



## 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:	3225/12.000MHZ
产品参数:	8PF/±10ppm
原厂型号:	K3A120000810
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

- |  |   |
|--|---|
| 1. Frequency:                                  | 12.000 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:               | 80 $\Omega$ 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 Temperatnre: | $\pm 20\text{ppm}$ $-40^\circ\text{C} \sim +85^\circ\text{C}$ |
| 8. Load Capacitance (CL):                      | 8 PF  |
| 9. Drive Level:                                | 100 $\mu$ W   |
| 10. Shunt Capacitance:                         | 5PF MAX   |
| 11. Insulation Resistance:                     | $\geq 500\text{M}\Omega$ Min at 100 V                         |
| 12. Mode Of Oscillation:                       | Fundamental   |
| 13. Aging:                                     | $\pm 3\text{ppm}/\text{Year}$                                 |
| Marking description:                           | KYX12.000   |
| 14. Dimensiors(mm):                            |   |



TOP VIEW



LAND PATTERN (REFERENCE)



16. Structure Illustration



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 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 transverseb 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) 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: +/-10ppm (2). Rr: +/-10 Ω
Drop 跌落	Form 70cm height 3 times on 3cm hard wooden floor 从 70cm 高处跌落到 3cm 厚的硬质木板上, 重复 3 次	
Shock 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) 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 (2). Rr: +/-10 Ω
Damp heat, constant 恒定湿热	The unit shall be stored at a temperature of 40°C ±2°C 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. 在温度: 40°C ±2°C、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 低温存储	The unit shall be stored at a temperature of -40°C ±5°C for 48h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made. 在 -40°C ±5°C 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 高温存储	The unit shall be stored at a temperature of 100°C ±5°C for 24h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made. 100°C ±5°C 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 老化	The unit shall be stored at a temperature of 85°C ±5°C for 7d then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made. 85°C ±5°C 下放置 7 天, 然后在标准大气压下放置 1~2 小时后测试	
Temperature cycling 温度循环	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 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	

	<table border="1"> <thead> <tr> <th></th> <th>Temperature 温度</th> <th>Duration 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 标准大气压</td> <td>Within 30s 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 标准大气压</td> <td>Within 30s 30 秒内</td> </tr> </tbody> </table>		Temperature 温度	Duration 放置时间	1	-40°C ± 3°C	30min (30 分钟)	2	Standard atmospheric conditions 标准大气压	Within 30s 30 秒内	3	100°C ± 3°C	30min (30 分钟)	4	Standard atmospheric conditions 标准大气压	Within 30s 30 秒内	
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<p>Resistance to soldering heat 耐焊接热</p>	<p>250°C 217°C 200°C 150°C 25°C</p> <p>Peak 10s Max +4°C /s Max preheating 60 to 120s 40 to 90s -6°C /s Max cooling 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	谢为亮
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