The type UP37 miniature Unlytic® is the best choice for "Decoupling" in high-power converter designs.

**FEATURES**
- High voltage ratings
- Superior performance over temperature ranges -55°C to +105°C
- Dry construction (no harmful electrolytes)
- Non-polar
- Voltage ratings convenient for European designs
- Spade lug terminals for high current carrying capacity
- RoHS Compliant

**STANDARD CONFIGURATION**
- UP37: Board through-hole mount
Specification Summary

Capacitance Range
4.7μF to 35.0μF

Capacitance Tolerance
Standard capacitance tolerance is ±10%.

Operating Temperature Range
-55°C to +85°C with 60% linear voltage derating from 85°C to 105°C

Enclosure/Construction
Plastic case, epoxy filled

Voltage Rating
500 VDC to 1500 VDC

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 upon special request.

Environmental

<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

Characteristics

Insulation Resistance vs. Temperature

Dielectric Strength
Capacitors withstand a DC potential of 1.3 x rated voltage for one (1) minute without damage or breakdown. Test voltage is applied and discharged through a minimum resistance of 100 OHM per volt minimum.

Capacitance Change at 1kHz vs. Temperature

Dissipation Factor
Polypropylene has an intrinsic dissipation factor of less than 2.1x 10-4 over the operating temperature range of -55°C to +105°C and frequencies to 1MHz.

Dissipation Factor at 1kHz vs. Temperature
Detail Data

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>VOLTAGE (VDC)</th>
<th>VALUE (µF)</th>
<th>ESR (OHMS) 25°C</th>
<th>I pk (AMPS) 50°C</th>
<th>dv/dt (V/µs) 75°C</th>
<th>ESL (nH) 50°C</th>
<th>Fres (kHz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>UP37BA0350</td>
<td>500</td>
<td>35</td>
<td>0.009</td>
<td>22.6</td>
<td>861</td>
<td>25</td>
<td>143</td>
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<tr>
<td>UP37BC0300</td>
<td>600</td>
<td>30</td>
<td>0.011</td>
<td>20.4</td>
<td>844</td>
<td>25</td>
<td>155</td>
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<tr>
<td>UP37BF0200</td>
<td>750</td>
<td>20</td>
<td>0.013</td>
<td>18.8</td>
<td>703</td>
<td>35</td>
<td>189</td>
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<tr>
<td>UP37BJ0140</td>
<td>900</td>
<td>14</td>
<td>0.015</td>
<td>17.3</td>
<td>591</td>
<td>42</td>
<td>226</td>
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<tr>
<td>UP37BL0100</td>
<td>1000</td>
<td>10</td>
<td>0.017</td>
<td>15.7</td>
<td>492</td>
<td>49</td>
<td>268</td>
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<tr>
<td>UP37BN0070</td>
<td>1200</td>
<td>7</td>
<td>0.020</td>
<td>13.6</td>
<td>394</td>
<td>56</td>
<td>320</td>
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<tr>
<td>UP37BS0047</td>
<td>1500</td>
<td>4.7</td>
<td>0.023</td>
<td>12.7</td>
<td>351</td>
<td>70</td>
<td>391</td>
</tr>
</tbody>
</table>

60% LINEAR VOLTAGE DERATING FROM 85°C TO 105°C. NOT INTENDED FOR USE IN AC APPLICATIONS.

Style

1. TERMINAL MATERIAL: 0.031(C110) COPPER HALF HARD
2. FINISH: 100% TIN PLATING 300 TO 500 MICROINCHES
3. PINS: 0.050 WIDE, TAPERED TO 0.035 RADIUS AT TIP (4 PL). TAPER LENGTH: 0.100
4. STANDOFF GAP: 0.500 WIDE ON CENTERLINE OF CASE
UNLYTIC® technology provides a dry film solution for electrolytic capacitor replacement, offering ten (10) times the current density and three (3) times the over voltage protection. For safety, eliminates the possibility of caustic electrolyte leakage and its harmful effects to the environment.

For Switching power supplies where high voltages at elevated temperatures in addition to high dv/dt as well as peak current are also required.

### How to Order

<table>
<thead>
<tr>
<th>TYPE</th>
<th>VOLTAGE</th>
<th>CAPACITANCE IN PICOFARADS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unlytic® Polypropylene</td>
<td>BA=500VDC, BC=600VDC, BF=750VDC, BJ=900VDC, BL=1000VDC, BN=1200VDC, BS=1500VDC</td>
<td>Last 3 characters represent capacitance to 1 significant digit. 350 = 35.0µF</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 UP37, 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., 1252 is the 52nd week of 2012, 1202 is the second week of 2012.

Quality Assurance
Major emphasis is placed on quality assurance. EC is an ISO 9001 and AS9100 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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