

Series 90H

SURFACE MOUNT PACKAGE FOR TUNING FORK 32.768KHz



Approved by:
Checked by:
Issued by:

SPECIFICATION

P/N: VMN-90H-32.768-12.5-20-70-C

Series 90H



SURFACE MOUNT PACKAGE FOR TUNING FORK 32.768KHz

FEATURES

- Tuning fork crystal with ceramic packaged type
- Small size
- Hi density SMD type
- Complete Pb free product

APPLICATIONS

- Small communication devices

ELECTRICAL SPECIFICATIONS

Frequency	32.768KHz
Frequency Tolerance (at 25°C)	±20ppm
ESR	70Kohm Max
Turnover Temperature	25 ± 5°C
Frequency Temperature Curve	-0.034(±0.006)ppm/°C ²
Storage Temperature Range	-55 °C to +125 °C
Operable Temperature Range	-40 °C to + 85 °C
Shunt Capacitance (C0)	1.05pF Typ
Dynamic Capacitance (C1)	3.4fF Typ.
Driver Level (Typical)	1 µW Max
Load Capacitance(C _L)	12.5pF
Aging @25°C 1 st year (Max)	±3ppm/year

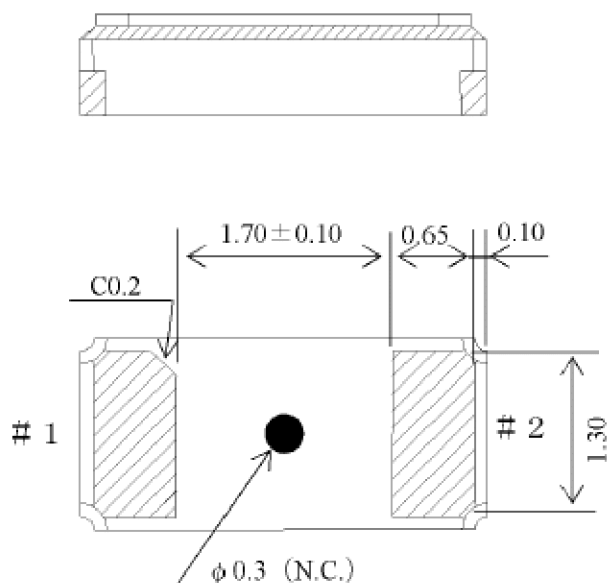
REMARK: SPECIFICATIONS SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. PLEASE CONFIRM WITH OUR SALES ENGINEER.

Series 90H



SURFACE MOUNT PACKAGE FOR TUNING FORK 32.768KHz

Dimensions (Unit: mm)



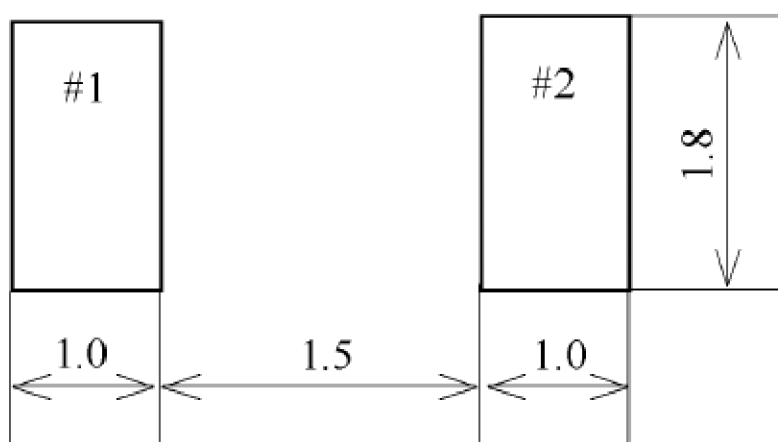
Internal connection



1

2

Recommended Soldering Pattern

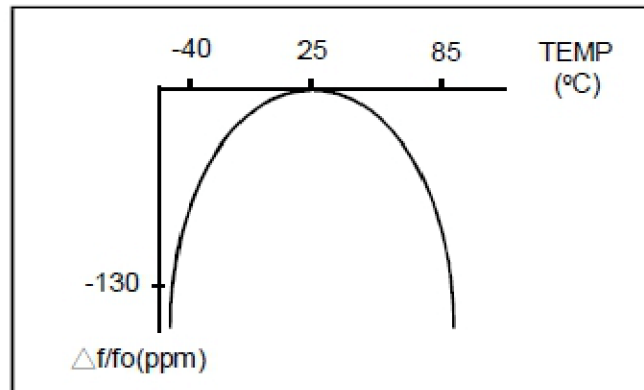


Series 90H

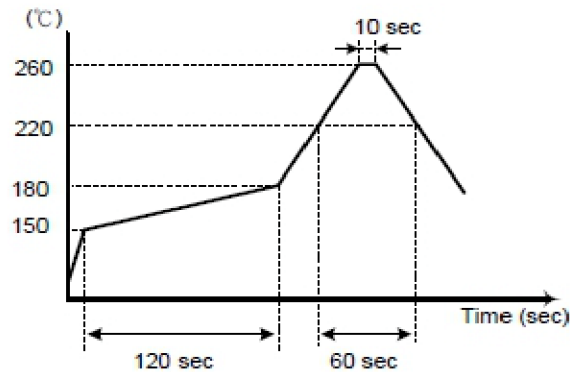


SURFACE MOUNT PACKAGE FOR TUNING FORK 32.768KHz

Frequency VS Temperature Curve



Recommended Reflow portfolio



(Total time : 200 sec. MaxSolder melting point :220 °C)

Note:

1. Tuning fork products oscillate at frequency bands that are close to the washing frequency of ultrasonic cleaning machine, which may cause resonance deteriorating the electrical characteristics in devices, and even damaging the overall structure of devices. Therefore, using ultrasonic cleaning machine to clean tuning fork devices should be avoided. If the use of this method to clean tuning fork devices is required, it's suggested to check the functionality of devices before and after the cleaning process.
2. Avoid mounting and processing by Ultrasonic welding this method has a possibility of an excessive vibration spreading inside the crystal products and becoming the cause of characteristic deterioration and not oscillating.
3. Manual soldering heat resistance Pressing a soldering iron of 400°C on the terminal electrode for four seconds (twice).

Series 90H



SURFACE MOUNT PACKAGE FOR TUNING FORK 32.768KHz

PACKING (UNIT:mm)

