



## 1419 Decade Capacitors

- 100 pF to 1.1  $\mu$ F
- choice of models
- two- or three-terminal connection

Type 1419 Decade Capacitors are offered in three models using two different dielectric materials to satisfy a variety of needs.

**Types 1419-A and -B (Polystyrene)** Capacitance and dissipation factor constant with frequency, essentially noninductive, very low dielectric absorption. The di-

electric is specially prepared of purified high-molecular-weight polystyrene, having very high resistance and freedom from interfacial polarization. Moisture sealing with Teflon\* feed-through insulators assures high performance under adverse humidity conditions.

**Type 1419-K (Silvered Mica)** Higher accuracy, low dissipation factor, and  $+35 \pm 10$  ppm/ $^{\circ}$ C temperature coefficient (10-50 $^{\circ}$ C) for use in higher ambient temperatures.

\* Registered trademark of E. I. duPont de Nemours and Company.

### SPECIFICATIONS

Type Number	1419-A	1419-B	1419-K
Dielectric	Polystyrene	Polystyrene	Silvered Mica
Maximum Capacitance of Box ( $\mu$ F)	1.110	1.1110	1.110
In Steps of ( $\mu$ F)	0.001	0.0001	0.001
Dials	3	4	3
Zero Capacitance, typical			
2-terminal connection	37 pF	50 pF	41 pF
3-terminal connection	15 pF	20 pF	13 pF
Accuracy <sup>1</sup>		$\pm(1\% + 2 \text{ pF})$	$\pm 0.5\%$
2-terminal connection <sup>2</sup>	$\pm 1\%$	$\pm 1\%$ except $+1\%$ to $-(2\% + 4 \text{ pF})$ on smallest decade	$\pm 0.5\%$ except $\pm 1\%$ on smallest decade
3-terminal connection	$\pm 1\%$ except $\pm 1.5\%$ on smallest decade		
Dissipation Factor at 1 kHz		$< 0.0002$	$< 0.0003$
Insulation Resistance at 100 V, 25 $^{\circ}$ C 50% RH, typical		$> 10^{12} \Omega$	$> 5 \times 10^9 \Omega$
Max Voltage <sup>3</sup> (dc or peak)		500 V up to 35 kHz	500 V up to 10 kHz
Max Operating Temperature (C)		65 $^{\circ}$	75 $^{\circ}$
Voltage Recovery <sup>4</sup>		$< 0.1\%$	$< 3\%$
Resonant Frequencies (typical)		1 $\mu$ F—400 kHz; 0.1 $\mu$ F—1MHz; 0.01 $\mu$ F—2.7 MHz; 0.001 $\mu$ F—7.8 MHz; 0.0001 $\mu$ F—23 MHz	
Dc Cap/1-kHz Cap		$< 1.001$	Typically 1.03
Cabinet: Lab-bench			
Over-all Dimensions — in. (mm)	13 x 4.31 x 5 (330 x 110 x 127)	16.3 x 4.31 x 5 (415 x 110 x 127)	14.13 x 5.5 x 6 (359 x 140 x 153)
Net Weight — lb (kg)	8.38 (3.8)	10.5 (4.8)	11.25 (5.5)
Shipping Weight — lb (kg)	10 (4.6)	11 (5)	18 (8.5)
Catalog Number	<b>1419-9701</b>	<b>1419-9702</b>	<b>1419-9711</b>

<sup>1</sup> Capacitance increments from zero position are within this percentage of the indicated value for any setting at 1 kHz.

<sup>2</sup> Units are checked with switch mechanism high, electrically, and the common lead and case grounded.

<sup>3</sup> At frequencies above the indicated max, the allowable voltage decreases and is (approx) inversely proportional to frequency. These limits correspond to a temperature of 40 $^{\circ}$ C at max setting of each decade in box.

<sup>4</sup> Final % of soaking voltage V measured after holding terminal voltage at V for 1 h, then discharging for 10 s through a resistance of V ohms.

National stock numbers are listed at the back of the catalog.