RF Exposure Report

For

Applicant Name:	**Sichuan AI-Link Technology Co.,Ltd.**
Address:	Anzhou,Industrial park,Mianyang,Sichuan,China
EUT Name:	WIFI &Bluetooth Module
Brand Name:	N/A
Model Number:	WF-M63B-USJ1
Series Model Number:	N/A

Issued By

Company Name:	**BTF Testing Lab (Shenzhen) Co., Ltd.**
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Report Number:	BTF240712R00706
Test Standards:	47 CFR Part 2 Subpart J Section 2.1091
FCC ID:	2AOKI-WFM63BUSJ1
Test Conclusion:	Pass
Test Date:	2024-07-15 to 2022-08-21
Date of Issue:	2024-08-22
Prepared By:	Sunny Qin / Project Engineer
Date:	2024-08-22
Approved By:	Ryan CJ / EMC Manager
Date:	2024-08-22

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Revision History		
Version	Issue Date	Revisions Content
R_V0	2024-08-22	Original
Note:	*Once the revision has been made, then previous versions reports are invalid.*	

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BTF Testing Lab (Shenzhen) Co., Ltd.
F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

1. Introduction

1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

1.2 Identification of the Responsible Testing Location

Test Location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Description:	All measurement facilities used to collect the measurement data are located at F101,201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
FCC Registration Number:	518915
Designation Number:	CN1330

1.3 Laboratory Condition

Ambient Temperature:	20℃ to 25℃
Ambient Relative Humidity:	45% to 55%
Ambient Pressure:	100 kPa to 102 kPa

1.4 Announcement

(1) The test report reference to the report template version v0.

(2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.

(3) The test report is invalid if there is any evidence and/or falsification.

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2. Product Information

2.1 Application Information

Company Name:	Sichuan AI-Link Technology Co.,Ltd.
Address:	Anzhou,Industrial park,Mianyang,Sichuan,China

2.2 Manufacturer Information

Company Name:	Sichuan AI-Link Technology Co.,Ltd.
Address:	Anzhou,Industrial park,Mianyang,Sichuan,China

2.3 Factory Information

Company Name:	Sichuan AI-Link Technology Co.,Ltd.
Address:	Anzhou,Industrial park,Mianyang,Sichuan,China

2.4 General Description of Equipment under Test (EUT)

EUT Name	WIFI &Bluetooth Module
Under Test Model Name	WF-M63B-USJ1
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	JU17.820
Software and Firmware Version	WinDriverV.0.0.2.5_FWv.67c4fb6a

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3. Test Requirement

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b), Limits for Maximum Permissible Exposure (MPE),

Frequency range (MHz)	Electric field strength(V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*($900/f^2$)	6
30–300	61.4	0.163	1.0	6
300–1500	-	-	f/300	6
1500–100,000	-	-	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*($180/f^2$)	30
30–300	27.5	0.073	0.2	30
300–1500	-	-	f/1500	30
1500–100,000	-	-	1.0	30

Note: f = frequency in MHz

EVALUATION METHOD

Transmission formula: **Pd = (Pout*G)/(4*pi*r^2)**

Where

Pd = power density in mW/cm^2, **Pout** = output power to antenna in mW, **G** = gain of antenna in linear scale;

Pi = 3.1416, **R** = distance between observation point and center of the radiator in cm

R=20cm

mW=10^(dBm/10)

antenna gain Numeric=10^(dBi/10)

3.1 Assessment Result

☒ **Passed** ☐ **Not Applicable**

BR+EDR:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2480	8DPSK	6.06	5.5±1	6.5	4.467	5.16	3.28	0.0029	1
Note: Refer to report No. BTF240712R00701 for EUT test Max Conducted Peak Output Power value.									

BLE:

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2480	GFSK 2M	4.12	4±1	5	3.162	5.16	3.28	0.0021	1
Note: Refer to report No. BTF240712R00702 for EUT test Max Conducted Peak Output Power value.									

2.4GWiFi:

Channel Freq. (MHz)	modulation	conducted power		Tune-up power		Max				Antenna		Evaluation result at 20cm			Power density Limits
		(dBm)		(dBm)		tune-up power				Gain		Power density(mW/cm2)			(mW/cm2)
						(dBm)		(mW)		Numeric					
		Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	sum	
2462	802.11g	15.85	16.21	16±1	16±1	17	17	50.119	50.119	3.28	3.28	0.03270	0.03270	N/A	1
2452	802.11n H40	15.97	16.19	16±1	16±1	17	17	50.119	50.119	3.28	3.28	0.03270	0.03270	0.06541	1
Note: Refer to report No. BTF240712R00703 for EUT test Max Conducted Peak Output Power value.															

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5GWiFi：

For U-NII-1

Channel Freq. (MHz)	modulation	conducted power		Tune-up power		Max				Antenna		Evaluation result at 20cm			Power density Limits
		(dBm)		(dBm)		tune-up power				Gain		Power density(mW/cm2)			(mW/cm2)
						(dBm)		(mW)		Numeric					
		Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	sum	
5240	802.11ac20 mode	11.85	12.32	12±1	12±1	13	13	19.953	19.953	2.7	2.7	0.01072	0.01072	0.02144	1
Note1: Refer to report No. BTF240712R00704 for EUT test Max Conducted Peak Output Power value. Note2: 5.18~5.24 GHz: 4.32dBi															

For U-NII-2a

Channel Freq. (MHz)	modulation	conducted power		Tune-up power		Max				Antenna		Evaluation result at 20cm			Power density Limits
		(dBm)		(dBm)		tune-up power				Gain		Power density(mW/cm2)			(mW/cm2)
						(dBm)		(mW)		Numeric					
		Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	sum	
5270	802.11ac40 mode	12.00	12.63	12±1	12±1	13	13	19.953	19.953	2.7	2.7	0.01072	0.01072	0.02144	1
Note1: Refer to report No. BTF240712R00704 for EUT test Max Conducted Peak Output Power value. Note2: 5.26~5.32 GHz: 4.32dBi															

For U-NII-2C

Channel Freq. (MHz)	modulation	conducted power		Tune-up power		Max				Antenna		Evaluation result at 20cm			Power density Limits
		(dBm)		(dBm)		tune-up power				Gain		Power density(mW/cm2)			(mW/cm2)
						(dBm)		(mW)		Numeric					
		Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	sum	
5500	802.11ac20 mode	11.73	12.17	12±1	12±1	13	13	19.953	19.953	2.61	2.61	0.01036	0.01036	0.02072	1
Note1: Refer to report No. BTF240712R00704 for EUT test Max Conducted Peak Output Power value. Note2: 5.50~5.70 GHz: 4.16dBi															

For U-NII-3

Channel Freq. (MHz)	modulation	conducted power		Tune-up power		Max				Antenna		Evaluation result at 20cm			Power density Limits
		(dBm)		(dBm)		tune-up power				Gain		Power density(mW/cm2)			(mW/cm2)
						(dBm)		(mW)		Numeric					
		Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	sum	
5825	802.11ac20 mode	12.29	12.67	12±1	12±1	13	13	19.953	19.953	2.51	2.51	0.00996	0.00996	0.01992	1
Note1: Refer to report No. BTF240712R00704 for EUT test Max Conducted Peak Output Power value. Note2: 5.725~5.85 GHz: 4.06dBi															

Note: The exposure evaluation safety distance is 20cm.

The device can transmitter simultaneously

BT+2.4G WIFI=0.0029/1+0.06541/1=0.06831<1
BT+5G WIFI=0.0029/1+0.01993/1=0.02283<1

Conclusion:
Pass, no SAR required.

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