



RF EXPOSURE REPORT

Applicant:	Guangzhou Shirui Electronics Co., Ltd
Address:	192 KeZhu Road, Sciencetech Park, Guangzhou Economic Technology Development District, Guangzhou China
Manufacturer:	Guangzhou Shirui Electronics Co., Ltd
Address:	192 KeZhu Road, Sciencetech Park, Guangzhou Economic Technology Development District, Guangzhou China
Product Description:	Touch Control Panel
Brand Name:	MAXHUB
Tested Model:	TCP30T
FCC ID:	2AFG6-TCP30T
Report No.:	JCF240313011-005
Received Date:	Mar. 13, 2024
Tested Date:	Mar. 13, 2024 ~ May. 09, 2024
Issued Date:	May. 09, 2024
Test Standards:	KDB 447498 D01 General RF Exposure Guidance v06
Test Result:	Pass
Prepared By:  <u>Roger Li/Engineer</u>	
Reviewed By:  <u>Kennys Zhang/Engineer</u>	
Approved By:  <u>Talent Zhang/Engineer</u>	

Date: May. 09, 2024

Date: May. 09, 2024

Date: May. 09, 2024

Note: The test results in this report apply exclusively to the tested model / sample. Without written approval of Guangzhou Jingce Testing Technology Co., Ltd. the test report shall not be reproduced except in full.

Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May. 09, 2024	Original Report	/

Table of Contents

1. Test Report Declare	4
2. Equipment Under Test	5
2.1. Description of EUT	5
2.2. Description of Available Antennas	5
3. Test Laboratory	6
4. RF Exposure Measurement	7
4.1. Requirement	7
4.2. Limits for Maximum Permissible Exposure (MPE)	7
4.3. MPE Calculation Formula	7
4.4. Classification	7
4.5. Conducted Power	7
5. RF Exposure Calculation	8

1. Test Report Declare

Applicant:	Guangzhou Shirui Electronics Co., Ltd
Address:	192 KeZhu Road, Sciencetech Park, guangzhou Economic Technology Development District, Guangzhou China
Manufacturer:	Guangzhou Shirui Electronics Co., Ltd
Address:	192 KeZhu Road, Sciencetech Park, guangzhou Economic Technology Development District, Guangzhou China
Product Name	Touch Control Panel
Brand Name:	MAXHUB
Model Name:	TCP30T, TCP*****(*: A~Z, a~z,0~9, or Blank)
Difference Description:	The derivative model have the same technical construction including circuit diagram, PCB Layout, components and component layout, all electrical construction and mechanical construction with the basic model. The difference lies only the model number just for marketing purpose.

We Declare:

The equipment described above is tested by Guangzhou Jingce Testing Technology Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangzhou Jingce Testing Technology Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests except as provided information by clients.

2. Equipment Under Test

2.1. Description of EUT

EUT* Name:	Touch Control Panel
Model Number:	TCP30T
EUT Function Description:	Please refer to user manual of this device
Power Supply:	52V $\approx$ 0.49A
Hardware Version:	NA
Software Version:	NA
Radio Specification:	IEEE 802.11a/n/ac
Operation Frequency:	IEEE 802.11a: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11n HT20: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11n HT40: 5190MHz-5230MHz, 5755MHz-5795MHz IEEE 802.11ac VHT20: 5180MHz-5240MHz, 5745MHz-5825MHz IEEE 802.11ac VHT40: 5190MHz-5230MHz, 5755MHz-5795MHz
Modulation:	IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac (VHT20/40): OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Data Rate:	IEEE 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps IEEE 802.11n HT20: 14.4, 28.9, 43.3, 57.8, 86.7, 115.6, 130, 144.4 Mbps IEEE 802.11n HT40: 30, 60, 90, 120, 180, 240, 270, 300 Mbps IEEE 802.11ac VHT20: 14.4, 28.9, 43.3, 57.8, 86.7, 115.6, 130, 144.4, 173.3 Mbps IEEE 802.11ac VHT40: 30, 60, 90, 120, 180, 240, 270, 300, 360, 400 Mbps
Antenna Type:	FPC Antenna1&2, MAX. Gain: 2.79 dBi
Product Type:	☐ Portable device ☒ Mobile device ☐ Fixed device

Note 1: EUT is the ab. of equipment under test.

Note 2: The antenna gain is declared by the customer and the laboratory is not responsible for the accuracy of the antenna gain.

2.2. Description of Available Antennas

Test Mode	Transmit and Receive Mode	Description
WIFI	☒ 2TX, 2RX	ANT 1 and ANT2 can be used as transmitting/receiving antenna.

3. Test Laboratory

Guangzhou Jingce Testing Technology Co., Ltd.

Add.: No.10, Hefeng No.1 street, Huangpu District, Guangzhou, Guangdong, People's Republic of China

Association for Laboratory Accreditation(A2LA). Certificate Number: 6594.03

FCC Designation Number: CN1381. Test Firm Registration Number: 486550

IC Test Firm Registration Number: 31808

Conformity Assessment Body identifier: CN0173

4. RF Exposure Measurement

4.1. Requirement

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 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

4.2. Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
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

F = Frequency in MHz

* = Plane-wave equivalent power density.

4.3. MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * R^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

4.4. Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as Mobile Device.

4.5. Conducted Power

Band	Channel Frequency (MHz)	Average Power (dBm)
5G WIFI	5240	13.95

5. RF Exposure Calculation

We used the maximum power between the conducted power and ERP/EIRP to perform RF exposure exemption evaluation.

Band	Channel Frequency (MHz)	Conducted Power (dBm)	Antenna Gain (dBi)	Power Density (mW/cm ²)	Limit (mW/cm ²)	PASS/FAIL
5G WIFI	5240	13.95	2.79	0.009	1	PASS

This confirmed that the device comply with FCC 1.1310 MPE limit.

--END--