

TEST REPORT

Application No.: SZEM1910019442AT
Applicant: SHENZHEN LANDUN ENVIRONMENTAL TECHNOLOGY CO., LTD
Address of Applicant: No.1, TongFuYu industrial park, Longtian community, Pingshan district, Shenzhen China 518122
Manufacturer: SHENZHEN LANDUN ENVIRONMENTAL TECHNOLOGY CO., LTD
Address of Manufacturer: No.1, TongFuYu industrial park, Longtian community, Pingshan district, Shenzhen China 518122
Factory: SHENZHEN LANDUN ENVIRONMENTAL TECHNOLOGY CO., LTD
Address of Factory: No.1, TongFuYu industrial park, Longtian community, Pingshan district, Shenzhen China 518122
Equipment Under Test (EUT):
EUT Name: Reverse Osmosis Water Purifier
Model No.: L-RO650, L-RO500, L-RO530, L-RO550, L-RO600, L-RO700, L-RO730, L-RO750 ♣
 ♣ Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade mark: WellBlue
Standard(s) : EN 55014-1:2017
 EN 55014-2:2015
 EN 61000-3-2:2014
 EN 61000-3-3:2013
Date of Receipt: 2019-10-21
Date of Test: 2019-10-21 to 2019-10-23
Date of Issue: 2019-10-25

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.



The CE mark as shown below can be used, under the responsibility of the manufacturer, after completion of an EU Declaration of Conformity and compliance with all relevant EU Directives.

Keny Xu
 EMC Laboratory Manager



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Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2019-10-25		Original

Authorized for issue by:			
			
		<hr/> Foray Chen /Project Engineer	
			
		<hr/> Eric Fu /Reviewer	



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2 Test Summary

Emission Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at Mains Terminals (150kHz-30MHz)	EN 55014-1:2017	CISPR 16-2-1	N/A	Pass
Radiated Emissions (30MHz-1GHz)	EN 55014-1:2017	CISPR 16-2-3	N/A	Pass
Harmonic Current Emission	EN 61000-3-2:2014	EN 61000-3-2:2014	Class A	Pass
Voltage Fluctuations and Flicker	EN 61000-3-3:2013	EN 61000-3-3:2013	Clause 5 of EN 61000-3-3	Pass

N/A: Not applicable

Immunity Part				
Item	Standard	Method	Requirement	Result
Electrostatic Discharge	EN 55014-2:2015	EN 61000-4-2:2009	4kV Contact Discharge 8kV Air Discharge	Pass
Electrical Fast Transients/Burst at Power Port	EN 55014-2:2015	EN 61000-4-4:2012	1kV 5/50ns Tr/Td 5kHz Repetition Frequency	Pass
Surge at Power Port	EN 55014-2:2015	EN 61000-4-5:2014 +A1:2017	1.2/50µs Tr/Td 1kV Line to Line 2kV Line to Ground	Pass
Voltage Dips and Interruptions	EN 55014-2:2015	EN 61000-4-11:2004 +A1:2017	0 % UT for 0.5per 40 % UT for 10per 70 % UT for 25per UT is Supply Voltage	Pass
Conducted Immunity at Power Port (150kHz-230MHz)	EN 55014-2:2015	EN 61000-4-6:2014	3Vrms (emf),80%,1kHz Amp. Mod.	Pass

N/A: Not applicable



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Declaration of EUT Family Grouping:

Model No.: L-RO650, L-RO500, L-RO530, L-RO550, L-RO600, L-RO700, L-RO730, L-RO750

Only the model L-RO650 was tested, since the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only difference on appearance design.



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4 General Information

4.1 Details of E.U.T.

Power supply:	Input: AC220V 50Hz Output: DC24V
Cable:	AC cable: 150cm unshielded

4.2 Description of Support Units

The EUT has been tested as an independent unit.

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Conduction Emission	± 3.0dB (150kHz to 30MHz)
2	Radiated Emission	± 4.5dB (30MHz-1GHz)
3	Harmonics & Flicker	± 0.068dB
4	Conducted Immunity	± 0.96dB
5	ESD	± 6 %
6	EFT (Electrical Fast Transients)	± 5 %
7	Surge Immunity	± 5 %
8	Voltage Dips and Interruptions	± 4 %
9	Temperature test	± 1 °C
10	Humidity test	± 3%



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4.4 Test Location

All tests were performed at:

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

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.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

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 display and work status of the EUT

Audio: None



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5 Equipment List

Conducted Emissions at Mains Terminals (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	ChangZhou ZhongYu	GB-88	SEM001-06	2019-06-13	2022-06-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2019-07-11	2020-07-10
LISN	Rohde & Schwarz	ENV216	SEM007-01	2019-09-24	2020-09-23
LISN	ETS-LINDGREN	3816/2	SEM007-02	2019-04-01	2020-03-31
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2019-04-01	2020-03-31

Radiated Emissions (30MHz-1GHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2017-08-05	2020-08-04
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2019-07-11	2020-07-10
EMI Test Receiver	Agilent Technologies	N9038A	SEM004-05	2019-09-24	2020-09-23
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2017-06-27	2020-06-26
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2019-04-01	2020-03-31

Voltage Fluctuations and Flicker					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
AC Power Source	California Instruments	5001ix	SEM016-02	2019-04-12	2020-04-11
Power Analyzer	California Instruments	PACS-1	SEM016-01	2019-04-12	2020-04-11
Measurement Software	California Instruments	CTS 4.0 V4.17.0	N/A	N/A	N/A

Electrostatic Discharge					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
ESD Ground Plane	SGS(3m*3m)	N/A	SEN006-01	N/A	N/A
ESD Generator	TESEQ AG	NSG 437	SEM019-02	2019-04-19	2020-04-18

Electrical Fast Transients/Burst at Power Port					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Ultra Compact Simulator	EM TEST	UCS 500N7	SEM018-02	2019-04-12	2020-04-11



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Measurement Software	EM TEST	IEC CONTROL V6.0.1	N/A	N/A	N/A
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Surge at Power Port					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Ultra Compact Simulator	EM TEST	UCS 500N7	SEM018-02	2019-04-12	2020-04-11
Measurement Software	EM TEST	IEC CONTROL V6.0.1	N/A	N/A	N/A

Voltage Dips and Interruptions					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Ultra Compact Simulator	EM TEST	UCS 500N7	SEM018-02	2019-04-12	2020-04-11
Measurement Software	EM TEST	IEC CONTROL V6.0.1	N/A	N/A	N/A

Conducted Immunity at Power Port (150kHz-230MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	AUDIX	N/A	SEM001-08	2019-06-13	2022-06-12
RF-Generator	SCHAFFNER	NSG 2070	SEM006-01	2019-09-24	2020-09-23
Coupling/Decoupling Network	SCHAFFNER	CDN M016	SEM007-03	2019-04-12	2020-04-11
Conditioning Amplifier	Brüel & Kjaer	2690-OS2	SEM005-10	2019-04-19	2020-04-18
Audio Analyzer	Rohde & Schwarz	UPV	SEM008-03	2019-09-24	2020-09-23

General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2019-09-26	2020-09-25
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2019-09-26	2020-09-25
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2019-09-26	2020-09-25
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2019-04-04	2020-04-03



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6 Emission Test Results

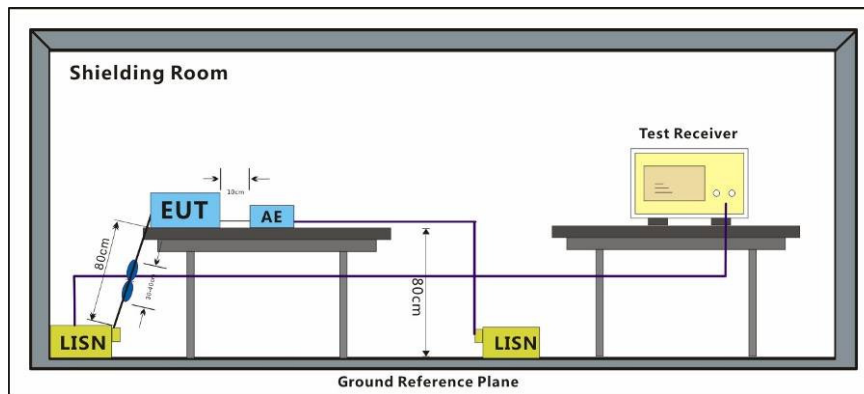
6.1 Conducted Emissions at Mains Terminals (150kHz-30MHz)

Test Requirement:	EN 55014-1:2017
Test Method:	CISPR 16-2-1
Frequency Range:	150kHz to 30MHz
Limit:	
0.15M-0.5MHz	66dB(μV)-56dB(μV) quasi-peak, 59dB(μV)-46dB(μV) average
0.5M-5MHz	56dB(μV) quasi-peak, 46dB(μV) average
5M-30MHz	60dB(μV) quasi-peak, 50dB(μV) average
Detector:	Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz

6.1.1 E.U.T. Operation

Operating Environment:			
Temperature:	22.8 °C	Humidity:	55.9 % RH
		Atmospheric Pressure:	1015 mbar
Test mode	a: On mode, keep EUT working normally.		

6.1.2 Test Setup Diagram



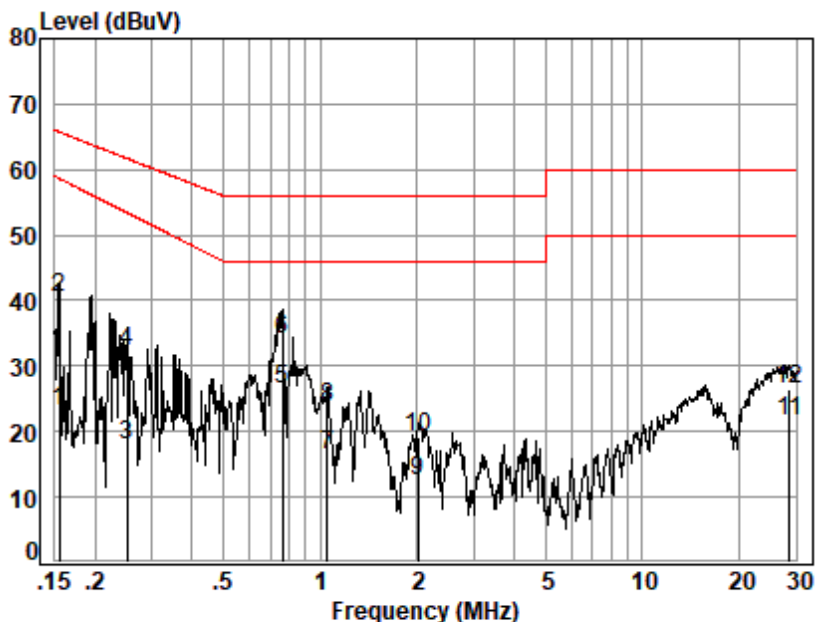
6.1.3 Measurement Data

An initial pre-scan was performed with peak detector. Quasi-Peak or Average measurement were performed at the frequencies with maximized peak emission were detected.



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Mode:a; Line:Live Line



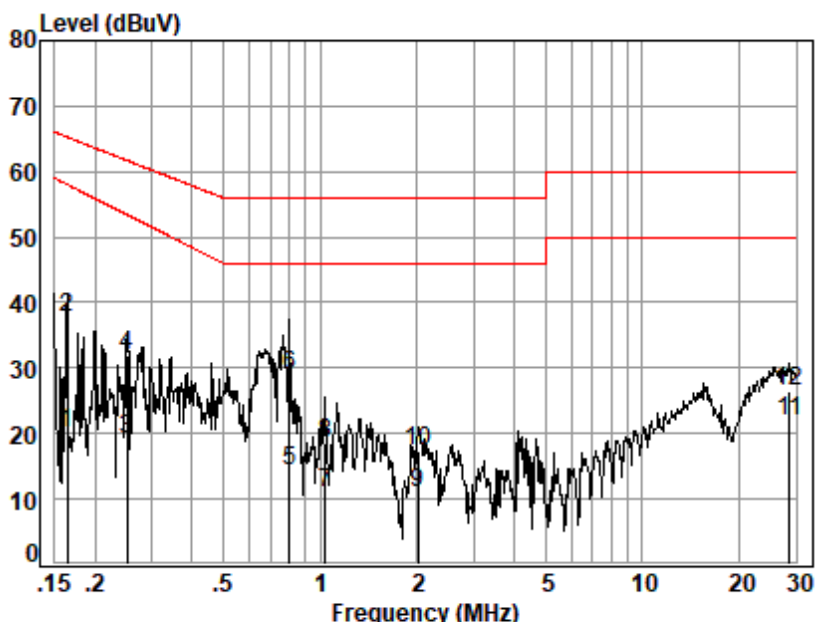
Site : Shielding Room
 Condition: Line
 Job No. : 19442AT
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.01	9.48	13.65	23.14	58.66	-35.52	Average
2	0.15	0.01	9.48	31.01	40.50	65.74	-25.24	QP
3	0.25	0.03	9.53	8.36	17.92	53.39	-35.47	Average
4	0.25	0.03	9.53	22.71	32.27	61.69	-29.42	QP
5	0.76	0.08	9.63	16.64	26.35	46.00	-19.65	Average
6	0.76	0.08	9.63	24.46	34.17	56.00	-21.83	QP
7	1.05	0.09	9.63	6.79	16.51	46.00	-29.49	Average
8	1.05	0.09	9.63	13.96	23.68	56.00	-32.32	QP
9	2.01	0.16	9.64	2.78	12.58	46.00	-33.42	Average
10	2.01	0.16	9.64	9.36	19.16	56.00	-36.84	QP
11	28.60	0.27	10.24	11.07	21.58	50.00	-28.42	Average
12	28.60	0.27	10.24	15.81	26.32	60.00	-33.68	QP



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Mode:a; Line:Neutral Line



Site : Shielding Room
 Condition: Neutral
 Job No. : 19442AT
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.16	0.01	9.43	10.70	20.14	58.03	-37.89	Average
2	0.16	0.01	9.43	28.39	37.83	65.25	-27.42	QP
3	0.25	0.03	9.47	9.77	19.27	53.45	-34.18	Average
4	0.25	0.03	9.47	22.53	32.03	61.73	-29.70	QP
5	0.80	0.08	9.64	4.63	14.35	46.00	-31.65	Average
6	0.80	0.08	9.64	19.24	28.96	56.00	-27.04	QP
7	1.04	0.09	9.66	1.08	10.83	46.00	-35.17	Average
8	1.04	0.09	9.66	8.71	18.46	56.00	-37.54	QP
9	2.01	0.16	9.70	1.15	11.01	46.00	-34.99	Average
10	2.01	0.16	9.70	7.52	17.38	56.00	-38.62	QP
11	28.60	0.27	10.47	11.10	21.84	50.00	-28.16	Average
12	28.60	0.27	10.47	15.86	26.60	60.00	-33.40	QP



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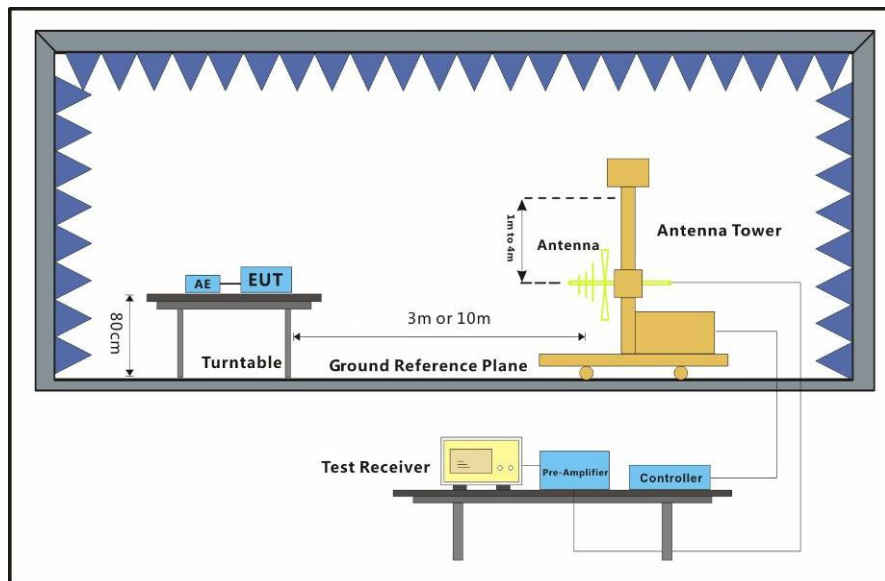
6.2 Radiated Emissions (30MHz-1GHz)

Test Requirement: EN 55014-1:2017
 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

6.2.1 E.U.T. Operation

Operating Environment:
 Temperature: 23 °C Humidity: 55 % RH Atmospheric Pressure: 1015 mbar
 Test mode a: On mode, keep EUT working normally.

6.2.2 Test Setup Diagram

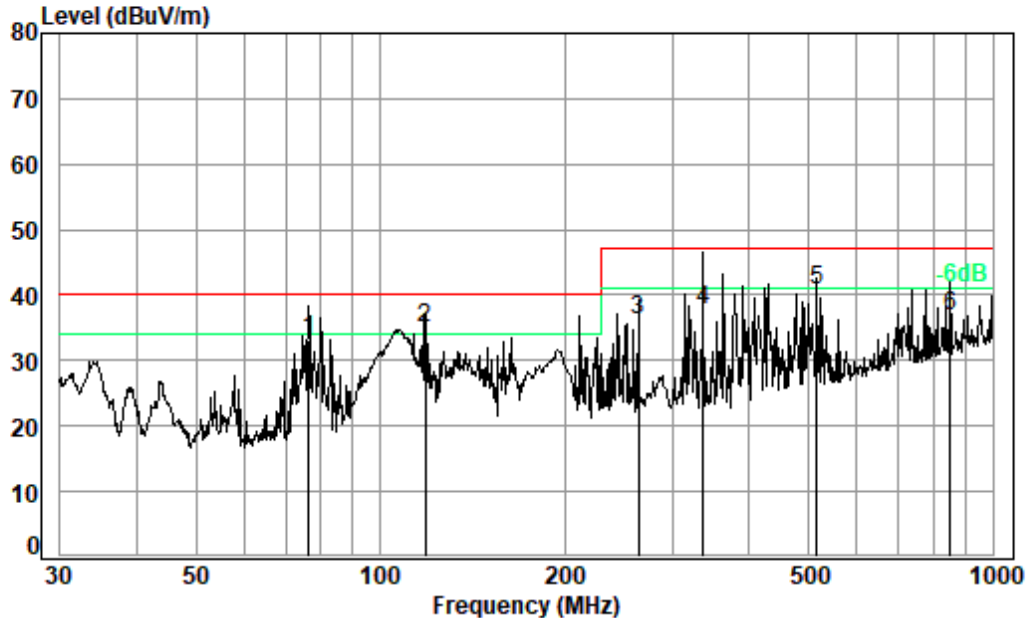


6.2.3 Measurement Data

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



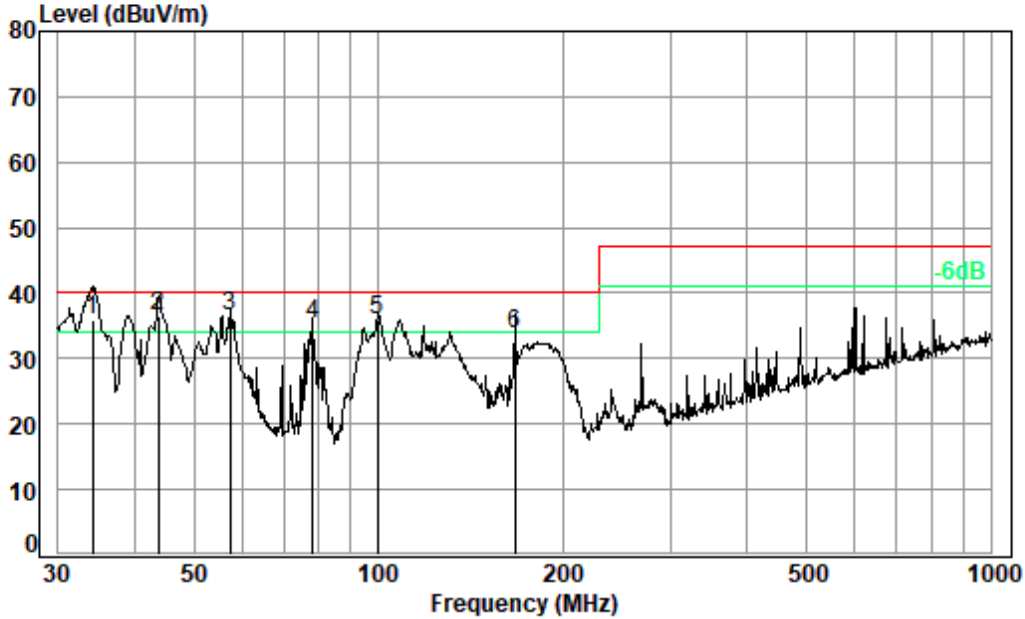
Condition: 3m HORIZONTAL
 Job No. : 19442AT
 Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	76.51	1.00	12.27	27.66	47.58	33.19	40.00	-6.81
2 pp	118.60	1.25	13.16	27.52	48.14	35.03	40.00	-4.97
3	263.82	1.74	19.04	26.98	42.30	36.10	47.00	-10.90
4	336.04	2.02	20.70	27.10	42.03	37.65	47.00	-9.35
5	515.44	2.62	24.93	27.89	41.01	40.67	47.00	-6.33
6	851.04	3.41	29.18	27.50	31.84	36.93	47.00	-10.07



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Mode:a; Polarization:Vertical



Condition: 3m VERTICAL
 Job No. : 19442AT
 Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit	Over
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	34.16	0.60	20.25	27.72	42.89	36.02	40.00	-3.98
2 pp	43.81	0.68	16.15	27.70	47.31	36.44	40.00	-3.56
3	57.39	0.80	13.44	27.68	49.84	36.40	40.00	-3.60
4	78.14	1.04	12.14	27.66	49.62	35.14	40.00	-4.86
5	99.53	1.20	13.96	27.64	48.43	35.95	40.00	-4.05
6	167.24	1.35	15.65	27.29	44.15	33.86	40.00	-6.14



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6.3 Harmonic Current Emission

Test Requirement: EN 61000-3-2:2014

Test Method: EN 61000-3-2:2014

Frequency Range: 100Hz to 2kHz

There is no need for Harmonics test to be performed on this product (rated power is less than 75W) in accordance with EN 61000-3-2:2014.

For further details, please refer to Clause 7 of EN 61000-3-2 which states:

"For the following categories of equipment, limits are not specified in this standard.- equipment with a rated power of 75W or less, other than lighting equipment."



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6.4 Voltage Fluctuations and Flicker

Test Requirement: EN 61000-3-3:2013

Test Method: EN 61000-3-3:2013

6.4.1 E.U.T. Operation

Operating Environment:

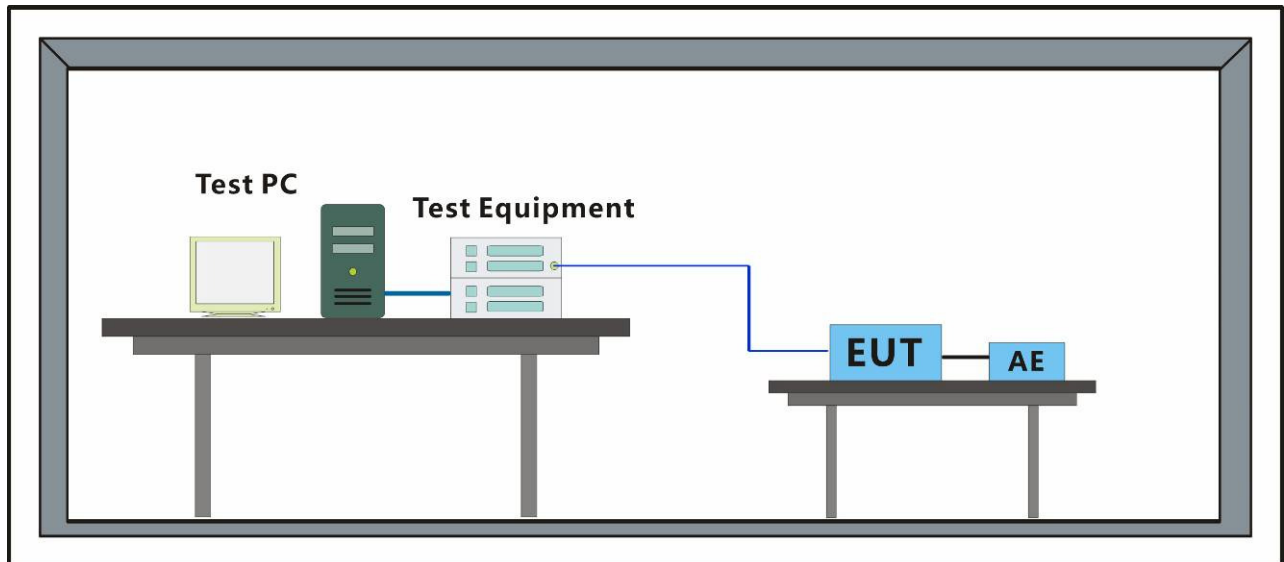
Temperature: 20 °C Humidity: 42.6 % RH Atmospheric Pressure: 1015 mbar

Pretest these modes to find the worst case: a: On mode, keep EUT working normally.

b: Idle mode, keep EUT standby.

The worst case for final test: a: On mode, keep EUT working normally.

6.4.2 Test Setup Diagram



6.4.3 Measurement Data



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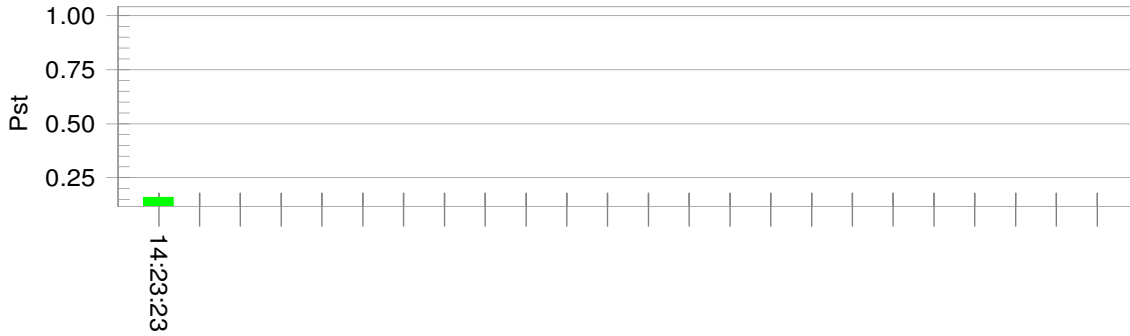
Mode:a

Test Result: Pass

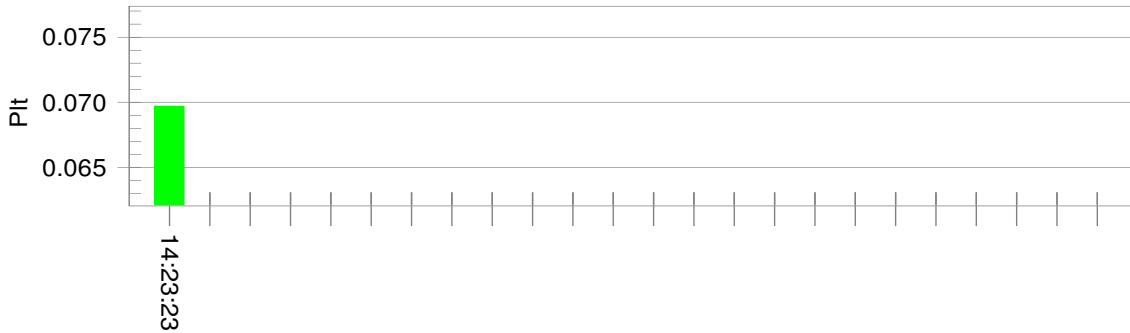
Status: Test Completed

Pst_i and limit line

European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	230.00		
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):	0.160	Test limit:	1.000 Pass



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7 Immunity Test Results

Performance Criteria Description in EN 55014-2:2015

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.

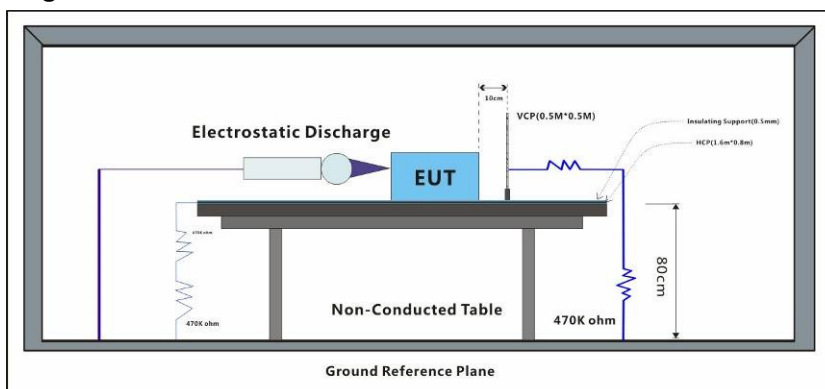


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7.1 Electrostatic Discharge

Test Requirement: EN 55014-2:2015
 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

7.1.1 Test Setup Diagram



7.1.2 E.U.T. Operation

Operating Environment:
 Temperature: 25 °C Humidity: 46 % RH Atmospheric Pressure: 1015 mbar
 Test mode:
 a: On mode, keep EUT working normally.
 b: Idle mode, keep EUT standby.

7.1.3 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.

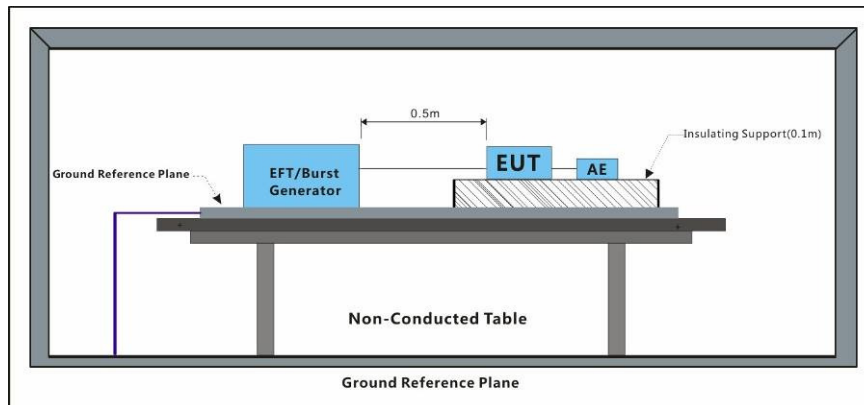


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7.2 Electrical Fast Transients/Burst at Power Port

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-4:2012
 Performance Criterion: B
 Repetition Frequency: 5kHz
 Burst Period: 300ms
 Test Duration: 2 minute per level & polarity

7.2.1 Test Setup Diagram



7.2.2 E.U.T. Operation

Operating Environment:
 Temperature: 20 °C Humidity: 42.4 % RH Atmospheric Pressure: 1015 mbar
 Test mode:
 a: On mode, keep EUT working normally.
 b: Idle mode, keep EUT standby.

7.2.3 Test Results:

Test Line	Level (kV)	Polarity	CDN/Clamp	Result / Observations
AC power port	1	+	CDN	A
AC power port	1	-	CDN	A

Results:

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

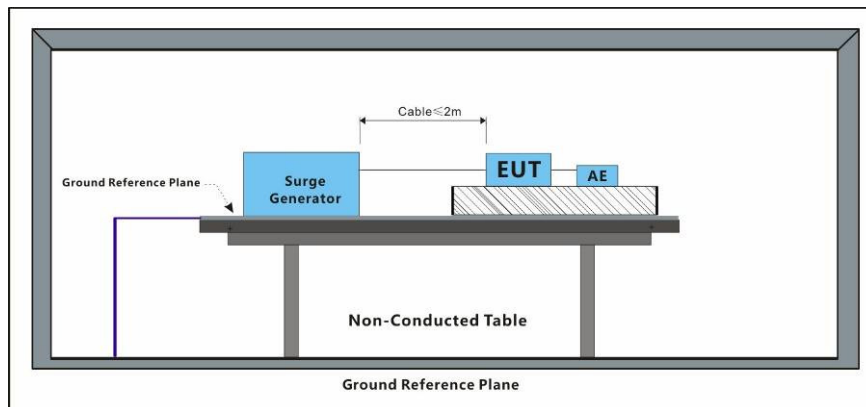


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7.3 Surge at Power Port

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-5:2014 +A1:2017
 Performance Criterion: B
 Interval: 60s between each surge
 No. of surges: 5 positive at 90°, 5 negative at 270°.

7.3.1 Test Setup Diagram



7.3.2 E.U.T. Operation

Operating Environment:
 Temperature: 20 °C Humidity: 42.4 % RH Atmospheric Pressure: 1015 mbar
 Test mode:
 a: On mode, keep EUT working normally.
 b: Idle mode, keep EUT standby.

7.3.3 Test Results:

Test Line	Level (kV)	Polarity	Phase (deg)	Result / Observations
L-N	1	+	90°	A
L-N	1	-	270°	A
L-PE	2	+	90°	A
N-PE	2	-	270°	A
L-N-PE	2	+	90	A
L-N-PE	2	-	270	A

Results:

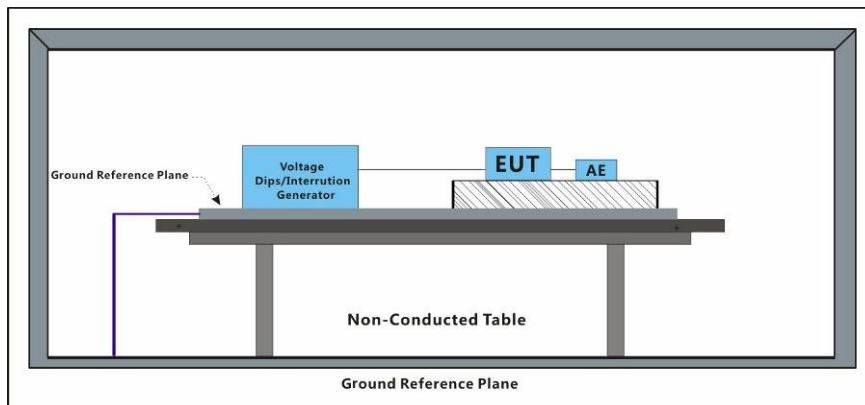
A: No degradation in the performance of the EUT was observed.



7.4 Voltage Dips and Interruptions

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-11:2004 +A1:2017
 Performance Criterion: 0% of UT (Rated Voltage) for 0.5 Cycle: C;
 40% of UT for 10 Cycle: C;
 70% of UT for 25 Cycle: C
 No. of Dips / Interruptions: 3 per Level
 Time between dropout 10s

7.4.1 Test Setup Diagram



7.4.2 E.U.T. Operation

Operating Environment:
 Temperature: 20 °C Humidity: 42.3 % RH Atmospheric Pressure: 1015 mbar
 Test mode:
 a: On mode, keep EUT working normally.
 b: Idle mode, keep EUT standby.

7.4.3 Test Results:

Level % UT	Phase (deg)	Duration	No. of Dips / Interruptions	Result / Observations
0	0°	0.5 Cycles	3	A
0	180°	0.5 Cycles	3	A
40	0°	10 Cycles	3	A
40	180°	10 Cycles	3	A
70	0°	25 Cycles	3	A
70	180°	25 Cycles	3	A

Results:

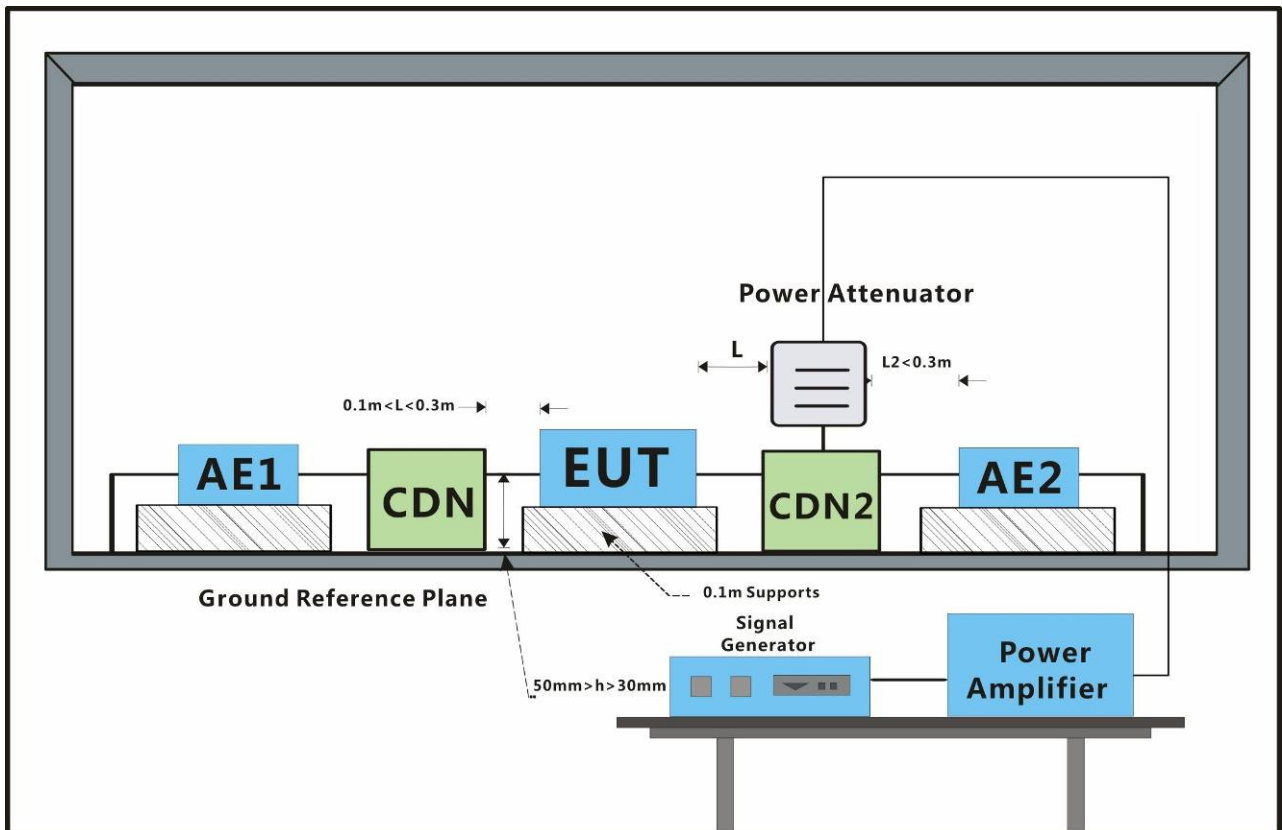
A: No degradation in the performance of the EUT was observed.



7.5 Conducted Immunity at Power Port (150kHz-230MHz)

Test Requirement: EN 55014-2:2015
 Test Method: EN 61000-4-6:2014
 Performance Criterion: A
 Frequency Range: 0.15MHz to 230MHz
 Modulation: 80%, 1kHz Amplitude Modulation
 Step Size 1%

7.5.1 Test Setup Diagram



7.5.2 E.U.T. Operation

Operating Environment:
 Temperature: 20 °C Humidity: 42.2 % RH Atmospheric Pressure: 1015 mbar
 Test mode:
 a: On mode, keep EUT working normally.
 b: Idle mode, keep EUT standby.

7.5.3 Test Results:

Cable port	Level (Vrms)	CDN/Clamp	Dwell time	Result / Observations
AC power port	3	CDN	2s	A

Results:

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

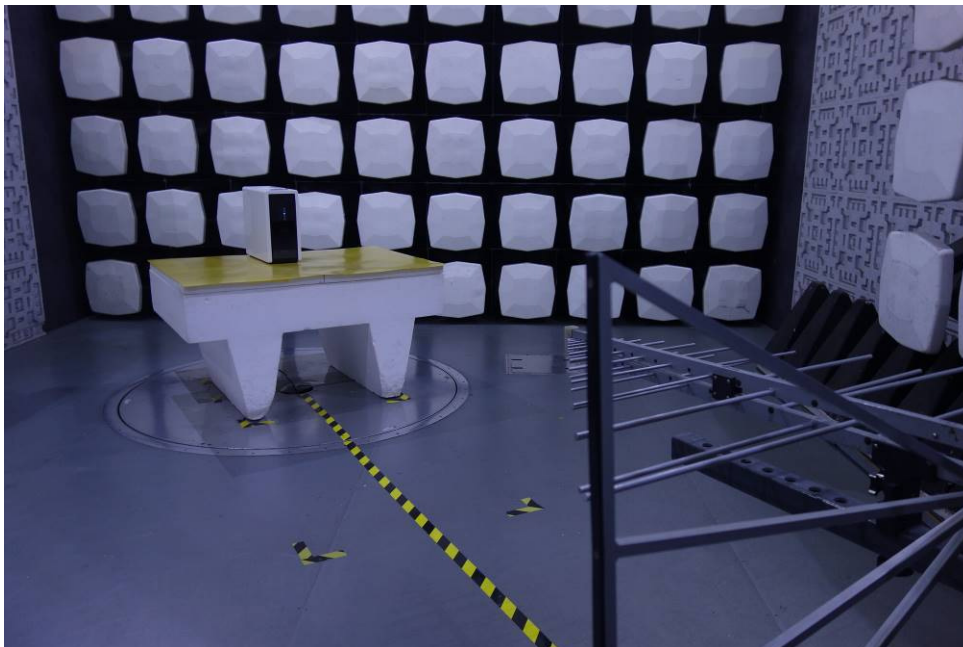


8 Photographs

8.1 Conducted Emissions at Mains Terminals (150kHz-30MHz) Test Setup



8.2 Radiated Emissions (30MHz-1GHz) Test Setup



8.3 Voltage Fluctuations and Flicker Test Setup



8.4 Electrostatic Discharge Test Setup



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8.5 Electrical Fast Transients/Burst at Power Port Test Setup



8.6 Surge at Power Port Test Setup

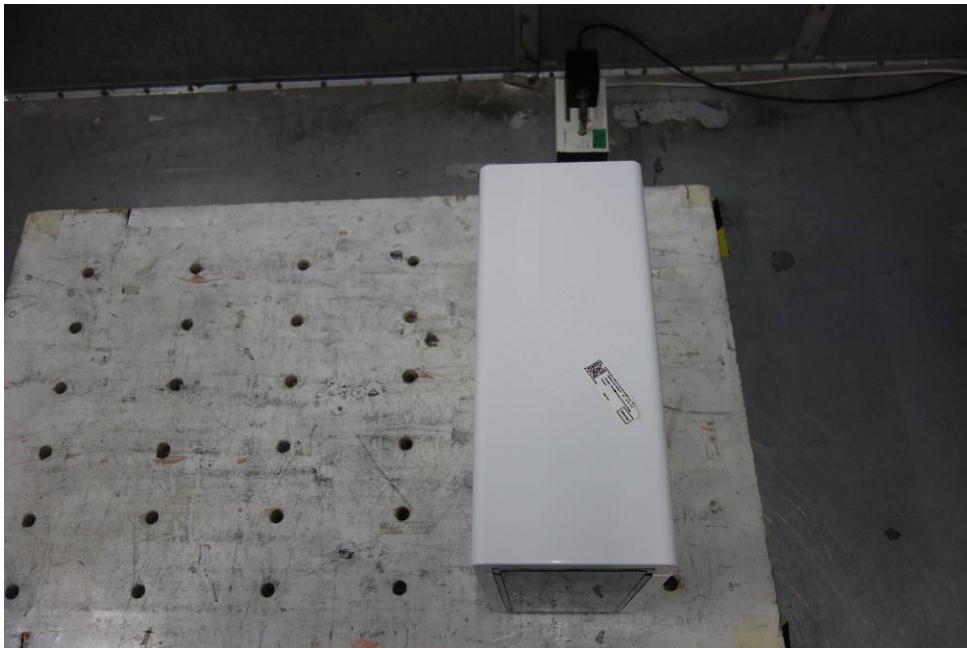


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8.7 Voltage Dips and Interruptions Test Setup



8.8 Conducted Immunity at Power Port (150kHz-230MHz) Test Setup



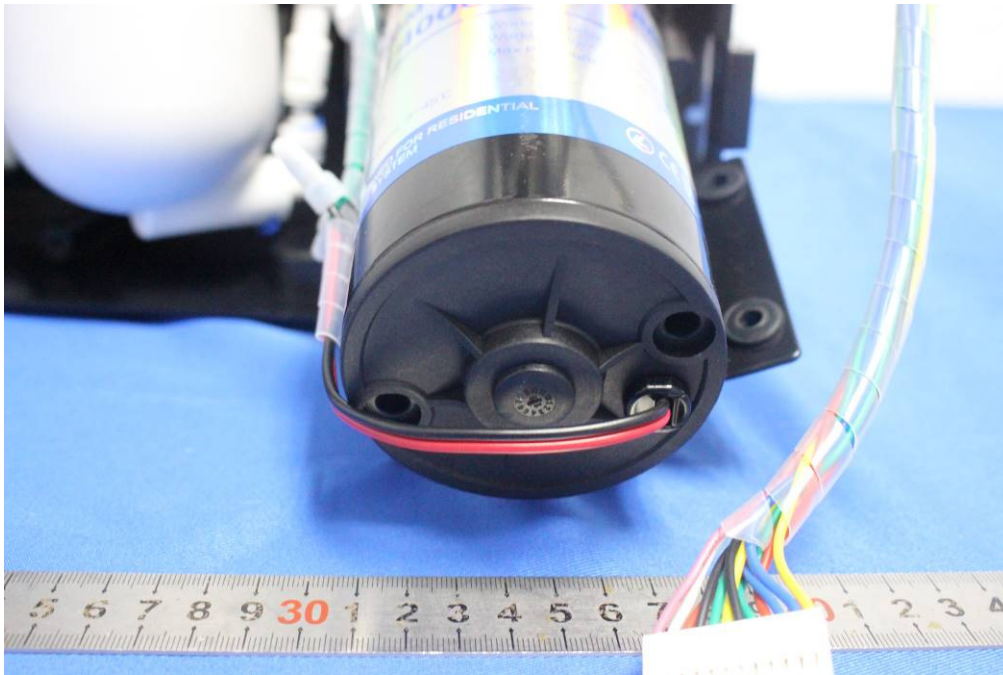
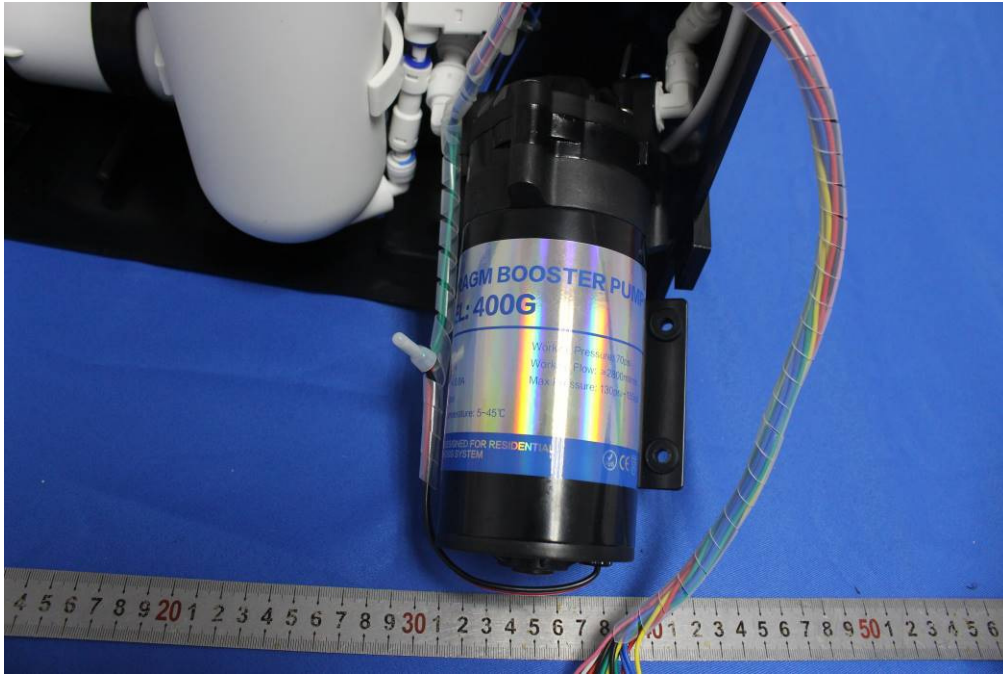
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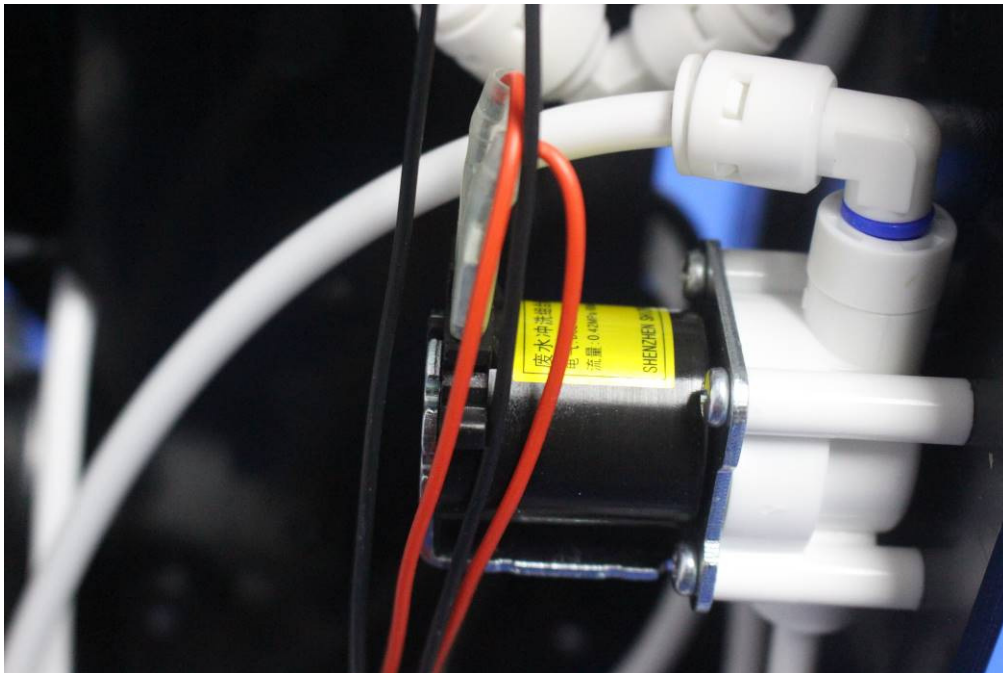
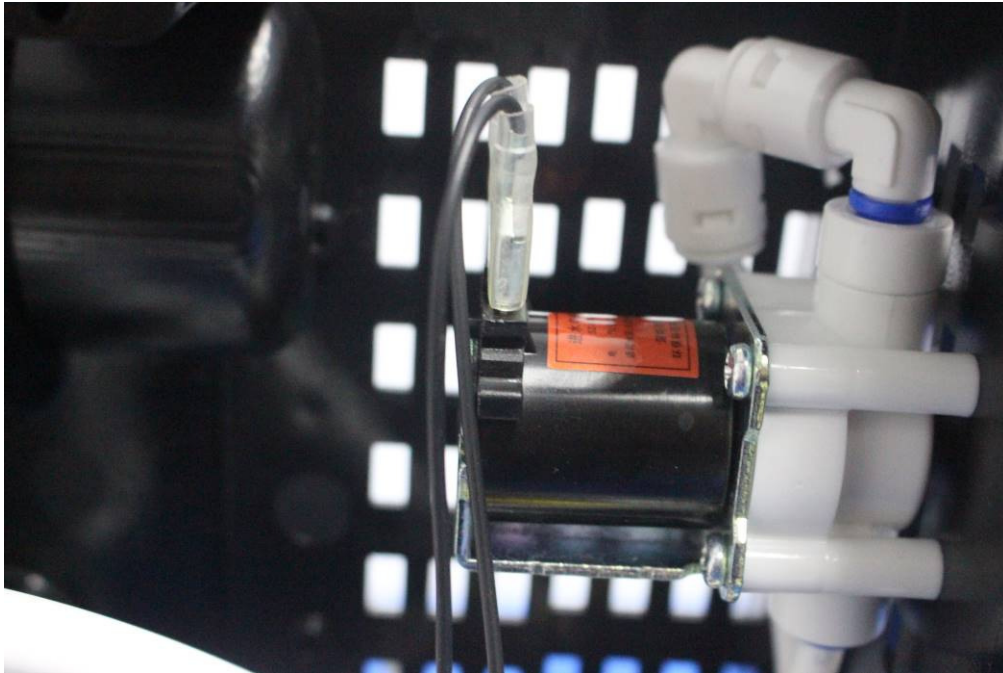
8.9 EUT Constructional Details (EUT Photos)

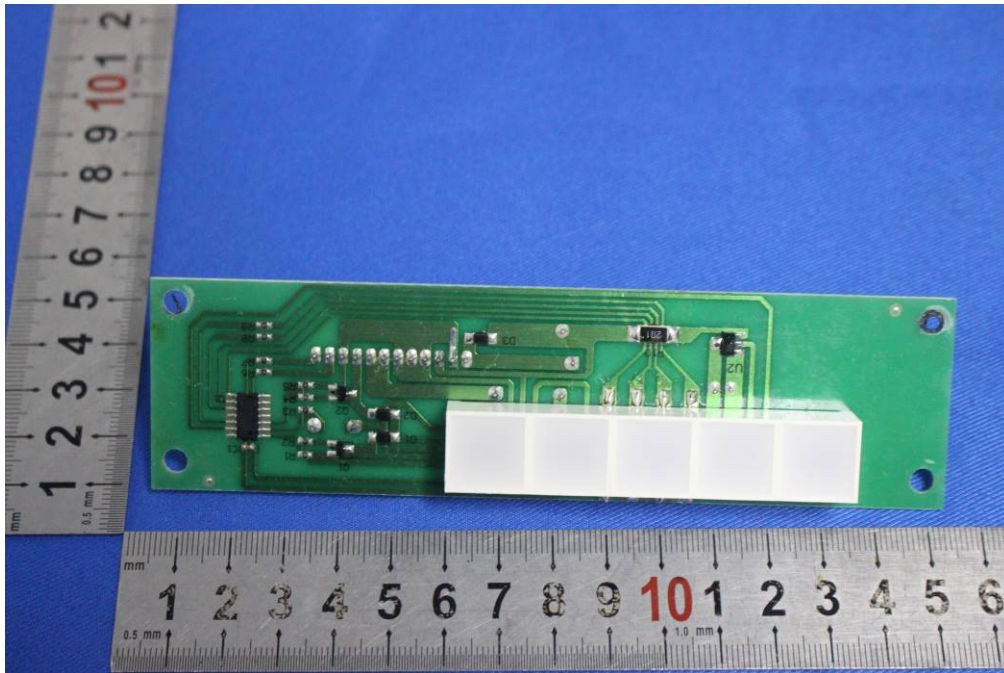
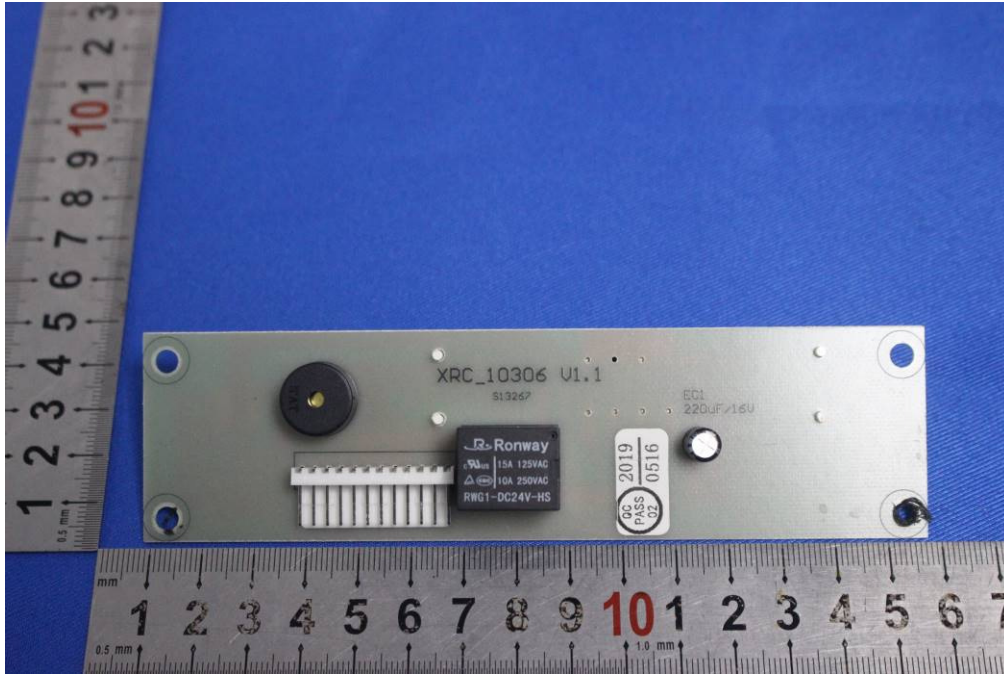


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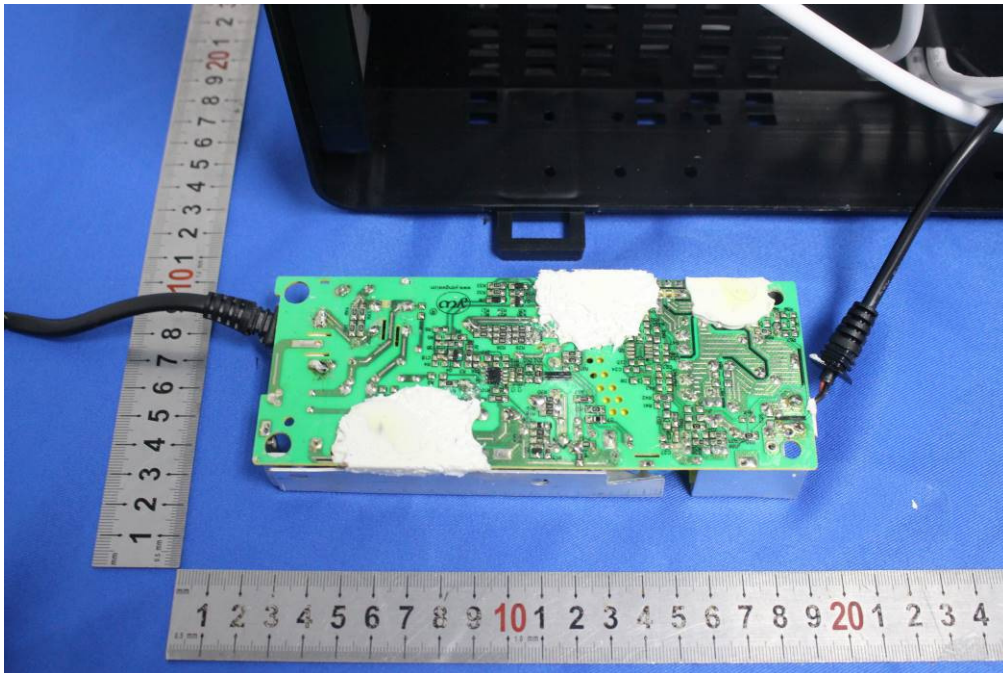
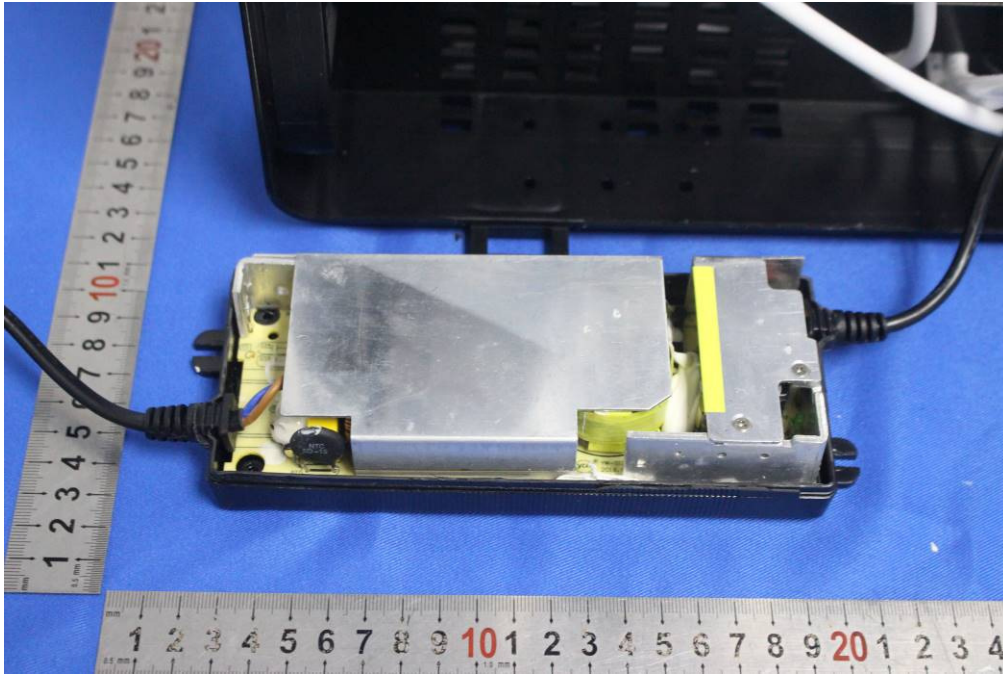


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- End of the Report -



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