

GENERAL DESCRIPTION

FD series use metallized dielectric, controlled self-healing technology, high specific energy.

USUAL APPLICATIONS

The FD capacitors are designed for discharge applications such as Laser, electronic flash, cardiac defibrillator, etc.

FD series offer a very high specific energy level, higher than 1500J per liter for cardiac defibrillator application.

ELECTRICAL CHARACTERISTICS

Operating temperature:	-55°C to +85°C
Storage temperature:	-55°C to +85°C
Capacitance range:	5µF to 150µF other values on request
Capacitance tolerance:	±10%
Nominal charging voltage:	1kV to 3kV higher voltage on request
Test voltage between terminals:	@ 25°C: 1.2 x U _{Ndc} during 10s
Test voltage between terminals and earth:	@ 25°C: 2 U _{Ndc} during 1 min (type test)

DISCHARGE

HOT SPOT CALCULATION

For all applications the temperature in the hot spot capacitor must be lower than 85°C

$$\theta_{\text{hot spot}} = \theta_{\text{ambient}} + (tg\delta_0 \times Q + R_s I_{\text{rms}}^2) \times R_{\text{th}}$$

with $tg\delta_0 = 2 \cdot 10^{-4}$ Q in Vars R_s in Ohm I_{rms} in Ampere R_{th} in °C/W

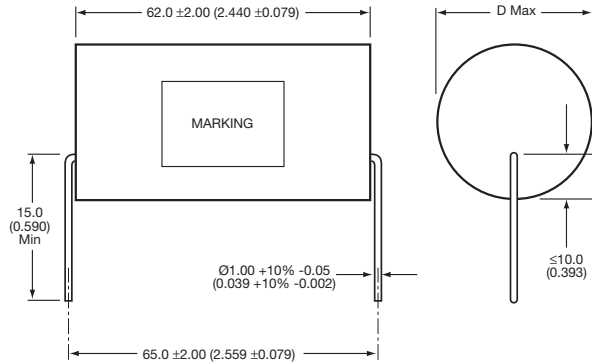
Medium Power Film Capacitors



FD Design

FDV1

PACKAGING

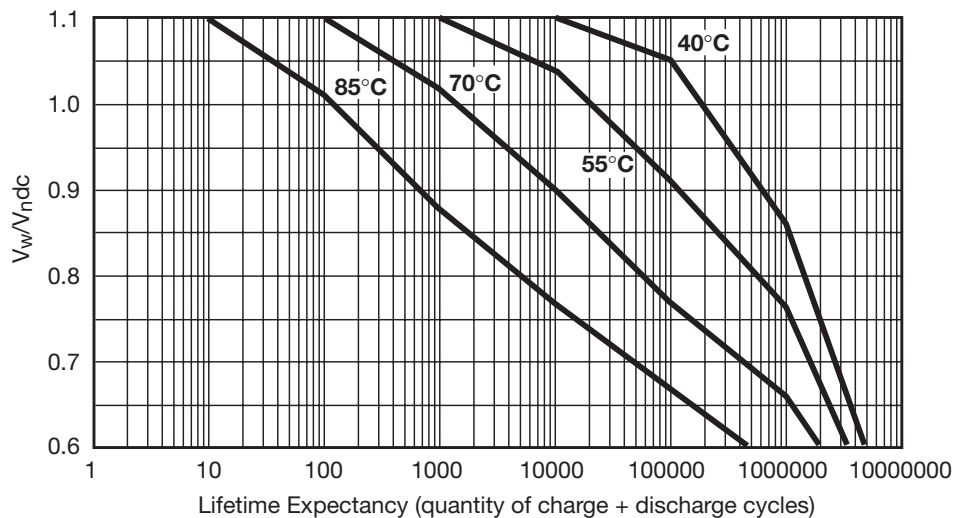


Cylindrical with thermosetting sleeve, sealed with polyurethane resin.

DISCHARGE

Capacitance (μF)	Max diameter mm (in)	I peak max (A)	I rms max (A)	R _s (mΩ)	R _{th} (°C/W)	Part Number
Uch = 1000V						
80	50 (1.969)	2500	12	6	15.9	FDV16L0806K--
60	44 (1.732)	2000	12	7.7	17.5	FDV16L0606K--
40	37 (1.457)	1300	10	11	18.2	FDV16L0406K--
20	28 (1.102)	650	5	21.1	17.3	FDV16L0206K--
Uch = 1400V						
50	51 (2.008)	2100	12	7.1	16	FDV16Q0506K--
30	41 (1.614)	1250	11.5	11.2	17.3	FDV16Q0306K--
20	35 (1.378)	800	7.5	16.3	18.4	FDV16Q0206K--
10	27 (1.063)	400	3.5	31.5	17.3	FDV16Q0106K--
Uch = 1700V						
35	51 (2.008)	1750	12	8.3	16	FDV16S0356K--
25	44 (1.732)	1250	12	11	17.2	FDV16S0256K--
15	35 (1.378)	750	7.5	18	18.5	FDV16S0156K--
5	24 (0.945)	250	2.5	51.9	15.9	FDV16S00505K--

LIFETIME EXPECTANCY vs VOLTAGE AND HOT SPOT TEMPERATURE



V_w: operating or working charge voltage

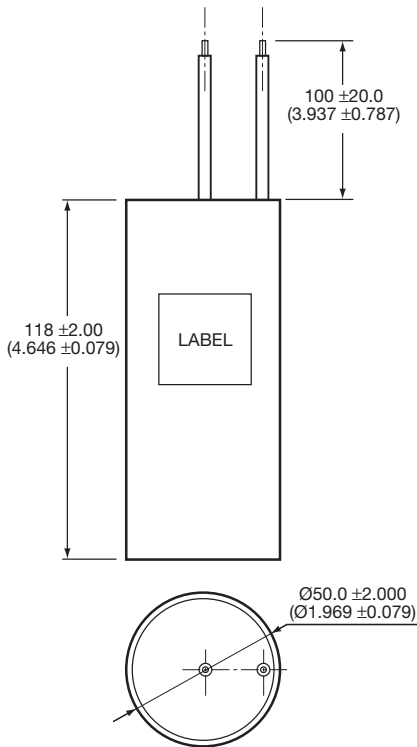


Medium Power Film Capacitors



FD Design

FDBB



DESIGN

Cylindrical plastic case filled with polyurethane resin

LIFETIME EXPECTANCY

7500 shots under 35°C hot spot temperature, reversal voltage = 10% max, charge duration 1s, hold time 1s

SPECIFIC PRODUCTS

For all other voltages, values, specific proposal will be done.

Requested elements:

- *Voltage charge
- *Reversal voltage
- *Voltage hold time
- *Discharge rate
- *Discharge time
- *Charge time
- *Lifetime
- *Temperature of use

Capacitance (µF)	Energy Joule	Energy Density (J/l)	I peak max (A)	Part Number
1800 Volts				
150	243	1062	2800	FDBB6S0157K--
2500 Volts				
100	312.5	1366	2300	FDBB6P0107K--
3000 Volts				
70	315	1377	2000	FDBB6X0706K--

DISCHARGE