TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2A3WYID7	
Test Report No..... :	TCT220104E034	
Date of issue..... :	Jan. 14, 2022	
Testing laboratory ..... :	SHENZHEN TONGCE TESTING LAB	
Testing location/ address:	TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, Bao'an District Shenzhen, Guangdong, 518103, People's Republic of China	
Applicant's name..... :	CompanyDeep Ltd	
Address..... :	122 Ross Street, Cambridge, CB13BU, United Kingdom	
Manufacturer's name ... :	CompanyDeep Ltd	
Address..... :	122 Ross Street, Cambridge, CB13BU, United Kingdom	
Standard(s) ..... :	FCC CFR Title 47 Part 1.1307	
Test item description ..... :	IDC7 Bluetooth Module	
Trade Mark ..... :	N/A	
Model/Type reference..... :	IDC747, IDC757, IDC767, IDC777, IDC717, IDC727, IDC737	
Rating(s)..... :	DC 3.3 V	
Date of receipt of test item ..... :	Jan. 04, 2022	
Date (s) of performance of test..... :	Jan. 04, 2022 - Jan. 14, 2022	
Tested by (+signature) ... :	Aaron MO	
Check by (+signature).... :	Beryl ZHAO	
Approved by (+signature):	Tomsin	

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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

Test item description .....:	IDC7 Bluetooth Module
Model/Type reference.....:	IDC747
Sample Number.....:	TCT220104E013-0101
Operation Frequency.....:	2402MHz~2480MHz
Modulation Type.....:	For BT: GFSK, π/4-DQPSK, 8DPSK For BLE: GFSK
Antenna Type.....:	Chip Antenna
Antenna Gain.....:	0dBi
Rating(s).....:	DC 3.3 V

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	IDC747	☒
Other models	IDC757, IDC767, IDC777, IDC717, IDC727, IDC737	☐
Note: IDC747 is tested model, other models are derivative models. The models are identical in circuit and PCB layout, only different on the model names. So the test data of IDC747 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 3.3V
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: TCT Testing Industrial Park Fuqiao 5th Industrial Zone, Fuhai Street, Bao'an District Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

4. Test Results and Measurement Data

According to §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Remark: 1) **For BT:** The maximum output power for antenna is 6.81dBm (4.80mW) at 2402MHz, 0dBi antenna gain(with 1.00 numeric antenna gain.)

For BLE(1M): The maximum output power for antenna is 2.86dBm (1.93mW) at 2440MHz, 0dBi antenna gain(with 1.00 numeric antenna gain.)

For BLE(2M): The maximum output power for antenna is 2.82dBm (1.91mW) at 2440MHz, 0dBi antenna gain(with 1.00 numeric antenna gain.)

2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

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*

Substituting the MPE safe distance using d=20cm into above equation.

Yields: $S=0.000199*P*G$

Mode	Power(mW)	numeric antenna gain	Power density (mW/cm^2)	Limit (mW/cm^2)	Result
BT	4.80	1.00	0.000955	1.0	PASS
BLE(1M)	1.93	1.00	0.000384		
BLE(2M)	1.91	1.00	0.000380		

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

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