



# 深圳市凯越翔电子有限公司

## 石英谐振器规格书

|         |                |
|---------|----------------|
| 产品名称:   | 石英晶振谐振器        |
| 产品型号:   | 3225/40.000MHZ |
| 产品参数:   | 10.5PF/±10ppm  |
| 原厂型号:   | K3A4000010.510 |
| 尺寸图:    | P. 2 3         |
| 凯越翔技术部: | 董宗全            |

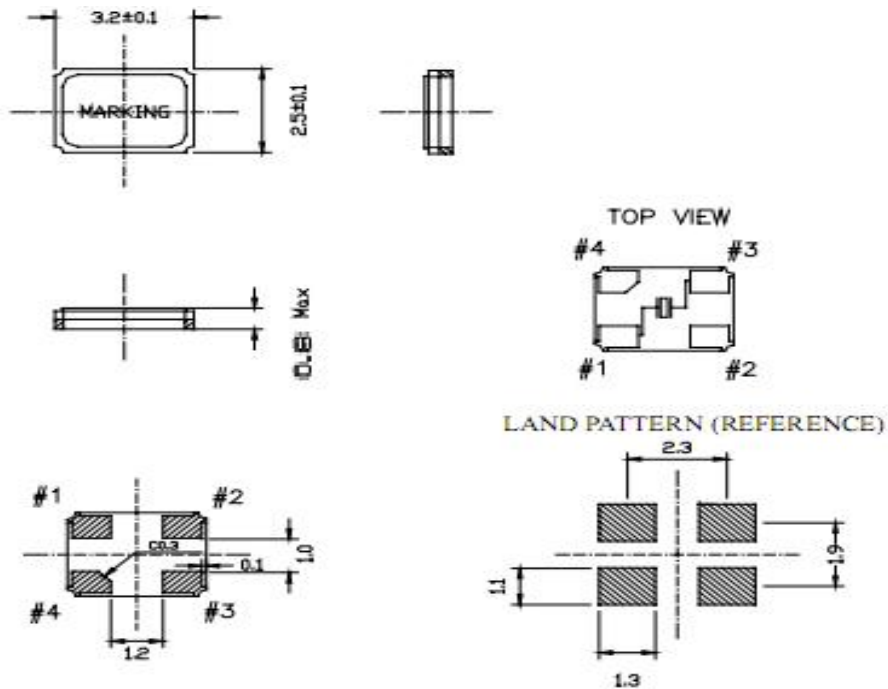
### 客户确认印栏

|       |       |
|-------|-------|
| 认证印章  | 负责人印章 |
| 年 月 日 | 年 月 日 |

本规格章程连同本页合共6页

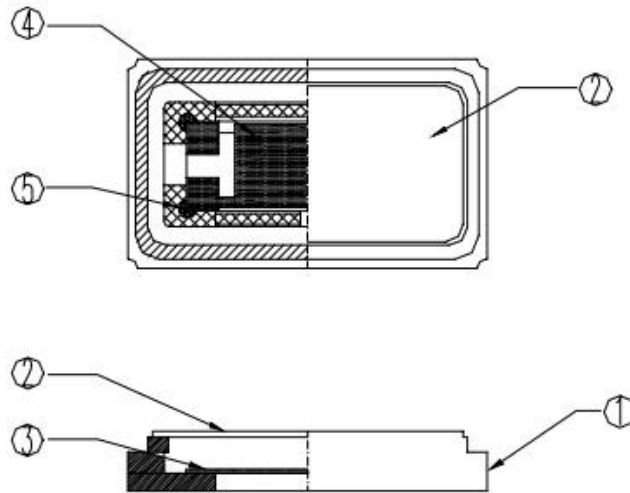
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- |  |   |
|--|---|
| 1. Frequency:                                  | 40.000 MHZ  |
| 2. Holder Type:                                | SMD3.2*2.5  |
| 3. Frequency Tolerance:                        | $\pm 10\text{ppm}$ at $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$  |
| 4. Equivalent Series Resistance:               | 30 $\Omega$ Max   |
| 5. Storage Temperature Range:                  | $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$                    |
| 6. Operating Temperature Range:                | $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$                    |
| 7. Frequency Characteristics Over Temperature: | $\pm 10\text{ppm}$ $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ |
| 8. Load Capacitance (CL):                      | 10.5PF  |
| 9. Drive Level:                                | 100 $\mu\text{W}$ Max   |
| 10. Shunt Capacitance:                         | 5PF MAX   |
| 11. Insulation Resistance:                     | $\geq 500\text{M}\Omega$ Min at 100 V                             |
| 12. Mode Of Oscillation:                       | Fundamental   |
| 13. Aging:                                     | 3ppm/Year   |
| Marking description:                           | K40.00 MHZ  |
| 14. Dimensions(mm):                            |   |



16. Structure Illustration

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| PART NAME |       | MATERIAL | PART NAME |           | MATERIAL    |
|-----------|-------|----------|-----------|-----------|-------------|
| 1.        | BASE  | CERAMIC  | 4.        | ELECTRODE | Metal       |
| 2.        | LID   | Co       | 5.        | ADHESMES  | SILVER GLUE |
| 3.        | BLANK | QUARTZ   |           |           |             |

## Reliability Testing 可靠性测试项目介绍

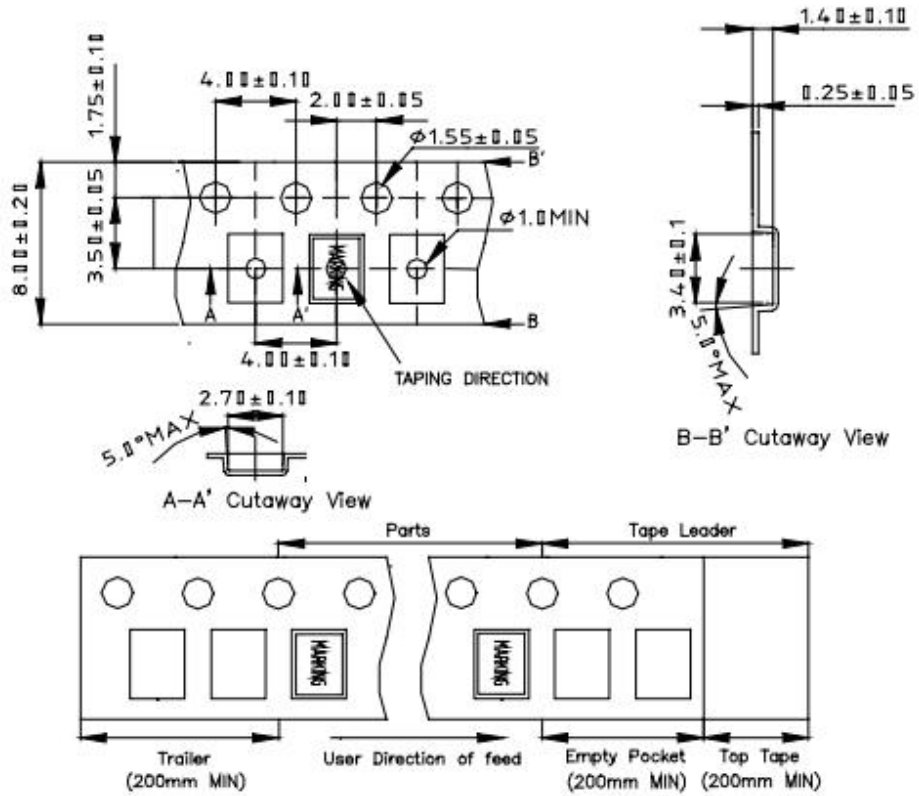
| 项目                          | 验条件及要求  | 要求                                   |
|-----------------------------|---|--------------------------------------|
| Vibration<br>振动             | Endurance condition by a frequency sweep shall be made. The entire frequency range from 10HZ to 50HZ and return to 10HZ, shall be transverse in 1min. Amplitude(total excursion):1.5mm this motion shall be applied for a period of 2h each of 3 mutually perpendicular axes(a total of 6h)<br>振动频率: 从 10HZ 到 55HZ, 再回到 10HZ 1 倍频程/min 幅度为 1.5mm 3 个相互垂直的方向各 2 小时 | (1). FL: +/-5ppm<br>(2). Rr: +/-5%   |
| Drop<br>跌落                  | Form 70cm height 3 times on 3cm hard wooden floor<br>从 70cm 高处跌落到 3cm 厚的硬质木板上, 重复 3 次   |                                      |
| Shock<br>冲击                 | Peak acceleration:981m/s <sup>2</sup> duration of the pulse :6ms three successive shocks shall be applied in both direction of 3 mutually perpendicular axes(a total of 18 shocks)<br>加速度: 981m/s <sup>2</sup> 时间: 6ms 作用在 3 个相互垂直的方向   | (1). FL: +/-10ppm<br>(2). Rr: +/-8 Ω |
| Damp heat, constant<br>恒定湿热 | The unit shall be stored at a temperature of 40℃ ±2℃ with relative humidity of 90%to95% for 48h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made.<br>在温度: 40℃ ±2℃、湿度: 90%to95%条件下存放 48 小时, 然后在标准大气压下放置 1~2 小时后测试   |                                      |
| Cold<br>低温存储                | The unit shall be stored at a temperature of -40℃ ±5℃ for 48h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made.<br>在 -40℃ ±5℃ 下存放 48 小时, 然后在标准大气压下放置 1~2 小时后测试   |                                      |
| Dry heat<br>高温存储            | The unit shall be stored at a temperature of 100℃ ±5℃ for 24h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made.<br>100℃ ±5℃ 下存放 24 小时, 然后在标准大气压下放置 1~2 小时后测试   |                                      |
| Aging<br>老化                 | The unit shall be stored at a temperature of 85℃ ±5℃ for 7d then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made.<br>85℃ ±5℃ 下放置 7 天, 然后在标准大气压下放置 1~2 小时后测试   |                                      |
| Temperature<br>cycling      | The unit shall be subjected to 5 successive change of temperature cycles, each as show in table below, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made<br>在下表给定温度和时间参数的条件下循环 5 次, 标准大气压下放置 1~2 小时后测试   |                                      |

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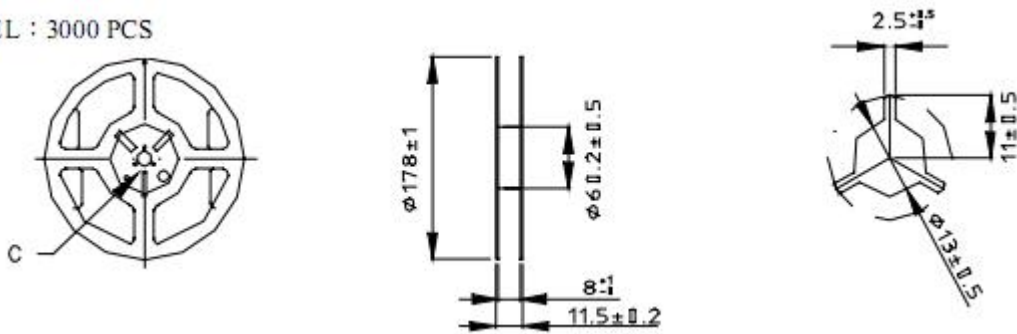
| <p>温度循环</p>                                  | <table border="1"> <thead> <tr> <th></th> <th>Temperature<br/>温度</th> <th>Duration<br/>放置时间</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-40°C ± 3°C</td> <td>30min (30 分钟)</td> </tr> <tr> <td>2</td> <td>Standard atmospheric conditions<br/>标准大气压</td> <td>Within 30s<br/>30 秒内</td> </tr> <tr> <td>3</td> <td>100°C ± 3°C</td> <td>30min (30 分钟)</td> </tr> <tr> <td>4</td> <td>Standard atmospheric conditions<br/>标准大气压</td> <td>Within 30s<br/>30 秒内</td> </tr> </tbody> </table> |                     | Temperature<br>温度 | Duration<br>放置时间 | 1 | -40°C ± 3°C | 30min (30 分钟) | 2 | Standard atmospheric conditions<br>标准大气压 | Within 30s<br>30 秒内 | 3 | 100°C ± 3°C | 30min (30 分钟) | 4 | Standard atmospheric conditions<br>标准大气压 | Within 30s<br>30 秒内 |  |
|--|---|---------------------|-------------------|------------------|---|-------------|---------------|---|--|---------------------|---|-------------|---------------|---|--|---------------------|--|
|  | Temperature<br>温度   | Duration<br>放置时间    |                   |                  |   |             |               |   |  |                     |   |             |               |   |  |                     |  |
| 1  | -40°C ± 3°C   | 30min (30 分钟)       |                   |                  |   |             |               |   |  |                     |   |             |               |   |  |                     |  |
| 2  | Standard atmospheric conditions<br>标准大气压  | Within 30s<br>30 秒内 |                   |                  |   |             |               |   |  |                     |   |             |               |   |  |                     |  |
| 3  | 100°C ± 3°C   | 30min (30 分钟)       |                   |                  |   |             |               |   |  |                     |   |             |               |   |  |                     |  |
| 4  | Standard atmospheric conditions<br>标准大气压  | Within 30s<br>30 秒内 |                   |                  |   |             |               |   |  |                     |   |             |               |   |  |                     |  |
| <p>Resistance to soldering heat<br/>耐焊接热</p> | <p>250°C<br/>217°C<br/>200°C<br/>150°C<br/>25°C</p> <p>Peak 10s-Max</p> <p>40 to 90s</p> <p>-6 °C /s Max cooling</p> <p>+4 °C /s Max preheating</p> <p>60 to 120s</p> <p>25°C to peak: 360s</p> <p>TIME (Seconds) Total: 420s</p> <p>使用回流焊方法见上图</p>   |                     |                   |                  |   |             |               |   |  |                     |   |             |               |   |  |                     |  |

■ PACKING

1. CARRIER TYPE



2. REEL : 3000 PCS



|    |     |    |     |    |     |
|----|-----|----|-----|----|-----|
| 拟制 | 成望生 | 审核 | 董宗全 | 批准 | 赵庸桓 |
|----|-----|----|-----|----|-----|