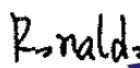


# TEST REPORT

|                                        |                                                                                                                                                      |                                                                                       |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| FCC ID. .... :                         | WOI-IG500BT                                                                                                                                          |                                                                                       |
| Test Report No..... :                  | TCT230530E064                                                                                                                                        |                                                                                       |
| Date of issue..... :                   | Jul. 03, 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..... :                | Champtek Incorporated                                                                                                                                |                                                                                       |
| Address..... :                         | 1F, No.4, Alley 2, Shih-Wei Lane, Chung-Cheng Rd., Xindian Dist., New Taipei City, 231 Taiwan                                                        |                                                                                       |
| Manufacturer's name ... :              | Champtek Incorporated                                                                                                                                |                                                                                       |
| Address..... :                         | 1F, No.4, Alley 2, Shih-Wei Lane, Chung-Cheng Rd., Xindian Dist., New Taipei City, 231 Taiwan                                                        |                                                                                       |
| Standard(s) .....                      | KDB 447498 D01 General RF Exposure Guidance v06                                                                                                      |                                                                                       |
| Product Name..... :                    | Gun-Type 2D Barcode Scanner                                                                                                                          |                                                                                       |
| Trade Mark .....                       | SCANTECH ID                                                                                                                                          |                                                                                       |
| Model/Type reference..... :            | IG500BT+RF                                                                                                                                           |                                                                                       |
| Rating(s)..... :                       | Rechargeable Li-ion Battery DC 3.7V                                                                                                                  |                                                                                       |
| Date of receipt of test item .....     | May 30, 2023                                                                                                                                         |                                                                                       |
| Date (s) of performance of test..... : | May 30, 2023 - Jul. 03, 2023                                                                                                                         |                                                                                       |
| Tested by (+signature) ... :           | Ronaldo LUO                                                                                                                                          |  |
| Check by (+signature).... :            | Beryl ZHAO                                                                                                                                           |  |
| Approved by (+signature):              | Tomsin                                                                                                                                               |  |

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## 1. General Product Information

### 1.1. EUT description

|                            |                                                                           |
|----------------------------|---------------------------------------------------------------------------|
| Product Name.....:         | Gun-Type 2D Barcode Scanner                                               |
| Model/Type reference.....: | IG500BT+RF                                                                |
| Sample Number.....:        | TCT230530E024-0101                                                        |
| Operation Frequency .....  | For BT/BLE: 2402MHz~2480MHz<br>For 2.4G TX: 2410MHz~2470MHz               |
| Modulation Type.....:      | For BT: GFSK, $\pi/4$ -DQPSK, 8DPSK<br>For BLE: GFSK<br>For 2.4G TX: GFSK |
| Antenna Type.....:         | For BT/BLE: PCB Antenna<br>For 2.4G TX: Spring Antenna                    |
| Antenna Gain.....:         | For BT/BLE: 0.55dBi<br>For 2.4G TX: 0.53dBi                               |
| Rating(s).....:            | Rechargeable Li-ion Battery DC 3.7V                                       |

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

None.

## 2. General Information

### 2.1. Test environment and mode

| Item                  | Normal condition                                          |
|-----------------------|-----------------------------------------------------------|
| Temperature           | +25°C                                                     |
| Voltage               | DC 3.7V                                                   |
| 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.

### 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 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  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR, where

- $f(\text{GHz})$  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

- BDR+EDR:

| Channel | Frequency (GHz) | 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 |
|---------|-----------------|------------------|---------------------|--------------------------|-------------------------|--------------------|--------|----------------------------------|
| CH 39   | 2.441           | 1.57             | 1±1                 | 2                        | 1.58                    | 5                  | 0.50   | 3.0                              |

- BLE:

| Channel | Frequency (GHz) | 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 |
|---------|-----------------|------------------|---------------------|--------------------------|-------------------------|--------------------|--------|----------------------------------|
| CH 19   | 2.440           | 2.07             | 2±1                 | 3                        | 2.00                    | 5                  | 0.62   | 3.0                              |

2.4G TX:

The maximum peak radiation emission for the EUT is 91.52dBuV/m at 3 m with frequency 2410 MHz,  $\text{EIRP[dBm]} = \text{E[dB}\mu\text{V/m]} + 20 \log(d[\text{m}]) - 104.77 = -3.71\text{dBm}$ .

| Channel | Frequency (GHz) | 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 |
|---------|-----------------|------------------|---------------------|--------------------------|-------------------------|--------------------|--------|----------------------------------|
| CH 0    | 2.410           | -3.71            | -4±1                | -3                       | 0.50                    | 5                  | 0.16   | 3.0                              |

Note: BT and 2.4GTX unable to transmit simultaneously.

Result:

Base on the calculation value, No SAR measurement is required.

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

