FCC RF EXPOSURE REPORT

CERTIFICATION TEST REPORT

For

WiFi Module

MODEL NUMBER: SI07

FCC ID: 2AFG6-SI07

REPORT NUMBER: 4789708215-20

ISSUE DATE: November 30, 2020

Prepared for

Guangzhou Shirui Electronics Co Ltd
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Prepared by

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Revision History

Rev.	Issue Date	Revisions	Revised By
V0	11/30/2020	Initial Issue	

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1. ATTESTATION OF TEST RESULTS

Applicant Information

Company Name:	Guangzhou Shirui Electronics Co Ltd
Address:	192 Kezhu Road, Scientech Park, guangzhou Economic Technology Development District Guangzhou China

Manufacturer Information

Company Name:	Guangzhou Shirui Electronics Co Ltd
Address:	192 Kezhu Road, Scientech Park, guangzhou Economic Technology Development District Guangzhou China

EUT Information

EUT Name:	WiFi Module
Model:	SI07
Sample Received Date:	October 29, 2020
Sample Status:	Normal
Sample ID:	3437335
Date of Tested:	October 29, 2020~ November 28, 2020

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC 47CFR§2.1091	PASS

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091.

3. FACILITIES AND ACCREDITATION

Accreditation Certificate	**A2LA (Certificate No.: 4102.01)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA. **FCC (FCC Designation No.: CN1187)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules **ISED (Company No.: 21320)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320. **VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)** UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793. Facility Name: Chamber D, the VCCI registration No. is G-20019 and R-20004 Shielding Room B, the VCCI registration No. is C-20012 and T-20011

Note: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China.

4. REQUIREMENT

LIMIT AND CALCULATION METHOD

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

RF EXPOSURE LIMIT

Frequency Range (MHz)	E-field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (Minutes)
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

CALCULATION METHOD

$S=PG/4\pi R^2$

Where:

S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

CALCULATED RESULTS

SKI.WB7668CU.1

WIFI 2.4G (Worst case)					
Operating Mode	Max. Tune up Power	Directional Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm^2)	
802.11n 40	17	5.89	3.88	0.03870	1

WIFI 5G (Worst case)					
Operating Mode	Max. Tune up Power	Directional Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm^2)	
802.11n 40	17.5	6.8	4.79	0.05355	1

SKI.WB8822CU.1

BT (Worst case)					
Operating Mode	Max. Tune up Power	Antenna Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm^2)	
3DH5	9	3.75	2.37	0.00375	1

BLE (Worst case)					
Operating Mode	Max. Tune up Power	Antenna Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm^2)	
BLE-1M	5	3.75	2.37	0.00149	1

WIFI 2.4G (Worst case)					
Operating Mode	Max. Tune up Power	Directional Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm^2)	
802.11n 20	19	6.48	4.45	0.07026	1

WIFI 5G (Worst case)					
Operating Mode	Max. Tune up Power	Directional Gain		Power density	Limit
	(dBm)	(dBi)	(num)	(mW/ cm^2)	
802.11n 40	19	7.01	5.02	0.07938	1

Note: 1. The calculated distance is 20cm.
2. SKI.WB7668CU.1 WIFI 2.4GHz+ SKI.WB8822CU.1 BT 2.4GHz
=0.03870+0.00375 =0.04245 (mW/ cm2)
SKI.WB7668CU.1 WIFI 2.4GHz+ SKI.WB8822CU.1 BLE 2.4GHz
=0.03870+0.00149 =0.04019 (mW/ cm2)
SKI.WB7668CU.1 WIFI 2.4GHz+ SKI.WB8822CU.1WIFI 2.4GHz
=0.03870+0.07026 =0.10897 (mW/ cm2)
SKI.WB7668CU.1 WIFI 2.4GHz+ SKI.WB8822CU.1WIFI 5GHz
=0.03870+0.07938 =0.11809(mW/ cm2)
SKI.WB7668CU.1 WIFI 5GHz+ SKI.WB8822CU.1 BT 2.4GHz
=0.05355+0.00375 =0.05729 (mW/ cm2)
SKI.WB7668CU.1 WIFI 5GHz+ SKI.WB8822CU.1 BLE 2.4GHz
=0.05355+0.00149 =0.05504 (mW/ cm2)

SKI.WB7668CU.1 WIFI 5GHz+ SKI.WB8822CU.1WIFI 2.4GHz
=0.05355+0.07026 =0.12381 (mW/ cm2)
SKI.WB7668CU.1 WIFI 5GHz+ SKI.WB8822CU.1WIFI 5GHz
=0.05355+0.07938 =0.13293(mW/ cm2)

Therefor the maximum calculations of above situations are less than the “1” limit.

END OF REPORT