

Report No.:	TW2202100-01E		
File reference No.:	2022-03-25		
Applicant:	Eastern Times Technology Co.,Ltd		
Product:	WIRED/2.4G/BT MECHANICAL GAMING KEYBOARD		
Model No.:	K530RGB-PRO (see the page 4 for additional models)		
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			
Termy Tang			
Terry Tang			
Managar			

Manager

Dated:

March 25, 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



# **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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## 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<br/>Village, Nanshan District, Shenzhen, ChinaTelephone:(755) 83448688Fax:(755) 83442996Site on File with the Federal Communications Commission – United SatesRegistration Number: 744189For 3m Anechoic Chamber

#### 1.2 Applicant Details

Applicant:Eastern Times Technology Co.,LtdAddress:Building D, Nan An Industrial Area, Youganpu Village, Fenggang Town, Dongguan City,<br/>Guangdong, China.Telephone:--Fax:--

1.3 Description of EUT

Product:	WIRED/2.4G/BT MECHANICAL 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:	K530RGB-PRO
Additional Model Name	K530W-RGB-PRO, ET-8639, ET-8547, K530-OG&GY&BK-RGB-PRO,
	K530-OG&BK&GY-RGB-PRO, K530-YL&WT&GY-RGB-PRO,
	K530-YL&GY&WT-RGB-PRO, K530PW-RGB-PRO, K530WP-RGB-PRO
Rating:	DC5.0V, 620mAh or DC3.7V, 220mA
Battery	DC3.8V, 1600mAh Li-ion battery
Modulation Type:	GFSK
<b>Operation Frequency:</b>	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
Serial No.:	RDK530RGB-PRO21101800630
Antenna Designation	PCB antenna with gain -1.85dBi Max (Declared by the Manufacturer)

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#### 1.4 Submitted Sample: 1 Sample

- 1.5 Test Duration 2022-02-23 to 2022-03-25
- 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

Andy -Xing

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	2021-06-18	2022-06-17
LISN	R&S	EZH3-Z5	100294	2021-06-18	2022-06-17
LISN	R&S	EZH3-Z5	100253	2021-06-18	2022-06-17
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2021-06-18	2022-06-17
Loop Antenna	EMCO	6507	00078608	2021-06-18	2024-06-17
Spectrum	R&S	FSIQ26	100292	2021-06-18	2022-06-17
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2021-07-02	2024-07-01
Horn Antenna	R&S	BBHA 9120D	9120D-631	2021-07-02	2024-07-01
Power meter	Anritsu	ML2487A	6K00003613	2021-06-18	2022-06-17
Power sensor	Anritsu	MA2491A	32263	2021-06-18	2022-06-17
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2021-07-02	2024-07-01
9*6*6 Anechoic			N/A	2021-07-02	2022-07-01
EMI Test Receiver	RS	ESVB	826156/011	2021-06-18	2022-06-17
EMI Test Receiver	RS	ESH3	860904/006	2021-06-18	2022-06-17
Spectrum	HP/Agilent	ESA-L1500A	US37451154	2021-06-18	2022-06-17
Spectrum	HP/Agilent	E4407B	MY50441392	2021-06-18	2022-06-17
Spectrum	RS	FSP	1164.4391.38	2022-01-15	2023-01-14
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA		2021-06-18	2022-06-17
RF Cable	Zhengdi	7m		2021-06-18	2022-06-17
RF Switch	EM	EMSW18	060391	2021-06-18	2022-06-17
Pre-Amplifier	Schwarebeck	BBV9743	#218	2021-06-18	2022-06-17
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2021-06-18	2022-06-17
LISN	SCHAFFNER	NNB42	00012	2022-01-05	2023-01-04

#### 2.2 Automation Test Software

#### For Conducted Emission Test

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

#### For Radiated Emissions

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

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#### **3.0** Technical Details

#### 3.1 Summary of test results

The EUT has been tested according to the following specifications:				
Standard	Test Type	Result	Notes	
FCC Part 15, Paragraph 15.203	Antenna Requirement	Pass	Complies	
FCC Part 15, Paragraph 15.207	Conducted Emission Test	Pass	Complies	
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	Pass	Complies	
FCC Part 15, Paragraph 15.209 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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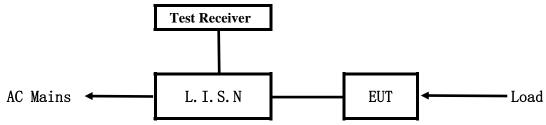
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# 5. Power Line Conducted Emission Test

5.1 Schematics of the test

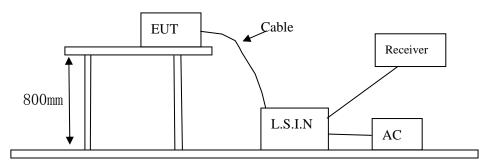


EUT: Equipment Under Test

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.

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
1 1.	<b>DU</b> I

Device	Manufacturer	Model	FCC ID
		K530RGB-PRO, K530W-RGB-PRO, ET-8639,	
WIRED/2.4G/BT		ET-8547, K530-OG&GY&BK-RGB-PRO,	
MECHANICAL	Eastern Times	K530-OG&BK&GY-RGB-PRO,	TUVET-8639
GAMING	Technology Co.,Ltd	K530-YL&WT&GY-RGB-PRO,	10101-8039
KEYBOARD		K530-YL&GY&WT-RGB-PRO,	
		K530PW-RGB-PRO, K530WP-RGB-PRO	

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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.	
$5.00 \sim 30.00$	60.0	50.0	

Notes: 1. \*Decreasing linearly with logarithm of frequency.

2. The tighter limit shall apply at the transition frequencies

# 5.6 Test Results:

Pass

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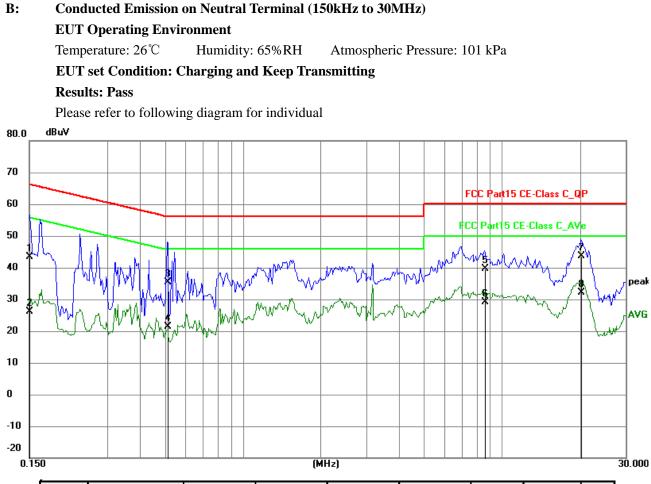
Conducted Emission on Live Terminal (150kHz to 30MHz) A: **EUT Operating Environment** Temperature: 26°C Humidity: 65%RH Atmospheric Pressure: 101 kPa **EUT set Condition: Charging and Keep Transmitting Results: Pass** Please refer to following diagram for individual dBu¥ 80.0 70 FCC Part15 CE-Class C\_QP 60 FCC Part 5 CE-Class C\_AVe 50 40 neak 30 AVG 20 10 0 -10 -20 0.150 (MHz) 30.000

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2280	36.51	9.75	46.26	62.52	-1 <mark>6</mark> .26	QP	Р
2	0.2280	12.92	9.75	22.67	<mark>52.52</mark>	-29.85	AVG	Р
3	1.3044	18.64	9.79	28.43	56.00	-27.57	QP	Ρ
4	1.3044	12.98	9.79	22.77	46.00	-23.23	AVG	Ρ
5	6.8220	25.94	10.00	35.94	60.00	-24.06	QP	Р
6	6.8220	16.22	10.00	26.22	50.00	-23.78	AVG	Ρ
7	20.0235	28.58	10.68	39.26	60.00	-20.74	QP	Р
8	20.0235	20.33	10.68	31.01	50.00	-18.99	AVG	Ρ

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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1500	33.56	9.79	43.35	66.00	-22.65	QP	Ρ
2	0.1500	16.44	9.79	26.23	56.00	-29.77	AVG	Ρ
3	0.5127	25.69	9.77	35.46	56.00	-20.54	QP	Ρ
4	0.5127	11.65	9.77	21.42	46.00	-24.58	AVG	Ρ
5	8.5731	29.47	10.09	39.56	60.00	-20.44	QP	Ρ
6	8.5731	18.96	10.09	29.05	50.00	-20.95	AVG	Р
7	20.2029	32.94	10.69	43.63	60.00	-16.37	QP	Ρ
8	20.2029	21.54	10.69	32.23	50.00	-17.77	AVG	Ρ

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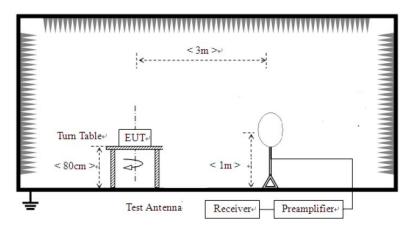


#### 6 Radiated Emission Test

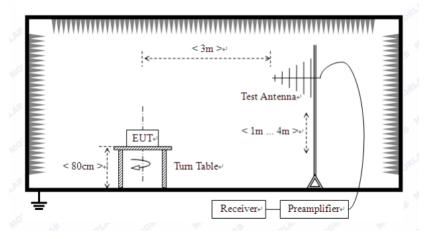
- 6.1 Test Method and test Procedure:
- The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is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

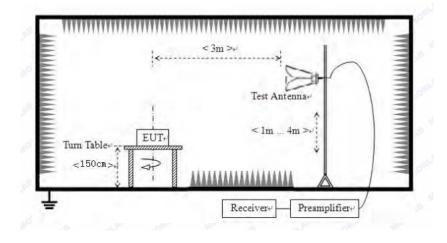


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For radiated emissions above 1GHz



- 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 Stre	ength of Fundame	ntal (3m)	Field St	trength of Harmo	onics (3m)
(MHz)	mV/m	dBu	V/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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#### Field strength (dB $\mu$ V/m) Frequency Range (MHz) Distance (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

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

Note: 1. RF Voltage  $(dBuV) = 20 \log RF$  Voltage (uV)

2. In the Above Table, the tighter limit applies at the band edges.

3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT

4. 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. 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.

7. Battery full charged during tests.

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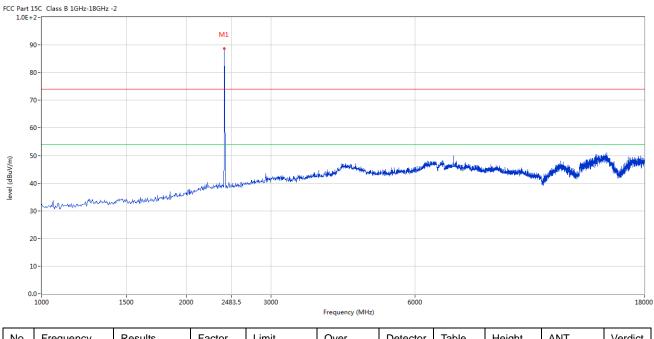


# 6.5 Test result

# 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	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2402.394	88.84	-3.57	114.0	-25.16	Peak	273.00	100	Horizontal	Pass

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## Vertical FCC Part 15C Class B 1GHz-18GHz -2 1.0E+2-90 М1 80 70 60 50 level (dBuV/m) 40 30 20 10 0.0-1500 2000 2483.5 3000 6000 18000 Frequency (MHz)

No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2402.394	83.41	-3.57	114.0	-30.59	Peak	85.00	100	Vertical	Pass

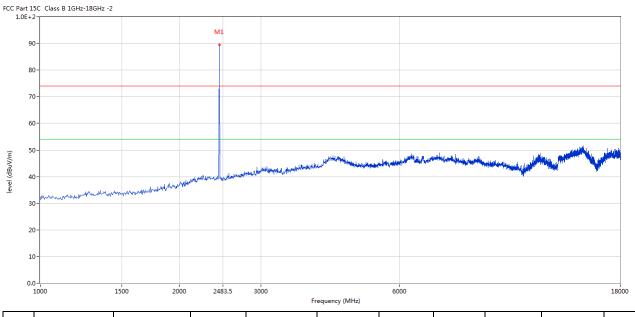
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# Please refer to the following test plots for details: Middle Channel-2441MHz

#### Horizontal



No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2440.384	89.41	-3.57	114.0	-24.59	Peak	276.00	100	Horizontal	Pass

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2440.384

1

82.88

-3.57

114.0

-31.12





74.00

100

Vertical

Pass

Peak

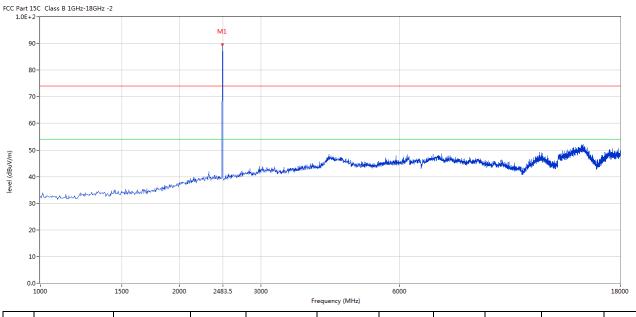
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# Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal

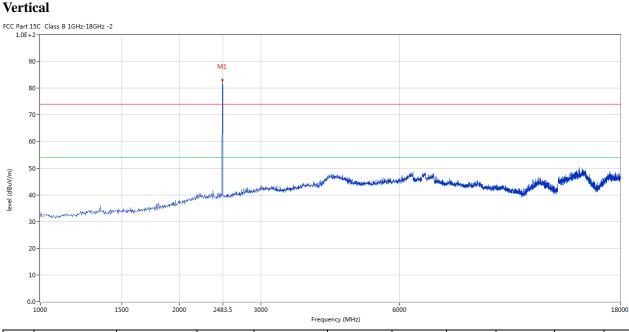


No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2479.394	89.57	-3.57	114.0	-24.43	Peak	268.00	100	Horizontal	Pass

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No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2479.394	83.23	-3.57	114.0	-30.77	Peak	72.00	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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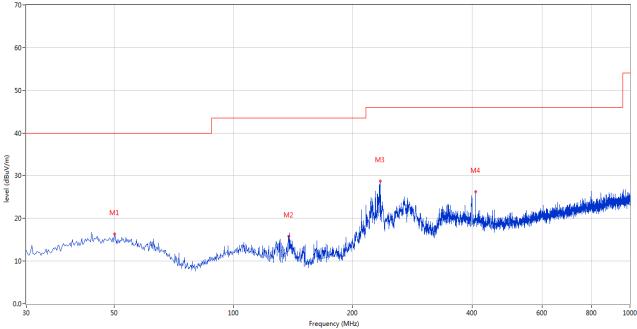
# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

## Results: Pass

Please refer to following diagram for individual

FCC\_FCC Part 15C Class B 30MHz-1GHz



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	50.122	16.39	-11.38	40.0	-23.61	Peak	93.00	100	Horizontal	Pass
2	137.643	15.88	-17.25	43.5	-27.62	Peak	320.00	100	Horizontal	Pass
3	234.376	28.70	-12.53	46.0	-17.30	Peak	0.00	100	Horizontal	Pass
4	407.963	26.28	-8.47	46.0	-19.72	Peak	189.00	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

FCC\_FCC Part 15C Class B 30MHz-1GHz

2

3

4

5

137.643

231.225

500.090

764.349

17.12

17.25

26.56

24.97

-17.25

-12.62

-6.91

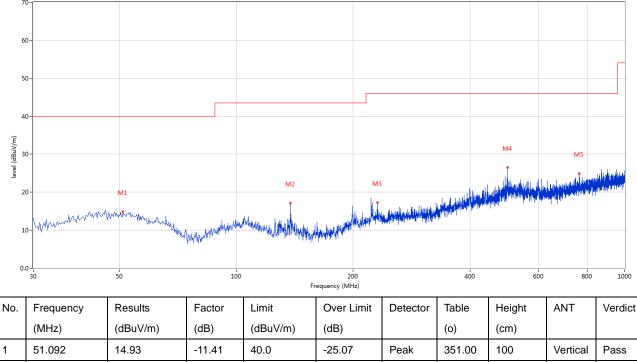
-3.25

43.5

46.0

46.0

46.0



-26.38

-28.75

-19.44

-21.03

Peak

Peak

Peak

Peak

100

100

100

100

Vertical

Vertical

Vertical

Vertical

Pass

Pass

Pass

Pass

356.00

360.00

353.00

338.00

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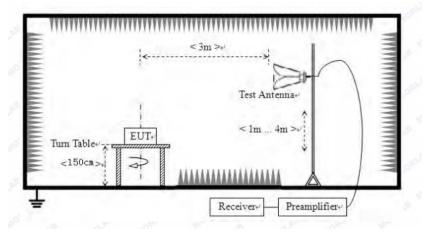


# 7. Band Edge

## 7.1 Test Method and test Procedure:

- 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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#### 7.6 Test Result

]	Product:			MECHANICA YBOARD	AL	Polari	ity		Horizonta	al
	Mode	K	eeping Tra	nsmitting		Test Vol	ltage		DC3.8V	r
Te	mperature		24 deg	. C,		Humid	lity		56% RH	[
Te	est Result:		Pass	5						
2 Part 1 1.0E+	L5C Class B 1GHz-18GHz 2-	-2								
g	10 -								M1	
	.0-								(MAN)	
									<u> </u>	
7	/0 -							1	Å	
6	i0 -							- /		
								M2	N	
. 5	i0 -								<u>۲</u>	
. 5		ale an attention and the second mean	ere er en beren uter	entropy and the second	dan da tu suda su ar	M3	.ne ilitetano anta marane		Ny	h
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• 4 3	10 - algenterski kalender og som at som a	รรับ	elen levet historiefte seeke	ontok ostanji socion nakoji svenimat	skáloslo křevnej beževeza říd	M3 Militaria Muangh ga	erafilikera ader itarie er	•	Å	Minakuk
• 4 3	10 - <mark>Alya Hawkawa ana aka aka aka aka aka aka aka aka ak</mark>	ปรับการที่มีรถที่เหลือเป็นที่การการที่ได้ที่เราจะการที่จะหัง	hlen koort isiden tillhessedir	çentek verden ji iç cişe, sakşil dere i berk	olatentre di sumuri kadena estaria	M3 รูร์รับกระหรักสารครับ	an the second	uuusiisee	, Mu	Malander,
. 4 3 2 1	10 - <mark>Ages Afgerdeland, son a star a star ages</mark> 10	iller och findensom kan det som som som som	eden der er för det an stellte som ber	ente a contra	ekstereler dezen gelanten ez det	M3 Marin Internet open ge	estiliken sieringen se	uuustud		2410
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. 4 3 2 1	0	Results	Factor			M3	Table	Height	ANT	2410 Verdict
. 4 . 3 . 2 . 1 . 0.	0			Fi	requency (MHz)		Table (o)	Height (cm)	ANT	r
. 4 . 3 . 2 . 1 . 0.	0	Results	Factor	Fi Limit	requency (MHz) Over Limit			-	ANT Horizontal	r
4 3 2 1 0 0	0	Results (dBuV/m)	Factor (dB)	Fi Limit (dBuV/m)	requency (MHz) Over Limit (dB)	Detector	(o)	(cm)		Verdict
3 2 1 0 No.	0 0 0 2350 Frequency (MHz) 2403.087	Results (dBuV/m) 88.11	Factor (dB) -3.57	Limit (dBuV/m) 74.0	requency (MHz) Over Limit (dB) 14.11	Detector Peak	(o) 273.00	(cm) 100	Horizontal	Verdict N/A

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]	Product:		D/2.4G/BT I AMING KE	MECHANIC EYBOARD	CAL	Detecto	or	V	Vertical	
	Mode	ŀ	Keeping Tra	ansmitting		Test Volt	age	Γ	DC3.8V	
Te	emperature		24 deg	g. C,		Humidi	ty	5	6% RH	
Te	est Result:		Pas	S						
CC Part 1 1.0E+	15C Class B 1GHz-18GHz	-2								
g	90 -							M1		
8	30 -							^		
-	70-									
								1	N.	
6	50 -									
(m/) 5	50-							•	<u>ا</u>	
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4 هدوا (ط8ر//ع 2 ع 1 م	10	tegelyen og kalles for som en som	anişl <sup>i</sup> şçı anaralış dişe sanının		is brind den in the state of th		iter i forder og gende	naun	1	2410
4 هدوا (ط8ر//ع 2 ع 1 م	10	Results	Factor				Table	Height	ANT	1
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evel (dBu//m 3 5 0	10	Results	Factor	Fre	rquency (MHz)	,	Table	Height	ANT	1
4 (dBn//m 2 1 0 No.	10	Results (dBuV/m)	Factor (dB)	Fre Limit (dBuV/m)	equency (MHz) Over Limit (dB)	Detector	Table (o)	Height (cm)		Verdio
المرابع 2 1 0 No.	10	Results (dBuV/m) 83.06	Factor (dB) -3.57	Fre Limit (dBuV/m) 74.0	over Limit (dB) 9.06	Detector Peak	Table (o) 77.00	Height (cm) 100	Vertical	Verdic N/A

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]	Product:	WIRED/		MECHANICA YBOARD	AL GAMIN	G	Polarit	у	Horizon	tal
	Mode		Keepin	g Transmittir	ıg	r	Test Volta	age	DC3.8	V
Te	mperature		2	4 deg. C,			Humidi	ty	56% R	Н
	est Result:			Pass						
CC Part 1 1.0E+	15C Class B 1GHz-18GHz	-2								
8	10 10 10		and the second sec	A CONTRACT OF CONTRACT						
evel (dBu//m 3 2	00	na daalaan yaa ahaa			No Calmente de constanción	ระระสมัย (การเรา (การเรา (การเรา)	<u>อาสารียาง</u> 	n de norden ander an	sanditasyan disaying sandi	<u>Uhborren</u>
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للس/Angp) 4 عاملوا (Internet of the second	10	Results	Factor			Detector	Table	Height	ANT	
evel (מאור/ש 3 2 0.	10		Factor (dB)		Frequency (MHz)					2500
evel (מאור/ש 3 2 0.	10	Results		Limit	Frequency (MHz)		Table	Height		2500
4 3 2 1 0. No.	10	Results (dBuV/m)	(dB)	Limit (dBuV/m)	Frequency (MHz) Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	2500 Verdic

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Product:		WIRED/2.4G/BT MECHANICAL GAMING KEYBOARD					Detector		Vertical	
	Mode		Keeping Transmitting 24 deg. C,					age	DC3.8V	
Te	mperature							ty	56% R	H
Te	est Result:		Pass							
CC Part 1 1.0E+	15C Class B 1GHz-18GHz	-2								
5 [eve] (qgn/\m) 3 2 1 0.	10 - 10 -			2483.5						2500
	1	-		Fre	quency (MHz)	1	1	1		1
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdie
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)	ļ	(o)	(cm)		
1	2479.920	83.18	-3.57	74.0	9.18	Peak	73.00	100	Vertical	N/A
	2483.489	53.27	-3.57	74.0	-20.73	Peak	78.00	100	Vertical	Pass

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 -1.85dBi Max. It fulfills the requirement of this section. Test Result: Pass

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

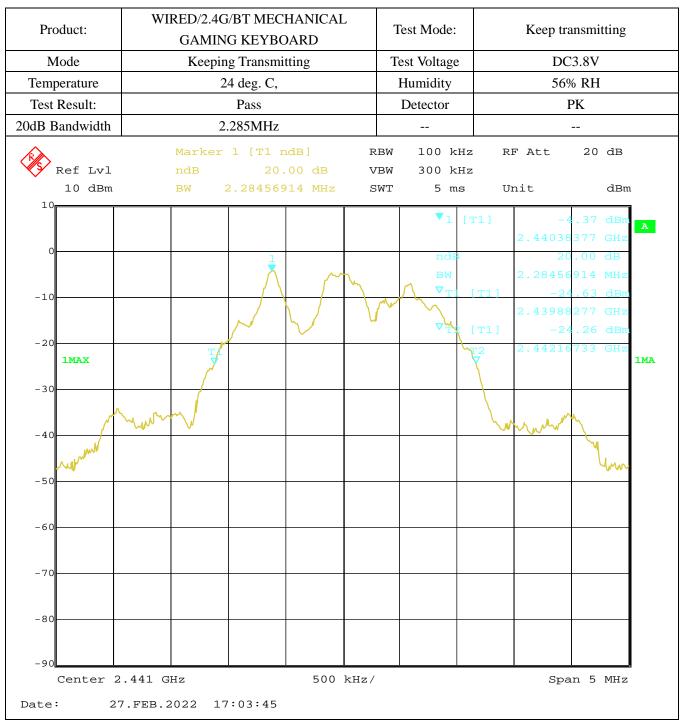
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Product:	WIRED/2.4G/BT MECHANICAL GAMING KEYBOARD Keeping Transmitting 24 deg. C, Pass 2.505MHz				Test Mode: Test Voltage Humidity Detector		Keep transmitting DC3.8V 56% RH PK 			
Mode										
Temperature										
Test Result:										
OdB Bandwidth										
Ref Lvl 10 dBm	Marke ndB BW	er 1 [T1 r 20. 2.50501(	.00 dB		BW BW ∿T	100 ki 300 ki 5 mi	Hz	F Att nit	20 dB dBm	n
0						▼1 ndB	[T1]	-4 2.40239	.79 dBm 379 GHz .00 dB	A
-10						BW	[T1]	-24	002 MHz .73 dBm	
-20		$\sim$	$\bigvee$			▼ <sub>T</sub>	[T1]	2.40167 -24 2.40417	234 GHz .78 dBm 735 GHz	1.
<b>1MAX</b>	, , , , , , , , , , , , , , , , , , ,									1112
-40	Mader							mum	h h	
-50 -50									Ulu	-
-60										-
-70										
-80										
-90 Center 2.	403 GHz		500 k	Hz/	1			Spa	.n 5 MHz	11

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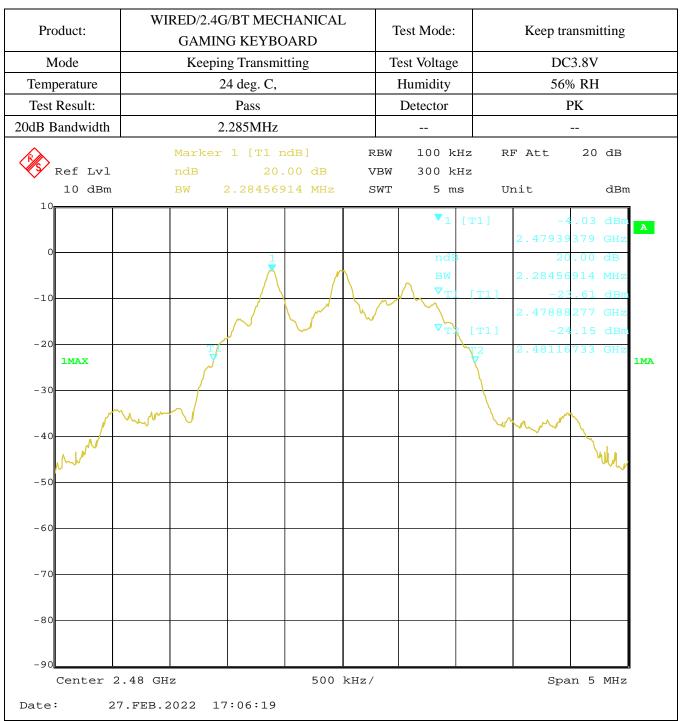




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## 10.0 FCC ID Label

## FCC ID: TUVET-8639

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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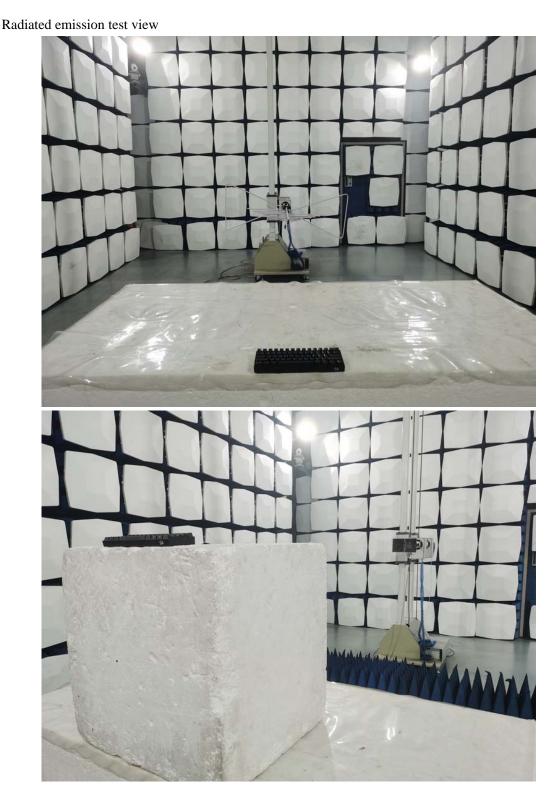
#### 11.0 Photo of testing

11.1 Conducted test View--



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#### 11.2 Photographs – EUT



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Outside View



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Outside View



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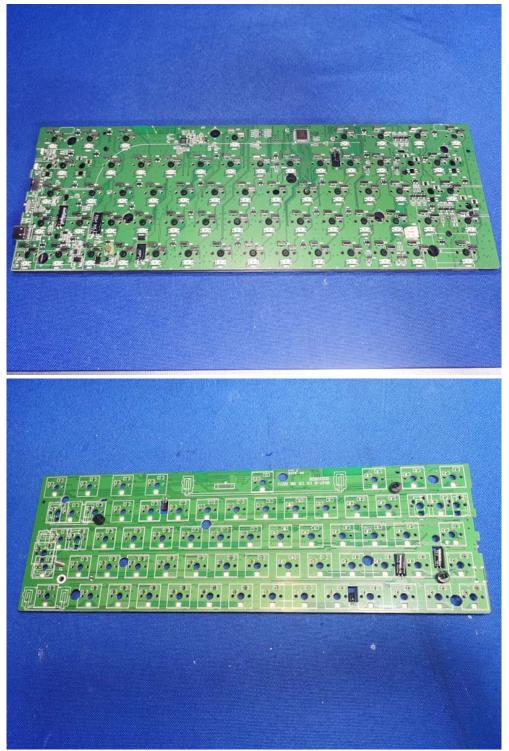
Inside view



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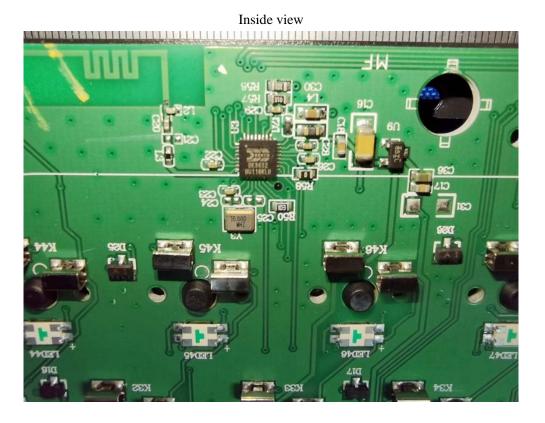


Inside view



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--End of the report--

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