SGS-CSTC Standards Technical Services
(Shanghai) Co., Ltd.

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1 Cover Page

RF Exposure Evaluation Report

Application No.:	SHEM1702000797CR
Applicant:	ZOGLAB Microsystem Co., Ltd.
FCC ID:	2AEBK-HWS2017B
Equipment Under Test (EUT): **NOTE:** The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	handheld weather station
Model No.(EUT):	HWS3000
Standards:	FCC Rules 47 CFR §2.1093 KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2017-02-22
Date of Test:	2017-04-13
Date of Issue:	2017-05-12
Test Result:	**Pass***

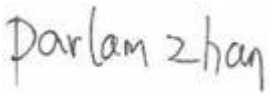
* In the configuration tested, the EUT detailed in this report complied with the standards specified above

Parlam Zhan
E&E Section Manager
SGS-CSTC (Shanghai) Co., Ltd.

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.

2 Version

Revision Record				
Version	**Chapter**	**Date**	**Modifier**	**Remark**
00	/	2017-05-12	/	Original

Authorized for issue by:				
Engineer		Eddy Zong **Print Name**		
Clerk		Susie Liu **Print Name**		
Reviewer		Parlam Zhan		

3 Contents

4 General Information

4.1 Client Information

Applicant:	ZOGLAB Microsystem Co., Ltd.
Address of Applicant:	Floor 1-2, South Block, Building A, KUNLUN Science Park No 61 BaiJiaYuan Road, West Lake District
Manufacturer:	ZOGLAB Microsystem Co., Ltd.
Address of Manufacturer:	Floor 1-2, South Block, Building A, KUNLUN Science Park No 61 BaiJiaYuan Road, West Lake District
Factory:	ZOGLAB Microsystem Co., Ltd.
Address of Factory:	Floor 1-2, South Block, Building A, KUNLUN Science Park No 61 BaiJiaYuan Road, West Lake District

4.2 General Description of E.U.T.

Product Description:	Portable product with BT function
Battery:	DC 10.8V 2500mAh rechargeable Li-ion battery

4.3 Technical Specifications

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	2.1+EDR
Modulation Technique:	GFSK, π /4DQPSK, 8DPSK
Number of Channel:	79
Antenna Type	PCB Antenna
Antenna Gain	0 dBi

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China.

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

4.5 Test Facility

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

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. 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.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868, C-4336, T-2221, G-830 respectively.

5 Test Standards and Limits

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in KDB447498 D01 section 4.3.1 must be applied to determine SAR test exclusion.

MHz	5	10	15	20	25	30	35	40	45	50	mm
150	39	77	116	155	194	232	271	310	349	387	(mW)
300	27	55	82	110	137	164	192	219	246	274	
450	22	45	67	89	112	134	157	179	201	224	
835	16	33	49	66	82	98	115	131	148	164	
900	16	32	47	63	79	95	111	126	142	158	
1500	12	24	37	49	61	73	86	98	110	122	
1900	11	22	33	44	54	65	76	87	98	109	
2450	10	19	29	38	48	57	67	77	86	96	
3600	8	16	24	32	40	47	55	63	71	79	
5200	7	13	20	26	33	39	46	53	59	66	
5400	6	13	19	26	32	39	45	52	58	65	
5800	6	12	19	25	31	37	44	50	56	62	

6 Measurement and Calculation

6.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM170200079701

Test Mode	Test Frequency (MHz)	Output Power (dBm)	Reading Power (mW)
GFSK	2402	4.02	2.52
	2441	4.17	2.61
	2480	**4.26**	**2.67**
π/4DQPSK	2402	1.94	1.56
	2441	2.10	1.62
	2480	2.07	1.61
8DPSK	2402	1.94	1.56
	2441	2.00	1.58
	2480	1.94	1.56

6.2 MPE Calculation

The Max Conducted Peak Output Power is 2.67mW;

The best case gain of the antenna is 0dBi. 0dB logarithmic terms convert to numeric result is nearly 1

According to the formula. calculate the EIRP test result:

EIRP= P x G = 2.67 mW x 1= 2.67mW < 10mW

So the device is exclusion from SAR test.

7 EUT Constructional Details

Refer to the < HWS3000_External Photos > & < HWS3000 _Internal Photos >.

--End of the Report--