



# Verification Report

Report No. A2180258692101

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## CENTRE TESTING INTERNATIONAL



**Applicant** SHENZHEN SKIHOTAR SEMICONDUCTOR CO.,LTD.  
**Address** A1806, GOLDEN CENTRAL BUSINESS BUILDING, NO. 3037  
JINTIAN ROAD, FUTIAN DISTRICT, SHENZHEN, CHINA  
**Product Name** DDR3 Memory Module

### Conclusion

Tested Sample	According to Standard	Result
Submitted Sample	GB/T26572-2011	Pass

Pass means that the results shown on the report comply with the limits set by GB/T26572-2011.

Tested by Crit Qin

Reviewed by Danna Fan



Approved by Hill Zheng  
Hill Zheng  
Technical Manager

Date Mar. 1, 2019

No.S140383008

Centre Testing International Group Co.,Ltd.

C11 Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

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

Product Part No.	DDR3 Memory Module
Client Reference Information	STxU3xxxxxx;STxL3xxxxxx/x stands for different frequency and capacity.
Sample Received Date	Dec. 27, 2018
Testing Period	Dec. 27, 2018 to Mar. 1, 2019

**Test Requested**

- 1.As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr) and Bromine(Br) in the submitted sample(s) by XRF.
- 2.As specified by client, when screening results exceed the XRF screening limit in GB/T26572-2011, further use of chemical methods are required to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls(PBBs), Polybrominated Diphenyl Ethers(PBDEs) in the submitted samples.

**Photo(s) of the Product(s)**

## DDR3 Memory Module



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## Test Method

### A.Screening limits for regulated elements according to GB/T26572-2011(Unit: mg/kg)

Element	Test Method	Polymers	Metals	Composite material
Pb	GB/T26125-2011 Screening – Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$ $< (1500+3\sigma) \leq OL$
Cd		$BL \leq (70-3\sigma) < X < (130+3\sigma)$ $\leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma)$ $\leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Hg		$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X$ $< (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X$ $< (1500+3\sigma) \leq OL$
Cr		$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br		$BL \leq (300-3\sigma) < X$	N/A	$BL \leq (250-3\sigma) < X$

### B.Chemical Test

Tested Item(s)	Test Method	Measured Equipment(s)	MDL	Limit
Lead (Pb)	GB/T26125-2011	ICP-OES	10 mg/kg	1000 mg/kg
Cadmium (Cd)	GB/T26125-2011	ICP-OES	10 mg/kg	100 mg/kg
Mercury (Hg)	GB/T26125-2011	ICP-OES	10 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	GB/T26125-2011	UV-Vis	/	1000 mg/kg
	GB/T26125-2011	UV-Vis	10 mg/kg	
Polybrominated Biphenyls (PBBs)	GB/T26125-2011	GC-MS	100mg/kg	1000 mg/kg
Polybrominated Diphenyl Ethers(PBDEs)	GB/T26125-2011	GC-MS	100mg/kg	1000 mg/kg

### Remark:

- BL = Under the screening limit
- OL = Above the screening limit
- X =The range of needing to do further testing
- $3\sigma$ =The reproducibility of analytical instruments
- N/A= Not applicable
- LOD= Detection limit

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## Test Result(s)

Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
001	Silvery metal	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	N/A	/		
002	Transparent/blue tape with adhesive paste	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
003	White double-sided adhesive paste	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
004	White label with black printing	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
005	Silvery metal	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	N/A	/		
006	Black resistance (Tested as a whole)	Pb	OL	192	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		

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Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
007	Light brown capacitance (Tested as a whole)	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
008	Black resistance (Tested as a whole)	Pb	OL	580	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
009	Brown capacitance (Tested as a whole)	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
010	IC (Tested as a whole)	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
011	Black resistance (Tested as a whole)	Pb	OL	178	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	IN	N.D.		
		Br(PBBs&PBDEs)	BL	/		
012	Brown capacitance (Tested as a whole)	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		

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Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
013	Brown-yellow capacitance (Tested as a whole)	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
014	Gray-white capacitance (Tested as a whole)	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
015	IC (Tested as a whole)	Pb	OL	684	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
016	Brown capacitance (Tested as a whole)	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	BL	/		
017	Black resistance (Tested as a whole)	Pb	OL	150	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	IN	N.D.		
		Br(PBBs&PBDEs)	BL	/		
018	PCB (Tested as a whole)	Pb	BL	/	PASS	Dec. 27, 2018
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	BL	/		
		Br(PBBs&PBDEs)	IN	N.D.		

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Sample No.	Sample Description	Tested Items	XRF Screening Test	Chemical Test (mg/kg)	Conclusion	Sample Received/ Resubmitted Date
019	Silvery metal solder	Pb	BL	/	PASS	Dec. 27, 2018/ Feb. 26, 2019
		Cd	BL	/		
		Hg	BL	/		
		Cr(Cr(VI))	IN	Negative		
		Br(PBBs&PBDEs)	N/A	/		

## Remark:

- N.D. = Not Detected (<MDL)
- MDL = Method Detection Limit
- mg/kg = ppm = parts per million
- 1000 mg/kg = 0.1%
- /=Not tested
- IN= Uncertain, Further chemical test
- N/A= Not applicable
- BL = Under the screening limit
- OL = Further chemical test will be conducted while the result is above the screening limit.
- Negative = Absence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm<sup>2</sup> sample surface area used.
- When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.



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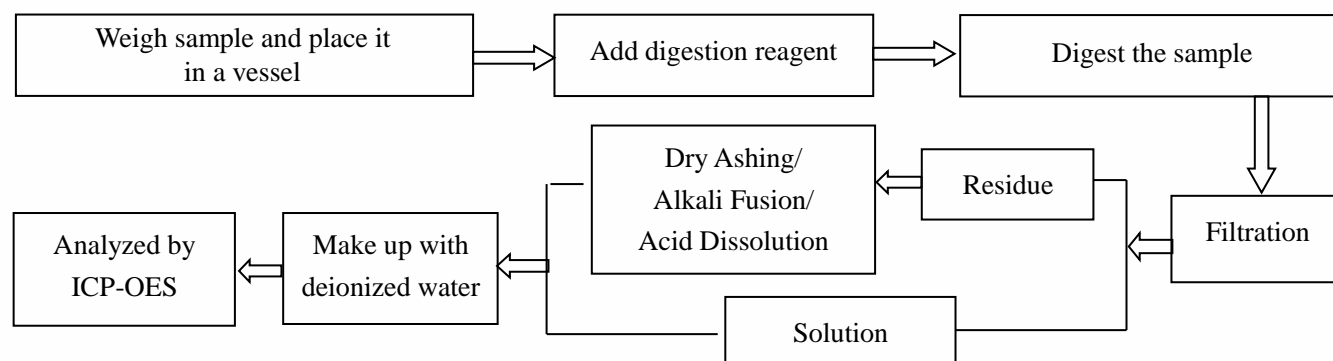
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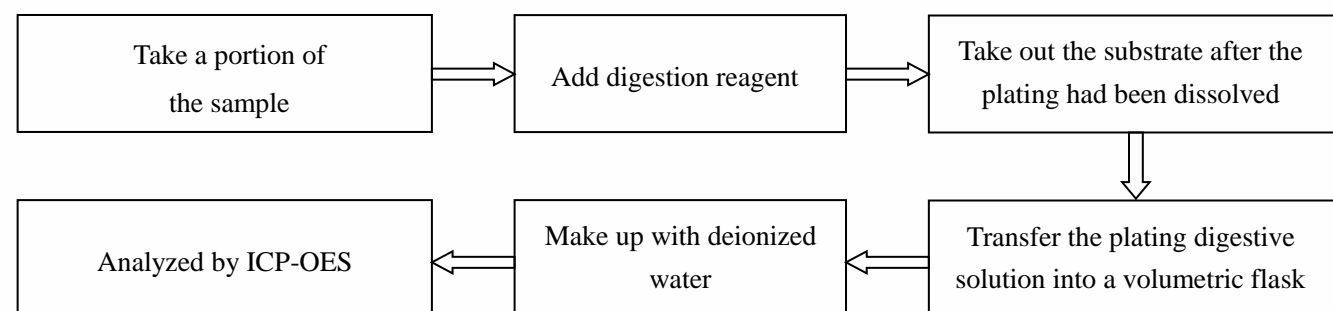
## Test Process

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

#### 1) Non-plating samples

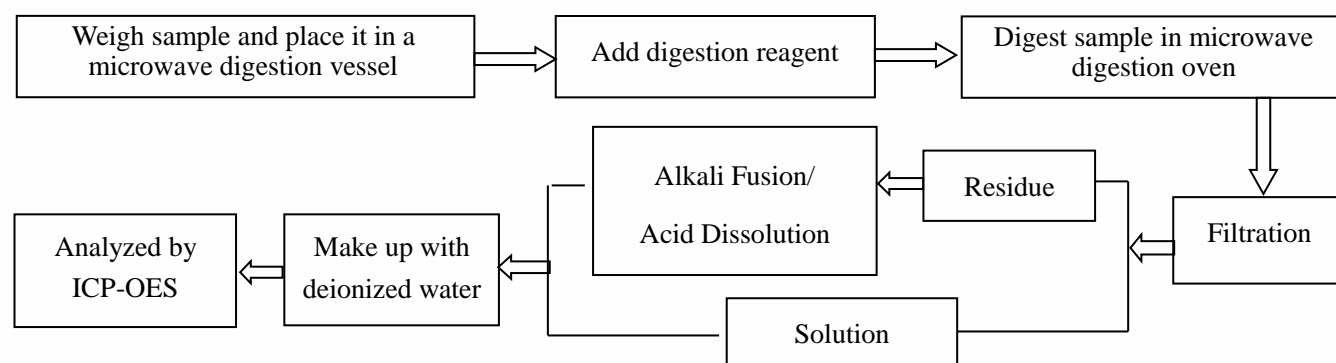


#### 2) Plating samples



### 2. Mercury (Hg)

#### 1) Non-plating samples

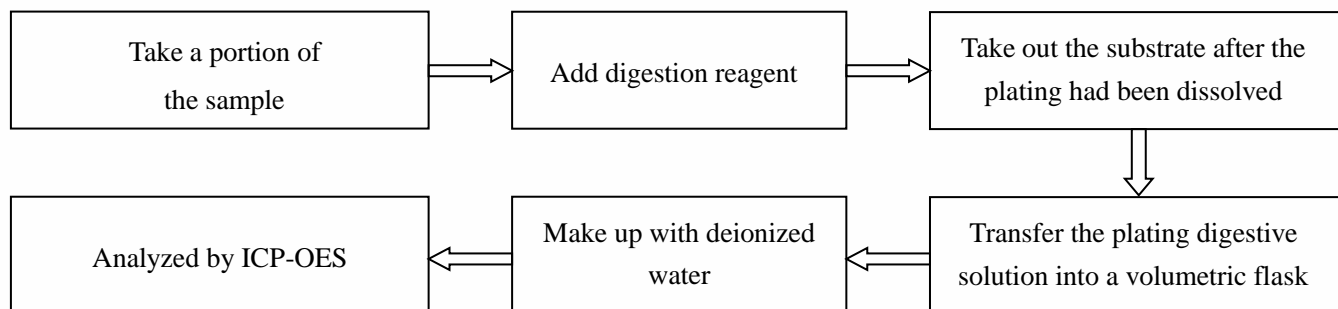


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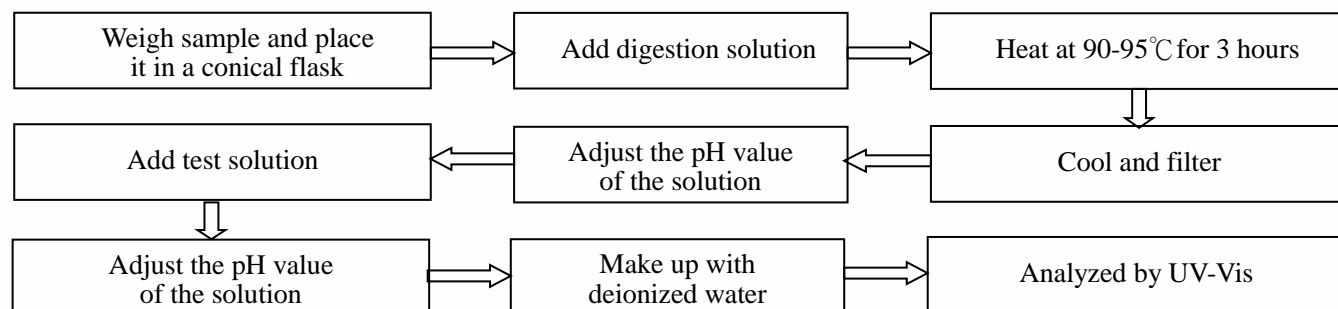
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## 2) Plating samples

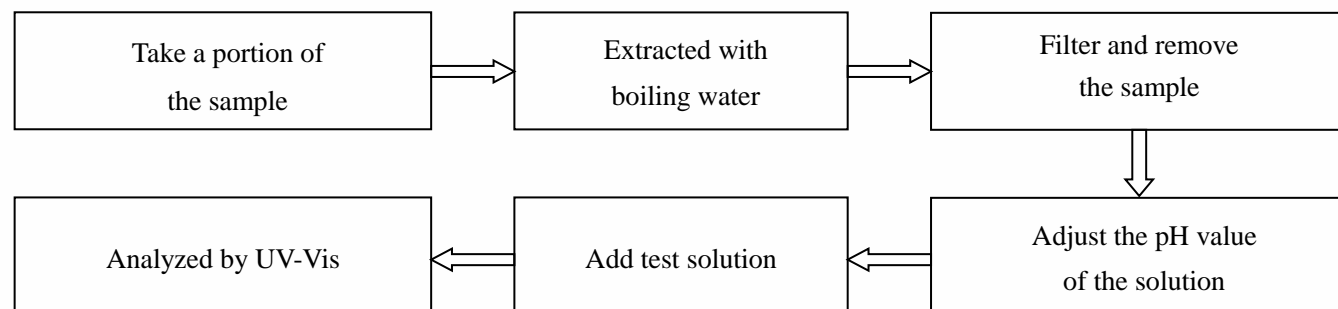


## 3. Hexavalent Chromium (Cr(VI))

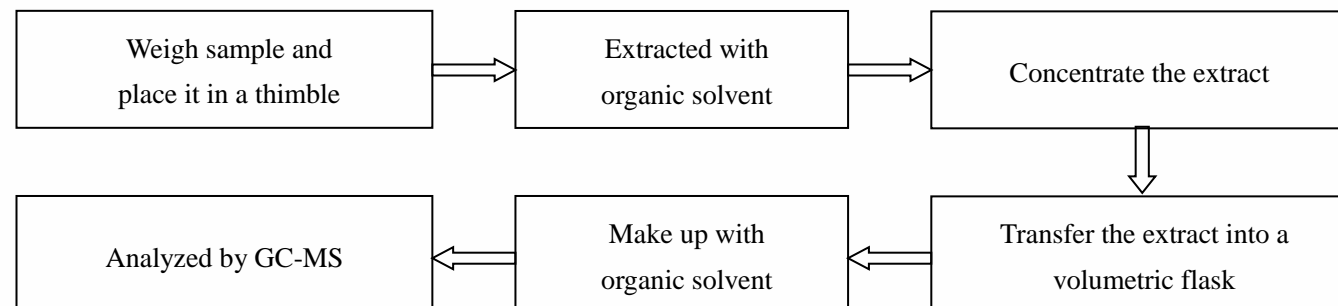
### 1) Non-metal sample(s)



### 2) Metal sample(s)



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

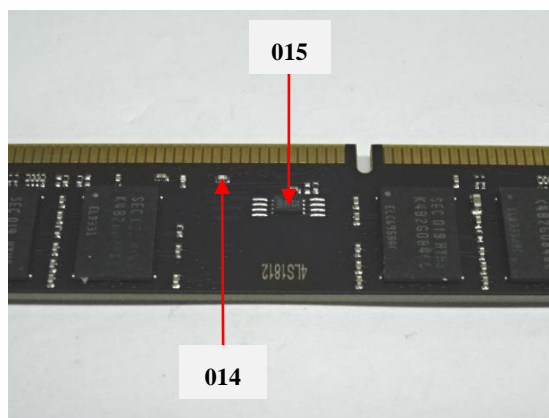
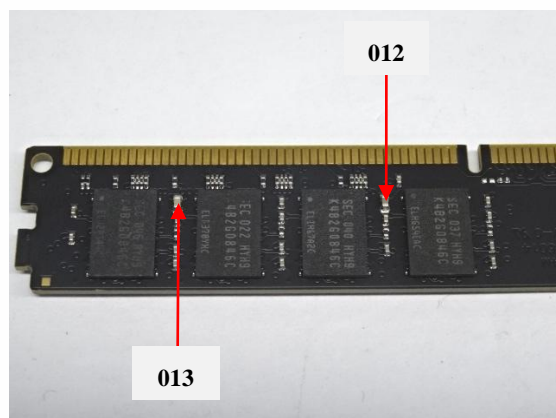
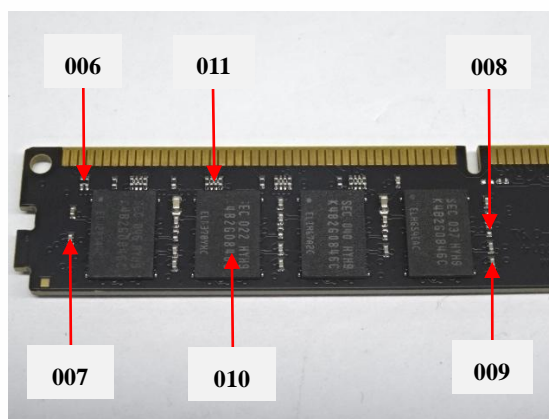
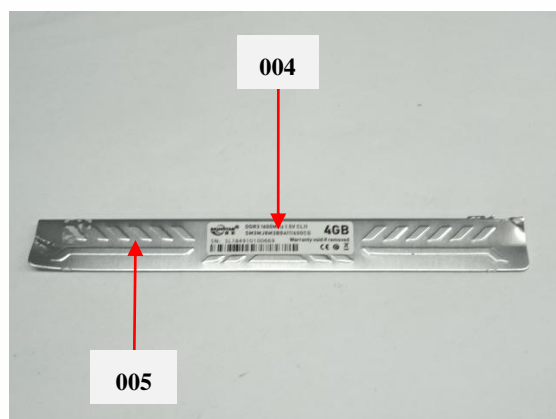
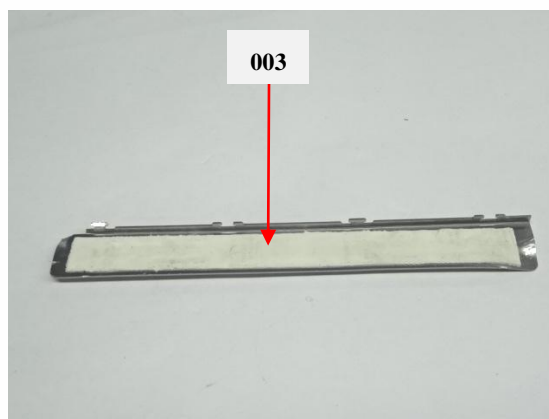
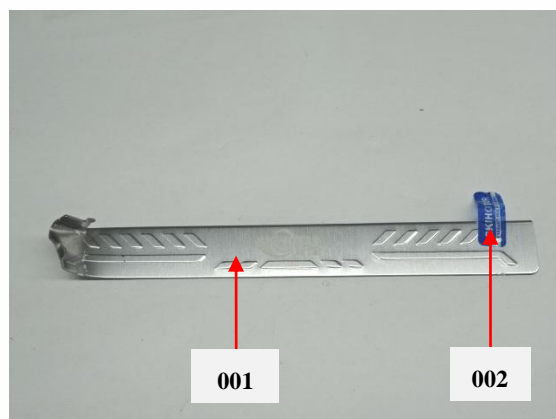


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## Photo(s) of the tested component(s)

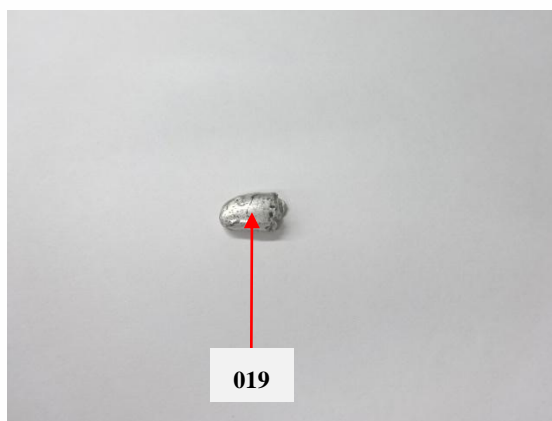
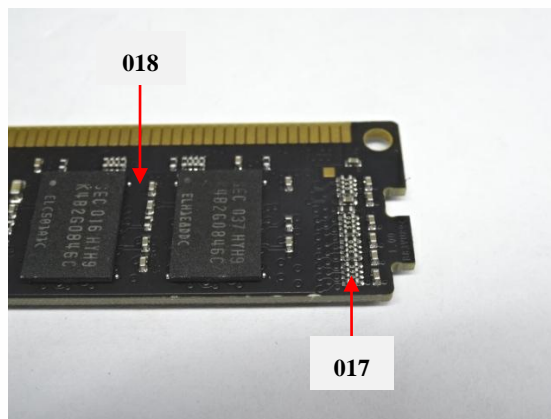
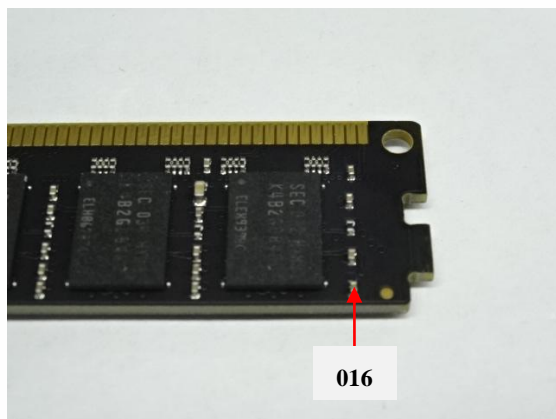


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## Photo(s) of the tested component(s)



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

### Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The sample(s) and sample information was/were provided by the client 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.