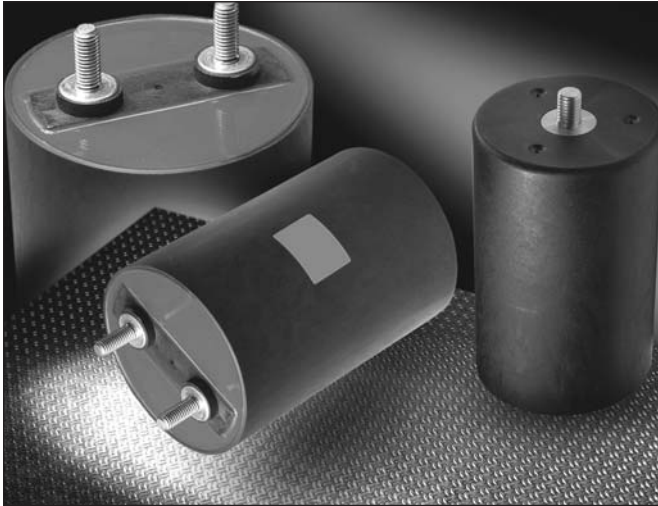


# Medium Power Film Capacitors



## FFLB Design

DC FILTERING



### APPLICATIONS

The FFLB is specifically designed for DC filtering, low reactive power.

### PACKAGING

Self-extinguishing plastic case (V-0 in accordance with UL 94; M2 in accordance with NFP 92-507; Type GET-30F in accordance with mil-M-24519) filled thermosetting resin.

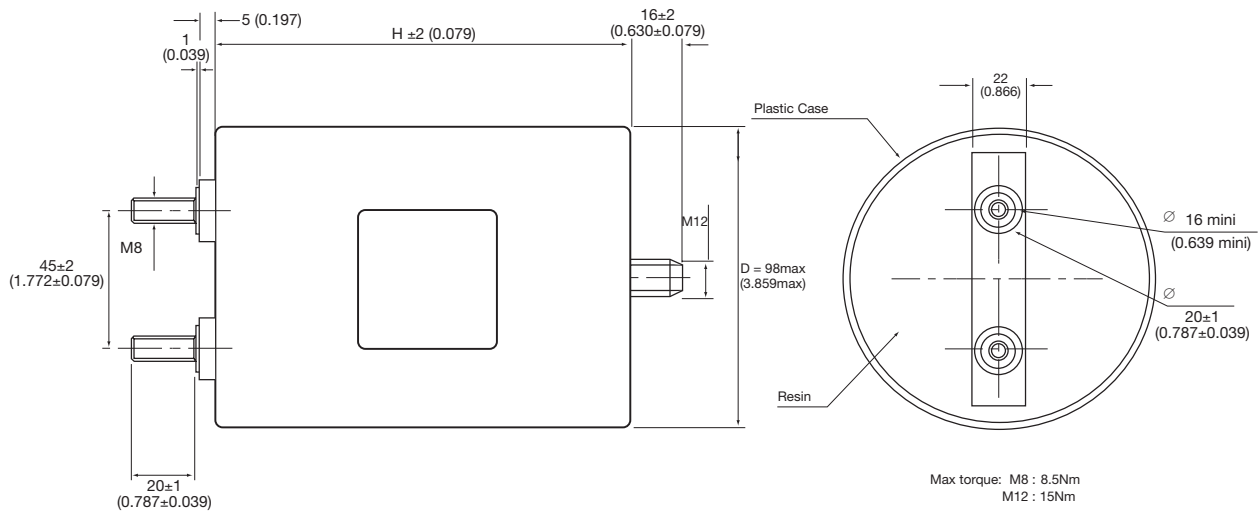
FFLB capacitors meet the level 2 requirement of the fire behavior standard NF F 16 102.

### PRESENTATION

Cylindric resin filled plastic case

2 x M8 terminals

Available with M5\*7.5 female terminal upon request (last codification digit "--" become in that case "JE")



### ELECTRICAL CHARACTERISTICS

Climatic Category	40/95/56 (IEC 60068)
Test Voltage Between Terminals	@ 25°C: $1.5 \times U_{dc}$ during 10s
Test Voltage Between Terminals and Case (Type test for FFLB, routine test for FFLC)	@ 25°C: @ 4 kVrms @ 50Hz during 1 min.
Standards	IEC 61071-1 IEC 61071-2: Power electronic capacitors IEC 60068-1: Environmental testing IEC 60077: Rules for electric traction equipment UL 94: Fire requirements NF F 16-101: Fire and smoke requirements NF F 16-102: Fire and smoke requirements

# Medium Power Film Capacitors



## FFLB Design

DC FILTERING

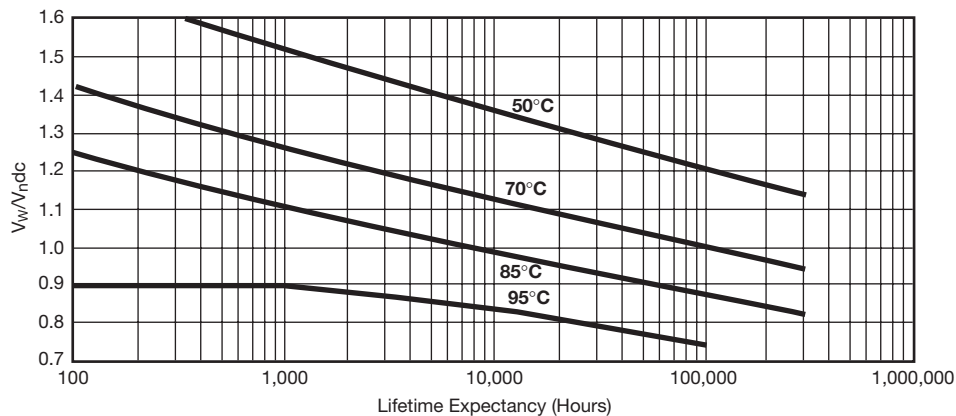
### ELECTRICAL CHARACTERISTICS

Capacitance Range $C_N$	58 $\mu$ F to 800 $\mu$ F
Tolerance on $C_N$	$\pm 10\%$
Rated DC Voltage $U_N$ dc	680 to 1900 V
Maximum rms Current $I_{rms}$ max	up to 60 Arms
Stray Inductance $L_s$	60 to 100 nH

### FFLB

Part Number	Capacitance ( $\mu$ F)	Height mm (in)	$I_{rms}$ (A)	$L_s$ (nH)	$R_s$ (m $\Omega$ )	$R_{th}$ ( $^{\circ}$ C/W)	Weight (kg)
<b><math>U_N</math> dc: 680 V</b>							
FFLB6A0807K--	800	170 (6.693)	45	100	6.5	3.2	1.5
FFLB6A0657K--	650	145 (5.709)	60	85	5.6	3.3	1.3
FFLB6A0387K--	380	97 (3.819)	60	60	3.6	3.4	0.9
<b><math>U_N</math> dc: 1000 V</b>							
FFLB6L0467K--	460	170 (6.693)	45	100	6.1	3.2	1.5
FFLB6L0397K--	390	145 (5.709)	60	85	5.2	3.3	1.3
FFLB6L0237K--	230	97 (3.819)	60	60	3.5	3.7	0.9
<b><math>U_N</math> dc: 1200 V</b>							
FFLB6U0327K--	320	170 (6.693)	45	100	7.2	3.2	1.5
FFLB6U0277K--	270	145 (5.709)	60	85	6.1	3.3	1.3
FFLB6U0167K--	160	97 (3.819)	60	60	4.1	3.7	0.9
<b><math>U_N</math> dc: 1900 V</b>							
FFLB6N1256K--	125	170 (6.693)	50	100	3.8	3.1	1.5
FFLB6N0107K--	100	145 (5.709)	55	85	3.4	3.3	1.3
FFLB6N0586K--	58	97 (3.819)	60	60	2.3	3.4	0.9

### LIFETIME EXPECTANCY vs HOT SPOT TEMPERATURE AND VOLTAGE



$V_w$ : permanent working or operating DC-voltage.

### HOT SPOT CALCULATION

$$\theta_{hot\ spot} = \theta_{ambient} + (P_d + P_t) \times R_{th}$$

with  $P_d$  (Dielectric losses) =  $Q \times tg\delta_0$   
 $\Rightarrow [ \frac{1}{2} \times C_n \times (V_{peak\ to\ peak})^2 \times f ] \times (2 \times 10^{-4})$   
 $P_t$  (Thermal losses) =  $R_s \times (I_{rms})^2$

where  $C_n$  in Farad  $I_{rms}$  in Ampere  $f$  in Hertz  $V$  in Volt  $R_s$  in Ohm  $\theta$  in  $^{\circ}$ C  $R_{th}$  in  $^{\circ}$ C/W

