

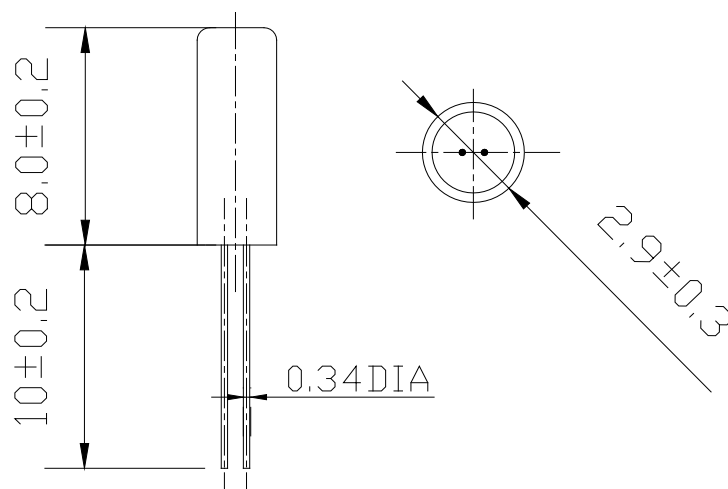
TUNING FORK CRYSTAL UNIT

TYPE : VT-30832.768KHz-DIP

1.ELECTRIC CHARAC:

PARAMETERS	VT-308
Mode of Vibration	+2° X-cut , Fundamental
Nominal frequency F	32.768KHz
Load Capacitance CL	12.5 PF Typical
Frequency Tolerance at 25°C	±20 ppm
Series Resistance Rr	30KΩ Max
Quality Factor Q	35K TYP
Turnover Temperature To	25 °C ± 5°C
Temperature Coefficient K	-0.035 ppm/°C ² Typical
Operation Temperature	-40 °C ~ +60°C
Shunt Capacitance Co	1.6PF Typical
Aging 1st Year Δf/f	± 5 ppm max.
Shock Resistance	± 5 ppm max.
Capacitance Ratio Co/C	520 Typical
Insulation Resistance	500MΩ at DC 100V ± 15V
Drive Level	1 μW
Remark:	

2.DIMENSION (MM)



3. PHYSICAL AND ENVIRONMENTAL CHARACTERISTICS

3-1. Humidity

Subject the crystal at $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ and 90% - 95% RH for 96 ± 4 hours. Then release the crystal into the room conditions for 1 hour prior to the measurement.

3-2. High Temperature Exposure

Subject the crystal to $85^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 96 ± 4 hours. Then release the crystal into the room conditions for 1 hour prior to the measurement.

3-3. Low Temperature

Subject the crystal to $-20^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 96 ± 4 hours. Then release the crystal into the room conditions for 1 hour prior to the measurement.

3-4. Mechanical Shock

Drop the crystal randomly onto a concrete floor from the height of 50cm 3 times.

3-5. Temperature Cycling

Subject the crystal to -30°C for 30 min. followed by a high temperature of $+85^{\circ}\text{C}$ for 30 min. Cycling shall be repeated 5 times with a transfer time of 15sec. at the room condition. Then release

the resonator into the room temperature for 2hours prior to the measurement .

3-6. Vibration

Subject the crystal to vibration for 2hours each in x, y and z axes with the amplitude of 1.5mm, the frequency shall be varied uniformly between the limits of 10-55 Hz .

3-7. Solder Ability

Dip the crystal terminals no closer than 2 mm into the solder bath at $235^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 3 ± 0.5 sec .more than 95% of the terminal surface of the crystal shall be covered with fresh solder.

3-8. Lead Fatigue

1) Pulling Test

Weight along with the direction of terminals without any shock 0.5kg for 10 ± 1 sec.; The crystal shall no evidence of damage and shall fulfill all the initial electric characteristics .

2) Bending Test

Lead shall be subject to withstand against 90 degree bending at its stem . This operation shall be done towards both direction; The crystal shall no evidence of damage and shall fulfill all the initial electric characteristics .

4. REVIEW OF SPECIFICATION

When something get doubtful with this specifications , we shall jointly work to get an agreement .