

# VCCI Appendix Report

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

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

Date of Receipt : 2017/09/19  
Issued Date : 2017/10/30  
Report No. : 1790255R-ITJPP01V00  
Report Version : V1.0



The test results relate only to the samples tested.  
The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.  
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# Test Report

Issued Date : 2017/10/30

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Product Name : Network Camera

Applicant : VIVOTEK INC.

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

Manufacturer : VIVOTEK INC.

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

EUT Rated Voltage : DC 12V, By PoE

EUT Test Voltage : AC 100 V / 50 Hz, By PoE

Trade Name : VIVOTEK

Applicable Standard : VCCI CISPR 32: 2016-11, Class A

Test Result : Complied

Performed Location : DEKRA Testing and Certification Co., Ltd.  
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## 1. General Information

### 1.1. EUT Description

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

Note:

1. This appendix report was based on DEKRA report No.: 1780565R-ITJPP01V00.
2. The different is Forward to Class A
3. The EUT is including three models for different marketing requirement

## 1.2. Mode of Operation

DEKRA has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

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

Note:

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

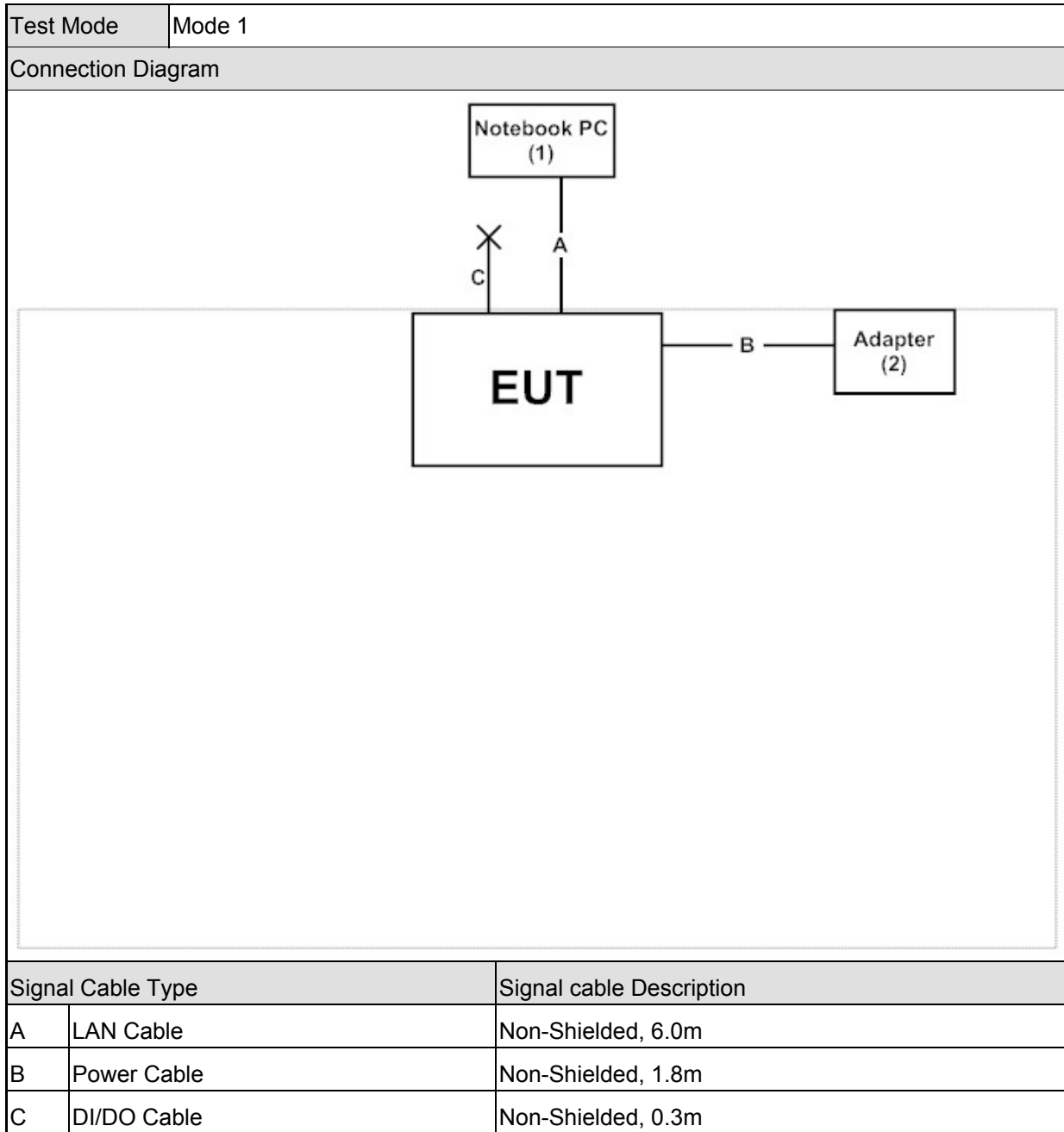
### 1.3. Tested System Details

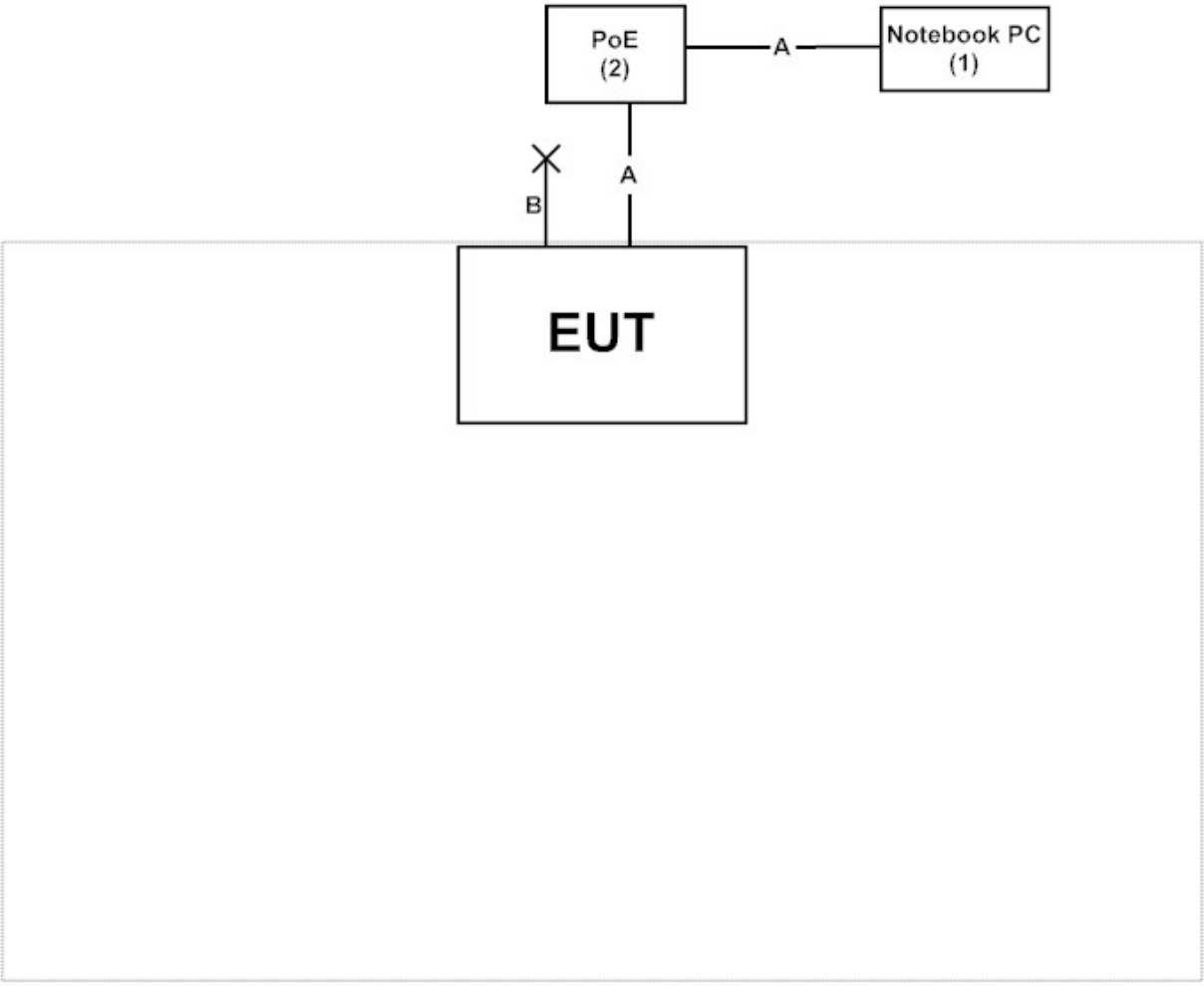
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

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

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

### 1.4. Configuration of Tested System



Test Mode		Mode 2	
Connection Diagram			
			
Signal Cable Type		Signal cable Description	
A	LAN Cable	Non-Shielded, 6.0m, two PCS	
B	DI/DO Cable	Non-Shielded, 0.3m	

### 1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipment.
3	Personal Computer reads data from disk.
4	Personal Computer sends "H" pattern to Monitor.
5	Personal Computer reads and writes data into and from modem.
6	Repeat the above procedure (4) to (5).

## 2. Technical Test

### 2.1. Summary of Test Result

- No deviations from the test standards  
 Deviations from the test standards as below description:

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	VCCI CISPR 32: 2016-11 Class A	Yes	No
Impedance Stabilization Network	VCCI CISPR 32: 2016-11 Class A	Yes	No
Radiated Emission	VCCI CISPR 32: 2016-11 Class A	Yes	No

## 2.2. List of Test Equipment

### Conducted Emission / SR8

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

### Impedance Stabilization Network / SR8

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

### Radiated Emission / Site 7

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

### Radiated Emission / CB8

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

### VCCI Test Site:

Test Item	Test Site	VCCI No.
Conducted Emission	SR8	C-3723
Conducted Emission (Telecommunication Port)	SR8	T-1887
Radiated Emission	Site 7	R-3748
Radiated Emission (Above 1GHz)	CB8(9x6x6_Chamber)	G-947

### **2.3. Measurement Uncertainty**

#### Conducted Emission

The measurement uncertainty is evaluated as  $\pm 3.44$  dB.

#### Impedance Stabilization Network

The measurement uncertainty is evaluated as  $\pm 3.88$  dB.

#### Radiated Emission

The measurement uncertainty is evaluated as  $\pm 4.22$  dB.

#### Radiated Emission Above 1GHz

The measurement uncertainty is evaluated as  $\pm 5.08$  dB.

## 2.4. Test Environment

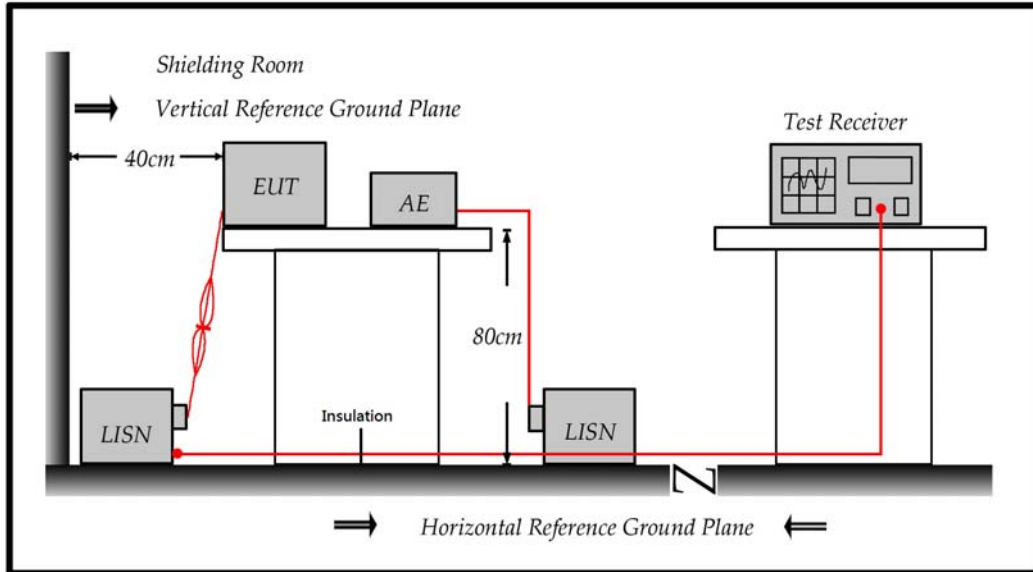
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Impedance Stabilization Network	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	31.1
	Humidity (%RH)	25-75	51
	Barometric pressure (mbar)	860-1060	950-1000

### 3. Conducted Emission

#### 3.1. Test Specification

According to EMC Standard : VCCI CISPR 32

#### 3.2. Test Setup



#### 3.3. Limit

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

Both apply across the entire frequency range.

Remarks:

If the limits for the average detector are met when using the quasi-peak detector, then the limits for the measurement with the average detector are considered to be met.

### **3.4. Test Procedure**

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

(Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to VCCI on conducted measurement.

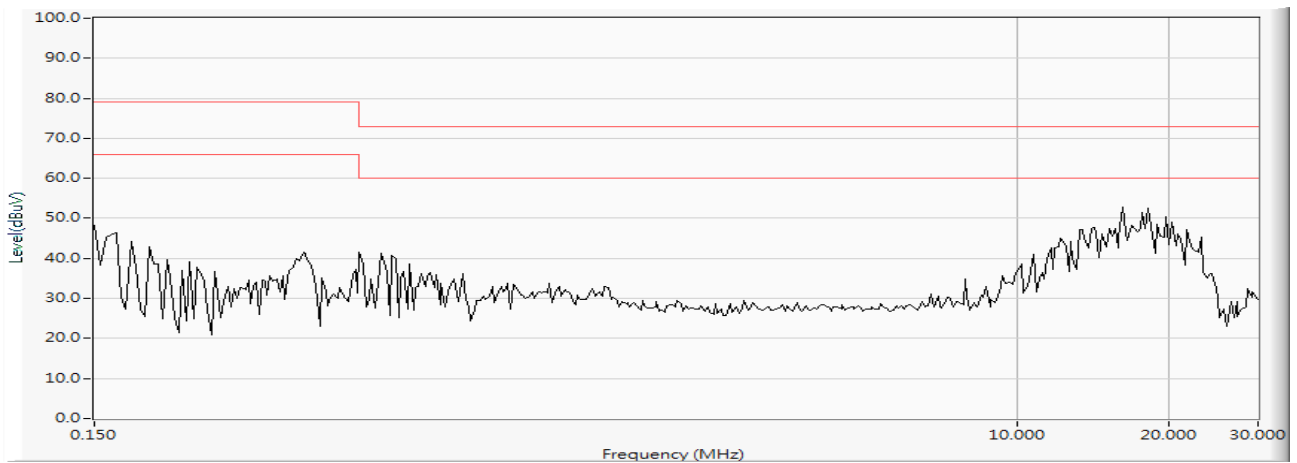
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

### **3.5. Deviation from Test Standard**

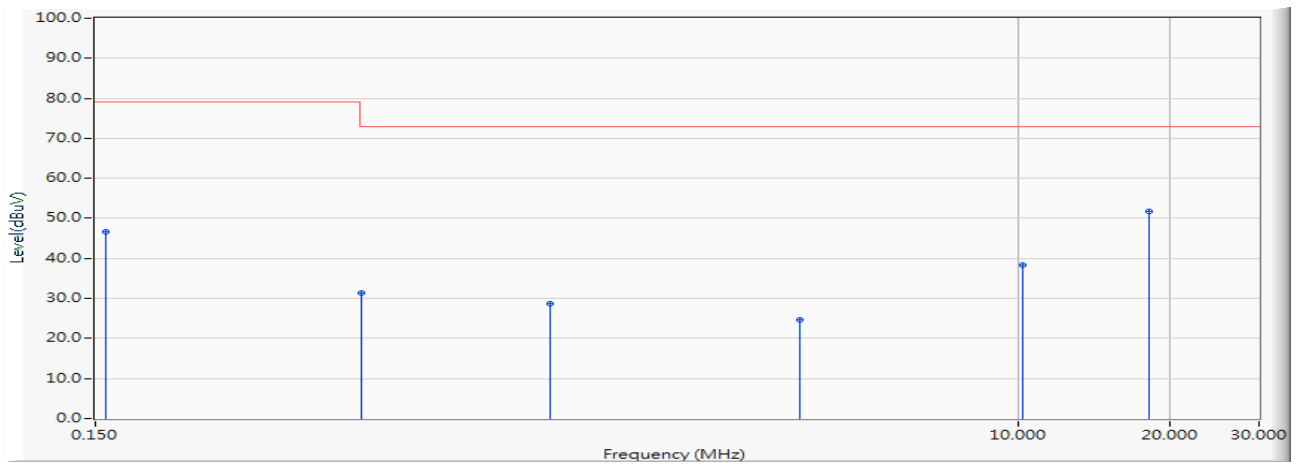
No deviation.

### 3.6. Test Result

Site : SR8	Time : 2017/09/27 - 17:11
Limit : CISPR_A_00M_QP	Margin : 13
EUT : Network Camera	Probe : ENV216_L1 - Line1
Power : AC 100V/50Hz to DC12V	Note : Mode 1



<b>Site : SR8</b>	<b>Time : 2017/09/27 - 17:12</b>
<b>Limit : CISPR_A_00M_QP</b>	<b>Margin : 0</b>
<b>EUT : Network Camera</b>	<b>Probe : ENV216_L1 - Line1</b>
<b>Power : AC 100V/50Hz to DC12V</b>	<b>Note : Mode 1</b>

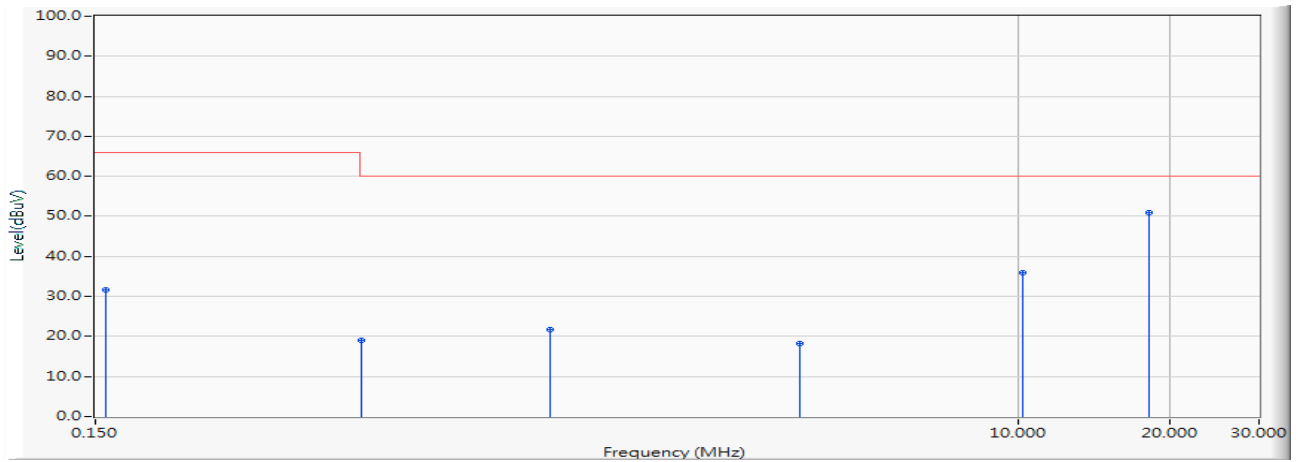


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.157	9.752	36.820	46.572	-32.428	79.000	QUASPEAK
2		0.502	9.741	21.640	31.381	-41.619	73.000	QUASPEAK
3		1.193	9.760	18.970	28.731	-44.269	73.000	QUASPEAK
4		3.709	9.884	14.650	24.534	-48.466	73.000	QUASPEAK
5		10.244	9.963	28.500	38.463	-34.537	73.000	QUASPEAK
6	*	18.244	10.066	41.700	51.766	-21.234	73.000	QUASPEAK

**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

<b>Site : SR8</b>	<b>Time : 2017/09/27 - 17:12</b>
<b>Limit : CISPR_A_00M_AV</b>	<b>Margin : 0</b>
<b>EUT : Network Camera</b>	<b>Probe : ENV216_L1 - Line1</b>
<b>Power : AC 100V/50Hz to DC12V</b>	<b>Note : Mode 1</b>

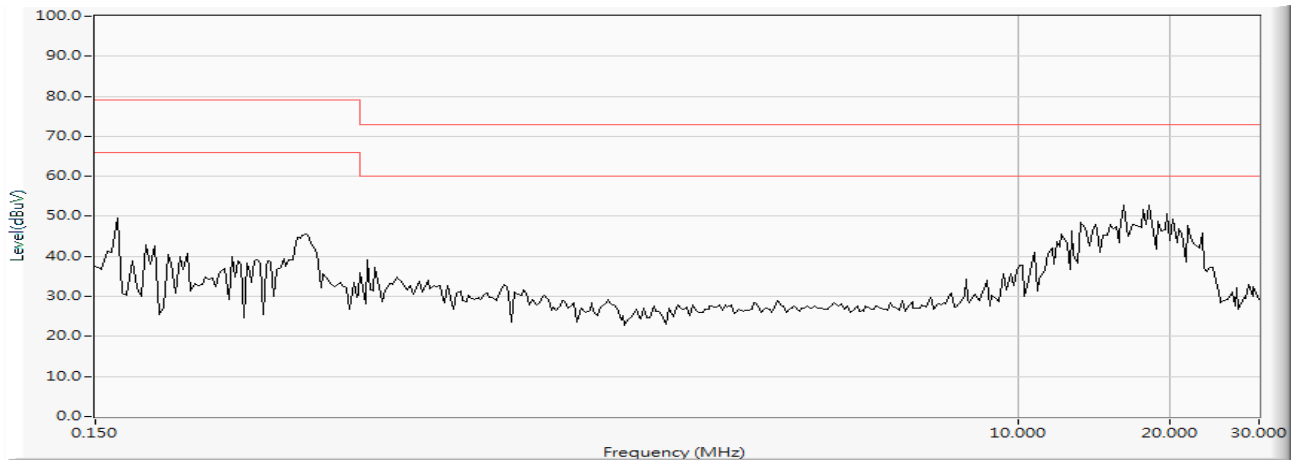


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.157	9.752	21.760	31.512	-34.488	66.000	AVERAGE
2		0.502	9.741	9.230	18.971	-41.029	60.000	AVERAGE
3		1.193	9.760	11.850	21.611	-38.389	60.000	AVERAGE
4		3.709	9.884	8.280	18.164	-41.836	60.000	AVERAGE
5		10.244	9.963	25.930	35.893	-24.107	60.000	AVERAGE
6	*	18.244	10.066	40.930	50.996	-9.004	60.000	AVERAGE

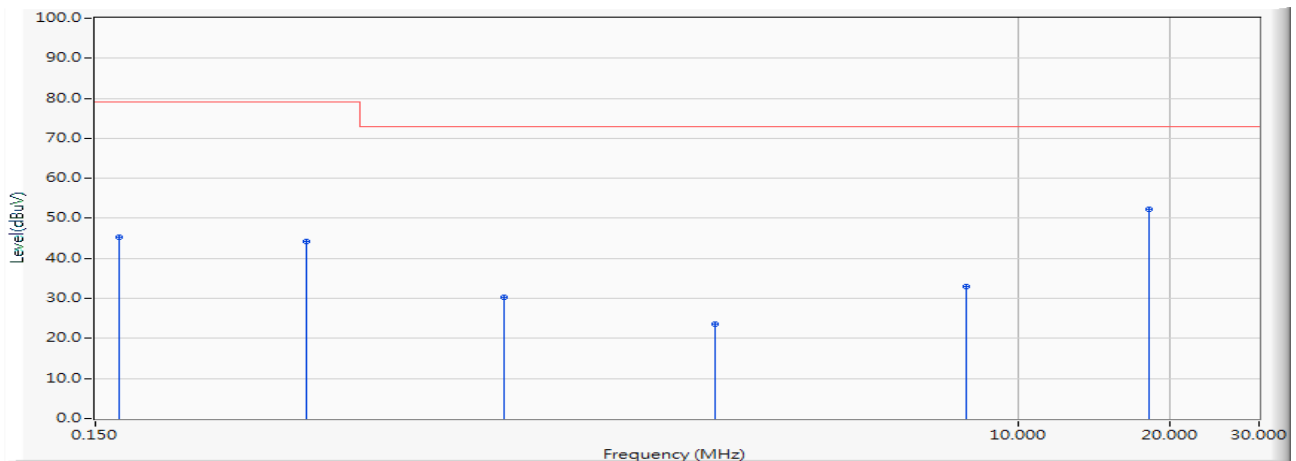
**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

<b>Site : SR8</b>	<b>Time : 2017/09/27 - 17:13</b>
<b>Limit : CISPR_A_00M_QP</b>	<b>Margin : 13</b>
<b>EUT : Network Camera</b>	<b>Probe : ENV216_N - Line2</b>
<b>Power : AC 100V/50Hz to DC12V</b>	<b>Note : Mode 1</b>



<b>Site : SR8</b>	<b>Time : 2017/09/27 - 17:14</b>
<b>Limit : CISPR_A_00M_QP</b>	<b>Margin : 0</b>
<b>EUT : Network Camera</b>	<b>Probe : ENV216_N - Line2</b>
<b>Power : AC 100V/50Hz to DC12V</b>	<b>Note : Mode 1</b>

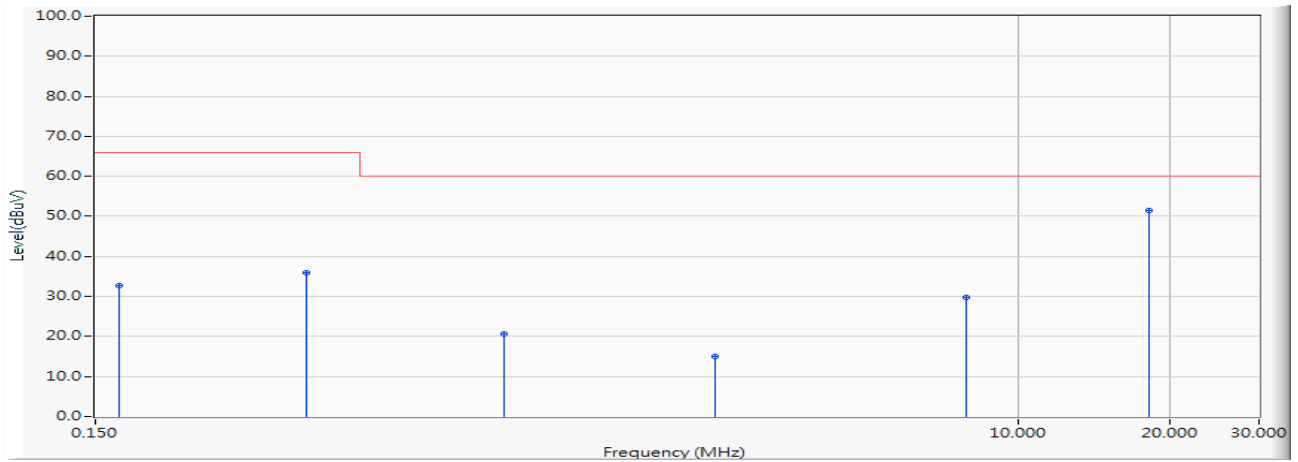


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.167	9.711	35.720	45.431	-33.569	79.000	QUASIPeAK
2		0.392	9.764	34.540	44.304	-34.696	79.000	QUASIPeAK
3		0.966	9.890	20.390	30.280	-42.720	73.000	QUASIPeAK
4		2.517	9.847	13.700	23.547	-49.453	73.000	QUASIPeAK
5		7.923	10.012	22.840	32.852	-40.148	73.000	QUASIPeAK
6	*	18.244	10.216	41.940	52.156	-20.844	73.000	QUASIPeAK

**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/09/27 - 17:14
Limit : CISPR_A_00M_AV	Margin : 0
EUT : Network Camera	Probe : ENV216_N - Line2
Power : AC 100V/50Hz to DC12V	Note : Mode 1



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.167	9.711	22.920	32.631	-33.369	66.000	AVERAGE
2		0.392	9.764	26.120	35.884	-30.116	66.000	AVERAGE
3		0.966	9.890	10.760	20.650	-39.350	60.000	AVERAGE
4		2.517	9.847	5.300	15.147	-44.853	60.000	AVERAGE
5		7.923	10.012	19.760	29.772	-30.228	60.000	AVERAGE
6	*	18.244	10.216	41.140	51.356	-8.644	60.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

### 3.7. Test Photograph

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Front View of Conducted Test



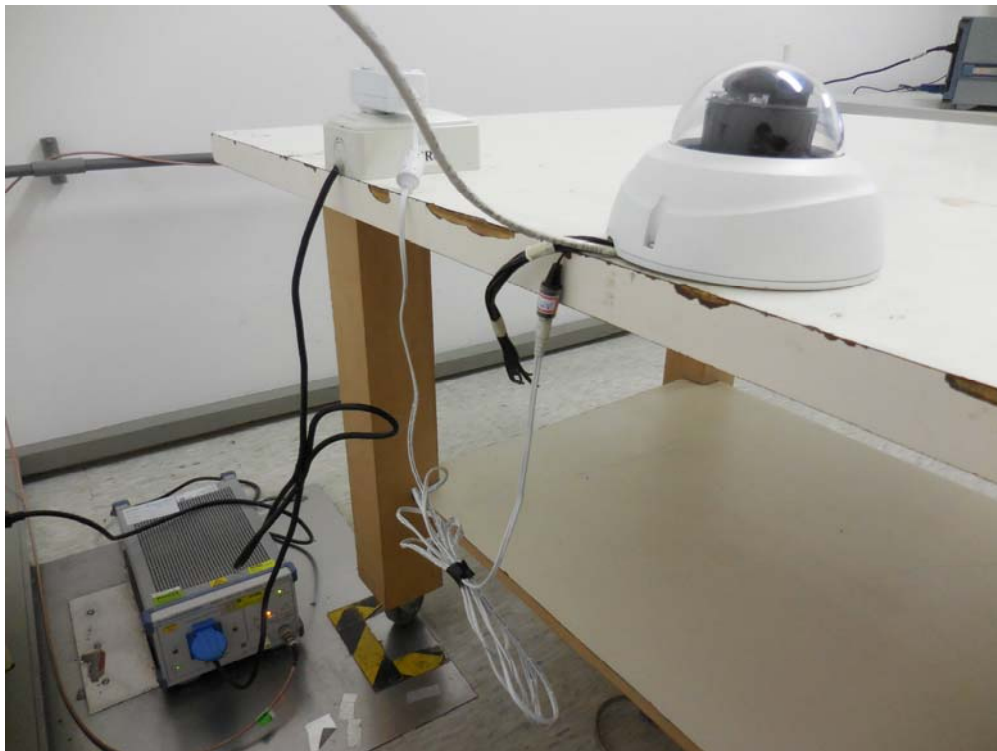
Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Back View of Conducted Test



Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Back View of Conducted Test

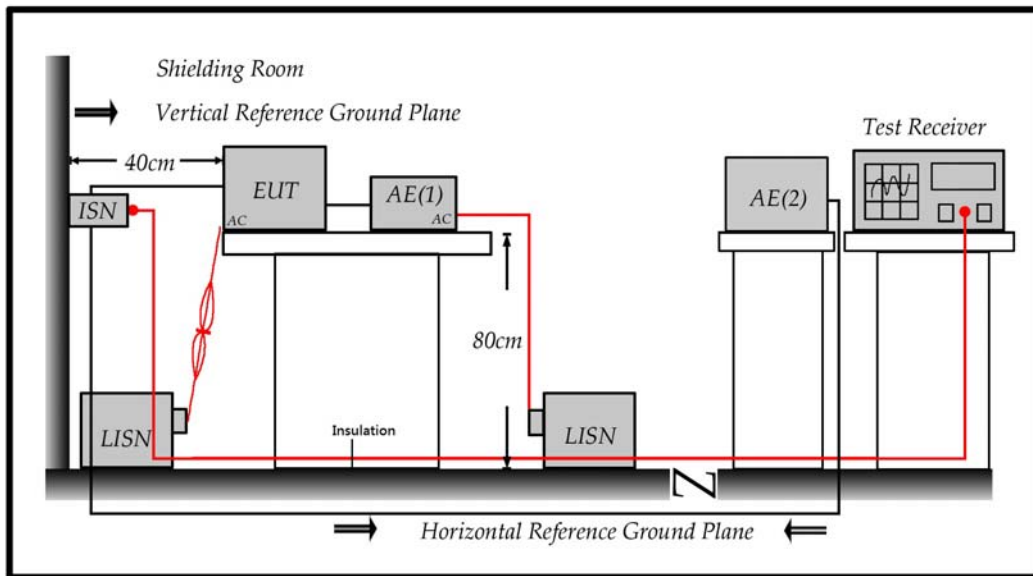


## 4. Conducted Emissions (Telecommunication Ports)

### 4.1. Test Specification

According to EMC Standard : VCCI CISPR 32

### 4.2. Test Setup



### 4.3. Limit

Applicable to				
1. wired network ports				
2. optical fibre port with metallic shield or tension members				
3. antenna ports				
Frequency range MHz	Coupling device	Detector type / Bandwidth	Class A voltage limits dB(µV)	Class A current limits dB(µA)
0.15 – 0.5	AAN	Quasi Peak / 9 KHz	97 – 87	N / A
0.5 – 30			87	
0.15 – 0.5	AAN	Average / 9 KHz	84 – 74	
0.5 – 30			74	
0.15 – 0.5	CVP And current probe	Quasi Peak / 9 KHz	97 – 87	53 – 43
0.5 – 30			87	43
0.15 – 0.5	CVP And current probe	Average / 9 KHz	84 – 74	40 – 30
0.5 – 30			74	30
0.15 – 0.5	Current Probe	Quasi Peak / 9 KHz	N / A	53 – 43
0.5 – 30				43
0.15 – 0.5	Current Probe	Average / 9 KHz		40 – 30
0.5 – 30				30

The choice of coupling device and measurement procedure is defined in Annex C.

AC mains ports that also have the function of a wired network port shall meet the limits given in Table A.9.

The measurement shall cover the entire frequency range.

The application of the voltage and/or current limits is dependent on the measurement procedure used. Refer to Table C.1 of CISPR 32 for applicability.

Testing is required at only one EUT supply voltage and frequency.

Applicable to ports listed above and intended to connect to cables longer than 3 m.

#### **4.4. Test Procedure**

##### **Telecommunication Port:**

The mains voltage shall be supplied to the EUT via the LISN when the measurement of telecommunication port is performed. The common mode disturbances at the telecommunication port shall be connected to the ISN, which is 150 ohm impedance.

Both alternative cables are tested related to the LCL requested. The measurement range is from 150kHz to 30MHz. The bandwidth of measurement is set to 9kHz.

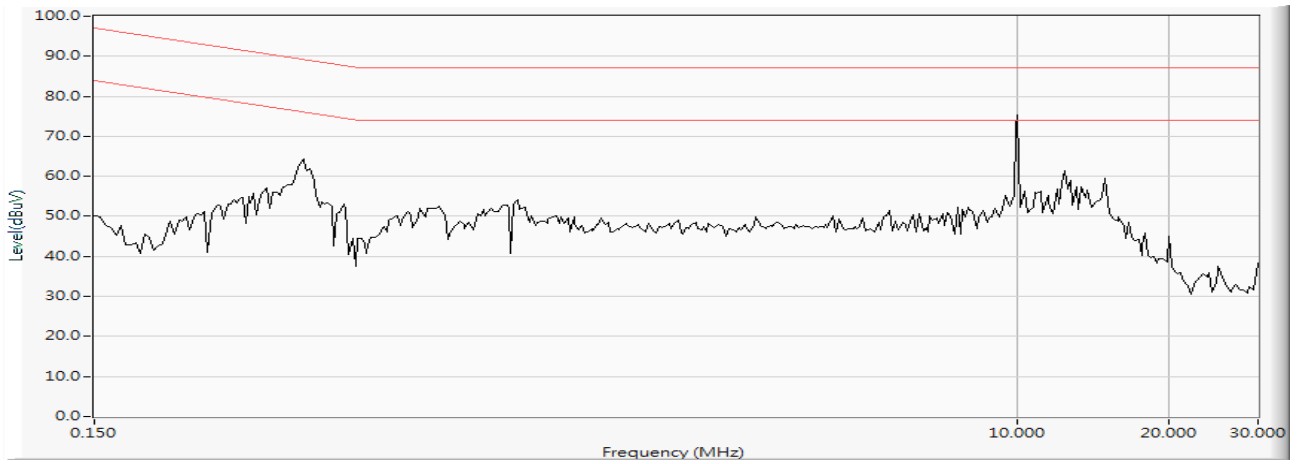
The 75dB LCL ISN is used for cat. 6 cable, the 65dB LCL ISN is used for cat. 5 cable, 55dB LCL ISN is used for cat. 3.

#### **4.5. Deviation from Test Standard**

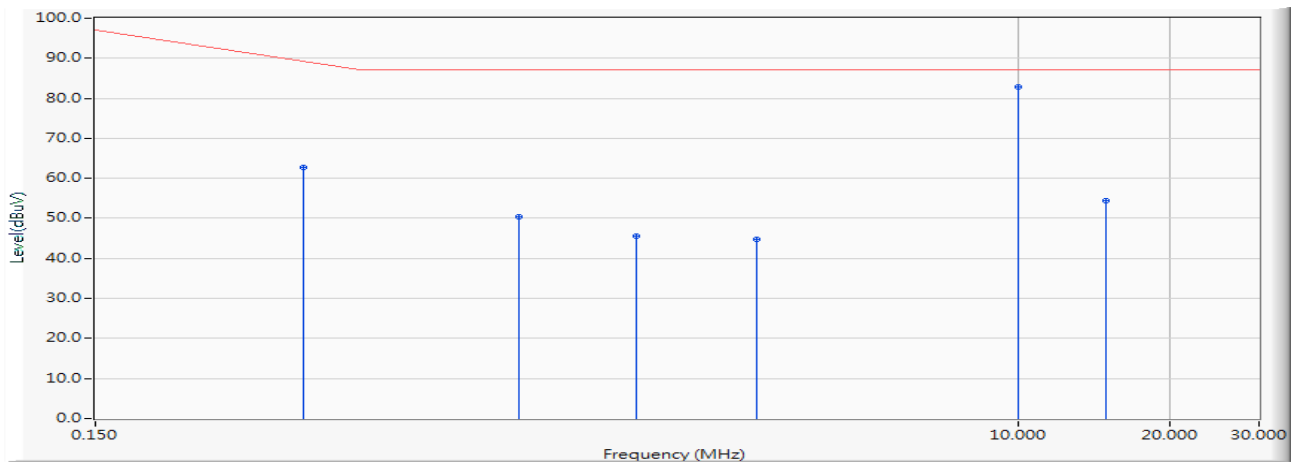
No deviation.

### 4.6. Test Result

Site : SR8	Time : 2017/09/27 - 17:05
Limit : ISN_Voltage_A_00M_QP	Margin : 13
EUT : Network Camera	Probe : TESEQ_T8_42815 - Line1
Power : AC 100V/50Hz to DC12V	Note : Mode 1,ISN 10M



Site : SR8	Time : 2017/09/27 - 17:06
Limit : ISN_Voltage_A_00M_QP	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8_42815 - Line1
Power : AC 100V/50Hz to DC12V	Note : Mode 1,ISN 10M

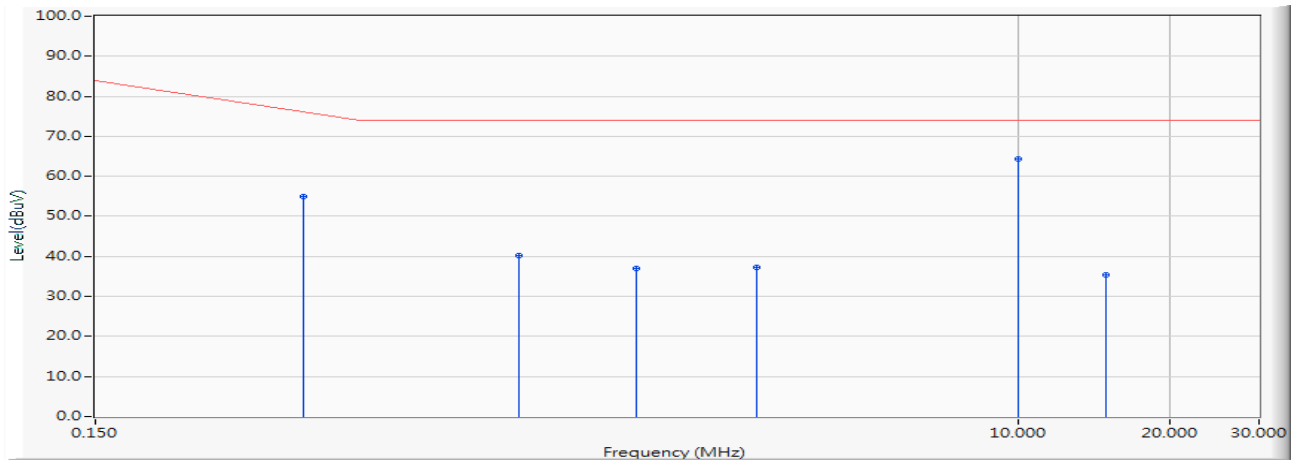


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.388	9.824	52.880	62.704	-27.496	90.200	QUASIPeAK
2		1.029	9.705	40.750	50.455	-36.545	87.000	QUASIPeAK
3		1.759	9.691	35.780	45.471	-41.529	87.000	QUASIPeAK
4		3.052	9.689	35.000	44.689	-42.311	87.000	QUASIPeAK
5	*	10.000	9.741	73.090	82.831	-4.169	87.000	QUASIPeAK
6		14.955	9.846	44.700	54.546	-32.454	87.000	QUASIPeAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

<b>Site : SR8</b>	<b>Time : 2017/09/27 - 17:06</b>
<b>Limit : ISN_Voltage_A_00M_AV</b>	<b>Margin : 0</b>
<b>EUT : Network Camera</b>	<b>Probe : TESEQ_T8_42815 - Line1</b>
<b>Power : AC 100V/50Hz to DC12V</b>	<b>Note : Mode 1,ISN 10M</b>

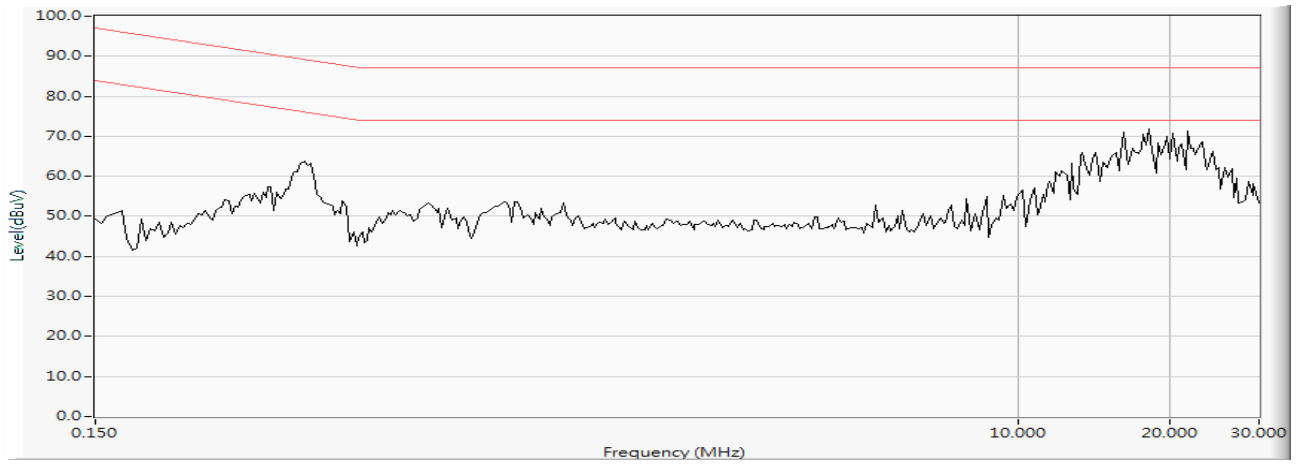


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.388	9.824	45.250	55.074	-22.126	77.200	AVERAGE
2		1.029	9.705	30.490	40.195	-33.805	74.000	AVERAGE
3		1.759	9.691	27.390	37.081	-36.919	74.000	AVERAGE
4		3.052	9.689	27.620	37.309	-36.691	74.000	AVERAGE
5	*	10.000	9.741	54.690	64.431	-9.569	74.000	AVERAGE
6		14.955	9.846	25.670	35.516	-38.484	74.000	AVERAGE

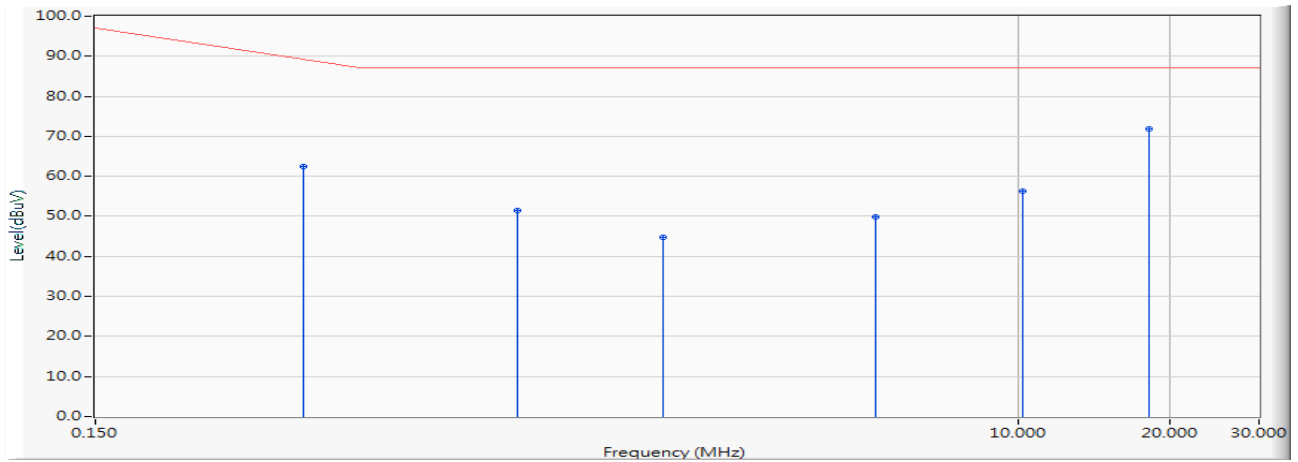
**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

<b>Site : SR8</b>	<b>Time : 2017/09/27 - 17:08</b>
<b>Limit : ISN_Voltage_A_00M_QP</b>	<b>Margin : 13</b>
<b>EUT : Network Camera</b>	<b>Probe : TESEQ_T8_42815 - Line1</b>
<b>Power : AC 100V/50Hz to DC12V</b>	<b>Note : Mode 1,ISN 100M</b>



<b>Site : SR8</b>	<b>Time : 2017/09/27 - 17:09</b>
<b>Limit : ISN_Voltage_A_00M_QP</b>	<b>Margin : 0</b>
<b>EUT : Network Camera</b>	<b>Probe : TESEQ_T8_42815 - Line1</b>
<b>Power : AC 100V/50Hz to DC12V</b>	<b>Note : Mode 1,ISN 100M</b>

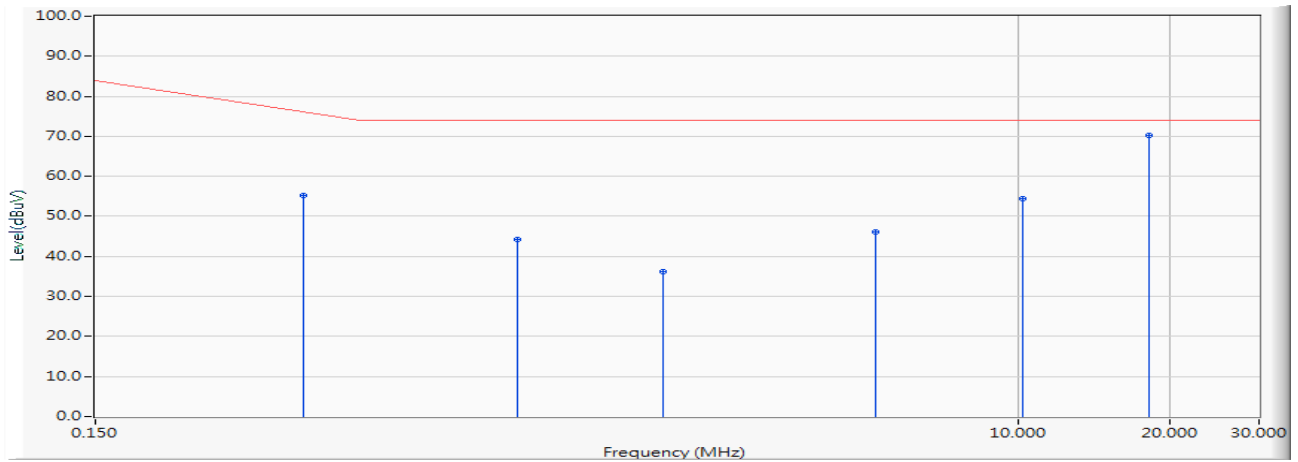


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.388	9.824	52.620	62.444	-27.756	90.200	QUASPEAK
2		1.025	9.705	41.650	51.355	-35.645	87.000	QUASPEAK
3		1.986	9.686	35.090	44.776	-42.224	87.000	QUASPEAK
4		5.236	9.711	40.220	49.931	-37.069	87.000	QUASPEAK
5		10.244	9.743	46.440	56.183	-30.817	87.000	QUASPEAK
6	*	18.244	9.916	61.850	71.766	-15.234	87.000	QUASPEAK

**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/09/27 - 17:09
Limit : ISN_Voltage_A_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8_42815 - Line1
Power : AC 100V/50Hz to DC12V	Note : Mode 1,ISN 100M

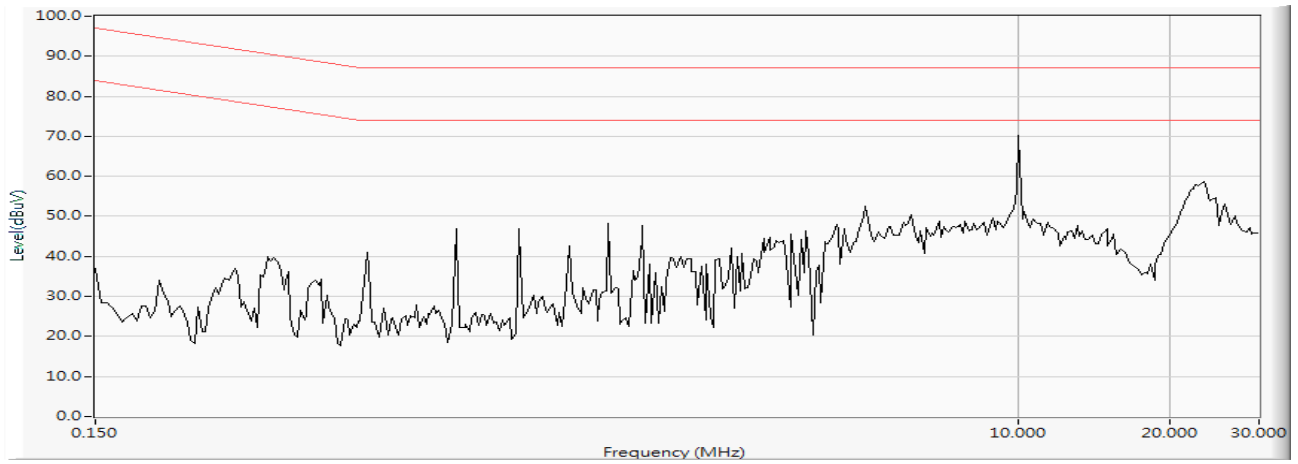


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	0.388	9.824	45.270	55.094	-22.106	77.200	AVERAGE
2	1.025	9.705	34.440	44.145	-29.855	74.000	AVERAGE
3	1.986	9.686	26.490	36.176	-37.824	74.000	AVERAGE
4	5.236	9.711	36.400	46.111	-27.889	74.000	AVERAGE
5	10.244	9.743	44.550	54.293	-19.707	74.000	AVERAGE
6	* 18.244	9.916	60.340	70.256	-3.744	74.000	AVERAGE

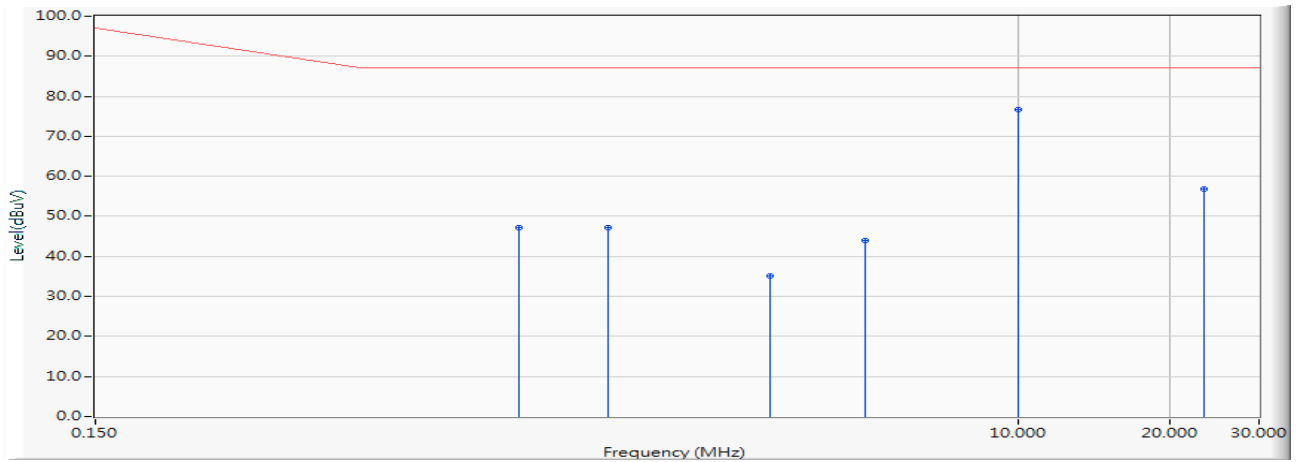
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

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



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

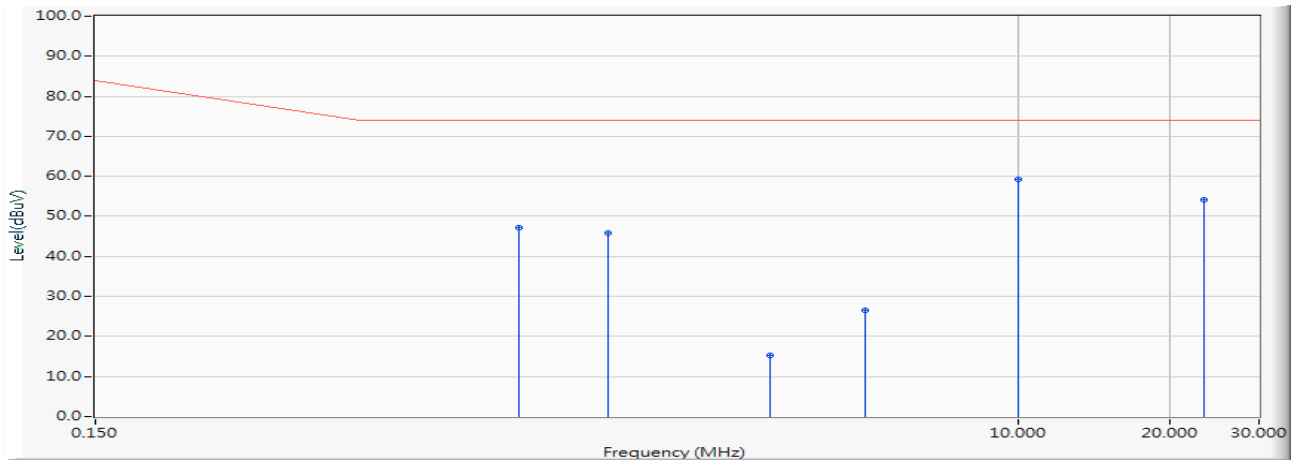


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.034	9.705	37.410	47.115	-39.885	87.000	QUASPEAK
2		1.552	9.698	37.530	47.228	-39.772	87.000	QUASPEAK
3		3.228	9.693	25.400	35.093	-51.907	87.000	QUASPEAK
4		4.990	9.708	34.160	43.868	-43.132	87.000	QUASPEAK
5	*	10.000	9.741	66.870	76.611	-10.389	87.000	QUASPEAK
6		23.283	10.056	46.860	56.916	-30.084	87.000	QUASPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/09/27 - 17:34
Limit : ISN_Voltage_A_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8_42815 - Line1
Power : Power By PoE	Note : Mode 2,ISN 10M

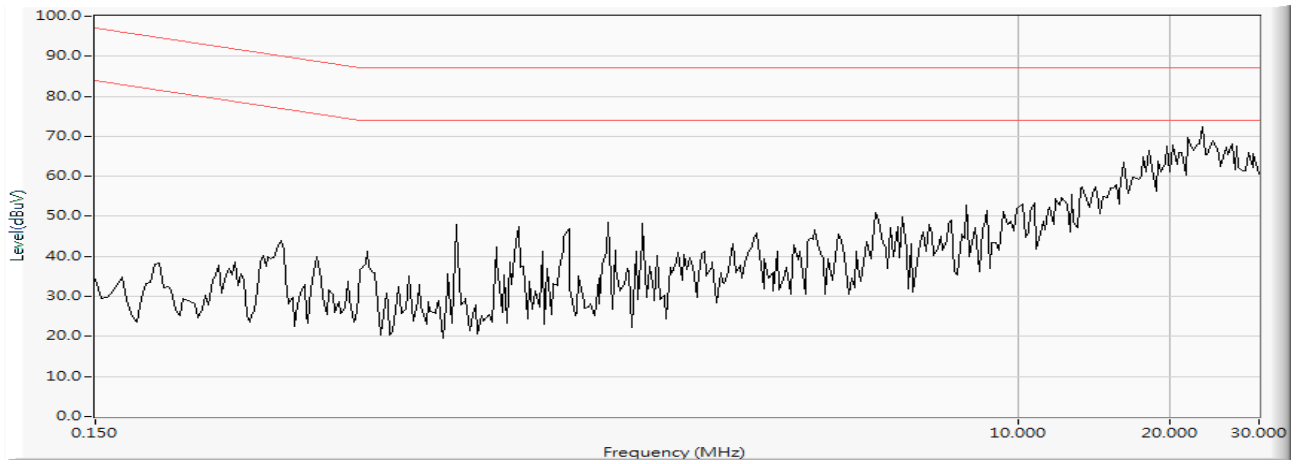


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		1.034	9.705	37.350	47.055	-26.945	74.000	AVERAGE
2		1.552	9.698	36.250	45.948	-28.052	74.000	AVERAGE
3		3.228	9.693	5.640	15.333	-58.667	74.000	AVERAGE
4		4.990	9.708	16.800	26.508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

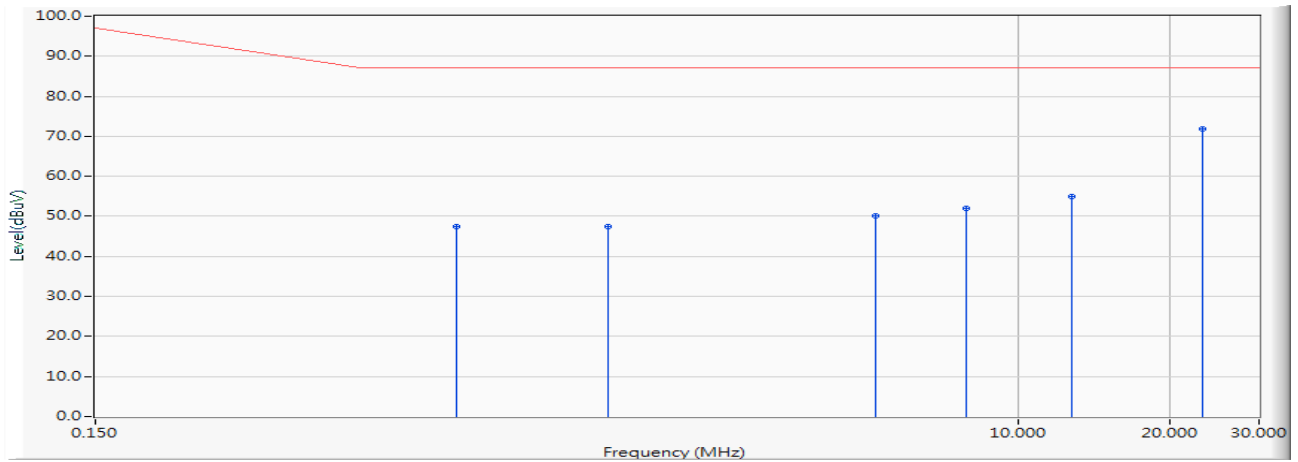
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

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



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

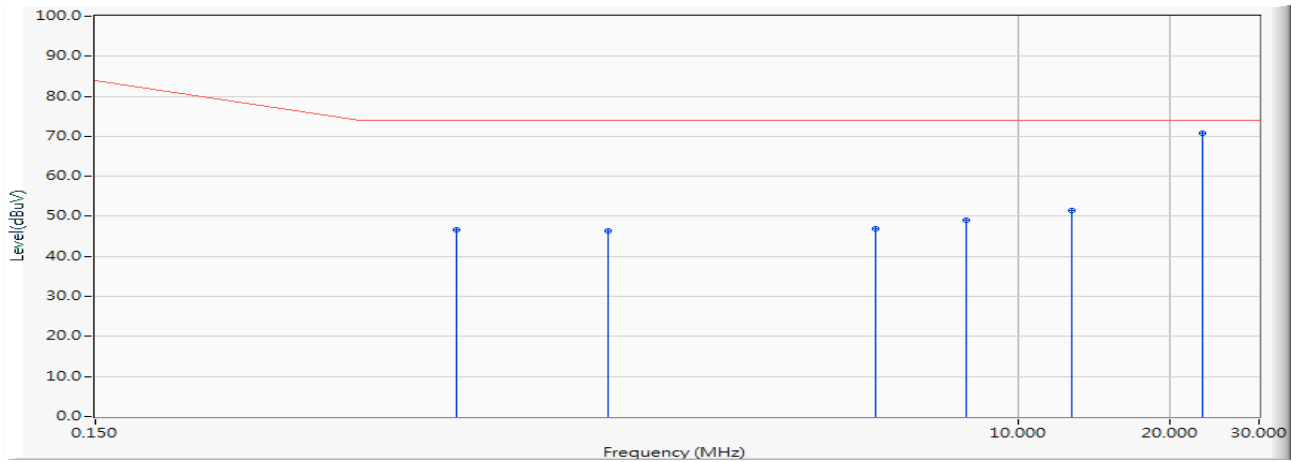


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.776	9.709	37.640	47.349	-39.651	87.000	QUASIPeAK
2		1.552	9.698	37.820	47.518	-39.482	87.000	QUASIPeAK
3		5.236	9.711	40.520	50.231	-36.769	87.000	QUASIPeAK
4		7.923	9.722	42.240	51.962	-35.038	87.000	QUASIPeAK
5		12.748	9.804	45.130	54.934	-32.066	87.000	QUASIPeAK
6	*	23.130	10.054	61.790	71.844	-15.156	87.000	QUASIPeAK

**Note:**

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR8	Time : 2017/09/27 - 17:29
Limit : ISN_Voltage_A_00M_AV	Margin : 0
EUT : Network Camera	Probe : TESEQ_T8_42815 - Line1
Power : Power By PoE	Note : Mode 2,ISN 100M



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

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " \* ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

### 4.7. Test Photograph

Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Front View of ISN Test



Test Mode : Mode 1: FD9367-EHTV, Adapter

Description : Back View of ISN Test



Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Front View of ISN Test



Test Mode : Mode 2: FD9367-EHTV, PoE

Description : Back View of ISN Test



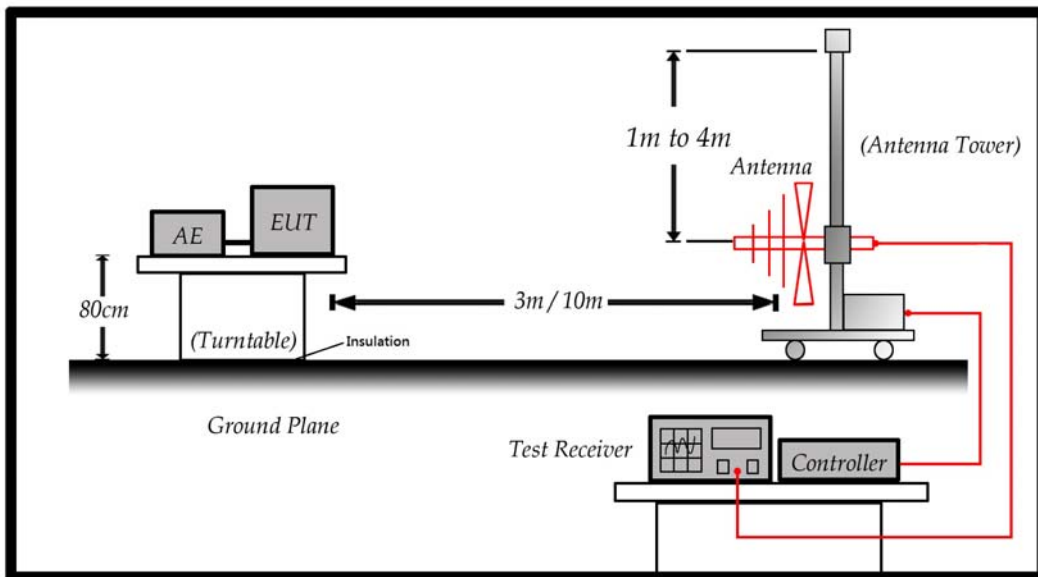
## 5. Radiated Emission

### 5.1. Test Specification

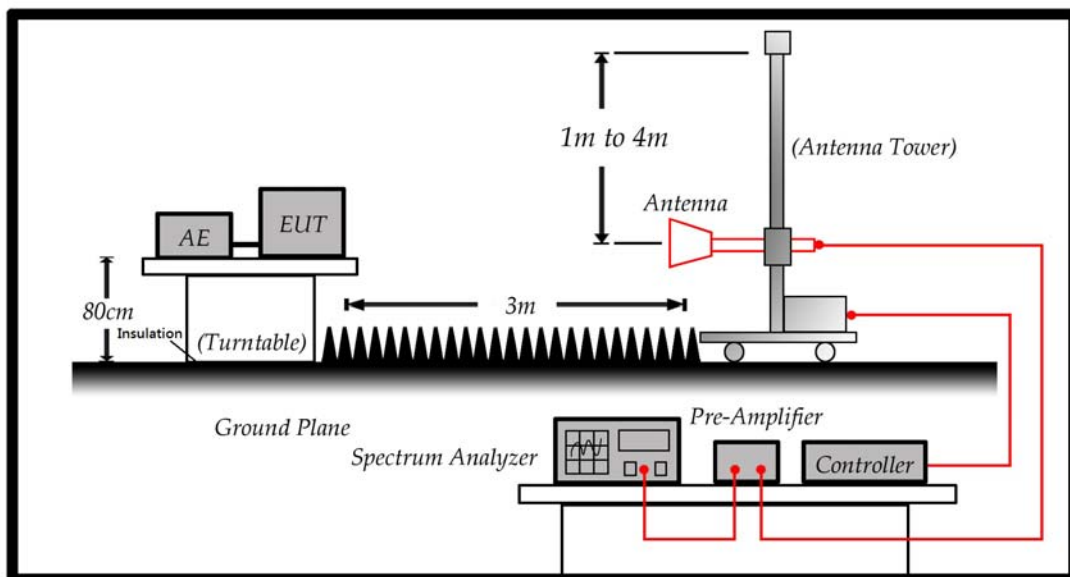
According to EMC Standard : VCCI CISPR 32

### 5.2. Test Setup

Under 1GHz Test Setup:



Above 1GHz Test Setup:



### 5.3. Limit

Radiated emissions at frequencies up to 1 GHz

for Class A equipment

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

Radiated emissions at frequencies above 1 GHz

for Class A equipment

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

Required highest frequency for radiated measurement

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

#### **5.4. Test Procedure**

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 10 meters. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.

All cable leaving the table-top EUT for a connection outside the test site (for example, mains cable, telephone lines, connections to auxiliary equipment located outside the test area) shall be fitted with ferrite clamps placed on the floor at the point where the cable reached the floor. Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated according to VCCI on radiated measurement.

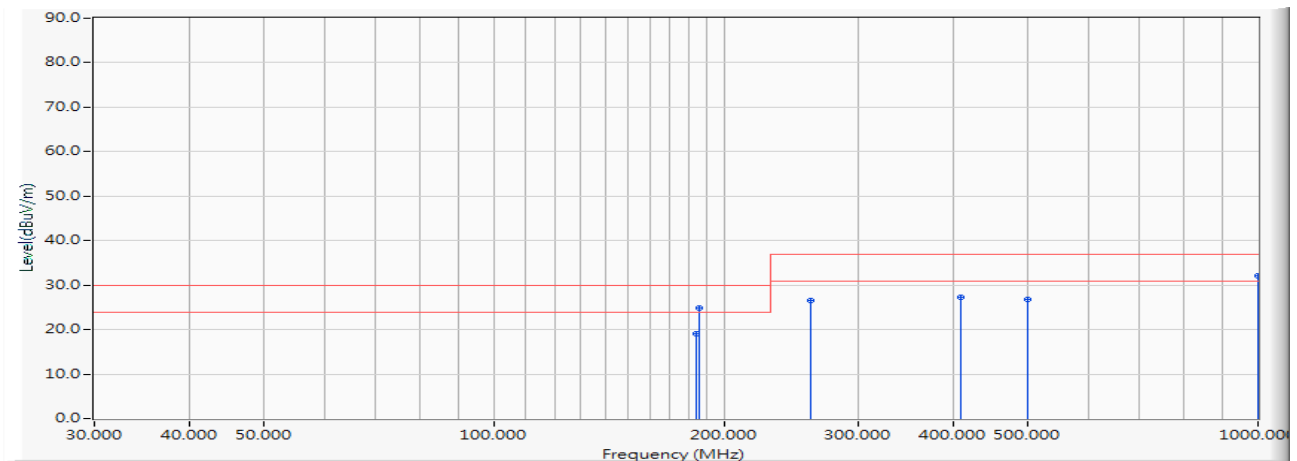
Radiated emissions were investigated over the frequency range from 30MHz to 1GHz using a receiver bandwidth of 120kHz. Radiated was performed at an antenna to EUT distance of 10 meters.

#### **5.5. Deviation from Test Standard**

No deviation.

### 5.6. Test Result

Site : SITE7	Time : 2017/09/20 - 17:42
Limit : CISPR_B_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112B_10M_1706 - HORIZONTAL
Power : AC 100V/50Hz to DC12V	Note : Mode 1

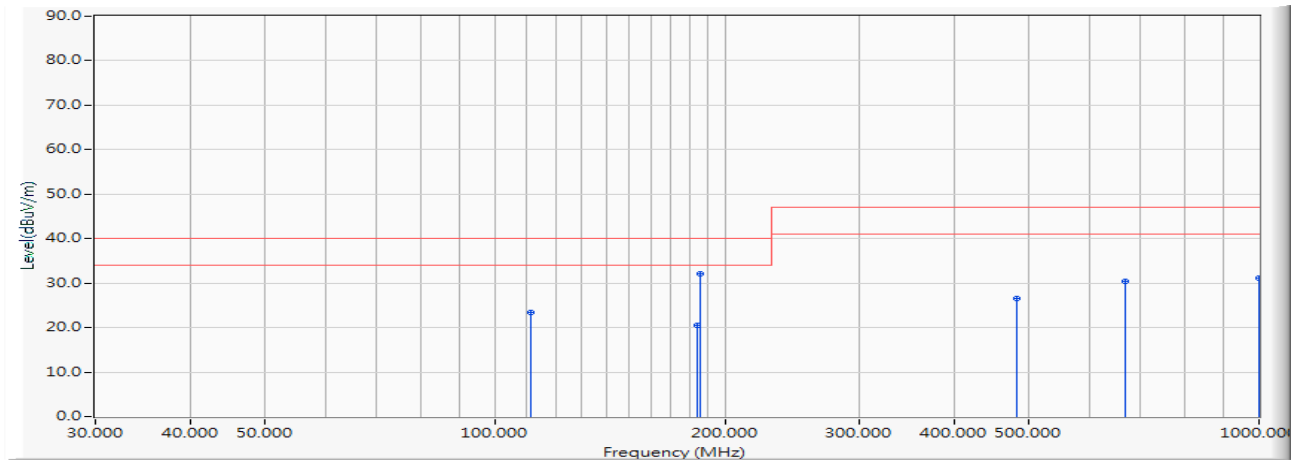


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	184.240	-14.350	33.500	19.150	-10.850	30.000	QUASPEAK	390.000	-128.000
2	185.620	-14.351	39.200	24.850	-5.150	30.000	QUASPEAK	400.000	98.000
3	259.870	-8.912	35.500	26.588	-10.412	37.000	QUASPEAK	390.000	128.000
4	408.400	-4.937	32.300	27.363	-9.637	37.000	QUASPEAK	220.000	-126.000
5	500.000	-2.549	29.300	26.751	-10.249	37.000	QUASPEAK	200.000	13.000
6	* 1000.000	5.300	26.800	32.100	-4.900	37.000	QUASPEAK	100.000	134.000

**Note:**

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

Site : SITE7	Time : 2017/09/20 - 17:42
Limit : CISPR_A_10M_QP	Margin : 6
EUT : Network Camera	Probe : Site7_CBL6112B_10M_1706 - VERTICAL
Power : AC 100V/50Hz to DC12V	Note : Mode 1

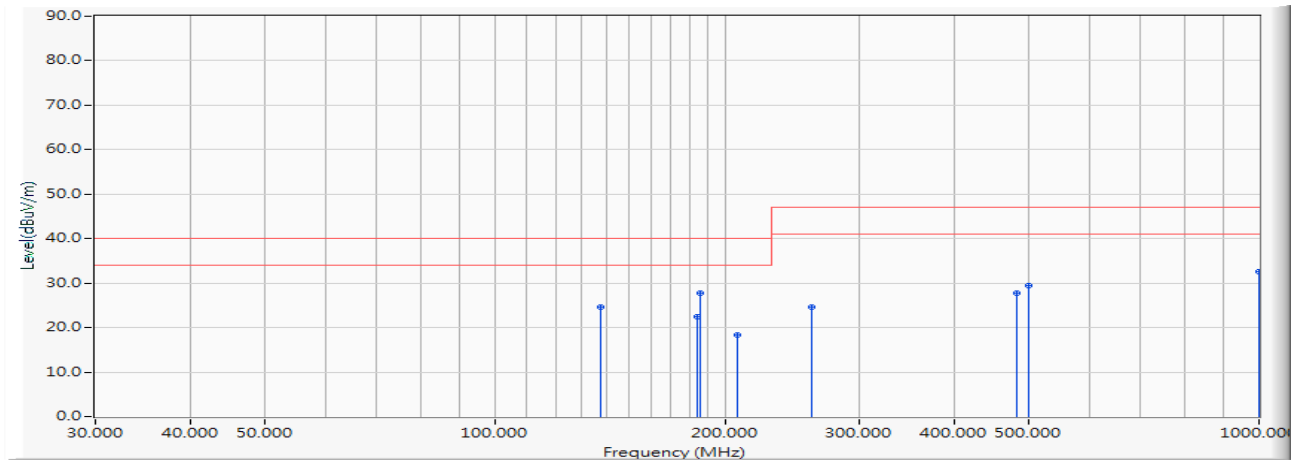


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	111.600	-12.498	35.900	23.402	-16.598	40.000	QUASIPeAK	100.000	132.000
2	184.260	-14.350	34.800	20.450	-19.550	40.000	QUASIPeAK	100.000	138.000
3	* 185.620	-14.351	46.500	32.150	-7.850	40.000	QUASIPeAK	100.000	131.000
4	482.630	-2.958	29.400	26.443	-20.557	47.000	QUASIPeAK	300.000	142.000
5	668.260	0.470	30.000	30.470	-16.530	47.000	QUASIPeAK	260.000	134.000
6	1000.000	5.300	25.900	31.200	-15.800	47.000	QUASIPeAK	168.000	131.000

Note:

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

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

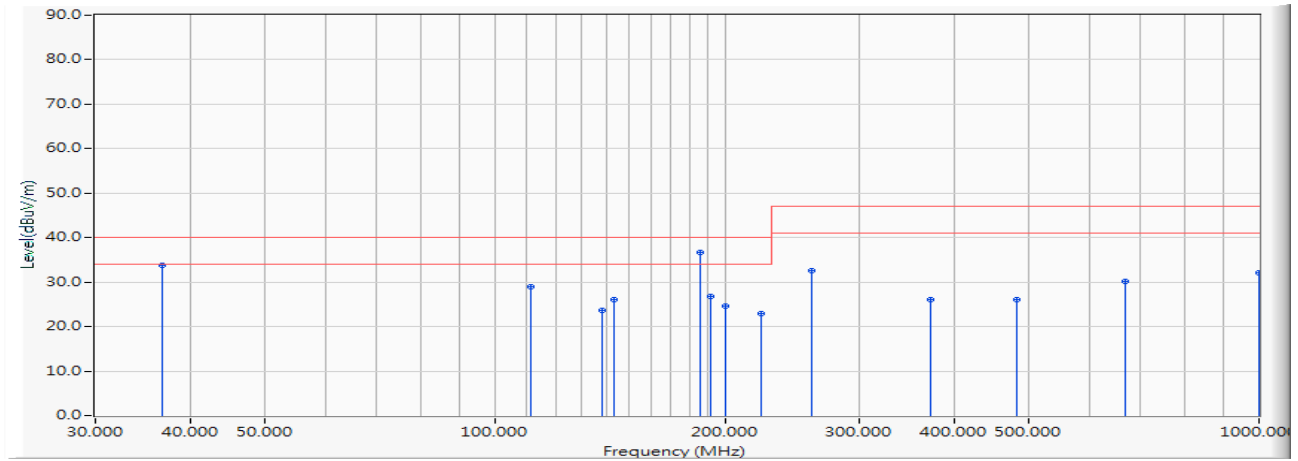


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	137.460	-12.505	37.000	24.494	-15.506	40.000	QUASPEAK	400.000	-182.000
2	184.240	-14.350	36.800	22.450	-17.550	40.000	QUASPEAK	400.000	-114.000
3	* 185.620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

**Note:**

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

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

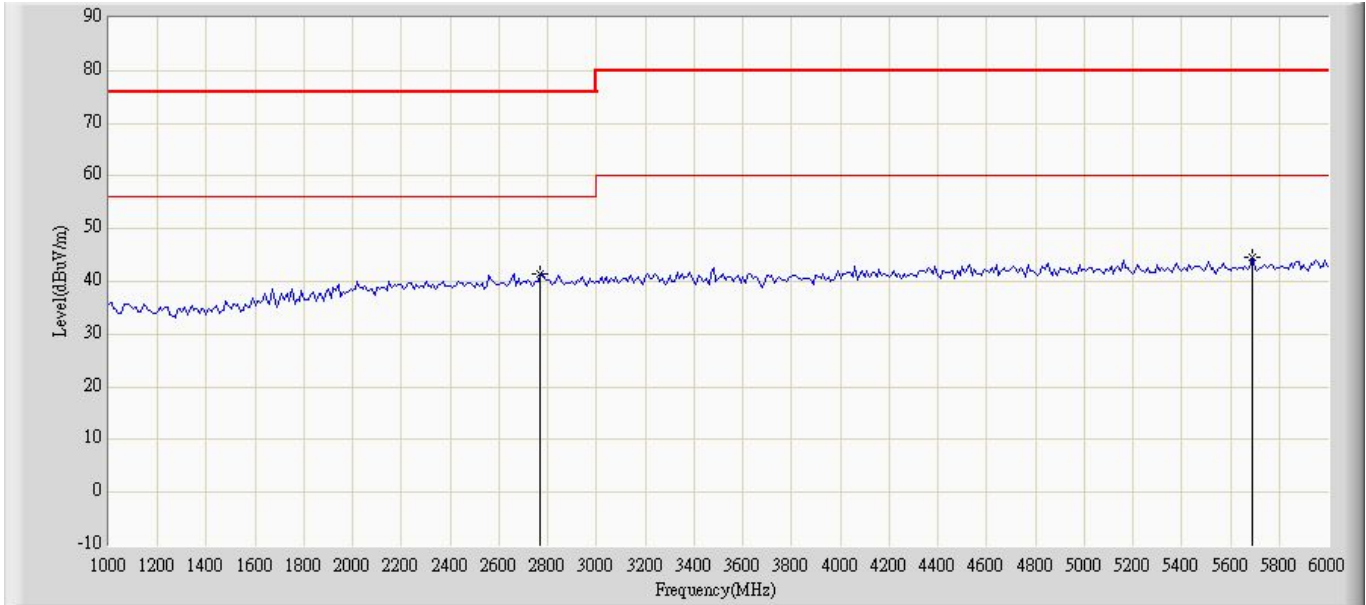


	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type	Ant Pos (cm)	Table Pos (deg)
1	36.700	-9.921	43.800	33.879	-6.121	40.000	QUASPEAK	100.000	152.000
2	111.570	-12.498	41.500	29.002	-10.998	40.000	QUASPEAK	100.000	-198.000
3	138.420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

Note:

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

Site: CB8	Time: 2017/09/27 - 22:29
Limit: VCCI_A_(Above_1G)	Margin: 0
Probe: CB8_Horn_3117_1704	Polarity: Horizontal
EUT: Network Camera	Power : AC 100V/50Hz to DC12V
Note: Mode 1	

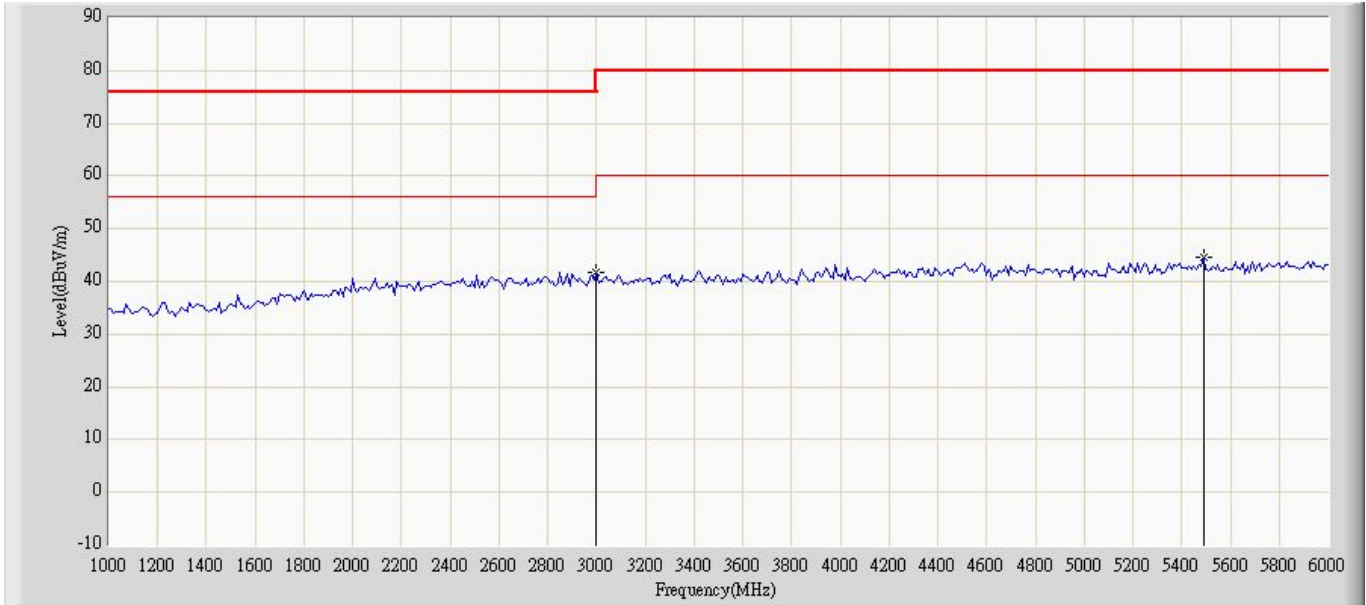


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2770.000	41.448	38.152	-34.552	76.000	3.295	PK
2			5690.000	44.528	35.782	-35.472	80.000	8.746	PK

**Note:**

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

Site: CB8	Time: 2017/09/27 - 22:29
Limit: VCCI_A_(Above_1G)	Margin: 0
Probe: CB8_Horn_3117_1704	Polarity: Vertical
EUT: Network Camera	Power : AC 100V/50Hz to DC12V
Note: Mode 1	

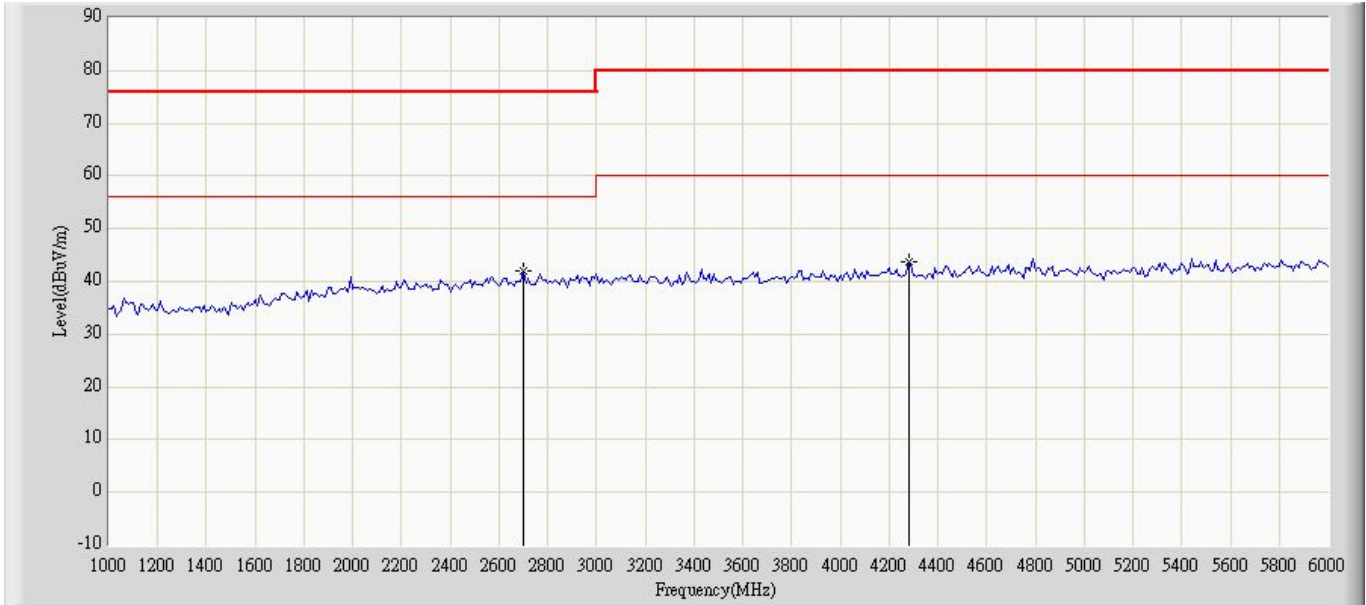


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	3000.000	41.811	38.151	-34.189	76.000	3.660	PK
2			5490.000	44.564	36.204	-35.436	80.000	8.359	PK

**Note:**

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

Site: CB8	Time: 2017/09/27 - 22:33
Limit: VCCI_A_(Above_1G)	Margin: 0
Probe: CB8_Horn_3117_1704	Polarity: Horizontal
EUT: Network Camera	Power : Power By PoE
Note: Mode 2	

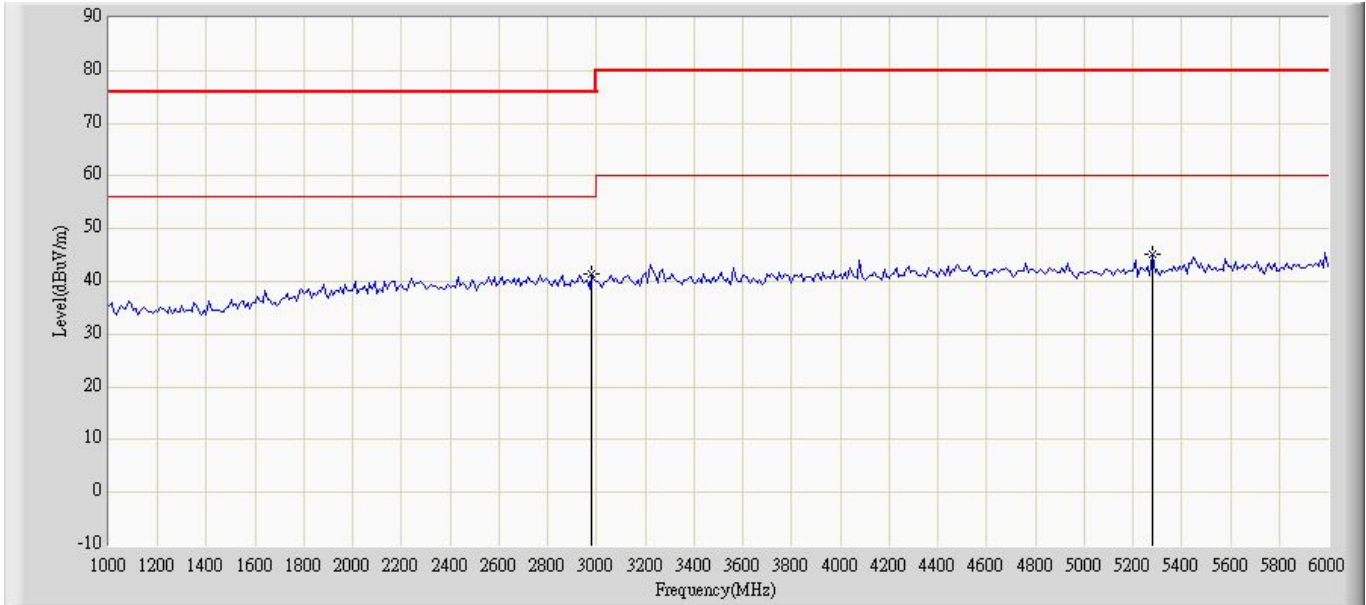


No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2700.000	42.048	39.066	-33.952	76.000	2.982	PK
2			4280.000	43.800	37.821	-36.200	80.000	5.979	PK

**Note:**

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

Site: CB8	Time: 2017/09/27 - 22:33
Limit: VCCI_A_(Above_1G)	Margin: 0
Probe: CB8_Horn_3117_1704	Polarity: Vertical
EUT: Network Camera	Power : Power By PoE
Note: Mode 2	



No	Flag	Mark	Frequency (MHz)	Measure Level (dBuV/m)	Reading Level (dBuV)	Over Limit (dB)	Limit (dBuV/m)	Factor	Type
1		*	2980.000	41.467	37.846	-34.533	76.000	3.621	PK
2			5280.000	45.124	37.273	-34.876	80.000	7.851	PK

**Note:**

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

### 5.7. Test Photograph

Test Mode: Mode 1: FD9367-EHTV, Adapter

Description: Front View of Radiated Test



Test Mode: Mode 1: FD9367-EHTV, Adapter

Description: Back View of Radiated Test



Test Mode: Mode 1: FD9367-EHTV, Adapter

Description : Front View of High Frequency Radiated Test



Test Mode: Mode 2: FD9367-EHTV, PoE

Description: Front View of Radiated Test



Test Mode: Mode 2: FD9367-EHTV, PoE  
Description: Back View of Radiated Test



Test Mode: Mode 2: FD9367-EHTV, PoE  
Description : Front View of High Frequency Radiated Test



**6. Attachment**  
➤ **EUT Photograph**  
(1) EUT Photo



(2) EUT Photo

