



# 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

DH-IPC-HDBW4x2yEz-vvB, IPC-HDBW4x2yEz-vvB, DH-IPC-HDBW4x2yEz,  
IPC-HDBW4x2yEz,DH-IPC-HDBW1320EP,  
DH-IPC-HDBW1320EN,IPC-HDBW1320EP,IPC-HDBW1320EN,  
DH-IPC-HDBW4x2yEz-AS-vvB, IPC-HDBW4x2yEz-AS-vvB,  
DH-IPC-HDBW4x2yEz-AS, IPC-HDBW4x2yEz-AS,  
DH-IPC-HDBW1120EP,DH-IPC-HDBW1120EN,  
DH-IPC-HDBW1220EP,DH-IPC-HDBW1220EN,  
IPC-HDBW1120EP,IPC-HDBW1120EN,IPC-HDBW1220EP,  
IPC-HDBW1220EN

("x" can be 1, 2, 4, denote different Pixels; y can be 0-9 denote different function;  
z=N, P or blank; vv=0280, 0360, 0600 which represents different lens)

Model No. : IPC-HDBW1120EP-W, IPC-HDBW1120EN-W,  
DH-IPC-HDBW1120EP-W, DH-IPC-HDBW1120EN-W,  
IPC-HDBW11A0EP-W, IPC-HDBW11A0EN-W,  
DH-IPC-HDBW11A0EP-W, DH-IPC-HDBW11A0EN-W,  
IPC-HDBW1320EN-W, IPC-HDBW1320EP-W,  
DH-IPC-HDBW1320EP-W, DH-IPC-HDBW1320EN-W,  
IPC-HDBW13A0EN-W, IPC-HDBW13A0EP-W,  
DH-IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EN-W,  
DH-IPC-HDBW1420EP,DH-IPC-HDBW1420EN,  
DH-IPC-HDBW1420E,IPC-HDBW1420EP,IPC-HDBW1420EN,  
DH-IPC-HDBW1420EP,DH-IPC-HDBW1420EN,IPC-HDBW1420EP,  
IPC-HDBW1420EN,DH-IPC-HDBW1020EP,DH-IPC-HDBW1020EN,  
IPC-HDBW1020EP,IPC-HDBW1020EN,DH-IPC-HDBW44A1EN-I,  
DH-IPC-HDBW44A1EN,DH-IPC-HDBW42A1EN-I,DH-IPC-HDBW42A1EN,  
DH-IPC-HDBW42A0EN-I,DH-IPC-HDBW42A0EN,DH-IPC-HDBW41A0EN-I,  
DH-IPC-HDBW41A0EN,DH-IPC-HDBW44A1EN-ASI,  
DH-IPC-HDBW44A1EN-AS, DH-IPC-HDBW42A1EN-ASI,  
DH-IPC-HDBW42A1EN-AS, DH-IPC-HDBW42A0EN-ASI,  
DH-IPC-HDBW42A0EN-AS,DH-IPC-HDBW41A0EN-ASI,



DH-IPC-HDBW41A0EN-AS,DH-IPC-HDBW13A0EN,  
DH-IPC-HDBW12A0EN,DH-IPC-HDBW11A0EN,  
DH-IPC-HDBW1420EP-S,DH-IPC-HDBW1420EN-S,  
IPC-HDBW1420EP-S,IPC-HDBW1420EN-S,DH-IPC-HDBW14A0EN-S,  
DH-IPC-HDBW1420EP-AS,DH-IPC-HDBW1420EN-AS,IPC-HDBW1420EP-AS,  
IPC-HDBW1420EN-AS,DH-IPC-HDBW14A0EN-AS,  
DH-IPC-HDBW1320EP-S,DH-IPC-HDBW1320EN-S,IPC-HDBW1320EP-S,  
IPC-HDBW1320EN-S,DH-IPC-HDBW13A0EN-S,DH-IPC-HDBW1320EP-AS,  
DH-IPC-HDBW1320EN-AS,IPC-HDBW1320EP-AS,IPC-HDBW1320EN-AS,  
DH-IPC-HDBW13A0EN-AS,DH-IPC-HDBW1220EP-S,DH-IPC-HDBW1220EN-S,  
IPC-HDBW1220EP-S,IPC-HDBW1320EN-S,DH-IPC-HDBW12A0EN-S,  
DH-IPC-HDBW1220EP-AS,DH-IPC-HDBW1220EN-AS,IPC-HDBW1220EP-AS,  
IPC-HDBW1220EN-AS,DH-IPC-HDBW12A0EN-AS,DH-IPC-HDBW1120EP-S,  
DH-IPC-HDBW1120EN-S,IPC-HDBW1120EP-S,IPC-HDBW1120EN-S,  
DH-IPC-HDBW11A0EN-S,DH-IPC-HDBW1120EP-AS,DH-IPC-HDBW1120EN-AS,  
IPC-HDBW1120EP-AS,IPC-HDBW1120EN-AS,DH-IPC-HDBW11A0EN-AS,  
DH-IPC-HDBW1020EP-S,DH-IPC-HDBW1020EN-S,IPC-HDBW1020EP-S,  
IPC-HDBW1020EN-S,DH-IPC-HDBW10A0EN-S,DH-IPC-HDBW1020EP-AS,  
DH-IPC-HDBW1020EN-AS,IPC-HDBW1020EP-AS,IPC-HDBW1020EN-AS,  
DH-IPC-HDBW10A0EN-AS,IPC-HDBW4120EP-S,IPC-HDBW4120EN-S,  
IPC-HDBW4220EP-S,IPC-HDBW4220EN-S,IPC-HDBW4221EP-S,  
IPC-HDBW4221EN-S,IPC-HDBW4421EP-S,IPC-HDBW4421EN-S,  
DH-IPC-HDBW4120EP-S,DH-IPC-HDBW4120EN-S,DH-IPC-HDBW4220EP-S,  
DH-IPC-HDBW4220EN-S,DH-IPC-HDBW4221EP-S,DH-IPC-HDBW4221EN-S,  
DH-IPC-HDBW4421EP-S,DH-IPC-HDBW4421EN-S,  
IPC-D1A30N,IPC-D1A30P,IPC-D1A20N,IPC-D1A20P,IPC-D1A00N,IPC-D1A00P

**I HEREBY CERTIFY THAT :**

The sample was received on Mar 14, 2016 and the testing was carried out on Mar 21, 2016 at Cerpass Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of Cerpass Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Ray Chou

EMC/RF B.U. Assistant Manager



# FCC 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.

Laboratory Accreditation:

☒ Cerpass Technology Corporation

<b>TAF LAB Code:</b>	<b>1439</b>
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## History of this test report

☐ ORIGINAL.

■ Additional attachment as following record:

Report No	Version	Date	Description
SEFD1503108	Rev 01	May 27, 2015	Initial Issue
SEFD1503108-B	Rev 02	Aug 13, 2015	Second Issue (1. Add model name: DH-IPC-HDBW4x2yEz-AS-vvB, IPC-HDBW4x2yEz-AS-vvB, DH-IPC-HDBW4x2yEz-AS, IPC-HDBW4x2yEz-AS 2. The original model name changed to DH-IPC-HDBW4x2yEz-vvB, IPC-HDBW4x2yEz-vvB, DH-IPC-HDBW4x2yEz, IPC-HDBW4x2yEz,DH-IPC-HDBW1320EP, DH-IPC-HDBW1320EN,IPC-HDBW1320EP, IPC-HDBW1320EN)
SEFD1506099-B	Rev 03	Sep 29, 2015	Third Issue (Add model name:DH-IPC-HDBW1120EP, DH-IPC-HDBW1120EN, DH-IPC-HDBW1220EP, DH-IPC-HDBW1220EN; IPC-HDBW1120EP,IPC-HDBW1120EN, IPC-HDBW1220EP,IPC-HDBW1220EN
SEFD1509190-B	Rev 04	Mar 31, 2016	Fourth Issue (Add model name:IPC-HDBW1120EP-W, IPC-HDBW1120EN-W, DH-IPC-HDBW1120EP-W, DH-IPC-HDBW1120EN-W, IPC-HDBW11A0EP-W, IPC-HDBW11A0EN-W, DH-IPC-HDBW11A0EP-W, DH-IPC-HDBW11A0EN-W, IPC-HDBW1320EN-W, IPC-HDBW1320EP-W, DH-IPC-HDBW1320EP-W, DH-IPC-HDBW1320EN-W, IPC-HDBW13A0EN-W, IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EN-W, DH-IPC-HDBW1420EP,DH-IPC-HDBW1420EN, DH-IPC-HDBW1420E,IPC-HDBW1420EP, IPC-HDBW1420EN)
SEFD1603108-B	Rev 05	Jul 18, 2016	Fifth Issue(Add model name and update standard)
SEFD1607092-B	Rev 06	Sep 27, 2017	Sixth Issue(Add model name)



## 1. Summary of Test Procedure and Test Result

### 1.1. Applicable Standards

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 Part 2, Part 15, CISPR PUB. 22.

The energy emitted by this equipment was passed both Radiated and Conducted Emissions Class B limits.

#### Fourth Issue

Test Item	Normative References	Test Result	Remarks
Conducted Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS	Meets Class B Limit Minimum passing margin(AV) is -6.40dB at 0.3180MHz
Radiated Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS	Meets Class B Limit Minimum passing margin(QP) is -2.97dB at 385.6200MHz

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#### Second Issue

Test Item	Normative References	Test Result	Remarks
Conducted Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS	Meets Class B Limit Minimum passing margin(AV) is -6.34dB at 0.3220MHz
Radiated Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS	Meets Class B Limit Minimum passing margin(QP) is -6.71dB at 650.7998MHz



## Initial Issue

Test Item	Normative References	Test Result	Remarks
Conducted Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS	Meets Class B Limit Minimum passing margin(AV) is -2.65dB at 0.3260MHz
Radiated Emission	ANSI C63.4-2014 FCC Part 15 Subpart B ICES 003 Issue 6	PASS	Meets Class B Limit Minimum passing margin(QP) is -2.00dB at 649.9949MHz



## 2. Test Configuration of Equipment under Test

### 2.1. Feature of Equipment under Test

Sixth Issue

<b>Product Name:</b>	IP CAMERA
<b>Model Name:</b>	<p>DH-IPC-HDBW4x2yEz-vvB, IPC-HDBW4x2yEz-vvB, DH-IPC-HDBW4x2yEz, IPC-HDBW4x2yEz, DH-IPC-HDBW1320EP, DH-IPC-HDBW1320EN, IPC-HDBW1320EP, IPC-HDBW1320EN, DH-IPC-HDBW4x2yEz-AS-vvB, IPC-HDBW4x2yEz-AS-vvB, DH-IPC-HDBW4x2yEz-AS, IPC-HDBW4x2yEz-AS, DH-IPC-HDBW1120EP, DH-IPC-HDBW1120EN, DH-IPC-HDBW1220EP, DH-IPC-HDBW1220EN, IPC-HDBW1120EP, IPC-HDBW1120EN, IPC-HDBW1220EP, IPC-HDBW1220EN</p> <p>("x" can be 1, 2, 4, denote different Pixels; y can be 0-9 denote different function; z=N, P or blank; vv=0280, 0360, 0600 which represents different lens)</p> <p>IPC-HDBW1120EP-W, IPC-HDBW1120EN-W, DH-IPC-HDBW1120EP-W, DH-IPC-HDBW1120EN-W, IPC-HDBW11A0EP-W, IPC-HDBW11A0EN-W, DH-IPC-HDBW11A0EP-W, DH-IPC-HDBW11A0EN-W, IPC-HDBW1320EN-W, IPC-HDBW1320EP-W, DH-IPC-HDBW1320EP-W, DH-IPC-HDBW1320EN-W, IPC-HDBW13A0EN-W, IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EN-W, DH-IPC-HDBW1420EP, DH-IPC-HDBW1420EN, DH-IPC-HDBW1420E, IPC-HDBW1420EP, IPC-HDBW1420EN, DH-IPC-HDBW1420EP, DH-IPC-HDBW1420EN, IPC-HDBW1420EP, IPC-HDBW1420EN, DH-IPC-HDBW1020EP, DH-IPC-HDBW1020EN, IPC-HDBW1020EP, IPC-HDBW1020EN, DH-IPC-HDBW44A1EN-I, DH-IPC-HDBW44A1EN, DH-IPC-HDBW42A1EN-I, DH-IPC-HDBW42A1EN, DH-IPC-HDBW42A0EN-I, DH-IPC-HDBW42A0EN, DH-IPC-HDBW41A0EN-I, DH-IPC-HDBW41A0EN, DH-IPC-HDBW44A1EN-ASI, DH-IPC-HDBW44A1EN-AS, DH-IPC-HDBW42A1EN-ASI, DH-IPC-HDBW42A1EN-AS, DH-IPC-HDBW42A0EN-ASI, DH-IPC-HDBW42A0EN-AS, DH-IPC-HDBW41A0EN-ASI, DH-IPC-HDBW41A0EN-AS, DH-IPC-HDBW13A0EN, DH-IPC-HDBW12A0EN, DH-IPC-HDBW11A0EN, DH-IPC-HDBW1420EP-S, DH-IPC-HDBW1420EN-S, IPC-HDBW1420EP-S, IPC-HDBW1420EN-S, DH-IPC-HDBW14A0EN-S, DH-IPC-HDBW1420EP-AS, DH-IPC-HDBW1420EN-AS, IPC-HDBW1420EP-AS, IPC-HDBW1420EN-AS, DH-IPC-HDBW14A0EN-AS,</p>





	DH-IPC-HDBW1320EP-S,DH-IPC-HDBW1320EN-S,IPC-HDBW1320EP-S,IPC-HDBW1320EN-S,DH-IPC-HDBW13A0EN-S,DH-IPC-HDBW1320EP-AS,DH-IPC-HDBW1320EN-AS,IPC-HDBW1320EP-AS,IPC-HDBW1320EN-AS,DH-IPC-HDBW13A0EN-AS,DH-IPC-HDBW1220EP-S,DH-IPC-HDBW1220EN-S,IPC-HDBW1220EP-S,IPC-HDBW1320EN-S,DH-IPC-HDBW12A0EN-S,DH-IPC-HDBW1220EP-AS,DH-IPC-HDBW1220EN-AS,IPC-HDBW1220EP-AS,IPC-HDBW1220EN-AS,DH-IPC-HDBW12A0EN-AS,DH-IPC-HDBW1120EP-S,DH-IPC-HDBW1120EN-S,IPC-HDBW1120EP-S,IPC-HDBW1120EN-S,DH-IPC-HDBW11A0EN-S,DH-IPC-HDBW1120EP-AS,DH-IPC-HDBW1120EN-AS,IPC-HDBW1120EP-AS,IPC-HDBW1120EN-AS,DH-IPC-HDBW11A0EN-AS,DH-IPC-HDBW1020EP-S,DH-IPC-HDBW1020EN-S,IPC-HDBW1020EP-S,IPC-HDBW1020EN-S,DH-IPC-HDBW10A0EN-S,DH-IPC-HDBW1020EP-AS,DH-IPC-HDBW1020EN-AS,IPC-HDBW1020EP-AS,IPC-HDBW1020EN-AS,DH-IPC-HDBW10A0EN-AS,IPC-HDBW4120EP-S,IPC-HDBW4120EN-S,IPC-HDBW4220EP-S,IPC-HDBW4220EN-S,IPC-HDBW4221EP-S,IPC-HDBW4221EN-S,IPC-HDBW4421EP-S,IPC-HDBW4421EN-S,DH-IPC-HDBW4120EP-S,DH-IPC-HDBW4120EN-S,DH-IPC-HDBW4220EP-S,DH-IPC-HDBW4220EN-S,DH-IPC-HDBW4221EP-S,DH-IPC-HDBW4221EN-S,DH-IPC-HDBW4421EP-S,DH-IPC-HDBW4421EN-S,IPC-D1A30N,IPC-D1A30P,IPC-D1A20N,IPC-D1A20P,IPC-D1A00N,IPC-D1A00P	
<b>Model Discrepancy:</b>	<p><b>IPC-HDBW1320EN-W</b> was selected as the test model and its data have been recorded in this report.</p> <p>IPC-HDBW1320EN-W: in the IPC-HDBW1320E original model topped with a piece of WIFI board. Like other.</p> <p>IPC-HDBW1120EN-W: in the IPC-HDBW1320E original model with a WIFI board, is not the same as the sensor board. The main board scheme.</p> <p>The model DH-IPC-HDBW1420EP,DH-IPC-HDBW1420EN, DH-IPC-HDBW1420E,IPC-HDBW1420EP,IPC-HDBW1420EN and IPC-HDBW1320EP are identical except the model name.</p> <p>Models with “-AS”“-S” have additional audio and alarm ports.</p>	
<b>Rating:</b>	I/P: 12Vdc 0.5A/ POE: 48Vdc, 115mA for add model name	
<b>Adapter</b>	Model No.:	ADS-12B-12 12012Gz
	INPUT:	100-240V~ 50/60Hz 0.3A Max.
	OUTPUT:	12V, 1.0A



Fifth Issue

<b>Product Name:</b>	IP CAMERA
<b>Model Name:</b>	<p>DH-IPC-HDBW4x2yEz-vvB, IPC-HDBW4x2yEz-vvB, DH-IPC-HDBW4x2yEz, IPC-HDBW4x2yEz, DH-IPC-HDBW1320EP, DH-IPC-HDBW1320EN, IPC-HDBW1320EP, IPC-HDBW1320EN, DH-IPC-HDBW4x2yEz-AS-vvB, IPC-HDBW4x2yEz-AS-vvB, DH-IPC-HDBW4x2yEz-AS, IPC-HDBW4x2yEz-AS, DH-IPC-HDBW1120EP, DH-IPC-HDBW1120EN, DH-IPC-HDBW1220EP, DH-IPC-HDBW1220EN, IPC-HDBW1120EP, IPC-HDBW1120EN, IPC-HDBW1220EP, IPC-HDBW1220EN</p> <p>("x" can be 1, 2, 4, denote different Pixels; y can be 0-9 denote different function; z=N, P or blank; vv=0280, 0360, 0600 which represents different lens)</p> <p>IPC-HDBW1120EP-W, IPC-HDBW1120EN-W, DH-IPC-HDBW1120EP-W, DH-IPC-HDBW1120EN-W, IPC-HDBW11A0EP-W, IPC-HDBW11A0EN-W, DH-IPC-HDBW11A0EP-W, DH-IPC-HDBW11A0EN-W, IPC-HDBW1320EN-W, IPC-HDBW1320EP-W, DH-IPC-HDBW1320EP-W, DH-IPC-HDBW1320EN-W, IPC-HDBW13A0EN-W, IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EN-W, DH-IPC-HDBW1420EP, DH-IPC-HDBW1420EN, DH-IPC-HDBW1420E, IPC-HDBW1420EP, IPC-HDBW1420EN, DH-IPC-HDBW1420EP, DH-IPC-HDBW1420EN, IPC-HDBW1420EP, IPC-HDBW1420EN, DH-IPC-HDBW1020EP, DH-IPC-HDBW1020EN, IPC-HDBW1020EP, IPC-HDBW1020EN, DH-IPC-HDBW44A1EN-I, DH-IPC-HDBW44A1EN, DH-IPC-HDBW42A1EN-I, DH-IPC-HDBW42A1EN, DH-IPC-HDBW42A0EN-I, DH-IPC-HDBW42A0EN, DH-IPC-HDBW41A0EN-I, DH-IPC-HDBW41A0EN, DH-IPC-HDBW44A1EN-ASI, DH-IPC-HDBW44A1EN-AS, DH-IPC-HDBW42A1EN-ASI, DH-IPC-HDBW42A1EN-AS, DH-IPC-HDBW42A0EN-ASI, DH-IPC-HDBW42A0EN-AS, DH-IPC-HDBW41A0EN-ASI, DH-IPC-HDBW41A0EN-AS, DH-IPC-HDBW13A0EN, DH-IPC-HDBW12A0EN, DH-IPC-HDBW11A0EN, DH-IPC-HDBW1420EP-S, DH-IPC-HDBW1420EN-S, IPC-HDBW1420EP-S, IPC-HDBW1420EN-S, DH-IPC-HDBW14A0EN-S, DH-IPC-HDBW1420EP-AS, DH-IPC-HDBW1420EN-AS, IPC-HDBW1420EP-AS, IPC-HDBW1420EN-AS, DH-IPC-HDBW14A0EN-AS, DH-IPC-HDBW1320EP-S, DH-IPC-HDBW1320EN-S, IPC-HDBW1320EP-S, IPC-HDBW1320EN-S, DH-IPC-HDBW13A0EN-S, DH-IPC-HDBW1320EP-AS, DH-IPC-HDBW1320EN-AS, IPC-HDBW1320EP-AS, IPC-HDBW1320EN-AS, DH-IPC-HDBW13A0EN-AS, DH-IPC-HDBW1220EP-S, DH-IPC-HDBW1220EN-S,</p>



	IPC-HDBW1220EP-S,IPC-HDBW1320EN-S,DH-IPC-HDBW12A0EN-S, DH-IPC-HDBW1220EP-AS,DH-IPC-HDBW1220EN-AS,IPC-HDBW1220EP-AS, IPC-HDBW1220EN-AS,DH-IPC-HDBW12A0EN-AS,DH-IPC-HDBW1120EP-S, DH-IPC-HDBW1120EN-S,IPC-HDBW1120EP-S,IPC-HDBW1120EN-S, DH-IPC-HDBW11A0EN-S,DH-IPC-HDBW1120EP-AS,DH-IPC-HDBW1120EN-AS, IPC-HDBW1120EP-AS,IPC-HDBW1120EN-AS,DH-IPC-HDBW11A0EN-AS, DH-IPC-HDBW1020EP-S,DH-IPC-HDBW1020EN-S,IPC-HDBW1020EP-S, IPC-HDBW1020EN-S,DH-IPC-HDBW10A0EN-S,DH-IPC-HDBW1020EP-AS, DH-IPC-HDBW1020EN-AS,IPC-HDBW1020EP-AS,IPC-HDBW1020EN-AS, DH-IPC-HDBW10A0EN-AS,IPC-HDBW4120EP-S,IPC-HDBW4120EN-S, IPC-HDBW4220EP-S,IPC-HDBW4220EN-S,IPC-HDBW4221EP-S, IPC-HDBW4221EN-S,IPC-HDBW4421EP-S,IPC-HDBW4421EN-S, DH-IPC-HDBW4120EP-S,DH-IPC-HDBW4120EN-S,DH-IPC-HDBW4220EP-S, DH-IPC-HDBW4220EN-S,DH-IPC-HDBW4221EP-S,DH-IPC-HDBW4221EN-S, DH-IPC-HDBW4421EP-S,DH-IPC-HDBW4421EN-S	
<b>Model Discrepancy:</b>	<p><b>IPC-HDBW1320EN-W</b> was selected as the test model and its data have been recorded in this report.</p> <p>IPC-HDBW1320EN-W: in the IPC-HDBW1320E original model topped with a piece of WIFI board. Like other.</p> <p>IPC-HDBW1120EN-W: in the IPC-HDBW1320E original model with a WIFI board, is not the same as the sensor board. The main board scheme.</p> <p>The model DH-IPC-HDBW1420EP,DH-IPC-HDBW1420EN, DH-IPC-HDBW1420E,IPC-HDBW1420EP,IPC-HDBW1420EN and IPC-HDBW1320EP are identical except the model name.</p> <p>Models with “-AS”“-S” have additional audio and alarm ports.</p>	
<b>Rating:</b>	I/P: 12Vdc 0.5A/ POE: 48Vdc, 115mA for add model name	
<b>Adapter</b>	Model No.:	ADS-12B-12 12012Gz
	INPUT:	100-240V~ 50/60Hz 0.3A Max.
	OUTPUT:	12V, 1.0A

**I/O PORT:**

I/O PORT TYPE	Quantity
1). RJ45 Port	2



## Fourth Issue

<b>Product Name:</b>	IP CAMERA	
<b>Model Name:</b>	DH-IPC-HDBW4x2yEz-vvB, IPC-HDBW4x2yEz-vvB, DH-IPC-HDBW4x2yEz, IPC-HDBW4x2yEz, DH-IPC-HDBW1320EP, DH-IPC-HDBW1320EN, IPC-HDBW1320EP, IPC-HDBW1320EN, DH-IPC-HDBW4x2yEz-AS-vvB, IPC-HDBW4x2yEz-AS-vvB, DH-IPC-HDBW4x2yEz-AS, IPC-HDBW4x2yEz-AS, DH-IPC-HDBW1120EP, DH-IPC-HDBW1120EN, DH-IPC-HDBW1220EP, DH-IPC-HDBW1220EN, IPC-HDBW1120EP, IPC-HDBW1120EN, IPC-HDBW1220EP, IPC-HDBW1220EN ("x" can be 1, 2, 4, denote different Pixels; y can be 0-9 denote different function; z=N, P or blank; vv=0280, 0360, 0600 which represents different lens) IPC-HDBW1120EP-W, IPC-HDBW1120EN-W, DH-IPC-HDBW1120EP-W, DH-IPC-HDBW1120EN-W, IPC-HDBW11A0EP-W, IPC-HDBW11A0EN-W, DH-IPC-HDBW11A0EP-W, DH-IPC-HDBW11A0EN-W, IPC-HDBW1320EN-W, IPC-HDBW1320EP-W, DH-IPC-HDBW1320EP-W, DH-IPC-HDBW1320EN-W, IPC-HDBW13A0EN-W, IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EP-W, DH-IPC-HDBW13A0EN-W, DH-IPC-HDBW1420EP, DH-IPC-HDBW1420EN, DH-IPC-HDBW1420E, IPC-HDBW1420EP, IPC-HDBW1420EN	
<b>Model Discrepancy:</b>	<b>IPC-HDBW1320EN-W</b> was selected as the test model and its data have been recorded in this report. IPC-HDBW1320EN-W: in the IPC-HDBW1320E original model topped with a piece of WIFI board. Like other. IPC-HDBW1120EN-W: in the IPC-HDBW1320E original model with a WIFI board, is not the same as the sensor board. The main board scheme. The model DH-IPC-HDBW1420EP, DH-IPC-HDBW1420EN, DH-IPC-HDBW1420E, IPC-HDBW1420EP, IPC-HDBW1420EN and IPC-HDBW1320EP are identical except the model name.	
<b>Rating:</b>	I/P: 12Vdc 0.5A/ POE: 48Vdc, 115mA for add model name	
<b>Adapter</b>	Model No.:	ADS-12B-12 12012Gz
	INPUT:	100-240V~ 50/60Hz 0.3A Max.
	OUTPUT:	12V, 1.0A

## I/O PORT:

I/O PORT TYPE	Quantity
2). RJ45 Port	2



## Third Issue

<b>Product Name:</b>	IP CAMERA	
<b>Model Name:</b>	DH-IPC-HDBW4x2yEz-vvB, IPC-HDBW4x2yEz-vvB, DH-IPC-HDBW4x2yEz, IPC-HDBW4x2yEz, DH-IPC-HDBW1320EP, DH-IPC-HDBW1320EN, IPC-HDBW1320EP, IPC-HDBW1320EN, DH-IPC-HDBW4x2yEz-AS-vvB, IPC-HDBW4x2yEz-AS-vvB, DH-IPC-HDBW4x2yEz-AS, IPC-HDBW4x2yEz-AS, DH-IPC-HDBW1120EP, DH-IPC-HDBW1120EN, DH-IPC-HDBW1220EP, DH-IPC-HDBW1220EN, IPC-HDBW1120EP, IPC-HDBW1120EN, IPC-HDBW1220EP, IPC-HDBW1220EN (“x” can be 1, 2, 4, denote different Pixels; y can be 0-9 denote different function; z=N, P or blank; vv=0280, 0360, 0600 which represents different lens)	
<b>Model Discrepancy:</b>	“x” can be 1, 2, 4, denote different Pixels; y can be 0-9 denote different function; z=N, P or blank; vv=0280, 0360, 0600 which represents different lens. Models with “-AS” have additional audio and alarm ports. <b>DH-IPC-HDBW4120EP-AS, DH-IPC-HDBW4220EP-AS, DH-IPC-HDBW4221EP-AS, DH-IPC-HDBW4421EP-AS</b> was selected as the test model and its data have been recorded in this report.	
<b>Rating:</b>	I/P: 12Vdc 0.5A/ POE: 48Vdc, 115mA for add model name	
<b>Adapter</b>	Model No.:	ADS-12B-12 12012Gz
	INPUT:	100-240V~ 50/60Hz 0.3A Max.
	OUTPUT:	12V, 1.0A



## Second Issue

<b>Product Name:</b>	IP CAMERA	
<b>Model Name:</b>	DH-IPC-HDBW4x2yEz-vvB, IPC-HDBW4x2yEz-vvB, DH-IPC-HDBW4x2yEz, IPC-HDBW4x2yEz, DH-IPC-HDBW1320EP, DH-IPC-HDBW1320EN, IPC-HDBW1320EP, IPC-HDBW1320EN, DH-IPC-HDBW4x2yEz-AS-vvB, IPC-HDBW4x2yEz-AS-vvB, DH-IPC-HDBW4x2yEz-AS, IPC-HDBW4x2yEz-AS (“x” can be 1, 2, 4, denote different Pixels; y can be 0-9 denote different function; z=N, P or blank; vv=0280, 0360, 0600 which represents different lens)	
<b>Model Discrepancy:</b>	“x” can be 1, 2, 4, denote different Pixels; y can be 0-9 denote different function; z=N, P or blank; vv=0280, 0360, 0600 which represents different lens. Models with “-AS” have additional audio and alarm ports. <b>DH-IPC-HDBW4120EP-AS, DH-IPC-HDBW4220EP-AS, DH-IPC-HDBW4221EP-AS, DH-IPC-HDBW4421EP-AS</b> was selected as the test model and its data have been recorded in this report.	
<b>Rating:</b>	I/P: 12Vdc 0.5A/ POE: 48Vdc, 115mA for add model name	
<b>Adapter</b>	Model No.:	ADS-12B-12 12012Gz
	INPUT:	100-240V~ 50/60Hz 0.3A Max.
	OUTPUT:	12V, 1.0A

Note: Please refer to user manual.

## I/O PORT:

I/O PORT TYPE	Quantity
3). RJ45 Port	1
4). Audio Port	2



## Initial Issue

<b>Product Name:</b>	IP CAMERA	
<b>Model Name:</b>	IPC-HDBW4421EP, IPC-HDBW4120EP, IPC-HDBW4221EP, IPC-HDBW4220EP	
<b>Series Model:</b>	IPC-HDBW4120EN-0280B;DH-IPC-HDBW4120EP-0280B; DH-IPC-HDBW4120EN-0280B; IPC-HDBW4120EP-0280B; IPC-HDBW4120EN-0360B;DH-IPC-HDBW4120EP-0360B; DH-IPC-HDBW4120EN-0360B; IPC-HDBW4120EP-0360B; IPC-HDBW4120EN-0600B;DH-IPC-HDBW4120EP-0600B; DH-IPC-HDBW4120EN-0600B; IPC-HDBW4120EP-0600B; DH-IPC-HDBW4120EP;DH-IPC-HDBW4120EN; IPC-HDBW4120EN;DH-IPC-HDBW4120E; DH-IPC-HDBW4221EN-0280B;IPC-HDBW4221EP-0280B; IPC-HDBW4221EN-0280B; DH-IPC-HDBW4221EP-0280B; DH-IPC-HDBW4221EN-0360B; IPC-HDBW4221EP-0360B; IPC-HDBW4221EN-0360B; DH-IPC-HDBW4221EP-0360B; DH-IPC-HDBW4221EN-0600B; IPC-HDBW4221EP-0600B; IPC-HDBW4221EN-0600B; DH-IPC-HDBW4221EP-0600B; DH-IPC-HDBW4221EP;DH-IPC-HDBW4221EN; DH-IPC-HDBW4421EN-0280B;DH-IPC-HDBW4421EP-0280B; IPC-HDBW4221EN;IPC-HDBW4421EP-0280B; IPC-HDBW4421EN-0280B; DH-IPC-HDBW4421EP-0360B; DH-IPC-HDBW4421EN-0360B; IPC-HDBW4421EP-0360B; IPC-HDBW4421EN-0360B; DH-IPC-HDBW4421EP-0600B; DH-IPC-HDBW4421EN-0600B;IPC-HDBW4421EP-0600B; IPC-HDBW4421EN-0600B;DH-IPC-HDBW4421EP; DH-IPC-HDBW4421EN;IPC-HDBW4220EN;IPC-HDBW4421EN; DH-IPC-HDBW4421E; IPC-HDBW4220EN-0280B; DH-IPC-HDBW4220EP-0280B;DH-IPC-HDBW4220EN-0280B; IPC-HDBW4220EP-0280B;DH-IPC-HDBW4220EP-0360B; IPC-HDBW4220EN-0360B; DH-IPC-HDBW4220EN-0360B; IPC-HDBW4220EP-0360B;DH-IPC-HDBW4220EP-0600B; IPC-HDBW4220EN-0600B; DH-IPC-HDBW4220EN-0600B; IPC-HDBW4220EP-0600B;DH-IPC-HDBW4220EP; DH-IPC-HDBW4220EN;DH-IPC-HDBW4421E;DH-IPC-HDBW4220E	
<b>Model Discrepancy:</b>	IPC-HDBW4x2yE X means:1-130 ten thousand, 2-200 ten thousand,4-400 ten thousand.Y means :Special function:1- True wide dynamic,0- Digital wide dynamic. Motherboard: HDBW4220E andHDBW4221E DSP are the same. Other mode name the DSP different. DH: with or without DAHUA logo. 280/360/600: Different label and lenses <b>IPC-HDBW4421EP, IPC-HDBW4120EP, IPC-HDBW4221EP, IPC-HDBW4220EP</b> was selected as the test model and its data have been recorded in this report.	
<b>Adapter</b>	Model No.:	ADS-12B-12 12012Gz
	INPUT:	100-240V~ 50/60Hz 0.3A Max.
	OUTPUT:	12V, 1.0A

Note: Please refer to user manual.



**I/O PORT:**

I/O PORT TYPE	Quantity
1) RJ45 Port	1

**2.2. Test Manner**

Fourth Issue

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
- b. Turn on the power of all equipment.
- c. The complete test system included Notebook PC and EUT for EMI&EMS test.
- d. The test mode as follow(for CE):  
Test Mode 1. Full system for IPC-HDBW1320EN-W with Adapter + POE  
Test Mode 2. Full system for IPC-HDBW1120EN-W with Adapter + POE  
The "Test Mode 1" were reported as final data.
- e. The test mode as follow(for RE):  
Test Mode 1. Full system for IPC-HDBW1320EN-W with Adapter + POE  
Test Mode 2. Full system for IPC-HDBW1320EN-W with POE  
Test Mode 3. Full system for IPC-HDBW1120EN-W with Adapter + POE  
Test Mode 4. Full system for IPC-HDBW1120EN-W with POE  
The "Test Mode 1,2" were reported as final data.
- f. The maximum operating frequency is above 108MHz, the test frequency range is from 1GHz to 6GHz.





Second Issue

- a. During testing, the interface cables and equipment positions were varied according to ANSI C63.4.
- b. Turn on the power of all equipment.
- c. The complete test system included Notebook PC and EUT for EMI&EMS test.
- d. The test mode as follow(for CE):
  - Test Mode 1. Full system for DH-IPC-HDBW4120EP-AS with Adapter + POE
  - Test Mode 2. Full system for DH-IPC-HDBW4221EP-AS with Adapter + POE
  - Test Mode 3. Full system for DH-IPC-HDBW4421EP-AS with Adapter + POE
  - Test Mode 4. Full system for DH-IPC-HDBW4220EP-AS with Adapter + POEThe "Test Mode 3" were reported as final data.
- e. The test mode as follow(for RE):
  - Test Mode 1. Full system for DH-IPC-HDBW4120EP-AS with Adapter + POE
  - Test Mode 2. Full system for DH-IPC-HDBW4120EP-AS with POE
  - Test Mode 3. Full system for DH-IPC-HDBW4221EP-AS with Adapter + POE
  - Test Mode 4. Full system for DH-IPC-HDBW4221EP-AS with POE
  - Test Mode 5. Full system for DH-IPC-HDBW4421EP-AS with Adapter + POE
  - Test Mode 6. Full system for DH-IPC-HDBW4421EP-AS with POE
  - Test Mode 7. Full system for DH-IPC-HDBW4220EP-AS with Adapter + POE
  - Test Mode 8. Full system for DH-IPC-HDBW4220EP-AS with POEThe "Test Mode 5,6" were reported as final data.
- f. The maximum operating frequency is above 108MHz, the test frequency range is from 1GHz to 6GHz.



Initial Issue

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

Test Mode 1. Normal Operation for IPC-HDBW4421EP

Test Mode 2. Normal Operation for IPC-HDBW4120EP

Test Mode 3. Normal Operation for IPC-HDBW4221EP

Test Mode 4. Normal Operation for IPC-HDBW4220EP

The "Test Mode 1-4" were reported as final data.

- e. The maximum operating frequency is above 108MHz, the test frequency range is from 30MHz to 18GHz.



### 2.3. Description of Test System

#### Fourth Issue

No	Device	Manufacturer	Model No.	Description
1	Notebook PC	SONY	PCG-71811P	Non-Shielded, 1.5m (R33021)
2	Notebook PC	DELL	VOSTRO-3560	Non-Shielded, 1.5m
3	DVR	Dahua	N/A	Non-Shielded, 1.5m

#### Use Cable:

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

#### Second Issue

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	N/A	N/A
4	DVR	Dahua	N/A	Non-Shielded, 1.5m

#### Use Cable:

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, >3.0 m
D	LAN Cable	1	Non-Shielded, >3.0 m
E	DC Cable	1	Non-Shielded, 1.5m

#### Initial Issue

No	Device	Manufacturer	Model No.	Description
1	Notebook PC	SONY	PCG-71811P	Non-Shielded, 1.5m (R33021)

#### Use Cable:

No	Cable	Quantity	Description
A	LAN Cable	1	Non-Shielded, >3.0 m



## 2.4. General Information of Test

Test Site :	<b>Cerpass Technology Corporation</b> 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 Registration Number :	TW1079, TW1061
IC Registration Number :	4934E-1, 4934E-2
VCCI	T-2205 for Telecommunication Test C-4663 for Conducted emission test R-4399, R-4218 for Radiated emission test G-812, G-813 for radiated disturbance above 1GHz
Frequency Range Investigated :	Conducted Emission Test: from 150 kHz to 30 MHz Radiated Emission Test: from 30 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.

## 2.5. 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

The measurement uncertainty will be considered, when test result margin to the limit.



### 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:

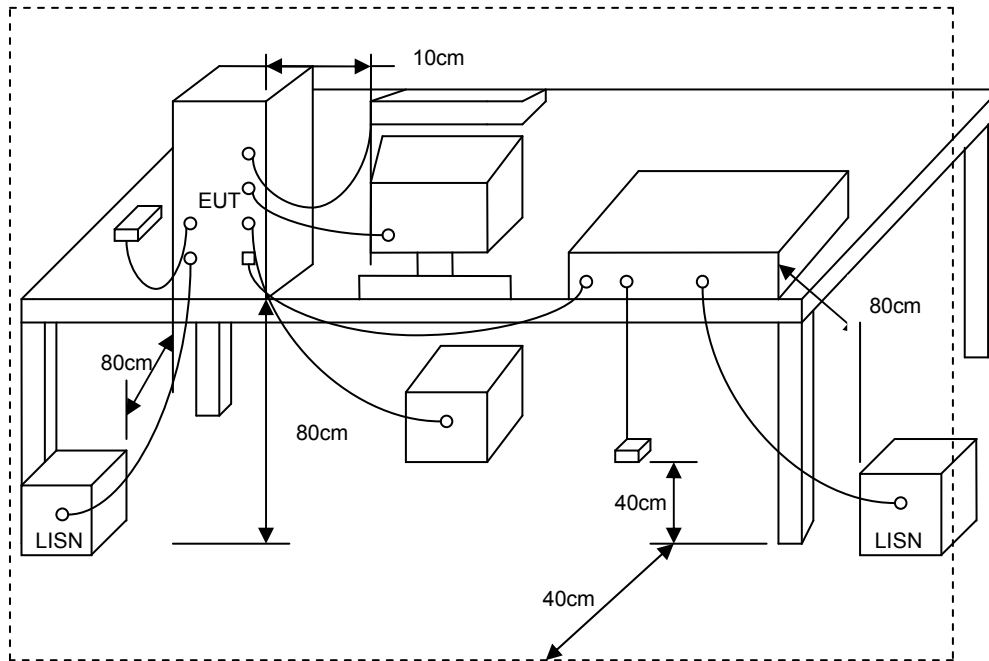
Frequency (MHz)	Quasi Peak (dB $\mu$ V)	Average (dB $\mu$ V)
0.15 – 0.5	66-56*	56-46*
0.5 – 5.0	56	46
5.0 – 30.0	60	50

#### 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

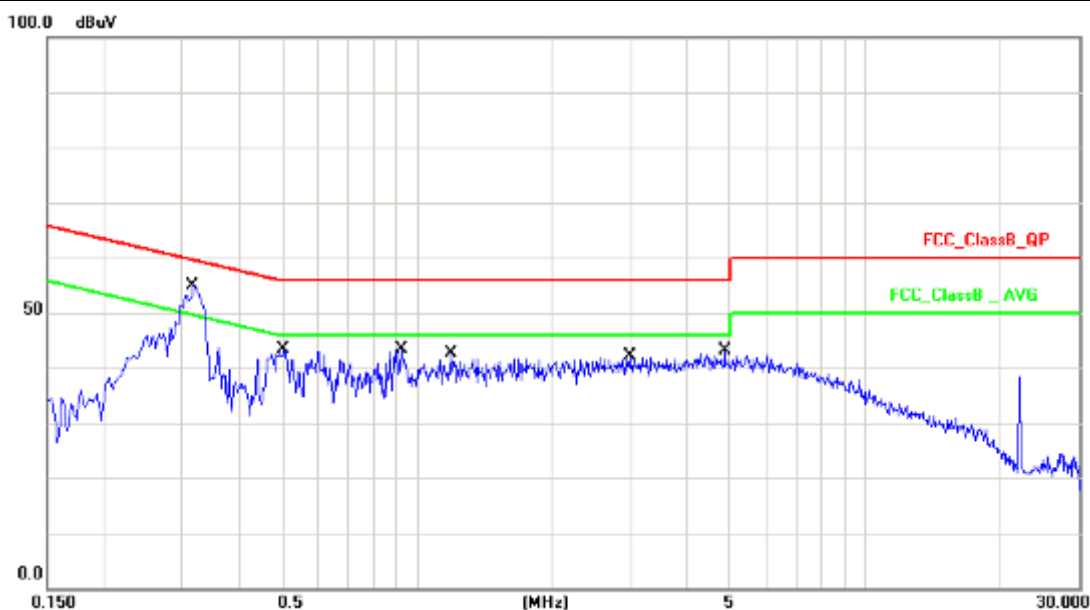
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
Test Receiver	R&S	ESCI	100565	2015.03.29	2016.03.28
AMN	R&S	ESH2-Z5	100182	2015.09.06	2016.09.05
Two-Line V-Network	R&S	ENV216	100325	/	/
ISN	FCC	FCC-TLISN-T2-02	20379	2015.03.29	2016.03.28
ISN	FCC	FCC-TLISN-T4-02	20380	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



### 3.5. Test Result and Data

#### Fourth Issue

Test Mode :	Mode 1: Full system for IPC-HDBW1320EN-W with Adapter + POE					
AC Power :	AC 120V/60Hz	Phase :	LINE			
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W			
Temperature :	20°C	Humidity :	54%			
Pressure(mbar) :	1002	Date :	2016/03/17			

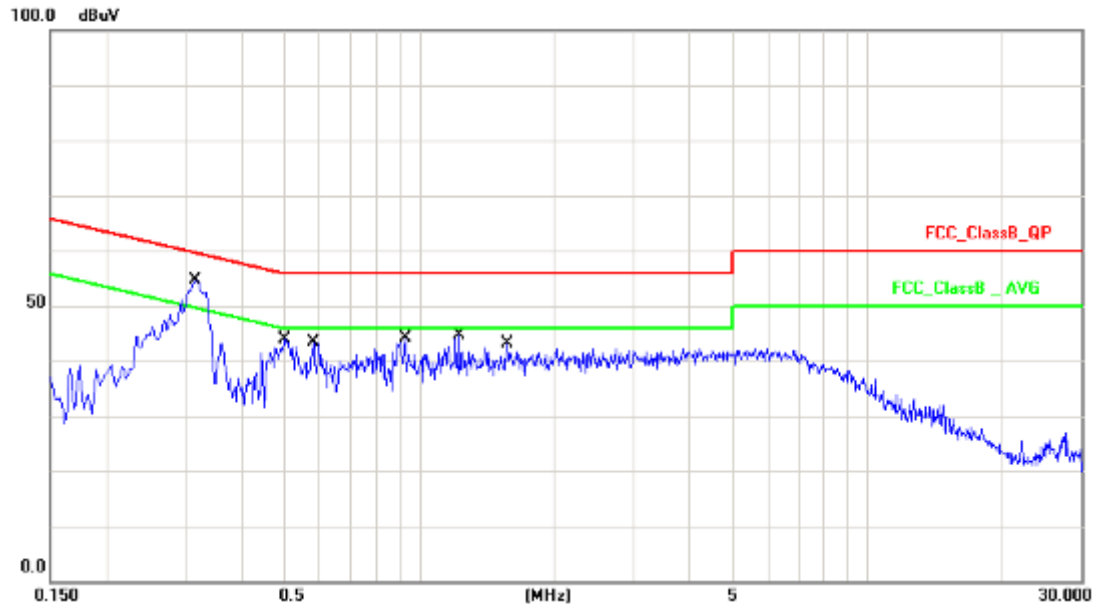


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3180	10.14	42.55	52.69	59.76	-7.07	QP
2	0.3180	10.14	32.88	43.02	49.76	-6.74	AVG
3	0.5060	10.16	30.93	41.09	56.00	-14.91	QP
4	0.5060	10.16	21.81	31.97	46.00	-14.03	AVG
5	0.9260	10.16	28.13	38.29	56.00	-17.71	QP
6	0.9260	10.16	19.21	29.37	46.00	-16.63	AVG
7	1.1940	10.16	26.77	36.93	56.00	-19.07	QP
8	1.1940	10.16	17.92	28.08	46.00	-17.92	AVG
9	2.9900	10.19	27.18	37.37	56.00	-18.63	QP
10	2.9900	10.19	19.40	29.59	46.00	-16.41	AVG
11	4.8500	10.24	27.19	37.43	56.00	-18.57	QP
12	4.8500	10.24	19.56	29.80	46.00	-16.20	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system for IPC-HDBW1320EN-W with Adapter + POE		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temperature :	20°C	Humidity :	54%
Pressure(mbar) :	1002	Date :	2016/03/17



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3180	10.14	42.25	52.39	59.76	-7.37	QP
2	0.3180	10.14	33.22	43.36	49.76	-6.40	AVG
3	0.5020	10.15	30.24	40.39	56.00	-15.61	QP
4	0.5020	10.15	22.51	32.66	46.00	-13.34	AVG
5	0.5820	10.15	28.19	38.34	56.00	-17.66	QP
6	0.5820	10.15	18.63	28.78	46.00	-17.22	AVG
7	0.9300	10.17	28.32	38.49	56.00	-17.51	QP
8	0.9300	10.17	19.67	29.84	46.00	-16.16	AVG
9	1.2300	10.18	25.78	35.96	56.00	-20.04	QP
10	1.2300	10.18	16.81	26.99	46.00	-19.01	AVG
11	1.5740	10.18	26.64	36.82	56.00	-19.18	QP
12	1.5740	10.18	18.86	29.04	46.00	-16.96	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: \_\_\_\_\_

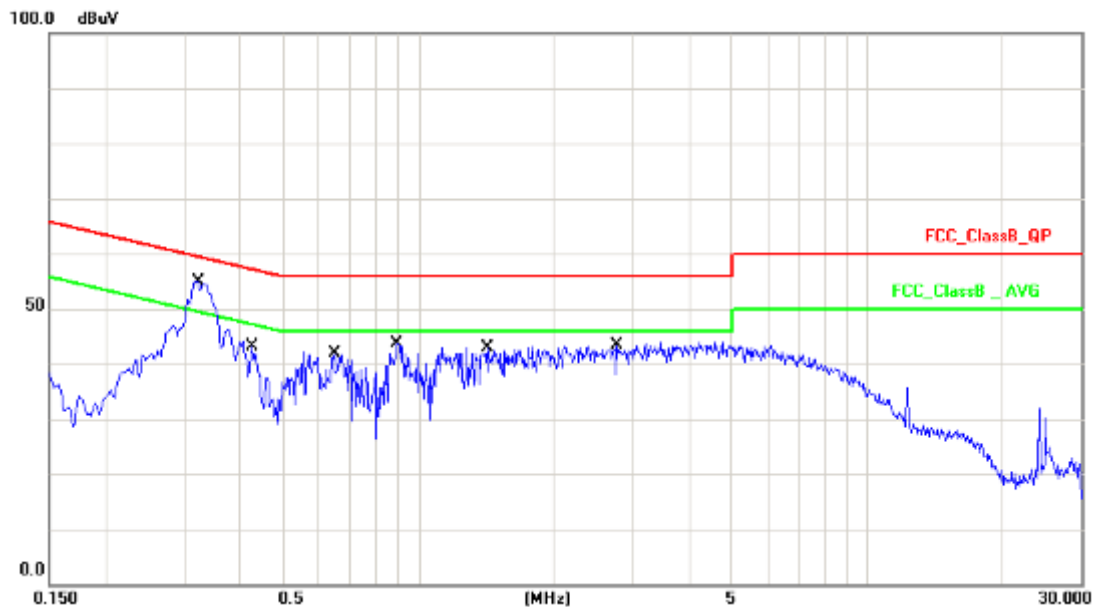
*Dian*





## Second Issue

Test Mode :	Mode 3: Full system for DH-IPC-HDBW4421EP-AS with Adapter + POE						
AC Power :	AC 120V/60Hz	Phase :	LINE				
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS				
Temperature :	25°C	Humidity :	50%				
Pressure(mbar) :	1002	Date :	2015/08/06				

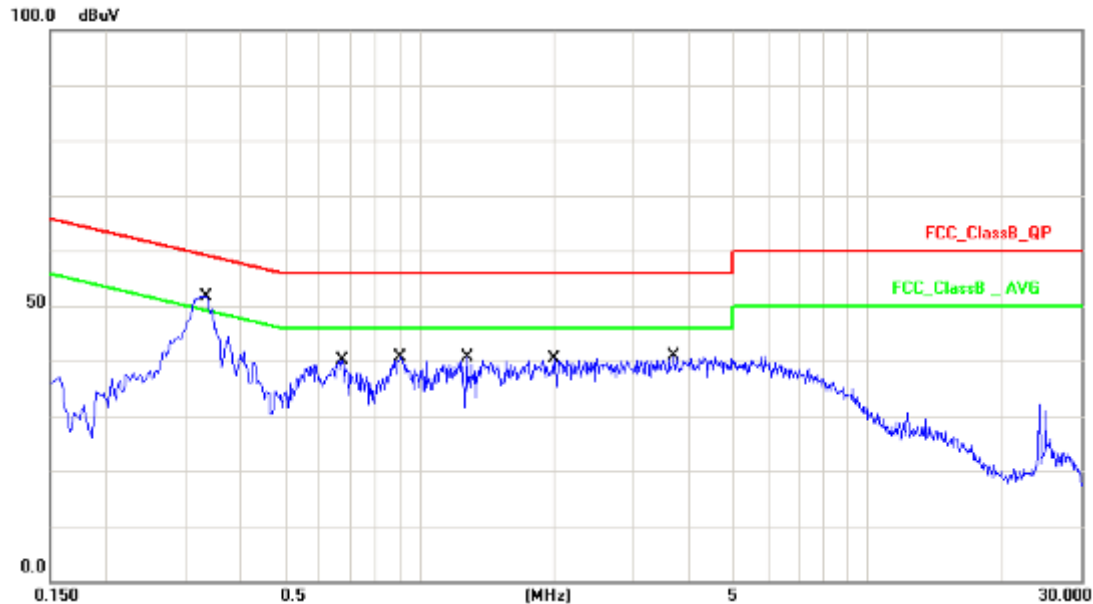


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3220	10.14	42.90	53.04	59.65	-6.61	QP
2	0.3220	10.14	33.17	43.31	49.65	-6.34	AVG
3	0.4260	10.15	28.87	39.02	57.33	-18.31	QP
4	0.4260	10.15	18.81	28.96	47.33	-18.37	AVG
5	0.6500	10.15	27.92	38.07	56.00	-17.93	QP
6	0.6500	10.15	17.81	27.96	46.00	-18.04	AVG
7	0.8980	10.15	30.24	40.39	56.00	-15.61	QP
8	0.8980	10.15	20.15	30.30	46.00	-15.70	AVG
9	1.4299	10.16	28.80	38.96	56.00	-17.04	QP
10	1.4299	10.16	18.72	28.88	46.00	-17.12	AVG
11	2.7659	10.18	28.33	38.51	56.00	-17.49	QP
12	2.7659	10.18	17.77	27.95	46.00	-18.05	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Full system for DH-IPC-HDBW4421EP-AS with Adapter + POE					
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL			
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS			
Temperature :	25°C	Humidity :	50%			
Pressure(mbar) :	1002	Date :	2015/08/06			



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3339	10.14	39.21	49.35	59.35	-10.00	QP
2	0.3339	10.14	31.32	41.46	49.35	-7.89	AVG
3	0.6740	10.16	26.85	37.01	56.00	-18.99	QP
4	0.6740	10.16	18.90	29.06	46.00	-16.94	AVG
5	0.9060	10.17	27.82	37.99	56.00	-18.01	QP
6	0.9060	10.17	19.22	29.39	46.00	-16.61	AVG
7	1.2780	10.18	25.02	35.20	56.00	-20.80	QP
8	1.2780	10.18	13.87	24.05	46.00	-21.95	AVG
9	1.9940	10.18	25.39	35.57	56.00	-20.43	QP
10	1.9940	10.18	16.44	26.62	46.00	-19.38	AVG
11	3.7140	10.21	25.36	35.57	56.00	-20.43	QP
12	3.7140	10.21	17.05	27.26	46.00	-18.74	AVG

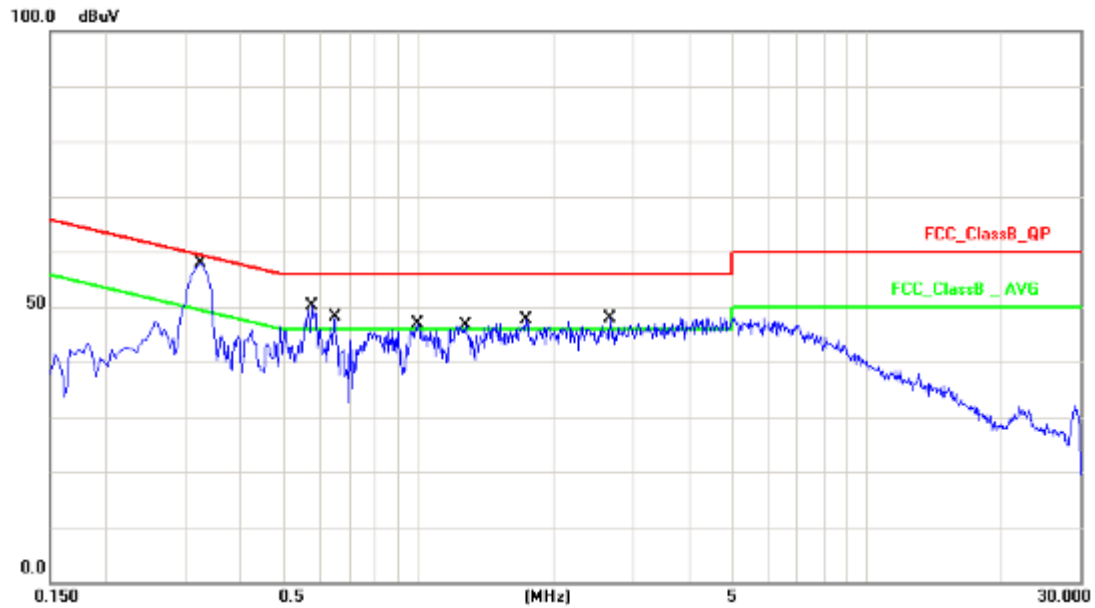
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Dian



## Initial Issue

Test Mode :	Mode 1: Normal Operation for IPC-HDBW4421EP		
AC Power :	AC 120V/60Hz	Phase :	LINE
Equipment :	IP CAMERA	Model No :	IPC-HDBW4421EP
Temperature :	22°C	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/04/15

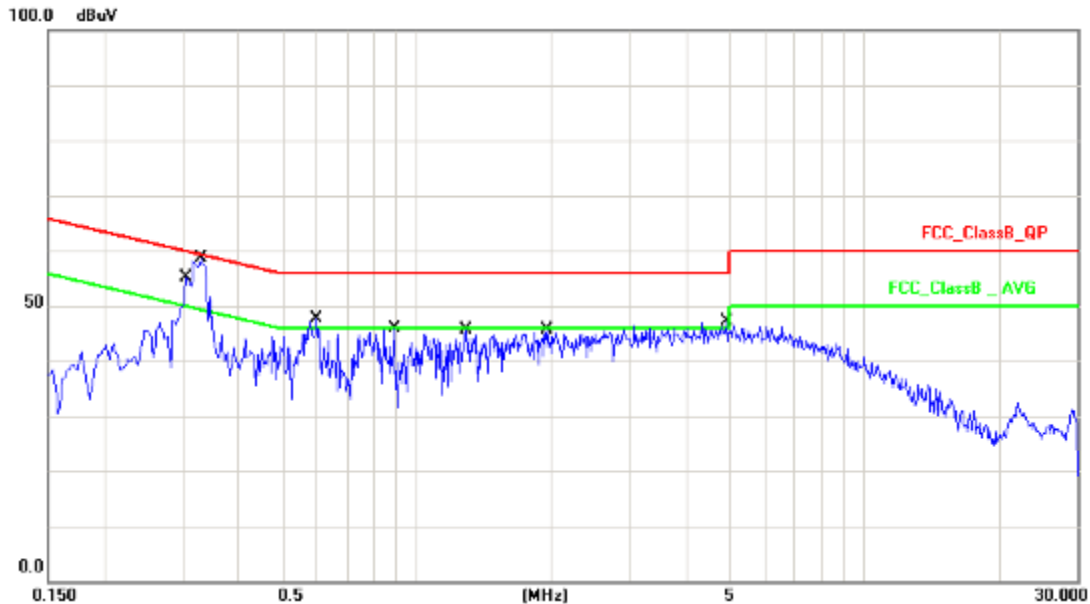


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3260	10.14	46.23	56.37	59.55	-3.18	QP
2	0.3260	10.14	36.76	46.90	49.55	-2.65	AVG
3	0.5780	10.16	36.32	46.48	56.00	-9.52	QP
4	0.5780	10.16	25.33	35.49	46.00	-10.51	AVG
5	0.6500	10.15	32.62	42.77	56.00	-13.23	QP
6	0.6500	10.15	19.30	29.45	46.00	-16.55	AVG
7	0.9980	10.16	33.34	43.50	56.00	-12.50	QP
8	0.9980	10.16	22.65	32.81	46.00	-13.19	AVG
9	1.2700	10.16	33.24	43.40	56.00	-12.60	QP
10	1.2700	10.16	23.53	33.69	46.00	-12.31	AVG
11	1.7420	10.17	32.25	42.42	56.00	-13.58	QP
12	1.7420	10.17	22.57	32.74	46.00	-13.26	AVG
13	2.6740	10.18	31.53	41.71	56.00	-14.29	QP
14	2.6740	10.18	22.13	32.31	46.00	-13.69	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Normal Operation for IPC-HDBW4421EP		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Equipment :	IP CAMERA	Model No :	IPC-HDBW4421EP
Temperature :	22°C	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/04/15

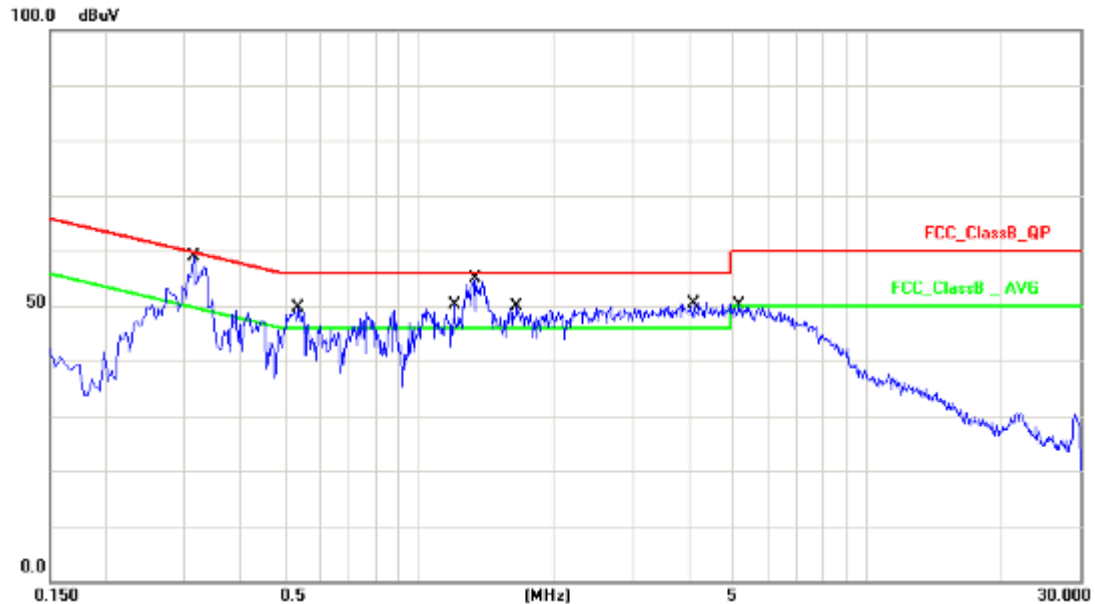


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3060	10.14	40.20	50.34	60.08	-9.74	QP
2	0.3060	10.14	30.13	40.27	50.08	-9.81	AVG
3	0.3300	10.14	44.49	54.63	59.45	-4.82	QP
4	0.3300	10.14	34.49	44.63	49.45	-4.82	AVG
5	0.5980	10.15	32.46	42.61	56.00	-13.39	QP
6	0.5980	10.15	21.04	31.19	46.00	-14.81	AVG
7	0.8940	10.17	29.78	39.95	56.00	-16.05	QP
8	0.8940	10.17	17.43	27.60	46.00	-18.40	AVG
9	1.2900	10.18	30.67	40.85	56.00	-15.15	QP
10	1.2900	10.18	18.99	29.17	46.00	-16.83	AVG
11	1.9620	10.18	30.09	40.27	56.00	-15.73	QP
12	1.9620	10.18	19.15	29.33	46.00	-16.67	AVG
13	4.9380	10.26	29.78	40.04	56.00	-15.96	QP
14	4.9380	10.26	19.68	29.94	46.00	-16.06	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Normal Operation for IPC-HDBW4120EP		
AC Power :	AC 120V/60Hz	Phase :	LINE
Equipment :	IP CAMERA	Model No :	IPC-HDBW4120EP
Temperature :	22°C	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/04/15

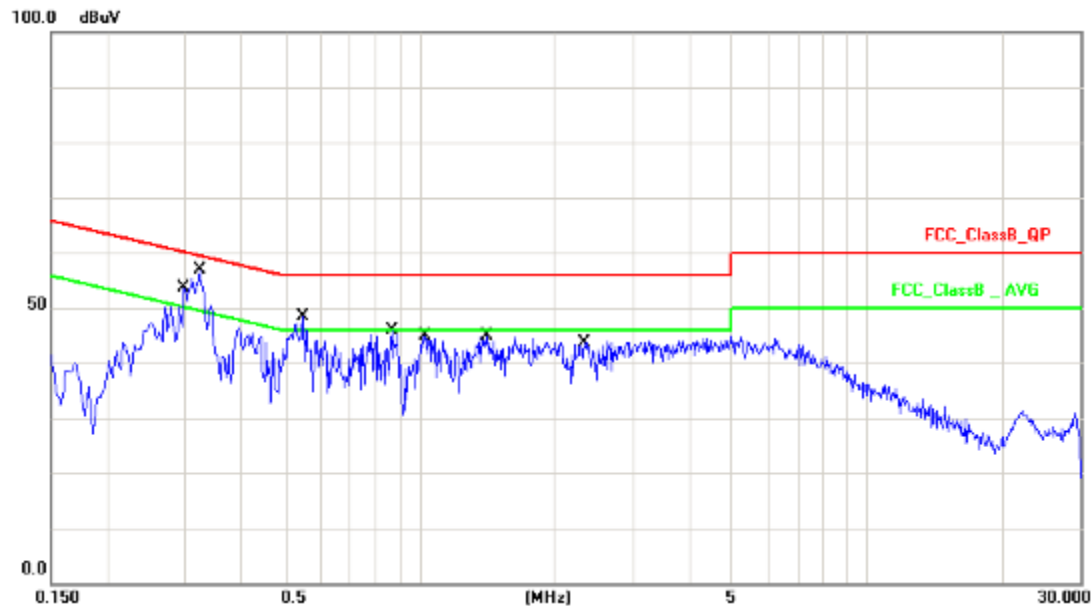


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3140	10.14	45.76	55.90	59.86	-3.96	QP
2	0.3140	10.14	35.73	45.87	49.86	-3.99	AVG
3	0.5380	10.16	37.19	47.35	56.00	-8.65	QP
4	0.5380	10.16	26.36	36.52	46.00	-9.48	AVG
5	1.2020	10.16	31.40	41.56	56.00	-14.44	QP
6	1.2020	10.16	16.38	26.54	46.00	-19.46	AVG
7	1.3420	10.16	39.05	49.21	56.00	-6.79	QP
8	1.3420	10.16	30.02	40.18	46.00	-5.82	AVG
9	1.6580	10.17	35.38	45.55	56.00	-10.45	QP
10	1.6580	10.17	26.94	37.11	46.00	-8.89	AVG
11	4.1180	10.21	33.55	43.76	56.00	-12.24	QP
12	4.1180	10.21	23.68	33.89	46.00	-12.11	AVG
13	5.1779	10.24	33.80	44.04	60.00	-15.96	QP
14	5.1779	10.24	23.93	34.17	50.00	-15.83	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Normal Operation for IPC-HDBW4120EP		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Equipment :	IP CAMERA	Model No :	IPC-HDBW4120EP
Temperature :	22°C	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/04/15

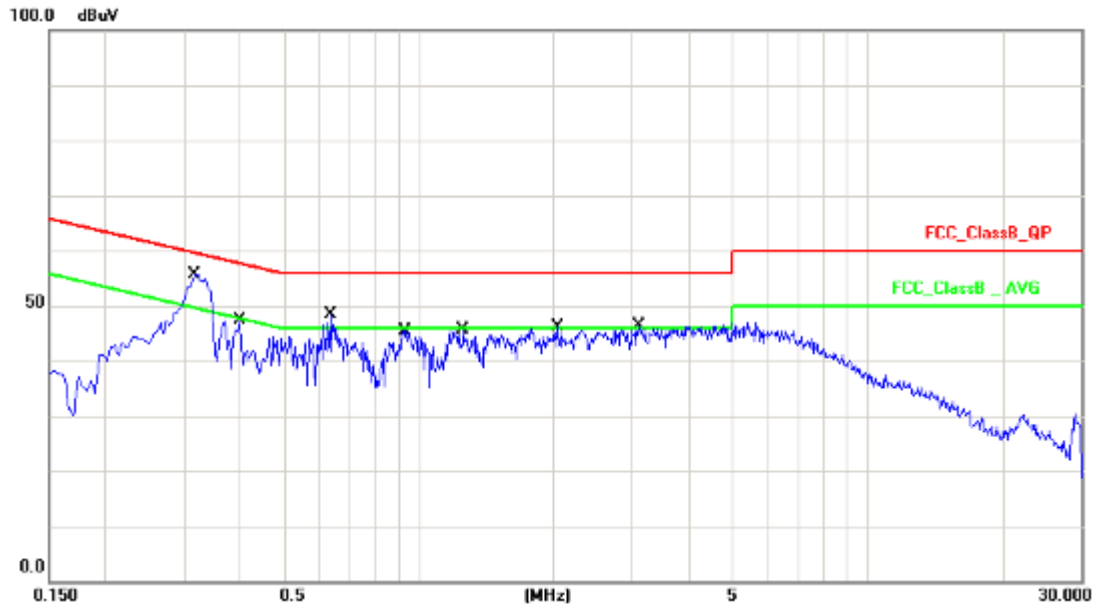


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2980	10.14	38.71	48.85	60.30	-11.45	QP
2	0.2980	10.14	29.64	39.78	50.30	-10.52	AVG
3	0.3220	10.14	42.68	52.82	59.65	-6.83	QP
4	0.3220	10.14	33.41	43.55	49.65	-6.10	AVG
5	0.5500	10.15	31.66	41.81	56.00	-14.19	QP
6	0.5500	10.15	20.90	31.05	46.00	-14.95	AVG
7	0.8700	10.17	30.11	40.28	56.00	-15.72	QP
8	0.8700	10.17	18.95	29.12	46.00	-16.88	AVG
9	1.0300	10.18	29.29	39.47	56.00	-16.53	QP
10	1.0300	10.18	19.14	29.32	46.00	-16.68	AVG
11	1.4180	10.18	29.24	39.42	56.00	-16.58	QP
12	1.4180	10.18	18.00	28.18	46.00	-17.82	AVG
13	2.3380	10.19	28.70	38.89	56.00	-17.11	QP
14	2.3380	10.19	17.68	27.87	46.00	-18.13	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Normal Operation for IPC-HDBW4221EP		
AC Power :	AC 120V/60Hz	Phase :	LINE
Equipment :	IP CAMERA	Model No :	IPC-HDBW4221EP
Temperature :	22°C	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/04/15

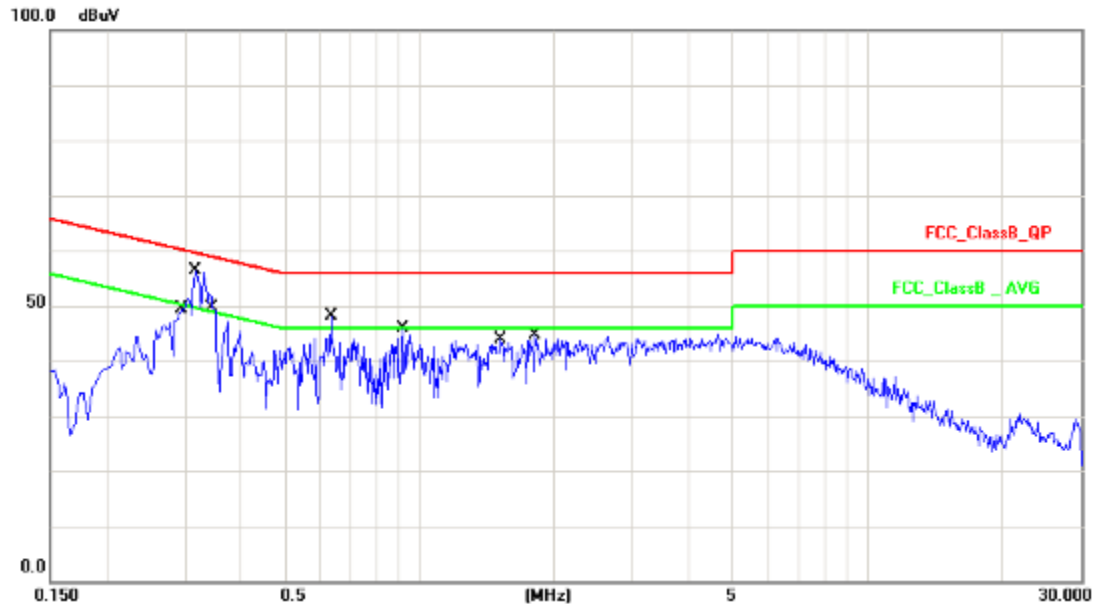


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.3180	10.14	43.47	53.61	59.76	-6.15	QP
2	0.3180	10.14	36.89	47.03	49.76	-2.73	AVG
3	0.3980	10.15	33.77	43.92	57.89	-13.97	QP
4	0.3980	10.15	25.20	35.35	47.89	-12.54	AVG
5	0.6340	10.15	35.79	45.94	56.00	-10.06	QP
6	0.6340	10.15	24.60	34.75	46.00	-11.25	AVG
7	0.9380	10.16	32.92	43.08	56.00	-12.92	QP
8	0.9380	10.16	24.50	34.66	46.00	-11.34	AVG
9	1.2579	10.16	31.70	41.86	56.00	-14.14	QP
10	1.2579	10.16	23.06	33.22	46.00	-12.78	AVG
11	2.0380	10.17	31.40	41.57	56.00	-14.43	QP
12	2.0380	10.17	22.55	32.72	46.00	-13.28	AVG
13	3.0940	10.19	30.98	41.17	56.00	-14.83	QP
14	3.0940	10.19	21.84	32.03	46.00	-13.97	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Normal Operation for IPC-HDBW4221EP		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Equipment :	IP CAMERA	Model No :	IPC-HDBW4221EP
Temperature :	22°C	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/04/15



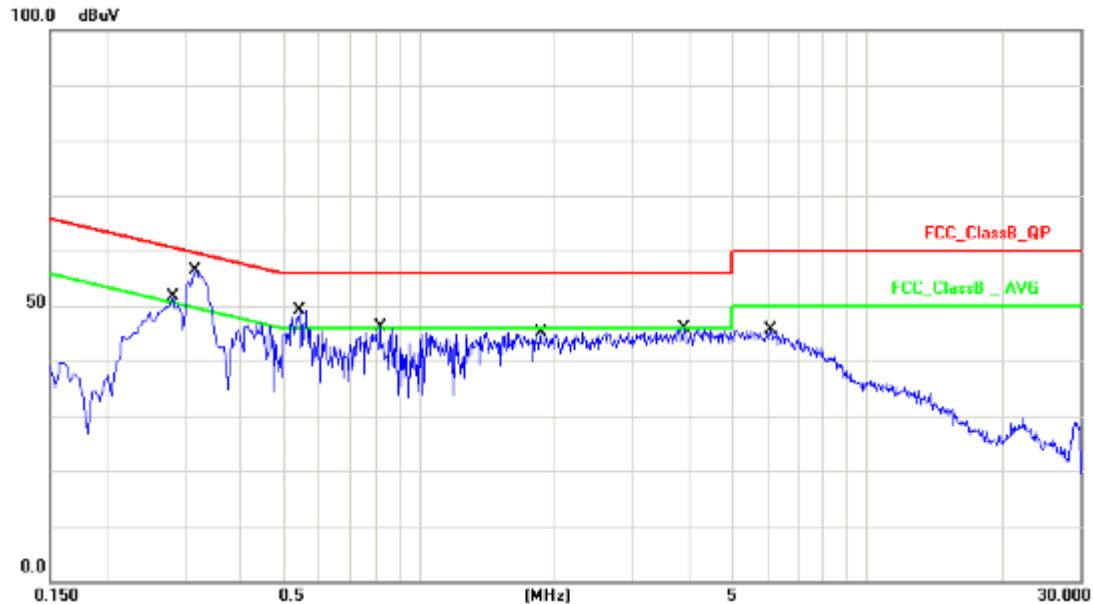
No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2940	10.14	35.70	45.84	60.41	-14.57	QP
2	0.2940	10.14	26.91	37.05	50.41	-13.36	AVG
3	0.3180	10.14	41.75	51.89	59.76	-7.87	QP
4	0.3180	10.14	33.48	43.62	49.76	-6.14	AVG
5	0.3465	10.14	36.01	46.15	59.04	-12.89	QP
6	0.3465	10.14	25.97	36.11	49.04	-12.93	AVG
7	0.6340	10.16	31.55	41.71	56.00	-14.29	QP
8	0.6340	10.16	21.15	31.31	46.00	-14.69	AVG
9	0.9220	10.17	28.54	38.71	56.00	-17.29	QP
10	0.9220	10.17	16.14	26.31	46.00	-19.69	AVG
11	1.5220	10.18	28.99	39.17	56.00	-16.83	QP
12	1.5220	10.18	18.48	28.66	46.00	-17.34	AVG
13	1.8100	10.18	28.37	38.55	56.00	-17.45	QP
14	1.8100	10.18	17.51	27.69	46.00	-18.31	AVG

Note: Measurement Level = Reading Level + Correct Factor





Test Mode :	Mode 4: Normal Operation for IPC-HDBW4220EP		
AC Power :	AC 120V/60Hz	Phase :	LINE
Equipment :	IP CAMERA	Model No :	IPC-HDBW4220EP
Temperature :	22°C	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/04/15

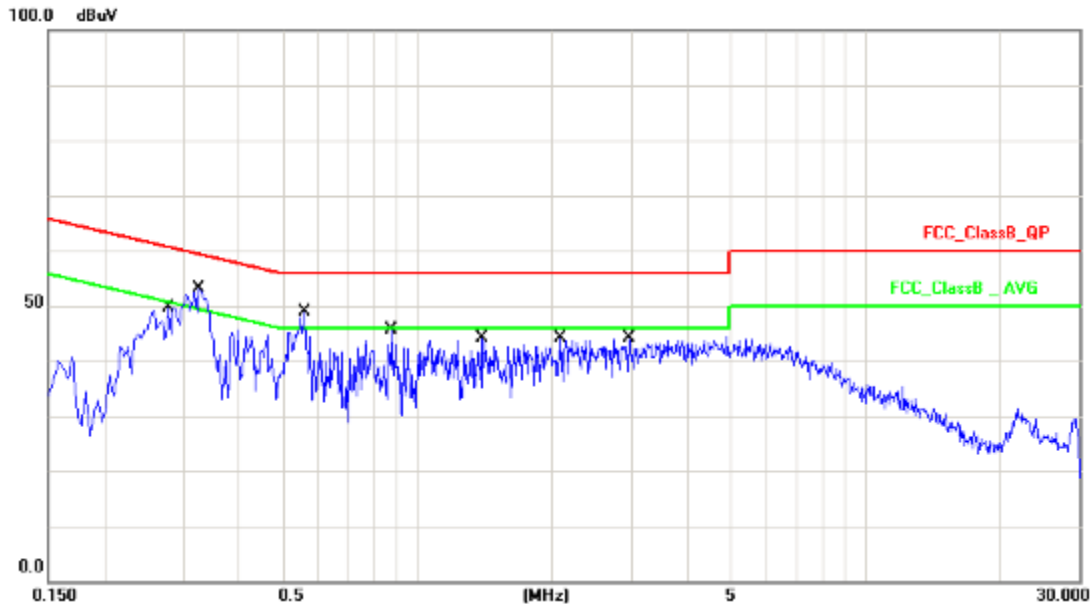


No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2819	10.14	38.72	48.86	60.76	-11.90	QP
2	0.2819	10.14	29.93	40.07	50.76	-10.69	AVG
3	0.3180	10.14	44.27	54.41	59.76	-5.35	QP
4	0.3180	10.14	35.33	45.47	49.76	-4.29	AVG
5	0.5420	10.16	35.98	46.14	56.00	-9.86	QP
6	0.5420	10.16	27.03	37.19	46.00	-8.81	AVG
7	0.8180	10.15	31.46	41.61	56.00	-14.39	QP
8	0.8180	10.15	21.78	31.93	46.00	-14.07	AVG
9	1.8700	10.17	30.48	40.65	56.00	-15.35	QP
10	1.8700	10.17	19.73	29.90	46.00	-16.10	AVG
11	3.9020	10.20	30.76	40.96	56.00	-15.04	QP
12	3.9020	10.20	21.23	31.43	46.00	-14.57	AVG
13	6.0939	10.25	30.15	40.40	60.00	-19.60	QP
14	6.0939	10.25	21.35	31.60	50.00	-18.40	AVG

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Normal Operation for IPC-HDBW4220EP		
AC Power :	AC 120V/60Hz	Phase :	NEUTRAL
Equipment :	IP CAMERA	Model No :	IPC-HDBW4220EP
Temperature :	22°C	Humidity :	48%
Pressure(mbar) :	1002	Date :	2015/04/15



No.	Frequency (MHz)	Factor (dB)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector
1	0.2779	10.14	35.95	46.09	60.88	-14.79	QP
2	0.2779	10.14	26.10	36.24	50.88	-14.64	AVG
3	0.3260	10.14	40.82	50.96	59.55	-8.59	QP
4	0.3260	10.14	31.51	41.65	49.55	-7.90	AVG
5	0.5620	10.15	32.07	42.22	56.00	-13.78	QP
6	0.5620	10.15	21.27	31.42	46.00	-14.58	AVG
7	0.8780	10.17	30.05	40.22	56.00	-15.78	QP
8	0.8780	10.17	19.12	29.29	46.00	-16.71	AVG
9	1.3980	10.18	28.42	38.60	56.00	-17.40	QP
10	1.3980	10.18	17.22	27.40	46.00	-18.60	AVG
11	2.0900	10.18	27.05	37.23	56.00	-18.77	QP
12	2.0900	10.18	16.05	26.23	46.00	-19.77	AVG
13	2.9620	10.20	27.56	37.76	56.00	-18.24	QP
14	2.9620	10.20	16.74	26.94	46.00	-19.06	AVG

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Dian



### 3.6. Test Photographs

Fourth Issue

Front View



Rear View





Second Issue

Front View



Rear View



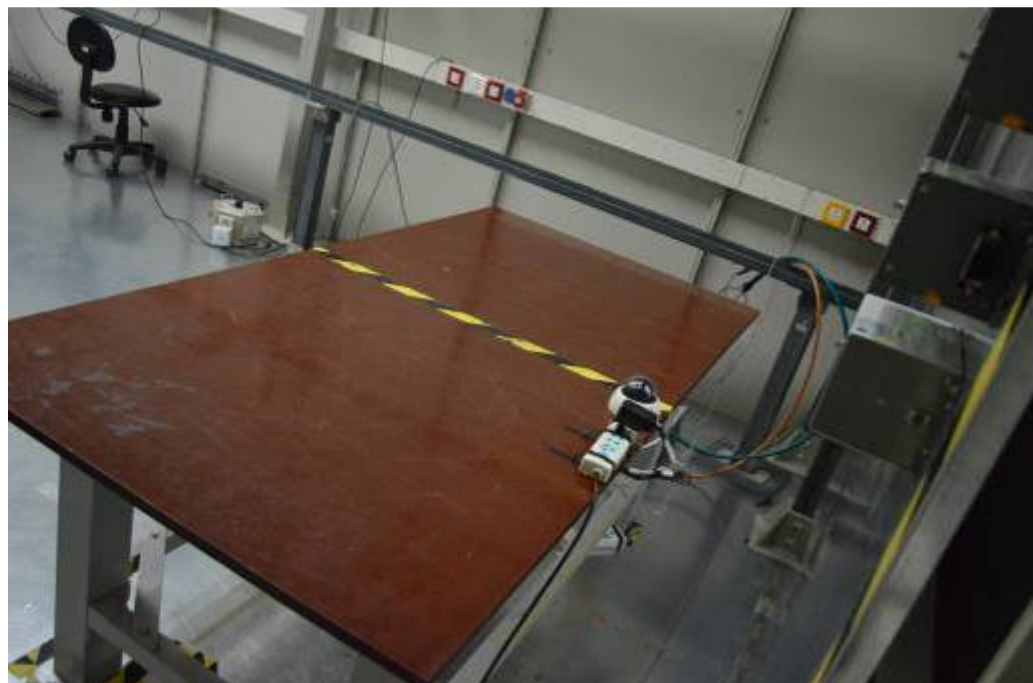


Initial Issue

Front View



Rear View







## 4. Test of Radiated Emission

### 4.1. Test Limit

#### Below 1GHz (for digital device)

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)	dBuV/m (At 10m)	
	Class A	Class B
30 ~ 230	40	30
230 ~ 1000	47	37

Limit tables for non-digital device:

#### Class A Radiated Emission limit at 10m (for others)

Frequency (MHZ)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	90	39
88 - 216	150	43.5
216 – 960	210	46.4
Above 960	300	49.5

#### Class B Radiated Emission limit at 3m (for others)

Frequency (MHZ)	Field Strength Limit (uV/m)Q.P.	Field Strength Limit (dBuV/m)Q.P.
30 - 88	100	40
88 - 216	150	43.5
216 – 960	200	46
Above 960	500	54

#### Above 1GHz(for all device)

Frequency (MHZ)	Class A (dBuV/m) (At 10m)		Class B (dBuV/m) (At 3m)	
	Average	Peak	Average	Peak
Above 1000	49.5	69.5	54	74

**NOTE:** (1) The lower limit shall apply at the transition frequencies.  
 (2) Emission level (dBuV/m) = 20 log Emission level (uV/m).  
 (3) The measurement above 1GHz is at close-in distances 3m, and determine the limit L2 corresponding to the close-in distance d2 by applying the following relation:  $L2 = L1 (d1/d2)$ , where L1 is the specified limit in microvolts per metre (uV/m) at the distance d1 (10m), L2 is the new limit for distance d2 (3m).  
 So the new Class A limit above 1GHz at 3m is as following table:



Frequency (MHZ)	Class A (dBuV/m) (At 3m)	
	Average	Peak
Above 1000	60	80

According to FCC Part 15.33 (b), for an unintentional radiator, including a digital device, the spectrum shall be investigated from the lowest radio frequency signal generated or used in the device, without going below the lowest frequency for which a radiated emission limit is specified, up to the frequency shown in the following table:

Highest frequency generated or used in the device or on which the device operates or tunes (MHz)	Upper frequency of measurement range (MHz)
Below 1.75	30
1.75-108	1000
108-500	2000
500-1000	5000
Above 1000	5 <sup>th</sup> harmonic of the highest frequency or 40GHz, whichever is lower

## 4.2. Test Procedures

### Procedure of Preliminary Test

- The equipment was set up as per the test configuration to simulate typical usage per the user's manual. When the EUT is a tabletop system, a wooden turntable with a height of 0.8 meters is used which is placed on the ground plane. When the EUT is a floor standing equipment, it is placed on the ground plane which has a 15 cm non-conductive covering to insulate the EUT from the ground plane.
- Support equipment, if needed, was placed as per ANSI C63.4.
- All I/O cables were positioned to simulate typical usage as per ANSI C63.4.
- The EUT received AC 120VAC/60Hz power source from the outlet socket under the turntable. All support equipment power received from another socket under the turntable.
- The antenna was placed at 3 or 10 meter away from the EUT as stated in ANSI C63.4. The antenna connected to the Spectrum Analyzer via a cable and at times a pre-amplifier would be used.
- The Analyzer / Receiver quickly scanned from 30MHz to 40GHz. The EUT test program was started. Emissions were scanned and measured rotating the EUT to 360 degrees and positioning the antenna 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.



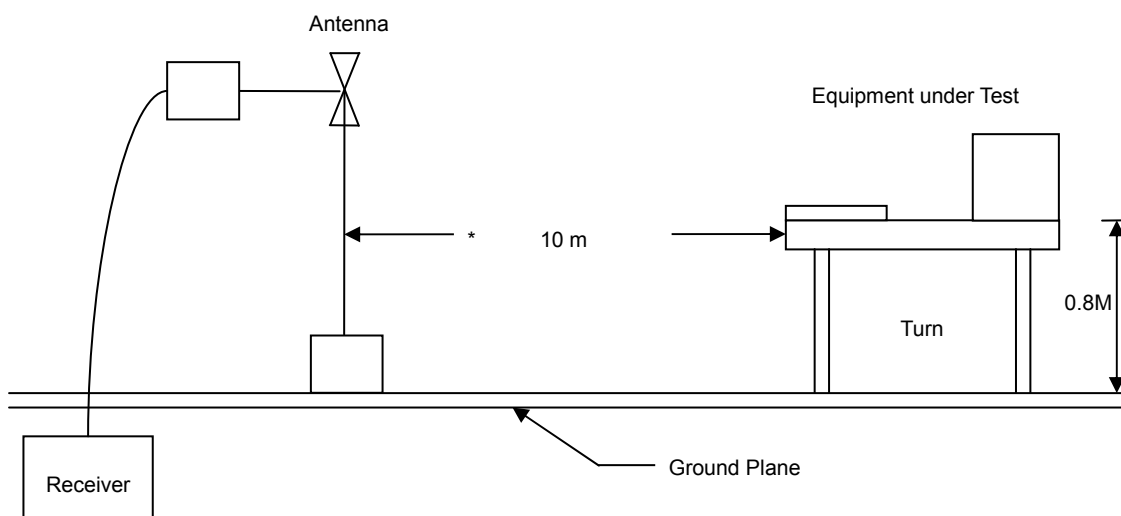
- Set the spectrum analyzer/ Receiver in the following setting as:  
Below 1GHz:  
RBW=120KHz / VBW=300KHz / Sweep=AUTO  
Above 1GHz:  
Peak: RBW=1MHz, VBW=3MHz / Sweep=AUTO  
Average: RBW=1MHz / VBW=10Hz / Sweep=AUTO
- The worst configuration of EUT and cable of the above highest emission level were recorded for reference of the final test.

### Procedure of Final Test

- EUT and support equipment were set up on the turntable as per the configuration with highest emission level in the preliminary test.
- The Analyzer / Receiver scanned from 30MHz to 40GHz. Emissions were scanned and measured rotating the EUT to 360 degrees, varying cable placement and positioning the antenna 1 or 1 to 4 meters above the ground plane, in both the vertical and the horizontal polarization, to maximize the emission reading level.
- Recording at least the six highest emissions. Emission frequency, amplitude, antenna position, polarization and turntable position were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit. Below 1GHz the Q.P. reading and above 1GHz the Peak and Average reading are presented.
- The test data of the worst-case condition(s) was recorded.

### 4.3. Typical test Setup

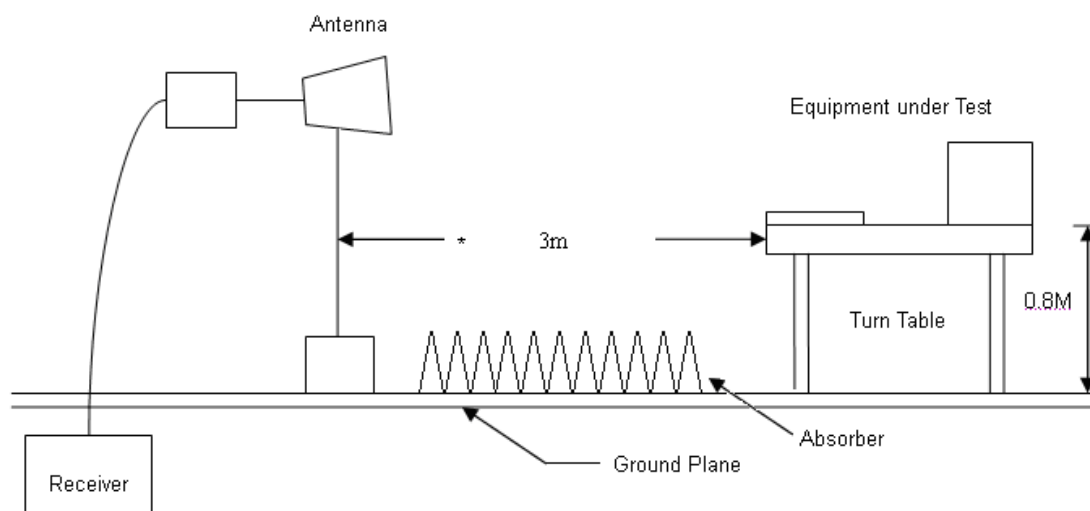
#### Below 1GHz Test Setup







## Above 1GHz Test Setup

**4.4. Measurement Equipment**

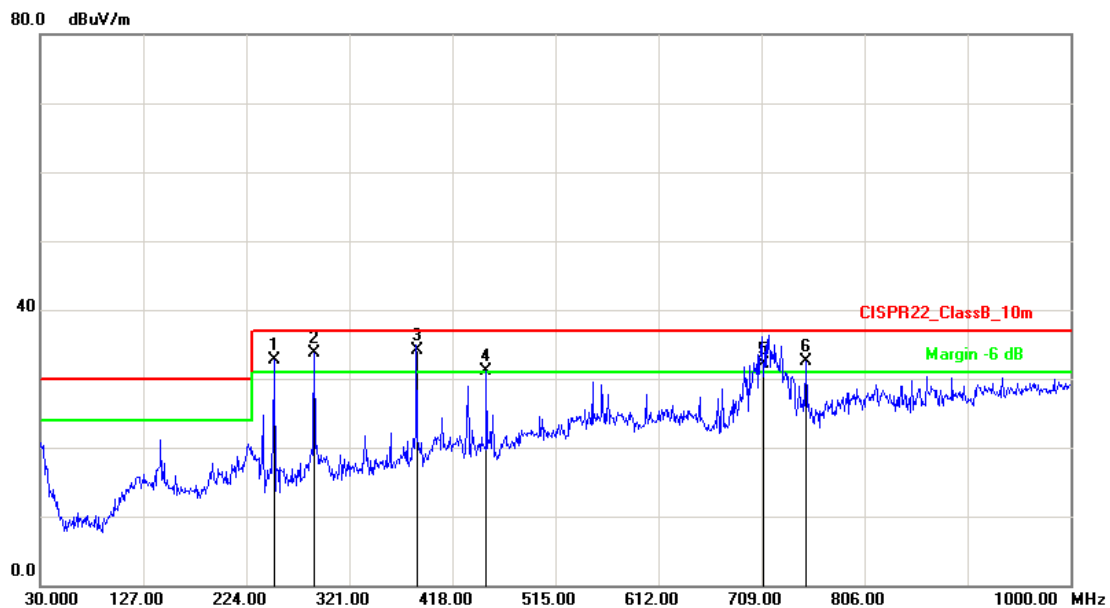
Instrument/Ancillary	Manufacturer	Model No.	Serial No.	Calibration Date	Valid Date.
EMI Test Receiver	R&S	ESCI7	100968	2015.03.29	2016.03.28
Preamplifier	Agilent	87405B	My39500554	2015.03.29	2016.03.28
Preamplifier	Agilent	8449B	3008A02342	2015.03.29	2016.03.28
Bilog Antenna	Sunol Science	JB1	A072414-3	2015.06.09	2016.06.08
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



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

Fourth Issue

Test Mode :	Mode 1: Full system for IPC-HDBW1320EN-W with Adapter + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temp :	22℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2016/03/21

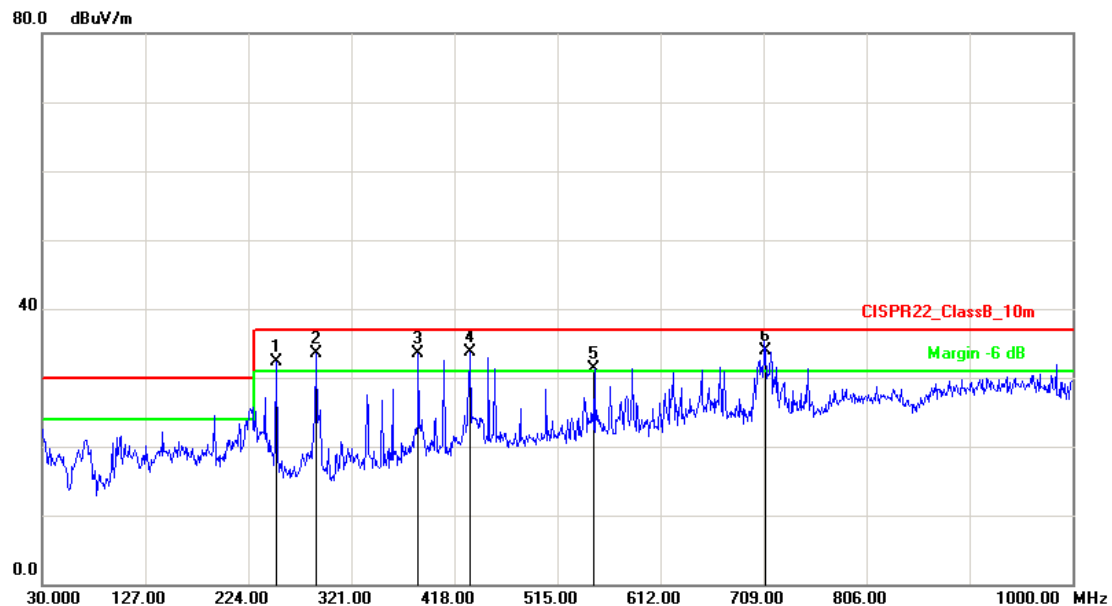


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	250.1899	-10.44	43.11	32.67	37.00	-4.33	QP	100	127
2	288.0199	-8.80	42.47	33.67	37.00	-3.33	QP	400	51
3	385.6200	-6.05	40.08	34.03	37.00	-2.97	QP	100	223
4	450.0099	-4.55	35.57	31.02	37.00	-5.98	QP	100	332
5	710.6500	0.09	31.92	32.01	37.00	-4.99	QP	100	87
6	750.7100	1.10	31.33	32.43	37.00	-4.57	QP	400	187

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system for IPC-HDBW1320EN-W with Adapter + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temp :	22℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2016/03/21

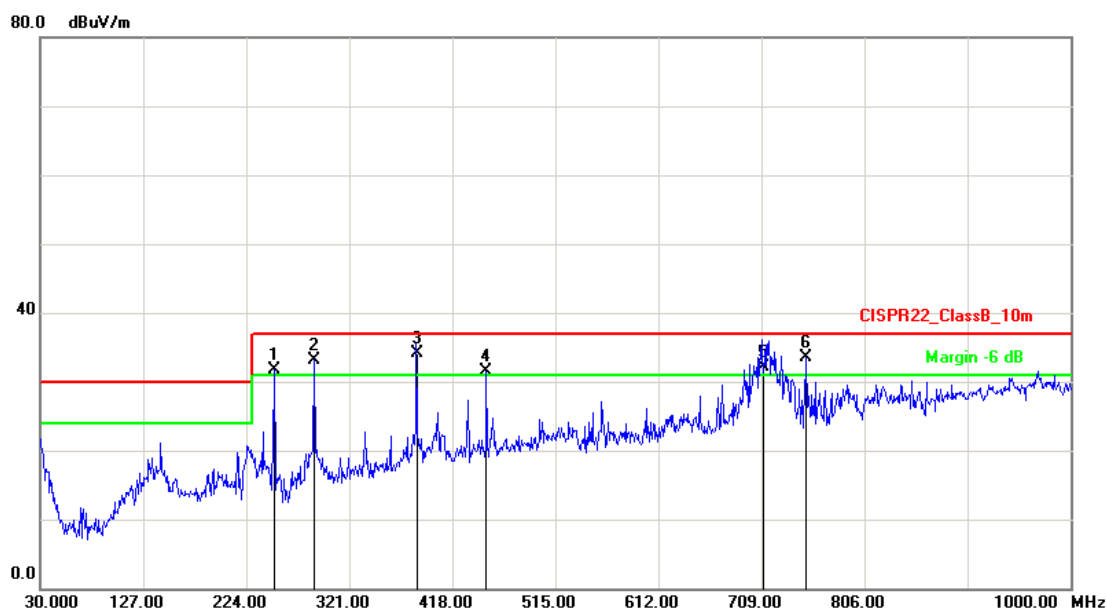


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	250.1899	-10.44	42.69	32.25	37.00	-4.75	QP	100	336
2	288.0199	-8.80	42.28	33.48	37.00	-3.52	QP	400	74
3	384.0500	-6.14	39.63	33.49	37.00	-3.51	QP	100	105
4	432.5500	-4.97	38.71	33.74	37.00	-3.26	QP	400	192
5	549.9198	-2.05	33.39	31.34	37.00	-5.66	QP	100	0
6	710.6500	0.09	33.90	33.99	37.00	-3.01	QP	100	210

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for IPC-HDBW1320EN-W with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temp :	22℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2016/03/21

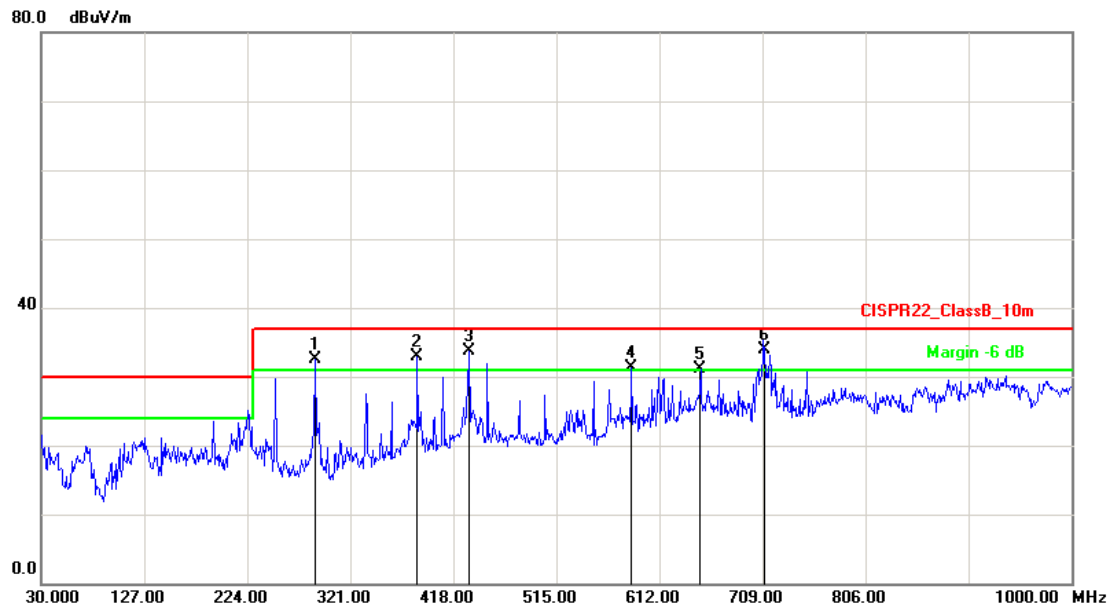


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	250.1899	-10.44	42.11	31.67	37.00	-5.33	QP	400	78
2	288.0199	-8.80	41.97	33.17	37.00	-3.83	QP	100	214
3	385.6200	-6.05	40.08	34.03	37.00	-2.97	QP	100	301
4	450.0099	-4.55	36.07	31.52	37.00	-5.48	QP	400	52
5	710.6500	0.09	32.01	32.10	37.00	-4.90	QP	100	136
6	750.7100	1.10	32.33	33.43	37.00	-3.57	QP	100	360

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for IPC-HDBW1320EN-W with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temp :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date :	2016/03/21



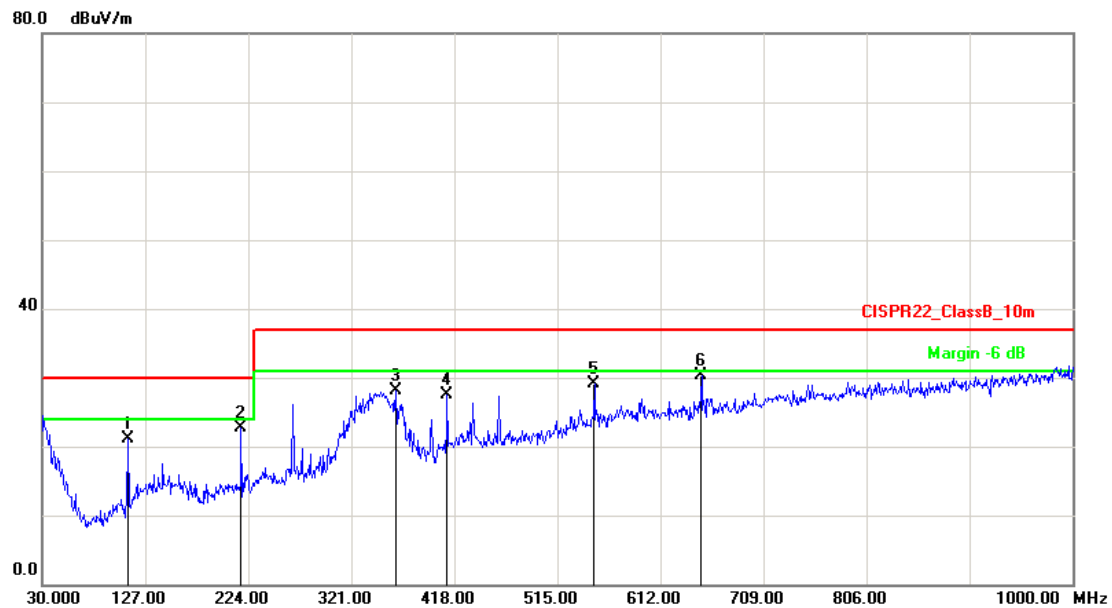
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	288.0199	-8.80	41.28	32.48	37.00	-4.52	QP	100	229
2	384.0500	-6.14	39.13	32.99	37.00	-4.01	QP	400	75
3	432.5500	-4.97	38.71	33.74	37.00	-3.26	QP	400	168
4	585.8099	-1.44	32.78	31.34	37.00	-5.66	QP	100	165
5	650.7998	-0.30	31.45	31.15	37.00	-5.85	QP	100	8
6	710.6500	0.09	33.86	33.95	37.00	-3.05	QP	100	296

Note: Measurement Level = Reading Level + Correct Factor



## Second Issue

Test Mode :	Mode 5: Full system for DH-IPC-HDBW4421EP-AS with Adapter + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS
Temp :	24℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2015/08/07

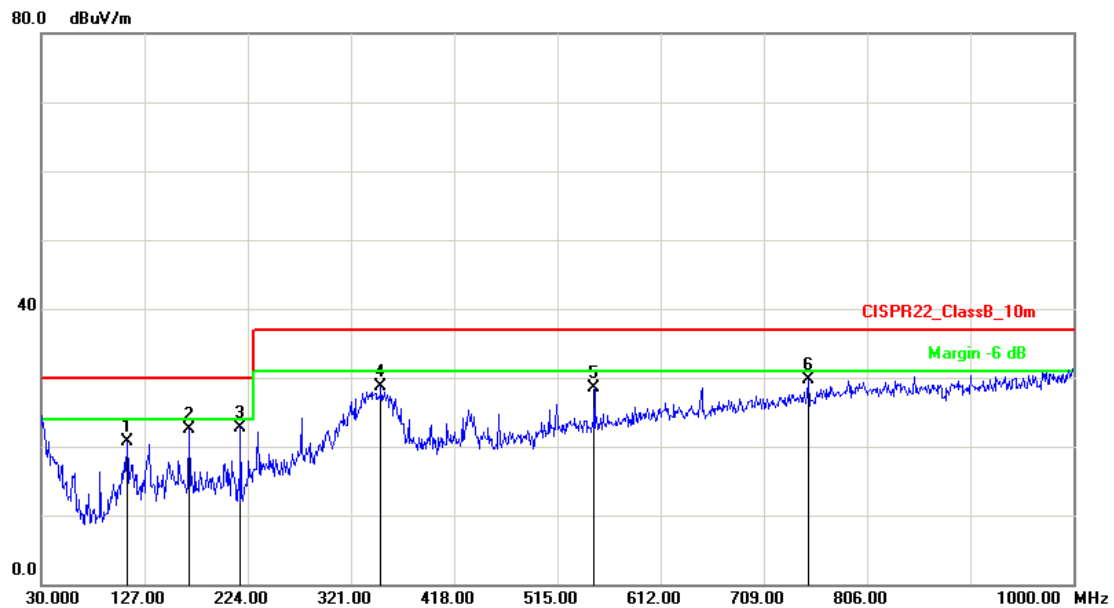


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	110.5100	-12.36	33.44	21.08	30.00	-8.92	QP	100	25
2	217.2100	-10.86	33.63	22.77	30.00	-7.23	QP	400	168
3	362.7099	-5.97	33.98	28.01	37.00	-8.99	QP	400	306
4	411.2099	-4.54	32.05	27.51	37.00	-9.49	QP	100	141
5	549.9198	-1.39	30.54	29.15	37.00	-7.85	QP	100	157
6	650.7998	0.59	29.70	30.29	37.00	-6.71	QP	100	85

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5: Full system for DH-IPC-HDBW4421EP-AS with Adapter + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS
Temp :	24℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2015/08/07

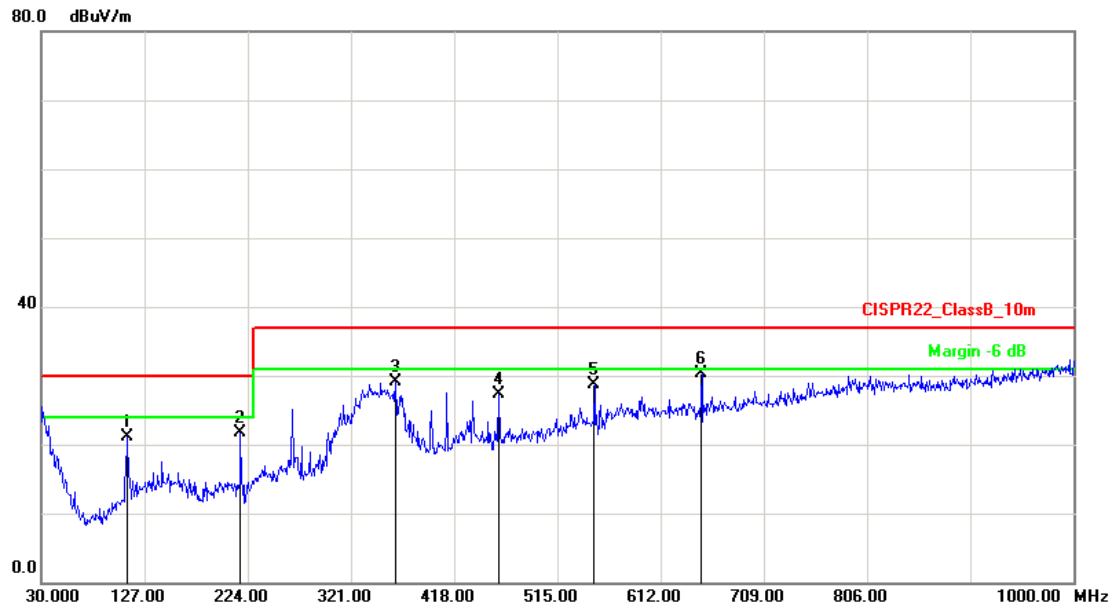


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	110.5100	-12.36	32.99	20.63	30.00	-9.37	QP	400	6
2	168.7100	-11.55	34.08	22.53	30.00	-7.47	QP	100	360
3	217.2100	-10.86	33.66	22.80	30.00	-7.20	QP	100	152
4	349.1298	-6.40	35.03	28.63	37.00	-8.37	QP	200	98
5	549.9198	-1.39	29.89	28.50	37.00	-8.50	QP	100	145
6	750.7100	2.39	27.22	29.61	37.00	-7.39	QP	200	2

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6: Full system for DH-IPC-HDBW4421EP-AS with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS
Temp :	24℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2015/08/07



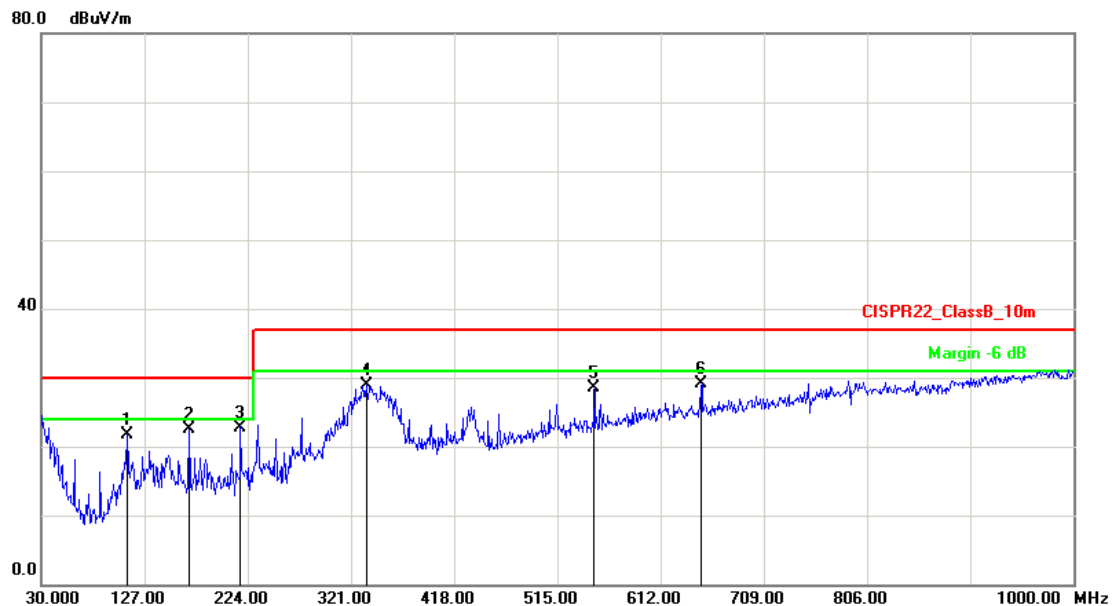
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	110.5100	-12.36	33.44	21.08	30.00	-8.92	peak	200	259
2	217.2100	-10.86	32.63	21.77	30.00	-8.23	peak	400	215
3	362.7099	-5.97	34.98	29.01	37.00	-7.99	peak	100	118
4	459.7099	-3.48	30.87	27.39	37.00	-9.61	peak	400	48
5	549.9198	-1.39	30.04	28.65	37.00	-8.35	peak	100	201
6	650.7998	0.59	29.70	30.29	37.00	-6.71	peak	100	63

Note: Measurement Level = Reading Level + Correct Factor





Test Mode :	Mode 6: Full system for DH-IPC-HDBW4421EP-AS with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS
Temp :	24℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2015/08/07



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	110.5100	-12.36	33.99	21.63	30.00	-8.37	QP	200	66
2	168.7100	-11.55	34.08	22.53	30.00	-7.47	QP	100	236
3	217.2100	-10.86	33.66	22.80	30.00	-7.20	QP	200	152
4	335.5500	-6.83	35.78	28.95	37.00	-8.05	QP	100	171
5	549.9198	-1.39	29.89	28.50	37.00	-8.50	QP	100	19
6	650.7998	0.59	28.50	29.09	37.00	-7.91	QP	400	73

Note: Measurement Level = Reading Level + Correct Factor

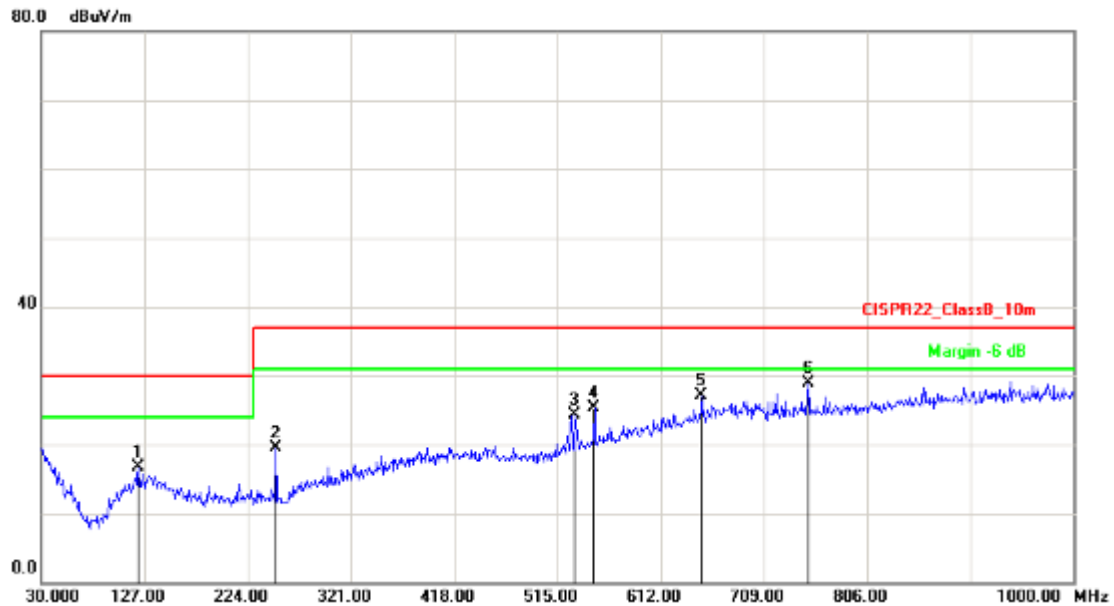
Test engineer: \_\_\_\_\_

*Karp*



## Initial Issue

Test Mode :	Mode 1: Normal Operation for IPC-HDBW4421EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW4421EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

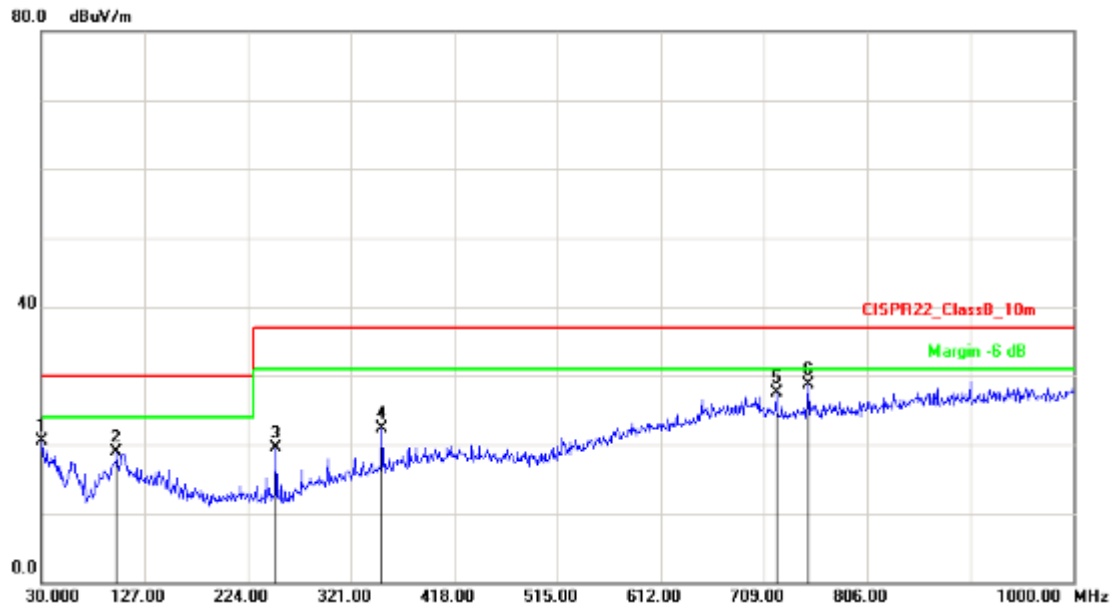


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	121.1800	-9.82	26.54	16.72	30.00	-13.28	QP	400	359
2	250.1899	-12.04	31.52	19.48	37.00	-17.52	QP	400	264
3	531.4900	-4.41	28.65	24.24	37.00	-12.76	QP	100	255
4	549.9199	-3.67	29.01	25.34	37.00	-11.66	QP	100	53
5	650.7999	-0.06	27.23	27.17	37.00	-9.83	QP	100	48
6	750.7100	0.42	28.49	28.91	37.00	-8.09	QP	400	288

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Normal Operation for IPC-HDBW4421EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW4421EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

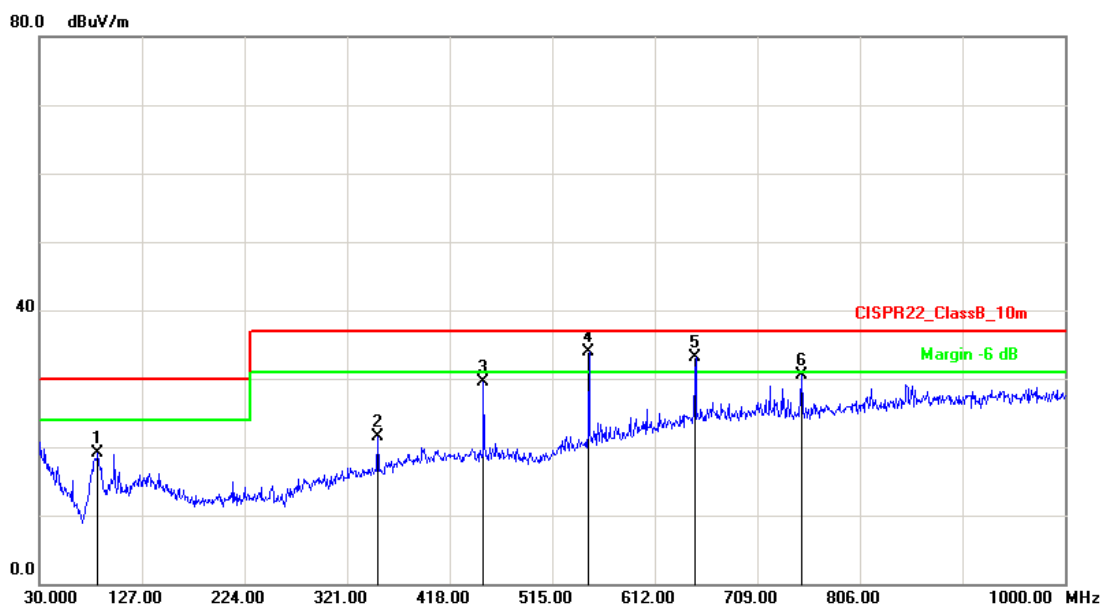


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9700	-5.75	26.21	20.46	30.00	-9.54	QP	100	360
2	100.8100	-12.67	31.62	18.95	30.00	-11.05	QP	100	160
3	250.1900	-12.04	31.56	19.52	37.00	-17.48	QP	400	252
4	350.1000	-7.21	29.51	22.30	37.00	-14.70	QP	100	256
5	720.6400	0.24	27.29	27.53	37.00	-9.47	QP	100	204
6	750.7100	0.42	28.36	28.78	37.00	-8.22	QP	400	206

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Normal Operation for IPC-HDBW4120EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW4120EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

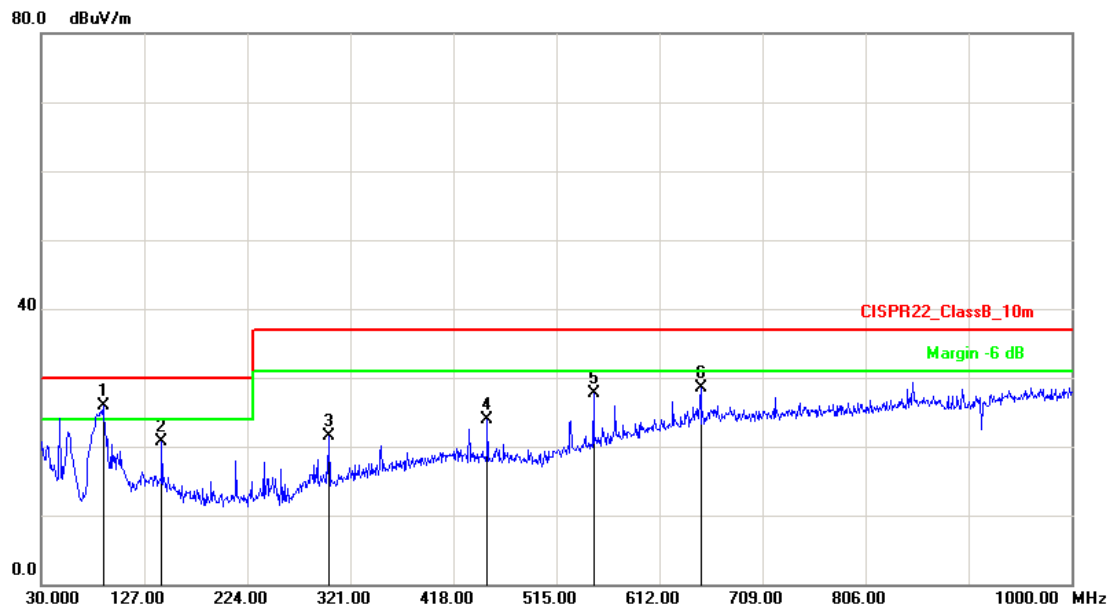


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	85.2900	-15.62	34.73	19.11	30.00	-10.89	QP	400	303
2	350.1000	-7.21	28.72	21.51	37.00	-15.49	QP	400	237
3	450.0099	-5.47	35.06	29.59	37.00	-7.41	QP	100	103
4	549.9199	-3.67	37.64	33.97	37.00	-3.03	QP	100	90
5	650.7999	-0.06	33.23	33.17	37.00	-3.83	QP	100	74
6	750.7100	0.42	30.05	30.47	37.00	-6.53	QP	100	71

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Normal Operation for IPC-HDBW4120EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW4120EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

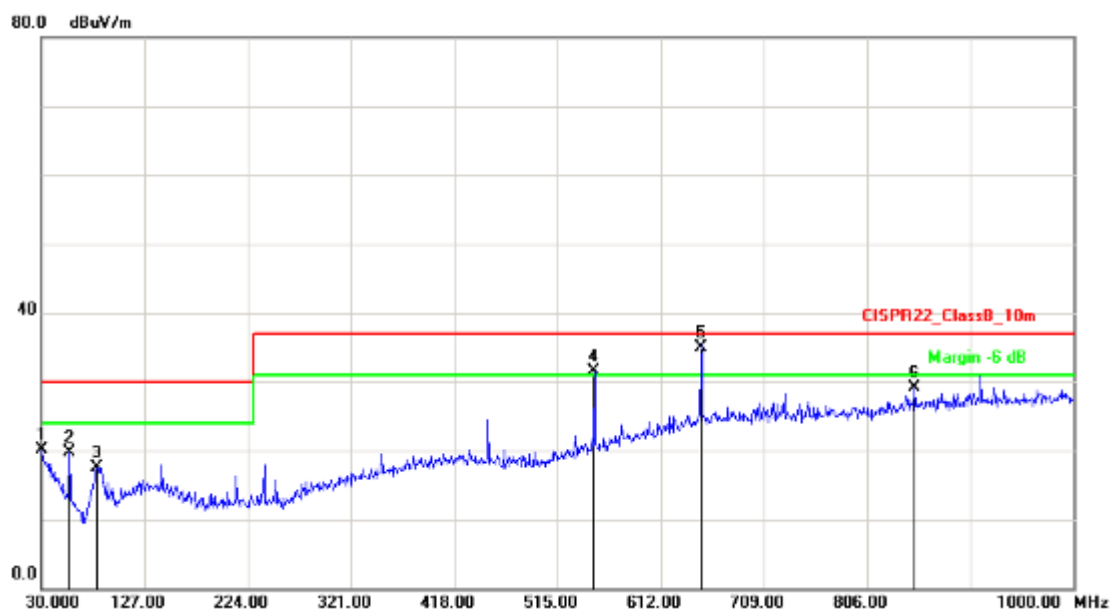


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	88.2000	-15.37	41.33	25.96	30.00	-4.04	QP	100	122
2	143.4900	-10.12	30.85	20.73	30.00	-9.27	QP	100	152
3	300.6300	-9.25	30.73	21.48	37.00	-15.52	QP	100	250
4	450.0100	-5.47	29.35	23.88	37.00	-13.12	QP	100	216
5	549.9200	-3.67	31.35	27.68	37.00	-9.32	QP	400	283
6	650.8000	-0.06	28.51	28.45	37.00	-8.55	QP	400	323

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Normal Operation for IPC-HDBW4221EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW4221EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

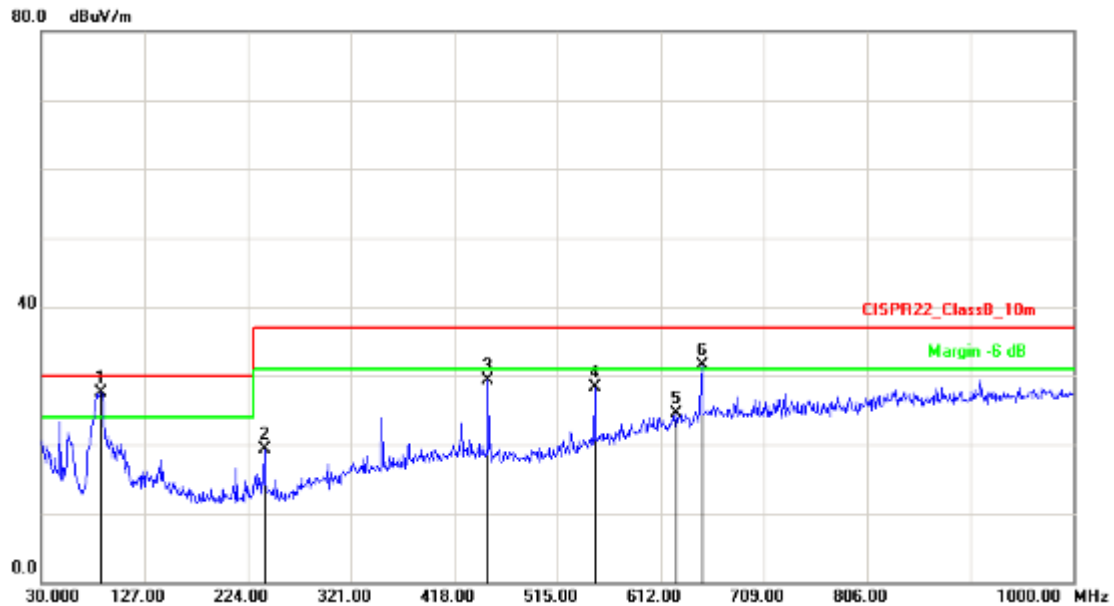


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	30.9699	-5.75	25.93	20.18	30.00	-9.82	QP	318	360
2	56.1899	-12.02	31.69	19.67	30.00	-10.33	QP	111	360
3	82.3799	-15.86	33.36	17.50	30.00	-12.50	QP	400	311
4	549.9199	-3.67	35.26	31.59	37.00	-5.41	QP	100	305
5	649.9949	-0.09	35.09	35.00	37.00	-2.00	QP	100	138
6	850.6200	1.70	27.49	29.19	37.00	-7.81	QP	100	289

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Normal Operation for IPC-HDBW4221EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW4221EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

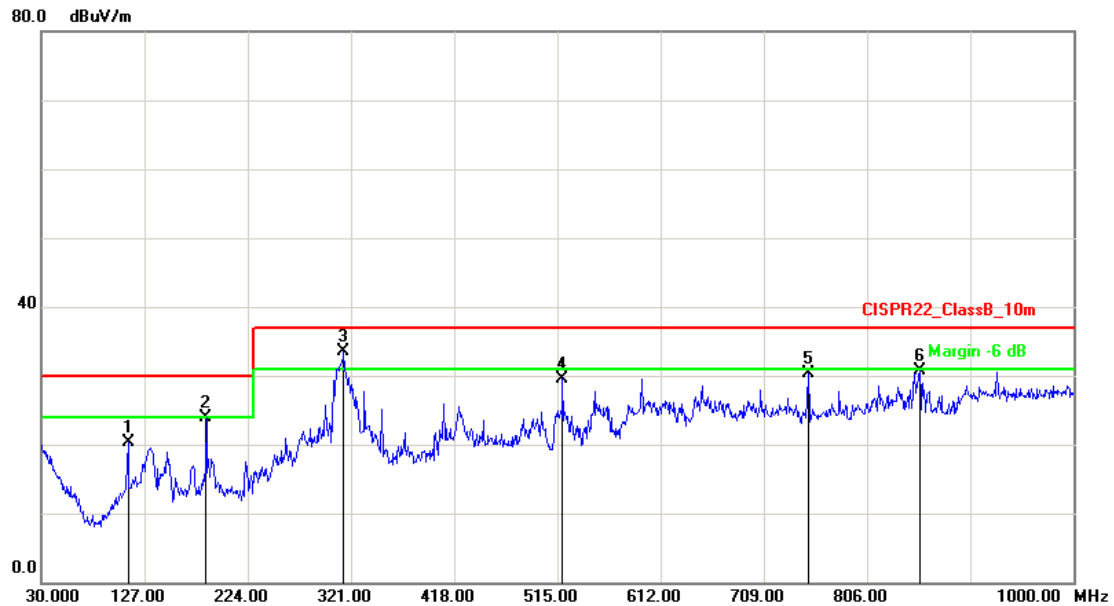


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	86.2600	-15.53	43.00	27.47	30.00	-2.53	QP	100	84
2	239.5200	-11.93	31.32	19.39	37.00	-17.61	QP	100	132
3	450.0100	-5.47	34.75	29.28	37.00	-7.72	QP	100	232
4	549.9200	-3.67	31.97	28.30	37.00	-8.70	QP	400	228
5	626.5500	-1.05	25.62	24.57	37.00	-12.43	QP	400	37
6	650.8000	-0.06	31.57	31.51	37.00	-5.49	QP	400	226

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Normal Operation for IPC-HDBW4220EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW4220EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16



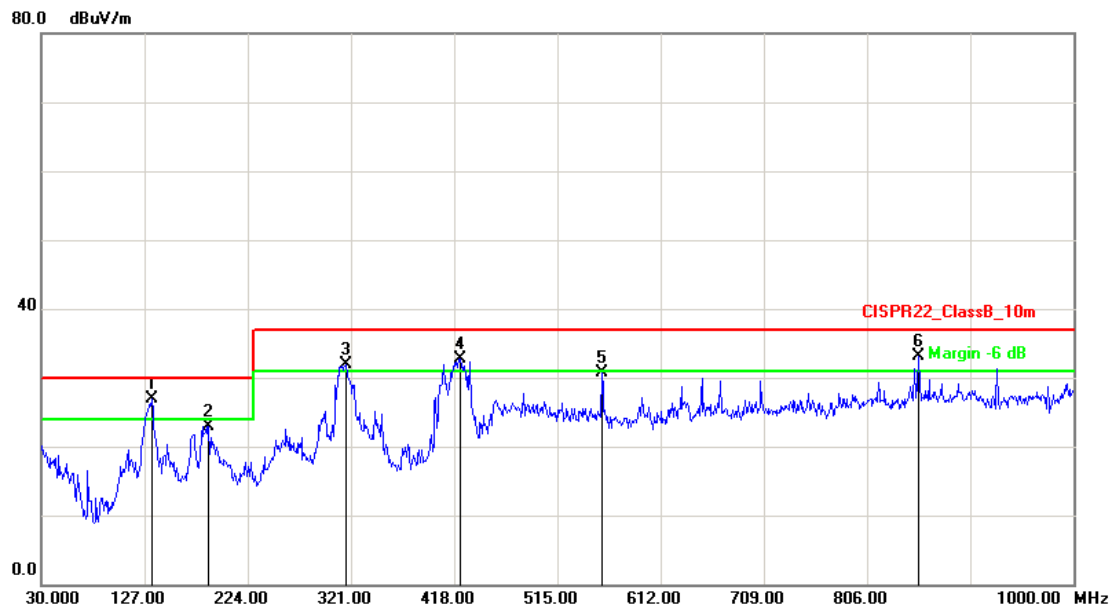
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	111.4800	-11.09	31.42	20.33	30.00	-9.67	QP	100	15
2	185.1999	-12.60	36.56	23.96	30.00	-6.04	QP	200	154
3	314.2099	-8.54	41.96	33.42	37.00	-3.58	QP	200	360
4	519.8500	-4.95	34.38	29.43	37.00	-7.57	QP	100	226
5	750.7100	0.42	29.97	30.39	37.00	-6.61	QP	100	87
6	855.4700	1.82	28.90	30.72	37.00	-6.28	QP	400	157

Note: Measurement Level = Reading Level + Correct Factor





Test Mode :	Mode 4: Normal Operation for IPC-HDBW4220EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW4220EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	133.7899	-9.83	36.77	26.94	30.00	-3.06	QP	200	154
2	187.1399	-12.58	35.58	23.00	30.00	-7.00	QP	100	114
3	316.1499	-8.44	40.44	32.00	37.00	-5.00	QP	200	360
4	423.8199	-5.30	38.08	32.78	37.00	-4.22	QP	100	226
5	556.7100	-3.42	34.10	30.68	37.00	-6.32	QP	400	8
6	854.5000	1.80	31.25	33.05	37.00	-3.95	QP	100	174

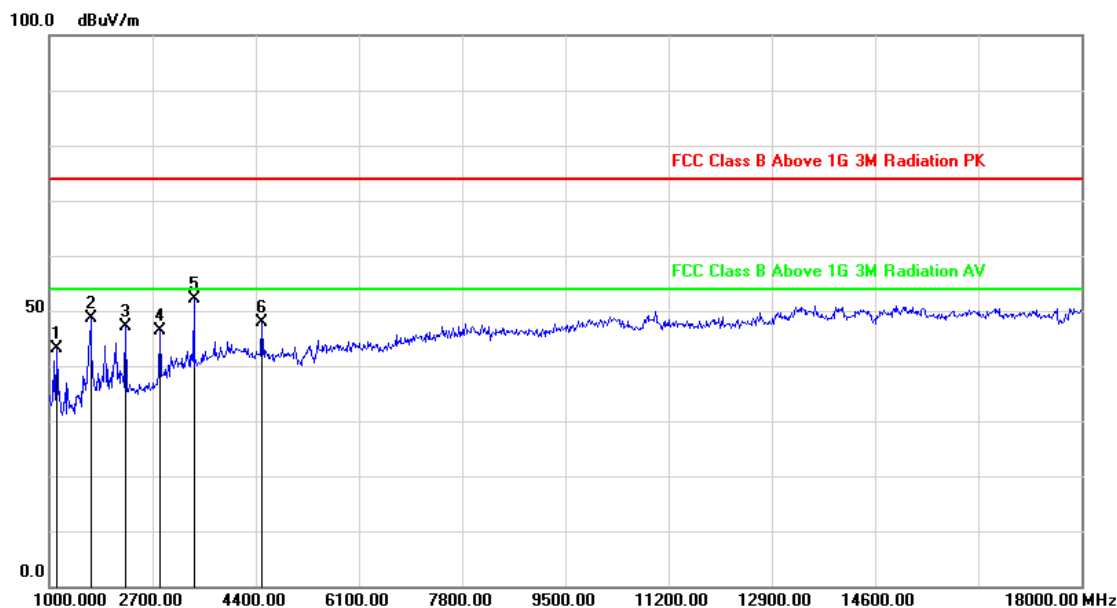
Note: Measurement Level = Reading Level + Correct Factor



#### 4.6. Test Result and Data (1GHz ~ 18GHz)

Fourth Issue

Test Mode :	Mode 1: Full system for IPC-HDBW1320EN-W with Adapter + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temp :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date :	2016/03/21

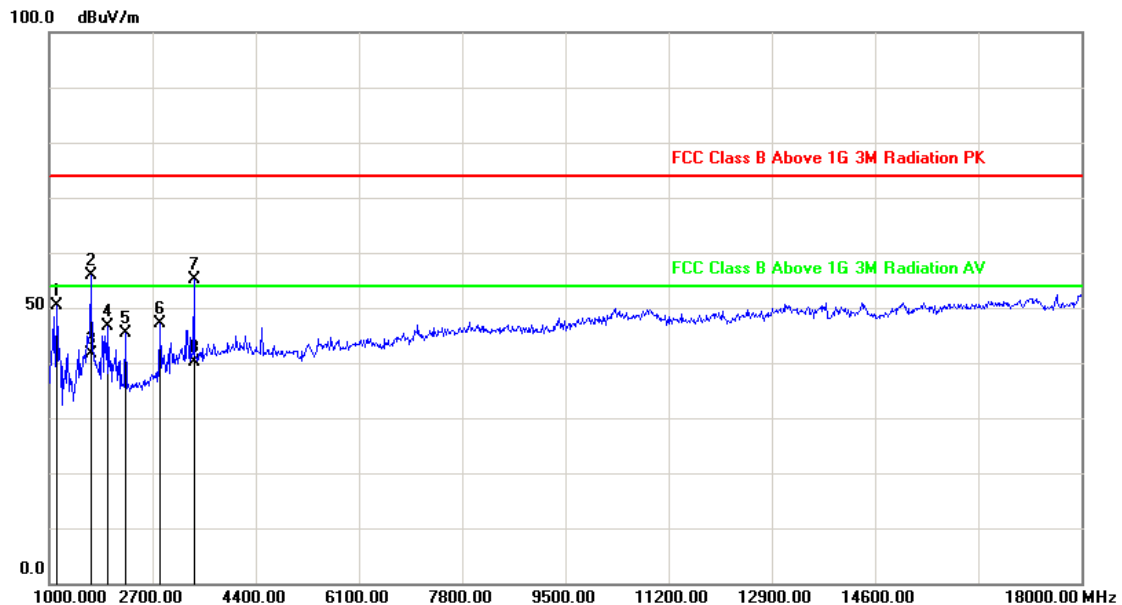


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1119.000	-16.81	59.87	43.06	74.00	-30.94	peak	100	299
2	1680.000	-13.99	62.61	48.62	74.00	-25.38	peak	100	85
3	2258.000	-11.02	58.26	47.24	74.00	-26.76	peak	100	124
4	2819.000	-9.02	55.29	46.27	74.00	-27.73	peak	100	142
5	3380.000	-6.89	58.90	52.01	74.00	-21.99	peak	200	49
6	4502.000	-4.07	51.85	47.78	74.00	-26.22	peak	200	57

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Full system for IPC-HDBW1320EN-W with Adapter + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temp :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date :	2016/03/21

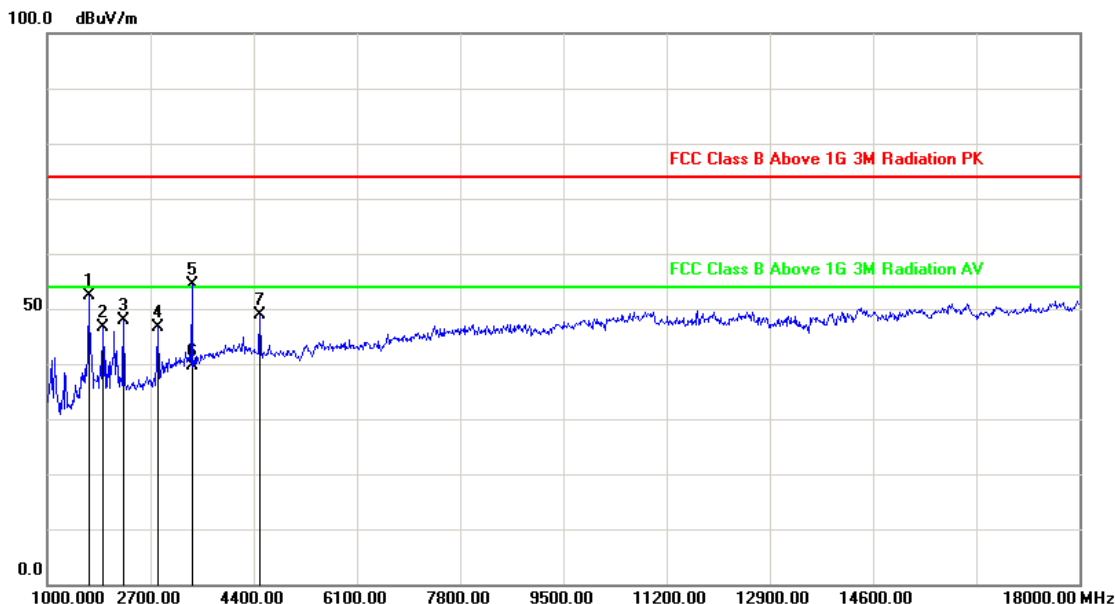


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1119.000	-16.81	67.13	50.32	74.00	-23.68	peak	100	185
2	1680.000	-13.99	69.80	55.81	74.00	-18.19	peak	100	213
3	1680.000	-13.99	55.66	41.67	54.00	-12.33	AVG	100	215
4	1969.000	-12.35	58.97	46.62	74.00	-27.38	peak	100	255
5	2258.000	-11.02	56.51	45.49	74.00	-28.51	peak	100	97
6	2819.000	-9.02	56.23	47.21	74.00	-26.79	peak	200	116
7	3380.000	-6.89	61.94	55.05	74.00	-18.95	peak	146	0
8	3380.000	-6.89	46.90	40.01	54.00	-13.99	AVG	146	0

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for IPC-HDBW1320EN-W with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temp :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date :	2016/03/21

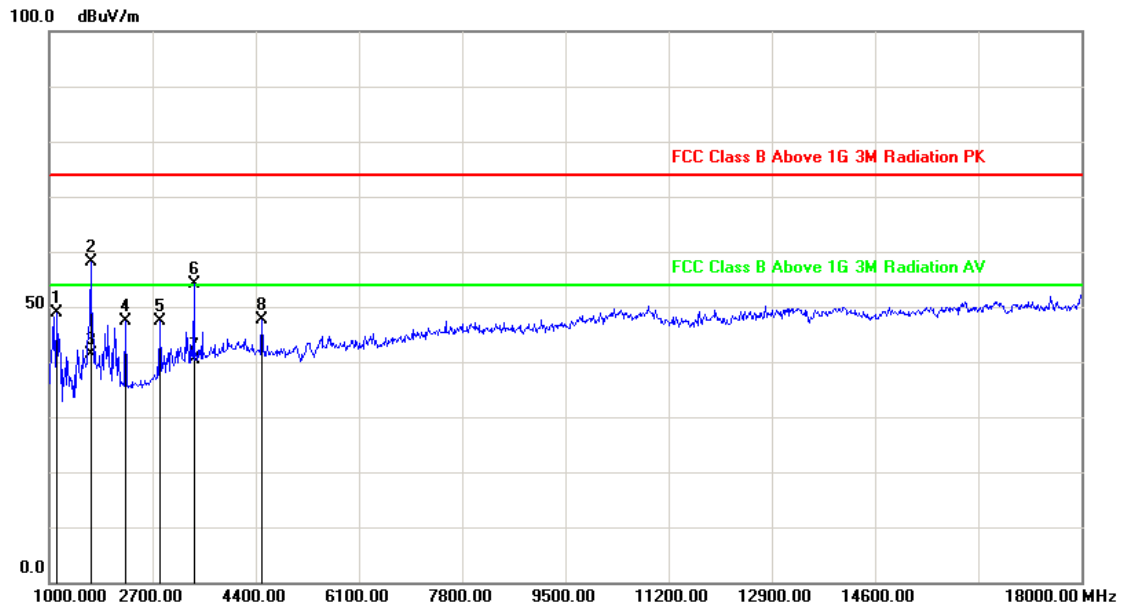


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1680.000	-13.99	66.46	52.47	74.00	-21.53	peak	100	253
2	1918.000	-12.64	59.25	46.61	74.00	-27.39	peak	200	232
3	2258.000	-11.02	59.00	47.98	74.00	-26.02	peak	200	132
4	2819.000	-9.02	55.70	46.68	74.00	-27.32	peak	100	139
5	3380.000	-6.89	61.23	54.34	74.00	-19.66	peak	100	242
6	3380.000	-6.89	46.51	39.62	54.00	-14.38	AVG	100	243
7	4502.000	-4.07	53.06	48.99	74.00	-25.01	peak	200	55

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Full system for IPC-HDBW1320EN-W with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW1320EN-W
Temp :	22°C	Humidity :	50%
Pressure(mbar) :	1002	Date :	2016/03/21



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1119.000	-16.81	65.63	48.82	74.00	-25.18	peak	100	96
2	1680.000	-13.99	72.15	58.16	74.00	-15.84	peak	200	202
3	1680.000	-13.99	55.36	41.37	54.00	-12.63	AVG	200	210
4	2258.000	-11.02	58.30	47.28	74.00	-26.72	peak	100	107
5	2819.000	-9.02	56.37	47.35	74.00	-26.65	peak	200	279
6	3380.000	-6.89	60.92	54.03	74.00	-19.97	peak	100	358
7	3380.000	-6.89	47.18	40.29	54.00	-13.71	AVG	100	358
8	4502.000	-4.07	51.69	47.62	74.00	-26.38	peak	100	204

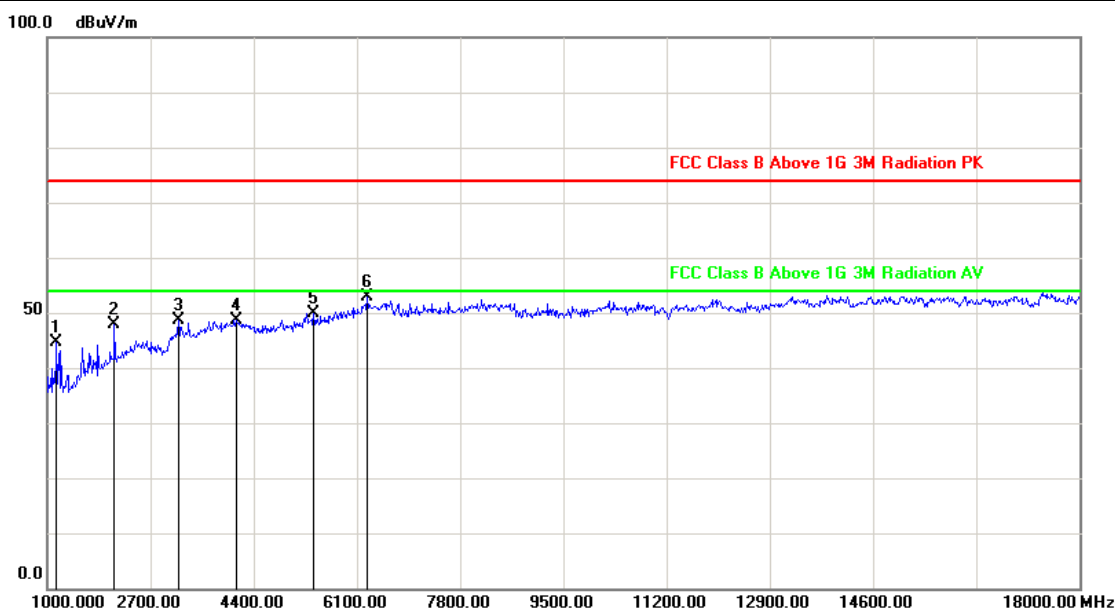
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Seben



## Second Issue

Test Mode :	Mode 5: Full system for DH-IPC-HDBW4421EP-AS with Adapter + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS
Temp :	24℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2015/08/07

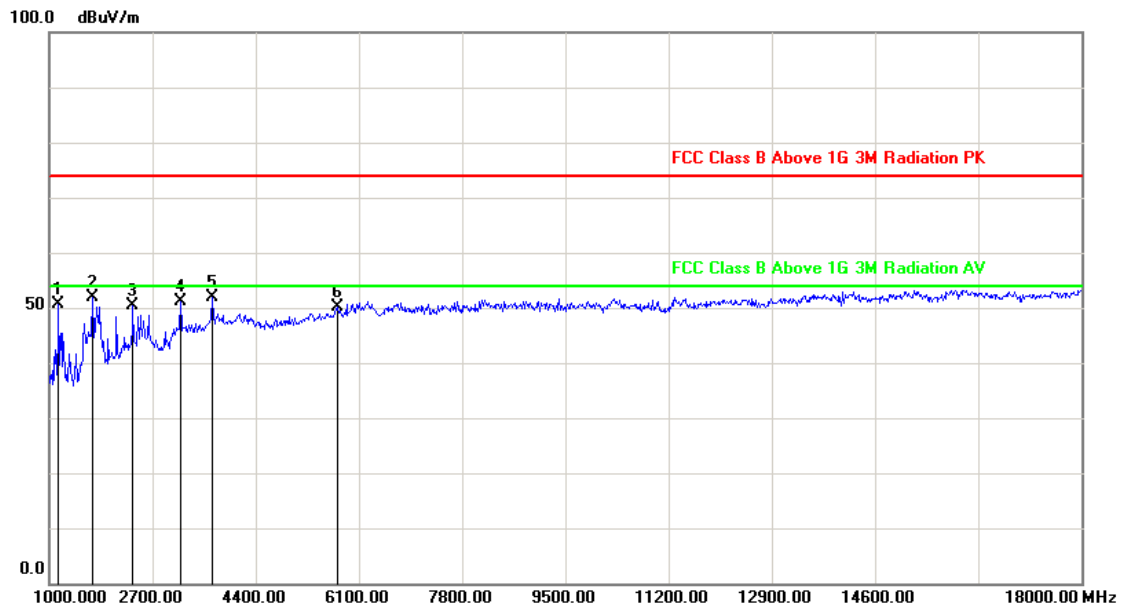


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1153.000	-8.33	53.01	44.68	74.00	-29.32	peak	100	331
2	2105.000	-1.31	49.13	47.82	74.00	-26.18	peak	100	138
3	3159.000	1.05	47.66	48.71	74.00	-25.29	peak	100	171
4	4111.000	4.35	44.39	48.74	74.00	-25.26	peak	100	157
5	5386.000	5.85	43.98	49.83	74.00	-24.17	peak	100	88
6	6270.000	8.60	44.33	52.93	74.00	-21.07	peak	100	211

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 5: Full system for DH-IPC-HDBW4421EP-AS with Adapter + POE		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS
Temp :	24℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2015/08/07

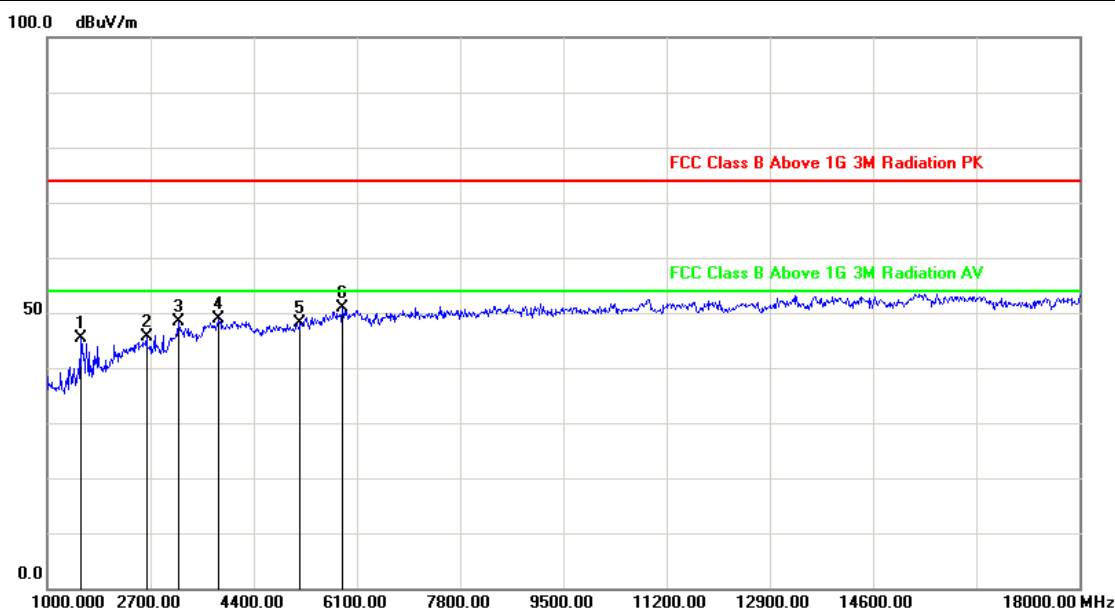


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1153.000	-8.33	59.08	50.75	74.00	-23.25	peak	100	79
2	1714.000	-4.76	56.54	51.78	74.00	-22.22	peak	100	306
3	2377.000	0.81	49.65	50.46	74.00	-23.54	peak	100	203
4	3159.000	1.05	49.99	51.04	74.00	-22.96	peak	100	239
5	3686.000	3.14	48.82	51.96	74.00	-22.04	peak	100	219
6	5743.000	6.91	43.11	50.02	74.00	-23.98	peak	100	240

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 6: Full system for DH-IPC-HDBW4421EP-AS with POE		
DC Power :	POE 48V	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS
Temp :	24℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2015/08/07



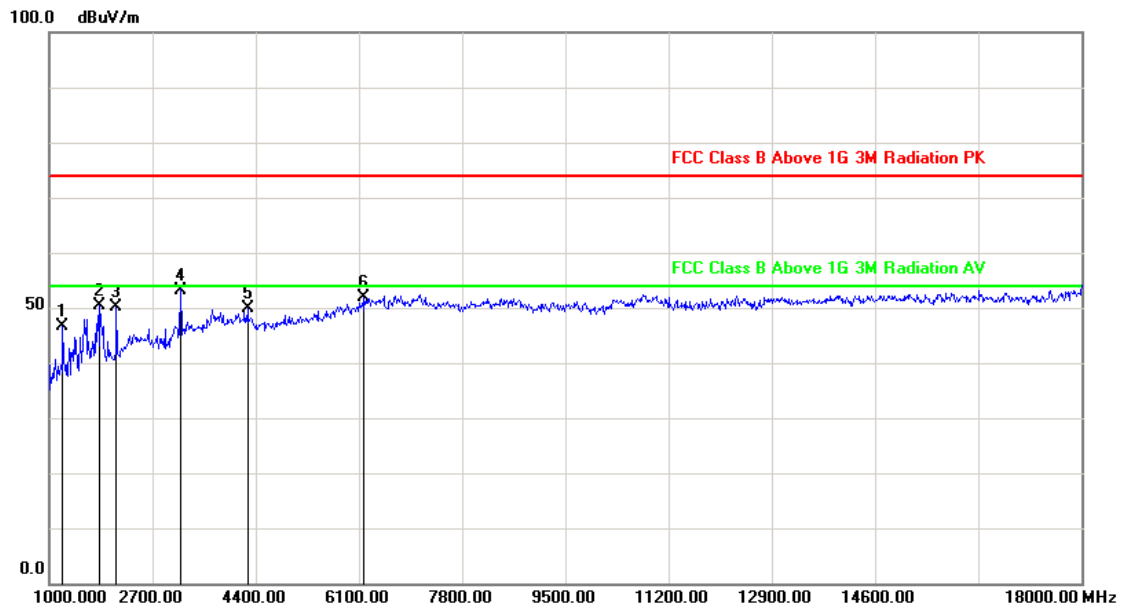
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1544.000	-6.32	51.74	45.42	74.00	-28.58	peak	100	256
2	2632.000	1.41	44.10	45.51	74.00	-28.49	peak	100	145
3	3159.000	1.05	47.21	48.26	74.00	-25.74	peak	100	206
4	3822.000	3.69	45.26	48.95	74.00	-25.05	peak	100	240
5	5165.000	5.28	42.73	48.01	74.00	-25.99	peak	100	171
6	5862.000	7.29	43.62	50.91	74.00	-23.09	peak	100	233

Note: Measurement Level = Reading Level + Correct Factor





Test Mode :	Mode 6: Full system for DH-IPC-HDBW4421EP-AS with POE		
DC Power :	POE 48V	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	DH-IPC-HDBW4421EP-AS
Temp :	24℃	Humidity :	50%
Pressure(mbar) :	1002	Date :	2015/08/07



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1221.000	-8.02	54.62	46.60	74.00	-27.40	peak	100	272
2	1833.000	-3.66	53.97	50.31	74.00	-23.69	peak	100	258
3	2105.000	-1.31	51.45	50.14	74.00	-23.86	peak	100	120
4	3159.000	1.05	52.20	53.25	74.00	-20.75	peak	200	119
5	4264.000	4.25	45.62	49.87	74.00	-24.13	peak	100	211
6	6185.000	8.32	43.50	51.82	74.00	-22.18	peak	100	344

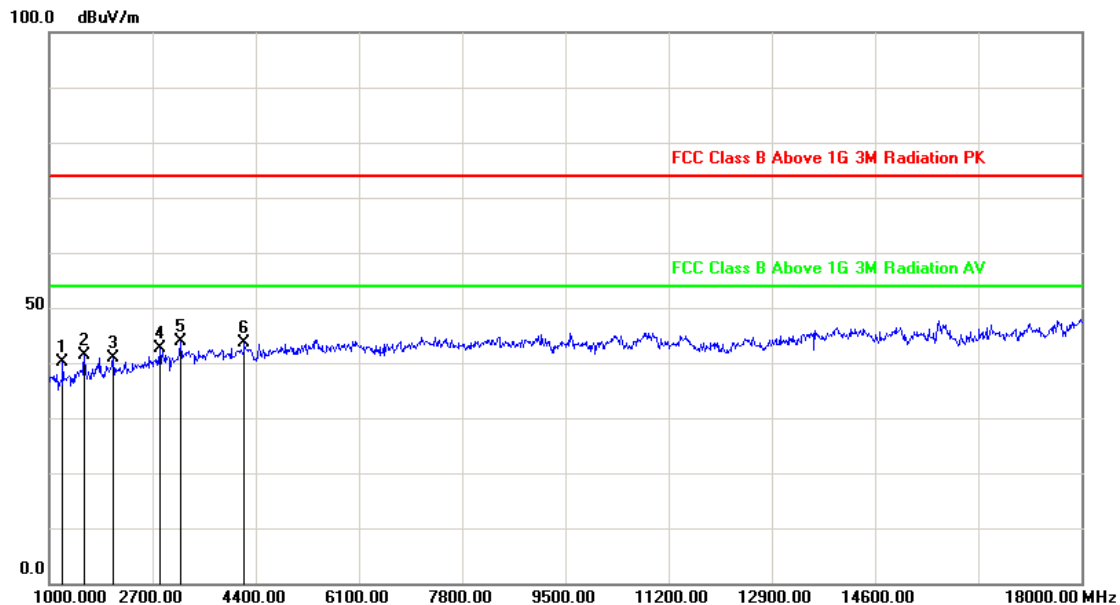
Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Karp



## Initial Issue

Test Mode :	Mode 1: Normal Operation for IPC-HDBW4421EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW4421EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

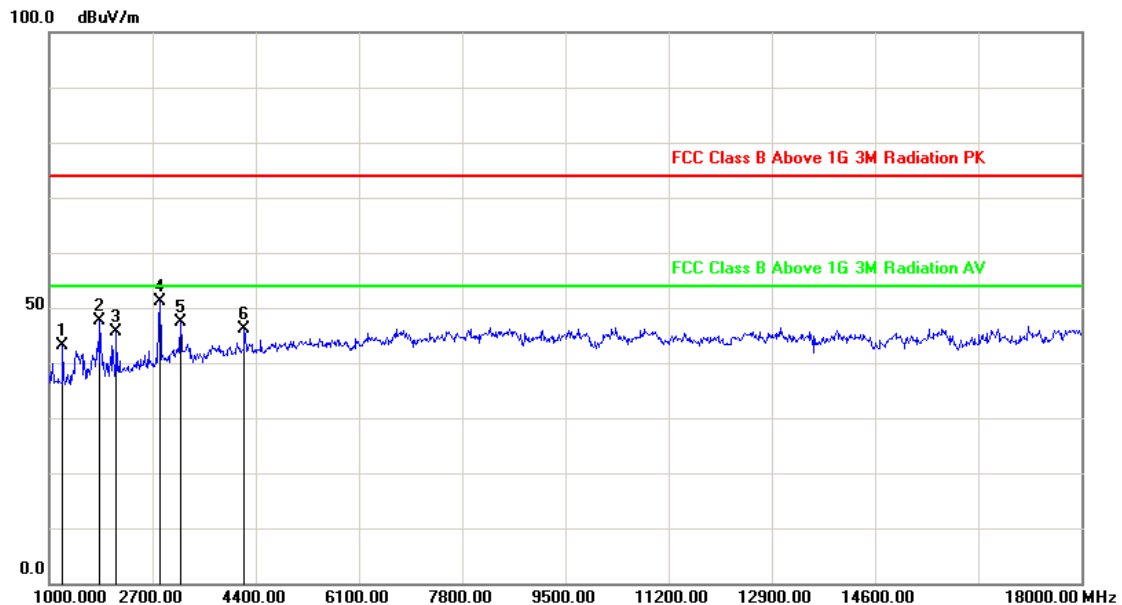


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1221.000	-5.95	46.19	40.24	74.00	-33.76	peak	100	346
2	1578.000	-4.46	45.96	41.50	74.00	-32.50	peak	100	188
3	2054.000	-2.52	43.51	40.99	74.00	-33.01	peak	100	209
4	2819.000	0.04	42.48	42.52	74.00	-31.48	peak	100	203
5	3159.000	1.24	42.71	43.95	74.00	-30.05	peak	100	148
6	4213.000	4.89	38.72	43.61	74.00	-30.39	peak	100	238

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 1: Normal Operation for IPC-HDBW4421EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW4421EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

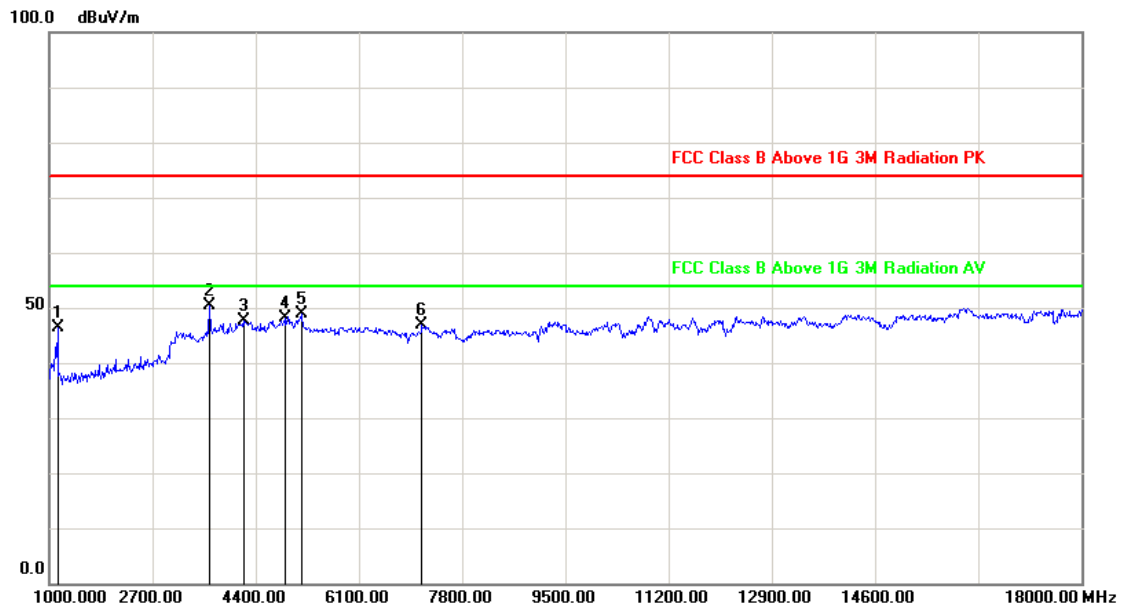


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1221.000	-5.95	49.17	43.22	74.00	-30.78	peak	100	280
2	1833.000	-3.40	51.14	47.74	74.00	-26.26	peak	100	185
3	2105.000	-2.35	47.95	45.60	74.00	-28.40	peak	100	197
4	2819.000	0.04	51.01	51.05	74.00	-22.95	peak	100	205
5	3159.000	1.24	46.14	47.38	74.00	-26.62	peak	100	163
6	4213.000	4.89	41.34	46.23	74.00	-27.77	peak	100	142

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Normal Operation for IPC-HDBW4120EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW4120EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

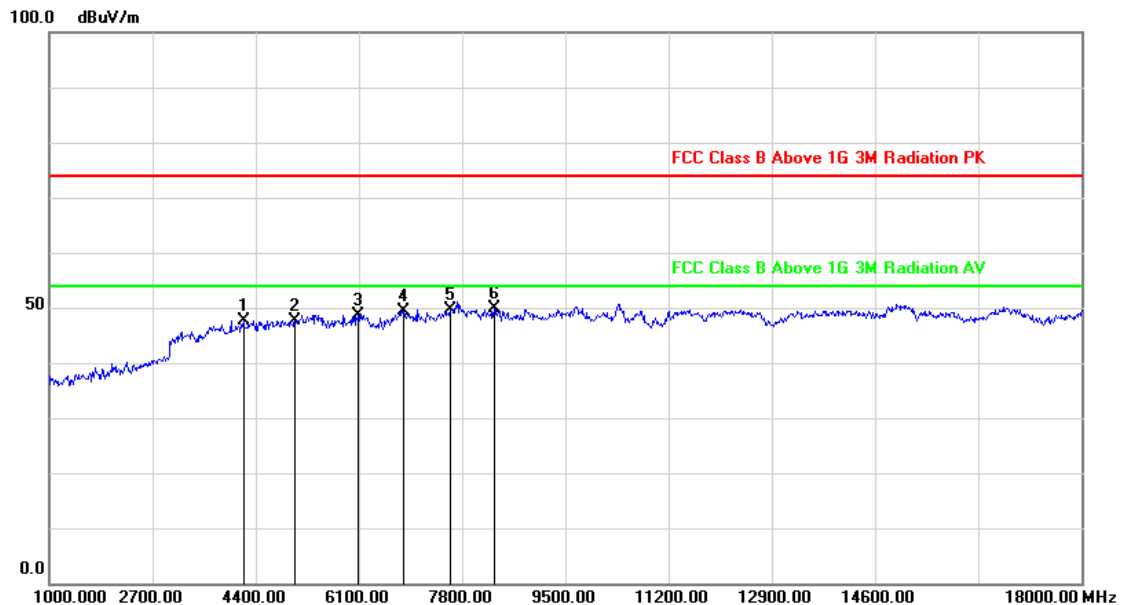


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1136.000	-6.30	52.61	46.31	74.00	-27.69	peak	100	91
2	3635.000	3.01	47.33	50.34	74.00	-23.66	peak	100	134
3	4196.000	4.85	42.70	47.55	74.00	-26.45	peak	100	128
4	4876.000	6.54	41.68	48.22	74.00	-25.78	peak	100	114
5	5148.000	7.10	41.83	48.93	74.00	-25.07	peak	100	196
6	7137.000	12.31	34.64	46.95	74.00	-27.05	peak	100	0

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 2: Normal Operation for IPC-HDBW4120EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW4120EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

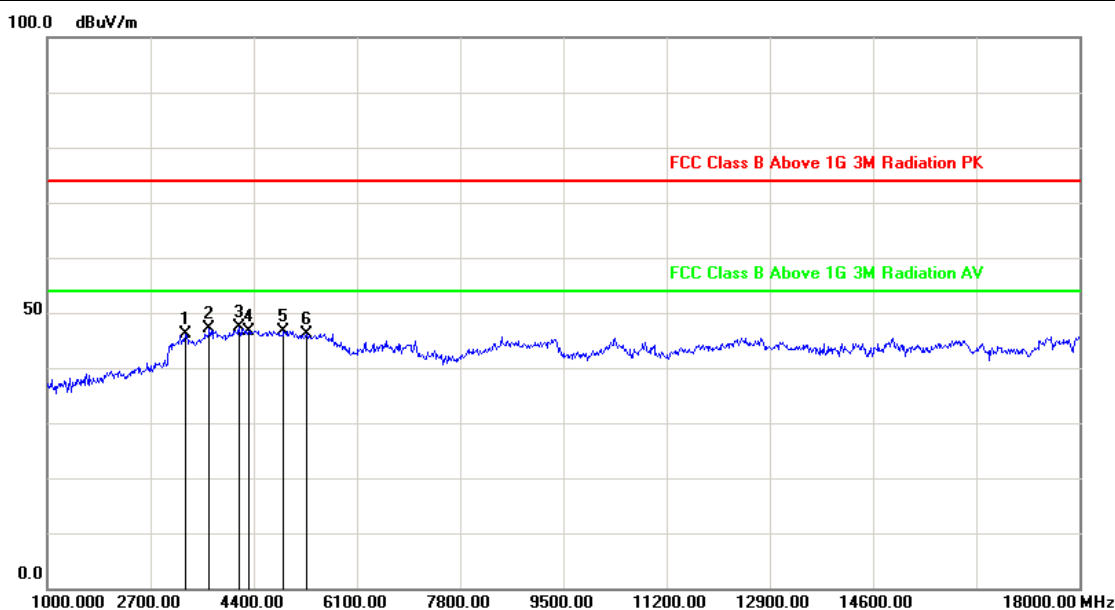


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4196.000	4.85	42.90	47.75	74.00	-26.25	peak	100	85
2	5046.000	6.93	40.80	47.73	74.00	-26.27	peak	100	223
3	6083.000	8.82	39.78	48.60	74.00	-25.40	peak	100	229
4	6831.000	11.40	38.01	49.41	74.00	-24.59	peak	100	1
5	7596.000	13.40	36.29	49.69	74.00	-24.31	peak	100	255
6	8327.000	14.51	35.49	50.00	74.00	-24.00	peak	100	338

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Normal Operation for IPC-HDBW4221EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW4221EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

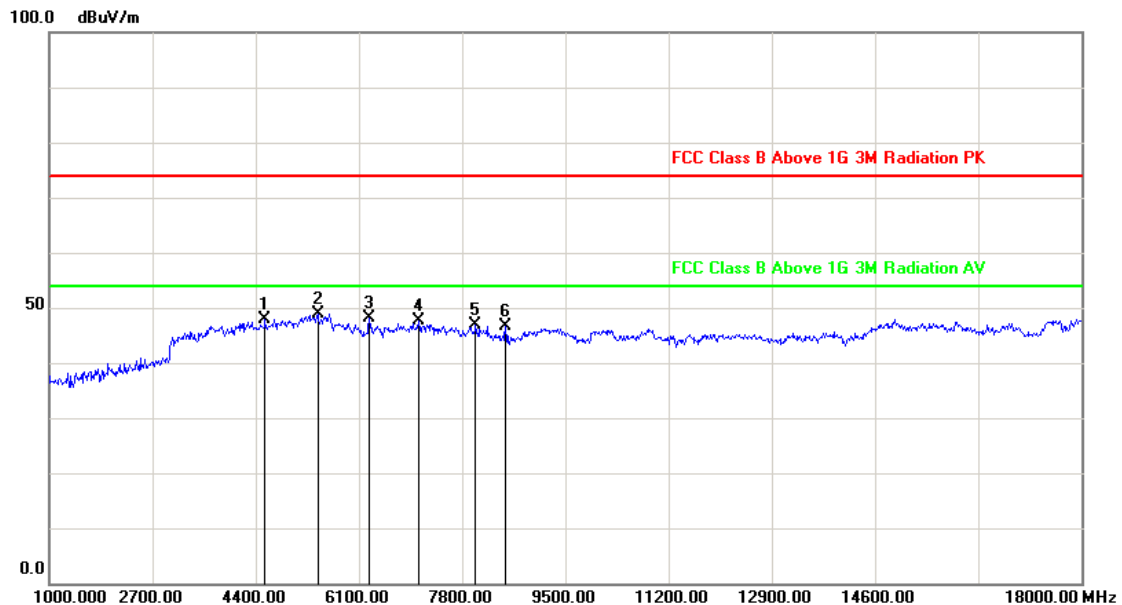


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	3278.000	1.68	44.50	46.18	74.00	-27.82	peak	100	71
2	3669.000	3.13	44.07	47.20	74.00	-26.80	peak	100	313
3	4162.000	4.76	42.51	47.27	74.00	-26.73	peak	100	0
4	4315.000	5.14	41.61	46.75	74.00	-27.25	peak	100	31
5	4893.000	6.58	40.04	46.62	74.00	-27.38	peak	100	155
6	5267.000	7.30	38.78	46.08	74.00	-27.92	peak	100	31

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 3: Normal Operation for IPC-HDBW4221EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW4221EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16

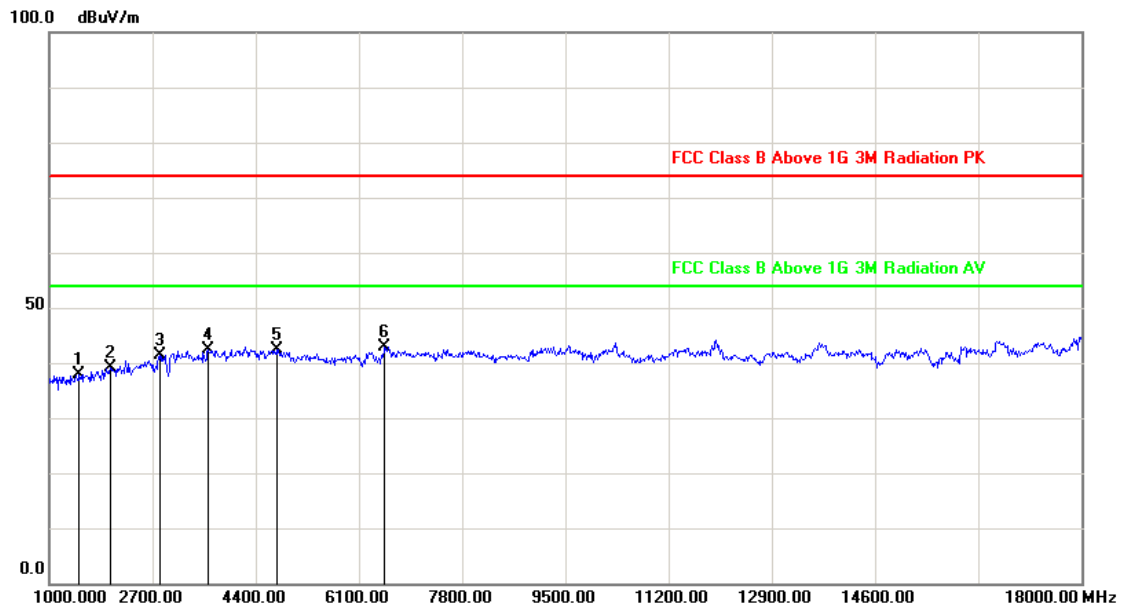


No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4553.000	5.74	42.16	47.90	74.00	-26.10	peak	100	208
2	5420.000	7.56	41.33	48.89	74.00	-25.11	peak	100	48
3	6270.000	9.46	38.65	48.11	74.00	-25.89	peak	100	173
4	7086.000	12.18	35.34	47.52	74.00	-26.48	peak	100	193
5	8021.000	14.37	32.42	46.79	74.00	-27.21	peak	100	165
6	8514.000	14.60	31.91	46.51	74.00	-27.49	peak	100	165

Note: Measurement Level = Reading Level + Correct Factor



Test Mode :	Mode 4: Normal Operation for IPC-HDBW4220EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Horizontal
Equipment :	IP CAMERA	Model No :	IPC-HDBW4220EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16



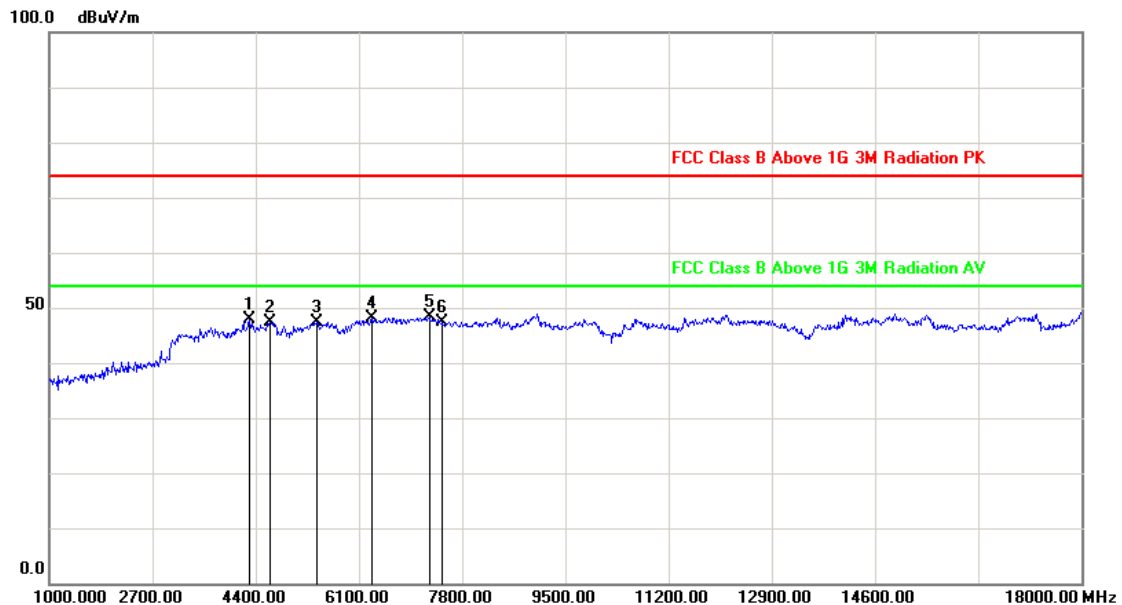
No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	1493.000	-4.81	42.66	37.85	74.00	-36.15	peak	100	290
2	2003.000	-2.69	41.70	39.01	74.00	-34.99	peak	100	49
3	2819.000	0.04	41.34	41.38	74.00	-32.62	peak	100	112
4	3618.000	2.94	39.54	42.48	74.00	-31.52	peak	100	31
5	4740.000	6.20	36.22	42.42	74.00	-31.58	peak	100	113
6	6525.000	10.34	32.50	42.84	74.00	-31.16	peak	100	348

Note: Measurement Level = Reading Level + Correct Factor





Test Mode :	Mode 4: Normal Operation for IPC-HDBW4220EP		
AC Power :	AC 120V/60Hz	Ant. Polarization:	Vertical
Equipment :	IP CAMERA	Model No :	IPC-HDBW4220EP
Temp :	23℃	Humidity :	47%
Pressure(mbar) :	1002	Date :	2015/04/16



No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.	Height (cm)	Azimuth (deg)
1	4298.000	5.10	42.73	47.83	74.00	-26.17	peak	100	15
2	4638.000	5.95	41.53	47.48	74.00	-26.52	peak	100	8
3	5403.000	7.53	39.90	47.43	74.00	-26.57	peak	100	124
4	6304.000	9.58	38.50	48.08	74.00	-25.92	peak	100	360
5	7256.000	12.59	35.78	48.37	74.00	-25.63	peak	100	262
6	7477.000	13.12	34.38	47.50	74.00	-26.50	peak	100	97

Note: Measurement Level = Reading Level + Correct Factor

Test engineer: Karp



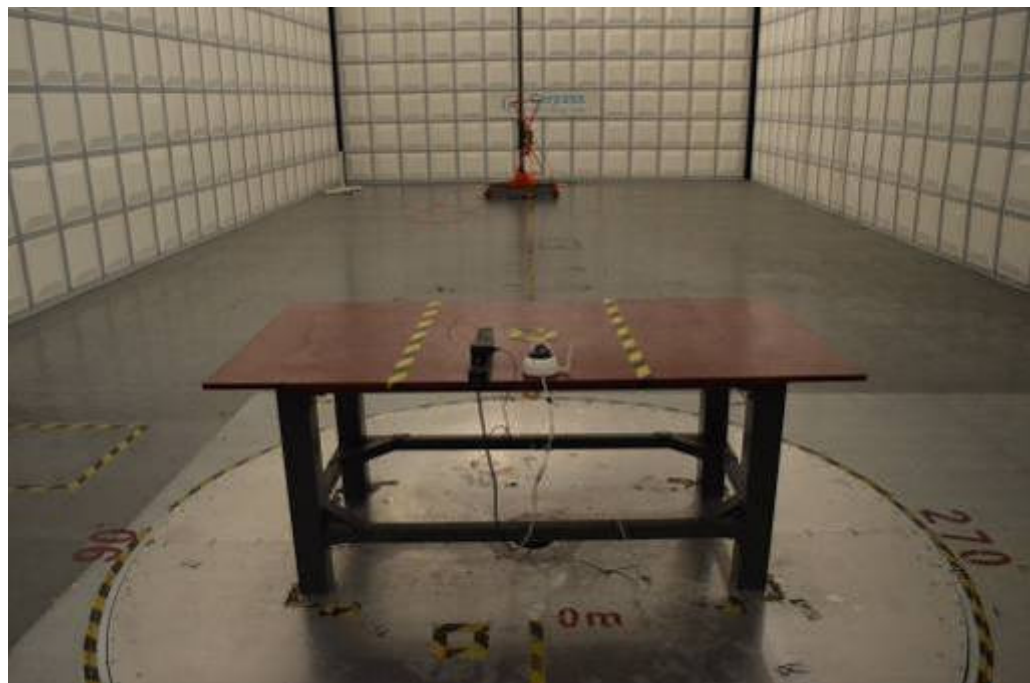
#### 4.7. Test Photographs (30MHz ~ 1GHz)

Fourth Issue

Front View



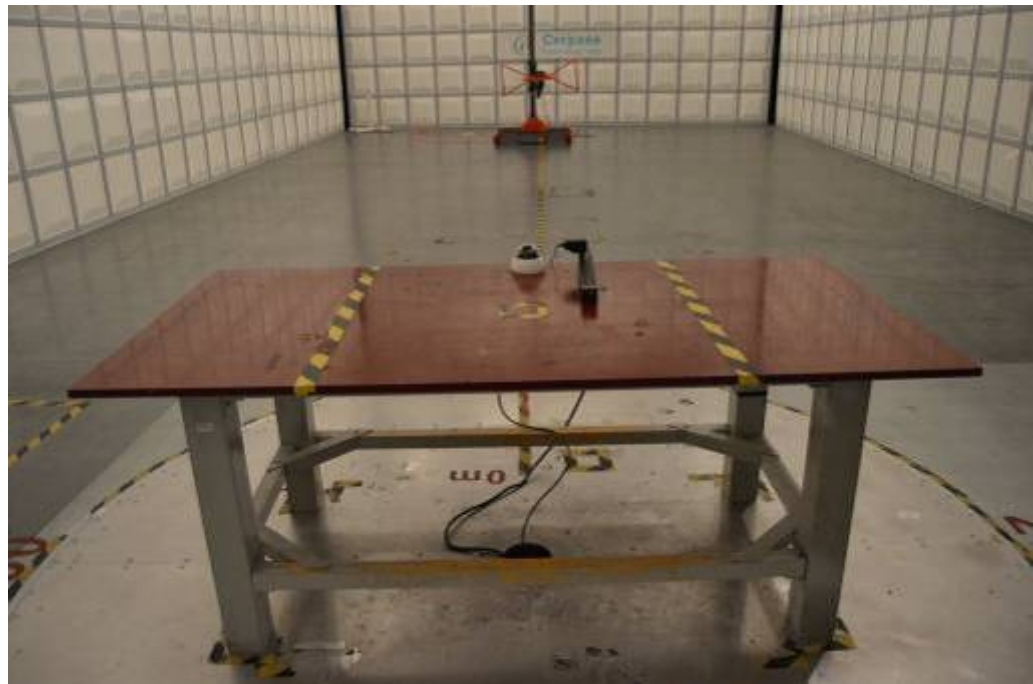
Rear View



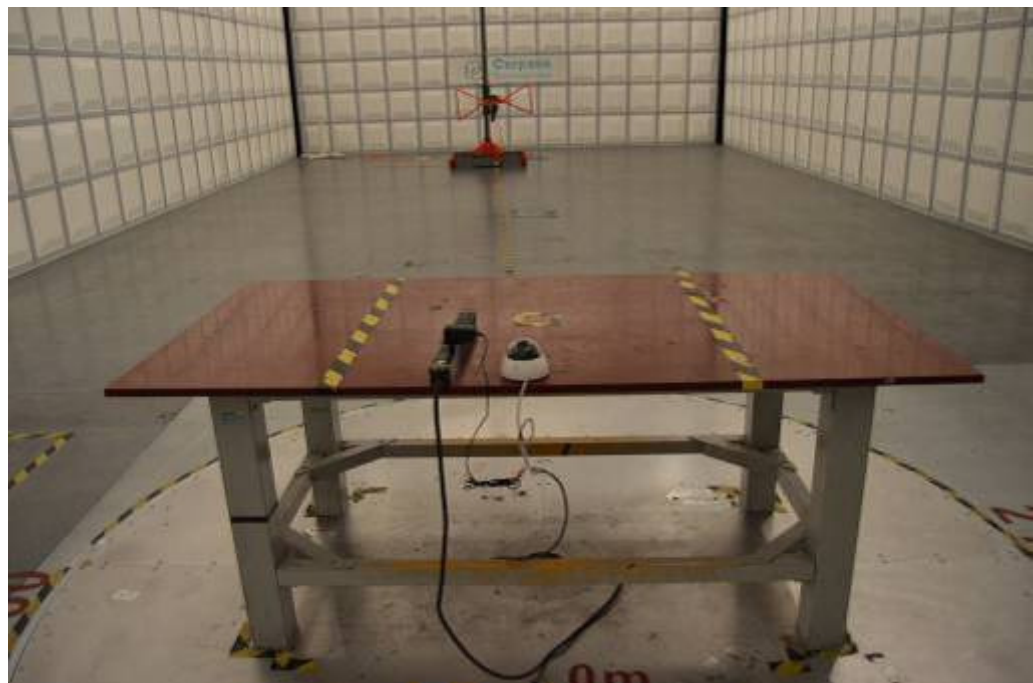


Initial Issue

Front View



Rear View

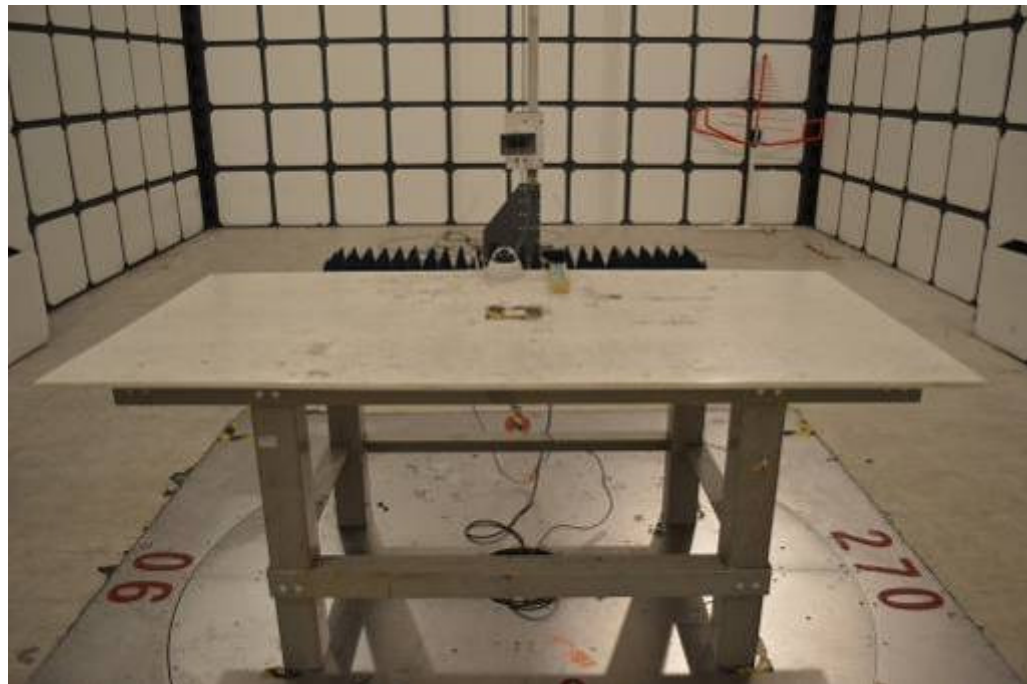




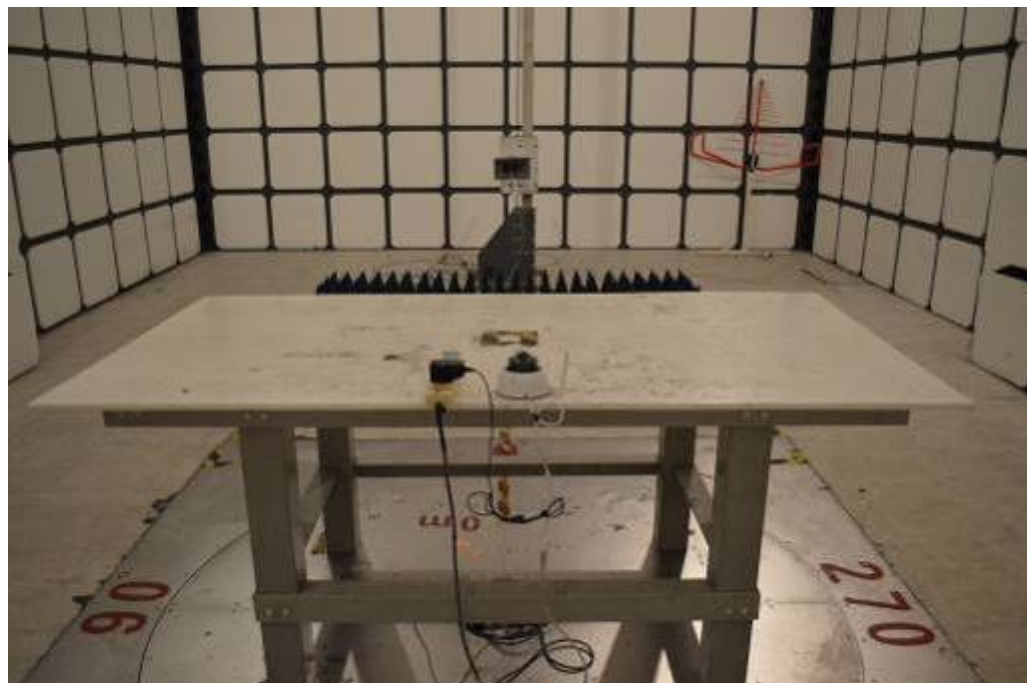
#### 4.8. Test Photographs (1GHz ~ 18GHz)

Fourth Issue

Front View



Rear View

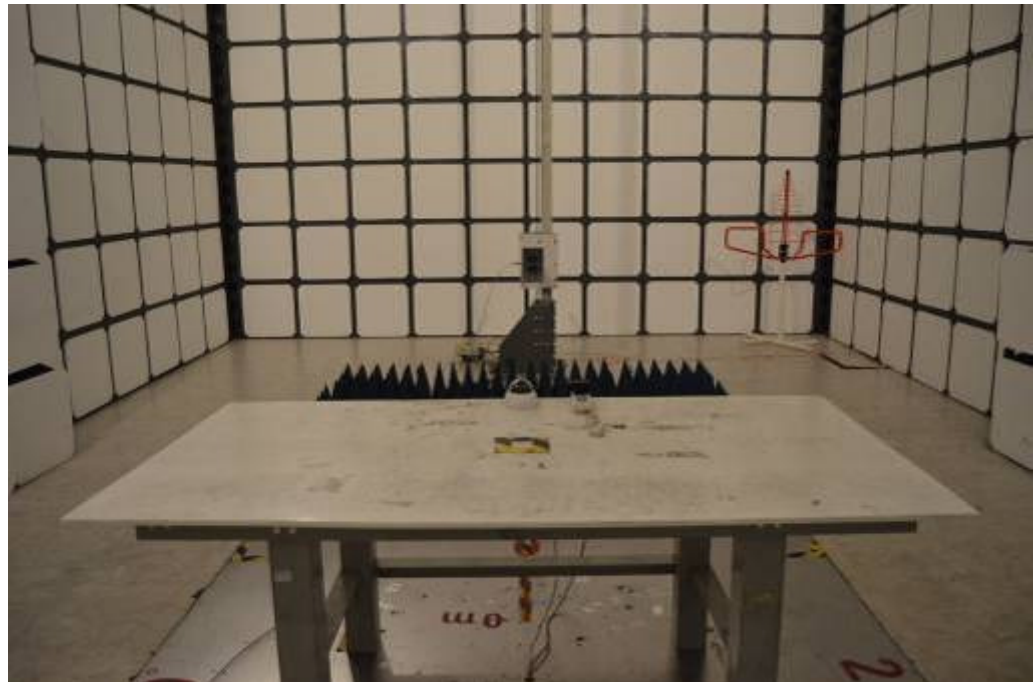




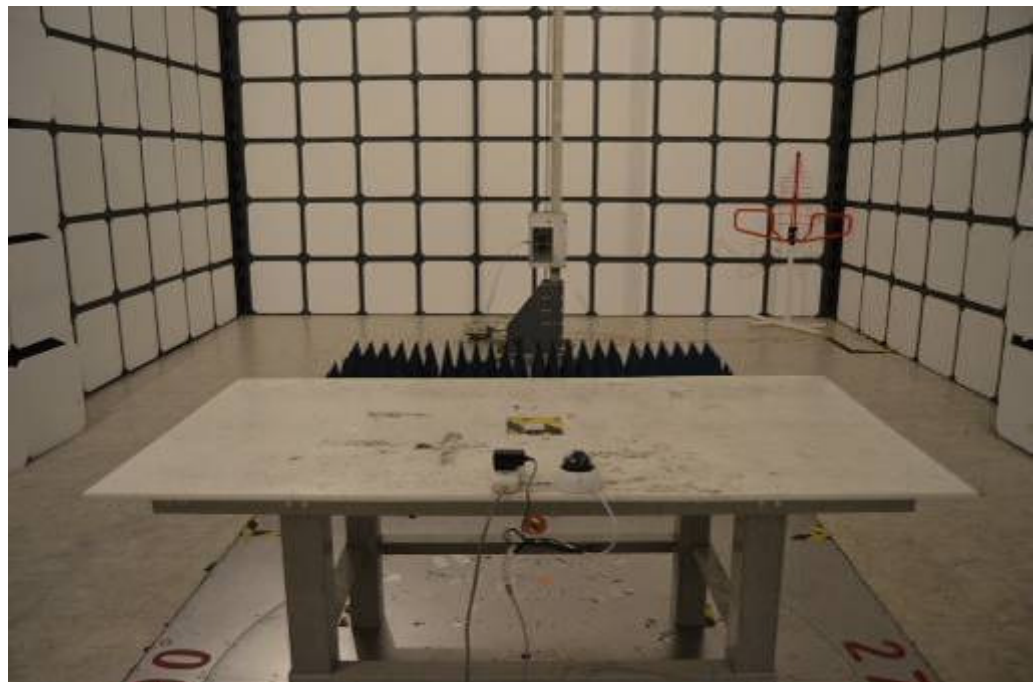


Initial Issue

Front View



Rear View





## 5. Photographs of EUT

Fourth Issue

IPC-HDBW1320EN-W

1) EUT Photo



2) EUT Photo





3)EUT Photo



4)EUT Photo





IPC-HDBW1120EN-W

5) EUT Photo



6) EUT Photo







7)EUT Photo



8)EUT Photo





Second Issue

DH-IPC-HDBW4120EP-AS

9) EUT Photo



10) EUT Photo





11) EUT Photo



12) EUT Photo





13) EUT Photo



DH-IPC-HDBW4220EP-AS

14) EUT Photo







15) EUT Photo



16) EUT Photo





17) EUT Photo



18) EUT Photo





DH-IPC-HDBW4221EP-AS

19) EUT Photo



20) EUT Photo





21) EUT Photo



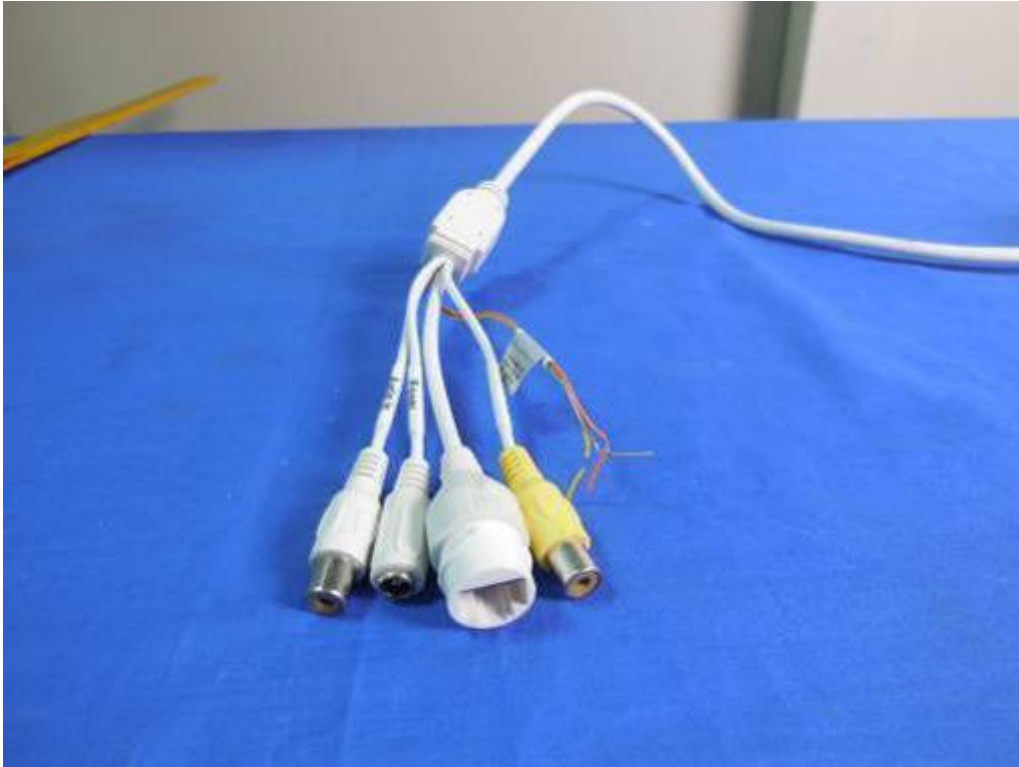
22) EUT Photo







23) EUT Photo



DH-IPC-HDBW4421EP-AS

24) EUT Photo





25) EUT Photo



26) EUT Photo





27) EUT Photo



28) EUT Photo





Initial Issue

IPC-HDBW4421EP

29) EUT Photo



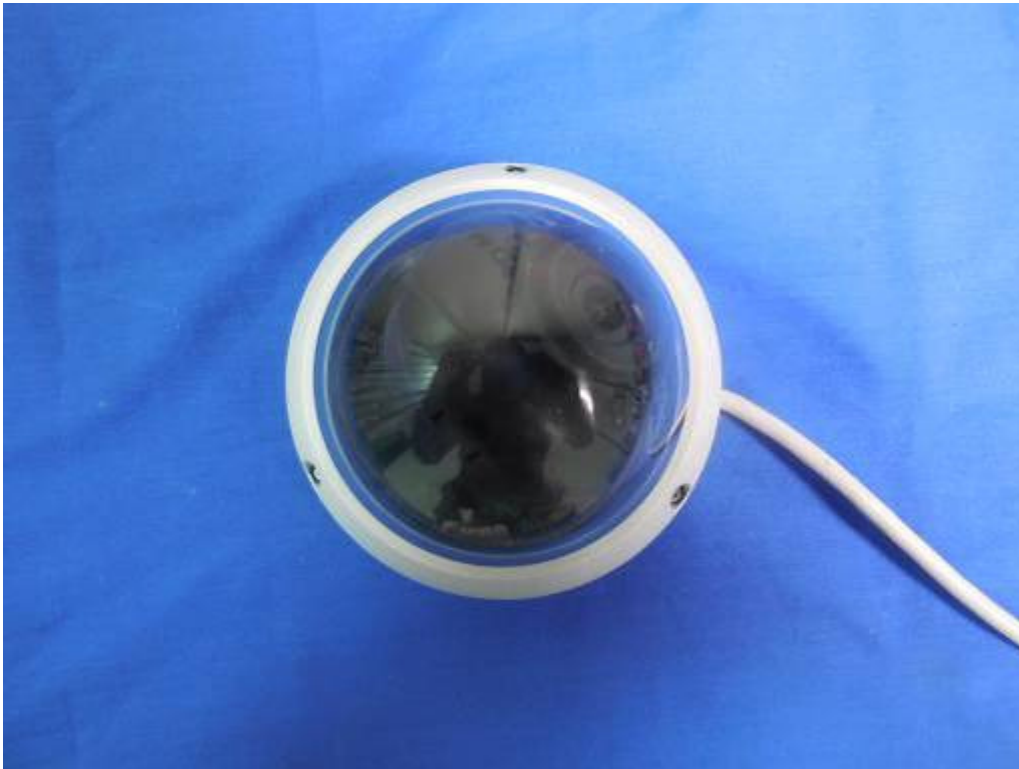
30) EUT Photo







31) EUT Photo



32) EUT Photo





IPC-HDBW4120EP

33) EUT Photo

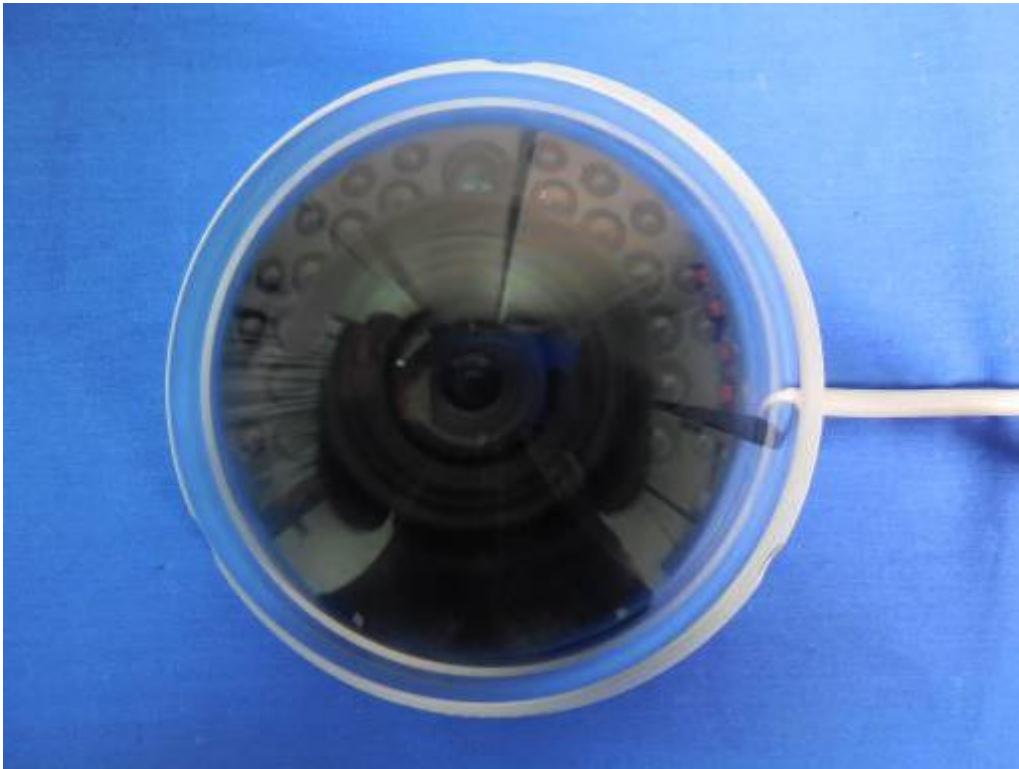


34) EUT Photo





35) EUT Photo



36) EUT Photo







37) EUT Photo



IPC-HDBW4221EP

38) EUT Photo



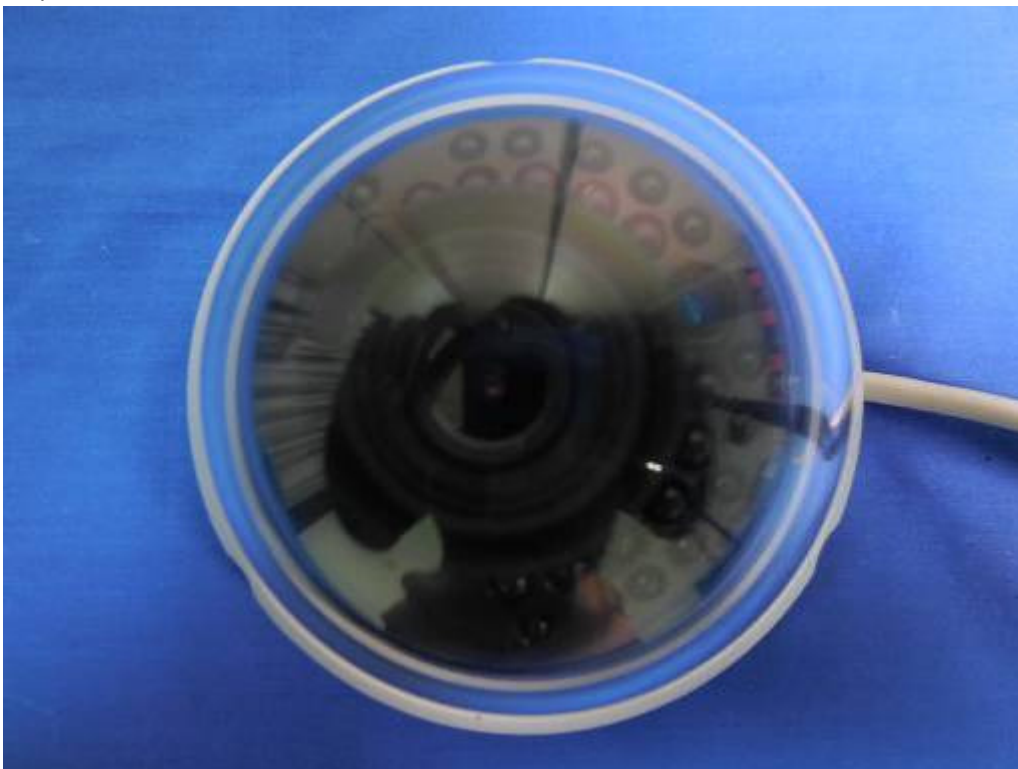




39) EUT Photo



40) EUT Photo





41) EUT Photo



IPC-HDBW4220EP

42) EUT Photo

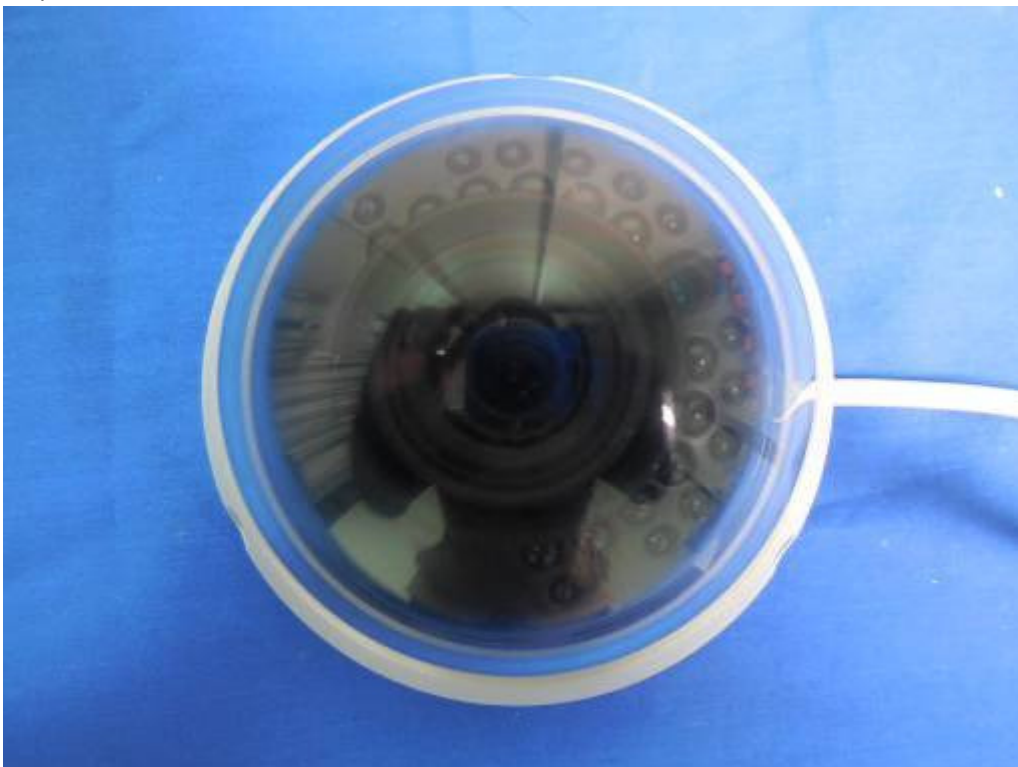




43) EUT Photo



44) EUT Photo







45) EUT Photo



46) EUT Photo





47) EUT Photo



48) EUT Photo





49) EUT Photo



50) EUT Photo

