

**Shenzhen Global Test Service Co.,Ltd.**

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong

**RF Exposure evaluation****Report Reference No.** : GTS20211120004-1-3**FCC ID** : 2A5ZEN2-C

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Date of issue : Mar. 14, 2022

**Representative Laboratory Name** : Shenzhen Global Test Service Co.,Ltd.

Address: No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong, China

**Applicant's name** : Huizhou Strich Technology Co., Ltd.

Address: Floor 3, Building 1, Ritongda Industry, Wuyi Road, Chenjiang, Huizhou, China 516229

**Test specification** :**47CFR §1.1310**Standard : **47CFR §2.1093****KDB 447498 D04 Interim General RF Exposure Guidance v01**

TRF Originator : Shenzhen Global Test Service Co.,Ltd.

Master TRF : Dated 2014-12

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**Test item description** : **WIRELESS PAGE TURNER**

Trade Mark : STRICH

Manufacturer: Huizhou Strich Technology Co., Ltd.

Model/Type reference: N2-C

Listed Models : N2-A, N2-B, N2-D, N2-E

Exposure category: General population/uncontrolled environment

EUT Type: Portable

Hardware Version : N/A

Software Version : N/A

Rating : DC 3.7V by battery

Recharged by DC 5.0V

Result: **PASS**

**TEST REPORT**

<b>Test Report No. :</b> GTS20211120004-1-3	Mar. 14, 2022 Date of issue
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Equipment under Test : WIRELESS PAGE TURNER

Model /Type : N2-C

Listed model : N2-A, N2-B, N2-D, N2-E

**Applicant** : **Huizhou Strich Technology Co., Ltd.**

Address : Floor 3, Building 1, Ritongda Industry, Wuyi Road, Chenjiang,  
Huizhou, China 516229

**Manufacturer** : **Huizhou Strich Technology Co., Ltd.**

Address : Floor 3, Building 1, Ritongda Industry, Wuyi Road, Chenjiang,  
Huizhou, China 516229

<b>Test Result:</b>	<b>PASS</b>
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Contents

**1. SUMMARY ..... 4**

1.1. EUT configuration .....4

1.2. Product Description .....4

**2. TEST ENVIRONMENT ..... 5**

2.1. Address of the test laboratory .....5

2.2. Test Facility .....5

2.3. Environmental conditions .....5

2.4. Statement of the measurement uncertainty .....5

**3. METHOD OF MEASUREMENT ..... 6**

3.1. Applicable Standard.....6

3.2. Evaluation Method and Limit.....6

**4. CONDUCTED POWER RESULTS ..... 7**

**5. MANUFACTURING TOLERANCE ..... 8**

**6. EVALUATION RESULTS ..... 9**

6.1. Standalone Evaluation .....9

**7. CONCLUSION ..... 10**

## 1. SUMMARY

### 1.1. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

● - supplied by the manufacturer

○ - supplied by the lab

○	Adapter	Length (m) :	0.4m
		Shield :	Non-Shielded
		Detachable :	Non- Detachable

### 1.2. Product Description

Product Name	WIRELESS PAGE TURNER
Trade Mark	STRICH
Model/Type reference	N2-C
List Models	N2-A, N2-B, N2-D, N2-E
Model Declaration	PCB board, structure and internal of these model(s) are the same, Only the model name different , So no additional models were tested.
Power supply:	DC 3.7V by battery Recharged by DC 5.0V
Sample ID	GTS20211120004-1-1# & GTS20211120004-1-2#
Bluetooth	
Operation frequency	2402-2480MHz
Channel Number	79 channels for Bluetooth (DSS) 40 channels for Bluetooth (DTS)
Channel Spacing	1MHz for Bluetooth (DSS) 2MHz for Bluetooth (DTS)
Modulation Type	GFSK, $\pi/4$ -DQPSK, 8DPSK for Bluetooth (DSS) GFSK for Bluetooth (DTS)
Antenna Description	PCB Antenna, 0.55dBi(Max.) for 2.4G Band

## 2. TEST ENVIRONMENT

### 2.1. Address of the test laboratory

#### **Shenzhen Global Test Service Co.,Ltd.**

No.7-101 and 8A-104, Building 7 and 8, DCC Cultural and Creative Garden, No.98, Pingxin North Road, Shangmugu Community, Pinghu Street, Longgang District, Shenzhen, Guangdong, China

### 2.2. Test Facility

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

CNAS (No. CNAS L8169)

Shenzhen Global Test Service Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2019 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA (Certificate No. 4758.01)

Shenzhen Global Test Service Co., Ltd. has been assessed by the American Association for Laboratory Accreditation (A2LA). Certificate No. 4758.01.

Industry Canada Registration Number. is 24189.

FCC Designation Number is CN1234.

FCC Registered Test Site Number is 165725.

### 2.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15-35 ° C
Humidity:	30-60 %
Atmospheric pressure:	950-1050mbar

### 2.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to TR-100028-01 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1" and TR-100028-02 "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2" and is documented in the Shenzhen Global Test Service Co., Ltd. quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen GTS laboratory is reported:

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.57 dB	(1)

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of  $k=2$ .

### 3. Method of measurement

#### 3.1. Applicable Standard

[ANSI C95.1–1999](#): IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

[KDB 447498 D04 Interim General RF Exposure Guidance v01](#): Mobile and Portable Device, RF Exposure, Equipment Authorization Procedures

[FCC CFR 47 part1 1.1310](#): Radiofrequency radiation exposure limits.

[FCC CFR 47 part2 2.1093](#): Radiofrequency radiation exposure evaluation: portable devices

#### 3.2. Evaluation Method and Limit

FCC: According to 447498 D04 Interim General RF Exposure Guidance v01.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold  $P_{th}$  (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive).  $P_{th}$  is given by Formula (B.2).

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and  $f$  is in GHz,  $d$  is the separation distance (cm), and  $ERP_{20 \text{ cm}}$  is per Formula (B.1).

The example values shown in Table B.2 are for illustration only.

**Table B.2—Example Power Thresholds (mW)**

Frequency (MHz)	Distance (mm)										
		5	10	15	20	25	30	35	40	45	50
	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

#### 4. Conducted Power Results

##### Bluetooth(BT)

Mode	Channel	Frequency (MHz)	Peak Conducted Output Power (dBm)
GFSK	00	2402	2.18
	39	2441	2.19
	78	2480	2.15
$\pi/4$ -DQPSK	00	2402	2.14
	39	2441	2.33
	78	2480	2.31
8DPSK	00	2402	2.20
	39	2441	2.09
	78	2480	2.06
GFSK(BLE)	00	2402	2.98
	19	2440	2.24
	39	2480	2.28

## 5. Manufacturing Tolerance

### Bluetooth(BT)

GFSK (Peak)			
Channel	Channel 00	Channel 39	Channel 78
Target (dBm)	2.0	2.0	2.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
$\pi/4$ -DQPSK(Peak)			
Channel	Channel 00	Channel 39	Channel 78
Target (dBm)	2.0	2.0	2.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
8DPSK (Peak)			
Channel	Channel 00	Channel 39	Channel 78
Target (dBm)	2.0	2.0	2.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0
GFSK BLE(Peak)			
Channel	Channel 00	Channel 19	Channel 39
Target (dBm)	2.0	2.0	2.0
Tolerance $\pm$ (dB)	1.0	1.0	1.0



## 6. Evaluation Results

### 6.1. Standalone Evaluation

#### Bluetooth(BT)

Band/Mode	f (GHz)	Antenna Distance (mm)	RF output power		Limit Pth(mW)	SAR Test Exclusion
			dBm	mW		
GFSK	2.480	5	3.00	2.00	3.00	Yes
$\pi/4$ -DQPSK	2.480	5	3.00	2.00	3.00	Yes
8DPSK	2.480	5	3.00	2.00	3.00	Yes
GFSK(BLE)	2.480	5	3.00	2.00	3.00	Yes

Remark:

1. Output power including tune up tolerance;
2. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to f) in section 4.1 of KDB447498 D04 Interim General RF Exposure Guidance v01 is applied to determine SAR test exclusion.

## **7. Conclusion**

The measurement results comply with the FCC Limit per 47 CFR 2.1093 for the uncontrolled RF Exposure and SAR Exclusion Threshold per KDB447498 D04 Interim General RF Exposure Guidance v01, No SAR is required.

**.....End of Report.....**