



Report No.: TW2203211E File reference No.: 2022-03-31

Applicant: Shenzhen SQT Electronics Co.,Ltd

Product: Bluetooth Keyboard

Model No.: SK-678BT, 888BT

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 Tong

Terry Tang Manager

Dated: March 31, 2022

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

# SHENZHEN TIMEWAY TESTING LABORATORIES

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

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

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# **Special Statement:**

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

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

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

#### **CNAS-LAB Code: L2292**

The EMC Laboratory has been assessed and in compliance with CNAS-CL01 accreditation criteria for testing Laboratories (identical to ISO/IEC 17025:2005 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

Date: 2022-03-31



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

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# 1.0 General Details

#### 1.1 Test Lab Details

Name: SHENZHEN TIMEWAY TESTING LABORATORIES.

Address: Zone C, 1st Floor, Block B, Jun Xiang Da Building, Zhongshan Park Road West, Tong Le

Village, Nanshan District, Shenzhen, China

Telephone: (755) 83448688 Fax: (755) 83442996

Site on File with the Federal Communications Commission – United Sates

Registration Number: 744189 For 3m Anechoic Chamber

#### 1.2 Applicant Details

Applicant: Shenzhen SQT Electronics Co.,Ltd

Address: ZhengChengFeng TechnologyZone Xinsha Road,ShaYi Village, Sha jing Town, Baoan Area,

Shenzhen, China

Telephone: 0755-27568078 Fax: 0755-27568223

# 1.3 Description of EUT

Product: Bluetooth Keyboard

Manufacturer: Shenzhen SQT Electronics Co.,Ltd

Address: ZhengChengFeng TechnologyZone Xinsha Road,ShaYi Village, Sha jing

Town, Baoan Area, Shenzhen, China

Trademark: N/A

Model Number: SK-678BT Additional Model Name 888BT

Rating: DC1.5V, 12mA

Battery 1pc 1.5V AAA battery

Modulation Type: GFSK, π/4D-QPSK, 8DPSK (Bluetooth)

Operation Frequency: 2402-2480MHz

Channel Number: 79
Channel Separation: 1MHz

Serial No.: SK678BT210600001

Antenna Designation PCB antenna with gain 1.87dBi Max (Get from the antenna specification

provided by the manufacturer)

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1.4 Submitted Sample: 2 Sample

1.5 Test Duration

2022-03-11 to 2022-03-31

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	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 Bilog Antenna	Anritsu	MA2491A	32263	2021-06-18	2022-06-17			
	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	1	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	N/A	N/A
FCC Part 15 Subpart C Paragraph 15.249(a) & 15.249(b) Limit	Field Strength of Fundamental	Pass	Complies
FCC Part 15, Paragraph 15.209	Radiated Emission Test	Pass	Complies
FCC Part 15 Subpart C Paragraph 15.249(d) Limit	Band Edge Test	Pass	Complies

#### 3.2 Test Standards

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

#### 4.0 EUT Modification

No modification by SHENZHEN TIMEWAY TESTING LABORATORIES

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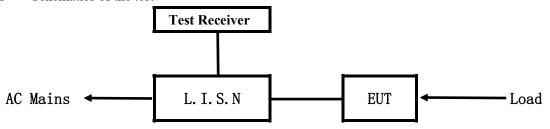
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#### 5. Power Line Conducted Emission Test

#### 5.1 Schematics of the test

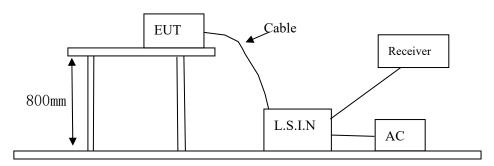


**EUT: Equipment Under Test** 

#### 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.

79 channels are provided to the EUT

#### A. EUT

Device	Manufacturer	Model	FCC ID
Bluetooth Keyboard	Shenzhen SQT Electronics Co.,Ltd	SK-678BT, 888BT	WOX-SK-678BT

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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 C63.4 -2014

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

5.5 Power line conducted Emission Limit according to Paragraph 15.207

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

Notes:

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

#### 5.6 Test Results:

N/A

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

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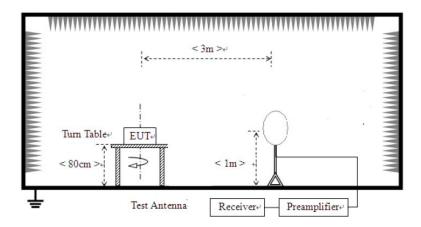


#### **6** Radiated Emission Test

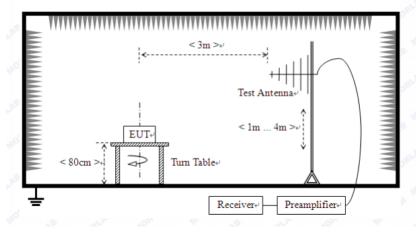
- 6.1 Test Method and test Procedure:
- (1) The EUT was tested according to ANSI C63.10-2013. The radiated test was performed at Timeway EMC Laboratory. This site is on file with the FCC laboratory division, Registration No. 744189
- (2) The EUT, peripherals were put on the turntable which table size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



For radiated emissions from 30MHz to1GHz



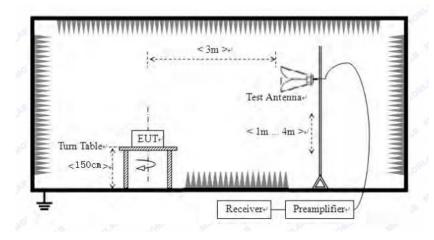
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For radiated emissions above 1GHz



- 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	ental (3m)	Field Strength of Harmonics (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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# B. Frequencies in restricted band are complied to limit on Paragraph 15.209.

	1	8 1
Frequency Range (MHz)	Distance (m)	Field strength (dB µ V/m)
0.009-0.490	3	20log(2400/F(kHz)) +40log (300/3)
0.490-1.705	3	20log(24000/F(kHz)) +40log (30/3)
1.705-30	3	69.5
30-80	3	40.0
88-216	3	43.5
216-960	3	46.0
Above 960	3	54.0

Note:

- 1. RF Voltage (dBuV) = 20 log RF 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 tests.
- 7. Three modulation were tested and only the worst case was recorded in the test report and GFSK modulation was the worst case.

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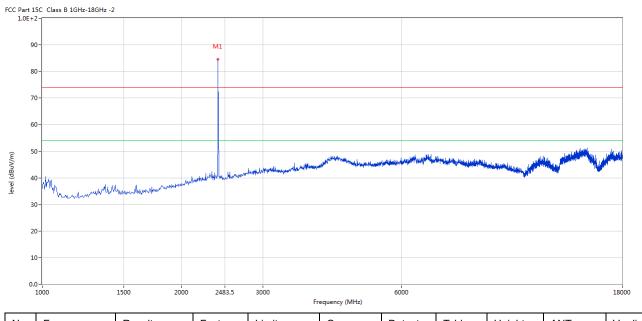


#### 6.5 Test result

# A Fundamental & Harmonics Radiated Emission Data

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

#### Horizontal



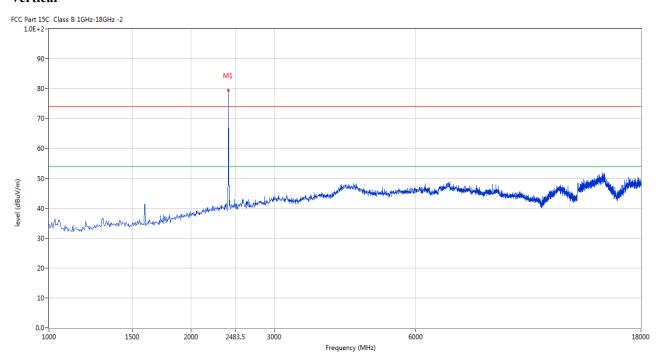
No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2402	84.69	-3.57	114.0	-29.31	Peak	110.00	100	Horizontal	Pass

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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	79.79	-3.57	114.0	-34.21	Peak	343.00	100	Vertical	Pass

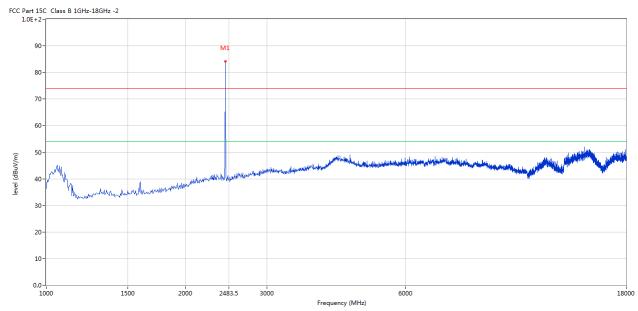
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Please refer to the following test plots for details: Middle Channel-2441MHz

#### Horizontal



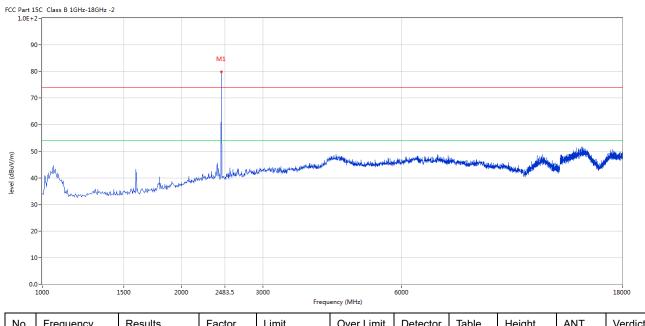
	No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
		(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
ſ	1	2441	84.12	-3.57	114.0	-29.88	Peak	113.00	100	Horizontal	Pass

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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2441	79.87	-3.57	114.0	-34.13	Peak	11.00	100	Vertical	Pass

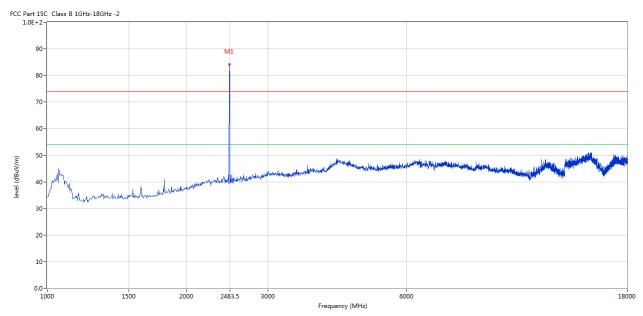
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Please refer to the following test plots for details: High Channel-2480MHz

#### Horizontal



No.	Frequency	Results	Factor	Limit	Over	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	Limit (dB)		(o)	(cm)		
1	2480	84.55	-3.57	114.0	-29.45	Peak	226.00	100	Horizontal	Pass

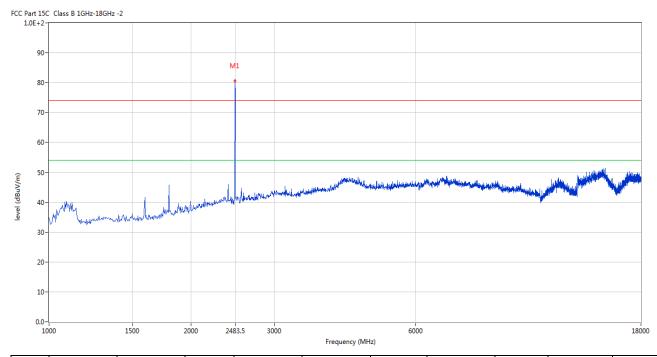
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#### Vertical



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table (o)	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)			(cm)		
1	2480	80.57	-3.57	114.0	-33.43	Peak	38.00	100	Vertical	Pass

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

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

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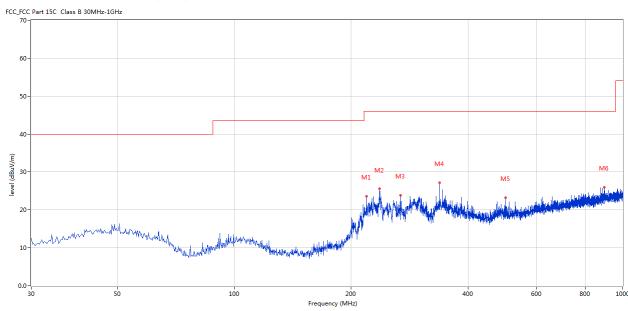


# B. General Radiated Emission Data Radiated Emission In Horizontal (30MHz----1000MHz)

EUT set Condition: Keep Tx transmitting

**Results:** Pass

Please refer to following diagram for individual



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(0)	(cm)		
1	219.103	23.58	-13.33	46.0	-22.42	Peak	298.00	100	Horizontal	Pass
2	236.801	25.51	-12.34	46.0	-20.49	Peak	279.00	100	Horizontal	Pass
3	267.591	23.92	-11.73	46.0	-22.08	Peak	245.00	100	Horizontal	Pass
4	337.413	27.11	-9.83	46.0	-18.89	Peak	290.00	100	Horizontal	Pass
5	500.090	23.15	-6.91	46.0	-22.85	Peak	126.00	100	Horizontal	Pass
6	896.236	25.95	-1.75	46.0	-20.05	Peak	230.00	100	Horizontal	Pass

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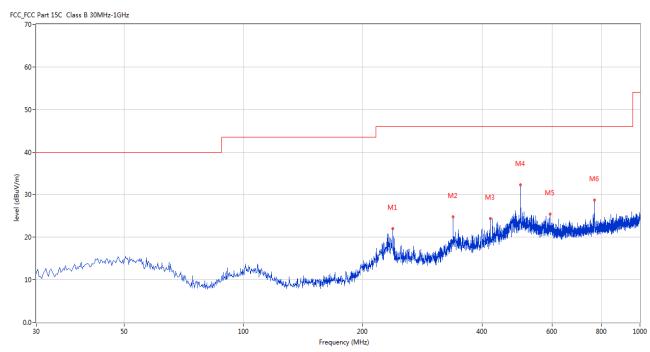


# Radiated Emission In Vertical (30MHz----1000MHz)

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	238.255	21.98	-12.48	46.0	-24.02	Peak	323.00	100	Vertical	Pass
2	337.413	24.73	-9.83	46.0	-21.27	Peak	331.00	100	Vertical	Pass
3	419.358	24.35	-8.29	46.0	-21.65	Peak	331.00	100	Vertical	Pass
4	500.090	32.32	-6.91	46.0	-13.68	Peak	178.00	100	Vertical	Pass
5	592.459	25.44	-5.16	46.0	-20.56	Peak	333.00	100	Vertical	Pass
6	767.501	28.79	-3.19	46.0	-17.21	Peak	360.00	100	Vertical	Pass

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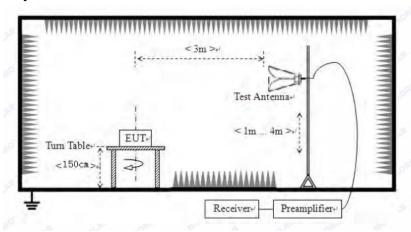


#### 7. Band Edge

# 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.

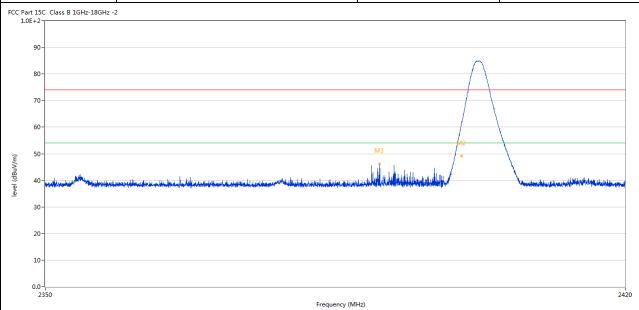
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#### 7.6 Test Result

Product:	Bluetooth Keyboard	Polarity	Horizontal
Mode	Keeping Transmitting	Test Voltage	DC1.5V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		

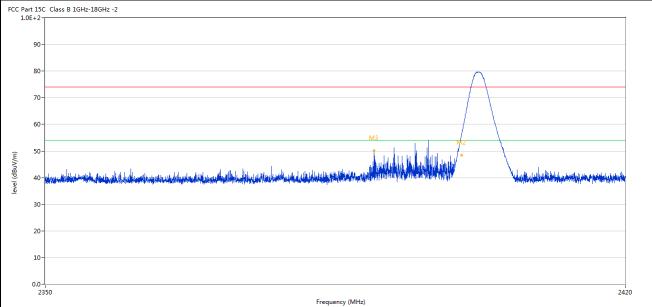


No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402.189	84.86	-3.57	74.0	10.86	Peak	112.00	100	Horizontal	N/A
2	2400.042	62.89	-3.57	74.0	-11.11	Peak	112.00	100	Horizontal	Pass
2**	2400.042	49.22	-3.57	54.0	-4.78	AV	112.00	100	Horizontal	Pass
3	2390.009	46.14	-3.53	74.0	-27.86	Peak	76.00	100	Horizontal	Pass

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Product:	Bluetooth Keyboard	Detector	Vertical
Mode	Keeping Transmitting	Test Voltage	DC1.5V
Temperature	24 deg. C,	Humidity	56% RH
Test Result:	Pass		
FCC Part 15C Class B 1GHz-18GHz -2		•	ı



No.	Frequency	Results	Factor	Limit	Over Limit	Detector	Table	Height	ANT	Verdict
	(MHz)	(dBuV/m)	(dB)	(dBuV/m)	(dB)		(o)	(cm)		
1	2402.207	79.63	-3.57	74.0	5.63	Peak	344.00	100	Vertical	N/A
2	2400.020	55.69	-3.57	74.0	-18.31	Peak	344.00	100	Vertical	Pass
2**	2400.020	48.47	-3.57	54.0	-5.53	AV	344.00	100	Vertical	Pass
3	2389.993	50.06	-3.53	74.0	-23.94	Peak	297.00	100	Vertical	Pass

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]	Product:		Blueto	oth Keyboar	d		Polarity	у	Horizon	tal
	Mode		Keepin	g Transmitti	ng	,	Test Volta	age	DC1.5	V
Te	emperature		24	4 deg. C,			Humidit	ty	56% R	Н
Τσ	est Result:			Pass						
CC Part 1	15C Class B 1GHz-18GHz	-2								
ç	90-									
	30 -									
٥										
7	70-									
	50-		1							
E	50-		1							
_	50-			M2						
_		iklari i kanadari i ka		M2	The state of the s	shirker h. Lukeris was dagang	ومراجع والمراجع والمراجع المراجع المرا	dhe oh esedibilish wadda ka	والمعادر وال	designation and
5	50-	Maritamorinia angretar	/	M. M.S	- Andrews	Medical description of the contract of	ian, Hadrovi, arnahiyadi, dan	the characteristical department of the	فيتعلقهن والجناء والمستعادين والمستعادين	de de diventar
5	10 - million besterne descriptions	Maritamonto in constituto de la constitu		M2	and Marines	Minister of Languages of Languages	العمالية المعالم والمعارض والمعارض المعارض المعارض المعارض المعارض المعارض المعارض المعارض المعارض المعارض الم	المهود والمعارف المعارض	يتعادلون فيادرون والمراور والمتابع والمتابع والمتابع والمتابع والمتابع والمتابع والمتابع والمتابع والمتابع والم	Automatical Control of the Control o
5 2 3	10-millioner de la companya de la co	klonianoniminana decar		M2	Mary and and an and an and an	Mindred h. L. Presting and Age, sign	an lipoteni, p. miliopolishen	the circus that open that hape	المتعادلة فيضاء بالمعادد الإساد والمفاقعة للمتعاددة	Antolerope
5 5 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	10	kbaniananininananana		M2	The said when the	Hiridan Ladiciden Adams	ion.Hydroi <sub>d</sub> avakidyakidya	lhedeschioù ghan ind Aspe	سطير والمضاور والمواج عزيد والمواج والمطاوعة	destroya
5 5 4 3 2 1	10-millioner de la companya de la co	ikbanidaanaitusiseanaitusis		2483.		Historia kalendari kan da k	and feeling and the selection of the sel	Abativa Nicipatrial Ama	المنافقة الم	2500
3 2 1 0.	10	Results	Factor	2483.: Limit		Detector	Table	Height	ANT	2500
5 2 3 2 1	10 - 11 - 11 - 11 - 11 - 11 - 11 - 11 -	Results (dBuV/m)	Factor (dB)	1	Frequency (MHz)					
(iu/anga) jawa 4 3 2 2 1 0.	50			Limit	Frequency (MHz)  Over Limit		Table	Height		2500

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	Product:		B	luetooth Ke	yboard		Detec	ctor	Verti	cal
	Mode		Ke	eping Trans	mitting		Test Vo	ltage	DC1.	5V
Te	emperature			24 deg. (	Ξ,		Humi	dity	56%]	RH
T	est Result:			Pass						
1.0E	15C Class B 1GHz-18GHz	z -2								
	70-									
	60-									
	50-				M2					
	50-							A BANGARAN AND AND AND AND AND AND AND AND AND A		alahir dayan halarid
level (dBuV/m)	50-	i die de diposit de procesa de pr								andric departed at
level (dBuV/m)	40-	h die de die gestelde gestelde ge								
level (dBuV/m)	50- 40-	h die de die gestelde ge						dinimination deliberation of the last		
level (dBuV/m)	50- 40- 30- 20-	jdeskludjesid selvekasiekteru				- 194 ( T ) ( 194 ( T ) ) ( 194 ( T ) )		American Adultura Vida d		2500
level (dBuV/m)	50- 40- 30- 20- 10- 0.0- 2470	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	2483.5	- 194 ( T ) ( 194 ( T ) ) ( 194 ( T ) )	Table (o)	Height (cm)	ANT	1
level (dBuV/m)	50- 40- 30- 20- 10- 0.0- 2470				2483.5 Frequency (Minute of the control of the cont	lz)	Litte and secondary the still	Height	and the result of the second o	2500 Verdict

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

2. Three modulation were tested and only the worst case was recorded in the test report and GFSK modulation was the worst case.

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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 1.87dBi Max. It fulfills the requirement of this section. Test Result: Pass

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FSK Modulation										
Product:	Blue	tooth Keyl	oard		Te	est Mode:		Keep tran	smitting	
Mode	Keep	ing Transm	nitting		Te	st Voltage		DC1	.5V	
Temperature		24 deg. C,						56%	RH	
Test Result:		Pass			I	Detector		PI	Κ	
OdB Bandwidth		1.052MHz							-	
<u> </u>	Marker	1 [T1 r	ndB]	RI	3W	30 k	Hz Ri	F Att	20 dB	
§ Ref Lvl	ndB	20.	.00 dB	VI	∃W	100 k	Hz			
10 dBm	BW	1.052104	121 MHz	sī	νT	8.5 m	s U	nit	dBr	n
10						<b>v</b> <sub>1</sub>	[T1]	2	.62 dBn	1_
							3	2.40208	717 GHz	
0				v v(	d	ndE	3	20	.00 dB	
			$^{\prime}$		)	BW		1.05210	421 MHz	5
-10		_	, , , , , , , , , , , , , , , , , , ,			W VT	[T1]	-17	.31 dBn	4
		T1				<b>₩</b>	'2 <b>7</b> [T1]	2.40155 -17		
-20						, T %	$\sqrt{\prod_{i=1}^{n}}$	2.40261	.37 dBn 022 GHz	
1MAX							W	2.10201	.022 G112	1:
- 40	m/ /						ď	My		
							(	\	4	
-50 mm									While	ų
-60										
-70										
-80					$\dashv$					-
-90 Center 2.40	2 GHz	Į	300	kHz/				Sna	ın 3 MHz	_{

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Product:	Blueto	ooth Keyboard	To	est Mode:	Keep tra	ansmitting
Mode	Keepin	g Transmitting	Te	est Voltage	DC	C1.5V
Temperature	2	4 deg. C,	I	Humidity	569	% RH
Test Result:		Pass	]	Detector	]	PK
20dB Bandwidth	1.	.052MHz				
R)	Marker	1 [T1 ndB]	RBW	30 kHz	RF Att	20 dB
Ref Lvl	ndB	20.00 dB	VBW	100 kHz		
10 dBm	BW 3	1.05210421 MHz	SWT	8.5 ms	Unit	dBm
10				<b>V</b> 1 [1	r1]	.89 dBm
			, <del>1</del>		2.44108	
0			~~~	ndB	20	0.00 dB
				BW ∇ <sub>T1</sub> I	1.05210 [T]] -18	
-10				V/	2.44055	/ GDII
		T1		VT2	[T1] -18	.02 dBm
-20				<u> </u>	2.44161	022 GHz
1MAX						1MA
-30	/				<del>\</del>	
-40					J.m.	
. Au . Mak. Au					V	<b>V.</b> 1
-50						ww.M
-60						
-70						
9.0						
-80						
-90 Center 2	2.441 GHz	300	kHz/		Spa	an 3 MHz
Date: 3	0.MAR.2022 13					

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Product:	Blueto	oth Keyboard		To	est Mode:		Keep tra	nsmitting	
Mode	Keepin	g Transmitting	3	Te	est Voltage		DC	1.5V	
Temperature	2	4 deg. C,		I	Humidity		56%	6 RH	
Test Result:		Pass		]	Detector		F	PK	
20dB Bandwidth	1.	040MHz							
Í Á	Marker	1 [T1 ndB]	] I	RBW	30 k	Hz RI	7 Att	20 dB	
Ref Lvl	ndB	20.00	dB 7	/BW	100 k				
10 dBm	BW 1	1.04008016	MHz	SWT	8.5 m	s Uı	nit	dBm	ı
10					<b>v</b> <sub>1</sub>	[T1]	1	.81 dBm	A
				,			2.48009	319 GHz	A
0				$\sqrt{}$	ndB		20	.00 dB	
			$\sqrt{}$		BW ▼T1	[ 17 ]	1.04008	016 MHz	
-10		2/1			M		2.47957	014 GHz	
		T1 Y			<b>√</b> \}	2 [T1]	-18	.49 dBm	
-20		$\sim$				\ <u>\</u>	2.48061	022 GHz	1MA
IFIAA									IMA
-30	/					4			
-40	M_/					\ \	~~		
- 10							<b>√</b> \		
-50	WIN -							- www	
W-41410									
-60									
-70									
-80									
-90									
Center 2			300 kHz/	,			Spa	n 3 MHz	
Date: 30	).MAR.2022 13	:57:38							

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Product:		Blueto	oth Keybo	ard		T	Test Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		T	est Voltage		DC1.5V		
Temperature		2	4 deg. C,				Humidity		56% RH		
Test Result:			Pass			Detector				PK	
20dB Bandwidth	1.052MHz  Marker 1 [T1 ndB] F										
r)						RBW 30 k		Hz R	F Att	20 dB	
Ref Lvl	r	ndB	20.	00 dB	7	VBW	100 ki				
10 dBm	F	3W 1	1.052104	21 MHz		SWT	8.5 ms	s Uı	nit	dBm	ı
10					1		<b>v</b> <sub>1</sub>	[T1]	2	2.48 dBm	A
				Λ	\\ <del>\\</del> \	١			2.40209	319 GHz	-
0				$\sim$		$\wedge /$	ndB		20	0.00 dB	
				N			BW	[T1]	1.05210		
-10			N				V	[TT]	2.40155	.09 dBm	
			T1/Y				V <sub>T</sub>	2 [T1]	-17	7.36 dBm	
-20								<u></u>	2.40261	022 GHz	
1MAX			$\sqrt{}$								1M2
-30		/						<del>- }</del>			
	$\sim$	\_ /							$\mathcal{M}$		
-40	<del>//  </del>	<del></del>							w \		
										\	
-50 WWW	₩										
-60											
-70											
-80											
-90											
Center 2	.402 GH	z		300	kHz/	/			Spa	an 3 MHz	

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Product:	Blue	etooth Keybo	oard	1	Test Mode:	Keep transmitting		
Mode	Keep	ing Transmi	tting	Т	est Voltage	DC1.5V 56% RH		
Геmperature		24 deg. C,			Humidity			
Test Result:		Pass			Detector		PK	
dB Bandwidth		1.058MHz						
<u> </u>	Marke	r 1 [T1 r	ndB]	RBW	30 kHz	RF Att	20 dB	
Ref Lvl	ndB	20.	.00 dB	VBW	100 kHz			
10 dBm	BW	1.058116	523 MHz	SWT	8.5 ms	Unit	dBm	
10					<b>▼</b> 1 ['	r1]	1.97 dBm	
				1		2.4410	8717 GHz	
0				$\frac{1}{\sqrt{N}}$	ndB	2	0.00 dB	
			$\mathcal{N}^{v}$		BW VT	1.0581		
-10		m /	<i>/</i>		V	[T1] -1 2.4405	18.07 dBm 55812 GHz	
		T1			<b>V</b> T2	[T1] -1	18.15 dBm	
-20		~			- V	2.4416	1623 GHz	
1MAX							11	
-30						J. M.	۸	
-50 Mary	<i>y</i>						My .	
-50							Sam.	
-60								
-70								
-80								
-90 Center 2.	441 GHz		300 k	Hz/		Sr	pan 3 MHz	

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Product:		Blueto	oth Keybo	oard		Test 1	Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		Test V	/oltage	DC1.5V 56% RH			
Temperature		2	4 deg. C,			Hun	nidity				
Test Result:	•		Pass			Detector			]	PK	
dB Bandwidth	1.040MHz					-	· <b>-</b>				
	Marker 1 [T1 ndB]					W	30 kH	Iz RI	7 Att	20 dB	
Ref Lvl	ndB 20.00 dB			VB	W 1	.00 kF	Iz				
10 dBm		BW 1	L.040080	16 MHz	SW	TT 8	8.5 ms	s U1	nit	dBm	ı
10							<b>v</b> <sub>1</sub>	[T1]	1	.83 dBm	Z
_				^	. × Λ				2.48009	319 GHz	
0				^	~~~	7	ndB		20	.00 dB	
				$\bigvee$			BW VT	[T1]	1.04008	016 MHz	
-10				<b>/</b>		-	M		2.47957		
	T1/V						<b>→</b>	[T1]	-18	.44 dBm	
-20			~					<u> </u>	2.48061	022 GHz	
1MAX											1M
-30								7			
	<i>\</i>	$\mathcal{N}$						Ļ	M		
-40		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\						Ì	\ \ 	<u></u>	
-50 when 1	w\									holine	
he blood of the same											
-60											
-70											
-80											
-90											
Center 2	.48 GHz			300	kHz/				Spa	n 3 MHz	

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8DPSK Modul	ation										
Product:		Blueto	oth Keybo	ard		Т	est Mode:		Keep tra	ansmitting	
Mode		Keepin	g Transmi	tting		Te	est Voltage	e	DC1.5V		
Temperature		2	4 deg. C,			]	Humidity		569	% RH	
Test Result:			Pass			Detector			]	PK	
20dB Bandwidth		1.	046MHz								
<b>R</b>		Marker	1 [T1 r	ndB]	R	BW	30 k	Hz R	F Att	20 dB	
Ref Lvl		ndB		00 dB		BW	100 k				
10 dBm		BW 1	1.046092	218 MHz	S	WT	8.5 m	ns U	nit	dBm	
					1		<b>v</b> <sub>1</sub>	[T1]	2	2.63 dBm	A
0				Λ	√√√				2.40208	3116 GHz	
				N°			ndI	В	20	0.00 dB	
				M			BW V T	l [T1]	1.04609	9218 MHz 7.53 dBm	
-10			~ ~	<b>,~</b> /				12	2.40155		
			7				$\nabla^{\mathrm{T}}$	(T1)	-1	7.17 dBm	
-20			$\sim$					h	2.40260	421 GHz	1MA
		,	$^{\prime}$								IMA
-30		. /						٦	_		
	<i>/</i>	V/4 /						\ \	MA		
-40		,00							,,	4. 4	
-50 WHVW	√ -									Water and the second	
-60											
-70											
-80											
-90 Center 2	2.402 G	Hz		300	kHz/				Spa	an 3 MHz	
Date: 3	0.MAR.2	022 14	:05:55								

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Product:	Bluetoo	th Keyboard	Т	est Mode:	Keep t	ransmitting	
Mode	Keeping	Transmitting	Te	est Voltage	DC1.5V		
Temperature	24	deg. C,	]	Humidity	56	% RH	
Test Result:		Pass		Detector		PK	
0dB Bandwidth	1.0	40MHz					
Ŕ <b>M</b>	Marker 1	l [T1 ndB]	RBW	30 kHz	RF Att	20 dB	
Ref Lvl	ndB	20.00 dB	VBW	100 kHz			
10 dBm	BW 1	.04008016 MHz	SWT	8.5 ms	Unit	dBm	
10				<b>▼</b> 1 [T	1]	1.99 dBm	
					2.4410	8717 GHz	
0			W. V	ndB	2	0.00 dB	
				BW	1.0400	8016 MHz	
-10					T1] -1	7.62 dBm	
		T1 V		V12 г	2.4405 T1] -1	6413 GHz 8.12 dBm	
-20				M.	2.4416	0421 GHz	
1MAX				V		1M	
-30	, n						
-50 <b>144/14/1</b>						M	
30 110						~u	
-60							
-70							
-80							
-90							
Center 2.4	41 GHz	300	kHz/		Sp	an 3 MHz	

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Product:		Blueto	oth Keybo	oard		Test Mode	e:	Keep transmitting		
Mode		Keepin	g Transmi	tting		Test Voltag	ge	DC1.5V		
Temperature		2-	4 deg. C,			Humidity	7	569	% RH	
Test Result:			Pass			Detector			PK	
0dB Bandwidth	1.040MHz  Marker 1 [T1 ndB]									
Ŕ						W 30	kHz F	RF Att	20 dB	
Ref Lvl	ndB 20.00 dB				VB					
10 dBm		BW 1	.040080	16 MHz	SW	T 8.5	ms (	Jnit	dBm	ı
10					1	▼:	L [T1]		1.85 dBm	A
0				Λ				2.48009	920 GHz	
						no BV		1.04008	0.00 dB 3016 MHz	
-10				N		Jy V5		-1	7.87 dBm	
-10			m <sub>1</sub> <	کہر		$\mathcal{N}$	0	2.4795	7014 GHz	
-20			7			$\triangle \vec{j}$	T2[T1]	-18	8.29 dBm	
1MAX							14	2.48061	l022 GHz	1M2
-30		/								
-40		7							5	
-50	~*************************************								- Wall	
-60										
-70										
-80										
-90 Center 2	.48 GHz	Z		300	kHz/			Spa	an 3 MHz	

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#### 10.0 FCC ID Label

#### FCC ID: WOX-SK-678BT

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:**



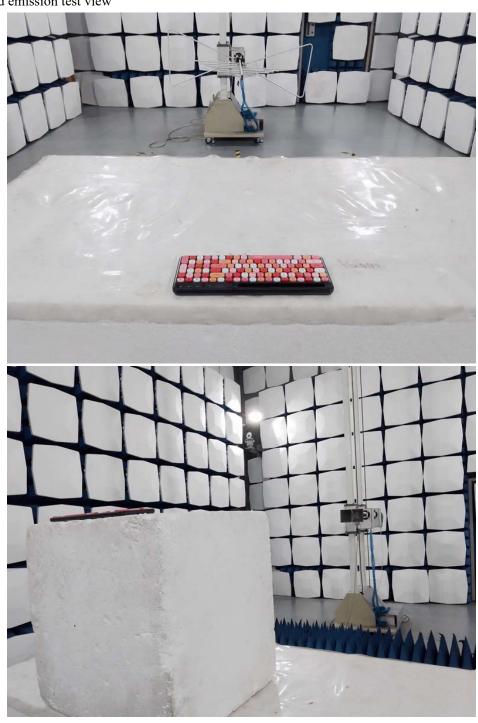
Date: 2022-03-31



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.

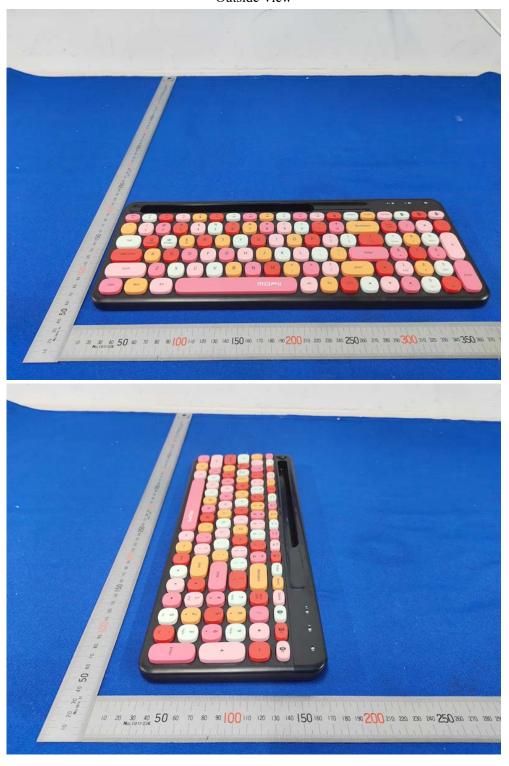
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Date: 2022-03-31



# 11.2 Photographs – EUT

Outside View



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

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Outside 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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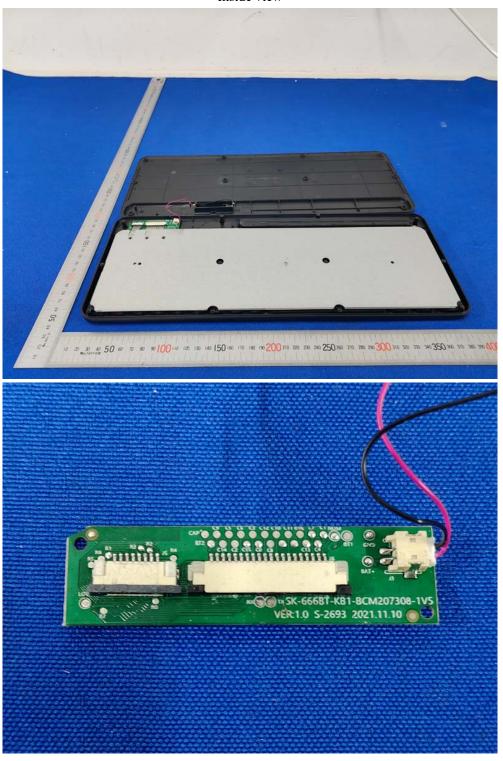
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Inside view



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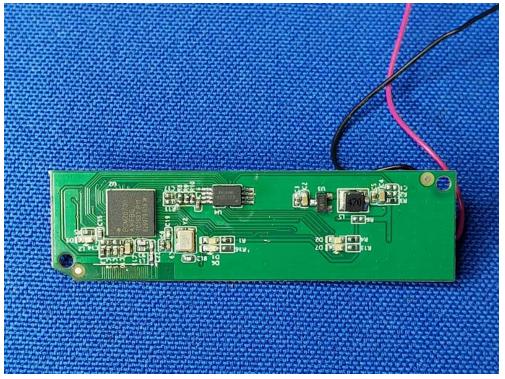
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# Inside view



-- End of the report--