SGS-CSTC Standards Technical Services Co., Ltd.

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TEST REPORT

Application No.:	SZEM1408004255HS
Applicant/Manufacturer /Factory:	SHENZHEN CITY SVAVO BATHROOM PRODUCTS CO., LTD.
Address of Applicant/ Manufacturer/Factory:	NO.4 FACTORY, XINWU INDUSTRIA ESTETE, SHABO, PINGSHAN DISTRICT, SHENZHEN, CHINA
Equipment Under Test (EUT):	
EUT Name:	Automatic Soap Dispenser
Model No.:	V-476
Trade mark:	SVAVO
Standards:	EN 55014-1:2006/A1:2009/A2:2011 EN 55014-2:1997/A1:2001/A2:2008
Date of Receipt:	2014-08-12
Date of Test:	2014-08-13 to 2014-08-14
Date of Issue:	2014-08-19
Test Result :	**Pass***

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

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The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of Conformity and compliance with all relevant EC Directives. The protection requirements with respect to electromagnetic compatibility contained in Directive 2004/108/EC are considered.

Jack Zhang
EMC Laboratory 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.
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. All test results in this report can be traceable to National or International Standards.

2 Test Summary

Item	Standard	Method	Class	Result
Radiated Disturbance (30MHz-1GHz)	EN 55014-1:2006/ A1:2009/A2:2011	CISPR 16-2-3	N/A	Pass
Electrostatic Discharge	EN 55014-2:1997/ A1:2001/A2:2008	EN 61000-4-2:2009	4kV Contact Discharge 8kV Air Discharge	Pass

N/A: Not applicable

3 Contents

4 General Information

4.1 Details of E.U.T.

Power Supply: DC 6.0V (4 x 1.5V "AAA" Size Battery)

4.2 Description of Support Units

The EUT has been tested as an independent unit.

4.3 Standards Applicable for Testing

Table 1 : Tests Carried Out Under EN 55014-1:2006/A1:2009/A2:2011

Method	Item	Status
CISPR 16-2-1	Conducted Disturbance at Mains Terminals (150kHz-30MHz)	×
CISPR 16-2-1	Conducted Disturbance at Load Terminals and Additional Terminals	×
EN 55014-1:2006/ A1:2009/A2:2011	Discontinuous Disturbance(150kHz-30MHz)	×
CISPR 16-2-2	Disturbance Power	×
CISPR 16-2-3	Radiated Disturbance(30MHz-1GHz)	√
CISPR 16-2-3	Radiated Disturbance (Magnetic field Induced Current)(9kHz-30MHz)	×

Table 2 : Tests Carried Out Under EN 55014-2:1997/A1:2001/A2:2008

Method	Item	Status
EN 61000-4-2:2009	Electrostatic Discharge	√
EN 61000-4-3:2006/ A1:2008/A2:2010	Radiated Immunity(80MHz-1GHz)	×
EN 61000-4-4:2012	Electrical Fast Transients/Burst at Power Port	×
EN 61000-4-4:2012	Electrical Fast Transients/Burst at Signal Port	×
EN 61000-4-5:2006	Surge at Power Port	×
EN 61000-4-6:2009	Conducted Immunity at Power Port(150kHz-80MHz)	×
EN 61000-4-6:2009	Conducted Immunity at Signal Port(150kHz-80MHz)	×
EN 61000-4-11:2004	Voltage Dips and Interruptions	×
EN 61000-4-6:2009	Conducted Immunity at Power Port(150kHz-230MHz)	×
EN 61000-4-6:2009	Conducted Immunity at Signal Port(150kHz-230MHz)	×

× Indicates that the test is not applicable
√ Indicates that the test is applicable

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch E&E Lab,

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China. 518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 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.

- **VCCI**

  The 3m Semi-anechoic chamber, Full-anechoic Chamber and Shielded Room (7.5m x 4.0m x 3.0m) of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2197, G-416, T-1153 and C-2383 respectively.

- **FCC – Registration No.: 556682**

  SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen 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 No.: 556682.

- **Industry Canada (IC)**

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

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None

4.8 Monitoring of EUT for All Immunity Test

Visual: Monitored the movement of the EUT
Audio: None

5 Equipment List

Radiated Disturbance(30MHz-1GHz)					
Item	**Equipment**	**Manufacturer**	**Model No**	**Inventory No**	**Cal Due Date**
1	3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEL0017	2015-6-10
2	EMI Test Receiver	Rohde & Schwarz	ESIB26	SEL0023	2015-5-16
3	EMI Test software	AUDIX	E3	SEL0050	N/A
4	Coaxial cable	SGS	N/A	SEL0028	2015-5-29
5	BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEL0014	2014-10-24
6	Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEL0053	2015-5-16

Electrostatic Discharge					
Item	**Equipment**	**Manufacturer**	**Model No**	**Inventory No**	**Cal Due Date**
1	ESD Simulator	SCHAFFNER	NSG 438	SEL0035	2015-3-16
2	ESD Ground Plane	SGS(3m*3m)	N/A	SEL0004	N/A

General used equipment					
Item	**Equipment**	**Manufacturer**	**Model No**	**Inventory No**	**Cal Due Date**
1	Humidity/Temperature Indicator	Shanghai	ZJ1-2B	SEL0102 to SEL0103	2014-10-24
2	Humidity/Temperature Indicator	Shanghai	ZJ1-2B	SEL0101	2014-10-24
3	Barometer	ChangChun	DYM3	SEL0088	2015-05-16

6 Emission Test Results

6.1 Radiated Disturbance(30MHz-1GHz)

Test Requirement:	EN 55014-1:2006/A1:2009/A2:2011
Test Method:	CISPR 16-2-3
Frequency Range:	30MHz to 1GHz
Measurement Distance:	3m
Limit:	
30MHz-230MHz	40 dB(μV/m) quasi-peak
230MHz-1GHz	47 dB(μV/m) quasi-peak
Detector:	Peak for pre-scan (120kHz resolution bandwidth) 30M to 1000MHz

6.1.1 E.U.T. Operation

Operating Environment:

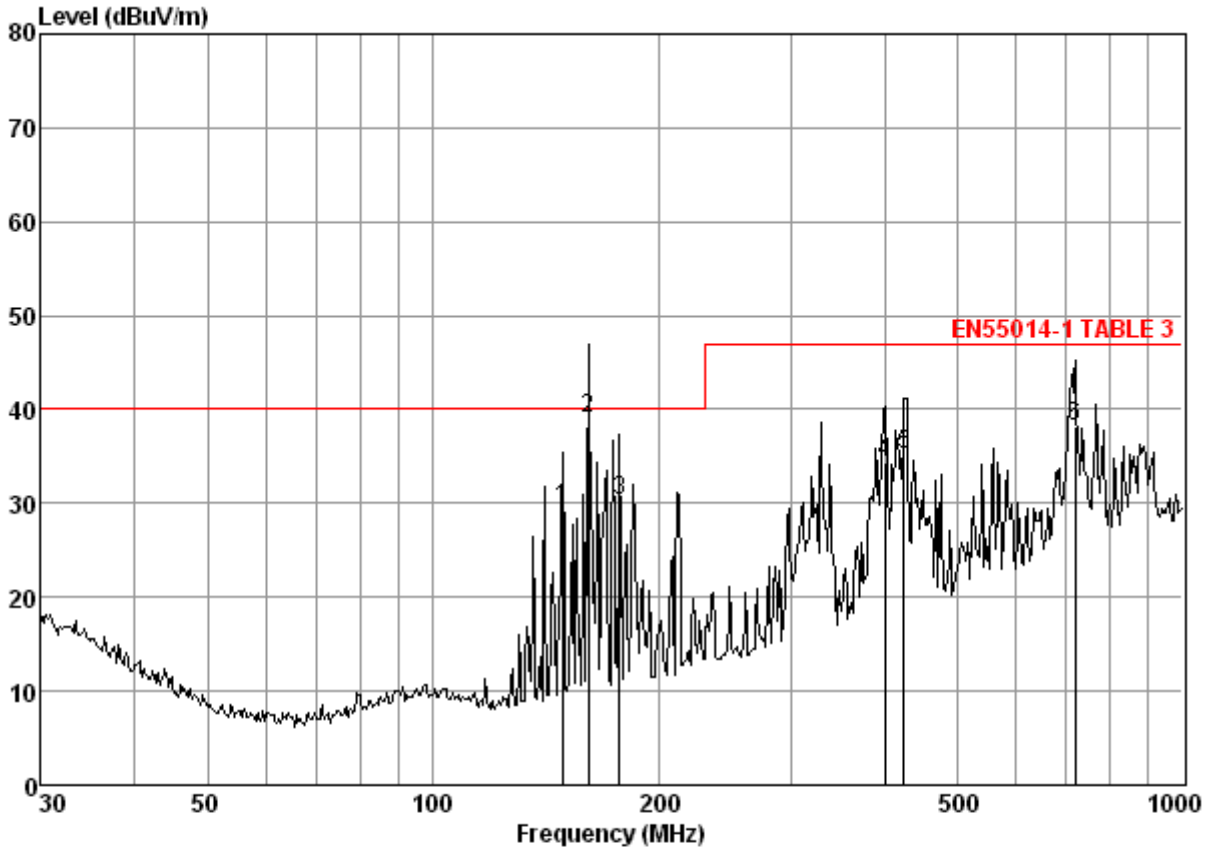
Temperature: 23.0 °C Humidity: 56 % RH Atmospheric Pressure: 1005 mbar

Test mode: a: On mode:Keep the EUT working normally.

6.1.2 Measurement Data

An initial pre-scan was performed in the chamber using the spectrum analyser in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by BiConiLog antenna with 2 orthogonal polarities.

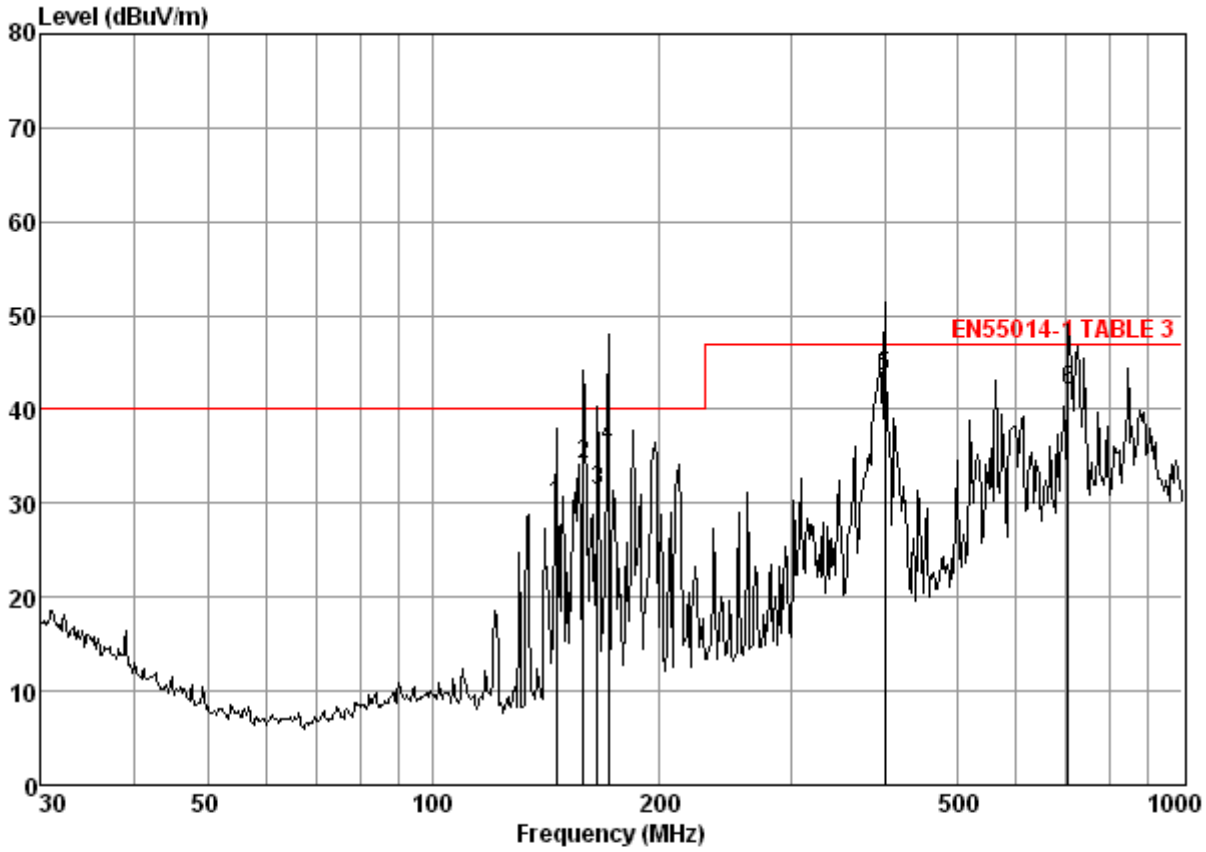
Mode:a;Polarization:Horizontal



Condition: EN55014-1 TABLE 3 3m 3142C HORIZONTAL
Job No. : 4255HS
: On mode

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	148.96	1.32	8.91	26.91	46.19	29.51	40.00	-10.49
2	160.91	1.34	9.59	26.86	54.91	38.98	40.00	-1.02
3	177.51	1.37	9.80	26.78	45.91	30.30	40.00	-9.70
4	400.43	2.20	16.30	27.13	42.92	34.29	47.00	-12.71
5	425.03	2.31	16.40	27.29	43.70	35.12	47.00	-11.88
6	719.20	2.96	21.60	27.39	41.00	38.17	47.00	-8.83

Mode:a;Polarization:Vertical



Condition: EN55014-1 TABLE 3 3m 3142C VERTICAL
Job No. : 4255HS
: On mode

	Freq	Cable Loss	Antenna Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	145.86	1.31	8.63	26.93	46.87	29.88	40.00	-10.12
2	158.67	1.33	9.52	26.86	50.12	34.11	40.00	-5.89
3	165.49	1.35	9.55	26.83	47.35	31.42	40.00	-8.58
4	171.39	1.36	9.56	26.81	51.94	36.05	40.00	-3.95
5	400.43	2.20	16.30	27.13	52.04	43.41	47.00	-3.59
6	704.23	2.92	21.60	27.41	44.92	42.03	47.00	-4.97

7 Immunity Test Results

7.1 Performance Criteria Description in EN 55014-2:1997/A1:2001/A2:2008

Criterion A The apparatus shall continue to operate as intended during the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and from what the user may reasonably expect from the apparatus if used as intended.

Criterion B The apparatus shall continue to operate as intended after the test. No degradation of performance or loss of function is allowed below a performance level (or permissible loss of performance) specified by the manufacturer, when the apparatus is used as intended. During the test, degradation of performance is allowed, however. No change of actual operating state or stored data is allowed. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation and from what the user may reasonably expect from the apparatus if used as intended.

Criterion C Temporary loss of function is allowed, provided the function is self recoverable or can be restored by the operation of the controls, or by any operation specified in the instructions for use.

7.2 Electrostatic Discharge

Test Requirement: EN 55014-2:1997/A1:2001/A2:2008
Test Method: EN 61000-4-2:2009
Performance Criterion: B
Discharge Impedance: 330Ω/150pF
Number of Discharge: Minimum 10 times at each test point
Discharge Mode: Single Discharge
Discharge Period: 1 second minimum

7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 20.0 °C Humidity: 55 % RH Atmospheric Pressure: 1000 mbar

Test mode: a: On mode:Keep the EUT working normally.
b: Idle mode:Standby.

7.2.2 Test Results:

Observations: Test Point:

1. All insulated enclosure and seams.
2. All accessible metal parts of the enclosure.
3. All side

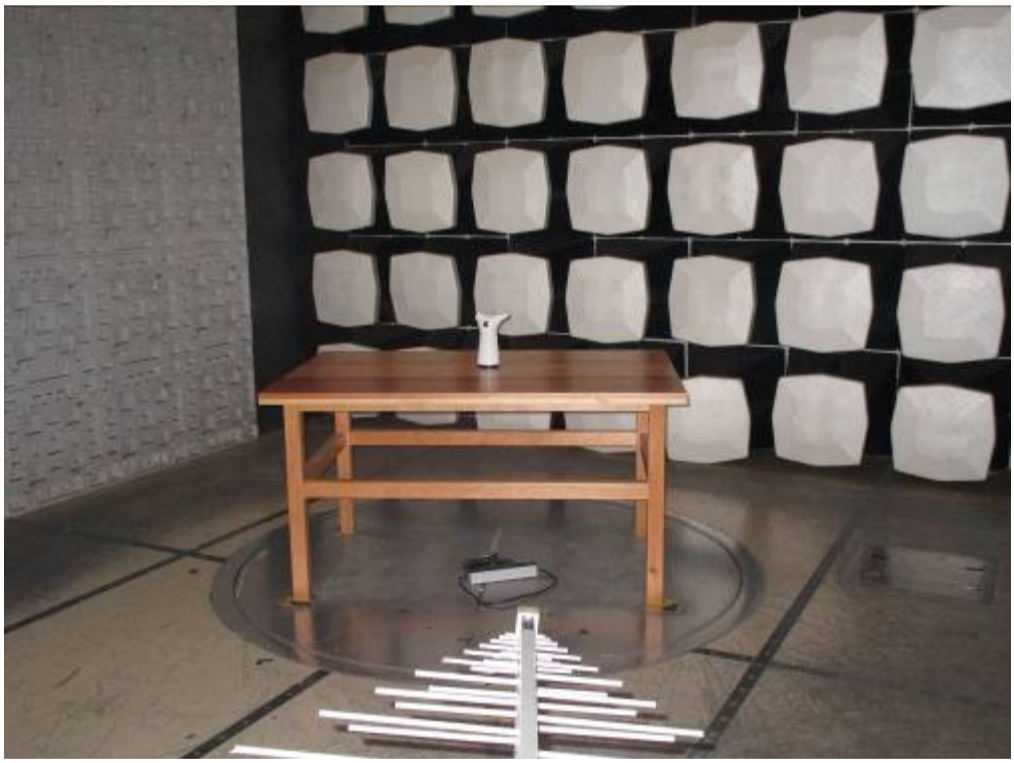
Discharge type	Level (kV)	Polarity	Test Point	Result / Observations
Air Discharge	8	+	1	A
Air Discharge	8	-	1	A
Contact Discharge	4	+	2	A
Contact Discharge	4	-	2	A
Horizontal Coupling	4	+	3	A
Horizontal Coupling	4	-	3	A
Vertical Coupling	4	+	3	A
Vertical Coupling	4	-	3	A

Results:

A: No degradation in the performance of the EUT was observed.

8 Photographs

8.1 Radiated Disturbance(30MHz-1GHz) Test Setup



8.2 Electrostatic Discharge Test Setup

8.3 EUT Constructional Details