

# CERAMIC CHIP CAPACITORS NPO (COG) DIELECTRIC

## APPLICATION

NPO (COG) dielectric properties; suited for precision circuits, requiring stable dielectric characteristics:

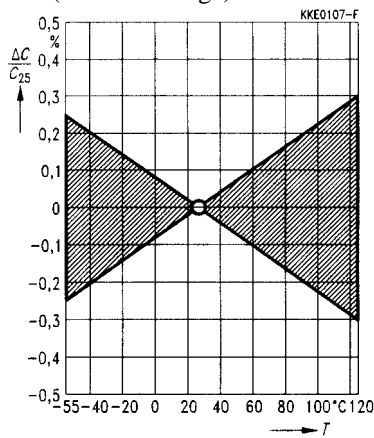
- ✧ Negligible dependence of capacitance and dissipation factor on time, voltage, and frequency
- ✧ Low-loss (High Q)
- ✧ Predictable linear temperature coefficient
- ✧ No piezoelectric behavior

## General Specification

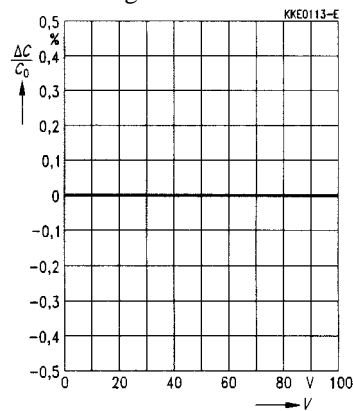
- **Operating temperature range**  $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- **Capacitance Range:** 0.5pF ~ 8200pF(1.0  $\pm$ 0.2 Vrms, 1kHz, for  $\geq$ 100 pF use 1 MHz)
- **Capacitance Tolerance:** Preferred  $\pm 5\%$ ,  $\pm 10\%$   
Others available:  $\pm 0.1$  pF,  $\pm 0.25$  pF,  $\pm 0.5$  pF,  $\pm 1\%$ ,  $\pm 2\%$
- **Voltage Ratings,** 25VDC, 50VDC, 100VDC
- **Dissipation Factor** 0.15% Max (1MHz, 1KHZ for  $C \geq 1000\text{pF}$ , 1Vrms,  $25^{\circ}\text{C}$ )
- **Insulation resistance** (rated voltage applied at  $25^{\circ}\text{C}$ )100,000 M $\Omega$  or 1,000  $\Omega$ -F min
- **Dielectric strength**  $>2.5\text{X WV. (DC.)}$

### Characteristics

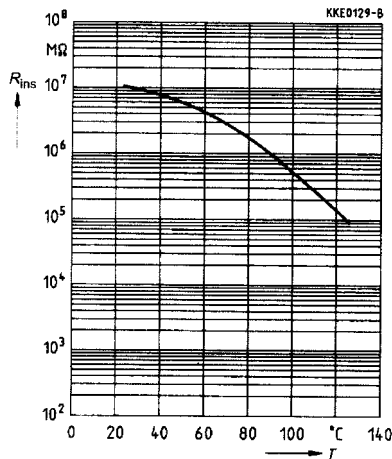
Capacitance change  $\Delta C/C_{25}$  versus temperature T (tolerance range)



Capacitance change  $\Delta C/C_0$  versus superimposed dc voltage V



Insulation resistance  $R_{\text{ins}}$  versus Temperature T



Capacitance change  $\Delta C/C_1$  versus frequency f

