



Report No.: FCC2006098 File Reference No.: 2020-06-29

Applicant: Shenzhen Unichain Technology Co., Ltd

Product: WIRELESS MOUSE

Model No.: DS-2862, EWM01862

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: June 29, 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(+86)- 755 83448688, E-Mail:info@timeway-lab.com

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# **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

Date: 2020-06-29



# Test Report Conclusion

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

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#### 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: (+86)-755-8344 8688

Fax: ---

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: 201, 2nd Floor, Building C, Shanhai Commercial Plaza, Huangjunshan District, Bantian Street,

Longgang District, Shenzhen, China

Telephone: 13077806581/0769-86800511

Fax: ---

### 1.3 Description of EUT

Product: WIRELESS 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-2862
Additional Model Name EWM01862

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

Modulation Type: GFSK

Operation Frequency 2408-2474MHz

Channel Number: 34
Channel Separation: 2MHz
Software Version: EA9F

Hardware Version: MA37P1 S0P16E

Antenna Designation PCB antenna with gain 0dBi Max

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1.4 Submitted Sample

1 Sample

1.5 Test Duration

2020-06-09 to 2020-06-29

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

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Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2020-06-23	2021-06-22
LISN	R&S	EZH3-Z5	100294	2020-06-23	2021-06-22
LISN	R&S	EZH3-Z5	100253	2020-06-23	2021-06-22
Ultra Broadband ANT	R&S	HL562	100157	2020-06-23	2021-06-22
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2020-06-23	2021-06-22
Loop Antenna	EMCO	6507	00078608	2018-06-25	2021-06-24
Spectrum	R&S	FSIQ26	100292	2020-06-23	2021-06-22
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2020-06-23	2021-06-22
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	2020-06-23	2021-06-22
EMI Test Receiver	RS	ESH3	860904/006	2020-06-23	2021-06-22
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2020-06-23	2021-06-22
Spectrum	HP/Agilent	E4407B	MY50441392	2020-06-23	2021-06-22
Spectrum	RS	FSP	1164.4391.38	2020-01-16	2021-01-15
RF Cable	Zhengdi	ZT26-NJ-NJ-8 M/FA		2020-06-23	2021-06-22
RF Cable	Zhengdi	7m		2020-06-23	2021-06-22
RF Switch	EM	EMSW18	060391	2020-06-23	2021-06-22
Pre-Amplifier	Schwarebeck	BBV9743	#218	2020-06-23	2021-06-22
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2020-06-23	2021-06-22
LISN	SCHAFFNER	NNB42	00012	2020-01-07	2021-01-06

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#### 3.0 Technical Details

# 3.1 Summary of test results

The EUT has I	heen tested	according to	the following	specifications:
THE LEGI Has I	occii icsicu	according to	, and romowing	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

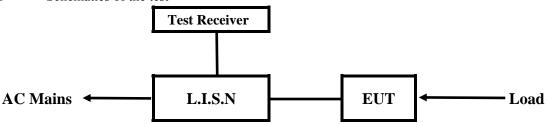
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

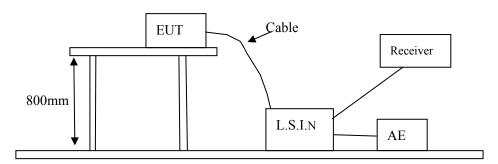


**EUT: Equipment Under Test** 

### 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
WIRELESS MOUSE	Eastern Times Technology Co., Ltd.	DS-2862, EWM01862	2AK8Q-EWM01862

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#### 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

· · · · · · · · · · · · · · · · · · ·					
Г(МП-)	Class A Li	mits (dBµV)	Class B Lin	nits (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 ~ 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.

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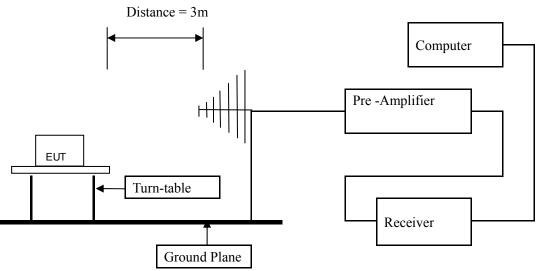
Date: 2020-06-29



#### **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.

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### 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 Stre	d Strength of Fundamental (3m)			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 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

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#### 6.5 Test result

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

Product:	WIRELESS 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)
2408	86.33 (PK)	Н	114/94	-7.67
2408	75.80 (PK)	V	114/94	-18.20
4816	47.57 (PK)	Н	74/54	-6.43
4816	47.12 (PK)	V	74/54	-6.88
7224		H/V	74/54	
9632		H/V	74/54	
12040		H/V	74/54	
14448		H/V	74/54	
16856		H/V	74/54	
19264		H/V	74/54	
21672		H/V	74/54	
24080		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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Product:	WIRELESS 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)
2440	85.36 (PK)	Н	114/94	-8.64
2440	76.44 (PK)	V	114/94	-17.56
4880	49.42 (PK)	Н	74/54	-4.58
4880	48.27 (PK)	V	74/54	-5.73
7320		H/V	74/54	
9760		H/V	74/54	
12200		H/V	74/54	
14640		H/V	74/54	
17080		H/V	74/54	
19520		H/V	74/54	
21960		H/V	74/54	
24400		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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Product:	WIRELESS 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)
2474	86.14 (PK)	Н	114/94	-7.86
2474	79.11 (PK)	V	114/94	-14.89
4948	49.74 (PK)	Н	74/54	-4.26
4948	48.55 (PK)	V	74/54	-5.45
7422		Н	74/54	
7422		V	74/54	
9896		H/V	74/54	
12370		H/V	74/54	
14844		H/V	74/54	
17318		H/V	74/54	
19792		H/V	74/54	
22266		H/V	74/54	
24740		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.

18000

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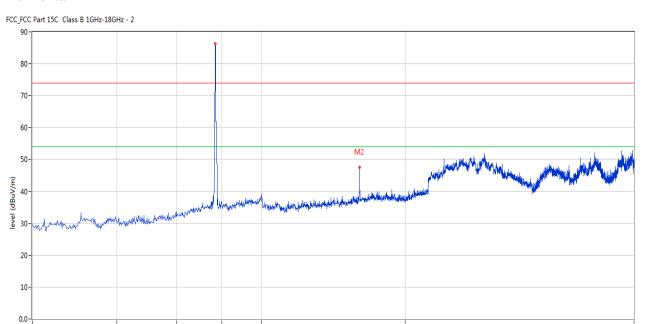


### Please refer to the following test plots for details: Low Channel

2000

2483.5

#### Horizontal

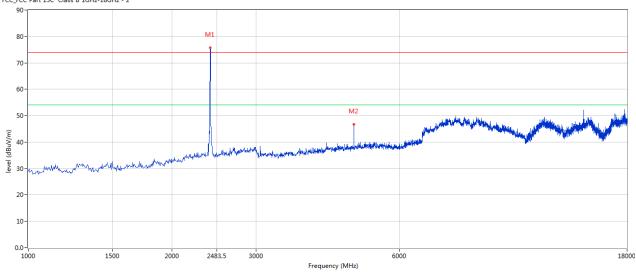


Frequency (MHz)

#### Vertical

1000





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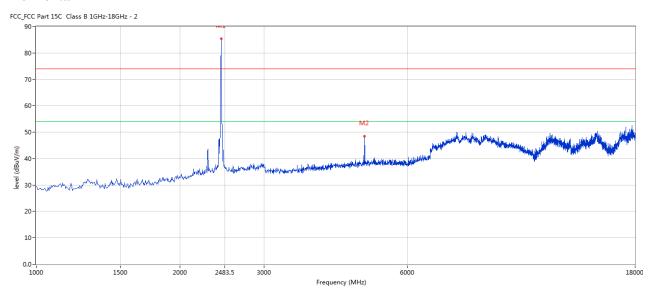
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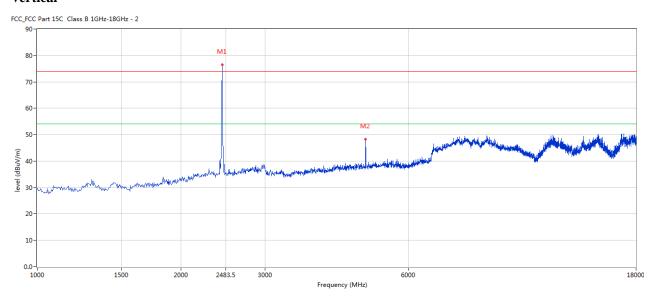


### Please refer to the following test plots for details: Middle Channel

#### Horizontal



#### Vertical

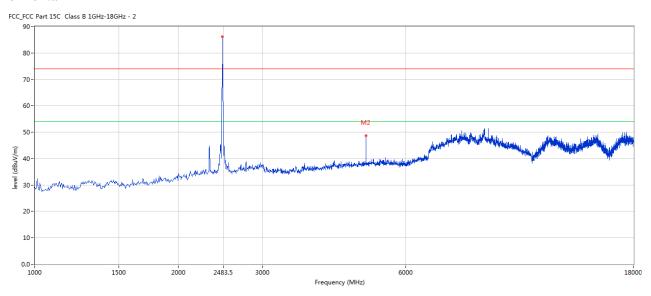


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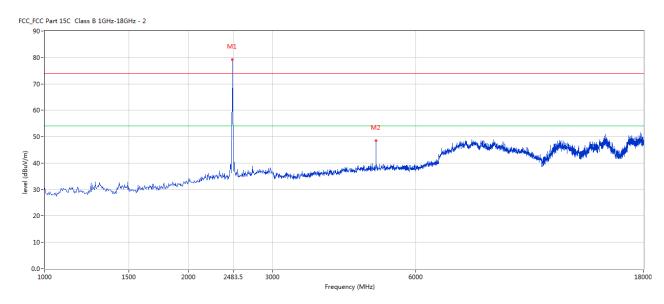


Please refer to the following test plots for details: High Channel

#### Horizontal



### Vertical



For radiated emission above 18GHz and below 30MHz, It is only the floor noise. No necessary to take down.

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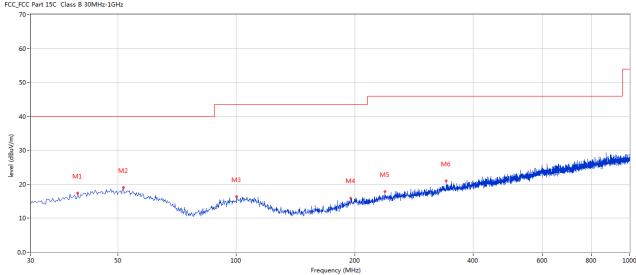
#### B. **General Radiated Emission Data** Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results: Pass** 

Please refer to following diagram for individual

FCC\_FCC Part 15C Class B 30MHz-1GHz



No.	Frequency	Results	Factor	Limit	Over	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)			(cm)		
1	39.455	17.45	-12.52	40.0	-22.55	Peak	155.00	100	Н	Pass
2	51.577	19.00	-11.41	40.0	-21.00	Peak	0.00	200	Н	Pass
3	100.307	16.36	-13.50	43.5	-27.14	Peak	258.00	100	Н	Pass
4	195.586	15.99	-13.70	43.5	-27.51	Peak	0.00	200	Н	Pass
5	238.498	17.89	-12.46	46.0	-28.11	Peak	180.00	200	Н	Pass
6	341.292	20.98	-9.73	46.0	-25.02	Peak	273.00	200	Н	Pass

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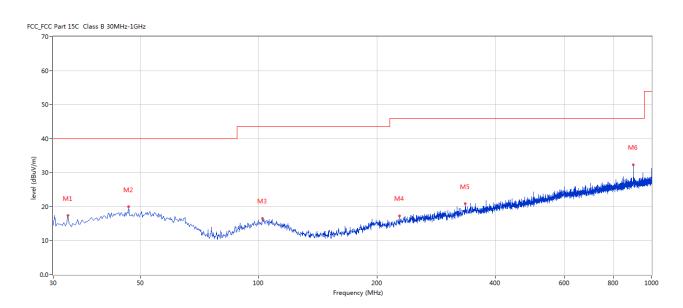


### Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)			(cm)		
1	32.667	17.43	-14.45	40.0	-22.57	Peak	256.00	100	V	Pass
2	46.728	19.96	-11.44	40.0	-20.04	Peak	360.00	200	V	Pass
3	102.247	16.59	-13.42	43.5	-26.91	Peak	262.00	200	V	Pass
4	228.315	17.33	-12.75	46.0	-28.67	Peak	152.00	100	V	Pass
5	335.716	20.85	-9.92	46.0	-25.15	Peak	39.00	100	V	Pass
6	897.933	32.34	-1.77	46.0	-13.66	Peak	103.00	100	V	Pass

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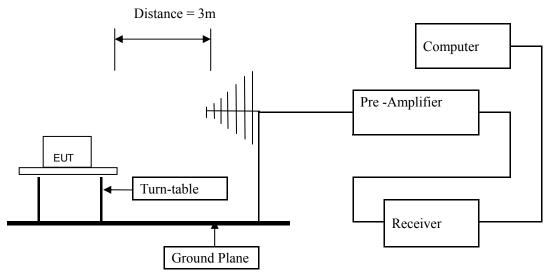


### 7. Band Edge

#### 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.

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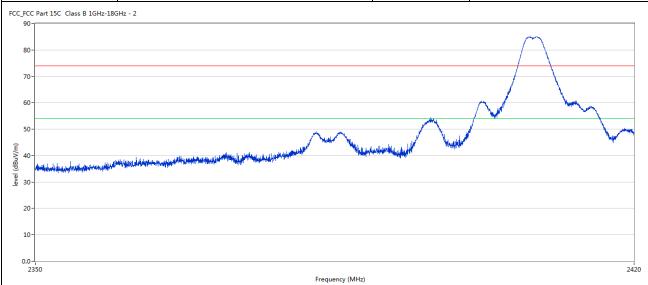
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#### 7.6 Test Result

Product:	WIRELESS MOUSE	Polarity	Horizontal
Mode	LOW CHANNEL	Test Voltage	DC1.5V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		-



(cm)   Peak 31.00 100 H Pass
Peak 31.00 100 H Pass
Peak         27.00         100         H         Pass
AV 27.00 100 H Pass
Peak         14.00         100         H         Pass
5

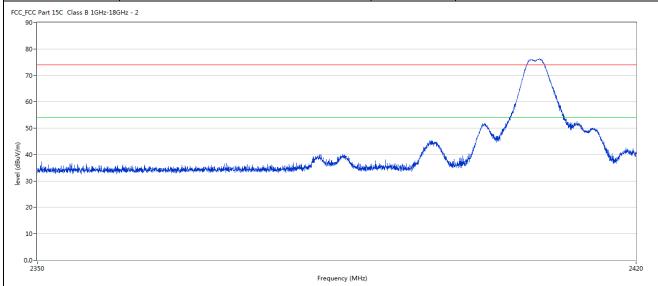
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Report No.: FCC2006098

Date: 2020-06-29



Product:	WIRELESS MOUSE	Detector	Vertical
Mode	LOW CHANNEL	Test Voltage	DC1.5V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



Г											
	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
	3	2400.737	42.59	-3.57	54.0	-11.41	Peak	51.00	100	V	Pass
	4	2390.450	38.02	-3.53	54.0	-15.98	Peak	246.00	100	V	Pass
	4	2390.450	38.02	-3.53	54.0	-15.98	Peak	246.00	100		V

Product: WIRELESS MOUSE	Polarity	Horizontal
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The report refers only to the sample tested and does not apply to the bulk.

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M	lode		HIGH C	CHANNEL		Test Volta	age	I	DC1.5V	
Temp	erature		24	deg. C,		Humidi	ity	5	56% RH	
Test l	Result:			Pass						
_	5C Class B 1GHz-18	3GHz - 2								
80-										
70-			S. A. C.		Mary Mary					
EQ 100	and the same of th		er.			M2	Land of the state			
50- (w/ \Angle 40-	The Andrew Miles	Hardware					The state of the s	distribution to be designed to	ALLE STREET, S	The state of the state of the state of
AND S	Mary Mary Mary Mary Mary Mary Mary Mary	Mary desirable and the second					The state of the s	Mentifedential physical architecture for	ALL STREET, ST	and white the state of the state of
AND S	The state of the s	Market					The state of the s	dilemental de descripti	ALL PROPERTY OF THE PARTY OF TH	Marie Specific desphision
40- 40- 30-	The stipp like	Market Control of the					The state of the s	Mention and the second property of	A STATE OF THE STA	and the proof of the price of
(m/ <sub>A</sub> 0/ <sub>w</sub> ) 40-	The adding the	Marketer Comments			Frequency (MHz)	2483.5	The state of the s	Alemande de la companya de la compa	A CONTRACTOR OF THE PARTY OF TH	2500
(W/N 8P) 99-9 30-	Frequency	Results	Factor	Limit	Over Limit	2483.5	The state of the s	Height	ANT	2500 Verdict
(E/NBB) 30- 20- 10- 2460	Frequency (MHz) 2483.454	Results (dBuV/m) 48.37	Factor (dB)	Limit (dBuV/m) 54.0		2483.5  Detector			ANT	

Product: WIRELESS M	OUSE Detector	Vertical
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The report refers only to the sample tested and does not apply to the bulk.

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Mode	ŀ	HIGH C	HANNEL		Test Volta	age		DC1.5V	T
Temperature		24 deg. C,		Humidi	ty	56% RH		I	
Test Result:			Pass						
2483.5MHz	PK (dBμV	V/m)		-	Limit		7	4 dBµV/	m/m
2483.5MHz	AV (dBμV	V/m)		_	Limit		5-	4 dBμV/	/m
C_FCC Part 15C Class B 1GH	z-18GHz - 2					'			
			M1						
80-									
70-									
			N <sub>k</sub>						
60-			/	<u> </u>					
50-		Name of the last o		Marine	M2				
50-	and the second s	NO TO SERVICE		& May good and a second a second and a second a second and a second an	M2		د العداد		White and a second
50-	Name of the State	No. of the last of		Marine	M2		and the country parties in the	the state of the s	with the state of
40-	or the same of the			Mariana	M2		and the constitution of the	ist marinistrative constitution of the constit	with the state of
30-	and the second s			Mary	M2		tal de de comment proplem series	tick production which we have been been been been been been been be	order had the state of the stat
30-	A SALANDAR AND			Marine	M2		المنطقة	interest section and the secti	reirikatelerika kanda esterik
30-	er street en de st				2483.5		and the comment people or corbi	interviewie de l'annière de l'a	The state of the s
50 - 40 - 40 - 40 - 40 - 40 - 40 - 40 -	er stranger			Frequency (MHz	2483.5		and the county part or corbi	ind province in the water,	
30 20 10 2460	Results	Factor	Limit	Frequency (MHz	2483.5		Height	ANT	
30 - 20 - 10 - 2460	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)		2483.5			ANT	250

Note: The PK emission level less than the AV limit. No necessary to record the AV emission level.

#### 8.0 Antenna Requirement

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### **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 0dBi Max. It fulfills the requirement of this section.

Test Result: Pass

#### 9.0 20dB Bandwidth Measurement

Date: 2020-06-29



Product:	WIRELESS MO	USE	Test Mode:	Keep tran	smitting	
Mode	Keeping Transmi	Keeping Transmitting Test Voltage DC1.5V			.5V	
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:	Pass		Detector	PF	ζ	
20dB Bandwidth	2.099MHz					
	Delta 1 [T1]	RI	BW 30 kH	Iz RF Att	20 dB	
Ref Lvl	-0.	19 dB VI	3W 100 kH	Iz		
10 dBm	2.099198	40 MHz SV	VT 14 ms	Unit	dBm	
10			$\mathbf{v}_1$	[T1] -25	.05 dBm	
				2.40700		
0			2	[T1] -0	.19 dB	
			$\nabla_2$	2.09919 [T1] -6	840 MHz .35 dBm	
-10	Λ	A A			112 GHz	
		$\backslash \wedge / \backslash \wedge$	\/ \			
-20	1 1	<del>\</del> \ <del>\</del> \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	$\bigvee \bigvee \bigwedge$		125	
1MAX —D1 -26.3	6 dBm				1MA	
-30				<b>\</b>		
-40					My	
-50					<del></del>	
-60						
-70						
-80						
-90						
	40805511 GHz	500 kHz/	<u> </u>	Spa	n 5 MHz	
Date: 22.	JUN.2020 17:28:38					

Product:	WIRELESS MOUSE	Test Mode:	Keep transmitting
Troduct.	WINEEEBB MOOBE	TOST WIGHT.	reep transmitting

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

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Date: 2020-06-29



Mode	Keeping 7	Transmitting	Т	est Voltage		DC	1.5V	
Temperature	24 deg. C, Pass		Humidity			56% RH PK 		
Test Result:				Detector				
20dB Bandwidth	2.10	2.109MHz						
Ref Lvl	Delta 1	[T1] -1.31 dB 10921844 MHz	RBW VBW SWT	30 kH 100 kH 14 ms	z	'Att	20 dB	
0					T1]	-24 2.43900 -1 2.10921	.31 dB	A
-10	<u> </u>			▼ <sub>2</sub>	T1]	- <u>5</u> 2.44056	.99 dBm	
1MAX —D1 -25.	99 dBm	<u> </u>			4	ſ		1MA
-40						\ <u>\</u>		
-60								
-70								
-80								
	.44006513 GHz 2.JUN.2020 17:3	500 i	kHz/			Spa	n 5 MHz	

Product:	WIRELESS MOUSE	Test Mode:	Keep transmitting
----------	----------------	------------	-------------------

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Mode	Keeping Transmitting		Test Voltage	DO	C1.5V
Temperature	24 de	g. C,	Humidity	569	% RH
Test Result:	Pass		Detector		PK
20dB Bandwidth	2.109	MHz			
Ref Lvl	Delta 1 [3	0.96 dB	RBW 30 k: VBW 100 k: SWT 14 m	Hz	20 dB
10 asiii	2.10	7921044 MHZ	ı	S UIIIC	QBIII
0			<b>V</b> 1		2.49 dBm A
-10				[T1] 2.1092: [T1] -	0.96 dB 1844 MHz 3.53 dBm
-20	0		$\mathcal{N}\setminus_{\Lambda}$	2.4745	5112 GHz
1MAY —D1 -25	.53 dBm	<i>)</i>	7		1MA
- 30					
-50				V V V V	W
-60					
-70					
-80					
	2.47406513 GHz 2.JUN.2020 17:35	500 kHz	2./	Spa	an 5 MHz

### 10.0 FCC ID Label

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### FCC ID: 2AK8Q-EWM01862

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:**



# 11.0 Photo of testing

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#### 11.1 Radiated emission test view





# 11.3 Photographs – EUT

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Outside View-





Outside View-

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Outside View-

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#### Inside view-

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Inside view-

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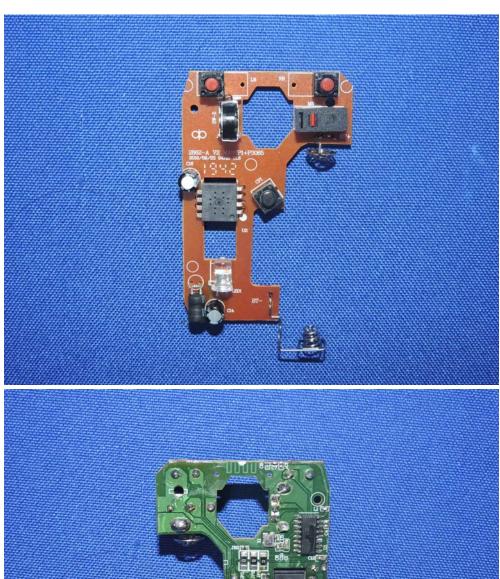
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-- End of the report--

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