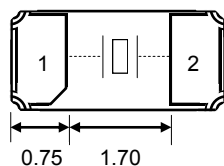
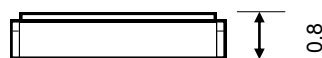
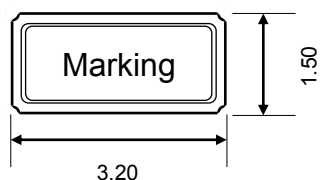


MINIATURE CERAMIC SMD TUNING FORK CRYSTAL (3.2 x 1.5 x 0.8mm)
FEATURES:

- SMALL CERAMIC SMD PACKAGE TUNING FORK
- EXCELLENT HEAT RESISTANCE
- -40°C ~ 85°C OPERATING TEMPERATURE

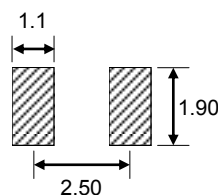

■ SPECIFICATION

FREQUENCY	32.768kHz
FREQUENCY TOLERANCE	STD: ±20ppm (See P/N guide for other options)
TEMPERATURE COEFFICIENT	-0.034ppm ±0.006 ppm / °C ²
OPERATING TEMPERATURE RANGE	-40°C ~ 85°C
STORAGE TEMPERATURE RANGE	-55°C ~ 125°C
TURN OVER TEMPERATURE	25°C ± 5°C
LOAD CAPACITANCE	STD: 12.5pF (See P/N guide for other options)
SHUNT CAPACITANCE	2.0pF max.
MOTIONAL CAPACITANCE	0.0036pF typ.
EQUIVALENT SERIES RESISTANCE	80kΩ max.
INSULATION RESISTANCE	500MΩ min. @ 100V _{DC} ± 15V _{DC}
DRIVE LEVEL	0.1μW typ. 1.0μW max.
AGING @ 25°C ± 3°C	±3.0ppm / 1 st year max.
SHOCK	±5.0ppm max.
VIBRATION	±5.0ppm max.

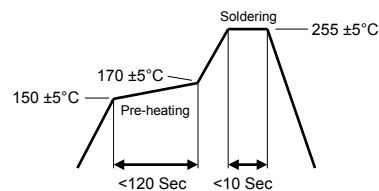
■ PACKAGE DIMENSIONS


Unit : mm

Pin Configuration	
1	Xtal
2	Xtal

■ SOLDER PATTERN


Unit :mm

■ REFLOW PROFILE


Note: Consult factory for detail

■ PART NUMBERING GUIDE
CS31 - **A** - **32.768K** - **12.5** - **TR**

Tolerance @ 25°C
Blank: ±20ppm
A: ±10ppm
B: ±50ppm

Frequency
32.768kHz

Load Capacitance
12.5: 12.5pF
9: 9pF
7: 7pF
4: 4pF

Other Options
TR: Tape and reel

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