TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2AUARTPMS90
Test Report No..... :	TCT220627E048
Date of issue..... :	Mar. 15, 2023
Testing laboratory ..... :	SHENZHEN TONGCE TESTING LAB
Testing location/ address:	2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China
Applicant's name..... :	THINKCAR TECH CO., LTD.
Address..... :	2606, building 4, phase II, TiananYungu, Gangtou community, Bantian, Longgang District, Shenzhen, China
Manufacturer's name ... :	THINKCAR TECH CO., LTD.
Address..... :	2606, building 4, phase II, TiananYungu, Gangtou community, Bantian, Longgang District, Shenzhen, China
Standard(s) ..... :	KDB 447498 D01 General RF Exposure Guidance v06
Product Name..... :	TPMS Activation and Diagnostic Tool
Trade Mark ..... :	THINKCAR, XHINKCAR, MUCAR
Model/Type reference..... :	TKTT3, THINKTPMS T90, THINKTPMS T610
Rating(s)..... :	Adapter Information: MODEL: FY0502500 INPUT: AC 100-240V, 50/60Hz, 0.6A Max OUTPUT: DC 5.0V, 2.5A Rechargeable Li-ion Battery DC 3.8V
Date of receipt of test item ..... :	Jun. 27, 2022
Date (s) of performance of test..... :	Jun. 27, 2022 - Mar. 15, 2023
Tested by (+signature) ... :	Rleo LIU
Check by (+signature).... :	Beryl ZHAO
Approved by (+signature):	Tomsin

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Table of Contents

Hotline: 400-6611-140 Tel: 86-755-27673339 Fax: 86-755-27673332 http://www.tct-lab.com

1. General Product Information

1.1. EUT description

Product Name.....:	TPMS Activation and Diagnostic Tool
Model/Type reference.....:	TKTT3
Sample Number.....:	TCT220627E018-0101
Operation Frequency.....:	315MHz, 433.92MHz
Modulation Type.....:	FSK
Antenna Type.....:	PCB Antenna
Antenna Gain.....:	1dBi
Rating(s).....:	Adapter Information: MODEL: FY0502500 INPUT: AC 100-240V, 50/60Hz, 0.6A Max OUTPUT: DC 5.0V, 2.5A Rechargeable Li-ion Battery DC 3.8V

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

1.2. Model(s) list

No.	Model No.	Tested with
1	TKTT3	☒
Other models	THINKTPMS T90, THINKTPMS T610	☐

Note: TKTT3 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names and trade mark. So the test data of TKTT3 can represent the remaining models.

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2. General Information

2.1. Test environment and mode

Item	Normal condition
Temperature	+25ºC
Voltage	DC 3.8V
Humidity	56%
Atmospheric Pressure:	1008 mbar
Test Mode:	
Engineering mode:	Keep the EUT in continuous transmitting by select channel

2.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Model No.	Serial No.	FCC ID	Trade Name
/	/	/	/	/

Note:

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.

2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

3. For conducted measurements (Output Power, 20dB Occupied Bandwidth, Carrier Frequencies Separation, Hopping Channel Number, Dwell Time, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

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3. Facilities and Accreditations

3.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098

  SHENZHEN TONGCE TESTING LAB

  Designation Number: CN1205

  The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1

  SHENZHEN TONGCE TESTING LAB

  CAB identifier: CN0031

  The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

3.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4. Test Results and Measurement Data

4.1. Requirements

According to KDB 447498 D01 General RF Exposure Guidance v06, systems operating under the provisions of this 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 guidance.

The 1-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max. power of channel, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√f(GHz)] ≤ 3.0 for 1-g SAR, where

- f(GHz) is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- When the minimum test separation distance is < 5 mm, a distance of 5 mm according is applied to determine SAR test exclusion.
- The result is rounded to one decimal place for comparison

4.2. Test Result

Frequency (MHz)	Electric field strength (dBuV/m)@3m	Max. Power (dBm)	Tune up Power (dBm)	Max. Tune up Power (dBm)	Max. Tune up Power (mW)	Test distance (mm)	Result	exclusion thresholds for 1-g SAR
315	83.63	-13.75	-14±1	-13	0.05	5	0.01	3.0
433.92	75.73	-21.65	-22±1	-21	0.01	5	0.03	3.0

Note: computational formula

EIRP[dBm] = E[dBμV/m] + 20 log (d[m]) − 104.77;

ERP= EIRP-2.15;

where

E is the electric field strength in V/m; d is the measurement distance in meters (m)

Result:

Because the max tune up power is less than the exemption limit, so No SAR measurement is required.

********END OF REPORT********

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