

FCC RF EXPOSURE REPORT

For

IEEE 802.11b/g/n/a/ac 2T2R USB WiFi Module Integrated BT 2.1+EDR/4.2/5.0

MODEL NUMBER: SKI.WB638BU.2_668BU

FCC ID: 2AR82-SKIWB668BU2

IC: 24728-SKIWB668BU2

REPORT NUMBER: 4789861913-5

ISSUE DATE: March 23, 2021

Prepared for

Guangzhou Shikun Electronics Co., Ltd NO.6 Liankun Road, Huangpu District, Guangzhou, China

Prepared by

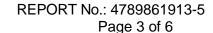
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1. ATTESTATION OF TEST RESULTS

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Company Name: Guangzhou Shikun Electronics Co., Ltd

Address: NO.6 Liankun Road, Huangpu District, Guangzhou, China

Manufacturer Information

Guangzhou Shikun Electronics Co., Ltd Company Name:

Address: NO.6 Liankun Road, Huangpu District, Guangzhou, China

EUT Description

IEEE 802.11b/g/n/a/ac 2T2R USB WiFi Module **EUT Name**

Integrated BT 2.1+EDR/4.2/5.0

Model SKI.WB638BU.2_668BU

Sample Status Normal Sample ID 3722611 Sample Received date March 2, 2021 **Date Tested** March 2 ~ 23, 2021

APPLICABLE STANDARDS

STANDARD TEST RESULTS

FCC 47CFR§2.1091

PASS

KDB-447498 D01 V06

Prepared By: Checked By:

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Project Engineer

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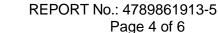
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Approved By:

Stephen Guo

Laboratory Manager

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2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 447498 D01 General RF Exposure Guidance v06.

3. FACILITIES AND ACCREDITATION

O. I. AUGILII ILO	AND ACCREDITATION
	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 Delcaration of Conformity (DoC) and Certification
	rules
	ISED (Company No.: 21320)
Accreditation	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
Certificate	has been registered and fully described in a report filed with ISED.
	The Company Number is 21320 and the test lab Conformity Assessment
	Body Identifier (CABID) is CN0046.
	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 1: 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

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OFS.



4. REQUIREMENT

LIMIT

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure					
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	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/f2)*	30	
30-300	27.5	0.073	0.2	30	
300-1500			f/150	30	
1500-100,000			1.0	30	

Note 1: f = frequency in MHz, * means Plane-wave equivalent power density

Note 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Note 3: The limit value 1.0mW/cm² is available for this EUT.

MPE CALCULATION METHOD

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

where: S = power density (in appropriate units, e.g. mW/ cm2)

P = power input to the antenna (in appropriate units, e.g., mW)

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 (appropriate units, e.g., cm)

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CALCULATED RESULTS

Radio Frequency Radiation Exposure Evaluation

BT (Worst case)					
Operating	Max. Tune up Power	Max. Antenna Gain	Power density	Limit	
Mode	(dBm)	(dBi)	(mW/ cm ²)		
8DPSK	8	3.5	0.00281	1	

BLE (Worst case)					
Operating	Max. Tune up Power	Max. Antenna Gain	Power density	Limit	
Mode	(dBm)	(dBi)	(mW/ cm ²)		
GFSK	1	3.5	0.00056	1	

WIFI 2.4G (Worst case)						
Operating Mode	Max. Tune up Power	Max. Directional Antenna Gain	Power density	Limit		
Mode	(dBm)	(dBi)	(mW/ cm ²)			
WIFI 2.4G (SISO mode)	17	3.5	0.02233	1		
WIFI 2.4G (MIMO mode)	14	6.51	0.02238	1		

WIFI5G (Worst case)					
Operating Mode	Max. Tune up Power	Max. Directional Antenna Gain	I Power density I		
Mode	(dBm)	(dBi)	(mW/ cm ²)		
WIFI 5G	18	8.21	0.08293	1	

Note:

- 1. The calculated distance is 20cm.
- 2. WLAN 2.4G & WLAN 5G can't transmit simultaneously.
- 3. BT+WIFI 2.4GHz=0.00281+0.02238 =0.02519 (mW/ cm2) BT+WIFI 5GHz=0.00281+0.08293 =0.08574 (mW/ cm2)

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

END OF REPORT