



Report No.: TW2101245E File reference No.: 2021-04-20

Applicant: Eastern Times Technology Co.,Ltd

Product: MECHANICAL GAMING KEYBOARD

Model No.: K598-KNS, ET-8486, K598-KNS-UK, K598-KNS-DE,

K598-KNS-FR, K598-KNS-DE, K598-KNS-IT, K598-WNS,

K598-WNS-UK, K598-WNS-DE, K598-WNS-FR,

K598-WNS-DE, K598-WNS-IT

Brand Name: 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

Jack Chung

Jack Chung Manager

Dated: April 20, 2021

Results appearing herein relate only to the sample tested

The technical reports is issued errors and omissions exempt and is subject to withdrawal at

SHENZHEN TIMEWAY TESTING LABORATORIES

Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le Village, Nanshan District, Shenzhen, China

Tel (755) 83448688, Fax (755) 83442996, E-Mail:info@timeway-lab.com

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Special Statement:

The testing quality ability of our laboratory meet with "Quality Law of People's Republic of China" Clause 19.

The testing quality system of our laboratory meet with ISO/IEC-17025 requirements, which is approved by CNAS. This approval result is accepted by MRA of APLAC.

Our test facility is recognized, certified, or accredited by the following organizations:

CNAS-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 744189

The EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications commission. The acceptance letter from the FCC is maintained in our files. Registration No.: 744189.

Industry Canada (IC) — Registration No.:5205A

The EMC Laboratory has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 5205A.

A2LA (Certification Number:5013.01)

The EMC Laboratory has been accredited by the American Association for Laboratory Accreditation (A2LA). Certification Number:5013.01

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Test Report Conclusion

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

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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: MECHANICAL GAMING KEYBOARD

Manufacturer: Eastern Times Technology Co.,Ltd

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

Dongguan City, Guangdong, China.

Brand Name: REDRAGON
Model Number: K598-KNS

Additional Model Name ET-8486, K598-KNS-UK, K598-KNS-DE, K598-KNS-FR, K598-KNS-DE,

K598-KNS-IT, K598-WNS, K598-WNS-UK, K598-WNS-DE, K598-WNS-FR,

K598-WNS-DE, K598-WNS-IT

Hardware Version: MA138K9-3 SSOP28

Software Version: RK-DualKB-Device-MA138K9-3-200120-1.00-0105-FCB6.hex

Serial No.: RDK598-KNS20103100752

Rating: 5V, 350mA, Built-in DC3.7V, 3000mAh, 11.100Wh Li-ion battery;

Modulation Type: GFSK

Operation Frequency: 2410-2468MHz

Channel Number: 30 Channel Separation: 2MHz

Antenna Designation PCB antenna with gain 2.0dBi Max (Declared by the applicant)

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1.4 Submitted Sample: 1 Sample

1.5 Test Duration

2021-01-26 to 2021-04-20

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

Terry Tang

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	2020-06-23	2021-06-22
LISN	R&S	EZH3-Z5	100294	2020-06-23	2021-06-22
LISN	R&S	EZH3-Z5	100253	2020-06-23	2021-06-22
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2020-06-23	2021-06-22
Loop Antenna	EMCO	6507	00078608	2018-06-25	2021-06-24
Spectrum	R&S	FSIQ26	100292	2020-06-23	2021-06-22
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2020-06-23	2021-06-22
Horn Antenna	R&S	BBHA 9120D	9120D-631	2018-07-09	2021-07-08
Power meter	Anritsu	ML2487A	6K00003613	2020-06-23	2021-06-22
Power sensor	Anritsu	MA2491A	32263	2020-06-23	2021-06-22
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2018-07-04	2021-07-03
9*6*6 Anechoic			N/A	2020-07-06	2021-07-05
EMI Test Receiver	RS	ESVB	826156/011	2020-06-23	2021-06-22
EMI Test Receiver	RS	ESH3	860904/006	2020-06-23	2021-06-22
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2020-06-23	2021-06-22
Spectrum	HP/Agilent	E4407B	MY50441392	2020-06-23	2021-06-22
Spectrum	RS	FSP	1164.4391.38	2021-01-16	2022-01-15
RF Cable	7honadi	ZT26-NJ-NJ-8M/F		2020 06 22	2021 06 22
RF Cable	Zhengdi	A	1	2020-06-23	2021-06-22
RF Cable	Zhengdi	7m	-	2020-06-23	2021-06-22
RF Switch	EM	EMSW18	060391	2020-06-23	2021-06-22
Pre-Amplifier	Schwarebeck	BBV9743	#218	2020-06-23	2021-06-22
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2020-06-23	2021-06-22
LISN	SCHAFFNER	NNB42	00012	2020-01-07	2021-01-06

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 15.207	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

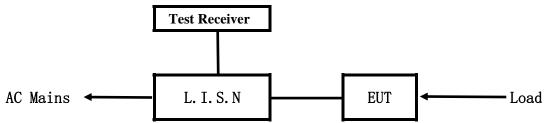
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5. Power Line Conducted Emission Test

5.1 Schematics of the test

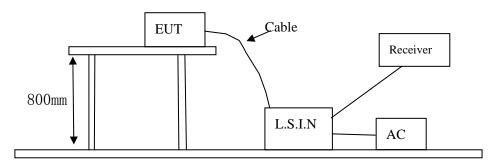


EUT: Equipment Under Test

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.

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.

One channels are provided to the EUT

A. EUT

Device	Manufacturer	Model	FCC ID
MECHANICAL	Footom Times Technology Co. Ltd.	K598-KNS,	TUVET-8486
GAMING KEYBOARD	Eastern Times Technology Co.,Ltd	ET-8486	1 U V E 1-8480

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B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	Rating
PC	ThinkPad	R4	ŀ

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013

- A Setup the EUT and simulators as shown on follow
- B Enable AF signal and confirm EUT active to normal condition

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB μ V)			
(MHz)	Quasi-peak Level	Average Lev 1		
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*		
0.50 ~ 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

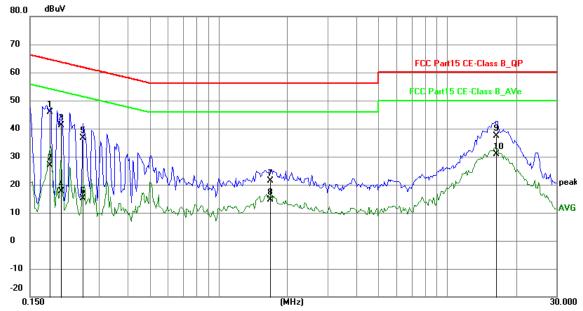
Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Charging and Keep Transmitting

Equipment Level: Class B

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	0.1825	36.18	9.76	45.94	64.37	-18.43	QP	Р
2	0.1825	17.12	9.76	26.88	54.37	-27.49	AVG	Р
3	0.2046	31.46	9.75	41.21	63.42	-22.21	QP	Р
4	0.2046	7.76	9.75	17.51	53.42	-35.91	AVG	Р
5	0.2553	26.90	9.75	36.65	61.58	-24.93	QP	Р
6	0.2553	5.46	9.75	15.21	51.58	-36.37	AVG	Р
7	1.6749	11.47	9.80	21.27	56.00	-34.73	QP	Р
8	1.6749	4.82	9.80	14.62	46.00	-31.38	AVG	Р
9	16.3458	26.89	10.46	37.35	60.00	-22.65	QP	Р
10	16.3458	20.54	10.46	31.00	50.00	-19.00	AVG	Р

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

EUT Operating Environment

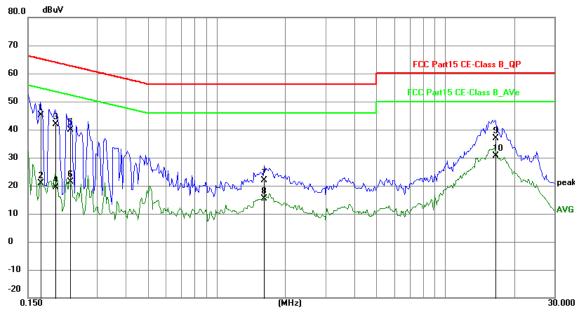
Temperature: 25°C Humidity: 65%RH Atmospheric Pressure: 101 kPa

EUT set Condition: Charging and Keep Transmitting

Equipment Level: Class B

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	0.1695	35.37	9.77	45.14	64.98	-19.84	QP	Р
2	0.1695	11.18	9.77	20.95	54.98	-34.03	AVG	Р
3	0.1976	32.10	9.75	41.85	63.71	-21.86	QP	Р
4	0.1976	9.72	9.75	19.47	53.71	-34.24	AVG	Р
5	0.2280	30.01	9.75	39.76	62.52	-22.76	QP	Р
6	0.2280	11.74	9.75	21.49	52.52	-31.03	AVG	Р
7	1.6125	12.01	9.80	21.81	56.00	-34.19	QP	Р
8	1.6125	5.53	9.80	15.33	46.00	-30.67	AVG	Р
9	16.5369	26.40	10.47	36.87	60.00	-23.13	QP	Р
10	16.5369	20.23	10.47	30.70	50.00	-19.30	AVG	Р

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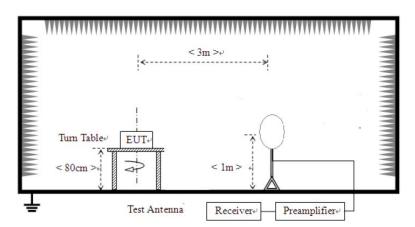


6 Radiated Emission Test

- 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



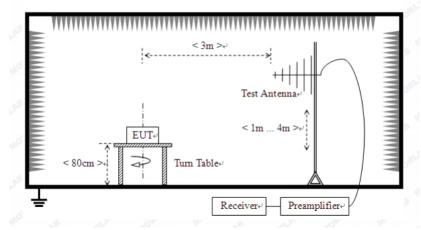
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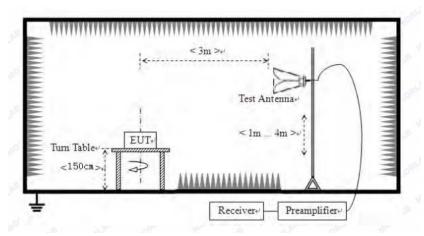
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For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition

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

Note:

- 1. RF Voltage $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.
- 5. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz.As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
- 6. Battery full charged during tests.

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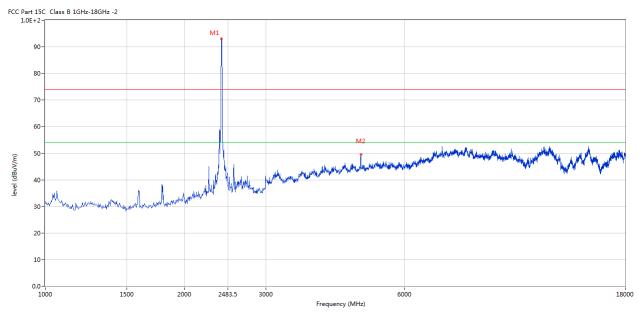


6.5 Test result

A Fundamental & Harmonics Radiated Emission Data

Please refer to the following test plots for details: Low Channel-2410MHz

Horizontal



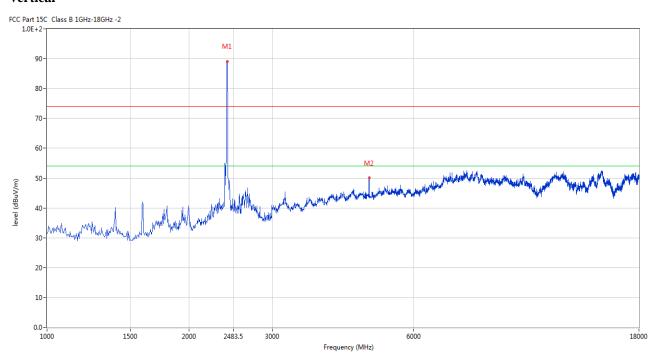
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2406.750	92.96	-3.57	114.0	-21.04	Peak	243.00	100	Horizontal	Pass
1*	2406.750	81.53	-3.57	94.0	-12.47	AV	243.00	100	Horizontal	Pass
2	4820.750	50.56	3.14	74.0	-23.44	Peak	273.00	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	2411.000	89.16	-3.57	114.0	-24.84	Peak	281.00	100	Vertical	Pass
2	4820.750	50.53	3.14	74.0	-23.47	Peak	202.00	100	Vertical	Pass

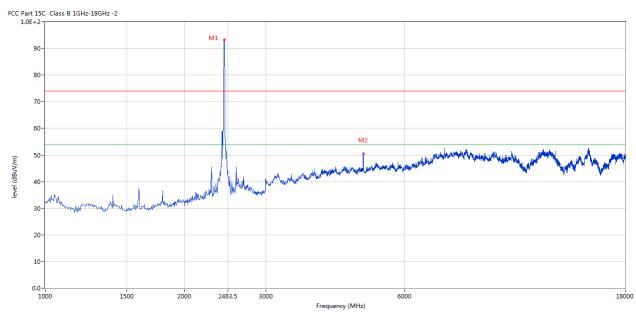
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Please refer to the following test plots for details: Middle Channel-2440MHz

Horizontal



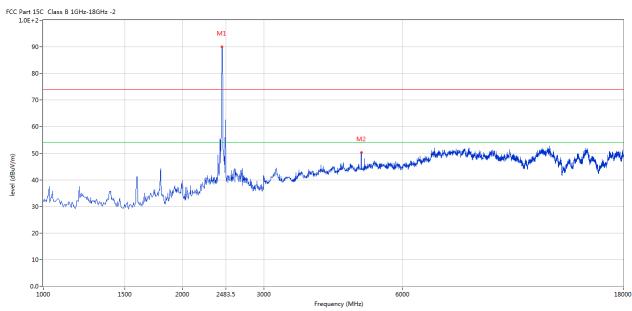
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2440.750	93.21	-3.57	114.0	-20.79	Peak	240.00	100	Horizontal	Pass
1*	2440.750	81.97	-3.57	94.0	-12.03	AV	240.00	100	Horizontal	Pass
2	4880.250	51.47	3.20	74.0	-22.53	Peak	277.00	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	2440.750	90.07	-3.57	114.0	-23.93	Peak	283.00	100	Vertical	Pass
2	4880.250	50.34	3.20	74.0	-23.66	Peak	206.00	100	Vertical	Pass

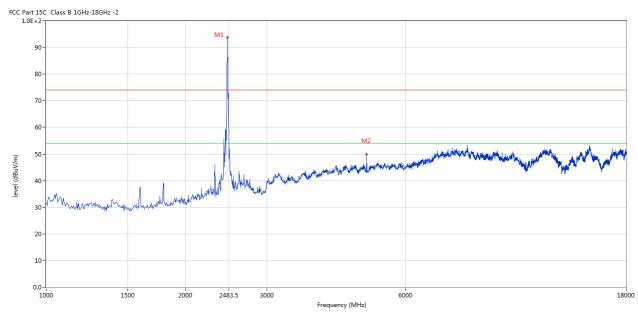
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Please refer to the following test plots for details: High Channel-2468MHz

Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2466.250	93.78	-3.57	114.0	-20.22	Peak	241.00	100	Horizontal	Pass
1*	2466.250	82.02	-3.57	94.0	-11.98	AV	241.00	100	Horizontal	Pass
2	4935.500	50.91	3.30	74.0	-23.09	Peak	271.00	100	Horizontal	Pass

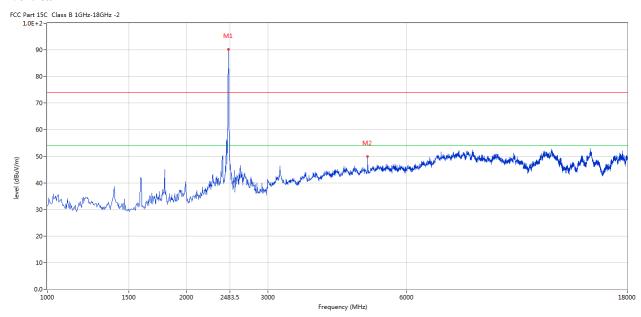
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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2466.250	90.28	-3.57	114.0	-23.72	Peak	282.00	100	Vertical	Pass
2	4935.500	50.86	3.30	74.0	-23.14	Peak	211.00	100	Vertical	Pass

Note: (2) Emission Level = Reading Level + Antenna Factor + Cable Loss-Amplifier

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

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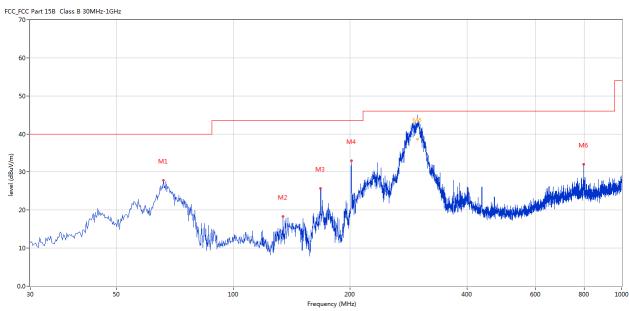


B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	66.123	27.78	-13.97	40.0	-12.22	Peak	11.00	100	Horizontal	Pass
2	134.249	18.32	-17.05	43.5	-25.18	Peak	169.00	100	Horizontal	Pass
3	167.706	25.68	-16.13	43.5	-17.82	Peak	166.00	100	Horizontal	Pass
4	201.405	33.00	-13.42	43.5	-10.50	Peak	181.00	100	Horizontal	Pass
5	298.138	44.90	-11.16	46.0	-1.10	Peak	28.00	100	Horizontal	Pass
5*	298.138	38.61	-11.16	46.0	-7.39	QP	28.00	100	Horizontal	Pass
6	797.321	31.98	-3.03	46.0	-14.02	Peak	115.00	100	Horizontal	Pass

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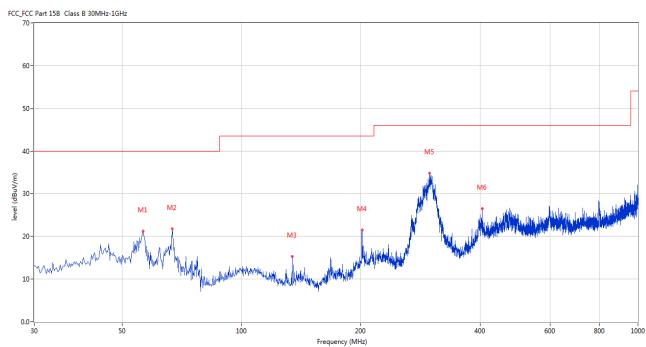


Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	56.426	21.26	-12.15	40.0	-18.74	Peak	62.00	100	Vertical	Pass
2	66.851	21.72	-14.24	40.0	-18.28	Peak	91.00	100	Vertical	Pass
3	134.249	15.34	-17.05	43.5	-28.16	Peak	266.00	100	Vertical	Pass
4	201.405	21.46	-13.42	43.5	-22.04	Peak	294.00	100	Vertical	Pass
5	297.653	34.79	-11.13	46.0	-11.21	Peak	69.00	100	Vertical	Pass
6	405.054	26.45	-8.63	46.0	-19.55	Peak	29.00	100	Vertical	Pass

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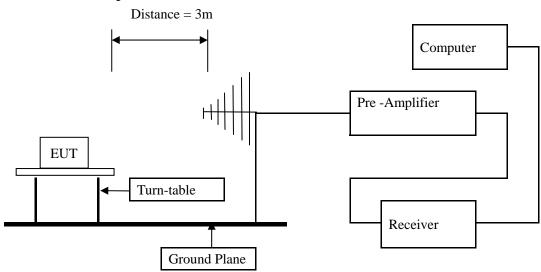


7. Band Edge

7.1 Test Method and test Procedure:

- (1) The EUT was tested according to ANSI C63.10–2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) Set Spectrum as RBW=1MHz, VBW=3MHz and Peak detector used for PK value. RBW=1MHz, VBW=10Hz and Peak detector used for AV value.
- (3) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (4) The antenna polarization: Vertical polarization and Horizontal polarization.

7. 2 Radiated Test Setup



For the actual test configuration, please refer to the related items – Photos of Testing

7.3 Configuration of The EUT

Same as section 5.3 of this report

7.4 EUT Operating Condition

Same as section 5.4 of this report.

7.5 Band Edge Limit

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

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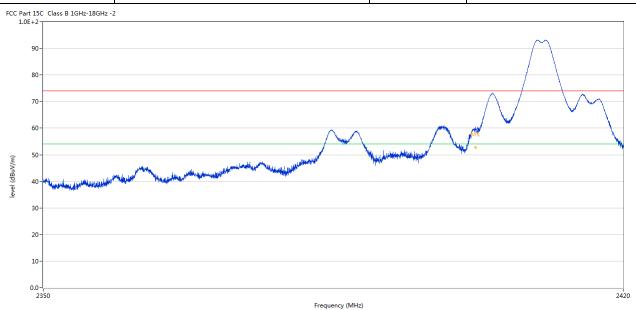
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7.6 Test Result

Product:	MECHANICAL GAMING KEYBOARD	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



		ı		I	<u> </u>	1	1	ı	I	
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2400.958	60.51	-3.57	74.0	-13.49	Peak	210.00	100	Horizontal	Pass
1**	2400.958	52.66	-3.57	54.0	-1.34	AV	210.00	100	Horizontal	Pass
2	2398.142	60.98	-3.56	74.0	-13.02	Peak	238.00	100	Horizontal	Pass
3	2390.810	51.63	-3.53	74.0	-22.37	Peak	205.00	100	Horizontal	Pass
4	2387.502	58.97	-3.52	74.0	-15.03	Peak	202.00	100	Horizontal	Pass
4*	2387.502	48.13	-3.52	54.0	-15.87	AV	202.00	100	Horizontal	Pass
5	2384.562	59.41	-3.51	74.0	-14.59	Peak	202.00	100	Horizontal	Pass
5*	2384.562	48.92	-3.51	54.0	-5.08	AV	202.00	100	Horizontal	Pass

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4**

2384.457

44.81

-3.51

54.0



F	Product:	MECHA	NICAL (GAMING K	EYBOARD	Detect	tor	•	Vertical	
	Mode		Keeping	g Transmitti	ng	Test Vol	tage	I	DC3.7V	
Ter	mperature			deg. C,		Humid		5	66% RH	
	st Result:			Pass						
Part 15 1.0E+2	5C Class B 1GHz-18GHz	z -2					<u>'</u>			
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20 10 0.0)-		and the second s							
20 10 0.0					Frequency (MI	Hz)				
20 10 0.0		Results	Factor	Limit		Hz) Detector	Table (o)	Height	ANT	Verdi
20 10 0.0)- - - - - - -				Frequency (MI	I	Table (o)	Height (cm)	ANT	Verdi
20 10 0.0	Frequency	Results	Factor	Limit	Frequency (MI	I	Table (o)		ANT Vertical	
30 20 10 0.0	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Frequency (MI Over Limit (dB)	Detector	. ,	(cm)		Pass
20 10 0.0 20 No.	Frequency (MHz) 2400.712	Results (dBuV/m) 54.85	Factor (dB)	Limit (dBuV/m) 74.0	Frequency (Mi Over Limit (dB) -19.15	Detector Peak	332.00	(cm) 100	Vertical	Verdi Pass Pass Pass
30 20 10 0.0 2	Frequency (MHz) 2400.712	Results (dBuV/m) 54.85 44.75	Factor (dB) -3.57	Limit (dBuV/m) 74.0 54.0	Frequency (MI Over Limit (dB) -19.15 -9.25	Detector Peak AV	332.00 332.00	(cm) 100 100	Vertical Vertical	Pass Pass
30 20 10 0.0.;;	Frequency (MHz) 2400.712 2400.712 2389.917	Results (dBuV/m) 54.85 44.75 54.34	Factor (dB) -3.57 -3.57	Limit (dBuV/m) 74.0 54.0 74.0	Frequency (MI Over Limit (dB) -19.15 -9.25 -19.66	Peak AV Peak	332.00 332.00 116.00	(cm) 100 100	Vertical Vertical Vertical	Pass Pass Pass
30 20 10 0.0.2 20 10 10 11 11 11 22 22*	Frequency (MHz) 2400.712 2400.712 2389.917 2389.917	Results (dBuV/m) 54.85 44.75 54.34 43.90	Factor (dB) -3.57 -3.57 -3.53	Limit (dBuV/m) 74.0 54.0 74.0	Frequency (MI Over Limit (dB) -19.15 -9.25 -19.66 -10.10	Peak AV Peak AV	332.00 332.00 116.00 116.00	(cm) 100 100 100 100	Vertical Vertical Vertical Vertical	Pass Pass Pass Pass

-9.19

ΑV

284.00

100

Vertical

Pass

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Product:	MECHANIC	CAL GAMING K	EYBOARD	Polarity	7		Horizontal	
Mode	Ke	eeping Transmitti	ng	Test Volta	age		DC3.7V	
Temperature		24 deg. C,		Humidit	.y		56% RH	
Test Result:		Pass						
CC Part 15C Class B 1GHz-18GH:	: -2							
90 - 80 - 70 -			, mh					
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50- 50- 40- 30-					- Tanga kalang kalandar	wholesaya para da fatal (a		shirtan side and
50- 40- 30-			Frequency (MHz)	2483.5	- Carnel Asiably Habert	which was spring have the first has the	and the same of th	2500
30 - 20 - 2460	Results Fa	actor Limit	1	2483.5	Table (o)	Height	ANT	
30- 20- 10- 2460	Results Fa		1	2483.5				2500

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Date: 2021-04-20



Product:		MECHANICAL GAMING KEYBOARD					tor	Vertical			
Mode			Keeping	g Transmitti	ng	Test Vol	tage	DC3.7V			
Temperature		24 deg. C,			Humid	lity	56% RH				
Tes	t Result:		Pass								
CC Part 150 1.0E+2-	Class B 1GHz-18GHz	-2					•				
90 - 80 - 70 -				~	M						
(E//NP) 40- 30- 20-						A SAME OF THE SAME	والمستخد المستخدم والمستخدم والمستخد	Maria para tanàna maka terdapa da 18	and and the state of	ind the first figure of the	
(W) 50- (W) 40- 30- 30- 10-	160				Frequency (MHz)	2483.5	adella in la propinsi in de ser in maria	Marine production of such principle and the	and the standard property of the standard prop	2500	
30- 10- 24		Results	Factor	Limit	Frequency (MHz) Over Limit	2483.5	Table (o)	Height	ANT		
(W) 50- (W) 40- 30- 30- 10-	160	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)		2483.5	The second secon	THE SECTION SECTION		2500	

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

2. This is a handhold device. The radiated emissions should be tested under 3-axes position (Lying, Side, and Stand), After pre-test. It was found that the worse radiated emission was get at the lying position.

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8.0 Antenna Requirement

Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section.

This product has a PCB antenna. The antenna gain is -2.0dBi Max. It fulfills the requirement of this section. Test Result: Pass

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Product:	MECHANICAL GAMING KEYBOARD					Test Mode:			Keep transmitting			
Mode		Keepi	ng Transm	nitting		Tes	t Voltage		DC3			
Temperature	24 deg. C,					Humidity			56% RH			
Test Result:			Pass				etector		PK			
dB Bandwidth		2.244MHz										
``	Marker 1 [T1 ndB]					3W	100 k	Iz RF Att 20		20 dB		
Ref Lvl	n	ndB	20.	.00 dB	VI	3W	300 k	Hz				
30 dBm	E	BW 2	2.244488	398 MHz	SI	VТ	5 m	s t	Jnit	dBr	n	
30							v ₁	[T1]	-:	2.99 dBn		
									2.41053	3607 GHz	A	
20							ndB		20	0.00 dB	1	
							BW		2.24448			
10							$ abla_{\mathrm{T1}}$	[T1]	-2:	2.54 dBm		
							V	[T1]	2.40889	279 GHz 2.87 dBn		
0						1	. 1 &	[11]	2.41113	2.87 GHz		
1MAX			/	M					2.1111	727 3112	1M	
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Who have									40*	M		
-50												
-60												
-70 Center 2.	41 CUE			500	kHz/				Cni	an 5 MHz		
CEIICEI Z.	ri Gnz			200	17114/				SPo	11112 ₪ נוג		

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Product:	MECHANICAL GAMING KEYBOARD				Test Mode:		Keep transmitting			
Mode	Keepin	To	Test Voltage		DC3.7V					
Temperature	2	4 deg. C,			Humidity		56%	6 RH		
Test Result:		Pass					PK			
20dB Bandwidth	2.									
R)	Marker	F	RBW	100 kH	Iz R	F Att	20 dB			
Ref Lvl	ndB 20.00 dB			/BW	300 kH		z			
30 dBm	BW 2	2.27454910 MHz	Ş	SWT	5 ms	s U:	nit	dBm	l	
30					v ₁	[T1]	-1	.91 dBm	Α	
							2.44055	611 GHz	A	
20					ndB		20	.00 dB		
					BW		2.27454			
10					$\nabla_{\mathrm{T}_1^{\prime}}$	[T1]	-22 2.43887	.22 dBm		
					$\nabla_{\mathbf{T}}$	[T1]	-2.43007 -21	275 GHz .28 dBm		
0					1		2.44114	729 GHz		
1MAX		/\(\frac{1}{2}\)	M.						1MA	
-10	TIA	mark 1		8	Man and a second	T 2				
-20						X.				
-30	many /					1	Market Commence	NA NA		
-40								A 7		
-50										
-60										
-70		_								
Center 2	.44 GHz	500	kHz/				Spa	n 5 MHz		
Date: 1	4.APR.2021 10	:19:51								

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Product:	MECHANICAL	T	est Mode:		Keep transmitting				
Mode	Keepin	Test Voltage		DC3.7V					
Temperature	2	Humidity		56% RH					
Test Result:		Detector		PK					
20dB Bandwidth	2.								
	Marker 1 [T1 ndB] ndB 20.00 dB BW 2.22444890 MHz			BW	100 kH		7 Att	20 dB	
Ref Lvl 30 dBm				BW 300 l WT 5 r				dBm	
30									l
					V 1 [T1]	-3 2.46752	.08 dBm 405 GHz	A
20					ndB		20	.00 dB	
					BW		2.22444	890 MHz	
10					$ abla_{\mathrm{T1}}$	[T1]	-24	.09 dBm	
					7		2.46691		
0					∇_{T2}	[T1]	-22	.46 dBm	
1MAX		, Tu			\		2.46913	727 GHz	1MA
-10		- Ingeria	Mary Mary	~/					
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-50									
-60									
-70 Center 2	. 468 GHz	500	kHz/				Sna	n 5 MHz	
	1.APR.2021 10								

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10.0 FCC ID Label

FCC ID: TUVET-8486

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:



FCC Label Location

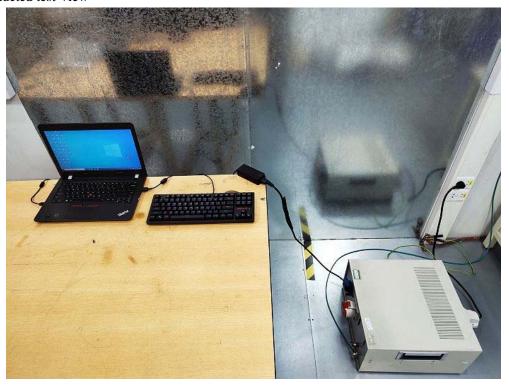
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11.0 Photo of testing

11.1 Conducted test View--



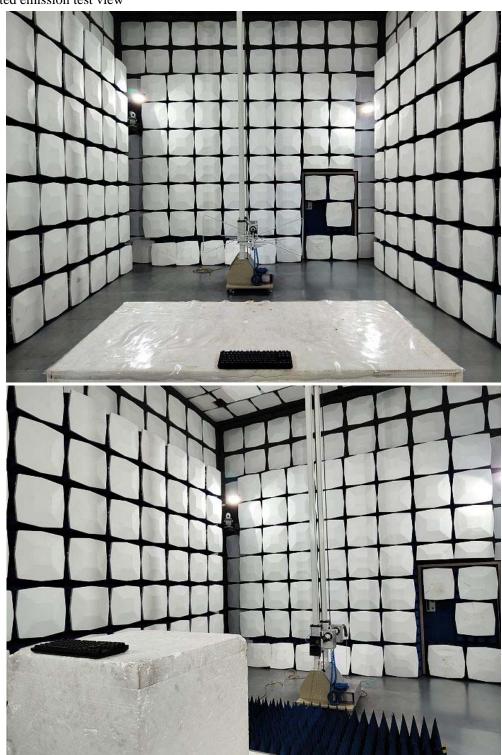
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Radiated emission test view



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11.2 Photographs – EUT

Outside View



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Photographs - EUT

Outside View



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Outside view



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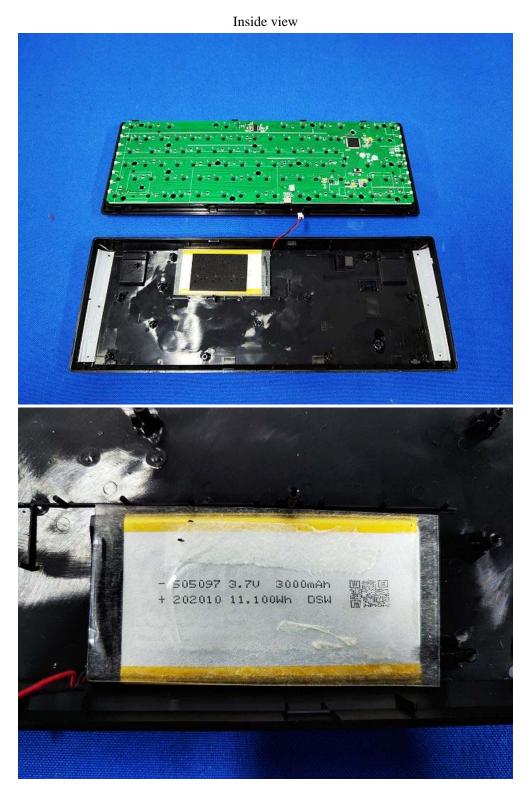
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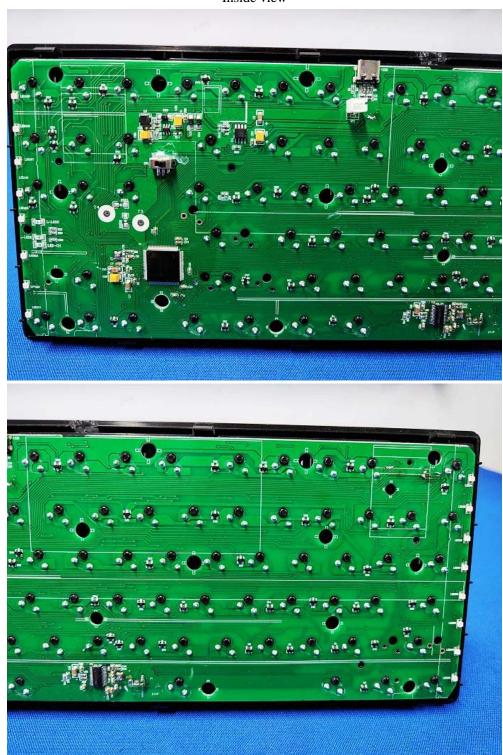
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Inside view



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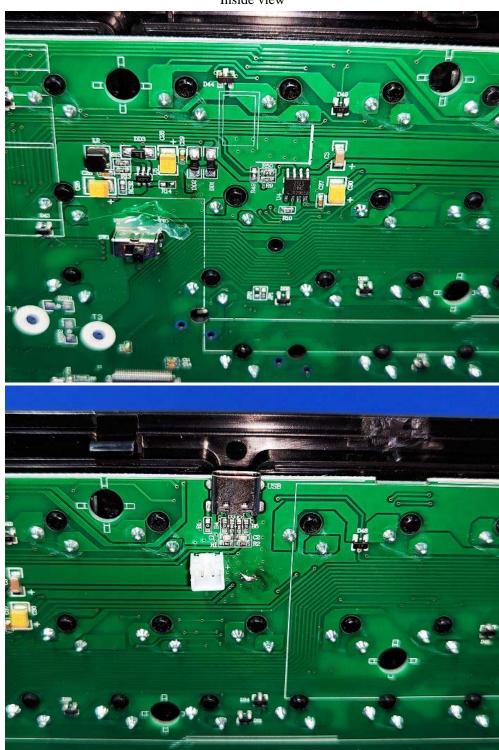
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Inside view



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Date: 2021-04-20



Inside view



-- End of the report--

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

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