

(RoHS)

产 品 规 格 书

SPECIFICATION FOR APPROVAL

客户名称

Customer Name:

立创

产品名称

Product Name:

贴片石英晶体谐振器

产品型号:

Product Type:

SMD 3225(4PIN)

标称频率

Nominal Freq:

16.000000MHz

产品编号

Part Coding

7325-1600A2010-00

规格书编号:

Specification P/N:

客户料号:

Customer P/N:

日期:

Date:

2024-06-21

客户承认

Approved By Customer:

签章

Signature:

日期

Date:



深圳市新天源电子有限公司

SHENZHEN XINTIANYUAN ELECTRONICS CO., LTD.

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批准

Accepted

杜知清

审核

Checked

熊伟

编制

Issued

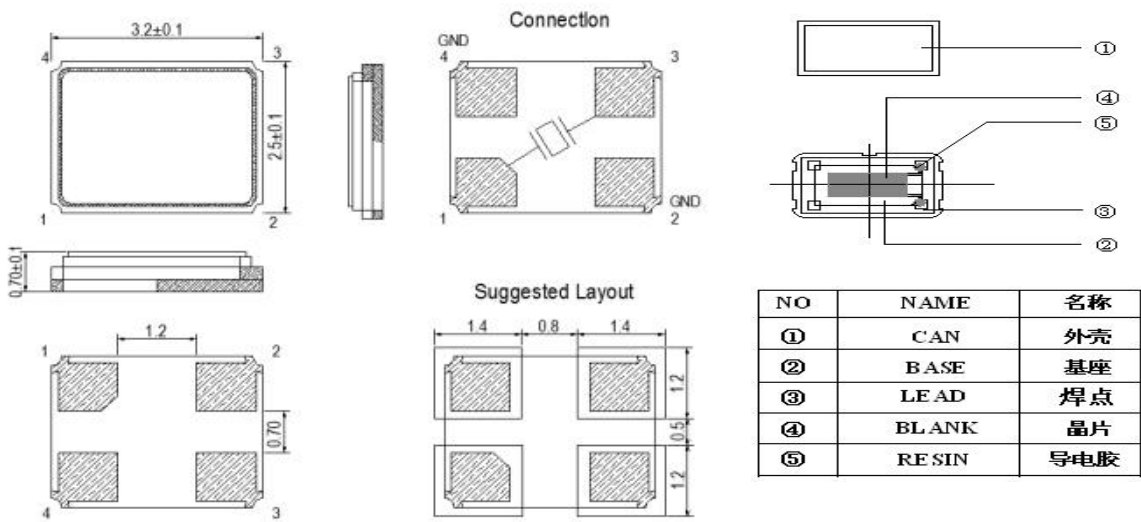
陈梅东

深圳市新天源电子有限公司 Shenzhen Xintianyuan Electronics Co.,Ltd.	石英晶体谐振器规格书 Specification of Quartz Crystal	NO:
	无源 SMD3225 4pin	Date: 2024-06-21
一、石英晶体规格参数 Quartz Crystal Specification Parameters		
1、产品型号 Holder Type	SMD 3225 (4pin)	
2、标称频率 Nominal Frequency	16.000000MHz	
3、振动模式： Mode of Oscillation	Fundamental	
4、调整频差 Frequency Tolerance at 25℃±2℃	±10ppm at 25℃±2℃	
5、等效电阻 Equivalent Resistance(ESR)	40 Ω	
6、负载电容 Load Capacitance(CL)	20pF	
7、温度频差 Temperature Characteristics	±20ppm	
8、工作温度范围 Operating Temperature range	-40~+85℃	
9、储存温度范围 Storage Temperature range	-55~+125℃	
10、激励功率 Drive Level	100uW	
11、静态电容 Shunt Capacitance (C0)	<4.0pF	
12、绝缘电阻 Insulation Resistance	≥500M Ω (DC100V±15V)	
13、测试仪器 Measure Instrument	250B	
14、年老化率 Aging Rate a Year	≤±3ppm/年	

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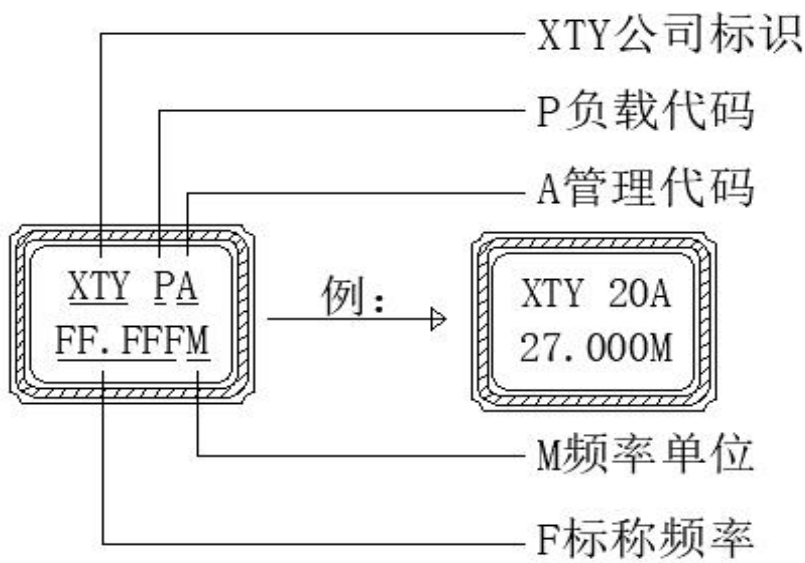
二、石英晶体尺寸、结构

Quartz Crystal Dimensions And Structure



三、石英晶体印字

Quartz Crystal Marking



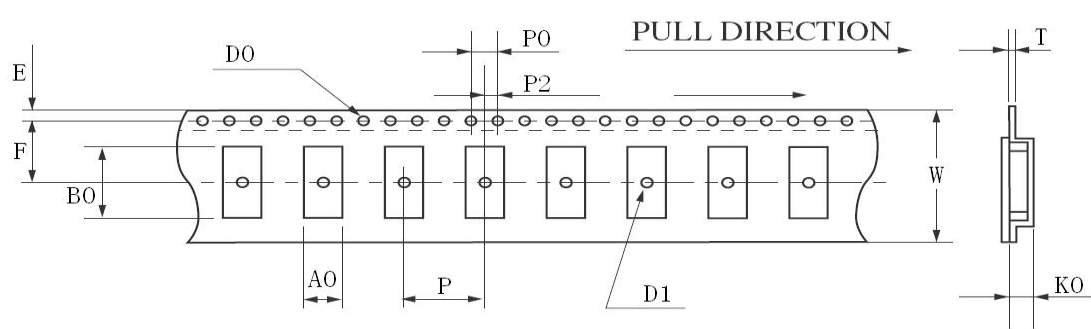
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四、包装要求

Packaging

1. 编带

Tape

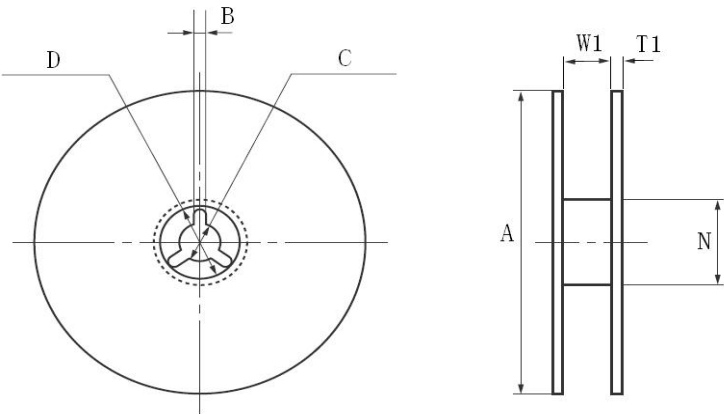


Type	W	E	F	T	P	P0	P2	D0	D1	A0	KO	BO
SMD 3225	8.00	1.75	3.50	0.25	4.00	4.00	2.00	ø1.5	ø1.0	2.75	0.95	3.50

Unit: mm

2. 轮

Reel



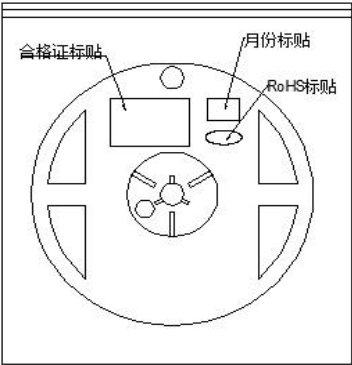
Type	A	B	C	D	N	W1	T1
SMD 3225	ø178	2.5	ø13	ø22.2	ø60	8.5	1.0

Unit: mm

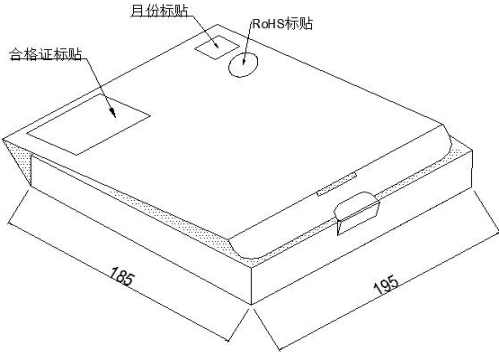
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3. 包装
Package

3000只/1卷
3000pcs/Reel



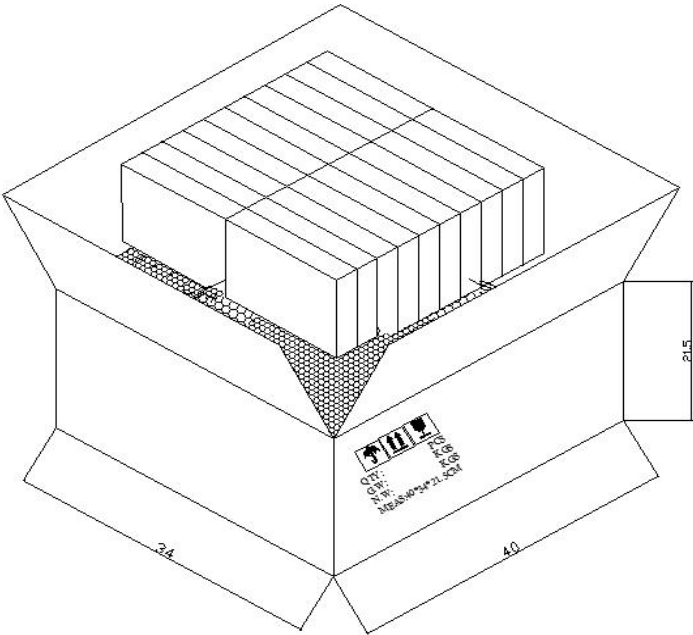
1轮=1盒
1Reel=1Box
Units: mm

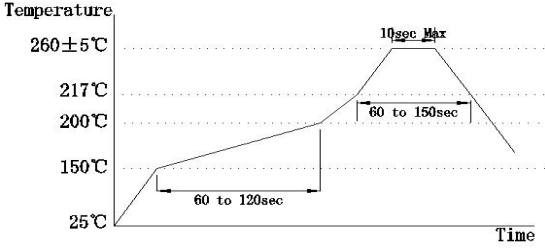


合 格 证	
频率:	型号:
负载:	电阻:
频差:	数量:
日期:	供应商:
批号:	编号:
订单号:	料号:

包装箱
Shipping Carton

40*34*21.5 (20 Box)
27*20*32.2 (12 Box)
27*20*20 (8 Box)
Units: cm



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五、石英晶体可靠性 Reliability Test			
NO.	测试项目 Test Ltem	可靠性条件 Testing Condition	判定标准 Determinant Criteria
1.	跌落 Dropping Test	从75cm高度跌落到30mm厚硬木板上，跌落三次 Drop the resonators from 75cm height to 30mm thick hardwood board, 3times.	$\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ (whichever is larger)
2.	振动 Vibration	频率 Frequency:10~60Hz；幅度 Amplitude:0.75mm；周期 Cycle time:10-55-10Hz: 1min；振动方向 Direction:X, Y, Z；振动时间 Duration: 每个方向2小时 2 h/direction.	$\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ (whichever is larger)
3.	高温 Heat Resistance	温度Temperature: 125℃±10℃ 时间Time: 720 ±24 Hours	$\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ (whichever is larger)
4.	低温 Cold Resistance	温度Temperature: -40℃±10℃ 时间Time: 720 ±24 Hours	$\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ (whichever is larger)
5.	回流焊（2次） Reflow (2times)	 回流焊Reflow 260℃±5℃≤10s	$\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ (whichever is larger)
6.	耐焊接热 Resistance To Soldering Heat	焊接温度Soldering Heat: 320℃±10℃ 测试时间Test Time: 3.5s±0.5s;	$\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ (whichever is larger)
7.	气密性 Leakage	用氦质谱仪进行检测，试验气体: He；真空度: 1×10 ⁻³ Pa; Helium mass-mass-spectrometer detector, and vacuum and reach 1×10 ⁻³ Pa;	≤1*10 ⁻⁸ atm • cc/S
8.	高温高湿 Constant Temperature and Humidity	在温度60℃±5℃，湿度90%~99%，储存720小时，取出2小时后测试; Stored at 60℃±5℃, Humidity 90%~99% For a period of minimun 720hours。Then 25℃±3℃ and 2 hours before testing	$\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ (whichever is larger) Appearance OK
9.	温度冲击 Temperature Shock	低温Low-40℃±2℃ (120min) ←→ 高温High85℃±2℃ (120min);循环10次;For 10 cycles	$\Delta FL \leq \pm 5\text{ppm}$ $\Delta RS \leq \pm 10\%$ (whichever is larger)