



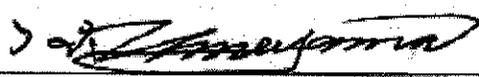
# EMI TEST REPORT

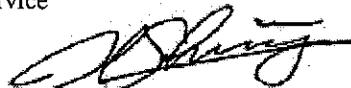
Test Report No. : 24DE0025-HO-1

Applicant : Sony Corp.  
Type of Equipment : Notebook Personal Computer  
Model No. : PCG-5A1L  
Test standard : FCC Part 15 Subpart C  
Section 15.207, Section 15.247  
FCC ID : AK8PCG5A1L  
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.
5. This test report does not constitute an endorsement by NIST/NVLAP or U.S. Government.

Date of test : November 26, 27, 28, December 10 and 11, 2003

Tested by :    
Hiroka Umeyama Kenichi Adachi  
EMC Service EMC Service

Approved by :   
Hironobu Shimoji  
Group Leader of EMC Service

UL Apex Co., Ltd.

Head Office EMC Lab.

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## **SECTION 1: Client information**

Company Name : Sony Corp.  
Brand name : SONY  
Address : 6-7-35, Kita-Shinagawa, Shinagawa-ku, Tokyo, 141-0001 Japan  
Telephone Number : +81-3-5795-8033  
Facsimile Number : +81-3-5795-8346  
Contact Person : Kaoru Ichimura

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

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

Type of Equipment : Notebook Personal Computer  
Model No. : PCG-5A1L  
Serial No. : 1100001 (Radiated and Conducted Emission),  
1100008 (Except for the Radiated and Conducted Emission)  
Country of Manufacture : JAPAN  
Rating : AC100 - 240V (AC Adaptor)  
Receipt Date of Sample : November 26, 2003  
Condition of EUT : Engineering prototype

## 2.2 Product Description

Sony Corp., Model No: PCG-5A1L is the Notebook computer, which is co-located with Wireless LAN module (IEEE 802.11b, IEEE 802.11g) and Bluetooth module(FCC ID:CWTUGPZ3).

We recognized that this EUT can be co-operated Wireless LAN and Bluetooth. Therefore, we measured EMI when both Wireless LAN and Bluetooth were transmitted at the same time.

\*Please refer to Report No.23DE0002-YK-1 for the detail on Bluetooth module.

Equipment Type	:	Transceiver
Frequency operation	:	2412-2462MHz ISM band
Type of modulation	:	OFDM and DSSS
Bandwidth	:	2412MHz to 2462MHz
Channel spacing	:	5MHz
Channel number	:	11
Antenna fixed method	:	Internal
Antenna Type	:	lambda/4-Monopole Antenna
Antenna connector Type	:	CFL connector (Hirose)
Antenna Gain	:	Right: -1.16dBi (Main antenna) Left:-1.98dBi(Sub antenna) (Included with cable loss)
Transmit Power	:	Max 802.11b mode 17.2 dBm Max 802.11g mode 16.3 dBm
Mode of Operation	:	(Duplex) Half Duplex
Other Clock Frequency	:	1.7GHz, 500MHz, 180MHz, 108MHz, 66MHz, 48MHz, 27MHz, 25MHz, 24.576MHz, 20MHz, 14.318MHz, 14MHz, 10MHz, 32.768kHz
ITU code	:	22M0P7D
Power Supply	:	DC3.1V – 3.46V
Temperature of operation	:	0 deg. C. to +55 deg. C.
Power & Signal Cable Length	:	≤ 3m

### 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 standard type of antenna connector is applied; however, the EUT complies this requirement since this radio equipment is for professional installation.

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### SECTION 3: Test specification, procedures & results

#### 3.1 Test Specification

Test Specification : FCC Part15 Subpart C

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

#### 3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	Conducted emission	ANSI C63.4:2001	Section 15.207	-	N/A	14.7dB 0.1500MHz L1	Complied
2	6dB Bandwidth	ANSI C63.4:2001	Section 15.247(a)(2)	Conducted	N/A	-	Complied
3	Maximum Peak Output Power	ANSI C63.4:2001	Section 15.247(b)(3)	Conducted	N/A	-	Complied
4	Out of Band Emission	ANSI C63.4:2001	Section 15.247 (c)	Conducted/ Radiated	N/A	1.0dB 6432.0MHz Vertical	Complied
5	Restricted Band Edges	ANSI C63.4:2001	Section 15.247 (c)	Conducted	N/A	-	Complied
6	Power Density	ANSI C63.4:2001	Section 15.247 (d)	Conducted	N/A	-	Complied

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

\*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) + Amendment	RSS210(issue 5) + Amendment	Conducted	N/A	N/A	N/A

#### 3.4 Confirmation

UL Apex Co., Ltd. hereby confirms that E.U.T., in the configuration tested, complies with the specifications FCC Part 15 Subpart C Section 15.207 and 15.247.

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### 3.5 Uncertainty

#### Conducted Emission

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

The data listed in this test report has enough margin.

#### Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is  $\pm 4.5$ dB(3m).

The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is  $\pm 5.2$ dB(3m).

The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is  $\pm 6.6$ dB.

The result is within Head Office EMC lab's uncertainty.

#### Other test except Conducted Emission and Spurious Emission (Radiated)

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

The data listed in this test report has enough margin.

### 3.6 Test Location

UL Apex Co., Ltd. Head Office EMC Lab.

No.1 semi anechoic chamber and No.3 measurement room

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No.1 semi anechoic chamber has been fully described in a report submitted to FCC office, and listed on February 01, 2002. (Registration number: No.1:313583 Industry Canada: No.1: IC4247)

\*NVLAP Lab. code: 200572-0

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

Refer to APPENDIX 1 to 3.

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

### 4.1 Operating Modes

The EUT exercise program used during radiated and conducted testing was designed to exercise the various system components in a manner similar to typical use.

Test mode : Transmitting (IEEE 802.11b) Burst Frame mode DSSS(CCK, QPSK, 11Mbps)  
Low channel : 2412MHz  
Middle channel : 2437MHz  
High channel : 2462MHz

Test mode : Transmitting (IEEE 802.11g) Burst Frame mode OFDM(64QAM, 54Mbps)  
Low channel : 2412MHz  
Middle channel : 2437MHz  
High channel : 2462MHz

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

The EUT was tested in all three orthogonal planes in order to determine worst case emissions. Channels at 2412MHz, 2437MHz and 2462MHz were tested and investigated from 30MHz to 26GHz Data for all three channels are presented in this report.

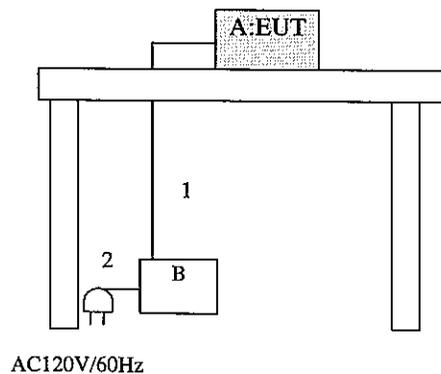
The EUT has an ability to provide some different modulation and data rates. Some of these modulation and data rates did not change in the spectrum envelopes of the EUT at conducted Measurement with the antenna terminal.

Therefore, the results of the final measurements were the IEEE 802.11b DSSS(CCK, QPSK, 11Mbps) and IEEE 802.11g OFDM(64QAM, 54Mbps) modulation as the highest data rate.

\*The test was performed with the Main Antenna which has the higher Antenna gain (since the both main and sub antenna are the same type and set up symmetrically).

\*As for the Radiated and Conducted Emission test, the test had been performed in the above mode + Bluetooth Transmitting in the simultaneous transmitting mode.

### 4.2 Configuration and peripherals



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

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**Description of EUT and Support equipment**

No.	Item	Model number	Serial number	Manufacturer	FCC ID	Remark
A	Notebook Personal Computer	PCG-5A1L	1100001 (Radiated and Conducted Emission) 1100008 (Except for the Radiated and Conducted Emission)	Sony Corp.	AK8PCG5A1L	EUT
B	AC Adaptor	PCGA-16V6	0432227	Sony Corp.	-	-

**List of cables used**

No.	Name	Length (m)	Shield	Backshell Material
1	DC cable	2.0	N	Polyvinyl chloride
2	AC cable	0.8	N	Polyvinyl chloride

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## **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 LISN and excess AC cable was 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. Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN to the input power source. All unused 50ohm connectors of the LISN were resistively terminated in 50ohm when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT on a reference ground plane 7.0 x 6.0m in a No.1 semi Anechoic Chamber.

The EUT was connected to a Line Impedance Stabilization Network (LISN).

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: 6dB Bandwidth, Section 15.247(a)(2)**

### **Test Procedure**

The minimum 6dB bandwidth was measured with a spectrum analyzer connected to the antenna port.

Test data : APPENDIX 3  
Test result : Pass

## **SECTION 7: Maximum Peak Output Power, Section 15.247(b)(3)**

### **Test Procedure**

The Maximum Peak Output Power was measured with a Power Meter and a Spectrum Analyzer connected to the antenna port.

Test data : APPENDIX 3  
Test result : Pass

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## **SECTION 8: Out of Band Emission, Section 15.247 (c)**

### **[Conducted]**

#### **Test Procedure**

The Out of Band Emission (Conducted) 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, 1m by 1.5m, raised 80cm above the conducting ground plane.

Test was made with the antenna positioned in both the horizontal and vertical planes of polarization.

The Radiated Electric Field Strength intensity has been measured in No.1 semi anechoic chamber (19.2x11.2x7.7m) with a ground plane and at a distance of 3m(Below 10GHz) and 1m(Upper 10GHz).

The measuring antenna height was varied between 1 to 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.

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.

The result was also satisfied the general limits specified in section 15.209(a).

Test data : APPENDIX 3  
Test result : Pass

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

### **[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



## APPENDIX 2: Test instruments

### EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE/CE	2002/12/28 * 12
MRENT-06	Spectrum Analyzer	Advantest	R3273	EX	2003/10/31 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ES140	RE / CE	2003/11/12 * 12
MCC-01	Coaxial Cable	Suhner/storm/Agilent/TSJ	-	RE	2002/12/19 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent/T SJ	-	CE	2002/12/19 * 12
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	CE(EUT)	2003/11/10 * 12
MPL-01	Pulse Limiter	Rohde & Schwarz	ESH3Z2	CE	2003/01/07 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2003/10/15 * 12
MLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2003/10/15 * 12
MHA-05	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2003/01/11 * 12
MHA-01	Horn Antenna	EMCO	3160-09	RE	2003/01/11 * 12
MPA-04	Pre Amplifier	Agilent	8447D	RE	2003/03/13 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2003/02/08 * 12
MCC-05	Microwave Cable	Storm	421-011	RE	2003/01/14 * 12
MCC-06	Microwave Cable	Storm	421-011	RE	2003/01/14 * 12
MCC-11	Microwave coaxial cable	Suhner	SUCOFLEX 104	RE	2003/03/27 * 12
MBF-01	SHF Bandpass Filter	M-City	5GHz BPF	RE	2003/04/24 * 12
MBF-02	SHF Bandpass Filter	M-City	8GHz BPF	RE	2003/04/24 * 12
MBF-03	SHF Bandpass Filter	M-City	13GHz BPF	RE	2003/04/24 * 12
MCC-21	Microwave Cable	Storm	-	EX	2003/04/30 * 12
MAT-21	Attenuator	HIROSE ELECTRIC CO.,LTD.	AT-120	EX	2003/02/03 * 12
MPM-04	Power Meter	Agilent	E4416A	EX	2003/03/13 * 12
MPSE-03	Power sensor	Agilent	E9327A	EX	2003/04/14 * 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 emission**  
**EX: Except for CE and RE**

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**APPENDIX 3: Data of EMI test**

**Conducted Emission**

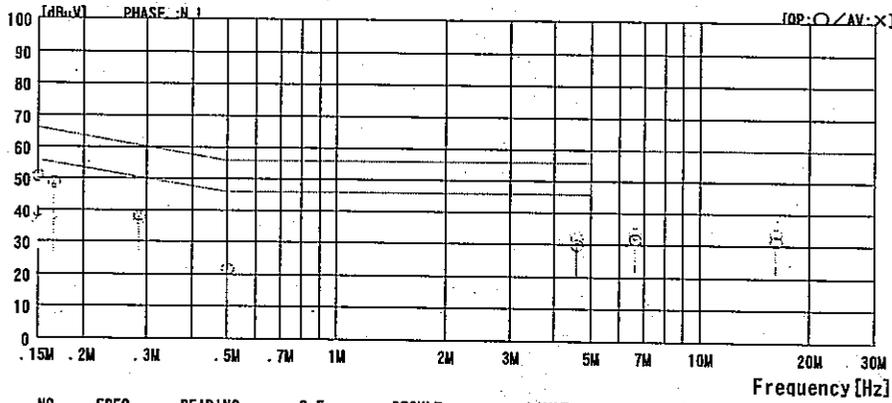
**DATA OF CONDUCTED EMISSION TEST**

UL Apex Co., Ltd. Head Office EMC Lab. No. 1 Semi Anechoic Chamber  
 Date : 2003/11/28 21:20:03

Applicant : Sony Corporation Report No. : 24DE0025-HO  
 Kind of EUT : Notebook Personal Computer Power : AC120V/60Hz  
 Model No. : PCG-5A1L Temp°C/Humid% : 21 / 40  
 Serial No. : 1100001 Operator : Hiroka Umeyama

Mode / Remarks: IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2412MHz)

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



NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dBμV]	AV [dBμV]		QP [dBμV]	AV [dBμV]	QP [dBμV]	AV [dBμV]	QP [dB]	AV [dB]	
1	0.1500	41.1	27.4	9.8	50.9	37.2	66.0	56.0	15.1	18.8	N
2	0.1658	39.1	26.4	9.9	49.0	36.3	65.2	55.2	16.2	18.9	N
3	0.2859	28.1	---	10.1	38.2	---	60.6	---	22.4	---	N
4	0.5001	11.4	---	10.4	27.8	---	56.0	---	34.2	---	N
5	4.5723	18.9	---	11.2	30.1	---	56.0	---	25.9	---	N
6	6.6154	20.7	---	11.2	31.9	---	60.0	---	28.1	---	N
7	16.0953	19.4	---	12.2	31.6	---	60.0	---	28.4	---	N
8	0.1500	41.4	27.9	9.8	51.2	37.7	66.0	56.0	14.8	18.3	N
9	0.1658	39.7	26.4	9.9	49.6	36.3	65.2	55.2	15.6	18.9	L
10	0.2859	27.1	---	10.1	37.2	---	60.6	---	23.4	---	L
11	0.5001	11.1	---	10.4	21.5	---	56.0	---	34.5	---	L
12	4.5723	21.2	---	11.2	32.4	---	56.0	---	23.6	---	L
13	6.6154	22.8	---	11.2	34.0	---	60.0	---	26.0	---	L
14	16.0953	21.9	---	12.2	34.1	---	60.0	---	25.9	---	L

CHART: WITHOUT FACTOR. Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

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### DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 1 Semi Anechoic Chamber  
Date : 2003/11/28 21:20:03

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp°C/HumiX	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2412MHz)

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

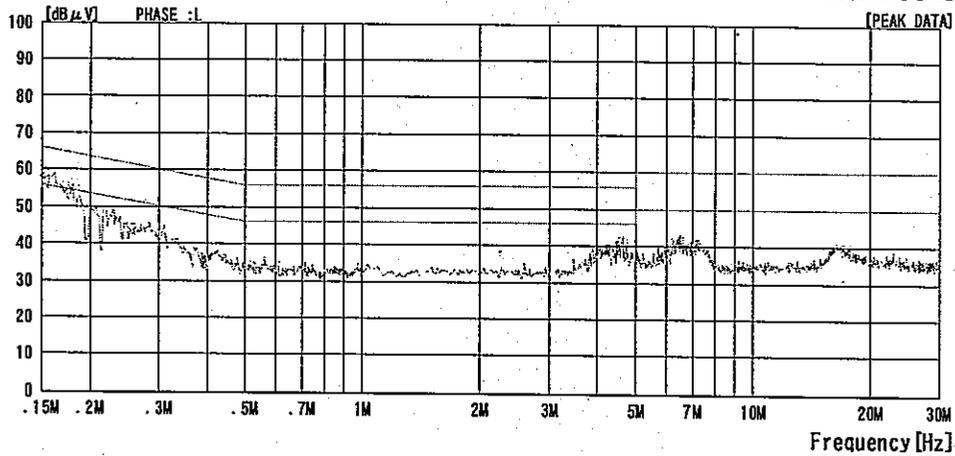
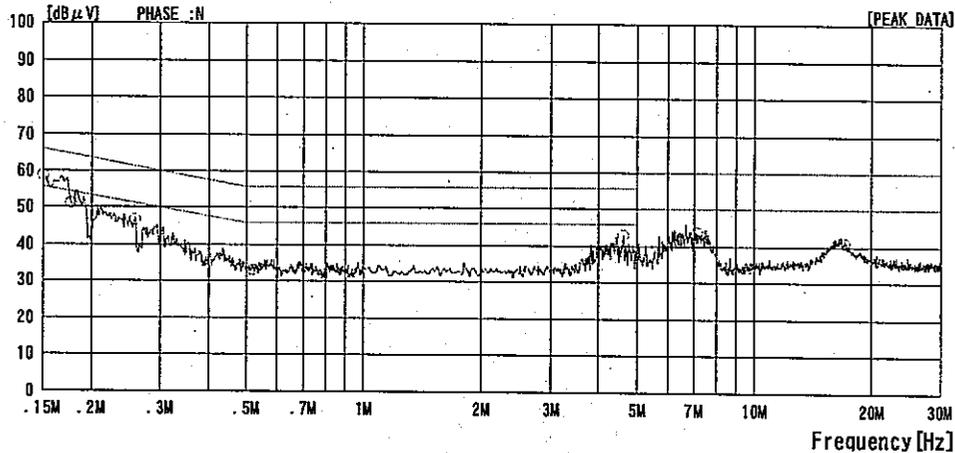


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**DATA OF CONDUCTED EMISSION TEST**

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/28 21:12:46

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5AIL	Temp°C/Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2437MHz)

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

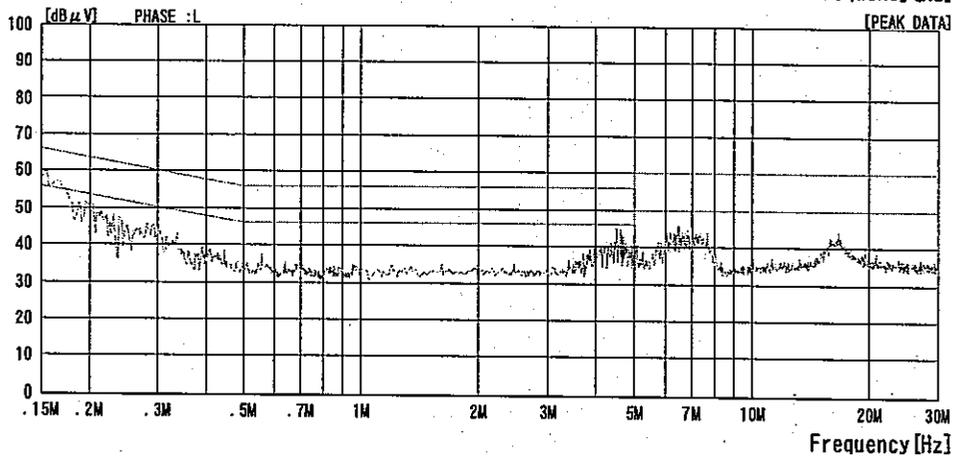
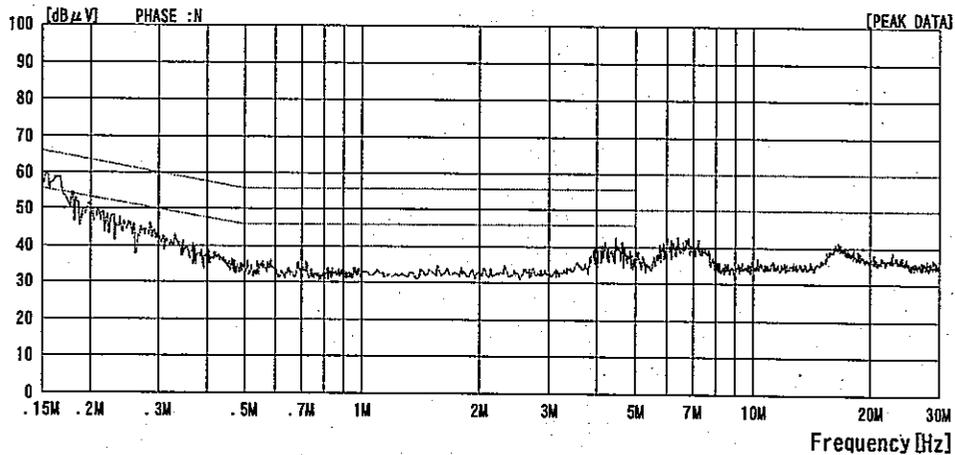


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

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### DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/28 21:06:45

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp/C/Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2462MHz)

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

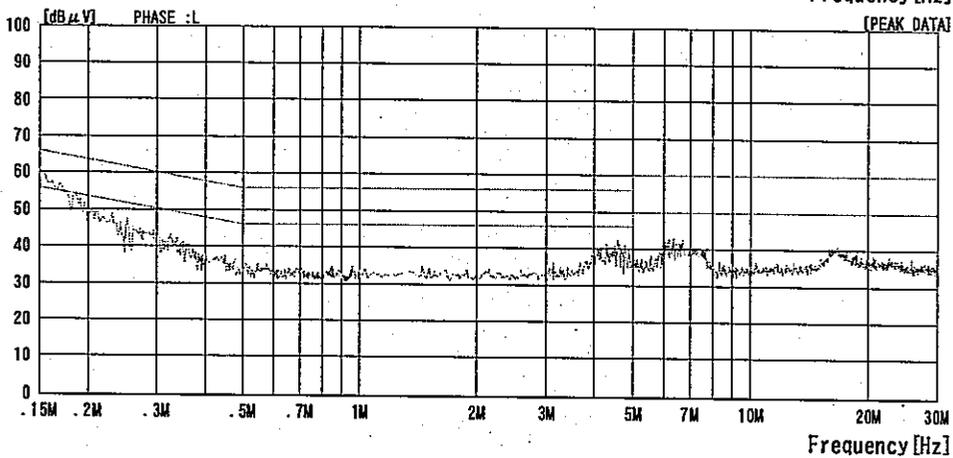
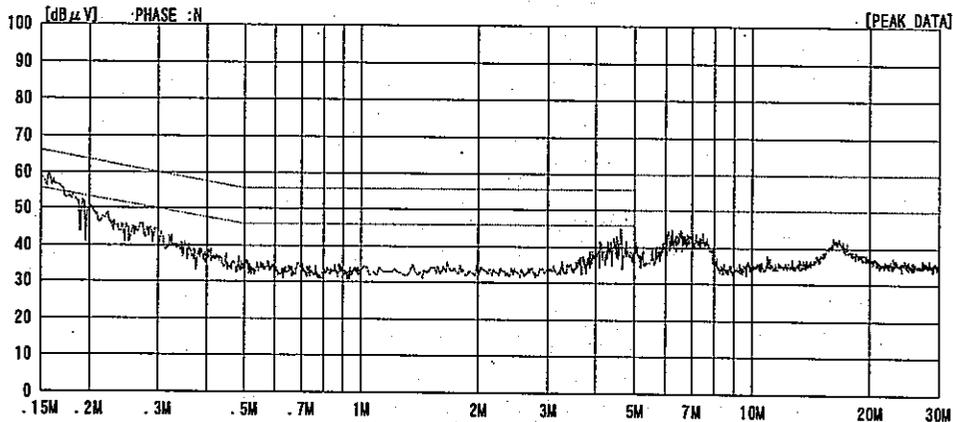


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

**UL Apex Co., Ltd.**  
**Head Office EMC Lab.**  
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 Facsimile : +81 596 24 8124

**DATA OF CONDUCTED EMISSION TEST**

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/28 20:47:59

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5AIL	Temp/C/Humix	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2412MHz) + Bluetooth Hopping ON

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

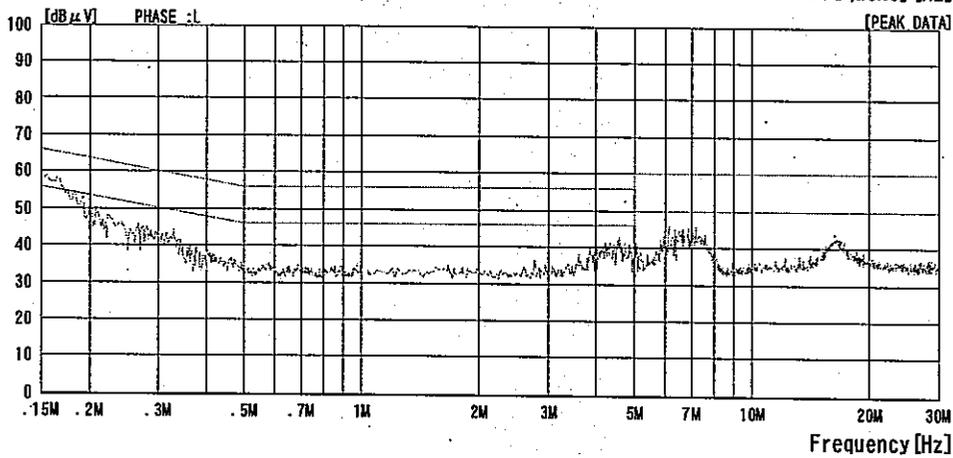
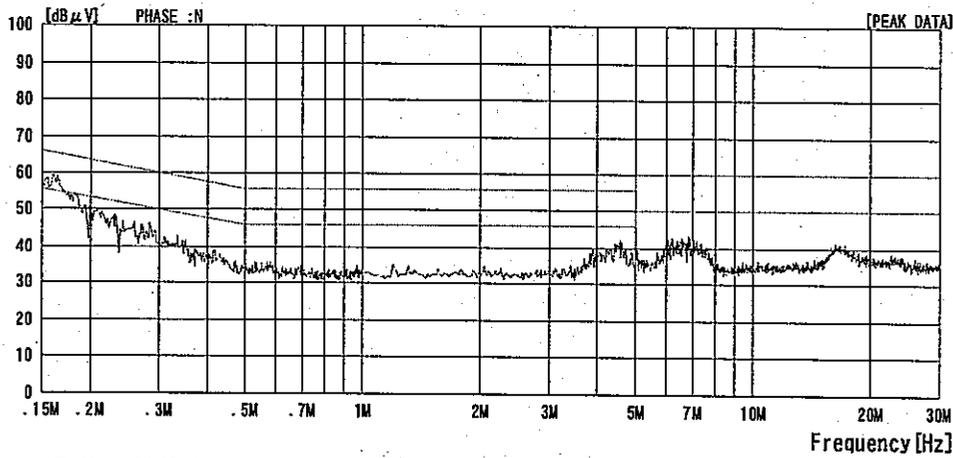


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

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**DATA OF CONDUCTED EMISSION TEST**

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/28 20:55:59

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp./Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2437MHz) + Bluetooth Hopping ON

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

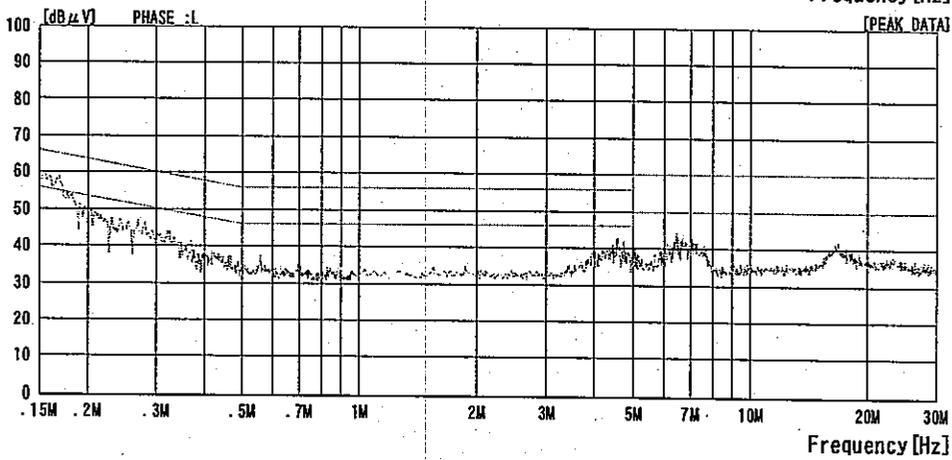
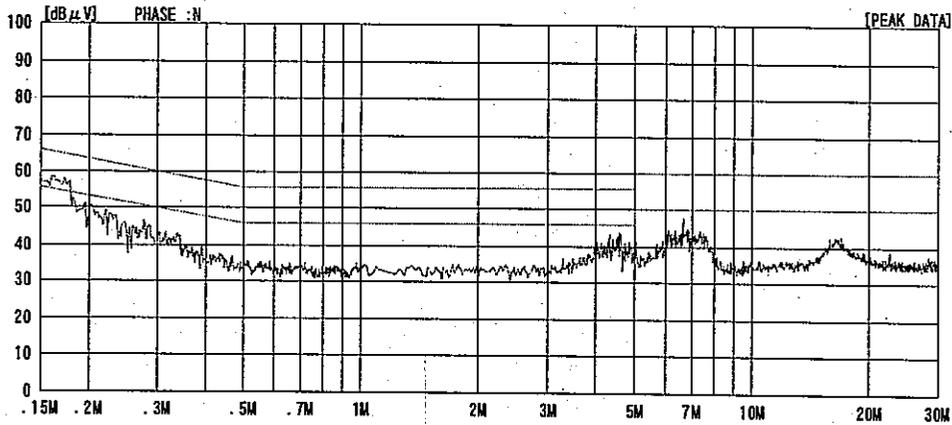


CHART:WITHOUT FACTOR,Peak hold data.Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

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**Head Office EMC Lab.**  
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**DATA OF CONDUCTED EMISSION TEST**

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/28 21:01:37

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp°C/Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2462MHz) + Bluetooth Hopping ON

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

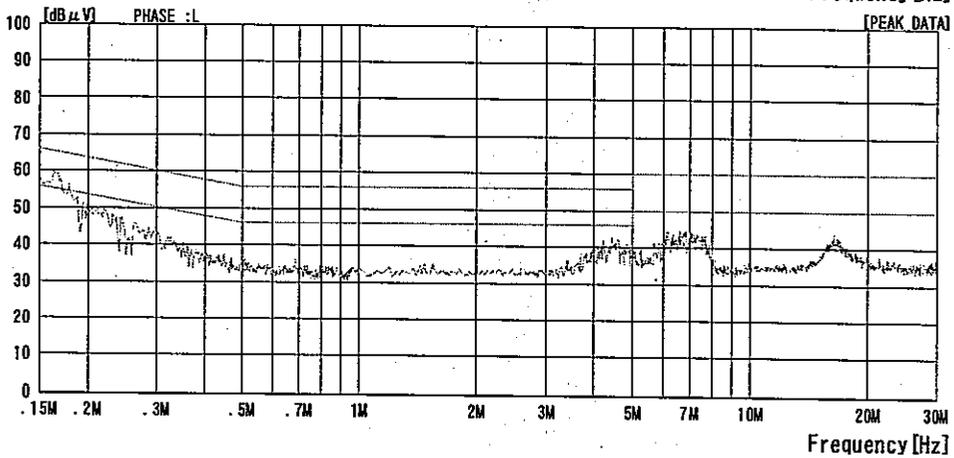
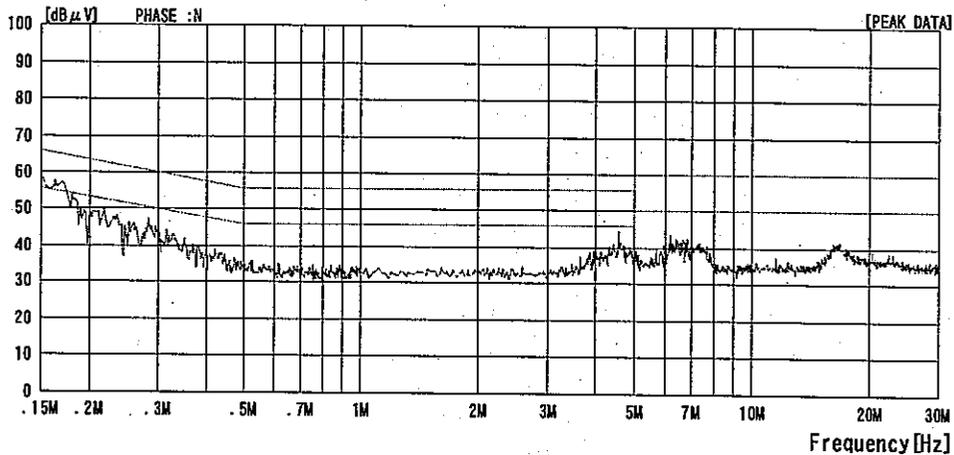


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

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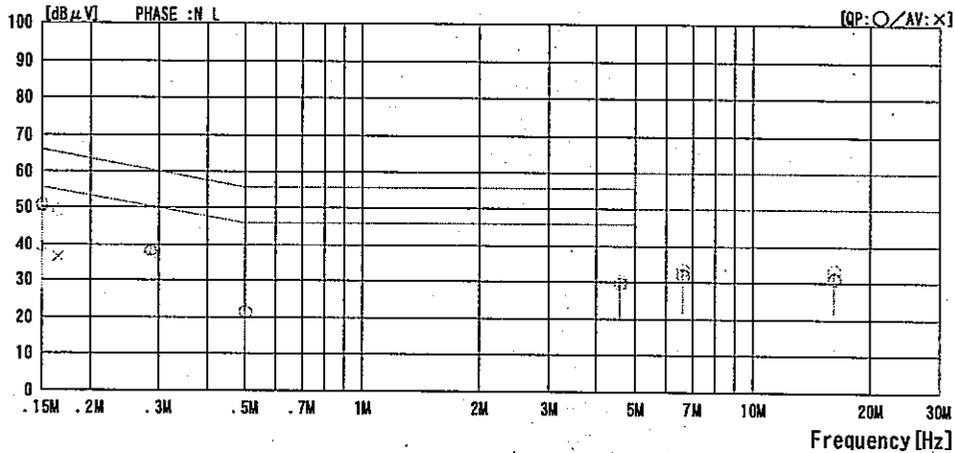
### DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/28 20:30:49

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCG-5A1L  
 Serial No. : 1100001  
 Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp°C/Humi% : 21 / 40  
 Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2412MHz)

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



NO	FREQ [MHz]	READING		C. F [dB]	RESULT		LIMIT		MARGIN		PHASE
		QP [dB μV]	AV [dB μV]		QP [dB μV]	AV [dB μV]	QP [dB]	AV [dB]			
1	0.1500	41.2	27.8	9.8	51.0	37.6	66.0	56.0	15.0	18.4	N
2	0.1658	39.4	26.5	9.9	49.3	36.4	65.2	55.2	15.9	18.8	N
3	0.2859	28.1	---	10.1	38.2	---	60.6	---	22.4	---	N
4	0.5001	11.1	---	10.4	21.5	---	56.0	---	34.5	---	N
5	4.5723	18.5	---	11.2	29.7	---	56.0	---	26.3	---	N
6	6.6154	20.7	---	11.2	31.9	---	60.0	---	28.1	---	N
7	16.0953	19.1	---	12.2	31.3	---	60.0	---	28.7	---	N
8	0.1500	41.5	27.9	9.8	51.3	37.7	66.0	56.0	14.7	18.3	L
9	0.1658	39.5	26.3	9.9	49.4	36.2	65.2	55.2	15.8	19.0	L
10	0.2859	27.0	---	10.1	37.1	---	60.6	---	23.5	---	L
11	0.5001	11.5	---	10.4	21.9	---	56.0	---	34.1	---	L
12	4.5723	19.2	---	11.2	30.4	---	56.0	---	25.6	---	L
13	6.6154	22.1	---	11.2	33.3	---	60.0	---	26.7	---	L
14	16.0953	21.1	---	12.2	33.3	---	60.0	---	26.7	---	L

CHART: WITHOUT FACTOR. Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

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**DATA OF CONDUCTED EMISSION TEST**

UL Apex Co., Ltd. Head Office EMC Lab. No. 1 Semi Anechoic Chamber  
 Date : 2003/11/28 20:30:49

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/50Hz
Model No.	: PCG-5A1L	Temp/C/Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2412MHz)

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

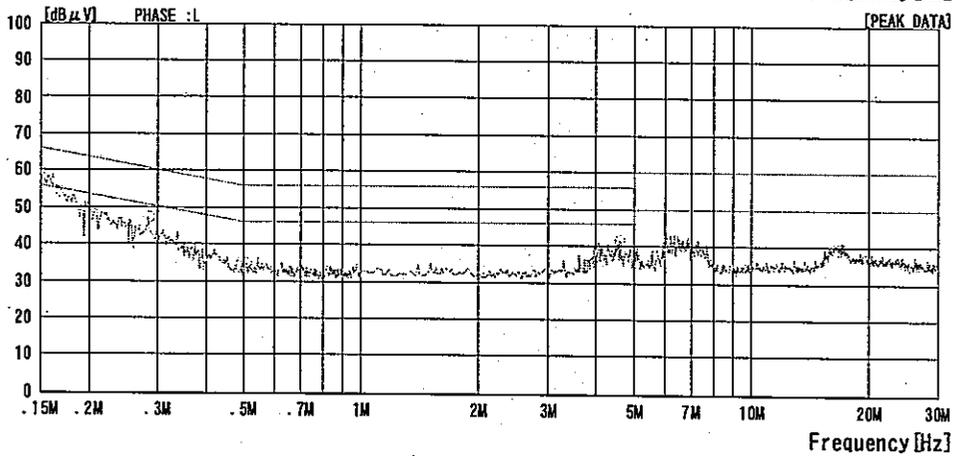
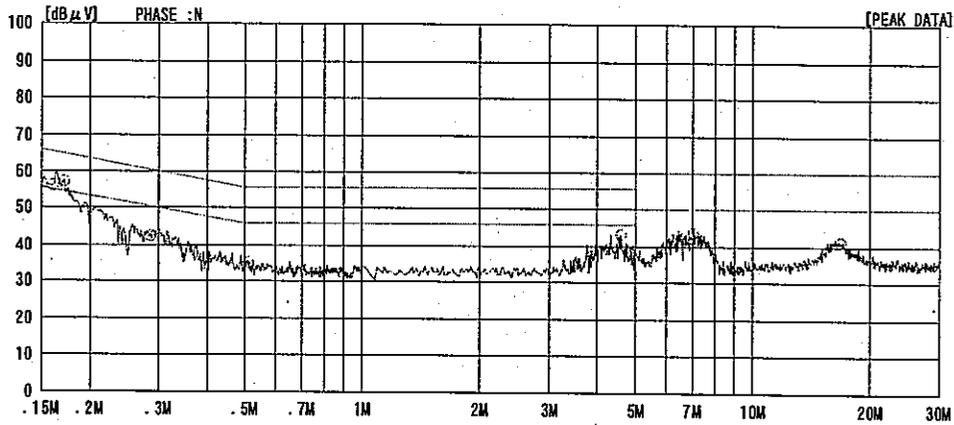


CHART:WITHOUT FACTOR. Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

### DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
Date : 2003/11/28 20:15:42

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp°C/Humix	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2437MHz)

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

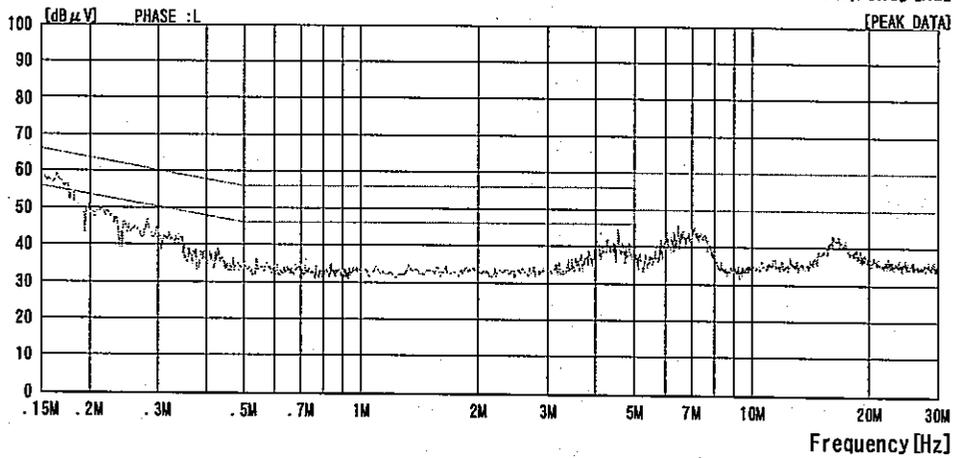
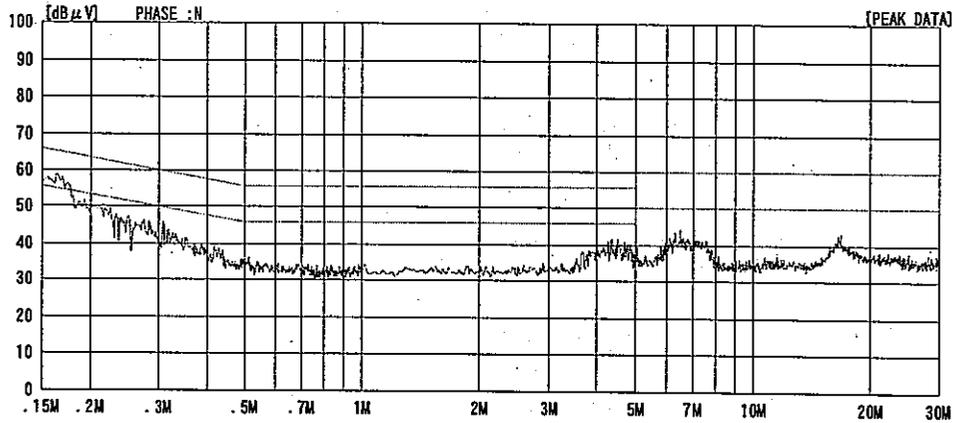


CHART:WITHOUT FACTOR,Peak hold data.Data is uncorrected.  
Except for the above table : adequate margin data below the limits. MLS-02

Test report No. : 24DE0025-HO-1  
 Page : 24 of 72  
 Issued date : December 16, 2003  
 FCC ID : AK8PCG5A1L

### DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 1 Semi Anechoic Chamber  
 Date : 2003/11/28 20:09:22

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp./Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Uneyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2462MHz)

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

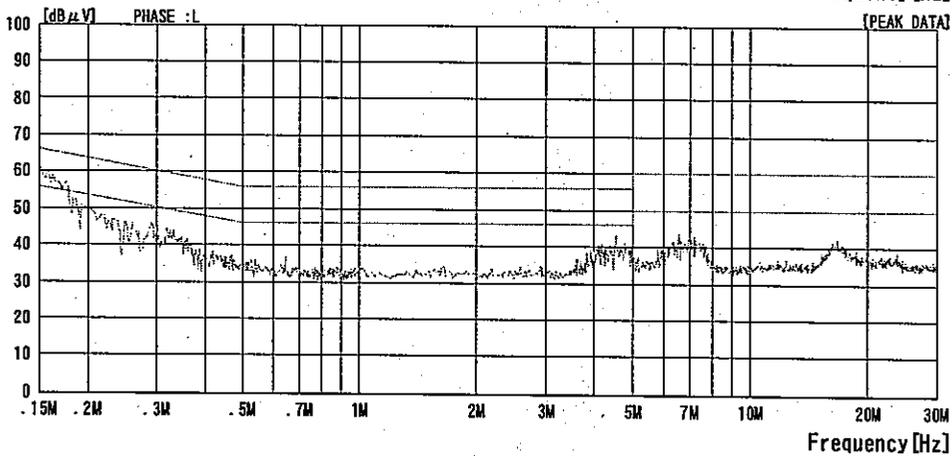
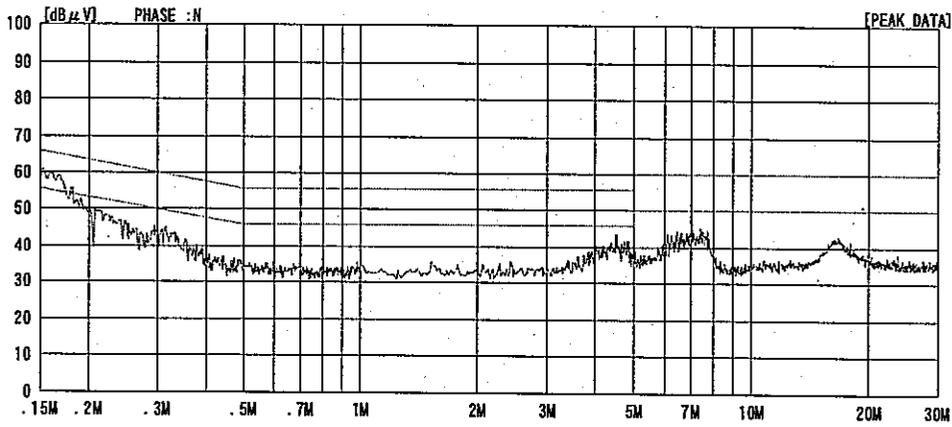


CHART: WITHOUT FACTOR, Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

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MF060b(10.04.03)

### DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No. 1 Semi Anechoic Chamber  
 Date : 2003/11/28 19:47:03

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp./Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2412MHz) + Bluetooth Hopping ON

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

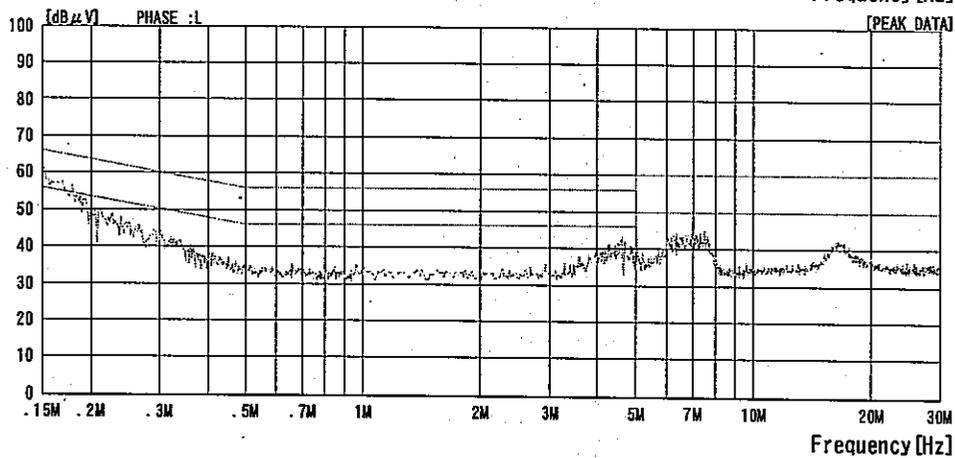
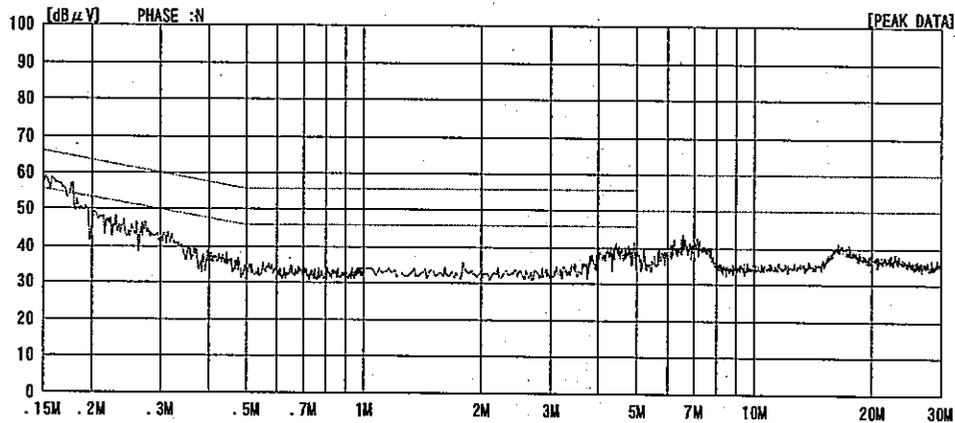


CHART:WITHOUT FACTOR. Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

**UL Apex Co., Ltd.**  
**Head Office EMC Lab.**  
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**DATA OF CONDUCTED EMISSION TEST**

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/28 19:57:53

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp°C/Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2437MHz) + Bluetooth Hopping ON

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

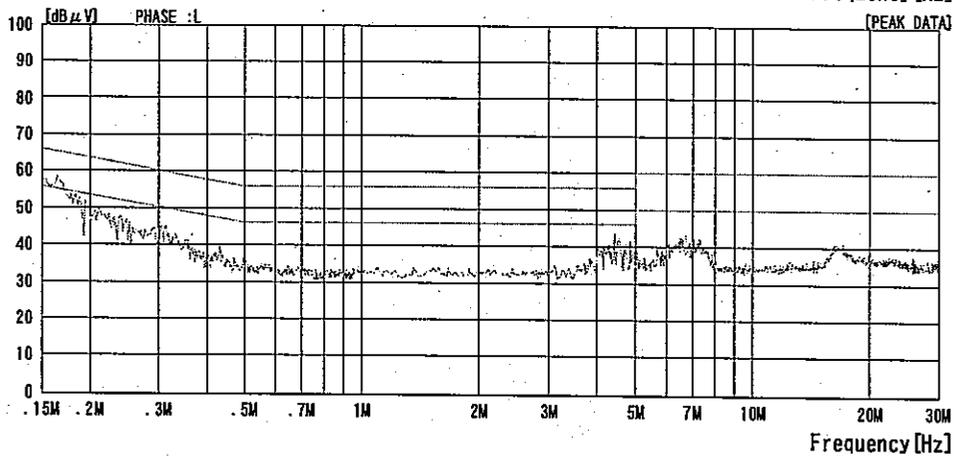
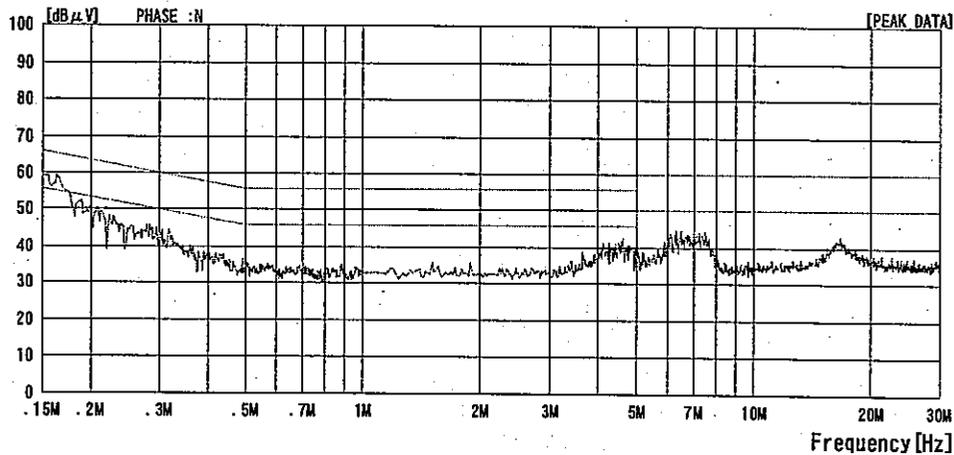


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

### DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/28 20:04:12

Applicant	: Sony Corporation	Report No.	: 24DE0025-HO
Kind of EUT	: Notebook Personal Computer	Power	: AC120V/60Hz
Model No.	: PCG-5A1L	Temp°C/Humi%	: 21 / 40
Serial No.	: 1100001	Operator	: Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx(2462MHz) + Bluetooth Hopping ON

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

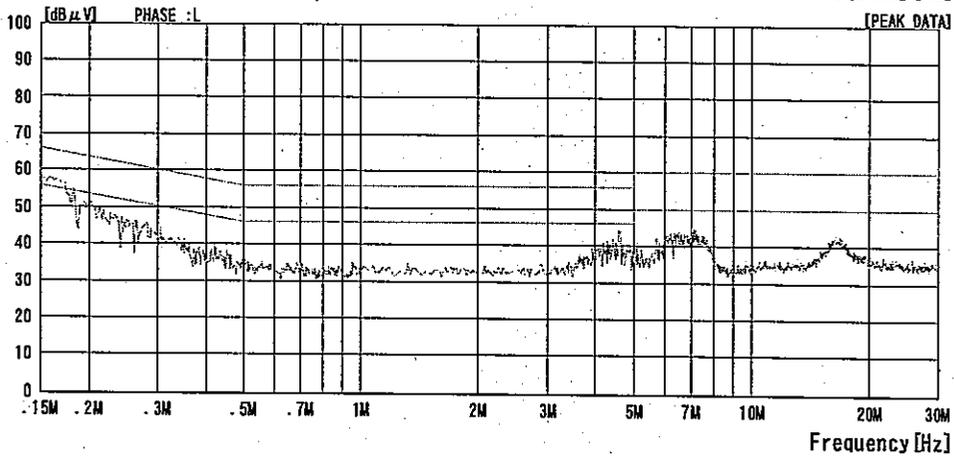
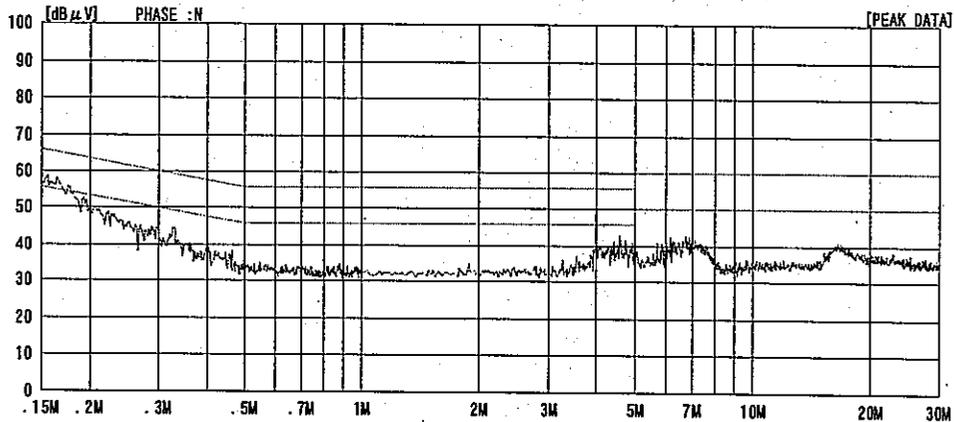


CHART:WITHOUT FACTOR, Peak hold data. Data is uncorrected.  
 Except for the above table : adequate margin data below the limits. MLS-02

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### 6dB Bandwidth (Conducted)

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement room

Company : Sony Corp.  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No.: 1100008  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11b/g)

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(a)  
TEST DISTANCE : -  
DATE : 11/27,28/2003  
TEMPERATURE : 23,23deg.C  
HUMIDITY : 45,42%  
ENGINEER : Kenichi Adachi

FCC ID : AK8PCG5A1L  
IC No. : 409B-PCG5A1L

Main Antenna  
CCK , QPSK , IEEE802.11b, 11Mbps

CH	FREQ	6dB Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low(1)	2412.0	7320.0	500.0
Mid(6)	2437.0	7240.0	500.0
High(11)	2462.0	6860.0	500.0

Main Antenna  
OFDM , 64QAM , IEEE802.11g, 54Mbps

CH	FREQ	6dB Bandwidth	Limit
	[MHz]	[kHz]	[kHz]
Low(1)	2412.0	16580.0	500.0
Mid(6)	2437.0	16600.0	500.0
High(11)	2462.0	16600.0	500.0

**UL Apex Co., Ltd.**

**Head Office EMC Lab.**

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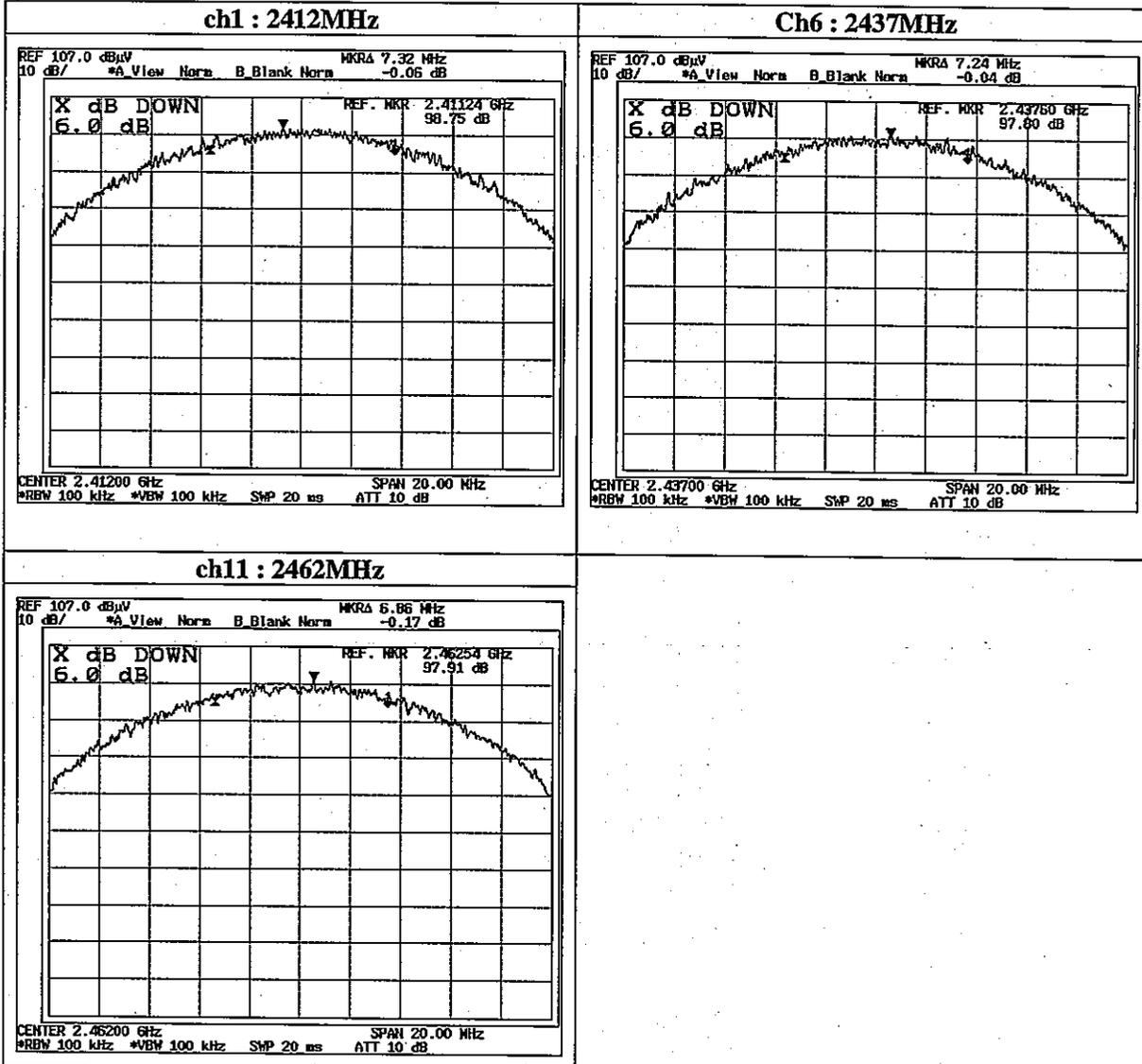
Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

MF060b(10.04.03)

**6dB Bandwidth (Conducted)**

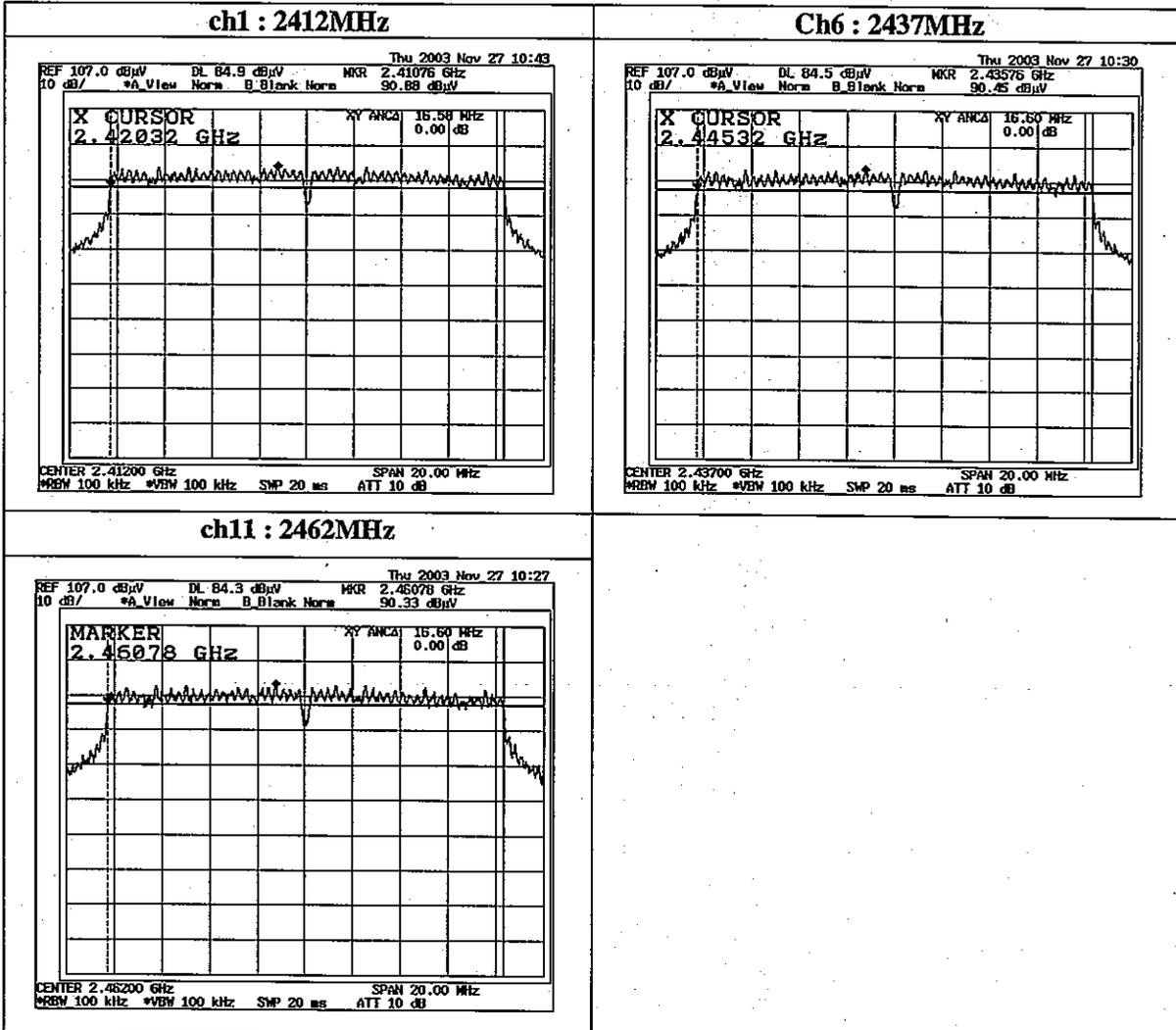
**Main Antenna, Transmitting (IEEE 802.11b) CCK, QPSK, 11Mbps.**



**UL Apex Co., Ltd.**  
**Head Office EMC Lab.**  
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**6dB Bandwidth (Conducted)**

**Main Antenna, Transmitting (IEEE 802.11g) OFDM, 64QAM, 54Mbps**



**UL Apex Co., Ltd.**  
**Head Office EMC Lab.**  
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**Maximum Peak OutPut Power (Conducted)**

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

Company : Sony Corporation	REPORT NO : 24DE0025-HO
Equipment : Notebook Personal Computer	REGULATION : Fcc Part15 Subpart C 15.247(b)(3)
Model : PCG-5A1L	TEST DISTANCE : -
Sample No. : 1100008	DATE : 12/10,11/2003
Power : AC120V/60Hz	TEMPERATURE : 23deg.C
Mode : Transmitting (IEEE 802.11b )	HUMIDITY : 47%
: CCK, QPSK, 11Mbps	Engineer : Kenichi Adachi
FCC ID : AK8PCG5A1L	
IC No. :409B-PCG5A1L	

Main Antenna

ch	FREQ [MHz]	P/M Reading [dBm]	Cable Loss [dB]	ATTEN [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low(1)	2412.0	-4.87	1.3	20.5	16.9	30.0	13.1
Mid(6)	2437.0	-5.54	1.2	20.5	16.2	30.0	13.8
High(11)	2462.0	-5.87	1.3	20.5	16.0	30.0	14.0

Sub Antenna

ch	FREQ [MHz]	P/M Reading [dBm]	Cable Loss [dB]	ATTEN [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low(1)	2412.0	-5.22	1.3	20.5	16.6	30.0	13.4
Mid(6)	2437.0	-5.77	1.2	20.5	16.0	30.0	14.0
High(11)	2462.0	-5.94	1.3	20.5	15.9	30.0	14.1

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

**UL Apex Co., Ltd.**

**Head Office EMC Lab.**

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

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**Maximum Peak OutPut Power (Conducted)**

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement room

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100008  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11g )  
: OFDM, 64QAM, 54Mbps  
FCC ID : AK8PCG5A1L  
IC No. : 409B-PCG5A1L

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : -  
DATE : 12/10,11/2003  
TEMPERATURE : 23deg.C  
HUMIDITY : 47%  
ENGINEER : Kenichi Adachi

Main Antenn : Transmitting (IEEE 802.11g ) OFDM, 64QAM 54Mbps

ch	FREQ [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	ATTEN. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low(1)	2412.0	-7.96	3.4	20.5	15.9	30.0	14.1
Mid(6)	2437.0	-8.44	3.3	20.5	15.4	30.0	14.6
High(11)	2462.0	-8.78	3.4	20.5	15.2	30.0	14.9

Sub Antenna : Transmitting (IEEE 802.11g ) OFDM, 64QAM 54Mbps

ch	FREQ [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	ATTEN. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low(1)	2412.0	-8.31	3.4	20.5	15.6	30.0	14.4
Mid(6)	2437.0	-8.97	3.3	20.5	14.9	30.0	15.1
High(11)	2462.0	-9.29	3.4	20.5	14.6	30.0	15.4

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

**UL Apex Co., Ltd.**

**Head Office EMC Lab.**

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Facsimile : +81 596 24 8124

MF060b(10.04.03)

**Maximum Peak OutPut Power (Conducted)**

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement room

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100008  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11g)  
: OFDM, QPSK, 18Mbps  
FCC ID : AK8PCG5A1L  
IC No. : 409B-PCG5A1L

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : -  
DATE : 12/10,11/2003  
TEMPERATURE : 23deg.C  
HUMIDITY : 47%  
ENGINEER : Kenichi Adachi

\*The power result of QPSK is shown in the following as the reference data.

Main Antenn : Transmitting (IEEE 802.11g)OFDM, QPSK, 18Mbps

ch	FREQ [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	ATTEN. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low(1)	2412.0	-8.20	3.4	20.5	15.7	30.0	14.3
Mid(6)	2437.0	-9.05	3.3	20.5	14.8	30.0	15.2
High(11)	2462.0	-9.46	3.4	20.5	14.5	30.0	15.5

Sub Antenna : Transmitting (IEEE 802.11g)OFDM, QPSK, 18Mbps

ch	FREQ [MHz]	S/A (PK) Reading [dBm]	Cable Loss [dB]	ATTEN. [dB]	Result [dBm]	Limit (1W) [dBm]	Margin [dB]
Low(1)	2412.0	-8.70	3.4	20.5	15.2	30.0	14.8
Mid(6)	2437.0	-9.05	3.3	20.5	14.8	30.0	15.2
High(11)	2462.0	-9.48	3.4	20.5	14.5	30.0	15.6

Sample Calculation:

Result = Reading + Cable Loss + Attenuator

**UL Apex Co., Ltd.**

**Head Office EMC Lab.**

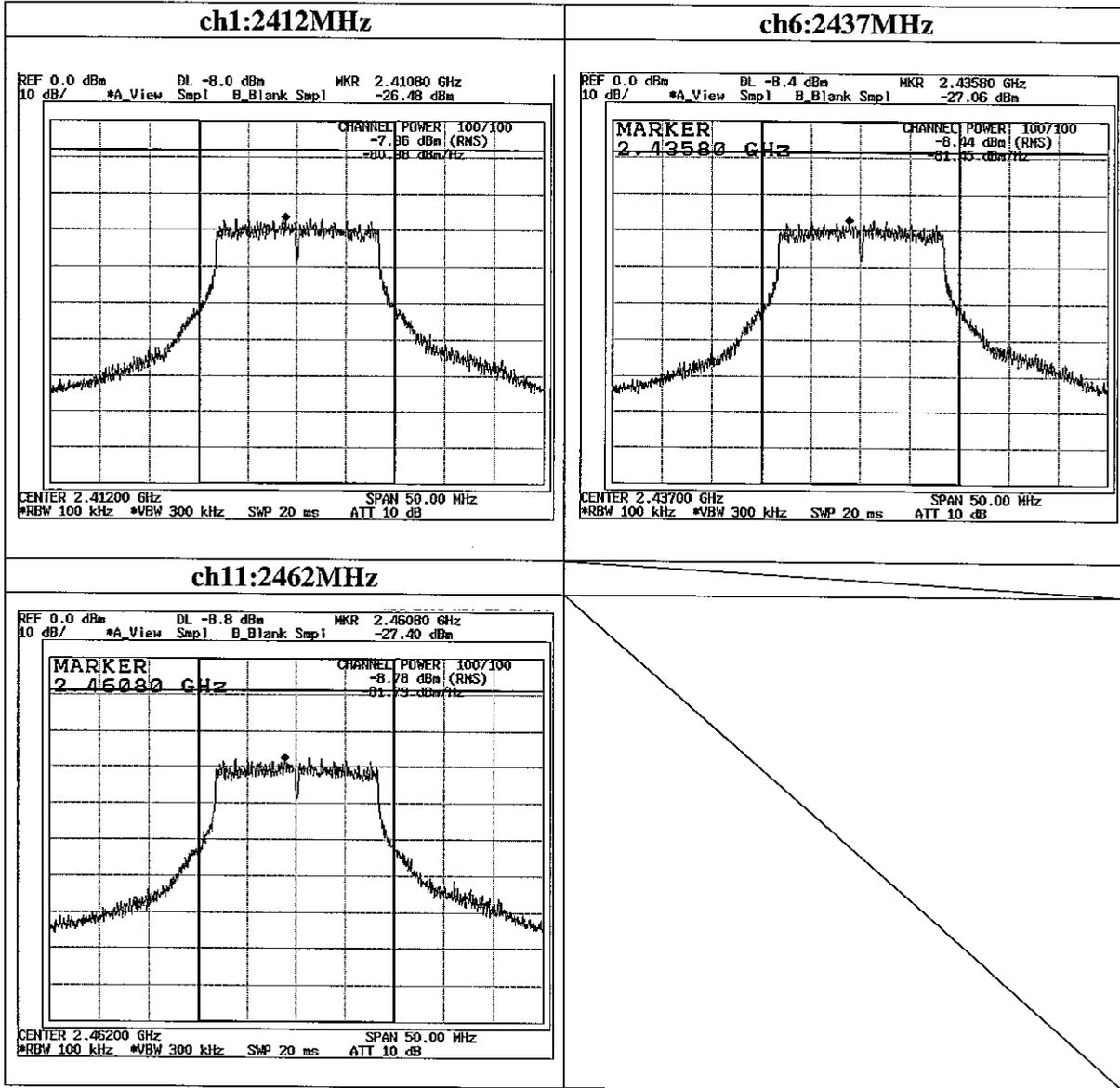
4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

**Maximum Peak OutPut Power (Conducted)**

Main Antenna, Transmitting (IEEE 802.11g ) OFDM, 64QAM, 54Mbps



**Out of Band Emission : Radiated**

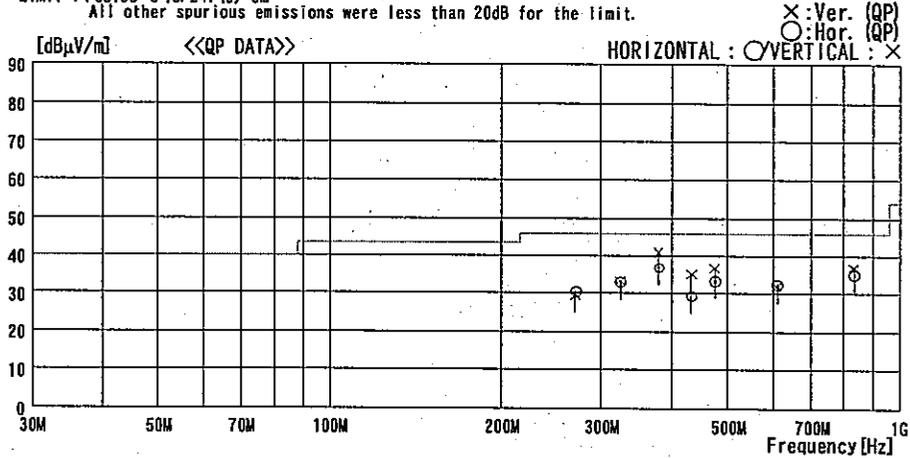
**DATA OF RADIATED EMISSION TEST**

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 16:24:46

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCG-5A1L  
 Serial No. : 1100001  
 Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp./Humid. : 21°C / 40%  
 Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2412MHz)

LIMIT : FCC15C § 15.247(c) 3m  
 All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dBµV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBµV/m]	LIMIT [dBµV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEC]
----- Horizontal -----										
1	270.780	28.7	18.7	9.6	26.5	30.5	46.0	15.5	100	230
2	832.482	29.4	21.6	12.5	28.4	35.1	46.0	10.9	150	326
3	324.099	34.7	15.2	9.9	26.8	33.0	46.0	13.0	100	285
4	378.426	36.4	17.4	10.3	27.2	36.9	46.0	9.1	100	285
5	432.000	28.1	18.2	10.6	27.5	29.4	46.0	16.6	185	99
6	474.466	32.6	18.0	10.8	28.1	33.3	46.0	12.7	179	262
7	610.030	29.9	19.6	11.5	28.6	32.4	46.0	13.6	160	134
----- Vertical -----										
8	270.780	27.7	18.7	9.6	26.5	29.5	46.0	16.5	252	0
9	832.400	31.3	21.6	12.5	28.4	37.0	46.0	9.0	140	10
10	324.108	35.0	15.2	9.9	26.8	33.9	46.0	12.7	159	6
11	378.426	40.4	17.4	10.3	27.2	40.9	46.0	5.1	150	359
12	432.000	33.8	18.2	10.6	27.5	35.1	46.0	10.9	119	353
13	474.460	36.1	18.0	10.8	28.1	36.8	46.0	9.2	100	5
14	610.037	29.4	19.6	11.5	28.6	31.9	46.0	14.1	100	359

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN

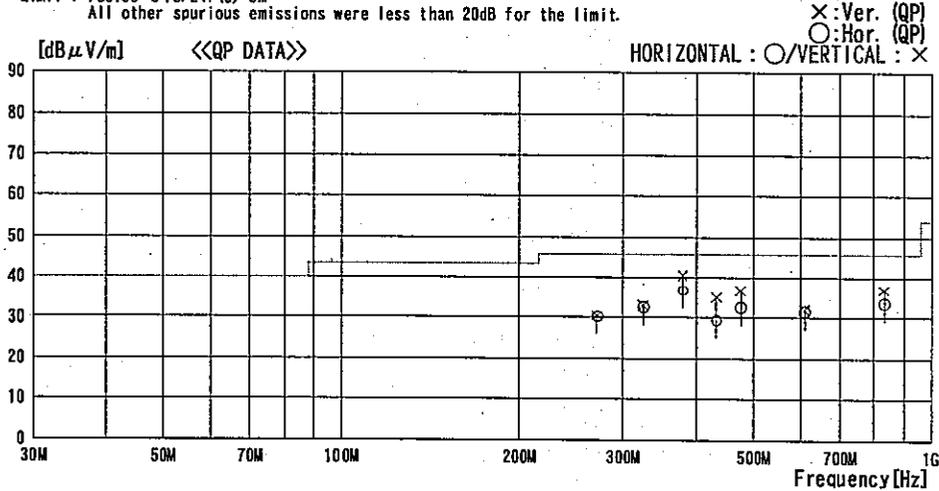
### DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
Date : 2003/11/27 17:20:27

Applicant : Sony Corporation  
Kind of EUT : Notebook Personal Computer  
Model No. : PCG-5A1L  
Serial No. : 1100001  
Report No. : 24DE0025-HO  
Power : AC120V/60Hz  
Temp°C/Humi% : 21°C / 40%  
Operator : Hiroka Umeyama

Mode / Remarks : 1EEE802.11b, CCK, QPSK, 11Mbps, Tx (2437MHz)

LIMIT : FCC15C §15.247(c) 3m  
All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	270.780	28.7	18.7	9.6	26.5	30.5	46.0	15.5	100	231
2	832.482	28.0	21.6	12.5	28.4	33.7	46.0	12.3	150	326
3	324.099	34.3	15.2	9.9	26.8	32.6	46.0	13.4	100	285
4	378.426	36.5	17.4	10.3	27.2	37.0	46.0	9.0	100	285
5	432.000	28.3	18.2	10.6	27.5	29.6	46.0	16.4	185	99
6	474.466	31.9	18.0	10.8	28.1	32.6	46.0	13.4	179	262
7	610.030	29.2	19.6	11.5	28.6	31.7	46.0	14.3	160	134
----- Vertical -----										
8	270.780	28.7	18.7	9.6	26.5	30.5	46.0	15.5	252	0
9	832.400	31.2	21.6	12.5	28.4	36.9	46.0	9.1	140	10
10	324.108	34.7	15.2	9.9	26.8	33.0	46.0	13.0	159	6
11	378.426	40.1	17.4	10.3	27.2	40.6	46.0	5.4	150	359
12	432.000	33.9	18.2	10.6	27.5	35.2	46.0	10.8	119	353
13	474.460	36.1	18.0	10.8	28.1	36.8	46.0	9.2	100	5
14	610.037	29.5	19.6	11.5	28.6	32.0	46.0	14.0	100	359

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPER IODIC, 1000MHz- HORN  
CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

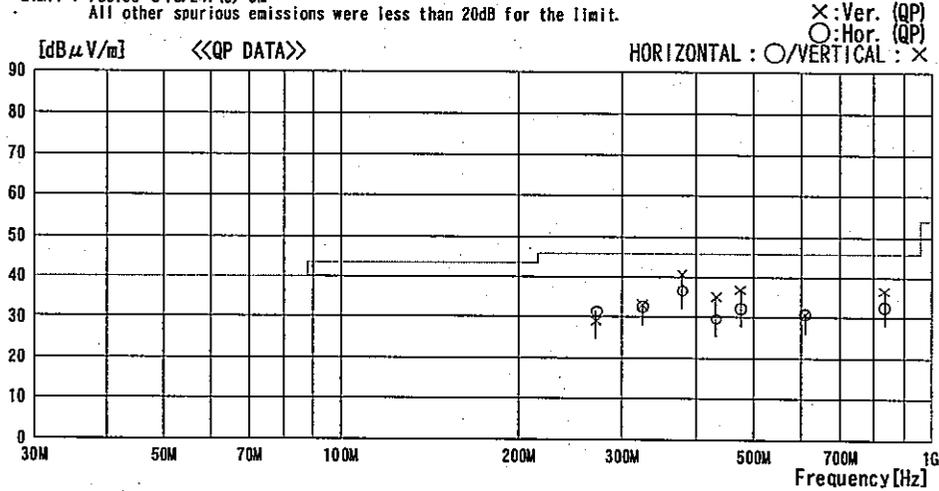
### DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 17:34:52

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCG-5A1L  
 Serial No. : 1100001  
 Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp./HumiX : 21°C / 40%  
 Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2462MHz)

LIMIT : FCC15C §15.247(c) 3m  
 All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	270.780	29.7	18.7	9.6	26.5	31.5	46.0	14.5	100	279
2	832.482	27.1	21.6	12.5	28.4	32.8	46.0	13.2	150	326
3	324.099	34.4	15.2	9.9	26.8	32.7	46.0	13.3	100	285
4	378.426	36.3	17.4	10.3	27.2	36.8	46.0	9.2	100	285
5	432.000	28.5	18.2	10.6	27.5	29.8	46.0	16.2	185	99
6	474.466	31.6	18.0	10.8	28.1	32.3	46.0	13.7	179	262
7	610.030	28.5	19.6	11.5	28.6	31.0	46.0	15.0	160	134
----- Vertical -----										
8	270.780	27.4	18.7	9.6	26.5	29.2	46.0	16.8	252	0
9	832.400	30.9	21.6	12.5	28.4	36.6	46.0	9.4	140	10
10	324.108	34.8	15.2	9.9	26.8	33.1	46.0	12.9	159	6
11	378.426	40.2	17.4	10.3	27.2	40.7	46.0	5.3	150	359
12	432.000	33.9	18.2	10.6	27.5	35.2	46.0	10.8	119	353
13	474.460	36.3	18.0	10.8	28.1	37.0	46.0	9.0	100	5
14	610.037	28.3	19.6	11.5	28.6	30.8	46.0	15.2	100	359

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPER10D1C, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

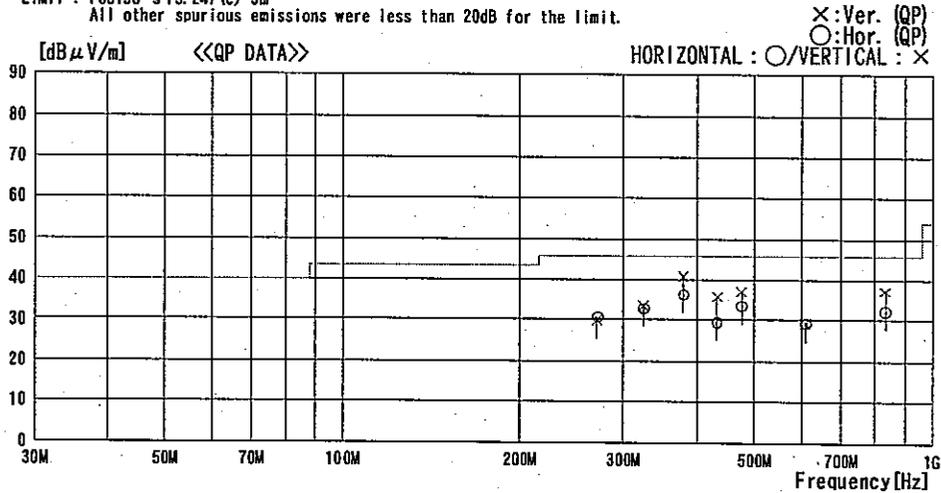
### DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 20:34:52

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCC-5A1L  
 Serial No. : 1100001  
 Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp/C/Humi% : 21°C / 40%  
 Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx (2412MHz) + Bluetooth Hopping ON

LIMIT : FCC15C §15.247(c) 3m  
 All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	270.780	29.1	18.7	9.6	26.5	30.9	46.0	15.1	100	319
2	832.482	26.7	21.6	12.5	28.4	32.4	46.0	13.6	150	326
3	324.099	34.6	15.2	9.9	26.8	32.9	46.0	13.1	100	285
4	378.426	35.9	17.4	10.3	27.2	36.4	46.0	9.6	100	285
5	432.000	28.4	18.2	10.6	27.5	29.7	46.0	16.3	185	99
6	474.466	32.9	18.0	10.8	28.1	33.6	46.0	12.4	179	262
7	610.030	27.0	19.6	11.5	28.6	29.5	46.0	16.5	160	134
----- Vertical -----										
8	270.780	28.2	18.7	9.6	26.5	30.0	46.0	16.0	242	0
9	832.400	31.6	21.6	12.5	28.4	37.3	46.0	8.7	140	10
10	324.108	35.2	15.2	9.9	26.8	33.5	46.0	12.5	159	6
11	378.426	40.3	17.4	10.3	27.2	40.8	46.0	5.2	150	359
12	432.000	34.4	18.2	10.6	27.5	35.7	46.0	10.3	119	353
13	474.466	36.5	18.0	10.8	28.1	37.2	46.0	8.8	100	5
14	610.037	26.8	19.6	11.5	28.6	29.3	46.0	16.7	100	359

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOOPER IODIC, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

## DATA OF RADIATED EMISSION TEST

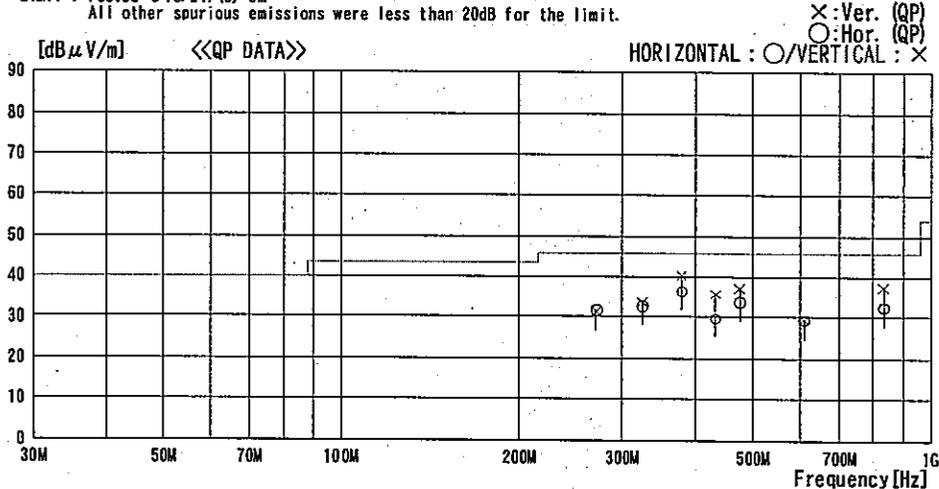
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 20:55:53

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCG-5A1L  
 Serial No. : 1100001

Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp/C/Humi% : 21°C / 40%  
 Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx(2437MHz) + Bluetooth Hopping ON

LIMIT : FCC15C §15.247(c) 3m  
 All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	270.780	29.8	18.7	9.6	26.5	31.6	46.0	14.4	100	319
2	832.482	26.8	21.6	12.5	28.4	32.5	46.0	13.5	150	326
3	324.099	34.4	15.2	9.9	26.8	32.7	46.0	13.3	100	285
4	378.426	36.0	17.4	10.3	27.2	36.5	46.0	9.5	100	285
5	432.000	28.5	18.2	10.6	27.5	29.8	46.0	16.2	185	99
6	474.466	33.0	18.0	10.8	28.1	33.7	46.0	12.3	179	262
7	610.030	26.9	19.6	11.5	28.6	29.4	46.0	16.6	160	134
----- Vertical -----										
8	270.780	29.6	18.7	9.6	26.5	31.4	46.0	14.6	242	0
9	832.400	31.8	21.6	12.5	28.4	37.5	46.0	8.5	140	10
10	324.108	35.3	15.2	9.9	26.8	33.6	46.0	12.4	159	6
11	378.426	39.9	17.4	10.3	27.2	40.4	46.0	5.6	150	359
12	432.000	34.3	18.2	10.6	27.5	35.6	46.0	10.4	119	353
13	474.460	36.4	18.0	10.8	28.1	37.1	46.0	8.9	100	5
14	610.037	27.0	19.6	11.5	28.6	29.5	46.0	16.5	100	359

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

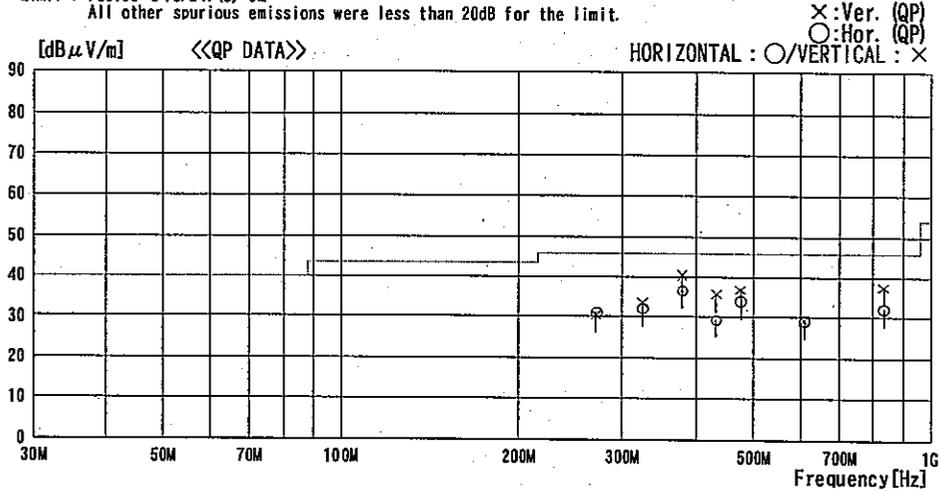
### DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 20:59:48

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCG-5A1L  
 Serial No. : 1100001  
 Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp/C/Humi% : 21°C / 40%  
 Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11b, CCK, QPSK, 11Mbps, Tx(2462MHz) + Bluetooth Hopping ON

LIMIT : FCC15C §15.247(c) 3m  
 All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
--- Horizontal ---										
1	270.780	29.3	18.7	9.6	26.5	31.1	46.0	14.9	100	319
2	832.482	26.5	21.6	12.5	28.4	32.2	46.0	13.8	150	326
3	324.099	33.9	15.2	9.9	26.8	32.2	46.0	13.8	100	285
4	378.426	36.2	17.4	10.3	27.2	36.7	46.0	9.3	100	285
5	432.000	28.2	18.2	10.6	27.5	29.5	46.0	16.5	185	99
6	474.466	33.4	18.0	10.8	28.1	34.1	46.0	11.9	179	262
7	610.030	26.8	19.6	11.5	28.6	29.3	46.0	16.7	160	134
--- Vertical ---										
8	270.780	28.7	18.7	9.6	26.5	30.5	46.0	15.5	242	0
9	832.400	32.0	21.6	12.5	28.4	37.7	46.0	8.3	140	10
10	324.108	35.1	15.2	9.9	26.8	33.4	46.0	12.6	159	6
11	378.426	40.1	17.4	10.3	27.2	40.6	46.0	5.4	150	359
12	432.000	34.5	18.2	10.6	27.5	35.8	46.0	10.2	119	353
13	474.460	36.3	18.0	10.8	28.1	37.0	46.0	9.0	100	5
14	610.037	26.8	19.6	11.5	28.6	29.3	46.0	16.7	100	359

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN

### DATA OF RADIATED EMISSION TEST

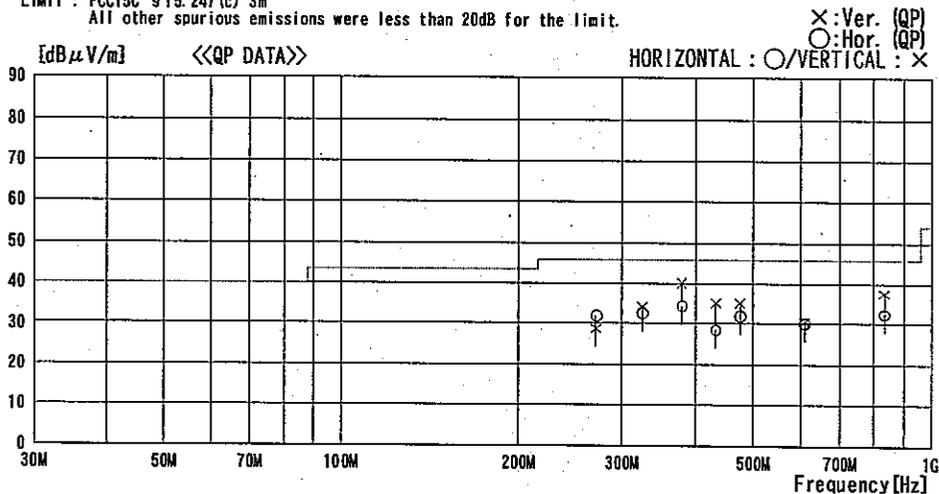
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 18:44:40

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCG-5A1L  
 Serial No. : 1100001  
 Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp./Humid. : 21°C / 40%  
 Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2412MHz)

LIMIT : FCC15C §15.247(c) 3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	270.780	30.2	18.7	9.6	26.5	32.0	46.0	14.0	100	319
2	832.482	26.8	21.6	12.5	28.4	32.5	46.0	13.5	150	326
3	324.099	34.5	15.2	9.9	26.8	32.8	46.0	13.2	100	285
4	378.426	33.9	17.4	10.3	27.2	34.4	46.0	11.6	100	285
5	432.000	27.3	18.2	10.6	27.5	28.6	46.0	17.4	185	99
6	474.466	31.3	18.0	10.8	28.1	32.0	46.0	14.0	179	262
7	610.030	27.7	19.6	11.5	28.6	30.2	46.0	15.8	160	134
----- Vertical -----										
8	270.780	27.0	18.7	9.6	26.5	28.8	46.0	17.2	242	0
9	832.400	32.0	21.6	12.5	28.4	37.7	46.0	8.3	140	10
10	324.108	35.8	15.2	9.9	26.8	34.1	46.0	11.9	159	6
11	378.426	39.8	17.4	10.3	27.2	40.3	46.0	5.7	150	359
12	432.000	33.9	18.2	10.6	27.5	35.2	46.0	10.8	119	353
13	474.460	34.4	18.0	10.8	28.1	35.1	46.0	10.9	100	5
14	610.037	28.0	19.6	11.5	28.6	30.5	46.0	15.5	100	359

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPER IODIC, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

### DATA OF RADIATED EMISSION TEST

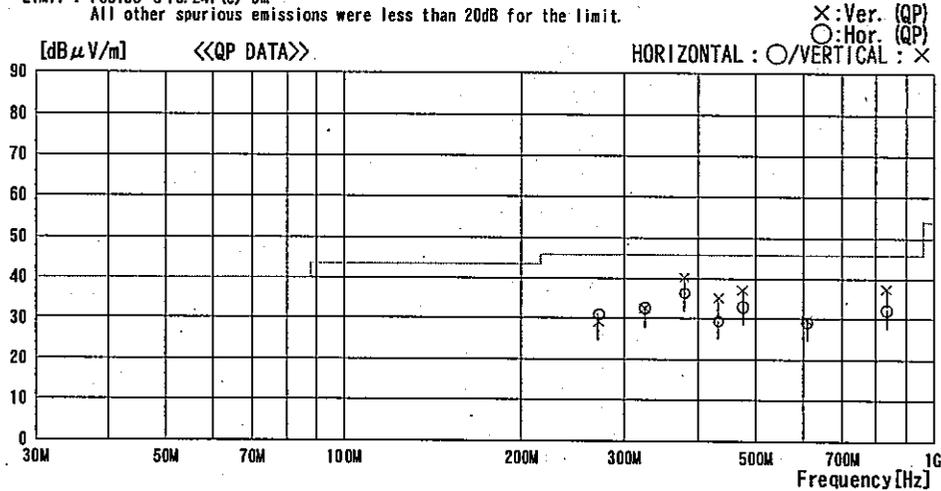
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 18:32:06

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCG-5A1L  
 Serial No. : 1100001

Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp./Humi% : 21°C / 40%  
 Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2437MHz)

LIMIT : FCC15C §15.247(c) 3m  
 All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	270.780	29.4	18.7	9.6	26.5	31.2	46.0	14.8	100	319
2	832.482	26.7	21.6	12.5	28.4	32.4	46.0	13.6	150	326
3	324.099	34.5	15.2	9.9	26.8	32.8	46.0	13.2	100	285
4	378.426	35.9	17.4	10.3	27.2	36.4	46.0	9.6	100	285
5	432.000	28.3	18.2	10.6	27.5	29.6	46.0	16.4	185	99
6	474.466	32.3	18.0	10.8	28.1	33.0	46.0	13.0	179	262
7	610.030	26.8	19.6	11.5	28.6	29.3	46.0	16.7	160	134
----- Vertical -----										
8	270.780	27.6	18.7	9.6	26.5	29.4	46.0	16.6	242	0
9	832.400	31.7	21.6	12.5	28.4	37.4	46.0	8.6	140	10
10	324.108	34.2	15.2	9.9	26.8	32.5	46.0	13.5	159	6
11	378.426	39.9	17.4	10.3	27.2	40.4	46.0	5.6	150	359
12	432.000	33.9	18.2	10.6	27.5	35.2	46.0	10.8	119	353
13	474.460	36.4	18.0	10.8	28.1	37.1	46.0	8.9	100	5
14	610.037	27.3	19.6	11.5	28.6	29.8	46.0	16.2	100	359

CHART: WITHOUT FACTOR ANT TYPE: -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

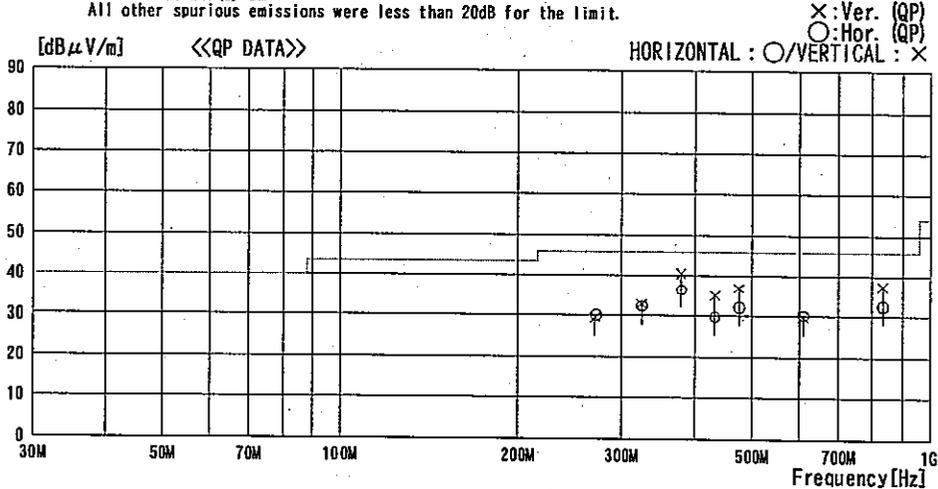
### DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
Date : 2003/11/27 18:20:46

Applicant : Sony Corporation  
Kind of EUT : Notebook Personal Computer  
Model No. : PCG-5A1L  
Serial No. : 1100001  
Report No. : 24DE0025-HO  
Power : AC120V/60Hz  
Temp/C/Humix : 21°C / 40%  
Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2462MHz)

LIMIT : FCC15C §15.247(c) 3m  
All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	270.780	28.4	18.7	9.6	26.5	30.2	46.0	15.8	100	275
2	832.482	26.9	21.6	12.5	28.4	32.6	46.0	13.4	150	326
3	324.099	34.2	15.2	9.9	26.8	32.5	46.0	13.5	100	285
4	378.426	36.1	17.4	10.3	27.2	36.6	46.0	9.4	100	285
5	432.000	28.6	18.2	10.6	27.5	29.9	46.0	16.1	185	99
6	474.466	31.7	18.0	10.8	28.1	32.4	46.0	13.6	179	262
7	610.030	28.0	19.6	11.5	28.6	30.5	46.0	15.5	160	134
----- Vertical -----										
8	270.780	27.9	18.7	9.6	26.5	29.7	46.0	16.3	233	0
9	832.400	31.7	21.6	12.5	28.4	37.4	46.0	8.6	140	10
10	324.108	34.6	15.2	9.9	26.8	32.9	46.0	13.1	159	6
11	378.426	40.0	17.4	10.3	27.2	40.5	46.0	5.5	150	359
12	432.000	33.8	18.2	10.6	27.5	35.1	46.0	10.9	119	353
13	474.460	36.2	18.0	10.8	28.1	36.9	46.0	9.1	100	5
14	610.037	27.5	19.6	11.5	28.6	30.0	46.0	16.0	100	359

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

### DATA OF RADIATED EMISSION TEST

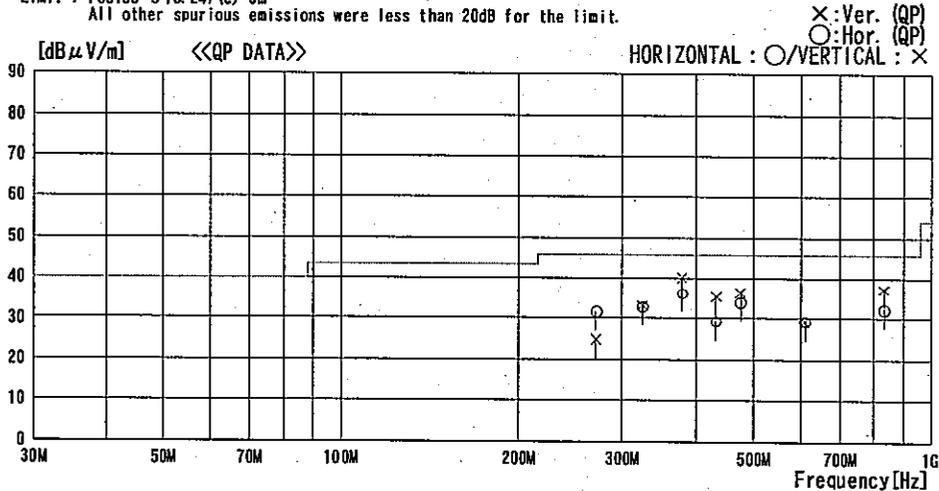
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 19:52:56

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCC-5A1L  
 Serial No. : 1100001  
 Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp./Humid. : 21°C / 40%  
 Operator : Hiroka Umeiyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx (2412MHz) + Bluetooth Hopping ON

LIMIT : FCC15C §15.247(c) 3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEC]
----- Horizontal -----										
1	270.780	29.9	18.7	9.6	26.5	31.7	46.0	14.3	100	319
2	832.482	26.7	21.6	12.5	28.4	32.4	46.0	13.6	150	326
3	324.099	34.6	15.2	9.9	26.8	32.9	46.0	13.1	100	285
4	378.426	35.8	17.4	10.3	27.2	36.3	46.0	9.7	100	285
5	432.000	28.1	18.2	10.6	27.5	29.4	46.0	16.6	185	99
6	474.466	33.3	18.0	10.8	28.1	34.0	46.0	12.0	179	262
7	610.030	26.9	19.6	11.5	28.6	29.4	46.0	16.6	160	134
----- Vertical -----										
8	270.780	23.0	18.7	9.6	26.5	24.8	46.0	21.2	242	0
9	832.400	31.6	21.6	12.5	28.4	37.3	46.0	8.7	140	10
10	324.108	35.0	15.2	9.9	26.8	33.3	46.0	12.7	159	6
11	378.426	39.6	17.4	10.3	27.2	40.1	46.0	5.9	150	359
12	432.000	34.2	18.2	10.6	27.5	35.5	46.0	10.5	119	353
13	474.466	35.8	18.0	10.8	28.1	36.5	46.0	9.5	100	5
14	610.037	26.8	19.6	11.5	28.6	29.3	46.0	16.7	100	359

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

### DATA OF RADIATED EMISSION TEST

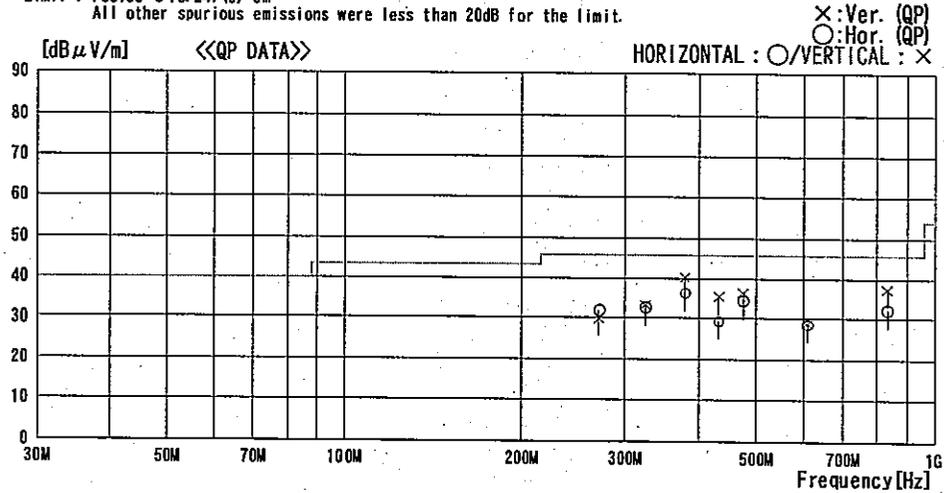
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
 Date : 2003/11/27 21:06:28

Applicant : Sony Corporation  
 Kind of EUT : Notebook Personal Computer  
 Model No. : PCG-5A1L  
 Serial No. : 1100001  
 Report No. : 24DE0025-HO  
 Power : AC120V/60Hz  
 Temp/C/Humi% : 21°C / 40%  
 Operator : Hiroka Uneyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM, 54Mbps, Tx(2437MHz) + Bluetooth Hopping ON

LIMIT : FCC15C §15.247(c) 3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
--- Horizontal ---										
1	270.780	30.2	18.7	9.6	26.5	32.0	46.0	14.0	100	319
2	832.482	26.6	21.6	12.5	28.4	32.3	46.0	13.7	150	326
3	324.099	34.3	15.2	9.9	26.8	32.6	46.0	13.4	100	285
4	378.426	35.9	17.4	10.3	27.2	36.4	46.0	9.6	100	285
5	432.000	28.2	18.2	10.6	27.5	29.5	46.0	16.5	185	99
6	474.466	33.8	18.0	10.8	28.1	34.5	46.0	11.5	179	262
7	610.030	26.3	19.6	11.5	28.6	28.8	46.0	17.2	160	134
--- Vertical ---										
8	270.780	28.3	18.7	9.6	26.5	30.1	46.0	15.9	242	0
9	832.400	31.7	21.6	12.5	28.4	37.4	46.0	8.6	140	10
10	324.108	34.9	15.2	9.9	26.8	33.2	46.0	12.8	159	6
11	378.426	39.9	17.4	10.3	27.2	40.4	46.0	5.6	150	359
12	432.000	34.1	18.2	10.6	27.5	35.4	46.0	10.6	119	353
13	474.460	35.8	18.0	10.8	28.1	36.5	46.0	9.5	100	5
14	610.037	25.3	19.6	11.5	28.6	28.8	46.0	17.2	100	359

CHART:WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
 CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN

### DATA OF RADIATED EMISSION TEST

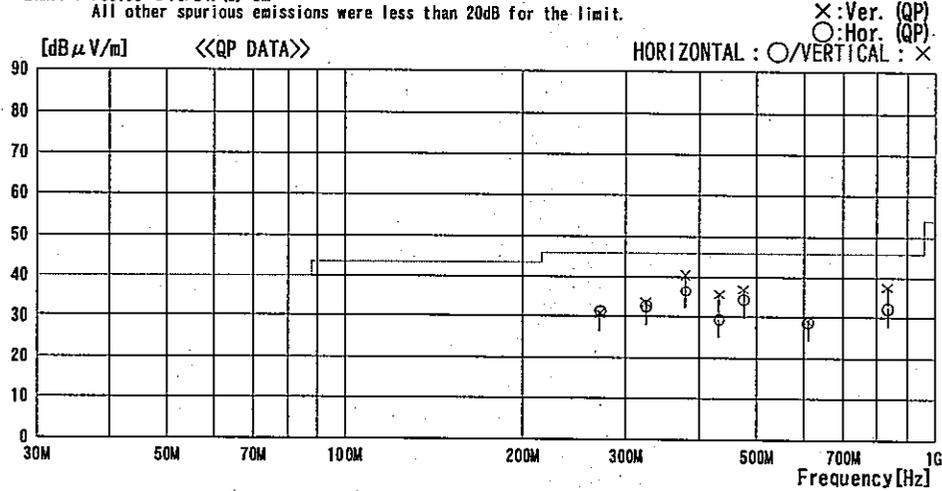
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber  
Date : 2003/11/27 21:09:46

Applicant : Sony Corporation  
Kind of EUT : Notebook Personal Computer  
Model No. : PCG-5A1L  
Serial No. : 1100001  
Report No. : 24DE0025-HO  
Power : AC120V/60Hz  
Temp°C/Humi% : 21°C / 40%  
Operator : Hiroka Umeyama

Mode / Remarks : IEEE802.11g, OFDM, 64QAM 54Mbps, Tx(2462MHz) + Bluetooth Hopping ON

LIMIT : FCC15C §15.247(c)-3m

All other spurious emissions were less than 20dB for the limit.



No.	FREQ [MHz]	READING QP [dB μV]	ANT FACTOR [dB]	LOSS [dB]	GAIN [dB]	RESULT [dB μV/m]	LIMIT [dB μV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal -----										
1	270.780	29.7	18.7	9.6	26.5	31.5	46.0	14.5	100	319
2	832.482	26.7	21.6	12.5	28.4	32.4	46.0	13.6	150	326
3	324.099	34.5	15.2	9.9	26.8	32.8	46.0	13.2	100	285
4	378.426	36.1	17.4	10.3	27.2	36.6	46.0	9.4	100	285
5	432.000	28.3	18.2	10.6	27.5	29.6	46.0	16.4	185	99
6	474.466	33.7	18.0	10.8	28.1	34.4	46.0	11.6	179	262
7	610.030	26.5	19.6	11.5	28.6	29.0	46.0	17.0	160	134
----- Vertical -----										
8	270.780	29.1	18.7	9.6	26.5	30.9	46.0	15.1	242	0
9	832.400	31.9	21.6	12.5	28.4	37.6	46.0	8.4	140	10
10	324.108	35.2	15.2	9.9	26.8	33.5	46.0	12.5	159	5
11	378.426	40.0	17.4	10.3	27.2	40.5	46.0	5.5	150	359
12	432.000	34.3	18.2	10.6	27.5	35.6	46.0	10.4	119	353
13	474.460	36.2	18.0	10.8	28.1	35.9	46.0	9.1	100	5
14	610.037	26.9	19.6	11.5	28.6	29.4	46.0	16.6	100	359

CHART: WITHOUT FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN  
CALCULATION : READING + ANT FACTOR + LOSS (CABLE+ATTEN.) - AMP. GAIN Page:

UL Apex Co., Ltd.

Head Office EMC Lab.

4383-326 Asama-cho, Ise-shi, Mie-ken 516-0021 JAPAN

Telephone : +81 596 24 8116

Facsimile : +81 596 24 8124

### Out of Band Emission : Radiated

UL Apex Co.,Ltd. Head Office EMC Lab.  
No.1 semi anechoic chamber

Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11b), Main Antenna  
: Continuous Tx mode, QPSK, 11Mbps  
: CH1: 2412MHz

REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE: 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%  
Engineer : Hiroka Umeyama

**PK DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	48.8	52.3	23.1	37.7	4.6	0.0	38.8	42.3	74.0	35.2	31.7
2	2312.0	51.2	53.6	30.7	36.9	6.3	0.0	51.3	53.7	74.0	22.7	20.3
3	2390.0	51.0	51.4	30.7	36.9	6.3	0.0	51.1	51.5	74.0	22.9	22.5
4	2400.0	69.7	69.3	30.7	36.9	6.4	0.0	69.9	69.5	80.8	10.9	11.3
5	2512.0	51.2	48.9	30.7	36.9	6.5	0.0	51.5	49.2	74.0	22.5	24.8
6	4824.0	42.7	43.7	35.2	36.8	8.8	0.7	50.6	51.6	74.0	23.4	22.4
7	6432.0	45.2	48.9	38.1	36.6	10.3	0.0	57.0	60.7	74.0	17.0	13.3
8	7236.0	44.0	43.4	37.7	36.5	10.7	0.2	56.1	55.5	74.0	17.9	18.5
9	9648.0	45.1	46.1	37.3	37.2	12.7	0.3	58.2	59.2	74.0	15.8	14.8
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
10	12060.0	43.1	43.2	40.7	36.8	14.6	0.5	52.6	52.7	74.0	21.4	21.3
11	14472.0	43.1	43.7	42.9	35.4	16.3	0.4	57.8	58.4	74.0	16.2	15.6
12	16884.0	42.1	42.6	45.3	36.4	17.6	0.0	59.1	59.6	74.0	14.9	14.4
13	19296.0	42.1	42.1	40.9	35.9	18.9	0.0	56.5	56.5	74.0	17.5	17.5
14	21708.0	43.1	43.1	40.9	36.6	19.6	0.0	57.5	57.5	74.0	16.5	16.5
15	24120.0	44.1	43.9	40.3	36.5	20.9	0.0	59.3	59.1	74.0	14.7	14.9

**AV DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	34.8	36.2	23.1	37.7	4.6	0.0	24.8	26.2	54.0	29.2	27.8
2	2312.0	37.3	37.7	30.7	36.9	6.3	0.0	37.4	37.8	54.0	16.6	16.2
3	2390.0	36.0	36.6	30.7	36.9	6.3	0.0	36.1	36.7	54.0	17.9	17.3
4	2400.0	58.1	57.8	30.7	36.9	6.4	0.0	58.3	58.0	68.5	10.3	10.5
5	2512.0	39.0	37.2	30.7	36.9	6.5	0.0	39.3	37.5	54.0	14.7	16.5
6	4824.0	29.7	30.5	35.2	36.8	8.8	0.7	37.6	38.4	54.0	16.4	15.6
7	6432.0	33.7	41.2	38.1	36.6	10.3	0.0	45.5	53.0	54.0	8.5	1.0
8	7236.0	30.1	30.1	37.7	36.5	10.7	0.2	42.2	42.2	54.0	11.8	11.8
9	9648.0	33.0	36.1	37.3	37.2	12.7	0.3	46.1	49.2	54.0	7.9	4.8
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
10	12060.0	30.7	30.5	40.7	36.8	14.6	0.5	40.2	40.0	54.0	13.8	14.0
11	14472.0	29.9	29.9	42.9	35.4	16.3	0.4	44.6	44.6	54.0	9.4	9.4
12	16884.0	29.7	29.7	45.3	36.4	17.6	0.0	46.7	46.7	54.0	7.3	7.3
13	19296.0	29.5	29.3	40.9	35.9	18.9	0.0	43.9	43.7	54.0	10.1	10.3
14	21708.0	31.0	31.1	40.9	36.6	19.6	0.0	45.4	45.5	54.0	8.6	8.5
15	24120.0	30.9	30.9	40.3	36.5	20.9	0.0	46.1	46.1	54.0	7.9	7.9

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.

\*The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower.

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

### Out of Band Emission : Radiated

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

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : I100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11b), Main Antenna  
: Continuous Tx mode, QPSK, 11Mbps  
: CH6: 2437MHz

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%  
ENGINEER : Hiroka Umeyama

#### PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.5	47.8	51.6	23.0	37.7	4.6	0.0	37.7	41.5	74.0	36.3	32.5
2	2336.0	53.7	54.7	30.7	36.9	6.3	0.0	53.8	54.8	74.0	20.2	19.2
3	2538.6	49.2	45.0	31.0	37.0	6.5	0.0	49.7	45.5	74.0	24.3	28.5
4	4874.0	42.7	44.0	35.5	36.8	8.8	0.7	50.9	52.2	74.0	23.1	21.8
5	6498.7	47.6	49.1	38.2	36.6	10.2	0.0	59.4	60.9	74.0	14.6	13.1
6	7311.0	43.0	43.5	37.7	36.6	10.8	0.3	55.2	55.7	74.0	18.8	18.3
7	9748.0	43.9	44.2	37.0	37.2	12.8	0.3	56.8	57.1	74.0	17.2	16.9
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfacc												
8	12185.0	43.1	42.4	41.1	36.7	14.7	0.4	53.1	52.4	74.0	20.9	21.6
9	14622.0	43.5	43.6	43.1	35.5	16.4	0.4	58.4	58.5	74.0	15.6	15.5
10	17059.0	42.1	41.6	45.5	36.2	17.8	0.0	59.7	59.2	74.0	14.3	14.8
11	19496.0	42.5	42.0	40.6	36.0	19.0	0.0	56.6	56.1	74.0	17.4	17.9
12	21933.0	45.1	45.8	40.9	36.0	19.6	0.0	60.1	60.8	74.0	13.9	13.2
13	24370.0	42.8	42.8	40.4	36.9	21.0	0.0	57.8	57.8	74.0	16.2	16.2

#### AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.5	34.7	35.9	23.0	37.7	4.6	0.0	24.6	25.8	54.0	29.4	28.2
2	2336.0	44.4	45.1	30.7	36.9	6.3	0.0	44.5	45.2	54.0	9.5	8.8
3	2538.6	38.0	33.0	31.0	37.0	6.5	0.0	38.5	33.5	54.0	15.5	20.5
4	4874.0	29.7	30.6	35.5	36.8	8.8	0.7	37.9	38.8	54.0	16.1	15.2
5	6498.7	38.7	40.3	38.2	36.6	10.2	0.0	50.5	52.1	54.0	3.5	1.9
6	7311.0	30.0	30.1	37.7	36.6	10.8	0.3	42.2	42.3	54.0	11.8	11.7
7	9748.0	30.6	33.9	37.0	37.2	12.8	0.3	43.5	46.8	54.0	10.5	7.2
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfacc												
8	12185.0	30.4	30.4	41.1	36.7	14.7	0.4	40.4	40.4	54.0	13.6	13.6
9	14622.0	30.3	30.3	43.1	35.5	16.4	0.4	45.2	45.2	54.0	8.8	8.8
10	17059.0	29.5	29.5	45.5	36.2	17.8	0.0	47.1	47.1	54.0	6.9	6.9
11	19496.0	29.5	29.3	40.6	36.0	19.0	0.0	43.6	43.4	54.0	10.4	10.6
12	21933.0	32.8	32.6	40.9	36.0	19.6	0.0	47.8	47.6	54.0	6.2	6.4
13	24370.0	30.4	30.4	40.4	36.9	21.0	0.0	45.4	45.4	54.0	8.6	8.6

Test Distance 1.0m : Distance Factor(Dfacc) = 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.

\*The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower

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MF060b(10.04.03)

### Out of Band Emission : Radiated

UL Apex Co.,Ltd. Head Office EMC Lab.  
No.1 semi anechoic chamber

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11b) , Main Antenna  
: Continuous Tx mode, QPSK, 11Mbps  
: CH11: 2462MHz

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
Engineer : Hiroka Umeyama

#### PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.6	48.7	52.8	23.0	37.7	4.6	0.0	38.6	42.7	74.0	35.4	31.3
2	2288.0	50.6	50.4	30.7	36.9	6.2	0.0	50.6	50.4	74.0	23.4	23.6
3	2360.0	52.5	52.2	30.7	36.9	6.3	0.0	52.6	52.3	74.0	21.4	21.7
4	2483.5	53.5	52.2	30.7	36.9	6.4	0.0	53.7	52.4	74.0	20.3	21.6
5	2488.0	54.2	53.7	30.7	36.9	6.4	0.0	54.4	53.9	74.0	19.6	20.1
6	4924.0	43.6	44.2	35.8	36.8	8.9	0.8	52.3	52.9	74.0	21.7	21.1
7	6565.3	45.6	47.4	38.3	36.6	10.4	0.0	57.7	59.5	74.0	16.3	14.5
8	7386.0	43.1	42.9	37.9	36.6	10.8	0.3	55.5	55.3	74.0	18.5	18.7
9	9848.0	43.3	44.8	36.7	37.3	12.9	0.3	55.9	57.4	74.0	18.1	16.6
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
10	12310.0	43.1	43.4	41.5	36.6	14.7	0.3	53.5	53.8	74.0	20.5	20.2
11	14772.0	42.6	43.3	43.2	35.6	16.6	0.4	57.7	58.4	74.0	16.3	15.6
12	17234.0	42.0	41.9	45.5	36.2	17.9	0.0	59.7	59.6	74.0	14.3	14.4
13	19696.0	42.5	42.8	40.8	36.0	19.0	0.0	56.8	57.1	74.0	17.2	16.9
14	22158.0	44.2	43.4	40.8	35.7	19.7	0.0	59.5	58.7	74.0	14.5	15.3
15	24620.0	43.0	43.4	40.5	36.9	21.1	0.0	58.2	58.6	74.0	15.8	15.4

#### AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.6	34.9	36.8	23.0	37.7	4.6	0.0	24.8	26.7	54.0	29.2	27.3
2	2288.0	40.2	39.7	30.7	36.9	6.2	0.0	40.2	39.7	54.0	13.8	14.3
3	2360.0	42.2	41.9	30.7	36.9	6.3	0.0	42.3	42.0	54.0	11.7	12.0
4	2483.5	38.3	37.5	30.7	36.9	6.4	0.0	38.5	37.7	54.0	15.5	16.3
5	2488.0	41.0	39.0	30.7	36.9	6.4	0.0	41.2	39.2	54.0	12.8	14.8
6	4924.0	29.5	29.9	35.8	36.8	8.9	0.8	38.2	38.6	54.0	15.8	15.4
6	6565.3	32.9	38.2	38.3	36.6	10.4	0.0	45.0	50.3	54.0	9.0	3.7
8	7386.0	30.4	30.3	37.9	36.6	10.8	0.3	42.8	42.7	54.0	11.2	11.3
9	9848.0	31.0	31.9	36.7	37.3	12.9	0.3	43.6	44.5	54.0	10.4	9.5
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
10	12310.0	30.2	30.2	41.5	36.6	14.7	0.3	40.6	40.6	54.0	13.4	13.4
11	14772.0	29.9	29.9	43.2	35.6	16.6	0.4	45.0	45.0	54.0	9.0	9.0
12	17234.0	29.3	29.3	45.5	36.2	17.9	0.0	47.0	47.0	54.0	7.0	7.0
13	19696.0	29.7	29.6	40.8	36.0	19.0	0.0	44.0	43.9	54.0	10.0	10.1
14	22158.0	31.1	31.1	40.8	35.7	19.7	0.0	46.4	46.4	54.0	7.6	7.6
15	24620.0	31.0	31.1	40.5	36.9	21.1	0.0	46.2	46.3	54.0	7.8	7.7

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.

### Out of Band Emission : Radiated

UL Apex Co., Ltd.  
Head Office EMC Lab. No.1 semi anechoic chamber

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11b) , Main Antenna  
Continuous Tx mode, QPSK, 11Mbps  
CHI: 2412MHz

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : 3/m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%  
Engineer : Hiroka Umeyama

Bluetooth Hopping ON  
**PK DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	47.5	51.7	23.1	37.7	4.6	0.0	37.5	41.7	74.0	36.5	32.3
2	2312.0	53.2	53.0	30.7	36.9	6.3	0.0	53.3	53.1	74.0	20.7	20.9
3	2390.0	53.1	51.9	30.7	36.9	6.3	0.0	53.2	52.0	74.0	20.8	22.0
4	2400.0	69.4	69.9	30.7	36.9	6.4	0.0	69.6	70.1	84.0	14.4	13.9
5	2512.0	50.3	48.8	30.7	36.9	6.5	0.0	50.6	49.1	74.0	23.4	24.9
6	4824.0	44.3	29.6	35.2	36.8	8.8	0.7	52.2	37.5	74.0	21.8	36.5
7	6432.0	46.1	47.9	38.1	36.6	10.3	0.0	57.9	59.7	74.0	16.1	14.3
8	7236.0	43.1	43.5	37.7	36.5	10.7	0.2	55.2	55.6	74.0	18.8	18.4
9	9648.0	45.4	46.3	37.3	37.2	12.7	0.3	58.5	59.4	74.0	15.5	14.6
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
10	12060.0	43.1	43.6	40.7	36.8	14.6	0.5	52.6	53.1	74.0	21.4	20.9
11	14472.0	42.9	43.3	42.9	35.4	16.3	0.4	57.6	58.0	74.0	16.4	16.0
12	16884.0	42.1	42.8	45.3	36.4	17.6	0.0	59.1	59.8	74.0	14.9	14.2
13	19296.0	41.9	41.8	40.9	35.9	18.9	0.0	56.3	56.2	74.0	17.7	17.8
14	21708.0	43.2	43.8	40.9	36.6	19.6	0.0	57.6	58.2	74.0	16.4	15.8
15	24120.0	43.7	43.2	40.3	36.5	20.9	0.0	58.9	58.4	74.0	15.1	15.6

**AV DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	34.6	33.9	23.1	37.7	4.6	0.0	24.6	23.9	54.0	29.4	30.1
2	2312.0	42.6	43.7	30.7	36.9	6.3	0.0	42.7	43.8	54.0	11.3	10.2
3	2390.0	37.9	36.2	30.7	36.9	6.3	0.0	38.0	36.3	54.0	16.0	17.7
4	2400.0	56.1	57.8	30.7	36.9	6.4	0.0	56.3	58.0	69.8	13.5	11.8
5	2512.0	36.4	37.1	30.7	36.9	6.5	0.0	36.7	37.4	54.0	17.5	16.6
6	4824.0	42.5	29.1	35.2	36.8	8.8	0.7	50.4	37.0	54.0	3.6	17.0
7	6432.0	35.2	39.9	38.1	36.6	10.3	0.0	47.0	51.7	54.0	7.0	2.3
8	7236.0	29.7	29.7	37.7	36.5	10.7	0.2	41.8	41.8	54.0	12.2	12.2
9	9648.0	34.0	36.7	37.3	37.2	12.7	0.3	47.1	49.8	54.0	6.9	4.2
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
10	12060.0	30.2	30.2	40.7	36.8	14.6	0.5	39.7	39.7	54.0	14.3	14.3
11	14472.0	29.5	29.5	42.9	35.4	16.3	0.4	44.2	44.2	54.0	9.8	9.8
12	16884.0	29.2	29.2	45.3	36.4	17.6	0.0	46.2	46.2	54.0	7.8	7.8
13	19296.0	29.0	28.9	40.9	35.9	18.9	0.0	43.4	43.3	54.0	10.6	10.7
14	21708.0	30.8	30.8	40.9	36.6	19.6	0.0	45.2	45.2	54.0	8.8	8.8
15	24120.0	30.6	30.6	40.3	36.5	20.9	0.0	45.8	45.8	54.0	8.2	8.2

Bluetooth Hopping OFF **PK DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER					HOR [dB]	VER [dB]			
3'	2390.0	52.3	51.4	30.7	36.9	6.3	0.0	52.4	51.5	74.0	21.6	22.5

**AV DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER					HOR [dB]	VER [dB]			
3'	2390.0	37.4	36.7	30.7	36.9	6.3	0.0	37.5	36.8	54.0	16.5	17.2

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.

\*The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower.

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MF060b(10.04.03)

Test report No. : 24DE0025-HO-1  
 Page : 51 of 72  
 Issued date : December 16, 2003  
 FCC ID : AK8PCG5A1L

### Out of Band Emission : Radiated

UL Apex Co., Ltd.  
 Head Office EMC Lab. No.1 semi anechoic chamber

Company : Sony Corporation  
 Equipment : Notebook Personal Computer  
 Model : PCG-5A1L  
 Sample No. : 1100001  
 Power : AC120V/60Hz  
 Mode : Transmitting (IEEE 802.11b) , Main Antenna  
 : Continuous Tx mode, QPSK, 11Mbps  
 : CH6: 2437MHz

REPORT NO : 24DE0025-HO  
 REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
 TEST DISTANCE : 3/m  
 DATE : Nov 26,27 and 28, 2003  
 TEMPERATURE : 21, 20, 21deg.C  
 HUMIDITY : 40, 41, 39%  
 Engineer : Hiroka Umeyama

#### Bluetooth Hopping ON PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.5	47.9	52.0	23.0	37.7	4.6	0.0	37.8	41.9	74.0	36.2	32.1
2	2336.0	54.6	51.8	30.7	36.9	6.3	0.0	54.7	51.9	74.0	19.3	22.1
3	2538.6	51.3	49.0	31.0	37.0	6.5	0.0	51.8	49.5	74.0	22.2	24.5
4	4874.0	42.4	43.9	35.5	36.8	8.8	0.7	50.6	52.1	74.0	23.4	21.9
5	6498.7	44.7	47.3	38.2	36.6	10.2	0.0	56.5	59.1	74.0	17.5	14.9
6	7311.0	43.0	43.5	37.7	36.6	10.8	0.3	55.2	55.7	74.0	18.8	18.3
7	9748.0	43.0	42.9	37.0	37.2	12.8	0.3	55.9	55.8	74.0	18.1	18.2
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
8	12185.0	42.5	42.7	41.1	36.7	14.7	0.4	52.5	52.7	74.0	21.5	21.3
9	14622.0	43.6	43.5	43.1	35.5	16.4	0.4	58.5	58.4	74.0	15.5	15.6
10	17059.0	41.7	42.0	45.5	36.2	17.8	0.0	59.3	59.6	74.0	14.7	14.4
11	19496.0	41.7	41.9	40.6	36.0	19.0	0.0	55.8	56.0	74.0	18.2	18.0
12	21933.0	45.8	45.1	40.9	36.0	19.6	0.0	60.8	60.1	74.0	13.2	13.9
13	24370.0	43.0	42.7	40.4	36.9	21.0	0.0	58.0	57.7	74.0	16.0	16.3

#### AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.5	34.1	36.8	23.0	37.7	4.6	0.0	24.0	26.7	54.0	30.0	27.3
2	2336.0	44.6	41.0	30.7	36.9	6.3	0.0	44.7	41.1	54.0	9.3	12.9
3	2538.6	38.9	36.3	31.0	37.0	6.5	0.0	39.4	36.8	54.0	14.6	17.2
4	4874.0	29.0	29.4	35.5	36.8	8.8	0.7	37.2	37.6	54.0	16.8	16.4
5	6498.7	31.7	39.7	38.2	36.6	10.2	0.0	43.5	51.5	54.0	10.5	2.5
6	7311.0	29.9	29.9	37.7	36.6	10.8	0.3	42.1	42.1	54.0	11.9	11.9
7	9748.0	29.7	29.8	37.0	37.2	12.8	0.3	42.6	42.7	54.0	11.4	11.3
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
8	12185.0	29.9	29.9	41.1	36.7	14.7	0.4	39.9	39.9	54.0	14.1	14.1
9	14622.0	29.9	29.9	43.1	35.5	16.4	0.4	44.8	44.8	54.0	9.2	9.2
10	17059.0	29.1	29.1	45.5	36.2	17.8	0.0	46.7	46.7	54.0	7.3	7.3
11	19496.0	28.9	28.9	40.6	36.0	19.0	0.0	43.0	43.0	54.0	11.0	11.0
12	21933.0	32.2	32.2	40.9	36.0	19.6	0.0	47.2	47.2	54.0	6.8	6.8
13	24370.0	30.2	30.1	40.4	36.9	21.0	0.0	45.2	45.1	54.0	8.8	8.9

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.

UL Apex Co., Ltd.

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MF060b(10.04.03)

### Out of Band Emission : Radiated

UL Apex Co.,Ltd.

Head Office EMC Lab. No.1 semi anechoic chamber

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11b) , Main Antenna  
Bluetooth Hopping ON : CH11: 2462MHz  
PK DETECT

REPORT NO : 24DE0025-HO  
REGULATION : Fee Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
Engineer : Hiroka Umeyama

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.6	47.9	51.7	23.0	37.7	4.6	0.0	37.8	41.6	74.0	36.2	32.4
2	2288.0	50.0	50.1	30.7	36.9	6.2	0.0	50.0	50.1	73.0	23.0	22.9
3	2360.0	52.5	52.1	30.7	36.9	6.3	0.0	52.6	52.2	74.0	21.4	21.8
4	2483.5	54.2	56.8	30.7	36.9	6.4	0.0	54.4	57.0	74.0	19.6	17.0
5	2488.0	54.8	51.4	30.7	36.9	6.4	0.0	55.0	51.6	74.0	19.0	22.4
6	4924.0	42.6	42.7	35.8	36.8	8.9	0.8	51.3	51.4	74.0	22.7	22.6
7	6565.3	46.1	47.1	38.3	36.6	10.4	0.0	58.2	59.2	74.0	15.8	14.8
8	7386.0	43.0	43.0	37.9	36.6	10.8	0.3	55.4	55.4	74.0	18.6	18.6
9	9848.0	43.8	44.9	36.7	37.3	12.9	0.3	56.4	57.5	74.0	17.6	16.5
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
10	12310.0	43.0	42.5	41.5	36.6	14.7	0.3	53.4	52.9	74.0	20.6	21.1
11	14772.0	42.5	42.5	43.2	35.6	16.6	0.4	57.6	57.6	74.0	16.4	16.4
12	17234.0	42.1	42.2	45.5	36.2	17.9	0.0	59.8	59.9	74.0	14.2	14.1
13	19696.0	42.4	41.9	40.8	36.0	19.0	0.0	56.7	56.2	74.0	17.3	17.8
14	22158.0	43.4	43.9	40.8	35.7	19.7	0.0	58.7	59.2	74.0	15.3	14.8
15	24620.0	44.0	43.6	40.5	36.9	21.1	0.0	59.2	58.8	74.0	14.8	15.2

AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]			
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.6	34.1	34.6	23.0	37.7	4.6	0.0	24.0	24.5	54.0	30.0	29.5
2	2288.0	38.0	39.3	30.7	36.9	6.2	0.0	38.0	39.3	53.0	15.0	13.7
3	2360.0	49.8	41.6	30.7	36.9	6.3	0.0	49.9	41.7	54.0	4.1	12.3
4	2483.5	37.8	33.5	30.7	36.9	6.4	0.0	38.0	33.7	54.0	16.0	20.3
5	2488.0	39.3	36.2	30.7	36.9	6.4	0.0	39.5	36.4	54.0	14.5	17.6
6	4924.0	29.1	29.1	35.8	36.8	8.9	0.8	37.8	37.8	54.0	16.2	16.2
6	6565.3	32.9	36.7	38.3	36.6	10.4	0.0	45.0	48.8	54.0	9.0	5.2
8	7386.0	29.9	29.9	37.9	36.6	10.8	0.3	42.3	42.3	54.0	11.7	11.7
9	9848.0	30.2	32.0	36.7	37.3	12.9	0.3	42.8	44.6	54.0	11.2	9.4
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
10	12310.0	29.8	29.8	41.5	36.6	14.7	0.3	40.2	40.2	54.0	13.8	13.8
11	14772.0	29.7	29.9	43.2	35.6	16.6	0.4	44.8	45.0	54.0	9.2	9.0
12	17234.0	29.1	29.1	45.5	36.2	17.9	0.0	46.8	46.8	54.0	7.2	7.2
13	19696.0	29.3	29.3	40.8	36.0	19.0	0.0	43.6	43.6	54.0	10.4	10.4
14	22158.0	30.7	30.7	40.8	35.7	19.7	0.0	46.0	46.0	54.0	8.0	8.0
15	24620.0	30.7	30.7	40.5	36.9	21.1	0.0	45.9	45.9	54.0	8.1	8.1

Bluetooth Hopping OFF

PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]			
3	2483.5	54.2	56.7	30.7	36.9	6.4	0.0	54.4	56.9	74.0	19.6	17.1

AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dB]	VER [dB]			
3	2483.5	40.9	44.4	30.7	36.9	6.4	0.0	41.1	44.6	54.0	12.9	9.4

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.

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### Out of Band Emission : Radiated

UL Apex Co.,Ltd.  
Head Office EMC Lab. No.1 semi anechoic chamber

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11g) , Main Antenna  
: Continuous Tx mode, OFDM, 64QAM, 54Mbps  
: CH1: 2412MHz

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE: 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%  
Engineer : Hiroka Umeyama

#### PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.9	48.1	51.2	23.1	37.7	4.6	0.0	38.1	41.2	74.0	35.9	32.8
2	2312.0	53.2	53.1	30.7	36.9	6.3	0.0	53.3	53.2	74.0	20.7	20.8
3	2360.0	48.6	48.3	30.7	36.9	6.3	0.0	48.7	48.4	74.0	25.3	25.6
4	2390.0	57.6	54.6	30.7	36.9	6.3	0.0	57.7	54.7	74.0	16.3	19.3
5	2400.0	76.1	74.0	30.7	36.9	6.4	0.0	76.3	74.2	80.2	3.9	6.0
6	4824.0	42.4	42.8	35.2	36.8	8.8	0.7	50.3	50.7	74.0	23.7	23.3
7	6432.0	46.0	49.0	38.1	36.6	10.3	0.0	57.8	60.8	74.0	16.2	13.2
8	7236.0	42.9	43.0	37.7	36.5	10.7	0.2	55.0	55.1	74.0	19.0	18.9
9	9648.0	44.5	45.2	37.3	37.2	12.7	0.3	57.6	58.3	74.0	16.4	15.7
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
11	12060.0	43.4	43.2	40.7	36.8	14.6	0.5	52.9	52.7	74.0	21.1	21.3
12	14472.0	43.0	43.1	42.9	35.4	16.3	0.4	57.7	57.8	74.0	16.3	16.2
13	16884.0	42.0	41.4	45.3	36.4	17.6	0.0	59.0	58.4	74.0	15.0	15.6
14	19296.0	42.0	42.1	40.9	35.9	18.9	0.0	56.4	56.5	74.0	17.6	17.5
15	21708.0	43.2	43.1	40.9	36.6	19.6	0.0	57.6	57.5	74.0	16.4	16.5
16	24120.0	44.1	44.0	40.3	36.5	20.9	0.0	59.3	59.2	74.0	14.7	14.8

#### AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.9	34.5	36.0	23.1	37.7	4.6	0.0	24.5	26.0	54.0	29.5	28.0
2	2312.0	39.4	39.4	30.7	36.9	6.3	0.0	39.5	39.5	54.0	14.5	14.5
3	2360.0	33.6	33.9	30.7	36.9	6.3	0.0	33.7	34.0	54.0	20.3	20.0
4	2390.0	34.9	33.8	30.7	36.9	6.3	0.0	35.0	33.9	54.0	19.0	20.1
5	2400.0	47.1	44.8	30.7	36.9	6.4	0.0	47.3	45.0	56.0	8.7	11.0
6	4824.0	29.7	29.7	35.2	36.8	8.8	0.7	37.6	37.6	54.0	16.4	16.4
7	6432.0	34.6	41.0	38.1	36.6	10.3	0.0	46.4	52.8	54.0	7.6	1.2
8	7236.0	30.2	30.2	37.7	36.5	10.7	0.2	42.3	42.3	54.0	11.7	11.7
9	9648.0	33.1	33.5	37.3	37.2	12.7	0.3	46.2	46.6	54.0	7.8	7.4
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
11	12060.0	30.5	30.5	40.7	36.8	14.6	0.5	40.0	40.0	54.0	14.0	14.0
12	14472.0	30.1	30.2	42.9	35.4	16.3	0.4	44.8	44.9	54.0	9.2	9.1
13	16884.0	29.4	29.5	45.3	36.4	17.6	0.0	46.4	46.5	54.0	7.6	7.5
14	19296.0	29.4	29.3	40.9	35.9	18.9	0.0	43.8	43.7	54.0	10.2	10.3
15	21708.0	31.1	31.1	40.9	36.6	19.6	0.0	45.5	45.5	54.0	8.5	8.5
16	24120.0	31.0	31.0	40.3	36.5	20.9	0.0	46.2	46.2	54.0	7.8	7.8

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.

\*The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower.

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### Out of Band Emission : Radiated

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11g) , Main Antenna  
: Continuous Tx mode, OFDM, 64QAM, 54Mbps  
: CH6: 2437MHz

UL Apex Co., Ltd.  
Head Office EMC Lab. No.1 Semi Anechoic Chamber  
REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE: 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%  
ENGINEER : Hiroka Umeyama

**PK DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		[dB]	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	48.0	51.2	23.0	37.7	4.6	0.0	37.9	41.1	74.0	36.1	32.9
2	2336.0	55.7	56.5	30.7	36.9	6.3	0.0	55.8	56.6	74.0	18.2	17.4
3	2538.7	48.0	46.9	31.0	37.0	6.5	0.0	48.5	47.4	74.0	25.5	26.6
4	4874.0	43.0	42.5	35.5	36.8	8.8	0.7	51.2	50.7	74.0	22.8	23.3
5	6498.7	45.9	48.3	38.2	36.6	10.2	0.0	57.7	60.1	74.0	16.3	13.9
6	7311.0	43.7	43.2	37.7	36.6	10.8	0.3	55.9	55.4	74.0	18.1	18.6
7	9748.0	43.5	45.1	37.0	37.2	12.8	0.3	56.4	58.0	74.0	17.6	16.0
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
8	12185.0	43.5	43.4	41.1	36.7	14.7	0.4	53.5	53.4	74.0	20.5	20.6
9	14622.0	43.0	43.0	43.1	35.5	16.4	0.4	57.9	57.9	74.0	16.1	16.1
10	17059.0	41.9	41.2	45.5	36.2	17.8	0.0	59.5	58.8	74.0	14.5	15.2
11	19496.0	42.4	42.0	40.6	36.0	19.0	0.0	56.5	56.1	74.0	17.5	17.9
12	21933.0	45.1	45.7	40.9	36.0	19.6	0.0	60.1	60.7	74.0	13.9	13.3
13	24370.0	42.8	42.9	40.4	36.9	21.0	0.0	57.8	57.9	74.0	16.2	16.1

**AV DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		[dB]	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	34.6	36.6	23.0	37.7	4.6	0.0	24.5	26.5	54.0	29.5	27.5
2	2336.0	42.9	42.9	30.7	36.9	6.3	0.0	43.0	43.0	54.0	11.0	11.0
3	2538.7	34.2	33.9	31.0	37.0	6.5	0.0	34.7	34.4	54.0	19.3	19.6
4	4874.0	29.2	29.2	35.5	36.8	8.8	0.7	37.4	37.4	54.0	16.6	16.6
5	6498.7	33.7	41.0	38.2	36.6	10.2	0.0	45.5	52.8	54.0	8.5	1.2
6	7311.0	30.7	30.8	37.7	36.6	10.8	0.3	42.9	43.0	54.0	11.1	11.0
7	9748.0	30.6	32.3	37.0	37.2	12.8	0.3	43.5	45.2	54.0	10.5	8.8
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
8	12185.0	30.5	30.4	41.1	36.7	14.7	0.4	40.5	40.4	54.0	13.5	13.6
9	14622.0	30.2	30.2	43.1	35.5	16.4	0.4	45.1	45.1	54.0	8.9	8.9
10	17059.0	29.4	29.4	45.5	36.2	17.8	0.0	47.0	47.0	54.0	7.0	7.0
11	19496.0	29.4	29.3	40.6	36.0	19.0	0.0	43.5	43.4	54.0	10.5	10.6
12	21933.0	32.7	32.6	40.9	36.0	19.6	0.0	47.7	47.6	54.0	6.3	6.4
13	24370.0	30.5	30.4	40.4	36.9	21.0	0.0	45.5	45.4	54.0	8.5	8.6

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.

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### Out of Band Emission : Radiated

UL Apex Co.,Ltd.  
Head Office EMC Lab. No.1 semi anechoic chamber

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEB 802.11g) , Main Antenna  
: Continuous Tx mode, OFDM, 64QAM, 54M bps  
: CH1: 2462MHz

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%  
Engineer : Hiroka Umeyama

#### PK DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	47.9	52.6	23.0	37.7	4.6	0.0	37.8	42.5	74.0	36.2	31.5
2	2288.0	50.3	49.2	30.7	36.9	6.2	0.0	50.3	49.2	74.0	23.7	24.8
3	2358.7	52.0	52.9	30.7	36.9	6.3	0.0	52.1	53.0	74.0	21.9	21.0
4	2483.5	62.5	57.4	30.7	36.9	6.4	0.0	62.7	57.6	74.0	11.3	16.4
5	2565.3	45.7	44.3	31.0	37.0	6.5	0.0	46.2	44.8	74.0	27.8	29.2
6	2600.0	46.9	46.7	31.1	37.0	6.6	0.0	47.6	47.4	74.0	26.4	26.6
7	4924.0	42.8	42.3	35.8	36.8	8.9	0.8	51.5	51.0	74.0	22.5	23.0
8	6565.3	45.7	47.8	38.3	36.6	10.4	0.0	57.8	59.9	74.0	16.2	14.1
9	7386.0	43.2	43.5	37.9	36.6	10.8	0.3	55.6	55.9	74.0	18.4	18.1
10	9848.0	43.5	43.6	36.7	37.3	12.9	0.3	56.1	56.2	74.0	17.9	17.8
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
11	12310.0	43.5	43.5	41.5	36.6	14.7	0.3	53.9	53.9	74.0	20.1	20.1
12	14772.0	42.5	42.8	43.2	35.6	16.6	0.4	57.6	57.9	74.0	16.4	16.1
13	17234.0	42.3	41.9	45.5	36.2	17.9	0.0	60.0	59.6	74.0	14.0	14.4
14	19696.0	42.6	42.7	40.8	36.0	19.0	0.0	56.9	57.0	74.0	17.1	17.0
15	22158.0	44.1	43.4	40.8	35.7	19.7	0.0	59.4	58.7	74.0	14.6	15.3
16	24620.0	43.2	43.5	40.5	36.9	21.1	0.0	58.4	58.7	74.0	15.6	15.3

#### AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	34.7	36.6	23.0	37.7	4.6	0.0	24.6	26.5	54.0	29.4	27.5
2	2288.0	36.8	35.1	30.7	36.9	6.2	0.0	36.8	35.1	54.0	17.2	18.9
3	2358.7	38.4	37.5	30.7	36.9	6.3	0.0	38.5	37.6	54.0	15.5	16.4
4	2483.5	36.9	34.4	30.7	36.9	6.4	0.0	37.1	34.6	54.0	16.9	19.4
5	2565.3	31.4	31.2	31.0	37.0	6.5	0.0	31.9	31.7	54.0	22.1	22.3
6	2600.0	32.6	32.6	31.1	37.0	6.6	0.0	33.3	33.3	54.0	20.7	20.7
7	4924.0	29.5	29.4	35.8	36.8	8.9	0.8	38.2	38.1	54.0	15.8	15.9
8	6565.3	34.0	37.8	38.3	36.6	10.4	0.0	46.1	49.9	54.0	7.9	4.1
9	7386.0	30.4	30.4	37.9	36.6	10.8	0.3	42.8	42.8	54.0	11.2	11.2
10	9848.0	30.3	30.4	36.7	37.3	12.9	0.3	42.9	43.0	54.0	11.1	11.0
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
11	12310.0	30.4	30.5	41.5	36.6	14.7	0.3	40.8	40.9	54.0	13.2	13.1
12	14772.0	30.0	30.0	43.2	35.6	16.6	0.4	45.1	45.1	54.0	8.9	8.9
13	17234.0	29.3	29.4	45.5	36.2	17.9	0.0	47.0	47.1	54.0	7.0	6.9
14	19696.0	29.8	29.7	40.8	36.0	19.0	0.0	44.1	44.0	54.0	9.9	10.0
15	22158.0	31.1	31.2	40.8	35.7	19.7	0.0	46.4	46.5	54.0	7.6	7.5
16	24620.0	31.0	31.1	40.5	36.9	21.1	0.0	46.2	46.3	54.0	7.8	7.7

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.

UL Apex Co., Ltd.

Head Office EMC Lab.

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MF060b(10.04.03)

### Out of Band Emission : Radiated

UL Apex Co.,Ltd.  
Head Office EMC Lab. No.1 semi anechoic chamber

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-SA1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11g), Main Antenna  
: Continuous Tx mode, OFDM, 64QAM, 54Mbps  
: CHI: 2412MHz

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%

Bluetooth Hopping ON  
PK DETECT

ENGINEER : Hiroka Umeyama

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.9	47.8	51.0	23.1	37.7	4.6	0.0	37.8	41.0	74.0	36.2	33.0
2	2312.0	54.7	56.7	30.7	36.9	6.3	0.0	54.8	56.8	74.0	19.2	17.2
3	2360.0	48.4	50.6	30.7	36.9	6.3	0.0	48.5	50.7	74.0	25.5	23.3
4	2390.0	60.1	56.7	30.7	36.9	6.3	0.0	60.2	56.8	74.0	13.8	17.2
5	2400.0	77.0	74.7	30.7	36.9	6.4	0.0	77.2	74.9	80.2	3.0	5.3
6	4824.0	42.4	42.9	35.2	36.8	8.8	0.7	50.3	50.8	74.0	23.7	23.2
7	6432.0	46.0	48.5	38.1	36.6	10.3	0.0	57.8	60.3	74.0	16.2	13.7
8	7236.0	42.6	42.7	37.7	36.5	10.7	0.2	54.7	54.8	74.0	19.3	19.2
9	9648.0	43.3	43.5	37.3	37.2	12.7	0.3	56.4	56.6	74.0	17.6	17.4
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
11	12060.0	43.1	43.1	40.7	36.8	14.6	0.5	52.6	52.6	74.0	21.4	21.4
12	14472.0	43.6	42.9	42.9	35.4	16.3	0.4	58.3	57.6	74.0	15.7	16.4
13	16884.0	42.7	42.0	45.3	36.4	17.6	0.0	59.7	59.0	74.0	14.3	15.0
14	19296.0	41.8	41.3	40.9	35.9	18.9	0.0	56.2	55.7	74.0	17.8	18.3
15	21708.0	43.3	43.2	40.9	36.6	19.6	0.0	57.7	57.6	74.0	16.3	16.4
16	24120.0	43.2	43.3	40.3	36.5	20.9	0.0	58.4	58.5	74.0	15.6	15.5

AV DETECT

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR [dBuV/m]	VER [dBuV/m]					HOR [dBuV/m]	VER [dBuV/m]		HOR [dB]	VER [dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.9	34.2	35.5	23.1	37.7	4.6	0.0	24.2	25.5	54.0	29.8	28.5
2	2312.0	40.9	42.7	30.7	36.9	6.3	0.0	41.0	42.8	54.0	13.0	11.2
3	2360.0	33.1	34.2	30.7	36.9	6.3	0.0	33.2	34.3	54.0	20.8	19.7
4	2390.0	37.8	34.4	30.7	36.9	6.3	0.0	37.9	34.5	54.0	16.1	19.5
5	2400.0	48.3	44.3	30.7	36.9	6.4	0.0	48.5	44.5	54.7	6.2	10.2
6	4824.0	29.0	29.1	35.2	36.8	8.8	0.7	36.9	37.0	54.0	17.1	17.0
7	6432.0	34.0	40.6	38.1	36.6	10.3	0.0	45.8	52.4	54.0	8.2	1.6
8	7236.0	29.7	29.7	37.7	36.5	10.7	0.2	41.8	41.8	54.0	12.2	12.2
9	9648.0	30.2	31.3	37.3	37.2	12.7	0.3	43.3	44.4	54.0	10.7	9.6
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
11	12060.0	30.2	30.2	40.7	36.8	14.6	0.5	39.7	39.7	54.0	14.3	14.3
12	14472.0	29.5	29.5	42.9	35.4	16.3	0.4	44.2	44.2	54.0	9.8	9.8
13	16884.0	29.3	29.3	45.3	36.4	17.6	0.0	46.3	46.3	54.0	7.7	7.7
14	19296.0	29.0	29.0	40.9	35.9	18.9	0.0	43.4	43.4	54.0	10.6	10.6
15	21708.0	30.8	30.9	40.9	36.6	19.6	0.0	45.2	45.3	54.0	8.8	8.7
16	24120.0	30.6	30.6	40.3	36.5	20.9	0.0	45.8	45.8	54.0	8.2	8.2

Bluetooth Hopping OFF  
PK DETECT

No.	FREQ [MHz]	T/R READING HOR [dBuV/m]	VER [dBuV/m]	ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT HOR [dBuV/m]	VER [dBuV/m]	Limit PK [dBuV/m]	MARGIN HOR [dB]	VER [dB]
3	2390.0	57.2	56.8	30.7	36.9	6.3	0.0	57.3	56.9	74.0	16.7	17.1

AV DETECT

No.	FREQ [MHz]	T/R READING HOR [dBuV/m]	VER [dBuV/m]	ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT HOR [dBuV/m]	VER [dBuV/m]	Limit PK [dBuV/m]	MARGIN HOR [dB]	VER [dB]
3	2390.0	35.6	34.8	30.7	36.9	6.3	0.0	35.7	34.9	54.0	18.3	19.1

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.

\*The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower.

### Out of Band Emission : Radiated

UL Apex Co., Ltd.  
Head Office EMC Lab. No.1 semi anechoic chamber

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11g), Main Antenna  
: Continuous Tx mode, OFDM, 64QAM, 54Mbps  
: CH6: 2437MHz

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%  
Engineer : Hiroka Umeyama

Bluetooth Hopping ON  
PK DETECT

No.	FREQ [MHz]	T/R READING HOR   VER [dBuV/m]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT HOR   VER [dBuV/m]		Limit PK [dBuV/m]	MARGIN HOR   VER [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	48.3	51.7	23.0	37.7	4.6	0.0	38.2	41.6	74.0	35.8	32.4
2	2336.0	55.9	54.8	30.7	36.9	6.3	0.0	56.0	54.9	74.0	18.0	19.1
3	2538.7	52.1	50.2	31.0	37.0	6.5	0.0	52.6	50.7	74.0	21.4	23.3
4	4874.0	42.3	42.5	35.5	36.8	8.8	0.7	50.5	50.7	74.0	23.5	23.3
5	6498.7	45.4	47.0	38.2	36.6	10.2	0.0	57.2	58.8	74.0	16.8	15.2
6	7311.0	43.2	43.4	37.7	36.6	10.8	0.3	55.4	55.6	74.0	18.6	18.4
7	9748.0	43.3	43.4	37.0	37.2	12.8	0.3	56.2	56.3	74.0	17.8	17.7
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
8	12185.0	43.1	43.0	41.1	36.7	14.7	0.4	53.1	53.0	74.0	20.9	21.0
9	14622.0	43.0	42.6	43.1	35.5	16.4	0.4	57.9	57.5	74.0	16.1	16.5
10	17059.0	42.4	42.4	45.5	36.2	17.8	0.0	60.0	60.0	74.0	14.0	14.0
11	19496.0	42.0	42.5	40.6	36.0	19.0	0.0	56.1	56.6	74.0	17.9	17.4
12	21933.0	44.9	45.4	40.9	36.0	19.6	0.0	59.9	60.4	74.0	14.1	13.6
13	24370.0	42.9	42.7	40.4	36.9	21.0	0.0	57.9	57.7	74.0	16.1	16.3

AV DETECT

No.	FREQ [MHz]	T/R READING HOR   VER [dBuV/m]		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT HOR   VER [dBuV/m]		Limit AV [dBuV/m]	MARGIN HOR   VER [dB]	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	33.8	35.2	23.0	37.7	4.6	0.0	23.7	25.1	54.0	30.3	28.9
2	2336.0	41.9	41.2	30.7	36.9	6.3	0.0	42.0	41.3	54.0	12.0	12.7
3	2538.7	37.6	36.4	31.0	37.0	6.5	0.0	38.1	36.9	54.0	15.9	17.1
4	4874.0	28.9	28.8	35.5	36.8	8.8	0.7	37.1	37.0	54.0	16.9	17.0
5	6498.7	32.1	35.8	38.2	36.6	10.2	0.0	43.9	47.6	54.0	10.1	6.4
6	7311.0	29.9	29.8	37.7	36.6	10.8	0.3	42.1	42.0	54.0	11.9	12.0
7	9748.0	30.0	30.0	37.0	37.2	12.8	0.3	42.9	42.9	54.0	11.1	11.1
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
8	12185.0	29.9	29.9	41.1	36.7	14.7	0.4	39.9	39.9	54.0	14.1	14.1
9	14622.0	29.9	29.9	43.1	35.5	16.4	0.4	44.8	44.8	54.0	9.2	9.2
10	17059.0	29.1	29.1	45.5	36.2	17.8	0.0	46.7	46.7	54.0	7.3	7.3
11	19496.0	29.1	29.2	40.6	36.0	19.0	0.0	43.2	43.3	54.0	10.8	10.7
12	21933.0	32.2	32.2	40.9	36.0	19.6	0.0	47.2	47.2	54.0	6.8	6.8
13	24370.0	30.1	30.1	40.4	36.9	21.0	0.0	45.1	45.1	54.0	8.9	8.9

\*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.

### Out of Band Emission : Radiated

UL Apex Co.,Ltd.  
Head Office EMC Lab. No.1 semi anechoic chamber

Company : Sony Corporation  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100001  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11g), Main Antenna  
: Continuous Tx mode, OFDM, 64QAM, 54Mbps  
: CH11: 2462MHz

REPORT NO : 24DE0025-HO  
REGULATION : For Part15 Subpart C 15.247(b)(3)  
TEST DISTANCE : 3/1m  
DATE : Nov 26,27 and 28, 2003  
TEMPERATURE : 21, 20, 21deg.C  
HUMIDITY : 40, 41, 39%  
Engineer : Hiroka Umeyama

Bluetooth Hopping ON  
**PK DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	47.9	52.3	23.0	37.7	4.6	0.0	37.8	42.2	74.0	36.2	31.8
2	2288.0	53.1	53.0	30.7	36.9	6.2	0.0	53.1	53.0	74.0	20.9	21.0
3	2358.7	54.3	52.7	30.7	36.9	6.3	0.0	54.4	52.8	74.0	19.6	21.2
4	2483.5	63.1	57.5	30.7	36.9	6.4	0.0	63.3	57.7	74.0	10.7	16.3
5	2565.3	50.2	48.7	31.0	37.0	6.5	0.0	50.7	49.2	74.0	23.3	24.8
6	2600.0	49.2	46.0	31.1	37.0	6.6	0.0	49.9	46.7	74.0	24.1	27.3
7	4924.0	42.4	42.0	35.8	36.8	8.9	0.8	51.1	50.7	74.0	22.9	23.3
8	6565.3	45.3	48.1	38.3	36.6	10.4	0.0	57.4	60.2	74.0	16.6	13.8
9	7386.0	43.0	43.3	37.9	36.6	10.8	0.3	55.4	55.7	74.0	18.6	18.3
10	9848.0	43.4	43.6	36.7	37.3	12.9	0.3	56.0	56.2	74.0	18.0	17.8
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
11	12310.0	43.0	42.4	41.5	36.6	14.7	0.3	53.4	52.8	74.0	20.6	21.2
12	14772.0	42.5	42.7	43.2	35.6	16.6	0.4	57.6	57.8	74.0	16.4	16.2
13	17234.0	42.5	42.6	45.5	36.2	17.9	0.0	60.2	60.3	74.0	13.8	13.7
14	19696.0	42.3	42.6	40.8	36.0	19.0	0.0	56.6	56.9	74.0	17.4	17.1
15	22158.0	43.7	43.4	40.8	35.7	19.7	0.0	59.0	58.7	74.0	15.0	15.3
16	24620.0	43.4	43.6	40.5	36.9	21.1	0.0	58.6	58.8	74.0	15.4	15.2

**AV DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit AV [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass												
1	1131.7	33.7	35.0	23.0	37.7	4.6	0.0	23.6	24.9	54.0	30.4	29.1
2	2288.0	39.3	39.1	30.7	36.9	6.2	0.0	39.3	39.1	54.0	14.7	14.9
3	2358.7	39.7	37.6	30.7	36.9	6.3	0.0	39.8	37.7	54.0	14.2	16.3
4	2483.5	38.3	35.3	30.7	36.9	6.4	0.0	38.5	35.5	54.0	15.5	18.5
5	2565.3	34.5	33.7	31.0	37.0	6.5	0.0	35.0	34.2	54.0	19.0	19.8
6	2600.0	33.4	32.1	31.1	37.0	6.6	0.0	34.1	32.8	54.0	19.9	21.2
7	4924.0	29.0	29.0	35.8	36.8	8.9	0.8	37.7	37.7	54.0	16.3	16.3
8	6565.3	32.7	39.9	38.3	36.6	10.4	0.0	44.8	52.0	54.0	9.2	2.0
9	7386.0	29.9	29.9	37.9	36.6	10.8	0.3	42.3	42.3	54.0	11.7	11.7
10	9848.0	30.0	30.2	36.7	37.3	12.9	0.3	42.6	42.8	54.0	11.4	11.2
Test distance 1meter RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Band Pass - Dfac												
11	12310.0	29.8	29.8	41.5	36.6	14.7	0.3	40.2	40.2	54.0	13.8	13.8
12	14772.0	29.6	29.6	43.2	35.6	16.6	0.4	44.7	44.7	54.0	9.3	9.3
13	17234.0	29.1	29.1	45.5	36.2	17.9	0.0	46.8	46.8	54.0	7.2	7.2
14	19696.0	29.2	29.2	40.8	36.0	19.0	0.0	43.5	43.5	54.0	10.5	10.5
15	22158.0	30.7	30.8	40.8	35.7	19.7	0.0	46.0	46.1	54.0	8.0	7.9
16	24620.0	30.7	30.7	40.5	36.9	21.1	0.0	45.9	45.9	54.0	8.1	8.1

Bluetooth Hopping OFF **PK DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
3'	2483.5	62.3	58.2	30.7	36.9	6.4	0.0	62.5	58.4	74.0	11.5	15.6

**AV DETECT**

No.	FREQ [MHz]	T/R READING		ANT Factor [dB/m]	AMP GAIN [dB]	CABLE LOSS [dB]	Band-Pass Filter [dB]	RESULT		Limit PK [dBuV/m]	MARGIN	
		HOR	VER					HOR	VER		HOR	VER
3'	2483.5	41.9	43.2	30.7	36.9	6.4	0.0	42.1	43.4	54.0	11.9	10.6

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

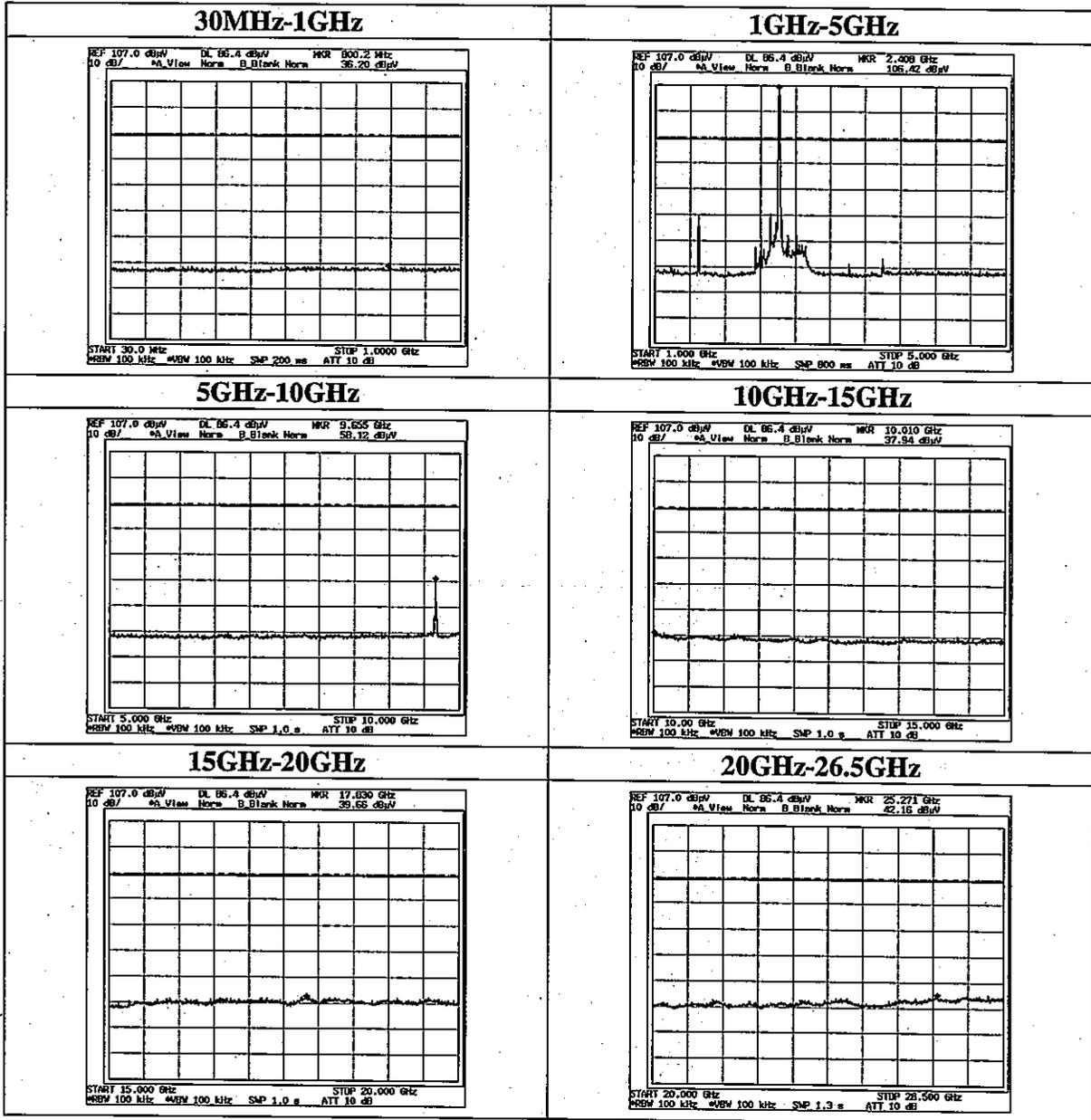
\*Except for the above table : All other spurious emissions were less than 20dB for the limit.

\*In the frequency over the fifth harmonic, the noise from the EUT was not seen. The data above is its base noise.

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**Out of Band Emission : Conducted**

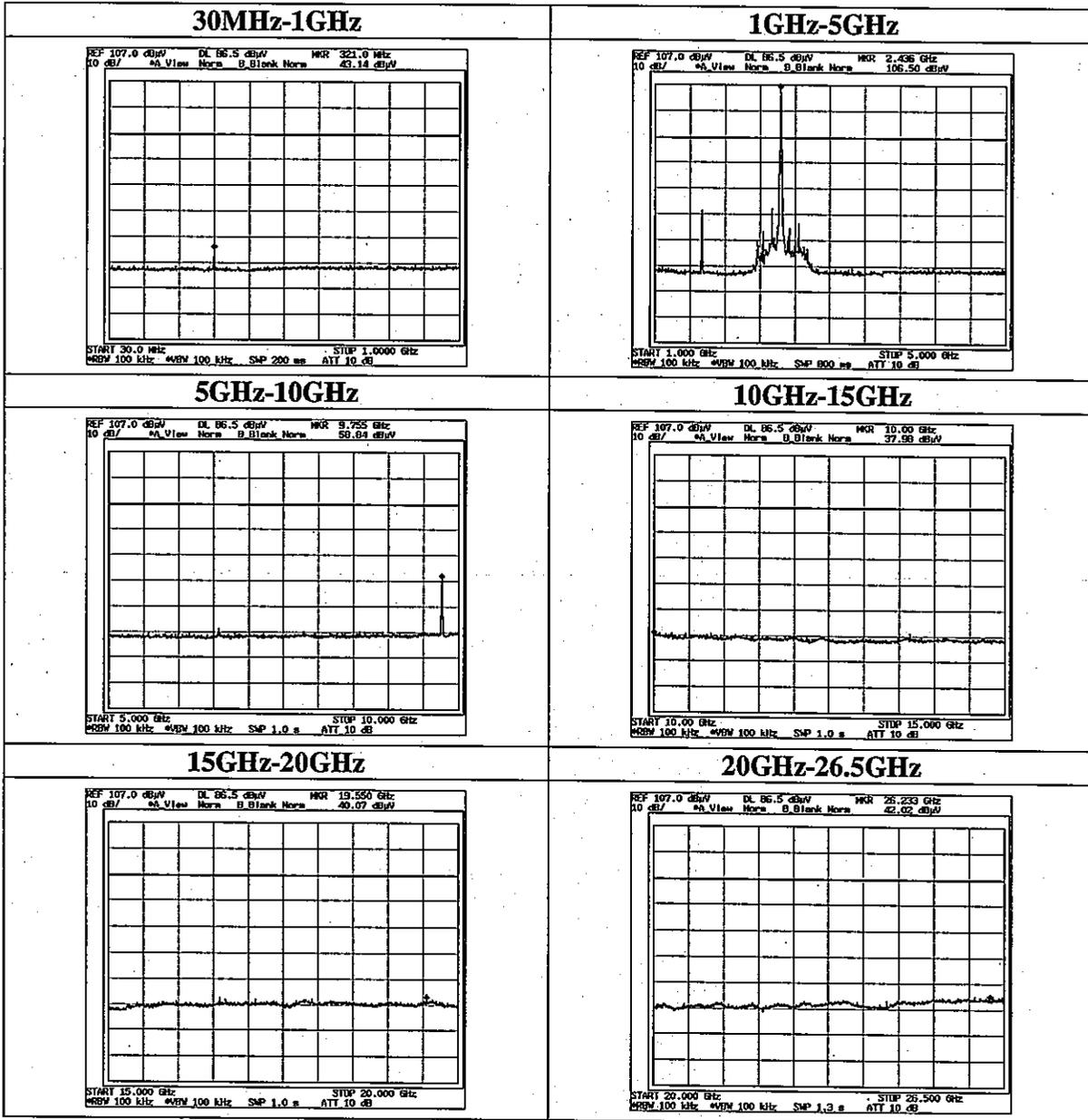
Main Antenna, Transmitting (IEEE 802.11b) CCK, QPSK, 11Mbps  
 Ch 1 : 2412MHz



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**Out Band Emissions (Conducted)**

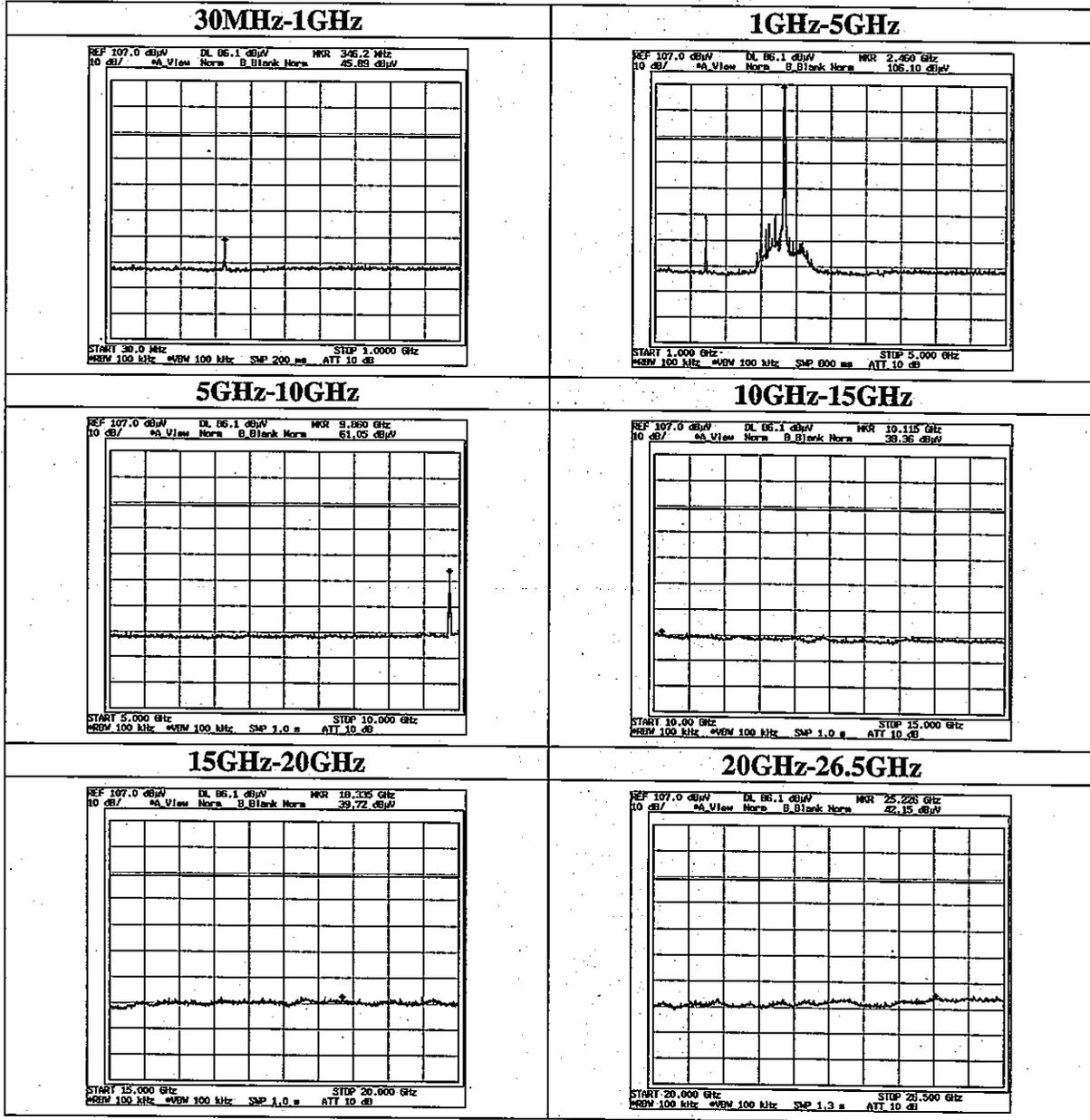
Main Antenna, Transmitting (IEEE 802.11b) CCK, QPSK, 11Mbps  
 Ch 6 : 2437MHz



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**Out Band Emissions (Conducted)**

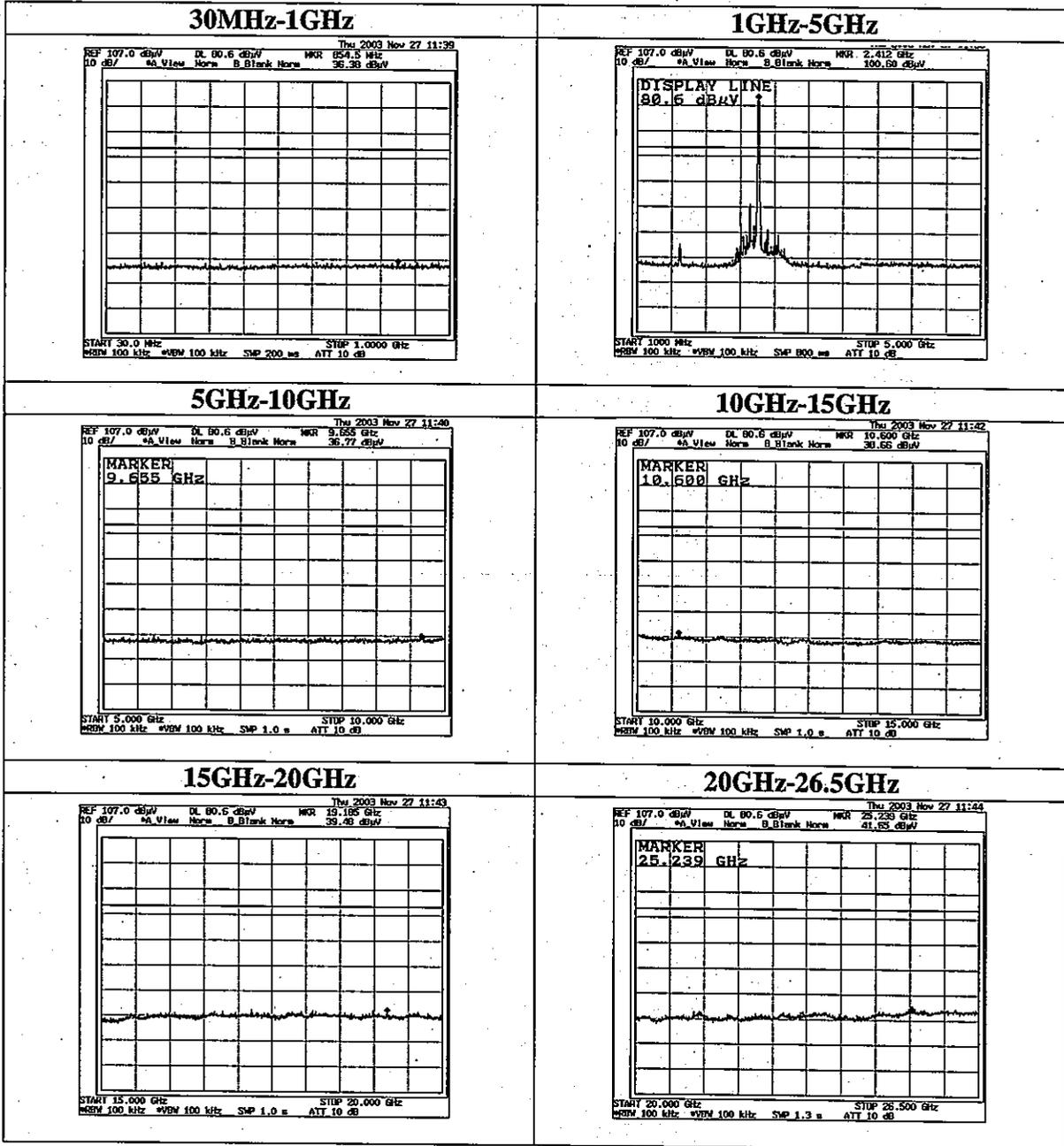
Main Antenna, Transmitting (IEEE 802.11b) CCK, QPSK, 11Mbps  
 Ch11 : 2462MHz



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**Out Band Emissions (Conducted)**

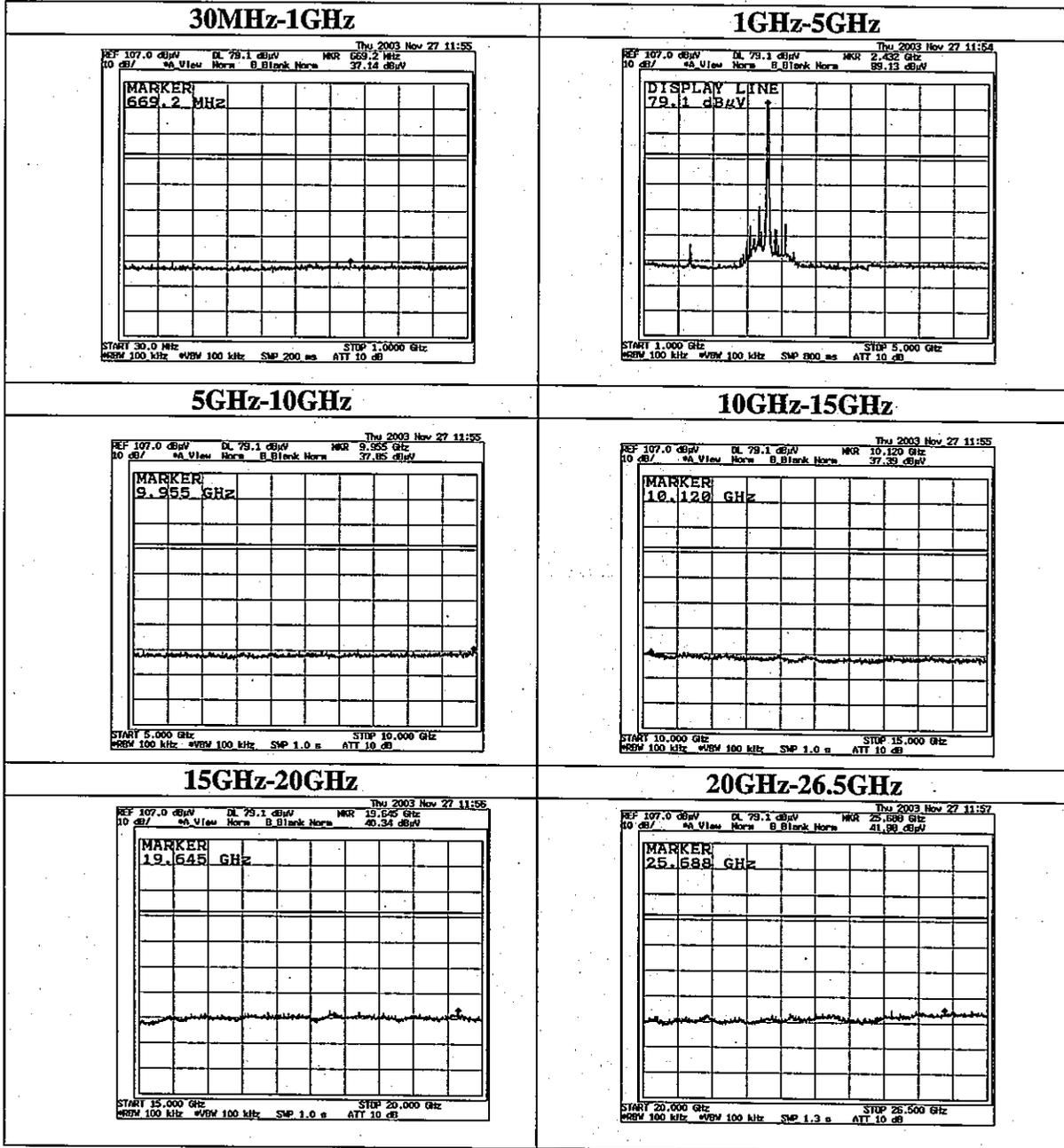
Main Antenna, Transmitting (IEEE 802.11g) OFDM, 64QAM, 54Mbps  
Ch1 : 2412MHz



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**Out Band Emissions (Conducted)**

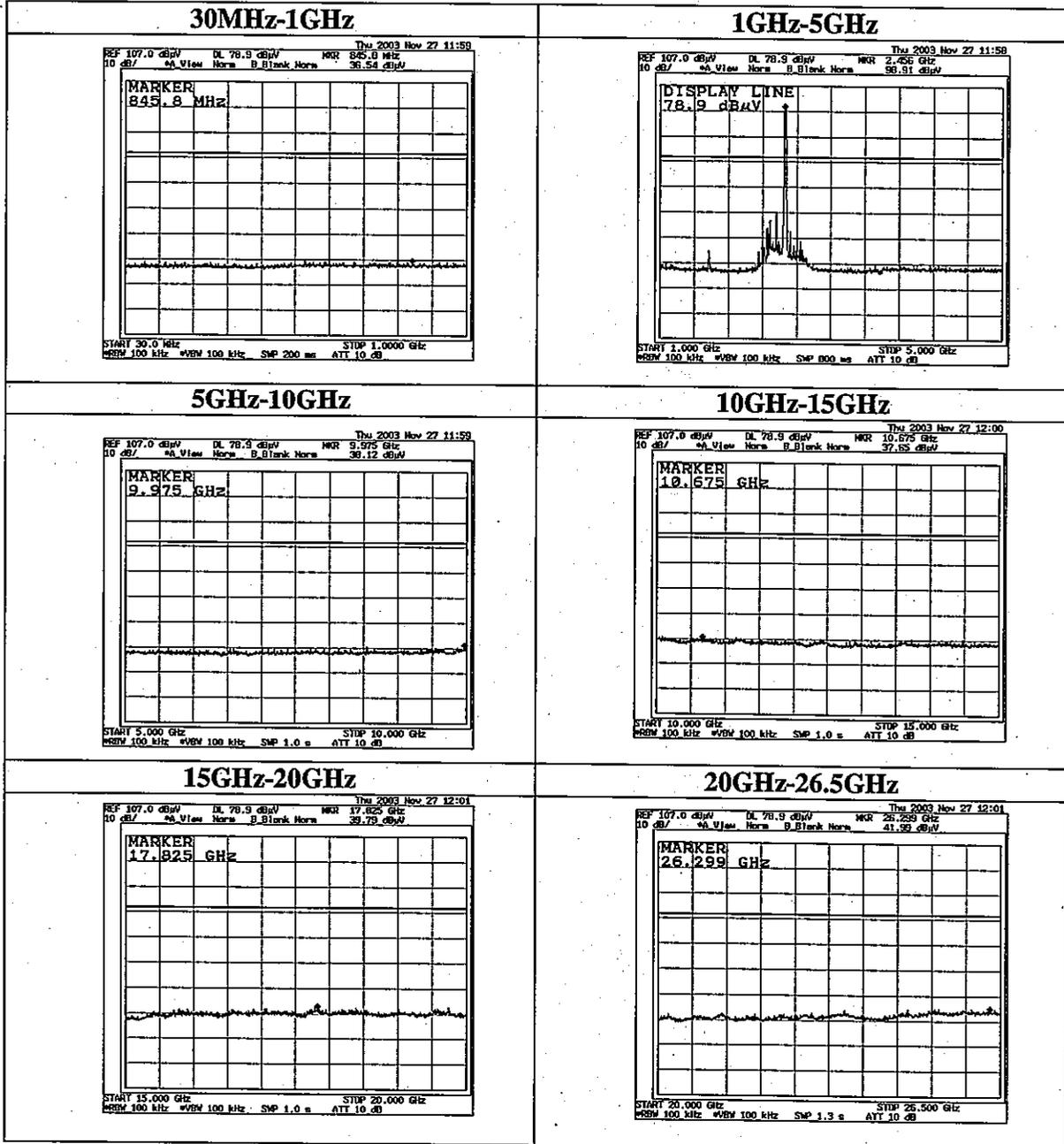
Main Antenna, Transmitting (IEEE 802.11g) OFDM, 64QAM, 54Mbps  
 Ch6 : 2437MHz



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**Out Band Emissions (Conducted)**

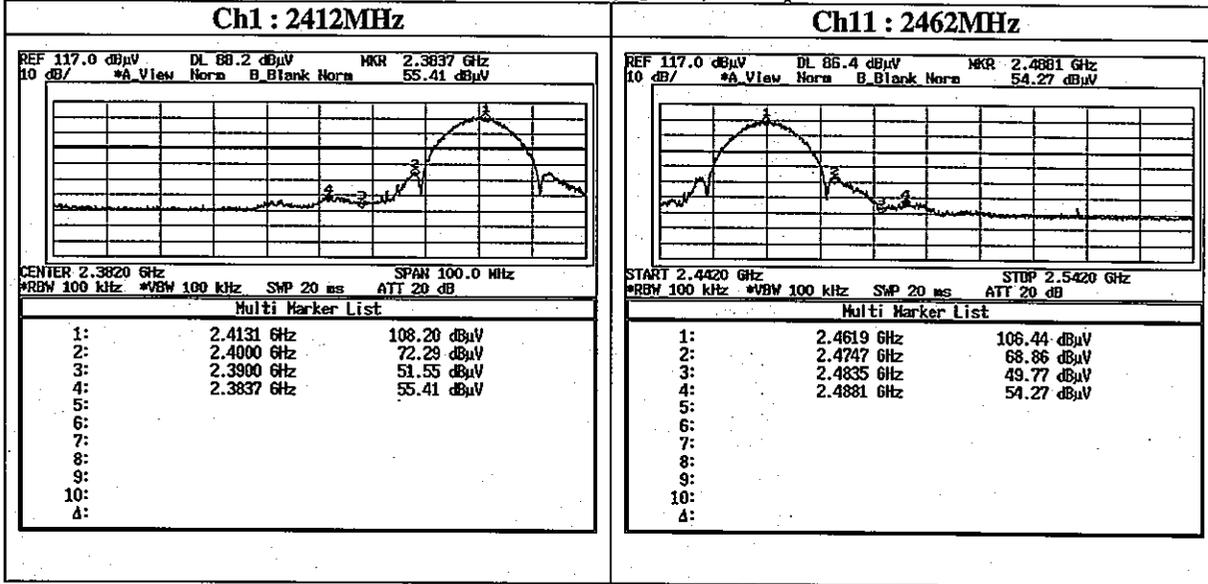
Main Antenna, Transmitting (IEEE 802.11g) OFDM, 64QAM, 54Mbps  
 Ch11 : 2462MHz



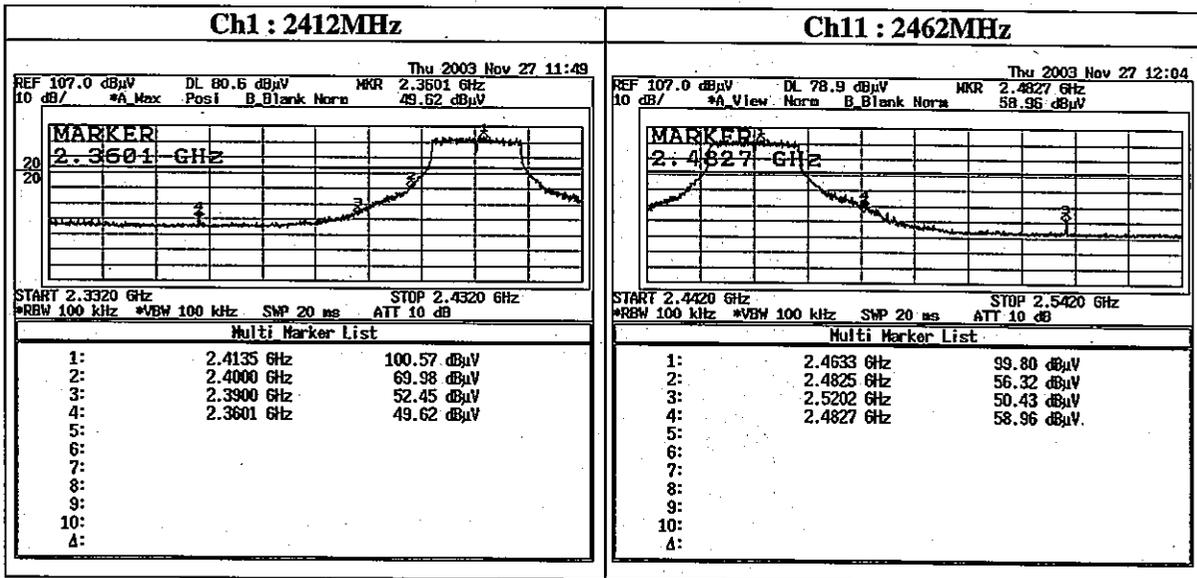
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**Out of Band Emission : Restricted Band Edges  
 (Conducted)**

Main Antenna, Transmitting (IEEE 802.11b) CCK, QPSK, 11Mbps

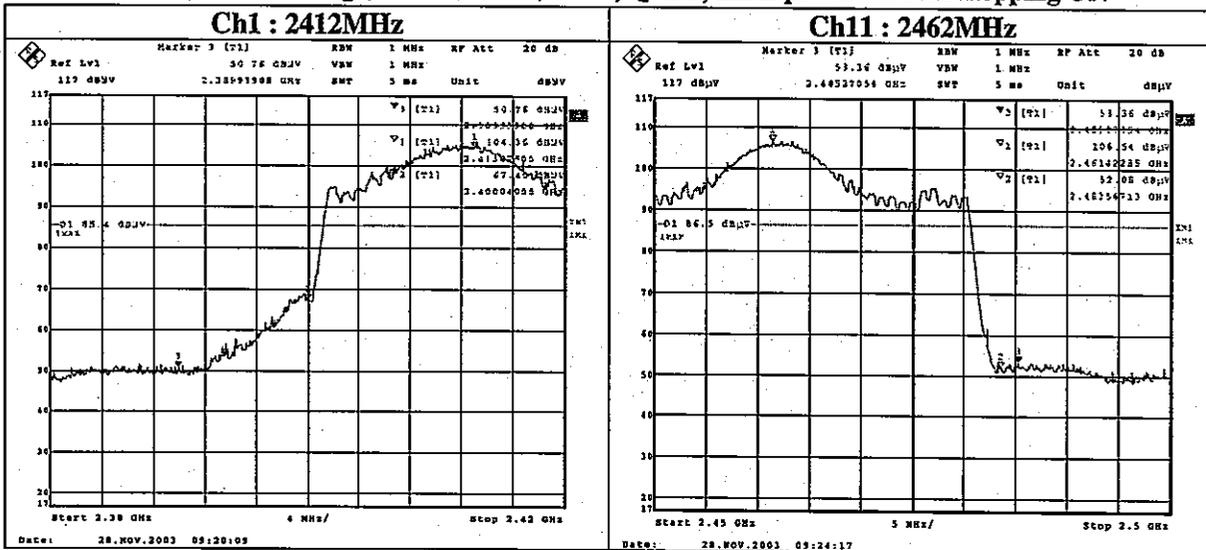


Main Antenna, Transmitting (IEEE 802.11g) OFDM, 64QAM, 54Mbps

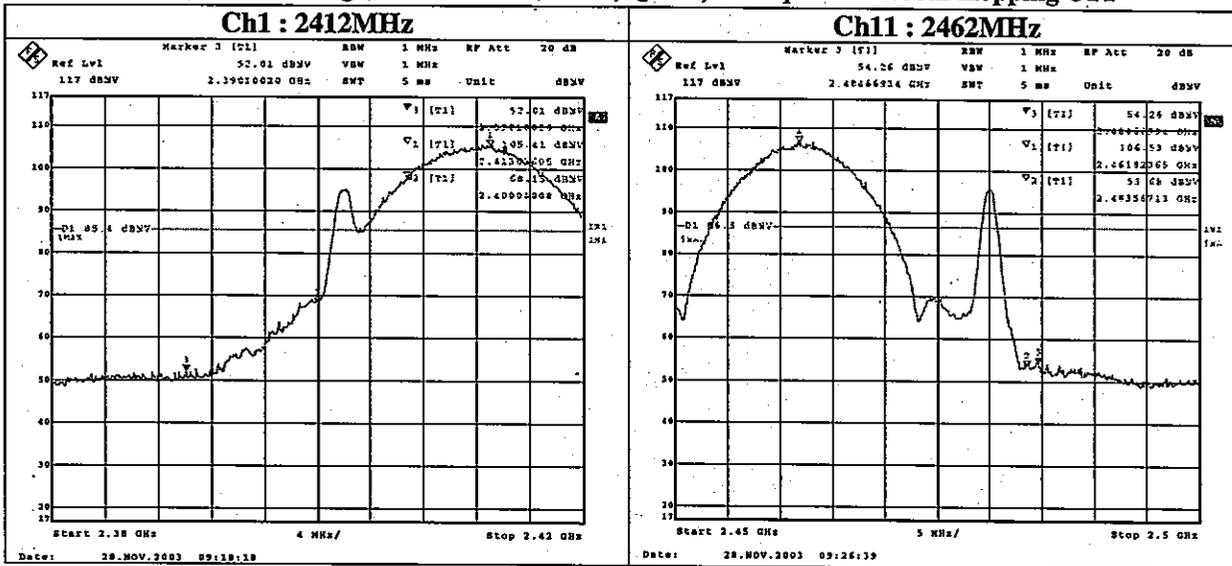


**Out of Band Emission : Restricted Band Edges  
 (Radiated)**

Main Antenna, Transmitting (IEEE 802.11b) CCK, QPSK, 11Mbps + Bluetooth Hopping ON

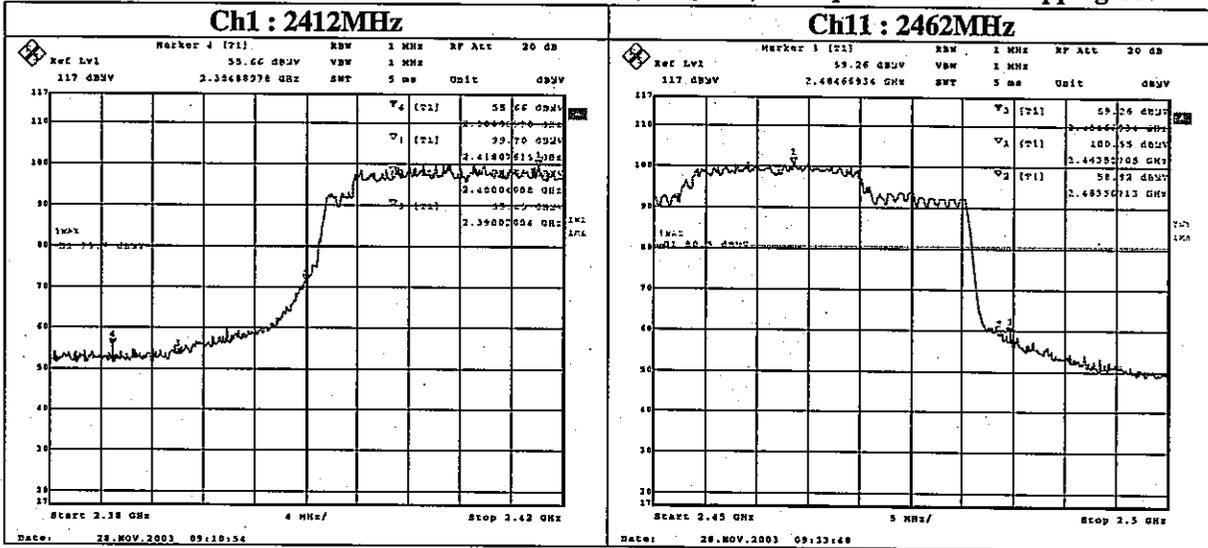


Main Antenna, Transmitting (IEEE 802.11b) CCK, QPSK, 11Mbps + Bluetooth Hopping OFF

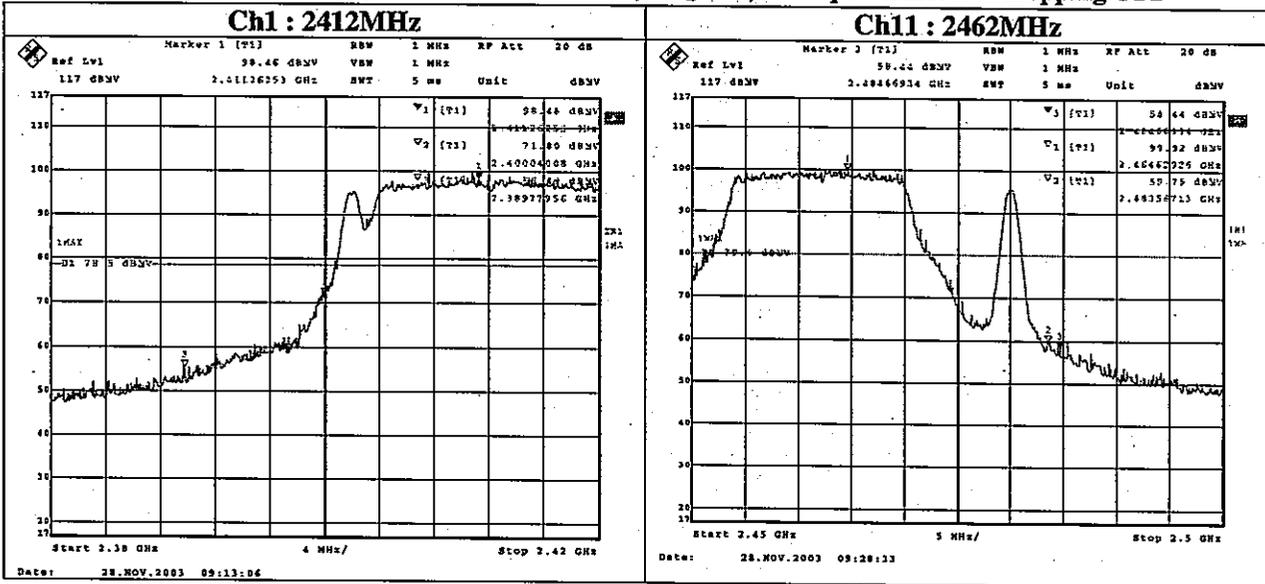


**Out of Band Emission : Restricted Band Edges  
 (Radiated)**

**Main Antenna, Transmitting (IEEE 802.11b) OFDM, 64QAM, 54Mbps + Bluetooth Hopping ON**



**Main Antenna, Transmitting (IEEE 802.11b) OFDM, 64QAM, 54Mbps + Bluetooth Hopping OFF**



**Power Density (Conducted)**

UL Apex Co., Ltd.  
Head Office EMC Lab. No.3 Measurement room

Company : Sony Corp.  
Equipment : Notebook Personal Computer  
Model : PCG-5A1L  
Sample No. : 1100008  
Power : AC120V/60Hz  
Mode : Transmitting (IEEE 802.11b/g)

REPORT NO : 24DE0025-HO  
REGULATION : Fcc Part15 Subpart C 15.247(d)  
TEST DISTANCE : -  
DATE : 11/27,28/2003  
TEMPERATURE : 23,23deg.C  
HUMIDITY : 45,42%

FCC ID : AK8PCG5A1L  
IC No. : 409B-PCG5A1L

ENGINEER : Kenichi Adachi

CCK , QPSK , IEEE802.11b, Rate: 11Mbps

ch	FREQ [MHz]	S/A Reading [dBm]	Cable Loss [dB]	ATTEN. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
ch1	2412.3	-14.06	3.2	10.0	-0.9	8.0	8.9
ch6	2437.3	-14.27	3.1	10.0	-1.1	8.0	9.1
ch11	2462.3	-15.51	3.2	10.0	-2.3	8.0	10.3

OFDM , 64QAM , IEEE802.11g, Rate: 54Mbps

ch	FREQ [MHz]	S/A Reading [dBm]	Cable Loss [dB]	ATTEN. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
ch1	2412.3	-19.93	3.2	10.0	-6.7	8.0	14.7
ch6	2437.3	-20.98	3.1	10.0	-7.8	8.0	15.8
ch11	2462.3	-21.97	3.2	10.0	-8.7	8.0	16.7

Sample Calculation:

Result = Reading + (Cable+ATTEN.)Loss

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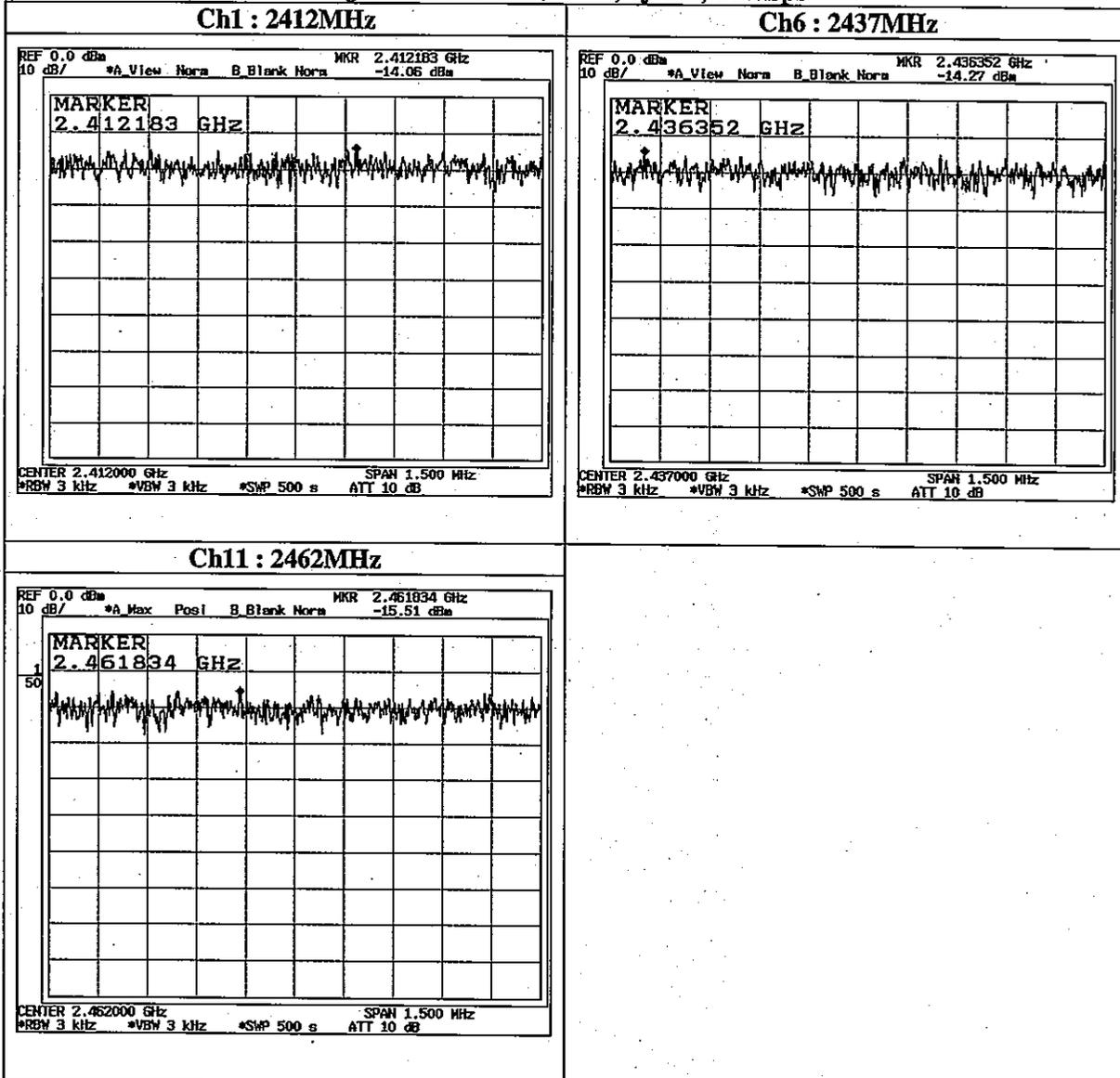
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Power Density (Conducted)

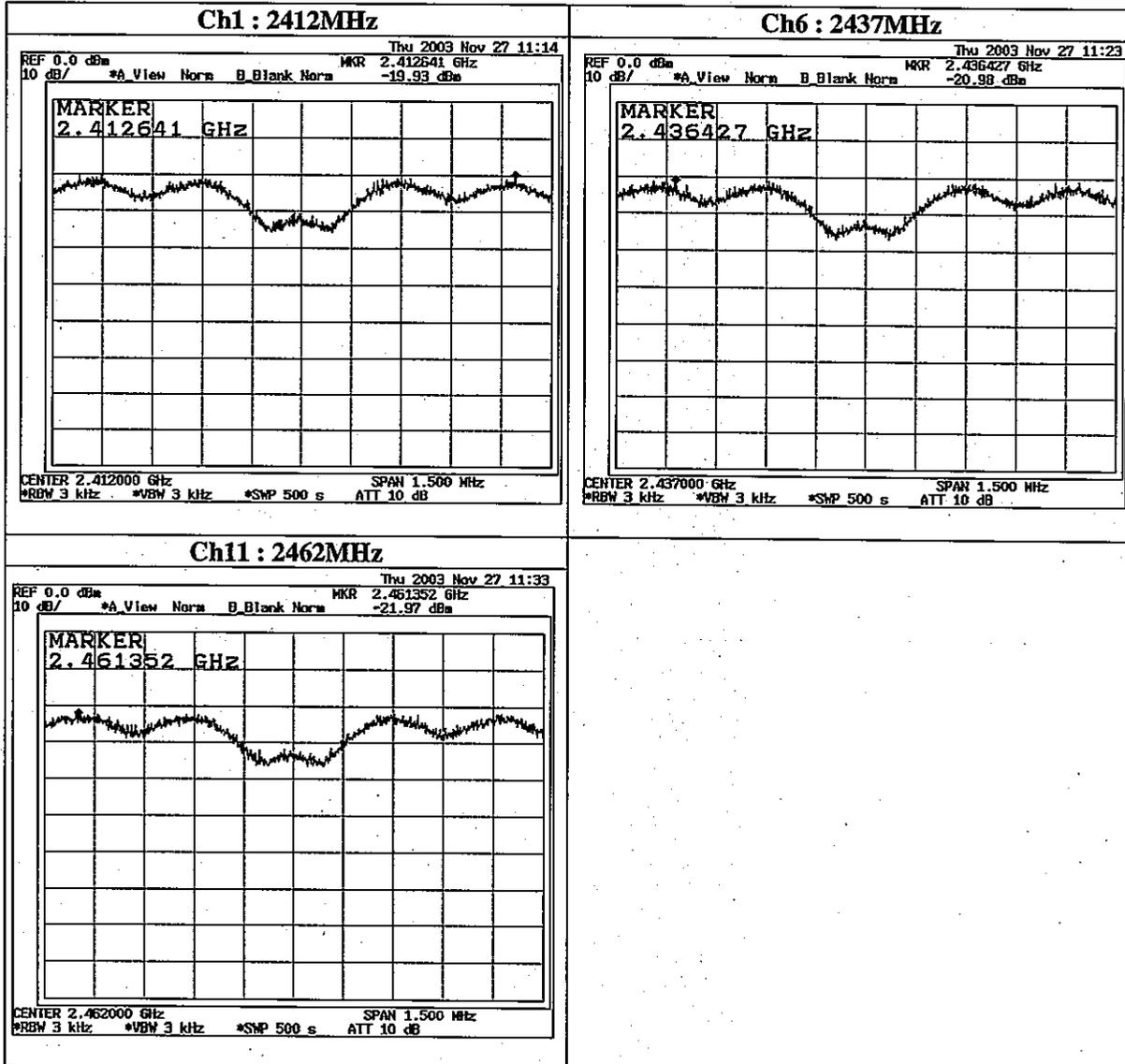
Main Antenna, Transmitting (IEEE 802.11b) CCK, QPSK, 11Mbps



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### Power Density (Conducted)

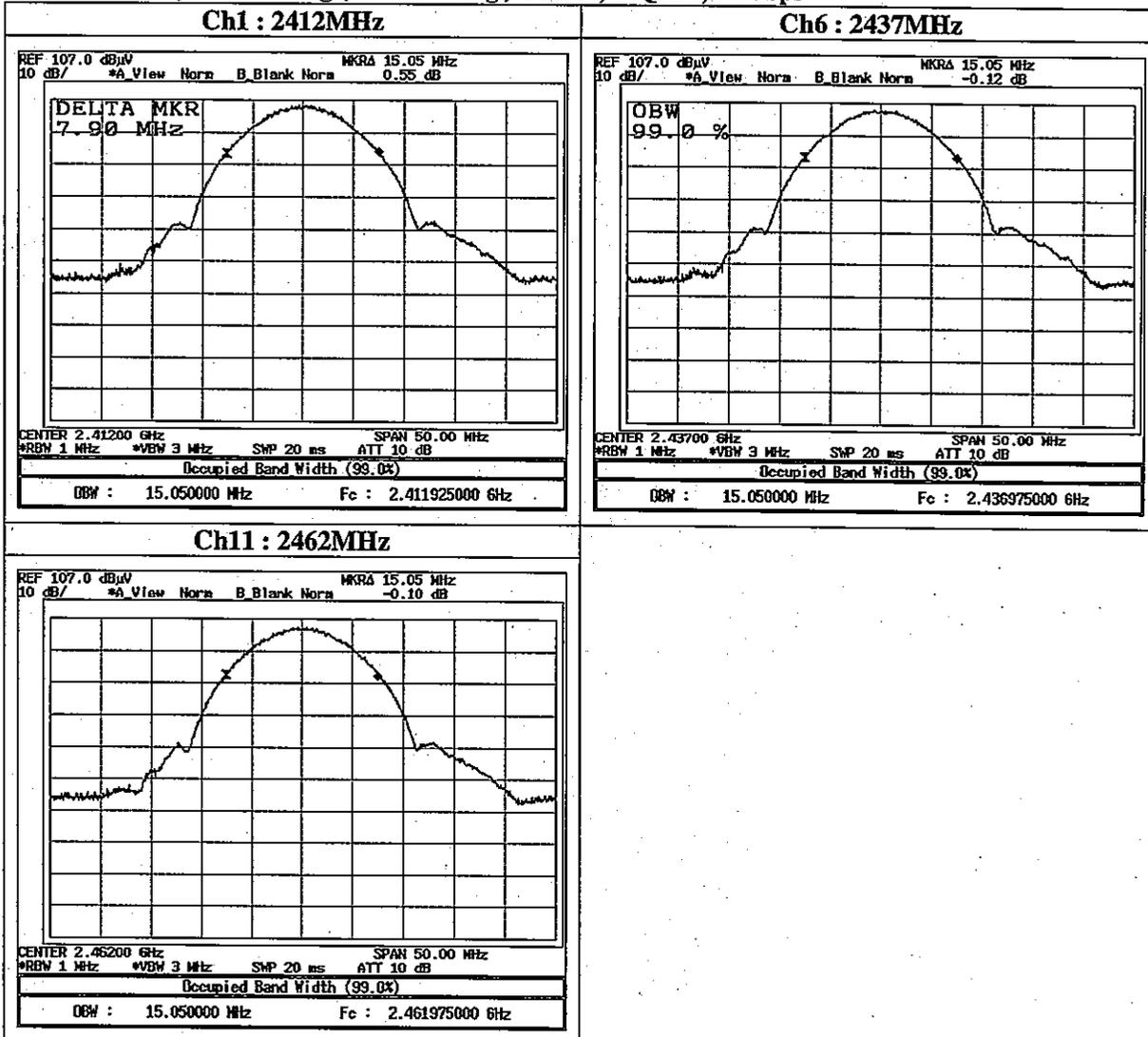
Main Antenna, Transmitting (IEEE 802.11g) OFDM, 64QAM, 54Mbps



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**99% Occupied Bandwidth**

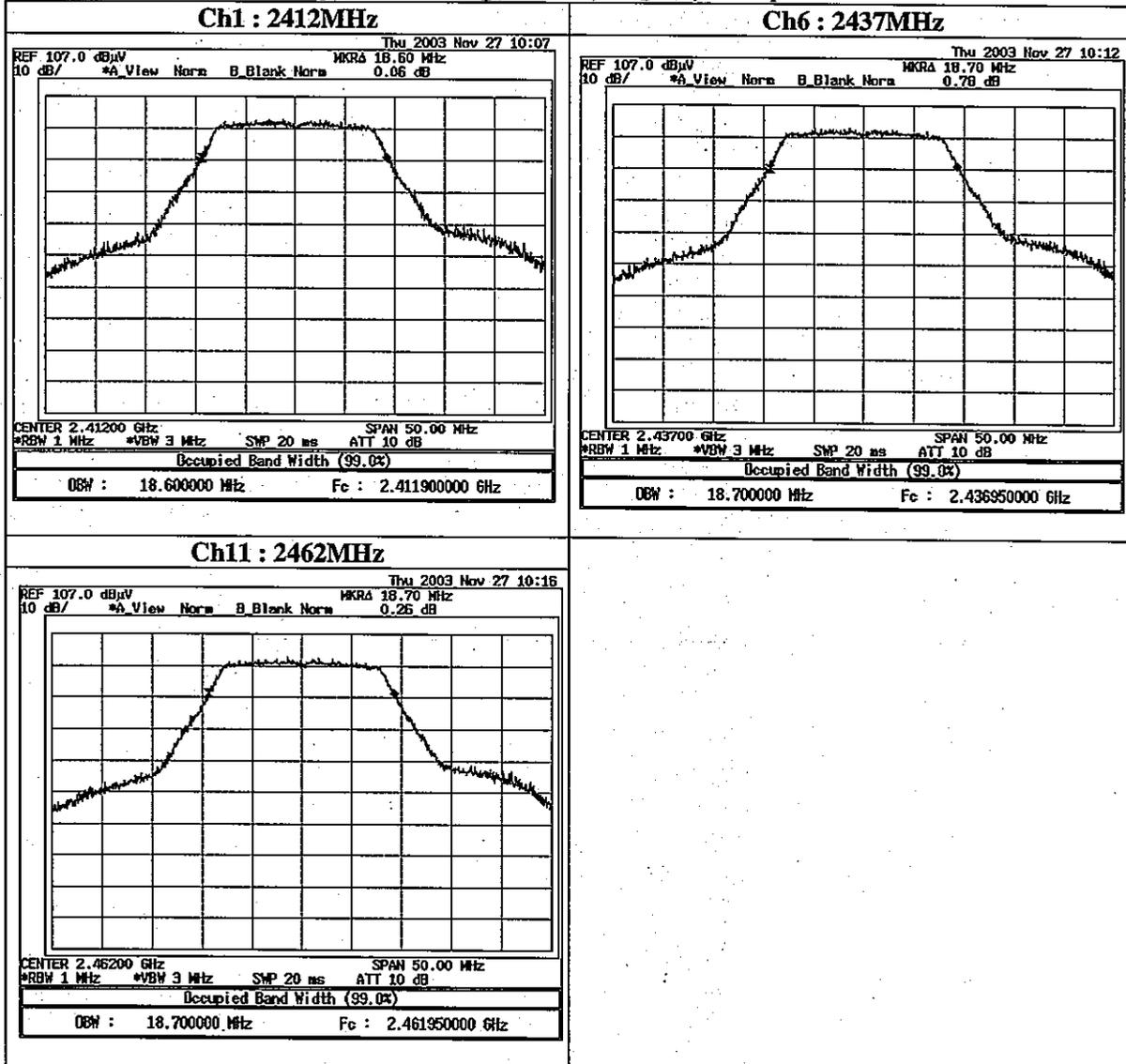
Main Antenna, Transmitting (IEEE 802.11g) OFDM, 64QAM, 54Mbps



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**99% Occupied Bandwidth**

Main Antenna, Transmitting (IEEE 802.11g) OFDM, 64QAM, 54Mbps



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