



## Test Report

Report No. A223014320310102

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Company Name JIANGSU MICRO COMMERCIAL COMPONENTS CO.,LTD

shown on Report

Address NO.6 WEST HEYE ROAD, HANJIANG DISTRICT, YANGZHOU, JIANGSU, CHINA

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

CTI Sample ID	Sample Name(s)	Material
001	Module	银色金属
002		白色固体
003		透明软固体
004		高温焊片
005		--
006		--
007		--
008		--
009		--
010		--
011		--

Sample Received Date Mar. 31, 2023

Testing Period Mar. 31, 2023 to Apr. 20, 2023

## 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

*Chen Kaimin*

Date

Apr. 27, 2023

Chen kaimin  
Lab Manager

No. R475311936

Centre Testing International Pinbiao(Shanghai) Co., Ltd.

No.1351, Wanfang Road, Minhang District, Shanghai, China

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**Conclusion**

<b>Tested Sample</b>	<b>According to standard/directive</b>	<b>Result</b>
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.

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## Test Method

Tested Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
	Refer to IEC 62321-5:2013	
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
	Refer to IEC 62321-5:2013	
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
	Refer to IEC 62321-4:2013+AMD1:2017 CSV	
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 Result(s)

Tested Item(s)	Result			MDL	Limit
	001	002	003		
Lead (Pb)	N.D.	11 mg/kg	N.D.	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	N.D.	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	N.D.	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	--	N.D.	N.D.	8 mg/kg	1000 mg/kg
	N.D.▼	--	--	0.10 $\mu\text{g}/\text{cm}^2$ (LOQ)	1000 mg/kg

Tested Item(s)	Result			MDL	Limit
	004	005	006		
Lead (Pb)	902259 mg/kg*	N.D.	N.D.	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	N.D.	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	N.D.	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	--	--	--	8 mg/kg	1000 mg/kg
	N.D.▼	N.D.▼	N.D.▼	0.10 $\mu\text{g}/\text{cm}^2$ (LOQ)	1000 mg/kg

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Tested Item(s)	Result			MDL	Limit
	007	008	009		
Lead (Pb)	N.D.	N.D.	38 mg/kg	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	N.D.	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	N.D.	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	--	N.D.	--	8 mg/kg	1000 mg/kg
	N.D.▼	--	N.D.▼	0.10 µg/cm <sup>2</sup> (LOQ)	1000 mg/kg

Tested Item(s)	Result		MDL	Limit
	010	011		
Lead (Pb)	72 mg/kg	N.D.	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.	--	8 mg/kg	1000 mg/kg
	--	N.D.▼	0.10 µg/cm <sup>2</sup> (LOQ)	1000 mg/kg

Tested Item(s)	Result			MDL	Limit
	002	003	008		
<b>Polybrominated Biphenyls (PBBs)</b>					
Monobromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	
Tribromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	
Tetrabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	
Pentabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	
Hexabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	
Heptabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	
Octabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	
Nonabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	
Decabromobiphenyl	N.D.	N.D.	N.D.	5 mg/kg	

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Tested Item(s)	Result		MDL	Limit
	010			
<b>Polybrominated Biphenyls (PBBs)</b>				
Monobromobiphenyl	N.D.		5 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.		5 mg/kg	
Tribromobiphenyl	N.D.		5 mg/kg	
Tetrabromobiphenyl	N.D.		5 mg/kg	
Pentabromobiphenyl	N.D.		5 mg/kg	
Hexabromobiphenyl	N.D.		5 mg/kg	
Heptabromobiphenyl	N.D.		5 mg/kg	
Octabromobiphenyl	N.D.		5 mg/kg	
Nonabromobiphenyl	N.D.		5 mg/kg	
Decabromobiphenyl	N.D.		5 mg/kg	

Tested Item(s)	Result			MDL	Limit
	002	003	008		
<b>Polybrominated Diphenyl Ethers (PBDEs)</b>					
Monobromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	
Tribromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	
Tetrabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	
Pentabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	
Hexabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	
Heptabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	
Octabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	
Nonabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	
Decabromodiphenyl ether	N.D.	N.D.	N.D.	5 mg/kg	

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Tested Item(s)	Result		MDL	Limit
	010			
<b>Polybrominated Diphenyl Ethers (PBDEs)</b>				
Monobromodiphenyl ether	N.D.		5 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.		5 mg/kg	
Tribromodiphenyl ether	N.D.		5 mg/kg	
Tetrabromodiphenyl ether	N.D.		5 mg/kg	
Pentabromodiphenyl ether	N.D.		5 mg/kg	
Hexabromodiphenyl ether	N.D.		5 mg/kg	
Heptabromodiphenyl ether	N.D.		5 mg/kg	
Octabromodiphenyl ether	N.D.		5 mg/kg	
Nonabromodiphenyl ether	N.D.		5 mg/kg	
Decabromodiphenyl ether	N.D.		5 mg/kg	

Tested Item(s)	Result			MDL	Limit
	002	003	008		
<b>Phthalates (DBP, BBP, DEHP, DIBP)</b>					
Dibutyl phthalate (DBP) CAS#:84-74-2	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
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	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

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Tested Item(s)	Result		MDL	Limit
	010			
<b>Phthalates (DBP, BBP, DEHP, DIBP)</b>				
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.		50 mg/kg	1000 mg/kg
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
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.		50 mg/kg	1000 mg/kg

Tested Item(s)	Result		MDL	Limit
	001	004		
<b>Polybrominated Biphenyls (PBBs)</b>				
Monobromobiphenyl	N.D.	N.D.	5 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	N.D.	5 mg/kg	
Tribromobiphenyl	N.D.	N.D.	5 mg/kg	
Tetrabromobiphenyl	N.D.	N.D.	5 mg/kg	
Pentabromobiphenyl	N.D.	N.D.	5 mg/kg	
Hexabromobiphenyl	N.D.	N.D.	5 mg/kg	
Heptabromobiphenyl	N.D.	N.D.	5 mg/kg	
Octabromobiphenyl	N.D.	N.D.	5 mg/kg	
Nonabromobiphenyl	N.D.	N.D.	5 mg/kg	
Decabromobiphenyl	N.D.	N.D.	5 mg/kg	

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Tested Item(s)	Result		MDL	Limit
	001	004		
<b>Polybrominated Diphenyl Ethers (PBDEs)</b>				
Monobromodiphenyl ether	N.D.	N.D.	5 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	N.D.	5 mg/kg	
Tribromodiphenyl ether	N.D.	N.D.	5 mg/kg	
Tetrabromodiphenyl ether	N.D.	N.D.	5 mg/kg	
Pentabromodiphenyl ether	N.D.	N.D.	5 mg/kg	
Hexabromodiphenyl ether	N.D.	N.D.	5 mg/kg	
Heptabromodiphenyl ether	N.D.	N.D.	5 mg/kg	
Octabromodiphenyl ether	N.D.	N.D.	5 mg/kg	
Nonabromodiphenyl ether	N.D.	N.D.	5 mg/kg	
Decabromodiphenyl ether	N.D.	N.D.	5 mg/kg	

Tested Item(s)	Result		MDL	Limit
	001	004		
<b>Phthalates (DBP, BBP, DEHP, DIBP)</b>				
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
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	001	Metal base
2	002	White plastic
3	003	Colorless transparent adhesive
4	004	Silvery metal
5	005	Silvery plating
6	006	Metal base
7	007	Silvery metal wire
8	008	Chip
9	009	Cupreous metal
10	010	White ceramic
11	011	Silvery plating



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

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL 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.

-\*=According to the client's statement, the material of the sample(s) fall into exemption items 7(a) according to EU Directive 2011/65/EU: Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).

**-According to the client's statement, the Company Name shown on Report in this report and the Company Name shown on Report in the report A2230143203101 are the Group-subsiary relations,the test result(s) of this report is/are presented in reference to the result(s) that reported in A2230143203101.**

# Test Report

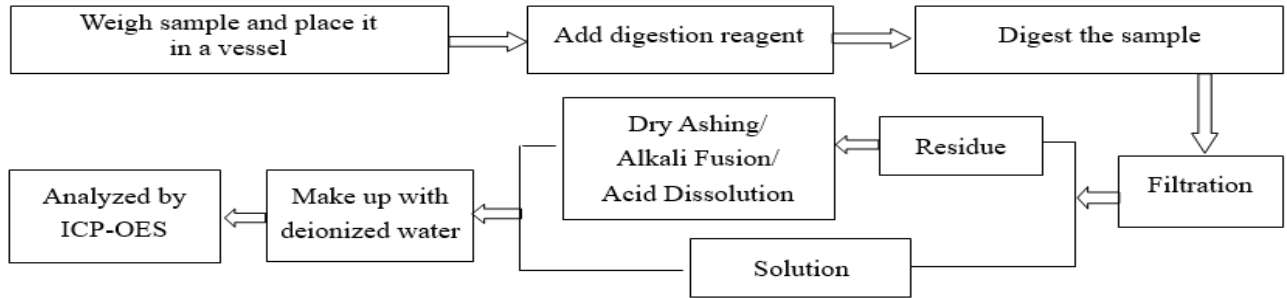
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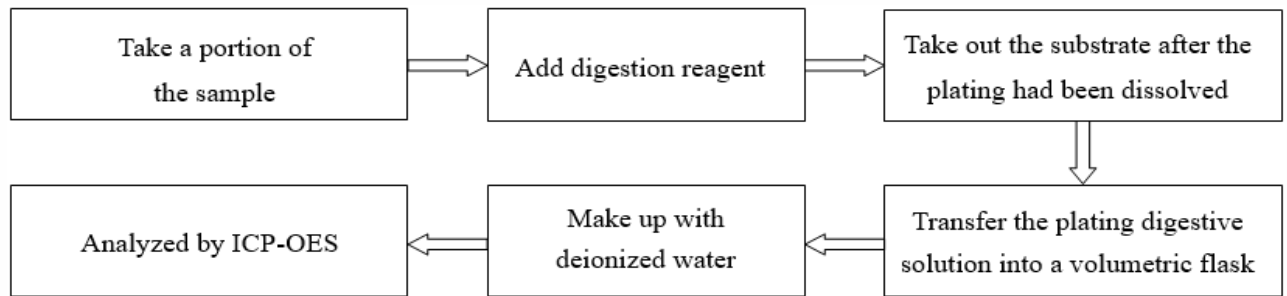
## Test Process

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

#### (1) IEC 62321-5:2013

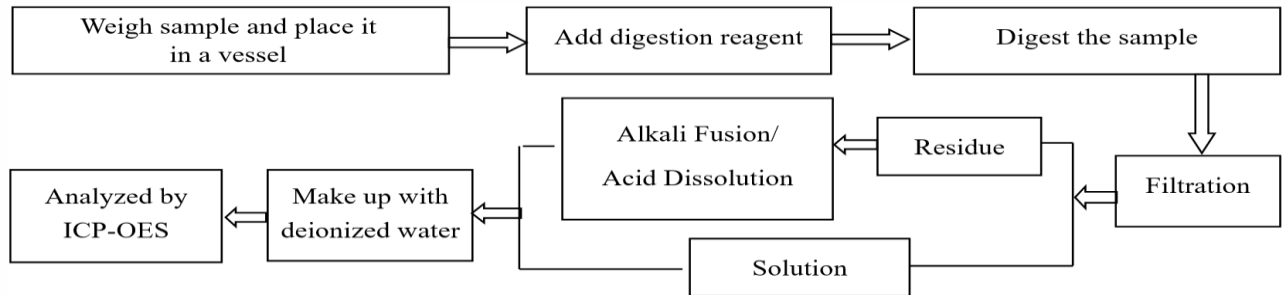


#### (2) Refer to IEC 62321-5:2013

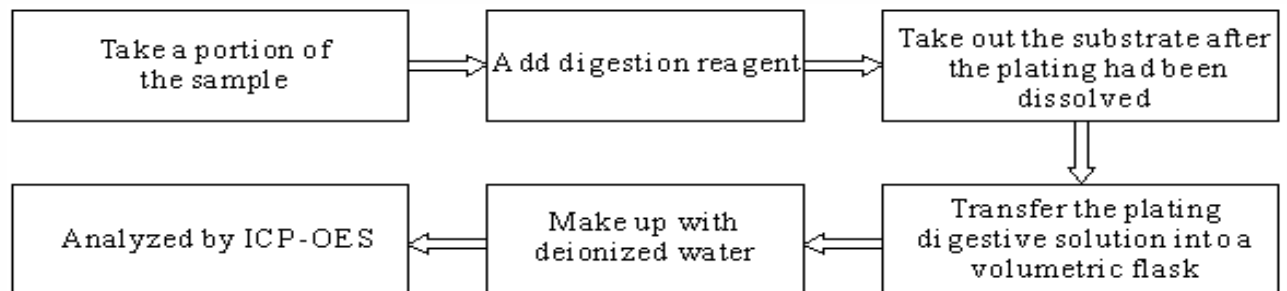


### 2. Mercury (Hg)

#### (1) IEC 62321-4:2013+AMD1:2017 CSV



#### (2) Refer to IEC 62321-4:2013+AMD1:2017 CSV



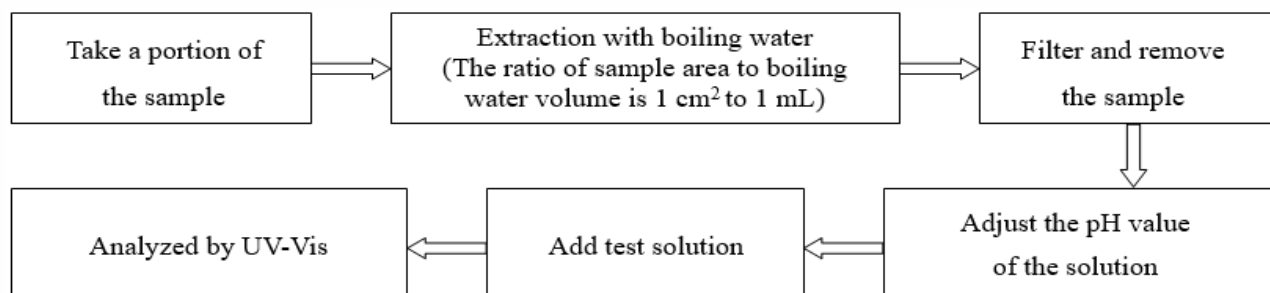
# Test Report

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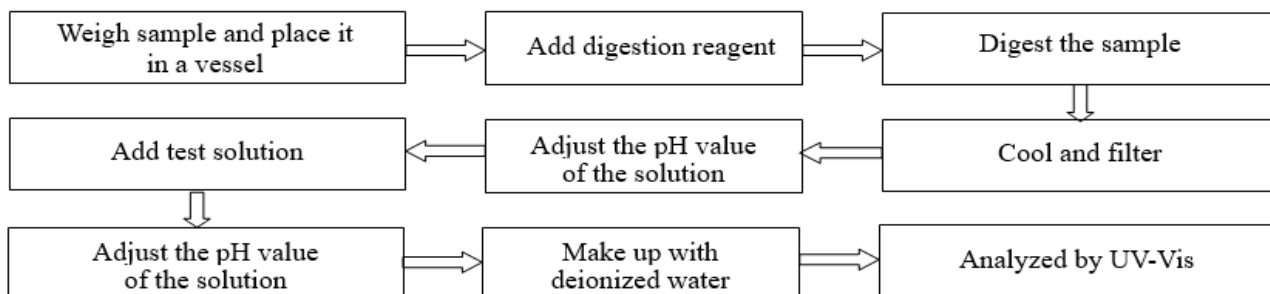
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### 3. Hexavalent Chromium (Cr(VI))

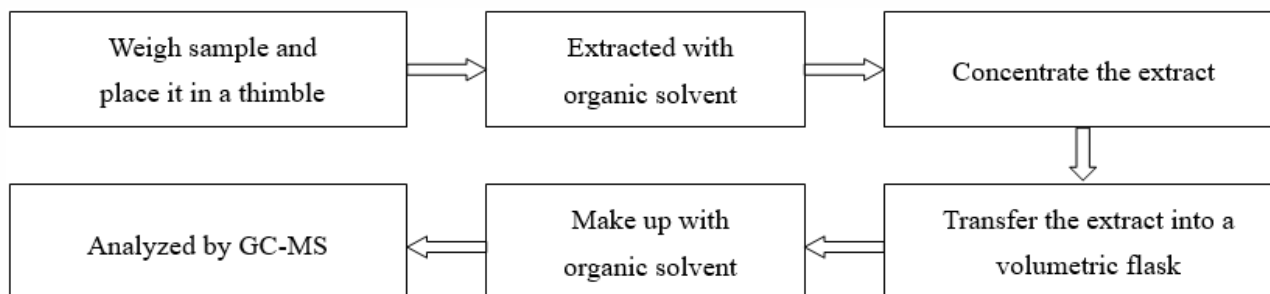
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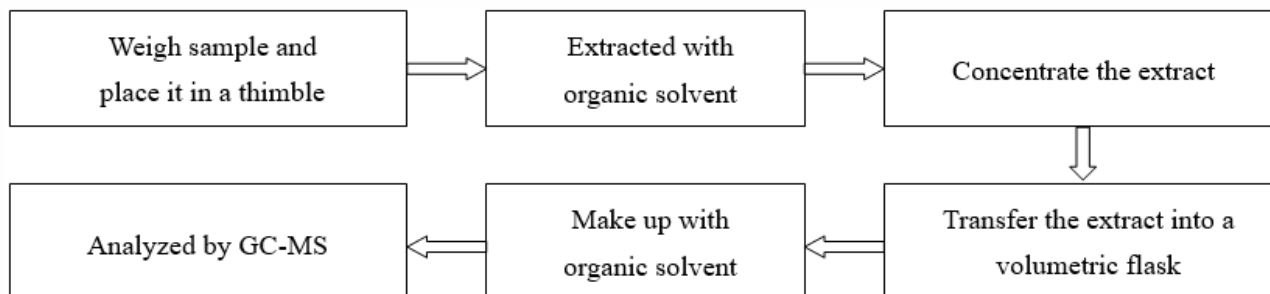
#### (2) IEC 62321-7-2:2017



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



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



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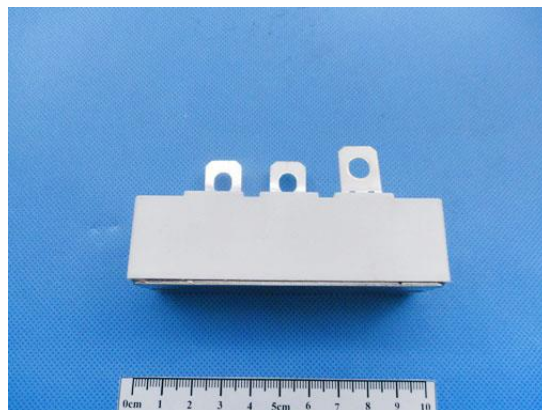
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## Photo(s) of the sample(s)

Final Product



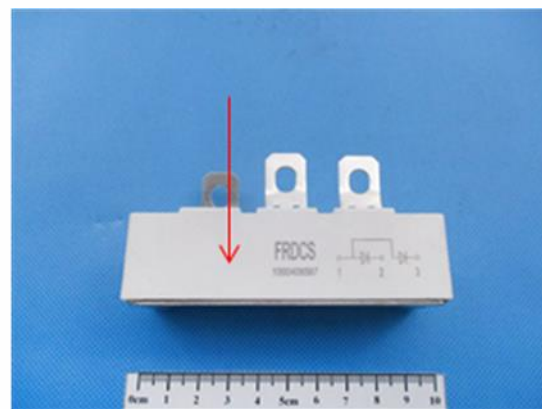
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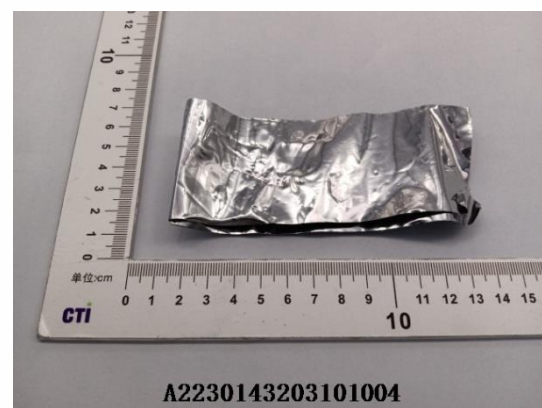
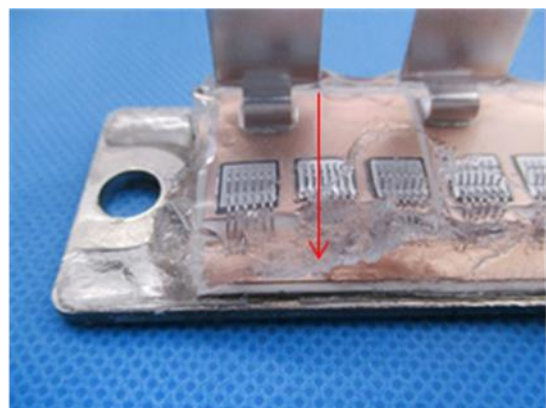
002



003



004

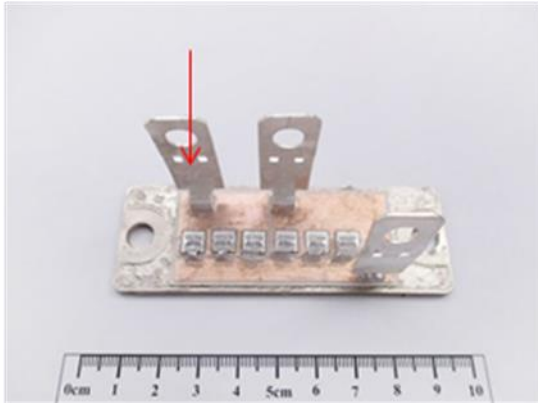


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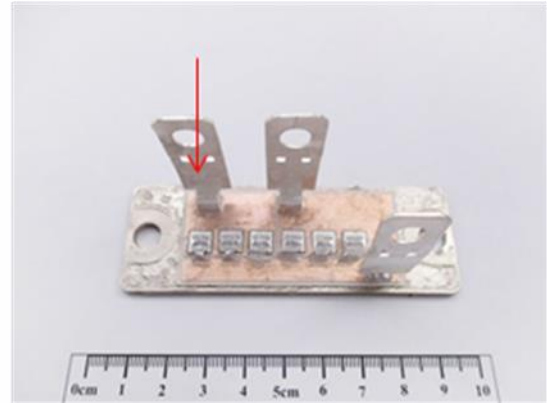
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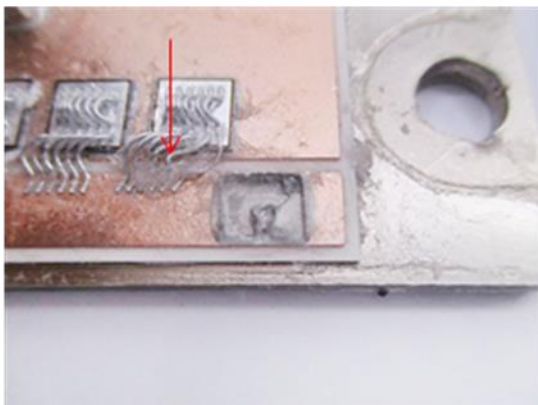
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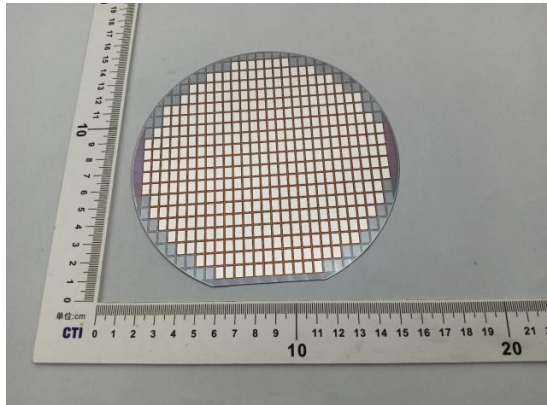
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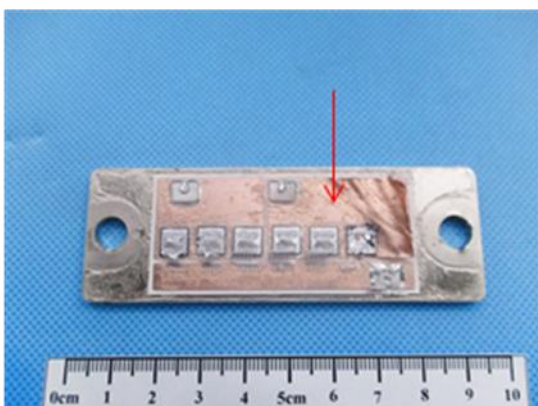
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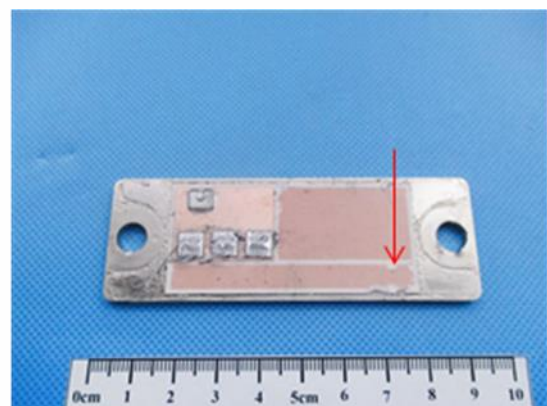
008



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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. Without written approval of CTI, this report can't be reproduced except in full;
5. 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 \*\*\*



## Appendix

### Client Reference Information

D1、D2、DA、M1、M2、NM2、M3、NM3、M4、M5、M7、M8、F3、F4N、F5、F6、FJ、C1、C2、L1、L2、T1、T2、D1N、MT、GJ、F1、F2、F2N、FS、P1、P2、P3、E1、E1A、E2、E2A、M9、T1A、T1D、F1N、T2A、C21、C3、E3、P4

### Client Reference Photo(Non-tested sample)

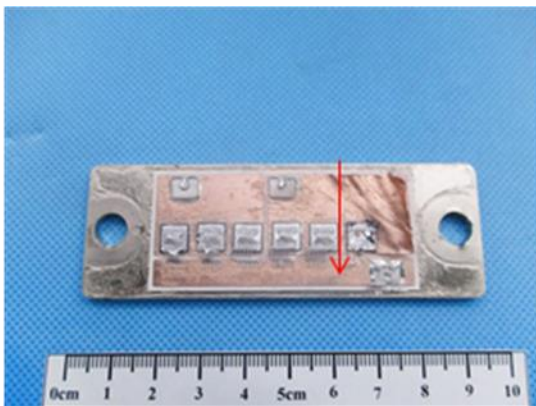
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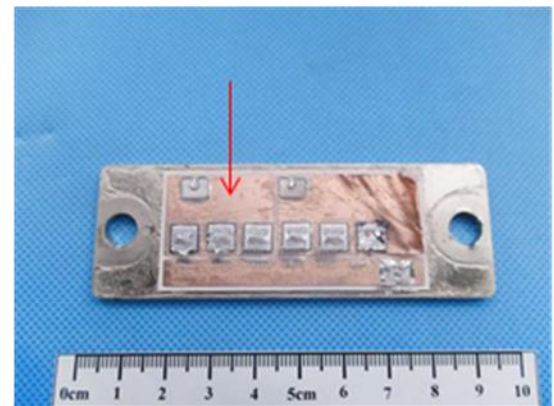
006



009



009



### Statement:

1. The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. The Appendix Information is/are the supplement(s) for the Report A223014320310102.