TCT 通测检测 TESTING CENTRE TECHNOLOGY

TEST REPORT

FCC ID. ..... :	2BDOA-USS-3WI
Test Report No..... :	TCT230804E010
Date of issue..... :	Aug. 14, 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..... :	Shenzhen Delixi Technology Co., Ltd.
Address..... :	412, BLDG A, B, C, Zone B, Yuanfen Industrial Zone, Taoyuan Community, Dalang St., Longhua Dist. Shenzhen, China
Manufacturer's name ... :	Shenzhen Delixi Technology Co., Ltd.
Address..... :	611, 6th Floor, Century Phoenix Business Center, Fenghuang First Industrial Zone, Fuyong Street, Bao'an District, Shenzhen，China
Standard(s) ..... :	FCC CFR Title 47 Part 1.1307
Product Name..... :	US Standard Switch
Trade Mark ..... :	N/A
Model/Type reference..... :	USS-3WI, USS-1WI, USS-3ZB, USS-1ZB, USTS-1LNB-WI, USTS-1LNB-ZB, USTS-2LNB-WI, USTS-2LNB-ZB, USTS-3LNB-WI, USTS-3LNB-ZB, USTS-4LNB-WI, USTS-4LNB-ZB, USTS-1LB-WI, USTS-1LB-ZB, USTS-2LB-WI, USTS-2LB-ZB, USTS-3LB-WI, USTS-3LB-ZB, USTS-WH
Rating(s)..... :	AC 120V/60Hz
Date of receipt of test item ..... :	Aug. 04, 2023
Date (s) of performance of test..... :	Aug. 04, 2023 - Aug. 14, 2023
Tested by (+signature) ... :	Ronaldo LUO
Check by (+signature).... :	Beryl ZHAO
Approved by (+signature):	Tomsin

General disclaimer:

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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

Product Name.....:	US Standard Switch
Model/Type reference.....:	USS-3WI
Sample Number.....:	TCT230804E009-0101
Operation Frequency.....:	2412MHz~2462MHz (802.11b/802.11g/802.11n(HT20))
Channel Separation .....:	5MHz
Number of Channel.....:	11 for 802.11b/802.11g/802.11n(HT20)
Modulation Technology .....:	802.11b: Direct Sequence Spread Spectrum (DSSS) 802.11g/802.11n: Orthogonal Frequency Division Multiplexing(OFDM)
Data speed .....:	802.11b: 1Mbps, 2Mbps, 5.5Mbps, 11Mbps 802.11g: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps 802.11n: Up to 150Mbps
Antenna Type.....:	PCB Antenna
Antenna Gain.....:	1.37dBi
Rating(s).....:	AC 120V/60Hz

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	USS-3WI	☒
Other models	USS-1WI, USS-3ZB, USS-1ZB, USTS-1LNB-WI, USTS-1LNB-ZB, USTS-2LNB-WI, USTS-2LNB-ZB, USTS-3LNB-WI, USTS-3LNB-ZB, USTS-4LNB-WI, USTS-4LNB-ZB, USTS-1LB-WI, USTS-1LB-ZB, USTS-2LB-WI, USTS-2LB-ZB, USTS-3LB-WI, USTS-3LB-ZB, USTS-WH	☐

Note: USS-3WI 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 USS-3WI can represent the remaining models.

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2. General Information

2.1. Test environment and mode

Item	Normal condition
Temperature	+25ºC
Voltage	AC 120V/60Hz
Humidity	56%
Atmospheric Pressure:	1008 mbar
Test Mode:	
Transmitting 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

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) The maximum output power for antenna is 12.47dBm (17.66mW) at 2462MHz, 1.37dBi antenna gain (with 1.37 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*

Maximum Permissible Exposure
output power= 17.66mW
Numeric Antenna gain= 1.37
Substituting the MPE safe distance using d=20cm into above equation.
Yields:
*S=0.000199*P*G*
Where P=Power in mW
G=Numeric antenna gain
S=Power density in mW/cm²
Power density= 0.004815mW/cm²

(For mobile or fixed location transmitters, the maximum power density is 1.0 mW/cm² even if the calculation
indicates that the power density would be larger.)

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

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