

承 認 書

SPECIFICATION

客 户/ <i>Customer</i>	
客户型号 <i>User's Mode No.</i>	
本司型号/ <i>Part. No.</i>	L-KLS3-PT-13*07-P5-22
数 量/ <i>Quantity</i>	100PCS

如本样品被认可，请签核回传 *Please send one back with signature upon approval of sample*

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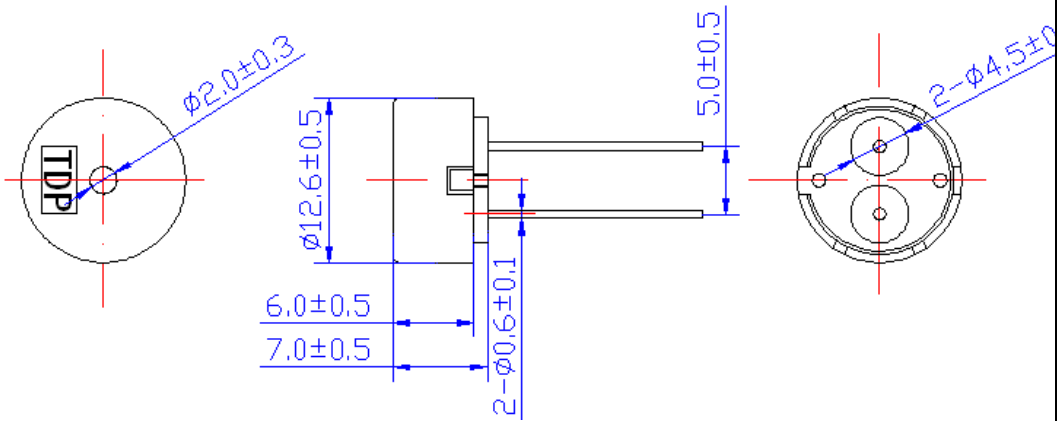
制 作 <i>Drafted By</i>	审 核 <i>Checked By</i>	批 准 <i>Approved By</i>

L-KLS3-PT-13*07-P5-22

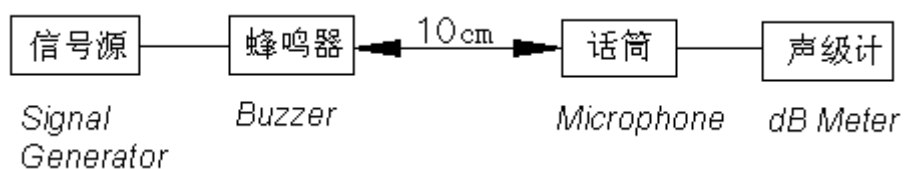
1 . *Electrical Characteristics* 电性能

Type型号	L-KLS3-PT-13*07-P5-22	
Resonant Frequency 谐振频率	(KHz)	4.0
Rated Voltage 额定电压	(V)	12.0
Operating Voltage 工作电压	(V)	3.0—20.0
Sound Pressure Level 输出音压	(dB)	70dB/ Min
Capacitance 电容	(nF)	8.0±30% (1KHz)
Operating Temperature 工作温度	(℃)	-20 - +70
Storage Temperature 贮存温度	(℃)	(室温) +5 - +40
material 材质	PBT	

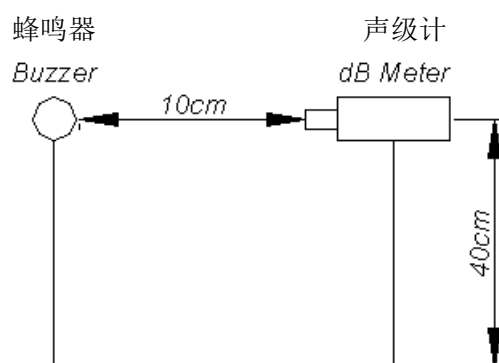
2.Dimensions:Unit(mm) 尺寸:单位



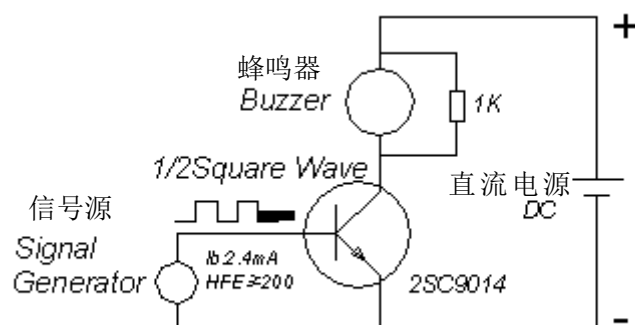
1. 产品测试仪连接:

Connection Diagram Of Testing Apparatus:

2. 产品测试方法:

Testing Method:

3. 驱动电路:

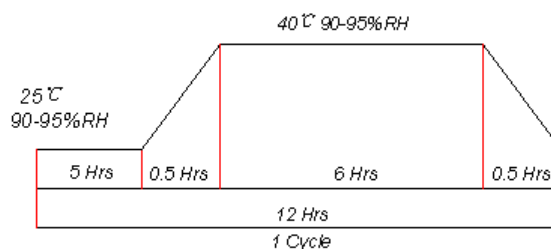
Circuit Diagram:

可靠性试验 **RELIABILITY TEST**

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试验项目 <i>ITEM</i>	测试方法 <i>METHOD OF TEST</i>	标准 <i>STANDARD</i>
高温试验 <i>Dry Heat Test</i>	+70℃±2℃，96h，恢复 2 小时后测量 <i>After being placed in a chamber with +70±2℃ for 96 hours and then being placed in natural condition for 2 hours, sounder shall be measured.</i>	试验后所有指标都满足 <i>All specification must be satisfied after the test.</i>
低温试验 <i>Cold Test</i>	-20℃±2℃，96h，恢复 2 小时后测量 <i>After being placed in a chamber with -20±2℃ for 96 hours and then being placed in natural condition for 2 hours, sounder shall be measured.</i>	试验后所有指标都满足 <i>All specification must be satisfied after the test.</i>
恒定湿热试验 <i>Humidity Test</i>	将产品置于+40℃±2℃，相对湿度保持在 90%-95%中的环境中放置 96h，恢复 2 小时后测量。 (见图 FIG.1) <i>After being placed in a chamber with, 90%-95%R.H. at +40℃±2℃ for 96 hours and then being placed in natural condition for 2 hours, sounder shall be measured.</i> (Attached FIG.1)	试验后所有指标都满足 <i>All specification must be satisfied after the test.</i>
温度变化试验 <i>Temperature Cycle Test</i>	产品在-20℃的试验箱和温度为+70℃的试验箱各放置 30 分钟，为一次温度循环。产品承受 5 次温度循环后，放置 2h 后进行测量(见图 FIG.2) <i>After being placed in a chamber at -20℃±2℃ for 30 minutes, sounder shall be placed at room temperature(+20℃). After 15 minutes at this temperature, sounder shall be placed in a chamber at +70℃±2℃. After 30 minutes at this temperature, sounder shall be returned to room temperature(+20℃) for 15 minutes. After 5 above cycles, sounder shall be measured after being placed in natural condition for 2 hours. (Attached FIG.2)</i>	试验后所有指标都满足 <i>All specification must be satisfied after the test</i>
振动试验 <i>Vibration Test</i>	频率 10-55-10(Hz)，单振幅: 1.5 (mm) 扫频时间 1min，振动时间 30min(见图 FIG.3) <i>Sounder shall be measured after being applied vibration of amplitude of 1.5mm with 10-55Hz band of vibration frequency for 30 minutes. Sweep time is 1 minute. (Attached FIG.3)</i>	试验后所有指标都满足。 <i>All specification must be satisfied after the test.</i>
碰撞试验 <i>Shock Test</i>	X,Y,Z 三个方向分别承受 100G 的冲击力，每向各冲击 3 次 <i>Sounder shall be measured after being applied shock (100G) for each three mutually perpendicular directions to each of 3 times.</i>	试验后所有指标都满足 <i>All specification must be satisfied after the test.</i>
插针的抗拉强度试验 <i>Terminal Strength Pulling Test</i>	插针承受 5 牛顿拉力，负荷时间 5s，然后进行检查，不出现焊点脱落断裂现象 <i>The force 5 seconds of 5N is applied to each terminal. No visible damage and cutting off.</i>	试验后所有指标都满足。 <i>All specification must be satisfied after the test.</i>
可焊性试验 <i>Solder ability Test</i>	焊锡温度 255℃±5℃，浸润时间为 3±0.5s，试验后采用目测的方法检查浸润,表面焊锡的浸润情况 <i>Lead terminals are immersed in rosin for 5 seconds and then immersed in solder bath of +255±5℃ for 3±0.5 seconds.</i>	试验后所有指标都满足。 <i>All specification must be satisfied after the test.</i>

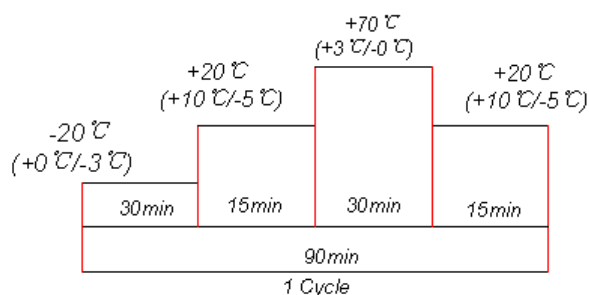
FIG. 1



将产品置于 $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ，相对湿度保持在90%-95%中的环境中放置96h，恢复2h后测量（见图FIG. 1）

After being placed in a chamber with,90%-95%R.H. at $+40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 96hours and then being placed in natural condition for 2 hours,sounder shall be measured (Attached FIG. 1)

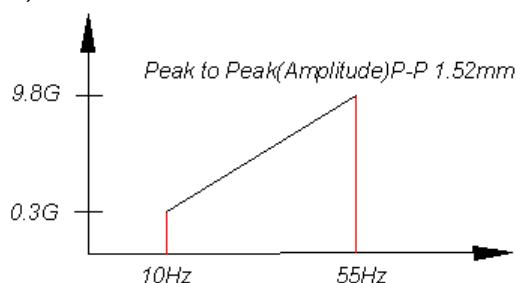
FIG. 2



产品在 -20°C 的试验箱和温度为 $+70^{\circ}\text{C}$ 的试验箱各放置30min, 为一次温度循环。产品承受5次温度循环后，放置2h后进行测量（见图FIG. 2）

After being placed in a chamber at $-20^{\circ}\text{C} \pm 2^{\circ}\text{C}$ for 30 minutes,sounder shall be placed at room temperature($+20^{\circ}\text{C}$).After 15 minutes at this temperature,sounder shall be placed in a chamber at $+70^{\circ}\text{C} \pm 2^{\circ}\text{C}$.After 30 minutes at this temperature , sounder shall be returned to room temperature($+20^{\circ}\text{C}$)for 15 minutes.After 5 above cycles,sounder shall be measured after being placed in natural condition for 2 hours(Attached FIG.2)

FIG. 3



频率10-55-10 (Hz)，单振幅：1.5 (mm) 扫频时间1min，振动时间30min（见图FIG. 3）。

Sounder shall be measured after being applied vibration of amplitude of 1.5mm with 10-55Hz band of vibration frequency for 30 minutes.Sweep time is 1 minute.(Attached FIG.3)

样品测试报告 *Sample Test Report*

TDP-1140PL

样品名称 <i>Sample Description:</i> 蜂鸣器							
客户 <i>Customer:</i>							
样品数量 <i>Sample Qty:</i> 100 pcs				测试数量 <i>Test Qty:</i> 10 pcs			
技术指标 <i>Specification:</i> $S.P.L \geq 70dB$ $Co = 8.0nF \pm 30\% (1KHz)$							
测试数据 <i>Test Date:</i>							
NO.	S.P.L [dB]	Co [nF]	A&D	NO.	S.P.L [dB]	Co [nF]	A&D
1	91	6.5	OK	11			
2	92	6.9	OK	12			
3	92	6.7	OK	13			
4	92	7.2	OK	14			
5	91	7.3	OK	15			
6	92	6.9	OK	16			
7	93	7.7	OK	17			
8	92	6.5	OK	18			
9	91	6.7	OK	19			
10	91	6.4	OK	20			

测试结果 *Test Result:*

合格 *Pass* [☒]

不合格 *Fail* [☐]

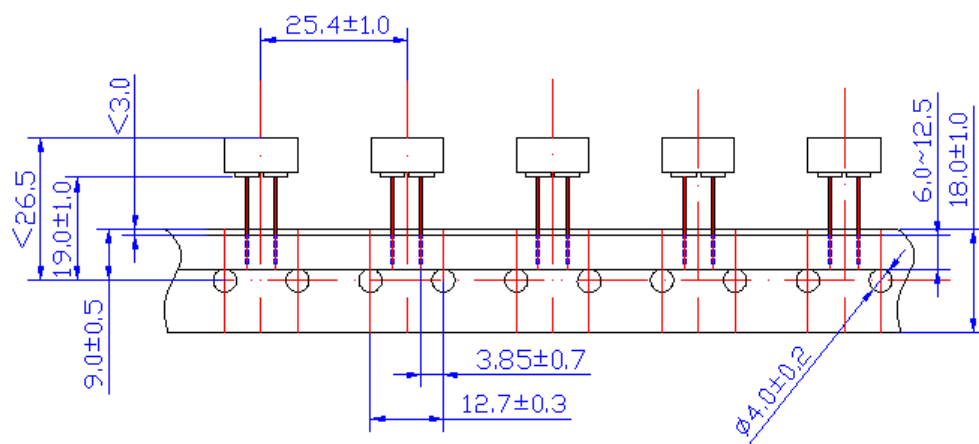
测试人员 *Inspector:*

确认 *Confirmed:*

测试日期 *Test Date:* 2017/7/4

产品包装图 *Packing*

1. 编带包装

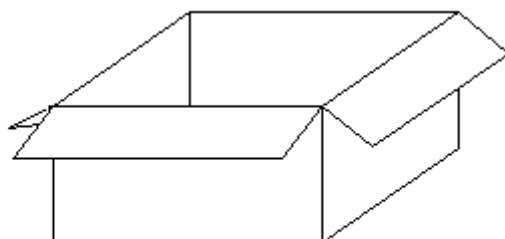


数量: 500 只/盒

Quantity: 500pcs/box



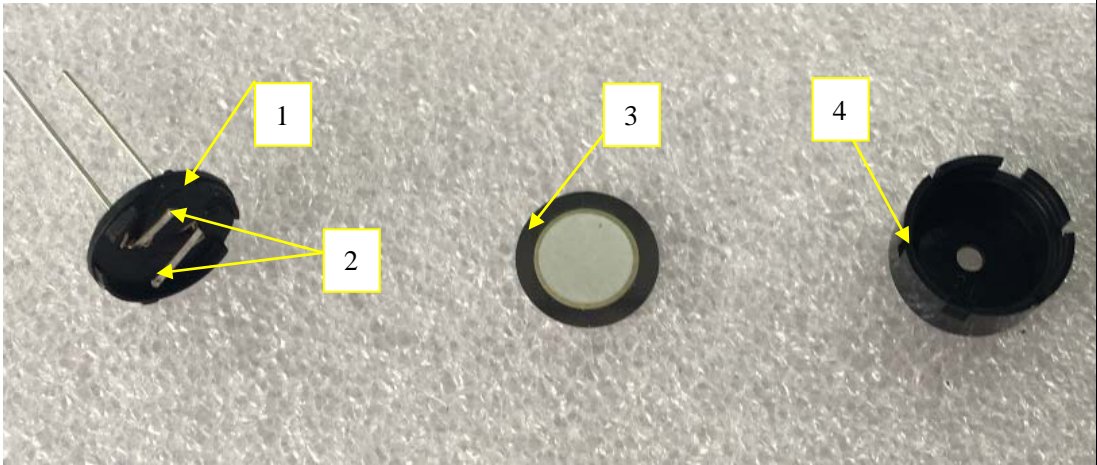
2. 纸箱包装



数量: 5000 只/箱

Quantity: 5000pcs/carton

材料明细表



No.	Q'ty	Name	Material	Note
1	1	Cover	PBT	
2	2	Pin	Copper	
3	1	Piezo Buzzer	Stainless Steel+Ceramic Chip+Silver Layer	
4	1	Shell	PBT	