

Applicant: Eastern Times Technology Co., Ltd

Product: WIRED/2.4G/BT 3 MODES MECHANICAL KEYBOARD

Model No.: K621RGB-PRO, K621W-RGB-PRO, ET-8949

Trademark: REDRAGON

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: September 14, 2024

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

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## **Special Statement:**

## 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** 

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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: Eastern Times Technology Co., Ltd

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

Guangdong, China.

#### 1.3 Description of EUT

Product: WIRED/2.4G/BT 3 MODES MECHANICAL KEYBOARD

Manufacturer: Eastern Times Technology Co., Ltd

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

Dongguan City, Guangdong, China.

Trademark: REDRAGON

Additional Trademark: N/A

Model Number: K621RGB-PRO

Additional Model Name K621W-RGB-PRO, ET-8949

Hardware Version: 8882-A RX V1

Software Version: 6a623b1c

Serial No.: RDK621RGB-PRO2405000993

Rating: Input: DC5V, 675mA or DC3.7V, 175mA

Battery: DC3.7V, 1900mAh Li-ion battery

Modulation Type: GFSK

Operation Frequency: 2402-2480MHz

Channel Separate: 1MHz Channel Number: 79

Antenna Designation PCB antenna with gain 2.34dBi Max (Get from the antenna specification)

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1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2024-09-10 to 2024-09-14

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: Terry Tang

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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	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100253	2024-07-12	2025-07-11
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2024-07-12	2025-07-11
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17
Spectrum	R&S	FSIQ26	100292	2024-07-12	2025-07-11
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	2025-07-17
Power meter	Anritsu	ML2487A	6K00003613	2024-07-12	2025-07-11
Power sensor	Anritsu	MA2491A	32263	2024-07-12	2025-07-11
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	2024-07-12	2025-07-11
EMI Test Receiver	RS	ESCS 30	834115/006	2024-07-12	2025-07-11
Spectrum	HP/Agilent	E4407B	MY50441392	2024-07-12	2025-07-11
Spectrum	RS	FSP	1164.4391.38	2024-07-12	2025-07-11
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA		2024-07-12	2025-07-11
RF Cable	Zhengdi	7m		2024-07-12	2025-07-11
Pre-Amplifier	Schwarebeck	BBV9743	#218	2024-07-12	2025-07-11
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2024-07-12	2025-07-11
LISN	SCHAFFNER	NNB42	00012	2024-07-12	2025-07-11
ESPI Test Receiver	R&S	ESPI 3	100379	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11

## 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	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	Pass	Complies
FCC Part 15, Paragraph 15.209	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

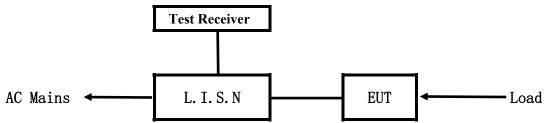
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

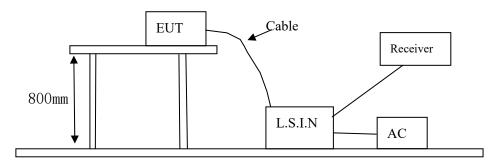


**EUT: Equipment Under Test** 

#### 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.

79 channels are provided to the EUT

#### A. EUT

Device	Manufacturer	Model	FCC ID
WIRED/2.4G/BT 3 MODES	Eastern Times	K621RGB-PRO,	TUVET-8949AUS
MECHANICAL KEYBOARD	Technology Co., Ltd	K621W-RGB-PRO, ET-8949	10 VE1-6949AUS

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#### B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

## C. Peripherals

Device	Manufacturer	Model	Rating
Power Supply	KEYU	KA23-0502000DEU	Input: 100-240V~, 50/60Hz, 0.35A;
			Output: DC5V, 2A

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 ~ 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:

Pass

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## A: Conducted Emission on Live Terminal (150kHz to 30MHz)

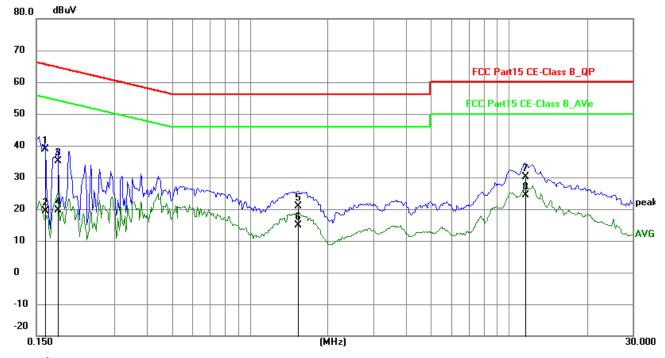
**EUT Operating Environment** 

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Charging and Communication by BT** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1617	29.17	9.78	38.95	65.38	-26.43	QP	Р
2	0.1617	9.48	9.78	19.26	55.38	-36.12	AVG	Р
3	0.1812	25.30	9.76	35.06	64.43	-29.37	QP	Р
4	0.1812	9.88	9.76	19.64	54.43	-34.79	AVG	Р
5	1.5306	10.98	9.80	20.78	56.00	-35.22	QP	Р
6	1.5306	4.97	9.80	14.77	46.00	-31.23	AVG	Р
7	11.5020	19.98	10.23	30.21	60.00	-29.79	QP	Р
8	11.5020	14.22	10.23	24.45	50.00	-25.55	AVG	Р

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# B: Conducted Emission on Neutral Terminal (150kHz to 30MHz)

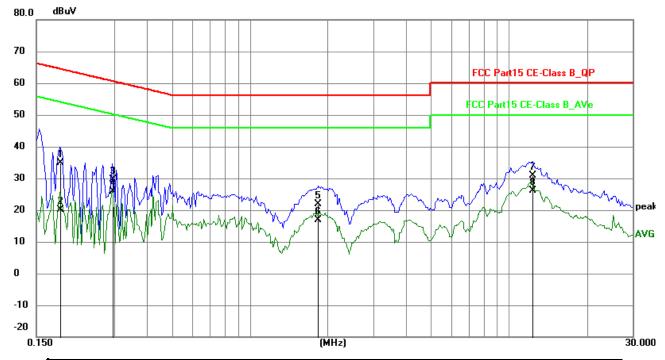
**EUT Operating Environment** 

Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

**EUT set Condition: Charging and Communication by BT** 

**Results: Pass** 

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1850	25.16	9.76	34.92	64.26	-29.34	QP	Р
2	0.1850	10.30	9.76	20.06	54.26	-34.20	AVG	П
3	0.2943	19.82	9.76	29.58	60.40	-30.82	QP	П
4	0.2943	16.18	9.76	25.94	50.40	-24.46	AVG	Р
5	1.8270	12.07	9.80	21.87	56.00	-34.13	QP	Р
6	1.8270	7.04	9.80	16.84	46.00	-29.16	AVG	Р
7	12.3834	20.62	10.26	30.88	60.00	-29.12	QP	Р
8	12.3834	15.89	10.26	26.15	50.00	-23.85	AVG	Р

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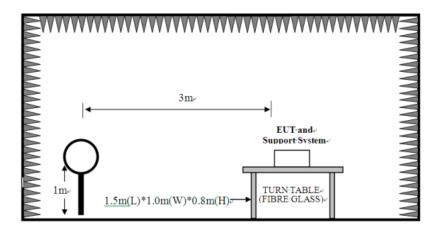


#### **6** Radiated Emission Test

- 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



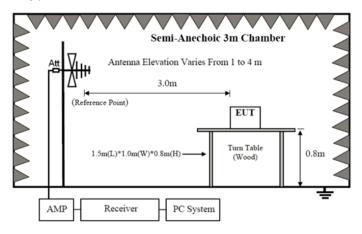
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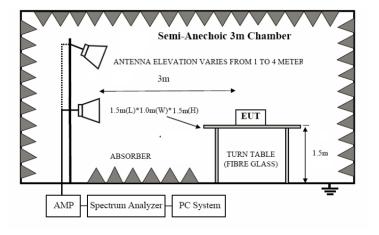
Date: 2024-09-14



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

  Same as section 5.4 of this report.

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#### 6.4 Radiated Emission Limit

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

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

Fundamental Frequency	Field Stre	Field Strength of Fundamental (3m)			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 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
30-88	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage (dBuV) = 20 log RF Voltage (uV)
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 5. For radiated emissions 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. Battery full charged during tests.

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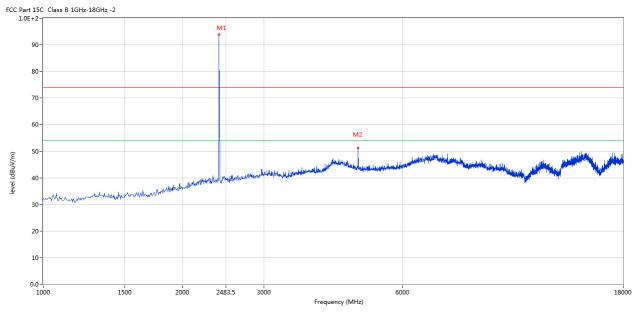
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## 6.5 Test result

## A Fundamental & Harmonics Radiated Emission Data

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

#### Horizontal



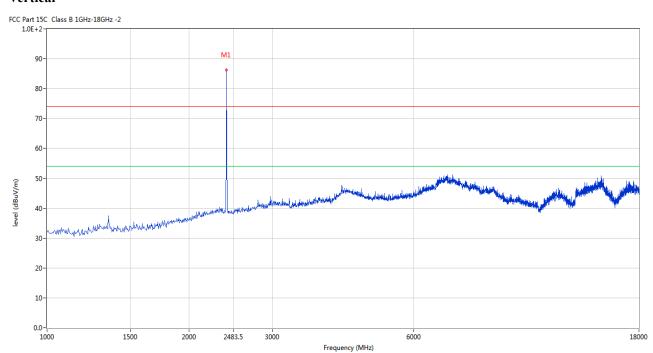
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2402	93.87	-3.57	114.0	-20.13	Peak	239.00	100	Horizontal	Pass
2	4802.799	51.25	3.12	74.0	-22.75	Peak	250.00	100	Horizontal	Pass

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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	86.33	-3.57	114.0	-27.67	Peak	239.00	100	Vertical	Pass

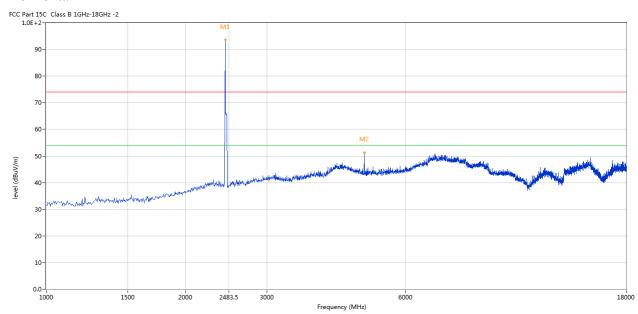
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Please refer to the following test plots for details: Middle Channel-2441MHz

#### Horizontal



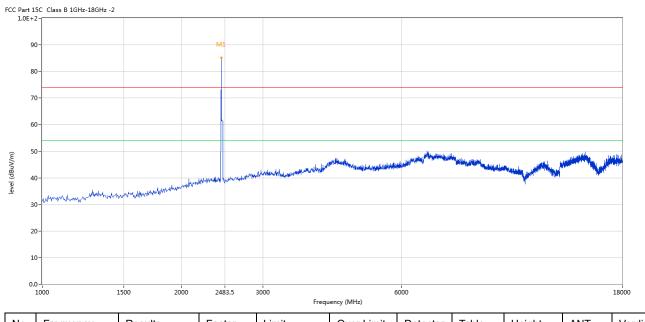
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	93.56	-3.57	114.0	-20.44	Peak	230.00	100	Horizontal	Pass
2	4879.280	51.16	3.20	74.0	-22.84	Peak	240.00	100	Horizontal	Pass

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## Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2441	85.17	-3.57	114.0	-28.83	Peak	235.00	100	Vertical	Pass

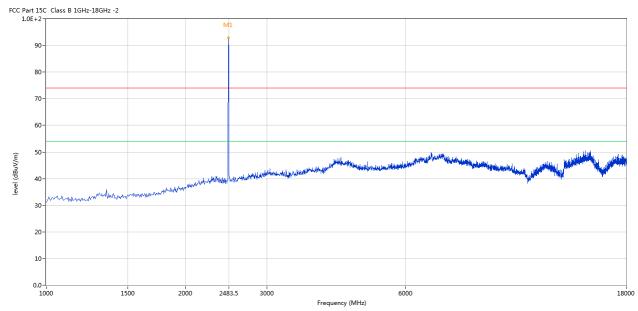
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Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal



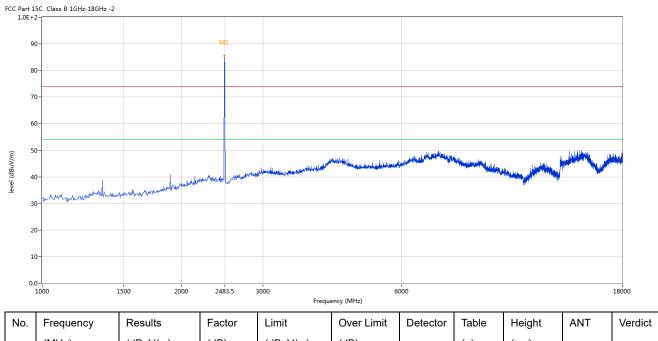
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	92.89	-3.57	114.0	-21.11	Peak	281.00	100	Horizontal	Pass

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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	85.55	-3.57	114.0	-28.45	Peak	15.00	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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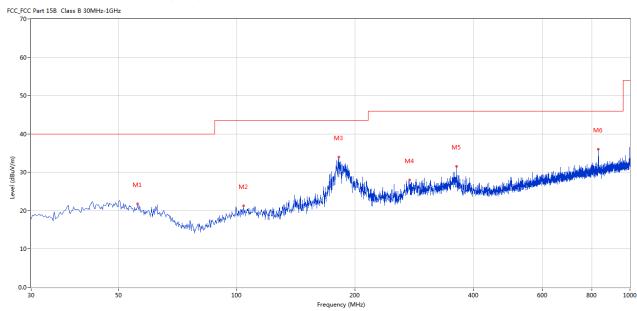


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	55.941	21.74	-12.00	40.0	18.26	Peak	266.00	100	Horizontal	Pass
2	104.186	21.23	-13.30	43.5	22.27	Peak	207.00	100	Horizontal	Pass
3	182.009	33.97	-15.03	43.5	9.53	Peak	279.00	100	Horizontal	Pass
4	275.349	28.02	-11.66	46.0	17.98	Peak	279.00	100	Horizontal	Pass
5	362.627	31.53	-9.51	46.0	14.47	Peak	339.00	100	Horizontal	Pass
6	829.808	36.04	-2.85	46.0	9.96	Peak	328.00	100	Horizontal	Pass

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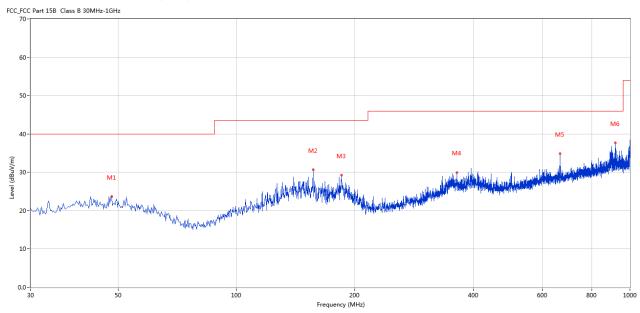


## Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Margin	Detector	Table	Height	Antenna	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(Degree)	(cm)		
1	48.183	23.62	-11.26	40.0	16.38	Peak	202.00	100	Vertical	Pass
2	156.553	30.62	-16.60	43.5	12.88	Peak	240.00	100	Vertical	Pass
3	184.919	29.30	-14.93	43.5	14.20	Peak	268.00	100	Vertical	Pass
4	363.597	29.94	-9.56	46.0	16.06	Peak	307.00	100	Vertical	Pass
5	663.737	34.86	-4.42	46.0	11.14	Peak	342.00	100	Vertical	Pass
6	918.055	37.69	-1.99	46.0	8.31	Peak	333.00	100	Vertical	Pass

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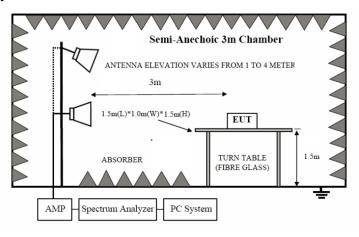


#### 7. Band Edge

#### 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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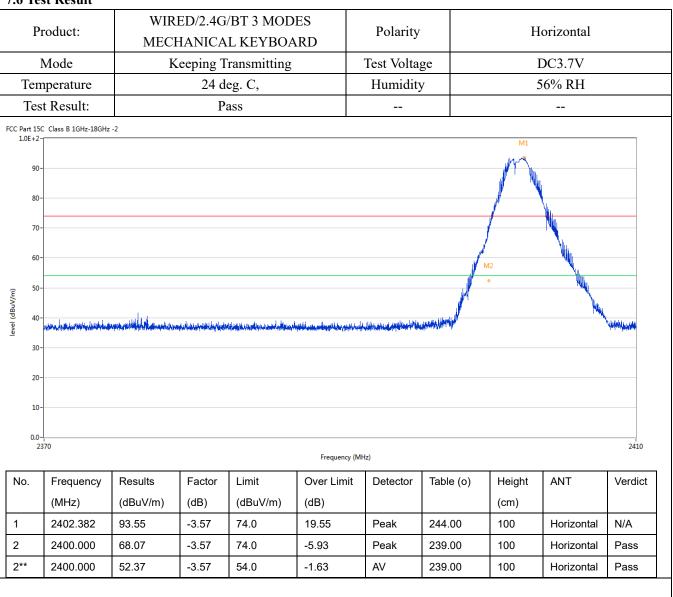
In the event of the improper use of the report. The SHENZHEN TIMEWAY TESTING LABORATORIES. reserves the rights to withdraw it and to adopt any other remedies which may be appropriate.

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## 7.6 Test Result

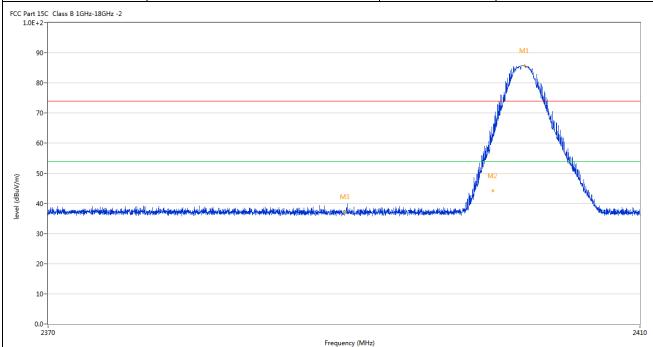


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Product:	WIRED/2.4G/BT 3 MODES MECHANICAL KEYBOARD	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



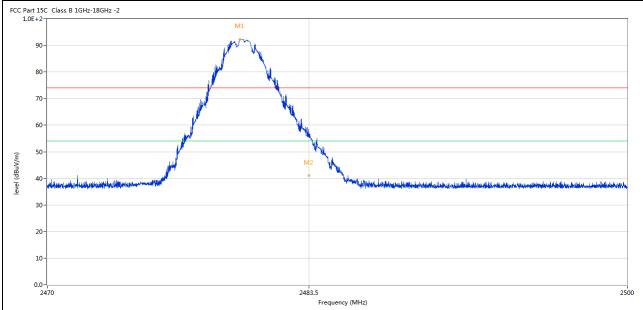
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2402.152	85.75	-3.57	74.0	11.75	Peak	274.00	100	Vertical	N/A
2	2400.000	61.87	-3.57	74.0	-12.13	Peak	274.00	100	Vertical	Pass
2**	2400.000	44.16	-3.57	54.0	-9.84	AV	274.00	100	Vertical	Pass
3	2390.000	37.20	-3.53	74.0	-36.80	Peak	258.50	100	Vertical	Pass

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Product:	WIRED/2.4G/BT 3 MODES MECHANICAL KEYBOARD	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2479.913	92.28	-3.57	74.0	18.28	Peak	239.00	100	Horizontal	N/A
2	2483.500	58.46	-3.57	74.0	-15.54	Peak	245.00	100	Horizontal	Pass
2**	2483.500	41.11	-3.57	54.0	-12.89	AV	245.00	100	Horizontal	Pass

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	Product:		WIRED/2.4G/BT 3 MODES MECHANICAL KEYBOARD			etector	Vertical							
	Mode Keepin			nsmitting	Test	Voltage		DC3.7V						
Te	mperature		24 deg. C,			ımidity		56% RH						
			Pass											
CC Part :	15C Class B 1GHz-18GHz	-2			<b>'</b>		II.							
Ē	90 -		M1											
8	30 -			1										
7	70-			V										
_	50 -		<i>y</i>	<b>V</b> .										
			W .			M2								
	50-		<i>y</i>	M2										
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(iii/angn) isasi	40 - Andrews for better highlight spirite spir	ter a constituent and the state of the state	<i>,</i>	M2	Marine Lhoulest distribution and	interior and shape remains a state of the sand	i bizadijili ishlokob paraydayla	idasəhəldu məddəsə olduğu dikası da	والمستعادة	distablish				
(11/202)	10-	فالمتحافظ فليما والمتعادل	<i>y</i>	M2	And the state of t	lat di Arabi da di Santa di S	المادية المتعادلة المتعادل	ddesidd dewydd Ameridd y ddesiad	الإنفادة المتعادية ا	divinalisal				
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(III/Anda)	10-lahan nahasi dikular yan yan bisi di 30-	and a second with the second of the second o		2483.5 Fre	equency (MHz)	in the state of th	يناب تبريد العراقة فالمؤاخذ والأ	hidenskih hidenskihilden de	og afres steps, et dente producer, et	2500				
(w//mgn) 22	10 - http://deligible.com/self/	Results	Factor			Detector	Table	Height	ANT	2500				
(w/angp) layar	10		Factor (dB)	Fre	equency (MHz)			4 4 5 7 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7						
(III/Angan) 44	10	Results		Limit	equency (MHz)  Over Limit		Table	Height		2500				

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 with gain 2.34dBi maximum. It fulfills the requirement of this section.

Test Result: Pass

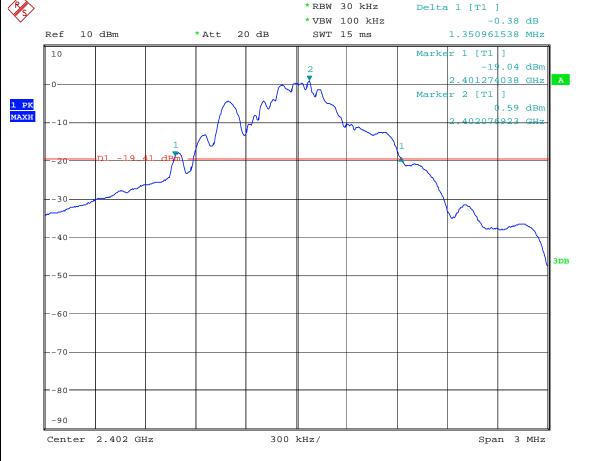
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9.0 20dB Bandwidth N	Measurement			
Product:	WIRED/2.4G/BT 3 MODES	Test Mode:	Keep transmitting	
Product:	MECHANICAL KEYBOARD	rest Mode:		
Mode	Keeping Transmitting	Test Voltage	DC3.7V	
Temperature	24 deg. C,	Humidity	56% RH	
Test Result:	Pass	Detector	PK	
20dB Bandwidth	1.351MHz			
(R)	* RBW 30 kHz	Delta 1 [	T1 ]	



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Product:	WIRED/2.4G/BT 3 MODES MECHANICAL KEYBOARD Keeping Transmitting				Test Mode: Test Voltage		Keep transmitting DC3.7V	
Mode								
Temperature		24 deg. C,					56% RH	
Test Result:		Pass			Detector		PK	
20dB Bandwidth		1.260MHz						
Ref 10 d	l.Bm	* Att 20 dB	*RBW 30 *VBW 100 SWT 15	kHz		1.259615	0.80 dB 5385 MHz	
-0			2				] .53 dBm 692 GHz	A
1 PK MAXH10	1					( 2 <u>.44107</u> 6	.50 dBm	
20 D	1 -19.5 dBm			•				
-40					V	\		
50								3DB
-60								
80								
-90 Center 2	.441 GHz	300	kHz/			Spa	n 3 MHz	

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Span 3 MHz

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Product:	WIRED/2.4G/BT 3 MOD MECHANICAL KEYBOA		Test Mode:	Keep transmitting		
Mode	Keeping Transmitting		Test Voltage	DO	C3.7V	
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:	Pass		Detector		PK	
20dB Bandwidth	1.159MHz					
Ref 10 di 10 -0 -1 PK MAXH1030405060		* RBW 30 k * VBW 100 SWT 15 m	Hz Delta : kHz ss 1 Marker  Marker	-19.61 dBm .479355769 GHz 2 [T1 ] 0.30 dBm .480073115 GHz	A 3DB	
-90						

Date: 13.SEP.2024 16:15:25

Center 2.48 GHz

300 kHz/

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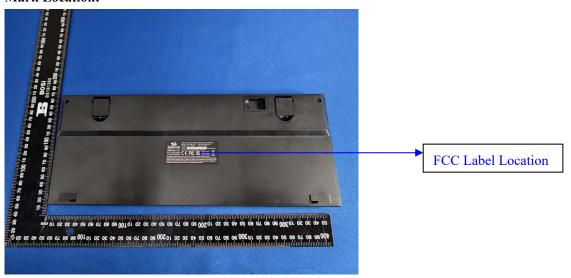
#### 10.0 FCC ID Label

### FCC ID: TUVET-8949AUS

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

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--



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#### Radiated emission test view





Photographs - EUT

Please refer test report TW2409065-01E

## -- End of the report--

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