Type ST12 Polystyrene capacitors excel in performance characteristics such as capacitance stability, linear negative temperature coefficient, low dielectric absorption, low dissipation factor and high insulation resistance. By far, polystyrene film provides capacitance stability exceeding that of all plastic films available today.

**FEATURES**
- Capacitance Stability
- Linear Negative Temperature Coefficient
- Low Dielectric Absorption
- Low Dissipation Factor
- High Insulation Resistance

**STANDARD CONFIGURATION**
- Wrap and Fill Axial Leads
**Specification Summary**

**Capacitance Range**
0.001µF to 1.8µF

**Capacitance Tolerance**
K=±10%, J=±5%, G=±2%, F=±1%

**Operating Temperature Range**
-55°C to +85°C

**Enclosure/Construction**
Extended foil (non-inductive)

**Voltage Rating**
50VDC to 400VDC

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**Quality Control**
Capacitors are tested 100% for:
- Capacitance tolerance
- Dissipation Factor
- Dielectric withstanding voltage
- Insulation Resistance
- Equivalent Series Resistance (ESR)

Process and inspection data are maintained on file and available on special request.

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**Environmental Characteristics**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Method</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vibration</td>
<td>204</td>
<td>D</td>
</tr>
<tr>
<td>Shock</td>
<td>213</td>
<td>I</td>
</tr>
<tr>
<td>Humidity</td>
<td>106</td>
<td>-</td>
</tr>
<tr>
<td>Thermal Shock</td>
<td>107</td>
<td>A</td>
</tr>
<tr>
<td>Life</td>
<td>108</td>
<td>F</td>
</tr>
</tbody>
</table>

Reference MIL-STD-202

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**Charateristics**

<table>
<thead>
<tr>
<th>Insulation Resistance</th>
<th>Temperature(°C)</th>
<th>25</th>
<th>85</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Megaohms x Microfarads</td>
<td>500,000</td>
<td>50,000</td>
</tr>
</tbody>
</table>

**Dielectric Strength**
Capacitors will withstand a DC potential of 200% rated voltage for two (2) minutes without damage or breakdown.
Test voltage is applied and discharged through a resistance of 1 OHM per volt minimum, and at 25°C.

<table>
<thead>
<tr>
<th>Capacitance Change</th>
<th>Temperature(°C)</th>
<th>-55</th>
<th>25</th>
<th>85</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percentage Change (typical)</td>
<td>1.0</td>
<td>0</td>
<td>-0.6</td>
</tr>
</tbody>
</table>

**Dissipation Factor**
When measured at the frequency specified for capacitance measurements, the dissipation factor will not exceed 0.05%.
The fifth character of the part number represents the DC voltage (i.e. B=50 VDC, D=100 VDC, etc.). Additionally, the tenth character of the part number represents the capacitance tolerance: K=±10%, J=±5%, G=±2%, F=±1%.
The type ST12 capacitor is offered in a "wrap and fill" configuration. The outer wrap is an electrical grade of Mylar film adhesive tape. The end fill is an epoxy resin specially formulated to bond with the Mylar film outer wrap forming a moisture resistant seal.

### HOW TO ORDER

<table>
<thead>
<tr>
<th>TYPE</th>
<th>ST</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polystyrene Dielectric</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>STYLE / VOLTAGE</th>
<th>12 B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrap and Fill Axial Leads</td>
<td>DC Voltage Rating: B=50VDC, D=100VDC, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAPACITANCE IN PICOFARADS</th>
<th>103</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expressed in Picofarads, the first two digits are significant figures. The third is the number of zeros. (e.g., 103 equals 10,000 pF)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TOLERANCE</th>
<th>K</th>
</tr>
</thead>
<tbody>
<tr>
<td>K=±10% J=±5% G=±2% F=±1%</td>
<td></td>
</tr>
</tbody>
</table>

Marking And Date Code
All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type ST12, capacitance, tolerance, rated DC working voltage and date code. The first two digits of the date code represent the year, the second two digits the week, i.e., 0952 is the 52nd week of 2009, 0902 is the second week of 2009.

Quality Assurance
Major emphasis is placed on quality assurance. EC is an ISO 9001-2000 and AS9100:2004 Certified Company. Raw material inspection and the use of SPC manufacturing procedures assure the highest quality standards. Procedures are fully described in the EC Quality Control Manual. Electronic Concepts will continue to advance the state-of-the-art by utilizing leading edge technology, compact capacitor designs and establishing reliability procedures.

### Sales Offices

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