

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

2.4G Wireless Optical Mouse  
Model No.: DS-2283, DS-2282

FCC ID: TUVDS-2283-2282

Prepared for : Eastern Times Technology Co., Ltd.  
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Report Number : ATE20132503  
Date of Test : November 28-29, 2013  
Date of Report : December 3, 2013

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APPENDIX I ( TEST CURVES) (28 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-2283, DS-2282  
(B) POWER SUPPLY: 3V DC ( “AAA” batteries 2×)

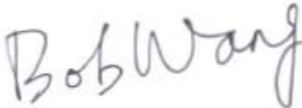
Measurement Procedure Used:

**FCC Rules and Regulations Part 15 Subpart C Section 15.249**  
**ANSI C63.4: 2009**

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 Section 15.249 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 : November 28-29, 2013

Prepared by :   
(Engineer)

Approved & Authorized Signer :   
(Manager)

# 1. GENERAL INFORMATION

## 1.1. Description of Device (EUT)

EUT	:	2.4G Wireless Optical Mouse
Model Number	:	DS-2283, DS-2282 (We hereby state that these models are identical in interior structure, electrical circuits and components, and just model names are different for the marketing requirement. Therefore only model DS-2283 is tested for tests)
Power Supply	:	3V DC ( “AAA” batteries 2× )
Operate Frequency	:	2408.000-2474.000MHz
Applicant	:	Eastern Times Technology Co., Ltd.
Address	:	Building D, Nan An Industry Park, Youganpu Village Fenggang Town, Dongguan City, Guangdong, China
Manufacturer	:	Eastern Times Technology Co., Ltd.
Address	:	Building D, Nan An Industry Park, Youganpu Village Fenggang Town, Dongguan City, Guangdong, China
Date of sample received	:	November 26, 2013
Date of Test	:	November 28-29, 2013

## 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 dates	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	Jan. 12, 2013	Jan. 11, 2014
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	Jan. 12, 2013	Jan. 11, 2014
Spectrum Analyzer	Agilent	E7405A	MY45115511	Jan. 12, 2013	Jan. 11, 2014
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	Jan. 12, 2013	Jan. 11, 2014
Loop Antenna	Schwarzbeck	FMZB1516	1516131	Feb. 06, 2013	Feb. 05, 2014
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	Feb. 06, 2013	Feb. 05, 2014
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	Feb. 06, 2013	Feb. 05, 2014
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1067	Feb. 06, 2013	Feb. 05, 2014
LISN	Rohde&Schwarz	ESH3-Z5	100305	Jan. 12, 2013	Jan. 11, 2014
LISN	Schwarzbeck	NSLK8126	8126431	Jan. 12, 2013	Jan. 11, 2014

### 3. SUMMARY OF TEST RESULTS

<b>FCC Rules</b>	<b>Description of Test</b>	<b>Result</b>
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)

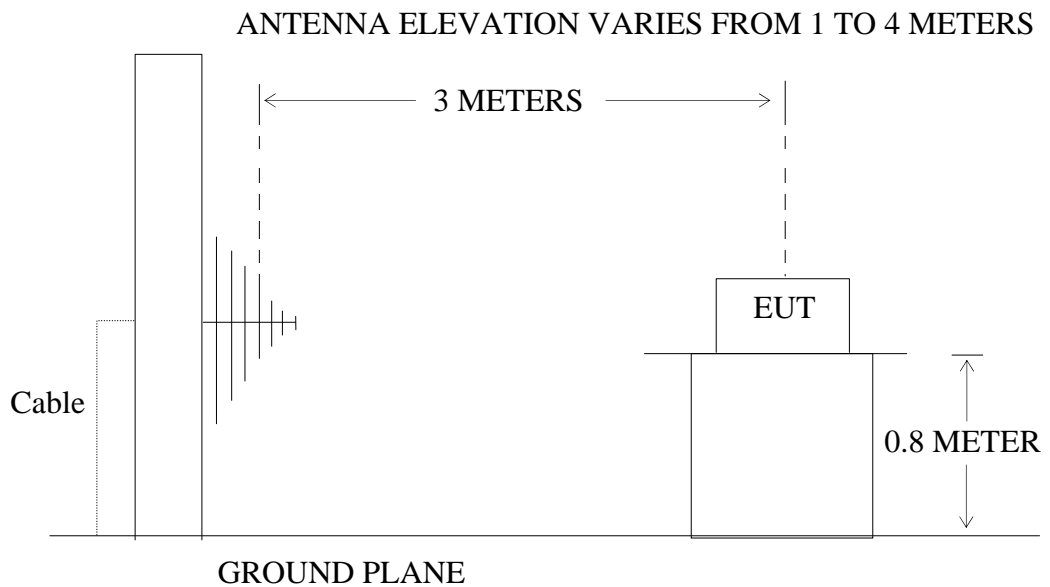
### 4.1. Block Diagram of Test Setup

#### 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



(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 Frequency	Field Strength of Fundamental (millivolts/meter)	Field Strength of harmonics (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-2283  
 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 2408.000 - 2474.000 MHz MHz. We are select 2408.000MHz, 2440.000MHz, 2474.000MHz 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 bi-log 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: 2009 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.

## 4.6. The Field Strength of Radiation Emission Measurement Results

### PASS.

Date of Test:	November 28, 2013	Temperature:	25°C
EUT:	2.4G Wireless Optical Mouse	Humidity:	50%
Model No.:	DS-2283	Power Supply:	3V DC
Test Mode:	TX 2408.000MHz	Test Engineer:	Pei

#### Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2408.000	78.99	86.12	-6.74	72.25	79.38	94.00	114.00	-21.75	-34.62	Vertical
2408.000	90.84	97.30	-6.74	84.10	90.56	94.00	114.00	-9.90	-23.44	Horizontal

#### Harmonics Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4816.000	41.65	47.32	-1.54	40.11	45.78	54.00	74.00	-13.89	-28.22	Vertical
4816.000	42.61	49.90	-1.54	41.07	48.36	54.00	74.00	-12.93	-25.64	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:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

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

Date of Test:	November 28, 2013	Temperature:	25°C
EUT:	2.4G Wireless Optical Mouse	Humidity:	50%
Model No.:	DS-2283	Power Supply:	3V DC
Test Mode:	TX 2440.000MHz	Test Engineer:	Pei

### Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2440.000	84.51	90.16	-6.65	77.86	83.51	94.00	114.00	-16.14	-30.49	Vertical
2440.000	93.74	98.29	-6.65	87.09	91.64	94.00	114.00	-6.91	-22.36	Horizontal

### Harmonics Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4880.000	40.33	46.94	-1.33	39.00	45.61	54.00	74.00	-15.00	-28.39	Vertical
4880.000	44.15	48.88	-1.33	42.82	47.55	54.00	74.00	-11.18	-26.45	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:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

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

Date of Test:	November 28, 2013	Temperature:	25°C
EUT:	2.4G Wireless Optical Mouse	Humidity:	50%
Model No.:	DS-2283	Power Supply:	3V DC
Test Mode:	TX 2474.000MHz	Test Engineer:	Pei

### Fundamental Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2474.000	84.67	90.80	-6.56	78.11	84.24	94.00	114.00	-15.89	-29.76	Vertical
2474.000	91.88	97.33	-6.56	85.32	90.77	94.00	114.00	-8.68	-23.23	Horizontal

### Harmonics Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4948.000	42.11	48.69	-1.15	40.96	47.54	54.00	74.00	-13.04	-26.46	Vertical
4948.000	42.74	49.80	-1.15	41.59	48.65	54.00	74.00	-12.41	-25.35	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:  

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$
3. The spectral diagrams in appendix I display the measurement of peak values.

## 5. SPURIOUS RADIATED EMISSION FOR SECTION 15.249(D)

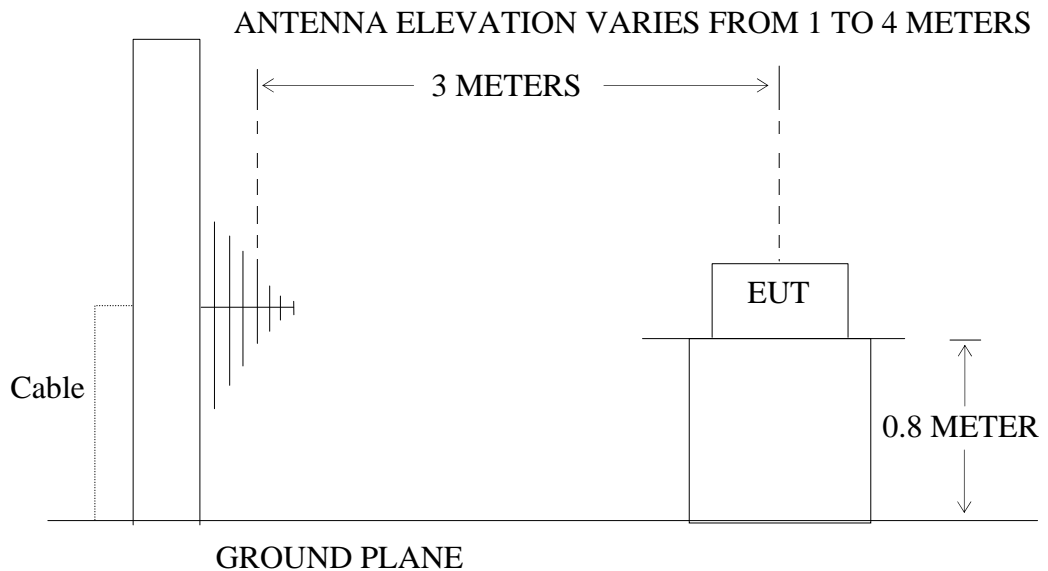
### 5.1. Block Diagram of Test Setup

#### 5.1.1. Block diagram of connection between the EUT and simulators



(EUT: 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

Frequency (MHz)	Limit		The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector.
	Field Strength (microvolts/meter)	Measurement Distance (meters)	
0.009 – 0.490	2400/F(kHz)	300	

0.490 – 1.705	24000/F(kHz)	30	Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
1.705 – 30.0	30	30	
30 - 88	100	3	
88 - 216	150	3	
216 - 960	200	3	
Above 960	500	3	

### 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-2283  
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 2408.000 - 2474.000 MHz. We are select 2408.000MHz, 2440.000MHz, 2474.000MHz 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: 2009 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.

The bandwidth of test receiver is set at 9kHz in below 30MHz. and set at 120kHz in 30-1000MHz, and 1MHz in above 1000MHz.

The frequency range from 9kHz to 25GHz 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:	<u>November 28, 2013</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Optical Mouse</u>	Humidity:	<u>50%</u>
Model No.:	<u>DS-2283</u>	Power Supply:	<u>3V DC</u>
Test Mode:	<u>TX 2408.000MHz</u>	Test Engineer:	<u>Pei</u>

30MHz-25GHz

Frequency (MHz)	Reading (dB $\mu$ V/m)	Factor(dB) Corr.	Result (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
470.5232	37.25	-14.27	22.98	46.00	-23.02	Vertical
647.3856	35.55	-10.70	24.85	46.00	-21.15	Vertical
709.1823	35.26	-9.59	25.67	46.00	-20.33	Vertical
383.9318	46.54	-15.76	30.78	46.00	-15.22	Horizontal
709.1823	38.72	-9.59	29.13	46.00	-16.87	Horizontal
900.1474	35.21	-6.11	29.10	46.00	-16.90	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:  

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain
3. The spectral diagrams in appendix I display the measurement of peak values.

Date of Test:	November 28, 2013	Temperature:	25°C
EUT:	2.4G Wireless Optical Mouse	Humidity:	50%
Model No.:	DS-2283	Power Supply:	3V DC
Test Mode:	TX 2440.000MHz	Test Engineer:	Pei

## 30MHz-25GH

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
383.9318	36.51	-15.76	20.75	46.00	-25.25	Vertical
661.1504	34.54	-10.43	24.11	46.00	-21.86	Vertical
709.1823	34.92	-9.59	25.33	46.00	-20.67	Vertical
383.9318	46.60	-15.76	30.84	46.00	-15.16	Horizontal
636.1340	39.19	-10.94	28.25	46.00	-17.75	Horizontal
900.1474	34.96	-6.11	28.85	46.00	-17.15	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:  

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

Where Corrected Factor = Antenna Factor + Cable Loss + High Pass Filter Loss – Amplifier Gain
3. The spectral diagrams in appendix I display the measurement of peak values.

Date of Test:	November 28, 2013	Temperature:	25°C
EUT:	2.4G Wireless Optical Mouse	Humidity:	50%
Model No.:	DS-2283	Power Supply:	3V DC
Test Mode:	TX 2474.000MHz	Test Engineer:	Pei

## 30MHz-25GH

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
383.9318	37.87	-15.76	22.11	46.00	-23.89	Vertical
612.0642	35.41	-11.42	23.99	46.00	-22.01	Vertical
709.1823	34.13	-9.59	24.54	46.00	-21.46	Vertical
383.9318	47.01	-15.76	31.25	46.00	-14.75	Horizontal
636.1340	39.93	-10.94	28.99	46.00	-17.01	Horizontal
900.1474	36.37	-6.11	30.26	46.00	-15.74	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:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

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

## 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-2283  
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 2408.000-2474.000MHz MHz. We are select 2408.000MHz, 2474.000MHz 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:	November 29, 2013	Temperature:	25°C
EUT:	2.4G Wireless Optical Mouse	Humidity:	50%
Model No.:	DS-2283	Power Supply:	3V DC
Test Mode:	TX 2408.000MHz	Test Engineer:	Pei

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2310.000	38.54	43.13	-6.99	31.55	36.14	54.00	74.00	-22.45	-37.86	Vertical
2382.460	42.99	48.51	-6.81	36.18	41.70	54.00	74.00	-17.82	-32.30	Vertical
2390.000	37.69	43.59	-6.78	30.91	36.81	54.00	74.00	-23.09	-37.19	Vertical
2310.000	35.88	42.90	-6.99	28.89	35.91	54.00	74.00	-25.11	-38.09	Horizontal
2382.320	38.54	46.20	-6.81	31.73	39.39	54.00	74.00	-22.27	-34.61	Horizontal
2390.000	36.20	42.49	-6.78	29.42	35.71	54.00	74.00	-24.58	-38.29	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:

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$

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

Date of Test:	November 29, 2013	Temperature:	25°C
EUT:	2.4G Wireless Optical Mouse	Humidity:	50%
Model No.:	DS-2283	Power Supply:	3V DC
Test Mode:	TX 2474.000MHz	Test Engineer:	Pei

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dB)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2483.500	42.74	48.62	-6.54	36.20	42.08	54.00	74.00	-17.80	-31.92	Vertical
2487.520	49.37	55.20	-6.52	42.85	48.68	54.00	74.00	-11.15	-25.32	Vertical
2500.000	36.62	45.43	-6.50	33.12	38.93	54.00	74.00	-20.88	-35.07	Vertical
2483.500	39.64	44.41	-6.54	33.10	37.87	54.00	74.00	-20.90	-36.13	Horizontal
2487.520	44.85	50.00	-6.52	38.33	43.48	54.00	74.00	-15.67	-30.52	Horizontal
2500.000	37.04	43.35	-6.50	30.54	36.85	54.00	74.00	-23.46	-37.15	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:  

$$\text{Result} = \text{Reading} + \text{Corrected Factor}$$

$$\text{Where Corrected Factor} = \text{Antenna Factor} + \text{Cable Loss} + \text{High Pass Filter Loss} - \text{Amplifier Gain}$$
3. The spectral diagrams in appendix I display the measurement of peak values.

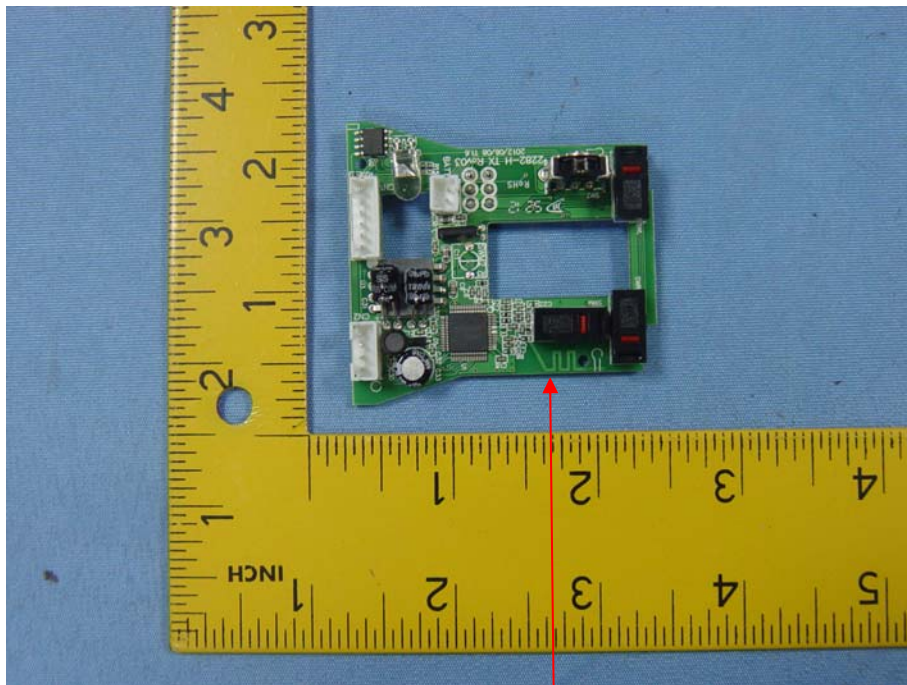
## 7. ANTENNA REQUIREMENT

### 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)





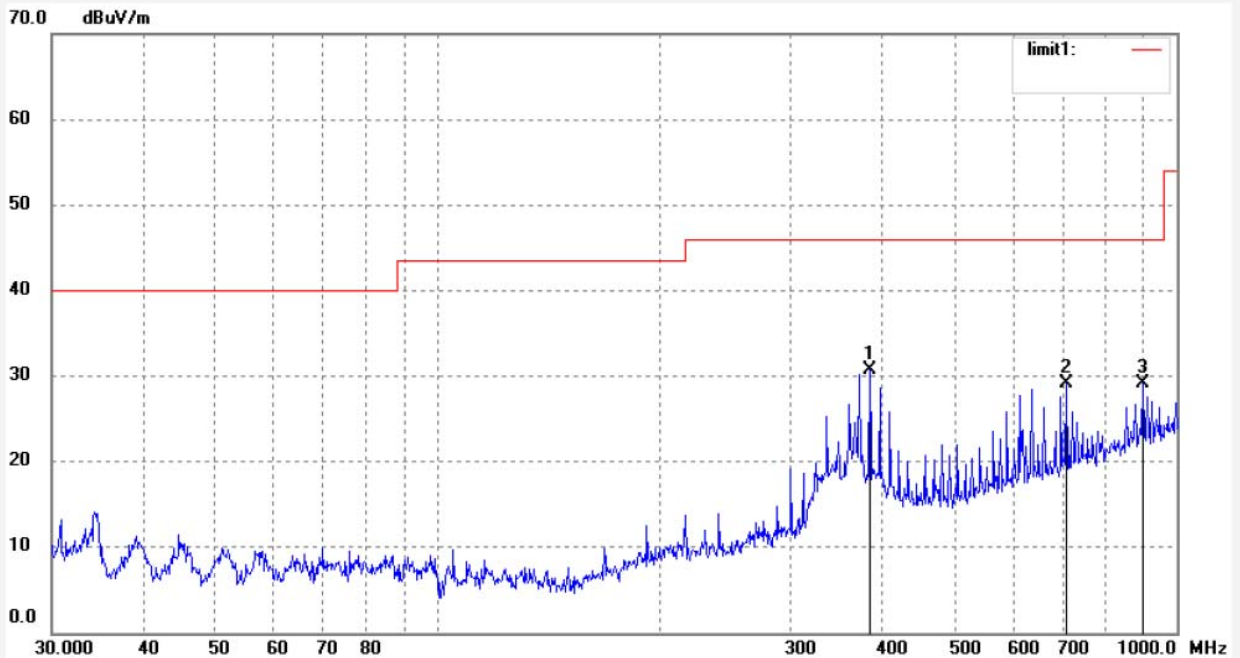
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3871	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:31:04
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2408MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	383.9318	46.54	-15.76	30.78	46.00	-15.22	QP			
2	709.1823	38.72	-9.59	29.13	46.00	-16.87	QP			
3	900.1474	35.21	-6.11	29.10	46.00	-16.90	QP			



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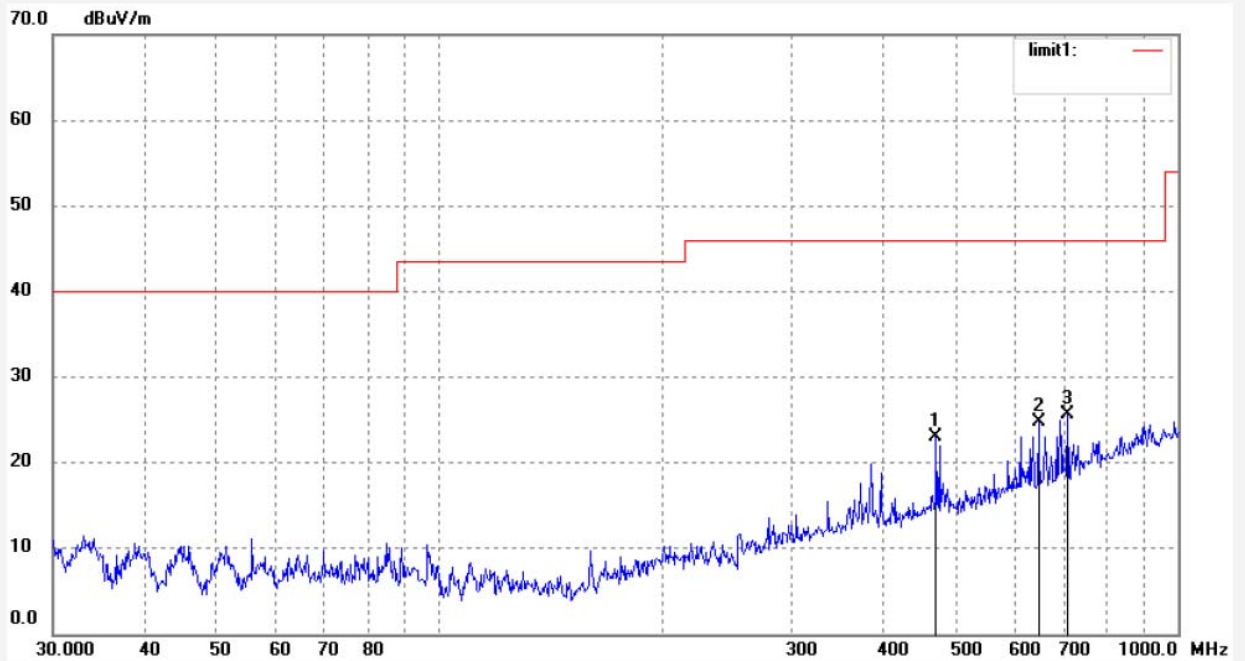
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3870  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: 2.4G Wireless Optical Mouse  
Mode: TX 2408MHz  
Model: DS-2283  
Manufacturer: Eastern Times

Polarization: Vertical  
Power Source: DC 3V  
Date: 2013/11/28  
Time: 18:30:18  
Engineer Signature:  
Distance: 3m

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	470.5232	37.25	-14.27	22.98	46.00	-23.02	QP			
2	647.3856	35.55	-10.70	24.85	46.00	-21.15	QP			
3	709.1823	35.26	-9.59	25.67	46.00	-20.33	QP			



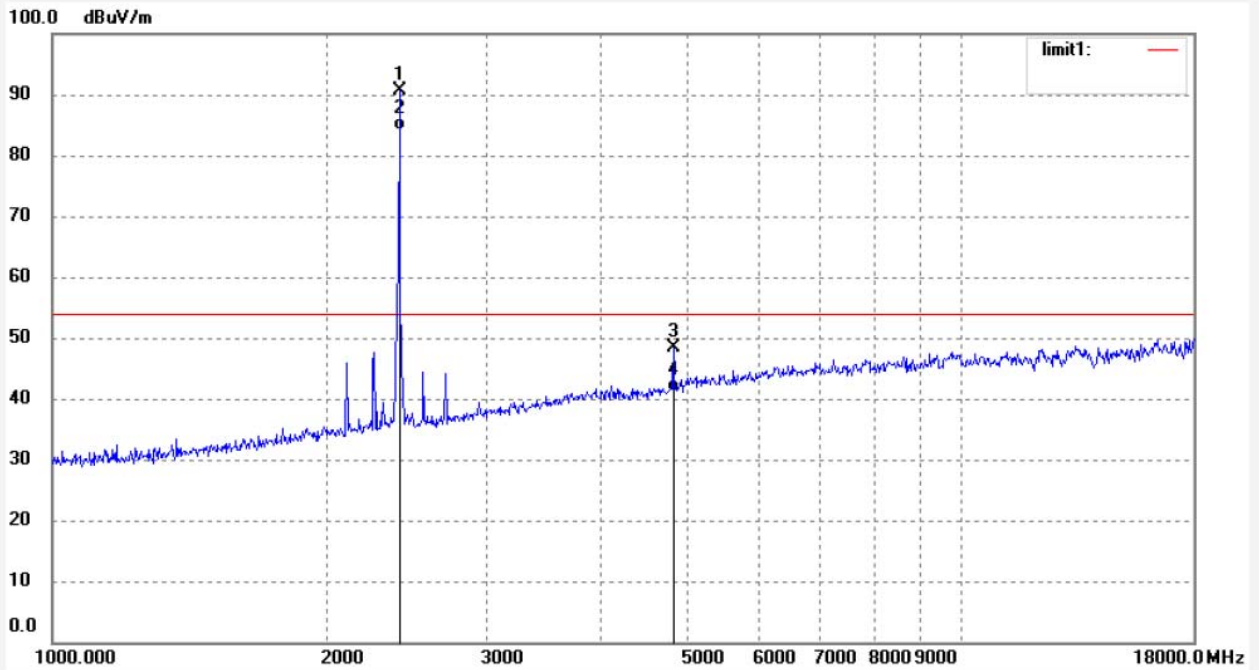
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Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3860	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:14:16
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2408MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2408.000	97.30	-6.74	90.56	114.00	-23.44	peak			
2	2408.000	90.84	-6.74	84.10	94.00	-9.90	AVG			
3	4816.000	49.90	-1.54	48.36	74.00	-25.64	peak			
4	4816.000	42.61	-1.54	41.07	54.00	-12.93	AVG			





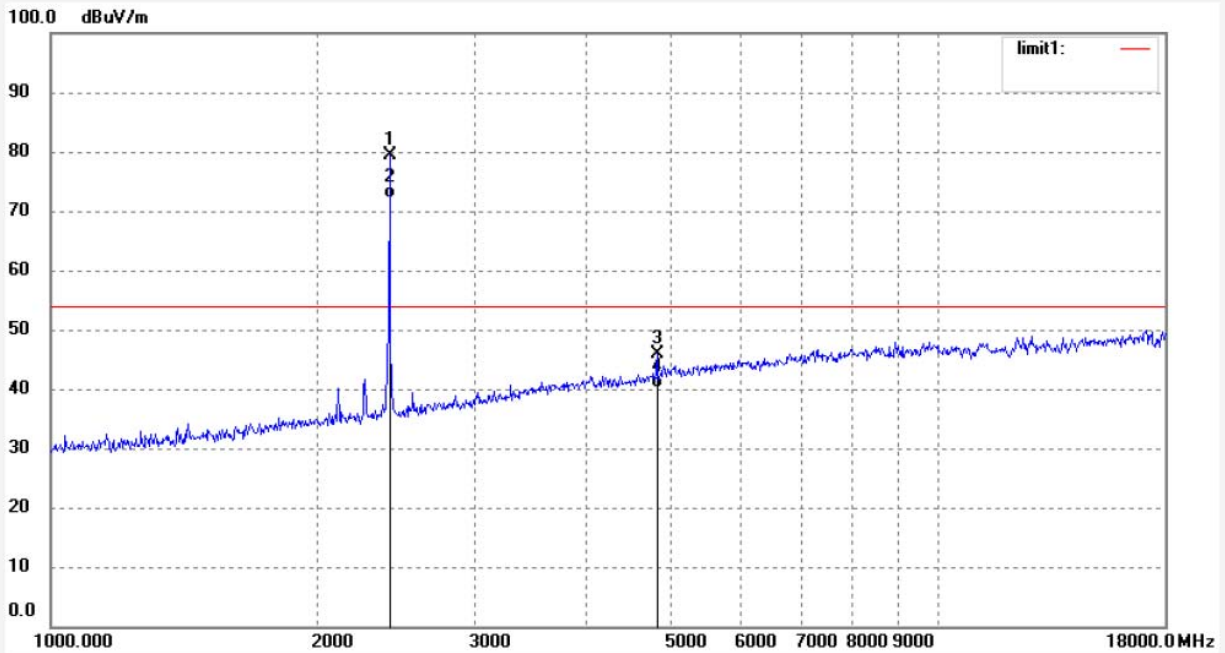
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Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3861	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:15:47
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2408MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2408.000	86.12	-6.74	79.38	114.00	-34.62	peak			
2	2408.000	78.99	-6.74	72.25	94.00	-21.75	AVG			
3	4816.000	47.32	-1.54	45.78	74.00	-28.22	peak			
4	4816.000	41.65	-1.54	40.11	54.00	-13.89	AVG			



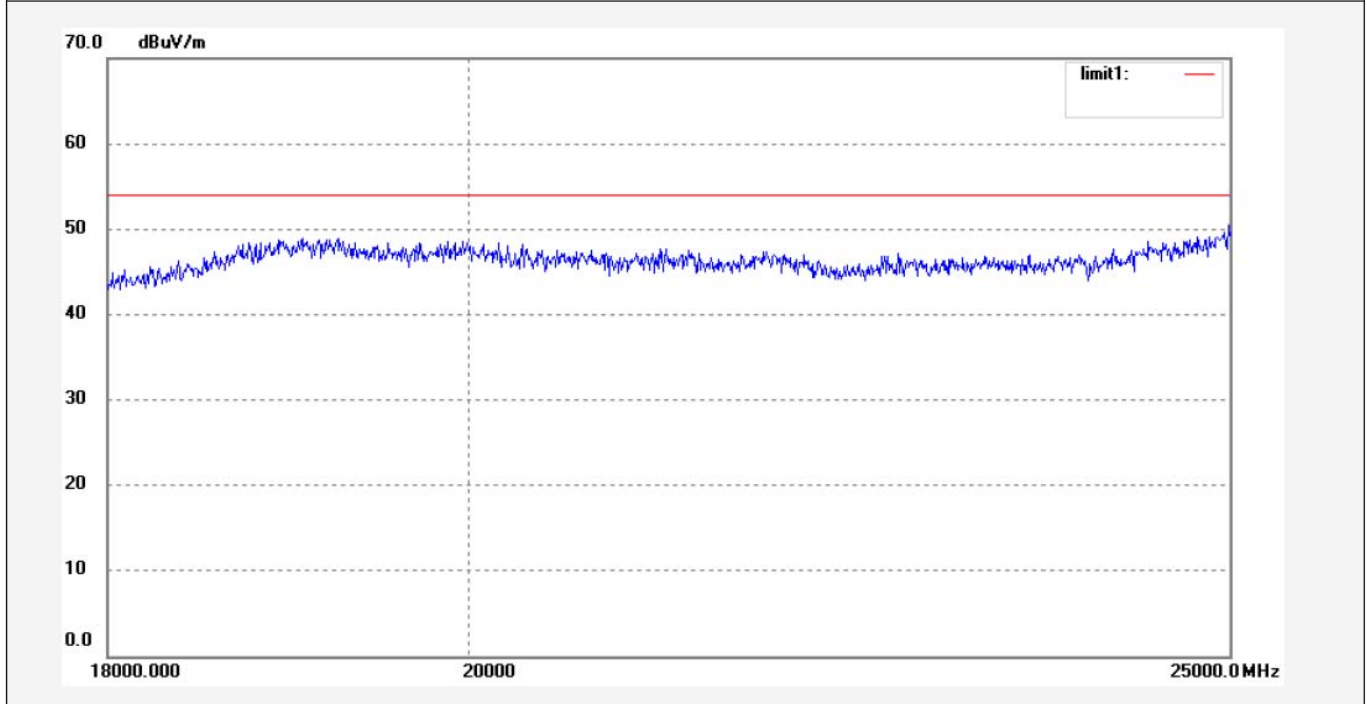
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Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3882	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/29
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 12:13:24
EUT: 2.4G Wireless Optical Mouse	Engineer Signature: star
Mode: TX 2408MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern	

Note:Report No.:ATE20132503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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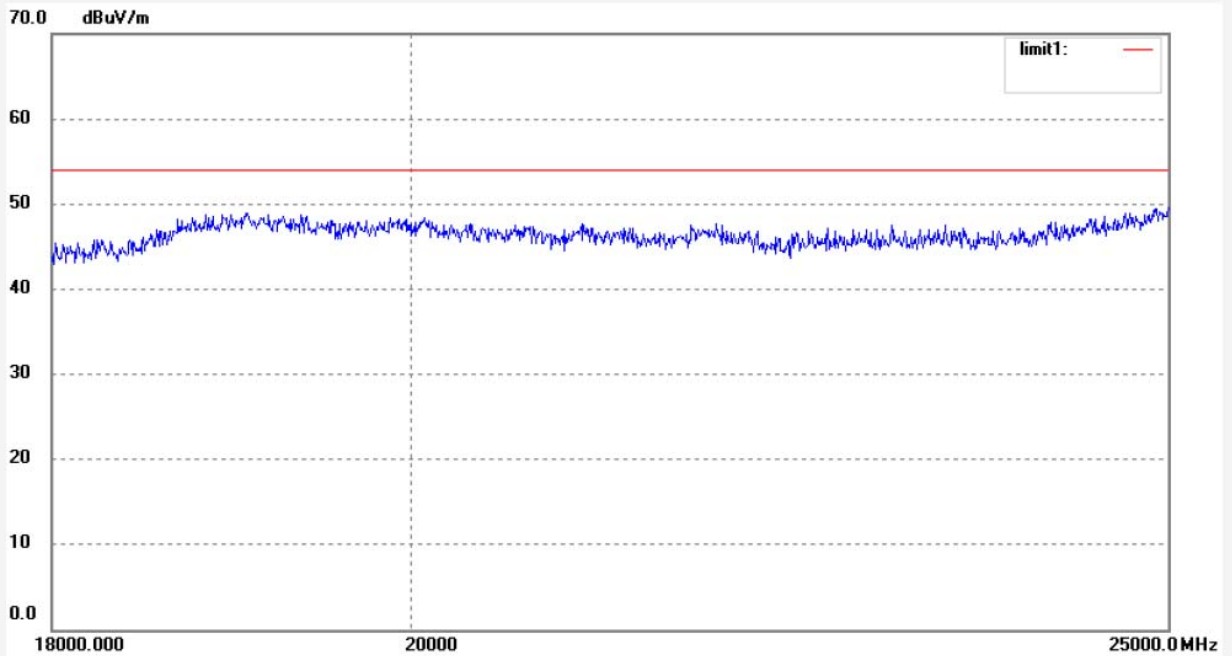
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Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3883	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/29
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 12:16:27
EUT: 2.4G Wireless Optical Mouse	Engineer Signature: star
Mode: TX 2408MHz)	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern	

Note:Report No.:ATE20132503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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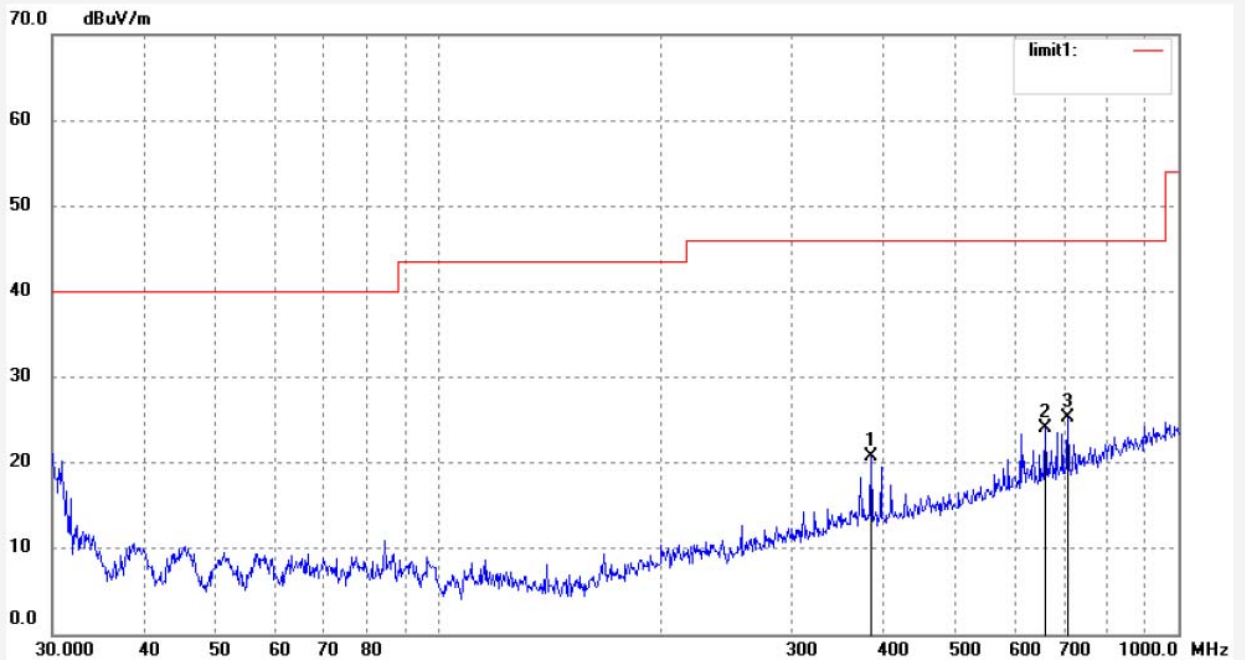
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Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3869	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:29:29
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2440MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	383.9318	36.51	-15.76	20.75	46.00	-25.25	QP			
2	661.1504	34.54	-10.43	24.11	46.00	-21.89	QP			
3	709.1823	34.92	-9.59	25.33	46.00	-20.67	QP			





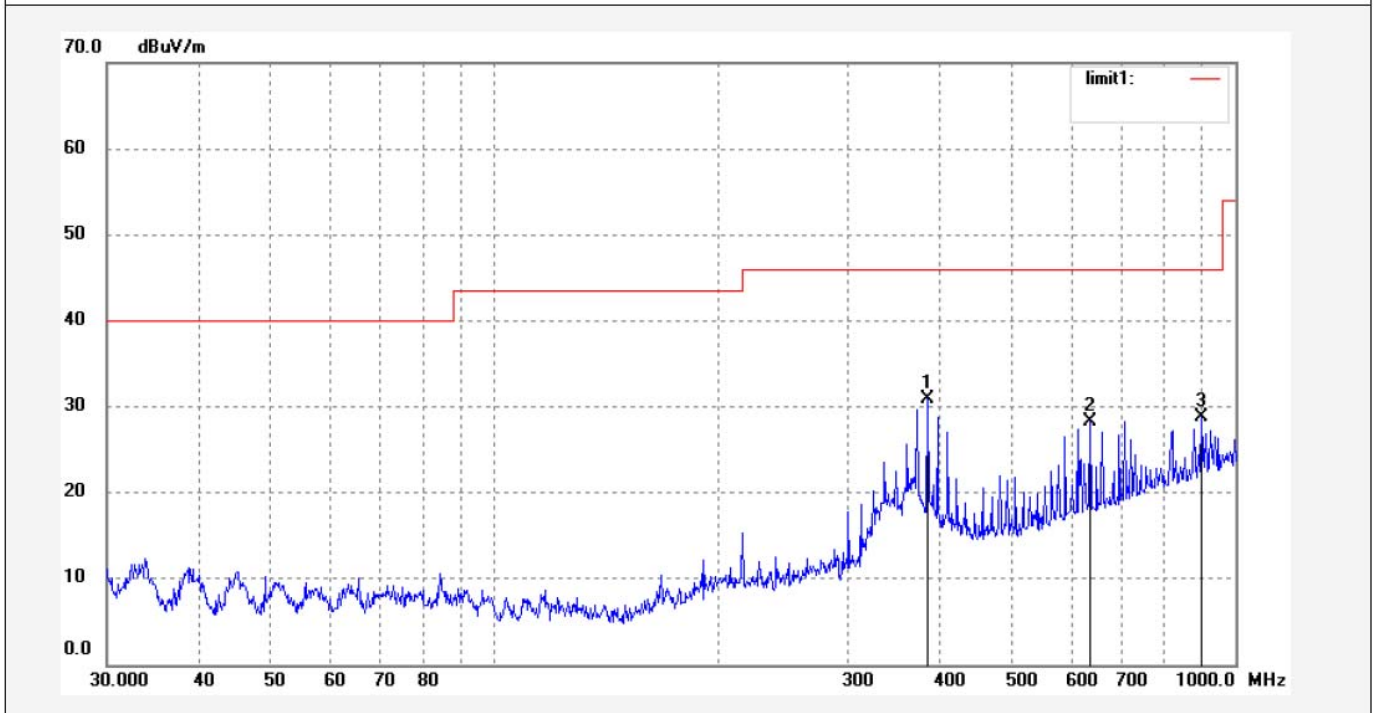
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Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3868	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:28:55
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2440MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	383.9318	46.60	-15.76	30.84	46.00	-15.16	QP			
2	636.1340	39.19	-10.94	28.25	46.00	-17.75	QP			
3	900.1474	34.96	-6.11	28.85	46.00	-17.15	QP			





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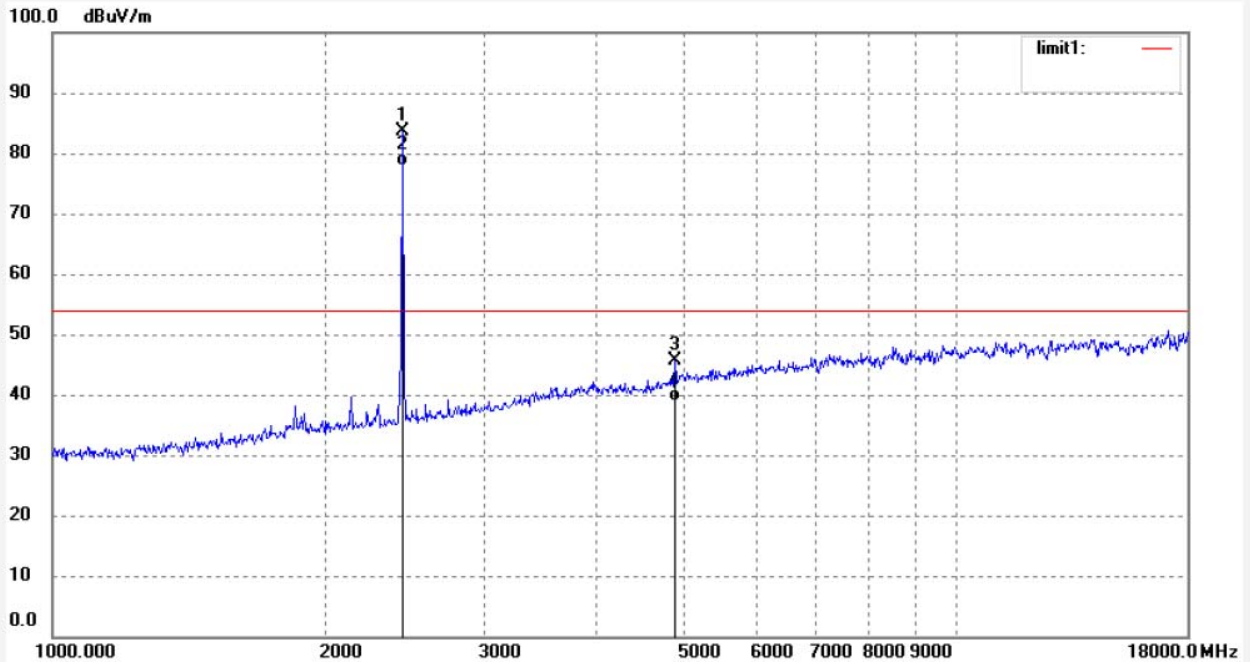
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3862  
Standard: FCC Class B 3M Radiated  
Test item: Radiation Test  
Temp.( C)/Hum.(%) 25 C / 55 %  
EUT: 2.4G Wireless Optical Mouse  
Mode: TX 2440MHz  
Model: DS-2283  
Manufacturer: Eastern Times

Polarization: Vertical  
Power Source: DC 3V  
Date: 2013/11/28  
Time: 18:17:01  
Engineer Signature:  
Distance: 3m

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.000	90.16	-6.65	83.51	114.00	-30.49	peak			
2	2440.000	84.51	-6.65	77.86	94.00	-16.14	AVG			
3	4880.000	46.94	-1.33	45.61	74.00	-28.39	peak			
4	4880.000	40.33	-1.33	39.00	54.00	-15.00	AVG			



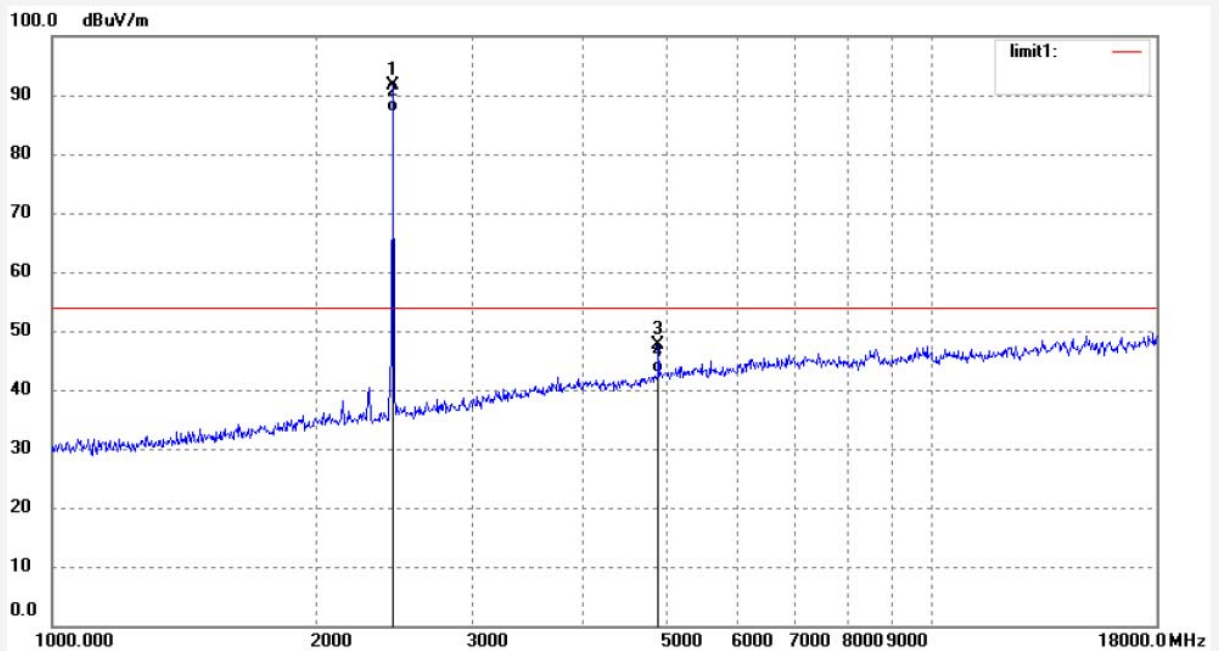
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3863	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:18:24
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2440MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2440.000	98.29	-6.65	91.64	114.00	-22.36	peak			
2	2440.000	93.74	-6.65	87.09	94.00	-6.91	AVG			
3	4880.000	48.88	-1.33	47.55	74.00	-26.45	peak			
4	4880.000	44.15	-1.33	42.82	54.00	-11.18	AVG			



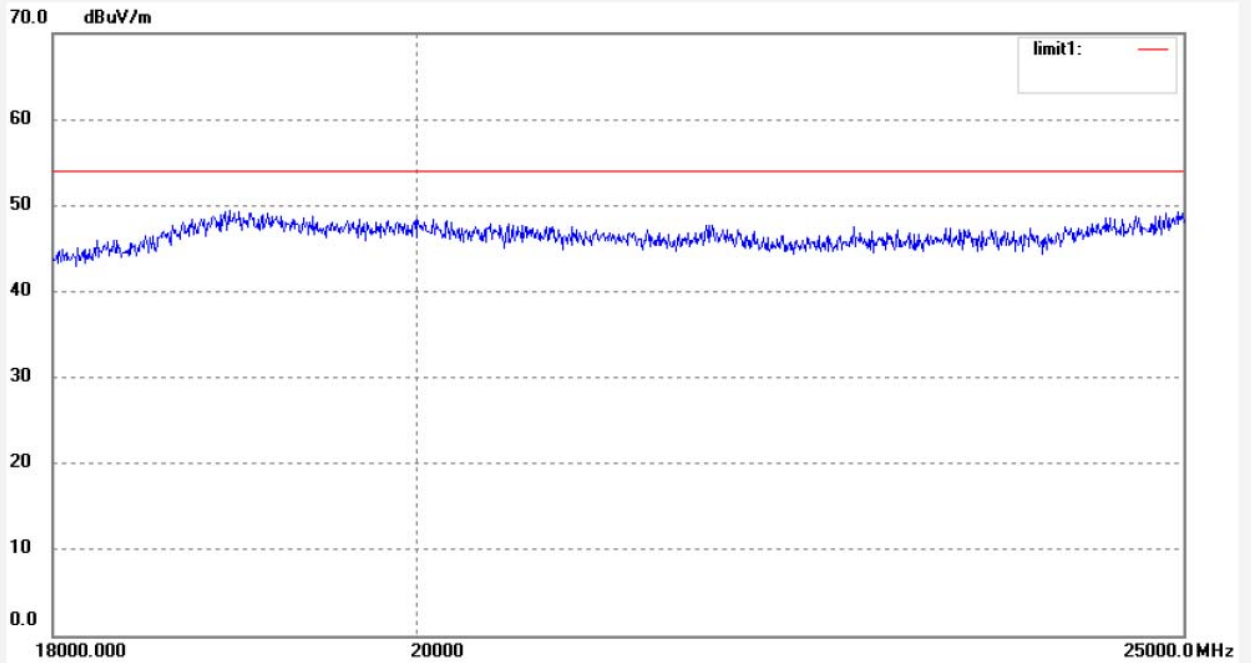
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Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3884	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/29
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 12:19:42
EUT: 2.4G Wireless Optical Mouse	Engineer Signature: star
Mode: TX 2440MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern	

Note:Report No.:ATE20132503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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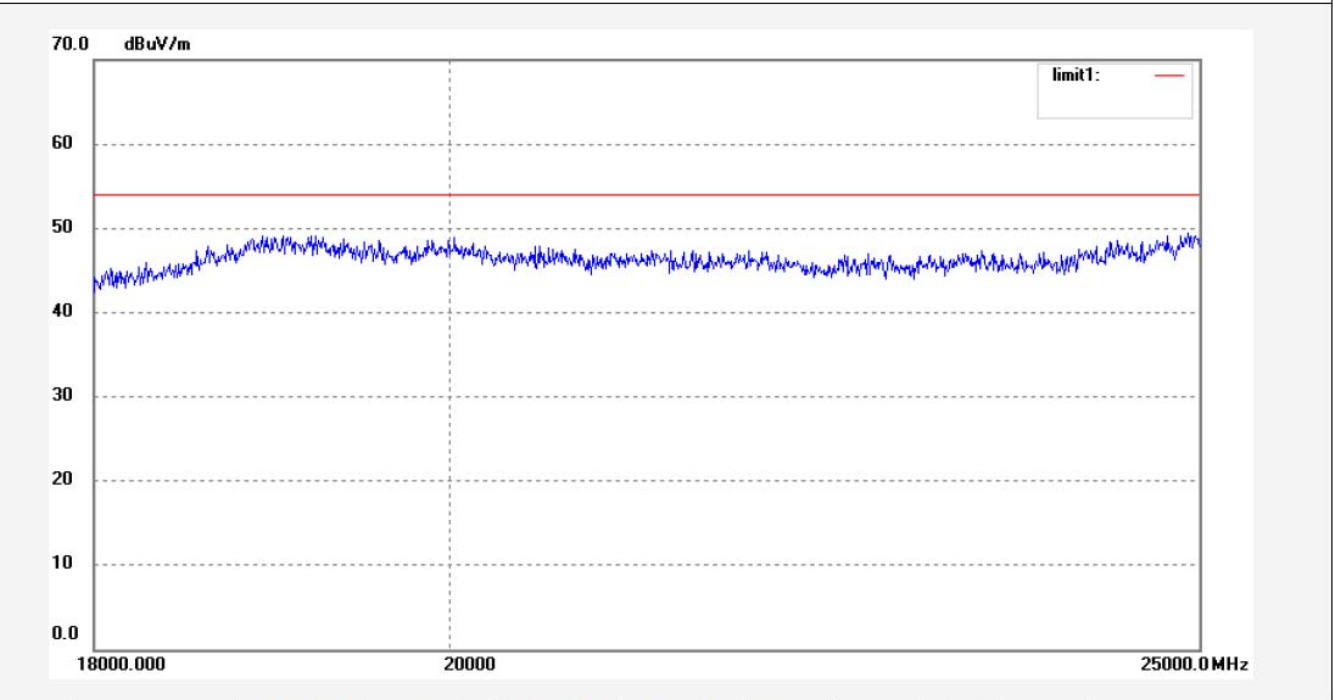
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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: star #3885	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/29
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 12:22:32
EUT: 2.4G Wireless Optical Mouse	Engineer Signature: star
Mode: TX 2440MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern	

Note:Report No.:ATE20132503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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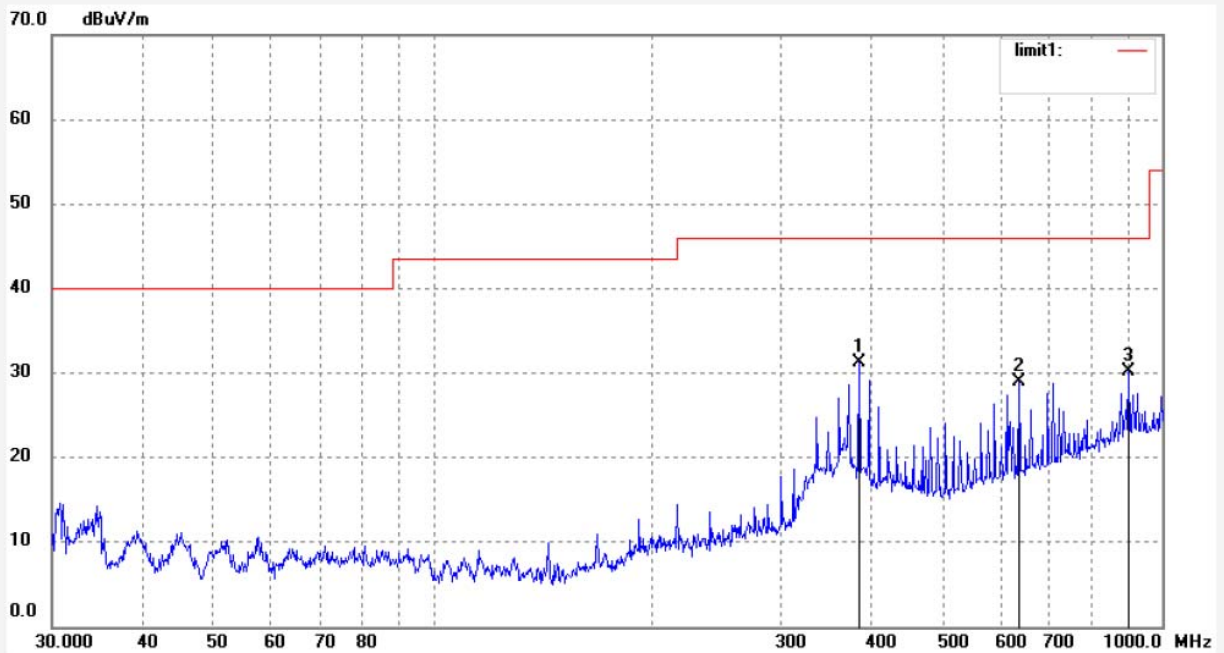
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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3867	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:28:03
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2474MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	383.9318	47.01	-15.76	31.25	46.00	-14.75	QP			
2	636.1340	39.93	-10.94	28.99	46.00	-17.01	QP			
3	900.1474	36.37	-6.11	30.26	46.00	-15.74	QP			



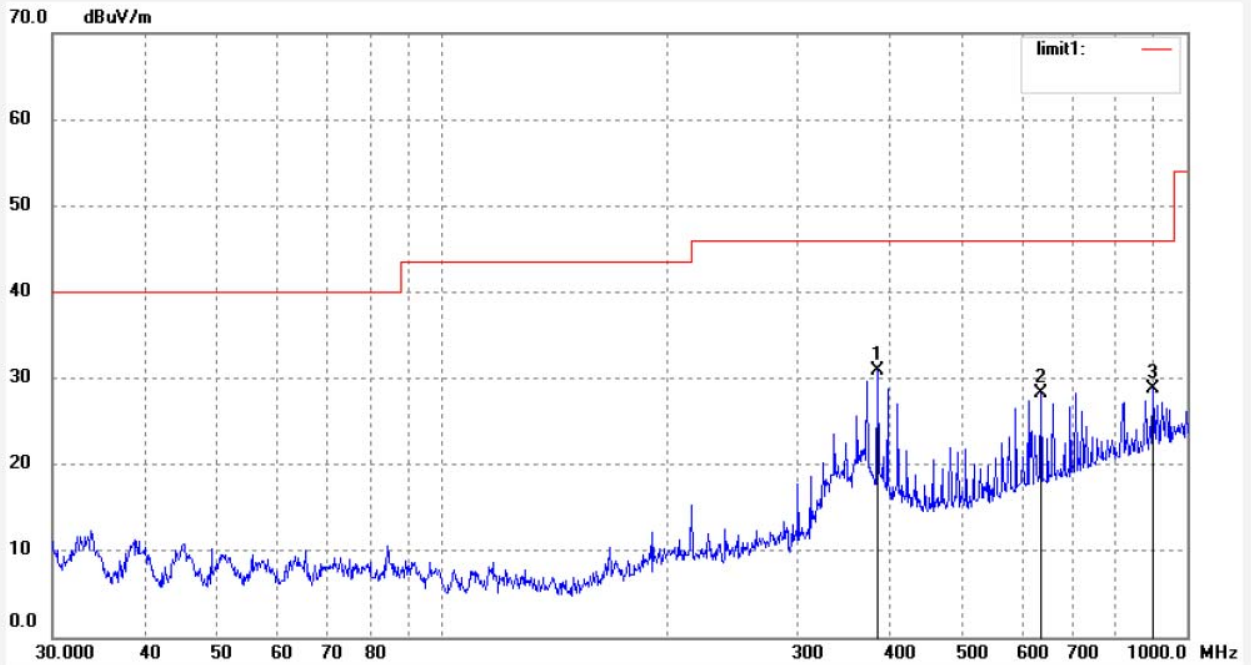
**ACCURATE TECHNOLOGY CO., LTD.**

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3868	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:28:55
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2440MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	383.9318	46.60	-15.76	30.84	46.00	-15.16	QP			
2	636.1340	39.19	-10.94	28.25	46.00	-17.75	QP			
3	900.1474	34.96	-6.11	28.85	46.00	-17.15	QP			

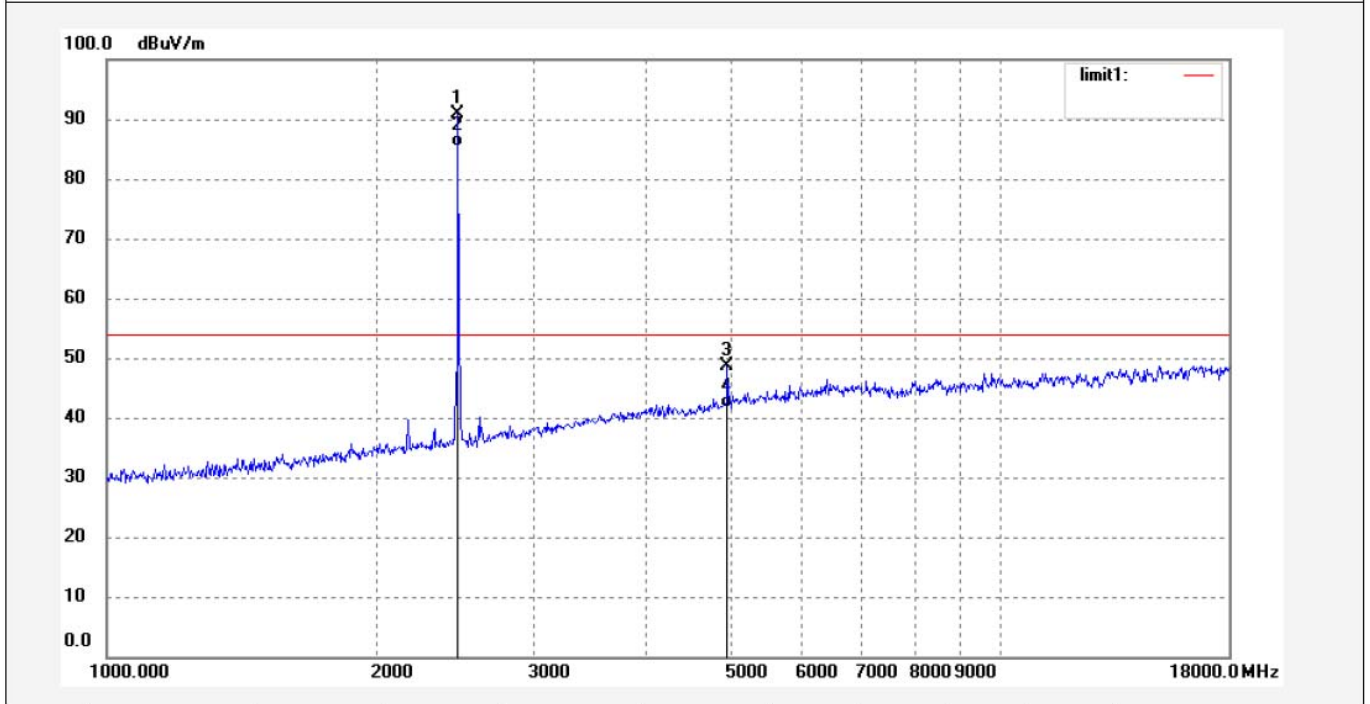


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Site: 1# Chamber  
 Tel:+86-0755-26503290  
 Fax:+86-0755-26503396

Job No.: star #3864	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:20:14
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2474MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2474.000	97.33	-6.56	90.77	114.00	-23.23	peak			
2	2474.000	91.88	-6.56	85.32	94.00	-8.68	AVG			
3	4948.000	49.80	-1.15	48.65	74.00	-25.35	peak			
4	4948.000	42.74	-1.15	41.59	54.00	-12.41	AVG			





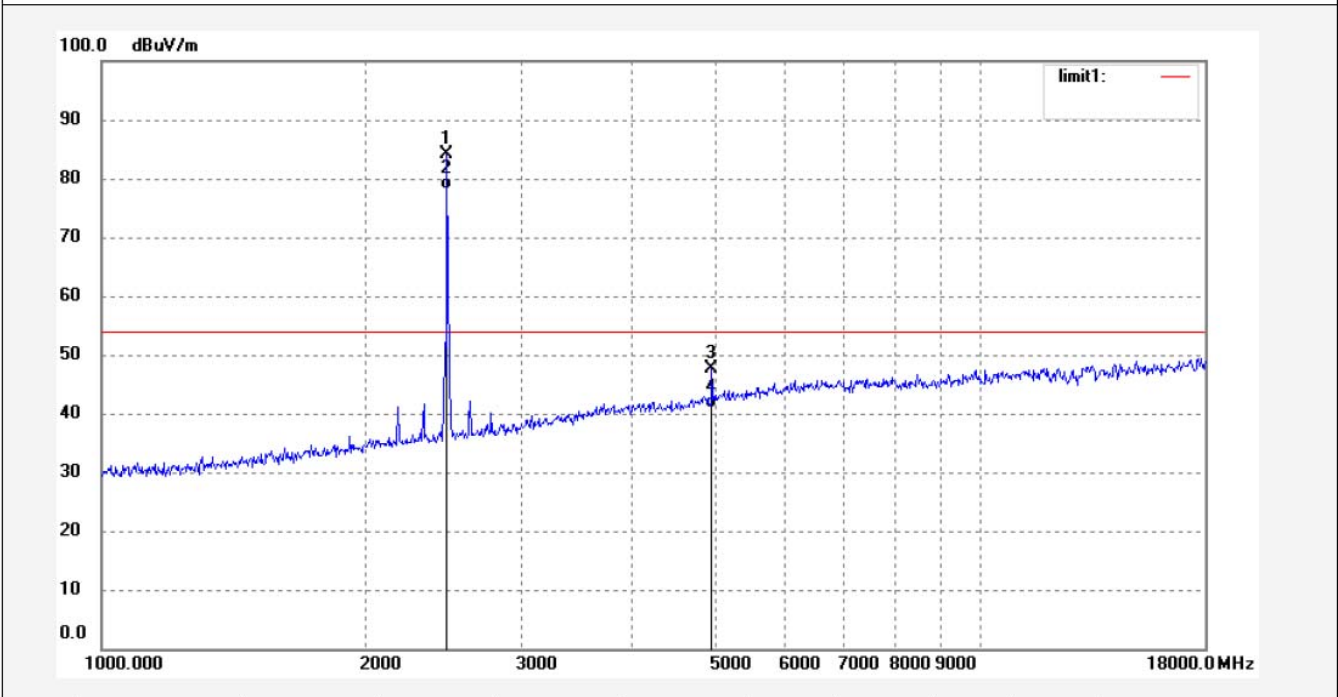
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3865	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/28
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 18:22:32
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2474MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2474.000	90.80	-6.56	84.24	114.00	-29.76	peak			
2	2474.000	84.67	-6.56	78.11	94.00	-15.89	AVG			
3	4948.000	48.69	-1.15	47.54	74.00	-26.46	peak			
4	4948.000	42.11	-1.15	40.96	54.00	-13.04	AVG			





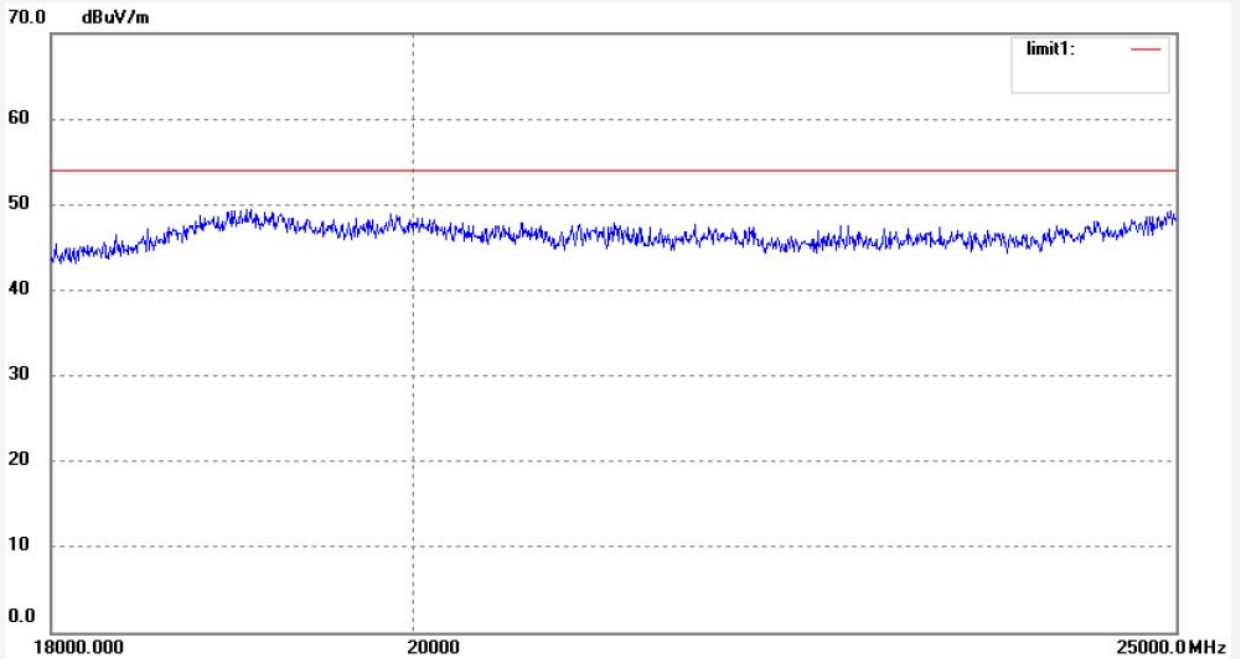
**ACCURATE TECHNOLOGY CO., LTD.**

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.: star #3886	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/29
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 12:25:36
EUT: 2.4G Wireless Optical Mouse	Engineer Signature: star
Mode: TX 2474MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern	

Note:Report No.:ATE20132503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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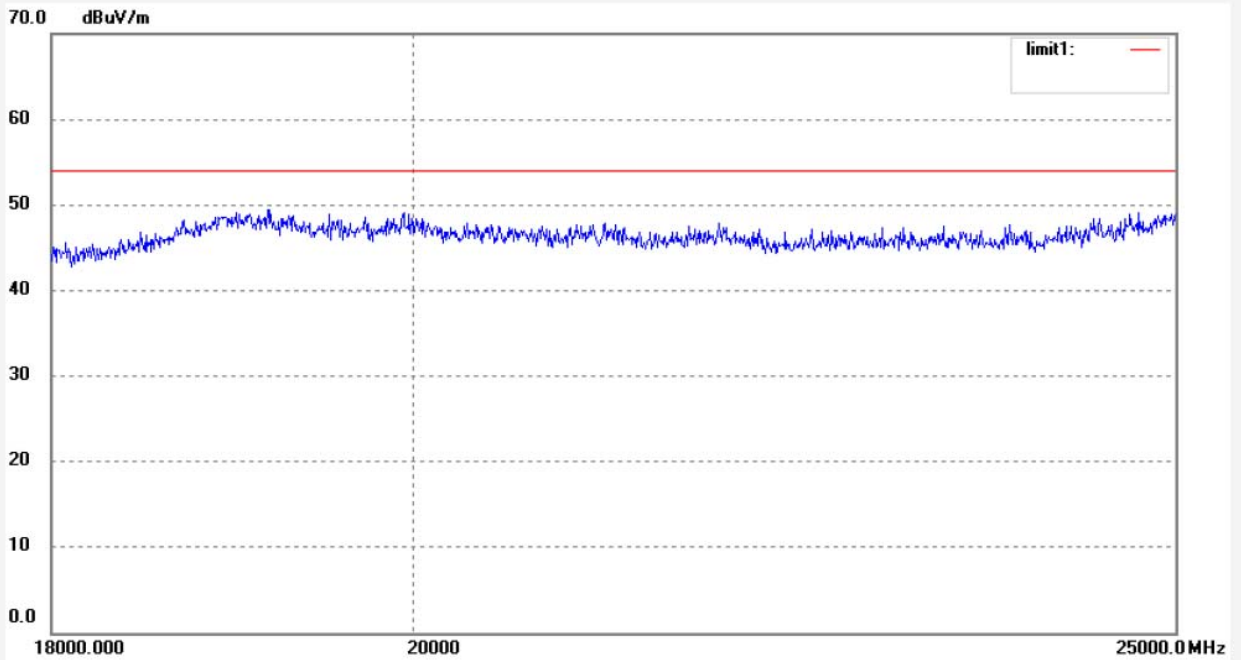
**ACCURATE TECHNOLOGY CO., LTD.**

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.: star #3887	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 2013/11/29
Temp.( C)/Hum.(%) 25 C / 50 %	Time: 12:28:30
EUT: T2.4G Wireless Optical Mouse	Engineer Signature: star
Mode: TX 2474MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern	

Note:Report No.:ATE20132503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
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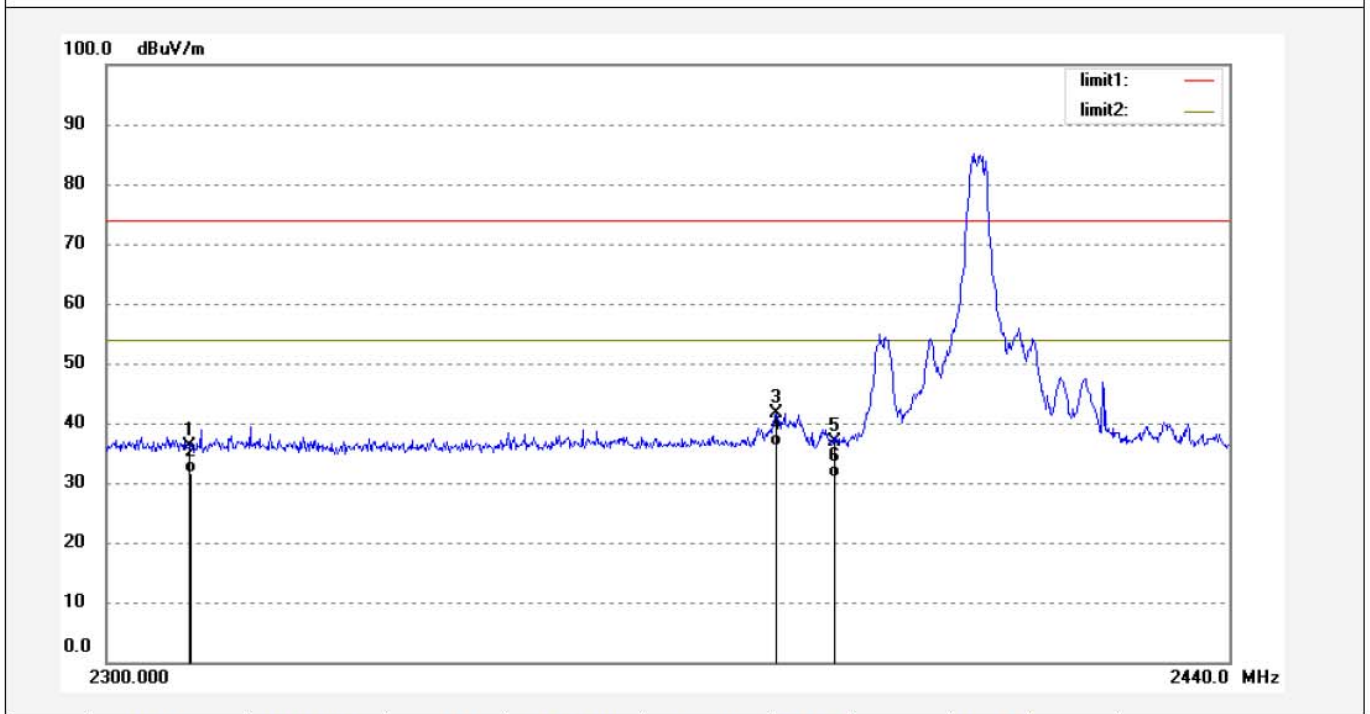
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3878	Polarization: Vertical
Standard: FCC PK	Power Source: DC 3V
Test item: Radiation Test	Date: 13/11/29/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/05/12
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2408MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	43.13	-6.99	36.14	74.00	-37.86	peak			
2	2310.000	38.54	-6.99	31.55	54.00	-22.45	AVG			
3	2382.460	48.51	-6.81	41.70	74.00	-32.30	peak			
4	2382.460	42.99	-6.81	36.18	54.00	-17.82	AVG			
5	2390.000	43.59	-6.78	36.81	74.00	-37.19	peak			
6	2390.000	37.69	-6.78	30.91	54.00	-23.09	AVG			



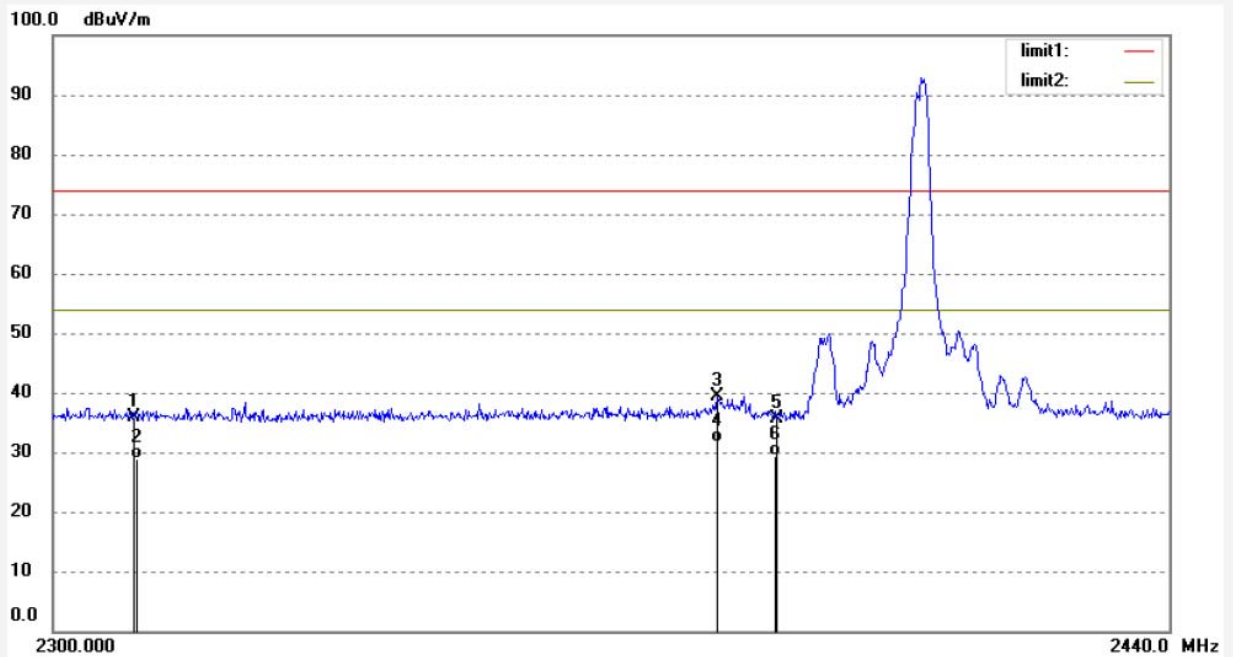
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3879	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 3V
Test item: Radiation Test	Date: 13/11/29/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/06/21
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2408MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2310.000	42.90	-6.99	35.91	74.00	-38.09	peak			
2	2310.000	35.88	-6.99	28.89	54.00	-25.11	AVG			
3	2382.320	46.20	-6.81	39.39	74.00	-34.61	peak			
4	2382.320	38.54	-6.81	31.73	54.00	-22.27	AVG			
5	2390.000	42.49	-6.78	35.71	74.00	-38.29	peak			
6	2390.000	36.20	-6.78	29.42	54.00	-24.58	AVG			





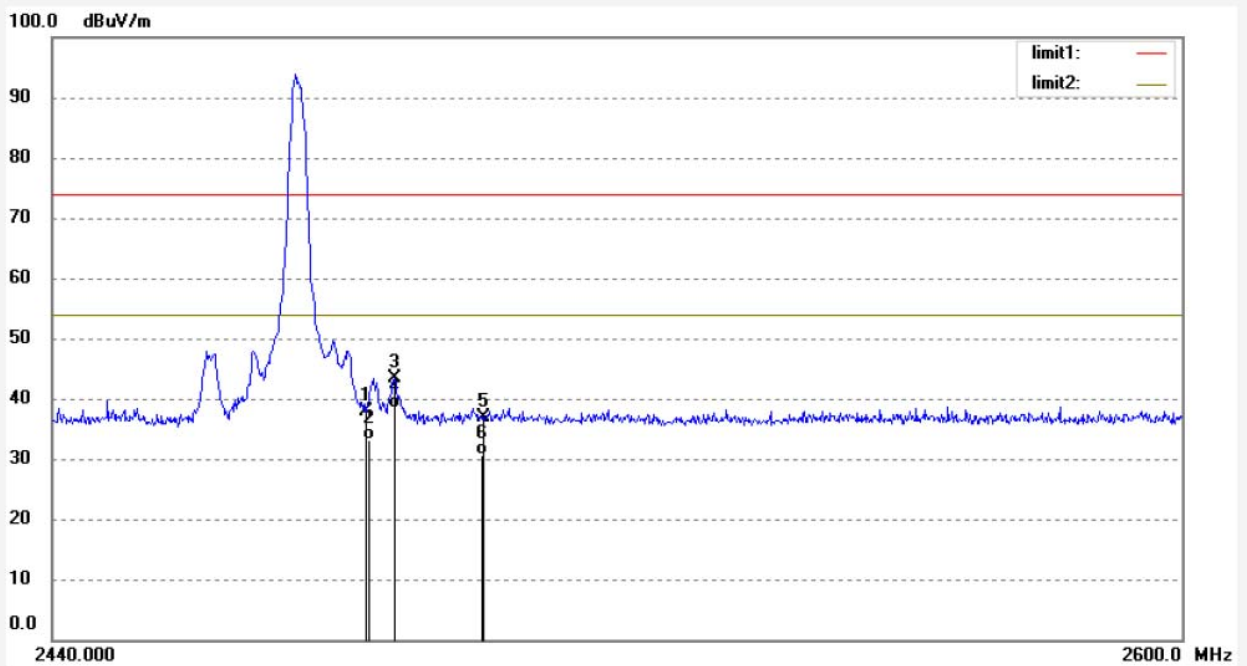
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3880	Polarization: Horizontal
Standard: FCC PK	Power Source: DC 3V
Test item: Radiation Test	Date: 13/11/29/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/09/22
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2474MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	44.41	-6.54	37.87	74.00	-36.13	peak			
2	2483.500	39.64	-6.54	33.10	54.00	-20.90	AVG			
3	2487.520	50.00	-6.52	43.48	74.00	-30.52	peak			
4	2487.520	44.85	-6.52	38.33	54.00	-15.67	AVG			
5	2500.000	43.35	-6.50	36.85	74.00	-37.15	peak			
6	2500.000	37.04	-6.50	30.54	54.00	-23.46	AVG			



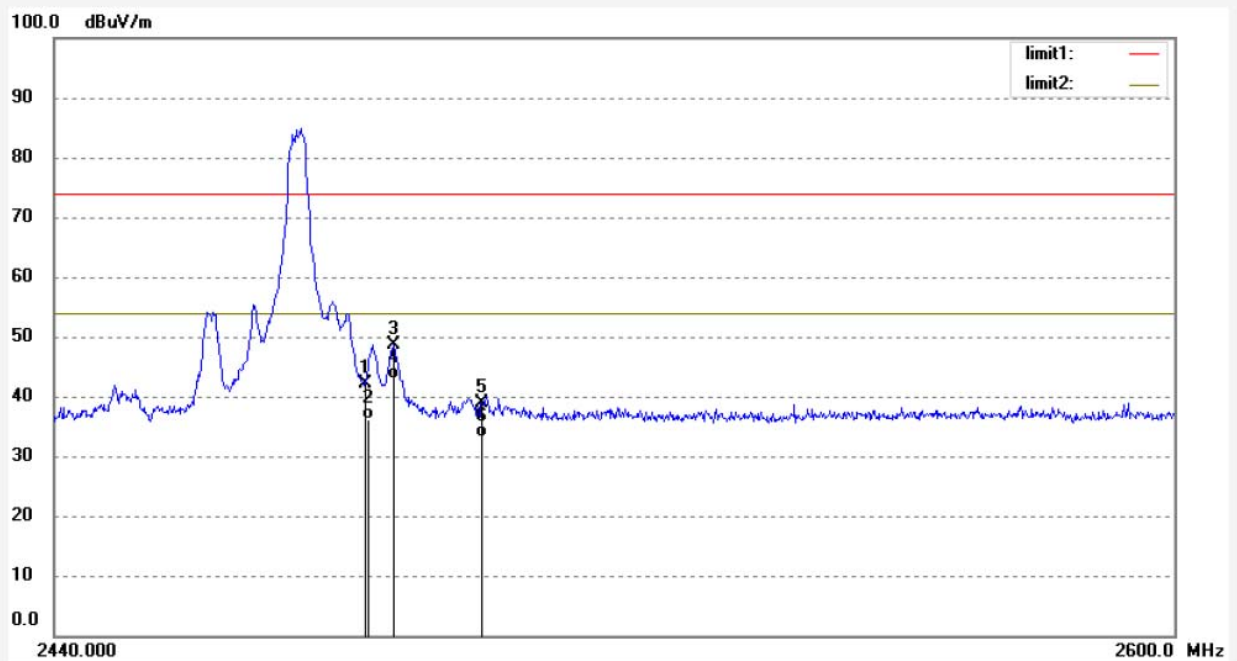
**ACCURATE TECHNOLOGY CO., LTD.**

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

Site: 1# Chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: star #3881	Polarization: Vertical
Standard: FCC PK	Power Source: DC 3V
Test item: Radiation Test	Date: 13/11/29/
Temp.( C)/Hum.(%) 25 C / 55 %	Time: 11/29/29
EUT: 2.4G Wireless Optical Mouse	Engineer Signature:
Mode: TX 2474MHz	Distance: 3m
Model: DS-2283	
Manufacturer: Eastern Times	

Note: Report No.:ATE201032503



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	48.62	-6.54	42.08	74.00	-31.92	peak			
2	2483.500	42.74	-6.54	36.20	54.00	-17.80	AVG			
3	2487.520	55.20	-6.52	48.68	74.00	-25.32	peak			
4	2487.520	49.37	-6.52	42.85	54.00	-11.15	AVG			
5	2500.000	45.43	-6.50	38.93	74.00	-35.07	peak			
6	2500.000	39.62	-6.50	33.12	54.00	-20.88	AVG			