

# NESSCAP Ultracapacitors





## Standard 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.

### Features & Benefits

#### Highly Efficient Component

=> High performance products with very low ESR and low RC time constant

#### Low Equivalent Series Resistance

=> Patented electrode technology and contact methods enables 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
- Telematics
- Manual Tools
- And many others

### Product Overview Small Cells Standard-Series

Nesscap Part Number	RUTRONIK Part Number	Capacitance Rating	DC-ESR	Terminal Type	Max Leakage Current	Size	Endurance **
ESHSR-0003CO-002R7	KUK568	2.7V 3F	<55 mΩ	Radial Lead	5μA	8x20mm	1,500 Hrs
ESHSR-0005CO-002R7	KUK798	2.7V 5F	<35 mΩ	Radial Lead	8μA	10x20mm	1,500 Hrs
ESHSR-0006CO-002R7	KUK819	2.7V 6F	<33 mΩ	Radial Lead	17μA	8x30mm	1,500 Hrs
ESHSR-0010CO-002R7	KUK638	2.7V 10F	<30 mΩ	Radial Lead	23μA	10x30mm	1,500 Hrs
ESHSR-0025CO-002R7	KUK412	2.7V 25F	<25 mΩ	Radial Lead	49μA	16x25mm	1,500 Hrs
ESHSR-0050CO-002R7	KUK443	2.7V 50F	<16 mΩ	Radial Lead	73μA	18x40mm	1,500 Hrs
ESHSR-0100CO-002R7	KUK444	2.7V 100F	<12 mΩ	Snap-in	0,26mA	22x45mm	1,500 Hrs

Data for reference only. Please use supplier data sheet for latest data.

\* = up to 85°C with de-rated voltage of 2.3V | \*\* = at 65°C, 2.7V (End-of-Life-Conditions: Capacitance: 30% from rated min. value or ESR: +100% from max. ESR value)



## XP-Series XTRA Performance



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 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

#### Low Equivalent Series Resistance

=> Patented electrode technology and contact methods enables lowest resistance

#### Long Operational Life

=> Offers >500k cycles (nominal voltage down to half voltage)

### Applications

- Advanced Metering
- Automotive
- Medical devices
- Safety Devices
- Security Devices
- Emergency Lighting
- Smoke Detectors
- And many others

### Product Overview XP-Series

Nesscap Part Number	RUTRONIK Part Number	Capacitance Rating	DC-ESR	Terminal Type	Max Leakage Current	Size	Biased Humidity Life *
ESHSR-0003CO-002R7UC	KUK974	2.7V 3F	<55 mΩ	Radial Lead	5μA	8x20mm	2,000 Hrs
ESHSR-0005CO-002R7UC	KUK973	2.7V 5F	<35 mΩ	Radial Lead	8μA	10x20mm	2,500 Hrs
ESHSR-0006CO-002R7UC	KUK972	2.7V 6F	<33 mΩ	Radial Lead	17μA	8x30mm	2,000 Hrs
ESHSR-0010CO-002R7UC	KUK971	2.7V 10F	<30 mΩ	Radial Lead	23μA	10x30mm	2,500 Hrs
ESHSR-0025CO-002R7UC	KUK965	2.7V 25F	<25 mΩ	Radial Lead	49μA	16x25mm	3,000 Hrs
ESHSR-0050CO-002R7UC	KUK970	2.7V 50F	<16 mΩ	Radial Lead	73μA	18x40mm	3,000 Hrs

Data for reference only. Please use supplier data sheet for latest data.

\* Biased Humidity Test (at VR, 60°C, and 90% RH)



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