

APPLICATION FOR CERTIFICATION

On Behalf of

Yusan Industries Ltd

Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna

Model Number: WIFI-3236AB-RUFA

Prepared for : Yusan Industries Ltd

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Prepared By : Audix Technology (Shenzhen) Co., Ltd.

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Report Number : ACS-F07521

Date of Test : Nov.11~27, 2007

Date of Report : Dec. 03, 2007

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TEST REPORT CERTIFICATION

Applicant : Yusan Industries Ltd
 Manufacturer : Yusan Technology (Shenzhen) Ltd
 EUT Description : Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna
 (A) MODEL NO. : WIFI-3236AB-RUFA
 (B) SERIAL NO. : N/A
 (C) POWER SUPPLY : DC 3.3V From PDA

Test Procedure Used:

FCC Rules and Regulations Part 15 Subpart C 2007

The device described above is tested by AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart C limits both radiated and conducted emissions.

The test results are contained in this test report and AUDIX TECHNOLOGY (SHENZHEN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of AUDIX TECHNOLOGY (SHENZHEN) CO., LTD.

Date of Test : Nov.12~27, 2007

Prepared by :

YoYo Wang
 YoYo Wang / Assistant

Reviewer :

Iceman Hu
 Iceman Hu / Supervisor
 Audix Technology (Shenzhen) Co., Ltd.
 EMC 部門報告專用章
 Stamp only for EMC Dept. Report
 Signature: *Ken Lu* 12/4/07

Approved & Authorized Signer :

Ken Lu / Deputy Manager

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION		
Description of Test Item	Standard	Results
Conducted Emission Test	FCC Part 15: 15.207 ANSI C63.4: 2003 KDB558074	PASS
Radiated Emission Test	FCC Part 15: 15.209 ANSI C63.4: 2003 KDB558074	PASS
6dB Bandwidth Test	FCC Part 15: 15.247 KDB558074	PASS
Output Power Test	FCC Part 15: 15.247 KDB558074	PASS
Band Edge Compliance Test	FCC Part 15: 15.247 KDB558074	PASS
Power Spectral Density Test	FCC Part 15: 15.247 KDB558074	PASS
MPE ESTIMATION	FCC Part 2: 2.1093	PASS
Antenna requirement	FCC Part 15: 15.203	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product name	:	Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna
Model Number	:	WIFI-3236AB-RUFA
Operation frequency	:	2.412GHz-----2.462GHz ISM Band
Channel Number	:	11
Channel frequency	:	$F = 2412 + 5(K-1)$ K=1,2,.....11
Radio Technology	:	IEEE 802.11b/g
Modulation Technology	:	DSSS for IEEE 802.11b and OFDM for IEEE802.11g
Modulation Type	:	CCK, DQPSK, DBPSK for DSSS; 64QAM, 16QAM QPSK for OFDM
Date rate	:	IEEE802.11b: 11/5.5/2/1Mbps IEEE802.11g: 54/48/36/24/18/12/9/6Mbps
Output power	:	12.37dBm(maximum measured)
Power	:	DC 3.3V From PDA
Antenna Assembly Gain	:	0dBi (maximum)
Applicant	:	Yusan Industries Ltd Unit 8-9, 8/F, Honour Ind'l Centre, 6 Sun Yip Street, Chai Wan, Hong Kong
Manufacturer	:	Yusan Technology (Shenzhen) Ltd Haoyi Technology Park, Nan Huan Road, Shajing West, Baoan, Shenzhen, Guang Dong, P.R. China
PDA	:	Manufacture: Digiwalker M/N: MiOP350 S/N: B2T79E01249 USB Cable: Shielded, Detachable, 1.8m
Date of Test	:	Nov.11~27, 2007
Date of Receipt	:	Nov.10, 2007
Sample Type	:	Prototype production

2.2. Tested Supporting System Details

2.2.1. NOTEBOOK

M/N	:	PP09S
S/N	:	N/A
Manufacturer	:	DELL
Power Adaptor	:	Manufacturer: DELL, M/N: LA65NS1-00 Cable: Unshielded, Detachable, 4.0m (Bond one ferrite core)
FCC ID	:	PIWW360BT

2.3. Test Facility

Site Description

- 3m Anechoic Chamber : Certificated by FCC, USA
Registration Number: 90454
Jun. 13, 2006
- 3m & 10m Anechoic Chamber : Certificated by FCC, USA
Registration Number: 794232
Jan. 31, 2007
- EMC Lab. : Certificated by DATech, German
Registration Number: DAT-P-091/99-01
Feb. 02, 2004
- Certificated by NVLAP, USA
NVLAP Code: 200372-0
Apr.01, 2007
- Certificated by Nemko, Norway
Aut. No.: ELA135
April. 22, 2004
- Certificated by Industry Canada
Registration Number: IC 5183A-1
Aug.10.2007
- Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
- Site Location : No. 6, Ke Feng Rd., 52 Block,
Shenzhen Science & Industrial Park,
Nantou, Shenzhen, Guangdong, China

2.4. Measurement Uncertainty

No.	Item	Uncertainty
1.	Uncertainty for Conducted Emission Test	1.22dB
2.	Uncertainty for Radiated Emission Test<1GHz	4.62dB
3.	Uncertainty for Radiated Emission Test>1GHz	4.79dB
4.	Uncertainty for conducted power measure	0.3265
5.	Uncertainty for Peak Power Density	0.3372
6.	Uncertainty for conducted Spurious Emission	0.3442
7.	Uncertainty for Bandwidth	1.0206×10^{-6}

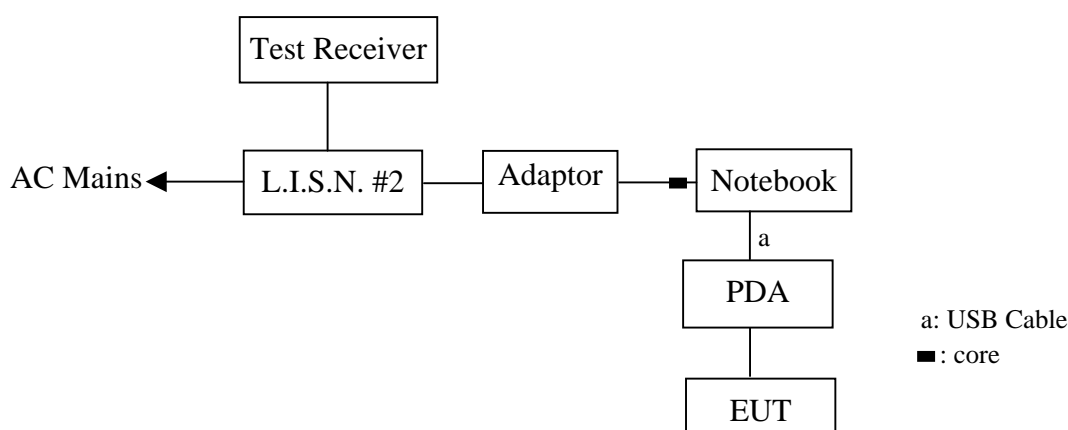
3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESHS10	838693/001	May 11, 07	1 Year
2.	L.I.S.N.#2	Kyoritsu	KNW-407	8-1636-1	May 11, 07	1 Year
3.	Terminator	Hubersuhner	50Ω	No. 1	May 11, 07	1 Year
4.	RF Cable	MIYAZAKI	5D-2W	LISN Cable 1#	Aug.11, 07	1/2 Year
5.	Coaxial Switch	Anritsu	MP59B	M55367	Aug.11, 07	1/2 Year
6.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100340	Aug.11, 07	1/2 Year

3.2. Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and simulators



(EUT: Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna)

3.3. Power Line Conducted Emission Test Limits

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.4. Configuration of EUT on Test

The following equipment are installed on Power Line Conducted Emission Test to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

3.4.1.Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna (EUT)

Model Number : WIFI-3236AB-RUFA
 Serial Number : N/A
 Manufacturer : Yusan Technology (Shenzhen) Ltd

3.4.2.Support Equipment : As Tested Supporting System Detail, in Section 2.2..

3.5.Operating Condition of EUT

3.5.1.Setup the EUT and simulator as shown as Section 3.2.

3.5.2.Turn on the power of all equipment.

3.5.3.EUT was powered by 3.3V DC from PDA

3.5.4.Notebook running the Control program which can make the EUT work in test mode (TX mode) through PDA.

3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power connected to the power mains through a line impedance stabilization network (L.I.S.N. #2). This provided a 50-ohm coupling impedance for the EUT (Please refer to the block diagram of the test setup and photographs). Both sides of power line were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4: 2003 on conducted Emission test.

The bandwidth of test receiver (R & S ESHS10) is set at 10kHz.

The frequency range from 150kHz to 30MHz is checked.

Note: The data rate was set 11Mbps for IEEE802.11b and 54Mbps for IEEE802.11g

The test result are reported on Section 3.7.,

3.7.Power Line Conducted Emission Test Results

PASS. (All emissions not reported below are too low against the prescribed limits.)

The EUT with the following test modes was tested and selected (mode 1) to read Q.P values and average values, all the test results are listed in next pages.

EUT: Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna

Model No. : WIFI-3236AB-RUFA

Test Date: Nov.11, 2007

Temperature: 25.9℃

Humidity: 55%

The details of test modes are as follows :

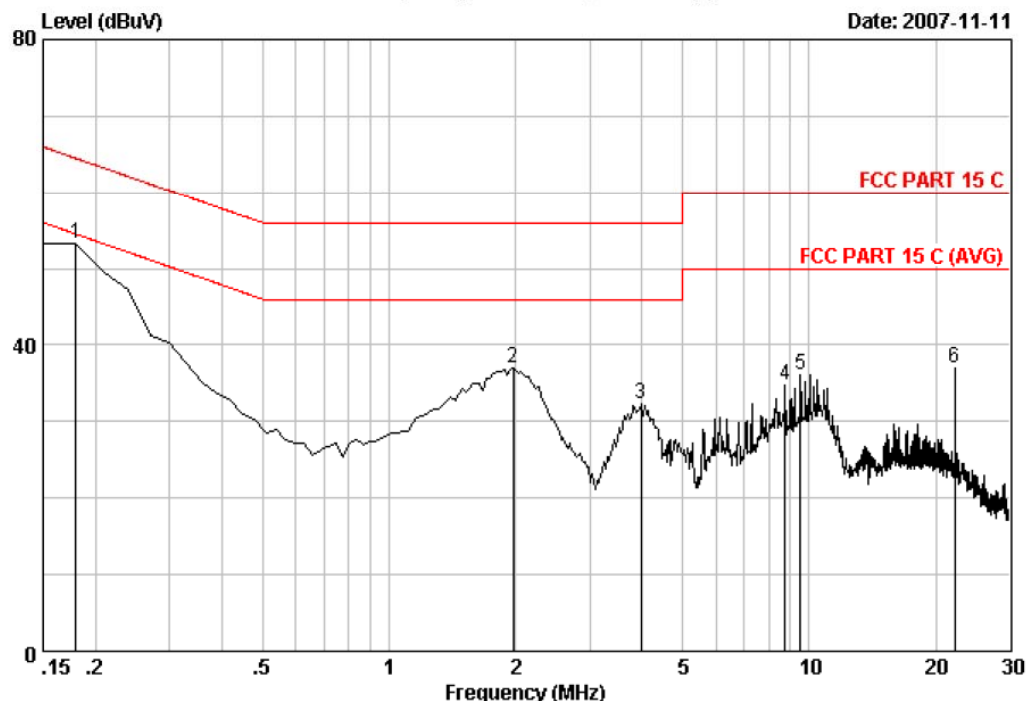
No.	Test Mode	Reference Test Data No.	
		VA	VB
1.	TX Mode	# 1	# 2



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Data: 1 File: D:\DATA\2007 Report\Yusuan\ACS7Q1392.EMI (2)

Date: 2007-11-11



Site no. : Audix 1# Conduction Data no. : 1
Dis. / Ant. : -- KNW407 VA (1#) LISN Phase :
Limit : FCC PART 15 C
Env. / Ins. : 25.9°C/55% ESHS10 Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating : DC 3.3V From PDA
Test Mode : Tx Mode
M/N : WIFI-3236AB-RUFA

		LISN.	Cable		Emission			
Freq.		Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)		(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.18	0.18	10.15	42.89	53.22	64.49	11.27	QP
2	1.97	0.05	10.15	26.74	36.94	56.00	19.06	QP
3	3.97	0.09	10.18	21.96	32.23	56.00	23.77	QP
4	8.78	0.16	10.24	24.38	34.78	60.00	25.22	QP
5	9.52	0.17	10.25	25.72	36.14	60.00	23.86	QP
6	22.21	0.50	10.37	26.05	36.92	60.00	23.08	QP

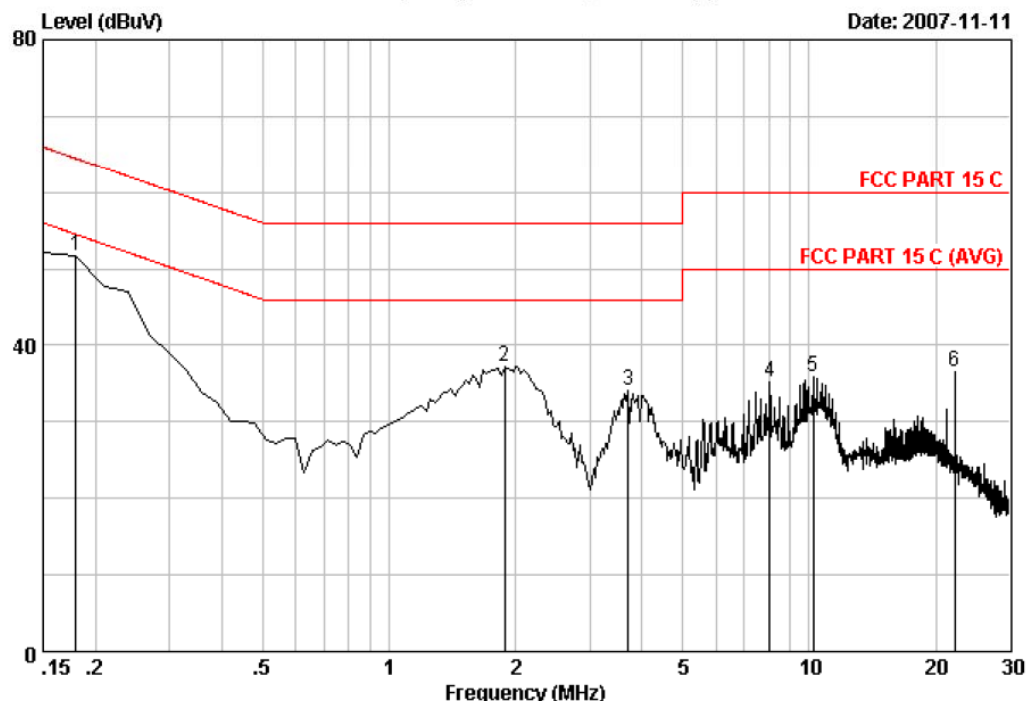
Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.



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Data: 2 File: D:\DATA\2007 Report\Yusuan\ACS7Q1392.EMI (2)

Date: 2007-11-11



Site no. : Audix 1# Conduction Data no. : 2
Dis. / Ant. : -- KNW407 VB (1#) LISN Phase :
Limit : FCC PART 15 C
Env. / Ins. : 25.9°C/55% ESHS10 Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating : DC 3.3V From PDA
Test Mode : Tx Mode
M/N : WIFI-3236AB-RUFA

		LISN.	Cable		Emission			
Freq.		Factor	Loss	Reading	Level	Limits	Margin	Remark
(MHz)		(dB)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dB)	
1	0.18	0.19	10.15	41.41	51.75	64.49	12.74	QP
2	1.88	0.05	10.15	27.10	37.30	56.00	18.70	QP
3	3.70	0.08	10.18	23.80	34.06	56.00	21.94	QP
4	8.06	0.14	10.23	24.80	35.17	60.00	24.83	QP
5	10.21	0.17	10.25	25.56	35.98	60.00	24.02	QP
6	22.21	0.50	10.37	25.58	36.45	60.00	23.55	QP

Remarks: 1. Emission Level= LISN Factor + Cable Loss + Reading.
2. If the average limit is met when using a quasi-peak detector, the EUT shall be deemed to meet both limits and measurement with average detector is unnecessary.

4. RADIATED EMISSION TEST

4.1. Test Equipment

4.1.1. For Anechoic Chamber

Frequency rang: 30~1000MHz

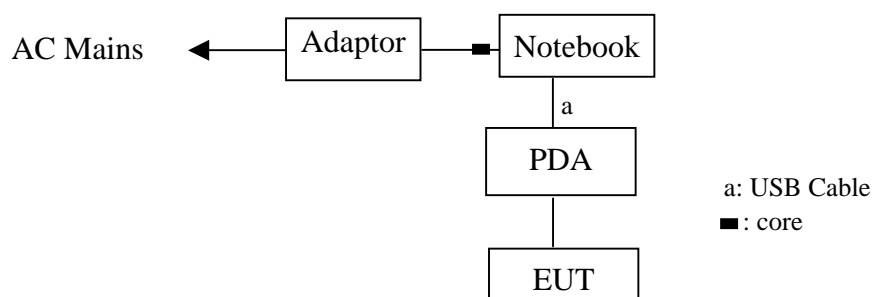
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	June.25.07	1/2 Year
2	EMI Spectrum	Agilent	E7403A	MY42000106	May 11, 07	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS20	830350/005	May 11, 07	1 Year
4	Amplifier	HP	8447D	2944A07794	Sep.11, 07	1/2 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Feb.22, 07	1 Year
6	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.1	July. 16, 07	1/2 Year
7	RF Cable	MIYAZAKI	5D-2W	3# Chamber No.2	July. 16, 07	1/2 Year
8	RF Cable	FUJIKURAw	RG-55/U	3# Chamber No.3	July. 16, 07	1/2 Year
9	RF Cable	FUJIKURA	RG-55/U	3# Chamber No.4	July. 16, 07	1/2 Year
10	Coaxial Switch	Anritsu	MP59B	M73989	July. 16, 07	1/2 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum	Agilent	E4407B	MY41440292	May 11, 07	1 Year
2.	Amp	HP	8449B	3008A00863	May 11, 07	1 Year
3.	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4.	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year
5.	Antenna	ETS	3116	00060088	May. 28, 07	1 Year

4.2. Block Diagram of Test Setup

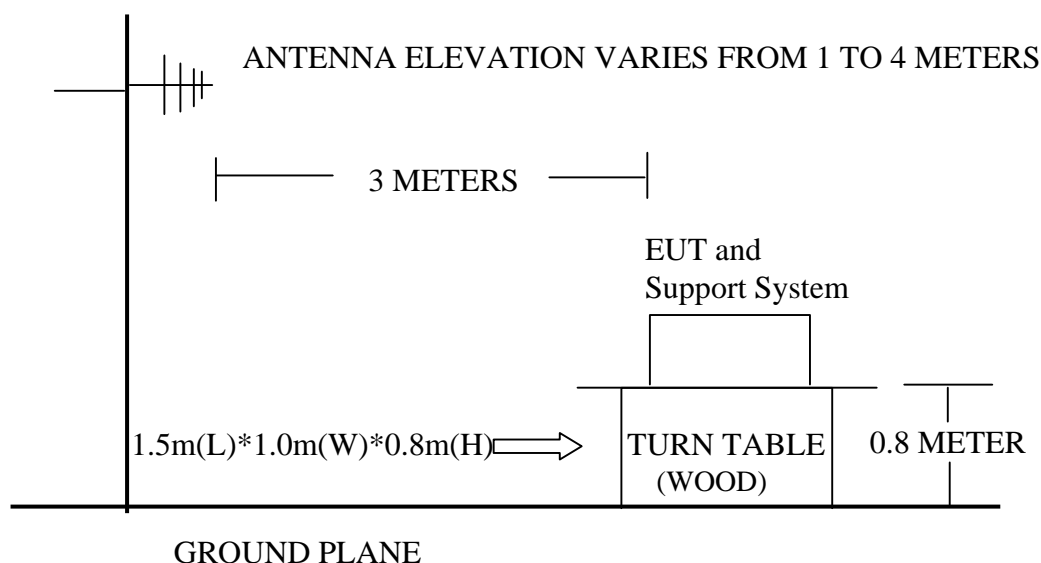
4.2.1. Block diagram of connection between the EUT and simulators



(EUT: Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna)

4.2.2. In Anechoic Chamber

ANTENNA TOWER



4.3. Radiated Emission Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V/m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak) 54.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average)	

- Remark :
- (1) Emission level $\text{dB}\mu\text{V} = 20 \log$ Emission level $\mu\text{V/m}$
 - (2) The smaller limit shall apply at the cross point between two frequency bands.
 - (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

4.4. EUT Configuration on Test

The following equipment are installed on Radiated Emission Test to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.4.1. Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna (EUT)

Model Number : WIFI-3236AB-RUFA
 Serial Number : N/A
 Manufacturer : Yusan Technology (Shenzhen) Ltd

4.4.2. Support Equipment : As Tested Supporting System Detail, in Section 2.2.

4.5.Operating Condition of EUT

- 4.5.1.Setup the EUT and simulator as shown as Section 3.2.
- 4.5.2.Turn on the power of all equipment.
- 4.5.3.EUT was powered by 3.3V DC from PDA
- 4.5.4.PC running the Control program which can make the EUT work in test mode (TX mode) through PDA.

4.6.Test Procedure

The EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber. An antenna was located 3m from the EUT on an adjustable mast. A pre-scan was first performed in order to find prominent radiated emissions. For final emissions measurements at each frequency of interest, the EUT were rotated and the antenna height was varied between 1m and 4m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.4: 2003 on Radiated Emission test.

The bandwidth of the EMI test receiver (R&S ESVS20) is set at 120kHz for frequency range from 30MHz to 1000 MHz.

The bandwidth of the VBW is set at 1MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW 10Hz VBW for average emission above 1GHz

The frequency range from 30MHz to 10th harmonic are checked.

Note: The data rate was set 11Mbps for IEEE802.11b and 54Mbps for IEEE802.11g.

The test modes (IEEE 802.11b TX/ IEEE 802.11g TX) is tested in Anechoic Chamber and all the scanning waveforms are reported with antenna in horizontal and vertical polarization on Section 4.7.

4.7.Radiated Emission Test Results

PASS.

The frequency range from 30MHz to 1000MHz and above 1GHz. is investigated. Please see the following pages.

All the emissions from 18GHz~25GHz are Peak measured and comply with average limit.

EUT: Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna

Model No. : WIFI-3236AB-RUFA

Test Date: Nov.12~27, 2007 Temperature: 24℃ Humidity: 56%

The details of test modes are as follows :

Test Mode	Frequency (MHz)	Test Mode	Reference Test Data No.	
			Horizontal	Vertical
1.	30~1000	Tx Mode	#12	#13
2.	1000~18000	Tx IEEE802.11b CH1 2412MHz	#5 #6	#7 #8
3.		Tx IEEE802.11b CH6 2437MHz	#11 #12	#9 #10
4.		Tx IEEE802.11b CH11 2462MHz	#13 #14	#15 #16
5.		Tx IEEE802.11g CH1 2412MHz	#25 #26	#27 #28
6.		Tx IEEE802.11g CH6 2437MHz	#23 #24	#21 #22
7.		Tx IEEE802.11g CH11 2462MHz	#17 #18	#19 #20
8.	18000~25000	Tx IEEE802.11b CH1 2412MHz	#38	#39
9.		Tx IEEE802.11b CH6 2437MHz	#41	#40
10.		Tx IEEE802.11b CH11 2462MHz	#42	#43
11.		Tx IEEE802.11g CH1 2412MHz	#49	#48
12.		Tx IEEE802.11g CH6 2437MHz	#46	#47
13.		Tx IEEE802.11g CH11 2462MHz	#45	#44

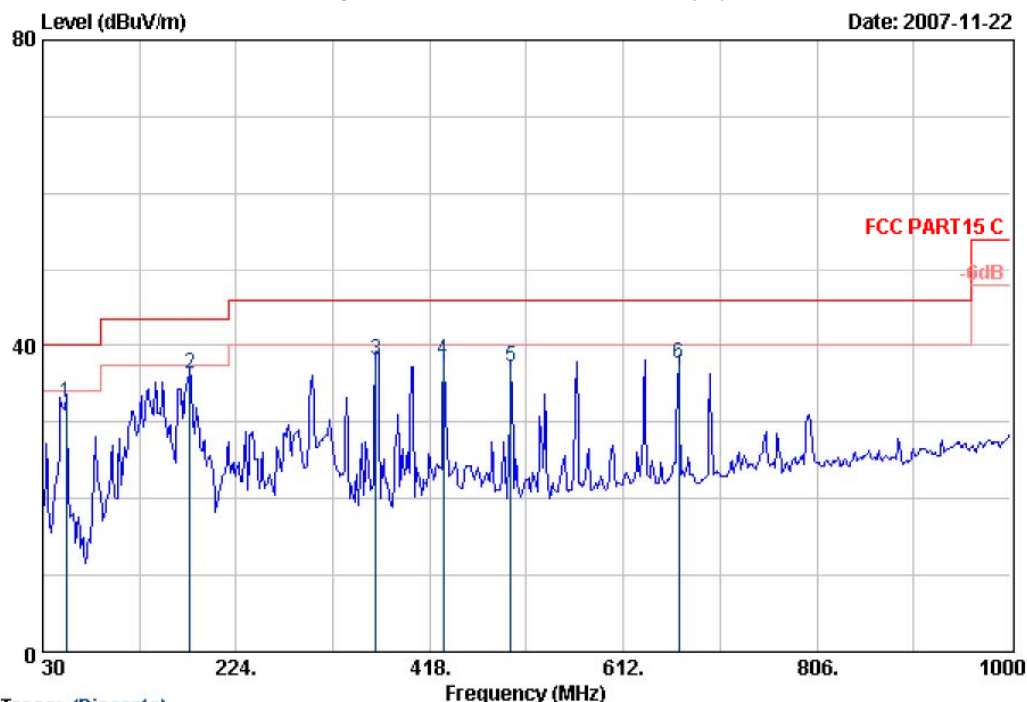


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Data: 12

File: D:\2007 Report Data\YUYUSAN\ACS7Q1392.EMI (15)

Date: 2007-11-22



Trace: (Discrete)

Site no.	: 3# Chamber Radiation	Data no.	: 12
Dis. / Ant.	: 3m 2598	Ant. pol.	: HORIZONTAL
Limit	: FCC PART15 C		
Env. / Ins.	: 24*C/56% ESVS20	Engineer	: Jamy
EUT	: Module 3236ab:802.11b/g Wi-Fi board with built-in antenna		
Power Rating	: DC 3.3V From PDA		
Test mode	: Tx Mode		
M/N	: WIFI-3236AB-RUFA		

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	53.28	7.66	0.87	24.05	32.58	40.00	7.42	QP
2	177.44	9.45	1.27	25.53	36.25	43.50	7.25	QP
3	363.68	15.40	1.76	20.98	38.14	46.00	7.86	QP
4	431.58	17.00	1.99	19.04	38.03	46.00	7.97	QP
5	499.48	18.10	2.02	17.03	37.15	46.00	8.85	QP
6	667.29	20.50	2.29	14.91	37.70	46.00	8.30	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

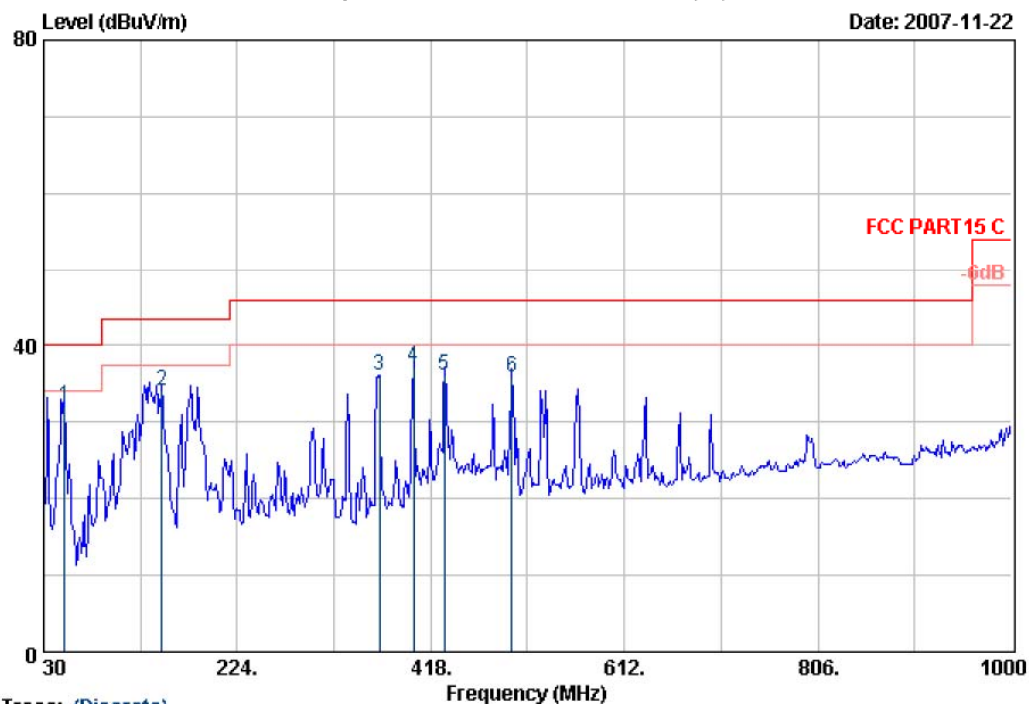


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Data: 13

File: D:\2007 Report Data\YYUSAN\ACS7Q1392.EMI (15)

Date: 2007-11-22



Trace: (Discrete)

Site no. : 3# Chamber Radiation Data no. : 13
 Dis. / Ant. : 3m 2598 Ant. pol. : VERTICAL
 Limit : FCC PART15 C
 Env. / Ins. : 24*C/56% ESVS20 Engineer : Jany
 EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
 Power Rating : DC 3.3V From PDA
 Test mode : Tx Mode
 M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	51.34	8.42	0.85	22.92	32.19	40.00	7.81	QP
2	148.34	11.60	1.21	21.19	34.00	43.50	9.50	QP
3	366.59	15.43	1.76	18.99	36.18	46.00	9.82	QP
4	400.54	16.53	1.83	18.88	37.24	46.00	8.76	QP
5	431.58	17.00	1.99	17.18	36.17	46.00	9.83	QP
6	499.48	18.10	2.02	15.85	35.97	46.00	10.03	QP

Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

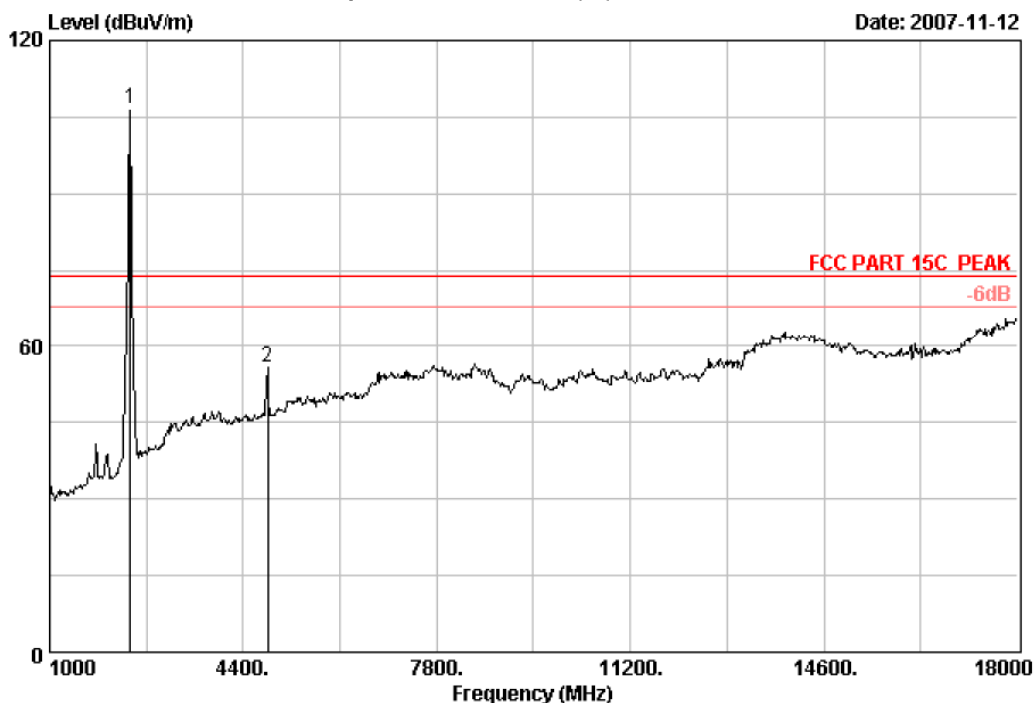


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Data: 5

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Date: 2007-11-12



Site no. : Data no. : 5
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH1 2412MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				
					Reading	Level	Limits	Margin	Remark
					(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2412.00	29.03	6.22	35.18	106.52	106.59	74.00	-32.59	Peak
2	4824.00	34.02	9.59	34.49	46.78	55.90	74.00	18.10	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

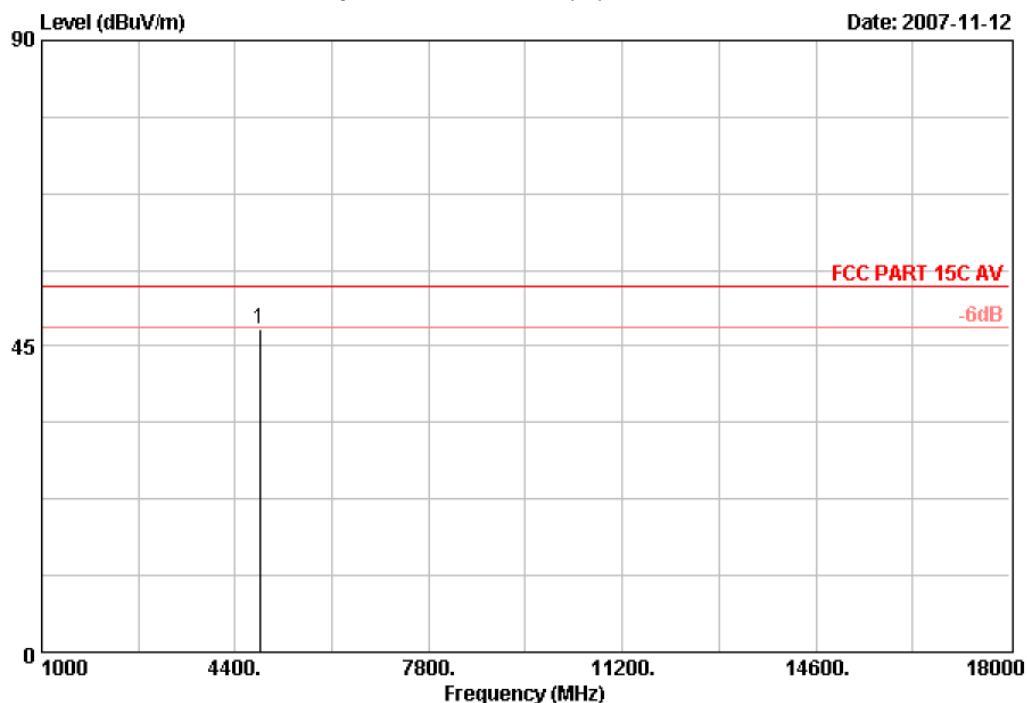


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Site no. : Data no. : 6
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH1 2412MHz
M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission					Remark
				Reading	Level	Limits	Margin		
				(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	4824.00	34.02	9.59	34.49	38.52	47.64	54.00	6.36	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

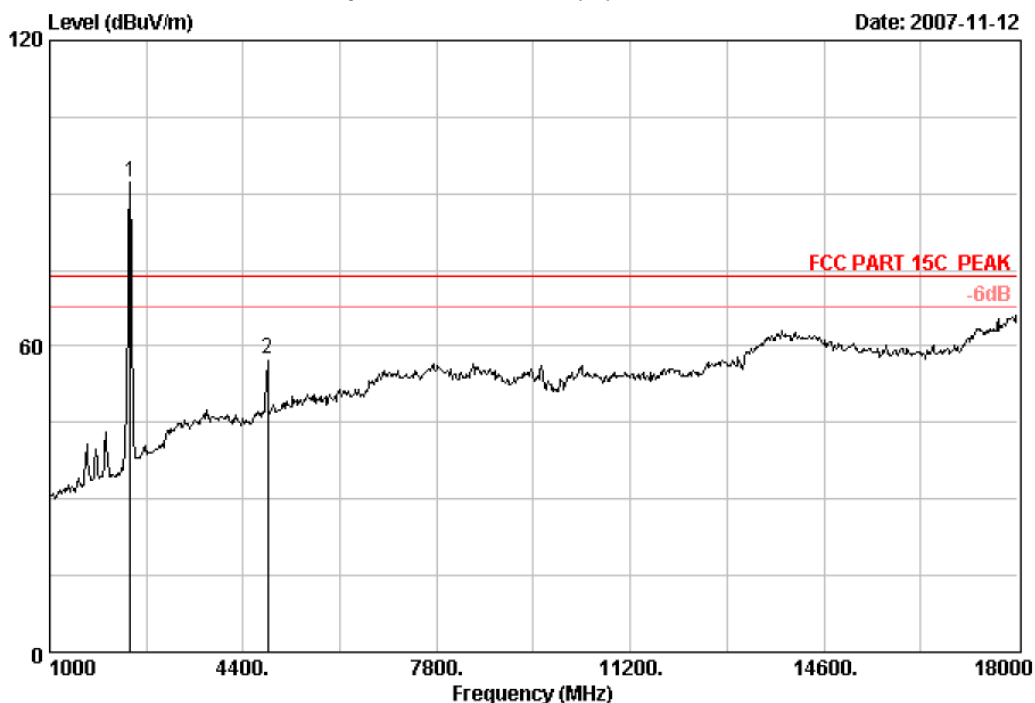


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Site no. : Data no. : 7
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH1 2412MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				
					Reading	Level	Limits	Margin	Remark
					(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2412.00	29.03	6.22	35.18	92.07	92.14	74.00	-18.14	Peak
2	4824.00	34.02	9.59	34.49	48.52	57.64	74.00	16.36	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

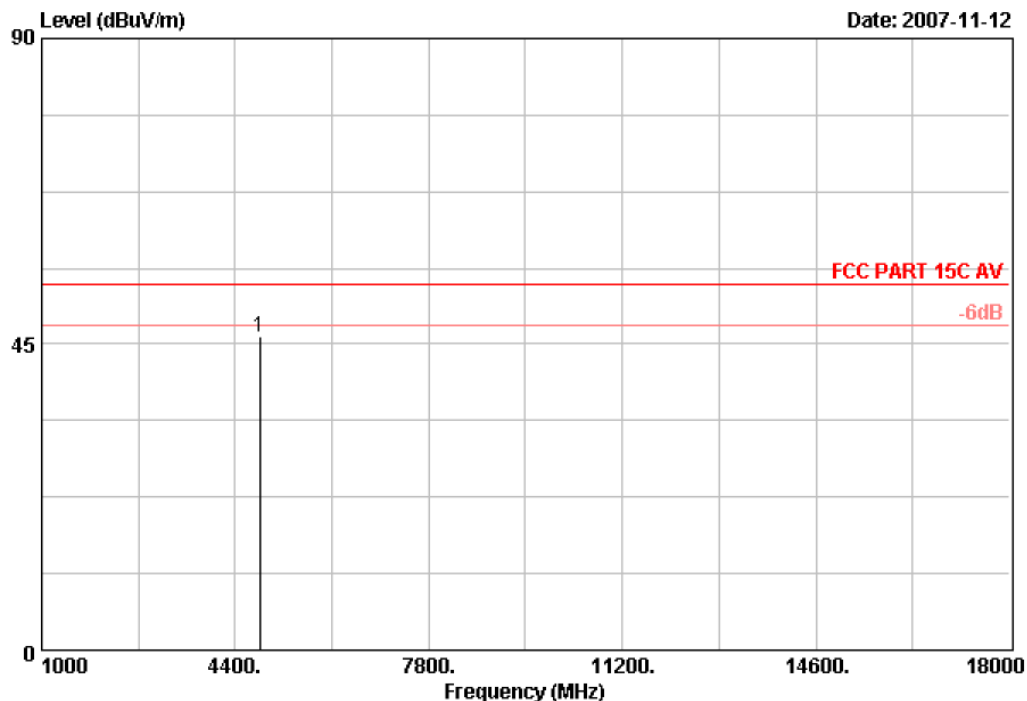


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Site no. : Data no. : 8
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH1 2412MHz
M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission					Remark
				Reading	Level	Limits	Margin		
(dBuV)	(dBuV/m)	(dBuV/m)	(dB)				(dB)		
1	4824.00	34.02	9.59	34.49	37.07	46.19	54.00	7.81	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

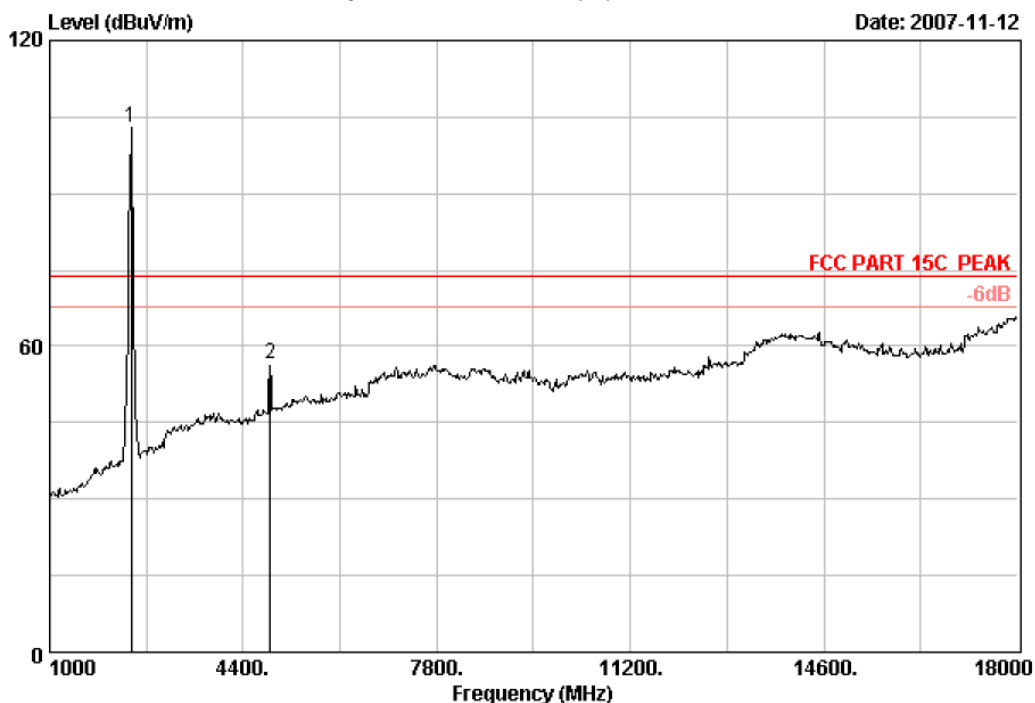


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Site no. : Data no. : 11
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH6 2437MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
					Reading	Level			
1	2437.00	29.11	6.25	35.17	102.69	102.88	74.00	-28.88	Peak
2	4874.00	34.16	9.67	34.48	47.09	56.44	74.00	17.56	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

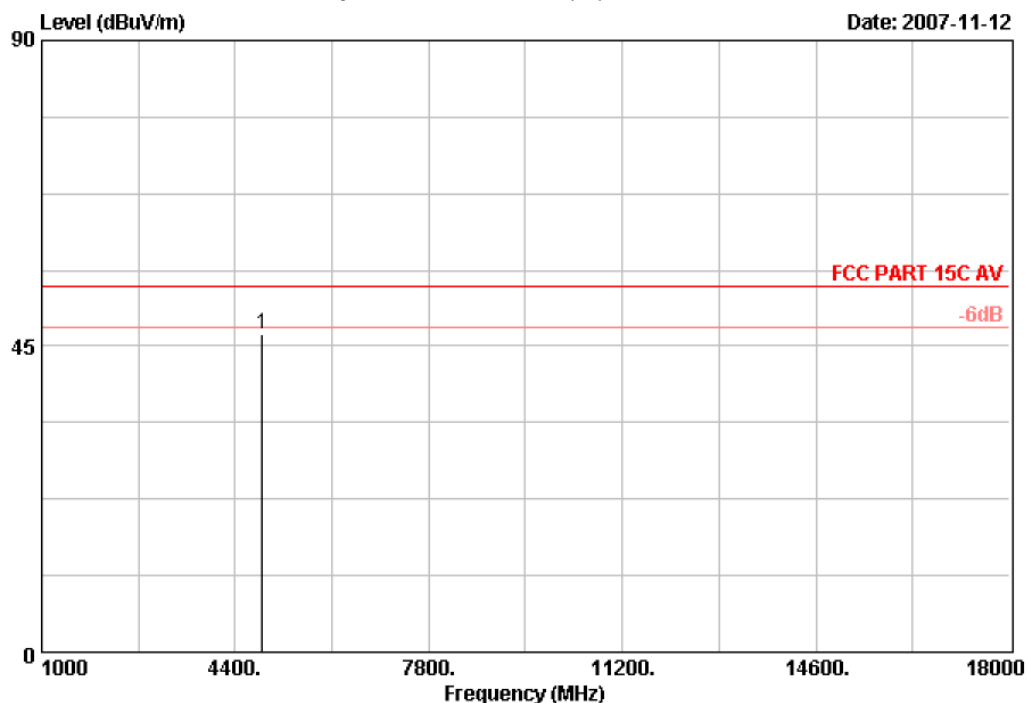


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Site no. : Data no. : 12
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Jamy
 EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
 Power Rating: DC 3.3V From PDA
 Test Mode : Tx IEEE802.11b CH6 2437MHz
 M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission			Margin (dB)	Remark	
				Reading (dBuV)	Level (dBuV/m)	Limits (dBuV/m)			
1	4874.00	34.16	9.67	34.48	37.45	46.80	54.00	7.20	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

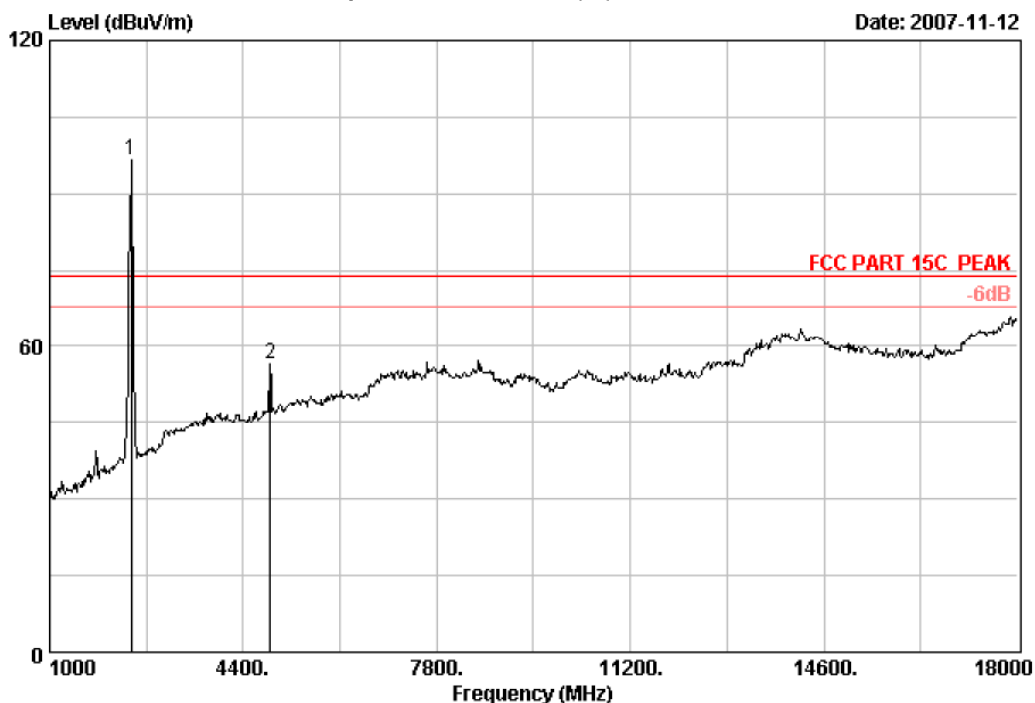


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Site no. : Data no. : 9
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH6 2437MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
					Reading	Level			
1	2437.00	29.11	6.25	35.17	96.31	96.50	74.00	-22.50	Peak
2	4874.00	34.16	9.67	34.48	47.11	56.46	74.00	17.54	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

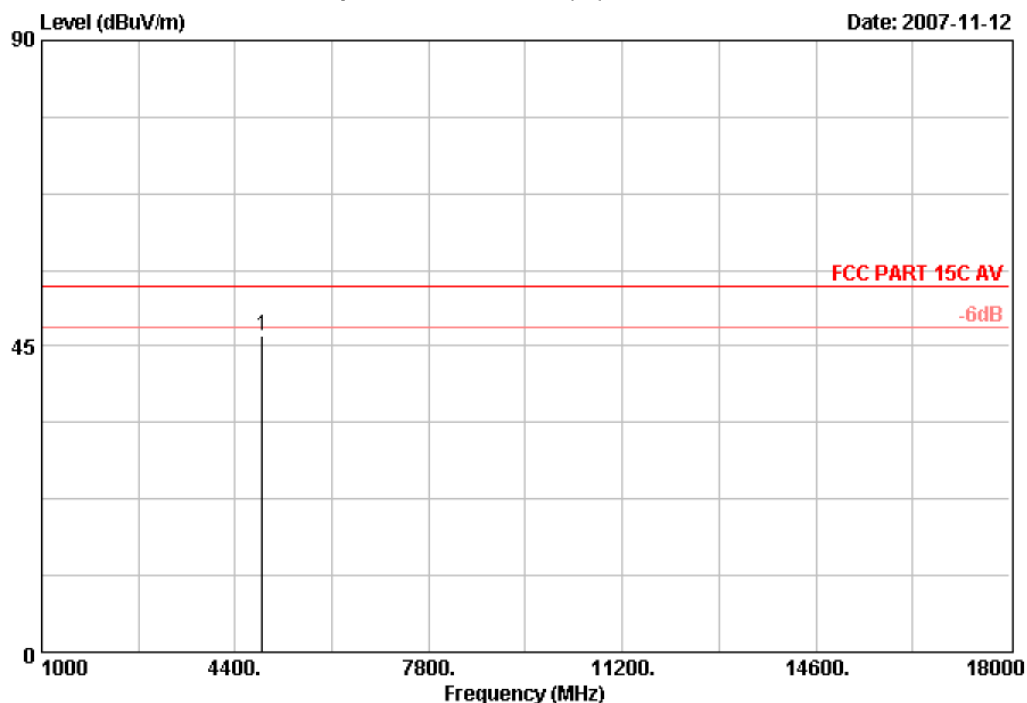


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Site no. : Data no. : 10
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH6 2437MHz
M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission					Remark
				Reading	Level	Limits	Margin		
(dBuV)	(dBuV/m)	(dBuV/m)	(dB)						
1	4874.00	34.16	9.67	34.48	37.30	46.65	54.00	7.35	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

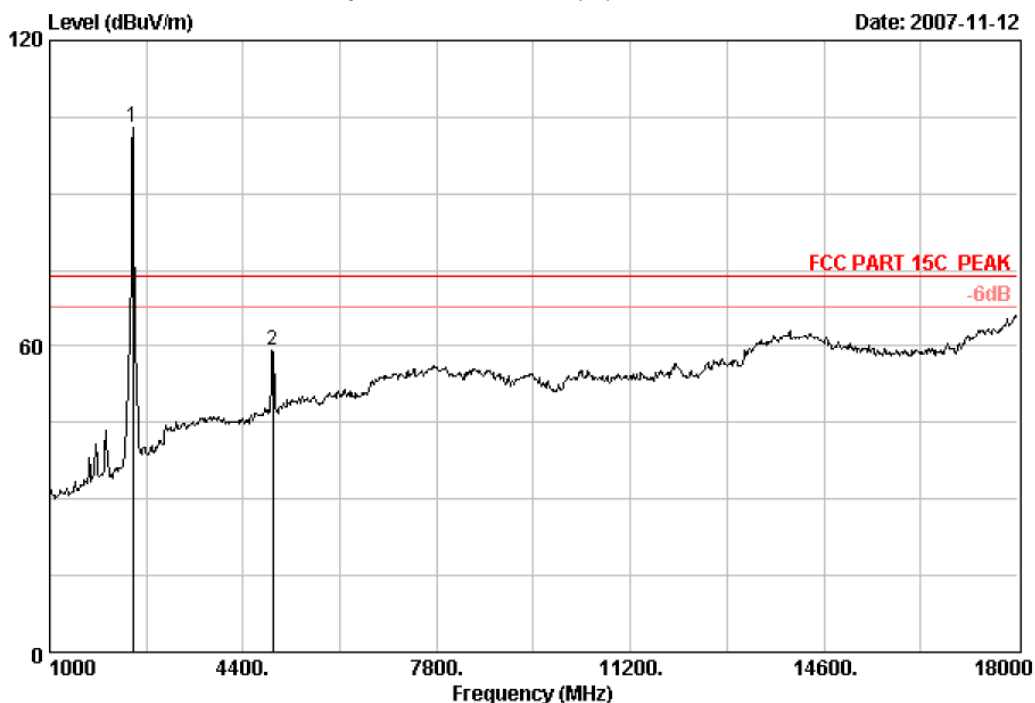


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Site no. : Data no. : 13
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH11 2462MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				
					Reading	Level	Limits	Margin	Remark
					(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2462.00	29.15	6.28	35.17	102.67	102.93	74.00	-28.93	Peak
2	4924.00	34.29	9.79	34.47	49.67	59.28	74.00	14.72	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

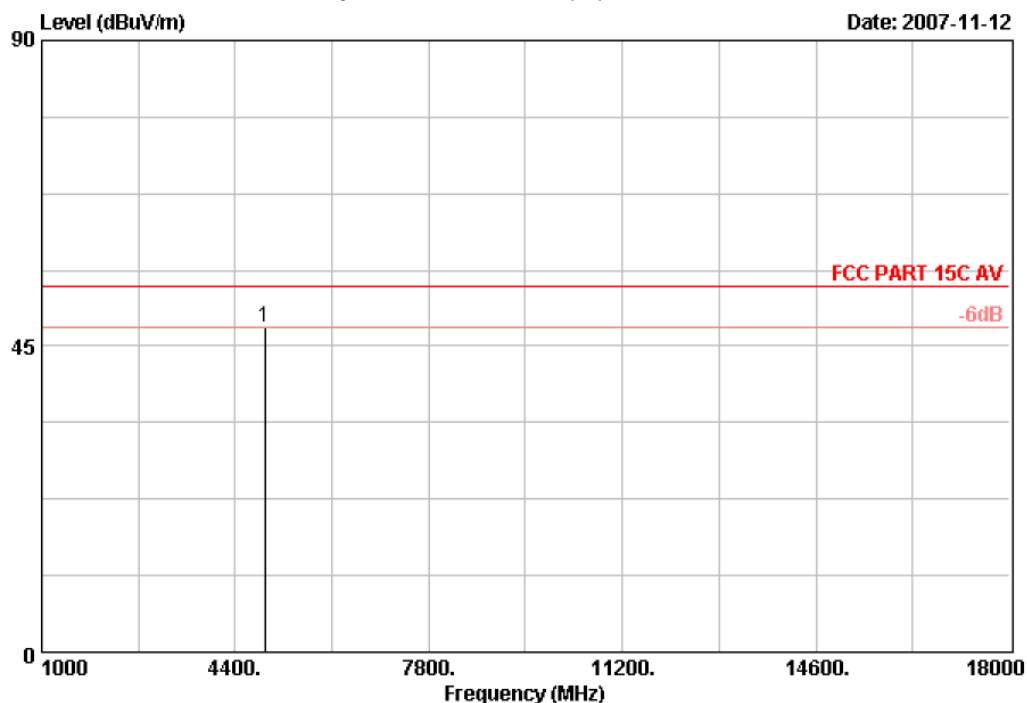


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Site no. : Data no. : 14
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH11 2462MHz
M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission					Remark
				Reading	Level	Limits	Margin		
(dBuV)	(dBuV/m)	(dBuV/m)	(dB)						
1	4924.00	34.29	9.79	34.47	38.18	47.79	54.00	6.21	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

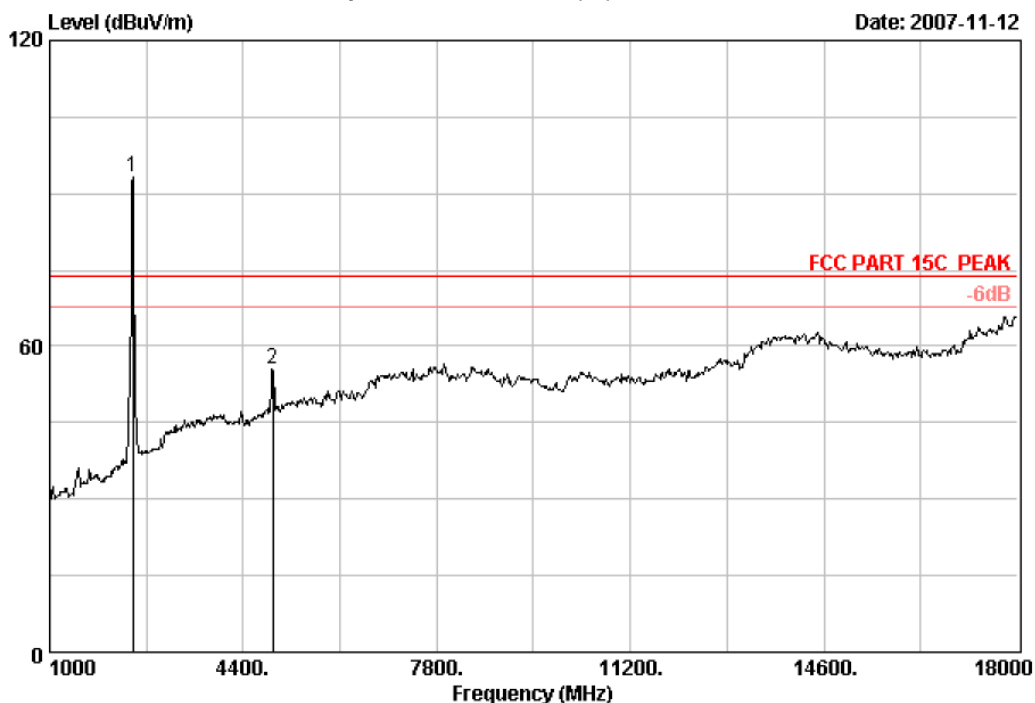


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Site no. : Data no. : 15
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH11 2462MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				
					Reading	Level	Limits	Margin	Remark
					(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2462.00	29.15	6.28	35.17	92.92	93.18	74.00	-19.18	Peak
2	4924.00	34.29	9.79	34.47	45.76	55.37	74.00	18.63	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

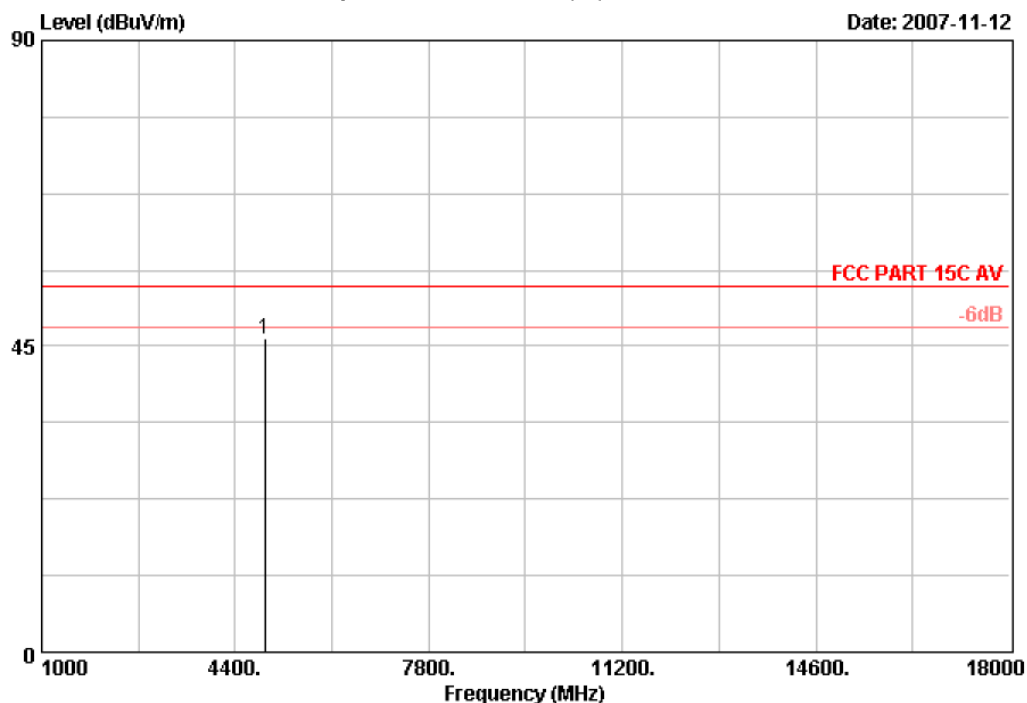


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Site no. : Data no. : 16
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH11 2462MHz
M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission					Remark
				Reading	Level	Limits	Margin		
(dBuV)	(dBuV/m)	(dBuV/m)	(dB)						
1	4924.00	34.29	9.79	34.47	36.58	46.19	54.00	7.81	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

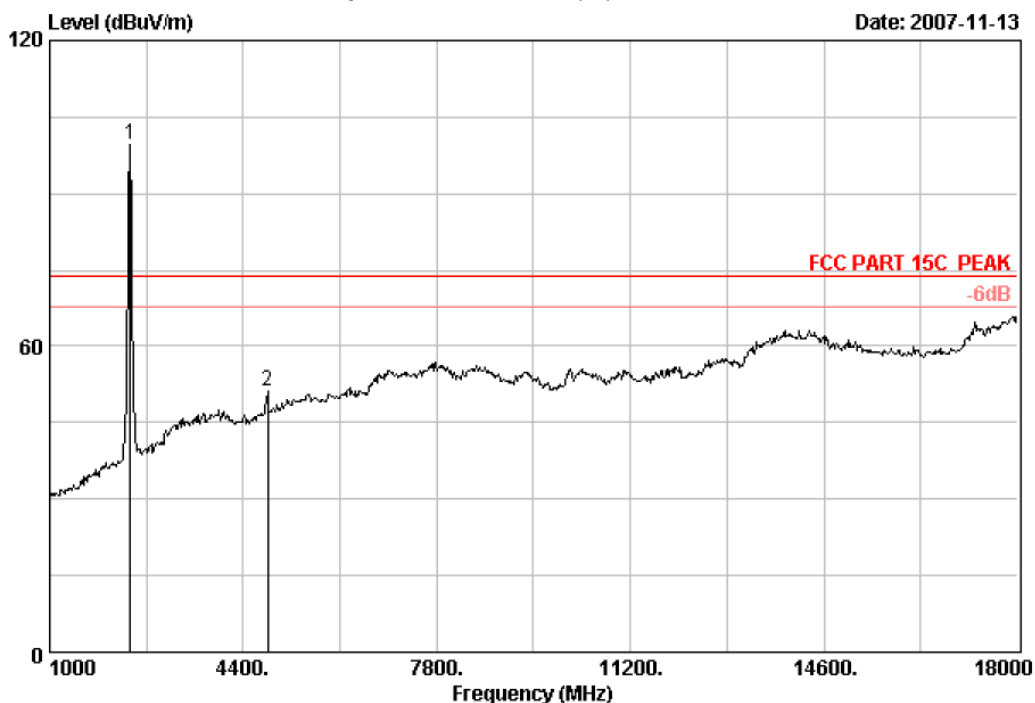


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Site no. : Data no. : 25
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH1 2412MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
					Reading	Level			
1	2412.00	29.03	6.22	35.18	99.60	99.67	74.00	-25.67	Peak
2	4824.00	34.02	9.59	34.49	42.16	51.28	74.00	22.72	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

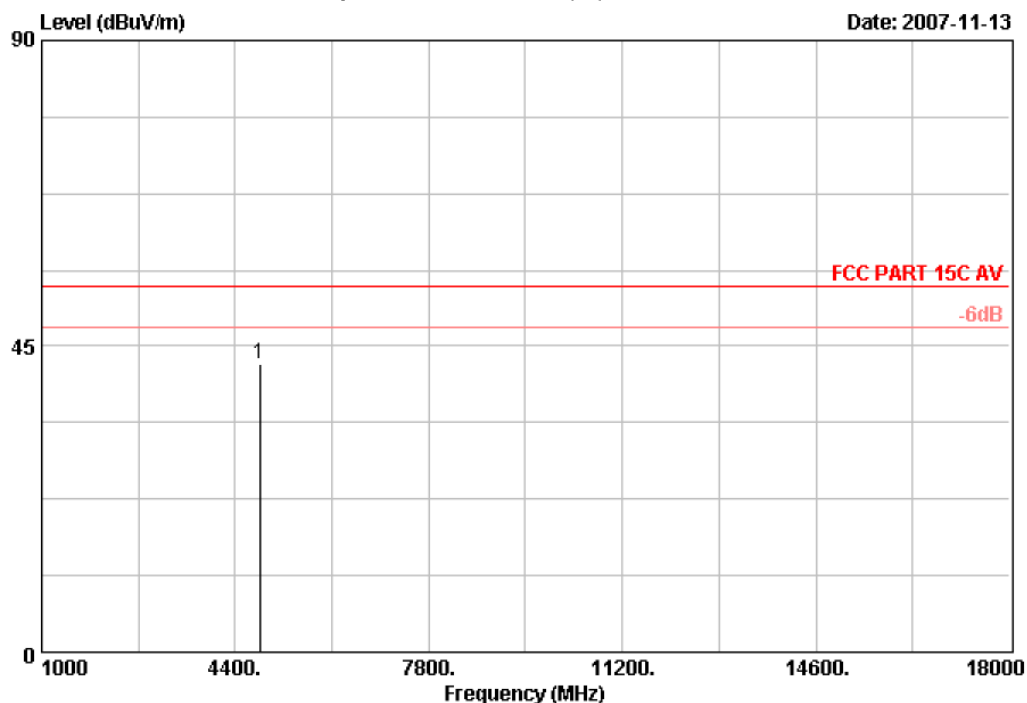


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Site no. : Data no. : 26
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH1 2412MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				Remark
					Reading	Level	Limits	Margin	
					(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	4824.00	34.02	9.59	34.49	33.16	42.28	54.00	11.72	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

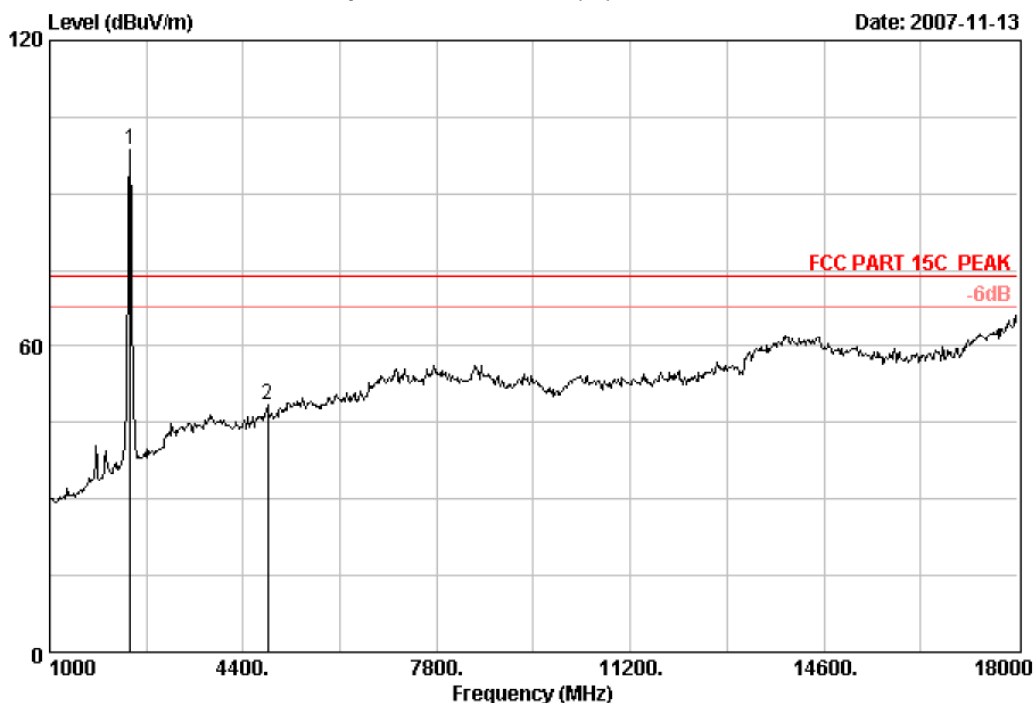


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Site no. : Data no. : 27
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH1 2412MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				
					Reading	Level	Limits	Margin	Remark
					(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2412.00	29.03	6.22	35.18	98.39	98.46	74.00	-24.46	Peak
2	4824.00	34.02	9.59	34.49	39.49	48.61	74.00	25.39	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

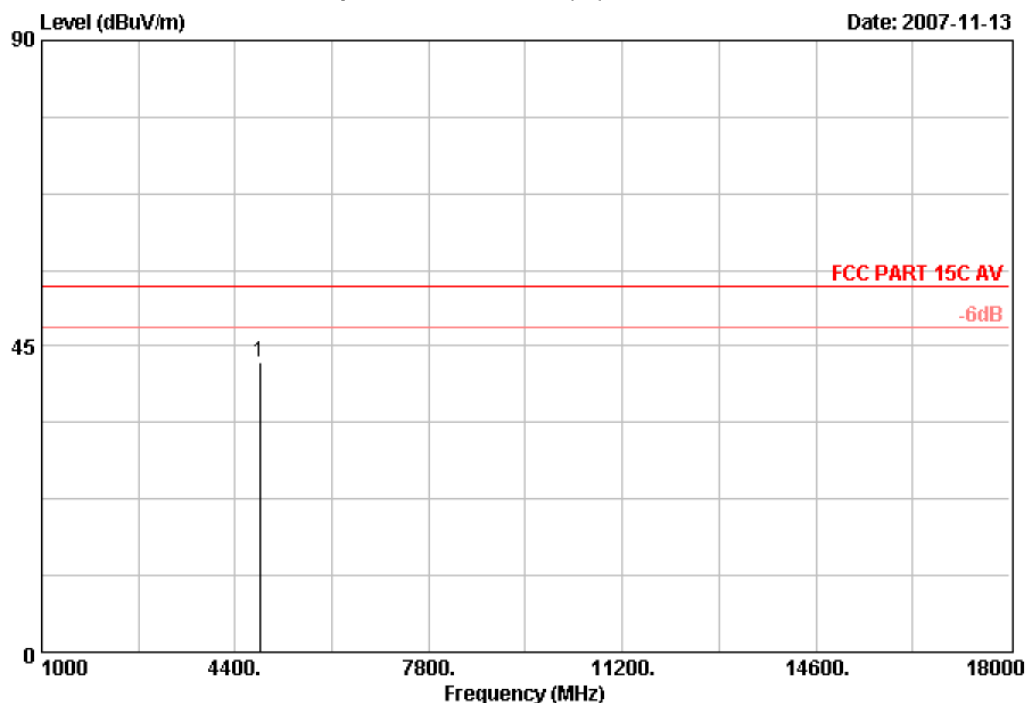


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Date: 2007-11-13



Site no. : Data no. : 28
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Jamy
 EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
 Power Rating: DC 3.3V From PDA
 Test Mode : Tx IEEE802.11g CH1 2412MHz
 M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission					Remark
				Reading	Level	Limits	Margin		
(dBuV)	(dBuV/m)	(dBuV/m)	(dB)						
1	4824.00	34.02	9.59	34.49	33.49	42.61	54.00	11.39	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

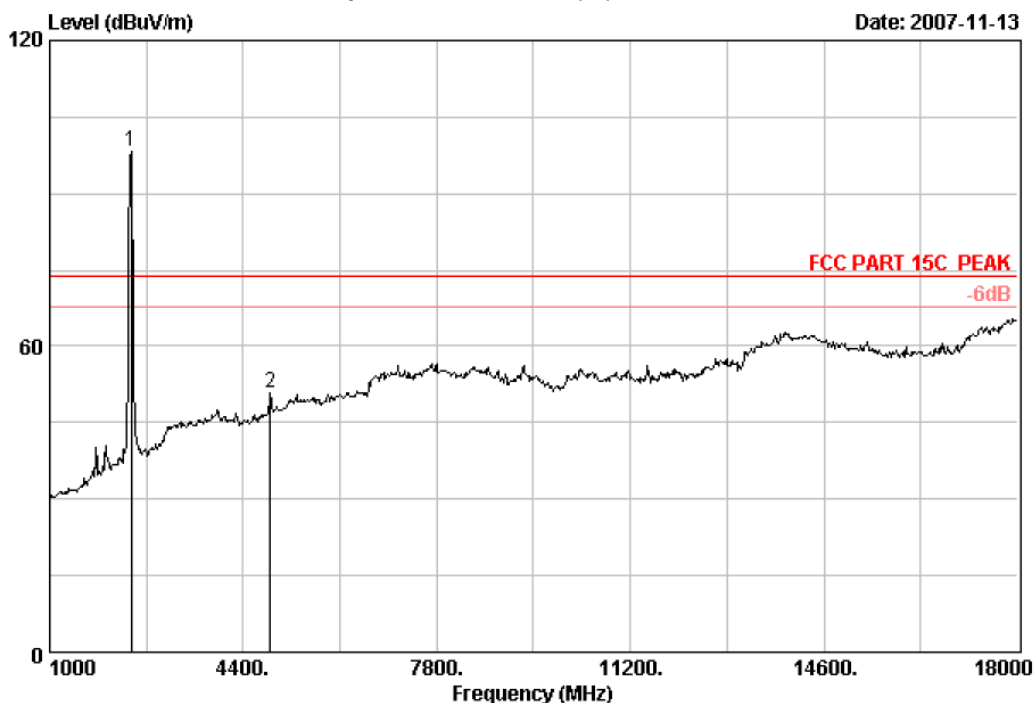


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Postcode:518057

Data: 23

File: D:\2007 Report\YACS7Q1392.EMI (49)

Date: 2007-11-13



Site no. : Data no. : 23
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH6 2437MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
					Reading	Level			
1	2437.00	29.11	6.25	35.17	98.22	98.41	74.00	-24.41	Peak
2	4874.00	34.16	9.67	34.48	41.38	50.73	74.00	23.27	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

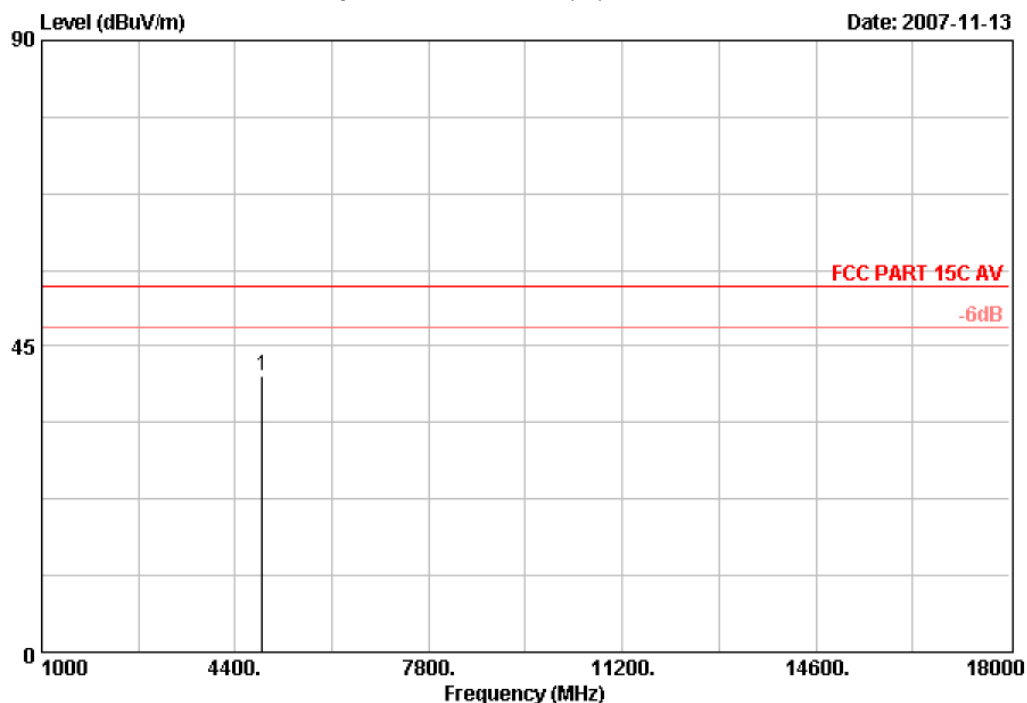


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Data: 24

File: D:\2007 Report\YACS7Q1392.EMI (49)

Date: 2007-11-13



Site no. : Data no. : 24
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Jamy
 EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
 Power Rating: DC 3.3V From PDA
 Test Mode : Tx IEEE802.11g CH6 2437MHz
 M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission					Remark
				Reading	Level	Limits	Margin		
(dBuV)	(dBuV/m)	(dBuV/m)	(dB)						
1	4874.00	34.16	9.67	34.48	31.38	40.73	54.00	13.27	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

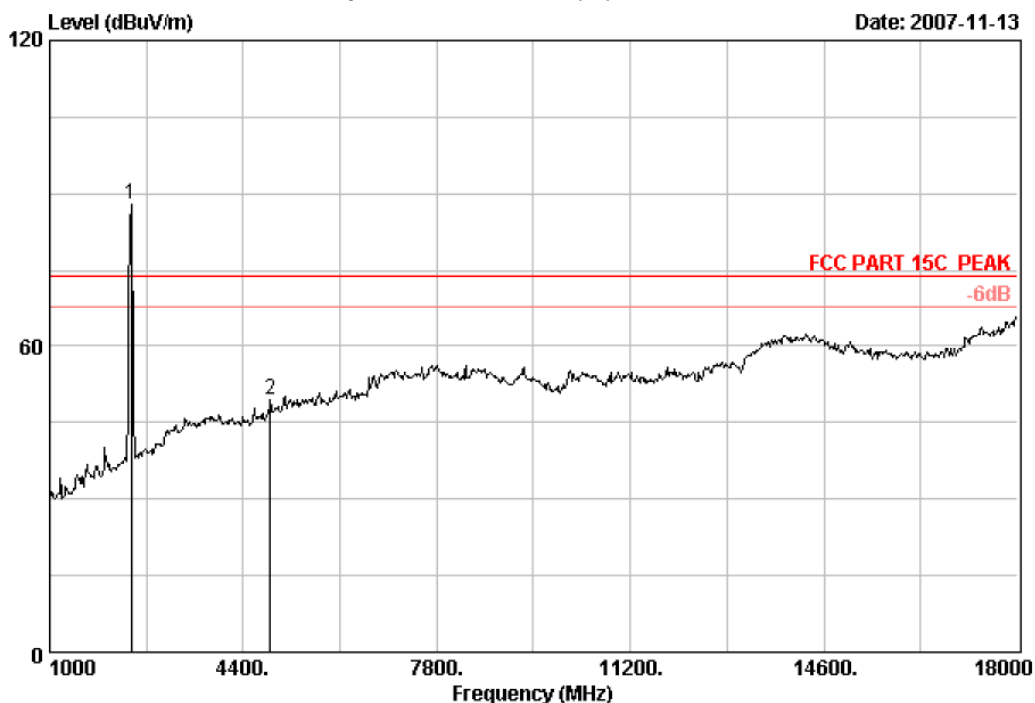


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Postcode:518057

Data: 21

File: D:\2007 Report\YACS7Q1392.EMI (49)

Date: 2007-11-13



Site no. : Data no. : 21
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH6 2437MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
					Reading	Level			
1	2437.00	29.11	6.25	35.17	87.84	88.03	74.00	-14.03	Peak
2	4874.00	34.16	9.67	34.48	40.02	49.37	74.00	24.63	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

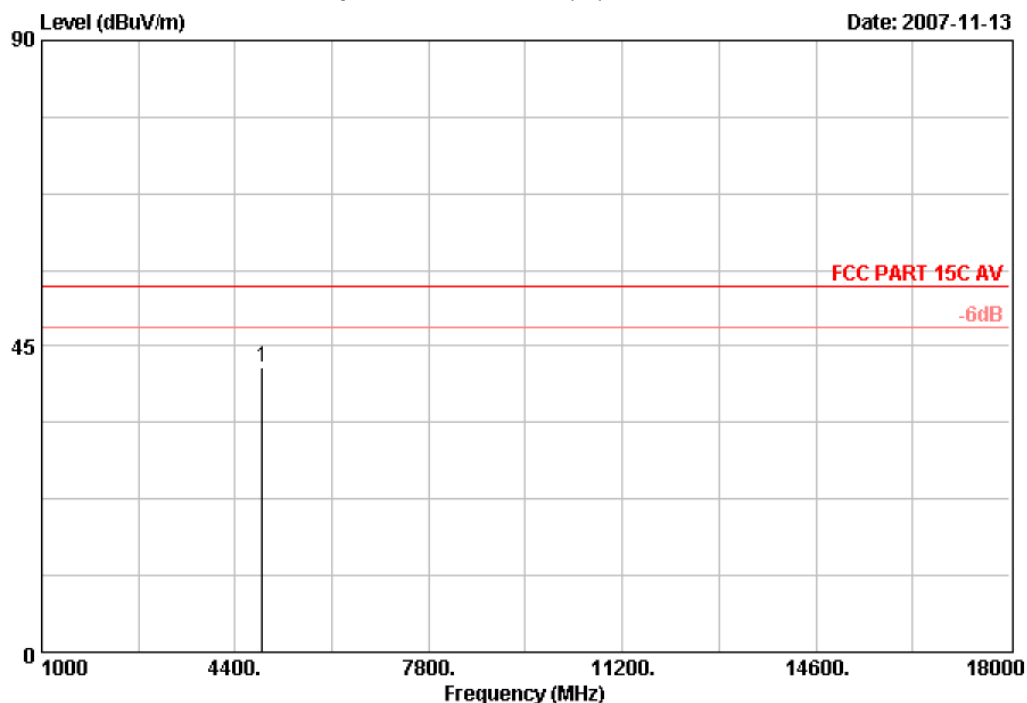


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Data: 22

File: D:\2007 Report\YACS7Q1392.EMI (49)

Date: 2007-11-13



Site no. : Data no. : 22
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Jamy
 EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
 Power Rating: DC 3.3V From PDA
 Test Mode : Tx IEEE802.11g CH6 2437MHz
 M/N : WIFI-3236AB-RUFA

Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission					Remark
				Reading	Level	Limits	Margin		
(dBuV)	(dBuV/m)	(dBuV/m)	(dB)						
1	4874.00	34.16	9.67	34.48	32.50	41.85	54.00	12.15	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.

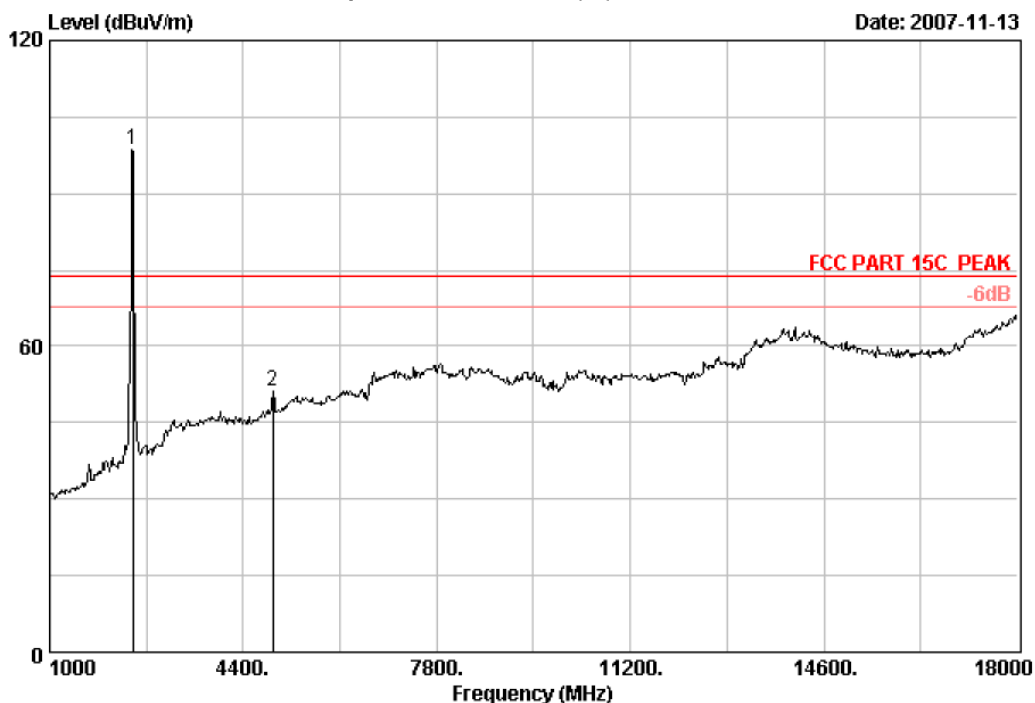


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Data: 17

File: D:\2007 Report\YACS7Q1392.EMI (49)

Date: 2007-11-13



Site no. : Data no. : 17
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH11 2462MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
					Reading	Level			
1	2462.00	29.15	6.28	35.17	98.39	98.65	74.00	-24.65	Peak
2	4924.00	34.29	9.79	34.47	41.48	51.09	74.00	22.91	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

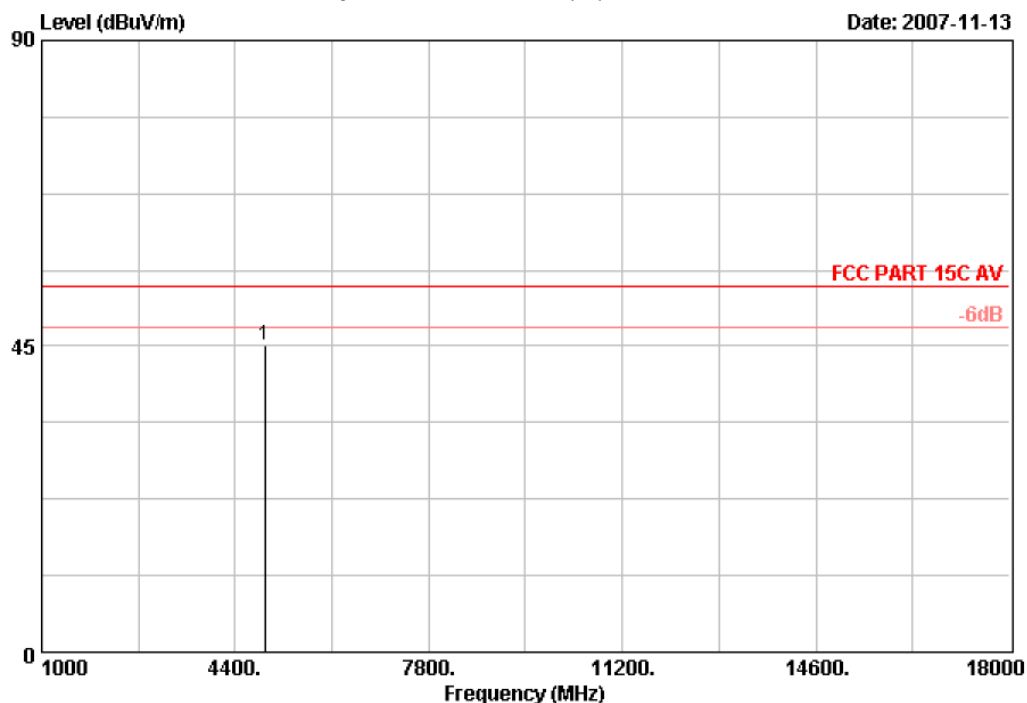


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Data: 18

File: D:\2007 Report\YACS7Q1392.EMI (49)

Date: 2007-11-13



Site no. : Data no. : 18
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH11 2462MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				Remark
					Reading	Level	Limits	Margin	
					(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	4924.00	34.29	9.79	34.47	35.48	45.09	54.00	8.91	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

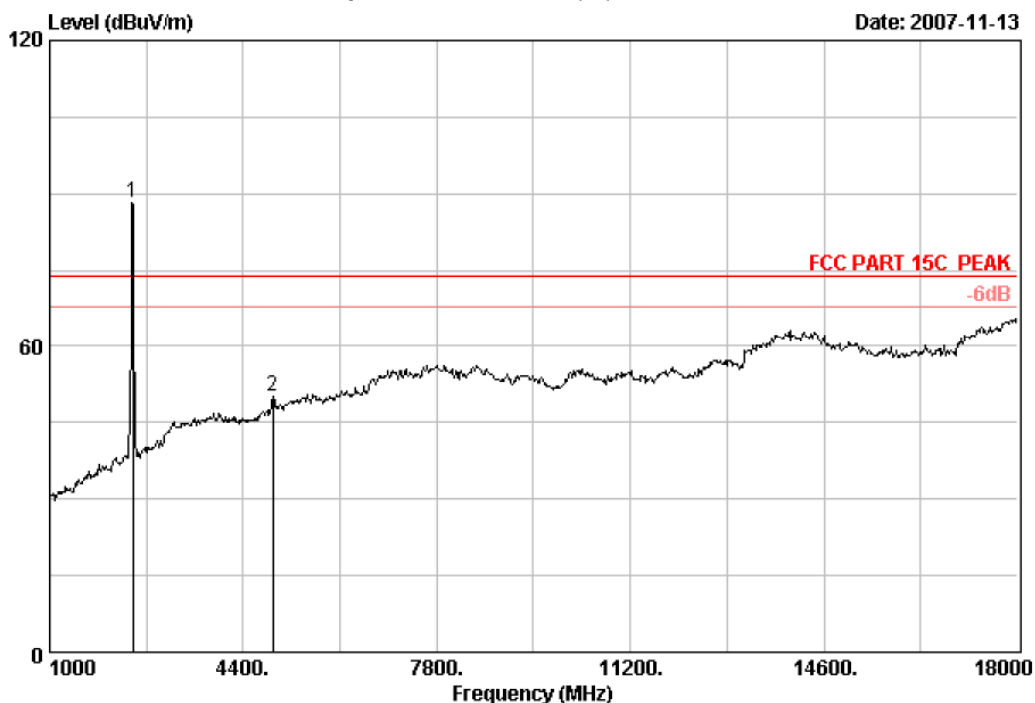


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Data: 19

File: D:\2007 Report\YACS7Q1392.EMI (49)

Date: 2007-11-13



Site no. : Data no. : 19
Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
Limit : FCC PART 15C PEAK
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH11 2462MHz
M/N : WIFI-3236AB-RUFA

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission		Limits (dBuV/m)	Margin (dB)	Remark
					Reading	Level			
					(dBuV)	(dBuV/m)			
1	2462.00	29.15	6.28	35.17	87.87	88.13	74.00	-14.13	Peak
2	4924.00	34.29	9.79	34.47	40.60	50.21	74.00	23.79	Peak

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

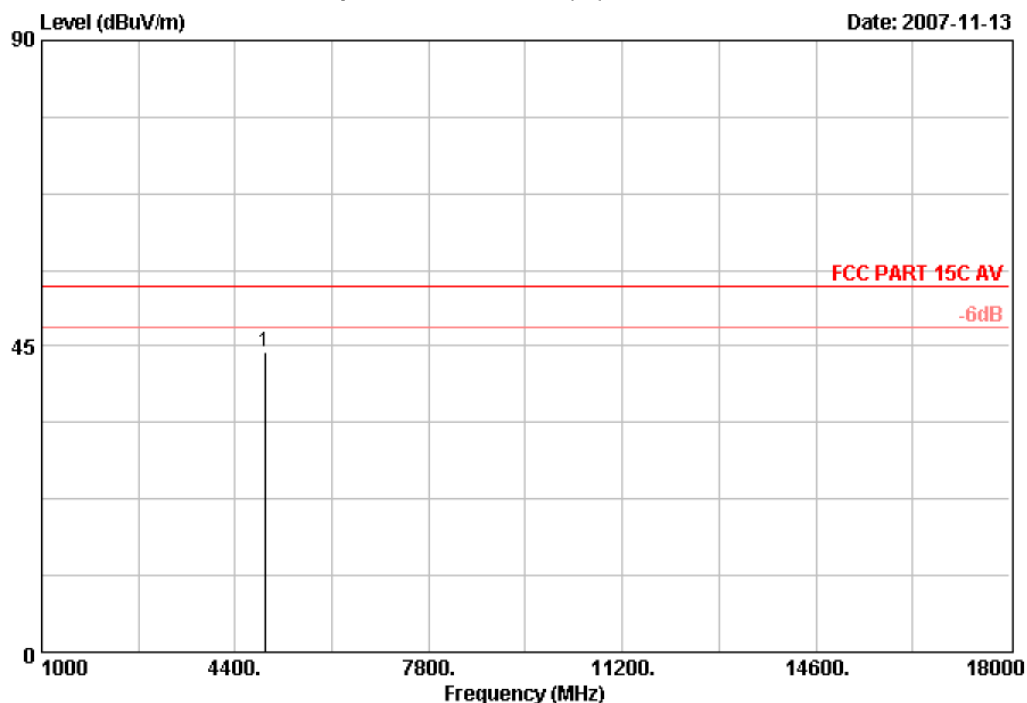


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Data: 20

File: D:\2007 Report\YACS7Q1392.EMI (49)

Date: 2007-11-13



Site no. : Data no. : 20
 Dis. / Ant. : 3m 3115 FACTOR Ant. pol. : VERTICAL
 Limit : FCC PART 15C AV
 Env. / Ins. : 23°C/54% Engineer : Jamy
 EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
 Power Rating: DC 3.3V From PDA
 Test Mode : Tx IEEE802.11g CH11 2462MHz
 M/N : WIFI-3236AB-RUFA

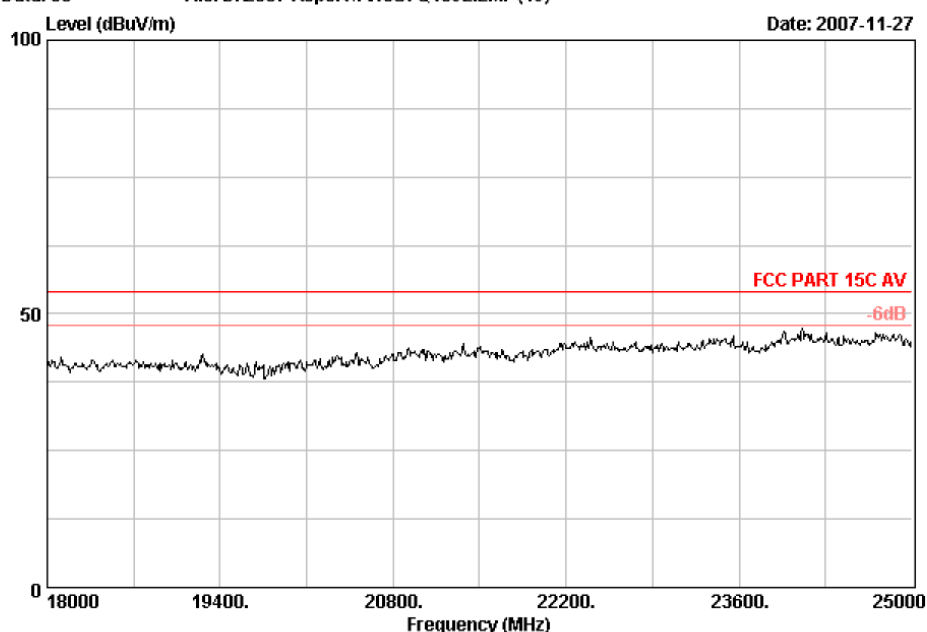
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Emission				Remark
					Reading	Level	Limits	Margin	
					(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	4924.00	34.29	9.79	34.47	34.60	44.21	54.00	9.79	Average

Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
 2. The emission levels that are 20dB below the official limit are not reported.



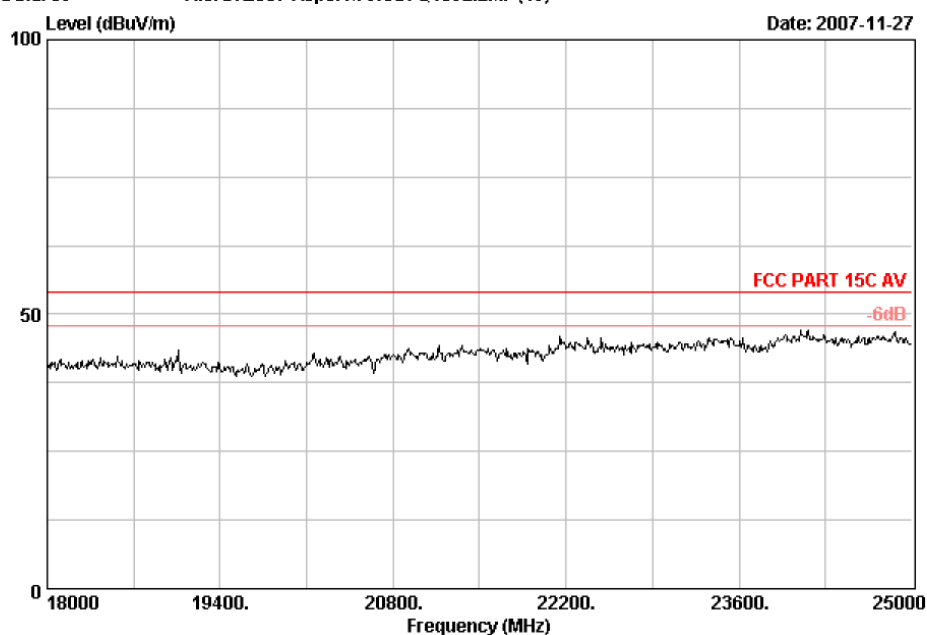
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Tel:+86-755-26639495-7
Fax:+86-755-26632877
Postcode:518057

Data: 38 File: D:\2007 Report\YACS7Q1392.EMI (49)



Site no. : Data no. : 38
Dis. / Ant. : 3m Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH1 2412MHz
M/N : WIFI-3236AB-RUFA

Data: 39 File: D:\2007 Report\YACS7Q1392.EMI (49)

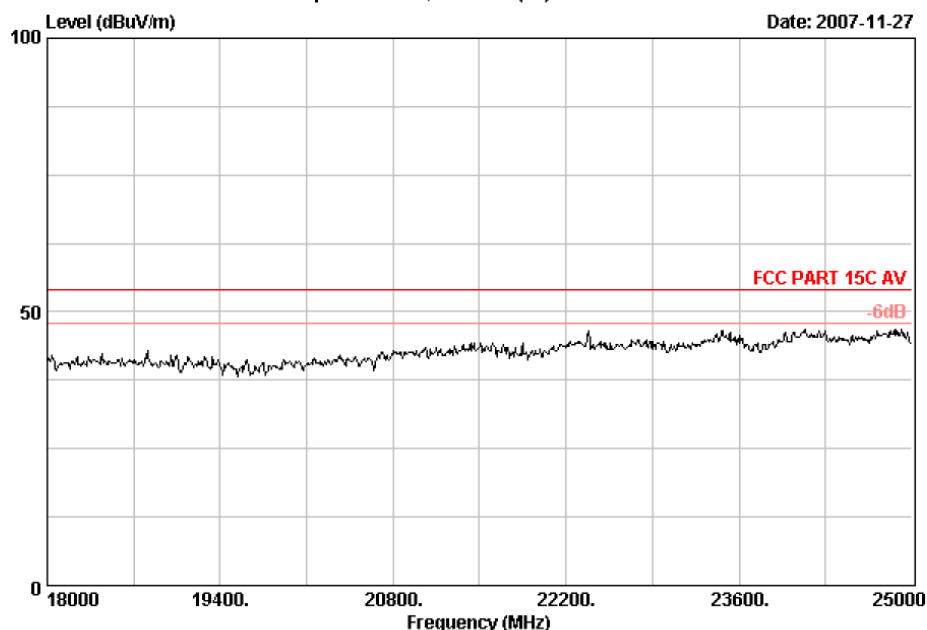


Site no. : Data no. : 39
Dis. / Ant. : 3m Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH1 2412MHz
M/N : WIFI-3236AB-RUFA



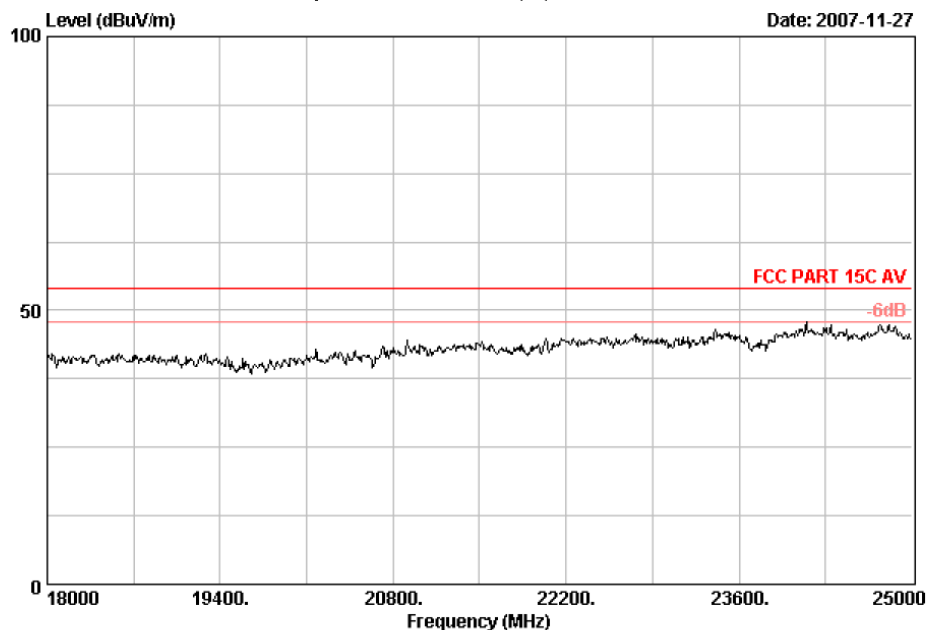
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Fax:+86-755-26632877
Postcode:518057

Data: 41 File: D:\2007 Report\YACS7Q1392.EMI (49)



Site no. : Data no. : 41
Dis. / Ant. : 3m Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH6 2437MHz
M/N : WIFI-3236AB-RUFA

Data: 40 File: D:\2007 Report\YACS7Q1392.EMI (49)

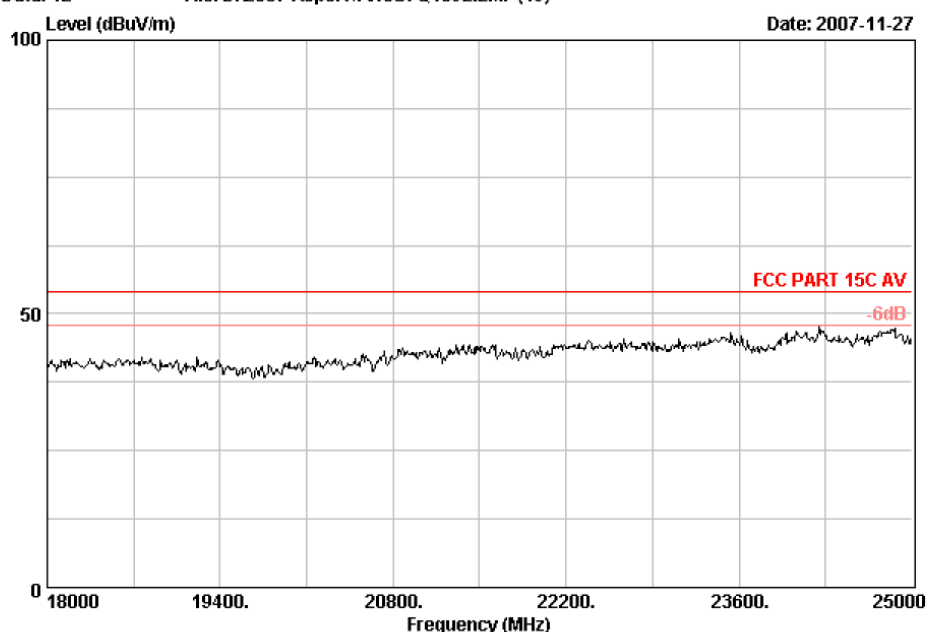


Site no. : Data no. : 40
Dis. / Ant. : 3m Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH6 2437MHz
M/N : WIFI-3236AB-RUFA



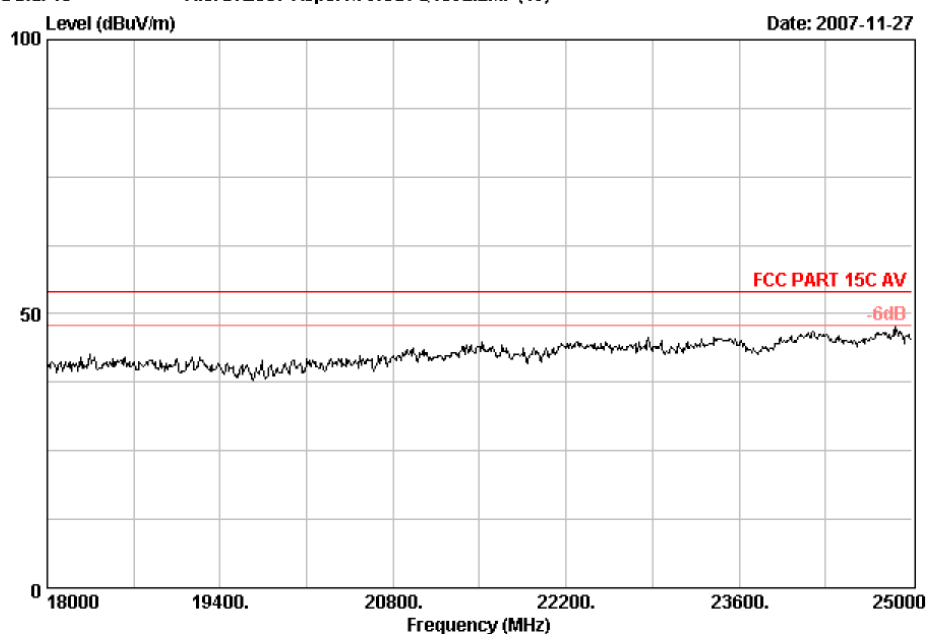
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Postcode:518057

Data: 42 File: D:\2007 Report\YACS7Q1392.EMI (49)



Site no. : Data no. : 42
Dis. / Ant. : 3m Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH11 2462MHz
M/N : WIFI-3236AB-RUFA

Data: 43 File: D:\2007 Report\YACS7Q1392.EMI (49)

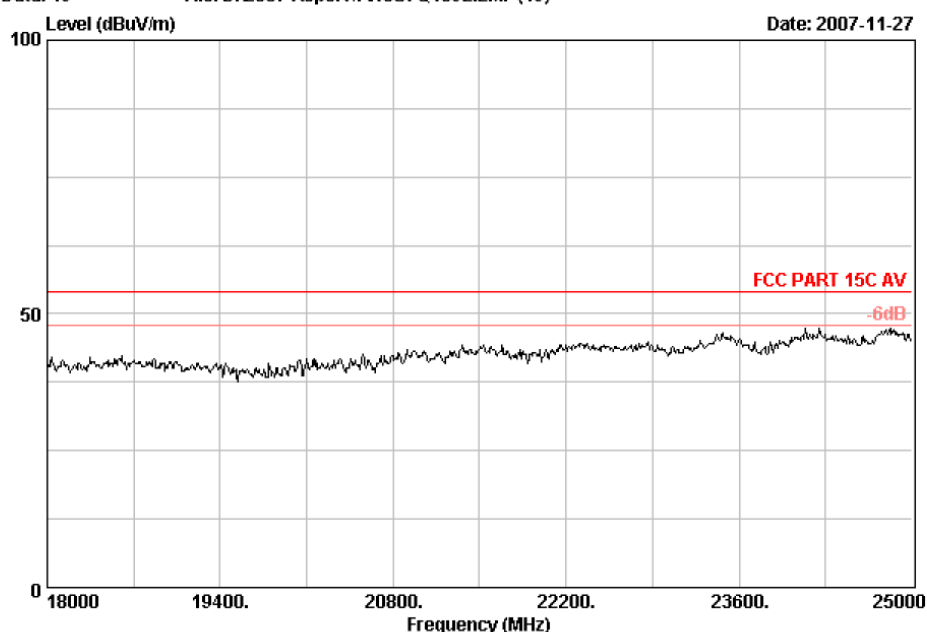


Site no. : Data no. : 43
Dis. / Ant. : 3m Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11b CH11 2462MHz
M/N : WIFI-3236AB-RUFA



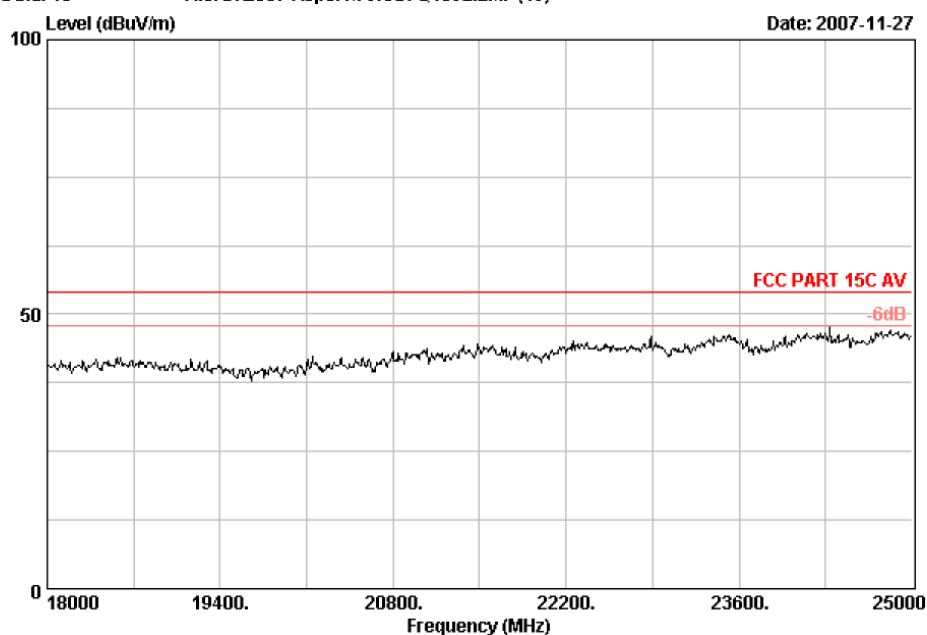
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Fax:+86-755-26632877
Postcode:518057

Data: 49 File: D:\2007 Report\YACS7Q1392.EMI (49)



Site no. : Data no. : 49
Dis. / Ant. : 3m Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH1 2412MHz
M/N : WIFI-3236AB-RUFA

Data: 48 File: D:\2007 Report\YACS7Q1392.EMI (49)

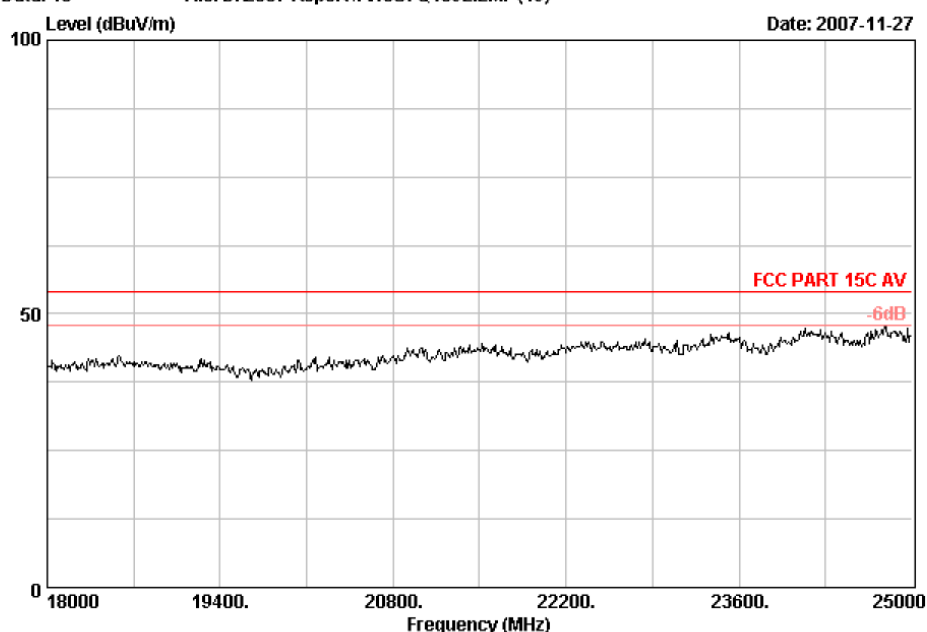


Site no. : Data no. : 48
Dis. / Ant. : 3m Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH1 2412MHz
M/N : WIFI-3236AB-RUFA



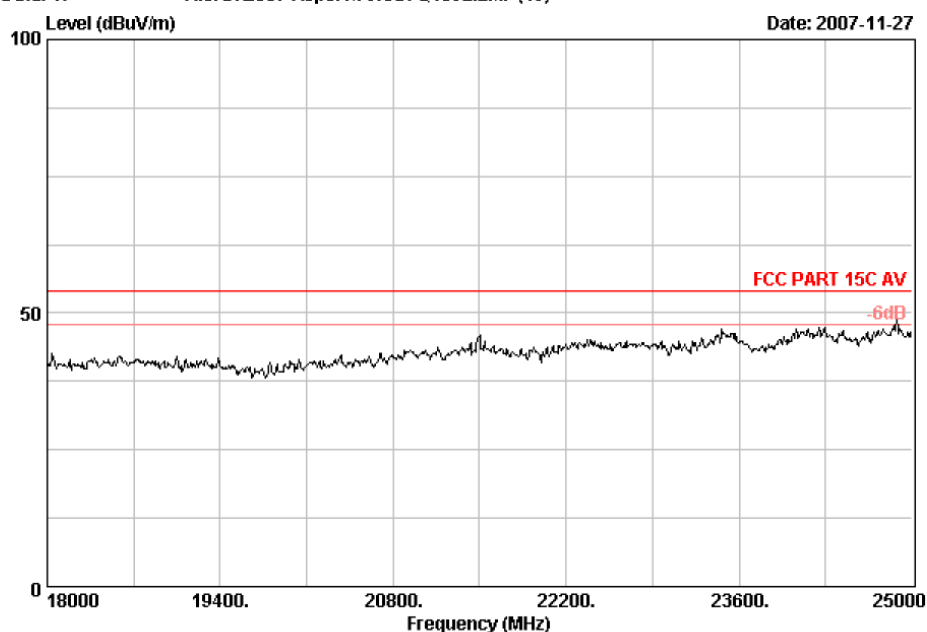
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Fax:+86-755-26632877
Postcode:518057

Data: 46 File: D:\2007 Report\YACS7Q1392.EMI (49)



Site no. : Data no. : 46
Dis. / Ant. : 3m Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH6 2437MHz
M/N : WIFI-3236AB-RUFA

Data: 47 File: D:\2007 Report\YACS7Q1392.EMI (49)

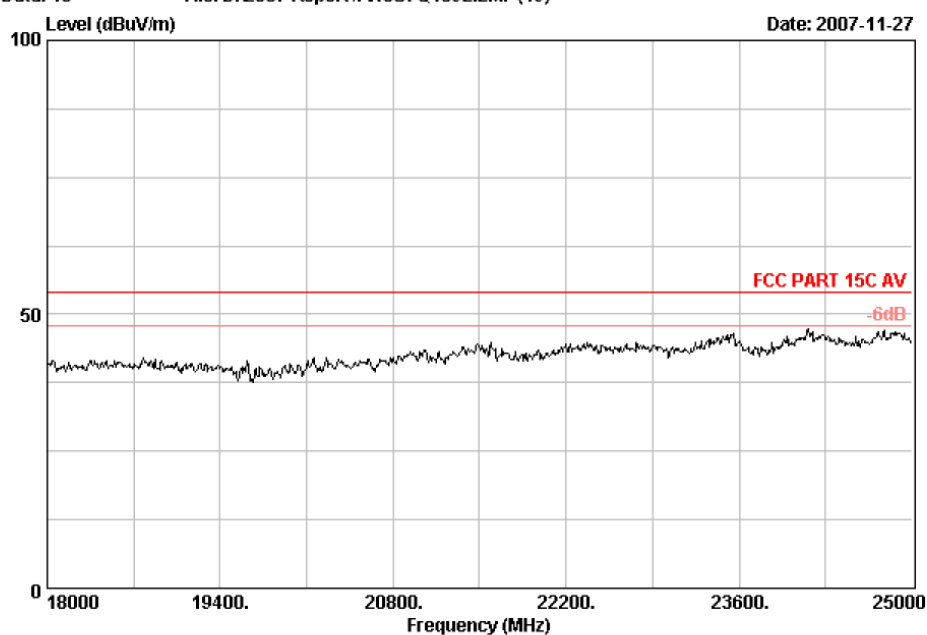


Site no. : Data no. : 47
Dis. / Ant. : 3m Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH6 2437MHz
M/N : WIFI-3236AB-RUFA



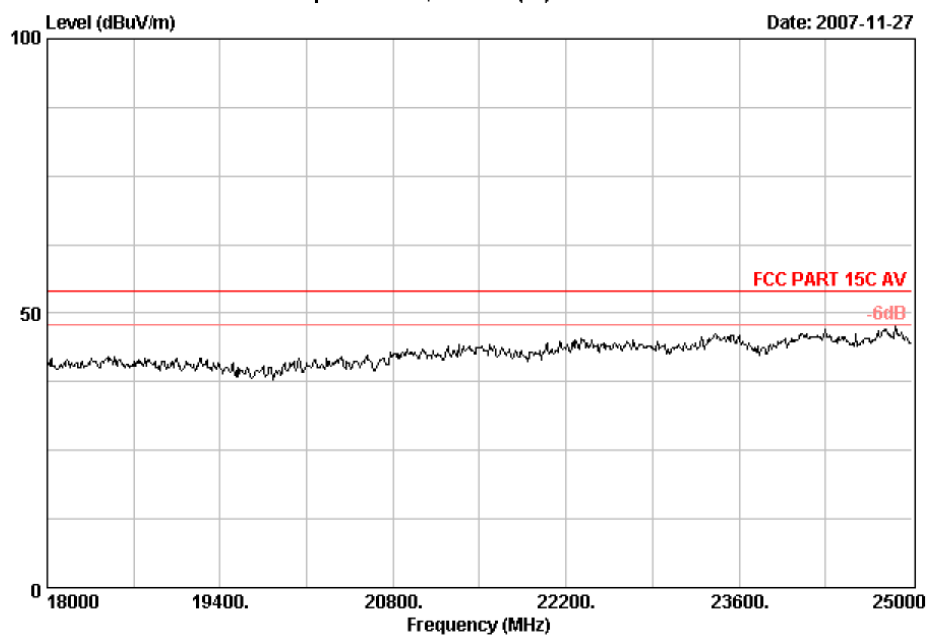
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Fax:+86-755-26632877
Postcode:518057

Data: 45 File: D:\2007 Report\YACS7Q1392.EMI (49)



Site no. : Data no. : 45
Dis. / Ant. : 3m Ant. pol. : HORIZONTAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH11 2462MHz
M/N : WIFI-3236AB-RUFA

Data: 44 File: D:\2007 Report\YACS7Q1392.EMI (49)



Site no. : Data no. : 44
Dis. / Ant. : 3m Ant. pol. : VERTICAL
Limit : FCC PART 15C AV
Env. / Ins. : 23°C/54% Engineer : Jamy
EUT : Module 3236ab:802.11b/g Wi-Fi board with built-in antenna
Power Rating: DC 3.3V From PDA
Test Mode : Tx IEEE802.11g CH11 2462MHz
M/N : WIFI-3236AB-RUFA

5. 6dB Bandwidth Test

5.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,11, 07	1 Year
2	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
3	RF Cable	MIYAZAKI	8D-FB	No.3	Jun.06, 07	1/2 Year

5.2.Test Information

EUT:	Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna
M/N:	WIFI-3236AB-RUFA
Test Date:	Nov.23, 2007
Ambient Temperature:	23°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	IEEE 802.11b TX/ IEEE 802.11g TX
Data rate:	11Mbps for IEEE802.11b, 54Mbps for IEEE802.11g
Test Frequency:	CH1: 2412MHz CH6: 2437MHz CH11: 2462MHz
Tested By:	Jamy

5.3.Test Procedure

The transmitter output was coupled to a spectrum analyzer via a horn antenna. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 100 kHz RBW and 300 kHz VBW. The 6dB bandwidth is defined as the total spectrum the power of which is lower than peak power minus 6dB.

5.4.Test Results

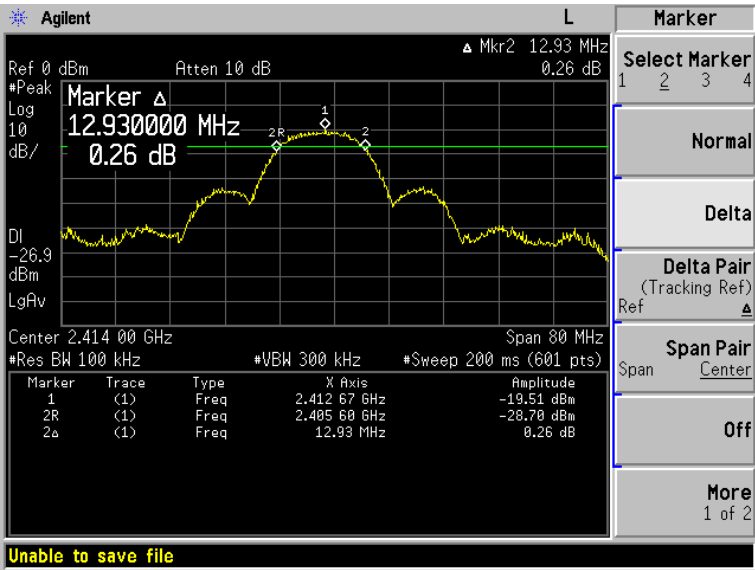
Test Mode: IEEE 802.11b TX

CH	6dB Bandwidth (MHz)	Limit(KHz)	Conclusion
1	12.93	>500	PASS
6	12.80	>500	PASS
11	13.60	>500	PASS

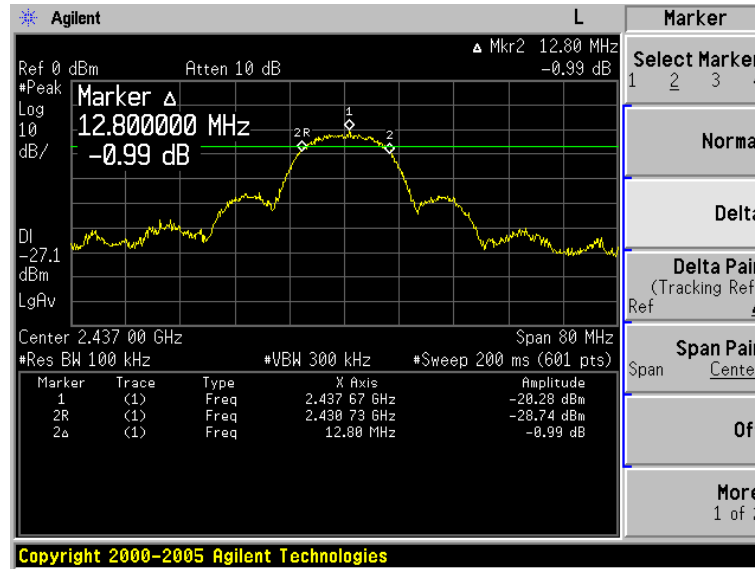
Test Mode: IEEE 802.11g TX

CH	6dB Bandwidth (MHz)	Limit(KHz)	Conclusion
1	16.53	>500	PASS
6	16.53	>500	PASS
11	16.27	>500	PASS

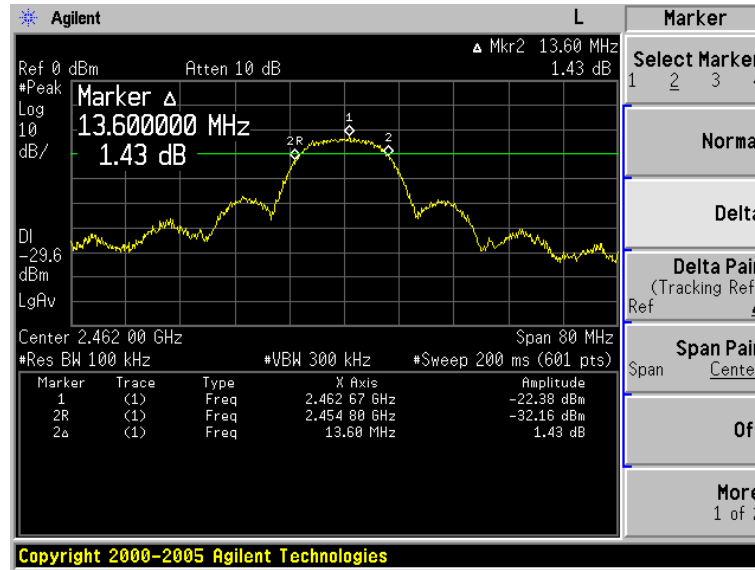
Test Mode: IEEE 802.11b TX
Test CH1: 2412MHz



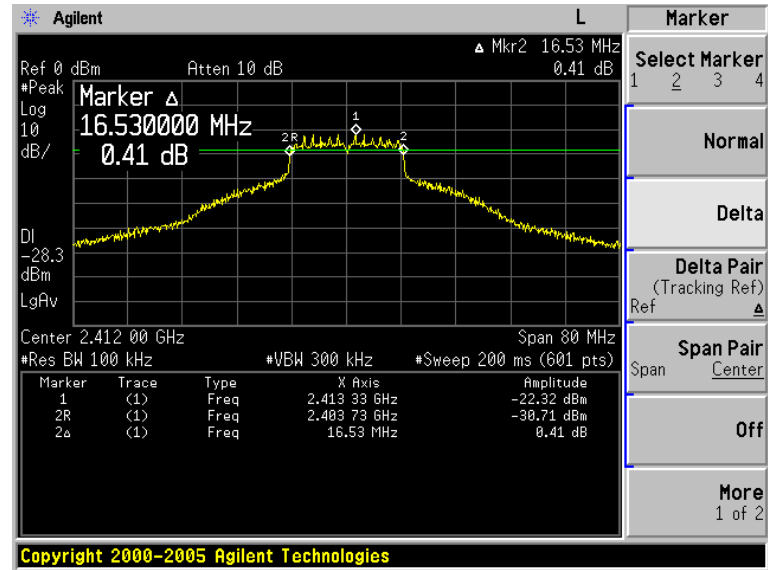
Test CH6: 2437MHz



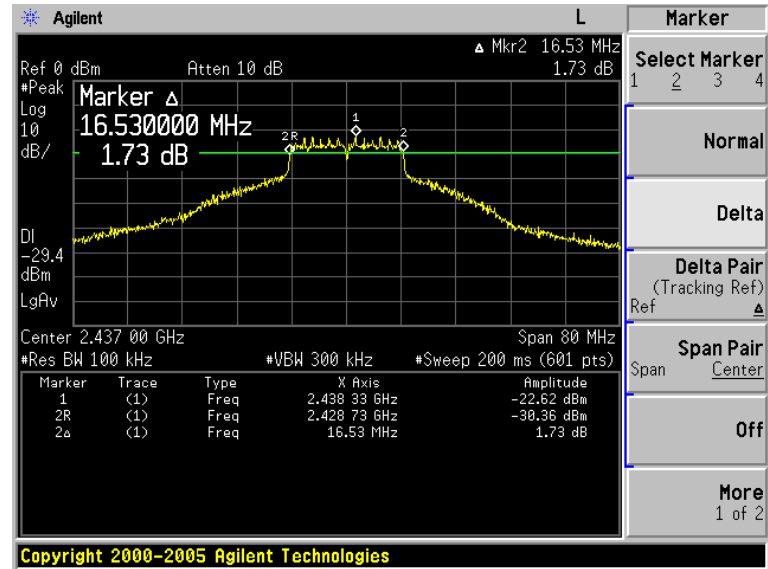
Test CH11: 2462MHz



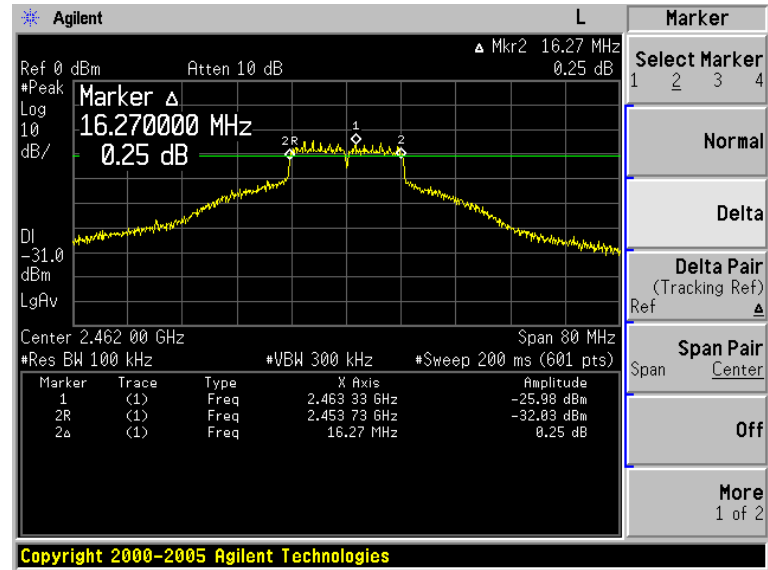
Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz



Test CH7: 2437MHz



Test CH11: 2462MHz



6. OUTPUT POWER TEST

6.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May,11, 07	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Jan, 23, 06	1.5 Year
3	Horn Antenna	EMCO	3115	9510-4580	Dec, 12, 06	1.5 Year
4	Signal Generator	HP	83732B	6K00003262	May,11, 07	1 Year
5	RF Cable	MIYAZAKI	8D-FB	No.1	May,11, 07	1/2 Year
6	RF Cable	MIYAZAKI	8D-FB	No.2	May,11, 07	1/2 Year
7	RF Cable	MIYAZAKI	8D-FB	No.3	May,11, 07	1/2 Year
8	Amplifier	HP	8449B	3008A00863	May,11, 07	1 Year

6.2. Test Information

EUT:	Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna
M/N:	WIFI-3236AB-RUFA
Test Date:	Nov.27, 2007
Ambient Temperature:	23°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	IEEE 802.11b TX/ IEEE 802.11g TX
Data rate:	11Mbps for IEEE802.11b, 54Mbps for IEEE802.11g
Test Frequency:	CH1: 2412MHz CH6: 2437MHz CH11: 2462MHz
Tested By:	Jamy

6.3. Test Procedure

- (1). The EUT was placed on a 1.5m high table in the chamber and turned on in continuously transmitting mode.
- (2). The maximum fundamental emission at 3m distance was measured and recorded with receive antenna in both vertical and horizontal by rotating the turntable and by lowering the receive antenna.
- (3). The EUT was then removed and replaced with a substitution antenna in the same position and the substitution antenna must have the same polarization with the receive antenna.
- (4). A signal which have the same frequency obtained in step 2 was fed to the substitution, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver ,the level of the signal generator was adjusted until the measured field strength level in step 2 was obtained, recorded the level of the signal generator.
- (5). Repeated step 4 with both antenna polarizations
- (6). The radiated power is equal to the power supplied by the signal generator and corrections due to the gain of the substitution antenna and the cable loss between the signal generator and the substitution antenna.

6.4.Test Results

Test mode: IEEE802.11b Tx Mode Antenna Gain:0dBi									
CH	Freq (MHz)	Ant Pol.	Electric Field Strength (dBuV/m)	SG Reading (dBm)	Tx Cable Loss (dB)	Tx Ant. Gain (dBi)	Result (dBm)	Limit (dBm)	Margin (dB)
1	2412.0	H	107.42	7.77	5.47	9.32	11.72	30	19.98
	2412.0	V	99.45	-1.62	5.47	9.32	2.23	30	27.77
6	2437.0	H	106.93	7.3	5.50	9.45	11.25	30	19.75
	2437.0	V	98.56	-0.91	5.50	9.45	3.04	30	26.96
11	2462.0	H	108.92	8.25	5.55	9.58	12.28	30	19.52
	2462.0	V	99.67	-0.44	5.55	9.58	3.59	30	26.41
Test mode: IEEE802.11g Tx Mode Antenna Gain:0dBi									
1	2412	H	108.18	7.87	5.47	9.32	11.72	30	20.28
	2412	V	98.92	-2.17	5.47	9.32	1.68	30	28.32
6	2437	H	106.65	7.94	5.50	9.45	11.89	30	20.11
	2437	V	97.68	-1.55	5.50	9.45	2.40	30	27.6
11	2462	H	107.13	7.34	5.55	9.58	12.37	30	20.53
	2462	V	97.56	-2.14	5.55	9.58	1.89	30	28.11
Result = SG Reading – Tx Cable Loss + Tx Antenna Gain									
Rx-Antenna: Horn Antenna									
Tx-Antenna: Horn Antenna									

7. BAND EDGE COMPLIANCE TEST

7.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,11, 07	1 Year
2	Amp	HP	8449B	3008A00863	May 11, 07	1 Year
3	Antenna	EMCO	3115	9607-4877	Jan. 23, 07	1.5 Year
4	HF Cable	Hubersuhne	Sucoflex104	-	May 11, 07	1 Year

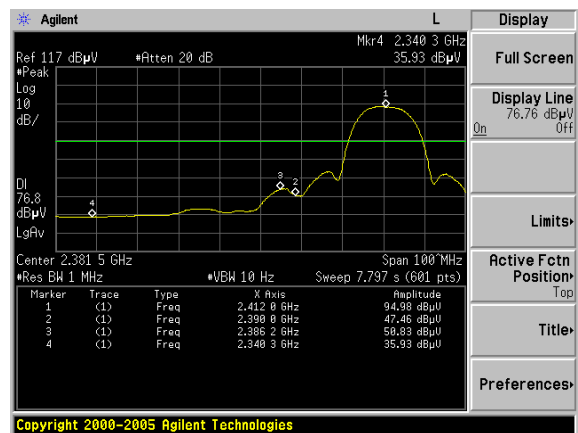
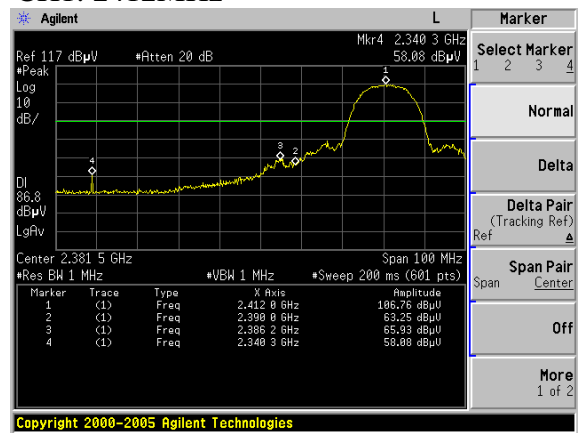
7.2. Test Information

EUT:	Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna
M/N:	WIFI-3236AB-RUFA
Test Date:	Nov.27, 2007
Ambient Temperature:	23°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	IEEE 802.11b TX/ IEEE 802.11g TX
Data rate:	11Mbps for IEEE802.11b, 54Mbps for IEEE802.11g
Test Frequency:	CH1: 2412MHz CH11: 2462MHz
Test By:	Jamy

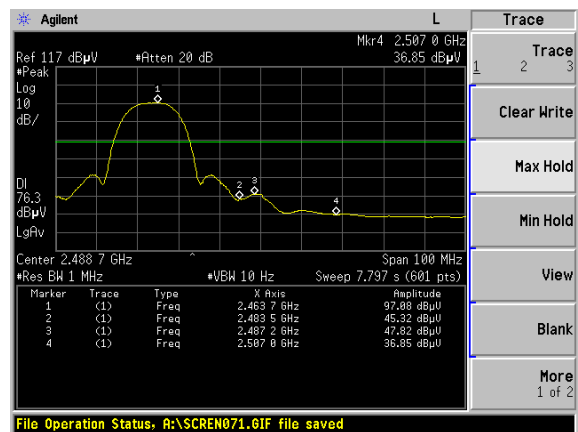
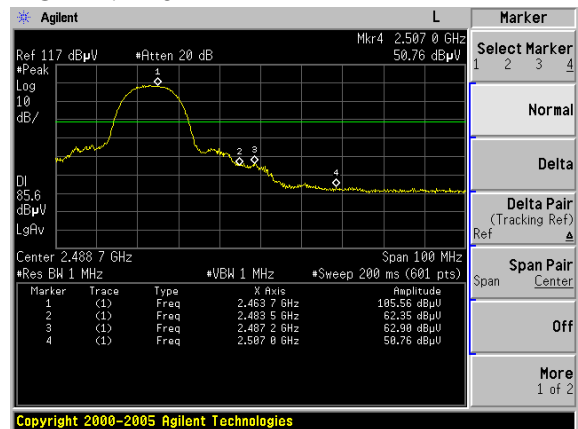
7.3. Test Results

Pass (The EUT was tested and all the test results are listed in next pages.)

Test mode: IEEE 802.11b TX
CH1: 2412MHz

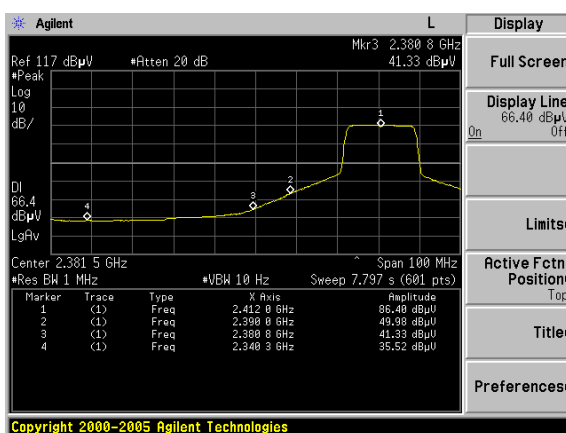
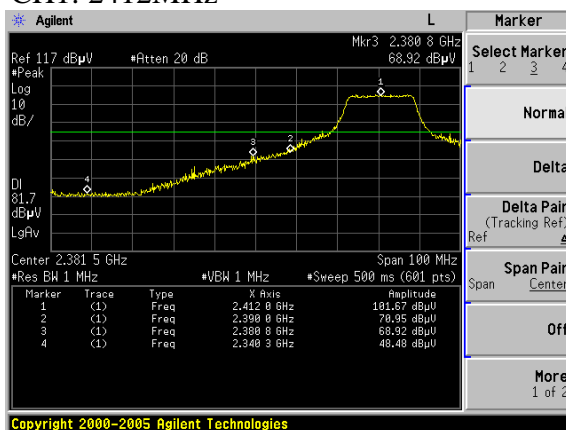


CH11: 2462MHz

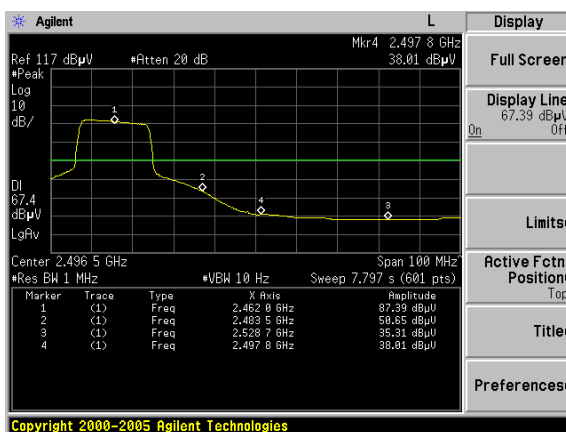
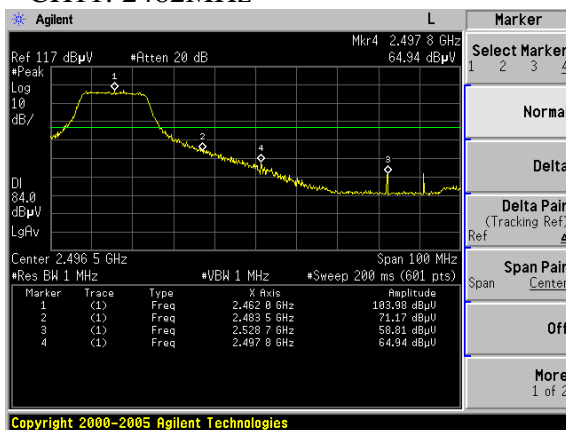


Test mode: IEEE 802.11g TX

CH1: 2412MHz



CH11: 2462MHz



8. POWER SPECTRAL DENSITY TEST

8.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Spectrum Analyzer	Agilent	E4446A	US44300459	May,11, 07	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Jan, 23, 06	1.5 Year
3	Horn Antenna	EMCO	3115	9510-4580	Dec, 12, 06	1.5 Year
4	Signal Generator	HP	83732B	6K00003262	May,11, 07	1 Year
5	RF Cable	MIYAZAKI	8D-FB	No.1	May,11, 07	1/2 Year
6	RF Cable	MIYAZAKI	8D-FB	No.2	May,11, 07	1/2 Year
7	RF Cable	MIYAZAKI	8D-FB	No.3	May,11, 07	1/2 Year
8	Amplifier	HP	8449B	3008A00863	May,11, 07	1 Year

8.2. Test Information

EUT:	Module 3236ab: 802.11b/g Wi-Fi board with built-in antenna
M/N:	WIFI-3236AB-RUFA
Test Date:	Nov.27, 2007
Ambient Temperature:	23°C
Relative Humidity:	60%
Test standard:	FCC PART 15C: 15.247
Test mode:	IEEE 802.11b TX/ IEEE 802.11g TX
Data rate:	11Mbps for IEEE802.11b, 54Mbps for IEEE802.11g
Test Frequency:	CH1: 2412MHz CH6: 2437MHz CH11: 2462MHz
Test By:	Jamy

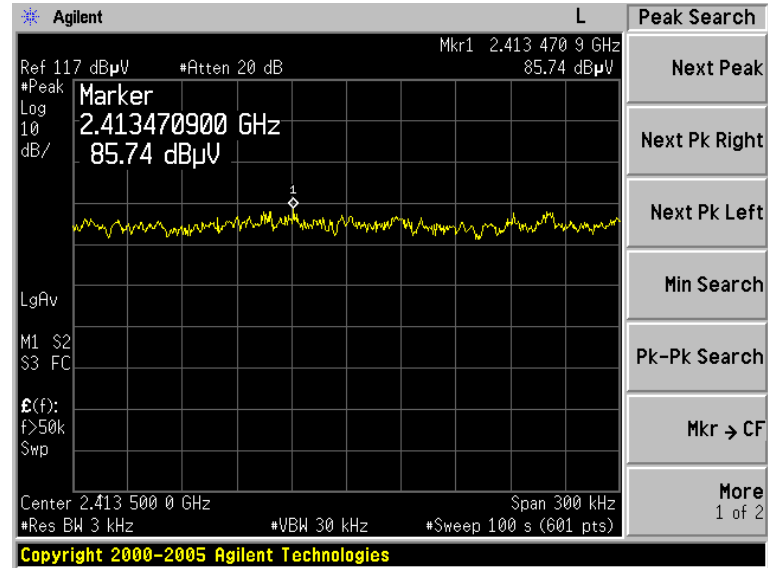
8.3. Test Procedure

The transmitter output was coupled to a spectrum analyzer via a horn antenna in anechoic chamber. The maximum power density level at 3m was measured by spectrum analyzer with 3 kHz RBW and 30kHz VBW, sweep time=span/3kHz. Record this level with test antenna in horizontal and vertical polarization. Use substitution measurements as clause 6.3 to measured out the power density.

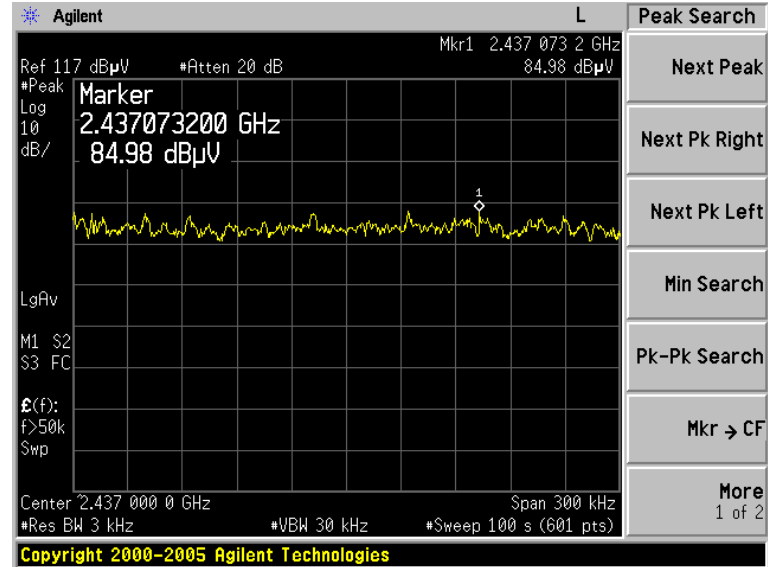
8.4.Test Results

Test mode: IEEE802.11b Tx Mode Antenna Gain:0dBi									
CH	Freq (MHz)	Ant Pol.	Read level At 3m (dBuV/m)	SG Reading (dBm)	Tx Cable Loss (dB)	Tx Ant. Gain (dBi)	Result (dBm/3kHz)	Limit (dBm/3kHz)	Margin (dB)
1	2412.0	H	85.74	-14.86	5.47	9.32	-11.01	8	19.01
6	2437.0	H	84.98	-15.04	5.50	9.45	-11.09	8	19.09
11	2462.0	H	86.97	-13.58	5.55	9.58	-9.55	8	17.55
Test Mode: IEEE802.11g Tx Mode Antenna Gain:0dBi									
1	2412	H	84.37	-16.18	5.47	9.32	-12.33	8	20.33
6	2437	H	82.29	-17.66	5.50	9.45	-13.71	8	21.71
11	2462	H	81.19	-19.36	5.55	9.58	-15.33	8	23.33
<p>Note: The read level when test antenna in vertical was below that when test antenna in horizontal polarization, so only the Horizontal polarization level were recorded.</p> <p>Result = SG Reading – Tx Cable Loss + Tx Antenna Gain</p> <p>Rx-Antenna: Horn Antenna</p> <p>Tx-Antenna: Horn Antenna</p>									

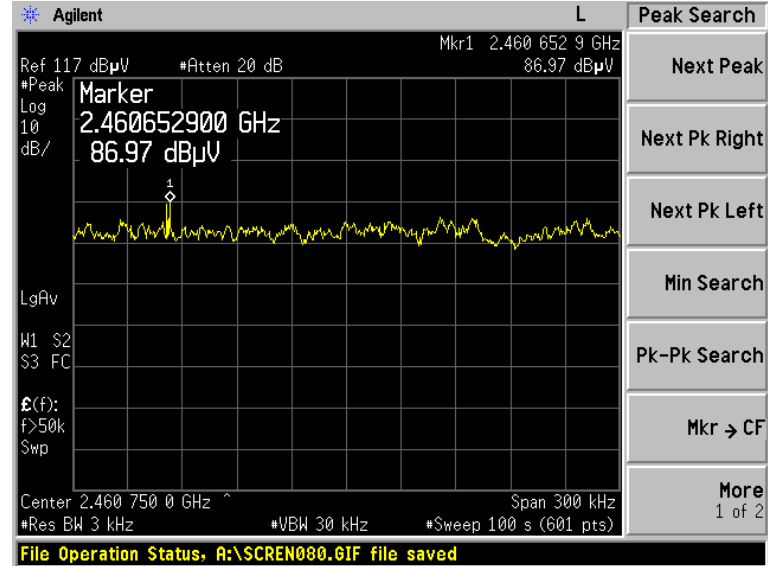
Test Mode: IEEE 802.11b TX
Test CH1: 2412MHz



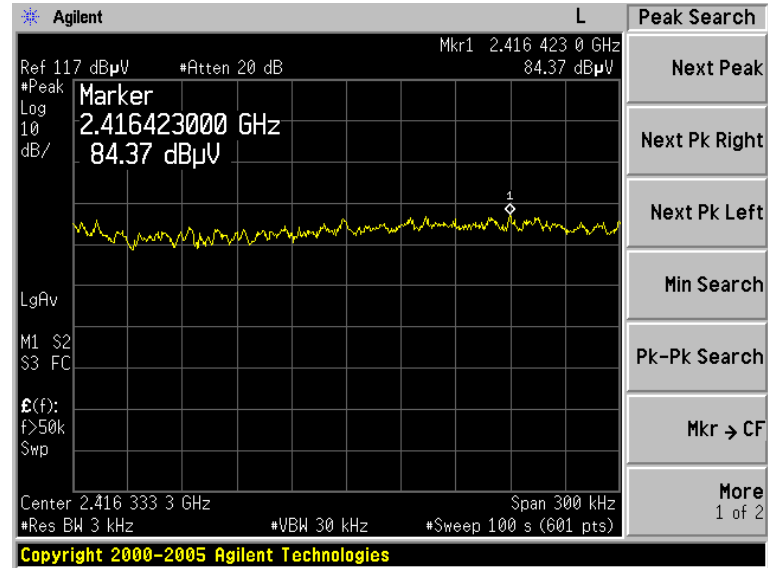
Test CH6: 2437MHz



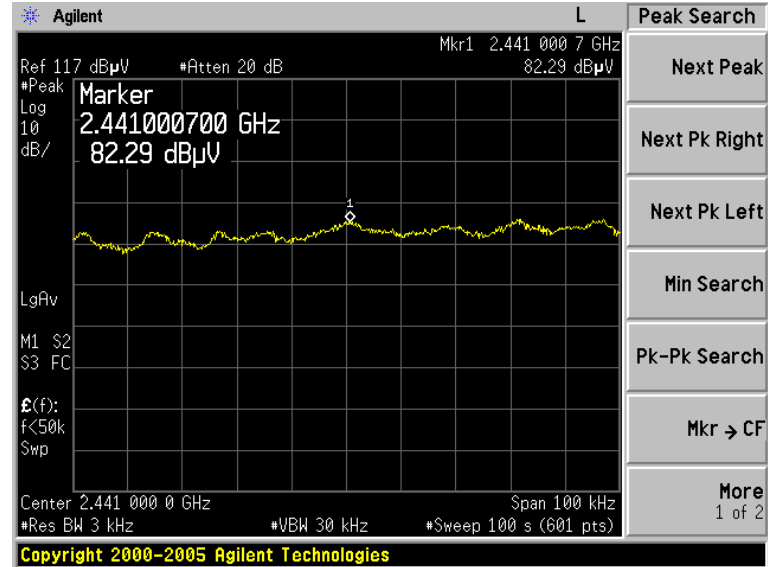
Test CH11: 2462MHz



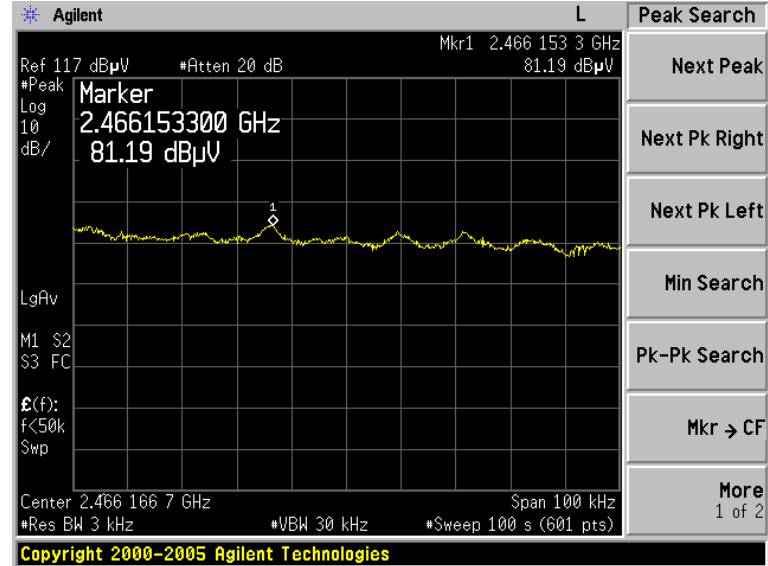
Test Mode: IEEE 802.11g TX
Test CH1: 2412MHz



Test CH6: 2437MHz



Test CH11: 2462MHz



9. MPE ESTIMATION

9.1.Limit for General Population / Uncontrolled Exposures

Frequency	Power density (mW/cm ²)	Averaging time (minutes)
300MHz~1.5GHz	F/1500	30
1.5GHz~100GHz	1.0	30

Frequency (MHz)	Power density (mW/cm ²)	Averaging time (minutes)
2412	1.0	30
2437	1.0	30
2462	1.0	30

Note: F = Frequency in MHz

9.2.Estimation Result

2.1 IEEE 802.11b Mode

Channel	Frequency(MHz)	Peak output power(dBm)	antenna gain(dBi)	antenna gain (Linear)
1	2412	11.72	0	1
6	2437	11.25	0	1
11	2462	12.28	0	1

Channel	Frequency(MHz)	Peak output power to antenna (mW)	Power density at 20cm(mW/ cm ²)
1	2412	14.86	0.0029
6	2437	13.34	0.0027
11	2462	16.90	0.0034

2.2 IEEE 802.11g Mode

Channel	Frequency(MHz)	Peak output power(dBm)	antenna gain(dBi)	antenna gain (Linear)
1	2412	11.72	0	1
6	2437	11.89	0	1
11	2462	12.37	0	1

Channel	Frequency(MHz)	Peak output power to antenna (mW)	Power density at 20cm(mW/ cm ²)
1	2412	14.86	0.0029
6	2437	15.45	0.0031
11	2462	17.26	0.0034

10.ANTENNA REQUIREMENT

10.1 STANDARD APPLICABLE

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6dBi.

10.2 ANTENNA CONNECTED CONSTRUCTION

The antenna used for this product is PCB integral antenna and no antenna other than that furnished by the responsible party can be used with the device . The maximum peak Gain of this antenna is 0 dBi.

11.DEVIATION TO TEST SPECIFICATIONS

[NONE]