

产品规格书

深圳市晶鹏源电子有限公司

产品名称：贴片晶体谐振器

类型：5032 12.000MHZ

客户代码：

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| 技术部 | | | ____ / ____ / ____ | | |
| 批准 | 审核 | 制表 | | | |
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1. General item

Nominal frequency: **12.000MHz**

Vibration mode: AT Fund.

Operation temperature range: **-20℃~+70℃**

Storage temperature rang: **-40℃~+85℃**

Test machine: **S&A 250B**

Drive level: **1.0 μW**

Load capacitance: **20pF**

2. Electrical characteristics

Condition: **25±3℃** Relatively humidity ≤60%

2.1 Frequency tolerance: **±20ppm**

2.2 Equivalent resistance: ≤40 Ω

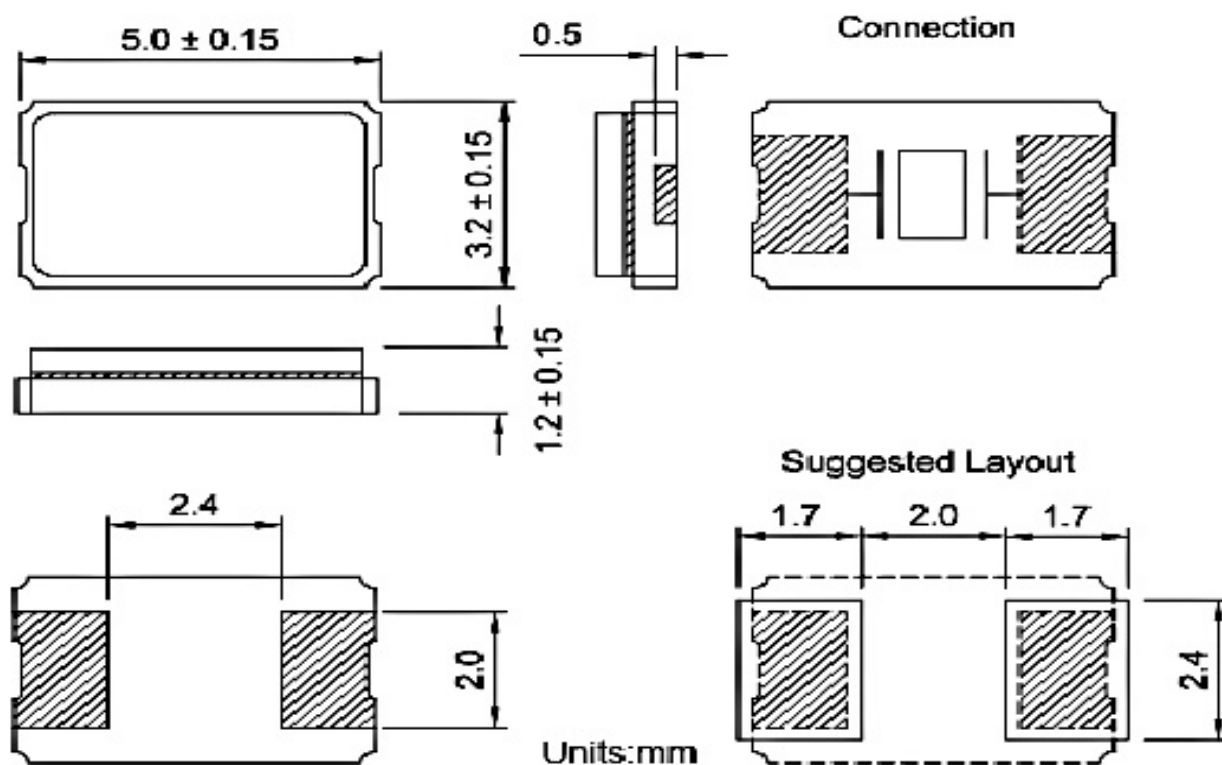
2.3 Temperature characteristics: **±30ppm**

2.4 Shunt capacitance: ≤7pF

2.5 Insulation resistance: ≥500M Ω / 100±15V_{DC}

2.6 Aging characteristics: **±3ppm/year**

3. Dimension (mm)



3. Reliability specification

3.1 Drop characteristics

Condition: height 50cm, 3 times, test after 1 hour

Equipment: S&A250B, thickness 3cm hard wood

Standard: frequency change: $\leq \pm 5\text{ppm}$, Rr as specification

3.2 Shake characteristics

Condition: shake frequency 10~55Hz, cyc1~2 minutes, swing 1.5mm, direction x/y/z, all 30 minutes. Test after 1 hour

Equipment: S&A250B, test machine

Standard: frequency change: $\leq \pm 5\text{ppm}$, Rr as specification

3.3 Airproof characteristics

Condition: put crystal into the pressure cabin with alcohol, keep pressure 0.4-0.5mpa 10 minutes, then take out and blow for 5 minutes

Equipment: IR machine

Standard: IR $\geq 500 \text{ m}\Omega$

3.4 Weld characteristics

Condition: $235 \pm 5^\circ\text{C}$ 、3 seconds

Equipment: test machine

Standard: 90% adhibit tin ok

3.5 Humidity characteristics

Condition: $40^\circ\text{C} \pm 2^\circ\text{C}$, humidity 90-95%, 250 hours.

Equipment: S&A250B, test cabin

Standard: frequency change: $\leq \pm 5\text{ppm}$, Rr as specification

3.6 Low temperature characteristics

Condition: $-30^\circ\text{C} \pm 2^\circ\text{C}$, after 250 hours, put in room temperature 1 hour

Equipment: S&A250B, test machine

Standard: frequency change: $\leq \pm 5\text{ppm}$, Rr as specification

3.7 High temperature characteristics

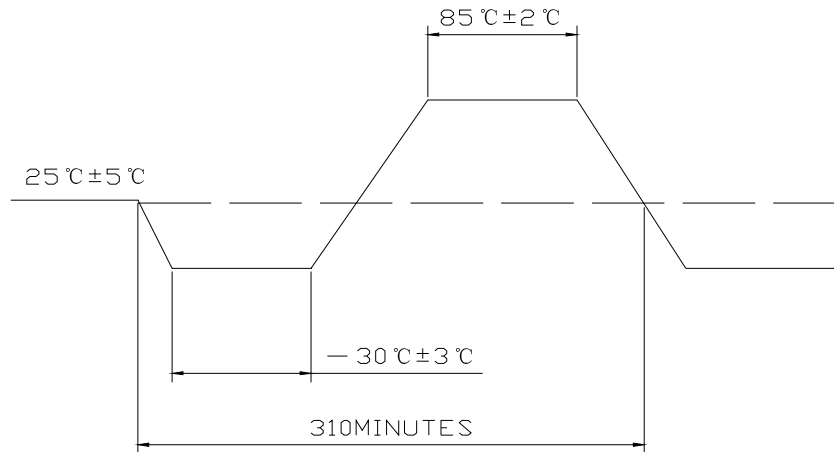
Condition: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$, after 250 hours, put in room temperature 1 hour

Equipment: S&A250B, test machine

Standard: frequency change: $\leq \pm 5\text{ppm}$, Rr as specification

3.8 Temperature cycling

Condition:



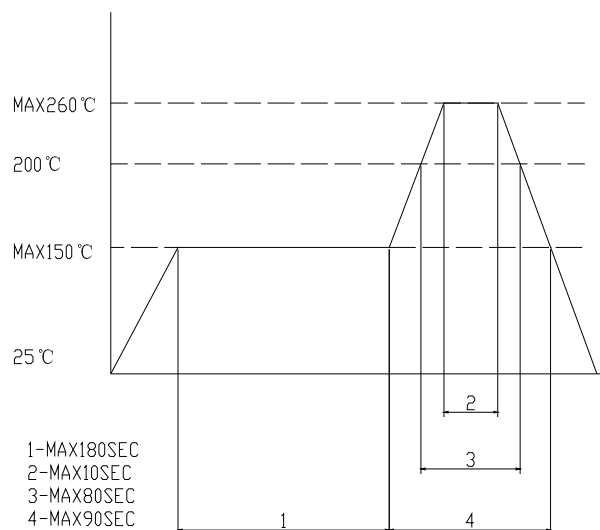
AFTER TEMPERATURE CYCLING

Equipment: S&A250B, test machine。

Standard: frequency change: $\leq \pm 5\text{ppm}$, Rr as specification

3.9 Refluence examination

Condition:



Equipment: S&A250B, test machine

Standard: frequency change: $\leq \pm 10\text{ppm}$,

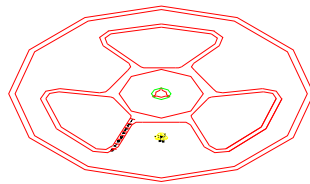
Rr as specification

4. Packing specification

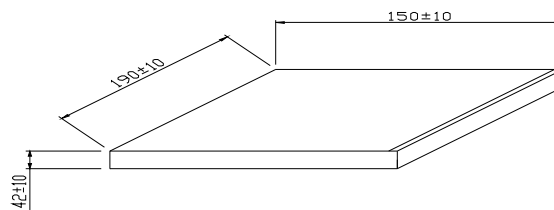
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P L A S T I C T U R N P L A T E



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