FCC CERTIFICATION On Behalf of Eastern Times Technology Co., Ltd.

2.4G Wireless Laser Mouse Model No.: DS-2233(2233-K)

FCC ID: TUV2233-K

Prepared for : Eastern Times Technology Co., Ltd.

Address : Building 5, Penghua Industry Park, Heping Rd.(W),

Longhua, Shenzhen, Guangdong, China

Prepared by : ACCURATE TECHNOLOGY CO. LTD

Address : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.

Science & Industry Park, Nanshan, Shenzhen, Guangdong

P.R. China

Tel: (0755) 26503290 Fax: (0755) 26503396

Report Number : ATE20081865

Date of Test : October 9-27, 2008

Date of Report : October 27, 2008

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APPENDIX I (TEST CURVES) (22 pages)

7.1.

7.2.

Test Report Certification

Applicant : Eastern Times Technology Co., Ltd.

Manufacturer : Eastern Times Technology Co., Ltd.

EUT Description : 2.4G Wireless Laser Mouse

(A) MODEL NO.: DS-2233(2233-K)

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: 3.0V DC ("AAA" batteries 2×)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.249: 2008 & ANSI C63.4: 2003

The device described above is tested by ACCURATE TECHNOLOGY 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 Section15.249 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. 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 ACCURATE TECHNOLOGY CO. LTD.

Date of Test:	October 9-27, 2008	
Prepared by :	sky Long	
	(Engineer)	
Approved & Authorized Signer:	Seal -	
	(Manager)	

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT : 2.4G Wireless Laser Mouse

Model Number : DS-2233(2233-K)

Power Supply : 3.0V DC ("AAA" batteries $2\times$)

Operate Frequency : 2402.9-2478.1MHz

Channel Number : 48

Applicant : Eastern Times Technology Co., Ltd.

Address : Building 5, Penghua Industry Park, Heping Rd.(W),

Longhua, Shenzhen, Guangdong, China

Manufacturer : Eastern Times Technology Co., Ltd.

Address : Building 5, Penghua Industry Park, Heping Rd.(W),

Longhua, Shenzhen, Guangdong, China

Date of sample received: October 7, 2008

Date of Test : October 9-27, 2008

1.2.Description of Test Facility

EMC Lab : Accredited by TUV Rheinland Shenzhen

Listed by FCC

The Registration Number is 752051

Listed by Industry Canada

The Registration Number is 5077A-2

Accredited by China National Accreditation Committee

for Laboratories

The Certificate Registration Number is L3193

Name of Firm : ACCURATE TECHNOLOGY CO. LTD

Site Location : F1, Bldg. A, Changyuan New Material Port, Keyuan Rd.

Science & Industry Park, Nanshan, Shenzhen, Guangdong

P.R. China

1.3. Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

Radiated emission expanded uncertainty = 3.08dB, k=2 (9kHz-30MHz)

,

Radiated emission expanded uncertainty = 4.42dB, k=2

(30MHz-1000MHz)

Radiated emission expanded uncertainty = 4.06dB, k=2

(Above 1GHz)

2. MEASURING DEVICE AND TEST EQUIPMENT

Table 1: List of Test and Measurement Equipment

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	03.29.2009
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	03.29.2009
Spectrum Analyzer	Agilent	E7405A	MY45115511	03.29.2009
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	03.31.2009
Loop Antenna	Schwarzbeck	FMZB1516	1516131	03.28.2009
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	03.29.2009
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	12.20.2008
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	10.09.2009
LISN	Rohde&Schwarz	ESH3-Z5	100305	03.29.2009
LISN	Schwarzbeck	NSLK8126	8126431	03.29.2009

3. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission	N/A
Section 15.249(d)	Radiated Emission	Compliant
Section 15.249(a)	The fundamental field strength and the harmonics	Compliant
Section 15.249(d)	Band Edge	Compliant

4. FUNDAMENTAL AND HARMONICS RADIATED EMISSION MEASURMENT

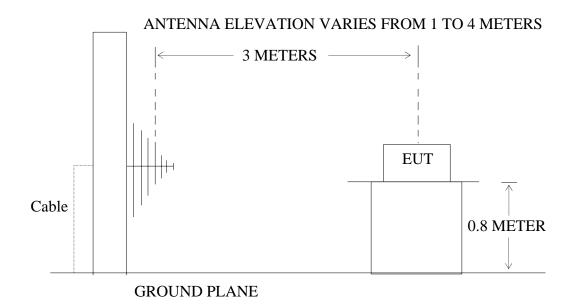
4.1.Block Diagram of Test Setup

4.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: 2.4G Wireless Laser Mouse)

4.1.2. Anechoic Chamber Test Setup Diagram



(EUT: 2.4G Wireless Laser Mouse)

4.2. The Emission Limit

4.2.1.For intentional radiators, According to section 15.249(a), Operation within the frequency band of 2.4 to 2.4835GHz, The fundamental field strength shall not exceed 94 dB μ V/m and the harmonics shall not exceed 54 dB μ V/m.

Fundamental	Field Strength of Fundamental	Field Strength of harmonics
Frequency	(millivolts/meter)	(microvolts/meter)
902-928MHz	50	500
2400-2483.5MHz	50	500
5725-5875MHz	50	500
24.0-24.25GHz	250	2500

4.2.2.According to section 15.249(e), as shown in section 15.35(b), the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

4.3. Configuration of EUT on Measurement

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

4.3.1. 2.4G Wireless Laser Mouse (EUT)

Model Number : DS-2233(2233-K)

Serial Number : N/A

Manufacturer : Eastern Times Technology Co., Ltd.

4.4. Operating Condition of EUT

- 4.4.1. Setup the EUT and simulator as shown as Section 4.1.
- 4.4.2. Turn on the power of all equipment.
- 4.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402.9-2478.1MHz. We are select 2402.9MHz, 2439.7MHz, 2478.1MHz TX frequency to transmit.

4.5.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 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 polarizations of the antenna are set on measurement. 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 measurement.

The bandwidth of test receiver (R&S ESI26) is set at 1MHz.

4.6. The Field Strength of Radiation Emission Measurement Results **PASS.**

Date of Test: October 9-13, 2008 Temperature: 25°C

EUT: 2.4G Wireless Laser Mouse Humidity: 52%

Model No.: DS-2233(2233-K) Power Supply: 3.0V DC ("AAA" batteries 2×)

Test Mode: TX 2402.9MHz Test Engineer: Joe

Fundamental Radiated Emissions

Frequency	Reading(c	dBμV/m)	Factor(dB)	Result(c	lBμV/m)	Limit(dI	BμV/m)	Margi	n(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
2402.901	90.12	97.68	-7.45	82.67	90.23	94	114	-11.33	-23.77	Vertical
2402.901	91.77	98.59	-7.45	84.32	91.14	94	114	-9.68	-22.86	Horizontal

Harmonics Radiated Emissions

Frequency	Reading(dBμV/m)	Factor(dB)	Result(c	lBμV/m)	Limit(dI	BμV/m)	Margi	n(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
4805.907	48.93	55.19	-0.28	48.65	54.91	54	74	-5.35	-19.09	Vertical
4805.907	51.15	57.21	-0.28	50.87	56.93	54	74	-3.13	-17.07	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

- 1. The emission emitted by the EUT is too low to be measured except the emission listed above.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Date of Test:October 9-13, 2008Temperature:25°CEUT:2.4G Wireless Laser MouseHumidity:52%Model No.:DS-2233(2233-K)Power Supply:3.0V DC ("AAA" batteries 2×)Test Mode:TX 2439.7MHzTest Engineer:Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)	Factor(dB)	Result(c	lBμV/m)	Limit(dI	BμV/m)	Margi	in(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
2439.701	89.56	95.97	-7.36	82.20	88.61	94	114	-11.80	-25.39	Vertical
2439.701	89.89	96.41	-7.36	82.53	89.05	94	114	-11.47	-24.95	Horizontal

Harmonics Radiated Emissions

Frequency	Reading(c	dBμV/m)	Factor(dB)	Result(c	lBμV/m)	Limit(dI	BμV/m)	Margi	in(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
4879.383	50.21	56.55	0.13	50.34	56.68	54	74	-3.66	-17.32	Vertical
4879.383	48.51	55.02	0.13	48.64	55.15	54	74	-5.36	-18.85	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

- 1. The emission emitted by the EUT is too low to be measured except the emission listed above.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Date of Test: October 9-13, 2008

EUT: 2.4G Wireless Laser Mouse

Model No.: DS-2233(2233-K)

Test Mode: TX 2478.1MHz

Temperature: 25°C

Humidity: 52%

Power Supply: 3.0V DC ("AAA" batteries 2×)

Test Engineer: Joe

Fundamental Radiated Emissions

Frequency	Reading(dBμV/m)	Factor(dB)	Result(c	lBμV/m)	Limit(dF	BμV/m)	Margi	in(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
2478.102	89.77	96.48	-7.37	82.40	89.11	94	114	-11.60	-24.89	Vertical
2478.102	90.22	96.58	-7.37	82.85	89.21	94	114	-11.15	-24.79	Horizontal

Harmonics Radiated Emissions

Frequency	Reading(c	dBμV/m)	Factor(dB)	Result(c	lBμV/m)	Limit(dI	BμV/m)	Margi	n(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
4956.165	49.56	55.60	0.51	50.07	56.11	54	74	-3.93	-17.89	Vertical
4956.165	49.95	56.44	0.51	50.46	56.95	54	74	-3.54	-17.05	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

- 1. The emission emitted by the EUT is too low to be measured except the emission listed above.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

5. RADIATED EMISSION FOR FCC PART 15 SECTION 15.249(D)

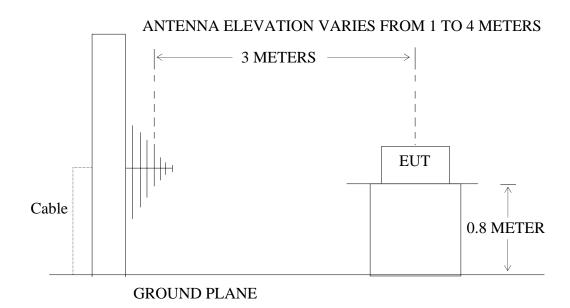
5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: 2.4G Wireless Laser Mouse)

5.1.2. Anechoic Chamber Test Setup Diagram



(EUT: 2.4G Wireless Laser Mouse)

5.2. The Emission Limit For Section 15.249(d)

5.2.1.Emission radiated outside of the specified frequency bands, except for harmonics, shall be comply with the general radiated emission limits in Section 15.209.

Radiation Emission Measurement Limits According to Section 15.209

			
		Limit	
Frequency (MHz)	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBµV/m)	The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is
30 - 88	100	40	performed with Average detector.
88 - 216	150	43.5	Except those frequency bands mention above, the
216 - 960	200	46	final measurement for frequencies below
Above 960	500	54	1000MHz is performed with Quasi Peak detector.

5.3.EUT Configuration on Measurement

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

5.3.1. 2.4G Wireless Laser Mouse (EUT)

Model Number : DS-2233(2233-K)

Serial Number : N/A

Manufacturer : Eastern Times Technology Co., Ltd.

5.4. Operating Condition of EUT

- 5.4.1. Setup the EUT and simulator as shown as Section 5.1.
- 5.4.2. Turn on the power of all equipment.
- 5.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402.9-2478.1MHz. We are select 2402.9MHz, 2439.7MHz, 2478.1MHz TX frequency to transmit.

5.5.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 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 polarizations of the antenna are set on measurement. 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 measurement.

The bandwidth of test receiver (R&S ESI26) is set at 120KHz in 30-1000MHz. and set at 1MHz in above 1000MHz.

The frequency range from 30MHz to 25000MHz is checked.

The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.

5.6. The Emission Measurement Result

PASS.

Date of Test:	October 9-13, 2008	Temperature:	25°C
EUT:	2.4G Wireless Laser Mouse	Humidity:	52%
Model No.:	DS-2233(2233-K)	Power Supply:	3.0 V DC ("AAA" batteries 2 \times)
Test Mode:	TX 2402.9MHz	Test Engineer:	Joe

Frequency	Reading	Factor(dB)	Result	Limit	Margin	Polarization
(MHz)	(dBµV/m)	Corr.	(dBµV/m)	(dBµV/m)	(dB)	
	QP		QP	QP	QP	
-	-	1	1	-	-	Vertical
-	-	-	-	-	-	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

- 1. Remark "- " means that the emission level is too low to be measured.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Date of Test: October 9-13, 2008 Temperature: 25°C

EUT: 2.4G Wireless Laser Mouse Humidity: 52%

Model No.: DS-2233(2233-K) Power Supply: 3.0V DC ("AAA" batteries 2×)

Test Mode: TX 2439.7MHz Test Engineer: Joe

Frequency	Reading	Factor(dB)	Result	Limit	Margin	Polarization
(MHz)	(dBµV/m)	Corr.	(dBµV/m)	(dBµV/m)	(dB)	
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

- 1. Remark "- " means that the emission level is too low to be measured.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Date of Test:	October 9-13, 2008	Temperature:	25°C
EUT:	2.4G Wireless Laser Mouse	Humidity:	52%
Model No.:	DS-2233(2233-K)	Power Supply:	3.0V DC ("AAA" batteries 2×)
Test Mode:	TX 2478.1MHz	Test Engineer:	Joe

Frequency	Reading	Factor(dB)	Result	Limit	Margin	Polarization
(MHz)	(dBµV/m)	Corr.	(dBµV/m)	(dBµV/m)	(dB)	
	QP		QP	QP	QP	
-	-	-	-	-	-	Vertical
-	-	-	-	-	-	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

- 1. Remark "- " means that the emission level is too low to be measured.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

6. BAND EDGES

6.1.The Requirement

6.1.1.Band Edge from 2400MHz to 2483.5MHz. Emission radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

6.2.EUT Configuration on Measurement

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

6.2.1. 2.4G Wireless Laser Mouse (EUT)

Model Number : DS-2233(2233-K)

Serial Number : N/A

Manufacturer : Eastern Times Technology Co., Ltd.

6.3. Operating Condition of EUT

- 6.3.1. Setup the EUT and simulator as shown as Section 4.1.
- 6.3.2. Turn on the power of all equipment.
- 6.3.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402.9-2478.1MHz. We are select 2402.9MHz, 2478.1MHz TX frequency to transmit.

6.4. Test Procedure

- 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 upper band-edges of the emission:

RBW=1MHz, VBW=1MHz

6.5. The Measurement Result

Pass.

Date of Test:October 27, 2008Temperature:25°CEUT:2.4G Wireless Laser MouseHumidity:52%Model No.:DS-2233(2233-K)Power Supply:3.0V DC ("AAA" batteries 2×)Test Mode:TX 2402.9MHzTest Engineer:Joe

Frequency	Reading(dBµV/m)		Factor(dB)	Result(c	lBμV/m)	Limit(dBµV/m)		Margin(dB)		Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
2400.000	53.37	60.02	-7.46	45.91	52.56	54	74	-8.09	-21.44	Vertical
2399.598	56.22	62.58	-7.46	48.76	55.12	54	74	-5.24	-18.88	
2400.000	61.39	55.04	-7.46	47.58	53.93	54	74	-6.42	-20.07	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

- 1. The emission emitted by the EUT is too low to be measured except the emission listed above.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

Date of Test:October 27, 2008Temperature:25°CEUT:2.4G Wireless Laser MouseHumidity:52%Model No.:DS-2233(2233-K)Power Supply:3.0V DC ("AAA" batteries 2×)Test Mode:TX 2478.1MHzTest Engineer:Joe

Frequency	Reading(dBμV/m)		Factor(dB)	Result(dBμV/m)		Limit(dBµV/m)		Margin(dB)		Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
2484.593	51.41	57.98	-7.38	44.03	50.60	54	74	-9.97	-23.40	Vertical
2484.111	52.17	58.43	-7.38	44.79	51.05	54	74	-9.21	-22.95	Horizontal

The spectral diagrams in appendix I display the measurement of peak values.

Note:

- 1. The emission emitted by the EUT is too low to be measured except the emission listed above.
- 2. The field strength is calculated by adding the antenna factor, high pass filter loss(if used) and cable loss, and subtracting the amplifier gain(if any)from the measured reading. The basic equation calculation is as follows:

Result = Reading + Corrected Factor

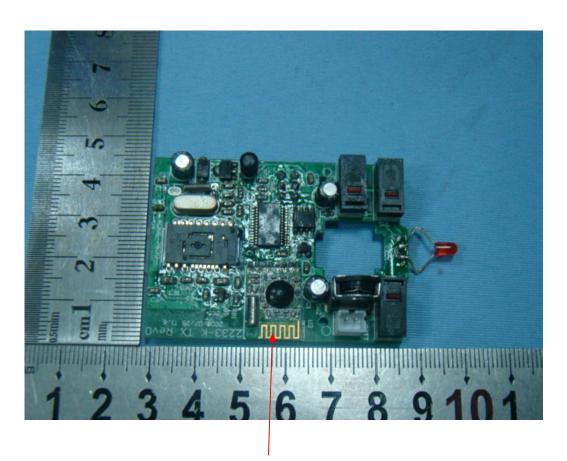
7. ANTENNA REQUIREMENT

7.1.The Requirement

7.1.1. According to 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.

7.2. Antenna Construction

The antenna is PCB Layout antenna, no consideration of replacement.



Antenna

APPENDIX I (Test Curves)



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #554

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

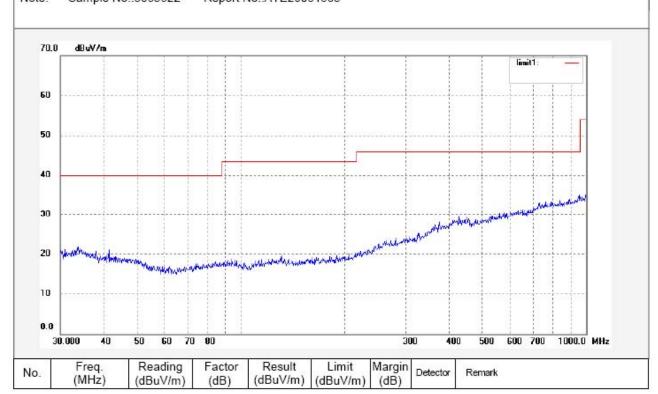
Mode: TX 2402.9MHz
Model: DS-2233(2233-K)
Manufacturer: Eastern Times

Note: Sample No.:3083622 Report No.:ATE20081865

Polarization: Horizontal Power Source: DC 3V

Date: 08/10/13/ Time: 11/30/37

Engineer Signature: Joe





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Power Source: DC 3V

Engineer Signature: Joe

Date: 08/10/13/

Time: 11/33/14

Distance: 3m

Job No.: RTTE #555

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

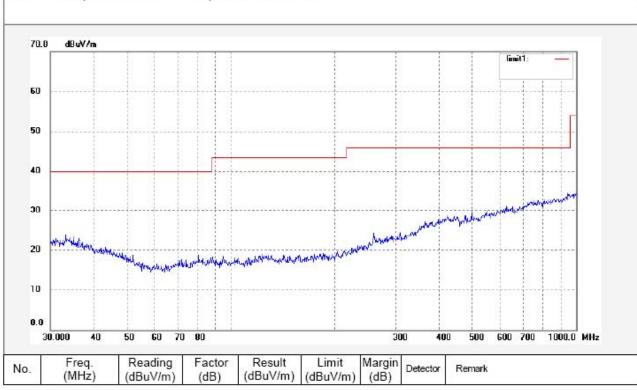
Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402.9MHz Model: DS-2233(2233-K)

Manufacturer: Eastern Times

Note: Sample No.:3083622 Report No.:ATE20081865





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #504

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

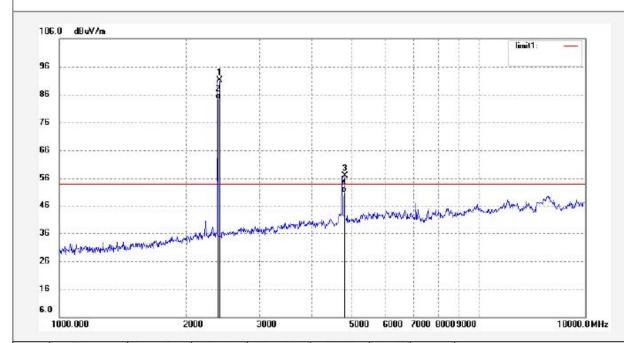
Mode: TX 2402.9MHz

Model: DS-2233(2233-K) Manufacturer: Eastern Times

Note: Sample No.:083622 Report No.:ATE20081865

Polarization: Horizontal Power Source: DC 3V Date: 2008/10/09 Time: 1:10:29

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2402.901	98.59	-7.45	91.14	114.00	-22.86	peak	
2	2402.901	91.77	-7.45	84.32	94.00	-9.68	AVG	
3	4805.907	57.21	-0.28	56.93	74.00	-17.07	peak	
4	4805.907	51.15	-0.28	50.87	54.00	-3.13	AVG	



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #505

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

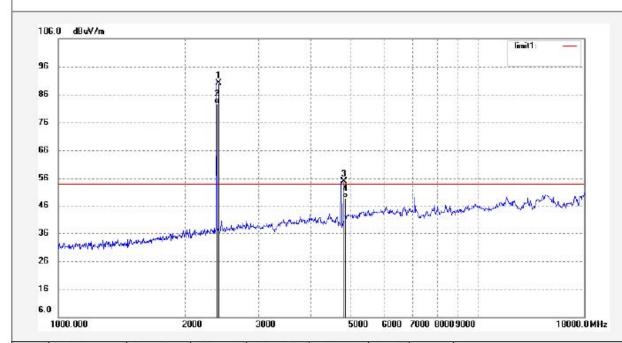
Mode: TX 2402.9MHz

Model: DS-2233(2233-K)
Manufacturer: Eastern Times

Note: Sample No.:083622 Report No.:ATE20081865

Polarization: Vertical Power Source: DC 3V Date: 2008/10/09 Time: 1:49:43

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2402.901	97.68	-7.45	90.23	114.00	-23.77	peak	
2	2402.901	90.12	-7.45	82.67	94.00	-11.33	AVG	
3	4805.907	55.19	-0.28	54.91	74.00	-19.09	peak	
4	4805.907	48.93	-0.28	48.65	54.00	-5.35	AVG	



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Polarization:

Power Source: DC 3V

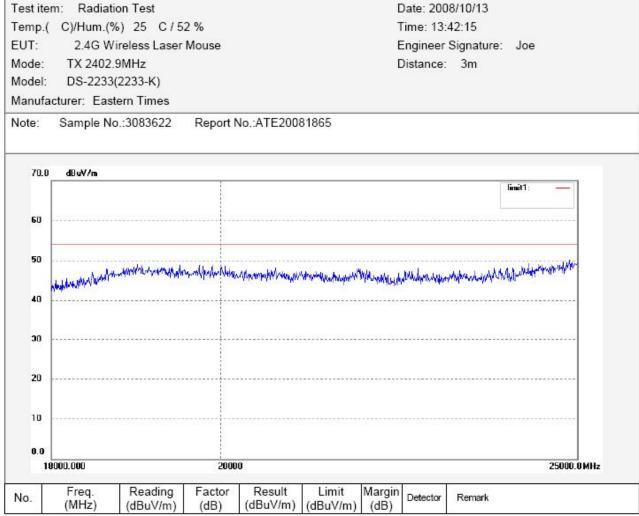
Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Horizontal

Job No.: RTTE #561

Standard: FCC Class B 3M Radiated

Test item: Radiation Test





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Power Source: DC 3V

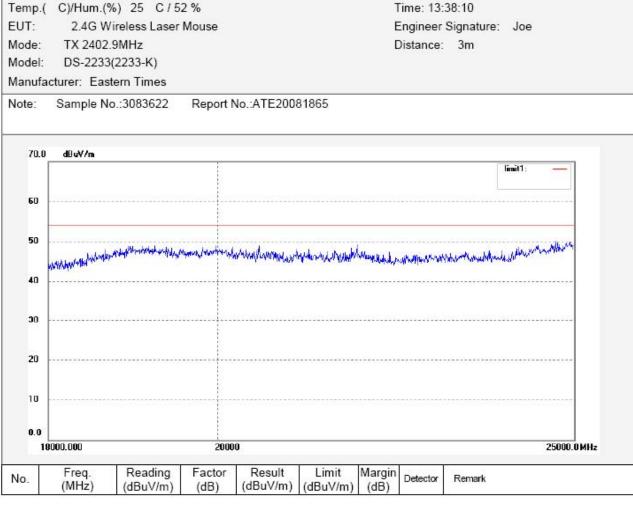
Date: 2008/10/13

Job No.: RTTE #560

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Polarization:

Date: 08/10/13/

Time: 11/37/39

Distance: 3m

Power Source: DC 3V

Engineer Signature: Joe

Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Horizontal

Job No.: RTTE #557

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

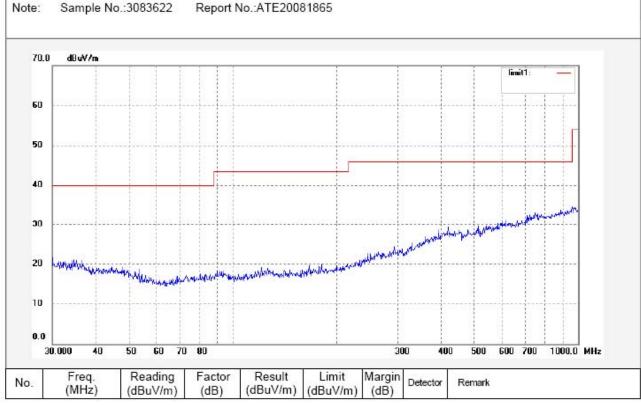
Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2439.7MHz Model: DS-2233(2233-K)

Manufacturer: Eastern Times

Report No.:ATE20081865





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Power Source: DC 3V

Engineer Signature: Joe

Date: 08/10/13/

Time: 11/35/45

Distance: 3m

Job No.: RTTE #556

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

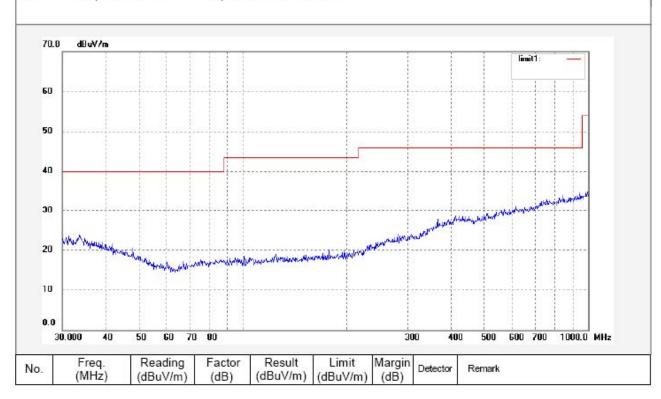
Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2439.7MHz Model: DS-2233(2233-K)

Model: DS-2233(2233-K) Manufacturer: Eastern Times

Note: Sample No.:3083622 Report No.:ATE20081865





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #509

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

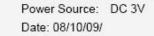
Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2439.7MHz

Model: DS-2233(2233-K)
Manufacturer: Eastern Times

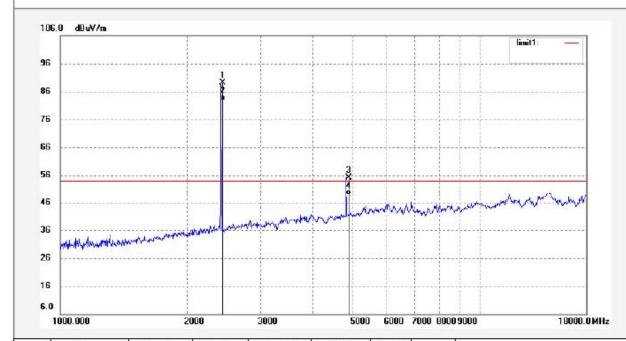
Note: Sample No.:083622 Report No.:ATE20081865



Time: 2/57/28

Engineer Signature: Joe

Polarization: Horizontal



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2439.701	96.41	-7.36	89.05	114.00	-24.95	peak	
2	2439.701	89.89	-7.36	82.53	94.00	-11.47	AVG	
3	4879.383	55.02	0.13	55.15	74.00	-18.85	peak	
4	4879.383	48.51	0.13	48.64	54.00	-5.36	AVG	



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #510

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2439.7MHz

Model: DS-2233(2233-K)
Manufacturer: Eastern Times

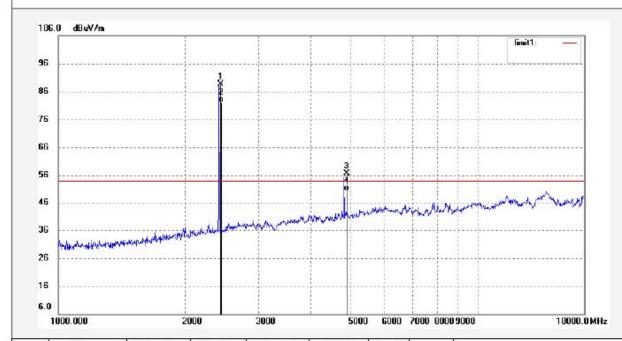
Note: Sample No.:083622 Report No.:ATE20081865

Power Source: DC 3V Date: 08/10/09/

Polarization: Vertical

Time: 3/10/06

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2439.701	95.97	-7.36	88.61	114.00	-25.39	peak	
2	2439.701	89.56	-7.36	82.20	94.00	-11.80	AVG	
3	4879.383	56.55	0.13	56.68	74.00	-17.32	peak	
4	4879.383	50.21	0.13	50.34	54.00	-3.66	AVG	



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Polarization:

Power Source: DC 3V Date: 2008/10/13

Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

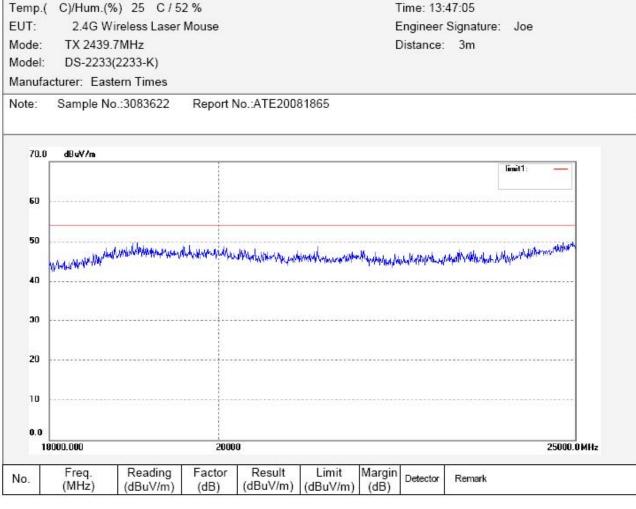
Horizontal

Job No.: RTTE #562

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

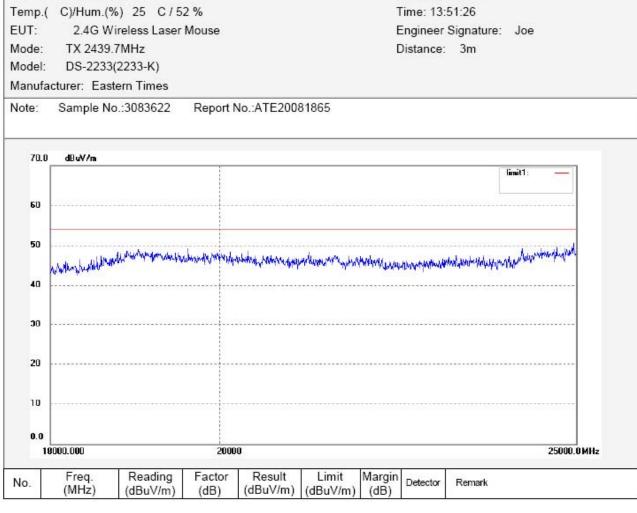
Power Source: DC 3V

Date: 2008/10/13

Job No.: RTTE #563

Standard: FCC Class B 3M Radiated

Test item: Radiation Test





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Horizontal

Engineer Signature: Joe

Power Source: DC 3V

Date: 08/10/13/

Time: 11/40/29

Distance: 3m

Job No.: RTTE #558

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

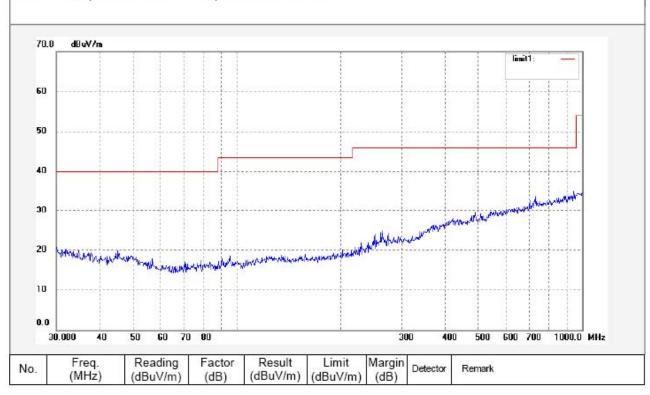
Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478.1MHz Model: DS-2233(2233-K)

Manufacturer: Eastern Times

Note: Sample No.:3083622 Report No.:ATE20081865





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Polarization: Vertical

Power Source: DC 3V

Engineer Signature: Joe

Date: 08/10/13/

Time: 11/43/13

Distance: 3m

Job No.: RTTE #559

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

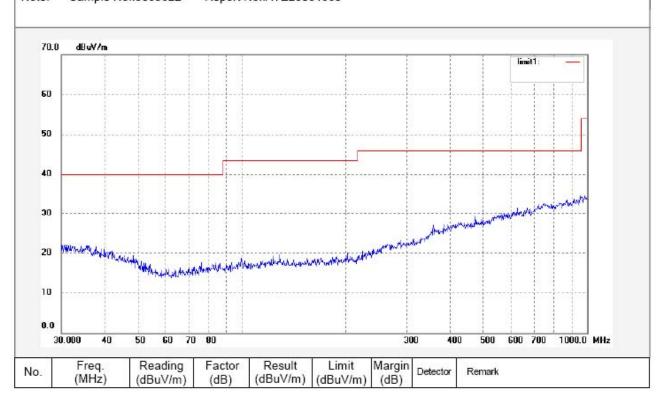
EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478.1MHz Model: DS-2233(2233-K)

Manufacturer: Eastern Times

Note: Sample No.:3083622

Sample No.:3083622 Report No.:ATE20081865





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #512

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478.1MHz

Model: DS-2233(2233-K)
Manufacturer: Eastern Times

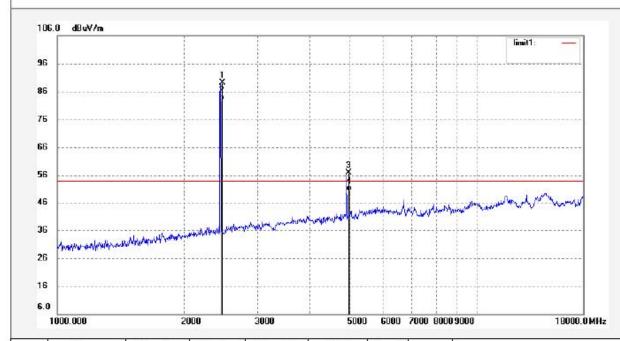
Note: Sample No.:083622 Report No.:ATE20081865

Date: 08/10/09/ Time: 3/43/20

Power Source: DC 3V

Engineer Signature: Joe

Polarization: Horizontal



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2478.102	96.58	-7.37	89.21	114.00	-24.79	peak	
2	2478.102	90.22	-7.37	82.85	94.00	-11.15	AVG	
3	4956.165	56.44	0.51	56.95	74.00	-17.05	peak	
4	4956.165	49.95	0.51	50.46	54.00	-3.54	AVG	



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #511

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478.1MHz

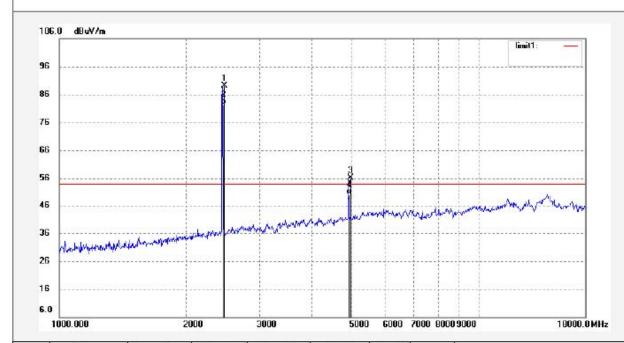
Model: DS-2233(2233-K)
Manufacturer: Eastern Times

Note: Sample No.:083622 Report No.:ATE20081865

Polarization: Vertical Power Source: DC 3V

Date: 08/10/09/ Time: 3/29/55

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2478.102	96.48	-7.37	89.11	114.00	-24.89	peak	
2	2478.102	89.77	-7.37	82.40	94.00	-11.60	AVG	
3	4956.165	55.60	0.51	56.11	74.00	-17.89	peak	
4	4956.165	49.56	0.51	50.07	54.00	-3.93	AVG	



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Polarization:

Time: 13:59:53

Power Source: DC 3V Date: 2008/10/13

Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Horizontal

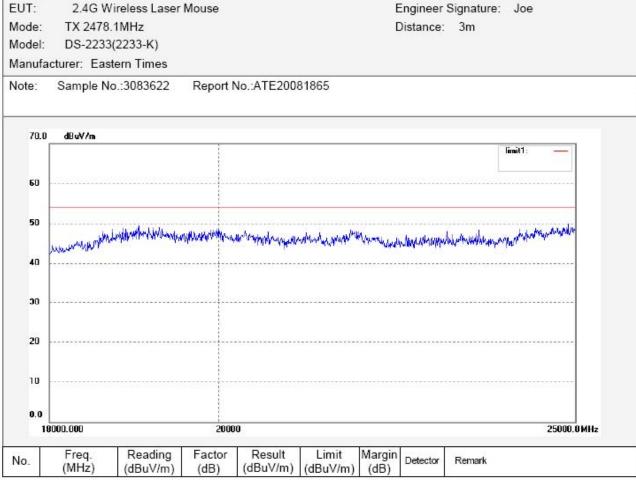
Job No.: RTTE #565

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #564

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse

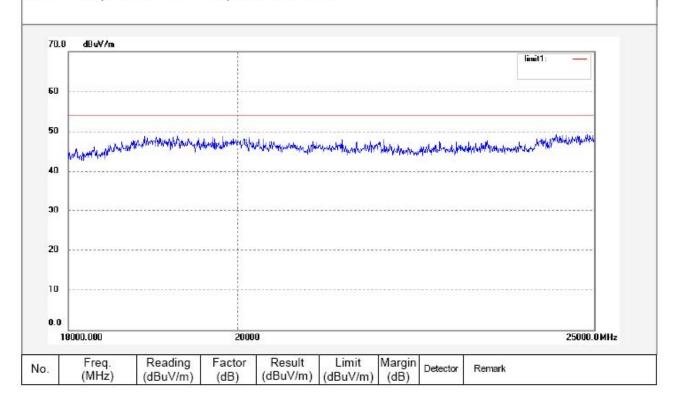
Mode: TX 2478.1MHz

Model: DS-2233(2233-K)
Manufacturer: Eastern Times

Note: Sample No.:3083622 Report No.:ATE20081865

Polarization: Vertical Power Source: DC 3V Date: 2008/10/13 Time: 13:56:01

Engineer Signature: Joe





F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #701 Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402.9MHz

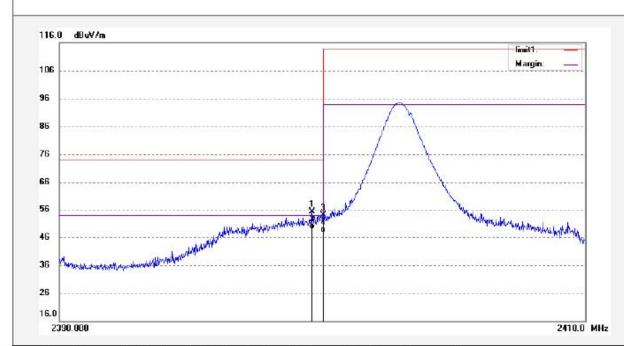
Model: DS-2233(2233-K) Manufacturer: Eastern Times

Note: Sample No.:3083624 Report No.:ATE20081864

Polarization: Horizontal Power Source: DC 3V

> Date: 08/10/27/ Time: 11/27/12

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2399.598	62.58	-7.46	55.12	74.00	-18.88	peak	
2	2399.598	56.22	-7.46	48.76	54.00	-5.24	AVG	
3	2400.000	61.39	-7.46	53.93	74.00	-20.07	peak	
4	2400.000	55.04	-7.46	47.58	54.00	-6.42	AVG	



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #700 Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402.9MHz Model: DS-2233(2233-K)

Model: DS-2233(2233-K) Manufacturer: Eastern Times

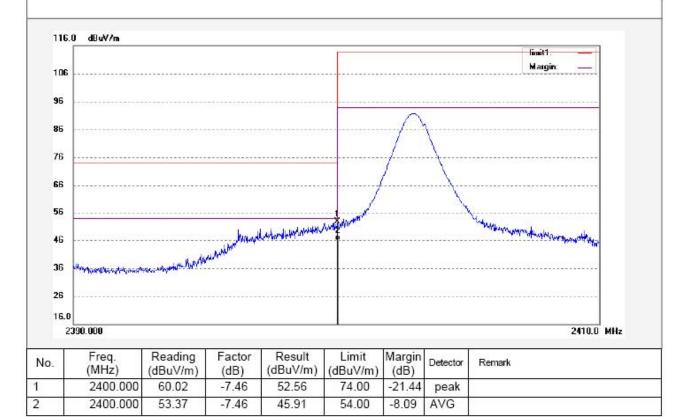
Note: Sample No.:3083624 Report No.:ATE20081864

Polarization: Vertical Power Source: DC 3V

Date: 08/10/27/ Time: 11/22/58

Engineer Signature: Joe







F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #702 Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478.1MHz
Model: DS-2233(2233-K)
Manufacturer: Eastern Times

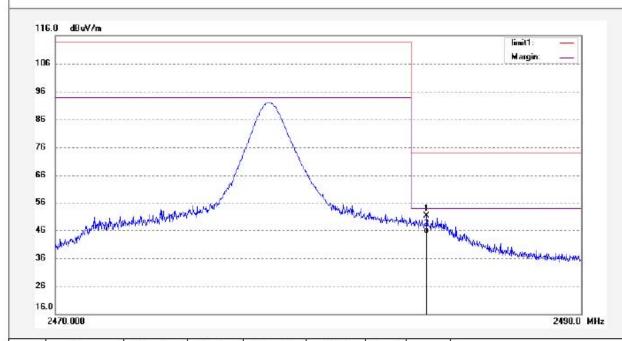
Polarization: Horizontal Power Source: DC 3V

Date: 08/10/27/ Time: 11/32/47

Engineer Signature: Joe

Distance: 3m

Note: Sample No.:3083624 Report No.:ATE20081864



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)		Margin (dB)	Detector	Remark
1	2484.111	58.43	-7.38	51.05	74.00	-22.95	peak	
2	2484.111	52.17	-7.38	44.79	54.00	-9.21	AVG	



F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park,Nanshan Shenzhen,P.R.China Site: 966 chamber Tel:+86-0755-26503290 Fax:+86-0755-26503396

Job No.: RTTE #703 Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %

EUT: 2.4G Wireless Laser Mouse Mode: TX 2478.1MHz

Model: DS-2233(2233-K)
Manufacturer: Eastern Times

Note: Sample No.:3083624 Report No.:ATE20081864

Polarization: Vertical Power Source: DC 3V

Date: 08/10/27/ Time: 11/35/06

Engineer Signature: Joe

