



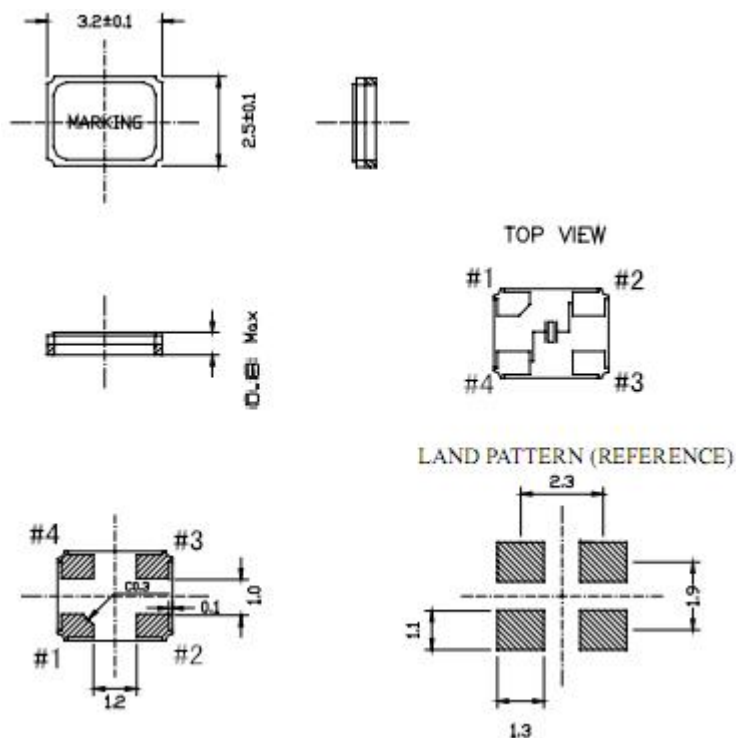
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## Victorlands Technical Specification

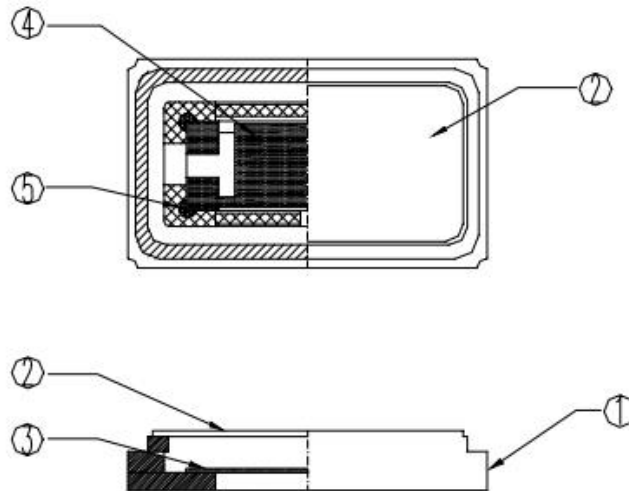
|                            |                            |
|----------------------------|----------------------------|
| <b>Product name</b>        | <b>Quartz crystal unit</b> |
| <b>Model</b>               | <b>3225/20.000MHz</b>      |
| <b>Product code</b>        | <b>K3A20000S0H4B2</b>      |
| <b>Product parameters</b>  | <b>20PF/±10PPM</b>         |
| <b>Product reliability</b> | <b>P. 2-5</b>              |
| <b>Packing form</b>        | <b>P. 6</b>                |



- |                                                |                                                                   |
|------------------------------------------------|-------------------------------------------------------------------|
| 1. Frequency:                                  | 20.000 MHZ                                                        |
| 2. Holder Type:                                | SMD3.2*2.5                                                        |
| 3. Frequency Tolerance:                        | $\pm 10\text{ppm}$ at $25^{\circ}\text{C} \pm 3^{\circ}\text{C}$  |
| 4. Equivalent Series Resistance:               | 40 $\Omega$ Max                                                   |
| 5. Storage Temperature Range:                  | $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$                    |
| 6. Operating Temperature Range:                | $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$                    |
| 7. Frequency Characteristics Over Temperature: | $\pm 20\text{ppm}$ $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$ |
| 8. Load Capacitance (CL):                      | 20 PF                                                             |
| 9. Drive Level:                                | 100 $\mu$ W                                                       |
| 10. Shunt Capacitance:                         | 5PF MAX                                                           |
| 11. Insulation Resistance:                     | $\geq 500\text{M}\Omega$ Min at 100 V                             |
| 12. Mode Of Oscillation:                       | Fundamental                                                       |
| 13. Aging:                                     | $\pm 3\text{ppm/Year}$                                            |
| Marking description:                           | KYX20.000                                                         |
| 14. Dimensions(mm):                            |                                                                   |



## 16. Structure Illustration



| PART NAME |       | MATERIAL | PART NAME |           | MATERIAL    |
|-----------|-------|----------|-----------|-----------|-------------|
| 1.        | BASE  | CERAMIC  | 4.        | ELECTRODE | Metal       |
| 2.        | LID   | Co       | 5.        | ADHESMES  | SILVER GLUE |
| 3.        | BLANK | QUARTZ   |           |           |             |



## Reliability Testing

| Project             | Test conditions and requirements                                                                                                                                                                                                                                                             | Request                                           |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Vibration           | Endurance condition by a frequency sweep shall be made. The entire frequency range from 10HZ to 50HZ and return to 10HZ, shall be transverseb in 1min. Amplitude(total excursion):1.5mm this motion shall be applied for a period of 2h each of 3 mutually perpendicular axes(a total of 6h) | (1). FL: $\pm 10$ ppm<br>(2). Rr: $\pm 10 \Omega$ |
| Drop                | Form 70cm height 3 times on 3cm hard wooden floor                                                                                                                                                                                                                                            |                                                   |
| Shock               | Peak acceleration: $981\text{m/s}^2$ duration of the pulse :6ms three successive shocks shall be applied in both direction of 3 mutually perpendicular axes(a total of 18 shocks)                                                                                                            | (1). FL: $\pm 10$ ppm<br>(2). Rr: $\pm 10 \Omega$ |
| Damp heat, constant | The unit shall be stored at a temperature of $40^\circ\text{C} \pm 2^\circ\text{C}$ with relative humidity of 90% to 95% for 48h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made.                                              |                                                   |
| Cold                | The unit shall be stored at a temperature of $-40^\circ\text{C} \pm 5^\circ\text{C}$ for 48h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made.                                                                                  |                                                   |
| Dry heat            | The unit shall be stored at a temperature of $100^\circ\text{C} \pm 5^\circ\text{C}$ for 24h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made.                                                                                  |                                                   |
| Aging               | The unit shall be stored at a temperature of $85^\circ\text{C} \pm 5^\circ\text{C}$ for 7d then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made.                                                                                     |                                                   |
| Temperature cycling | The unit shall be subjected to 5 successive change of temperature cycles, each as show in table below, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made                                                                          |                                                   |



|   | Temperature                                 | Duration   |
|---|---------------------------------------------|------------|
| 1 | $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ | 30min      |
| 2 | Standard atmospheric conditions             | Within 30s |
| 3 | $100^{\circ}\text{C} \pm 3^{\circ}\text{C}$ | 30min      |
| 4 | Standard atmospheric conditions             | Within 30s |

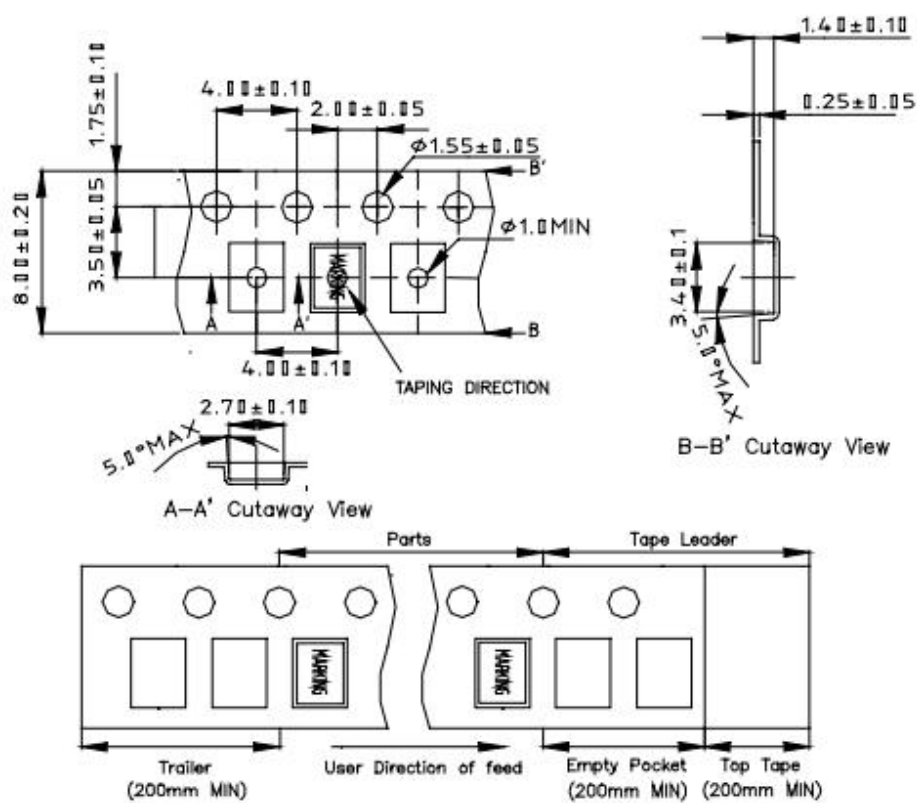
Resistance to  
soldering heat





## ■ PACKING

### 1. CARRIER TYPE



### 2. REEL : 3000 PCS

