

Test Report

No. SHAEC1704705405

Date: 30 Mar 2017

Page 1 of 7

JIANGSU YUTAI ELECTRONICS CO., LTD

2 XINSHENG ROAD, XINGSHENG VILLAGE, CHUNJIANG TOWN, XINBEI DISTRICT, CHANGZHOU,
JIANGSU PROVINCE, CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as : DIODE BRIDGE

SGS Job No. : SP17-008204 - SH

Manufacturer : JIANGSU YUTAI ELECTRONICS CO., LTD

Country of Origin : CHINA

Client Ref. Information : SMA SMB SMC HSMA HSMB HSMC SMAG SMBG SMCG SMAF SMBF SMCF
SOD-123 SOD-123FL
SOD-123SL SOD-323 SOD-523 SOD-723 SOD-923 DFN QFN SOT-23
SOT-323 SOT-523
SOT-353 SOT-363 SOT-563 SOT-553 SOT-723 SOT-89 MELF MINMELF
D-PAK D2-PAK
MB-S MBF DB-S ABS LBF UMSB TMBF ABF CDS TBS R-1 A-405 DO-35
DO-41 DO-15 R-3
DO-201AD R-6 TO-220AC TO-220AB ITO-220AC ITO-220AB TO-277A
TO-277B TO-3P
TO-252 TO-263 TO-92 MB-M DB-1 WOM KBP KBP-K D3K KBL KBU RS GBL
GBU KBJ GBJ
KBPC KBPC-W GBPC GBPC-W

Model No. : S3M

Date of Sample Received : 16 Mar 2017

Testing Period : 16 Mar 2017 - 20 Mar 2017

Test Requested : Selected test(s) as requested by client.

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

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



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Testing Center - China

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Test Report

No. SHAEC1704705405

Date: 30 Mar 2017

Page 2 of 7

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.



Helen Liu
Approved Signatory



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Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA17-047054.001	Black body part(mix all*)

Remarks :

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU

- Test Method :
- (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.
 - (2) With reference to IEC 62321-5:2013, determination of Lead by ICP-OES.
 - (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
 - (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.
 - (5) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.
 - (6) With reference to IEC 62321-8 Ed.1.0 (11/321/CD), determination of phthalates by GC-MS.

Test Item(s)	Limit	Unit	MDL	001
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	4478▲
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	2	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND
Sum of PBDEs	1000	mg/kg	-	ND



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Test Report

No. SHAEC1704705405

Date: 30 Mar 2017

Page 4 of 7

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>001</u>
Monobromodiphenyl ether	-	mg/kg	5	ND
Dibromodiphenyl ether	-	mg/kg	5	ND
Tribromodiphenyl ether	-	mg/kg	5	ND
Tetrabromodiphenyl ether	-	mg/kg	5	ND
Pentabromodiphenyl ether	-	mg/kg	5	ND
Hexabromodiphenyl ether	-	mg/kg	5	ND
Heptabromodiphenyl ether	-	mg/kg	5	ND
Octabromodiphenyl ether	-	mg/kg	5	ND
Nonabromodiphenyl ether	-	mg/kg	5	ND
Decabromodiphenyl ether	-	mg/kg	5	ND
Di-butyl Phthalate (DBP)	1000	mg/kg	50	ND
Benzyl Butyl Phthalate (BBP)	1000	mg/kg	50	ND
Di-2-Ethyl Hexyl Phthalate (DEHP)	1000	mg/kg	50	ND
Diisobutyl Phthalates (DIBP)	1000	mg/kg	50	ND

Notes :

- (1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.
- (2) On 4 June 2015, Commission Directive (EU) 2015/863 was published in the Official Journal of the European Union (OJEU) to include the phthalates BBP, DBP, DEHP and DIBP into ANNEX II of the Rohs Recast Directive. The new law restricts each phthalate to no more than 0.1% in each homogeneous material of an electrical product.
- (3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.
- (4) The restriction of DEHP, BBP, DBP and DIBP shall not apply to cables or spare parts for the repair, the reuse, the updating of functionalities or upgrading of capacity of EEE placed on the market before 22 July 2019, and of medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, placed on the market before 22 July 2021.
- (5) The restriction of DEHP, BBP and DBP shall not apply to toys which are already subject to the restriction of DEHP, BBP and DBP through entry 51 of Annex XVII to Regulation (EC) No 1907/2006.

Remark:

*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 and only for reference.

▲According to the declaration from the client, Lead (Pb) in No.001 is exempted by EU RoHS directive 2011/65/EU based on [ANNEX III 15]: Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages.



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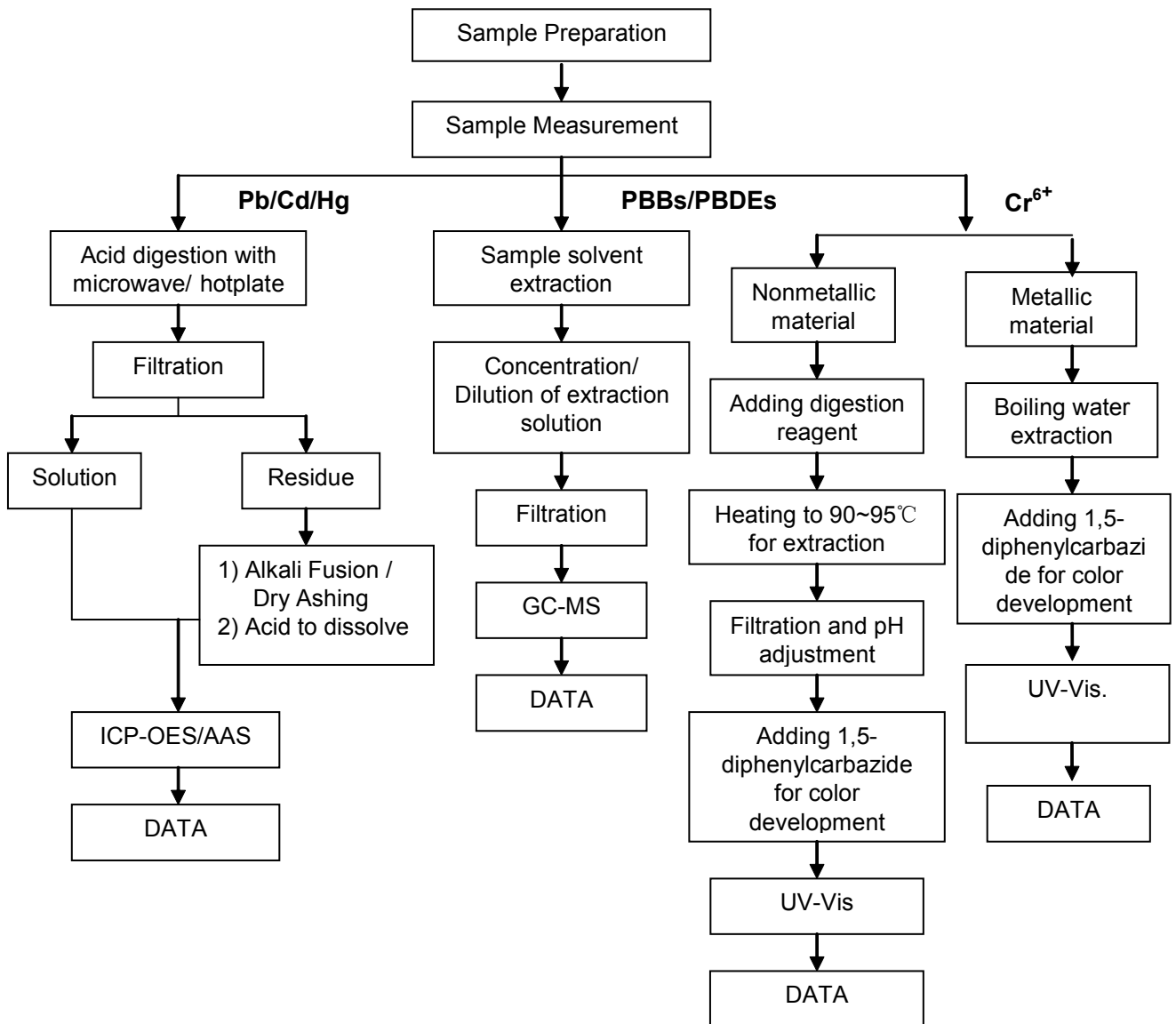
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ATTACHMENTS

RoHS Testing Flow Chart

- 1) Name of the person who made testing: Meria Jin/Gary Xu/Sean Li/Sielina Song
- 2) Name of the person in charge of testing: Jan Shi/Jessy Huang/Luna Xu/Shara Wang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded)



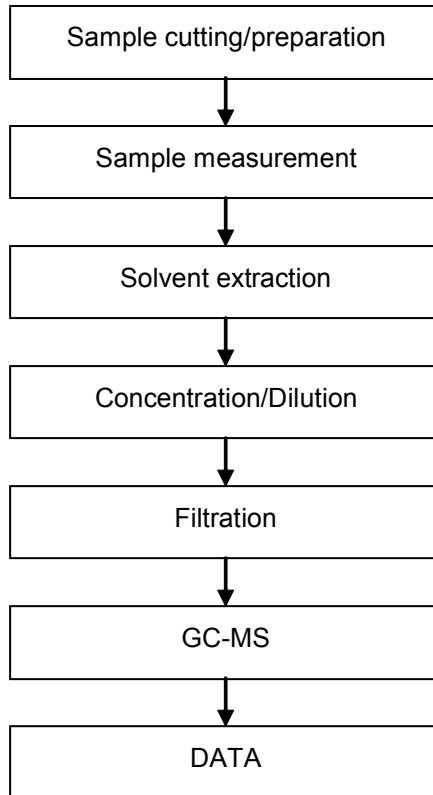
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Phthalates Testing Flow Chart

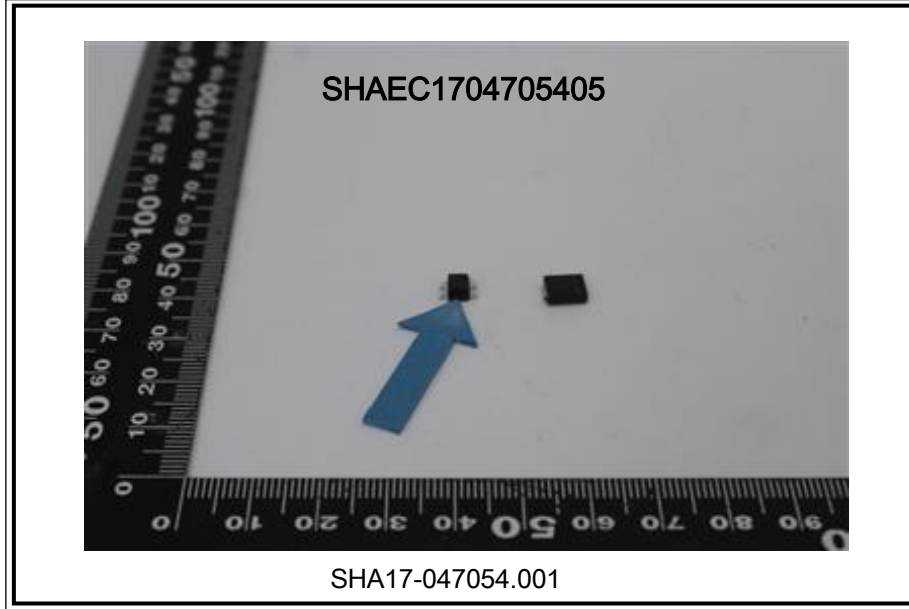
- 1) Name of the person who made testing: Sherlock Gao
- 2) Name of the person in charge of testing: Jessy Huang



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