

APPLICATION FOR CERTIFICATION

On Behalf of

Jing Mold Electronic Technology (Shen Zhen) Co., Ltd.

Wireless USB Receiver

Model Number: JME-3263R

FCC ID: FPWJME3263R

Prepared for : Jing Mold Electronic Technology (Shen Zhen) Co., Ltd.
Xinqiao, 3rd Industrial Estate, Shajing Baoan, Shenzhen,
China

Prepared By : Audix Technology (Shenzhen) Co., Ltd.
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Report Number : ACS-F08476
Date of Test : Dec.16~21, 2008
Date of Report : Dec.24, 2008

TABLE OF CONTENTS

Description	Page
1. SUMMARY OF STANDARDS AND RESULTS.....	1-1
1.1. Description of Standards and Results	1-1
2. GENERAL INFORMATION	2-1
2.1. Description of Device (EUT).....	2-1
2.2. Tested Supporting System Details	2-1
2.3. Test Facility	2-2
2.4. Measurement Uncertainty (95% confidence levels, k=2)	2-2
3. POWER LINE CONDUCTED EMISSION TEST	3-1
3.1. Test Equipments.....	3-1
3.2. Block Diagram of Test Setup.....	3-1
3.3. Power Line Conducted Emission Test Limits.....	3-1
3.4. Configuration of EUT on Test	3-1
3.5. Operating Condition of EUT.....	3-2
3.6. Test Procedure.....	3-2
3.7. Power Line Conducted Emission Test Results	3-2
4. RADIATED EMISSION TEST	4-1
4.1. Test Equipment	4-1
4.2. Block Diagram of Test Setup.....	4-1
4.3. Radiated Emission Limit.....	4-2
4.4. EUT Configuration on Test.....	4-3
4.5. Operating Condition of EUT.....	4-3
4.6. Test Procedure.....	4-3
4.7. Radiated Emission Test Results	4-3
5. BAND EDGE COMPLIANCE TEST	5-1
5.1. Test Equipment	5-1
5.2. Limit.....	5-1
5.3. Test Produce.....	5-1
5.4. Test Results	5-1
6. 20 DB BANDWIDTH TEST	6-6
6.1. Test Equipment	6-6
6.2. Test Information	6-6
6.3. Limit.....	6-6
6.4. Test Results	6-6
7. ANTENNA REQUIREMENT	7-1
7.1 STANDARD APPLICABLE.....	7-1
7.1. ANTENNA CONNECTED CONSTRUCTION.....	7-1
8. DEVIATION TO TEST SPECIFICATIONS.....	8-2
9. PHOTOGRAPH OF TEST	9-1
9.1. Photos of Power Line Conducted Emission Test	9-1
9.2. Photos of Radiated Emission Test.....	9-2
10. PHOTOGRAPH OF EUT	10-1

TEST REPORT CERTIFICATION

Applicant : Jing Mold Electronic Technology (Shen Zhen) Co., Ltd.
Manufacturer : Jing Mold Electronic Technology (Shen Zhen) Co., Ltd.
EUT Description : Wireless USB Receiver
FCC ID : FPWJME3263R
(A) Model No. : JME-3263R
(B) Serial No. : N/A
(C) Power Supply : DC 5V
(D) Test Voltage : DC 5V From PC Input AC 120V/60Hz

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: Dec.16~21, 2008

Prepared by: Selina Liu
Selina Liu / Assistant

Reviewer: Jammy Yu
Jammy Yu / Senior Engineer

Approved & Authorized Signer: Ken Lu
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.

Description of Test Item	Standard	Results
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.4-2003	PASS
Radiated Emission Test	FCC Part 15C: 15.209 FCC Part 15C: 15.249 ANSI C63.4-2003	PASS
Band Edge Compliance Test	FCC Part 15: 15.249	PASS
20dB Bandwidth Test	FCC Part 15: 15.215	PASS
Antenna Requirement	FCC Part 15: 15.203	PASS

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product name	: Wireless USB Receiver
Model Number	: JME-3263R
FCC ID	: FPWJME3263R
Operation frequency	: 2402MHz~2478MHz
Modulation mode	: DSSS
Power Supply	: DC 5V from PC Input 230V/50Hz
Applicant	: Jing Mold Electronic Technology (Shen Zhen) Co., Ltd. Xinqiao, 3rd Industrial Estate, Shajing Baoan, Shenzhen, China
Manufacturer	: Jing Mold Electronic Technology (Shen Zhen) Co., Ltd. Xinqiao, 3rd Industrial Estate, Shajing Baoan, Shenzhen, China
Date of Test	: Dec.16~21, 2008
Date of Receipt	: Dec.14, 2008
Sample Type	: Series production

Note: This EUT is a Wireless Module, and it's need Limited Module approval, the representative host is IdeaCentre A6 Series Personal computer and the below radiated emissions data are measured both with EUT in a stand alone configuration and operating conditions in which the Module will be used to demonstrate comply with Limited modular approval requirements. The worse case is EUT in a stand alone configuration.

2.2. Tested Supporting System Details

2.2.1. PERSONAL COMPUTER

Manufacturer	: Lenovo
M/N	: IdeaCentre A6 Series

2.2.2. Adapter

M/N	: ADP-150NBD
Manufacturer	: Lenovo
Cable	: Shielded, Undetachable, 3m (with one core)

2.3. Test Facility

Site Description

- Name of Firm : Audix Technology (Shenzhen) Co., Ltd.
No. 6, Ke Feng Rd., 52 Block, Shenzhen
Science & Industrial Park, Nantou, Shenzhen,
Guangdong, China
- 3m Anechoic Chamber : Jun. 13, 2006 File on Federal Communication
Commission
Registration Number: 90454
- 3m & 10m Anechoic Chamber : Jan. 31, 2007 File on Federal Communication
Commission
Registration Number: 794232
- EMC Lab. : Accredited by DATech, German
Registration Number: DAT-P-091/99-01
Dec.20, 2007
- Accredited by NVLAP, USA
NVLAP Code: 200372-0
Apr. 01, 2008

2.4. Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	MU	Remark
1.	Uncertainty for Conduction emission test in No. 1 Conduction	2.88dB	
2.	Uncertainty for Radiation Emission test in 3m chamber	3.86 dB	Polarize: V
		4.3 dB	Polarize: H
3.	Uncertainty for test site temperature and humidity	0.1°C	
		1%	

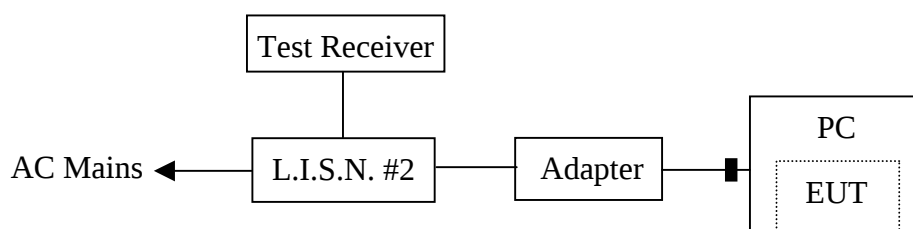
3. POWER LINE CONDUCTED EMISSION TEST

3.1. Test Equipments

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Test Receiver	Rohde & Schwarz	ESCI	100843	Oct.24, 08	1 Year
2.	L.I.S.N.#2	Kyoritsu	KNW-407	8-1636-1	May 10,08	1 Year
3.	Terminator	Hubersuhner	50Ω	No. 1	May 10,08	1 Year
4.	RF Cable	Fujikura	3D-2W	LISN Cable 1#	Nov.10, 08	1/2 Year
5.	Coaxial Switch	Anritsu	MP59B	M55367	Nov.10, 08	1/2 Year
6.	Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100341	Nov.10, 08	1/2 Year

3.2. Block Diagram of Test Setup

3.2.1. Block diagram of connection between the EUT and simulators



(EUT: Wireless USB Receiver)

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. Wireless USB Receiver (EUT)

Model Number : JME-3263R

Serial Number : N/A

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 as shown in Section 3.2..

3.5.2.Turned on the power of all equipment.

3.5.3.Let the EUT worked in test modes (Running) and tested it.

3.6.Test Procedure

The EUT was placed on a non-metallic table, 80cm above the ground plane. The EUT Power Via PC connected to the power mains through a line impedance stabilization network (L.I.S.N. 2#). The AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Test.

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

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

The test result are reported on Section 3.7.

3.7.Power Line Conducted Emission Test Results

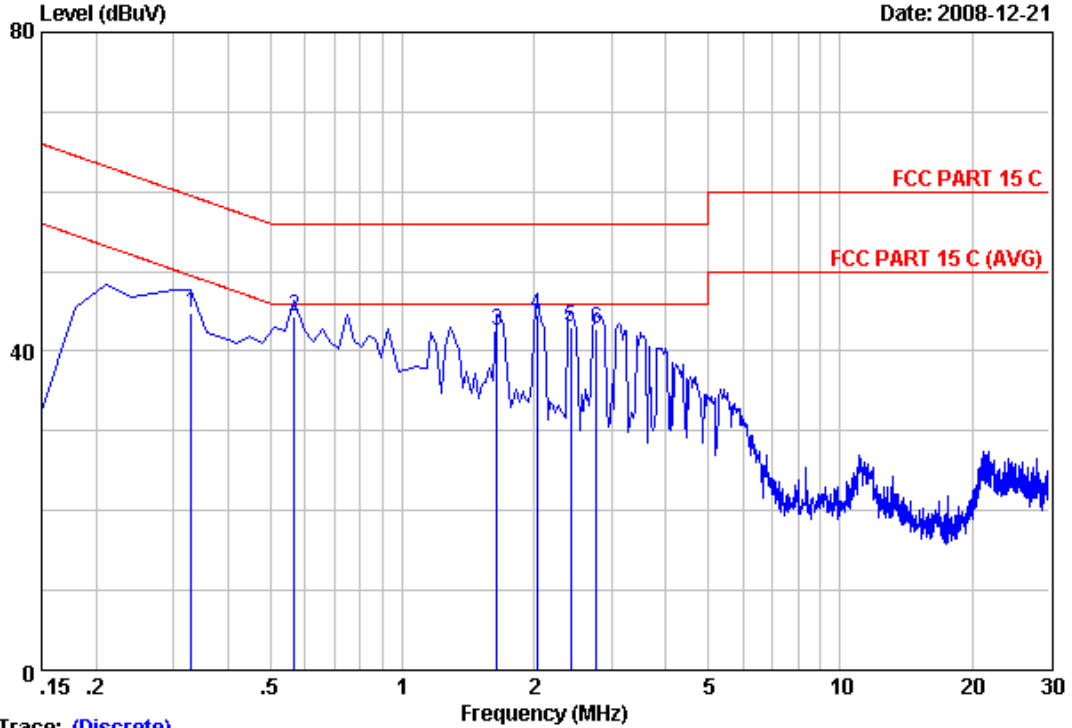
PASS. (All emissions not reported below are too low against the prescribed limits.)



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Data: 2 File: D:\DATA\2008 Report\L\Lenovo\ACS8Q1848_2.EMI (4)

Date: 2008-12-21



Trace: (Discrete)
Site no :Audix No.1 Conduction Data no :2
Dis./Ant. :-- ESH2-Z5 LINE LISN phase:
Limit :FCC PART 15 C
Env./Ins. :Temp:23'C Humi:54% Engineer :Power
EUT :Wireless USB Receiver M/N:JME-3263R
Power Rating :DC 5V From PC AC 120V/60Hz
Test Mode :Running
:
:

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV)	Limits (dBuV)	Margin (dB)	Remark
1	0.33	0.37	9.88	34.44	44.69	59.47	14.78	QP
2	0.57	0.38	9.87	34.20	44.45	56.00	11.55	QP
3	1.64	0.51	9.90	32.14	42.55	56.00	13.45	QP
4	2.03	0.52	9.90	34.07	44.49	56.00	11.51	QP
5	2.42	0.55	9.91	32.60	43.06	56.00	12.94	QP
6	2.78	0.57	9.91	32.36	42.84	56.00	13.16	QP

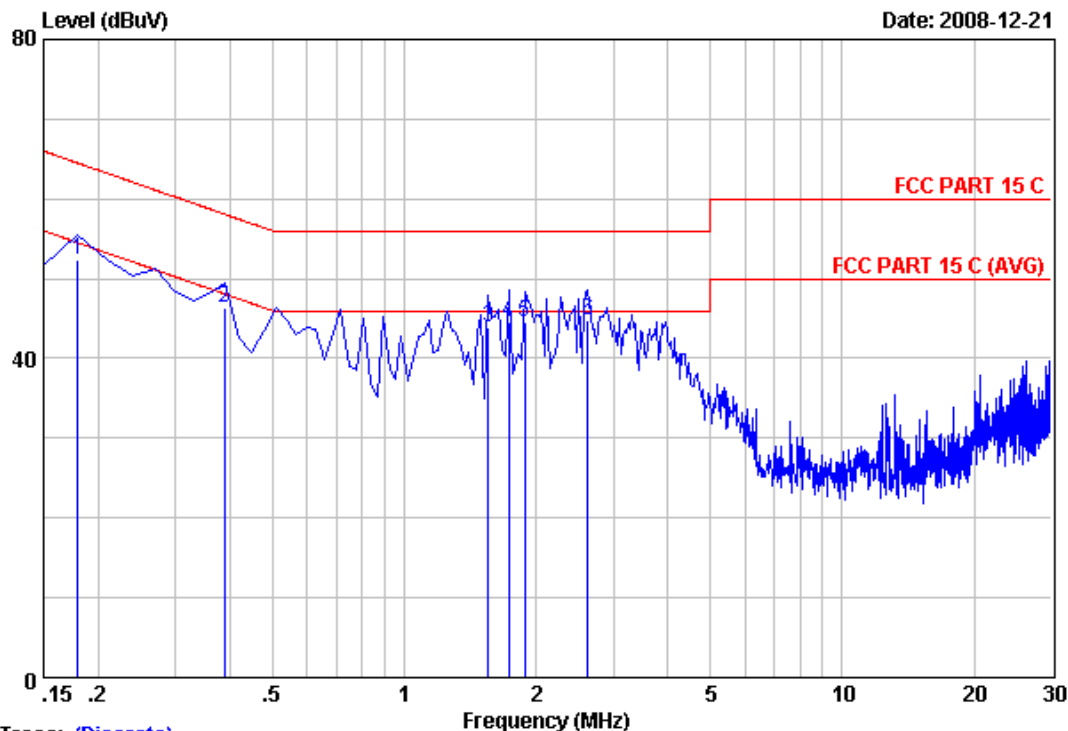
Remarks: 1.Emission Level=LISN Factor+Cable Loss+Reading.
2.If the average limit is met when using a quasi-peak detector.
the EUT shall be deemed to meet both limits and measurement
with average detector is unnecessary.



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Data: 1 File: D:\DATA\2008 Report\L\Lenovo\ACS8Q1848_2.EMI (4)

Date: 2008-12-21



Trace: (Discrete)

Site no :Audix No.1 Conduction Data no :1
Dis./Ant. :-- ESH2-Z5 NEUTRAL LISN phase:
Limit :FCC PART 15 C
Env./Ins. :Temp:23'C Humi:54% Engineer :Power
EUT :Wireless USB Receiver M/N:JME-3263R
Power Rating :DC 5V From PC AC 120V/60Hz
Test Mode :Running
:
:

No	Freq (MHz)	LISN Factor (dB)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV)	Limits (dBUV)	Margin (dB)	Remark
1	0.18	0.25	9.82	42.39	52.46	64.49	12.03	QP
2	0.39	0.25	9.88	36.29	46.42	58.09	11.67	QP
3	1.55	0.25	9.90	33.84	43.99	56.00	12.01	QP
4	1.73	0.25	9.90	34.42	44.57	56.00	11.43	QP
5	1.88	0.25	9.90	34.32	44.47	56.00	11.53	QP
6	2.63	0.26	9.91	34.51	44.68	56.00	11.32	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

Frequency rang: 30~1000MHz

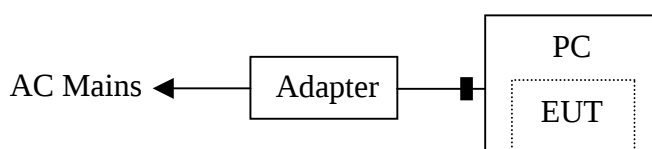
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	3#Chamber	AUDIX	N/A	N/A	Dec.05, 08	1/2 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May 10, 08	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May 10, 08	1 Year
4	Amplifier	HP	8447D	2648A04738	Nov.04, 08	1/2 Year
5	Bilog Antenna	Schaffner	CBL6112D	25237	Mar.12, 08	1 Year
6	RF Cable	JINGCHENG	JBY400	3# Chamber No.1	Nov.01, 08	1/2 Year
7	RF Cable	JINGCHENG	JBY400	3# Chamber No.2	Nov.01, 08	1/2 Year
8	RF Cable	JINGCHENG	JBY400	3# Chamber No.3	Nov.01, 08	1/2 Year
9	RF Cable	JINGCHENG	JBY400	3# Chamber No.4	Nov.01, 08	1/2 Year
10	Coaxial Switch	Anritsu	MP59B	M73989	Nov.01, 08	1/2 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,10, 08	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May, 27, 08	1.5 Year
3	Horn Antenna	EMCO	3116	00060088	May 27, 08	1 Year
4	Amplifier	Agilent	8449B	3008A02495	Nov,06.08	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX 102	28620/2	May,28, 08	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX 102	271471/4	May,28, 08	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX 102	29086/2	May,28, 08	1 Year

4.2. Block Diagram of Test Setup

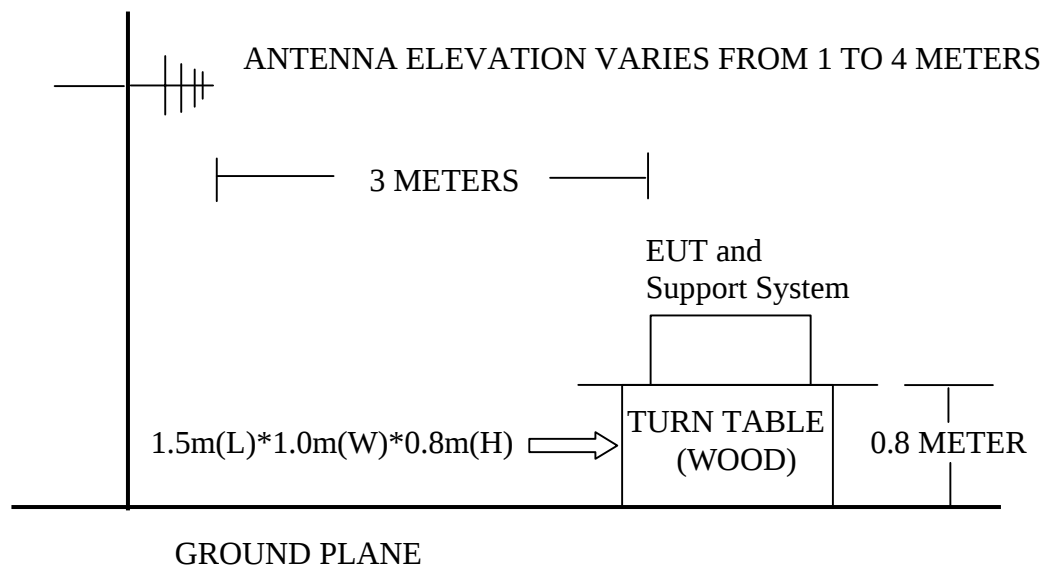
4.2.1. Block diagram of connection between the EUT and simulators



(EUT: Wireless USB Receiver)

4.2.2. In Anechoic Chamber

ANTENNA TOWER



4.3. Radiated Emission Limit

4.3.1.15.209 and 15.249 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)	
Field Strength of Fundamental emission for 2.4GHz-2.4835GHz	3	94.0 $\text{dB}(\mu\text{V})/\text{m}$ (Average) 114.0 $\text{dB}(\mu\text{V})/\text{m}$ (Peak)	
Field Strength of Harmonics	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 $\text{dB}\mu\text{V} = 20 \log \text{Emission level } \mu\text{V/m}$
 - (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) The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

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.Wireless USB Receiver (EUT)

Model Number : NWGTS2
Serial Number : N/A

4.5.Operating Condition of EUT

4.5.1.Setup the EUT as shown in Section 4.2..

4.5.2.Let the EUT worked in test modes (Running / TX Mode) and test it.

4.6.Test Procedure

EUT and its simulators are placed on a turn table, which is 0.8 meter high above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. Power on the EUT and let it work normally, we use a keyboard test soft ware, let EUT working in test mode, then test it. EUT is set 3 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna are set on test.

This test was performed with EUT in X, Y, Z position, and the worse case was found when EUT in X position as the test photo indicated.

The bandwidth of the EMI test receiver (R&S ESVS10) 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,PK detector for peak emissions measurement above 1GHz.

The duty cycle factor was used to calculate Average Level above 1 GHz:
Average level = PK measured level – duty cycle factor

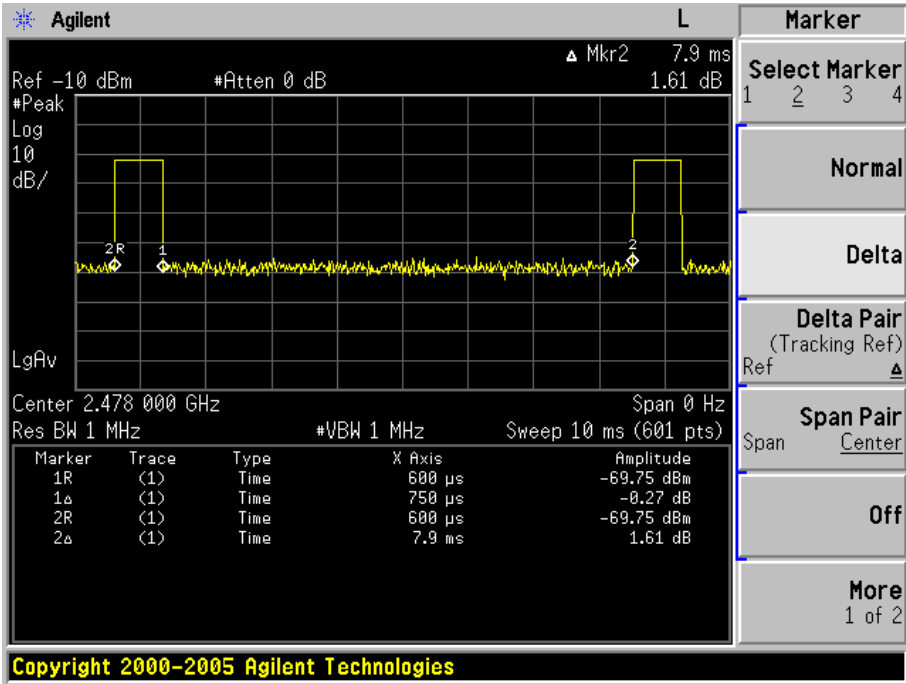
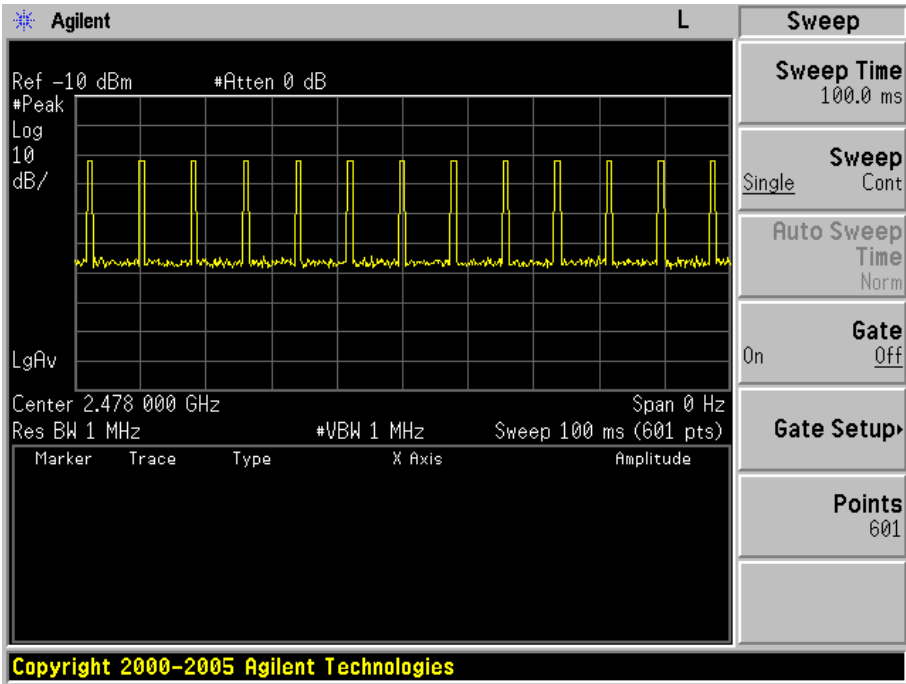
The frequency range from 30MHz to 10th harmonic (25GHz) harmonic are checked. and no any emissions were found from 18GHz to 25 GHz, So the radiated emissions from 18GHz to 25GHz were not record.

4.7.Radiated Emission Test Results

PASS.

All the emissions from 30MHz to 25GHz were comply with the 15.209 and 15.249 Limit.

Duty cycle factor
 $DCF=20\log(1/\text{duty cycle})=20\log(1/0.095)=20.45$



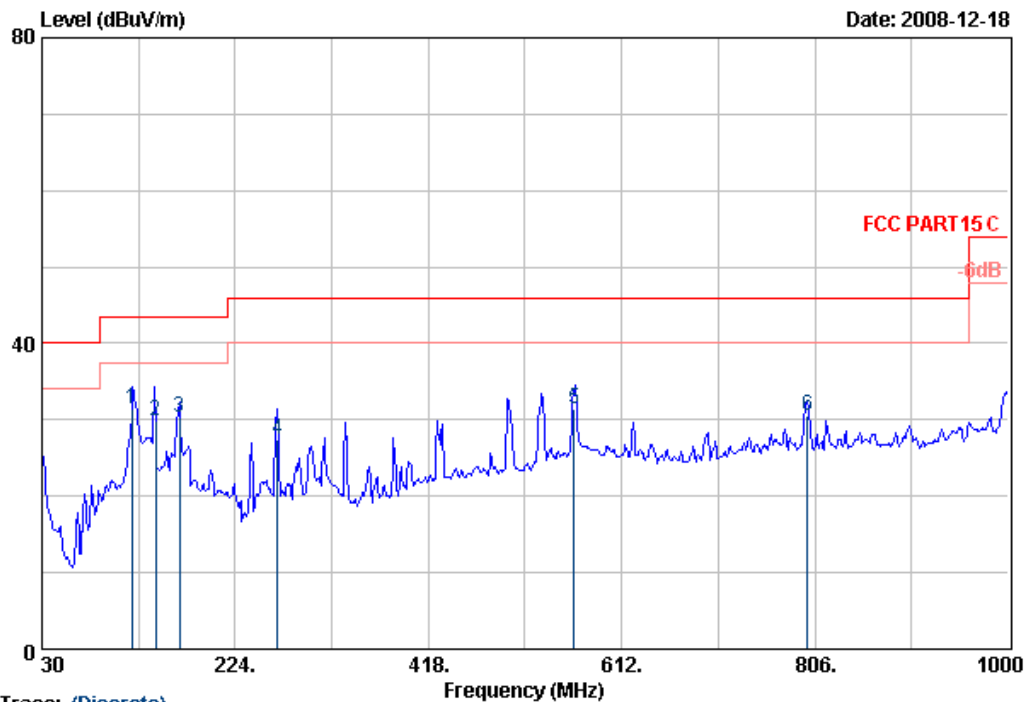
Test Frequency: 30MHz-1000MHz



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Data: 4 File: D:\2008 Report Data\J\Jing Mold\ACS8Q1848-2.EMI (6)

Date: 2008-12-18



Trace: (Discrete)

Site no. : AUDIX 3m chamber Data no. : 4
Dis. / Ant. : 3m CBL6112D Ant. pol. : VERTICAL
Limit : FCC PART15 C
Env. / Ins. : 25.5°C/55% Engineer : Jolly
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test Mode : Tx Mode

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	120.02	13.38	1.03	17.10	31.51	43.50	11.99	QP
2	143.99	10.09	1.15	18.69	29.93	43.50	13.57	QP
3	167.96	10.05	1.25	19.10	30.40	43.50	13.10	QP
4	266.68	12.98	1.68	12.78	27.44	46.00	18.56	QP
5	564.04	18.65	2.76	10.10	31.51	46.00	14.49	QP
6	798.24	19.52	3.52	7.53	30.57	46.00	15.43	QP

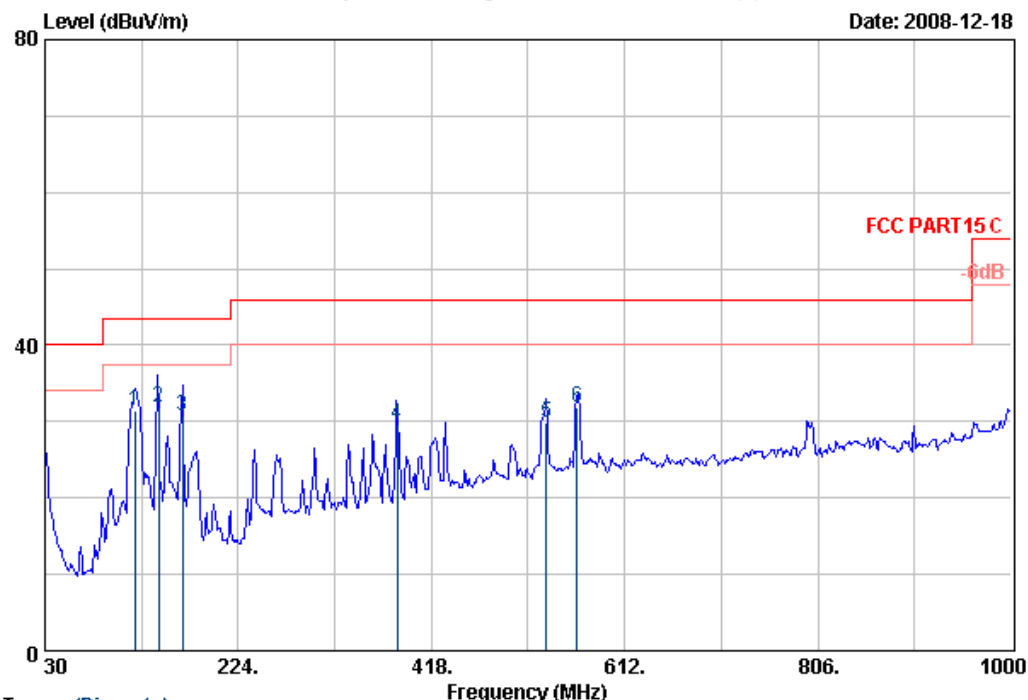
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.



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Data: 3 File: D:\2008 Report Data\JJing Mold\ACS8Q1848-2.EMI (6)

Date: 2008-12-18



Trac (Discrete)

Site no. : AUDIX 3m chamber Data no. : 3
Dis. / Ant. : 3m CBL6112D Ant. pol. : HORIZONTAL
Limit : FCC PART15 C
Env. / Ins. : 25.5°C/55% Engineer : Jolly
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test Mode : Tx Mode

	Freq.	Ant.	Cable		Emission			
	(MHz)	Factor	Loss	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	120.01	13.38	1.03	16.90	31.31	43.50	12.19	QP
2	144.00	10.09	1.15	20.69	31.93	43.50	11.57	QP
3	168.00	10.05	1.25	19.40	30.70	43.50	12.80	QP
4	384.01	14.38	2.14	13.19	29.71	46.00	16.29	QP
5	533.43	17.98	2.64	9.27	29.89	46.00	16.11	QP
6	564.08	18.65	2.76	10.40	31.81	46.00	14.19	QP

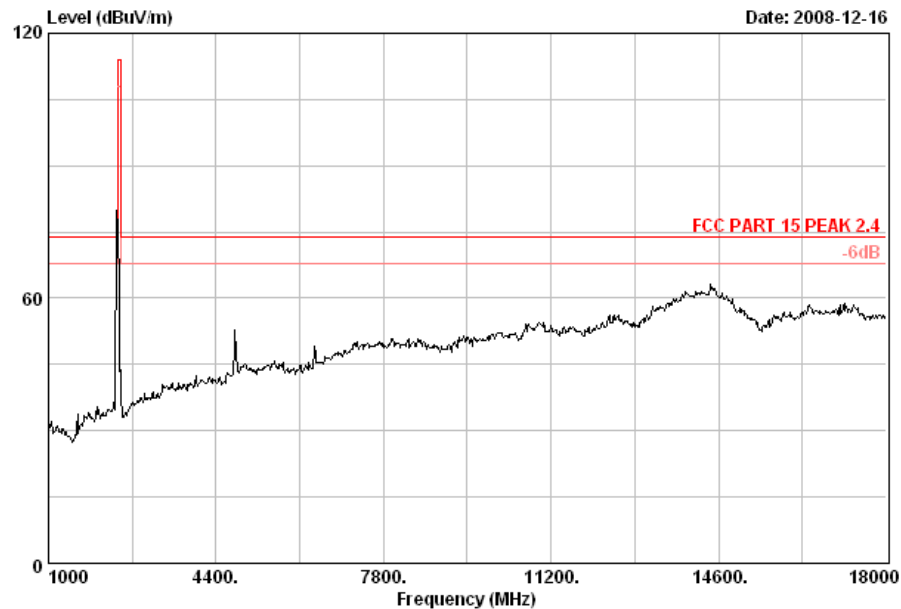
Remarks: 1. Emission Level= Antenna Factor + Cable Loss + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Test Frequency: 1GHz-18GHz



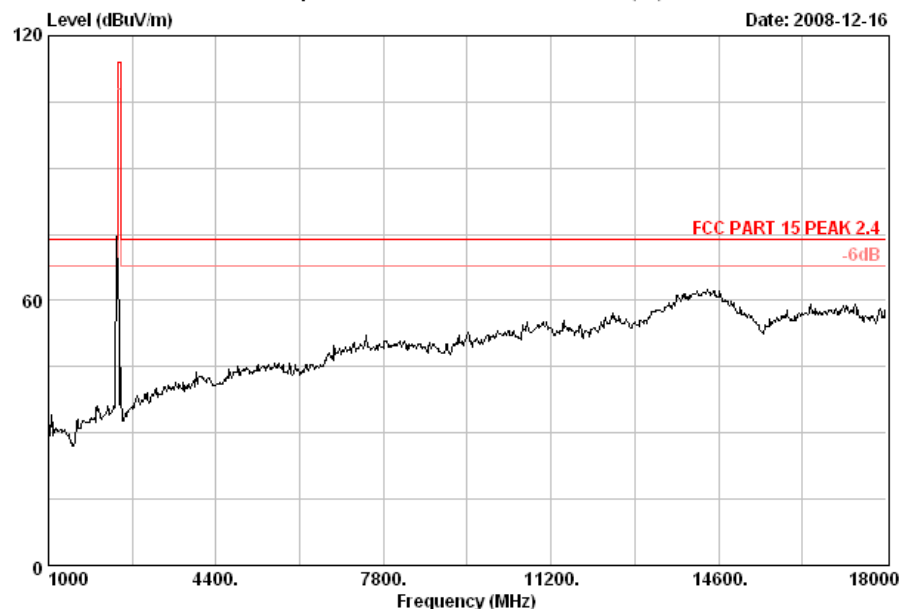
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Data: 1 File: E:\2008 report data\L\LENOVO\ACS8Q1848-2.EMI (16) Date: 2008-12-16



Site no. : 3# Chamber Data no. : 1
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2402MHz
Memo :

Data: 3 File: E:\2008 report data\L\LENOVO\ACS8Q1848-2.EMI (16) Date: 2008-12-16



Site no. : 3# Chamber Data no. : 3
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2402MHz
Memo :

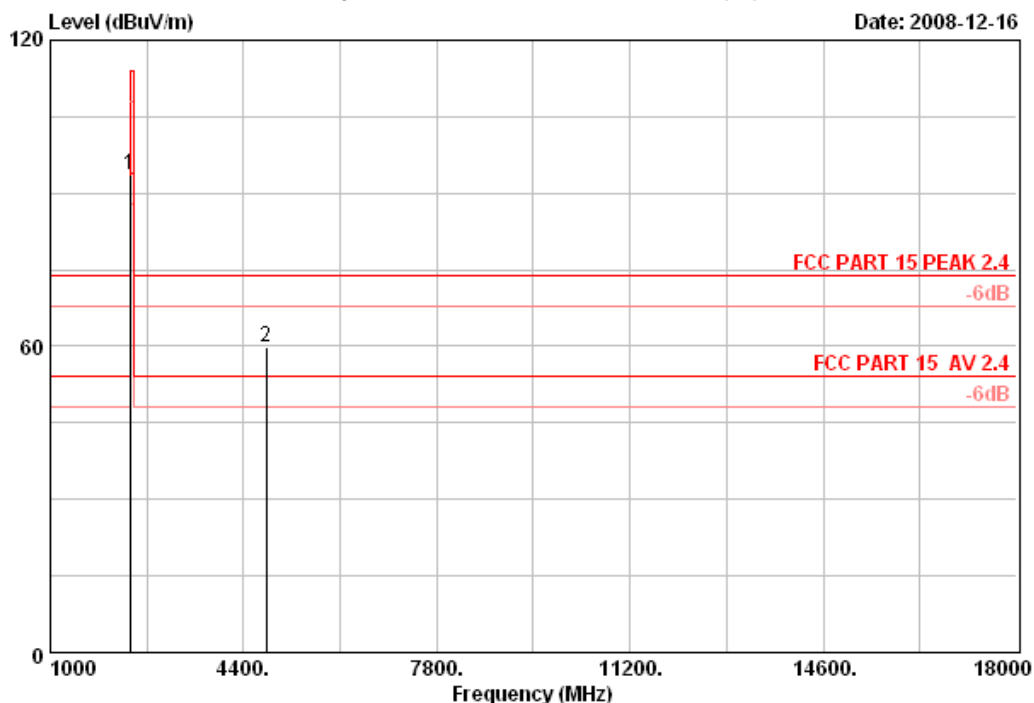


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Fax:+86-755-26632877
Postcode:518057

Data: 2

File: E:\2008 report data\L\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 2
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2402MHz
Memo :

		Ant.	Cable	Amp	Emission				
	Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
	(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2402.00	28.46	6.73	35.95	94.44	93.68	114.00	20.32	Peak
2	4804.00	34.36	10.53	35.23	50.22	59.88	74.00	14.12	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.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2402.00	93.68	20.45	73.23	94	20.77
4804.00	59.88	20.45	39.43	54	14.57

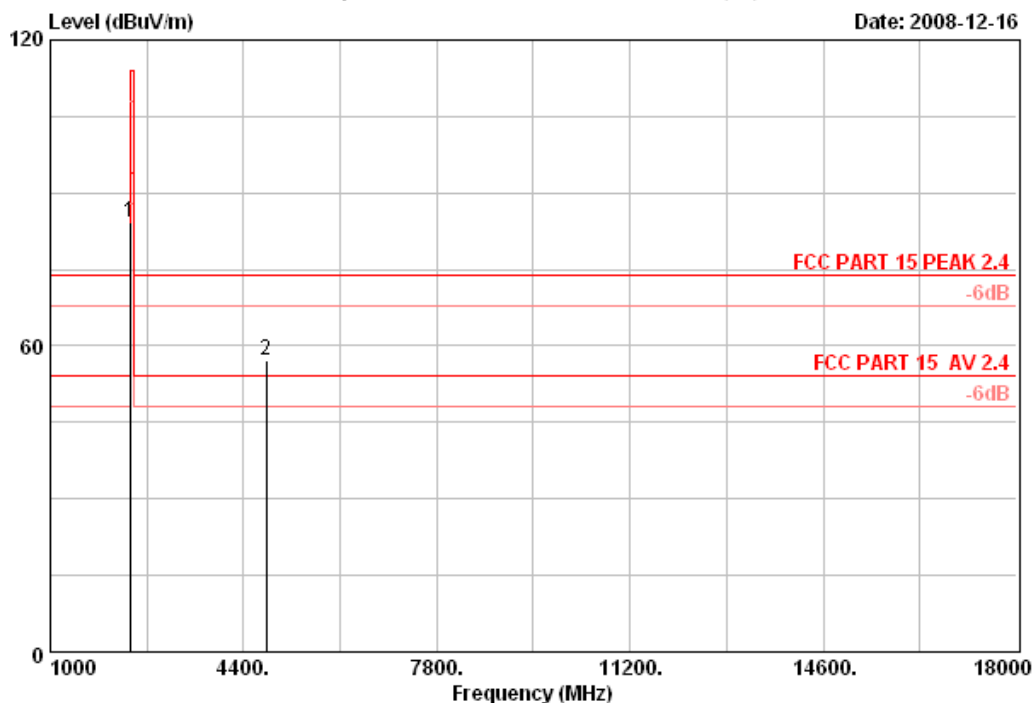


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Data: 4

File: E:\2008 report data\L\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 4
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2402MHz
Memo :

	Ant.	Cable	Amp		Emission				
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	28.46	6.73	35.95	85.12	84.36	114.00	29.64	Peak	
2	34.36	10.53	35.23	47.47	57.13	74.00	16.87	Peak	

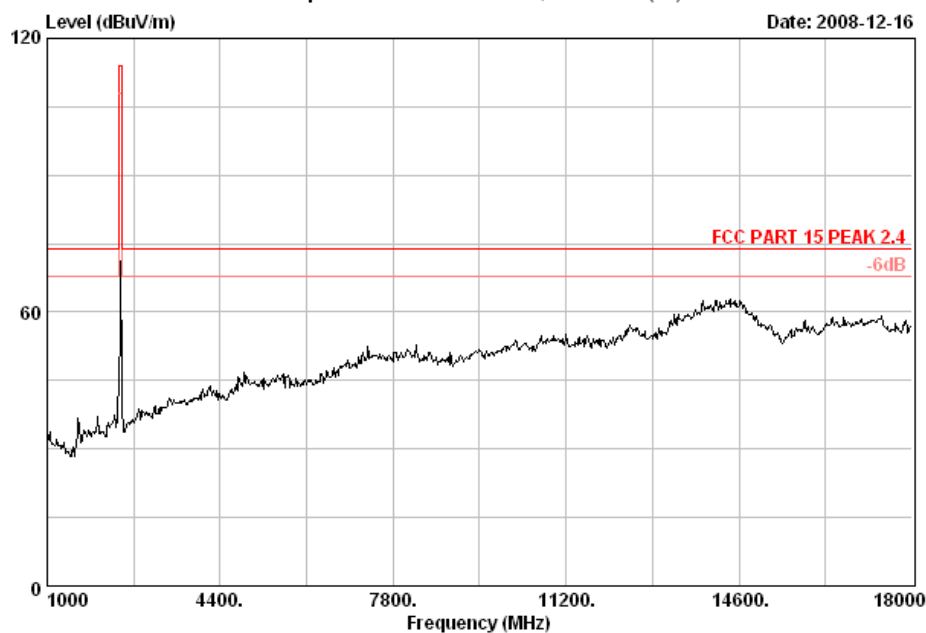
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2402.00	84.36	20.45	63.91	94	30.09
4804.00	57.13	20.45	36.68	54	17.32



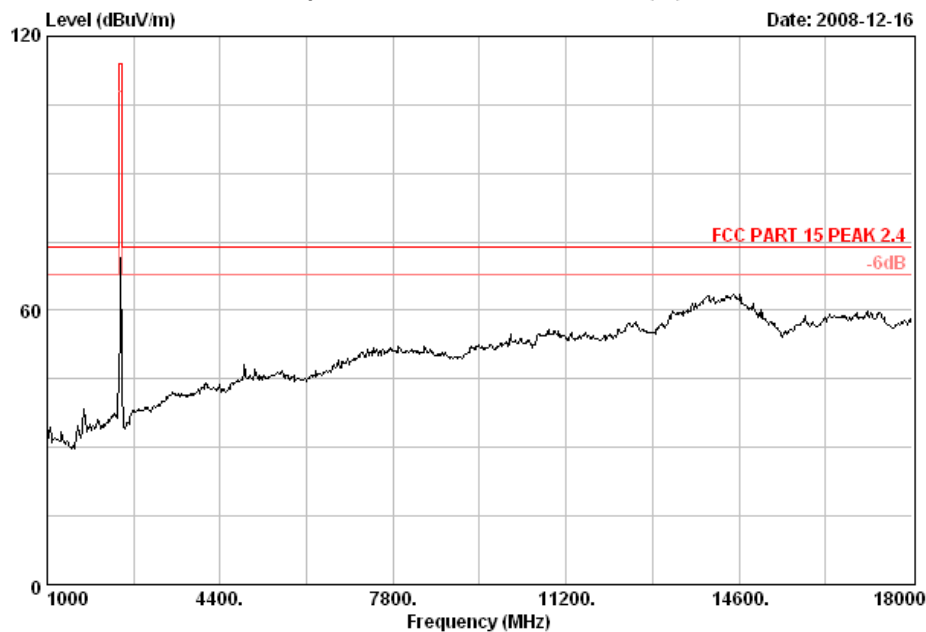
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Data: 7 File: E:\2008 report data\L\LENOVO\ACS8Q1848-2.EMI (16)



Site no. : 3# Chamber Data no. : 7
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2440MHz
Memo :

Data: 5 File: E:\2008 report data\L\LENOVO\ACS8Q1848-2.EMI (16)



Site no. : 3# Chamber Data no. : 5
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From pc Input AC 120V/60Hz
Test mode : Tx CH 2440MHz
Memo :

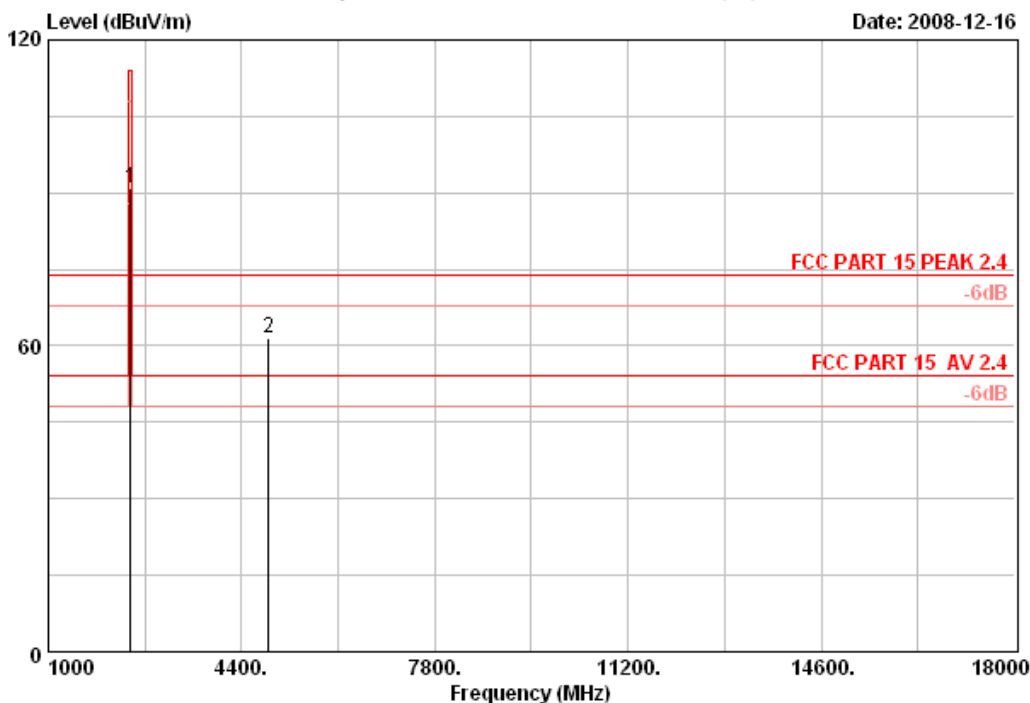


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Data: 8

File: E:\2008 report data\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 8
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2440MHz
Memo :

	Ant.	Cable	Amp	Emission					
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2440.00	28.53	6.80	35.96	91.62	90.99	114.00	23.01	Peak
2	4880.00	34.78	10.56	35.13	51.45	61.66	74.00	12.34	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.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2440.00	90.99	20.45	70.54	94	23.46
4884.00	61.66	20.45	41.21	54	12.79

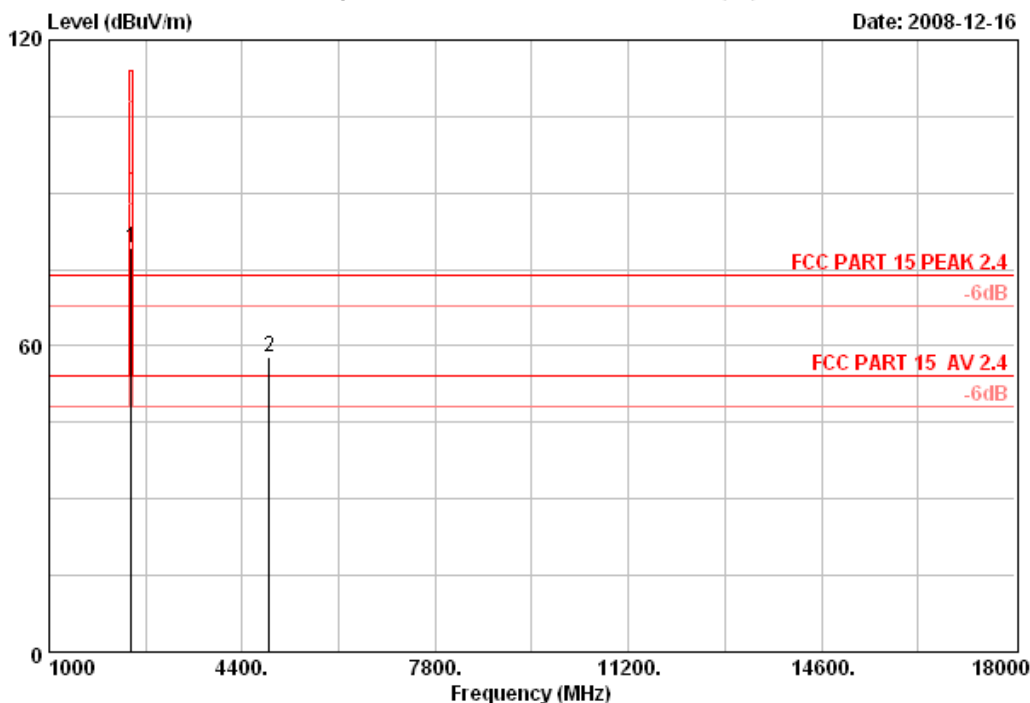


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Data: 6

File: E:\2008 report data\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 6
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2440MHz
Memo :

	Ant.	Cable	Amp		Emission				
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2440.00	28.53	6.80	35.96	79.69	79.06	114.00	34.94	Peak
2	4880.00	34.78	10.56	35.13	47.47	57.68	74.00	16.32	Peak

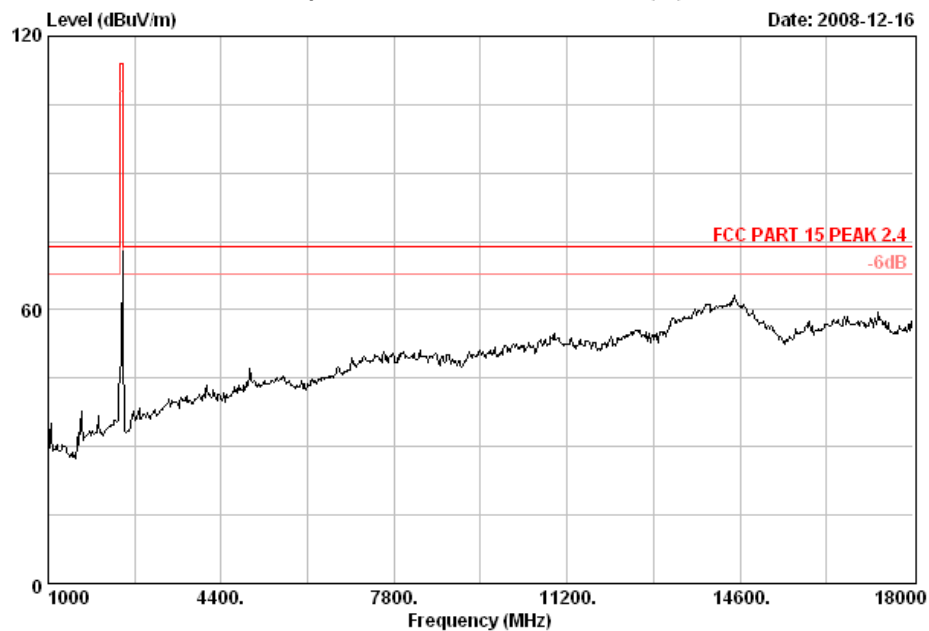
Remarks: 1. Emission Level= Antenna Factor + Cable Loss - Amp Factor + Reading.
2. The emission levels that are 20dB below the official limit are not reported.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2440.00	79.06	20.45	58.61	94	35.39
4884.00	57.68	20.45	37.23	54	16.77



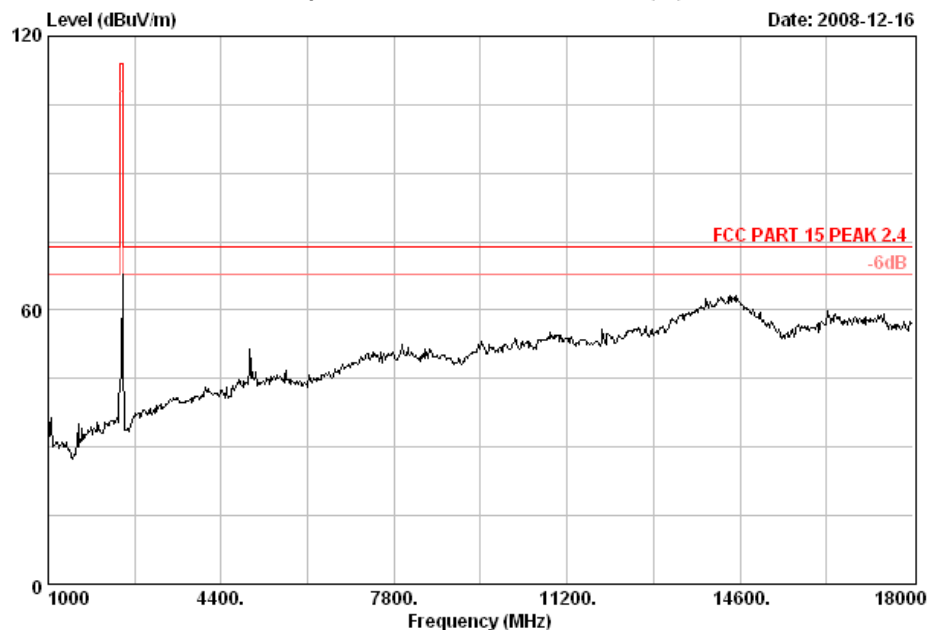
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Data: 9 File: E:\2008 report data\L\LENOVO\ACS8Q1848-2.EMI (16)



Site no. : 3# Chamber Data no. : 9
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2478MHz
Memo :

Data: 11 File: E:\2008 report data\L\LENOVO\ACS8Q1848-2.EMI (16)



Site no. : 3# Chamber Data no. : 11
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2478MHz
Memo :

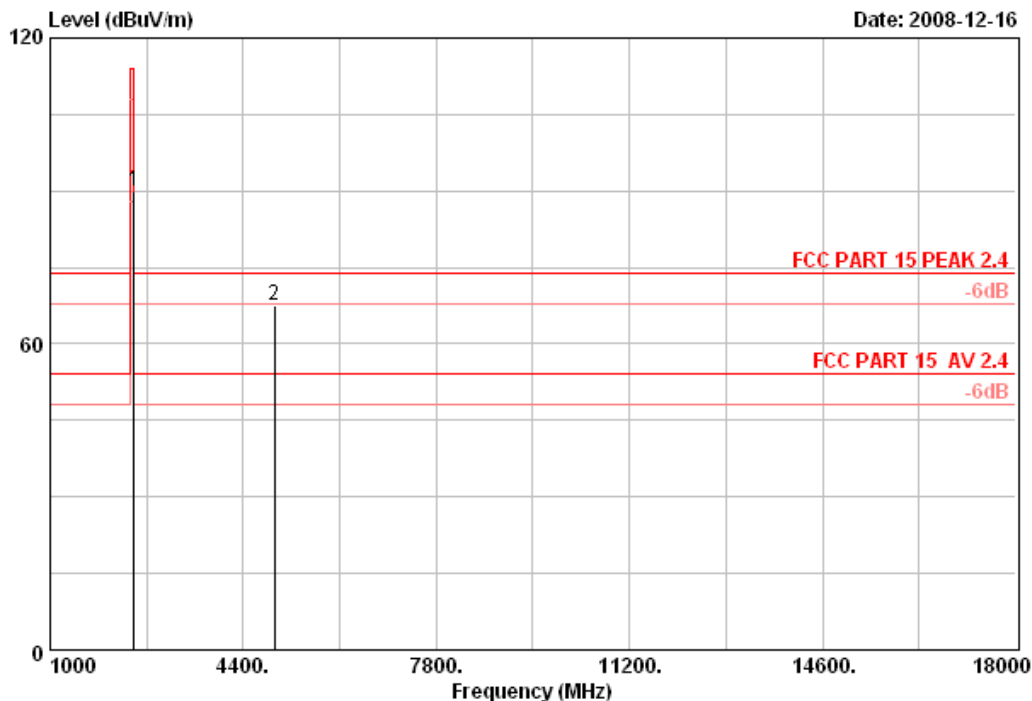


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Data: 10

File: E:\2008 report data\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 10
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2478MHz
Memo :

	Ant.	Cable	Amp		Emission				
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2478.00	28.58	6.87	35.96	90.26	89.75	114.00	24.25	Peak
2	4956.00	35.29	10.58	35.10	56.80	67.57	74.00	6.43	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.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2478.00	89.75	20.45	69.3	94	24.7
4956.00	67.57	20.45	47.12	54	6.88

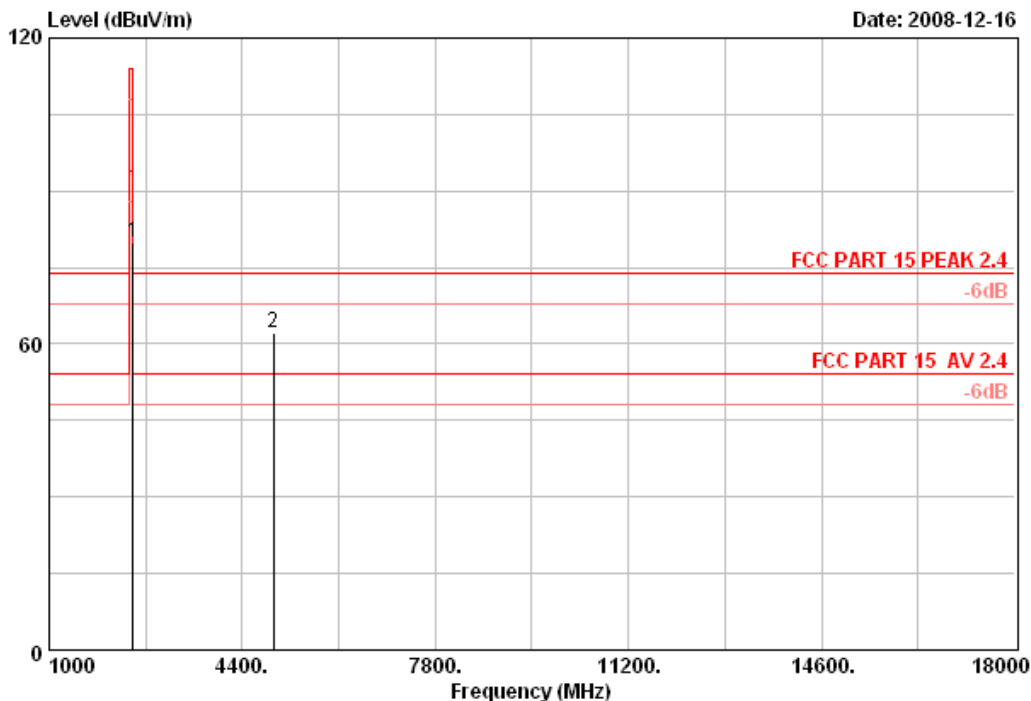


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Data: 12

File: E:\2008 report data\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 12
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2478MHz
Memo :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2478.00	28.58	6.87	35.96	80.34	79.83	114.00	34.17	Peak
2	4956.00	35.29	10.58	35.10	51.39	62.16	74.00	11.84	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.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2478.00	79.83	20.45	59.38	94	34.62
4956.00	62.16	20.45	41.71	54	12.29

5. BAND EDGE COMPLIANCE TEST

5.1. Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May,10, 08	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	May, 27, 08	1.5 Year
3	Amplifier	Agilent	8449B	3008A02495	Nov,06.08	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX 102	28620/2	May,28, 08	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX 102	271471/4	May,28, 08	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX 102	29086/2	May,28, 08	1 Year

5.2. Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50dB below the level of the fundamental or to the general radiated emission limits in section 15.209, which is the lesser attenuation.

5.3. Test Produce

1. The EUT is placed on a turntable, which is 0.8m above the ground plane and worked at highest radiated power.(X position)
2. The turntable was rotated for 360 degrees to determine the position of maximum emission level.
3. EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emission.
4. Set the spectrum analyzer in the following setting in order to capture the lower and upperband-edges of the emission:
 PEAK: RBW=VBW=1MHz / Sweep=AUTO PK detector
 The duty cycle factor was used to calculate Average Level
 Average level = PK measured level – duty cycle factor

5.4. Test Results

Pass (The testing data was attached in the next pages.)

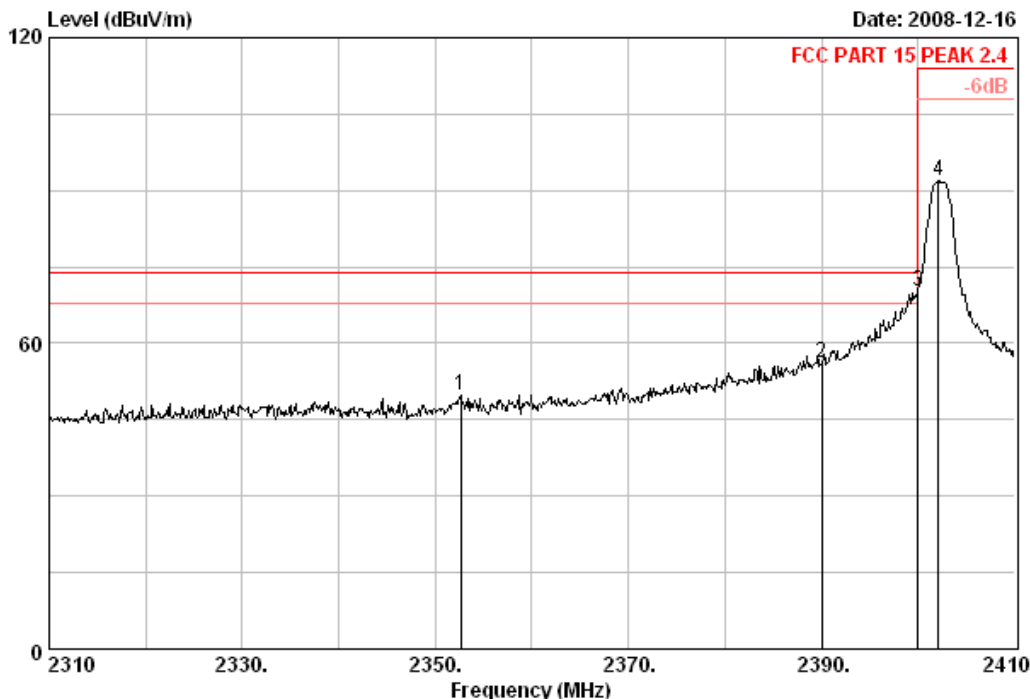


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Data: 14

File: E:\2008 report data\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 14
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2402MHz
Memo :

	Ant.	Cable	Amp		Emission				
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	28.41	6.67	35.99	50.85	49.94	74.00	24.06	Peak	
2	28.46	6.71	35.95	56.85	56.07	74.00	17.93	Peak	
3	28.46	6.73	35.95	70.93	70.17	74.00	3.83	Peak	
4	28.46	6.73	35.95	92.55	91.79	114.00	22.21	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.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2352.60	49.97	20.45	29.52	54	24.48
2390.00	56.07	20.45	35.62	54	18.38

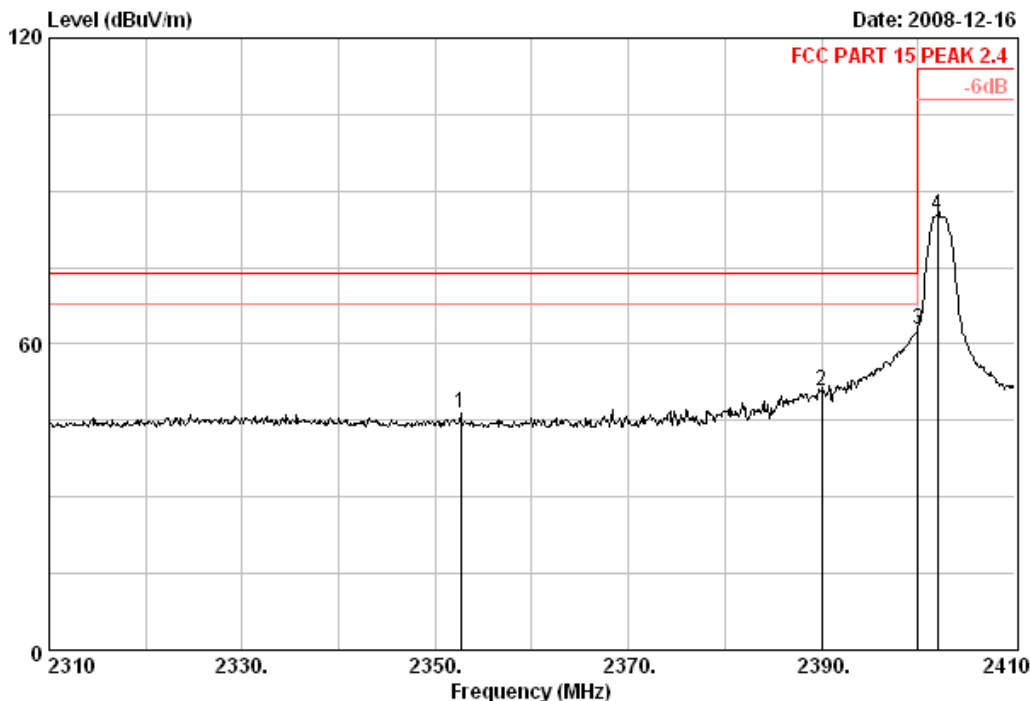


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Data: 13

File: E:\2008 report data\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 13
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2402MHz
Memo :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2352.60	28.41	6.67	35.99	47.27	46.36	74.00	27.64	Peak
2	2390.00	28.46	6.71	35.95	51.50	50.72	74.00	23.28	Peak
3	2400.00	28.46	6.73	35.95	63.77	63.01	74.00	10.99	Peak
4	2402.00	28.46	6.73	35.95	85.93	85.17	114.00	28.83	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.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2352.60	46.36	20.45	25.91	54	28.09
2390.00	50.72	20.45	30.27	54	23.73

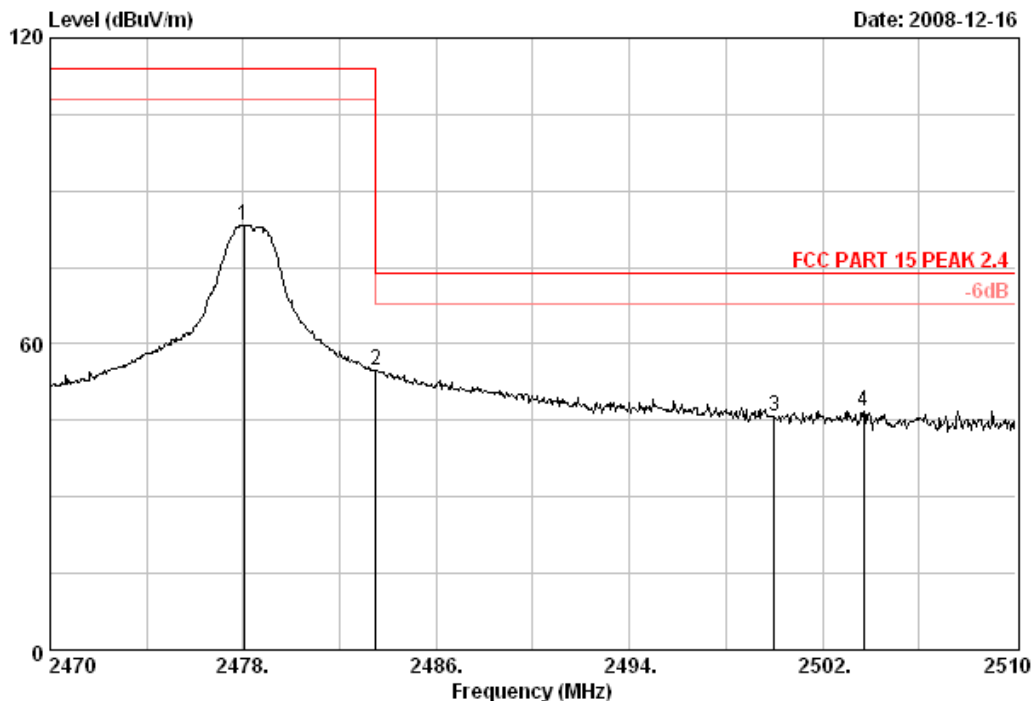


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Data: 15

File: E:\2008 report data\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 15
Dis. / Ant. : 3m 3115 Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2478MHz
Memo :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2478.04	28.58	6.87	35.96	83.82	83.31	114.00	30.69	Peak
2	2483.50	28.58	6.87	35.96	55.45	54.94	74.00	19.06	Peak
3	2500.00	28.60	6.91	35.96	46.13	45.68	74.00	28.32	Peak
4	2503.72	28.60	6.91	35.96	47.31	46.86	74.00	27.14	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.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2483.50	54.94	20.45	34.49	54	19.51
2500.00	45.68	20.45	25.23	54	28.77
2503.72	46.86	20.45	26.41	54	27.59

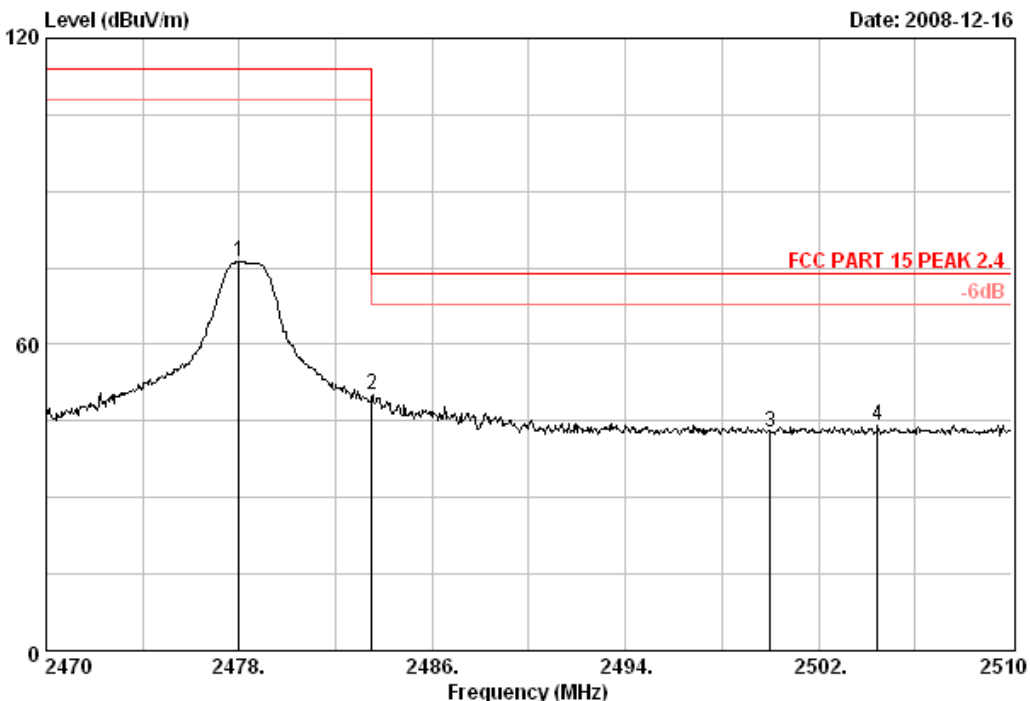


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Postcode:518057

Data: 16

File: E:\2008 report data\LENOVO\ACS8Q1848-2.EMI (16)

Date: 2008-12-16



Site no. : 3# Chamber Data no. : 16
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Sunny
EUT : Wireless USB Receiver M/N:JME-3263R
Power Rating : DC 5V From PC Input AC 120V/60Hz
Test mode : Tx CH 2478MHz
Memo :

	Ant.	Cable	Amp		Emission				
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1	2478.00	28.58	6.87	35.96	76.76	76.25	114.00	37.75	Peak
2	2483.50	28.58	6.87	35.96	50.60	50.09	74.00	23.91	Peak
3	2500.00	28.60	6.91	35.96	43.30	42.85	74.00	31.15	Peak
4	2504.44	28.60	6.91	35.96	44.49	44.04	74.00	29.96	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.

Frequency (MHz)	PK Measured level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2483.50	50.09	20.45	29.64	54	24.36
2500.00	42.65	20.45	22.2	54	31.8
2504.44	44.04	20.45	23.59	54	30.41

6. 20 DB BANDWIDTH TEST

6.1.Test Equipment

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.10, 08	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May.28, 08	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May.28, 08	1Year

6.2.Test Information

EUT:	Wireless USB Receiver
M/N:	JME-3263R
Test Date:	Dec.20, 2008
Ambient Temperature:	23℃
Relative Humidity:	54%
Test standard:	FCC PART 15C: 15.247(a)(1)
Test mode:	TX
Test Frequency:	Low: 2402MHz Mid: 2440MHz High: 2478MHz
Test By:	Jamy

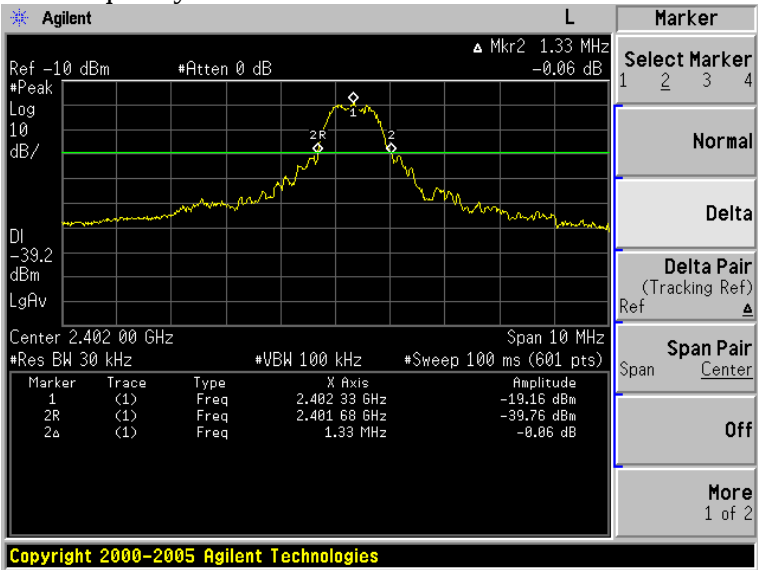
6.3.Limit

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

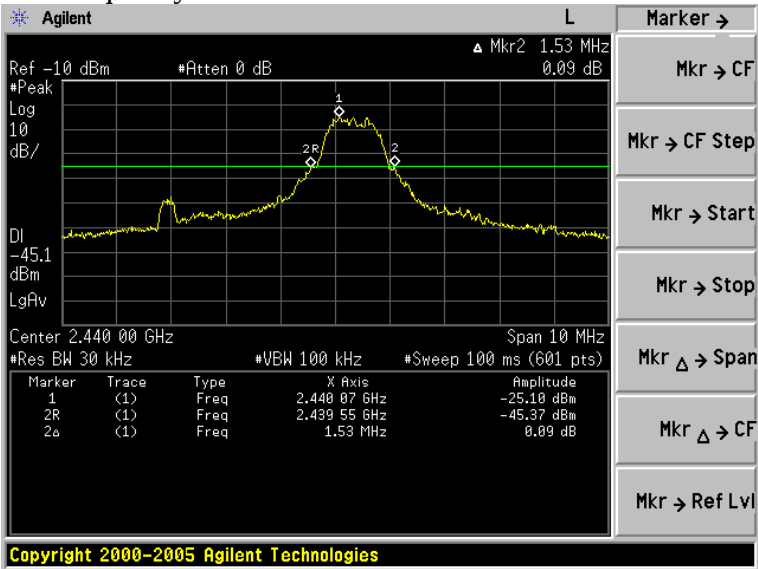
6.4.Test Results

PASS

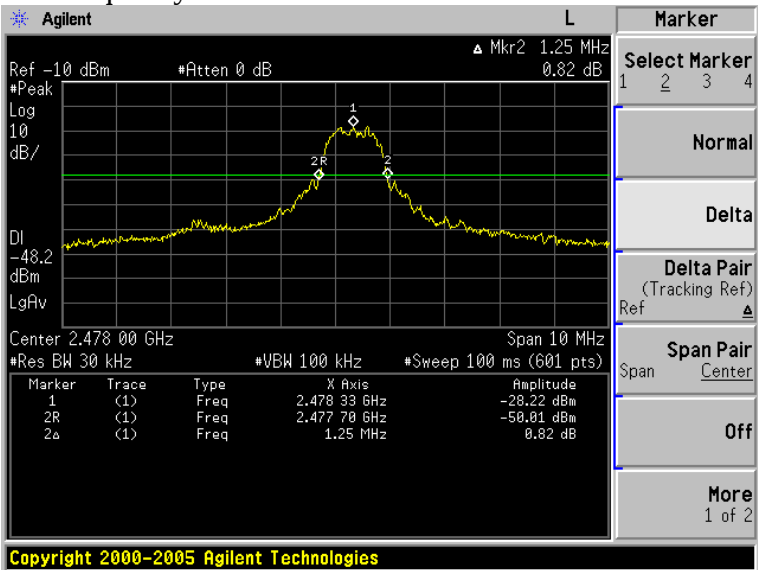
Test Frequency: 2402MHz



Test Frequency: 2440MHz



Test Frequency: 2478MHz



7. ANTENNA REQUIREMENT

7.1 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.

7.1. ANTENNA CONNECTED CONSTRUCTION

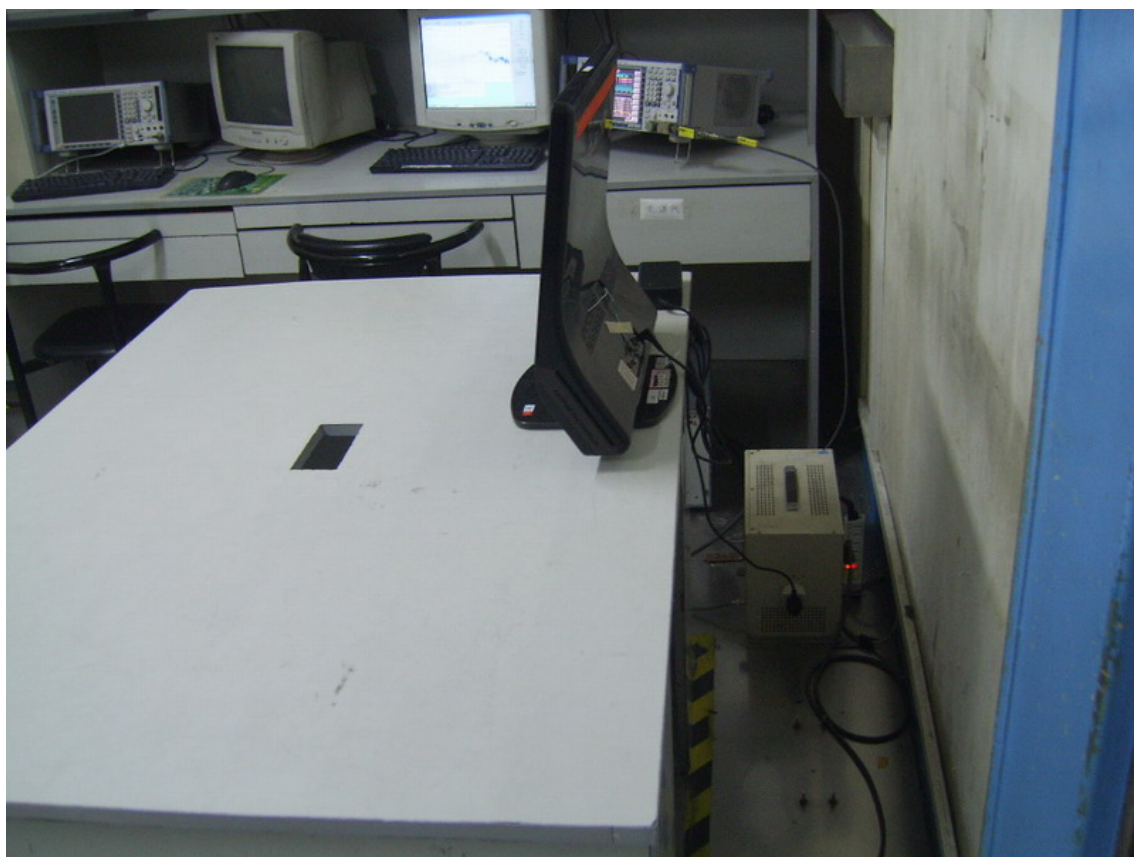
The antenna used for this product is an integrated PCB antenna (see EUT photo) that no antenna other than that furnished by the responsible party shall be used with the device.

8. DEVIATION TO TEST SPECIFICATIONS

[NONE]

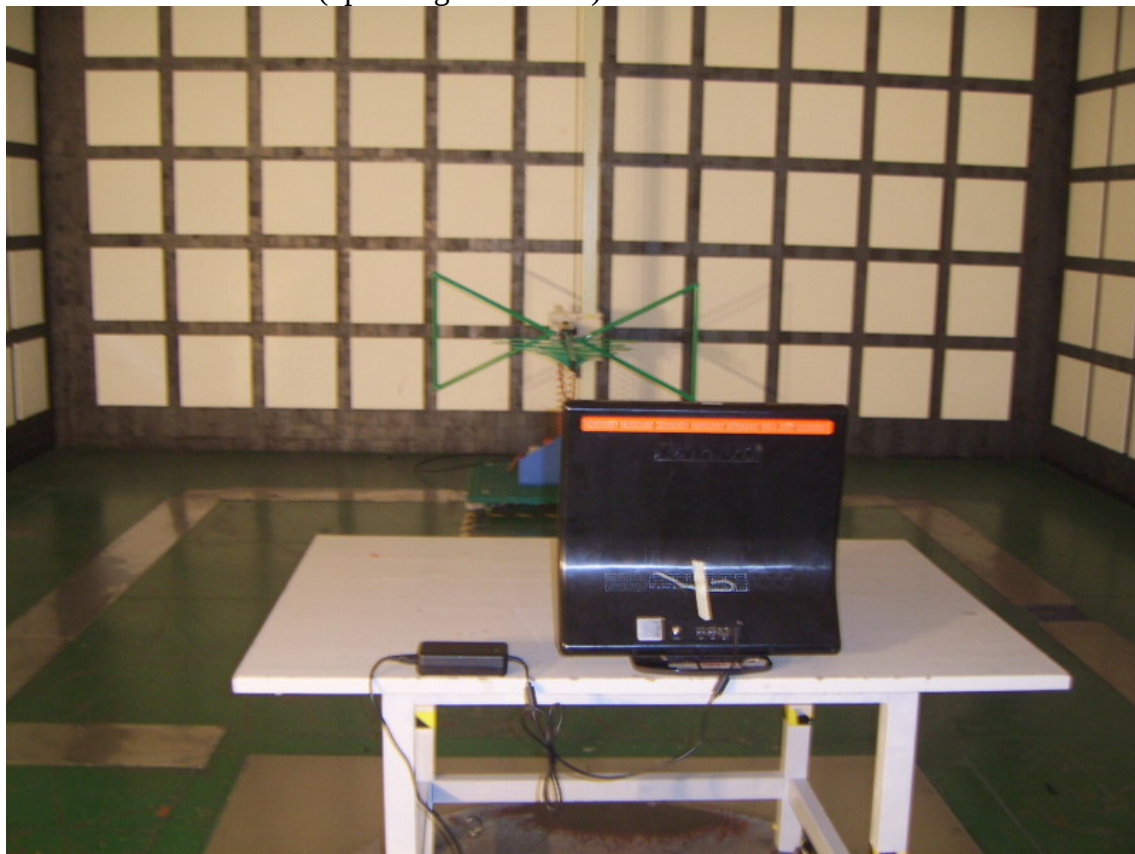
9. PHOTOGRAPH OF TEST

9.1.Photos of Power Line Conducted Emission Test

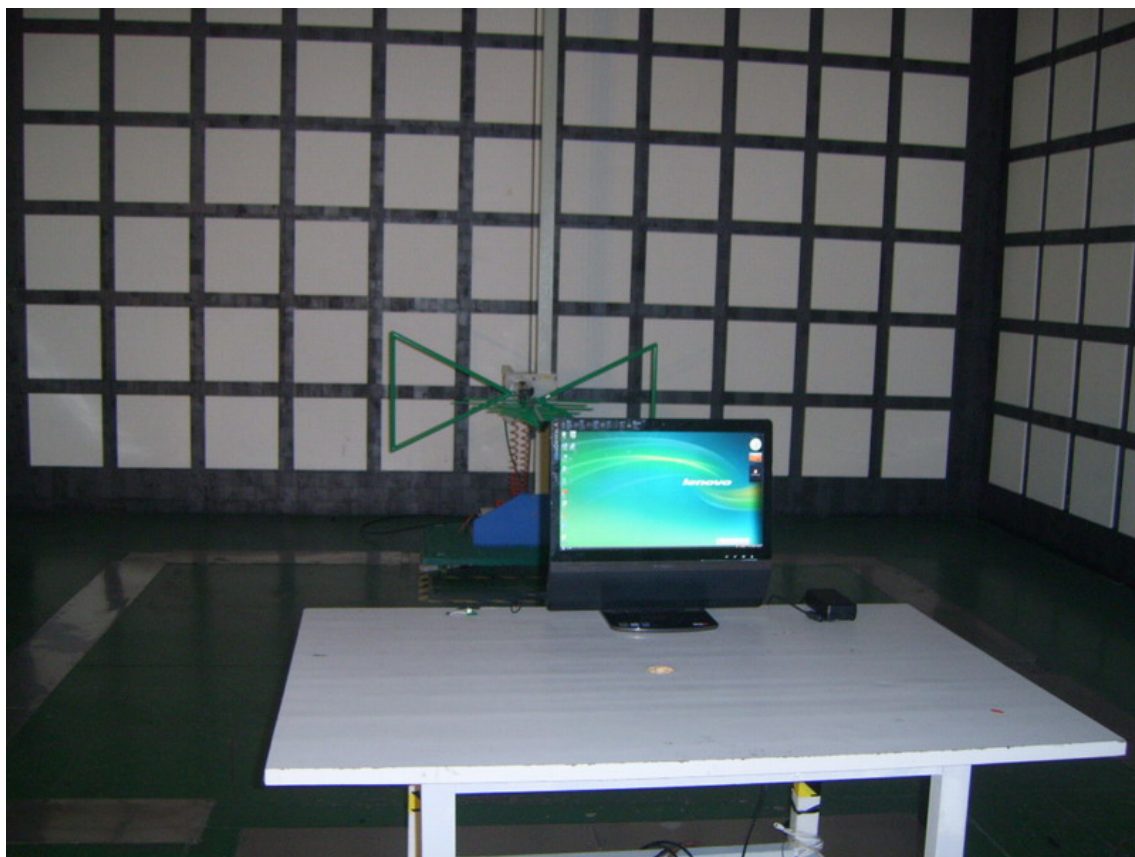


9.2.Photos of Radiated Emission Test

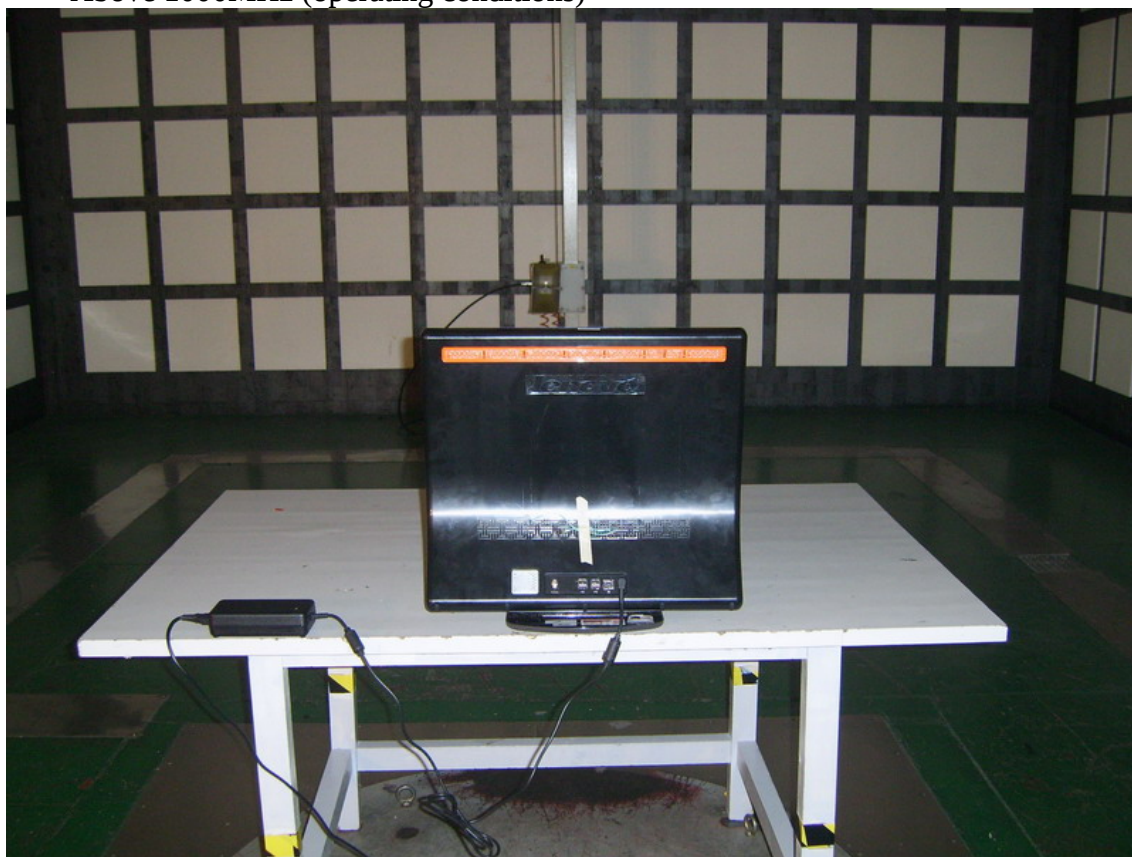
30-1000MHz (operating conditions)



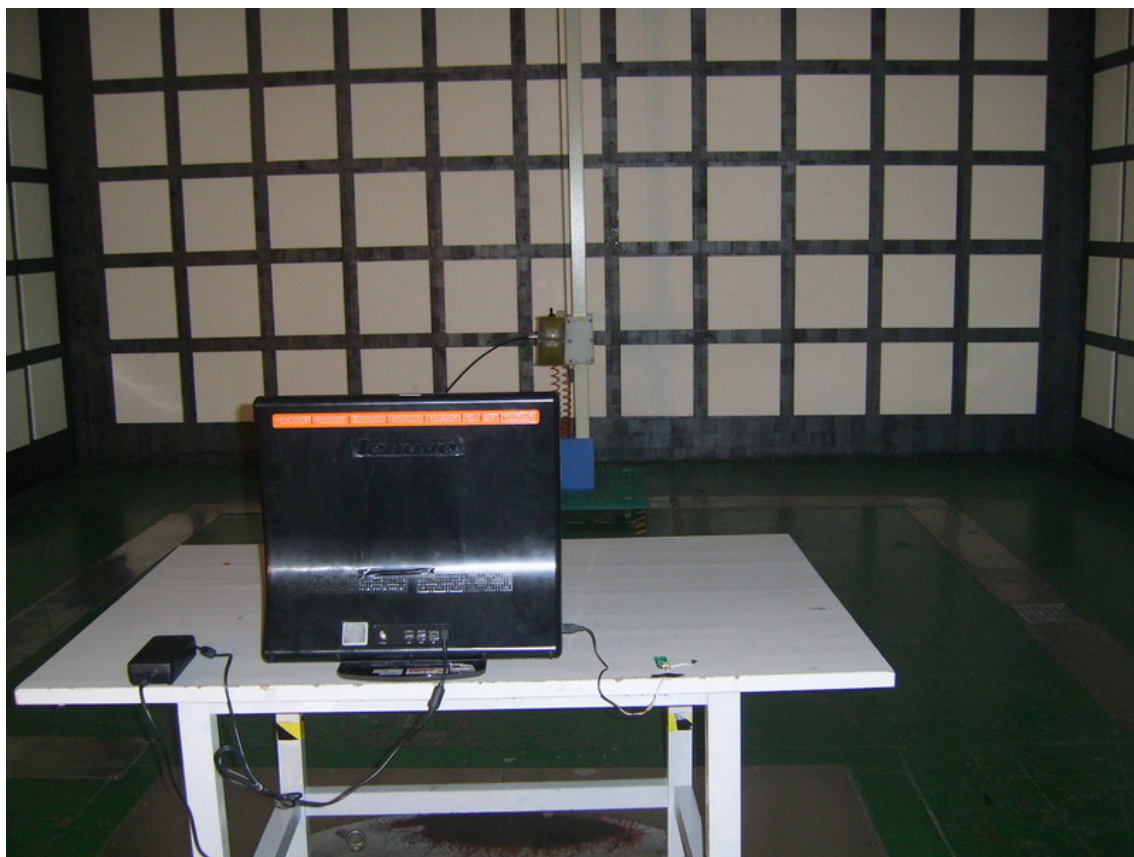
(Stand alone configuration)



Above 1000MHz (operating conditions)



(Stand alone configuration)



10.PHOTOGRAPH OF EUT

Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT

