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

2.4G Wireless Laser Mouse Model No.: DS-2331L

FCC ID: TUV2331

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

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Report Number : ATE20101010
Date of Test : May 17, 2010
Date of Report : May 24, 2010

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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-2331L

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: 3V DC ("AAA" batteries $2\times$)

Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.249 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 :	May 17, 2010	
Prepared by :	Joe	
	(Engineer)	
Approved & Authorized Signer :	Seal =	
	(Manager)	

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT : 2.4G Wireless Laser Mouse

Model Number : DS-2331L

Power Supply : 3V DC ("AAA" batteries $2 \times$)

Operate Frequency : 2402-2478MHz

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: May 13, 2010

Date of Test : May 17, 2010

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	Jan. 9, 2011
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 9, 2011
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 9, 2011
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 9, 2011
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Jan. 9, 2011
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Jan. 9, 2011
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Jan. 9, 2011
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	Jan. 9, 2011
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 9, 2011
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 9, 2011

3. SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Result
Section 15.207	Conducted Emission	N/A
Section 15.249(a)	Fundamental and Harmonics Radiated Emission	Compliant
Section 15.249(d)	Spurious Radiated Emission	Compliant
Section 15.249(d)	Band Edge	Compliant
Section 15.203	Antenna Requirement	Compliant

Remark: "N/A" means "Not applicable".

4. FUNDAMENTAL AND HARMONICS RADIATED EMISSION FOR SECTION 15.249(A)

4.1.Block Diagram of Test Setup

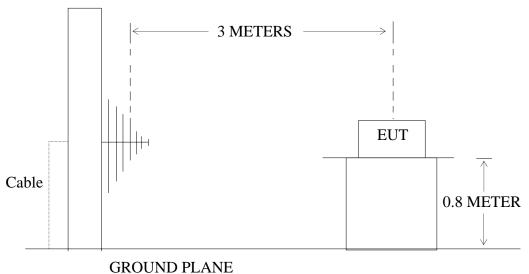
4.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: 2.4G Wireless Laser Mouse)

4.1.2.Semi-Anechoic Chamber Test Setup Diagram

ANTENNA ELEVATION VARIES FROM 1 TO 4 METERS



(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-2331L 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 2402-2478MHz. We are select 2402MHz, 2440MHz, 2478MHz 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 EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 1MHz.

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

Date of Test:May 17, 2010Temperature:25°CEUT:2.4G Wireless Laser MouseHumidity:50%Model No.:DS-2331LPower Supply:3V DC ("AAA" batteries 2×)

Test Mode: TX 2402MHz Test 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	
2402.282	93.78	99.82	-7.45	86.33	92.37	94	114	-7.67	-21.63	Vertical
2402.282	96.85	102.91	-7.45	89.40	95.46	94	114	-4.60	-18.54	Horizontal

Harmonics Radiated Emissions

Frequency	Reading(dBμV/m)	Factor(dB)	Result(c	lBμV/m)	Limit(dl	BμV/m)	Margi	in(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
4804.554	47.08	53.10	-0.30	46.78	52.80	54	74	-7.22	-21.20	Vertical
4804.501	48.44	54.48	-0.30	48.14	54.18	54	74	-5.86	-19.82	Horizontal

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

Date of Test:May 17, 2010Temperature:25°CEUT:2.4G Wireless Laser MouseHumidity:50%Model No.:DS-2331LPower Supply:3V DC ("AAA" batteries 2×)

Test Mode: TX 2440MHz Test 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	
2440.286	93.70	99.72	-7.36	86.34	92.36	94	114	-7.66	-21.64	Vertical
2440.286	96.54	102.60	-7.36	89.18	95.24	94	114	-4.82	-18.76	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	
4880.560	45.86	51.87	0.13	45.99	52.00	54	74	-8.01	-22.00	Vertical
4880.560	47.62	53.66	0.13	47.75	53.79	54	74	-6.25	-20.21	Horizontal

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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:

 $Result = Reading + Corrected \ Factor$

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

Date of Test:May 17, 2010Temperature:25°CEUT:2.4G Wireless Laser MouseHumidity:50%Model No.:DS-2331LPower Supply:3V DC ("AAA" batteries 2×)

Test Mode: TX 2478MHz Test 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	
2478.290	93.56	99.57	-7.37	86.19	92.20	94	114	-7.81	-21.80	Vertical
2478.290	96.71	102.76	-7.37	89.34	95.39	94	114	-4.66	-18.61	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	
4956.570	45.30	51.35	0.51	45.84	51.86	54	74	-8.19	-22.14	Vertical
4956.570	48.28	54.31	0.51	48.79	54.82	54	74	-5.21	-19.18	Horizontal

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

5. SPURIOUS RADIATED EMISSION FOR SECTION 15.249(D)

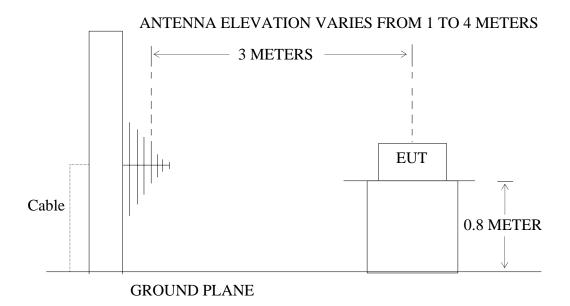
5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: 2.4G Wireless Laserl Mouse)

5.1.2.Semi-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-2331L

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 2402-2478MHz. We are select 2402MHz, 2440MHz, 2478MHz 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 EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver 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:	May 17, 2010	Temperature:	25°C
EUT:	2.4G Wireless Laser Mouse	Humidity:	50%
Model No.:	DS-2331L	Power Supply:	3V DC ("AAA" batteries 2×)
Test Mode:	TX 2402MHz	Test Engineer:	Joe

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

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

Date of Test:	May 17, 2010	Temperature:	25°C
EUT:	2.4G Wireless Laser Mouse	Humidity:	50%
Model No.:	DS-2331L	Power Supply:	3V DC ("AAA" batteries 2×)
Test Mode:	TX 2440MHz	Test Engineer:	Joe

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

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

Date of Test:	May 17, 2010	Temperature:	25°C
EUT:	2.4G Wireless Laser Mouse	Humidity:	50%
Model No.:	DS-2331L	Power Supply:	3V DC ("AAA" batteries 2×)
Test Mode:	TX 2478MHz	Test Engineer:	Joe

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

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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:

 $Result = Reading + Corrected \ Factor$

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

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-2331L

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 2402-2478MHz. We are select 2402MHz, 2478MHz 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:	May 17, 2010	Temperature:	25°C
EUT:	2.4G Wireless Laser Mouse	Humidity:	50%
Model No.:	DS-2331L	Power Supply:	3V DC ("AAA" batteries 2×)
Test Mode:	TX 2402MHz	Test Engineer:	Joe

Frequency	Reading(dBµV/m)		Factor(dB)	Result(dBµV/m)		Limit(dBµV/m)		Marg	Polarization	
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
-	-	-	-	-	-	-	-	-	_	Vertical
-	-	_	-	-	-	-	-	-	-	Horizontal

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

Date of Test:	May 17, 2010	Temperature:	25°C
EUT:	2.4G Wireless Laser Mouse	Humidity:	50%
Model No.:	DS-2331L	Power Supply:	3V DC ("AAA" batteries 2×)
Test Mode:	TX 2478MHz	Test Engineer:	Joe

Frequency	Reading(dBµV/m)		Factor(dB)	Result(dB\(\mu\)V/m)		Limit(dBµV/m)		Margi	Polarization	
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
-	_	-	-	-	_	_	_	-	_	Vertical
-	_	-	-	-	-	-	-	-	_	Horizontal

Note:

- 1. Emissions attenuated more than 20 dB below the permissible value are not reported.
- 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

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss - Amplifier Gain

7. ANTENNA REQUIREMENT

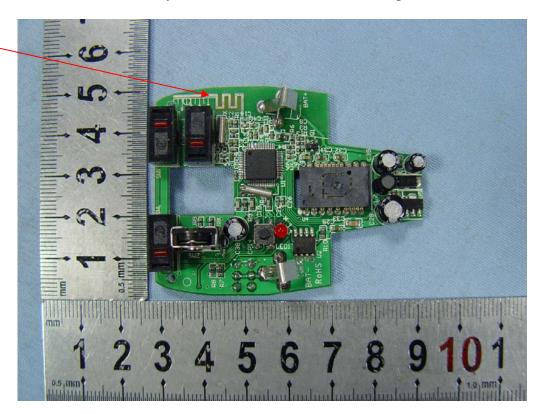
7.1.The Requirement

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

1000.0 MHz

Remark

600 700

Degree

(deg.)

Height

(cm)

Job No.: RTTE #4956

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402MHz Model: DS-2331L

dBuV/m

70.0

БП

50

40

30

20

10

0.0

No.

30.000

40

Freq.

(MHz)

60 70 80

Factor

(dB)

Result

(dBuV/m)

Limit

(dBuV/m)

Margin

(dB)

Detector

Reading

(dBuV/m)

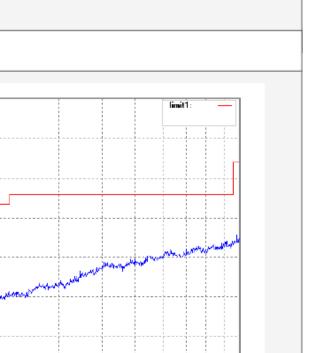
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 10:03:06

Distance: 3m

Engineer Signature: Joe



FCC ID: TUV2331



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 #4957

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

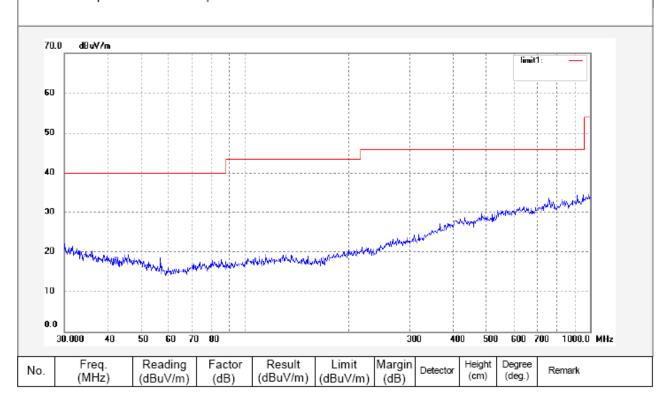
Mode: TX 2402MHz Model: DS-2331L

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Vertical Power Source: DC 3V Date: 2010/05/17 Time: 10:06:40

> Engineer Signature: Joe Distance: 3m





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 #4981

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402MHz Model: DS-2331L

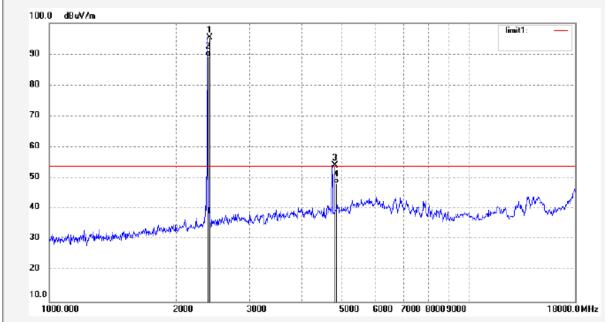
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 11:54:56

Distance: 3m

Engineer Signature: Joe



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.282	102.91	-7.45	95.46	114.00	-18.54	peak			
2	2402.282	96.85	-7.45	89.40	94.00	-4.60	AVG			
3	4804.554	54.48	-0.30	54.18	74.00	-19.82	peak			
4	4804.554	48.44	-0.30	48.14	54.00	-5.86	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

Standard: FCC Class B 3M Radiated

Test item: Radiation Test Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402MHz Model: DS-2331L

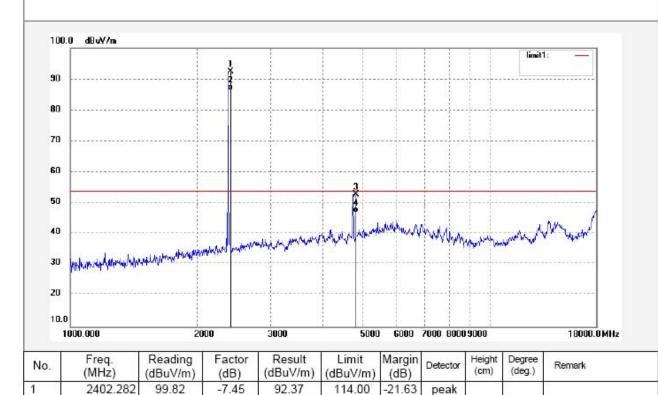
Manufacturer: Eastern Times Technology Co., Ltd.

Sample No.:101095 Report No.:ATE20101010 Note:

Polarization: Vertical Power Source: DC 3V Date: 2010/05/17 Time: 11:51:16

Engineer Signature: Joe

Distance: 3m



-21.63

-7.67

-21.20

-7.22

AVG

peak

AVG

94.00

74.00

54.00

1

3

4

2402.282

4804.554

4804.554

93.78

53.10

47.08

-7.45

-0.30

-0.30

86.33

52.80

46.78



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 #4988

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402MHz Model: DS-2331L

dBuV/m

70.0

κп

50

40

30

20

10

0.0

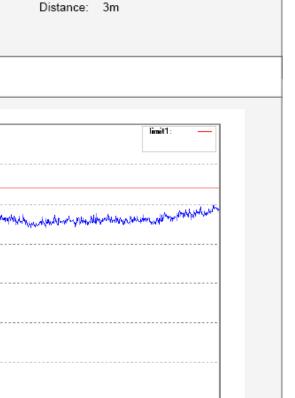
18000.000

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 13:00:38

Engineer Signature: Joe



25000.0 MHz

Reading Freq. Factor Result Limit Margin Height Degree No. Detector Remark (deg.) (dBuV/m) (cm) (MHz) (dBuV/m) (dB) (dBuV/m) (dB)

20000



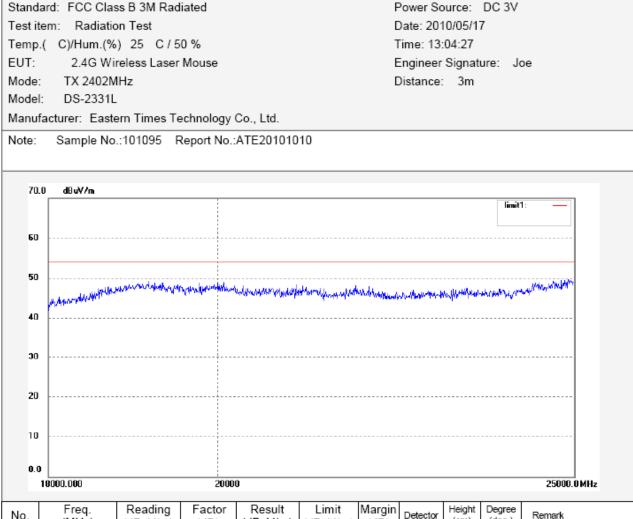
F1,Bldg,A,Changyuan New Material Port Keyuan Rd, Science & Industry Park, Nanshan Shenzhen, P.R. China

Polarization:

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

Job No.: RTTE #4989

Standard: FCC Class B 3M Radiated





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 #4959

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2440MHz Model: DS-2331L

70.0

БП

50

40

30

20

10

0.0

No.

30.000

(MHz)

(dBuV/m)

(dB)

Manufacturer: Eastern Times Technology Co., Ltd.

Sample No.:101095 Report No.:ATE20101010 Note:

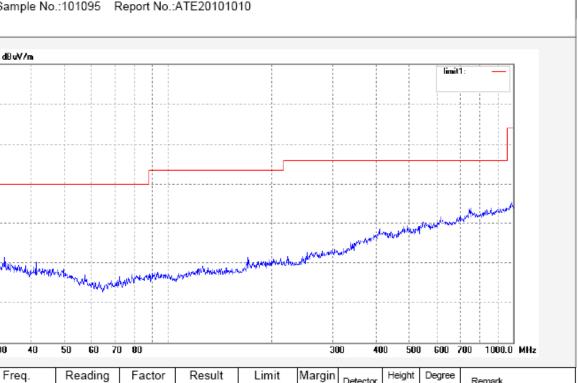
Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 10:14:16

Distance: 3m

Detector

(dB)

Engineer Signature: Joe



(dBuV/m)

(dBuV/m)

Remark

(deg.)

(cm)



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 #4958

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2440MHz Model: DS-2331L

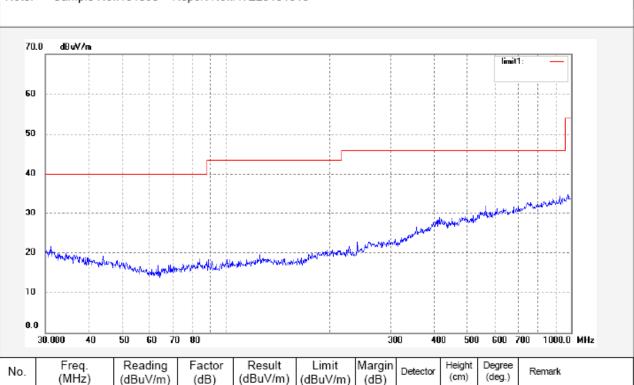
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Vertical Power Source: DC 3V Date: 2010/05/17 Time: 10:10:43

Distance: 3m

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 #4982

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

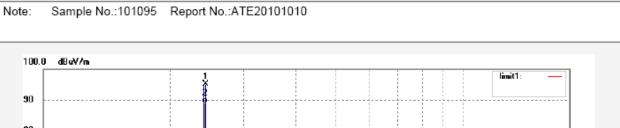
Mode: TX 2440MHz Model: DS-2331L

Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 11:59:08

Distance: 3m

Engineer Signature: Joe



- 10	000.000	2000	3000		5000	6000	7000	80009	000	18	3000.
10.0											
20							ļ				
30	Marketter get of the first of the section of the section of	Mary									
40	organización folias por forta de productivo de la constitución de la c	لياس	Marshandard was you	Allaharak	بمسألتال والربه	May()/	WW	Analyte	M/M	White And Market	g.H.
50				4							
60		-		3							
70											
80											
90							1	1			

No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.286	102.60	-7.36	95.24	114.00	-18.76	peak			
2	2440.286	96.54	-7.36	89.18	94.00	-4.82	AVG			
3	4880.560	53.66	0.13	53.79	74.00	-20.21	peak			
4	4880.560	47.62	0.13	47.75	54.00	-6.25	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 #4983

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 %

EUT: 2.4G Wireless Laser Mouse

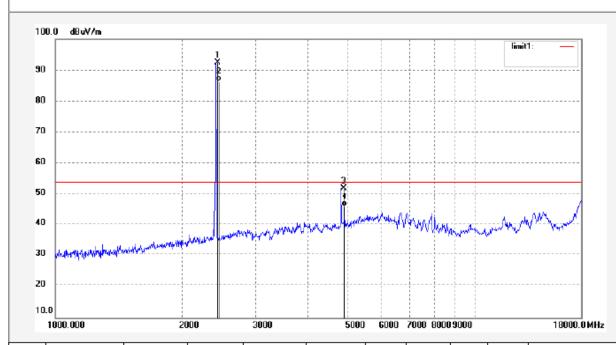
Mode: TX 2440MHz Model: DS-2331L

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010



Distance: 3m



	No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
	1	2440.286	99.72	-7.36	92.36	114.00	-21.64	peak			
	2	2440.286	93.70	-7.36	86.34	94.00	-7.66	AVG			
	3	4880.560	51.87	0.13	52.00	74.00	-22.00	peak			
	4	4880.560	45.86	0.13	45.99	54.00	-8.01	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 #4991

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2440MHz Model: DS-2331L

dBuV/m

70.0

κп

50

40

30

20

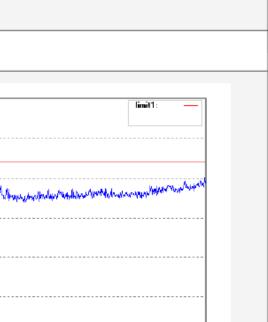
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 13:12:19

Distance: 3m

Engineer Signature: Joe



10 0.0 18000.000 20000 25000.0 MHz Reading Freq. Factor Result Limit Margin Height Degree No. Detector Remark (deg.) (dBuV/m) (cm) (MHz) (dBuV/m) (dB) (dBuV/m) (dB)



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 #4990

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2440MHz Model: DS-2331L

dBuV/m

70.0

κп

50

40

30

20

10

0.0

No.

18000.000

Freq.

(MHz)

Manufacturer: Eastern Times Technology Co., Ltd.

Reading

(dBuV/m)

Note: Sample No.:101095 Report No.:ATE20101010

20000

Result

(dBuV/m)

Limit

(dBuV/m)

Margin

(dB)

Height

(cm)

Detector

Degree

(deg.)

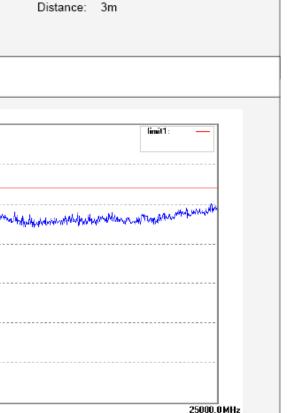
Remark

Factor

(dB)

Polarization: Vertical Power Source: DC 3V Date: 2010/05/17 Time: 13:08:41

Engineer Signature: Joe



FCC ID:	TUV2331



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 #4960

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478MHz Model: DS-2331L

dBuV/m

70.0

БП

50

40

30

20

10

0.0

No.

30.000

40

Freq.

(MHz)

60 70 80

Factor

(dB)

Result

(dBuV/m)

Limit

(dBuV/m)

Margin

(dB)

Detector

Reading

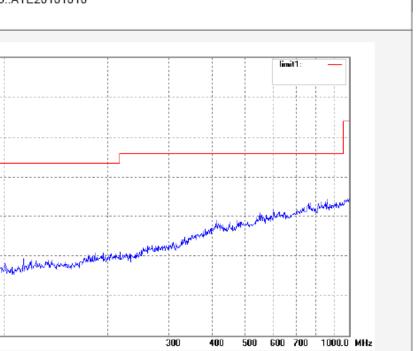
(dBuV/m)

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 10:18:25

> Engineer Signature: Joe Distance: 3m



Height

(cm)

Degree

(deg.)

Remark



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 #4961

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478MHz Model: DS-2331L

dBuV/m

70.0

БП

50

40

30

20

10

0.0

No.

30.000

40

Freq.

(MHz)

60 70 80

Factor

(dB)

Result

(dBuV/m)

Limit

(dBuV/m)

Margin

(dB)

Detector

Reading

(dBuV/m)

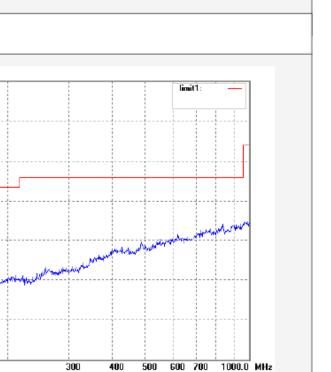
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Vertical Power Source: DC 3V Date: 2010/05/17 Time: 10:21:58

Distance: 3m

Engineer Signature: Joe



Height

(cm)

Degree

(deg.)

Remark



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

Standard: FCC Class B 3M Radiated

Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 50 %
EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478MHz Model: DS-2331L

2478.290

2478.290

4956.570

4956.570

102.76

96.71

54.31

48.28

-7.37

-7.37

0.51

0.51

95.39

89.34

54.82

48.79

114.00

94.00

74.00

54.00

-18.61

-4.66

-19.18

-5.21

peak

AVG

peak

AVG

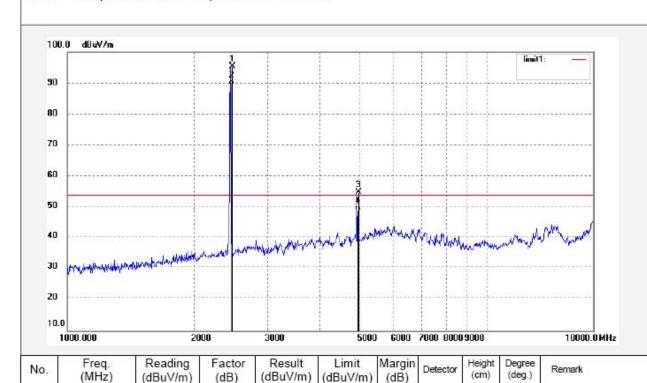
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 11:43:35

Engineer Signature: Joe

Distance: 3m



1

3

4



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 #4979

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478MHz Model: DS-2331L

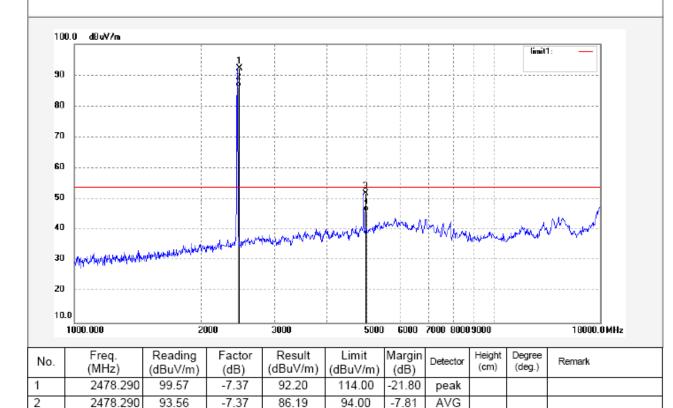
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Vertical Power Source: DC 3V Date: 2010/05/17 Time: 11:47:10

Engineer Signature: Joe

Distance: 3m



74.00

54.00

-22.14

-8.19

peak

AVG

3

4

4956.570

4956.570

51.35

45.30

0.51

0.51

51.86

45.81



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

25000.0 MHz

Remark

Job No.: RTTE #4992

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478MHz Model: DS-2331L

dBuV/m

70.0

κп

50

40

30

20

10

0.0

No.

18000.000

Freq.

(MHz)

Manufacturer: Eastern Times Technology Co., Ltd.

Reading

(dBuV/m)

Note: Sample No.:101095 Report No.:ATE20101010

20000

Result

(dBuV/m)

Limit

(dBuV/m)

Margin

(dB)

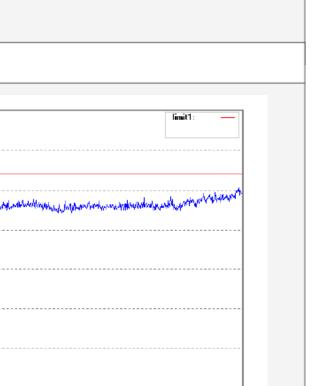
Factor

(dB)

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 13:16:35

Distance: 3m

Engineer Signature: Joe



Height

(cm)

Detector

Degree

(deg.)



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 #4993

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478MHz Model: DS-2331L

(MHz)

(dBuV/m)

(dB)

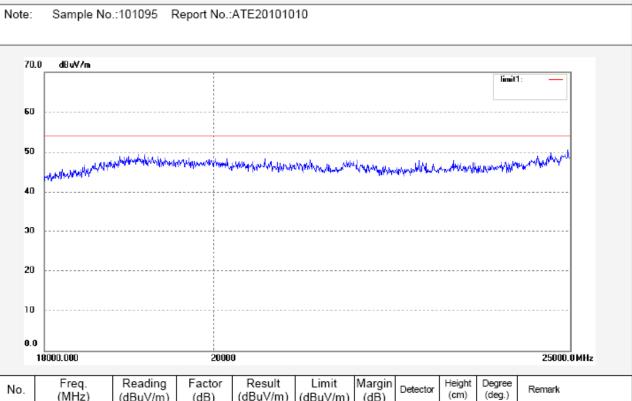
Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Power Source: DC 3V Date: 2010/05/17 Time: 13:20:07

Distance: 3m

Engineer Signature: Joe

(cm)



(dBuV/m)

(dB)

(dBuV/m)



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 #4984

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402MHz

Model: DS-2331L

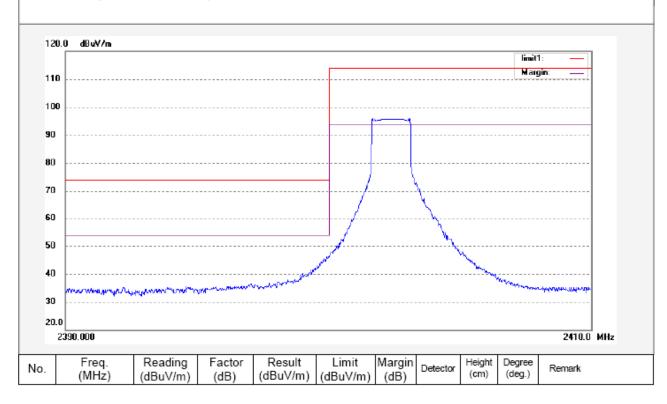
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 12:40:32

Engineer Signature: Joe

Distance: 3m





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 #4985

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test Temp.(C)/Hum.(%) 25 C / 50 %

EUT: 2.4G Wireless Laser Mouse

Mode: TX 2402MHz Model: DS-2331L

dBuV/m

120.0

110

100

90

80

70

60

50

40

30 20.0

Manufacturer: Eastern Times Technology Co., Ltd.

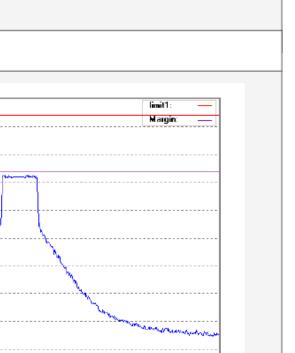
Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Vertical Power Source: DC 3V

Date: 10/02/02/ Time: 12:44:55

Distance: 3m

Engineer Signature: Joe



2390.000 2410.0 MHz Reading Freq. Factor Result Limit Margin Height Degree No. Detector Remark (deg.) (cm) (MHz) (dBuV/m) (dB) (dBuV/m) (dBuV/m) (dB)



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 #4986

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478MHz Model: DS-2331L

dBuV/m

120.0

110

100

90

80

70

60

50

40

30 20.0

No.

2470.000

Freq.

(MHz)

Manufacturer: Eastern Times Technology Co., Ltd.

Reading

(dBuV/m)

Factor

(dB)

Result

(dBuV/m)

Limit

(dBuV/m)

Margin

(dB)

Detector

Height

(cm)

Degree

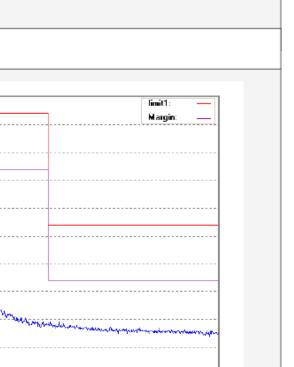
(deg.)

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Horizontal Power Source: DC 3V Date: 2010/05/17 Time: 12:50:18

Distance: 3m

Engineer Signature: Joe



2490.0 MHz

Remark



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

2490.0 MHz

Remark

Job No.: RTTE #4987

Standard: FCC Part 15 PEAK 2.4G

Test item: Radiation Test

Temp.(C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Laser Mouse

Mode: TX 2478MHz Model: DS-2331L

dBuV/m

120.0

110

100

90

80

70

60

50

40

30 20.0

No.

2470.000

Freq.

(MHz)

Manufacturer: Eastern Times Technology Co., Ltd.

Reading

(dBuV/m)

Factor

(dB)

Result

(dBuV/m)

Limit

(dBuV/m)

Margin

(dB)

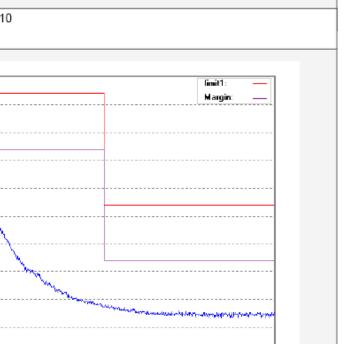
Detector

Note: Sample No.:101095 Report No.:ATE20101010

Polarization: Vertical Power Source: DC 3V Date: 2010/05/17 Time: 12:54:39

Distance: 3m

Engineer Signature: Joe



Height

(cm)

Degree

(deg.)