

### Medium Power DC Link Filter Capacitor

Proven replacements for electrolytic capacitor banks. Dry "self-healing" metallized polypropylene film capacitors.



#### FEATURES

- UL Recognized
- Long Life: > 100,000 Hours
- Low ESL & ESR
- High RMS Current Capability
- High Surge Voltage Capability: 1.5 x VDC
- Surge Current: 1.5 x Ipk
- Cost Effective Design
- Ground Test: 5 kVDC for 10s
- Reference MIL-STD 202 & IEC 61071
- Flexible, Dry Film Fully Encapsulated Construction
- RoHS compliant

#### STANDARD CONFIGURATION

- Female Terminals (Male terminals are optional)
- UP33 Bolt Mount Package
- UP30 Package Without Bolt Mount

# Specification Summary

## Capacitance Range

25µF to 2100µF

## Capacitance Tolerance

Standard capacitance tolerance is ±10%.  
(Other tolerances available on request.)

## Operating Temperature Range

-40°C to +85°C (+105°C upon special request)  
Hot Spot Temperature Calculation:  $H.S. = Tamb + (I^2 \times ESR) \times Rth$ .  
Failure Rate: 100FIT

## Enclosure/Construction

Aluminum housing with brass terminals, encased in a plastic cover

## Voltage Rating

600 VDC to 3000 VDC

## Quality Control

Capacitors are tested 100% for:

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

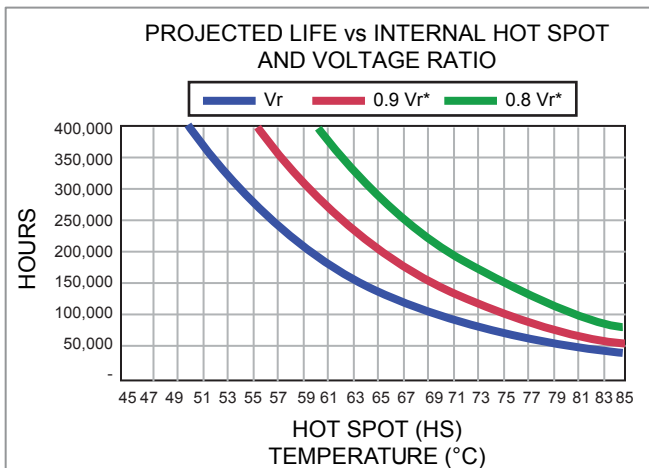
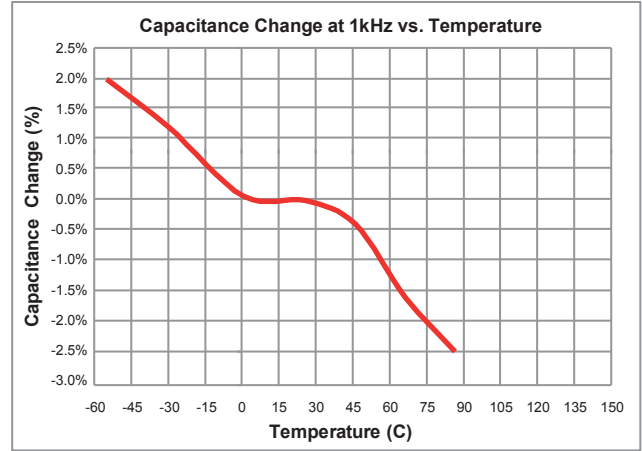
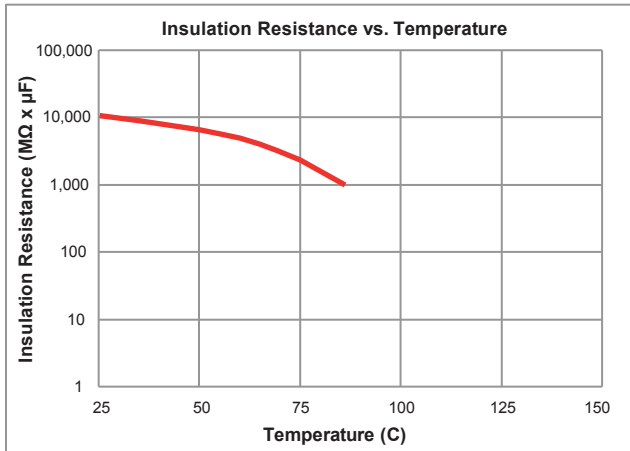
Process and inspection data are maintained on file and available upon special request.

## Environmental

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

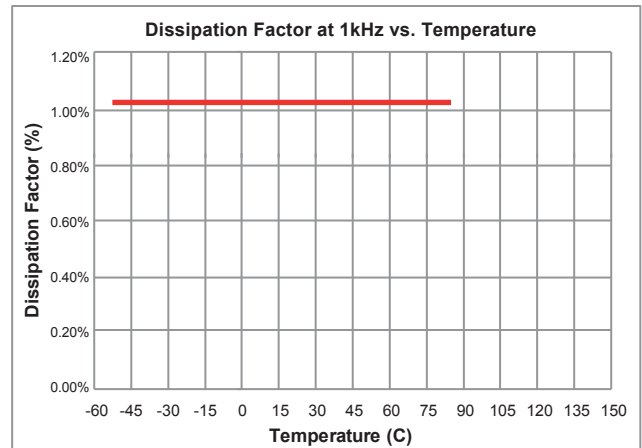
Complies with IEC 61071

# Characteristics



## Dissipation Factor

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



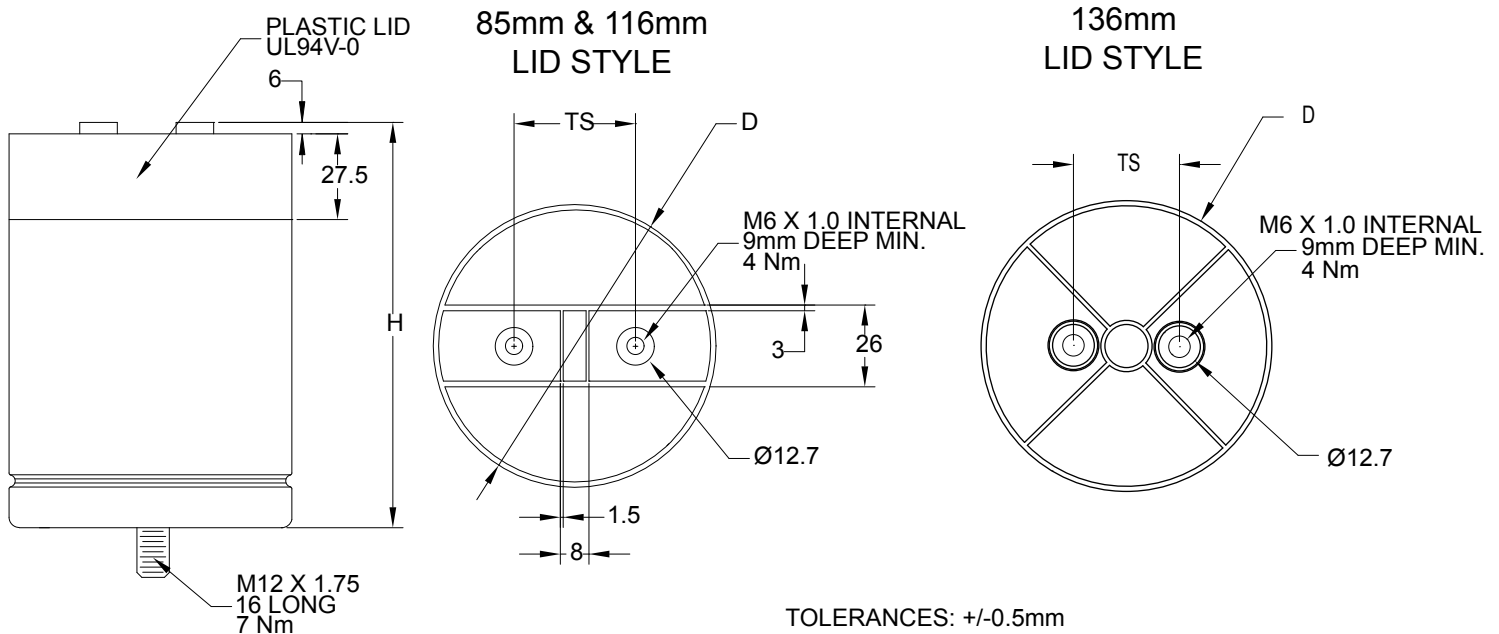
# Detail Data

PART NUMBER	VOLTAGE VDC	CAP μF	"D"	"H" (mm)	"TS"	ESR mOhms	ESL nH	Fres kHz	I PEAK AMPS	I MAX 70°C	dv/dt V/μs	Rth °C/W	WT KG	STYLE REF.
UP3_BC0375	600	375	90	110	50	2.5	50	36.7	5700	35	15.0	5.6	0.80	FIG. 2
UP3_BC0700	600	700	90	160	50	4.0	90	20.0	6100	30	20.0	5.2	1.10	FIG. 2
UP3_BE0660	700	660	85	135	32	2.5	40	18.7	6300	30	9.5	4.6	0.95	FIG. 1
UP3_BE1000	700	1000	85	190	32	1.0	50	24.9	12800	60	13.0	2.8	1.30	FIG. 1
UP3_BE1250	700	1250	116	135	50	1.4	40	13.6	12000	60	9.5	3.1	1.70	FIG. 1
UP3_BE1850	700	1850	116	190	50	0.6	50	18.3	23600	100	13.0	1.9	2.30	FIG. 1
UP3_BJ0250	900	250	90	110	50	3.0	50	45.0	4700	30	19.0	5.5	0.80	FIG. 2
UP3_BJ0450	900	450	90	160	50	5.0	90	25.0	4900	25	11.0	5.2	1.10	FIG. 2
UP3_BJ0620	900	620	85	190	32	1.3	60	31.6	10000	60	16.0	2.7	1.30	FIG. 1
UP3_BJ0750	900	750	116	135	50	1.7	40	17.5	9200	50	12.0	3.1	1.70	FIG. 1
UP3_BJ1140	900	1140	116	190	50	0.8	50	23.3	18400	100	16.0	1.8	2.30	FIG. 1
UP3_BJ1500	900	1500	116	235	50	0.9	60	17.5	18400	100	12.0	1.6	2.80	FIG. 1
UP3_BJ1050	900	1050	136	135	50	1.3	40	14.8	13000	60	12.0	2.5	2.20	FIG. 1
UP3_BJ1600	900	1600	136	190	50	0.6	50	19.7	26000	100	16.0	1.4	3.10	FIG. 1
UP3_BJ2100	900	2100	136	235	50	0.7	60	14.8	26000	100	12.0	1.3	3.80	FIG. 1
UP3_BM0420	1100	420	85	190	32	1.6	60	38.4	8400	60	20.0	2.7	1.30	FIG. 1
UP3_BM0510	1100	510	116	135	50	2.2	40	21.3	7600	45	16.0	3.1	1.70	FIG. 1
UP3_BM0760	1100	760	116	190	50	0.9	50	28.5	15200	100	20.0	1.8	2.30	FIG. 1
UP3_BM1020	1100	1020	116	235	50	1.1	60	21.3	15200	100	15.0	1.5	2.80	FIG. 1
UP3_BM0710	1100	710	136	135	50	1.5	40	17.8	11000	60	15.5	2.4	2.20	FIG. 1
UP3_BM1080	1100	1080	136	190	50	0.7	50	23.9	21600	100	20.0	1.4	3.10	FIG. 1
UP3_BM1420	1100	1420	136	235	50	0.9	60	18.0	21600	100	15.0	1.3	3.80	FIG. 1
UP3_BN0175	1200	175	90	110	50	3.6	50	53.8	4000	30	23.0	5.5	0.80	FIG. 2
UP3_BN0300	1200	300	90	160	50	6.2	90	30.6	3900	25	13.0	5.5	1.10	FIG. 2
UP3_BN0340	1200	340	85	190	32	1.8	60	42.6	7200	50	21.0	2.8	1.30	FIG. 1
UP3_BN0420	1200	420	116	135	50	2.4	40	23.4	7000	45	17.0	3.1	1.70	FIG. 1
UP3_BN0640	1200	640	116	190	50	1.0	50	31.1	14000	90	22.0	1.8	2.30	FIG. 1
UP3_BN0840	1200	840	116	235	50	1.2	60	23.4	14000	80	17.0	1.6	2.80	FIG. 1
UP3_BN0600	1200	600	136	135	50	1.7	40	19.6	10000	60	17.0	2.5	2.20	FIG. 1
UP3_BN0900	1200	900	136	190	50	0.7	50	26.2	19600	100	22.0	1.5	3.10	FIG. 1
UP3_BN1200	1200	1200	136	235	50	0.9	60	16.6	20000	100	17.0	1.2	3.80	FIG. 1
UP3_BR0125	1400	125	90	110	50	4.3	50	63.2	3400	25	27.0	5.5	0.80	FIG. 2
UP3_BR0175	1400	175	90	135	50	5.7	70	45.5	3400	25	19.0	4.5	0.90	FIG. 2
UP3_BR0225	1400	225	90	160	50	7.1	90	35.4	3400	20	15.0	5.3	1.10	FIG. 2
UP3_BT0125	1600	125	90	135	50	7.0	70	53.4	2800	25	22.0	4.6	0.90	FIG. 2
UP3_BT0175	1600	175	90	160	50	8.0	90	40.1	3000	20	17.0	5.2	1.10	FIG. 2
UP3_BT0230	1600	230	116	135	50	3.4	40	31.7	5000	35	22.0	3.2	1.70	FIG. 1
UP3_BT0460	1600	460	116	235	50	1.7	60	31.7	10000	70	22.0	1.6	2.80	FIG. 1
UP3_BT0210	1600	210	136	135	50	2.3	40	26.4	7200	50	22.0	2.5	2.20	FIG. 1
UP3_BT0500	1600	500	136	190	50	1.0	50	35.2	14400	100	29.0	1.5	3.10	FIG. 1
UP3_BT0660	1600	660	136	235	50	1.2	60	26.4	14400	100	22.0	1.3	3.80	FIG. 1
UP3_CA0150	2000	150	116	135	50	4.0	40	39.2	4000	30	27.0	3.1	1.70	FIG. 1
UP3_CA0300	2000	300	116	235	50	2.0	60	39.2	8000	65	27.0	1.6	2.80	FIG. 1
UP3_CA0210	2000	210	136	135	50	2.9	40	33.1	5800	40	27.5	2.5	2.20	FIG. 1
UP3_CA0320	2000	320	136	190	50	1.2	50	44.0	11600	90	36.0	1.3	3.10	FIG. 1
UP3_CA0420	2000	420	136	235	50	1.5	60	33.1	11600	90	28.0	1.3	3.80	FIG. 1
UP3_CD0025	3000	25	90	110	50	10.0	50	142.4	1400	15	57.0	8.1	0.80	FIG. 2
UP3_CD0035	3000	35	90	135	50	12.0	70	102.0	1400	15	42.0	6.6	0.90	FIG. 2
UP3_CD0045	3000	45	90	160	50	14.0	90	79.0	1400	14	33.0	5.6	1.10	FIG. 2
UP3_CD0065	3000	65	116	135	50	6.5	40	98.7	2700	25	41.5	3.7	1.70	FIG. 1
UP3_CD0130	3000	130	116	235	50	3.2	60	57.0	5400	50	41.5	1.9	2.80	FIG. 1
UP3_CD0095	3000	95	136	135	50	4.3	40	81.6	3800	35	40.0	2.9	2.20	FIG. 1
UP3_CD0145	3000	145	136	190	50	1.8	50	59.0	7600	70	52.0	1.7	3.10	FIG. 1
UP3_CD0190	3000	190	136	235	50	2.2	60	47.0	7600	70	40.0	1.5	3.80	FIG. 1

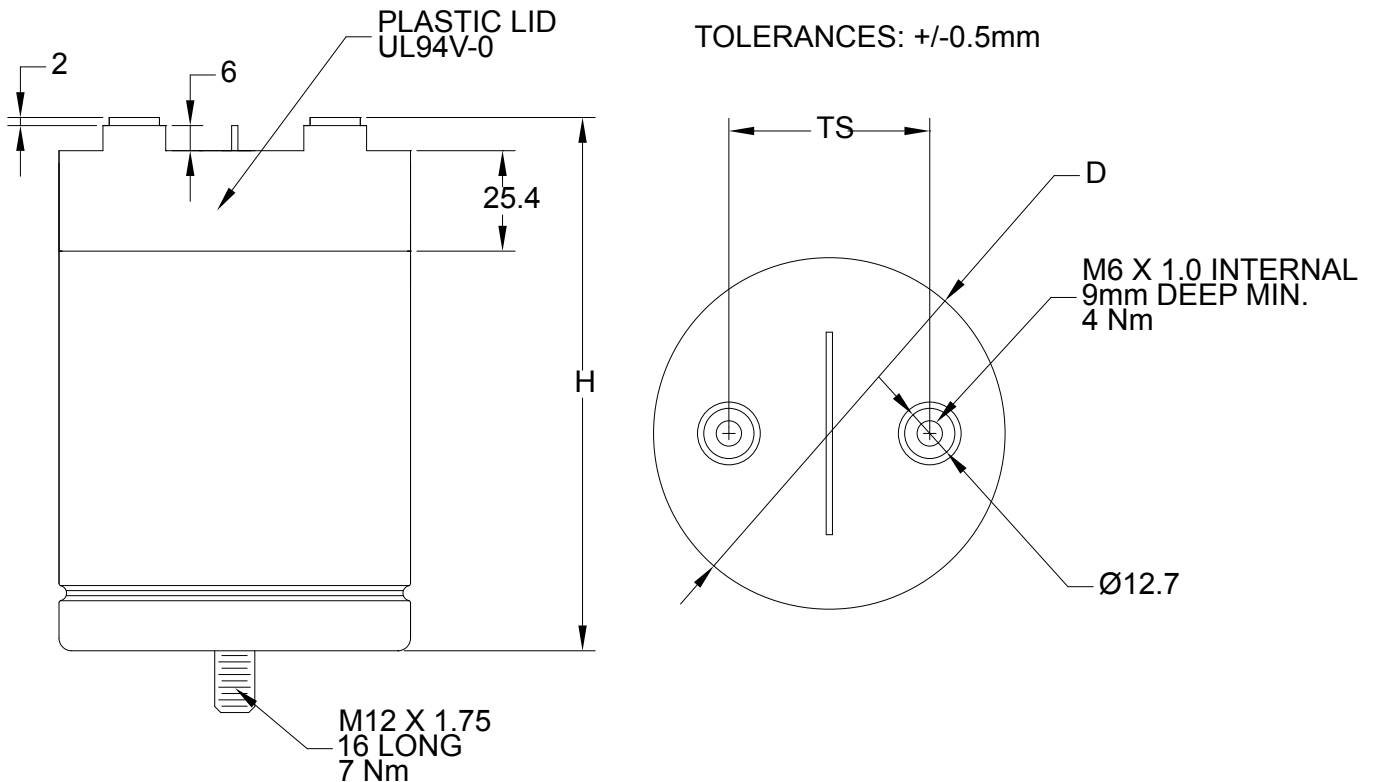
NOTE: The 4th character of the part number represents the STYLE: '3' - Bolt Mount Package; '0' - Package without Bolt Mount.

# STYLE

## FIGURE - 1



## FIGURE - 2



## Additional Information

The UP3 capacitor series further enhances the existing UL30 product offering. The UP3 incorporates the established UNLYTIC® film technology with new cost effective packaging, which provides higher storage capacity and voltage creepage protection. The solid plastic top adds more than a one inch gap between the case and terminal connections. The capacitor is isolated from the outer case, allowing for simple package and connection mounting. The product series is well suited for bulk DC storage, especially useful in DC link converter/inverter applications.

## How to Order

TYPE Metallized Polypropylene	→	<b>UP3</b>
STYLE '3' Bolt Mount Package : '0' Flat Mount (no bolt)	→	<b>0</b>
VOLTAGE DC Voltage Rating: BC=600VDC, BE=700VDC, BJ=900VDC, BM=1100VDC, BN=1200VDC, BR=1400VDC, BT=1600VDC, CA=2000VDC, CD=3000VDC	→	<b>BC</b>
CAPACITANCE IN MICROFARADS Capacitance in $\mu\text{F}$ (e.g. 0700 = 700 $\mu\text{F}$ )	→	<b>0700</b>

### Marking And Date Code

All capacitors are marked with company initials "EC", corporate logo or EC trademark—in addition to type UP3, 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

### United States Headquarters

Electronic Concepts, Inc.  
526 Industrial Way West  
Eatontown, NJ 07724  
Tel: 732-542-7880  
Fax: 732-542-0524

email: [sales@ecicaps.com](mailto:sales@ecicaps.com)  
website: [www.ecicaps.com](http://www.ecicaps.com)

### Distribution Center

Elcon Sales  
542 Industrial Way West  
Eatontown, NJ 07724  
Tel: 732-380-0405  
Fax: 732-380-0409

email: [sales@elconsales.com](mailto:sales@elconsales.com)

### European Headquarters

Electronic Concepts Europe LTD  
IDA Estate  
Oughterard  
Co. Galway  
Ireland  
tel: +353-91-552385,552432  
fax: +353-91-552387

email: [sales@ecicaps.ie](mailto:sales@ecicaps.ie)  
website: [www.electronicconcepts.ie](http://www.electronicconcepts.ie)

