

Report No.: TW2305116E

Applicant: Shenzhen SQT Electronics Co.,Ltd

Product: Wireless Mouse

Model No.: SMK-676683M6AG, I 豆 MAX, I 豆, Sweet,

SMK-676683M5AG, SMK-676683M3AG, SMK-676M6AG,

SMK-676M5AG, SMK-676M3AG, SMK-676612AG, SMK-676367AG, SMK-676M2AG, SMK-676386AG,

Ambrane KeyPop, KeyPop, KeyWave, KeyMice, AWKM-01, AWKM-02, AWKM-03, AWKM-04, AWKM-05, AWKM-06,

AWKM-07

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: May 19, 2023

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.: TW2305116E Page 2 of 37

Date: 2023-05-19



### **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

CAB identifier: CN0033

Report No.: TW2305116E

Date: 2023-05-19



## Test Report Conclusion

#### Content

1.0	General Details	4
1.1	Test Lab Details	4
1.2	Applicant Details	4
1.3	Description of EUT	4
1.4	Submitted Sample	4
1.5	Test Duration.	5
1.6	Test Uncertainty	5
1.7	Test By	5
2.0	List of Measurement Equipment	6
3.0	Technical Details	7
3.1	Summary of Test Results	7
3.2	Test Standards	7
4.0	EUT Modification	7
5.0	Power Line Conducted Emission Test.	8
5.1	Schematics of the Test	8
5.2	Test Method and Test Procedure	8
5.3	Configuration of the EUT	8
5.4	EUT Operating Condition.	9
5.5	Conducted Emission Limit.	9
5.6	Test Result.	9
6.0	Radiated Emission test	10
5.1	Test Method and Test Procedure.	10
6.2	Configuration of the EUT	11
6.3	EUT Operation Condition.	11
6.4	Radiated Emission Limit.	11
6.5	Test Result.	13
7.0	Band Edge	21
7.1	Test Method and Test Procedure.	21
7.2	Radiated Test Setup.	21
7.3	Configuration of the EUT	21
7.4	EUT Operating Condition.	21
7.5	Band Edge Limit.	21
7.6	Band Edge Test Result.	22
8.0	Antenna Requirement.	26
9.0	20dB bandwidth measurement.	27
10.0	FCC ID Label	30
11.0	Photo of Test Setup and EUT View.	31

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Date: 2023-05-19



#### 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 SQT Electronics Co.,Ltd

Address: ZhengChengFeng TechnologyZone Xinsha Road,ShaYi Village, Sha jing Town, Baoan Area,

Shenzhen, China

Telephone: 0755-27568078 Fax: 0755-27568223

#### 1.3 Description of EUT

Product: Wireless Mouse

Manufacturer: Shenzhen SOT Electronics Co.,Ltd

Address: ZhengChengFeng TechnologyZone Xinsha Road,ShaYi Village, Sha jing

Town, Baoan Area, Shenzhen, China

Trademark: N/A

Model Number: SMK-676683M6AG

Additional Model Name I 豆 MAX, I 豆, Sweet, SMK-676683M5AG, SMK-676683M3AG,

SMK-676M6AG, SMK-676M5AG, SMK-676M3AG, SMK-676612AG, SMK-676367AG, SMK-676M2AG, SMK-676386AG, Ambrane KeyPop,

KeyPop, KeyWave, KeyMice, AWKM-01, AWKM-02, AWKM-03,

AWKM-04, AWKM-05, AWKM-06, AWKM-07

Rating: Input: DC3.0V, 10mA Battery: 2pcs AAA batteries

Modulation Type: GFSK

Operation Frequency: 2408-2474MHz

Channel Number: 34
Channel Separation: 2MHz
Hardware Version: VER:00

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: TW2305116E Page 5 of 37

Date: 2023-05-19

TING LASO RATIO RESIDENCE OF THE PART OF T

Software Version: VER:00

Serial No.: HTSMK676683M6230300024

Antenna Designation PCB antenna with gain -0.61dBi Max (Get from the antenna specification)

1.4 Submitted Sample: 1 Sample

1.5 Test Duration

2023-05-11 to 2023-05-19

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

Page 6 of 37

Report No.: TW2305116E

Date: 2023-05-19



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	1	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
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

#### 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

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: TW2305116E Page 7 of 37

Date: 2023-05-19



#### 3.0 Technical Details

#### 3.1 Summary of test results

The EUT has	been tested	l 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

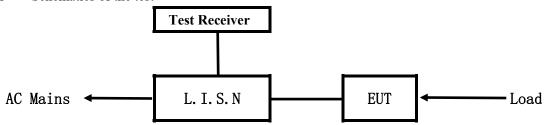
Report No.: TW2305116E

Date: 2023-05-19



#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test



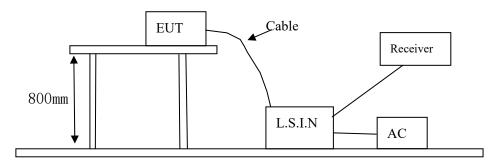
**EUT: Equipment Under Test** 

#### 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: N/A

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.

34 channels are provided to the EUT

#### A. EUT

Device	Manufacturer	Model	FCC ID
		SMK-676683M6AG, I 豆 MAX, I 豆, Sweet,	
	Changhan COT	SMK-676683M5AG, SMK-676683M3AG, SMK-676M6AG,	
Wireless	Shenzhen SQT Electronics	SMK-676M5AG, SMK-676M3AG, SMK-676612AG,	WOX-SM-
Mouse		SMK-676367AG, SMK-676M2AG, SMK-676386AG, Ambrane	M6AG
	Co.,Ltd	KeyPop, KeyPop, KeyWave, KeyMice, AWKM-01, AWKM-02,	
		AWKM-03, AWKM-04, AWKM-05, AWKM-06, AWKM-07	

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: TW2305116E Page 9 of 37

Date: 2023-05-19



#### 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 $\mu$ 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	
$5.00 \sim 30.00$	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 AAA battery, this test item not applicable

Report No.: TW2305116E Page 10 of 37

Date: 2023-05-19

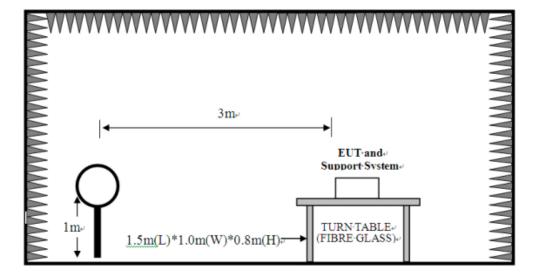


#### **6** Radiated Emission Test

- 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

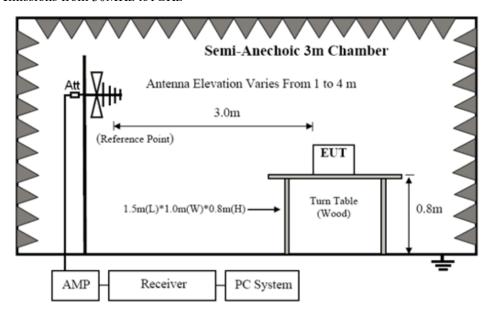


Report No.: TW2305116E

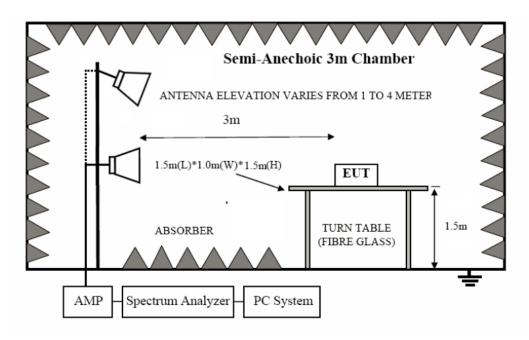
Date: 2023-05-19



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

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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.



Date: 2023-05-19



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	nics (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 (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 Batteries were used during tests.

Report No.: TW2305116E Page 13 of 37

Date: 2023-05-19

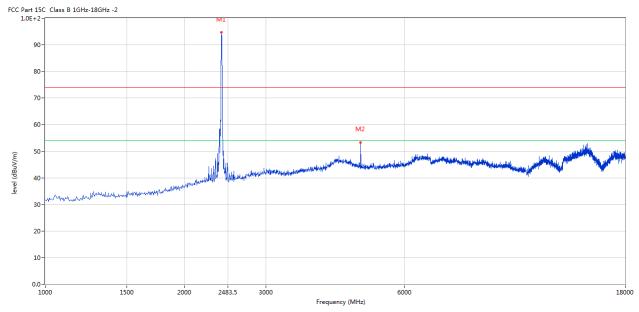


#### 6.5 Test result

#### A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2408MHz

#### Horizontal



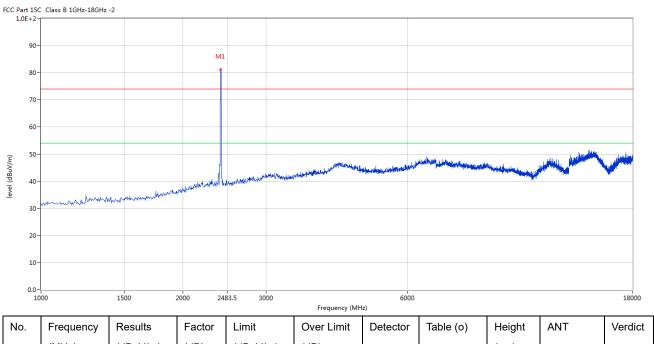
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2408	94.70	-3.57	114.0	-19.30	Peak	87.00	100	Horizontal	Pass
1*	2408	85.29	-3.57	94.0	-8.71	AV	87.00	100	Horizontal	Pass
2	4815.546	53.31	3.14	74.0	-20.69	Peak	62.00	100	Horizontal	Pass
2*	4815.546	40.63	3.14	54.0	-13.37	AV	62.00	100	Horizontal	Pass

Report No.: TW2305116E Page 14 of 37

Date: 2023-05-19



#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2408	81.09	-3.57	114.0	-32.91	Peak	1.00	100	Vertical	Pass

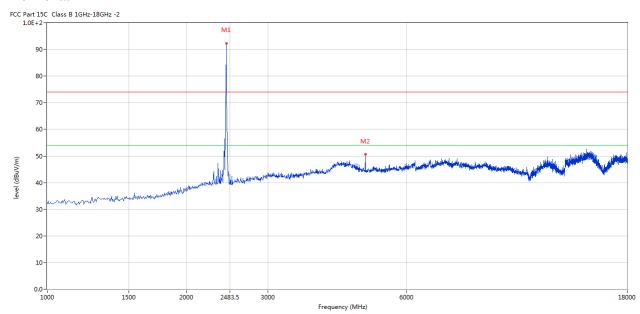
Report No.: TW2305116E Page 15 of 37

Date: 2023-05-19



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

#### Horizontal



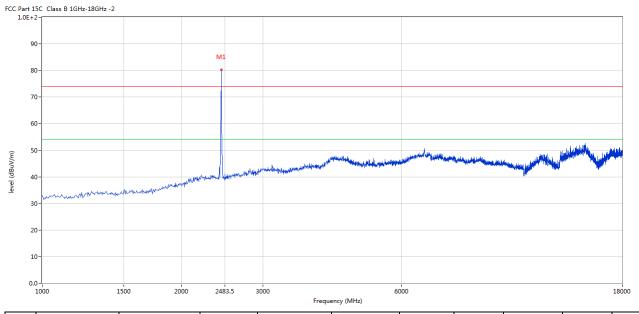
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2440	92.30	-3.57	114.0	-21.70	Peak	94.00	100	Horizontal	Pass
2	4879.280	50.75	3.20	74.0	-23.25	Peak	79.00	100	Horizontal	Pass

Report No.: TW2305116E Page 16 of 37

Date: 2023-05-19



#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2440	80.17	-3.57	114.0	-33.83	Peak	75.00	100	Vertical	Pass

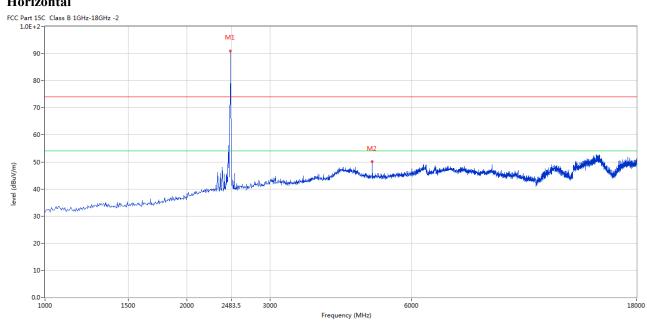
Page 17 of 37 Report No.: TW2305116E

Date: 2023-05-19



Please refer to the following test plots for details: High Channel-2474MHz

#### Horizontal



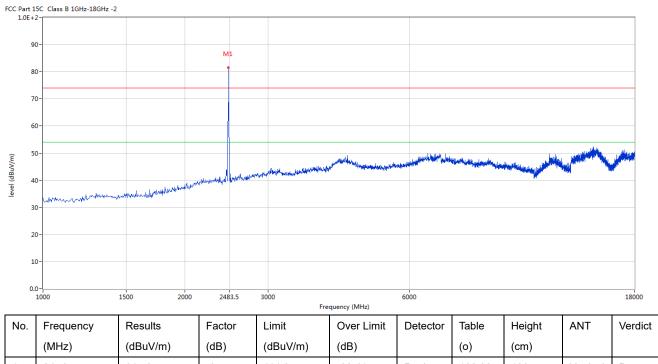
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2474	90.45	-3.57	114.0	-23.55	Peak	66.00	100	Horizontal	Pass
2	4947.263	50.06	3.33	74.0	-23.94	Peak	66.00	100	Horizontal	Pass

Report No.: TW2305116E Page 18 of 37

Date: 2023-05-19



#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2474	81.59	-3.57	114.0	-32.41	Peak	122.00	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.

Report No.: TW2305116E Page 19 of 37

Date: 2023-05-19

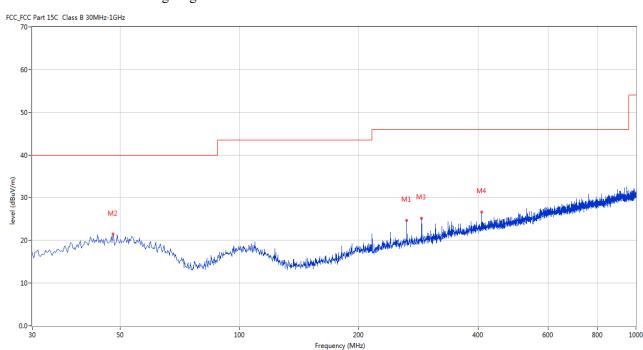


## B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

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	263.954	24.66	-11.79	46.0	-21.34	Peak	46.00	100	Horizontal	Pass
2	47.941	21.43	-11.30	40.0	-18.57	Peak	360.00	200	Horizontal	Pass
3	287.956	25.18	-11.27	46.0	-20.82	Peak	99.00	100	Horizontal	Pass
4	407.963	26.57	-8.47	46.0	-19.43	Peak	284.00	100	Horizontal	Pass

Report No.: TW2305116E Page 20 of 37

Date: 2023-05-19

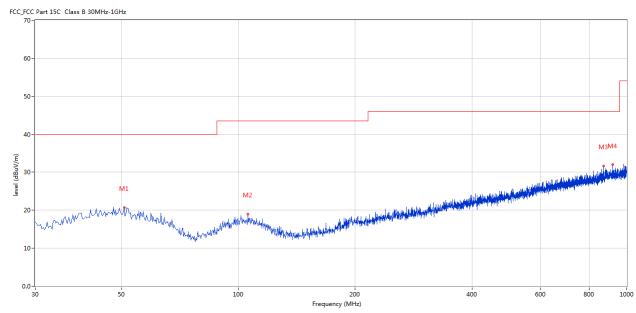


#### Radiated Emission In Vertical (30MHz----1000MHz)

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	50.850	20.70	-11.40	40.0	-19.30	Peak	42.00	100	Vertical	Pass
2	105.884	19.00	-13.29	43.5	-24.50	Peak	347.00	100	Vertical	Pass
3	873.447	31.59	-2.15	46.0	-14.41	Peak	67.00	100	Vertical	Pass
4	919.025	31.97	-1.93	46.0	-14.03	Peak	287.00	100	Vertical	Pass

Report No.: TW2305116E Page 21 of 37

Date: 2023-05-19

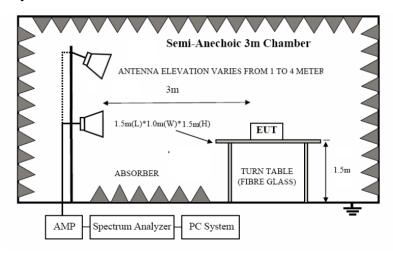


#### 7. Band Edge

#### 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.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

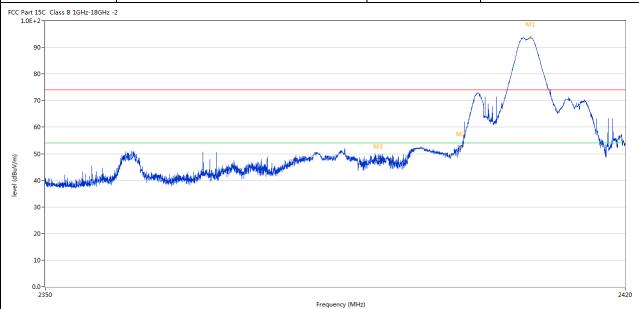
Report No.: TW2305116E Page 22 of 37

Date: 2023-05-19



#### 7.6 Test Result

Product:	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	2408.470	93.76	-3.57	74.0	19.76	Peak	94.00	100	Horizontal	N/A
2	2400.000	52.37	-3.57	74.0	-21.63	Peak	99.00	100	Horizontal	Pass
3	2390.000	47.72	-3.53	74.0	-26.28	Peak	84.00	100	Horizontal	Pass

Report No.: TW2305116E Page 23 of 37



]	Product:		Wireless	Mouse		Detector		7	Vertical	
	Mode	K	Leeping Tra	nsmitting	7	Test Voltag	ge	Г	OC3.0V	
Te	mperature		24 deg	g. C,		Humidity	r	5	6% RH	
Te	est Result:		Pas	s						
Part 1 1.0E+	.5C Class B 1GHz-18GHz 2-	-2								
9	0-									
8	0-							M1		
7	0-									
6	0-						N.	/ \	\	
	0-								My My	
	O-	ddy fann Lwyrddwyson o ddwydd gafar mae y hawn diw blady	nd franklingsstander stander (flyssads gewicker per betal	and a second and a	M3		M <sub>2</sub>		To the	maga pirangi
	O-	hap has him be have been as see made him pe	al konselvensen skensen i Albert van desl	marine	M3			/	The Many	Mary Janes, V
5	O - versombishaseth, alsterphistorical	to the same of the	nd francisco de alemante de francisco de la construir de la co	mbriumshawwind	M3			/	The state of the s	Mary Mary
5 4		day laasi qoordhaasaan dhaq kaasaa dhaa qaasaa ka ahaa ka ka ka ahaa ka ahaa ka ahaa ka ahaa ka ahaa ka ahaa k	n konsistenten disasset jälensisten nortui	ne deriver she wished her der	M3			/		Mary de Maria de Mari
5 4 3 2 1		da tan ing at ang akan katan ang at ang akang	nk passismen dinasut filosoft madas	and desired advantables	M3	material services				ng palana
5 4 3 2 1		Adapter s significações de la propriaçõe de sense de la seguida de la seguida de la seguida de la seguida de l Seguida de la seguida de l	ार्च क्रिकार के क्षेत्रक क 	andrium shawipina da sa	M3			/		2420
5 4 3 2 1		Results	Factor	E Limit	The Late March	Detector	Table	Height	ANT	1
5 4 3 2 1	0-0-0-0-2350		Factor (dB)	1	requency (MHz)	Detector	Table (o)	Height (cm)	ANT	1
5 4 4 3 2 1 0.	o	Results		Limit	requency (MHz)  Over Limit	Detector Peak		_	ANT Vertical	2420 Verdic
5 4 3 2 1	o- 0- 0- 0- 0- 2350 Frequency (MHz)	Results (dBuV/m)	(dB)	Limit (dBuV/m)	requency (MHz)  Over Limit (dB)		(0)	(cm)		Verdic

Report No.: TW2305116E Page 24 of 37



I	Product:		Wireless	Mouse		Pola	rity		Horizonta	al
	Mode	K	eeping Tra	ansmitting		Test Vo	oltage		DC3.0V	
Te	mperature		24 deg	g. C,		Humi	dity		56% RH	[
Te	est Result:		Pas	SS						
CC Part 1 1.0E+2	.5C Class B 1GHz-18GHz 2-	-2								
90 80 70	0-				m Jana					
(E//ngp) 4(0 30 30 30 30 30 30 30 30 30 30 30 30 30	0-0-0-	head with the state of the stat	paulike en			M2 Vyyydrifiaddidd	and the state of t	ht-hasiotaphila	in de la participa di ingre	hope of the second
(E) 50 (A)	0-0-0-0-	head with the second	paulike en			M2	may may have be	h Lihansteining Nach-La	in de la proposition della pro	2500
30 20 10		Results	Factor	Limit	2		Table	Height	ANT	2500 Verdic
30 20 10	0-	Results (dBuV/m)	Factor (dB)	ı	2. Frequency (MHz)	183.5		The second secon	ANT	1
(E) 50 (E) 10 (E	o- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0-			Limit	Frequency (MHz)  Over Limit	183.5	Table	Height	ANT	1

Report No.: TW2305116E Page 25 of 37



F	Product:	Wireless Mouse  Keeping Transmitting 24 deg. C,				Detector Test Voltage Humidity		Vertical DC3.0V 56% RH		
	Mode				Te					
Ter	mperature				I					
Te	st Result:		Pass							
Part 15	5C Class B 1GHz-18GHz	-2								
90										
			M1							
80	)-									
70	)-			<del></del>						
			u	N.						
60	)-			سر الأ						
60 50					Married Wall					
50	biological and the second second				M	-	Make 1 1	ļ	مانت فالسابانان	. L
50 40	)-				M. M.		Harrie Lunder	water the second se	material pitch bed at other	terland and
50	)-				The state of the s	Andrew House	istarra haribil kumba	andress distributed as relative	ween was a part of the other w	the land and
50 40	De la				Marine Marine		<del>Makada dal</del> kumba	andres distributed about	مادين المعادر	tolastaes.
50 40 30	)-  - 				The state of the s	January Harrison	Harabaria Landon	on de september de la	with the control of t	industrial and a
50 40 30 20					No. of the second secon		stadonisti kumba	wanda a firifan a kala	والرياف المنافز والمنافز والمن	and and last
50 40 30 20	)-  - 			Fre	2483		Hanniberial kumbon	ander, deles a frigies e la levelur	والمساولة المساولة ا	2500
50 40 30 20		Results	Factor	Fre			Table	Height	ANT	ı
50 40 30 20 10	0	Results (dBuV/m)	Factor (dB)	1	equency (MHz)	3.5	The state of the s	Height (cm)	ANT	ı
50 40 30 20 10	Frequency			Limit	Over Limit	3.5	Table		ANT Vertical	2500 Verdic

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

Report No.: TW2305116E Page 26 of 37

Date: 2023-05-19



#### 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 -0.61dBi Max. It fulfills the requirement of this section. Test Result: Pass

Page 27 of 37 Report No.: TW2305116E



Product:	Wireless Mouse			Test Mode:		Keep transmitting				
Mode	Keeping Transmitting 24 deg. C, Pass				Test Voltage Humidity Detector			DC3	.0V	
Temperature							56% RH			
Test Result:								PF	ζ	
0dB Bandwidth	2.224MHz									
	Marker 1 [T1 ndB] ndB 20.00 dB			RI	ЗW	100 k	Hz RI	F Att 30 dB		<u> </u>
Ref Lvl				VI	ЗW	W 300 kHz				
10 dBm	BW :	2.224448	90 MHz	SV	TV	5 m	s Uı	nit	dBm	ļ
10						$lacktriangledown_1$	[T1]	-5	.83 dBm	Z
								2.40851	603 GHz	
0						ndF 1		20	.00 dB	
		٨.	۸		ď	BW VT	[T1]	2.22444	890 MHz	
-10		<i>J</i>		1	N	1	. [11]	2.40690		
			Jum	MM	\	<b>▼</b> <sub>T1</sub>	[T1]	-25	.07 dBm	
-20	T				•	- Will	Г2	2.40912	725 GHz	
1MAX	7						7			11
-30	<del>                                     </del>						<u> </u>	dr	N	
	M.L. 111/44*						Why	Munhe	V\n\w\u\u	
-40	7 000001 +									
-50										
-60										
-70										
-80										
-90										
Center 2.408 GHz 500								Spa	n 5 MHz	

Page 28 of 37

Report No.: TW2305116E



Product:	Wireless Mouse			est Mode:	Keep tra	Keep transmitting	
Mode	Keeping '	Transmitting	Te	est Voltage	DC3.0V		
Temperature	24 deg. C,			Humidity	56% RH		
Test Result:	]		Detector	PK			
20dB Bandwidth	2.20						
Ref Lvl	ndB	[T1 ndB] 20.00 dB	RBW VBW	100 kHz 300 kHz	3	30 dB	
10 dBm	BW 2.	20440882 MHz	SWT	5 ms	Unit	dBm	
-10				ndB BW V <sub>T1</sub>	2.44051 2.20440 2.20440 [T11] -24 2.43890	603 GHz .00 dB 882 MHz	A
-20 1MAX	Ţ,	/u 4/1000	- Mul	V T 2	[T1] -24 2 2.44110	.17 dBm 721 GHz 1	.MA
-40	Munt Man				The manufacture of the second	Yuman	
-50							
-60							
-70							
-80							
-90 Center 2	44 CH	F00	latta /		G	ın 5 MHz	
	.44 GHZ 7.MAY.2023 18:	500 i 22:40	<b>к</b> п2 /		Spa	III O MHZ	

Report No.: TW2305116E Page 29 of 37



Product:	Wireless Mous	Test Mode:	Keep transmitting				
Mode	Keeping Transmi	Test Voltage	DC3.0V 56% RH				
Temperature	24 deg. C,	Humidity					
Test Result:	Pass		Detector	PK			
20dB Bandwidth	2.224MHz						
	Marker 1 [T1 n		BW 100 kHz		30 dB		
Ref Lvl 10 dBm	ndB 20. BW 2.224448		BW 300 kHz WT 5 ms	Unit	dBm		
10			<b>V</b> 1 [3	n. 1	0.2 45-		
			* 1 [:	r1] -5 2.47450	.23 dBm 601 GHz		
0			ndB	20	.00 dB		
		h	BW ∇ <sub>TT</sub>	2.22444 [T1] -24	890 MHz		
-10				2.47290	281 GHz		
-20		Man M		[T1] -25	.14 dBm		
1MAX			May /	2.47512 7	725 GHz <b>1MA</b>		
-30	\null_what			The market was	Tukenny		
-40							
-50							
-60							
-70							
-80							
-90							
Center 2.474 GHz 500 kHz/ Span 5 MHz							
Date: 1	7.MAY.2023 19:17:41						

Report No.: TW2305116E Page 30 of 37

Date: 2023-05-19

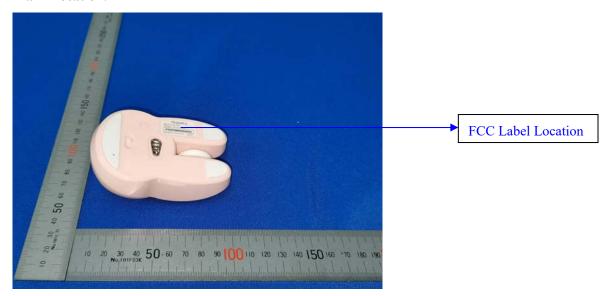


#### 10.0 FCC ID Label

#### FCC ID: WOX-SM-M6AG

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:**



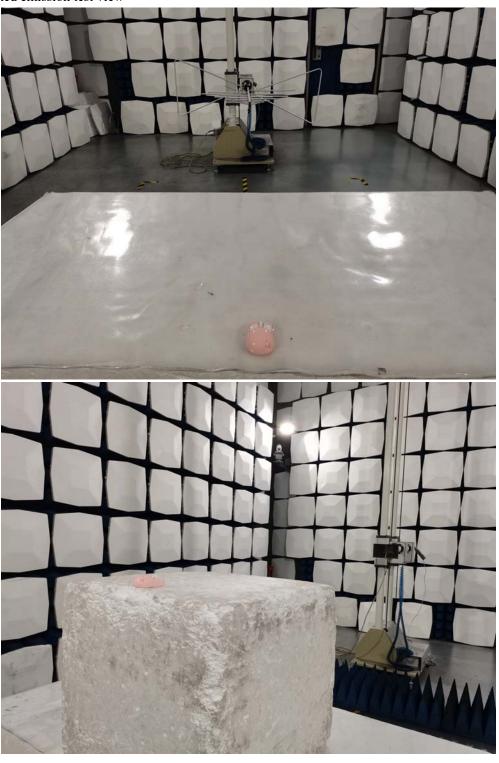
Report No.: TW2305116E

Date: 2023-05-19



#### 11.0 Photo of testing

#### 11.1 Radiated emission test view



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 32 of 37

Report No.: TW2305116E

Date: 2023-05-19

11.2







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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: TW2305116E Page 33 of 37

Date: 2023-05-19



Outside View - Wireless Mouse



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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 34 of 37

Report No.: TW2305116E

Date: 2023-05-19



Outside View - Wireless Mouse





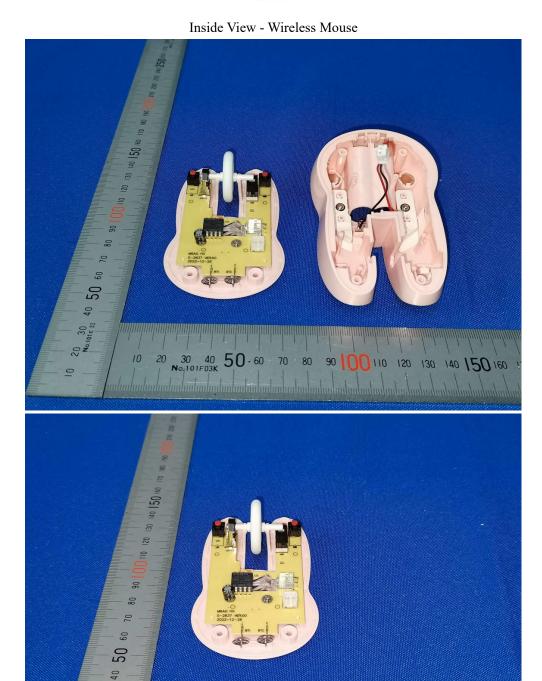
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Page 35 of 37

Report No.: TW2305116E Date: 2023-05-19





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

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

30 40 50 - 60 No.101F03K

70 80

110 120 130 140

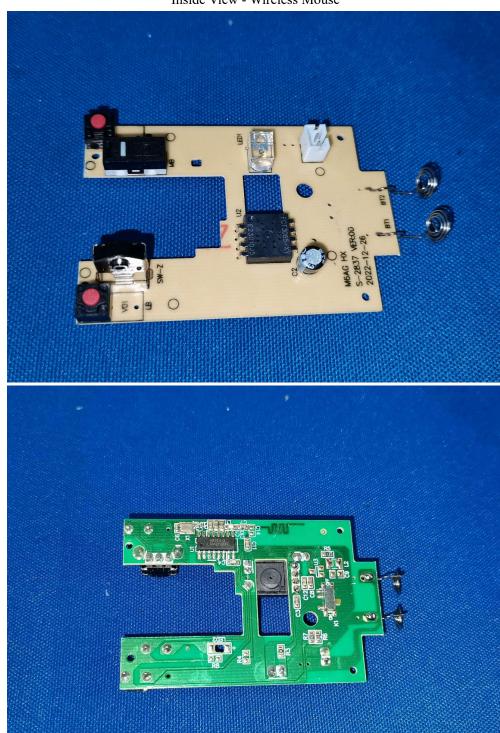
Page 36 of 37

Report No.: TW2305116E

Date: 2023-05-19



Inside View - Wireless Mouse



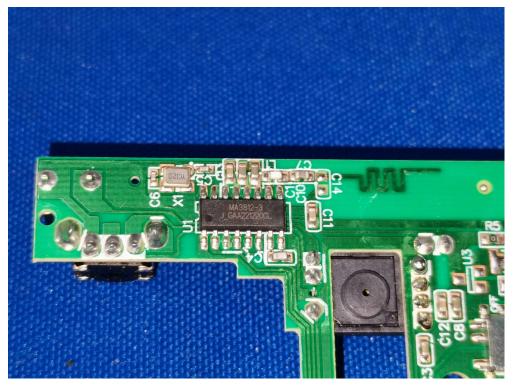
The report refers only to the sample tested and does not apply to the bulk.

This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for adverting. The client to whom the report is issued may, however, show or send it . or a certified copy there of prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

Report No.: TW2305116E Page 37 of 37



Inside View - Wireless Mouse



-- End of the Report--