

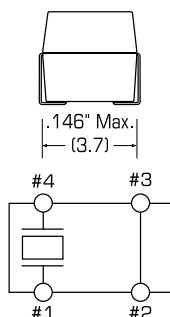
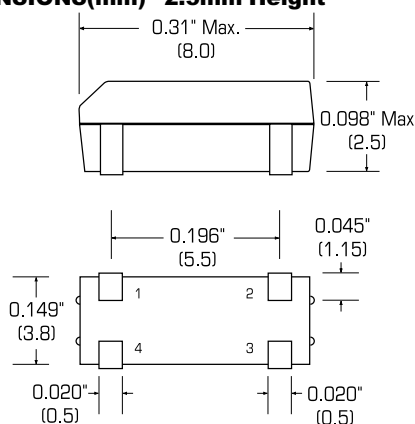


## PLASTIC PACKAGE SURFACE MOUNT CRYSTALS

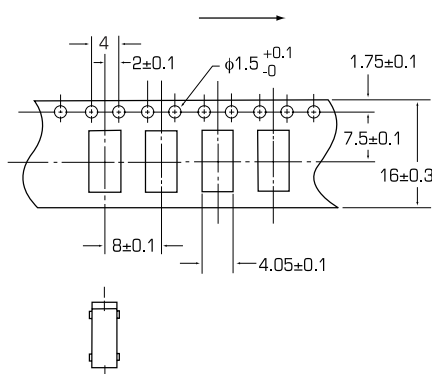
**MODEL CCL SM5**

Model	CCL SM5
Standard Frequency	32.768kHz
Nominal Frequency Range	24kHz~200kHz
Frequency Tolerance	Based on Temperature Range (See Chart Below)
Parabolic Curvature Constant	-0.034ppm/°C <sup>2</sup> Typical (See Chart)
Operating Temperature Range	-20°C to +70°C
Storage Temperature Range	-10°C to +60°C Standard, Other Ranges Available
Turnover Temperature	25°C ±5°C
Series Resistance	50 kΩ Max
Load Capacitance (C <sub>L</sub> )	12.5pF Typical
Shunt Capacitance (C <sub>0</sub> )	0.85pF to 1.7pF Typical
Drive Level	1.0μW Max
Reflow Condition	10 Seconds Max @ +235°C ± 5°C

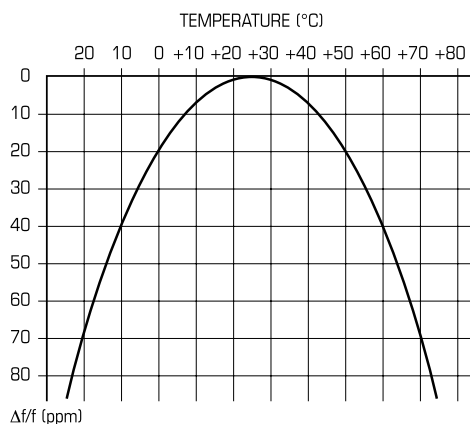
### DIMENSIONS(mm) 2.5mm Height



Pins 1 & 4 XTAL Connections  
Pins 2 Short to Pin3 (Case Ground)



### X-CUT



Electrical Characteristics of Frequency Coefficient  
 $\Delta f/f = -0.034 + 0.006/C^2$  typ.

