

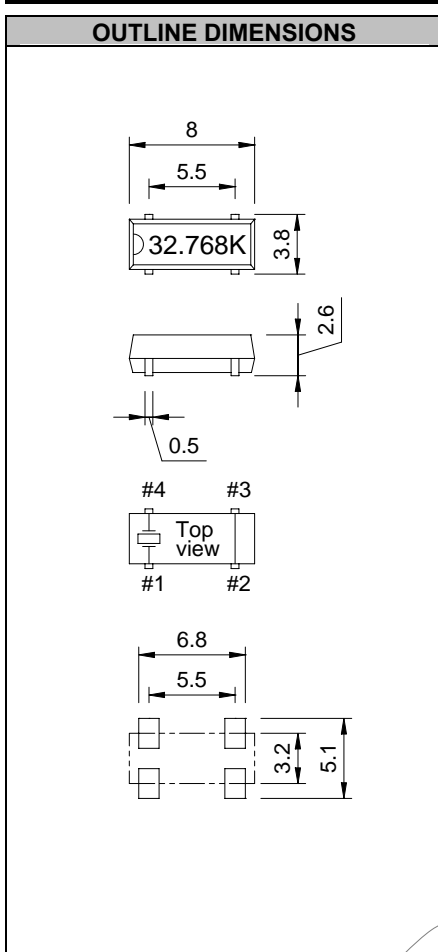
CRYSTAL SBX - 13

TUNING FORK
SMD TYPE

PICTURE
AREA

APPLICATIONS

- ▶ LCD
- ▶ LAN card
- ▶ Main board
- ▶ Timing peripherals



ELECTRICAL SPECIFICATIONS	
Frequency range	32.768KHz ~ 165.000KHz
Frequency tolerance	±20ppm
Frequency stability	±30ppm
Operating temperature range	-10 °C ~ 60 °C
Operable temperature range	-40 °C ~ 85 °C
Storage temperature range	-55 °C ~ 125 °C
Temperature coefficient	-0.04ppm / °C ² max.
Shunt capacitance (C ₀)	0.9pF max.
Motional capacitance (C ₁)	1.8fF (Typical)
Load capacitance (C _L)	6pF to ∞, 12.5pF (Typical)
Series resistance (ESR)	50KΩ max. (Typical)
Drive level	1.0μW max. (Typical)
Aging (at 25 °C)	±5ppm / year max.
Insulation resistance	500MΩ min.
Shock resistance	±5ppm max.

ORDERING GUIDE

SBX - 13 - Frequency :

Load capacitance : pF

Crystal impedance : Ω

Stability : ± ppm (at 25 °C)

Tolerance : ± ppm (°C ~ °C)

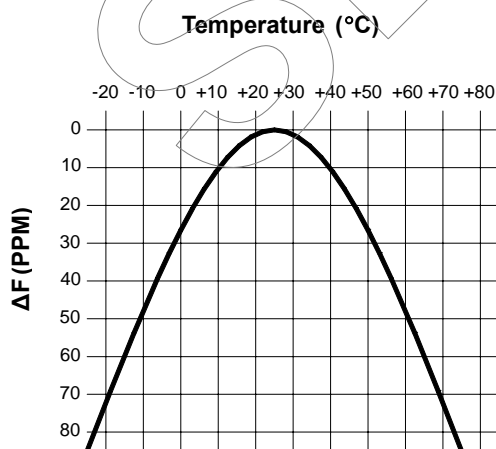
Drive level : μW

Shunt capacitance : pF

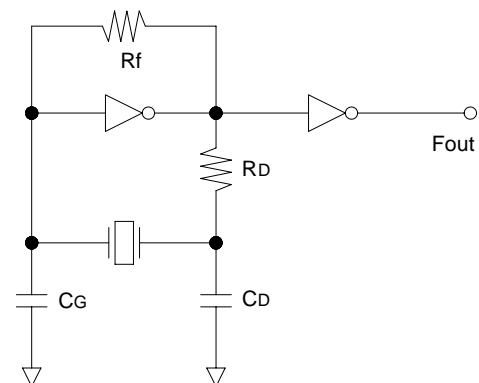
Packing type : Bulk / Taping

Specifications subjects to change without notice & If you need other specifications, Contact our factory.

TEMPERATURE CHARACTERISTICS



APPLICATIONS CIRCUIT



The majority of applications use a KHz crystal in an oscillator circuit Incorporating binary division to produce a 1.0Hz output.