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RF Exposure Evaluation Report

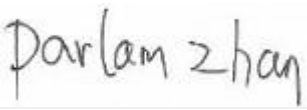
Application No.:	SHEM1908016770CR
IC:	25126-TPMDPROI
Applicant:	Baolong Huf Shanghai Electronics Co., Ltd.
Address of Applicant:	1st Floor, Building 5, 5500 Shenzhuan Rd, Songjiang, Shanghai
Manufacturer:	Baolong Huf Shanghai Electronics Co., Ltd.
Address of Manufacturer:	1st Floor, Building 5, 5500 Shenzhuan Rd, Songjiang, Shanghai
Factory:	Baolong Huf Shanghai Electronics Co., Ltd.
Address of Factory:	1st Floor, Building 5, 5500 Shenzhuan Rd, Songjiang, Shanghai
Equipment Under Test (EUT):	
EUT Name:	TPMS-sensor
Model No.:	TPM-D pro-l
Trade mark:	BHSENS
Standard(s) :	RSS-102 Issue 5 (March 2015)
Date of Receipt:	2019-08-30
Date of Test:	2019-09-12 to 2019-10-19
Date of Issue:	2019-11-21
Test Result:	**Pass***

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

Parlam Zhan
E&E Section Manager

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.

Revision Record			
Version	**Description**	**Date**	**Remark**
00	Original	2019-11-21	/

Authorized for issue by:				
				
		Micheal Niu / Project Engineer		
				
		Parlam Zhan / Reviewer		

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3 General Information

3.1 General Description of E.U.T.

Power supply:	DC 3.0 V By battery
Test voltage:	DC 3V

3.2 Details of E.U.T.

Antenna Gain	-23dBi
Modulation Type	FSK&ASK
Number of Channels	1
Operation Frequency	433.92MHz
Antenna Type	Monopole antenna
Transmitter type	Periodic
Number of Channels	1

3.3 Test Location

All tests were performed at:

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

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

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

No tests were sub-contracted.

3.4 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.

• NVLAP (Certificate No. 201034-0)

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. is accredited by the National Voluntary Laboratory Accreditation Program(NVLAP). Certificate No. 201034-0.

• FCC –Designation Number: CN5033

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been recognized as an accredited testing laboratory.
Designation Number: CN5033. Test Firm Registration Number: 479755.

• Innovation, Science and Economic Development Canada

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. EMC Laboratory has been recognized by ISED as an accredited testing laboratory.
IC Registration No.: 8617A-1. CAB identifier: CN0020.

• 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-13868, C-14336, T-12221, G-10830 respectively.

4 Test Standards and Limits

4.1 IC Radiofrequency radiation exposure limits

According RSS-102 Table 4(RF Field Strength Limits for Devices Used by the General Public)

Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field (A/m rms)	Power Density (W/m^2)	Reference Period (minutes)
0.003-10	83	90	-	Instantaneous*
0.1-10	-	0.73/ f	-	6**
1.1-10	87/ $f^{0.5}$	-	-	6**
10-20	27.46	0.0728	-2	6
20-48	58.07/ $f^{0.25}$	0.1540/ $f^{0.25}$	8.944/ $f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 $f^{0.3417}$	0.008335 $f^{0.3417}$	0.02619 $f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/ $f^{1.2}$
150000-300000	0.158 $f^{0.5}$	4.21 x 10^{-4} $f^{0.5}$	6.67 x 10^{-5} f	616000/$f^{1.2}$

Note: f is frequency in MHz.

* Based on nerve stimulation (NS).

** Based on specific absorption rate (SAR).

For 433MHz Devices RF Field Strength Limits is 25.01V/m

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM190801677001

Test Mode	Freq. (MHz)	Result Level (dBμV/m)	Detector	Polarization
FSK	433.92	77.67	Peak	Horizontal
		59.27	Average	Horizontal
		71.27	Peak	Vertical

Test Mode	Freq. (MHz)	Result Level (dBμV/m)	Detector	Polarization
ASK	433.92	71.02	Peak	Horizontal
		64.79	Peak	Vertical

5.2 MPE Calculation

77.67dBuV/m=0.008V/m＜25.01V/m

So the device is exclusion from SAR test.

--End of the Report--