

TEST REPORT

Applicant: Shenzhen RuisiMai Electronics Limited

Room 609, Gangshun Building, Shangxing Village

Address: No.4, Xinqiao sub-district, Baoan District,

Shenzhen, Guangdong, China

Equipment Type: 2.4G Wireless keyboard

Model Name: GWM-X03B (refer section 2.4)

Brand Name: N/A

FCC ID: 2A6G2-GWMX03K

Test Standard: 47 CFR Part 2.1093 KDB 447498 D01 v06

Test Date: Apr. 02, 2022 - May 10, 2022

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ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Julie zhu Checked by: Zong Liyao Approved by: Wei Yanquan

(Chief Engineer)

Julie zhu

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Revision History

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1 GENERAL INFORMATION

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Addraga	Block B, 1/F, Baisha Science and Technology Park, Shahe West
Address	Road, Nanshan District, ShenZhen, GuangDong Province, China
Phone Number	+86 755 6685 0100

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
A ddraga	Block B, 1/F, Baisha Science and Technology Park, Shahe West
Address	Road, Nanshan District, ShenZhen, GuangDong Province, China
Accreditation	The laboratory is a testing organization accredited by FCC as a
Certificate	accredited testing laboratory. The designation number is CN1196.
	All measurement facilities used to collect the measurement data are
Description	located at Block B, 1/F, Baisha Science and Technology Park, Shahe
Description	West Road, Nanshan District, ShenZhen, GuangDong Province,
	China



2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Shenzhen RuisiMai Electronics Limited	
Address	Room 609, Gangshun Building, Shangxing Village No.4, Xinqiao sub-	
Address	district, Baoan District, Shenzhen, Guangdong, China	

2.2 Manufacturer Information

Manufacturer Shenzhen RuisiMai Electronics Limited	
Address	Room 609, Gangshun Building, Shangxing Village No.4, Xinqiao sub-
Addiess	district, Baoan District, Shenzhen, Guangdong, China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Name	2.4G Wireless keyboard
Model Name Under Test	GWM-X03B
Series Model Name	GWM-X03W
Description of Model	All models are same with electrical parameters and internal circuit
name differentiation	structure, but only differ in shell color and model name.
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Ancillary Equipment

Note: Not applicable.



2.6 Technical Information

Network and Wireless	2.4G ISM Band (GFSK modulation)
connectivity	2.49 ISM Ballu (GFSK Modulation)

The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	2.4G ISM Band (GFSK modulation)	
Frequency Range	2.4G ISM Band	2400 ~ 2483.5 MHz
Trequency Nange	(GFSK modulation)	
Antonna Tyna	2.4G ISM Band	PCB Antenna
Antenna Type	(GFSK modulation)	POD AIREIIIIA
Exposure Category	General Population/Uncontrolled Exposure	
EUT Stage	Portable Device	



3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title	
4	47 CFR Part	Radiofrequency radiation exposure evaluation: portable devices	
'	2.1093		
2	KDB 447498	KDP 447409 Conoral DE Evnagura Cuidanaa D01 v06	
	D01 v06	KDB 447498 General RF Exposure Guidance D01 v06	



4 DEVICE CATEGORY AND LEVELS LIMITS

Portable Derives:

CFR Title 47 §2.1093(b)

(b) For purposes of this section, a portable device is defined as a transmitting device designed to be used so that the radiating structure(s) of the device is/are within 20 centimeters of the body of the user.

FCC KDB 447498 D01 General RF Exposure Guidance v06 Limit

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Test Exclusion Threshold condition, listed below, is satisfied. These test exclusion conditions are based on source-based time-averaged maximum conducted output power of the RF channel requiring evaluation, adjusted for tune-up tolerance, and the minimum test separation distance required for the exposure conditions. The minimum test separation distance is determined by the smallest distance from the antenna and radiating structures or outer surface of the device, according to the host form factor, exposure conditions and platform requirements, to any part of the body or extremity of a user or bystander.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances

 \leq 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] \cdot [$\sqrt{}$ f(GHz)] \leq 3.0 for 1-g SAR and \leq 7.5 for 10-g extremity SAR Where

- f (GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is \leq 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is \leq 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.



5 ASSESSMENT RESULT

5.1 Output Power

2.4G ISM Band			
Mode	GFSK modulation		
	Low Channel	Middle Channel	High Channel
Peak Power (dBm)	-20.12	-19.93	-20.18
Note: This report listed the worst case peak power value, please refer to RF test report for more details.			

5.2 Turn-up power

Mode	Conducted Power Range (dBm)
Bluetooth	(-20.50)-(-19.50)

5.3 RF Exposure Evaluation Result

	Mode	Tune-up limit	Distance	Calculation	Calculation	Threshold	Verdict
		power (dBm)	(mm)	Frequency (MHz)	Results	Value	
	Bluetooth	-19.50	5	2440	0.0035	3.0	Compliance

5.4 Conclusion

This EUT is deemed to comply with the reference level limits, therefore the basic restrictions are compliant with human exposure limits.



Statement

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