

RF Exposure Evaluation Report

Product : karaoke machine
Trade mark : Blueera
Model/Type reference : See section 4.2
Serial Number : N/A
Report Number : EED32Q80407202
FCC ID : 2BF39BS2024032001
Date of Issue : May 20, 2024
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091
47 CFR Part 2.1093
447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

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1 Version

Version No.	Date	Description
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3 General Information

3.1 Client Information

Applicant:	Shenzhen Laner Technology Co., Ltd.
Address of Applicant:	Room 1204, Building 13, Lane 1, Changkeng District, Wuhe Avenue, Bantian Street, Longgang District, Shenzhen City, Guangdong Province, China
Manufacturer:	Shenzhen Laner Technology Co., Ltd.
Address of Manufacturer:	Room 1204, Building 13, Lane 1, Changkeng District, Wuhe Avenue, Bantian Street, Longgang District, Shenzhen City, Guangdong Province, China
Factory:	Shenzhen Laner Technology Co., Ltd.
Address of Factory:	Room 1204, Building 13, Lane 1, Changkeng District, Wuhe Avenue, Bantian Street, Longgang District, Shenzhen City, Guangdong Province, China

3.2 General Description of EUT

Product Name:	karaoke machine
Model No.(EUT):	Ardour 1, Ardour 2, Ardour 3, Ardour 4, Amber 1, Amber 2, Amber 3, Amber 4, Amber 5, Amber 6, Trendy 1, Trendy 2, Trendy 3, Trendy 4, Ebullient 1, Ebullient 2, Ebullient 3, Ebullient 4, Ebullient 5, Ebullient 6
Test Model No.:	Ardour 1
Trade Mark:	Blueera

3.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK	
Test Power Grade:	Default	
Test Software of EUT:	FrequencyTool_v0.3.2	
Antenna Type:	FPC Antenna	
Antenna Gain:	3.43dBi	
Power Supply:	Battery:	DC 11.1V
Sample Received Date:	Mar. 29, 2024	
Sample tested Date:	Mar. 29, 2024 to May. 14, 2024	
Remark:	<p>Company Name and Address shown on Report, the sample(s) and sample Information were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.</p> <p>Model No.: Ardour 1, Ardour 2, Ardour 3, Ardour 4, Amber 1, Amber 2, Amber 3, Amber 4, Amber 5, Amber 6, Trendy 1, Trendy 2, Trendy 3, Trendy 4, Ebullient 1, Ebullient 2, Ebullient 3, Ebullient 4, Ebullient 5, Ebullient 6</p> <p>Only the model Ardour 1 was tested. The electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being color and model name..</p>	

3.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.1.3 EUT RF Exposure Evaluation

For Stand alone:

For BT

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2402	0.81	3.43	2.09	1.618	2.788	PASS

Note:

- ① EIRP=conducted power+antenna gain;
- ② ERP=EIRP-2.15;
- ③ $EIRP(dBm) = \text{Field strength of the fundamental signal}(dBuV/m@3m) - 95.23;$
- ④ $ERP(mW) = 10^{(ERP(dBm)/10)};$
- ⑤ The estimation distance is 0.5cm;
- ⑥ The test data please refer to the report of EED32Q80407201 and only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***