Electronic Concepts

"Film Capacitor Innovation without Limits"

UL9 SERIES
Medium Power Film

DC "Link" Filter Capacitor

The UL9 is a metallized polypropylene film capacitor designed to handle the heavy load of power applications, typical in DC Link applications. The packaging incorporates mounting used in typical design, but can be customized to meet specific customer needs.

FEATURES
- Long Life > 100,000 Hours
- Cost Effective
- Low ESL & ESR
- High RMS Current Capability
- High Surge Voltage Capability, 1.5 x VDC 10s
- Surge Curent 1.5 x Ipk
- Ground Test: 5 kVDC for 10s
- Reference Mil-Std 202 & IEC 61071
- Flexible Construction
- RoHS compliant

STANDARD CONFIGURATION
- Male Screw Terminal
- Female Screw Terminal
- Low ESL Bus Mount Terminal
- IGBT Direct Mount Terminal

Specification Summary

Capacitance Range
380µF to 17,100µF

Capacitance Tolerance
Standard capacitance tolerance is ±10%. Tolerances of ±5% and ±20% are available on request.

Operating Temperature Range
-40°C to +85°C
Hot Spot Temperature Calculation: H.S. = Tamb + (I x I x Rs) x Rth.
Failure Rate: 100FIT

Enclosure/Construction
Metallized Polypropylene encapsulated in aluminum housing. Bus bar electrical mounting for low ESL & ESR.

Voltage Rating
700 VDC to 3000 VDC

Quality Control
Capacitors are tested 100% for:

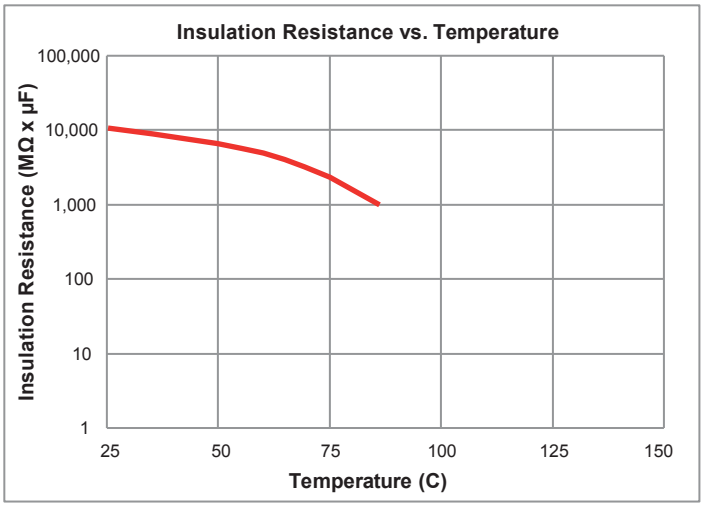
- Capacitance
- Tolerance
- Dissipation Factor
- Dielectric withstanding voltage
- Insulation Resistance
- Equivalent Series Resistance (ESR)

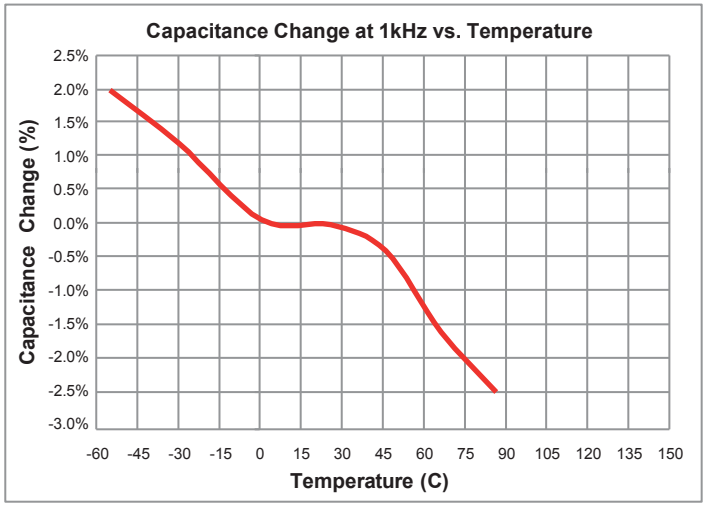
Process and inspection data are maintained on file and available on special request.

Environmental (Complies with IEC 61071)

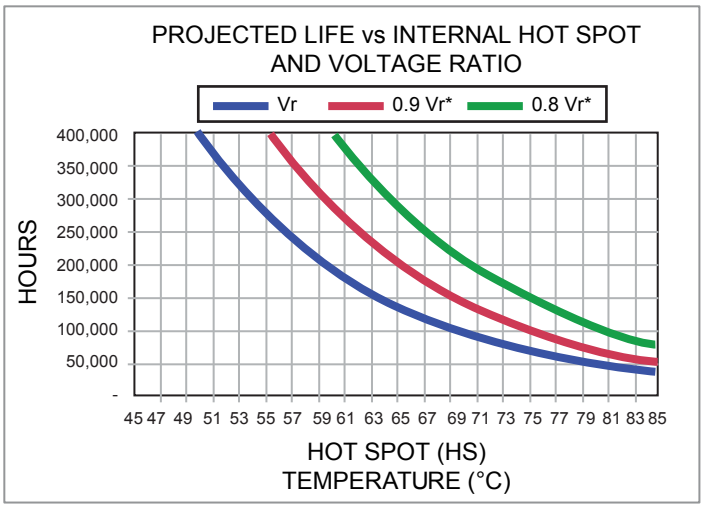
Parameter	Method	Condition
Vibration	204	D
Shock	213	I
Humidity	106	-
Thermal Shock	107	A
Life	108	F

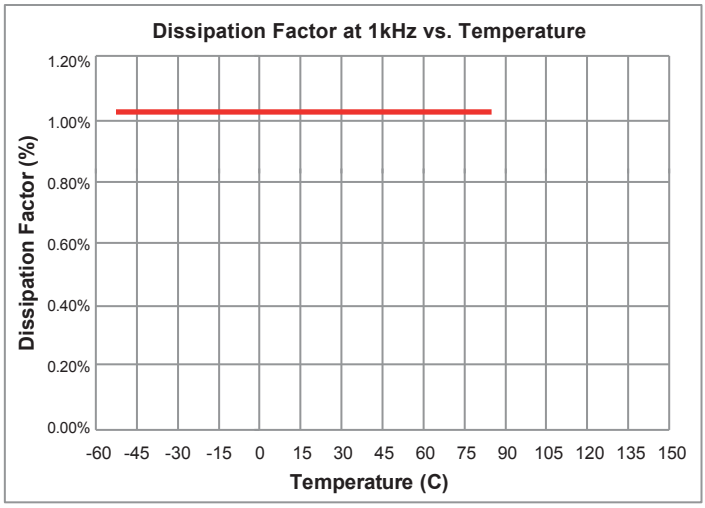
Characteristics





Dissipation Factor
Polypropylene has an intrinsic dissipation factor of less than 0.00021 over the operating temperature range and frequencies to 1MHz.





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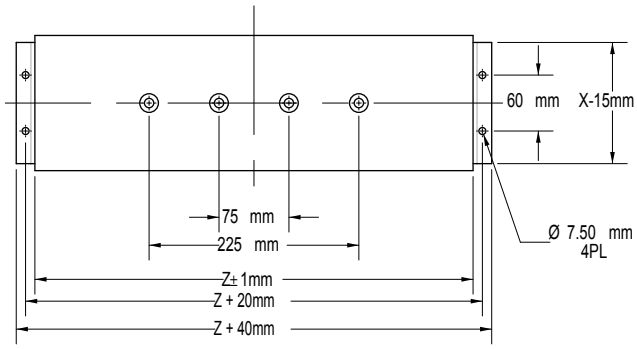
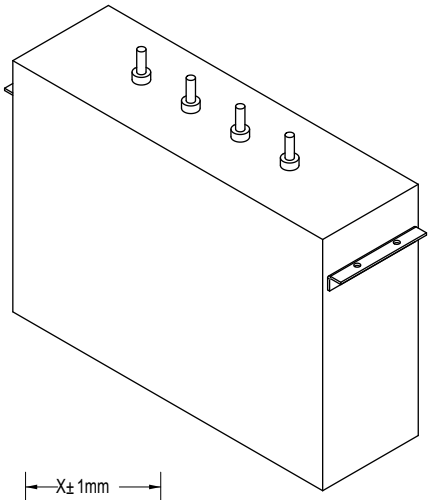
Detail Data

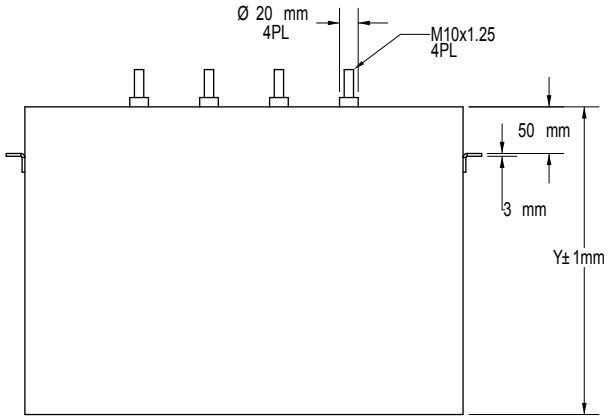
PART NUMBER	CAP µF	VDC	"X" (mm)	"Y" (mm)	"Z" (mm)	ESR mOhms	ESL nH	Fres kHz	I PEAK kAMPS	dv/dt (V/µs)	Irms AMPS	Rth °C/W
UL9_BE0688K	6800	700	95	330	320	0.15	<30	11.1	44	6.5	300	0.70
UL9_BE0928K	9200	700	120	330	320	0.20	<30	9.6	44	4.8	300	0.75
UL9_BE1388K	13800	700	120	330	470	0.15	<30	7.8	66	4.7	400	0.50
UL9_BE1718K	17100	700	145	330	470	0.20	<30	7.0	66	3.8	400	0.55
UL9_BJ0448K	4400	900	95	330	320	0.20	<30	13.8	70	16	300	0.65
UL9_BJ0608K	6000	900	120	330	320	0.22	<30	11.8	72	12	300	0.70
UL9_BJ0908K	9000	900	120	330	470	0.16	<30	9.6	100	11	400	0.45
UL9_BJ1148K	11400	900	145	330	470	0.20	<30	8.6	100	9	400	0.50
UL9_BM0308K	3000	1100	95	330	320	0.25	<30	16.8	60	20	300	0.65
UL9_BM0408K	4000	1100	120	330	320	0.31	<30	14.5	60	15	300	0.70
UL9_BM0608K	6000	1100	120	330	470	0.20	<30	11.8	90	15	400	0.45
UL9_BM0758K	7500	1100	145	330	470	0.23	<30	10.6	90	12	400	0.50
UL9_BN0258K	2500	1200	95	330	320	0.28	<30	18.4	55	22	300	0.65
UL9_BN0348K	3400	1200	120	330	320	0.34	<30	15.8	56	16	300	0.70
UL9_BN0518K	5100	1200	120	330	470	0.22	<30	12.9	84	16	400	0.45
UL9_BN0658K	6500	1200	145	330	470	0.26	<30	11.4	84	13	400	0.50
UL9_BT0148K	1400	1600	95	330	320	0.40	<30	24.5	40	28	250	0.65
UL9_BT0198K	1900	1600	120	330	320	0.47	<30	21.0	40	21	250	0.70
UL9_BT0288K	2800	1600	120	330	470	0.32	<30	17.4	60	21	350	0.45
UL9_BT0368K	3600	1600	145	330	470	0.37	<30	15.3	60	17	350	0.50
UL9_CA0907K	900	2000	95	330	320	0.55	<30	30.6	34	37	220	0.65
UL9_CA0128K	1200	2000	120	330	320	0.63	<30	26.0	32	27	220	0.70
UL9_CA0188K	1800	2000	120	330	470	0.42	<30	21.7	48	26	300	0.45
UL9_CA0238K	2300	2000	145	330	470	0.48	<30	19.2	48	21	300	0.50
UL9_CD0387K	380	3000	95	330	320	0.60	<30	47.1	11	28	170	0.70
UL9_CD0527K	520	3000	120	330	320	0.78	<30	40.3	11	21	170	0.60
UL9_CD0787K	780	3000	120	330	470	0.52	<30	32.9	16	20	240	0.40
UL9_CD0997K	990	3000	145	330	470	0.64	<30	29.2	16	16	210	0.50

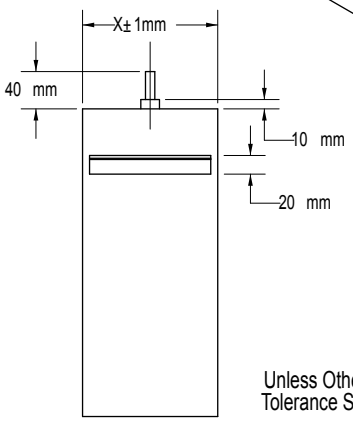
Style

UL91



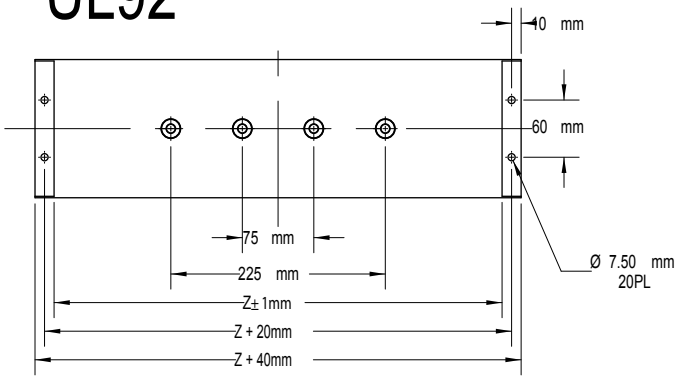


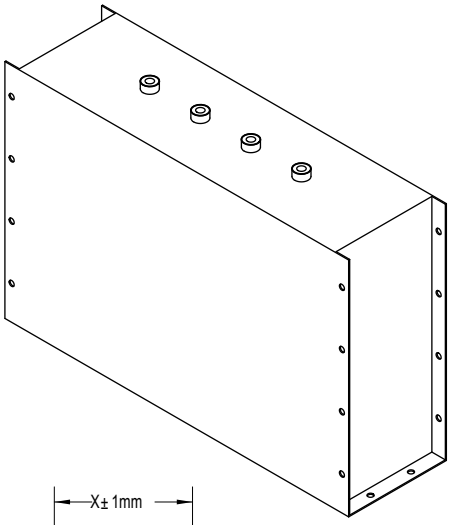


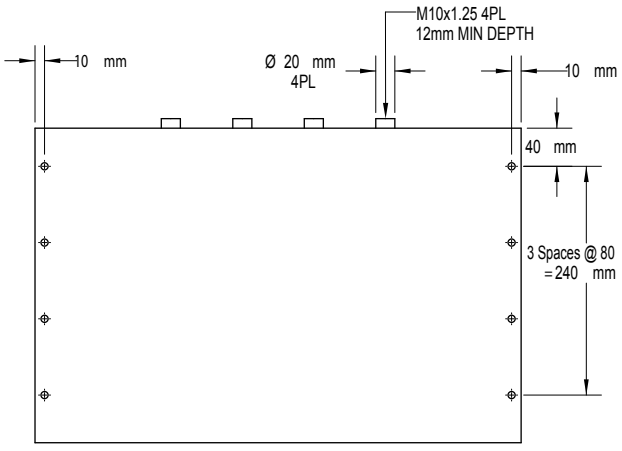


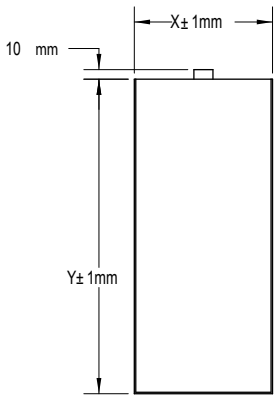
Unless Otherwise Specified the
Tolerance Shall be +/- 0.5mm

UL92









Mounting Bracket 1.5mm Thick
Unless Otherwise Specified the
Tolerance Shall be +/- 0.5mm

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Additional Information

The UL9 series uses the company's proven Unlytic® technology which significantly reduces weight and size optimized for DC power conversion. Additionally, the product incorporates traditional dry film "self-healing" properties, providing long life and reliability.

How to Order

TYPE Metallized Polypropylene →	**UL9**
STYLE 1=Male Screw, 2=Female Screw →	**1**
VOLTAGE DC Voltage Rating: BE=700VDC, BJ=900VDC, BM=1100VDC, BN=1200VDC, BT=1600VDC, CA=2000VDC, CD=3000VDC →	**BJ**
CAPACITANCE IN PICOFARADS The first two digits are significant, the third represents the number of zeros (e.g 448=4,400,000,000pF) →	**448**
TOLERANCE Standard tolerance is ±10%. Tolerances of ±5% and ±20% are available upon request. →	**K**

Marking And Date Code

All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type UL9, 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.

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