



# Test Report

Report No. A2250461545107

Page 1 of 15

**Company Name** DONGGUAN AILLEN ELECTRONIC TECHNOLOGY CO., LTD.  
**shown on Report**  
**Address** NO.32, JINGGANG ZHONG ROAD, SHATIAN TOWN, DONGGUAN CITY,  
GUANGDONG PROVINCE, P. R. CHINA

**The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant**

**Sample Name** Dip Aluminum Eletrolytic Capacitor(low voltage)  
**Sample Received Date** Jul. 3, 2025  
**Testing Period** Jul. 3, 2025 to Jul. 10, 2025

**Test Requested** As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the submitted sample(s).

**Test Method/Test Result(s)** Please refer to the following page(s).



Approved by

Anso Fang

Date

Jul. 23, 2025

Anso Fang

Lab Authorized Signatory

No. R179751867

Centre Testing International Group Co.,Ltd.

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

Test Report

Report No. A2250461545107 Page 2 of 15

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Conclusion

Tested Sample	According to standard/directive	Result
Submitted Sample	RoHS Directive 2011/65/EU with amendment (EU) 2015/863	PASS

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PASS means that the results shown on the report comply with the limits set by RoHS Directive 2011/65/EU with amendment (EU) 2015/863.

Test Report

Report No. A2250461545107

Page 3 of 15

Test Method

Tested Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS

# Test Report

Report No. A2250461545107

Page 4 of 15

**Test Result(s)**

Tested Item(s)	Result			RL	Limit
	1	2	3		
Lead (Pb)	N.D.	N.D.	N.D.	10 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	N.D.	N.D.	10 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	N.D.	N.D.	10 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	--	N.D. ▼	N.D. ▼	0.10 $\mu\text{g}/\text{cm}^2$ (LOQ)	1000 mg/kg
	N.D.	--	--	20 mg/kg	1000 mg/kg

Tested Item(s)	Result			RL	Limit
	4	5	6		
Lead (Pb)	N.D.	N.D.	N.D.	10 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	N.D.	N.D.	10 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	N.D.	N.D.	10 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	--	--	--	0.10 $\mu\text{g}/\text{cm}^2$ (LOQ)	1000 mg/kg
	N.D.	N.D.	N.D.	20 mg/kg	1000 mg/kg

Tested Item(s)	Result		RL	Limit
	7	8		
Lead (Pb)	N.D.	N.D.	10 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	N.D.	10 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	N.D.	10 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	N.D. ▼	N.D. ▼	0.10 $\mu\text{g}/\text{cm}^2$ (LOQ)	1000 mg/kg
	--	--	20 mg/kg	1000 mg/kg

# Test Report

Report No. A2250461545107

Page 5 of 15

Tested Item(s)	Result			RL	Limit
	1	4	5		
Polybrominated Biphenyls (PBBs)					
Monobromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	
Tribromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	
Tetrabromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	
Pentabromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	
Hexabromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	
Heptabromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	
Octabromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	
Nonabromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	
Decabromobiphenyl	N.D.	N.D.	N.D.	100 mg/kg	

Tested Item(s)	Result		RL	Limit
	2	3		
Polybrominated Biphenyls (PBBs)*				
Monobromobiphenyl	N.D.	N.D.	100 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	N.D.	100 mg/kg	
Tribromobiphenyl	N.D.	N.D.	100 mg/kg	
Tetrabromobiphenyl	N.D.	N.D.	100 mg/kg	
Pentabromobiphenyl	N.D.	N.D.	100 mg/kg	
Hexabromobiphenyl	N.D.	N.D.	100 mg/kg	
Heptabromobiphenyl	N.D.	N.D.	100 mg/kg	
Octabromobiphenyl	N.D.	N.D.	100 mg/kg	
Nonabromobiphenyl	N.D.	N.D.	100 mg/kg	
Decabromobiphenyl	N.D.	N.D.	100 mg/kg	

# Test Report

Report No. A2250461545107

Page 6 of 15

Tested Item(s)	Result	RL	Limit
	6		
Polybrominated Biphenyls (PBBs)			
Monobromobiphenyl	N.D.	100 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	100 mg/kg	
Tribromobiphenyl	N.D.	100 mg/kg	
Tetrabromobiphenyl	N.D.	100 mg/kg	
Pentabromobiphenyl	N.D.	100 mg/kg	
Hexabromobiphenyl	N.D.	100 mg/kg	
Heptabromobiphenyl	N.D.	100 mg/kg	
Octabromobiphenyl	N.D.	100 mg/kg	
Nonabromobiphenyl	N.D.	100 mg/kg	
Decabromobiphenyl	N.D.	100 mg/kg	

Tested Item(s)	Result		RL	Limit
	7	8		
Polybrominated Biphenyls (PBBs)				
Monobromobiphenyl	N.D.	N.D.	100 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	N.D.	100 mg/kg	
Tribromobiphenyl	N.D.	N.D.	100 mg/kg	
Tetrabromobiphenyl	N.D.	N.D.	100 mg/kg	
Pentabromobiphenyl	N.D.	N.D.	100 mg/kg	
Hexabromobiphenyl	N.D.	N.D.	100 mg/kg	
Heptabromobiphenyl	N.D.	N.D.	100 mg/kg	
Octabromobiphenyl	N.D.	N.D.	100 mg/kg	
Nonabromobiphenyl	N.D.	N.D.	100 mg/kg	
Decabromobiphenyl	N.D.	N.D.	100 mg/kg	

## Test Report

Report No. A2250461545107

Page 7 of 15

Tested Item(s)	Result			RL	Limit
	1	4	5		
Polybrominated Diphenyl Ethers (PBDEs)					
Monobromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	
Tribromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	
Tetrabromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	
Pentabromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	
Hexabromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	
Heptabromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	
Octabromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	
Nonabromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	
Decabromodiphenyl ether	N.D.	N.D.	N.D.	100 mg/kg	

Tested Item(s)	Result		RL	Limit
	2	3		
Polybrominated Diphenyl Ethers (PBDEs)*				
Monobromodiphenyl ether	N.D.	N.D.	100 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Tribromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Tetrabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Pentabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Hexabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Heptabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Octabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Nonabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Decabromodiphenyl ether	N.D.	N.D.	100 mg/kg	

## Test Report

Report No. A2250461545107

Page 8 of 15

Tested Item(s)	Result	RL	Limit
	6		
Polybrominated Diphenyl Ethers (PBDEs)			
Monobromodiphenyl ether	N.D.	100 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	100 mg/kg	
Tribromodiphenyl ether	N.D.	100 mg/kg	
Tetrabromodiphenyl ether	N.D.	100 mg/kg	
Pentabromodiphenyl ether	N.D.	100 mg/kg	
Hexabromodiphenyl ether	N.D.	100 mg/kg	
Heptabromodiphenyl ether	N.D.	100 mg/kg	
Octabromodiphenyl ether	N.D.	100 mg/kg	
Nonabromodiphenyl ether	N.D.	100 mg/kg	
Decabromodiphenyl ether	N.D.	100 mg/kg	

Tested Item(s)	Result		RL	Limit
	7	8		
Polybrominated Diphenyl Ethers (PBDEs)				
Monobromodiphenyl ether	N.D.	N.D.	100 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Tribromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Tetrabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Pentabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Hexabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Heptabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Octabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Nonabromodiphenyl ether	N.D.	N.D.	100 mg/kg	
Decabromodiphenyl ether	N.D.	N.D.	100 mg/kg	



# Test Report

Report No. A2250461545107

Page 9 of 15

Tested Item(s)	Result			RL	Limit
	1	4	5		
Phthalates (DBP, BBP, DEHP, DIBP)					
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	N.D.	50 mg/kg	1000 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	N.D.	50 mg/kg	1000 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	N.D.	50 mg/kg	1000 mg/kg

Tested Item(s)	Result		RL	Limit
	2	3		
Phthalates (DBP, BBP, DEHP, DIBP)*				
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	50 mg/kg	1000 mg/kg
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	50 mg/kg	1000 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	50 mg/kg	1000 mg/kg

# Test Report

Report No. A2250461545107

Page 10 of 15

Tested Item(s)	Result	RL	Limit
	6		
Phthalates (DBP, BBP, DEHP, DIBP)			
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

Tested Item(s)	Result		RL	Limit
	7	8		
Phthalates (DBP, BBP, DEHP, DIBP)				
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	50 mg/kg	1000 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	50 mg/kg	1000 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	50 mg/kg	1000 mg/kg

## Sample/Part Description

No.	CTI Sample ID	Description
1	1	Green plastic with golden printing
2	2	Silvery metal pin
3	3	Silvery white metal
4	4	Transparent adhesive tape
5	5	Black rubber
6	6	White paper
7	7	Grey metal foil
8	8	Silvery grey metal foil

## Test Report

Report No. A2250461545107

Page 11 of 15

**Remark:** The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

-RL=Report Limit

-N.D. = Not Detected (<RL or LOQ)

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10  $\mu\text{g}/\text{cm}^2$

-▼The sample is negative for Cr(VI) – The Cr(VI) concentration is below 0.10  $\mu\text{g}/\text{cm}^2$ . The coating is considered a non-Cr(VI) based coating. Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

-In consideration of the analysis requirement and the limit of sample volume, the screening test for the article is based on components / material enough to test.

**Note:** “\*” indicates the item(s)/method(s) is (are) not in CNAS accreditation scope.

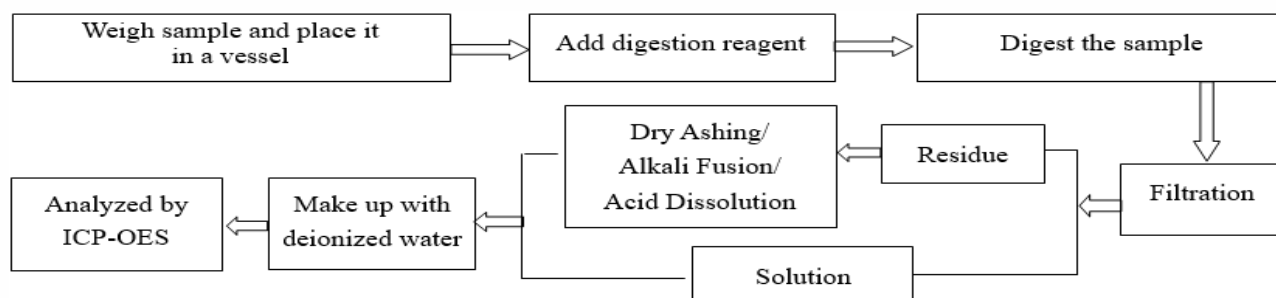
# Test Report

Report No. A2250461545107

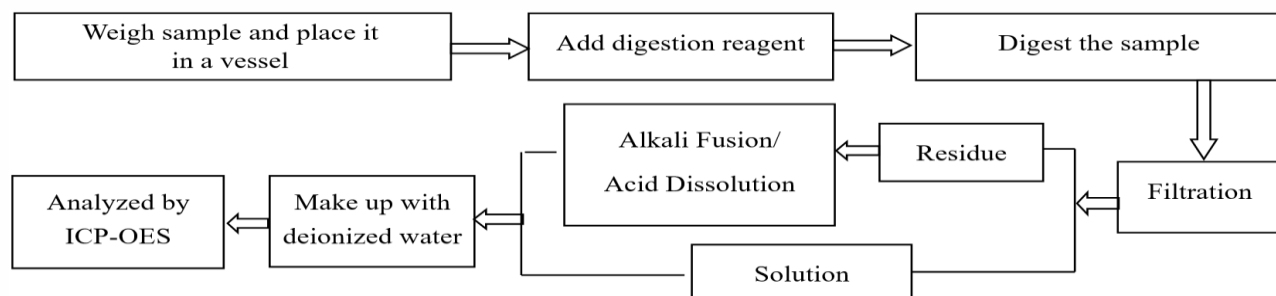
Page 12 of 15

## Test Process

### 1. Lead (Pb), Cadmium (Cd), Chromium(Cr)

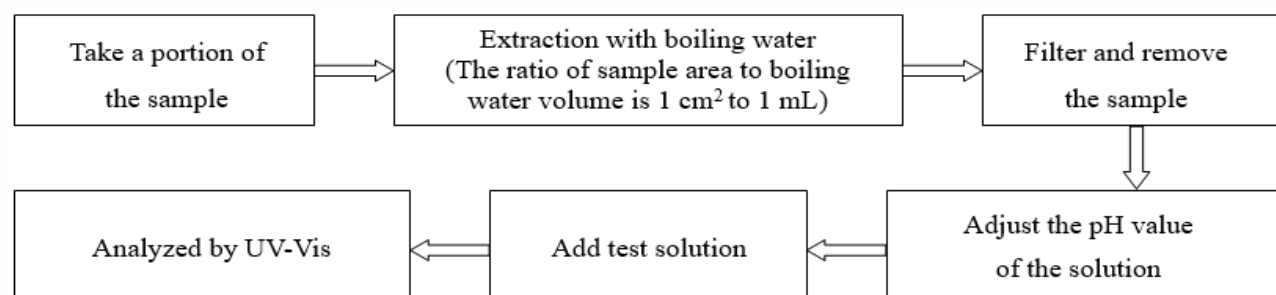


### 2. Mercury (Hg)

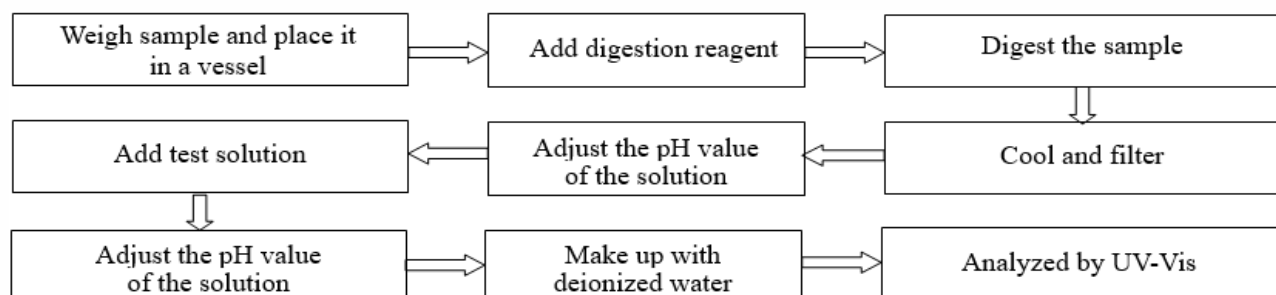


### 3. Hexavalent Chromium (Cr(VI))

#### (1) IEC 62321-7-1:2015



#### (2) IEC 62321-7-2:2017

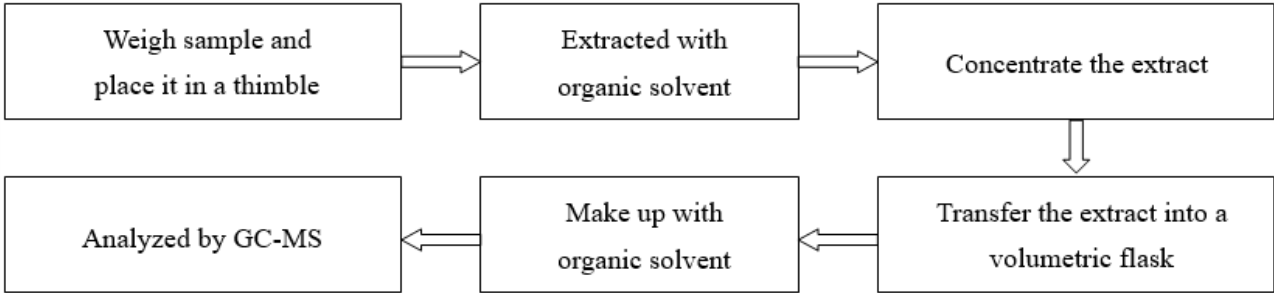


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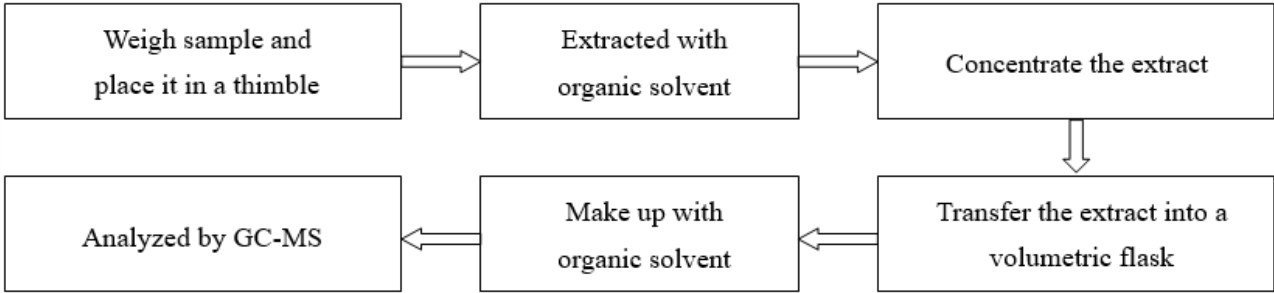
Report No. A2250461545107

Page 13 of 15

4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)



5. Phthalates (DBP, BBP, DEHP, DIBP)



Test Report

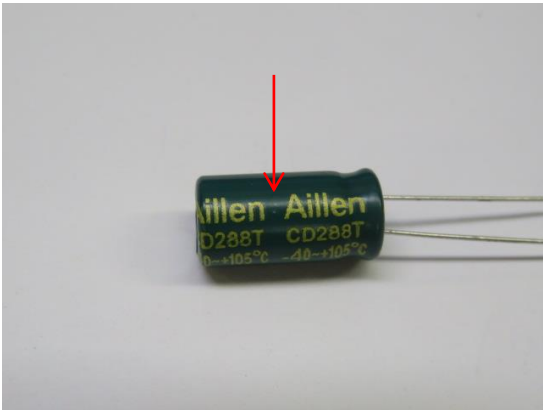
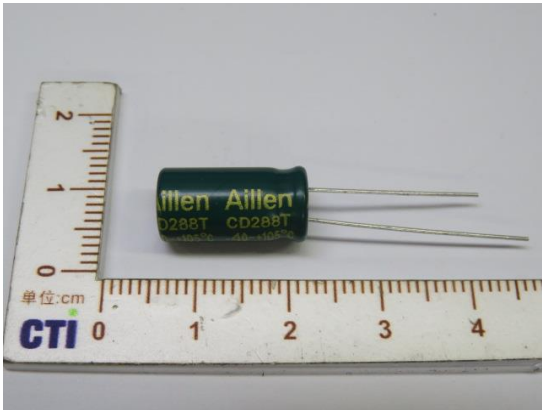
Report No. A2250461545107

Page 14 of 15

Photo(s) of the sample(s)

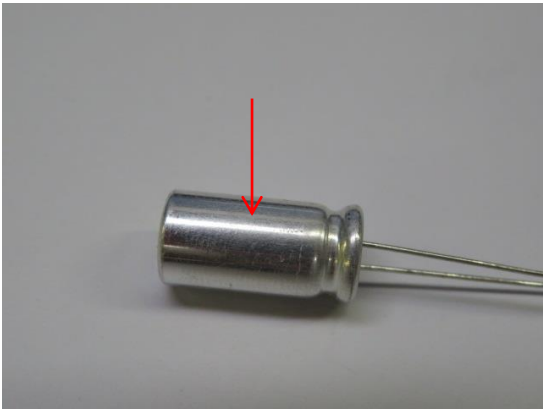
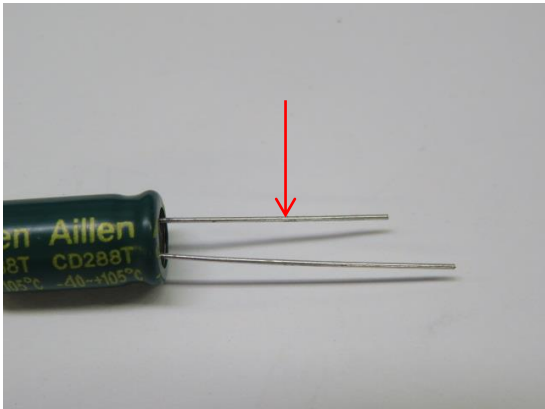
Final Product

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# Test Report

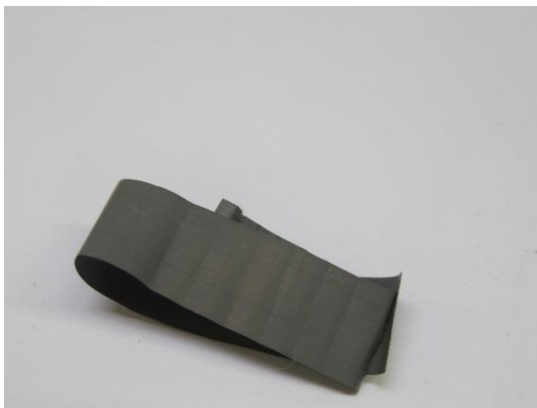
Report No. A2250461545107

Page 15 of 15

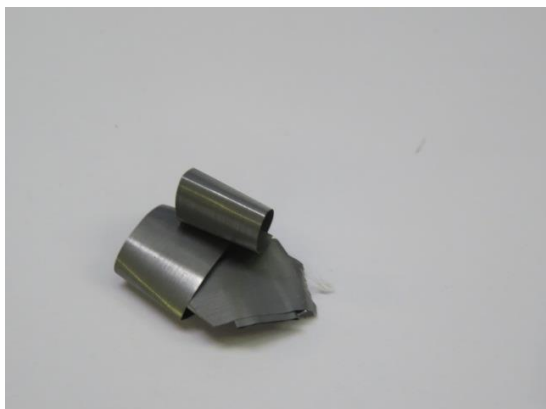
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## Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule ( $w=0$ ) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;
6. In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

\*\*\* End of Report \*\*\*