Voltage	<u>0.5</u> kV		<u>1</u> kV	
Mode / Polarity / Result	+	—	+	—
RJ45(10Mbps+POE)	A	A	A	A
RJ45(100Mbps+POE)	A	A	A	A

Test Voltage: AC 253V/50Hz						
Waveform : 1.2/50μs(8/20μs) Repetition rate : 60 sec Time : 20 time/each condition						
/Phase Voltage / Mode / Polarity / Result			0°	90°	180°	270°
<u>0.5/1.0</u> kV	L-N	+	A	A	A	A
		—	A	A	A	A

Waveform : 1.2/50μs(8/20μs) Repetition rate : 60 sec Time : 5 time/each condition				
Voltage	<u>0.5</u> kV		<u>1</u> kV	
Mode / Polarity / Result	+	—	+	—
RJ45(10Mbps+POE)	A	A	A	A
RJ45(100Mbps+POE)	A	A	A	A



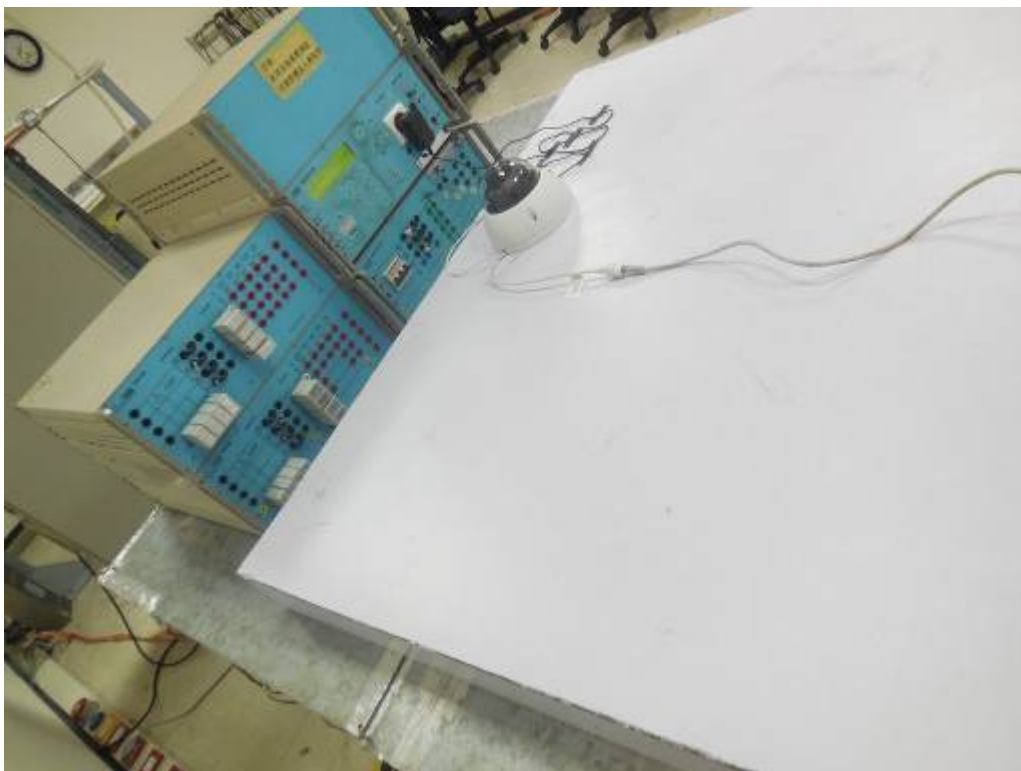
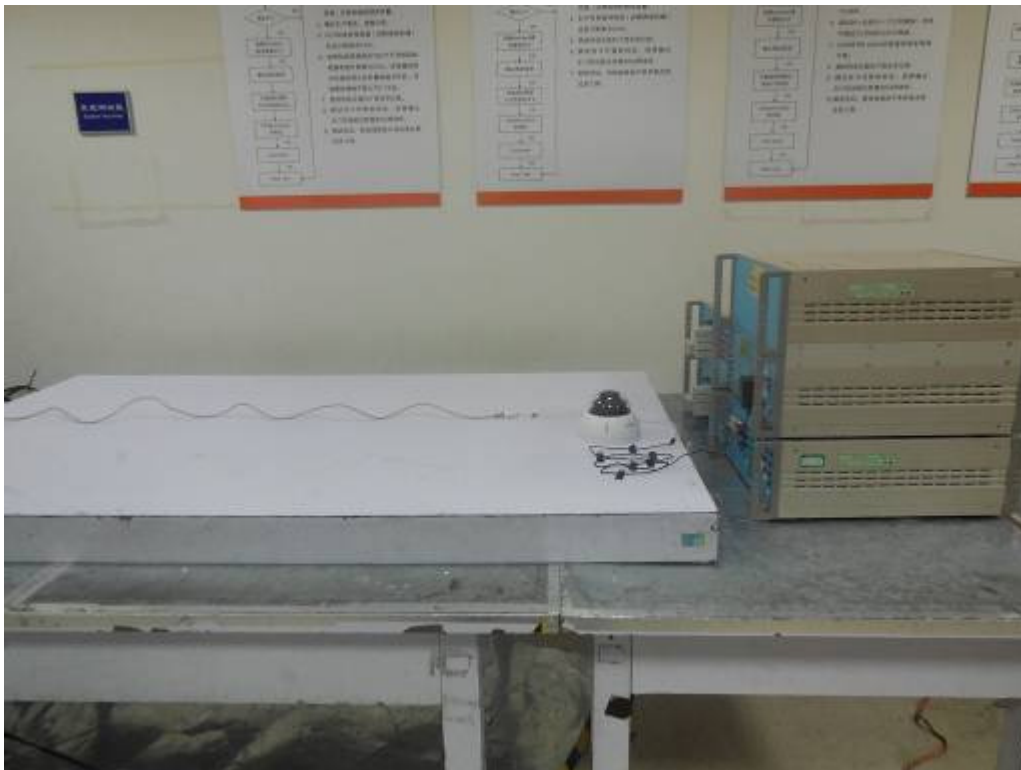
Waveform : 10/700μs Repetition rate : 60 sec Time : 5 time/each condition				
Voltage	0.5 kV		1 kV	
Mode / Polarity / Result	+	—	+	—
RJ45(10Mbps+POE)	A	A	A	A
RJ45(100Mbps+POE)	A	A	A	A

Test engineer: Seben



11.6. Test Photographs

Main





12. Conduction Disturbances induced by Radio-Frequency Fields

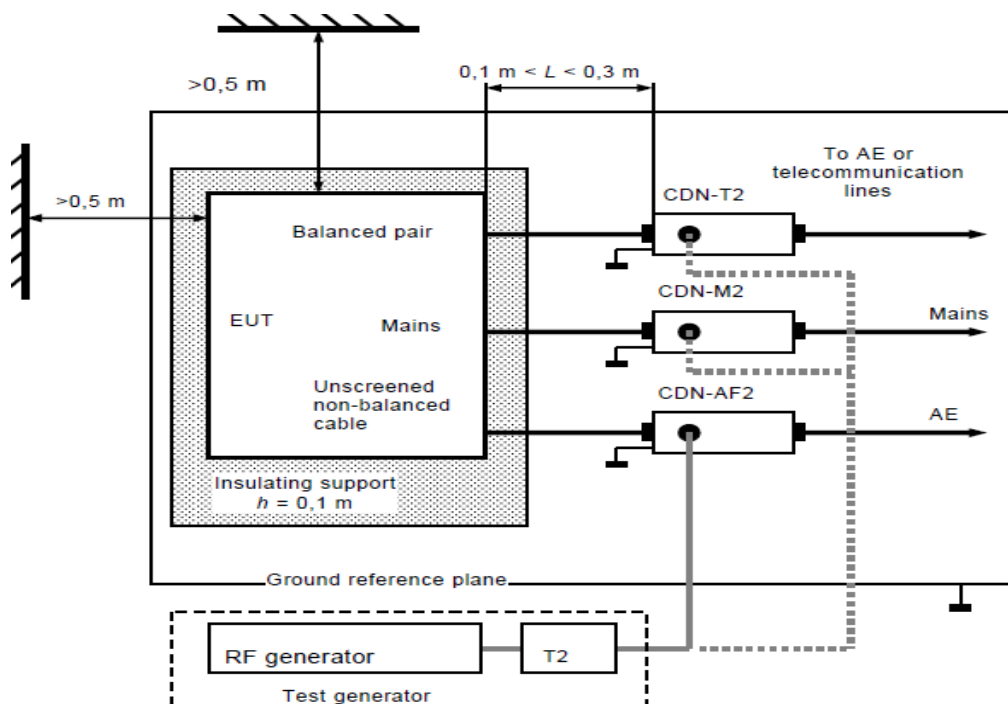
12.1. Test Procedure

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

12.2. Test Severity Levels

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

12.3.TEST SETUP



Note: 1. The EUT is setup 0.1m above Ground Reference Plane

2. The CDNs and / or EM clamp used for real test depends on ports and cables configuration of EUT.

3. For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

12.4.Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Conducted immunity test system	FRANKONIA	CIT-10/75	102D1294	2015.03.29	2016.03.28
EM Injection clamp	FCC	F-203I-23MM	536	2015.03.29	2016.03.28
CDN	FRANKONIA	CDN-T2	A3010029	2015.03.29	2016.03.28
CDN	FRANKONIA	CDN-T4	A3015017	2015.03.29	2016.03.28
CDN	FRANKONIA	CDN-T8	A3022010	2015.03.29	2016.03.28
CDN	FRANKONIA	CDN-M2	A3002037	2015.03.29	2016.03.28
CDN	FRANKONIA	CDN-M2+M3	A3011102	2015.03.29	2016.03.28
CDN	FCC	CDN-M5/32	A3013024	2015.03.29	2016.03.28
6 dB Attenuator	FRANKONIA	N/A	N/A	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2015.04.02	2016.04.01
EN61000-4-6	Hubert GmbH	Ver 2.21	N/A	N/A	N/A



12.5. Test Result and Data

Basic Standard : IEC 61000-4-6
Product Standard : EN 50130-4: 2011
Product Standard : EN 55024 : 2010
Equipment : Network Dome Camera
Model No. : PI-SFW401L, PI-SFW201L
Final Test Result : PASS
Temperature : 18 °C
Relative Humidity : 49 %
Atmospheric Pressure : 100 kPa
Test Date : Jun 20, 2015

Mode 1& Mode 2& Mode 3& Mode 4

For EN 55024: 2010

Frequency : 0.15~80MHz, Modulation : AM 80%,1KHz sine wave, Dwell time: 3.0s Frequency Step Size : 1 % of preceding frequency value			
Frequency	Test mode	Voltage(V)	Result
0.15 ~ 80MHz	Power(M2)	3	A
0.15 ~ 80MHz	RJ45(10Mbps+POE)	3	A
0.15 ~ 80MHz	RJ45(100Mbps+POE)	3	A

Mode 1& Mode 2& Mode 3& Mode 4

For EN 50130-4: 2011

Test Voltage: AC 230V/50Hz

Frequency : 0.15~100MHz, Modulation : AM 80%,1KHz sine wave, Dwell time: 3.0s Frequency Step Size : 1 % of preceding frequency value			
Frequency	Test mode	Voltage(V)	Result
0.15 ~ 100MHz	Power(M2)	10	A
0.15 ~ 100MHz	RJ45(10Mbps+POE)	10	A
0.15 ~ 100MHz	RJ45(100Mbps+POE)	10	A



Test Voltage: AC 195.5V/50Hz

Frequency : 0.15~100MHz, Modulation : AM 80%,1KHz sine wave, Dwell time: 3.0s Frequency Step Size : 1 % of preceding frequency value			
Frequency	Test mode	Voltage(V)	Result
0.15 ~ 100MHz	Power(M2)	10	A
0.15 ~ 100MHz	RJ45(10Mbps+POE)	10	A
0.15 ~ 100MHz	RJ45(100Mbps+POE)	10	A

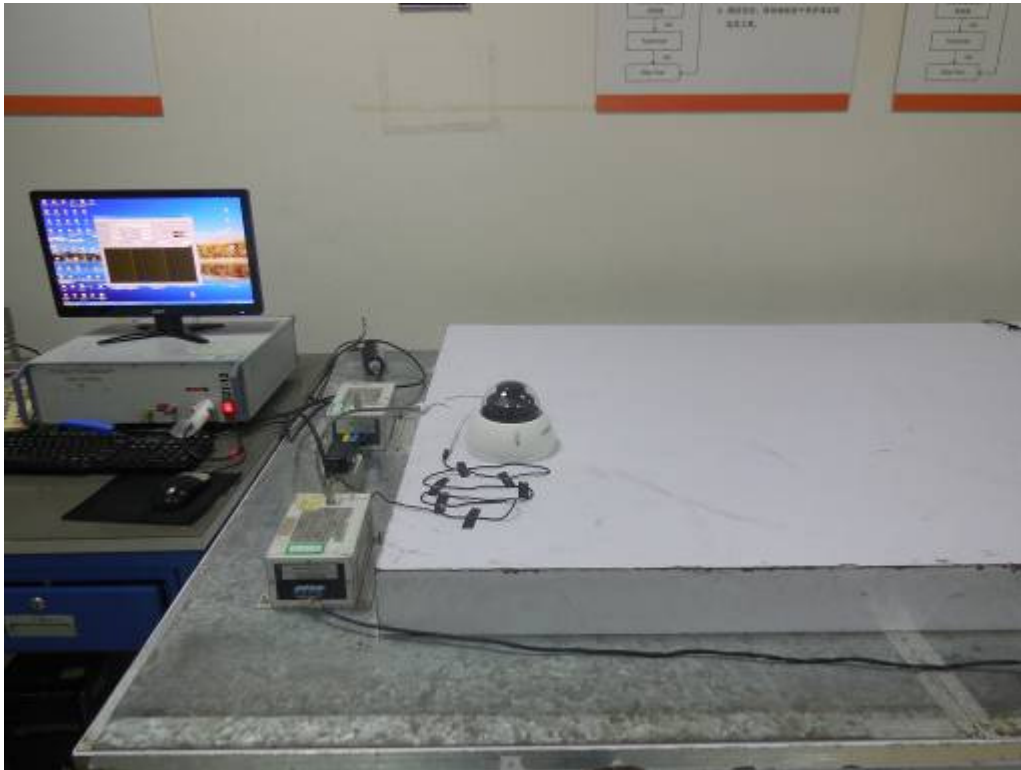
Test Voltage: AC 253V/50Hz

Frequency : 0.15~100MHz, Modulation : AM 80%,1KHz sine wave, Dwell time: 3.0s Frequency Step Size : 1 % of preceding frequency value			
Frequency	Test mode	Voltage(V)	Result
0.15 ~ 100MHz	Power(M2)	10	A
0.15 ~ 100MHz	RJ45(10Mbps+POE)	10	A
0.15 ~ 100MHz	RJ45(100Mbps+POE)	10	A

Test engineer: Seben

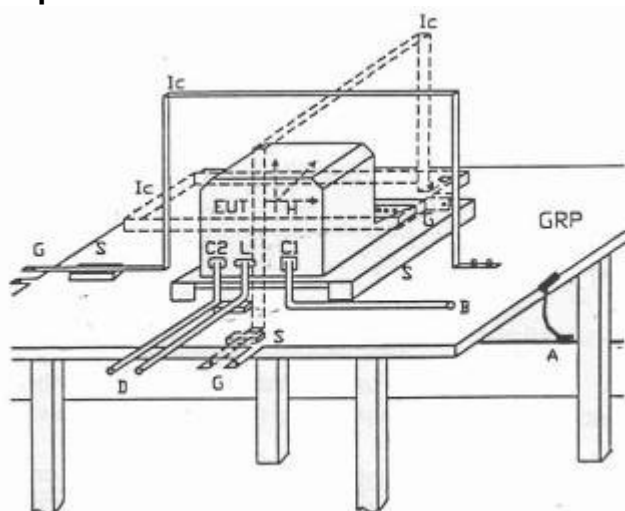


12.6. Test Photographs



13. Power Frequency Magnetic Field Immunity Test

13.1. Test Setup



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

13.2. Test Severity Levels

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

13.3. Measurement Equipment

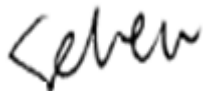
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2015.03.29	2016.03.28
H-Filed-Loop	EMCPARTNER	MF1000-1	144	2015.03.29	2016.03.28
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2015.04.02	2016.04.01

**13.4. Test Result and Data**

Basic Standard : IEC 61000-4-8
Product Standard : EN 55024 : 2010
Equipment : Network Dome Camera
Model No. : PI-SFW401L, PI-SFW201L
Final Test Result : PASS
Temperature : 21° C
Relative Humidity : 51%
Atmospheric Pressure : 100 kPa
Test Date : Jun 20,2015

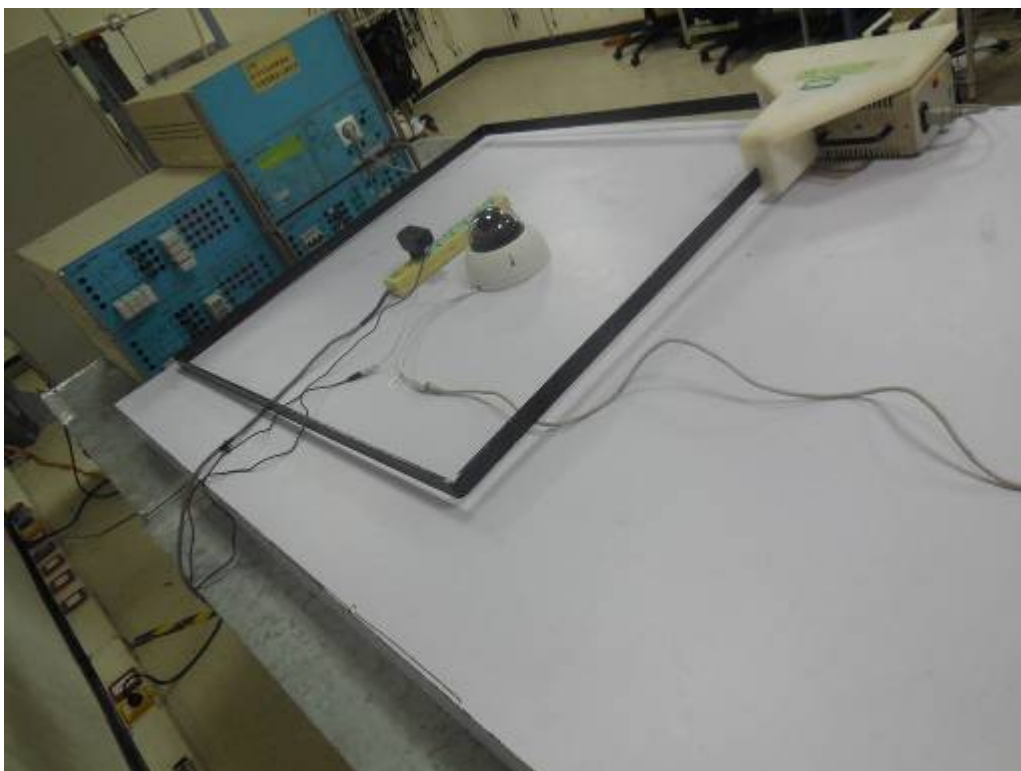
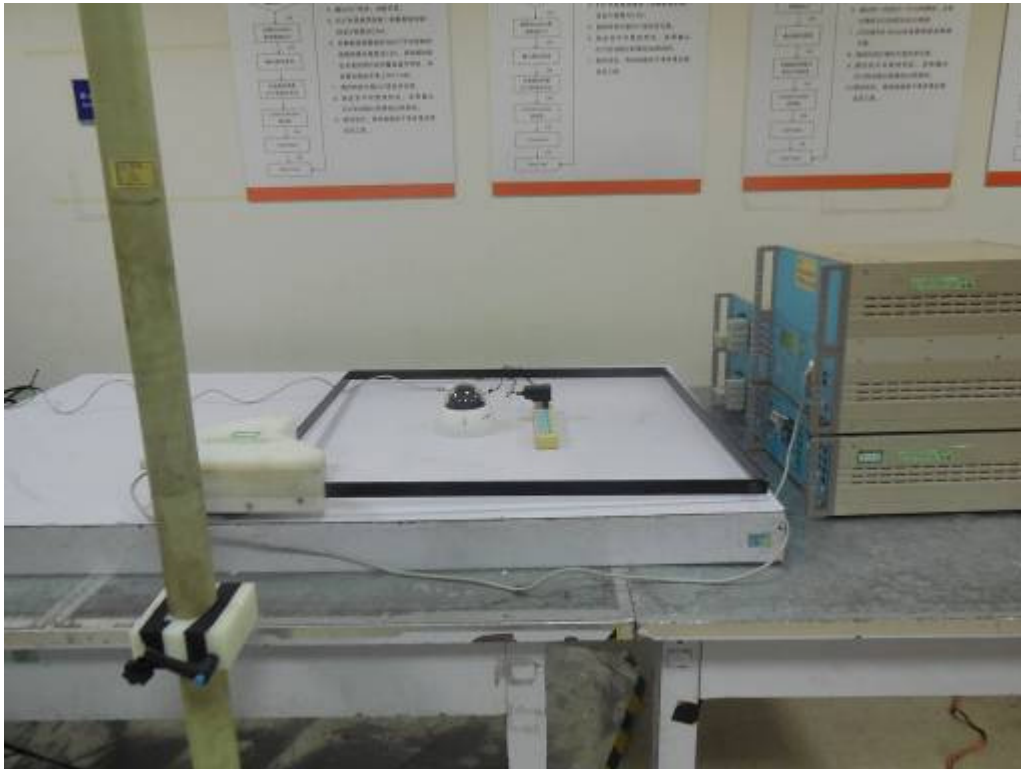
Mode 1& Mode 2& Mode 3& Mode 4

Power Frequency Magnetic Field : <u>50/60</u> Hz, <u>1</u> A/m		
Coil Orientation	Testing duration	Results
X-axis	1.0 Min	A
Y-axis	1.0 Min	A
Z-axis	1.0 Min	A

Test engineer: 



13.5. Test Photographs





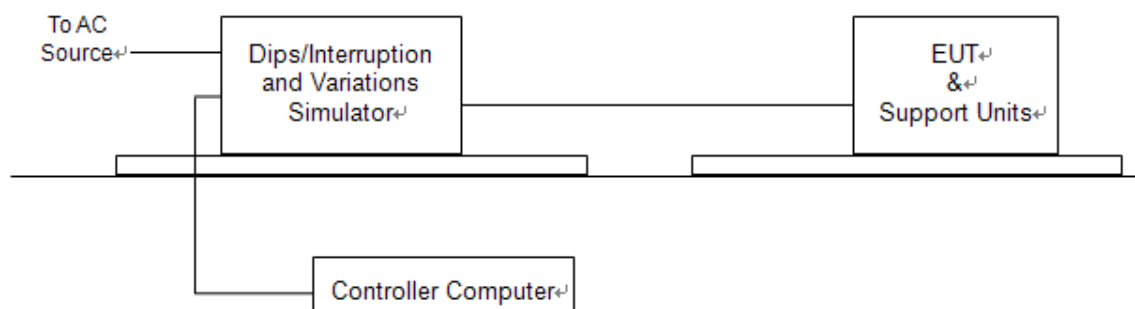
14. Voltage Dips and Voltage Interruptions Immunity Test Setup

14.1. Test Conditions

1. Source voltage and frequency : AC 100/230/240V / 50Hz, Single phase.
2. Test of interval : 10 sec.
3. Level and duration : Sequence of 3 dips/interrupts.
4. Voltage rise (and fall) time : 1 ~ 5 μ s.
5. Test severity :

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

14.2. TEST SETUP



For the actual test configuration, please refer to the related item – Photographs of the Test Configuration.

14.3. Measurement Equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
TRANSIENT	EMCPARTNER	TRA2000IN6	901	2014.03.24	2015.03.23
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-005	2014.03.31	2015.03.30



14.4. Test Result and Data

N/A



15. EUT Photographs

PI-SFW401L

1) EUT Photo



2) EUT Photo





3) EUT Photo



4) EUT Photo



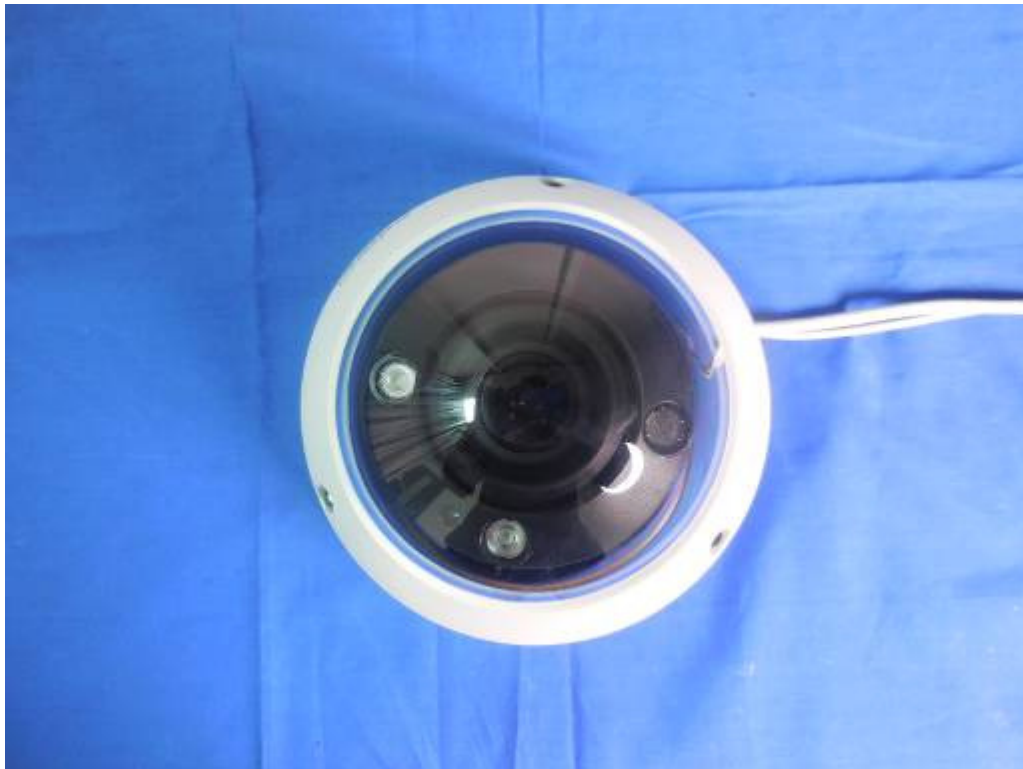


PI-SFW201L

5) EUT Photo



6) EUT Photo





7) EUT Photo



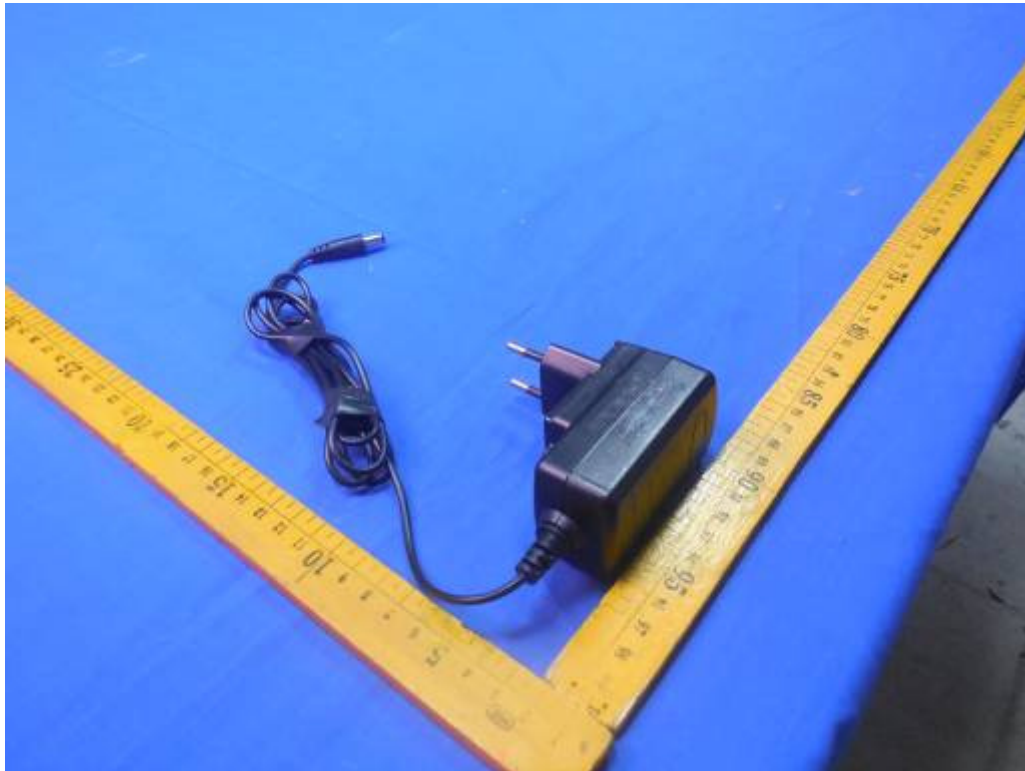
8) EUT Photo





Adapter #1

9) EUT Photo



10) EUT Photo





11) EUT Photo



12) EUT Photo





Adapter #2

13) EUT Photo



14) EUT Photo





15) EUT Photo

