



深圳市晶友嘉电子有限公司

SHENZHEN JINGYOUJIA ELECTRONIC CO., LTD



CRYSTAL RESONATOR SPECIFICATIONS

石英晶体谐振器承认书

| | |
|---------------------|----------------|
| 客户 Customer: | 立创商城 |
| 型号 Product: | S1C |
| 客户料号 Code No: | |
| 我司料号 Code No: | S1C98156NWXGAC |
| 频率 Frequency: | 9.81563MHz |
| 数量 Sample Quantity: | |
| 日期 Date: | 2021-12-10 |

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供应商确认栏:

| | | |
|------------|------------|-------------|
| 制作 Handler | 确认 Checked | 核审 Approved |
| 戴晓嘉 | 陈斌 | 李晨 |

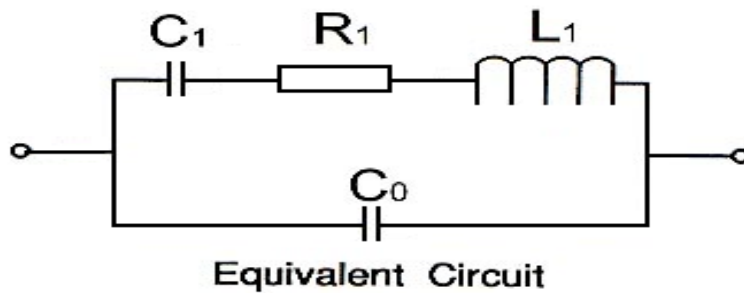
客户承认栏:

| | |
|------------|-------------|
| 承认 Checked | 核审 Approved |
| | |

1. Electrical Parameters

| No. | Item | Symb | Electrical Specification | | | | Remark |
|-----|------------------------------|---------------|--------------------------|------|------|-------|---------------|
| | | | Min. | Type | Max. | Units | |
| 1 | Nominal Frequency | F0 | 9.81563 | | | MHz | |
| 2 | Mode of Vibration | | Fundamental | | | | |
| 3 | Frequency Tolerance | $\Delta F/F0$ | -20 | | 20 | ppm | At 25°C ± 3°C |
| 4 | Operating Temperature Range | TOPR | -20 | | 70 | °C | |
| 5 | Frequency Stability | TC | -20 | | 20 | ppm | |
| 6 | Storage Temperature | TSTG | -40 | | 90 | °C | |
| 7 | Load Capacitance | CL | | 12 | | PF | |
| 8 | Equivalent Series Resistance | ESR | | | 70 | Ω | |
| 9 | Drive Level | DL | | 100 | | μW | |
| 10 | Insulation Resistance | IR | 100 | | | MΩ | At 100VDC |
| 11 | Shunt Capacitance | C0 | | | 7 | PF | |
| 12 | Motional Capacitance | C1 | | | | PF | |
| 13 | Aging Per Year | Fa | -3 | | 3 | ppm | First Year |
| | | | | | | | |

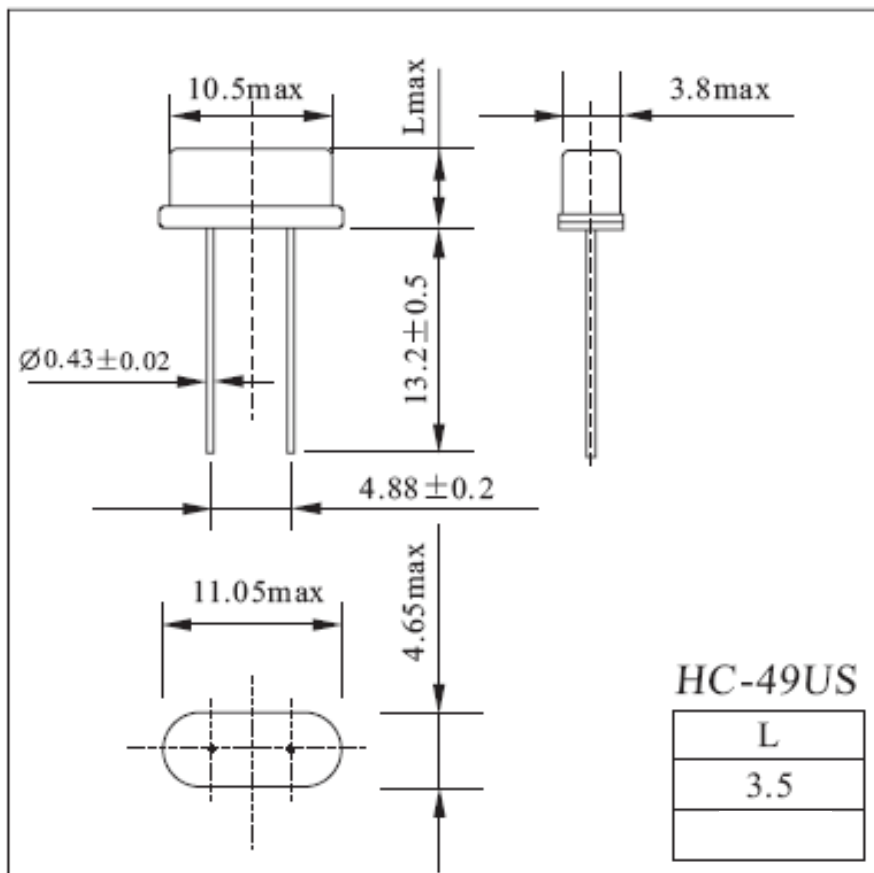
2. Equivalent Circuit:



3.实物 Product

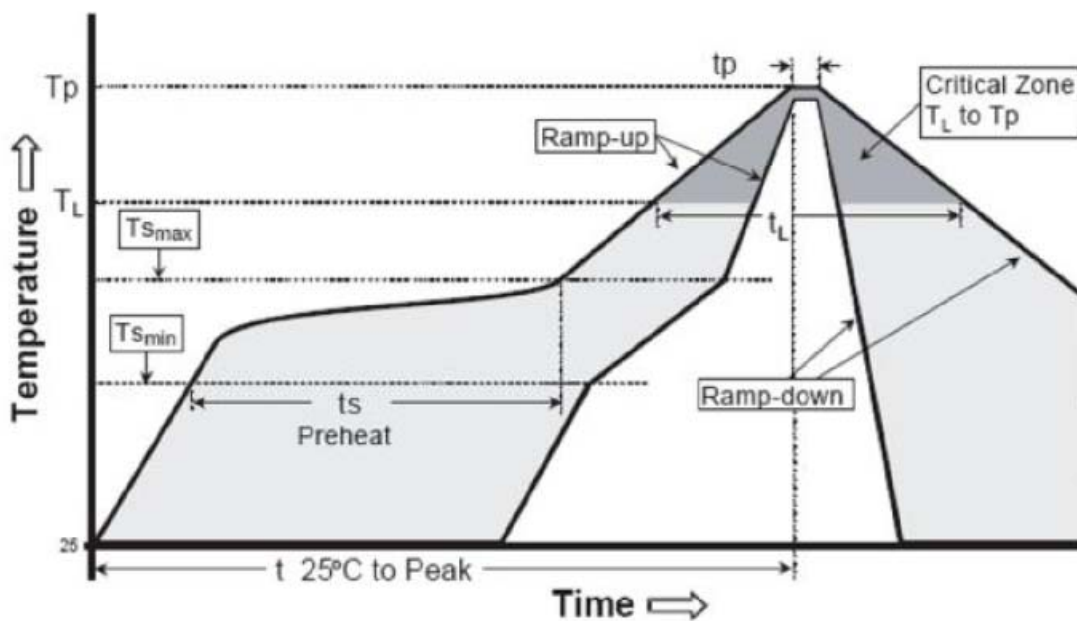


4.外型尺寸 Outline Dimensions (unit:mm)



5.回流焊曲线 Reflow Profiles

| | |
|--------------------------------------|------------------|
| Profiles Feature | Pb-Free Assembly |
| Average Ramp-up Rate (Ts max to Tp) | 3°C/second max. |
| Preheat | |
| Temperature Min (Ts min) | 125°C |
| Temperature Max(Ts max) | 200°C |
| Time (ts min to ts max) | 60~180 seconds |
| Time maintained above | |
| Temperature (TL) | 217°C |
| Time (tL) | 60~150 seconds |
| Peak/Classification Temperature (Tp) | |
| Time within 5°C of actual Peak | 20~40 second |
| Temperature(tp) | |
| Ramp-down rate | 6°C/second max. |
| Time 25°C to Peak Temperature | 8 minutes max. |
| Suggest reflow times | 3 times max. |

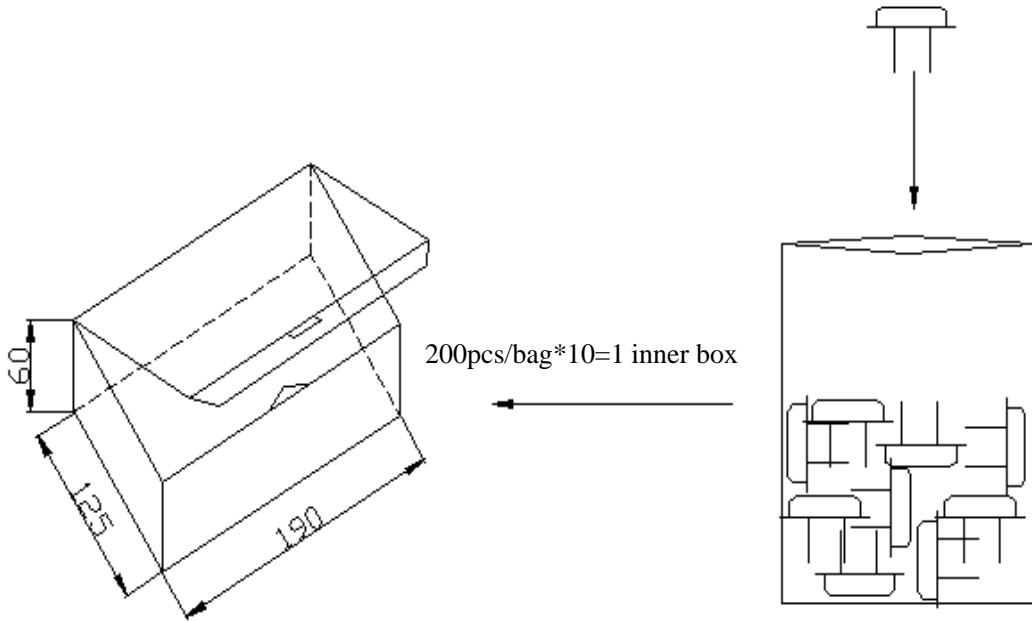


6.机械可靠/信赖性 Mechanical Performance

| | Item | Condition | Standard |
|-----|----------------------------------|---|---|
| 1. | Drop characteristics | Free drop from 50cm height on a hard wooden board for 3 times. (Board is thickness more than 30 mm.) | Frequency change: ≤5ppm Rr as specification |
| 2.. | Shake characteristics | Shake frequency 10~55Hz, cyc1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes, test after 1 hours. | Frequency change: ≤5ppm Rr as specification |
| 3. | Airproof characteristics | Put crystal into the pressure cabin with alcohol, keep pressure 0.4~0.5mpa 10 minutes, then take out and blow for 5 minutes | IR≥500MΩ |
| 4. | Weld characteristics | 260℃ Max, 10 seconds | 90% exhibit tin ok |
| 5. | Humidity characteristics | +40±2℃ & 90%~95% R.H. 250 hours | Frequency change: ≤5ppm Rr as specification |
| 6. | Low temperature characteristics | -30±2℃, 250 hours, put in room temperature, test after 1 hours. | Frequency change: ≤5ppm Rr as specification |
| 7. | High temperature characteristics | +85±2℃, 250 hours, put in room temperature, test after 1 hours. | Frequency change: ≤5ppm Rr as specification |
| 8. | Temperature cycling | -30±3℃/30±3 min~+85±2℃/30±3min, 5 cycles | Frequency change: ≤5ppm Rr as specification |

7.Dimension of Inside Package

内包装尺寸图



Dimensions of outside Package

外包装尺寸图

