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

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TEST REPORT

Application No.:	GZEM1808004588CR
Applicant:	Virgin Pulse Inc.
Address of Applicant:	492 Old Connecticut Path, Suite 601, Framingham, MA 01701,US
Manufacturer:	Zhongshan Transtek Electronics Co.,Ltd
Address of Manufacturer:	No. 23, Jin'an Road, Minzhong, Zhongshan, Guangdong, China
Factory:	Zhongshan Transtek Electronics Co.,Ltd
Address of Factory:	No. 23, Jin'an Road, Minzhong, Zhongshan, Guangdong, China
Equipment Under Test (EUT):	
FCC ID:	2AKPRVP-SC001
EUT Name:	Body Scale
Model No.:	LS102-B3
Standard(s) :	47 CFR Part 1.1307, Part 2.1093, KDB 447498
Date of Receipt:	2018-08-08
Date of Test:	2018-08-13 to 2018-08-23
Date of Issue:	2018-09-03
Test Result:	**Pass***

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

Kobe Jian
Lab 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	**Chapter**	**Date**	**Modifier**	**Remark**
01		2018-09-03		Original

Authorized for issue by:				
Tested By		 **Jackson_Yuan /Project Engineer**		2018-08-13 to 2018-08-23 **Date**
Checked By		 **Ricky_Liu /Reviewer**		2018-08-28 **Date**

2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
RF Exposure	47 CFR Part 1.1307, Part 2.1093, KDB 447498	CFR 47 Part 2.1093	CFR 47 Part 2.1093	Pass

3 Contents

4 General Information

4.1 Details of E.U.T.

Power Supply:	DC 6V = 4 x DC 1.5V size of "AAA" batteries
Test Voltage:	DC 6.0V
Cable:	None
Antenna Gain	0 dBi
Antenna Type	PCB Antenna
Channel Spacing	2MHz
Modulation Type	GFSK
Operation Frequency	2402MHz to 2480MHz
Number of Channels	40
Software	NFgo
BT Version	Bluetooth 4.0 Smart (BLE mode)

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Laptop	Lenovo	T430u	REF. No.SEA1800
BT test board	SGS EMC	RF 07	RF 07

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	+/-5.5 x 10^{-8}
2	Duty cycle	+/-0.57%
3	Occupied Bandwidth	+/-3%
4	RF Conducted power	+/-0.68dB
5	RF Power Density	+/-1.50dB
6	Conducted Spurious Emissions	+/-1.04dB
7	RF Radiated Power	+/-4.5dB (below 1GHz)
8	RF Radiated Power	+/-4.8dB (above 1GHz)
	Radiated Spurious Emission Test	+/-4.5dB (30MHz-1GHz)
9	Radiated Spurious Emission Test	+/-4.8dB (1GHz-18GHz)
	Temperature	+/-0.4℃
10	Humidity	+/-1.3%
11	Supply Voltages	+/-1.5%
12	Time	+/-3%

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,

198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663

Tel: +86 20 82155555 Fax: +86 20 82075059

No tests were sub-contracted.

4.5 Test Facility

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

- **NVLAP (Lab Code: 200611-0)**

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou EMC Laboratory is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP/NIST). NVLAP Code: 200611-0.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

- **ACMA**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our NVLAP accreditation.

- **SGS UK(Certificate No.: 32), SGS-TUV SAARLAND and SGS-FIMKO**

Have approved SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory as a supplier of EMC TESTING SERVICES and SAFETY TESTING SERVICES.

- **CNAS (Lab Code: L0167)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been assessed and in compliance with CNAS-CL01:2006 accreditation criteria for testing laboratories (identical to

ISO/IEC 17025:2005 General Requirements) for the Competence of Testing Laboratories.

- **FCC Recognized 2.948 Listed Test Firm(Registration No.: 282399)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 282399, May 31, 2002.

- **FCC Recognized Accredited Test Firm(Registration No.: 486818)**

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been accredited and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Designation Number: CN5016, Test Firm Registration Number: 486818, Jul 13, 2017.

- **Industry Canada (Registration No.: 4620B-1)**

The 3m/10m Alternate Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Certification and Engineering of Industry Canada for radio equipment testing with Registration No. 4620B-1.

- **VCCI (Registration No.: R-2460, C-2584, G-449 and T-1179)**

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.: R-2460, C-2584，G-449 and T-1179 respectively.

- **CBTL (Lab Code: TL129)**

SGS-CSTC Standards Technical Services Co., Ltd., E&E Laboratory has been assessed and fully comply with the requirements of ISO/IEC 17025:2005, the Basic Rules, IECEE 01 and Rules of procedure IECEE 02, and the relevant IECEE CB-Scheme Operational documents.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

5 Equipment List

Conducted Peak Output Power					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
EXA Signal Analzer	Agilent Technologies	N9010A	EMC2138	2017-11-15	2018-11-14
6dB Attenuator	HP	8491A	EMC2062	2018-04-04	2020-04-03
Test Software JS1120-3	HangTianXing	V2.6	GZE100-69	N/A	N/A

General used equipment					
Equipment	**Manufacturer**	**Model No**	**Inventory No**	**Cal Date**	**Cal Due Date**
DMM	Fluke	73	EMC0006	2018-07-20	2019-07-19
DMM	Fluke	73	EMC0007	2018-07-19	2019-07-18

6 Radio Spectrum Technical Requirement

6.1 RF Exposure

6.1.1 Test Requirement:

CFR 47 Part 2.1093

Limit:

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, including tune-up tolerance, mW) / (min. test separation distance, mm)] · [√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 before calculation[17]

The result is rounded to one decimal place for comparison

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 is applied to determine SAR test exclusion

6.1.2 Conclusion

The Max conducted output power is 0.369 dBm in Lowest channel (2.402 GHz);

The best case gain of the antenna is 0 dBi.

EIRP= 0.369 dBm + (0 dBi) = 1.369 dBm

0.369 dBm logarithmic terms convert to numeric result is nearly 1.09 mW

According to the formula. calculate the test result:

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] · [√f(GHz)]

General RF Exposure = (1.09 mW / 5 mm) x √2.402 GHz = 0.337 ①

SAR requirement:

S= 3.0 ② ;

① < ②.

So the SAR report is not required.

7 Photographs

7.1 EUT Constructional Details

Refer to Appendix A - Photographs of EUT Constructional Details for GZEM1808004588CR.

--End of Report—