

APPLICATION FOR CERTIFICATION
On Behalf of

Jing Mold Electronics Technology (Shen Zhen) CO., LTD.

Wireless Keyboard

Model Number: JME-8281R; RF-6430

FCC ID: FPWJME8281R

Prepared for : Jing Mold Electronics 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-F10072
Date of Test : Mar.31~Apr.03, 2010
Date of Report : Apr.12, 2010

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TEST REPORT CERTIFICATION

Applicant : Jing Mold Electronics Technology (Shen Zhen) CO., LTD.
Manufacturer : Jing Mold Electronics Technology (Shen Zhen) CO., LTD.
EUT Description : Wireless Keyboard
FCC ID : FPWJME8281R
(A) MODEL NO. : JME-8281R; RF-6430
(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 2008

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 : Mar.31~Apr.03, 2010

Prepared by :

Edie Huang
Edie Huang / Assistant

Reviewer :

Jam Yu
Jamy Yu / Supervisor

Approved & Authorized Signer :



Ken Lu / 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	: JME-8281R; RF-6430 Note: This device have two model numbers, and the actual device is same.
FCC ID	: FPWJME8281R
Operation frequency	: 2410MHz~2473MHz
Modulation mode	: MSK
Power Supply	: DC 3V (Note: New batteries were used for all test.)
Applicant	: Jing Mold Electronics Technology (Shen Zhen) CO., LTD. Xinqiao, 3rd Industrial Estate, Shajing Baoan, Shenzhen, China
Manufacturer	: Jing Mold Electronics Technology (Shen Zhen) CO., LTD. Xinqiao, 3rd Industrial Estate, Shajing Baoan, Shenzhen, China
Date of Test	: Mar.31~Apr.03, 2010
Date of Receipt	: Mar.24, 2010
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	:	Mar.31, 2009 File on Federal Communication Commission Registration Number: 90454
3m & 10m Anechoic Chamber	:	Dec. 30, 2009 File on Federal Communication Commission Registration Number: 794232
EMC Lab.	:	Accredited by DATech, German Registration Number: DAT-P-091/99-01 Feb. 02, 2009 Accredited by NVLAP, USA NVLAP Code: 200372-0 Apr. 01, 2010

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

Uncertainty for Radiation Emission test in 3m chamber	3.82 dB (Polarize: V)
	4.32 dB (Polarize: H)
Uncertainty for Radiation Emission test in 10m chamber (1GHz-18GHz)	3.56 dB (Distance: 3m Polarize: V)
	3.84 dB (Distance: 3m Polarize: H)
Uncertainty for Output power test	0.94 dB
Uncertainty for Power density test	2.10 dB
Uncertainty for Temperature and humidity test	2%
	1°C
Uncertainty for Frequency range test	1×10^{-9}
Uncertainty for Bandwidth test	1×10^{-9}
Uncertainty for DC power test	0.038 %
Uncertainty for test site temperature and humidity	0.6°C
	3%

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.05,09	1 Year
2	EMI Spectrum	Agilent	E4407B	MY41440292	May.08, 09	1 Year
3	Test Receiver	Rohde & Schwarz	ESVS10	834468/011	May.08, 09	1 Year
4	Amplifier	HP	8447D	2648A04738	May.08, 09	1 Year
5	Bilog Antenna	Schaffner	CBL6111C	2598	Dec.14, 09	1 Year
6	RF Cable	MIYAZAKI	8D-FB	3# Chamber No.1	May.08, 09	1 Year
7	Coaxial Switch	Anritsu	MP59B	M73989	May.08, 09	1 Year

Frequency rang: above 1000MHz

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Spectrum Analyzer	Agilent	E4446A	US44300459	May.08, 09	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3	Horn Antenna	EMCO	3116	00060089	Dec.03, 09	1.5 Year
4	Amplifier	Agilent	8449B	3008A00863	May.08, 09	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	Nov.28, 09	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	Nov.28, 09	1 Year
7	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08, 09	1Year

4.2. Block Diagram of Test Setup

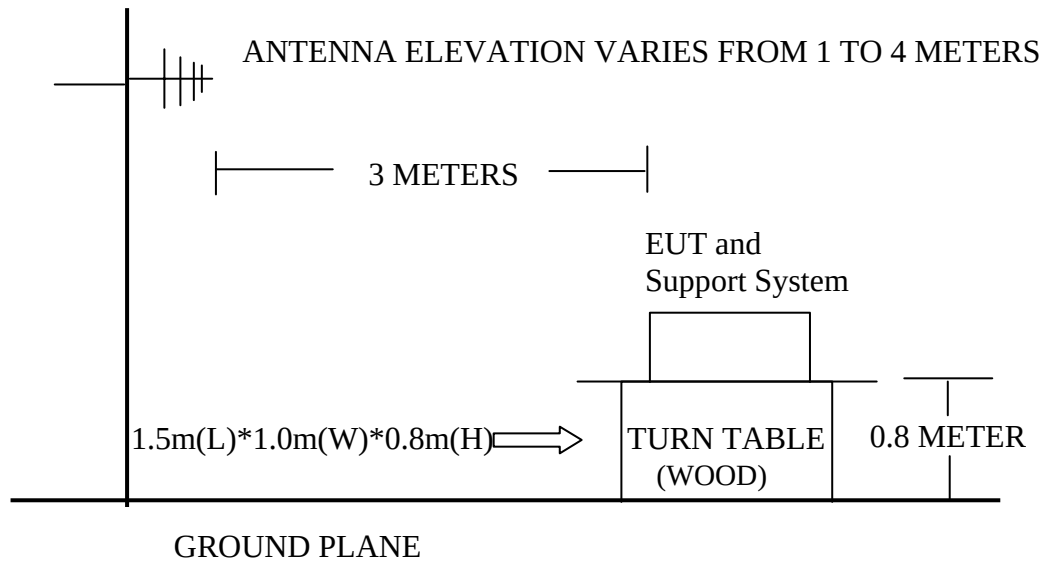
4.2.1. Block Diagram of connection between EUT and simulators



(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 : JME-8281R
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 mode (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.

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 Spectrum's VBW is set at 3MHz and RBW is set at 1MHz for peak emissions measurement above 1GHz and 1MHz RBW, 10Hz VBW for average emissions measure above 1GHz

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.

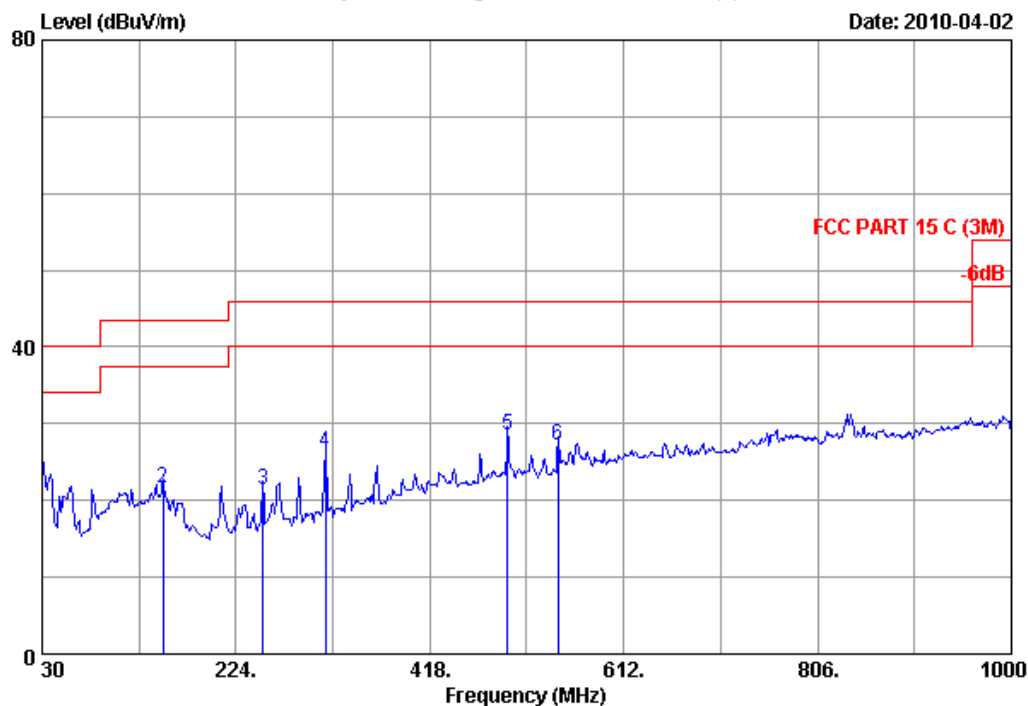
All the emissions from 30MHz to 25GHz were comply with the 15.209 and 15.249 Limit.

Test Frequency: 30MHz-1000MHz



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Data: 1 File: D:\2010 Repot Data\Jing Mold\ACS10Q032.EM6 (2)



Site no. : 3m chamber Data no. : 1
Dis. / Ant. : 3m 2009 CBL6111C Ant. pol. : HORIZONTAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24°C/56% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power Rating : DC 3V
Test Mode : Tx Mode
M/N :

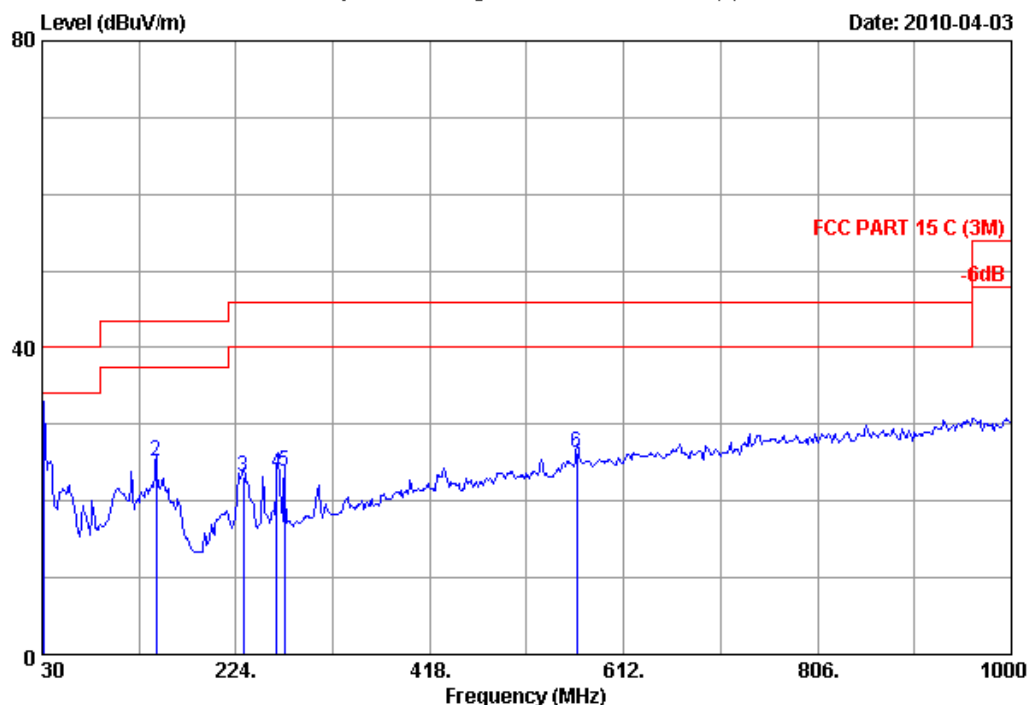
No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	30.000	20.00	0.52	3.97	24.49	40.00	15.51	QP
2	151.250	11.54	1.10	9.05	21.69	43.50	21.81	QP
3	251.160	12.90	1.64	6.95	21.49	46.00	24.51	QP
4	313.240	14.06	1.76	10.59	26.41	46.00	19.59	QP
5	495.600	18.25	2.24	8.10	28.59	46.00	17.41	QP
6	546.040	18.80	2.36	6.09	27.25	46.00	18.75	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: 2 File: D:\2010 Repot Data\JJing Mold\ACS10Q032.EM6 (2)



Site no. : 3m chamber Data no. : 2
Dis. / Ant. : 3m 2009 CBL6111C Ant. pol. : VERTICAL
Limit : FCC PART 15 C (3M)
Env. / Ins. : 24°C/56% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power Rating : DC 3V
Test Mode : Tx Mode
M/N :

No.	Freq. (MHz)	Ant. Factor (dB/m)	Cable Loss (dB)	Reading (dBuV)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
1	31.940	18.88	0.53	10.91	30.32	40.00	9.68	QP
2	144.460	11.92	1.07	12.08	25.07	43.50	18.43	QP
3	231.760	11.12	1.51	10.57	23.20	46.00	22.80	QP
4	264.740	13.80	1.67	8.23	23.70	46.00	22.30	QP
5	272.500	13.25	1.68	8.89	23.82	46.00	22.18	QP
6	565.440	19.61	2.41	4.34	26.36	46.00	19.64	QP

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

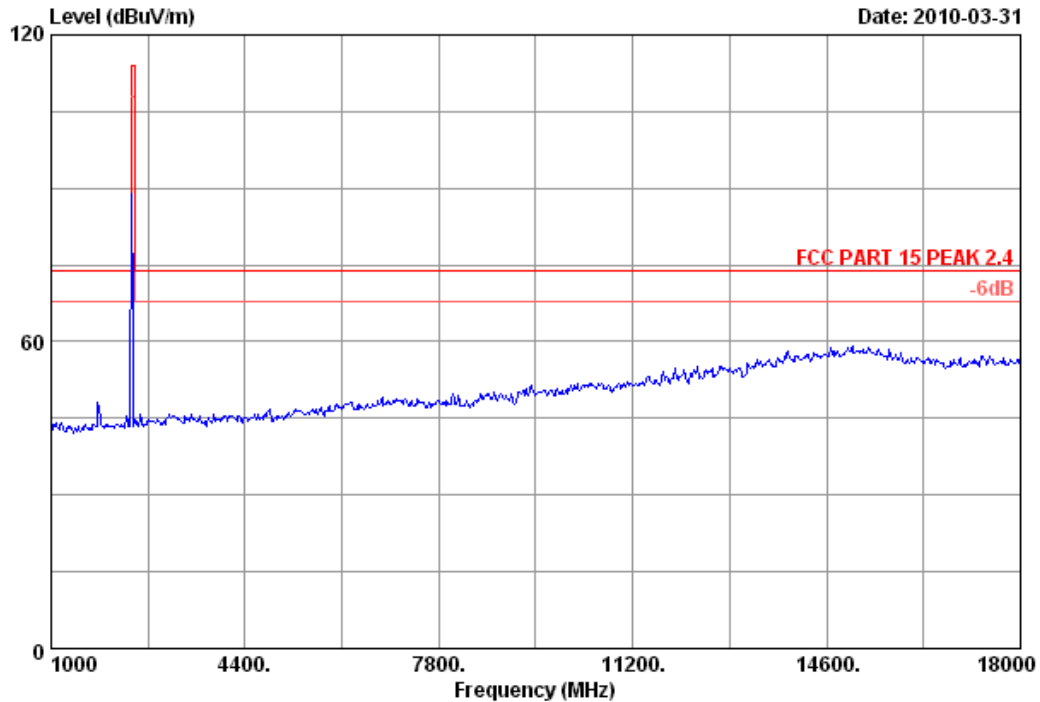
Test Frequency: 1GHz-18GHz



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Date: 2010-03-31

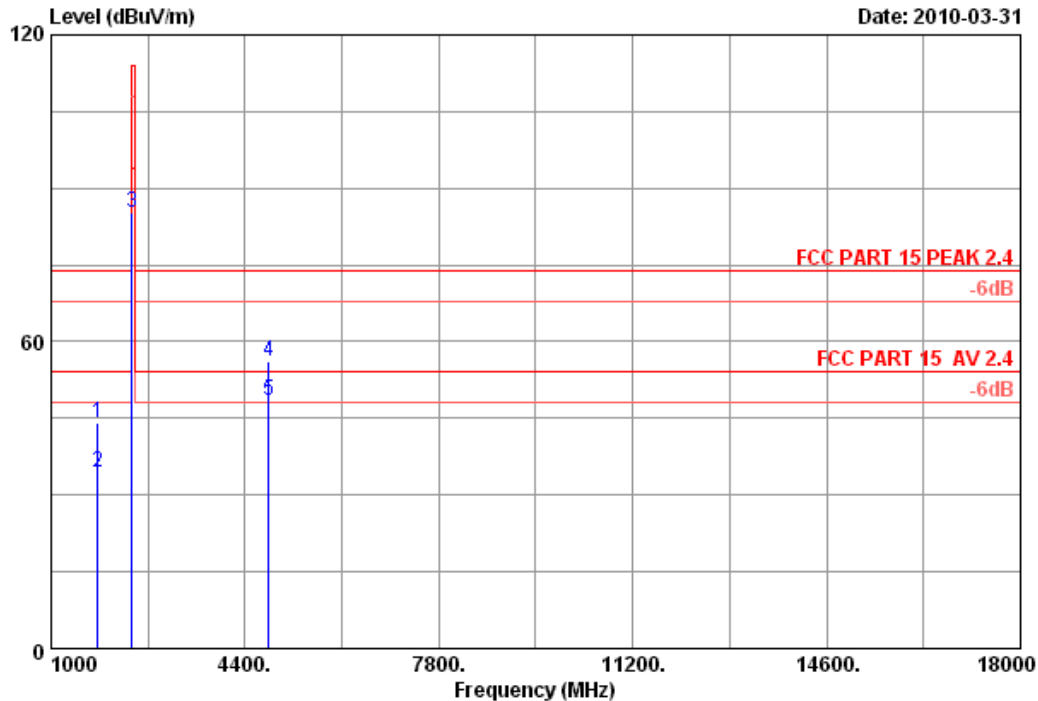


Site no.	: 3m Chamber	Data no.	: 1
Dis. / Ant.	: 3m 3115	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard	M/N:	JME-8281R
Power	: DC 3V		
Test mode	: Tx 2410MHz		
M/N	:		



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Data: 2 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no. : 3m Chamber Data no. : 2
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power : DC 3V
Test mode : Tx 2410MHz
M/N :

		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	1816.000	28.17	7.45	36.34	44.99	44.27	74.00	29.73	Peak
2	1816.000	28.17	7.45	36.34	35.25	34.53	54.00	19.47	Average
3	2410.000	29.45	8.72	35.95	83.11	85.33	114.00	28.67	Peak
4	4820.000	34.32	12.35	35.25	44.60	56.02	74.00	17.98	Peak
5	4820.000	34.32	12.35	35.25	37.18	48.60	54.00	5.40	Average

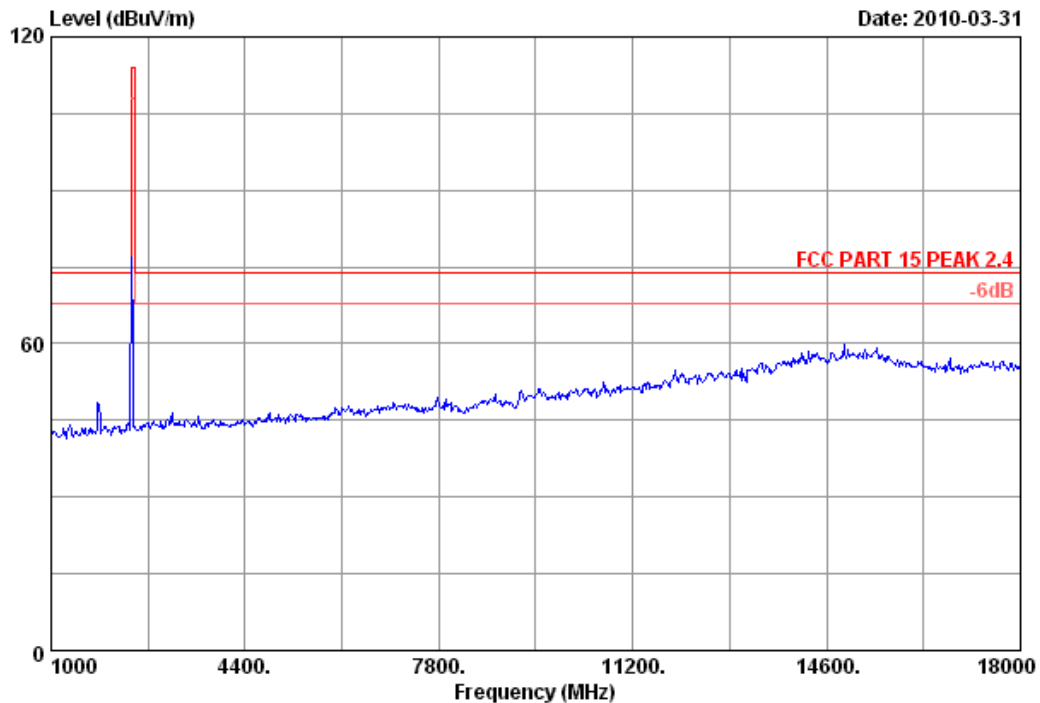
Remarks:

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: 3 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)

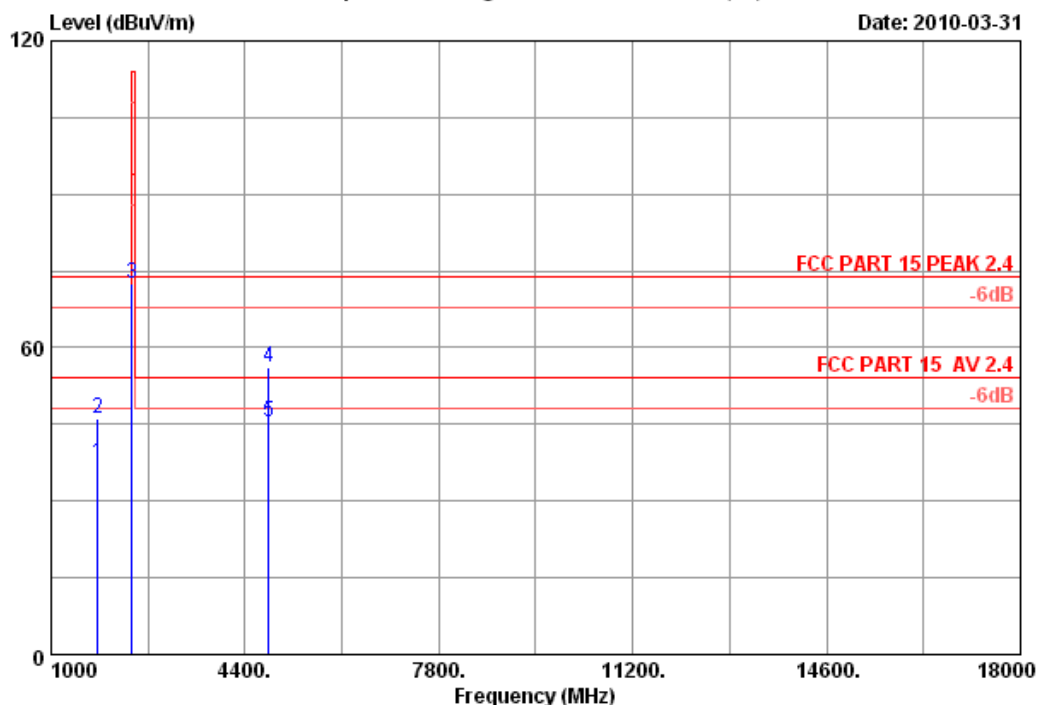


Site no.	: 3m Chamber	Data no.	: 3
Dis. / Ant.	: 3m 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard	M/N:	JME-8281R
Power	: DC 3V		
Test mode	: Tx 2410MHz		
M/N	:		



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Data: 4 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no. : 3m Chamber Data no. : 4
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power : DC 3V
Test mode : Tx 2410MHz
M/N :

	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	1816.000	28.17	7.45	36.34	38.25	37.53	54.00	16.47	Average
2	1816.000	28.17	7.45	36.34	46.74	46.02	74.00	27.98	Peak
3	2410.000	29.45	8.72	35.95	70.26	72.48	114.00	41.52	Peak
4	4820.000	34.32	12.35	35.25	44.58	56.00	74.00	18.00	Peak
5	4820.000	34.32	12.35	35.25	34.15	45.57	54.00	8.43	Average

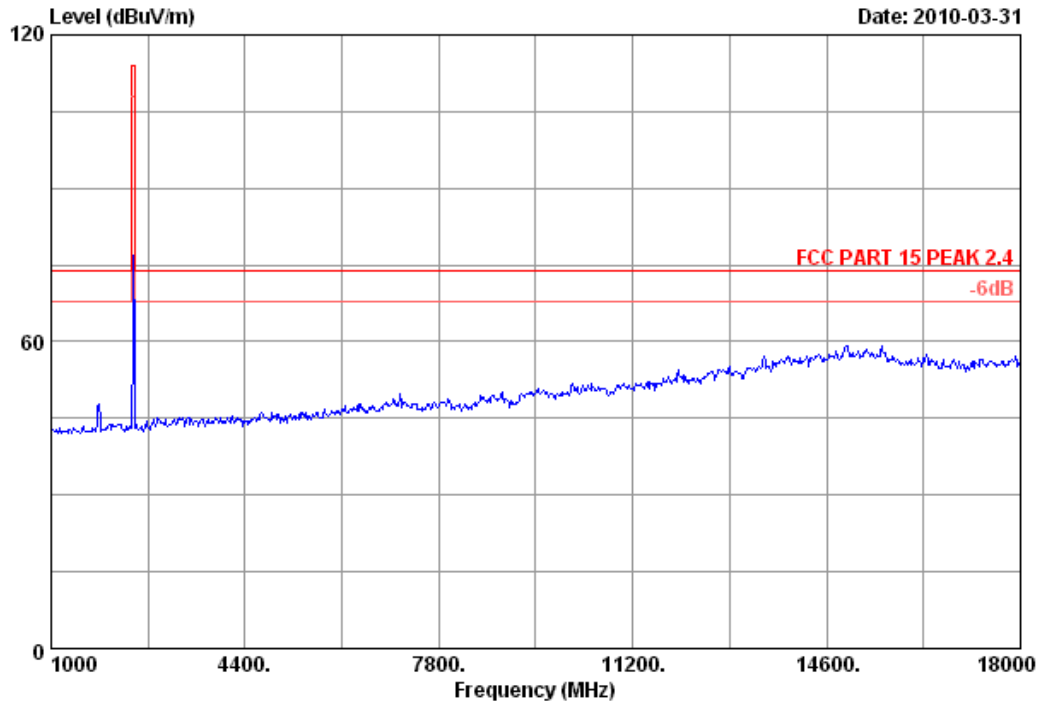
Remarks:

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: 5 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)

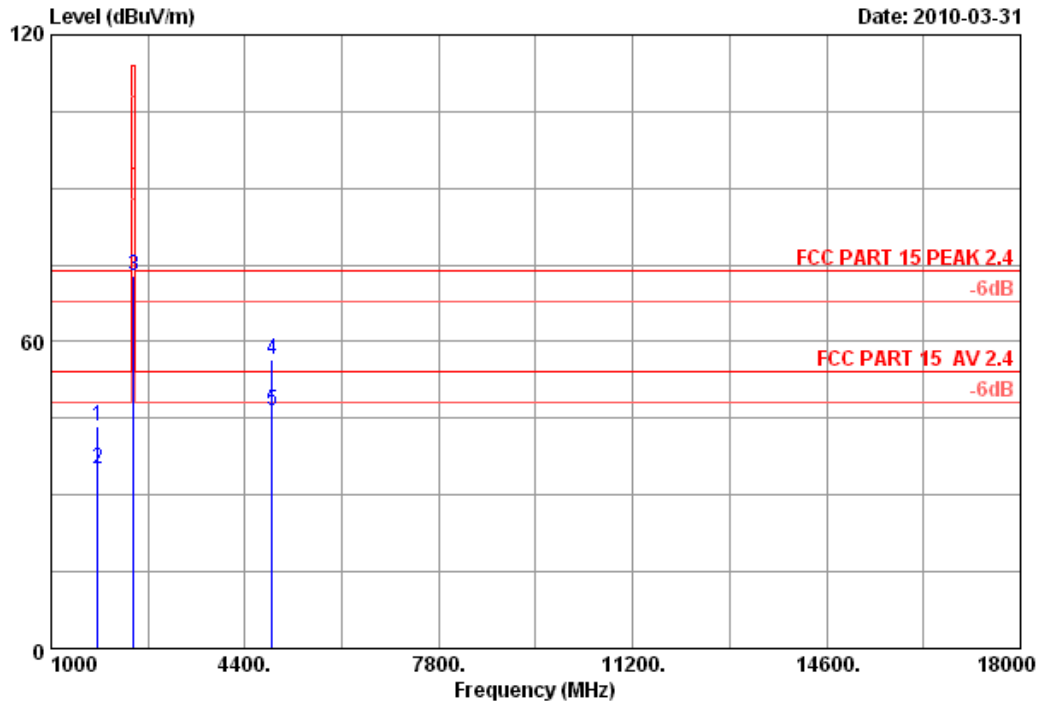


Site no.	: 3m Chamber	Data no.	: 5
Dis. / Ant.	: 3m 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard	M/N:	JME-8281R
Power	: DC 3V		
Test mode	: Tx 2441MHz		
M/N	:		



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Data: 6 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no. : 3m Chamber Data no. : 6
Dis. / Ant. : 3m 3115(0911) Ant. pol. : VERTICAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power : DC 3V
Test mode : Tx 2441MHz
M/N :

		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	1816.000	28.17	7.45	36.34	44.03	43.31	74.00	30.69	Peak
2	1816.000	28.17	7.45	36.34	35.95	35.23	54.00	18.77	Average
3	2441.000	29.47	8.77	36.06	70.70	72.88	114.00	41.12	Peak
4	4882.000	34.41	12.44	35.36	44.90	56.39	74.00	17.61	Peak
5	4882.000	34.41	12.44	35.36	35.10	46.59	54.00	7.41	Average

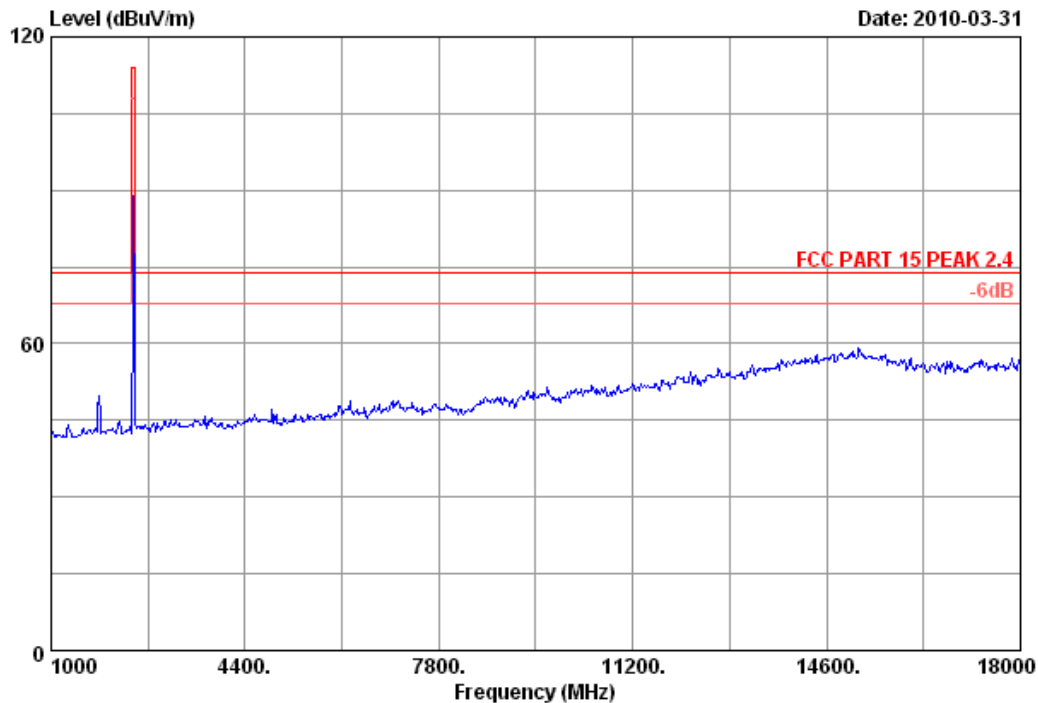
Remarks:

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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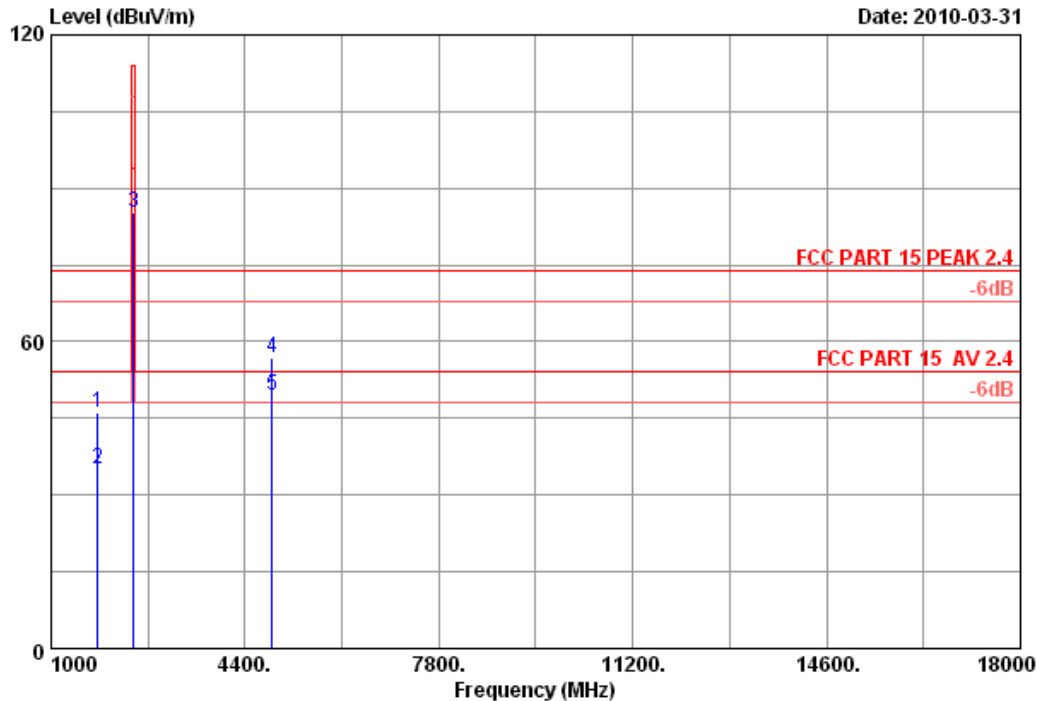


Site no.	: 3m Chamber	Data no.	: 7
Dis. / Ant.	: 3m 3115	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard	M/N:	JME-8281R
Power	: DC 3V		
Test mode	: Tx 2437MHz		
M/N	:		



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Data: 8 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no. : 3m Chamber Data no. : 8
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power : DC 3V
Test mode : Tx 2437MHz
M/N :

		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	1816.000	28.17	7.45	36.34	46.91	46.19	74.00	27.81	Peak
2	1816.000	28.17	7.45	36.34	35.87	35.15	54.00	18.85	Average
3	2441.000	29.47	8.77	36.06	82.93	85.11	114.00	28.89	Peak
4	4882.000	34.41	12.44	35.36	45.25	56.74	74.00	17.26	Peak
5	4882.000	34.41	12.44	35.36	38.05	49.54	54.00	4.46	Average

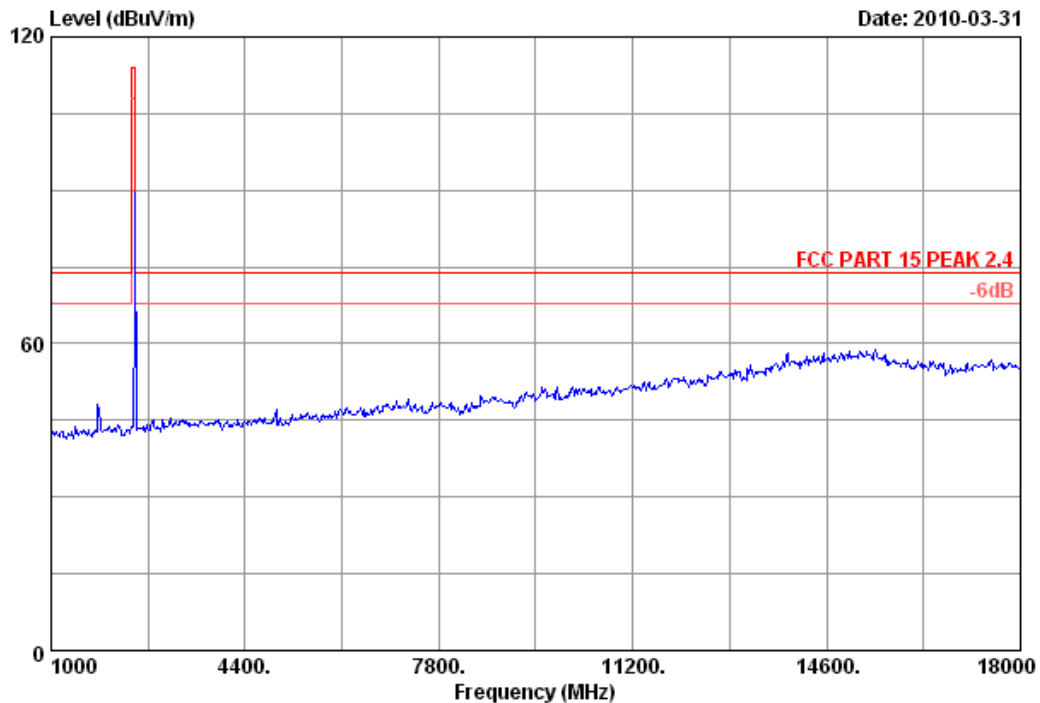
Remarks:

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: 9 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)

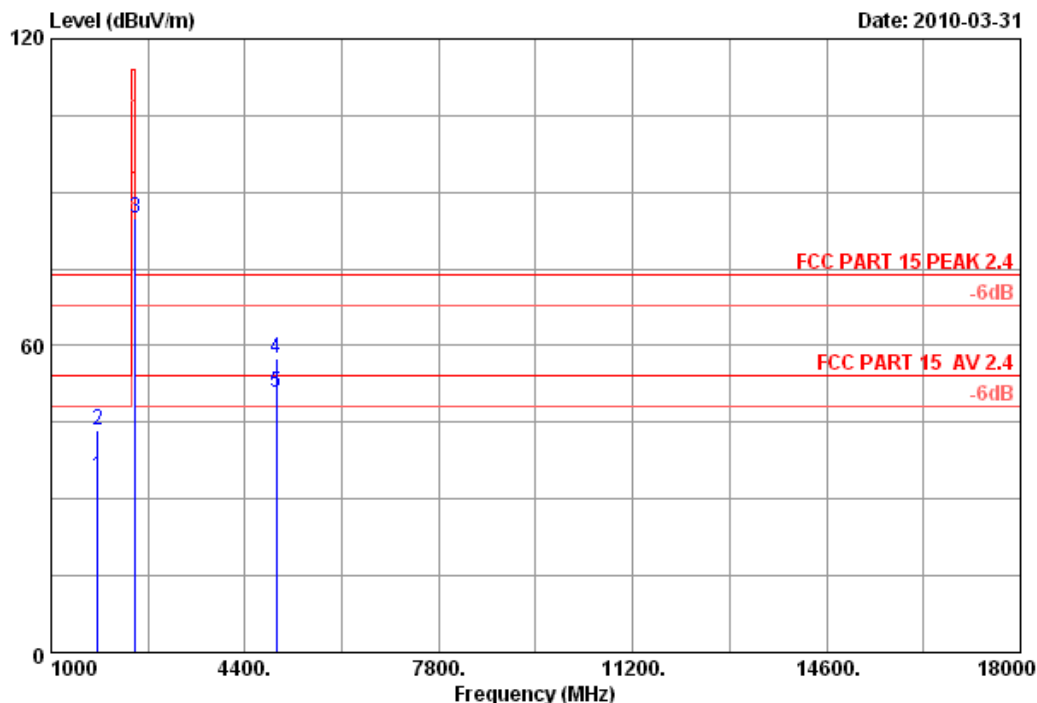


Site no.	: 3m Chamber	Data no.	: 9
Dis. / Ant.	: 3m 3115	Ant. pol.	: HORIZONTAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard	M/N:	JME-8281R
Power	: DC 3V		
Test mode	: Tx 2473MHz		
M/N	:		



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Data: 10 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no. : 3m Chamber Data no. : 10
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power : DC 3V
Test mode : Tx 2473MHz
M/N :

		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	1816.000	28.17	7.45	36.34	35.18	34.46	54.00	19.54	Average
2	1816.000	28.17	7.45	36.34	44.23	43.51	74.00	30.49	Peak
3	2473.000	29.49	8.87	35.97	82.61	85.00	114.00	29.00	Peak
4	4946.000	34.52	12.53	35.40	45.90	57.55	74.00	16.45	Peak
5	4946.000	34.52	12.53	35.40	39.08	50.73	54.00	3.27	Average

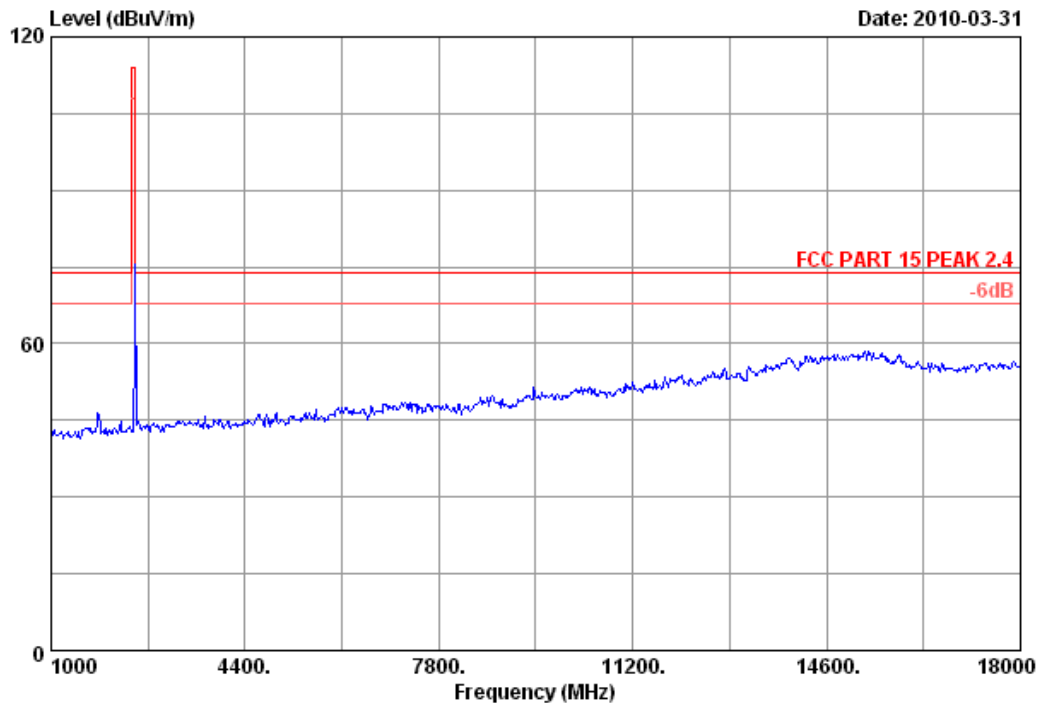
Remarks:

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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Data: 11 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)

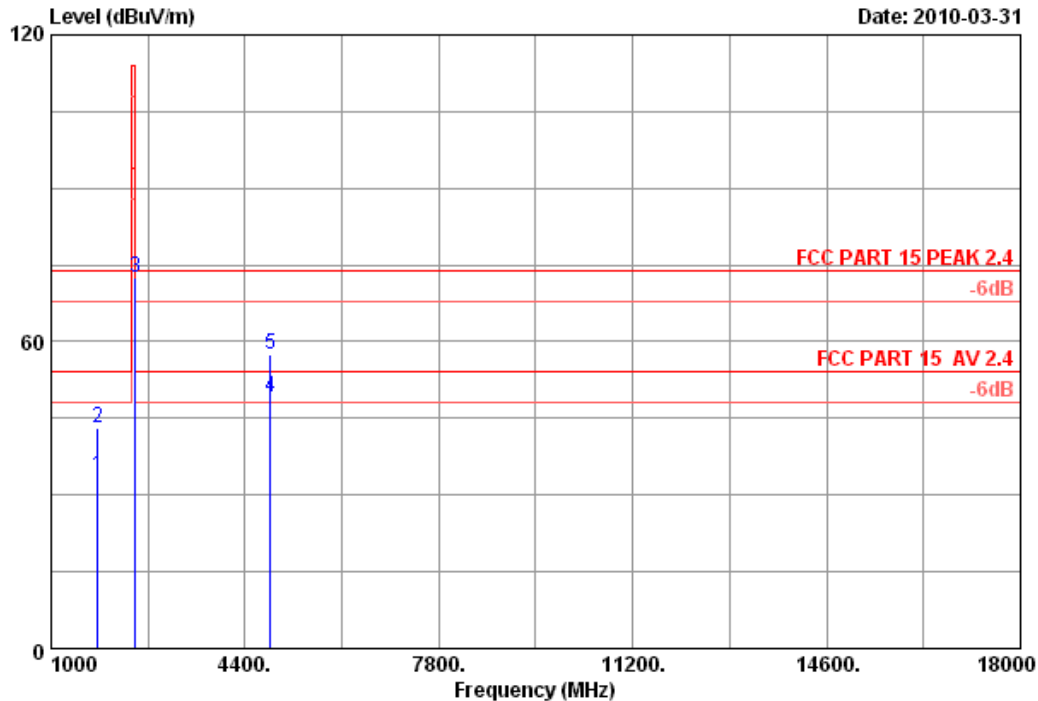


Site no.	: 3m Chamber	Data no.	: 11
Dis. / Ant.	: 3m 3115	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard	M/N:	JME-8281R
Power	: DC 3V		
Test mode	: Tx 2473MHz		
M/N	:		



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Data: 12 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no.	: 3m Chamber	Data no.	: 12
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard M/N:JME-8281R		
Power	: DC 3V		
Test mode	: Tx 2473MHz		
M/N	:		

	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	1816.000	28.17	7.45	36.34	34.55	33.83	54.00	20.17	Average
2	1816.000	28.17	7.45	36.34	43.83	43.11	74.00	30.89	Peak
3	2473.000	29.49	8.87	35.97	70.08	72.47	114.00	41.53	Peak
4	4846.000	34.35	12.41	35.25	37.48	48.99	54.00	5.01	Average
5	4846.000	34.35	12.41	35.25	45.86	57.37	74.00	16.63	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.

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.08, 09	1 Year
2	Horn Antenna	EMCO	3115	9607-4877	Nov.25, 09	1.5 Year
3	Amplifier	Agilent	8449B	3008A00863	May.08, 09	1 Year
4	RF Cable	Hubersuhner	SUCOFLEX102	28620/2	Nov.28, 09	1 Year
5	RF Cable	Hubersuhner	SUCOFLEX102	29091/2	Nov.28, 09	1 Year
6	RF Cable	Hubersuhner	SUCOFLEX102	28618/2	May.08, 09	1Year

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=1MHz; VBW=3MHz; PK detector; Sweep=Auto

Average: RBW=1MHz; VBW=10Hz; PK detector; Sweep=Auto

Note: 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.

5.4. Test Results

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

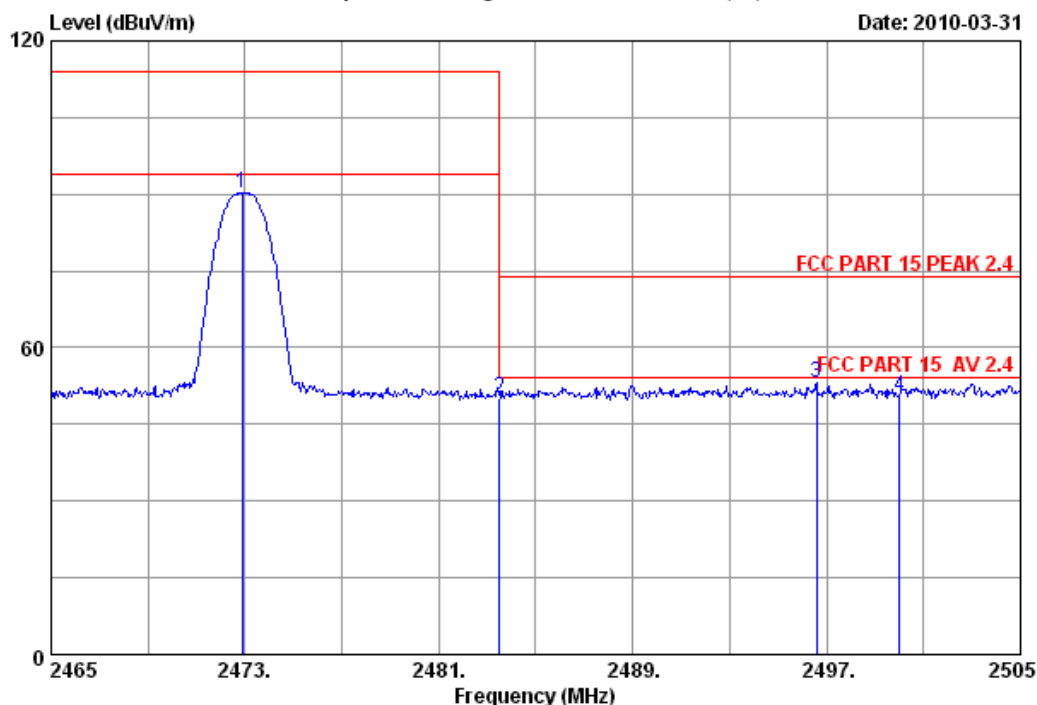
All the emissions outside operation frequency band comply with 15.209 limit.

All the PK measured emissions comply with average limit, so the average levels were deemed to comply with average limit.



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Data: 13 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no. : 3m Chamber Data no. : 13
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power : DC 3V
Test mode : Tx 2473MHz
M/N :

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission			Remark
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	2472.880	29.49	8.87	35.97	87.75	90.14	114.00	23.86	Peak
2	2483.500	29.49	8.87	35.97	47.71	50.10	74.00	23.90	Peak
3	2496.600	29.50	8.92	36.00	50.62	53.04	74.00	20.96	Peak
4	2500.000	29.50	8.92	36.00	48.14	50.56	74.00	23.44	Peak

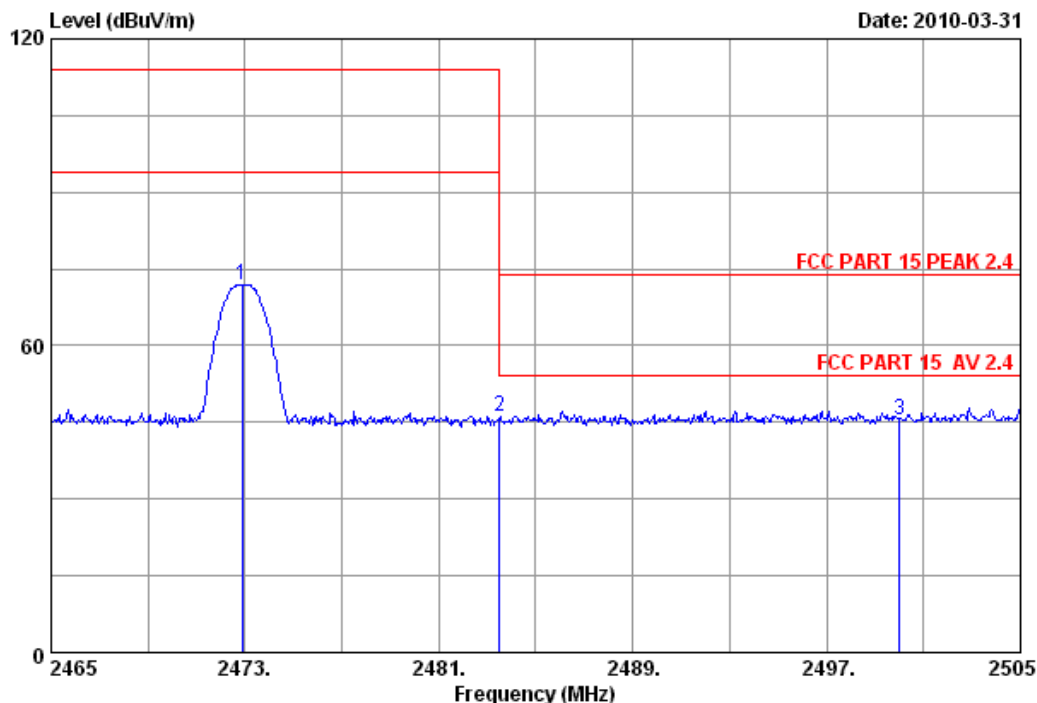
Remarks:

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: 14 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no.	: 3m Chamber	Data no.	: 14
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard M/N:JME-8281R		
Power	: DC 3V		
Test mode	: Tx 2473MHz		
M/N	:		

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission			Remark
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	2472.880	29.49	8.87	35.97	69.60	71.99	114.00	42.01	Peak
2	2483.500	29.49	8.87	35.97	43.83	46.22	74.00	27.78	Peak
3	2500.000	29.50	8.92	36.00	43.17	45.59	74.00	28.41	Peak

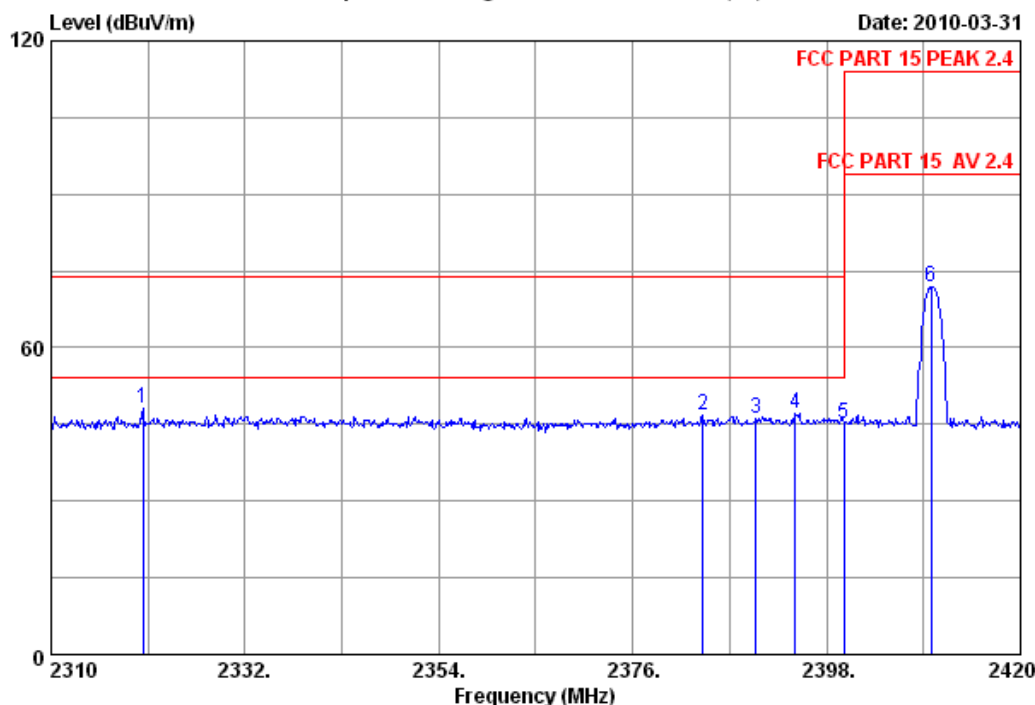
Remarks:

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: 15 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no.	: 3m Chamber	Data no.	: 15
Dis. / Ant.	: 3m 3115(0911)	Ant. pol.	: VERTICAL
Limit	: FCC PART 15 PEAK 2.4		
Env. / Ins.	: 23°C/54%	Engineer	: Leo-Li
EUT	: Wireless Keyboard M/N:JME-8281R		
Power	: DC 3V		
Test mode	: Tx 2473MHz		
M/N	:		

	Freq. (MHz)	Ant. Factor (dB/m)	Cable loss (dB)	Amp. Factor (dB)	Reading (dBuV)	Emission			Remark
						Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	
1	2320.450	29.40	8.52	36.06	46.24	48.10	74.00	25.90	Peak
2	2383.920	29.43	8.67	36.00	44.68	46.78	74.00	27.22	Peak
3	2390.000	29.44	8.67	36.09	44.25	46.27	74.00	27.73	Peak
4	2394.480	29.44	8.67	36.09	45.17	47.19	74.00	26.81	Peak
5	2400.000	29.44	8.72	36.09	43.15	45.22	74.00	28.78	Peak
6	2409.880	29.45	8.72	35.95	69.64	71.86	114.00	42.14	Peak

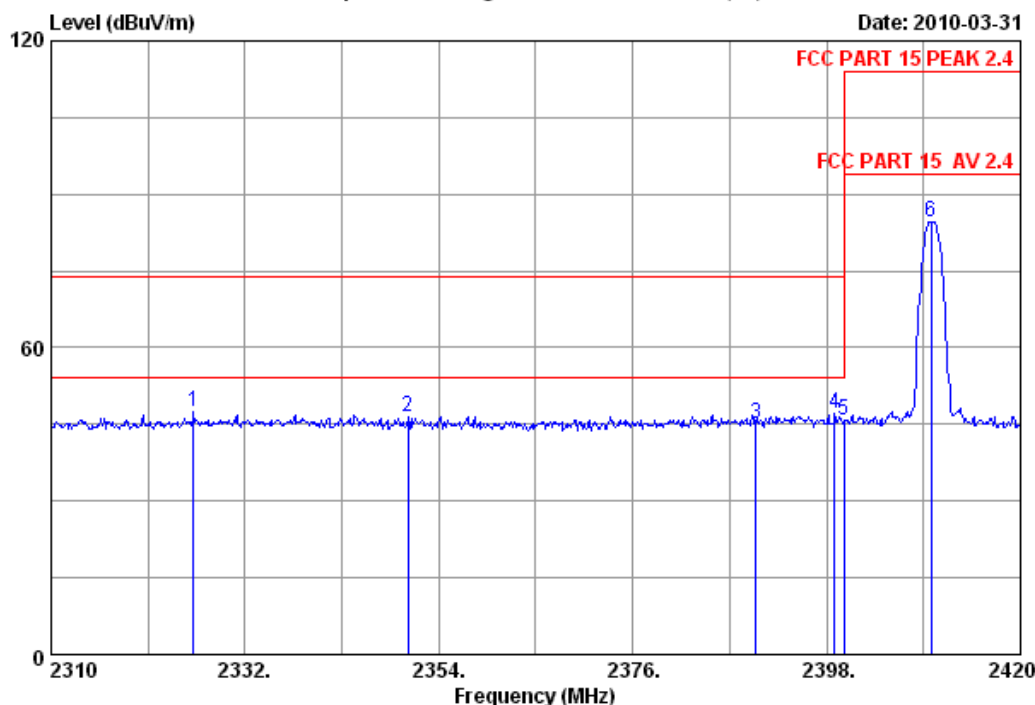
Remarks:

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



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Data: 16 File: E:\2010 report data\JJing mold\ACS10Q032.EM6 (19)



Site no. : 3m Chamber Data no. : 16
Dis. / Ant. : 3m 3115(0911) Ant. pol. : HORIZONTAL
Limit : FCC PART 15 PEAK 2.4
Env. / Ins. : 23°C/54% Engineer : Leo-Li
EUT : Wireless Keyboard M/N:JME-8281R
Power : DC 3V
Test mode : Tx 2473MHz
M/N :

	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	2326.170	29.40	8.57	36.06	45.52	47.43	74.00	26.57	Peak
2	2350.480	29.41	8.62	35.99	44.57	46.61	74.00	27.39	Peak
3	2390.000	29.44	8.67	36.09	42.96	44.98	74.00	29.02	Peak
4	2398.880	29.44	8.72	36.09	44.90	46.97	74.00	27.03	Peak
5	2400.000	29.44	8.72	36.09	43.63	45.70	74.00	28.30	Peak
6	2409.880	29.45	8.72	35.95	82.36	84.58	114.00	29.42	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.

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,08, 09	1 Year
2	Attenuator	Agilent	8491B	MY39262165	May,08, 09	1 Year
3	RF Cable	Hubersuhner	SUCOFLEX 102	28618/2	May,08, 09	1Year

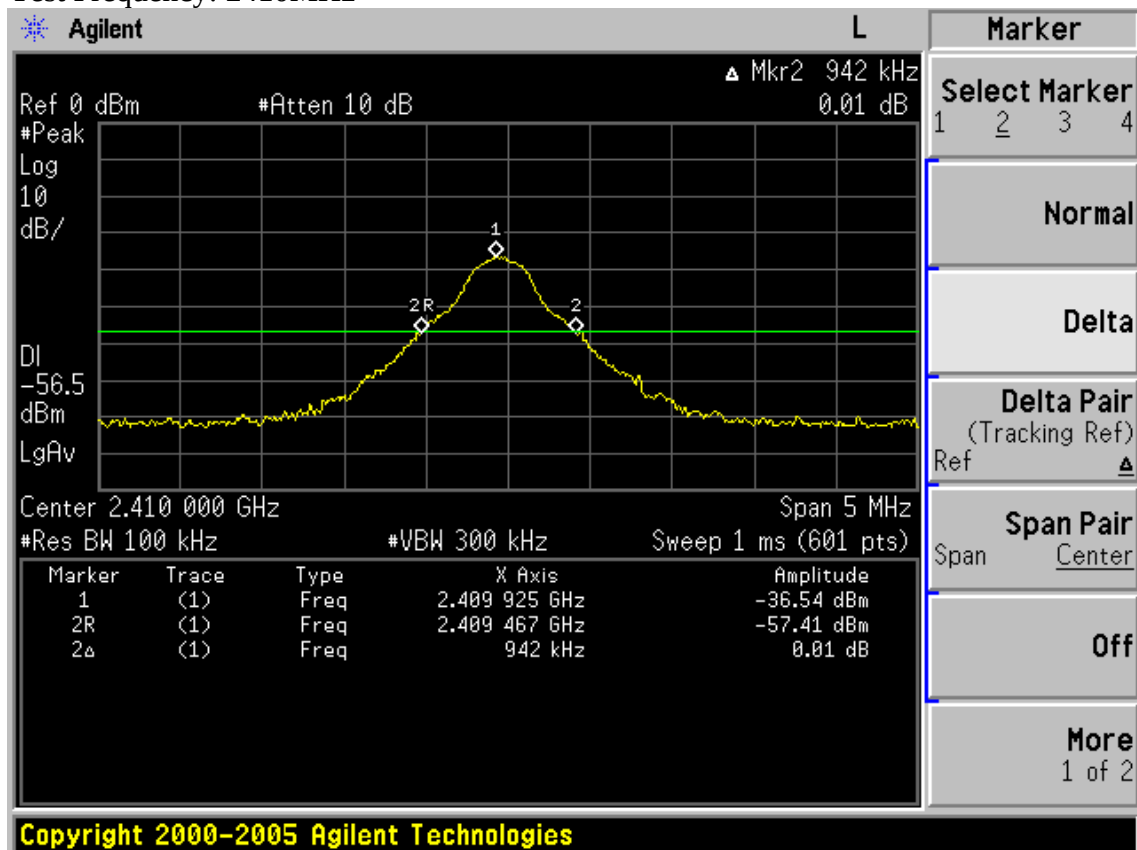
6.2. Limit

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.

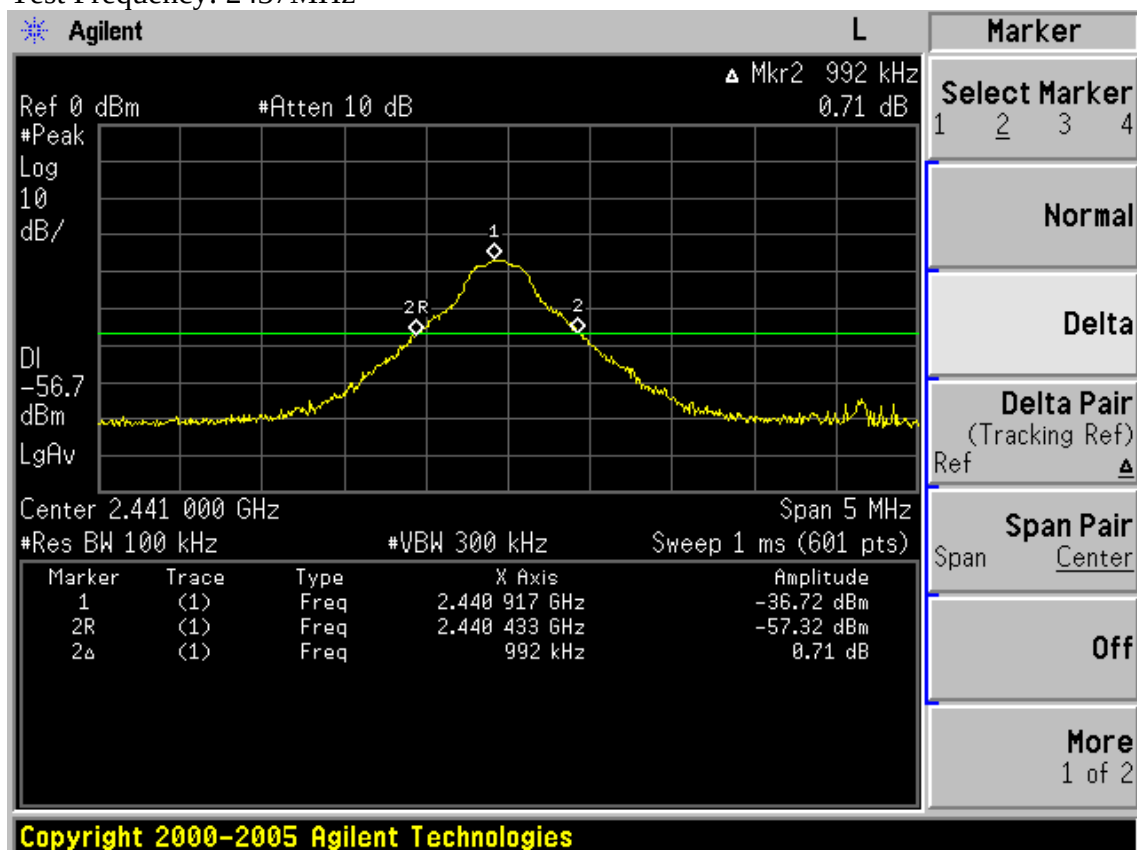
6.3. Test Results

CH	20dB Bandwidth (kHz)	Conclusion
(Low)	942	PASS
(Mid)	992	PASS
(High)	975	PASS

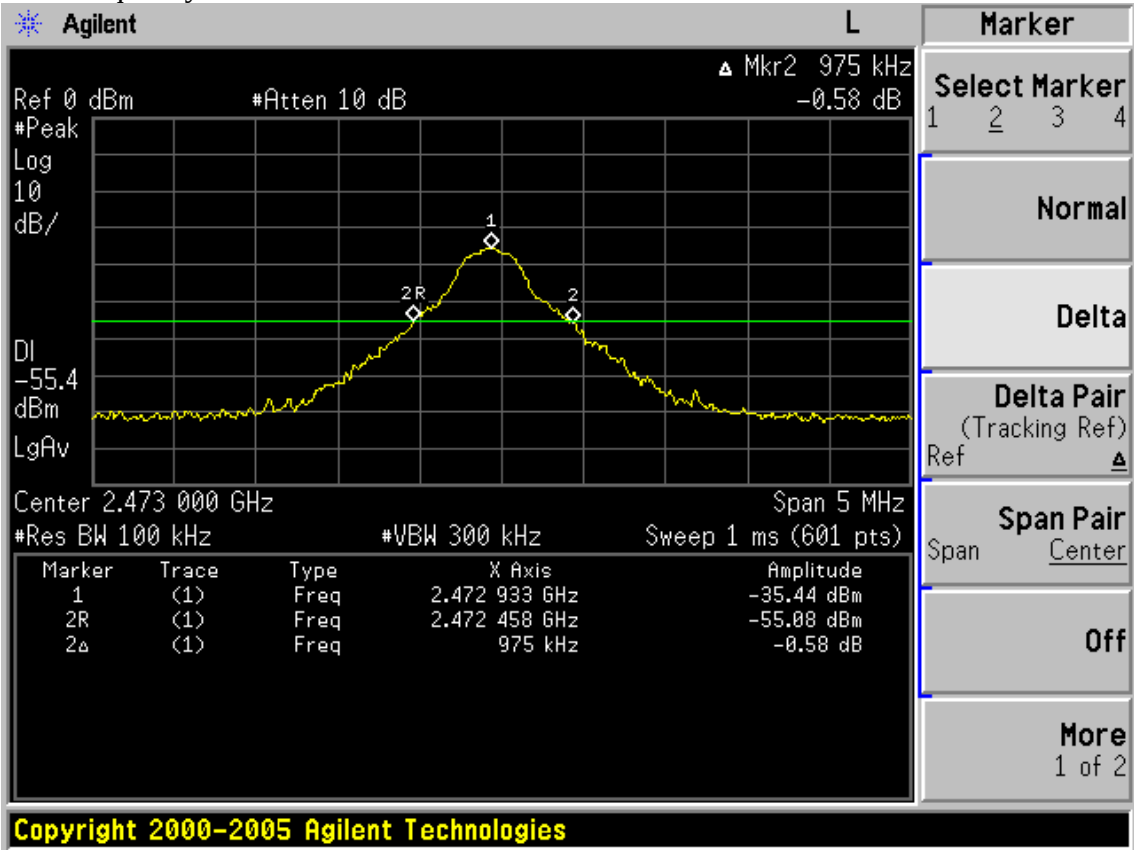
Test Frequency: 2410MHz



Test Frequency: 2437MHz



Test Frequency: 2473MHz



7. DEVIATION TO TEST SPECIFICATIONS

[NONE]