

## Test Report

No. : CE/2010/20309C Date : 2010/04/09 Page : 1 of 12


COMCHIP TECHNOLOGY CO., LTD.  
NO. 31, YONG HSIN LANE, YINGTAU ROAD, YINGGE TOWN,  
TAIPEI HSIEN, TAIWAN, R. O. C.



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

Sample Description : SMD DIOSES  
Style/Item No. : SOD-523/0603/0805/SOD-323S/SOD-323/SOD-123H/MINI-SMA  
(SOD-123)/SMA(DO-214AC)SMA-S/SMA-L/SMB(DO-214AA)/  
SMC(DO-214AB)SMC-T1/MELF(DO-213AB)/MINI-MELF(DO-213AA)  
Sample Receiving Date : 2010/02/01  
Testing Period : 2010/02/01 TO 2010/02/09

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

  
Chenyu Kung / Operation Manager  
Signed for and on behalf of  
SGS TAIWAN LTD.  
Chemical Laboratory – Taipei

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# Test Report

No. : CE/2010/20309C Date : 2010/04/09 Page : 2 of 12

COMCHIP TECHNOLOGY CO., LTD.  
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## Test Result(s)

PART NAME NO.1 : PLATING LAYER OF SILVER COLORED METAL  
PART NAME NO.2 : BASE MATERIAL OF COPPER COLORED METAL  
PART NAME NO.3 : MIXED ALL PARTS

Test Item (s):	Unit	Method	MDL	Result		
				NO.1	NO.2	NO.3
Cadmium (Cd)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
Lead (Pb)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	---	12	12000
Mercury (Hg)	mg/kg	With reference to IEC 62321: 2008 and performed by ICP-AES.	2	n.d.	n.d.	n.d.
Hexavalent Chromium Cr(VI) by Spot test / boiling water extraction	**	With reference to IEC 62321: 2008 and performed by Spot test / boiling water extraction Method. (See Note 7)	0.02 mg/kg with 50 cm <sup>2</sup> surface area	Negative	Negative	---
Hexavalent Chromium Cr(VI) by alkaline extraction	mg/kg	With reference to IEC 62321: 2008 and performed by UV-VIS.	2	---	---	n.d.
Nickel (Ni)	mg/kg	With reference to US EPA Method 3050B for Nickel Content. Analysis was performed by ICP-AES.	2	21	---	---
Perfluorooctane sulfonates (PFOS) PFOS – Acid PFOS – Metal Salt PFOS – Amide	µg/m <sup>2</sup>	With reference to US EPA 3540C: 1996 method for PFOS Content. Analysis was performed by LC/MS.	1	n.d.	---	---
PFOA (CAS No.: 000335-67-1)	µg/m <sup>2</sup>	With reference to US EPA 3540C: 1996 method for PFOA Content. Analysis was performed by LC/MS.	1	n.d.	---	---

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## Test Report

No. : CE/2010/20309C Date : 2010/04/09 Page : 3 of 12

COMCHIP TECHNOLOGY CO., LTD.

NO. 31, YONG HSIN LANE, YINGTAU ROAD, YINGGE TOWN,  
TAIPEI HSIEN, TAIWAN, R. O. C.

Test Item (s):	Unit	Method	MDL	Result		
				NO.1	NO.2	NO.3
<b>Sum of PBBs</b>	mg/kg	With reference to IEC 62321: 2008 and performed by GC/MS.	-	---	---	n.d.
Monobromobiphenyl			5	---	---	n.d.
Dibromobiphenyl			5	---	---	n.d.
Tribromobiphenyl			5	---	---	n.d.
Tetrabromobiphenyl			5	---	---	n.d.
Pentabromobiphenyl			5	---	---	n.d.
Hexabromobiphenyl			5	---	---	n.d.
Heptabromobiphenyl			5	---	---	n.d.
Octabromobiphenyl			5	---	---	n.d.
Nonabromobiphenyl			5	---	---	n.d.
Decabromobiphenyl			5	---	---	n.d.
<b>Sum of PBDEs</b>			-	---	---	n.d.
Monobromodiphenyl ether			5	---	---	n.d.
Dibromodiphenyl ether			5	---	---	n.d.
Tribromodiphenyl ether			5	---	---	n.d.
Tetrabromodiphenyl ether			5	---	---	n.d.
Pentabromodiphenyl ether			5	---	---	n.d.
Hexabromodiphenyl ether			5	---	---	n.d.
Heptabromodiphenyl ether			5	---	---	n.d.
Octabromodiphenyl ether			5	---	---	n.d.
Nonabromodiphenyl ether			5	---	---	n.d.
Decabromodiphenyl ether			5	---	---	n.d.

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SGS Taiwan Ltd.

台灣檢驗科技股份有限公司 Chemical-Taipei 33 WuChyuan Road, Wuku Industrial Zone, Taipei County, Taiwan /台北縣五股工業區五權路33號 t + 886 (02)2299 3279 f + 886 (02)2299 3237 www.sgs.com

# Test Report

No. : CE/2010/20309C Date : 2010/04/09 Page : 4 of 12

COMCHIP TECHNOLOGY CO., LTD.  
NO. 31, YONG HSIN LANE, YINGTAU ROAD, YINGGE TOWN,  
TAIPEI HSIEN, TAIWAN, R. O. C.



## Note :

1. mg/kg = ppm ; 0.1wt% = 1000ppm
2. n.d. = Not Detected
3. MDL = Method Detection Limit
4. " - " = Not Regulated
5. "---" = Not Conducted
6. \*\* = Qualitative analysis (No Unit)
7. Spot-test:  
Negative = Absence of Cr(VI) coating / surface layer; Positive = Presence of Cr(VI) coating / surface layer;  
(The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed.)

### Boiling-water-extraction:

Negative = Absence of Cr(VI) coating / surface layer; Positive = Presence of Cr(VI) coating / surface layer;  
The detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.

8. The sample(s) was/were analyzed on behalf of the applicant as mixing sample in one testing. The above result(s) was/were only given as the informality value.

## PFOS Reference Information : Directive 2006/122/EC

(1) May not be placed on the market or used as a substance or constituent of preparations in a concentration equal to or higher than 0.005 % by mass.

(2) May not be placed on the market in semi-finished products or articles, or parts thereof, if the concentration of PFOS is equal to or higher than 0.1 % by mass calculated with reference to the mass of structurally or microstructurally distinct parts that contain PFOS or, for textiles or other coated materials, if the amount of PFOS is equal to or higher than 1µg/m<sup>2</sup> of the coated material.

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# Test Report

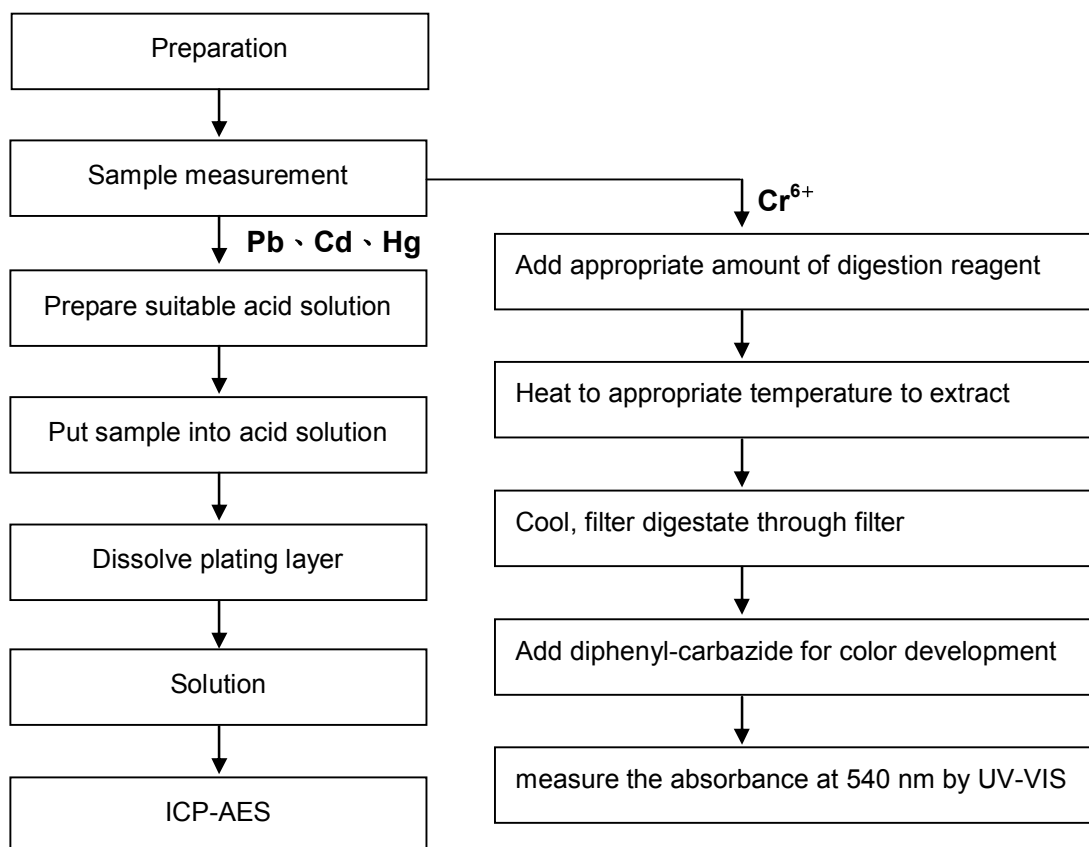
No. : CE/2010/20309C Date : 2010/04/09 Page : 5 of 12

COMCHIP TECHNOLOGY CO., LTD.  
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TAIPEI HSIEN, TAIWAN, R. O. C.  
PART NAME NO.1



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

## Flow Chart of Stripping method for metal analysis



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# Test Report

No. : CE/2010/20309C Date : 2010/04/09 Page : 6 of 12

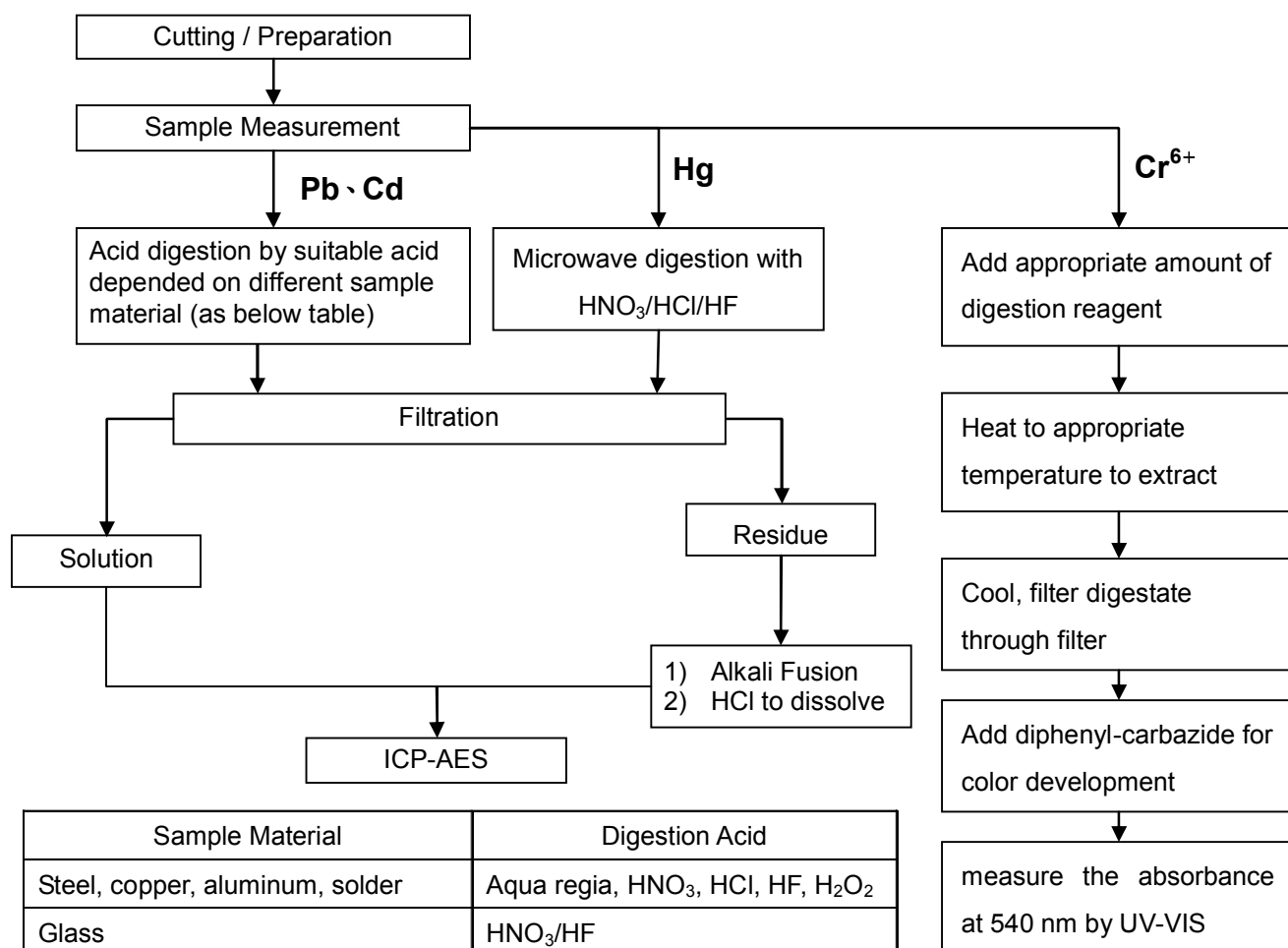
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NO. 31, YONG HSIN LANE, YINGTAU ROAD, YINGGE TOWN,  
TAIPEI HSIEN, TAIWAN, R. O. C.

PART NAME NO.2 AND NO.3



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.  
(Cr<sup>6+</sup> test method excluded)
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang



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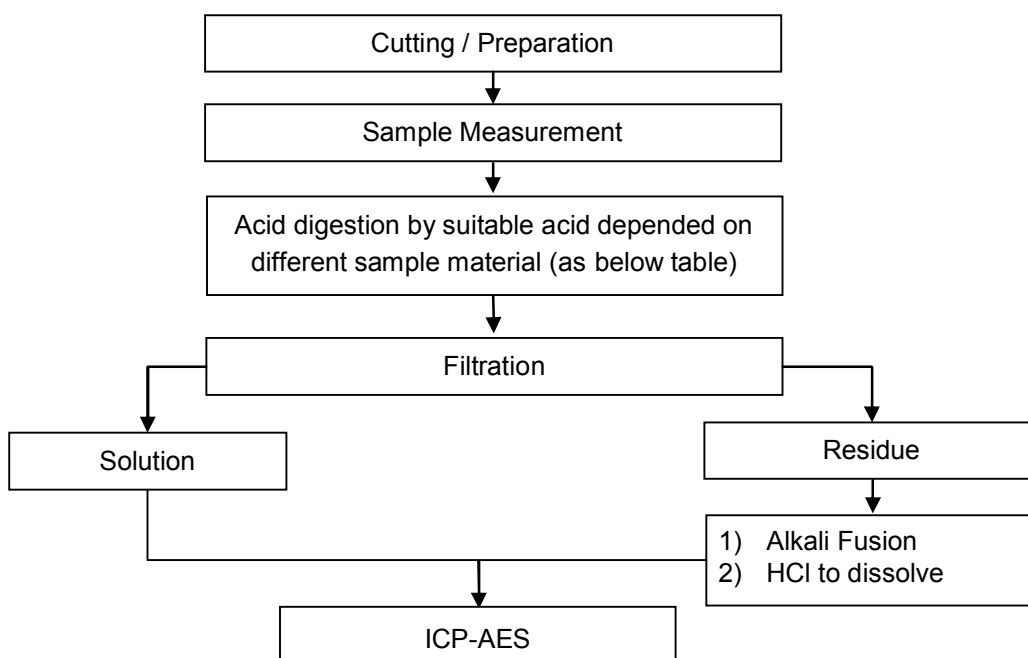
No. : CE/2010/20309C Date : 2010/04/09 Page : 7 of 12

COMCHIP TECHNOLOGY CO., LTD.  
NO. 31, YONG HSIN LANE, YINGTAU ROAD, YINGGE TOWN,  
TAIPEI HSIEN, TAIWAN, R. O. C.



- 1) These samples were dissolved totally by pre-conditioning method according to below flow chart.
- 2) Name of the person who made measurement: Climbgreat Yang
- 3) Name of the person in charge of measurement: Troy Chang

### Flow Chart of digestion for the elements analysis performed by ICP-AES



Steel, copper, aluminum, solder	Aqua regia, HNO <sub>3</sub> , HCl, HF, H <sub>2</sub> O <sub>2</sub>
Glass	HNO <sub>3</sub> /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO <sub>3</sub>
Plastic	H <sub>2</sub> SO <sub>4</sub> , H <sub>2</sub> O <sub>2</sub> , HNO <sub>3</sub> , HCl
Others	Any acid to total digestion

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## Test Report

No. : CE/2010/20309C Date : 2010/04/09 Page : 8 of 12

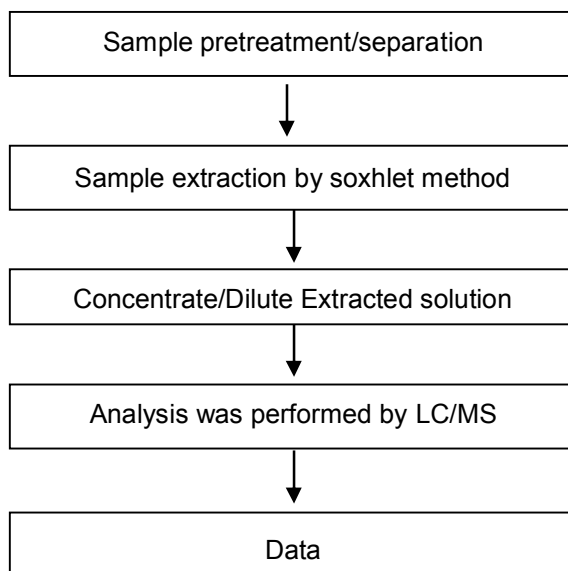
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### Analytical flow chart of Soxhlet extraction (LC/MS) procedure

- 1) Name of the person who made measurement: Lydia Fu
- 2) Name of the person in charge of measurement: Shinjyh Chen

■ Test Items: PFOS/PFOA 、 Benzotriazole



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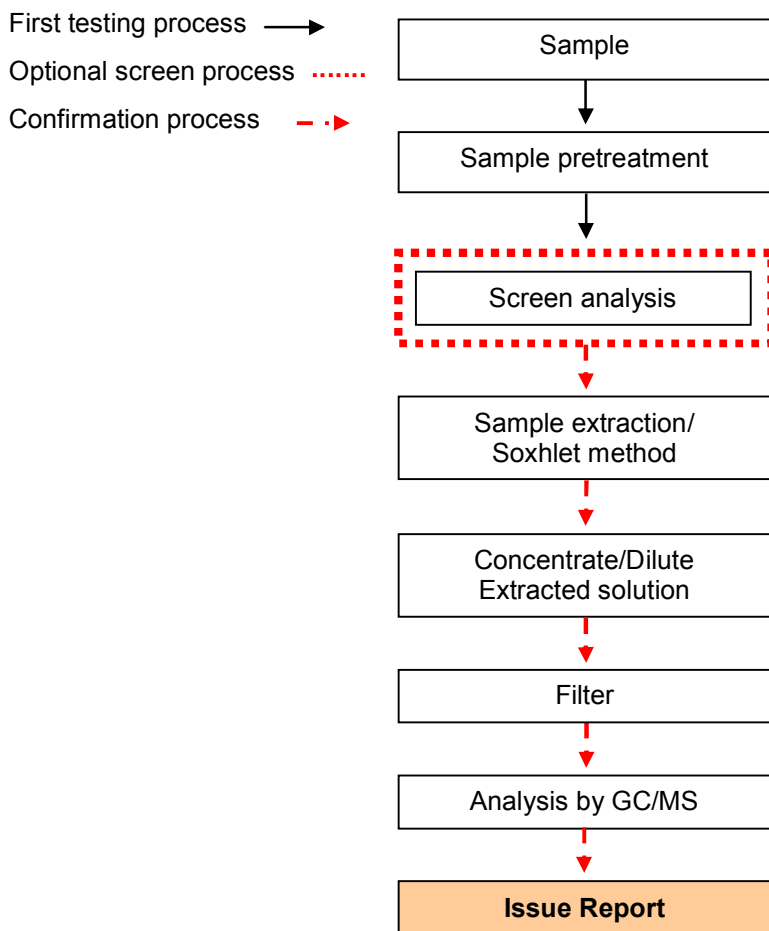
No. : CE/2010/20309C Date : 2010/04/09 Page : 9 of 12

COMCHIP TECHNOLOGY CO., LTD.  
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### PBB/PBDE analytical FLOW CHART

- 1) Name of the person who made measurement: Roman Wong
- 2) Name of the person in charge of measurement: Shinjyh Chen



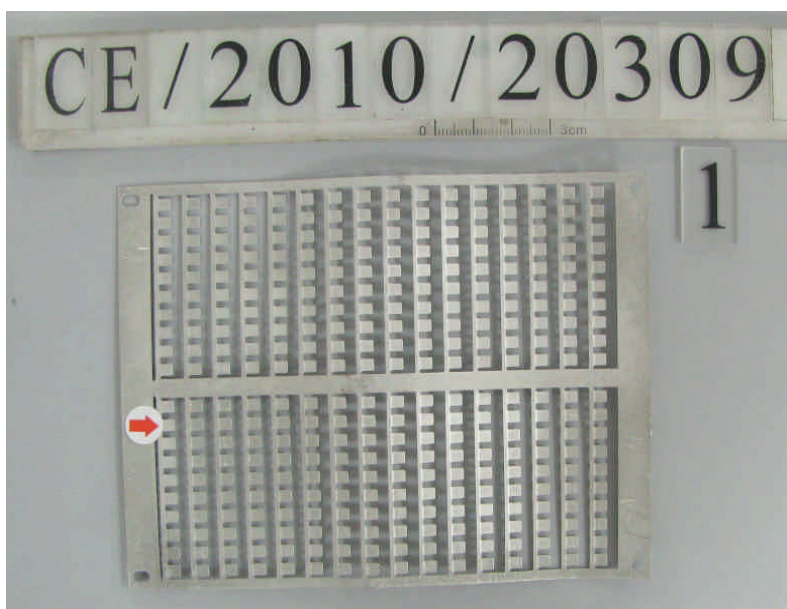
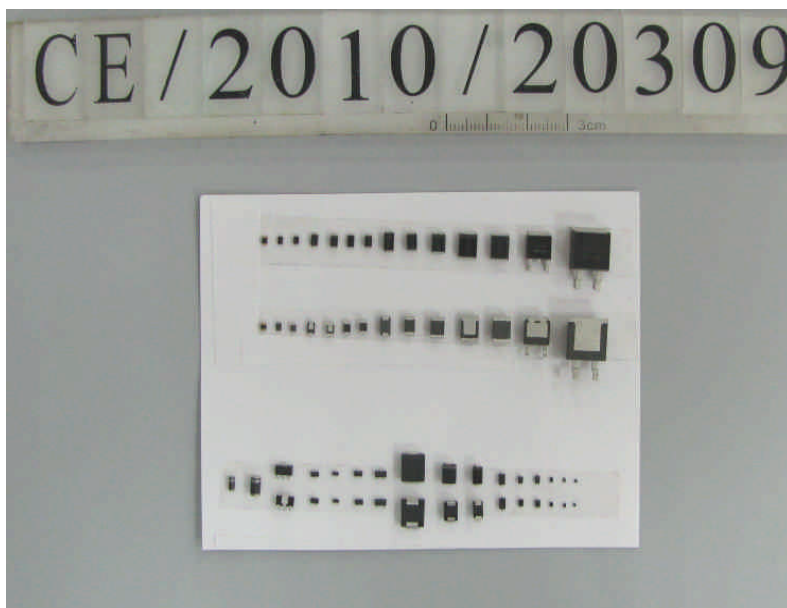
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No. : CE/2010/20309C Date : 2010/04/09 Page : 10 of 12

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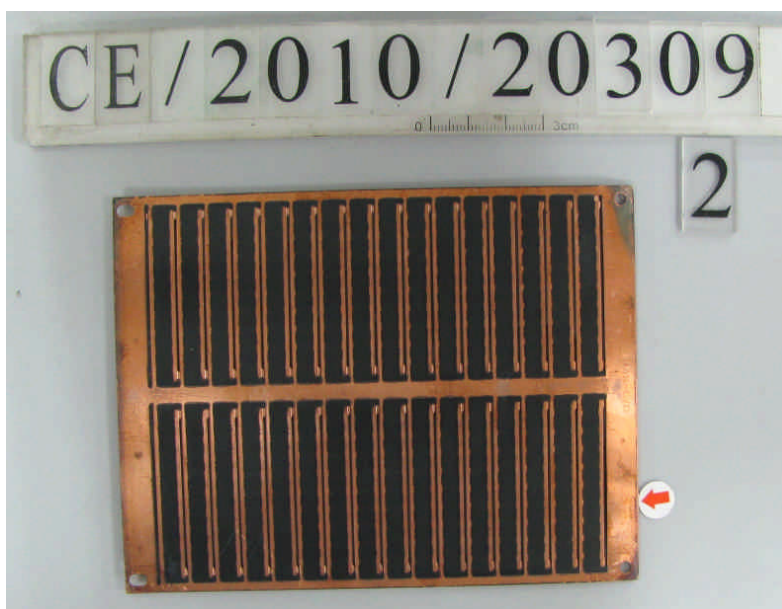
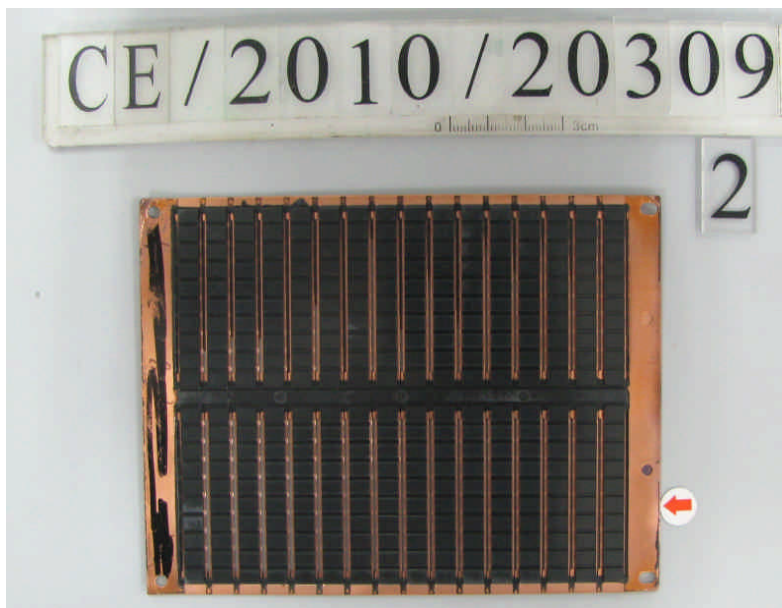
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## Test Report

No. : CE/2010/20309C Date : 2010/04/09 Page : 11 of 12

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No. : CE/2010/20309C Date : 2010/04/09 Page : 12 of 12

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

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