

RF Exposure Evaluation Report

Product : 8" Intelligent All-In-One Machine
Trade mark : N/A
Model/Type reference : TXJ-X8
Serial Number : N/A
Report Number : EED32P80248504
FCC ID : 2BAJQTXJ-X8
Date of Issue : Apr. 27, 2023
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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Prepared by:

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2 Version

Version No.	Date	Description
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3 Contents

	Page
1 COVER PAGE	1
2 VERSION	2
3 CONTENTS	3
4 GENERAL INFORMATION	4
4.1 CLIENT INFORMATION	4
4.2 GENERAL DESCRIPTION OF EUT	4
4.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD	4
4.4 TEST LOCATION	5
4.5 DEVIATION FROM STANDARDS	5
4.6 ABNORMALITIES FROM STANDARD CONDITIONS	5
4.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER	5
5 SAR EVALUATION	6
5.1 RF EXPOSURE COMPLIANCE REQUIREMENT	6
5.1.1 Limits	6
5.1.2 Test Procedure	6
5.1.3 EUT RF Exposure Evaluation	7

4 General Information

4.1 Client Information

Applicant:	Shenzhen Suanzi Technology Co., Ltd
Address of Applicant:	Room 1408, Huafeng Financial Port, No. 1003, Xin'an 6th Road, Xin'an Street, Bao'an District, Shenzhen
Manufacturer:	Shenzhen Suanzi Technology Co., Ltd
Address of Manufacturer:	Room 1408, Huafeng Financial Port, No. 1003, Xin'an 6th Road, Xin'an Street, Bao'an District, Shenzhen
Factory:	Shenzhen Juxiang Electronics Co., Ltd
Address of Factory:	Zone B, 1F and F4, Building 10, Hebei Industrial Zone, Longhua Street, Longhua New District, Shenzhen

4.2 General Description of EUT

Product Name:	8" Intelligent All-In-One Machine
Model No.(EUT):	TXJ-X8
Trade Mark:	N/A

4.3 Product Specification subjective to this standard

Frequency Range:	BLE/BT: 2402MHz~2480MHz 2.4G WIFI: IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz	
Modulation Type:	BLE:GFSK, BT: GFSK, π/4DQPSK, 8DPSK 2.4G WIFI: IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g :OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM,QPSK,BPSK)	
Test Power Grade:	Default	
Test Software of EUT:	CMD	
Antenna Type:	PCB Antenna	
Antenna Gain:	3.60dBi	
Power Supply:	Adapter:	model: AD0241-1202000UB input: 100-240V~50/60Hz, 0.8A MAX output: 12.0V, 2.0A, 24.0W
Sample Received Date:	Feb. 27, 2023	
Sample tested Date:	Feb. 27, 2023 to Mar. 16, 2023	
Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.		

4.4 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

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 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.

5.1.2 Test Procedure

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

5.1.3 EUT RF Exposure Evaluation

(1)For Stand alone:

For BLE

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2440	7.29	3.60	10.89	8.74	7.482	3060	PASS

For BT

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2402	0.11	3.60	3.71	1.56	1.432	3060	PASS

For 2.4G Wi-Fi

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2412	17.9	3.60	21.5	19.35	86.099	3060	PASS

Note:

- ①EIRP=conducted power+antenna gain;
- ②ERP=EIRP-2.15
- ③Only the worst case data was recorded in the report.

(2)For SUM:

SUM=7.482/3060+86.099/3060=0.031 < 1

Result: pass

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 ***