1 Cover Page

RF Exposure REPORT

Application No.:	SZCR2104020733AT (SHEM2103002575CR)
FCC ID:	2AWDCTR1000-D
Applicant:	Tsingoal(Beijing) Technology Co., Ltd
Address of Applicant:	Room 32021, Zhongtai Building, Shuangqing Road No.3, Haidian District, Beijing,China
Manufacturer:	Tsingoal(Beijing) Technology Co., Ltd
Address of Manufacturer:	Room 32021, Zhongtai Building, Shuangqing Road No.3, Haidian District, Beijing, China
Factory:	Beijing Yongshixinyu Electronic Technology Co., Ltd.
Address of Factory:	Maohua factory, houfengbozuodi Road, Shunyi District, Beijing,China
Equipment Under Test (EUT):	
EUT Name:	TICTAG
Model No.:	TR1000-d
Standard(s) :	FCC Rules 47 CFR §2.1093 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2021-03-26
Date of Test:	2021-03-29 to 2021-04-21
Date of Issue:	2021-04-25
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Keny. xu

Keny Xu
EMC Laboratory Manager

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Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2021-04-25	/

Authorized for issue by:				
		Fony chen		
		Foray Chen /Project Engineer		
		Eric Fu		
		Eric Fu /Reviewer		

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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 3V by CR2032

3.2 Details of E.U.T.

Antenna Gain:	0dBi (Provided by manufacturer)
Antenna Type:	PCB Antenna
Bluetooth Version:	V5.0 LE
Channel Spacing:	2MHz
Modulation Type:	GFSK
Number of Channels:	40
Operation Frequency:	2402MHz to 2480MHz

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3.3 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

3.4 Test Facility

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

• A2LA (Certificate No. 3816.01)

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

• VCCI

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

• FCC –Designation Number: CN1178

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.
IC#: 4620C.

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4 Test Standards and Limits

4.1 FCC Radiofrequency radiation exposure limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

[(max power of channel)/(min test separation distance)]*[√f(GHz)] ≤ 3.0 for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

• f(GHz) is the RF channel transmit frequency in GHz

• Power and distance are rounded to the nearest mW and mm

• The result is rounded to one decimal place for comparison

• 3.0 and 7.5 are referred to as the numeric thresholds

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm, and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm according to 4.1 f) is applied to determine SAR test exclusion.

For 2.4G band device, the limit of worse case is

$P_{max} \leq 3.0*D_{min})/\sqrt{f} = 3.0*5/\sqrt{2.480} = 9.525mW$

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5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SZCR210402073301.

Test Data:

Test Mode	Test Channel	Peak Power [dBm]		Peak Power (mW)	
		1M	2M	1M	2M
BLE	2402	6.81	6.77	4.80	4.75
BLE	2440	7.12	7.13	5.15	5.16
BLE	2480	5.94	5.96	3.93	3.94

5.2 RF Exposure Calculation

The Max Conducted Peak Output Power is 5.16mW. The best case gain of the antenna is 0dBi. 0dBi logarithmic terms convert to numeric result is nearly 1.

According to the formula. calculate the EIRP test result:

EIRP= P x G = 5.16 mW x 1 = 5.16mW < 9.525mW

So the SAR report is not required.

--End of the Report--

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