



Product/Process Change Notification

PCN#	Effective Date	Issue Date
2017-05-25C-05	2017/8/25	2017/5/25
PCN Classification		Product Category
Major		Diode
Subject		
Production process change from lead free to halogen free.		
Affected Product(s)		
SOD-123JD Package of Diode, Such as attachments.		
Description of Change(s)		
To meet EU environment requirement, we implement halogen free to our products.		
Content of Change(s)		
Adding "-C" to each part number.		
Impact(s)		
N/A		
Attachment(s)		
SGS report. Reliability report.		

Approval		
Issue by	Alice Lai	e-mail: alice@secosgmbh.com
Development Engineer		Alice Lai
QA Manager		Peter Yang
General Manger		Mathew Liu

For more information, please contact us directly or visit our website <http://www.secosgmbh.com>

Affected Product(s)

SM120JD	SM4003JD	SUF104JD
SM140JD	SM4004JD	SUF105JD
SM160JD	SM4006JD	SUF201JD
SM1100JD	SM4007JD	SUF202JD
SM1150JD	SM4005JD	SUF203JD
SM1200JD	QG201JD	SUF204JD
SM220JD	QG202JD	SUF205JD
SM240JD	QG203JD	SEF101JD
SM260JD	QG204JD	SEF102JD
SM2100JD	QG205JD	SEF103JD
SM2150JD	QG206JD	SEF104JD
SM2200JD	QG207JD	SEF105JD
SM320JD	SMF102JD	SEF106JD
SM340JD	SMF103JD	SEF107JD
SM360JD	SMF104JD	SEF201JD
SM3100JD	SMF105JD	SEF202JD
SM3150JD	SMF106JD	SEF203JD
SM3200JD	SMF107JD	SEF204JD
SK16JD	SUF101JD	SEF205JD
SM4001JD	SUF102JD	SEF206JD
SM4002JD	SUF103JD	SEF207JD

Test Report

No. SHAEC1708921103

Date: 11 May 2017

Page 1 of 7

Jiangsu HHCK Advanced Materials Co., Ltd.

66 Eastern Avenue, Economic & Technical Development Zone, Lianyungang, Jiangsu, China

The following sample(s) was/were submitted and identified on behalf of the clients as : Epoxy molding compound

SGS Job No. : SP17-015627 - SH

Model No. : EMG

Client Ref. Information : EMG-100,EMG-100-1,EMG-100-2,EMG-100-3,EMG-100-4,EMG-100-B,EMG-100-H,EMG-100-N,EMG-100-S1,EMG-100-2N,EMG-100-S,EMG-100-2S,EMG-120,EMG-120-1,EMG-120-1N,EMG-120-2N,EMG-120-2N1,EMG-120-2N2,EMG-120-1K,EMG-120-A,EMG-200,EMG-200-1,EMG-200-2,EMG-200-3,EMG-200-D,EMG-200-DJ,EMG-200-S,EMG-200-S1,EMG-200-TM,EMG-250-S,EMG-300,EMG-350,EMG-350-1,EMG-350-2M,EMG-350-H,EMG-350-M,EMG-350-S1,EMG-400,EMG-400-1,EMG-400-1A,EMG-400-2,EMG-400-2FF,EMG-400-2M2,EMG-400-5,EMG-400-5A,EMG-400-1F,EMG-400-1FF,EMG-400-1FY,EMG-400-C,EMG-400-FL,EMG-400-NXP,EMG-400-GM,EMG-400-HT,EMG-400-HV,EMG-400-S,EMG-400-S1,EMG-400SV,EMG-400SV-S,EMG-400SV-SS,EMG-400SV-1,EMG-400SV-1JD,EMG-400SV-2,EMG-400SV-4,EMG-400SV-6,EMG-400SV-J,EMG-400SV-ST,EMG-430,EMG-460,EMG-460-2,EMG-460-3,EMG-460-6,EMG-460-8,EMG-460-9,EMG-480-1,EMG-480-1T,EMG-480-2,EMG-480-3,EMG-480-4,EMG-480-5,EMG-480-HV,EMG-480-S,EMG-500,EMG-500-2,EMG-500-TW,EMG-550,EMG-550-H,EMG-600,EMG-600-1,EMG-600-2,EMG-600-2AH,EMG-600-2D,EMG-600-2G,EMG-600-2JD,EMG-600-2Y,EMG-600-3,EMG-600-5,EMG-600-5A,EMG-600-6,EMG-600-55M,EMG-600-L,EMG-600-LG,EMG-600-S,EMG-620-1,EMG-620-1T,EMG-620-2,EMG-620-3,EMG-620-T,EMG-630-HT,EMG-650-1,EMG-650-2,EMG-660-1,EMG-660-2,EMG-680-1,EMG-680-2,EMG-660,EMG-700,EMG-700-2,EMG-700-2H,EMG-700-2T,EMG-700-3,EMG-700-3H,EMG-700-D1,EMG-700-D3,EMG-700-F,EMG-700-N,EMG-700-N5M,EMG-700-HV,EMG-700-S,EMG-700-S4M,EMG-700-Y,EMG-800,EMG-800-2,EMG-800-5,EMG-800-HV,EMG-800-SV,EMG-900,EMG-900-2M,EMG-900-3M,EMG-900-K4,EMG-900-K5,EMG-900-K6,EMG-900-K7,EMG-900M,EMG-900-M1,EMG-900-P2,EMG-900-P3,EMG-900-P4,EMG-900-SD,EMG-950-2M

Date of Sample Received : 04 May 2017

Testing Period : 04 May 2017 - 09 May 2017

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS CSTC (Shanghai) Technical Services Co., Ltd.
Testing Center - Chemical Laboratory

13th Building, No. 889 Yishan Road Xuhui District, Shanghai China 200233
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t E&E (86-21) 61402553 f E&E (86-21) 64953679 www.sgs.com.cn
t HL (86-21) 61402594 f HL (86-21) 61156899 e sgs.china@sgs.com

Test Report

No. SHAEC1708921103

Date: 11 May 2017

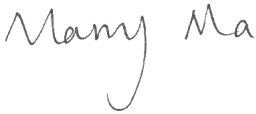
Page 2 of 7

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

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

Conclusion : Based on the performed tests on submitted sample(s), the results of Cadmium, Lead, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) and Phthalates such as Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) comply with the limits as set by RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

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



Marry Ma
Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
Testing Center - Chemical Laboratory

3rd Building, No. 889 Yishan Road Xuhui District, Shanghai China 200233
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t E&E (86-21) 61402553 f E&E (86-21) 64953679 www.sgsgroup.com.cn
t HL (86-21) 61402594 f HL (86-21) 61156899 e sgs.china@sgs.com

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA17-089211.002	Black solid

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 62321-7-2:2017, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis and/or with reference to IEC 62321-5:2013, determination of Chromium by ICP-OES.
 - (5) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS.
 - (6) With reference to IEC 62321-8:2017, determination of phthalates by GC-MS.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	ND
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	8	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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 13th Building, No. 889 Yishan Road Xuhui District, Shanghai China 200233 tE&E (86-21) 61402553 fE&E (86-21) 64953679 www.sgsgroup.com.cn
 中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 tHL (86-21) 61402594 fHL (86-21) 61156899 e sgs.china@sgs.com

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Sum of PBDEs	1000	mg/kg	-	ND
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. IEC 62321 series is equivalent to EN 62321 series
http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25
- (2) The result of Hexavalent Chromium (Cr(VI)) is deemed to be "ND" since the result of total chromium content is "ND", so testing of Hexavalent Chromium (Cr(VI)) is not required.
- (3) If the Chromium (Cr) content is greater than the MDL of Hexavalent Chromium (Cr(VI)), confirmation test of Hexavalent Chromium (Cr(VI)) is required.
- (4) 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.
- (5) 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.
- (6) 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.
- (7) 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.



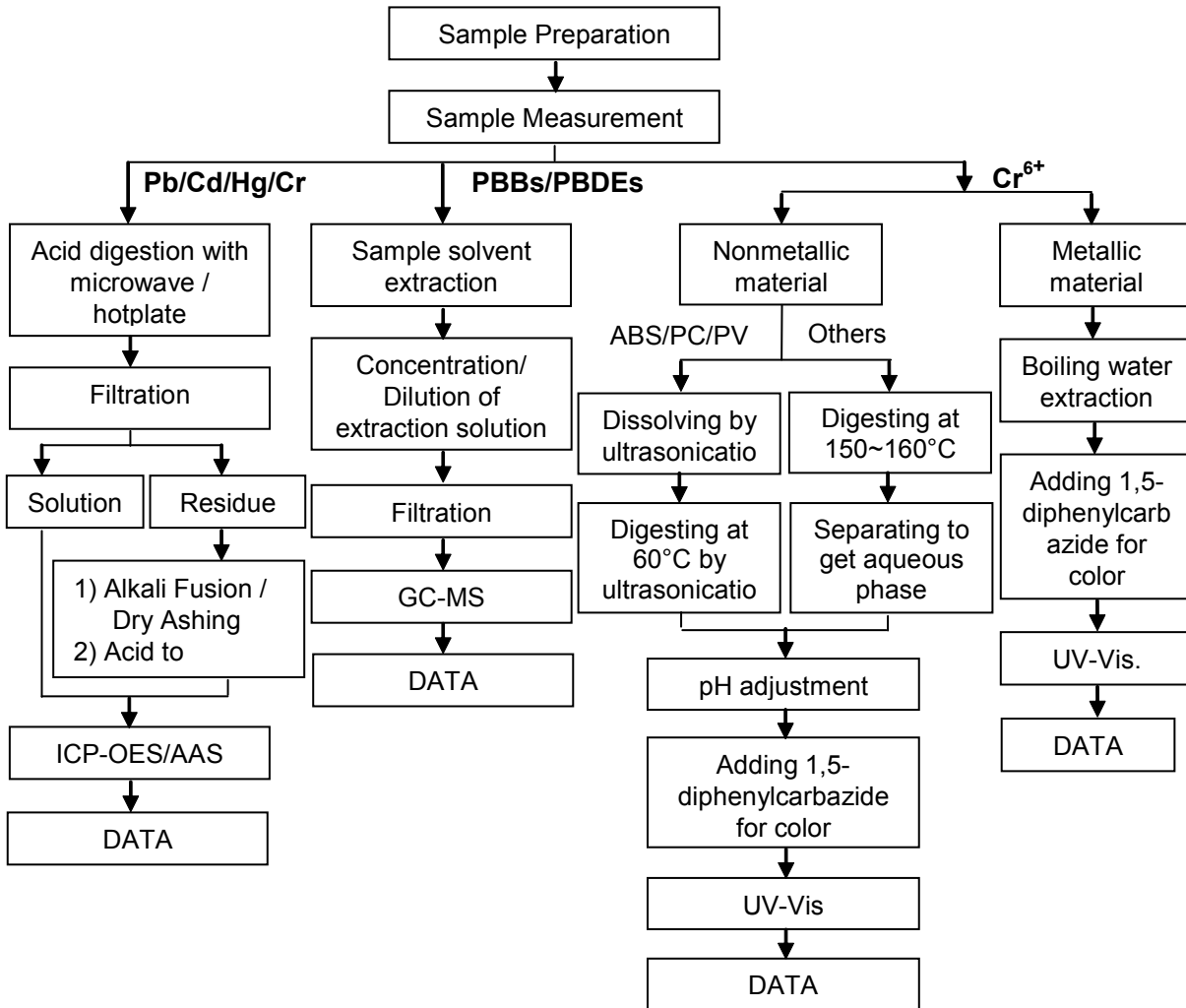
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com
 13th Building, No. 889 Yishan Road Xuhui District, Shanghai China 200233 t E&E (86-21) 61402553 f E&E (86-21) 64953679 www.sgsgroup.com.cn
 中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86-21) 61402594 f HL (86-21) 61156899 e sgs.china@sgs.com

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)



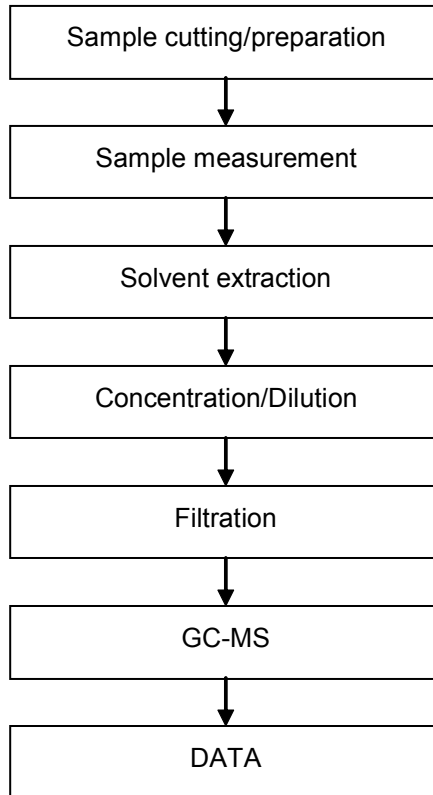
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

ATTACHMENTS

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

Jiangsu HHCK Advanced Materials Co., Ltd.

66 Eastern Avenue, Economic & Technical Development Zone, Lianyungang, Jiangsu, China

The following sample(s) was/were submitted and identified on behalf of the clients as : Epoxy molding compound

SGS Job No. : SP17-015627 - SH

Model No. : EMG

Client Ref. Information : EMG-100,EMG-100-1,EMG-100-2,EMG-100-3,EMG-100-4,EMG-100-B,EMG-100-H,EMG-100-N,EMG-100-S1,EMG-100-2N,EMG-100-S,EMG-100-2S,EMG-120,EMG-120-1,EMG-120-1N,EMG-120-2N,EMG-120-2N1,EMG-120-2N2,EMG-120-1K,EMG-120-A,EMG-200,EMG-200-1,EMG-200-2,EMG-200-3,EMG-200-D,EMG-200-DJ,EMG-200-S,EMG-200-S1,EMG-200-TM,EMG-250-S,EMG-300,EMG-350,EMG-350-1,EMG-350-2M,EMG-350-H,EMG-350-M,EMG-350-S1,EMG-400,EMG-400-1,EMG-400-1A,EMG-400-2,EMG-400-2FF,EMG-400-2M2,EMG-400-5,EMG-400-5A,EMG-400-1F,EMG-400-1FF,EMG-400-1FY,EMG-400-C,EMG-400-FL,EMG-400-NXP,EMG-400-GM,EMG-400-HT,EMG-400-HV,EMG-400-S,EMG-400-S1,EMG-400SV,EMG-400SV-S,EMG-400SV-SS,EMG-400SV-1,EMG-400SV-1JD,EMG-400SV-2,EMG-400SV-4,EMG-400SV-6,EMG-400SV-J,EMG-400SV-ST,EMG-430,EMG-460,EMG-460-2,EMG-460-3,EMG-460-6,EMG-460-8,EMG-460-9,EMG-480-1,EMG-480-1T,EMG-480-2,EMG-480-3,EMG-480-4,EMG-480-5,EMG-480-HV,EMG-480-S,EMG-500,EMG-500-2,EMG-500-TW,EMG-550,EMG-550-H,EMG-600,EMG-600-1,EMG-600-2,EMG-600-2AH,EMG-600-2D,EMG-600-2G,EMG-600-2JD,EMG-600-2Y,EMG-600-3,EMG-600-5,EMG-600-5A,EMG-600-6,EMG-600-55M,EMG-600-L,EMG-600-LG,EMG-600-S,EMG-620-1,EMG-620-1T,EMG-620-2,EMG-620-3,EMG-620-T,EMG-630-HT,EMG-650-1,EMG-650-2,EMG-660-1,EMG-660-2,EMG-680-1,EMG-680-2,EMG-660,EMG-700,EMG-700-2,EMG-700-2H,EMG-700-2T,EMG-700-3,EMG-700-3H,EMG-700-D1,EMG-700-D3,EMG-700-F,EMG-700-N,EMG-700-N5M,EMG-700-HV,EMG-700-S,EMG-700-S4M,EMG-700-Y,EMG-800,EMG-800-2,EMG-800-5,EMG-800-HV,EMG-800-SV,EMG-900,EMG-900-2M,EMG-900-3M,EMG-900-K4,EMG-900-K5,EMG-900-K6,EMG-900-K7,EMG-900M,EMG-900-M1,EMG-900-P2,EMG-900-P3,EMG-900-P4,EMG-900-SD,EMG-950-2M

Date of Sample Received : 04 May 2017

Testing Period : 04 May 2017 - 09 May 2017

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



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS CSTC (Shanghai) Technical Services Co., Ltd.
Testing Center - China Laboratory

13th Building, No.889 Yishan Road Xuhui District, Shanghai China 200233 t E&E (86-21) 61402553 f E&E (86-21) 64953679 www.sgs.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86-21) 61402594 f HL (86-21) 61156899 e sgs.china@sgs.com

Test Report

No. SHAEC1708921105

Date: 11 May 2017

Page 2 of 6

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

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

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



Marry Ma
Approved Signatory



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.
Testing Center - China Head Office

13th Building, No. 889 Yishan Road Xuhui District, Shanghai China 200233
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t E&E (86-21) 61402553 f E&E (86-21) 64953679 www.sgsgroup.com.cn
t HL (86-21) 61402594 f HL (86-21) 61156899 e sgs.china@sgs.com

Test Report

No. SHAEC1708921105

Date: 11 May 2017

Page 3 of 6

Test Results :

Test Part Description :

Specimen No.	SGS Sample ID	Description
SN1	SHA17-089211.002	Black solid

Remarks :

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

Element(s)

Test Method : With reference to US EPA 3052:1996, analysis was performed by ICP-OES.

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Antimony (Sb)	mg/kg	10	ND
Sb ₂ O ₃ ♦	mg/kg	12	ND

Notes :

- (1) ♦ Calculated concentration of Sb₂O₃ is based on the identified Sb

Halogen

Test Method : With reference to EN 14582: 2007, analysis was performed by Ion Chromatograph (IC).

<u>Test Item(s)</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>
Fluorine (F)	mg/kg	50	ND
Chlorine (Cl)	mg/kg	50	102
Bromine (Br)	mg/kg	50	ND
Iodine (I)	mg/kg	50	ND



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

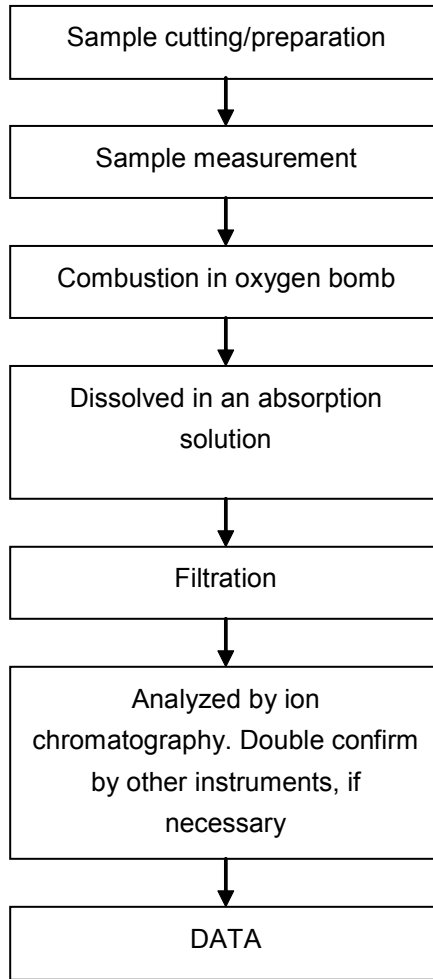
SGS-CSTC Shanghai Technical Services Co., Ltd.
Testing Center - Chemical Laboratory

3rd Building, No. 889 Yishan Road Xuhui District, Shanghai China 200233 t E&E (86-21) 61402553 f E&E (86-21) 64953679 www.sgs.com.cn
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86-21) 61402594 f HL (86-21) 61156899 e sgs.china@sgs.com

ATTACHMENTS

Halogen Testing (oxygen bomb) Flow Chart

- 1) Name of the person who made testing: Kevin Xu
- 2) Name of the person in charge of testing: Sisily Yin



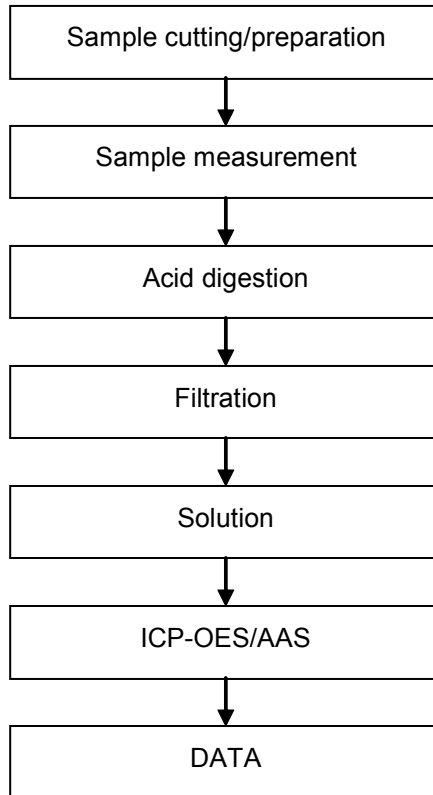
Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

ATTACHMENTS

Elements Testing Flow Chart

- 1) Name of the person who made testing: Meria Jin/Sielina Song
- 2) Name of the person in charge of testing: Luna Xu/Jan Shi



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Document.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

Sample photo:



SGS authenticate the photo on original report only

*** End of Report ***



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions for Electronic Documents at <http://www.sgs.com/en/Terms-and-Conditions/Terms-e-Documents.aspx>. Attention is drawn to the limitation of liability, indemnification and jurisdiction issues defined therein. Any holder of this document is advised that information contained hereon reflects the Company's findings at the time of its intervention only and within the limits of Client's instructions, if any. The Company's sole responsibility is to its Client and this document does not exonerate parties to a transaction from exercising all their rights and obligations under the transaction documents. This document cannot be reproduced except in full, without prior written approval of the Company. Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS-CSTC (Shanghai) Technical Services (Shanghai) Co., Ltd.
Testing Center-Chemical Laboratory

13th Building, No. 889 Yishan Road Xuhui District, Shanghai China 200233
中国·上海·徐汇区宜山路889号3号楼 邮编: 200233

t E&E (86-21) 61402553 f E&E (86-21) 64953679 www.sgs.com.cn
t HL (86-21) 61402594 f HL (86-21) 61156899 e sgs.china@sgs.com



Reliability Testing Summary Report

Date: 2017/05/12

Document No.: SK17 -05- 072

Test Item	P/N	Test Condition	(LTPD)	Sample Numbers	Allow Fall Numbers	Fall Numbers	Result
HTRB High Temp Reverse Bias	SM340JD-C	100°C ± 5°C, 80% VR, T = 1000 hrs		77	0	0	ACC
HTSL High Temperature Storage Life	SM340JD-C	150°C, T = 1000 hrs		77	0	0	ACC
PCT Pressure Cooker Test	SM340JD-C	121°C, 29.7PSIG, 168 hrs		77	0	0	ACC
TCT Temperature Cycle Test	SM340JD-C	-55°C/30min, 150°C/30min, For 1000 Cycle		77	0	0	ACC
THT High Temperature High Humidity Test	SM340JD-C	85 ± 2°C, RH=85±5%, 1000 hrs		77	0	0	ACC
H3TRB High Temper High Humidity Reverse Bies Test	SM340JD-C	85 ± 2°C, RH=85±5%, 80% VR, 1000 hrs		77	0	0	ACC
Resistance to Solder Heat Test	SM340JD-C	270°C±5°C, 7Sec +2/-0Sec		77	0	0	ACC

Judgment:

qualified unqualified

Testing Start Date: 2017.03.20 Testing End Date: 2017.05.12

Tester: King Huang Approval: Peter Yang



High Temperature Reverse Bias Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 100 ± 5°C, 80% VR, T = 1000 hrs

Test Date: 2017.03.20 ~ 2017.05.02

Test Standard : JESD22 STANDARD Method-A108

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
1	491.4mV	47.85V	17.92uA	491.4mV	47.22V	17.65uA
2	490.1mV	46.81V	21.16uA	491.8mV	46.90V	20.01uA
3	487.5mV	47.10V	19.02uA	487.1mV	46.68V	20.25uA
4	491.4mV	47.57V	16.49uA	488.5mV	47.58V	20.97uA
5	494.5mV	46.76V	17.35uA	487.5mV	46.58V	21.14uA
6	496.3mV	46.78V	17.41uA	492.4mV	47.20V	16.43uA
7	488.9mV	46.99V	18.74uA	496.2mV	47.79V	18.40uA
8	495.8mV	47.14V	19.02uA	496.0mV	46.56V	19.37uA
9	493.5mV	47.01V	18.12uA	489.3mV	46.64V	16.98uA
10	488.4mV	47.06V	20.50uA	489.5mV	46.98V	20.65uA
11	495.7mV	47.86V	16.89uA	488.9mV	46.61V	19.10uA
12	487.9mV	47.86V	18.94uA	486.8mV	47.76V	20.47uA
13	490.5mV	47.45V	19.40uA	496.0mV	46.69V	19.26uA
14	490.7mV	47.73V	16.38uA	492.0mV	46.68V	17.57uA
15	492.3mV	47.13V	17.38uA	488.6mV	46.81V	17.45uA
16	491.5mV	46.59V	16.61uA	488.7mV	46.65V	18.91uA
17	488.6mV	46.69V	17.62uA	493.6mV	46.56V	18.07uA
18	494.0mV	47.72V	17.05uA	495.9mV	47.34V	16.63uA
19	495.6mV	47.54V	16.19uA	486.6mV	46.92V	16.93uA
20	487.1mV	47.39V	16.24uA	491.5mV	47.61V	19.97uA
21	486.7mV	46.64V	16.64uA	487.6mV	46.72V	20.11uA
22	489.2mV	46.63V	17.22uA	491.0mV	47.02V	19.34uA
23	494.7mV	47.61V	18.05uA	491.1mV	47.14V	16.29uA
24	489.7mV	47.07V	18.92uA	489.2mV	47.31V	18.24uA
25	486.1mV	46.60V	17.24uA	496.4mV	47.19V	19.17uA
26	495.2mV	47.82V	20.58uA	492.0mV	47.52V	21.08uA
27	492.9mV	47.52V	20.58uA	486.9mV	46.95V	19.63uA
28	489.0mV	47.68V	17.60uA	486.7mV	47.83V	17.20uA
29	495.4mV	46.69V	20.85uA	496.3mV	47.04V	18.05uA
30	488.1mV	46.63V	18.66uA	492.3mV	47.04V	17.79uA



High Temperature Reverse Bias Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 100 ± 5°C, 80% VR, T = 1000 hrs

Test Date: 2017.03.20 ~ 2017.05.02

Test Standard : JESD22 STANDARD Method-A108

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
31	494.5mV	47.54V	19.72uA	486.7mV	47.57V	17.05uA
32	495.5mV	46.63V	21.16uA	488.8mV	47.70V	19.08uA
33	487.4mV	47.54V	16.58uA	486.2mV	47.44V	17.18uA
34	494.9mV	47.02V	21.06uA	487.2mV	47.33V	19.90uA
35	492.5mV	46.74V	19.27uA	493.2mV	47.07V	17.77uA
36	493.0mV	47.17V	16.29uA	494.5mV	46.64V	16.35uA
37	489.2mV	47.59V	17.74uA	488.9mV	46.56V	19.66uA
38	491.2mV	47.64V	20.71uA	493.9mV	46.99V	20.60uA
39	493.2mV	47.02V	17.53uA	490.6mV	47.33V	19.97uA
40	492.1mV	46.74V	17.57uA	487.4mV	46.64V	19.63uA
41	495.3mV	47.85V	19.82uA	491.6mV	47.20V	20.41uA
42	488.5mV	47.23V	20.12uA	493.4mV	46.76V	20.99uA
43	495.4mV	47.83V	19.82uA	488.5mV	47.42V	17.52uA
44	492.6mV	46.83V	19.10uA	494.8mV	47.68V	17.20uA
45	486.9mV	47.01V	20.57uA	496.3mV	46.84V	16.79uA
46	488.5mV	47.18V	18.91uA	494.5mV	46.84V	17.55uA
47	493.0mV	47.18V	20.23uA	492.9mV	47.07V	18.92uA
48	491.5mV	46.84V	20.59uA	490.5mV	46.98V	16.45uA
49	493.7mV	47.20V	21.08uA	492.2mV	46.57V	16.61uA
50	488.6mV	47.32V	18.31uA	492.4mV	47.33V	17.83uA
51	493.3mV	46.67V	18.75uA	490.5mV	46.95V	17.46uA
52	496.0mV	47.47V	17.63uA	495.2mV	47.27V	16.27uA
53	494.2mV	47.20V	16.34uA	487.1mV	47.72V	19.21uA
54	488.7mV	46.67V	17.13uA	493.3mV	46.92V	17.70uA
55	488.6mV	46.90V	20.21uA	487.5mV	46.94V	16.74uA
56	495.1mV	46.97V	18.95uA	486.6mV	46.75V	16.29uA
57	490.1mV	47.49V	16.51uA	493.0mV	47.23V	18.89uA
58	495.6mV	47.81V	18.80uA	494.3mV	46.96V	19.13uA
59	493.4mV	47.46V	19.89uA	492.2mV	47.24V	20.39uA
60	495.1mV	46.95V	16.66uA	488.1mV	47.87V	18.75uA



High Temperature Reverse Bias Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 100 ± 5°C, 80% VR, T = 1000 hrs

Test Date: 2017.03.20 ~ 2017.05.02

Test Standard : JESD22 STANDARD Method-A108

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
61	488.6mV	46.82V	19.16uA	490.9mV	47.03V	19.43uA
62	490.5mV	47.10V	17.53uA	495.9mV	47.31V	18.29uA
63	492.3mV	47.23V	20.37uA	494.2mV	46.98V	20.99uA
64	487.3mV	47.06V	18.64uA	493.0mV	46.74V	20.56uA
65	491.8mV	47.35V	18.24uA	488.0mV	47.18V	17.07uA
66	490.7mV	47.15V	18.91uA	495.2mV	47.59V	17.13uA
67	493.4mV	47.06V	16.57uA	491.6mV	47.42V	17.26uA
68	494.7mV	47.68V	18.01uA	492.7mV	47.37V	16.70uA
69	486.6mV	46.62V	16.93uA	494.0mV	46.88V	16.92uA
70	494.2mV	47.77V	19.03uA	486.7mV	46.74V	19.33uA
71	490.6mV	46.93V	21.05uA	488.5mV	47.77V	17.24uA
72	493.0mV	47.57V	18.16uA	489.3mV	46.74V	18.47uA
73	487.8mV	46.92V	18.07uA	489.3mV	47.60V	18.38uA
74	492.1mV	47.56V	20.06uA	491.5mV	47.00V	18.85uA
75	489.2mV	47.57V	17.70uA	488.8mV	47.10V	19.00uA
76	493.7mV	47.67V	17.37uA	490.1mV	46.74V	18.20uA
77	496.0mV	47.28V	17.31uA	491.3mV	47.41V	16.90uA

Made By: King Huang

Approval: Peter Yang



High Temperature Storage Life Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 150°C, 1000Hrs

Test Date: 2017.03.20 ~ 2017.05.02

Test Standard : JESD22 STANDARD Method-A103

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
1	490.5mV	47.29V	17.23uA	487.4mV	47.82V	17.49uA
2	495.4mV	46.94V	20.16uA	488.6mV	47.81V	19.65uA
3	494.9mV	46.97V	20.29uA	488.0mV	47.40V	20.28uA
4	495.5mV	47.80V	16.60uA	487.1mV	47.55V	17.77uA
5	487.5mV	47.41V	19.08uA	494.6mV	46.73V	19.77uA
6	493.6mV	46.78V	18.47uA	492.4mV	46.77V	19.10uA
7	486.2mV	47.76V	16.66uA	495.3mV	47.57V	17.65uA
8	494.6mV	47.31V	16.40uA	494.8mV	46.71V	21.10uA
9	492.3mV	47.34V	20.17uA	487.8mV	46.56V	19.33uA
10	493.6mV	47.59V	16.68uA	486.9mV	47.62V	17.94uA
11	488.3mV	47.44V	17.20uA	492.7mV	47.85V	16.76uA
12	492.5mV	47.50V	19.09uA	494.0mV	46.83V	18.53uA
13	492.9mV	47.01V	17.59uA	487.1mV	47.63V	17.75uA
14	494.5mV	47.68V	20.30uA	489.6mV	46.89V	18.77uA
15	491.9mV	47.57V	16.26uA	494.7mV	46.90V	18.71uA
16	489.6mV	47.41V	16.27uA	490.1mV	47.49V	19.99uA
17	489.7mV	46.78V	20.39uA	488.5mV	47.68V	17.50uA
18	491.4mV	47.12V	16.94uA	492.0mV	47.23V	19.89uA
19	486.4mV	46.80V	17.82uA	495.1mV	47.31V	18.85uA
20	490.0mV	46.68V	18.74uA	490.8mV	46.81V	17.76uA
21	491.7mV	47.20V	17.58uA	492.8mV	46.60V	16.72uA
22	487.2mV	46.81V	20.33uA	492.8mV	47.48V	17.03uA
23	492.9mV	47.38V	17.76uA	489.0mV	47.42V	18.80uA
24	491.6mV	47.77V	16.65uA	492.6mV	47.58V	19.61uA
25	487.4mV	46.73V	20.22uA	489.5mV	46.89V	17.04uA
26	487.5mV	46.93V	19.45uA	488.3mV	46.62V	18.32uA
27	491.3mV	46.67V	17.71uA	491.1mV	46.71V	20.97uA
28	495.8mV	47.02V	16.77uA	494.8mV	47.17V	19.11uA
29	493.5mV	47.57V	16.52uA	487.0mV	46.67V	18.83uA
30	488.3mV	47.76V	19.07uA	492.3mV	47.34V	20.98uA



High Temperature Storage Life Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 150°C, 1000Hrs

Test Date: 2017.03.20 ~ 2017.05.02

Test Standard : JESD22 STANDARD Method-A103

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
31	491.2mV	47.23V	18.27uA	489.6mV	47.63V	16.62uA
32	492.2mV	46.60V	18.34uA	496.1mV	47.74V	20.66uA
33	495.7mV	47.41V	17.68uA	491.1mV	46.63V	17.89uA
34	489.3mV	47.15V	17.42uA	489.9mV	47.86V	16.27uA
35	490.4mV	47.60V	18.23uA	496.1mV	47.57V	18.21uA
36	490.3mV	46.75V	19.32uA	488.5mV	46.72V	19.65uA
37	487.9mV	47.60V	19.18uA	487.0mV	47.45V	16.89uA
38	492.2mV	47.29V	20.24uA	492.1mV	47.60V	17.51uA
39	486.0mV	47.84V	16.26uA	492.2mV	46.84V	17.82uA
40	489.2mV	46.76V	20.56uA	493.8mV	46.60V	16.60uA
41	488.8mV	47.78V	20.12uA	492.3mV	47.16V	18.96uA
42	491.6mV	47.86V	19.91uA	489.3mV	47.69V	21.04uA
43	488.2mV	46.56V	19.42uA	488.1mV	46.73V	20.84uA
44	495.0mV	47.07V	16.36uA	494.0mV	47.62V	21.02uA
45	495.9mV	47.86V	19.82uA	487.2mV	47.73V	16.59uA
46	487.7mV	46.70V	18.17uA	493.7mV	47.38V	21.08uA
47	490.0mV	46.61V	18.62uA	491.3mV	47.37V	18.40uA
48	486.7mV	46.75V	17.36uA	488.7mV	47.62V	19.92uA
49	488.2mV	47.13V	20.99uA	491.4mV	46.84V	18.31uA
50	488.8mV	46.57V	17.99uA	489.5mV	47.00V	18.23uA
51	491.3mV	46.58V	17.27uA	491.8mV	47.68V	20.99uA
52	491.1mV	47.10V	17.95uA	495.2mV	46.67V	17.72uA
53	487.5mV	46.98V	20.72uA	489.8mV	47.69V	19.88uA
54	489.9mV	47.16V	18.51uA	486.8mV	47.54V	18.00uA
55	487.4mV	47.32V	19.00uA	494.8mV	47.39V	16.58uA
56	489.7mV	47.82V	18.78uA	488.2mV	47.20V	16.95uA
57	488.4mV	47.70V	17.23uA	491.3mV	47.22V	20.19uA
58	486.6mV	46.63V	17.32uA	492.5mV	46.87V	17.39uA
59	495.2mV	46.59V	16.28uA	488.2mV	46.99V	20.28uA
60	495.3mV	46.88V	19.95uA	493.5mV	47.14V	20.54uA



High Temperature Storage Life Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 150°C, 1000Hrs

Test Date: 2017.03.20 ~ 2017.05.02

Test Standard : JESD22 STANDARD Method-A103

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
61	489.6mV	47.34V	16.52uA	493.2mV	46.70V	19.54uA
62	490.7mV	46.90V	17.28uA	489.4mV	47.50V	17.62uA
63	493.9mV	47.59V	18.46uA	486.3mV	47.42V	19.71uA
64	489.1mV	47.05V	20.03uA	496.3mV	46.95V	16.99uA
65	495.0mV	47.42V	18.65uA	492.6mV	47.62V	17.06uA
66	493.6mV	46.75V	17.41uA	490.8mV	47.69V	16.98uA
67	490.3mV	47.79V	19.51uA	490.3mV	46.95V	19.47uA
68	493.2mV	47.66V	20.62uA	488.4mV	47.13V	19.01uA
69	496.1mV	46.78V	20.93uA	495.9mV	47.48V	16.78uA
70	492.6mV	47.16V	17.80uA	491.7mV	46.99V	20.42uA
71	490.5mV	47.29V	20.05uA	493.9mV	47.88V	18.61uA
72	489.0mV	46.59V	19.04uA	494.4mV	46.80V	18.51uA
73	489.0mV	47.59V	16.99uA	488.7mV	46.71V	20.33uA
74	495.9mV	46.87V	18.47uA	489.4mV	47.67V	20.30uA
75	489.7mV	47.33V	17.24uA	495.9mV	47.64V	19.64uA
76	492.6mV	47.25V	17.37uA	494.5mV	47.83V	19.11uA
77	491.1mV	47.80V	16.48uA	496.2mV	47.44V	18.51uA

Made By: King Huang

Approval: Peter Yang



SeCoS Corporation

Pressure Cooker Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 121°C, 100%RH, 29.7PSIG, 168Hrs

Test Date: 2017.03.20 ~ 2017.03.28

Test Standard : JESD22 STANDARD Method-A102

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
1	496.0mV	47.30V	18.12uA	493.2mV	47.64V	21.11uA
2	489.4mV	46.71V	20.73uA	492.1mV	47.60V	16.86uA
3	494.6mV	47.70V	16.80uA	494.3mV	47.12V	16.40uA
4	492.3mV	47.30V	17.60uA	495.4mV	46.68V	16.22uA
5	486.0mV	46.94V	19.08uA	486.4mV	47.72V	18.83uA
6	490.3mV	47.31V	16.86uA	494.0mV	46.67V	16.59uA
7	489.7mV	47.51V	20.82uA	495.9mV	47.63V	16.44uA
8	487.1mV	47.85V	16.77uA	488.5mV	47.63V	20.32uA
9	490.9mV	47.17V	17.13uA	488.4mV	47.76V	18.98uA
10	493.1mV	46.94V	16.44uA	489.8mV	46.65V	18.61uA
11	490.4mV	47.09V	16.47uA	494.8mV	47.68V	16.81uA
12	493.0mV	47.04V	20.25uA	492.6mV	47.81V	17.33uA
13	487.0mV	46.78V	18.13uA	496.1mV	47.72V	20.26uA
14	494.2mV	46.97V	17.80uA	488.1mV	46.80V	16.72uA
15	487.9mV	46.89V	20.29uA	488.2mV	46.71V	16.68uA
16	491.4mV	46.66V	18.84uA	486.4mV	47.72V	19.58uA
17	494.0mV	46.64V	16.80uA	493.9mV	47.34V	17.28uA
18	494.5mV	47.79V	19.06uA	488.9mV	46.68V	18.54uA
19	492.3mV	46.89V	20.53uA	486.4mV	47.29V	16.54uA
20	487.3mV	46.87V	19.15uA	488.7mV	46.71V	16.24uA
21	494.4mV	47.80V	16.30uA	493.0mV	46.56V	20.31uA
22	489.5mV	47.01V	19.78uA	493.0mV	47.74V	20.38uA
23	492.7mV	46.71V	20.34uA	490.7mV	47.42V	19.19uA
24	489.3mV	47.38V	20.51uA	486.2mV	47.63V	19.28uA
25	489.0mV	47.60V	18.46uA	496.1mV	47.18V	19.74uA
26	491.6mV	46.86V	19.82uA	490.4mV	46.72V	18.24uA
27	491.6mV	46.92V	19.62uA	488.1mV	46.95V	19.88uA
28	491.1mV	46.88V	16.70uA	494.2mV	47.32V	19.70uA
29	495.2mV	46.56V	20.73uA	486.6mV	47.71V	17.74uA
30	492.2mV	46.96V	18.84uA	493.4mV	47.85V	19.69uA



SeCoS Corporation

Pressure Cooker Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 121°C, 100%RH, 29.7PSIG, 168Hrs

Test Date: 2017.03.20 ~ 2017.03.28

Test Standard : JESD22 STANDARD Method-A102

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
31	494.2mV	47.07V	18.74uA	493.0mV	47.27V	20.10uA
32	496.3mV	47.40V	18.63uA	487.9mV	47.25V	16.65uA
33	494.9mV	46.91V	17.53uA	487.1mV	46.93V	17.32uA
34	487.3mV	47.41V	18.54uA	493.9mV	47.70V	20.78uA
35	489.6mV	46.80V	19.95uA	494.5mV	47.64V	18.27uA
36	491.9mV	47.15V	20.40uA	487.7mV	47.20V	18.44uA
37	491.9mV	47.27V	19.49uA	491.2mV	47.00V	20.80uA
38	495.4mV	47.15V	16.62uA	487.8mV	46.92V	16.83uA
39	493.5mV	46.85V	17.74uA	495.1mV	47.35V	17.00uA
40	490.7mV	46.91V	19.94uA	495.4mV	47.32V	20.24uA
41	492.6mV	47.04V	20.45uA	488.5mV	47.70V	20.52uA
42	489.4mV	47.43V	17.66uA	495.4mV	46.84V	19.63uA
43	487.4mV	47.13V	19.52uA	488.5mV	46.76V	16.20uA
44	487.5mV	47.60V	20.08uA	493.2mV	47.67V	17.32uA
45	492.1mV	47.03V	20.27uA	486.5mV	47.14V	16.95uA
46	487.6mV	47.05V	16.60uA	492.1mV	47.53V	19.12uA
47	491.7mV	47.42V	17.78uA	491.9mV	47.62V	17.47uA
48	496.0mV	47.79V	18.76uA	486.1mV	47.59V	20.83uA
49	493.0mV	46.93V	16.24uA	491.4mV	46.66V	17.40uA
50	489.4mV	47.01V	20.09uA	488.1mV	47.57V	17.28uA
51	490.8mV	46.68V	19.47uA	492.7mV	46.56V	16.71uA
52	486.7mV	47.64V	21.19uA	495.1mV	47.36V	16.89uA
53	492.8mV	46.58V	16.72uA	495.2mV	46.99V	20.14uA
54	490.4mV	47.14V	17.72uA	488.8mV	47.84V	18.03uA
55	495.7mV	47.48V	18.44uA	491.7mV	47.72V	18.56uA
56	495.8mV	47.28V	19.44uA	492.7mV	47.64V	18.67uA
57	496.2mV	47.03V	21.16uA	496.2mV	47.80V	18.06uA
58	489.6mV	47.16V	19.61uA	495.6mV	47.81V	19.79uA
59	495.2mV	47.42V	16.96uA	486.7mV	47.75V	19.44uA
60	494.9mV	47.69V	17.70uA	490.9mV	47.15V	20.20uA



SeCoS Corporation

Pressure Cooker Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 121°C, 100%RH, 29.7PSIG, 168Hrs

Test Date: 2017.03.20 ~ 2017.03.28

Test Standard : JESD22 STANDARD Method-A102

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
61	492.6mV	46.90V	17.78uA	491.4mV	47.63V	19.49uA
62	495.4mV	47.81V	20.45uA	489.9mV	46.79V	20.97uA
63	491.7mV	46.98V	19.29uA	492.5mV	47.34V	18.05uA
64	492.4mV	46.60V	18.71uA	494.5mV	46.56V	19.41uA
65	493.2mV	46.66V	20.93uA	496.4mV	46.75V	20.59uA
66	494.7mV	46.89V	17.99uA	486.8mV	46.68V	19.05uA
67	487.4mV	46.62V	20.05uA	492.6mV	47.77V	17.23uA
68	492.3mV	47.69V	16.19uA	487.7mV	46.58V	18.88uA
69	491.4mV	47.30V	21.01uA	487.9mV	46.66V	21.13uA
70	487.4mV	46.60V	20.35uA	489.3mV	47.52V	20.50uA
71	494.4mV	46.61V	20.57uA	495.7mV	47.24V	18.24uA
72	491.2mV	47.27V	17.55uA	491.0mV	47.49V	20.29uA
73	486.9mV	46.70V	19.37uA	492.2mV	47.50V	20.61uA
74	487.5mV	47.66V	17.20uA	494.7mV	47.03V	18.08uA
75	495.5mV	47.77V	20.03uA	488.2mV	46.95V	20.00uA
76	495.9mV	47.20V	17.76uA	487.3mV	47.86V	17.84uA
77	495.9mV	46.60V	16.60uA	493.2mV	47.85V	16.93uA

Made By: King Huang

Approval: Peter Yang



SeCoS Corporation

Temperature Cycle Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: -55°C/30min, 150°C/30min, for1000 Cycle

Test Date: 2017.03.21 ~ 2017.05.12

Test Standard : JESD22 STANDARD Method-A104

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
1	495.0mV	46.57V	18.06uA	487.8mV	46.78V	17.15uA
2	490.1mV	47.61V	16.94uA	489.5mV	47.79V	16.91uA
3	492.1mV	47.05V	19.92uA	495.9mV	47.62V	18.95uA
4	492.7mV	47.50V	19.89uA	495.4mV	47.53V	17.84uA
5	489.9mV	47.02V	20.16uA	491.5mV	46.74V	19.57uA
6	487.6mV	46.64V	18.18uA	487.1mV	47.59V	18.14uA
7	493.5mV	47.21V	19.62uA	490.0mV	46.88V	18.61uA
8	491.1mV	47.35V	16.74uA	486.1mV	46.64V	18.39uA
9	492.8mV	47.66V	16.54uA	493.1mV	47.02V	17.36uA
10	493.6mV	47.70V	16.25uA	491.6mV	47.81V	17.31uA
11	488.9mV	47.14V	17.98uA	494.1mV	47.55V	17.04uA
12	489.9mV	47.68V	20.33uA	489.6mV	46.96V	16.52uA
13	486.4mV	47.33V	17.53uA	488.4mV	46.93V	17.51uA
14	490.1mV	47.01V	16.72uA	489.7mV	46.98V	21.16uA
15	490.2mV	47.63V	20.96uA	491.8mV	47.24V	20.39uA
16	491.1mV	47.65V	21.02uA	490.5mV	47.74V	18.63uA
17	493.0mV	47.61V	20.29uA	490.5mV	47.32V	17.42uA
18	492.3mV	47.42V	18.93uA	495.4mV	47.64V	16.68uA
19	491.9mV	47.77V	17.93uA	492.1mV	46.66V	16.99uA
20	494.6mV	47.13V	20.93uA	495.4mV	46.70V	20.36uA
21	486.2mV	47.70V	17.23uA	489.9mV	46.58V	17.56uA
22	490.1mV	47.53V	19.83uA	491.2mV	46.58V	18.25uA
23	486.9mV	47.46V	17.53uA	487.7mV	47.33V	16.44uA
24	494.8mV	47.81V	16.64uA	487.6mV	47.80V	19.43uA
25	493.8mV	46.69V	18.99uA	486.6mV	47.09V	19.85uA
26	486.5mV	47.70V	16.26uA	489.9mV	47.26V	19.22uA
27	494.3mV	47.15V	16.69uA	491.6mV	47.68V	18.51uA
28	488.4mV	46.65V	20.50uA	491.1mV	47.82V	17.13uA
29	495.4mV	46.87V	17.35uA	493.3mV	46.90V	17.83uA
30	494.8mV	46.78V	20.43uA	490.9mV	47.80V	20.71uA



SeCoS Corporation

Temperature Cycle Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: -55°C/30min, 150°C/30min, for1000 Cycle

Test Date: 2017.03.21 ~ 2017.05.12

Test Standard : JESD22 STANDARD Method-A104

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
31	489.3mV	47.54V	19.17uA	493.4mV	47.41V	18.88uA
32	493.2mV	47.00V	20.20uA	489.0mV	47.62V	16.73uA
33	491.7mV	47.24V	19.88uA	491.5mV	46.79V	19.62uA
34	493.4mV	47.86V	17.97uA	494.9mV	47.09V	19.02uA
35	496.0mV	47.59V	19.73uA	490.8mV	47.09V	16.33uA
36	494.6mV	46.98V	17.78uA	490.5mV	47.43V	20.14uA
37	488.8mV	47.86V	17.15uA	489.9mV	47.72V	20.08uA
38	495.0mV	47.37V	20.20uA	494.2mV	47.64V	16.33uA
39	487.9mV	47.07V	19.44uA	493.4mV	47.36V	20.32uA
40	492.6mV	47.25V	18.02uA	493.7mV	46.81V	16.94uA
41	488.4mV	47.14V	20.67uA	490.4mV	47.00V	20.04uA
42	496.1mV	47.19V	19.45uA	496.4mV	46.62V	17.74uA
43	492.8mV	47.04V	21.08uA	491.7mV	47.45V	18.03uA
44	490.9mV	47.04V	17.13uA	492.3mV	47.09V	19.14uA
45	494.4mV	47.51V	17.30uA	487.0mV	46.95V	20.24uA
46	496.1mV	47.04V	16.42uA	490.7mV	47.71V	17.86uA
47	494.1mV	47.15V	20.38uA	493.1mV	47.22V	19.60uA
48	486.3mV	47.45V	17.64uA	489.5mV	47.67V	18.81uA
49	491.5mV	47.48V	19.26uA	487.4mV	47.44V	16.39uA
50	489.4mV	47.26V	20.93uA	494.6mV	46.99V	18.44uA
51	491.7mV	47.56V	19.50uA	493.5mV	47.16V	18.12uA
52	496.4mV	47.50V	17.42uA	486.7mV	47.76V	19.23uA
53	495.9mV	47.03V	16.81uA	488.0mV	46.75V	20.52uA
54	487.8mV	47.74V	20.43uA	489.3mV	47.19V	17.46uA
55	489.5mV	46.69V	18.60uA	489.2mV	46.71V	17.03uA
56	489.4mV	46.66V	17.67uA	492.0mV	46.58V	18.50uA
57	490.4mV	47.72V	18.71uA	490.0mV	47.79V	17.29uA
58	489.9mV	46.76V	19.38uA	491.2mV	47.16V	19.34uA
59	491.3mV	47.69V	18.70uA	488.4mV	46.82V	20.18uA
60	486.0mV	47.60V	18.50uA	490.7mV	47.05V	18.72uA



SeCoS Corporation

Temperature Cycle Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: -55°C/30min, 150°C/30min, for1000 Cycle

Test Date: 2017.03.21 ~ 2017.05.12

Test Standard : JESD22 STANDARD Method-A104

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
61	486.6mV	47.24V	17.19uA	487.8mV	47.48V	20.44uA
62	495.4mV	47.49V	16.27uA	496.2mV	47.02V	18.35uA
63	487.8mV	47.78V	17.21uA	488.2mV	46.63V	16.95uA
64	489.4mV	47.07V	19.57uA	496.2mV	46.71V	20.83uA
65	496.2mV	47.34V	19.72uA	492.3mV	47.27V	19.51uA
66	491.2mV	47.36V	16.80uA	488.0mV	47.47V	20.66uA
67	494.3mV	46.70V	19.55uA	490.9mV	47.81V	19.22uA
68	486.4mV	46.61V	17.52uA	492.2mV	47.40V	18.80uA
69	494.0mV	46.56V	17.41uA	492.3mV	47.12V	20.38uA
70	493.9mV	47.62V	20.03uA	488.7mV	47.33V	19.72uA
71	489.0mV	47.85V	16.89uA	493.8mV	46.96V	18.04uA
72	496.0mV	47.28V	17.19uA	489.2mV	47.80V	17.32uA
73	488.0mV	47.11V	20.36uA	491.9mV	47.19V	18.91uA
74	489.0mV	47.45V	17.60uA	493.5mV	47.14V	16.75uA
75	494.1mV	47.06V	17.18uA	491.2mV	47.57V	18.51uA
76	496.3mV	46.69V	16.55uA	490.8mV	47.38V	20.48uA
77	489.6mV	47.08V	18.12uA	494.8mV	47.78V	18.11uA

Made By: King Huang

Approval: Peter Yang



High Temperature High Humidity Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 85±2°C, 85±5%RH, 1000Hrs

Test Date: 2017.03.28 ~ 2017.05.10

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
1	493.5mV	47.82V	18.72uA	488.9mV	47.28V	16.77uA
2	486.5mV	47.00V	18.18uA	489.6mV	46.72V	18.23uA
3	487.7mV	46.58V	18.09uA	494.0mV	47.60V	19.72uA
4	490.0mV	46.89V	17.09uA	493.1mV	46.92V	16.71uA
5	495.4mV	47.17V	19.17uA	489.5mV	47.86V	20.88uA
6	494.2mV	46.82V	19.10uA	487.8mV	46.64V	19.37uA
7	488.0mV	47.27V	16.49uA	488.3mV	47.06V	18.32uA
8	495.0mV	47.42V	17.89uA	487.5mV	46.85V	17.29uA
9	487.1mV	46.57V	17.83uA	489.2mV	47.56V	18.86uA
10	492.6mV	47.07V	18.44uA	494.0mV	47.60V	20.37uA
11	489.1mV	47.55V	21.06uA	494.9mV	47.64V	20.53uA
12	490.0mV	46.81V	17.62uA	495.9mV	47.29V	17.20uA
13	493.2mV	46.72V	17.64uA	486.7mV	47.60V	17.57uA
14	496.2mV	46.60V	20.82uA	490.1mV	47.45V	18.92uA
15	492.5mV	47.41V	19.53uA	496.3mV	47.30V	20.78uA
16	492.0mV	47.33V	19.65uA	490.0mV	47.31V	20.22uA
17	493.1mV	46.71V	16.55uA	487.0mV	46.71V	19.22uA
18	495.0mV	47.60V	18.03uA	488.7mV	47.63V	17.13uA
19	491.0mV	46.68V	20.70uA	490.4mV	47.36V	19.08uA
20	494.7mV	47.09V	20.28uA	493.8mV	46.84V	16.47uA
21	490.2mV	47.49V	16.41uA	490.4mV	47.08V	20.48uA
22	493.0mV	47.47V	18.86uA	488.0mV	47.09V	17.82uA
23	493.3mV	47.43V	20.31uA	486.1mV	47.67V	17.60uA
24	494.6mV	46.99V	16.55uA	495.6mV	47.46V	17.44uA
25	493.4mV	47.56V	20.68uA	489.0mV	47.53V	20.89uA
26	487.9mV	47.12V	18.75uA	494.7mV	47.26V	17.08uA
27	492.3mV	47.24V	17.12uA	494.7mV	46.64V	16.62uA
28	487.4mV	46.67V	16.58uA	490.0mV	47.34V	16.77uA
29	489.5mV	47.62V	20.67uA	495.9mV	47.18V	17.25uA
30	489.0mV	47.52V	17.98uA	489.5mV	47.42V	19.18uA



High Temperature High Humidity Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 85±2°C, 85±5%RH, 1000Hrs

Test Date: 2017.03.28 ~ 2017.05.10

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
31	490.3mV	47.41V	16.21uA	488.8mV	47.03V	17.63uA
32	489.3mV	47.11V	16.77uA	488.3mV	47.01V	16.50uA
33	494.1mV	47.32V	20.25uA	495.7mV	47.72V	20.78uA
34	495.9mV	47.13V	16.83uA	493.4mV	47.76V	18.04uA
35	487.9mV	47.17V	20.33uA	492.3mV	47.09V	19.43uA
36	488.3mV	47.71V	21.17uA	491.6mV	47.06V	17.44uA
37	491.2mV	47.11V	16.92uA	496.0mV	47.04V	19.16uA
38	487.9mV	47.36V	18.20uA	489.1mV	47.35V	16.83uA
39	492.0mV	47.51V	17.82uA	486.7mV	46.71V	17.48uA
40	495.0mV	47.60V	20.91uA	491.9mV	47.63V	16.40uA
41	490.1mV	47.77V	17.31uA	494.8mV	47.43V	18.34uA
42	490.5mV	47.61V	20.85uA	486.3mV	47.36V	16.22uA
43	491.0mV	46.93V	19.18uA	494.7mV	46.82V	18.12uA
44	489.6mV	47.57V	18.02uA	489.2mV	46.90V	19.43uA
45	489.8mV	47.55V	18.66uA	486.9mV	46.76V	17.16uA
46	486.5mV	47.77V	18.67uA	490.1mV	46.98V	21.09uA
47	488.6mV	47.13V	17.93uA	496.1mV	46.91V	21.06uA
48	488.1mV	47.54V	16.33uA	491.0mV	47.10V	16.91uA
49	493.3mV	47.00V	20.48uA	491.2mV	47.72V	21.17uA
50	495.7mV	47.35V	19.07uA	489.7mV	46.70V	19.78uA
51	490.9mV	46.64V	21.08uA	490.5mV	46.86V	20.33uA
52	494.3mV	46.77V	20.89uA	487.0mV	47.02V	21.17uA
53	488.0mV	46.92V	20.11uA	496.1mV	47.06V	19.29uA
54	488.6mV	47.31V	18.38uA	490.5mV	47.51V	21.05uA
55	489.2mV	47.69V	18.86uA	489.8mV	47.88V	18.06uA
56	495.9mV	47.13V	19.58uA	494.4mV	47.21V	18.58uA
57	491.9mV	46.57V	20.61uA	493.6mV	47.22V	20.89uA
58	495.0mV	47.47V	17.50uA	493.4mV	47.60V	17.44uA
59	486.8mV	47.06V	17.66uA	486.1mV	46.68V	17.34uA
60	490.2mV	47.44V	20.25uA	493.3mV	47.13V	16.82uA



High Temperature High Humidity Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 85±2°C, 85±5%RH, 1000Hrs

Test Date: 2017.03.28 ~ 2017.05.10

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
61	491.9mV	47.36V	17.09uA	492.0mV	47.50V	20.50uA
62	496.2mV	46.94V	18.56uA	488.1mV	47.78V	20.17uA
63	489.4mV	47.14V	17.49uA	492.8mV	47.62V	18.60uA
64	487.8mV	47.39V	17.31uA	490.5mV	47.78V	21.12uA
65	491.2mV	47.69V	17.04uA	486.9mV	46.70V	19.56uA
66	495.3mV	47.14V	17.74uA	492.7mV	47.20V	18.06uA
67	494.0mV	47.19V	17.03uA	494.0mV	47.69V	21.09uA
68	490.0mV	47.28V	16.98uA	490.7mV	46.57V	18.19uA
69	490.3mV	46.71V	16.74uA	491.3mV	47.51V	20.91uA
70	487.1mV	47.36V	19.58uA	488.1mV	47.32V	17.62uA
71	496.2mV	47.13V	20.83uA	495.7mV	46.97V	18.71uA
72	493.5mV	47.31V	19.00uA	495.8mV	47.39V	19.94uA
73	494.7mV	46.74V	18.59uA	492.0mV	47.70V	18.63uA
74	494.2mV	47.43V	20.52uA	494.1mV	47.60V	20.95uA
75	489.3mV	47.02V	17.78uA	490.8mV	47.30V	18.74uA
76	487.9mV	46.86V	16.69uA	487.4mV	46.82V	21.13uA
77	488.6mV	46.81V	16.46uA	495.9mV	47.60V	17.99uA

Made By: King Huang

Approval: Peter Yang



High Temper High Humidity Reverse Bies Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 85±2°C, 85±5%RH, 80% VR, 1000Hrs

Test Date: 2017.03.28 ~ 2017.05.10

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
1	495.6mV	46.67V	19.19uA	489.3mV	46.74V	18.38uA
2	490.6mV	46.87V	16.28uA	490.3mV	47.40V	17.06uA
3	491.1mV	47.35V	16.64uA	491.0mV	47.79V	16.64uA
4	492.1mV	47.50V	16.21uA	490.2mV	47.57V	20.03uA
5	492.8mV	47.79V	17.18uA	488.4mV	46.99V	16.19uA
6	490.8mV	46.65V	17.19uA	491.3mV	47.09V	20.65uA
7	495.4mV	46.68V	19.63uA	495.1mV	47.58V	18.26uA
8	488.6mV	47.74V	16.76uA	493.5mV	47.31V	17.87uA
9	493.8mV	47.60V	18.75uA	490.9mV	47.67V	19.87uA
10	492.6mV	47.10V	18.99uA	492.4mV	47.79V	20.62uA
11	496.2mV	47.64V	19.31uA	490.4mV	47.15V	19.62uA
12	489.5mV	47.66V	20.33uA	490.2mV	47.09V	20.91uA
13	495.6mV	46.71V	21.18uA	486.5mV	47.40V	17.05uA
14	487.3mV	47.12V	18.67uA	490.4mV	47.50V	17.89uA
15	492.0mV	47.44V	16.80uA	496.1mV	46.85V	19.57uA
16	493.3mV	47.45V	16.30uA	489.5mV	47.18V	19.43uA
17	487.6mV	47.70V	18.00uA	494.0mV	47.88V	17.14uA
18	493.2mV	47.32V	16.79uA	492.2mV	46.61V	16.78uA
19	490.3mV	46.57V	19.81uA	488.5mV	46.66V	17.41uA
20	494.7mV	46.83V	20.19uA	491.6mV	47.61V	20.77uA
21	489.8mV	47.46V	19.82uA	487.3mV	47.48V	20.47uA
22	494.0mV	47.73V	16.58uA	493.1mV	47.44V	16.47uA
23	490.9mV	47.57V	17.05uA	486.4mV	46.77V	17.74uA
24	495.7mV	46.62V	18.40uA	492.5mV	47.34V	18.11uA
25	488.5mV	47.73V	19.08uA	491.6mV	47.58V	19.80uA
26	489.3mV	47.65V	21.12uA	490.7mV	47.65V	17.53uA
27	490.3mV	47.30V	21.14uA	492.7mV	47.81V	19.75uA
28	490.7mV	46.82V	18.04uA	494.5mV	47.48V	19.86uA
29	493.2mV	47.44V	18.80uA	487.9mV	47.71V	16.42uA
30	488.3mV	46.82V	17.19uA	493.4mV	47.83V	18.50uA



High Temper High Humidity Reverse Bies Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 85±2°C, 85±5%RH, 80% VR, 1000Hrs

Test Date: 2017.03.28 ~ 2017.05.10

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
31	489.9mV	46.71V	19.30uA	495.7mV	46.85V	18.31uA
32	495.0mV	47.24V	17.94uA	489.0mV	46.56V	18.56uA
33	486.8mV	46.60V	18.69uA	493.3mV	46.72V	18.24uA
34	494.9mV	47.64V	16.68uA	491.2mV	46.67V	17.67uA
35	486.3mV	46.90V	16.56uA	486.4mV	46.69V	17.55uA
36	487.1mV	47.65V	19.84uA	495.9mV	47.14V	19.95uA
37	487.4mV	47.81V	17.11uA	494.7mV	46.61V	20.27uA
38	493.7mV	47.36V	19.89uA	488.5mV	47.04V	20.84uA
39	495.0mV	47.47V	20.38uA	490.0mV	46.71V	17.53uA
40	488.6mV	46.89V	18.87uA	488.8mV	47.07V	19.90uA
41	490.1mV	47.00V	18.51uA	494.2mV	47.37V	19.37uA
42	487.1mV	47.09V	19.91uA	495.5mV	47.80V	20.24uA
43	487.6mV	46.82V	19.96uA	486.1mV	47.43V	16.18uA
44	494.2mV	47.17V	18.19uA	491.9mV	46.97V	17.61uA
45	487.9mV	47.27V	17.96uA	488.8mV	47.60V	16.22uA
46	492.5mV	47.00V	16.47uA	487.4mV	47.86V	16.82uA
47	492.5mV	47.55V	18.68uA	489.5mV	47.65V	19.70uA
48	495.4mV	47.55V	17.16uA	494.8mV	46.65V	19.29uA
49	491.6mV	46.84V	20.00uA	489.0mV	46.67V	18.75uA
50	494.3mV	47.65V	19.68uA	492.8mV	46.60V	17.01uA
51	486.4mV	47.08V	19.71uA	495.9mV	46.93V	17.90uA
52	486.4mV	46.89V	17.65uA	491.1mV	46.87V	20.46uA
53	495.6mV	47.27V	19.99uA	492.2mV	47.82V	18.90uA
54	492.4mV	47.33V	20.33uA	491.0mV	47.54V	19.84uA
55	487.6mV	47.31V	16.22uA	489.5mV	47.23V	16.68uA
56	487.8mV	47.31V	18.02uA	490.8mV	47.05V	18.74uA
57	491.4mV	47.36V	17.92uA	488.5mV	47.59V	21.11uA
58	486.0mV	47.67V	20.63uA	489.9mV	47.19V	19.15uA
59	491.1mV	47.44V	20.94uA	492.5mV	46.79V	19.72uA
60	488.4mV	46.58V	17.93uA	490.5mV	46.86V	20.52uA



High Temper High Humidity Reverse Bies Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 85±2°C, 85±5%RH, 80% VR, 1000Hrs

Test Date: 2017.03.28 ~ 2017.05.10

Test Standard : JESD22 STANDARD Method-A101

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
61	491.4mV	47.68V	16.32uA	490.0mV	47.19V	16.75uA
62	494.7mV	47.57V	20.02uA	486.5mV	47.17V	17.20uA
63	495.6mV	47.47V	18.72uA	494.2mV	46.79V	16.37uA
64	495.1mV	47.79V	16.59uA	493.4mV	46.66V	18.25uA
65	496.4mV	46.65V	17.82uA	486.8mV	47.15V	16.36uA
66	491.7mV	46.70V	18.96uA	492.4mV	47.67V	21.14uA
67	493.4mV	47.45V	18.79uA	495.2mV	46.90V	18.49uA
68	491.7mV	46.56V	16.31uA	491.3mV	47.61V	19.02uA
69	486.9mV	47.51V	19.25uA	495.4mV	47.16V	16.92uA
70	490.0mV	46.71V	16.67uA	493.8mV	46.70V	18.86uA
71	493.1mV	47.67V	19.41uA	492.6mV	47.61V	18.63uA
72	487.5mV	47.75V	16.37uA	495.4mV	46.71V	19.04uA
73	488.2mV	47.53V	21.02uA	488.3mV	47.24V	19.59uA
74	496.3mV	47.06V	19.94uA	486.1mV	46.71V	17.56uA
75	488.5mV	46.90V	18.52uA	491.9mV	46.61V	19.51uA
76	492.6mV	46.89V	17.42uA	495.2mV	46.94V	20.87uA
77	487.4mV	47.23V	16.57uA	490.8mV	47.37V	20.93uA

Made By: King Huang

Approval: Peter Yang



Resistance to Solder Heat Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 270°C ± 5°C, 7Sec + 2Sec/-0Sec

Test Date: 2017.05.12

Test Standard : JESD22 STANDARD Method-B106

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
1	491.6mV	47.54V	17.21uA	487.6mV	47.70V	16.35uA
2	491.1mV	47.80V	19.94uA	487.3mV	46.82V	16.95uA
3	491.8mV	47.79V	17.33uA	494.3mV	47.04V	20.14uA
4	495.5mV	47.08V	18.19uA	492.6mV	47.50V	18.54uA
5	489.0mV	47.15V	19.61uA	494.0mV	47.17V	16.29uA
6	493.2mV	46.76V	18.92uA	494.4mV	47.28V	17.36uA
7	486.5mV	47.36V	20.18uA	493.6mV	47.05V	19.48uA
8	494.9mV	47.62V	16.33uA	492.0mV	47.70V	20.60uA
9	487.8mV	47.19V	21.08uA	491.2mV	47.09V	18.51uA
10	494.8mV	46.91V	17.41uA	495.7mV	47.09V	19.05uA
11	488.6mV	47.86V	20.56uA	487.5mV	47.86V	16.29uA
12	487.9mV	47.16V	17.35uA	490.5mV	46.90V	17.97uA
13	487.8mV	46.56V	19.24uA	491.0mV	47.63V	16.88uA
14	490.8mV	46.88V	20.61uA	492.5mV	47.85V	20.37uA
15	493.4mV	46.65V	16.30uA	493.3mV	47.79V	16.78uA
16	490.0mV	47.59V	18.07uA	487.4mV	46.65V	19.34uA
17	490.9mV	46.60V	19.30uA	492.7mV	47.19V	16.31uA
18	492.2mV	47.23V	19.80uA	494.8mV	46.96V	19.90uA
19	491.5mV	46.76V	17.70uA	486.8mV	47.86V	20.65uA
20	487.3mV	46.75V	17.63uA	494.1mV	46.76V	17.96uA
21	487.7mV	46.76V	17.82uA	487.8mV	47.84V	19.84uA
22	496.2mV	46.77V	21.04uA	486.8mV	47.49V	20.18uA
23	486.8mV	46.79V	16.35uA	488.6mV	46.89V	17.17uA
24	490.9mV	47.62V	17.12uA	496.0mV	46.68V	18.03uA
25	487.4mV	46.88V	18.06uA	489.9mV	46.90V	18.95uA
26	492.1mV	47.58V	18.33uA	493.5mV	47.33V	20.91uA
27	491.2mV	46.72V	17.33uA	495.1mV	47.63V	19.93uA
28	489.8mV	47.12V	16.76uA	487.5mV	47.33V	20.77uA
29	494.2mV	46.76V	17.54uA	496.0mV	46.98V	19.17uA
30	493.0mV	47.73V	17.59uA	494.4mV	47.42V	17.99uA



Resistance to Solder Heat Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 270°C ± 5°C, 7Sec + 2Sec/-0Sec

Test Date: 2017.05.12

Test Standard : JESD22 STANDARD Method-B106

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
31	492.7mV	47.09V	19.71uA	486.6mV	46.72V	19.16uA
32	493.3mV	47.40V	17.42uA	493.7mV	47.52V	19.37uA
33	487.9mV	47.22V	16.64uA	488.3mV	47.16V	20.22uA
34	488.8mV	47.10V	16.57uA	490.3mV	47.13V	19.28uA
35	486.2mV	46.97V	17.98uA	491.3mV	47.46V	16.78uA
36	486.8mV	46.62V	19.16uA	492.9mV	47.14V	18.81uA
37	495.6mV	47.62V	19.73uA	493.8mV	47.59V	17.58uA
38	495.4mV	46.83V	18.38uA	492.0mV	46.68V	19.07uA
39	495.5mV	46.87V	21.15uA	487.2mV	47.27V	20.65uA
40	486.6mV	47.34V	16.62uA	490.3mV	46.79V	17.49uA
41	495.6mV	47.08V	17.06uA	495.7mV	46.68V	19.36uA
42	492.9mV	47.85V	18.80uA	491.6mV	47.82V	18.78uA
43	493.9mV	47.15V	19.44uA	487.1mV	47.57V	20.12uA
44	489.1mV	46.74V	20.34uA	495.3mV	47.33V	19.55uA
45	493.8mV	47.12V	16.58uA	492.8mV	47.00V	21.20uA
46	493.7mV	46.96V	16.91uA	486.8mV	46.70V	16.35uA
47	491.5mV	46.65V	19.81uA	490.9mV	47.21V	20.28uA
48	493.7mV	46.80V	20.00uA	489.6mV	46.63V	18.47uA
49	488.7mV	47.72V	17.62uA	489.5mV	47.45V	17.38uA
50	488.0mV	47.62V	18.17uA	490.2mV	46.75V	19.00uA
51	487.7mV	46.89V	21.04uA	493.4mV	46.75V	17.29uA
52	492.4mV	47.24V	16.54uA	486.8mV	47.69V	17.57uA
53	487.3mV	46.68V	19.03uA	488.1mV	46.98V	17.74uA
54	488.1mV	46.92V	18.14uA	489.2mV	46.82V	20.22uA
55	491.3mV	47.45V	20.73uA	496.2mV	46.98V	17.99uA
56	489.5mV	46.96V	17.27uA	491.2mV	46.78V	16.27uA
57	496.4mV	47.08V	19.54uA	489.0mV	47.48V	16.59uA
58	488.5mV	46.76V	19.15uA	492.0mV	46.98V	19.86uA
59	493.1mV	47.29V	16.57uA	489.7mV	46.60V	20.86uA
60	493.2mV	46.86V	19.31uA	494.0mV	46.62V	16.70uA



Resistance to Solder Heat Test Data

Report No : T170512-072

Part No : SM340JD-C

Test Equipment: JUNO Test System DTS-1000

Test Condition : VF<550mV@IF=3A, VB>40V@IR=1mA, IR<500uA@VR=40V

Test Condition: 270°C ± 5°C, 7Sec + 2Sec/-0Sec

Test Date: 2017.05.12

Test Standard : JESD22 STANDARD Method-B106

Operator: Leo Hsia

Test Result: PASS

No	Before			After		
	VF	VB	IR	VF	VB	IR
61	491.8mV	47.25V	20.72uA	493.6mV	47.55V	18.75uA
62	486.4mV	46.63V	19.73uA	491.1mV	47.66V	20.71uA
63	486.6mV	47.11V	17.70uA	492.9mV	46.99V	20.27uA
64	493.5mV	47.57V	18.55uA	493.5mV	46.82V	18.21uA
65	487.7mV	47.45V	19.51uA	493.1mV	46.79V	19.03uA
66	491.9mV	46.96V	17.31uA	494.6mV	47.11V	18.25uA
67	496.4mV	47.15V	17.61uA	489.8mV	47.37V	17.14uA
68	488.6mV	46.61V	19.92uA	490.1mV	46.60V	20.86uA
69	489.0mV	47.77V	17.90uA	495.8mV	47.74V	19.08uA
70	486.4mV	46.82V	16.61uA	494.7mV	47.63V	20.55uA
71	492.8mV	47.09V	20.38uA	494.4mV	47.60V	18.27uA
72	490.9mV	47.17V	18.14uA	488.0mV	47.00V	17.27uA
73	489.3mV	46.89V	16.96uA	492.4mV	47.47V	20.95uA
74	486.4mV	46.86V	19.35uA	489.4mV	46.93V	19.98uA
75	495.1mV	46.88V	17.24uA	492.0mV	47.67V	17.70uA
76	487.1mV	47.06V	21.02uA	493.8mV	47.56V	16.81uA
77	489.5mV	47.74V	19.40uA	491.4mV	47.63V	17.05uA

Made By: King Huang

Approval: Peter Yang