

TAE雅晶

序號Serial No. 2024052302F

日期Date: 2024-05-23

致TO:

產品ITEM: 石英晶体谐振器

客户物料编码Customer P/N: 01010307026

供应商编码Supplier P/N: T13D327687305

规格型号SPECIFICATION: 3215SMD/32.768KHZ/±20ppm/12.5pf/70KΩ

請收到我們的規格書後，簽字回傳。
Please confirm you received this specification, sign and fax it to us.

接收確認RECEIVING CONFIRMATION	
日期DATA	
接收RECEIVED	

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擬制Prepared by: 应金会

批准Confirmed by: 王琴飞

RoHS Compliant Standard

SMD3215

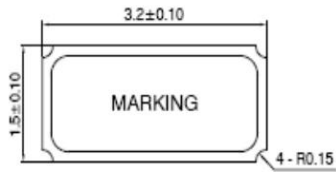


- Features 特性
- Nominal Frequency 标称频率: 32.768 KHz
- Suited for portable devices with low current consumption
適合於低功耗的便攜設備
- For a clock source in electronic equipments 適用於电子設備的時鐘源

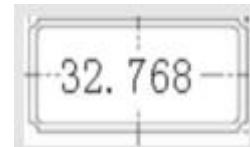


	3215SMD	Conditions
Frequency Range 标称频率	32.768KHz	
Frequency Tolerance 調整頻差	±20ppm Max	at 25±3°C
Turnover Temperature 拐點溫度	25±5°C	-40~+85°C
Temperature Coefficient 二次溫度系数	-0.02~-0.04ppm/°C ²	
Operating Temp. Range 工作溫度範圍	-40~+85°C	
Storage Temp. Range 保存溫度範圍	-55~+125°C	
Series Resistance 諧振電阻	70KΩ Max	
Load Capacitance 負載電容	12.5PF	
Shunt Capacitance 靜態電容	1.1pF TYP	
Motional Capacitance 动态電容	4.1 fF TYP	
Drive Level 激勵電平	0.1μw TYP	
Aging 老化率	±3ppm/year Max	
Insulation Resistance 絕緣阻抗	500Mohm Min	At 100V DC

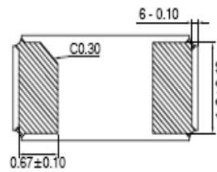
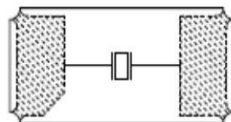
■ OUTLINE DIMENSIONS (unit: mm)



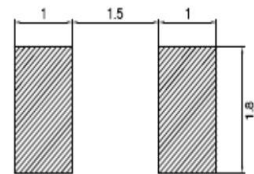
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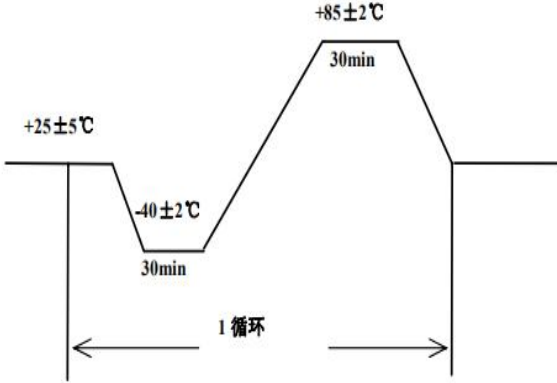


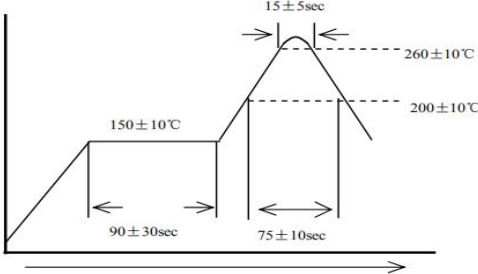
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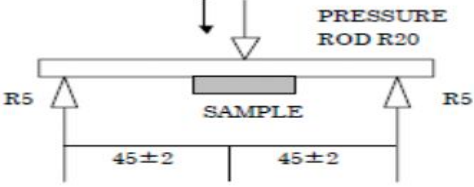
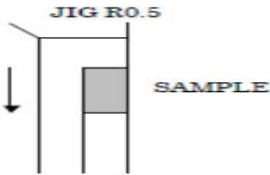
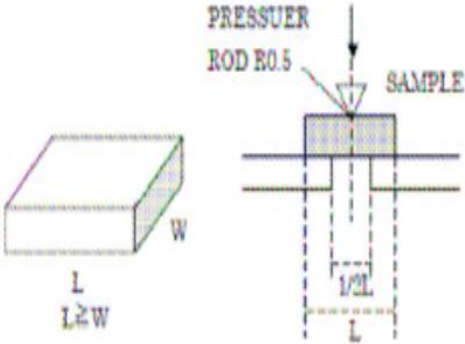


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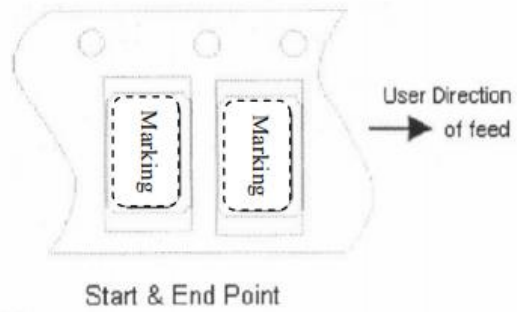
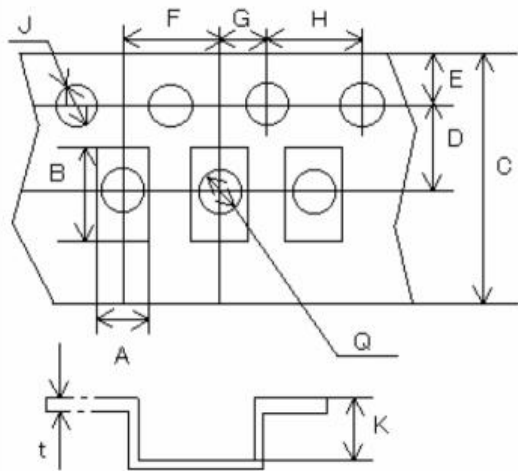


No.	Test Items	Test Method and Condition	Requirements
1	跌落 Drop	(1)样品 (Dummy):150g (2)高度 (Height):180cm (3)周期 (Dropped Cycle):3 Cycle 6个面各跌落在混凝土板上一次为1各周期.{Drop it onto a concrete board for 6 directions(xx',yy'zz')this should be 1 cycle.}	试验前后, 频率变化不超过±10PPM, 电阻变化不超过±20% (1) .Frequency Change: ±10PPM (2) .Resistance: ±20%
2	振动 Vibration	振动频率 (Frequency):10-60Hz 全振幅(Amplitude):1.5mm±15% 时间(Period):每个方位三面(X, Y, Z)各振动2小时{3 direction (x,y,z)each for 2 hrs}	试验前后, 频率变化不超过±10PPM, 电阻变化不超过±20% (1) .Frequency Change: ±10PPM (2) .Resistance: ±20%
3	冷热冲击 Temperature Cycle	晶体放入试验箱中, 高低温循环100次 The crystal is put into the test box, and the high and low temperature cycle is 100 times 低温为-40±3℃保持30分钟, 高温85±2℃保持30分钟, 高、低温每3分钟变换一次 The low temperature is kept at -40±3℃ for 30 minutes, and the high temperature is maintained at 85±2℃ for 30 minutes, and the high and low temperature are changed every 3 minutes. 	试验前后, 频率变化不超过±10PPM, 电阻变化不超过±20% (1) .Frequency Change: ±10PPM (2) .Resistance: ±20%
4	气密性 (细漏) Sealing (Fine Leak)	氦气气压标准: 5~5.5 kgf/cm ² , 氦气加压时间: 2小时 Helium bombing 5~5.5 kgf/cm ² for 2 hours.	漏率标准 (leak rate): ≤1X10 ⁻⁴ pa.m ³ /s

No.	Test Items	Test Method and Condition	Requirements
5	耐焊接热 Resistance to soldering heat	波峰温度 (Peak Temp): $260^{\circ}\text{C} \pm 10^{\circ}\text{C}$ 时间 (Time): $15\text{s} \pm 5\text{ sec}$ 	试验前后, 频率变化不超过 $\pm 10\text{PPM}$, 电阻变化不超过 $\pm 20\%$ (1) .Frequency Change: $\pm 10\text{PPM}$ (2) .Resistance: $\pm 20\%$
6	沾锡试验 Solderability	温度 (Temperature): $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 浸泡时间 (Seaking Time): $2\text{s} \pm 0.6\text{sec}$	引脚沾锡后覆盖面积达 90% 以上 A new uniform coating of solder shall cover min mum 95% of the surface being immersed.
7	高温高湿 High Temp. & Humidity	温度 (Temperature): $60^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 湿度 (humidity): 90%-95% 保持时间 (Hold time): 500 hours	1. 试验前后, 频率变化不超过 $\pm 10\text{PPM}$, 电阻变化不超过 $\pm 20\%$ (1) .Frequency Change: $\pm 10\text{PPM}$ (2) .Resistance: $\pm 20\%$ 2. 绝缘电阻 $500\text{M}\Omega \text{ min}/100\text{V}$ (insulation resistance $500\text{M}\Omega \text{ min}/100\text{V}$)
8	高温试验 High Temp. Storage	高温温度 (Temperaure): $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 时间 (Hold time): 500 hours	试验前后, 频率变化不超过 $\pm 10\text{PPM}$, 电阻变化不超过 $\pm 20\%$ (1) .Frequency Change: $\pm 10\text{PPM}$ (2) .Resistance: $\pm 20\%$
9	低温试验 Low Temp. Storage	低温温度 (Temperaure): $-40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 时间 (Hold time): 500 hours	试验前后, 频率变化不超过 $\pm 10\text{PPM}$, 电阻变化不超过 $\pm 20\%$ (1) .Frequency Change: $\pm 10\text{PPM}$ (2) .Resistance: $\pm 20\%$

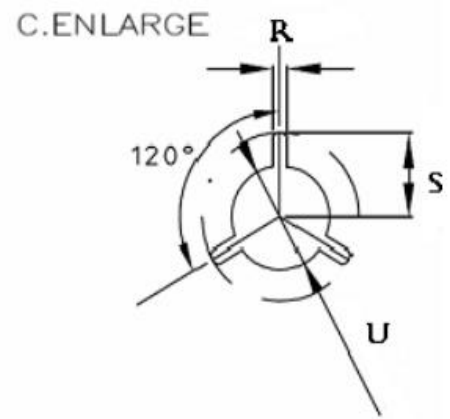
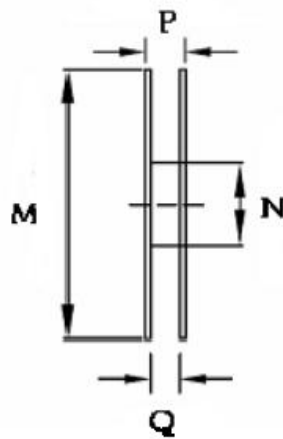
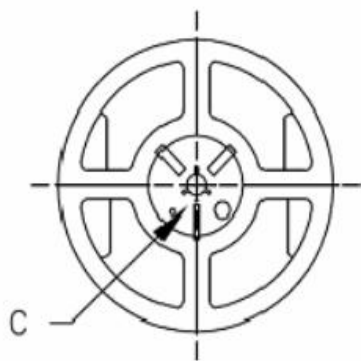
No.	Test Items	Test Method and Condition	Requirements
10	折板弯曲试验 Terminal Strength	高度(Height):3mm 时间(Time):5sec 速度(Speed):0.5mm/sec 	试验前后, 频率变化不超过±10PPM, 电阻变化不超过±20% (1) .Frequency Change: ±10PPM (2) .Resistance: ±20%
11	折板推力试验 Sticking Tendency	荷重(Load):10N 时间(Hold time):10 sec 治具(Tool):R0.5制品侧边位置(Side position of product) 	试验前后, 频率变化不超过±10PPM, 电阻变化不超过±20% (1) .Frequency Change: ±10PPM (2) .Resistance: ±20%
12	本体荷重试验 Element Assembly Strength	荷重(Load):10N 时间(Hold time):10 sec 治具(Tool):R0.5制品中心位置(Center position of product) 	试验前后, 频率变化不超过±10PPM, 电阻变化不超过±20% (1) .Frequency Change: ±10PPM (2) .Resistance: ±20%

● Tape Dimensions(unit:mm)



A	B	C	D	E	F	G	H	J	K	t
1.75	3.45	12.0	5.5	1.75	4.0	2.0	4.0	1.5	1.0	0.25

● Reel Dimensions(unit:mm)



M	N	P	Q	R	S	U
180	60	17.5	13.5	3.2	10.5	13.0

注[P.S]: 3000PCS/Reel