



## Victorlands Technical Specification

<b>Product name</b>	<b>Quartz crystal unit</b>
<b>Model</b>	<b>5032/12.288MHz</b>
<b>Product code</b>	<b>K5A12288S0H4B2</b>
<b>Product parameters</b>	<b>20PF/±10PPM</b>
<b>Product reliability</b>	<b>P. 2-4</b>
<b>Packing form</b>	<b>P. 5</b>



## 1. General item

Nominal frequency: **12.288MHz**

Vibration mode: AT Fund

Operation temperature range: **-40°C~+85°C**

Storage temperature range: **-40°C~+85°C**

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

Drive level: **100 μW**

Load capacitance: **20pF**

## 2. Electrical characteristics

Condition: **25±3°C Relatively humidity≤60%**

2.1 Frequency tolerance: **±10ppm**

2.2 Equivalent resistance: **≤80 Ω**

2.3 Temperature characteristics: **±20ppm**

2.4 Shunt capacitance: **≤7pF**

2.5 Insulation resistance: **≥500M Ω/100±15V DC**

2.6 Aging characteristics: **±5ppm/year**

## 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: **≤±5ppm, 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



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

### 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

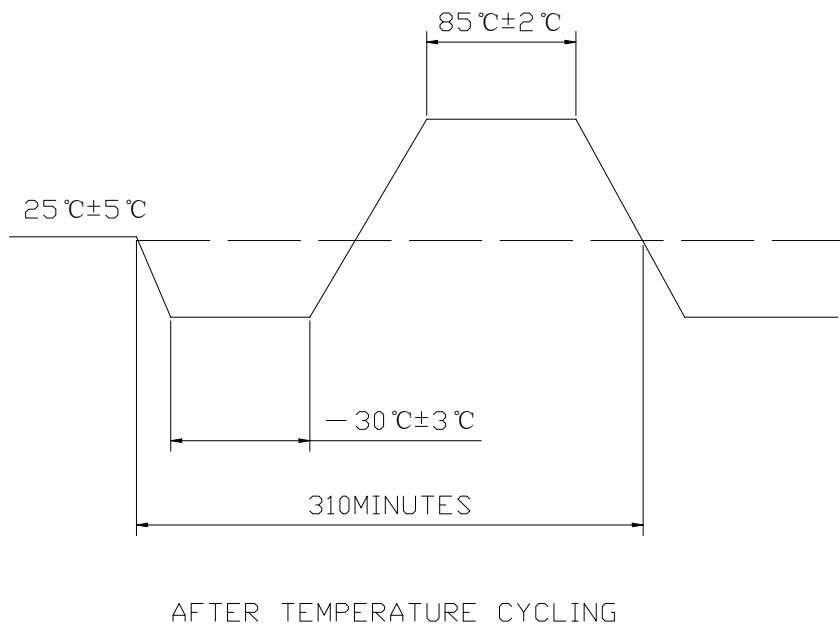
Equipment: S&A250B, test machine



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

### 3.8 Temperature cycling

Condition:



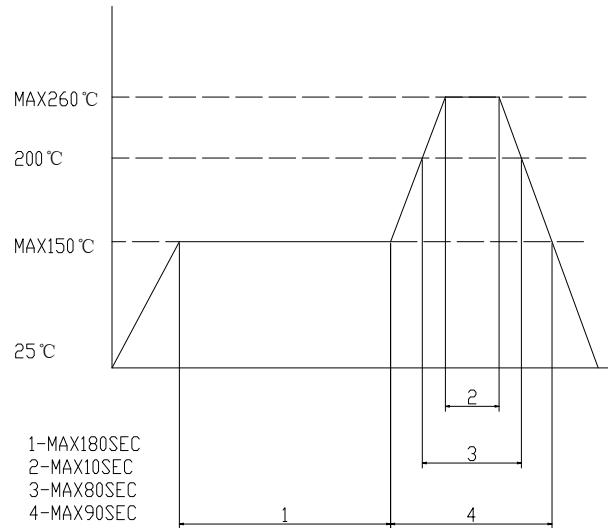
AFTER TEMPERATURE CYCLING

Equipment: S&A250B, test machine.

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

### 3.9 Refluence examination

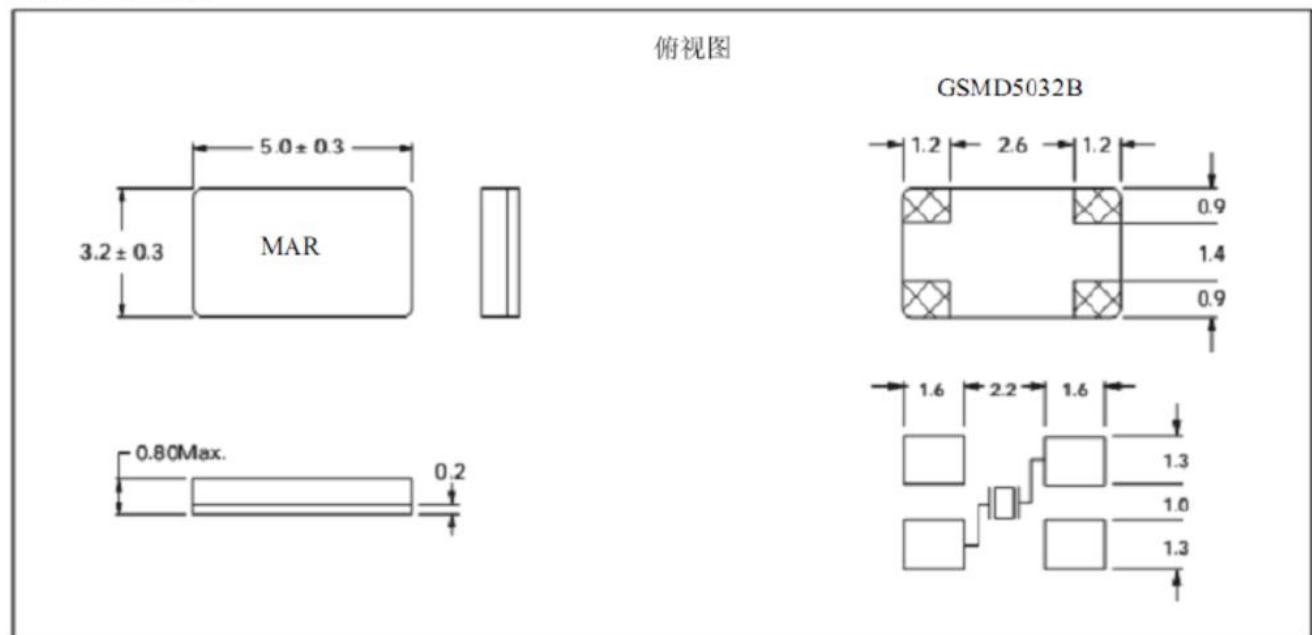
Condition:



Equipment: S&A250B, test machine

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

#### External dimensions



Dimension: mm