

Report No.: TW2208279E

Applicant: Shenzhen Star Sources Electronic Technology Co., Ltd.

Product: Wireless Mouse

Model No.: ST-668, 2IHMS1576

Trademark: IHOME

Test Standards: FCC Part 15.249

Test result:

It is herewith confirmed and found to comply with the

requirements set up by ANSI C63.10 & FCC Part 15 Subpart C,

Paragraph 15.249 regulations for the evaluation of

electromagnetic compatibility

Approved By

Terry Tang

Manager

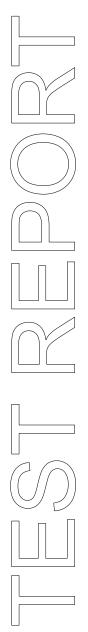
Dated: November 29, 2022

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



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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 17025:2017 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

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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: (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 Star Sources Electronic Technology Co., Ltd.

Address: Room2102, Block 1st, Yi Luan Building, Xixiang Road 230, BaoAn District, Shenzhen, China

Telephone: +86-755-86397260 Fax: +86-755-26609516

## 1.3 Description of EUT

Product: Wireless Mouse

Manufacturer: Shenzhen Star Sources Electronic Technology Co., Ltd.

Address: Room2102, Block 1st, Yi Luan Building, Xixiang Road 230, BaoAn District,

Shenzhen, China

Trademark: IHOME
Model Number: ST-668
Additional Model Name 2IHMS1576

Rating: DC1.5V (1pc AA battery)

Modulation Type: GFSK

Operation Frequency: 2405MHz, 2411MH, 2417MHz, 2451MHz, 2457MHz, 2463MHz, 2469MHz,

2475MHz

Hardware Version: V1.2 Software Version: V5

Serial No.: 16969LW100001

Antenna Designation PCB antenna with gain 1.6dBi Max (Get from the antenna specification)

### 1.4 Submitted Sample: 2 Samples

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#### 1.5 Test Duration

2022-08-16 to 2022-11-29

## 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

The sample tested by

Print Name: Andy Xing

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2.0 Test Equipment					
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date
ESPI Test Receiver	R&S	ESPI 3	100379	2022-07-15	2023-07-14
LISN	R&S	EZH3-Z5	100294	2022-07-18	2023-07-17
LISN	R&S	EZH3-Z5	100253	2022-07-18	2023-07-17
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2022-07-18	2023-07-17
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17
Spectrum	R&S	FSIQ26	100292	2022-07-15	2023-07-14
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2024-07-17
Power meter	Anritsu	ML2487A	6K00003613	2022-07-18	2023-07-17
Power sensor	Anritsu	MA2491A	32263	2022-07-18	2023-07-17
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17
9*6*6 Anechoic			N/A	2022-07-26	2025-07-25
EMI Test Receiver	RS	ESVB	826156/011	2022-07-15	2023-07-14
EMI Test Receiver	RS	ESCS 30	834115/006	2022-07-15	2023-07-14
Spectrum	HP/Agilent	E4407B	MY50441392	2022-07-15	2023-07-14
Spectrum	RS	FSP	1164.4391.38	2022-07-15	2023-07-14
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA		2022-07-15	2023-07-14
RF Cable	Zhengdi	7m		2022-07-15	2023-07-14
Pre-Amplifier	Schwarebeck	BBV9743	#218	2022-07-15	2023-07-14
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2022-07-15	2023-07-14
LISN	SCHAFFNER	NNB42	00012	2022-08-18	2023-07-17

## 2.2 Automation Test Software

## For Conducted Emission Test

Name	Version	
EZ-EMC	Ver.EMC-CON 3A1.1	

## For Radiated Emissions

Name	Version
EMI Test Software BL410-EV18.91	V18.905
EMI Test Software BL410-EV18.806 High Frequency	V18.06

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## 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 15.203	Antenna Requirement	Pass	Complies
FCC Part 15, Paragraph 15.207	Conducted Emission Test	N/A	N/A
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	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

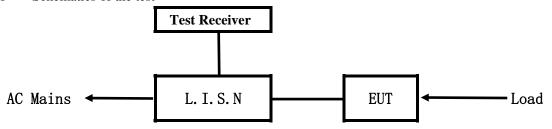
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#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

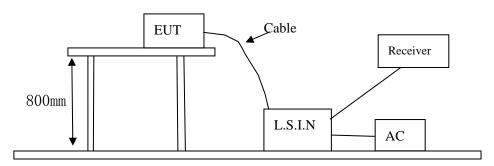


**EUT: Equipment Under Test** 

## 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: 120V~, 60Hz Block diagram of Test setup



## 5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

8 channels are provided to the EUT

#### A. EUT

Device	Manufacturer	Model	FCC ID
Wineless Mouse	Shenzhen Star Sources Electronic	ST-668,	ZJEST-688
Wireless Mouse	Technology Co., Ltd.	hnology Co., Ltd. 2IHMS1576 ZJE	

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#### B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

### C. Peripherals

Device	Manufacturer	Model	Rating
N/A			

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013

- 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 15.207

Frequency	Limits (dB μ V)		
(MHz)	Quasi-peak Level	Average Level	
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*	
$0.50 \sim 5.00$	56.0	46.0	
5.00 ~ 30.00	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

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

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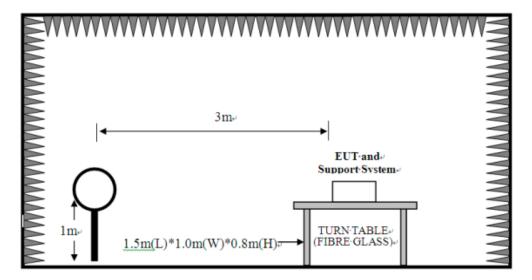


#### **6** Radiated Emission Test

- 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=10MHz, 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**

For radiated emissions from 9kHz to 30MHz

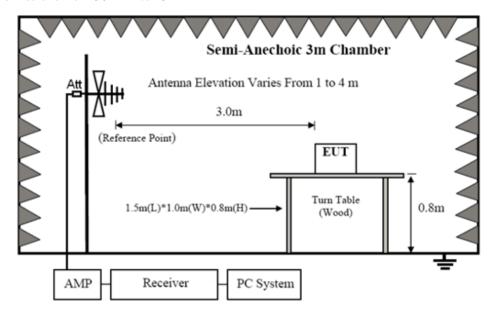


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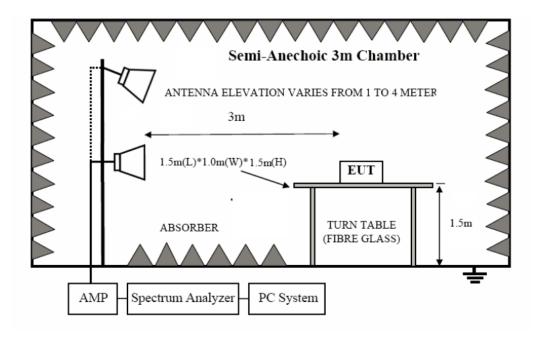
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For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



# 6.2 Configuration of The EUT Same as section 5.3 of this report

## 6.3 EUT Operating Condition

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Same as section 5.4 of this report.

#### 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  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 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 (dB $\mu$ V/m)
0.009-0.490	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-80	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 from 9kHz to 30MHz, the emission level is much less than the limit for more than 20dB. No necessary to take down the record.
- 6. New Battery was used during tests.

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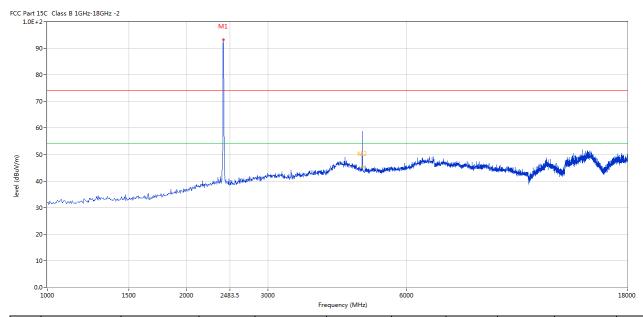


## 6.5 Test result

## A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2405MHz

#### Horizontal



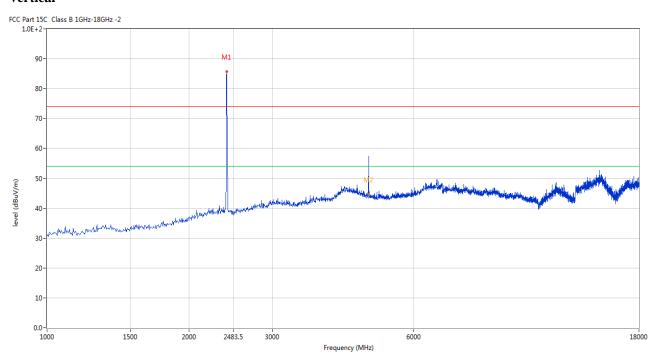
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2405	93.45	-3.57	114.0	-20.55	Peak	138.00	100	Horizontal	Pass
2	4811.297	58.74	3.13	74.0	-15.26	Peak	133.00	100	Horizontal	Pass
2**	4811.297	45.48	3.13	54.0	-8.52	AV	133.00	100	Horizontal	Pass

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## Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2405	85.94	-3.57	114.0	-28.06	Peak	360.00	100	Vertical	Pass
2	4807.048	57.50	3.13	74.0	-16.50	Peak	207.00	100	Vertical	Pass
2**	4807.048	44.38	3.13	54.0	-9.62	AV	207.00	100	Vertical	Pass

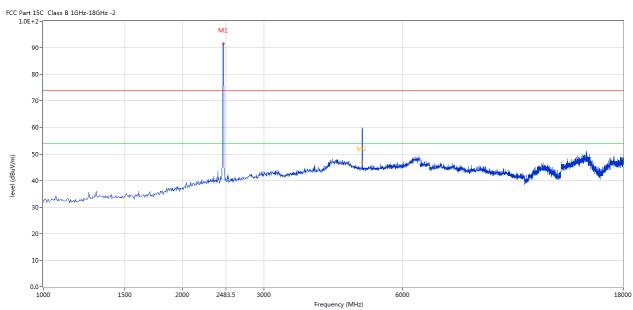
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Please refer to the following test plots for details: Middle Channel-2451MHz

#### **Horizontal**



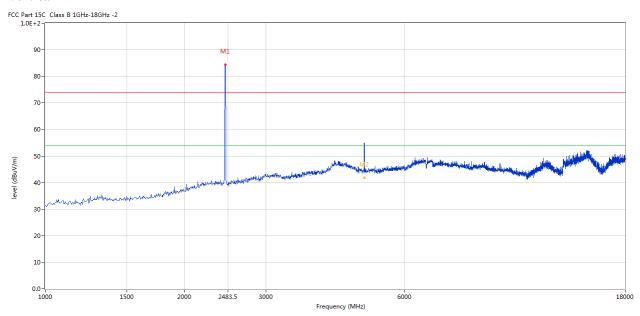
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2451	91.62	-3.57	114.0	-22.38	Peak	86.00	100	Horizontal	Pass
2	4900.525	59.91	3.22	74.0	-14.09	Peak	128.00	100	Horizontal	Pass
2**	4900.525	46.80	3.22	54.0	-7.20	AV	128.00	100	Horizontal	Pass

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## Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2451	84.41	-3.57	114.0	-29.59	Peak	349.00	100	Vertical	Pass
2	4904.774	54.99	3.23	74.0	-19.01	Peak	206.00	100	Vertical	Pass
2**	4904.774	41.72	3.23	54.0	-12.28	AV	206.00	100	Vertical	Pass

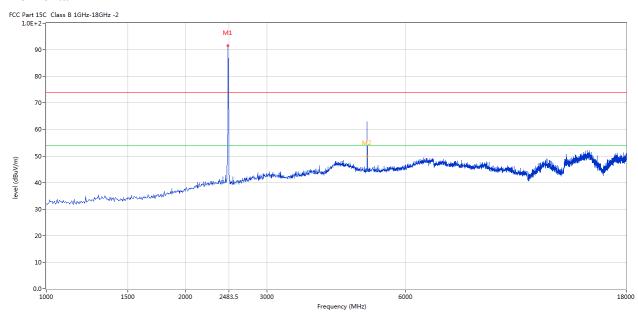
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Please refer to the following test plots for details: High Channel-2475MHz

#### Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2475	91.75	-3.57	114.0	-22.25	Peak	142.00	100	Horizontal	Pass
2	4947.263	62.95	3.33	74.0	-11.05	Peak	132.00	100	Horizontal	Pass
2**	4947.263	49.88	3.33	54.0	-4.12	AV	132.00	100	Horizontal	Pass

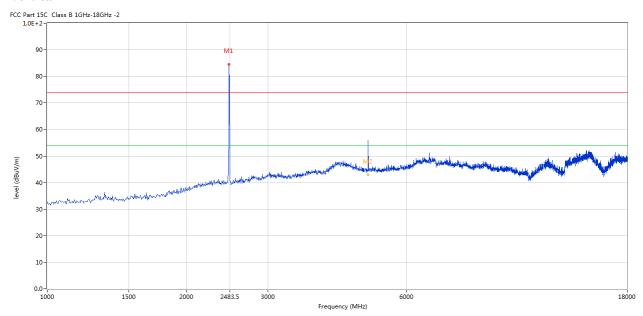
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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2475	85.09	-3.57	114.0	-28.91	Peak	173.00	100	Vertical	Pass
2	4951.512	55.95	3.34	74.0	-18.05	Peak	189.00	100	Vertical	Pass
2**	4951.512	42.93	3.34	54.0	-11.07	AV	189.00	100	Vertical	Pass

Note: (2) Emission Level = Reading Level + Antenna Factor + Cable Loss-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) For emission above 18GHz and Below 30MHz, It is only the floor noise. No necessary to take down.
- (7) the measured PK value less than the AV limit.

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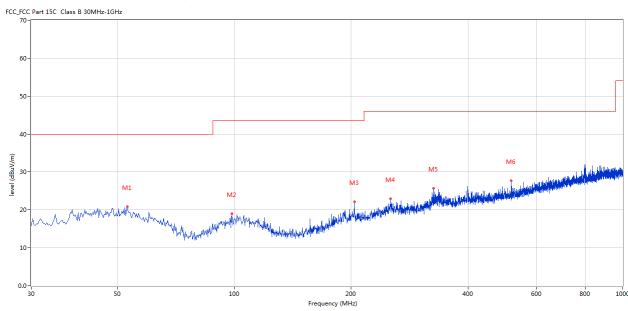


## B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	53.032	20.80	-11.50	40.0	-19.20	Peak	49.00	100	Horizontal	Pass
2	98.610	18.99	-13.70	43.5	-24.51	Peak	67.00	100	Horizontal	Pass
3	203.829	22.17	-13.50	43.5	-21.33	Peak	249.00	100	Horizontal	Pass
4	252.317	22.93	-12.09	46.0	-23.07	Peak	281.00	100	Horizontal	Pass
5	325.534	25.72	-10.37	46.0	-20.28	Peak	337.00	100	Horizontal	Pass
6	516.576	27.72	-6.73	46.0	-18.28	Peak	262.00	100	Horizontal	Pass

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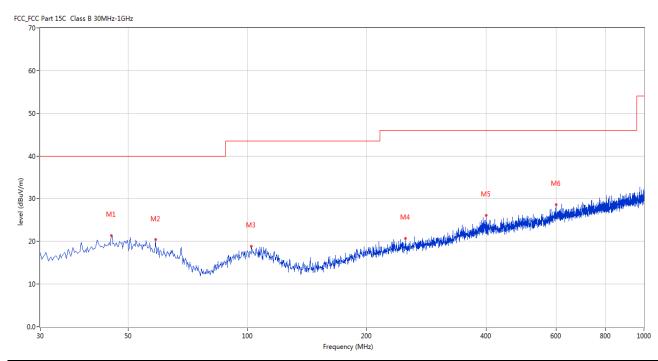


## Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	45.274	21.37	-11.40	40.0	-18.63	Peak	197.00	100	Vertical	Pass
2	58.608	20.38	-12.79	40.0	-19.62	Peak	204.00	100	Vertical	Pass
3	102.247	18.90	-13.42	43.5	-24.60	Peak	260.00	100	Vertical	Pass
4	250.135	20.75	-12.06	46.0	-25.25	Peak	342.00	100	Vertical	Pass
5	399.478	26.10	-8.58	46.0	-19.90	Peak	217.00	100	Vertical	Pass
6	599.733	28.60	-4.98	46.0	-17.40	Peak	210.00	100	Vertical	Pass

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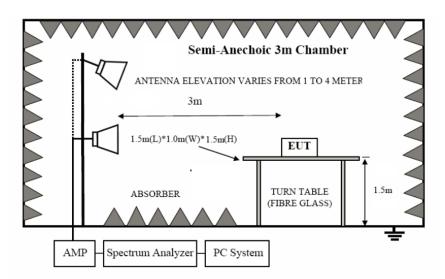


#### 7. Band Edge

#### 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 for PK value. RBW=1MHz, VBW=10Hz and Peak detector used for AV value.
- (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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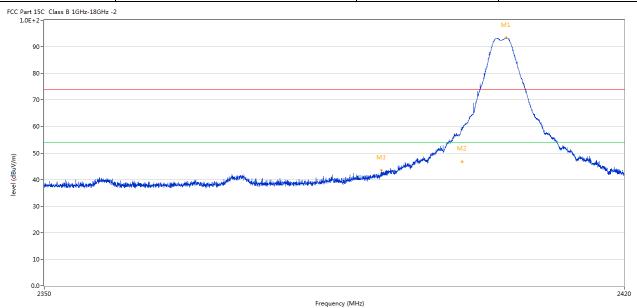
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#### 7.6 Test Result

Product:	Wireless Mouse	Polarity	Horizontal
Mode	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	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2405.584	93.37	-3.57	74.0	19.37	Peak	137.00	100	Horizontal	N/A
2	2400.247	59.74	-3.57	74.0	-14.26	Peak	137.00	100	Horizontal	Pass
2**	2400.247	46.63	-3.57	54.0	-7.37	AV	137.00	100	Horizontal	Pass
3	2390.485	43.41	-3.53	74.0	-30.59	Peak	152.00	100	Horizontal	Pass

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]	Product:		Wireless	Mouse		Detecto	or	7	Vertical	
	Mode	k	Keeping Tra	nsmitting		Test Volt	age	Γ	C1.5V	
Te	mperature		24 deg	g. C,		Humidi	ty	5	6% RH	
Те	est Result:		Pas	S						
Part 1	15C Class B 1GHz-18GHz 2-	-2								
9	10-							M1		
,										
6	60-						M2			
_	50-				M3	فمينشيون وار	M2		Market II	
_	0-	angles sometyn hei kennengan spesier som en sterne general	et-fillensselssmallensbeholmelesse	a hann stand of the latest and a factor	M3	e to richte de	M2		Maria Ma	e i beldengage
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5	10 -	taifi), aastipsk disperadiosijs is aanti-rainislasis	indiğinin dili meşke ilmişi kalı dişinin il	ahanista kalendaria	M3	المتعادل المتعادلة ا	M2	Jung.	The hand have been been been been been been been be	er Meldenson
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5 4 3 2	10	tangka, samusiya da din garapan da siri samusi na maga ka sa	tichlikus allam alka Andria Andrias a	a hamming in the best of and a few	M3	nanifetatik depirarka	M2		The was the work and the	a defensi.
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5 4 3 2 1	0	Results	Factor	Fre Limit	या कर होते. महाने कर होती है	Detector	M2		ANT	2420
5 4 3 2 1	10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -				quency (MHz)	Detector		Height (cm)		2420
5 4 3 2 1	0	Results	Factor	Limit	quency (MHz)  Over Limit	Detector Peak	Table	Height		2420
5 4 3 2 1 0.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	quency (MHz)  Over Limit (dB)		Table (o)	Height (cm)	ANT	2420 Verdi

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	Product:		Wire	eless Mouse			Polarit	y	Horizon	tal
	Mode		Keepin	g Transmittir	ıg	,	Test Volta	age	DC1.5	V
Te	emperature		2	4 deg. C,			Humidi	ty	56% R	Н
Te	est Result:			Pass						
CC Part	15C Class B 1GHz-18GHz	: -2								
,	90-			M1						
3	90-									
8	80-		<i>y</i>							
-	70-			$\overline{}$						
(	50-									
<u> </u>	50-	The same of the sa	<b>√</b>		- Sandard Contraction of the Con	A2				
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level (dBuV/m)	40 -								the state of the s	est brookly au
	30 -								of the second	and the second
\$									afficiency and a second se	and the second
3	30-							The Control of the Co		and the second s
2	20-								ofference and by which arrange any par	
; ;	20-				24 Frequency (MHz)	183.5			Afterior and by children and consistently particles	2500
2	20-	Results	Factor	Limit			Table	Height	ANT	2500
1	20 - 10 - 2460		Factor (dB)		Frequency (MHz)	83.5				2500
1	20- 10- 2460 Frequency	Results		Limit	Over Limit	83.5	Table	Height		

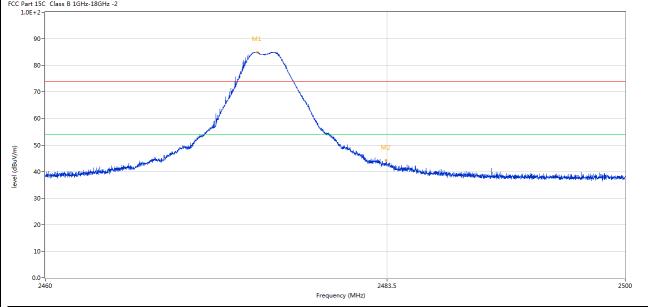
Note: 1. The PK emission level less than the AV limit. No necessary to record the AV emission level.

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Product:	Wireless Mouse	Detector	Vertical					
Mode	Keeping Transmitting	Test Voltage	DC1.5V					
Temperature	24 deg. C,	Humidity	56% RH					
Test Result:	Pass							
FCC Part 15C Class B 1GHz-18GHz -2 1.0E+2-r								



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2474.526	85.02	-3.57	74.0	11.02	Peak	179.00	100	Vertical	N/A
2	2483.434	44.23	-3.57	74.0	-29.77	Peak	179.00	100	Vertical	Pass

Note: 1. The PK emission level less than the AV limit. No necessary to record the AV emission level.

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## 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 1.6dBi Max. It fulfills the requirement of this section. Test Result: Pass

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Product:		Wireless Mouse			Test Mode:		Keep transmitting			
Mode										
Temperature	perature 24 deg. C,			Humidity		56% RH				
Test Result:					Detector			PK		
dB Bandwidth				-						
<u>`</u>	Marker 1 [T1 ndB]			RI	ЗW	100 k	Hz Rl	F Att	20 dB	
Ref Lvl	ndB	20.	00 dB	VI	ВW	300 k	Hz			
10 dBm	BW	2.715430	086 MHz	SV	$T^{V}$	5 m	s Uı	nit	dBm	ı
10						lacksquare1	[T1]	-3	3.99 dBm	
								2.40558	8617 GHz	I
0						1 ndH	3	20	0.00 dB	
		- Marie 1	Lower	MUL		MM BW		2.71543		
-10	_	and the				W.T.	[T1]	2.40369	3.43 dBm	
		المو				$ abla_{\mathrm{T}2}$	2 [701]	-24	1.06 dBm	
-20	T						Ţ2	2.40640	782 GHz	
1MAX	u N						<b>V</b>	المسمم	M	11
-30	VIII							V.	W.	
-40										
5.0										
-50										
-60										
-70										
-80										
-90	F 933							_	<u> </u>	J
Center 2.40	o GHZ		500 k	ΠZ/				Spa	an 5 MHz	

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Product: Wireless Mouse			Т	est Mode:	Keep transmitting		
Mode	Keeping Transmitting			est Voltage	De	C1.5V	
Temperature	24 deg. C,			Humidity	56% RH		
Test Result:	Pass Detector F			PK			
20dB Bandwidth	2.685MHz						
Dof I	Marker 1 [T1 ndB]  Ref Lvl ndB 20.00 dB  10 dBm BW 2.68537074 MHz		RBW	100 kH		20 dB	
10 dBm			VBW SWT	300 kH 5 ms	z Unit	dBm	
10				<b>▼</b> 1 [	m1.1	2 21 40-	
					T1] - 2.4516	2.71 dBm 7635 GHz	
0		1.1		ndB	2	0.00 dB	
	100 mm/m/m	hhm	mmy	₩ ₩	2.6853		
-10				V TV	[T1] -2	3.07 dBm 0240 GHz	
				$oldsymbol{ abla}_{\mathrm{T}2}$	[T1] -2	0240 GHz 1.89 dBm	
-20	When y				2.4523	8778 GHz	
-30	a samuel				Yuri '	White the same of	
-30						V	
-40							
-50							
-60							
-70							
-80							
-90							
Center 2.4	451 GHz	500 kF	Hz/		Sp	an 5 MHz	
Date: 25.2	AUG.2022 11:25:11						

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Product: Wireless Mouse		Test Mode:	Keep tra	nsmitting	
Mode	Mode Keeping Transmitting			DC	1.5V
Temperature 24 deg. C,		g. C,	Humidity	569	6 RH
Test Result: Pa		SS	Detector	I	PK
20dB Bandwidth	20dB Bandwidth 2.695				
r r	Marker 1 [	T1 ndB]	RBW 100 kH	Iz RF Att	20 dB
Ref Lvl	ndB	20.00 dB	VBW 300 kH		
10 dBm	BW 2.69	539078 MHz	SWT 5 ms	unit Unit	dBm
10			<b>v</b> <sub>1</sub>	[T1] -2	.91 dBm
				2.47448	397 GHz
0		wia .	ndB	20	.00 dB
	1	many man	Mm BW	2.69539	078 MHz
-10	· March			[T1] -24 2.47369	.43 dBm 238 GHz
	W/W		$\triangledown_{\mathrm{T2}}$	[TM] -22	.45 dBm
-20	T			72 2.47638	778 GHz
1MAX	whom   P			mm	1MA
-30	<u> </u>				W.
\frac{1}{2}					Y
-40					
-50					
-60					
-70					
_ / 0					
-80					
-90 Center 2	.475 GHz	500 kHz	z /	<u> </u>	n 5 MHz
	5.AUG.2022 11:24			25	
Date: 25	0.AUG.ZUZZ 11:Z4	• ວວ			

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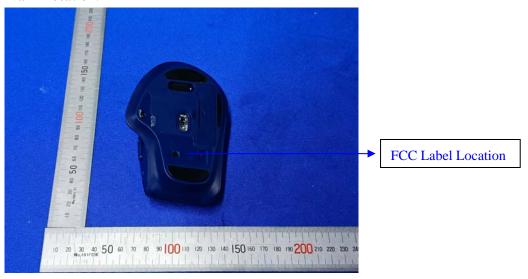


#### 10.0 FCC ID Label

#### FCC ID: ZJEST-688

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:**



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11.0 Photo of testing

11.1 Conducted test View-- N/A

Radiated emission test view



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## 11.2 Photographs – EUT

Outside View- Mouse



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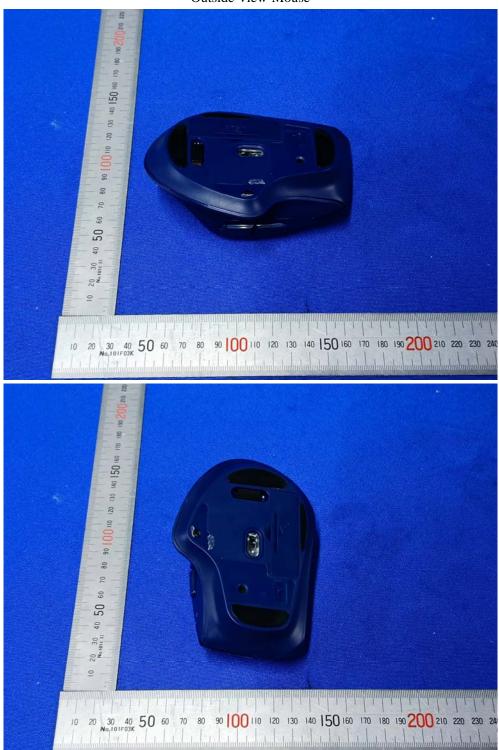
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Outside View-Mouse



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#### Outside View-Mouse



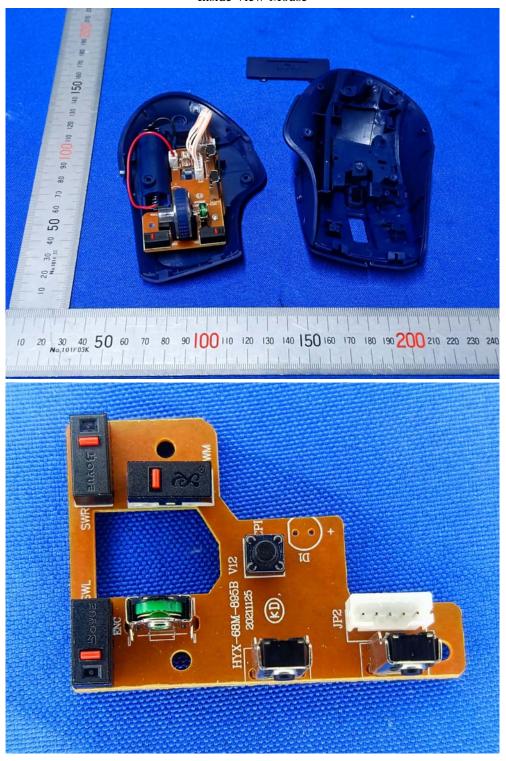
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Inside View-Mouse



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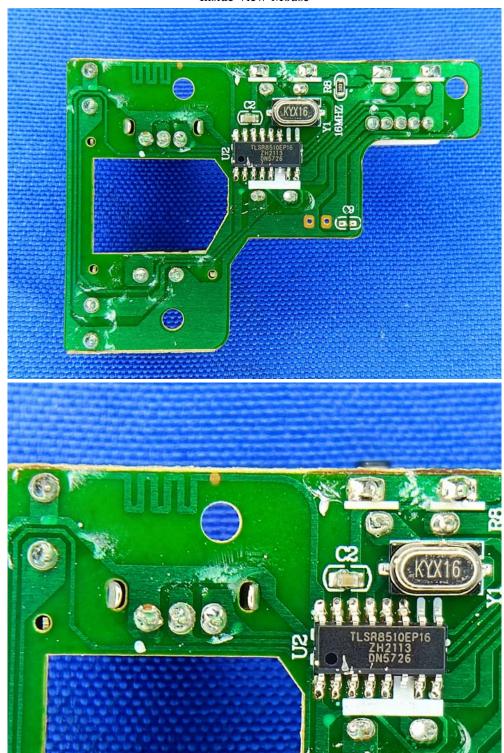
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Inside View-Mouse



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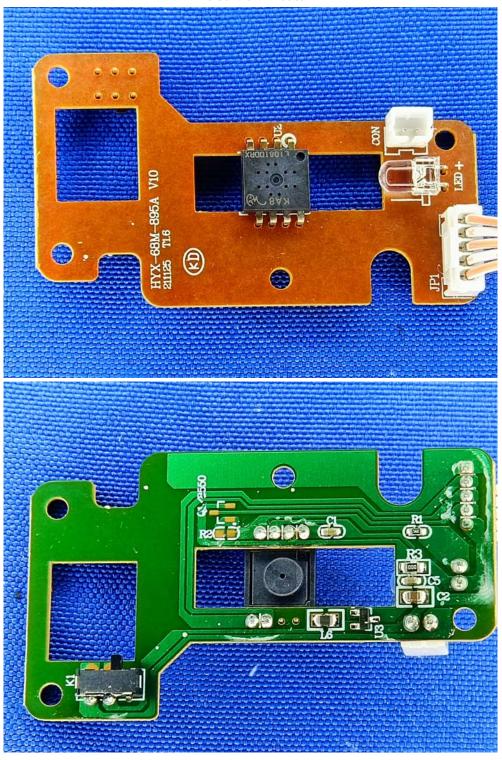
adopt any other remedies which may be appropriate.

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Inside View-Mouse



--- End of the Report--

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