



SPECIFICATION FOR APPROVAL

承 认 书



Customer Name : _____

Customer Part No : _____

Product Name : QUARTZ CRYSTAL

Part Description : 49SMD 6.000MHZ 20PF ±20PPM 60Ω ROHS

TKD Part No : 49SMD6000FD1C-CA

Date : 2014-04-04

CUSTOMER APPROVED BY

REDACTOR:

黄伟

APPROVER:

解国

湖北厂址 Hu Bei Factory Address:

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Parameters of the crystal 产品参数性能

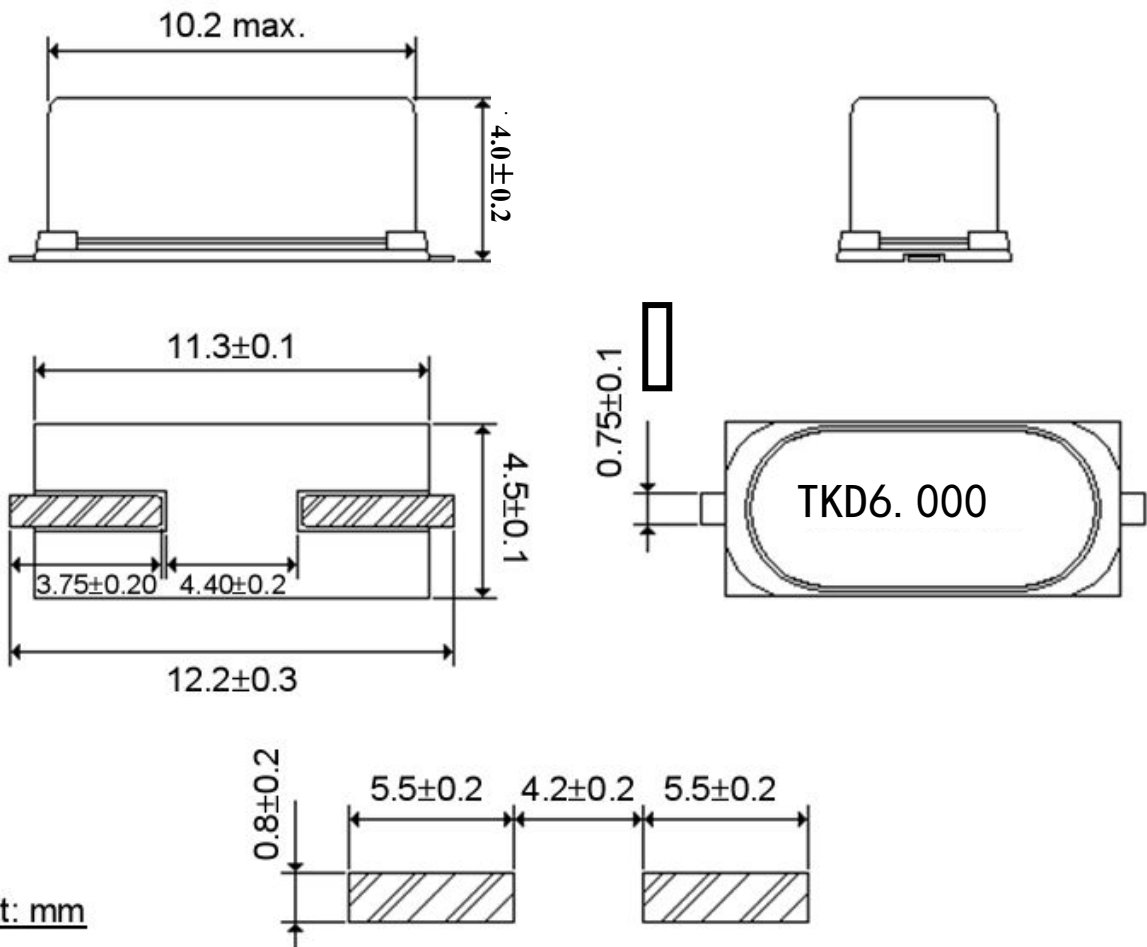
	Parameters 参数	
1	Nominal Frequency 标称频率	6.000MHZ
2	Holding 封装形式	HC-49SMD
3	Vibration Mode 振动模式	AT CUT,FUND AT 切, 基频
4	Frequency Tolerance (25±3°C) 调整频差	±20PPM
5	Frequency Stability 工作温度条件下的频差	±30ppm
6	Operating Temperature Rang 工作温度	-20°C~+70°C
7	Storage Temperature Range 存储温度	-40°C~+85°C
8	Equivalency Resistance 等效电阻	60Ω
9	Load Capacitance 负载电容(CL)	20PF
10	Shunt Capacitance 静态电容(C0)	7PF MAX
12	Drive Level 激励电平	100uW Max
13	Insulation Resistance 绝缘阻抗	≥500MΩ at DC 100 V±15V
14	Aging 老化	±3PPM/year
15	Making 打标	TKD6.000



Construction 产品结构

1. Outline drawing 外观尺寸

2. 单位: mm



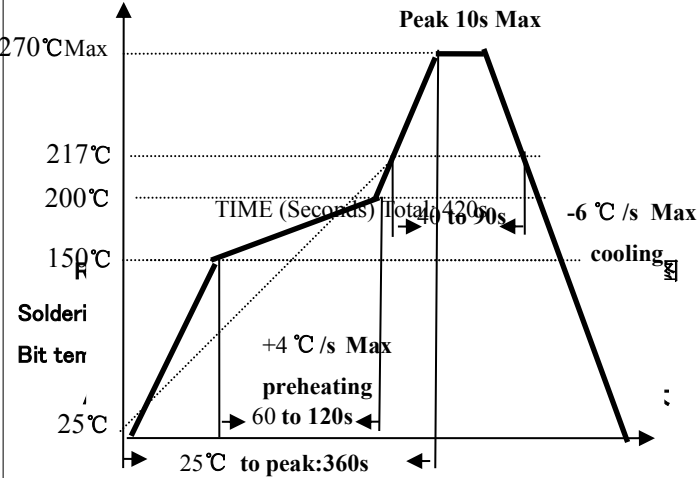


Environmental 可靠性试验

Test 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 1000g maintained as is for 10±2s 在引线端垂直的方向施加 1000g 力, 时间为 10±2s	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 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). $\Delta FL \pm 5ppm \text{ MAX}$ 频率变化量 $\pm 5ppm \text{ MAX}$ (2). $\Delta RR \pm 15\% \text{ MAX}$ 电阻变化量: $\pm 15\% \text{ MAX}$
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 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%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	

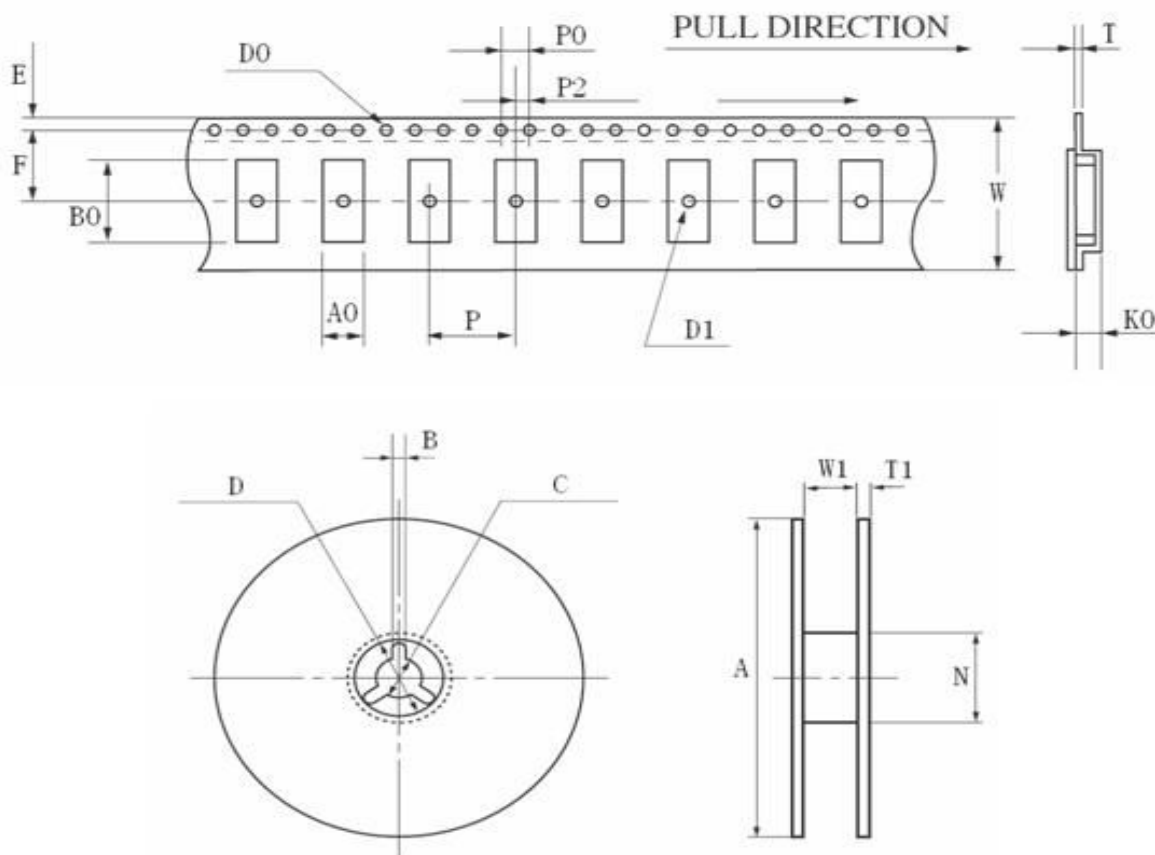


Environmental 可靠性试验

Test Item 项目	Condition of test 实验条件及要求	Performance Requirements 性能要求															
<p>Temperature cycling 温度循环</p>	<p>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</p> <table border="1" data-bbox="400 629 1059 967"> <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	<p>(1).$\Delta FL : \pm 5ppm \text{ MAX}$ 频率变化量 $\pm 5ppm \text{ MAX}$</p> <p>(2).$\Delta RR : \pm 15\% \text{ MAX}$ 电阻变化量: $\pm 15\% \text{ MAX}$</p>
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3	100°C±3°C	30min (30 分钟)															
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<p>Resistance to soldering heat 耐焊接热</p>		<p>(1).$\Delta FL : \pm 5ppm \text{ MAX}$ 频率变化量 $\pm 5ppm \text{ MAX}$</p> <p>(2).$\Delta RR : \pm 15\% \text{ MAX}$ 电阻变化量: $\pm 15\% \text{ MAX}$</p>															



Packing Spec.



	HC-49SMD	8045	7050	6035	5032	4025	3225
W	24.00 ± 0.30	16.00 ± 0.05	16.00 ± 0.05	12.00 ± 0.05	12.00 ± 0.05	12.00 ± 0.05	12.00 ± 0.05
E	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10	1.75 ± 0.10
F	11.5 ± 0.10	7.5 ± 0.10	7.5 ± 0.10	5.5 ± 0.10	5.5 ± 0.10	5.5 ± 0.10	5.5 ± 0.10
T	0.40 ± 0.05	0.35 ± 0.05	0.35 ± 0.05	0.35 ± 0.05	0.35 ± 0.05	0.35 ± 0.05	0.30 ± 0.05
P	12.00 ± 0.10	8.00 ± 0.10	8.00 ± 0.10	8.00 ± 0.10	8.00 ± 0.10	8.00 ± 0.10	8.00 ± 0.10
P0	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10
P2	2.00 ± 0.10	2.00 ± 0.10	2.00 ± 0.10	2.00 ± 0.10	2.00 ± 0.10	2.00 ± 0.10	2.00 ± 0.10
D0	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10	φ 1.50+0.10
D1	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN	φ 1.50MIN
A0	4.60 ± 0.10	4.85 ± 0.10	5.40 ± 0.10	3.90 ± 0.10	3.60 ± 0.10	2.80 ± 0.10	2.85 ± 0.10
K0	4.40 ± 0.10	1.90 ± 0.10	1.80 ± 0.10	1.50 ± 0.10	1.10 ± 0.10	0.90 ± 0.10	0.85 ± 0.10
BO	14.20 ± 0.15	8.60 ± 0.15	7.40 ± 0.10	6.40 ± 0.10	5.40 ± 0.10	4.30 ± 0.10	3.55 ± 0.10
A	φ 330 ± 1.0	φ 178 ± 2.0	φ 178 ± 2.0	φ 178 ± 2.0	φ 178 ± 2.0	φ 178 ± 2.0	φ 178 ± 2.0
B	2.30 ± 0.20	2.00 ± 0.50	2.00 ± 0.50	2.00 ± 0.50	2.00 ± 0.50	2.00 ± 0.50	2.00 ± 0.50
C	φ 13.5 ± 0.20	φ 13.2 ± 0.20	φ 13.2 ± 0.20	φ 13.2 ± 0.20	φ 13.2 ± 0.20	φ 13.2 ± 0.20	φ 13.2 ± 0.20
D	φ 21.5 ± 0.20	φ 20.0 ± 0.50	φ 20.0 ± 0.50	φ 20.0 ± 0.50	φ 20.0 ± 0.50	φ 20.0 ± 0.50	φ 20.0 ± 0.50
N	φ 100.0 ± 0.5	φ 60.5 ± 1.0	φ 60.5 ± 1.0	φ 60.5 ± 1.0	φ 60.5 ± 1.0	φ 60.5 ± 1.0	φ 60.5 ± 1.0
W1	24.5 ± 0.20	16.5 ± 0.20	16.5 ± 0.20	12.5 ± 0.20	12.5 ± 0.20	12.5 ± 0.20	12.5 ± 0.20
T1	2.30 ± 0.20	1.80 ± 0.20	1.80 ± 0.20	1.80 ± 0.20	1.80 ± 0.20	1.80 ± 0.20	1.80 ± 0.20

单击下面可查看定价，库存，交付和生命周期等信息

[>>TKD\(泰晶\)](#)