APPLICATION CERTIFICATION FCC Part 15C
On Behalf of
Eastern Times Technology Co., Ltd.

Bluetooth Laser Mouse
Model No.: DS-2292(2292-B)

FCC ID: TUV2292

Prepared for	:	Eastern Times Technology Co., Ltd.
Address	:	Building 5, Penghua Industry Park, Heping Rd.(W), Longhua, Shenzhen, Guangdong, China
Prepared by	:	ACCURATE TECHNOLOGY CO. LTD
Address	:	F1, Bldg. A, Changyuan New Material Port, Keyuan Rd. Science & Industry Park, Nanshan, Shenzhen, Guangdong P.R. China
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Report Number	:	ATE20090070
Date of Test	:	May 13, 2009
Date of Report	:	May 14, 2009

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Description Page

Test Report Certification

Applicant : Eastern Times Technology Co., Ltd.

Manufacturer : Eastern Times Technology Co., Ltd.

EUT Description : Bluetooth Laser Mouse

(A) MODEL NO.: DS-2292(2292-B)

(B) SERIAL NO.: N/A

(C) POWER SUPPLY: 2.4V DC ("AAA" Ni-MH rechargeable batteries 2×)

Measurement Procedure Used:

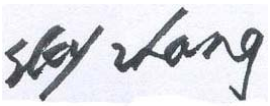
FCC Rules and Regulations Part 15 Subpart C Section 15.247
ANSI C63.4: 2003

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 15.247 limits. The measurement results are contained in this test report and ACCURATE TECHNOLOGY CO. LTD is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the Equipment Under Test (EUT) is to be technically compliant with the FCC requirements.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of ACCURATE TECHNOLOGY CO. LTD.

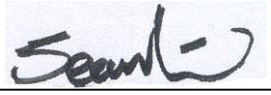
Date of Test : May 13, 2009

Prepared by :



(Engineer)

Approved & Authorized Signer :



(Manager)

1. GENERAL INFORMATION

1.1.Description of Device (EUT)

EUT	:	Bluetooth Laser Mouse
Model Number	:	DS-2292(2292-B)
Frequency Band	:	2402MHz-2480MHz
Number of Channels	:	79
Antenna Gain	:	0dBi Max.
Power Supply	:	2.4V DC ("AAA" Ni-MH rechargeable batteries 2×)
Applicant	:	Eastern Times Technology Co., Ltd.
Address	:	Building 5, Penghua Industry Park, Heping Rd.(W), Longhua, Shenzhen, Guangdong, China
Manufacturer	:	Eastern Times Technology Co., Ltd.
Address	:	Building 5, Penghua Industry Park, Heping Rd.(W), Longhua, Shenzhen, Guangdong, China
Date of sample received	:	May 10, 2009
Date of Test	:	May 13, 2009

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	03.28.2010
EMI Test Receiver	Rohde&Schwarz	ESPI3	101526/003	03.28.2010
Spectrum Analyzer	Agilent	E7405A	MY45115511	03.28.2010
Pre-Amplifier	Rohde&Schwarz	CBLU1183540-01	3791	03.30.2010
Loop Antenna	Schwarzbeck	FMZB1516	1516131	03.28.2010
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	03.28.2010
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	12.19.2009
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	10.09.2009
LISN	Rohde&Schwarz	ESH3-Z5	100305	03.28.2010
LISN	Schwarzbeck	NSLK8126	8126431	03.28.2010

3. OPERATION OF EUT DURING TESTING

3.1.Operating Mode

The mode is used: Transmitting mode
Low Channel: 2402MHz
Middle Channel: 2441MHz
High Channel: 2480MHz
Hopping

3.2.Configuration and peripherals

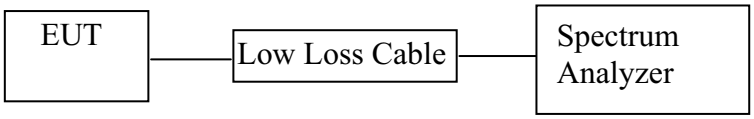
Figure 1 Setup: Transmitting mode

4. TEST PROCEDURES AND RESULTS

FCC Rules	**Description of Test**	**Result**
Section 15.247(a)(1)	20dB Bandwidth Test	Compliant
Section 15.247(a)(1)	Carrier Frequency Separation Test	Compliant
Section 15.247(a)(1)(iii)	Number Of Hopping Frequency Test	Compliant
Section 15.247(a)(1)(iii)	Dwell Time Test	Compliant
Section 15.247(b)(1)	Maximum Peak Output Power Test	Compliant
Section 15.247(d)	Band Edge Compliance Test	Compliant
Section 15.247(d) Section 15.209	Radiated Spurious Emission Test	Compliant
Section 15.203	Antenna Requirement	Compliant

5. 20DB BANDWIDTH TEST

5.1.Block Diagram of Test Setup



(EUT: Bluetooth Laser Mouse)

5.2.The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

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.Bluetooth Laser Mouse (EUT)

Model Number	:	DS-2292(2292-B)
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(Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

5.5. Test Procedure

5.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

5.5.2. Set RBW of spectrum analyzer to 30kHz and VBW to 100kHz.

5.5.3. The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

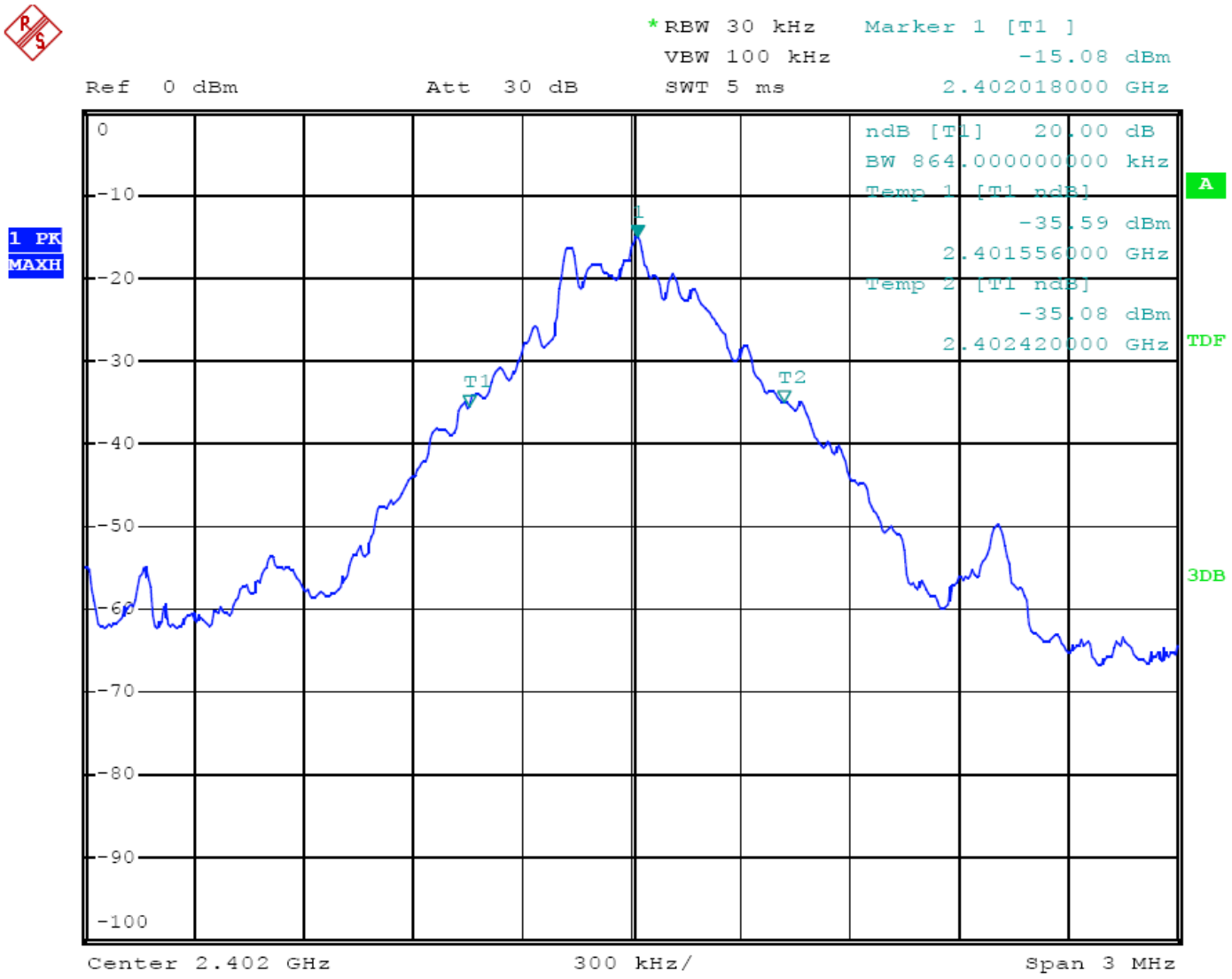
5.6. Test Result

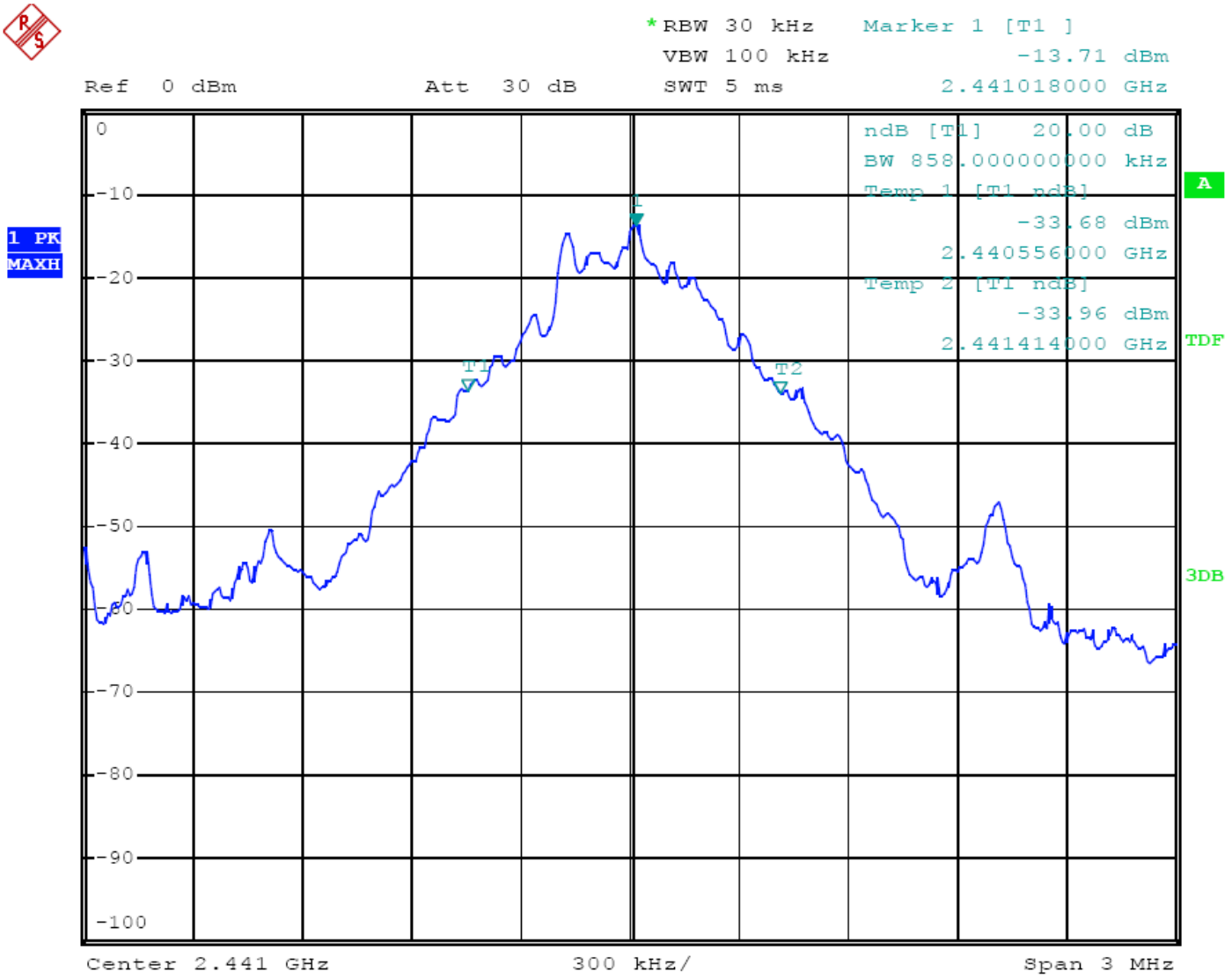
PASS.

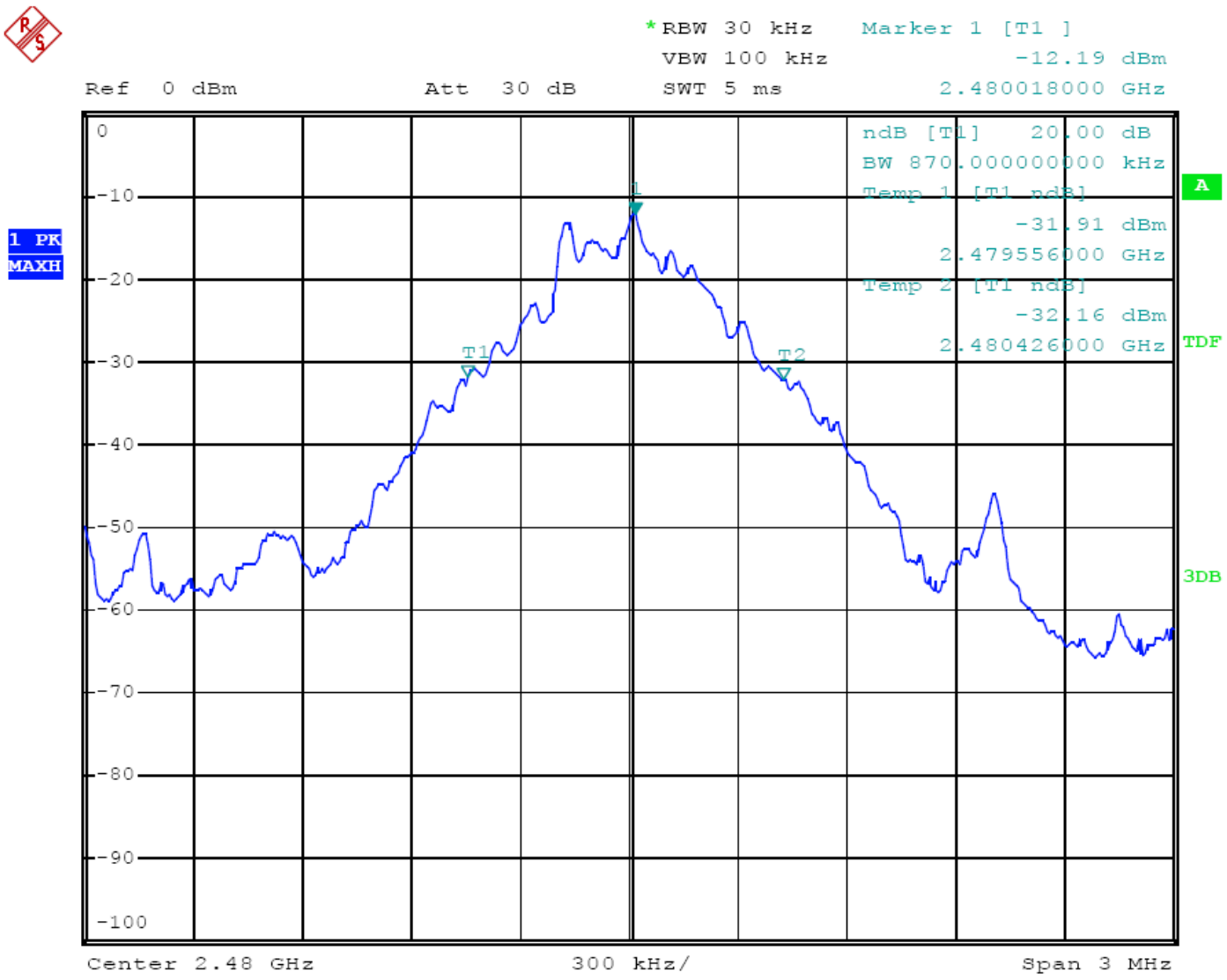
Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	TX	Test Engineer:	Joe

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	Limit (MHz)
Low	2402	0.864	---
Middle	2441	0.858	---
High	2480	0.870	---

The spectrum analyzer plots are attached as below.

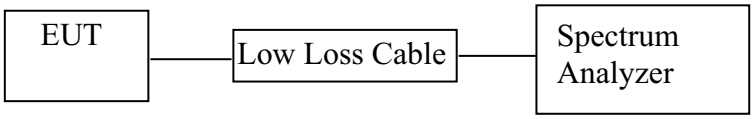

*RBW 30 kHz
VBW 100 kHz
SWT 5 ms
Marker 1 [T1]
-15.08 dBm
2.402018000 GHz
Ref 0 dBm
Att 30 dB
ndB [T1] 20.00 dB
BW 864.000000000 kHz
Temp 1 [T1 ndB]
-35.59 dBm
2.401556000 GHz
Temp 2 [T1 ndB]
-35.08 dBm
2.402420000 GHz
1 PK
MAXH
A
TDF
3DB
T1
T2
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.402 GHz
300 kHz/
Span 3 MHz


*RBW 30 kHz
VBW 100 kHz
SWT 5 ms
Marker 1 [T1]
-13.71 dBm
2.441018000 GHz
Ref 0 dBm
Att 30 dB
ndB [T1] 20.00 dB
BW 858.000000000 kHz
Temp 1 [T1 ndB]
-33.68 dBm
2.440556000 GHz
Temp 2 [T1 ndB]
-33.96 dBm
2.441414000 GHz
1 PK
MAXH
A
TDF
3DB
T1
T2
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.441 GHz
300 kHz/
Span 3 MHz


*RBW 30 kHz
VBW 100 kHz
SWT 5 ms
Marker 1 [T1]
-12.19 dBm
2.480018000 GHz
Ref 0 dBm
Att 30 dB
ndB [T1] 20.00 dB
BW 870.000000000 kHz
Temp 1 [T1 ndB]
-31.91 dBm
2.479556000 GHz
Temp 2 [T1 ndB]
-32.16 dBm
2.480426000 GHz
1 PK
MAXH
A
TDF
3DB
T1
T2
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.48 GHz
300 kHz/
Span 3 MHz

6. CARRIER FREQUENCY SEPARATION TEST

6.1. Block Diagram of Test Setup



(EUT: Bluetooth Laser Mouse)

6.2. The Requirement For Section 15.247(a)(1)

Section 15.247(a)(1): Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudorandomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

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. Bluetooth Laser Mouse (EUT)

Model Number	:	DS-2292(2292-B)
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 (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

6.5. Test Procedure

6.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

6.5.2. Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz. Adjust Span to 3 MHz.

6.5.3. Set the adjacent channel of the EUT maxhold another trace.

6.5.4. Measurement the channel separation

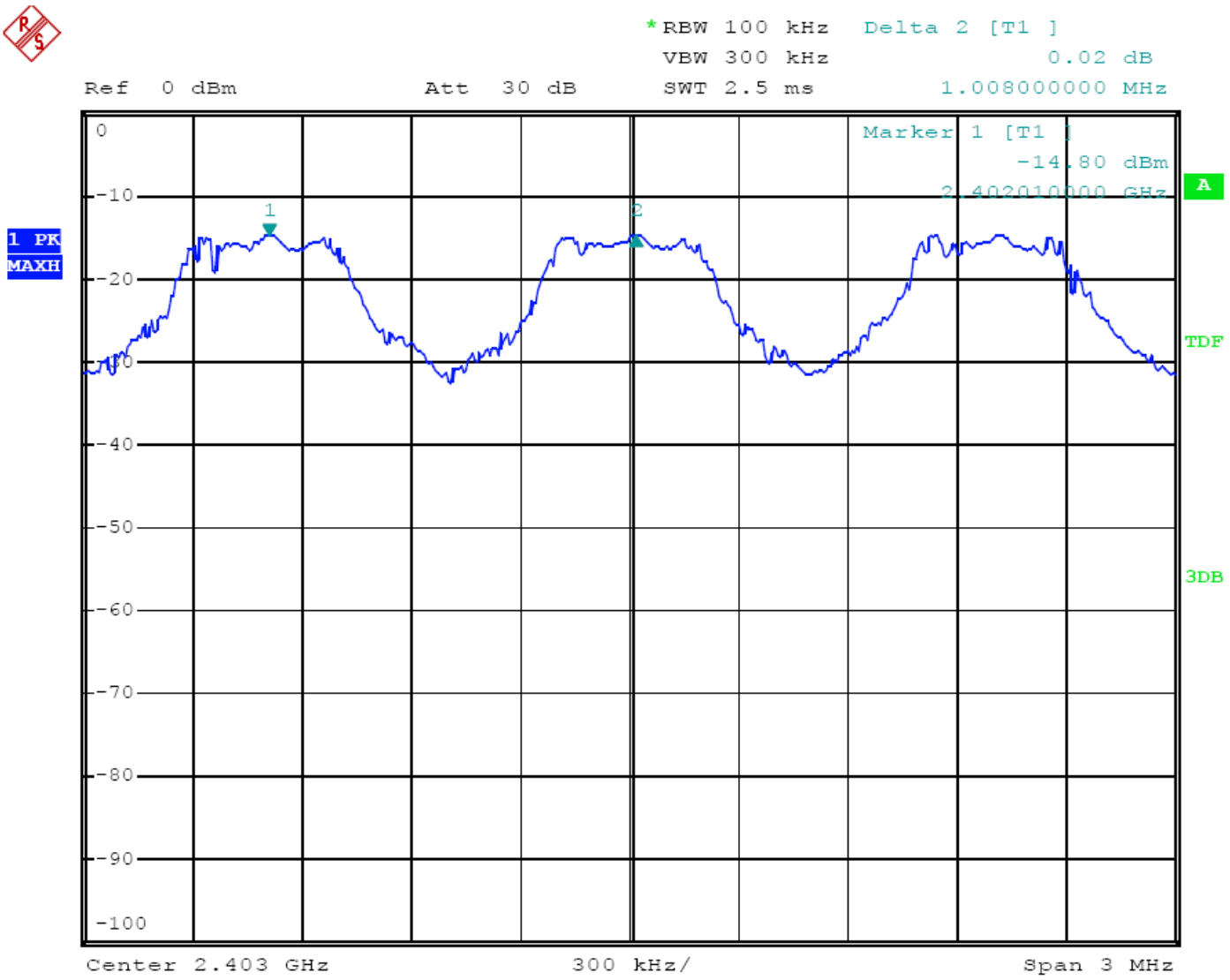
6.6. Test Result

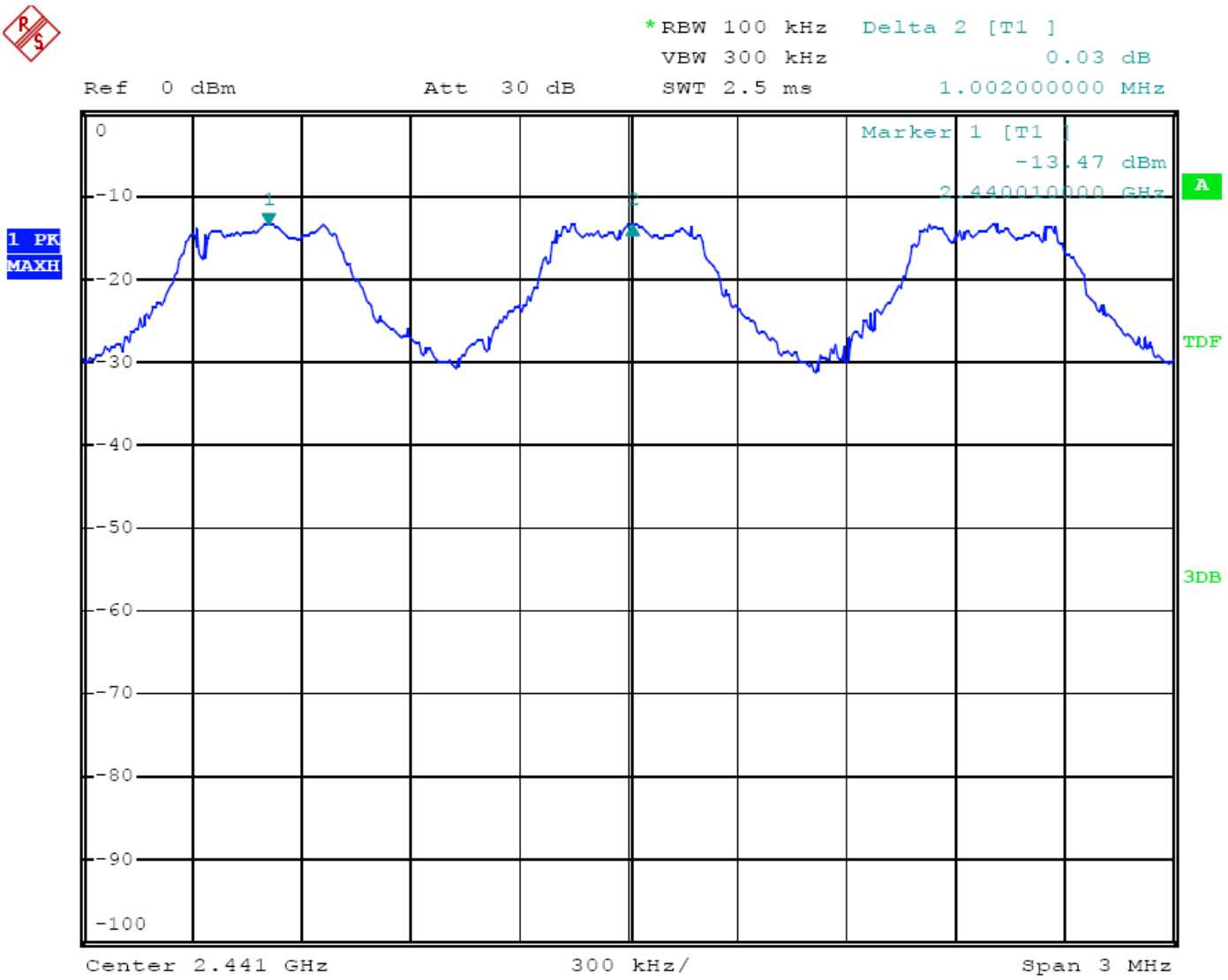
PASS.

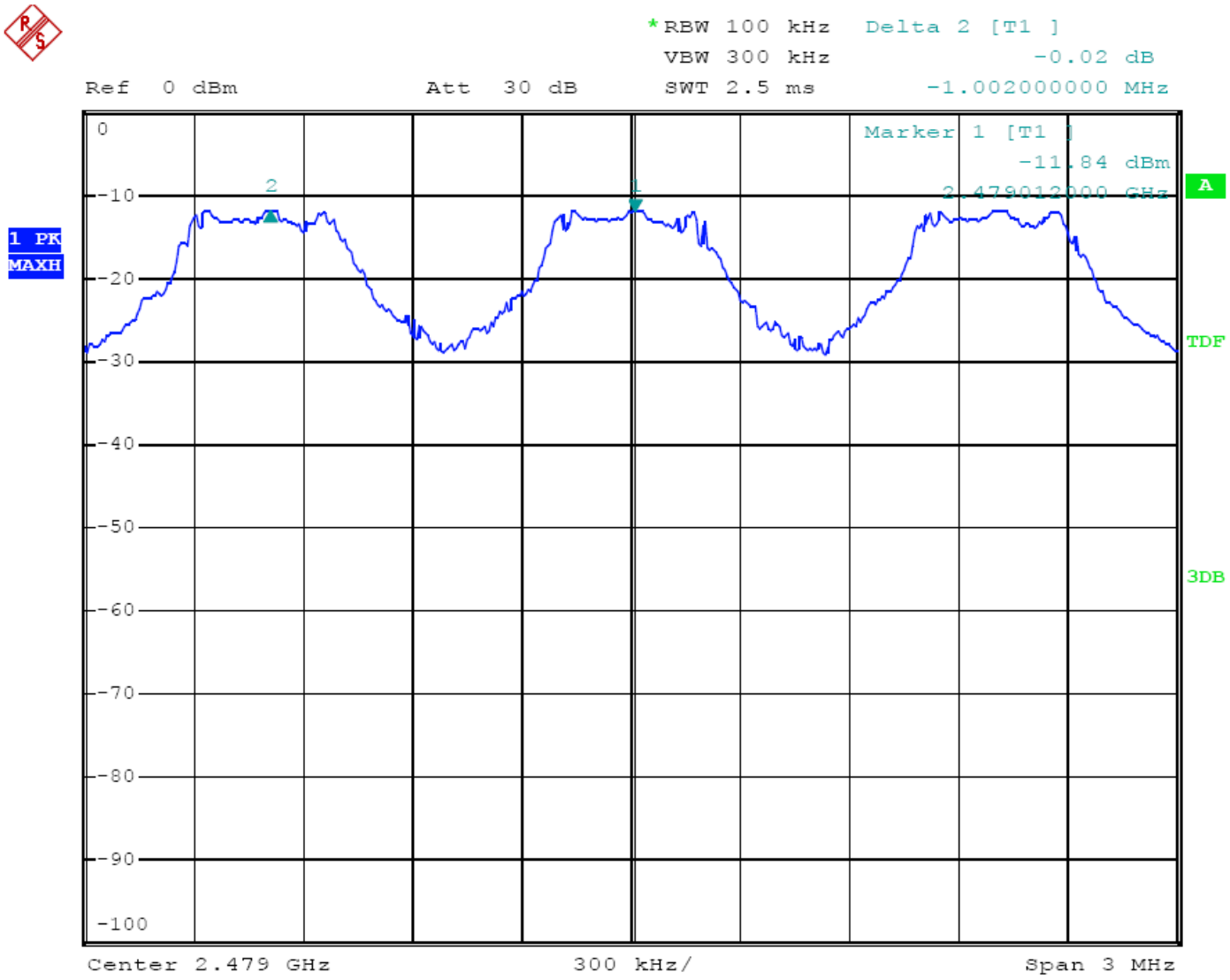
Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	Hopping	Test Engineer:	Joe

Channel	Channel Frequency (MHz)	Channel separation (MHz)	Limit
Low	2402	1.008	> the 20dB Bandwidth or 25kHz (whichever is greater)
Middle	2441	1.002	> the 20dB Bandwidth or 25kHz (whichever is greater)
High	2480	1.002	> the 20dB Bandwidth or 25kHz (whichever is greater)

The spectrum analyzer plots are attached as below.

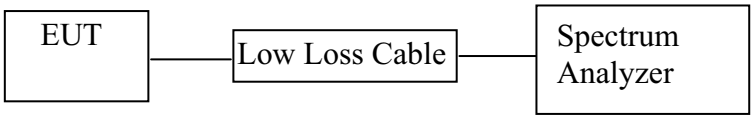

*RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
Delta 2 [T1]
0.02 dB
1.008000000 MHz
Ref 0 dBm
Att 30 dB
Marker 1 [T1]
-14.80 dBm
2.402010000 GHz
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.403 GHz
300 kHz/
Span 3 MHz


*RBW 100 kHz
Delta 2 [T1]
VBW 300 kHz
0.03 dB
Ref 0 dBm
Att 30 dB
SWT 2.5 ms
1.002000000 MHz
Marker 1 [T1]
-13.47 dBm
2.440010000 GHz
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.441 GHz
300 kHz/
Span 3 MHz


*RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
Delta 2 [T1]
-0.02 dB
-1.002000000 MHz
Ref 0 dBm
Att 30 dB
Marker 1 [T1]
-11.84 dBm
2.479012000 GHz
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.479 GHz
300 kHz/
Span 3 MHz

7. NUMBER OF HOPPING FREQUENCY TEST

7.1. Block Diagram of Test Setup



(EUT: Bluetooth Laser Mouse)

7.2. The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels.

7.3. 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.

7.3.1. Bluetooth Laser Mouse (EUT)

Model Number	:	DS-2292(2292-B)
Serial Number	:	N/A
Manufacturer	:	Eastern Times Technology Co., Ltd.

7.4. Operating Condition of EUT

7.4.1. Setup the EUT and simulator as shown as Section 7.1.

7.4.2. Turn on the power of all equipment.

7.4.3. Let the EUT work in TX (Hopping on) modes measure it.

7.5. Test Procedure

7.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

7.5.2. Set the spectrum analyzer as Span=30MHz, RBW=300kHz, VBW=300kHz.

7.5.3. Max hold, view and count how many channel in the band.

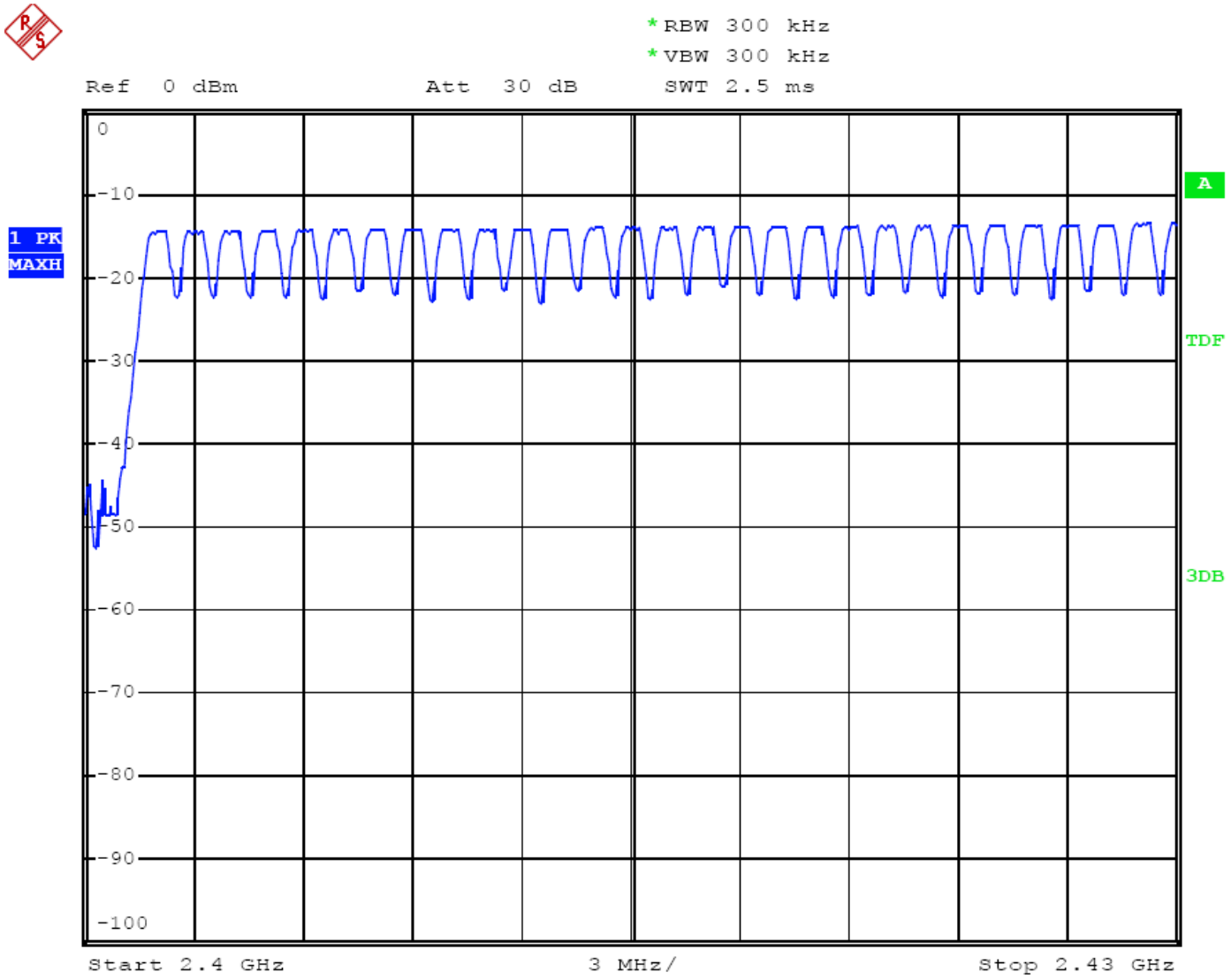
7.6. Test Result

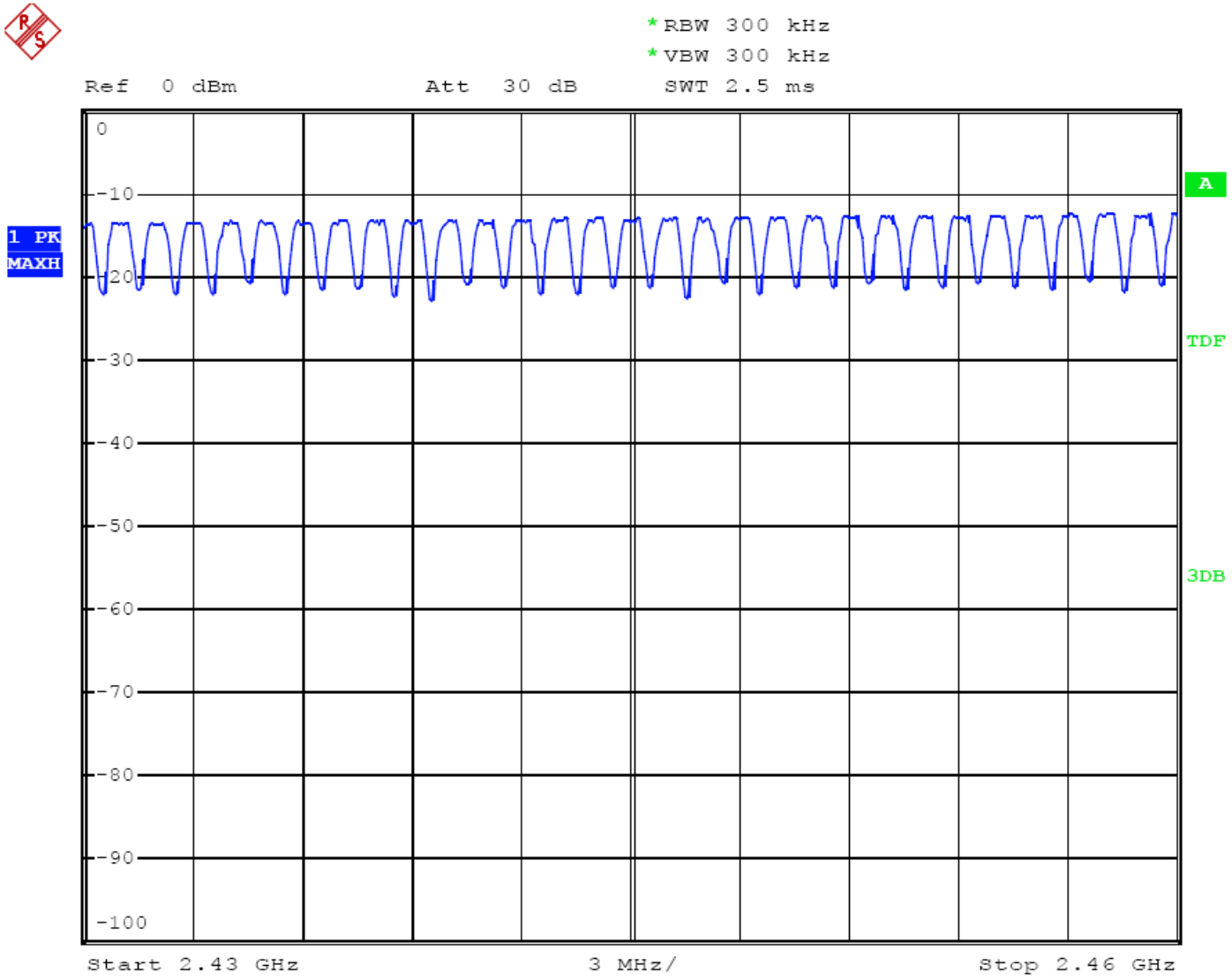
PASS.

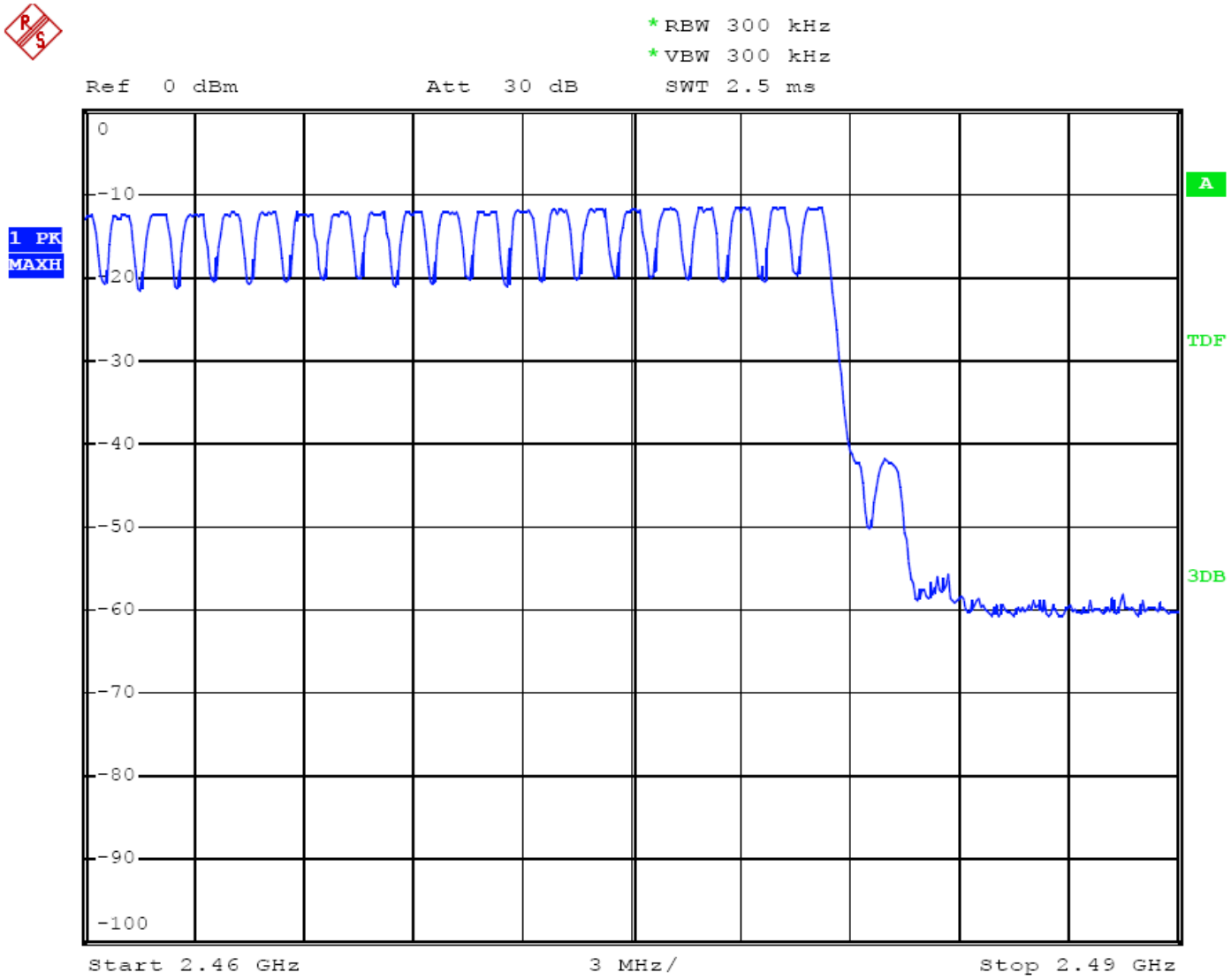
Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	Hopping	Test Engineer:	Joe

	Measurement result (CH)	Limit (CH)
Total number of hopping channel	79	>15

The spectrum analyzer plots are attached as below.

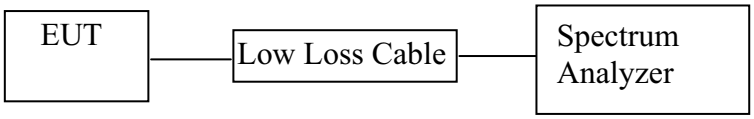

*RBW 300 kHz
*VBW 300 kHz
Ref 0 dBm
Att 30 dB
SWT 2.5 ms
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
1 PK
MAXH
A
TDF
3DB
Start 2.4 GHz
3 MHz/
Stop 2.43 GHz


*RBW 300 kHz
*VBW 300 kHz
Ref 0 dBm
Att 30 dB
SWT 2.5 ms
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
1 PK
MAXH
A
TDF
3DB
Start 2.43 GHz
3 MHz/
Stop 2.46 GHz


*RBW 300 kHz
*VBW 300 kHz
Ref 0 dBm
Att 30 dB
SWT 2.5 ms
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
1 PK
MAXH
A
TDF
3DB
Start 2.46 GHz
3 MHz/
Stop 2.49 GHz

8. DWELL TIME TEST

8.1.Block Diagram of Test Setup



(EUT: Bluetooth Laser Mouse)

8.2.The Requirement For Section 15.247(a)(1)(iii)

Section 15.247(a)(1)(iii): Frequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

8.3.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.

8.3.1.Bluetooth Laser Mouse (EUT)

Model Number	:	DS-2292(2292-B)
Serial Number	:	N/A
Manufacturer	:	Eastern Times Technology Co., Ltd.

8.4.Operating Condition of EUT

8.4.1.Setup the EUT and simulator as shown as Section 8.1.

8.4.2.Turn on the power of all equipment.

8.4.3.Let the EUT work in TX (Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

8.5.Test Procedure

8.5.1.The transmitter output was connected to the spectrum analyzer through a low loss cable.

8.5.2.Set center frequency of spectrum analyzer = operating frequency.

8.5.3.Set the spectrum analyzer as RBW=100kHz, VBW=300kHz, Span=0Hz, Adjust Sweep=1s. Get the burst (in 1 sec.).

8.5.4.Set the spectrum analyzer as RBW=1MHz, VBW=3MHz, Span=0Hz, Adjust Sweep=2ms. Get the pulse time.

8.5.5.Repeat above procedures until all frequency measured were complete.

8.6.Test Result

PASS.

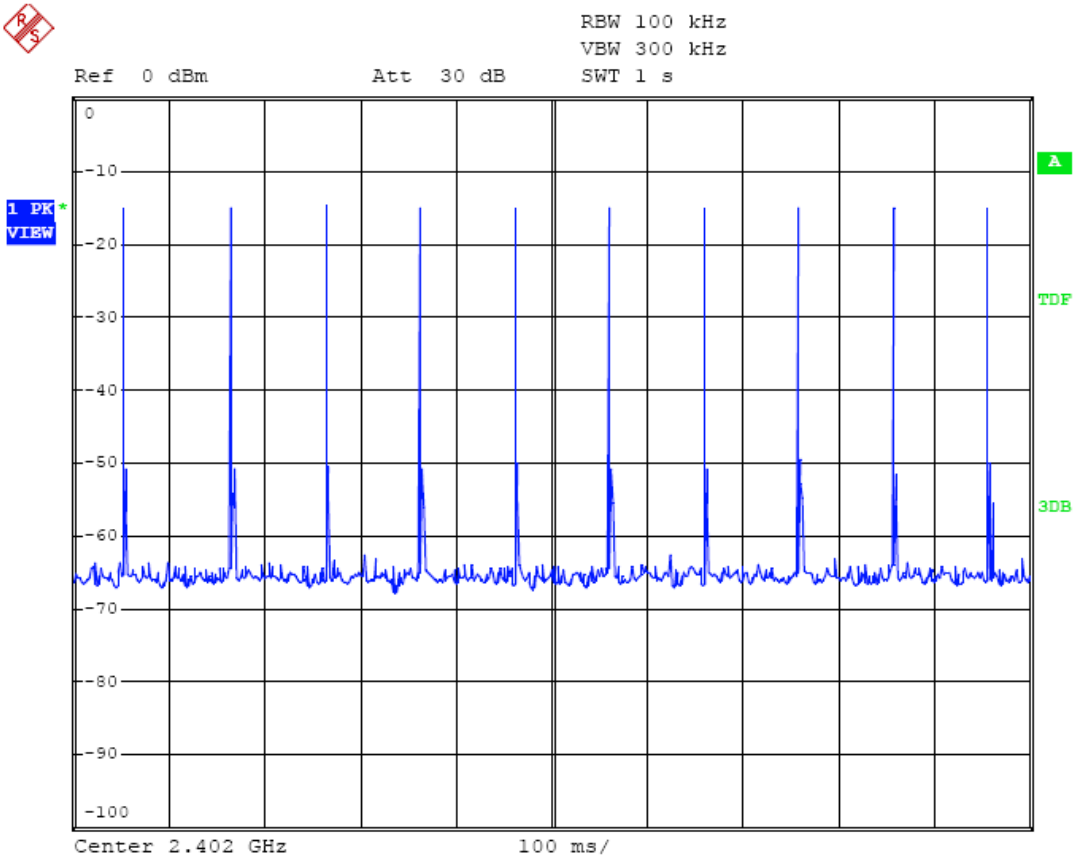
Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	Hopping	Test Engineer:	Joe

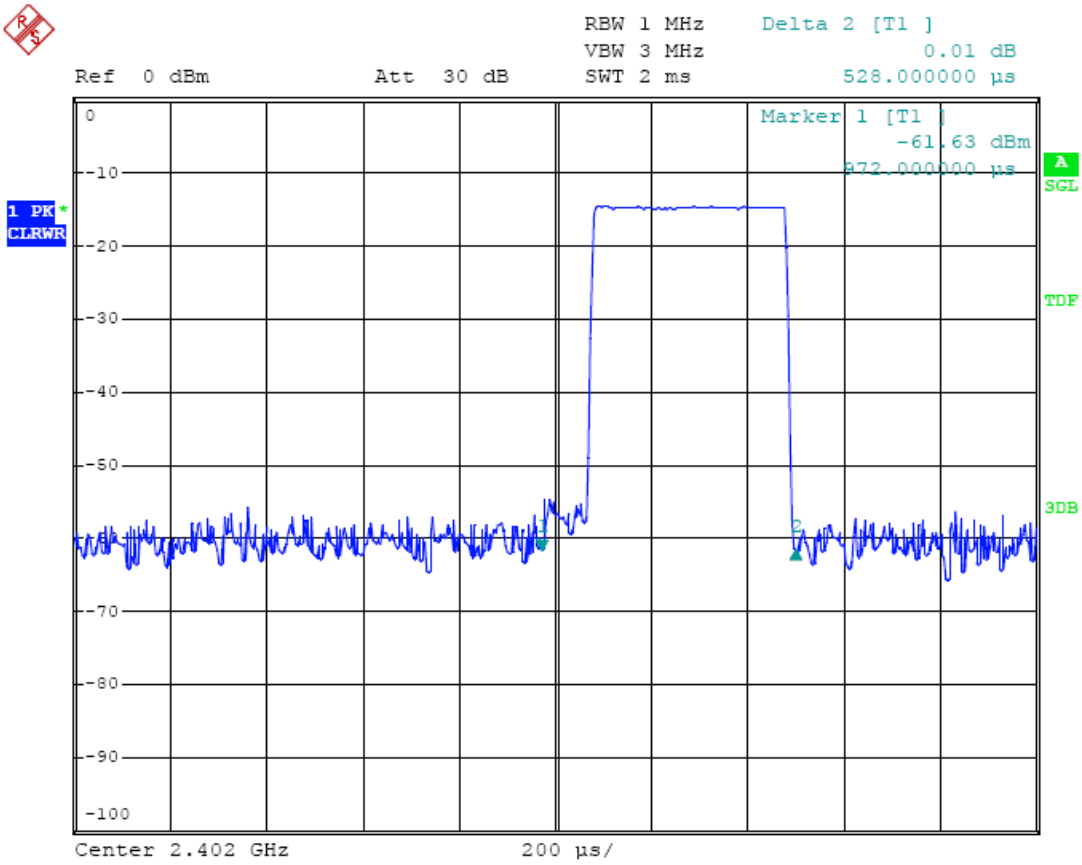
A period transmit time = 0.4 × 79 = 31.6

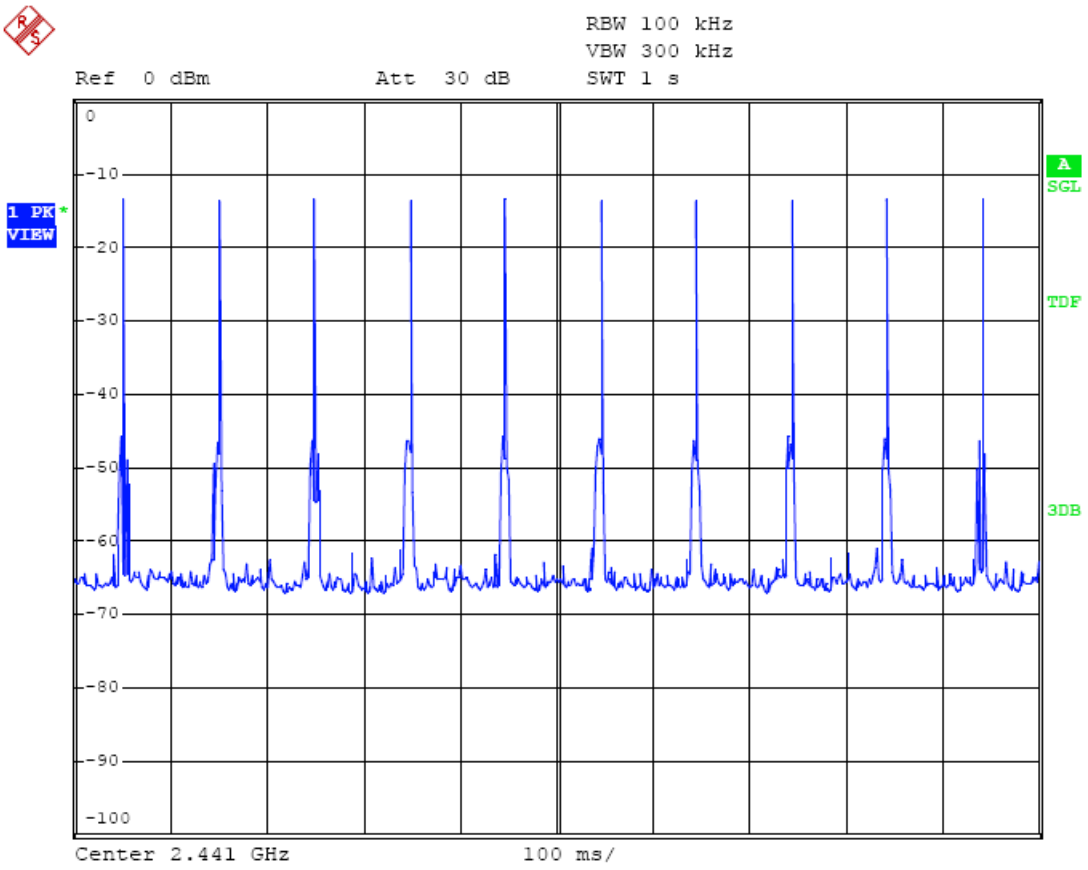
Dwell time = pulse time × burst (in 1 sec.)×31.6

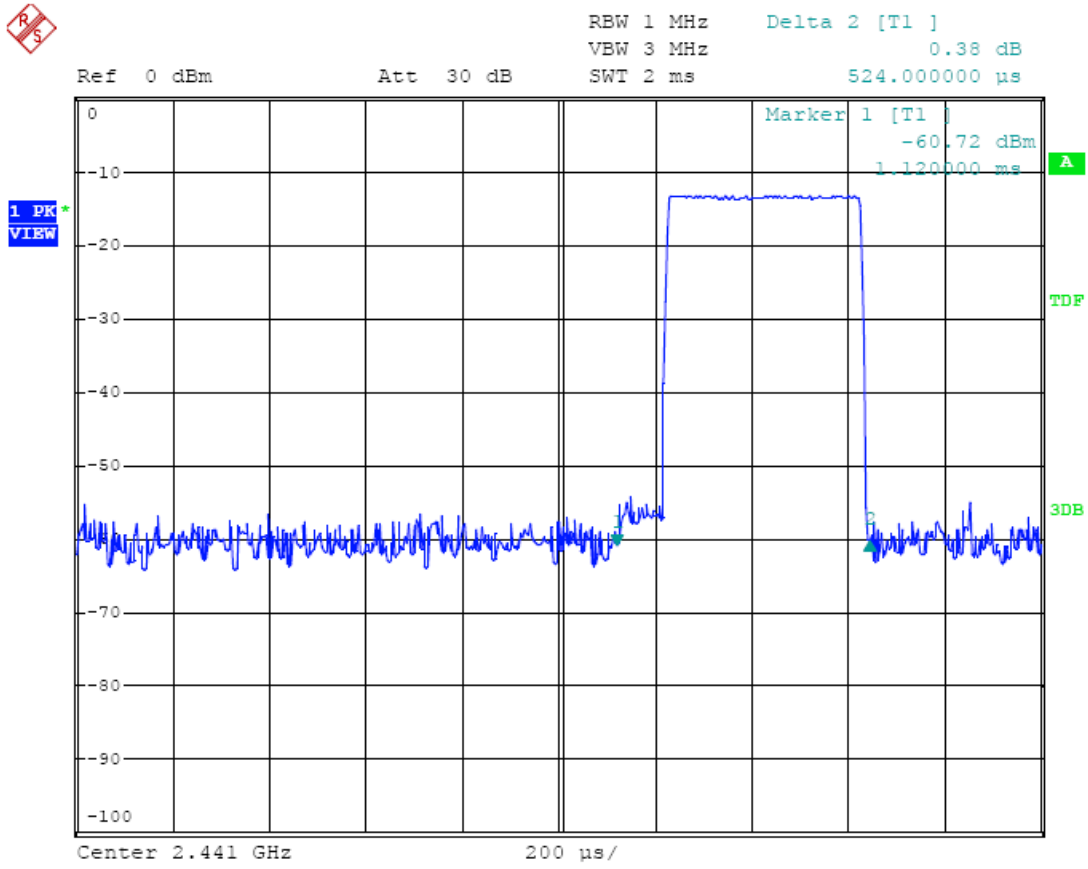
Channel	Channel Frequency (MHz)	Pulse Time (ms)	Burst (in 1 sec.)	Dwell Time (ms)	Limit (ms)
Low	2402	0.528	10	166.85	400
Middle	2441	0.524	10	165.58	400
High	2480	0.524	10	165.58	400

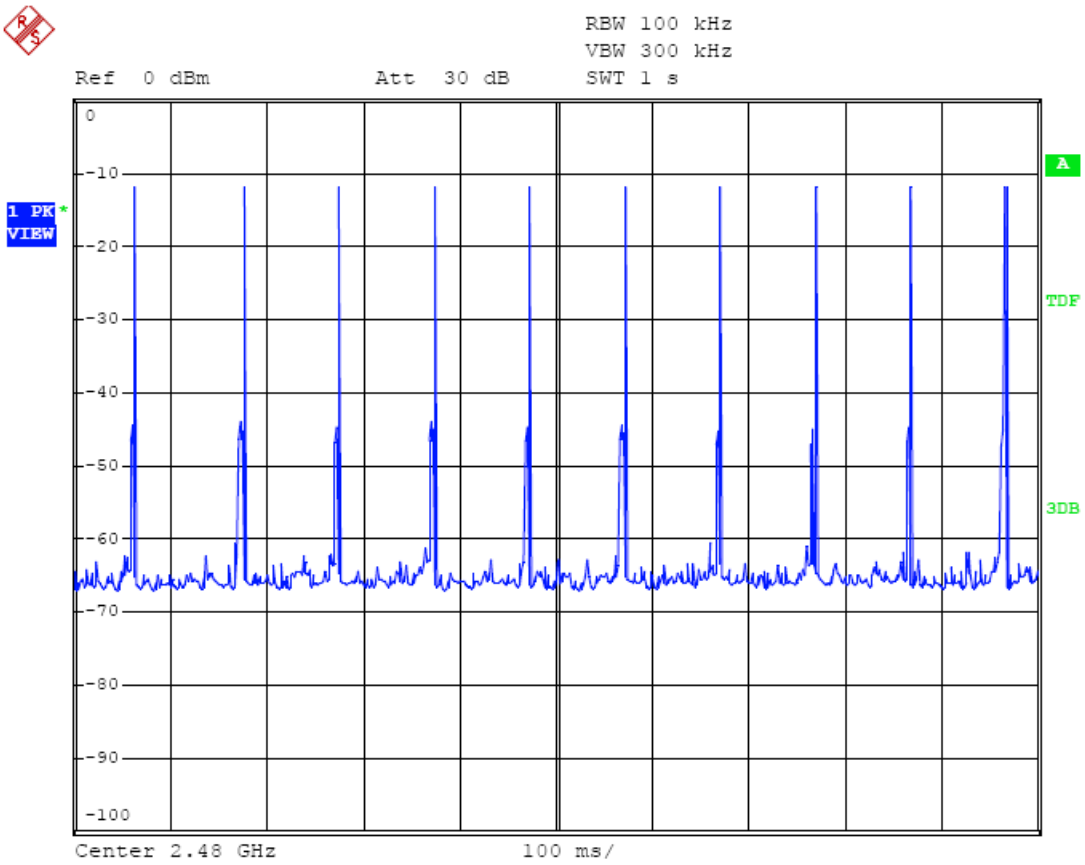
The spectrum analyzer plots are attached as below.

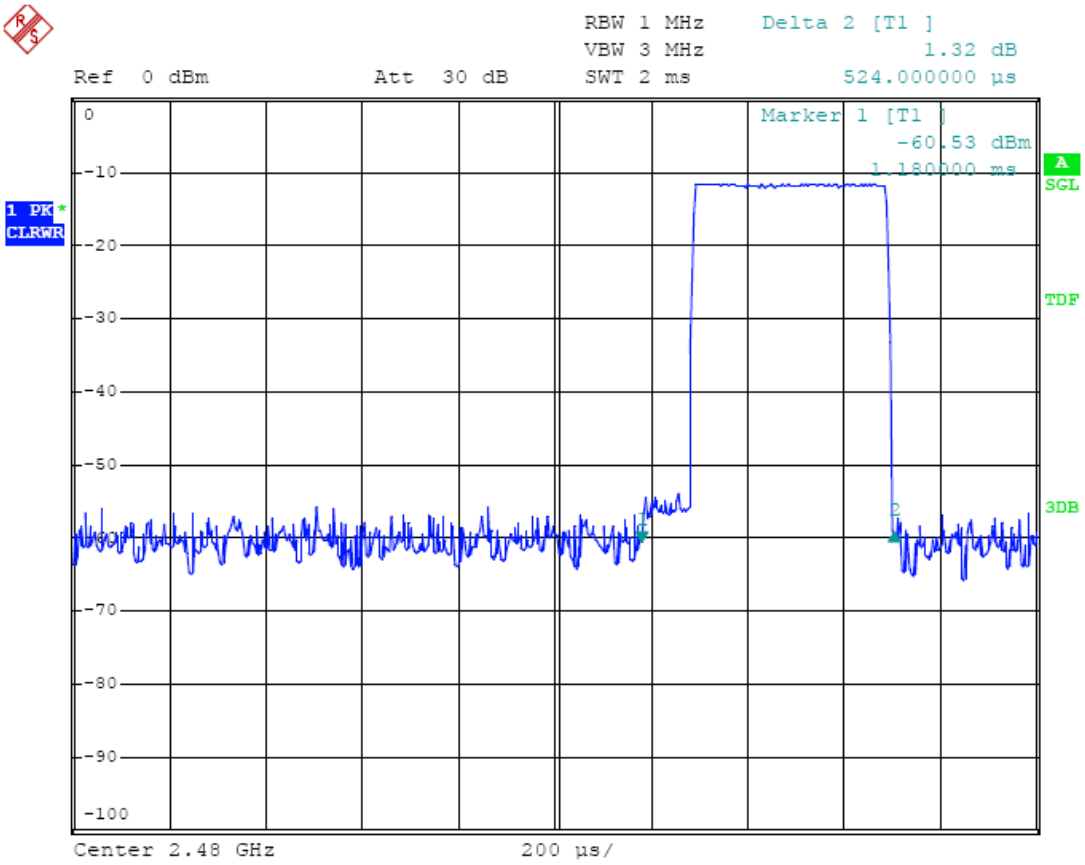

RBW 100 kHz
VBW 300 kHz
Ref 0 dBm
Att 30 dB
SWT 1 s
1 PK
VIEW
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.402 GHz
100 ms/


RBW 1 MHz
VBW 3 MHz
SWT 2 ms
Delta 2 [T1]
0.01 dB
528.000000 µs
Marker 1 [T1]
-61.63 dBm
472.000000 µs
Ref 0 dBm
Att 30 dB
1 PK
CLRWR
A
SGL
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.402 GHz
200 µs/


RBW 100 kHz
VBW 300 kHz
Ref 0 dBm
Att 30 dB
SWT 1 s
1 PK VIEW
A SGL
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.441 GHz
100 ms/

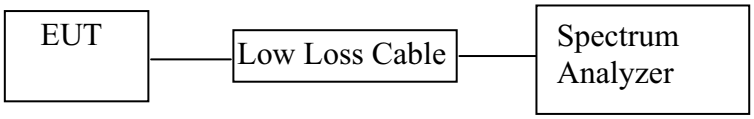

RBW 1 MHz
VBW 3 MHz
SWT 2 ms
Delta 2 [T1]
0.38 dB
524.000000 µs
Marker 1 [T1]
-60.72 dBm
1.120000 ms
Ref 0 dBm
Att 30 dB
1 PK VIEW
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.441 GHz
200 µs/


RBW 100 kHz
VBW 300 kHz
Ref 0 dBm
Att 30 dB
SWT 1 s
1 PK
VIEW
A
TDF
3DB
Center 2.48 GHz
100 ms/


RBW 1 MHz
VBW 3 MHz
Ref 0 dBm
Att 30 dB
SWT 2 ms
Delta 2 [T1]
1.32 dB
524.000000 µs
Marker 1 [T1]
-60.53 dBm
1.180000 ms
1 PK
CLRWR
A
SGL
TDF
3DB
Center 2.48 GHz
200 µs/

9. MAXIMUM PEAK OUTPUT POWER TEST

9.1.Block Diagram of Test Setup



(EUT: Bluetooth Laser Mouse)

9.2.The Requirement For Section 15.247(b)(1)

Section 15.247(b)(1): For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

9.3.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.

9.3.1.Bluetooth Laser Mouse (EUT)

Model Number	:	DS-2292(2292-B)
Serial Number	:	N/A
Manufacturer	:	Eastern Times Technology Co., Ltd.

9.4.Operating Condition of EUT

9.4.1.Setup the EUT and simulator as shown as Section 9.1.

9.4.2.Turn on the power of all equipment.

9.4.3.Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

9.5. Test Procedure

9.5.1. The transmitter output was connected to the spectrum analyzer through a low loss cable.

9.5.2. Set RBW of spectrum analyzer to 1MHz and VBW to 3MHz.

9.5.3. Measurement the maximum peak output power.

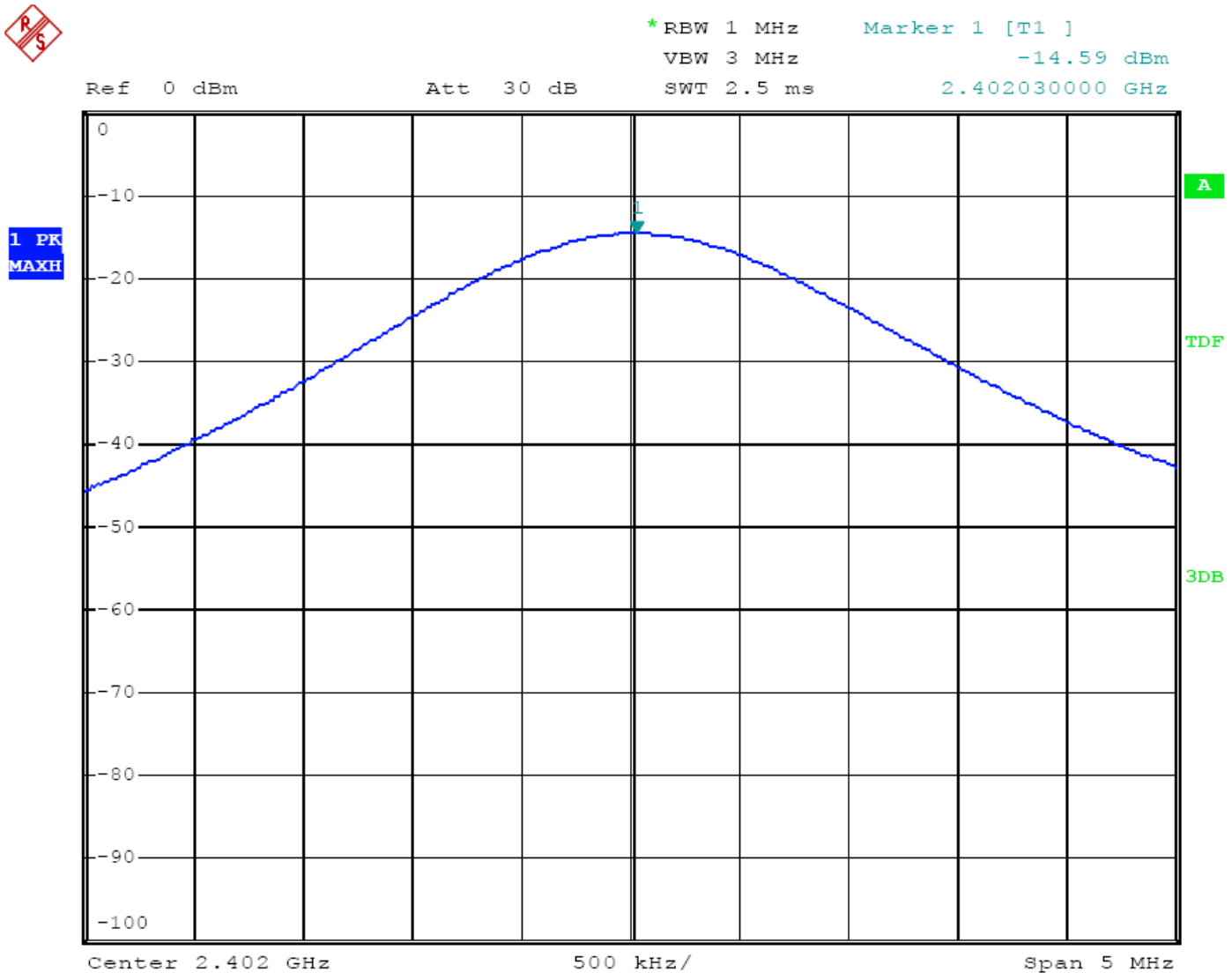
9.6. Test Result

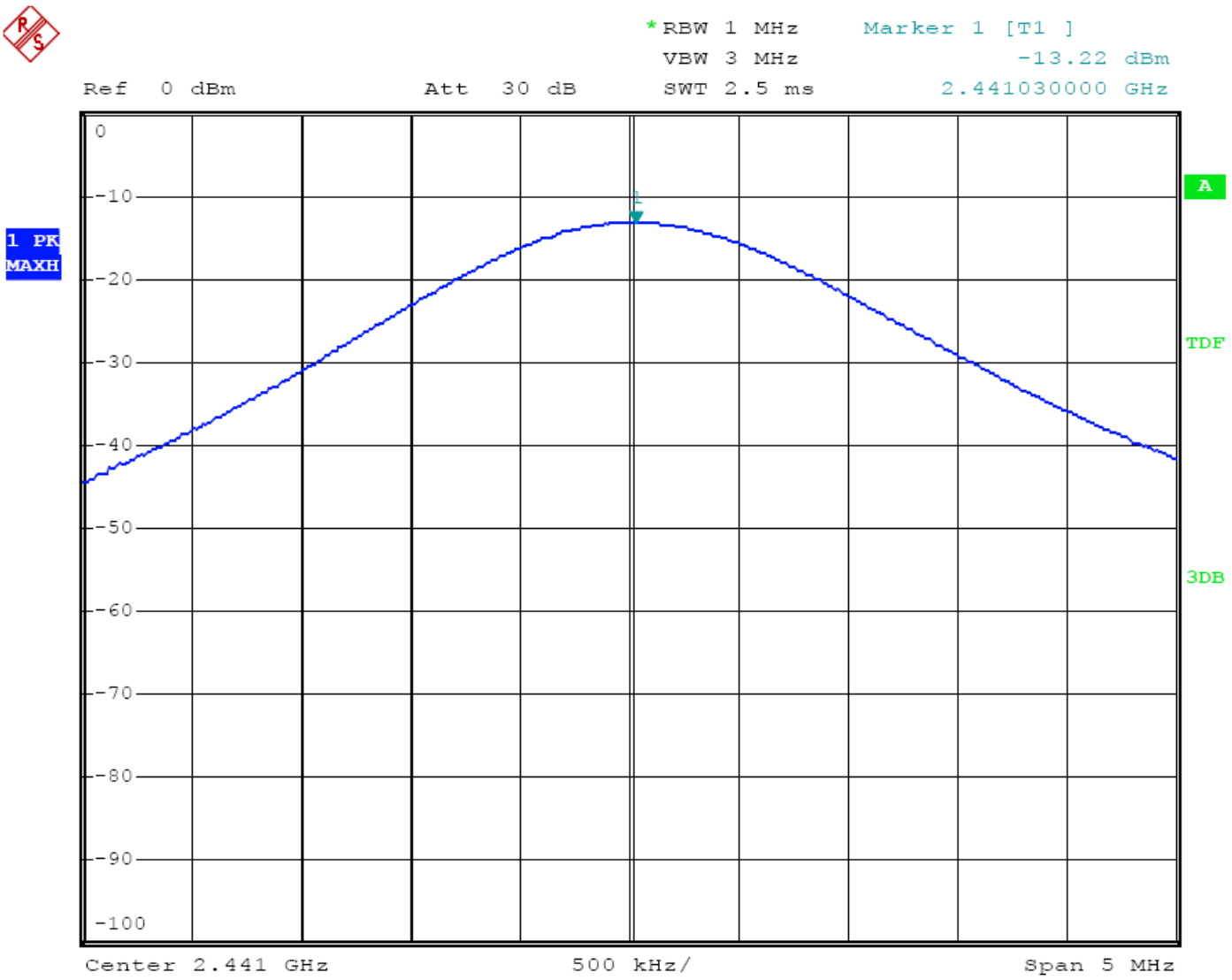
PASS.

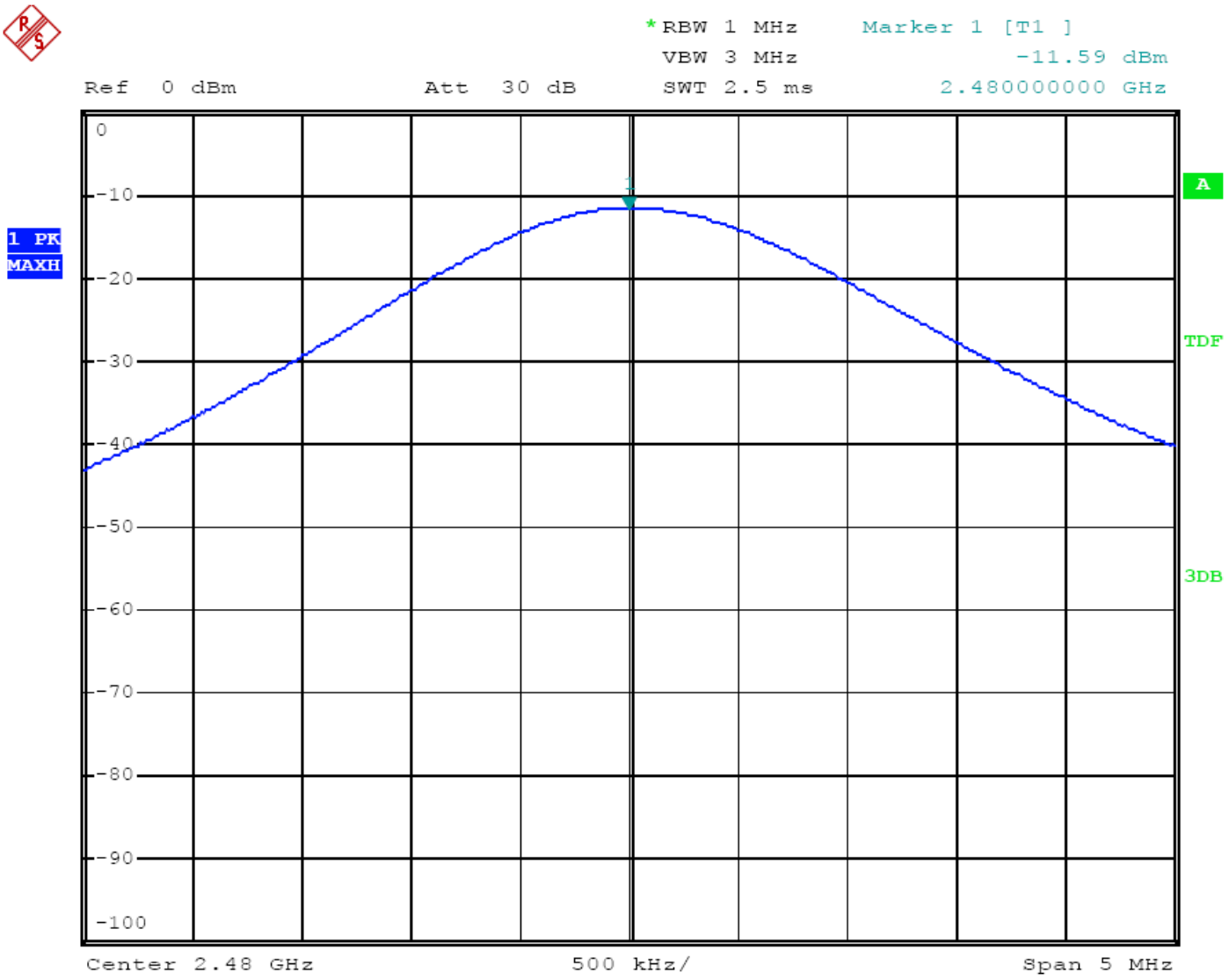
Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	TX	Test Engineer:	Joe

Channel	Frequency (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Limits dBm / W
Low	2402	-14.59	0.035	30 dBm / 1 W
Middle	2441	-13.22	0.048	30 dBm / 1 W
High	2480	-11.59	0.069	30 dBm / 1 W

The spectrum analyzer plots are attached as below.

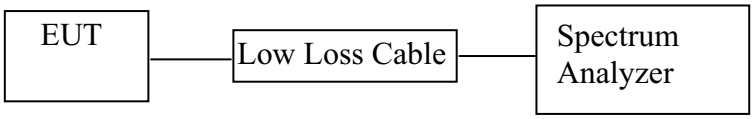

*RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Marker 1 [T1]
-14.59 dBm
2.402030000 GHz
Ref 0 dBm
Att 30 dB
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.402 GHz
500 kHz/
Span 5 MHz


*RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Marker 1 [T1]
-13.22 dBm
2.441030000 GHz
Ref 0 dBm
Att 30 dB
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.441 GHz
500 kHz/
Span 5 MHz


*RBW 1 MHz
VBW 3 MHz
SWT 2.5 ms
Marker 1 [T1]
-11.59 dBm
2.480000000 GHz
Ref 0 dBm
Att 30 dB
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.48 GHz
500 kHz/
Span 5 MHz

10. BAND EDGE COMPLIANCE TEST

10.1. Block Diagram of Test Setup



(EUT: Bluetooth Laser Mouse)

10.2. The Requirement For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

10.3. 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.

10.3.1. Bluetooth Laser Mouse (EUT)

Model Number	:	DS-2292(2292-B)
Serial Number	:	N/A
Manufacturer	:	Eastern Times Technology Co., Ltd.

10.4.Operating Condition of EUT

10.4.1.Setup the EUT and simulator as shown as Section 10.1.

10.4.2.Turn on the power of all equipment.

10.4.3.Let the EUT work in TX (Hopping off, Hopping on) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2480MHz TX frequency to transmit.

10.5.Test Procedure

10.5.1.The transmitter output was connected to the spectrum analyzer via a low loss cable.

10.5.2.Set RBW of spectrum analyzer to 100kHz and VBW to 300kHz.

10.5.3.The band edges was measured and recorded.

10.6.Test Result

Pass

Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	TX (Hopping off)	Test Engineer:	Joe

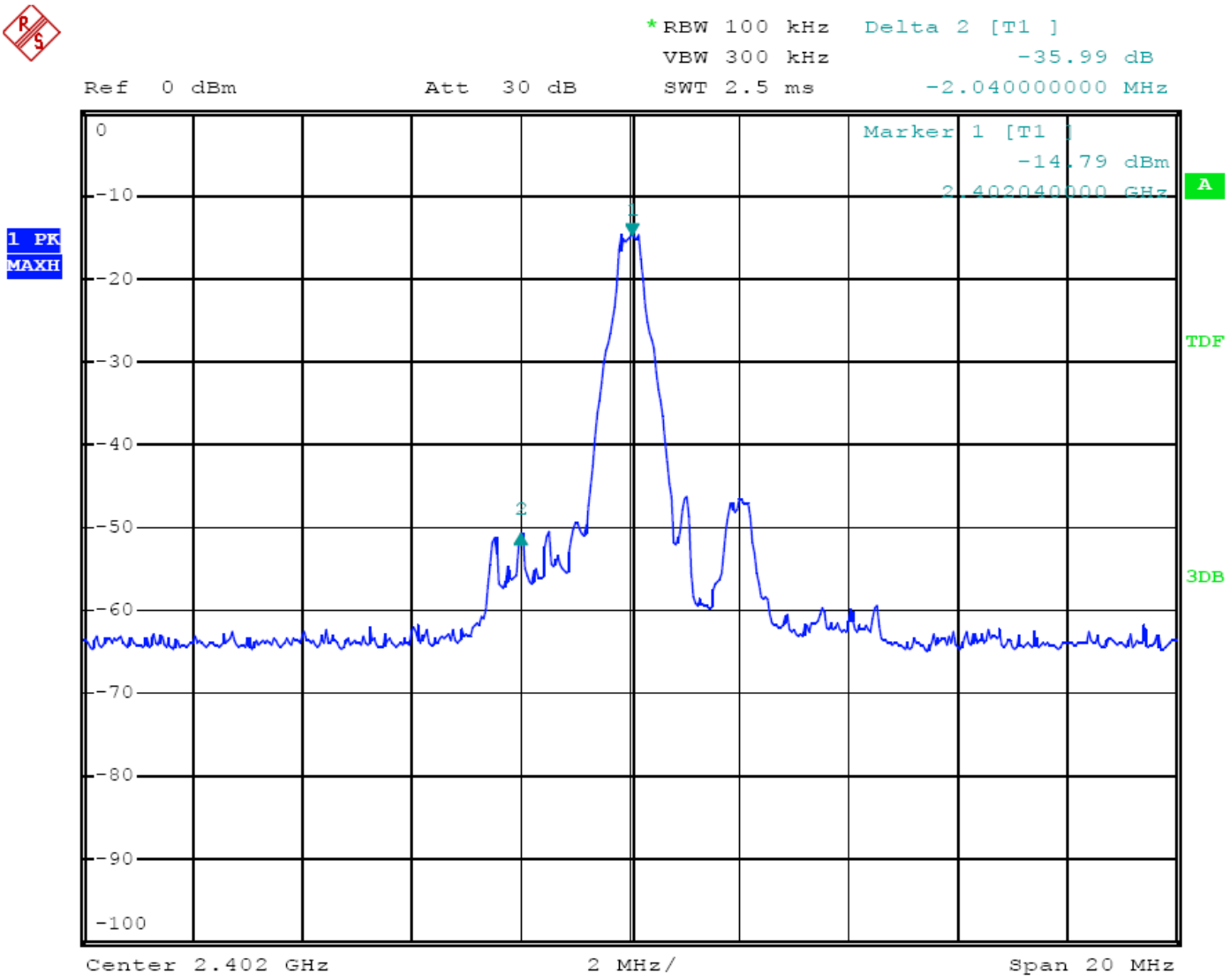
Conducted test

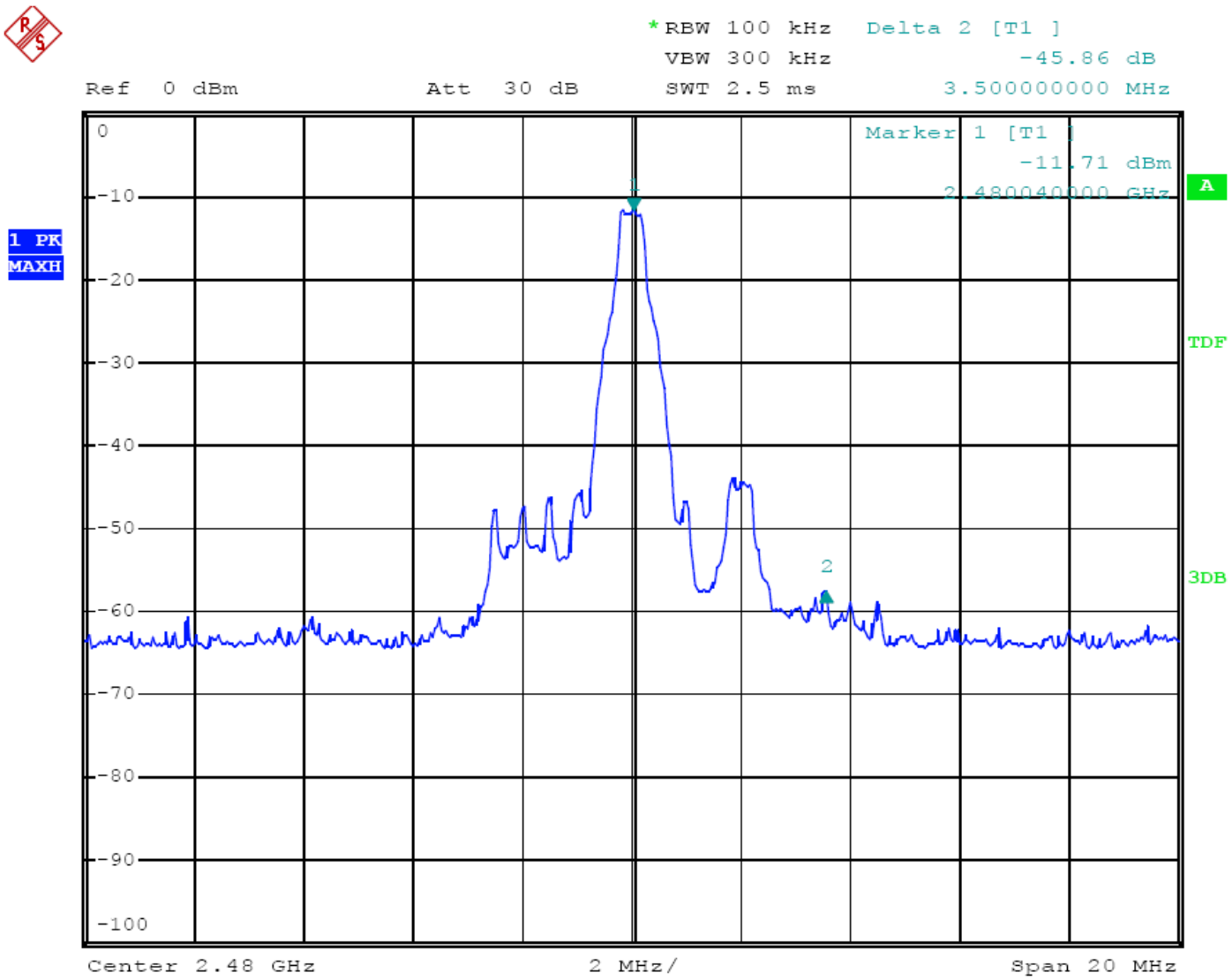
Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	35.99	> 20dBc
2480	45.86	> 20dBc

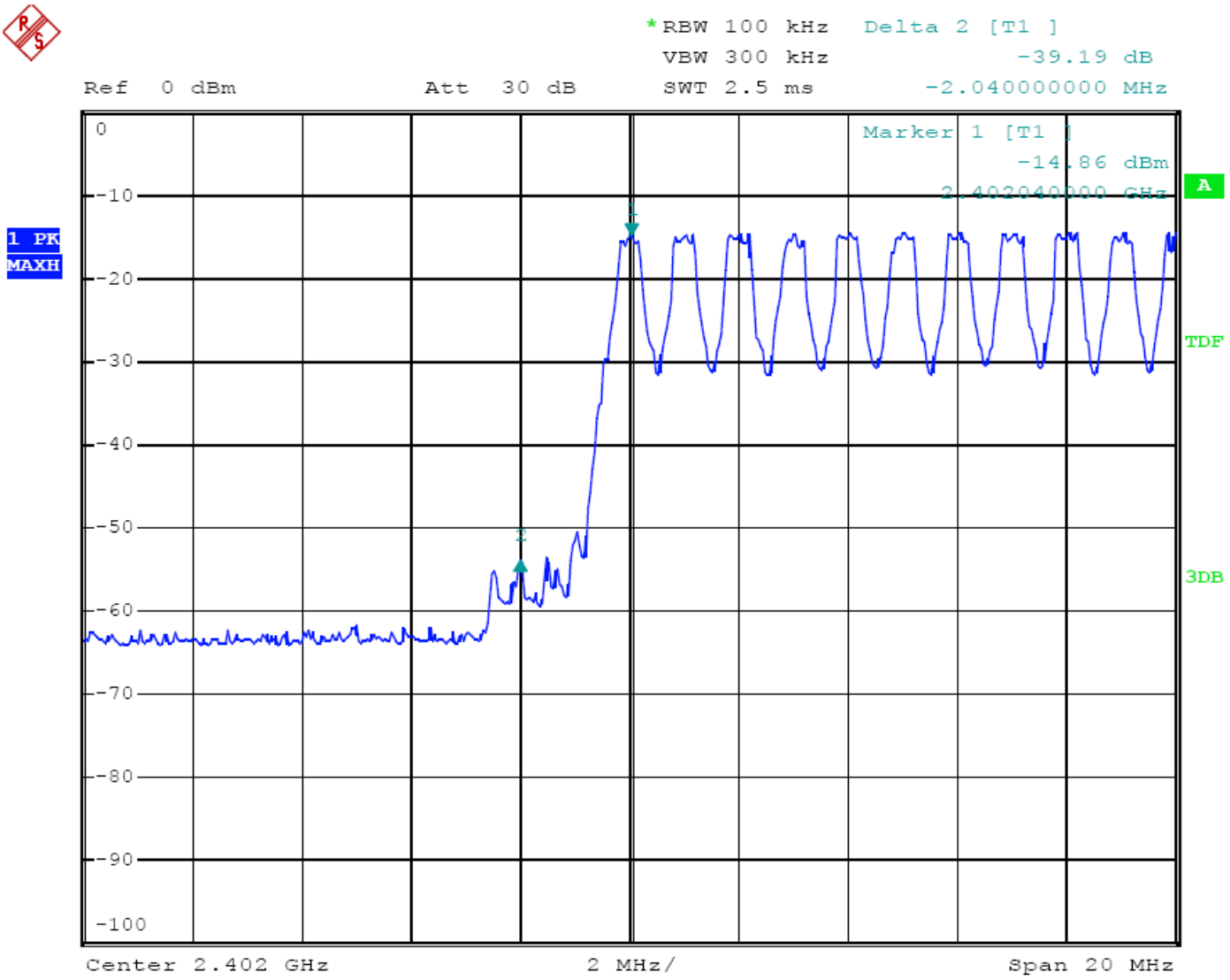
Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	TX (Hopping on)	Test Engineer:	Joe

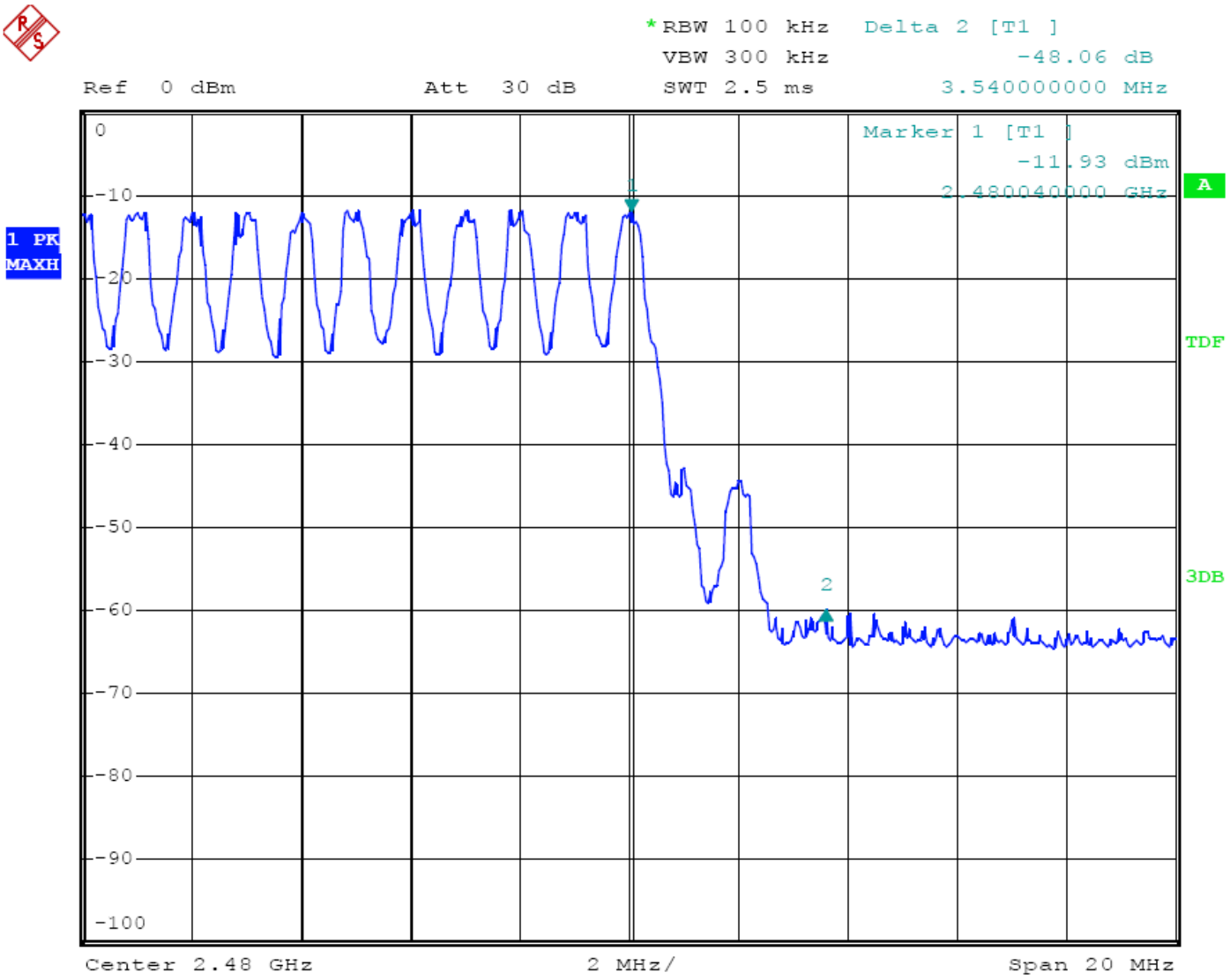
Conducted test

Frequency (MHz)	Result of Band Edge (dBc)	Limit of Band Edge (dBc)
2402	39.19	> 20dBc
2480	48.06	> 20dBc


*RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
Delta 2 [T1]
-35.99 dB
-2.040000000 MHz
Ref 0 dBm
Att 30 dB
Marker 1 [T1]
-14.79 dBm
2.402040000 GHz
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.402 GHz
2 MHz/
Span 20 MHz


*RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
Delta 2 [T1]
-45.86 dB
3.500000000 MHz
Ref 0 dBm
Att 30 dB
Marker 1 [T1]
-11.71 dBm
2.480040000 GHz
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.48 GHz
2 MHz/
Span 20 MHz


*RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
Delta 2 [T1]
-39.19 dB
-2.040000000 MHz
Ref 0 dBm
Att 30 dB
Marker 1 [T1]
-14.86 dBm
2.402040000 GHz
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.402 GHz
2 MHz/
Span 20 MHz


*RBW 100 kHz
VBW 300 kHz
SWT 2.5 ms
Delta 2 [T1]
-48.06 dB
3.540000000 MHz
Ref 0 dBm
Att 30 dB
Marker 1 [T1]
-11.93 dBm
2.480040000 GHz
1 PK
MAXH
A
TDF
3DB
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-100
Center 2.48 GHz
2 MHz/
Span 20 MHz

11.RADIATED SPURIOUS EMISSION TEST

11.1.Block Diagram of Test Setup

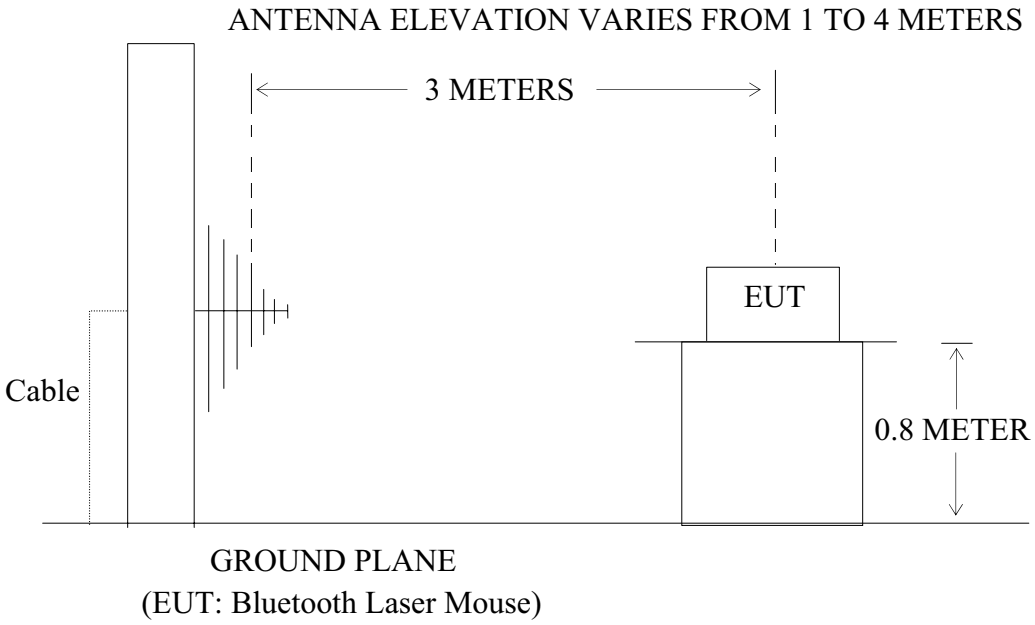
11.1.1.Block diagram of connection between the EUT and simulators

EUT

Setup: Transmitting mode

(EUT: Bluetooth Laser Mouse)

11.1.2.Semi-Anechoic Chamber Test Setup Diagram



(EUT: Bluetooth Laser Mouse)

11.2.The Limit For Section 15.247(d)

Section 15.247(d): In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

11.3.Restricted bands of operation

11.3.1.FCC Part 15.205 Restricted bands of operation

(a) Except as shown in paragraph (d) of this section, Only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510
[2]Above 38.6

(b) Except as provided in paragraphs (d) and (e), the field strength of emission appearing within these frequency bands shall not exceed the limits shown in Section 15.209. At frequencies equal to or less than 1000MHz, Compliance with the limits in Section 15.209 shall be demonstrated using measurement instrumentation employing a CISPR quasi-peak detector. Above 1000MHz, compliance with the emission limits in Section15.209 shall be demonstrated based on the average value of the measured emissions. The provisions in Section 15.35 apply to these measurements.

11.4.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.

11.4.1.Bluetooth Laser Mouse (EUT)

Model Number	:	DS-2292(2292-B)
Serial Number	:	N/A
Manufacturer	:	Eastern Times Technology Co., Ltd.

11.5.Operating Condition of EUT

11.5.1.Setup the EUT and simulator as shown as Section 11.1.

11.5.2.Turn on the power of all equipment.

11.5.3.Let the EUT work in TX (Hopping off) modes measure it. The transmit frequency are 2402-2480MHz. We select 2402MHz, 2441MHz, 2480MHz TX frequency to transmit.

11.6.Test Procedure

The EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on an antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated bilog antenna) is used as receiving antenna. Both horizontal and vertical polarizations of the antenna are set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4: 2003 on radiated emission measurement. The EUT was tested in 3 orthogonal planes.
The bandwidth of test receiver (R&S ESI26) is set at 120kHz in 30-1000MHz. and set at 1MHz in above 1000MHz.
The frequency range from 30MHz to 25000MHz is checked.
The final measurement in band 9-90kHz, 110-490kHz and above 1000MHz is performed with Average detector. Except those frequency bands mention above, the final measurement for frequencies below 1000MHz is performed with Quasi Peak detector.
The field strength is calculated by adding the antenna factor, and cable loss, and subtracting the amplifier gain from the measured reading. The basic equation calculation is as follows:
Result = Reading + Corrected Factor
Where Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

11.7.The Field Strength of Radiation Emission Measurement Results

PASS.

Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	TX (2402MHz)	Test Engineer:	Joe

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
51.4960	18.07	14.40	32.47	40.00	-7.53	Vertical
96.6484	19.11	13.89	33.00	43.50	-10.50	Vertical
145.2760	21.43	14.48	35.91	43.50	-7.59	Vertical
145.2760	17.01	14.48	31.49	43.50	-12.01	Horizontal
431.7932	13.08	22.96	36.04	46.00	-9.96	Horizontal
499.2379	11.48	23.99	35.47	46.00	-10.53	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2400.000	50.21	53.59	-7.46	42.75	46.13	54	74	-11.25	-27.87	Vertical
2402.030	86.21	89.69	-7.45	78.76	82.24	-	-	-	-	Vertical
*4804.044	50.42	54.84	-0.30	50.12	54.54	54	74	-3.88	-19.46	Vertical
2400.000	46.61	49.92	-7.46	39.15	42.46	54	74	-14.85	-31.54	Horizontal
2402.030	82.33	85.68	-7.45	74.88	78.23	-	-	-	-	Horizontal
*4804.044	49.17	53.46	-0.30	48.87	53.16	54	74	-5.13	-20.84	Horizontal

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

2. *: Denotes restricted band of operation.

Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	TX (2441MHz)	Test Engineer:	Joe

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
43.2305	14.48	16.83	31.31	40.00	-8.69	Vertical
96.6484	18.96	13.89	32.85	43.50	-10.65	Vertical
145.2760	22.67	14.48	37.15	43.50	-6.35	Vertical
145.2760	18.85	14.48	33.33	43.50	-10.17	Horizontal
431.7933	13.74	22.96	36.70	46.00	-9.30	Horizontal
499.2379	11.62	23.99	35.61	46.00	-10.39	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2.441.030	82.75	86.22	-7.35	75.40	78.87	-	-	-	-	Vertical
*4882.047	49.96	54.42	0.14	50.10	54.56	54	74	-3.90	-19.44	Vertical
2.441.030	82.94	86.20	-7.35	75.59	78.85	-	-	-	-	Horizontal
*4882.047	48.51	53.19	0.14	48.65	53.33	54	74	-5.35	-20.67	Horizontal

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

2. *: Denotes restricted band of operation.

Date of Test:	May 13, 2009	Temperature:	25°C
EUT:	Bluetooth Laser Mouse	Humidity:	52%
Model No.:	DS-2292(2292-B)	Power Supply:	DC 2.4V
Test Mode:	TX (2480MHz)	Test Engineer:	Joe

For 30MHz-1000MHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading (dBμV/m)	Factor Corr. (dB)	Result (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Polarization
	QP		QP	QP	QP	
96.1485	19.33	13.88	33.21	43.50	-10.29	Vertical
145.2760	20.13	14.48	34.61	43.50	-8.89	Vertical
151.9955	18.56	14.54	33.10	43.50	-10.40	Vertical
155.7427	17.38	14.57	31.95	43.50	-11.55	Horizontal
158.9289	17.64	14.59	32.23	43.50	-11.27	Horizontal
431.7932	14.45	22.96	37.41	46.00	-8.59	Horizontal

For 1GHz-25GHz

Corrected Factor = Antenna Factor + Cable Loss – Amplifier Gain

Frequency (MHz)	Reading(dBμV/m)		Factor Corr. (dB)	Result(dBμV/m)		Limit(dBμV/m)		Margin(dBμV/m)		Polarization
	AV	PEAK		AV	PEAK	AV	PEAK	AV	PEAK	
2.480.000	85.38	88.53	-7.37	78.01	81.16	-	-	-	-	Vertical
2483.500	40.11	43.37	-7.37	32.74	36.00	54	74	-21.26	-38.00	Vertical
*4960.001	49.17	53.46	0.52	49.69	53.98	54	74	-4.31	-20.02	Vertical
2.480.000	83.34	86.49	-7.37	75.97	79.12	-	-	-	-	Horizontal
2483.500	38.31	41.57	-7.37	30.94	34.20	54	74	-23.06	-39.80	Horizontal
*4960.001	48.41	52.83	0.52	48.93	53.35	54	74	-5.07	-20.65	Horizontal

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

2. *: Denotes restricted band of operation.

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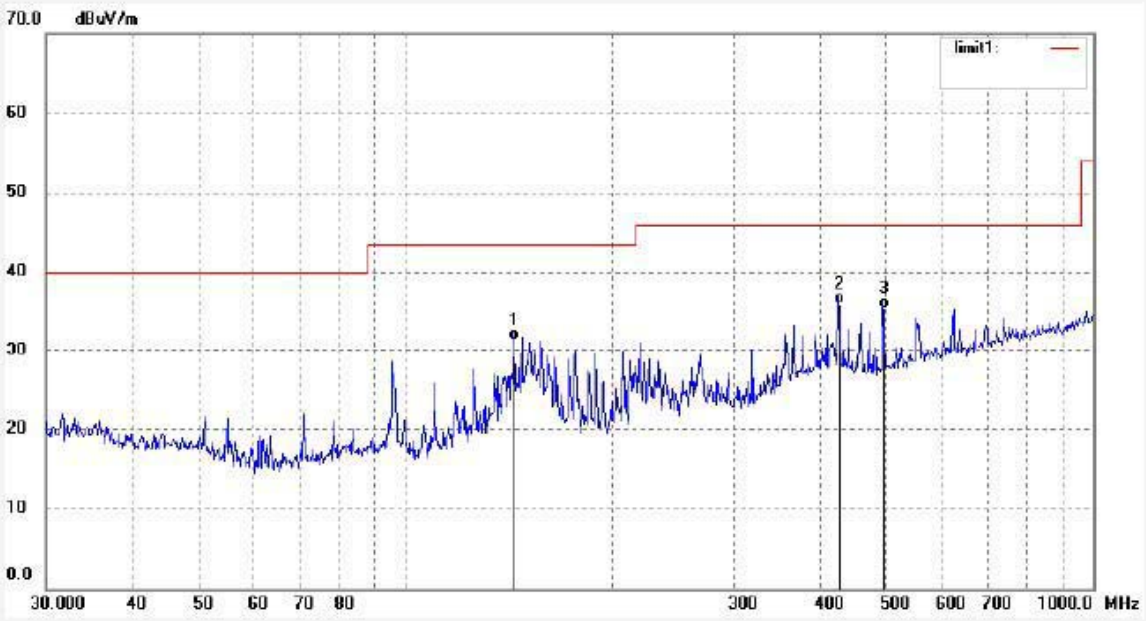
Fax:+86-0755-26503396

Job No.: ET #105	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 13:55:59
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2402MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	145.2760	17.01	14.48	31.49	43.50	-12.01	QP	
2	431.7932	13.08	22.96	36.04	46.00	-9.96	QP	
3	499.2379	11.48	23.99	35.47	46.00	-10.53	QP	

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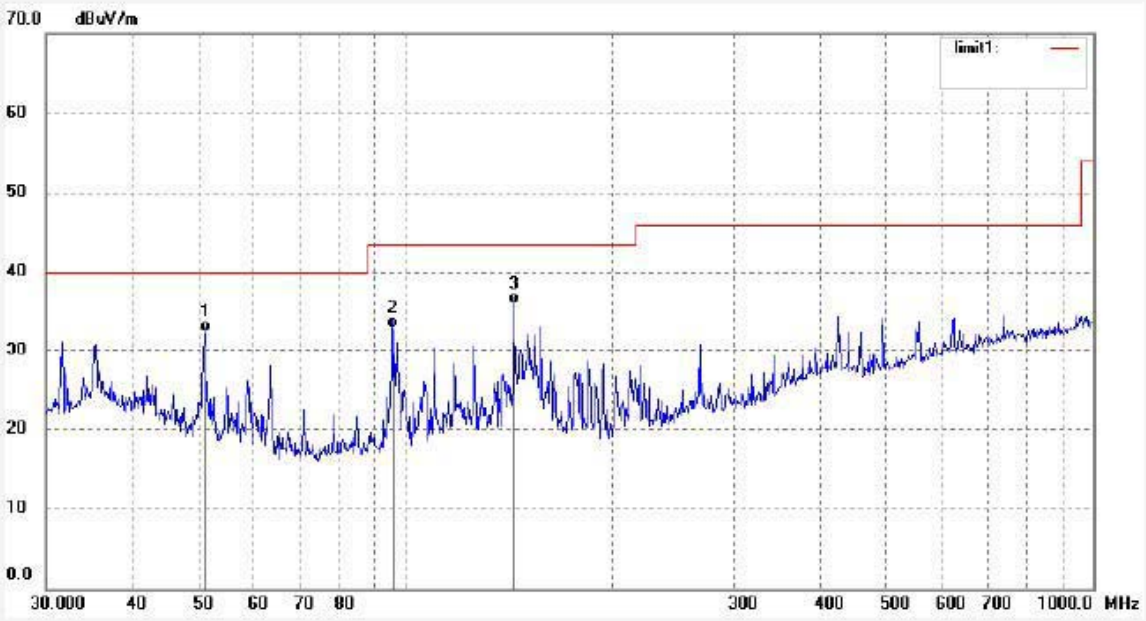
Job No.: ET #106	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 13:57:38
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2402MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	51.4960	18.07	14.40	32.47	40.00	-7.53	QP	
2	96.6484	19.11	13.89	33.00	43.50	-10.50	QP	
3	145.2760	21.43	14.48	35.91	43.50	-7.59	QP	

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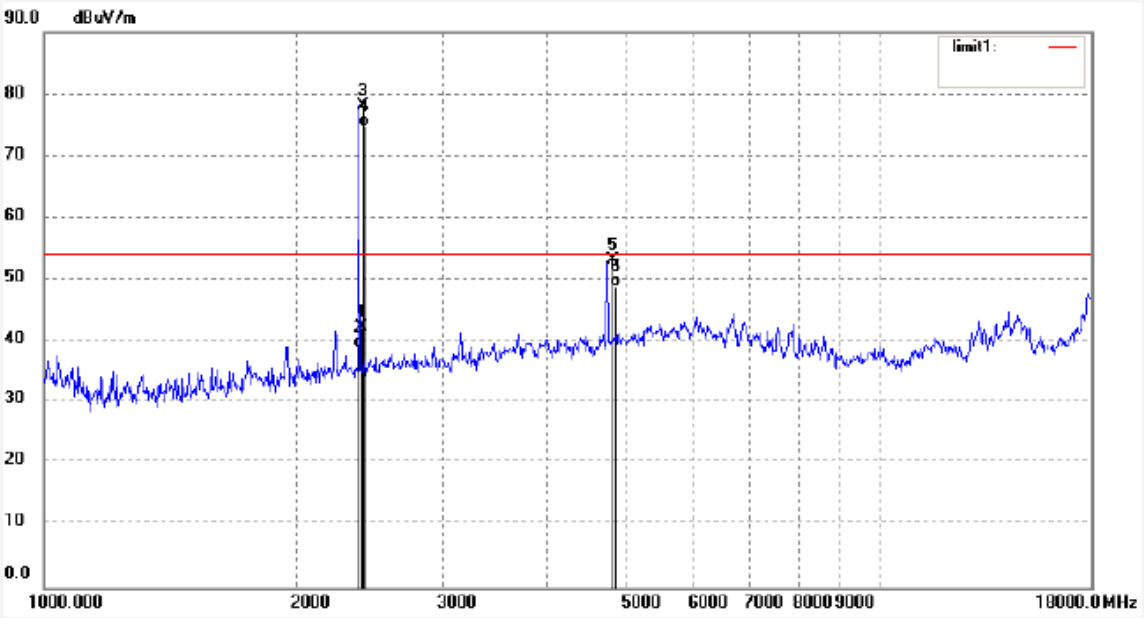
Job No.: ET #135
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: Bluetooth Laser Mouse
Mode: Bluetooth TX 2402MHz
Model: DS-2292(2292-B)
Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Horizontal
Power Source: DC 2.4V
Date: 2009/05/13
Time: 16:42:41
Engineer Signature: Joe
Distance: 3m

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2400.000	49.92	-7.46	42.46	74.00	-31.54	peak	
2	2400.000	46.61	-7.46	39.15	54.00	-14.85	AVG	
3	2402.030	85.68	-7.45	78.23	-	-	peak	
4	2402.030	82.33	-7.45	74.88	-	-	AVG	
5	4804.044	53.46	-0.30	53.16	74.00	-20.84	peak	
6	4804.044	49.17	-0.30	48.87	54.00	-5.13	AVG	

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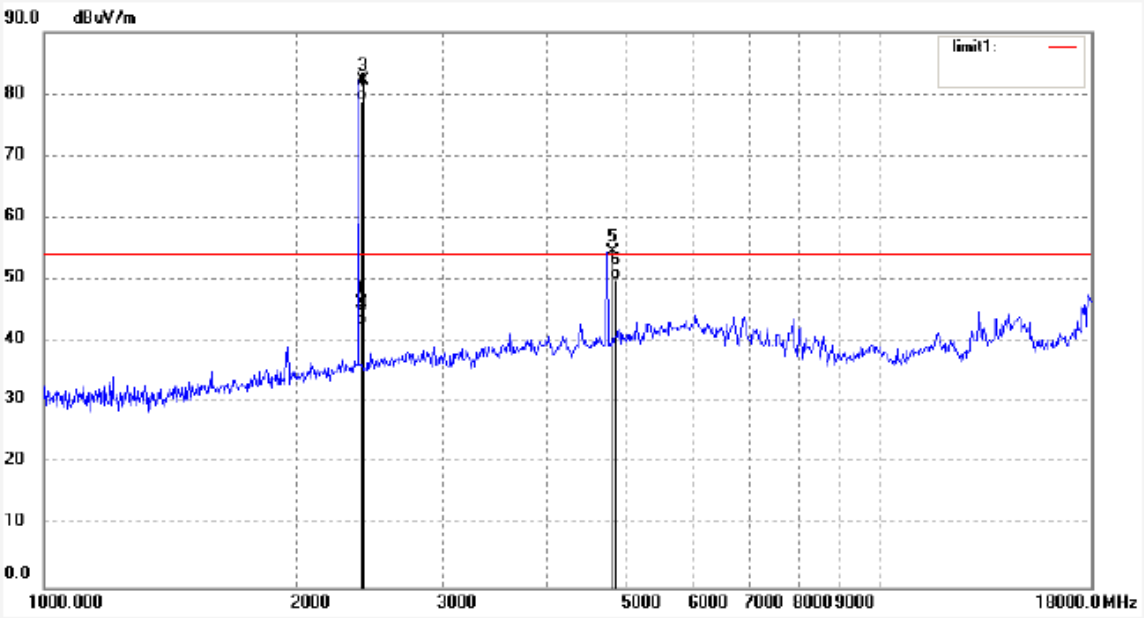
Job No.: ET #136	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 16:53:38
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2402MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2400.000	53.59	-7.46	46.13	74.00	-27.87	peak	
2	2400.000	50.21	-7.46	42.75	54.00	-11.25	AVG	
3	2402.030	89.69	-7.45	82.24	-	-	peak	
4	2402.030	86.21	-7.45	78.76	-	-	AVG	
5	4804.044	54.84	-0.30	54.54	74.00	-19.46	peak	
6	4804.044	50.42	-0.30	50.12	54.00	-3.88	AVG	

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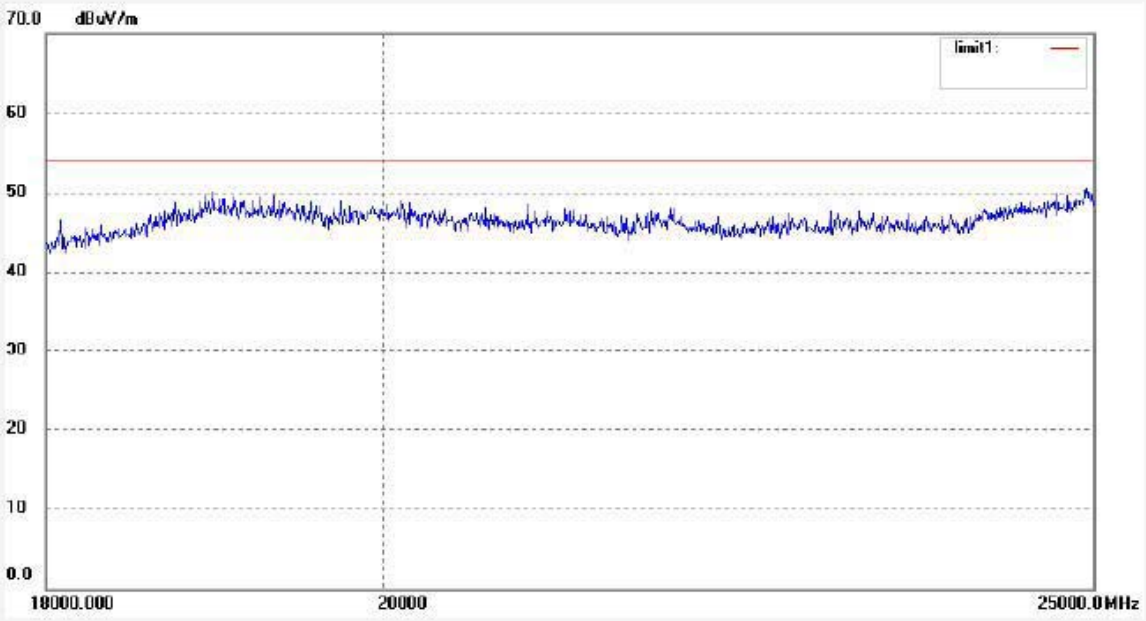
Job No.: ET #142	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 17:25:37
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2402MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



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

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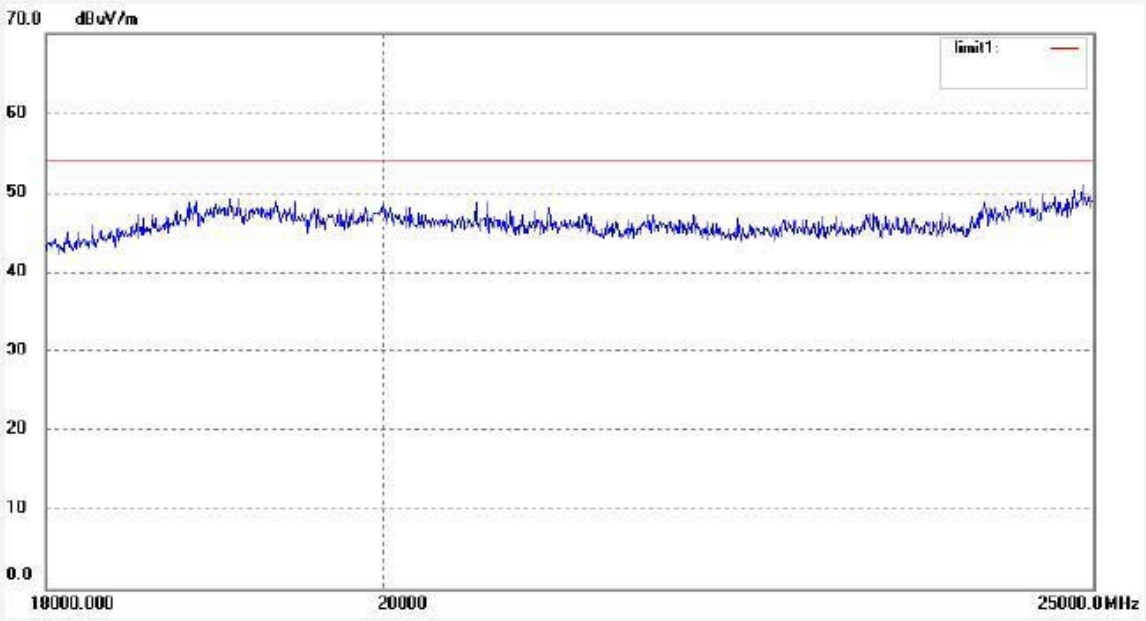
Job No.: ET #141	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 17:21:57
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2402MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



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

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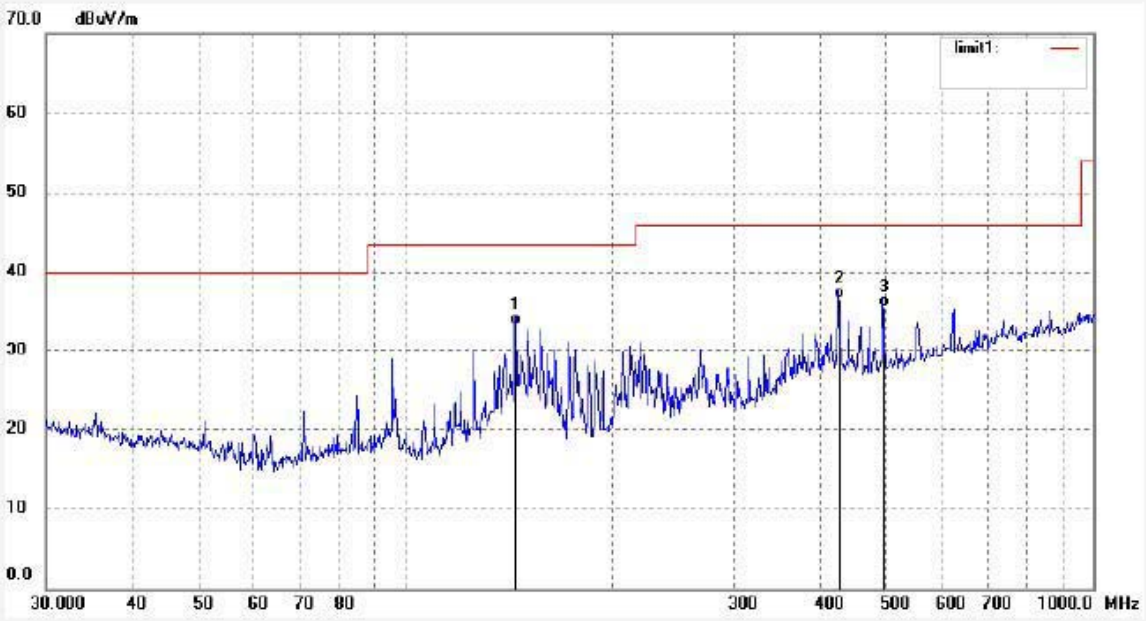
Job No.: ET #108	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 14:02:36
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2441MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	145.2760	18.85	14.48	33.33	43.50	-10.17	QP	
2	431.7933	13.74	22.96	36.70	46.00	-9.30	QP	
3	499.2379	11.62	23.99	35.61	46.00	-10.39	QP	

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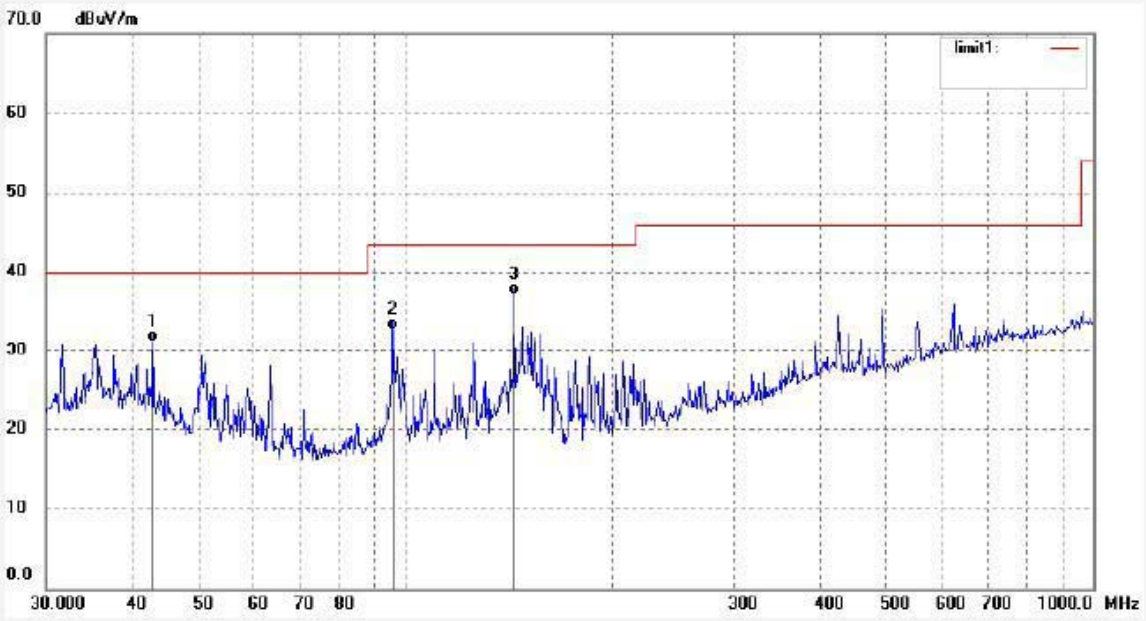
Job No.: ET #107	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 14:00:44
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2441MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	43.2305	14.48	16.83	31.31	40.00	-8.69	QP	
2	96.6484	18.96	13.89	32.85	43.50	-10.65	QP	
3	145.2760	22.67	14.48	37.15	43.50	-6.35	QP	

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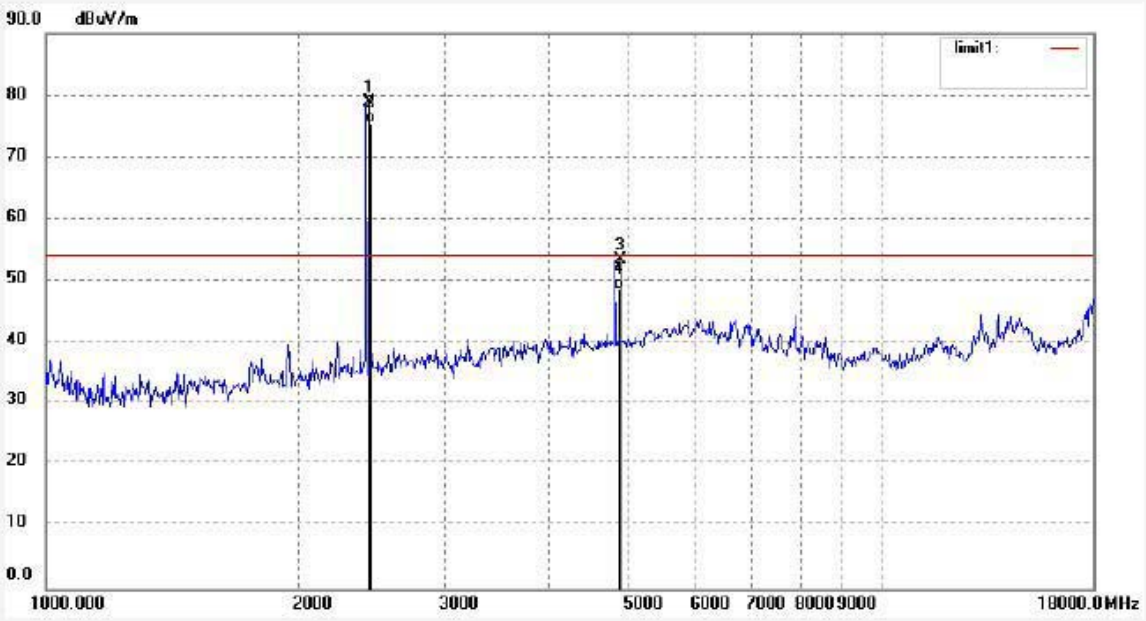
Job No.: ET #138	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 17:11:41
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2441MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2441.030	86.20	-7.35	78.85	-	-	peak	
2	2441.030	82.94	-7.35	75.59	-	-	AVG	
3	4882.047	53.19	0.14	53.33	74.00	-20.67	peak	
4	4882.047	48.51	0.14	48.65	54.00	-5.35	AVG	

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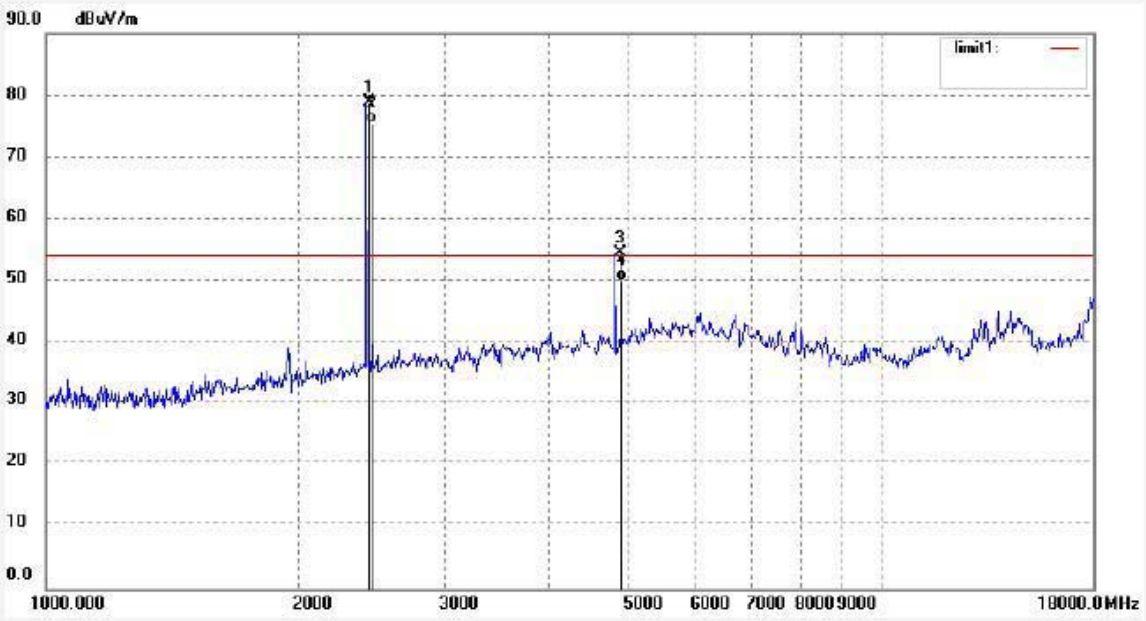
Job No.: ET #137
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: Bluetooth Laser Mouse
Mode: Bluetooth TX 2441MHz
Model: DS-2292(2292-B)
Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 2.4V
Date: 2009/05/13
Time: 17:03:53
Engineer Signature: Joe
Distance: 3m

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2441.030	86.22	-7.35	78.87	-	-	peak	
2	2441.030	82.75	-7.35	75.40	-	-	AVG	
3	4882.047	54.42	0.14	54.56	74.00	-19.44	peak	
4	4882.047	49.96	0.14	50.10	54.00	-3.90	AVG	

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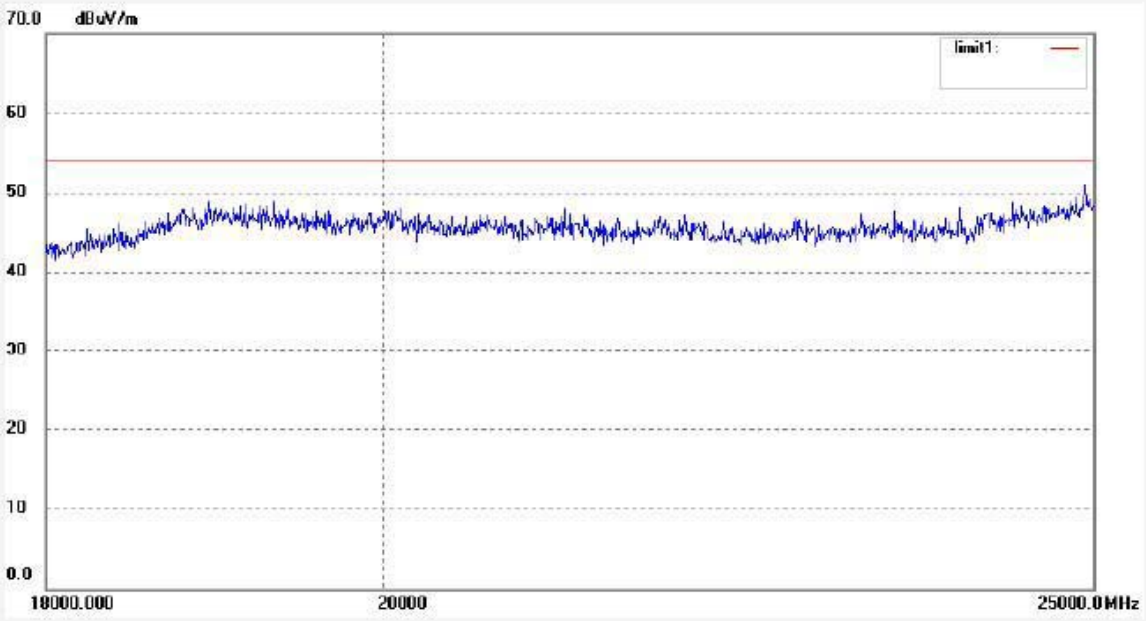
Job No.: ET #143	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 17:30:16
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2441MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



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

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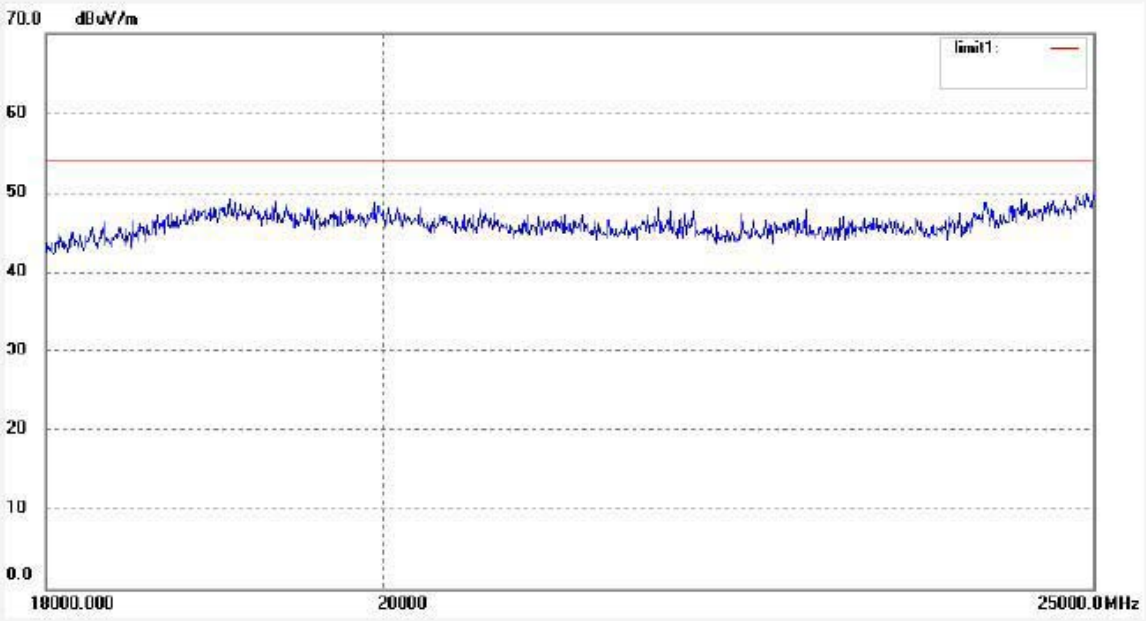
Job No.: ET #144	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 17:34:07
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2441MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



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

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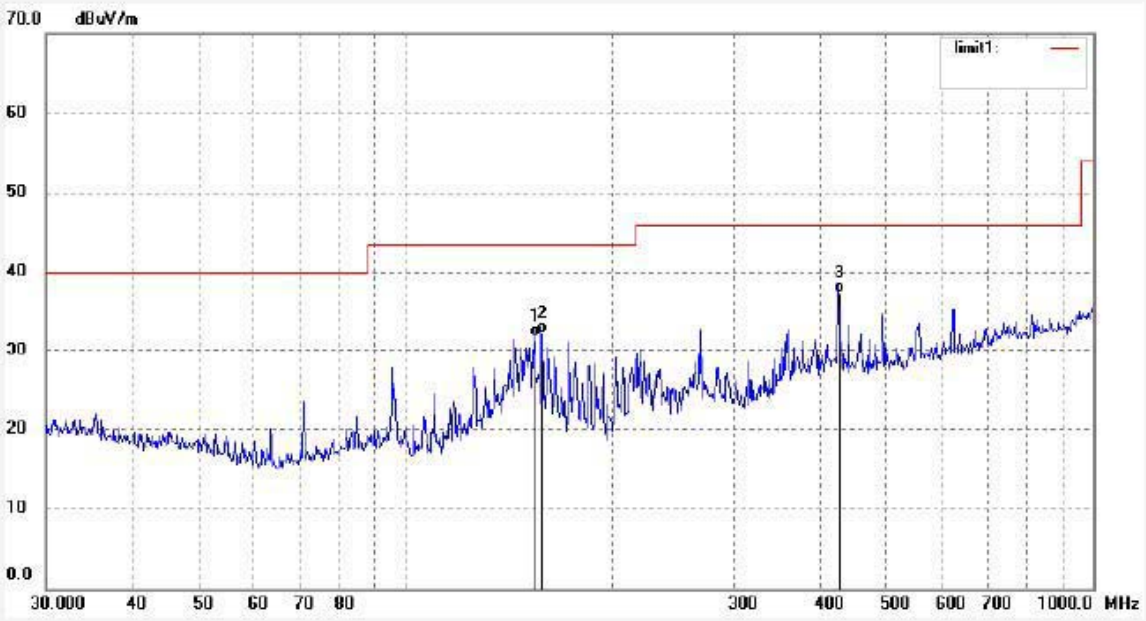
Job No.: ET #109	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 14:05:46
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2480MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	155.7427	17.38	14.57	31.95	43.50	-11.55	QP	
2	158.9289	17.64	14.59	32.23	43.50	-11.27	QP	
3	431.7932	14.45	22.96	37.41	46.00	-8.59	QP	

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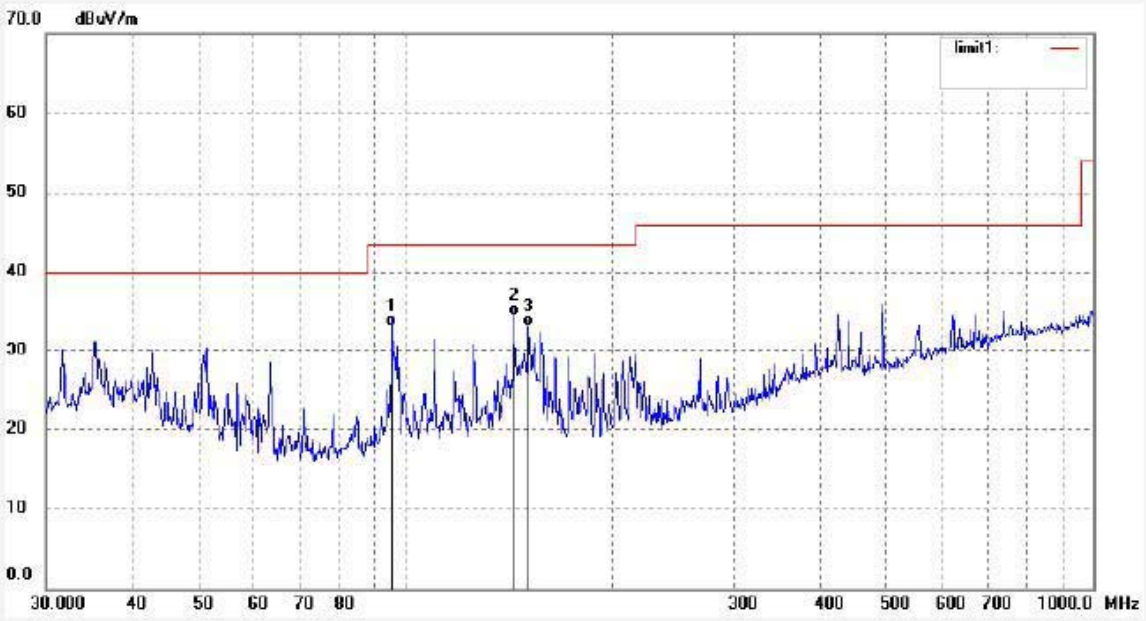
Job No.: ET #110	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 14:07:30
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2480MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	96.1485	19.33	13.88	33.21	43.50	-10.29	QP	
2	145.2760	20.13	14.48	34.61	43.50	-8.89	QP	
3	151.9955	18.56	14.54	33.10	43.50	-10.40	QP	

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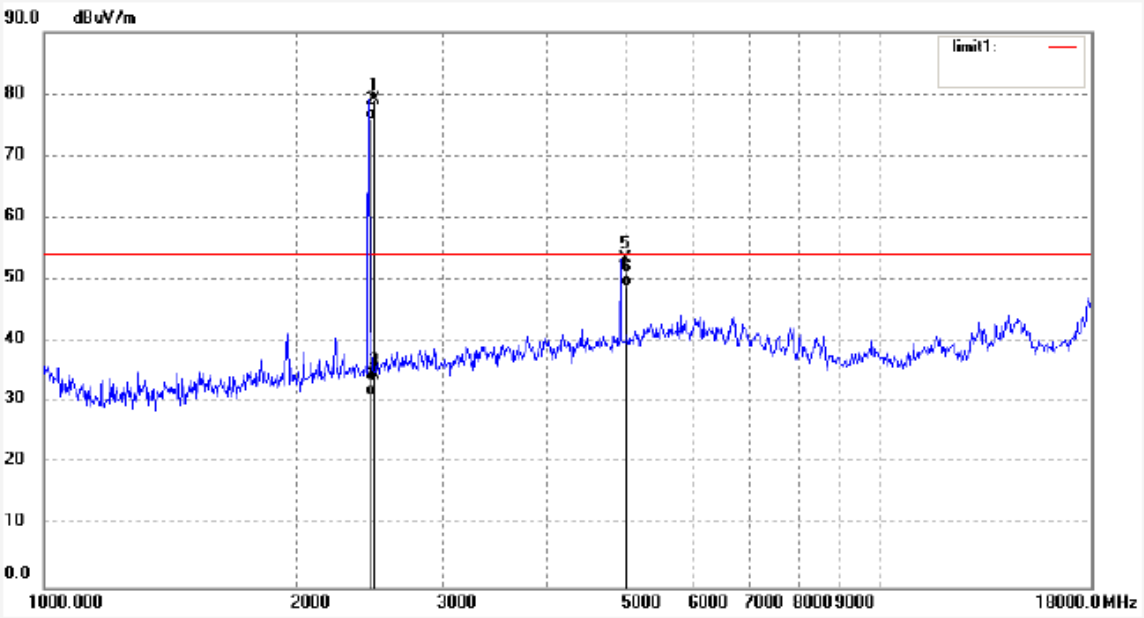
Job No.: ET #139
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: Bluetooth Laser Mouse
Mode: Bluetooth TX 2480MHz
Model: DS-2292(2292-B)
Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Horizontal
Power Source: DC 2.4V
Date: 2009/05/13
Time: 17:14:21
Engineer Signature: Joe
Distance: 3m

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2480.000	86.49	-7.37	79.12	-	-	peak	
2	2480.000	83.34	-7.37	75.97	-	-	AVG	
3	2483.500	41.57	-7.37	34.20	74.00	-39.80	peak	
4	2483.500	38.31	-7.37	30.94	54.00	-23.06	AVG	
5	4960.001	52.83	0.52	53.35	74.00	-20.65	peak	
6	4960.001	48.41	0.52	48.93	54.00	-5.07	AVG	

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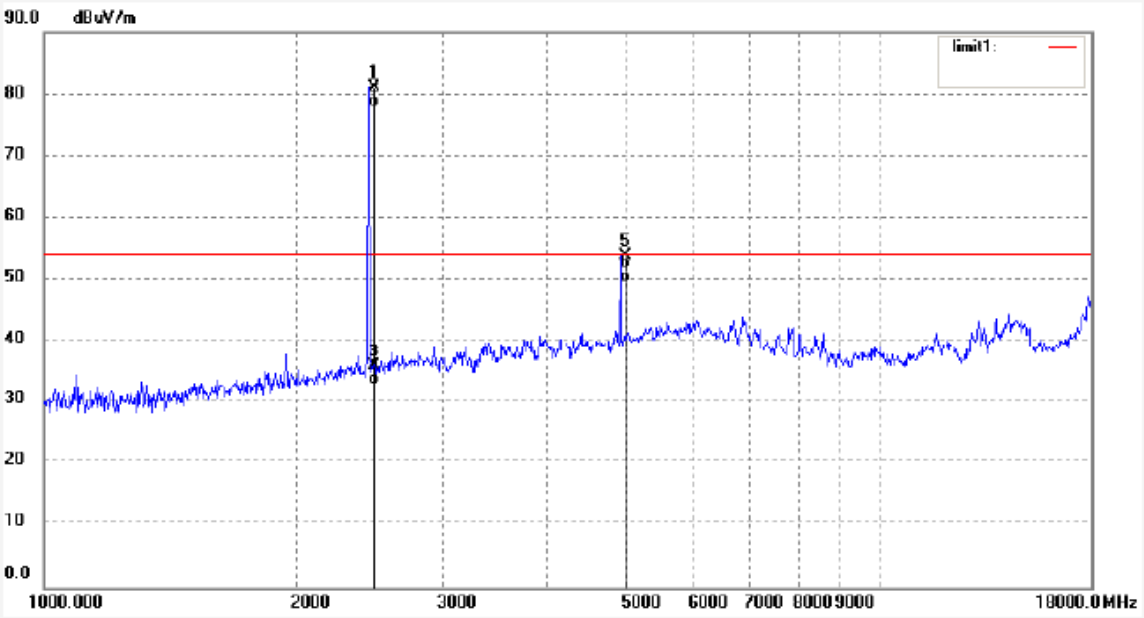
Job No.: ET #140
Standard: FCC Class B 3M Radiated
Test item: Radiation Test
Temp.(C)/Hum.(%) 25 C / 52 %
EUT: Bluetooth Laser Mouse
Mode: Bluetooth TX 2480MHz
Model: DS-2292(2292-B)
Manufacturer: Eastern Times Technology Co., Ltd.

Polarization: Vertical
Power Source: DC 2.4V
Date: 2009/05/13
Time: 17:16:36
Engineer Signature: Joe
Distance: 3m

Note: Sample No.:090072 Report No.:ATE20090070



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Remark
1	2480.000	88.53	-7.37	81.16	-	-	peak	
2	2480.000	85.38	-7.37	78.01	-	-	AVG	
3	2483.500	43.37	-7.37	36.00	74.00	-38.00	peak	
4	2483.500	40.11	-7.37	32.74	54.00	-21.26	AVG	
5	4960.001	53.46	0.52	53.98	74.00	-20.02	peak	
6	4960.001	49.17	0.52	49.69	54.00	-4.31	AVG	

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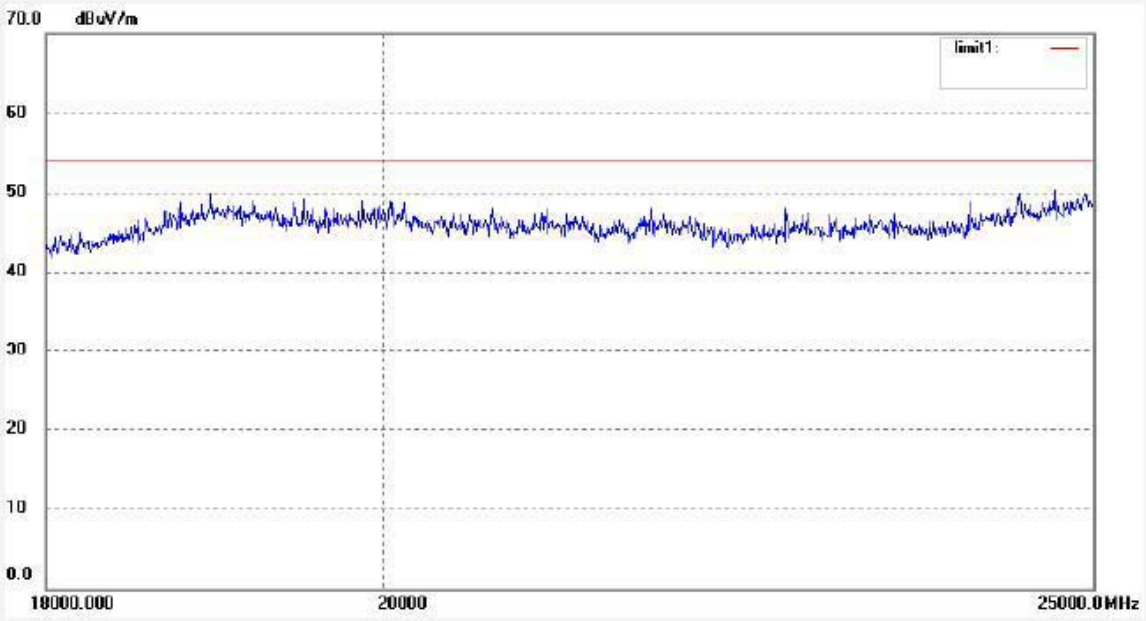
Fax:+86-0755-26503396

Job No.: ET #146	Polarization: Horizontal
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 17:45:15
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2480MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



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

ACCURATE TECHNOLOGY CO., LTD.
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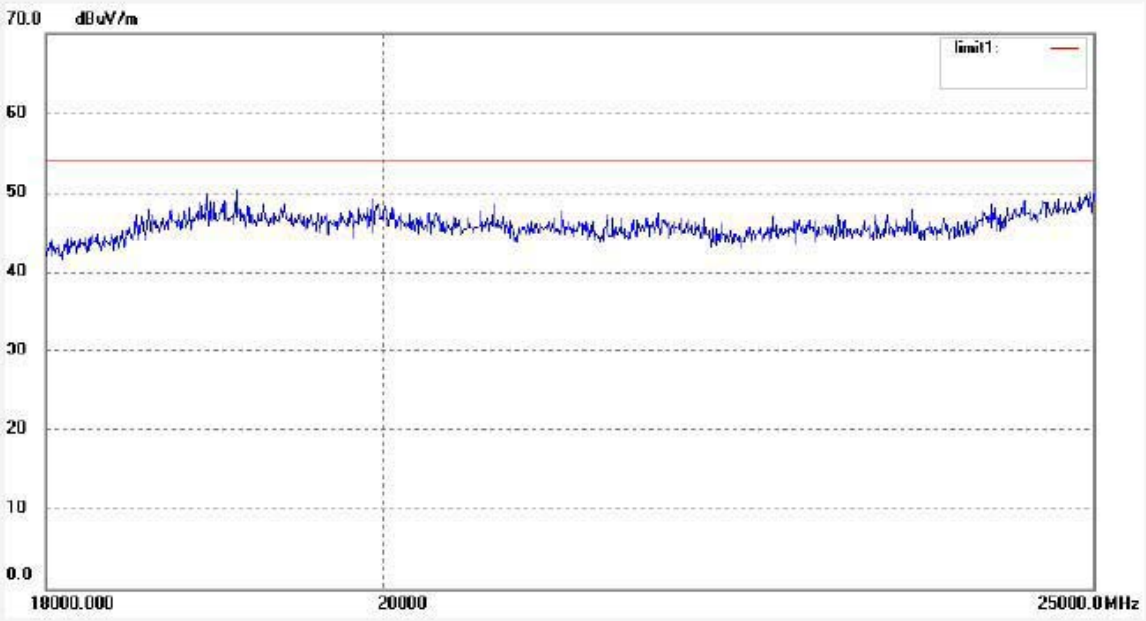
Job No.: ET #145	Polarization: Vertical
Standard: FCC Class B 3M Radiated	Power Source: DC 2.4V
Test item: Radiation Test	Date: 2009/05/13
Temp.(C)/Hum.(%) 25 C / 52 %	Time: 17:41:36
EUT: Bluetooth Laser Mouse	Engineer Signature: Joe
Mode: Bluetooth TX 2480MHz	Distance: 3m
Model: DS-2292(2292-B)	
Manufacturer: Eastern Times Technology Co., Ltd.	

Note: Sample No.:090072 Report No.:ATE20090070



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

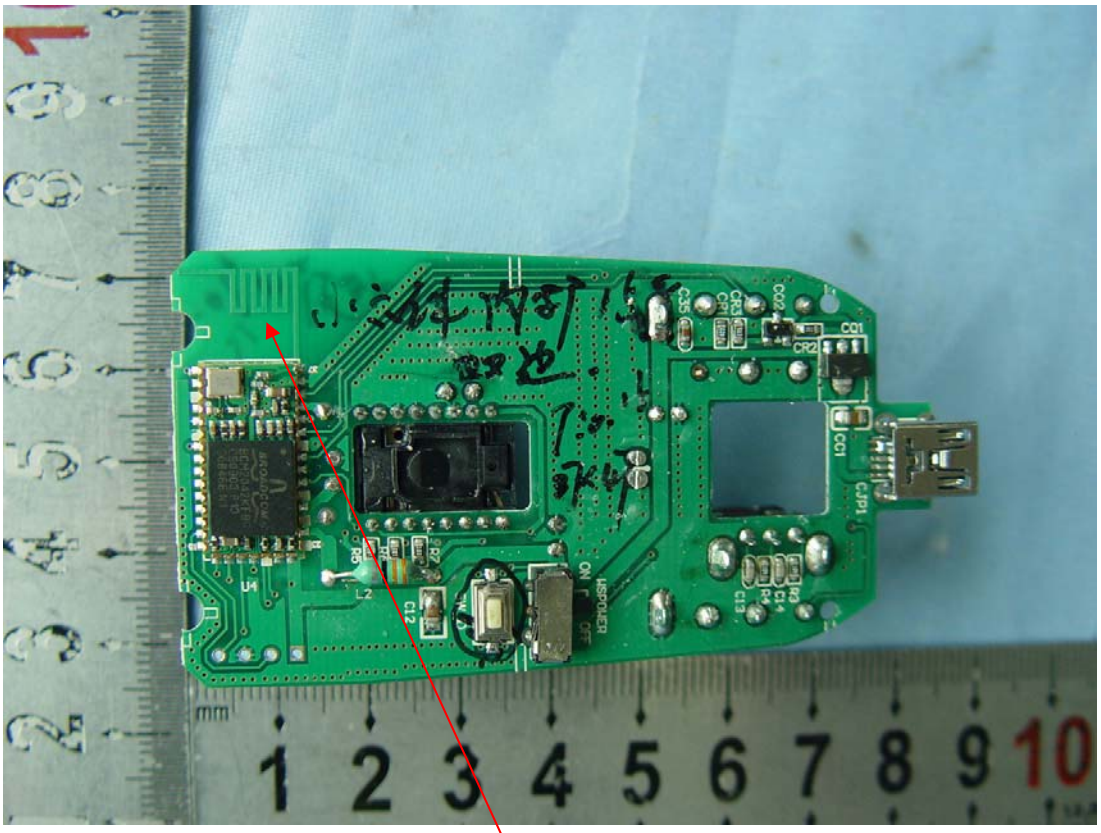
12. ANTENNA REQUIREMENT

12.1. The Requirement

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.

12.2. Antenna Construction

The antenna is PCB Layout antenna, no consideration of replacement. Therefore, the equipment complies with the antenna requirement of Section 15.203.



Antenna