

RF EXPOSURE EVALUATION REPORT

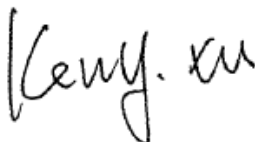
Application No.: SZCR2312004149AT
Applicant: Huizhou Enya Musical Instruments Ltd.
Address of Applicant: Shun Ju Village, Chayuan Admin district, Qiuchang, Huiyang, Huizhou, Guangdong, 516221 China
Manufacturer: Huizhou Enya Musical Instruments Ltd.
Address of Manufacturer: Shun Ju Village, Chayuan Admin district, Qiuchang, Huiyang, Huizhou, Guangdong, 516221 China
Factory: Huizhou Enya Musical Instruments Ltd.
Address of Factory: Shun Ju Village, Chayuan Admin district, Qiuchang, Huiyang, Huizhou, Guangdong, 516221 China

Equipment Under Test (EUT):
EUT Name: Enya Intelligent Sound Guitar
Model No.: NOVA GO SONIC
Trade Mark: ENYA
FCC ID: 2A6K2NEXG697456670
Standard(s) : 47 CFR PART 1, Subpart I, Section 1.1310
47 CFR PART 2, Subpart J, Section 2.1093
KDB447498D01 General RF Exposure Guidance v06

Date of Receipt: 2023-12-15
Date of Test: 2023-12-18 to 2023-12-20
Date of Issue: 2023-12-28

Evaluation Result:	Pass*
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* In the configuration evaluated, the EUT complied with the standards specified above.



Keny Xu
EMC Laboratory Manager



Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2023-12-28		Original

Authorized for issue by:			
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		_____ Bill Chen/Project Engineer	
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3 General Information

3.1 General Description of E.U.T.

Power supply:	Adapter Model: RY-U33 Input: AC 100-240V, 50/60Hz 0.8A Output USB-A+ Type-C: 5V 4.5A USB-A: 5V 4.5A/5V 3A/9V 3A/12V 2.5A/15V 2A/20V 1.5A Type-C: 5V 3A/9V 3A/10V 2.25A/12V 2.5A/15V 2A/20V 1.5A Guitars: DC 7.4V 2600mAh by rechargeable battery and charged by an adapter.
Cable(s):	Type C cable:95cm, unshielded
For BT:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.0 Dual mode
Modulation Type:	GFSK, pi/4DQPSK, 8DPSK
Number of Channels:	79
Channel Spacing:	1MHz
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Antenna Type:	PCB Antenna
Antenna Gain:	-1.88dBi
Cable Loss (for RF conducted test):	0.5dB
For BLE:	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.0 Dual mode
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Rate data:	1Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	-1.88dBi
Cable Loss (for RF conducted test):	0.5dB



3.2 Separation Distance

Minimum test separation distance:	5mm
Remark: This 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.	



3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Nanshan District, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.4 Test Facility

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

• **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• **VCCI (Member No. 1937)**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen EMC laboratory have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• **FCC –Designation Number: CN1336**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1336. Test Firm Registration Number: 787754.

• **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

3.5 Deviation from Standards

None

3.6 Abnormalities from Standard Conditions

None



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4 Technical Requirements Specification

4.1 RF Exposure Evaluation

4.1.1 Limit & Test Method

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

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

- $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

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

4.1.2 Conclusion

For BT:

The Max. power (including tune-up tolerance) is 4.79 dBm on the highest chann 2.441 GHz (*)
4.79 dBm logarithmic terms convert to numeric result is nearly 3.01 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$

$$\text{General RF Exposure} = (3.01 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.441 \text{ GHz}} = 0.94 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)

So the SAR report is not required.

(*) Max. power refer to Report No.:SZCR231200414902 and the User Manual.



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For BLE:

The Max. power (including tune-up tolerance) is 3.81 dBm on the highest chann 2.44 GHz (*)
3.81 dBm logarithmic terms convert to numeric result is nearly 2.40 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\sqrt{f(\text{GHz})}]$

$$\text{General RF Exposure} = (2.40 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.44 \text{ GHz}} = 0.75 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

$$(1) < (2)$$

So the SAR report is not required.

(*) Max. power refer to Report No.:SZCR231200414903 and the User Manual.

5 EUT Constructional Details (EUT Photos)

Refer to appendix - external and internal photos for SZCR2312004149AT

--End of the Report--



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