



**Test Report No.** F690501/LF-CTSGPJ05-0105

Date: November 02, 2005

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To: **AUK CORP**  
802-12  
Shinheung-dong  
Iksan-city  
JEONBUK  
Korea

The following merchandise was submitted and identified by the client as :

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**Commodity** : Silicon Chip  
**SGS File No.** : GPJ05-0105  
**Received Date** : October 26, 2005  
**Test Performing Date** : October 27, 2005  
**Test Performed** : SGS Testing Korea tested the sample(s) selected by applicant with following results  
**Test Results** : For further details, please refer to following page(s)  
**Comments** : Buyer is SONY

SGS Testing Korea Co. Ltd.

Jason Han / Lab Director

Jeff Jang / Technical Mgr

**Test Report No. F690501/LF-CTSGPJ05-0105**

Date: November 02, 2005

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**Sample No.** : GPJ05-0105.001  
**Sample Description** : Silicon Chip  
**Style/Item No.** : N/A  
**Comments** : Material is Silicon

**Heavy Metals**

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	USEPA 3050B, ICP-AES	0.5	N.D.
Lead (Pb)	mg/kg	USEPA 3050B, ICP-AES	5	N.D.
Mercury (Hg)	mg/kg	USEPA 3052, ICP-AES	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	USEPA 3060A, UV-vis	1	N.D.

**Flame Retardants-PBBs/PBDEs**

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Monobromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N.D.

\*\*\* End \*\*\*

NOTE: N.D. = Not detected.(<MDL)  
ppm = mg/kg  
MDL = Method Detection Limit  
"- " = No Regulation  
\*\* = Qualitative analysis (No Unit)  
Negative = Undetectable / Positive = Detectable



**Test Report No.** F690501/LF-CTS059026

Date : November 10, 2005

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To: **POONGSAN MICROTEC CORP.**  
52, Banyeo 1-dong,  
Haeundae-gu,  
Busan,  
Korea

The following merchandise was submitted and identified by the client as : -

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<b>Commodity</b>	:	Lead Frame (Ni + Fe Alloy - A42)
<b>SGS File No.</b>	:	P-48/2005-1042/2
<b>Country of Origin</b>	:	Korea
<b>Received Date</b>	:	November. 01, 2005
<b>Test Performing Date</b>	:	November. 02, 2005
<b>Test Performed</b>	:	SGS Testing Korea tested the sample(s) selected by applicant with following result.
<b>Test Results</b>	:	For further details, please refer to following page.
<b>Comments</b>	:	Buyers are LG, SAMSUNG, SANYO and SONY

SGS Testing Korea Co., Ltd.

Thomas Hwang / Lab. Manager

SBP/mss



# Test Report No. F690501/LF-CTS059026

Date : November 10, 2005

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## Heavy Metal

Test Item(s)	Unit	Test Method	MDL	Result(s)
Cadmium (Cd)	mg/kg	USEPA 3052, ICP-AES	1	N. D.
Lead (Pb)	mg/kg	USEPA 3052, ICP-AES	10	N. D.
Mercury (Hg)	mg/kg	USEPA 3052, ICP-AES	2	N. D.
Hexavalent Chromium (Cr VI)	mg/kg	USEPA 3060A, UV-vis	1	N. D.

## Flame Retardants

Test Item(s)	Unit	Test Method	MDL	Result(s)
Monobromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Dibromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Tribromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Tetrabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Heptabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Hexabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Pentabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Octabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Nonabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Decabromobiphenyl	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Monobromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Dibromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Tribromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Tetrabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Heptabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Hexabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Pentabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Octabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Nonabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.
Decabromobiphenyl ether	mg/kg	USEPA 3540C, GC/MS	5	N. D.

Note: (1) N.D. = Not detected. (<MDL)  
(2) MDL = Method Detection Limit

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

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**Test Report No. F690501/LF-CTSGP06-00592**

Date: January 16, 2006

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To: **MK ELECTRONICS**  
316-2,Kumeri  
Pogpk-myun  
Yongin-city  
KYUNGGI-DO  
Korea

The following merchandise was submitted and identified by the client as :

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**Commodity** : GOLD WIRE (4N)  
**SGS File No.** : GP06-00592  
**Received Date** : January 09, 2006  
**Test Performing Date** : January 10, 2006  
**Test Performed** : SGS Testing Korea tested the sample(s) selected by applicant with following results  
**Test Results** : For further details, please refer to following page(s)

Brendan Lee  
Monet Jeong  
Jully Oh  
Jerry Jung  
/Testing Person

Jeff Jang / Technical Mgr

SGS Testing Korea Co. Ltd.

Jason Han / Lab Director

**Test Report No. F690501/LF-CTSGP06-00592**

Date: January 16, 2006

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Sample No. : GP06-00592.001  
Sample Description : GOLD WIRE (4N)  
Style/Item No. : N/A

**Heavy Metals**

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	5	N.D.
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996)	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992)	1	N.D.

**Flame Retardants-PBBs/PBDEs**

Test Items	Unit	Test Method	MDL	Results
Monobromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Monobromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Dibromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tribromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Tetrabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Heptabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Hexabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Pentabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Octabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Nonabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.
Decabromobiphenyl ether	mg/kg	US EPA 3540C, GC/MS	5	N.D.

NOTE: N.D. = Not detected.(<MDL)  
ppm = mg/kg  
MDL = Method Detection Limit  
"- " = No Regulation  
\*\* = Qualitative analysis (No Unit)  
Negative = Undetectable / Positive = Detectable

**Picture of Sample as Received:**

\*\*\* End \*\*\*

NOTE: N.D. = Not detected.(<MDL)  
ppm = mg/kg  
MDL = Method Detection Limit  
"-." = No Regulation  
\*\* = Qualitative analysis (No Unit)  
Negative = Undetectable / Positive = Detectable



**Test Report No. F690501/LF-CTSGPJ06-0124**

Date: January 23, 2006

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To: **KCC CO., LTD**  
846, Yongam-ri  
Bongdong-eub  
Wanju-gun  
Jeonbuk  
Korea

The following merchandise was submitted and identified by the client as :

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**Commodity** : KTMC-1050+  
**SGS File No.** : GPJ06-0124  
**Received Date** : January 16, 2006  
**Test Performing Date** : January 17, 2006  
**Test Performed** : SGS Testing Korea tested the sample(s) selected by applicant with following results  
**Test Results** : For further details, please refer to following page(s)

SGS Testing Korea Co. Ltd.

Jason Han / Lab Director

Jeff Jang / Technical Mgr

Sample No. : GPJ06-0124.001  
 Sample Description : KTMC-1050+  
 Style/Item No. : N/A

**Heavy Metals**

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	5	N.D.
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996)	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992)	1	N.D.

Picture of Sample as Received:

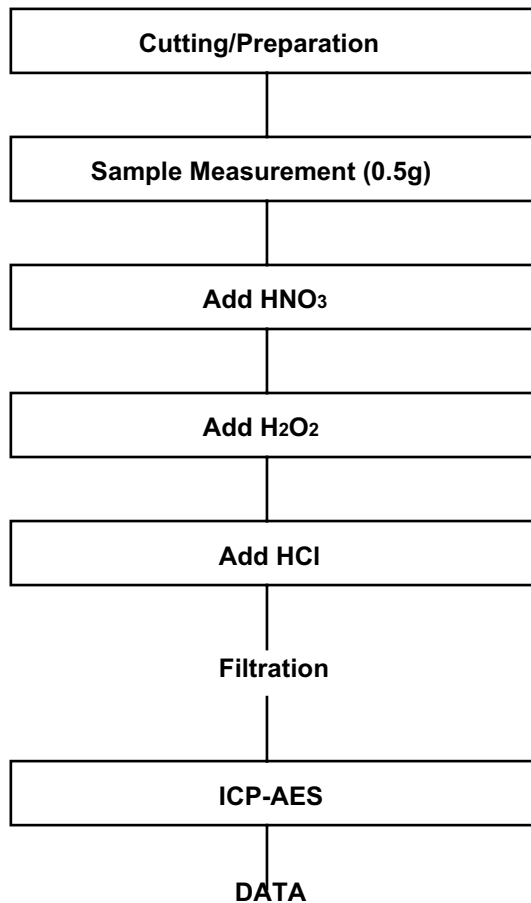


- NOTE:
- (1) N.D. = Not detected.(<MDL)
  - (2) ppm = mg/kg
  - (3) MDL = Method Detection Limit
  - (4) - = No regulation
  - (5) \*\* = Qualitative analysis (No Unit)
  - (6) Negative = Undetectable / Positive = Detectable



### Flow Chart of Digestion

(EPA 3050B for Cd, Pb)



The samples were dissolved by pre-conditioning method according to above flow chart.

Operator Lauren Kim

Section Chief Jeff Jang

\*\*\* End \*\*\*

- NOTE:
- (1) N.D. = Not detected.(<MDL)
  - (2) ppm = mg/kg
  - (3) MDL = Method Detection Limit
  - (4) - = No regulation
  - (5) \*\* = Qualitative analysis (No Unit)
  - (6) Negative = Undetectable / Positive = Detectable



**Test Report No. F690501/LF-CTSGPJ06-0149**

Date: January 24, 2006

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To: **CALIX ELECTRONIC CHEMICAL CO., LTD.**  
838-2  
Palbong-dong  
Iksan  
JEONBUK  
Korea

The following merchandise was submitted and identified by the client as :

**Commodity** : CALIX-2000 Make-Up Chemical  
**SGS File No.** : GPJ06-0149  
**Received Date** : January 17, 2006  
**Test Performing Date** : January 18, 2006  
**Test Performed** : SGS Testing Korea tested the sample(s) selected by applicant with following results  
**Test Results** : For further details, please refer to following page(s)  
**Buyer(s)** : SAMSUNG

Brendan Lee  
Patrick An  
Monet Jeong  
Jinee Song  
/Testing Person

Jeff Jang / Technical Mgr

SGS Testing Korea Co. Ltd.

Jason Han / Lab Director

The above certificate is the accredited test items by Korea Laboratory Accreditation Schmee (KOLAS), which signed the ILAC-MRA.

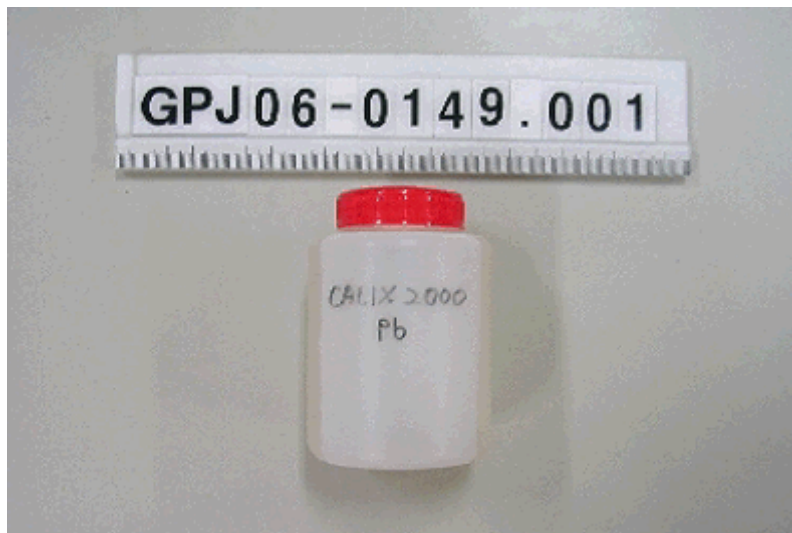
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**Sample No.** : GPJ06-0149.001  
**Sample Description** : CALIX-2000 Make-Up Chemical  
**Style/Item No.** : N/A

**Heavy Metals**

Test Items	Unit	Test Method	MDL	Results
Cadmium(Cd)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	0.5	N.D.
Lead (Pb)	mg/kg	US EPA 3050B(1996), US EPA 6010B(1996)	5	N.D.
Mercury (Hg)	mg/kg	US EPA 3052(1996), US EPA 6010B(1996)	2	N.D.
Hexavalent Chromium (Cr VI)	mg/kg	US EPA 3060A(1996), US EPA 7196A(1992)	1	N.D.

Picture of Sample as Received:



\*\*\* End \*\*\*

- NOTE:
- (1) N.D. = Not detected.(<MDL)
  - (2) ppm = mg/kg
  - (3) MDL = Method Detection Limit
  - (4) Estimated expanded uncertainty U with a coverage factor  $k=2$ , corresponding to a level of confidence of about 95%

The above certificate is the accredited test items by Korea Laboratory Accreditation Schmee (KOLAS), which signed the ILAC-MRA.

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