NESSCAP Ultracapacitors

Committed to excellence

NESSCAP Ultracapacitors

Standard & XTRA Performance Ultracapacitors
Nesscap Energy produces Ultracapacitors since many years. The Standard Ultracapacitor series is well known and used in diverse applications in the global market. Nesscap Energy is focused on delivering high volume manufacturing and exceptional quality.

Nesscap Energy is supplying an Ultracapacitor series ranges in the capacitance range from 3F to 100F with an operating voltage of 2.7V. The product series is offering high performance within a wide temperature range of -40°C to +85°C* with very low ESR and low RC time constant. These small-sized Ultracapacitor cells operate up to 500,000 duty cycles. The products are compliant with RoHs, UL and Reach requirements.

XP™ products are engineered specifically for applications that operate over long durations in environments with high temperature and humidity. Proprietary product and manufacturing enhancements, designed into XP™, significantly reduce the likelihood of long term reliability issues resulting from prolonged operation in adverse environmental conditions. Under biased test conditions (2.7V, 90% relative humidity, 60°C), XP™ products deliver a 3 times improvement compared to benchmarked industry-standard cells.

XP™ products are offered at capacitances ranging from 3F to 50F with dimensions and electrical specifications identical to those of Nesscap’s corresponding standard cells. All products have been extensively tested to ensure adherence to strict performance standards and will be compliant with RoHs, UL, and REACH.

Features & Benefits
- Highly Efficient Component
  => High performance products with very low ESR and low RC time constant
- Low Equivalent Series Resistance
  => Patent electrode technology and contact methods enable lowest resistance
- Wide Temperature Range
  => Very good temperature performance down to -40°C and up to +65°C*
- Long Operational Life
  => Offers >500k cycles (nominal voltage down to half voltage)
- Applications
  => Actuators
  => Back-Up Power
  => Burst Power
  => Emergency Lighting
  => Telemetrics
  => Manual Tools
  => And many others

Features & Benefits
- Highly Efficient Rugged Component
  => Biased Humidity Test Conditions (at VR, 60°C, and 90% RH)
- High Endurance
  Endurance equal to standard series
  => Highly superior results at Biased Humidity Test
- Wide Temperature Range
  => Very good temperature performance down to -40°C and up to +65°C*
- Applications
  => Advanced Metering
  => Automotive
  => Medical devices
  => Safety Devices
  => Security Devices
  => Emergency Lighting
  => Smoke Detectors
  => And many others

* Biased Humidity Test at VR, 60°C, and 90% RH
** = at 65°C, 2.7V (End-of-Life-Conditions: Capacitance: -30% from rated min. value or ESR: +100% from max. ESR value)

For more information please contact: EDLC@rutronik.com

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**Product Overview Standard-Serie**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>RUTRONIK Part Number</th>
<th>Capacitance Rating</th>
<th>DC-ESR</th>
<th>Terminal Type</th>
<th>Max Leakage Current</th>
<th>Size</th>
<th>Endurance **</th>
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<tbody>
<tr>
<td>ESHS800100C0-002R7</td>
<td>KUK368</td>
<td>2.7V 3F</td>
<td>&lt;55 mΩ</td>
<td>Radial Lead</td>
<td>5A</td>
<td>8x32mm</td>
<td>1,500 Hrs</td>
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<td>KUK383</td>
<td>2.7V 10F</td>
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<td>18x40mm</td>
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<td>KUK398</td>
<td>2.7V 20F</td>
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<td>1,500 Hrs</td>
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<tr>
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<td>KUK444</td>
<td>2.7V 50F</td>
<td>&lt;55 mΩ</td>
<td>Snap-in</td>
<td>0.25mA</td>
<td>28x50mm</td>
<td>1,500 Hrs</td>
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</tbody>
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Data for reference only. Please use supplier data sheet for latest data.

**Product Overview XP-Series**

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<tr>
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<th>Terminal Type</th>
<th>Max Leakage Current</th>
<th>Size</th>
<th>Biased Humidity Life *</th>
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<td>KUK974</td>
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<td>2,000 Hrs</td>
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<tr>
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<td>2.7V 10F</td>
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<td>Radial Lead</td>
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<tr>
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<td>Radial Lead</td>
<td>5A</td>
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<td>2,500 Hrs</td>
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<tr>
<td>ESHS900200C0-002R7UC</td>
<td>KUK977</td>
<td>2.7V 50F</td>
<td>&lt;55 mΩ</td>
<td>Snap-in</td>
<td>0.25mA</td>
<td>28x50mm</td>
<td>3,000 Hrs</td>
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</tbody>
</table>

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** = at 65°C, 2.7V (End-of-Life-Conditions: Capacitance: -30% from rated min. value or ESR: +100% from max. ESR value)