EMI TEST REPORT

Test Report No. : 25LE0058-HO-1

Applicant	:	**Canon Inc.**
Type of Equipment	:	**WLAN MODULE UNIT**
Model No.	:	**CM13264**
FCC ID	:	**AZDCM13264**
Test standard	:	**FCC Part 15 Subpart C Section 15.207, Section 15.247 : 2005**
Test Result	:	**Complied**

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

Date of test:

July 9 to August 30, 2005

Tested by:

Yutaka Yoshida
EMC Services

Norihisa Hashimoto
EMC Services

Approved by :

Tetsuo Maeno
Site Manager of EMC Services

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

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SECTION 1: Client information

Company Name	:	Canon Inc.
Brand name	:	Canon
Address	:	30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501 Japan
Telephone Number	:	+81-3-3757-6798
Facsimile Number	:	+81-3-3757-8431
Contact Person	:	Takayuki Kono

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

2.1 Identification of E.U.T.

Type of Equipment	:	WLAN MODULE UNIT
Model No.	:	CM13264
Serial No.	:	MT0165, MT0166
Country of Manufacture	:	JAPAN
Rating	:	AC100 - 240V (AC Adaptor)
Receipt Date of Sample	:	July 8, 2005
Condition of EUT	:	Production Prototype (Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product Description

Model No: CM13264 is the WLAN MODULE UNIT.

Clock frequency	CPU: 44MHz
Feature of EUT	A small Wireless LAN module with Antenna and CF interface. RF characteristics is specified in the IEEE 802.11b standard.

Equipment Type	Transceiver
Frequency of Operation	2412-2472 MHz
Intermediate frequency	480MHz
Type of Modulation	DSSS
Antenna Type	Planar Inverted-F
Antenna Gain	-0.6 dBi max
Mode of Operation	Simplex
Method of frequency generation	Synthesizer
ITU code	G1D
Power Supply	DC3.15-3.45V

FCC 15.31 (e)

Power source, DC3.35V of EUT is supplied from the printer in which the EUT is installed. The following three voltages are supplied with RF module part.
-3.3V (not regulated) 2.9V (regulated) 2.5V (regulated) 1.4V (regulated)
Testing of the variation of the input voltage was performed and complied with this requirement.
As for the detail, please refer to APPENDIX 4.

FCC Part 15.203 Antenna requirement

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

SECTION 3: Test specification, procedures & results

3.1 Test Specification

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

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	Conducted emission	ANSI C63.4:2003 7. AC powerline conducted emission measurements	Section 15.207	-	N/A	15.8dB 0.70757MHz, QP, L	Complied
2	6dB Bandwidth	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(a)(2)	Conducted	N/A	*See data.	Complied
3	Maximum Peak Output Power	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247(b)(3)	Conducted	N/A		
4	Spurious Emission	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d)	Conducted/ Radiated	N/A	4.2dB 17059MHz 17234MHz, AV Horizontal	Complied
5	Restricted Band Edges	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (d)	Conducted	N/A	*See data.	Complied
6	Power Density	ANSI C63.4:2003 13. Measurement of intentional radiators	Section 15.247 (e)	Conducted	N/A		

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

Uncertainty:

Conducted Emission

The measurement uncertainty (with a 95% confidence level) for this test is ±1.3dB.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.
The data listed in this test report has enough margin, more than the site margin.

Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test using Biconical antenna is ±4.5dB(3m)/ ±4.7dB(10m).
The measurement uncertainty (with a 95% confidence level) for this test using Logperiodic antenna is ±5.2dB(3m)/ ±3.8dB(10m).
The measurement uncertainty (with a 95% confidence level) for this test using Horn antenna is ±6.6dB.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.
The data listed in this test report has enough margin, more than the site margin.

Other test except Conducted Emission and Spurious Emission (Radiated)

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

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

3.3 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	RSS-210(issue 6): 2005	RSS-210 A1.1.3	Conducted	N/A	N/A	N/A
2	Co-location & Co-operation (Confirmation testing for Radiated Spurious Emission at simultaneous transmission)	ANSI C63.4:2003 13. Measurement of intentional radiators	Section15.247(d) RSS-210 A8.5	Radiated	N/A*1)	N/A	N/A

*1) The test is not applicable since EUT does not co-operation mode.

3.4 Test Location

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

	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	313583	IC4247A	19.2 x 11.2 x 7.7m	7.0 x 6.0m	Preparation room
No.2 semi-anechoic chamber	846015	IC4247A-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 shielded room	-	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.4 measurement room	-	-	3.1 x 5.0 x 2.7m	N/A	-

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

3.5 Test set up, Test instruments and Data of EMI

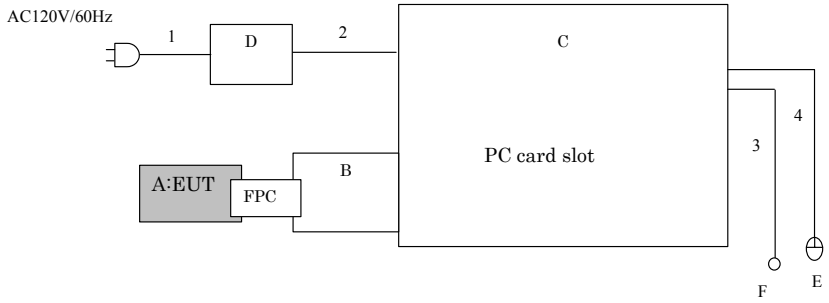
Refer to APPENDIX 1 to 3.

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

4.1 Operating Modes

The mode is used : Transmitting mode(CCK 11Mbps)
Low Channel :2412MHz(Ch1)
Mid Channel :2437MHz(Ch6)
High channel :2462MHz(Ch11)

4.2 Configuration and peripherals



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

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	FCC ID
A	WLAN MODULE UNIT	CM13264	MT0165 *1) MT0166 *2)	CANON	AZDCM13264 (EUT)
B	CF Adapter	ICM-MA2A-CL454N	-	JST	-
C	PC	PC-LM600J52DC	0Y02724KA	NEC	-
D	AC Adapter	PC-VP-BP08	0P-520-72501	NEC	-
E	Mouse *3)	M-UB48	830318-0000	Logitech	-
F	Ear Phone *3)	-	-	-	-

*1) Used for Conducted and Spurious emission (radiated) test
*2) Used for Antenna Terminal tests
*3) Used for Conducted emission test only

List of cables used

No.	Name	Length (m)	Shield
1	AC Cable	1.0	N
2	DC Cable	1.5	N
3	Ear phone Cable *3)	1.0	N
4	Mouse Cable *3)	0.8	N

SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a platform of nominal size, 1m by 0.5m, raised 80cm above the conducting ground plane.
The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center.

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

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber or a Measurement Room.
The EUT was connected to a LISN (AMN).
An overview sweep with peak detection has been performed.

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

SECTION 6: Spurious Emission

[Conducted]

Test Procedure
The Out of Band Emission was measured with a spectrum analyzer connected to the antenna port.
Test data : APPENDIX 3
Test result : Pass

[Radiated]

Test Procedure
EUT was placed on a platform of nominal size, 0.5m by 0.5m, raised 80cm above the conducting ground plane.
The Radiated Electric Field Strength intensity has been measured in a Semi Anechoic Chamber with a ground plane and at a distance of 3m(Below 10GHz) and 1m(Upper 10GHz).
The height of the measuring varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity.
The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer (in linear mode).
The test was made with the detector (RBW/VBW) in the following table.
When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

In any 100kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

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

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

Test data : APPENDIX 3
Test result : Pass

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

SECTION 7: 6dB Bandwidth

Test Procedure

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

Test data : APPENDIX 3
Test result : Pass

SECTION 8: Maximum Peak Output Power

Test Procedure
The Maximum Peak Output Power was measured with a peak power meter (power sensor) that has a function of detector for broadband connected to the antenna port.

Test data : APPENDIX 3
Test result : Pass

SECTION 9: Peak Power Density

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

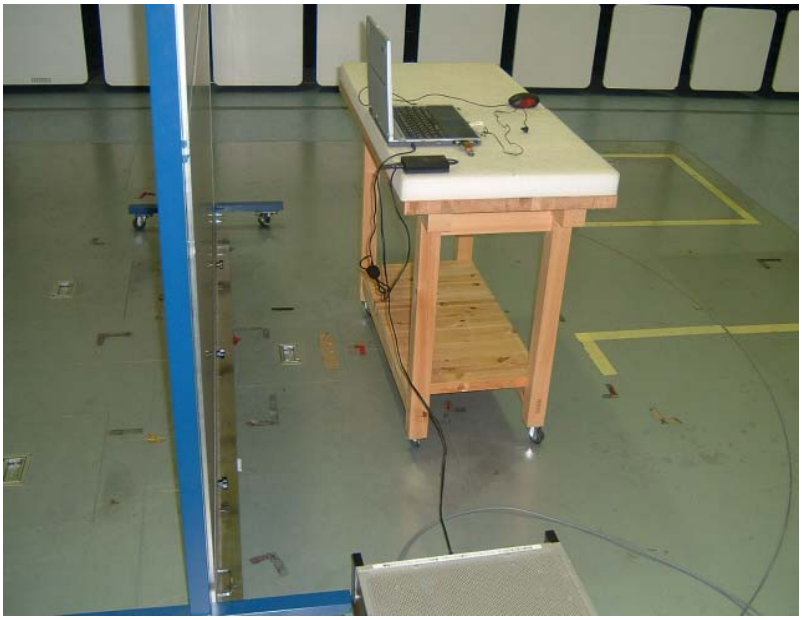
Test data : APPENDIX 3
Test result : Pass

APPENDIX 1: Photographs of test setup

Conducted Emission

Front

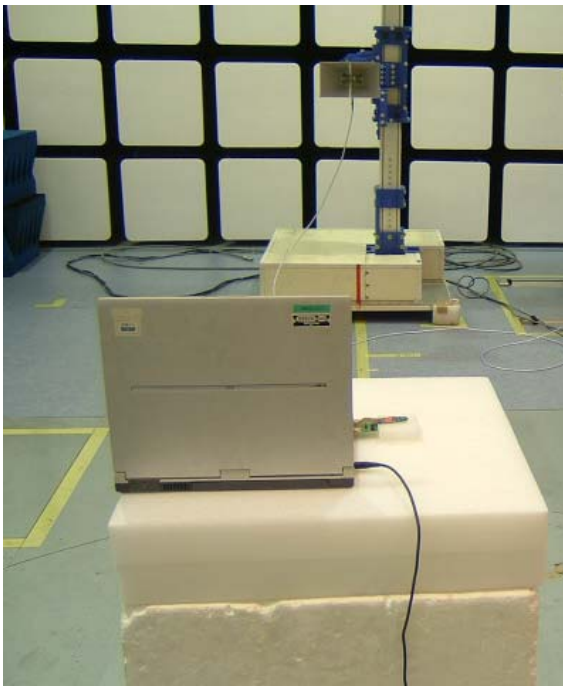
Side



Spurious Emission (Radiated)

Front

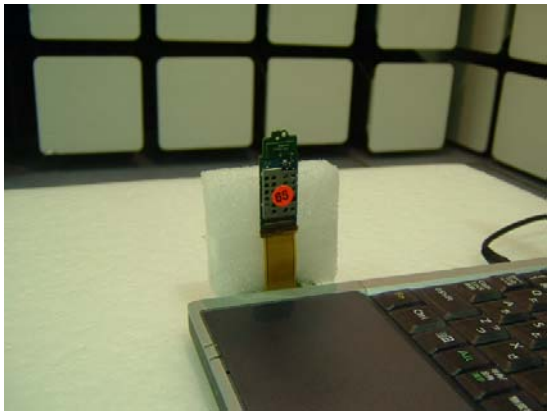
Rear



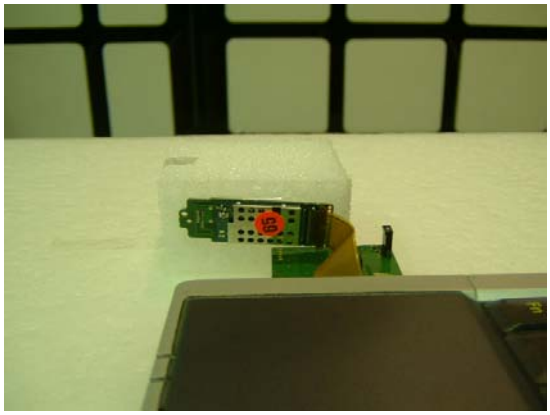
Worst Case Position (Z-axis:Horizontal / Y-axis:Vertical)

X-axis

Y-axis



Z-axis



APPENDIX 2:Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Test Item	Calibration Date * Interval(month)
MAEC-02	Anechoic Chamber	TDK	Semi Anechoic Chamber 3m	RE	2005/04/11 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	RE	2005/06/03 * 12
MHA-06	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2005/01/10 * 12
MCC-19	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2005/02/03 * 12
MCC-27	Microwave Cable 1G-50GHz	Suhner	SUCOFLEX101	RE	2004/08/26 * 12
MHA-02	Horn Antenna	EMCO	3160-09	RE	2005/01/10 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2005/02/05 * 12
MHF-02	High Pass Filter	Tokimec	TF323DCA	RE	2004/09/18 * 12
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE	2004/11/13 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE	2004/11/12 * 12
MBA-01	Biconical Antenna	Schwarzbeck	BBA9106	RE	2004/10/14 * 12
MLA-01	Logperiodic Antenna	Schwarzbeck	USLP9143	RE	2004/10/14 * 12
MCC-01	Coaxial Cable 0.1-3000MHz	Suhner/storm/Agilent/ TSJ	-	RE	2004/12/19 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2004/12/16 * 12
MPA-04	Pre Amplifier	Agilent	8447D	RE	2005/05/24 * 12
MCC-28	Microwave Cable 1G-50GHz	Suhner	SUCOFLEX101	Conducted	2004/08/26 * 12
MAT-20	Attenuator(10dB) (above1GHz)	HIROSE ELECTRIC CO.,LTD.	AT-110	Conducted	2005/01/11 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	Conducted	2005/06/03 * 12
MPM-01	Power Meter	Agilent	E4417A	Conduced	2004/11/09 * 12
MPSE-03	Power sensor	Agilent	E9327A	Conducted	2004/11/23 * 12

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

CE: AC Main Conducted Emission
RE: Radiated Spurious Emission
Conducted : Maximum Peak Output Power, 6dB Bandwidth, Peak Output Power Density, Spurious Emission (Conducted)

APPENDIX 3: Data of EMI test

Conducted Emission

2005/07/21 15:27:15

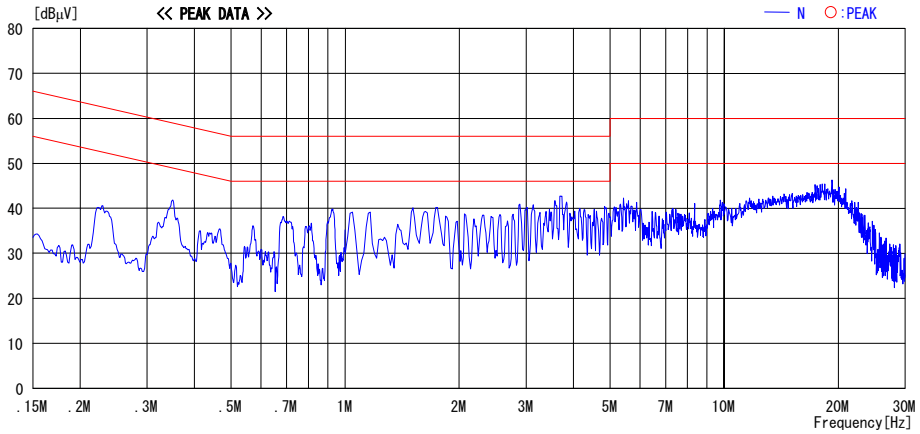
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/21 15:26:20

Applicant	: CANON	Report No.	: 25LE0058-HO
Kind of EUT	: WLAN MODULE UNIT	Power	: AC120V / 60Hz
Model No.	: CM13264	Temp℃/Humi%	: 24deg.C / 54%
Serial No.	: MT0165	Operator	: Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Tx:2412

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



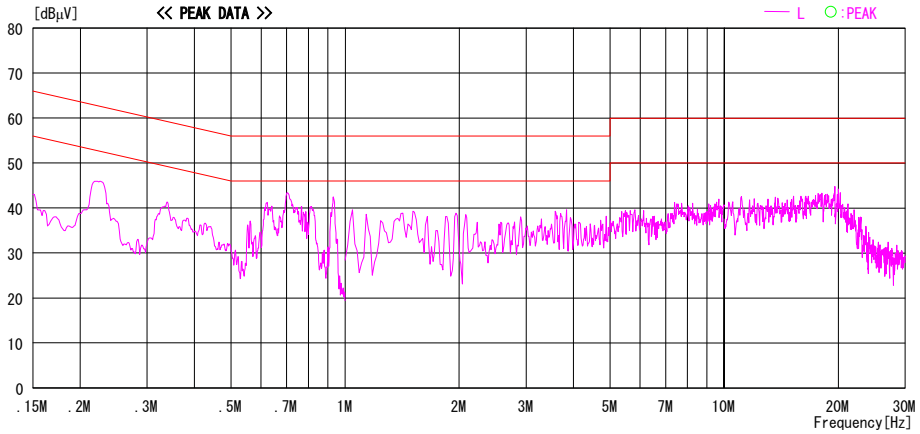


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

2005/07/21 15:31:52

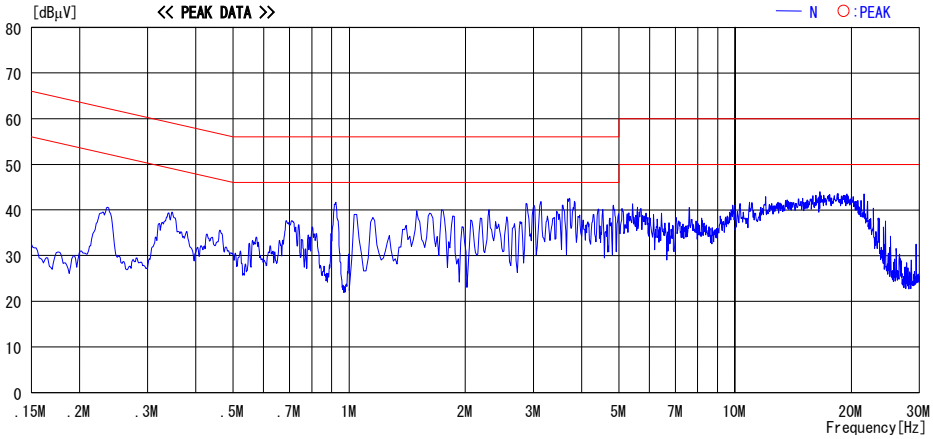
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/21 15:30:57

Applicant	: CANON	Report No.	: 25LE0058-HO
Kind of EUT	: WLAN MODULE UNIT	Power	: AC120V / 60Hz
Model No.	: CM13264	Temp℃/Humi%	: 24deg.C / 54%
Serial No.	: MT0165	Operator	: Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Tx:2437

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



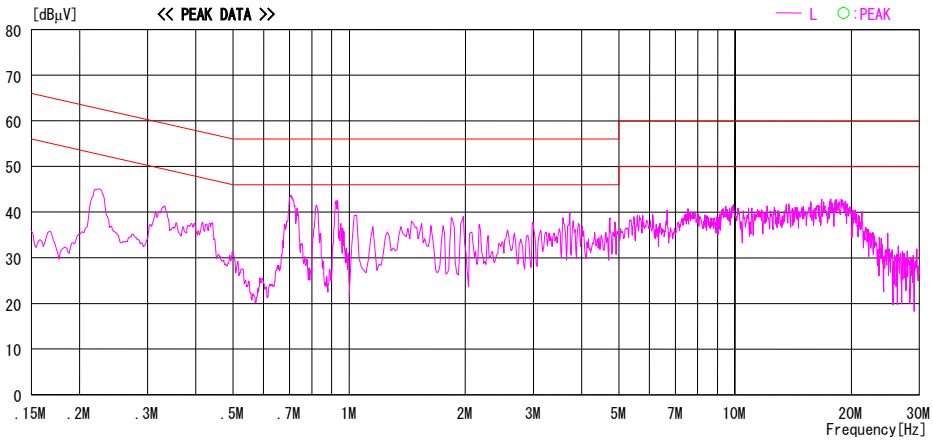


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

2005/07/21 15:35:41

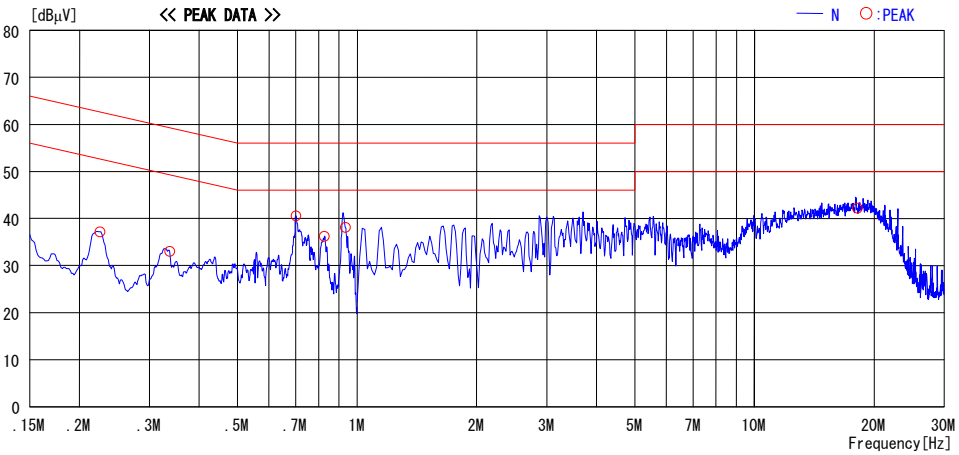
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/21 15:35:09

Applicant	: CANON	Report No.	: 25LE0058-HO
Kind of EUT	: WLAN MODULE UNIT	Power	: AC120V / 60Hz
Model No.	: CM13264	Temp℃/Humi%	: 24deg.C / 54%
Serial No.	: MT0165	Operator	: Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Tx:2462

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



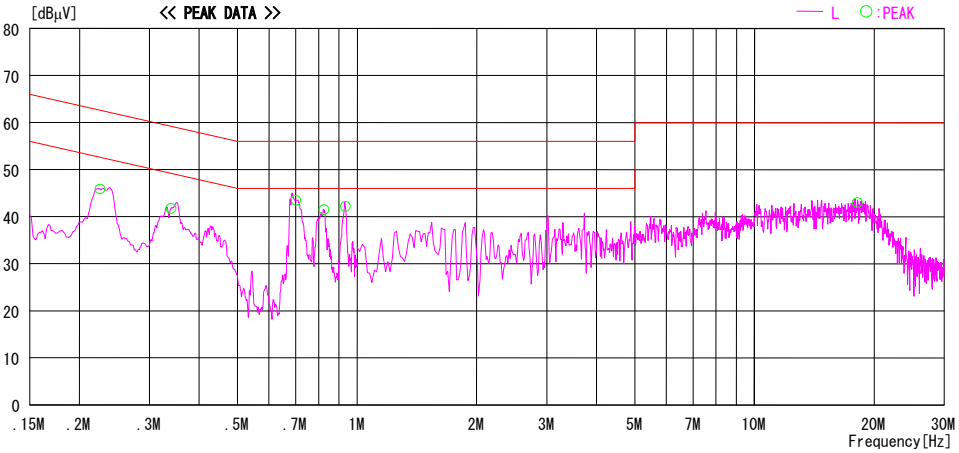


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

2005/07/21 16:38:40

DATA OF CONDUCTED EMISSION TEST

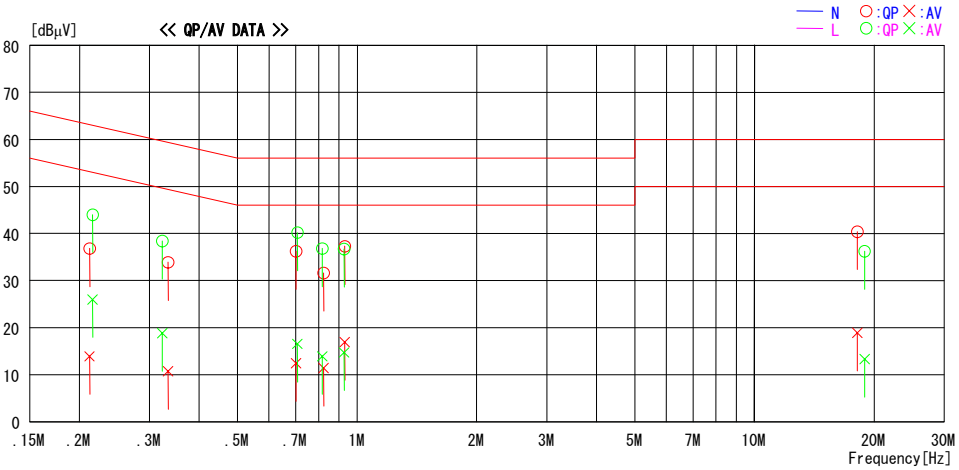
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/21 15:35:09

Applicant : CANON
Kind of EUT : WLAN MODULE UNIT
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : AC120V/60Hz
Temp℃/Humi% : 24deg.C / 55%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE.802 11b Tx:2462MHz

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



Frequency	Reading Level		Corr.	Results		Limit		Margin		Phase
	QP	AV	Factor	QP	AV	QP	AV	QP	AV	
[MHz]	[dBuV]	[dBuV]	[dB]	[dBuV]	[dBuV]	[dBuV]	[dBuV]	[dB]	[dB]	
0.21218	36.7	13.8	0.1	36.8	13.9	63.1	53.1	26.3	39.2	N
0.21596	43.9	25.9	0.1	44.0	26.0	63.0	53.0	19.0	27.0	L
0.32331	38.3	18.7	0.1	38.4	18.8	59.6	49.6	21.2	30.8	L
0.33453	33.8	10.6	0.1	33.9	10.7	59.3	49.3	25.4	38.6	N
0.70195	35.9	12.1	0.3	36.2	12.4	56.0	46.0	19.8	33.6	N
0.70757	39.9	16.2	0.3	40.2	16.5	56.0	46.0	15.8	29.5	L
0.81712	36.5	13.6	0.3	36.8	13.9	56.0	46.0	19.2	32.1	L
0.82400	31.3	11.1	0.3	31.6	11.4	56.0	46.0	24.4	34.6	N
0.92806	36.4	14.4	0.3	36.7	14.7	56.0	46.0	19.3	31.3	L
0.93123	37.0	16.6	0.3	37.3	16.9	56.0	46.0	18.7	29.1	N
18.13125	38.7	17.2	1.7	40.4	18.9	60.0	50.0	19.6	31.1	N
18.92155	34.4	11.5	1.8	36.2	13.3	60.0	50.0	23.8	36.7	L

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

6dB Bandwidth(DSSS and other forms of modulation)

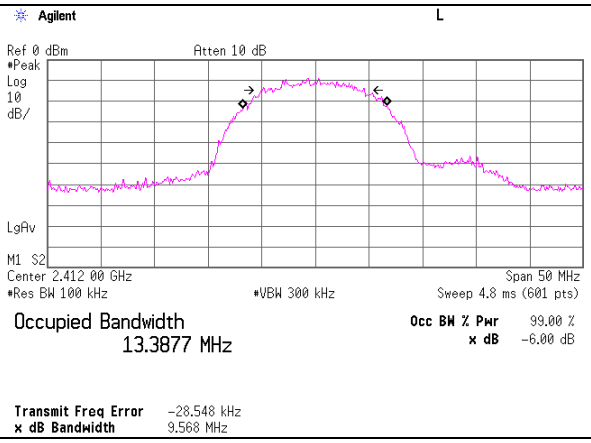
UL Apex Co., Ltd.
Head Office EMC Lab. No.3 Shielded Room

Company	: Canon Inc.	REPORT NO	: 25LE0058-HO
Equipment	: Wireless LAN Module	REGULATION	: Fcc Part15 Subpart C 15.247(a)(2)
Model	: CM13264	TEST DISTANCE	: -
Sample No.	: MT0166	DATE	: 07/12/2005
Power	: DC3.3V (from PCMCIA Slot)	TEMPERATURE	: 23℃
Mode	: Tx (ch1,6,11)	HUMIDITY	: 60%
		ENGINEER	: Yutaka Yoshida

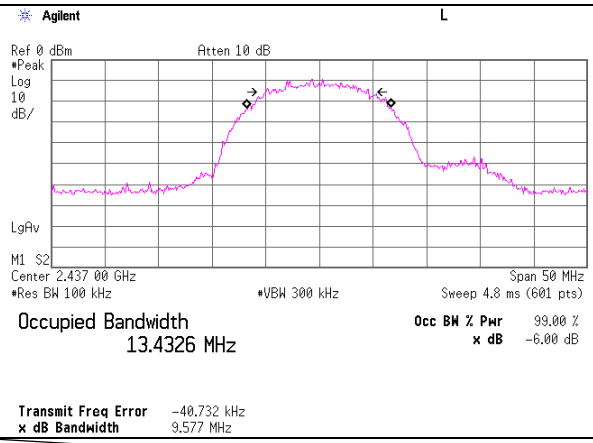
Ch	Freq. [MHz]	6dB Bandwidth [MHz]	Limit [kHz]
Low	2412.0	9.568	500.0
Mid	2437.0	9.577	500.0
High	2462.0	9.556	500.0

6dB Bandwidth(DSSS and other forms of modulation)

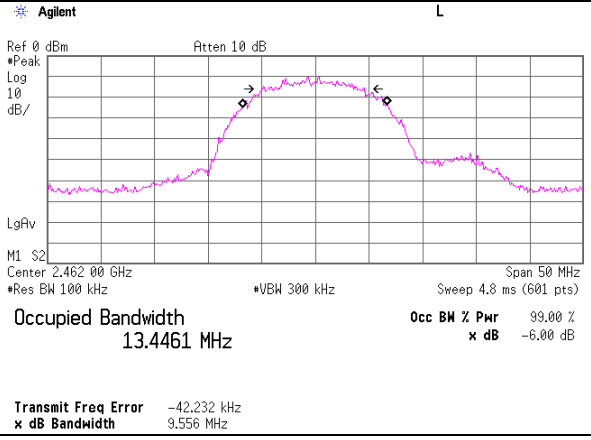
Ch:Low



Ch:Mid



Ch:High



Maximum Peak OutPut Power (DSSS and other forms of modulation)

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

Company	: Canon Inc.	REPORT NO	: 25LE0058-HO
Equipment	: Wireless LAN Module	REGULATION	: Fcc Part15 Subpart C 15.247(b)(3)
Model	: CM13264	TEST DISTANCE	: -
Sample No.	: MT0166	DATE	: 08/30/2005
Power	: DC3.3V(from PCMCIA Slot)	TEMPERATURE	: 24℃
Mode	: Tx(ch1,6,11)	HUMIDITY	: 58%
		ENGINEER	: Yutaka Yoshida

Ch	Freq. [MHz]	Power meter Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2412.0	1.04	1.70	10.00	12.74	30.00	17.26
Mid	2437.0	0.92	1.71	10.00	12.63	30.00	17.37
High	2462.0	0.65	1.72	10.00	12.37	30.00	17.63

Sample Calculation:
Result = Reading + Cable Loss (including customer cable) + Attenuator

Radiated Spurious Emission(DSSS and other forms of modulation)

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/09

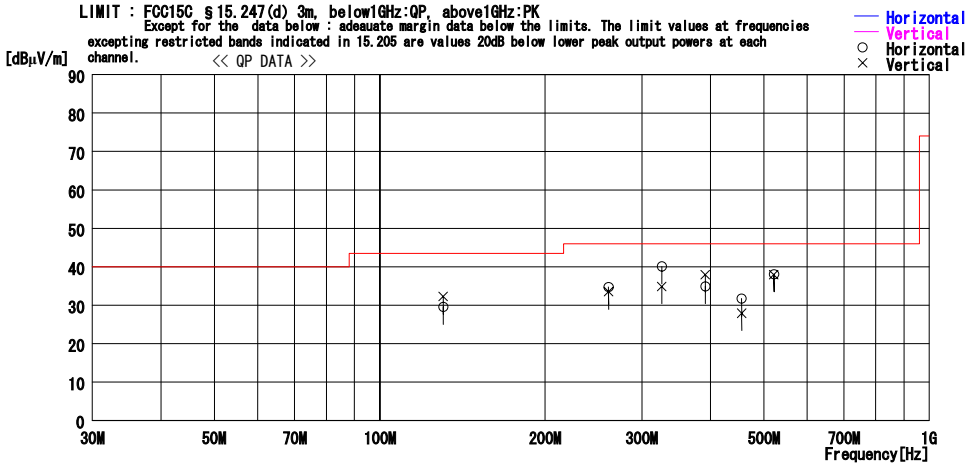
Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : AC120V/60Hz
Temp./Humi. : 25deg.C / 68%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting ch1 2412MHz

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

<< QP DATA >>



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
130.447	37.6	QP	13.8	-19.2	32.2	0	100	Vert.	43.5	11.3	
130.447	35.0	QP	13.8	-19.2	29.6	142	195	Hori.	43.5	13.9	
260.904	32.8	QP	18.1	-17.4	33.5	272	100	Vert.	46.0	12.5	
260.904	34.0	QP	18.1	-17.4	34.7	224	173	Hori.	46.0	11.3	
326.129	41.5	QP	15.6	-17.0	40.1	93	100	Hori.	46.0	5.9	
326.129	36.3	QP	15.6	-17.0	34.9	63	100	Vert.	46.0	11.1	
391.349	34.2	QP	17.7	-17.0	34.9	139	100	Hori.	46.0	11.1	
391.349	37.3	QP	17.7	-17.0	38.0	179	140	Vert.	46.0	8.0	
456.032	30.6	QP	18.4	-17.3	31.7	164	222	Hori.	46.0	14.3	
456.032	26.8	QP	18.4	-17.3	27.9	166	100	Vert.	46.0	18.1	
521.795	36.4	QP	18.9	-17.2	38.1	172	100	Hori.	46.0	7.9	
521.795	36.3	QP	18.9	-17.2	38.0	0	118	Vert.	46.0	8.0	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/09

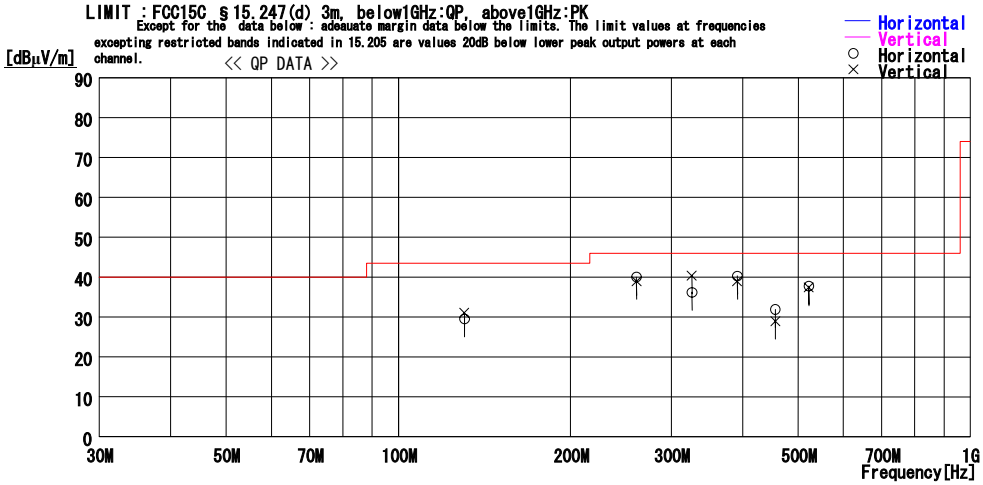
Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 68%
Operator : Norihisa Hashimoto

Mode / Remarks: IEEE802.11b Transmitting ch6 2437MHz

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.

<< QP DATA >>



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
130.459	35.0	QP	13.8	-19.2	29.6	117	188	Hori.	43.5	13.9	
130.459	36.5	QP	13.8	-19.2	31.1	0	100	Vert.	43.5	12.4	
260.903	39.3	QP	18.1	-17.4	40.0	163	125	Hori.	46.0	6.0	
260.903	38.3	QP	18.1	-17.4	39.0	213	100	Vert.	46.0	7.0	
326.138	37.6	QP	15.6	-17.0	36.2	210	100	Hori.	46.0	9.8	
326.138	41.8	QP	15.6	-17.0	40.4	297	100	Vert.	46.0	5.6	
391.369	39.6	QP	17.7	-17.0	40.3	165	100	Hori.	46.0	5.7	
391.369	38.3	QP	17.7	-17.0	39.0	116	138	Vert.	46.0	7.0	
456.578	30.8	QP	18.4	-17.3	31.9	222	197	Hori.	46.0	14.1	
456.578	27.9	QP	18.4	-17.3	29.0	166	100	Vert.	46.0	17.0	
521.811	36.0	QP	18.9	-17.2	37.7	227	100	Hori.	46.0	8.3	
521.811	35.7	QP	18.9	-17.2	37.4	221	100	Vert.	46.0	8.6	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

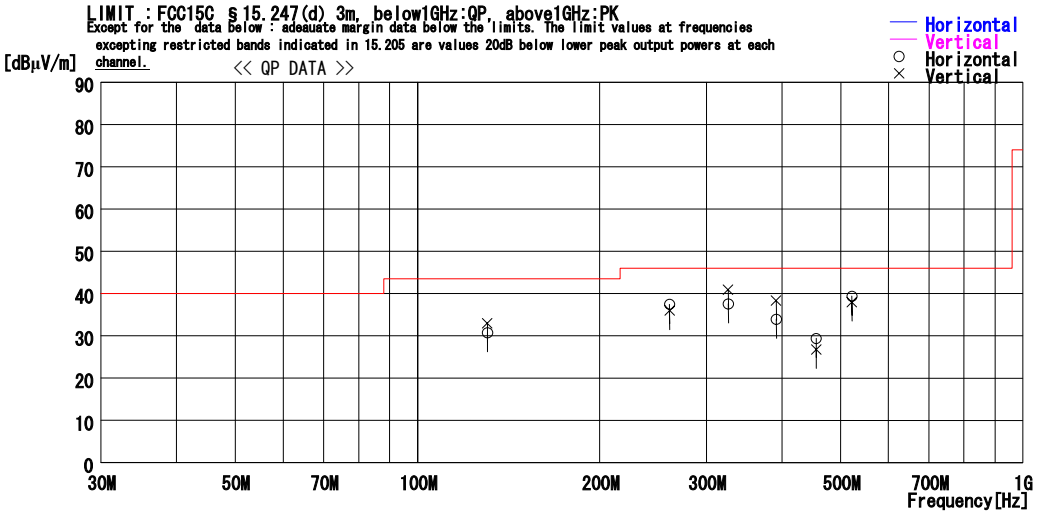
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 68%
Operator : Norihisa Hashimoto

Mode / Remarks: IEEE802.11b Transmitting ch11 2462MHz

LIMIT : FCC15C §15.247(d) 3m, below1GHz:QP, above1GHz:PK
Except for the data below : adequate margin data below the limits. The limit values at frequencies excepting restricted bands indicated in 15.205 are values 20dB below lower peak output powers at each channel.



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
130.453	36.1	QP	13.8	-19.2	30.7	146	159	Hori.	43.5	12.8	
130.453	38.4	QP	13.8	-19.2	33.0	0	100	Vert.	43.5	10.5	
260.923	36.8	QP	18.1	-17.4	37.5	0	131	Hori.	46.0	8.5	
260.923	35.3	QP	18.1	-17.4	36.0	262	100	Vert.	46.0	10.0	
326.125	39.0	QP	15.6	-17.0	37.6	58	160	Hori.	46.0	8.4	
326.125	42.3	QP	15.6	-17.0	40.9	35	182	Vert.	46.0	5.1	
391.351	33.2	QP	17.7	-17.0	33.9	159	100	Hori.	46.0	12.1	
391.351	37.6	QP	17.7	-17.0	38.3	171	153	Vert.	46.0	7.7	
456.029	28.3	QP	18.4	-17.3	29.4	155	100	Hori.	46.0	16.6	
456.029	25.7	QP	18.4	-17.3	26.8	140	100	Vert.	46.0	19.2	
521.816	37.7	QP	18.9	-17.2	39.4	163	204	Hori.	46.0	6.6	
521.816	36.3	QP	18.9	-17.2	38.0	0	100	Vert.	46.0	8.0	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

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

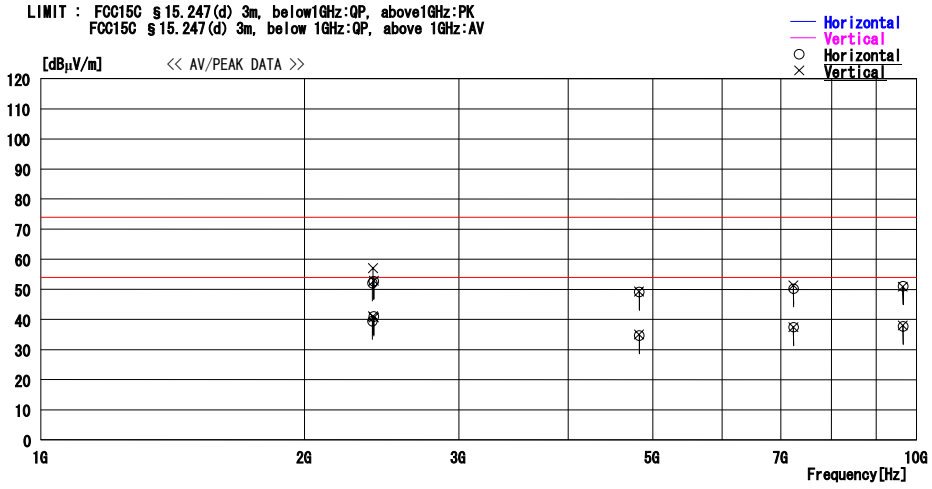
Date : 2005/07/09

Applicant : Canon Inc,
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : AC120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting ch1 2412MHz

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



Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
2390.000	55.3	PK	30.5	-33.7	52.1			Hori.	74.0	21.9	
2395.300	60.2	PK	30.5	-33.7	57.0			Vert.	74.0	17.0	
2400.000	55.9	PK	30.5	-33.7	52.7			Hori.	74.0	21.3	
2400.000	56.0	PK	30.5	-33.7	52.8			Vert.	74.0	21.2	
4824.000	44.9	PK	35.3	-31.1	49.1			Hori.	74.0	24.9	
4824.000	45.1	PK	35.3	-31.1	49.3			Vert.	74.0	24.7	
7236.000	43.4	PK	37.7	-30.9	50.2			Hori.	74.0	23.8	
7236.000	44.5	PK	37.7	-30.9	51.3			Vert.	74.0	22.7	
9648.000	44.9	PK	36.9	-30.7	51.1			Hori.	74.0	23.0	
9648.000	44.7	PK	36.9	-30.7	50.9			Vert.	74.0	23.1	
2395.300	44.3	AV	30.5	-33.7	41.1			Vert.	54.0	12.9	
2400.000	43.9	AV	30.5	-33.7	40.7			Vert.	54.0	13.3	
4824.000	30.7	AV	35.3	-31.1	34.9			Vert.	54.0	19.1	
7236.000	30.8	AV	37.7	-30.9	37.4			Vert.	54.0	16.7	
9648.000	31.8	AV	36.9	-30.7	38.0			Vert.	54.0	16.0	
2390.000	42.7	AV	30.5	-33.7	39.5			Hori.	54.0	14.6	
2400.000	44.2	AV	30.5	-33.7	41.0			Hori.	54.0	13.0	
4824.000	30.4	AV	35.3	-31.1	34.6			Hori.	54.0	19.4	
7236.000	30.6	AV	37.7	-30.9	37.4			Hori.	54.0	16.6	
9648.000	31.5	AV	36.9	-30.7	37.7			Hori.	54.0	16.3	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

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

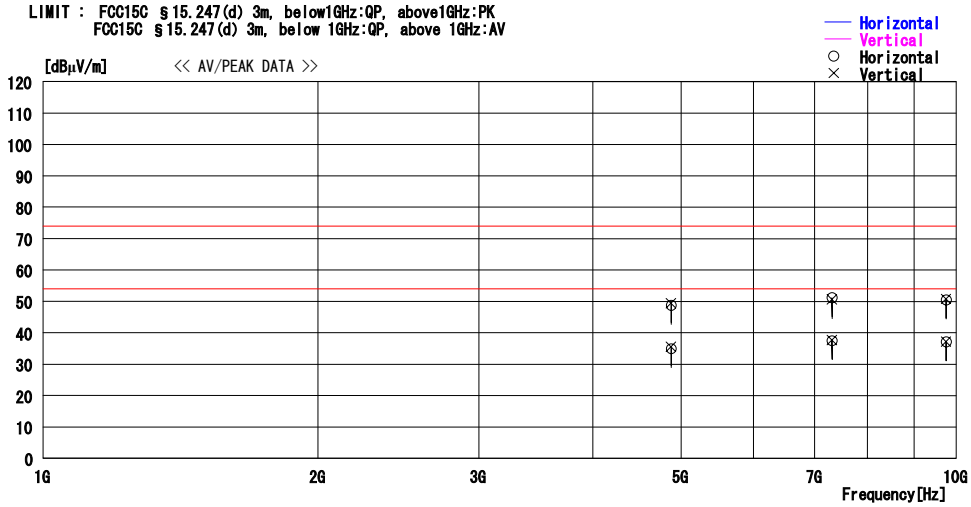
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting ch6 2437MHz

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
4874.000	44.2	PK	35.6	-31.1	48.7			Hori.	74.0	25.3	
4874.000	44.9	PK	35.6	-31.1	49.4			Vert.	74.0	24.6	
7311.000	44.1	PK	37.9	-30.8	51.2			Hori.	74.0	22.8	
7311.000	43.5	PK	37.9	-30.8	50.6			Vert.	74.0	23.4	
9748.000	44.2	PK	36.8	-30.5	50.5			Hori.	74.0	23.5	
9748.000	44.5	PK	36.8	-30.5	50.8			Vert.	74.0	23.2	
4874.000	30.4	AV	35.6	-31.1	34.9			Hori.	54.0	19.1	
4874.000	31.0	AV	35.6	-31.1	35.5			Vert.	54.0	18.5	
7311.000	30.4	AV	37.9	-30.8	37.5			Hori.	54.0	16.5	
7311.000	30.6	AV	37.9	-30.8	37.7			Vert.	54.0	16.3	
9748.000	30.8	AV	36.8	-30.5	37.1			Hori.	54.0	16.9	
9748.000	30.9	AV	36.8	-30.5	37.2			Vert.	54.0	16.8	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

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

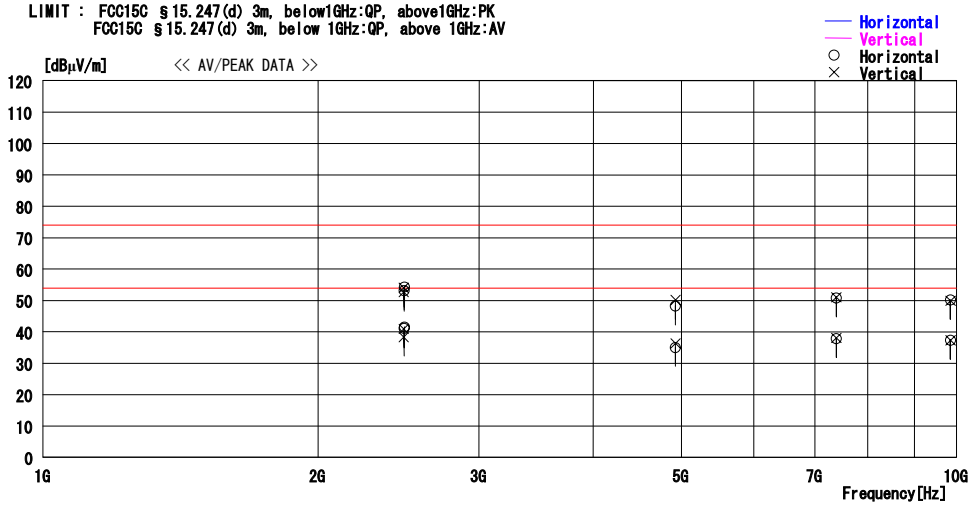
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting ch11 2462MHz

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
2486.590	57.5	PK	30.5	-33.7	54.3			Hori.	74.0	19.7	
2484.020	57.2	PK	30.5	-33.7	54.0			Vert.	74.0	20.0	
4924.000	43.4	PK	35.9	-31.0	48.3			Hori.	74.0	25.7	
4924.000	45.2	PK	35.9	-31.0	50.1			Vert.	74.0	23.9	
7386.000	43.4	PK	38.0	-30.6	50.8			Hori.	74.0	23.2	
7386.000	43.6	PK	38.0	-30.6	51.0			Vert.	74.0	23.0	
9848.000	43.9	PK	36.7	-30.4	50.2			Hori.	74.0	23.8	
9848.000	43.6	PK	36.7	-30.4	49.9			Vert.	74.0	24.1	
2486.590	44.8	AV	30.5	-33.7	41.6			Hori.	54.0	12.4	
2484.020	41.5	AV	30.5	-33.7	38.3			Vert.	54.0	15.7	
4924.000	30.1	AV	35.9	-31.0	35.0			Hori.	54.0	19.0	
4924.000	31.4	AV	35.9	-31.0	36.3			Vert.	54.0	17.7	
7386.000	30.4	AV	38.0	-30.6	37.8			Hori.	54.0	16.2	
7386.000	30.6	AV	38.0	-30.6	38.0			Vert.	54.0	16.0	
9848.000	31.0	AV	36.7	-30.4	37.3			Hori.	54.0	16.7	
9848.000	31.0	AV	36.7	-30.4	37.3			Vert.	54.0	16.7	
2483.500	55.8	PK	30.5	-33.7	52.6			Vert.	74.0	21.4	
2483.500	44.1	AV	30.5	-33.7	40.9			Vert.	54.0	13.1	
2483.500	56.3	PK	30.5	-33.7	53.1			Hori.	74.0	20.9	
2483.500	44.3	AV	30.5	-33.7	41.1			Hori.	54.0	12.9	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

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

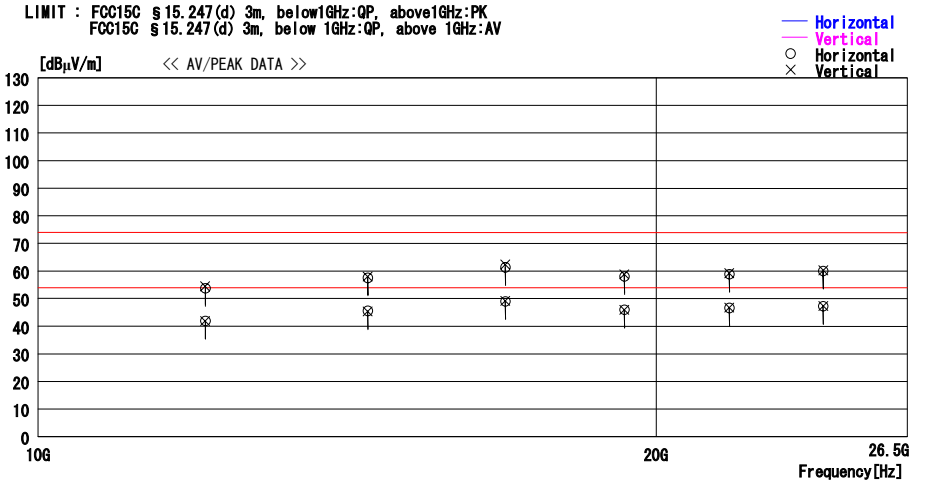
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : AC120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting ch 2412MHz

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
12060.000	42.4	PK	41.6	-30.2	53.8			Hori.	74.0	20.2	
12060.000	43.1	PK	41.6	-30.2	54.5			Vert.	74.0	19.5	
14472.000	44.1	PK	41.9	-28.5	57.5			Hori.	74.0	16.5	
14472.000	44.6	PK	41.9	-28.5	58.0			Vert.	74.0	16.1	
16884.000	44.6	PK	45.2	-28.4	61.4			Hori.	74.0	12.6	
16884.000	45.5	PK	45.2	-28.4	62.3			Vert.	74.0	11.7	
19296.000	44.5	PK	40.2	-26.6	58.1			Hori.	74.0	16.0	
19296.000	45.2	PK	40.2	-26.6	58.8			Vert.	74.0	15.2	
21708.000	46.4	PK	39.8	-27.3	58.9			Hori.	74.0	15.1	
21708.000	46.6	PK	39.8	-27.3	59.1			Vert.	74.0	14.9	
24120.000	48.1	PK	40.4	-28.5	60.0			Hori.	74.0	14.0	
24120.000	48.4	PK	40.4	-28.5	60.3			Vert.	74.0	13.7	
12060.000	30.5	AV	41.6	-30.2	41.9			Hori.	54.0	12.1	
12060.000	30.5	AV	41.6	-30.2	41.9			Vert.	54.0	12.1	
14472.000	32.1	AV	41.9	-28.5	45.5			Hori.	54.0	8.5	
14472.000	31.9	AV	41.9	-28.5	45.3			Vert.	54.0	8.7	
16884.000	32.2	AV	45.2	-28.4	49.0			Hori.	54.0	5.0	
16884.000	32.5	AV	45.2	-28.4	49.3			Vert.	54.0	4.8	
19296.000	32.4	AV	40.2	-26.6	46.0			Hori.	54.0	8.0	
19296.000	32.3	AV	40.2	-26.6	45.9			Vert.	54.0	8.1	
21708.000	34.2	AV	39.8	-27.3	46.7			Hori.	54.0	7.3	
21708.000	34.2	AV	39.8	-27.3	46.7			Vert.	54.0	7.3	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting c1 2412MHz

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

Frequency [MHz]	Reading [dBuV]	DET	Antenna Factor [dB/m]	Loss& Gain [dB]	Level [dBuV/m]	Angle [Deg]	Height [cm]	Polar.	Limit [dBuV/m]	Margin [dB]	Comment
24120.000	35.4	AV	40.4	-28.5	47.3			Hori.	54.0	6.8	
24120.000	35.4	AV	40.4	-28.5	47.3			Vert.	54.0	6.7	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

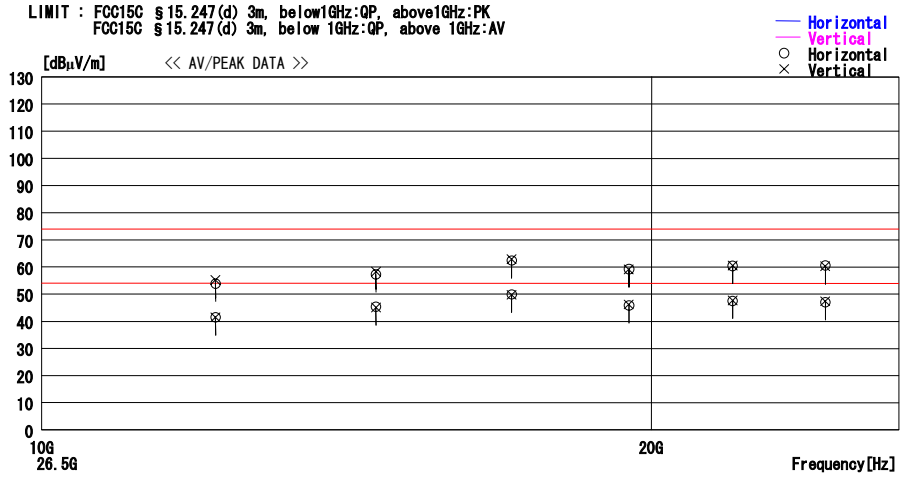
UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting c6 2437MHz

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
12185.000	43.7	PK	41.6	-30.1	55.2			Vert.	74.0	18.8	
12185.000	42.3	PK	41.6	-30.1	53.8			Hori.	74.0	20.2	
14622.000	45.1	PK	42.1	-28.9	58.3			Vert.	74.0	15.7	
14622.000	44.1	PK	42.1	-28.9	57.3			Hori.	74.0	16.7	
17059.000	45.9	PK	45.3	-28.4	62.8			Vert.	74.0	11.2	
17059.000	45.5	PK	45.3	-28.4	62.4			Hori.	74.0	11.6	
19496.000	45.5	PK	40.3	-26.7	59.1			Vert.	74.0	14.9	
19496.000	45.6	PK	40.3	-26.7	59.2			Hori.	74.0	14.8	
21933.000	47.5	PK	39.8	-26.8	60.5			Vert.	74.0	13.5	
21933.000	47.4	PK	39.8	-26.8	60.4			Hori.	74.0	13.6	
24370.000	47.9	PK	40.4	-28.1	60.2			Vert.	74.0	13.8	
24370.000	48.3	PK	40.4	-28.1	60.6			Hori.	74.0	13.4	
12185.000	29.9	AV	41.6	-30.1	41.4			Vert.	54.0	12.6	
12185.000	30.0	AV	41.6	-30.1	41.5			Hori.	54.0	12.5	
14622.000	31.9	AV	42.1	-28.9	45.1			Vert.	54.0	8.9	
14622.000	32.1	AV	42.1	-28.9	45.3			Hori.	54.0	8.7	
17059.000	32.8	AV	45.3	-28.4	49.7			Vert.	54.0	4.3	
17059.000	33.0	AV	45.3	-28.4	49.9			Hori.	54.0	4.2	
19496.000	32.5	AV	40.3	-26.7	46.1			Vert.	54.0	7.9	
19496.000	32.3	AV	40.3	-26.7	45.9			Hori.	54.0	8.1	
21933.000	34.6	AV	39.8	-26.8	47.6			Vert.	54.0	6.4	
21933.000	34.5	AV	39.8	-26.8	47.5			Hori.	54.0	6.5	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting c6 2437MHz

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

Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
24370.000	35.1	AV	40.4	-28.1	47.4			Vert.	54.0	6.6	
24370.000	34.7	AV	40.4	-28.1	47.0			Hori.	54.0	7.0	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP,30-300MHz BICONICAL,300MHz-1000MHz LOGPERIODIC,1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

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

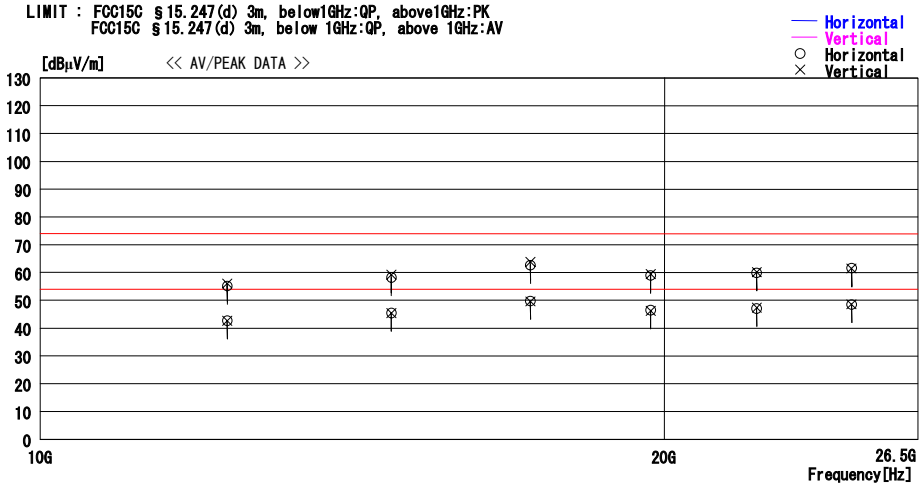
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting c11 2462MHz

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



Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
12310.000	44.3	PK	41.7	-30.0	56.0			Vert.	74.0	18.0	
12310.000	43.4	PK	41.7	-30.0	55.1			Hori.	74.0	18.9	
14772.000	46.2	PK	42.4	-29.4	59.2			Vert.	74.0	14.8	
14772.000	45.2	PK	42.4	-29.4	58.2			Hori.	74.0	15.8	
17234.000	47.3	PK	44.9	-28.4	63.8			Vert.	74.0	10.2	
17234.000	46.1	PK	44.9	-28.4	62.6			Hori.	74.0	11.4	
19696.000	46.0	PK	40.3	-26.8	59.5			Vert.	74.0	14.5	
19696.000	45.5	PK	40.3	-26.8	59.0			Hori.	74.0	15.0	
22158.000	47.0	PK	39.8	-26.7	60.1			Vert.	74.0	13.9	
22158.000	46.8	PK	39.8	-26.7	59.9			Hori.	74.0	14.2	
24620.000	48.5	PK	40.5	-27.6	61.4			Vert.	74.0	12.6	
24620.000	48.7	PK	40.5	-27.6	61.6			Hori.	74.0	12.4	
12310.000	30.9	AV	41.7	-30.0	42.6			Vert.	54.0	11.4	
12310.000	30.9	AV	41.7	-30.0	42.6			Hori.	54.0	11.4	
14772.000	32.4	AV	42.4	-29.4	45.4			Vert.	54.0	8.6	
14772.000	32.5	AV	42.4	-29.4	45.5			Hori.	54.0	8.5	
17234.000	33.1	AV	44.9	-28.4	49.6			Vert.	54.0	4.4	
17234.000	33.3	AV	44.9	-28.4	49.8			Hori.	54.0	4.2	
19696.000	32.7	AV	40.3	-26.8	46.2			Vert.	54.0	7.8	
19696.000	33.0	AV	40.3	-26.8	46.5			Hori.	54.0	7.5	
22158.000	34.3	AV	39.8	-26.7	47.4			Vert.	54.0	6.6	
22158.000	33.9	AV	39.8	-26.7	47.0			Hori.	54.0	7.0	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

DATA OF RADIATED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.2 Semi Anechoic Chamber
Date : 2005/07/09

Applicant : Canon Inc.
Kind of EUT : WLAN Module
Model No. : CM13264
Serial No. : MT0165

Report No. : 25LE0058-HO
Power : Ac120V/60Hz
Temp./Humi. : 25deg.C / 36%
Operator : Norihisa Hashimoto

Mode / Remarks : IEEE802.11b Transmitting c11 2462MHz

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

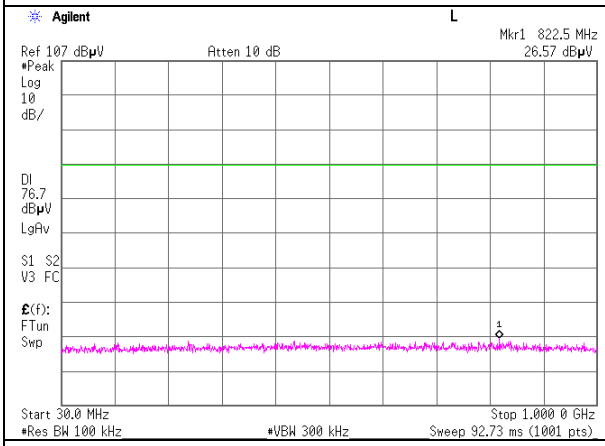
Frequency	Reading	DET	Antenna Factor	Loss& Gain	Level	Angle	Height	Polar.	Limit	Margin	Comment
[MHz]	[dBuV]		[dB/m]	[dB]	[dBuV/m]	[Deg]	[cm]		[dBuV/m]	[dB]	
24620.000	35.7	AV	40.5	-27.6	48.6			Vert.	54.0	5.4	
24620.000	35.5	AV	40.5	-27.6	48.4			Hori.	54.0	5.6	

CHART:WITH FACTOR ANT TYPE : -30MHz LOOP, 30-300MHz BICONICAL, 300MHz-1000MHz LOGPERIODIC, 1000MHz- HORN
Except for the data below : adequate margin data below the limits.
CALCULATION : READING + ANT FACTOR + LOSS(CABLE+ATTEN.) - AMP.GAIN

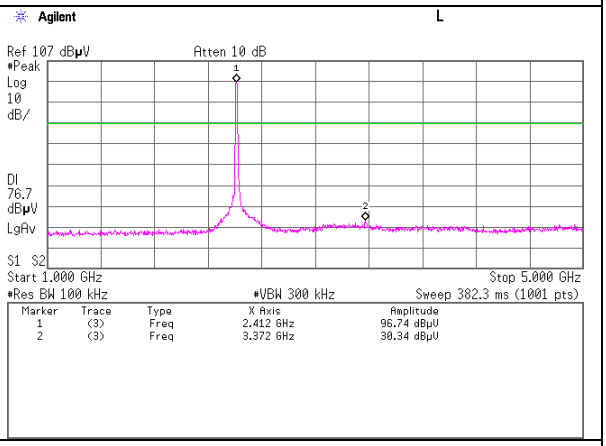
Conducted Spurious Emission(DSSS and other forms of modulation)

Ch : Low

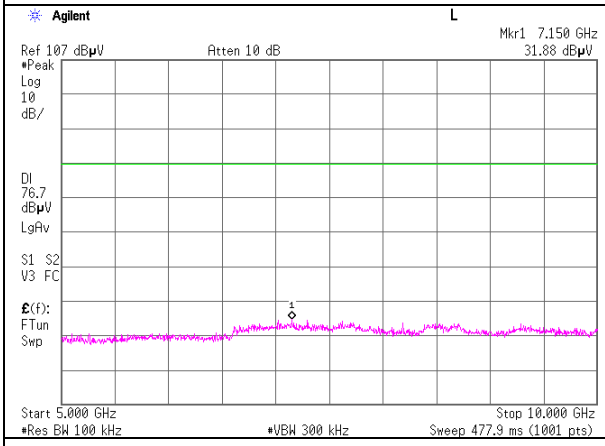
30MHz-1GHz



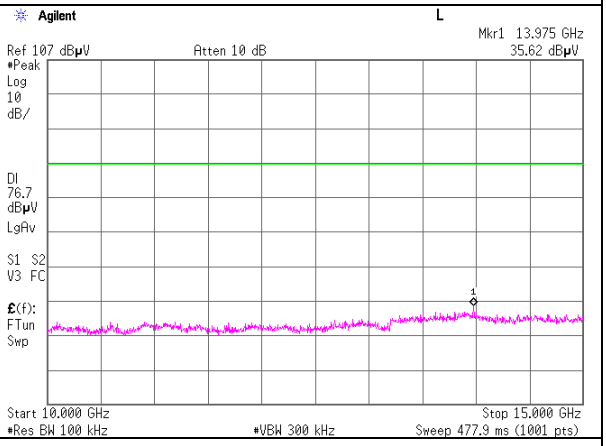
1GHz-5GHz



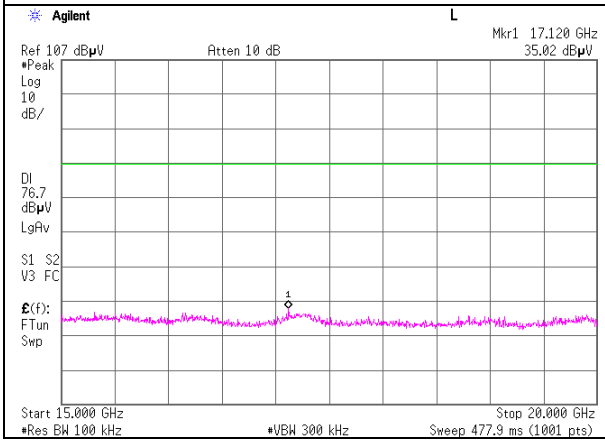
5GHz-10GHz



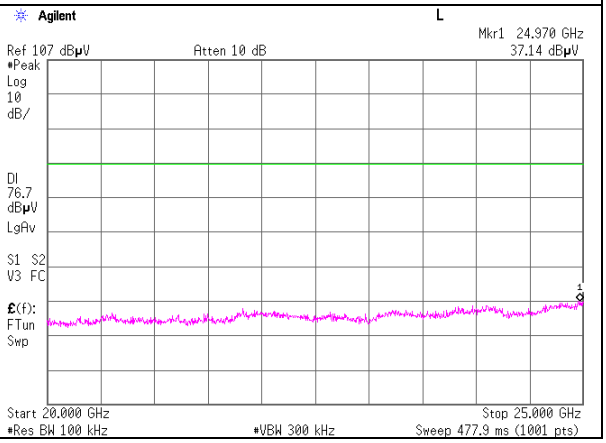
10GHz-15GHz



15GHz-20GHz



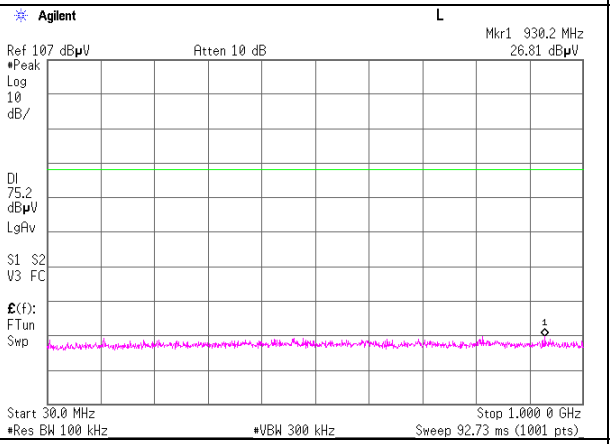
20GHz-25GHz



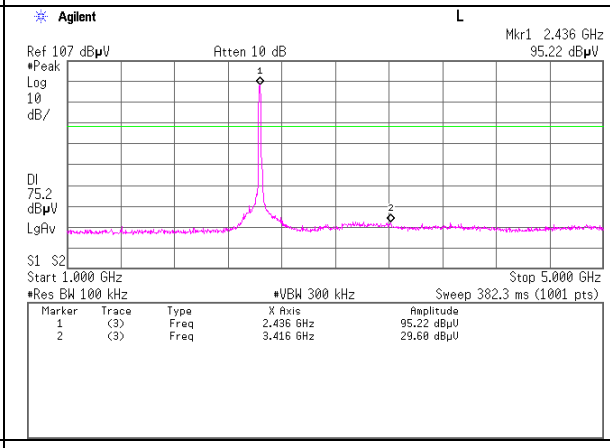
Conducted Spurious Emission (DSSS and other forms of modulation)

Ch : Mid

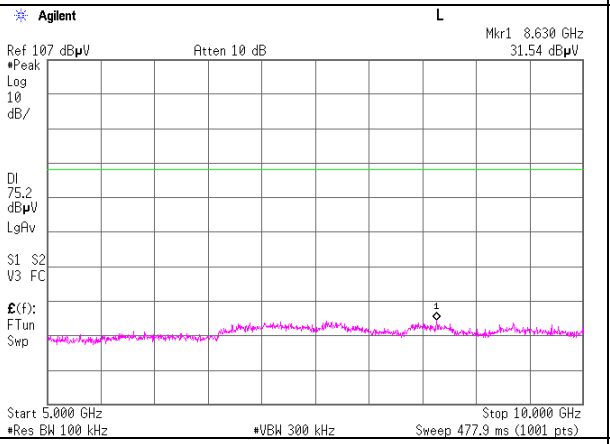
30MHz-1GHz



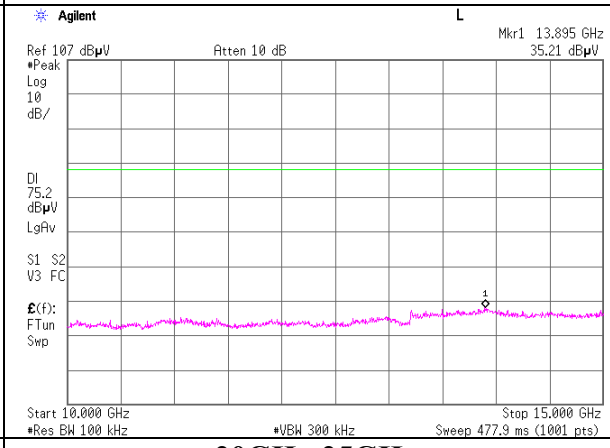
1GHz-5GHz



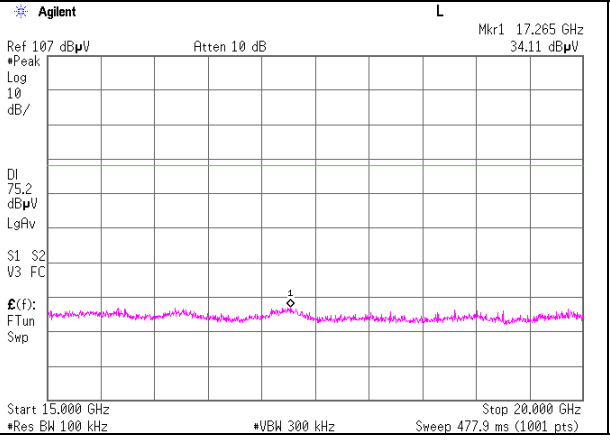
5GHz-10GHz



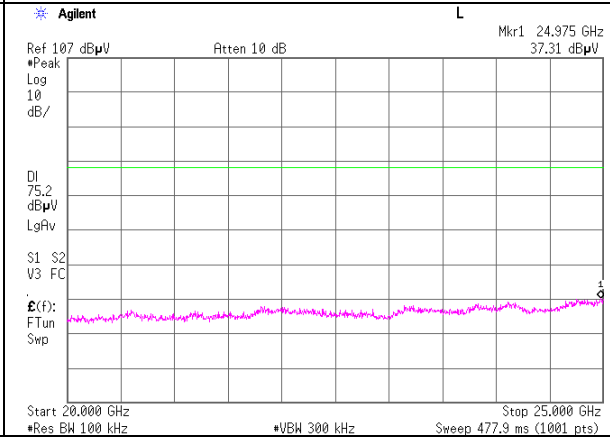
10GHz-15GHz



15GHz-20GHz



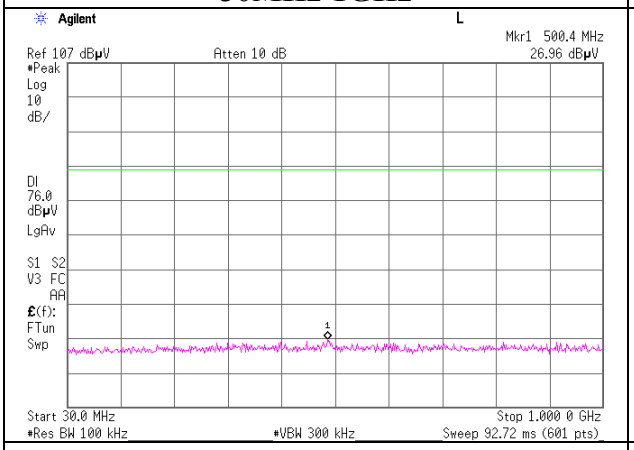
20GHz-25GHz



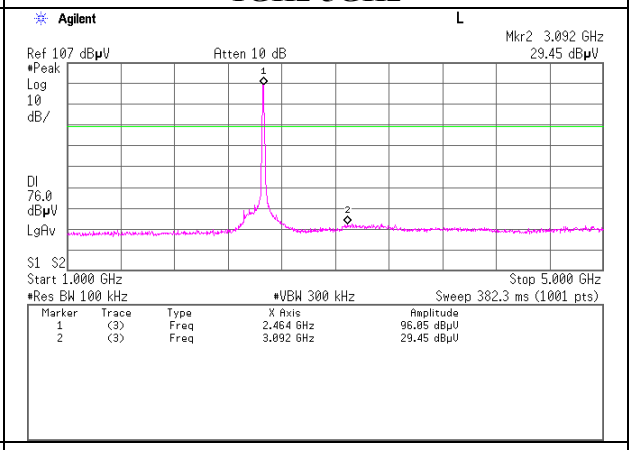
Conducted Spurious Emission(DSSS and other forms of modulation)

Ch : High

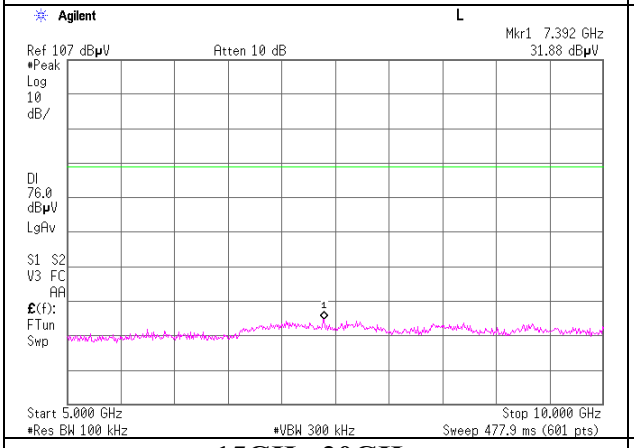
30MHz-1GHz



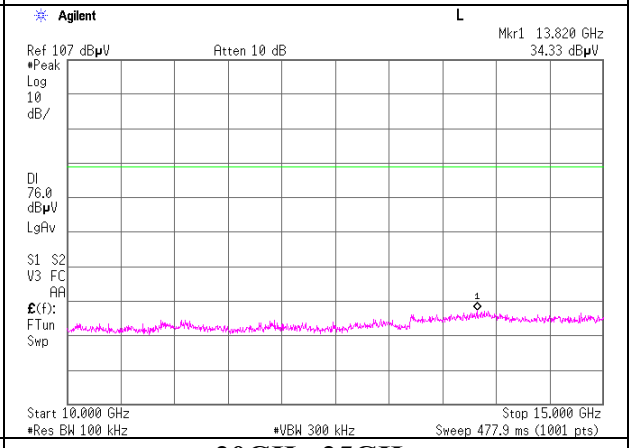
1GHz-5GHz



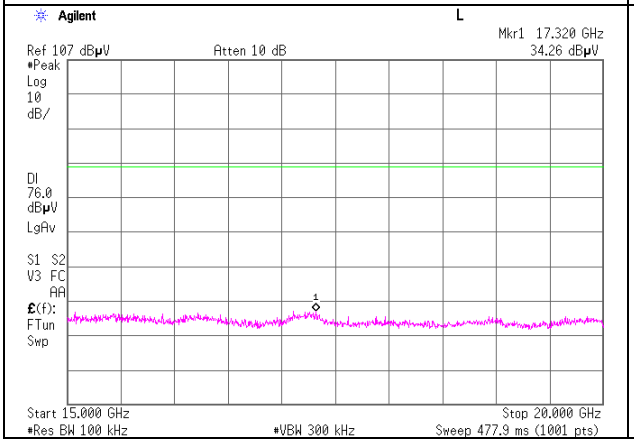
5GHz-10GHz



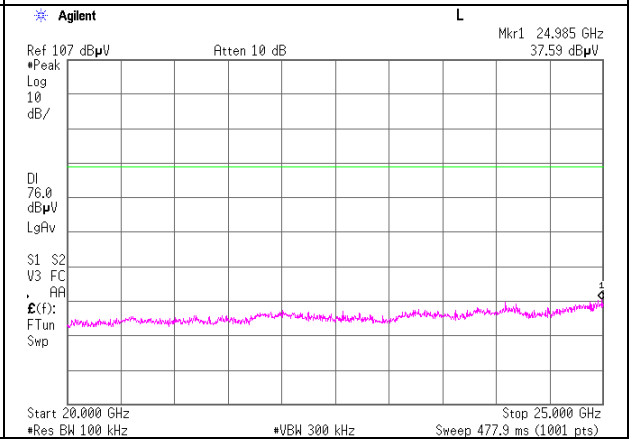
10GHz-15GHz



15GHz-20GHz

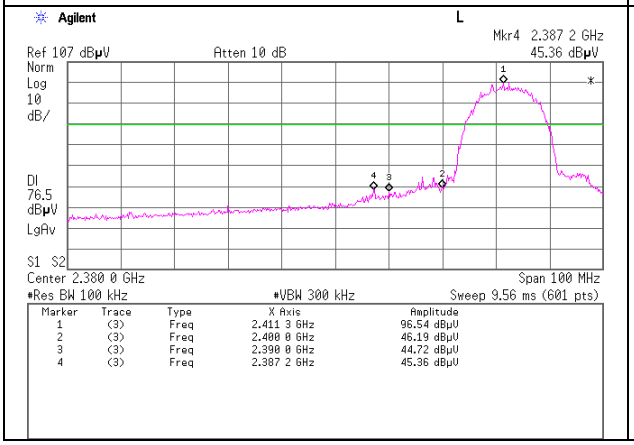


20GHz-25GHz

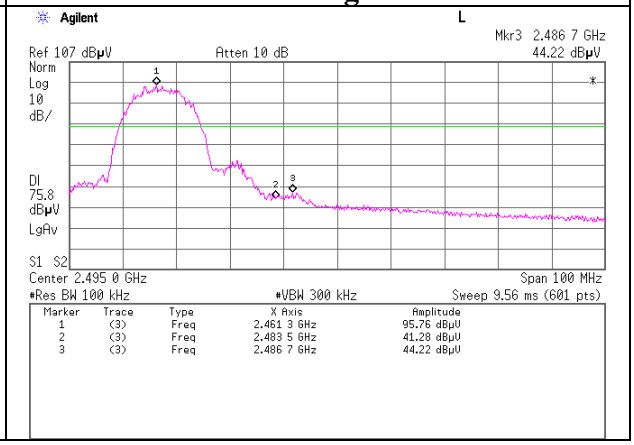


Conducted emission Band Edge compliance (DSSS and other forms of modulation)

Ch:Low



Ch:High



Power Density (DSSS and other forms of modulation)

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

COMPANY	: Canon Inc.	REGULATION	: FCC Part15 Subpart C 15.247(e)
QUIPMENT	: Wireless LAN Module	TEST DISTANCE	: -
MODEL	: CM13264	DATE	: 07/12/2005
SAMPLE NO.	: MT0166	TEMPERATURE	: 23℃
POWER	: DC3.3V(from PCMCIA Slot)	HUMIDITY	: 60%
MODE	: Tx (ch1,6,11)	ENGINEER	: Yutaka Yoshida

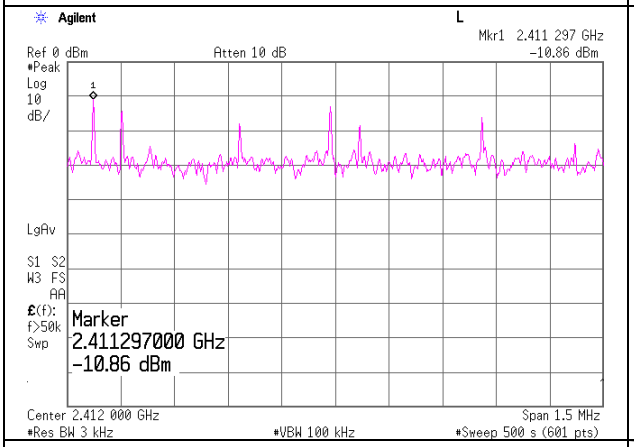
[IEEE802.11b]

Ch	Freq. [MHz]	Reading [dBm]	Cable [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
Low	2411.3	-10.86	1.7	10.0	0.8	8.0	7.2
Mid	2436.3	-11.13	1.7	10.0	0.6	8.0	7.4
High	2461.3	-11.04	1.7	10.0	0.7	8.0	7.3

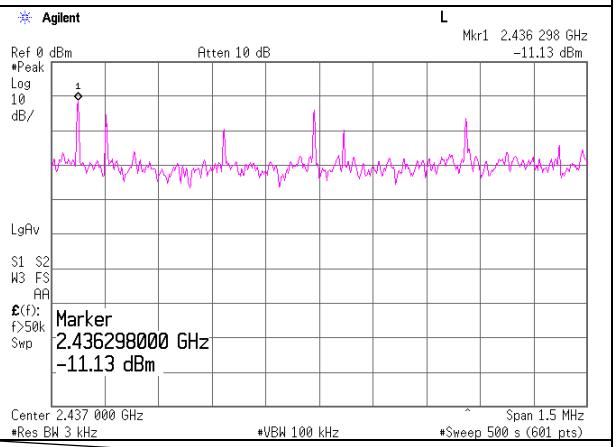
Sample Calculation:
Result = Reading + Cable Loss (including customer cable) + Attenuator

Power Density(DSSS and other forms of modulation)

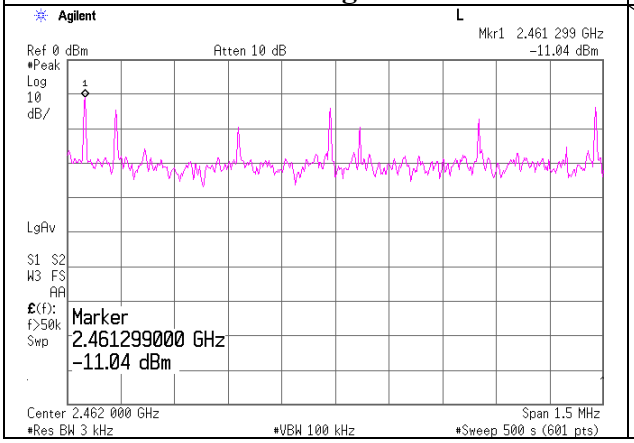
Ch:Low



Ch:Mid

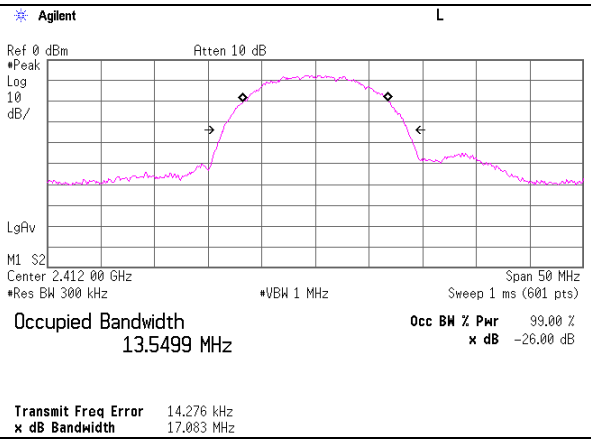


Ch:High

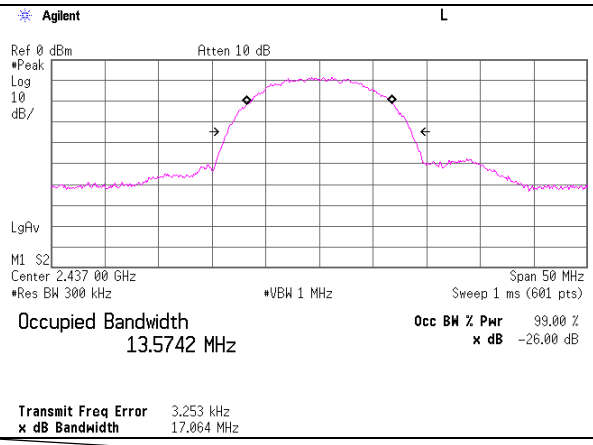


99%Occupied Bandwidth(DSSS and other forms of modulation)

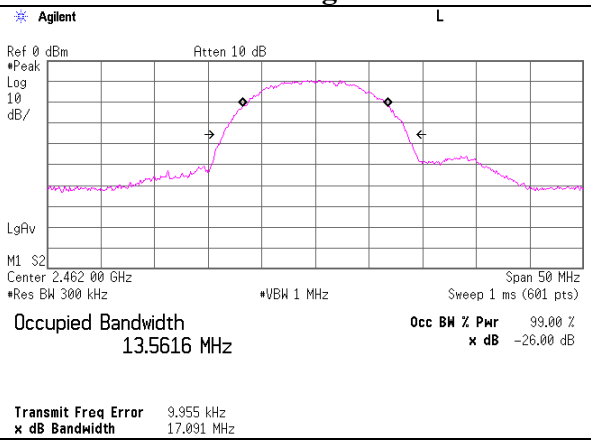
Ch:Low



Ch:Mid



Ch:High



APPENDIX 4: Reference data [Testing of the variation of input voltage]

The module has a voltage regulator circuit inside and the regulated voltage is provided with IC chip and the circuit which determines RF characteristics.

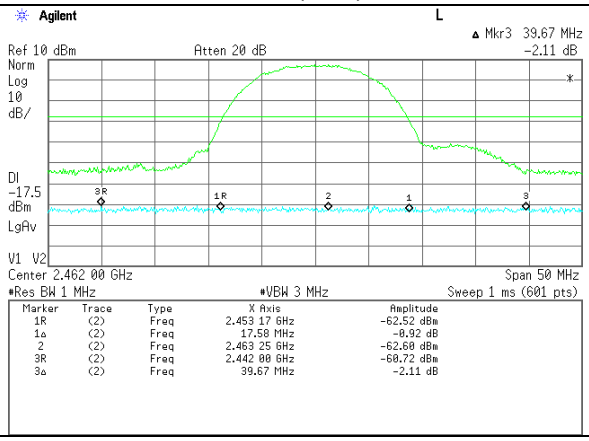
However, only RF power amplifier is operated with the voltage (+3.3V) supplied from outside directly.
We performed tests with the following conditions,
-Low threshold voltage ; until transmission stops
-High voltage: +5V (50% up of rated voltage +3.3V),

Then we confirmed that there were no changes in the transmission bandwidth, the transmission power, and the spurious emission of frequencies adjacent to carrier by supply voltage.
In addition, we found no abnormal signal.

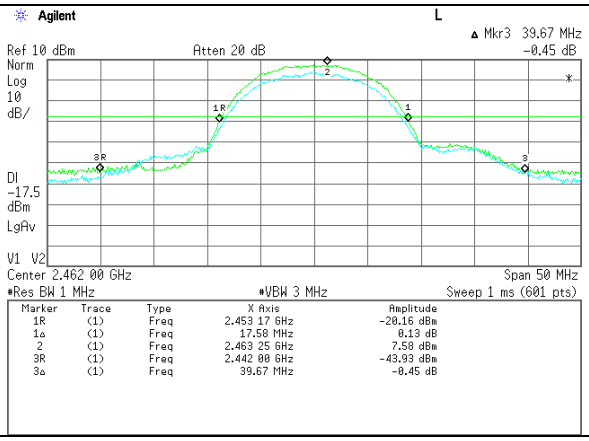
See the following data:

Maximum Peak OutPut Power and 20dB Band Width
Characteristic and destructive tests
IEEE802.11b 11Mbps(Worst Case)

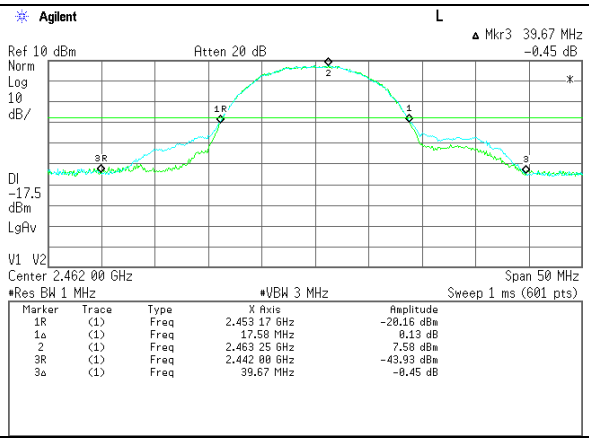
2.16V(Low)



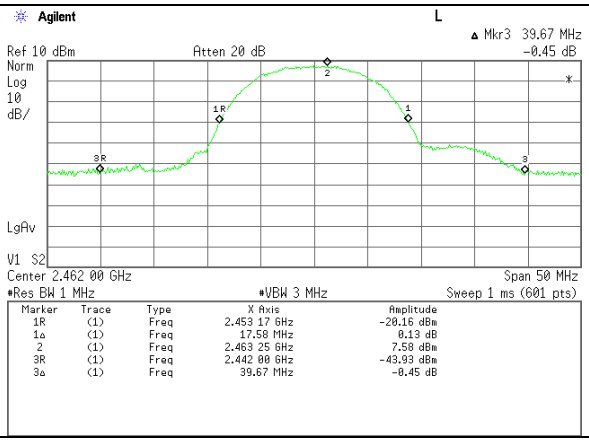
2.60V



2.80V

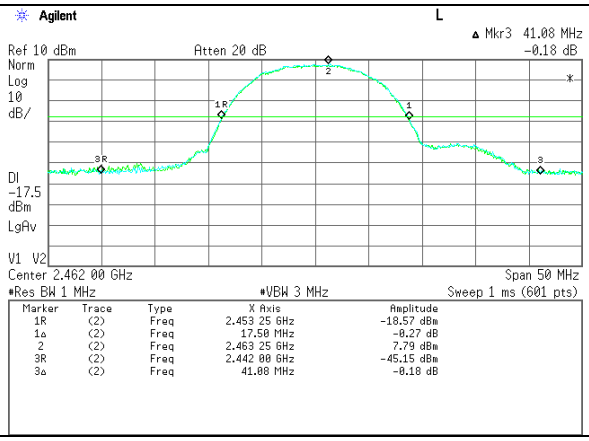


3.30V(Normal)

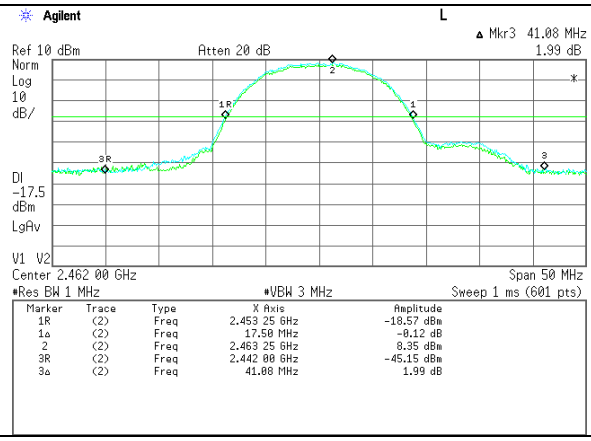


Maximum Peak OutPut Power and 20dB Band Width
Characteristic and destructive tests
IEEE802.11b 11Mbps(Worst Case)

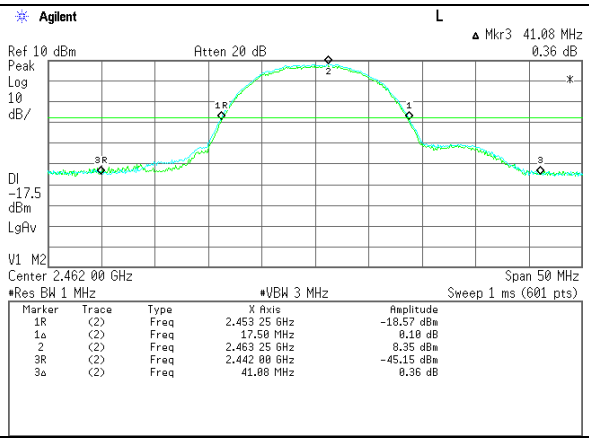
3.80V



4.30V



4.80V



5.00V(High)