

合肥同晶电子有限公司

HEFEI TONGJING ELECTRONICS CO., LTD

产品规格书

SPECIFICATION FOR PRODUCT

品 名
PARTNAME 同晶MHz谐振器

规 格
SPECIFICATION SMD3225-27.13827MHz-16pF

客 户
CUSTOMER 深圳市立创电子商务有限公司

客户 料号
CUSTOMER P/N

同晶 料号
TONGJING P/N XTM32027138MT00351001

日 期
DATE 2025 年 7 月 10 日

编 号
NUMBER T2110080799

拟制: 王东平 复核: 赵建锋 批准: 王天明

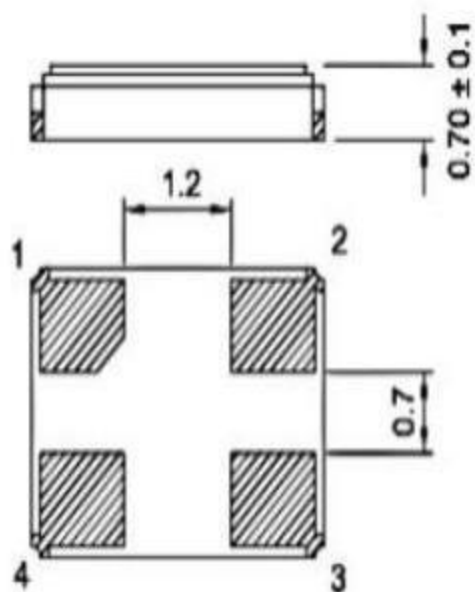
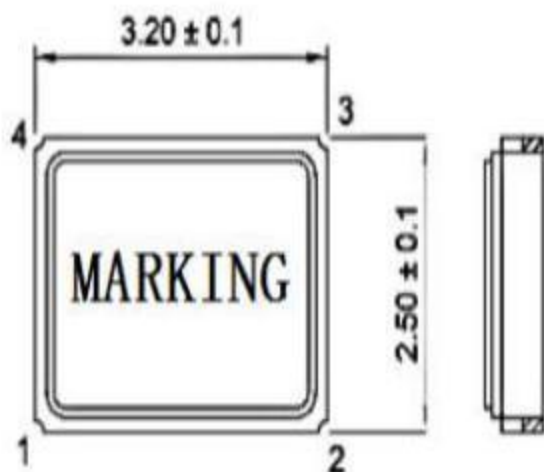
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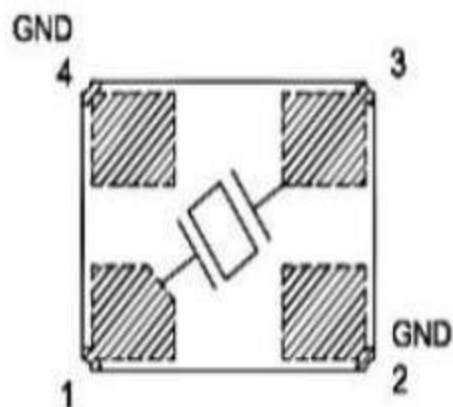
DESCRIPTION			CONTENTS
1	Holder Type	封装盒型	SMD3225-4P
2	Nominal Frequency	标称频率	27.13827MHz
3	Mode of oscillation	振动模式	Fundamental
4	Adjustment Tolerance @25±2℃	调整频差	±10ppm
5	Frequency characteristics over temperature (-20℃~ +70℃)	频温特性	±10ppm
6	Load Capacitance(CL)	负载电容	16 pF
7	Equivalent Resistance	等效电阻	30 Ω Max
8	Drive Level	激励功率	10 μW
9	Shunt Capacitance	静态电容	C0:3.0pF Max
10	Operable Temperature Range	可工作温度	-20℃~ +70℃
11	Storage Temperature Range	储存温度	-55℃~ +125℃
12	Aging Rate	年老化率	< ± 3ppm/Year
13	Insulation Resistance	绝缘电阻	500MΩ at DC100V
14	Leak	检漏	1×10^{-7} Torr.1/sec Max
15	Test Impedance Meter	测试仪器	S&A250B
16	Reflow	回流焊	After reflow $\Delta F/F \leq \pm 5\text{ppm}$ $\Delta R \leq 5 \Omega$



Outline Dimensions(unit: mm)



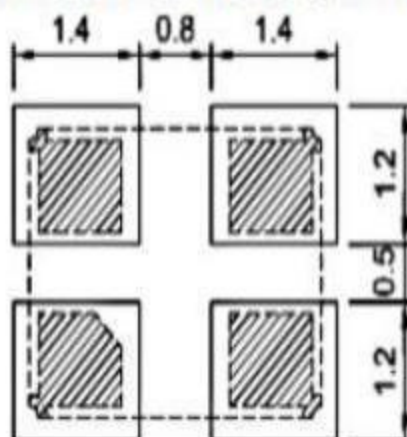
Internal Connections(Top View)



#1, #3 connected to quartz element

#2, #4 connected to the cover

Recommended land pattern

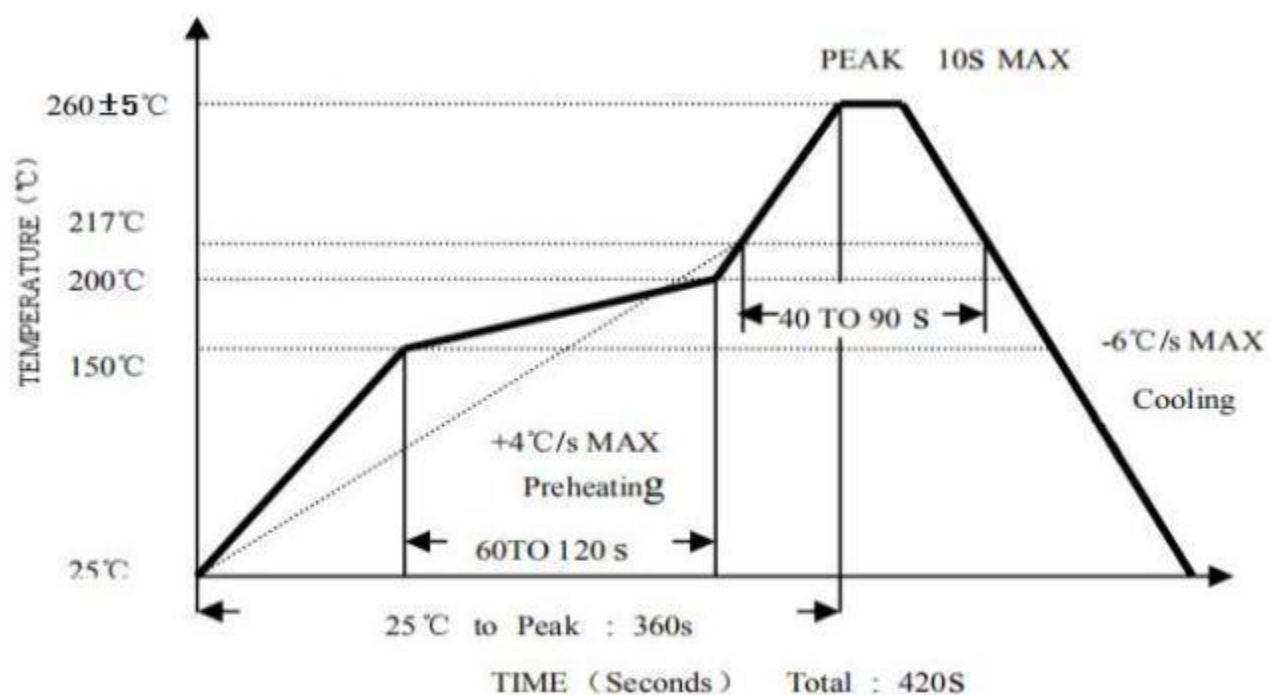




Reliability Testing

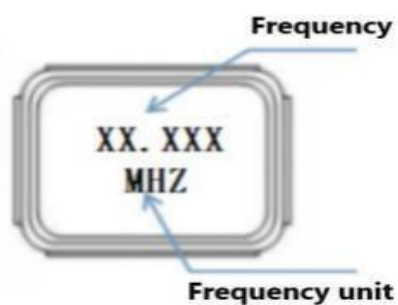
NO.	项目 Item	规格值 value	试验条件 conditions
		Δ F/other	
1	自由跌落 Drop	$\pm 2\text{ppm}$	100cm 高自由落下到水泥地上, 3 个方向各 6 次 Drop from 100 cm height onto the concrete 3 directions, repeat 6 times
2	振动 Vibration	$\pm 2\text{ppm}$	频率 10~50Hz 幅度 1.0mm 10to50Hz amplitude 1.0mm 频率 55~2000Hz 加速度 98m/s^2 55to2000Hz acceleration 98m/s^2 频率 10to2000to10 时间 15min/cycle 10to2000to10 15min/cycle 时间 6h (三个方向各 2 小时) 6h (2h, 3directions)
3	冲击 Shock	$\pm 3\text{ppm}$	加速度: 981m/s^2 时间 : 6ms 作用在 3 个相互垂直的方向 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)
4	高温储存 High Temperature Storage	$\pm 3\text{ppm}$	$+85^\circ\text{C} \pm 3^\circ\text{C}$ 1000h
5	低温储存 Low Temperature Storage	$\pm 3\text{ppm}$	$-40^\circ\text{C} \pm 3^\circ\text{C}$ 1000h
6	恒温恒湿 Temperature Humidity Storage	$\pm 3\text{ppm}$	$+85^\circ\text{C} \pm 3^\circ\text{C}$ 90%RH 1000h
7	温度循环 Temperature Cycle	$\pm 3\text{ppm}$	-40 $^\circ\text{C}$ to 85 $^\circ\text{C}$ 条件下, 每个温度点 30 分钟循环 30 次, 标准大气压下放置 2 小时后测试。 At - 40 $^\circ\text{C}$ to 85 $^\circ\text{C}$, each temperature point is cycled 30 times for 30 minutes, and then tested after standing at standard atmospheric pressure for 2 hours.
8	热冲击 Heat Shock	$\pm 3\text{ppm}$	高温 : $+85 \pm 3^\circ\text{C}$ 15% $\pm 5\%$ RH 1h; 低温 : - 40 $^\circ\text{C}$ $\pm 3^\circ\text{C}$ 1h, 间隔应小于 5 分钟, 重复 3 次。所有过程结束后, 将 24 小时置于环境温度下, 然后进行测试。 high temperature : $+85 \pm 3^\circ\text{C}$ 15% $\pm 5\%$ RH 1h; low temperature : $-40^\circ\text{C} \pm 3^\circ\text{C}$ 1h ,the interval should be less than 5 minutes,repeat 3 times.After all process,place 24H in ambient temperature, then test.
9	老化 Aging	$\pm 3\text{ppm}$	在 $85 \pm 2^\circ\text{C}$ 下放置 30 天, 然后在标准大气压下放置 1 小时后 The unit shall be stored at a temperature of $85 \pm 2^\circ\text{C}$ for 30d ,then it shall be subjected to standard atmospheric conditions for 1h after which measurement shall be made.

Reflowsoldering



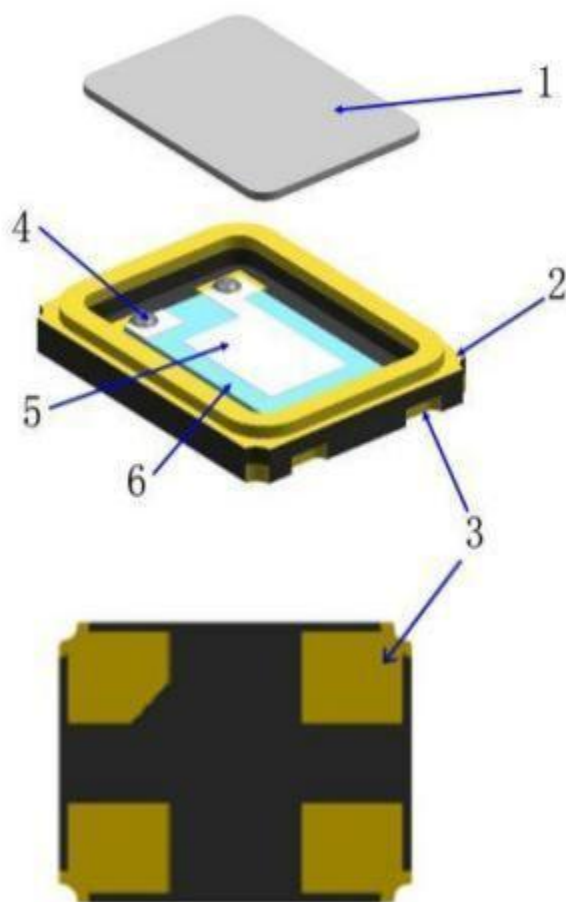
Reflow soldering cure see the chart. 使用回流焊方法见上图

Marking





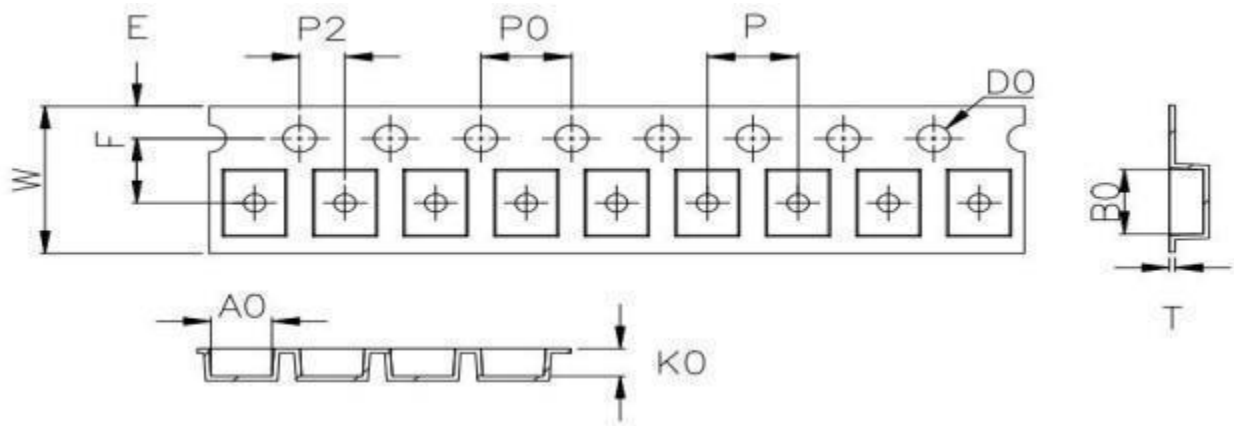
Structure Illustration



NO.	Items	Materials
1	LID(cap)	Fe ALLOY
2	PKG(BBase)	CERAMIC+AU PLATING
3	Exte mal Electrode	AU PLATING
4	conductive Adhesive	Ag+silicon
5	Inte mal Electrode	Ag+c'r
6	Element (Blank)	si02

 Package

Tape Dimensions(unit :mm)



W	8.00±0.30	P	4.00±0.05	A0	2.75±0.05
E	1.75±0.05	P0	4.00±0.05	K0	1.25±0.05
F	3.50±0.05	P2	2.00±0.05	B0	3.50±0.05
T	0.25±0.03	D0	1.50+0.10/-0		

