



RF EXPOSURE EVALUATION REPORT

Application No.: GZCR2201000078HS
Applicant: Breville Pty Ltd
Address of Applicant: Ground Floor, Suite 2, 170-180 Bourke Road, Alexandria, NSW 2015, Australia
Manufacturer: Breville Pty Ltd
Address of Manufacturer: Ground Floor, Suite 2, 170-180 Bourke Road, Alexandria, NSW 2015, Australia
Factory: Kolvin Industries Ltd
Address of Factory: Unit 6 M/F, Century Centre, 44 Hung To Road, Kwun Tong, Kowloon, Hong Kong SAR
Equipment Under Test (EUT):
EUT Name: Immersion Circulator
Model No.: CSV750
Trade Mark: Hydro Pro Plus
Standard(s) : 47 CFR Part 1.1307
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2019-10-23
Date of Test: 2019-11-05
Date of Issue: 2022-05-11

Test Result:

Pass*

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

Kobe Jian

EMC Laboratory Manager



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Revision Record			
Version	Report No.	Date	Remark
01	GZEM191001651403	2019-11-07	Original
02	GZEM191001651406	2022-05-11	Copy report: Changed factory information; Updated EUT name, added trade mark; Alternative new motor driver IC (DRV10975)

Authorized for issue by:			
Tested By		Kevin Zhang	
		Kevin Zhang /Project Engineer	
Checked By		Ricky Liu	
		Ricky_Liu /Reviewer	



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2 Evaluation Summary

Note:

E.U.T./EUT means Equipment Under Test.

Pass means the test result passed the test standard requirement, please find the detailed decision rule in the report relative section.

Remark for report GZEM191001651406:

This report GZEM191001651406 is based on original report GZEM191001651403. With the follow changes:

1. Changed factory information;
2. Updated EUT name and added trade mark
3. Alternative new motor driver IC (DRV10975)

Considered the alternative motor driver also did not affect the RF characterize, therefore no need further testing for this change.

All test results in report GZEM191001654103 were kept in this report GZEM191001654106.



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4 General Information

4.1 Details of E.U.T.

Power Supply:	AC 120V, 60Hz
Rated Power:	1450W
Cable:	AC mains (unshielded, 1.3m)
	AUX in ports
	Micro USB ports
Antenna Gain	0 dBi
Antenna Type	PCB Antenna
Channel Spacing	2MHz
Modulation Type	GFSK
Number of Channels	40
Operation Frequency	2402MHz to 2480MHz
Software	Smart RF studio 7
Power Setting	5

4.2 Evaluating Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Guangzhou Branch EMC Laboratory,
 198 Kezhu Road, Sciencetech Park, Guangzhou Economic & Technology Development District,
 Guangzhou, China 510663

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

No tests were sub-contracted.



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4.3 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-CL01:2018 accreditation criteria for testing laboratories (identical to

ISO/IEC 17025:2017 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, CAB identifier: CN0052)**

SGS-CSTC Standards Technical Services Co., Ltd., has been registered by Innovation Science and Economic Development Canada for Wireless Device Testing laboratories to test to Canadian radio equipment requirements. Registration No. 4620B, CAB identifier: CN0052.

● **VCCI (Registration No.: R-12460, C-12584, G-10449 and T-11179)**

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-12460, C-12584, G-10449 and T-11179 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.



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4.4 Deviation from Standards

None

4.5 Abnormalities from Standard Conditions

None



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5 Radio Spectrum Technical Requirement

5.1 RF Exposure

5.1.1 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:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\sqrt{f(\text{GHz})}} \right] \cdot \left[\frac{1}{\text{min. test separation distance, mm}} \right] \leq 3.0$$
 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 calculation¹⁷
- ☐ 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

5.1.2 Conclusion

The Max conducted output power is 4.933 dBm in Highest channel (2.480 GHz);

4.933 dBm logarithmic terms convert to numeric result is nearly 3.11 mW

According to the formula. calculate the test result:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{\sqrt{f(\text{GHz})}} \right] \cdot \left[\frac{1}{\text{min. test separation distance, mm}} \right]$$

General RF Exposure = $(3.11 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.480 \text{ GHz}} = 0.981$ ①

SAR requirement:

$S = 3.0$ ② ;

① < ②.

So the SAR report is not required.



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6 Photographs

6.1 EUT Constructional Details

Refer to Appendix A - Photographs of EUT Constructional Details for GZCR2201000078HS

--End of Report--



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