## **CARDINAL COMPONENTS**

## **Surface Mount UM-1**

· Smaller than C49J with the same characteristics

- · SMD profile
- Grounded case better for EMI

Series CM1J



Part Numbering Example: CM1J - Z - A1 B2 C2 50 - 7.0 D18 - 3

CM1J SERIES ADDED FEATURES OPERATING TOLERANCE RESISTANCE FREQUENCY BLANK = BULK PACK A0 = -10°C ~ +60°C  $B1 = \pm 100$ SEE CHART CM1J  $C1 = \pm 100$ D16,18,20,ETC.  $Z = TAPE AND REEL A1 = -10^{\circ}C \sim +70^{\circ}C$ **BELOW** -3: 3rd OT  $B2 = \pm 50$  $C2 = \pm 50$ DS = SERIES  $A2 = -40^{\circ}C \sim +85^{\circ}C$ -5: 5th OT  $B3 = \pm 30$  $C3 = \pm 30$ -7: 7th OT  $A3 = -55^{\circ}C \sim +125^{\circ}C$  $B4 = \pm 10$  $C4 = \pm 10$ -BT: BT Cut

## Specifications: CM1J

Frequency Range: 10.000 ~ 175.000 MHz **Operating Temperature:** -10°C ~ + 70°CStandard -40°C ~ + 85°C -55°C ~ +125°C Frequency Stability: ± 100 ppm ± 50 ppm Standard ± 30 ppm ± 10 ppm **Frequency Tolerance:** ± 100 ppm (at 25°C) ± 50 ppm Standard ± 30 ppm ± 10 ppm Load Capacitance: Standard 18 pF or series. Please specify your required load. Resistance: Maximum resistance corresponds to frequency.

See below.

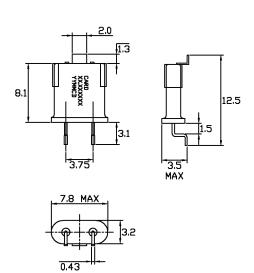
**Standard:** Mode: Fundamental, 3rd, 5th, or 7th Overtone

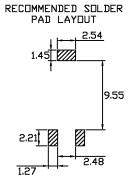
Shunt Capacitance: 7 pF Max

Aging: ± 5 ppm/year Drive Level: 1.0 mW Max

Optional Features: Tape and Reel (1K per Reel)

Note: Not all combinations of the above tolerances, stabilities, and temperature ranges are available. Consult the factory if your requirement is not standard.





Resistance Chart: All resistances are maximum values.

EQUIVALENT SERIES RESISTANCE (ESR), MODE OF OPERATION (MODE), AND		
Frequency MHz	Equivalent Series Resistance ( $\Omega$ )	Oscillation Mode / Cut
7.000~15.999	50 Max	Fundamental
16.000~40.000	40 Max	Fundamental
30.000~90.000	70 Max	Third Overtone
70.000~175.000	100 Max	Fifth Overtone



16

<sup>\*</sup>NOTE: The above ABC combinations cover basic specification options. We tailor our crystal specifications to meet customer requirements. Please contact our sales department if you don't see exactly what you need.