

Specification

TO:STE

Model Name: Crystal Unit

PART NO: 49S-27.000M-20-20-20

CUSTOMER PART NO.:

APPROVAL SHEET

Approved?	Yes
	No.
Customer's comments are welcomed here.	
Pls return this copy as a certificate of your approval by Fax:+86-755-84528986	
Approved By	Date: _____

STRONG ELECTRONICS&TECHNOLOGY LIMITED

深圳市思硕电子科技有限公司

Tel:86-755-84528985 Fax: 86-755-84528986

Email:info@strongelectronics.net

www.sawfilter.cn

History Record

Date	Part No.	SPEC No.	Discription.	Remarks.
	ISO9001:2000 ISO14001:2004	Approved by	Check by	Design by
		Dec-23-2011	Dec-22-2011	Dec-22-2011
Reversions	Total Page	<i>Xu gang dong</i>	<i>Liu jun</i>	<i>Wang hon</i>
CU-002SDIP				

SPECIFICATION OF CRYSTAL UNIT

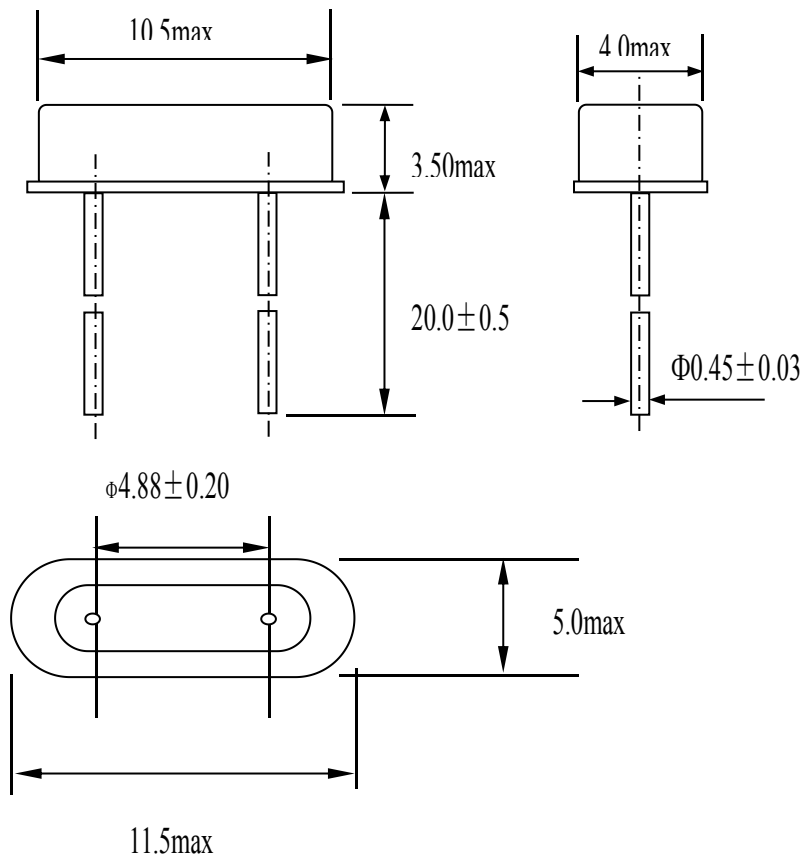
1. RANGE:

This specification shall cover the characteristics of crystal unit with Strong's P/N: 49S-27.000-20-20

2.. ELECTRICAL SPECIFICATION

1	Nominal Frequency 标称频率	27.000MHz
2	Holding 封装形式	49S
3	Vibration Mode 振动模式	AT CUT,FUND. AT 切,基波
4	Frequency Tolerance @ 25±3℃ 调整频差	±20PPM
5	Frequency Stability@ No.6 工作温度条件下的频率容差	±20PPM
6	Operating Temperature Range 工作温度	-20℃~+70℃
7	Store Temperature Range 存储温度	-45℃~+85℃
8	Equivalency Resistance 等效电阻	40Ω Max
9	Load Capacitance 负载电容	20 pF
10	Shunt Capacitance 静态电容	<7.0 PF
11	Drive Level 激励功率	10 ± 2 μW
12	Insulation Resistance 绝缘阻抗	>500MΩ at DC 100V±15V
14	Aging 老化	±3PPM/year max
15	Marking 打标	S27.000

3.Dimension: 49S Holder



4. ENVIRONMENTAL (可靠性试验)

Item 项目	Condition of Test 试验条件及要求	Performance Requirements 性能要求
Tensile Strength Termination 引出端强度	The unit's lead wire should withstand a tensile force applied to the termination in the direction of its draw-out axis of up to 900g maintained as is for 30±5s . 在引线端垂直的方向施加 900g 力，时间为 30±5s.	There should be no abnormalities detected on the unit 产品外观无异常
Vibration 振动	Endurance condition by a frequency sweep shall be made. the entire frequency range from 10HZ to 55HZ and return to 10HZ, shall be transversed 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	After the test, the parameters of table must be satisfied 满足表中的参数要求
Drop 跌落	Dropping From 75cm height 3 times on cement board 振荡器从 75 厘米高处跌落到混泥土地面，重复 3 次	Frequency less than ±5ppm, Resistance less than ±15% or 2ohms max 频率变化小于 5ppm，电阻变化小于 15%或 2ohms
Shock 冲击	Peak acceleration:981m/s ² 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 ² 时间：6ms 作用在 3 个相互垂直的方向	
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% to 95% for 56d, then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在温度：40°C±2°C、湿度：90% to 95%条件下存放 56 天，然后在标准大气压下放置 1 小时后测试	After the test, the parameters of table must be satisfied 满足表中的参数要求
Cold 低温存储	The unit shall be stored at a temperature of -55±3°C for 2h , then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在-55°C±3°C下存放 2 小时，然后在标准大气压下放置 1 小时后测试	
Dry heat 高温存储	The unit shall be stored at a temperature of 105±3°C for 16h , then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在 105°C±3°C下存放 16 小时，然后在标准大气压下放置 1 小时后测试	

ENVIRONMENTAL (可靠性试验)																	
Test Item 项目	Condition of Test 试验条件	Performance Requirements 性能要求															
Aging 老化	The unit shall be stored at a temperature of 85±2°C for 30d , then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在 85±2°C 下放置 30 天,然后在标准大气压下放置 1 小时后测试	Less than ±3ppm/year															
Temperature Cycling 温度循环	<p>The unit shall be subjected to 10 successive change of temperature cycles, each as shown in table below, then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made. 在下表给定温度和时间参数的条件下循环 10 次, 标准大气压下放置 1 小时后测试</p> <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>85°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	85°C±3°C	30min (30 分钟)	4	standard atmospheric conditions 标准大气压	Within 30S 30 秒内	After the test, the parameters of table must be satisfied 满足表中的参数要求
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Resistance to soldering heat 耐焊接热	<p>Reflow soldering cure see the chart. 反焊热流方法见上图 Soldering iron method: Bit temperature : 350°C±10°C 温度: 350°C±10°C Application time of soldering iron : 5S MAX 时间: 5S MAX</p>	After the test, the parameters of table must be satisfied 满足表中的参数要求															

Notice (备注):

Standard atmospheric conditions:

Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows:

如无其他规定,测试时的标准大气压的范围如下:

Ambient temperature	:	25°C ±10°C
Relative humidity	:	30% to 80%
Air pressure	:	860hPa to 1060hPa

If there is no doubt about the result, the measurements and tests shall be made within the follows limits:

如果对测试结果有疑问,请在下面的条件下测试:

Ambient temperature	:	25°C ±2°C
Relative humidity	:	55% to 65%
Air pressure	:	860hPa to 1060hPa

5. PACKAGE

To protect the products in storage and transportation, it is necessary to pack them(outer and inner package)

5.1 Section of package

Package is made of corrugated paper with thickness of 0.8cm.Package has 10 inner boxes.

5.2 Quantity of package

Per inner box 2000 pieces

Per package 10 inner boxes

(20000 pieces part)

If there has any change of the Part Specification, the ver code will be changed to B,C ..如果本规格书有变更,版本号将改变为 B,C...依次类推.

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