# Test Report

Product Name ： Network Camera

Model No. ： IP8172, IP8172P

Applicant ： VIVOTEK INC.

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

Date of Receipt ： 2012/08/31

Issued Date ： 2012/09/21

Report No. ： 129088R-ITJPP05V01

Report Version ： V1.0

Testing Laboratory
0914

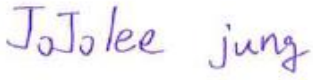
# Test Report Certification

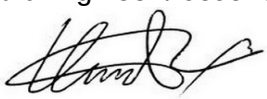
Issued Date : 2012/09/21
Report No. : 129088R-ITJPP05V01

QuieTek

| | | |
|---|---|---|
| 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. | : | IP8172, IP8172P |
| EUT Rated Voltage | : | AC 24V, DC 12V, By POE |
| EUT Test Voltage | : | AC 24V, DC 12V, By POE |
| Trade Name | : | VIVOTEK |
| Applicable Standard | : | VCCI: 2012-04 Class A |
| Test Result | : | Complied |
| Performed Location | : | Quietek Corporation (Linkou Laboratory)<br>No. 5-22, Rueishu Keng, Linkou Dist., New Taipei City 24451, Taiwan. R.O.C.<br>TEL:+866-2-8601-3788 / FAX:+886-2-8601-3789 |

Documented By : 
( Adm. Specialist / Joanne Lin )

Reviewed By : 
( Assistant Engineer / JoJoLee Jung)

Approved By : 
( Manager / Vincent Lin )

## Laboratory Information

We, **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scopes:

| | | |
|---|---|---|
| **Taiwan R.O.C.** | **:** | **BSMI, NCC, TAF** |
| **Norway** | **:** | **Nemko, DNV** |
| **USA** | **:** | **FCC, NVLAP** |
| **Japan** | **:** | **VCCI** |

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site : http://www.quietek.com/tw/ctg/cts/accreditations.htm
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

**HsinChu Testing Laboratory :**

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0

**LinKou Testing Laboratory :**

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

NVLAP Lab Code: 200533-0

**Suzhou (China) Testing Laboratory :**

No. 99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., Suzhou,China.
TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098 E-Mail : service@quietek.com

# TABLE OF CONTENTS

# 1. General Information

## 1.1. EUT Description

| | |
|---|---|
| Product Name | Network Camera |
| Trade Name | VIVOTEK |
| Model No. | IP8172, IP8172P |

| Component | |
|---|---|
| Power Adapter (1) | MFR: ENG, M/N: 3A-183WP12<br>Input: AC 100-240V, 50-60Hz, 0.6A<br>Output: DC 12V, 1.5A<br>Cable Out: Non-Shielded, 1.8m |
| Power Adapter (2)<br>(Optional) | MFR: PTC, M/N: N/A<br>Input: AC 110/220V<br>Output: AC 24V<br>Cable IN: Non-Shielded, 1m<br>Cable Out: Non-Shielded, 1m |

Note: The different of the each model is shown as below:

| Model No. | Description |
|---|---|
| IP8172 | DC IRIS |
| IP8172P | P IRIS |
| Note: DC IRIS and P IRIS are LENS is dissimilar | |

## 1.2. Mode of Operation

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

| Pre-Test Mode | |
|---|---|
| Mode 1: AC 24V<br>Mode 2: DC 12V<br>Mode 3: PoE | |
| Final Test Mode | |
| Conducted Emission | Mode 1: AC 24V<br>Mode 2: DC 12V |
| Impedance Stabilization Network | Mode 1: AC 24V<br>Mode 2: DC 12V<br>Mode 3: PoE |
| Radiated Emission | Mode 1: AC 24V<br>Mode 2: DC 12V<br>Mode 3: PoE |

## 1.3. Tested System Details

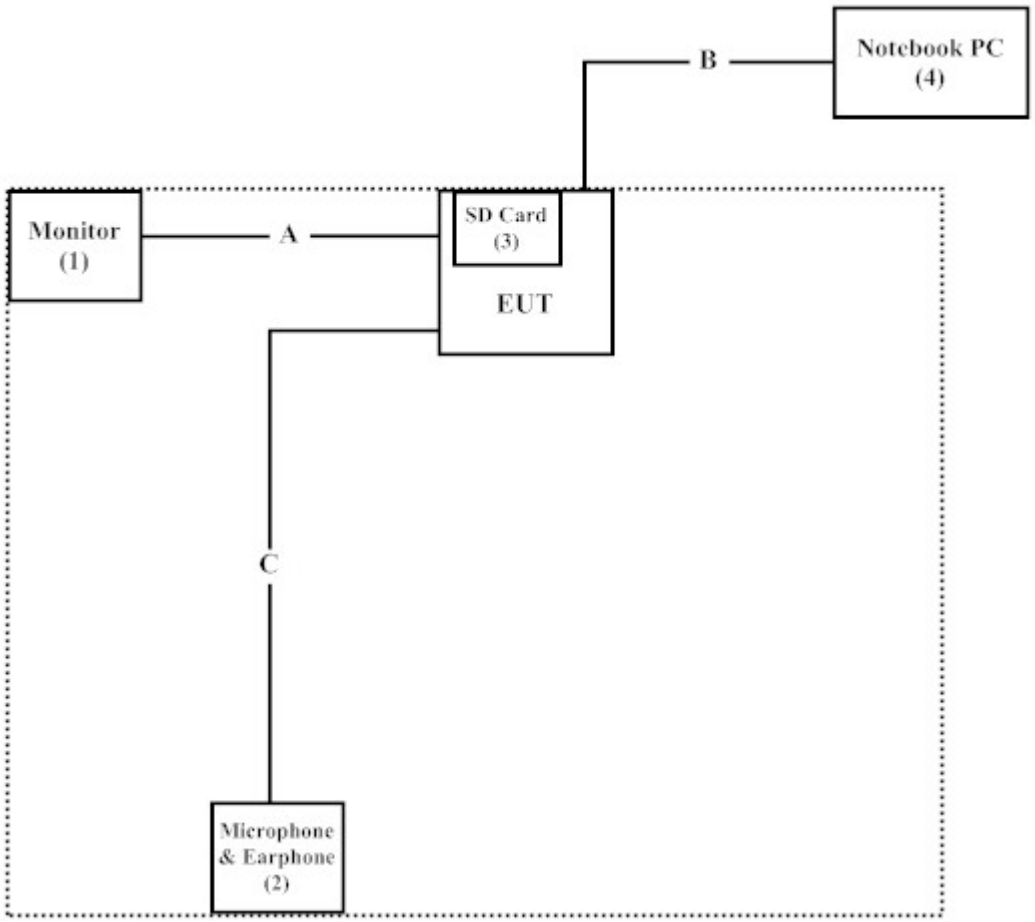
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

| Test Mode | | Mode 1, Mode 2 | | | |
|---|---|---|---|---|---|
| Product | | Manufacturer | Model No. | Serial No. | Power Cord |
| 1 | Monitor | SONY | PVM-14M2U | 2105742 | Non-Shielded, 1.8m |
| 2 | Microphone & Earphone | Ergotech | ET-E201 | N/A | N/A |
| 3 | SD Card (2GB) | Transcend | TS2GSDC | 256987 7612 | N/A |
| 4 | Notebook PC | DELL | PP04X | C8YYM1S | Non-Shielded, 1.8m |

| Test Mode | | Mode 3 | | | |
|---|---|---|---|---|---|
| Product | | Manufacturer | Model No. | Serial No. | Power Cord |
| 1 | Monitor | SONY | PVM-14M2U | 2105742 | Non-Shielded, 1.8m |
| 2 | Microphone & Earphone | Ergotech | ET-E201 | N/A | N/A |
| 3 | SD Card<br>2GB | Transcend | TS2GSDC | 256987 7612 | N/A |
| 4 | PoE | VIVOTEK | IJ-1748NDN | N/A | Non-Shielded, 1.8m |
| 5 | Notebook PC | DELL | PP04X | C8YYM1S | Non-Shielded, 1.8m |

## 1.4. Configuration of Tested System

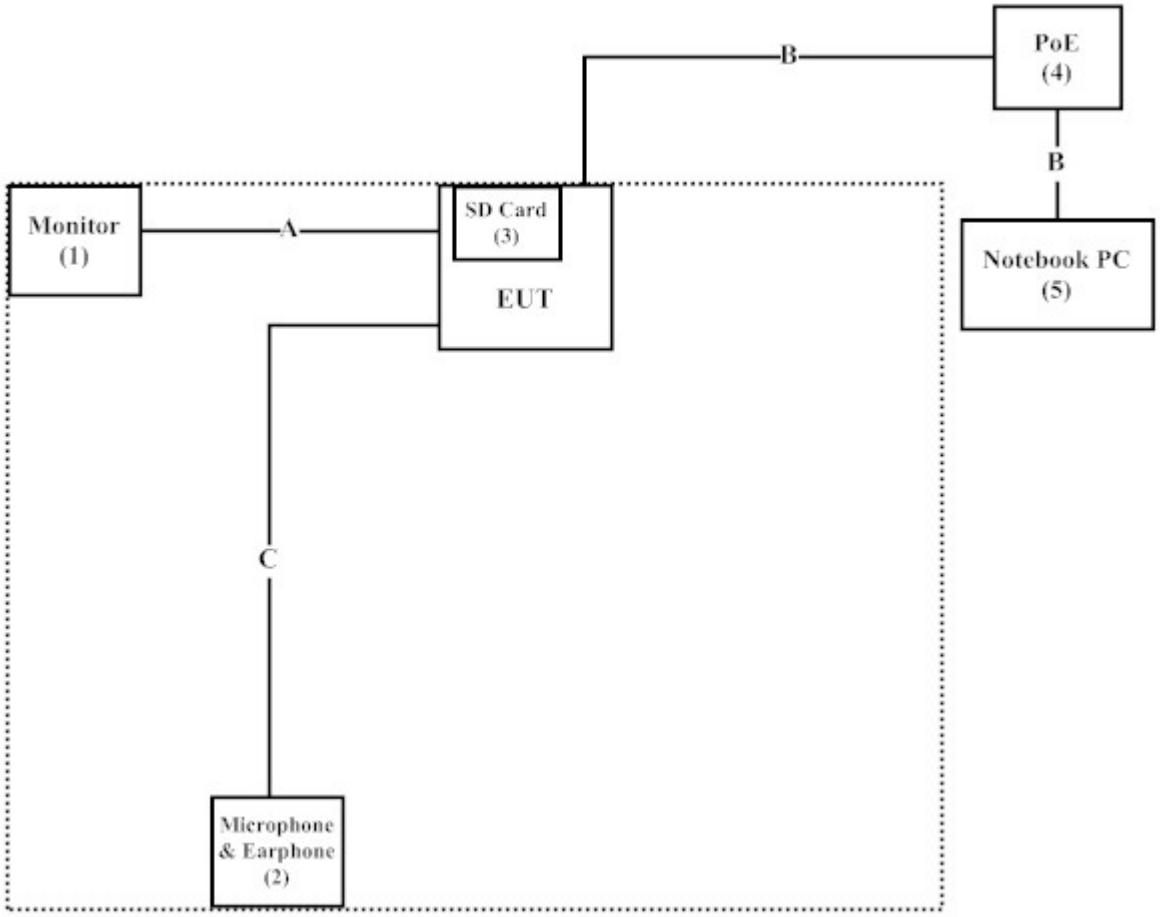
| Test Mode | Mode 1, Mode 2 |
|---|---|
| Connection Diagram | |




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

| Test Mode | Mode 3 |
|---|---|

Connection Diagram




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

## 1.5. EUT Exercise Software

| | |
|---|---|
| 1 | Setup the EUT and simulators as shown on 1.4. |
| 2 | Turn on the power of all equipment. |
| 3 | The EUT will start to operate and display the video figure from the signal source. |
| 4 | The EUT will display “video figure” on monitor. |
| 5 | SD Card works while the EUT is recording. |
| 6 | Repeat the above procedure (3) 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: 2012-04 Class A | Yes | No |
| Impedance Stabilization Network | VCCI: 2012-04 Class A | Yes | No |
| Radiated Emission | VCCI: 2012-04 Class A | Yes | No |

## 2.2. List of Test Equipment

Conducted Emission / SR1

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

Impedance Stabilization Network / SR1

| Instrument | Manufacturer | Type No. | Serial No | Cal. Date |
|---|---|---|---|---|
| Capacitive Voltage Probe | Schaffner | CVP2200A | 18331 | 2011/11/23 |
| EMI Test Receiver | R&S | ESCS 30 | 838251/001 | 2012/06/05 |
| LISN | R&S | ENV216 | 100085 | 2012/02/13 |
| LISN | R&S | ESH3-Z5 | 836679/023 | 2012/01/12 |
| Pulse Limiter | R&S | ESH3-Z2 | 357.8810.52-1 | 2012/09/16 |
| RF Current Probe | FCC | F-65 10KHz~1GHz | 198 | 2011/10/25 |
| BALANCED TELECOM ISN | FCC | FCC-TLISN-T2-02 | 20316 | 2012/07/22 |
| Impedance Stabilization Network | Teseq | ISN T800 | 30303 | 2012/03/10 |

Radiated Emission / Site 7

| Instrument | Manufacturer | Type No. | Serial No | Cal. Date |
|---|---|---|---|---|
| EMI Test Receiver | R&S | ESCI | 100648 | 2011/10/13 |
| Bilog Antenna | Schaffner Chase | CBL6112B | 2930 | 2012/07/06 |
| Pre-Amplifier | QTK | AP-025C | 071919 | 2012/07/07 |
| Site7 NSA | QTK | N/A | N/A | 2012/06/27 |

Radiated Emission / CB7

| Instrument | Manufacturer | Type No. | Serial No | Cal. Date |
|---|---|---|---|---|
| EMI Test Receiver | Agilent | E4440A | MY46185846 | 2011/12/12 |
| Horn Antenna | ETS-Lindgren | 3117 | 00135205 | 2012/03/30 |
| Horn Antenna | SCHWARZBECK | 9120D | 576 | 2011/11/14 |
| Pre-Amplifier | QuieTek | AP-180C | CHM/071920 | 2012/07/12 |
| CB7 VSWR | QTK | N/A | N/A | 2012/08/25 |

VCCI Test Site:

| Test Item | Test Site | VCCI No. |
|---|---|---|
| Conducted Emission | SR1 | C-2428 |
| Conducted Emission (Telecommunication Port) | SR1 | T-1473 |
| Radiated Emission | Site 7 | R-3748 |
| Radiated Emission (Above 1GHz) | CB7(9x6x6_Chamber) | G-35 |

## 2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Impedance Stabilization Network

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

## 2.4. Test Environment

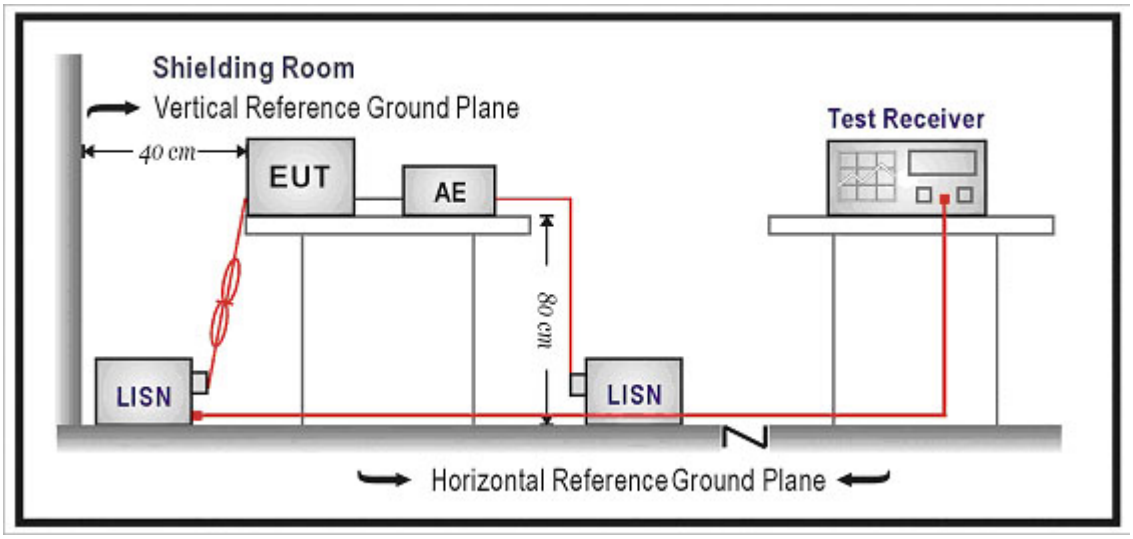
| Performed Item | Items | Required | Actual |
|---|---|---|---|
| Conducted Emission | Temperature (°C) | 15-35 | 25.5 |
| | Humidity (%RH) | 25-75 | 53 |
| | Barometric pressure (mbar) | 860-1060 | 950-1000 |
| Impedance Stabilization Network | Temperature (°C) | 15-35 | 25.5 |
| | Humidity (%RH) | 25-75 | 53 |
| | Barometric pressure (mbar) | 860-1060 | 950-1000 |
| Radiated Emission | Temperature (°C) | 15-35 | 25.8 |
| | Humidity (%RH) | 25-75 | 58 |
| | Barometric pressure (mbar) | 860-1060 | 950-1000 |

# 3. Conducted Emission

## 3.1. Test Specification

According to EMC Standard : VCCI

## 3.2. Test Setup




## 3.3. Limit

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

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

## 3.4. Test Procedure

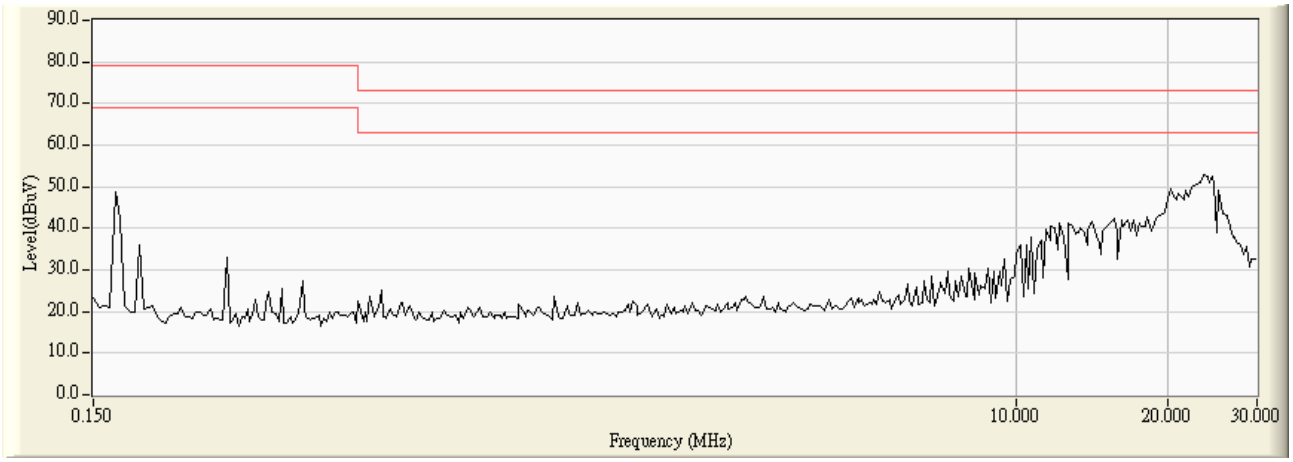
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling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

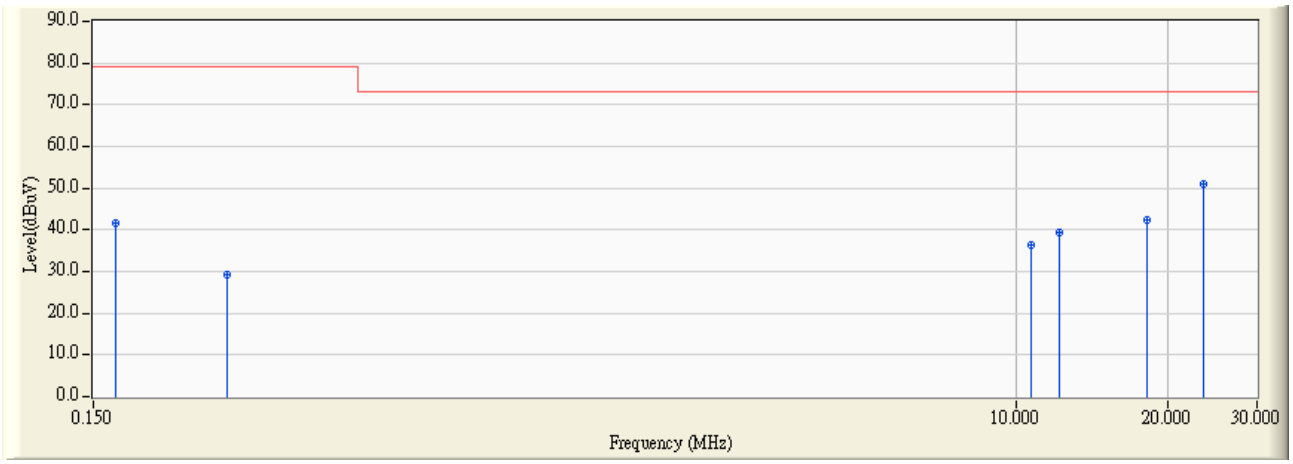
No deviation.

## 3.6. Test Result

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:18** |
| **Limit : CISPR_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : ENV_216_L1 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:20** |
| **Limit : CISPR_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : ENV_216_L1 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1** |

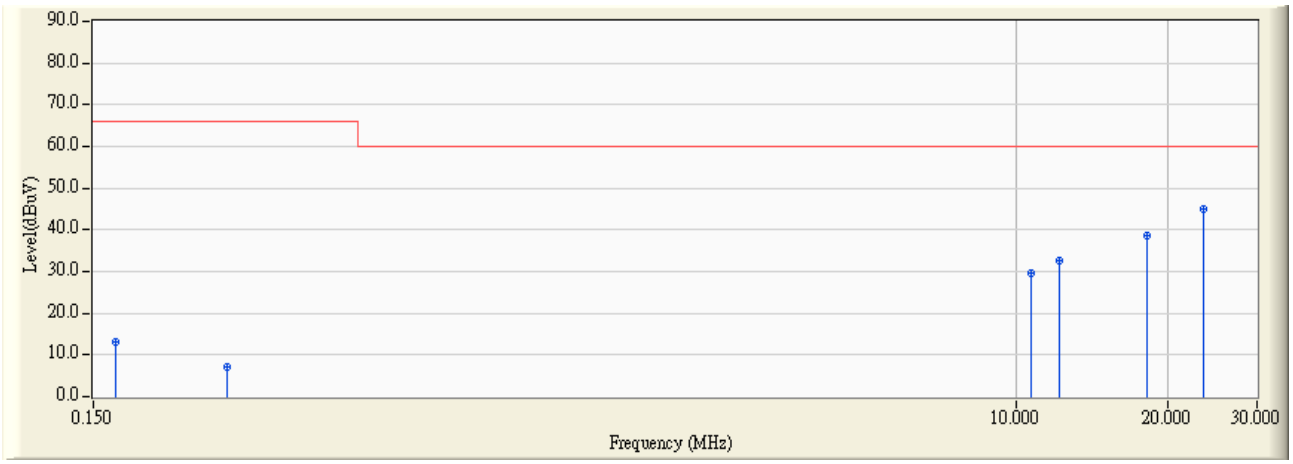



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.166 | 9.821 | 31.710 | 41.531 | -37.469 | 79.000 | QUASIPEAK |
| 2 | | 0.275 | 9.821 | 19.280 | 29.101 | -49.899 | 79.000 | QUASIPEAK |
| 3 | | 10.740 | 10.010 | 26.420 | 36.430 | -36.570 | 73.000 | QUASIPEAK |
| 4 | | 12.205 | 10.010 | 29.440 | 39.450 | -33.550 | 73.000 | QUASIPEAK |
| 5 | | 18.244 | 10.094 | 32.250 | 42.344 | -30.656 | 73.000 | QUASIPEAK |
| 6 | * | 23.437 | 10.140 | 40.850 | 50.990 | -22.010 | 73.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:20** |
| **Limit : CISPR_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : ENV_216_L1 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1** |

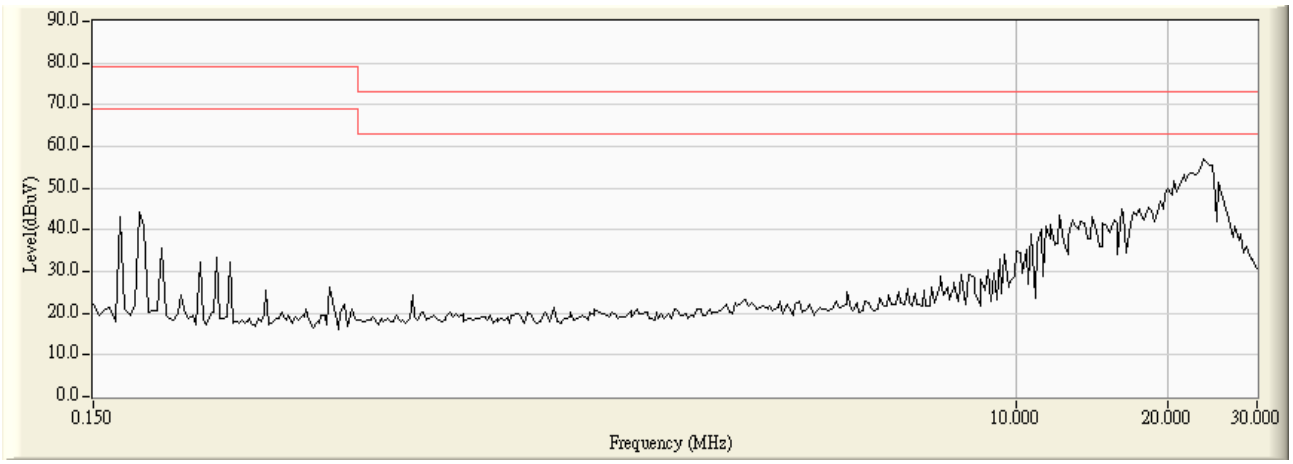



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.166 | 9.821 | 3.440 | 13.261 | -52.739 | 66.000 | AVERAGE |
| 2 | | 0.275 | 9.821 | -2.790 | 7.031 | -58.969 | 66.000 | AVERAGE |
| 3 | | 10.740 | 10.010 | 19.450 | 29.460 | -30.540 | 60.000 | AVERAGE |
| 4 | | 12.205 | 10.010 | 22.520 | 32.530 | -27.470 | 60.000 | AVERAGE |
| 5 | | 18.244 | 10.094 | 28.480 | 38.574 | -21.426 | 60.000 | AVERAGE |
| 6 | * | 23.437 | 10.140 | 34.780 | 44.920 | -15.080 | 60.000 | AVERAGE |

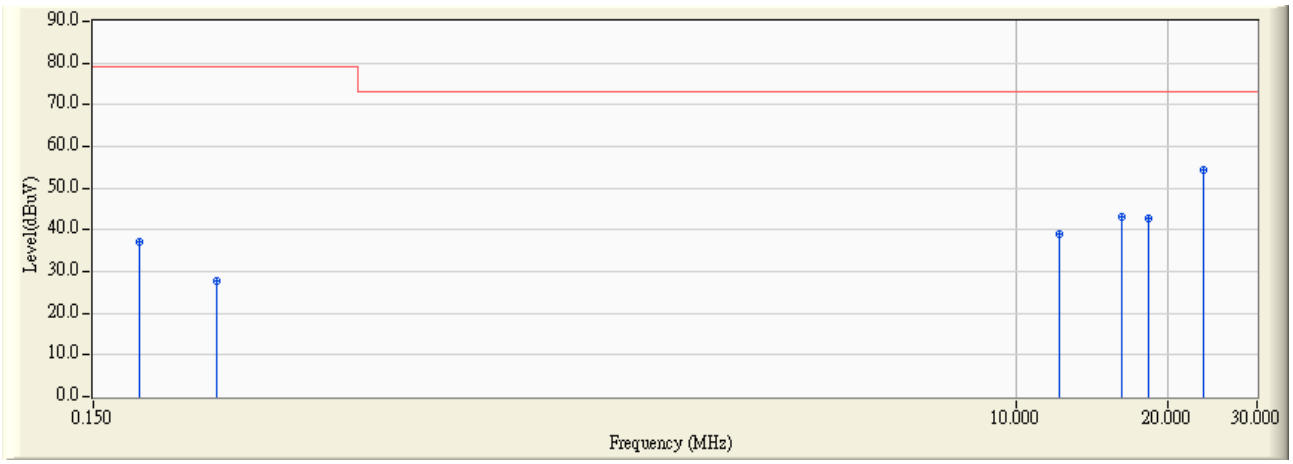
Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:21** |
| **Limit : CISPR_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : ENV_216_N - Line2** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:22** |
| **Limit : CISPR_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : ENV_216_N - Line2** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1** |

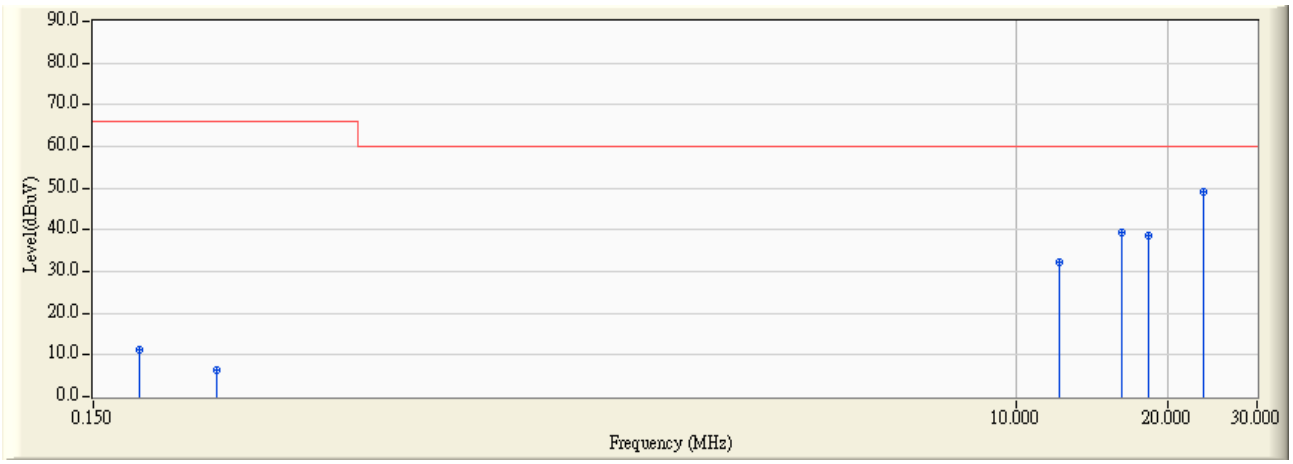



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.185 | 9.861 | 27.350 | 37.211 | -41.789 | 79.000 | QUASIPEAK |
| 2 | | 0.263 | 9.861 | 17.740 | 27.601 | -51.399 | 79.000 | QUASIPEAK |
| 3 | | 12.201 | 10.090 | 28.820 | 38.910 | -34.090 | 73.000 | QUASIPEAK |
| 4 | | 16.228 | 10.165 | 33.010 | 43.175 | -29.825 | 73.000 | QUASIPEAK |
| 5 | | 18.302 | 10.226 | 32.380 | 42.606 | -30.394 | 73.000 | QUASIPEAK |
| 6 | * | 23.435 | 10.310 | 43.930 | 54.240 | -18.760 | 73.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:22** |
| **Limit : CISPR_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : ENV_216_N - Line2** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1** |

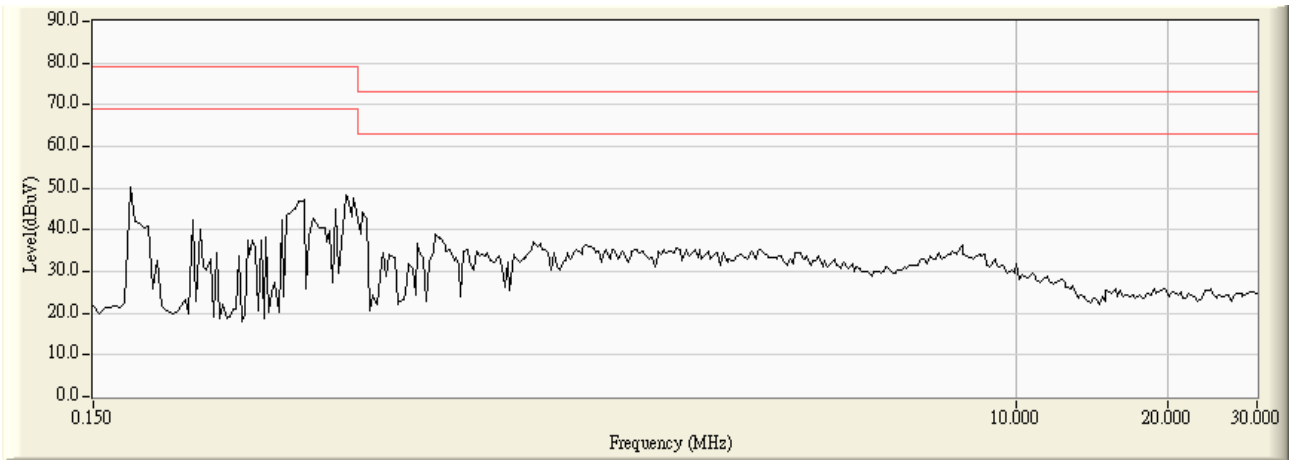



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.185 | 9.861 | 1.280 | 11.141 | -54.859 | 66.000 | AVERAGE |
| 2 | | 0.263 | 9.861 | -3.330 | 6.531 | -59.469 | 66.000 | AVERAGE |
| 3 | | 12.201 | 10.090 | 22.030 | 32.120 | -27.880 | 60.000 | AVERAGE |
| 4 | | 16.228 | 10.165 | 29.260 | 39.425 | -20.575 | 60.000 | AVERAGE |
| 5 | | 18.302 | 10.226 | 28.220 | 38.446 | -21.554 | 60.000 | AVERAGE |
| 6 | * | 23.435 | 10.310 | 38.850 | 49.160 | -10.840 | 60.000 | AVERAGE |

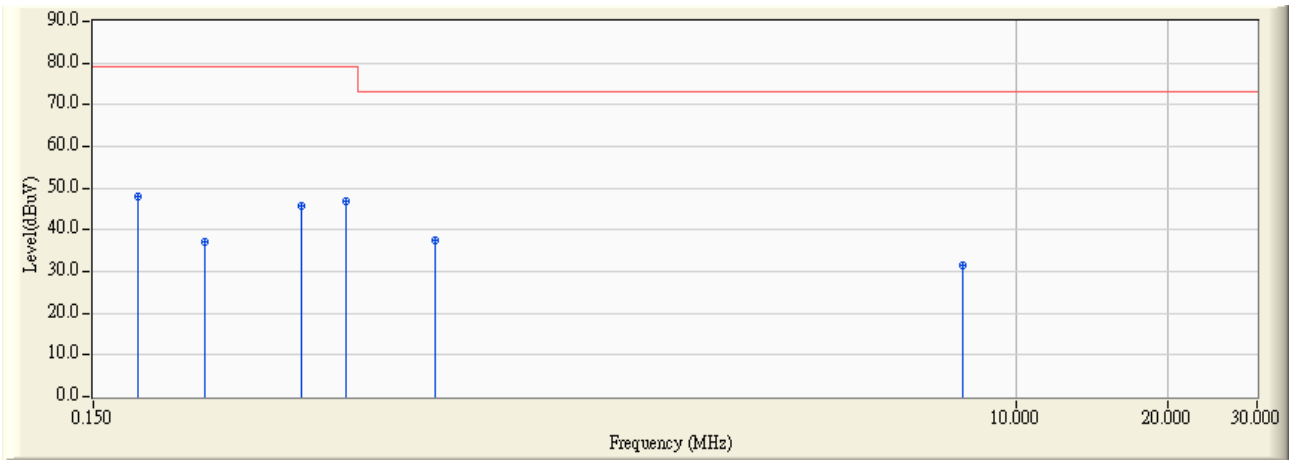
Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:34** |
| **Limit : CISPR_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : ENV_216_L1 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:35** |
| **Limit : CISPR_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : ENV_216_L1 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2** |

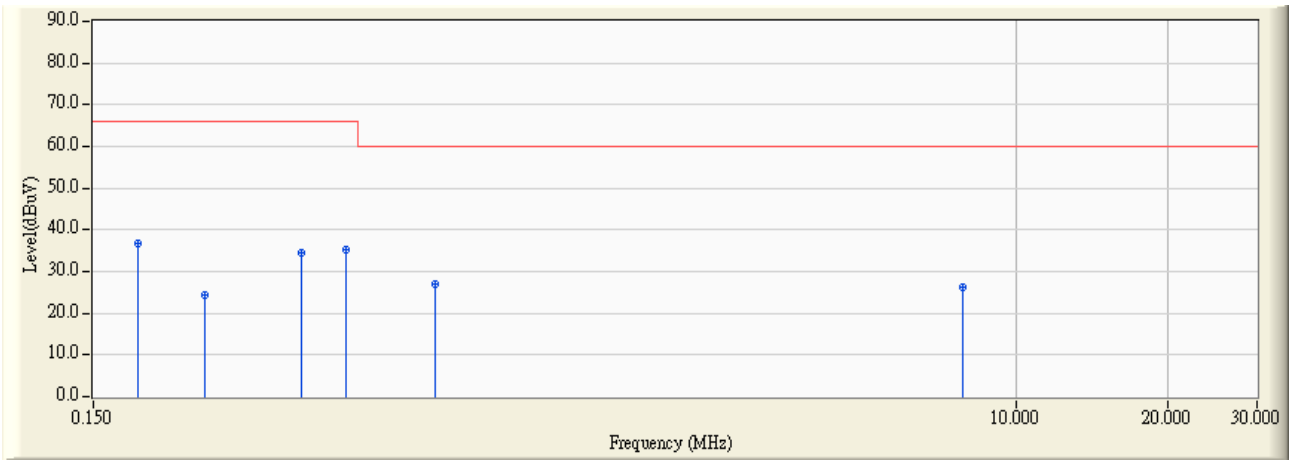



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 0.184 | 9.821 | 38.040 | 47.861 | -31.139 | 79.000 | QUASIPEAK |
| 2 | | 0.250 | 9.821 | 27.310 | 37.131 | -41.869 | 79.000 | QUASIPEAK |
| 3 | | 0.386 | 9.822 | 35.830 | 45.652 | -33.348 | 79.000 | QUASIPEAK |
| 4 | * | 0.475 | 9.822 | 37.000 | 46.822 | -32.178 | 79.000 | QUASIPEAK |
| 5 | | 0.713 | 9.823 | 27.620 | 37.443 | -35.557 | 73.000 | QUASIPEAK |
| 6 | | 7.841 | 9.990 | 21.470 | 31.460 | -41.540 | 73.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:35** |
| **Limit : CISPR_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : ENV_216_L1 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2** |

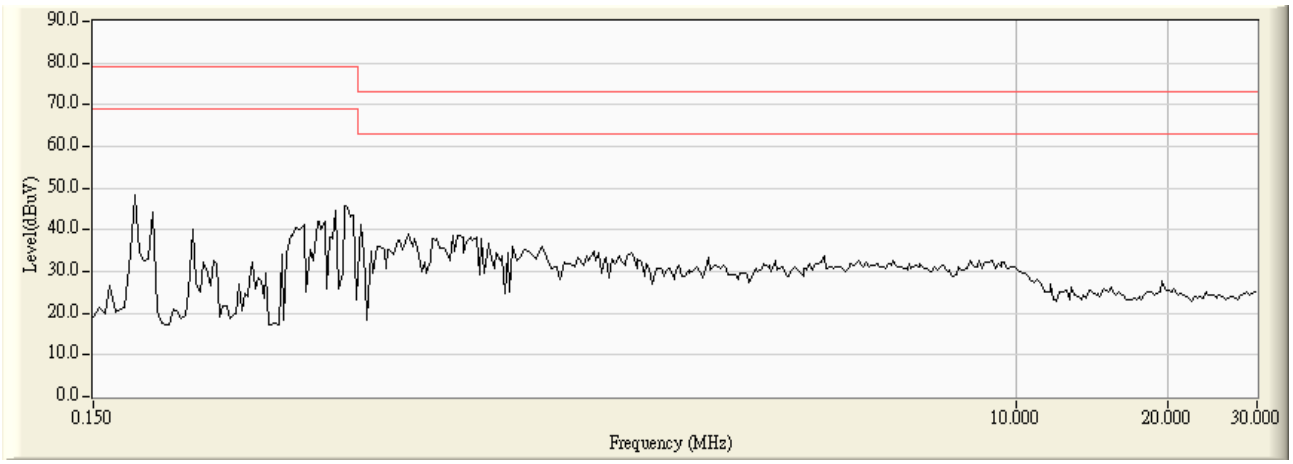



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 0.184 | 9.821 | 26.860 | 36.681 | -29.319 | 66.000 | AVERAGE |
| 2 | | 0.250 | 9.821 | 14.530 | 24.351 | -41.649 | 66.000 | AVERAGE |
| 3 | | 0.386 | 9.822 | 24.560 | 34.382 | -31.618 | 66.000 | AVERAGE |
| 4 | * | 0.475 | 9.822 | 25.400 | 35.222 | -30.778 | 66.000 | AVERAGE |
| 5 | | 0.713 | 9.823 | 17.330 | 27.153 | -32.847 | 60.000 | AVERAGE |
| 6 | | 7.841 | 9.990 | 16.170 | 26.160 | -33.840 | 60.000 | AVERAGE |

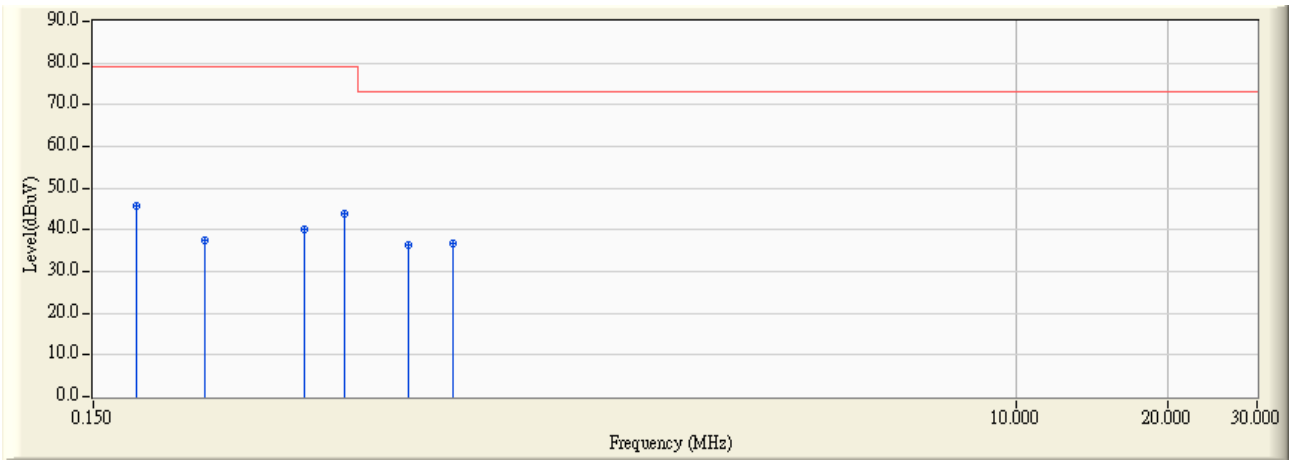
Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:35** |
| **Limit : CISPR_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : ENV_216_N - Line2** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:36** |
| **Limit : CISPR_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : ENV_216_N - Line2** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2** |

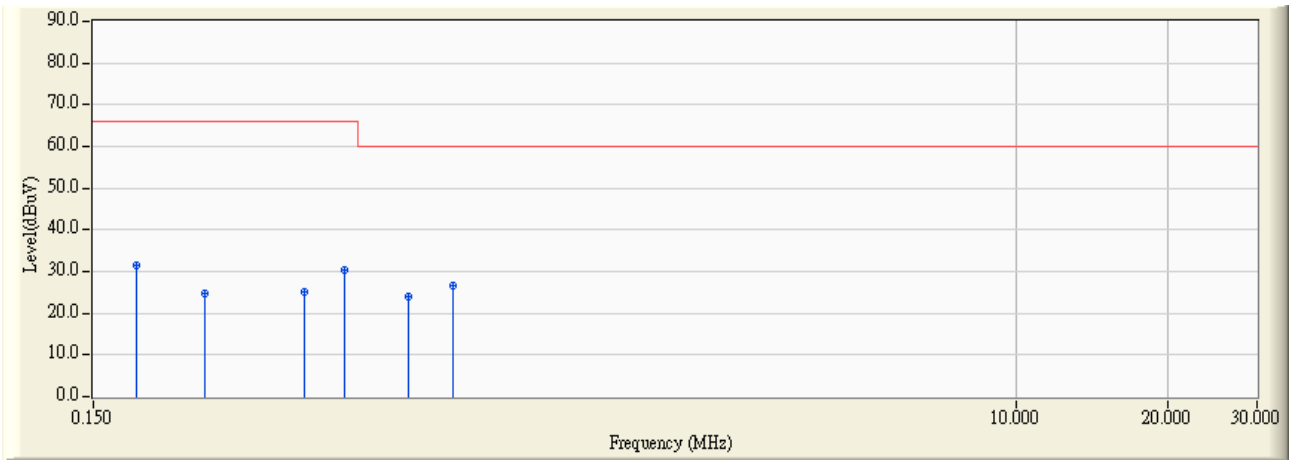



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 0.183 | 9.861 | 35.800 | 45.661 | -33.339 | 79.000 | QUASIPEAK |
| 2 | | 0.250 | 9.861 | 27.530 | 37.391 | -41.609 | 79.000 | QUASIPEAK |
| 3 | | 0.392 | 9.872 | 30.310 | 40.182 | -38.818 | 79.000 | QUASIPEAK |
| 4 | * | 0.470 | 9.872 | 33.980 | 43.852 | -35.148 | 79.000 | QUASIPEAK |
| 5 | | 0.630 | 9.873 | 26.320 | 36.193 | -36.807 | 73.000 | QUASIPEAK |
| 6 | | 0.771 | 9.873 | 26.820 | 36.693 | -36.307 | 73.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:38** |
| **Limit : CISPR_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : ENV_216_N - Line2** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2** |




| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.183 | 9.861 | 21.560 | 31.421 | -34.579 | 66.000 | AVERAGE |
| 2 | | 0.250 | 9.861 | 14.800 | 24.661 | -41.339 | 66.000 | AVERAGE |
| 3 | | 0.392 | 9.872 | 15.070 | 24.942 | -41.058 | 66.000 | AVERAGE |
| 4 | * | 0.470 | 9.872 | 20.690 | 30.562 | -35.438 | 66.000 | AVERAGE |
| 5 | | 0.630 | 9.873 | 13.940 | 23.813 | -36.187 | 60.000 | AVERAGE |
| 6 | * | 0.771 | 9.873 | 16.810 | 26.683 | -33.317 | 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: AC 24V

Description : Front View of Conducted Test

Test Mode : Mode 1: AC 24V

Description : Back View of Conducted Test

Test Mode : Mode 2: DC 12V

Description : Front View of Conducted Test

Test Mode : Mode 2: DC 12V

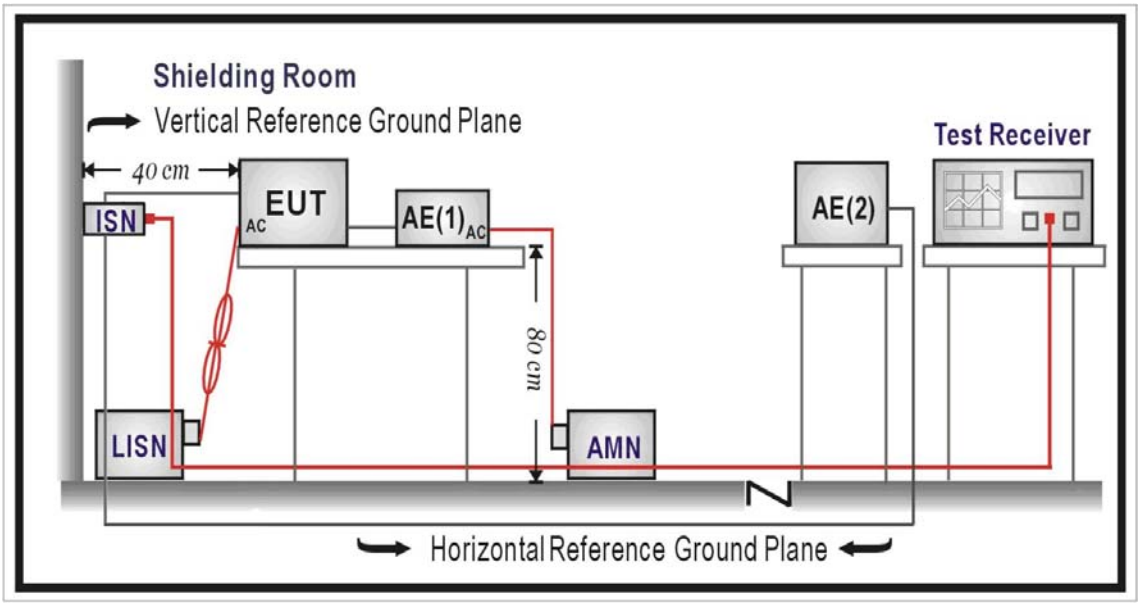
Description : Back View of Conducted Test

# 4. Conducted Emissions (Telecommunication Ports)

## 4.1. Test Specification

According to EMC Standard : VCCI

## 4.2. Test Setup




## 4.3. Limit

| Limits | | |
|---|---|---|
| **Frequency (MHz)** | **QP (dBuV)** | **AV (dBuV)** |
| 0.15 - 0.50 | 97 – 87 | 84 – 74 |
| 0.50 - 30 | 87 | 74 |

Remarks:

The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz.

## 4.4. Test Procedure

**Telecommunication Port:**

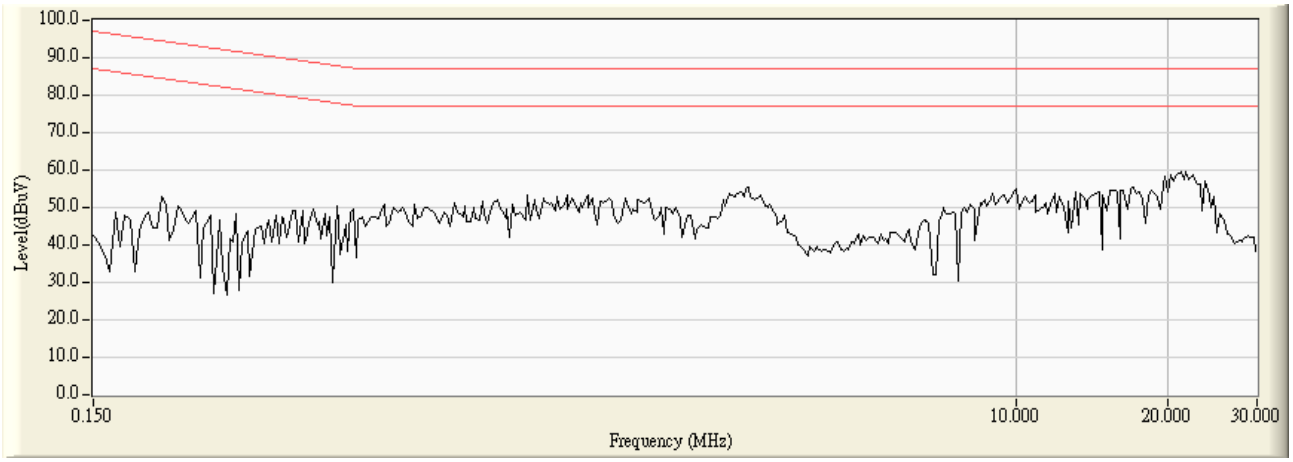
The mains voltage shall be supplied to the EUT via the LISN when the measurement of telecommunication port is performed. The common mode disturbances at the telecommunication port shall be connected to the ISN, which is 150 ohm impedance.
Both alternative cables are tested related to the LCL requested. 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

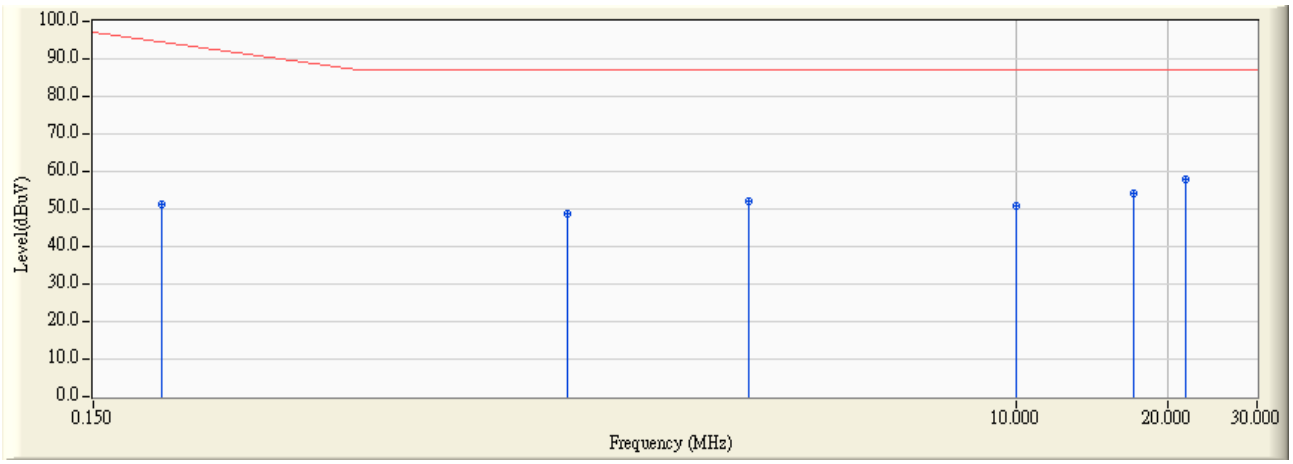
No deviation.

## 4.6. Test Result

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:11** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1, ISN 10Mbps** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:12** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1, ISN 10Mbps** |

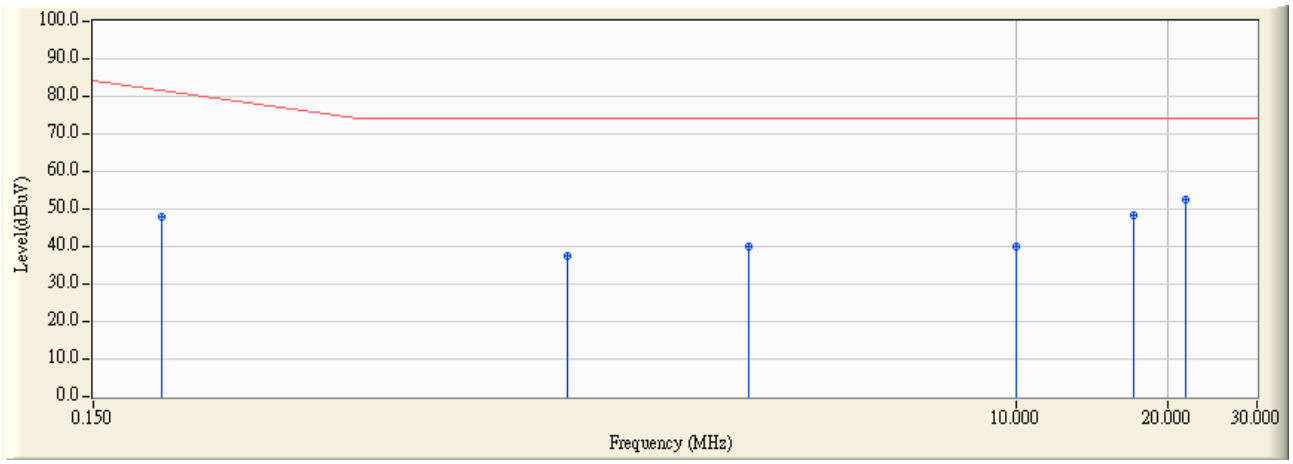



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.205 | 10.294 | 41.000 | 51.294 | -44.135 | 95.429 | QUASIPEAK |
| 2 | | 1.295 | 9.926 | 38.970 | 48.896 | -38.104 | 87.000 | QUASIPEAK |
| 3 | | 2.974 | 9.884 | 42.120 | 52.004 | -34.996 | 87.000 | QUASIPEAK |
| 4 | | 10.009 | 9.910 | 40.760 | 50.670 | -36.330 | 87.000 | QUASIPEAK |
| 5 | | 17.087 | 9.985 | 44.070 | 54.055 | -32.945 | 87.000 | QUASIPEAK |
| 6 | * | 21.727 | 10.110 | 47.960 | 58.070 | -28.930 | 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 : SR1** | **Time : 2012/09/05 - 00:12** |
| **Limit : ISN_Voltage_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1, ISN 10Mbps** |

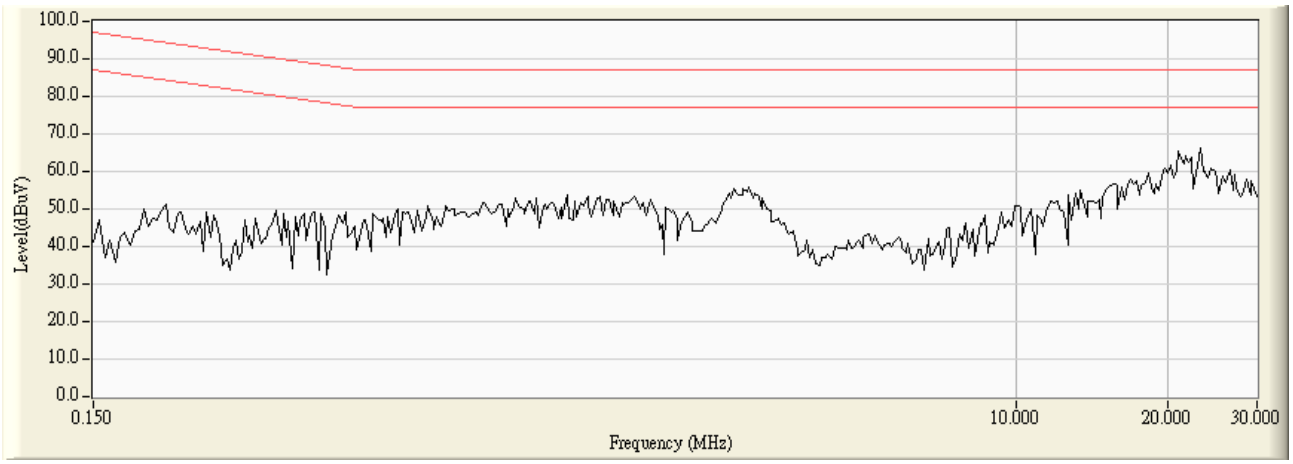



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.205 | 10.294 | 37.710 | 48.004 | -34.425 | 82.429 | AVERAGE |
| 2 | | 1.295 | 9.926 | 27.510 | 37.436 | -36.564 | 74.000 | AVERAGE |
| 3 | | 2.974 | 9.884 | 29.980 | 39.864 | -34.136 | 74.000 | AVERAGE |
| 4 | | 10.009 | 9.910 | 30.000 | 39.910 | -34.090 | 74.000 | AVERAGE |
| 5 | | 17.087 | 9.985 | 38.450 | 48.435 | -25.565 | 74.000 | AVERAGE |
| 6 | * | 21.727 | 10.110 | 42.470 | 52.580 | -21.420 | 74.000 | AVERAGE |

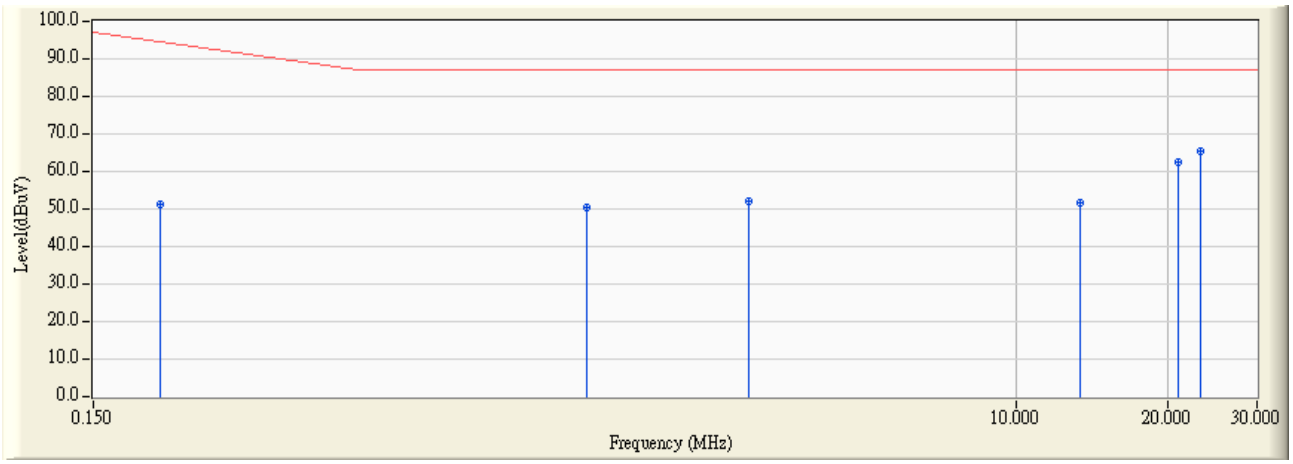
Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:13** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1, ISN 100Mbps** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/05 - 00:15** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1, ISN 100Mbps** |

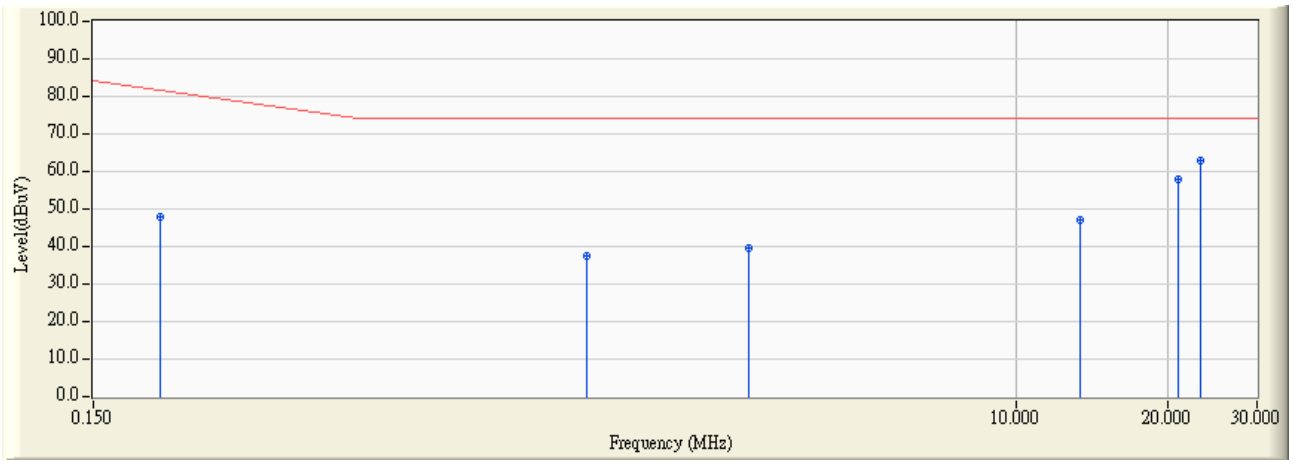



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.204 | 10.297 | 40.960 | 51.257 | -44.200 | 95.457 | QUASIPEAK |
| 2 | | 1.423 | 9.916 | 40.590 | 50.506 | -36.494 | 87.000 | QUASIPEAK |
| 3 | | 2.970 | 9.884 | 42.340 | 52.224 | -34.776 | 87.000 | QUASIPEAK |
| 4 | | 13.423 | 9.921 | 41.850 | 51.771 | -35.229 | 87.000 | QUASIPEAK |
| 5 | | 20.994 | 10.100 | 52.310 | 62.410 | -24.590 | 87.000 | QUASIPEAK |
| 6 | * | 23.130 | 10.140 | 55.240 | 65.380 | -21.620 | 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 : SR1** | **Time : 2012/09/05 - 00:15** |
| **Limit : ISN_Voltage_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1, ISN 100Mbps** |

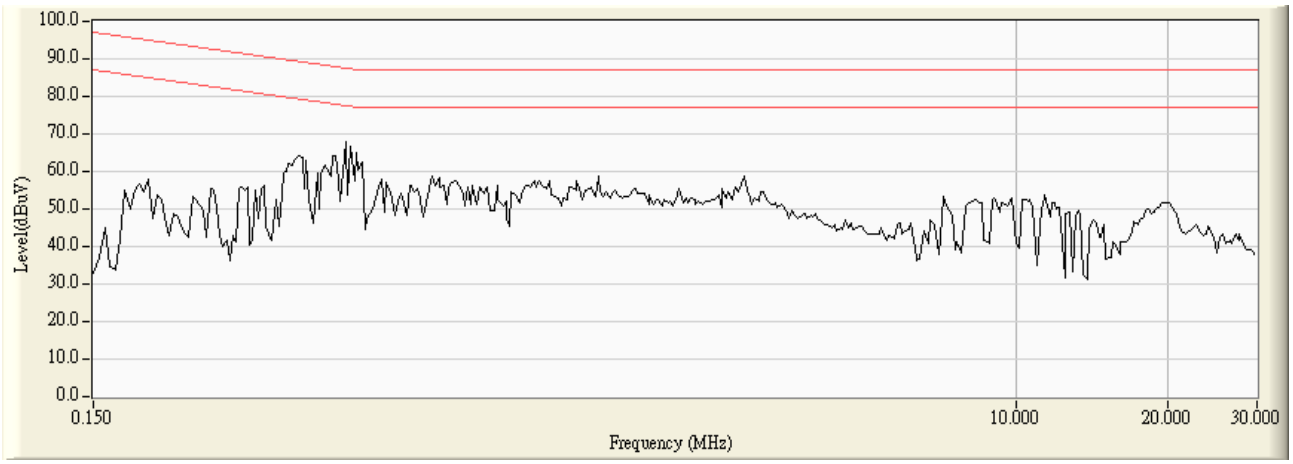



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.204 | 10.297 | 37.640 | 47.937 | -34.520 | 82.457 | AVERAGE |
| 2 | | 1.423 | 9.916 | 27.640 | 37.556 | -36.444 | 74.000 | AVERAGE |
| 3 | | 2.970 | 9.884 | 29.650 | 39.534 | -34.466 | 74.000 | AVERAGE |
| 4 | | 13.423 | 9.921 | 37.190 | 47.111 | -26.889 | 74.000 | AVERAGE |
| 5 | | 20.994 | 10.100 | 47.790 | 57.890 | -16.110 | 74.000 | AVERAGE |
| 6 | * | 23.130 | 10.140 | 52.910 | 63.050 | -10.950 | 74.000 | AVERAGE |

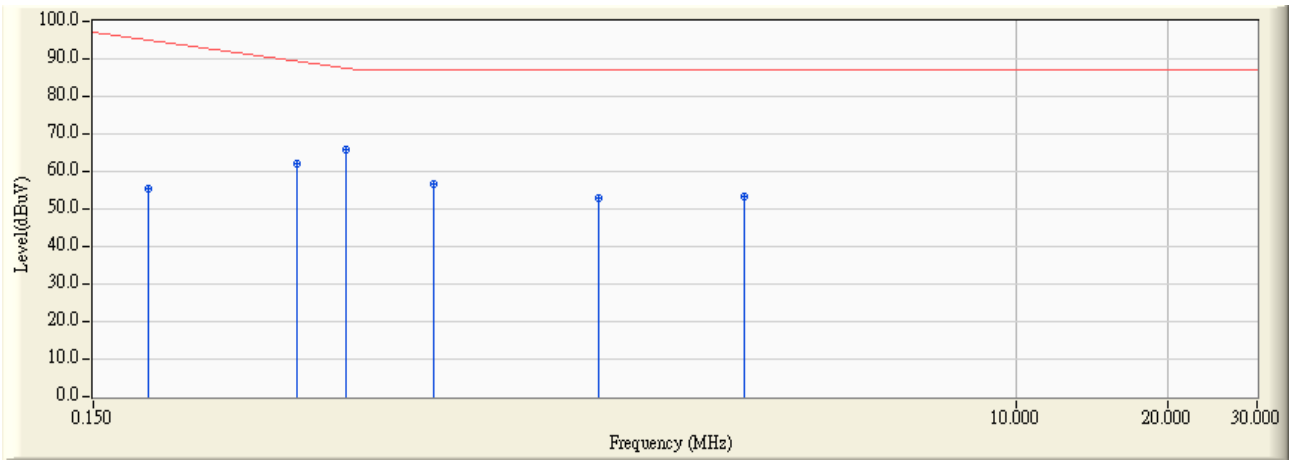
Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:43** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2, ISN 10Mbps** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:44** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2, ISN 10Mbps** |

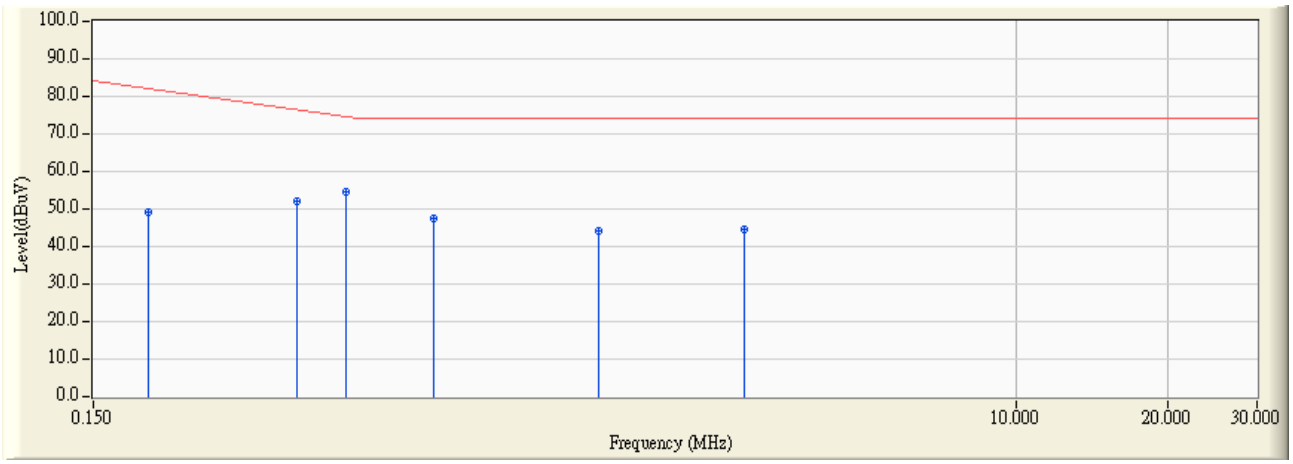



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.193 | 10.326 | 45.220 | 55.546 | -40.225 | 95.771 | QUASIPEAK |
| 2 | | 0.380 | 10.140 | 51.950 | 62.090 | -28.339 | 90.429 | QUASIPEAK |
| 3 | * | 0.474 | 10.065 | 55.880 | 65.945 | -21.798 | 87.743 | QUASIPEAK |
| 4 | | 0.708 | 10.003 | 46.750 | 56.753 | -30.247 | 87.000 | QUASIPEAK |
| 5 | | 1.502 | 9.914 | 43.140 | 53.054 | -33.946 | 87.000 | QUASIPEAK |
| 6 | | 2.908 | 9.888 | 43.560 | 53.448 | -33.552 | 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 : SR1** | **Time : 2012/09/04 - 23:44** |
| **Limit : ISN_Voltage_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2, ISN 10Mbps** |

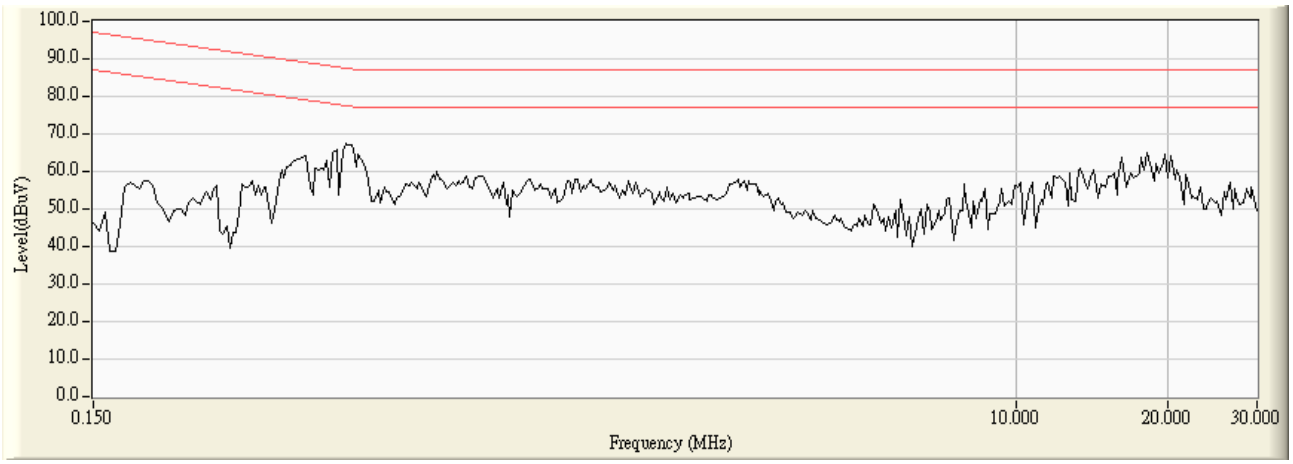



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.193 | 10.326 | 38.900 | 49.226 | -33.545 | 82.771 | AVERAGE |
| 2 | | 0.380 | 10.140 | 42.050 | 52.190 | -25.239 | 77.429 | AVERAGE |
| 3 | * | 0.474 | 10.065 | 44.450 | 54.515 | -20.228 | 74.743 | AVERAGE |
| 4 | | 0.708 | 10.003 | 37.550 | 47.553 | -26.447 | 74.000 | AVERAGE |
| 5 | | 1.502 | 9.914 | 34.060 | 43.974 | -30.026 | 74.000 | AVERAGE |
| 6 | | 2.908 | 9.888 | 34.880 | 44.768 | -29.232 | 74.000 | AVERAGE |

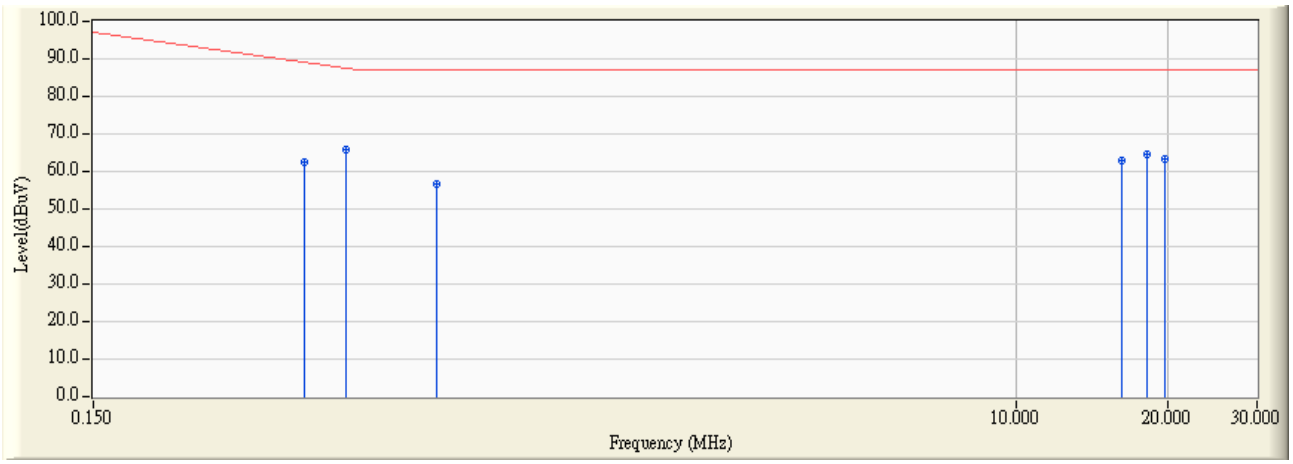
Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:45** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2, ISN 100Mbps** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/04 - 23:45** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2, ISN 100Mbps** |

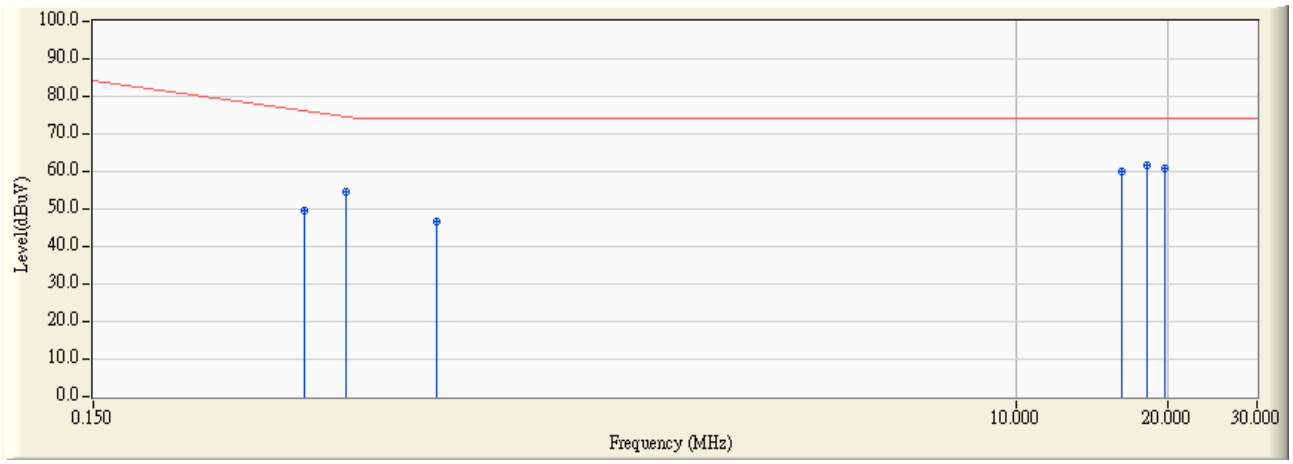



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.391 | 10.131 | 52.230 | 62.360 | -27.754 | 90.114 | QUASIPEAK |
| 2 | * | 0.474 | 10.065 | 55.920 | 65.985 | -21.758 | 87.743 | QUASIPEAK |
| 3 | | 0.716 | 10.003 | 46.490 | 56.493 | -30.507 | 87.000 | QUASIPEAK |
| 4 | | 16.228 | 9.955 | 52.960 | 62.915 | -24.085 | 87.000 | QUASIPEAK |
| 5 | | 18.244 | 10.024 | 54.360 | 64.384 | -22.616 | 87.000 | QUASIPEAK |
| 6 | | 19.709 | 10.078 | 53.420 | 63.498 | -23.502 | 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 : SR1** | **Time : 2012/09/04 - 23:45** |
| **Limit : ISN_Voltage_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2, ISN 100Mbps** |

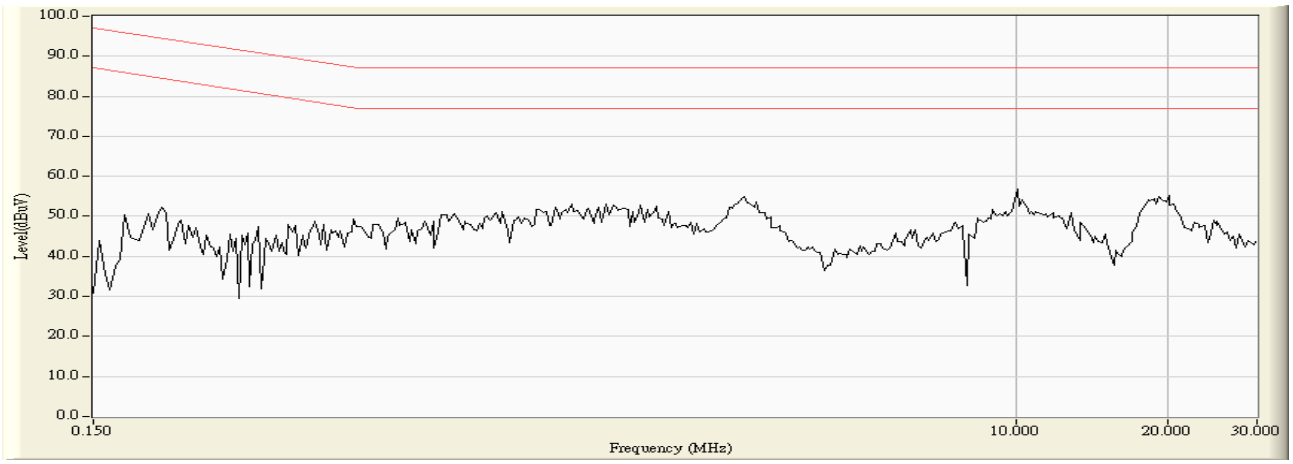



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.391 | 10.131 | 39.390 | 49.520 | -27.594 | 77.114 | AVERAGE |
| 2 | | 0.474 | 10.065 | 44.580 | 54.645 | -20.098 | 74.743 | AVERAGE |
| 3 | | 0.716 | 10.003 | 36.680 | 46.683 | -27.317 | 74.000 | AVERAGE |
| 4 | | 16.228 | 9.955 | 50.100 | 60.055 | -13.945 | 74.000 | AVERAGE |
| 5 | * | 18.244 | 10.024 | 51.540 | 61.564 | -12.436 | 74.000 | AVERAGE |
| 6 | | 19.709 | 10.078 | 50.550 | 60.628 | -13.372 | 74.000 | AVERAGE |

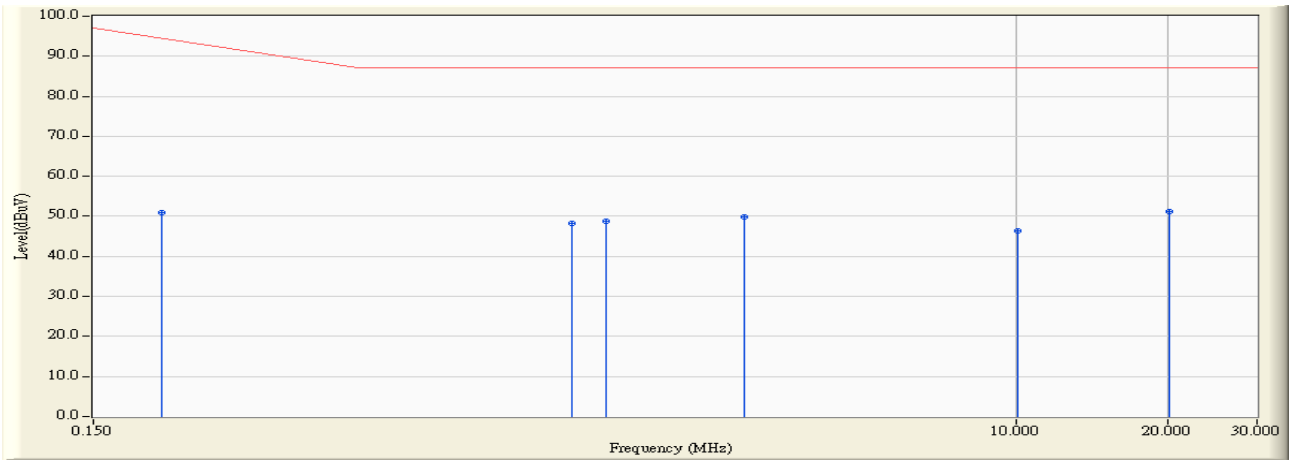
Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/06 - 00:48** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : By PoE** | **Note : Mode 3, ISN 10Mbps** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/06 - 00:50** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : By PoE** | **Note : Mode 3, ISN 10Mbps** |

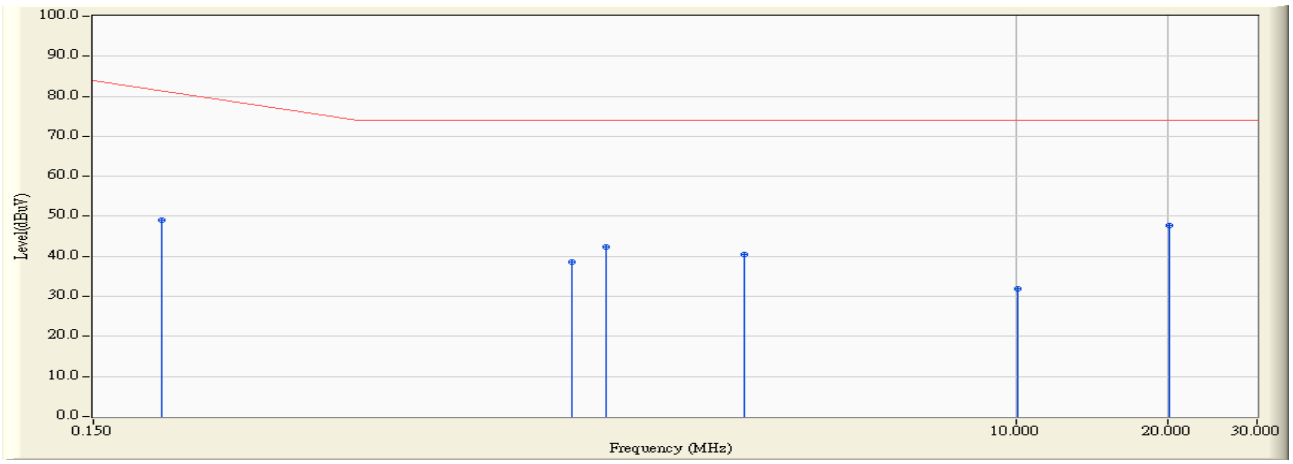



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.205 | 10.294 | 40.670 | 50.964 | -44.465 | 95.429 | QUASIPEAK |
| 2 | | 1.326 | 9.926 | 38.340 | 48.266 | -38.734 | 87.000 | QUASIPEAK |
| 3 | | 1.545 | 9.907 | 38.880 | 48.787 | -38.213 | 87.000 | QUASIPEAK |
| 4 | | 2.904 | 9.889 | 39.970 | 49.860 | -37.140 | 87.000 | QUASIPEAK |
| 5 | | 10.072 | 9.910 | 36.470 | 46.380 | -40.620 | 87.000 | QUASIPEAK |
| 6 | * | 20.158 | 10.080 | 41.050 | 51.130 | -35.870 | 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 : SR1** | **Time : 2012/09/06 - 00:50** |
| **Limit : ISN_Voltage_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : By PoE** | **Note : Mode 3, ISN 10Mbps** |

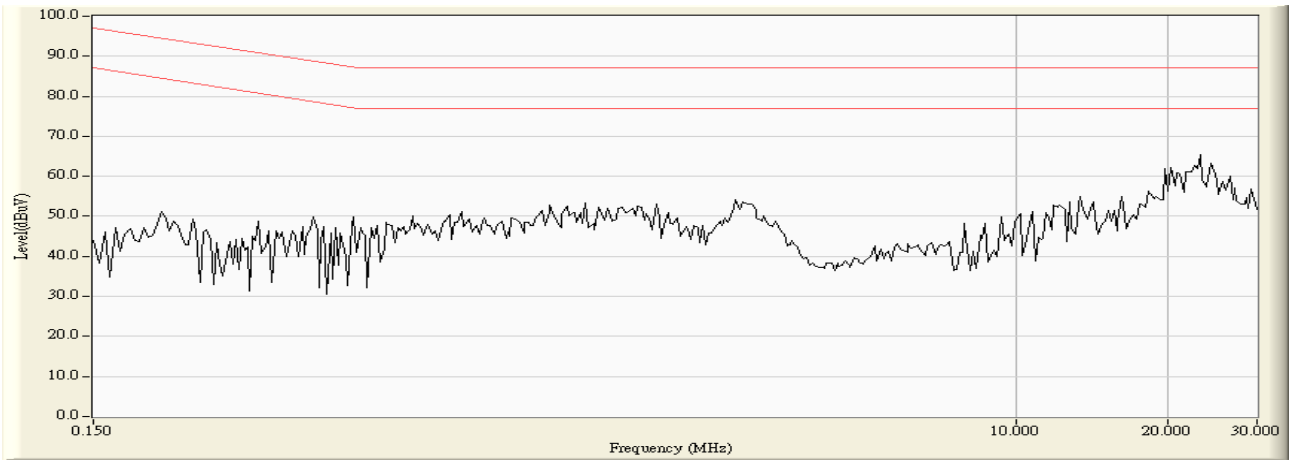



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 0.205 | 10.294 | 38.700 | 48.994 | -33.435 | 82.429 | AVERAGE |
| 2 | | 1.326 | 9.926 | 28.770 | 38.696 | -35.304 | 74.000 | AVERAGE |
| 3 | | 1.545 | 9.907 | 32.500 | 42.407 | -31.593 | 74.000 | AVERAGE |
| 4 | | 2.904 | 9.889 | 30.510 | 40.400 | -33.600 | 74.000 | AVERAGE |
| 5 | | 10.072 | 9.910 | 21.880 | 31.790 | -42.210 | 74.000 | AVERAGE |
| 6 | * | 20.158 | 10.080 | 37.570 | 47.650 | -26.350 | 74.000 | AVERAGE |

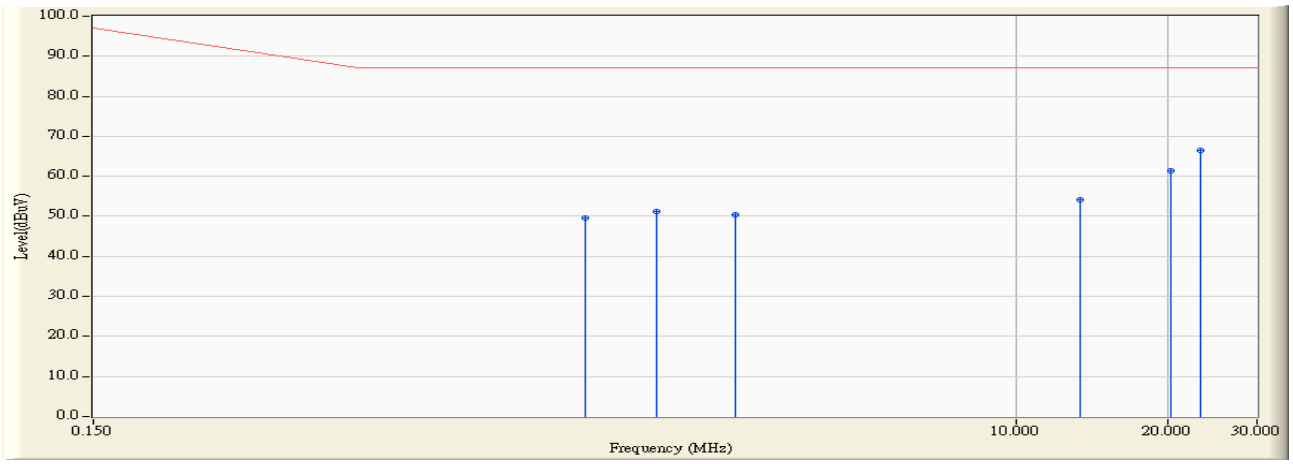
Note:

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

| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/06 - 00:51** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 10** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : By PoE** | **Note : Mode 3, ISN 100Mbps** |



| | |
|---|---|
| **Site : SR1** | **Time : 2012/09/06 - 00:53** |
| **Limit : ISN_Voltage_A_00M_QP** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : By PoE** | **Note : Mode 3, ISN 100Mbps** |

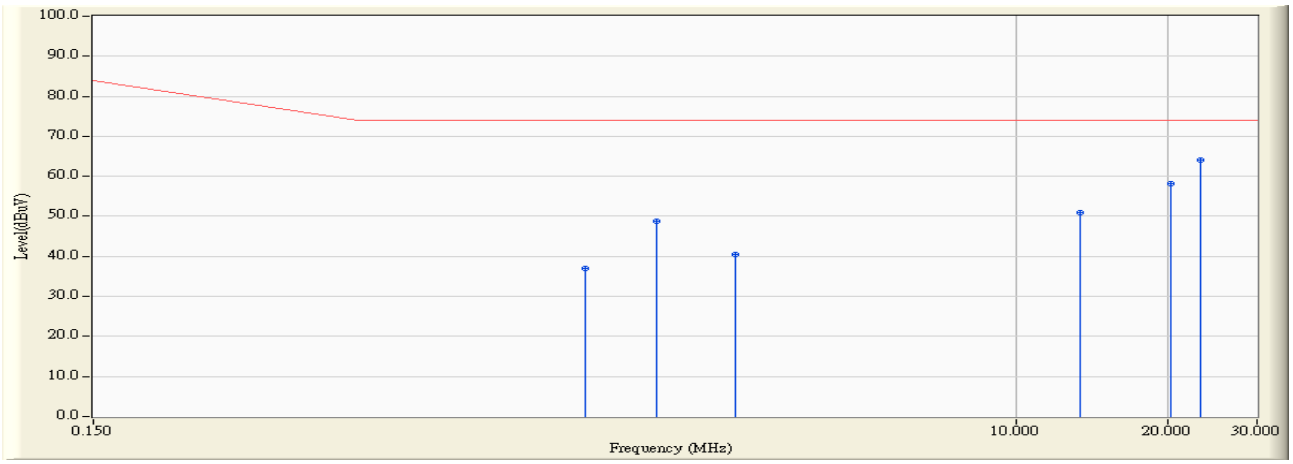



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1.408 | 9.916 | 39.640 | 49.556 | -37.444 | 87.000 | QUASIPEAK |
| 2 | | 1.953 | 9.879 | 41.370 | 51.249 | -35.751 | 87.000 | QUASIPEAK |
| 3 | | 2.795 | 9.889 | 40.580 | 50.469 | -36.531 | 87.000 | QUASIPEAK |
| 4 | | 13.420 | 9.921 | 44.210 | 54.131 | -32.869 | 87.000 | QUASIPEAK |
| 5 | | 20.259 | 10.087 | 51.440 | 61.527 | -25.473 | 87.000 | QUASIPEAK |
| 6 | * | 23.129 | 10.140 | 56.420 | 66.560 | -20.440 | 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 : SR1** | **Time : 2012/09/06 - 00:53** |
| **Limit : ISN_Voltage_A_00M_AV** | **Margin : 0** |
| **EUT : Network Camera** | **Probe : TESEQ_T8 - Line1** |
| **Power : By PoE** | **Note : Mode 3, ISN 100Mbps** |




| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV) | Margin (dB) | Limit (dBuV) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1.408 | 9.916 | 27.020 | 36.936 | -37.064 | 74.000 | AVERAGE |
| 2 | | 1.953 | 9.879 | 38.950 | 48.829 | -25.171 | 74.000 | AVERAGE |
| 3 | | 2.795 | 9.889 | 30.620 | 40.509 | -33.491 | 74.000 | AVERAGE |
| 4 | | 13.420 | 9.921 | 40.990 | 50.911 | -23.089 | 74.000 | AVERAGE |
| 5 | | 20.259 | 10.087 | 48.220 | 58.307 | -15.693 | 74.000 | AVERAGE |
| 6 | * | 23.129 | 10.140 | 54.010 | 64.150 | -9.850 | 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: AC 24V

Description : Front View of ISN Test

Test Mode : Mode 1: AC 24V

Description : Back View of ISN Test

Test Mode : Mode 2: DC 12V

Description : Front View of ISN Test

Test Mode : Mode 2: DC 12V

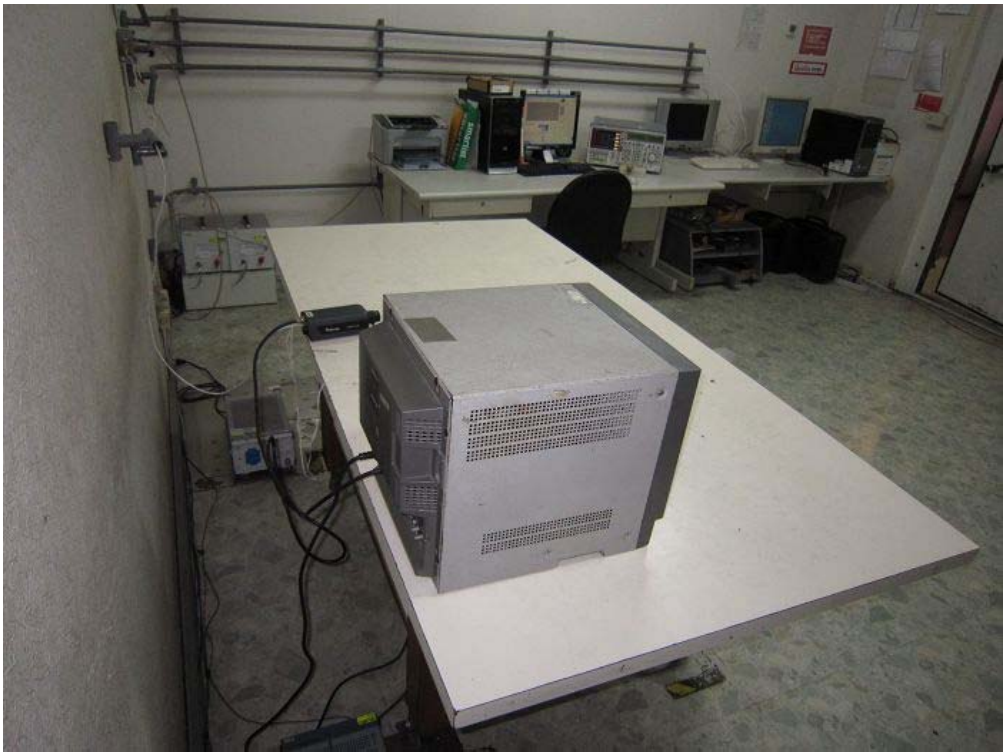
Description : Back View of ISN Test

Test Mode : Mode 3: PoE

Description : Front View of ISN Test

Test Mode : Mode 3: PoE

Description : Back View of ISN Test



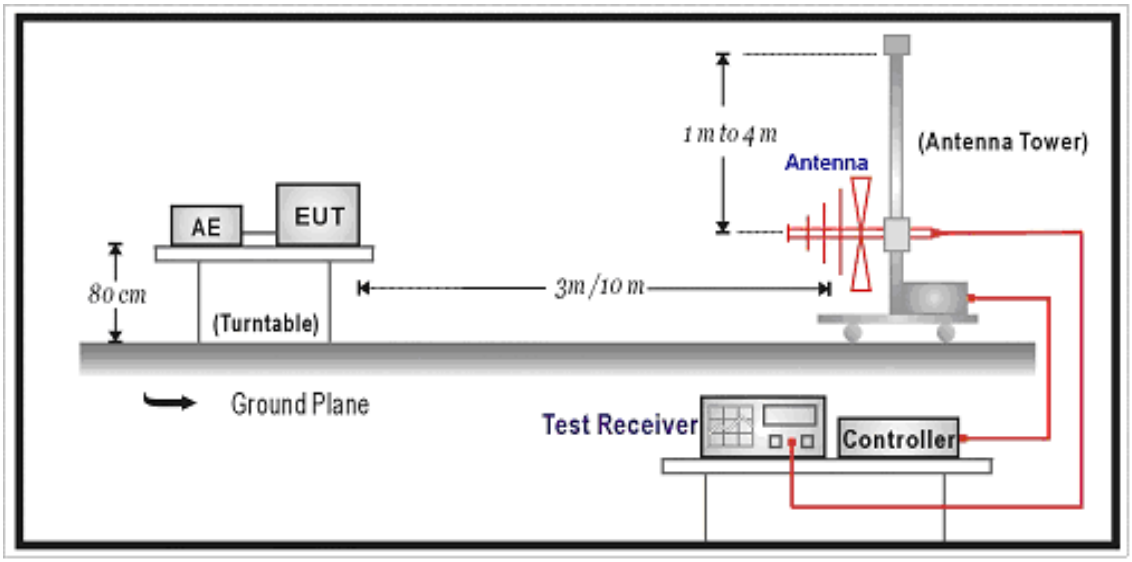
# 5. Radiated Emission

## 5.1. Test Specification

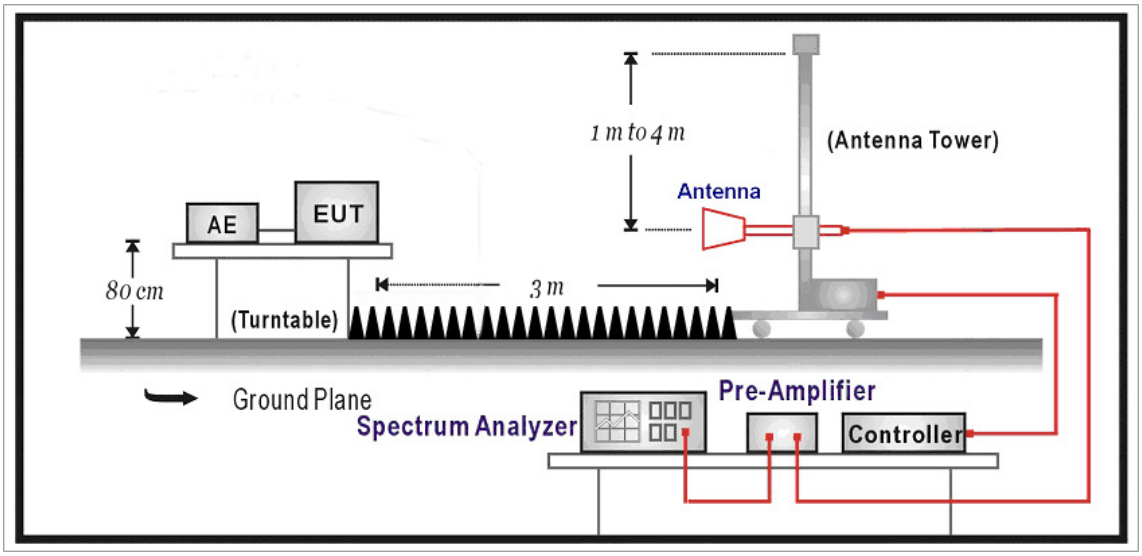
According to EMC Standard : VCCI

## 5.2. Test Setup

Under 1GHz Test Setup:




Above 1GHz Test Setup:



## 5.3. Limit

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

| Limits | | | |
|---|---|---|---|
| Frequency (GHz) | Distance (m) | Peak (dBuV/m) | Average (dBuV/m) |
| 1 – 3 | 3 | 76 | 56 |
| 3 – 6 | 3 | 80 | 60 |

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

| Highest frequency generated or used in the device or on which the device operates or tunes (MHz) | Upper frequency of measurement range (MHz) |
|---|---|
| Below 108 | 1000 |
| 108 – 500 | 2000 |
| 500 – 1000 | 5000 |
| Above 1000 | $5^{th}$ harmonic of the highest frequency or 6 GHz, whichever is lower |

## 5.4. Test Procedure

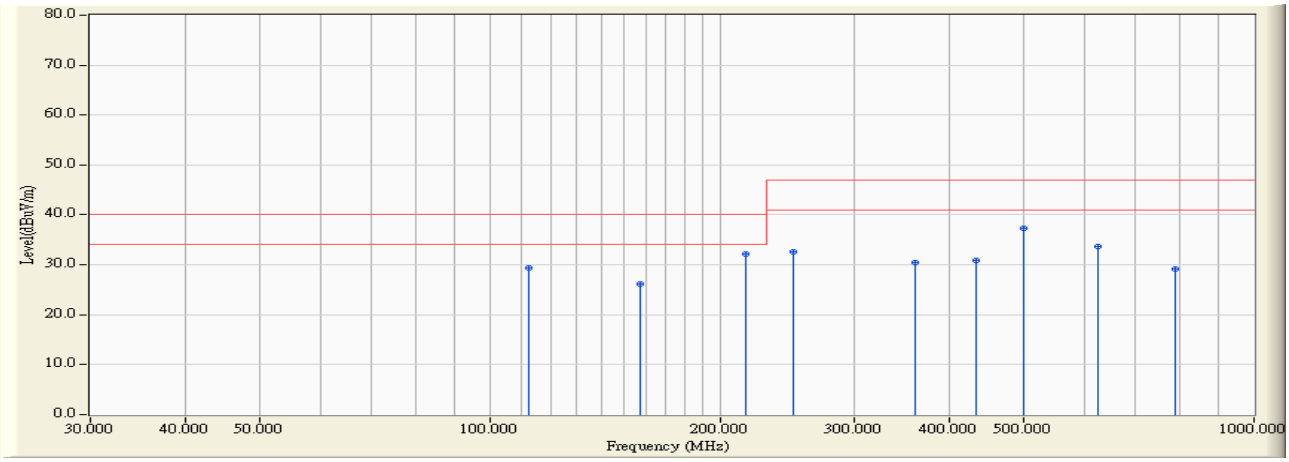
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
The EUT was positioned such that the distance from antenna to the EUT was 10 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
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 invested over the frequency range from 30MHz to1GHz using a receiver bandwidth of 120kHz and above 1GHz using a receiver bandwidth of 1MHz.
30MHz to1GHz Radiated was performed at an antenna to EUT distance of 10 meters.
Above 1GHz Radiated was performed at an antenna to EUT distance of 3 meters.
It is placed with absorb on the ground between EUT and Antenna.

## 5.5. Deviation from Test Standard

No deviation.

## 5.6. Test Result

| | |
|---|---|
| **Site : Site7** | **Time : 2012/09/04 - 09:02** |
| **Limit : CISPR_A_10M_QP** | **Margin : 6** |
| **EUT : Network Camera** | **Probe : Site7_CBL6112_10M_1207 - HORIZONTAL** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1** |

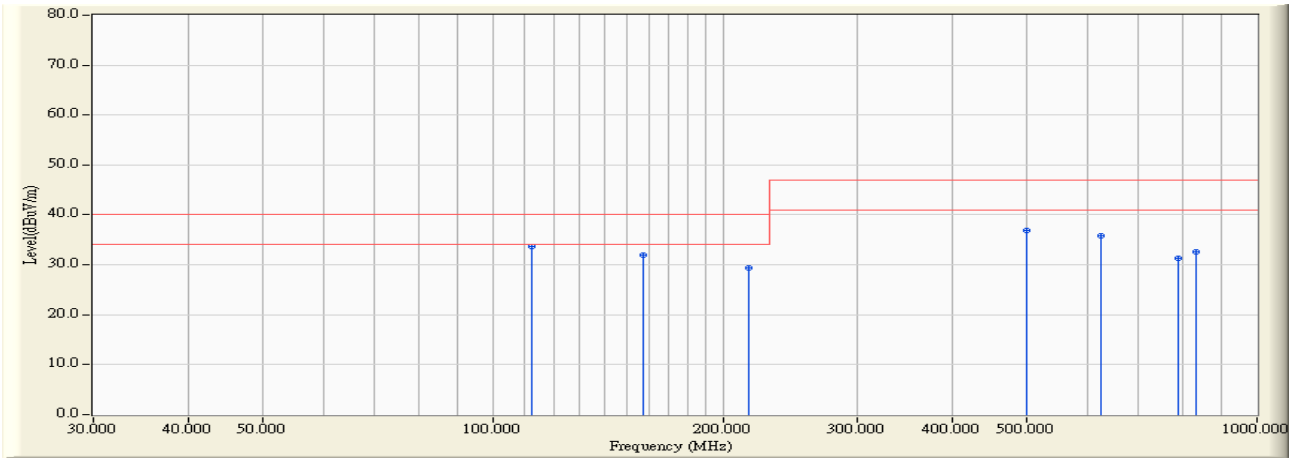



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 112.504 | -18.597 | 47.986 | 29.389 | -10.611 | 40.000 | QUASIPEAK |
| 2 | | 157.491 | -19.708 | 45.781 | 26.073 | -13.927 | 40.000 | QUASIPEAK |
| 3 | * | 216.004 | -19.899 | 52.032 | 32.133 | -7.867 | 40.000 | QUASIPEAK |
| 4 | | 250.001 | -16.104 | 48.599 | 32.495 | -14.505 | 47.000 | QUASIPEAK |
| 5 | | 359.991 | -12.842 | 43.367 | 30.525 | -16.475 | 47.000 | QUASIPEAK |
| 6 | | 431.992 | -10.243 | 41.226 | 30.983 | -16.017 | 47.000 | QUASIPEAK |
| 7 | | 500.001 | -8.699 | 46.044 | 37.345 | -9.655 | 47.000 | QUASIPEAK |
| 8 | | 624.995 | -6.346 | 40.093 | 33.747 | -13.253 | 47.000 | QUASIPEAK |
| 9 | | 787.522 | -3.990 | 33.136 | 29.146 | -17.854 | 47.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : Site7** | **Time : 2012/09/04 - 09:20** |
| **Limit : CISPR_A_10M_QP** | **Margin : 6** |
| **EUT : Network Camera** | **Probe : Site7_CBL6112_10M_1207 - VERTICAL** |
| **Power : AC 100V/50Hz to AC 24V** | **Note : Mode 1** |

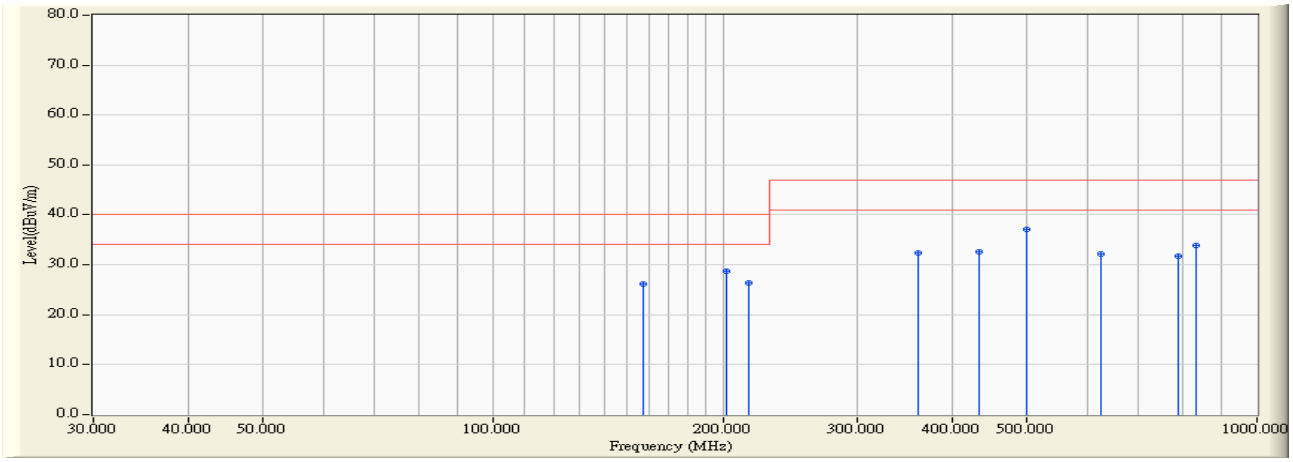



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 112.502 | -18.597 | 52.350 | 33.753 | -6.247 | 40.000 | QUASIPEAK |
| 2 | | 157.504 | -19.708 | 51.714 | 32.006 | -7.994 | 40.000 | QUASIPEAK |
| 3 | | 215.995 | -19.899 | 49.324 | 29.425 | -10.575 | 40.000 | QUASIPEAK |
| 4 | | 499.992 | -8.699 | 45.593 | 36.894 | -10.106 | 47.000 | QUASIPEAK |
| 5 | | 624.991 | -6.346 | 42.082 | 35.736 | -11.264 | 47.000 | QUASIPEAK |
| 6 | | 787.522 | -3.990 | 35.255 | 31.265 | -15.735 | 47.000 | QUASIPEAK |
| 7 | | 832.524 | -3.317 | 35.986 | 32.669 | -14.331 | 47.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : Site7** | **Time : 2012/09/04 - 10:10** |
| **Limit : CISPR_A_10M_QP** | **Margin : 6** |
| **EUT : Network Camera** | **Probe : Site7_CBL6112_10M_1207 - HORIZONTAL** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2** |

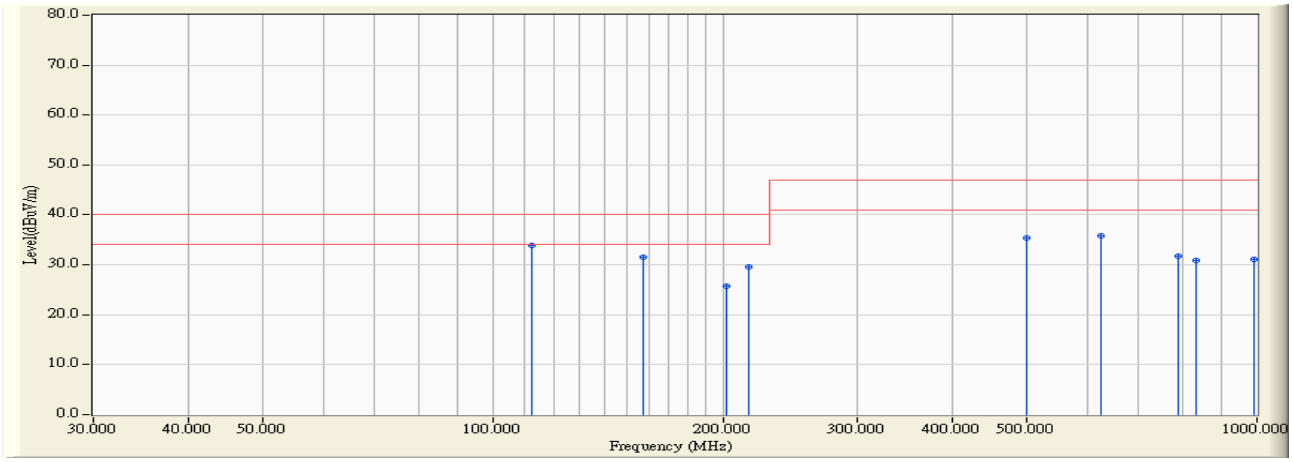



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 157.514 | -19.708 | 45.839 | 26.131 | -13.869 | 40.000 | QUASIPEAK |
| 2 | | 202.495 | -20.111 | 48.805 | 28.694 | -11.306 | 40.000 | QUASIPEAK |
| 3 | | 216.003 | -19.899 | 46.201 | 26.302 | -13.698 | 40.000 | QUASIPEAK |
| 4 | | 360.000 | -12.842 | 45.157 | 32.315 | -14.685 | 47.000 | QUASIPEAK |
| 5 | | 432.003 | -10.243 | 42.925 | 32.682 | -14.318 | 47.000 | QUASIPEAK |
| 6 | * | 500.004 | -8.699 | 45.880 | 37.181 | -9.819 | 47.000 | QUASIPEAK |
| 7 | | 624.992 | -6.346 | 38.488 | 32.142 | -14.858 | 47.000 | QUASIPEAK |
| 8 | | 787.524 | -3.990 | 35.778 | 31.788 | -15.212 | 47.000 | QUASIPEAK |
| 9 | | 832.522 | -3.317 | 37.253 | 33.936 | -13.064 | 47.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : Site7** | **Time : 2012/09/04 - 10:30** |
| **Limit : CISPR_A_10M_QP** | **Margin : 6** |
| **EUT : Network Camera** | **Probe : Site7_CBL6112_10M_1207 - VERTICAL** |
| **Power : AC 100V/50Hz to DC 12V** | **Note : Mode 2** |

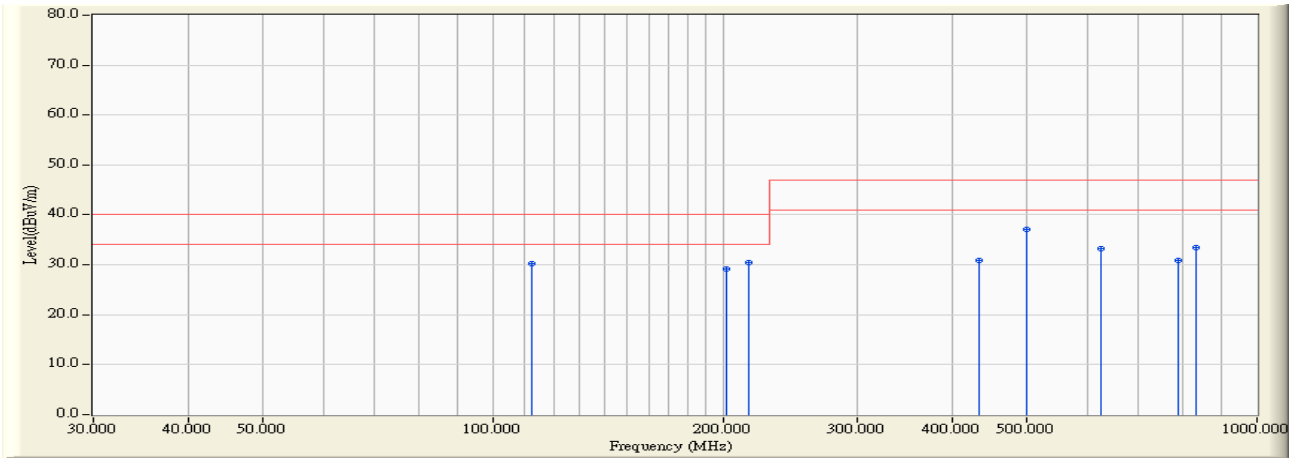



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 112.491 | -18.597 | 52.436 | 33.839 | -6.161 | 40.000 | QUASIPEAK |
| 2 | | 157.491 | -19.708 | 51.133 | 31.425 | -8.575 | 40.000 | QUASIPEAK |
| 3 | | 202.504 | -20.111 | 45.915 | 25.804 | -14.196 | 40.000 | QUASIPEAK |
| 4 | | 215.995 | -19.899 | 49.472 | 29.573 | -10.427 | 40.000 | QUASIPEAK |
| 5 | | 500.002 | -8.699 | 44.080 | 35.381 | -11.619 | 47.000 | QUASIPEAK |
| 6 | | 624.992 | -6.346 | 42.067 | 35.721 | -11.279 | 47.000 | QUASIPEAK |
| 7 | | 787.515 | -3.990 | 35.746 | 31.756 | -15.244 | 47.000 | QUASIPEAK |
| 8 | | 832.512 | -3.317 | 34.300 | 30.983 | -16.017 | 47.000 | QUASIPEAK |
| 9 | | 990.005 | -1.490 | 32.664 | 31.174 | -15.826 | 47.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : Site7** | **Time : 2012/09/04 - 11:33** |
| **Limit : CISPR_A_10M_QP** | **Margin : 6** |
| **EUT : Network Camera** | **Probe : Site7_CBL6112_10M_1207 - HORIZONTAL** |
| **Power : By PoE** | **Note : Mode 3** |

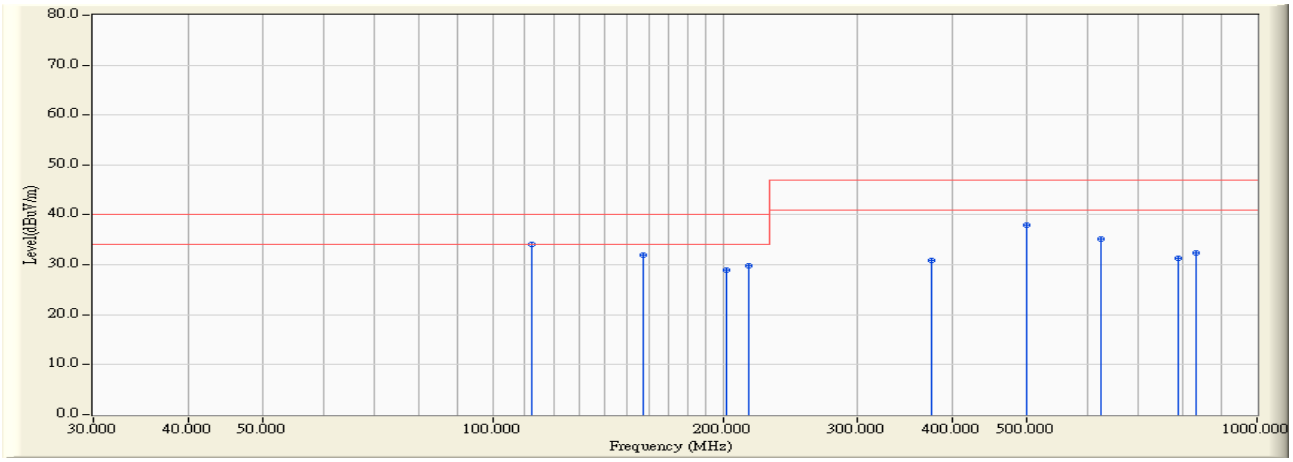



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 112.503 | -18.597 | 48.792 | 30.195 | -9.805 | 40.000 | QUASIPEAK |
| 2 | | 202.491 | -20.111 | 49.385 | 29.274 | -10.726 | 40.000 | QUASIPEAK |
| 3 | * | 216.005 | -19.899 | 50.383 | 30.484 | -9.516 | 40.000 | QUASIPEAK |
| 4 | | 432.000 | -10.243 | 41.051 | 30.808 | -16.192 | 47.000 | QUASIPEAK |
| 5 | | 499.993 | -8.699 | 45.715 | 37.016 | -9.984 | 47.000 | QUASIPEAK |
| 6 | | 625.000 | -6.346 | 39.506 | 33.160 | -13.840 | 47.000 | QUASIPEAK |
| 7 | | 787.513 | -3.990 | 34.968 | 30.978 | -16.022 | 47.000 | QUASIPEAK |
| 8 | | 832.521 | -3.317 | 36.734 | 33.417 | -13.583 | 47.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site : Site7** | **Time : 2012/09/04 - 11:58** |
| **Limit : CISPR_A_10M_QP** | **Margin : 6** |
| **EUT : Network Camera** | **Probe : Site7_CBL6112_10M_1207 - VERTICAL** |
| **Power : By PoE** | **Note : Mode 3** |

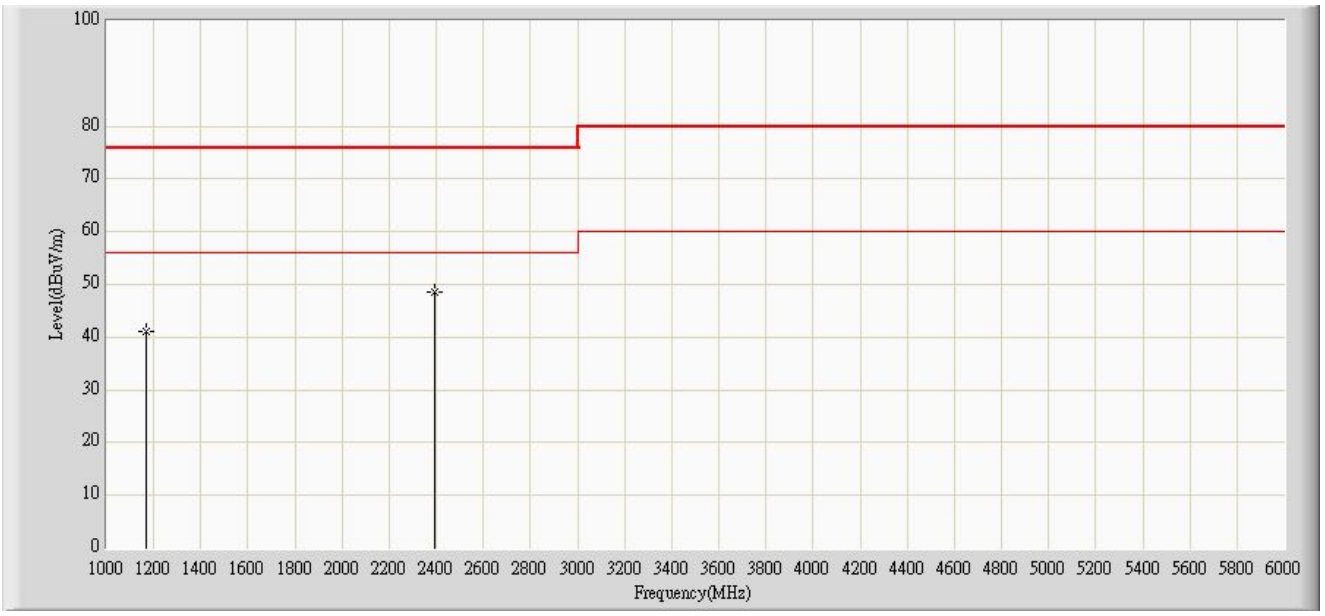



| | | Frequency (MHz) | Correct Factor (dB) | Reading Level (dBuV) | Measure Level (dBuV/m) | Margin (dB) | Limit (dBuV/m) | Detector Type |
|---|---|---|---|---|---|---|---|---|
| 1 | * | 112.492 | -18.597 | 52.676 | 34.079 | -5.921 | 40.000 | QUASIPEAK |
| 2 | | 157.511 | -19.708 | 51.643 | 31.935 | -8.065 | 40.000 | QUASIPEAK |
| 3 | | 202.504 | -20.111 | 49.097 | 28.986 | -11.014 | 40.000 | QUASIPEAK |
| 4 | | 215.995 | -19.899 | 49.670 | 29.771 | -10.229 | 40.000 | QUASIPEAK |
| 5 | | 375.002 | -12.226 | 43.065 | 30.839 | -16.161 | 47.000 | QUASIPEAK |
| 6 | | 499.994 | -8.699 | 46.558 | 37.859 | -9.141 | 47.000 | QUASIPEAK |
| 7 | | 625.001 | -6.346 | 41.527 | 35.181 | -11.819 | 47.000 | QUASIPEAK |
| 8 | | 787.522 | -3.990 | 35.248 | 31.258 | -15.742 | 47.000 | QUASIPEAK |
| 9 | | 832.522 | -3.317 | 35.779 | 32.462 | -14.538 | 47.000 | QUASIPEAK |

Note:

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

| | |
|---|---|
| **Site: CB7** | **Time: 2012/09/05 - 22:30** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Horizontal** |
| **EUT: Network Camera** | **Power: AC 100V/50Hz to AC 24V** |
| **Note: Mode 1** | |

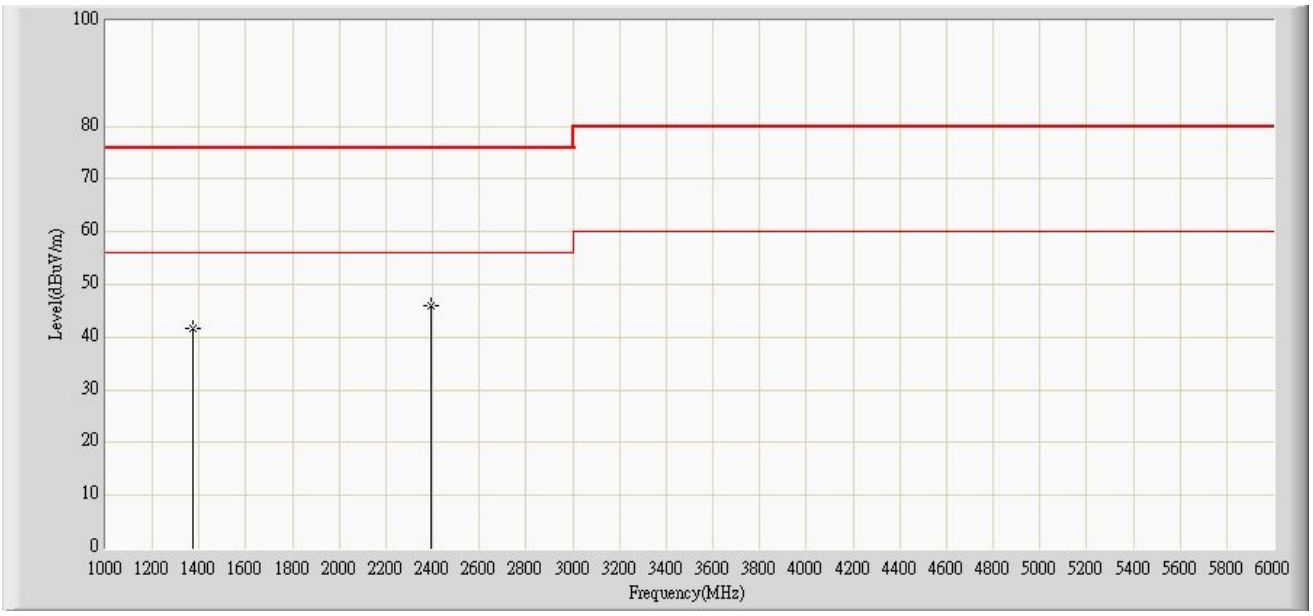



| | | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1170.000 | 41.210 | 43.550 | -34.790 | 76.000 | -2.340 | PK |
| 2 | * | 2391.000 | 48.703 | 46.220 | -27.297 | 76.000 | 2.483 | PK |

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: CB7** | **Time: 2012/09/05 - 22:34** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Vertical** |
| **EUT: Network Camera** | **Power: AC 100V/50Hz to AC 24V** |
| **Note: Mode 1** | |

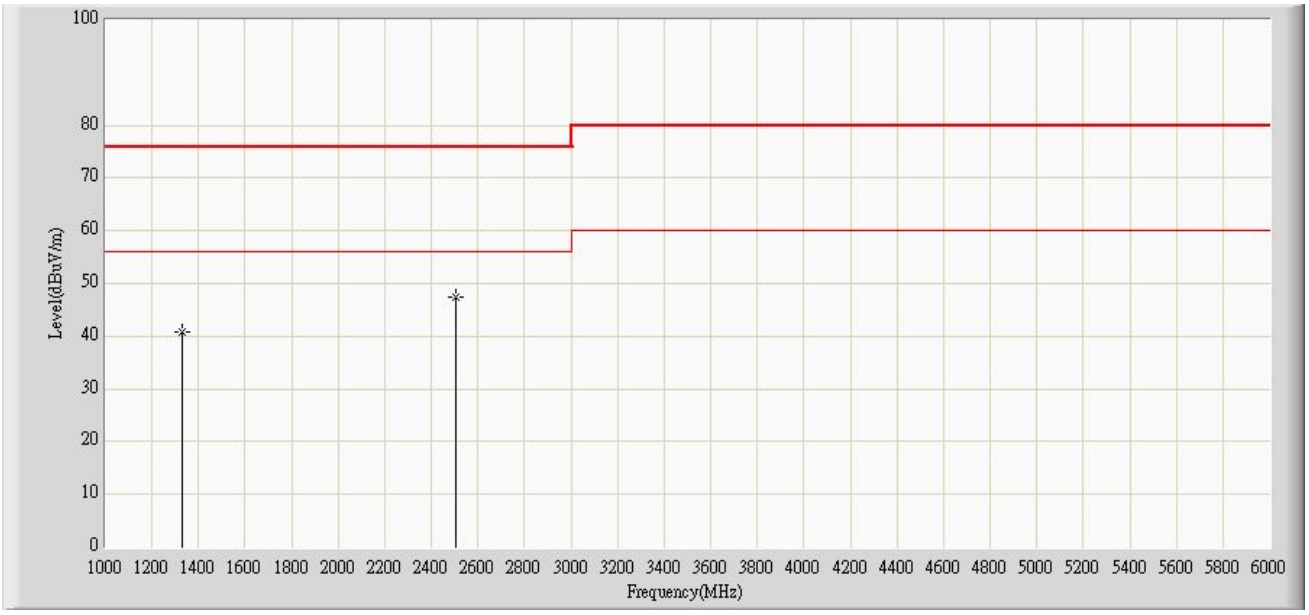



| | | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1372.000 | 41.579 | 43.720 | -34.421 | 76.000 | -2.141 | PK |
| 2 | * | 2390.000 | 46.031 | 43.550 | -29.969 | 76.000 | 2.481 | PK |

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: CB7** | **Time: 2012/09/05 - 02:14** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Horizontal** |
| **EUT: Network Camera** | **Power: AC 100V/50Hz to DC 12V** |
| **Note: Mode 2** | |

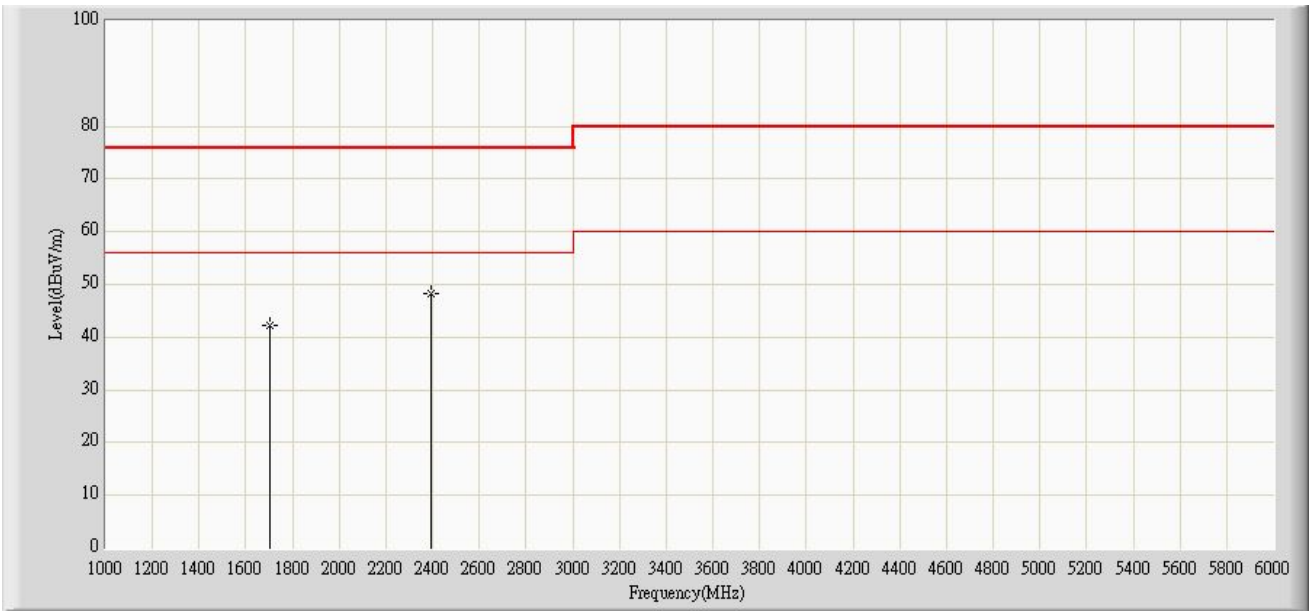



| | | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1331.000 | 40.664 | 42.840 | -35.336 | 76.000 | -2.175 | PK |
| 2 | * | 2503.000 | 47.476 | 44.770 | -28.524 | 76.000 | 2.706 | PK |

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: CB7** | **Time: 2012/09/05 - 02:17** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Vertical** |
| **EUT: Network Camera** | **Power: AC 100V/50Hz to DC 12V** |
| **Note: Mode 2** | |

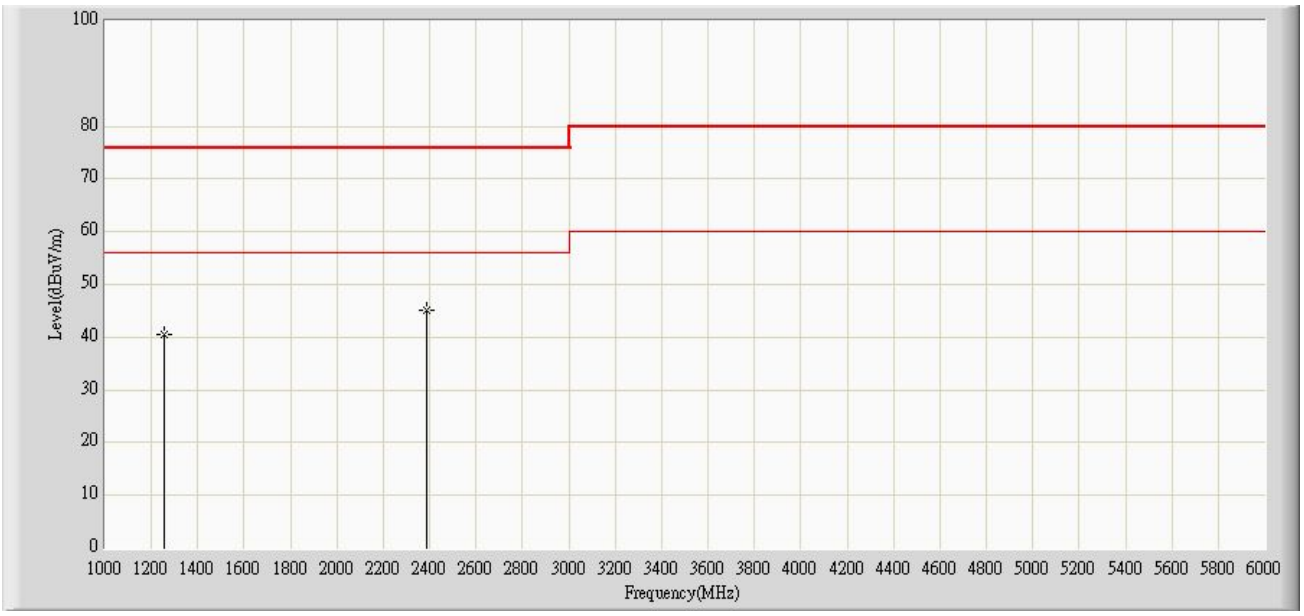



| | | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1701.000 | 42.231 | 42.740 | -33.769 | 76.000 | -0.510 | PK |
| 2 | * | 2396.000 | 48.304 | 45.810 | -27.696 | 76.000 | 2.494 | PK |

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: CB7** | **Time: 2012/09/05 - 02:27** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Horizontal** |
| **EUT: Network Camera** | **Power: By PoE** |
| **Note: Mode 3** | |

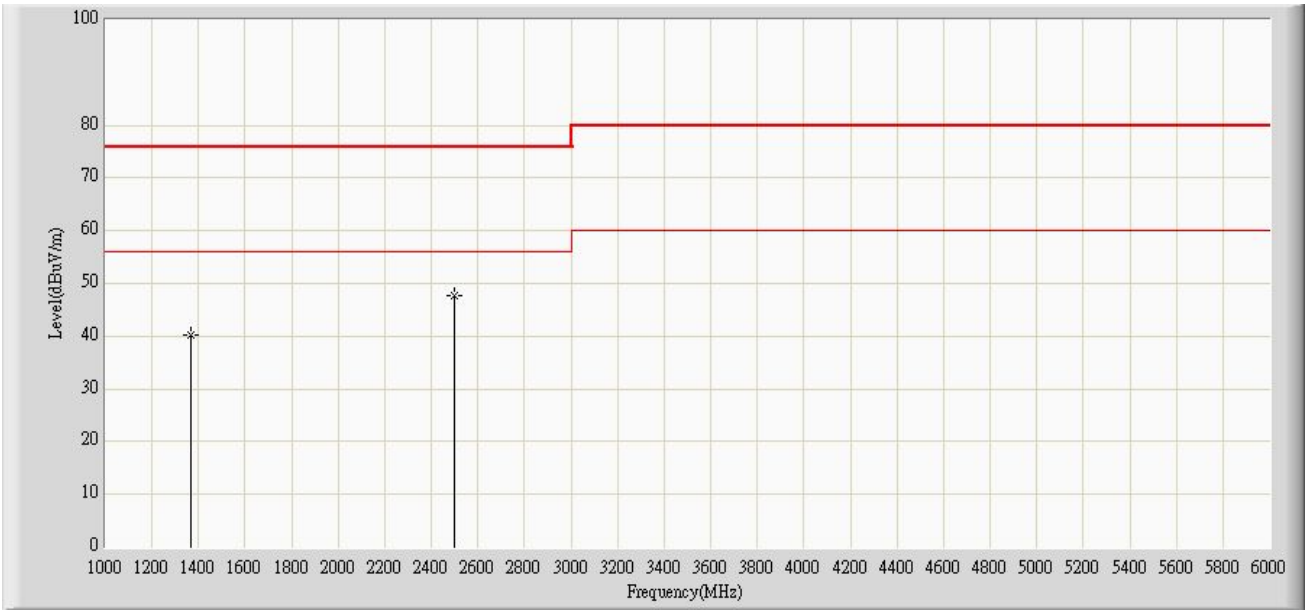



| | | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1256.000 | 40.541 | 42.790 | -35.459 | 76.000 | -2.249 | PK |
| 2 | * | 2388.000 | 45.166 | 42.690 | -30.834 | 76.000 | 2.475 | PK |

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: CB7** | **Time: 2012/09/05 - 02:29** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Vertical** |
| **EUT: Network Camera** | **Power: By PoE** |
| **Note: Mode 3** | |

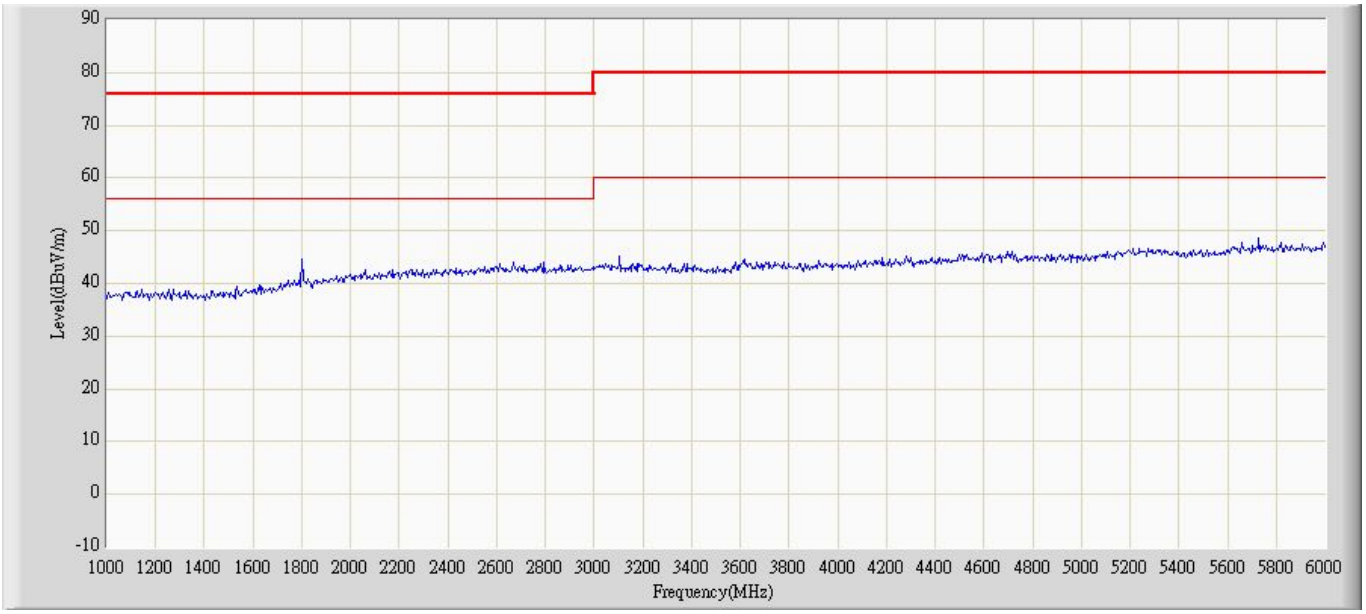



| | | Frequency (MHz) | Measure Level (dBuV/m) | Reading Level (dBuV) | Over Limit (dB) | Limit (dBuV/m) | Factor | Type |
|---|---|---|---|---|---|---|---|---|
| 1 | | 1366.000 | 40.155 | 42.300 | -35.845 | 76.000 | -2.145 | PK |
| 2 | * | 2501.000 | 47.622 | 44.920 | -28.378 | 76.000 | 2.702 | PK |

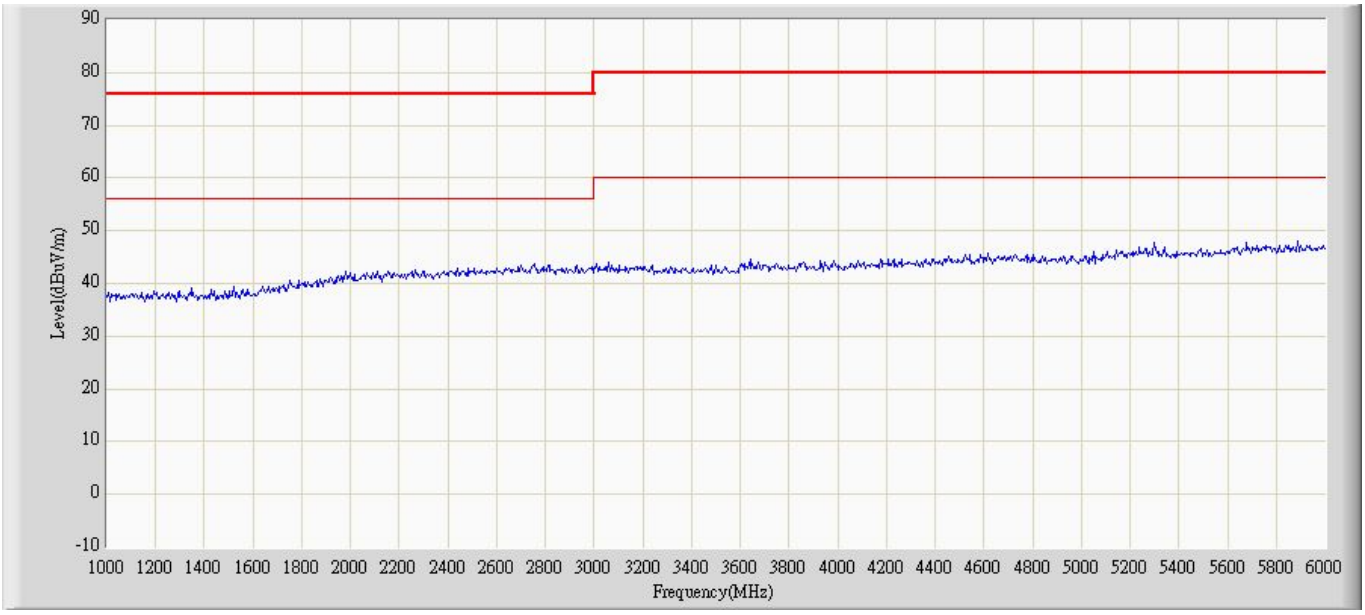
Note:

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).

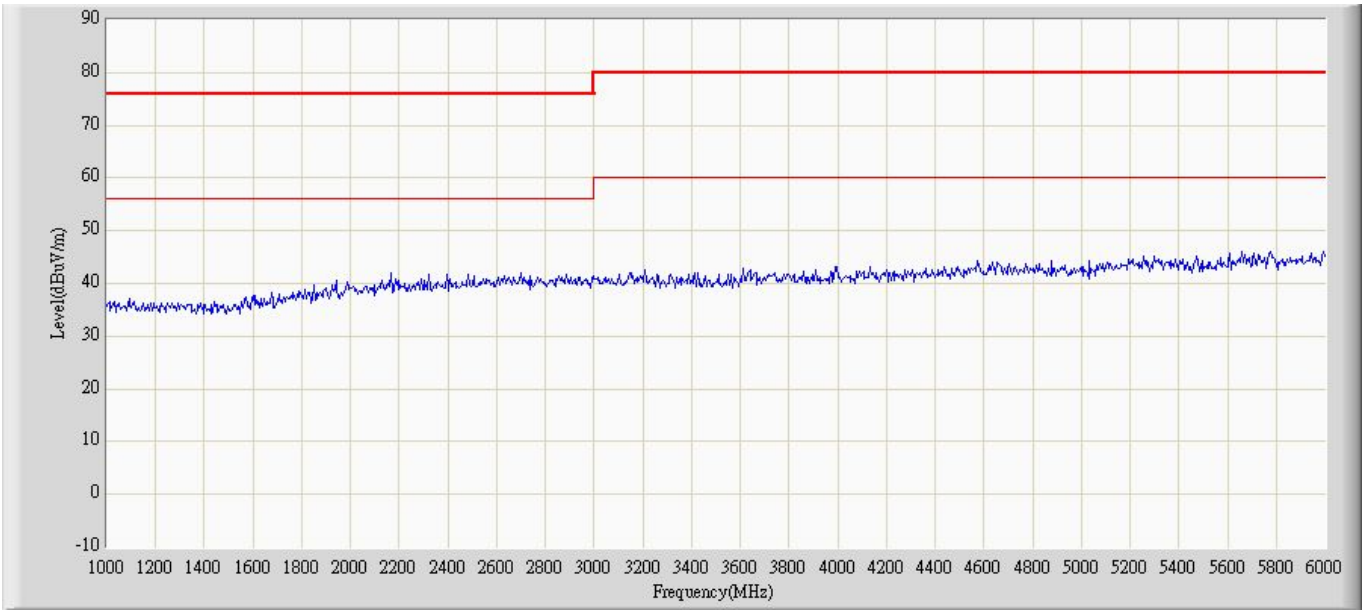
| | |
|---|---|
| **Site: CB7** | **Time: 2012/10/24 - 10:49** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Horizontal** |
| **EUT: Network Camera** | **Power: AC 100V/50Hz** |
| **Note: Mode 1** | |



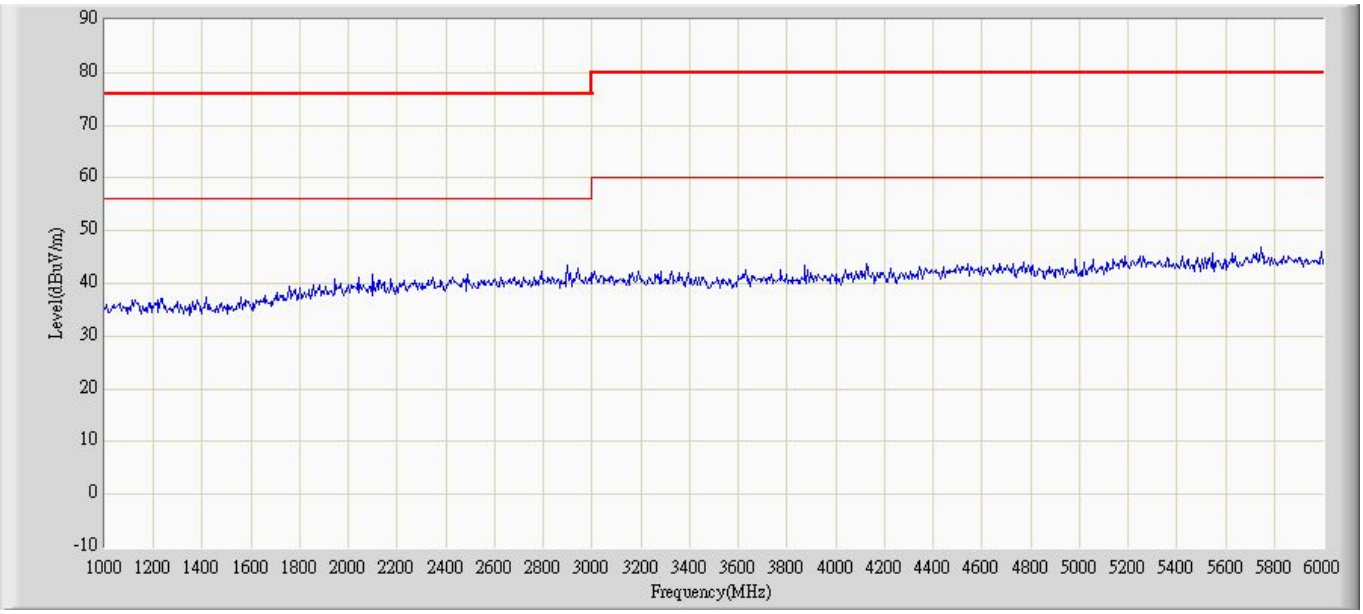
| | |
|---|---|
| **Site: CB7** | **Time: 2012/10/24 - 10:54** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Vertical** |
| **EUT: Network Camera** | **Power: AC 100V/50Hz** |
| **Note: Mode 1** | |



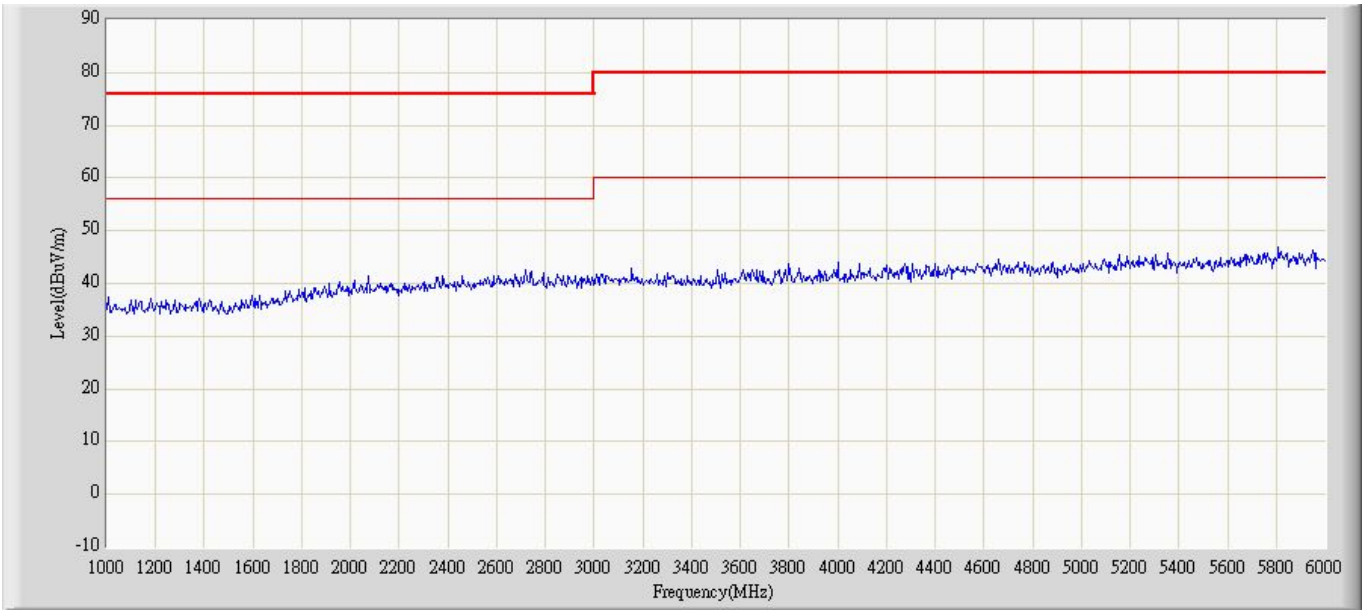
| | |
|---|---|
| **Site: CB7** | **Time: 2012/10/24 - 11:12** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Horizontal** |
| **EUT: Network Camera** | **Power: AC 100V/50Hz** |
| **Note: Mode 2** | |



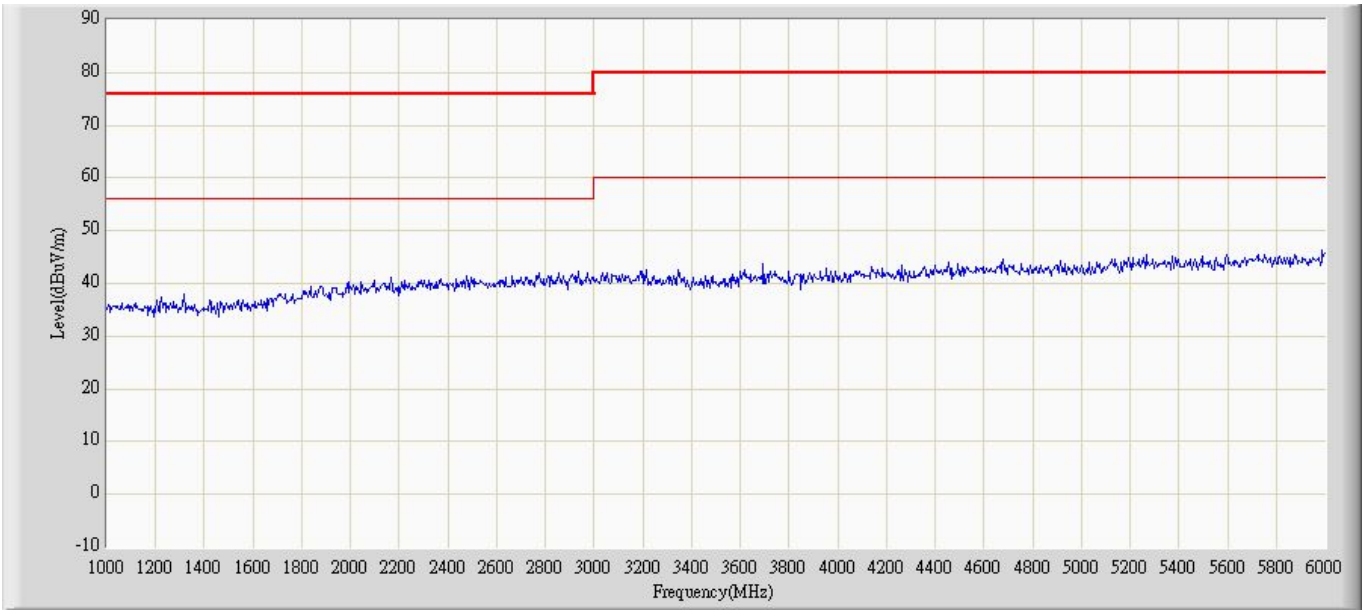
| | |
|---|---|
| **Site: CB7** | **Time: 2012/10/24 - 11:13** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Vertical** |
| **EUT: Network Camera** | **Power: AC 100V/50Hz** |
| **Note: Mode 2** | |



| | |
|---|---|
| **Site: CB7** | **Time: 2012/10/24 - 11:33** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Horizontal** |
| **EUT: Network Camera** | **Power: By POE** |
| **Note: Mode 3** | |



| | |
|---|---|
| **Site: CB7** | **Time: 2012/10/24 - 11:43** |
| **Limit: VCCI_A_(Above_1G)** | **Margin: 0** |
| **Probe: CB7_Horn_3117_1204** | **Polarity: Vertical** |
| **EUT: Network Camera** | **Power: By POE** |
| **Note: Mode 3** | |



## 5.7. Test Photograph

Test Mode : Mode 1: AC 24V

Description : Front View of Radiated Test

Test Mode : Mode 1: AC 24V

Description : Back View of Radiated Test

Test Mode : Mode 1: AC 24V

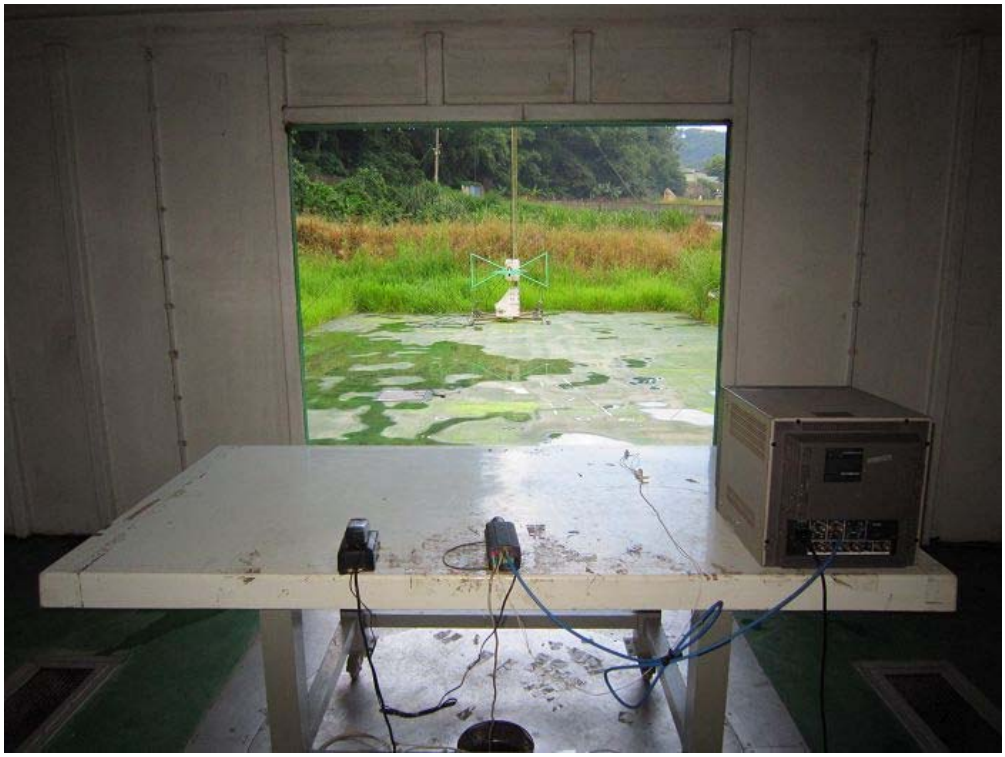
Description : Front View of High Frequency Radiated Test

Test Mode : Mode 2: DC 12V

Description : Front View of Radiated Test

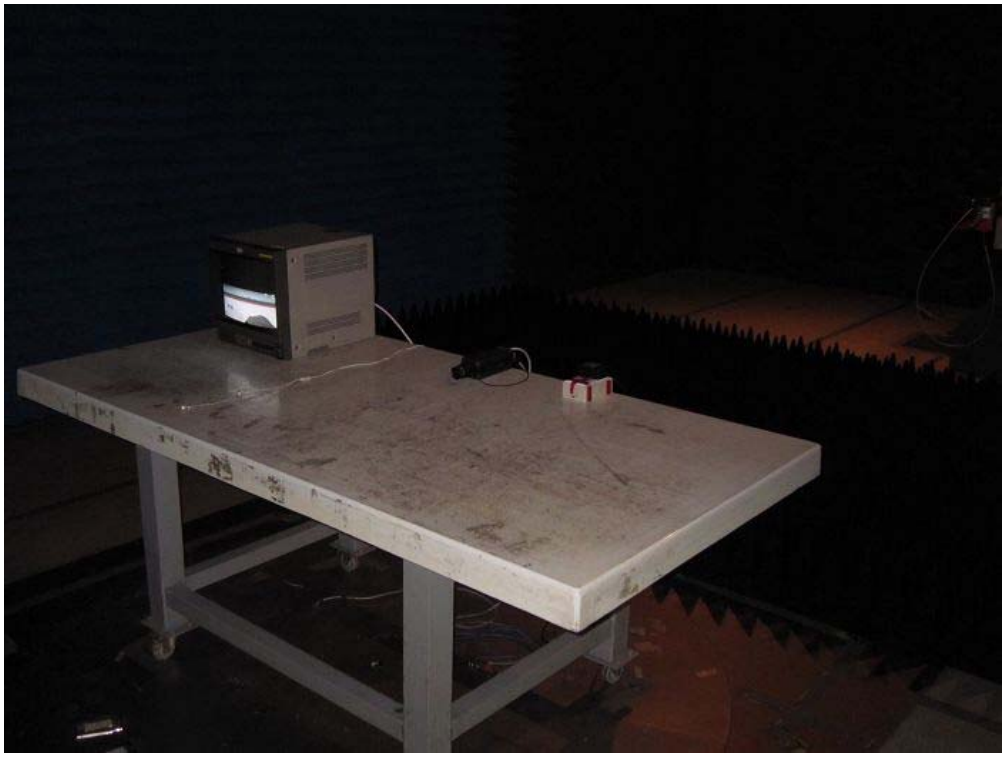
Test Mode : Mode 2: DC 12V

Description : Back View of Radiated Test



Test Mode : Mode 2: DC 12V

Description : Front View of High Frequency Radiated Test



Test Mode : Mode 3: PoE

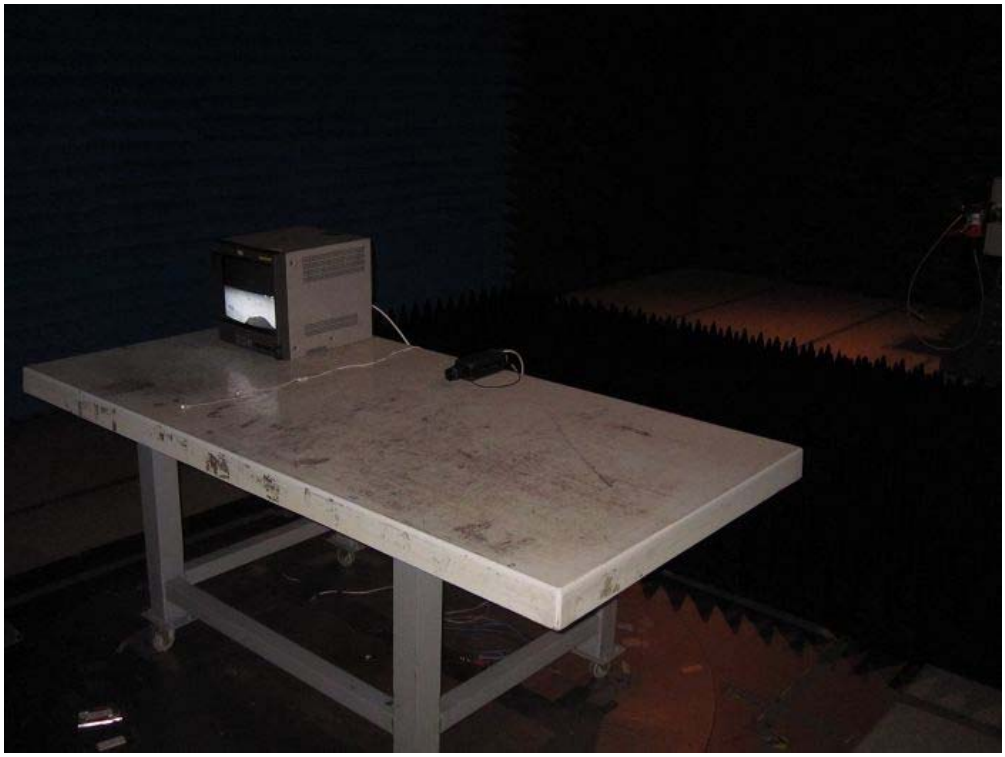
Description : Front View of Radiated Test

Test Mode : Mode 3: PoE

Description : Back View of Radiated Test

Test Mode : Mode 3: PoE

Description : Front View of High Frequency Radiated Test



## 6. Attachment

### ➢ EUT Photograph

(1) EUT Photo

(2) EUT Photo

(3) EUT Photo


(4) EUT Photo

(5) EUT Photo

(6) EUT Photo