FCC TEST REPORT

FCC ID : W2IAM-2230

Applicant : ADOMAX ELECTRONIC TECHNOLOGY CO., (Z.Q.) LTD.
Address : East Side of Qiancun,Yingbin Road,Zhaoqing,Guangdong,China

Equipment Under Test (EUT) :

Product Name : Mouse
Model No. : AM-2220-USB, AM-2230-USB, AM-2240-USB, AM-2220-USB +PS/2, AM-2230-USB +PS/2, AM-2240-USB +PS/2

Standards : FCC 15 SUBPART B

Date of Test : Dec. 31, 2008

Test Engineer : Maikou.Zhang

Reviewed By : Phillo zhong

Test Result :	**PASS ***

* The sample detailed above has been tested to the requirements of Council Directives ANSI C63.4:2003. The test results have been reviewed against the Directives above and found to meet their essential requirements.

1 Test Summary

Test	Test Requirement	Test Method	Class / Severity	Result
Radiated Emission (30MHz to 1GHz)	FCC PART 15, SUBPART B: 2007	ANSI C63.4: 2003	Class B	PASS
Conducted Emission (150KHz to 30MHz)	FCC PART 15, SUBPART B: 2007	ANSI C63.4: 2003	Class B	N/A

2 Contents

1 COVER PAGE 1

1 TEST SUMMARY 2

2 CONTENTS 3

3 GENERAL INFORMATION 4

3.1 CLIENT INFORMATION 4
3.2 DETAILS OF E.U.T. 4
3.3 DESCRIPTION OF SUPPORT UNITS 4
3.4 STANDARDS APPLICABLE FOR TESTING 4
3.5 TEST FACILITY 5
3.6 TEST LOCATION 5

4 EQUIPMENT USED DURING TEST 6

5 EMISSIONS TEST RESULTS 7

5.1 RADIATION EMISSION DATA 7
5.1.1 Measurement Uncertainty 7
5.1.2 EUT Setup 7
5.1.3 Spectrum Analyzer Setup 8
5.1.4 Test Procedure 8
5.1.5 Corrected Amplitude & Margin Calculation 8
5.1.6 Summary of Test Results 9
5.1.7 Photographs-Radiation Emission Test Setup 11

6 PHOTOGRAPHS - CONSTRUCTIONAL DETAILS 12

6.1 EUT-COMPONENT VIEW 12
6.2 EUT– FRONT VIEW 12
6.3 EUT– BACK VIEW 13
6.4 EUT – OPEN VIEW 13
6.5 PCB – FRONT VIEW 14
6.6 PCB – BACK VIEW 14

7 FCC LABEL 15

3 General Information

3.1 Client Information

Applican ADOMAX ELECTRONIC TECHNOLOGY CO., (Z.Q.) LTD.
Address of Applicant East Side of Qiancun,Yingbin Road,Zhaoqing,Guangdong,China

Manufacturer: ADOMAX ELECTRONIC TECHNOLOGY CO., (Z.Q.) LTD.
Address of Manufacturer: East Side of Qiancun,Yingbin Road,Zhaoqing,Guangdong,China

Product Name: Mouse
Model No. : AM-2220-USB, AM-2230-USB, AM-2240-USB, AM-2220-USB +PS/2, AM-2230-USB +PS/2, AM-2240-USB +PS/2

Note: The PCB of all the models are same except the appearance difference . the AM-2230-USB +PS/2 is testing sample , and the final test data were shown in this test report .

3.2 Details of E.U.T.

Power Supply: DC 5V Input By Signal Port

3.3 Description of Support Units

The EUT has been tested as an independent unit.

3.4 Standards Applicable for Testing

The customer requested FCC tests for a Mouse. The standards used Were FCC PART 15 SUBPART B.

3.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC – Registration No.:880581**

  Waltek Services(Shenzhen) Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 880581, June 24, 2008.

- **IC – Registration No.:IC7760**

  Waltek Services(Shenzhen) Co., Ltd. has been registered and fully described in a report filed with the Industry Canada. The acceptance letter from the Industry Canada is maintained in our files. Registration IC7760, July 24, 2008..

3.6 Test Location

All Emissions tests were performed at:-

Waltek Services(Shenzhen) Co., Ltd. at 1/F, Fukangtai Building, West Baima Rd.,Songgang Street, Baoan District, Shenzhen, China

4 Equipment Used during Test

Equipment	Brand Name	Model	Related standards	Cal.Intal Months	Last Cal. Date	Serial No
3m Semi- Anechoic chamber						
EMC Analyzer	Agilent	E7405A	ISO9001:2000	12	Aug-08	MY451 14943
Trilog Broadband Antenne 30-3000 MHz	SCHWAR ZBECK MESS-ELEKTROM	VULB9163	EN/ISO/IEC 17025 DIN EN ISO9001	12	Aug-08	336
Broad-band Horn Antenna 1-18 GHz	SCHWAR ZBECK MESS-ELEKTROM	BBHA 9120 D	EN/ISO/IEC 17025 DIN EN ISO9001	12	Aug-08	667
Broadband Preamplifier 0.5-18 GHz	SCHWARZBECK MESS-ELEKTROM	BBV 9718	EN/ISO/IEC 17025 DIN EN ISO9001	12	Aug-08	9718-148
10m Coaxial Cable with N-male Connectors usable up to 18GHz,	SCHWARZBECK MESS-ELEKTROM	AK 9515 H	EN/ISO/IEC 17025 DIN EN ISO9001	12	Aug-08	-
10m 50 Ohm Coaxial Cable with N-plug,individual length,usable up to 3(5)GHz, Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9513	EN/ISO/IEC 17025 DIN EN ISO9001	12	Aug-08	-
Positioning Controller	C&C LAB	CC-C-IF	ISO9001	12	Aug-08	MF780 2108
Color Monitor	SUNSPO	SP-14C	ISO9001	12	Aug-08	-
EMI Shielded Room						
Test Receiver	ROHDE&SCHWARZ	ESPI	ISO9001	12	Jul-08	101155
Two-Line V-Network	ROHDE&SCHWARZ	ENV216	ISO9001 EN/ISO/IEC 17025	12	Jul-08	100115
Absorbing Clamp	ROHDE&SCHWARZ	MDS-21	ISO9001 EN/ISO/IEC 17025	12	Jul-08	100205
10m 50 Ohm Coaxial Cable with N-plug,individual length,usable up to 3(5)GHz, Connectors	SCHWARZBECK MESS-ELEKTROM	AK 9514	EN/ISO/IEC 17025 DIN EN ISO9001	12	Aug-08	-
Other						
Notebook	IBM	X31	-----	---	--	--

5 Emissions Test Results

5.1 Radiation Emission Data

Test Requirement:	FCC Part15 B 15.109 Class B
Test Method:	ANSI C63.4:2003
Test Date:	Dec. 31, 2008
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Class:	Class B
Limit:	40.0 dBμV/m between 30MHz & 88MHz
	43.5 dBμV/m between 88MHz & 216MHz
	46.0 dBμV/m between 216MHz & 960MHz
	54.0 dBμV/m zbove 960MHz
Detector:	Peak for pre-scan (120kHz resolution bandwidth)
	Quasi-Peak if maximised peak within 6dB of limit

5.1.1 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Based on ANSI C63.4:2003, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of a radiation emissions measurement at Waltek Lab is +2.9 dB.

5.1.2 EUT Setup

The radiated emission tests were performed in the 3m Semi- Anechoic Chamber test site, using the setup accordance with the ANSI C63.4:2003, The specification used in this report was the FCC Part15 B limits.
The EUT was placed on the test table in ON mode. and connected with the Notebook.

5.1.3 Spectrum Analyzer Setup

According to FCC Part15 B Rules, the system was tested 30 to 1000MHz.

Start Frequency.....30 MHz
Stop Frequency.....1 GHz
Sweep Speed Auto
IF Bandwidth.....100 kHz
Video Bandwidth.....100KHz
Quasi-Peak Adapter Bandwidth .....120 kHz
Quasi-Peak Adapter Mode .....Normal
Resolution Bandwidth 100KHz

5.1.4 Test Procedure

For the radiated emissions test, since the EUT does not have a power source, there was no connection to AC outlets.

Maximizing procedure was performed on the six (6) highest emissions to ensure EUT is compliant with all installation combinations.

All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dBμV of specification limits), and are distinguished with a "Qp" in the data table. But any frequency above 1000 MHz, the limit is based on average detector.

The EUT was under normal mode during the final qualification test and the configuration was used to represent the worst case results.

5.1.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

Corr. Ampl. = Indicated Reading + Antenna Factor + Cable Factor - Amplifier Gain

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -7dBμV means the emission is 7dBμV below the maximum limit for Class B. The equation for margin calculation is as follows:

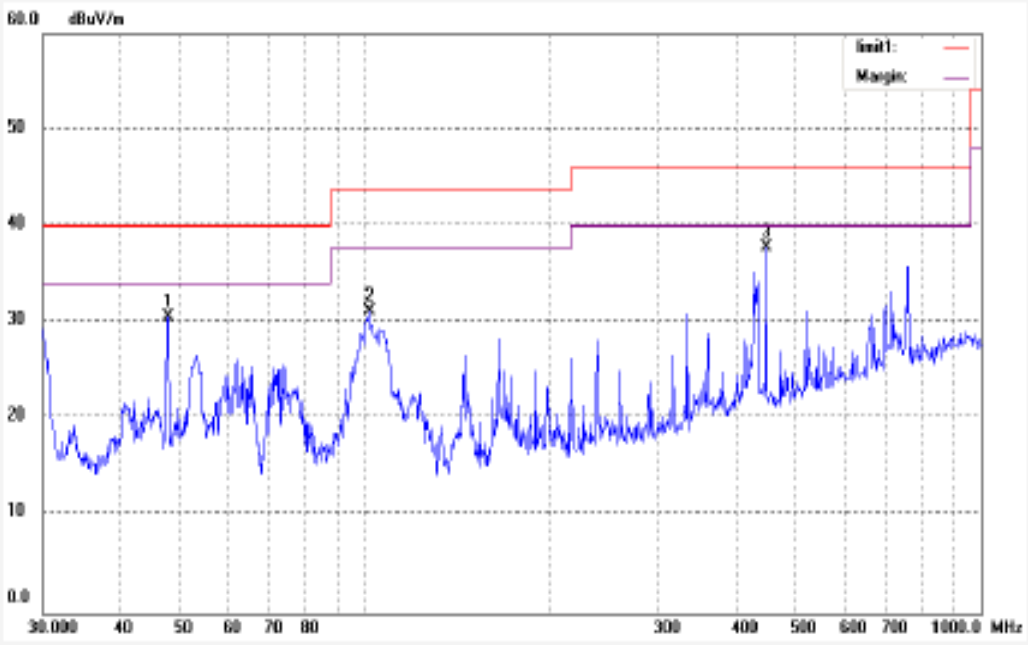
Margin = Corr. Ampl. – Class B Limit

5.1.6 Summary of Test Results

According to the data in this section , the EUT complied with the FCC Part15 B standards.

Job No.:	Polarization: Vertical
Standard: FCC Part15 RE-Class B_30-1000MHz	Power Source: DC 5V
Test item: Radiation Test	Date: 08/12/29/
Temp.(C)/Hum.(%) 26 C / 53 %	Time: 11/31/36
EUT: MOUSE	Engineer Signature:
Mode: RUNNING PC SYSTEM	Distance: 3m
Model: AM-2230-USB+PS/2	

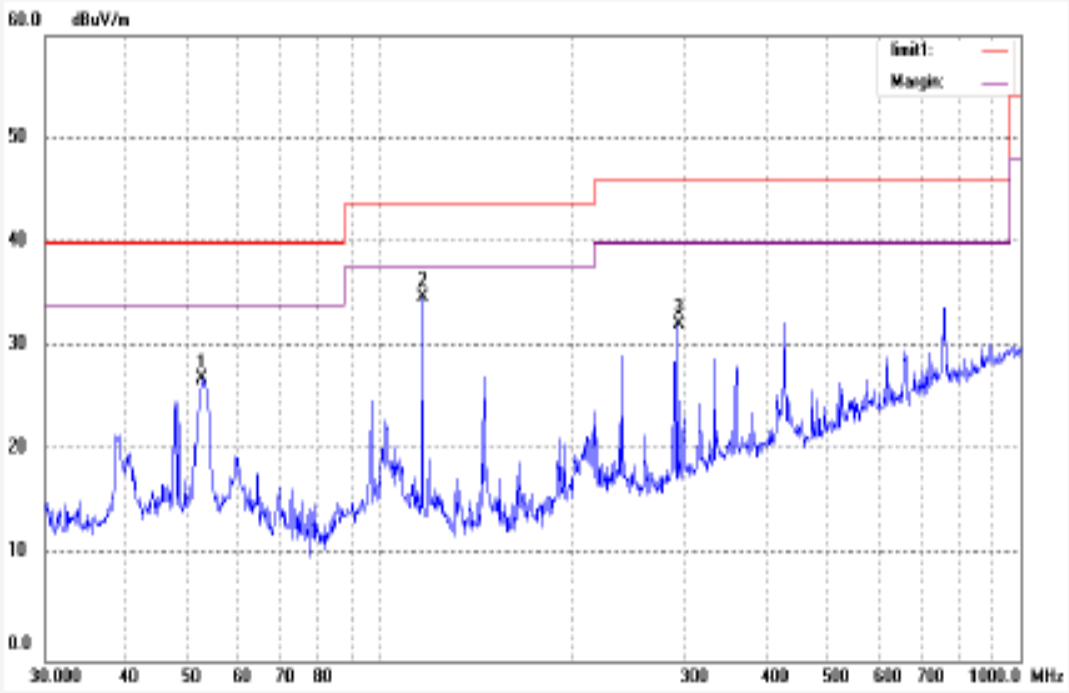
Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	48.0392	13.66	16.87	30.53	40.00	-9.47	peak	
2	101.5358	14.47	16.72	31.19	43.50	-12.31	peak	
3	447.2619	17.31	20.37	37.68	46.00	-8.32	peak	

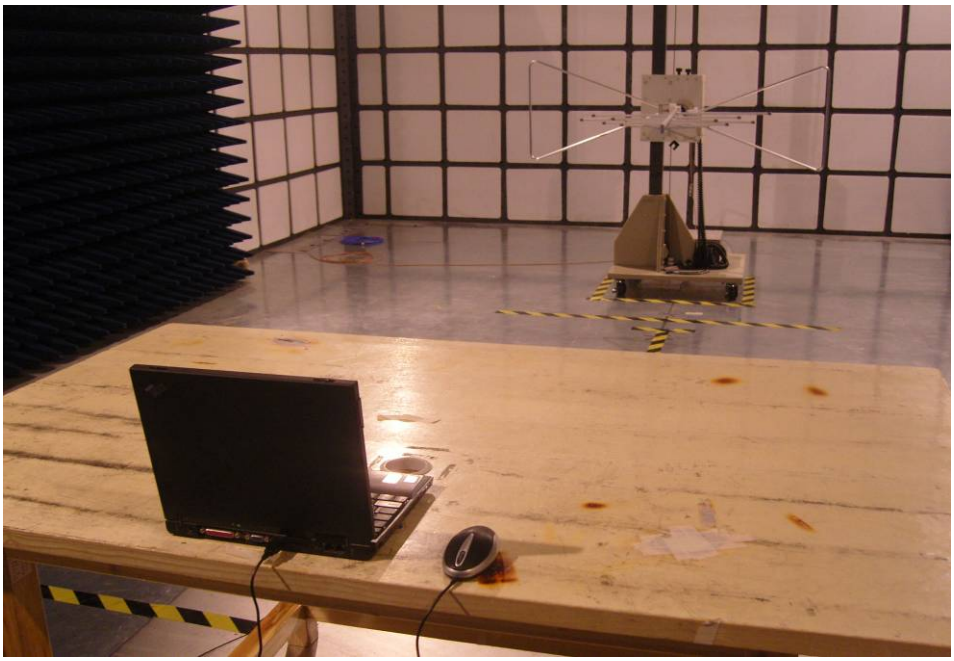
Job No.:	Polarization: Horizontal
Standard: FCC Part15 RE-Class B_30-1000MHz	Power Source: DC 5V
Test item: Radiation Test	Date: 08/12/29/
Temp.(C)/Hum.(%) 26 C / 53 %	Time: 11/21/31
EUT: MOUSE	Engineer Signature:
Mode: RUNNING PC SYSTEM	Distance: 3m
Model: AM-2230-USB+PS/2	

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	52.6345	12.29	14.63	26.92	40.00	-13.08	peak	
2	116.4476	22.04	12.72	34.76	43.50	-8.74	peak	
3	292.3643	16.25	15.92	32.17	46.00	-13.83	peak	

5.1.7 Photographs-Radiation Emission Test Setup



6 Photographs - Constructional Details

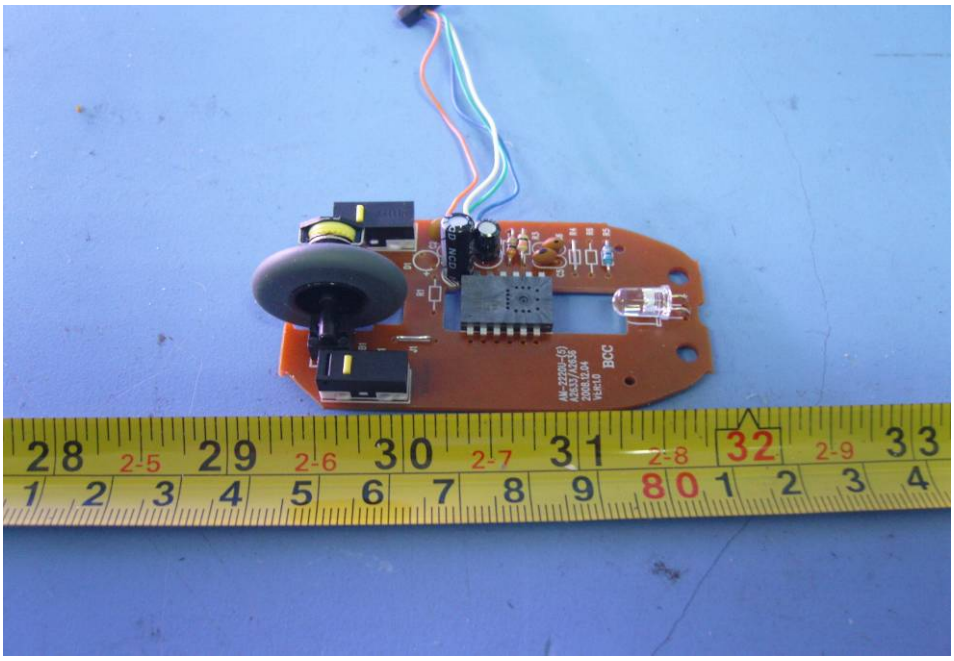
6.1 EUT-Component View

6.2 EUT– Front View

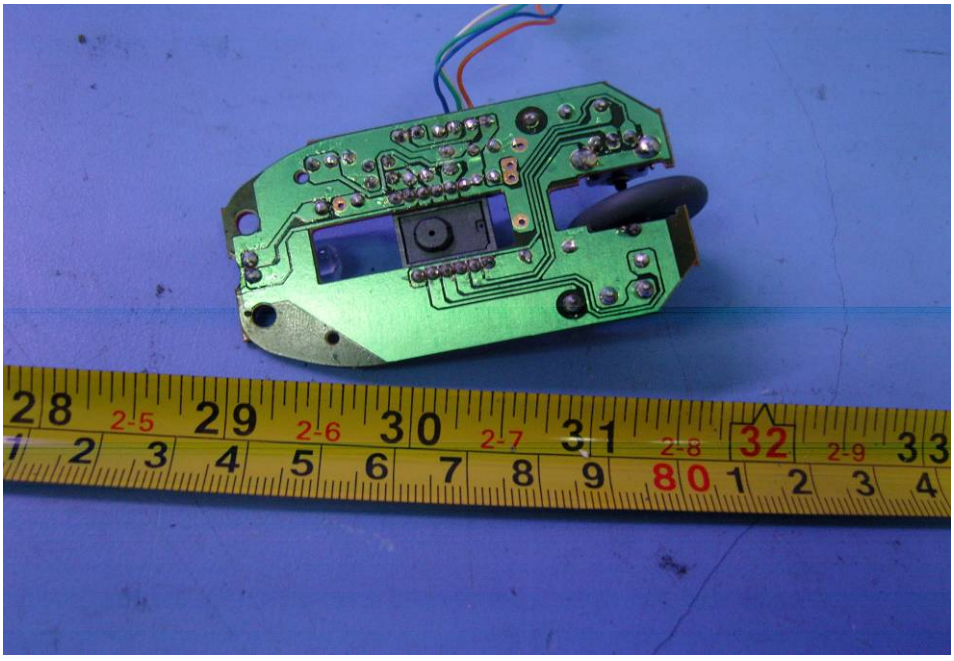
6.3 EUT– Back View

6.4 EUT – Open View

6.5 PCB – Front View



6.6 PCB – Back View



7 FCC Label

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:(1)this device may not cause harmful interference,and (2) this device must accept any interference received, including interference that may cause undesired operation

The Label must not be a stick-on paper. The Label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

Proposed Label Location on EUT

EUT Bottom View/proposed FCC Mark Location