

## 测试报告

No. SZXEC1800251102

日期: 2018年03月14日 第1页,共8页

隆科电子(惠阳)有限公司  
广东省惠州市惠阳区秋长镇金秋大道(镇政府东侧)

以下测试之样品是由申请者所提供及确认:压敏电阻(银电极)

SGS工作编号: RP18-002441 - SZ  
样品接收日期: 2018年03月08日  
测试周期: 2018年03月08日 - 2018年03月13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)的测试结果不超过欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

通标标准技术服务有限公司深圳分公司  
授权签名

Kenny Li李啟鴻  
批准签署人

备注: 本报告是编号为SZXEC1800251101报告的中文版本。



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 Bldg, No.3, Jiangheo Industrial Park, No.430, Jintua Road, Banlian, Longgang District, Shenzhen, China 518129 t (86-755) 25328888 f (86-755) 83106190 www.sgsgroup.com.cn  
中国·深圳·龙岗区坂田吉华路430号江灏工业园3栋SGS大楼 邮编: 518129 t (86-755) 25328888 f (86-755) 83106190 e sgs.china@sgs.com

测试结果:

测试样品描述:

样品编号	SGS样品ID	描述
SN1	SZX18-002511.001	绿色物料1#
SN2	SZX18-002511.002	银色金属引脚2#
SN3	SZX18-002511.003	带银白色表层的银色金属3#
SN4	SZX18-002511.004	深灰色物料 4#

备注:

- (1) 1 mg/kg = 1 ppm = 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+A1:2017, 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	004
镉 (Cd)	100	mg/kg	2	ND	ND
铅 (Pb)	1,000	mg/kg	2	ND	14
汞 (Hg)	1,000	mg/kg	2	ND	ND
六价铬 (Cr(VI))	1,000	mg/kg	8	ND	ND
多溴联苯之和(PBBs)	1,000	mg/kg	-	ND	ND
一溴联苯	-	mg/kg	5	ND	ND
二溴联苯	-	mg/kg	5	ND	ND
三溴联苯	-	mg/kg	5	ND	ND
四溴联苯	-	mg/kg	5	ND	ND
五溴联苯	-	mg/kg	5	ND	ND
六溴联苯	-	mg/kg	5	ND	ND
七溴联苯	-	mg/kg	5	ND	ND
八溴联苯	-	mg/kg	5	ND	ND
九溴联苯	-	mg/kg	5	ND	ND
十溴联苯	-	mg/kg	5	ND	ND
多溴二苯醚之和(PBDEs)	1,000	mg/kg	-	ND	ND
一溴二苯醚	-	mg/kg	5	ND	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

SGS Bldg, No.3, Jiangheo Industrial Park, No.430, Jinhua Road, Banlian, Longgang District, Shenzhen, China 518129 t (86-755) 25328888 f (86-755) 83106190 www.sgs.com.cn  
中国·深圳·龙岗区坂田吉华路430号江灏工业园3栋SGS大楼 邮编: 518129 t (86-755) 25328888 f (86-755) 83106190 e sgs.china@sgs.com

## 测试报告

No. SZXEC1800251102

日期: 2018年03月14日 第3页,共8页

测试项目	限值	单位	MDL	001	004
二溴二苯醚	-	mg/kg	5	ND	ND
三溴二苯醚	-	mg/kg	5	ND	ND
四溴二苯醚	-	mg/kg	5	ND	ND
五溴二苯醚	-	mg/kg	5	ND	ND
六溴二苯醚	-	mg/kg	5	ND	ND
七溴二苯醚	-	mg/kg	5	ND	ND
八溴二苯醚	-	mg/kg	5	ND	ND
九溴二苯醚	-	mg/kg	5	ND	ND
十溴二苯醚	-	mg/kg	5	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND	ND

备注:

(1) 最大允许限值引用自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)

### 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+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, 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	002	003
镉 (Cd)	100	mg/kg	2	ND	ND
铅 (Pb)	1,000	mg/kg	2	ND	27
汞 (Hg)	1,000	mg/kg	2	ND	ND
六价铬(Cr(VI))▼	-	µg/cm <sup>2</sup>	0.10	ND	ND
多溴联苯之和(PBBs)	1,000	mg/kg	-	ND	ND
一溴联苯	-	mg/kg	5	ND	ND
二溴联苯	-	mg/kg	5	ND	ND
三溴联苯	-	mg/kg	5	ND	ND
四溴联苯	-	mg/kg	5	ND	ND
五溴联苯	-	mg/kg	5	ND	ND
六溴联苯	-	mg/kg	5	ND	ND
七溴联苯	-	mg/kg	5	ND	ND
八溴联苯	-	mg/kg	5	ND	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

SGS-CSTC 检测技术有限公司深圳分公司  
 Shenzhen Branch Testing Center Chemical Laboratory

SGS Bldg, No.3, Jiangheo Industrial Park, No.430, Jinhua Road, Banlian, Longgang District, Shenzhen, China 518129 t (86-755) 25328888 f (86-755) 83106190 www.sgsgroup.com.cn  
 中国·深圳·龙岗区坂田吉华路430号江灏工业园3栋SGS大楼 邮编: 518129 t (86-755) 25328888 f (86-755) 83106190 e sgs.china@sgs.com

## 测试报告

No. SZXEC1800251102

日期: 2018年03月14日 第4页,共8页

测试项目	限值	单位	MDL	002	003
九溴联苯	-	mg/kg	5	ND	ND
十溴联苯	-	mg/kg	5	ND	ND
多溴二苯醚之和(PBDEs)	1,000	mg/kg	-	ND	ND
一溴二苯醚	-	mg/kg	5	ND	ND
二溴二苯醚	-	mg/kg	5	ND	ND
三溴二苯醚	-	mg/kg	5	ND	ND
四溴二苯醚	-	mg/kg	5	ND	ND
五溴二苯醚	-	mg/kg	5	ND	ND
六溴二苯醚	-	mg/kg	5	ND	ND
七溴二苯醚	-	mg/kg	5	ND	ND
八溴二苯醚	-	mg/kg	5	ND	ND
九溴二苯醚	-	mg/kg	5	ND	ND
十溴二苯醚	-	mg/kg	5	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND	ND

### 备注:

(1) 最大允许限值引用自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) ▼= a. 当六价格的浓度高于0.13 µg/cm<sup>2</sup>时, 样品为阳性, 即含有六价格;

b. 当六价格的浓度为ND(低于0.10 µg/cm<sup>2</sup>)时, 样品为阴性, 即未检测到六价格;

c. 当六价格的浓度介于0.10 µg/cm<sup>2</sup>与0.13 µg/cm<sup>2</sup>之间时, 无法直接判定是否检测到六价格, 因不同个体的样品表面差异可能会影响测定结果;

由于未获知样品的存储条件和生产日期, 样品的六价格测试结果仅能代表测试时样品含六价格的状态。



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) 83071443, or email: CN.Doccheck@sgs.com

SGS-CSTC 通标标准技术服务(深圳)有限公司  
Shenzhen Branch Testing Center Chemical Laboratory

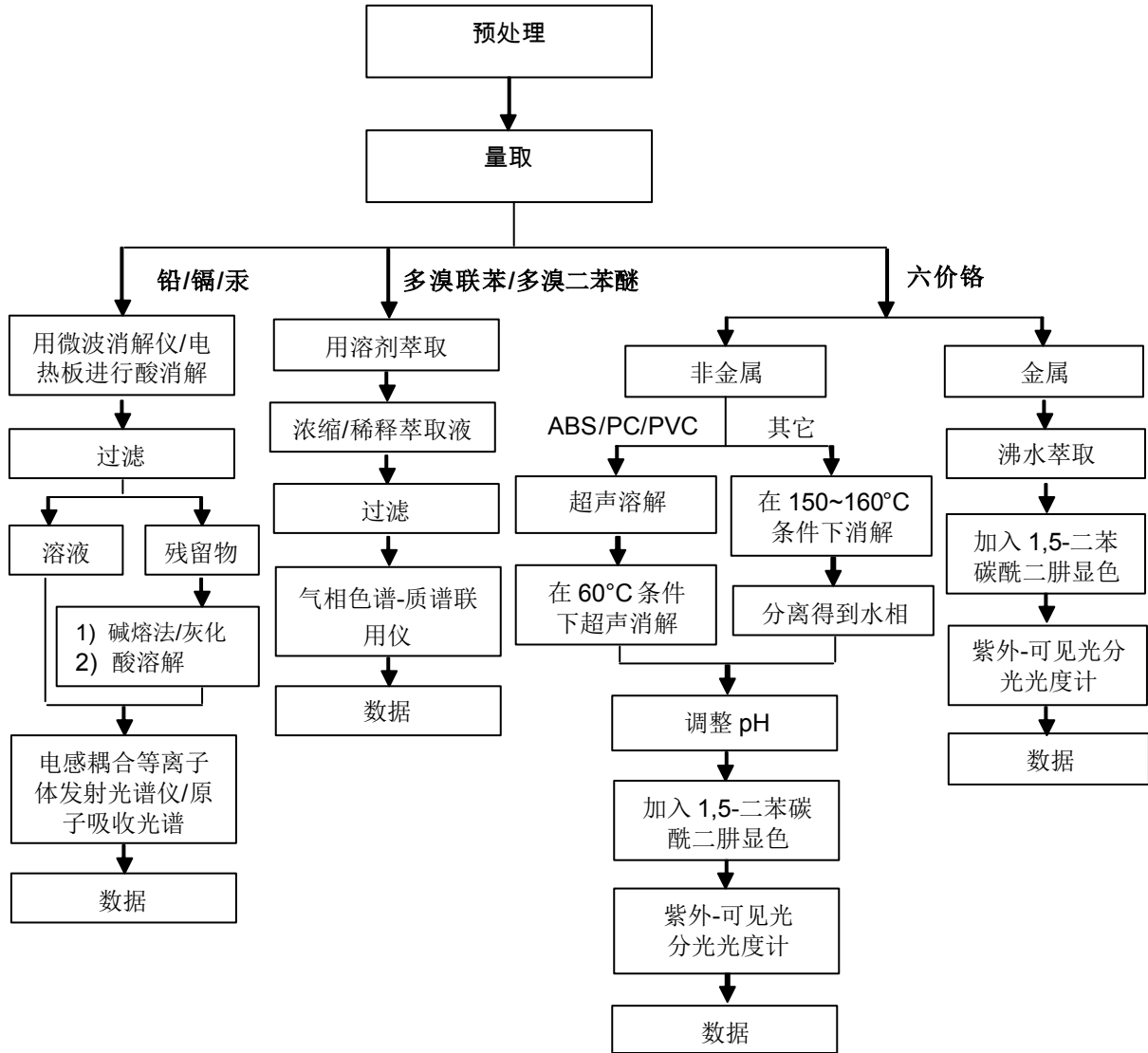
SGS Bldg, No.3, Jiangheo Industrial Park, No.430, Jinhua Road, Banliao, Longgang District, Shenzhen, China 518129 t (86-755) 25328888 f (86-755) 83106190 www.sgs.com.cn  
中国·深圳·龙岗区坂田吉华路430号江灏工业园3栋SGS大楼 邮编: 518129 t (86-755) 25328888 f (86-755) 83106190 e sgs.china@sgs.com



附件

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

- 1) 分析人员: 邓焕梁 / 麦康志 / 任秋美
- 2) 项目负责人: 罗敏仪 / 周文凯 / 童妙琦
- 3) 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)。



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.

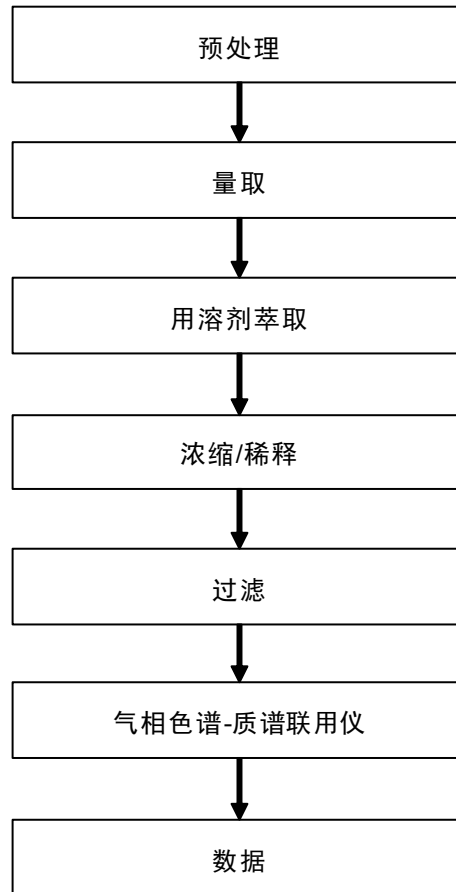
Attention: To check the authenticity of testing / inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

SGS Bldg, No.3, Jiangheo Industrial Park, No.430, Jinhua Road, Banlian, Longgang District, Shenzhen, China 518129 t (86-755) 25328888 f (86-755) 83106190 www.sgs.com.cn  
 中国·深圳·龙岗区坂田吉华路430号江灏工业园3栋SGS大楼 邮编: 518129 t (86-755) 25328888 f (86-755) 83106190 e sgs.china@sgs.com

附件

### Phthalates 测试流程图

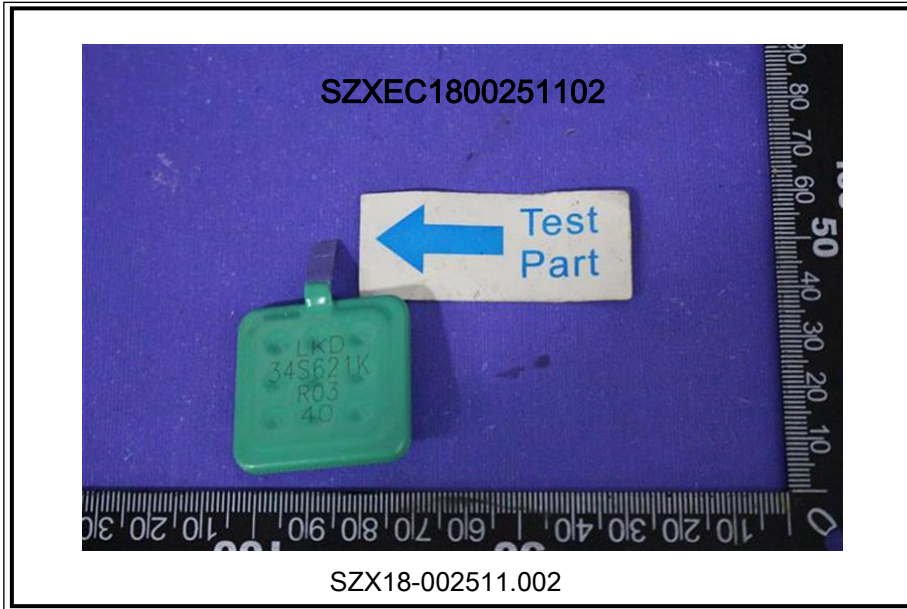
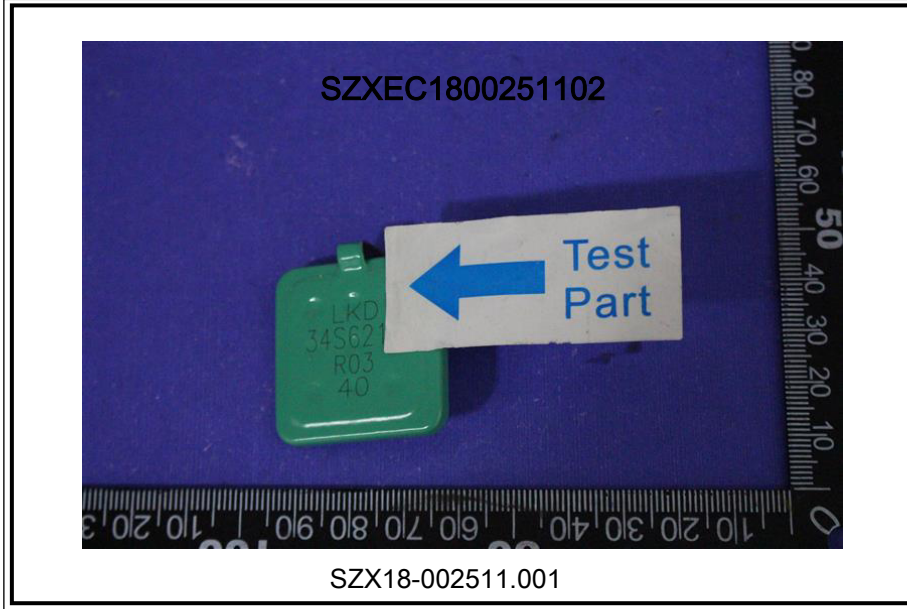
- 1) 分析人员: 麦康志
- 2) 项目负责人: 周文凯



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

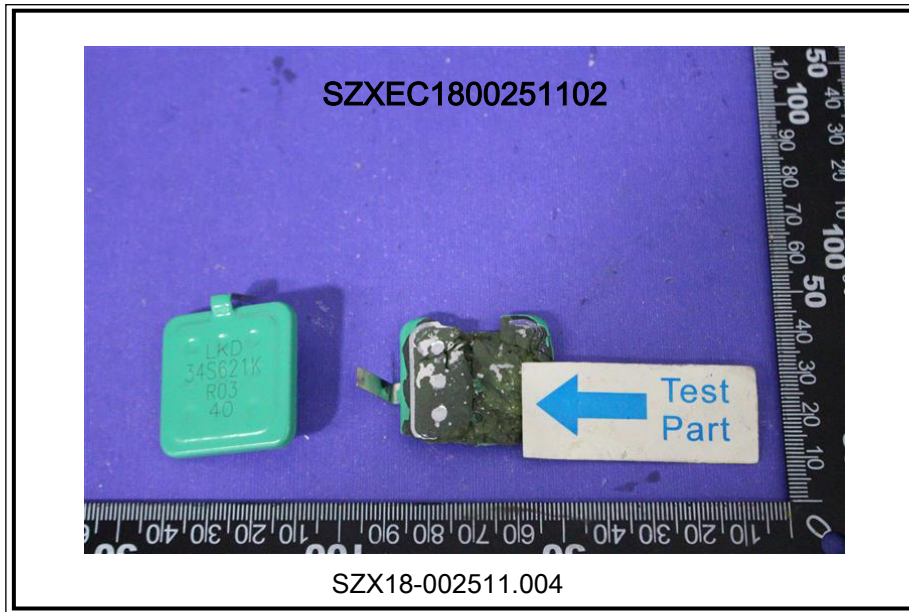
样品照片:



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





此照片仅限于随SGS正本报告使用

\*\*\* 报告完 \*\*\*



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 Bldg, No.3, Jianghao Industrial Park, No.430, Jinhua Road, Banlian, Longgang District, Shenzhen, China 518129 t (86-755) 25328888 f (86-755) 83106190 www.sgsgroup.com.cn  
 中国·深圳·龙岗区坂田吉华路430号江灏工业园3栋SGS大楼 邮编: 518129 t (86-755) 25328888 f (86-755) 83106190 e sgs.china@sgs.com