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Report No.: SZEM180100017502
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1 Cover Page

RF Exposure REPORT

Application No.:	SZEM1801000175CR (SHEM1712008301CR)
Applicant:	Andon Health Co., Ltd.
FCC ID:	ZRYBG5S
Equipment Under Test (EUT):	
NOTE: The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	iHealth Wireless Smart Glucose Meter
Model No.(EUT):	BG5S
Standards:	FCC Rules 47 CFR §2.1093 KDB 447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2017-12-06
Date of Test:	2018-01-04
Date of Issue:	2018-01-16
Test Result:	Pass*

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.





The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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Revision Record				
Version	Chapter	Date	Modifier	Remark
00	/	2018-01-16	/	Original

Authorized for issue by:				
				
		<hr/> Foray Chen /Project Engineer		
				
		<hr/> Eric Fu /Reviewer		

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3 General Information

3.1 Client Information

Applicant:	Andon Health Co., Ltd.
Address of Applicant:	No.3 JinPing Street, YaAn Road, Nankai District, Tianjin 300190, China
Manufacturer:	Andon Health Co., Ltd.
Address of Manufacturer:	No.3 JinPing Street, YaAn Road, Nankai District, Tianjin 300190, China
Factory:	Andon Medical Co., Ltd.
Address of Factory:	No.26 HangYu Road, Tianjin Airport Economic Area, Tianjin 300380, China

3.2 General Description of E.U.T.

Product Description:	Portable product with BT function
Battery:	DC 3.7V rechargeable Li-ion battery

3.3 Technical Specifications

Operation Frequency:	2402MHz-2480MHz
Bluetooth Version:	BT 4.0 Single mode
Modulation Type:	GFSK
Number of Channel:	40
Antenna Type	PCB Antenna
Antenna Gain	2 dBi

3.4 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.

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No tests were sub-contracted.

3.5 Test Facility

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

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **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 10m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-823, R-4188, T-1153 and C-2383 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.

- **Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

4 Test Standards and 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:

$[(\text{max power of channel})/(\text{min test separation distance})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR, where

- $f(\text{GHz})$ 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

$$P_{\text{max}} \leq 7.5 \cdot D_{\text{min}} / \sqrt{f} = 7.5 \cdot 5 / \sqrt{2.480} = 23.8 \text{ mW}$$

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SZEM180100017501.

Test Data:

Test mode	Channel	Peak Power (dBm)	Peak Power (mW)
GFSK	2402	-0.71	0.85
	2440	-0.46	0.90
	2480	-0.01	1.00

5.2 RF Exposure Calculation

For FCC:

The Max Conducted Peak Output Power is -0.01dBm (1.00mW); The best case gain of the antenna is 2 dBi. 2dB logarithmic terms convert to numeric result is nearly 1.585

According to the formula $S = \frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

- 1) P (Watts) = Power Input to antenna = $10^{\frac{dBm}{10}} / 1000$
- 2) G (Antenna gain in numeric) = $10^{(Antenna\ gain\ in\ dBi / 10)}$
- 3) R = distance to the center of radiation of antenna (in meter) = 20cm
- 4) MPE limit = 1mW/cm²

$$S = \frac{PG}{4R^2\pi} = \frac{1 \times 1.585}{4 \times 400 \times 3.14} = 0.000315 \text{ mW/cm}^2 < 1\text{mW/cm}^2$$

--End of the Report--