



## FEATURES

- Ultra Low Profile
- 1.0mm Height
- Long Term Stability
- Tape and Reel (3,000 pcs. STD)
- $\pm 10$  PPM Available

# DISCONTINUED

Quote it!

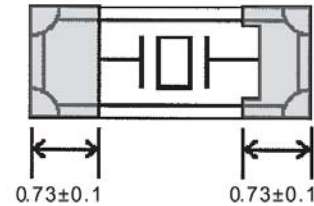
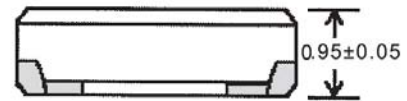
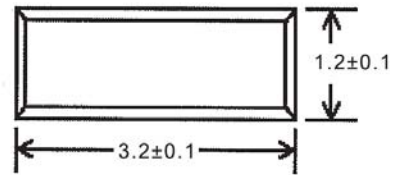
PART NUMBER <a href="#">Learn More</a> - Internet Required				
Part Number	Model Number	Frequency Stability	Operating Temperature	Frequency
593-Frequency-xxxxx	FSN	-0.045PPM/(\Delta^{\circ}C)^2	-40 ~ +85^{\circ}C	32.768 kHz

## STANDARD SPECIFICATIONS

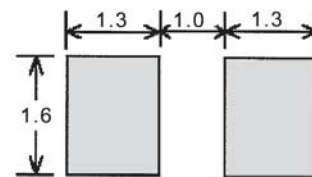
PARAMETERS	MAX (unless otherwise noted)
Frequency	32.768 kHz
Frequency Tolerance @ 25^{\circ}C	$\pm 20$ PPM
Frequency Stability Temperature Coefficient	-0.045 PPM / (\Delta^{\circ}C)^2
Temperature Range	
Turnover (TO)	+20^{\circ}C ~ +30^{\circ}C
Operating (TOPR)	-40^{\circ}C ~ +85^{\circ}C
Storage (TSTG)	-55^{\circ}C ~ +125^{\circ}C
Equivalent Series Resistance (RS)	65 k\Omega
Load Capacitance (CL)	12.5 pF (Standard) 7 pF (Optional)
Insulation Resistance @ 100VDC	500 M\Omega Min
Drive Level	1.0 \mu W
Aging per year	$\pm 5$ PPM

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

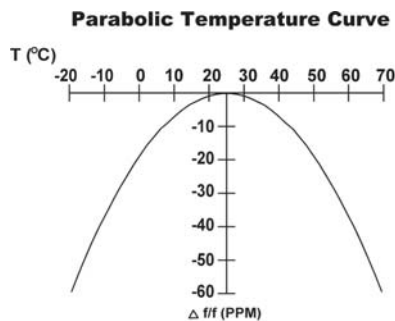
Learn more about:  
[Part Marking Identification](#)  
[Tape and Reel Specification](#)  
 Internet required



### Recommended Solder Pad Layout



All dimensions are in millimeters.



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

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