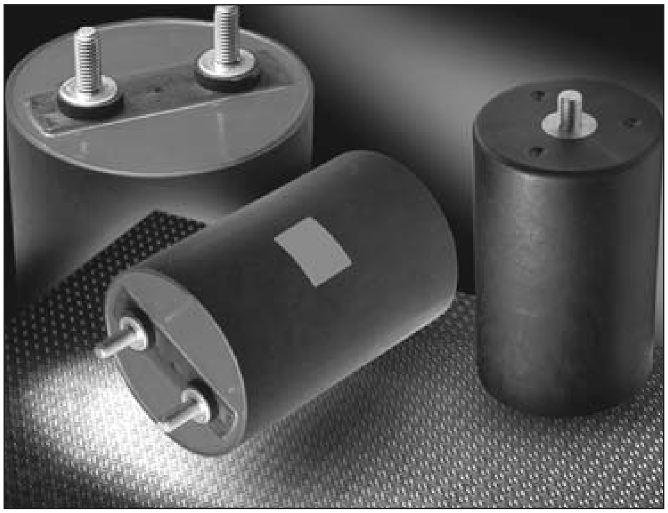
Medium Power Film Capacitors

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.

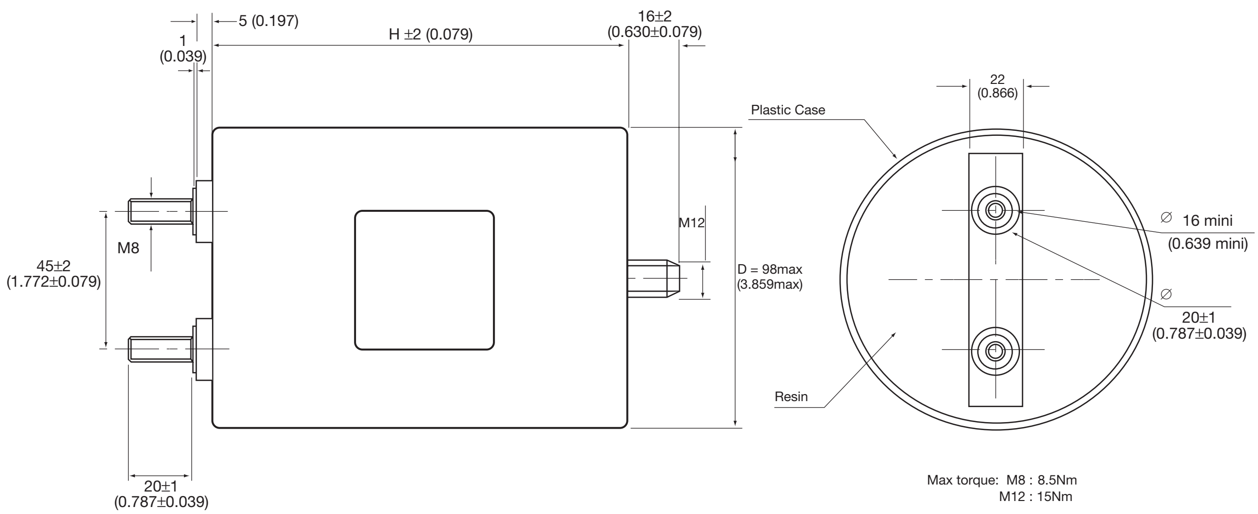
FFLB capacitors meet the level 2 requirement of the fire behavior standard NF F 16 102.

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 x $U_N$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

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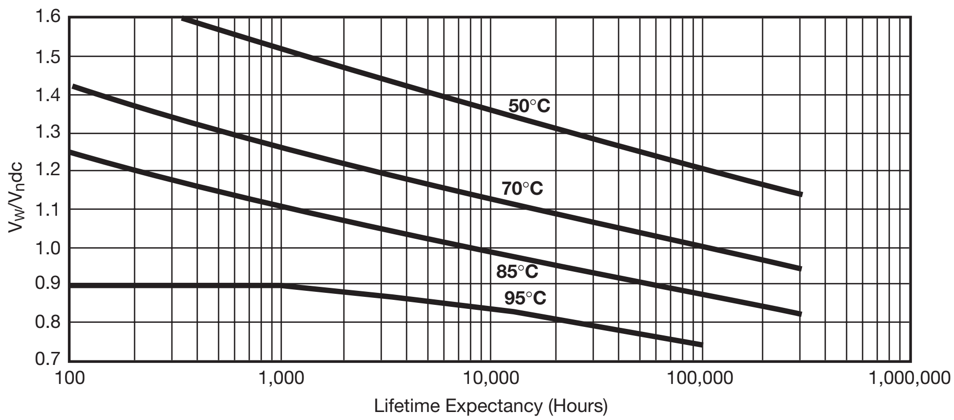
ELECTRICAL CHARACTERISTICS

Capacitance Range C_N	58 µF to 800 µF
Tolerance on C_N	±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 (µF)	Height mm (in)	Irms (A)	Ls (nH)	Rs (mΩ)	Rth (°C/W)	Weight (kg)
U_N dc: 680 V							
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
U_N dc: 1000 V							
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
U_N dc: 1200 V							
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
U_N dc: 1900 V							
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) = $Q \times tg\delta_0$

$\Rightarrow [\ ½ \times C_n \times (V_{peak\ to\ peak})^2 \times f\ ] \times (2 \times 10^{-4})$

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 θ in °C R_{th} in °C/W