



FCC DOC TEST REPORT

According to

**47 CFR, Part 2, Part 15, CISPR PUB. 22,
ICES 003 Issue 6**

Applicant : ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

Address : No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

Equipment : IP CAMERA, HD Intelligent Traffic Camera

Model No. : IPC-HFW8301EP, IPC-HFW8301EN, IPC-HFW8306EP,
IPC-HFW8306EN, IPC-HFW8306EP-0722A,
IPC-HFW8306EN-0722A, IPC-HFW8301EP-H,
IPC-HFW8301EN-H, IPC-HFW8306EP-H,IPC-HFW8306EN-H,
IPC-HFW8306EP-H-0722A,IPC-HFW8306EN-H-0722A,
DH-IPC-HFW8301EP,DH-IPC-HFW8301EN,DH-IPC-HFW8306EP,
DH-IPC-HFW8306EN, DH-IPC-HFW8306EP-0722A,
DH-IPC-HFW8306EN-0722A, DH-IPC-HFW8301EP-H,
DH-IPC-HFW8301EN-H, DH-IPC-HFW8306EP-H,
DH-IPC-HFW8306EN-H, DH-IPC-HFW8306EP-H-0722A,
DH-IPC-HFW8306EN-H-0722A, ITC237-PW1A-IRZ,
DH-ITC237-PW1A-IRZ,DHI-ITC237-PW1A-IRZ,
DHI-ITC237-PF1A-IR,ITC237-PF1A-IR,DHI-ITC237-PF1A,
ITC237-PF1A,DHI-ITC237-PU1A-IRHL,ITC237-PU1A-IRHL,
DHI-ITC237-PU1A-HL,ITC237-PU1A-HL, DHI-ITC237-PW1B-IRZ,
ITC237-PW1B-IRZ, DHI-ITC237-PU1B-IR, ITC237-PU1B-IR,
DHI-ITC237-PU1B-L, ITC237-PU1B-L

- 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.



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History of this test report

☐ ORIGINAL.

■ Additional attachment as following record:

Attachment No.	Date	Description
SEFD1403162	May 15, 2014	Original
SEFD1403162-A	Mar 12, 2015	First edition (Add model name, update standard)
SEFD1503037-A	Jun 28, 2016	Second edition (Add model name and update standard)
SEFD1606203-A	Dec 15,2016	Third edition (Add equipment name and model name)



FCC DOC TEST REPORT

Declaration of Conformity

According to

**47 CFR, Part 2, Part 15, CISPR PUB. 22,
ICES 003 Issue 6**

Applicant : ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

Address : No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

Equipment : IP CAMERA, HD Intelligent Traffic Camera

Model No. : IPC-HFW8301EP, IPC-HFW8301EN, IPC-HFW8306EP,
IPC-HFW8306EN, IPC-HFW8306EP-0722A,
IPC-HFW8306EN-0722A, IPC-HFW8301EP-H,
IPC-HFW8301EN-H, IPC-HFW8306EP-H,IPC-HFW8306EN-H,
IPC-HFW8306EP-H-0722A,IPC-HFW8306EN-H-0722A,
DH-IPC-HFW8301EP,DH-IPC-HFW8301EN,DH-IPC-HFW8306EP,
DH-IPC-HFW8306EN, DH-IPC-HFW8306EP-0722A,
DH-IPC-HFW8306EN-0722A, DH-IPC-HFW8301EP-H,
DH-IPC-HFW8301EN-H, DH-IPC-HFW8306EP-H,
DH-IPC-HFW8306EN-H, DH-IPC-HFW8306EP-H-0722A,
DH-IPC-HFW8306EN-H-0722A, ITC237-PW1A-IRZ,
DH-ITC237-PW1A-IRZ,DHI-ITC237-PW1A-IRZ,
DHI-ITC237-PF1A-IR,ITC237-PF1A-IR,DHI-ITC237-PF1A,
ITC237-PF1A,DHI-ITC237-PU1A-IRHL,ITC237-PU1A-IRHL,
DHI-ITC237-PU1A-HL,ITC237-PU1A-HL,
DHI-ITC237-PW1B-IRZ,ITC237-PW1B-IRZ,DHI-ITC237-PU1B-IR,
ITC237-PU1B-IR,DHI-ITC237-PU1B-L,ITC237-PU1B-L

I **HEREBY** CERTIFY THAT :

The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.4 – 2014** and the energy emitted by this equipment was **passed CISPR PUB. 22, FCC Part 15, ICES 003 Issue 6** in both radiated and conducted emission class B limits. Testing was carried out on May 15, 2014 at Cerpass Technology Corp.

Signature

Ray Chou

EMC/RF B.U. Assistant Manager



1. Summary of Test Procedure and Test Result

Test Item	Normative References	Test Result
Conducted Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS
Radiated Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS



2. Test Configuration of Equipment under Test


2.1. Manufacturer

ZHEJIANG DAHUA VISION TECHNOLOGY CO.,LTD.

No.1199, Bin'an Road, Binjiang District, Hangzhou, P.R. China

2.2. Feature of Equipment under Test

Third edition:

IP CAMERA, HD Intelligent Traffic Camera	Model No.:	IPC-HFW8301EP, IPC-HFW8301EN, IPC-HFW8306EP, IPC-HFW8306EN, IPC-HFW8306EP-0722A, IPC-HFW8306EN-0722A, IPC-HFW8301EP-H, IPC-HFW8301EN-H, IPC-HFW8306EP-H,IPC-HFW8306EN-H, IPC-HFW8306EP-H-0722A,IPC-HFW8306EN-H-0722A, DH-IPC-HFW8301EP,DH-IPC-HFW8301EN,DH-IPC-HFW8306EP, DH-IPC-HFW8306EN, DH-IPC-HFW8306EP-0722A, DH-IPC-HFW8306EN-0722A, DH-IPC-HFW8301EP-H, DH-IPC-HFW8301EN-H, DH-IPC-HFW8306EP-H, DH-IPC-HFW8306EN-H, DH-IPC-HFW8306EP-H-0722A, DH-IPC-HFW8306EN-H-0722A, ITC237-PW1A-IRZ, DH-ITC237-PW1A-IRZ,DHI-ITC237-PW1A-IRZ, DHI-ITC237-PF1A-IR,ITC237-PF1A-IR,DHI-ITC237-PF1A, ITC237-PF1A,DHI-ITC237-PU1A-IRHL,ITC237-PU1A-IRHL, DHI-ITC237-PU1A-HL,ITC237-PU1A-HL, DHI-ITC237-PW1B-IRZ,ITC237-PW1B-IRZ,DHI-ITC237-PU1B-IR, ITC237-PU1B-IR,DHI-ITC237-PU1B-L,ITC237-PU1B-L
Remark	DH-IPC-HFW8301EN was selected as the test model and its data have been recorded in this report.	
Adapter	Model No.:	ADS-24RD-12 1224G
	Input :	100-240V~ 50/60Hz Max.0.7A
	Output :	12V  2.0A

The difference btw type DH-IPC-HFW8301EN and other types

Model No	Differences
IPC-HFW8301EP	Label is different, it lacks Dahua silk-screen structurally.
IPC-HFW8301EN	Label is different, it lacks Dahua silk-screen structurally.
IPC-HFW8306EP	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference.




IPC-HFW8306EN	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EP-0722A	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
IPC-HFW8306EN-0722A	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
IPC-HFW8301EP-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater.
IPC-HFW8301EN-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater.
IPC-HFW8306EP-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EN-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EP-H-0722A	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
IPC-HFW8306EN-H-0722A	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
DH-IPC-HFW8301EP	Label is different.
DH-IPC-HFW8306EP	Label is different, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EN	Label is different, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EP-0722A	Label is different, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.



DH-IPC-HFW8306EN-0722A	Label is different, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
DH-IPC-HFW8301EP-H	Label is different, About hardware, it has heater.
DH-IPC-HFW8301EN-H	Label is different, About hardware, it has heater.
DH-IPC-HFW8306EP-H	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EN-H	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EP-H-0722A	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
DH-IPC-HFW8306EN-H-0722A	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
ITC237-PW1A-IRZ, DH-ITC237-PW1A-IRZ, DHI-ITC237-PW1A-IRZ	Compare to the original model, only change the model naming rules.
HI-ITC237-PW1B-IRZ,ITC237-PW1B-IRZ, DHI-ITC237-PU1B-IR, ITC237-PU1B-IR,DHI-ITC237-PU1B-L, ITC237-PU1B-L	Compare to the original model, only change the model naming rules.




Second edition:

IP CAMERA	Model No.:	IPC-HFW8301EP, IPC-HFW8301EN, IPC-HFW8306EP, IPC-HFW8306EN, IPC-HFW8306EP-0722A, IPC-HFW8306EN-0722A, IPC-HFW8301EP-H, IPC-HFW8301EN-H, IPC-HFW8306EP-H,IPC-HFW8306EN-H, IPC-HFW8306EP-H-0722A,IPC-HFW8306EN-H-0722A, DH-IPC-HFW8301EP,DH-IPC-HFW8301EN,DH-IPC-HFW8306EP, DH-IPC-HFW8306EN, DH-IPC-HFW8306EP-0722A, DH-IPC-HFW8306EN-0722A, DH-IPC-HFW8301EP-H, DH-IPC-HFW8301EN-H, DH-IPC-HFW8306EP-H, DH-IPC-HFW8306EN-H, DH-IPC-HFW8306EP-H-0722A, DH-IPC-HFW8306EN-H-0722A, ITC237-PW1A-IRZ, DH-ITC237-PW1A-IRZ,DHI-ITC237-PW1A-IRZ, DHI-ITC237-PF1A-IR,ITC237-PF1A-IR,DHI-ITC237-PF1A, ITC237-PF1A,DHI-ITC237-PU1A-IRHL,ITC237-PU1A-IRHL, DHI-ITC237-PU1A-HL,ITC237-PU1A-HL
Remark	DH-IPC-HFW8301EN was selected as the test model and its data have been recorded in this report.	
Adapter	Model No.:	ADS-24RD-12 1224G
	Input :	100-240V~ 50/60Hz Max.0.7A
	Output :	12V  2.0A



First edition:

IP CAMERA	Model No.:	IPC-HFW8301EP,IPC-HFW8301EN, IPC-HFW8306EP, IPC-HFW8306EN,IPC-HFW8306EP-0722A, IPC-HFW8306EN-0722A, IPC-HFW8301EP-H,IPC-HFW8301EN-H, IPC-HFW8306EP-H,IPC-HFW8306EN-H, IPC-HFW8306EP-H-0722A,IPC-HFW8306EN-H-0722A, DH-IPC-HFW8301EP,DH-IPC-HFW8301EN,DH-IPC-HFW8306EP, DH-IPC-HFW8306EN,DH-IPC-HFW8306EP-0722A, DH-IPC-HFW8306EN-0722A,DH-IPC-HFW8301EP-H, DH-IPC-HFW8301EN-H,DH-IPC-HFW8306EP-H, DH-IPC-HFW8306EN-H, DH-IPC-HFW8306EP-H-0722A, DH-IPC-HFW8306EN-H-0722A, ITC237-PW1A-IRZ, DH-ITC237-PW1A-IRZ, DHI-ITC237-PW1A-IRZ
Remark	DH-IPC-HFW8301EN was selected as the test model and its data have been recorded in this report.	
Adapter	Model No.:	ADS-24RD-12 1224G
	Input :	100-240V~ 50/60Hz Max.0.7A
	Output :	12V  2.0A

The difference btw type DH-IPC-HFW8301EN and other types

Model No	Differences
IPC-HFW8301EP	Label is different, it lacks Dahua silk-screen structurally.
IPC-HFW8301EN	Label is different, it lacks Dahua silk-screen structurally.
IPC-HFW8306EP	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EN	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EP-0722A	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
IPC-HFW8306EN-0722A	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
IPC-HFW8301EP-H	Label is different, it lacks Dahua silk-screen structurally, About




	hardware, it has heater.
IPC-HFW8301EN-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater.
IPC-HFW8306EP-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EN-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EP-H-0722A	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
IPC-HFW8306EN-H-0722A	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
DH-IPC-HFW8301EP	Label is different.
DH-IPC-HFW8306EP	Label is different, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EN	Label is different, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EP-0722A	Label is different, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
DH-IPC-HFW8306EN-0722A	Label is different, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
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DH-IPC-HFW8301EN-H	Label is different, About hardware, it has heater.
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DH-IPC-HFW8306EN-H-0722A	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens



	is difference.
ITC237-PW1A-IRZ, DH-ITC237-PW1A-IRZ, DHI-ITC237-PW1A-IRZ	Compare to the original model, only change the model naming rules.

Original:

IP CAMERA	Model No.:	IPC-HFW8301EP, IPC-HFW8301EN, IPC-HFW8306EP, IPC-HFW8306EN, IPC-HFW8306EP-0722A,IPC-HFW8306EN-0722A, IPC-HFW8301EP-H,IPC-HFW8301EN-H,IPC-HFW8306EP-H, IPC-HFW8306EN-H,IPC-HFW8306EP-H-0722A, IPC-HFW8306EN-H-0722A, DH-IPC-HFW8301EP,DH-IPC-HFW8301EN, DH-IPC-HFW8306EP,DH-IPC-HFW8306EN, DH-IPC-HFW8306EP-0722A,DH-IPC-HFW8306EN-0722A, DH-IPC-HFW8301EP-H,DH-IPC-HFW8301EN-H, DH-IPC-HFW8306EP-H,DH-IPC-HFW8306EN-H, DH-IPC-HFW8306EP-H-0722A, DH-IPC-HFW8306EN-H-0722A
Remark	DH-IPC-HFW8301EN was selected as the test model and its data have been recorded in this report.	
Adapter	Model No.:	ADS-24RD-12 1224G
	Input :	100-240V~ 50/60Hz Max.0.7A
	Output :	12V  2.0A

The difference btw type DH-IPC-HFW8301EN and other types

Model No	Differences
IPC-HFW8301EP	Label is different, it lacks Dahua silk-screen structurally.
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IPC-HFW8306EP	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EN	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference.
IPC-HFW8306EP-0722A	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference, camera



	lens is difference.
IPC-HFW8306EN-0722A	Label is different, it lacks Dahua silk-screen structurally, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
IPC-HFW8301EP-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater.
IPC-HFW8301EN-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater.
IPC-HFW8306EP-H	Label is different, it lacks Dahua silk-screen structurally, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.
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DH-IPC-HFW8301EP	Label is different.
DH-IPC-HFW8306EP	Label is different, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EN	Label is different, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EP-0722A	Label is different, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
DH-IPC-HFW8306EN-0722A	Label is different, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
DH-IPC-HFW8301EP-H	Label is different, About hardware, it has heater.
DH-IPC-HFW8301EN-H	Label is different, About hardware, it has heater.
DH-IPC-HFW8306EP-H	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.
DH-IPC-HFW8306EN-H	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference.



DH-IPC-HFW8306EP-H-0722A	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.
DH-IPC-HFW8306EN-H-0722A	Label is different, About hardware, it has heater, focus mode also different, it is electric zoom, Mainboard has difference, camera lens is difference.

2.3. Test Manner

Test Manner

- a During testing, the interface cables and equipment positions were varied according to ANSI C63.4-2009
- b Turn on the power of all equipment.
- c The complete test system included Sound, Notebook PC, DVD and EUT for EMI test.

The pre-test modes

Test Mode 1: Normal Operation

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

Test Mode 1: Normal Operation

**2.4. Description of Test System**

No.	Device	Manufacturer	Model No.	Description
1	Notebook PC	SONY	PCG-71811P	Non-Shielded,1.5m (R33021)
2	DVD	Pioneer	DV-600AV-S	Non-Shielded,1.5m (R31271-ETC)
3	Sound	Creative	MF4105	N/A

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



2.5. General Information of Test

Test Site :	Cerpass Technology Corp. 2F-11, No. 3, Yuan Qu St., (Nankang Software Park), Taipei, Taiwan 115, R.O.C.
Test Site Location (OATS2-SD) :	No.68-1, Shihbachongsi, Shihding Township, Taipei City 223, Taiwan, R.O.C.
FCC Registration Number :	TW1049, TW1061
IC Registration Number :	4934B-1, 4934D-1
VCCI Registration Number :	T-1173 for Telecommunication Test C-4139 for Conducted emission test R-3428 for Radiated emission test G-97 for radiated disturbance above 1GHz
Frequency Range Investigated :	Conducted: from 150kHz to 30 MHz Radiation: from 30 MHz to 1,000 MHz Radiation: from 1,000 MHz to 18,000 MHz
Test Distance :	The test distance of radiated emission below 1GHz from antenna to EUT is 3 M. The test distance of radiated emission above 1GHz from antenna to EUT is 3 M.

2.6. Measurement Uncertainty

Measurement Item	Measurement Frequency	Polarization	Uncertainty
Conducted Emission	9 kHz ~ 30 MHz	LINE / NEUTRAL	3.25 dB
Radiated Emission	30 MHz ~ 1,000 MHz	Vertical / Horizontal	3.93 dB
	1,000 MHz ~ 18,000 MHz	Vertical / Horizontal	5.18 dB



3. Test of Conducted Emission

3.1. Test Limit

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 KHz on the 120 VAC power and return leads of the EUT according to the methods defined in ANSI C63.4-2014 Section 3.1. The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 2.2. The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position produced maximum conducted emissions.

Conducted Emission Limits:

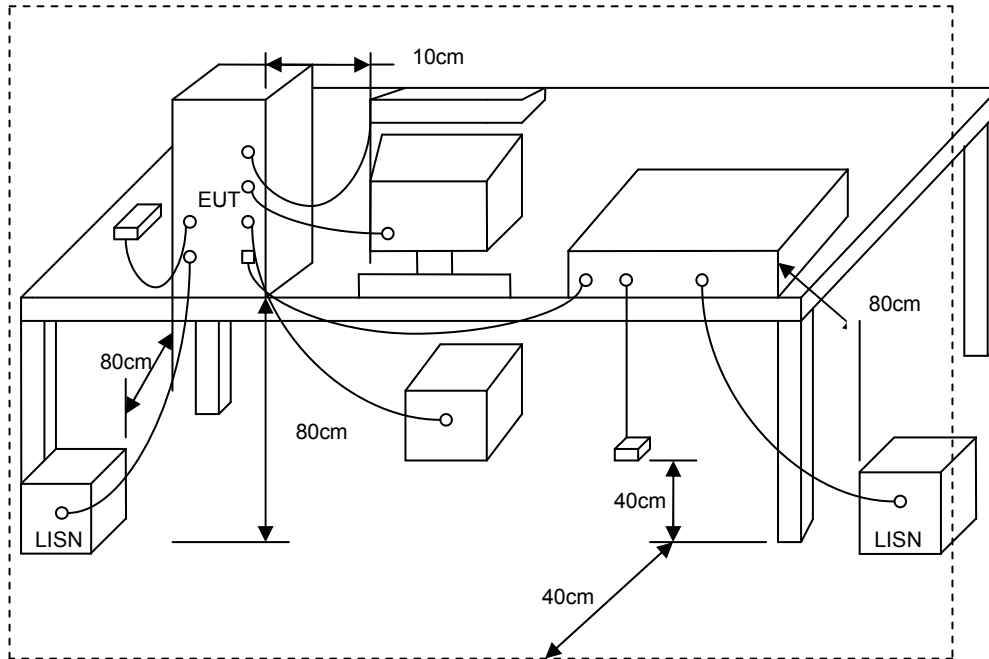
Frequency (MHz)	Quasi Peak (dB μ V)	Average (dB μ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

3.2. Test Procedures

- The EUT was placed 0.4 meter from the conducting wall of the shielding room was kept at least 80 centimeters from any other grounded conducting surface.
- Connect EUT to the power mains through a line impedance stabilization network (LISN).
- All the support units are connecting to the other LISN.
- The LISN provides 50 ohm coupling impedance for the measuring instrument.
- The FCC states that a 50 ohm, 50 micro-Henry LISN should be used.
- Both sides of AC line were checked for maximum conducted interference.
- The frequency range from 150 kHz to 30 MHz was searched.
- Set the test-receiver system to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.



3.3. Typical test Setup



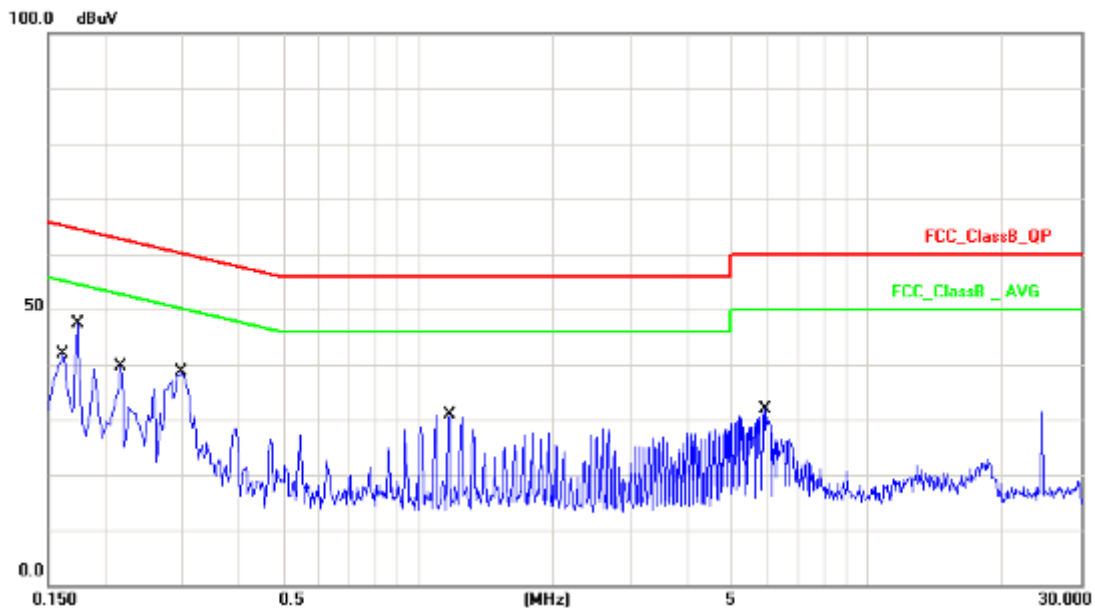
3.4. Measurement equipment

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2014.03.24	2015.03.23
AMN	R&S	ESH2-Z5	100182	2013.09.11	2014.09.10
Two-Line V-Network	R&S	ENV216	100325	2013.12.04	2014.12.03
ISN	FCC	FCC-TLISN-T2-02	20379	2014.03.24	2015.03.23
ISN	FCC	FCC-TLISN-T4-02	20380	2014.03.24	2015.03.23
ISN	FCC	FCC-TLISN-T8-02	20381	2014.03.24	2015.03.23
ISN	TESEQ	ISN ST08	30175	2014.03.24	2015.03.23
Current Probe	R&S	EZ-17	100303	2014.04.04	2015.04.03
Passive Voltage Probe	R&S	ESH2-Z3	100026	2014.03.24	2015.03.23
Pulse Limiter	R&S	ESH3-Z2	100529	2014.03.24	2015.03.23
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-004	2014.03.31	2015.03.30



3.5. Test Result and Data

Test Mode :	Mode 1: Normal Operation		
AC Power :	AC 120V/60Hz	Phase :	LINE
Equipment :	IP CAMERA	Model No :	DH-IPC-HFW8301EN
Temperature :	23℃	Humidity :	52%
Pressure(mbar) :	1002	Date :	2014/04/20

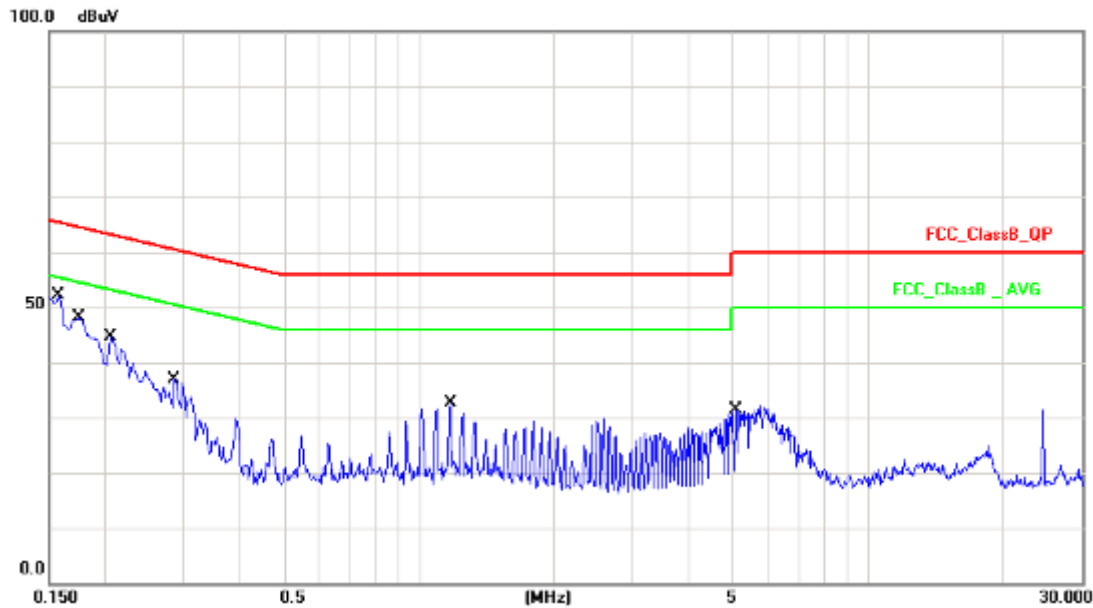


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1620	10.13	24.29	34.42	65.36	-30.94	QP
2	0.1620	10.13	13.01	23.14	55.36	-32.22	AVG
3	0.1740	10.13	24.02	34.15	64.76	-30.61	QP
4	0.1740	10.13	0.89	11.02	54.76	-43.74	AVG
5	0.2180	10.12	20.34	30.46	62.89	-32.43	QP
6	0.2180	10.12	0.11	10.23	52.89	-42.66	AVG
7	0.2980	10.14	24.32	34.46	60.30	-25.84	QP
8	0.2980	10.14	2.80	12.94	50.30	-37.36	AVG
9	1.1740	10.16	18.82	28.98	56.00	-27.02	QP
10	1.1740	10.16	16.14	26.30	46.00	-19.70	AVG
11	5.9380	10.25	17.80	28.05	60.00	-31.95	QP
12	5.9380	10.25	11.43	21.68	50.00	-28.32	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Normal Operation		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Equipment :	IP CAMERA	Model No :	DH-IPC-HFW8301EN
Temperature :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2014/04/20



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.1580	10.13	27.50	37.63	65.56	-27.93	QP
2	0.1580	10.13	20.64	30.77	55.56	-24.79	AVG
3	0.1740	10.13	21.12	31.25	64.76	-33.51	QP
4	0.1740	10.13	-0.69	9.44	54.76	-45.32	AVG
5	0.2060	10.13	17.77	27.90	63.36	-35.46	QP
6	0.2060	10.13	-1.29	8.84	53.36	-44.52	AVG
7	0.2860	10.14	12.13	22.27	60.64	-38.37	QP
8	0.2860	10.14	-2.53	7.61	50.64	-43.03	AVG
9	1.1740	10.18	18.85	29.03	56.00	-26.97	QP
10	1.1740	10.18	16.09	26.27	46.00	-19.73	AVG
11	5.0699	10.26	15.96	26.22	60.00	-33.78	QP
12	5.0699	10.26	5.43	15.69	50.00	-34.31	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Dian



3.6. Test Photographs

Front View



Rear View





4. Test of Radiated Emission

4.1. Test Limit

Radiated emissions were measured with a bandwidth according to the methods defines in ANSI C63.4-2014. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 3.2. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Distance Meters	Radiated (μ V / M)	Radiated (dB μ V/ M)
30-88	3	100	40.0
88-216	3	150	43.5
216-960	3	200	46.0
Above 960	3	500	54.0

For unintentional device, according to CISPR PUB.22, for Class B digital devices, the general requirement of field strength of radiated emissions from intentional radiators at a distance of 10 meters shall not exceed the below table.

Frequency (MHz)	Distance Meters	Radiated (dB μ V/ M)
30-230	10	30
230-1000	10	37

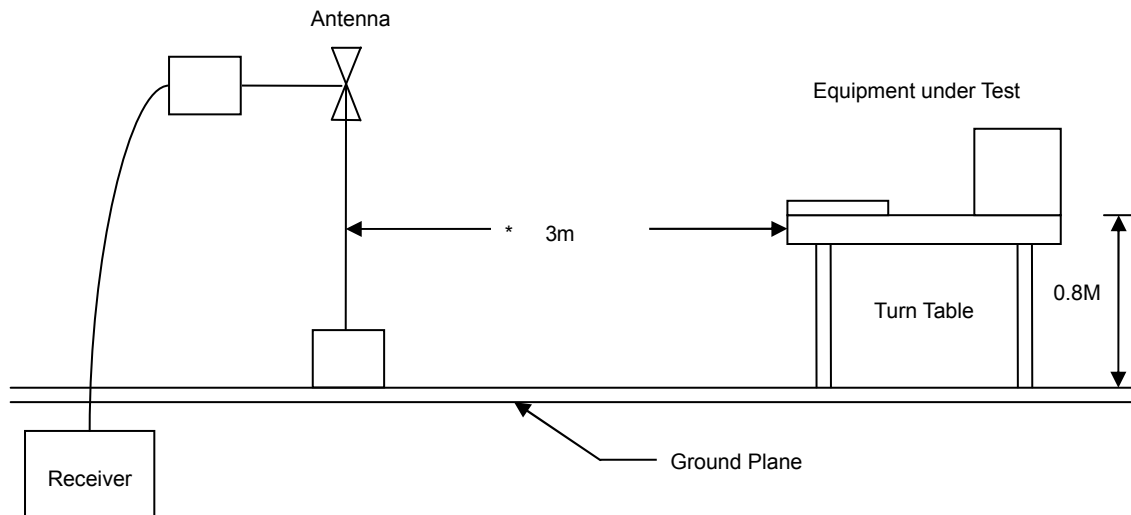
4.2. Test Procedures

- The EUT was placed on a Rota 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 6 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 6 dB margin will be repeated one by one using the quasi-peak method and reported.

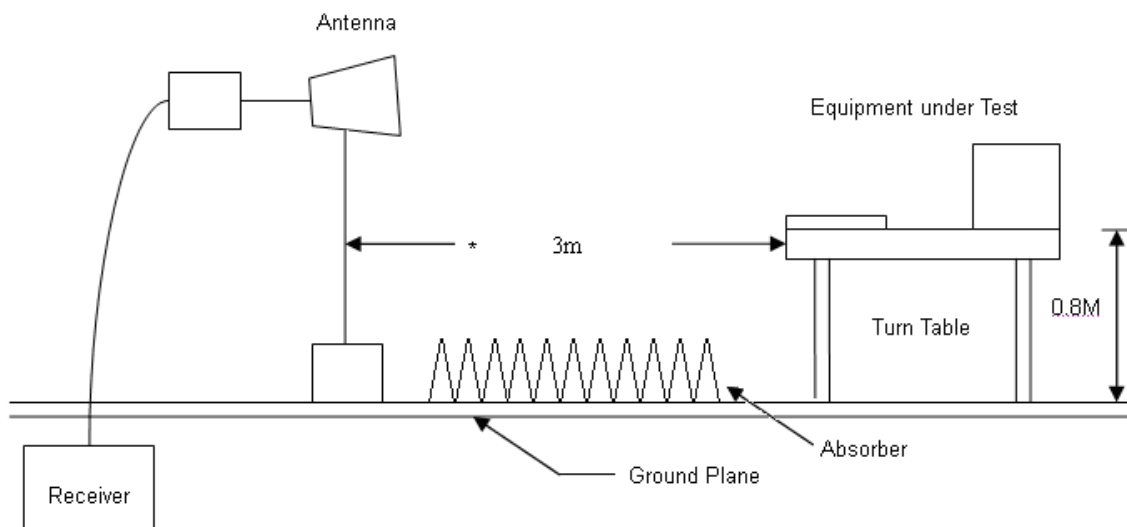


4.3. Typical test Setup

Below 1GHz Test Setup



Above 1GHz Test Setup

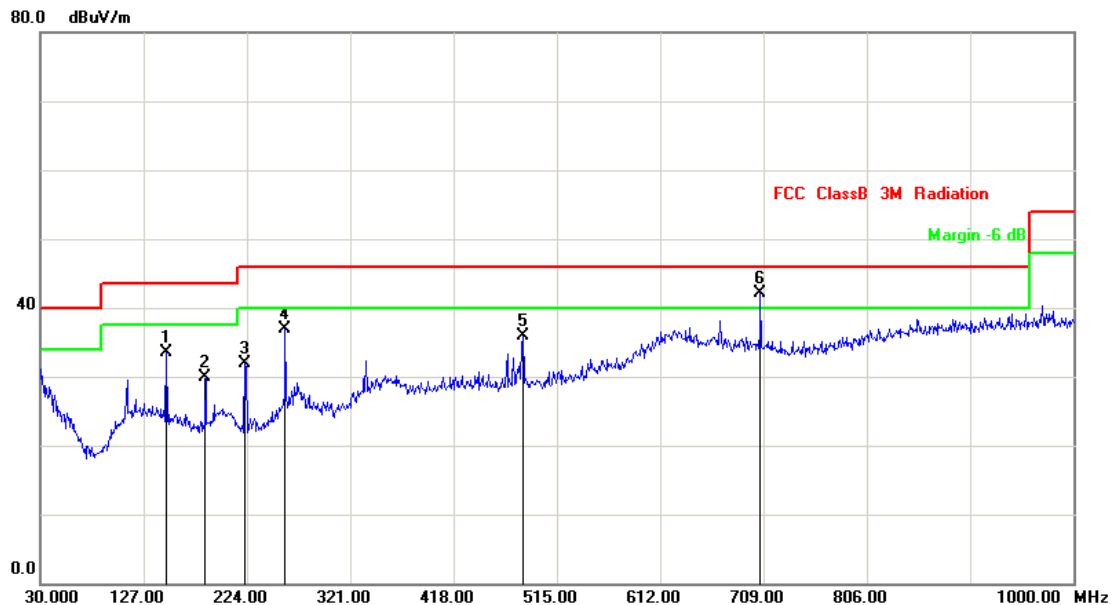


**4.4. Measurement equipment**

Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI	100563	2014.02.10	2015.02.09
H64 Preamplifier	HP	8447F	3113A05582	2014.03.24	2015.03.23
Preamplifier	Agilent	8449B	3008A02342	2014.03.24	2015.03.23
Ultra Broadband Antenna	R&S	HL562	100362	2014.05.02	2015.05.01
Broad-Band Horn Antenna	Schwarzbeck	BBHA9120D	9120D-619	2014.05.02	2015.05.01
Broad-Band Horn Antenna	Schwarzbeck	BBHA9170	9170-348	2013.11.04	2014.11.03
Spectrum Analyzer	R&S	FSP40	100324	2014.03.23	2015.03.24
Temperature/ Humidity Meter	Zhicheng	ZC1-11	CEP-TH-002	2014.03.31	2015.03.30

**4.5. Test Result and Data (30MHz ~ 1000MHz)**

Test Mode :	Mode 1: Normal Operation		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	DH-IPC-HFW8301EN
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2014/03/20

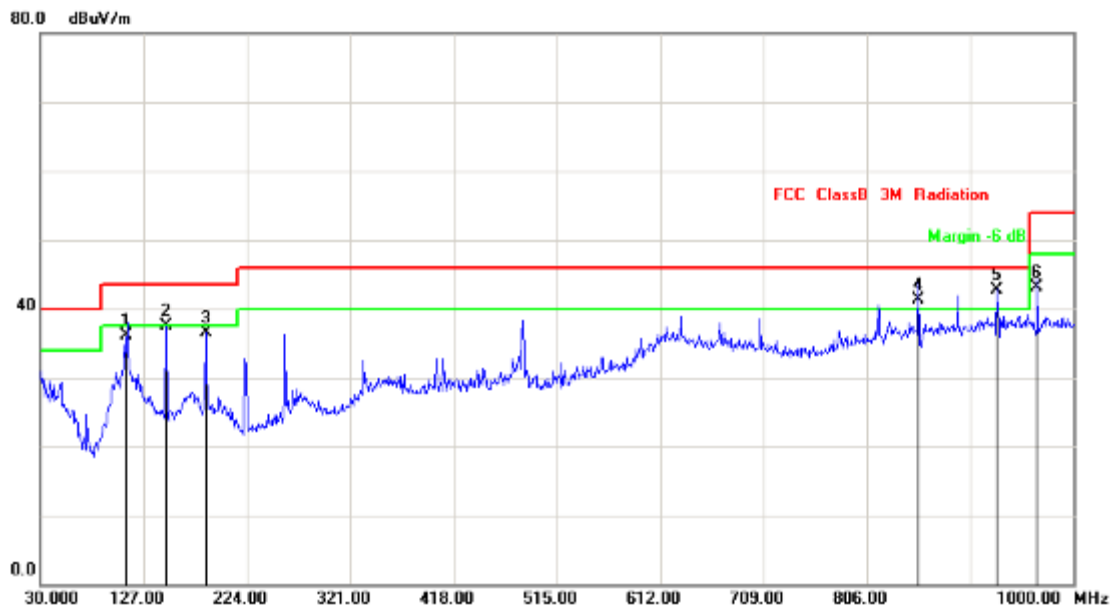


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	148.3400	-0.52	34.05	33.53	43.50	-9.97	QP	400	77
2	185.1999	-1.96	31.87	29.91	43.50	-13.59	QP	300	349
3	222.0600	-2.16	34.03	31.87	46.00	-14.13	QP	199	340
4	259.8899	-2.15	39.07	36.92	46.00	-9.08	QP	400	104
5	482.9900	4.28	31.56	35.84	46.00	-10.16	QP	199	25
6	706.0900	9.73	32.29	42.02	46.00	-3.98	QP	100	109

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Normal Operation		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	DH-IPC-HFW8301EN
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2014/03/20



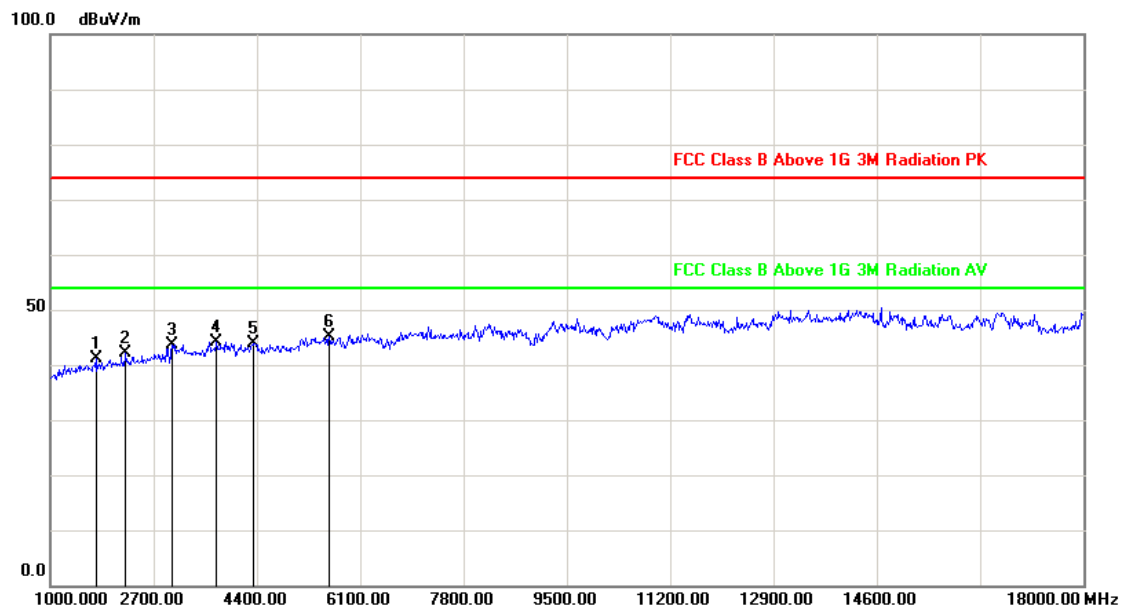
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	111.3900	-1.10	37.13	36.03	43.50	-7.47	QP	100	230
2	148.3400	-0.52	37.98	37.46	43.50	-6.04	QP	100	99
3	185.2000	-1.96	38.41	36.45	43.50	-7.05	QP	100	182
4	853.8750	11.78	29.62	41.40	46.00	-4.60	QP	200	190
5	928.1300	12.44	30.27	42.71	46.00	-3.29	QP	200	230
6	965.2750	12.75	30.38	43.13	54.00	-10.87	QP	200	134

Note: Measurement Level = Reading Level + Correct Factor



4.6. Test Result and Data (1000MHz ~ 18000MHz)

Test Mode :	Mode 1: Normal Operation		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	DH-IPC-HFW8301EN
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2014/04/15

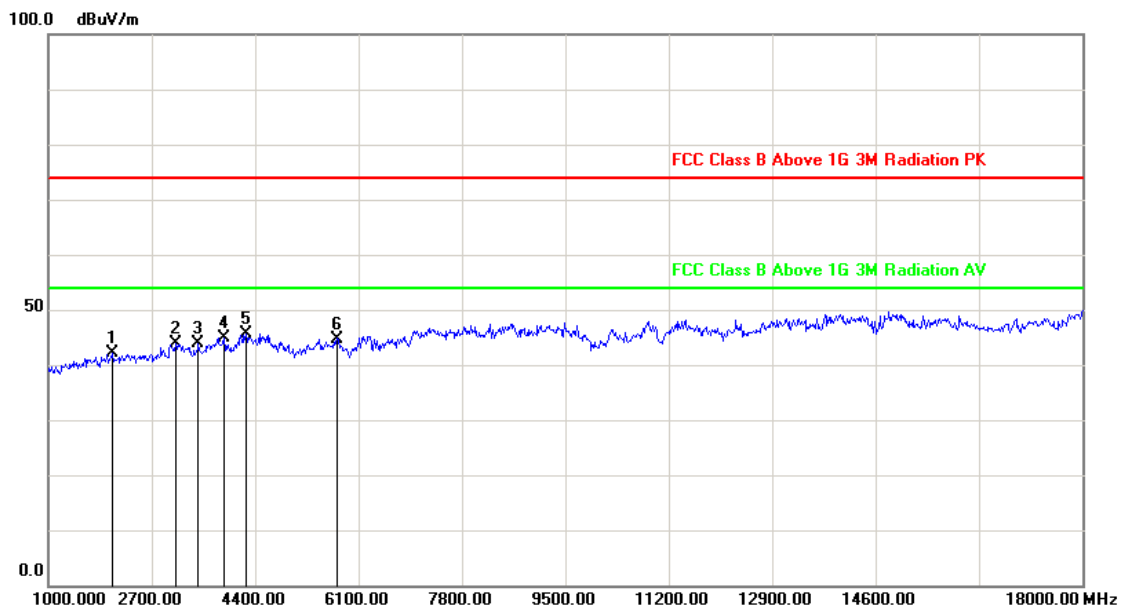


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1748.000	-3.75	44.84	41.09	74.00	-32.91	peak	100	187
2	2241.000	-1.89	43.92	42.03	74.00	-31.97	peak	100	87
3	3006.000	0.67	42.99	43.66	74.00	-30.34	peak	100	262
4	3737.000	3.38	40.74	44.12	74.00	-29.88	peak	100	360
5	4349.000	5.23	38.68	43.91	74.00	-30.09	peak	100	225
6	5590.000	7.84	37.31	45.15	74.00	-28.85	peak	100	2

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Normal Operation		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	DH-IPC-HFW8301EN
Temp :	23°C	Humidity :	52%
Pressure(mbar) :	1002	Date :	2014/04/15



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	2054.000	-2.52	44.54	42.02	74.00	-31.98	peak	100	236
2	3091.000	0.99	42.96	43.95	74.00	-30.05	peak	100	114
3	3465.000	2.38	41.55	43.93	74.00	-30.07	peak	100	0
4	3890.000	3.95	40.99	44.94	74.00	-29.06	peak	100	25
5	4247.000	4.98	40.63	45.61	74.00	-28.39	peak	100	3
6	5743.000	8.10	36.65	44.75	74.00	-29.25	peak	100	6

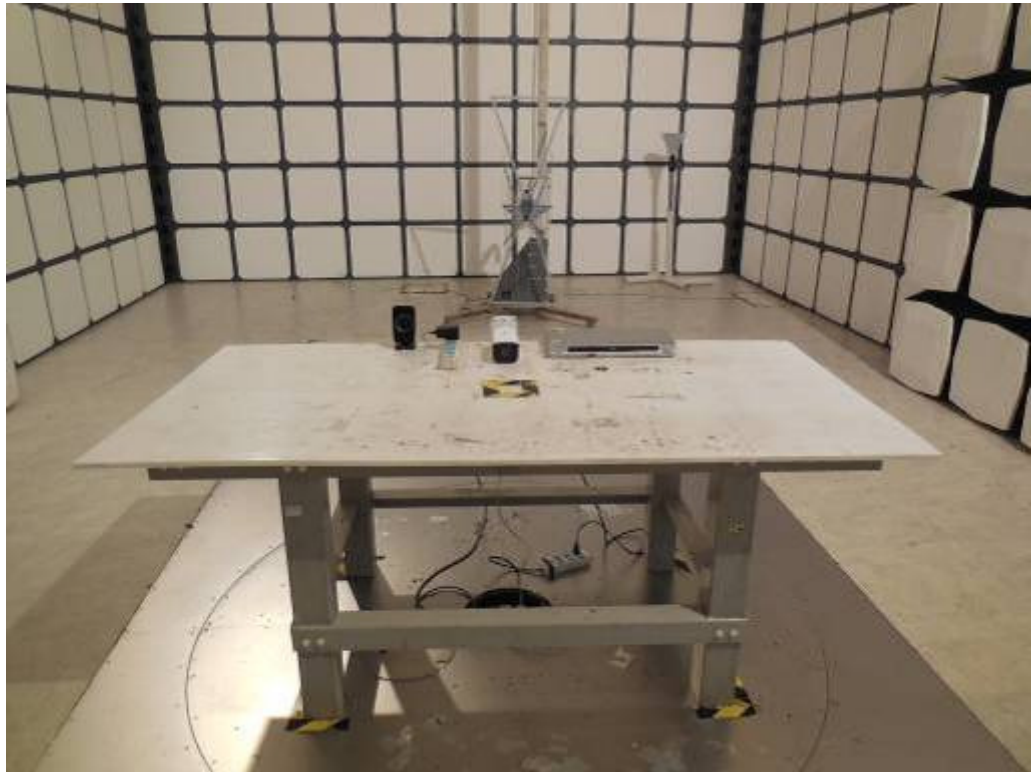
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Karp

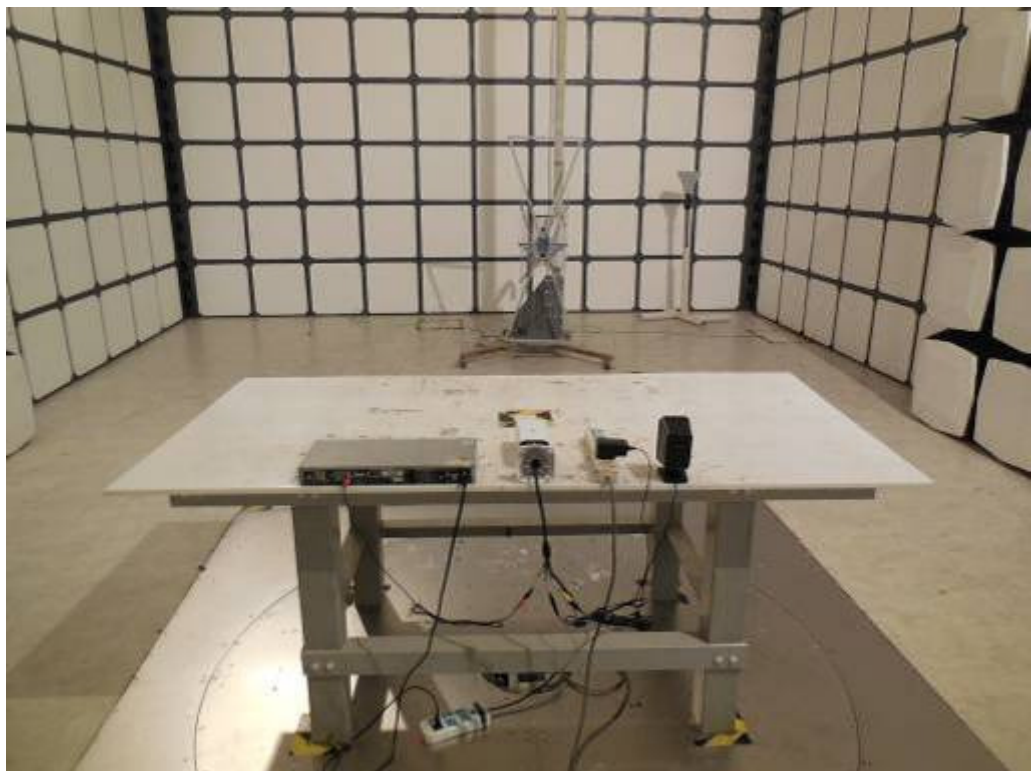


4.7. Test Photographs (30MHz ~ 1000MHz)

Front View



Rear View



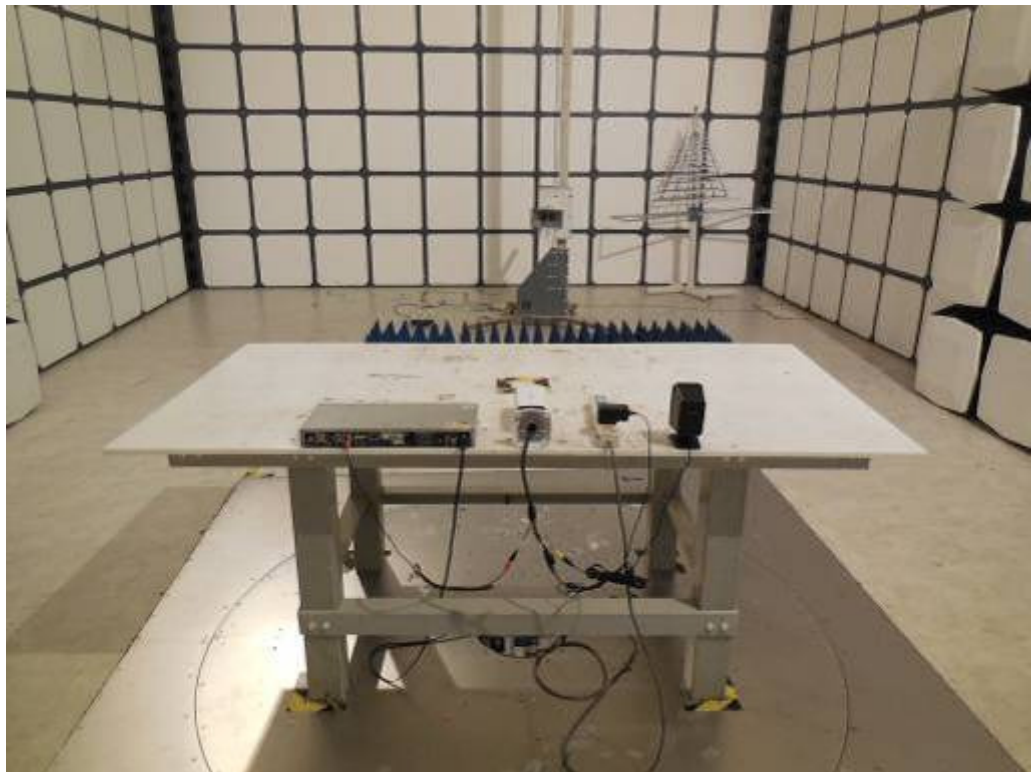


4.8. Test Photographs (1000MHz ~ 18000MHz)

Front View



Rear View





5. Photographs of EUT

1) EUT Photo



2) EUT Photo





3) EUT Photo



4) EUT Photo(Adapter)





5) EUT Photo(Adapter)



6) EUT Photo(Adapter)



7) EUT Photo(Adapter)

