

**PACKAGE**  
SM1

**FREQUENCY**  
Customer Specified

## Part Number Guide



**CCL-SM1 - 10.000MHz - B - 2 - 5 - F - R**

**TOLERANCE/STABILITY vs. TEMP**

- A..... 100ppm / 100ppm
- B..... 50ppm / 100ppm
- C..... 50ppm / 50ppm
- D..... 25ppm / 100ppm
- E..... 25ppm / 50ppm
- F..... 25ppm / 25ppm
- G..... 10ppm / 50ppm
- H..... 10ppm / 25ppm
- I..... 10ppm / 10ppm
- J... Customer Specified

**OPERATING TEMPERATURE**

- 1.... 0°C to +70°C
- 2.... -10°C to +60°C
- 3.... -20°C to +70°C
- 4.... -40°C to +85°C
- 5.... Customer Specified

**LOAD CAPACITANCE**

- S...Series
- 1....50 pF
- 2....32 pF
- 3....30 pF
- 4....20 pF
- 5....18 pF
- 6....15 pF
- 7....10 pF
- 8....7.5 pF
- X...Customer Specified

**MODE OF OPERATION**

- F..... Fundamental
- 3..... 3<sup>RD</sup> Overtone

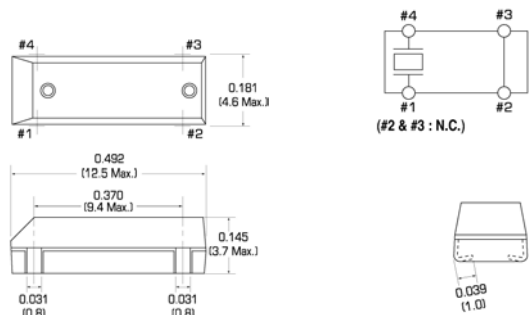
**OPTIONS**

- R.... RoHS Compliant
- T... Tape & Reel

### Electrical Specifications

Frequency Range	3.5 MHz ~ 80.000 MHz
Frequency Tolerance	±50ppm Standard
Frequency Stability	±100ppm 0°C ~ 70°C Standard
Operating Range	-10°C ~ 60°C Standard
Load Capacitance	Series Resonance or Parallel
Shunt Capacitance	7pF Max.
Drive Level	100uW Typical
Insulation Resistance	500 megohms Min.
Aging	±5ppm Max. / Year
Reflow	10 Seconds Max. @ +235°C

### Mechanical Specifications



**Maximum Equivalent Series Resistance (Ω)**

Freq. Range (MHz)	ESR (Ω)	Freq. Range (MHz)	ESR (Ω)
<b>Fundamental Mode</b>		13.500 ~ 19.999	50
3.5 ~ 3.999	200	20.000 ~ 29.999	40
4.000 ~ 5.999	150	30.000 ~ 35.0	100
6.000 ~ 7.299	100	<b>3rd Overtone</b>	
7.250 ~ 8.999	80	35.0 ~ 80.0	100
9.000 ~ 13.499	60		

