

莆田市宏信电子石英有限公司

PUTIAN HONGXIN ELECTRONICS QUARTZ CO.,LTD

石英晶体谐振器规格书

QUARTZ CRYSTAL SPECIFICATION

Customer Name:			
Product Name: 石英晶体振荡器			
Part Description: TF3*8 32.768KHZ 12.5PF			
承认 Confirmation			
顾 客 customer		供 方 Supplier	
签章：（签字生效） Signature (Effective Upon Signature)		签章：（签字生效） Signature (Effective Upon Signature)	
代表 Deputy		代表 Deputy	
日期 Date		日期 Date	

TUNING FORK CRYSTAL UNIT

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TYPE:TF308 32.768Khz-DIP

技术参数 ELECTRICAL SPECIFICATIONS

1	频率范围 Frequency Range	32.768KHZ	
2	负载电容 Load Capacitance	12.5PF	
3	激励功率 Drive Level	1.0uWMax	
4	调整频差 Frequency Tolerance	$\pm 10\text{PPM} \sim \pm 100\text{PPM}$	At 25°C 指定温度
5	二次温度系数 Temperature Coefficient	$ -0.035 \pm 0.01 $ ppm/°C	
6	工作温度范围 Operationg Temperature Range	-20~+70°C	
7	贮存温度范围 Storage Temperature Range	-40°C ~ 85°C	
8	谐振电阻 Series Resistance	30K Ω Max	At 25°C 和频率有关
9	静态电容 Shunt Capacitance	1.75PF Typical	和频率有关
10	动态电容 Motional Capacitance	0.0035pf Typical	和频率有关
11	绝缘电阻 Insulation Resistance	<500M Ω	DC100V $\pm 15\text{V}$
12	年老化率 Aging	$\pm 5\text{PPM Max}$	25°C $\pm 3^\circ\text{C}$
13	拐点温度 Turnover Temperature	25 $\pm 5^\circ\text{C}$	
备注			

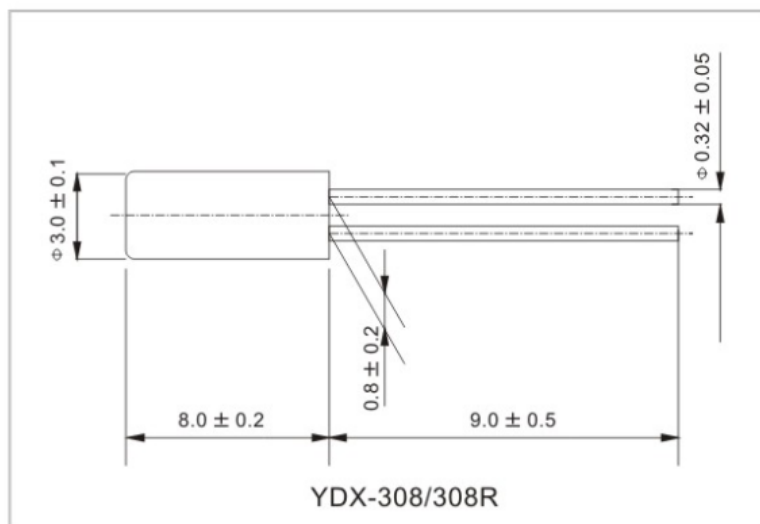
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外形尺寸 REMARKS DIMENSIONS

■ OUTLINE DIMENSIONS(mm)



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石英晶振使用说明书

PROCESSING INSTRUCTIONS

■ 石英晶体意外跌落(When dropped by mistake)

设计和制造的石英晶体本身具有耐冲击能力,但是当石英晶体元件经受剧烈的机械冲击,如跌落到地板上或安装期间剧烈震动时,在使用之前需要进行电性能确认.

The crystal units are designed and manufactured to resist physical shocks. However, When the crystal units are subjected to excessive impact such as being dropped onto the floor or giving shocks during processing .need to make sure its satisfactory performance before using it.

■ 焊接(Soldering)

(1) 引线型产品(Lead Type products)

- ① 使用电烙铁焊接时,引线应该在 3 秒内焊接完毕,电烙铁温度不能高于 300℃

Lead wires should be soldered within 3 seconds with the soldering iron heated to a temperature no higher than 300℃'

- ② 使用浸锡方式焊接时,引线应该在 10 秒内焊接完毕,焊锡温度不能高于 260℃,并且注意不能将整个晶体浸锡,推荐使用垂直安装方式,避免热力直接传导到晶体上.

In solder-dip processing, the leads should be soldered within 10 seconds with a temperature no higher than 260℃. Mounting in upright is recommendable to prevent the heat conduction directly to the body of the crystal unit.

■ 石英晶体剪脚(To bend the lead of cylinder type products)

- ① 当圆柱状晶体组件需要剪脚时,为了防止剪脚时造成 密封玻璃体的破裂,从剪脚处到晶体基座底部距离应该大于 1.5mm,推荐距离 3.0mm,并使用工装夹具进行剪脚.

When the lead of cylinder type crystal units need to be bent ,leave more than 1.5mm(3.0mm is recommendable) of lead from the case in order to prevent from any cracks of the hermetic sealing glass at the root of the lead ,and use a jig to bend if possible.

- ② 当圆柱状晶体组件进行剪脚时,不要剥离引线的镀层.

When bending the lead of cylinder type crystal units,do not scrape off the soldering off the soldering plating from the lead surface.

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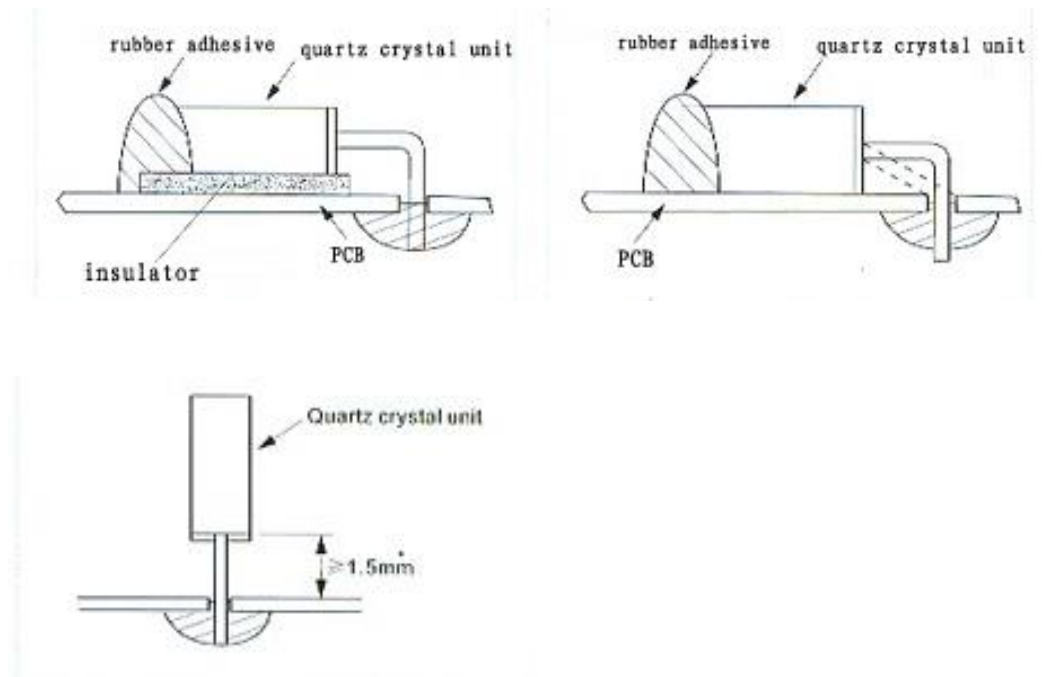
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■ 元件的安装 (Mounting)

圆柱状晶体元件的安装 Mounting of cylinder type products

- ① 为了避免影响元件电性能或损坏元件, 严禁将圆柱状晶体元件外壳焊接在印制板上进行固定, 推荐使用橡胶粘结剂进行固定.

Soldering the body of the cylinder type crystal units with PCB must be avoided due to deteriorate the characteristics or damage the products. Rubber adhesive is recommended.



- ② 当用手工来弯曲引线时,请遵照下列方法.

When the lead needs to be bent by hand, please follow the instruction as below:

用手指捏住圆柱晶体的外壳,用镊子夹住引线要弯曲的部位,该部位离晶体基座底部 1.5mm 以上(推荐 3.0mm);用镊子夹住弯曲引线成 90°, 不要用力拉引线,用力拉引线可能造成引线根部的玻璃珠破裂,而产生漏气损坏元件电性能.

Hold the body of the cylinder type crystal units in fingers; pick at the part with tweezer, which you want to bend. there should be more than 1.5mm (3.0mm is recommended) from the body case.

Bend the lead 90° by tweezer without pulling the lead strongly. If pulling the lead

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strongly may cause any cracks of hermetic sealing glass at the root of the lead and may cause the leakage and the characteristics to deteriorate.

■ 石英晶体元件的贮存

石英晶体元件长时间贮存在高温或高湿环境中,可能会影响频率的稳定性和可焊性,请将晶体组件贮存在正常的温度和湿度环境中,避免阳光直射和露水凝结,避免贮存 6 个月以上再使用,拆封后尽快装配使用.

Storage of the crystal units under higher temperature of high humidity for a long term may affects frequency stability or solderability .please store the crystal units under the normal temperature and humidity without exposing to direct sunlight and dew condensation ,and avoid the storage of crystal units for more than 6 months ,and mount them as soon as possible after unpacking.