

产品规格书 SPECIFICATION

客户名称 CUSTOMER	
产品名称 PRODUCTION	全方位震动传感器
产品型号 MODEL	SYW-1810
版本号 VERSION NO	A1.0

广东赛亚传感股份有限公司

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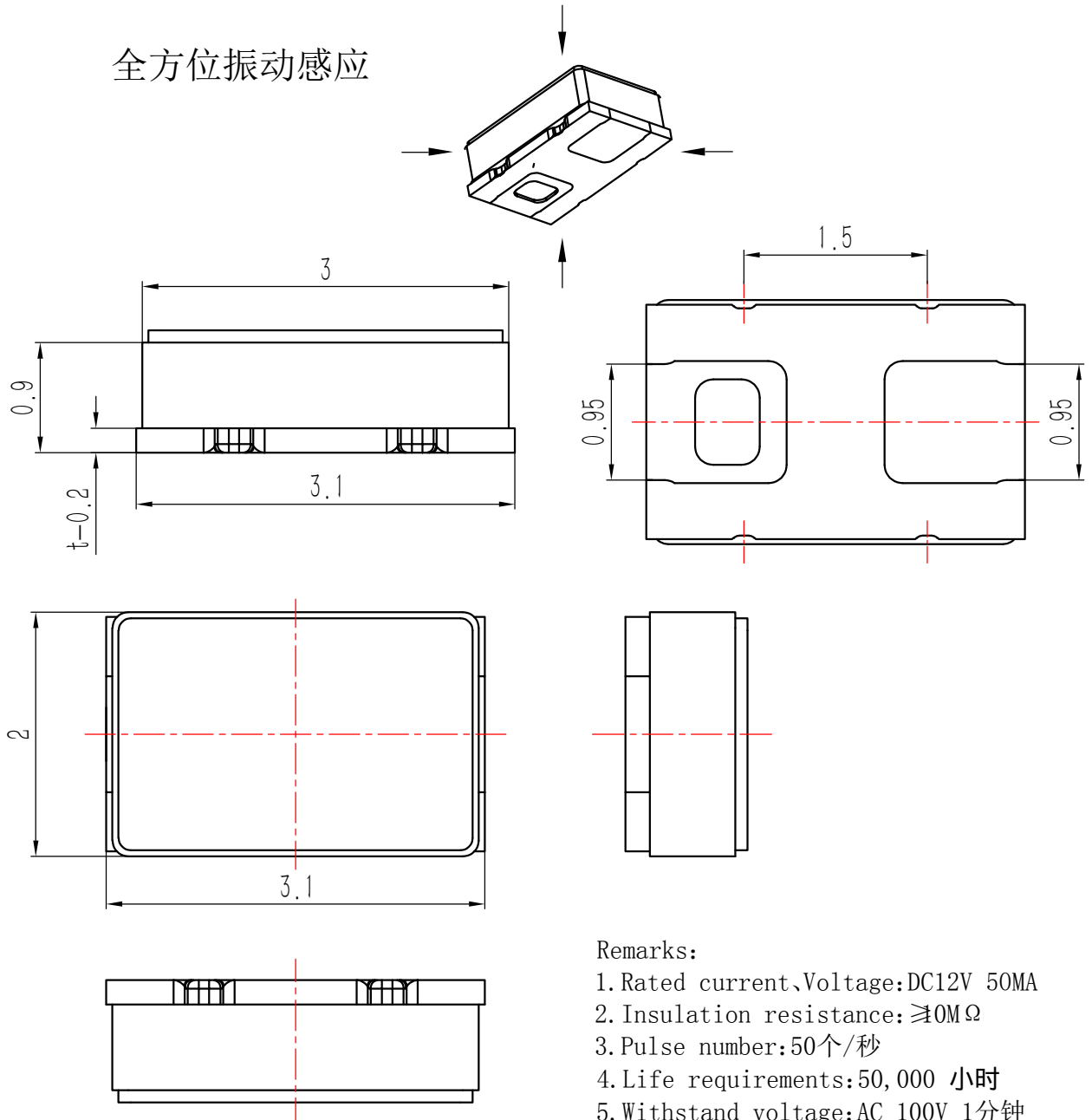
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全方位振动感应



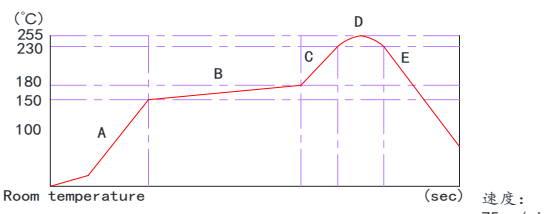
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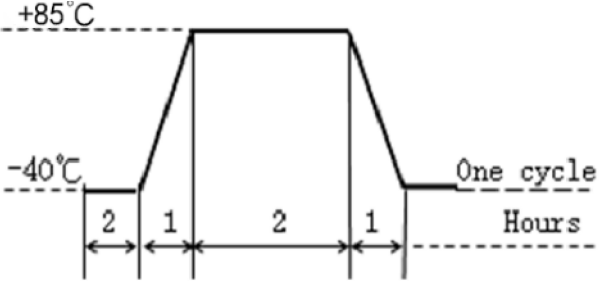
1. Rated current、Voltage:DC12V 50MA
2. Insulation resistance: $\geq 0M\Omega$
3. Pulse number:50个/秒
4. Life requirements:50,000 小时
5. Withstand voltage:AC 100V 1分钟
6. All materials comply with RoHS standards

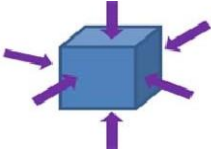
NO.	PART NAME	MATERIAL	QTY	FINISHING
3	Cover	Phosphor Copper	1	Ni Plating
2	Housing	PPA	1	Black
1	Terminal	Brass	2	Ag Plating
General Tolerance				
X Δ	± 0.10	DRAWN	何文昌	Product Name
1 Δ	± 0.20	AFFIRM	陈维钧	PART DESCRIPTION
5 Δ	± 0.25	AUDITING	季斌斌	Model Number
X ≥ 0	± 0.30	DATE	2022.08.27	Rev
ANGLE	\pm °			AO
UNIT	mm			SHEET
				1:1

广东赛亚传感股份有限公司

1. General specification 基本事项			
1.1 Product categories 产品类别 : SMD micro vibration sensor SMD微型振动传感器			
1.2 Switch rating 最大额定值: DC 12V , 50MA			
1.3 Operation temperature range 使用温度试验范围 : - 20~ + 70°C			
1.4 Preservative temperature range 保存温度范围 : - 40~ + 85°C			
1.5 Appearance and dimensions : See outside drawing page 外形及尺寸: 见外形尺寸图			
1.6 Standard condition :Unless otherwise specified, the test and measurements shall be carried out as follows: 标准条件: 试验和测量应进行如下: Ambient temperature 温度: 5 ~ 35°C Relative humidity 相对湿度: 45 ~ 85% Air pressure 气压: 86 ~ 106kPa(860~1060mbar) However, if doubt arises on the decision based on the measured Values under the above-mentioned conditions, the following conditions shall be employed: 但是在对判定产生疑义时,按下述状态实施: Ambient temperature 温度:20±2°C Relative humidity 相对湿度: 65±5% Air pressure 气压: 86 ~ 106kPa(860~1060mbar)			
2. Performance性能			
2.1 Electrical characteristics电气性能			
No. 序号	Item 项目	Test condition 试验条件	Performance 规格
2.1.1	Insulation Resistance 绝缘电阻	DC 100V (Between terminals) 不相接的两端子间、端子与塑胶间施加DC 100V 的电压	10MΩ min 10MΩ 以上
2.1.2	Withstand Voltage 耐电压	AC 100V for 1 min (Between terminals) 不相接的两端子间、端子与塑胶间施加AC 100V 的电压	No insulation destruction. 无绝缘破坏.
2.1.3	Pulse number 脉冲数	The number of pulses per unit time, i.e., the number of repeats 单位时间内脉冲的个数, 即重复次数	quantity: 30pcs/sec min 数量:30个/秒 以上
2.1.4	Trigger rate 触发率	1) The amplitude>1mm 振幅>1mm 2) frequency: 20-100Hz 频率: 20-100Hz	Rate of 100% to trigger 触发率为100%

2.2 Mechanical Characteristics机械性能																											
No. 序号	Item 项目	Test condition 试验条件	Performance 规格																								
2.2.1	Terminal strength 端子强度	A static load of 500gf shall be applied to the tip of the terminal for 60 sec in any direction 在任意一个方向的顶端加上500gf力度测试,时间为60秒.	No damage (Electrical and mechanical) 端子没有裂开,松动等异常,满足于机械,电器性能.																								
2.2.2	Vibration test 耐振性	1) Amplitude 全振幅: 1.5 mm 2) Sweep rate: 10-55-10HZ for 1 minute 扫描速度: 10-55-10HZ 1分钟 3) Sweep method: Logarithmic frequency sweep rate 扫描方式: 对数频率扫描速度 4) Vibration direction: X, Y, Z (3 directions) 振动方向: X, Y, Z (3方向) 5) Time: Each direction 2 hours (Total 6 hours) 时间: 每个方向2个小时(共6个小时)	No. 2.1.1 to 2.1.2 shall be satisfied 满足2.1.1到2.1.2项.																								
2.2.3	Soldering heat test 耐焊接热 For reflux welding 适用于回流焊	Peak temperature: 250±5°C 峰值温度: 250±5°C Peak time: 10 secMax. 峰值时间: 10秒以内	No damage electrical and mechanical) 无异常。(电气、机械特性)																								
2.2.4	Solderability 可焊性	After sprated flux 涂上助焊剂后 temperature: 245±5°C 温度: 245±5°C soldering time: 3±0.5 sec 焊接时间: 3±0.5秒	95% or more of surface area of the portion immersed in solder shall be covered by new solder 95% 或更多的浸焊面积能被焊锡覆盖.																								
2.2.5	Reflow soldering heat test 回流焊耐热试验	 <table border="1" data-bbox="399 1433 1037 1579"> <thead> <tr> <th>Parts</th> <th>Temperature (°C)</th> <th>Time at temperature (sec)</th> <th>Treatments</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>NO~150</td> <td>60~90S</td> <td>Pre-heating zone</td> </tr> <tr> <td>B</td> <td>150~180</td> <td>90S</td> <td>Heat preservation zone</td> </tr> <tr> <td>C</td> <td>180~220</td> <td>30~40S</td> <td>Heating zone</td> </tr> <tr> <td>D</td> <td>220-255-220</td> <td>40S (其中255°C为7~10S)</td> <td>recirculation zone</td> </tr> <tr> <td>E</td> <td>220 to NO</td> <td>40~80S</td> <td>Cooling zone</td> </tr> </tbody> </table>	Parts	Temperature (°C)	Time at temperature (sec)	Treatments	A	NO~150	60~90S	Pre-heating zone	B	150~180	90S	Heat preservation zone	C	180~220	30~40S	Heating zone	D	220-255-220	40S (其中255°C为7~10S)	recirculation zone	E	220 to NO	40~80S	Cooling zone	No damage electrical and mechanical) 无异常。(电气、机械特性)
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2.3 Climatic characteristics 耐候性能																											
No. 序号	Item 项目	Test condition 试验条件	Performance 规格																								
2.3.1	Cold test 耐寒性	1) Temperature: -40±2°C 温度: -40±2°C 2) Duration of test: 96h 持续时间: 96小时 3) Take off a drop water 去掉水珠 4) Standard conditions after test: 1h 试验后的放置条件: 1小时	Insulation resistance: 10MΩ min 绝缘电阻: 大于10MΩ Withstand voltage: 耐电压: 无绝缘破坏. No. 2.1.1 to 2.1.2 shall be satisfied 满足2.1.1到2.1.2项.																								

No. 序号	Item 项目	Test condition 试验条件	Performance 规格
2.3.2	Heat test 耐热性	1) Temperature : $80\pm 2^{\circ}\text{C}$ 温度: $80\pm 2^{\circ}\text{C}$ 2) Duration of test: 96h 持续时间: 96小时 3) Standard conditions after test : 1h 试验后的放置条件: 1 小时	Insulation resistance: $10\text{M}\Omega$ min 绝缘电阻: 大于 $10\text{M}\Omega$ Withstand voltage: No. destruction. 耐电压: 无绝缘破坏. No. 2.1.1 to 2.1.2 shall be satisfied 满足2.1.1到2.1.2项.
2.3.3	Temperature cycle 温度循环	According to following figure, after 5cycles, test after keeping in normal condition for 1h. 如图示环境中, 循环5次后, 放置在正常环境中, 1小时后进行测量。 	Insulation resistance: $10\text{M}\Omega$ min 绝缘电阻: 大于 $10\text{M}\Omega$ Withstand voltage: No. destruction. 耐电压: 无绝缘破坏. No. 2.1.1 to 2.1.2 shall be satisfied 满足2.1.1到2.1.2项.
2.3.4	Humidity test 耐湿性	1) Temperature : $60\pm 2^{\circ}\text{C}$ 温度: $60\pm 2^{\circ}\text{C}$ 2) relative humidity: 90~95% 相对湿度: 90~95% 3) Duration of test: 96h 持续时间: 96小时 4) Take off a drop water 去掉水珠 5) Standard conditions after test : 1h 试验后的放置条件: 1 小时	Insulation resistance: $10\text{M}\Omega$ min 绝缘电阻: 大于 $10\text{M}\Omega$ Withstand voltage: No. destruction. 耐电压: 无绝缘破坏. No. 2.1.1 to 2.1.2 shall be satisfied 满足2.1.1到2.1.2项.
2.3.5	Endurance (switching) action 耐久特性 (开关寿命)	1) Operation speed : 50 times / s 动作速度: 20 次/ 秒 2) Operation time : 50,000 hours	Bouncing: 10 ms max 触点抖动: 10毫秒以下 Withstand voltage: No. destruction. 耐电压: 无绝缘破坏. No. 2.1.1 to 2.1.2 shall be satisfied 满足2.1.1到2.1.2项.

No. 序号	Item 项目	Test condition 试验条件	Performance 规格
2.3.6	Withstand H2S 耐H2S	1) Density : 3±1ppm 浓度 :3±1ppm 2) Temperature : 40±2° C 温度 : 40±2° C 3) Relative humidity : 90~95% 相对湿度: 90~95% 4) Duration of test : 12h 持续时间: 12小时 5) Standard conditions after test : 1h 试验后的放置条件:1小时	Withstand voltage: No. destruction. 耐电压: 无绝缘破坏. No. 2.1.1 to 2.1.2 shall be satisfied 满足2.1.1到2.1.2项.
2.3.7	Salt mist test 盐雾实验	At 5% nacl liquor for 24 hours hours depend on 35°C, after washing, keep in normal condition. 5%的nacl溶液, PH值: 6.5~7.2, 在35°C的条件下喷雾。铜材24小时, 铁材8小时。用水清洗干净后并在室温下晾干	No remarkable corrosion shall be recognized in metal part. 在金属件上没有腐蚀斑点。
2.3.8	Shock test 耐冲击性	Measure after test at a condition below 在下列条件下进行测试后的量度 Peak acceleration: 500m/S2 冲击加速度:500m/S2 Pulse duration 11ms 脉冲持续时间11ms Test time-6direction ,each 3 times total 18 times 测试次数-6个方向, 各3次共计18次。 	Withstand voltage: No. destruction. 耐电压: 无绝缘破坏. No. 2.1.1 to 2.1.2 shall be satisfied 满足2.1.1到2.1.2项.

3. Precaution

注意事项

3.1 Soldering condition

浸焊条件

ITEM 项目	CONDITION 条件
Preheat temperature 预热温度	110°C max (Embilomental temperature of soldering surface of P. C. B) 110°C以下(印刷基板焊锡面周围的温度)
Preheat time 预热时间	60 sec, max 60 秒以内
Area of flux 助焊剂的面积	1/2 max of P. C. B. thickness 印刷基板厚度的1/2以内
Temperature of solder 焊锡温度	Peak temperature of reflux welding: 250 ± 5° Max 回流焊的峰值温度: 250±5°C以下
Peak time for reflux welding 回流焊的峰值时间	Within 10 sec 10秒以内
Soldering number 浸焊次数	Within 2 times (But should bring down heat of the first soldering) 2次以内 (但应把第一次焊锡的温度降下来)
Printed wiring board 印刷基板	Single sided copper-clad laminates 单面铜箔

1) After switches were soldered, please be careful not to clean switches with solvent
开关浸焊后, 注意不要用溶剂清洗.

2) In the case of using soldering iron, soldering conditions shall be 350°C max and 3 sec. max
在使用烙铁的情况下, 焊锡温度应在350°C以下、3秒以内.

3) Right after switches were soldered; please be careful not to load on the knobs of switches.
浸焊后, 注意不要在顶部施加负荷.

3. 2 Design instructions(设计中应注意的事项)

1) Follow recommended P. C. B. piercing plan in outside drawing page.
印刷基板的安装孔尺寸参见产品图.

3.3 Note(注意点)

1) Please be cautious not to give excessive static load or shock to switches.
注意不要施加超负荷的压力或晃动开关.

2) Please be careful not to pile up P. C. B. after switches were soldered.
开关焊接以后, 印刷基板注意不要叠放.

3) Preservation under high temperature and high humidity or corrosive gas should be avoided especially. When you need to preserve for a long period, do not open the carton.

The stock time is not recommended to exceed 6 months, as the shelf life of the general plating parts is 6 months.

保管时尤其应注意避开高温高湿和有腐蚀性气体的环境. 如需长时间保存, 请不要打开包装箱.
库存时间建议不要超过6个月, 因一般电镀件保质期时间为6个月.

备注: