Type UNL, DC Link and Filter Capacitors

High Capacitance, High Current, Board Mount



Constructed using a low-loss polypropylene film, the UNL series offers high ripple current capabilities and high capacitance values making them ideal for electrolytic bank replacement and high ripple current applications.

Highlights

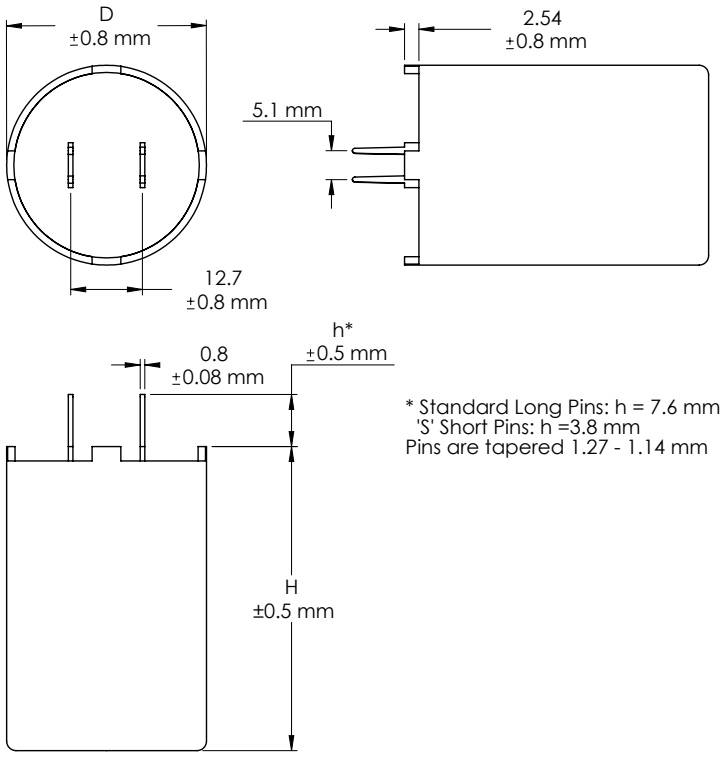
Advantages over Electrolytics

- Exceptionally low ESR
- Up to 10 times the ripple current
- Non-polar
- Higher voltage ratings
- Dry construction - no electrolyte
- Improved reliability

Specifications

Capacitance Range	4.7 to 100 µF
Capacitance Tolerance	±10% (K) standard
Rated Voltage	400 to 1500 Vdc
Operating Temperature Range	–55 °C to 105 °C* *Full rated voltage at 85 °C - derate linearly to 50% rated at 105 °C
Maximum rms Current	Check tables for values
Test Voltage between Terminals @ 25 °C	125% rated DC voltage for 60 s
Test Voltage between Terminals & Case @ 25 °C	3 kVac @ 50/60 Hz for 60 s
Life Test	2,000 h @ 85 °C, 125% rated voltage
Life Expectancy	60,000 h @ 70 °C, rated voltage
Standards	IEC 61071
Regulatory Information	

Dimensions



* Standard Long Pins: h = 7.6 mm
'S' Short Pins: h =3.8 mm
Pins are tapered 1.27 - 1.14 mm

Construction Details	
Case Material	Plastic UL94V-0
Resin Material	Dry Resin UL94V-0
Terminal Material	Tin Plated Brass

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Part Numbering System

UNL	7	W20	K	S	–F
Type	**Voltage**	**Capacitance**	**Tolerance**	**Leads**	**RoHS**
UNL	4 = 400 Vdc	W80 = 80µF	K = ±10%	S = Short Pins	Compliant
	5 = 500Vdc	W100 = 100µF		Blank = Long Pins	
	6 = 600 Vdc	W30 = 30µF			
	7 = 750 Vdc	W50 = 50µF			
	8 = 800 Vdc	W40 = 40µF			
	9 = 900 Vdc	W13P5 = 13.5µF			
	10 = 1000 Vdc	W10 = 10µF			
	12 = 1200 Vdc	W7P5 = 7.5µF			
	15 = 1500 Vdc	W4P7 = 4.7µF			

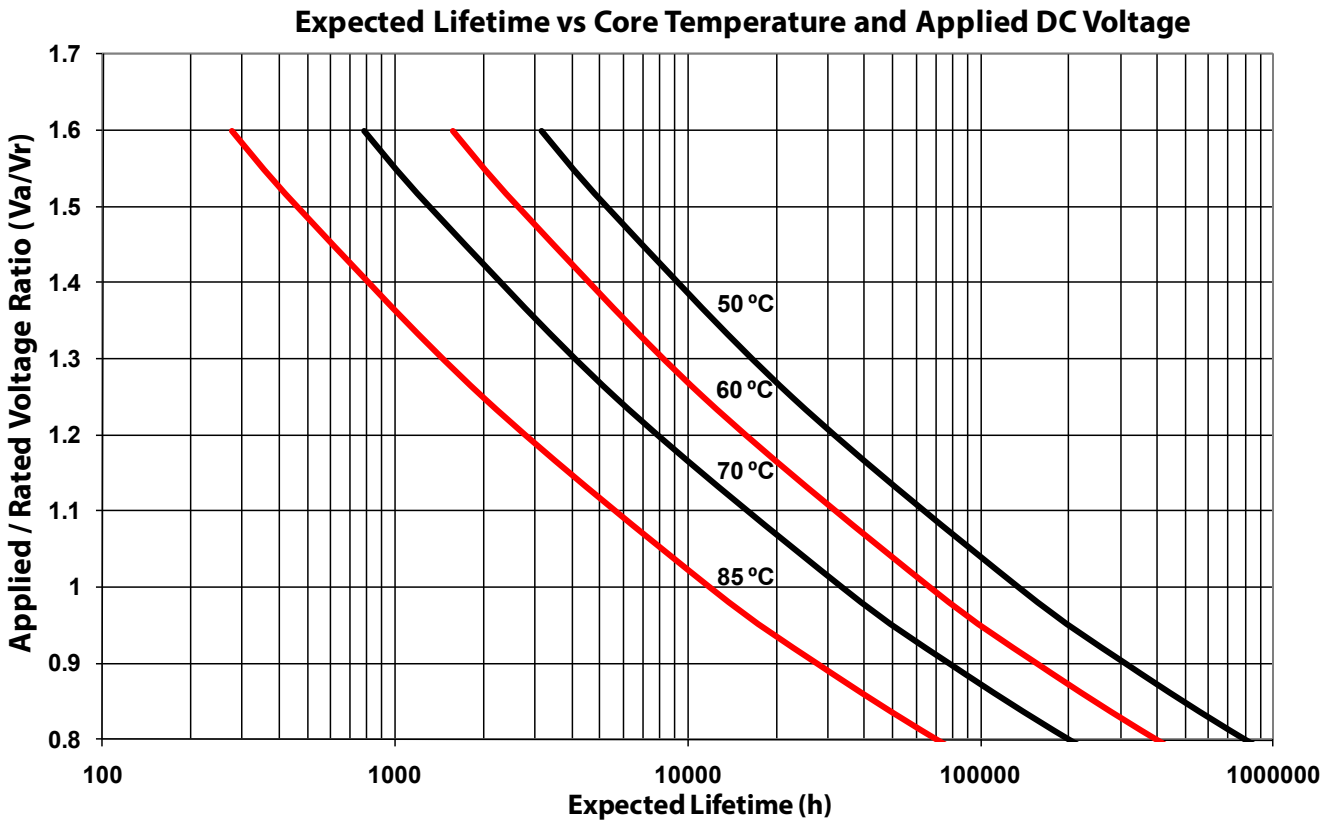
Ratings

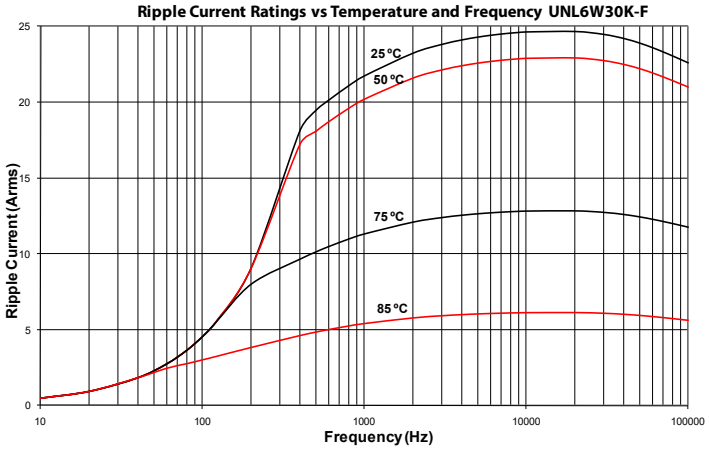
NOTE: Other ratings, sizes and performance specifications are available. Contact us.

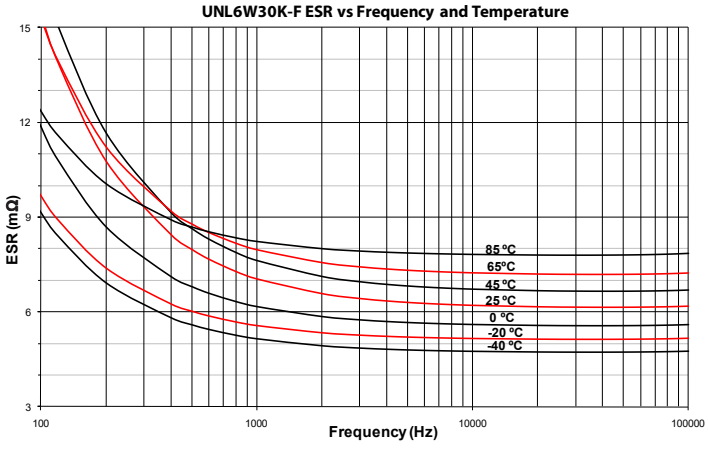
Catalog Part Number*	Cap (µF)	Rated Voltage (Vdc)	Dia. D (mm)	Height H (mm)	Typical ESR @ 100 kHz (mΩ)	dV/dt (V/µs)	Peak Current (A)	Ripple Current @ 100 kHz		
								25 °C (Arms)	50 °C (Arms)	75 °C (Arms)
UNL4W30K-F	30.0	400	35	53.7	6.0	30	900	24.2	19.4	14.6
UNL4W80K-F	80.0	400	50	63	5.0	25	2000	35.0	28.0	14.3
UNL5W35K-F	35.0	500	35	53.7	8.0	26	910	22.0	18.2	13.0
UNL5W100K-F	100.0	500	50	63	6.0	22	2200	31.8	25.4	13.2
UNL6W30K-F	30.0	600	35	53.7	9.0	30	900	20.7	17.0	12.0
UNL6W80K-F	80.0	600	50	63	6.5	25	2000	30.5	24.4	12.6
UNL7W20K-F	20.0	750	35	53.7	10.0	37	740	19.0	16.0	9.9
UNL7W50K-F	50.0	750	50	63	7.0	30	1500	29.4	23.5	12.0
UNL8W15K-F	15.0	800	35	53.7	10.0	42	630	18.8	15.0	9.8
UNL8W40K-F	40.0	800	50	63	7.5	35	1400	28.4	22.8	11.7
UNL9W13P5K-F	13.5	900	35	53.7	10.5	43	580	18.0	14.5	9.6
UNL9W35K-F	35.0	900	50	63	8.0	36	1260	27.5	22.0	11.3
UNL10W10K-F	10.0	1000	35	53.7	12.0	50	500	17.5	13.7	9.0
UNL10W25K-F	25.0	1000	50	63	8.5	40	1000	26.7	21.4	11.0
UNL12W7P5K-F	7.5	1200	35	53.7	13.5	60	450	16.0	12.0	8.4
UNL12W20K-F	20.0	1200	50	63	9.0	50	1000	26.0	20.7	10.7
UNL15W4P7K-F	4.7	1500	35	53.7	15.0	72	338	15.0	11.5	7.8
UNL15W13K-F	13.0	1500	50	63	10.0	60	780	24.6	19.7	10.1

***Add 'S' after 'K' for short pins**

Typical Performance Curves







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