

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

2.4G Wireless Laser Mouse  
Model No.: DS-2253(2253-B TX + MA RX)

FCC ID: TUV2253-B

Prepared for : Eastern Times Technology Co., Ltd.  
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APPENDIX I ( TEST CURVES) (24 pages)

## 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-2253(2253-B TX + MA RX)  
(B) SERIAL NO.: N/A  
(C) POWER SUPPLY: 3.0V DC (“AAA” batteries 2×)

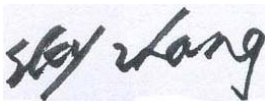
Measurement Procedure Used:

FCC Rules and Regulations Part 15 Subpart C Section 15.249:2007 & 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 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 : August 20-26, 2008

Prepared by :   
(Engineer)

Approved & Authorized Signer :   
(Manager)

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT	:	2.4G Wireless Laser Mouse
Model Number	:	DS-2253(2253-B TX + MA RX)
Power Supply	:	3.0V DC (“AAA” batteries 2×), Can use USB cable connect to PC
Operate Frequency	:	2402.8-2478.0MHz
Channel Number	:	48
Applicant Address	:	Eastern Times Technology Co., Ltd. Building 5, Penghua Industry Park, Heping Rd.(W), Longhua, Shenzhen, Guangdong, China
Manufacturer Address	:	Eastern Times Technology Co., Ltd. Building 5, Penghua Industry Park, Heping Rd.(W), Longhua, Shenzhen, Guangdong, China
Date of sample received	:	August 18, 2008
Date of Test	:	August 20-26, 2008

### 1.2. Description of Test Facility

EMC Lab	:	Accredited by TUV Rheinland Shenzhen
		Listed by FCC The Registration Number is 752051
		Listed by Industry Canada The Registration Number is 5077A-2
		Accredited by China National Accreditation Committee for Laboratories The Certificate Registration Number is L3193
Name of Firm	:	ACCURATE TECHNOLOGY CO. LTD
Site Location	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China

### 1.3.Measurement Uncertainty

Conducted Emission Expanded Uncertainty = 2.23dB, k=2

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

Radiated emission expanded uncertainty  
(30MHz-1000MHz) = 4.42dB, k=2

Radiated emission expanded uncertainty  
(Above 1GHz) = 4.06dB, k=2

## 2. MEASURING DEVICE AND TEST EQUIPMENT

**Table 1: List of Test and Measurement Equipment**

Kind of equipment	Manufacturer	Type	S/N	Calibrated until
EMI Test Receiver	Rohde&Schwarz	ESCS30	100307	03.29.2009
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	03.29.2009
Spectrum Analyzer	Agilent	E7405A	MY45115511	03.29.2009
Pre-Amplifier	Rohde&Schwarz	CBLU118354 0-01	3791	03.31.2009
Loop Antenna	Schwarzbeck	FMZB1516	1516131	03.28.2009
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	03.29.2009
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	12.20.2008
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	10.10.2008
LISN	Rohde&Schwarz	ESH3-Z5	100305	03.29.2009
LISN	Schwarzbeck	NLSK8126	8126431	03.29.2009

### 3. SUMMARY OF TEST RESULTS

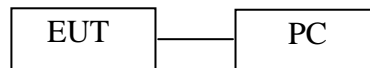
<b>FCC Rules</b>	<b>Description of Test</b>	<b>Result</b>
Section 15.207	Conducted Emission	Compliant
Section 15.209 Section 15.249(d)	Radiated Emission	Compliant
Section 15.249(a)	The fundamental field strength and the harmonics	Compliant
Section 15.249(d)	Band Edge	Compliant

## 4. CONDUCTED EMISSION FOR FCC PART 15 SECTION

### 15.207(A)

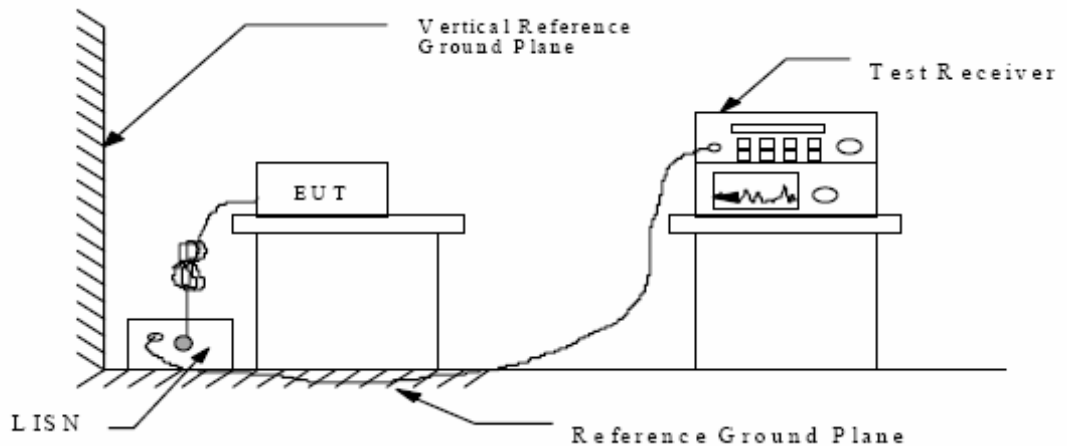
#### 4.1. Block Diagram of Test Setup

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



(EUT: 2.4G Wireless Laser Mouse)

##### 4.1.2. Shielding Room Test Setup Diagram



(EUT: 2.4G Wireless Laser Mouse)

#### 4.2. The Emission Limit For Section 15.207(a)

##### 4.2.1. Conducted Emission Measurement Limits According to Section 15.207(a)

Frequency (MHz)	Limit dB(μV)	
	Quasi-peak Level	Average Level
0.15 - 0.50	66.0 – 56.0 *	56.0 – 46.0 *
0.50 - 5.00	56.0	46.0
5.00 - 30.00	60.0	50.0

\* Decreases with the logarithm of the frequency.



### 4.3. Configuration of EUT on Measurement

The following equipment are installed on the Conducted 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-2253(2253-B TX + MA RX)  
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 Connect to PC mode measure it.

### 4.5. Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4: 2003 on Conducted Emission Measurement.

The bandwidth of test receiver (R & S ESCS30) is set at 9kHz.

The frequency range from 150kHz to 30MHz is checked.

All the scanning waveforms are attached in Appendix I.

## 4.6. Power Line Conducted Emission Measurement Results

**PASS.**

The frequency range from 150kHz to 30MHz is checked.

Date of Test:	<u>August 26, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Laser Mouse</u>	Humidity:	<u>53%</u>
Model No.:	<u>DS-2253(2253-B TX + MA RX)</u>	Power Supply:	<u>AC 120V/60Hz</u>
Test Mode:	<u>Connect to PC</u>	Test Engineer:	<u>Feng</u>

Test Line	Frequency MHz	Emission Level (dB $\mu$ V)		Limits (dB $\mu$ V)		Margin (dB)	
		QP	AV	QP	AV	QP	AV
Va	0.150	41.5	25.4	66.00	56.00	-24.50	-30.60
Va	0.185	44.8	43.8	64.26	54.26	-19.46	-10.46
Va	0.865	33.1	32.9	56.00	46.00	-22.90	-13.10
Va	1.115	32.0	31.6	56.00	46.00	-24.00	-14.40
Va	1.795	31.8	31.2	56.00	46.00	-24.20	-14.80
Va	14.625	34.4	27.3	60.00	50.00	-25.60	-22.70
Vb	0.150	38.0	21.9	66.00	56.00	-28.00	-34.10
Vb	0.185	40.8	40.1	64.26	54.26	-23.46	-14.16
Vb	0.865	31.7	31.2	56.00	46.00	-24.30	-14.80
Vb	1.420	31.6	31.5	56.00	46.00	-24.40	-14.50
Vb	2.100	31.3	30.6	56.00	46.00	-24.70	-15.40
Vb	14.575	27.3	28.5	56.00	46.00	-25.40	-21.50

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

# 5. FUNDAMENTAL AND HARMONICS RADIATED EMISSION MEASUREMENT

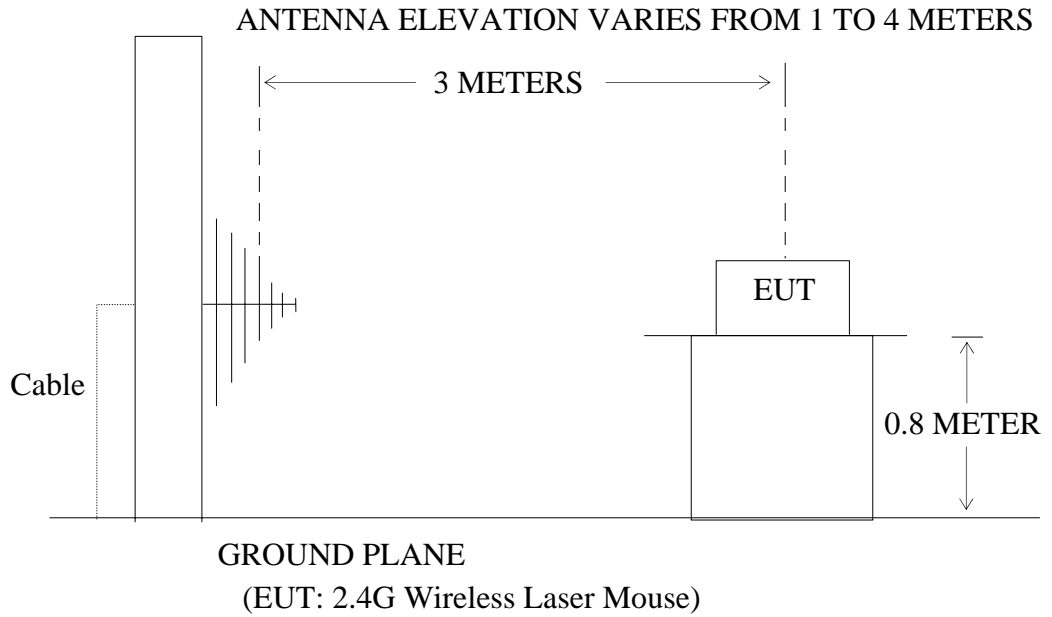
## 5.1. Block Diagram of Test Setup

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



(EUT: 2.4G Wireless Laser Mouse)

### 5.1.2. Anechoic Chamber Test Setup Diagram



## 5.2.The Emission Limit

5.2.1.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

5.2.2.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.

## 5.3.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.

### 5.3.1. 2.4G Wireless Laser Mouse (EUT)

Model Number : DS-2253(2253-B TX + MA RX)  
 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 2402.8-2478.0MHz. We are select 2402.8MHz, 2439.6MHz, 2478.0MHz TX frequency to transmit.

## 5.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

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

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

### PASS.

Date of Test:	<u>August 22, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Laser Mouse</u>	Humidity:	<u>52%</u>
Model No.:	<u>DS-2253(2253-B TX + MA RX)</u>	Power Supply:	<u>3.0V DC (“AAA” batteries 2×)</u>
Test Mode:	<u>TX 2402.8MHz</u>	Test Engineer:	<u>Feng</u>

#### 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	
2402.802	79.95	90.90	-7.45	72.50	83.45	94	114	-21.50	-30.55	Vertical
2402.802	85.35	93.05	-7.45	77.90	85.60	94	114	-16.10	-28.40	Horizontal

#### Harmonics Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4805.605	43.39	49.36	-0.29	43.10	49.07	54	74	-10.90	-24.93	Vertical
4805.605	52.89	62.93	-0.29	52.60	62.64	54	74	-1.40	-11.36	Horizontal

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

Note:

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

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

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

Date of Test:	<u>August 22, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Laser Mouse</u>	Humidity:	<u>52%</u>
Model No.:	<u>DS-2253(2253-B TX + MA RX)</u>	Power Supply:	<u>3.0V DC (“AAA” batteries 2×)</u>
Test Mode:	<u>TX 2439.6MHz</u>	Test Engineer:	<u>Feng</u>

### 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	
2439.598	83.56	91.23	-7.36	76.20	83.87	94	114	-17.80	-30.13	Vertical
2439.589	88.16	99.45	-7.36	80.80	92.09	94	114	-13.20	-21.91	Horizontal

### Harmonics Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4879.225	43.04	47.04	0.13	43.17	47.17	54	74	-10.83	-26.83	Vertical
4879.225	43.27	49.25	0.13	43.40	49.38	54	74	-10.60	-24.62	Horizontal

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

Note:

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

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

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

Date of Test:	<u>August 22, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Laser Mouse</u>	Humidity:	<u>52%</u>
Model No.:	<u>DS-2253(2253-B TX + MA RX)</u>	Power Supply:	<u>3.0V DC (“AAA” batteries 2×)</u>
Test Mode:	<u>TX 2478.0MHz</u>	Test Engineer:	<u>Feng</u>

### 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	
2478.001	84.27	92.29	-7.37	76.90	84.92	94	114	-17.10	-29.08	Vertical
2478.001	86.97	96.57	-7.37	79.60	89.20	94	114	-14.40	-24.80	Horizontal

### Harmonics Radiated Emissions

Frequency (MHz)	Reading(dBμV/m)		Factor(dB) Corr.	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
4956.004	43.72	49.72	0.51	44.23	50.23	54	74	-9.77	-23.77	Vertical
4956.004	46.59	57.66	0.51	47.10	58.17	54	74	-6.90	-15.83	Horizontal

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

Note:

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

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

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



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

### 6.1. Block Diagram of Test Setup

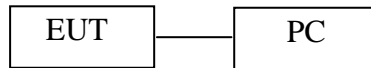
#### 6.1.1. Block diagram of connection between the EUT and simulators

##### 6.1.1.1. For TX test mode



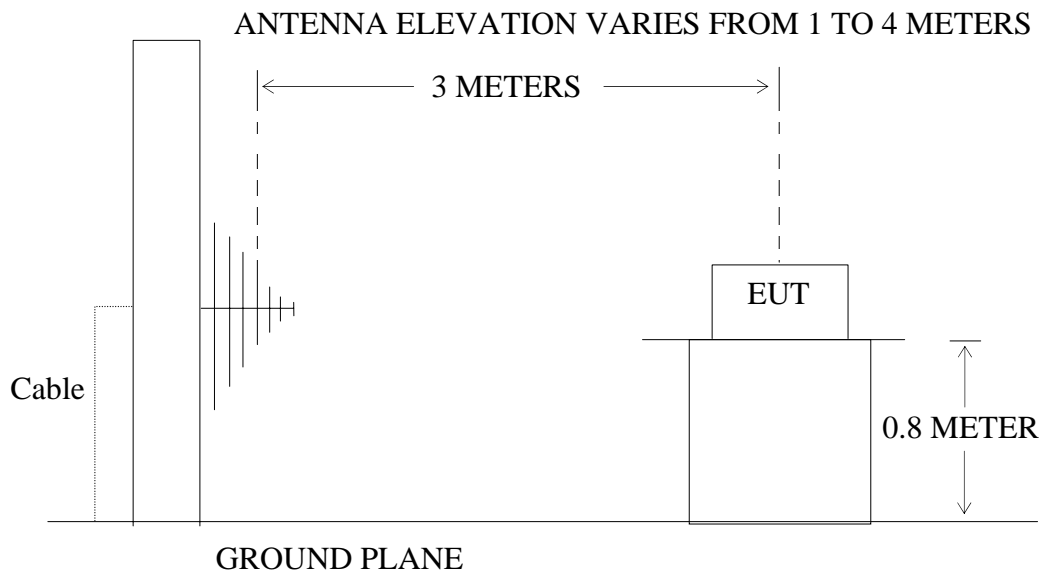
(EUT: 2.4G Wireless Laser Mouse)

##### 6.1.1.2. For Connect to PC test mode



(EUT: 2.4G Wireless Laser Mouse)

#### 6.1.2. Anechoic Chamber Test Setup Diagram



(EUT: 2.4G Wireless Laser Mouse)

6.2.The Emission Limit For Section 15.249(d)

6.2.1.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. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
	Field Strength of Quasi-peak Value (microvolts/m)	Field Strength of Quasi-peak Value (dBμV/m)	
30 - 88	100	40	
88 - 216	150	43.5	
216 - 960	200	46	
Above 960	500	54	

6.3.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.

6.3.1. 2.4G Wireless Laser Mouse (EUT)

- Model Number : DS-2253(2253-B TX + MA RX)
- Serial Number : N/A
- Manufacturer : Eastern Times Technology Co., Ltd.

6.4.Operating Condition of EUT

6.4.1.Setup the EUT and simulator as shown as Section 6.1.

6.4.2.Turn on the power of all equipment.

6.4.3. Let the EUT work in TX modes measure it. The transmit frequency are 2402.8-2478.0MHz. We are select 2402.8MHz, 2439.6MHz, 2478.0MHz TX frequency to transmit.

6.4.4. Let the EUT work in Connect to PC mode measure it.

## 6.5. Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement.

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

The frequency range from 30MHz to 25000MHz is checked for TX test mode.

The frequency range from 30MHz to 1000MHz is checked for Connect to PC test mode.

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.

## 6.6.The Emission Measurement Result

**PASS.**

Date of Test:	<u>August 21-26, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Laser Mouse</u>	Humidity:	<u>52%</u>
Model No.:	<u>DS-2253(2253-B TX + MA RX)</u>	Power Supply:	<u>3.0V DC (“AAA” batteries 2×)</u>
Test Mode:	<u>TX 2402.8MHz</u>	Test Engineer:	<u>Feng</u>

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

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

Note:

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

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

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

Date of Test:	<u>August 21-26, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Laser Mouse</u>	Humidity:	<u>52%</u>
Model No.:	<u>DS-2253(2253-B TX + MA RX)</u>	Power Supply:	<u>3.0V DC (“AAA” batteries 2×)</u>
Test Mode:	<u>TX 2439.6MHz</u>	Test Engineer:	<u>Feng</u>

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

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

Note:

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

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

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

Date of Test:	<u>August 21-26, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Laser Mouse</u>	Humidity:	<u>52%</u>
Model No.:	<u>DS-2253(2253-B TX + MA RX)</u>	Power Supply:	<u>3.0V DC (“AAA” batteries 2×)</u>
Test Mode:	<u>TX 2478.0MHz</u>	Test Engineer:	<u>Feng</u>

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

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

Note:

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

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

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

Date of Test:	<u>August 26, 2008</u>	Temperature:	<u>25°C</u>
EUT:	<u>2.4G Wireless Laser Mouse</u>	Humidity:	<u>52%</u>
Model No.:	<u>DS-2253(2253-B TX + MA RX)</u>	Power Supply:	<u>5V DC power by PC USB port PC power: AC120V/60Hz</u>
Test Mode:	<u>Connect to PC</u>	Test Engineer:	<u>Feng</u>

Frequency (MHz)	Reading (dBμV/m)	Factor(dB) Corr.	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
35.5112	10.02	16.57	26.59	40.00	-13.41	Vertical
147.8746	11.72	14.51	26.23	43.50	-17.27	Vertical
444.1299	12.39	22.90	35.29	46.00	-10.71	Vertical
481.5111	11.16	23.87	35.03	46.00	-10.97	Vertical
693.9101	9.86	26.43	36.29	46.00	-9.71	Vertical
762.9628	7.73	27.81	35.54	46.00	-10.46	Vertical
34.8928	9.73	16.70	26.43	40.00	-13.57	Horizontal
147.8746	16.20	14.51	30.71	43.50	-12.79	Horizontal
196.5595	12.92	14.94	27.86	43.50	-15.64	Horizontal
383.1960	10.67	21.64	32.31	46.00	-13.69	Horizontal
402.5167	10.33	22.39	32.72	46.00	-13.28	Horizontal
456.7909	9.05	23.15	32.20	46.00	-13.80	Horizontal

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

Note:

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

Result = Reading + Corrected Factor

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

## 7. BAND EDGES

### 7.1.The Requirement

7.1.1.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.

### 7.2.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.

#### 7.2.1. 2.4G Wireless Laser Mouse (EUT)

Model Number : DS-2253(2253-B TX + MA RX)  
Serial Number : N/A  
Manufacturer : Eastern Times Technology Co., Ltd.

### 7.3.Operating Condition of EUT

7.3.1.Setup the EUT and simulator as shown as Section 4.1.

7.3.2.Turn on the power of all equipment.

7.3.3.Let the EUT work in TX modes measure it. The transmit frequency are 2402.8-2478.0MHz. We are select 2402.8MHz, 2478.0MHz TX frequency to transmit.

### 7.4.Test Procedure

7.4.1.Measure the fundamental amplitude appearing on spectral display and set it as a reference level. Measure the lower band edge amplitude. Get the delta amplitude and edge frequency.

7.4.2.Repeat above procedures, Measure the fundamental amplitude appearing on spectral display and set it as a reference level. Measure the upper band edge amplitude. Get the delta amplitude and edge frequency.



## 7.5.The Measurement Result

### Pass

7.5.1.Lower band edge: Emission radiated outside of the lower band edge are 40.82 dB below the level of the fundamental.

Frequency (MHz)	The emission of carrier power strength (dB $\mu$ V/m)	The maximum field strength at the band edge (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2402.8	85.60	44.78	74	-29.22	Peak
2402.8	77.90	37.08	54	-16.92	Average

7.5.2.Upper band edge: Emission radiated outside of the upper band edge are 45.54 dB below the level of the fundamental.

Frequency (MHz)	The emission of carrier power strength (dB $\mu$ V/m)	The maximum field strength at the band edge (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Margin (dB)	Result
2478.0	89.20	43.66	74	-30.34	Peak
2478.0	79.60	34.06	54	-19.94	Average

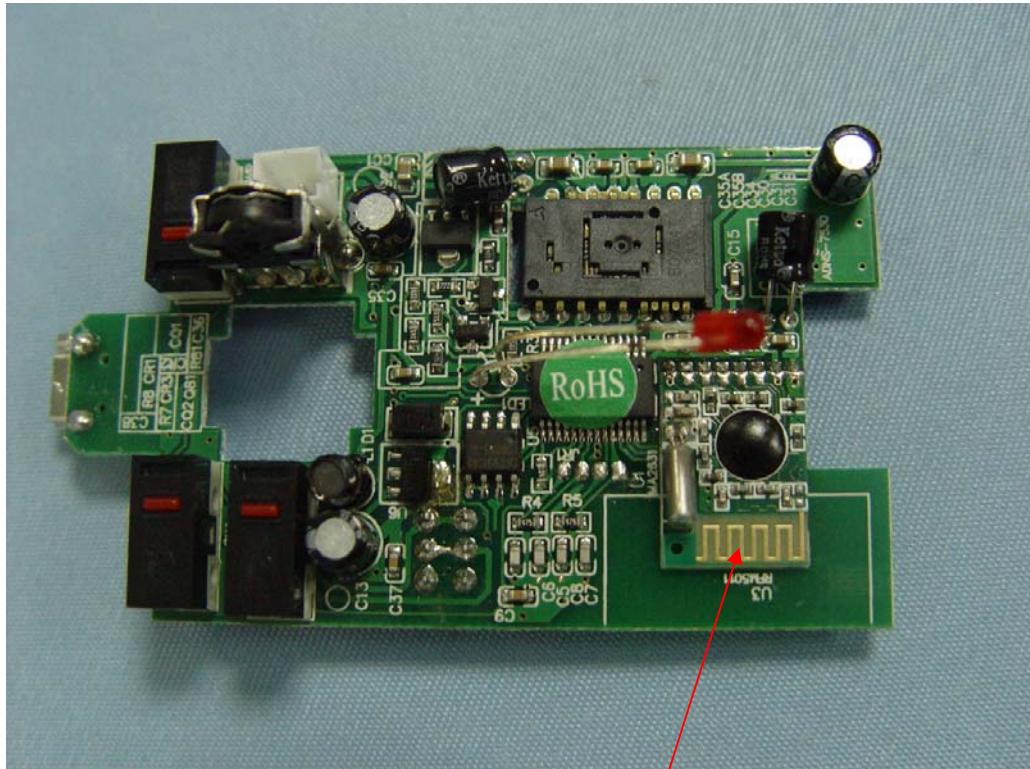
## 8. ANTENNA REQUIREMENT

### 8.1.The Requirement

8.1.1. 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.

### 8.2.Antenna Construction

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



Antenna

# APPENDIX I (Test Curves)

# CONDUCTION EMISSION STANDARD FCC Part15B

26. Aug 08 09:16

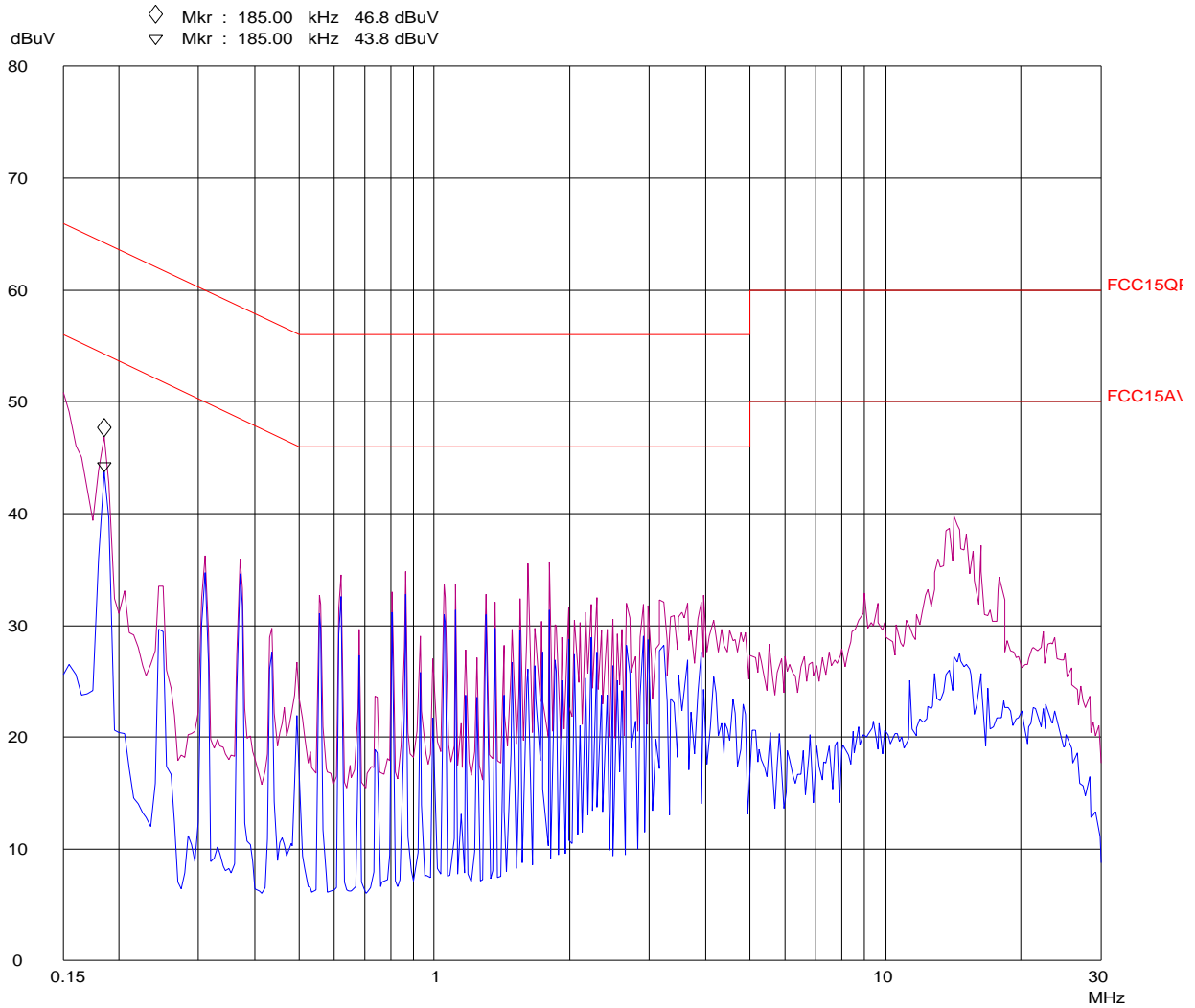
EUT: 2.4G Wireless Laser Mouse  
 Manuf: Eastern Times  
 Op Cond: Connect to PC  
 Operator: Feng  
 Test Spec: Va 120V/60Hz  
 Comment: Tem25 C Humi53%  
 M/N:DS-2253(2253-B TX+MA RX) Sample No.:083204

Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	10ms	AUTO	LN OFF
2M	10M	10k	9k	PK+AV	10ms	AUTO	LN OFF
10M	30M	25k	9k	PK+AV	1ms	AUTO	LN OFF

Final Measurement: x QP / + AV  
 Meas Time: 1 s  
 Subranges: 25  
 Acc Margin: 6dB

Transducer No. Start Stop Name  
 1 9k 30M confac



# CONDUCTION EMISSION STANDARD FCC Part15B

26. Aug 08 09:07

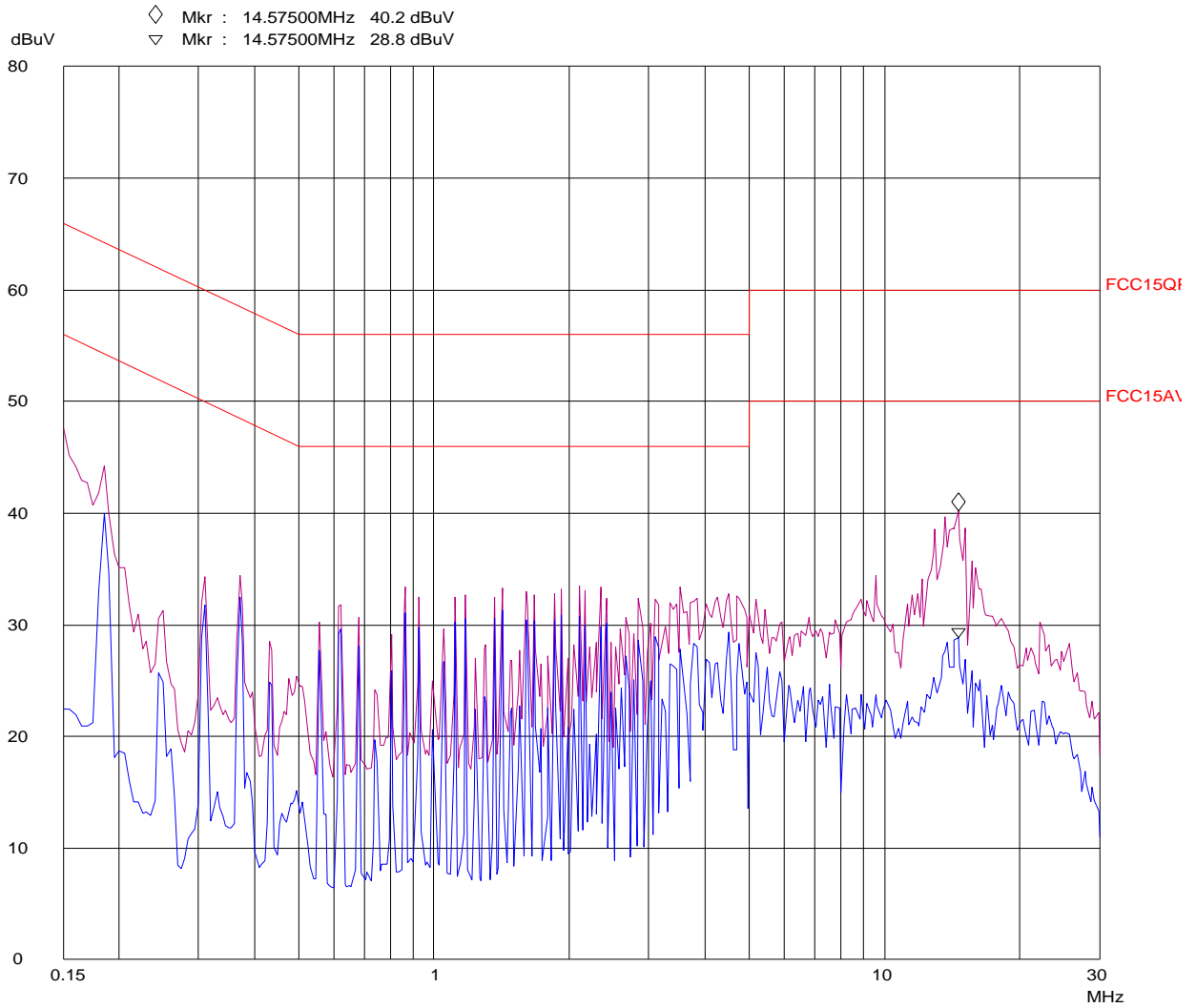
EUT: 2.4G Wireless Laser Mouse  
Manuf: Eastern Times  
Op Cond: Connect to PC  
Operator: Feng  
Test Spec: Vb 120V/60Hz  
Comment: Tem25° C Humi53%  
M/N:DS-2253(2253-B TX+MA RX) Sample No.:083204

### Scan Settings (3 Ranges)

Frequencies			Receiver Settings				
Start	Stop	Step	IF BW	Detector	M-Time	Atten	Preamp
150k	2M	5k	9k	PK+AV	10ms	AUTO	LN OFF
2M	10M	10k	9k	PK+AV	10ms	AUTO	LN OFF
10M	30M	25k	9k	PK+AV	1ms	AUTO	LN OFF

Final Measurement: x QP / + AV  
Meas Time: 1 s  
Subranges: 25  
Acc Margin: 6dB

Transducer No. Start Stop Name  
1 9k 30M confac





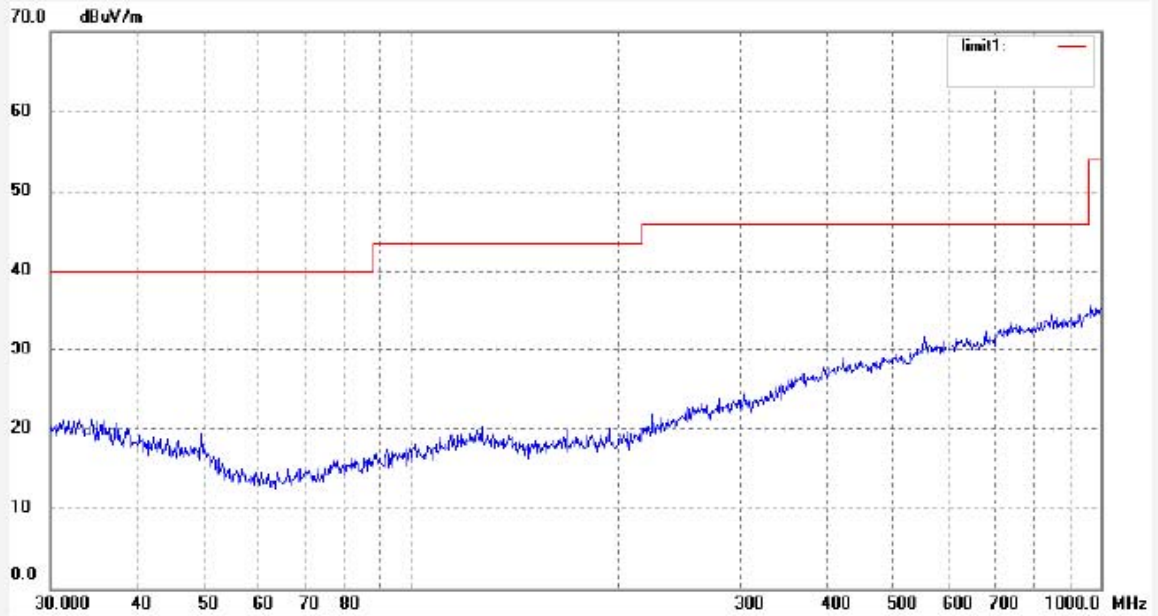
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #289	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/21/
Temp.( C)/Hum.(%) 25 C / 53 %	Time: 9/43/58
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2402.8MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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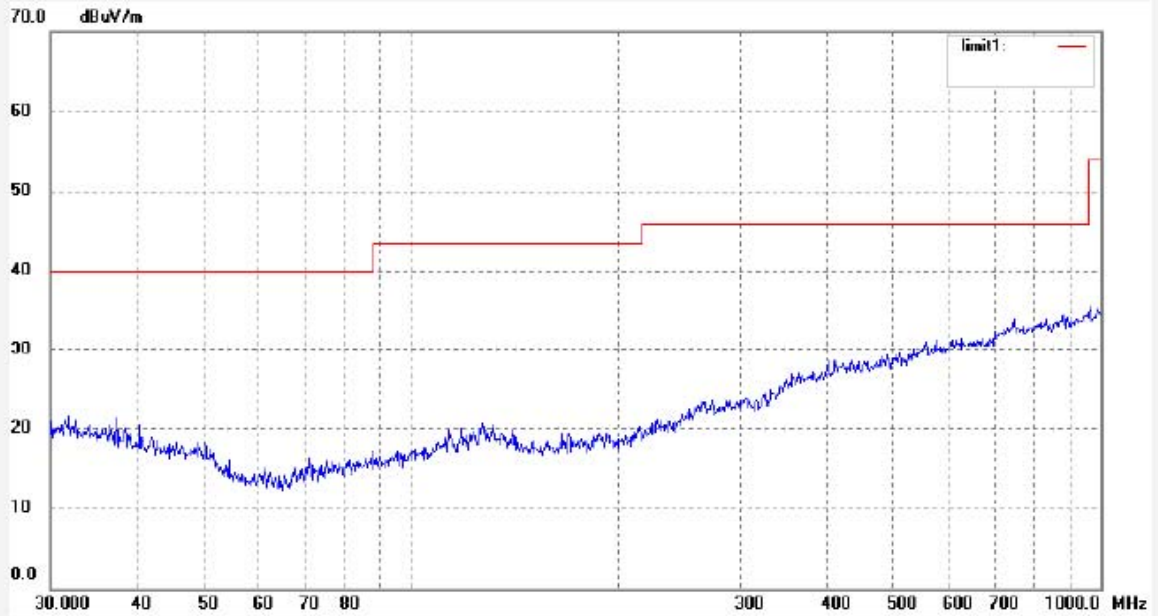
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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: RTTE #288	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/21/
Temp.( C)/Hum.(%) 25 C / 53 %	Time: 9/42/44
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2402.8MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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





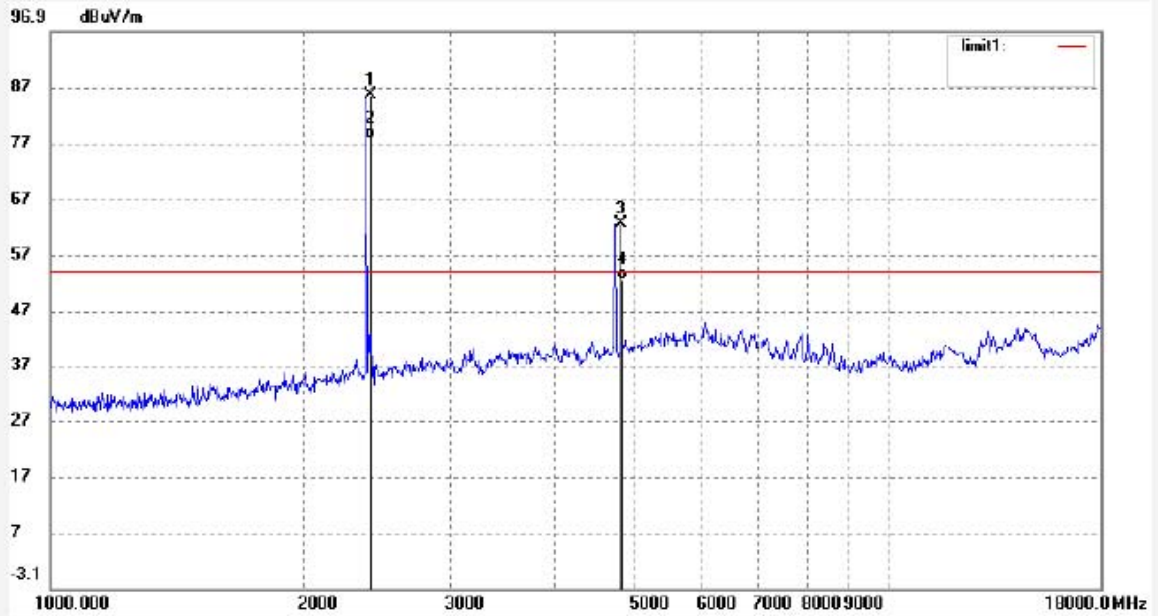
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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: RTTE #296	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/06/16
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2402.8MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2402.802	93.05	-7.45	85.60	114.00	-28.40	peak	
2	2402.802	85.35	-7.45	77.90	94.00	-16.10	AVG	
3	4805.605	62.93	-0.29	62.64	74.00	-11.36	peak	
4	4805.605	52.89	-0.29	52.60	54.00	-1.40	AVG	





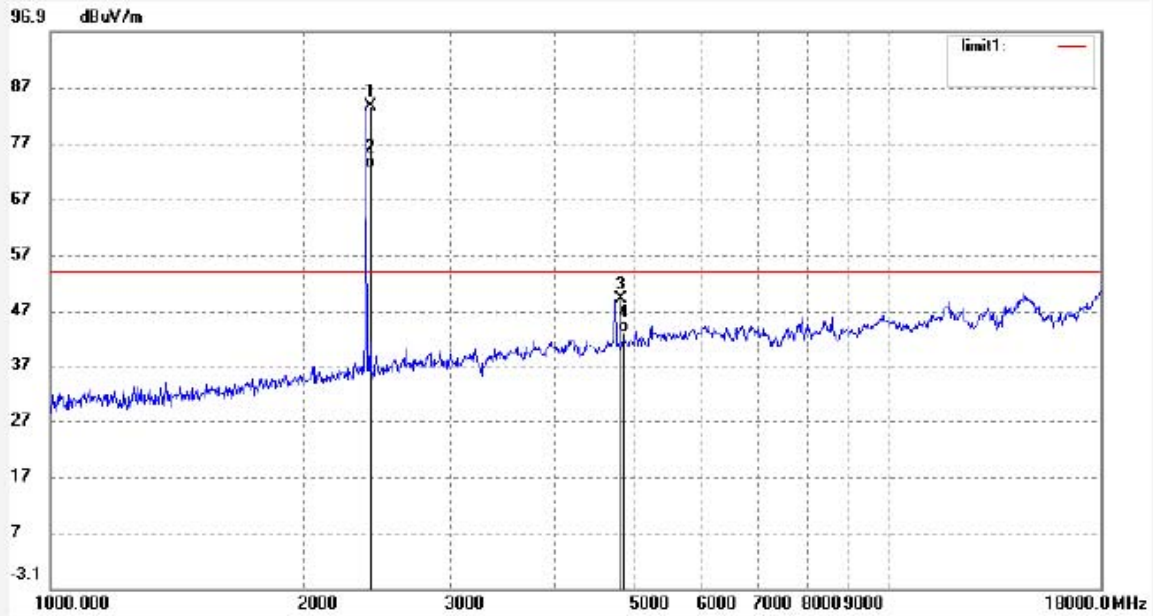
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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: RTTE #297	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/19/01
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2402.8MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2402.802	90.90	-7.45	83.45	114.00	-30.55	peak	
2	2402.802	79.95	-7.45	72.50	94.00	-21.50	AVG	
3	4805.605	49.36	-0.29	49.07	74.00	-24.93	peak	
4	4805.605	43.39	-0.29	43.10	54.00	-10.90	AVG	



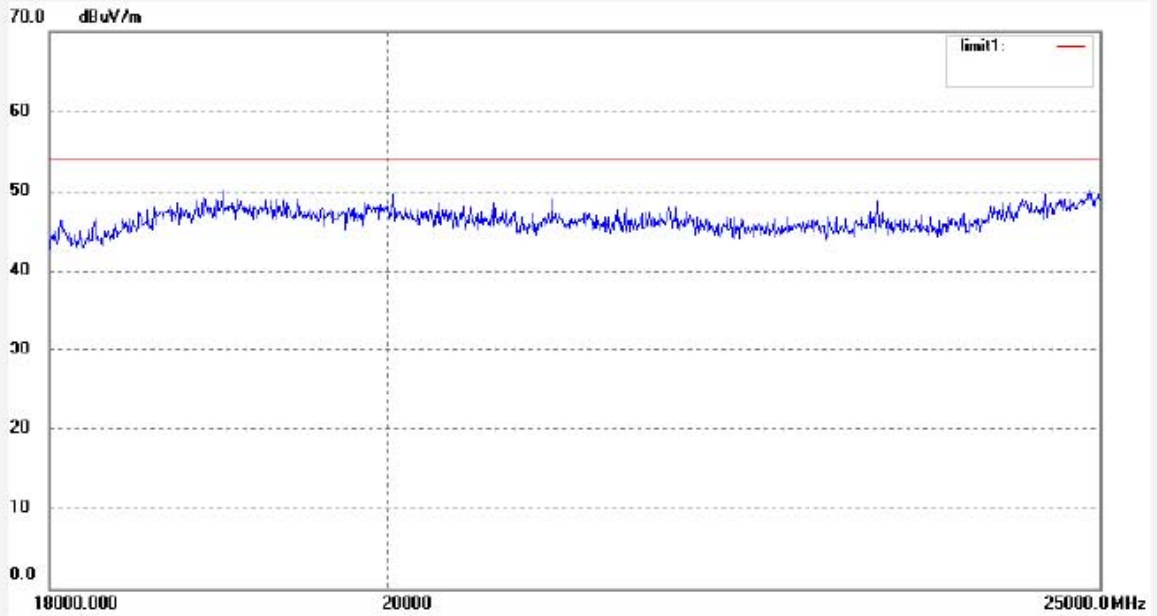
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Site: 966 chamber  
Tel:+86-0755-26503290  
Fax:+86-0755-26503396

Job No.: RTTE #306	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/57/09
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2402.8MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
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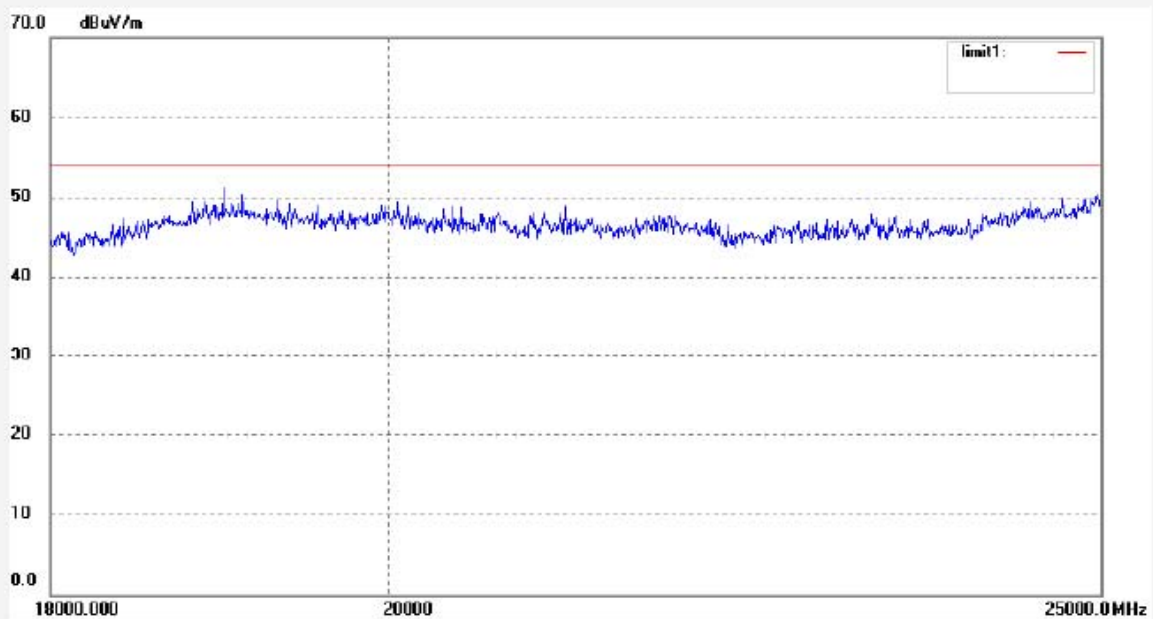
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: RTTE #307	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/57/29
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2402.8MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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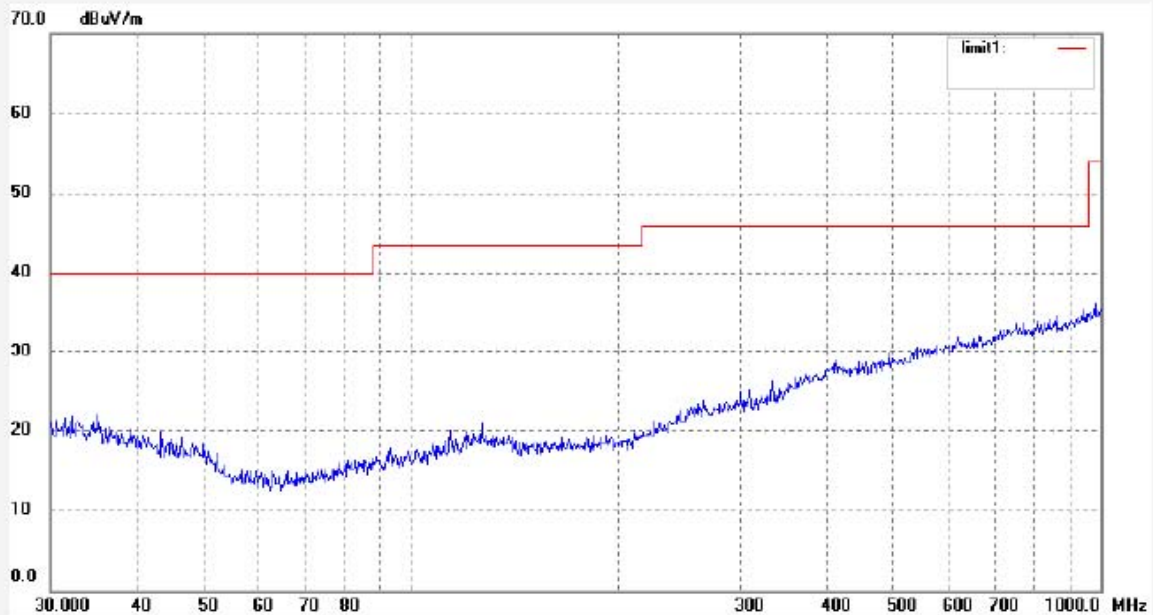
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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: RTTE #290	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/21/
Temp.( C)/Hum.(%) 25 C / 53 %	Time: 9/45/22
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2439.6MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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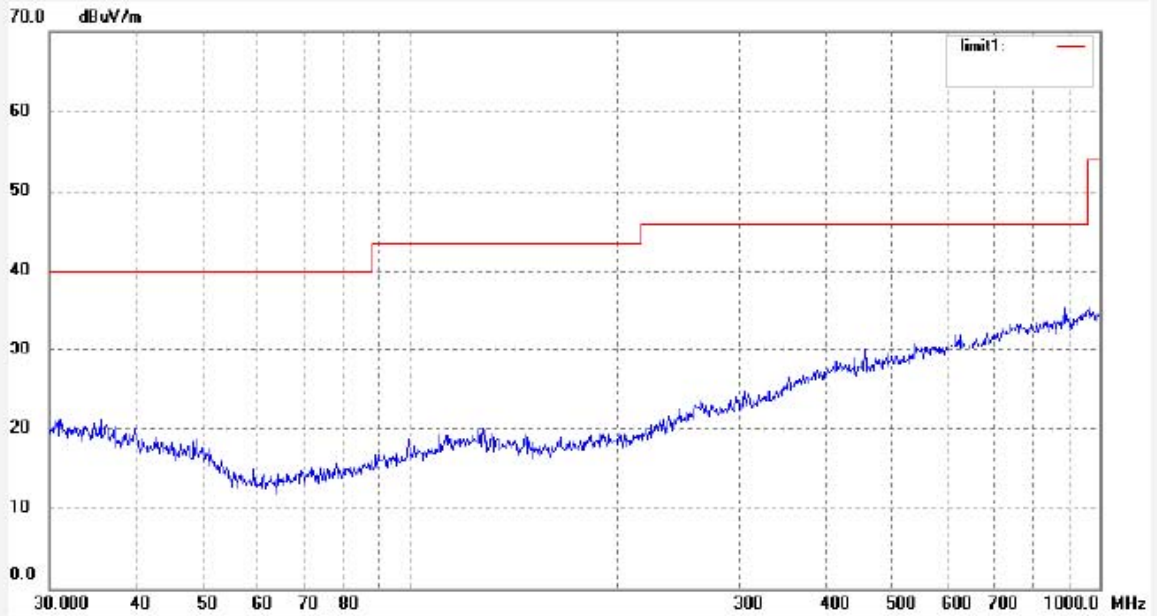
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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: RTTE #291	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/21/
Temp.( C)/Hum.(%) 25 C / 53 %	Time: 9/46/24
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2439.6MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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





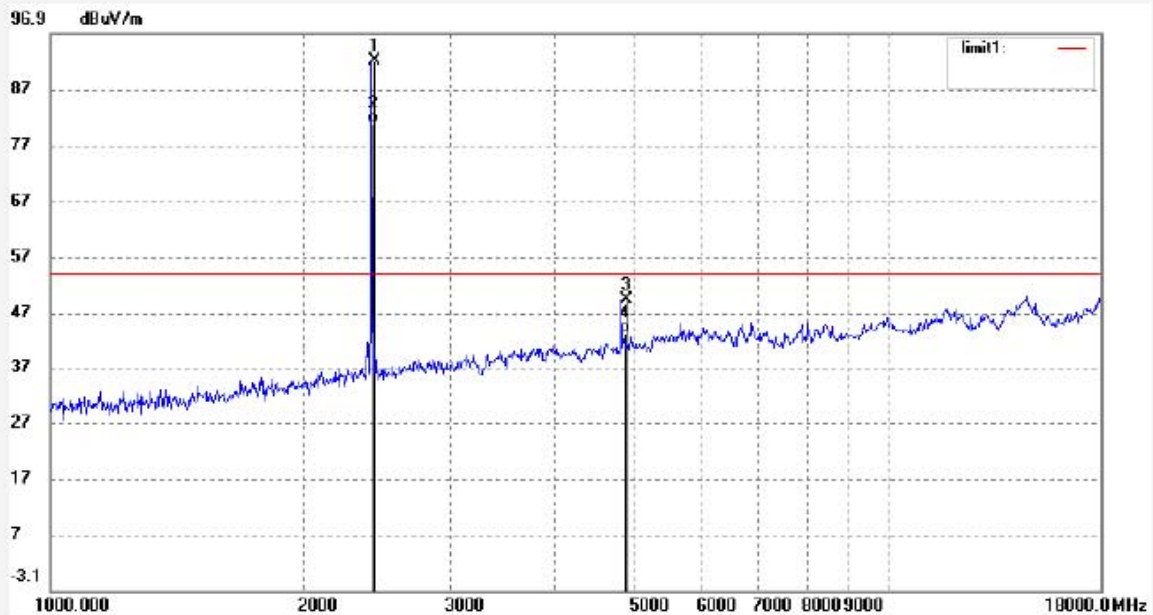
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #299	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/34/50
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2439.6MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2439.598	99.45	-7.36	92.09	114.00	-21.91	peak	
2	2439.598	88.16	-7.36	80.80	94.00	-13.20	AVG	
3	4879.225	49.25	0.13	49.38	74.00	-24.62	peak	
4	4879.225	43.27	0.13	43.40	54.00	-10.60	AVG	



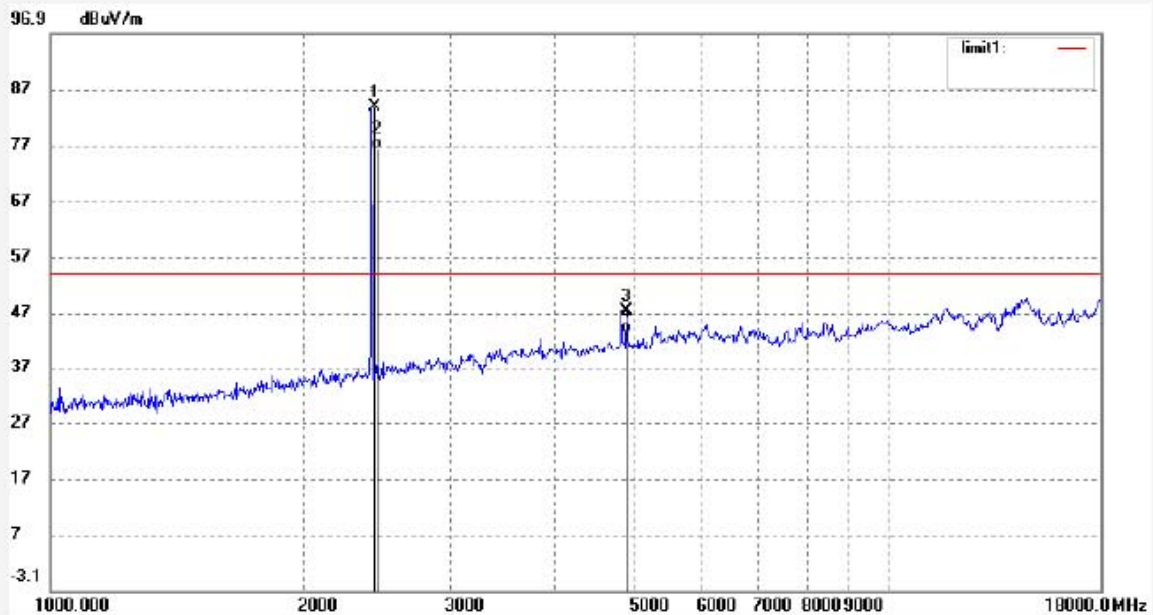
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F1,Bldg,A,Changyuan New Material Port Keyuan Rd,  
Science & Industry Park,Nanshan Shenzhen,P.R.China

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

Job No.: RTTE #298	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/29/36
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2439.6MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2439.598	91.23	-7.36	83.87	114.00	-30.13	peak	
2	2439.598	83.56	-7.36	76.20	94.00	-17.80	AVG	
3	4879.225	47.04	0.13	47.17	74.00	-26.83	peak	
4	4879.225	43.04	0.13	43.17	54.00	-10.83	AVG	



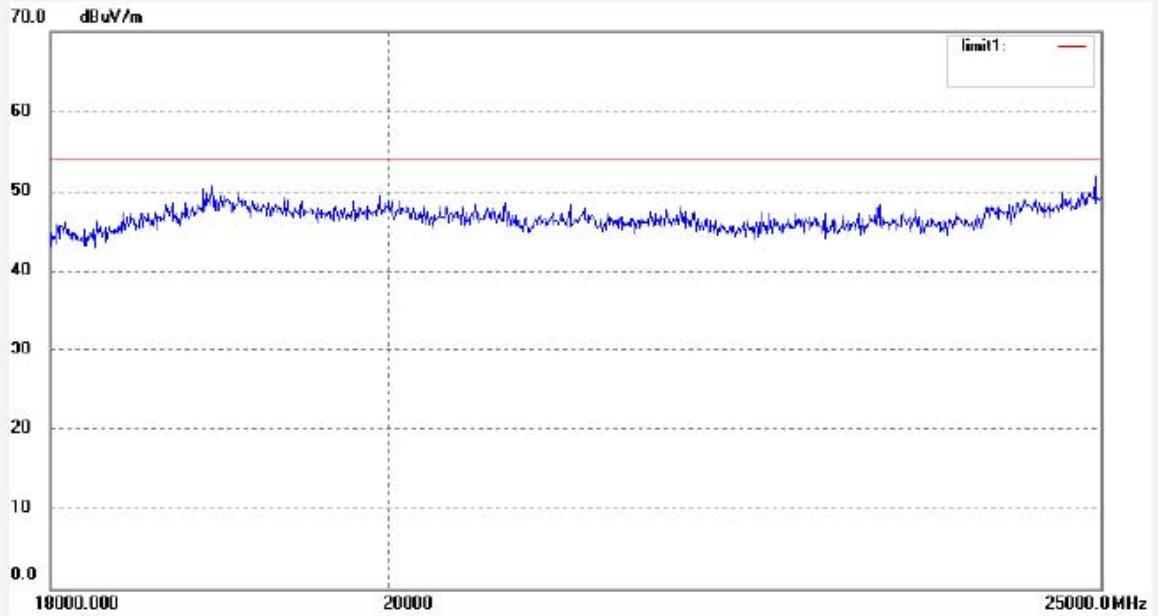
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #305	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/56/52
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2439.6MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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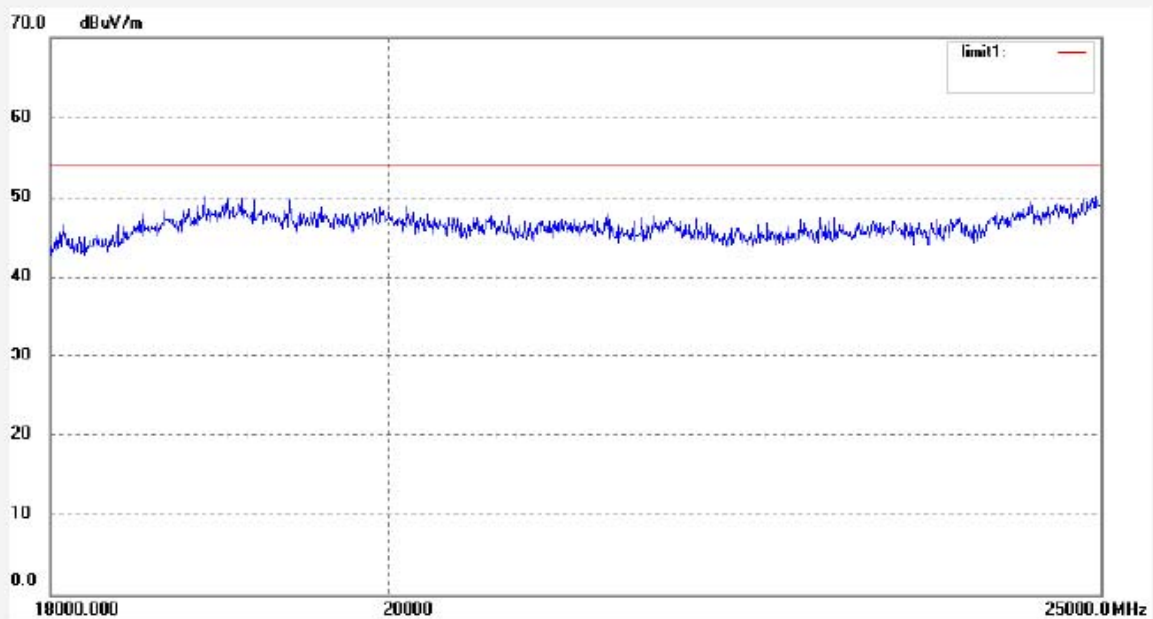
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #304	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/56/26
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2439.6MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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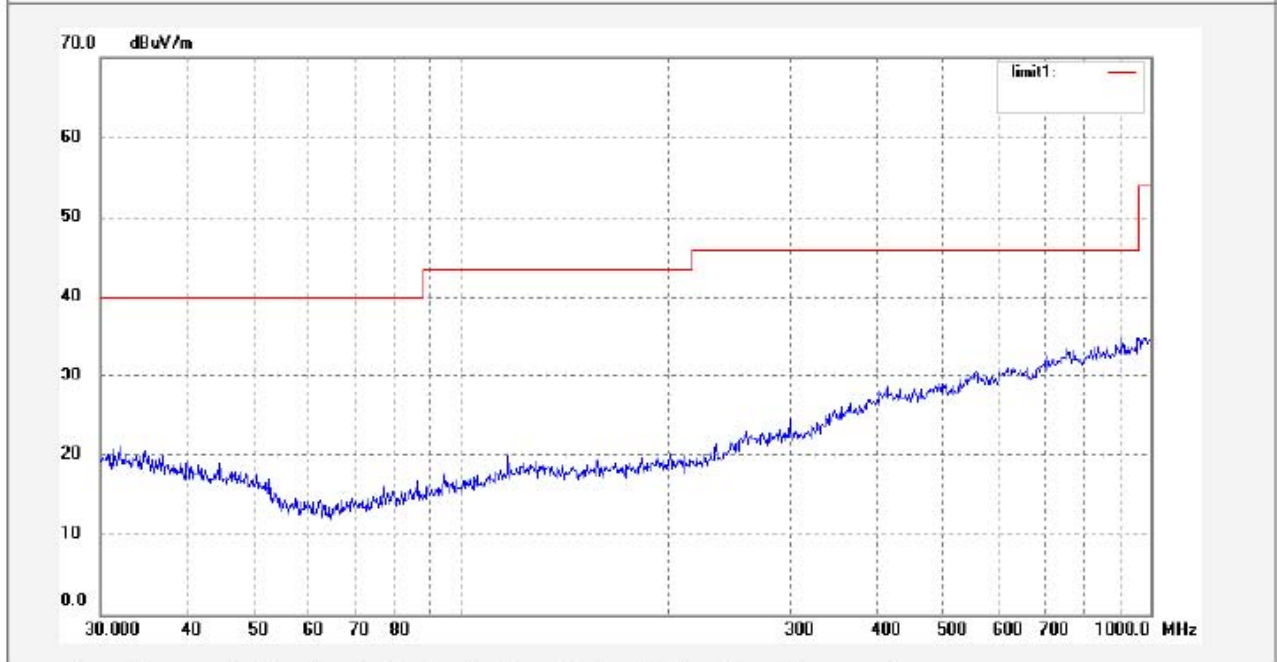
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #325	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/25/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 14/23/11
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2478.0MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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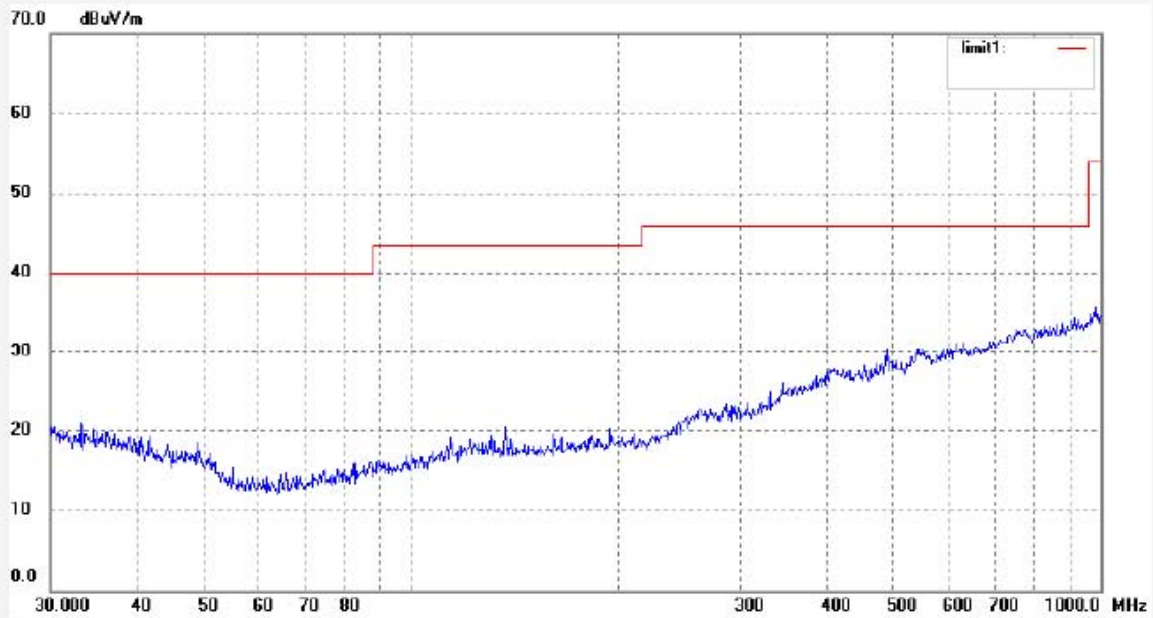
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #326	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/25/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 14/24/06
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2478.0MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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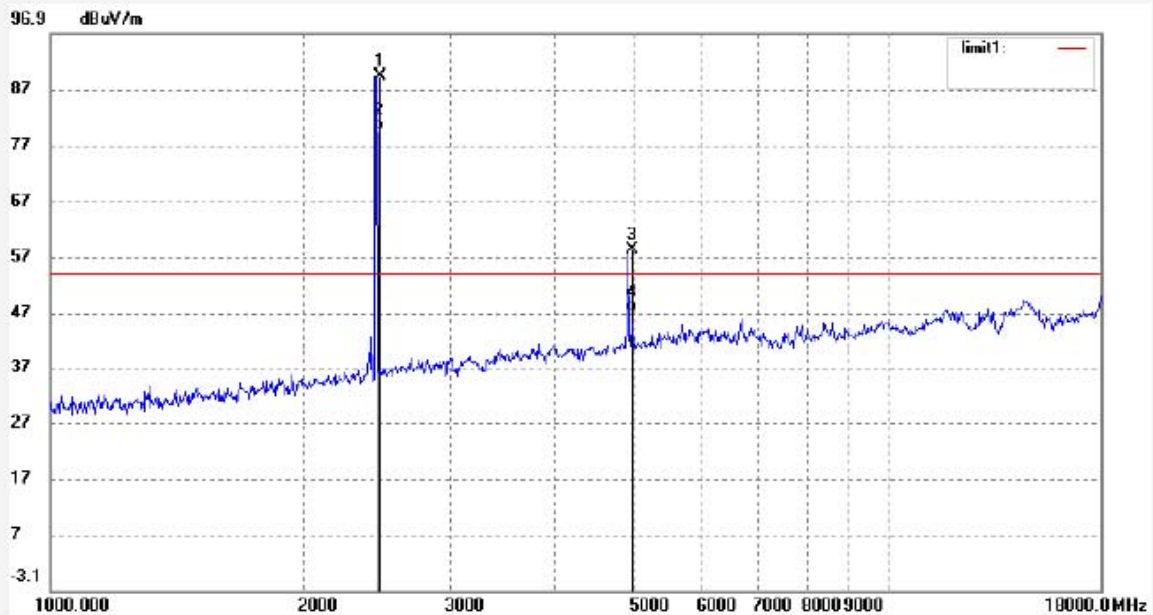
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #300	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/41/20
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2478.0MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2478.001	96.57	-7.37	89.20	114.00	-24.80	peak	
2	2478.001	86.97	-7.37	79.60	94.00	-14.40	AVG	
3	4956.004	57.66	0.51	58.17	74.00	-15.83	peak	
4	4956.004	46.59	0.51	47.10	54.00	-6.90	AVG	



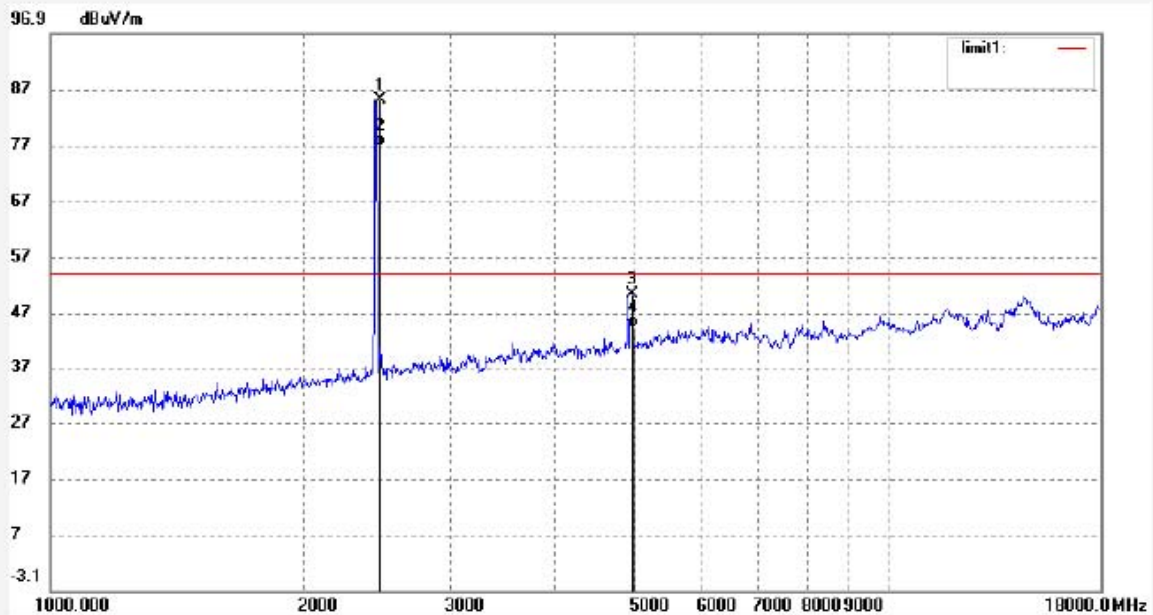
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #301	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/50/00
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2478.0MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2478.001	92.29	-7.37	84.92	114.00	-29.08	peak	
2	2478.001	84.27	-7.37	76.90	94.00	-17.10	AVG	
3	4956.004	49.72	0.51	50.23	74.00	-23.77	peak	
4	4956.004	43.72	0.51	44.23	54.00	-9.77	AVG	





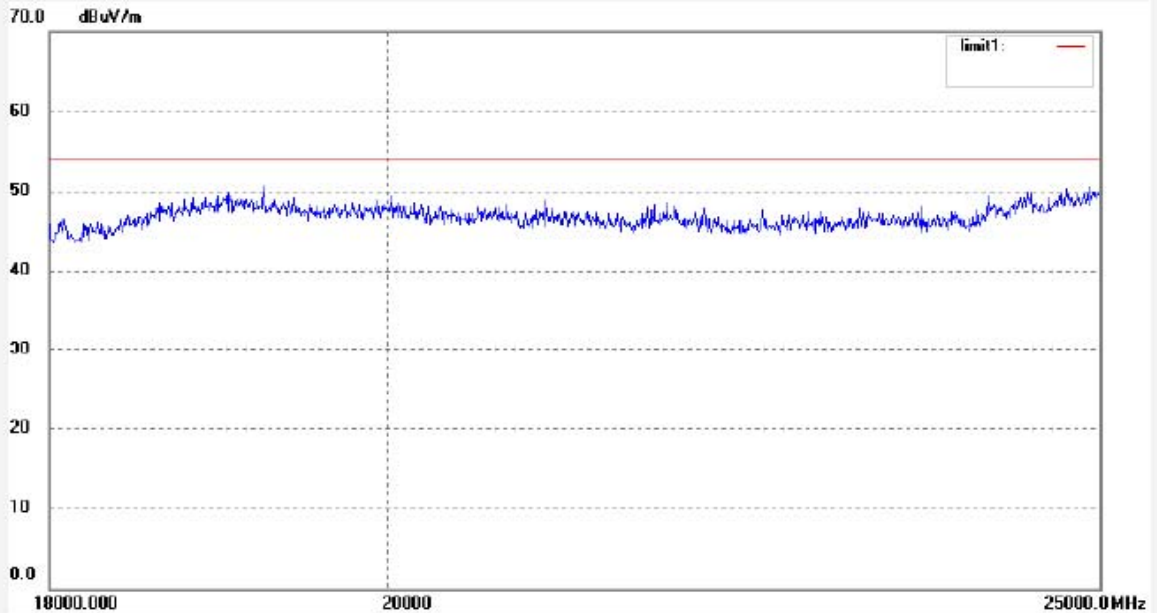
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #302	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/55/31
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2478.0MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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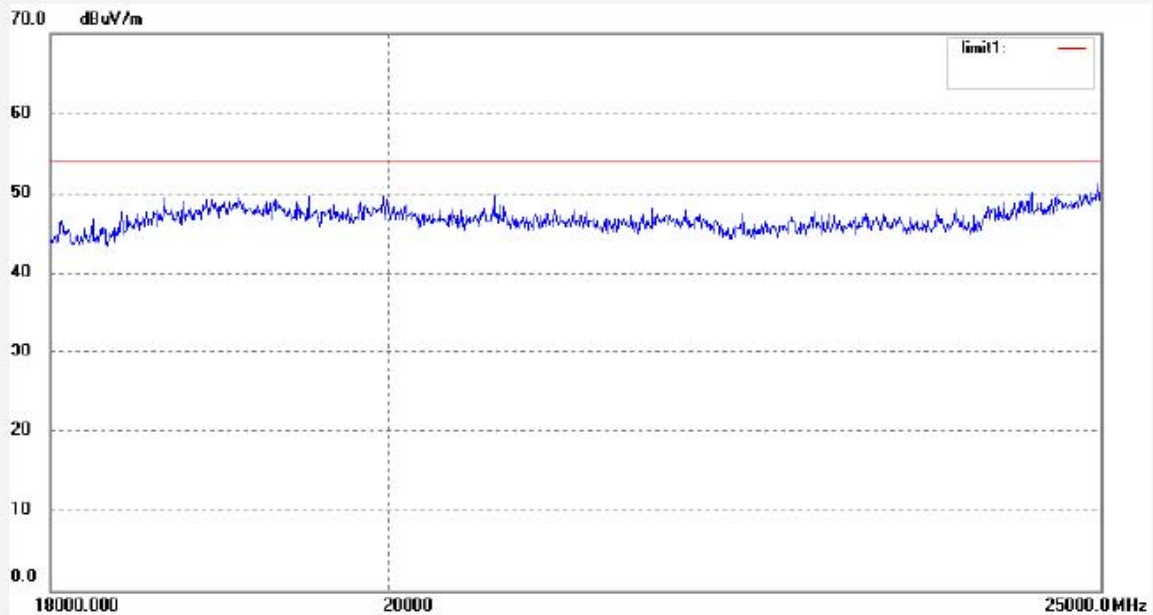
**ACCURATE TECHNOLOGY CO., LTD.**

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.: RTTE #303	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 3V
Test item: Radiation Test	Date: 08/08/22/
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 9/56/01
EUT: 2.4G Wireless Laser Mouse	Engineer Signature:
Mode: TX 2478.0MHz	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



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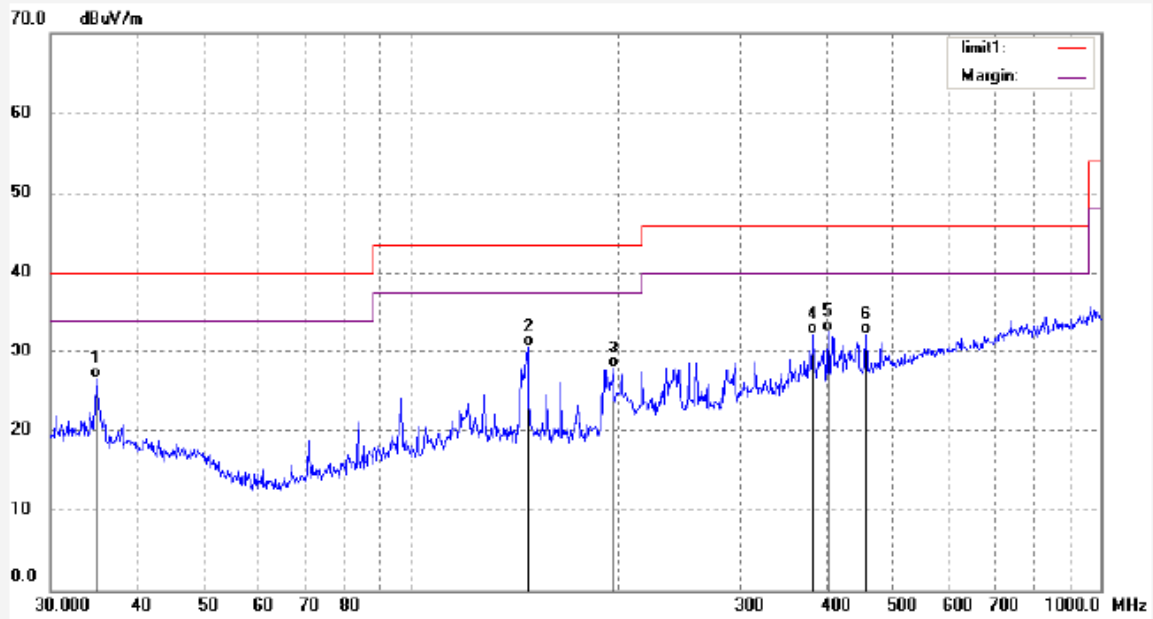
**ACCURATE TECHNOLOGY CO., LTD.**

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.: feng #31	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 2008/08/26
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 14:40:23
EUT: 2.4G Wireless Laser Mouse	Engineer Signature: feng
Mode: Connect to PC	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

Note: Sample No.:083204 Report No.:ATE20081578



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	34.8928	9.73	16.70	26.43	40.00	-13.57	QP	
2	147.8746	16.20	14.51	30.71	43.50	-12.79	QP	
3	196.5595	12.92	14.94	27.86	43.50	-15.64	QP	
4	383.1960	10.67	21.64	32.31	46.00	-13.69	QP	
5	402.5167	10.33	22.39	32.72	46.00	-13.28	QP	
6	456.7909	9.05	23.15	32.20	46.00	-13.80	QP	





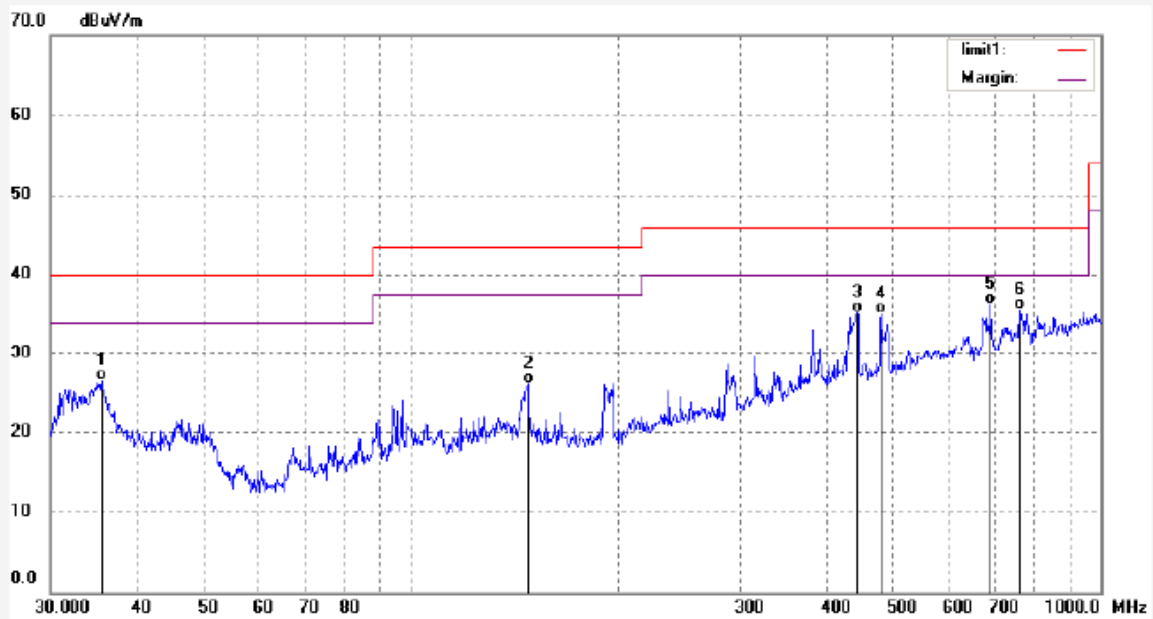
**ACCURATE TECHNOLOGY CO., LTD.**

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.: feng #32	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 5V
Test item: Radiation Test	Date: 2008/08/26
Temp.( C)/Hum.(%) 25 C / 52 %	Time: 14:41:18
EUT: 2.4G Wireless Laser Mouse	Engineer Signature: feng
Mode: Connect to PC	Distance: 3m
Model: DS-2253(2253-B TX+MA RX)	
Manufacturer: Eastern Times	

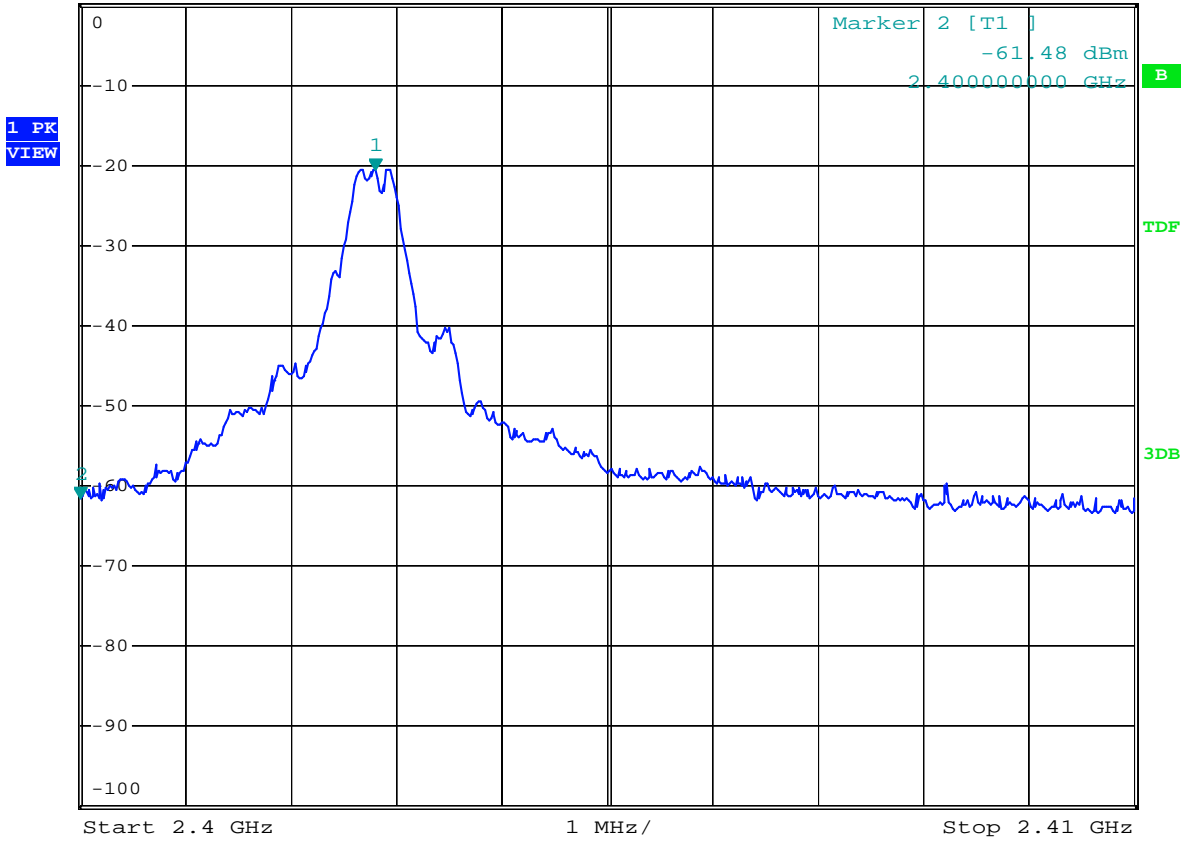
Note: Sample No.:083204 Report No.:ATE20081578



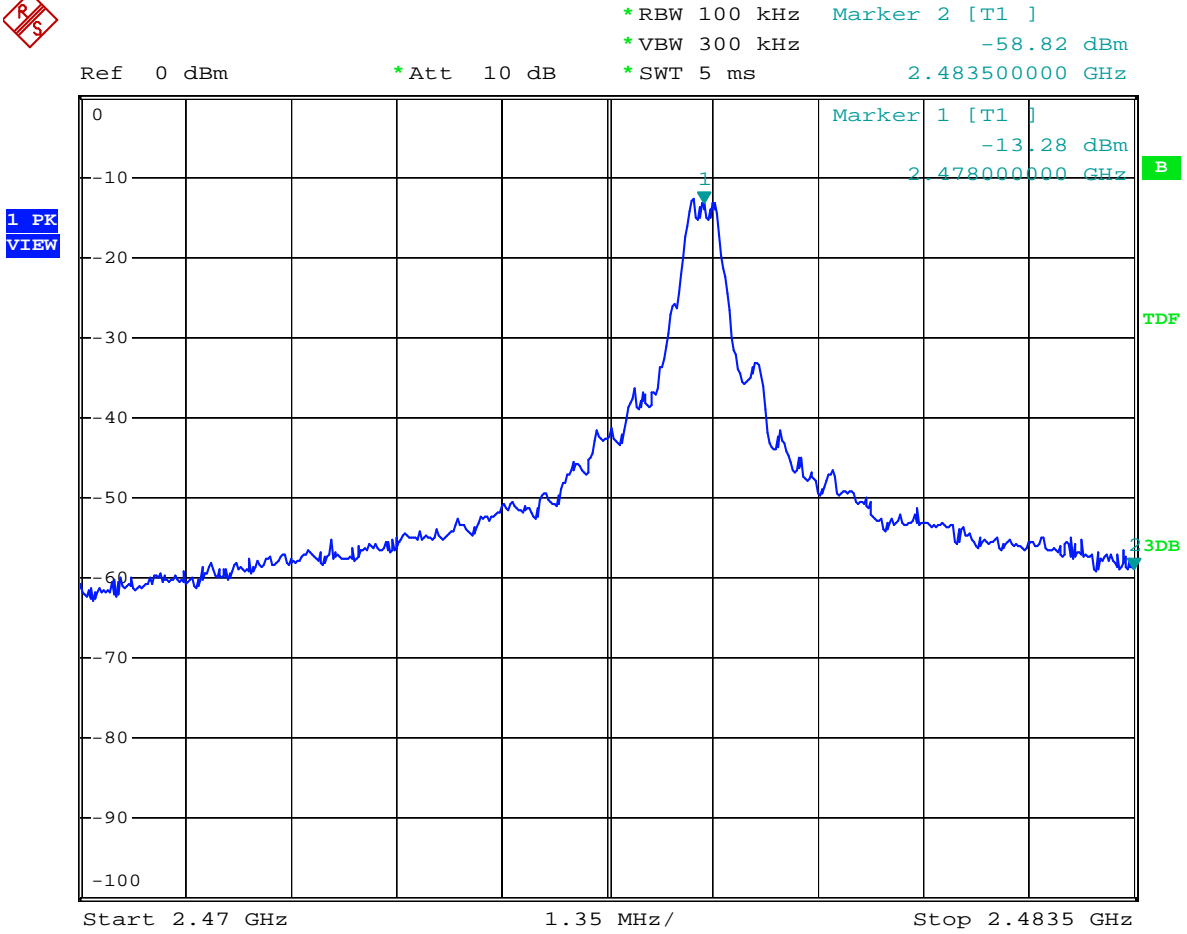
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	35.5112	10.02	16.57	26.59	40.00	-13.41	QP	
2	147.8746	11.72	14.51	26.23	43.50	-17.27	QP	
3	444.1299	12.39	22.90	35.29	46.00	-10.71	QP	
4	481.5111	11.16	23.87	35.03	46.00	-10.97	QP	
5	693.9101	9.86	26.43	36.29	46.00	-9.71	QP	
6	762.9628	7.73	27.81	35.54	46.00	-10.46	QP	



Ref 0 dBm \*Att 10 dB \*RBW 100 kHz Marker 1 [T1 ]  
\*VBW 300 kHz -20.66 dBm  
\*SWT 5 ms 2.402800000 GHz



Date: 25.AUG.2008 14:48:21



Date: 25.AUG.2008 14:52:53