

产 品 规 格 书

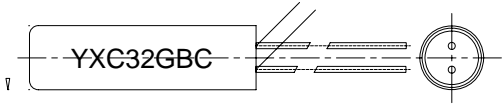
SPECIFICATION

产 品 名 称	石英晶体谐振器 QUARTZ CRYSTAL UNITS
型 号	YT-38
料 号	X308032768KGB2SC
标 称 频 率	32.768KHZ-12.5PF-10PPM
页 次	共 6 页

确 认 签 章

APPROVAL SIGNATURE

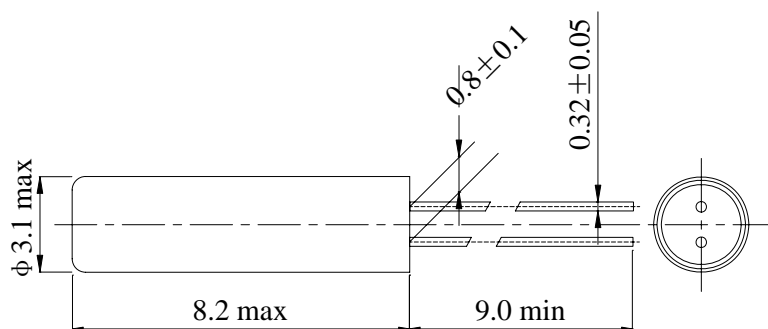
客 户		
客户物料号		
机种 / 型号		
批 准	审 核	检 验

产品规格书/ SPECIFICATION	型号	YT-38
I 晶振电性能 Electrical Characteristics		
1. 标称频率 Nominal Frequency	32.768 KHZ	
2. 振动模式 Mode of vibration	基 波	
3. 工作温度范围 Operating Temperature Range	- 20 °C ~ + 70 °C	
4. 保存温度范围 Storage Temperature Range	-20°C ~ +70°C	
5. 频率偏差 Adjustment Tolerance	± 10 ppm Max at 25°C	
6. 温度偏差 Tolerance over the Temperature Range	± 30 ppm Max	
7. 等效电阻 Equivalent Series Resistance	40 KΩ Max. at 25°C	
8. 静电容 Shunt Capacitance	5.0 pF Max	
9. 绝缘电阻 Insulation resistance	500MΩ Min. /DC100V±15V	
10. 老化率 Aging	±3ppm Max	
11. 标字 Marking		
12. 引线长度 Length of leading	10 ±0.5mm	
II-1. 测试条件 Test Condition		
1. 负载电容 Load Capacitance	12.5 pF	
2. 激励功率 Level of Drive	1 μ W	
3. 测试仪表 Equipment	250B Crystal Impedance Meter	

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型号

YT-38



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VIII. 可靠性试验项目 Reliability Test Items			
1. 机械性能试验 Mechanical Performance Tests			
试验项目 Test Item	试验方法 Test Method		规格 No. Spec. No
1-1	耐冲击 shock	从 75 厘米高, 3 次, 自由落在 3 厘米的硬木板上 Orient the sample in any attitude and drop it three times from a height of 75 cm onto a hardwood board with a thickness of 3 cm	A
1-2	耐振性 Vibration	振动频率 10~55Hz, 振幅 1.5mm 时间 1.5 分钟循环, 在 X、Y、Z 轴方向各 2 小时, 总计 6 小时。 Subject the sample to 1.5-minute cycles of frequencies of 10 to 55 Hz and amplitudes of 1.5mm for two hours in each of the X,Y, and Z directions, or 6 hours in total.	A
1-3	引出端强度 Tensile strength of terminal	每端子加 1.5Kg 负荷, 保持 30±5 秒 Apply a 1.5Kg tensile load to each terminal and sustain it for 30±5 seconds.	A. C
1-4	引线弯曲度 Bending strength of terminal	每端子加 0.5Kg 负荷并弯曲成 90°, 恢复原状后, 再反方向弯曲成 90°。 Apply a 0.5 Kg load to one of the terminals, and after tilting the main unit for 90°, restore to its original attitude. Then, tilt it in an opposite direction for 90°, and restore to its original attitude.	A. C
1-5	可焊性 Solder ability	槽焊法, 浸锡温度 230±5℃ 时间 5±0.5 秒, 端子浸助焊剂时间 5±0.5 秒, 浸锡高度 2mm。 Dip terminals in RMA flux for 5 ± 0.5 seconds. Under room temperature. Dip terminals in a 230 ± 5℃ solder bath for 5 ± 0.5 seconds. The solder shall leave an undipped terminal length of 2 mm at their base.	D
1-6	耐焊接热 Resistance to Soldering Heat	槽焊法, 温度 260±5℃ 时间 10±0.5 秒, 锡面离基座高度 2mm 以上。 Dip terminals in a 260 ± 5℃ solder bath for 10 ± 0.5 seconds. The solder shall leave an undipped terminal length of 2 mm at their base.	A
1-7	气密性 Leaking Test	用氦质谱仪测试或加压测绝缘电阻 Take measurements with a helium leakage detector, or measure insulation resistance under pressure.	E

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VIII. 可靠性试项目 Reliability Test Items

2. 环境测试 Environmental Tests

试验项目 Test Item	试验方法 Test Method	规格 No. Spec. No.
2-1 耐寒性 Cold	在-40℃环境中非工作状态放置 500 小时 Expose the sample in an inoperative mode to 500 hours in a -40℃	A
2-2 耐温性 Dry heat	在+85℃环境中非工作状态放置 500 小时 Expose the sample in an inoperative mode to 500 hours in a 85℃	B
2-3 耐湿性 Damp heat	在温度+65℃，湿度 95%环境中非工作状态放置 500 小时 Expose the sample in an inoperative mode to 500 hours in a 65℃, and 95%RH	B
2-4 热冲击 Thermal shock	在-40℃保持 30 分钟，100℃保持 30 分钟，循环 5 次。 Subject the sample to 5 temperature variation cycles at -40℃ for 30 minutes and +100℃ for the next 30 minutes in each cycles.	A

SPECIFICATIONS 规格

规格 No. Spec No.	规格 Specification
A	试验前后,频率变化在±5ppm 以内,等效电阻变化在要求范围内。 Any variation between the pre- and post-test frequencies shall remain within ±5ppm. The post-test equivalent series resistance shall remain within its specified tolerance range.
B	试验前后,频率变化在±10ppm 以内,等效电阻变化在要求范围内。 The post-test equivalent series resistance shall remain within its specified tolerance range.
C	试验前后,外观未见明显损伤,气密性未破坏。 After each test, no visible damage shall be manifested, nor shall the hermetic seal break down.
D	上锡量至少在 90%以上。 At least 90% of each dipped area shall be covered by fresh solder
E	$1 \times 10^{-2} \mu Pa \cdot m^3 / s$ Max or $IR \geq 500 M\Omega$

※测试在室温 $25 \pm 2^\circ C$ 环境中进行,每次试验后,样品必须在 $25 \pm 2^\circ C$ 环境中恢复 2 小时以上。

※Measurements shall be taken at $25 \pm 2^\circ C$, and after each test, the sample be exposed to two hours at $25 \pm 2^\circ C$

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