

## 测试报告

No. SHAEC1903856306

日期: 2019年03月18日 第1页,共8页

江苏辰达行电子有限公司

江苏省常州市新北区春江镇新华村新宇路2号

以下测试之样品是由申请者所提供及确认: 二极管

SGS工作编号: SP19-006381 - SH

型号: S2MF

客户参考信息: SMA SMB SMC HSMA HSMB HSMC SMAG SMBG SMCG SMAF SMBF SMCF  
SOD-123 SOD-123FL SOD-123SL SOD-323 SOD-323FL 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-23-6L SOT-89 MELF MINI-MELF D-PAK D2-PAK,  
D2-PAK DO-218AB 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-247  
TO-3P TO-251 TO-252 TO-263 TO-92  
BRIDGE:UMB MB-S MBF DBS ABF CDS ABS TBS LBF UMSB TMBF MB-M  
DB-1 WOM KBP KBP-K D3K KBL KBU RS GBP GBL GBU KBJ GBJ KBPC  
KBPC-W GBPC GBPC-W

原产国: 中国

样品接收日期: 2019年03月06日

测试周期: 2019年03月06日 - 2019年03月18日

测试要求: 根据客户要求测试

测试方法: 请参见下一页

测试结果: 请参见下一页

结论: 基于所送样品进行的测试, 镉、铅、汞、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸酯(如邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苯酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP))的测试结果符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。



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授权签名

Helen Liu 刘海鹏  
批准签署人



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测试结果:

### 测试样品描述:

样品编号	SGS样品ID	描述
SN1	SHA19-038563.001	黑色本体部分

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

### RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863

测试方法: 参考IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015和IEC 62321-8:2017, 采用ICP-OES, UV-Vis和GC-MS进行分析。

测试项目	限值	单位	MDL	001
镉(Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	10940 <sup>▲</sup>
汞(Hg)	1000	mg/kg	2	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND
多溴联苯之和(PBBs)	1000	mg/kg	-	ND
一溴联苯	-	mg/kg	5	ND
二溴联苯	-	mg/kg	5	ND
三溴联苯	-	mg/kg	5	ND
四溴联苯	-	mg/kg	5	ND
五溴联苯	-	mg/kg	5	ND
六溴联苯	-	mg/kg	5	ND
七溴联苯	-	mg/kg	5	ND
八溴联苯	-	mg/kg	5	ND
九溴联苯	-	mg/kg	5	ND
十溴联苯	-	mg/kg	5	ND
多溴二苯醚之和(PBDEs)	1000	mg/kg	-	ND
一溴二苯醚	-	mg/kg	5	ND
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND
四溴二苯醚	-	mg/kg	5	ND



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# 测试报告

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测试项目	限值	单位	MDL	001
五溴二苯醚	-	mg/kg	5	ND
六溴二苯醚	-	mg/kg	5	ND
七溴二苯醚	-	mg/kg	5	ND
八溴二苯醚	-	mg/kg	5	ND
九溴二苯醚	-	mg/kg	5	ND
十溴二苯醚	-	mg/kg	5	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND

备注:

- (1) 最大允许极限值引用自RoHS指令(EU) 2015/863 。  
IEC 62321系列等同于 EN 62321 系列  
[http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP\\_ORG\\_ID,FSP\\_LANG\\_ID:1258637,25](http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25)
  - (2) 2015年6月4号发表在欧盟官方杂志（官方公报）上的RoHS指令(EU) 2015/863 附录II限值中还包括邻苯二甲酸酯BBP, DBP, DEHP和DIBP。新的指令限制了电子电器产品的每一个均一材质中邻苯二甲酸酯含量不得超过0.1%。
  - (3) 2021年7月22号开始, DEHP, BBP, DBP 和 DIBP的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。
  - (4) DEHP, BBP, DBP 和 DIBP的限制不适用于2019年7月22日前投放市场的电缆及电子电气产品中用于维修、重复利用、功能更新及容量提升的备用配件以及2021年7月22日前投放市场的医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。
  - (5) DEHP、BBP 和 DBP的限制不适用于玩具产品, 因为No.1907/2006 附录XVII第51条已对玩具产品中的DEHP、BBP 和 DBP含量进行了限制。
  - (6) ▲根据客户提供的声明, 编号001中的铅(Pb)被欧盟RoHS指令2011/65/EU豁免, 相应豁免条文(请以英文原文为准) [ANNEX III 7(c)-I]: 电子电气元件中玻璃或陶瓷材料(电容中陶瓷介质除外)所含的铅, 如压电设备、玻璃或陶瓷基复合元件。
  - (7) ▲根据客户提供的声明, 编号001中的铅(Pb)被欧盟RoHS指令2011/65/EU豁免, 相应豁免条文(请以英文原文为准) [ANNEX III 7(a)]: 高熔点型焊料中的铅(即铅含量等于或大于85%的铅基合金焊料)。
- 检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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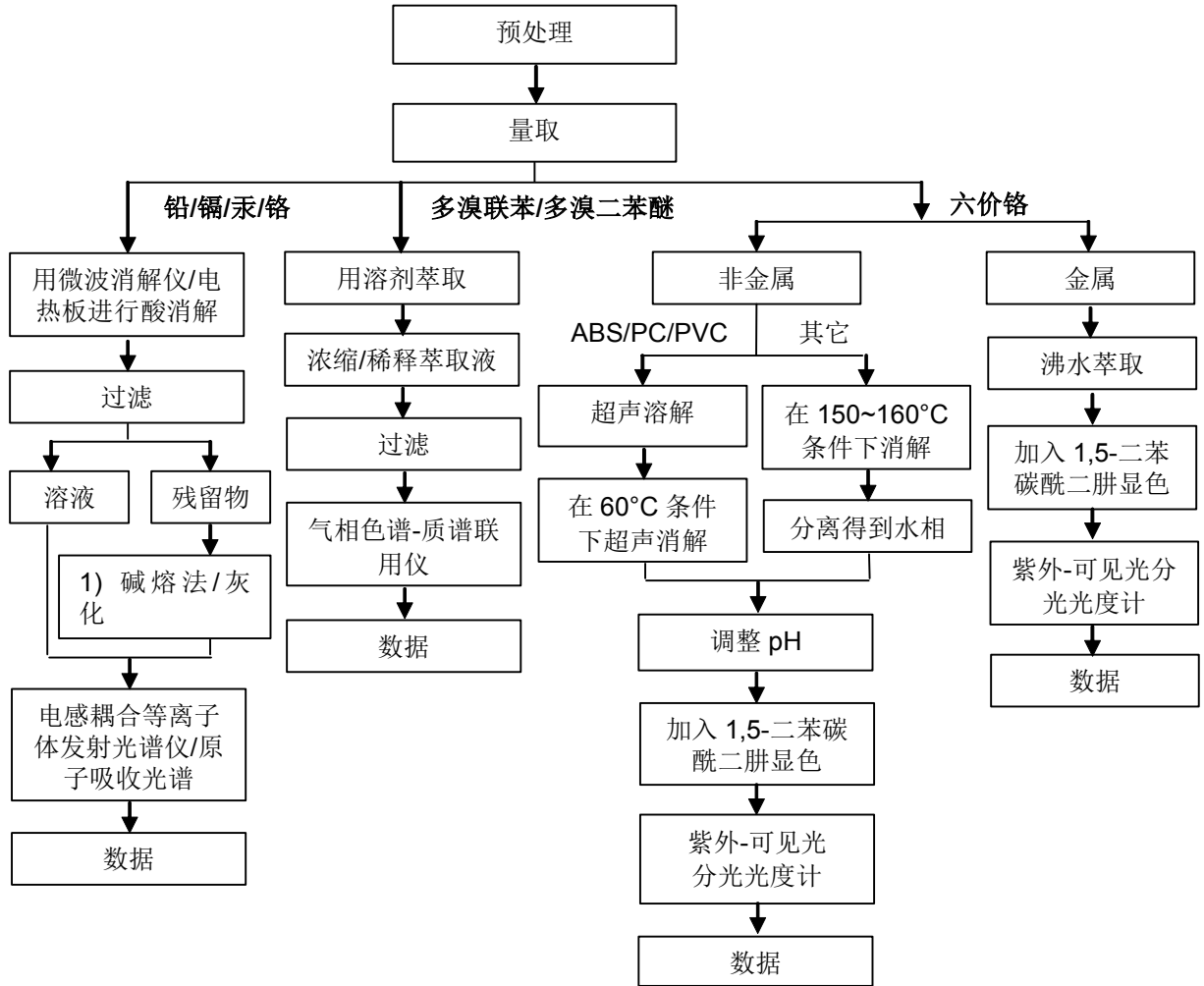
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附件

## Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs 测试流程图

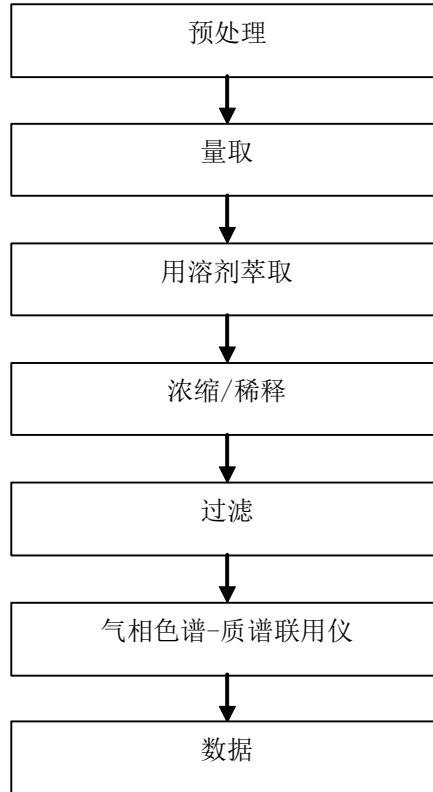
1)样品按照下述流程被完全消解（六价铬和多溴联苯/多溴二苯醚测试除外）。



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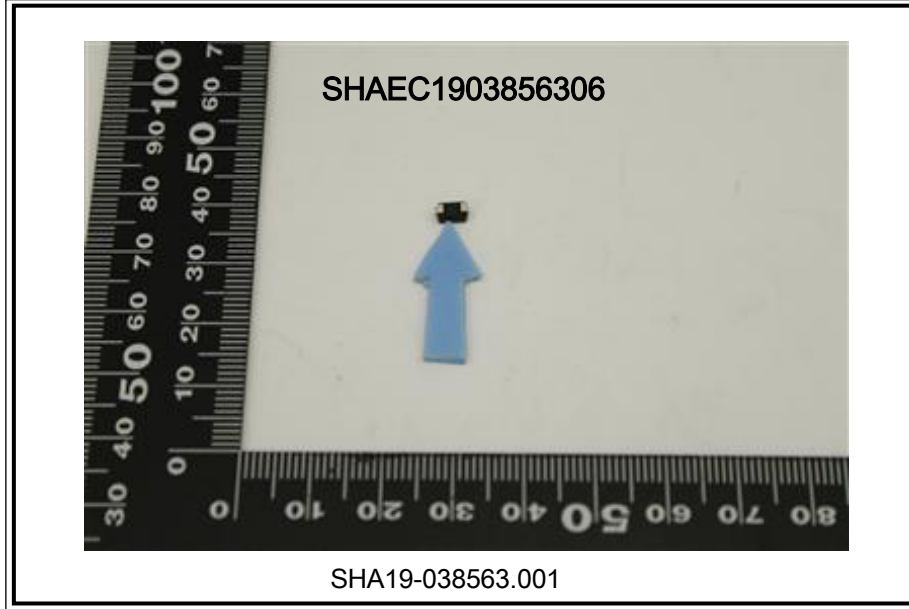
## Phthalates 测试流程图



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样品照片:



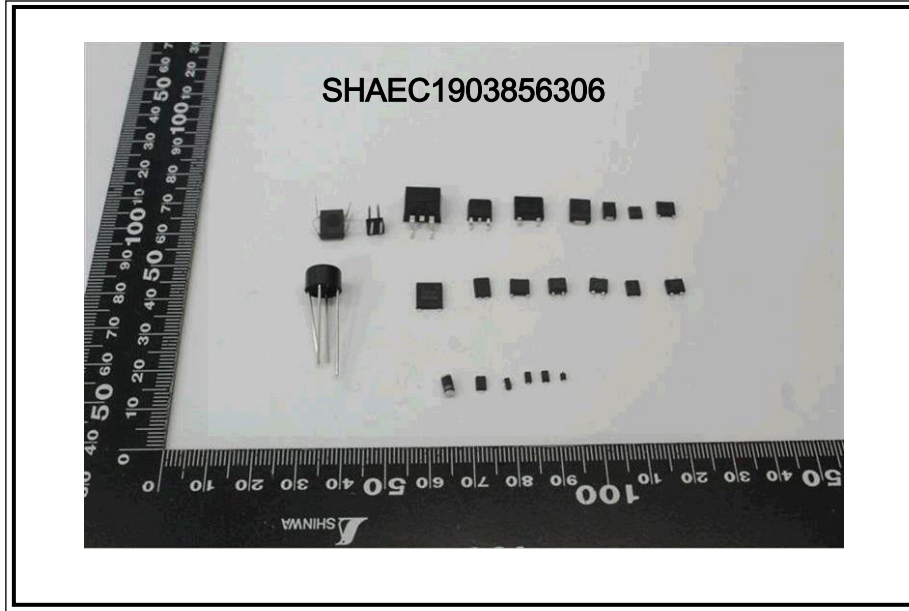
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