

EMI TEST REPORT

Test Report No. : 26BE0215-HO-1a

Applicant : Panasonic Communications Co., Ltd.

Type of Equipment : Network Camera

Model No. : BL-C20A

FCC ID : ACJ96NBL-C20

**Test standard : FCC Part 15 Subpart C
Section 15.207, Section 15.247 : 2005**

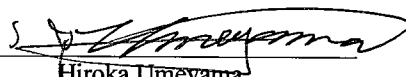
Test Result : Complied

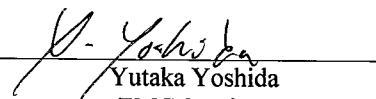
1. This test report shall not be reproduced in full or partial, without the written approval of UL Apex Co., Ltd.
2. The results in this report apply only to the sample tested.
3. This equipment is in compliance with the above regulation. We hereby certify that the data contain a true representation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

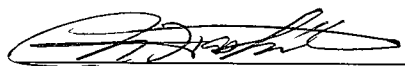
Date of test:

October 7, 8, 12, and 16, 2005

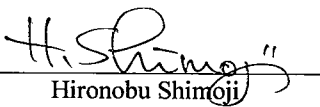
Tested by:


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SECTION 1: Manufacturer's (Client's) information

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

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

2.1 Identification of E.U.T.

Type of Equipment : Network Camera
Model No. : BL-C20A
Serial No. : 001
Country of Manufacture : Malaysia
Condition of EUT : Engineering prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Rating : AC120V/60Hz
Receipt Date of Sample : October 7, 2005

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2.2 Product Description

Model No: BL-C20A (referred to as the EUT in this report) is the Wireless Network Camera (IEEE802.11b and 11g).

Equipment Type	:	Transceiver
Frequency band	:	Lower limit: 2412MHz Upper limit: 2462MHz
Frequency of Operation	:	2412-2462MHz
Modulation	:	DSSS/OFDM
Mode of Operation	:	Simplex
ITU code	:	G1D
Method of Frequency Generation	:	Synthesizer
Power Supply	:	AC120V (Inner: DC3.3V)
Antenna Type	:	½ lambda Dipole Antenna
Antenna Connector Type	:	Hirose U.FL-R-SMT (10)
Antenna Gain	:	2.8dBi

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

The antenna is not removable from EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part15 Subpart C : 2005

Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits : 2005
Section 15.247 Operation within the bands 902-928MHz,
2400-2483.5MHz, and 5725-5850MHz : 2005

3.2 Procedures and results

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	8.1dB 0.53760MHz, L, QP	Complied
2	6dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(a)(2)	Conducted	N/A	*See data	Complied
3	Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(b)(3)	Conducted	N/A	*See data	Complied
4	Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d)	Conducted/ Radiated	N/A	1.4dB 2320.0MHz, AV, Hori	Complied
5	Restricted Band Edges	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d)	Conducted/ Radiated	N/A	*See data	Complied
6	Power Density	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (e)	Conducted	N/A	*See data	Complied

Note: UL Apex's EMI Work Procedures No.QPM05 and QPM15.

Uncertainty:

Conducted Emission

The measurement uncertainty (with a 95% confidence level) for this test is $\pm 1.3\text{dB}$.
The data listed in this test report has enough margin, more than the site margin.

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is $\pm 4.5\text{dB}(3\text{m})/\pm 4.7\text{dB}(10\text{m})$.
The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is $\pm 5.2\text{dB}(3\text{m})/\pm 3.8\text{dB}(10\text{m})$.
The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is $\pm 6.6\text{dB}$.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.

Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test is $\pm 3.0\text{dB}$.

*These tests were also referred to "Guidance on Measurement of Digital Transmission Systems Operating under Section15.247".

*These tests were performed without any deviations from test procedure except for additions or exclusions.

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3.3 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	RSS-Gen 4.4.1	-	Conducted	N/A	N/A	N/A

3.4 Test Location

UL Apex Co., Ltd. Head Office EMC Lab. *NVLAP Lab. code: 200572-0
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	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	313583	IC4247A	19.2 x 11.2 x 7.7m	7.0 x 6.0m	Preparation room
No.2 semi-anechoic chamber	846015	IC4247A-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

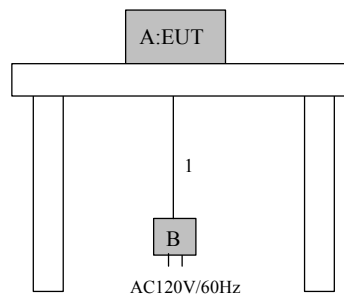
The mode is used : Continuous transmitting mode

*Transmitting mode (11b, CCK, 11Mbps, PN9)
Low channel : 2412MHz
Middle channel : 2437MHz
High channel : 2462MHz

*Transmitting mode (11g, OFDM, 54Mbps, PN9)
Low channel : 2412MHz
Middle channel : 2437MHz
High channel : 2462MHz

The EUT has an ability to provide some different modulation and data rates.
Antenna Terminal Conducted and Radiated Spurious Emission Tests were performed with the worst modulation and data rate.

4.2 Configuration and peripherals



- * Cabling was taken into consideration and test data was taken under worse case conditions.
- * Pre-check found that spurious emission data was same with AC adapter putting on the table and under the table.

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	FCC ID
A	Network Camera	BL-C20A	001	Panasonic	ACJ96NBL-C20
B	AC Adaptor	PQLV206	001	Panasonic	-

List of cables used

No.	Name	Length (m)	Shield	Remark
1	DC Cable	3m	N	-

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a platform of nominal size, 0.5m by 1.0m, 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.

For the tests on EUT itself (as a stand alone equipment)

Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN /(AMN) to the input power source. All unused 50ohm connectors of the LISN(AMN) were resistivity terminated in 50ohm when not connected to the measuring equipment.

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.

Detector	: CISPR quasi-peak and average detector (IF BW 9 kHz)
Measurement range	: 0.15-30MHz
Test data	: APPENDIX 3
Test result	: Pass

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SECTION 6: Spurious Emission

[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 a platform of nominal 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 linear mode).

The test was made with the detector (RBW/VBW) in the following table.

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

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.

20dBc was applied to the frequency over the limit of FCC 15.209 and outside the restricted band of 15.205.

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

- The carrier level and noise levels were confirmed at each position of X, Y and Z axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

Test data : APPENDIX 3

Test result : Pass

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SECTION 7: Bandwidth

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

Test Procedure

The test was made with the spectrum analyzer that has a function of channel-power measurements.
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

[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

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APPENDIX 1: Photographs of test setup

Conducted Emission **Front**



Rear



Spurious Emission (Radiated)

Front



Rear



Worst Case Position (Z-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)
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE/CE	2004/11/12 * 12
MHF-02	High Pass Filter	Tokimec	TF323DCA	RE	2005/09/27 * 12
MHA-05	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2005/01/10 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2005/02/03 * 12
MCC-26	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX104	RE	2005/08/30 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2005/02/05 * 12
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE/CE	2004/11/13 * 12
MHA-01	Horn Antenna	EMCO	3160-09	RE	2005/01/10 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/A gilent/TSJ	-	CE	2004/12/24 * 12
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2004/11/10 * 12
MCC-21	Microwave Cable 1G-50GHz	Storm	421-011 (90- 011-080)	RE	2005/04/29 * 12
MCC-15	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	AT	2005/02/03 * 12
MAT-23	Attenuator(10dB)(above1GHz)	Orient Microwave	BX10-0476-00	AT	2005/03/16 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	AT	2005/09/16 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2005/10/10 * 12
MLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2004/10/14 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2004/12/16 * 12
MCC-01	Coaxial Cable 0.1- 3000MHz	Suhner/storm/Agil ent/TSJ	-	RE	2004/12/19 * 12

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

Test Item:

CE: Conducted Emission

RE: Radiated Spurious Emission

AT: Antenna Terminal Conducted Test

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APPENDIX 3: Data of EMI test

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 03:11:21

Company

Kind of EUT

Model No.

Serial No.

: Panasonic Communications Co., Ltd.

: Network Camera

: BL-C20A

: 001

Report No.

Power

Temp./Humi.

Operator

: 26BE0215-HO

: AC 120V / 60Hz

: 23deg. C / 55%

: Norihisa Hashimoto

Mode / Remarks : 11b 2412MHz, 11Mbps (Worst Data Rate)

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

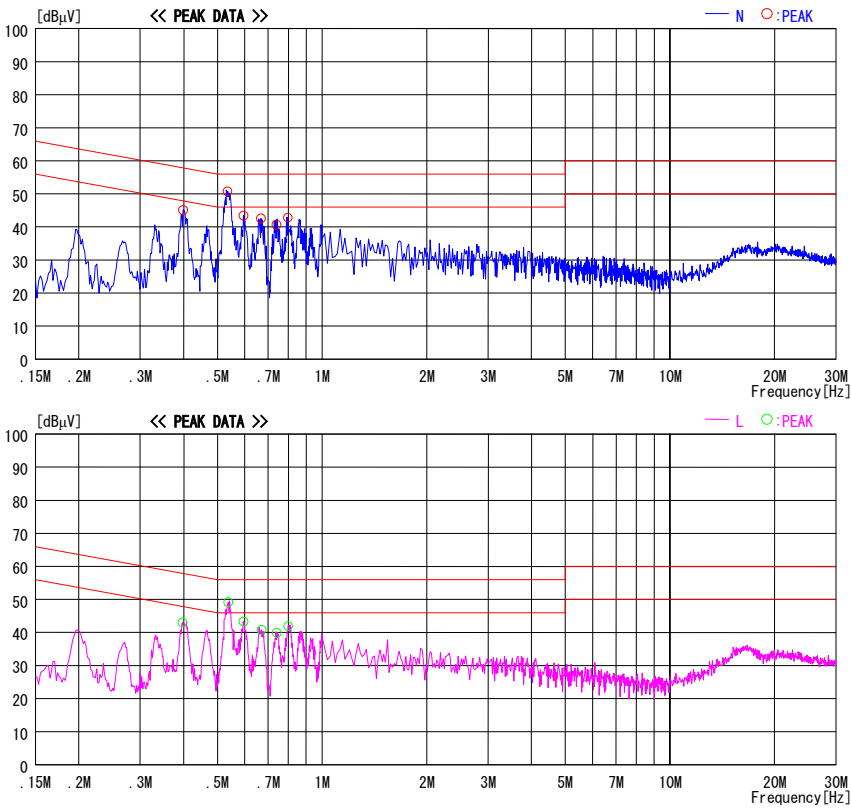


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

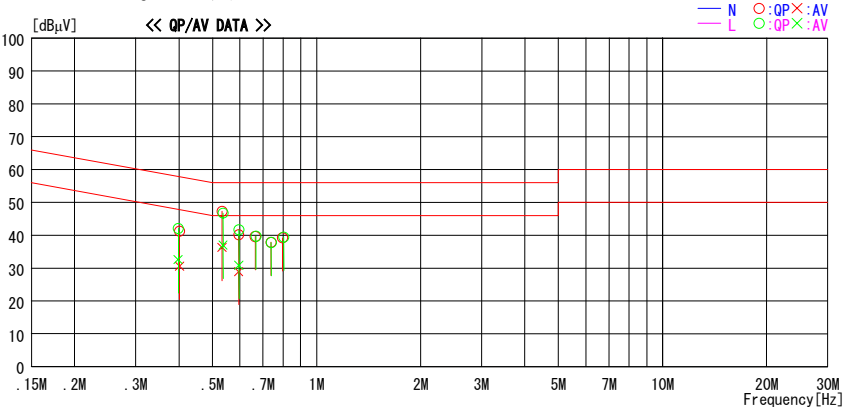
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 03:11:21

Company : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC 120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg. C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2412MHz, 11Mbps (Worst Data Rate)

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



Frequency	Reading Level		Corr. Factor	Results		Limit		Margin		Phase
	QP	AV		QP	AV	QP	AV	QP	AV	
[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
0.40126	40.9	30.3	0.3	41.2	30.6	57.8	47.8	16.6	17.2	N
0.53302	46.8	35.8	0.5	47.3	36.3	56.0	46.0	8.7	9.7	N
0.59542	39.6	28.4	0.6	40.2	29.0	56.0	46.0	15.8	17.0	N
0.66478	39.0	---	0.6	39.6	---	56.0	---	16.4	---	N
0.73855	37.3	---	0.6	37.9	---	56.0	---	18.1	---	N
0.79691	38.6	---	0.6	39.2	---	56.0	---	16.8	---	N
0.39835	41.8	32.3	0.3	42.1	32.6	57.9	47.9	15.8	15.4	L
0.53682	46.3	36.5	0.5	46.8	37.0	56.0	46.0	9.2	9.0	L
0.59632	41.1	30.3	0.6	41.7	30.9	56.0	46.0	14.3	15.1	L
0.66871	39.1	---	0.6	39.7	---	56.0	---	16.3	---	L
0.73866	37.2	---	0.6	37.8	---	56.0	---	18.2	---	L
0.80419	38.8	---	0.6	39.4	---	56.0	---	16.6	---	L

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

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 03:49:25

Company

Kind of EUT

Model No.

Serial No.

: Panasonic Communications Co., Ltd.

: Network Camera

: BL-C20A

: 001

Report No.

Power

Temp./Humi.

Operator

: 26BE0215-H0

: AC 120V / 60Hz

: 23deg. C / 55%

: Norihisa Hashimoto

Mode / Remarks : 11b 2437MHz, 11Mbps (Worst Data Rate)

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

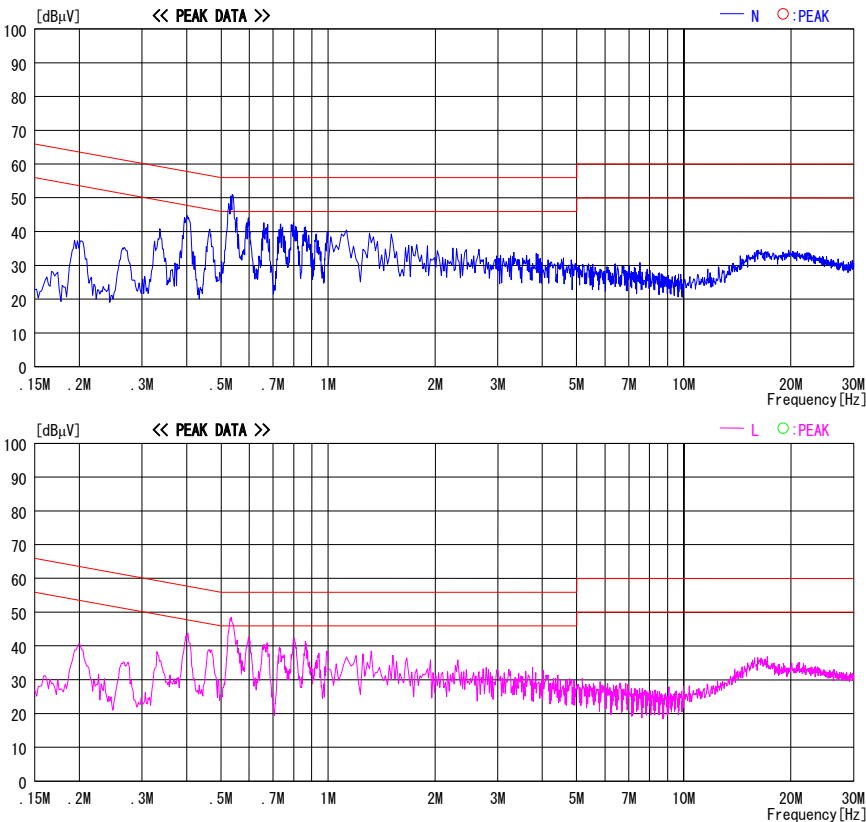


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 03:55:32

Company

Kind of EUT

Model No.

Serial No.

: Panasonic Communications Co., Ltd.

: Network Camera

: BL-C20A

: 001

Report No.

Power

Temp./Humi.

Operator

: 26BE0215-H0

: AC 120V / 60Hz

: 23deg. C / 55%

: Norihisa Hashimoto

Mode / Remarks : 11b 2462MHz, 11Mbps (Worst Data Rate)

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

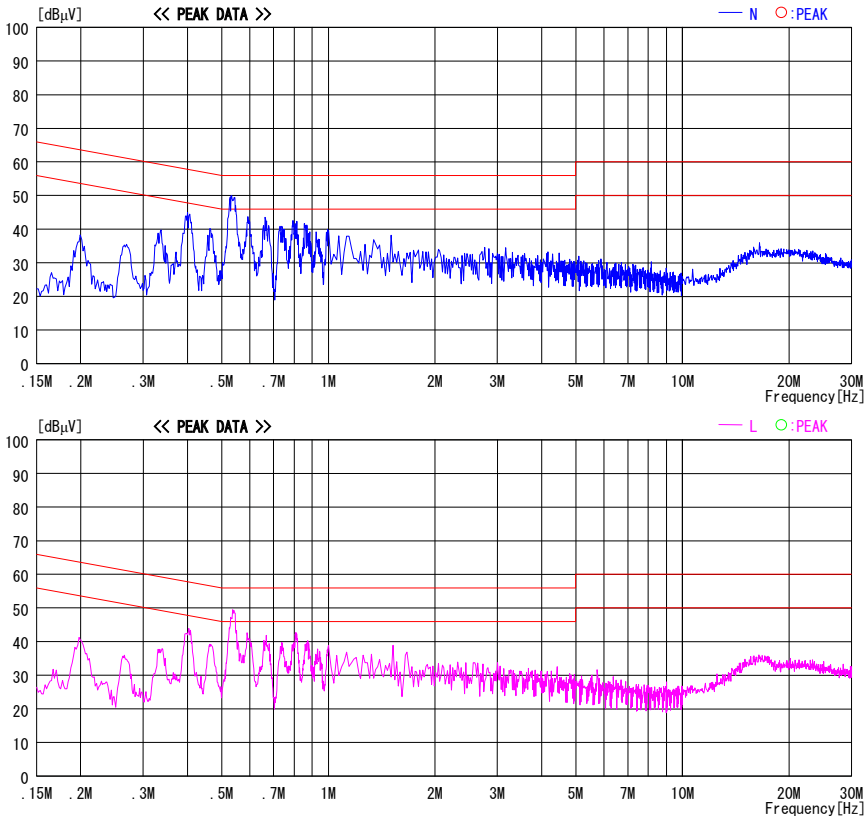


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 04:07:33

Company

Kind of EUT

Model No.

Serial No.

: Panasonic Communications Co., Ltd.

: Network Camera

: BL-C20A

: 001

Report No.

Power

Temp./Humi.

Operator

: 26BE0215-HO

: AC 120V / 60Hz

: 23deg. C / 55%

: Norihisa Hashimoto

Mode / Remarks : RX 11b 2437MHz, 11Mbps (Worst Data Rate)

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

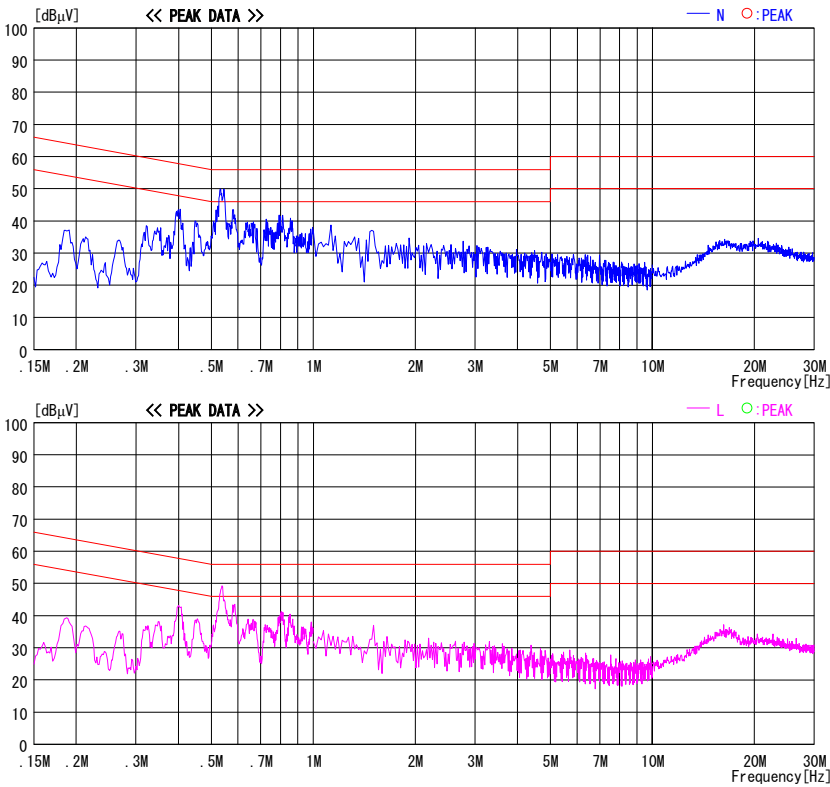


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

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Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 04:16:42

Company : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC 120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg. C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2412MHz, 54Mbps (Worst Data Rate)

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

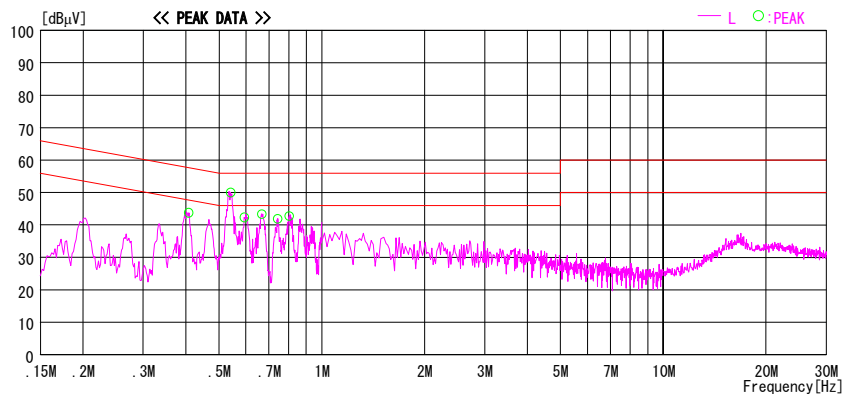
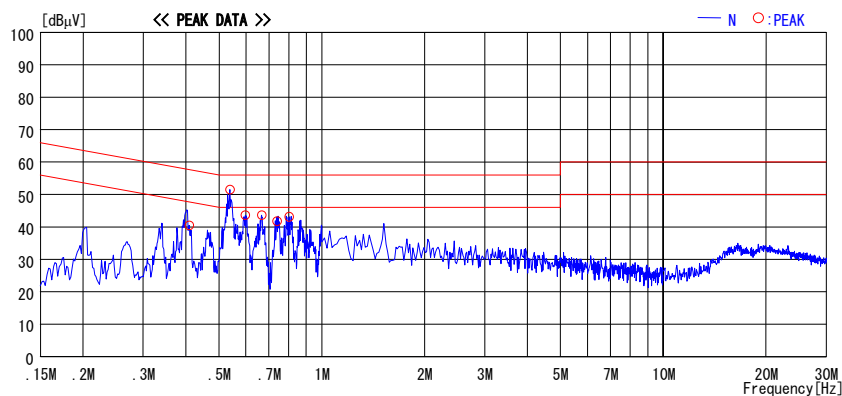


CHART: WITH FACTOR, Peak hold data. Data is uncorrected. CALCURATION: RESULT=READING+C.F (LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

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MF060b(01.06.05)

Conducted Emission

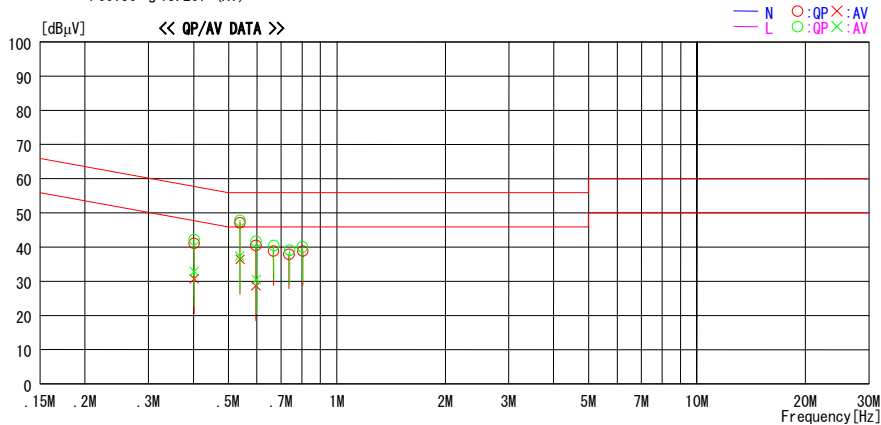
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 1 Semi Anechoic Chamber
Date : 2005/10/08 04:16:42

Company : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC 120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg. C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2412MHz, 54Mbps (Worst Data Rate)

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



Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase
	QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
0.40126	40.8	30.4	0.3	41.1	30.7	57.8	47.8	16.7	17.1	N
0.53853	46.6	35.9	0.5	47.1	36.4	56.0	46.0	8.9	9.6	N
0.59607	39.9	28.0	0.6	40.5	28.6	56.0	46.0	15.5	17.4	N
0.66606	38.3	---	0.6	38.9	---	56.0	---	17.1	---	N
0.73660	37.4	---	0.6	38.0	---	56.0	---	18.0	---	N
0.80323	38.3	---	0.6	38.9	---	56.0	---	17.1	---	N
0.40158	41.9	32.6	0.3	42.2	32.9	57.8	47.8	15.6	14.9	L
0.53760	47.4	36.9	0.5	47.9	37.4	56.0	46.0	8.1	8.6	L
0.59710	41.1	30.0	0.6	41.7	30.6	56.0	46.0	14.3	15.4	L
0.66861	39.9	---	0.6	40.5	---	56.0	---	15.5	---	L
0.73940	38.5	---	0.6	39.1	---	56.0	---	16.9	---	L
0.80218	39.5	---	0.6	40.1	---	56.0	---	15.9	---	L

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

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 04:38:07

Company

Kind of EUT

Model No.

Serial No.

: Panasonic Communications Co., Ltd.

: Network Camera

: BL-C20A

: 001

Report No.

Power

Temp./Humi.

Operator

: 26BE0215-HO

: AC 120V / 60Hz

: 23deg.C / 55%

: Norihisa Hashimoto

Mode / Remarks : 11g 2437MHz, 54Mbps (Worst Data Rate)

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

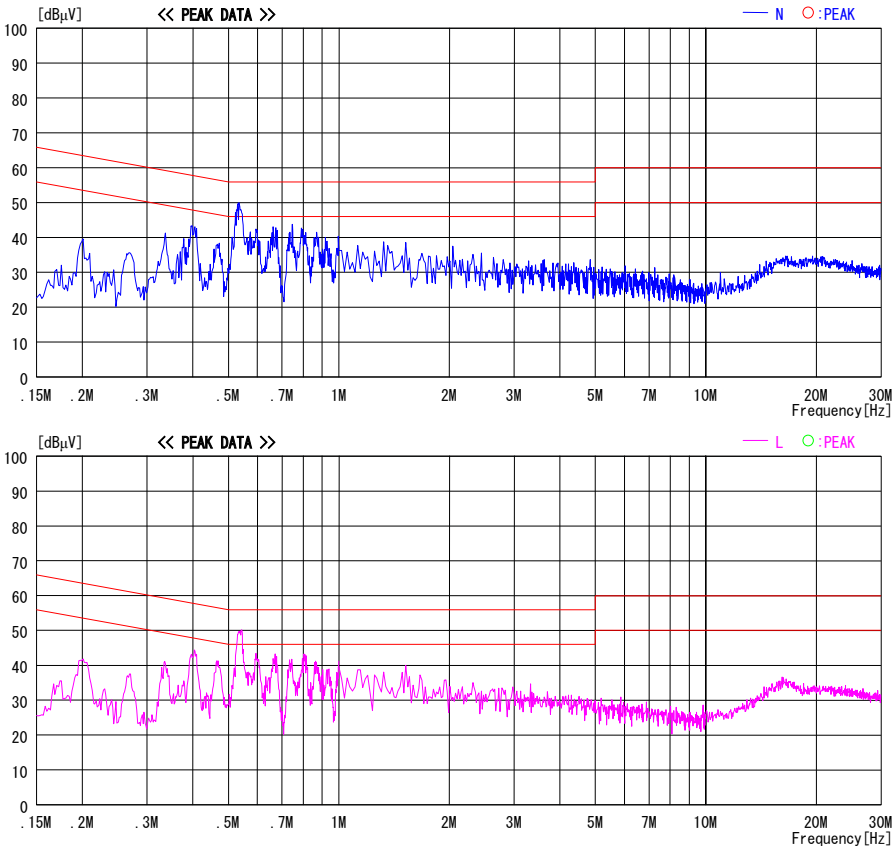


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 04:44:25

Company

Kind of EUT

Model No.

Serial No.

: Panasonic Communications Co., Ltd.

: Network Camera

: BL-G20A

: 001

Report No.

Power

Temp./Humi.

Operator

: 26BE0215-H0

: AC 120V / 60Hz

: 23deg. C / 55%

: Norihisa Hashimoto

Mode / Remarks : 11g 2462MHz, 54Mbps (Worst Data Rate)

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

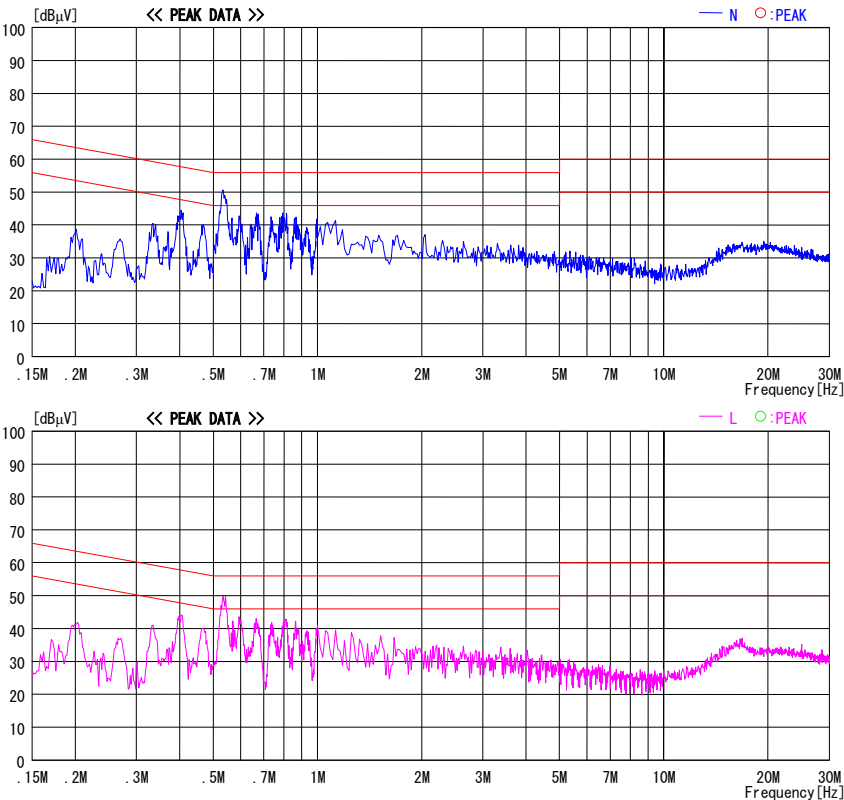


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(L:ISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission

DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 04:51:18

Company

Kind of EUT

Model No.

Serial No.

: Panasonic Communications Co., Ltd.

: Network Camera

: BL-G20A

: 001

Report No.

Power

Temp./Humi.

Operator

: 26BE0215-H0

: AC 120V / 60Hz

: 23deg.C / 55%

: Norihisa Hashimoto

Mode / Remarks : RX 11g 2437MHz, 54Mbps (Worst Data Rate)

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

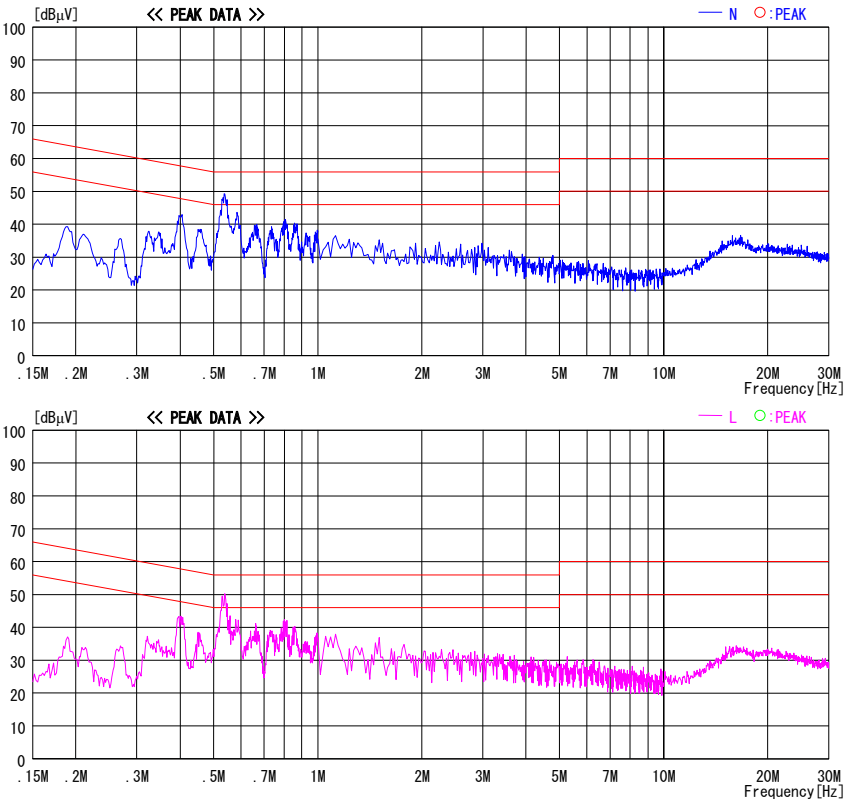


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C. F (L:ISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

6dB Bandwidth

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

Company	: Panasonic Communications Co., Ltd.	REPORT NO	: 26BE0215-HO
Equipment	: Network Camera	REGULATION	: Fcc Part15 Subpart C 15.247(a)(2)
Model	: BL-C20A	TEST DISTANCE	: -
Sample No.	: 001	DATE	: 2005/10/12
Power	: AC120V/60Hz	TEMPERATURE	: 24℃
Mode	: Tx (ch1,6,11)	HUMIDITY	: 64%
		ENGINEER	: Hiroka Umeyama

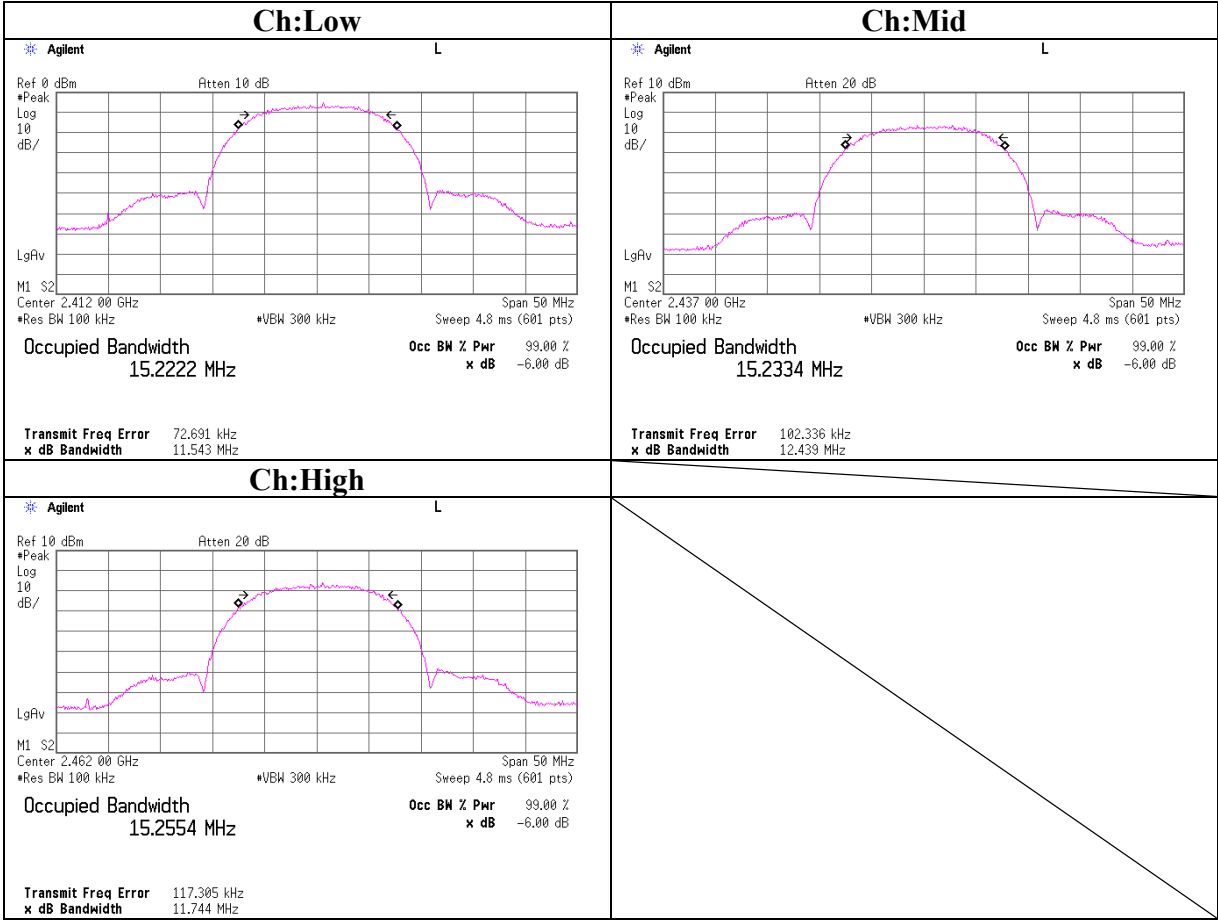
[IEEE 802.11b]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	11.543	500.0
Mid	2437.0	12.439	500.0
High	2462.0	11.744	500.0

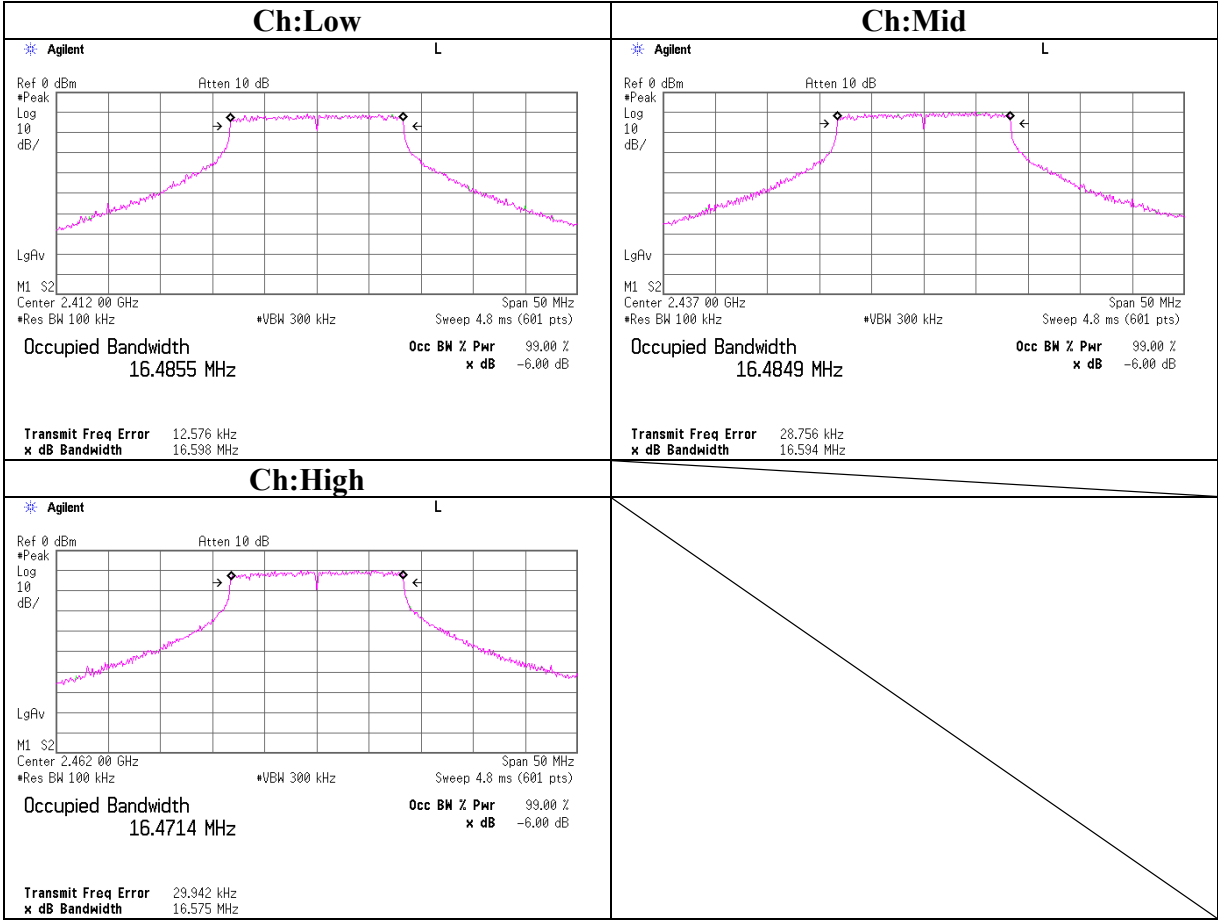
[IEEE 802.11g]

Ch	Freq.	6dB Bandwidth	Limit
	[MHz]	[MHz]	[kHz]
Low	2412.0	16.598	500.0
Mid	2437.0	16.594	500.0
High	2462.0	16.575	500.0

6dB Bandwidth
(11b)



6dB Bandwidth
(11g)



Maximum Peak Output Power

UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

Company	: Panasonic Communications Co., Ltd.	REPORT NO	: 26BE0215-HO
Equipment	: Network Camera	REGULATION	: Fcc Part15 Subpart C 15.247(b)(3)
Model	: BL-C20A	TEST DISTANCE	: -
Sample No.	: 001	DATE	: 2005/ 10/12
Power	: AC120V/60Hz	TEMPERATURE	: 24°C
Mode	: Tx(ch1,6,11)	HUMIDITY	: 64%
		ENGINEER	: Hiroka Umeyama

[IEEE802.11b]

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	9.19	0.80	10.00	19.99	30.00	10.01
Mid	2437.0	9.82	0.80	10.00	20.62	30.00	9.38
High	2462.0	9.23	0.80	10.00	20.03	30.00	9.97

Sample Calculation:

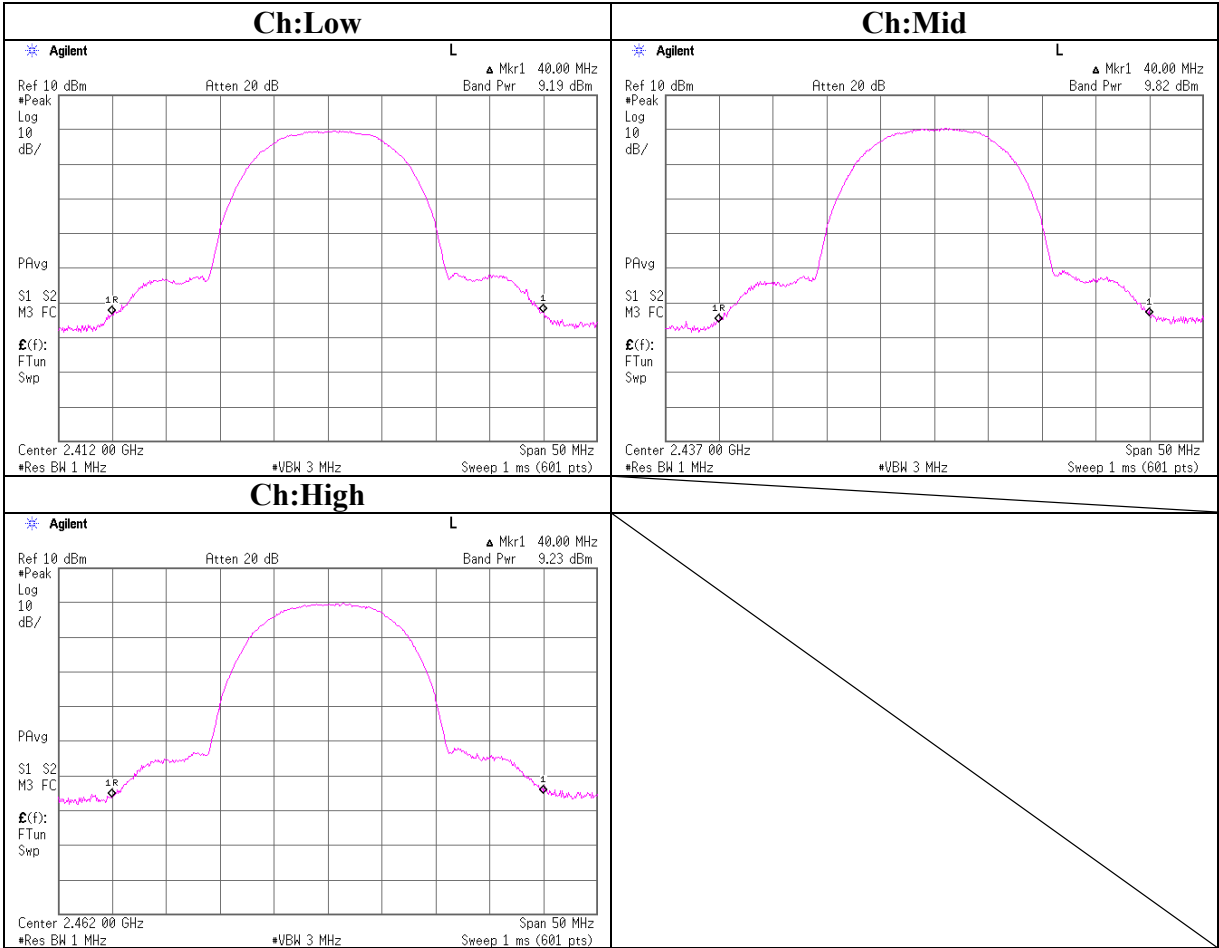
Result = Reading + Cable Loss (supplied by customer) + Attenuator

[IEEE802.11g]

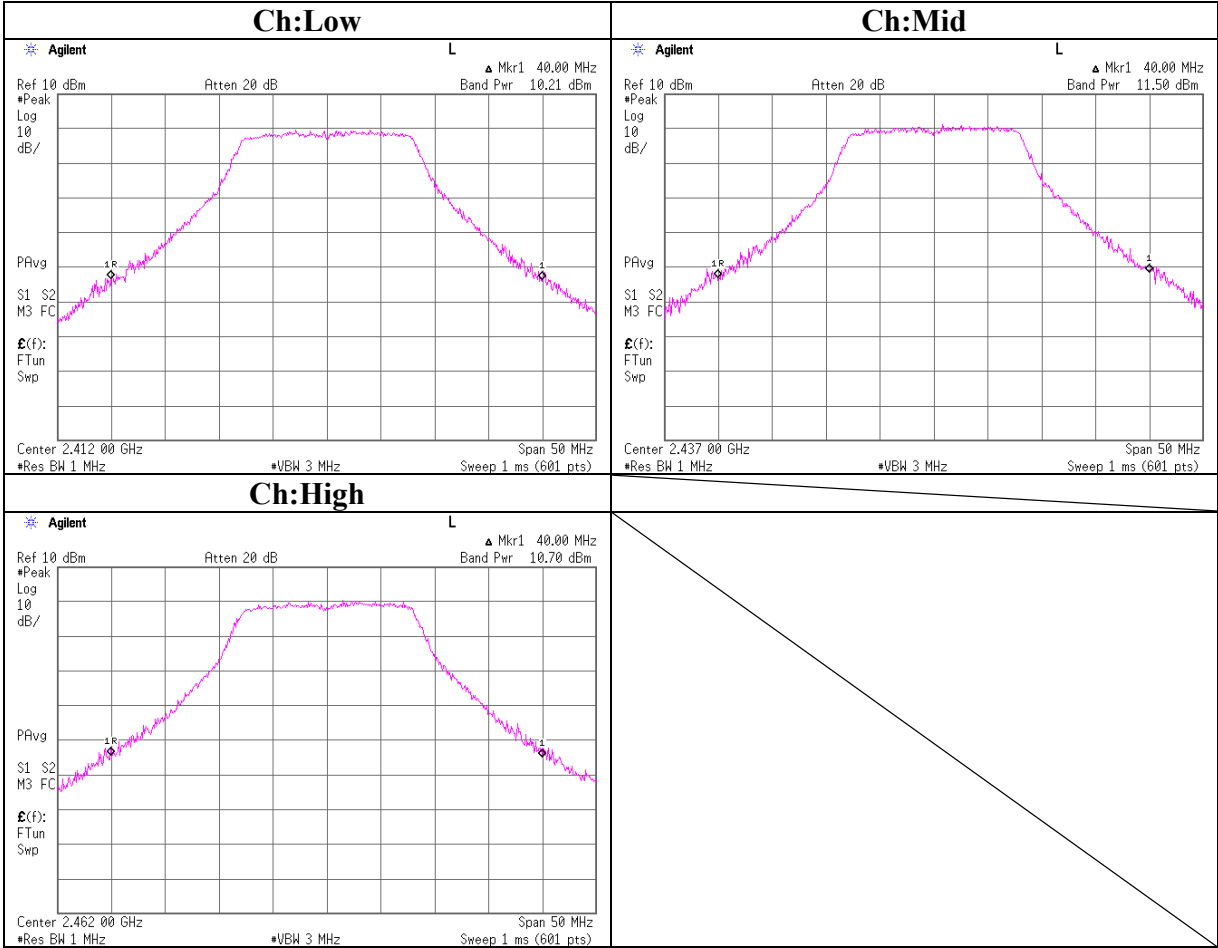
Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	10.21	0.21	10.00	20.42	30.00	9.58
Mid	2437.0	11.50	0.21	10.00	21.71	30.00	8.29
High	2462.0	10.70	0.21	10.00	20.91	30.00	9.09

Sample Calculation:

Maximum Peak Output Power
(11b)



Maximum Peak Output Power
(11g)



Radiated Spurious Emission (30MHz-1GHz/11b Low Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

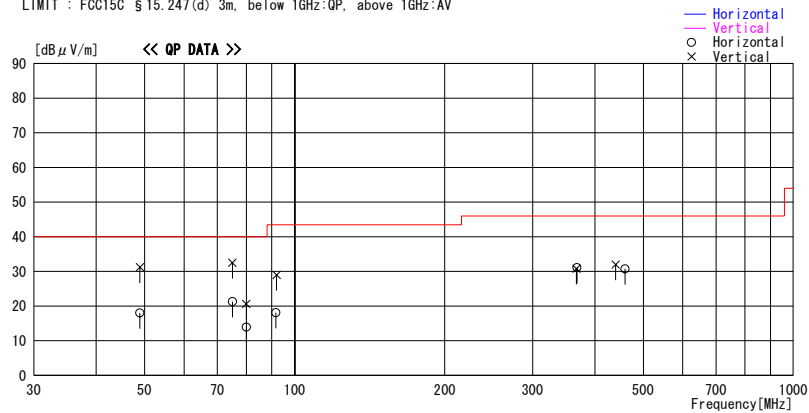
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/16 14:13:05

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 25deg. C / 60%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2412MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna Factor	Loss & Gain	Level	Angle	Height	Polar.	Limit	Margin
[MHz]	[dBμV]		[dB/m]	[dB]	[dBμV/m]	[Deg]	[cm]		[dBμV/m]	[dB]
48.938	27.8	QP	10.9	-20.7	18.0	0	344	Hori.	40.0	22.0
48.958	41.0	QP	10.9	-20.7	31.2	222	116	Vert.	40.0	8.8
75.001	34.6	QP	6.9	-20.2	21.3	99	286	Hori.	40.0	18.7
75.002	45.8	QP	6.9	-20.2	32.5	231	112	Vert.	40.0	7.5
79.993	33.9	QP	6.9	-20.2	20.6	207	103	Vert.	40.0	19.4
79.993	27.2	QP	6.9	-20.2	13.9	140	300	Hori.	40.0	26.1
91.683	29.1	QP	8.9	-19.9	18.1	85	344	Hori.	43.5	25.4
91.996	39.9	QP	9.0	-19.9	29.0	236	100	Vert.	43.5	14.5
367.992	31.4	QP	16.7	-17.0	31.1	296	110	Hori.	46.0	14.9
367.335	31.2	QP	16.6	-17.0	30.8	300	171	Vert.	46.0	15.2
459.919	30.2	QP	17.8	-17.3	30.7	233	240	Hori.	46.0	15.3
440.280	31.5	QP	17.7	-17.2	32.0	224	100	Vert.	46.0	14.0

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)

Test report No. : 26BE0215-HO-1a
Page : 33 of 68
Issued date : October 18, 2005
Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission **(30MHz-1GHz/11b Mid Ch.)**

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

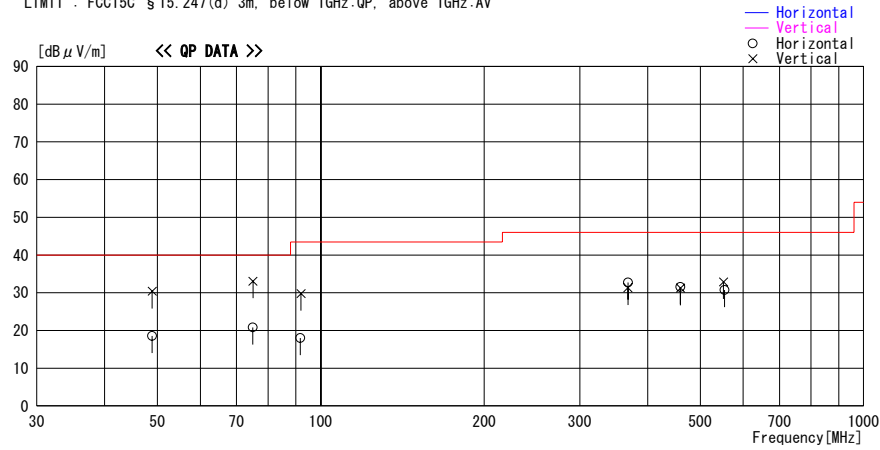
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/16 15:15:35

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 25deg.C / 60%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2437MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBμV]	DET	Antenna	Loss&	Level [dBμV/m]	Angle [Deg]	Height [cm]	Polar.	Limit	Margin
			Factor [dB/m]	Gain [dB]					[dBμV/m]	[dB]
48.938	28.4	QP	10.9	-20.7	18.6	76	288	Hori.	40.0	21.4
48.956	40.2	QP	10.9	-20.7	30.4	2	112	Vert.	40.0	9.6
74.995	34.1	QP	6.9	-20.2	20.8	116	318	Hori.	40.0	19.2
75.000	46.4	QP	6.9	-20.2	33.1	177	115	Vert.	40.0	6.9
91.683	29.0	QP	8.9	-19.9	18.0	220	180	Hori.	43.5	25.5
91.996	40.7	QP	9.0	-19.9	29.8	159	115	Vert.	43.5	13.7
367.986	33.0	QP	16.7	-17.0	32.7	136	329	Hori.	46.0	13.3
367.989	31.6	QP	16.7	-17.0	31.3	169	173	Vert.	46.0	14.7
460.012	31.1	QP	17.8	-17.3	31.6	292	330	Hori.	46.0	14.4
460.012	30.7	QP	17.8	-17.3	31.2	255	105	Vert.	46.0	14.8
552.012	31.5	QP	18.5	-17.1	32.9	358	190	Vert.	46.0	13.1
553.908	29.3	QP	18.5	-17.1	30.7	358	322	Hori.	46.0	15.3

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)

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MF060b(01.06.05)

Test report No. : 26BE0215-HO-1a
Page : 34 of 68
Issued date : October 18, 2005
Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission (30MHz-1GHz/11b High Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

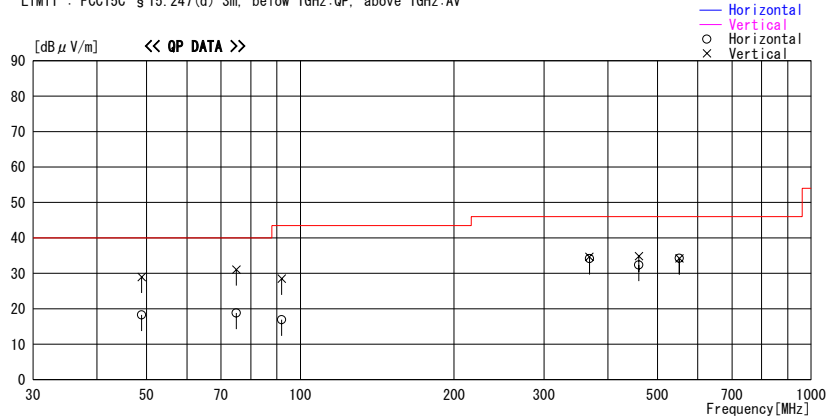
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/16 16:05:21

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 25deg.C / 60%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2462MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
48.944	38.8	QP	10.9	-20.7	29.0	149	111	Vert.	40.0	11.0
48.955	28.1	QP	10.9	-20.7	18.3	103	229	Hori.	40.0	21.7
74.995	32.1	QP	6.9	-20.2	18.8	93	253	Hori.	40.0	21.2
74.995	44.4	QP	6.9	-20.2	31.1	160	132	Vert.	40.0	8.9
91.989	27.8	QP	9.0	-19.9	16.9	130	259	Hori.	43.5	26.6
91.996	39.4	QP	9.0	-19.9	28.5	243	109	Vert.	43.5	15.0
367.991	34.5	QP	16.7	-17.0	34.2	222	100	Hori.	46.0	11.8
367.996	35.0	QP	16.7	-17.0	34.7	180	163	Vert.	46.0	11.3
459.999	34.4	QP	17.8	-17.3	34.9	305	132	Vert.	46.0	11.1
460.009	31.9	QP	17.8	-17.3	32.4	108	232	Hori.	46.0	13.6
551.994	32.9	QP	18.5	-17.1	34.3	112	164	Hori.	46.0	11.7
551.992	32.8	QP	18.5	-17.1	34.2	56	100	Vert.	46.0	11.8

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)

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Facsimile : +81 596 24 8124

MF060b(01.06.05)

Radiated Spurious Emission **(30MHz-1GHz/11g Low Ch.)**

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

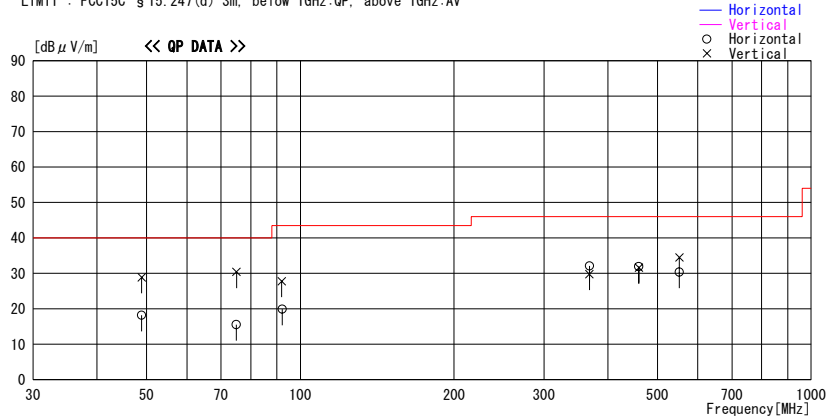
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/16 16:42:14

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 25deg.C / 60%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2412MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
48.944	38.7	QP	10.9	-20.7	28.9	158	106	Vert.	40.0	11.1
48.955	28.0	QP	10.9	-20.7	18.2	120	227	Hori.	40.0	21.8
74.910	28.8	QP	7.0	-20.2	15.6	298	300	Hori.	40.0	24.4
75.001	43.7	QP	6.9	-20.2	30.4	168	115	Vert.	40.0	9.6
92.001	38.7	QP	9.0	-19.9	27.8	298	130	Vert.	43.5	15.7
92.224	30.8	QP	9.0	-19.9	19.9	305	277	Hori.	43.5	23.6
368.001	32.4	QP	16.7	-17.0	32.1	268	115	Hori.	46.0	13.9
368.001	30.1	QP	16.7	-17.0	29.8	203	143	Vert.	46.0	16.2
460.007	31.4	QP	17.8	-17.3	31.9	267	204	Hori.	46.0	14.1
459.999	31.1	QP	17.8	-17.3	31.6	343	142	Vert.	46.0	14.4
552.006	29.0	QP	18.5	-17.1	30.4	127	377	Hori.	46.0	15.6
551.994	33.1	QP	18.5	-17.1	34.5	266	100	Vert.	46.0	11.5

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)

Test report No. : 26BE0215-HO-1a
Page : 36 of 68
Issued date : October 18, 2005
Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission (30MHz-1GHz/11g Mid Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

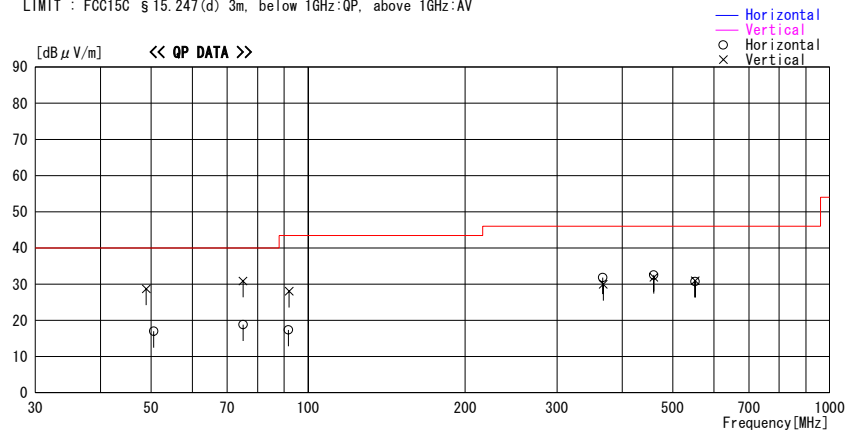
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/16 17:12:54

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-H0
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 25deg. C / 60%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2437MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dB μ V]	DET	Antenna	Loss&	Level [dB μ V/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dB μ V/m]	Margin [dB]
			Factor [dB/m]	Gain [dB]						
48.953	38.5	QP	10.9	-20.7	28.7	174	100	Vert.	40.0	11.3
50.561	27.2	QP	10.5	-20.7	17.0	267	300	Hori.	40.0	23.0
75.004	32.1	QP	6.9	-20.2	18.8	140	281	Hori.	40.0	21.2
75.000	44.2	QP	6.9	-20.2	30.9	231	131	Vert.	40.0	9.1
91.683	28.4	QP	8.9	-19.9	17.4	254	300	Hori.	43.5	26.1
92.005	39.0	QP	9.0	-19.9	28.1	206	111	Vert.	43.5	15.4
367.335	32.2	QP	16.6	-17.0	31.8	248	226	Hori.	46.0	14.2
368.004	30.3	QP	16.7	-17.0	30.0	66	171	Vert.	46.0	16.0
460.009	32.1	QP	17.8	-17.3	32.6	253	226	Hori.	46.0	13.4
460.004	31.4	QP	17.8	-17.3	31.9	317	115	Vert.	46.0	14.1
551.996	29.3	QP	18.5	-17.1	30.7	131	384	Hori.	46.0	15.3
551.994	29.6	QP	18.5	-17.1	31.0	359	199	Vert.	46.0	15.0

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)

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MF060b(01.06.05)

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FCC ID : ACJ96NBL-C20

Radiated Spurious Emission **(30MHz-1GHz/11g High Ch.)**

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

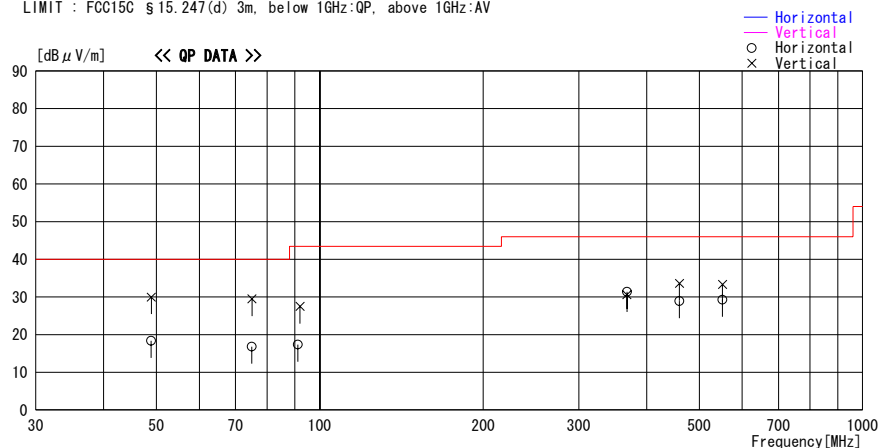
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/16 17:57:24

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 25deg.C / 60%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2462MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dB μ V]	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin
			Factor [dB/m]	Gain [dB]						
48.938	28.2	QP	10.9	-20.7	18.4	258	300	Hori.	40.0	21.6
48.962	39.8	QP	10.9	-20.7	30.0	256	115	Vert.	40.0	10.0
74.995	30.1	QP	6.9	-20.2	16.8	135	369	Hori.	40.0	23.2
75.008	42.8	QP	6.9	-20.2	29.5	238	132	Vert.	40.0	10.5
91.142	28.4	QP	8.8	-19.8	17.4	191	242	Hori.	43.5	26.1
91.997	38.4	QP	9.0	-19.9	27.5	321	130	Vert.	43.5	16.0
367.999	31.7	QP	16.7	-17.0	31.4	127	116	Hori.	46.0	14.6
367.996	30.9	QP	16.7	-17.0	30.6	203	167	Vert.	46.0	15.4
459.984	28.4	QP	17.8	-17.3	28.9	96	291	Hori.	46.0	17.1
460.002	33.1	QP	17.8	-17.3	33.6	313	156	Vert.	46.0	12.4
552.009	31.9	QP	18.5	-17.1	33.3	123	100	Vert.	46.0	12.7
552.014	27.9	QP	18.5	-17.1	29.3	101	386	Hori.	46.0	16.7

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)

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MF060b(01.06.05)

Radiated Spurious Emission (1-10GHz/11b Low Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

UL Apex Co., Ltd.
Head Office EMC Lab. No.1 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.	REPORT NO : 26BE0215-HO
Equipment : Network Camera	REGULATION : Fcc Part15 Subpart C 15.247(d)
Model : BL-C20A	TEST DISTANCE : 3m
Sample No. : 001	DATE : 2005/10/07
Power : AC120V / 60Hz	TEMPERATURE : 23deg.C
Mode : IEEE802.11b, Tx 2412MHz 11Mbps	HUMIDITY : 55%
Remarks : Horizontal: Z-axis, Vertical: X-axis	ENGINEER : Yutaka Yoshida

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1608.1	55.9	57.9	25.4	36.6	2.8	0.0	47.5	49.5	74.0	26.5	24.5
2	2390.0	59.5	57.2	30.9	36.4	3.1	0.0	57.1	54.8	74.0	16.9	19.2
3	4824.0	48.7	47.4	35.0	36.0	4.3	1.0	53.0	51.7	74.0	21.0	22.3
4	7236.0	46.0	45.1	37.6	36.0	5.1	0.4	53.1	52.2	74.0	20.9	21.8
5	9648.0	46.9	46.8	36.3	36.4	6.1	0.2	53.1	53.0	74.0	20.9	21.0

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1608.1	50.0	53.8	25.4	36.6	2.8	0.0	41.6	45.4	54.0	12.4	8.6
2	2390.0	46.7	44.4	30.9	36.4	3.1	0.0	44.3	42.0	54.0	9.7	12.0
3	4824.0	34.3	33.5	35.0	36.0	4.3	1.0	38.6	37.8	54.0	15.4	16.2
4	7236.0	32.5	32.4	37.6	36.0	5.1	0.4	39.6	39.5	54.0	14.4	14.5
5	9648.0	33.5	34.6	36.3	36.4	6.1	0.2	39.7	40.8	54.0	14.3	13.2

20dBc(Fundamental 2412MHz) (RBW: 100kHz, VBW: 300kHz)

20dBc Fundamental 2412-2412 (KDFW: 100kHz, VDFW: 500kHz)												
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2412.0	109.4	107.9	30.9	36.4	3.4	0.0	107.3	105.8	-	-	-
2	2400.0	70.5	66.2	30.9	36.4	3.1	0.0	68.1	63.8	Funda-20dB	19.2	22.0

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

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

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FCC ID : ACJ96NBL-C20

Radiated Spurious Emission (1-10GHz/11b Mid Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

UL Apex Co., Ltd.
Head Office EMC Lab. No.1 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.	REPORT NO : 26BE0215-HO
Equipment : Network Camera	REGULATION : Fcc Part15 Subpart C 15.247(d)
Model : BL-C20A	TEST DISTANCE : 3m
Sample No. : 001	DATE : 2005/10/07
Power : AC120V / 60Hz	TEMPERATURE : 23deg.C
Mode : IEEE802.11b, Tx 2437MHz 11Mbps	HUMIDITY : 55%
Remarks : Horizontal: Z-axis, Vertical: X-axis	ENGINEER : Yutaka Yoshida

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

KREDEFECT (RED: FMHZ, YEW: FMHZ)												
No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4874.0	47.6	47.4	35.3	36.0	4.3	1.0	52.2	52.0	74.0	21.8	22.0
2	7311.0	43.1	43.6	37.7	36.0	5.2	0.5	50.5	51.0	74.0	23.5	23.0
3	9748.0	44.0	44.8	36.2	36.4	6.1	0.2	50.1	50.9	74.0	23.9	23.1

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	4874.0	33.0	32.5	35.3	36.0	4.3	1.0	37.6	37.1	54.0	16.4	16.9
2	7311.0	30.6	30.6	37.7	36.0	5.2	0.5	38.0	38.0	54.0	16.0	16.0
3	9748.0	32.2	33.1	36.2	36.4	6.1	0.2	38.3	39.2	54.0	15.7	14.8

20dBc(Fundamental 2437MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2437.0	108.0	111.0	30.9	36.4	3.2	0.0	105.7	108.7	-	-	-
2	3249.4	54.0	46.8	31.7	36.5	3.6	0.0	52.8	45.6	Funda-20dB	32.9	43.1

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

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

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Radiated Spurious Emission (1-10GHz/11b High Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

UL Apex Co., Ltd.
Head Office EMC Lab. No.1 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.	REPORT NO : 26BE0215-HO
Equipment : Network Camera	REGULATION : Fcc Part15 Subpart C 15.247(d)
Model : BL-C20A	TEST DISTANCE : 3m
Sample No. : 001	DATE : 2005/10/07
Power : AC120V / 60Hz	TEMPERATURE : 23deg.C
Mode : IEEE802.11b, Tx 2462MHz 11Mbps	HUMIDITY : 55%
Remarks : Horizontal: Z-axis, Vertical: X-axis	ENGINEER : Yutaka Yoshida

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.5	63.6	62.2	30.8	36.4	3.1	0.0	61.1	59.7	74.0	12.9	14.3
2	3260.5	52.8	50.7	31.7	36.5	3.6	0.0	51.6	49.5	74.0	22.4	24.5
3	4924.0	50.0	47.8	35.6	35.9	4.3	1.0	55.0	52.8	74.0	19.0	21.2
4	7386.0	43.8	43.7	37.8	36.0	5.2	0.6	51.4	51.3	74.0	22.6	22.7
5	9848.0	44.0	43.6	36.2	36.4	6.2	0.3	50.3	49.9	74.0	23.7	24.1

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2483.5	50.5	48.9	30.8	36.4	3.1	0.0	48.0	46.4	54.0	6.0	7.6
2	3260.5	51.7	48.8	31.7	36.5	3.6	0.0	50.5	47.6	54.0	3.5	6.4
3	4924.0	34.1	33.2	35.6	35.9	4.3	1.0	39.1	38.2	54.0	14.9	15.8
4	7386.0	30.4	30.5	37.8	36.0	5.2	0.6	38.0	38.1	54.0	16.0	15.9
5	9848.0	31.7	30.5	36.2	36.4	6.2	0.3	38.0	36.8	54.0	16.0	17.2

20dBc(Fundamental 2462MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2462.0	109.9	107.5	30.8	36.4	3.1	0.0	107.4	105.0	-	-	-
2	3284.6	54.9	48.2	31.7	36.5	3.6	0.0	53.7	47.0	Funda-20dB	33.7	38.0

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

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

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Radiated Spurious Emission (1-10GHz/11g Low Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

UL Apex Co., Ltd.
Head Office EMC Lab. No.1 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.	REPORT NO : 26BE0215-HO
Equipment : Network Camera	REGULATION : Fcc Part15 Subpart C 15.247(d)
Model : BL-C20A	TEST DISTANCE : 3m
Sample No. : 001	DATE : 2005/10/07
Power : AC120V / 60Hz	TEMPERATURE : 23deg.C
Mode : IEEE802.11g, Tx 2412MHz 54Mbps	HUMIDITY : 55%
Remarks : Horizontal: Z-axis, Vertical: X-axis	ENGINEER : Yutaka Yoshida

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1608.1	59.9	60.6	25.4	36.6	2.8	0.0	51.5	52.2	74.0	22.5	21.8
2	2320.0	65.6	61.6	31.0	36.4	3.1	0.0	63.3	59.3	74.0	10.7	14.7
3	2390.0	70.1	67.7	30.9	36.4	3.1	0.0	67.7	65.3	74.0	6.3	8.7
4	4824.0	45.9	44.3	35.0	36.0	4.3	1.0	50.2	48.6	74.0	23.8	25.4
5	7236.0	42.8	42.7	37.6	36.0	5.1	0.4	49.9	49.8	74.0	24.1	24.2
6	9648.0	44.6	45.3	36.3	36.4	6.1	0.2	50.8	51.5	74.0	23.2	22.5

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1608.1	57.0	58.1	25.4	36.6	2.8	0.0	48.6	49.7	54.0	5.4	4.3
2	2320.0	53.7	50.1	31.0	36.4	3.1	0.0	51.4	47.8	54.0	2.6	6.2
3	2390.0	46.0	47.1	30.9	36.4	3.1	0.0	43.6	44.7	54.0	10.4	9.3
4	4824.0	32.1	31.6	35.0	36.0	4.3	1.0	36.4	35.9	54.0	17.6	18.1
5	7236.0	30.1	30.0	37.6	36.0	5.1	0.4	37.2	37.1	54.0	16.8	16.9
6	9648.0	32.6	32.8	36.3	36.4	6.1	0.2	38.8	39.0	54.0	15.2	15.0

20dBc(Fundamental 2412MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2412.0	101.4	102.5	30.9	36.4	3.4	0.0	99.3	100.4	-	-	-
2	2400.0	70.8	72.3	30.9	36.4	3.1	0.0	68.4	69.9	Funda-20dB	10.9	10.5
3	3216.1	50.6	52.2	31.8	36.5	3.6	0.0	49.5	51.1	Funda-20dB	29.8	29.3

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

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

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Radiated Spurious Emission (1-10GHz/11g Mid Ch.)

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

UL Apex Co., Ltd.
Head Office EMC Lab. No.1 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.	REPORT NO : 26BE0215-HO
Equipment : Network Camera	REGULATION : Fcc Part15 Subpart C 15.247(d)
Model : BL-C20A	TEST DISTANCE : 3m
Sample No. : 001	DATE : 2005/10/07
Power : AC120V / 60Hz	TEMPERATURE : 23deg.C
Mode : IEEE802.11g, Tx 2437MHz 54Mbps	HUMIDITY : 55%
Remarks : Horizontal: Z-axis, Vertical: X-axis	ENGINEER : Yutaka Yoshida

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1624.7	59.3	61.0	25.7	36.6	2.8	0.0	51.2	52.9	74.0	22.8	21.1
2	2320.0	64.5	59.7	31.0	36.4	3.1	0.0	62.2	57.4	74.0	11.8	16.6
3	4874.0	45.7	46.4	35.3	36.0	4.3	1.0	50.3	51.0	74.0	23.7	23.0
4	7311.0	46.4	45.3	37.7	36.0	5.2	0.5	53.8	52.7	74.0	20.2	21.3
5	9748.0	44.4	45.5	36.2	36.4	6.1	0.2	50.5	51.6	74.0	23.5	22.4

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1624.7	56.6	58.0	25.7	36.6	2.8	0.0	48.5	49.9	54.0	5.5	4.1
2	2320.0	54.9	50.1	31.0	36.4	3.1	0.0	52.6	47.8	54.0	1.4	6.2
3	4874.0	32.1	32.6	35.3	36.0	4.3	1.0	36.7	37.2	54.0	17.3	16.8
4	7311.0	31.7	31.5	37.7	36.0	5.2	0.5	39.1	38.9	54.0	14.9	15.1
5	9748.0	31.9	33.8	36.2	36.4	6.1	0.2	38.0	39.9	54.0	16.0	14.1

20dBc(Fundamental 2437MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2437.0	104.9	103.0	30.9	36.4	3.2	0.0	102.6	100.7	-	-	-
2	3249.4	52.0	52.5	31.7	36.5	3.6	0.0	50.8	51.3	Funda-20dB	31.8	29.4

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

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Fiter was not used for factor 0.0dB of the above table.

Test report No. : 26BE0215-HO-1a
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Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission (1-10GHz/11g High Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

UL Apex Co., Ltd.
Head Office EMC Lab. No.1 Semi Anechoic Chamber

Company : Panasonic Communications Co., Ltd.	REPORT NO : 26BE0215-HO
Equipment : Network Camera	REGULATION : Fcc Part15 Subpart C 15.247(d)
Model : BL-C20A	TEST DISTANCE : 3m
Sample No. : 001	DATE : 2005/10/07
Power : AC120V / 60Hz	TEMPERATURE : 23deg.C
Mode : IEEE802.11g, Tx 2462MHz 54Mbps	HUMIDITY : 55%
Remarks : Horizontal: Z-axis, Vertical: X-axis	ENGINEER : Yutaka Yoshida

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1641.4	55.3	59.2	26.0	36.6	2.8	0.0	47.5	51.4	74.0	26.5	22.6
2	2320.0	61.6	59.1	31.0	36.4	3.1	0.0	59.3	56.8	74.0	14.7	17.2
3	2483.5	68.8	72.1	30.8	36.4	3.1	0.0	66.3	69.6	74.0	7.7	4.4
4	4924.0	47.4	45.8	35.6	35.9	4.3	1.0	52.4	50.8	74.0	21.6	23.2
5	7386.0	43.1	45.2	37.8	36.0	5.2	0.6	50.7	52.8	74.0	23.3	21.2
6	9848.0	43.9	44.6	36.2	36.4	6.2	0.3	50.2	50.9	74.0	23.8	23.1

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

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	1641.4	51.1	55.0	26.0	36.6	2.8	0.0	43.3	47.2	54.0	10.7	6.8
2	2320.0	51.4	48.6	31.0	36.4	3.1	0.0	49.1	46.3	54.0	4.9	7.7
3	2483.5	49.0	52.4	30.8	36.4	3.1	0.0	46.5	49.9	54.0	7.5	4.1
4	4924.0	33.3	32.6	35.6	35.9	4.3	1.0	38.3	37.6	54.0	15.7	16.4
5	7386.0	30.5	31.2	37.8	36.0	5.2	0.6	38.1	38.8	54.0	15.9	15.2
6	9848.0	32.2	33.7	36.2	36.4	6.2	0.3	38.5	40.0	54.0	15.5	14.0

20dBc(Fundamental 2462MHz) (RBW: 100kHz, VBW: 300kHz)

No.	FREQ [MHz]	S/A READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Hi-Pass Filter [dB]	RESULT		Limit 20dBc [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
		[dBuV]						[dBuV/m]			[dB]	
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + Cable Loss + Filter Loss												
1	2462.0	101.9	103.9	30.8	36.4	3.1	0.0	99.4	101.4	-	-	-
2	3282.7	52.3	50.2	31.7	36.5	3.6	0.0	51.1	49.0	Funda-20dB	28.3	32.4

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

*The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

*Hi-Pass Filter was not used for factor 0.0dB of the above table.

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MF060b(01.06.05)

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FCC ID : ACJ96NBL-C20

Radiated Spurious Emission (10-18GHz/11b Low Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

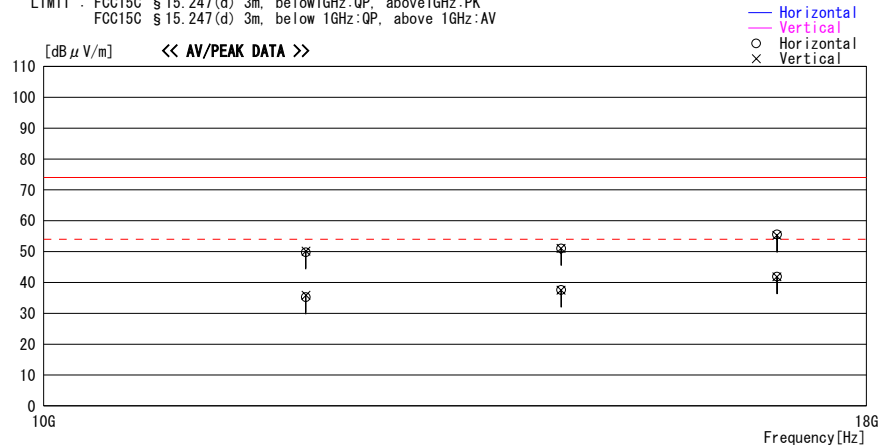
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 20:18:55

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2412MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
12060.000	46.6	PK	41.4	-38.2	49.8	0	100	Hori.	74.0	24.2
12060.000	32.1	AV	41.4	-38.2	35.3	0	100	Hori.	54.0	18.7
12060.000	47.0	PK	41.4	-38.2	50.2	0	100	Vert.	74.0	23.8
12060.000	32.6	AV	41.4	-38.2	35.8	0	100	Vert.	54.0	18.2
14472.000	32.1	AV	41.8	-36.4	37.5	0	100	Hori.	54.0	16.5
14472.000	45.7	PK	41.8	-36.4	51.1	0	100	Vert.	74.0	22.9
14472.000	45.6	PK	41.8	-36.4	51.0	0	100	Hori.	74.0	23.0
14472.000	32.1	AV	41.8	-36.4	37.5	0	100	Vert.	54.0	16.5
16884.000	45.8	PK	44.6	-35.1	55.3	0	100	Vert.	74.0	18.8
16884.000	46.1	PK	44.6	-35.1	55.6	0	100	Hori.	74.0	18.4
16884.000	32.4	AV	44.6	-35.1	41.9	0	100	Hori.	54.0	12.1
16884.000	32.3	AV	44.6	-35.1	41.8	0	100	Vert.	54.0	12.2

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)

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MF060b(01.06.05)

Test report No. : 26BE0215-HO-1a
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FCC ID : ACJ96NBL-C20

Radiated Spurious Emission **(10-18GHz/11b Mid Ch.)**

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

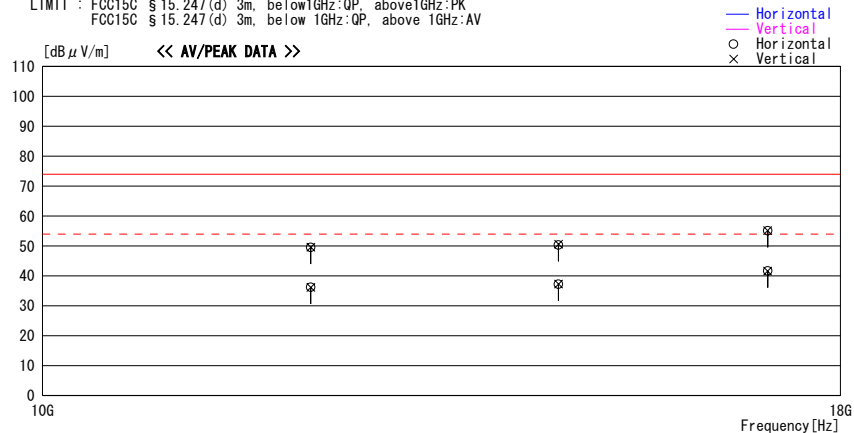
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 20:49:37

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg. C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2437MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	
			Factor	Gain					[dB μ V/m]	Margin
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
12185.000	46.1	PK	41.5	-38.0	49.6	0	100	Vert.	74.0	24.4
12185.000	46.1	PK	41.5	-38.0	49.6	0	100	Hori.	74.0	24.4
12185.000	32.8	AV	41.5	-38.0	36.3	0	100	Hori.	54.0	17.7
12185.000	32.7	AV	41.5	-38.0	36.2	0	100	Vert.	54.0	17.8
14622.000	32.1	AV	42.1	-36.9	37.3	0	100	Hori.	54.0	16.7
14622.000	45.4	PK	42.1	-36.9	50.6	0	100	Vert.	74.0	23.4
14622.000	45.1	PK	42.1	-36.9	50.3	0	100	Hori.	74.0	23.7
14622.000	32.1	AV	42.1	-36.9	37.3	0	100	Vert.	54.0	16.7
17059.000	45.6	PK	44.6	-35.0	55.2	0	100	Vert.	74.0	18.8
17059.000	32.1	AV	44.6	-35.0	41.7	0	100	Hori.	54.0	12.3
17059.000	45.5	PK	44.6	-35.0	55.1	0	100	Hori.	74.0	18.9
17059.000	32.1	AV	44.6	-35.0	41.7	0	100	Vert.	54.0	12.3

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)

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MF060b(01.06.05)

Radiated Spurious Emission
(10-18GHz/11b High Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

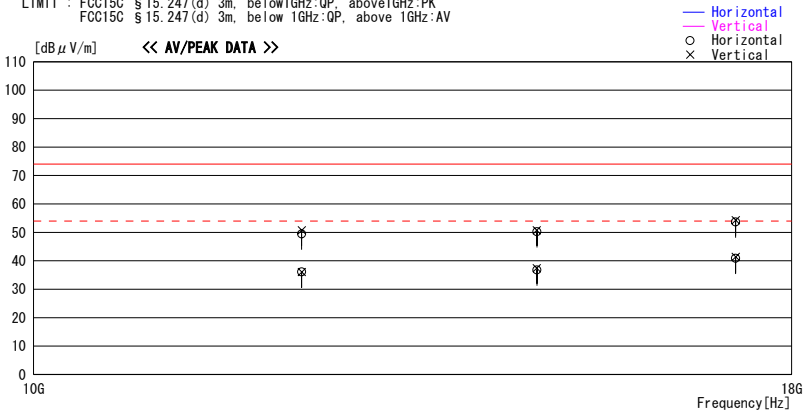
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 21:10:27

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-H0
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2462MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dBμV]	DET	Antenna	Loss&	Level [dBμV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBμV/m]	Margin [dB]
			Factor [dB/m]	Gain [dB]						
12310.000	32.4	AV	41.5	-37.8	36.1	0	100	Hori.	54.0	17.9
12310.000	45.8	PK	41.5	-37.8	49.5	0	100	Hori.	74.0	24.5
12310.000	32.4	AV	41.5	-37.8	36.1	0	100	Vert.	54.0	17.9
12310.000	47.1	PK	41.5	-37.8	50.8	0	100	Vert.	74.0	23.2
14772.000	31.5	AV	42.4	-37.1	36.8	0	100	Hori.	54.0	17.2
14772.000	32.1	AV	42.4	-37.1	37.4	0	100	Vert.	54.0	16.6
14772.000	45.0	PK	42.4	-37.1	50.3	0	100	Hori.	74.0	23.7
14772.000	45.4	PK	42.4	-37.1	50.7	0	100	Vert.	74.0	23.3
17234.000	31.9	AV	44.5	-35.0	41.4	0	100	Vert.	54.0	12.6
17234.000	31.4	AV	44.5	-35.0	40.9	0	100	Hori.	54.0	13.1
17234.000	44.2	PK	44.5	-35.0	53.7	0	100	Hori.	74.0	20.3
17234.000	44.8	PK	44.5	-35.0	54.3	0	100	Vert.	74.0	19.7

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)

Radiated Spurious Emission (10-18GHz/11g Low Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

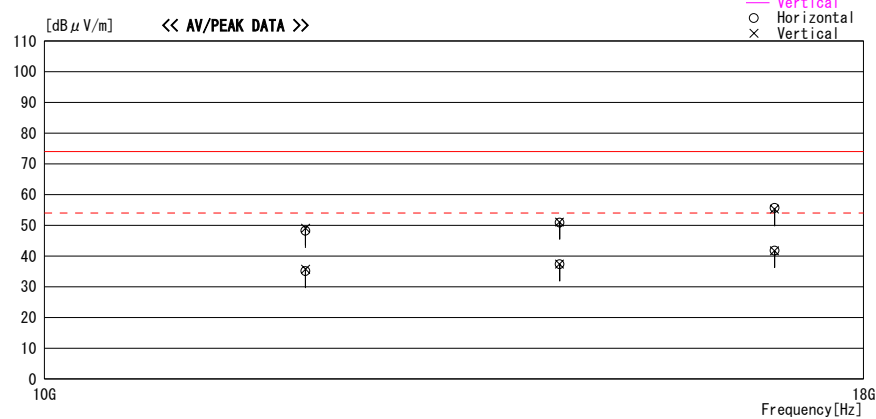
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 21:26:48

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-H0
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2412MHz, 54Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dB μ V]	DET	Antenna	Loss&	Level [dB μ V/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dB μ V/m]	Margin [dB]
			Factor [dB/m]	Gain [dB]						
12060.000	45.1	PK	41.4	-38.2	48.3	0	100	Hori.	74.0	25.7
12060.000	31.9	AV	41.4	-38.2	35.1	0	100	Hori.	54.0	18.9
12060.000	45.9	PK	41.4	-38.2	49.1	0	100	Vert.	74.0	24.9
12060.000	32.6	AV	41.4	-38.2	35.8	0	100	Vert.	54.0	18.2
14472.000	32.0	AV	41.8	-36.4	37.4	0	100	Hori.	54.0	16.6
14472.000	45.5	PK	41.8	-36.4	50.9	0	100	Hori.	74.0	23.1
14472.000	45.7	PK	41.8	-36.4	51.1	0	100	Vert.	74.0	22.9
14472.000	32.0	AV	41.8	-36.4	37.4	0	100	Vert.	54.0	16.6
16884.000	46.2	PK	44.6	-35.1	55.7	0	100	Hori.	74.0	18.4
16884.000	45.7	PK	44.6	-35.1	55.2	0	100	Vert.	74.0	18.8
16884.000	32.3	AV	44.6	-35.1	41.8	0	100	Hori.	54.0	12.2
16884.000	32.3	AV	44.6	-35.1	41.8	0	100	Vert.	54.0	12.2

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)

Radiated Spurious Emission
(10-18GHz/11g Mid Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

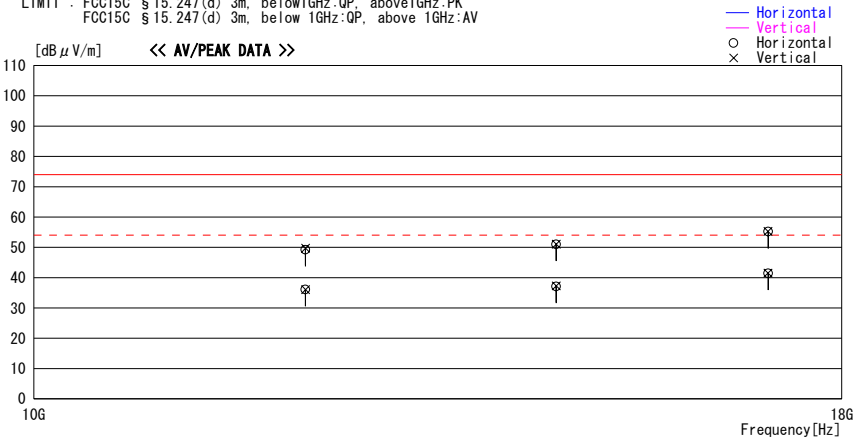
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 21:38:59

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg. C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2437MHz, 54Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dB μ V]		[dB/m]	[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
12185.000	45.7	PK	41.5	-38.0	49.2	0	100	Hori.	74.0	24.8
12185.000	46.2	PK	41.5	-38.0	49.7	0	100	Vert.	74.0	24.3
12185.000	32.6	AV	41.5	-38.0	36.1	0	100	Hori.	54.0	17.9
12185.000	32.6	AV	41.5	-38.0	36.1	0	100	Vert.	54.0	17.9
14622.000	32.0	AV	42.1	-36.9	37.2	0	100	Hori.	54.0	16.8
14622.000	45.8	PK	42.1	-36.9	51.0	0	100	Hori.	74.0	23.0
14622.000	45.9	PK	42.1	-36.9	51.1	0	100	Vert.	74.0	22.9
14622.000	32.1	AV	42.1	-36.9	37.3	0	100	Vert.	54.0	16.7
17059.000	45.6	PK	44.6	-35.0	55.2	0	100	Hori.	74.0	18.8
17059.000	45.7	PK	44.6	-35.0	55.3	0	100	Vert.	74.0	18.7
17059.000	31.9	AV	44.6	-35.0	41.5	0	100	Hori.	54.0	12.5
17059.000	31.9	AV	44.6	-35.0	41.5	0	100	Vert.	54.0	12.5

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)

Radiated Spurious Emission
(10-18GHz/11g High Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

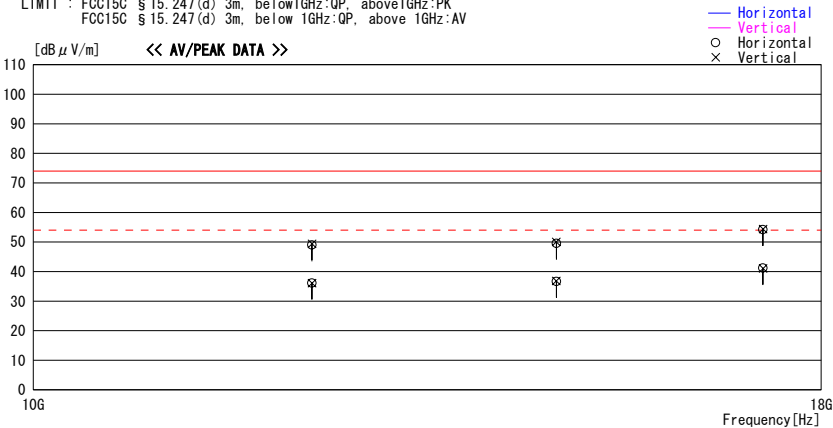
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 21:49:54

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2462MHz, 54Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dB μ V]			[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
12310.000	45.7	PK	41.5	-37.8	49.4	0	100	Vert.	74.0	24.6
12310.000	45.3	PK	41.5	-37.8	49.0	0	100	Hori.	74.0	25.0
12310.000	32.4	AV	41.5	-37.8	36.1	0	100	Hori.	54.0	17.9
12310.000	32.4	AV	41.5	-37.8	36.1	0	100	Vert.	54.0	17.9
14772.000	44.3	PK	42.4	-37.1	49.6	0	100	Hori.	74.0	24.4
14772.000	31.4	AV	42.4	-37.1	36.7	0	100	Hori.	54.0	17.3
14772.000	44.8	PK	42.4	-37.1	50.1	0	100	Vert.	74.0	23.9
14772.000	31.6	AV	42.4	-37.1	36.9	0	100	Vert.	54.0	17.1
17234.000	44.9	PK	44.5	-35.0	54.4	0	100	Vert.	74.0	19.6
17234.000	44.8	PK	44.5	-35.0	54.3	0	100	Hori.	74.0	19.7
17234.000	31.7	AV	44.5	-35.0	41.2	0	100	Hori.	54.0	12.8
17234.000	31.5	AV	44.5	-35.0	41.0	0	100	Vert.	54.0	13.0

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)

Test report No. : 26BE0215-HO-1a
Page : 50 of 68
Issued date : October 18, 2005
Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission **(18-26.5GHz/11b Low Ch.)**

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

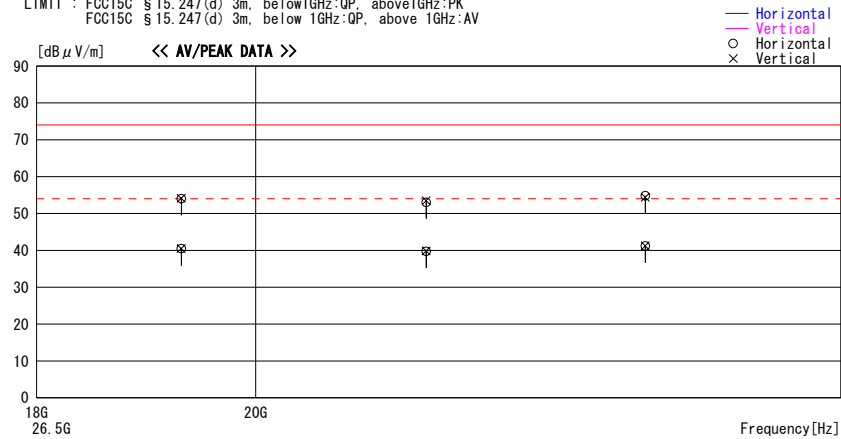
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 22:38:17

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2412MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna		Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
19296.000	46.1	PK	41.6	-33.5	54.2	0	100	Vert.	74.0	19.8
19296.000	45.9	PK	41.6	-33.5	54.0	0	100	Hori.	74.0	20.0
19296.000	32.4	AV	41.6	-33.5	40.5	0	100	Hori.	54.0	13.5
19296.000	32.4	AV	41.6	-33.5	40.5	0	100	Vert.	54.0	13.5
21708.000	33.2	AV	40.4	-33.8	39.8	0	100	Hori.	54.0	14.3
21708.000	46.9	PK	40.4	-33.8	53.5	0	100	Vert.	74.0	20.5
21708.000	46.4	PK	40.4	-33.8	53.0	0	100	Hori.	74.0	21.0
21708.000	33.3	AV	40.4	-33.8	39.9	0	100	Vert.	54.0	14.1
24120.000	47.5	PK	41.0	-34.1	54.4	0	100	Vert.	74.0	19.6
24120.000	34.3	AV	41.0	-34.1	41.2	0	100	Hori.	54.0	12.8
24120.000	48.0	PK	41.0	-34.1	54.9	0	100	Hori.	74.0	19.1
24120.000	34.3	AV	41.0	-34.1	41.2	0	100	Vert.	54.0	12.8

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)

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MF060b(01.06.05)

Test report No. : 26BE0215-HO-1a
Page : 51 of 68
Issued date : October 18, 2005
Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission **(18-26.5GHz/11b Mid Ch.)**

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

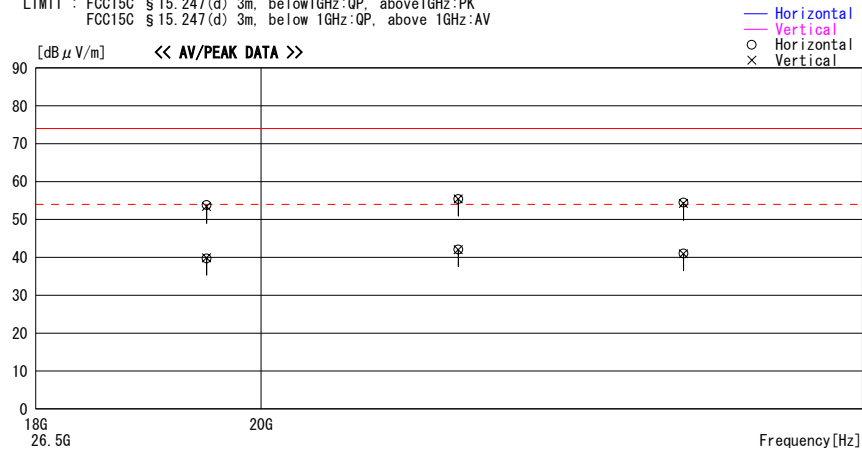
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 23:16:07

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2437MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
19496.000	46.2	PK	41.4	-33.8	53.8	0	100	Hori.	74.0	20.2
19496.000	32.2	AV	41.4	-33.8	39.8	0	100	Hori.	54.0	14.2
19496.000	45.8	PK	41.4	-33.8	53.4	0	100	Vert.	74.0	20.6
19496.000	32.3	AV	41.4	-33.8	39.9	0	100	Vert.	54.0	14.1
21933.000	48.3	PK	40.5	-33.3	55.5	0	100	Vert.	74.0	18.5
21933.000	48.2	PK	40.5	-33.3	55.4	0	100	Hori.	74.0	18.6
21933.000	34.9	AV	40.5	-33.3	42.1	0	100	Hori.	54.0	11.9
21933.000	34.8	AV	40.5	-33.3	42.0	0	100	Vert.	54.0	12.0
24370.000	47.5	PK	41.1	-34.1	54.5	0	100	Hori.	74.0	19.5
24370.000	34.0	AV	41.1	-34.1	41.0	0	100	Hori.	54.0	13.0
24370.000	47.2	PK	41.1	-34.1	54.2	0	100	Vert.	74.0	19.8
24370.000	34.0	AV	41.1	-34.1	41.0	0	100	Vert.	54.0	13.1

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)

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MF060b(01.06.05)

Test report No. : 26BE0215-HO-1a
Page : 52 of 68
Issued date : October 18, 2005
Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission **(18-26.5GHz/11b High Ch.)**

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

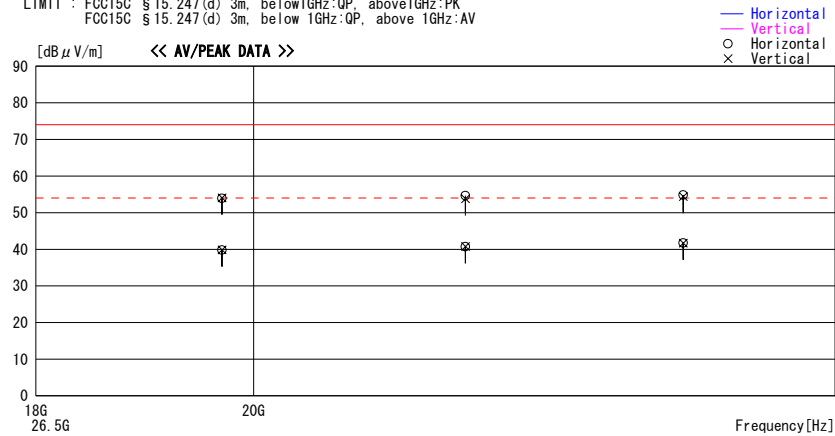
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/07 23:26:58

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11b 2462MHz, 11Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency [MHz]	Reading [dB μ V]	DET	Antenna	Loss&	Level [dB μ V/m]	Angle [Deg]	Height [cm]	Polar.	Limit	Margin
			Factor [dB/m]	Gain [dB]					[dB μ V/m]	[dB]
19696.000	46.9	PK	41.2	-34.0	54.1	0	100	Vert.	74.0	19.9
19696.000	46.7	PK	41.2	-34.0	53.9	0	100	Hori.	74.0	20.1
19696.000	32.7	AV	41.2	-34.0	39.9	0	100	Hori.	54.0	14.1
19696.000	32.7	AV	41.2	-34.0	39.9	0	100	Vert.	54.0	14.1
22158.000	33.4	AV	40.5	-33.1	40.8	0	100	Hori.	54.0	13.3
22158.000	46.4	PK	40.5	-33.1	53.8	0	100	Vert.	74.0	20.3
22158.000	47.3	PK	40.5	-33.1	54.7	0	100	Hori.	74.0	19.4
22158.000	33.4	AV	40.5	-33.1	40.8	0	100	Vert.	54.0	13.2
24620.000	47.2	PK	41.1	-33.9	54.4	0	100	Vert.	74.0	19.6
24620.000	34.5	AV	41.1	-33.9	41.7	0	100	Hori.	54.0	12.3
24620.000	47.7	PK	41.1	-33.9	54.9	0	100	Hori.	74.0	19.1
24620.000	34.5	AV	41.1	-33.9	41.7	0	100	Vert.	54.0	12.3

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)

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MF060b(01.06.05)

Radiated Spurious Emission
(18-26.5GHz/11g Low Ch.)

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

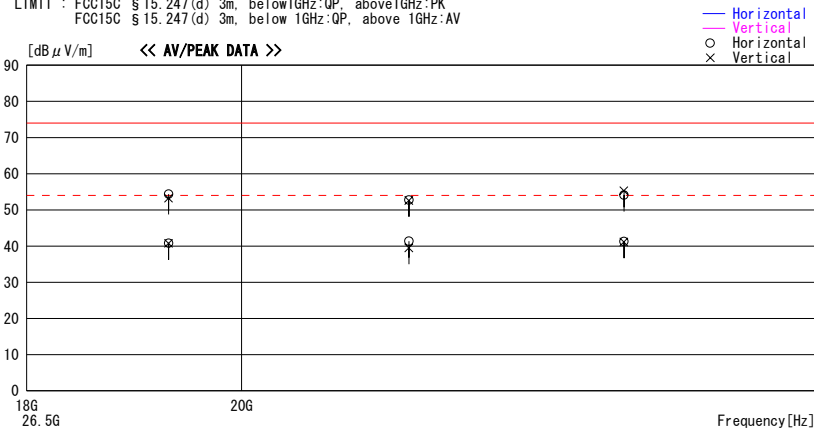
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 00:16:41

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2412MHz, 54Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dB μ V]			[dB]	[dB μ V/m]	[Deg]	[cm]		[dB μ V/m]	[dB]
19296.000	46.3	PK	41.6	-33.5	54.4	0	100	Hori.	74.0	19.6
19296.000	32.8	AV	41.6	-33.5	40.9	0	100	Hori.	54.0	13.1
19296.000	45.2	PK	41.6	-33.5	53.3	0	100	Vert.	74.0	20.7
19296.000	32.7	AV	41.6	-33.5	40.8	0	100	Vert.	54.0	13.2
21708.000	46.0	PK	40.4	-33.8	52.6	0	100	Vert.	74.0	21.4
21708.000	32.9	AV	40.4	-33.8	39.5	0	100	Vert.	54.0	14.5
21708.000	46.1	PK	40.4	-33.8	52.7	0	100	Hori.	74.0	21.3
21708.000	34.8	AV	40.4	-33.8	41.4	0	100	Hori.	54.0	12.6
24120.000	48.4	PK	41.0	-34.1	55.3	0	100	Vert.	74.0	18.7
24120.000	34.3	AV	41.0	-34.1	41.2	0	100	Vert.	54.0	12.8
24120.000	47.2	PK	41.0	-34.1	54.1	0	100	Hori.	74.0	19.9
24120.000	34.3	AV	41.0	-34.1	41.2	0	100	Hori.	54.0	12.8

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)

Test report No. : 26BE0215-HO-1a
Page : 54 of 68
Issued date : October 18, 2005
Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission **(18-26.5GHz/11g Mid Ch.)**

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

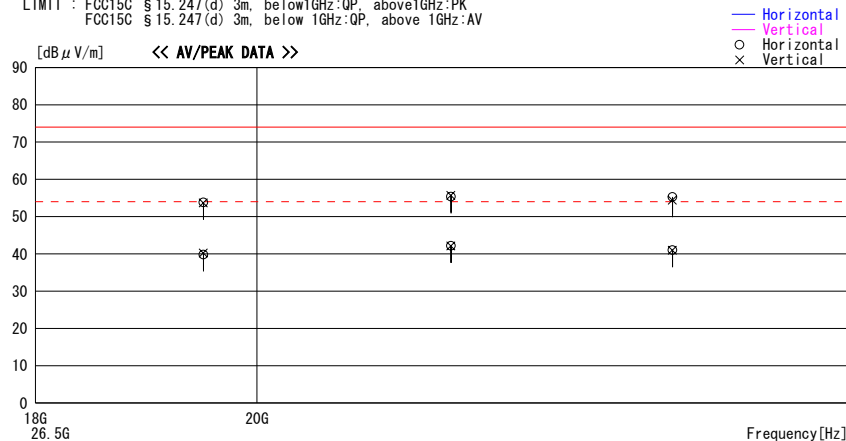
DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 00:27:33

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg. C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2437MHz, 54Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:PK
FCC15C § 15.247(d) 3m, below 1GHz:QP, above 1GHz:AV



Frequency	Reading	DET	Antenna	Loss&	Level	Angle	Height	Polar.	Limit	Margin
			Factor	Gain						
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]
19496.000	46.1	PK	41.4	-33.8	53.7	0	100	Vert.	74.0	20.3
19496.000	46.3	PK	41.4	-33.8	53.9	0	100	Hori.	74.0	20.2
19496.000	32.2	AV	41.4	-33.8	39.8	0	100	Hori.	54.0	14.2
19496.000	32.7	AV	41.4	-33.8	40.3	0	100	Vert.	54.0	13.7
21933.000	48.5	PK	40.5	-33.3	55.7	0	100	Vert.	74.0	18.3
21933.000	48.2	PK	40.5	-33.3	55.4	0	100	Hori.	74.0	18.6
21933.000	35.0	AV	40.5	-33.3	42.2	0	100	Hori.	54.0	11.8
21933.000	34.9	AV	40.5	-33.3	42.1	0	100	Vert.	54.0	11.9
24370.000	34.0	AV	41.1	-34.1	41.0	0	100	Hori.	54.0	13.0
24370.000	48.3	PK	41.1	-34.1	55.3	0	100	Hori.	74.0	18.7
24370.000	47.4	PK	41.1	-34.1	54.4	0	100	Vert.	74.0	19.6
24370.000	34.0	AV	41.1	-34.1	41.0	0	100	Vert.	54.0	13.0

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)

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MF060b(01.06.05)

Test report No. : 26BE0215-HO-1a
Page : 55 of 68
Issued date : October 18, 2005
Revised date : October 19, 2005
FCC ID : ACJ96NBL-C20

Radiated Spurious Emission **(18-26.5GHz/11g High Ch.)**

* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/10/08 00:46:59

Applicant : Panasonic Communications Co., Ltd. Report No. : 26BE0215-HO
Kind of EUT : Network Camera Power : AC120V / 60Hz
Model No. : BL-C20A Temp./Humi. : 23deg.C / 55%
Serial No. : 001 Operator : Norihisa Hashimoto

Mode / Remarks : 11g 2462MHz, 54Mbps(Worst Data Rate), Hor:Z Ver:X(Worst Position)

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
FCC15C §15.247(d) 3m, below 1GHz:QP, above 1GHz:AV

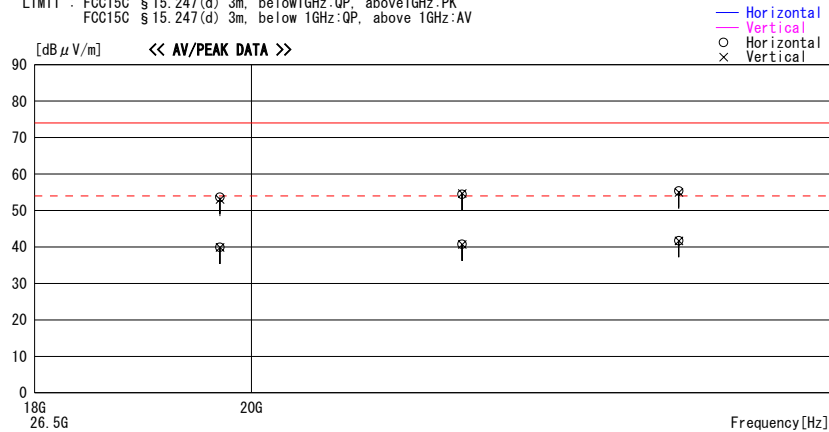
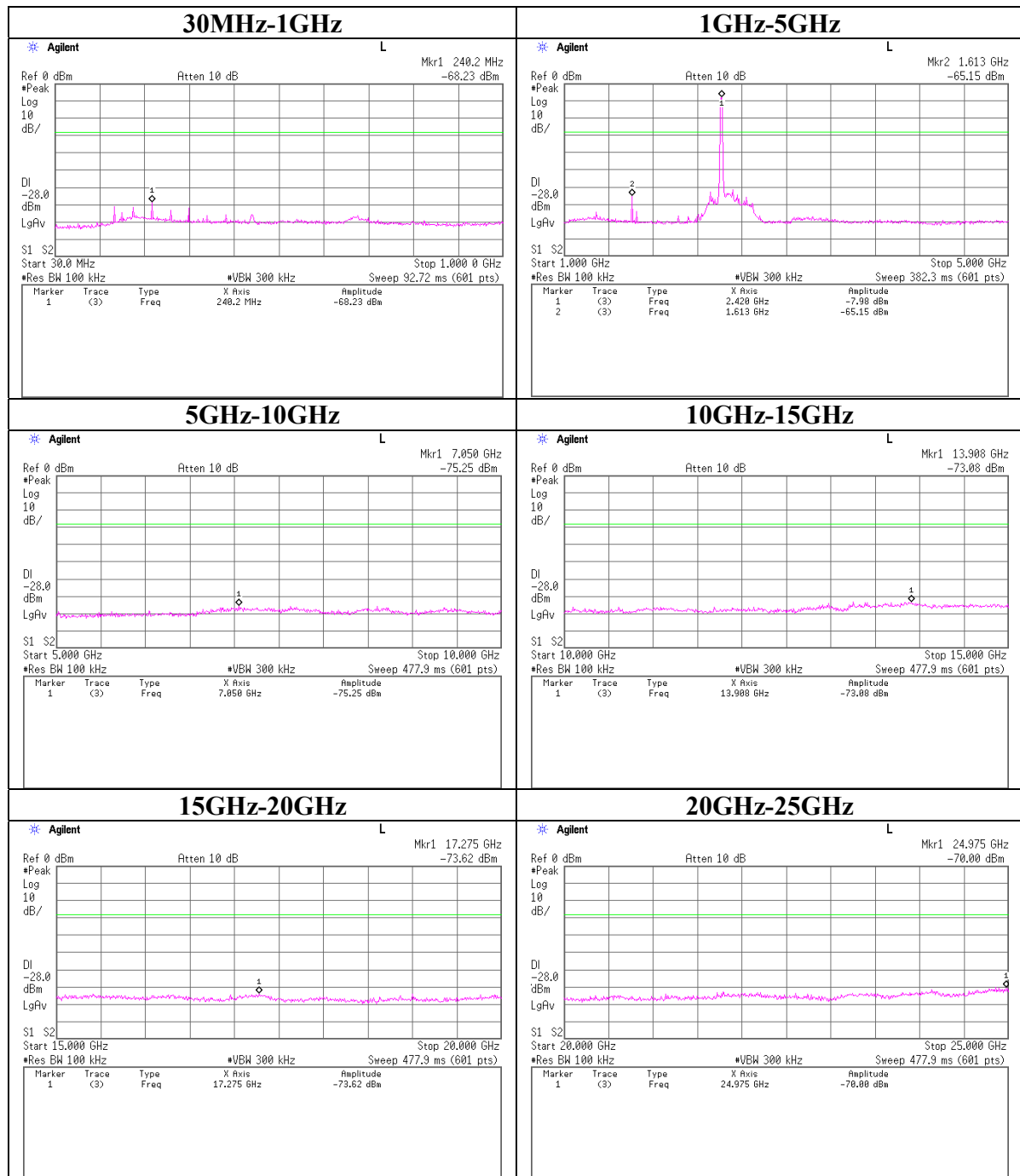


CHART:WITH FACTOR ANT TYPE : -30MHz LOOP 30-300MHz BICONICAL 300MHz-1000MHz LOGPERIODIC 1000MHz- HORN
CALCULATION:RESULT = READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - GAIN (AMP)

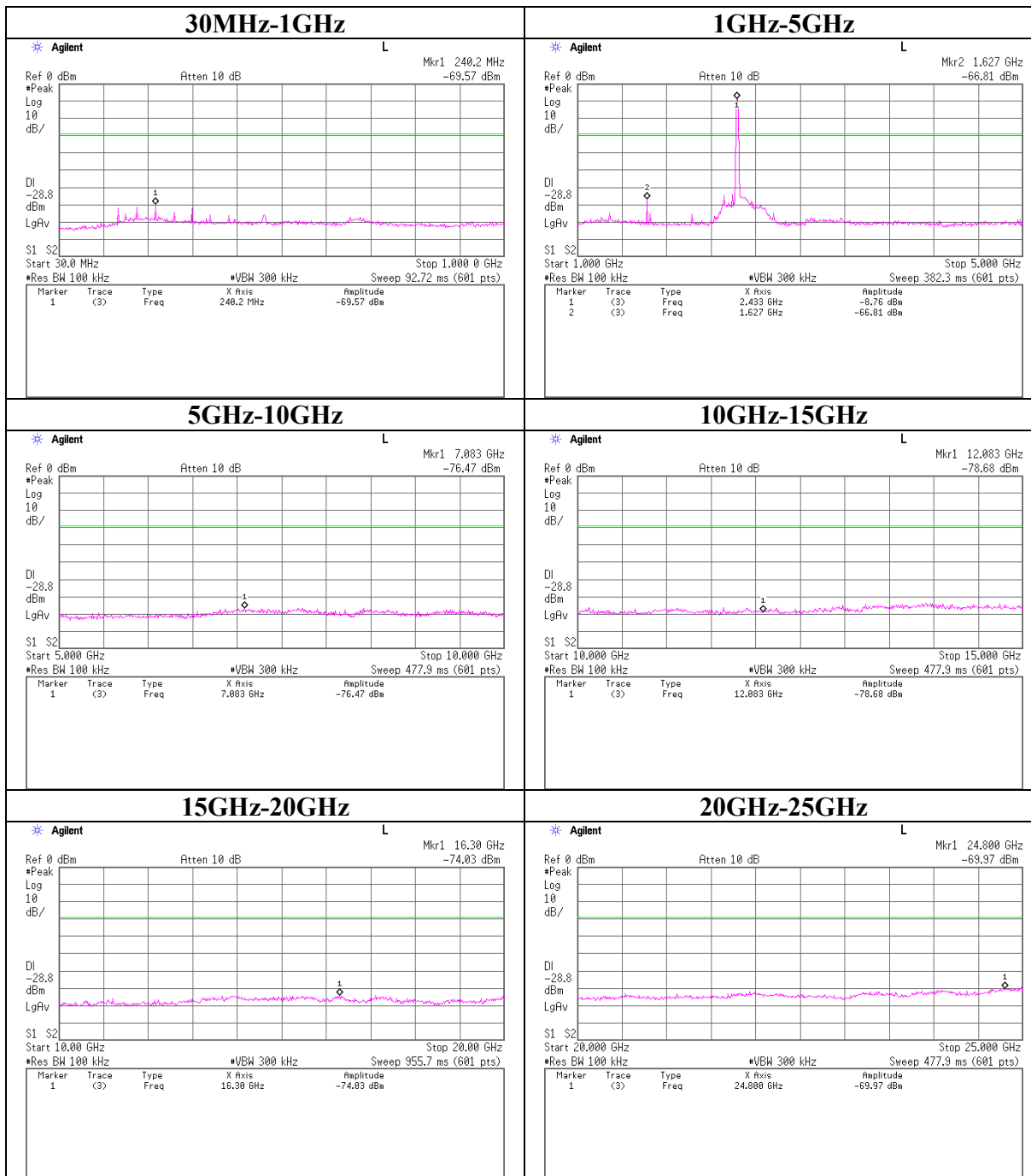
UL Apex Co., Ltd.
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MF060b(01.06.05)

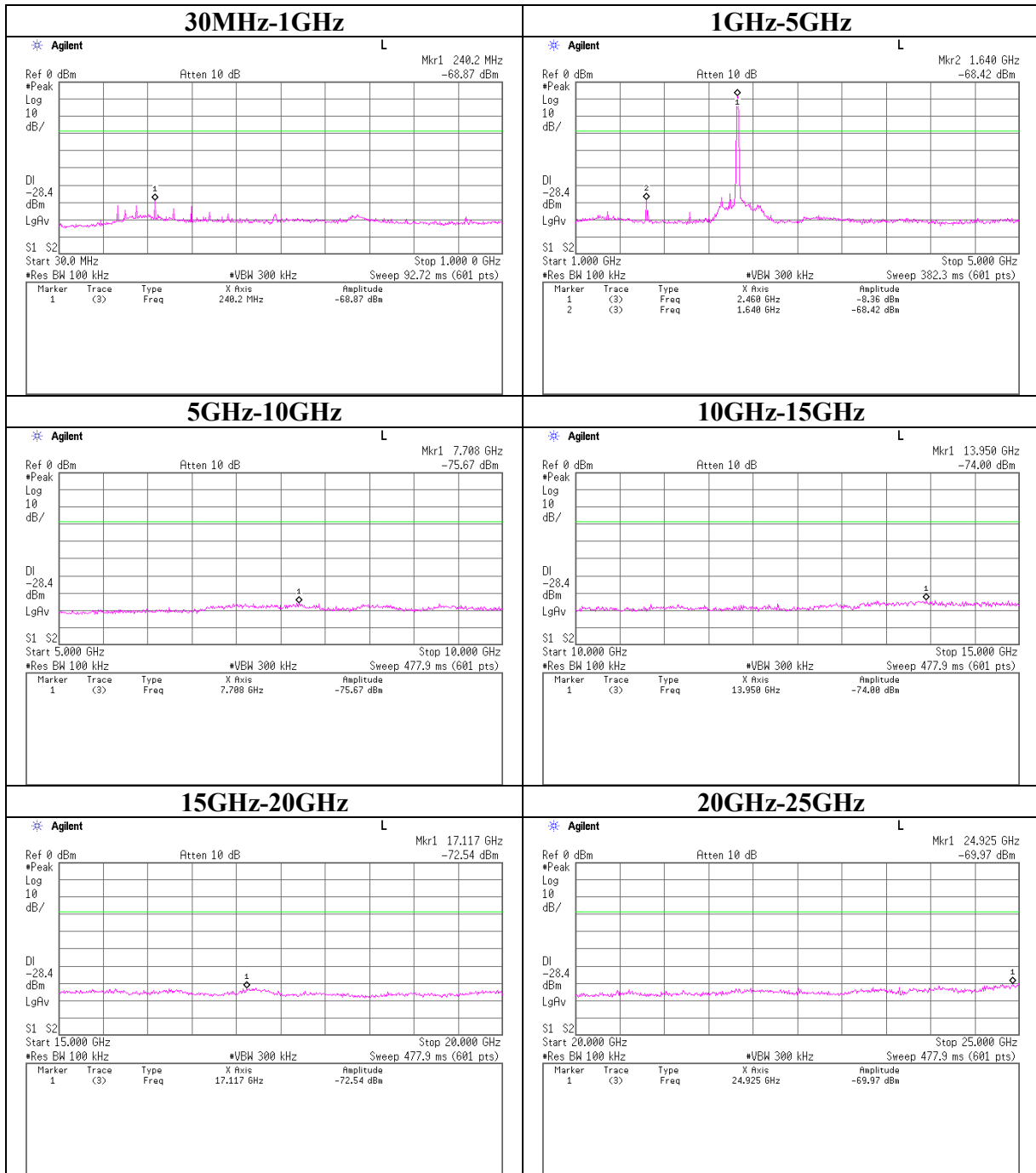
Conducted Spurious Emission
(11b Low Ch.)



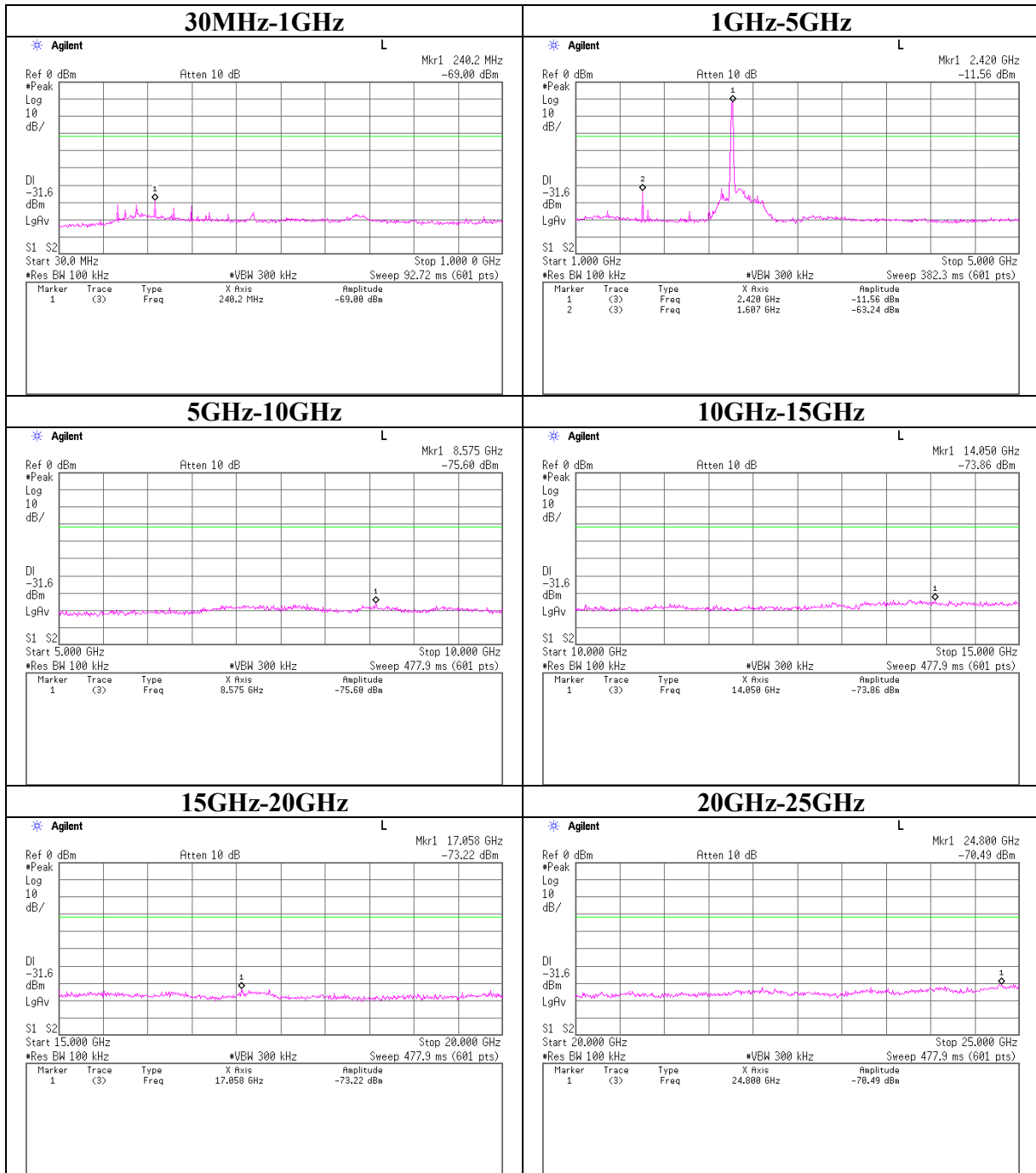
Conducted Spurious Emission (11b Mid Ch.)



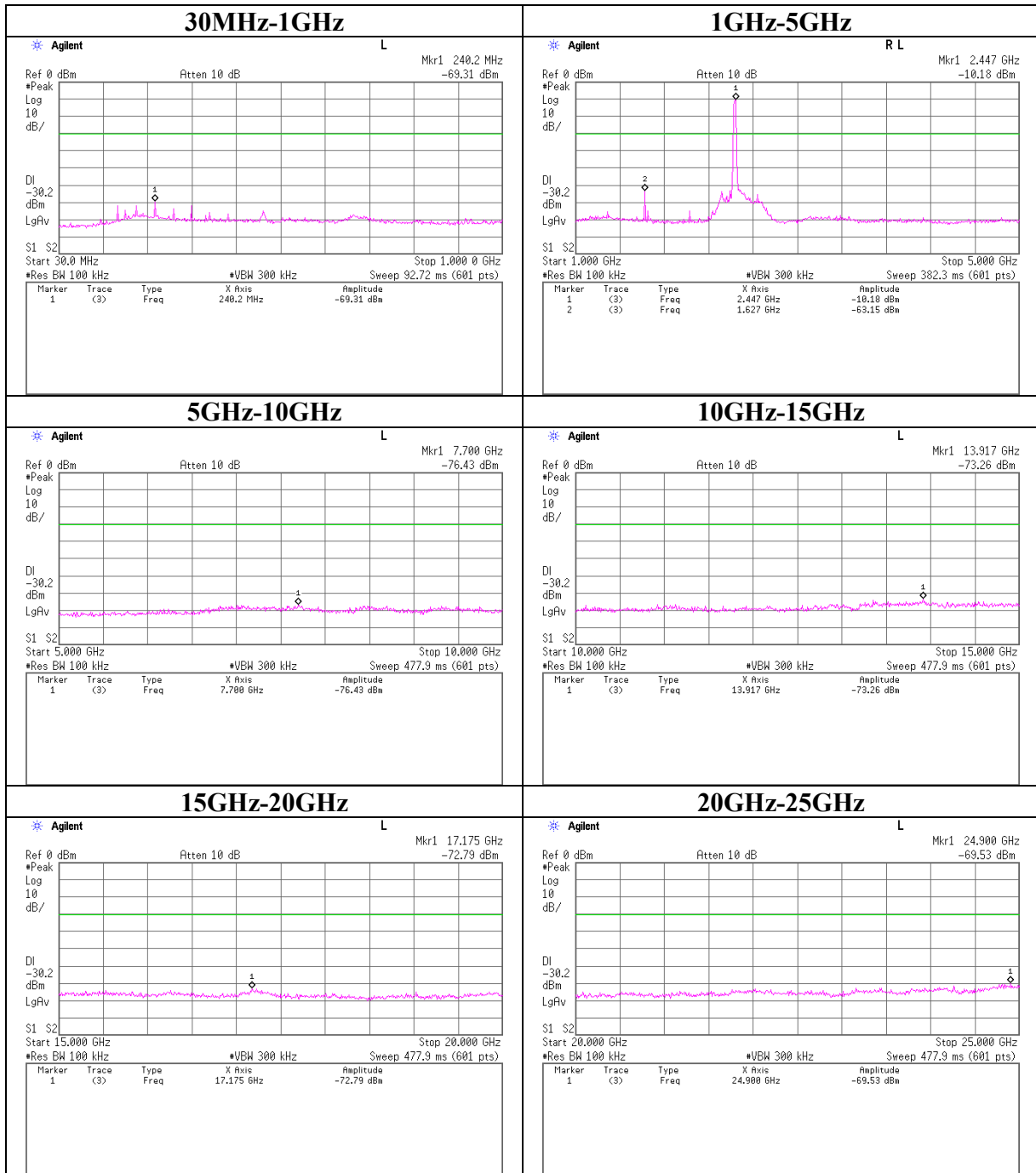
**Conducted Spurious Emission
(11b High Ch.)**



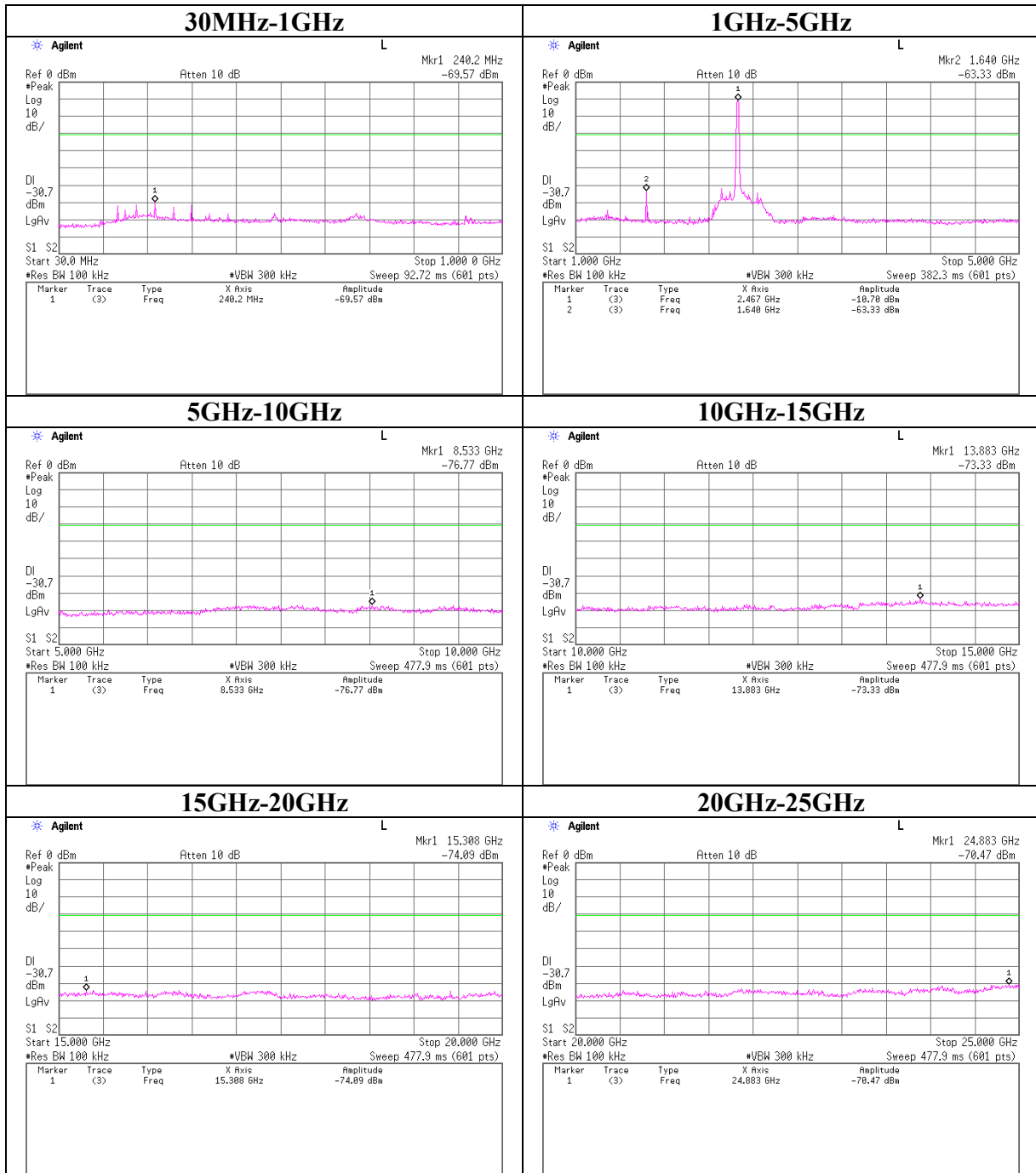
Conducted Spurious Emission
(11g Low Ch.)



Conducted Spurious Emission
(11g Mid Ch.)

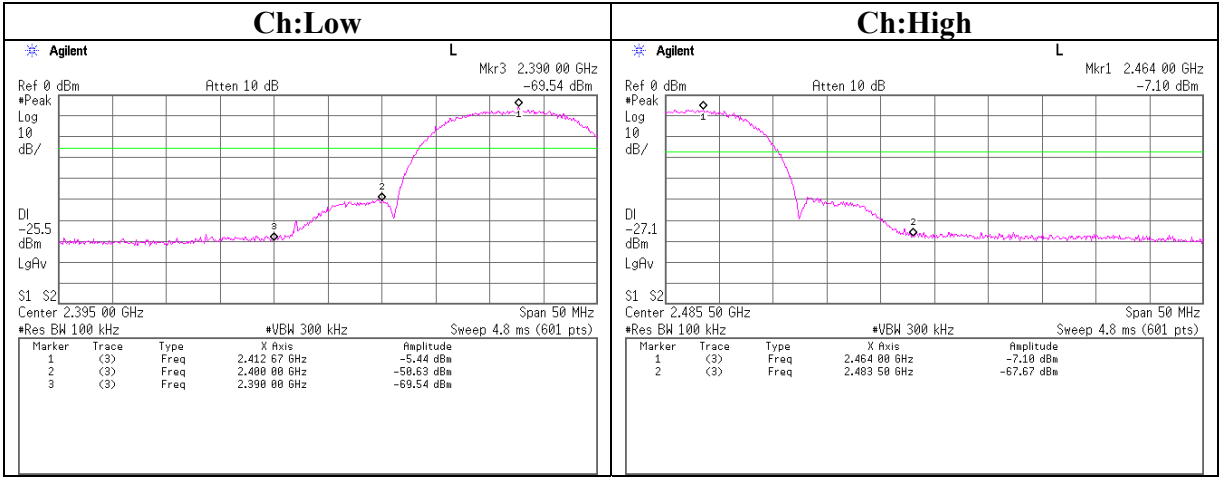


Conducted Spurious Emission
(11g High Ch.)

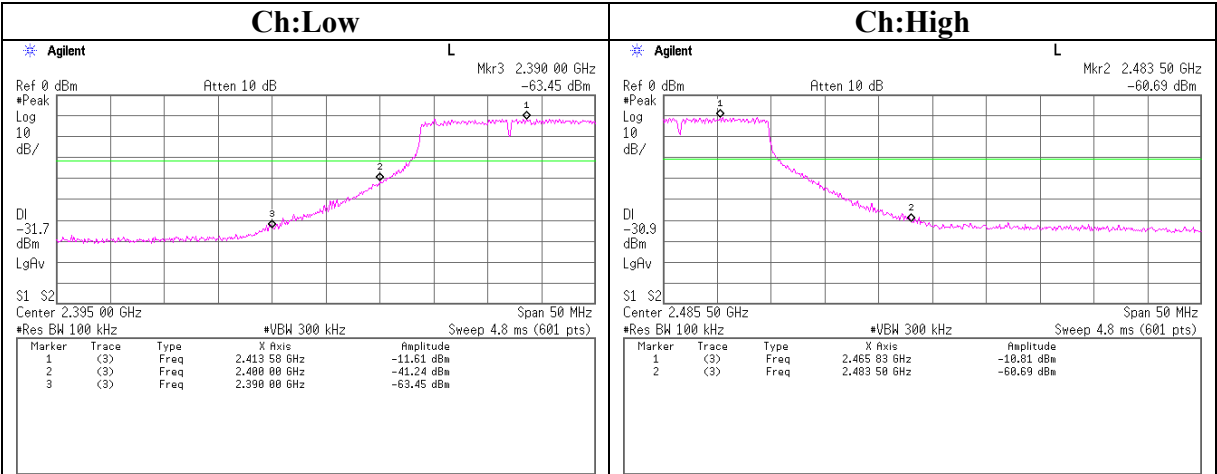


Conducted Emission Band Edge Compliance

11b



Conducted Emission Band Edge Compliance
11g



Power Density

UL Apex Co., Ltd.

Head Office EMC Lab. No.3 Shielded Room

Company : Panasonic Communications Co., Ltd.
Equipment : Network Camera
Model : BL-C20A
Sample No. : 001
Power : AC120V/60Hz
Mode : Tx(ch1,6,11)

REGULATION : FCC Part15 Subpart C 15.247(e)
TEST DISTANCE : -
DATE : 2005/10/12
TEMPERATURE : 24°C
HUMIDITY : 64%
ENGINEER : Hiroka Umeyama

[IEEE802.11b]

Ch	Freq. [MHz]	Reading [dBm]	Cable [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-20.34	0.8	10.0	-9.5	8.0	17.5
Mid	2437.0	-19.48	0.8	10.0	-8.7	8.0	16.7
High	2462.0	-19.43	0.8	10.0	-8.6	8.0	16.6

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer) + Attenuator

[IEEE802.11g]

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	-23.16	0.8	10.0	-12.4	8.0	20.4
Mid	2437.0	-20.86	0.8	10.0	-10.1	8.0	18.1
High	2462.0	-22.58	0.8	10.0	-11.8	8.0	19.8

Sample Calculation:

Result = Reading + Cable Loss (supplied by customer)+ Attenuator

UL Apex Co., Ltd.

Head Office EMC Lab.

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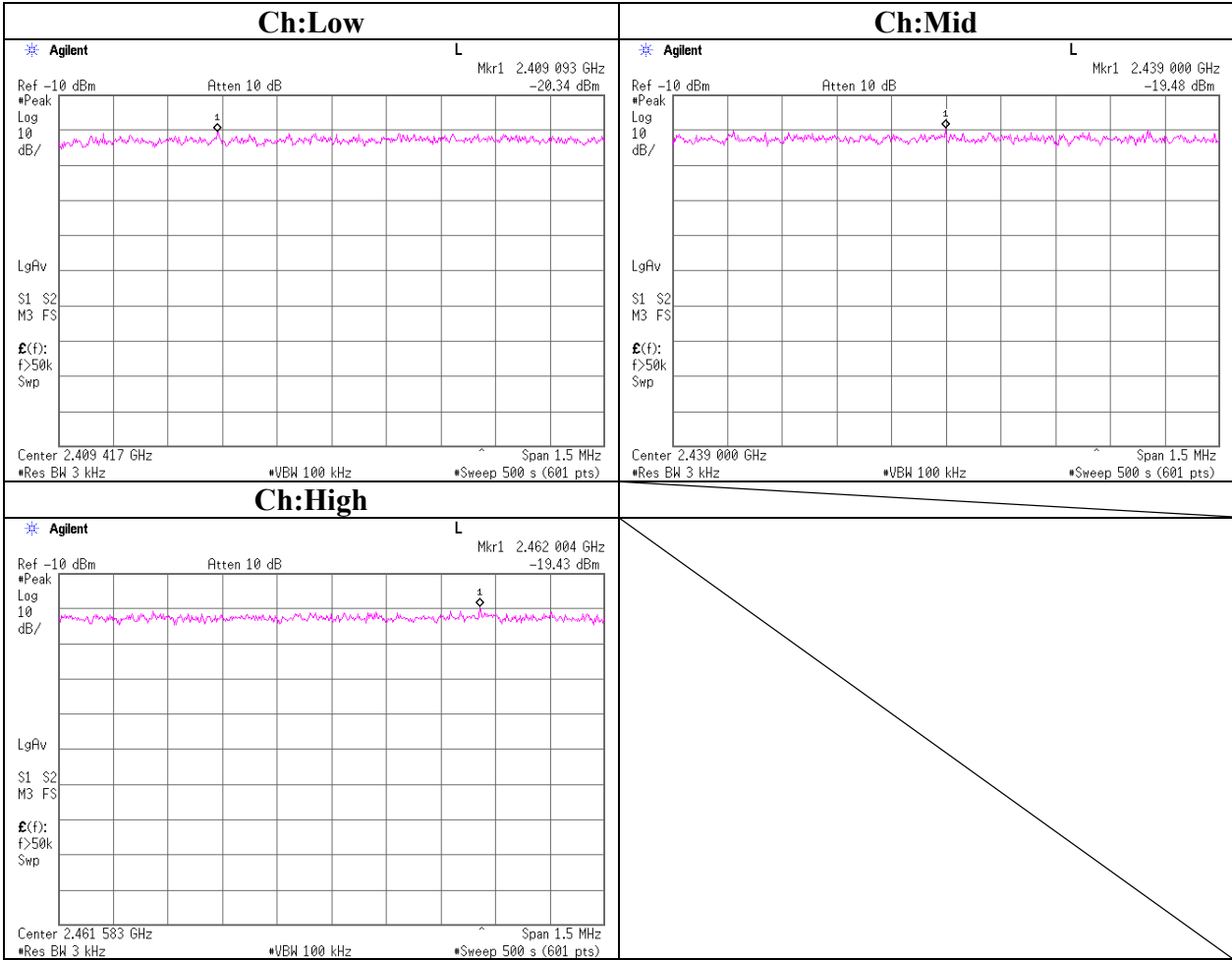
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MF060b(01.06.05)

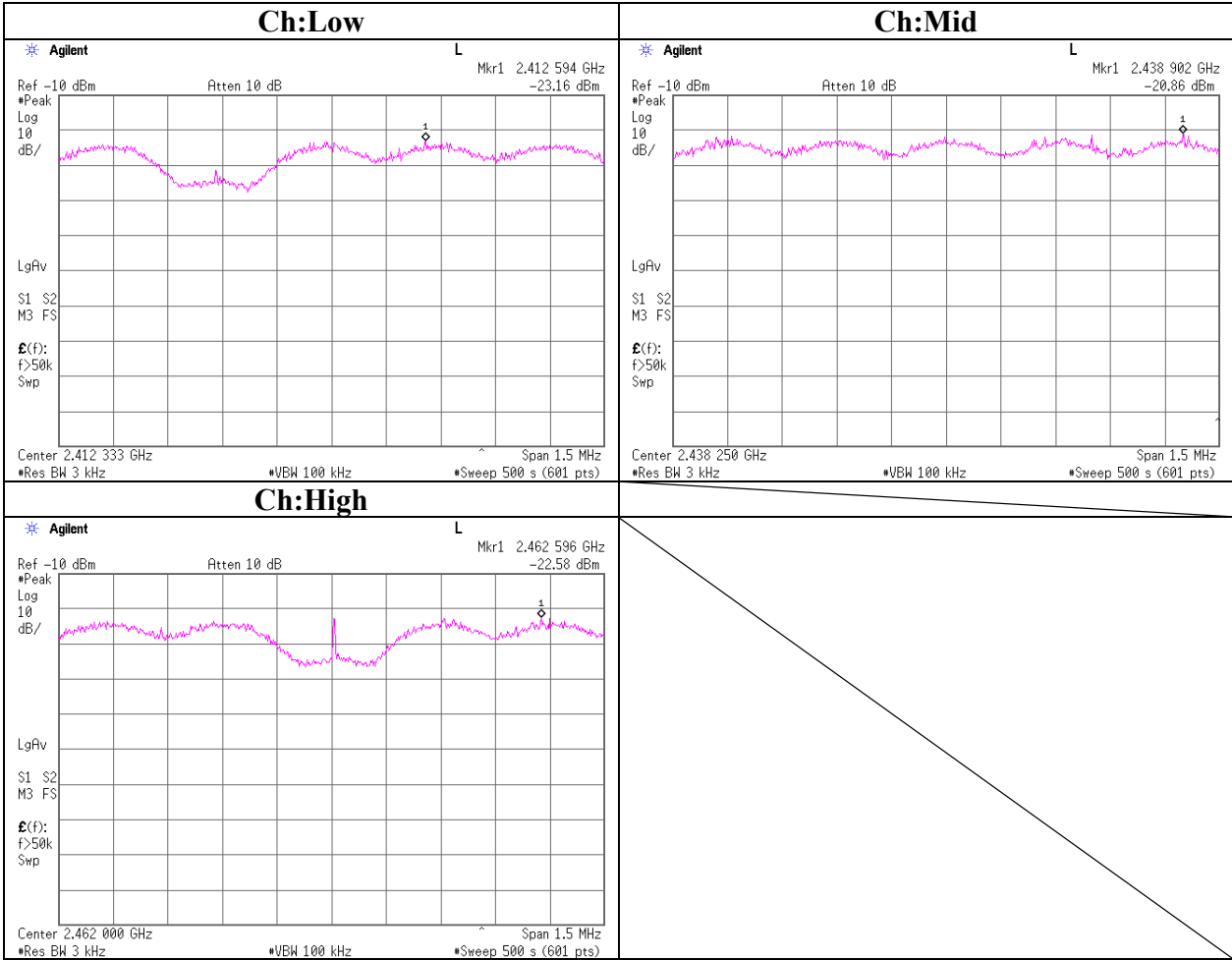
Power Density

11b



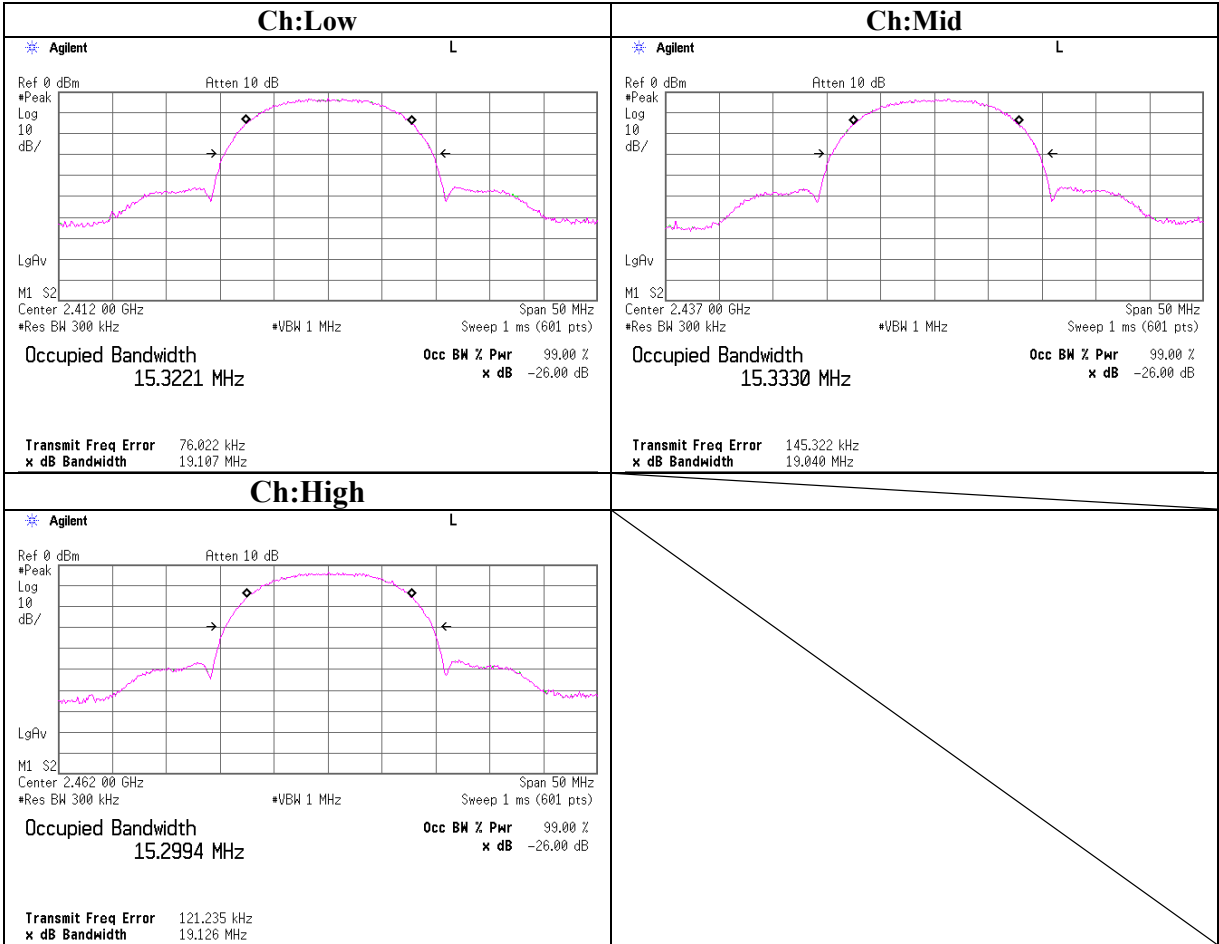
Power Density

11g



99%Occupied Bandwidth

11b



99%Occupied Bandwidth

11g

