

Report No.: TW2307358E

Applicant: Shenzhen Star Sources Electronic Technology Co., Ltd

Product: Bluetooth Wireless Keyboard

Model No.: TWKBB2WH, ST-BK605, ST-BK607, ST-BK608, xyz (x=0-9;

y=0-9; z=0-9)

Trademark: N/A

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

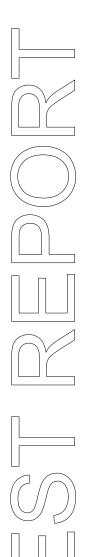
Dated: August 11, 2023

Results appearing herein relate only to the sample tested The technical reports is issued errors and omissions exempt and is subject to withdrawal at

# SHENZHEN TIMEWAY TESTING LABORATORIES

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

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

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# **Test Report Conclusion**

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

11.0

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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: Shenzhen Star Sources Electronic Technology Co., Ltd

Address: Room 2102, Block 1st, Yi Luan Building, Xixiang Road 230, BaoAn District, Shenzhen, China

Telephone: +86-755-86397260

Fax: --

# 1.3 Description of EUT

Product: Bluetooth Wireless Keyboard

Manufacturer: Shenzhen Star Sources Electronic Technology Co., Ltd

Address: Room 2102, Block 1st, Yi Luan Building, Xixiang Road 230, BaoAn District,

Shenzhen, China

Trademark: N/A
Additional Trademark: N/A

Model Number: TWKBB2WH

Additional Model Name ST-BK605, ST-BK607, ST-BK608, xyz (x=0-9; y=0-9; z=0-9)

Rating: DC3.0V

Battery: DC3.0V (2pcs AAA batteries)
Modulation Type: GFSK (Bluetooth Low Energy)

Operation Frequency: 2402-2480MHz

Channel Separate: 2MHz
Channel Number: 40
Hardware Version: V1.0
Software Version: V03

Serial No.: TWKBB2WH0001-TWKBB2WH2500

Antenna Designation PCB antenna with gain -1.52dBi Max (Get from the antenna Specification)

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1.4 Submitted Sample: 2 Samples

1.5 Test Duration

2023-07-24 to 2023-08-11

1.6 Test Uncertainty

Conducted Emissions Uncertainty = 3.6dB

Radiated Emissions below 1GHz Uncertainty =4.7dB

Radiated Emissions above 1GHz Uncertainty =6.0dB

Conducted Power Uncertainty =6.0dB

Occupied Channel Bandwidth Uncertainty = 5%

Conducted Emissions Uncertainty = 3.6dB

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

1.7 Test Engineer

The sample tested by

Print Name: Andy Xing

Andy -xing

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2.0 Test Equipment									
Instrument Type	Manufacturer	Model	Serial No.	Date of Cal.	Due Date				
ESPI Test Receiver R&S		ESPI 3	100379	2023-07-14	2024-07-13				
LISN	R&S	EZH3-Z5	100294	2023-07-14	2024-07-13				
LISN	R&S	EZH3-Z5	100253	2023-07-14	2024-07-13				
Impuls-Begrenzer	R&S	ESH3-Z2	100281	2023-07-14	2024-07-13				
Loop Antenna	EMCO	6507	00078608 2022-07-18		2025-07-17				
Spectrum	R&S	FSIQ26	100292	2023-07-14	2024-07-13				
Horn Antenna	A-INFO	LB-180400-KF	J211060660	2022-07-18	2025-07-17				
Horn Antenna	R&S	BBHA 9120D	9120D-631	2022-07-18	2024-07-17				
Power meter	Anritsu	ML2487A	6K00003613	2023-07-14	2024-07-13				
Power sensor	Anritsu	MA2491A	32263	2023-07-14	2024-07-13				
Bilog Antenna	Schwarebeck	VULB9163	9163/340	2022-07-18	2025-07-17				
9*6*6 Anechoic		1	N/A	2022-07-26	2025-07-25				
EMI Test Receiver	RS	ESVB	826156/011	2023-07-14	2024-07-13				
EMI Test Receiver	RS	ESCS 30	834115/006	2023-07-14	2024-07-13				
Spectrum	HP/Agilent	E4407B	MY50441392	2023-07-14	2024-07-13				
Spectrum	RS	FSP	1164.4391.38	2023-07-14	2024-07-13				
RF Cable	Zhengdi	ZT26-NJ-NJ-8M/FA	-	2023-07-14	2024-07-13				
RF Cable	Zhengdi	7m		2023-07-14	2024-07-13				
Pre-Amplifier	Schwarebeck	BBV9743	#218	2023-07-14	2024-07-13				
Pre-Amplifier	HP/Agilent	8449B	3008A00160	2023-07-14	2024-07-13				
LISN	SCHAFFNER	NNB42	00012	2023-07-14	2024-07-13				
ESPI Test Receiver	R&S	ESPI 3	100379	2023-07-14	2024-07-13				
LISN	R&S	EZH3-Z5	100294	2023-07-14	2024-07-13				

# 2.2 Automation Test Software

#### For Conducted Emission Test

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

# For Radiated Emissions

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

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#### 3.0 Technical Details

# 3.1 Summary of test results

The EUT has been tested 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	N/A	N/A
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Pass Fundamental		Complies
FCC Part 15, Paragraph 15.209	Radiated Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies

#### 3.2 Test Standards

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

#### 4.0 EUT Modification

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

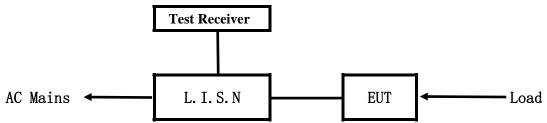
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#### 5. Power Line Conducted Emission Test

# 5.1 Schematics of the test



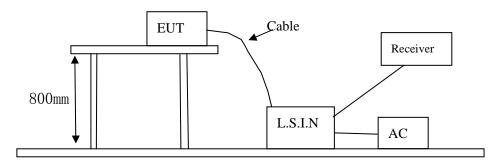
**EUT: Equipment Under Test** 

# 5.2 Test Method and test Procedure

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

Test Voltage: N/A

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.

40 channels are provided to the EUT

#### A. EUT

Device	Manufacturer	Model	FCC ID
Bluetooth Wireless	Shenzhen Star Sources Electronic Technology Co., Ltd	TWKBB2WH, ST-BK605, ST-BK607, ST-BK608, xyz (x=0-9; y=0-9; z=0-9)	ZJEST-BK605
Keyboard			

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#### B. Internal Device

Device	Manufacturer	Model	FCC ID/DOC
N/A			

# C. Peripherals

Device	Manufacturer	Model	Rating
N/A			

5.4 EUT Operating Condition

Operating condition is according to ANSI C63.10-2013

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

5.5 Power line conducted Emission Limit according to Paragraph 15.207

Frequency	Limits (dB µ V)				
(MHz)	Quasi-peak Level	Average 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:

N/A

Note: EUT powered by AAA battery, so this test item not applicable.

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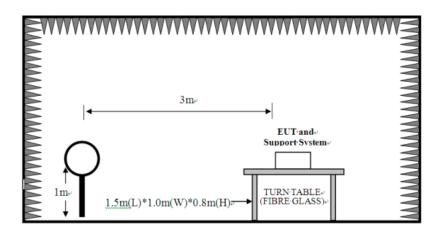


#### **6** Radiated Emission Test

- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 0.8 m. All set up is according to ANSI C63.10-2013.
- (3) The frequency spectrum from 30 MHz to 25 GHz was investigated. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 kHz. All readings are above 1 GHz, peak values with a resolution bandwidth of 1 MHz (Note: for Fundamental frequency radiated emission measurement, RBW=3MHz, VBW=10MHz). Measurements were made at 3 meters.
- (4) The antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency.
- (5) The antenna polarization: Vertical polarization and Horizontal polarization.

#### **Block diagram of Test setup**

For radiated emissions from 9kHz to 30MHz



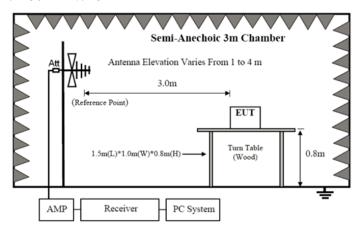
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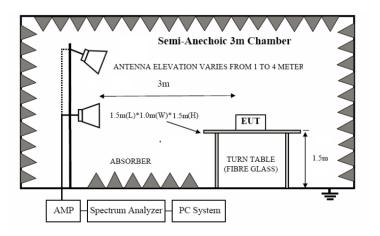
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For radiated emissions from 30MHz to1GHz



For radiated emissions above 1GHz



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

  Same as section 5.4 of this report.

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#### 6.4 Radiated Emission Limit

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

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

Fundamental Frequency	Field Stre	ength of Fundame	ental (3m)	Field Strength of Harmonics (3m)			
(MHz)	mV/m	dBu	V/m	uV/m	dBuV/m		
2400-2483.5	50	94 (Average)	114 (Peak)	500	54 (Average)	74 (Peak)	

Note:

- 1. RF Field Strength (dBuV) = 20 log RF Voltage (uV)
- 2.Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- 3. The emission limit in this paragraph is based on measurement instrumentation employing an average detector.

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

Frequency Range (MHz)	Distance (m)	Field strength (dB µ V m)		
0.009-0.490	3 20log(2400/F(kHz)) +40log (300			
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)		
1.705-30	3	69.5		
30-88	3	40.0		
88-216	3	43.5		
216-960	3	46.0		
Above 960	3	54.0		

Note:

- 1. RF Voltage  $(dBuV) = 20 \log RF \text{ Voltage } (uV)$
- 2. In the Above Table, the tighter limit applies at the band edges.
- 3. Distance refers to the distance in meters between the measuring instrument antenna and the EUT
- 4. 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. New battery was used during the test.

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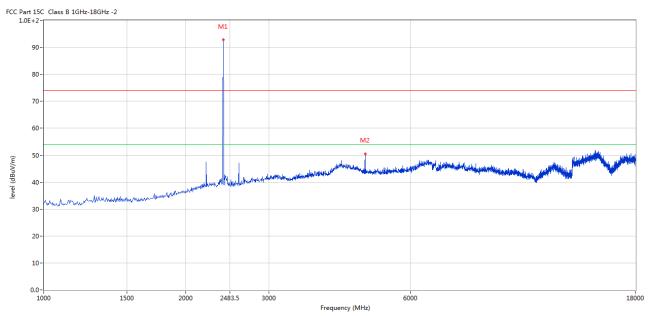


#### 6.5 Test result

# A Fundamental & Harmonics Radiated Emission Data

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

#### Horizontal



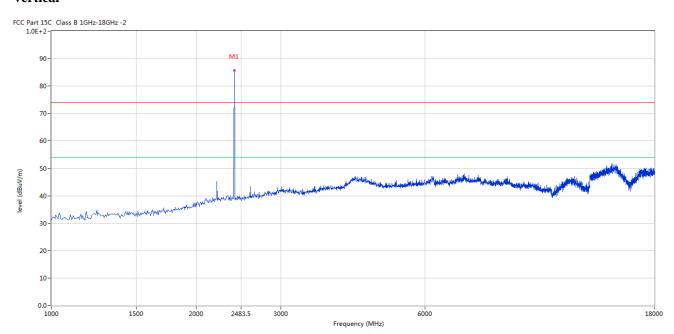
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402	93.62	-3.57	114.0	-20.38	Peak	132.00	100	Horizontal	Pass
2	4802.799	50.55	3.12	74.0	-23.45	Peak	127.00	100	Horizontal	Pass

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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	2402	87.08	-3.57	114.0	-26.92	Peak	174.00	100	Vertical	Pass

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

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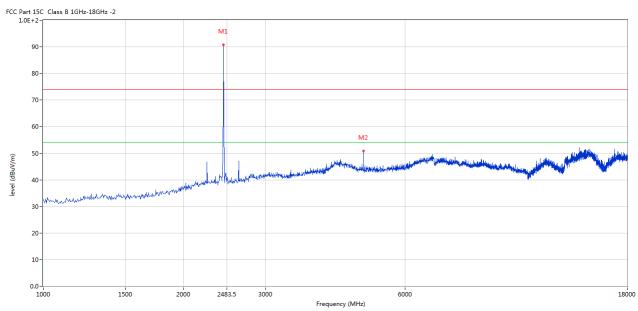
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# Horizontal



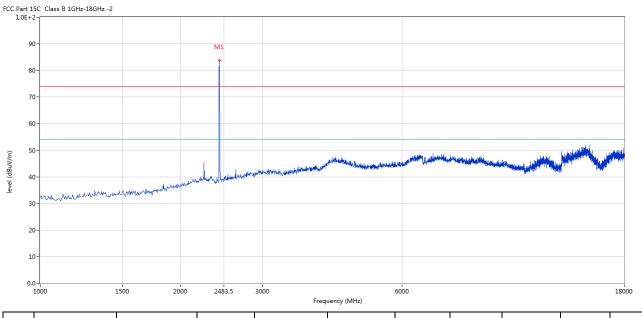
No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2440	90.87	-3.57	114.0	-23.13	Peak	283.00	100	Horizontal	Pass
2	4879.280	50.87	3.20	74.0	-23.13	Peak	89.00	100	Horizontal	Pass

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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	2440	84.06	-3.57	114.0	-29.94	Peak	174.00	100	Vertical	Pass

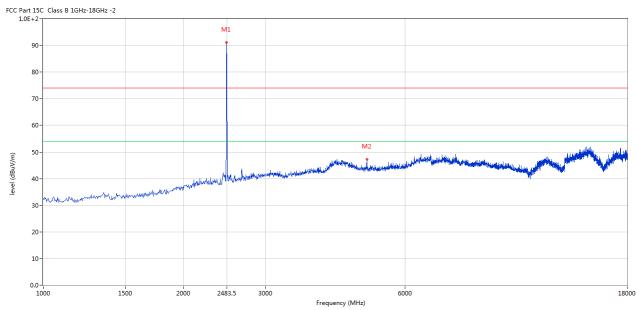
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Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2480	91.23	-3.57	114.0	-22.77	Peak	138.00	100	Horizontal	Pass
2	4960.010	47.23	3.36	74.0	-26.77	Peak	164.00	100	Horizontal	Pass

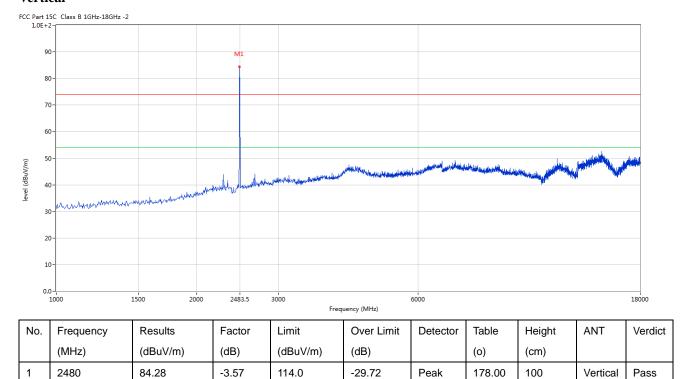
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#### Vertical



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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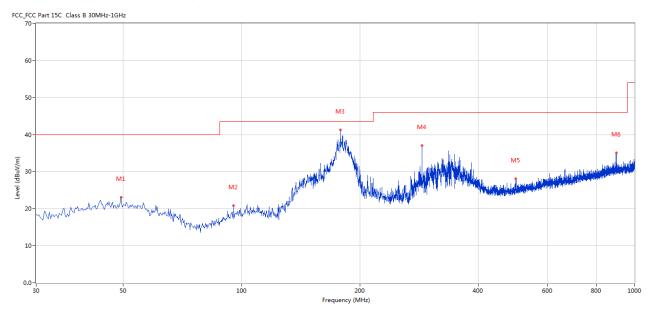


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

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	49.395	23.07	-11.28	40.0	16.93	Peak	153.00	100	Horizontal	Pass
2	95.459	20.81	-14.22	43.5	22.69	Peak	77.00	100	Horizontal	Pass
3	178.615	41.25	-15.43	43.5	2.25	Peak	252.00	100	Horizontal	Pass
4	287.956	37.00	-11.27	46.0	9.00	Peak	25.00	100	Horizontal	Pass
5	498.150	28.04	-7.12	46.0	17.96	Peak	269.00	100	Horizontal	Pass
6	898.660	35.11	-1.80	46.0	10.89	Peak	246.00	100	Horizontal	Pass

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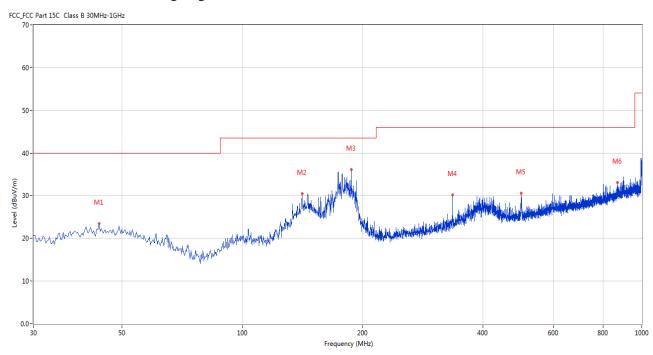


# Radiated Emission In Vertical (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	43.819	23.47	-11.48	40.0	16.53	Peak	64.00	100	Vertical	Pass
2	141.037	30.50	-17.26	43.5	13.00	Peak	297.00	100	Vertical	Pass
3	187.343	36.08	-14.58	43.5	7.42	Peak	33.00	100	Vertical	Pass
4	335.959	30.17	-9.91	46.0	15.83	Peak	285.00	100	Vertical	Pass
5	498.150	30.55	-7.12	46.0	15.45	Peak	242.00	100	Vertical	Pass
6	869.083	33.15	-2.08	46.0	12.85	Peak	337.00	100	Vertical	Pass

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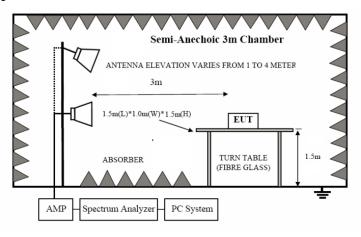


#### 7. Band Edge

#### 7.1 Test Method and test Procedure:

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

# 7. 2 Radiated Test Setup



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

# 7.3 Configuration of the EUT

Same as section 5.3 of this report

# 7.4 EUT Operating Condition

Same as section 5.4 of this report.

# 7.5 Band Edge Limit

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

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

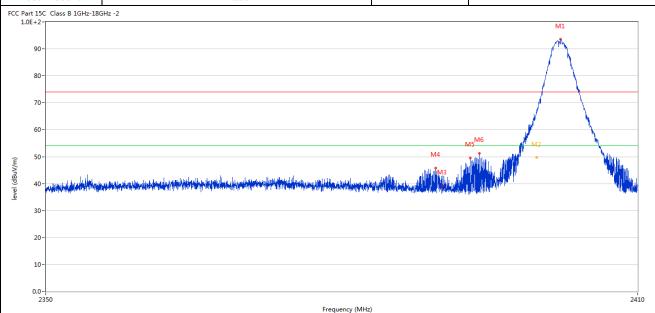
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#### 7.6 Test Result

Product:	Bluetooth Wireless Keyboard	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC3.0V
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	2402.097	93.52	-3.57	74.0	19.52	Peak	52.00	100	Horizontal	N/A
2	2400.002	65.71	-3.57	74.0	-8.29	Peak	153.00	100	Horizontal	Pass
2**	2400.002	49.67	-3.57	54.0	-4.33	AV	153.00	100	Horizontal	Pass
3	2390.025	39.18	-3.53	74.0	-34.82	Peak	52.00	100	Horizontal	Pass
4	2389.365	45.84	-3.53	74.0	-28.16	Peak	89.00	100	Horizontal	Pass
5	2392.889	49.48	-3.54	74.0	-24.52	Peak	52.00	100	Horizontal	Pass
6	2393.834	51.24	-3.54	74.0	-22.76	Peak	52.00	100	Horizontal	Pass

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J	Product:	Blu	etooth Wir	eless Keybo	ard	Detecto	or	V	ertical	
	Mode		Keeping T	ransmitting		Test Volta	age	D	C3.0V	
Te	mperature		24 d	eg. C,		Humidi	ty	56% RH		
Te	est Result:		P	ass						
Part 1 1.0E+	.5C Class B 1GHz-18GHz 2-	-2								
9	0-								M1	
,									1	
8	0-									
7	0-								-	
6	0-								\.	
5	0-							- V	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	
,							M5	M2	'N	ı
						N/ds	៖ គេជីង	July William		Mala Mara
3	0-	بالمناف والمارات المنافعة والمنافعة	h had sig a siglipatible de la palette	ومراوية والمراوية والمراوي	والمتعادية والمتعاددة والمتعاددة والمتعاددة والمتعاددة والمتعاددة والمتعاددة والمتعاددة والمتعاددة والمتعاددة	North American Americ				Mile.
3		والمرتب بالحاقية ومسيسط بالمفاقس فالمرتب فالمرتب	<del>h had i</del> t e <i>ar</i> ileaidh ease, bidei	erdeskusin sin del talanderye kesik ulu	dendrinten a siringal den gazina			with "		Mark.
3 2 1		i fuzzi ka ing iza dan mada katikarishi, niga yan	h met et a ereit puid haven hiere	erdestasion similali talanda ya kasai uluu	and the second seco		and the state of t			2
3 2 1 0.	0-	Results	Factor	Limit	Frequency (MHz)  Over Limit		Table	Height	ANT	1
3 2 1 0.		(Ashin see, I is maintain data shake it as	and the control of th	A Company of the Comp	Frequency (MHz)	. Mary Andrew Color of the Mary Andrews	and the state of t	Height (cm)	ANT	1
3 2 1 1 0.	o- 0- 0- 2350	Results	Factor	Limit	Frequency (MHz)  Over Limit	. Mary Andrew Color of the Mary Andrews	Table	_	ANT	1
3 2 1 0.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Frequency (MHz)  Over Limit (dB)	Detector	Table (o)	(cm)		Verd
3 2 1 0.	Frequency (MHz)	Results (dBuV/m) 86.74	Factor (dB) -3.57	Limit (dBuV/m) 74.0	Frequency (MHz)  Over Limit (dB)  12.74	Detector Peak	Table (o) 208.00	(cm)	Vertical	Verd N/A Pass
3 2 1 0. No.	Frequency (MHz) 2401.737 2400.012	Results (dBuV/m) 86.74 60.70	Factor (dB) -3.57	Limit (dBuV/m) 74.0 74.0	Frequency (MHz)  Over Limit (dB)  12.74  -13.30	Detector Peak Peak	Table (o) 208.00 148.00	(cm) 100 100	Vertical Vertical	Verd N/A Pass Pass
3 2 1	Frequency (MHz) 2401.737 2400.012 2400.012	Results (dBuV/m) 86.74 60.70 43.68	Factor (dB) -3.57 -3.57	Limit (dBuV/m) 74.0 74.0 54.0	Frequency (MHz)  Over Limit (dB)  12.74  -13.30  -10.32	Detector Peak Peak AV	Table (o) 208.00 148.00 148.00	(cm) 100 100	Vertical Vertical Vertical	Verding N/A Pass Pass Pass Pass

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Product:	Bluetooth Wire	eless Keyboard	Polarity	Horizontal
Mode	Keeping Ti	ransmitting	Test Voltage	DC3.0V
Temperature	24 de	eg. C,	Humidity	56% RH
Test Result:	Pa	ass		
CC Part 15C Class B 1GHz-18GHz -2 1.0E+2-				
90-	M1	ma Mr.		
80-	M	The second		
70-	, to l	J. C. Mary		
60 -	W	M <sub>2</sub>		
50- 40-	Mark Control of the C	W. W. wydyll		hainanna abaybhadh whaisan dhashi sayah ahain an abbisha
•				
30-				
20-		2483.5 Frequency (M	H2)	2

No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2479.950	91.16	-3.57	74.0	17.16	Peak	138.00	100	Horizontal	N/A
2	2483.500	50.77	-3.57	74.0	-23.23	Peak	267.00	100	Horizontal	Pass

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	Product:	В	luetooth W	Vireless Key	board	Det	ector		Vertical	
	Mode		Keeping	Transmittin	g	Test V	/oltage		DC3.0V	
Т	Temperature		24	deg. C,		Hun	nidity		56% RH	
7	Test Result:			Pass		-				
CC Part 1.0E+	15C Class B 1GHz-18GHz -	2				•		•		
8	90		M1	24						
level (dBuV/m)	40		<i>[</i>	A A	ing and the later than the second	المراجعة الم	المراجعة	nederleiche auch durchten zu weite	ગ્લાન્સ સહસીના દાર્શમાં જના હતા કરો	ada ada, inte
level (dBuV/m)	40-		<i></i>	And		ayer shak talk sak dibada	. Land the state of the state o	and the little because of understand a second	us ng sepalika dikenya pakebake shiri	t till seller tele
level (dBuV/m)	40- 30- 20-			2483.5	requency (MHz)	n og sen eg	Alexander and the second and the sec	ne dat feit die en sche fere die ken er wede	na me ag addish dan guna dhul an biri	2500
level (dBuV/m)	40	Results	Factor			Detector	Table	Height	uniterallishideneestelishidenee	
level (dBuV/m)	30 - 20 - 10 - 2470	Results (dBuV/m)	Factor (dB)	-	requency (MHz)					2500
level (dBuV/m)	30			Limit	Over Limit		Table	Height		2500

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 -1.52 dBi maximum. It fulfills the requirement of this section.

Test Result: Pass

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9.0 20dB Bandwidth	h Measurement					
Product:			Test Mode:	Keep transmitting		
Mode	Keeping Tran	Keeping Transmitting		DO	DC3.0V	
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:	Pass	3	Detector PK		PK	
20dB Bandwidth	1.208M	IHz				
	Marker 1 [T1	ndB] RBW	100 kHz	RF Att	20 dB	
Ref Lvl		0.00 dB VBW	300 kHz			
10 dBm	BW 1.2084	1683 MHz SWT	5 ms	Unit	dBm	
10			<b>▼</b> 1 [T1	1	1.21 dBm	
				2.4017		
0			ndB	2.0004	0.00 dB	
			BW VTI [T	1.20841 11 -1		
-10					3186 GHz	
			V <sub>T</sub> T <sup>2</sup> [T	1] -1	8.81 dBm	
-20	/			2.4026	4028 GHz <b>1MA</b>	
			\			
-30	mul		<u> </u>	The same of the sa		
$\sim$						
-40	/			<del> </del>	\	
-50					V <sub>V</sub>	
					Mymy	
-60						
-70						
-80						
-90 Center 2.	402 GHz	300 kHz/		Sn	an 3 MHz	
				520	5 11112	
ate: 25.	JUL.2023 16:09:24	L				

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Product:	Bluetooth Wireless Keyboard			Test Mode: Kee		p transmitting	
Mode	Keeping Tr	Keeping Transmitting		Test Voltage	D	C3.0V	
Temperature	24 deg. C,			Humidity 56% RH		5% RH	
Test Result:	Pass			Detector PK		PK	
20dB Bandwidth	1.208MHz						
R.	Marker 1 [	r1 ndB]	RBW	100 kHz	RF Att	20 dB	
Ref Lvl	ndB	20.00 dB	VBW	300 kHz			
10 dBm	BW 1.20	841683 MHz	SWI	' 5 ms	Unit	dBm	
10				<b>▼</b> 1 [T1		l.46 dBm	
		1			2.43978	A GHz	
0			5	ndB	20	0.00 dB	
				BW	1.20841		
-10				VT1 [1	2 42045		
	E.J			∇ <sub>T2</sub> T2		3186 GHz 3.31 dBm	
-20	<del>-  </del>					1028 GHz	
1MAX					<b>\</b>	1MA	
-30							
-40	/						
V-M						M	
-50						Way.	
-60							
-70							
-80							
-90							
Center 2.44 GHz 300 kHz/ Span 3 MHz							
Date: 25.JUL.2023 16:10:12							

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Product:	Bluetooth Wireless F	Test Mode: Keep transmitting				
Mode	Keeping Transm	Test Voltage	DC3.0V			
Temperature	24 deg. C,		Humidity	56% RH		
Test Result:	Pass		Detector	PK		
20dB Bandwidth	1.208MHz					
	Marker 1 [T1 ndB] RBW		100 kHz	RF Att	20 dB	
Ref Lvl		00 dB VBW	300 kHz			
10 dBm	BW 1.208416	83 MHz SWT	5 ms	Unit	dBm	
10			▼1 [T1]	1.	51 dBm	
		1		2.479786	57 GHz	
0			ndB	20.	00 dB	
			BW V <sub>T1</sub> [T1		68 MHz	
-10					.86 GHz	
	T1		▼ <sub>T2</sub> T2 T1		42 dBm	
-20				2.480640	28 GHz	
IMAX					1MA	
-30			<del>                                     </del>	~~~		
-40						
					ц.	
-50					www.	
-60						
-70						
-80						
-90 Center 2.4	48 GHz	300 kHz/		Span	ı 3 MHz	
Date: 25.JUL.2023 16:11:44						

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#### 10.0 FCC ID Label

#### FCC ID: ZJEST-BK605

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:**



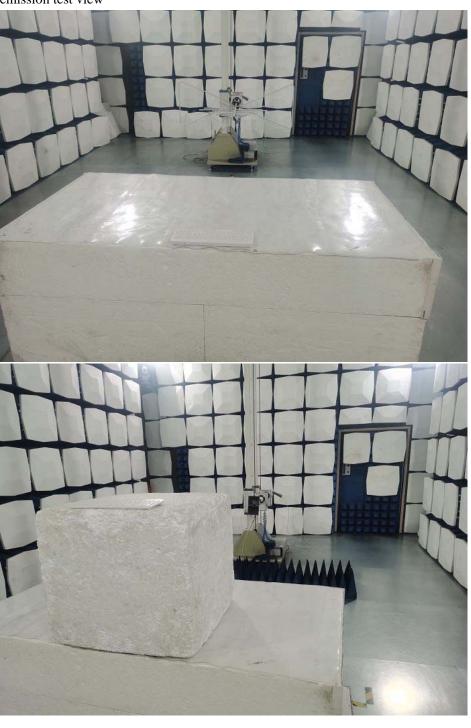
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11.0 Photo of testing

11.1 Conducted test View - N/A
Radiated emission test view



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

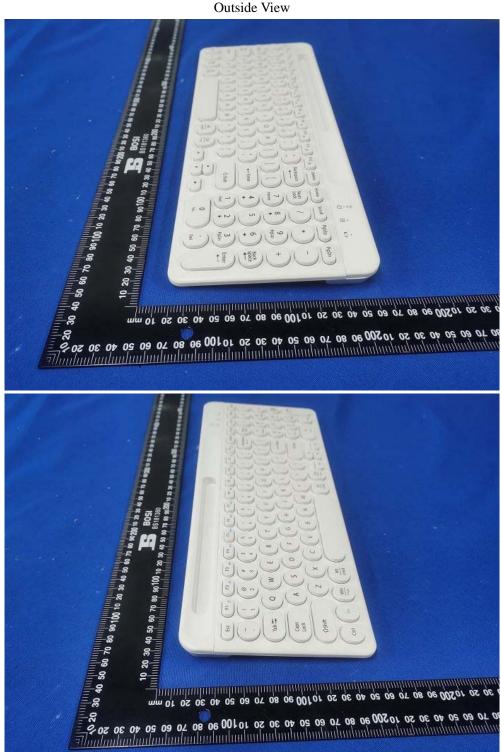
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Outside View



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Outside View





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Outside View



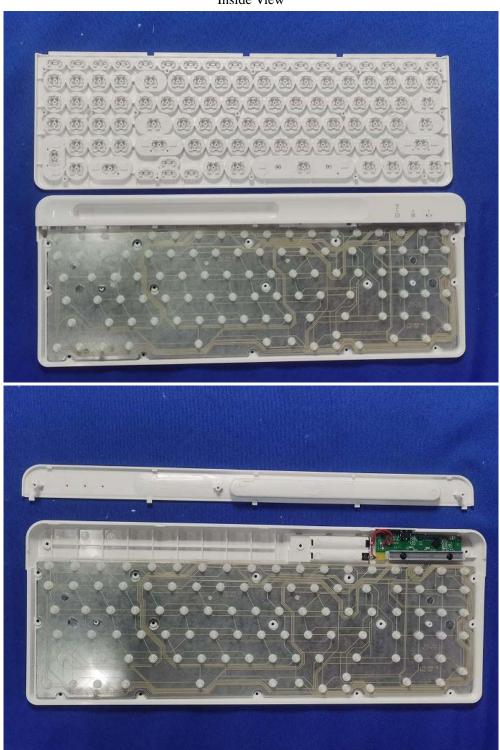
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Inside View



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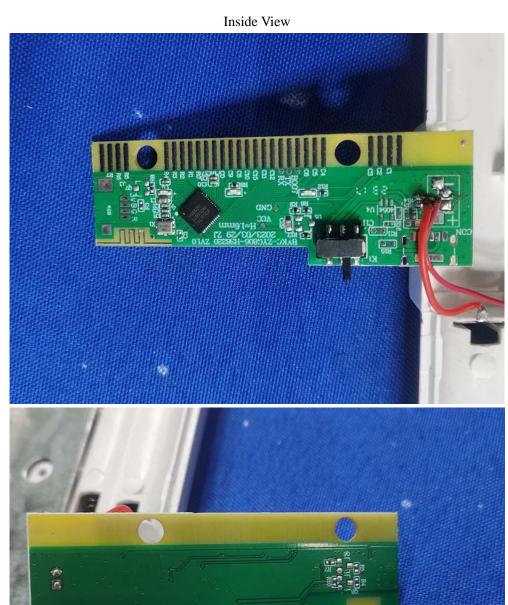
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-- End of the report--

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