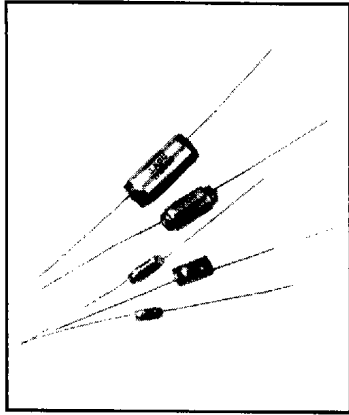


# SX Series Polystyrene-Foil / Axial Leads

**MALLORY**


- Axial Leads
- High Q and Excellent Stability
- High Insulation, Low Absorption
- Low Dissipation Factor, Tight Temperature Coefficient
- Lead Material Solder Coated or Tinned Solid Wire

The colored band at one side of the body serves as a color guide for rated voltage, and indicates the lead attached to the outside foil.

## GENERAL SPECIFICATIONS

Operating Temperature:  
-40°C to +70°C (Derate 0.67% per °C above 40°C)

Voltage Range:  
40°C - 33 VDC to 630 VDC  
70°C - 25 VDC to 500 VDC

Capacitance Range:  
20 pF to 0.1 μF

Capacitance Tolerance:  
±2.5% (SXK, SXL, SXM)  
±5.0% (SX)

Total Self Inductance:  
Body: 10 to 30 nH, function of the body length  
Leads: 10 nH/cm of length

Dielectric Withstand:  
2.5 x V rated for 5 seconds  
Charge and discharge current ≤ 50 mA

Dissipation Factor (DF):  
Shall not be > .05%

Ideally suited for precision circuits such as sample and hold, dual Slope Integration and Temperature Compensation

## Temperature Coefficient

For 33 VDC:

-125 ± 75 PPM/°C

For 63, 160, 630 VDC

Capacitance Values ≤ 500 pF -175 ± 75 PPM/°C  
Capacitance Values > 500 PF -125 ± 75 PPM/°C

## Specifications

### Insulation Resistance (IR)

Shall be less than:

50,000 MΩ or 1000/C (MΩ) (C in MFD) whichever is lower for 33 VDC at 10 VDC

100,000 MΩ or 2000/C (MΩ) (C in MFD) whichever is lower for 63 VDC at 10 VDC

500,000 MΩ or 10,000/C (MΩ) (C in MFD) whichever is lower for 160 to 630 VDC at 100 VDC

### Dielectric Absorption:

Equal to or less than .02%

### Capacitance Drift:

Equal to or less than ± 0.3% + 0.4 pF after thermal cycle from +25°C to -25°C to +70°C and back to +25°C

### Storage:

ΔC/C ≤ ± 0.5% +.4pF for SXK, SXL

ΔC/C ≤ ± 0.2% +.4PF for SXM, SX

When stored in constant climate ≤ 70% RH within operating temperature range and stabilized at 40% RH 25°C ± 5°C for 24 hours before measurements

### Life Test:

125% of rated voltage for 250 hrs at 70°C

### Soldering Conditions:

Not recommended for wave soldering

For manual soldering:

Solder Temperature: 270°C

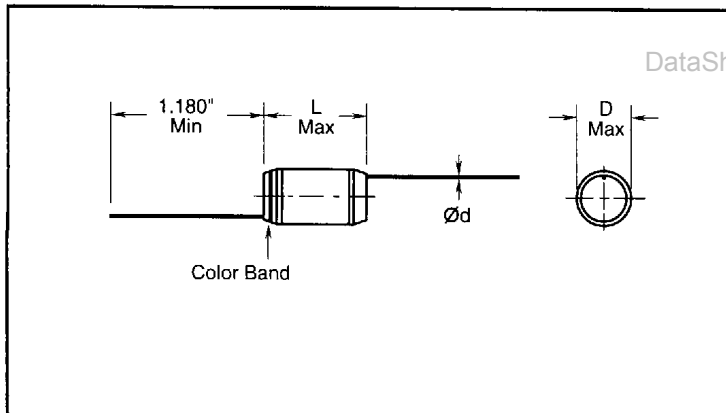
Time: 4 seconds maximum

Distance from body: .236 inches minimum

### Caution:

Exposure to temperatures > 70°C will result in serious degradation  
Clean with de-ionized water only. Do not expose to solvents.

## Outline Dimensions



# SX Series

## Polystyrene-Foil / Axial Leads

**MALLORY**

| Catalog Number           | Cap pF | Inches |       |    | Millimeters |       |    |
|--------------------------|--------|--------|-------|----|-------------|-------|----|
|                          |        | D Max  | L Max | Ød | D Max       | L Max | Ød |
| <b>33 WVDC @ +40°C</b>   |        |        |       |    |             |       |    |
| <b>25 WVDC @ +85°C</b>   |        |        |       |    |             |       |    |
| <b>(Blue Color Band)</b> |        |        |       |    |             |       |    |

| Catalog Number | Cap pF  | D Max | L Max | Ød   | D Max | L Max | Ød |
|----------------|---------|-------|-------|------|-------|-------|----|
| SXK310         | 100     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK312         | 120     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK315         | 150     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK318         | 180     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK322         | 220     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK327         | 270     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK333         | 330     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK339         | 390     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK347         | 470     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK356         | 560     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK368         | 680     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK382         | 820     | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK210         | 1,000   | .180  | .315  | .012 | 4.6   | 8.0   | .3 |
| SXK212         | 1,200   | .260  | .473  | .016 | 6.6   | 12.0  | .4 |
| SXK215         | 1,500   | .260  | .473  | .016 | 6.6   | 12.0  | .4 |
| SXK218         | 1,800   | .260  | .473  | .016 | 6.6   | 12.0  | .4 |
| SXK222         | 2,200   | .260  | .473  | .016 | 6.6   | 12.0  | .4 |
| SXK227         | 2,700   | .260  | .473  | .016 | 6.6   | 12.0  | .4 |
| SXK233         | 3,300   | .260  | .473  | .016 | 6.6   | 12.0  | .4 |
| SXK239         | 3,900   | .260  | .473  | .016 | 6.6   | 12.0  | .4 |
| SXK247         | 4,700   | .260  | .473  | .016 | 6.6   | 12.0  | .4 |
| SXK256         | 5,600   | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK268         | 6,800   | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK282         | 8,200   | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK110         | 10,000  | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK112         | 12,000  | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK115         | 15,000  | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK118         | 18,000  | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK122         | 22,000  | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK125         | 25,000  | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK127         | 27,000  | .470  | .670  | .020 | 11.9  | 17.0  | .5 |
| SXK133         | 33,000  | .709  | .867  | .020 | 18.0  | 22.0  | .5 |
| SXK139         | 39,000  | .709  | .867  | .020 | 18.0  | 22.0  | .5 |
| SXK147         | 47,000  | .709  | .867  | .020 | 18.0  | 22.0  | .5 |
| SXK156         | 56,000  | .709  | .867  | .020 | 18.0  | 22.0  | .5 |
| SXK168         | 68,000  | .709  | .867  | .020 | 18.0  | 22.0  | .5 |
| SXK182         | 82,000  | .709  | .867  | .020 | 18.0  | 22.0  | .5 |
| SXK010         | 100,000 | .709  | .867  | .020 | 18.0  | 22.0  | .5 |

| Catalog Number             | Cap pF | Inches |       |    | Millimeters |       |    |
|----------------------------|--------|--------|-------|----|-------------|-------|----|
|                            |        | D Max  | L Max | Ød | D Max       | L Max | Ød |
| <b>63 WVDC @ +40°C</b>     |        |        |       |    |             |       |    |
| <b>50 WVDC @ +85°C</b>     |        |        |       |    |             |       |    |
| <b>(Yellow Color Band)</b> |        |        |       |    |             |       |    |

| Catalog Number | Cap pF | D Max | L Max | Ød   | D Max | L Max | Ød |
|----------------|--------|-------|-------|------|-------|-------|----|
| SXL482         | 82     | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL310         | 100    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL315         | 150    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL318         | 180    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL322         | 220    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL327         | 270    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL333         | 330    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL347         | 470    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL356         | 560    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL368         | 680    | .190  | .315  | .012 | 4.8   | 8.0   | .3 |
| SXL210         | 1,000  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL212         | 1,200  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL215         | 1,500  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL218         | 1,800  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL222         | 2,200  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL227         | 2,700  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL233         | 3,300  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL239         | 3,900  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL247         | 4,700  | .330  | .473  | .016 | 8.4   | 12.0  | .4 |
| SXL256         | 5,600  | .340  | .670  | .020 | 8.6   | 17.0  | .5 |
| SXL268         | 6,800  | .340  | .670  | .020 | 8.6   | 17.0  | .5 |
| SXL282         | 8,200  | .340  | .670  | .020 | 8.6   | 17.0  | .5 |
| SXL110         | 10,000 | .340  | .670  | .020 | 8.6   | 17.0  | .5 |
| SXL112         | 12,000 | .430  | .867  | .020 | 10.9  | 22.0  | .5 |
| SXL115         | 15,000 | .430  | .867  | .020 | 10.9  | 22.0  | .5 |
| SXL116         | 16,000 | .430  | .867  | .020 | 10.9  | 22.0  | .5 |
| SXL118         | 18,000 | .430  | .867  | .020 | 10.9  | 22.0  | .5 |
| SXL120         | 20,000 | .430  | .867  | .020 | 10.9  | 22.0  | .5 |
| SXL122         | 22,000 | .430  | .867  | .020 | 10.9  | 22.0  | .5 |
| SXL125         | 25,000 | .430  | .867  | .020 | 10.9  | 22.0  | .5 |