



Victorlands Technical Specification

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



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	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
6	Storage Temperature	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
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 15V
12	Aging	$\leq \pm 5\text{ppm/year}$
13	Hold Type (mm)	
14	Marking	



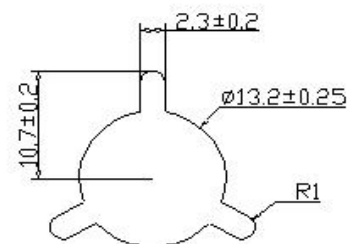
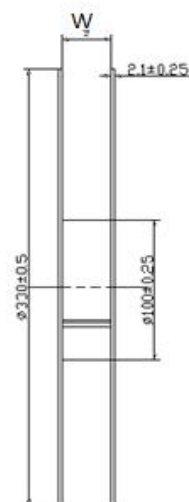
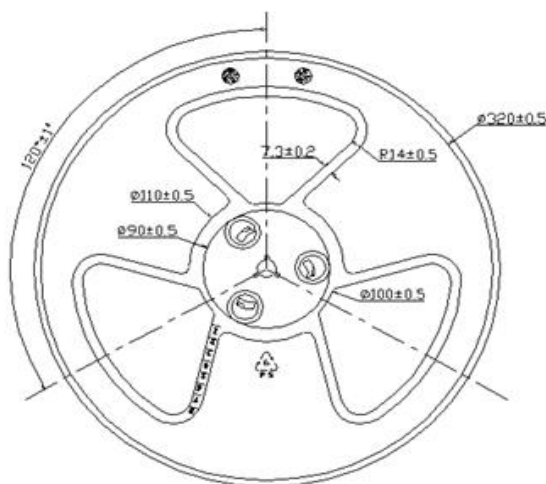
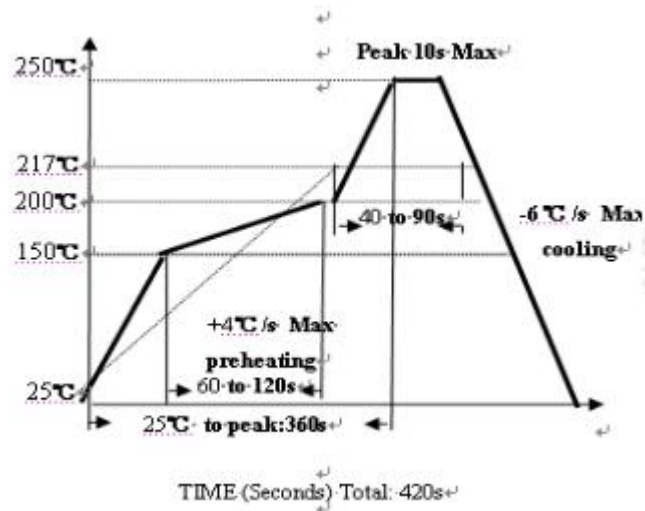
Reliability Testing

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: ± 10 ppm (2). Rr: $\pm 10 \Omega$
Drop	Form 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)	(1). FL: ± 10 ppm (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



Available Reel Size (mm)	
Tape width	$W \pm 0.3 \text{ mm}$
24 mm	24.4