DECLARATION OF CONFORMITY

We, Manufacturer/Importer

Company Name	:	**Prime Water Corporation**
Address	:	**(Ojeong-Dong, Ilwoo Bldg,) 6 fl. 21, Saneop-ro, 7 Beon-gil, Ojeong-Gu, Bucheon-Si, Gyeonggi-Do, Korea**

Declare that the Doc is issued under our sole responsibility and belongs to the following product:

Product Name	:	**Water Ionizer**
Model No.	:	**PRIME 1301**
Series Model No.	:	**PRIME 1101, PRIME 901, PRIME 701, PRIME 501, PRIME 1301-S, PRIME 1101-S, PRIME 901-S, PRIME 701-S, PRIME 501-S, PRIME LC-11, PRIME 1301V, PRIME 1101V, PRIME 901V, PRIME 701V, PRIME 501V, PRIME 1301-SV, PRIME 1101-SV, PRIME 901-SV, PRIME 701-SV, PRIME 501-SV**
Rating	:	**AC 230 V, 50 Hz**

The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

EMC Directive 2014/30/EU

The following harmonized standards and technical specifications have been applied:

EMCD: **EN 55014-1:2006+A2:2011**
EN 55014-2:2015
EN 61000-3-2:2014
EN 61000-3-3:2013

Provided that other applicable Directive requirements are satisfied, the manufacturer (or the European authorized representative), may draw up an EC/EEA Declaration of Conformity and affix the CE-marking, to each conforming product.

Signed for and on behalf of

Name :
Title :
Date :

Signature

Tested by : BWS Testing Laboratory

Ref. No. : BWS-16-EC-0039

Date : 28 April 2016

Authorized Signature

DJ. Kang

EMC TEST REPORT

According to

EN 55014-1:2006+A2:2011
EN 55014-2:2015
EN 61000-3-2:2014
EN 61000-3-3:2013

Test Report No.	:	**BWS-16-EC-0039**
Equipment	:	**Water Ionizer**
Model No.	:	**PRIME 1301**
Series Model No.	:	**PRIME 1101, PRIME 901, PRIME 701, PRIME 501, PRIME 1301-S, PRIME 1101-S, PRIME 901-S, PRIME 701-S, PRIME 501-S, PRIME LC-11, PRIME 1301V, PRIME 1101V, PRIME 901V, PRIME 701V, PRIME 501V, PRIME 1301-SV, PRIME 1101-SV, PRIME 901-SV, PRIME 701-SV, PRIME 501-SV**
Applicant	:	**Prime Water Corporation** (Ojeong-Dong, Ilwoo Bldg,) 6 fl. 21, Saneop-ro, 7 Beon-gil, Ojeong-Gu, Bucheon-Si, Gyeonggi-Do, Korea
Manufacturer	:	**Prime Water Corporation** (Ojeong-Dong, Ilwoo Bldg,) 6 fl. 21, Saneop-ro, 7 Beon-gil, Ojeong-Gu, Bucheon-Si, Gyeonggi-Do, Korea
Incoming Date	:	**11 April 2016**
Testing Date	:	**20 April 2016**
Issue Date	:	**28 April 2016**

We hereby certify that the above product has been tested by BWS TECH Inc. with the listed standards and found in compliance with the council EMC Directive 2014/30/EU. This report applies only to the product named in the title of this report manufactured at the location indicated. Test results apply only to the particular equipment and functionality described in this test report.

Prepared by :
Jae-Min, Lim / EMC Engineer
BWS TECH Inc.

Reviewed by: DJ-Kang
Dae-Joong, Kang / Chief Engineer
BWS TECH Inc.

BWS TECH Inc.
23, Gokhyeon-ro 480 Beon-gil, Mohyeon-myeon,
Cheoin-gu, Yongin-si, Gyeonggi-do 17031, Korea
TEL: +82-31-333-5997, FAX: +82-31-333-0017
http://www.bws.co.kr

TABLE OF CONTENTS

1. General Description of EUT

1.1 Applicant

Company Name	:	**Prime Water Corporation**
Contact Person	:	**Bong-Cheol, Kang**
Address	:	**(Ojeong-Dong, Ilwoo Bldg,) 6 fl. 21, Saneop-ro, 7 Beon-gil, Ojeong-Gu, Bucheon-Si, Gyeonggi-Do, Korea**
Phone/Fax	:	**TEL : +82-32-681-8950 FAX : +82-32-681-8951**

1.2 Manufacture

Company Name	:	**Prime Water Corporation**
Contact Person	:	**Bong-Cheol, Kang**
Address	:	**(Ojeong-Dong, Ilwoo Bldg,) 6 fl. 21, Saneop-ro, 7 Beon-gil, Ojeong-Gu, Bucheon-Si, Gyeonggi-Do, Korea**
Phone/Fax	:	**TEL : +82-32-681-8950 FAX : +82-32-681-8951**

1.3 Basic Description of EUT

Trade Name	:	Prime Water
Product Name	:	**Water Ionizer**
Model Name	:	**PRIME 1301**
Series Model Name	:	**PRIME 1101, PRIME 901, PRIME 701, PRIME 501, PRIME 1301-S, PRIME 1101-S, PRIME 901-S, PRIME 701-S, PRIME 501-S, PRIME LC-11, PRIME 1301V, PRIME 1101V, PRIME 901V, PRIME 701V, PRIME 501V, PRIME 1301-SV, PRIME 1101-SV, PRIME 901-SV, PRIME 701-SV, PRIME 501-SV**
Serial Number	:	**Prototype**
Input Rating	:	**AC 230 V, 50 Hz**

2. General Information of Test

2.1 Test Facility

This test was carried out by BWS TECH Inc.

Test Site Location : 23, Gokhyeon-ro 480 Beon-gil, Mohyeon-myeon, Cheoin-gu, Yongin-si, Gyeonggi-do 449-853, Korea
TEL : +82-31-333-5997
FAX : +82-31-333-0017

2.2 Standard for Methods of Measurement

Basic Standard	Description	Test Result
EN 55014-1:2006+A2:2011	Requirements for household appliances, electric tools and similar apparatus	☒ Pass ☐ Fail
EN55014-2:2015	Requirements for household appliances, electric tools and similar apparatus	☒ Pass ☐ Fail
EN 61000-3-2:2014	Mains harmonics equipment up to 16 A.	☒ Pass ☐ Fail
EN 61000-3-3:2013	Voltage fluctuations equipment up to 16 A.	☒ Pass ☐ Fail
EN 61000-4-2:2009	Testing and measurement techniques. Electrostatic discharge Immunity Test.	☒ Pass ☐ Fail
EN 61000-4-3:2006+A1:2008 +A2:2010	Testing and measurement techniques. Radiated Immunity.	☒ Pass ☐ Fail
EN 61000-4-4:2012	Testing and measurement techniques. Electrical fast transient/burst Immunity Test.	☒ Pass ☐ Fail
EN 61000-4-5:2014	Testing and measurement techniques. Surge Immunity Test.	☒ Pass ☐ Fail
EN 61000-4-6:2014	Testing and measurement techniques. Immunity to conducted disturbances induced by radio Frequency fields.	☒ Pass ☐ Fail
EN 61000-4-11:2004	Testing and measurement techniques. Voltage Dips, Short Interruptions and Voltage Variations Immunity Tests.	☒ Pass ☐ Fail

2.3 Description of EUT Modification

- N/A

2.4 Variations covered by this report

- Model Difference: PRIME 1101, PRIME 901, PRIME 701, PRIME 501, PRIME 1301-S, PRIME 1101-S, PRIME 901-S, PRIME 701-S, PRIME 501-S, PRIME LC-11, PRIME 1301V, PRIME 1101V, PRIME 901V, PRIME 701V, PRIME 501V, PRIME 1301-SV, PRIME 1101-SV, PRIME 901-SV, PRIME 701-SV, PRIME 501-SV
The model PRIME 1301 is basic model that was tested. Others are series models to basic model.
The difference between the series model : only the front display board being different.

2.5 Additional information related to Testing

Test results apply only to the particular sample tested and functionality described in this test report. This report may be reproduced in full. Partial reproduction may only be made with the written permission of the BWS Tech Inc.

2.6 Test Conditions

EUT Operating Mode

EUT was tested according to the following operation modes provided by the specifications given by the manufacturer, and reported the worst emissions.

Operation Modes	Worst Case Mode
4th grade alkaline ionization mode	☒

2.7 Performance criteria

A functional description and a definition of performance criteria, during or as a consequence of the EMC testing, shall be provided by the manufacturer and noted in the test report, based on the following criteria.

Performance 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.

Performance 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.

Performance 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. The following Table 14 serves as a guide to formulate the permissible degradation of the equipment under test (EUT) caused by electromagnetic stress. Not all functions of the apparatus need to be tested. The selection, the specification of functions, and the permissible degradation is left to the responsibility of the manufacturer.

***EMS**

-Classification of Apparatus

Category I: apparatus containing no electronic control circuitry

Category II: Transformer toys, dual supply toys, mains powered motor operated appliances, tools, heating appliances and similar electric apparatus (for example—UV radiators, IR radiators and microwave ovens) containing electronic control circuitry with no internal clock frequency or oscillator frequency higher than 15 MHz.

Category III: battery powered apparatus (with built-in batteries or external batteries), which in normal use is not connected to the mains, containing an electronic control circuitry with no internal clock frequency or oscillator frequency higher than 15 MHz.

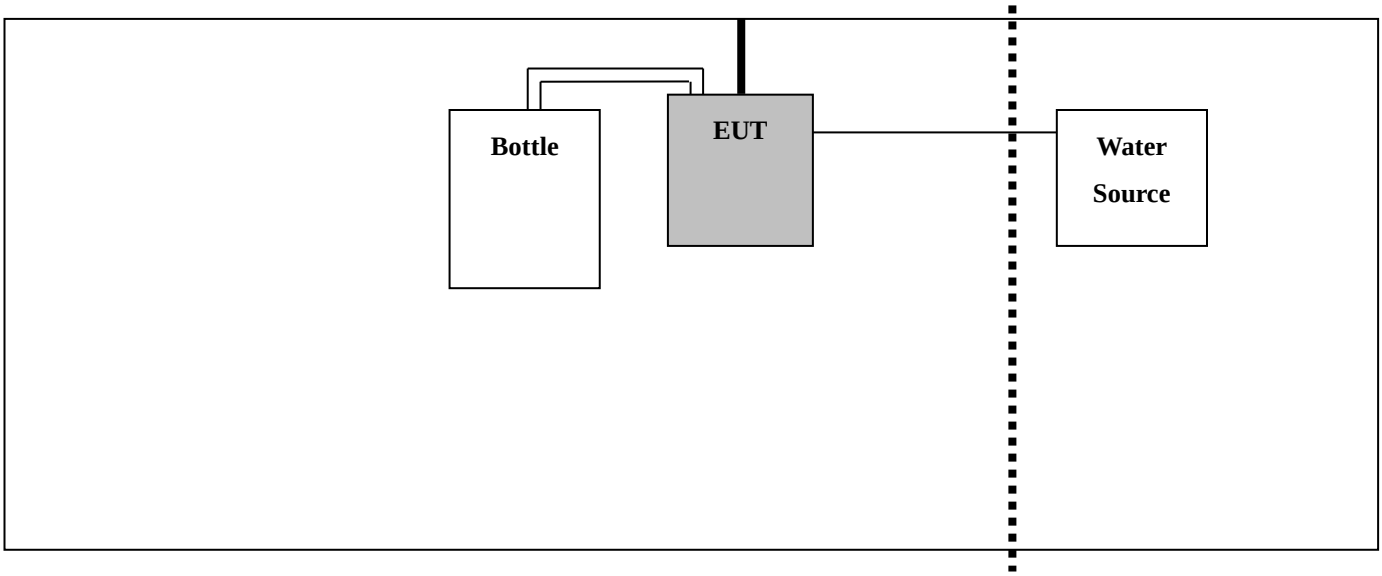
Category IV: all other apparatus covered by the scope of this standard.

Note:

-This EUT contains **Category IV**.

Test System layout on EUT and peripherals

Interface cable Power cable



2.8 Description of Test System (EMI and EMS)

Type of Peripheral Equipment Used:

Description	Model Name	Serial No.	Manufacturer
EUT	PRIME 1301	Prototype	Prime Water Corporation

Type of Cables Used:

Device from	I/O Port	Device to	I/O Port	Length(m)	Type of Shield
EUT	Inlet	Power socket	-	1.5	Unshielded
EUT	Input	Water Source	-	10	-
EUT	Acid Alkaline Purify output	bottle	-	20	-
EUT	Purify output	bottle	-	0.8	-

3.1 Power Line Conducted Emission Tests

Conducted Emissions were measured from 150 kHz to 30 MHz with a bandwidth of 9 kHz on the 230 V AC power and return leads of the EUT according to the methods defined in European Standard EN 55014-1:2006+A2:2011.
The EUT was placed on a nonmetallic stand in a shielded room 0.8 meters above the ground plane as shown in section 3.1.5.
The interface cables and equipment positioning were varied within limits of reasonable applications to determine the position producing maximum conducted emissions.

3.1.1 Test Condition

Frequency Range of Test	:	150 kHz to 30 MHz
Test Standard	:	EN 55014-1:2006+A2:2011
Test Date	:	20 April 2016
Temperature(15 °C~35 °C)/Humidity	:	22 °C / 37 % R.H.

3.1.2 Test Standard

Item	Frequency Range (MHz)	Limit (dBμV)	
		Quasi-Peak	Average-Peak
Main Terminal Disturbance Voltage (Main terminal)	0.15 ~ 0.5	66-56	59-46
	0.5 ~ 5	56	46
	5 ~ 30	60	50

3.1.3 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
Test Receiver	ESPI	ROHDE & SCHWARZ	100063	08. 01. 2017	☒
#2 Conducted Cable_2.7 m	N/A	N/A	N/A	N/A	☒
LISN	NSLK 8127	SCHWARZBECK	8127-414	28. 03. 2017	☒
Impuls-Begrenzer Pulse Limiter	ESH3-Z2	ROHDE & SCHWARZ	100092	06. 01. 2017	☒
CE CHAMBER	N/A	SY Corporation	N/A	N/A	☒

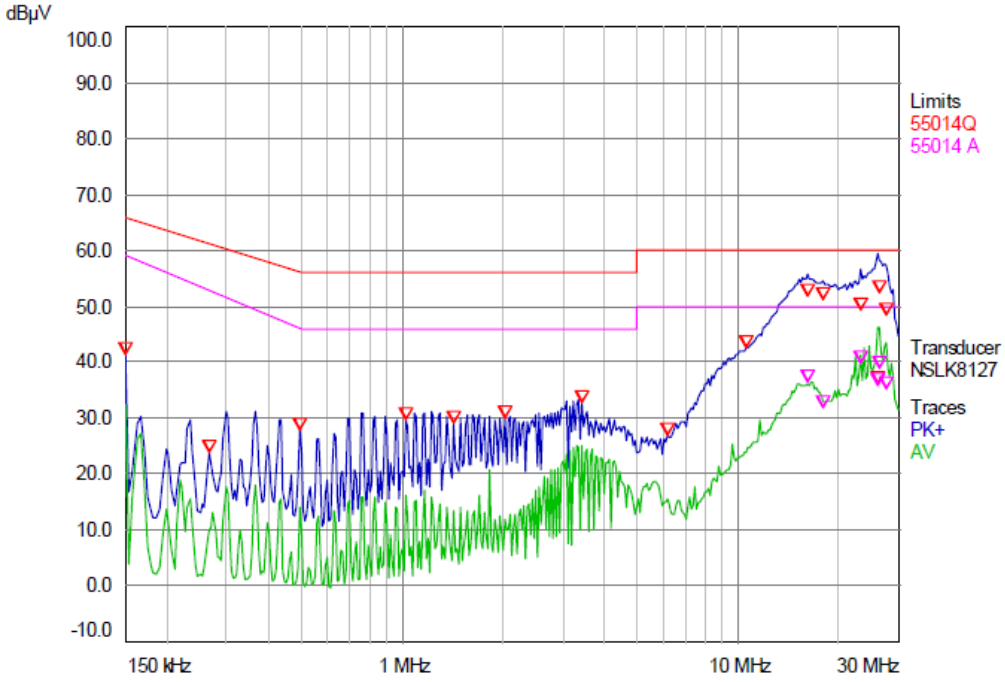
3.1.4 Test Result of Power Line Conducted Emission

EUT : PRIME 1301

Input Voltage : AC 230 V, 50 Hz

Power Line Conducted Emission Test Results: **PASS**
Test data sheets follow.

PLOTS OF EMISSIONS

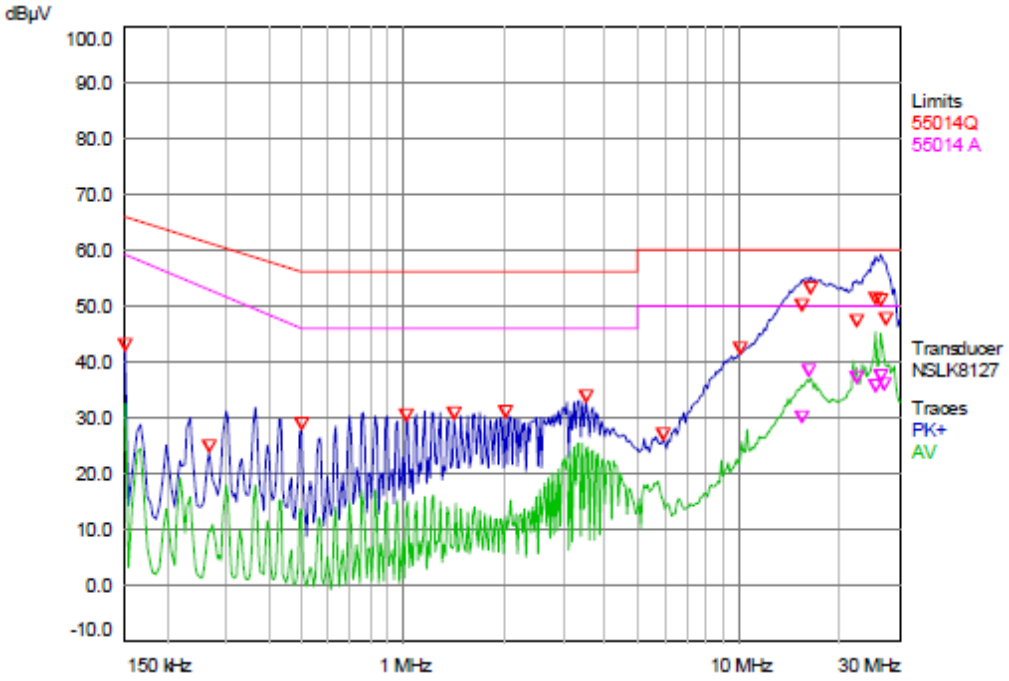


Final Measurement Results

Trace	Frequency (MHz)	Level (dBµV)	Limit (dBµV)	Delta Limit (dB)	Delta Ref (dB)	Comment
1 QP	0.15	41.38	66.00	-24.62		
1 QP	0.266	23.83	61.24	-37.41		
1 QP	0.498	27.81	56.03	-28.22		
1 QP	1.024	29.56	56.00	-26.44		
1 QP	1.42	29.17	56.00	-26.83		
1 QP	2.032	29.88	56.00	-26.12		
1 QP	3.432	32.59	56.00	-23.41		
1 QP	6.132	26.97	60.00	-33.03		
1 QP	10.528	42.45	60.00	-17.55		
2 CA	16.024	36.32	50.00	-13.68		
1 QP	16.036	51.86	60.00	-8.14		
1 QP	17.968	51.23	60.00	-8.77		
2 CA	17.968	31.79	50.00	-18.21		
1 QP	23.288	49.32	60.00	-10.68		
2 CA	23.288	39.69	50.00	-10.31		
2 CA	26.008	35.85	50.00	-14.15		
1 QP	26.012	35.99	60.00	-24.01		
2 CA	26.448	38.71	50.00	-11.29		
1 QP	26.488	52.44	60.00	-7.56		
1 QP	27.74	48.41	60.00	-11.59		
2 CA	27.74	35.30	50.00	-14.70		

Test Mode: L1
Model Name: PRIME 1301
Classification: EN 55014-1:2006+A2:2011

PLOTS OF EMISSIONS



Final Measurement Results

Trace	Frequency (MHz)	Level (dBµV)	Limit (dBµV)	Delta Limit (dB)	Delta Ref (dB)	Comment
1 QP	0.15	42.04	66.00	-23.96		
1 QP	0.266	23.68	61.24	-37.56		
1 QP	0.5	27.66	56.00	-28.34		
1 QP	1.028	29.19	56.00	-26.81		
1 QP	1.432	29.65	56.00	-26.35		
1 QP	2.032	29.95	56.00	-26.05		
1 QP	3.496	32.86	56.00	-23.14		
1 QP	5.932	25.88	60.00	-34.12		
1 QP	10.056	41.46	60.00	-18.54		
1 QP	15.42	48.85	60.00	-11.15		
2 CA	15.42	29.06	50.00	-20.94		
2 CA	16.212	37.42	50.00	-12.58		
1 QP	16.28	52.21	60.00	-7.79		
2 CA	22.252	36.07	50.00	-13.93		
1 QP	22.276	46.21	60.00	-13.79		
2 CA	25.456	34.60	50.00	-15.40		
1 QP	25.476	50.14	60.00	-9.86		
1 QP	26.34	50.03	60.00	-9.97		
2 CA	26.34	36.52	50.00	-13.48		
2 CA	27.152	34.96	50.00	-15.04		
1 QP	27.196	46.47	60.00	-13.53		

Test Mode: N
Model Name: PRIME 1301
Classification: EN 55014-1:2006+A2:2011

Notes:
1. Margin = Limit - Emission Level
2. All modes of operation were investigated and the worst-case emissions are reported.
3. Measurement uncertainty estimated at 3.718 dB.
   The measurement uncertainty is given with a confidence of 95 % with the coverage factor, $k = 2$
4. The EUT is worst case when running 230 V, 50 Hz.

3.1.5 Photographs of Power Line Conducted Emission Test Configuration

3.2 Radiated Emission Test

Radiated emissions form 30 MHz to 1 GHz were measured with a bandwidth of 120 kHz according to the methods defines in EN 55014-1:2006+A2:2011. The EUT was placed on a nonmetallic stand in the open-field site, 0.8 meter above the ground plane, as shown in section 3.2.5. The interface cables and equipment positions were varied within limits of reasonable applications to determine the positions producing maximum radiated emissions.

3.2.1 Test Condition

Frequency Range of Test	:	30 MHz to 1 GHz
Test Standard	:	EN 55014-1:2006+A2:2011
Test Date	:	20 April 2016
Temperature/Humidity	:	10 °C / 38 % R.H.

3.2.2 Test Standard

Frequency Range (MHz)	Limit dB(μV/m)
	Quasi-Peak
30 ~ 230	30
230 ~ 1000	37

3.2.3 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
Bilog Antenna	VULB 9160	SCHWARZBECK	9160-3052	06. 10. 2017	☒
EMI Receiver	ESVN30	ROHDE & SCHWARZ	832854/010	07. 01. 2017	☒
Open Site Cable_0.5 m	RG 214/U	SUHNER SWITZERLAND	509794	N/A	☒
Open Site Cable_33 m	SUCOTEST 18A	Hubersuhner	8400/18A	N/A	☒
Antenna Master	JAC-3	DAEIL EMC	N/A	N/A	☒
Antenna Turntable Controller	JAC-2	DAEIL EMC	N/A	N/A	☒
OPEN SITE	N/A	N/A	N/A	N/A	☒

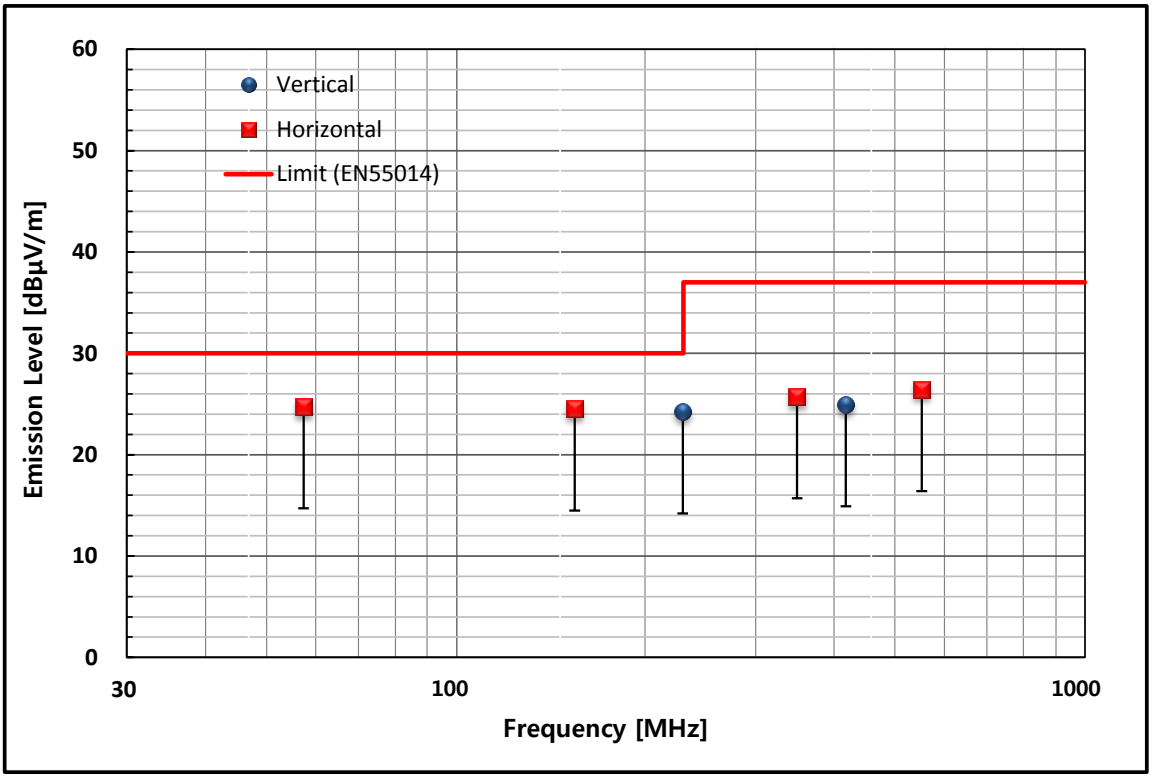
3.2.4 Test Result of Radiated Emission

EUT : **PRIME 1301**

Test distance : **10 m**

Radiated Emission Test Results : **PASS**
Test data sheets follow.

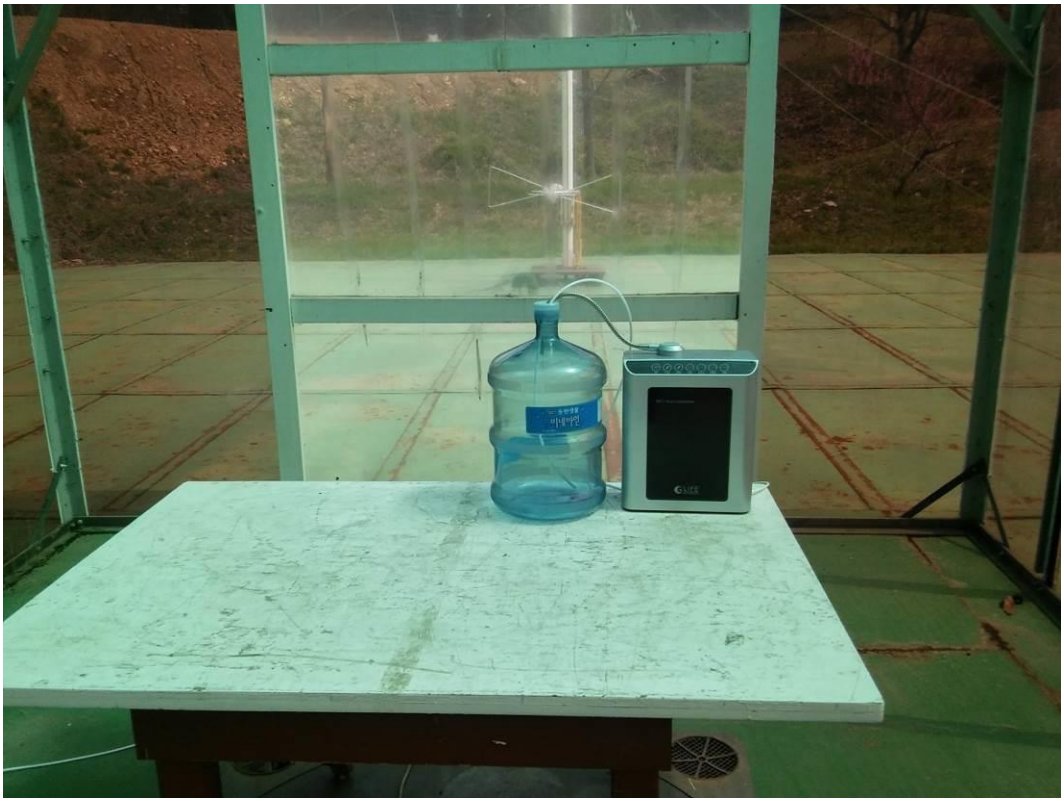
Frequency [MHz]	Reading [dBμV]	Polarization [*H/**V]	Ant. Factor [dB]	Cable Loss [dB]	Limit [dBμV/m]	Emission Level [dBμV/m]	Margin [dB]
57.29	10.22	H	11.87	2.62	30.00	24.70	5.30
154.58	8.01	H	12.76	3.72	30.00	24.50	5.50
229.52	9.20	V	10.52	4.48	30.00	24.20	5.80
348.81	5.84	H	14.26	5.60	37.00	25.70	11.30
416.90	3.12	V	15.68	6.10	37.00	24.90	12.10
550.47	0.85	H	18.49	7.06	37.00	26.40	10.60



Notes

1. * H : Horizontal polarization , ** V : Vertical polarization
2. Emission Level = Reading + Antenna factor + Cable loss
3. Margin value = Limit - Emission Level
4. All other emissions not reported were more than 25 dB below the permitted limit.
5. Measurement uncertainty estimated at 5.552 dB.
   The measurement uncertainty is given with a confidence of 95 % with the coverage factor, k = 2.
6. The EUT is worst case when running 230 V, 50 Hz.

3.2.5 Photographs of Radiated Emission Test Configuration



3.3 Discontinuous disturbance Emission Tests

Discontinuous disturbance emissions form 148.5 kHz to 30 MHz were measured with a bandwidth of 9 kHz according to the methods defines in EN 55014-1:2006+A2:2011. The EUT was placed on a nonmetallic stand in a shielded room, 0.8 meter above the ground plane.

3.3.1 Test Condition

Frequency Range of Test	:	148.5 kHz to 30 MHz
Test Standard	:	EN 55014-1:2006+A2:2011
Test Date	:	20 April 2016
Temperature(15 °C~35 °C)/Humidity	:	22 °C / 36 % R.H.

3.3.2 Test Standard.

The click limit L_q is attained by increasing the relevant limit L (as given in 3.1) with:

44 dB for $N < 0.2$, or

20 log(30/N) dB for $0.2 \leq N < 30$

3.3.3 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
CLICK ANALYZER	CL55C	AFJ INSTRUMENT	S9095P	07. 09. 2016	☒
#2 Conducted Cable_2.7 m	N/A	N/A	N/A	N/A	☒
LISN	NSLK 8127	SCHWARZBECK	8127-414	28. 03. 2017	☒
CE CHAMBER	N/A	SY Corporation	N/A	N/A	☒

3.3.4 Test Data

AFJ CL55c Click Analyser ver 6.05

Test Report - Printed

ClickMeter for Windows

AGE SYSTEM\Default\Test0014\1 - Analisys print n#: 1

Title	PRIME1301 Test# 1
Date	20/04/2016 12:01:12 Time 120:02.418
Required	
Executed by	
Description	
Model	PRIME1301
SN	
Type	
Report	

Pass

Mode:	Switch Op	f= 1.00	Click Rate

Rx1 150kHz	New Limit Calculated
Rx2 500kHz	New Limit Calculated
Rx3 1.4MHz	New Limit Calculated
Rx4 30MHz	No Clicks

Remote	Input Offset	External Attenuator
NONE	0.0	0 dB

Att. Rx1 150kHz	Att. Rx2 500kHz	Att. Rx3 1.4MHz	Att. Rx4 30MHz
20dB	10dB	10dB	10dB

First Pass

		Rx1 150kHz	Rx2 500kHz	Rx3 1.4MHz	Rx4 30MHz
CISPR 4-1:2005 + A1:2008	Short	0	0	0	0
	Long	1	1	1	0
	Fast Long	0	0	0	0
	Total Clicks	1	1	1	0
Continuous Int. Correction	Events	0	0	0	0
	TIME (s)	0.00	0.00	0.00	0.00
Manual	Switch Op	0	0	0	0
	2 Click	0	0	0	0
	Limit dBuV	66.0	56.0	56.0	60.0
7.4.2.2	N	0.01	0.01	0.01	0.01
	Limit dBuV	110.0	100.0	100.0	
	Allowed Clicks	0	0	0	

Second Pass Preview

	Short	0	0	0	0
	Long	0	0	0	0
	Total Clicks	0	0	0	0
Continuous Int.	Events	0	0	0	0
	TIME (s)	0.00	0.00	0.00	0.00
	2 Click	0	0	0	0
	PASS	✔	✔	✔	✔
	Peak Clipping	■	■	■	

3.3.5 Photographs of Discontinuous disturbance Emission Tests Configuration.

3.4 Power Frequency Harmonics and Flicker Emission Tests

3.4.1 Test Procedure

Power Frequency Harmonics Tests :

The measured values of the harmonics components of the input current, including line current and neutral current, shall be compared with the limits given in Clause 7 of EN61000-3-2:2014

Flicker Emission Tests :

The total impedance of the test circuit, excluding the appliance under test, but including the internal impedance of the supply source, shall be equal to the reference impedance. The stability and tolerance of the reference impedance shall be adequate to ensure that the overall accuracy of ±8 % is achieved during the whole assessment procedure.

3.4.2 Test Condition

EUT	:	PRIME 1301
Test Standard	:	EN61000-3-2:2014 EN61000-3-3:2013
Test Date	:	20 April 2016
Device Class	:	A
Temperature(15 °C~35 °C)/Humidity	:	22 °C / 37 % R.H.

3.4.3 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
Compliance Test System	PACS-1	California Instruments	71980	N/A	☒
AC Power Source	5001IX	California Instruments	54549	06. 01. 2017	☒
CE CHAMBER	N/A	SY Corporation	N/A	N/A	☒

3.4.4 Test Result of Power Frequency Harmonics and Flicker Emission Tests

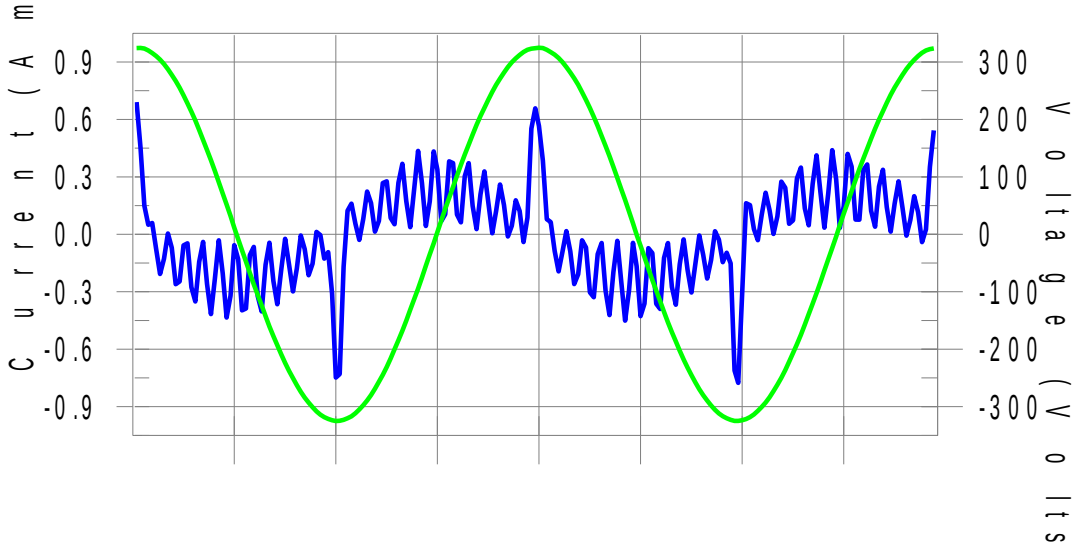
Power Frequency Harmonics : PASS

Flicker Emission Tests PASS

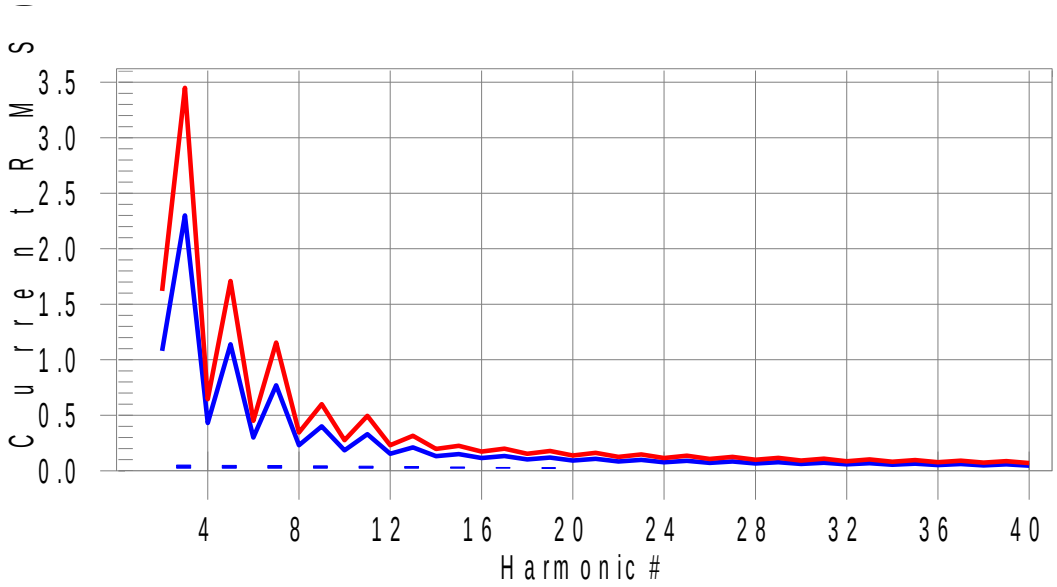
Harmonics – Class-A (Run time)

EUT: PRIME 1301 **Tested by: Test Operator**
Test category: Class-A (European limits) **Test Margin: 100**
Test date: **Start time:** **End time:**
Test duration (min): 3 **Data file name: H-000589.cts_data**
Comment: -
Customer: Prime Water Corporation
Test Result: Pass **Source qualification: Normal**

Current & voltage waveforms



Harmonics and Class A limit line **European Limits**



Test result: Pass **Worst harmonic was #15 with 14.91% of the limit.**

Current Test Result Summary (Run time)

EUT: PRIME 1301 **Tested by: Test Operator**
Test category: Class-A (European limits) **Test Margin: 100**
Test date: **Start time:** **End time:**
Test duration (min): 3 **Data file name: H-000589.cts_data**
Comment: -
Customer: Prime Water Corporation
Test Result: Pass **Source qualification: Normal**
THC(A): 0.06 **I-THD(%): 31.81** **POHC(A): 0.017** **POHC Limit(A): 0.251**
Highest parameter values during test:

V_RMS (Volts):	**229.87**	**Frequency(Hz):**	**50.00**
I_Peak (Amps):	**0.878**	**I_RMS (Amps):**	**0.255**
I_Fund (Amps):	**0.179**	**Crest Factor:**	**3.665**
Power (Watts):	**12.2**	**Power Factor:**	**0.227**

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.002	1.080	0.0	0.003	1.620	0.21	Pass
3	0.022	2.300	1.0	0.052	3.450	1.51	Pass
4	0.002	0.430	0.0	0.003	0.645	0.49	Pass
5	0.020	1.140	1.8	0.049	1.710	2.87	Pass
6	0.002	0.300	0.0	0.003	0.450	0.67	Pass
7	0.020	0.770	2.5	0.047	1.155	4.08	Pass
8	0.002	0.230	0.0	0.003	0.345	0.78	Pass
9	0.018	0.400	4.6	0.044	0.600	7.37	Pass
10	0.002	0.184	0.0	0.003	0.276	0.93	Pass
11	0.018	0.330	5.3	0.041	0.495	8.33	Pass
12	0.002	0.153	0.0	0.002	0.230	0.95	Pass
13	0.016	0.210	7.7	0.037	0.315	11.90	Pass
14	0.002	0.131	0.0	0.002	0.197	0.97	Pass
15	0.015	0.150	9.9	0.034	0.225	14.91	Pass
16	0.001	0.115	0.0	0.001	0.173	0.79	Pass
17	0.014	0.132	10.2	0.030	0.199	14.83	Pass
18	0.001	0.102	0.0	0.001	0.153	0.97	Pass
19	0.012	0.118	10.1	0.025	0.178	14.19	Pass
20	0.001	0.092	0.0	0.001	0.138	0.76	Pass
21	0.011	0.107	9.9	0.021	0.161	13.20	Pass
22	0.001	0.084	0.0	0.001	0.125	0.91	Pass
23	0.009	0.098	9.3	0.017	0.147	11.77	Pass
24	0.001	0.077	0.0	0.001	0.115	0.74	Pass
25	0.008	0.090	8.7	0.014	0.135	10.33	Pass
26	0.001	0.071	0.0	0.001	0.106	0.85	Pass
27	0.006	0.083	7.7	0.011	0.125	8.55	Pass
28	0.000	0.066	0.0	0.001	0.099	0.61	Pass
29	0.005	0.078	8.1	0.008	0.116	6.90	Pass
30	0.001	0.061	0.0	0.001	0.092	0.79	Pass
31	0.004	0.073	6.4	0.006	0.109	5.09	Pass
32	0.000	0.058	0.0	0.001	0.086	0.79	Pass
33	0.004	0.068	0.0	0.004	0.102	3.76	Pass
34	0.000	0.054	0.0	0.001	0.081	0.72	Pass
35	0.003	0.064	0.0	0.003	0.096	3.19	Pass
36	0.000	0.051	0.0	0.001	0.077	0.88	Pass
37	0.002	0.061	0.0	0.003	0.091	2.87	Pass
38	0.000	0.048	0.0	0.001	0.073	0.79	Pass
39	0.002	0.058	0.0	0.002	0.087	2.49	Pass
40	0.000	0.046	0.0	0.001	0.069	0.93	Pass

Voltage Source Verification Data (Run time)

EUT: PRIME 1301 **Tested by: Test Operator**
Test category: Class-A (European limits) **Test Margin: 100**
Test date: **Start time:** **End time:**
Test duration (min): 3 **Data file name: H-000589.cts_data**
Comment: -
Customer: Prime Water Corporation
Test Result: Pass **Source qualification: Normal**

Highest parameter values during test:

Voltage (Vrms):	**229.87**	**Frequency(Hz):**	**50.00**
I_Peak (Amps):	**0.878**	**I_RMS (Amps):**	**0.255**
I_Fund (Amps):	**0.179**	**Crest Factor:**	**3.665**
Power (Watts):	**12.2**	**Power Factor:**	**0.227**

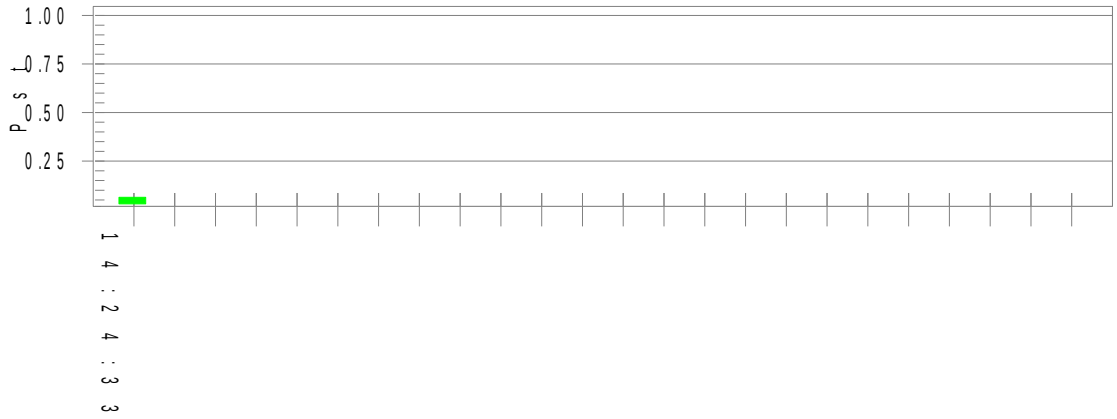
Harm#	Harmonics V-rms	Limit V-rms	% of Limit	Status
2	0.106	0.460	23.00	OK
3	0.503	2.069	24.31	OK
4	0.017	0.460	3.65	OK
5	0.032	0.919	3.51	OK
6	0.015	0.460	3.30	OK
7	0.027	0.690	3.88	OK
8	0.014	0.460	2.95	OK
9	0.022	0.460	4.74	OK
10	0.014	0.460	3.01	OK
11	0.026	0.230	11.36	OK
12	0.020	0.230	8.86	OK
13	0.028	0.230	12.20	OK
14	0.012	0.230	5.14	OK
15	0.022	0.230	9.76	OK
16	0.013	0.230	5.49	OK
17	0.034	0.230	14.89	OK
18	0.016	0.230	6.82	OK
19	0.018	0.230	8.03	OK
20	0.013	0.230	5.62	OK
21	0.028	0.230	12.01	OK
22	0.008	0.230	3.51	OK
23	0.015	0.230	6.70	OK
24	0.005	0.230	1.98	OK
25	0.025	0.230	10.89	OK
26	0.008	0.230	3.64	OK
27	0.011	0.230	4.76	OK
28	0.006	0.230	2.41	OK
29	0.016	0.230	6.96	OK
30	0.006	0.230	2.79	OK
31	0.006	0.230	2.60	OK
32	0.005	0.230	2.19	OK
33	0.013	0.230	5.63	OK
34	0.002	0.230	0.96	OK
35	0.003	0.230	1.38	OK
36	0.004	0.230	1.59	OK
37	0.009	0.230	3.78	OK
38	0.002	0.230	0.85	OK
39	0.006	0.230	2.45	OK
40	0.009	0.230	3.89	OK

Flicker Test Summary per EN/IEC61000-3-3 (Run time)

EUT: PRIME 1301 **Tested by: Test Operator**
Test category: All parameters (European limits) **Test Margin: 100**
Test date: **Start time:** **End time:**
Test duration (min): 10 **Data file name: F-000591.cts_data**
Comment: -
Customer: Prime Water Corporation

Test Result: Pass **Status: Test Completed**

Pst_i and limit line **European Limits**

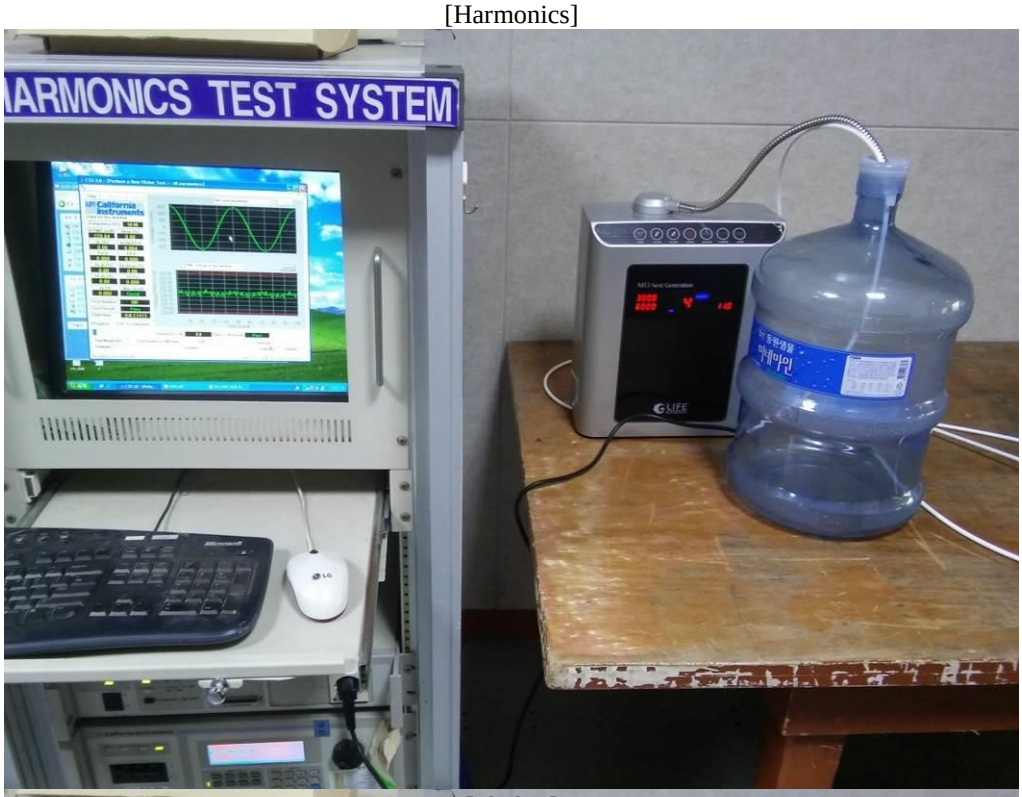


Parameter values recorded during the test:

Vrms at the end of test (Volt):	**229.77**			
Highest dt (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Time(mS) > dt:	**0.0**	**Test limit (mS):**	**500.0**	**Pass**
Highest dc (%):	**0.00**	**Test limit (%):**	**3.30**	**Pass**
Highest dmax (%):	**0.00**	**Test limit (%):**	**4.00**	**Pass**
Highest Pst (10 min. period):	**0.064**	**Test limit:**	**1.000**	**Pass**

3.4.5 Photographs of Power Frequency Harmonics and Flicker Emission Tests Configuration.

[Harmonics]



[Flicker]

3.5 Electrostatic Discharge Immunity Test

In order to minimize the impact of environmental parameters on test results, the tests shall be carried out in climatic and electromagnetic reference conditions as specified in EN55014-2:2015.
The test programs and software shall be chosen so as to exercise all normal modes of operation of the EUT. The use of special exercising software is encouraged, but permitted only where it can be shown that the EUT is being comprehensively exercised. The testing shall be performed by direct and indirect application of discharges to the EUT according to a test plan.

3.5.1 Test Condition

EUT	:	PRIME 1301
Test Standard	:	EN55014-2:2015
Test Method	:	EN61000-4-2:2009
Test Date	:	20 April 2016
Test Voltage	:	±4 kV(Contact discharge), ±8 kV(Air discharge)
Performance criterion	:	B
Temperature/Humidity/Pressure	:	22 °C / 37 % R.H. / 101.4 kPa

3.5.2 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
ESD Simulator	ESS-2000	NoiseKen	4000c02954	14. 01. 2017	☒
EMS CHAMBER	N/A	SY Corporation	N/A	N/A	☒

3.5.3 Test Result of Electrostatic Discharge Immunity Test

Electrostatic Discharge Immunity Test Result : PASS

The equipment meets the requirements.

Test data sheet follows.

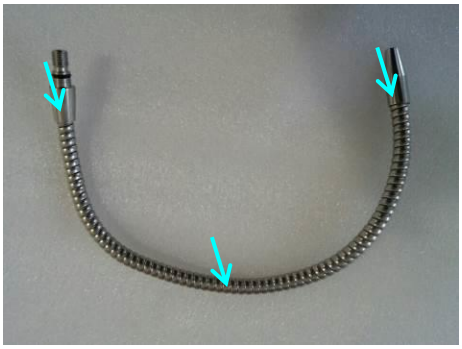
Test Point	Discharge Type CD=Contact AD=Air	Test Voltage(kV)	Tested No	Observation	Result
VCP	CD	±4 kV	Each 10 times	Normal	PASS (A)
HCP	CD	±4 kV	Each 10 times	Normal	PASS (A)
EUT Case	AD	±8 kV	Each 10 times	Normal	PASS (A)
EUT Button	AD	±8 kV	Each 10 times	Normal	PASS (A)
EUT Display	AD	±8 kV	Each 10 times	Normal	PASS (A)
EUT Metal Hose	CD	±4 kV	Each 10 times	Normal	PASS (A)

[Test Point] ***AD*** → ***CD*** →

EUT Front

EUT Rear

Metal Hose



Remarks

The primary functions as described below were fully functional during and after test.
- 4th grade alkaline ionization mode

3.5.4 Photographs of Electrostatic Discharge Immunity Test Configuration

[Electrostatic Discharge Immunity Test]

3.6 Radiated, radio-frequency, electromagnetic field Immunity Test

Tests were conducted in accordance with EN 55014-2:2015 over the frequency range of 80 MHz to 1000 MHz. The transmitting antenna was located 3 meters from the EUT at a height of 1.55 meter above the floor. Front, sides and back of the EUT were exposed to a uniform field of 3 V/m using both horizontal and vertical antenna polarizations.

3.6.1 Test Condition

EUT	:	PRIME 1301
Test Standard	:	EN 55014-2:2015
Test Method	:	EN 61000-4-3:2006+A1:2008+A2:2010
Test Date	:	20 April 2016
Test field strength (V/m)	:	3 V/m
Performance criterion	:	A
Temperature/Humidity/Pressure	:	22 °C / 37 % R.H. / 101.4 kPa

3.6.2 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
Signal Generator	SMT06	ROHDE & SCHWARZ	DE24552	21. 01. 2017	☒
RF Power Amplifier	5127	OPHIR RF	1008	13. 05. 2016	☒
Bilog Antenna	CBL6140A	CHASE	1144	N/A	☒
Directional Coupler	DC6180A	Amplifier Research	0335214	06. 01. 2017	☒
RS CHAMBER	N/A	SY Corporation	N/A	N/A	☒

3.6.3 Test Result of Radiated, radio-frequency, electromagnetic field Immunity Test

Radiated, radio-frequency, electromagnetic field Immunity Test Result **: PASS**

The equipment meets the requirements.

Test data sheet follows.

Frequency Range (MHz)	Position (Angle)	Antenna Polarity	Field Strength (V/m)	Modulation	Result
80-1000	Front	Vertical	3	80 % AM(1 kHz)	PASS(A)
80-1000	Rear	Vertical	3	80 % AM(1 kHz)	PASS(A)
80-1000	Right	Vertical	3	80 % AM(1 kHz)	PASS(A)
80-1000	Left	Vertical	3	80 % AM(1 kHz)	PASS(A)
80-1000	Front	Horizontal	3	80 % AM(1 kHz)	PASS(A)
80-1000	Rear	Horizontal	3	80 % AM(1 kHz)	PASS(A)
80-1000	Right	Horizontal	3	80 % AM(1 kHz)	PASS(A)
80-1000	Left	Horizontal	3	80 % AM(1 kHz)	PASS(A)

Remarks

The primary functions as described below were fully functional during and after test.
- 4th grade alkaline ionization mode

3.6.4 Photographs of Radiated, radio-frequency, electromagnetic field Immunity Test Configuration

[Radiated, radio-frequency, electromagnetic field Immunity Test]

3.7 Electrical fast transient/burst Immunity Test

Tests were conducted in accordance with EN55014-2:2015**.** Tests were performed to 1 kV to AC Power lines.

3.7.1 Test Condition

EUT	:	PRIME 1301
Test Standard	:	EN55014-2:2015
Test Method	:	EN 61000-4-4:2012
Test Date	:	20 April 2016
Test Voltage	:	±1 kV(power supply)
Performance criterion	:	B
Temperature/Humidity/Pressure	:	22 °C / 37 % R.H. / 101.4 kPa

3.7.2 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
EMS Immunity Test System	EMC Pro	KeyTek	0105254	10. 03. 2017	☒
EMS CHAMBER	N/A	SY Corporation	N/A	N/A	☒

3.7.3 Test Result of Electrical fast transient/burst Immunity Test

Electrical fast transient/burst Immunity Test Result : PASS

The equipment meets the requirements.

Test data sheet follows.

Line	Voltage	Coupling	Inject Time (sec)	Result
L1-N-PE	±1 kV	Direct	120	PASS (A)

Remarks

The primary functions as described below were fully functional during and after test.
- 4th grade alkaline ionization mode

3.7.4 Photographs of Electrical fast transient/burst Immunity Test Configuration

[Electrical fast transient/burst Immunity Test]

3.8 Surge Immunity Test

Tests were conducted in accordance with EN55014-2:2015. Tests were performed to 1 kV to AC Line to Line and 2 kV to Line to Ground.

3.8.1 Test Condition

EUT	:	PRIME 1301
Test Standard	:	EN55014-2:2015
Test Method	:	EN 61000-4-5:2014
Test Date	:	20 April 2016
Test Voltage	:	1 kV(Line to Line with 2 Ω Impedance), 2 kV(Line to Ground with 12 Ω Impedance)
Performance criterion	:	B
Temperature/Humidity/Pressure	:	22 °C / 37 % R.H. / 101.4 kPa

3.8.2 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
EMS Immunity Test System	EMC Pro	KeyTek	0105254	10. 03. 2017	☒
EMS CHAMBER	N/A	SY Corporation	N/A	N/A	☒

3.8.3 Test Result of Surge Immunity Test

Surge Immunity Test Result : PASS

The equipment meets the requirements.

Test data sheet follows.

Line	Voltage	Impedance	Phase(Degree)	Inject (count - min)	Result
L1-N	±1 kV	2 Ω	(+) 90°, (-) 270°	5 times - 5 min	Pass(A)
L1-PE	±2 kV	12 Ω	(+) 90°, (-) 270°	5 times - 5 min	Pass(A)
N-PE	±2 kV	12 Ω	(+) 90°, (-) 270°	5 times - 5 min	Pass(A)

Remarks
The primary functions as described below were fully functional during and after test.
- 4th grade alkaline ionization mode

3.8.4 Photographs of Surge Immunity Test Configuration

[Surge Immunity Test]

3.9 Conducted Immunity Test

Tests were conducted in accordance with EN55014-2:2015. Over the frequency range of 150 kHz to 80 MHz. Tests were performed at 3 V on power line.

3.9.1 Test Condition

EUT	:	PRIME 1301
Test Standard	:	EN55014-2:2015
Test Method	:	EN 61000-4-6:2014
Test Date	:	20 April 2016
Test Voltage	:	3 V
Performance criterion	:	A
Temperature/Humidity/Pressure	:	22 °C / 37 % R.H. / 101.4 kPa

3.9.2 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
RF Power Amplifier	75A220	Amplifier Research	15326	07. 01. 2017	☒
Signal Generator	SMT03	ROHDE & SCHWARZ	826919/008	06. 01. 2017	☒
Attenuator	8325	BIRD	4572	06. 01. 2017	☒
CDN	FCC-801-M3-16A	FCC	01044	08. 01. 2017	☒
EMS CHAMBER	N/A	SY Corporation	N/A	N/A	☒

3.9.3 Test Result of Conducted Immunity Test

Conducted Immunity Test Result : PASS

The equipment meets the requirements.

Test data sheet follows.

Frequency (MHz)	Coupling	Dwell time	Modulation	Step Size	Result
0.15 - 80	CDN(M3)	1 s	80 % AM @ 1 kHz	1.0 %	Pass(A)

Remarks

The primary functions as described below were fully functional during and after test.
- 4th grade alkaline ionization mode

3.9.4 Photographs of Conducted Immunity Test Configuration

[Conducted Immunity Test]

3.10 Voltage Dips and Voltage interruptions Immunity Test

Voltage variations tests were conducted in accordance with EN55014-2:2015**.**

3.10.1 Test Condition

EUT	:	PRIME 1301
Test Standard	:	EN55014-2:2015
Test Method	:	EN61000-4-11:2004
Test Date	:	20 April 2016
Voltage Dip	:	100 % (0.5 cycle), 60 % (10 cycles), 30 % (25 cycles)
Performance criterion	:	100 % (0.5 cycle)-C, 60 % (10 cycles)-C, 30 % (25 cycles)-C
Temperature/Humidity/Pressure	:	24 °C / 35 % R.H. / 101.4 kPa

3.10.2 Test Equipment List

Equipment Type	Model	Manufacture	Serial No	Cal Due Date	Use
EMS Immunity Test System	EMC Pro	KeyTek	0105254	10. 03. 2017	☒
EMS CHAMBER	N/A	SY Corporation	N/A	N/A	☒

3.10.3 Test Result of Voltage Dips and Voltage interruptions Immunity Test

Voltage Dips and Voltage interruptions Immunity Test Result : PASS

The equipment meets the requirements.

Test data sheet follows.

Voltage Dip %U_T	Cycles	Angle (°)	Criteria	Result
100 %	0.5	0,180	C	Pass(A)
60 %	10	0,180	C	Pass(A)
30 %	25	0,180	C	Pass(A)

Remarks

The primary functions as described below were fully functional during and after test.
- 4th grade alkaline ionization mode

3.10.4 Photographs of Voltage Dips and Voltage interruptions Immunity Test Configuration

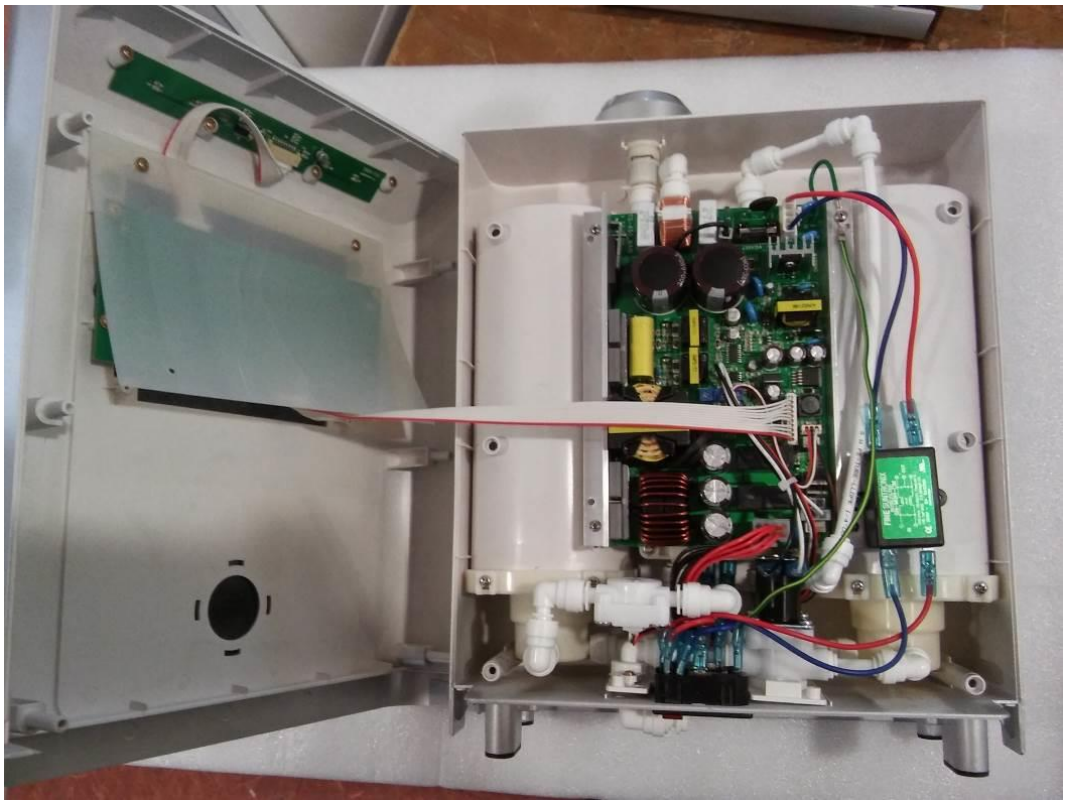
[Voltage Dips and Voltage interruptions Immunity Test]

4. EUT PHOTOGRAPHS

Front of EUT

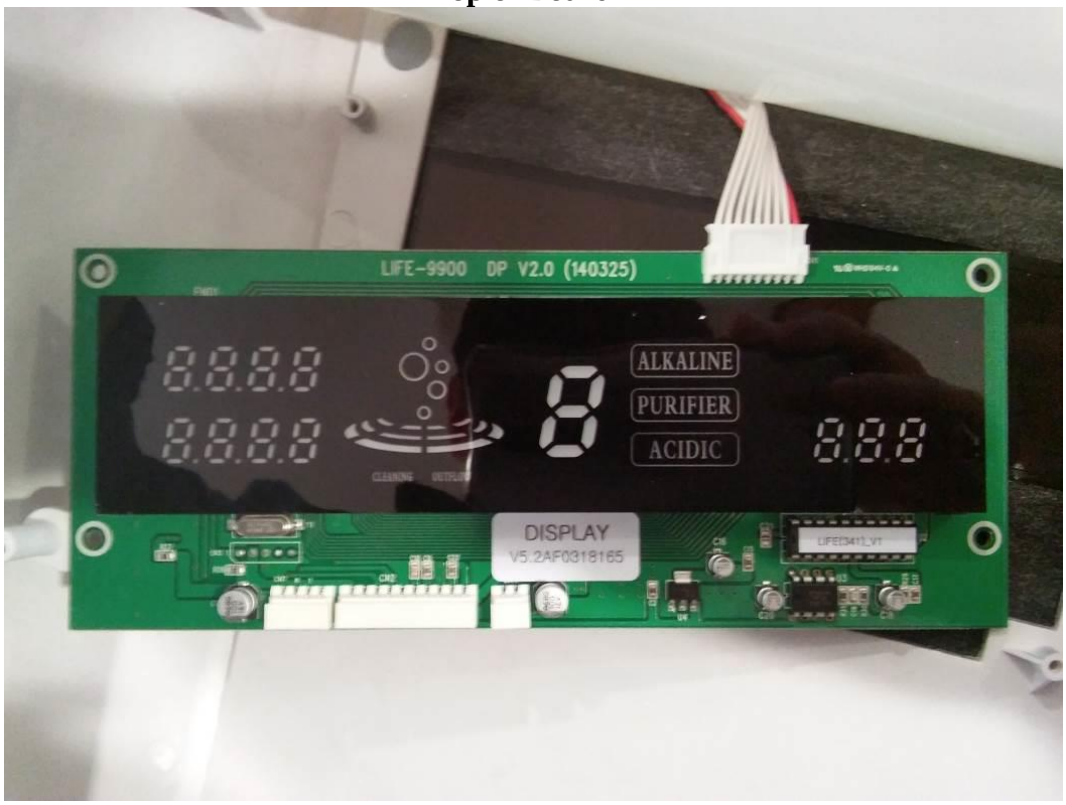
Back of EUT

Internal of EUT

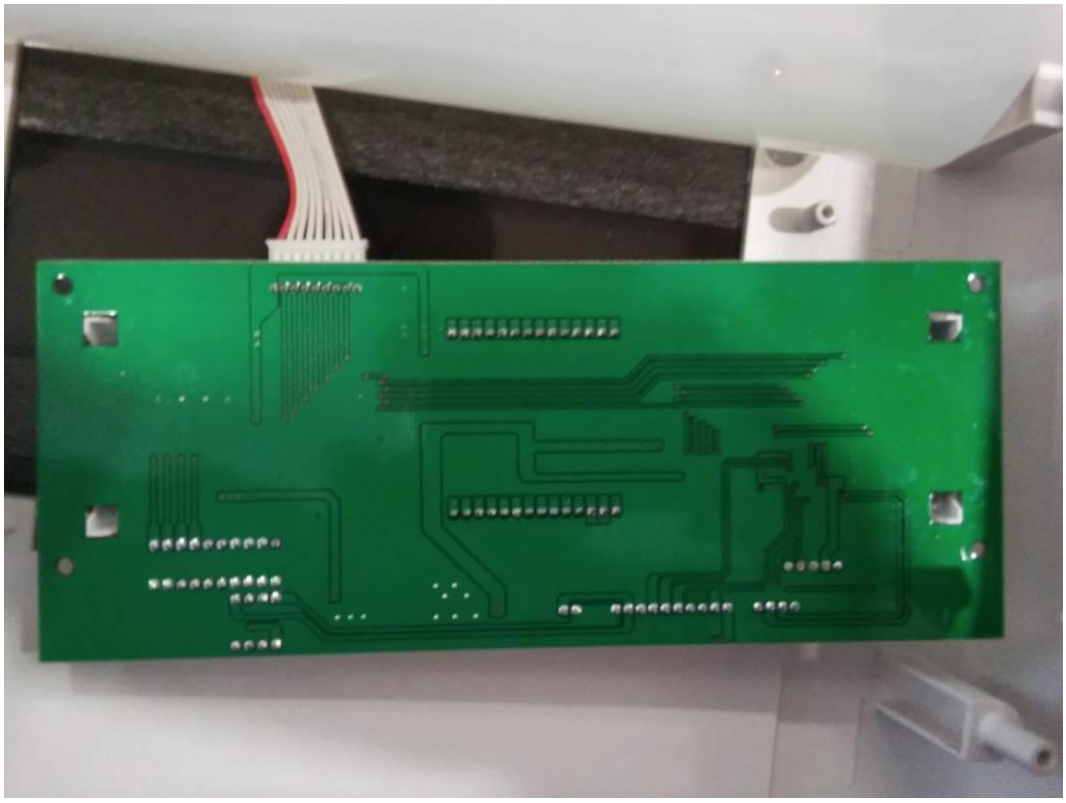


Metal Hose

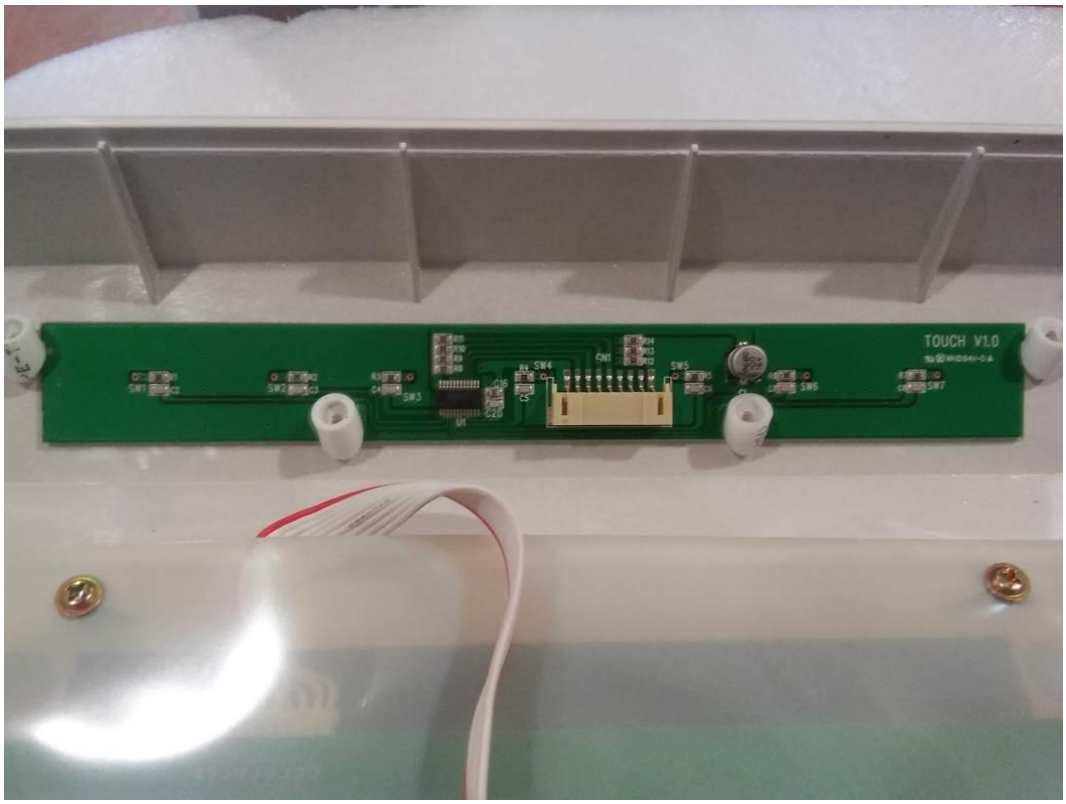
Top of Board 1



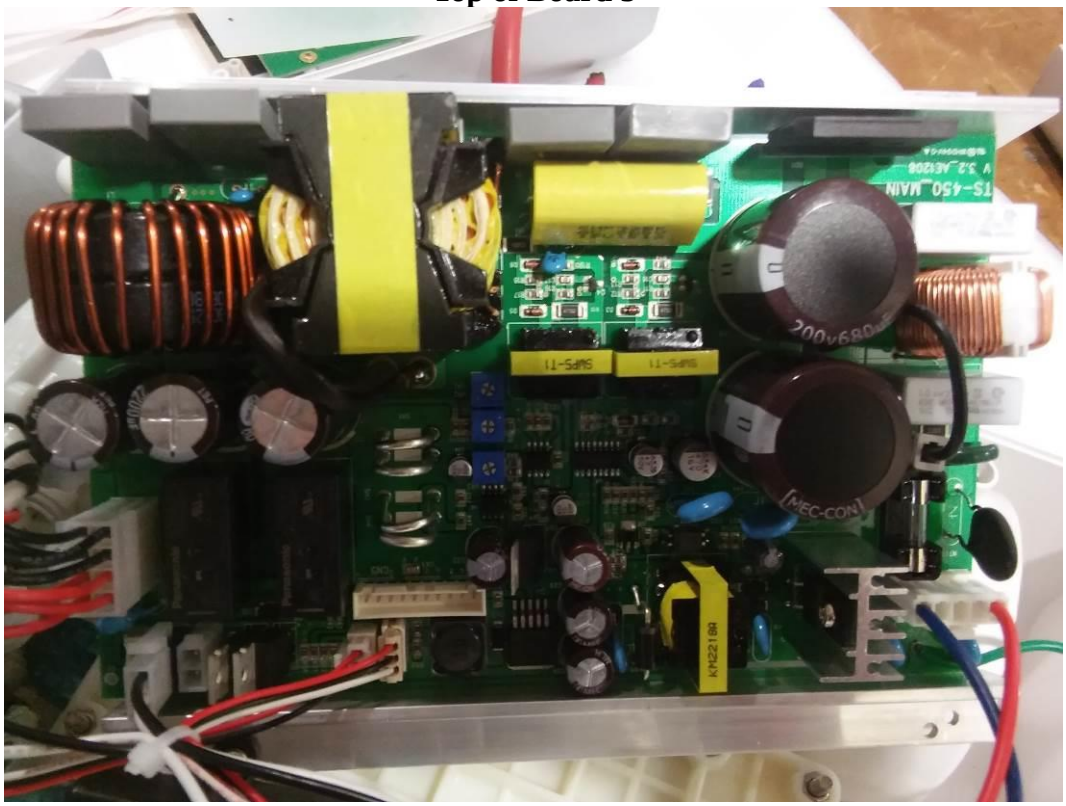
Bottom of Board 1



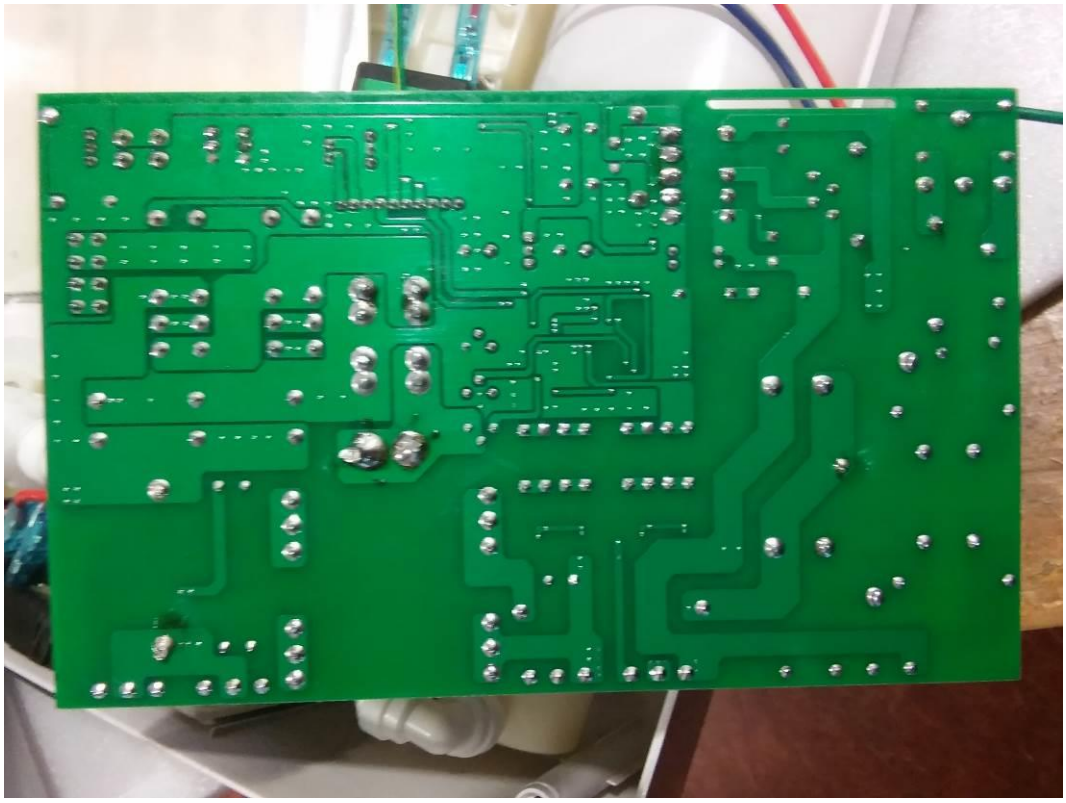
Top of Board 2



Top of Board 3



Bottom of Board 3



Label of Noise Filter

Filter 1

Filter 2