



Report No.: TWN2505646-02E

Applicant: Eastern Times Technology Co.,Ltd

Product: WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD

Model No.: K709WBP-RGB-PRO, K709AK-RGB-PRO, ET-7145

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

Terry Tang

Manager

Dated: June 13, 2025

**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:

### **FCC-Registration No.: 744189**

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

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

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

### **A2LA (Certification Number:5013.01)**

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

### **CAB identifier: CN0033**

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## Test Report Conclusion

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## 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 States  
Registration Number: 744189  
For 3m Anechoic Chamber

### 1.2 Applicant Details

Applicant: Eastern Times Technology Co.,Ltd  
Address: Building D, Nan An Industrial Area, Youganpu Village, Fenggang Town, Dongguan City, Guangdong, China.

### 1.3 Description of EUT

Product: WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD  
Manufacturer: Eastern Times Technology Co.,Ltd  
Address: Building D, Nan An Industrial Area, Youganpu Village, Fenggang Town, Dongguan City, Guangdong, China.  
Trademark: REDRAGON  
Model Number: K709WBP-RGB-PRO  
Additional Model Name: K709AK-RGB-PRO, ET-7145  
Rating: Input: DC5V, 640mA or DC3.7V, 120mA  
Battery: DC3.7V, 2500mAh Li-ion battery  
Hardware Version: 7145-A TX V1  
Software Version: 1F81  
Serial No.: RDK709WBP-RGB-PRO24121600603  
Operation Frequency: 2402-2480MHz  
Modulation Type: GFSK  
Number of Channels: 79  
Channel Separation: 1MHz  
Antenna Designation: PCB antenna with gain 2.34dBi maximum (Declared by the Manufacturer)

### 1.4 Submitted Sample: 2 Samples

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1.5 Test Duration

2025-03-04 to 2025-06-13

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	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100253	2024-07-12	2025-07-11
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2024-07-12	2025-07-11
Loop Antenna	EMCO	6507	00078608	2022-07-18	2025-07-17
Spectrum	R&S	FSIQ26	100292	2024-07-12	2025-07-11
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2025-07-17
Power meter	Anritsu	ML2487A	6K00003613	2024-07-12	2025-07-11
Power sensor	Anritsu	MA2491A	32263	2024-07-12	2025-07-11
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17
9*6*6 Anechoic	--	--	N/A	2022-07-26	2025-07-25
EMI Test Receiver	RS	ESVB	826156/011	2024-07-12	2025-07-11
EMI Test Receiver	RS	ESCS 30	834115/006	2024-07-12	2025-07-11
Spectrum	HP/Agilent	E4407B	MY50441392	2024-07-12	2025-07-11
Spectrum	RS	FSP	1164.4391.38	2024-07-12	2025-07-11
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA	--	2024-07-12	2025-07-11
RF Cable	Zhengdi	7m	--	2024-07-12	2025-07-11
Pre-Amplifier	Schwarebeck	BBV9743	#218	2024-07-12	2025-07-11
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2024-07-12	2025-07-11
LISN	SCHAFFNER	NNB42	00012	2024-07-12	2025-07-11
ESPI Test Receiver	R&S	ESPI 3	100379	2024-07-12	2025-07-11
LISN	R&S	EZH3-Z5	100294	2024-07-12	2025-07-11

## 2.2 Automation Test Software

For Conducted Emission Test

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

For Radiated Emissions

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

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### 3.0 Technical Details

#### 3.1 Summary of test results

The EUT has been tested according to the following specifications:			
Standard	Test Type	Result	Notes
FCC Part 15, Paragraph 15.203	Antenna Requirement	Pass	Complies
FCC Part 15, Paragraph 15.207	Conducted Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	Pass	Complies
FCC Part 15, Paragraph 15.209	Radiated Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies
FCC Part 15.215(c)	20dB bandwidth	Pass	Complies

#### 3.2 Test Standards

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

#### 4.0 EUT Modification

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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## 5.0 Power Line Conducted Emission Test

### 5.1 Schematics of the test



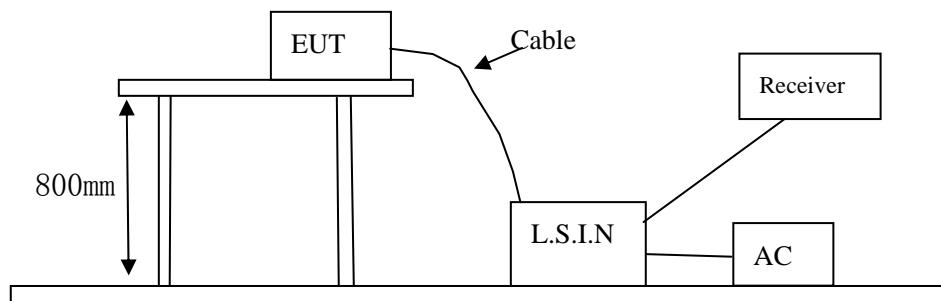
EUT: Equipment Under Test

### 5.2 Test Method and test Procedure

The EUT was tested according to ANSI C63.10-2013. The Frequency spectrum from 0.15MHz to 30MHz was investigated. The LISN used was 50ohm/50uH as specified by section 5.1 of ANSI C63.10-2013.

Test Voltage: 120V~, 60Hz

Block diagram of Test setup



### 5.3 Configuration of the EUT

The EUT was configured according to ANSI C63.10-2013. All interface ports were connected to the appropriate peripherals. All peripherals and cables are listed below.

#### A. EUT

Device	Manufacturer	Model	FCC ID
WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD	Eastern Times Technology Co.,Ltd	K709WBP-RGB-PRO, K709AK-RGB-PRO, ET-7145	TUVET-7145A

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B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

C. Peripherals

Device	Manufacturer	Model	Rating
Power Supply	Xiaomi	CDQ02ZM	Input: 100-240V~, 50/60Hz, 1.2A; Output: DC5V, 3A; DC9V, 3A; DC12V, 3A; DC15V, 3A; DC20V, 2.25A;

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 (MHz)	Limits (dB $\mu$ V)	
	Quasi-peak Level	Average Level
0.15 ~ 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:

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

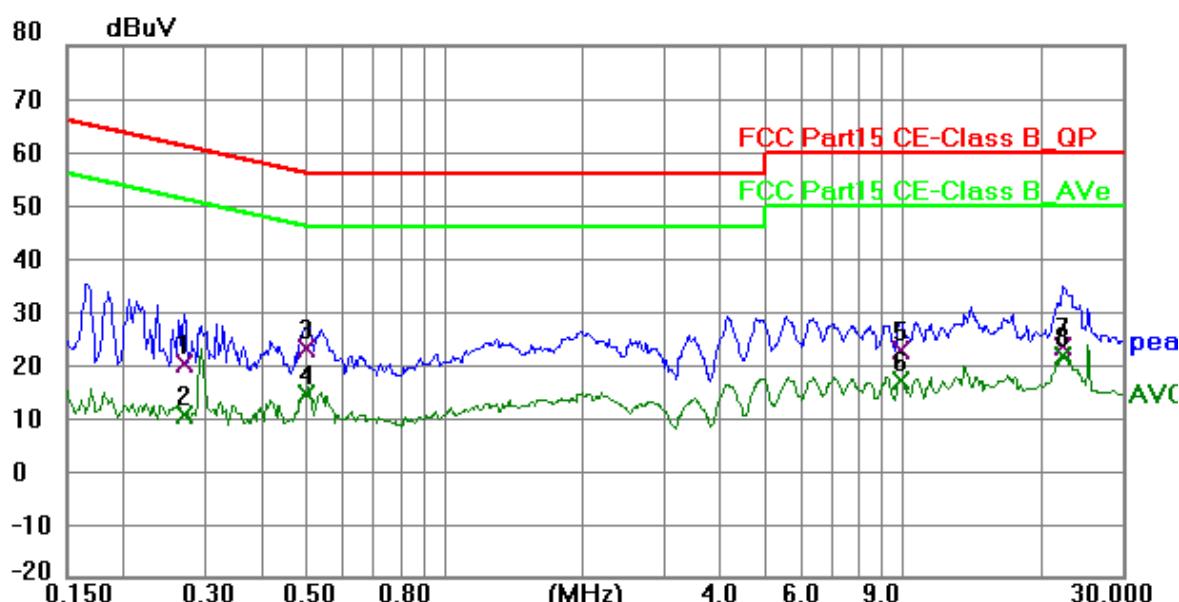
**EUT Operating Environment**

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

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

**Results: Pass**

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.2709	9.89	10.34	20.23	61.09	-40.86	QP	P
2	0.2709	0.22	10.34	10.56	51.09	-40.53	AVG	P
3	0.4994	12.59	10.40	22.99	56.01	-33.02	QP	P
4	0.4994	4.10	10.40	14.50	46.01	-31.51	AVG	P
5	9.8085	8.91	13.76	22.67	60.00	-37.33	QP	P
6	9.8085	3.27	13.76	17.03	50.00	-32.97	AVG	P
7	22.3050	7.37	15.94	23.31	60.00	-36.69	QP	P
8	22.3050	5.54	15.94	21.48	50.00	-28.52	AVG	P

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

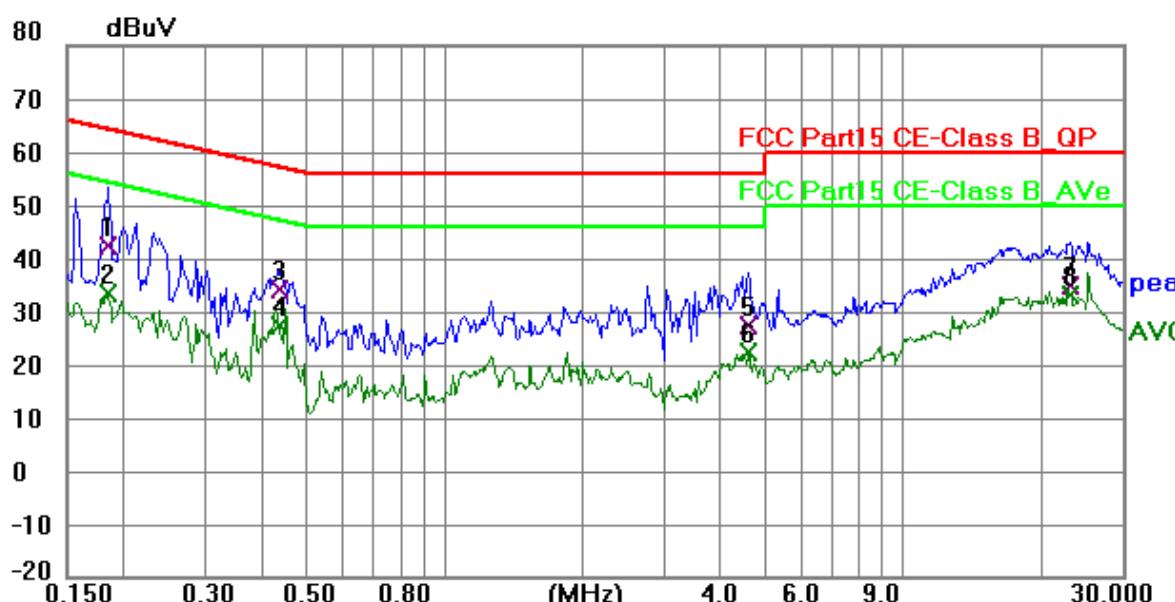
**EUT Operating Environment**

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

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

**Results: Pass**

Please refer to following diagram for individual



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F
1	0.1850	32.03	10.33	42.36	64.26	-21.90	QP	P
2	0.1850	23.13	10.33	33.46	54.26	-20.80	AVG	P
3	0.4347	23.76	10.38	34.14	57.16	-23.02	QP	P
4	0.4347	16.90	10.38	27.28	47.16	-19.88	AVG	P
5	4.6029	15.10	12.19	27.29	56.00	-28.71	QP	P
6	4.6029	10.29	12.19	22.48	46.00	-23.52	AVG	P
7	23.1864	19.14	15.74	34.88	60.00	-25.12	QP	P
8	23.1864	17.21	15.74	32.95	50.00	-17.05	AVG	P

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

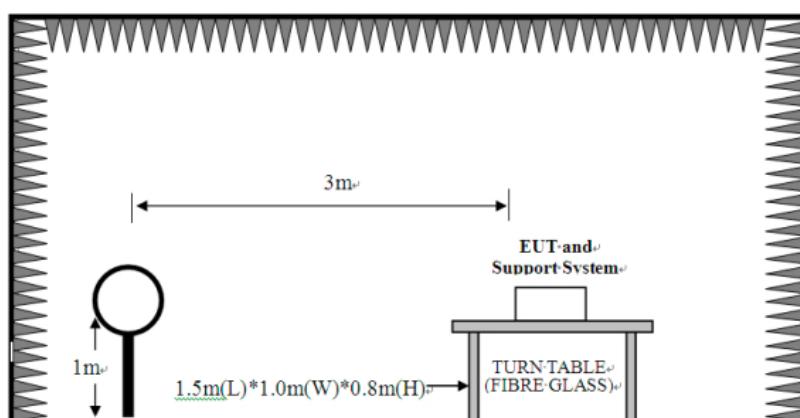
Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Peak	1MHz	10Hz	Average

(Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz).  
Measurements were made at 3 meters.

- (4) The antenna height 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



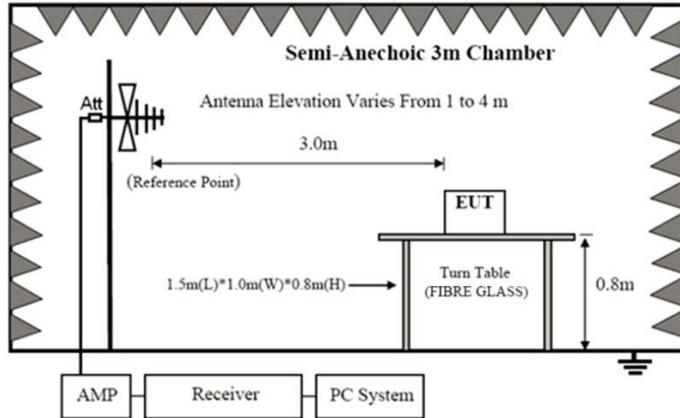
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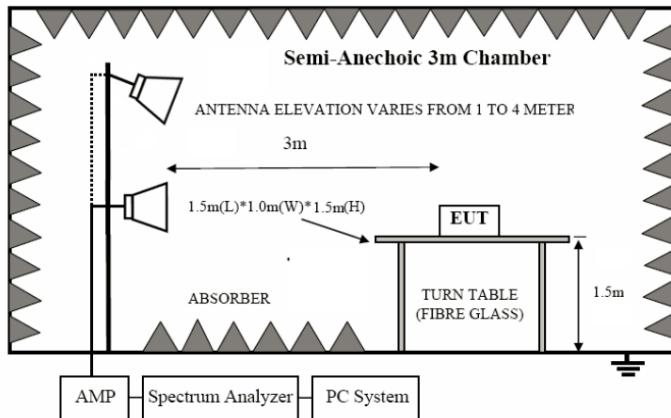
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For radiated emissions from 30MHz to1GHz



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.

#### 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:

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 § 15.209, whichever is the lesser attenuation.

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

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Fundamental Frequency (MHz)	Field Strength of Fundamental (3m)			Field Strength of Harmonics (3m)		
	<b>mV/m</b>	<b>dBuV/m</b>		<b>uV/m</b>	<b>dBuV/m</b>	
2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)

Note:

1. RF Field Strength (dBuV) =  $20 \log_{10} \text{RF Voltage (uV)}$
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 $\mu$ V/m)
0.009-0.490	3	$20\log_{10}(2400/F(\text{kHz})) + 40\log_{10}(300/3)$
0.490-1.705	3	$20\log_{10}(24000/F(\text{kHz})) + 40\log_{10}(30/3)$
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) =  $20 \log_{10} \text{RF Voltage (uV)}$
2. In the Above Table, the tighter limit applies at the band edges.
3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
4. All scanning using PK detector. And the final emission level was get using QP detector for frequency range from 30-1000MHz. As to 1G-25G, the final emission level got using PK. For fundamental measurement, PK detector used.
5. Battery fully charged was used during the test.

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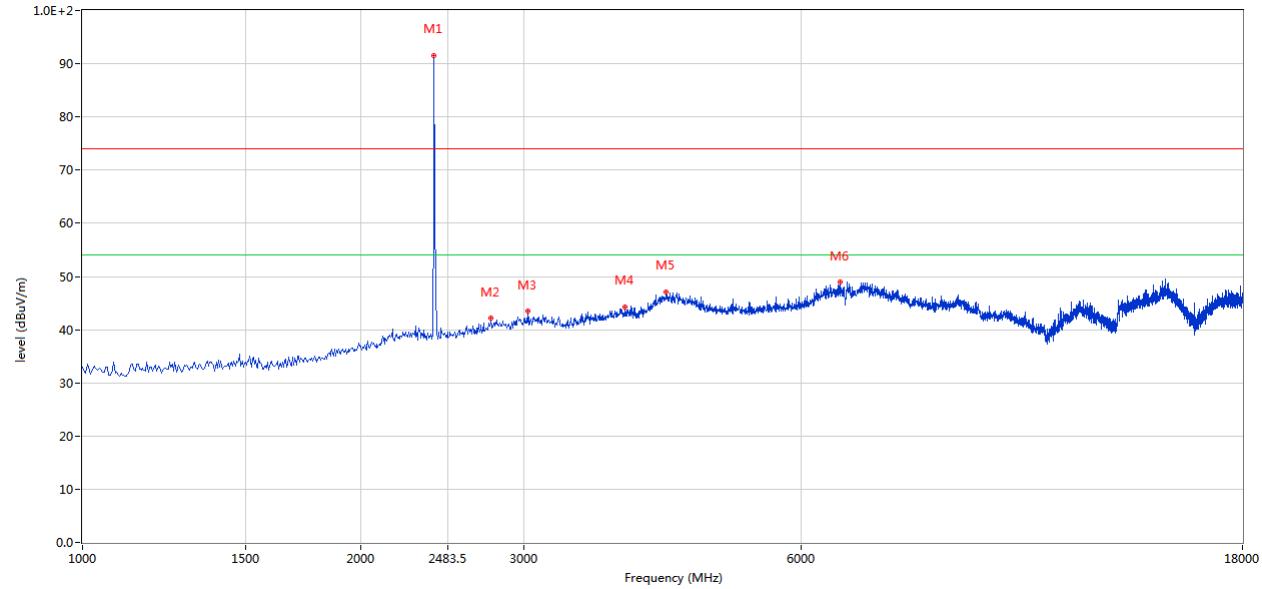
## 6.5 Test result

### A Fundamental & Harmonics Radiated Emission Data

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

#### Horizontal

FCC Part 15C Class B 1GHz-18GHz -2



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2402	91.52	-3.57	114.0	-22.48	Peak	245.00	100	Horizontal	Pass
2	2767.558	42.22	-2.78	74.0	-31.78	Peak	220.00	100	Horizontal	Pass
3	3035.241	43.42	-2.48	74.0	-30.58	Peak	93.00	100	Horizontal	Pass
4	3868.033	44.19	0.65	74.0	-29.81	Peak	0.00	100	Horizontal	Pass
5	4284.429	47.13	1.80	74.0	-26.87	Peak	124.00	100	Horizontal	Pass
6	6600.100	49.03	6.21	74.0	-24.97	Peak	119.00	100	Horizontal	Pass

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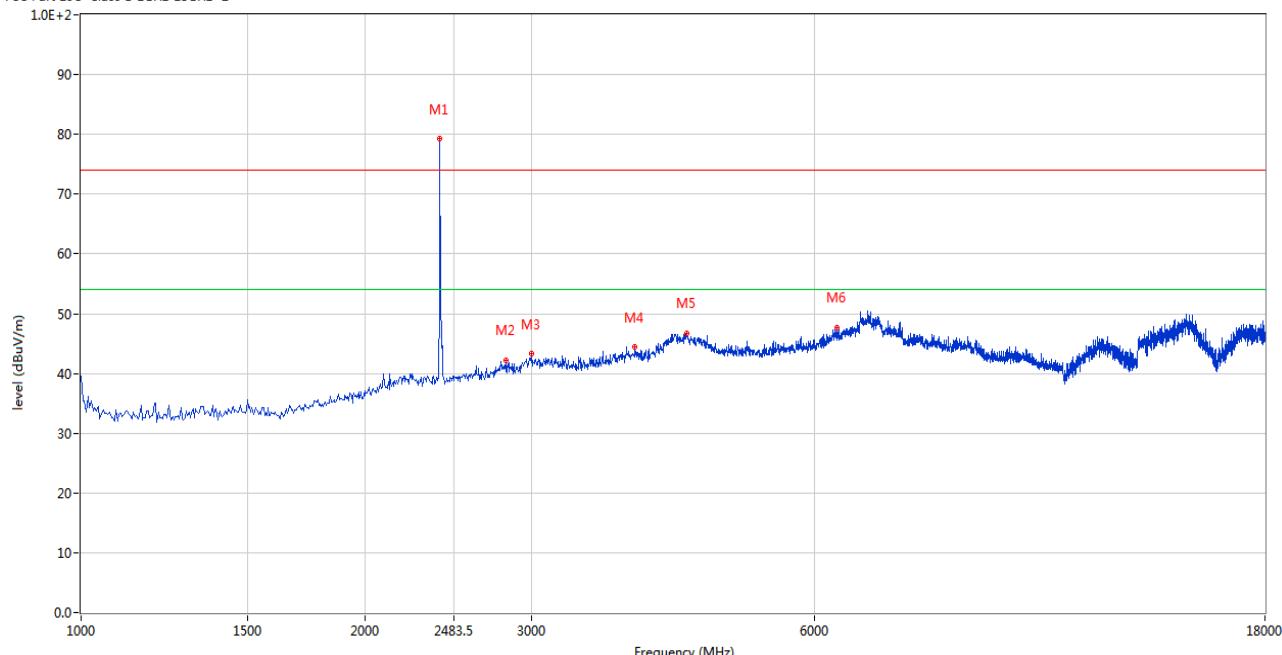
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## Vertical

FCC Part 15C Class B 1GHz-18GHz -2



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2402	79.27	-3.57	114.0	-34.73	Peak	203.00	100	Vertical	Pass
2	2822.794	42.16	-2.69	74.0	-31.84	Peak	101.00	100	Vertical	Pass
3	3005.499	43.29	-2.62	74.0	-30.71	Peak	188.00	100	Vertical	Pass
4	3863.784	44.45	0.63	74.0	-29.55	Peak	51.00	100	Vertical	Pass
5	4386.403	46.74	1.98	74.0	-27.26	Peak	283.00	100	Vertical	Pass
6	6323.919	47.64	5.06	74.0	-26.36	Peak	46.00	100	Vertical	Pass

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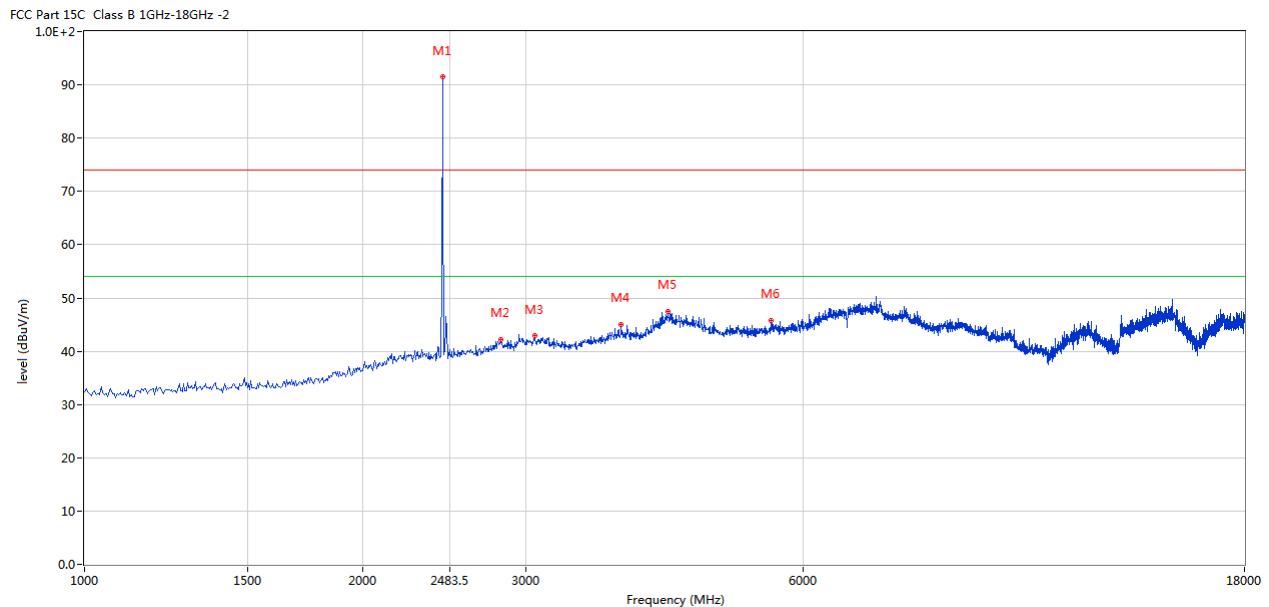
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Please refer to the following test plots for details: Middle Channel-2441MHz

### Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2441	91.51	-3.57	114.0	-22.49	Peak	42.00	100	Horizontal	Pass
2	2818.545	42.15	-2.69	74.0	-31.85	Peak	216.00	100	Horizontal	Pass
3	3069.233	42.96	-2.33	74.0	-31.04	Peak	231.00	100	Horizontal	Pass
4	3808.548	44.92	0.35	74.0	-29.08	Peak	281.00	100	Horizontal	Pass
5	4275.931	47.49	1.78	74.0	-26.51	Peak	355.00	100	Horizontal	Pass
6	5537.866	45.76	3.92	74.0	-28.24	Peak	291.00	100	Horizontal	Pass

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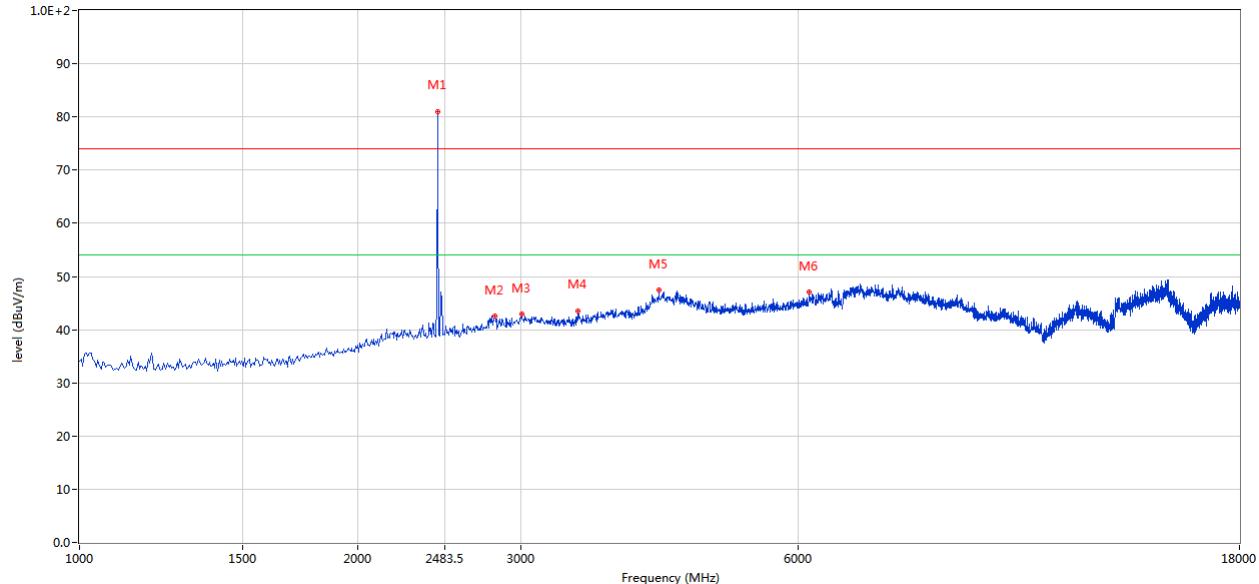
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## Vertical

FCC Part 15C Class B 1GHz-18GHz -2



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2441	81.02	-3.57	114.0	-32.98	Peak	132.00	100	Vertical	Pass
2	2814.296	42.50	-2.69	74.0	-31.50	Peak	243.00	100	Vertical	Pass
3	3009.748	42.96	-2.60	74.0	-31.04	Peak	142.00	100	Vertical	Pass
4	3460.135	43.44	-1.37	74.0	-30.56	Peak	324.00	100	Vertical	Pass
5	4237.691	47.43	1.69	74.0	-26.57	Peak	148.00	100	Vertical	Pass
6	6162.459	47.14	4.42	74.0	-26.86	Peak	0.00	100	Vertical	Pass

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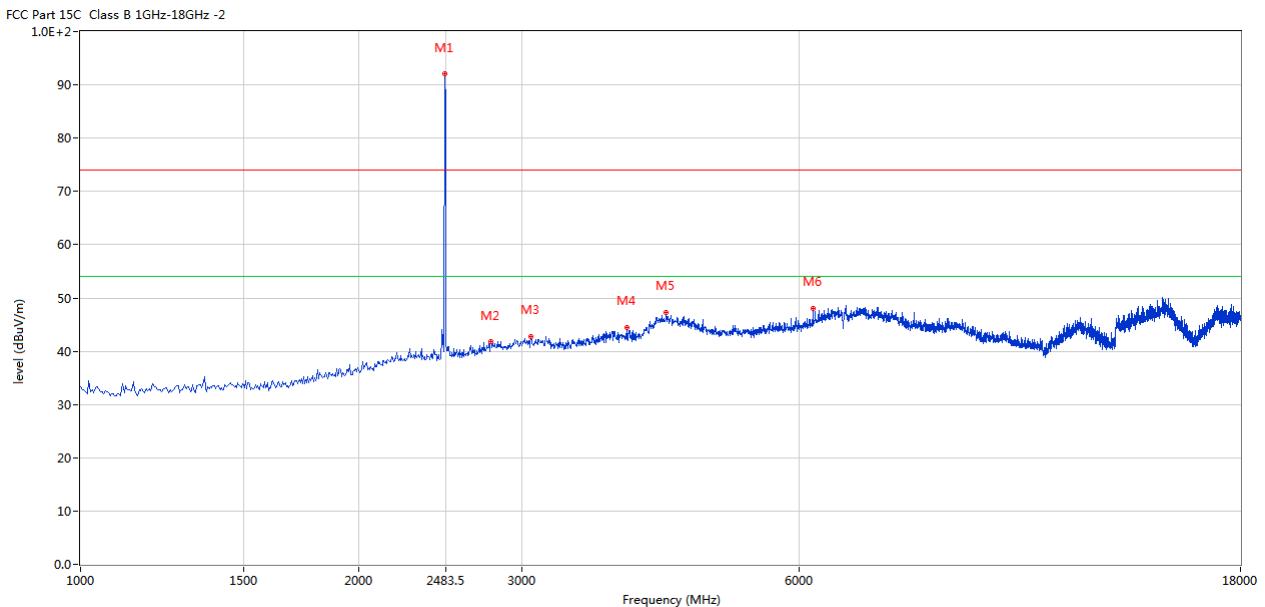
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Please refer to the following test plots for details: High Channel-2480MHz

### Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2480	92.02	-3.57	114.0	-21.98	Peak	227.00	100	Horizontal	Pass
2	2780.305	41.75	-2.75	74.0	-32.25	Peak	355.00	100	Horizontal	Pass
3	3073.482	42.70	-2.31	74.0	-31.30	Peak	74.00	100	Horizontal	Pass
4	3897.776	44.36	0.80	74.0	-29.64	Peak	60.00	100	Horizontal	Pass
5	4301.425	47.31	1.84	74.0	-26.69	Peak	314.00	100	Horizontal	Pass
6	6204.949	48.07	4.58	74.0	-25.93	Peak	125.00	100	Horizontal	Pass

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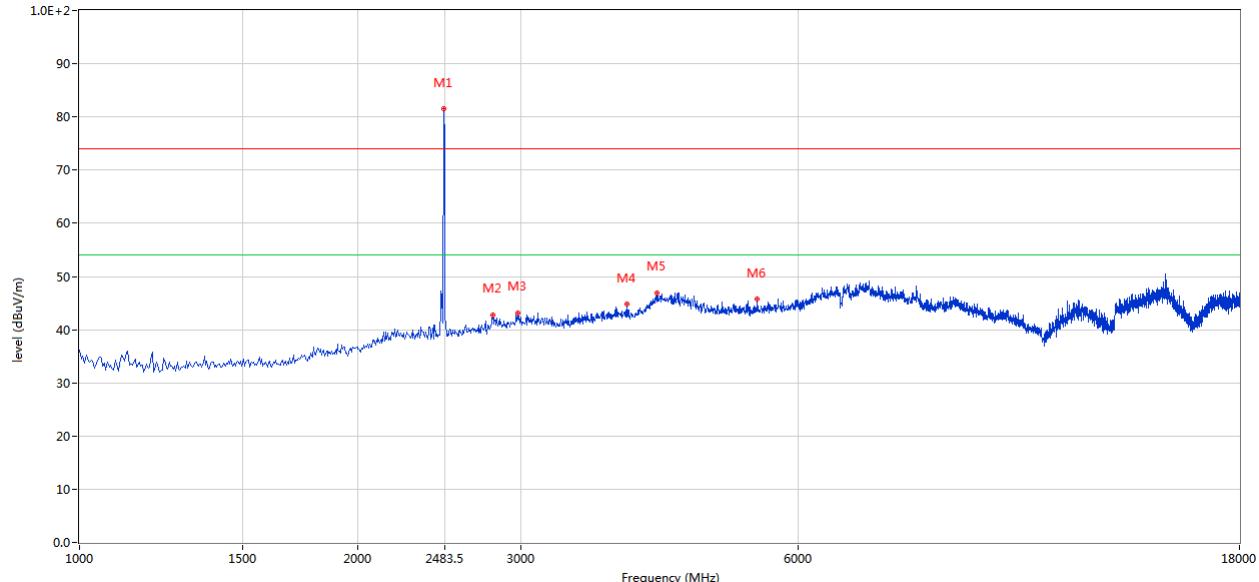
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## Vertical

FCC Part 15C Class B 1GHz-18GHz -2



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2480	81.62	-3.57	114.0	-32.38	Peak	356.00	100	Vertical	Pass
2	2801.550	42.79	-2.70	74.0	-31.21	Peak	315.00	100	Vertical	Pass
3	2984.254	43.13	-2.65	74.0	-30.87	Peak	192.00	100	Vertical	Pass
4	3914.771	44.90	0.87	74.0	-29.10	Peak	254.00	100	Vertical	Pass
5	4216.446	46.87	1.64	74.0	-27.13	Peak	254.00	100	Vertical	Pass
6	5414.646	45.67	3.73	74.0	-28.33	Peak	90.00	100	Vertical	Pass

Note:

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

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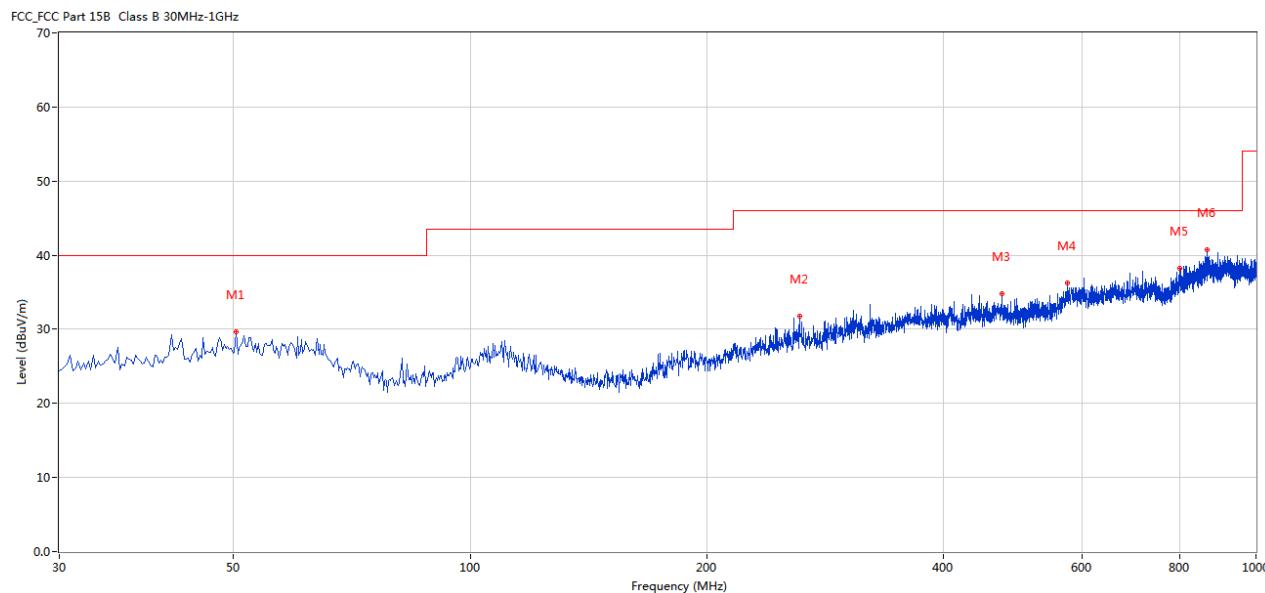
## B. General Radiated Emission Data

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

EUT set Condition: Keep Tx transmitting

**Results: Pass**

Please refer to following diagram for individual



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	50.365	29.63	-5.13	40.0	10.37	Peak	139.00	100	Horizontal	Pass
2	262.499	31.77	-5.11	47.0	15.23	Peak	80.00	100	Horizontal	Pass
3	474.634	34.81	-0.37	47.0	12.19	Peak	86.00	100	Horizontal	Pass
4	575.489	36.21	1.27	47.0	10.79	Peak	349.00	100	Horizontal	Pass
5	799.988	38.19	3.42	47.0	8.81	Peak	46.00	100	Horizontal	Pass
6	866.416	40.72	4.79	47.0	6.28	Peak	328.00	100	Horizontal	Pass

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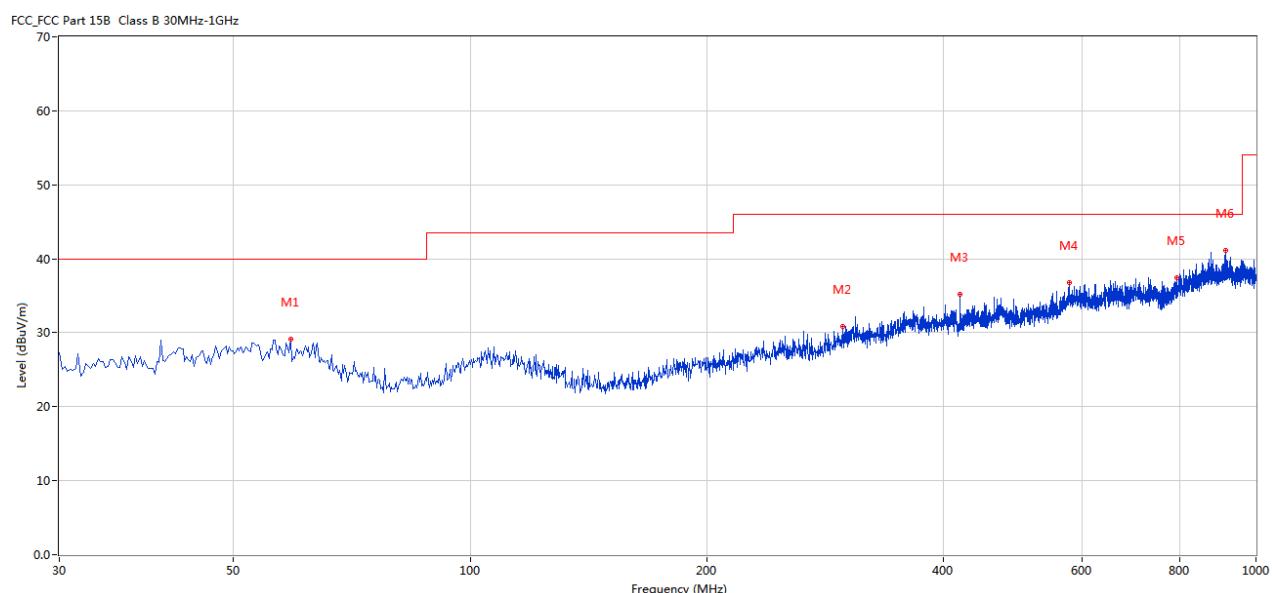


### Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results: Pass**

Please refer to following diagram for individual



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Height (cm)	Antenna	Verdict
1	59.093	29.11	-5.25	40.0	10.89	Peak	183.00	100	Vertical	Pass
2	297.896	30.84	-4.17	47.0	16.16	Peak	146.00	100	Vertical	Pass
3	420.327	35.15	-2.02	47.0	11.85	Peak	356.00	100	Vertical	Pass
4	578.155	36.72	1.60	47.0	10.28	Peak	352.00	100	Vertical	Pass
5	792.472	37.50	2.89	47.0	9.50	Peak	226.00	100	Vertical	Pass
6	916.358	41.07	5.37	47.0	5.93	Peak	82.00	100	Vertical	Pass

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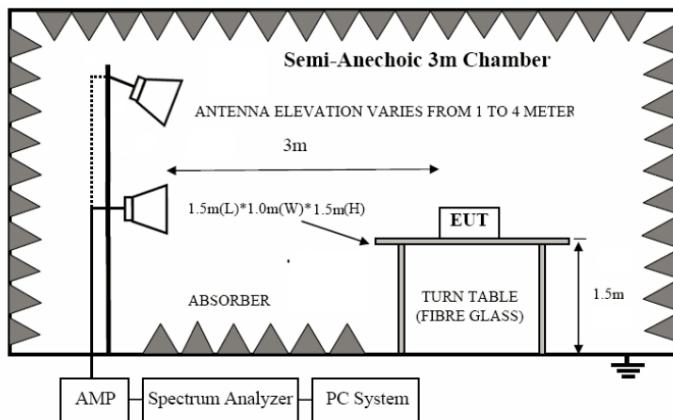


## 7. Band Edge

### 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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## 7.6 Test Result

Product:	WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD	Polarity	Horizontal							
Mode	Keeping Transmitting	Test Voltage	DC3.7V							
Temperature	24 deg. C,	Humidity	56% RH							
Test Result:	Pass	--	--							
FCC Part 15C Class B 1GHz-18GHz -2 										
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2401.582	90.87	-3.57	74.0	16.87	Peak	230.00	100	Horizontal	N/A
2	2400.000	68.64	-3.57	74.0	-5.36	Peak	228.33	100	Horizontal	Pass
2**	2400.000	53.26	-3.57	54.0	-0.74	AV	228.33	100	Horizontal	Pass
3	2390.000	37.11	-3.53	74.0	-36.89	Peak	117.50	100	Horizontal	Pass

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Product:	WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD	Detector	Vertical							
Mode	Keeping Transmitting	Test Voltage	DC3.7V							
Temperature	24 deg. C,	Humidity	56% RH							
Test Result:	Pass	--	--							
FCC Part 15C Class B 1GHz-18GHz -2 										
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2402.092	78.61	-3.57	74.0	4.61	Peak	123.00	100	Vertical	N/A
2	2400.000	55.85	-3.57	74.0	-18.15	Peak	123.00	100	Vertical	Pass
2**	2400.000	41.56	-3.57	54.0	-12.44	AV	123.00	100	Vertical	Pass
3	2390.000	38.76	-3.53	74.0	-35.24	Peak	244.00	100	Vertical	Pass

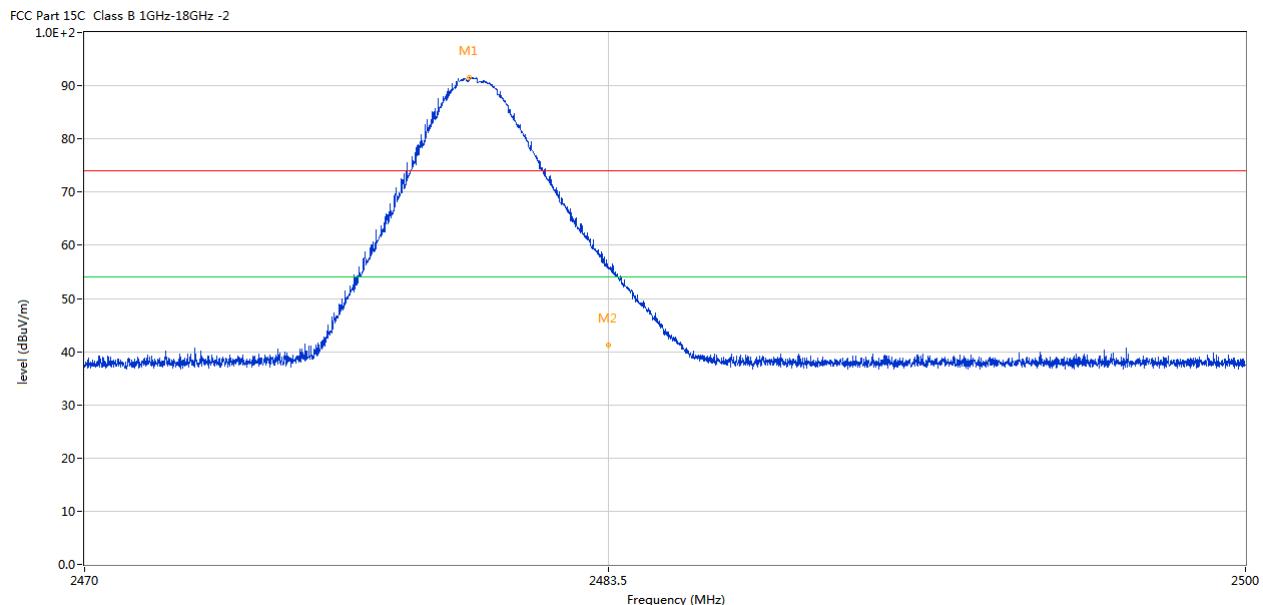
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Product:	WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	--	--



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2479.898	91.48	-3.57	74.0	17.48	Peak	236.00	100	Horizontal	N/A
2	2483.500	55.53	-3.57	74.0	-18.47	Peak	248.86	100	Horizontal	Pass
2**	2483.500	41.26	-3.57	54.0	-12.74	AV	248.86	100	Horizontal	Pass

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Product:	WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD		Detector	Vertical						
Mode	Keeping Transmitting		Test Voltage	DC3.7V						
Temperature	24 deg. C,		Humidity	56% RH						
Test Result:	Pass		--	--						
FCC Part 15C Class B 1GHz-18GHz -2 										
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	2480.047	80.00	-3.57	74.0	6.00	Peak	350.00	100	Vertical	N/A
2	2483.500	45.75	-3.57	74.0	-28.25	Peak	172.43	100	Vertical	Pass

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

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## 8.0 Antenna Requirement

### Applicable Standard

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

This product has a PCB antenna with gain 2.34dBi maximum. 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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## 9.0 20dB Bandwidth Measurement

### Test Configuration



### Test Procedure

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

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

### Limit

N/A

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## Test Result

Product:	WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	984kHz	--	--
<p>Date: 12.JUN.2025 22:19:52</p>			

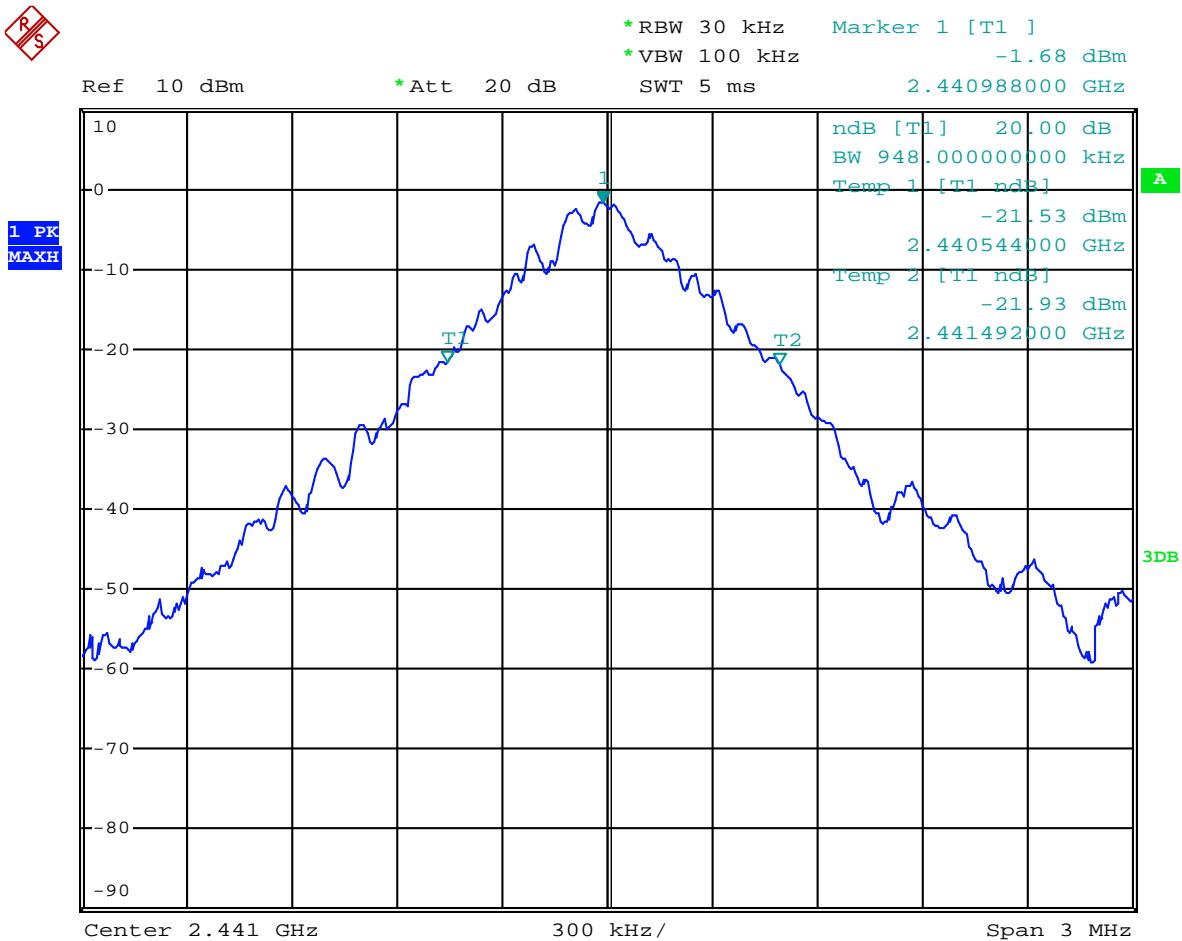
The report refers only to the sample tested and does not apply to the bulk.

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Product:	WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	948kHz	--	--



Date: 12.JUN.2025 22:20:31

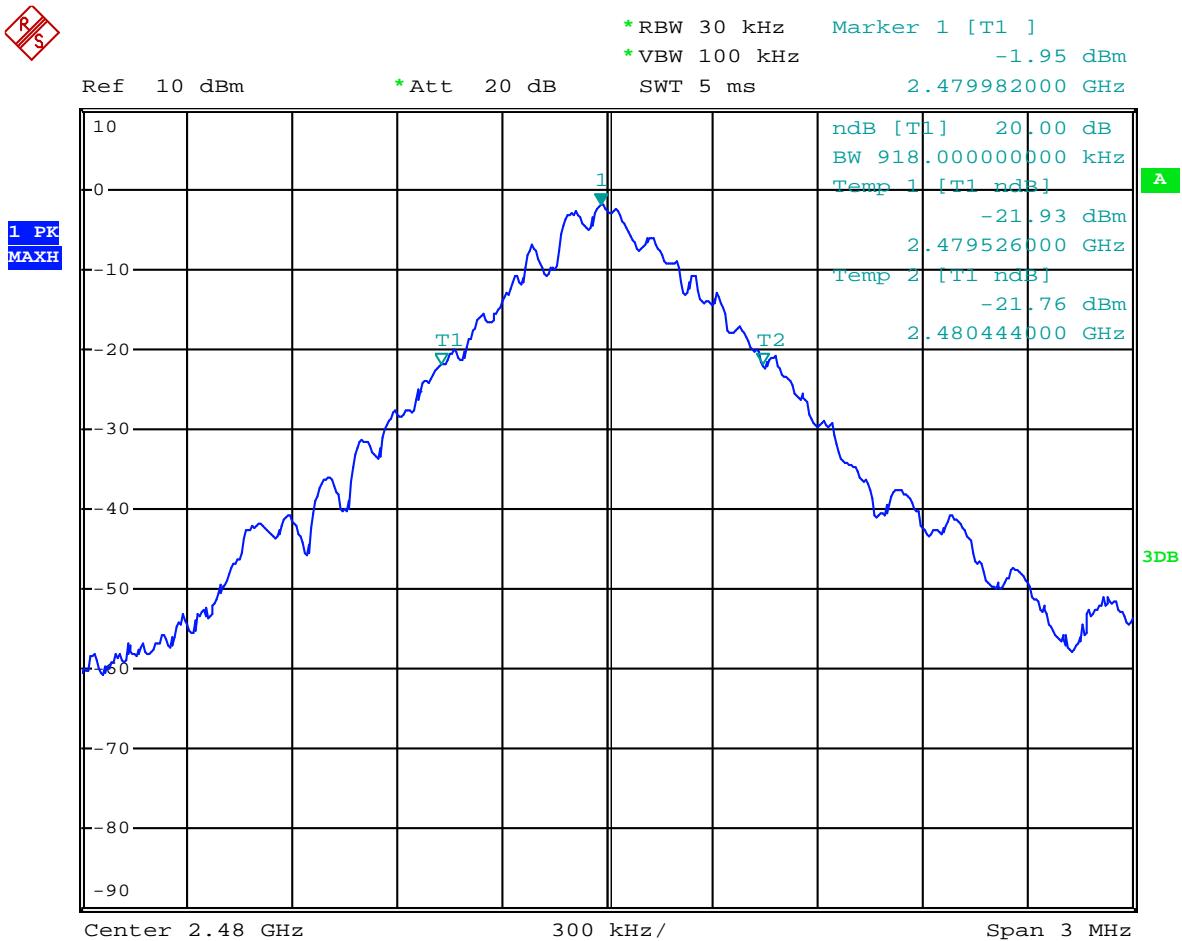
The report refers only to the sample tested and does not apply to the bulk.

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Product:	WIRED/2.4G/BT HOT-SWAPPABLE GASKET MOUNTED MECHANICAL KEYBOARD	Test Mode:	Keep transmitting
Mode	Keeping Transmitting	Test Voltage	DC3.7V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass	Detector	PK
20dB Bandwidth	918kHz	--	--



Date: 12.JUN.2025 22:24:29

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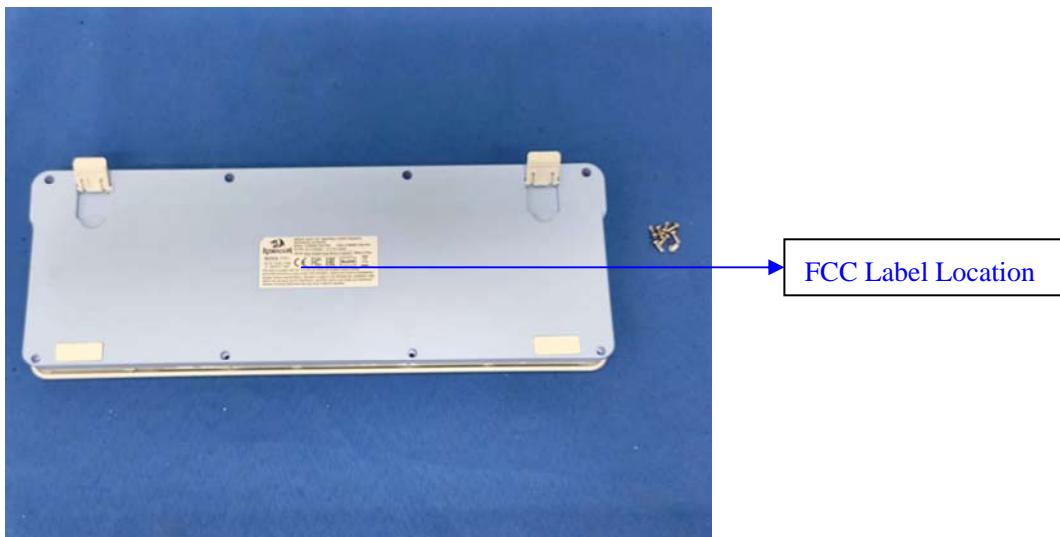
## 10.0 FCC ID Label

**FCC ID: TUVET-7145A**

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:



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

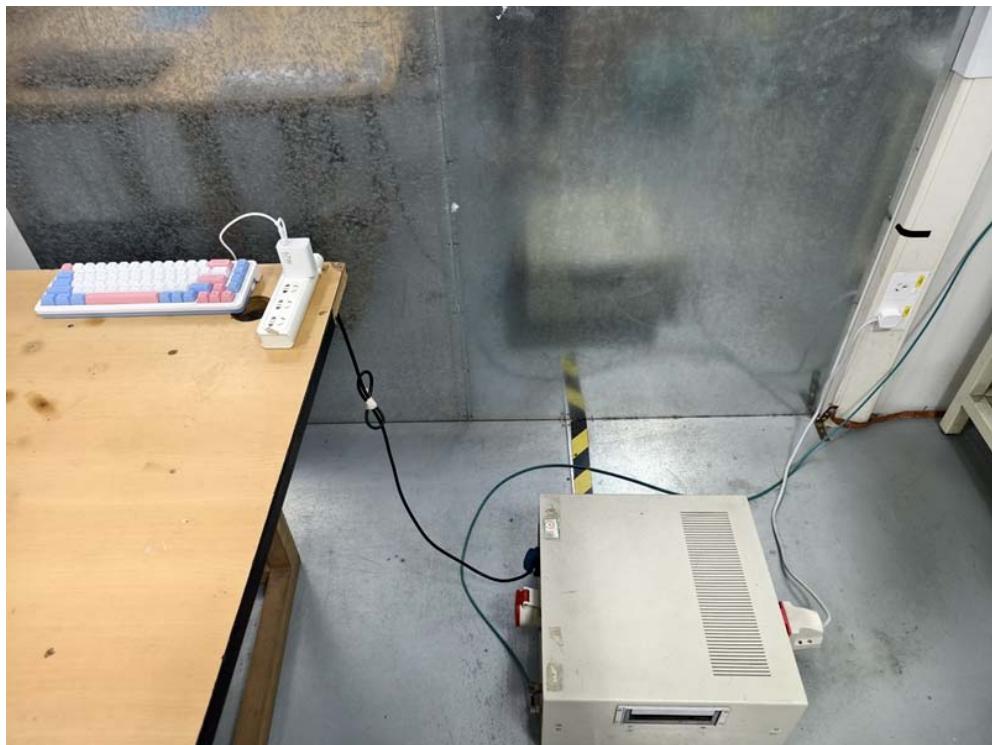
This report is issued in confidence to the client and it will be strictly treated as such by the SHENZHEN TIMEWAY TESTING LABORATORIES. It may not be reproduced rather in its entirety or in part and it may not be used for advertising. The client to whom the report is issued may, however, show or send it . or a certified copy thereof prepared by the SHENZHEN TIMEWAY TESTING LABORATORIES. to his customer. Supplier or others persons directly concerned. SHENZHEN TIMEWAY TESTING LABORATORIES. will not, without the consent of the client enter into any discussion of correspondence with any third party concerning the contents of the report.

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**11.0** Photo of testing

**11.1** Conducted test View



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Radiated emission test view



#### 11.2 Photographs – EUT

Please refer test report TWN2505646-01E

**--End of the report--**

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