

## FEATURES

- Extremely Small Size
- Low Cost
- 1.4mm Height Max
- Tape and Reel (3,000 pcs. STD)

# DISCONTINUED

Quote it!



### • PART NUMBER [Learn More](#) - Internet Required

Part Number	Model Number	Frequency Stability	Operating Temperature	Frequency
501-Frequency-xxxxx	FSX	-0.04PPM/( $\Delta^{\circ}\text{C}$ ) <sup>2</sup>	-40 ~ +85 $^{\circ}\text{C}$	32.768 kHz

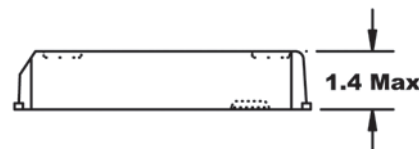
Learn more about:  
[Part Marking Identification](#)  
[Tape and Reel Specification](#)

Internet required

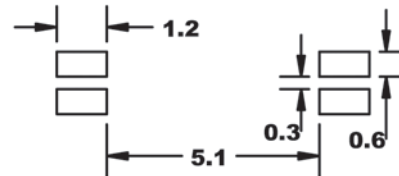
### • STANDARD SPECIFICATIONS

PARAMETERS	MAX (unless otherwise noted)
Frequency Range	32.768 kHz
Frequency Tolerance @ 25 $^{\circ}\text{C}$	$\pm 20$ PPM
Frequency Stability, ref @ 25 $^{\circ}\text{C}$	-0.04PPM/( $\Delta^{\circ}\text{C}$ ) <sup>2</sup>
Temperature Range	
Turnover (To)	+20 $^{\circ}\text{C}$ ~ +30 $^{\circ}\text{C}$
Operating (TOPR)	-40 $^{\circ}\text{C}$ ~ +85 $^{\circ}\text{C}$
Storage (TSTG)	-55 $^{\circ}\text{C}$ ~ +125 $^{\circ}\text{C}$
Equivalent Series Resistance	65 k $\Omega$
Load Capacitance (CL)	7 pF, 12.5pF Typ
Insulation Resistance @ 100V <sub>DC</sub>	500 M $\Omega$ Min
Drive Level	1.0 $\mu\text{W}$
Aging	$\pm 3$ PPM

All specifications subject to change without notice. Rev. 7/12/04

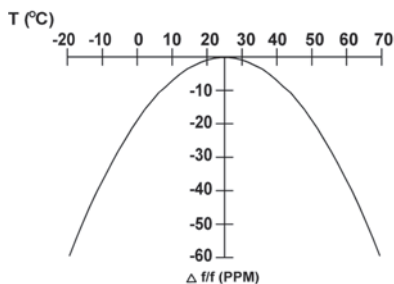


### Recommended Solder Pad Layout



All dimensions are in millimeters.

### Parabolic Temperature Curve



To determine frequency stability, use parabolic curvature (K).  
For example: What is stability at 45 $^{\circ}\text{C}$ ?

- 1) Change in T ( $^{\circ}\text{C}$ ) = 45-25 = 20 $^{\circ}\text{C}$
- 2) Change in frequency = -0.04 PPM \* ( $\Delta^{\circ}\text{C}$ )<sup>2</sup>  
= -0.04 PPM \* (20)<sup>2</sup>  
= -16.0 PPM