# EMI TEST REPORT

## Test Report No. : 24JE0143-HO

| | | |
|---|---|---|
| **Applicant** | : | **Panasonic Communications Co.,Ltd.** |
| **Type of Equipment** | : | **Network Camera** |
| **Model No.** | : | **BL-C30A** |
| **Test standard** | : | **FCC Part 15 Subpart C : 2004**<br>**Section 15.207, Section 15.247** |
| **FCC ID** | : | **ACJ96NBL-C30A** |
| **Test Result** | : | **Complied** |

1. This test report shall not be reproduced in full or partial, without the written approval of UL Apex Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with above regulation. We hereby certify that the data contain a true representation of the EMC profile.
4. The test results in this report are traceable to the national or international standards.

**Date of test:** July 6 and 7, 2004

**Tested by:**

K. Adachi
Kenichi Adachi
EMC Service

Naoki Sakamoto
Group Leader of
EMC Service

**Approved by :**

Hironobu Shimoji
Group Leader of
EMC Service

**UL Apex Co., Ltd.**
**Head Office EMC Lab.**
**4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN**
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**Facsimile : +81 596 24 8124**

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## SECTION 1: Client information

| | | |
|---|---|---|
| Company Name | : | Panasonic Communications Co.,Ltd. |
| Address | : | 1-62, 4-chome, Minoshima, Hakata-ku, Fukuoka, Japan, 812-8531 |
| Telephone Number | : | +81-92-477-1405 |
| Facsimile Number | : | +81-92-477-1487 |
| Contact Person | : | Michihito Miyazaki |

## SECTION 2: Equipment under test (E.U.T.)

### 2.1 Identification of E.U.T.

| | | |
|---|---|---|
| Type of Equipment | : | Network Camera |
| Model No. | : | BL-C30A |
| Serial No. | : | ES1 |
| Rating | : | AC 120V |
| Country of Manufacture | : | Japan |
| Receipt Date of Sample | : | July 6, 2004 |
| Condition of EUT | : | Production prototype<br>(Not for Sale: This sample is equivalent to mass-produced items.) |

### 2.2 Product Description

Model No: BL-C30A(referred to as the EUT in this report) is the Wireless Network Camera.
Network Camera corresponds to the wireless system based on IEEE 802.11b and 802.11g.

System clock : 32.768kHz(RTC), 16.32MHz(RTC), 25MHz(LAN), 49.0MHz(LAN), 40MHz(RF)

**[W-LAN:IEEE802.11b,11g]**

| | | |
|---|---|---|
| Equipment Type | : | Transceiver |
| Frequency of operation | : | 2412-2462MHz |
| Transmission method | : | DSSS |
| Type of modulation | : | CCK(11b), OFDM(11g) |
| Bandwidth & Channel spacing | : | 5MHz |
| Transmit power | : | 16dBm (11b), 15dBm (11g) |
| Power control | : | Non |
| Mode of operation | : | Simplex |
| Antenna Gain | : | 2.8dBi |
| Antenna Connector Type | : | Hirose U.FL-R-SMT(10) |
| Operating voltage (inner) | : | DC 3.3V |

**FCC 15.31 (e)**
This EUT provides stable voltage(DC3.3V) constantly to RF Module regardless of input voltage. Therefore, this EUT complies with the requirement.

**FCC Part 15.203 Antenna requirement**
It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

# SECTION 3: Test specification, procedures & results

## 3.1 Test Specification

Test Specification : FCC Part15 Subpart C : 2004

Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz, and 5725-5850MHz

[**DSSS** and other forms of modulation ]

| No. | Item | Test Procedure | Specification | Remarks | Deviation | Worst margin | Results |
|---|---|---|---|---|---|---|---|
| 1 | Conducted emission | ANSI C63.4:2003 7. AC powerline conducted emission measurements | Section 15.207 | - | N/A | *See the worst margins(marked as shading) in the data sheet in APPENDIX 3 . . | Complied |
| 2 | 6dB Bandwidth | ANSI C63.4:2003 13. Measurement of intentional radiators | Section 15.247(a)(2) | Conducted | N/A | | Complied |
| 3 | Maximum Peak Output Power | ANSI C63.4:2003 13. Measurement of intentional radiators | Section 15.247(b)(3) | Conducted | N/A | | Complied |
| 4 | Spurious Emission | ANSI C63.4:2003 13. Measurement of intentional radiators | Section 15.247 (c) | Conducted/ Radiated | N/A | | Complied |
| 5 | Restricted Band Edges | ANSI C63.4:2003 13. Measurement of intentional radiators | Section 15.247 (c) | Conducted | N/A | | Complied |
| 6 | Power Density | ANSI C63.4:2003 13. Measurement of intentional radiators | Section 15.247 (d) | Conducted | N/A | | Complied |

Note: UL Apex's EMI Work Procedures No.QPM05.

**Uncertainty:**

*In case of the margin below the EMC Head Office's uncertainty.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.

Conducted Emission

The measurement uncertainty (with a 95% confidence level) for this test is ±1.3dB.

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ±4.5dB(3m)/ ±4.7dB(10m).
The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ±5.2dB(3m)/ ±3.8dB(10m).
The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is ±6.6dB.

Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test is ±3.0dB.

*These tests were also referred to "Guidance on Measurement for Digital Transmission Systems Section15.247".
*These tests were performed without any deviations from test procedure except for additions or exclusions.

### 3.3 Addition to standards

| No. | Item | Test Procedure | Specification | Remarks | Deviation | Worst margin | Results |
|---|---|---|---|---|---|---|---|
| 1 | 99% Occupied Band Width | RSS210(issue 5): 2001<br>+ Amendment:2002<br>+ Amendment2:2003<br>+ Amendment3:2004 | RSS210(issue 5): 2001<br>+ Amendment:2002<br>+ Amendment2:2003<br>+ Amendment3:2004 | Conducted | N/A | N/A | N/A |

### 3.4 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN
Telephone : +81 596 24 8116
Facsimile : +81 596 24 8124

| | Listed date (for FCC) | FCC Registration Number | IC Registration Number | Width x Depth x Height (m) | Size of reference ground plane (m) / horizontal conducting plane | Other rooms |
|---|---|---|---|---|---|---|
| No.1 semi-anechoic chamber | February 01, 2002 | 313583 | IC4247 | 19.2 x 11.2 x 7.7m | 7.0 x 6.0m | Preparation room |
| No.2 semi-anechoic chamber | June 05, 2002 | 846015 | IC4247-2 | 7.5 x 5.8 x 5.2m | 4.0 x 4.0m | - |
| No.3 shielded room | - | - | - | 4.7 x 7.5 x 2.7m | 4.7 x 7.5m | - |
| No.4 measurement room | - | - | - | 3.1 x 5.0 x 2.7m | N/A | - |

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m for No.1 and No.2 semi-anechoic and No.3 shielded room.

### 3.5 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

# SECTION 4: Operation of E.U.T. during testing

## 4.1 Operating Modes

The EUT was operating in a manner similar to typical use during the tests.
The mode is used : [DSSS and other forms of modulation]
Transmitting mode(11b, CCK, 11Mbps, PN9)
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

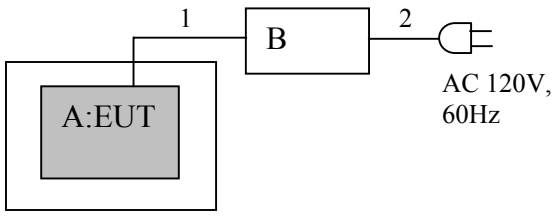
Transmitting mode(11g, OFDM, 54Mbps, PN9)
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

The radio was transmitting at full power on the specified channels with the maximum allowed duty cycle and at a data rate of 11Mbps(11b)/54Mbps(11g).
Packet Type: Maximum, Payload : PN9.

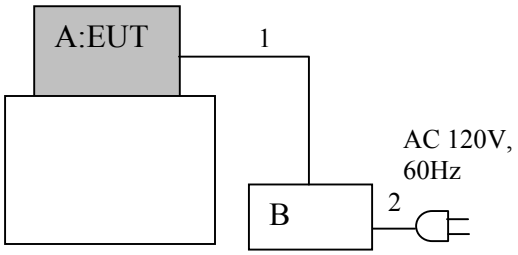
Justification: The system was configured in typical fashion (as a customer would normally use it) for testing.

## 4.2 Configuration and peripherals

**Top view**




**Front view**




* Cabling was taken into consideration and test data was taken under worse case conditions.

**Description of EUT and Support equipment**

| No. | Item | Model number | Serial number | Manufacturer | FCC ID |
|---|---|---|---|---|---|
| A | Network Camera | BL-C30A | ES1 | Panasonic Communications | ACJ96NBL-C30A |
| B | AC Adaptor | PQLV202Y-LJ | - | Panasonic Communications | - |

**List of cables used**

| No. | Name | Length (m) | Shield | Backshell Material |
|---|---|---|---|---|
| 1 | DC Cable | 3 | N | Polyvinyl chloride |
| 2 | AC Cable | 1.8 | N | Polyvinyl chloride |

## SECTION 5: Conducted Emission, Section 15.207

**Test Procedure**

EUT was placed on a platform of nominal size, 1m by 1.5m, raised 80cm above the conducting ground plane.
The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center .

1) For the tests on EUT with other peripherals (as a whole system)
I/O cable and AC cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber or a Measurement Room.
The EUT was connected to a LISN (AMN).
An overview sweep with peak detection has been performed.
The measurements have been performed with a CISPR quasi-peak detector (IF BW 9 kHz).
Measurement range: 0.15-30MHz

**Test data** **: APPENDIX 3**
**Test result** **: Pass**

## SECTION 6: Spurious Emission 15.247(c)

**[Conducted]**

**Test Procedure**
The Out of Band Emission was measured with a spectrum analyzer connected to the antenna port.

**Test data : APPENDIX 3**
**Test result : Pass**

**[Radiated]**

**Test Procedure**
EUT was placed on the size, 0.5m by 0.5m, raised 80cm above the conducting ground plane.
The Radiated Electric Field Strength intensity has been measured in a Semi Anechoic Chamber with a ground plane and at a distance of 3m(Below 10GHz) and 1m(Upper 10GHz).
The height of the measuring varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.
The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver or the Spectrum Analyzer.
In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

When not satisfying the requirement of § 15.209, 20dBc was applied except the restricted band of § 15.205

| Frequency | Below 1GHz | Above 1GHz |
|---|---|---|
| Instrument used | Test Receiver / Spectrum Analyzer | Spectrum Analyzer |
| Detector<br>IF Bandwidth | QP: BW 120kHz(T/R)<br>20dBc : RBW:100kHz/VBW: 300kHz (S/A) | PK: RBW:1MHz/VBW: 1MHz<br>AV: RBW:1MHz/VBW:10Hz<br>20dBc : RBW:100kHz/VBW:300kHz |

**Test data : APPENDIX 3**
**Test result : Pass**

- The carrier level (or, noise levels) was (or were) measured at each position of all three axes X, Y and Z, and the position that has the maximum noise was determined.
With the position, the noise levels of all the frequencies was measured.

## SECTION 7: 6dB Bandwidth, Section 15.247(a)(2)

**Test Procedure**

The bandwidth was measured with a spectrum analyzer connected to the antenna port.

**Test data : APPENDIX 3**
**Test result : Pass**

## SECTION 8: Maximum Peak Output Power, Section 15.247(b)(3)

**Test Procedure**

The Maximum Peak Output Power was measured with a spectrum analyzer connected to the antenna port.

**Test data : APPENDIX 3**
**Test result : Pass**

## SECTION 9: Peak Power Density, Section 15.247 (d)

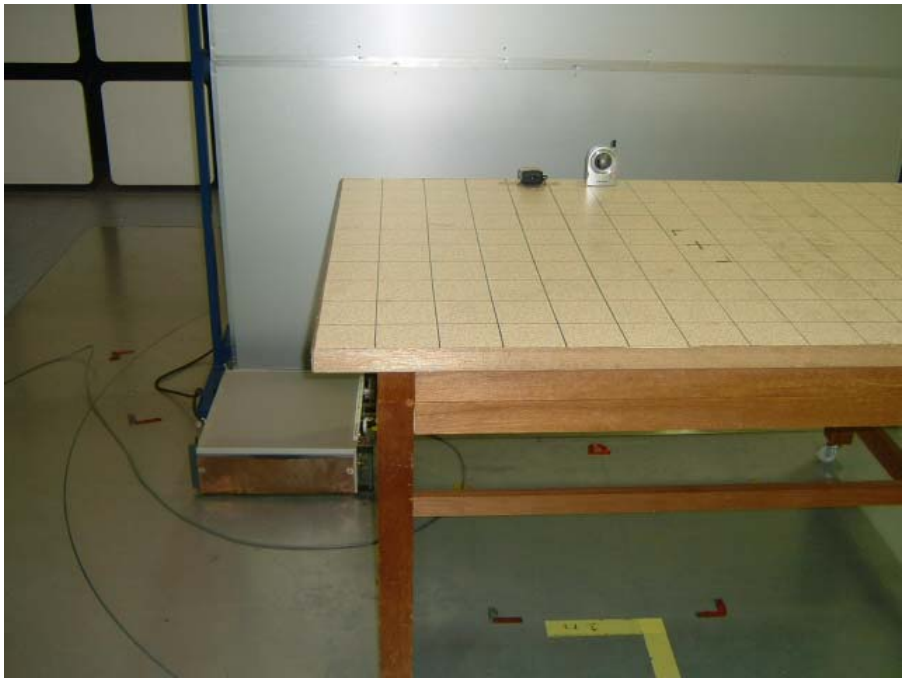
**[Conducted]**
**Test Procedure**
The Peak Power Density was measured with a spectrum analyzer connected to the antenna port.

**Test data : APPENDIX 3**
**Test result : Pass**

## APPENDIX 1: Photographs of test setup

### Conducted Emission

**Front**

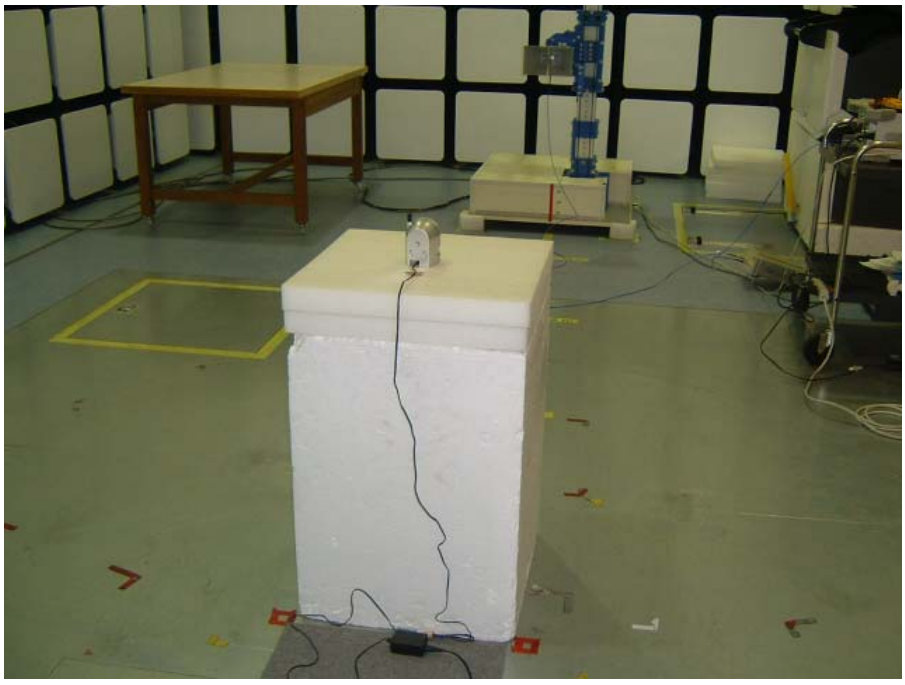


**Rear**

## Spurious Emission (Radiated)

**Front**

**Rear**



## Worst Case Position (Y-axis:Horizontal / X-axis:Vertical)

**X-axis**

**Y-axis**

**Z-axis**

## APPENDIX 2:Test instruments

**EMI test equipment**

| Control No. | Instrument | Manufacturer | Model No | Test Item | Calibration Date * Interval(month) |
|---|---|---|---|---|---|
| MAEC-02 | Anechoic Chamber | TDK | Semi Anechoic Chamber 3m | 1,2,3,4,5,6,7,8 | 2004/04/12 * 12 |
| MTR-02 | Test Receiver | Rohde & Schwarz | ESCS30 | 1,5 | 2004/02/03 * 12 |
| MRENT-09 | Spectrum Analyzer | Advantest | R3273 | 1,2,3,4,5,6,7,8 | 2004/02/18 * 12 |
| MCC-12 | Coaxial Cable | Fujikura/Agilent | - | 5 | 2004/02/24 * 12 |
| MAT-07 | Attenuator(6dB) | Weinschel Corp | 2 | 5 | 2003/12/16 * 12 |
| MBA-02 | Biconical Antenna | Schwarzbeck | BBA9106 | 5 | 2003/10/15 * 12 |
| MLA-02 | Logperiodic Antenna | Schwarzbeck | USLP9143 | 5 | 2003/10/15 * 12 |
| MPA-02 | Pre Amplifier | Agilent | 87405A | 5 | 2004/04/16 * 12 |
| MCC-04 | Microwave Cable | Storm | 421-011 | 4 | 2004/01/06 * 12 |
| MPA-01 | Pre Amplifier | Agilent | 8449B | 4 | 2004/02/06 * 12 |
| MAT-22 | Attenuator (10dB) | Orient Microwave | BX10-0476-00 | 2,3,4,6,7,8 | 2004/03/30 * 12 |
| MHF-02 | High Pass Filter | Tokimec | TF323DCA | 4 | 2003/09/19 * 12 |
| MCC-24 | Microwave Cable | Storm | - | 4 | 2004/05/01 * 12 |
| MHA-06 | Horn Antenna | Schwarzbeck | BBHA9120D | 4 | 2004/01/10 * 12 |
| MHA-02 | Horn Antenna | EMCO | 3160-09 | 4 | 2004/01/10 * 12 |
| MAT-23 | Attenuator (10dB) | Orient Microwave | BX10-0476-00 | 2,3,6,7,8 | 2004/03/30 * 12 |
| MCC-13 | Coaxial Cable | Fujikura/Agilent | - | 1 | 2004/02/24 * 12 |
| MLS-07 | LISN(AMN) | Schwarzbeck | NSLK8127 | 1 | 2004/02/17 * 12 |
| | | | | | |

**All equipment is calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.**

**Test Item:**

**1: AC Main Conducted Emission**
**2: 6dB Bandwidth [DSSS]**
**3: Maximum Peak Output Power**
**4: Radiated Spurious Emission(above 1GHz)**
**5: Radiated Spurious Emission(below 1GHz)**
**6: Antenna Terminal Conducted Spurious Emission**
**7: Peak Output Power Density [DSSS]**
**8: 99% Occupied Bandwidth [DSSS]**

# APPENDIX 3: Data of EMI test

## Conducted Emission (11b)

## DATA OF CONDUCTED EMISSION TEST

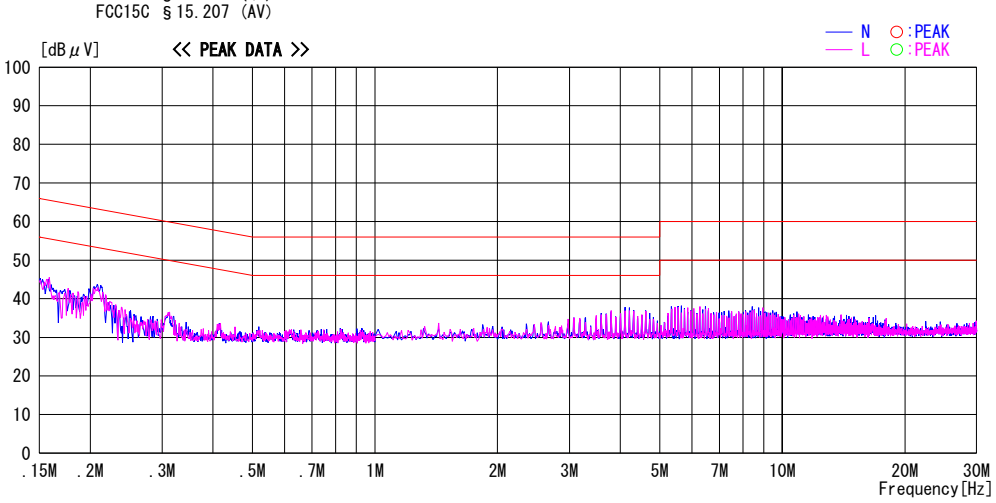
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/07 12:01:55

Applicant : Panasonic Communications Co.,Ltd.
Kind of EUT : Network Camera
Model No. : BL-C30A
Serial No. : ES1

Report No. : 24JE0143-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg.C / 60%
Operator : Kenichi Aadchi

Mode / Remarks : Transmitting 11b, 11Mbps, ch01(2412MHz)

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)




| NO | FREQ | READING PEAK | C.F | RESULT | LIMIT QP | LIMIT AV | MARGIN QP | MARGIN AV | PHASE |
|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBμV] | [dB] | [dBμV] | [dBμV] | [dBμV] | [dB] | [dB] | |

CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

# Conducted Emission (11b)

## DATA OF CONDUCTED EMISSION TEST

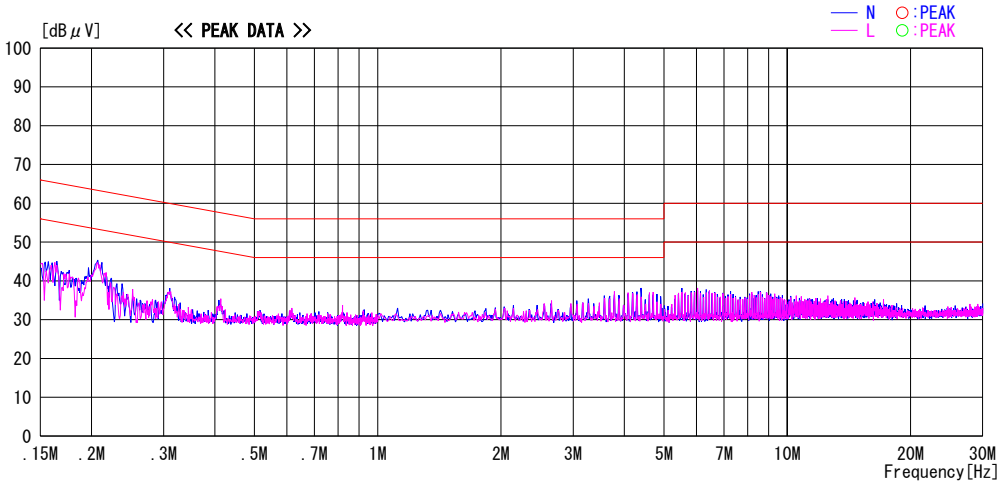
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/07 13:01:36

Applicant : Panasonic Communications Co.,Ltd.
Kind of EUT : Network Camera
Model No. : BL-C30A
Serial No. : ES1

Report No. : 24JE0143-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg.C / 60%
Operator : Kenichi Aadchi

Mode / Remarks : Transmitting 11b, 11Mbps, ch06(2437MHz)

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)




| NO | FREQ | READING PEAK | C.F | RESULT | LIMIT QP | LIMIT AV | MARGIN QP | MARGIN AV | PHASE |
|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBμV] | [dB] | [dBμV] | [dBμV] | [dBμV] | [dB] | [dB] | |

CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

# Conducted Emission (11b)

## DATA OF CONDUCTED EMISSION TEST

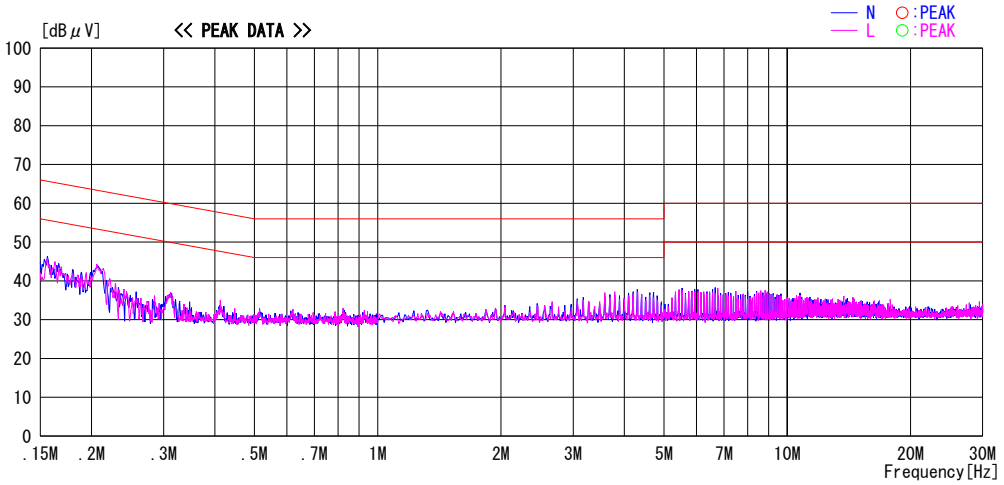
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/07 13:05:40

Applicant : Panasonic Communications Co.,Ltd.
Kind of EUT : Network Camera
Model No. : BL-C30A
Serial No. : ES1

Report No. : 24JE0143-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg.C / 60%
Operator : Kenichi Aadchi

Mode / Remarks : Transmitting 11b, 11Mbps, ch11(2462MHz)

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)




| NO | FREQ | READING PEAK | C.F | RESULT | LIMIT QP | LIMIT AV | MARGIN QP | MARGIN AV | PHASE |
|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBμV] | [dB] | [dBμV] | [dBμV] | [dBμV] | [dB] | [dB] | |

CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

# Conducted Emission (11g)

## DATA OF CONDUCTED EMISSION TEST

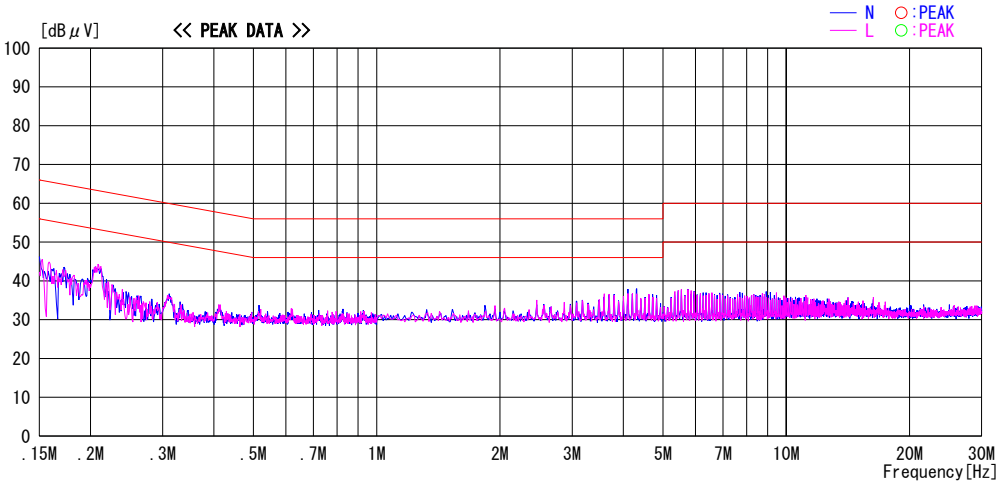
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/07 13:09:54

Applicant : Panasonic Communications Co.,Ltd.
Kind of EUT : Network Camera
Model No. : BL-C30A
Serial No. : ES1

Report No. : 24JE0143-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg.C / 60%
Operator : Kenichi Aadchi

Mode / Remarks : Transmitting 11g, 54Mbps, ch01(2412MHz)

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)




| NO | FREQ [MHz] | READING PEAK [dBμV] | C.F [dB] | RESULT [dBμV] | LIMIT QP [dBμV] | LIMIT AV [dBμV] | MARGIN QP [dB] | MARGIN AV [dB] | PHASE |
|---|---|---|---|---|---|---|---|---|---|

CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

# Conducted Emission (11g)

## DATA OF CONDUCTED EMISSION TEST

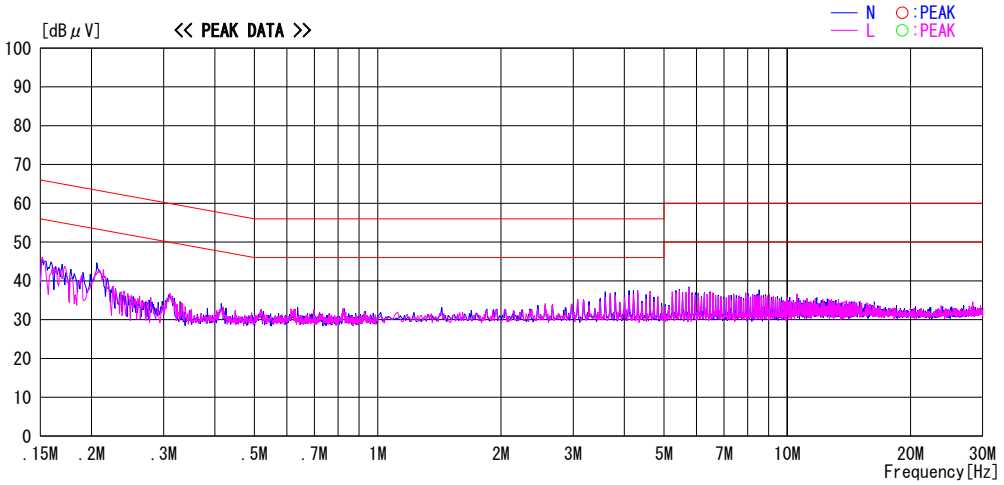
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/07 13:13:49

Applicant : Panasonic Communications Co.,Ltd.
Kind of EUT : Network Camera
Model No. : BL-C30A
Serial No. : ES1

Report No. : 24JE0143-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg.C / 60%
Operator : Kenichi Aadchi

Mode / Remarks : Transmitting 11g, 54Mbps, ch06(2437MHz)

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)




| NO | FREQ [MHz] | READING PEAK [dBμV] | C.F [dB] | RESULT [dBμV] | LIMIT QP [dBμV] | LIMIT AV [dBμV] | MARGIN QP [dB] | MARGIN AV [dB] | PHASE |
|---|---|---|---|---|---|---|---|---|---|

CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

# Conducted Emission (11g)

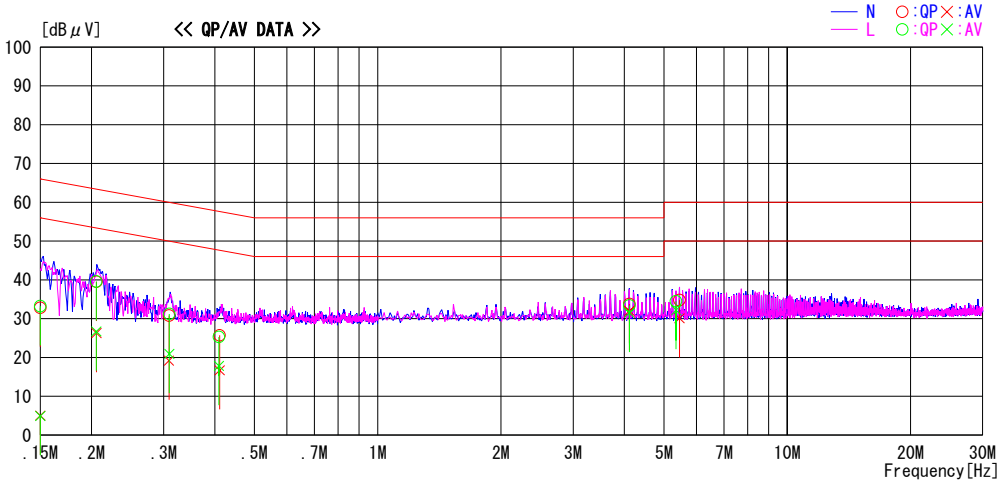
## DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/07 13:17:45

Applicant : Panasonic Communications Co.,Ltd.
Kind of EUT : Network Camera
Model No. : BL-C30A
Serial No. : ES1
Report No. : 24JE0143-HO
Power : AC120V / 60Hz
Temp./Humi. : 24deg.C / 60%
Operator : Kenichi Aadchi

Mode / Remarks : Transmitting 11g, 54Mbps, ch11(2462MHz)

LIMIT : FCC15C §15.207 (QP)
FCC15C §15.207 (AV)




| NO | FREQ | READING QP | READING AV | C.F | RESULT QP | RESULT AV | LIMIT QP | LIMIT AV | MARGIN QP | MARGIN AV | PHASE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBμV] | [dBμV] | [dB] | [dBμV] | [dBμV] | [dBμV] | [dBμV] | [dB] | [dB] | |
| 1 | 0.1500 | 32.7 | 4.9 | 0.1 | 32.8 | 5.0 | 66.0 | 56.0 | 33.2 | 51.0 | N |
| 2 | 0.2056 | 39.4 | 26.2 | 0.1 | 39.5 | 26.3 | 63.4 | 53.4 | 23.9 | 27.1 | N |
| 3 | 0.3092 | 30.7 | 19.1 | 0.1 | 30.8 | 19.2 | 60.0 | 50.0 | 29.2 | 30.8 | N |
| 4 | 0.4111 | 25.6 | 16.6 | 0.1 | 25.7 | 16.7 | 57.6 | 47.6 | 31.9 | 30.9 | N |
| 5 | 4.1188 | 33.3 | 31.5 | 0.5 | 33.8 | 32.0 | 56.0 | 46.0 | 22.2 | 14.0 | N |
| 6 | 5.4561 | 34.2 | 29.5 | 0.6 | 34.8 | 30.1 | 60.0 | 50.0 | 25.2 | 19.9 | N |
| 7 | 0.1500 | 33.1 | 4.8 | 0.1 | 33.2 | 4.9 | 66.0 | 56.0 | 32.8 | 51.1 | L |
| 8 | 0.2054 | 39.5 | 26.6 | 0.1 | 39.6 | 26.7 | 63.4 | 53.4 | 23.8 | 26.7 | L |
| 9 | 0.3099 | 31.1 | 20.8 | 0.1 | 31.2 | 20.9 | 60.0 | 50.0 | 28.8 | 29.1 | L |
| 10 | 0.4095 | 25.2 | 17.7 | 0.1 | 25.3 | 17.8 | 57.7 | 47.7 | 32.4 | 29.9 | L |
| 11 | 4.1167 | 32.9 | 31.0 | 0.5 | 33.4 | 31.5 | 56.0 | 46.0 | 22.6 | 14.5 | L |
| 12 | 5.3533 | 33.9 | 31.6 | 0.6 | 34.5 | 32.2 | 60.0 | 50.0 | 25.5 | 17.8 | L |

CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

# 6dB Bandwidth(DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

| | | | |
|---|---|---|---|
| Company | : Panasonic Communications Co,. Ltd. | REPORT NO | : 24JE0143-HO |
| Equipment | : Network Camera | REGULATION | : Fcc Part15 Subpart C 15.247(a)(2) |
| Model | : BL-C30A | TEST DISTANCE | : - |
| Sample No. | : ES1 | DATE | : 07/07/2004 |
| Power | : AC120V/60Hz | TEMPERATURE | : 23℃ |
| Mode | : Tx (ch1,6,11) | HUMIDITY | : 60% |
| FCC ID | : ACJ96NBL-C30A | ENGINEER | : Kenichi Adachi |
| IC No. | : - | | |

**11b**

| Ch | Freq. [MHz] | 6dB Bandwidth [MHz] | Limit [kHz] |
|---|---|---|---|
| Low | 2412.0 | **12.160** | 500.0 |
| Mid | 2437.0 | 12.460 | 500.0 |
| High | 2462.0 | 12.460 | 500.0 |

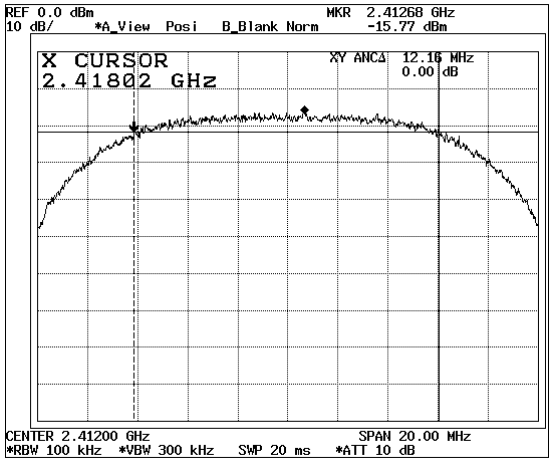
**11g**

| Ch | Freq. [MHz] | 6dB Bandwidth [MHz] | Limit [kHz] |
|---|---|---|---|
| Low | 2412.0 | 16.580 | 500.0 |
| Mid | 2437.0 | 16.580 | 500.0 |
| High | 2462.0 | 16.580 | 500.0 |

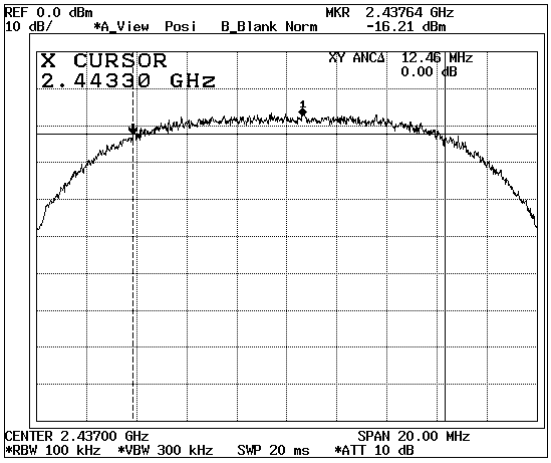
## 6dB Bandwidth(DSSS and other forms of modulation)

**11b**

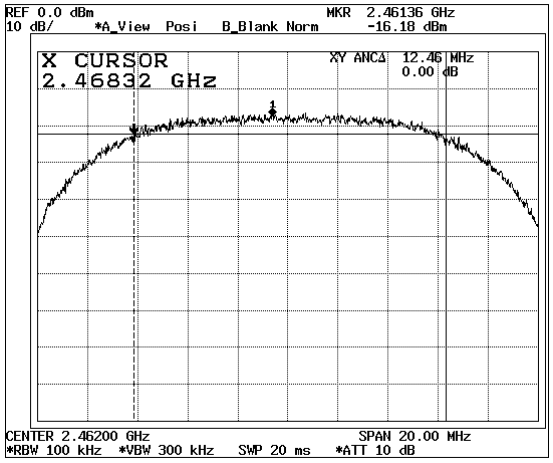
### Ch:Low




### Ch:Mid



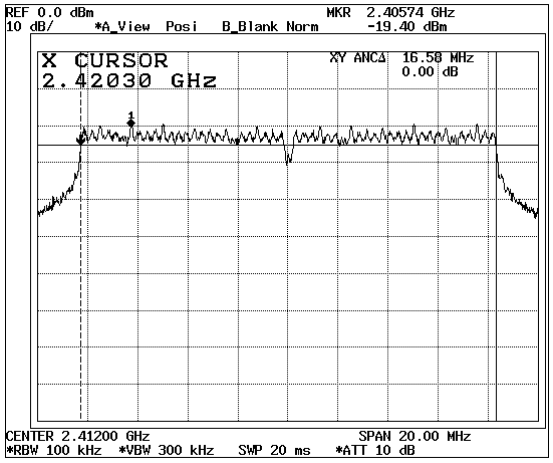

### Ch:High



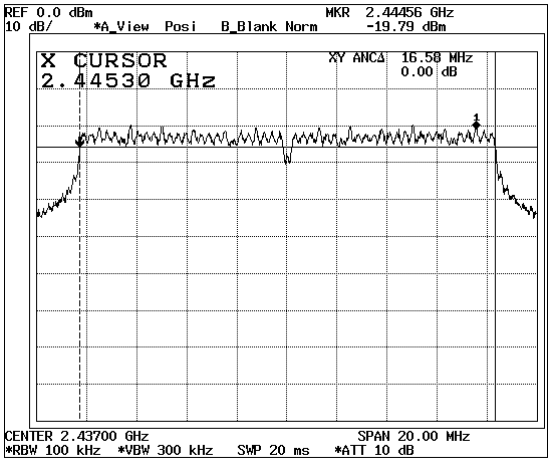
## 6dB Bandwidth(DSSS and other forms of modulation)

**11g**

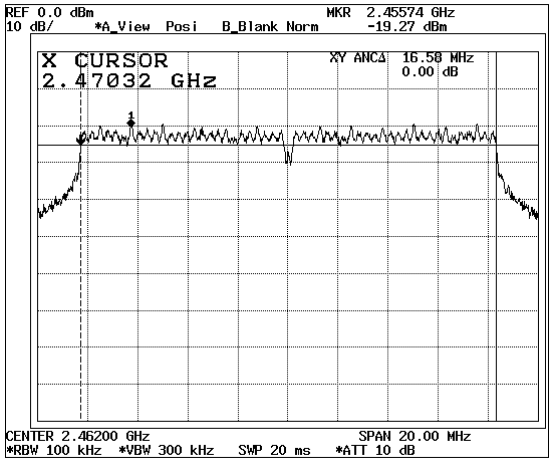
### Ch:Low




### Ch:Mid




### Ch:High



# Maximum Peak Output Power (DSSS and other forms of modulation)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

| | | | |
|---|---|---|---|
| Company | : Panasonic Communications Co,. Ltd. | REPORT NO | : 24JE0143-HO |
| Equipment | : Network Camera | REGULATION | : Fcc Part15 Subpart C 15.247(b)(3) |
| Model | : BL-C30A | TEST DISTANCE | : - |
| Sample No. | : ES1 | DATE | : 07/07/2004 |
| Power | : AC120V/60Hz | TEMPERATURE | : 23℃ |
| Mode | : Tx (ch1,6,11) | HUMIDITY | : 60% |
| FCC ID | : ACJ96NBL-C30A | ENGINEER | : Kenichi Adachi |
| IC No. | : - | | |

**11b**

| Ch | Freq. [MHz] | S/A Reading [dBm] | Cable Loss [dB] | Atten. [dB] | Result [dBm] | Limit (1W) [dBm] | Margin [dB] |
|---|---|---|---|---|---|---|---|
| Low | 2412.0 | -1.15 | 1.97 | 20.00 | 20.82 | 30.00 | 9.18 |
| Mid | 2437.0 | -1.05 | 1.98 | 20.00 | 20.93 | 30.00 | 9.07 |
| High | 2462.0 | -1.22 | 1.98 | 20.00 | 20.76 | 30.00 | 9.24 |

**11g**

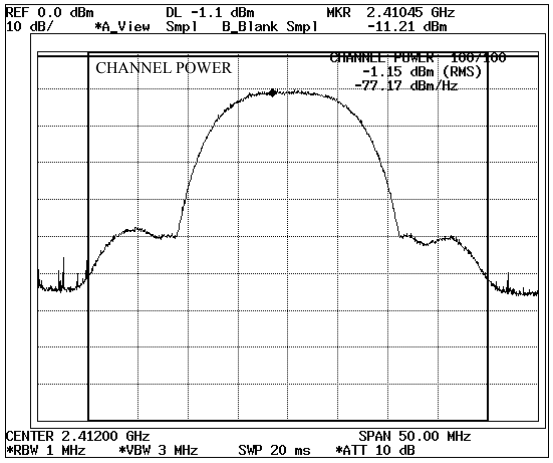
| Ch | Freq. [MHz] | S/A Reading [dBm] | Cable Loss [dB] | Atten. [dB] | Result [dBm] | Limit (1W) [dBm] | Margin [dB] |
|---|---|---|---|---|---|---|---|
| Low | 2412.0 | -1.05 | 1.97 | 20.00 | 20.92 | 30.00 | 9.08 |
| Mid | 2437.0 | -0.98 | 1.98 | 20.00 | 21.00 | 30.00 | 9.00 |
| High | 2462.0 | **-0.49** | 1.98 | 20.00 | **21.49** | 30.00 | **8.51** |

Sample Calculation:
Result = Reading + Cable Loss + Attenuator
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

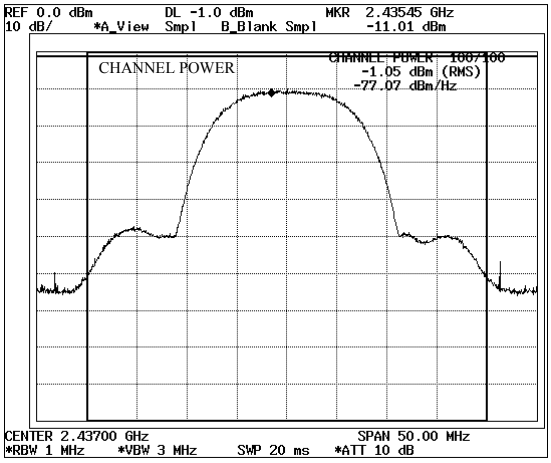
## Maximum Peak Output Power (DSSS and other forms of modulation)

**11b**

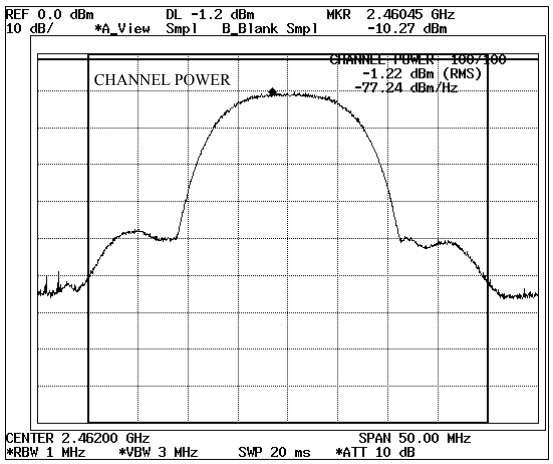
### Ch:Low




### Ch:Mid



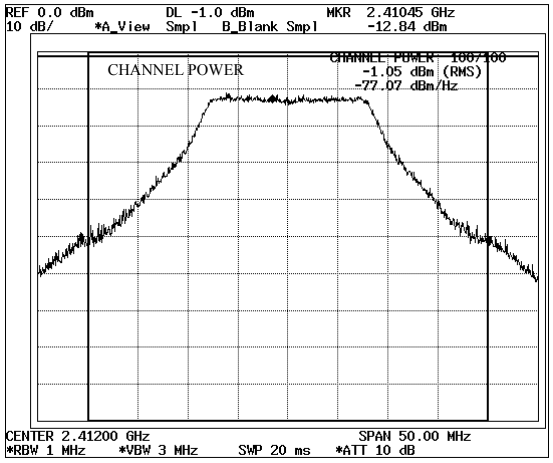

### Ch:High



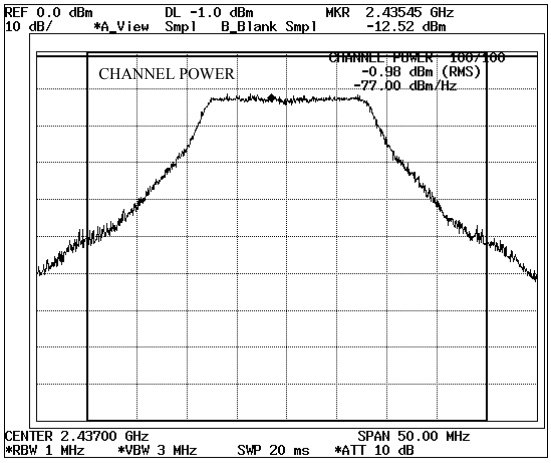
## Maximum Peak Output Power (DSSS and other forms of modulation)

**11g**

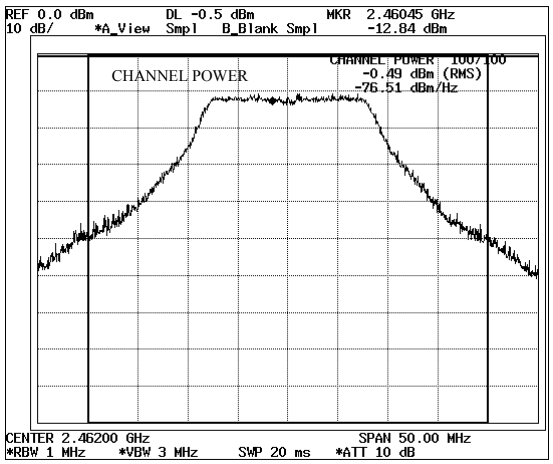
### Ch:Low




### Ch:Mid




### Ch:High



## Radiated Spurious Emission(DSSS and other forms of modulation )(11b)

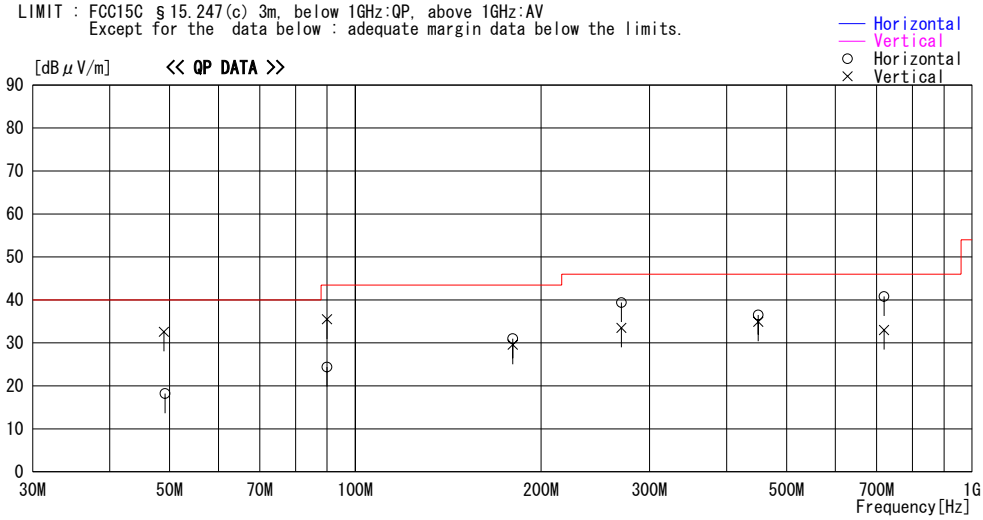
## DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 20:01:03

| | | | |
|---|---|---|---|
| Applicant | : Panasonic Communicatons Co.,Ltd. | Report No. | : 24JE0143-HO |
| Kind of EUT | : Network Camera | Power | : AC 120V / 60Hz |
| Model No. | : BL-C30A | Temp./ Humi. | : 27 deg.C. / 60 % |
| Serial No. | : ES1 | Operator | : Naoki Sakamoto |

Mode / Remarks : Transmitting IEEE801.11b, 11Mbps, ch01(2412MHz), Max-axis (H:Y-Axis,V:X-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.




| No. | FREQ [MHz] | READING QP [dBμV] | ANT FACTOR [dB/m] | LOSS [dB] | GAIN [dB] | RESULT [dBμV/m] | LIMIT [dBμV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 49.153 | 24.2 | 10.5 | 6.7 | 23.2 | 18.2 | 40.0 | 21.8 | 100 | 0 |
| 2 | 90.001 | 32.3 | 7.8 | 7.2 | 22.9 | 24.4 | 43.5 | 19.1 | 322 | 239 |
| 3 | 180.001 | 30.2 | 16.2 | 7.7 | 23.1 | 31.0 | 43.5 | 12.5 | 180 | 235 |
| 4 | 270.002 | 35.4 | 18.6 | 8.3 | 22.9 | 39.4 | 46.0 | 6.6 | 121 | 237 |
| 5 | 450.004 | 31.8 | 18.3 | 9.2 | 22.8 | 36.5 | 46.0 | 9.5 | 100 | 200 |
| 6 | 720.007 | 32.8 | 20.4 | 10.3 | 22.7 | 40.8 | 46.0 | 5.2 | 134 | 122 |
| ----- Vertical ------ | | | | | | | | | | |
| 7 | 48.948 | 38.5 | 10.6 | 6.7 | 23.2 | 32.6 | 40.0 | 7.4 | 100 | 0 |
| 8 | 90.002 | 43.4 | 7.8 | 7.2 | 22.9 | 35.5 | 43.5 | 8.0 | 100 | 221 |
| 9 | 180.001 | 28.8 | 16.2 | 7.7 | 23.1 | 29.6 | 43.5 | 13.9 | 100 | -1 |
| 10 | 270.002 | 29.5 | 18.6 | 8.3 | 22.9 | 33.5 | 46.0 | 12.5 | 100 | 327 |
| 11 | 450.003 | 30.2 | 18.3 | 9.2 | 22.8 | 34.9 | 46.0 | 11.1 | 100 | 184 |
| 12 | 720.006 | 25.0 | 20.4 | 10.3 | 22.7 | 33.0 | 46.0 | 13.0 | 100 | 345 |

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

*1: Except for the above table : All other spurious emissions were less than 20dB for the limit.

# Radiated Spurious Emission(DSSS and other forms of modulation)(11b)
# DATA OF SPURIOUS EMISSIONS(1GHz to 26.5GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Panasonic Communications Co.,Ltd.
Equipment : Network Camera
Model : BL-C30A
Sample No. : ES1
Power : AC120V / 60Hz
Mode : 11b, 11Mbps, PN9, Tx 2412MHz

REPORT NO : 24JE0143-HO
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)
TEST DISTANCE : 3/1m
DATE : 07/06/2004
TEMPERATURE : 27deg.C
HUMIDITY : 60%
ENGINEER : Kenichi Adachi

**PK DETECT** (RBW: 1MHz , VBW:1MHz)

| No. | FREQ | S/A READING HOR | S/A READING VER | ANT Factor | AMP GAIN | CABLE LOSS | ATT or Filter | RESULT HOR | RESULT VER | Limit PK | MARGIN HOR | MARGIN VER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2015.8 | 48.7 | 48.8 | 30.2 | 36.4 | 5.9 | 9.9 | 58.3 | 58.4 | - | - | - | MAT-22 |
| 2 | 2386.6 | 47.8 | 47.7 | 30.8 | 36.3 | 6.4 | 9.9 | 58.6 | 58.5 | 74.0 | 15.4 | 15.5 | MAT-22 |
| 3 | 2400.0 | 60.1 | 61.0 | 30.8 | 36.3 | 6.4 | 9.9 | 70.9 | 71.8 | - | - | - | MAT-22 |
| 4 | 4822.6 | 53.6 | 52.8 | 35.4 | 36.1 | 9.3 | 1.0 | 63.2 | 62.4 | 74.0 | 10.8 | 11.6 | MHF-02 |
| 5 | 7237.3 | 43.2 | 42.8 | 38.0 | 35.6 | 11.8 | 0.5 | 57.9 | 57.5 | 74.0 | 16.1 | 16.5 | MHF-02 |
| 6 | 9648.0 | 44.8 | 42.7 | 37.5 | 36.3 | 13.9 | 0.5 | 60.4 | 58.3 | 74.0 | 13.6 | 15.7 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 7 | 12060.0 | 43.0 | 42.3 | 41.1 | 35.7 | 15.5 | 0.6 | 55.0 | 54.3 | 74.0 | 19.0 | 19.7 | MHF-02 |
| 8 | 14472.0 | 40.2 | 40.3 | 41.0 | 34.6 | 16.6 | 0.6 | 54.4 | 54.5 | 74.0 | 19.7 | 19.6 | MHF-02 |
| 9 | 16884.0 | 42.6 | 42.5 | 46.1 | 35.5 | 18.7 | 0.5 | 62.8 | 62.7 | 74.0 | 11.2 | 11.3 | MHF-02 |
| 10 | 19296.0 | 42.4 | 42.7 | 39.5 | 34.9 | 20.4 | 0.9 | 58.8 | 59.1 | 74.0 | 15.2 | 14.9 | MHF-02 |
| 11 | 21708.0 | 42.3 | 42.8 | 40.7 | 35.3 | 22.1 | 0.6 | 61.0 | 61.5 | 74.0 | 13.0 | 12.5 | MHF-02 |
| 12 | 24120.0 | 42.5 | 42.7 | 39.9 | 36.0 | 22.6 | 1.6 | 61.2 | 61.4 | 74.0 | 12.8 | 12.6 | MHF-02 |

**AV DETECT** (RBW: 1MHz , VBW:10Hz)

| No. | FREQ | S/A READING HOR | S/A READING VER | ANT Factor | AMP GAIN | CABLE LOSS | Band-Pass Filter | RESULT HOR | RESULT VER | Limit AV | MARGIN HOR | MARGIN VER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2015.8 | 41.6 | 43.9 | 30.2 | 36.4 | 5.9 | 9.9 | 51.2 | 53.5 | - | - | - | MAT-22 |
| 2 | 2386.6 | 37.2 | 36.1 | 30.8 | 36.3 | 6.4 | 9.9 | 48.0 | 46.9 | 54.0 | 6.0 | 7.1 | MAT-22 |
| 3 | 2400.0 | 53.1 | 52.3 | 30.8 | 36.3 | 6.4 | 9.9 | 63.9 | 63.1 | - | - | - | MAT-22 |
| 4 | 4822.6 | 39.2 | 38.7 | 35.4 | 36.1 | 9.3 | 1.0 | 48.8 | 48.3 | 54.0 | 5.2 | 5.7 | MHF-02 |
| 5 | 7237.3 | 30.9 | 30.9 | 38.0 | 35.6 | 11.8 | 0.5 | 45.6 | 45.6 | 54.0 | 8.4 | 8.4 | MHF-02 |
| 6 | 9648.0 | 34.0 | 31.3 | 37.5 | 36.3 | 13.9 | 0.5 | 49.6 | 46.9 | 54.0 | 4.4 | 7.1 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 7 | 12060.0 | 29.8 | 30.3 | 41.1 | 35.7 | 15.5 | 0.6 | 41.8 | 42.3 | 54.0 | 12.2 | 11.7 | MHF-02 |
| 8 | 14472.0 | 28.3 | 28.3 | 41.0 | 34.6 | 16.6 | 0.6 | 42.5 | 42.5 | 54.0 | 11.6 | 11.6 | MHF-02 |
| 9 | 16884.0 | 30.4 | 30.5 | 46.1 | 35.5 | 18.7 | 0.5 | 50.6 | 50.7 | 54.0 | 3.4 | 3.3 | MHF-02 |
| 10 | 19296.0 | 30.3 | 30.0 | 39.5 | 34.9 | 20.4 | 0.9 | 46.7 | 46.4 | 54.0 | 7.3 | 7.6 | MHF-02 |
| 11 | 21708.0 | 30.9 | 30.8 | 40.7 | 35.3 | 22.1 | 0.6 | 49.6 | 49.5 | 54.0 | 4.4 | 4.5 | MHF-02 |
| 12 | 24120.0 | 31.0 | 31.2 | 39.9 | 36.0 | 22.6 | 1.6 | 49.7 | 49.9 | 54.0 | 4.3 | 4.1 | MHF-02 |

**20dBc(Fundamental 2412MHz)** (RBW: 100kHz , VBW:100kHz)

| No. | FREQ | S/A READING HOR | S/A READING VER | ANT Factor | AMP GAIN | CABLE LOSS | Band-Pass Filter | RESULT HOR | RESULT VER | Limit 20dBc | MARGIN HOR | MARGIN VER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2410.6 | 93.4 | 94.6 | 30.8 | 36.3 | 6.4 | 9.9 | 104.3 | 105.5 | - | - | - | MAT-22 |
| 2 | 2015.8 | 43.8 | 45.9 | 30.2 | 36.4 | 5.9 | 9.9 | 53.4 | 55.5 | Funda-20dB | 30.9 | 30.0 | MAT-22 |
| 3 | 2400.0 | 53.9 | 53.2 | 30.8 | 36.3 | 6.4 | 9.9 | 64.7 | 64.0 | Funda-20dB | 19.5 | 21.4 | MAT-22 |

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rouded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

## Radiated Spurious Emission(DSSS and other forms of modulation)(11b)

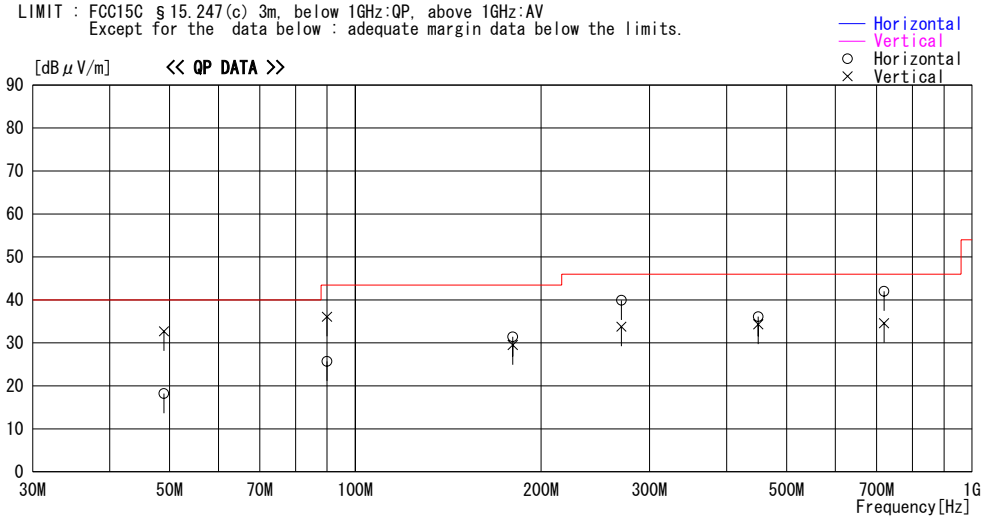
### DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 20:42:52

| | | | |
|---|---|---|---|
| Applicant | : Panasonic Communicatons Co.,Ltd. | Report No. | : 24JE0143-HO |
| Kind of EUT | : Network Camera | Power | : AC 120V / 60Hz |
| Model No. | : BL-C30A | Temp./ Humi. | : 27 deg.C. / 60 % |
| Serial No. | : ES1 | Operator | : Naoki Sakamoto |

Mode / Remarks : Transmitting IEEE801.11b, 11Mbps, ch06(2437MHz), Max-axis (H:Y-Axis,V:X-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.




| No. | FREQ [MHz] | READING QP [dBμV] | ANT FACTOR [dB/m] | LOSS [dB] | GAIN [dB] | RESULT [dBμV/m] | LIMIT [dBμV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 48.952 | 24.1 | 10.6 | 6.7 | 23.2 | 18.2 | 40.0 | 21.8 | 227 | 261 |
| 2 | 90.001 | 33.6 | 7.8 | 7.2 | 22.9 | 25.7 | 43.5 | 17.8 | 242 | 256 |
| 3 | 180.002 | 30.6 | 16.2 | 7.7 | 23.1 | 31.4 | 43.5 | 12.1 | 172 | 246 |
| 4 | 270.002 | 35.9 | 18.6 | 8.3 | 22.9 | 39.9 | 46.0 | 6.1 | 126 | 238 |
| 5 | 450.004 | 31.4 | 18.3 | 9.2 | 22.8 | 36.1 | 46.0 | 9.9 | 100 | 218 |
| 6 | 720.004 | 34.0 | 20.4 | 10.3 | 22.7 | 42.0 | 46.0 | 4.0 | 118 | 119 |
| ----- Vertical ------ | | | | | | | | | | |
| 7 | 48.964 | 38.6 | 10.6 | 6.7 | 23.2 | 32.7 | 40.0 | 7.3 | 100 | 360 |
| 8 | 90.002 | 44.0 | 7.8 | 7.2 | 22.9 | 36.1 | 43.5 | 7.4 | 100 | 184 |
| 9 | 180.001 | 28.7 | 16.2 | 7.7 | 23.1 | 29.5 | 43.5 | 14.0 | 100 | 0 |
| 10 | 270.003 | 29.8 | 18.6 | 8.3 | 22.9 | 33.8 | 46.0 | 12.2 | 100 | 293 |
| 11 | 450.003 | 29.6 | 18.3 | 9.2 | 22.8 | 34.3 | 46.0 | 11.7 | 100 | 191 |
| 12 | 720.005 | 26.6 | 20.4 | 10.3 | 22.7 | 34.6 | 46.0 | 11.4 | 100 | 280 |

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

*1: Except for the above table : All other spurious emissions were less than 20dB for the limit.

# Radiated Spurious Emission(DSSS and other forms of modulation )(11b)
# DATA OF SPURIOUS EMISSIONS(1GHz to 26.5GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Panasonic Communications Co.,Ltd.
Equipment : Network Camera
Model : BL-C30A
Sample No. : ES1
Power : AC120V / 60Hz
Mode : 11b, 11Mbps, PN9, Tx 2437MHz

REPORT NO : 24JE0143-HO
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)
TEST DISTANCE : 3/1m
DATE : 07/06/2004
TEMPERATURE : 27deg.C
HUMIDITY : 60%
ENGINEER : Kenichi Adachi

**PK DETECT** (RBW: 1MHz , VBW:1MHz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | PK | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.2 | 48.1 | 49.8 | 30.2 | 36.4 | 5.9 | 9.9 | 57.7 | 59.4 | - | - | - | MAT-22 |
| 2 | 4874.2 | 52.5 | 54.7 | 35.6 | 36.1 | 9.4 | 1.0 | 62.5 | 64.7 | 74.0 | 11.5 | 9.3 | MHF-02 |
| 3 | 7310.8 | 43.4 | 43.4 | 38.2 | 35.7 | 11.9 | 0.5 | 58.4 | 58.4 | 74.0 | 15.7 | 15.7 | MHF-02 |
| 4 | 9747.8 | 44.7 | 44.1 | 37.3 | 36.3 | 14.0 | 0.5 | 60.1 | 59.5 | 74.0 | 13.9 | 14.5 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 5 | 12185.0 | 42.9 | 42.2 | 41.4 | 35.6 | 15.6 | 0.5 | 55.3 | 54.6 | 74.0 | 18.8 | 19.5 | MHF-02 |
| 6 | 14622.0 | 40.7 | 40.2 | 41.5 | 34.8 | 16.8 | 0.6 | 55.3 | 54.8 | 74.0 | 18.7 | 19.2 | MHF-02 |
| 7 | 17059.0 | 42.7 | 42.7 | 46.4 | 35.4 | 18.8 | 0.4 | 63.4 | 63.4 | 74.0 | 10.6 | 10.6 | MHF-02 |
| 8 | 19496.0 | 42.6 | 42.0 | 39.2 | 35.0 | 20.6 | 1.0 | 58.9 | 58.3 | 74.0 | 15.1 | 15.7 | MHF-02 |
| 9 | 21933.0 | 41.8 | 42.0 | 40.5 | 35.0 | 22.3 | 0.9 | 61.0 | 61.2 | 74.0 | 13.0 | 12.8 | MHF-02 |
| 10 | 24370.0 | 43.3 | 43.4 | 40.1 | 36.6 | 22.7 | 2.2 | 62.3 | 62.4 | 74.0 | 11.7 | 11.6 | MHF-02 |

**AV DETECT** (RBW: 1MHz , VBW:10Hz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | AV | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.2 | 43.1 | 44.1 | 30.2 | 36.4 | 5.9 | 9.9 | 52.7 | 53.7 | - | - | - | MAT-22 |
| 2 | 4874.2 | 38.3 | 39.3 | 35.6 | 36.1 | 9.4 | 1.0 | 48.3 | 49.3 | 54.0 | 5.7 | 4.7 | MHF-02 |
| 3 | 7310.8 | 31.3 | 31.0 | 38.2 | 35.7 | 11.9 | 0.5 | 46.3 | 46.0 | 54.0 | 7.8 | 8.1 | MHF-02 |
| 4 | 9747.8 | 34.3 | 31.7 | 37.3 | 36.3 | 14.0 | 0.5 | 49.7 | 47.1 | 54.0 | 4.3 | 6.9 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 5 | 12185.0 | 29.7 | 29.6 | 41.4 | 35.6 | 15.6 | 0.5 | 42.1 | 42.0 | 54.0 | 12.0 | 12.1 | MHF-02 |
| 6 | 14622.0 | 28.2 | 28.1 | 41.5 | 34.8 | 16.8 | 0.6 | 42.8 | 42.7 | 54.0 | 11.2 | 11.3 | MHF-02 |
| 7 | 17059.0 | 30.3 | 30.3 | 46.4 | 35.4 | 18.8 | 0.4 | 51.0 | 51.0 | 54.0 | 3.0 | 3.0 | MHF-02 |
| 8 | 19496.0 | 31.0 | 31.4 | 39.2 | 35.0 | 20.6 | 1.0 | 47.3 | 47.7 | 54.0 | 6.7 | 6.3 | MHF-02 |
| 9 | 21933.0 | 30.8 | 31.0 | 40.5 | 35.0 | 22.3 | 0.9 | 50.0 | 50.2 | 54.0 | 4.0 | 3.8 | MHF-02 |
| 10 | 24370.0 | 31.4 | 31.4 | 40.1 | 36.6 | 22.7 | 2.2 | 50.4 | 50.4 | 54.0 | 3.6 | 3.6 | MHF-02 |

**20dBc(Fundamental 2437MHz)** (RBW: 100kHz , VBW:100kHz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | 20dBc | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2437.9 | 94.8 | 95.1 | 30.9 | 36.3 | 6.5 | 9.9 | 105.8 | 106.1 | - | - | - | MAT-22 |
| 2 | 2016.2 | 44.6 | 45.7 | 30.2 | 36.4 | 5.9 | 9.9 | 54.2 | 55.3 | Funda-20dB | 31.6 | 30.8 | MAT-22 |

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rouded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

# Radiated Spurious Emission(DSSS and other forms of modulation )(11b)

## DATA OF RADIATED EMISSION TEST

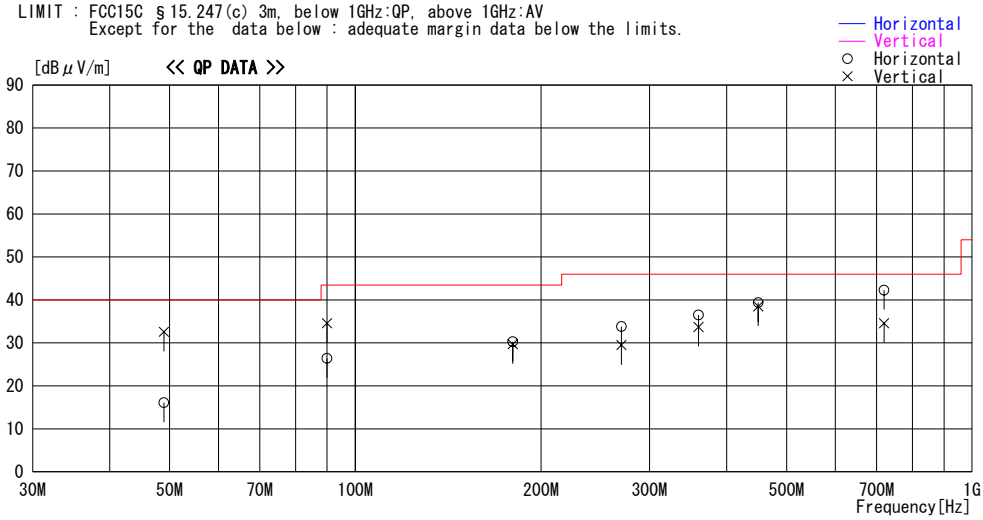
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 21:31:20

Applicant : Panasonic Communicatons Co.,Ltd.
Kind of EUT : Network Camera
Model No. : BL-C30A
Serial No. : ES1

Report No. : 24JE0143-HO
Power : AC 120V / 60Hz
Temp./ Humi. : 27 deg.C. / 60 %
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting IEEE801.11b, 11Mbps, ch11(2462MHz), Max-axis (H:Y-Axis,V:X-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.




| No. | FREQ [MHz] | READING QP [dBμV] | ANT FACTOR [dB/m] | LOSS [dB] | GAIN [dB] | RESULT [dBμV/m] | LIMIT [dBμV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 48.952 | 22.0 | 10.6 | 6.7 | 23.2 | 16.1 | 40.0 | 23.9 | 388 | 96 |
| 2 | 90.001 | 34.3 | 7.8 | 7.2 | 22.9 | 26.4 | 43.5 | 17.1 | 236 | 264 |
| 3 | 180.001 | 29.5 | 16.2 | 7.7 | 23.1 | 30.3 | 43.5 | 13.2 | 188 | 248 |
| 4 | 270.001 | 29.8 | 18.6 | 8.3 | 22.9 | 33.8 | 46.0 | 12.2 | 126 | 240 |
| 5 | 360.002 | 34.0 | 16.6 | 8.6 | 22.7 | 36.5 | 46.0 | 9.5 | 100 | 236 |
| 6 | 450.001 | 34.7 | 18.3 | 9.2 | 22.8 | 39.4 | 46.0 | 6.6 | 100 | 228 |
| 7 | 720.003 | 34.3 | 20.4 | 10.3 | 22.7 | 42.3 | 46.0 | 3.7 | 115 | 235 |
| ----- Vertical ------ | | | | | | | | | | |
| 8 | 48.960 | 38.5 | 10.6 | 6.7 | 23.2 | 32.6 | 40.0 | 7.4 | 100 | 360 |
| 9 | 90.002 | 42.5 | 7.8 | 7.2 | 22.9 | 34.6 | 43.5 | 8.9 | 100 | 199 |
| 10 | 180.002 | 28.9 | 16.2 | 7.7 | 23.1 | 29.7 | 43.5 | 13.8 | 100 | 185 |
| 11 | 270.004 | 25.5 | 18.6 | 8.3 | 22.9 | 29.5 | 46.0 | 16.5 | 100 | 296 |
| 12 | 360.002 | 31.2 | 16.6 | 8.6 | 22.7 | 33.7 | 46.0 | 12.3 | 121 | 186 |
| 13 | 450.002 | 33.8 | 18.3 | 9.2 | 22.8 | 38.5 | 46.0 | 7.5 | 100 | 187 |
| 14 | 720.004 | 26.6 | 20.4 | 10.3 | 22.7 | 34.6 | 46.0 | 11.4 | 100 | 335 |

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

*1: Except for the above table : All other spurious emissions were less than 20dB for the limit.

# Radiated Spurious Emission(DSSS and other forms of modulation )(11b)
# DATA OF SPURIOUS EMISSIONS(1GHz to 26.5GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Panasonic Communications Co.,Ltd.
Equipment : Network Camera
Model : BL-C30A
Sample No. : ES1
Power : AC120V / 60Hz
Mode : 11b, 11Mbps, PN9, Tx 2462MHz

REPORT NO : 24JE0143-HO
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)
TEST DISTANCE : 3/1m
DATE : 07/06/2004
TEMPERATURE : 27deg.C
HUMIDITY : 60%
ENGINEER : Kenichi Adachi

**PK DETECT** (RBW: 1MHz , VBW:1MHz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | PK | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.1 | 47.4 | 49.3 | 30.2 | 36.4 | 5.9 | 9.9 | 57.0 | 58.9 | - | - | - | MAT-22 |
| 2 | 2483.5 | 45.9 | 46.2 | 30.9 | 36.2 | 6.5 | 9.9 | 57.0 | 57.3 | 74.0 | 17.1 | 16.8 | MAT-22 |
| 3 | 4924.0 | 53.3 | 53.3 | 35.9 | 36.1 | 9.5 | 1.0 | 63.6 | 63.6 | 74.0 | 10.4 | 10.4 | MHF-02 |
| 4 | 7386.8 | 42.4 | 43.4 | 38.3 | 35.7 | 12.0 | 0.5 | 57.6 | 58.6 | 74.0 | 16.4 | 15.4 | MHF-02 |
| 5 | 9848.0 | 45.0 | 43.8 | 37.1 | 36.4 | 14.1 | 0.5 | 60.3 | 59.1 | 74.0 | 13.7 | 14.9 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 6 | 12310.0 | 42.1 | 42.8 | 41.7 | 35.6 | 15.6 | 0.5 | 54.8 | 55.5 | 74.0 | 19.2 | 18.5 | MHF-02 |
| 7 | 14772.0 | 41.8 | 41.1 | 42.1 | 34.9 | 16.9 | 0.6 | 57.1 | 56.4 | 74.0 | 16.9 | 17.6 | MHF-02 |
| 8 | 17234.0 | 43.4 | 42.5 | 46.7 | 35.3 | 18.9 | 0.3 | 64.5 | 63.6 | 74.0 | 9.5 | 10.4 | MHF-02 |
| 9 | 19696.0 | 42.9 | 42.1 | 39.6 | 35.2 | 20.7 | 1.0 | 59.6 | 58.8 | 74.0 | 14.4 | 15.2 | MHF-02 |
| 10 | 22158.0 | 43.4 | 43.3 | 40.6 | 35.0 | 22.3 | 1.4 | 63.2 | 63.1 | 74.0 | 10.8 | 10.9 | MHF-02 |
| 11 | 24620.0 | 44.4 | 43.9 | 40.2 | 36.8 | 22.9 | 2.6 | 63.8 | 63.3 | 74.0 | 10.2 | 10.7 | MHF-02 |

**AV DETECT** (RBW: 1MHz , VBW:10Hz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | AV | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.1 | 41.4 | 44.7 | 30.2 | 36.4 | 5.9 | 9.9 | 51.0 | 54.3 | - | - | - | MAT-22 |
| 2 | 2483.5 | 35.9 | 34.5 | 30.9 | 36.2 | 6.5 | 9.9 | 47.0 | 45.6 | 54.0 | 7.1 | 8.5 | MAT-22 |
| 3 | 4924.0 | 38.8 | 39.0 | 35.9 | 36.1 | 9.5 | 0.5 | 48.7 | 48.9 | 54.0 | 5.4 | 5.1 | MHF-02 |
| 4 | 7386.8 | 31.4 | 31.0 | 38.3 | 35.7 | 12.0 | 0.5 | 46.5 | 46.1 | 54.0 | 7.5 | 7.9 | MHF-02 |
| 5 | 9848.0 | 34.9 | 31.3 | 37.1 | 36.4 | 14.1 | 0.0 | 49.7 | 46.1 | 54.0 | 4.3 | 7.9 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 6 | 12310.0 | 29.8 | 29.8 | 41.7 | 35.6 | 15.6 | 0.5 | 42.5 | 42.5 | 54.0 | 11.5 | 11.5 | MHF-02 |
| 7 | 14772.0 | 29.0 | 28.9 | 42.1 | 34.9 | 16.9 | 0.6 | 44.3 | 44.2 | 54.0 | 9.7 | 9.8 | MHF-02 |
| 8 | 17234.0 | 30.5 | 30.5 | 46.7 | 35.3 | 18.9 | 0.3 | 51.6 | 51.6 | 54.0 | 2.4 | 2.4 | MHF-02 |
| 9 | 19696.0 | 30.5 | 30.5 | 39.6 | 35.2 | 20.7 | 1.0 | 47.2 | 47.2 | 54.0 | 6.8 | 6.8 | MHF-02 |
| 10 | 22158.0 | 30.8 | 30.9 | 40.6 | 35.0 | 22.3 | 1.4 | 50.6 | 50.7 | 54.0 | 3.4 | 3.3 | MHF-02 |
| 11 | 24620.0 | 31.7 | 31.6 | 40.2 | 36.8 | 22.9 | 2.6 | 51.1 | 51.0 | 54.0 | 2.9 | 3.0 | MHF-02 |

**20dBc(Fundamental 2462MHz)** (RBW: 100kHz , VBW:100kHz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | 20dBc | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2461.9 | 94.7 | 94.7 | 30.9 | 36.2 | 6.5 | 9.9 | 105.8 | 105.8 | - | - | - | MAT-22 |
| 2 | 2016.1 | 43.6 | 46.8 | 30.2 | 36.4 | 5.9 | 9.9 | 53.2 | 56.4 | Funda-20dB | 32.6 | 29.4 | MAT-22 |

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rouded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

## Radiated Spurious Emission(DSSS and other forms of modulation)(11g)

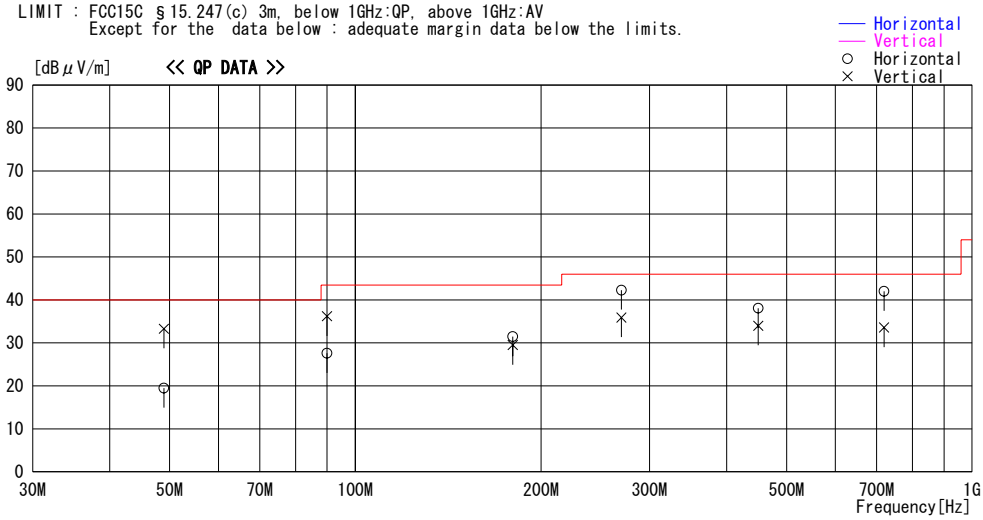
### DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 22:18:26

| | | | |
|---|---|---|---|
| Applicant | : Panasonic Communicatons Co.,Ltd. | Report No. | : 24JE0143-HO |
| Kind of EUT | : Network Camera | Power | : AC 120V / 60Hz |
| Model No. | : BL-C30A | Temp./ Humi. | : 27 deg.C. / 60 % |
| Serial No. | : ES1 | Operator | : Naoki Sakamoto |

Mode / Remarks : Transmitting IEEE801.11g, 54Mbps, ch1(2412MHz), Max-axis (H:Y-Axis,V:X-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.




| No. | FREQ [MHz] | READING QP [dBμV] | ANT FACTOR [dB/m] | LOSS [dB] | GAIN [dB] | RESULT [dBμV/m] | LIMIT [dBμV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 48.961 | 25.4 | 10.6 | 6.7 | 23.2 | 19.5 | 40.0 | 20.5 | 374 | 273 |
| 2 | 90.002 | 35.5 | 7.8 | 7.2 | 22.9 | 27.6 | 43.5 | 15.9 | 243 | 248 |
| 3 | 180.002 | 30.7 | 16.2 | 7.7 | 23.1 | 31.5 | 43.5 | 12.0 | 100 | 258 |
| 4 | 270.002 | 38.3 | 18.6 | 8.3 | 22.9 | 42.3 | 46.0 | 3.7 | 124 | 256 |
| 5 | 450.002 | 33.4 | 18.3 | 9.2 | 22.8 | 38.1 | 46.0 | 7.9 | 100 | 216 |
| 6 | 720.003 | 34.0 | 20.4 | 10.3 | 22.7 | 42.0 | 46.0 | 4.0 | 119 | 88 |
| ----- Vertical ------ | | | | | | | | | | |
| 7 | 48.960 | 39.2 | 10.6 | 6.7 | 23.2 | 33.3 | 40.0 | 6.7 | 100 | 360 |
| 8 | 90.001 | 44.1 | 7.8 | 7.2 | 22.9 | 36.2 | 43.5 | 7.3 | 100 | 200 |
| 9 | 180.002 | 28.7 | 16.2 | 7.7 | 23.1 | 29.5 | 43.5 | 14.0 | 100 | 0 |
| 10 | 270.002 | 31.9 | 18.6 | 8.3 | 22.9 | 35.9 | 46.0 | 10.1 | 100 | 299 |
| 11 | 450.003 | 29.3 | 18.3 | 9.2 | 22.8 | 34.0 | 46.0 | 12.0 | 100 | 180 |
| 12 | 720.004 | 25.6 | 20.4 | 10.3 | 22.7 | 33.6 | 46.0 | 12.4 | 160 | 360 |

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

*1: Except for the above table : All other spurious emissions were less than 20dB for the limit.

# Radiated Spurious Emission(DSSS and other forms of modulation)(11g)
# DATA OF SPURIOUS EMISSIONS(1GHz to 26.5GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Panasonic Communications Co.,Ltd.
Equipment : Network Camera
Model : BL-C30A
Sample No. : ES1
Power : AC120V / 60Hz
Mode : 11g, 54Mbps, PN9, Tx 2412MHz

REPORT NO : 24JE0143-HO
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)
TEST DISTANCE : 3/1m
DATE : 07/06/2004
TEMPERATURE : 27deg.C
HUMIDITY : 60%
ENGINEER : Kenichi Adachi

**PK DETECT** (RBW: 1MHz , VBW:1MHz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | ATT or | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | PK | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.0 | 52.2 | 53.5 | 30.2 | 36.4 | 5.9 | 9.9 | 61.8 | 63.1 | - | - | - | MAT-22 |
| 2 | 2390.0 | 57.1 | 57.5 | 30.8 | 36.3 | 6.4 | 9.9 | 67.9 | 68.3 | 74.0 | 6.1 | 5.7 | MAT-22 |
| 4 | 2400.0 | 75.0 | 67.2 | 30.8 | 36.3 | 6.4 | 9.9 | 85.8 | 78.0 | - | - | - | MAT-22 |
| 6 | 4825.2 | 50.3 | 48.9 | 35.4 | 36.1 | 9.3 | 1.0 | 59.9 | 58.5 | 74.0 | 14.1 | 15.5 | MHF-02 |
| 7 | 7236.0 | 42.8 | 41.3 | 38.0 | 35.6 | 11.8 | 0.5 | 57.5 | 56.0 | 74.0 | 16.5 | 18.0 | MHF-02 |
| 8 | 9648.0 | 43.7 | 42.6 | 37.5 | 36.3 | 13.9 | 0.5 | 59.3 | 58.2 | 74.0 | 14.7 | 15.8 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 9 | 12060.0 | 43.0 | 42.7 | 41.1 | 35.7 | 15.5 | 0.6 | 55.0 | 54.7 | 74.0 | 19.0 | 19.3 | MHF-02 |
| 10 | 14472.0 | 40.2 | 41.0 | 41.0 | 34.6 | 16.6 | 0.6 | 54.4 | 55.2 | 74.0 | 19.7 | 18.9 | MHF-02 |
| 11 | 16884.0 | 42.6 | 41.1 | 46.1 | 35.5 | 18.7 | 0.5 | 62.8 | 61.3 | 74.0 | 11.2 | 12.7 | MHF-02 |
| 12 | 19296.0 | 42.6 | 42.3 | 39.5 | 34.9 | 20.4 | 0.9 | 59.0 | 58.7 | 74.0 | 15.0 | 15.3 | MHF-02 |
| 13 | 21708.0 | 43.0 | 42.5 | 40.7 | 35.3 | 22.1 | 0.6 | 61.7 | 61.2 | 74.0 | 12.3 | 12.8 | MHF-02 |
| 14 | 24120.0 | 42.8 | 43.5 | 39.9 | 36.0 | 22.6 | 1.6 | 61.5 | 62.2 | 74.0 | 12.5 | 11.8 | MHF-02 |

**AV DETECT** (RBW: 1MHz , VBW:10Hz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | AV | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.0 | 48.5 | 50.5 | 30.2 | 36.4 | 5.9 | 9.9 | 58.1 | 60.1 | - | - | - | MAT-22 |
| 2 | 2390.0 | 40.6 | 41.0 | 30.8 | 36.3 | 6.4 | 9.9 | 51.4 | 51.8 | 54.0 | 2.6 | 2.2 | MAT-22 |
| 3 | 2400.0 | 54.1 | 56.2 | 30.8 | 36.3 | 6.4 | 9.9 | 64.9 | 67.0 | - | - | - | MAT-22 |
| 6 | 4825.2 | 37.2 | 37.3 | 35.4 | 36.1 | 9.3 | 1.0 | 46.8 | 46.9 | 54.0 | 7.2 | 7.1 | MHF-02 |
| 7 | 7236.0 | 30.8 | 31.2 | 38.0 | 35.6 | 11.8 | 0.5 | 45.5 | 45.9 | 54.0 | 8.5 | 8.1 | MHF-02 |
| 8 | 9648.0 | 31.3 | 31.4 | 37.5 | 36.3 | 13.9 | 0.5 | 46.9 | 47.0 | 54.0 | 7.1 | 7.0 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 9 | 12060.0 | 29.7 | 29.8 | 41.1 | 35.7 | 15.5 | 0.6 | 41.7 | 41.8 | 54.0 | 12.3 | 12.2 | MHF-02 |
| 10 | 14472.0 | 28.4 | 28.2 | 41.0 | 34.6 | 16.6 | 0.6 | 42.6 | 42.4 | 54.0 | 11.5 | 11.7 | MHF-02 |
| 11 | 16884.0 | 30.6 | 30.4 | 46.1 | 35.5 | 18.7 | 0.5 | 50.8 | 50.6 | 54.0 | 3.2 | 3.4 | MHF-02 |
| 12 | 19296.0 | 30.3 | 30.1 | 39.5 | 34.9 | 20.4 | 0.9 | 46.7 | 46.5 | 54.0 | 7.3 | 7.5 | MHF-02 |
| 13 | 21708.0 | 31.3 | 30.8 | 40.7 | 35.3 | 22.1 | 0.6 | 50.0 | 49.5 | 54.0 | 4.0 | 4.5 | MHF-02 |
| 14 | 24120.0 | 30.8 | 31.4 | 39.9 | 36.0 | 22.6 | 1.6 | 49.5 | 50.1 | 54.0 | 4.5 | 3.9 | MHF-02 |

**20dBc(Fundamental 2412MHz)** (RBW: 100kHz , VBW:100kHz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | 20dBc | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2416.0 | 90.6 | 93.4 | 30.8 | 36.3 | 6.4 | 9.9 | 101.5 | 104.3 | - | - | - | MAT-22 |
| 2 | 2016.0 | 49.8 | 44.6 | 30.2 | 36.4 | 5.9 | 9.9 | 59.4 | 54.2 | Funda-20dB | 22.1 | 30.1 | MAT-22 |
| 3 | 2400.0 | 57.6 | 51.6 | 30.8 | 36.3 | 6.4 | 9.9 | 68.4 | 62.4 | Funda-20dB | 13.0 | 21.8 | MAT-22 |

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB
* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rouded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

## Radiated Spurious Emission(DSSS and other forms of modulation)(11g)

### DATA OF RADIATED EMISSION TEST

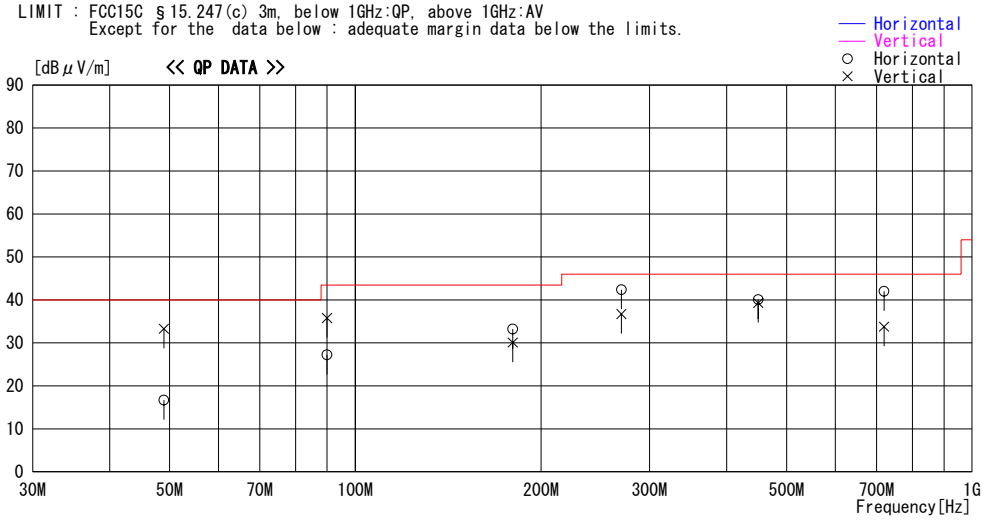
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 22:57:46

Applicant : Panasonic Communicatons Co.,Ltd.
Kind of EUT : Network Camera
Model No. : BL-C30A
Serial No. : ES1

Report No. : 24JE0143-HO
Power : AC 120V / 60Hz
Temp./ Humi. : 27 deg.C. / 60 %
Operator : Naoki Sakamoto

Mode / Remarks : Transmitting IEEE801.11g, 54Mbps, ch6(2437MHz), Max-axis (H:Y-Axis,V:X-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.




| No. | FREQ [MHz] | READING QP [dBμV] | ANT FACTOR [dB/m] | LOSS [dB] | GAIN [dB] | RESULT [dBμV/m] | LIMIT [dBμV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 48.962 | 22.6 | 10.6 | 6.7 | 23.2 | 16.7 | 40.0 | 23.3 | 400 | 113 |
| 2 | 90.001 | 35.1 | 7.8 | 7.2 | 22.9 | 27.2 | 43.5 | 16.3 | 240 | 262 |
| 3 | 180.001 | 32.4 | 16.2 | 7.7 | 23.1 | 33.2 | 43.5 | 10.3 | 100 | 260 |
| 4 | 270.002 | 38.4 | 18.6 | 8.3 | 22.9 | 42.4 | 46.0 | 3.6 | 124 | 260 |
| 5 | 450.002 | 35.4 | 18.3 | 9.2 | 22.8 | 40.1 | 46.0 | 5.9 | 100 | 213 |
| 6 | 720.004 | 34.0 | 20.4 | 10.3 | 22.7 | 42.0 | 46.0 | 4.0 | 123 | 235 |
| ----- Vertical ------ | | | | | | | | | | |
| 7 | 48.955 | 39.2 | 10.6 | 6.7 | 23.2 | 33.3 | 40.0 | 6.7 | 100 | -1 |
| 8 | 90.001 | 43.7 | 7.8 | 7.2 | 22.9 | 35.8 | 43.5 | 7.7 | 112 | 204 |
| 9 | 180.002 | 29.3 | 16.2 | 7.7 | 23.1 | 30.1 | 43.5 | 13.4 | 100 | 0 |
| 10 | 270.002 | 32.7 | 18.6 | 8.3 | 22.9 | 36.7 | 46.0 | 9.3 | 100 | 297 |
| 11 | 450.003 | 34.6 | 18.3 | 9.2 | 22.8 | 39.3 | 46.0 | 6.7 | 100 | 195 |
| 12 | 720.005 | 25.8 | 20.4 | 10.3 | 22.7 | 33.8 | 46.0 | 12.2 | 150 | 349 |

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

*1: Except for the above table : All other spurious emissions were less than 20dB for the limit.

# Radiated Spurious Emission(DSSS and other forms of modulation)(11g)
# DATA OF SPURIOUS EMISSIONS(1GHz to 26.5GHz)

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

Company : Panasonic Communications Co.,Ltd.
Equipment : Network Camera
Model : BL-C30A
Sample No. : ES1
Power : AC120V / 60Hz
Mode : 11g, 54Mbps, PN9, Tx 2437MHz

REPORT NO : 24JE0143-HO
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)
TEST DISTANCE : 3/1m
DATE : 07/06/2004
TEMPERATURE : 27deg.C
HUMIDITY : 60%
ENGINEER : Kenichi Adachi

**PK DETECT** (RBW: 1MHz , VBW:1MHz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | PK | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.0 | 52.3 | 53.7 | 30.2 | 36.4 | 5.9 | 9.9 | 61.9 | 63.3 | - | - | - | MAT-22 |
| 2 | 4874.4 | 50.8 | 51.5 | 35.6 | 36.1 | 9.4 | 1.0 | 60.8 | 61.5 | 74.0 | 13.2 | 12.5 | MHF-02 |
| 3 | 7311.4 | 43.6 | 44.6 | 38.2 | 35.7 | 11.9 | 0.5 | 58.6 | 59.6 | 74.0 | 15.5 | 14.5 | MHF-02 |
| 4 | 9747.8 | 43.9 | 44.4 | 37.3 | 36.3 | 14.0 | 0.5 | 59.3 | 59.8 | 74.0 | 14.7 | 14.2 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 5 | 12185.0 | 43.3 | 42.6 | 41.4 | 35.6 | 15.6 | 0.5 | 55.7 | 55.0 | 74.0 | 18.4 | 19.1 | MHF-02 |
| 6 | 14622.0 | 40.5 | 40.5 | 41.5 | 34.8 | 16.8 | 0.6 | 55.1 | 55.1 | 74.0 | 18.9 | 18.9 | MHF-02 |
| 7 | 17059.0 | 42.5 | 42.6 | 46.4 | 35.4 | 18.8 | 0.4 | 63.2 | 63.3 | 74.0 | 10.8 | 10.7 | MHF-02 |
| 8 | 19496.0 | 42.2 | 42.5 | 39.2 | 35.0 | 20.6 | 1.0 | 58.5 | 58.8 | 74.0 | 15.5 | 15.2 | MHF-02 |
| 9 | 21933.0 | 43.5 | 43.3 | 40.5 | 35.0 | 22.3 | 0.9 | 62.7 | 62.5 | 74.0 | 11.3 | 11.5 | MHF-02 |
| 10 | 24370.0 | 43.6 | 43.6 | 40.1 | 36.6 | 22.7 | 2.2 | 62.6 | 62.6 | 74.0 | 11.4 | 11.4 | MHF-02 |

**AV DETECT** (RBW: 1MHz , VBW:10Hz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | AV | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.0 | 48.8 | 51.0 | 30.2 | 36.4 | 5.9 | 9.9 | 58.4 | 60.6 | - | - | - | MAT-22 |
| 2 | 4874.4 | 32.5 | 37.9 | 35.6 | 36.1 | 9.4 | 1.0 | 42.5 | 47.9 | 54.0 | 11.5 | 6.1 | MHF-02 |
| 3 | 7311.4 | 30.7 | 31.4 | 38.2 | 35.7 | 11.9 | 0.5 | 45.7 | 46.4 | 54.0 | 8.3 | 7.6 | MHF-02 |
| 4 | 9747.8 | 31.3 | 31.2 | 37.3 | 36.3 | 14.0 | 0.5 | 46.7 | 46.6 | 54.0 | 7.3 | 7.4 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 5 | 12185.0 | 29.8 | 29.7 | 41.4 | 35.6 | 15.6 | 0.5 | 42.2 | 42.1 | 54.0 | 11.9 | 12.0 | MHF-02 |
| 6 | 14622.0 | 28.3 | 28.3 | 41.5 | 34.8 | 16.8 | 0.6 | 42.9 | 42.9 | 54.0 | 11.1 | 11.1 | MHF-02 |
| 7 | 17059.0 | 30.6 | 31.0 | 46.4 | 35.4 | 18.8 | 0.4 | 51.3 | 51.7 | 54.0 | 2.7 | 2.3 | MHF-02 |
| 8 | 19496.0 | 30.0 | 30.0 | 39.2 | 35.0 | 20.6 | 1.0 | 46.3 | 46.3 | 54.0 | 7.7 | 7.7 | MHF-02 |
| 9 | 21933.0 | 30.9 | 30.9 | 40.5 | 35.0 | 22.3 | 0.9 | 50.1 | 50.1 | 54.0 | 3.9 | 3.9 | MHF-02 |
| 10 | 24370.0 | 31.3 | 31.5 | 40.1 | 36.6 | 22.7 | 2.2 | 50.3 | 50.5 | 54.0 | 3.7 | 3.5 | MHF-02 |

**20dBc(Fundamental 2437MHz)** (RBW: 100kHz , VBW:100kHz)

| No. | FREQ | S/A READING | | ANT | AMP | CABLE | Band-Pass | RESULT | | Limit | MARGIN | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | HOR | VER | Factor | GAIN | LOSS | Filter | HOR | VER | 20dBc | HOR | VER | |
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2435.9 | 91.7 | 93.7 | 30.9 | 36.3 | 6.5 | 9.9 | 102.7 | 104.7 | - | - | - | MAT-22 |
| 2 | 2016.0 | 50.0 | 51.8 | 30.2 | 36.4 | 5.9 | 9.9 | 59.6 | 61.4 | Funda-20dB | 23.1 | 23.3 | MAT-22 |

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rouded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

## Radiated Spurious Emission(DSSS and other forms of modulation)(11g)

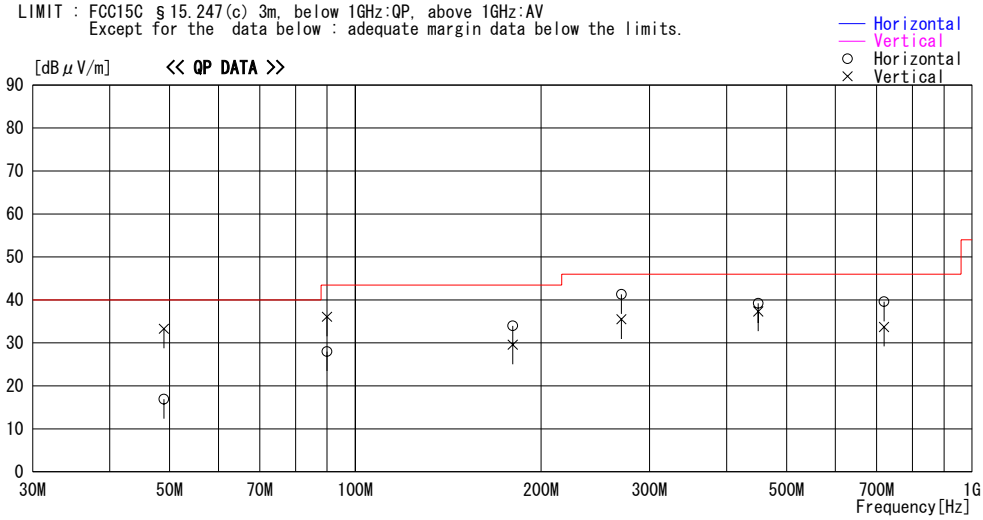
### DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2004/07/06 23:35:32

| | | | |
|---|---|---|---|
| Applicant | : Panasonic Communicatons Co.,Ltd. | Report No. | : 24JE0143-HO |
| Kind of EUT | : Network Camera | Power | : AC 120V / 60Hz |
| Model No. | : BL-C30A | Temp./ Humi. | : 27 deg.C. / 60 % |
| Serial No. | : ES1 | Operator | : Naoki Sakamoto |

Mode / Remarks : Transmitting IEEE801.11g, 54Mbps, ch11(2462MHz), Max-axis (H:Y-Axis,V:X-axis)

LIMIT : FCC15C §15.247(c) 3m, below 1GHz:QP, above 1GHz:AV
Except for the data below : adequate margin data below the limits.




| No. | FREQ [MHz] | READING QP [dBμV] | ANT FACTOR [dB/m] | LOSS [dB] | GAIN [dB] | RESULT [dBμV/m] | LIMIT [dBμV/m] | MARGIN [dB] | ANTENNA [cm] | TABLE [DEG] |
|---|---|---|---|---|---|---|---|---|---|---|
| ----- Horizontal ------ | | | | | | | | | | |
| 1 | 48.950 | 22.8 | 10.6 | 6.7 | 23.2 | 16.9 | 40.0 | 23.1 | 400 | 98 |
| 2 | 90.001 | 35.9 | 7.8 | 7.2 | 22.9 | 28.0 | 43.5 | 15.5 | 248 | 250 |
| 3 | 180.002 | 33.2 | 16.2 | 7.7 | 23.1 | 34.0 | 43.5 | 9.5 | 181 | 238 |
| 4 | 270.003 | 37.3 | 18.6 | 8.3 | 22.9 | 41.3 | 46.0 | 4.7 | 122 | 257 |
| 5 | 450.003 | 34.5 | 18.3 | 9.2 | 22.8 | 39.2 | 46.0 | 6.8 | 100 | 197 |
| 6 | 720.005 | 31.6 | 20.4 | 10.3 | 22.7 | 39.6 | 46.0 | 6.4 | 100 | 228 |
| ----- Vertical ------ | | | | | | | | | | |
| 7 | 48.952 | 39.2 | 10.6 | 6.7 | 23.2 | 33.3 | 40.0 | 6.7 | 100 | 360 |
| 8 | 90.001 | 44.0 | 7.8 | 7.2 | 22.9 | 36.1 | 43.5 | 7.4 | 100 | 194 |
| 9 | 180.001 | 28.8 | 16.2 | 7.7 | 23.1 | 29.6 | 43.5 | 13.9 | 100 | 0 |
| 10 | 270.002 | 31.5 | 18.6 | 8.3 | 22.9 | 35.5 | 46.0 | 10.5 | 100 | 360 |
| 11 | 450.002 | 32.6 | 18.3 | 9.2 | 22.8 | 37.3 | 46.0 | 8.7 | 100 | 182 |
| 12 | 720.003 | 25.7 | 20.4 | 10.3 | 22.7 | 33.7 | 46.0 | 12.3 | 100 | 337 |

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - GAIN(AMP)

*1: Except for the above table : All other spurious emissions were less than 20dB for the limit.

# Radiated Spurious Emission(DSSS and other forms of modulation)(11g)

Head Office EMC Lab. No.2 Semi Anechoic Chamber

| | | | |
|---|---|---|---|
| Company | : Panasonic Communications Co.,Ltd. | REPORT NO | : 24JE0143-HO |
| Equipment | : Network Camera | REGULATION | : Fcc Part15 Subpart C 15.247(b)(3) |
| Model | : BL-C30A | TEST DISTANCE | : 3/1m |
| Sample No. | : ES1 | DATE | : 07/06/2004 |
| Power | : AC120V / 60Hz | TEMPERATURE | : 27deg.C |
| Mode | : 11g, 54Mbps, PN9, Tx 2462MHz | HUMIDITY | : 60% |
| | | ENGINEER | : Kenichi Adachi |

**PK DETECT** (RBW: 1MHz , VBW:1MHz)

| No. | FREQ | S/A READING HOR | S/A READING VER | ANT Factor | AMP GAIN | CABLE LOSS | Band-Pass Filter | RESULT HOR | RESULT VER | Limit PK | MARGIN HOR | MARGIN VER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.1 | 52.3 | 53.8 | 30.2 | 36.4 | 5.9 | 9.9 | 61.9 | 63.4 | 74.0 | 12.1 | 10.6 | MAT-22 |
| 2 | 2483.5 | 56.1 | 60.4 | 30.9 | 36.2 | 6.5 | 9.9 | 67.2 | 71.5 | 74.0 | 6.8 | 2.6 | MAT-22 |
| 3 | 4923.2 | 51.1 | 52.1 | 35.9 | 36.1 | 9.5 | 1.0 | 61.4 | 62.4 | 74.0 | 12.6 | 11.6 | MHF-02 |
| 4 | 7386.2 | 44.0 | 44.6 | 38.3 | 35.7 | 12.0 | 0.5 | 59.2 | 59.8 | 74.0 | 14.8 | 14.2 | MHF-02 |
| 5 | 9848.3 | 44.0 | 44.0 | 37.1 | 36.4 | 14.1 | 0.5 | 59.3 | 59.3 | 74.0 | 14.7 | 14.7 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 6 | 12310.0 | 42.5 | 42.8 | 41.7 | 35.6 | 15.6 | 0.5 | 55.2 | 55.5 | 74.0 | 18.8 | 18.5 | MHF-02 |
| 7 | 14772.0 | 40.9 | 41.3 | 42.1 | 34.9 | 16.9 | 0.6 | 56.2 | 56.6 | 74.0 | 17.8 | 17.4 | MHF-02 |
| 8 | 17234.0 | 42.6 | 42.3 | 46.7 | 35.3 | 18.9 | 0.3 | 63.7 | 63.4 | 74.0 | 10.3 | 10.6 | MHF-02 |
| 9 | 19696.0 | 42.6 | 42.3 | 39.6 | 35.2 | 20.7 | 1.0 | 59.3 | 59.0 | 74.0 | 14.7 | 15.0 | MHF-02 |
| 10 | 22158.0 | 42.8 | 43.0 | 40.6 | 35.0 | 22.3 | 1.4 | 62.6 | 62.8 | 74.0 | 11.4 | 11.2 | MHF-02 |
| 11 | 24620.0 | 43.7 | 43.4 | 40.2 | 36.8 | 22.9 | 2.6 | 63.1 | 62.8 | 74.0 | 10.9 | 11.2 | MHF-02 |

**AV DETECT** (RBW: 1MHz , VBW:10Hz)

| No. | FREQ | S/A READING HOR | S/A READING VER | ANT Factor | AMP GAIN | CABLE LOSS | Band-Pass Filter | RESULT HOR | RESULT VER | Limit AV | MARGIN HOR | MARGIN VER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2016.1 | 48.3 | 49.9 | 30.2 | 36.4 | 5.9 | 9.9 | 57.9 | 59.5 | - | - | - | MAT-22 |
| 2 | 2483.5 | 38.7 | 40.8 | 30.9 | 36.2 | 6.5 | 9.9 | 49.8 | 51.9 | 54.0 | 4.3 | **2.2** | MAT-22 |
| 3 | 4923.2 | 37.9 | 37.8 | 35.9 | 36.1 | 9.5 | 1.0 | 48.2 | 48.1 | 54.0 | 5.8 | 5.9 | MHF-02 |
| 4 | 7386.2 | 31.1 | 31.3 | 38.3 | 35.7 | 12.0 | 0.5 | 46.3 | 46.5 | 54.0 | 7.7 | 7.5 | MHF-02 |
| 5 | 9848.3 | 31.5 | 31.4 | 37.1 | 36.4 | 14.1 | 0.5 | 46.8 | 46.7 | 54.0 | 7.2 | 7.3 | MHF-02 |
| **Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac** | | | | | | | | | | | | | |
| 6 | 12310.0 | 29.6 | 29.7 | 41.7 | 35.6 | 15.6 | 0.5 | 42.3 | 42.4 | 54.0 | 11.7 | 11.6 | MHF-02 |
| 7 | 14772.0 | 29.0 | 28.3 | 42.1 | 34.9 | 16.9 | 0.6 | 44.3 | 43.6 | 54.0 | 9.7 | 10.4 | MHF-02 |
| 8 | 17234.0 | 30.5 | 30.2 | 46.7 | 35.3 | 18.9 | 0.3 | 51.6 | 51.3 | 54.0 | 2.4 | 2.7 | MHF-02 |
| 9 | 19696.0 | 30.5 | 30.0 | 39.6 | 35.2 | 20.7 | 1.0 | 47.2 | 46.7 | 54.0 | 6.8 | 7.3 | MHF-02 |
| 10 | 22158.0 | 31.4 | 30.6 | 40.6 | 35.0 | 22.3 | 1.4 | 51.2 | 50.4 | 54.0 | 2.8 | 3.6 | MHF-02 |
| 11 | 24620.0 | 31.7 | 31.6 | 40.2 | 36.8 | 22.9 | 2.6 | 51.1 | 51.0 | 54.0 | 2.9 | 3.0 | MHF-02 |

**20dBc(Fundamental 2462MHz)** (RBW: 100kHz , VBW:100kHz)

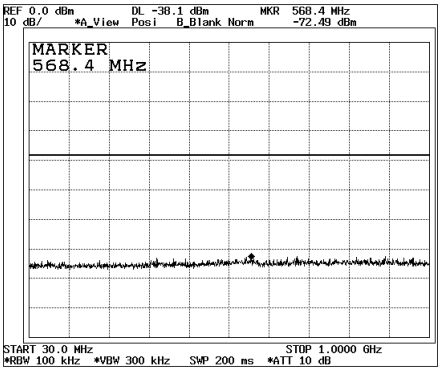
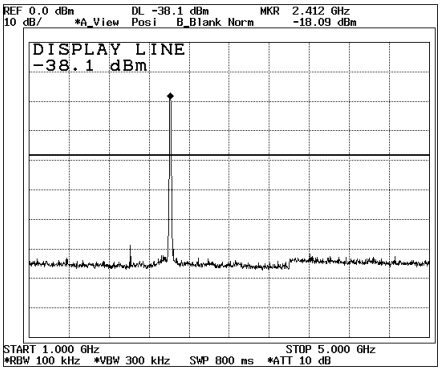
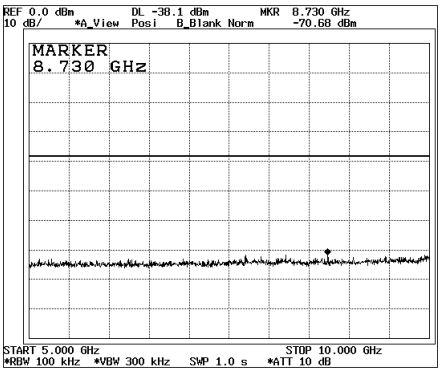
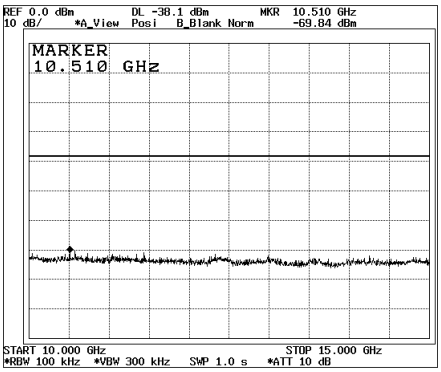
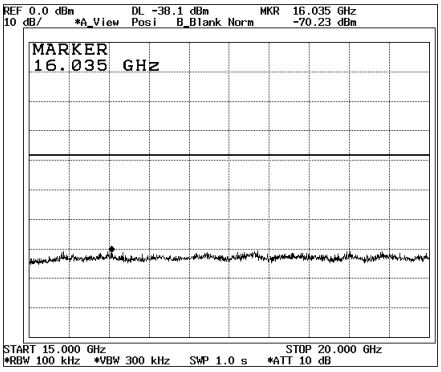
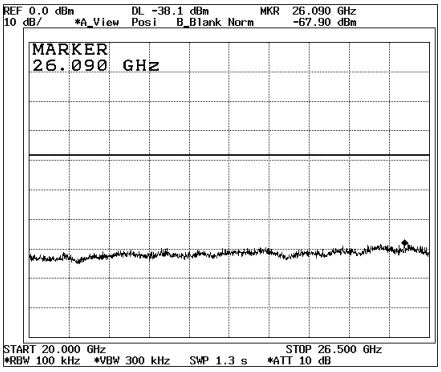
| No. | FREQ | S/A READING HOR | S/A READING VER | ANT Factor | AMP GAIN | CABLE LOSS | Band-Pass Filter | RESULT HOR | RESULT VER | Limit 20dBc | MARGIN HOR | MARGIN VER | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | [MHz] | [dBuV/m] | | [dB/m] | [dB] | [dB] | [dB] | [dBuV/m] | | [dBuV/m] | [dB] | [dB] | |
| **Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass** | | | | | | | | | | | | | |
| 1 | 2469.1 | 93.0 | 93.8 | 30.9 | 36.2 | 6.5 | 9.9 | 104.1 | 104.9 | - | - | - | MAT-22 |
| 2 | 2016.1 | 49.9 | 51.0 | 30.2 | 36.4 | 5.9 | 9.9 | 59.5 | 60.6 | Funda-20dB | 24.6 | 24.3 | MAT-22 |

Test Distance 1.0m : Distance Factor(Dfac) = 20log(3/1.0) = 9.5dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the frequency over the fifth harmonic, the noise from the EUT was not seen.The data above is its base noise.
* Atten. : 1 to 3.5GHz, Filter : 3.5 to 26GHz
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rouded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

## Conducted Spurious Emission(DSSS and other forms of modulation)(11b)

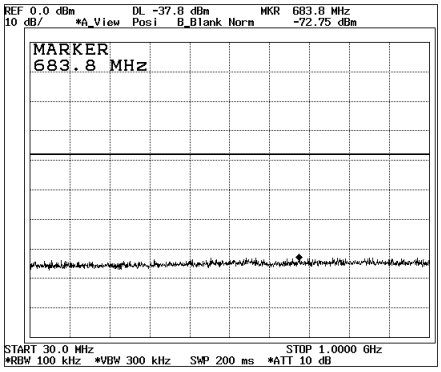
### Ch : Low

| 30MHz-1GHz | 1GHz-5GHz |
|---|---|
|  |  |
| **5GHz-10GHz** | **10GHz-15GHz** |
|  |  |
| **15GHz-20GHz** | **20GHz-26.5GHz** |
|  |  |

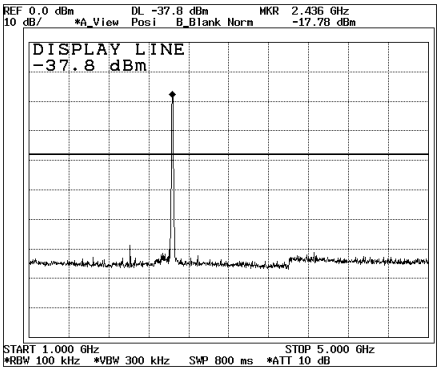
## Conducted Spurious Emission(DSSS and other forms of modulation)(11b)

## Ch : Mid

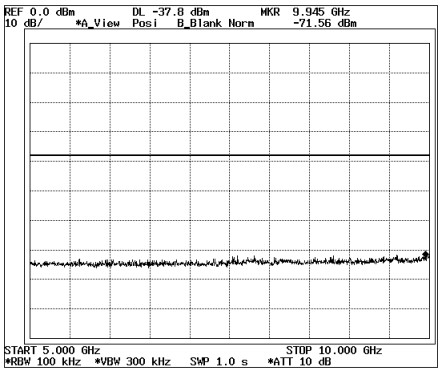
### 30MHz-1GHz



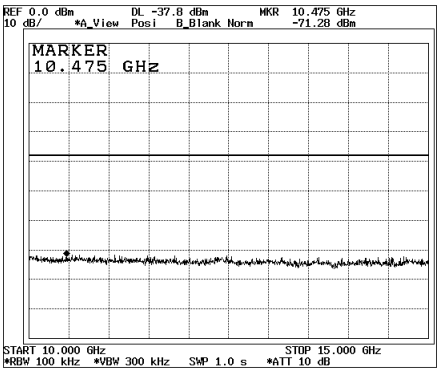

### 1GHz-5GHz



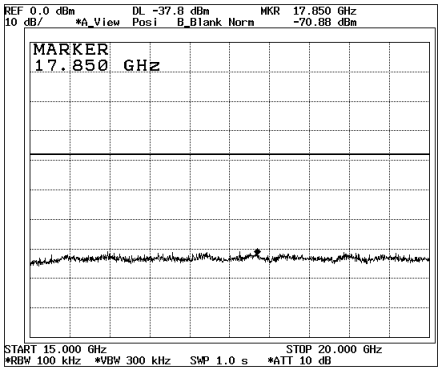

### 5GHz-10GHz



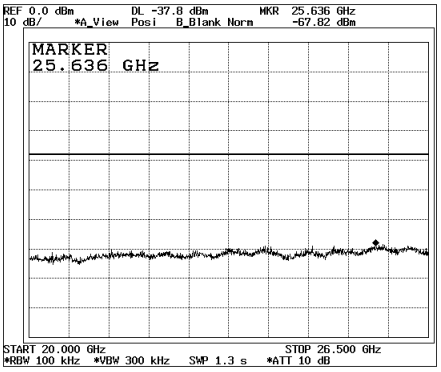

### 10GHz-15GHz




### 15GHz-20GHz

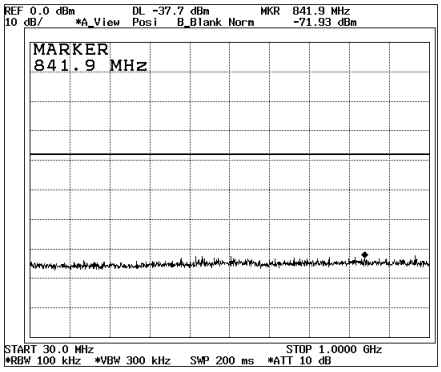
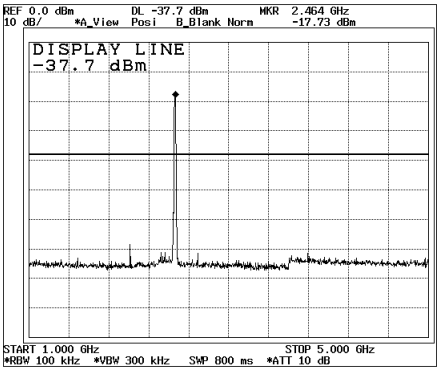
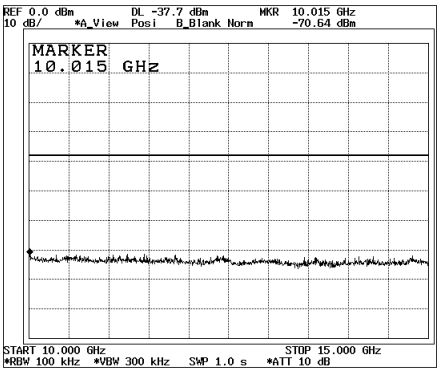
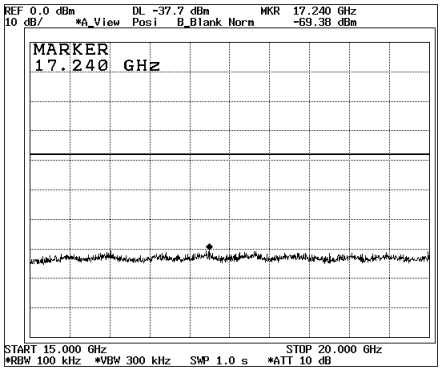
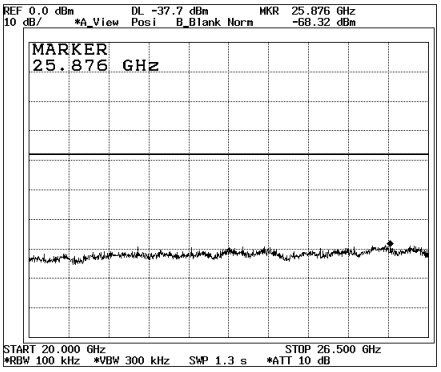



### 20GHz-26.5GHz



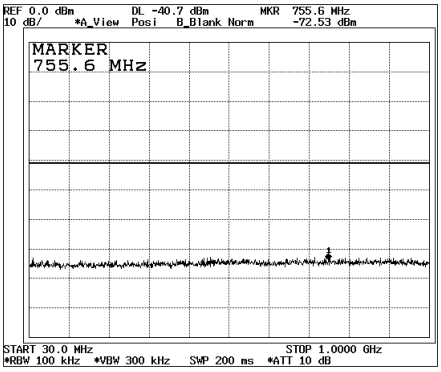
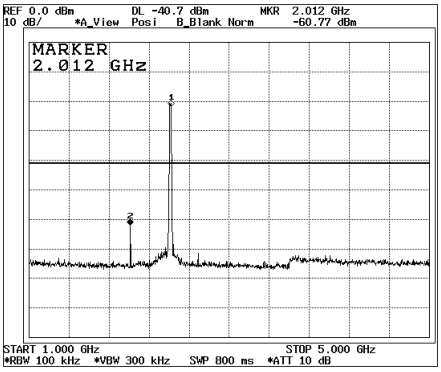
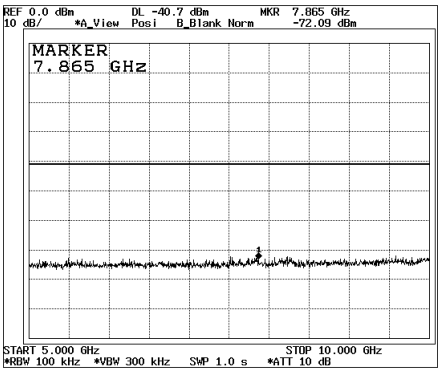
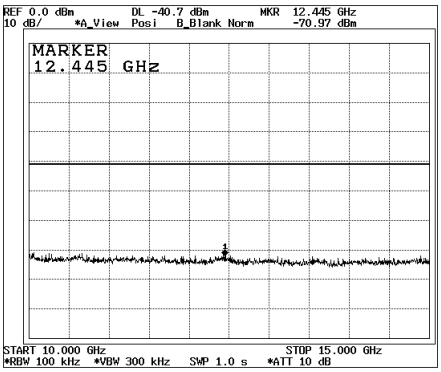
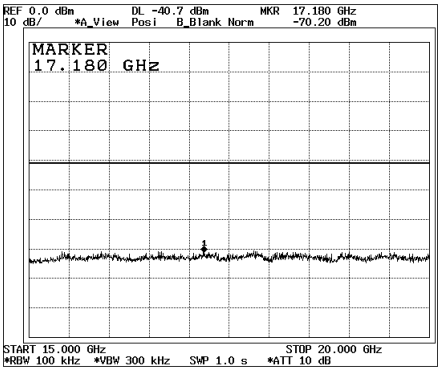
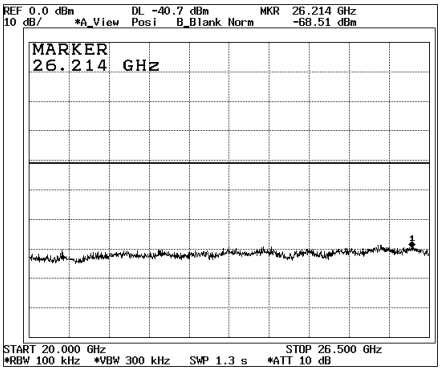
## Conducted Spurious Emission(DSSS and other forms of modulation) (11b)

### Ch : High

| 30MHz-1GHz | 1GHz-5GHz |
|---|---|
|  |  |
| **5GHz-10GHz** | **10GHz-15GHz** |
|  |  |
| **15GHz-20GHz** | **20GHz-26.5GHz** |
|  |  |

## Conducted Spurious Emission(DSSS and other forms of modulation)(11g)

### Ch : Low

| 30MHz-1GHz | 1GHz-5GHz |
|---|---|
|  |  |
| **5GHz-10GHz** | **10GHz-15GHz** |
|  |  |
| **15GHz-20GHz** | **20GHz-26.5GHz** |
|  |  |

REF 0.0 dBm
DL -40.7 dBm
MKR 755.6 MHz
10 dB/ *A_View Posi B_Blank Norm -72.53 dBm
MARKER
755.6 MHz
START 30.0 MHz
STOP 1.0000 GHz
*RBW 100 kHz *VBW 300 kHz SWP 200 ms *ATT 10 dB

REF 0.0 dBm
DL -40.7 dBm
MKR 2.012 GHz
10 dB/ *A_View Posi B_Blank Norm -60.77 dBm
MARKER
2.012 GHz
START 1.000 GHz
STOP 5.000 GHz
*RBW 100 kHz *VBW 300 kHz SWP 800 ms *ATT 10 dB

REF 0.0 dBm
DL -40.7 dBm
MKR 7.865 GHz
10 dB/ *A_View Posi B_Blank Norm -72.09 dBm
MARKER
7.865 GHz
START 5.000 GHz
STOP 10.000 GHz
*RBW 100 kHz *VBW 300 kHz SWP 1.0 s *ATT 10 dB

REF 0.0 dBm
DL -40.7 dBm
MKR 12.445 GHz
10 dB/ *A_View Posi B_Blank Norm -70.97 dBm
MARKER
12.445 GHz
START 10.000 GHz
STOP 15.000 GHz
*RBW 100 kHz *VBW 300 kHz SWP 1.0 s *ATT 10 dB

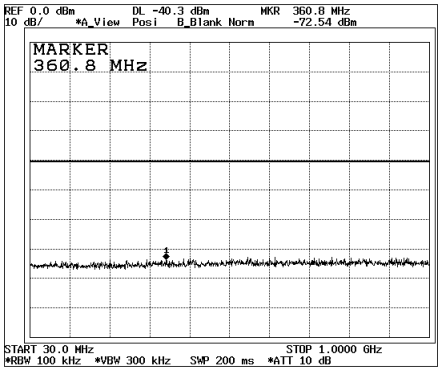
REF 0.0 dBm
DL -40.7 dBm
MKR 17.180 GHz
10 dB/ *A_View Posi B_Blank Norm -70.20 dBm
MARKER
17.180 GHz
START 15.000 GHz
STOP 20.000 GHz
*RBW 100 kHz *VBW 300 kHz SWP 1.0 s *ATT 10 dB

REF 0.0 dBm
DL -40.7 dBm
MKR 26.214 GHz
10 dB/ *A_View Posi B_Blank Norm -68.51 dBm
MARKER
26.214 GHz
START 20.000 GHz
STOP 26.500 GHz
*RBW 100 kHz *VBW 300 kHz SWP 1.3 s *ATT 10 dB

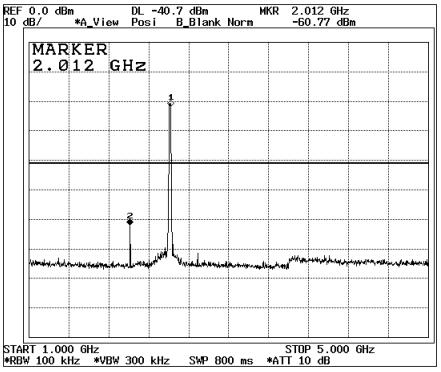
## Conducted Spurious Emission(DSSS and other forms of modulation)(11g)

## Ch : Mid

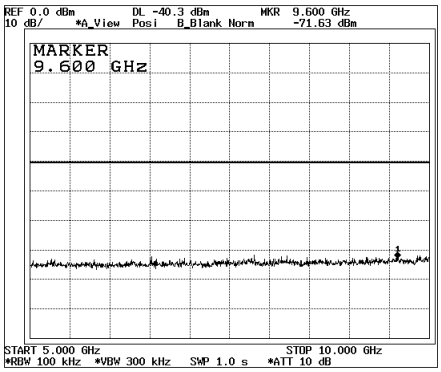
### 30MHz-1GHz



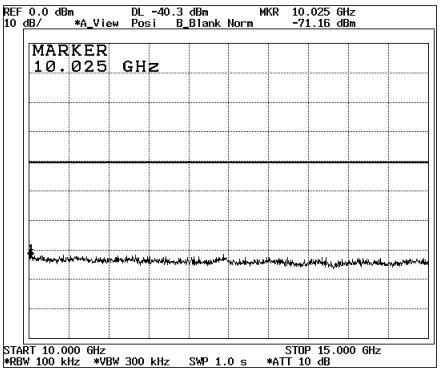

### 1GHz-5GHz



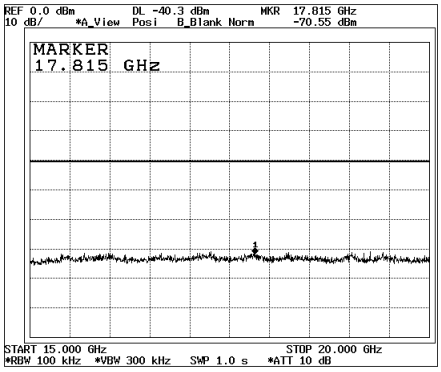

### 5GHz-10GHz



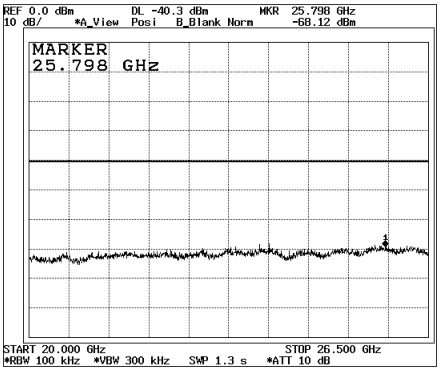

### 10GHz-15GHz




### 15GHz-20GHz



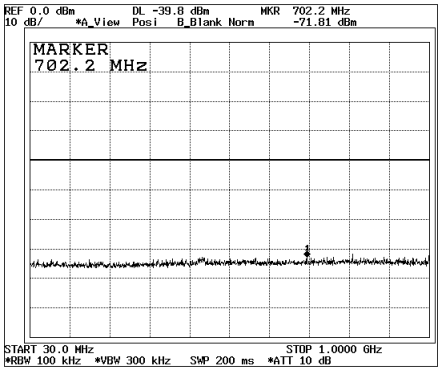

### 20GHz-26.5GHz



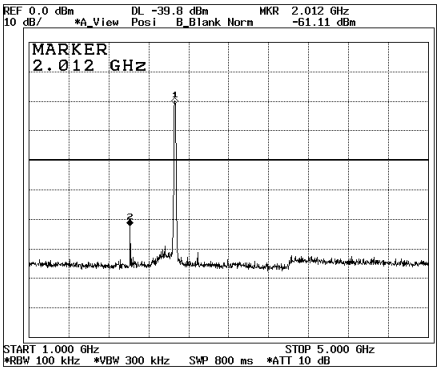
## Conducted Spurious Emission(DSSS and other forms of modulation)(11g)

**Ch : High**

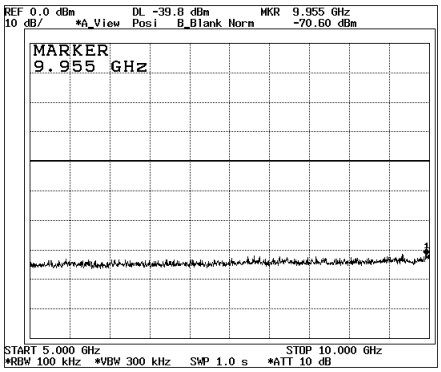
### 30MHz-1GHz



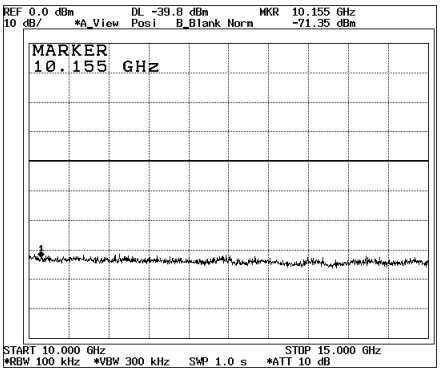

### 1GHz-5GHz



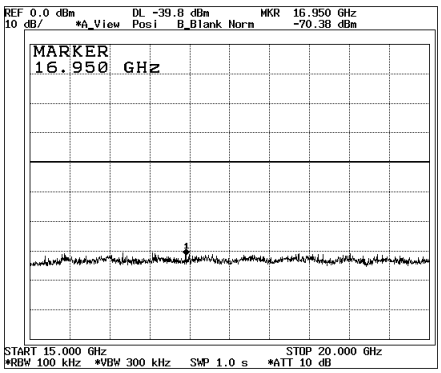

### 5GHz-10GHz



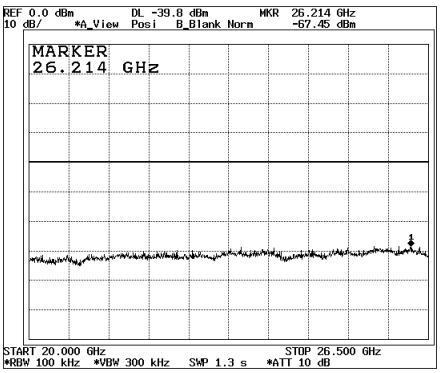

### 10GHz-15GHz




### 15GHz-20GHz

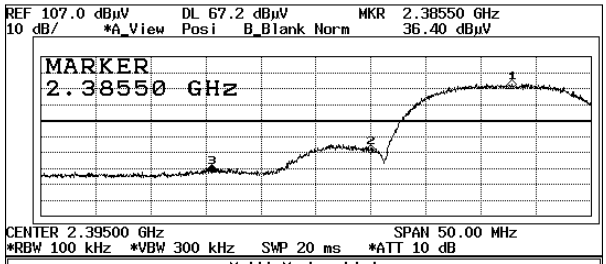



### 20GHz-26.5GHz



## Conducted emission Band Edge compliance (DSSS and other forms of modulation)(11b)

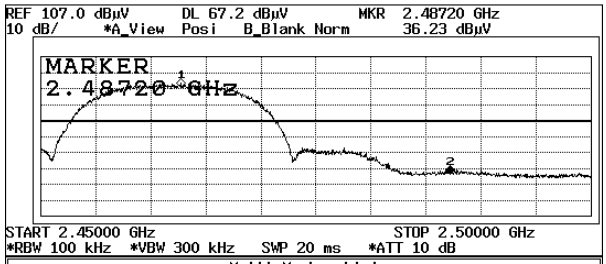
### Ch:Low




Multi Marker List

| | | |
|---|---|---|
| 1: | 2.41280 GHz | 90.07 dBµV |
| 2: | 2.40000 GHz | 48.80 dBµV |
| 3: | 2.38550 GHz | 36.40 dBµV |
| 4: | | |
| 5: | | |
| 6: | | |
| 7: | | |
| 8: | | |
| 9: | | |
| 10: | | |
| Δ: | | |

### Ch:High

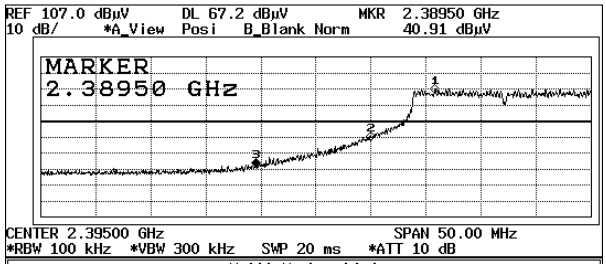



Multi Marker List

| | | |
|---|---|---|
| 1: | 2.46270 GHz | 90.58 dBµV |
| 2: | 2.48720 GHz | 36.23 dBµV |
| 3: | | |
| 4: | | |
| 5: | | |
| 6: | | |
| 7: | | |
| 8: | | |
| 9: | | |
| 10: | | |
| Δ: | | |

## Conducted emission Band Edge compliance (DSSS and other forms of modulation)(11g)

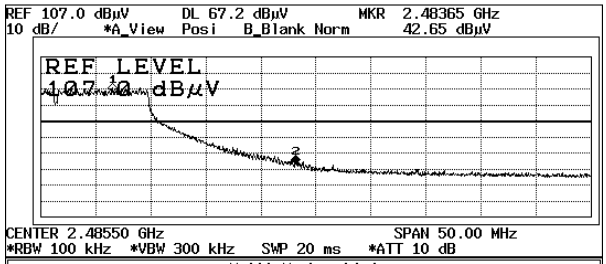
### Ch:Low




Multi Marker List

| | | |
|---|---|---|
| 1: | 2.40580 GHz | 87.38 dBµV |
| 2: | 2.40000 GHz | 57.13 dBµV |
| 3: | 2.38950 GHz | 40.91 dBµV |
| 4: | | |
| 5: | | |
| 6: | | |
| 7: | | |
| 8: | | |
| 9: | | |
| 10: | | |
| Δ: | | |

### Ch:High




Multi Marker List

| | | |
|---|---|---|
| 1: | 2.46700 GHz | 87.52 dBµV |
| 2: | 2.48365 GHz | 42.65 dBµV |
| 3: | | |
| 4: | | |
| 5: | | |
| 6: | | |
| 7: | | |
| 8: | | |
| 9: | | |
| 10: | | |
| Δ: | | |

# Peak Power Density (DSSS and other forms of modulation )

UL Apex Co., Ltd.
Head Office EMC Lab. No.2 Semi Anechoic Chamber

| | | | |
|---|---|---|---|
| COMPANY | : Panasonic Communications Co,. Ltd. | REPORT NO | : 24JE0143-HO |
| QUIPMENT | : Network Camera | REGULATION | : Fcc Part15 Subpart C 15.247(d) |
| MODEL | : BL-C30A | TEST DISTANCE | : - |
| SAMPLE NO. | : ES1 | DATE | : 07/07/2004 |
| POWER | : AC120V/60Hz | TEMPERATURE | : 23℃ |
| MODE | : Tx (ch1,6,11) | HUMIDITY | : 60% |
| | | ENGINEER | : Kenichi Adachi |

**11b**

| Ch | Freq. [MHz] | Reading [dBm] | Cable Loss [dB] | Atten. [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|---|---|---|---|---|---|---|---|
| Low | 2412.0 | -28.02 | 1.97 | 20.00 | -6.1 | 8.0 | 14.1 |
| Mid | 2437.0 | **-27.11** | 1.98 | 20.00 | **-5.1** | 8.0 | **13.1** |
| High | 2462.0 | -29.70 | 1.98 | 20.00 | -7.7 | 8.0 | 15.7 |

**11g**

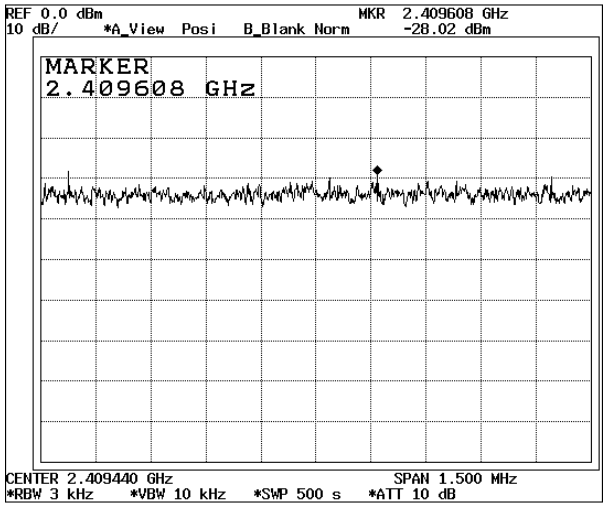
| Ch | Freq. [MHz] | Reading [dBm] | Cable Loss [dB] | Atten. [dB] | Result [dBm] | Limit [dBm] | Margin [dB] |
|---|---|---|---|---|---|---|---|
| Low | 2412.0 | -31.60 | 1.97 | 20.00 | -9.6 | 8.0 | 17.6 |
| Mid | 2437.0 | -31.57 | 1.98 | 20.00 | -9.6 | 8.0 | 17.6 |
| High | 2462.0 | -30.87 | 1.98 | 20.00 | -8.9 | 8.0 | 16.9 |

Sample Calculation:
Result = Reading + Cable Loss + Attenuator
* Atten. was not used for factor 0.0dB of the above table.

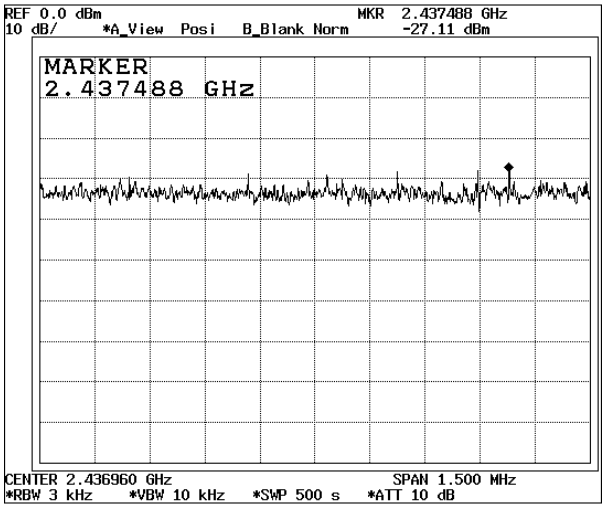
## Peak Power Density(DSSS and other forms of modulation)

**11b**

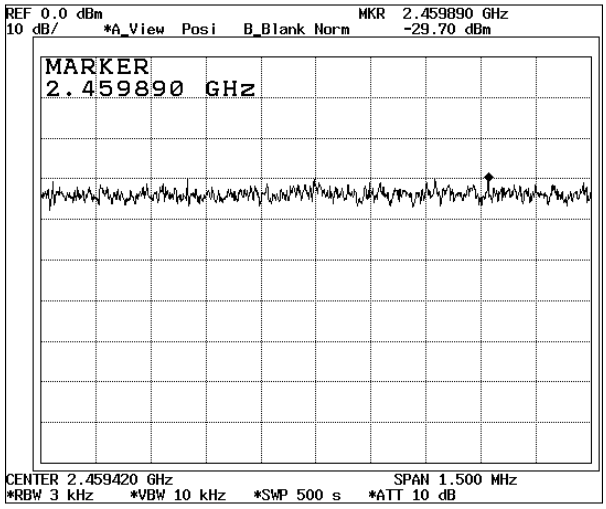
### Ch:Low




### Ch:Mid



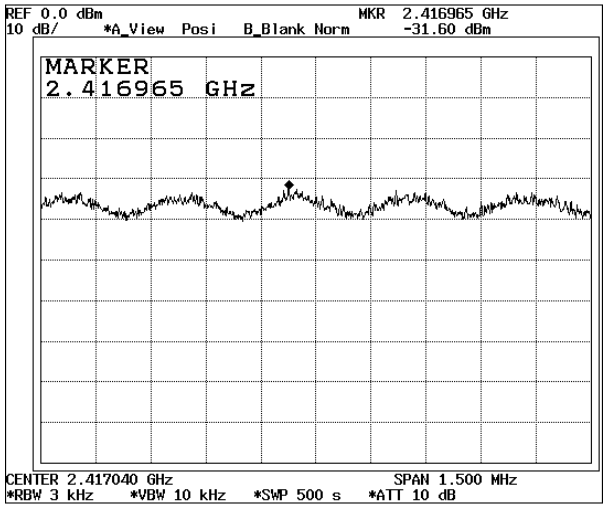

### Ch:High



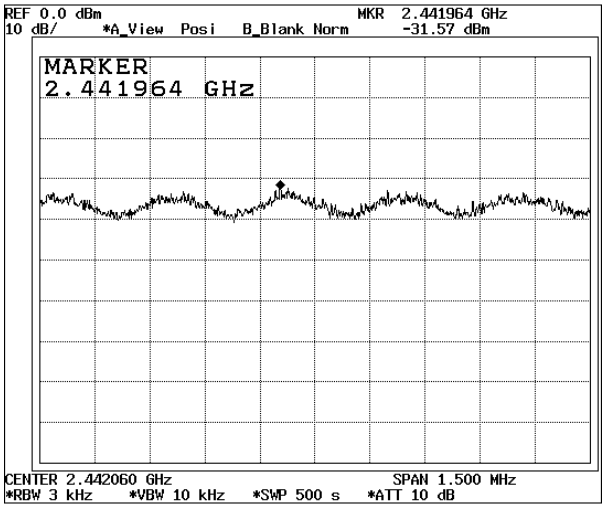
## Peak Power Density(DSSS and other forms of modulation)

**11g**

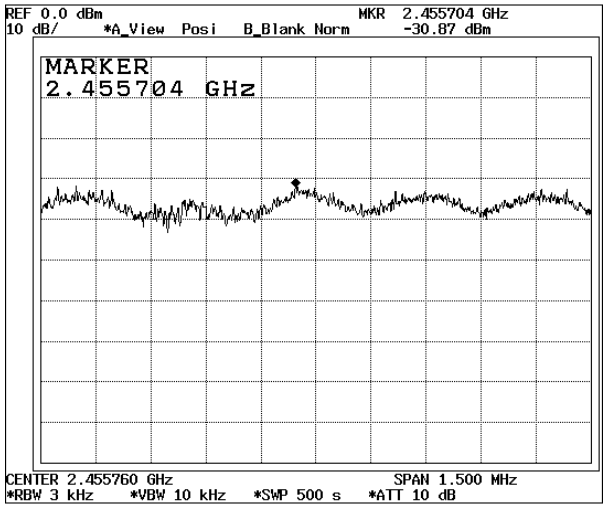
### Ch:Low




### Ch:Mid

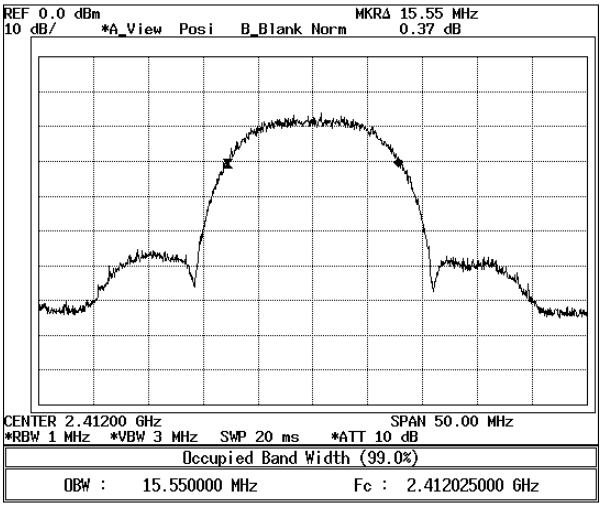



### Ch:High

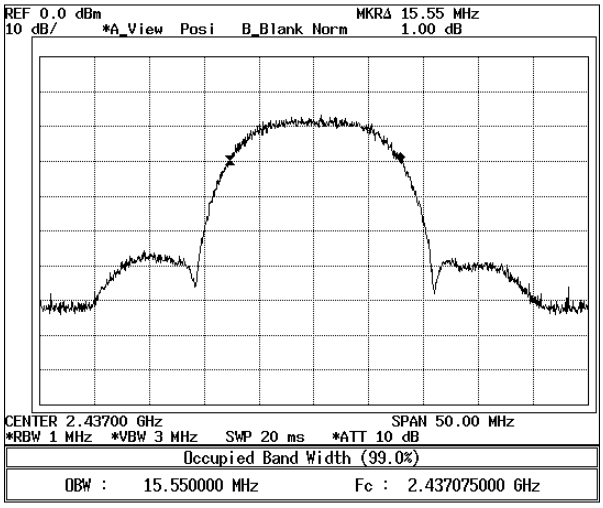


## 99%Occupied Bandwidth(DSSS and other forms of modulation)(11b)

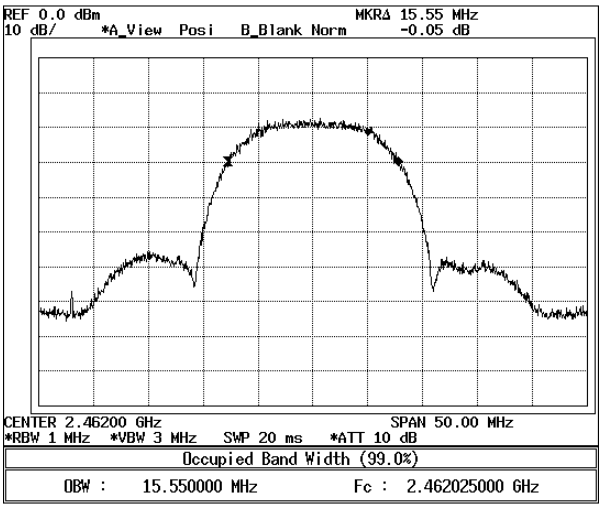
**Ch:Low**




**Ch:Mid**

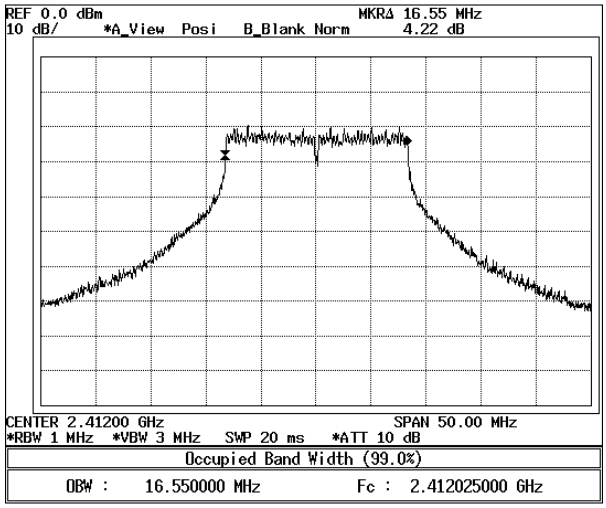



**Ch:High**

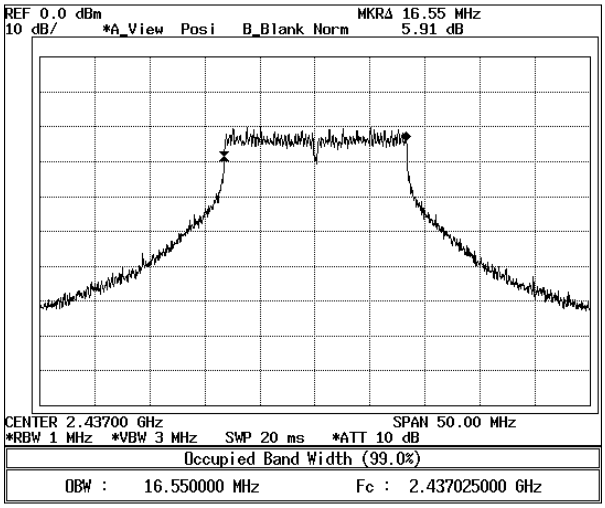


## 99%Occupied Bandwidth(DSSS and other forms of modulation)(11g)

### Ch:Low




### Ch:Mid




### Ch:High