



Victorlands Technical Specification

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| Product name | Quartz crystal unit |
| Model | 3068/32.768KHz |
| Product code | K2N32768L5H2B2 |
| Product parameters | 12.5PF/±10PPM |
| Product reliability | P. 2-4 |
| Packing form | P. 4 |



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|----|-----------------------------|--|
| 1 | Nominal Frequency | 32.768 KHz |
| 2 | Mode of Oscillation | AT FUND |
| 3 | Frequency Tolerance | $\pm 10\text{PPM}$ |
| 4 | Temperature Tolerance | $\pm 20\text{PPM}$ |
| 5 | Operating Temperature Range | -40°C ~ +85°C |
| 6 | Storage Temperature | -40°C ~ +85°C |
| 7 | Equivalency Resistance | $\leq 70 \text{ K}\Omega$ |
| 8 | Load Capacitance | 12.5 pF |
| 9 | Drive Level | 100 μW |
| 10 | Shunt Capacitance | $\leq 7.0 \text{ pF}$ |
| 11 | Insulation Resistance | $\geq 500\text{M}\Omega$ at DC 100V $\pm 15\text{V}$ |
| 12 | Aging | $\leq \pm 5\text{ppm/year}$ |
| 13 | Hold Type (mm) | <p>Unit: mm</p> |
| 14 | Marking | |



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:+/-10ppm (2). Rr:+/-10Ω |
| Drop | From 70cm height 3 times on 3cm hard wooden floor | |
| Shock | 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) | |
| Damp heat, constant | The unit shall be stored at a temperature of 40°C±2°Cwith relative humidity of 90%to95% 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°C±5°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°C±5°C for 24h, then it shall be subjected to standard atmospheric conditions for 1~2h after which measurement shall be made. | (1). FL:+/-10ppm (2). Rr:+/-10Ω |
| Aging | The unit shall be stored at a temperature of 85°C±5°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 |

