

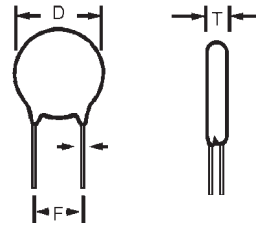
# Disc Ceramic Capacitors



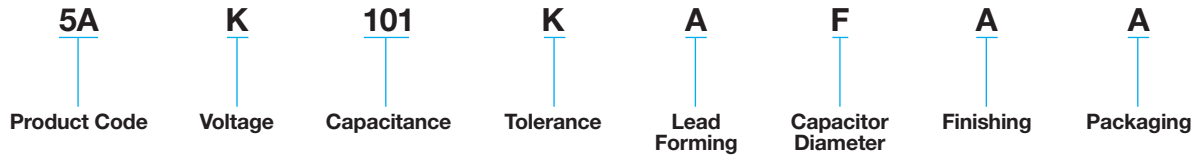
## General Specifications - Class I Temperature Compensating

### DIELECTRIC - CLASS I

These ceramic capacitors have linear temperature coefficient, very low tolerances, low losses, high insulation resistance and are specially suitable for tuned circuits, timing and other precision circuits. Meets IEC 384-8 (1988).



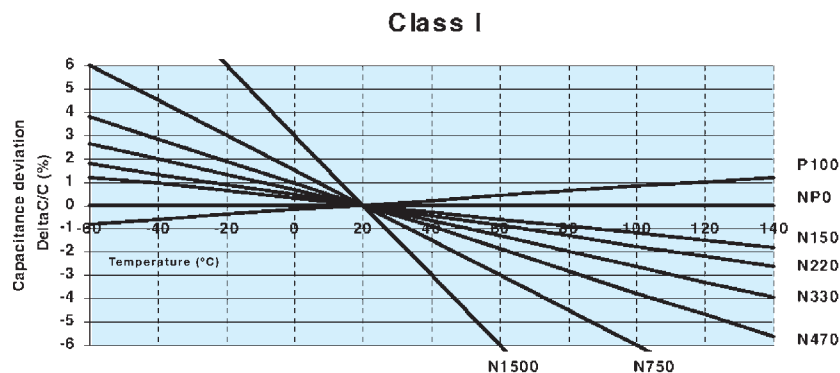
### HOW TO ORDER



### PERFORMANCE CHARACTERISTICS

Voltage Rating	100 V → 500 V	1kV → 5kV
Measured at	1.0 MHz @ 1.0 Vrms / 25°C	1.0 MHz @ 1.0 Vrms / 25°C
Dissipation Factor (%)	$C_R \leq 30 \text{ pF} \rightarrow \leq 1/C_R + 0.07$ $C_R > 30 \text{ pF} \rightarrow \leq 0.1\%$	$C_R \leq 30 \text{ pF} \rightarrow \leq 1/C_R + 0.07$ $C_R > 30 \text{ pF} \rightarrow \leq 0.1\%$
Tolerance	$C_R < 10 \text{ pF} \rightarrow \pm 0.25 \text{ pF}, \pm 0.5 \text{ pF}$ $C_R \geq 10 \text{ pF} \rightarrow \pm 5\%, \pm 10\%$	$C_R < 10 \text{ pF} \rightarrow \pm 0.25 \text{ pF}, \pm 0.5 \text{ pF}$ $C_R \geq 10 \text{ pF} \rightarrow \pm 5\%, \pm 10\%$
Insulation Resistance (IR)	@ $V_R \geq 10 \text{ G}\Omega$	@ $500\text{V} \geq 10 \text{ G}\Omega$
Dielectric Strength NOTE: Charging current limited to 50 mA	@ $V_R = 100\text{V} \rightarrow V_t = 250\text{V (DC)}$ @ $V_R = 500\text{V} \rightarrow V_t = 1250\text{V (DC)}$	$1.5 \times V_R + 500 \text{ (DC)}$
Operating Temperature Range (°C)	-30 → +85°C	-30 → +85°C -30 → +125°C
Climatic Category	30 / 85 / 21 Phenolic Coated	30 / 085 / 21 Phenolic Coated 30 / 085 / 56 Epoxy Coated

### TEMPERATURE COEFFICIENT – TYPICAL CURVES



# Disc Ceramic Capacitors



## Dimension Table - Class I Temperature Compensating

### CLASS I - CAPACITANCE VS. DISC DIAMETER

millimeters (inches)

Temp. Coefficient	NPO											
Digits 1, 2, 3 of P.N.	5AK	5AQ	5AR	5AS	5AT	5AU						
Rated Voltage (V <sub>R</sub> )	100 VDC	500 VDC	1000 VDC 130 VAC	2000 VDC 250 VAC	3000 VDC 380 VAC	4000 VDC 440 VAC						
C <sub>R</sub> (pF)												
1.0	5.0 (0.197)	5.0 (0.197)	5.0 (0.197)	5.0 (0.197)	5.0 (0.197)	5.0 (0.197)						
1.2												
1.5												
1.8												
2.2												
2.7												
3.3												
3.9												
4.7												
5.6												
6.8												
8.2												
10												
12												
15												
18												
22												
27												
33												
39												
47	7.0 (0.276)	7.0 (0.276)	8.0 (0.315)	8.0 (0.315)	9.0 (0.354)	11.0 (0.433)						
56												
68												
82												
100												
120												
150												
180												
220												
270												
330												
390												
47							9.0 (0.354)	11.0 (0.433)	12.0 (0.472)	14.0 (0.551)	14.0 (0.551)	14.0 (0.551)
56												
68												
82												
100												
120												
150												
180												
220												
270												
330												
390												
47	11.0 (0.433)	14.0 (0.551)	16.0 (0.630)	16.0 (0.630)	16.0 (0.630)	16.0 (0.630)						
56												
68												
82												
100												
120												
150												
180												
220												
270												
330												
390												
47							12.0 (0.472)	16.0 (0.630)	19.0 (0.748)	19.0 (0.748)	19.0 (0.748)	19.0 (0.748)
56												
68												
82												
100												
120												
150												
180												
220												
270												
330												
390												

# Disc Ceramic Capacitors



## Dimension Table - Class I Temperature Compensating

### CLASS I - CAPACITANCE VS. DISC DIAMETER

millimeters (inches)

Temp. Coefficient Digits 1, 2, 3 of P.N.	N750							N1500	
	5GK	5GQ	5GR	5GS	5GT	5GU	5GW	5HK	5HQ
Rated Voltage (V <sub>R</sub> )	100 VDC	500 VDC	1000 VDC 130 VAC	2000 VDC 250 VAC	3000 VDC 380 VAC	4000 VDC 440 VAC	5000 VDC 550 VAC	100 VDC	500 VDC
C <sub>R</sub> (pF)									
1.5	5.0 (0.197)	5.0 (0.197)	5.0 (0.197)	5.0 (0.197)	5.0 (0.197)	6.0 (0.236)	6.0 (0.236)	5.0 (0.197)	5.0 (0.197)
1.8									
2.2									
2.7									
3.3									
3.9									
4.7									
5.6									
6.8									
8.2									
9.0									
10									
12									
15									
18									
22									
27									
33									
39									
47									
56									
68									
82									
100									
120									
150									
180									
220									
270									
330									

