

File reference No.: 2022-08-30

Applicant: Eastern Times Technology Co.,Ltd

Product: WIRED/2.4G/BT 68 KEYS GAMING KEYBOARD

Model No.: K631RGB-PRO-BRW, ET-8677, K631RGB-PRO, ET-8538,

ET-8539, ET-8678, ET-8744, ET-8745, ET-8754, ET-8755

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: August 30, 2022

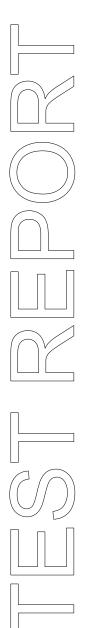
Results appearing herein relate only to the sample tested

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

SHENZHEN TIMEWAY TESTING LABORATORIES

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

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



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Special Statement:

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

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

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

CNAS-LAB Code: L2292

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2017 General Requirements) for the Competence of testing Laboratories.

FCC-Registration No.: 744189

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

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

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

A2LA (Certification Number:5013.01)

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

Date: 2022-08-30



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.

Telephone: -Fax: --

1.3 Description of EUT

Product: WIRED/2.4G/BT 68 KEYS GAMING 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: K631RGB-PRO-BRW

Additional Model Name ET-8677, K631RGB-PRO, ET-8538, ET-8539, ET-8678, ET-8744, ET-8745,

ET-8754, ET-8755

Rating: DC5.0V, 660mA or DC3.7V, 216mA Battery DC3.7V, 1600mAh Li-ion battery

Modulation Type: GFSK

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

Hardware Version: 8899-A TX V1

Software Version: 214C

Serial No.: RDK631RGB-PRO-BRW22090100001

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Antenna Designation PCB antenna with gain 0.11dBi Max (Get from the antenna specification)

1.4 Submitted Sample: 1 Sample

1.5 Test Duration

2022-08-08 to 2022-08-30

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

Andy - May

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	2022-07-15	2023-07-14
LISN	R&S	EZH3-Z5	100294	2022-07-18	2023-07-17
LISN	R&S	EZH3-Z5	100253	2022-07-18	2023-07-17
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2022-07-18	2023-07-17
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17
Spectrum	R&S	FSIQ26	100292	2022-07-15	2023-07-14
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2024-07-17
Power meter	Anritsu	ML2487A	6K00003613	2022-07-18	2023-07-17
Power sensor	Anritsu	MA2491A	32263	2022-07-18	2023-07-17
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17
9*6*6 Anechoic			N/A	2022-07-26	2025-07-25
EMI Test Receiver	RS	ESVB	826156/011	2022-07-15	2023-07-14
EMI Test Receiver	RS	ESCS 30	834115/006	2022-07-15	2023-07-14
Spectrum	HP/Agilent	E4407B	MY50441392	2022-07-15	2023-07-14
Spectrum	RS	FSP	1164.4391.38	2022-07-15	2023-07-14
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA	1	2022-07-15	2023-07-14
RF Cable	Zhengdi	7m	1	2022-07-15	2023-07-14
Pre-Amplifier	Schwarebeck	BBV9743	#218	2022-07-15	2023-07-14
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2022-07-15	2023-07-14
LISN	SCHAFFNER	NNB42	00012	2022-08-18	2023-07-17
ESPI Test Receiver	R&S	ESPI 3	100379	2022-07-15	2023-07-14
LISN	R&S	EZH3-Z5	100294	2022-07-18	2023-07-17

2.2 Automation Test Software

For Conducted Emission Test

Name	Version		
EZ-EMC	Ver.EMC-CON 3A1.1		

For Radiated Emissions

Name	Version
EMI Test Software BL410-EV18.91	V18.905
EMI Test Software BL410-EV18.806 High Frequency	V18.06

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Technical Details 3.0

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 and RSS-210	Radiated Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies

3.2 **Test Standards**

FCC Part 15 Subpart C, Paragraph 15.249, ANSI C63.4:2014 and ANSI C63.10:2013

4.0 **EUT Modification**

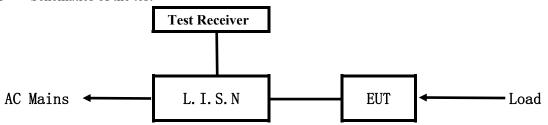
No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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5. Power Line Conducted Emission Test

5.1 Schematics of the test

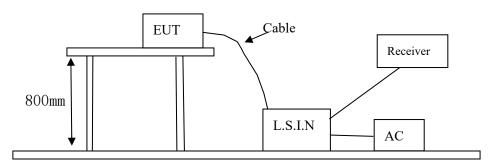


EUT: Equipment Under Test

5.2 Test Method and test Procedure

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

Test Voltage: 120V~, 60Hz Block diagram of Test setup



5.3 Configuration of The EUT

The EUT was configured according to ANSI C63.4-2014. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

16 channels are provided to the EUT

A. EUT

Device	Manufacturer	Model	FCC ID
WIRED/2.4G/BT 68	Eastern Times	K631RGB-PRO-BRW, ET-8677,	
KEYS GAMING	Eastern Times	K631RGB-PRO, ET-8538, ET-8539, ET-8678,	TUVET-8677
KEYBOARD	Technology Co.,Ltd	ET-8744, ET-8745, ET-8754, ET-8755	

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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 C63.4 -2014

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

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB μ V)				
(MHz)	Quasi-peak Level	Average Level			
$0.15 \sim 0.50$	66.0~56.0*	56.0~46.0*			
$0.50 \sim 5.00$	56.0	46.0			
5.00 ~ 30.00	60.0	50.0			

Notes:

- 1. *Decreasing linearly with logarithm of frequency.
- 2. The tighter limit shall apply at the transition frequencies

5.6 Test Results:

Pass

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

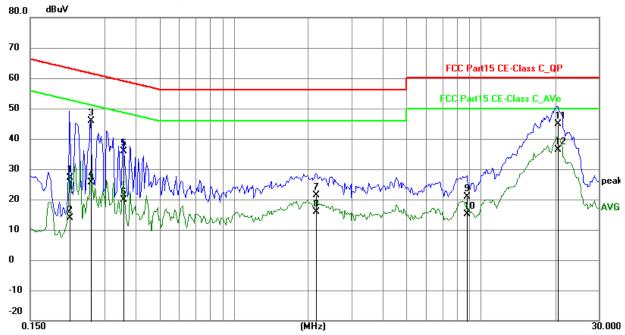
EUT Operating Environment

Temperature: 26°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	0.2163	17.37	9.75	27.12	62.96	-35.84	QP	Р
2	0.2163	4.17	9.75	13.92	52.96	-39.04	AVG	Р
3	0.2631	36.18	9.75	45.93	61.33	-15.40	QP	Р
4	0.2631	15.82	9.75	25.57	51.33	-25.76	AVG	Ъ
5	0.3567	26.13	9.76	35.89	58.80	-22.91	QP	П
6	0.3567	10.14	9.76	19.90	48.80	-28.90	AVG	Р
7	2.1507	11.51	9.81	21.32	56.00	-34.68	QP	Р
8	2.1507	6.15	9.81	15.96	46.00	-30.04	AVG	Р
9	8.7837	10.81	10.10	20.91	60.00	-39.09	QP	Л
10	8.7837	5.02	10.10	15.12	50.00	-34.88	AVG	Р
11	20.4876	34.11	10.71	44.82	60.00	-15.18	QP	Р
12	20.4876	25.55	10.71	36.26	50.00	-13.74	AVG	Р

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

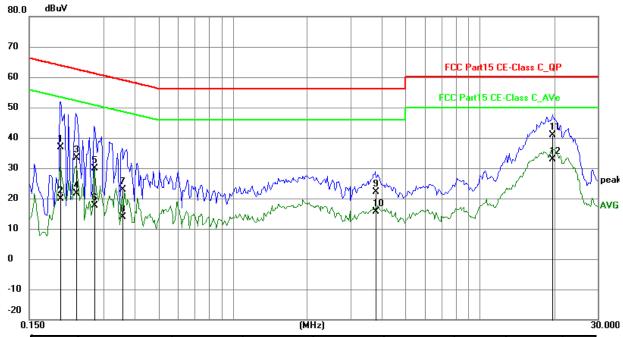
EUT Operating Environment

Temperature: 26°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	0.2007	27.16	9.75	36.91	63.58	-26.67	QP	Р
2	0.2007	10.01	9.75	19.76	53.58	-33.82	AVG	Р
3	0.2319	23.64	9.75	33.39	62.38	-28.99	QP	Р
4	0.2319	11.83	9.75	21.58	52.38	-30.80	AVG	Р
5	0.2748	20.25	9.75	30.00	60.97	-30.97	QP	Ъ
6	0.2748	7.98	9.75	17.73	50.97	-33.24	AVG	J
7	0.3567	13.19	9.76	22.95	58.80	-35.85	QP	Р
8	0.3567	4.15	9.76	13.91	48.80	-34.89	AVG	Р
9	3.7800	12.21	9.88	22.09	56.00	-33.91	QP	П
10	3.7800	5.86	9.88	15.74	46.00	-30.26	AVG	Р
11	19.7154	30.33	10.66	40.99	60.00	-19.01	QP	Р
12	19.7154	22.25	10.66	32.91	50.00	-17.09	AVG	Р

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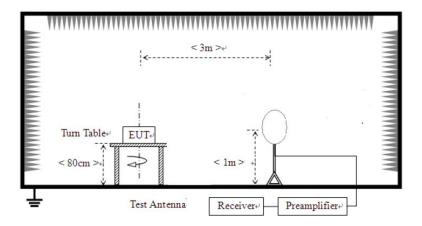


6 Radiated Emission Test

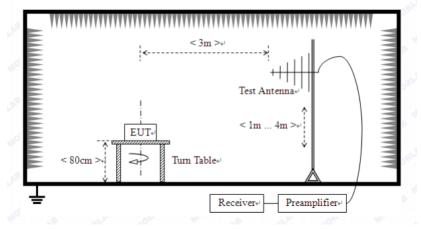
- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size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



For radiated emissions from 30MHz to1GHz



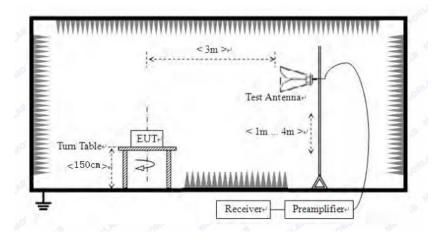
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For radiated emissions above 1GHz



- 6.2 Configuration of The EUT

 Same as section 5.3 of this report
- 6.3 EUT Operating Condition
 Same as section 5.4 of this report.
- 6.4 Radiated Emission Limit

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

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

Fundamental Frequency	Field Strength of Fundamental (3m)			Field S	trength of Harmo	onics (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.

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

	1	8 1
Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
0.009-0.490	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-80	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 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. 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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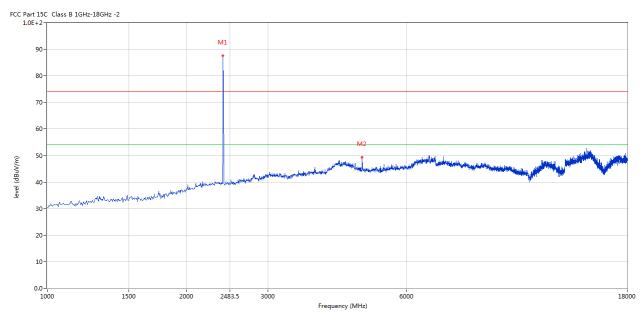


6.5 Test result

A Fundamental & Harmonics Radiated Emission Data

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

Horizontal



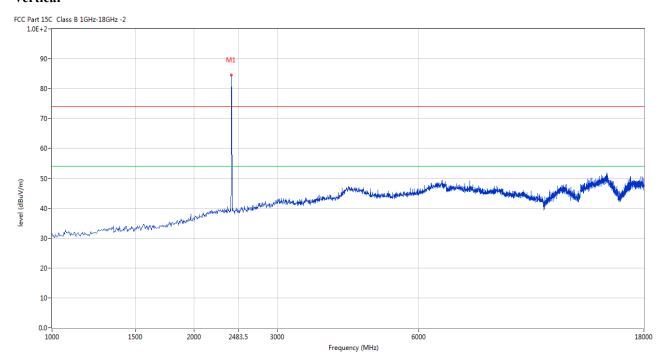
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2403	87.78	-3.57	114.0	-26.22	Peak	274.00	100	Horizontal	Pass
2	4802.799	49.35	3.12	74.0	-24.65	Peak	274.00	100	Horizontal	Pass

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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	2403	84.60	-3.57	114.0	-29.40	Peak	302.00	100	Vertical	Pass

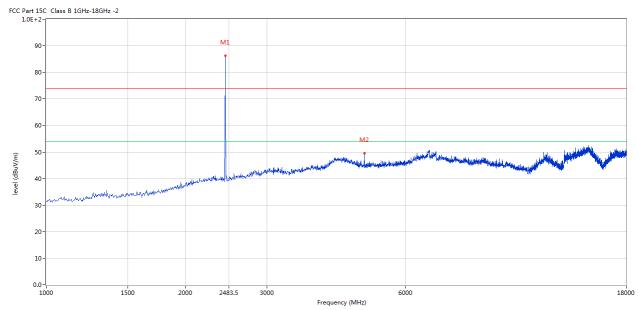
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Please refer to the following test plots for details: Middle Channel-2441MHz

Horizontal



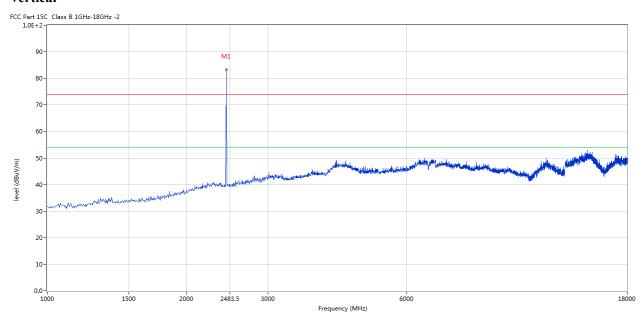
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2441	86.34	-3.57	114.0	-27.66	Peak	274.00	100	Horizontal	Pass
2	4883.529	49.53	3.20	74.0	-24.47	Peak	279.00	100	Horizontal	Pass

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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	83.28	-3.57	114.0	-30.72	Peak	360.00	100	Vertical	Pass

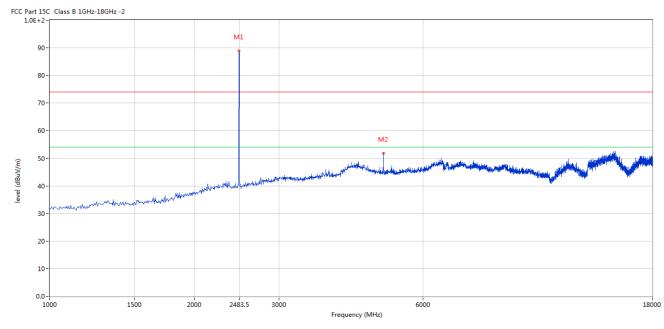
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Please refer to the following test plots for details: High Channel-2480MHz

Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	2480	88.93	-3.57	114.0	-25.07	Peak	269.00	100	Horizontal	Pass
2	4960.010	51.80	3.36	74.0	-22.20	Peak	91.00	100	Horizontal	Pass

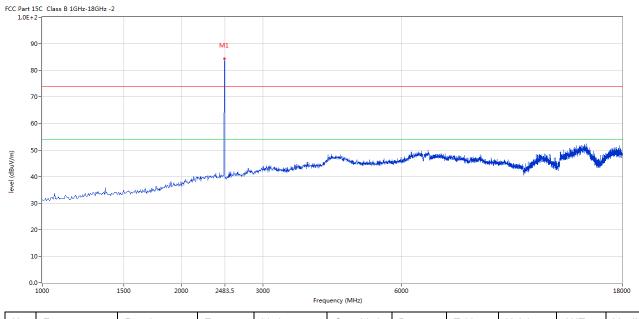
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Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	84.57	-3.57	114.0	-29.43	Peak	281.00	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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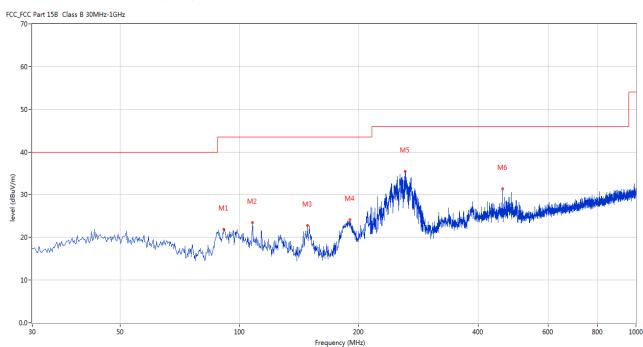


B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

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	91.337	21.88	-14.84	43.5	-21.62	Peak	0.00	200	Horizontal	Pass
2	107.823	23.51	-13.41	43.5	-19.99	Peak	208.00	100	Horizontal	Pass
3	148.310	22.76	-17.16	43.5	-20.74	Peak	291.00	200	Horizontal	Pass
4	189.768	24.17	-14.33	43.5	-19.33	Peak	178.00	200	Horizontal	Pass
5	261.772	35.41	-11.89	46.0	-10.59	Peak	267.00	100	Horizontal	Pass
6	461.300	31.33	-7.84	46.0	-14.67	Peak	82.00	200	Horizontal	Pass

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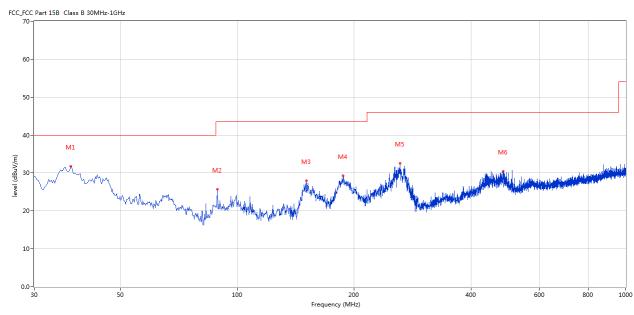


Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

Results: Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	37.273	31.78	-13.06	40.0	-8.22	Peak	3.00	100	Vertical	Pass
2	88.913	25.72	-15.46	43.5	-17.78	Peak	218.00	100	Vertical	Pass
3	150.492	27.92	-17.00	43.5	-15.58	Peak	110.00	100	Vertical	Pass
4	186.858	29.33	-14.65	43.5	-14.17	Peak	116.00	100	Vertical	Pass
5	262.499	32.54	-11.88	46.0	-13.46	Peak	0.00	200	Vertical	Pass
6	484.089	30.45	-7.35	46.0	-15.55	Peak	22.00	200	Vertical	Pass

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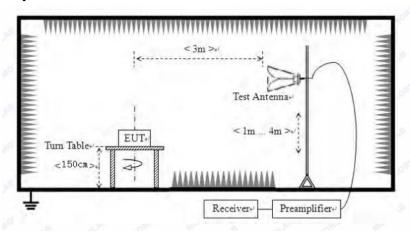


7. Band Edge

7.1 Test Method and test Procedure:

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

7. 2 Radiated Test Setup



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

7.3 Configuration of The EUT

Same as section 5.3 of this report

7.4 EUT Operating Condition

Same as section 5.4 of this report.

7.5 Band Edge Limit

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

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

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7.6 Test Result

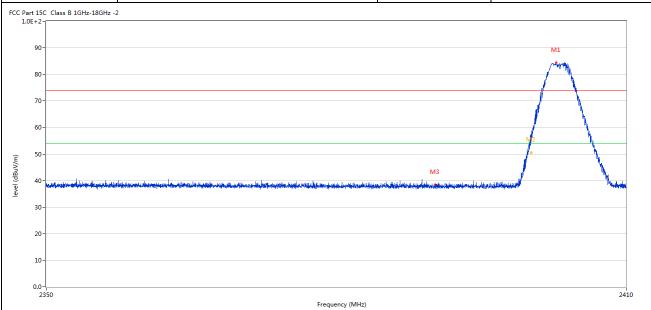
	Product:	WIRED/2.	4G/BT 68 KEYBO	KEYS GAMI ARD	NG	Polari	ity		Horizonta	al
	Mode	K	eeping Tra	nsmitting		Test Vol	tage		DC3.7V	r
Te	mperature		24 deg	. C,		Humid	lity		56% RH	[
Te	est Result:		Pass	S						
CC Part :	15C Class B 1GHz-18GHz	-2								
	90-								M1	
8	30-									
7	70-							- /		
6	50-								-	
								1	\ \	
<u> </u>	50-							M2	,	
(m/yudb) le		والمراجعة	ماليلية والتمنين ولواجه العالمة	المراجعة والمتحافظ والمتحا	المعدد معاملات الما	M3	روار فر مقراعة المستورية والروار والمواري	<i>f</i> •	1	\
level (dBuV/m		nelfet pelent siekenspyliks dischen zigen her sieber beiden.	ecknowed the description is the place the	وأرسا الحاجزة والمراجزة والمواجزة والمائة والمراجزة والمائة	de constitution de la constituti			<i>f</i> •	\	\ <u></u>
level (dBuV/m	10 - Huly and Hayres with Jackston and La	ndig telent, nik unter til den kommunik som selve beden.	الغاورات وينوا فالموراء	وأروب فالمراد والمرادية والموافقة والمرادية والموافقة	de constitue de la constitue d			<i>f</i> •	1	V
level (dBuV/m	10 - Karaman Ukaraman kalabah dalah	ndikhelara, nikunik da dalam nikulara da	nd worderd, hereby wourd a stable	وأدسا المفردية وهوي والانتخاص والمتعادث والمتعادث والمتعادث والمتعادث والمتعادث والمتعادث والمتعادث والمتعادث	dicentillation and			<i>f</i> •		\ <u></u>
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س/Agn (dBuv) ا	10	Results	Factor	Free	quency (MHz) Over Limit		Table	Height	ANT	2410 Verdict
M/(ngp) Javal	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	quency (MHz) Over Limit (dB)	Detector	Table (o)	Height (cm)		Verdict
(n)	Frequency (MHz) 2403.627	Results (dBuV/m) 87.53	Factor (dB) -3.57	Limit (dBuV/m) 74.0	quency (MHz) Over Limit (dB) 13.53	Detector Peak	Table (o) 282.00	Height (cm)	Horizontal	Verdict
ω(ngp) μολοί 3 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Frequency (MHz) 2403.627 2400.087	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m) 74.0 74.0	quency (MHz) Over Limit (dB) 13.53 -14.05	Detector	Table (o)	Height (cm)		Verdict
(n)	Frequency (MHz) 2403.627	Results (dBuV/m) 87.53	Factor (dB) -3.57	Limit (dBuV/m) 74.0 74.0	quency (MHz) Over Limit (dB) 13.53	Detector Peak	Table (o) 282.00	Height (cm)	Horizontal	Verdict

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Product:	WIRED/2.4G/BT 68 KEYS GAMING	Detector	Vertical
	KEYBOARD		
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		



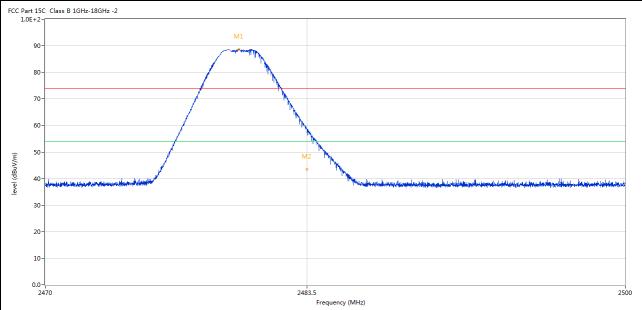
	No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
	1	2402.652	84.34	-3.57	74.0	10.34	Peak	299.00	100	Vertical	N/A
	2	2400.072	55.58	-3.57	74.0	-18.42	Peak	360.00	100	Vertical	Pass
	2**	2400.072	50.51	-3.57	54.0	-3.49	AV	360.00	100	Vertical	Pass
	3	2390.055	38.49	-3.53	74.0	-35.51	Peak	115.00	100	Vertical	Pass
۲			I	ı	<u>I</u>	I .	ı	I.		I.	ı

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Product:	WIRED/2.4G/BT 68 KEYS GAMING 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 Limit	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
	1	2479.973	88.65	-3.57	74.0	14.65	Peak	248.00	100	Horizontal	N/A
	2	2483.497	58.74	-3.57	74.0	-15.26	Peak	264.00	100	Horizontal	Pass
	2**	2483.497	43.49	-3.57	54.0	-10.51	AV	264.00	100	Horizontal	Pass
Г											

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]	Product:	WIRED/2.4	G/BT 68 I	KEYS GAMII	ARD	Detecto	r	Vertica	ıl	
	Mode		Keepir	ng Transmittii	-	Test Volta	DC3.7	V		
Te	mperature			Humidit	ty	56% R	Н			
Te	est Result:		24 deg. C, Pass							
CC Part 1 1.0E+	L5C Class B 1GHz-18GHz	-2				•				
9	0-		M1							
8	10-		1							
7	0-									
6	50-									
Œ 5	0-									
5 (m//mgp) av		and the second second		M2	Madding was admited	idas di cost y describit de parde ser	Principal Control of the Control of		والضيخط الموادية والمراجع الوراد المراجع المرا	hite after the
level (dBuV/m 4	10-	armanian de la companya de la compan		M2	Marin and a second	dast di cortistico di cidade di cida	oranietakaji karakajani	the second of th	المعرضاية ووارسوراورأر مادع غونالهما	the officer
m//uBuV/m 4	10-	and the second s		M2	The state of the s	ikan ikun japan, disilapah jung	- North Anglish den gebergened	n marika yi kupikan asa sin ma	التفريخوا فرتو وفرت فرياط أنديم فيوافأها	the officer
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امدوا (Agn(Agn) عاد المدوا (Agn(Agn) عاد المدوا (Agn(Agn) عاد المدون ال	10	Results	Factor	2483.5		Detector	Table	Height	Baydila ol yayk kwashd	2500
لالم) المها (Band) المها (Band	0		Factor (dB)	2483.5 Fre	quency (MHz)					2500
لالم) المها (Band) المها (Band	00- 00- 00- 00- 00- 00- 00- 00- 00- 00-	Results		2483.5 Fre	quency (MHz) Over Limit		Table	Height		2500
ル/(ngp) Java 4 3 2 1 1 0.	Frequency (MHz)	Results (dBuV/m)	(dB)	2483.5 Fre Limit (dBuV/m)	quency (MHz) Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	2500 Verdic

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

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8.0 Antenna Requirement

Applicable Standard

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

This product has a PCB antenna. The antenna gain is 0.11dBi Max. It fulfills the requirement of this section. Test Result: Pass

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9.0 20dB Bandwidt												
Product:	WIRED/2.4G/BT 68 KEYS GAMING KEYBOARD					Test Mode:			Keep transmitting			
Mode		Keepi	ng Transm	nitting		Te	st Voltage		DC3	.7V		
Temperature			24 deg. C,			F	Humidity		56%	RH		
Test Result:			Pass]	Detector		PF	ζ		
20dB Bandwidth			2.495MHz	[
Ref Lvl		ndB		.00 dB		ЗW	100 ki	Hz	F Att	20 dB		
10 dBm		BW 2	2.494989	998 MHz	Sī	TV	5 m	s Ui	nit	dBn	n -	
							v ₁	[T1]	-12 2.40240	.92 dBm 381 GHz	A	
0							ndB BW		202.49498	.00 dB 998 MHz		
-10			1				$ abla_{\mathrm{T1}}$	[T1]	-33	.03 dBm		
-20			\bigwedge	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		- A-C		[T1]	2.40169	238 GHz	1	
1MAX		مر		V		, -			2.40418	737 GHz	1MA	
-30	م سرب	-Andrews						Y				
-40	Jan Andrews							\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	munum	~ www		
-50										W W		
-60												
-70												
-80												
-90LLL Center 2.	403 GH	[z		500	kHz/				Spa	n 5 MHz	11	
Date: 20	.AUG.20	022 15	5:11:04						_			

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Product:	WIRED/2.4G/BT 68 KEYS GAMING KEYBOARD				est Mode:	Keep transmitting			
Mode	Keepin	Test Voltage			DC3.7V				
Temperature	2	4 deg. C,]	Humidity		56%	6 RH	
Test Result:		Pass			Detector		F	PK	
20dB Bandwidth	2.	465MHz							
(A)	Marker	1 [T1 ndB]	F	RBW	100 kHz	z RF	Att	20 dB	
Ref Lvl	ndB	20.00 d	В	/BW	300 kHz	z			
10 dBm	BW 2	2.46492986 M	Hz S	SWT	5 ms	Un	it	dBm	l
-10 -20 1MAX	TI WAR			~~~	ndB BW	[T1]	-11 2.44104 20 2.46492 -32 2.43972 -32 2.44218	.00 dB 986 MHz	A 1MA
-40	Lum					Mar	Mulmild		
-60									
-70									
-80									
	.441 GHz		00 kHz/				Spa	n 5 MHz	

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Product:	WIR	WIRED/2.4G/BT 68 KEYS GAMING KEYBOARD				Test Mode:			Keep transmitting		
Mode		Keeping Transmitting					Test Voltage		DC3.7V		
Temperature		2	4 deg. C,			1	Humidity			% RH	
Test Result:			Pass				Detector		I	PK PK	
20dB Bandwid	th	2	.515MHz								
Ref Lv 10 de		ndB	1 [T1 r 20. 2.515030	.00 dB	7	RBW 7BW SWT	100 kH 300 kH 5 ms	Iz	F Att	20 dB dBm	
10 -10 -20 1MAX -30 -40 -50 -60 -70		M. W.					ndB BW VT1	[T1] [T1]	-12 2.48005 20 2.51503 -32 2.47868 -32 2.48119	.00 dB 006 MHz .44 dBm 236 GHz	A 1MA
-90 Center	2.480 G	Hz		500	kHz/				Spa	ın 5 MHz	
Date:	20.AUG.:	2022 15	:18:56								

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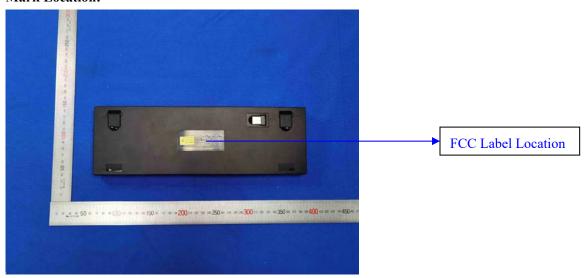
10.0 FCC ID Label

FCC ID: TUVET-8677

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--



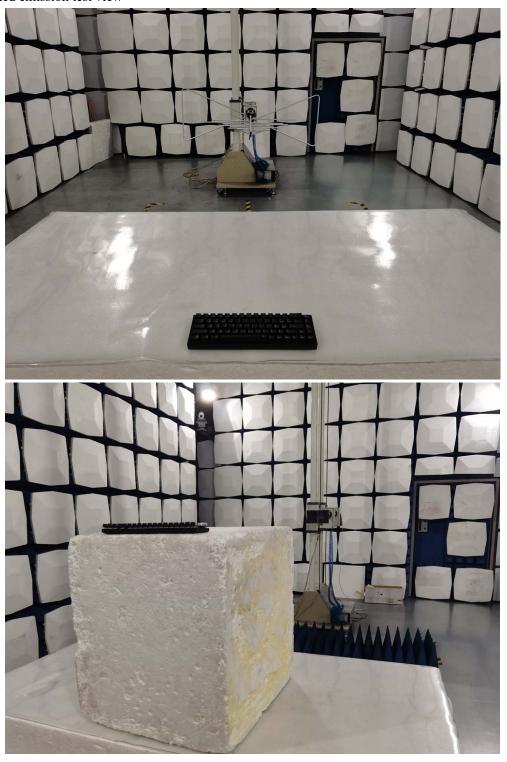
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Radiated emission test view



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

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11.2 Photographs - EUT



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adopt any other remedies which may be appropriate.

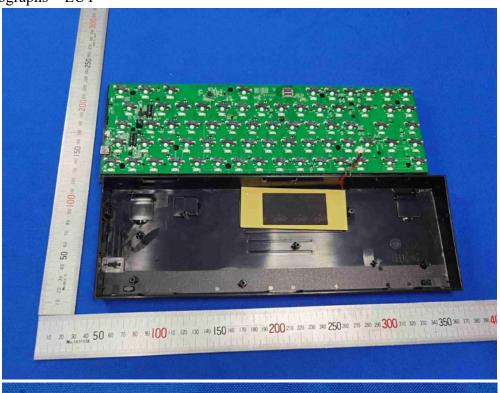
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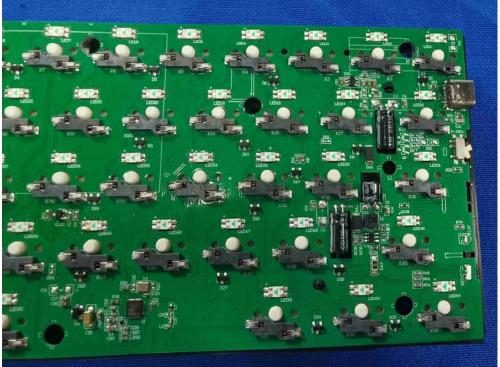
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Photographs – EUT





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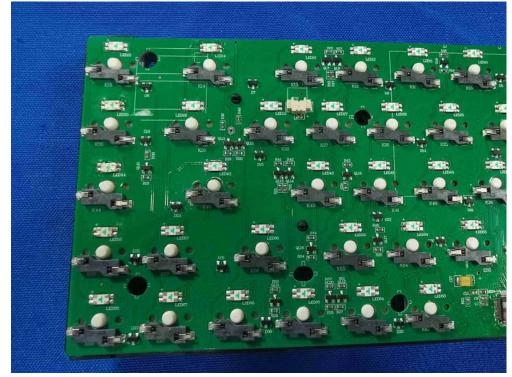
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Date: 2022-08-30



Photographs – EUT

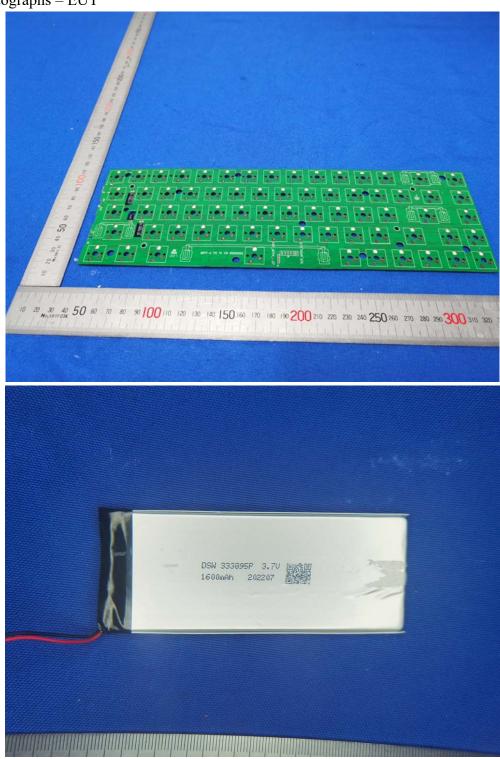




Date: 2022-08-30



Photographs – EUT



-End of the Report--

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

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