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

2.4G Wireless Optical Mouse Model No.: DS-2329

FCC ID: TUV2329A

Prepared for

Address

: Eastern Times Technology Co., Ltd.

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

Longhua, Shenzhen, Guangdong, China

Prepared by

Address

: ACCURATE TECHNOLOGY CO. LTD

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Report Number : ATE20101687

Date of Test : August 5-6, 2010

Date of Report : August 9, 2010

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APPENDIX I (TEST CURVES) (22 pages)

#### **Test Report Certification**

Applicant : Eastern Times Technology Co., Ltd.

Manufacturer : Eastern Times Technology Co., Ltd.

EUT Description : 2.4G Wireless Optical Mouse

(A) MODEL NO.: DS-2329

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: 3V DC ("AAA" batteries 2×)

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 :	August 5-6, 2010
Prepared by :	Joe
_	(Engineer)
Approved & Authorized Signer :	Lemb
	(Manager)

#### 1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT : 2.4G Wireless Optical Mouse

Model Number : DS-2329

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

Operate Frequency : 2408-2474MHz

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: August 3, 2010

Date of Test : August 5-6, 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	Туре	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	<b>Description of Test</b>	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

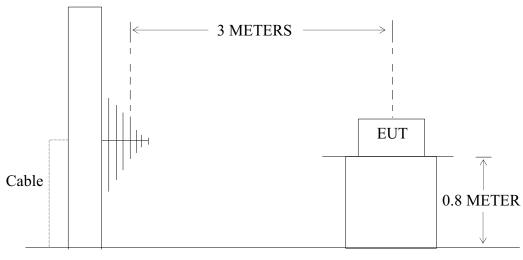
4.1.1.Block diagram of connection between the EUT and simulators



(EUT: 2.4G Wireless Optical Mouse)

4.1.2.Semi-Anechoic Chamber Test Setup Diagram

#### ANTENNA ELEVATION VARIES FROM 1 TO 4 METERS



**GROUND PLANE** 

(EUT: 2.4G Wireless Optical 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 $\mu$ V/m and the harmonics shall not exceed 54 dB $\mu$ 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 Optical Mouse (EUT)

Model Number : DS-2329 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 2408-2474MHz. We are select 2408MHz, 2440MHz, 2474MHz 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: August 5-6, 2010 Temperature: 25°C

EUT: 2.4G Wireless Optical Mouse Humidity: 50%

Model No.: DS-2329 Power Supply: 3V DC ("AAA" batteries 2×)

Test Mode: TX 2408MHz Test Engineer: Joe

#### **Fundamental Radiated Emissions**

Frequency	Reading(	dBμV/m)	Factor(dB) Result(dBµV/m		lBμV/m)	Limit(dBµV/m)		Margin(dB)		Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
2408.248	88.02	93.66	-7.44	80.58	86.22	94	114	-13.42	-27.78	Vertical
2408.248	93.02	98.69	-7.44	85.58	91.25	94	114	-8.42	-22.75	Horizontal

#### **Harmonics Radiated Emissions**

Frequency	Reading(	dBμV/m)	Factor(dB)	Result(c	lBμV/m)	Limit(d	BμV/m)	Marg	in(dB)	Polarization
(MHz)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
4816.495	44.53	50.17	-0.23	44.30	49.94	54	74	-9.70	-24.06	Vertical
4816.495	47.24	52.81	-0.23	47.01	52.58	54	74	-6.99	-21.42	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:August 5-6, 2010Temperature:25°CEUT:2.4G Wireless Optical MouseHumidity:50%Model No.:DS-2329Power Supply:3V DC ("AAA" batteries 2×)Test Mode:TX 2440MHzTest Engineer:Joe

#### **Fundamental Radiated Emissions**

Frequency (MHz)			Factor(dB) Corr.	Result(dBµV/m)		Limit(dBµV/m)		Margin(dB)		Polarization
(IVIIIZ)	AV	PEAK	Con.	AV	PEAK	AV	PEAK	AV	PEAK	
2440.249	87.46	93.23	-7.36	80.10	85.87	94	114	-13.90	-28.13	Vertical
2440.249	92.60	98.23	-7.36	85.24	90.87	94	114	-8.76	-23.13	Horizontal

#### **Harmonics Radiated Emissions**

Frequency (MHz)	Reading(o	dBμV/m	Factor(dB) Corr.	Result(dBµV/m)		Limit(dBµV/m)		Margin(dB)		Polarization
(WITIZ)	AV	PEAK	Con.	AV	PEAK	AV	PEAK	AV	PEAK	
4880.500	44.59	50.24	0.13	44.72	50.37	54	74	-9.28	-23.63	Vertical
4880.500	47.84	53.47	0.13	47.97	53.60	54	74	-6.03	-20.4	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: August 5-6, 2010

EUT: 2.4G Wireless Optical Mouse

Model No.: DS-2329

Test Mode: TX 2474MHz

Temperature: 25°C

Humidity: 50%

Power Supply: 3V DC ("AAA" batteries 2×)

Test Engineer: Joe

#### **Fundamental Radiated Emissions**

Frequency (MHz)	Reading(	dBμV/m	Factor(dB) Corr.	Result(d	Result(dBμV/m) Limit(dBμV		BμV/m)	Margin(dB)		Polarization
(WITIZ)	AV	PEAK	Con.	AV	PEAK	AV	PEAK	AV	PEAK	
2474.256	87.37	92.97	-7.37	80.00	85.60	94	114	-14.00	-28.40	Vertical
2474.256	92.38	98.00	-7.37	85.01	90.63	94	114	-8.99	-23.37	Horizontal

#### **Harmonics Radiated Emissions**

Frequency (MHz)	Reading(dBμV/m		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBµV/m)		Margin(dB)		Polarization
(IVIIIZ)	AV	PEAK	Corr.	AV	PEAK	AV	PEAK	AV	PEAK	
4948.510	45.03	50.67	0.47	45.50	51.14	54	74	-8.5	-22.86	Vertical
4948.510	47.53	53.14	0.47	48.00	53.61	54	74	-6.00	-20.39	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)

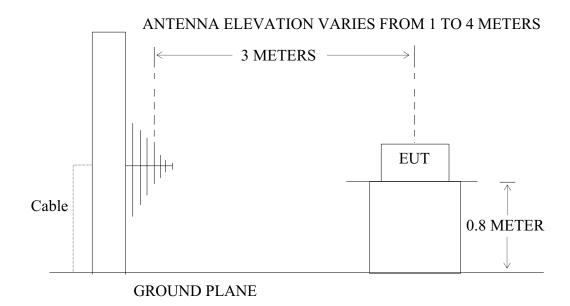
#### 5.1.Block Diagram of Test Setup

5.1.1.Block diagram of connection between the EUT and simulators

EUT

(EUT: 2.4G Wireless Optical Mouse)

5.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: 2.4G Wireless Optical 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 Optical Mouse (EUT)

Model Number : DS-2329 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 2408-2474MHz. We are select 2408MHz, 2440MHz, 2474MHz 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:August 5-6, 2010Temperature:25°CEUT:2.4G Wireless Optical MouseHumidity:50%Model No.:DS-2329Power Supply:3V DC ("AAA" batteries 2×)Test Mode:TX 2408MHzTest 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

#### 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:August 5-6, 2010Temperature:25°CEUT:2.4G Wireless Optical MouseHumidity:50%Model No.:DS-2329Power Supply:3V DC ("AAA" batteries 2×)Test Mode:TX 2440MHzTest 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

#### 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:August 5-6, 2010Temperature:25°CEUT:2.4G Wireless Optical MouseHumidity:50%Model No.:DS-2329Power Supply:3V DC ("AAA" batteries 2×)Test Mode:TX 2474MHzTest 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

#### 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 Optical Mouse (EUT)

Model Number : DS-2329 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 2408-2474MHz. We are select 2408MHz, 2474MHz 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:August 6, 2010Temperature:25°CEUT:2.4G Wireless Optical MouseHumidity:50%Model No.:DS-2329Power Supply:3V DC ("AAA" batteries 2×)Test Mode:TX 2408MHzTest 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	
-	_	_	-	_	_	_	_	-	_	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:August 6, 2010Temperature:25°CEUT:2.4G Wireless Optical MouseHumidity:50%Model No.:DS-2329Power Supply:3V DC ("AAA" batteries 2×)Test Mode:TX 2474MHzTest 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	
_	_	_	_	-	_	_	_	-	_	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

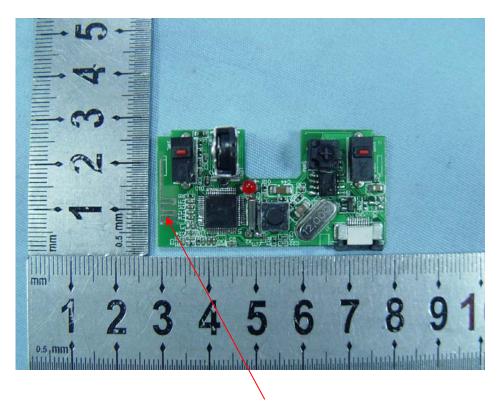
### 7. ANTENNA REQUIREMENT

# 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

Job No.: RTTE #5581 Standard: FCC Class B 3M Radiated

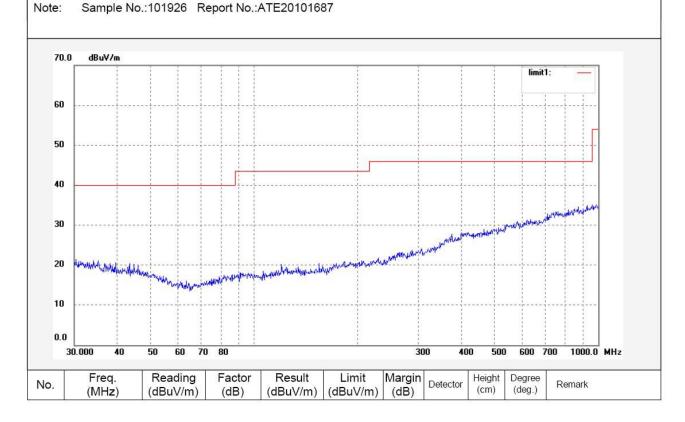
Test item: Radiation Test Temp.( C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Optical Mouse

TX 2408MHz Mode: Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/05 Time: 8:36:41

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 #5582 Standard: FCC Class B 3M Radiated

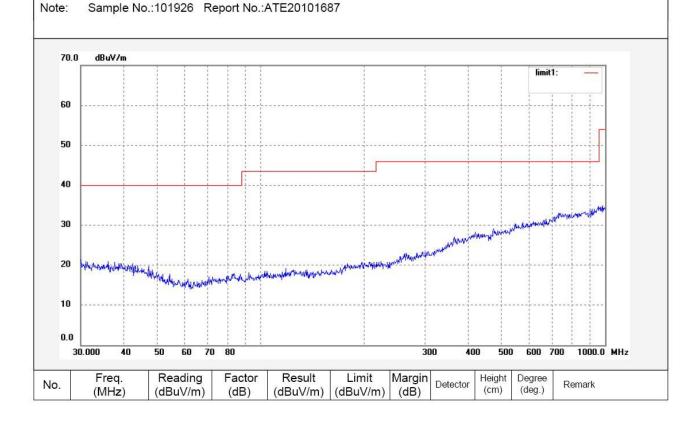
Test item: Radiation Test Temp.( C)/Hum.(%) 25 C / 50 % EUT: 2.4G Wireless Optical Mouse

Mode: TX 2408MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Vertical Power Source: DC 3V Date: 2010/08/05 Time: 8:40:10

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 #5603

Standard: FCC Class B 3M Radiated

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

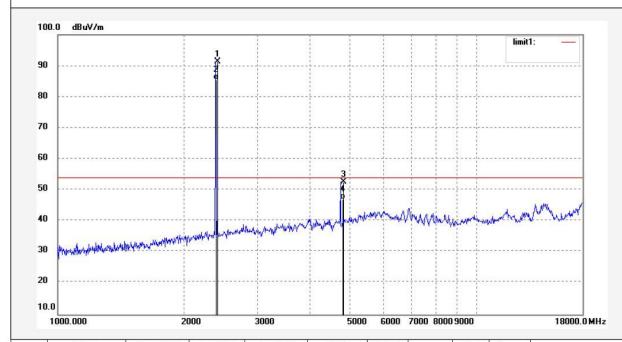
Mode: TX 2408MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/06 Time: 15:30:20

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	2408.248	98.69	-7.44	91.25	114.00	-22.75	peak			
2	2408.248	93.02	-7.44	85.58	94.00	-8.42	AVG	8		
3	4816.495	52.81	-0.23	52.58	74.00	-21.42	peak			
4	4816.495	47.24	-0.23	47.01	54.00	-6.99	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 #5604 Standard: FCC Class B 3M Radiated

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

Mode: TX 2408MHz

2408.248

2408.248

4816.495

4816.495

93.66

88.02

50.17

44.53

-7.44

-7.44

-0.23

-0.23

86.22

80.58

49.94

44.30

114.00

94.00

74.00

54.00

-27.78

-13.42

-24.06

-9.70

peak

AVG

peak

**AVG** 

Model: DS-2329

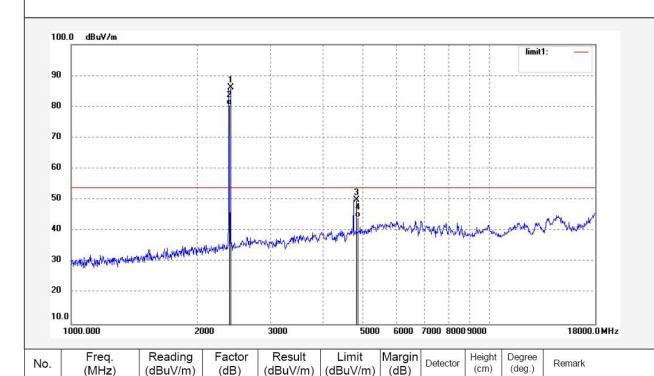
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/06 Time: 15:34:36

Engineer Signature: Joe

Distance: 3m



1

2

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 #5609

Standard: FCC Class B 3M Radiated

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

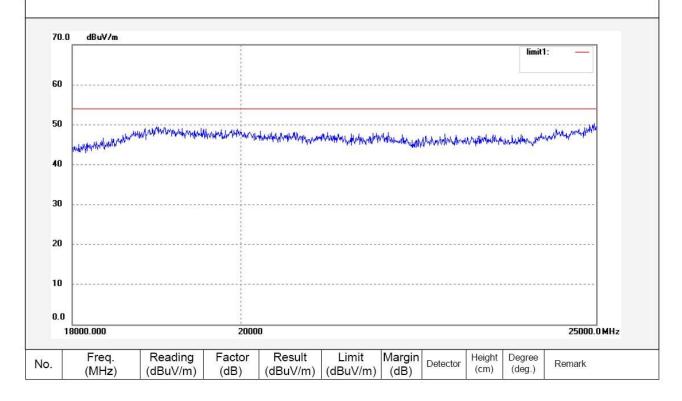
Mode: TX 2408MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/06 Time: 15:58:54

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 #5610 Standard: FCC Class B 3M Radiated

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

Mode: TX 2408MHz Model: DS-2329

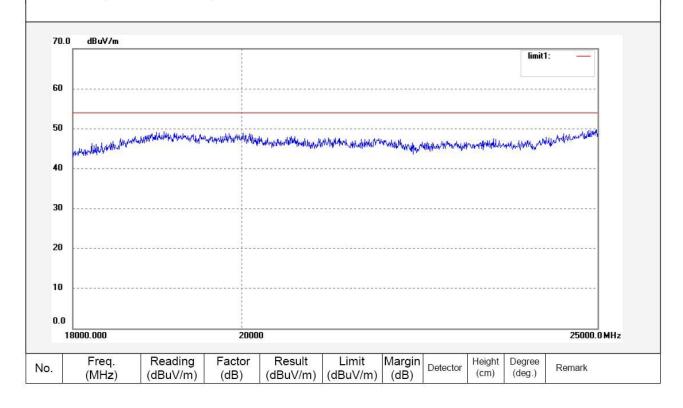
Note:

Manufacturer: Eastern Times Technology Co., Ltd.

Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/06 Time: 16:03:02

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 #5584

Standard: FCC Class B 3M Radiated

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

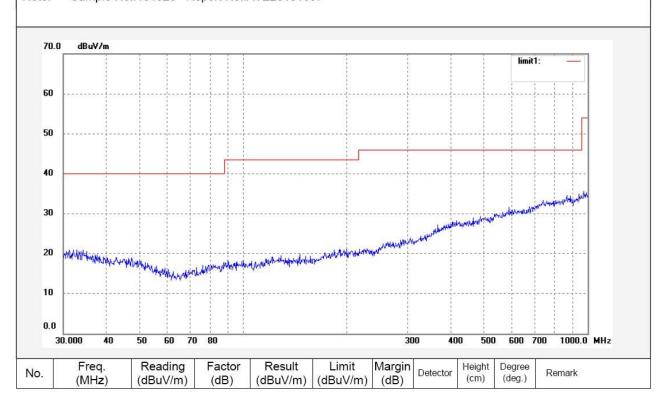
Mode: TX 2440MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/05 Time: 8:47:54

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 #5583

Standard: FCC Class B 3M Radiated

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

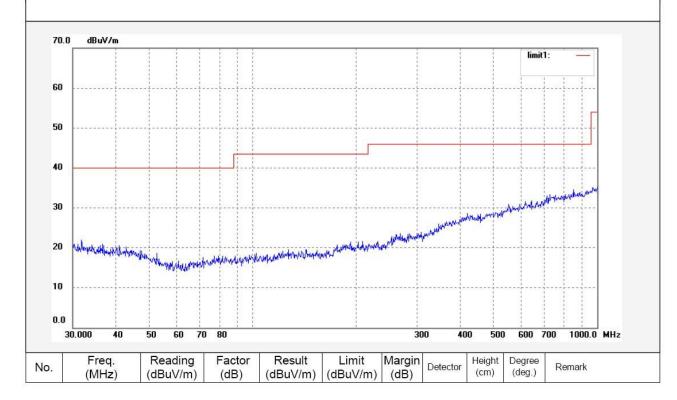
Mode: TX 2440MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/05 Time: 8:44:19

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 #5606

Standard: FCC Class B 3M Radiated

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

Mode: TX 2440MHz Model: DS-2329

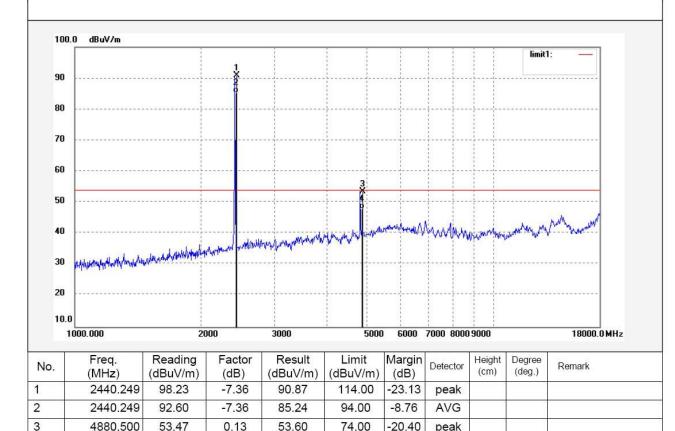
Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/06 Time: 15:43:59

Engineer Signature: Joe

Distance: 3m



4

4880.500

47.84

0.13

47.97

54.00

-6.03

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 #5605

Standard: FCC Class B 3M Radiated

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

Mode: TX 2440MHz

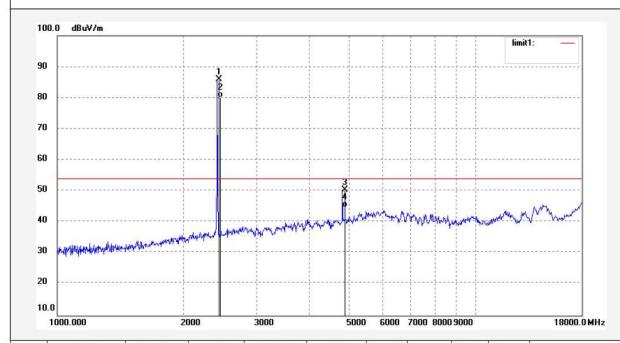
Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/06 Time: 15:39:45

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	2440.249	93.23	-7.36	85.87	114.00	-28.13	peak			
2	2440.249	87.46	-7.36	80.10	94.00	-13.90	AVG			
3	4880.500	50.24	0.13	50.37	74.00	-23.63	peak			
4	4880.500	44.59	0.13	44.72	54.00	-9.28	AVG		0	



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 #5612 Standard: FCC Class B 3M Radiated

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

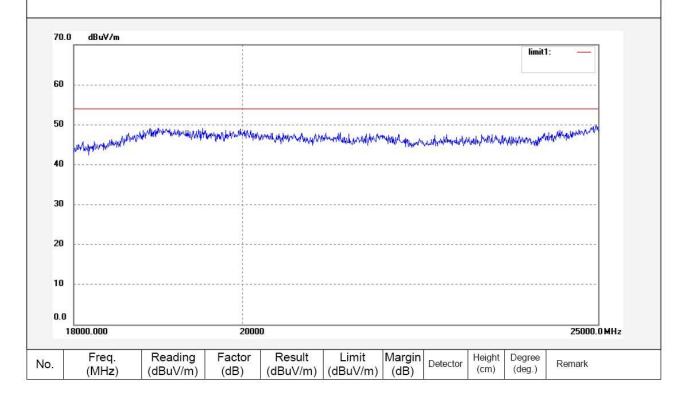
Mode: TX 2440MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/06 Time: 16:12:09

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 #5611

Standard: FCC Class B 3M Radiated

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

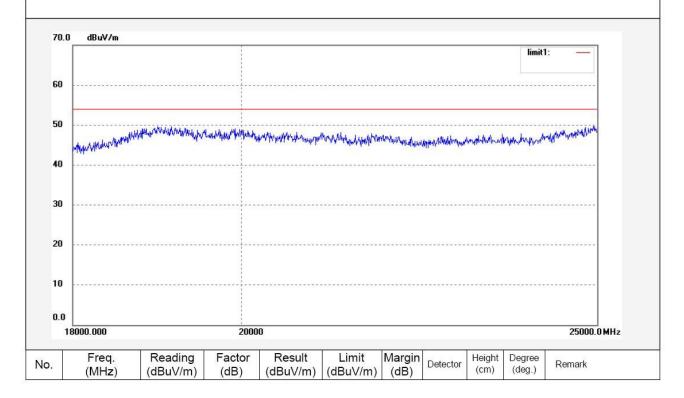
Mode: TX 2440MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/06 Time: 16:07:55

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 #5585

Standard: FCC Class B 3M Radiated

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

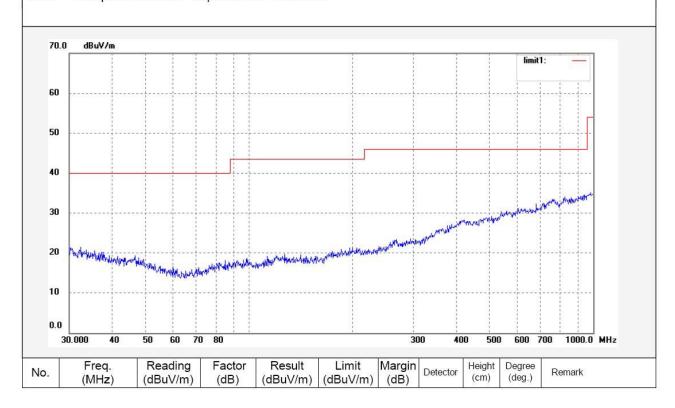
Mode: TX 2474MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/05 Time: 8:52:08

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 #5586

Standard: FCC Class B 3M Radiated

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

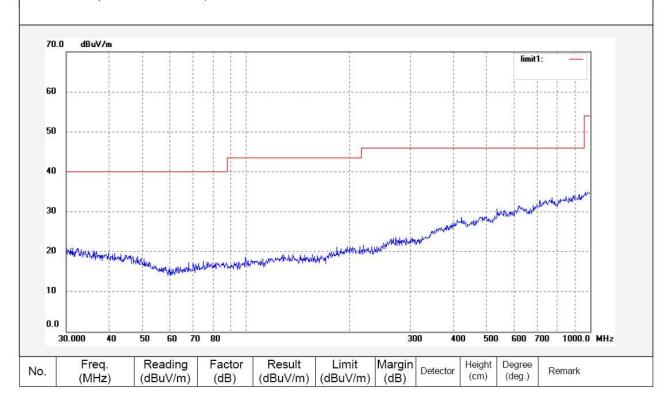
Mode: TX 2474MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/05 Time: 8:55:46

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 #5607

Standard: FCC Class B 3M Radiated

Test item: Radiation Test

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

EUT: 2.4G Wireless Optical Mouse

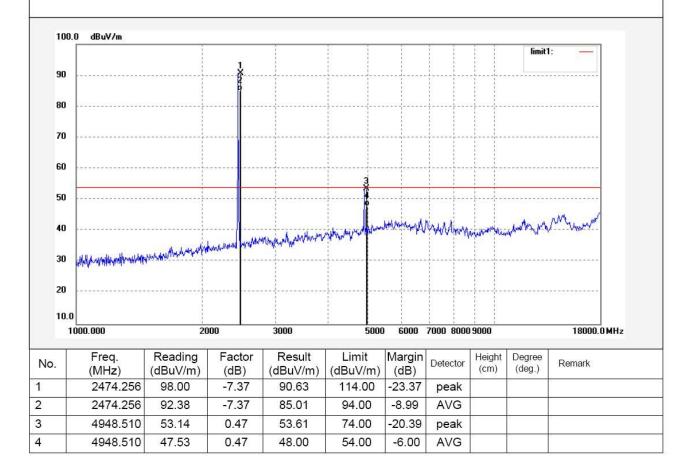
Mode: TX 2474MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/06 Time: 15:45:09

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 #5608

Standard: FCC Class B 3M Radiated

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

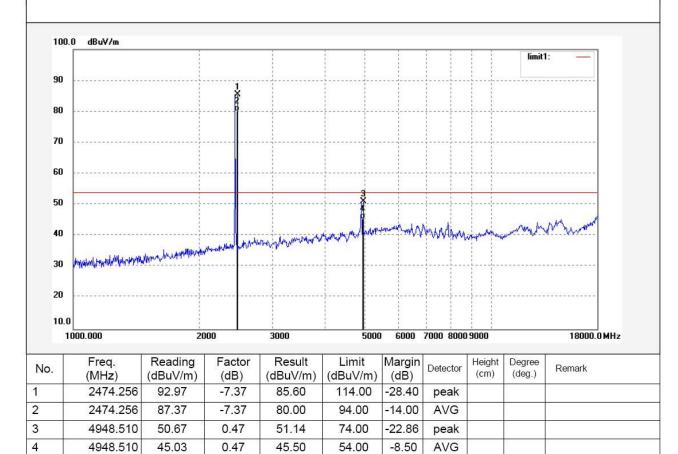
Mode: TX 2474MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/06 Time: 15:49:32

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 #5613

Standard: FCC Class B 3M Radiated

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

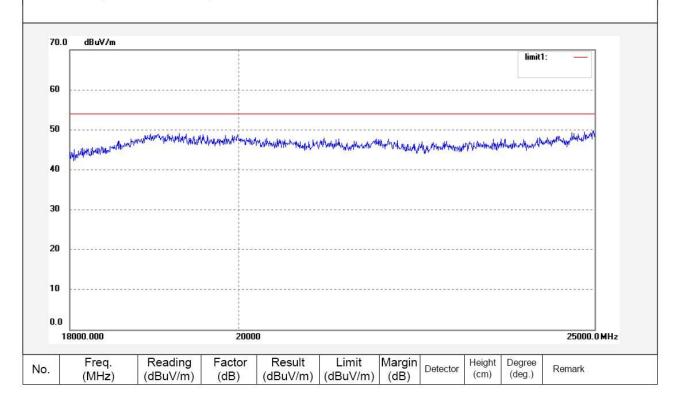
Mode: TX 2474MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/06 Time: 16:16:59

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 #5614

Standard: FCC Class B 3M Radiated

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

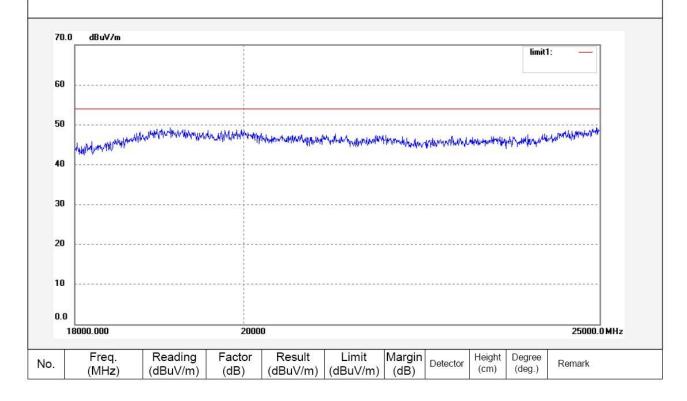
Mode: TX 2474MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/06 Time: 16:21:18

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 #5615 Standard: FCC Part 15 PEAK 2.4G

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

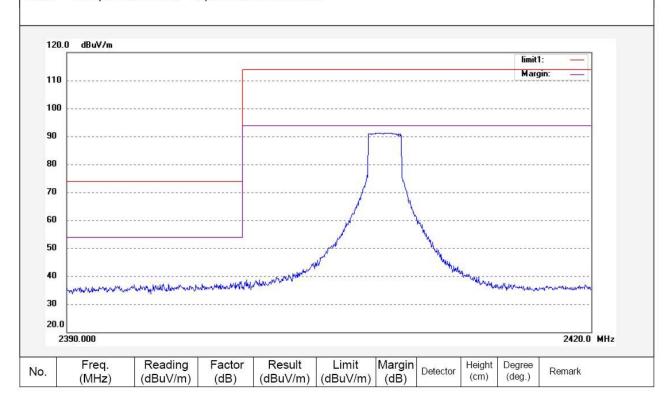
Mode: TX 2408MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/06 Time: 16:32:35

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 #5616

Standard: FCC Part 15 PEAK 2.4G

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

Mode: TX 2408MHz

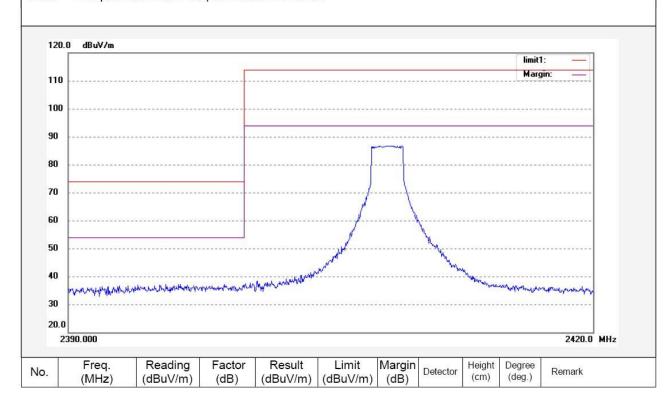
Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Vertical Power Source: DC 3V Date: 2010/08/06 Time: 16:36:50

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 #5618 Standard: FCC Part 15 PEAK 2.4G

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

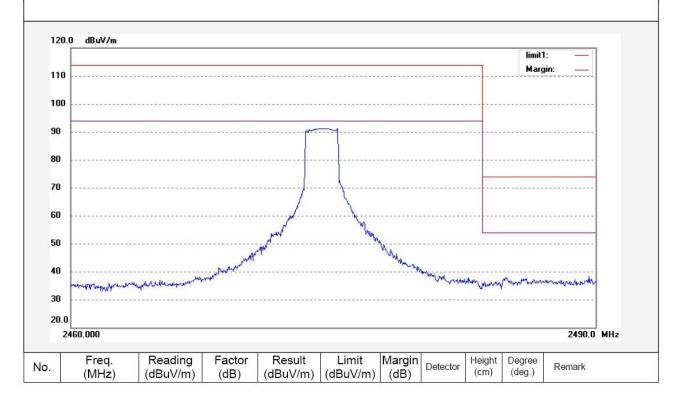
Mode: TX 2474MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Note: Sample No.:101926 Report No.:ATE20101687

Polarization: Horizontal Power Source: DC 3V Date: 2010/08/06 Time: 16:46:39

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 #5617 Standard: FCC Part 15 PEAK 2.4G

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

Mode: TX 2474MHz Model: DS-2329

Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 3V
Date: 2010/08/06
Time: 16:42:28

Engineer Signature: Joe

