



Report No.: FCC2004092 File Reference No.: 2020-05-11

Applicant: Shenzhen Unichain Technology Co., Ltd

Product: Cordless Optical Mouse

Model No.: DS-2832, DS-2510, DS-2599, DS-2601, DS-2603, DS-2638,

DS-2640, DS-2659, DS-2661, DS-2728, DS-2729, DS-2750, DS-2766, DS-2769, DS-2786, DS-2799, DS-2603, DS-2796,

DS-2868, EWM01832

Brand Name: TECKNET

Test Standards: FCC Part 15.249

Test Result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.4&FCC Part 15 Subpart C, Paragraph 15.249 regulations for the evaluation of

electromagnetic compatibility

Approved By

Jack Chung

Jack Chung

Manager

Dated: May 11, 2020

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

## SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com

Report No.: FCC2004092 Page 2 of 35

Date: 2020-05-11



## **Special Statement:**

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

#### **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

## FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

## Industry Canada (IC) — Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

#### **A2LA** (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

30

Report No.: FCC2004092

Date: 2020-05-11



## Test Report Conclusion

#### Content 1.0 General Details 4 1.1 4 Test Lab Details.... 1.2 Applicant Details. 4 1.3 Description of EUT ..... 4 1.4 Submitted Sample. 5 1.5 5 Test Duration. 1.6 Test Uncertainty. 5 1.7 Test By..... List of Measurement Equipment 2.0 6 Technical Details 3.0 7 7 4.0 EUT Modification. 5.0 Power Line Conducted Emission Test. Schematics of the Test. 5.1 8 5.2 Test Method and Test Procedure. 8 Configuration of the EUT..... 5.3 8 5.4 EUT Operating Condition. 9 9 5.5 Conducted Emission Limit 5.6 Test Result..... 9 6.0 Radiated Emission test. 10 Test Method and Test Procedure. 6.1 10 6.2 Configuration of the EUT..... 10 6.3 EUT Operation Condition. 10 6.4 Radiated Emission Limit. 11 6.5 Test Result. 12 **7.0** 20 Band Edge 7.1 Test Method and Test Procedure. 20 7.2 Radiated Test Setup. 20 73 Configuration of the EUT..... 20 7.4 EUT Operating Condition... 20 7.5 Band Edge Limit. 20 7.6 Band Edge Test Result 21 8.0 Antenna Requirement. 25 9.0 20dB bandwidth measurement. 26 FCC ID Label 10.0 29

11.0

Photo of Test Setup and EUT View.

Date: 2020-05-11



#### 1.0 General Details

#### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 744189 For 3m Anechoic Chamber

#### 1.2 Applicant Details

Applicant: Shenzhen Unichain Technology Co., Ltd

Address: 3 Floor, HongXiangJia electronic commerce Pioneer Park, Shenzhen, China

Telephone: --Fax: --

## 1.3 Description of EUT

Product: Cordless Optical Mouse

Manufacturer: Eastern Times Technology Co., Ltd

Address: Building D, Nan An Industrial Area, Youganpu Village, Fenggang Town,

Dongguan City, Guangdong, China

Brand Name: TECKNET Model Number: DS-2832

Additional Model Name DS-2510, DS-2599, DS-2601, DS-2603, DS-2638, DS-2640, DS-2659, DS-2661,

DS-2728, DS-2729, DS-2750, DS-2766, DS-2769, DS-2786, DS-2799, DS-2603,

DS-2796, DS-2868, EWM01832

Input Voltage: DC1.5V, 1 pcs AA battery

Modulation Type: GFSK

Operation Frequency 2403-2480MHz

Software Version: V3.0 Hardware Version: V1.0

Channel List:

Channel	1	2	3	4	5	6	7	8
Frequency (MHz)	2403	2426	2441	2463	2407	2422	2445	2466
Channel	9	10	11	12	13	14	15	16
Frequency (MHz)	2414	2436	2459	2473	2419	2439	2453	2480

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Date: 2020-05-11



Page 5 of 35

Antenna Designation PCB antenna with gain -1.0dBi Max

1.4 Submitted Sample

1 Sample

1.5 Test Duration

2020-04-08 to 2020-05-11

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty = 6.0dB

Occupied Channel Bandwidth Uncertainty =5%

Conducted Emissions Uncertainty = 3.6dB

Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

1.7 Test Engineer

Terry Tang

The sample tested by

Print Name: Terry Tang

Report No.: FCC2004092 Page 6 of 35



2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2019-06-21	2020-06-20
LISN	R&S	EZH3-Z5	100294	2019-06-21	2020-06-20
LISN	R&S	EZH3-Z5	100253	2019-06-21	2020-06-20
Ultra Broadband ANT	R&S	HL562	100157	2019-06-21	2020-06-20
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2019-06-21	2020-06-20
Loop Antenna	EMCO	6507	00078608	2018-06-25	2021-06-24
Spectrum	R&S	FSIQ26	100292	2019-06-21	2020-06-20
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2019-06-21	2021-06-20
Horn Antenna	R&S	BBHA 9120D	9120D-631	2018-07-09	2021-07-08
Power meter	Anritsu	ML2487A	6K00003613	2019-08-22	2020-08-21
Power sensor	Anritsu	MA2491A	32263	2019-08-22	2020-08-21
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2018-07-04	2021-07-03
9*6*6 Anechoic			N/A	2018-02-07	2021-02-06
EMI Test Receiver	RS	ESVB	826156/011	2019-06-21	2020-06-20
EMI Test Receiver	RS	ESH3	860904/006	2019-06-21	2020-06-20
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2019-06-21	2020-06-20
Spectrum	HP/Agilent	E4407B	MY50441392	2019-06-21	2020-06-20
Spectrum	RS	FSP	1164.4391.38	2019-01-20	2020-01-19
RF Cable	Zhengdi	ZT26-NJ-NJ-8 M/FA		2019-06-21	2020-06-20
RF Cable	Zhengdi	7m		2019-06-21	2020-06-20
RF Switch	EM	EMSW18	060391	2019-06-21	2020-06-20
Pre-Amplifier	Schwarebeck	BBV9743	#218	2019-06-21	2020-06-20
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2019-06-21	2020-06-20
LISN	SCHAFFNER	NNB42	00012	2020-01-07	2021-01-06

Page 7 of 35

Report No.: FCC2004092

Date: 2020-05-11



#### 3.0 Technical Details

## 3.1 Summary of test results

The EUT has been tested according to the following specifications:

Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.207	Conducted Emission Test	N/A	Complies
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	PASS	Complies
FCC Part 15, Paragraph 15.209 and RSS-210	Radiated Emission Test	PASS	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	PASS	Complies

#### 3.2 Test Standards

FCC Part 15 Subpart C, Paragraph 15.249, ANSI C63.4:2014 and ANSI C63.10:2013

#### 4.0 EUT Modification

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

Page 8 of 35

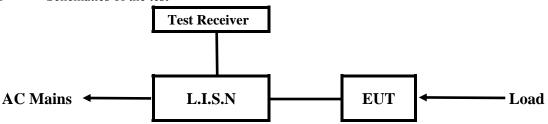
Report No.: FCC2004092

Date: 2020-05-11



#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

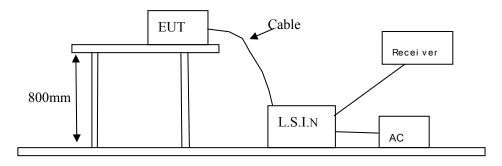


**EUT: Equipment Under Test** 

## 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.4-2014.

## Block diagram of Test setup



#### 5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2014. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

One channels are provided to the EUT

### A. EUT

Device	Manufacturer	Model	FCC ID
Cordless Optical Mouse	Eastern Times Technology	DS-2832(see the page 4	2AK8Q-EWM01832
Cordiess Optical Wouse	Co., Ltd	for additional models)	2AK6Q-E W W 01632

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Report No.: FCC2004092 Page 9 of 35

Date: 2020-05-11



#### B. Internal Device

Device	Manufacturer	Model	FCC ID/SDOC
N/A			

## C. Peripherals

Device	Manufacturer	Model	Rating
N/A			

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.4 -2014

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

## 5.5 Power line conducted Emission Limit according to Paragraph 15.107 and 15.207

Eraguanay (MHz)	Class A Li	mits (dBµV)	Class B Limits (dBµV)		
Frequency(MHz)	Quasi-peak Level	Average Level	Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	79.0	66.0	66.0~56.0*	56.0~46.0*	
$0.50 \sim 5.00$	73.0	60.0	56.0	46.0	
$5.00 \sim 30.00$	73.0	60.0	60.0	50.0	

Notes:

- 1. \*Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

#### 5.6 Test Results: N/A

The frequency spectrum from 0.15MHz to 30MHz was investigated. All reading are quasi-peak values with a resolution bandwidth of 9kHz.

Note: EUT powered by AA battery, this test item not applicable.

Report No.: FCC2004092 Page 10 of 35

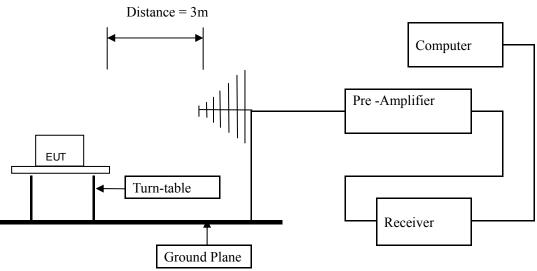
Date: 2020-05-11



#### **6** Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz (Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz). Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.

## **Block diagram of Test setup**



- 6.2 Configuration of The EUT
  Same as section 5.3 of this report
- 6.3 EUT Operating Condition
  Same as section 5.4 of this report.

Report No.: FCC2004092 Page 11 of 35

Date: 2020-05-11



#### 6.4 Radiated Emission Limit

All emission from a digital device, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strength specified below:

#### A FCC Part 15 Subpart C Paragraph 15.249(a) Limit

Fundamental Frequency	Field Strength of Fundamental (3m)			Field S	trength of Harmo	onics (3m)
(MHz)	mV/m	dBuV/m		uV/m	dBu	V/m
2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)

Note:

- 1. RF Field Strength (dBuV) = 20 log RF Voltage (uV)
- 2.Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

## B. Frequencies in restricted band are complied to limit on Paragraph 15.209.

Frequency Range (MHz)	Distance (m)	Field strength (dBμV/m)
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 5. For radiated emissions below 30MHz, it was the floor noise.
- 6. New battery was used during tests.
- (7) X,Y,Z are all have been tested, only worse case is reported

Report No.: FCC2004092 Page 12 of 35

Date: 2020-05-11



#### 6.5 Test result

## **A** Fundamental & Harmonics Radiated Emission Data

Product:	Cordless Optical Mouse	Test Mode:	Keep transmitting-Low Channel
Test Item:	Fundamental Radiated Emission	Temperature:	25℃
	Data		
Test Voltage:	DC1.5V	Humidity:	56%
Test Result:	Pass		

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2403	89.73 (PK)	Н	114/94	-4.27
2403	77.38 (PK)	V	114/94	-16.62
4806		Н	74/54	
4806		V	74/54	
7209		H/V	74/54	
9612		H/V	74/54	
12015		H/V	74/54	
14418		H/V	74/54	
16821		H/V	74/54	
19224		H/V	74/54	
21627		H/V	74/54	
24030		H/V	74/54	

Note: (1) PK= Peak, AV= Average

- (2) Emission Level = Reading Level + Antenna Factor + Cable Loss Pre-Amplifier
- (3)Margin=Emission-Limits
- (4)According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (5) For test purpose, keep EUT continuous transmitting
- (6) The PK emission level less than the AV limit. No necessary to record the AV emission level.

Report No.: FCC2004092 Page 13 of 35

Date: 2020-05-11



Product:	Cordless Optical Mouse	Test Mode:	Keep transmitting-Middle Channel
Test Item:	Fundamental Radiated Emission	Temperature:	25℃
	Data		
Test Voltage:	DC1.5V	Humidity:	56%
Test Result:	Pass		

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2441	91.94 (PK)	Н	114/94	-2.06
2441	83.25 (PK)	V	114/94	-10.75
4882	52.78 (PK)	Н	74/54	-1.22
4882		V	74/54	
7323		H/V	74/54	
9764		H/V	74/54	
12205		H/V	74/54	
14646		H/V	74/54	
17087		H/V	74/54	
19528		H/V	74/54	
21969		H/V	74/54	
24410		H/V	74/54	

Note: (1) PK= Peak, AV= Average

- (2) Emission Level = Reading Level + Antenna Factor + Cable Loss Pre-Amplifier
- (3)Margin=Emission-Limits
- (4)According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (5) For test purpose, keep EUT continuous transmitting
- (6) The PK emission level less than the AV limit. No necessary to record the AV emission level.

Page 14 of 35

Report No.: FCC2004092

Date: 2020-05-11



Product:	Cordless Optical Mouse	Test Mode:	Keep transmitting-High Channel
Test Item:	Fundamental Radiated Emission	Temperature:	25℃
	Data		
Test Voltage:	DC1.5V	Humidity:	56%
Test Result:	Pass		

Frequency	Emission PK/AV	Horiz /	Limits PK/AV	Margin
(MHz)	(dBuV/m)	Vert	(dBuV/m)	(dB)
2480	91.80 (PK)	Н	Н 114/94	
2480	84.08 (PK)	V	114/94	-9.92
4960	47.71 (PK)	Н	74/54	-6.29
4960		V	74/54	
7440		Н	74/54	
7440		V	74/54	
9920		H/V	74/54	
12400		H/V	74/54	
14880		H/V	74/54	
17360		H/V	74/54	
19840		H/V	74/54	
22320		H/V	74/54	
24800		H/V	74/54	

Note: (1) PK= Peak, AV= Average

- (2) Emission Level = Reading Level + Antenna Factor + Cable Loss Pre-Amplifier
- (3)Margin=Emission-Limits
- (4)According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (5) For test purpose, keep EUT continuous transmitting
- (6) The PK emission level less than the AV limit. No necessary to record the AV emission level.

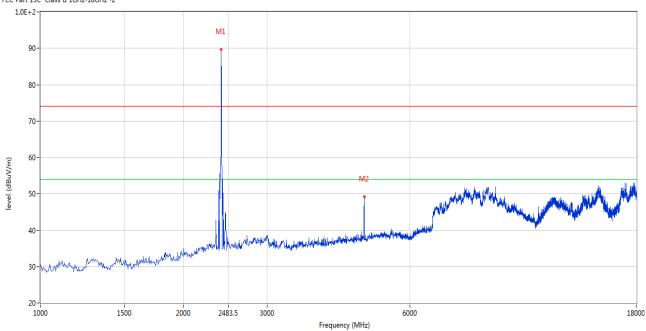
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## Please refer to the following test plots for details: Low Channel

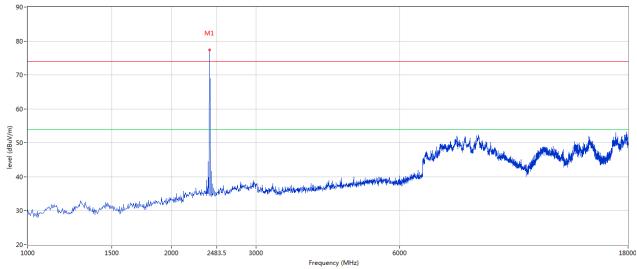
#### Horizontal





#### Vertical

## FCC Part 15C Class B 1GHz-18GHz -2



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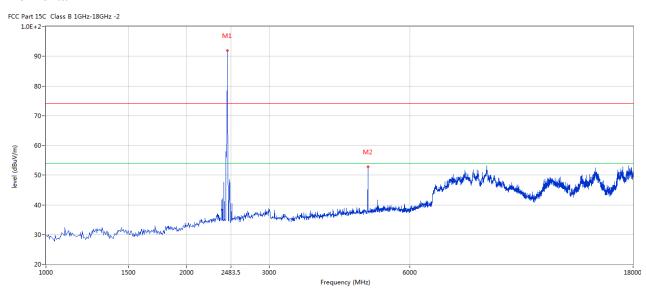
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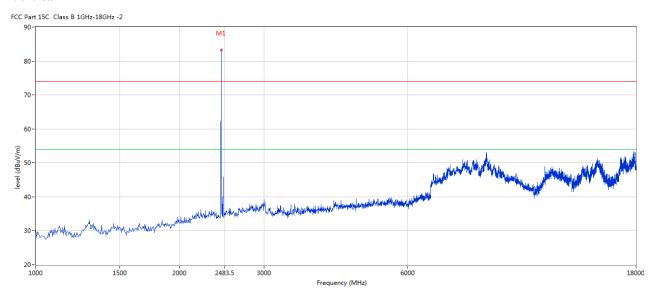


## Please refer to the following test plots for details: Middle Channel

#### **Horizontal**



#### Vertical

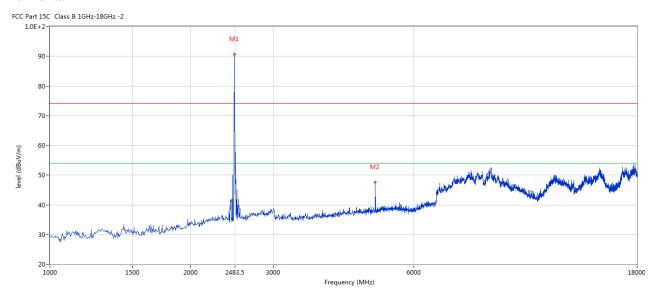


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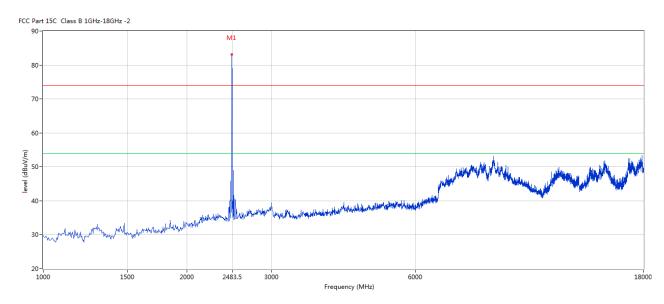


Please refer to the following test plots for details: High Channel

#### **Horizontal**



## Vertical



For emission above 18GHz, It is only the floor noise. No necessary to take down.

Report No.: FCC2004092 Page 18 of 35

Date: 2020-05-11



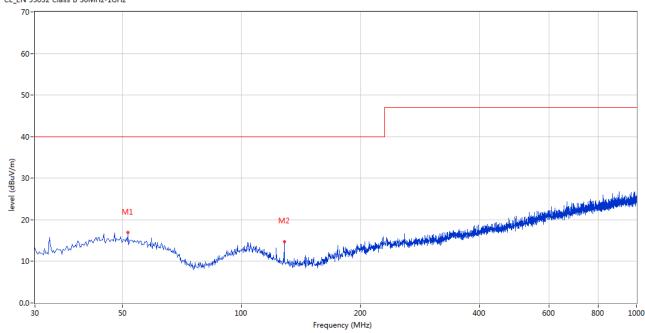
# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual

CE\_EN 55032 Class B 30MHz-1GHz



No.	Frequency	Results	Factor (dB)	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)		(dBuV/m)	(dB)		(o)	(cm)		
1	51.577	16.93	-11.41	40.0	-23.07	Peak	180.00	100	Н	Pass
2	128.430	14.76	-16.75	40.0	-25.24	Peak	84.00	200	Н	Pass

Report No.: FCC2004092 Page 19 of 35

Date: 2020-05-11



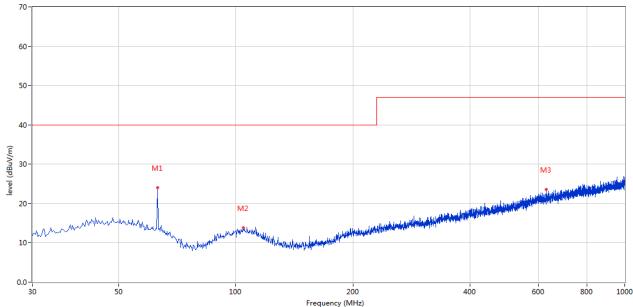
## Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual





No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	62.972	24.04	-13.31	40.0	-15.96	Peak	0.00	200	V	Pass
2	104.671	13.75	-13.25	40.0	-26.25	Peak	0.00	200	V	Pass
3	628.340	23.52	-4.93	47.0	-23.48	Peak	0.00	200	V	Pass

Date: 2020-05-11

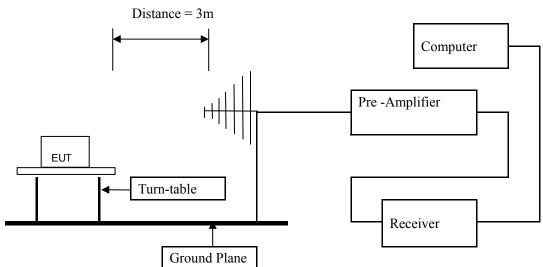


## 7. Band Edge

#### 7.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.10–2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) Set Spectrum as RBW=1MHz,VBW=3MHz and Peak detector used
- (3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (4) The antenna polarization: Vertical polarization and Horizontal polarization.

## 7. 2 Radiated Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing

#### 7.3 Configuration of The EUT

Same as section 5.3 of this report

## 7.4 EUT Operating Condition

Same as section 5.4 of this report.

## 7.5 Band Edge Limit

Emissions 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.

The report refers only to the sample tested and does not apply to the bulk.

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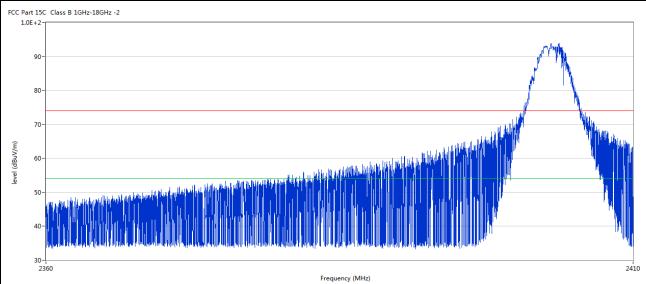
Report No.: FCC2004092 Page 21 of 35

Date: 2020-05-11



#### 7.6 Test Result

Product:	Cordless Optical Mouse	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC1.5V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



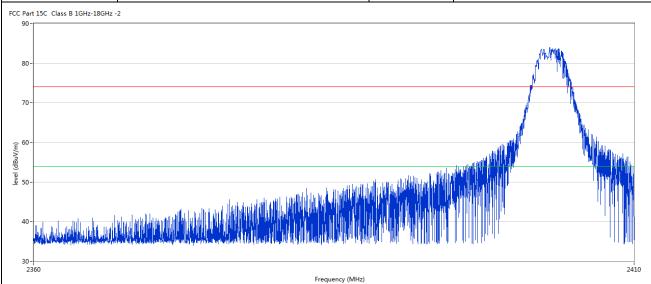
	1	1		1		1		1	1	
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2400.015	70.38	-3.57	74.0	-3.62	Peak	228.00	100	Н	Pass
1*	2400.015	49.52	-3.57	54.0	-4.48	AV	228.00	100	Н	Pass
2	2390.080	60.65	-3.53	74.0	-13.35	Peak	222.00	100	Н	Pass
2*	2390.080	38.85	-3.53	54.0	-15.15	AV	222.00	100	Н	Pass

Page 22 of 35

Report No.: FCC2004092



Product:	Cordless Optical Mouse	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	DC1.5V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



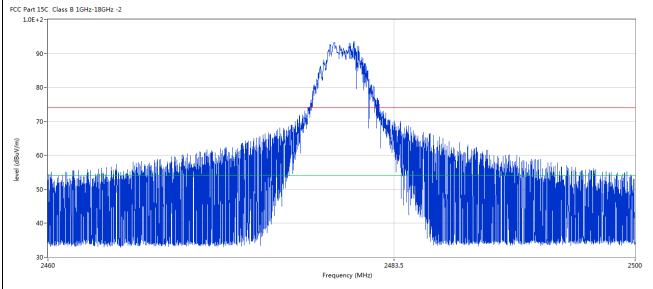
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2399.990	57.47	-3.57	74.0	-16.53	Peak	85.00	100	٧	Pass
1*	2399.990	36.61	-3.57	54.0	-17.39	AV	85.00	100	٧	Pass
2	2390.112	50.89	-3.53	74.0	-23.11	Peak	265.00	100	٧	Pass
2*	2390.112	29.52	-3.53	54.0	-24.48	AV	265.00	100	٧	Pass

Page 23 of 35

Report No.: FCC2004092



Product:	Cordless Optical Mouse	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC1.5V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



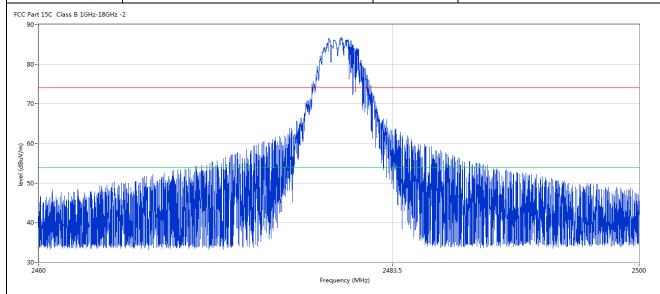
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2483.5	70.52	-3.57	74.0	-3.48	Peak	230.00	100	Н	Pass
1*	2483.5	38.39	-3.57	54.0	-15.61	AV	230.00	100	Н	Pass

Page 24 of 35

Report No.: FCC2004092



Product:	Cordless Optical Mouse	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	DC1.5V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2483.5	63.17	-3.57	74.0	-10.83	Peak	64.00	100	V	Pass
1*	2483.5	41.92	-3.57	54.0	-12.08	AV	64.00	100	V	Pass

Report No.: FCC2004092 Page 25 of 35

Date: 2020-05-11



#### 8.0 Antenna Requirement

## **Applicable Standard**

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. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has a PCB antenna. The antenna gain is -1.0dBi Max. It fulfills the requirement of this section. Test Result: Pass

Page 26 of 35

Report No.: FCC2004092



Product:	Cordless Optical Mouse				Test Mode:		Keep transmitting			
Mode	Keeping Transmitting					est Voltage		DC1.5V		
Temperature	24 deg. C, Pass				Humidity Detector		56% RH PK			
Test Result:										
OdB Bandwidth	2.265MHz									
<b>&gt;</b>	Delta	1 [T1]		RI	ЗW	30 k	Hz Rl	F Att	20 dB	
Ref Lvl		-0.	.80 dB	VI	B₩	100 k				
-10 dBm		2.264529	906 MHz	SI	T	14 m	s Ui	nit	dBn	n
-10						<b>v</b> <sub>1</sub>	[T1]	-45	.08 dBm	P
-20								2.40192	285 GHz	
-20				2		<u>^</u> 1	[T1]	-(	.80 dB	
				Ň		∇2	[ 17 ]	2.26452	906 MHz	
-30		M	www.	V.		<u>M</u>		2.40303	507 GHz	
-40 -MAY -D1 -45.55	dBm 1	V			M		1			1M
-50	W.	Ĭ					V			
	Jlan Marine							M <sub>1</sub> A		
-60								V, V.	m/\lah	
-70									***************************************	
-80										.[
-90										
100										
110										
Center 2.4	03 GHz		500	kHz/				Spa	ın 5 MHz	

Page 27 of 35

Report No.: FCC2004092



Product:	Cordless C	ptical Mouse	Te	Test Mode:		Keep transmitting	
Mode	Keeping	Те	est Voltage		DC1.5V 56% RH		
Temperature	24 0	leg. C,	I	Humidity			
Test Result:	F	Pass	Detector		PK		
20dB Bandwidth	2.28	37MHz					
<b>F</b>	Delta 1	[T1]	RBW	30 kH	z RF	Att 20 dB	
Ref Lvl		-0.73 dB	VBW	100 kH		_	
-10 dBm	2.:	28657315 MHz	SWT	14 ms	Uni	t dBı	n
				▼1 [	T1]	-44.82 dBr	A
-20						.43992285 GHz	
			2 <b>7</b>	<b>▲</b> ⊥   l	[T1]	-0.73 dB 28657315 MH <sub>2</sub>	,
-30		<u>"</u>		<b>▽</b> 2 [	T1]	-25.61 dBr	
		MMMM	M	Μ	2.	.44104509 GHz	2
-40			MM	14.1			
1MAY	51 dBm 1		ľ	W V	1		1MA
-50	OI CIBILI				1		
	yll phylometry				\   <sub> </sub>	MIN MININ	
-60							
-70					Ψ.	<u> </u>	
-80							-
-90							1
-100							1
-110	111 777		1 /				J
Center 2.	441 GHZ	500	KHZ/			Span 5 MHz	Z
Date: 21.	.APR.2020 19:1	L8:28					

Page 28 of 35

Report No.: FCC2004092



Product:	Cordless Optical Mouse	Test Mode:	Keep transmitting		
Mode	Keeping Transmitting	Test Voltage	DC1.5V		
Temperature	24 deg. C,	Humidity	56% RH		
Test Result:	Pass	Detector	PK		
20dB Bandwidth	2.265MHz				
r.	Delta 1 [T1]	RBW 30 kH	z RF Att 20 dB		
Ref Lvl	-1.67 dB	VBW 100 kH	z		
-10 dBm	2.26452906 MHz	SWT 14 ms	Unit dBm		
-10		<b>V</b> 1 [	T1] -42.03 dBm		
			2.47893287 GHz		
-20		2 <b>v</b>	T1] -1.67 dB		
	A .	∇2	2.26452906 MHz T11 -24.01 dBm		
-30	7 / 1	M A	2.48003507 GHz		
		~ My L. A			
-40	I. T. W.	<del> </del>	1		
<b>-</b> 1D1 −44.06 d	IBM V	\	1MA		
-50	A de la contraction de la cont		<del> </del>		
4.1	$\mathcal{M}$		MA		
-60	/				
			The Poly		
-70			100		
-80					
-90					
-100					
-110					
Center 2.48	GHz 500	kHz/	Span 5 MHz		
Date: 21.APF	R.2020 19:20:39				

Report No.: FCC2004092 Page 29 of 35

Date: 2020-05-11



#### 10.0 FCC ID Label

## FCC ID: 2AK8Q-EWM01832

The label must not be a stick-on paper label. The label on these products must be permanently affixed to the product and readily visible at the time of purchase and must last the expected lifetime of the equipment not be readily detachable.

#### **Mark Location:**



**Label Location** 

Page 30 of 35

Report No.: FCC2004092

Date: 2020-05-11

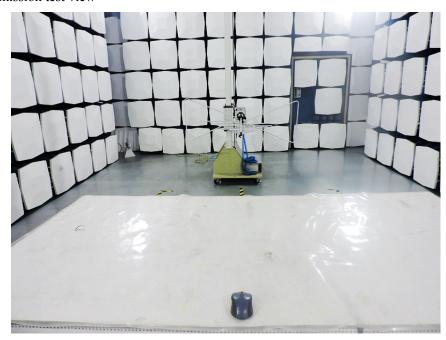


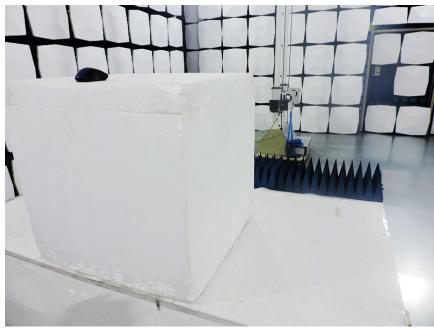
## 11.0 Photo of testing

## 11.1 Conducted test View

N/A

## 11.2 Radiated emission test view





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#### 11.3 Photographs – EUT

## Outside View





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Page 32 of 35

Report No.: FCC2004092

Date: 2020-05-11



Outside View





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Report No.: FCC2004092 Page 33 of 35



Outside View



Page 34 of 35

Report No.: FCC2004092

Date: 2020-05-11



Inside view





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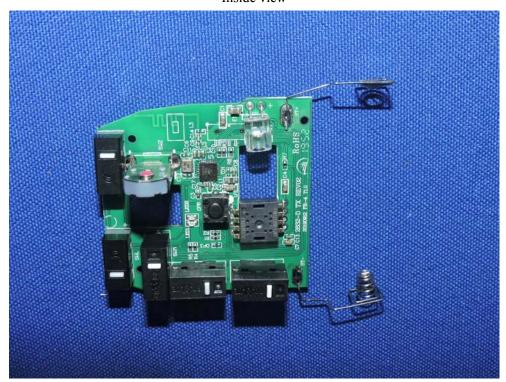
Page 35 of 35

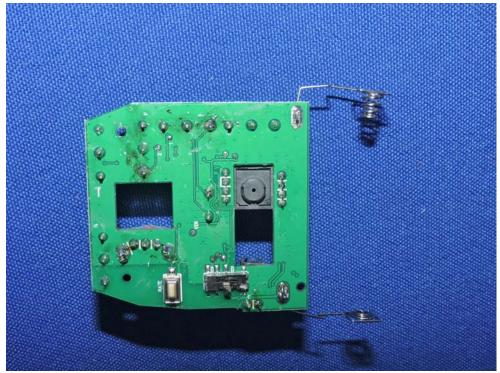
Report No.: FCC2004092

Date: 2020-05-11



Inside view





-- End of the report--

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