

RF Exposure Evaluation Report

Product : THINKCAR
Trade mark : THINKCAR
Model/Type reference : THINKCAR 1, THINKCAR 1S
Serial Number : N/A
Report Number : EED32L00200302
FCC ID : 2AUARTHINK
Date of Issue : Sep. 02, 2019
Test Standards : IEEE C95.1 2005
KDB 447498 D03
47 C.F.R. Part 1, Subpart I, Section 1.1310
47 C.F.R. Part 2, Subpart J, Section 2.1091
Test result : PASS

Prepared for:

THINKCAR TECH CO., LTD.

**B302, Floor 3, Yuwei Factory, Qinghu community,
Longhua district, Shenzhen, China**

Prepared by:

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Sep. 02, 2019

Check No.:3096373656



2 Version

Version No.	Date	Description
00	Sep. 02, 2019	Original

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4 General Information

4.1 Client Information

Applicant:	THINKCAR TECH CO., LTD.
Address of Applicant:	B302, Floor 3, Yuwei Factory, Qinghu community, Longhua district, Shenzhen, China
Manufacturer:	THINKCAR TECH CO., LTD.
Address of Manufacturer:	B302, Floor 3, Yuwei Factory, Qinghu community, Longhua district, Shenzhen, China

4.2 General Description of EUT

Product Name:	THINKCAR
Model No.(EUT):	THINKCAR 1, THINKCAR 1S
Test Model No.:	THINKCAR 1
Trade Mark:	THINKCAR
EUT Supports Radios application	5.0.1 BT Single mode

4.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz
Modulation Type:	GFSK
Number of Channels:	40
Test Power Grade:	Default
Test Software of EUT:	DTM Tester
Antenna Type:	Chip antenna
Antenna Gain:	2.08 dBi
Power Supply:	DC 12V
Max Conducted Peak Output Power:	-1.67dBm
	The Max Conducted Peak Output Power data refer to the report EED32L00200301
Sample Received Date:	Jul. 25, 2019
Sample tested Date:	Jul. 25, 2019 to Aug. 29, 2019
The tested sample(s) and the sample information are provided by the client. Model No.: THINKCAR 1, THINKCAR 1S Only the model THINKCAR 1 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference model name.	

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 RF Exposure Evaluation

5.1 RF Exposure Compliance Requirement

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{377}$

Where E = Field strength in Volts / meter

P = Power in Watts

G = Numeric antenna gain

d = Distance in meters

S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377 d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

5.2 Maximum Permissible Exposure

Substituting the MPE safe distance using $d = 20$ cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where P = Power in mW

G = Numeric antenna gain

S = Power density in mW / cm²

Bluetooth:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm2)
19	2440	0.68	1.61	20	0.0002	1

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32L00200301 or EUT external and internal photos.

*** End of Report ***

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