

APPLICATION FOR CERTIFICATION
On Behalf of

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

Wireless Keyboard

Model Number: LXH-JME8001R

FCC ID: FPWJME8001R

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-F08468
Date of Test : Dec.16~18, 2008
Date of Report : Dec.19, 2008

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TEST REPORT CERTIFICATION

Applicant : Jing Mold Electronic Technology (Shen Zhen) Co., Ltd.
Manufacturer : Jing Mold Electronic Technology (Shen Zhen) Co., Ltd.
EUT Description : Wireless Keyboard
FCC ID : FPWJME8001R
(A) MODEL NO. : LXH-JME8001R
(B) SERIAL NO. : N/A
(C) POWER SUPPLY : DC 3V
(D) TEST VOLTAGE : DC 3V

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.16~18, 2008

Prepared by :

Edie Huang
Edie Huang / Assistant

Reviewer :

Jamy Yu
Jamy Yu / Senior Engineer

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
Power Line Conducted Emission Test	FCC Part 15C: 15.207 ANSI C63.4-2003	N/A
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
N/A is an abbreviation for Not Applicable.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

Product name	: Wireless Keyboard
Model Number	: LXH-JME8001R
FCC ID	: FPWJME8001R
Operation frequency	: 2402MHz~2478MHz
Modulation mode	: DSSS
Power Supply	: DC 3V (Note: New batteries were used for all test.)
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.16~18, 2008
Date of Receipt	: Dec.14, 2008
Sample Type	: Series production

2.2. 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

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

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

3. POWER LINE CONDUCTED EMISSION TEST

According to Paragraph (f) of FCC Part 15 section 15.207, Tests to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines.

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	1Year
4	Amplifier	Agilent	8449B	3008A02495	Nov.06.08	1 Year
5.	RF Cable	Hubersuhner	SUCOFLEX1 02	28620/2	May.28, 08	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX1 02	271471/4	May.28, 08	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX1 02	29086/2	May.28, 08	1 Year

4.2. Block Diagram of Test Setup

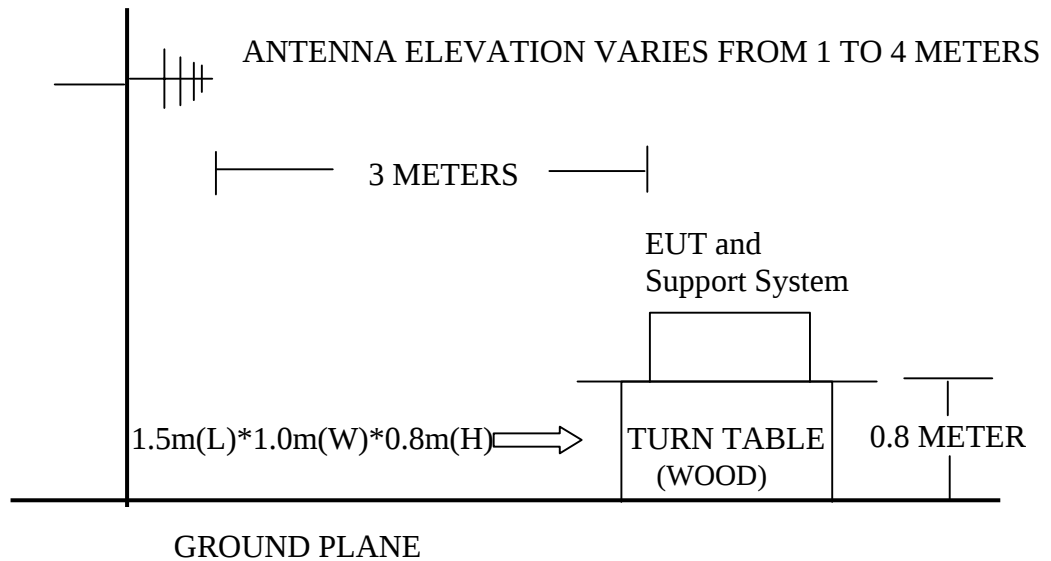
4.2.1. Block Diagram of connection between EUT and simulators



(EUT: Wireless Keyboard)

4.2.2. Anechoic Chamber Setup Diagram

ANTENNA TOWER



4.3. Radiated Emission Limit Standard: FCC 15.209 and 15.249

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
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 960MHz	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 $\text{dB}\mu\text{V} = 20 \log$ Emission level $\mu\text{V}/\text{m}$
 - (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 Keyboard (EUT)

Model Number : LXH-JME8001R
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. This EUT is battery powered, and a new battery was used for all the test.

4.5.3. Let the EUT work in test modes (TX Mode) and test it.

4.6. Test Procedure

The 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. The 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 is set on Test. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2003 on radiated emission Test.

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.

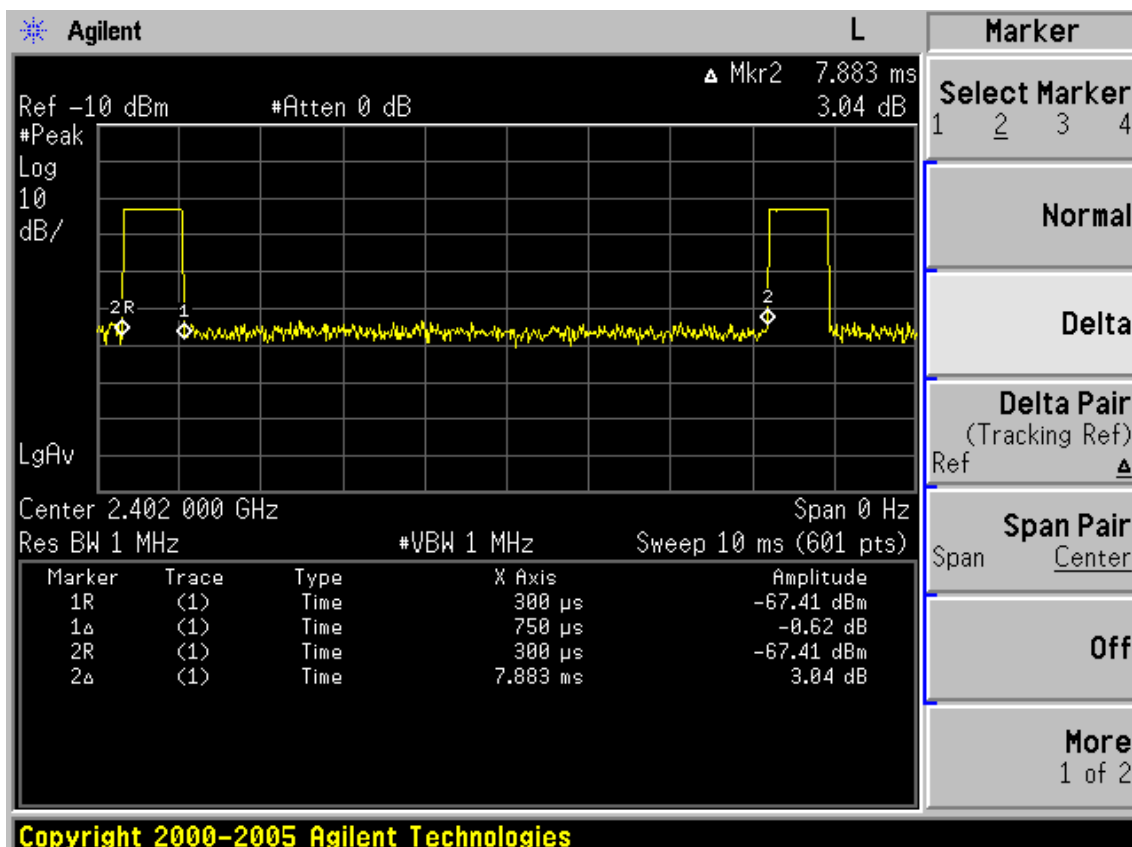
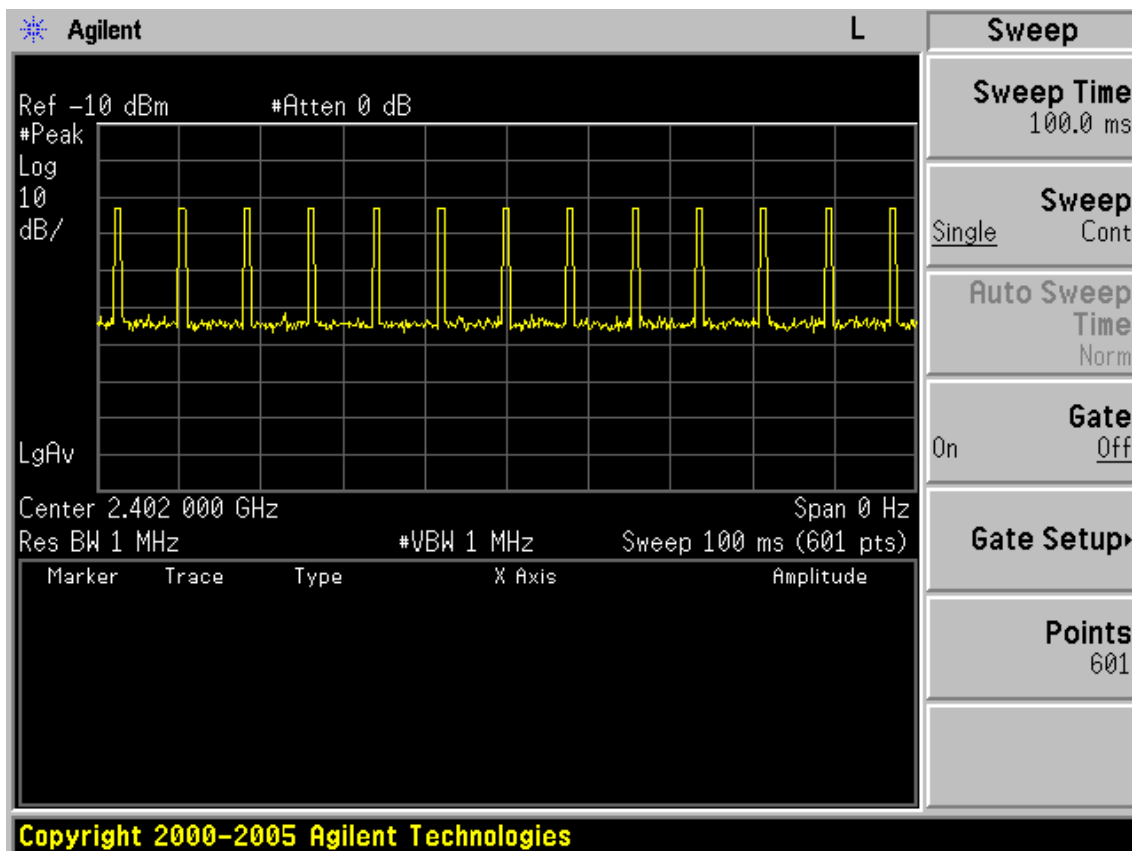
4.7. Radiated Emission Test Results

PASS.

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

Duty cycle=Tx on/Tx on+Tx off=0.75/7.883=9.5%

Duty Factor=20log(1/Duty clcye)=20.43



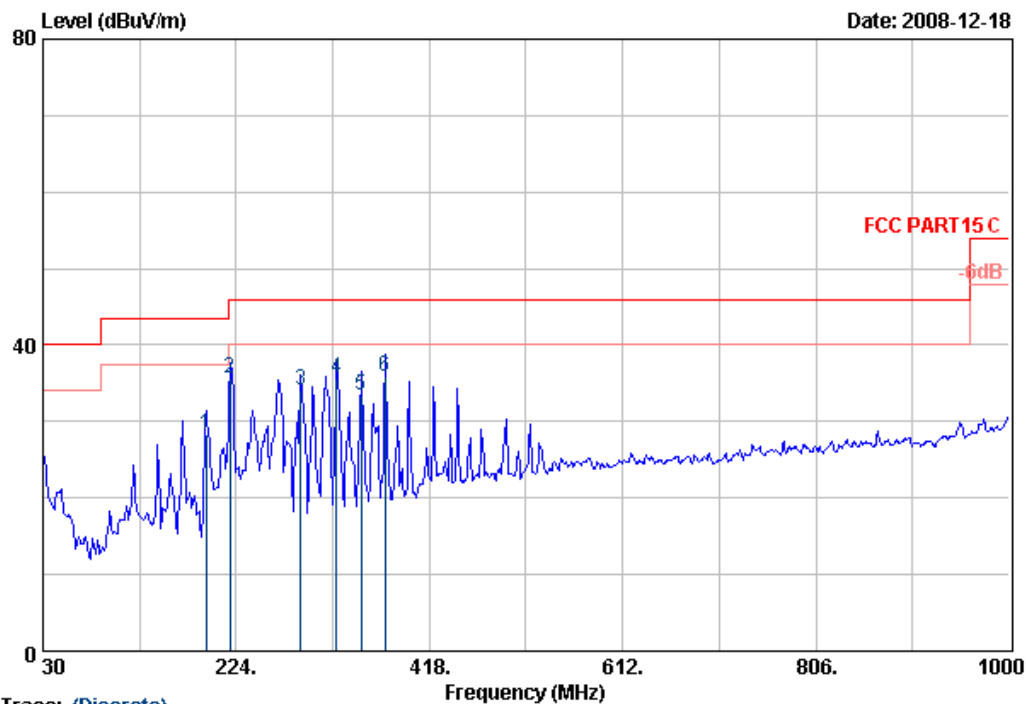
Test Frequency: 30MHz-1000MHz



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Data: 6 File: D:\2008 Report Data\Jing Mold\ACS8Q1848-1.EMI (6)

Date: 2008-12-18



Trace: (Discrete)

Site no. : AUDIX 3m chamber Data no. : 6
Dis. / Ant. : 3m CBL6112D Ant. pol. : HORIZONTAL
Limit : FCC PART15 C
Env. / Ins. : 25.5°C/55% Engineer : Jolly
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test Mode : Tx Mode

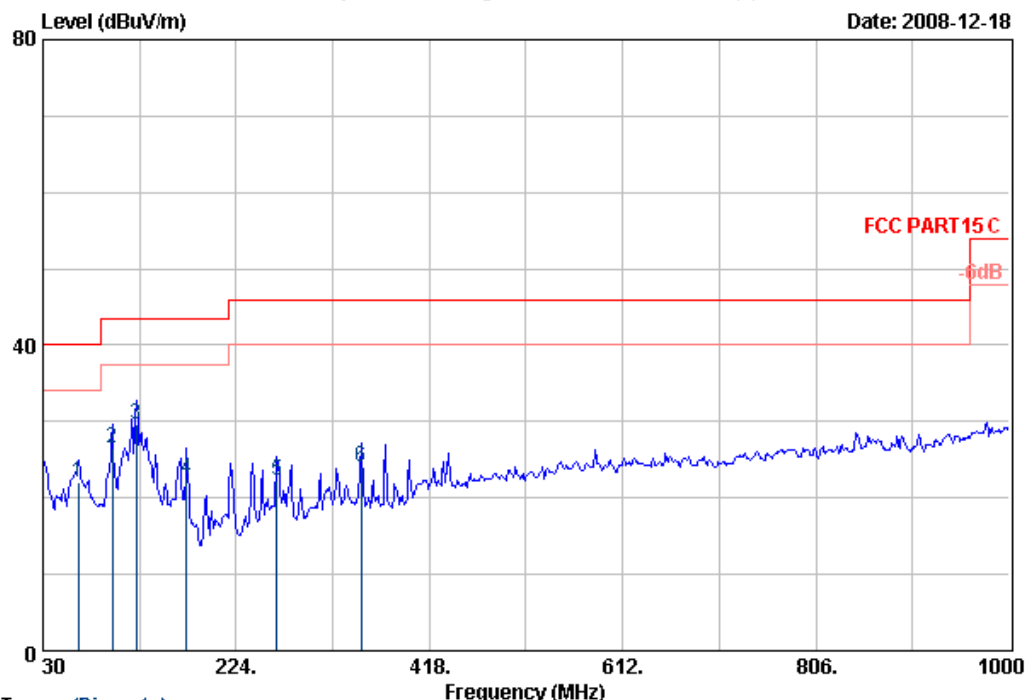
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBUV)	Emission Level (dBUV/m)	Limits (dBUV/m)	Margin (dB)	Remark
1	193.88	9.04	1.36	17.90	28.30	43.50	15.20	QP
2	218.12	9.07	1.47	25.10	35.64	46.00	10.36	QP
3	288.59	12.80	1.78	19.51	34.09	46.00	11.91	QP
4	324.76	14.04	1.92	19.80	35.76	46.00	10.24	QP
5	349.10	14.16	2.01	17.30	33.47	46.00	12.53	QP
6	373.34	14.48	2.10	19.20	35.78	46.00	10.22	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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Site no. : AUDIX 3m chamber Data no. : 5
Dis. / Ant. : 3m CBL6112D Ant. pol. : VERTICAL
Limit : FCC PART15 C
Env. / Ins. : 25.5°C/55% Engineer : Jolly
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test Mode : Tx Mode

	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	65.80	6.33	0.72	14.90	21.95	40.00	18.05	QP
2	99.70	10.91	0.93	14.70	26.54	43.50	16.96	QP
3	124.04	12.73	1.05	15.90	29.68	43.50	13.82	QP
4	174.33	9.53	1.28	11.60	22.41	43.50	21.09	QP
5	264.52	12.92	1.67	7.80	22.39	46.00	23.61	QP
6	349.13	14.16	2.01	7.90	24.07	46.00	21.93	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

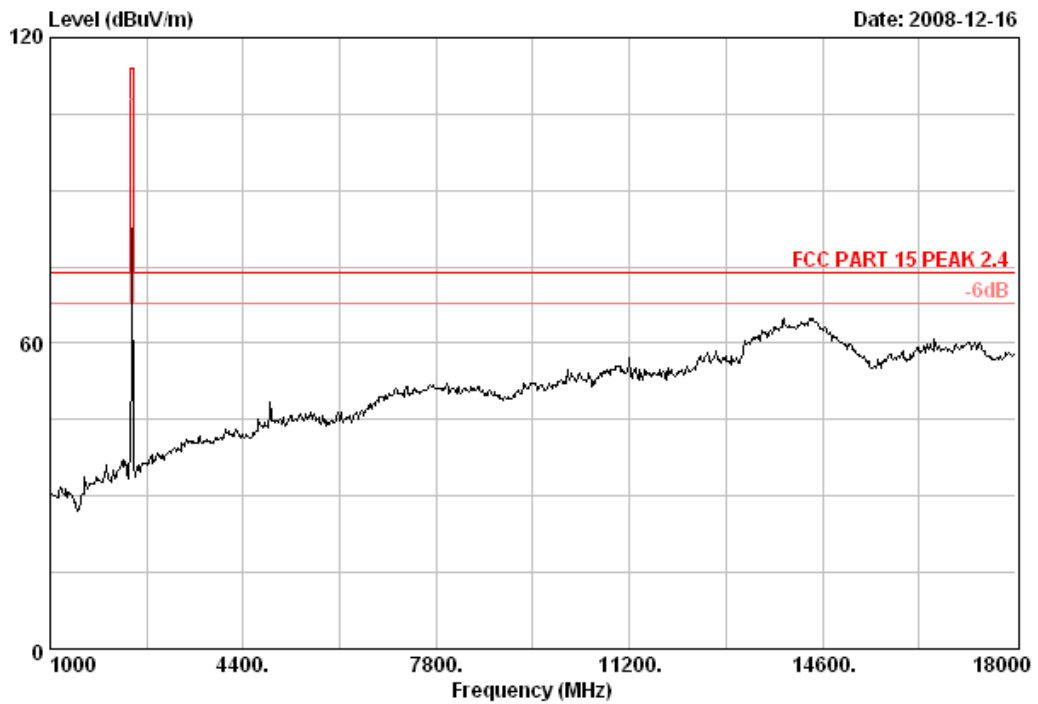


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Date: 2008-12-16



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	: Alan
EUT	: Wireless Keyboard M/N: LXH-JME8001R		
Power Rating	: DC 3V		
Test mode	: Tx CH 2440MHz		
Memo	:		

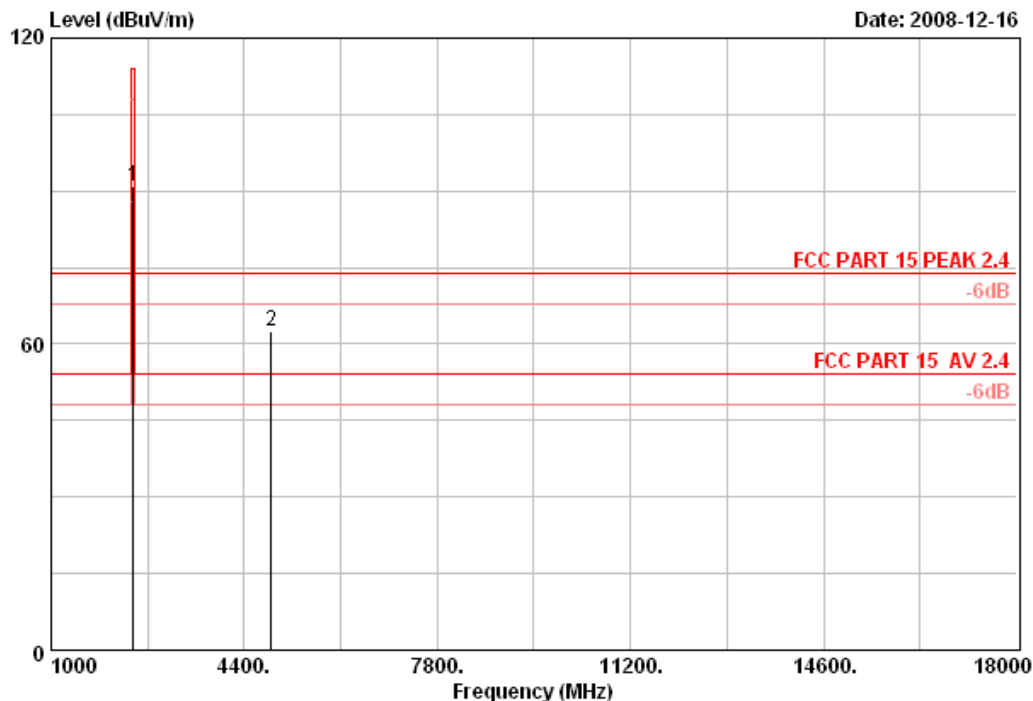


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Date: 2008-12-16



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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test mode : Tx CH 2440MHz
Memo :

	Freq.	Ant.	Cable	Amp		Emission			
	(MHz)	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark
		(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)	
1	2440.00	28.53	6.80	35.96	91.66	91.03	114.00	22.97	Peak
2	4880.00	34.78	10.56	35.13	52.25	62.46	74.00	11.54	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.

Frequency (MHz)	PK Level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2440	91.03	20.43	70.6	94	23.4
4880	62.46	20.43	42.03	54	11.97

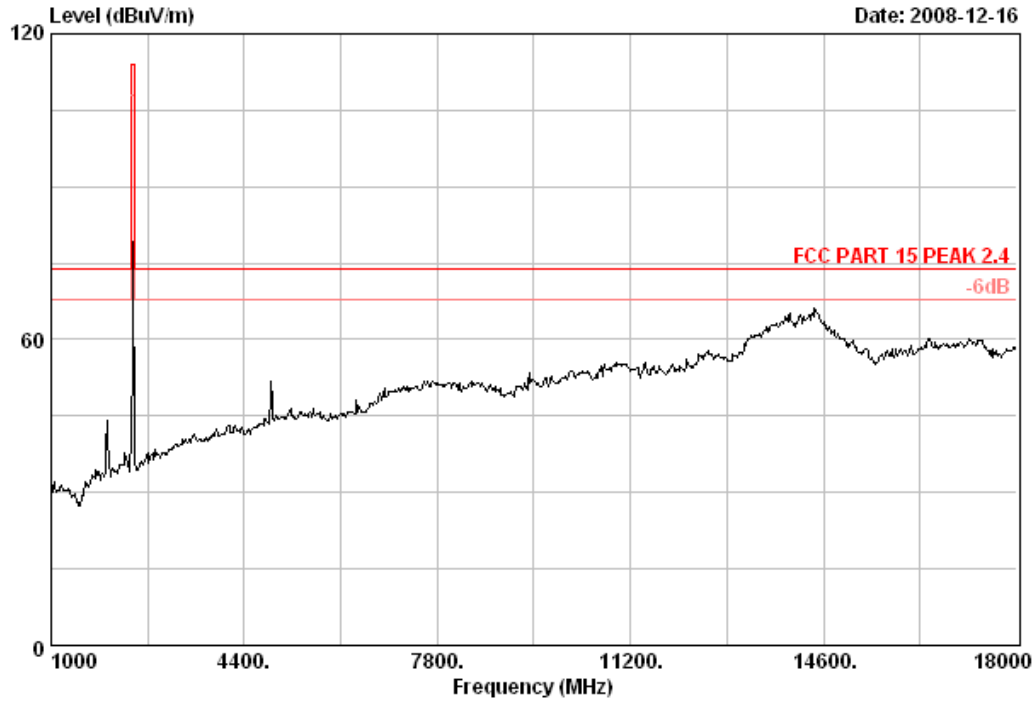


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Date: 2008-12-16



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	: Alan
EUT	: Wireless Keyboard M/N: LXH-JME8001R		
Power Rating	: DC 3V		
Test mode	: Tx CH 2440MHz		
Memo	:		

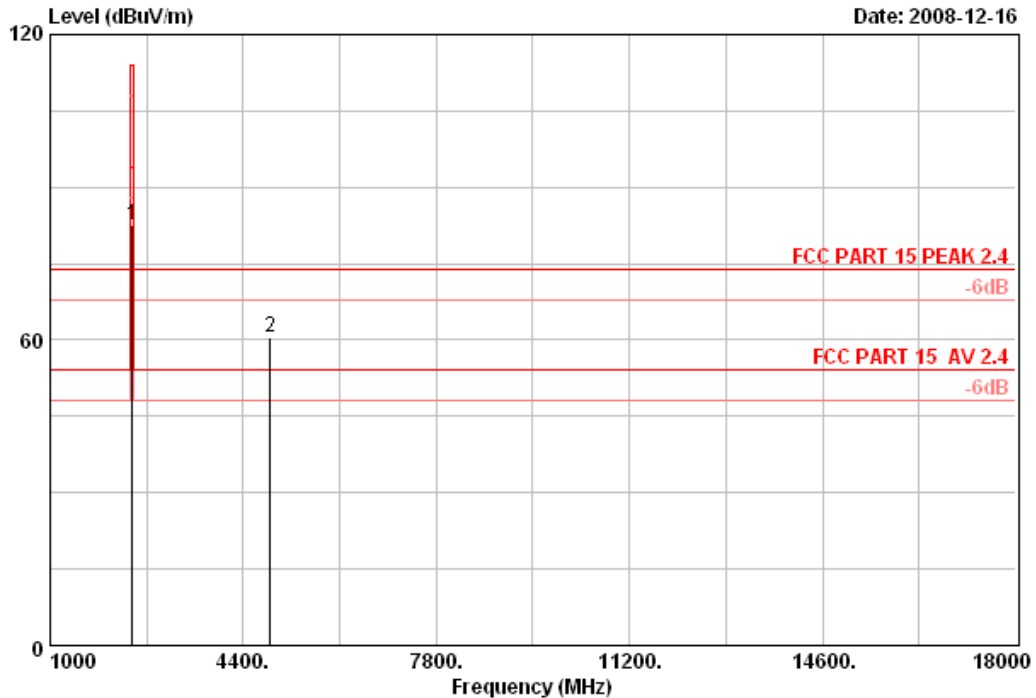


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Date: 2008-12-16



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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test mode : Tx CH 2440MHz
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	2440.00	28.53	6.80	35.96	83.09	82.46	114.00	31.54	Peak
2	4880.00	34.78	10.56	35.13	50.30	60.51	74.00	13.49	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 Level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2440	82.46	20.43	62.03	94	31.97
4880	60.51	20.43	40.08	54	13.92

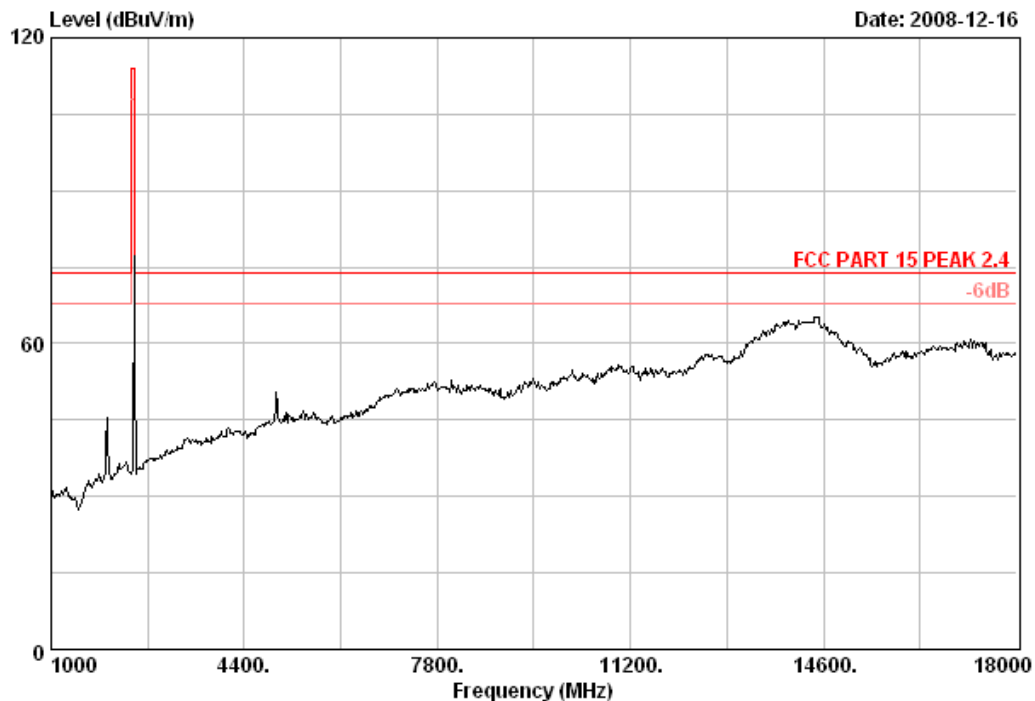


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Date: 2008-12-16



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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test mode : Tx CH 2478MHz
Memo :

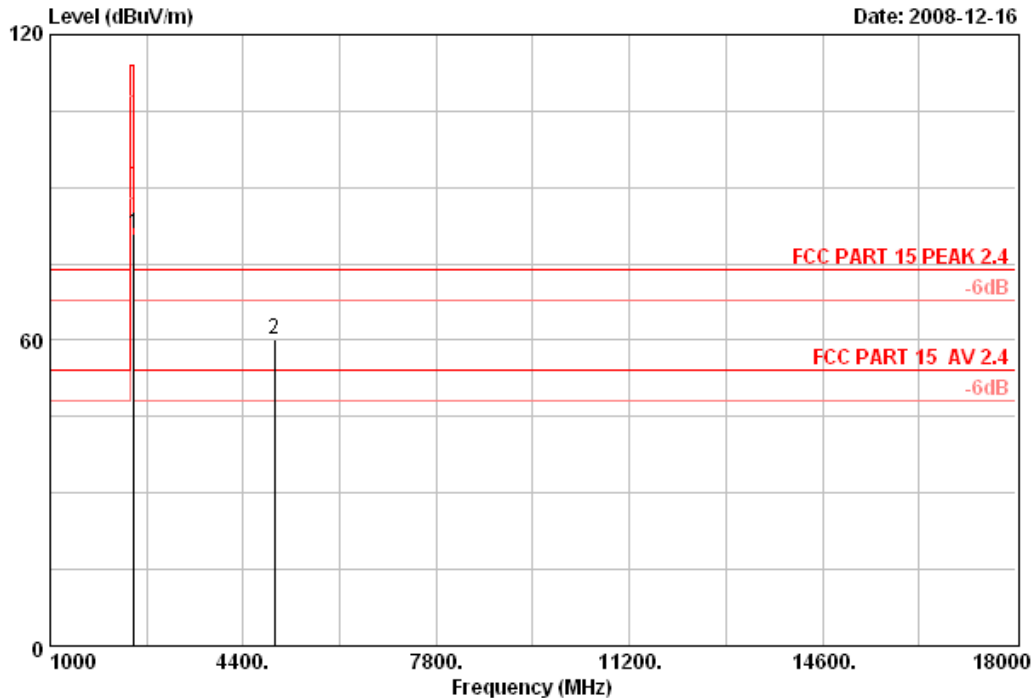


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Site no. : 3# Chamber Data no. : 6
Dis. / Ant. : 3m 3115 Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test mode : Tx CH 2478MHz
Memo :

		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	81.35	80.84	114.00	33.16	Peak
2	4956.00	35.29	10.58	35.10	49.44	60.21	74.00	13.79	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.

Frequency (MHz)	PK Level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2478	80.84	20.43	60.41	94	33.59
4956	60.21	20.43	39.78	54	14.22

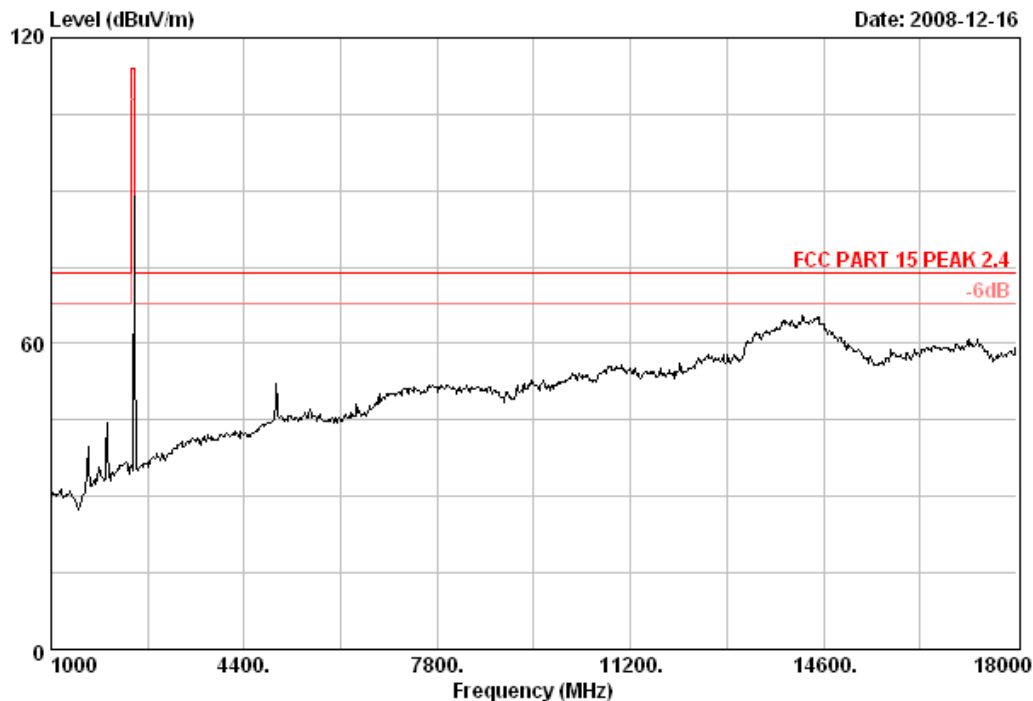


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Date: 2008-12-16



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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test mode : Tx CH 2478MHz
Memo :

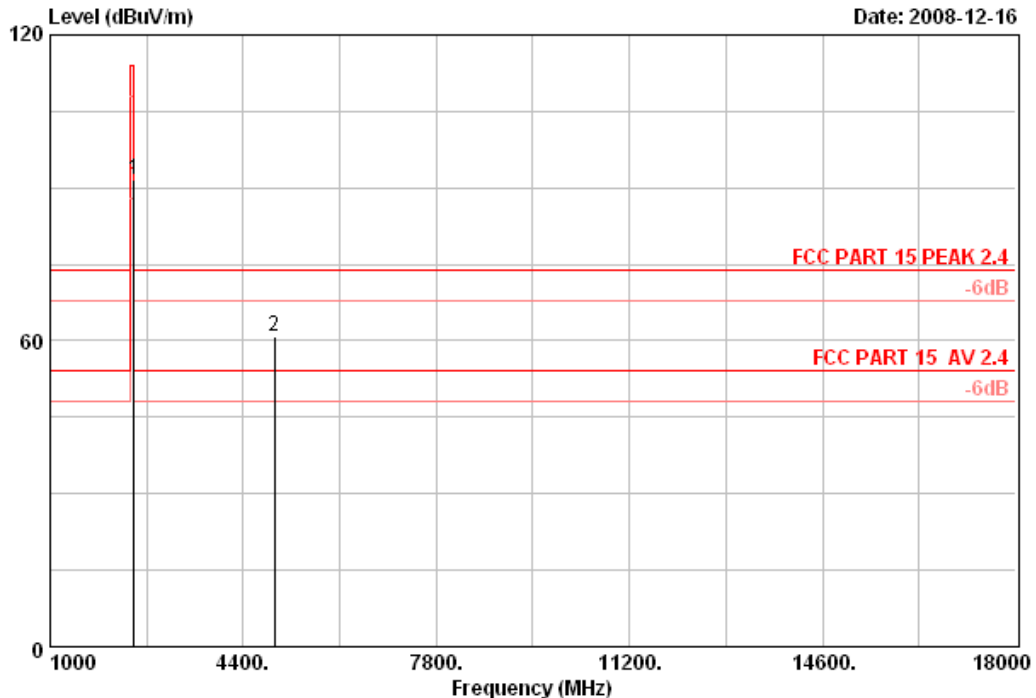


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Postcode:518057

Data: 8

File: E:\2008 report data\LENOVO\ACS8Q1848-1.EMI (18)

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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
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	91.93	91.42	114.00	22.58	Peak
2	4956.00	35.29	10.58	35.10	50.22	60.99	74.00	13.01	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 Level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2478	91.42	20.43	70.99	94	23.01
4956	60.99	20.43	40.56	54	13.44

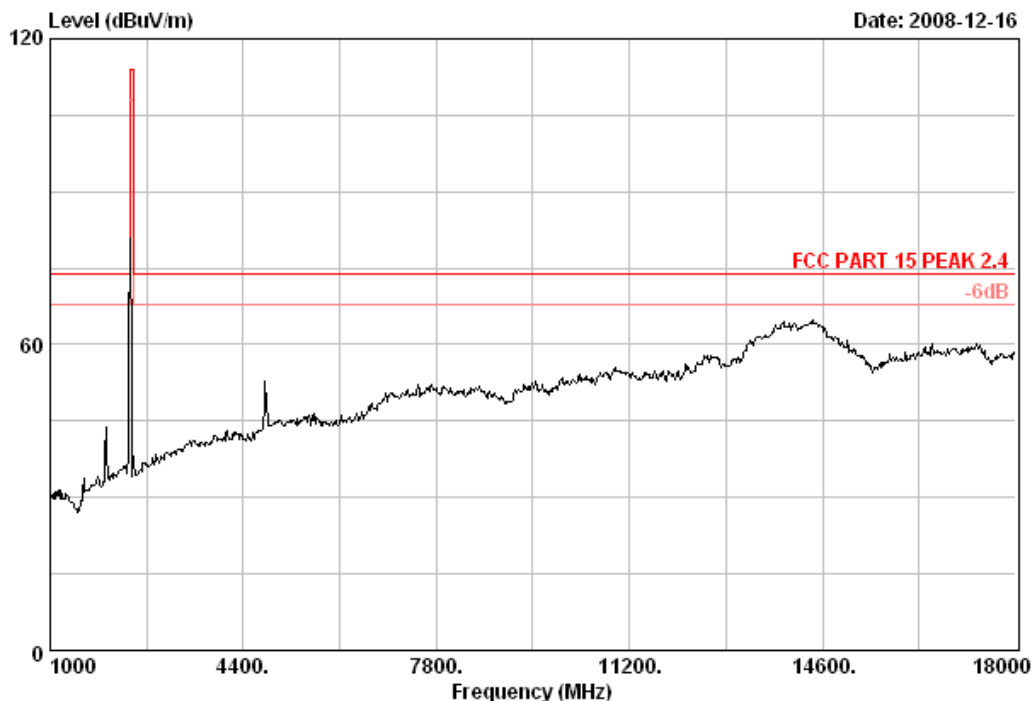


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Data: 9

File: E:\2008 report data\LENVOVO\ACS8Q1848-1.EMI (18)

Date: 2008-12-16



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	: Alan
EUT	: Wireless Keyboard M/N: LXH-JME8001R		
Power Rating	: DC 3V		
Test mode	: Tx CH 2402MHz		
Memo	:		

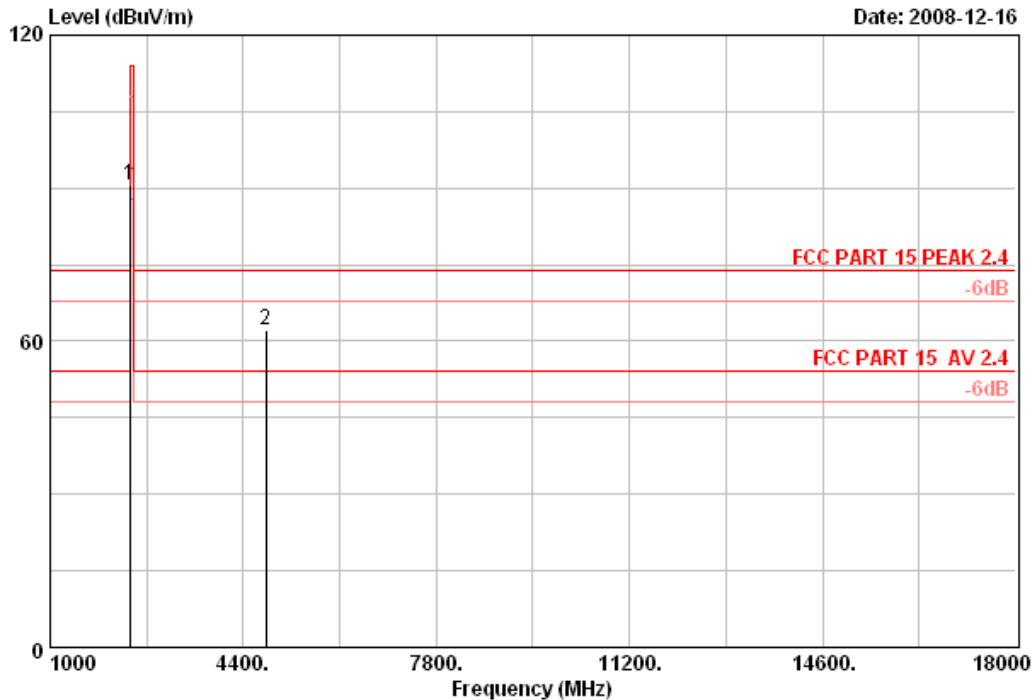


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Data: 10

File: E:\2008 report data\LENOVO\ACS8Q1848-1.EMI (18)

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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test mode : Tx CH 2402MHz
Memo :

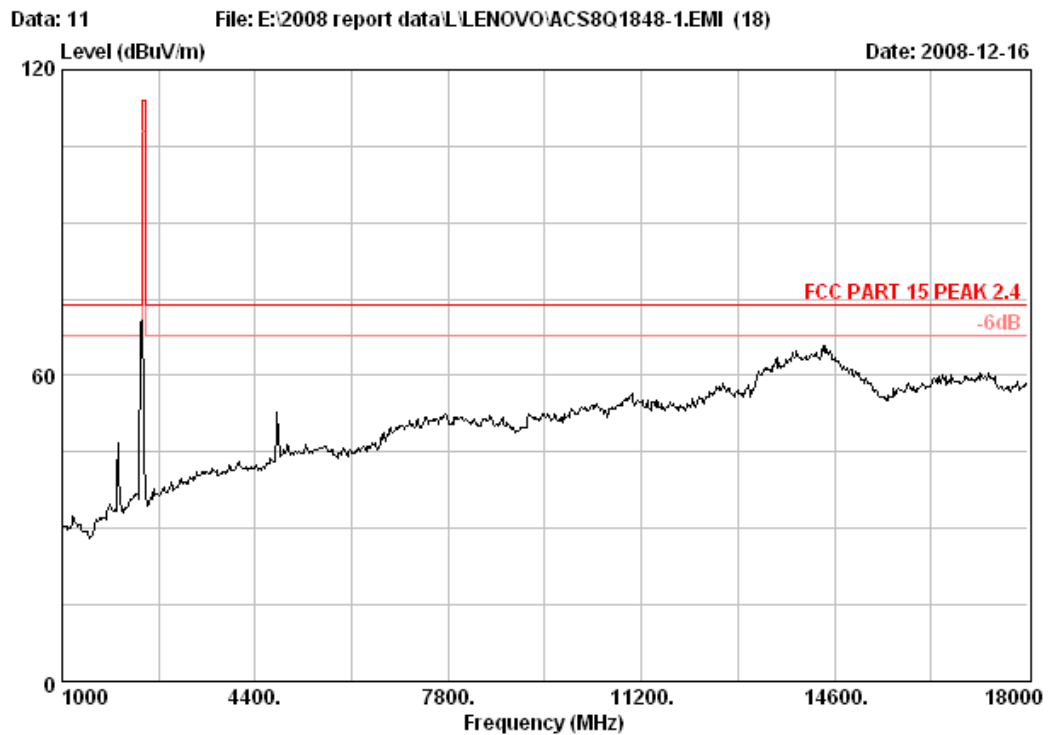
	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Amp Factor (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	2402.00	28.46	6.73	35.95	91.48	90.72	114.00	23.28	Peak
2	4804.00	34.36	10.53	35.23	52.58	62.24	74.00	11.76	Peak

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 Level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2402	90.72	20.43	70.29	94	23.71
4804	62.24	20.43	41.81	54	12.19



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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	: Alan
EUT	: Wireless Keyboard M/N: LXH-JME8001R		
Power Rating	: DC 3V		
Test mode	: Tx CH 2402MHz		
Memo	:		

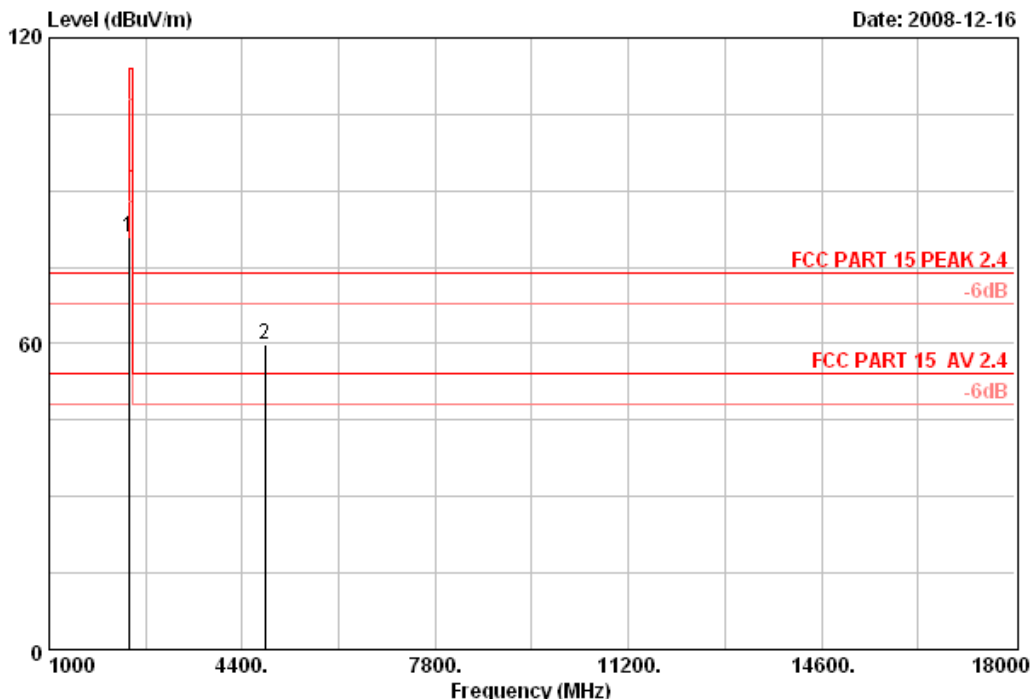


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Data: 12

File: E:\2008 report data\LENOVO\ACS8Q1848-1.EMI (18)

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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
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	2402.00	28.46	6.73	35.95	81.68	80.92	114.00	33.08	Peak
2	4804.00	34.36	10.53	35.23	50.08	59.74	74.00	14.26	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 Level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2402	80.92	20.43	60.49	94	33.51
4804	59.74	20.43	39.31	54	14.69

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.
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, PK detector, Sweep=AUTO

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

5.4. Test Results

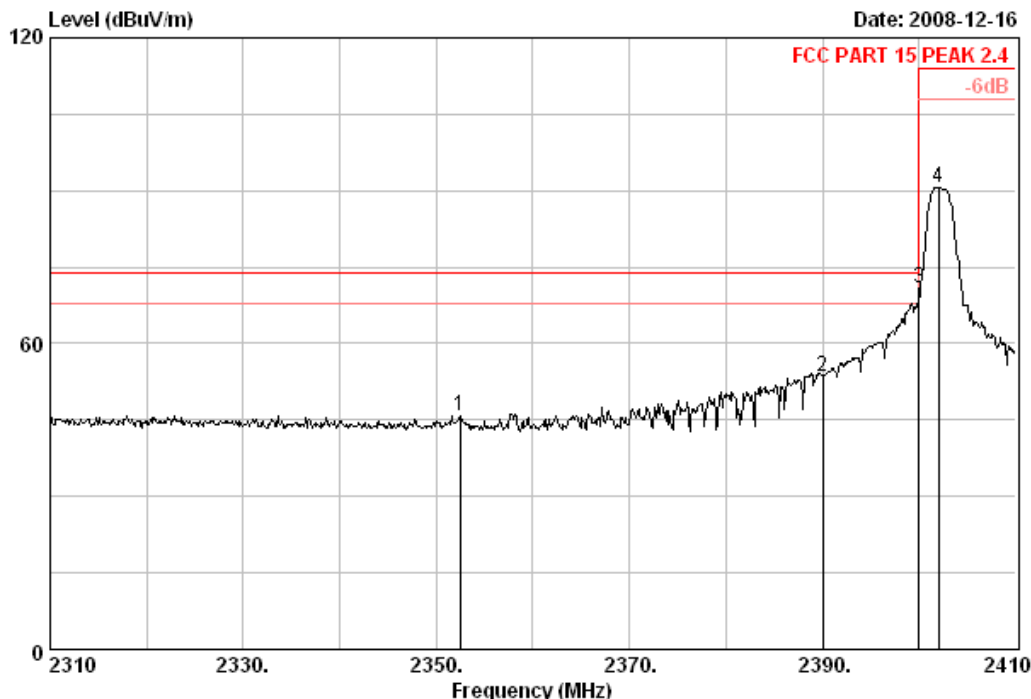
Pass (The testing data was attached in the next pages.)



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Data: 14 File: E:\2008 report data\L\LENOVO\ACS8Q1848-1.EMI (18)

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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test mode : Tx CH 2402MHz
Memo :

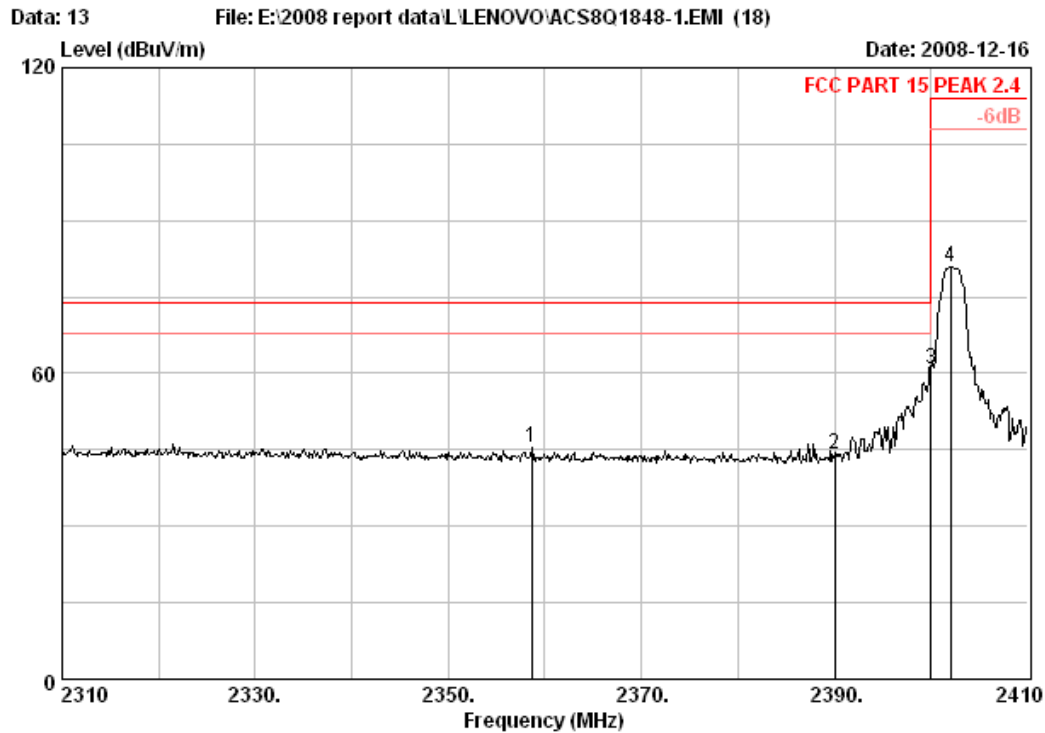
	Ant.	Cable	Amp	Emission					
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBUV)	(dBUV/m)	(dBUV/m)	(dB)		
1	2352.50	28.41	6.67	35.99	46.80	45.89	74.00	28.11	Peak
2	2390.00	28.46	6.71	35.95	54.37	53.59	74.00	20.41	Peak
3	2400.00	28.46	6.73	35.95	71.68	70.92	74.00	3.08	Peak
4	2402.00	28.46	6.73	35.95	91.42	90.66	114.00	23.34	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 Level (dBUV/m)	Duty cycle factor (dB)	Average Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)
2390	53.59	20.43	33.16	54	20.84
2352.50	45.89	20.43	25.46	54	28.54



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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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
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	2358.60	28.41	6.69	35.99	46.35	45.46	74.00	28.54	Peak
2	2390.00	28.46	6.71	35.95	44.78	44.00	74.00	30.00	Peak
3	2400.00	28.46	6.73	35.95	61.57	60.81	74.00	13.19	Peak
4	2402.00	28.46	6.73	35.95	81.73	80.97	114.00	33.03	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 Level (dBUV/m)	Duty cycle factor (dB)	Average Level (dBUV/m)	Limit (dBUV/m)	Margin (dB)
2390	44.00	20.43	23.57	54	30.43
2358.60	45.46	20.43	25.03	54	28.97

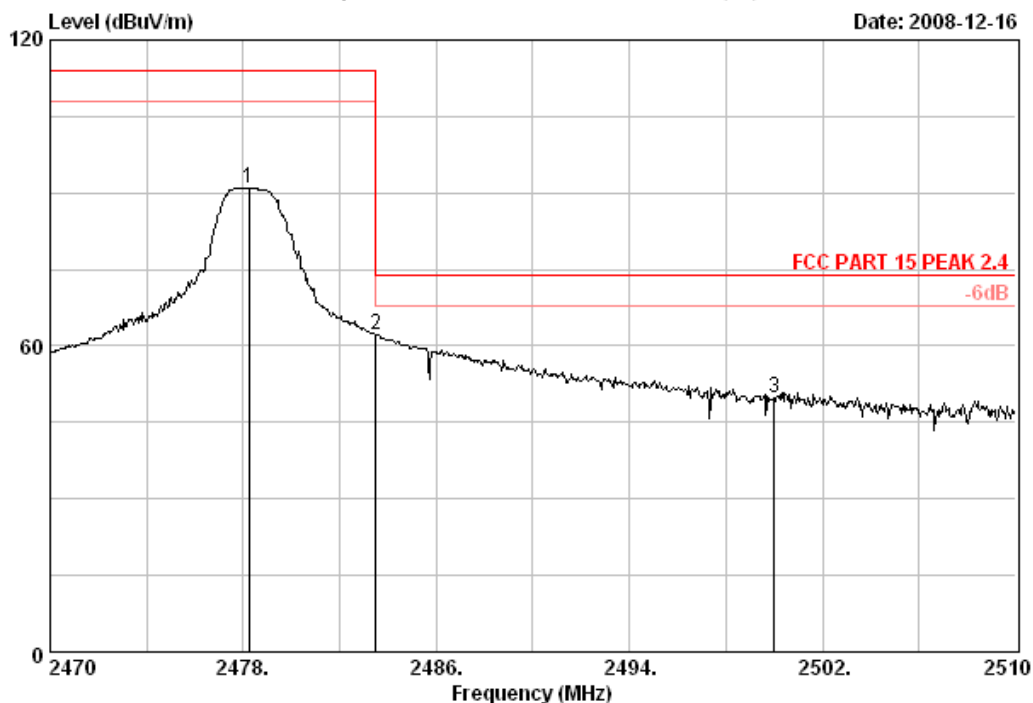


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Data: 15

File: E:\2008 report data\L\LENOVO\ACS8Q1848-1.EMI (18)

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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
Test mode : Tx CH 2478MHz
Memo :

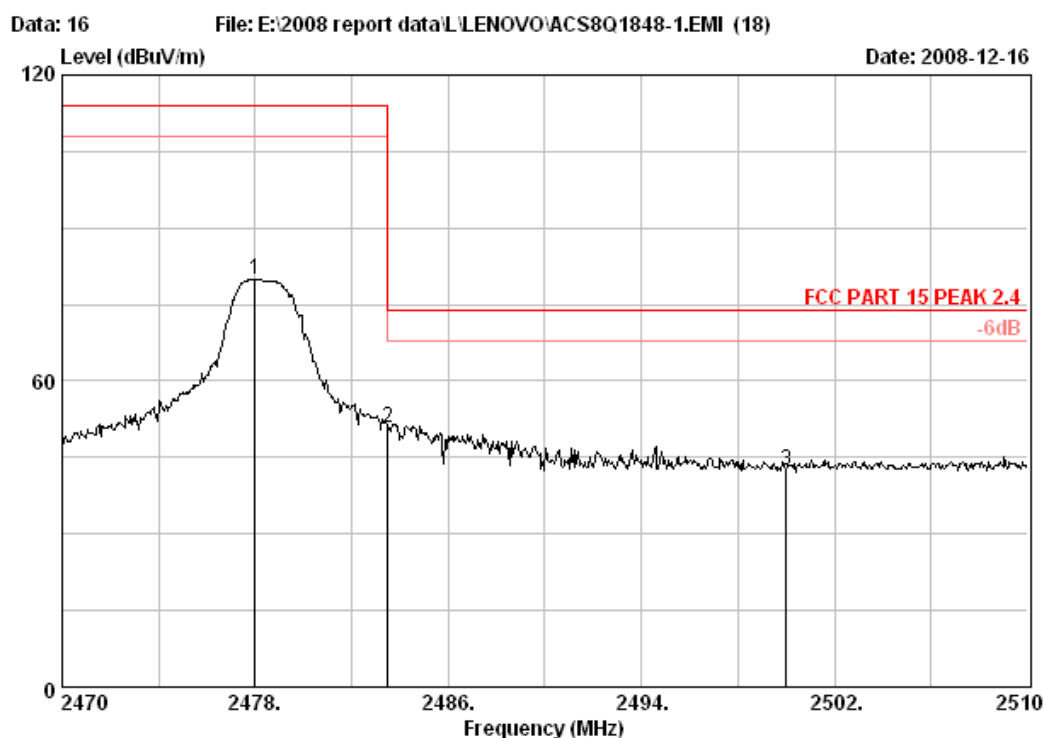
		Ant.	Cable	Amp	Emission				
Freq.	Factor	Loss	Factor	Reading	Level	Limits	Margin	Remark	
(MHz)	(dB/m)	(dB)	(dB)	(dBuV)	(dBuV/m)	(dBuV/m)	(dB)		
1 2478.24	28.58	6.87	35.96	91.53	91.02	114.00	22.98	Peak	
2 2483.50	28.58	6.87	35.96	62.61	62.10	74.00	11.90	Peak	
3 2500.00	28.60	6.91	35.96	50.35	49.90	74.00	24.10	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.

Frequency (MHz)	PK Level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2483.5	62.10	20.43	41.67	54	12.33
2500.0	49.90	20.43	29.47	54	24.53



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Postcode:518057



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 : Alan
EUT : Wireless Keyboard M/N: LXH-JME8001R
Power Rating : DC 3V
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	80.36	79.85	114.00	34.15	Peak	
2 2483.50	28.58	6.87	35.96	51.35	50.84	74.00	23.16	Peak	
3 2500.00	28.60	6.91	35.96	43.00	42.55	74.00	31.45	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 Level (dBuV/m)	Duty cycle factor (dB)	Average Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)
2483.5	50.84	20.43	30.41	54	23.59
2500.0	42.55	20.43	22.12	54	31.88

6. 20DB 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 Keyboard
M/N:	LXH-JME8001R
Test Date:	Dec.17, 2008
Ambient Temperature:	23°C
Relative Humidity:	54%
Test standard:	FCC PART 15C: 15.215
Test mode:	TX Mode
Test Frequency:	Low: 2402MHz Mid: 2440MHz High: 2478MHz
Test By:	Sunny

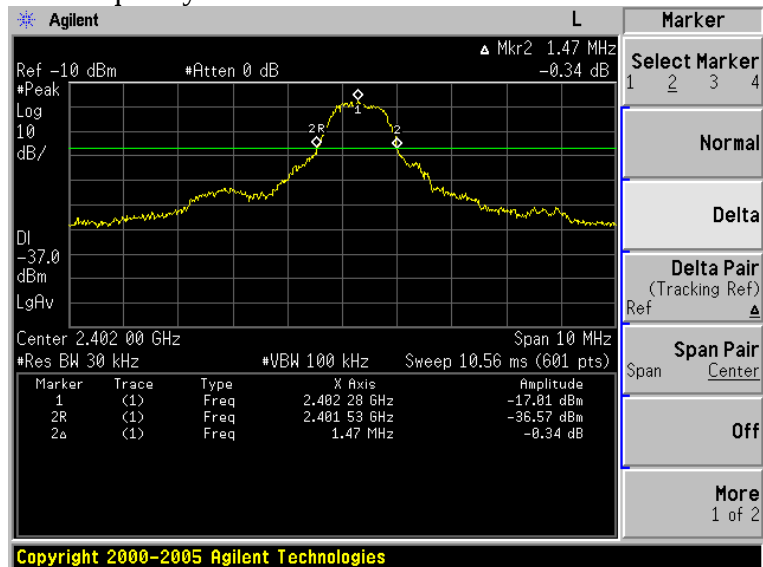
6.3. Limit

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, 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.

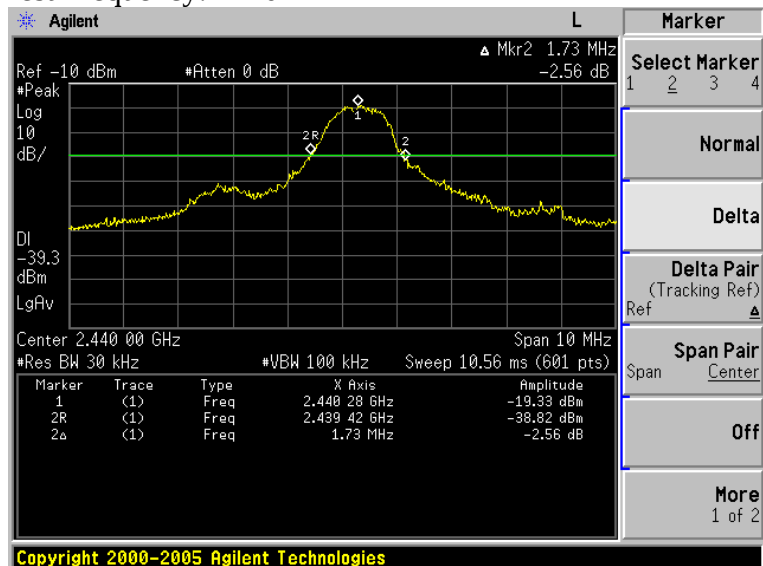
6.4. Test Results

Pass

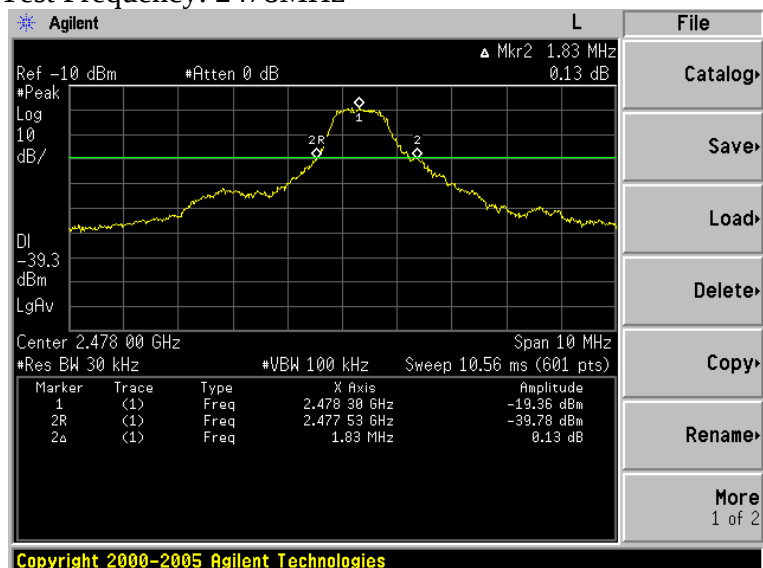
Test Frequency: 2402MHz



Test Frequency: 2440MHz



Test Frequency: 2478MHz



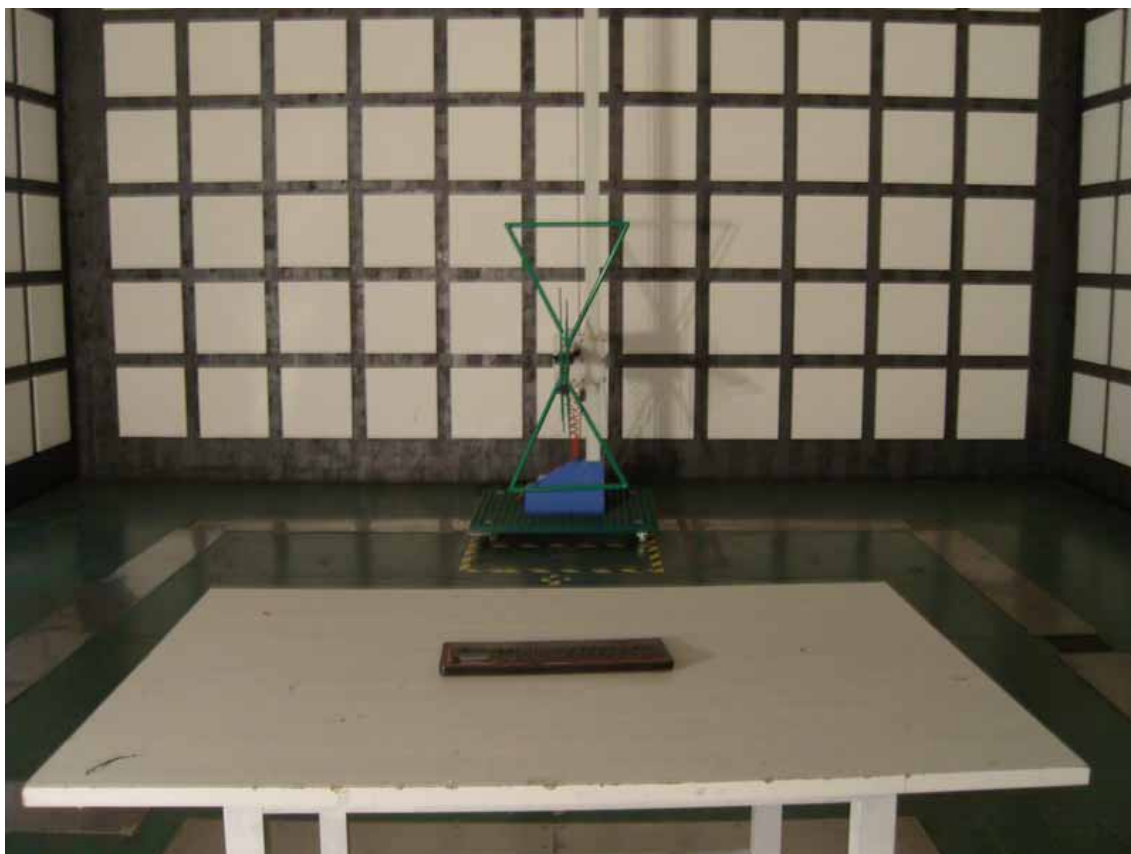
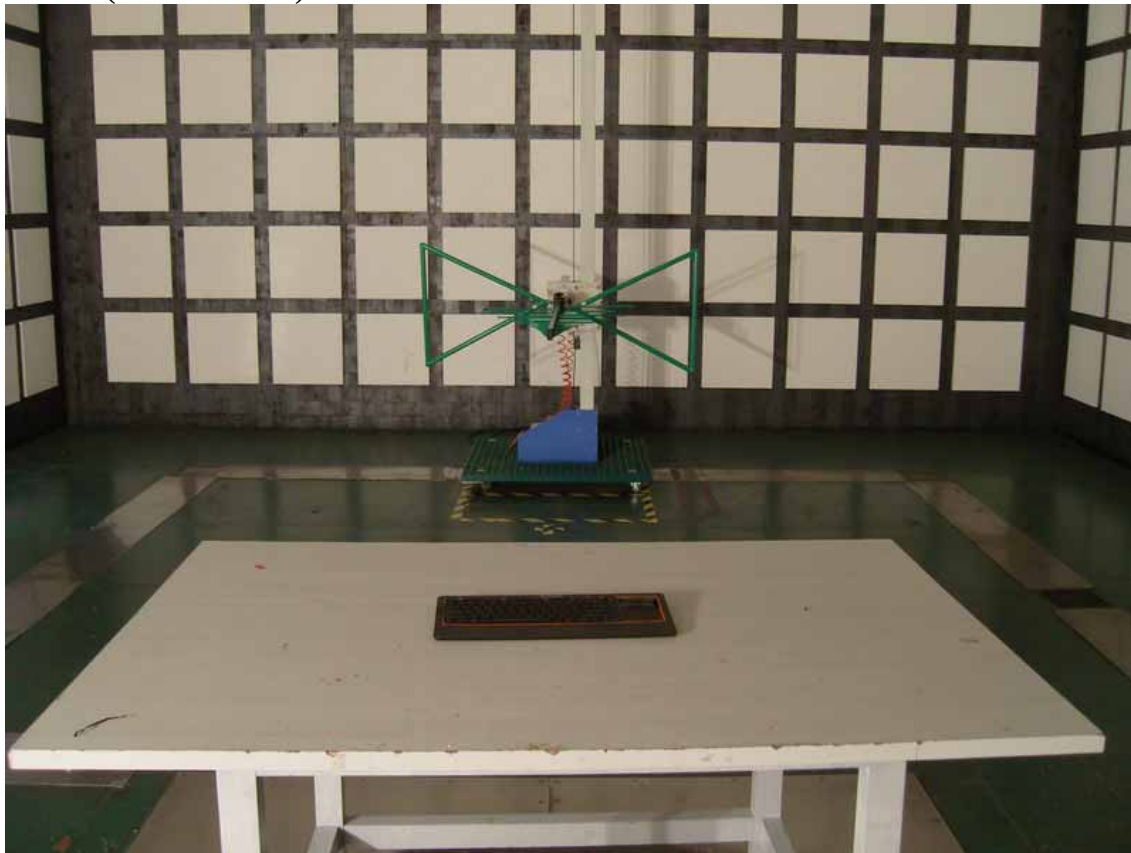
7. DEVIATION TO TEST SPECIFICATIONS

[NONE]

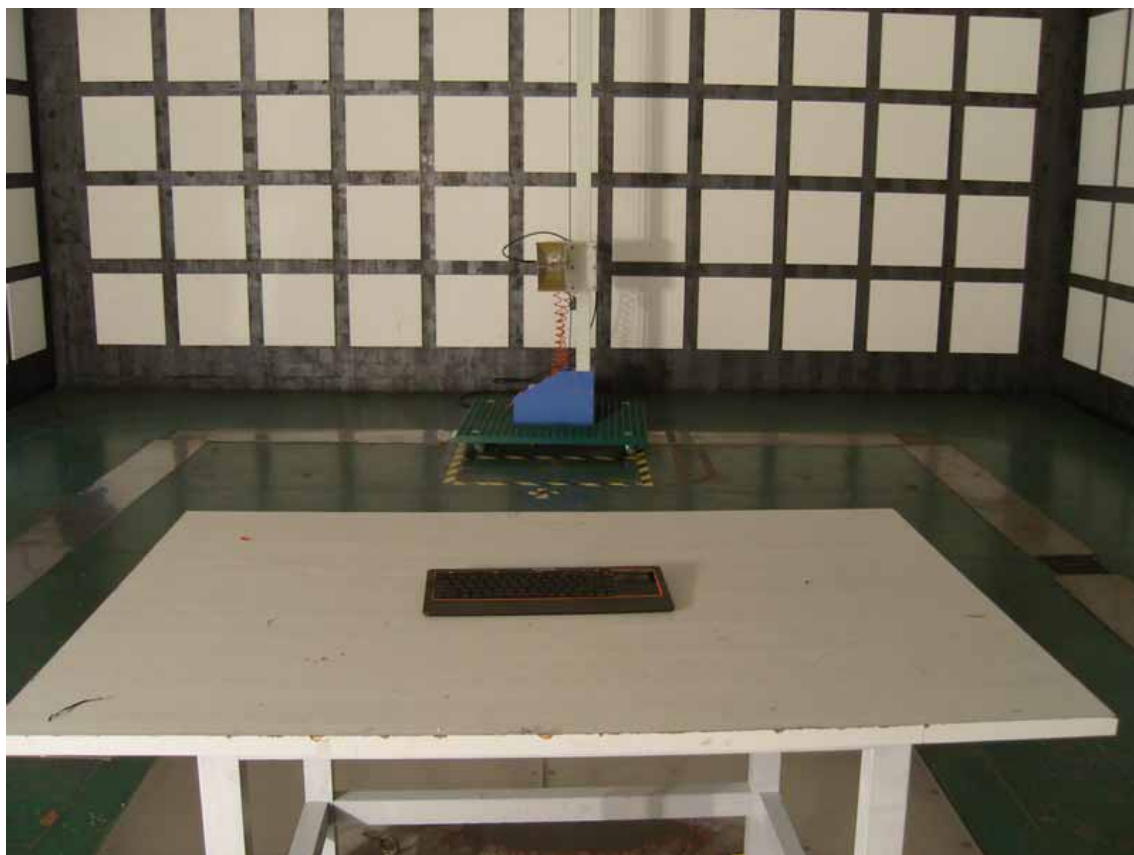
8. PHOTOGRAPH OF TEST

8.1. Photos of Radiated Emission Test (In Anechoic Chamber)

(30~1000MHz)



Above 1GHz



9. PHOTOGRAPH OF EUT

Figure 1
General Appearance of the EUT



Figure 2
General Appearance of the EUT



Figure 3
Inside of the EUT

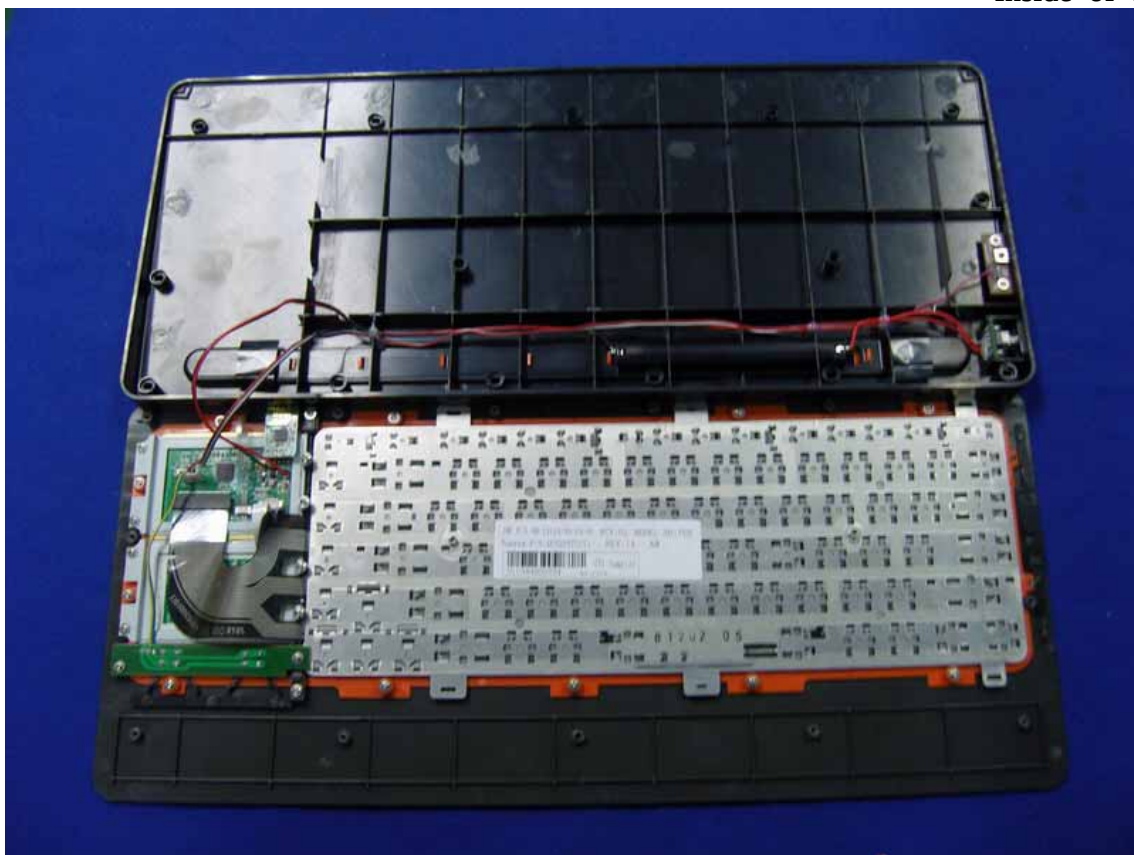


Figure 4
Inside of the EUT



Figure 5
Inside of the EUT

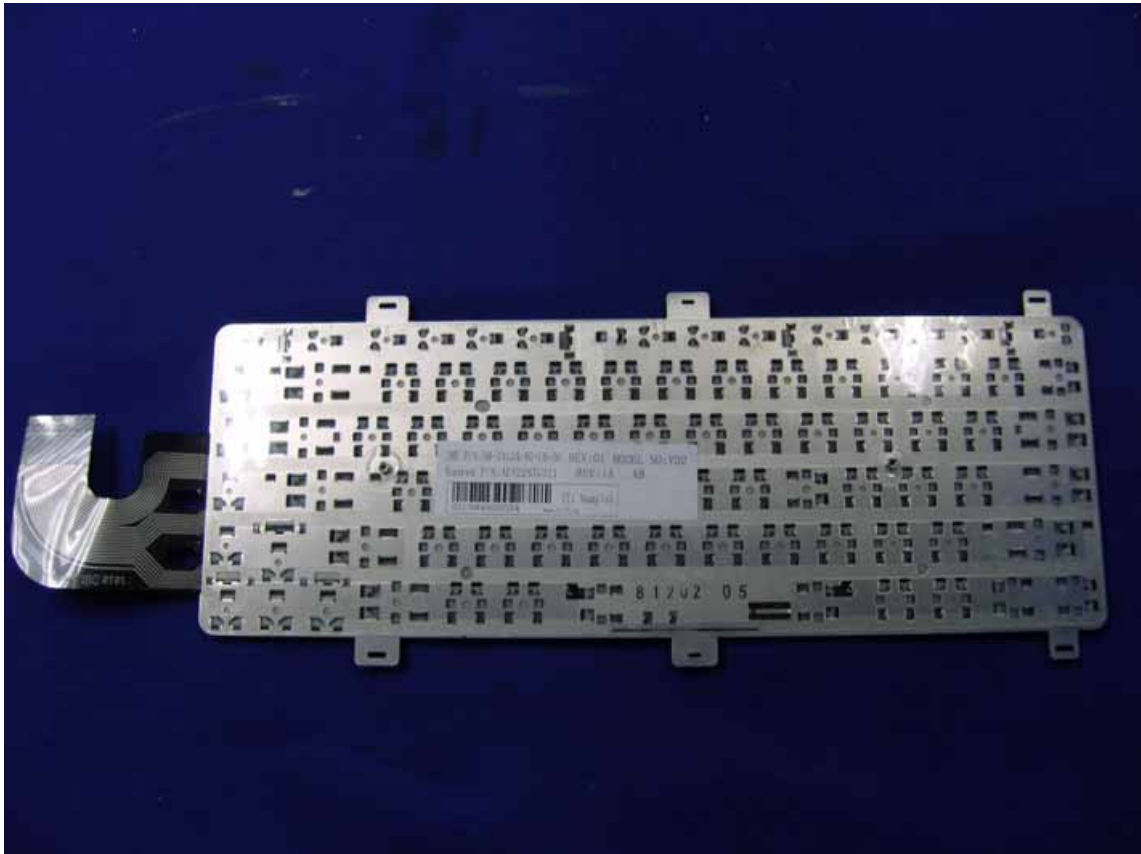


Figure 6
Inside of the EUT



Figure 7
Inside of the EUT

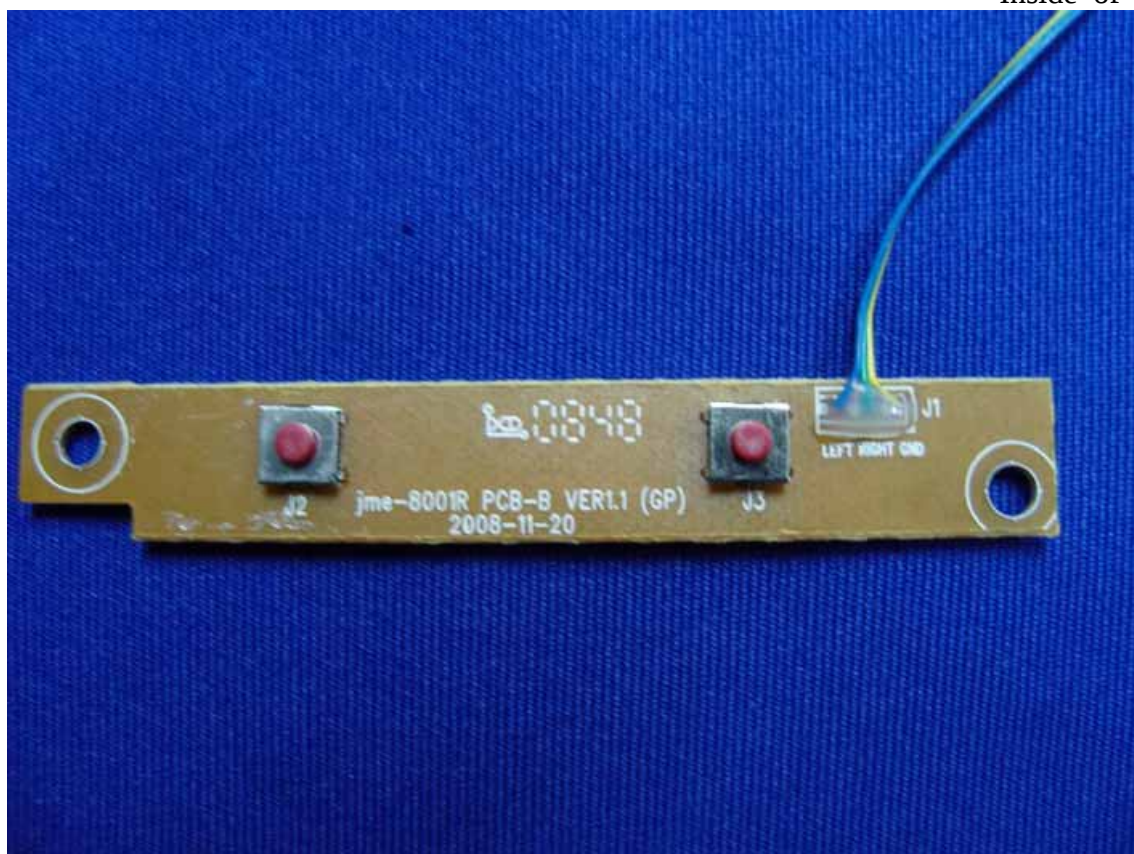


Figure 8
Inside of the EUT

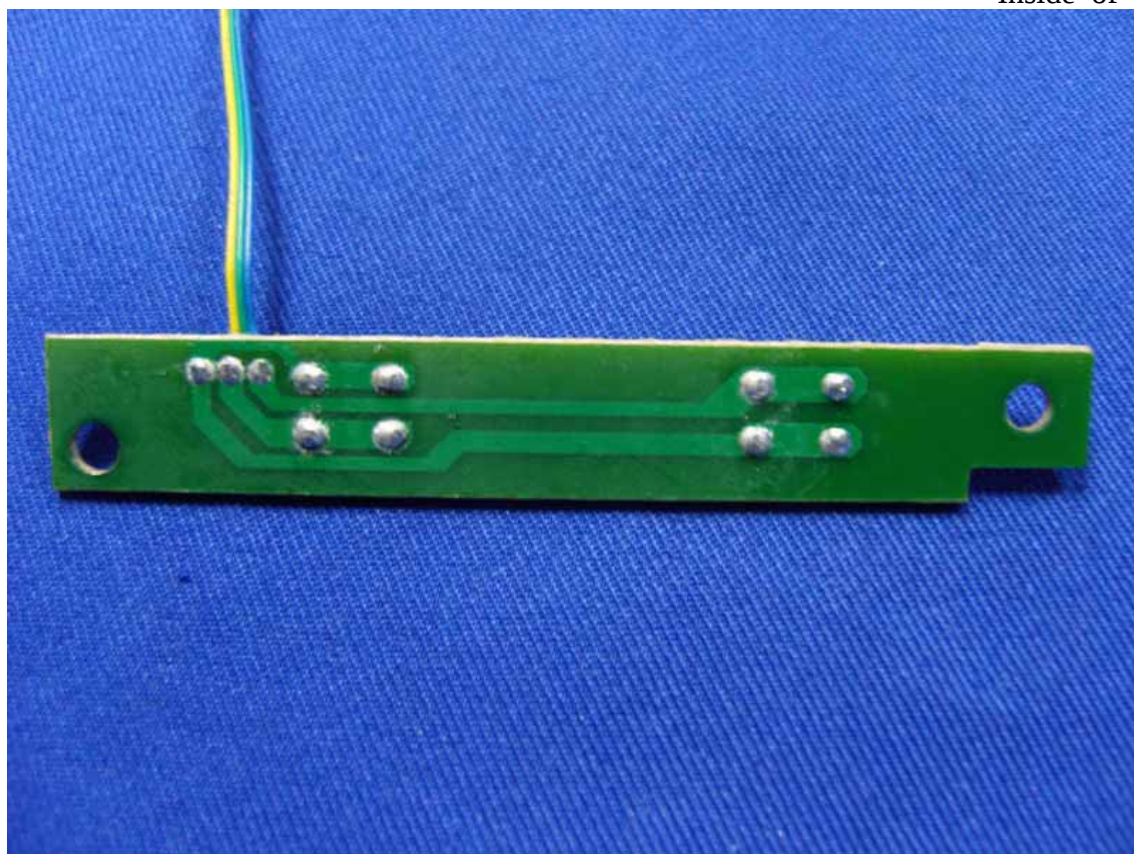


Figure 9
Inside of the EUT

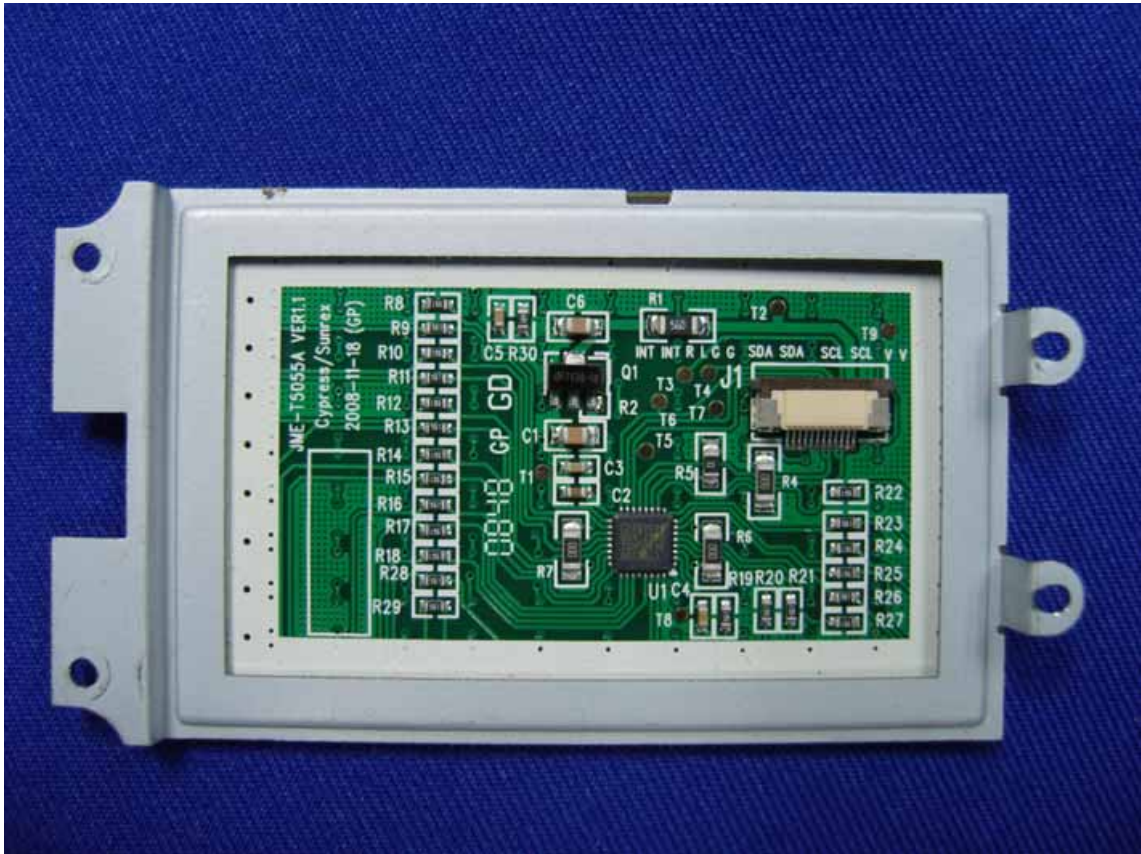


Figure 10
Inside of the EUT



Figure 11
Inside of the EUT



Figure 12
Inside of the EUT



Figure 13
Inside of the EUT

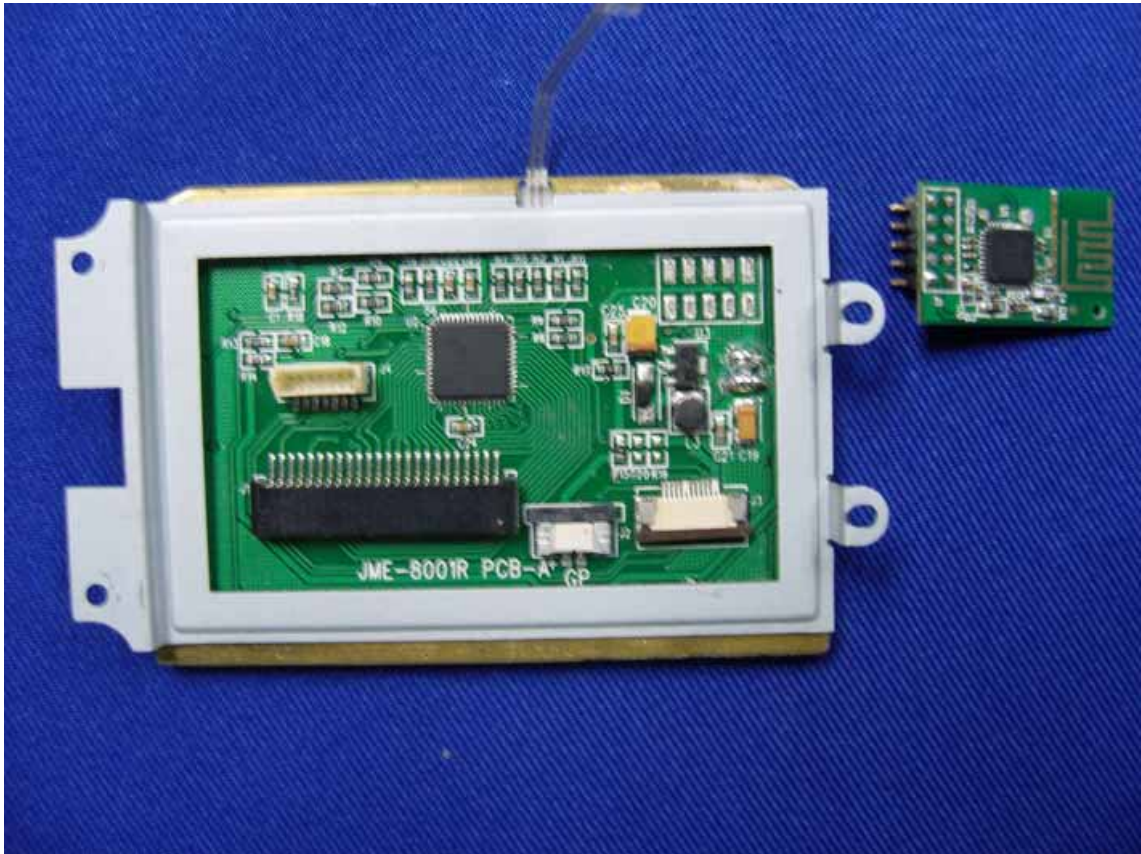


Figure 14
Inside of the EUT

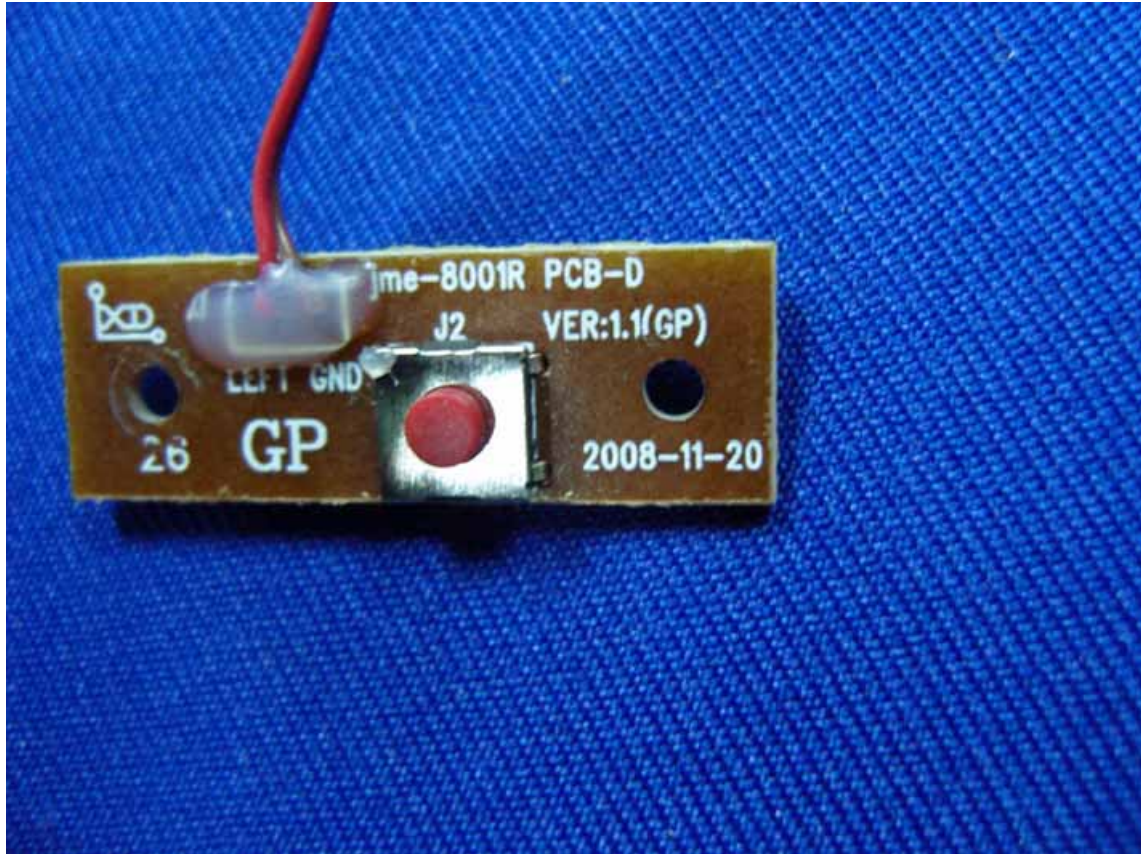


Figure 15
Inside of the EUT

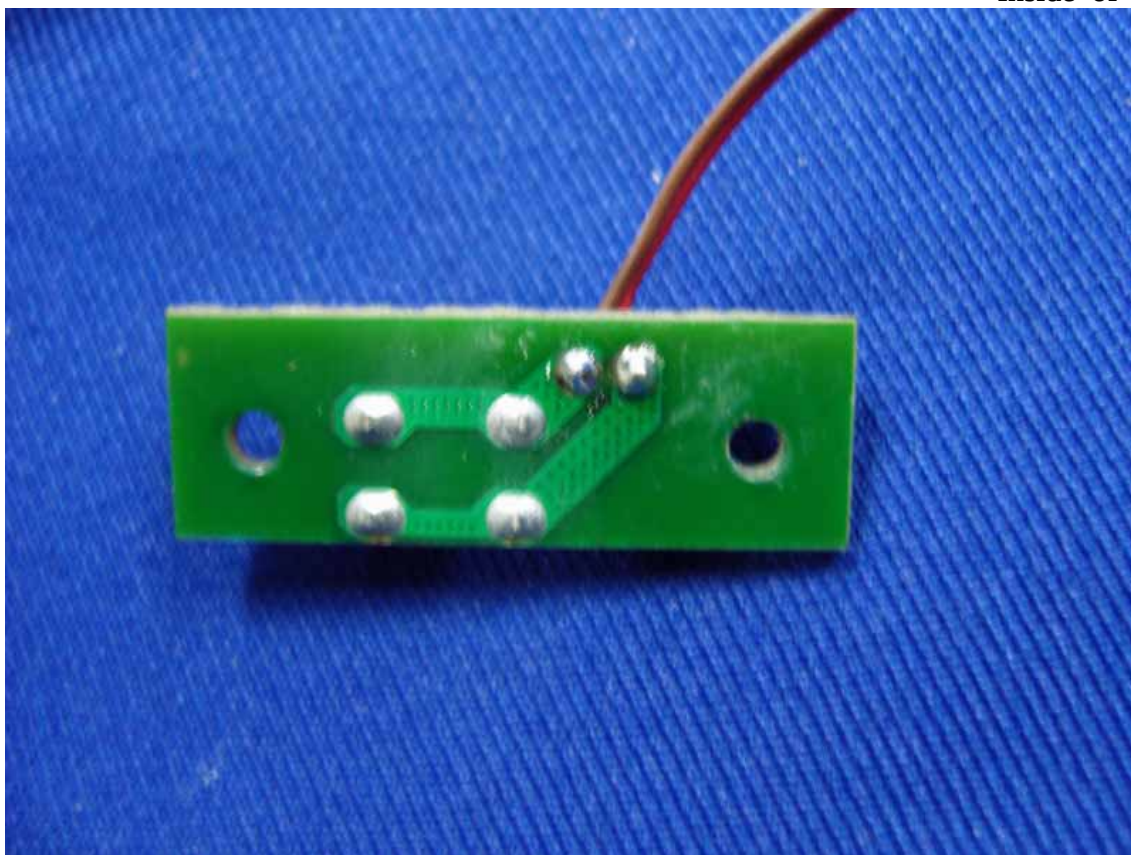


Figure 16
Inside of the EUT

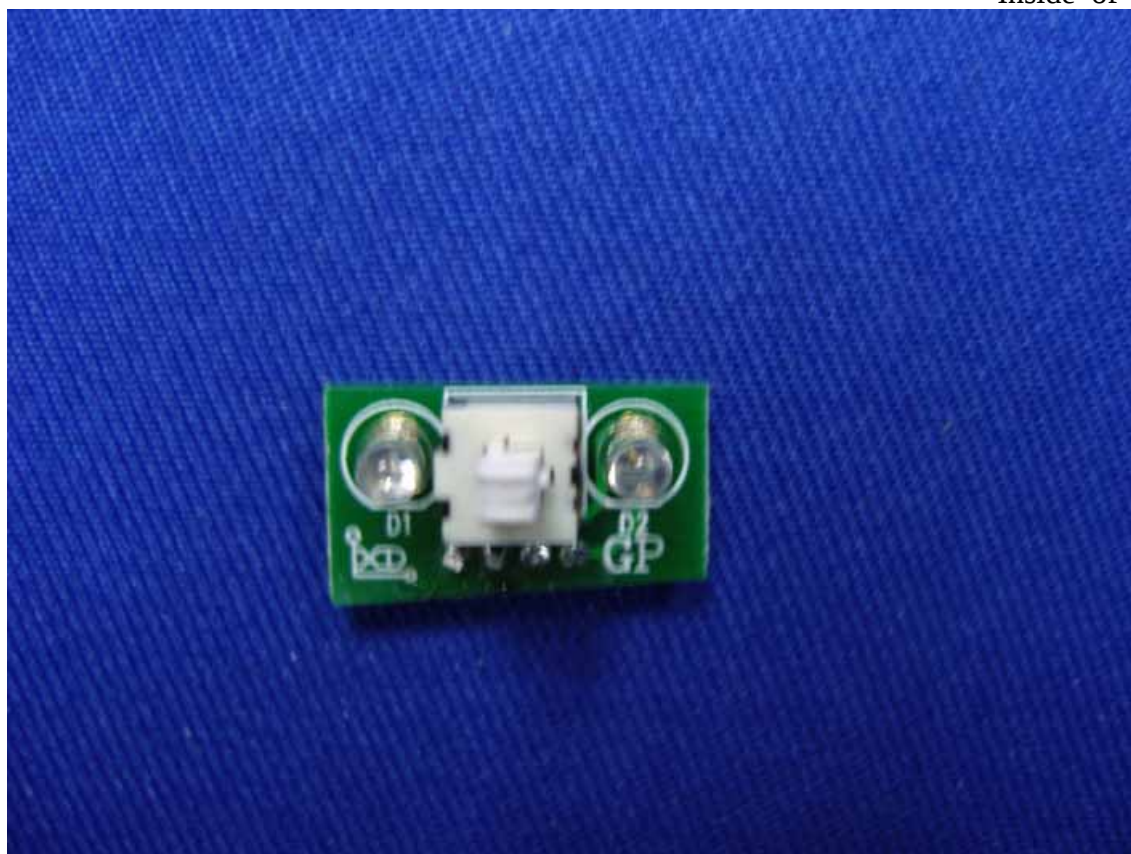


Figure 17
Inside of the EUT

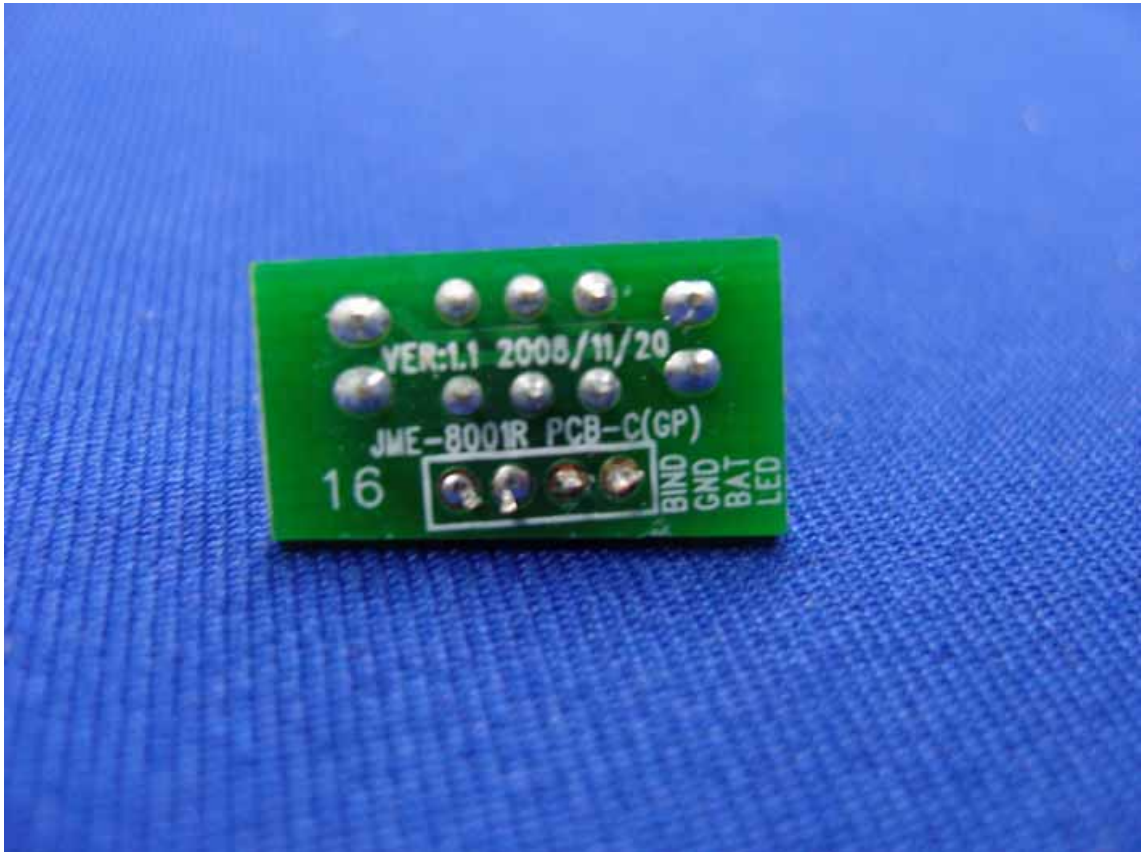


Figure 18
Inside of the EUT

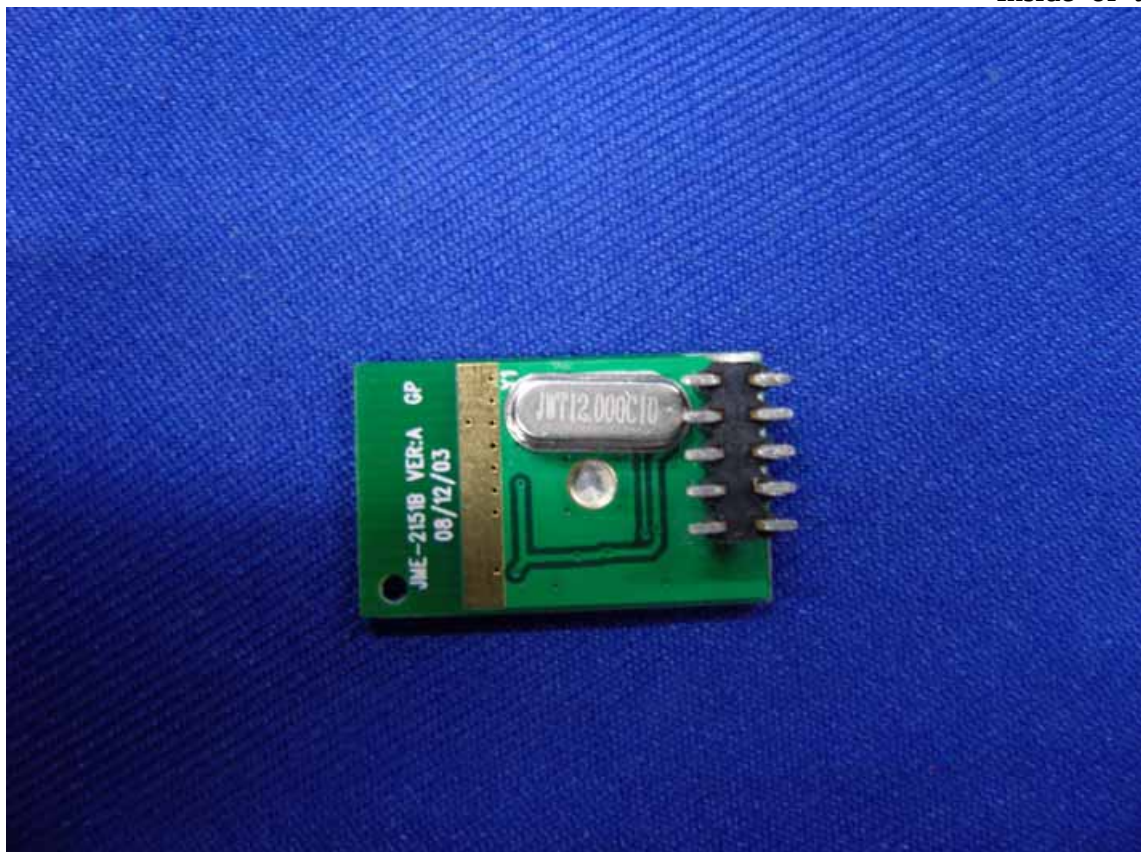


Figure 19
Inside of the EUT

