



四川索斯特电子有限公司
Sichuan Source-Set Electronics Co., Ltd

承 认 书

SPECIFICATIONS FOR APPROVAL

客户名称:
Customer: _____

产品名称: 石英晶体谐振器
Description: CRYSTAL RESONATOR

产品型号: HC-49S/DIP
SPECIES _____

标称频率: 4.000MHz 16PF
FREQUENCY _____

料 号:
MATERIAL CODE SCBYS04X00000YNRJ

| 供应商确认 | | | | 客户确认 | | | |
|----------------|-------------------------|----------------------|--|----------------|-------------------------|-------------------------|-------------------------------------|
| 品管部 QC Dept | 工程部 Engineer Dept | 业务部 Trade Dept | <input checked="" type="checkbox"/> 合格 PASS | 品管部 QC Dept | 工程部 Engineer Dept | 采购部 Purchase Dept | <input type="checkbox"/> 合格 PASS |
| 郭 淘 | 梁 雄 | 陈 晓 群 | <input type="checkbox"/> 不合格 NG | | | | <input type="checkbox"/> 不合格 NG |

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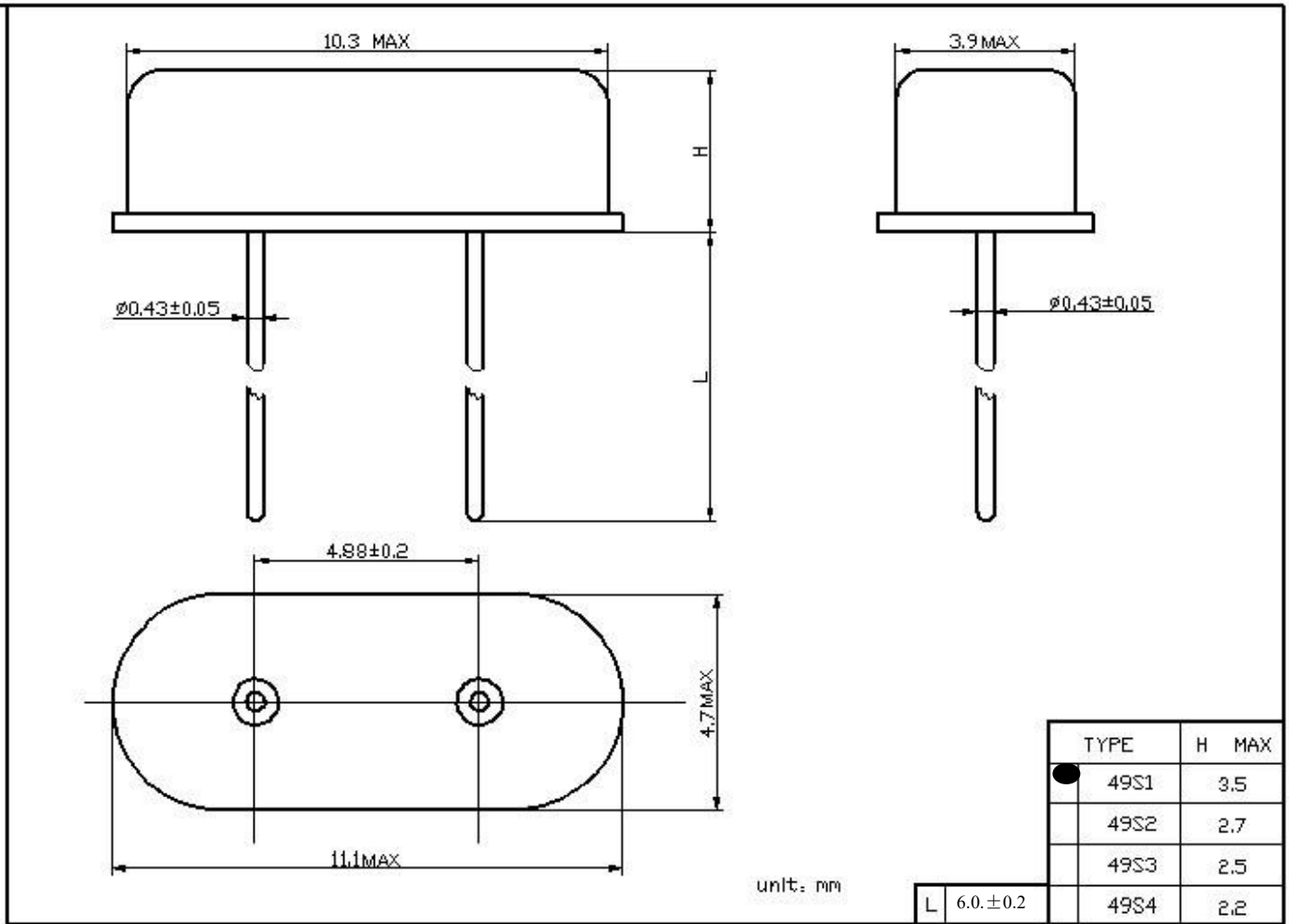
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GENERAL SPECIFICATIONS (电气特性) :

| | | |
|---|--|-------------------------|
| 1. Holder type: (型号) | HC-49S | |
| 2. Normal Frequency: (标称频率) | 4.000MHz | |
| 3. Oscillation Mode: (振动模式) | AT | |
| 4. Load Capacitance(CL): (负载电容) | 16 PF | |
| 5. Frequency Tolerance 25±3℃: (频率偏差 25±3℃) | ± 20 PPM | |
| 6. Effective Series Resistance: (等效电阻) | ≤100 Ω | |
| 7. DLD2 (不同功率下之最大与最小阻抗差值) | ≤ 33 Ω | 0.01 uW~100 uW 10 steps |
| 8. RLD2 (不同功率下之最大阻抗值) | ≤100 Ω | 0.01 uW~100 uW 10 steps |
| 9. FDLD (不同功率下之最大与最小 FR 差值) | ≤ 6PPM | 0.01 uW~100 uW 10 steps |
| 10. Shunt Capacitance(C0): (静态电容) | ≤ 7 PF | |
| 11. Typical drive level: (激励功率) | 100 uW TYP. | |
| 12. Operation Temperature Range: (工作温度范围) | -40℃ to +85℃ | |
| 13. Stability Over Temperature Range: (工作温度频率偏差) | ±30 PPM at -40℃ to+85℃ | |
| 14. Insulation Resistance: (绝缘阻抗) | ≥500 MΩ at DC 100V | |
| 15. Aging: (老化率) | ±3 PPM/Year | |
| 16. Storage Temperature: (存储温度) | -40℃ to +85℃ | |
| 17. Test circuit (测试仪器) | S&A 250B Pi-Network Crystal Measurement System | |

Remark (备注) :

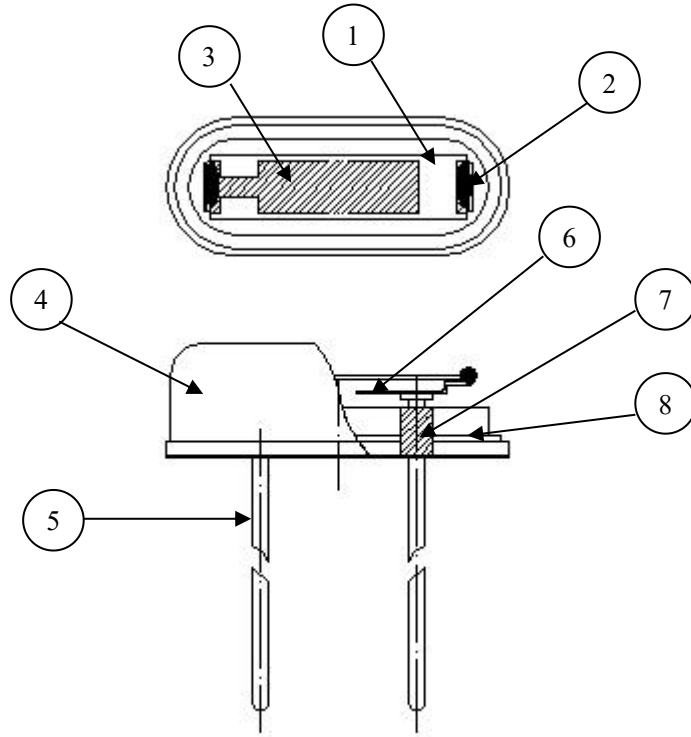
DIMENSIONS SPECIFICATIONS (外形尺寸)



MASK (印字)



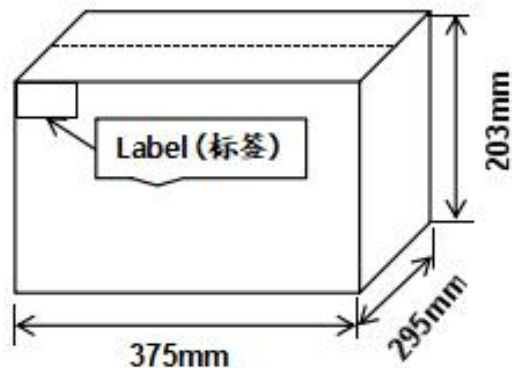
Report of bills of materials and suppliers (物料清单)



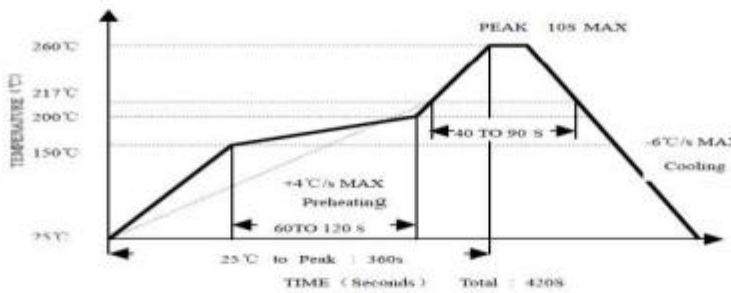
| NO. | Product name 部件名称 | MATERIALS 材质 | QTY 数量 | |
|-----|----------------------|-----------------|-----------|--|
| 1 | Blank 晶片 | SIO2 | 1 | |
| 2 | Silver paste 导电胶 | 3301F | 2 | |
| 3 | Silver 电极 | Ag | 2 | |
| 4 | Cover 外壳 | Au | 1 | |
| 5 | Lead 引线 | Kovar | 2 | |
| 6 | Pin 簧片 | C7701 | 2 | |
| 7 | GLASS 玻璃珠 | GLASS | 2 | |
| 8 | Base 底板 | SPCC-SD | 1 | |

Packing Method (包装样式)

1. Packed 200 Pcs in 1 vinyl bag
200PCS一小袋。
2. Packed 10 vinyl bag in 1 box
10小袋一盒。
3. Packed 10 box in 1 carton
10盒一箱
4. There are 20000Pcs in 1 carton
总计20000PCS装一箱
5. Size of carton: 375mm*295mm*203mm
外箱尺寸: 375mm*295mm*203mm
6. Label mode
标签样式
 - A. P/O NO:
 - B. LOT NO:
 - C. HOLDER TYPE.
 - D. FREQUENCY:
 - E. LOAD CAP
 - F. FREQUENCY TOLERANCE
 - G. RESISTANCE
 - H. QUANTITY:



CARTON (外箱)

| | | | |
|---|-------------|---|----|
| 1 | Drop 跌落 | According to experiment of IEC 68-2-32 method Ed,quartz crystal unit shall be dropped from 75cm height on 3cm hard board for 3 times. | AB |
| | | 按IEC 68-2-32试验Ed进行，晶体从75厘米高度自由下落至3厘米硬木板，重复3次。 | |
| 2 | Reflow 回流焊 | Reflow soldering cure see the chart. 回流焊曲线见下图。 | A |
| | |  <p>260°C 217°C 200°C 150°C 75°C</p> <p>PEAK 10S MAX</p> <p>-4°C/s MAX Preheating 60 TO 120 S</p> <p>-6°C/s MAX Cooling</p> <p>40 TO 90 S</p> <p>25°C to Peak : 300s Total : 420S</p> | |
| 3 | Leakage 气密性 | Alcohol press method:quartz crystal unit shall be immersed in the can,and pressed by 0.5kg press for 30min;Then put away press ,and dry it.Quartz crystal unit shall be test insulation resistance by 100V volts d.c for 1 min. | D |
| | | 酒精加压法：晶体浸入酒精罐中，加压（压力0.5kg，时间30分钟）；撤去压力后，晾干晶体，测量引线与外壳之间绝缘电阻（100V直流电压，时间1分钟）。 | |
| 4 | Aging 老化 | Quartz crystal unit shall be stored at a temperature 85±2°C for 720±12 hours(30days),and then it shall be subjected to standard atmospheric conditions for 1 hour. | A |
| | | 晶体在温度85±2°C中放置720小时（30天）±12小时后，在常温常湿状态下放置1小时后测试。 | |

Accept Level:

判定标准:

| No. | specification 标准 |
|-----|---|
| A | Satisfying the electric characteristic; Frequency change is at the range of 5PPM and resistance change is at the range of 5Ω. 电气性能可满足要求：频率变化量在5ppm以内,电阻变化量在5Ω以内。 |
| B | After each test,no visible damage shall be manifested,nor shall the hermetic seal break down 试验后，无机械损伤 |
| C | Dipping in 3 sec.A new uniform coating of solder shall covera minimum of 95% of the surface being immersed. 浸锡时间3秒以内，引线挂锡面积95%以上。 |
| D | Insulation resistance of leads shall be more than 500MΩ(100V DC). 端子之间的绝缘电阻≥500MΩ(100V DC)。 |

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