

Test Report

Report No.: U00903200921608-2E

Query Password: QW7592

Date: Sep. 28, 2020

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Applicant: Shrinton Electron Technology Ltd.**Contact information:** 3F, Building 21, Second Industrial Zone, Changzhen Community, Yutang Street, Guangming District, Shenzhen, Guangdong 518000 CHINA.**The following sample(s) was (were) submitted and identified by client as:**

Sample Name : AC/DC ADAPTER / Switching Power Adapter

Model No. : HT39B-xxxxxyyyw, HT05-xxxxxyyyw, HT05-xxxxxyyywL, HT02-xxxxxyyyw, HT02-xxxxxyyywL, HT41-xxxxxyyyw
(xxx=030-240,yyy=0010-4000,w=US,CN,EU,KC,AR,JA,SA,BS,ME,BR,IN,S O,IS,TA)

Manufacturer : Shrinton Electron Technology Ltd.

Address : 3F, Building 21, Second Industrial Zone, Changzhen Community, Yutang Street, Guangming District, Shenzhen, Guangdong 518000 CHINA.

Sample Received Date : Sep. 21, 2020

Testing Period : From Sep. 21, 2020 to Sep. 28, 2020

Test Request : Please refer to next page(s).

Test Result(s) : Please refer to next page(s).

Signed for and on behalf of Shen Zhen UONE Test Co., LTD.

Prepared by



Marcia Deng

Checked by



Nora Deng

Approved by



Levent Liang



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Summary of test results:**TEST REQUEST**

RoHS Directive 2011/65/EU and its subsequent amendments & Directive (EU) 2015/863

To determine Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)),

(1) Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)
content by screening test and chemical test

(2) To determine Phthalates (DBP, BBP, DEHP, DIBP) content by chemical test

CONCLUSION**PASS****PASS**

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Test Material List

Material No.	Description (Location)	Photo(s) of tested materials
1	Silvery metal(pin, adapter)	
2	Black plastic(shell, adapter)	
3	Black adhesive plastic(sheet)	
4	Black soft plastic(wire jacket)	
5	Red soft plastic(wire jacket)	
6	Silvery metal(cover, inductor)	
7	Black plastic(bobbin, inductor)	
8	Black magnet(core, inductor)	
9	Coppery metal(coil, inductor)	
10	Coffee plastic with white printing(sleeve, capacitor)	
11	Silvery metal(shell, capacitor)	
12	Black soft rubber(base, capacitor)	
13	Brown paper with liquid(film, capacitor)	
14	Silvery metal(foil, capacitor)	
15	Dull silvery metal(foil, capacitor)	
16	Silvery metal(pin, capacitor)	
17	Yellow adhesive plastic(tape, transformer)	
18	Black plastic(bobbin, transformer)	
19	Black magnet(core, transformer)	
20	Coppery metal(coil, transformer)	
21	Coppery metal with yellow coating(coil, transformer)	
22	Silvery metal with red coating(shell, capacitor)	
23	White soft glue	
24	Grey body(fuse, PCB)	
25	Blue body(capacitor, PCB)	
26	Coppery metal(coil, inductor)	

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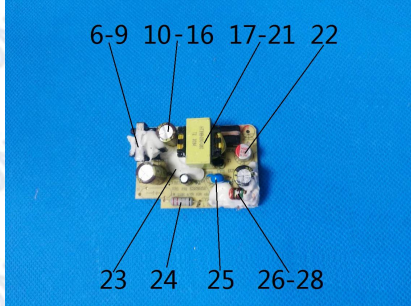
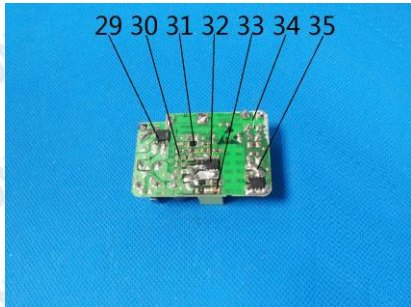
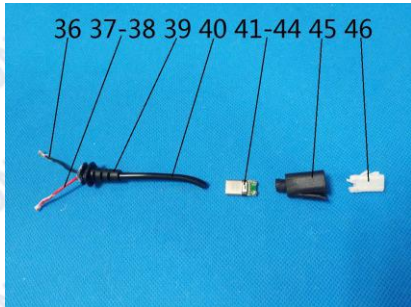
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Material No.	Description (Location)	Photo(s) of tested materials
27	Red metal(coil, inductor)	
28	Green magnet(core, inductor)	
29	Black body(BD, PCB)	
30	Black body(resistor, PCB)	
31	Black body(diode, PCB)	
32	Black body(IC, PCB)	
33	Brown body(capacitor, PCB)	
34	Green PCB	
35	Silvery solder(PCB)	
36	Black soft plastic(wire jacket)	
37	Red soft plastic(wire jacket)	
38	Coppery metal(wire)	
39	Black plastic(SR)	
40	Black soft plastic(cable jacket)	
41	Silvery metal(tube, USB plug)	
42	Black plastic(tube, USB plug)	
43	Green PCB	
44	Silvery solder(PCB)	
45	Black plastic(shell, USB plug)	
46	White plastic(sealing, USB plug)	

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Test Result(s):

(1) Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)

Test Method: IEC62321-3-1: 2013, IEC62321-4: 2013+A1:2017, IEC62321-5: 2013, IEC62321-6: 2015, IEC 62321-7-1:2015, IEC 62321-7-2: 2017, analyzed by EDXRF & ICP-OES & GC-MS & UV-Vis.

No.	EDXRF Result ⁽¹⁾					Chemical Result ⁽²⁾ (mg/kg)	Remark ⁽³⁾	Conclusion
	Pb	Cd	Hg	Cr	Br			
1	BL	BL	BL	BL	BL	—	—	PASS
2	BL	BL	BL	BL	BL	—	—	PASS
3	BL	BL	BL	BL	BL	—	—	PASS
4	BL	BL	BL	BL	BL	—	—	PASS
5	BL	BL	BL	BL	BL	—	—	PASS
6	BL	BL	BL	BL	BL	—	—	PASS
7	BL	BL	BL	BL	BL	—	—	PASS
8	BL	BL	BL	BL	BL	—	—	PASS
9	BL	BL	BL	BL	BL	—	—	PASS
10	BL	BL	BL	BL	BL	—	—	PASS
11	BL	BL	BL	BL	BL	—	—	PASS
12	BL	BL	BL	BL	BL	—	—	PASS
13	BL	BL	BL	BL	BL	—	—	PASS
14	BL	BL	BL	BL	BL	—	—	PASS
15	BL	BL	BL	BL	BL	—	—	PASS
16	BL	BL	BL	BL	BL	—	—	PASS
17	BL	BL	BL	BL	BL	—	—	PASS
18	BL	BL	BL	BL	BL	—	—	PASS
19	BL	BL	BL	BL	BL	—	—	PASS
20	BL	BL	BL	BL	BL	—	—	PASS
21	BL	BL	BL	BL	BL	—	—	PASS
22	BL	BL	BL	BL	BL	—	—	PASS
23	BL	BL	BL	BL	BL	—	—	PASS

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No.	EDXRF Result ⁽¹⁾					Chemical Result ⁽²⁾ (mg/kg)	Remark ⁽³⁾	Conclusion
	Pb	Cd	Hg	Cr	Br			
24	BL	BL	BL	BL	BL	—	—	PASS
25	BL	BL	BL	BL	BL	—	—	PASS
26	BL	BL	BL	BL	BL	—	—	PASS
27	BL	BL	BL	BL	BL	—	—	PASS
28	BL	BL	BL	BL	BL	—	—	PASS
29	BL	BL	BL	BL	BL	—	—	PASS
30	BL	BL	BL	BL	BL	—	—	PASS
31	BL	BL	BL	BL	BL	—	—	PASS
32	BL	BL	BL	BL	BL	—	—	PASS
33	BL	BL	BL	BL	BL	—	—	PASS
34	BL	BL	BL	BL	X	PBBs: N.D. PBDEs: N.D.	—	PASS
35	BL	BL	BL	BL	BL	—	—	PASS
36	BL	BL	BL	BL	BL	—	—	PASS
37	BL	BL	BL	BL	BL	—	—	PASS
38	BL	BL	BL	BL	BL	—	—	PASS
39	BL	BL	BL	BL	BL	—	—	PASS
40	BL	BL	BL	BL	BL	—	—	PASS
41	BL	BL	BL	BL	BL	—	—	PASS
42	BL	BL	BL	BL	BL	—	—	PASS
43	BL	BL	BL	BL	X	PBBs: N.D. PBDEs: N.D.	—	PASS
44	BL	BL	BL	BL	BL	—	—	PASS
45	BL	BL	BL	BL	BL	—	—	PASS
46	BL	BL	BL	BL	BL	—	—	PASS

Remark:

(1) ① Results are obtained by EDXRF for primary screening, and further wet chemical testing by ICP-OES (for Cd,

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Pb, Hg), UV-VIS (for Cr(VI)) and GC/MS (for PBBs, PBDEs) is recommended to be performed, if an inconclusive result was found (as "X" in below table) (unit: mg/kg).

②OL = Over Limit, BL = Below Limit, X = Inconclusive..

③The EDXRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

Element	Polymer	Metal	Composite Materials
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Br	$BL \leq (300-3\sigma) < X$	NA	$BL \leq (250-3\sigma) < X$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$

Units and limits in EU RoHS Directive 2011/65/EU:

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit	1000	100	1000	1000	1000	1000

(2) ① mg/kg = ppm = 0.0001%, N.D. = Not Detected (Less than RL).

②Unit and RL (Report limit) in wet chemical test.

Element	Pb	Cd	Hg	Cr(VI)	PBBs(single)	PBDEs(single)
Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
RL	2	2	2	2	5	5

③According to IEC 62321-7-1:2015, result on Cr(VI) for metal sample is shown as Positive/Negative.

Negative = Absence of Cr(VI) coating, Positive = Presence of Cr(VI) coating.

Storage condition and production date of the tested sample are unavailable and thus results of Cr(VI) represent status of the sample at the time of testing.

④ According to IEC 62321-3-1:2013, this column represents the results of wet chem test.

(3) This column represents the exempted decoration of material or other related testing sample's information.

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(2) Phthalates (DBP, BBP, DEHP, DIBP) content

Test Method: IEC 62321-8: 2017, analyzed by gas chromatographic- mass spectrometer (GC-MS).

Test Method: IEC 62271-3: 2017, analyzed by gas chromatographic-mass spectrometer (GC-MS).					
Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
RL (mg/kg)	30	30	30	30	
Material No.	Result (mg/kg)				
1	N.D.	N.D.	N.D.	N.D.	PASS
2	N.D.	N.D.	N.D.	N.D.	PASS
3	N.D.	N.D.	N.D.	N.D.	PASS
4	N.D.	N.D.	N.D.	N.D.	PASS
5	N.D.	N.D.	N.D.	N.D.	PASS
6	N.D.	N.D.	N.D.	N.D.	PASS
7	N.D.	N.D.	N.D.	N.D.	PASS
8	N.D.	N.D.	N.D.	N.D.	PASS
9	N.D.	N.D.	N.D.	N.D.	PASS
10	N.D.	N.D.	N.D.	N.D.	PASS
11	N.D.	N.D.	N.D.	N.D.	PASS
12	N.D.	N.D.	N.D.	N.D.	PASS
13	N.D.	N.D.	N.D.	N.D.	PASS
14	N.D.	N.D.	N.D.	N.D.	PASS
15	N.D.	N.D.	N.D.	N.D.	PASS
16	N.D.	N.D.	N.D.	N.D.	PASS
17	N.D.	N.D.	N.D.	N.D.	PASS
18	N.D.	N.D.	N.D.	N.D.	PASS
19	N.D.	N.D.	N.D.	N.D.	PASS
20	N.D.	N.D.	N.D.	N.D.	PASS
21	N.D.	N.D.	N.D.	N.D.	PASS
22	N.D.	N.D.	N.D.	N.D.	PASS

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Substances	DBP	BBP	DEHP	DIBP	Conclusion
CAS No.	84-74-2	85-68-7	117-81-7	84-69-5	
Limit (mg/kg)	1000	1000	1000	1000	
RL (mg/kg)	30	30	30	30	
Material No.	Result (mg/kg)				Conclusion
23	N.D.	N.D.	N.D.	N.D.	
24	N.D.	N.D.	N.D.	N.D.	
25	N.D.	N.D.	N.D.	N.D.	
26	N.D.	N.D.	N.D.	N.D.	
27	N.D.	N.D.	N.D.	N.D.	
28	N.D.	N.D.	N.D.	N.D.	
29	N.D.	N.D.	N.D.	N.D.	
30	N.D.	N.D.	N.D.	N.D.	
31	N.D.	N.D.	N.D.	N.D.	
32	N.D.	N.D.	N.D.	N.D.	
33	N.D.	N.D.	N.D.	N.D.	
34	N.D.	N.D.	N.D.	N.D.	
35	N.D.	N.D.	N.D.	N.D.	
36	394	N.D.	N.D.	N.D.	
37	523	N.D.	N.D.	N.D.	
38	N.D.	N.D.	N.D.	N.D.	
39	N.D.	N.D.	N.D.	N.D.	
40	N.D.	N.D.	N.D.	N.D.	
41	N.D.	N.D.	N.D.	N.D.	
42	N.D.	N.D.	N.D.	N.D.	
43	N.D.	N.D.	N.D.	N.D.	
44	N.D.	N.D.	N.D.	N.D.	
45	N.D.	N.D.	N.D.	N.D.	
46	N.D.	N.D.	N.D.	N.D.	

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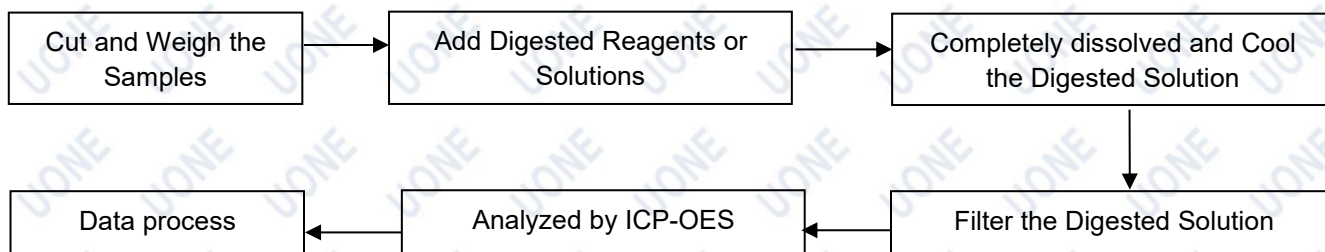
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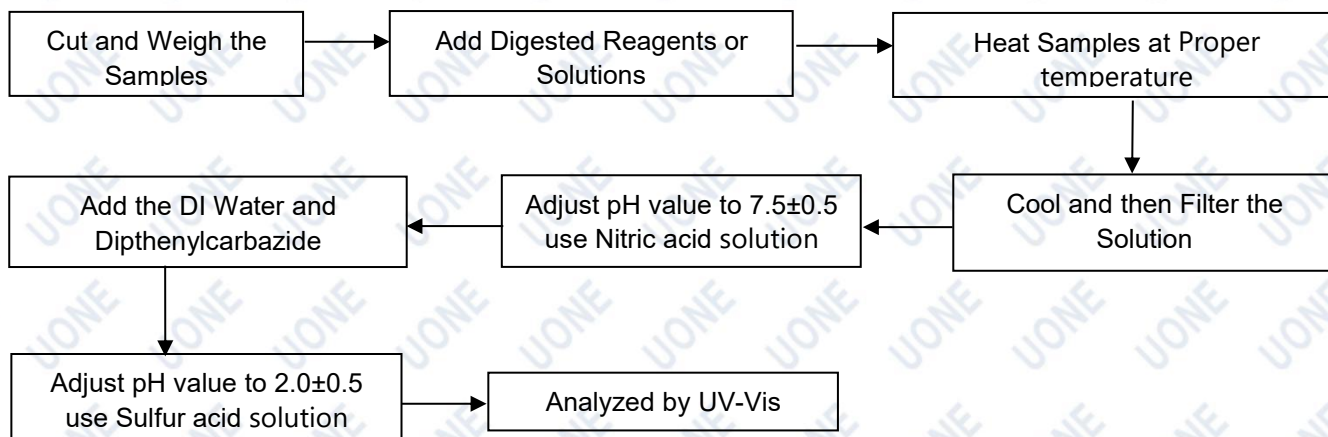
- Note:**
1. mg/kg = milligram per kilogram (ppm).
 2. RL = report limit.
 3. N.D.=not detected(less than RL).

Test Process Flow

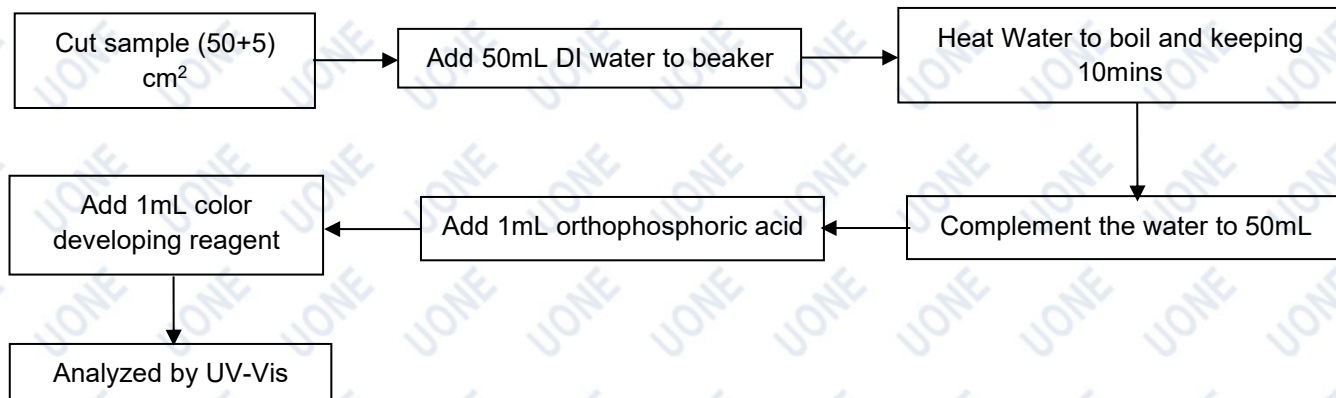
1. Lead, Cadmium, Mercury



2. Hexavalent Chromium (Non-metal)



Hexavalent Chromium (Metal)



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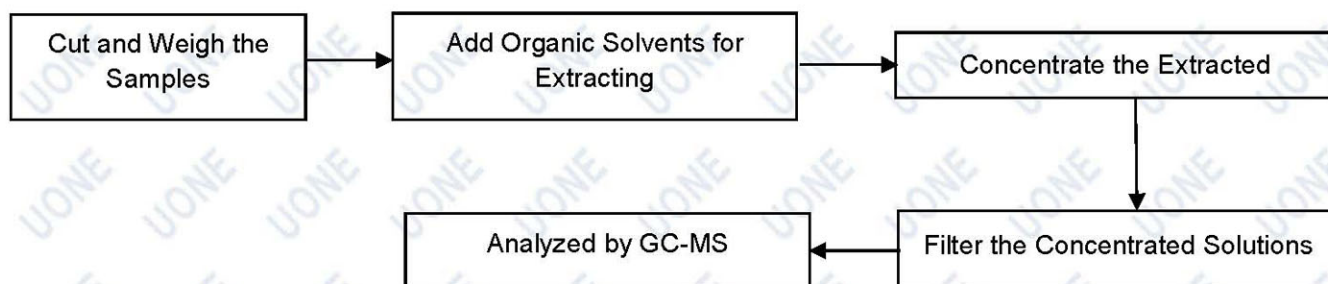
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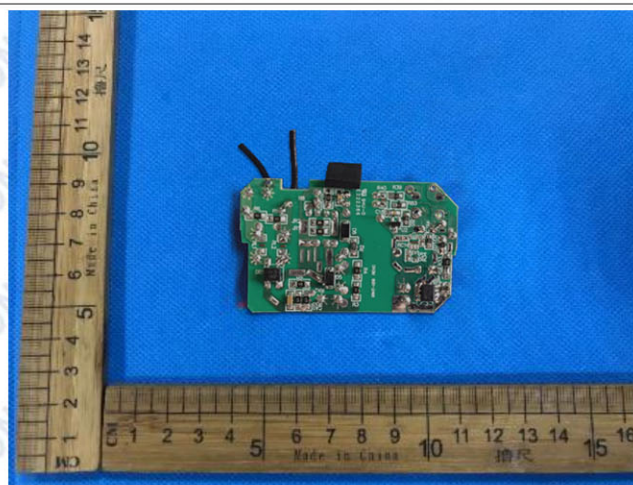
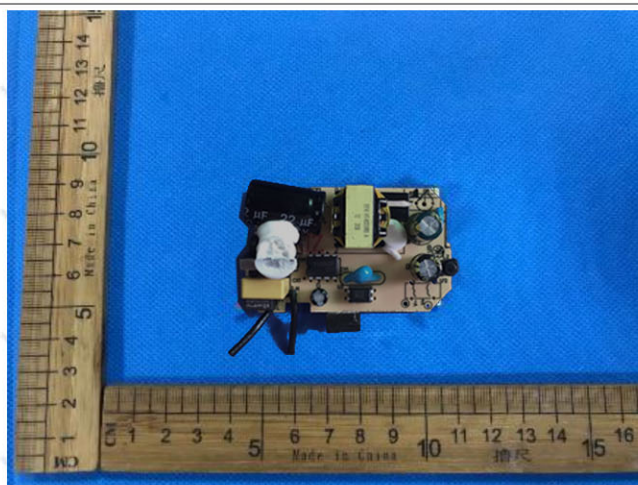
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Test Process Flow (Continued):

3. PBBs & PBDEs, Phthalates



Photo(s) of Sample:



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