

Report No.: TW2205245E

File reference No.: 2022-06-10

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

Product: 2.4G wireless Mouse

Model No.: MW-063, ST-045, 2IHMS1424B1G7, 2IHMS1424F1G7,

2IHMS1424P1G7, 2IHMS1424S1G7, 2IHMS1457B1G7,

ST-XYZ (X=0~9, Y=0~9, Z=0~9)

Trademark: N/A

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: June 10, 2022

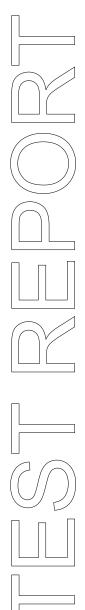
Results appearing herein relate only to the sample tested

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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Test Report Conclusion

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

11.0

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Photo of Test Setup and EUT View.

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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: 2.4G 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: N/A

Model Number: MW-063

Additional Model Name ST-045, 2IHMS1424B1G7, 2IHMS1424F1G7, 2IHMS1424P1G7,

2IHMS1424S1G7, 2IHMS1457B1G7, ST-XYZ (X=0~9, Y=0~9, Z=0~9)

Rating: DC3.0V, 2pc 1.5V AAA battery

Modulation Type: GFSK

Operation Frequency: 2402-2480MHz

Channel Number: 40
Channel Separation: 2MHz
Hardware Version: VER1.0
Software Version: V68

Serial No.: 16432LW100001

Antenna Designation PCB antenna with gain -1.52dBi Max (Get from the antenna specification)

1.4 Submitted Sample: 1 Sample

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1.5 Test Duration

2022-05-20 to 2022-06-10

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	2.0 Test Equipment									
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date					
ESPI Test Receiver	R&S	ESPI 3	100379	2021-06-18	2022-06-17					
LISN	LISN R&S		100294	2021-06-18	2022-06-17					
LISN	R&S	EZH3-Z5	100253	2021-06-18	2022-06-17					
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2021-06-18	2022-06-17					
Loop Antenna	EMCO	6507	00078608	2021-06-18	2024-06-17					
Spectrum	R&S	FSIQ26	100292	2021-06-18	2022-06-17					
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2021-07-02	2024-07-01					
Horn Antenna	R&S	BBHA 9120D	9120D-631	2021-07-02	2024-07-01					
Power meter	Anritsu	ML2487A	6K00003613	2021-06-18	2022-06-17					
Power sensor	Anritsu	MA2491A	32263	2021-06-18	2022-06-17					
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2021-07-02	2024-07-01					
9*6*6 Anechoic			N/A	2021-07-02	2022-07-01					
EMI Test Receiver	RS	ESVB	826156/011	2021-06-18	2022-06-17					
EMI Test Receiver	RS	ESH3	860904/006	2021-06-18	2022-06-17					
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2021-06-18	2022-06-17					
Spectrum	HP/Agilent	E4407B	MY50441392	2021-06-18	2022-06-17					
Spectrum	RS	FSP	1164.4391.38	2022-01-15	2023-01-14					
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA		2021-06-18	2022-06-17					
RF Cable	Zhengdi	7m		2021-06-18	2022-06-17					
RF Switch	EM	EMSW18	060391	2021-06-18	2022-06-17					
Pre-Amplifier	Schwarebeck	BBV9743	#218	2021-06-18	2022-06-17					
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2021-06-18	2022-06-17					
LISN SCHAFFNER NNB42		NNB42	00012	2022-01-05	2023-01-04					

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

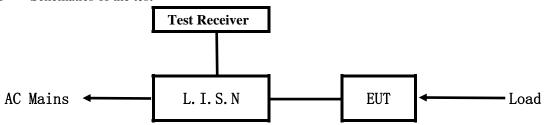
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5. Power Line Conducted Emission Test

5.1 Schematics of the test

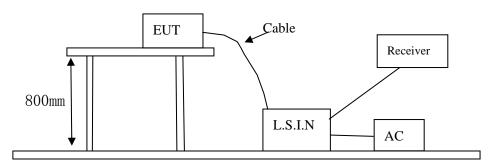


EUT: Equipment Under Test

5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.4-2014. The Frequency spectrum From 0.15MHz to 30MHz was investigated. The LISN used was 500hm/50uH as specified by section 5.1 of ANSI C63.4 -2014.

Test Voltage: 120V~, 60Hz 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.

16 channels are provided to the EUT

A. EUT

Device	Manufacturer	Model	FCC ID
		MW-063, ST-045, 2IHMS1424B1G7,	
2.4G wireless	Shenzhen Star Sources Electronic	2IHMS1424F1G7, 2IHMS1424P1G7,	71ECT 0.62
Mouse	Technology Co., Ltd.	2IHMS1424S1G7, 2IHMS1457B1G7,	ZJEST-063
		ST-XYZ (X=0~9, Y=0~9, Z=0~9)	

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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 C63.4 -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 15.207

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 2 pcs AAA batteries, this test item not applicable.

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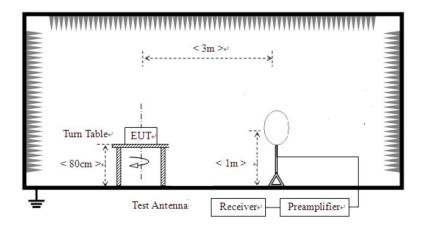


6 Radiated Emission Test

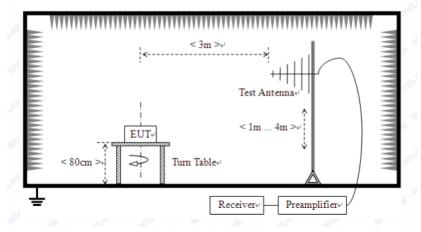
- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size 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=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

For radiated emissions from 9kHz to 30MHz



For radiated emissions from 30MHz to1GHz



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

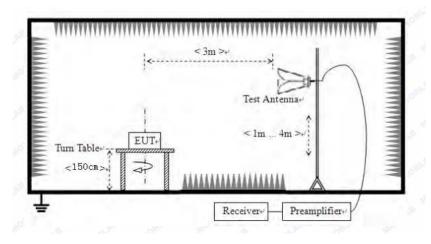
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For radiated emissions above 1GHz



- 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.
- 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	ength of Fundame	ntal (3m)	Field Strength of Harmonics (3m)			
(MHz)	mV/m	mV/m dBuV/m		uV/m	dBuV/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.

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

Frequency Range (MHz)	Distance (m)	Field strength (dB µ 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 60	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. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.
- 5. 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.
- 6. 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.
- 7. New battery was used during tests.

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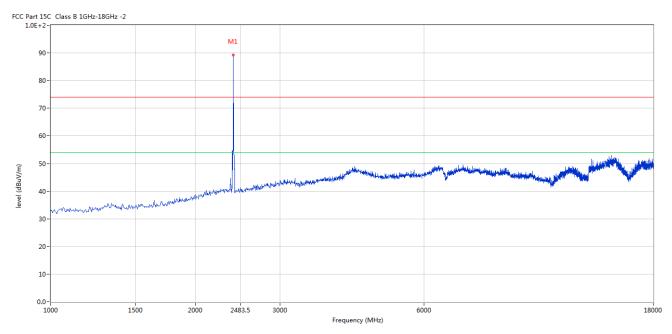


6.5 Test result

A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2402MHz

Horizontal



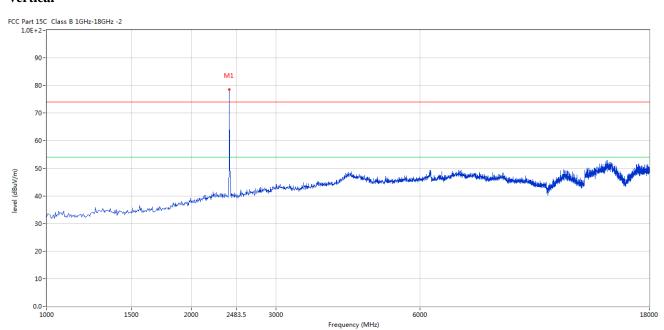
No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2402	90.68	-3.57	114.0	-23.32	Peak	64.00	100	Horizontal	Pass

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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	2402	78.89	-3.57	114.0	-35.11	Peak	157.00	100	Vertical	Pass

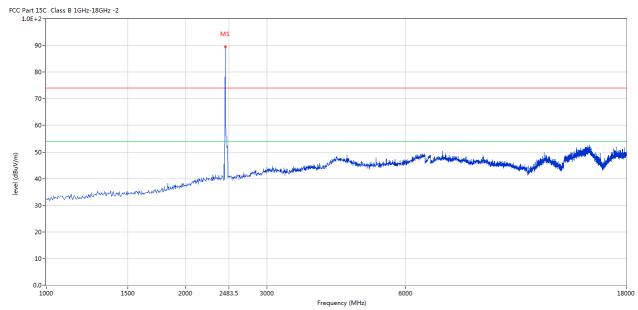
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Please refer to the following test plots for details: Middle Channel-2440MHz

Horizontal



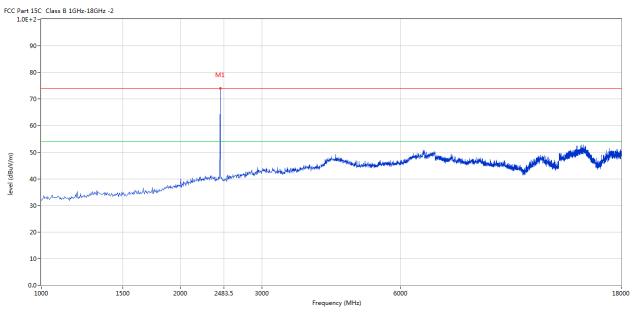
Ī	No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
	1	2440	89.46	-3.57	114.0	-24.54	Peak	38.00	100	Horizontal	Pass

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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	2440	74.06	-3.57	114.0	-39.94	Peak	213.00	100	Vertical	Pass

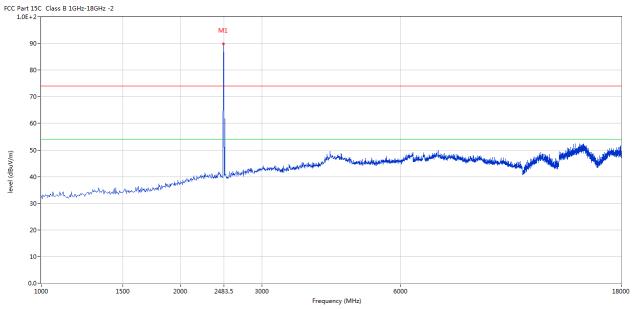
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Please refer to the following test plots for details: High Channel-2480MHz

Horizontal



Ī	No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
	1	2480	89.87	-3.57	114.0	-24.13	Peak	239.00	100	Horizontal	Pass

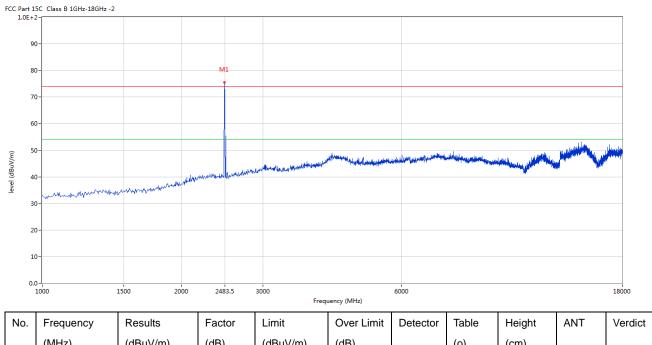
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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	75.53	-3.57	114.0	-38.47	Peak	280.00	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
- (5) For emission above 18GHz and Below 30MHz, It is only the floor noise. No necessary to take down.
- (6) the measured PK value less than the AV limit.

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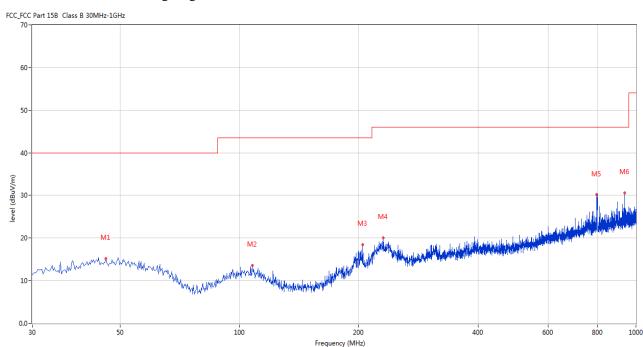


B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	46.001	15.17	-11.40	40.0	-24.83	Peak	314.00	100	Horizontal	Pass
2	107.823	13.59	-13.41	43.5	-29.91	Peak	216.00	100	Horizontal	Pass
3	204.556	18.42	-13.55	43.5	-25.08	Peak	246.00	100	Horizontal	Pass
4	230.012	19.99	-12.67	46.0	-26.01	Peak	284.00	100	Horizontal	Pass
5	796.593	30.21	-3.07	46.0	-15.79	Peak	305.00	100	Horizontal	Pass
6	938.178	30.64	-1.78	46.0	-15.36	Peak	37.00	100	Horizontal	Pass

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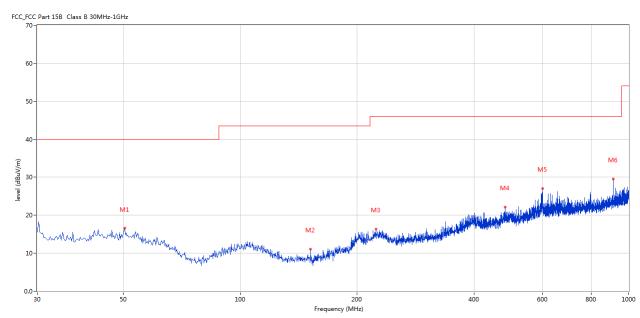


Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	50.365	16.55	-11.39	40.0	-23.45	Peak	314.00	100	Vertical	Pass
2	151.705	11.11	-16.94	43.5	-32.39	Peak	288.00	100	Vertical	Pass
3	223.709	16.38	-13.11	46.0	-29.62	Peak	64.00	100	Vertical	Pass
4	480.210	22.20	-7.38	46.0	-23.80	Peak	360.00	100	Vertical	Pass
5	599.733	26.99	-4.98	46.0	-19.01	Peak	235.00	100	Vertical	Pass
6	911.510	29.51	-1.79	46.0	-16.49	Peak	346.00	100	Vertical	Pass

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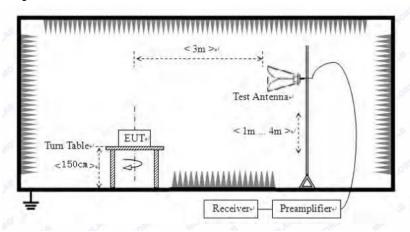


7. Band Edge

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.

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

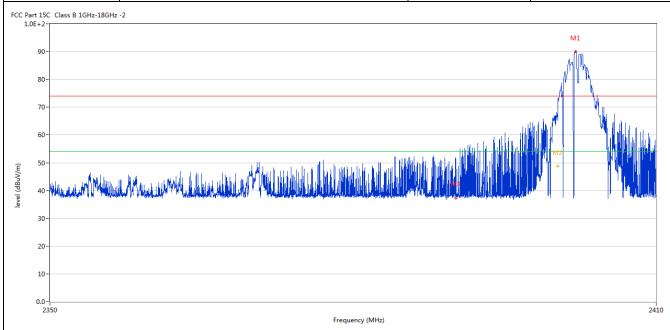
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7.6 Test Result

Product:	2.4G wireless Mouse	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC3.0V
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	2401.932	89.99	-3.57	74.0	15.99	Peak	199.00	100	Horizontal	N/A
2	2400.147	65.09	-3.57	74.0	-8.91	Peak	284.00	100	Horizontal	Pass
2**	2400.147	48.80	-3.57	54.0	-5.20	AV	284.00	100	Horizontal	Pass
3	2389.995	37.38	-3.53	74.0	-36.62	Peak	82.00	100	Horizontal	Pass

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,										
	Product:		2.4G w	ireless Mouse	e		Detector		Vertica	ıl
	Mode		Keeping	Transmitting	g 5	Т	est Voltag	ge	DC3.0	V
Te	Mode emperature est Result: 15C Class B 1GHz-18GHz -2 +2		24	deg. C,			Humidity	56% I		Н
Те	emperature Pest Result: 115C Class B 1GHz-18GHz -2 127 127 130 130 130 130 130 130 130 13			Pass						
CC Part 1	st Result: 5C Class B 1GHz-18GHz -2				'		'			
1.02+										
9	00-									
8	60-							M1		
7	70-							///	1	
6	60 -							.	N _M	
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E 5	60-				. 1	a a leas	a sa Ulubahi		Man .	lata.
(m//wab) level	O-	فاخيسيه بنبار أفادة أدفيه بيدن البناس بالماداولي	وعاربها ورسعت سائد سيهي فالأوأ	ويتناه فالمهاد ويتوام أيبا	بالمامليان بمحساب				THU	
	0-									
2	0-									
	0-									
1										2410
0.	0-				quency (MHz)					1
1	.0-	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Г
0.	0-	Results (dBuV/m)	Factor (dB)			Detector	Table (o)	Height (cm)	ANT	verdic
0.	Prequency			Limit	Over Limit	Detector Peak		_	ANT Vertical	1
0. No.	Frequency (MHz)	(dBuV/m)	(dB)	Limit (dBuV/m)	Over Limit (dB)		(0)	(cm)		Verdic
0. No.	Frequency (MHz) 2402.157	(dBuV/m) 78.54	(dB) -3.57	Limit (dBuV/m) 74.0	Over Limit (dB) 4.54	Peak	(o) 197.00	(cm)	Vertical	Verdic

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Product:		2.4G w	rireless Mous	e		Polarity	/	Horizon	tal
Mode		Keepin	g Transmittin	g	r	Test Volta	ige	DC3.0	V
Temperature		24	4 deg. C,			Humidit	У	56% RH	
Test Result:			Pass						
CC Part 15C Class B 1GHz-18GHz - 1.0E+2-	2								
90-									
80-		. M. J.	Man .						
			IIIA						
70-									
60-				dudu a co.	H n.				
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50-			M2						
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40 - 30 - 20 -									
30-									
40 - 30 - 20 -			2483.5						2500
40 - 30 - 20 - 10 - 0.0 - 2470	Passita	Factor	F	requency (MHz)	Datasta	Toble	l loicht	LANT	ı
40 - 30 - 20 - 10 - 2470 No. Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	ı
40 - 30 - 20 - 10 - 2470 No. Frequency (MHz)	(dBuV/m)	(dB)	Limit (dBuV/m)	Over Limit (dB)		(o)	(cm)		Verd
30- 20- 10- 2470 No. Frequency			Limit	Over Limit	Detector Peak Peak		_	ANT Horizontal Horizontal	z500 Verd N/A Pass

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I	Product:		2.4G v	wireless Mou	se		Detecto	r	Vertica	al
	Mode		Keepir	ng Transmitti	ng	-	Test Volta	ige		
Te	mperature		2	24 deg. C,			Humidit	у	56% R	Н
Te	est Result:			Pass						
C Part 1 1.0E+	.5C Class B 1GHz-18GHz	-2								
91	0-									
80	0-		M1							
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30	o-					distribution of the second	, detallist to the second	rither a short and a	ala ang kanala ang kan	Market Supp
30	o			2483.5	equency (MHz)	dillialis dilla	a delichter des personel	hildred staffense des filosophe austibe	ishandan karibadi dahi	2500
5(4) 4(4) 3(1) 2(4) 1(4)	o-	Results	Factor	2483.5		Detector	Table	Height	ANT	ı
5(4) 4(4) 3(1) 2(4) 1(4)	0-0-0-0-0-2470	Results (dBuV/m)	Factor (dB)	2483.5 Fre	equency (MHz)				ANT	ı
30	o			2483.5 Fre	equency (MHz) Over Limit		Table	Height	ANT Vertical	2500 Verdic

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 -1.52dBi Max. It fulfills the requirement of this section. Test Result: Pass

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Product:		2.4G wirele	ss Mouse			Test	Mode:	Keep	transmitt	ing
Mode	,	Keeping Tra	nsmitting			Test '	Voltage		DC3.0V	
Temperature		24 deg	g. C,			Hur	nidity	:	56% RH	
Test Result:		Pas	S			Det	ector		PK	
OdB Bandwidth		2.174N	ИНz							
>	Marke	r 1 [T1 r	ndB]	RBW	10	00 kH	z R	F Att	20 dB	
Ref Lvl	ndB	20.	00 dB	VBW	30	00 kH	z			
10 dBm	BW	2.174348	370 MHz	SWT		5 ms	U	nit	dBr	m
10						lacksquare1	[T1]		7.26 dBr	n Z
								2.40206	513 GH2	
0						ndB		20	0.00 dB	
			رب	<u></u>		$oldsymbol{f v}_{ m T1}$	[T1]	2.17434	870 MH2 7.69 dBr	3
-10						V 11	[TI]	2.40093	3287 GH ₂	
			همس	\sim		∇_{T2}	[T1]	-2"		
-20		^ ^(<u></u>	~ ~		2.40310	721 GH2	3
1MAX	J.						F2 V			11
-30										
-40	~~~ ^M							Jan Marie Ma	w	
5.0									~~	
-50										
-60										
-70										1
-80										1
-90										
Center 2.40	∠ GHZ		500	kHz/				Spa	an 5 MH2	Z

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Product:	2.4G wireless N	Mouse	Test Mode:	Keep transmitting	
Mode	Keeping Transmitting			DC3.0V	
Temperature	24 deg. C,		Humidity	56% RH	
Test Result:	Pass		Detector	PK	
20dB Bandwidth	2.164MHz				
Marker 1 [T1 ndB] RBW			100 kHz RI	7 Att 20 dB	
Ref Lvl	ndB 20.0	0 dB VBW	300 kHz		
10 dBm	BW 2.1643286	6 MHz SWT	5 ms Ur	nit dBm	
10			▼ ₁ [T1]	-6.88 dBm	
				2.44002505 GHz	
0			ndB	20.00 dB	
		<u> </u>	BW	2.16432866 MHz	
-10			▼ _{T1 [T1]}	-26.65 dBm	
		1	lacksquare	2.43894289 GHz	
-20			12 [11]	-26.76 dBm 2.44110721 GHz	
1MAX	T/		T2	1MA	
-30	/		, ,		
			7		
-40	, m		1		
-40				The same of the sa	
				· m	
-50					
-60					
-70					
-80					
-90					
Center 2.44 G	Hz	500 kHz/		Span 5 MHz	
Date: 8.JUN.:	2022 15:36:19				

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Product:	2.4G wireless Mouse			Test Mode:	Keep transmitti	ng	
Mode	Keeping Transmitting			Test Voltage	DC3.0V		
Temperature	24 deg. C,			Humidity			
Test Result:	Pass			Detector PK			
20dB Bandwidth	2.184MHz						
Marker 1 [T1 ndB] RBW		RBW	100 kHz RE	F Att 20 dB			
Ref Lvl	ndB	20.00 dB	VBW	300 kHz			
10 dBm	BW 2.18436874 MHz SWT			5 ms Unit dBm			
10				▼ 1 [T1]	-7.01 dBm	А	
					2.48003 <mark>507 GHz</mark>	A	
0			1	ndB	20.00 dB		
				BW ▼T1 [T1]	2.18436874 MHz		
-10		7	<u>~</u>	VT1 [T1]	-27.11 dBm 2.47893287 GHz		
				▼ _{T2} [T1]	-26.94 dBm		
-20				m	2.48111 ⁷²³ GHz		
1MAX	T.			F2		1MA	
-30							
-40	Van 1				Van		
-50							
-60							
-70							
-80							
-90							
Center 2.48 GHz 500 kHz/ Span 5 MHz							
Date: 8.JUN.2022 15:48:12							

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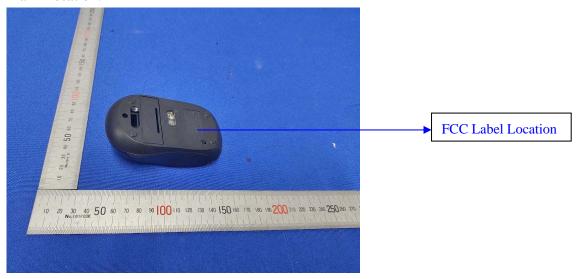


10.0 FCC ID Label

FCC ID: ZJEST-063

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





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

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11.2 Photographs – EUT

Outside View



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Outside View





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Outside View



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Outside View



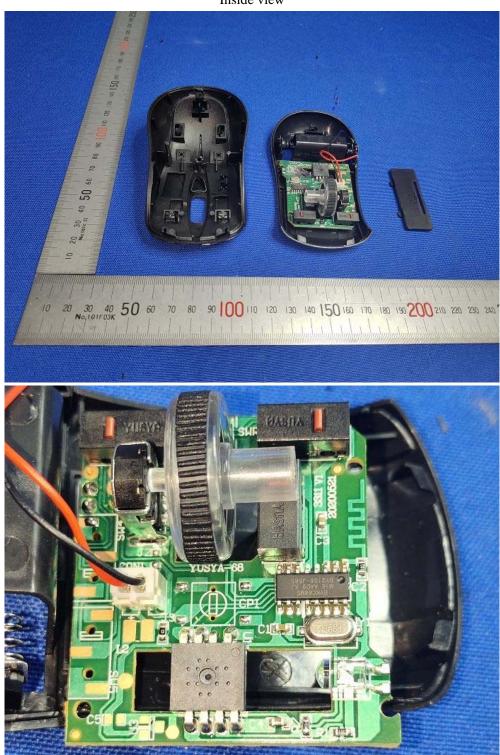
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Inside view



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Inside view



-- End of the report--