EMI TEST REPORT

Test Report No. : 25IE0245-HO-3

Applicant	:	**Sony Corporation**
Type of Equipment	:	**Wireless LAN Module**
Model No.	:	**IRF303JU**
Test standard	:	**FCC Part 15 Subpart E Section 15.407 : 2005**
FCC ID	:	**AK8IRF303**
Test Result	:	**Complied**

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

Date of test:

June 13 to 17, 2005

Tested by:

Yutaka Yoshida
EMC Service

Norihisa Hashimoto
EMC Service

Hiroka Umeyama
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Approved by :

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CONTENTS **PAGE**

SECTION 1: Client information 3
SECTION 2: Equipment under test (E.U.T.) 3
SECTION 3: Test specification, procedures & results 4
SECTION 4: Operation of E.U.T. during testing 6
SECTION 5: Conducted Emission 8
SECTION 6: Spurious Emission , Band Edge Compliance 9
SECTION 7: 26dB Emission Bandwidth 10
SECTION 8: Peak Transmit Power 10
SECTION 9: Peak Power Spectral Density 10
SECTION 10: Peak Excursion Ratio 10
APPENDIX 1: Photographs of test setup 11
Conducted Emission 11
Spurious Emission (Radiated) 12
Worst Case Position (Z-axis:Horizontal / Y-axis:Vertical) 13
APPENDIX 2:Test instruments 14
APPENDIX 3: Data of EMI test 15
Conducted Emission 15
26dB Emission Bandwidth 19
Peak Transmit Power 21
Radiated Spurious Emission (below 1GHz) 24
Radiated Spurious Emission (above 1GHz:Inside of the restricted band) 27
Radiated Spurious Emission (above 1GHz:Outside of the restricted band) 33
Conducted Spurious Emission(DSSS and other forms of modulation) 39
Radiated emission Band Edge compliance 42
Conducted emission Band Edge compliance 44
Peak Power Spectral Density 45
Peak Excursion Ratio 47
99%Occupied Bandwidth 49

SECTION 1: Client information

Company Name	:	Sony Corporation
Address	:	Gate City Osaki West Tower Osaki East Tec. 1-11-1 Osaki Shinagawa-ku, Tokyo, 141-0032 Japan
Telephone Number	:	+81-3-5435-3977
Facsimile Number	:	+81-3-5435-3963
Contact Person	:	Masaki Nishimura

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

2.1 Identification of E.U.T.

Type of Equipment	:	Wireless LAN Module
Model No.	:	IRF303JU
Serial No.	:	002 (for Spurious Emission (Radiated) and Conducted Emission tests) 003(Maximum Peak Output Power test) 001 (for other tests)
Rating	:	DC3.3V, 0.81A
Country of Manufacture	:	Japan
Receipt Date of Sample	:	June 13, 2005
Condition of EUT	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)

2.2 Product Description

Equipment Type	:	Transceiver
Frequency of operation	:	5180-5320MHz
Channel Suppoert	:	5180, 5200, 5220, 5240, 5260, 5280, 5300, 5320
Modulation Techniques	:	OFDM
Channel number	:	8channels
Power control	:	Non
Mode of operation	:	Duplex
Antenna Type	:	Pattern Antenna (M\N : LFANT101,LFANT103)
Antenna Gain	:	LFANT101 : 2.81dBi (MAX) LFANT103 : 2.93dBi (MAX)
Antenna Connector Type	:	U.FL

Remarks :

1. variant model : IRF303U2 (only a different Host device)
2. This Wireless Module consists of 1 chip each of 5GHz band.

FCC 15.31 (e)

The stabilized voltage (DC3.3V) is supplied constantly from the host device as power supply to EUT.
Therefore, this EUT complies with the requirement.

FCC Part 15E Antenna requirement

This EUT complies with the requirement of FCC15E, because a unique coupling (Antenna Connector Type : U.FL) is used for this EUT.

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part15 Subpart E : 2005
Title : FCC 47CFR Part15 Radio Frequency Device
Subpart E Unlicensed National Information Infrastructure Devices
Section 15.407 General technical requirements

3.2 Procedures and results

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin*0)	Results
1	26dB Emission Bandwidth	ANSI C63.4:2003	Section 15.407(a)(1)(2)(3)	-	N/A	*See data	Complied
2	Peak Transmit Power	ANSI C63.4:2003	Section 15.407(a)(1)(2)(3)	Conducted	N/A		Complied
3	Peak Power Spectral Density	ANSI C63.4:2003	Section 15.407(a)(1)(2)(3)	Conducted	N/A		Complied
4	Peak Excursion Ratio	ANSI C63.4:2003	Section 15.407(a)(6)	Conducted	N/A		Complied
5	Spurious Emission	ANSI C63.4:2003	Section 15.407(b)(1)(2)(3)(4)(5)(6)(7) 15.205/15.209	Conducted	N/A		Complied
6	Spurious Emission	ANSI C63.4:2003		Radiated	N/A	1.4dB 37240MHz, Ver. (5320MHz)	Complied
7	AC Conducted Emission	ANSI C63.4:2003	Section 15.407(b)(6)/15.207	-	N/A	15.4dB 0.1835MHz Phase N (QP)	Complied
8	Band Edge Compliance	ANSI C63.4:2003	Section 15.407(b)(7)/15.205	Conducted Radiated	N/A	*See data	Complied

Note: UL Apex's EMI Work Procedures No.QPM05 and QPM15.
*0) The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Uncertainty:

Conducted Emission

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

Other test except Conducted Emission and Spurious Emission (Radiated)

The measurement uncertainty (with a 95% confidence level) for this test is ±3.0dB.
The data listed in this report meets the limits unless the uncertainty is taken into consideration.

*These tests were also referred to FCC Public Notice DA 02-2138 "Measurement Procedure Updated for Peak Transmit Power in the Unlicensed National Information Infrastructure (U-NII) Bands ".
*These tests were performed without any deviations from test procedure except for additions or exclusions.

3.3 Addition to standards

No.	Item	Test Procedure	Specification	Remarks	Deviation	Worst margin	Results
1	99% Occupied Band Width	RSS210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004 + Amendment4:2004	RSS210(issue 5): 2001 + Amendment:2002 + Amendment2:2003 + Amendment3:2004 + Amendment4:2004	Conducted	N/A	N/A	N/A

3.4 Test Location

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

	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	IC4247	19.2 x 11.2 x 7.7m	7.0 x 6.0m	Preparation room
No.2 semi-anechoic chamber	846015	IC4247-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 shielded room	-	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.4 shielded room	-	-	3.1 x 5.0 x 2.7m	N/A	-

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

3.5 Test set up, Test instruments and Data of EMI

Refer to APPENDIX 1 to 3.

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

4.1 Operating Modes

The EUT was operating in a manner similar to typical use during the tests.

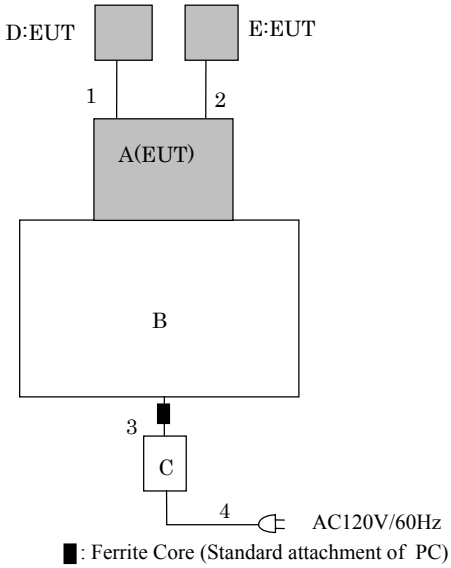
Packet Type : Maximum
Payload : PN9
Operation : Transmitting mode ((IEEE802.11a OFDM 54Mbps) * See Remarks.
Channel 36: 5180MHz
Channel 52: 5260MHz
Channel 64: 5320MHz

Conditions : 1) Data Rate: 6,9,12,18,24,36,48,54 Mbps
2) Antenna Port :1,2 (same type)
3) Pattern Antenna:LFANT101, LFANT103
4) Cable length : from 10cm to 20cm
*We pre-confirmed the above conditions on EUT and performed the final test with the following conditions;

	IEEE802.11a
Conducted emission test	1)Rate:54Mbps
	2)Antenna Port:1,
	3)Pattern Antenna:LFANT101
	4)Cable:20cm
Radiated emission test	1)Rate:54Mbps
	2)Antenna Port:1
	3)Pattern Antenna:LFANT101, LFANT103 (*both were tested)
	4)Cable:20cm
Other tests	1)Rate: 54Mbps
	2)Antenna Port:2
	3) Pattern Antenna:N/A
	4)Cable:10cm

<The details>
Conducted emission test : The above conditions did not affect the test result so that the test was made with these conditions in the above table.
Radiated emission test : As for Rate, 54Mbps (Maximum transmission rate of 11a) had worst margins.
The result of Antenna Port 1 had worst margin.
We confirmed the tests with minimum length 10cm and maximum length 20cm, and the result with 20cm had worst margin.
Other tests : As for Rate, 54Mbps (Maximum transmission rate of 11a) had worst margins.
The result of Antenna Port 2 had worst margin.
The Cable length did not affect the test result so that the test was made with 10cm.

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	Remarks
A	Wireless LAN Module	IRF303JU	002*1 003*2 001*3	SONY	AK8IRF303	EUT
B	Notebook Personal Computer	PP01L	CN-04P449-48155-28N-1004	DELL	-	-
C	AC Adaptor	AA20031	CN-09364U-16291-289-00YA	DELL	-	-
D	Pattern Antenna	LFANT101 LFANT103	-	SONY	AK8IRF303	EUT
E	Pattern Antenna	LFANT101 LFANT103	-	SONY	AK8IRF303	EUT

*1 : for Spurious Emission (Radiated) and Conducted Emission tests
*2 : for Maximum Peak Output Power test
*3 : for other tests

List of cables used

No.	Name	Length (m)	Shield	Backshell Material
1	Antenna Cable	0.2	Y	FEP
2	Antenna Cable	0.2	Y	FEP
3	DC Cable	1.8	N	Polyvinyl chloride
4	AC Cable	1.8	N	Polyvinyl chloride

SECTION 5: Conducted Emission

Test Procedure

EUT was placed on a platform of nominal size, 0.5m by 1.0m, raised 80cm above the conducting ground plane.
The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface.
EUT was located 80cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center .
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.
2) For the tests on EUT itself (as a stand alone equipment)
Each EUT current-carrying power lead, except the ground (safety) lead, was individually connected through a LISN /(AMN) to the input power source. All unused 50ohm connectors of the LISN(AMN) were resistively terminated in 50ohm when not connected to the measuring equipment.
The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber or a Measurement Room.
The EUT was connected to a LISN (AMN).
An overview sweep with peak detection has been performed.
The measurements have been performed with a CISPR quasi-peak detector (IF BW 9 kHz).
Measurement range: 0.15-30MHz

Test data : APPENDIX 3
Test result : Pass

SECTION 6: Spurious Emission , Band Edge Compliance

[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 1.0m, 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) , 1m(10-26.5GHz, Distance Factor : 20log(3[m]/1[m])) and 0.5m(Upper 26.5GHz, Distance Factor : 20log(3[m]/0.5[m]).
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.

Below 1GHz

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

Above 1GHz

Inside of the restricted bands (Section 15.205) : Apply to limit in the Section 15.209(a)
Outside of the restricted bands (Section 15.205) : Limit –27dBm EIRP
–17dBm EIRP (5.725-5.825GHz Band Edge)

Frequency	Below 1GHz	Above 1GHz (Inside of the restricted bands)	Above 1GHz (Outside of the restricted bands)
Instrument use	Test Receiver	Spectrum Analyzer	Spectrum Analyzer
Detector IF Bandwidth	QP: BW 120kHz	PK: RBW:1MHz/VBW: 1MHz AV: RBW:1MHz/VBW:10Hz	RBW:1MHz/VBW: 1MHz

Test data : APPENDIX 3
Test result : Pass

*The noise from the EUT was not seen in the above 18GHz. The measurement was made in the residual noise levels.

SECTION 7: 26dB Emission Bandwidth

Test Procedure
The 26dB Emission Bandwidth was measured with a spectrum analyzer connected to the antenna port.

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

SECTION 8: Peak Transmit Power

Test Procedure
The Peak Transmit Power was measured with a spectrum analyzer connected to the antenna port.
The test was made with the spectrum analyzer that has a function of channel-power measurement.
We followed the method 1 specified in DA-02-2138A1.

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

SECTION 9: Peak Power Spectral Density

Test Procedure
The Peak Power Spectral Density was measured with a spectrum analyzer connected to the antenna port.
We followed the method 2 specified in DA-02-2138A1.

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

SECTION 10: Peak Excursion Ratio

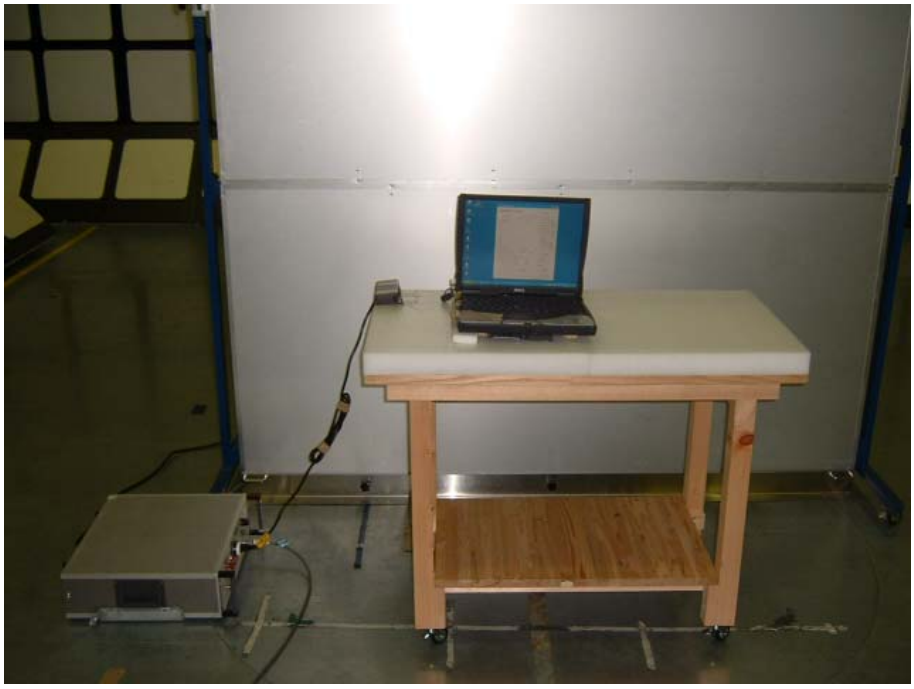
Test Procedure
The Peak Excursion Ratio was measured with a spectrum analyzer connected to the antenna port.
The second Sweep was measured based on method 1 specified in DA-02-2138A1.

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

APPENDIX 1: Photographs of test setup

Conducted Emission

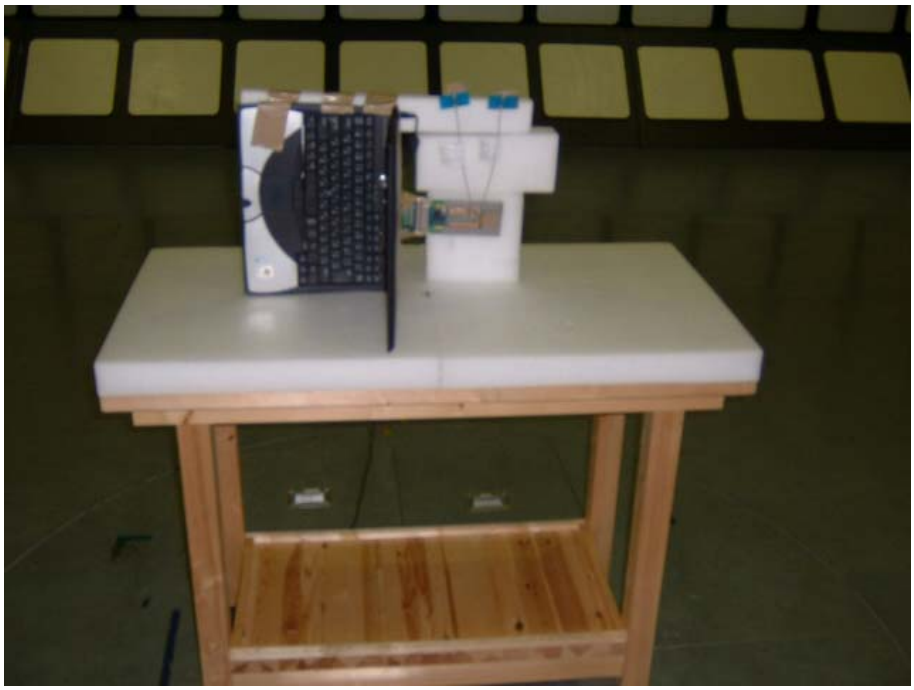
Front



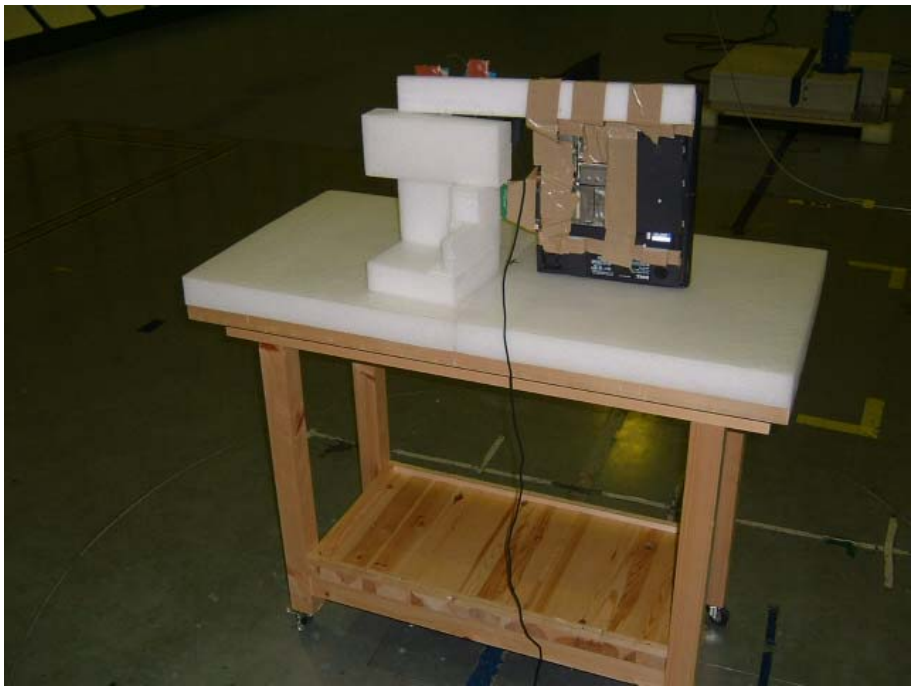
Rear

Spurious Emission (Radiated)

Front

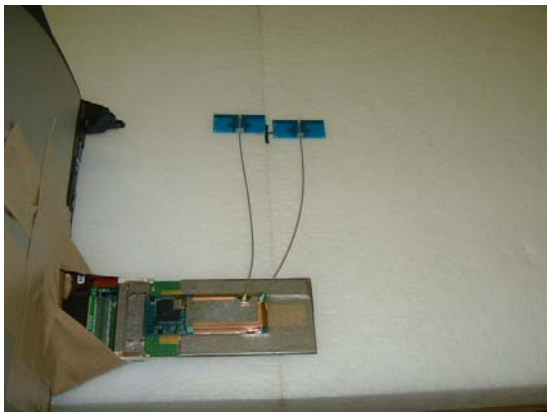


Rear

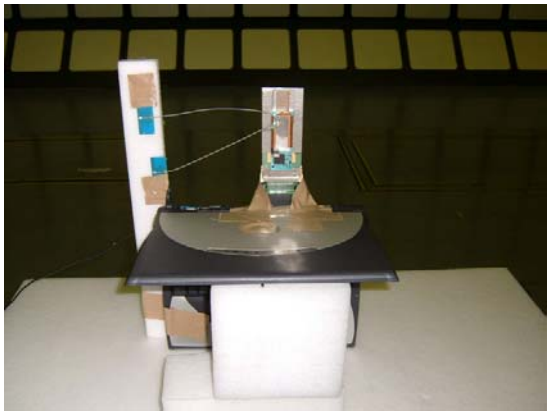


Worst Case Position (Z-axis:Horizontal / Y-axis:Vertical)

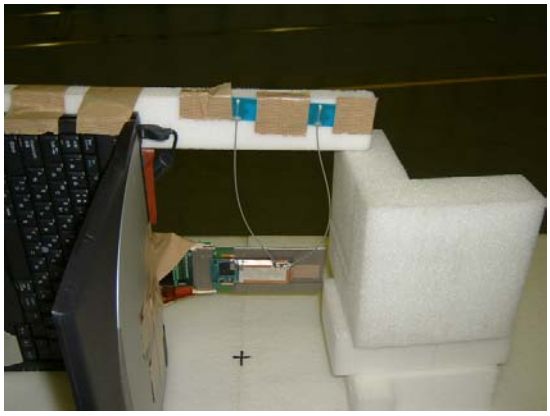
X-axis



Y-axis



Z-axis



APPENDIX 2:Test instruments

EMI test equipment

Control No.	(Conducted Emission)Instrument	Manufacturer	Model No	Item	Calibration Date * Interval(month)
MAEC-01	Anechoic Chamber	TDK	Semi Anechoic Chamber 10m	RE/CE	2004/11/13 * 12
MHA-05	Horn Antenna	Schwarzbeck	BBHA9120D	RE	2005/01/10 * 12
MCC-05	Microwave Cable 1G-50GHz	Storm	421-011 (90-1394-079)	RE	2005/01/05 * 12
MCC-18	Microwave Cable 1G-26.5GHz	Suhner	SUCOFLEX 104	RE	2005/02/03 * 12
MPA-01	Pre Amplifier	Agilent	8449B	RE	2005/02/05 * 12
MBF-03	SHF Bandpass Filter	M-City	13GHz BPF	RE	2005/05/20 * 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
MPA-04	Pre Amplifier	Agilent	8447D	RE	2005/05/24 * 12
MAT-06	Attenuator(6dB)	Weinschel Corp	2	RE	2004/12/16 * 12
MTR-01	Test Receiver	Rohde & Schwarz	ESI40	RE /CE	2004/11/12 * 12
MSA-03	Spectrum Analyzer	Agilent	E4448A	AT	2005/06/03 * 12
MAT-24	Attenuator	Agilent	8493C	AT	2005/06/03 * 12
MHF-02	High Pass Filter	Tokimec	TF323DCA	RE	2004/09/18 * 12
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	CE（EUT)	2004/11/10 * 12
MCC-03	Coaxial Cable	Fujikura/Suhner/Agilent/TSJ	-	CE	2004/12/24 * 12
MCC-28	Microwave Cable 1G-50GHz	Suhner	SUCOFLEX101	RE	2004/08/26 * 12
MCC-17	Microwave Cable 1G-50GHz	Suhner	SUCOFLEX 101	RE	2005/02/03 * 12
MHA-01	Horn Antenna	EMCO	3160-09	RE	2005/01/10 * 12
MPA-03	Microwave System Power Amplifier	Agilent	83050A	RE	2005/05/11 * 12
MHA-03	Horn Antenna	EMCO	3160-10	RE	2005/01/10 * 12

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

Test Item：

CE: Conducted emission

RE: Spurious emission(Radiated)

AT: Other tests

APPENDIX 3: Data of EMI test

Conducted Emission

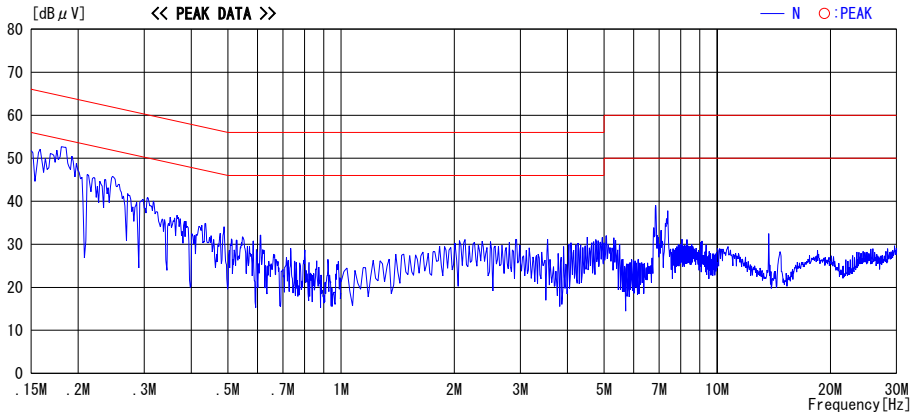
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/06/17 00:54:40

Applicant	: Sony Corporation	Report No.	: 25IE0245-HO
Kind of EUT	: Wireless LAN Module	Power	: DC3.3V(AC120/60Hz)
Model No.	: IRF303JU,LFANT101	Temp℃/Humi%	: 26deg.C / 49%
Serial No.	: 002	Operator	: Norihisa Hashimoto

Mode / Remarks : Transmitting 11a 54Mbps ch36 5180MHz

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



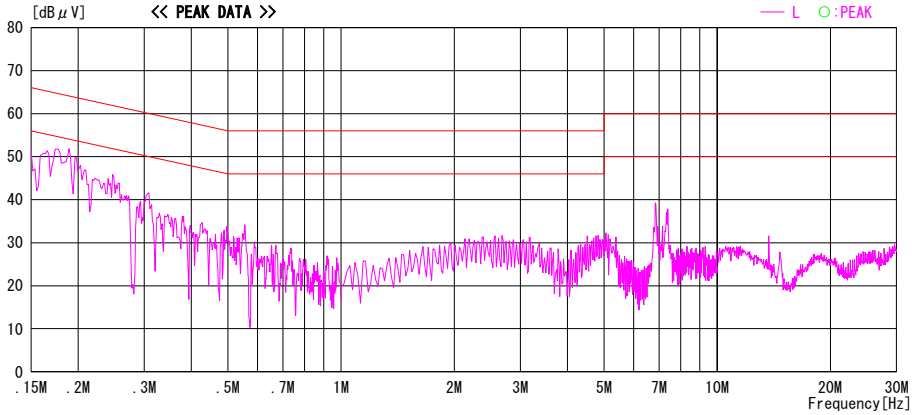


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

DATA OF CONDUCTED EMISSION TEST

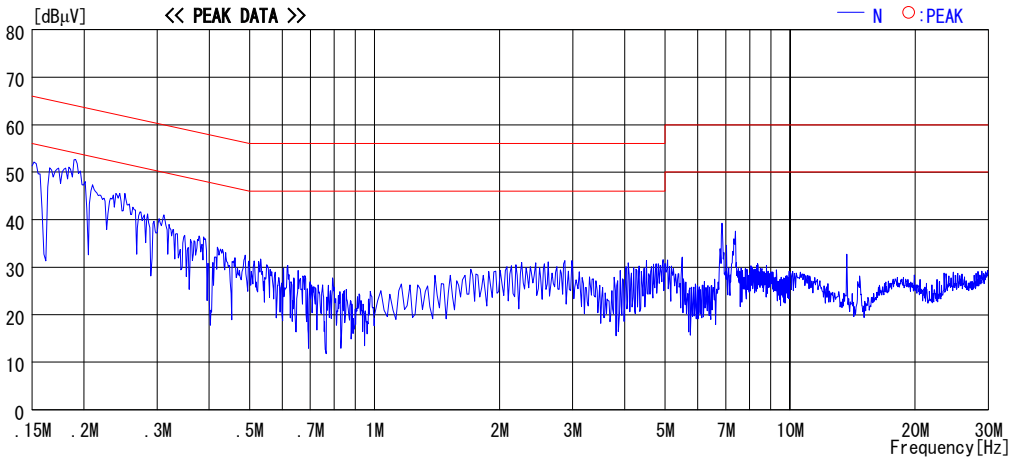
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/06/17 01:00:09

Applicant : Sony Corporation
Kind of EUT : Wireless LAN Module
Model No. : IRF303JU,LFANT101
Serial No. : 002

Report No. : 25IE0245-HO
Power : DC3.3V(AC120/60Hz)
Temp℃/Humi% : 26deg.C / 49%
Operator : Norihisa Hashimoto

Mode / Remarks: Transmitting 11a 54Mbps ch52 5260MHz

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



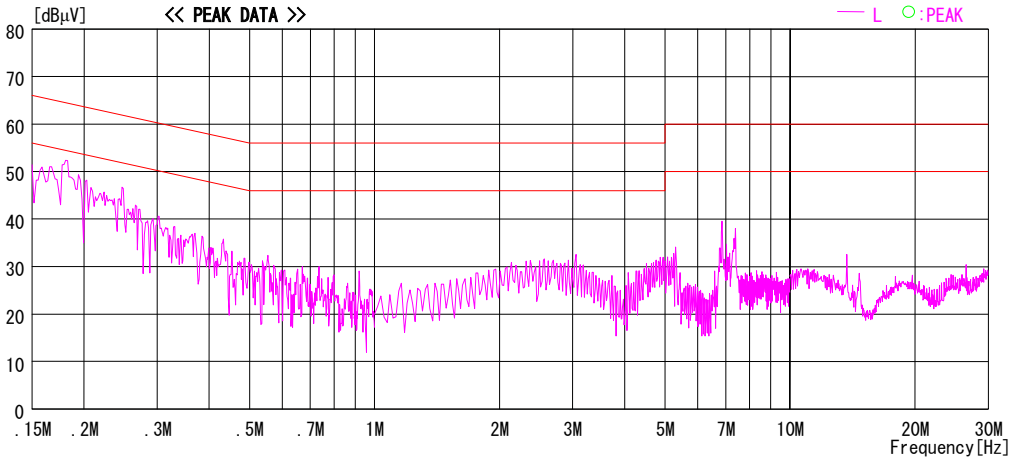


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

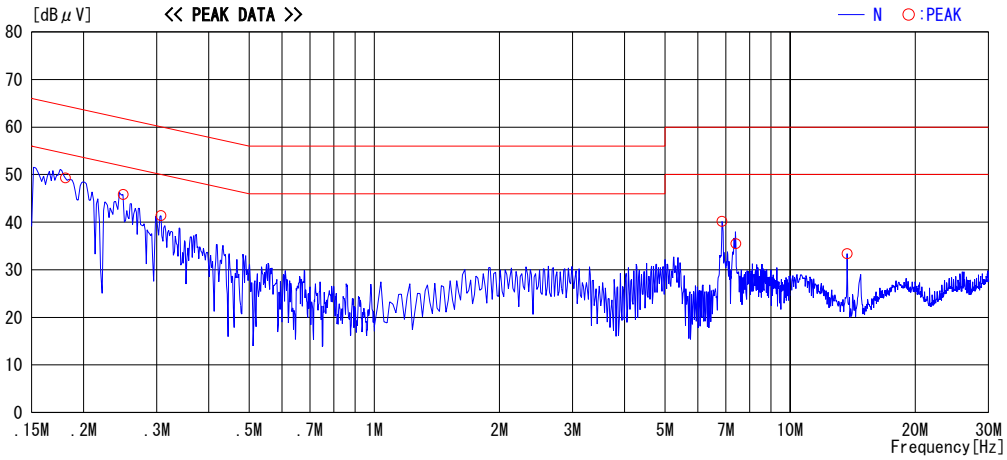
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/06/17 01:12:21

Applicant	: Sony Corporation	Report No.	: 25IE0245-HO
Kind of EUT	: Wireless LAN Module	Power	: DC3.3V(AC120/60Hz)
Model No.	: IRF303JU,LFANT101	Temp℃/Humi%	: 26deg.C / 49%
Serial No.	: 002	Operator	: Norihisa Hashimoto

Mode / Remarks : Transmitting 11a 54Mbps ch64 5320MHz

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



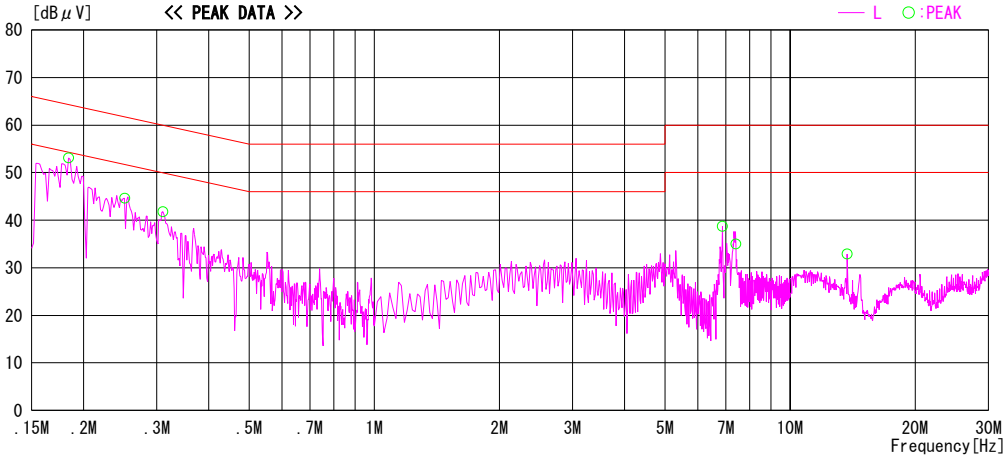


CHART:WITH FACTOR,Peak hold data.Data is uncorrected. CALCURATION:RESULT=READING+C.F(LISN LOSS+CABLE LOSS)
Except for the above table : adequate margin data below the limits.

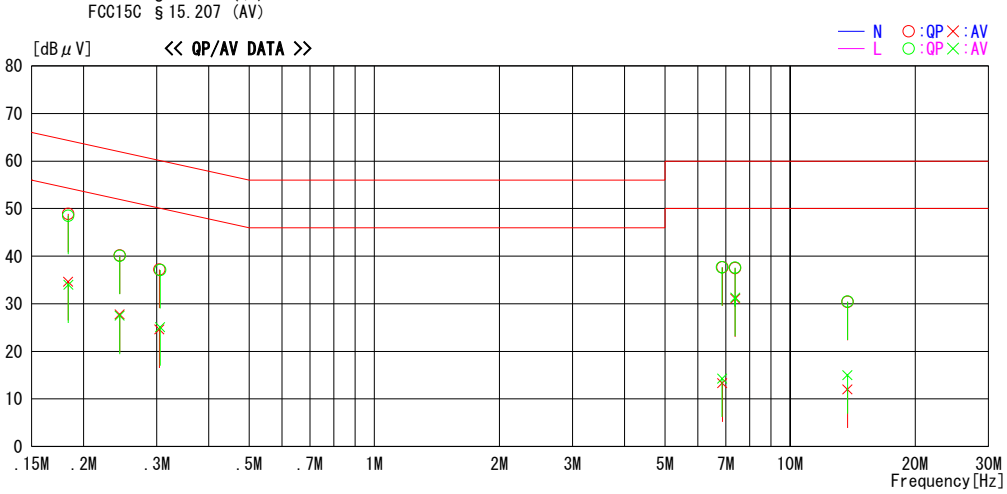
DATA OF CONDUCTED EMISSION TEST

UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2005/06/17 01:12:21

Applicant	: Sony Corporation	Report No.	: 25IE0245-HO
Kind of EUT	: Wireless LAN Module	Power	: DC3.3V(AC120/60Hz)
Model No.	: IRF303JU,LFANT101	Temp℃/Humi%	: 26deg.C / 49%
Serial No.	: 002	Operator	: Norihisa Hashimoto

Mode / Remarks : Transmitting 11a 54Mbps ch64 5320MHz

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



NO	FREQ	READING QP	READING AV	C.F	RESULT QP	RESULT AV	LIMIT QP	LIMIT AV	MARGIN QP	MARGIN AV	PHASE
	[MHz]	[dBμV]	[dBμV]	[dB]	[dBμV]	[dBμV]	[dBμV]	[dBμV]	[dB]	[dB]	
1	0.1835	48.4	34.1	0.5	48.9	34.6	64.3	54.3	15.4	19.7	N
2	0.2443	39.7	27.3	0.5	40.2	27.8	61.9	51.9	21.7	24.1	N
3	0.3043	36.8	24.2	0.4	37.2	24.6	60.1	50.1	22.9	25.5	N
4	6.8675	36.4	12.0	1.3	37.7	13.3	60.0	50.0	22.3	36.7	N
5	7.3809	36.2	29.8	1.3	37.5	31.1	60.0	50.0	22.5	18.9	N
6	13.7341	28.5	10.1	1.9	30.4	12.0	60.0	50.0	29.6	38.0	N
7	0.1836	48.0	33.5	0.5	48.5	34.0	64.3	54.3	15.8	20.3	L
8	0.2442	39.6	27.0	0.5	40.1	27.5	62.0	52.0	21.9	24.5	L
9	0.3054	36.7	24.7	0.4	37.1	25.1	60.1	50.1	23.0	25.0	L
10	6.8656	36.4	13.0	1.3	37.7	14.3	60.0	50.0	22.3	35.7	L
11	7.3797	36.3	30.0	1.3	37.6	31.3	60.0	50.0	22.4	18.7	L
12	13.7331	28.6	13.1	1.9	30.5	15.0	60.0	50.0	29.5	35.0	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.

26dB Emission Bandwidth

UL Apex Co., Ltd.
Head Office EMC Lab. No.4 Measurement Room

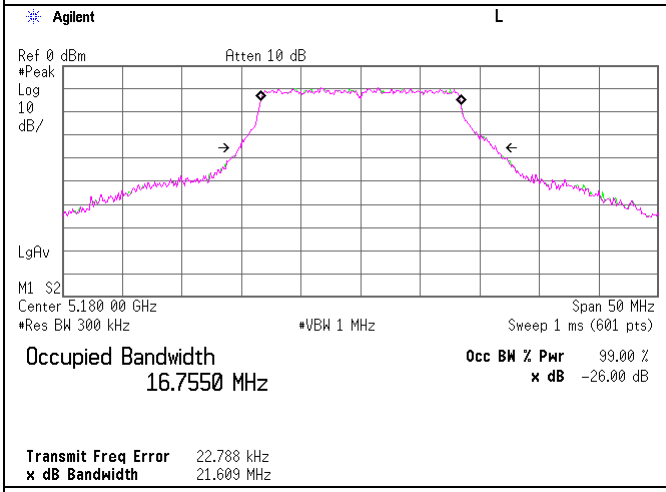
Company	: Sony Corporation	REPORT NO	: 25IE0245-HO
Equipment	: Wireless LAN Module	REGULATION	: FCC 15. 407(a)(1)(2)(3)
Model	: IRF303JU	TEST DISTANCE	: -
Sample No.	: 001	DATE	: 06/15/2005
Power	: DC3.3V	TEMPERATURE	: 25deg.C
Mode	: Tx IEEE 802.11a, 54Mbps	HUMIDITY	: 60%
Antenna Port	: 2	ENGINEER	: Hiroka Umeyama

Ch	Freq. [MHz]	26dB Bandwidth [MHz]	Limit [MHz]
36	5180.0	21.609	-
52	5260.0	23.212	-
64	5320.0	23.692	-

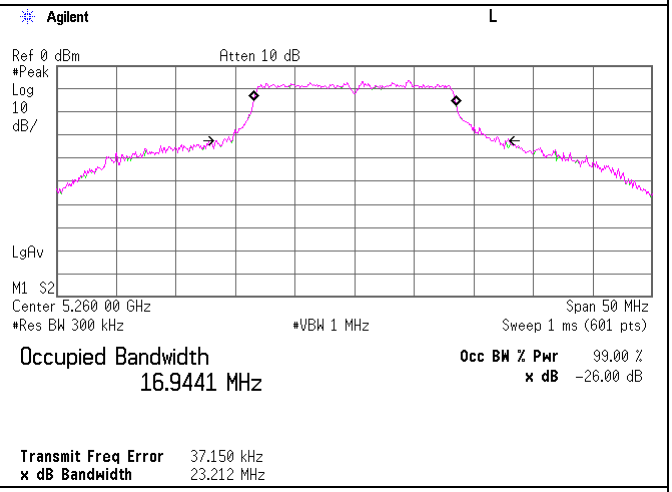
26dB Emission Bandwidth

54Mbps Antenna Port:2

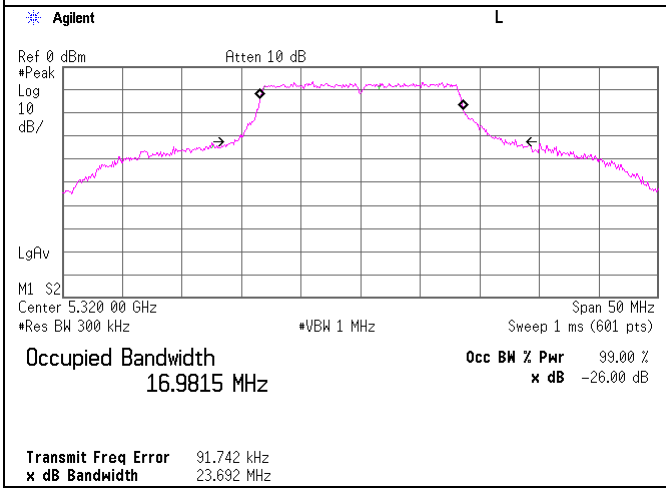
Ch:36



Ch:52



Ch:64



Peak Transmit Power

UL Apex Co., Ltd.
Head Office EMC Lab. No.4 Measurement Room

Company	: Sony Corporation	REPORT NO	: 25IE0245-HO
Equipment	: Wireless LAN Module	REGULATION	: FCC 15. 407(a)(1)(2)(3)
Model	: IRF303JU	TEST DISTANCE	: -
Sample No.	: 003	DATE	: 06/13/2005
Power	: DC3.3V	TEMPERATURE	: 24deg.C
Mode	: Tx IEEE 802.11a	HUMIDITY	: 49%
Antenna Port	: 1,2	ENGINEER	: Hiroka Umeyama

Antenna 1, 54Mbps

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
36	5180.00	1.36	1.23	10.00	12.59	17.00	4.41
52	5260.00	0.70	1.23	10.00	11.93	17.00	5.07
64	5320.00	0.50	1.23	10.00	11.73	24.00	12.27

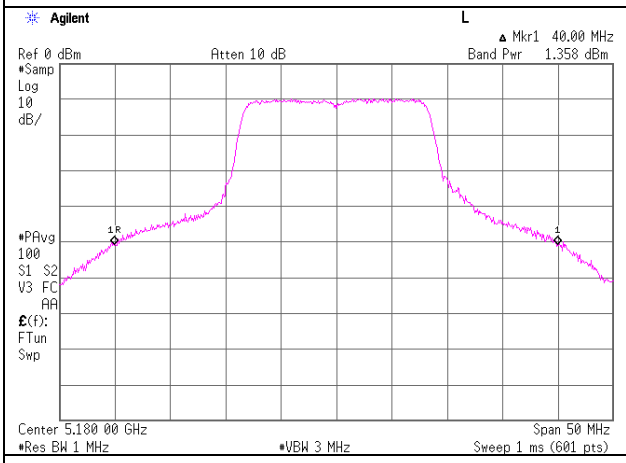
Antenna 2, 54Mbps

Ch	Freq. [MHz]	S/A Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
36	5180.00	1.41	1.23	10.00	12.64	17.00	4.36
52	5260.00	0.76	1.23	10.00	11.99	17.00	5.01
64	5320.00	0.49	1.23	10.00	11.72	24.00	12.28

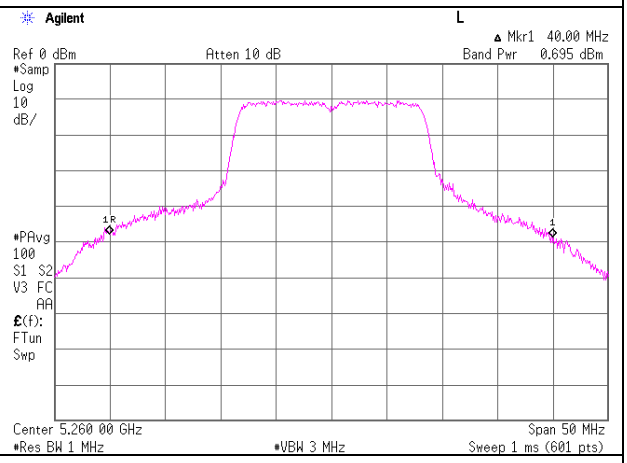
Sample Calculation:
Result = Reading + Cable Loss + Attenuator
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.

Peak Transmit Power
54Mbps, Antenna Port:1

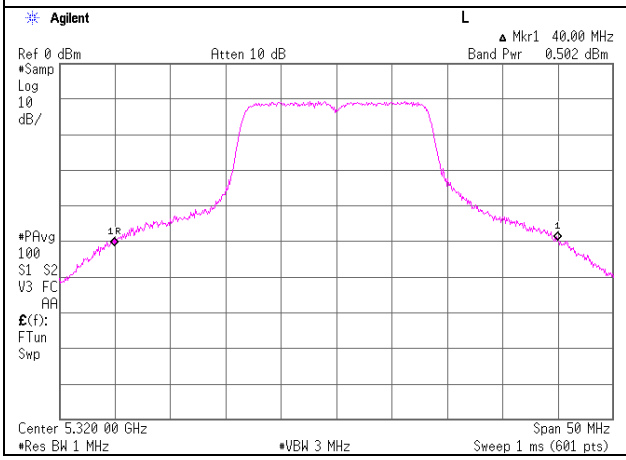
Ch:36



Ch:52

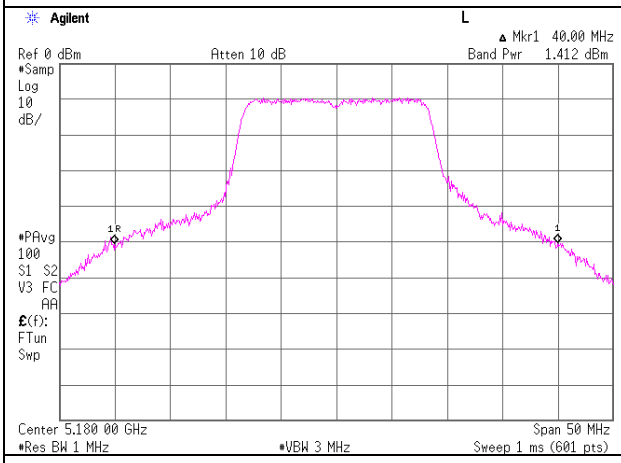


Ch:64

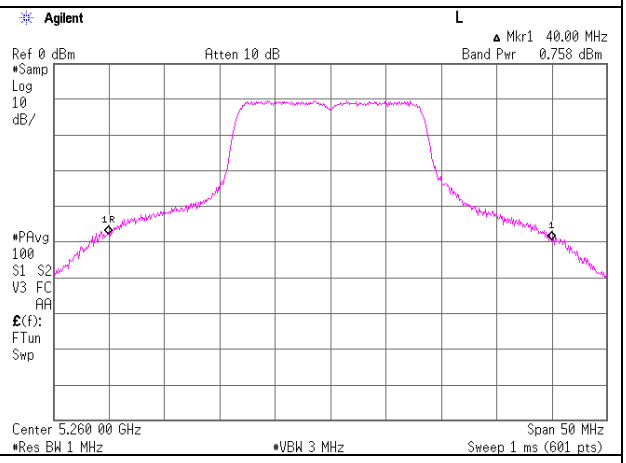


Peak Transmit Power
54Mbps, Antenna Port:2

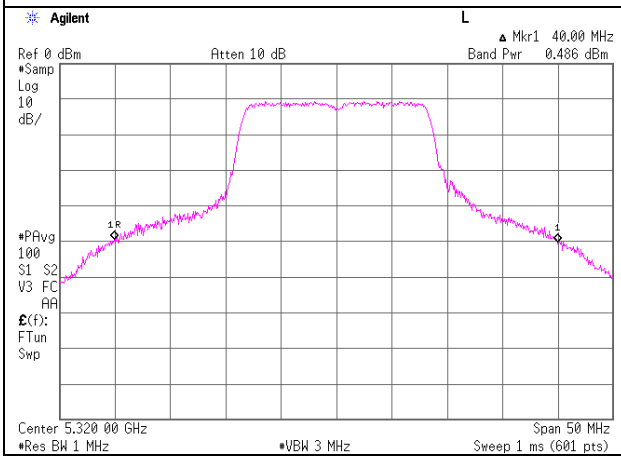
Ch:36



Ch:52



Ch:64



Radiated Spurious Emission (below 1GHz)

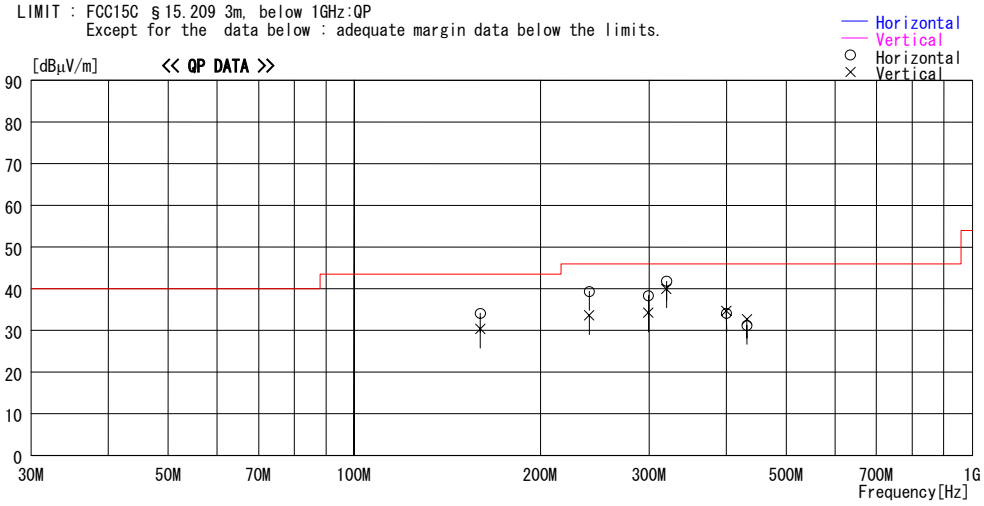
DATA OF RADIATED EMISSION TEST

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

Applicant	: Sony Corporation	Report No.	: 25IE0245-HO
Kind of EUT	: Wireless LAN Module	Power	: DC3.3V(AC120v/60Hz)
Model No.	: IRF303JU,LFANT101	Temp℃/Humi%	: 24deg.C / 53%
Serial No.	: 002	Operator	: Norihisa Hashimoto

Mode / Remarks : Transmitting 11a ch36 5180MHz 54Mbps HOR:Z,VER:Y

LIMIT : FCC15C §15.209 3m, below 1GHz:QP
Except for the data below : adequate margin data below the limits.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	160.004	37.1	15.7	8.8	27.5	34.1	43.5	9.4	197	35
2	240.005	39.6	17.3	9.6	27.1	39.4	46.0	6.6	135	211
3	299.107	35.2	20.4	9.9	27.1	38.4	46.0	7.6	115	52
4	320.004	43.6	15.3	10.1	27.2	41.8	46.0	4.2	100	203
5	400.003	33.2	18.0	10.7	27.8	34.1	46.0	11.9	100	35
6	431.986	30.2	18.2	10.9	28.1	31.2	46.0	14.8	200	2
----- Vertical ------										
7	160.005	33.3	15.7	8.8	27.5	30.3	43.5	13.2	100	27
8	240.010	33.8	17.3	9.6	27.1	33.6	46.0	12.4	211	1
9	299.110	31.0	20.4	9.9	27.1	34.2	46.0	11.8	282	354
10	320.007	41.8	15.3	10.1	27.2	40.0	46.0	6.0	153	126
11	400.003	33.8	18.0	10.7	27.8	34.7	46.0	11.3	104	121
12	431.986	31.7	18.2	10.9	28.1	32.7	46.0	13.3	100	57

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:

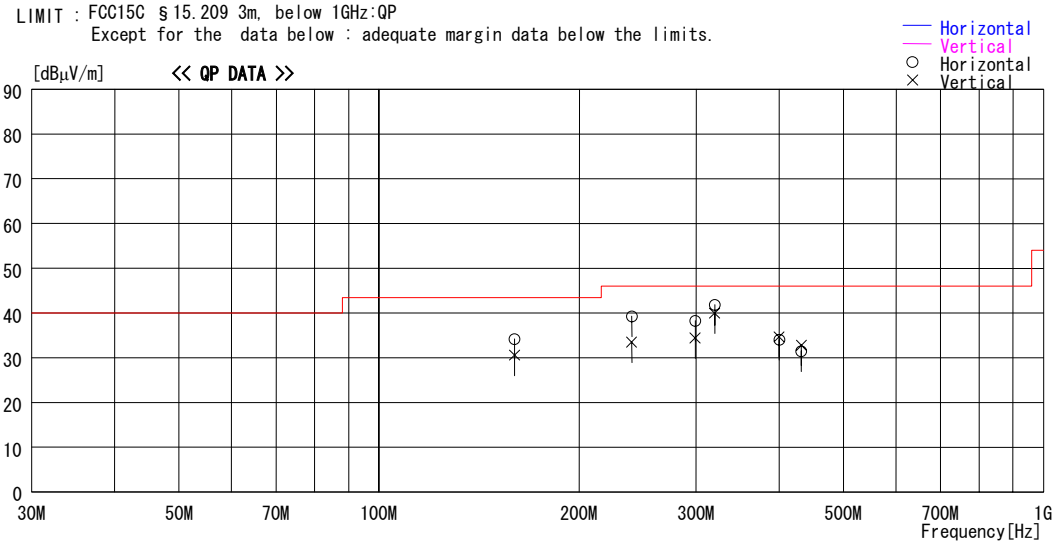
DATA OF RADIATED EMISSION TEST

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

Applicant	: Sony Corporation	Report No.	: 25IE0245-HO
Kind of EUT	: Wireless LAN Module	Power	: DC3.3V(AC120v/60Hz)
Model No.	: IRF303JU,LFANT101	Temp℃/Humi%	: 24deg.C / 53%
Serial No.	: 002	Operator	: Norihisa Hashimoto

Mode / Remarks : Transmitting 11a ch52 5250MHz 54Mbps HOR:Z,VER:Y

LIMIT : FCC15C §15.209 3m, below 1GHz:QP
Except for the data below : adequate margin data below the limits.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	160.008	37.2	15.7	8.8	27.5	34.2	43.5	9.3	186	44
2	240.004	39.5	17.3	9.6	27.1	39.3	46.0	6.7	143	210
3	299.091	35.1	20.4	9.9	27.1	38.3	46.0	7.7	114	42
4	320.002	43.6	15.3	10.1	27.2	41.8	46.0	4.2	100	204
5	400.004	33.1	18.0	10.7	27.8	34.0	46.0	12.0	100	28
6	432.013	30.5	18.2	10.9	28.1	31.5	46.0	14.5	199	0
----- Vertical ------										
7	160.002	33.6	15.7	8.8	27.5	30.6	43.5	12.9	100	25
8	240.003	33.7	17.3	9.6	27.1	33.5	46.0	12.5	188	360
9	299.094	31.2	20.4	9.9	27.1	34.4	46.0	11.6	290	360
10	320.005	41.8	15.3	10.1	27.2	40.0	46.0	6.0	137	128
11	400.004	33.8	18.0	10.7	27.8	34.7	46.0	11.3	102	111
12	432.013	31.8	18.2	10.9	28.1	32.8	46.0	13.2	100	63

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

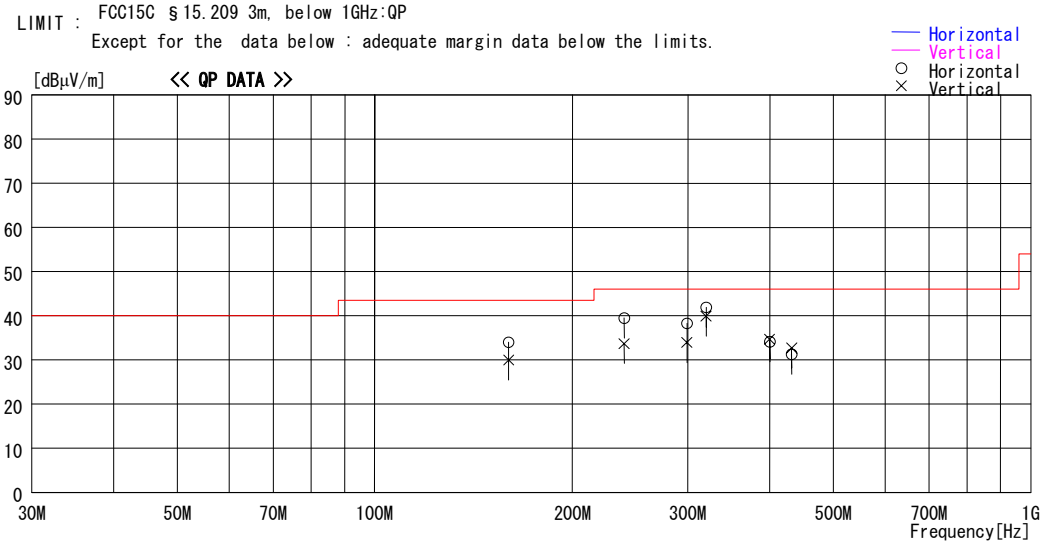
UL Apex Co., Ltd. Head Office EMC Lab. No.1 Semi Anechoic Chamber

Applicant	: Sony Corporation	Report No.	: 25IE0245-HO
Kind of EUT	: Wireless LAN Module	Power	: DC3.3V(AC120v/60Hz)
Model No.	: IRF303JU,LFANT101	Temp℃/Humi%	: 24deg.C / 53%
Serial No.	: 002	Operator	: Norihisa Hashimoto

Mode / Remarks : Transmitting 11a ch64 5320MHz 54Mbps HOR:Z,VER:Y

LIMIT : FCC15C §15.209 3m, below 1GHz:QP

Except for the data below : adequate margin data below the limits.



No.	FREQ [MHz]	READING QP [dBμV]	ANT FACTOR [dB/m]	LOSS [dB]	GAIN [dB]	RESULT [dBμV/m]	LIMIT [dBμV/m]	MARGIN [dB]	ANTENNA [cm]	TABLE [DEG]
----- Horizontal ------										
1	160.003	37.0	15.7	8.8	27.5	34.0	43.5	9.5	203	6
2	240.005	39.7	17.3	9.6	27.1	39.5	46.0	6.5	136	206
3	299.113	35.1	20.4	9.9	27.1	38.3	46.0	7.7	117	32
4	320.002	43.7	15.3	10.1	27.2	41.9	46.0	4.1	100	214
5	400.003	33.2	18.0	10.7	27.8	34.1	46.0	11.9	100	21
6	431.998	30.3	18.2	10.9	28.1	31.3	46.0	14.7	202	359
----- Vertical ------										
7	160.009	33.0	15.7	8.8	27.5	30.0	43.5	13.5	100	12
8	240.004	33.9	17.3	9.6	27.1	33.7	46.0	12.3	216	353
9	299.103	30.8	20.4	9.9	27.1	34.0	46.0	12.1	273	0
10	320.008	41.7	15.3	10.1	27.2	39.9	46.0	6.1	159	67
11	400.003	33.8	18.0	10.7	27.8	34.7	46.0	11.3	108	124
12	431.982	31.7	18.2	10.9	28.1	32.7	46.0	13.3	100	52

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

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Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407	
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m	
MODEL	: IRF303JU, LFANT101	DATE	: 06/15/2005	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 49%	: 60%
MODE	: Transmitting (11a / 54Mbps / CH36:5180MHz)	ENGINEER	: Norihisa Hashimoto	: Yutaka Yoshida
	: Antenna Port 1			
POSITION	: Worst Case			

PK DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.5	47.4	46.0	23.0	36.8	2.6	0.0	36.2	34.8	74.0	37.8	39.2
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	11108.0	50.1	47.6	37.8	35.7	8.9	0.7	52.3	49.8	74.0	21.7	24.2
2	15540.0	43.8	43.2	40.4	35.4	10.9	0.7	50.9	50.3	74.0	23.1	23.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
3	20720.0	45.7	45.8	40.7	35.5	4.8	0.0	40.2	40.3	74.0	33.8	33.7

AV DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
	1196.5	35.8	35.7	23.0	36.8	2.6	0.0	24.6	24.5	54.0	29.4	29.5
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	11108.0	45.4	41.9	37.8	35.7	8.9	0.7	47.6	44.1	54.0	6.4	9.9
2	15540.0	29.8	29.8	40.4	35.4	10.9	0.7	36.9	36.9	54.0	17.1	17.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
3	20720.0	33.0	33.0	40.7	35.5	4.8	0.0	27.5	27.5	54.0	26.5	26.5

Test Distance 1.0m : Distance Factor(Dfac1) = 20log(3/1.0) = 9.5 dB
Test Distance 0.5m : Distance Factor(Dfac2) = 20log(3/0.5) = 15.5 dB
* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m
MODEL	: IRF303JU, LFANT101	DATE	: 06/15/2005 : 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C : 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 49% : 60%
MODE	: Transmitting (11a / 54Mbps / CH52:5260MHz)	ENGINEER	: Norihisa Hashimoto : Yutaka Yoshida
	: Antenna Port 1		
POSITION	: Worst Case		

PK DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.5	48.1	45.2	23.0	36.8	2.6	0.0	36.9	34.0	74.0	37.1	40.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	11268.0	51.4	50.1	37.8	35.7	8.9	0.7	53.6	52.3	74.0	20.4	21.7
2	15780.0	43.1	44.5	41.4	35.6	11.1	0.5	51.0	52.4	74.0	23.0	21.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
3	21040.0	48.3	47.4	40.5	35.7	4.7	0.0	42.3	41.4	74.0	31.7	32.6
4	31560.0	53.9	55.0	41.4	26.0	7.3	0.0	61.1	62.2	74.0	12.9	11.8

AV DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.5	36.8	35.8	23.0	36.8	2.6	0.0	25.6	24.6	54.0	28.4	29.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	11268.0	48.0	46.1	37.8	35.7	8.9	0.7	50.2	48.3	54.0	3.8	5.7
2	15780.0	30.3	30.5	41.4	35.6	11.1	0.5	38.2	38.4	54.0	15.8	15.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
3	21040.0	33.8	33.8	40.5	35.7	4.7	0.0	27.8	27.8	54.0	26.2	26.2
4	31560.0	41.3	41.3	41.4	26.0	7.3	0.0	48.5	48.5	54.0	5.5	5.5

Test Distance 1.0m : Distance Factor(Dfac1) = 20log(3/1.0) = 9.5 dB
Test Distance 0.5m : Distance Factor(Dfac2) = 20log(3/0.5) = 15.5 dB
* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407	
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m	
MODEL	: IRF303JU, LFANT101	DATE	: 06/15/2005	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 49%	: 60%
MODE	: Transmitting (11a / 54Mbps / CH64:5320MHz)	ENGINEER	: Norihisa Hashimoto	: Yutaka Yoshida
	: Antenna Port 1			
POSITION	: Worst Case			

PK DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.6	48.5	45.4	23.0	36.8	2.6	0.0	37.3	34.2	74.0	36.7	39.8
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	10640.0	44.4	46.7	37.2	35.8	8.6	0.9	45.8	48.1	74.0	28.2	25.9
2	11388.0	51.3	49.2	37.8	35.7	8.7	0.7	53.3	51.2	74.0	20.7	22.8
3	15960.0	47.5	43.9	42.2	35.7	11.1	0.3	55.9	52.3	74.0	18.1	21.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
4	21280.0	47.2	47.4	40.4	35.4	4.7	0.0	41.4	41.6	74.0	32.6	32.4

AV DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.6	37.1	36.1	23.0	36.8	2.6	0.0	25.9	24.9	54.0	28.1	29.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	10640.0	31.6	33.4	37.2	35.8	8.7	0.9	33.1	34.9	54.0	20.9	19.1
2	11388.0	47.9	49.2	37.8	35.7	8.9	0.7	50.1	51.4	54.0	3.9	2.6
3	15960.0	30.5	30.6	42.2	35.7	11.1	0.3	38.9	39.0	54.0	15.1	15.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
4	21280.0	33.8	33.8	40.4	35.4	4.7	0.0	28.0	28.0	54.0	26.0	26.0

Test Distance 1.0m : Distance Factor(Dfac1) = 20log(3/1.0) = 9.5 dB
Test Distance 0.5m : Distance Factor(Dfac2) = 20log(3/0.5) = 15.5 dB
* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407	
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m	
MODEL	: IRF303JU, LFANT103	DATE	: 06/13/2005	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 49%	: 60%
MODE	: Transmitting (11a / 54Mbps / CH36:5180MHz)	ENGINEER	: Hiroka Umeyama	: Yutaka Yoshida
	: Antenna Port 1			
POSITION	: Worst Case			

PK DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.9	48.5	34.2	23.0	36.8	2.6	0.0	37.3	23.0	74.0	36.7	51.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	11108.0	48.7	48.3	37.8	35.7	8.9	0.7	50.9	50.5	74.0	23.1	23.5
2	15540.0	42.8	42.6	40.4	35.4	10.9	0.7	49.9	49.7	74.0	24.1	24.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
3	20720.0	46.0	45.9	40.7	35.5	4.8	0.0	40.5	40.4	74.0	33.5	33.6

AV DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.9	34.2	35.8	23.0	36.8	2.6	0.0	23.0	24.6	54.0	31.0	29.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	11108.0	43.9	43.6	37.8	35.7	8.9	0.7	46.1	45.8	54.0	7.9	8.2
2	15540.0	29.9	29.9	40.4	35.4	10.9	0.7	37.0	37.0	54.0	17.0	17.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
3	20720.0	32.9	32.8	40.7	35.5	4.8	0.0	27.4	27.3	54.0	26.6	26.7

Test Distance 1.0m : Distance Factor(Dfac1) = 20log(3/1.0) = 9.5 dB
Test Distance 0.5m : Distance Factor(Dfac2) = 20log(3/0.5) = 15.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407	
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m	
MODEL	: IRF303JU, LFANT103	DATE	: 06/13/2005	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 49%	: 60%
MODE	: Transmitting (11a / 54Mbps / CH52:5260MHz)	ENGINEER	: Hiroka Umeyama	: Yutaka Yoshida
	: Antenna Port 1			
POSITION	: Worst Case			

PK DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.9	51.6	47.6	23.0	36.8	2.6	0.0	40.4	36.4	74.0	33.6	37.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	11268.0	50.7	48.6	37.8	35.7	8.9	0.7	52.9	50.8	74.0	21.1	23.2
2	15780.0	43.3	43.8	41.4	35.6	11.1	0.5	51.2	51.7	74.0	22.8	22.3
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
3	21040.0	47.9	47.1	40.5	35.7	4.7	0.0	41.9	41.1	74.0	32.1	32.9
4	31560.0	54.2	54.3	41.4	26.0	7.3	0.0	61.4	61.5	74.0	12.6	12.5

AV DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.9	33.9	33.5	23.0	36.8	2.6	0.0	22.7	22.3	54.0	31.3	31.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	11268.0	47.5	41.7	37.8	35.7	8.9	0.7	49.7	43.9	54.0	4.3	10.1
2	15780.0	30.5	30.5	41.4	35.6	11.1	0.5	38.4	38.4	54.0	15.6	15.6
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
3	21040.0	33.8	33.8	40.5	35.7	4.7	0.0	27.8	27.8	54.0	26.2	26.2
4	31560.0	41.2	41.2	41.4	26.0	7.3	0.0	48.4	48.4	54.0	5.6	5.6

Test Distance 1.0m : Distance Factor(Dfac1) = 20log(3/1.0) = 9.5 dB
Test Distance 0.5m : Distance Factor(Dfac2) = 20log(3/0.5) = 15.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Inside of the restricted band)

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407	
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m	
MODEL	: IRF303JU, LFANT103	DATE	: 06/13/2005	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 49%	: 60%
MODE	: Transmitting (11a / 54Mbps / CH64:5320MHz)	ENGINEER	: Hiroka Umeyama	: Yutaka Yoshida
	: Antenna Port 1			
POSITION	: Worst Case			

PK DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.9	49.7	46.1	23.0	36.8	2.6	0.0	38.5	34.9	74.0	35.5	39.1
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfa1												
1	10640.0	43.9	44.8	37.2	35.8	8.6	0.9	45.3	46.2	74.0	28.7	27.8
2	11388.0	50.5	52.2	37.8	35.7	8.7	0.7	52.5	54.2	74.0	21.5	19.8
3	15960.0	43.5	44.2	42.2	35.7	11.1	0.3	51.9	52.6	74.0	22.1	21.4
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
4	21280.0	47.0	46.8	40.4	35.4	4.7	0.0	41.2	41.0	74.0	32.8	33.0

AV DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	AV	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
0	1196.9	36.2	36.5	23.0	36.8	2.6	0.0	25.0	25.3	54.0	29.0	28.7
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac1												
1	10640.0	31.2	31.2	37.2	35.8	8.6	0.9	32.6	32.6	54.0	21.4	21.4
2	11388.0	46.3	47.5	37.8	35.7	8.7	0.7	48.3	49.5	54.0	5.7	4.5
3	15960.0	30.6	30.6	42.2	35.7	11.1	0.3	39.0	39.0	54.0	15.0	15.0
Test distance 1meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter) - Dfac2												
4	21280.0	33.8	33.8	40.4	35.4	4.7	0.0	28.0	28.0	54.0	26.0	26.0

Test Distance 1.0m : Distance Factor(Dfac1) = 20log(3/1.0) = 9.5 dB
Test Distance 0.5m : Distance Factor(Dfac2) = 20log(3/0.5) = 15.5 dB

* Except for the above table : All other spurious emissions were less than 20dB for the limit.
* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Outside of the restricted band)
*used conversion formula

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m/0.5m
MODEL	: IRF303JU, LFANT101	DATE	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 60%
MODE	: Transmitting (11a / 54Mbps / CH36:5180MHz)	ENGINEER	: Yutaka Yoshida
	: Antenna Port 1		
POSITION	: Worst Case		

No.	Freq. [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER	HOR	VER		HOR	VER
1	10360.00	45.3	44.8	-49.9	-50.4	-27.0	22.9	23.4
2	25900.00	44.5	44.3	-50.7	-50.9	-27.0	23.7	23.9
3	31080.00	61.1	61.5	-34.1	-33.7	-27.0	7.1	6.7
4	36260.00	63.4	63.0	-31.8	-32.2	-27.0	4.8	5.2

Resrult(EIRP[dBm])=10*LOG({ (Electric Field Strength [V/m] * Distance^ 2 } / 30)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*Result is calculated to two places of decimals. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Outside of the restricted band)
*used conversion formula

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m/0.5m
MODEL	: IRF303JU, LFANT101	DATE	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 60%
MODE	: Transmitting (11a / 54Mbps / CH52:5260MHz)	ENGINEER	: Yutaka Yoshida
	: Antenna Port 1		
POSITION	: Worst Case		

No.	Freq. [MHz]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER	HOR	VER		HOR	VER
1	10520.00	45.5	44.4	-49.7	-50.8	-27.0	22.7	23.8
2	26300.00	44.1	44.2	-51.1	-51.0	-27.0	24.1	24.0
3	36820.00	63.1	63.1	-32.1	-32.1	-27.0	5.1	5.1

Resrult(EIRP[dBm])=10*LOG({ (Electric Field Strength [V/m] * Distance^ 2 } / 30)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*Result is calculated to two places of decimals. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Outside of the restricted band)
*used conversion formula

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m/0.5m
MODEL	: IRF303JU, LFANT101	DATE	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 60%
MODE	: Transmitting (11a / 54Mbps / CH64:5320MHz)	ENGINEER	: Yutaka Yoshida
	: Antenna Port 1		
POSITION	: Worst Case		

No.	Freq. [MHz]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER	HOR	VER		HOR	VER
1	26600.00	61.4	61.4	-33.8	-33.8	-27.0	6.8	6.8
2	31920.00	60.8	60.9	-34.4	-34.3	-27.0	7.4	7.3
3	37240.00	66.4	66.8	-28.8	-28.4	-27.0	1.8	1.4

Resrult(EIRP[dBm])=10*LOG({ (Electric Field Strength [V/m] * Distance^ 2 } / 30)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*Result is calculated to two places of decimals. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Outside of the restricted band)
*used conversion formula

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m/0.5m
MODEL	: IRF303JU, LFANT103	DATE	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 60%
MODE	: Transmitting (11a / 54Mbps / CH36:5180MHz)	ENGINEER	: Yutaka Yoshida
	: Antenna Port 1		
POSITION	: Worst Case		

No.	Freq. [MHz]	Electric Field Strength (After Factor Calculation) [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER	HOR	VER		HOR	VER
1	10360.00	45.4	45.5	-49.8	-49.7	-27.0	22.8	22.7
2	25900.00	44.3	44.6	-50.9	-50.6	-27.0	23.9	23.6
3	31080.00	61.5	61.1	-33.7	-34.1	-27.0	6.7	7.1
4	36260.00	63.0	63.4	-32.2	-31.8	-27.0	5.2	4.8

Resrult(EIRP[dBm])=10*LOG({ (Electric Field Strength [V/m] * Distance^ 2 } / 30)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*Result is calculated to two places of decimals. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Outside of the restricted band)
*used conversion formula

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m/0.5m
MODEL	: IRF303JU, LFANT103	DATE	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 60%
MODE	: Transmitting (11a / 54Mbps / CH52:5260MHz)	ENGINEER	: Yutaka Yoshida
	: Antenna Port 1		
POSITION	: Worst Case		

No.	Freq. [MHz]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER	HOR	VER		HOR	VER
1	10520.00	45.9	45.1	-49.3	-50.1	-27.0	22.3	23.1
2	26300.00	44.0	43.8	-51.2	-51.4	-27.0	24.2	24.4
3	36820.00	63.2	64.4	-32.0	-30.8	-27.0	5.0	3.8

Resrult(EIRP[dBm])=10*LOG({ (Electric Field Strength [V/m] * Distance^ 2 } / 30)

*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*Result is calculated to two places of decimals. Therefore, there may be 0.1 difference for the result.

Radiated Spurious Emission (above 1GHz:Outside of the restricted band)

*used conversion formula

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.407
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m/0.5m
MODEL	: IRF303JU, LFANT103	DATE	: 06/16/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 60%
MODE	: Transmitting (11a / 54Mbps / CH64:5320MHz)	ENGINEER	: Yutaka Yoshida
	: Antenna Port 1		
POSITION	: Worst Case		

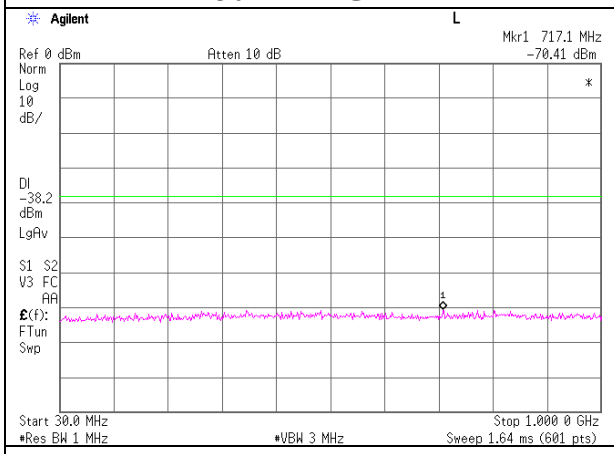
No.	Freq. [MHz]	Electric Field Strength [dBuV/m]		Result (EIRP) [dBm]		Lmit [dBm]	Margin [dB]	
		HOR	VER	HOR	VER		HOR	VER
1	26600.00	61.8	62.1	-33.4	-33.1	-27.0	6.4	6.1
2	31920.00	61.0	60.6	-34.2	-34.6	-27.0	7.2	7.6
3	37240.00	66.3	66.5	-28.9	-28.7	-27.0	1.9	1.7

Resrult(EIRP[dBm])=10*LOG({ (Electric Field Strength [V/m] * Distance^ 2 } / 30)

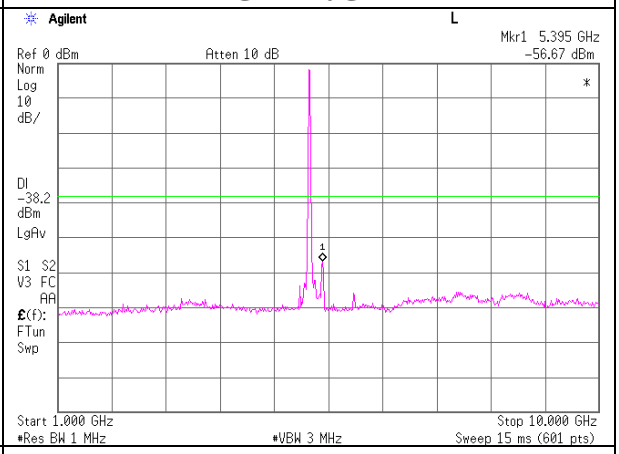
*Except for the above table : All other spurious emissions were less than 20dB for the limit.
*Result is calculated to two places of decimals. Therefore, there may be 0.1 difference for the result.

Conducted Spurious Emission(DSSS and other forms of modulation)
54Mbps Antenna Port:2
Ch : 36

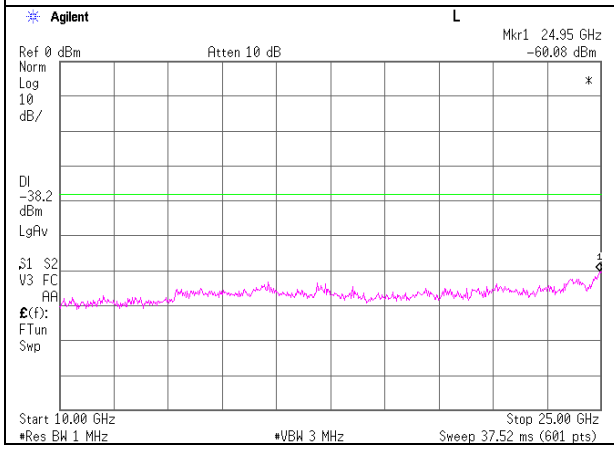
30MHz-1GHz



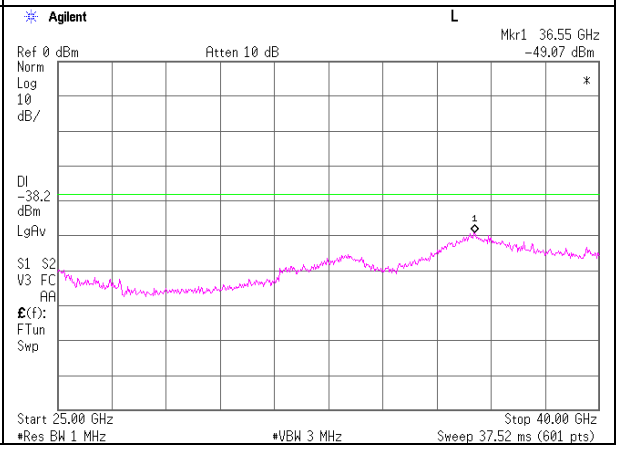
1GHz-10GHz



10GHz-25GHz



25GHz-40GHz

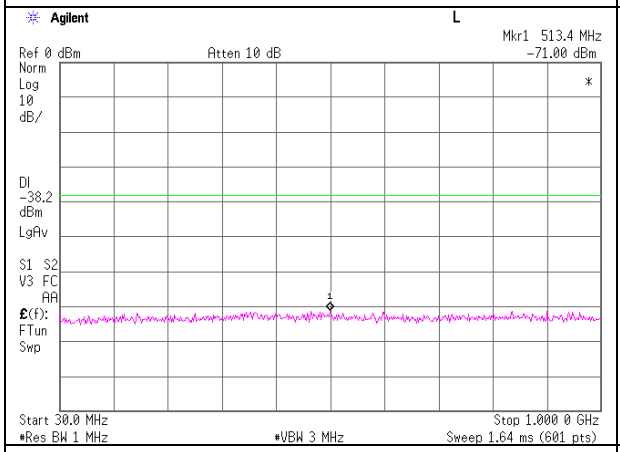


Conducted Spurious Emission(DSSS and other forms of modulation)

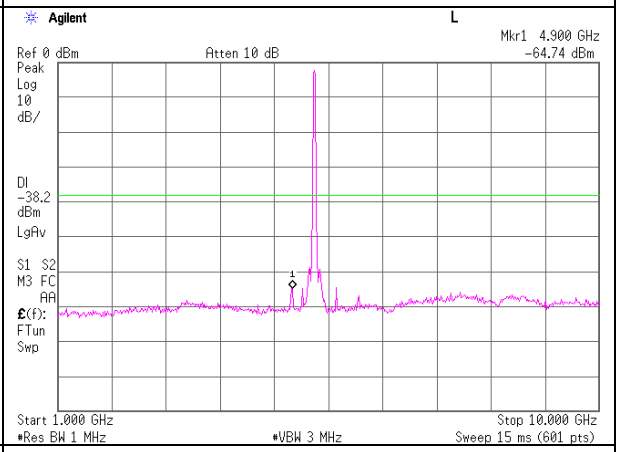
54Mbps Antenna Port:2

Ch : 52

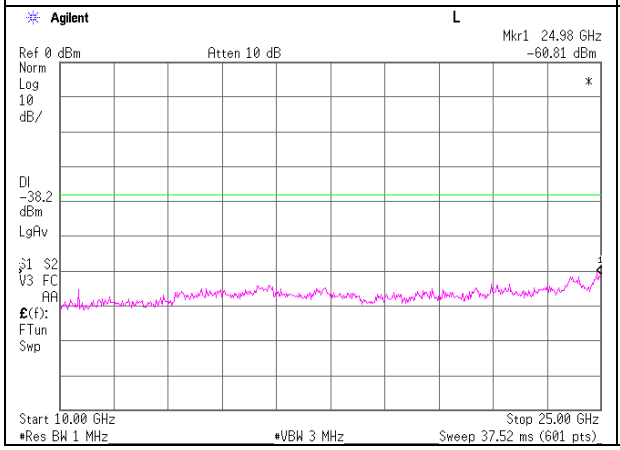
30MHz-1GHz



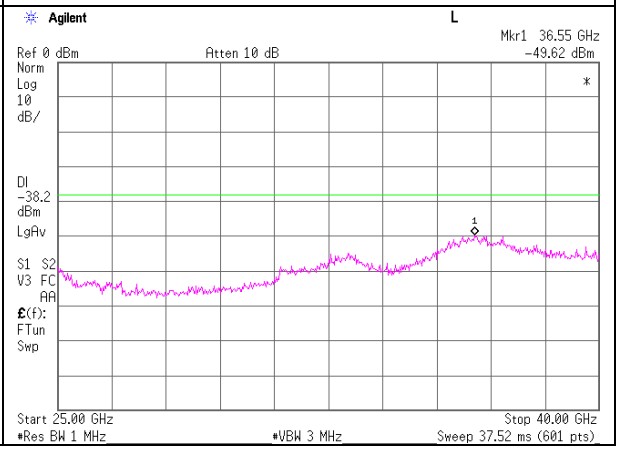
1GHz-10GHz



10GHz-25GHz



25GHz-40GHz

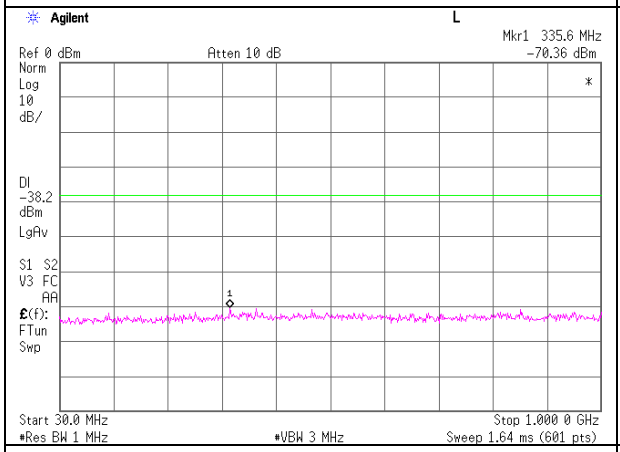


Conducted Spurious Emission(DSSS and other forms of modulation)

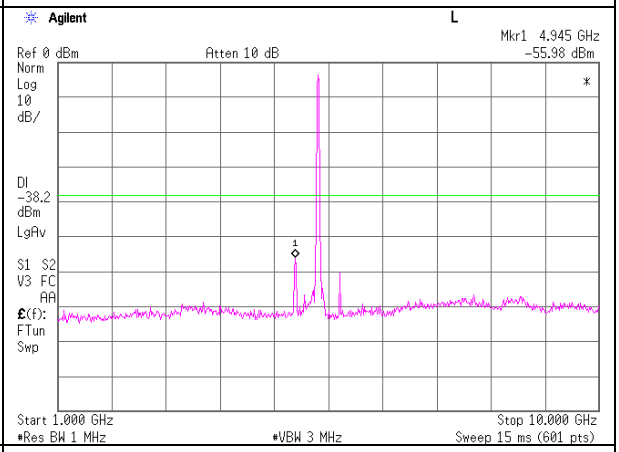
54Mbps Antenna Port:2

Ch : 64

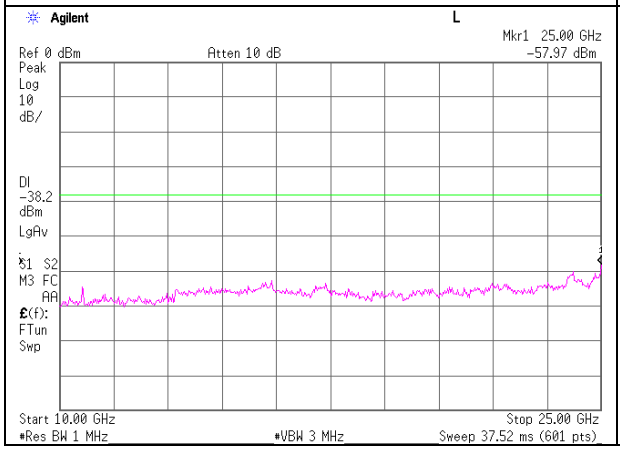
30MHz-1GHz



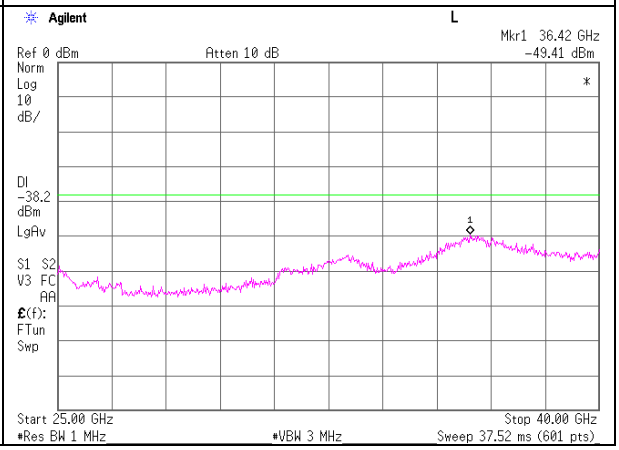
1GHz-10GHz



10GHz-25GHz



25GHz-40GHz



Radiated emission Band Edge compliance
54Mbps Antenna Port:1

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m
MODEL	: IRF303JU, LFANT101	DATE	: 06/13/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 49%
MODE	: Transmitting (11a / 54Mbps)	ENGINEER	: Hiroka Umeyama
	: CH36:5180MHz / CH52:5260MHz		
	: Antenna Port 1		
POSITION	: Worst Case		

PK DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	5150.0	43.3	43.8	35.9	35.9	5.6	0.0	48.9	49.4	74.0	25.1	24.6
2	5350.0	55.3	56.9	35.8	35.8	5.7	0.0	61.0	62.6	74.0	13.0	11.4

AV DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	5150.0	29.1	29.5	35.9	35.9	5.6	0.0	34.7	35.1	54.0	19.3	18.9
2	5350.0	35.1	36.8	35.8	35.8	5.7	0.0	40.8	42.5	54.0	13.2	11.5

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

Radiated emission Band Edge compliance
54Mbps Antenna Port:1

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

COMPANY	: Sony Corporation	REGULATION	: Fcc Part15 Subpart C 15.247 (d)
EQUIPMENT	: Wireless LAN Module	TEST DISTANCE	: 3m / 1m
MODEL	: IRF303JU, LFANT103	DATE	: 06/13/2005
SAMPLE NO.	: 002	TEMPERATURE	: 26deg.C
POWER	: DC3.3V(AC120V/60Hz)	HUMIDITY	: 49%
MODE	: Transmitting (11a / 54Mbps)	ENGINEER	: Hiroka Umeyama
	: CH36:5180MHz / CH52:5260MHz		
	: Antenna Port 1		
POSITION	: Worst Case		

PK DETECT

No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	5150.0	43.0	43.7	35.9	35.9	5.6	0.0	48.6	49.3	74.0	25.4	24.7
2	5350.0	54.8	57.5	35.8	35.8	5.7	0.0	60.5	63.2	74.0	13.5	10.8

AV DETECT

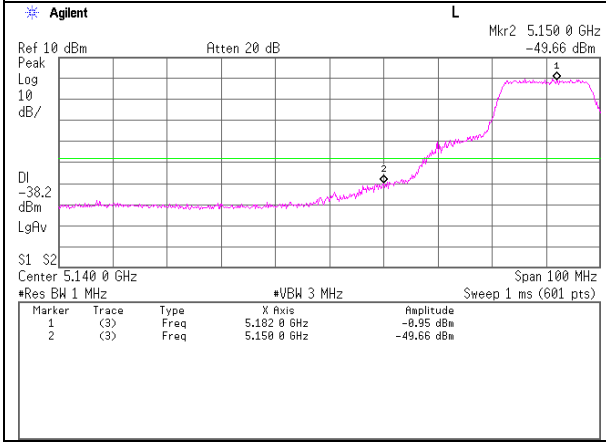
No.	Freq.	Reading		Ant.	Amp.	Cable	Atten. or	Result		Limit	Margin	
		HOR	VER	Factor	Gain	Loss	Filter	HOR	VER	PK	HOR	VER
	[MHz]	[dBuV]		[dB/m]	[dB]	[dB]	[dB]	[dBuV/m]		[dBuV/m]	[dB]	[dB]
Test distance 3meters RESULT=Reading + ANT Factor - Amp Gain + CABLE LOSS + Attenuator (or Filter)												
1	5150.0	28.9	29.5	35.9	35.9	5.6	0.0	34.5	35.1	54.0	19.5	18.9
2	5350.0	35.4	37.2	35.8	35.8	5.7	0.0	41.1	42.9	54.0	12.9	11.1

* In the above table, factor 0.0dB represents no use of Atten. and/or Filter.
* The result is rounded off to the second decimal place. Therefore, there may be 0.1 difference for the result.

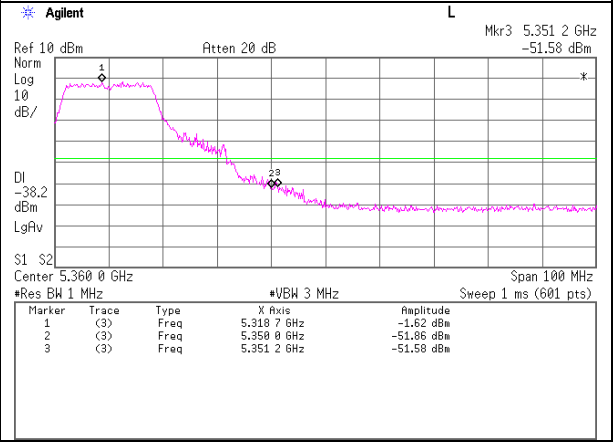
Conducted emission Band Edge compliance

54Mbps Antenna Port:2

CH36 5.180GHz



CH64 5.320GHz



Peak Power Spectral Density

UL Apex Co., Ltd.
Head Office EMC Lab. No.4 Measurement Room

Company : Sony Corporation
Equipment : Wireless LAN Module
Model : IRF303JU
Sample No. : 001
Power : DC3.3V
Mode : Tx IEEE 802.11a
Antenna Port : 2

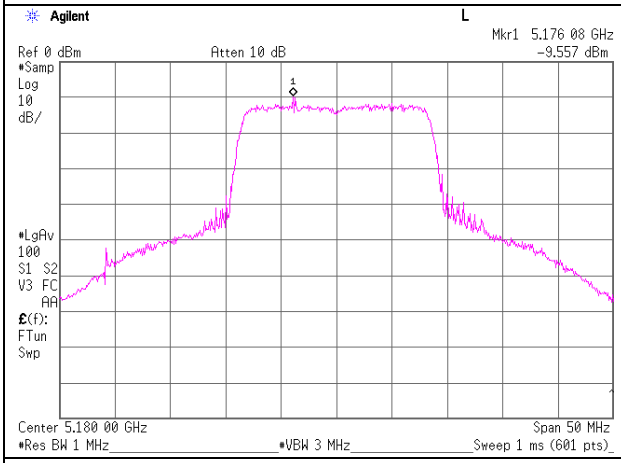
REPORT NO : 25IE0245-HO
REGULATION : FCC 15. 407(a)(1)(2)(3)
TEST DISTANCE : -
DATE : 06/14/2005
TEMPERATURE : 26deg.C
HUMIDITY : 57%
ENGINEER : Hiroka Umeyama

Ch	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. [dB]	Result [dBm]	Limit [dBm]	Margin [dB]
36	5180.0	-9.55	1.23	10.00	1.68	4.00	2.32
52	5260.0	-11.59	1.23	10.00	-0.36	4.00	4.36
64	5320.0	-10.96	1.23	10.00	0.27	11.00	10.73

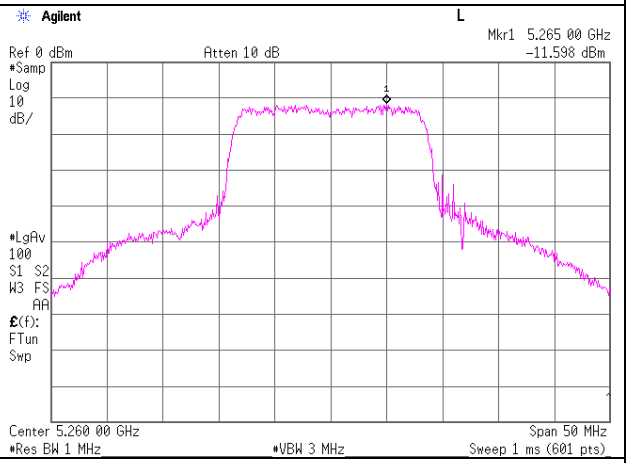
Sample Calculation:
Result = Reading + Cable Loss + Attenuator
* Atten. was not used for factor 0.0dB of the above table.

Peak Power Spectral Density
54Mbps Antenna Port:2

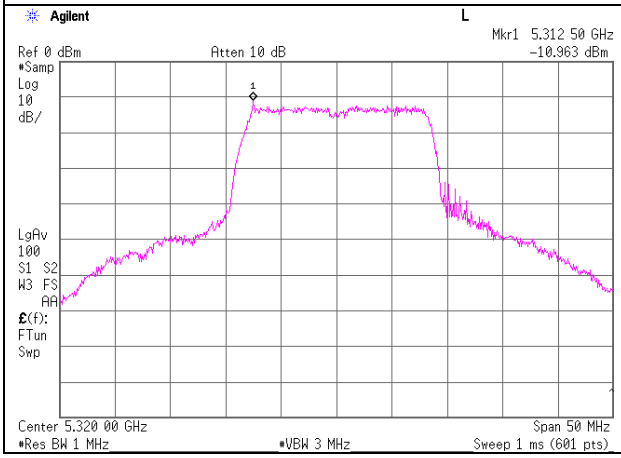
Ch:36



Ch:52



Ch:64



Peak Excursion Ratio

UL Apex Co., Ltd.
Head Office EMC Lab. No.4 Measurement Room

Company : Sony Corporation
Equipment : Wireless LAN Module
Model : IRF303JU
Sample No. : 001
Power : DC3.3V
Mode : Tx IEEE 802.11a, 54Mbps
Antenna Port : 2

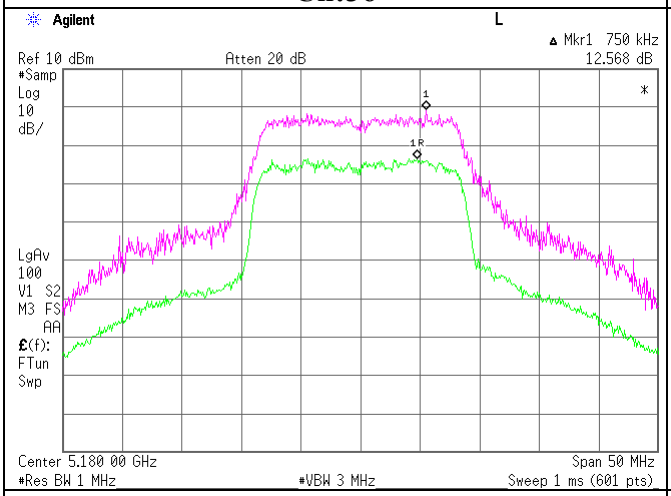
REPORT NO : 25IE0245-HO
REGULATION : FCC 15. 407(a)(6)
TEST DISTANCE : -
DATE : 06/15/2005
TEMPERATURE : 25deg.C
HUMIDITY : 60%
ENGINEER : Hiroka Umeyama

Ch	Freq. [MHz]	Peak Power Excursion [dB]	Limit [dB]
36	5180.0	12.568	13.0
52	5260.0	7.108	13.0
64	5320.0	10.146	13.0

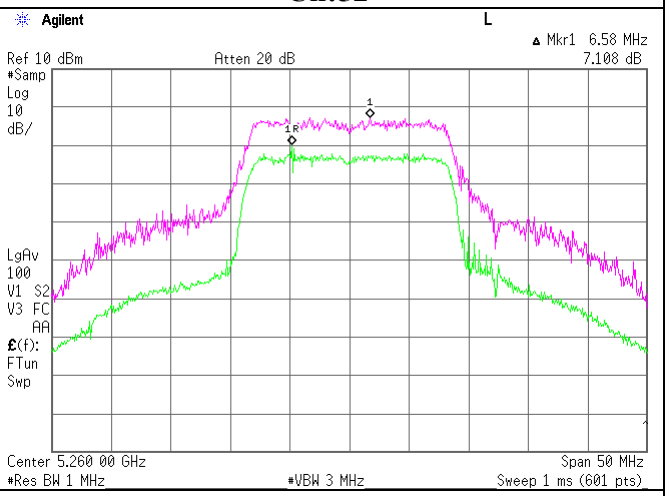
Peak Excursion Ratio

54Mbps Antenna Port:2

Ch:36



Ch:52



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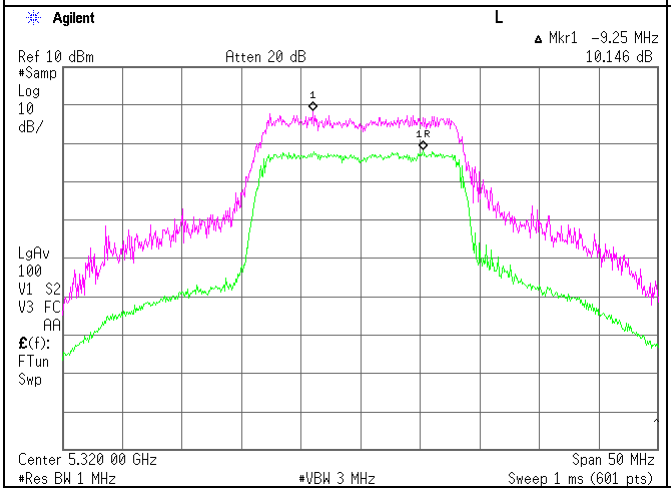
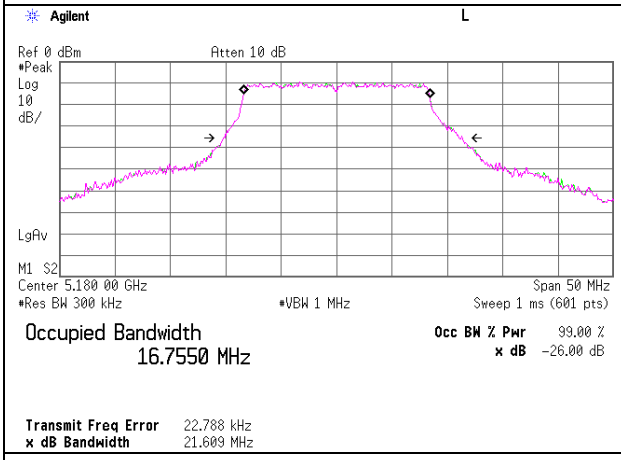


99%Occupied Bandwidth

54Mbps Antenna Port:2

Ch:36



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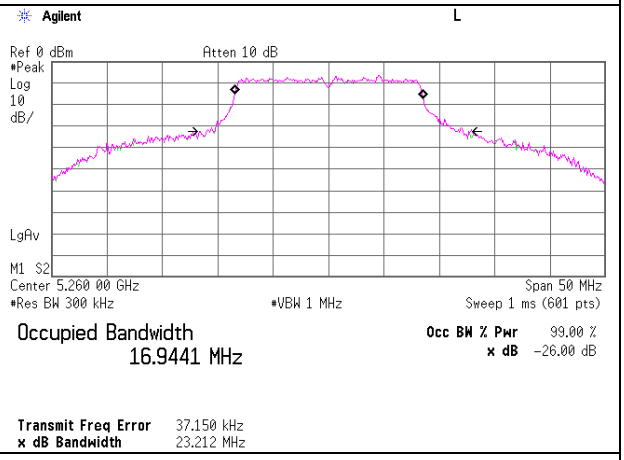

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