

Applicant: Eastern Times Technology Co.,Ltd

Product: 3MODES 60% ALUMINUM RGB MECHANICAL

**KEYBOARD** 

Model No.: K641G-GW-RGB-PRO, ET-8876, K641B-BW-RGB-PRO

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

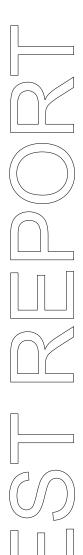
Dated: October 30, 2023

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

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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

Date: 2023-10-30



# Test Report Conclusion

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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.

Telephone: --Fax: --

## 1.3 Description of EUT

Product: 3MODES 60% ALUMINUM RGB 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

Model Number: K641G-GW-RGB-PRO

Additional Model Name ET-8876, K641B-BW-RGB-PRO

Rating: Input: DC5V, 740mA or DC3.7V, 260mA

Battery: DC3.7V, 3000mAh Li-ion battery

Hardware Version: 8876-A V1 Software Version: 6A5D

Serial No.: RDK641G-GW-RGB-PRO23012500219

Operation Frequency: 2403-2480MHz

Channel Number: 16

Channel List (Unit: MHz): 2403, 2424, 2441, 2461, 2414, 2435, 2450, 2470, 2409, 2429, 2455, 2475,

2419, 2445, 2465, 2480

Antenna Designation PCB antenna with gain -7.30dB maximum (Get from the antenna

specification)

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1.4 Submitted Sample: 2 Samples

1.5 Test Duration 2023-08-29 to 2023-10-30

1.6 Test Uncertainty

Conducted Emissions Uncertainty =3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty =6.0dB

Occupied Channel Bandwidth Uncertainty = 5%

Conducted Emissions Uncertainty =3.6dB

Note: The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

1.7 Test Engineer

The sample tested by

Print Name: Andy Xing

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2.0 Test Equipment								
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date			
ESPI Test Receiver	R&S	ESPI 3	100379	2023-07-14	2024-07-13			
LISN	R&S	EZH3-Z5	100294	2023-07-14	2024-07-13			
LISN	R&S	EZH3-Z5	100253	2023-07-14	2024-07-13			
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2023-07-14	2024-07-13			
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17			
Spectrum	R&S	FSIQ26	100292	2023-07-14	2024-07-13			
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	2023-07-14	2024-07-13			
Power sensor	Anritsu	MA2491A	32263	2023-07-14	2024-07-13			
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	2023-07-14	2024-07-13			
EMI Test Receiver	RS	ESCS 30	834115/006	2023-07-14	2024-07-13			
Spectrum	HP/Agilent	E4407B	MY50441392	2023-07-14	2024-07-13			
Spectrum	RS	FSP	1164.4391.38	2023-07-14	2024-07-13			
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA	-	2023-07-14	2024-07-13			
RF Cable	Zhengdi	7m		2023-07-14	2024-07-13			
Pre-Amplifier	Schwarebeck	BBV9743	#218	2023-07-14	2024-07-13			
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2023-07-14	2024-07-13			
LISN	SCHAFFNER	NNB42	00012	2023-07-14	2024-07-13			
ESPI Test Receiver	R&S	ESPI 3	100379	2023-07-14	2024-07-13			
LISN	R&S	EZH3-Z5	100294	2023-07-14	2024-07-13			

## 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 accord	ling to the foll	owing specifications:
			o

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
FCC Part 15.215(c)	20dB bandwidth	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

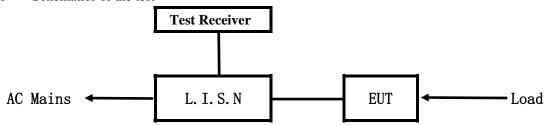
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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#### 5.0 Power Line Conducted Emission Test

## 5.1 Schematics of the test

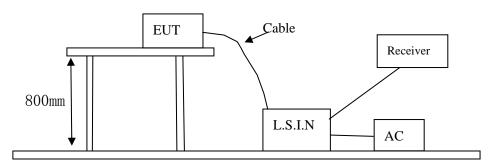


**EUT: Equipment Under Test** 

## 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.

16 channels are provided to the EUT

## A. EUT

Device	Manufacturer	Model	FCC ID
3MODES 60% ALUMINUM RGB MECHANICAL KEYBOARD	Eastern Times Technology Co.,Ltd	K641G-GW-RGB-PRO, ET-8876, K641B-BW-RGB-PRO	TUVET-8876A

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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:

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

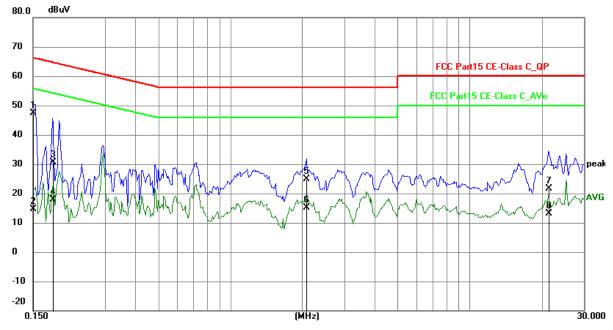
## **EUT Operating Environment**

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

**EUT set Condition: Charging and Keep Transmitting** 

**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	0.1500	37.64	9.79	47.43	66.00	-18.57	QP	Р
2	0.1500	4.73	9.79	14.52	56.00	-41.48	AVG	Р
3	0.1812	20.83	9.76	30.59	64.43	-33.84	QP	Р
4	0.1812	8.20	9.76	17.96	54.43	-36.47	AVG	Р
5	2.0844	15.07	9.80	24.87	56.00	-31.13	QP	Р
6	2.0844	5.31	9.80	15.11	46.00	-30.89	AVG	Р
7	21.2988	10.89	10.76	21.65	60.00	-38.35	QP	Р
8	21.2988	2.28	10.76	13.04	50.00	-36.96	AVG	Р

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

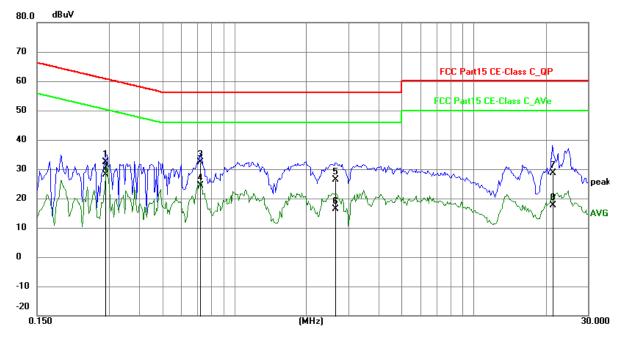
**EUT Operating Environment** 

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

**EUT set Condition: Charging and Keep Transmitting** 

**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	0.2904	22.68	9.76	32.44	60.51	-28.07	QP	Р
2	0.2904	18.35	9.76	28.11	50.51	-22.40	AVG	Р
3	0.7233	22.60	9.78	32.38	56.00	-23.62	QP	Р
4	0.7233	14.49	9.78	24.27	46.00	-21.73	AVG	Р
5	2.6499	16.65	9.83	26.48	56.00	-29.52	QP	Р
6	2.6499	6.61	9.83	16.44	46.00	-29.56	AVG	Р
7	21.2832	17.75	10.76	28.51	60.00	-31.49	QP	Р
8	21.2832	6.76	10.76	17.52	50.00	-32.48	AVG	Р

Date: 2023-10-30



#### **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 9kHz to 25 GHz was investigated. The frequency spectrum is set as follows:

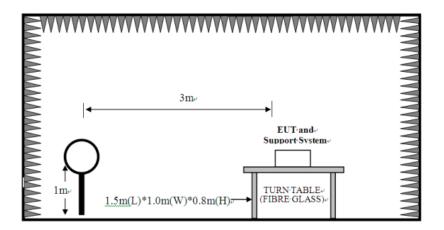
Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
ADOVE IGHZ	Peak	1MHz	10Hz	Average

(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**

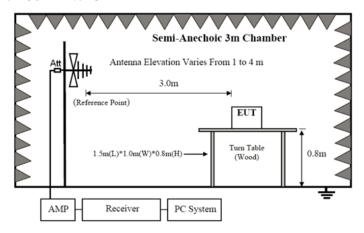
For radiated emissions from 9kHz to 30MHz



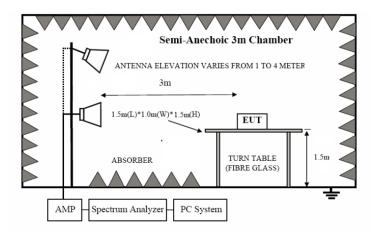
Date: 2023-10-30



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.
- 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 Fundamental (3m)	Field Strength of Harmonics (3m)			
(MHz)	mV/m	dBuV/m	uV/m	dBuV/m		

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2400 2402 5	<b>5</b> 0	04 (4	114 (D 1)	<b>-</b> 00	<b>5 4 4 4</b>	74 (Pools)
2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)
2 <del>1</del> 00-2 <del>1</del> 03.3	50	JT (Miverage)	11+ (1 cak)	500	J+ (Michago)	/ + (1 0

Note: 1. RF Field Strength  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$ 

- 2.Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

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

Frequency Range (MHz)	Distance (m)	Field strength (dB $\mu$ V/m)
0.009-0.490	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-80	3	40.0
88-216		43.5
21 -960	3	46.0
Above 960	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. 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. Battery fully charged was used during the test.

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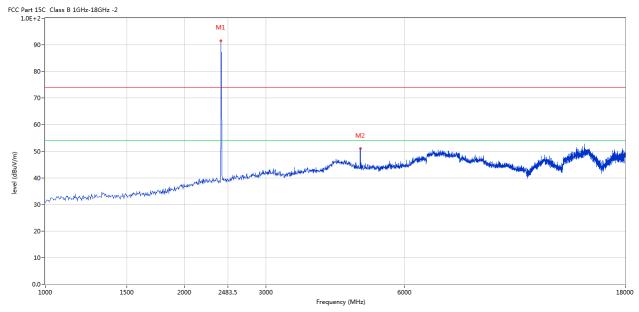


## 6.5 Test result

## A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2403MHz

#### Horizontal



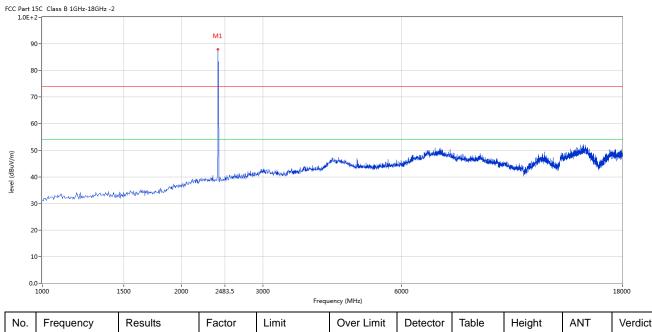
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2403	91.53	-3.57	114.0	-22.47	Peak	163.00	100	Horizontal	Pass
2	4807.048	51.09	3.13	74.0	-22.91	Peak	170.00	100	Horizontal	Pass

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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	2403	87.97	-3.57	114.0	-26.03	Peak	288.00	100	Vertical	Pass

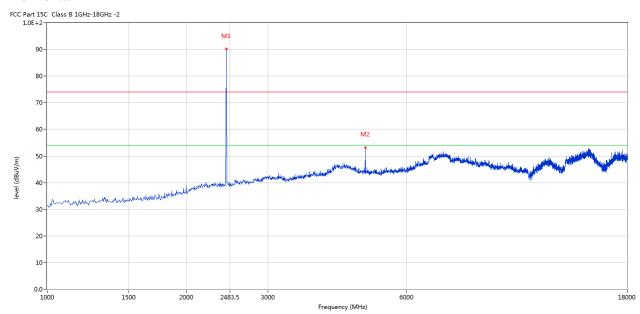
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Please refer to the following test plots for details: Middle Channel-2441MHz

#### **Horizontal**



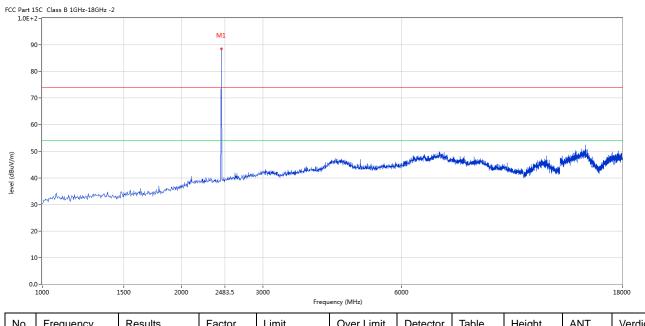
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	90.19	-3.57	114.0	-23.81	Peak	201.00	100	Horizontal	Pass
2	4879.280	53.12	3.20	74.0	-20.88	Peak	165.00	100	Horizontal	Pass

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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	2441	88.54	-3.57	114.0	-25.46	Peak	288.00	100	Vertical	Pass

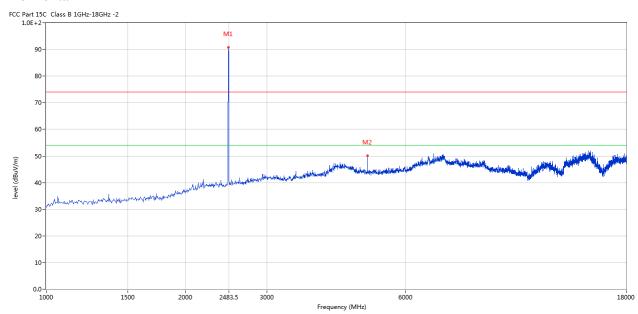
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Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	90.77	-3.57	114.0	-23.23	Peak	162.00	100	Horizontal	Pass
2	4960.010	50.13	3.36	74.0	-23.87	Peak	173.00	100	Horizontal	Pass

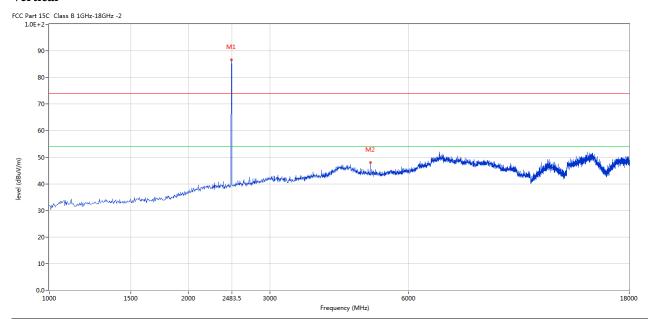
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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	87.62	-3.57	114.0	-26.38	Peak	296.00	100	Vertical	Pass
2	4960.010	48.01	3.36	74.0	-25.99	Peak	296.00	100	Vertical	Pass

Note: (1) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier

- (2) Margin=Emission-Limits
- (3) According to section 15.35(b), the peak limit is 20dB higher than the average limit
- (4) For test purpose, keep EUT continuous transmitting
- (5) For emission above 18GHz and Below 30MHz, It is only the floor noise and less than the limit for more than 20dB. No necessary to take down.
- (6) the measured PK value less than the AV limit.

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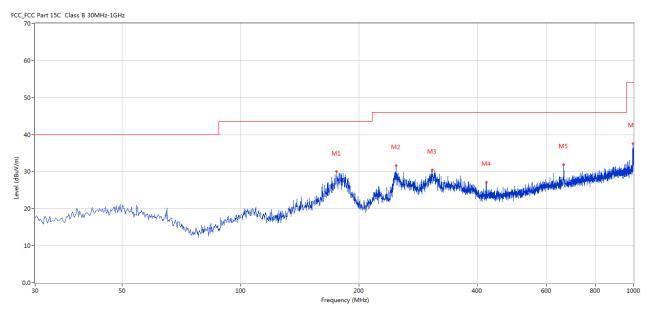


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

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	175.221	30.00	-15.63	43.5	13.50	Peak	257.00	100	Horizontal	Pass
2	248.438	31.70	-12.19	46.0	14.30	Peak	197.00	100	Horizontal	Pass
3	307.593	30.42	-10.94	46.0	15.58	Peak	172.00	100	Horizontal	Pass
4	422.024	27.18	-8.08	46.0	18.82	Peak	93.00	100	Horizontal	Pass
5	663.737	31.91	-4.42	46.0	14.09	Peak	296.00	100	Horizontal	Pass
6	995.879	37.59	-1.26	54.0	16.41	Peak	289.00	100	Horizontal	Pass

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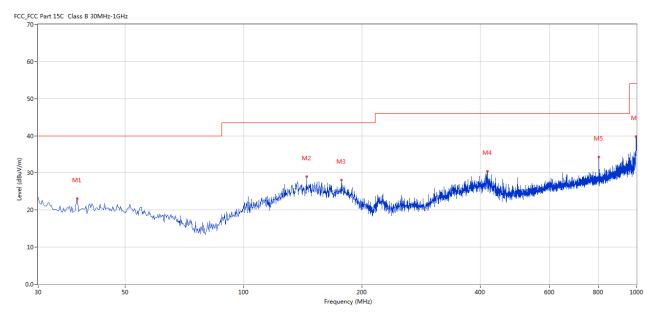


## Radiated Emission In Vertical (30MHz----1000MHz)

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	37.758	23.13	-12.84	40.0	16.87	Peak	278.00	100	Vertical	Pass
2	144.674	28.95	-17.18	43.5	14.55	Peak	281.00	100	Vertical	Pass
3	177.646	28.03	-15.61	43.5	15.47	Peak	276.00	100	Vertical	Pass
4	417.176	30.50	-8.17	46.0	15.50	Peak	340.00	100	Vertical	Pass
5	803.139	34.32	-3.03	46.0	11.68	Peak	285.00	100	Vertical	Pass
6	998.060	39.84	-1.21	54.0	14.16	Peak	338.00	100	Vertical	Pass

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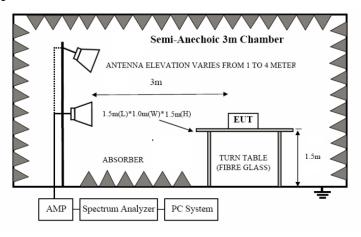


## 7. Band Edge

#### 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

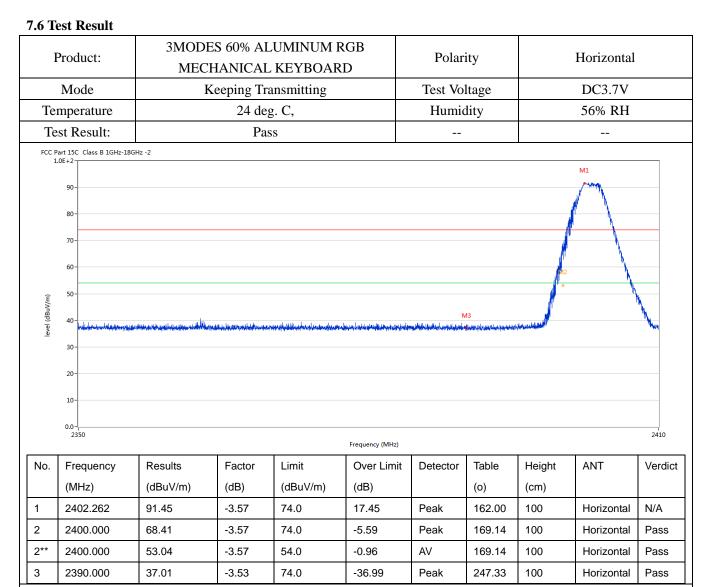
Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation.

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

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2

2\*\*

3

2400.000

2400.000

2390.000

58.13

43.06

37.23

-3.57

-3.57

-3.53

74.0

54.0

74.0



Product:			3MODES 60% ALUMINUM RGB MECHANICAL KEYBOARD Dete			Detect	cor		Vertical		
	Mode	Ke	eeping Tra	ansmitting		Test Vol	tage	DC3.7V			
Ter	mperature		24 deg	g. C,		Humid	ity	56% RH			
Te	st Result:		Pas	SS							
FCC Part 1.0E	15C Class B 1GHz-18GHz +2-	-2									
BuV/m)	90- 80- 70- 60- 50- 40-	oden flastraciju in kilinika je je je kostovik je živoje.	wy / wkinen have week	e verskan stakkan samen krist skriken k	- No sisse gar a state state springer so	M3		M2 •	M1	<b>M</b>	
	30- 20- 10- 2350			f	requency (MHz)					2410	
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdi	
1	2402.397	87.89	-3.57	74.0	13.89	Peak	287.00	100	Vertical	N/A	

-15.87

-10.94

-36.77

Peak

Peak

ΑV

282.00

282.00

209.00

100

100

100

Pass

Pass

Pass

Vertical

Vertical

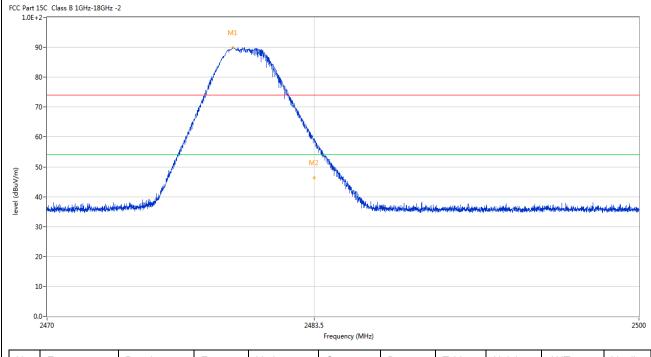
Vertical

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Product:	3MODES 60% ALUMINUM RGB 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	2479.388	89.77	-3.57	74.0	15.77	Peak	166.00	100	Horizontal	N/A
2	2483.500	59.27	-3.57	74.0	-14.73	Peak	166.00	100	Horizontal	Pass
2**	2483.500	46.34	-3.57	54.0	-7.66	AV	166.00	100	Horizontal	Pass

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]	Product:	3MODES 60% ALUMINUM RGB MECHANICAL KEYBOARD			Detector  Test Voltage			Vertical			
	Mode	Keeping Transmitting					.D	DC3.7V			
Te	mperature 24 deg. C,					Humic			56% RH		
	est Result:		Pas				·· · · <b>J</b>				
	rt 15C Class B 1GHz-18GH	z -2						I			
1.0	90- 80-		M1	Militim							
	70-			January Company							
level (dBuV/m)	50- 40- 30-	and the second description of the second des		M2	Maryananinan	en de adiption nomination	rifikaranilysisyila, joska	والمرافعة	ومادوا والمرافع والم	delicus and editor delicated	
level (dBuV/m)	30- 10-	terational desiritation and a second desired and a second desired as a second desired as a second desired as a		M2		nendendette nemberier	additurius den gestus a	itodearindustrialneareasea	quiqirah de mamine nekar		
level (dBuV/m)	30- 20-	and the second s		M2 2483.		nandradistini nemberiar	ekkerenkeus kanprises	etysfikaristekiski kiskeparen pro	gadarishdika na minja sukut		
	30- 10-	Results	Factor	2483.: Limit	5	Detector	Table	Height	ANT	2500	
	30 - 20 - 10 - 2470		Factor (dB)	1	5 Frequency (MHz)					2500	
No.	30- 20- 10- 2470 Frequency	Results		Limit	5 Frequency (MHz)		Table	Height		2500	
No.	30- 20- 10- 2470 Frequency (MHz)	Results (dBuV/m)	(dB)	Limit (dBuV/m)	5 Frequency (MHz)  Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	2500 Verdic	

Note: 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 -7.30dBi maximum. It fulfills the requirement of this section.

Test Result: Pass

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#### 9.0 20dB Bandwidth Measurement

## **Test Configuration**



## **Test Procedure**

The transmitter output was connected to the spectrum analyzer through an attenuator. The bandwidth of the fundamental frequency was measured by spectrum analyzer with 30kHz RBW and 100kHz VBW.

The 20dB bandwidth is defined as the total spectrum the power of which is higher than peak power minus 20dB.

## Limit

N/A

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## **Test Result**

Product:	3MODES 60% ALUMINUM MECHANICAL KEYBOAH	L Test Mode:	Keep transmitting	
Mode	Keeping Transmitting	Test Voltage	DC3.7V	
Temperature	24 deg. C,	Humidity	56% RH	
Test Result:	Pass	Detector	PK	
20dB Bandwidth	2.290MHz			
Ref 10 dB	3m *Att 20 dB	*VBW 300 kHz *SWT 5 ms	er 1 [T1 ] -4.88 dBm 2.403010000 GHz	
0		ndB BW Temp	2.290000000 MHz 1 [T1 nd8]	
1 PK MAXH		Temp	-24.89 dBm 2.401820000 GHz 2 [TI nd8]	
20	TI	T2	-24.84 dBm 2.404110000 GHz	
30				
-40	var /			
50			3DB	
60				
70				
80				
-90				
Center 2.4	103 GHz 500 F	cHz/	Span 5 MHz	

Date: 11.0CT.2023 17:02:08

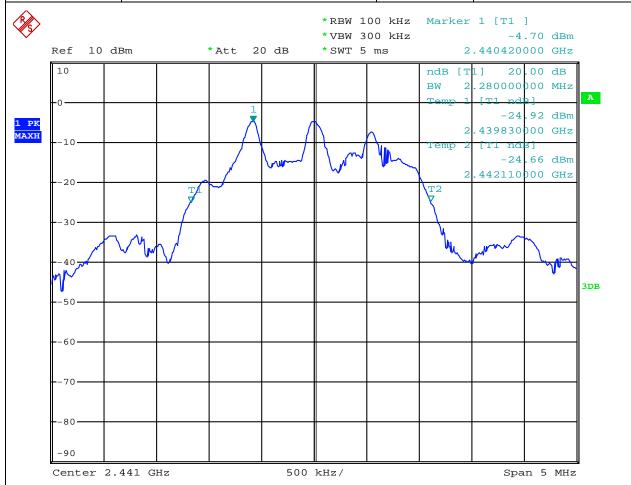
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Product:	3MODES 60% ALUMINUM RGB MECHANICAL KEYBOARD	Test Mode:	Keep transmitting
Mode	Mode Keeping Transmitting		DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	2.280MHz		



Date: 11.0CT.2023 17:08:53

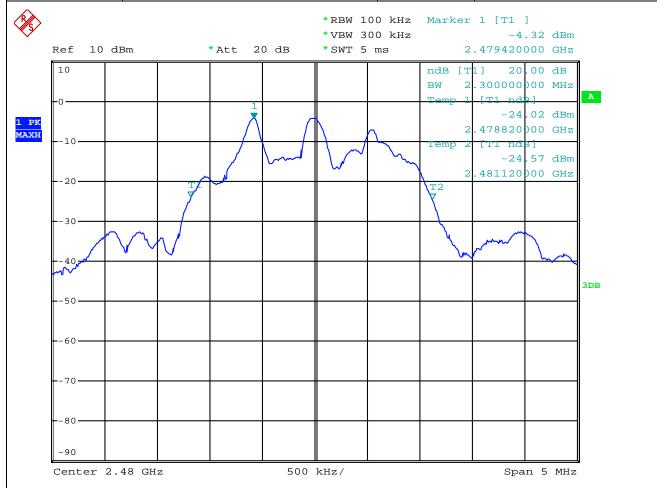
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Product:	3MODES 60% ALUMINUM RGB MECHANICAL KEYBOARD	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	2.300MHz		



Date: 11.0CT.2023 16:47:07

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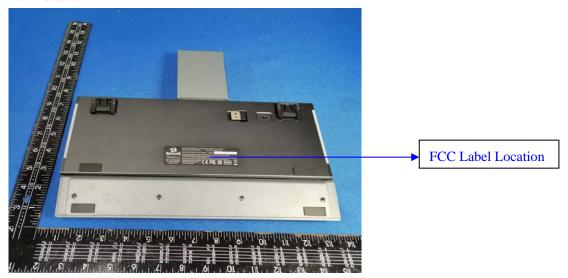
## 10.0 FCC ID Label

#### FCC ID: TUVET-8876A

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



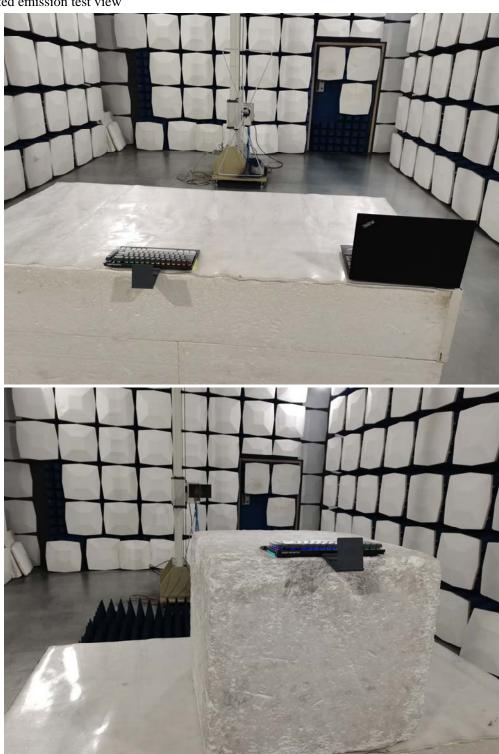
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## Radiated emission test view



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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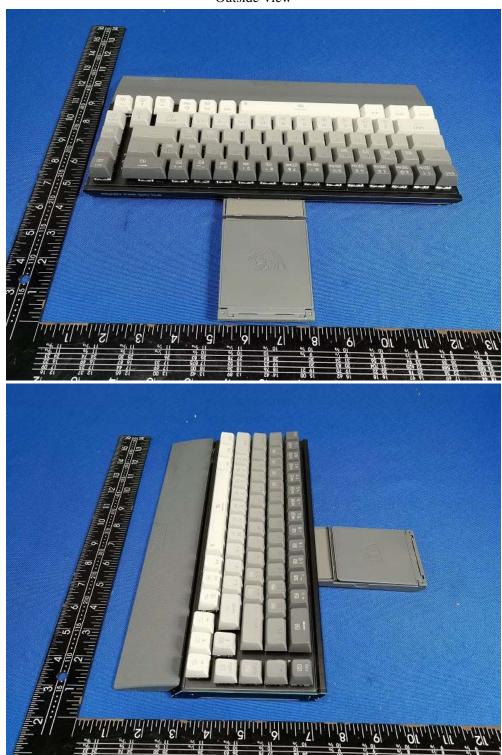
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Outside View



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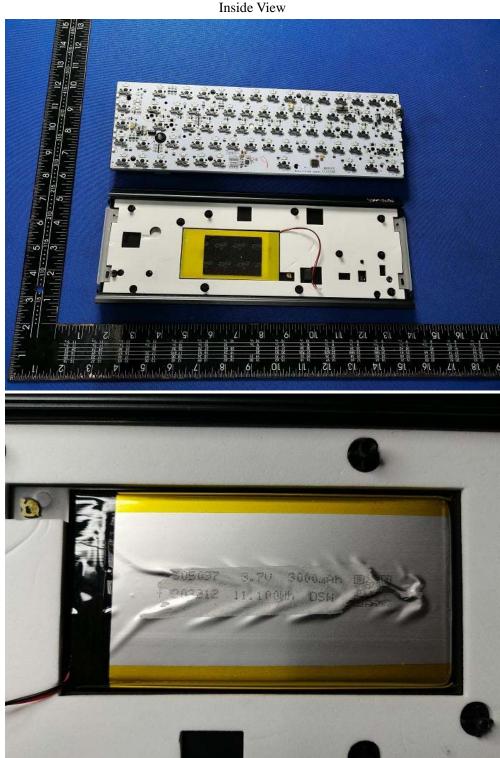
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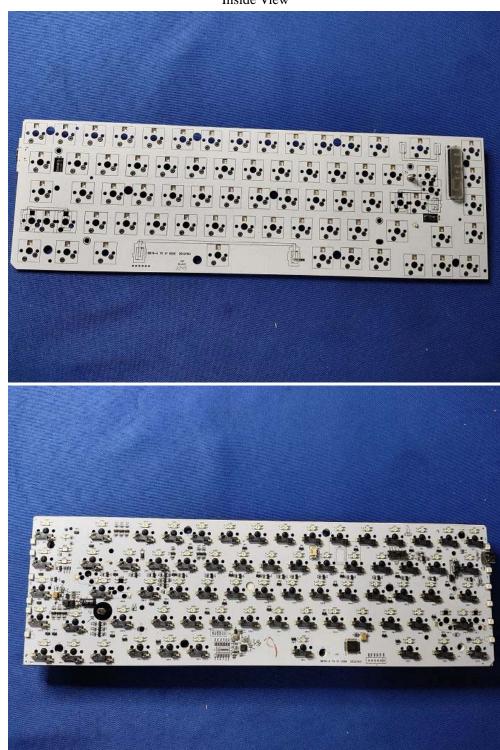
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Inside View



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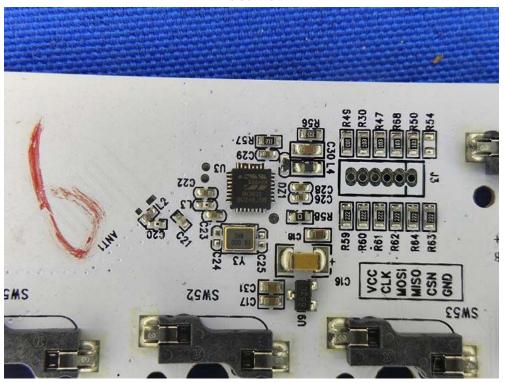
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Inside View



-- End of the report--