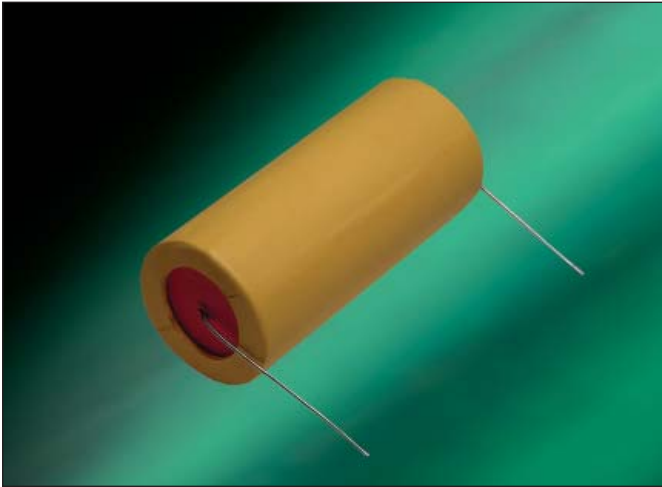


Medium Power Film Capacitors



FD (RoHS Compliant)



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.

PACKAGING MATERIAL

Cylindrical with thermosetting sleeve, sealed with polyurethane resin.

HOT SPOT CALCULATION

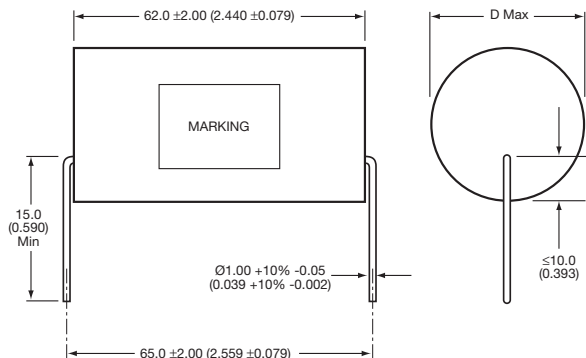
See Hot Spot Temperature page 3.

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

DIMENSIONS



DISCHARGE

HOW TO ORDER

FD	V1	6	L	0806	K	--
Series	Style	Dielectric 6 = Polypropylene	Voltage Code L = 1000V Q = 1400V S = 1700V	Capacitance Code 0 = pF code 0806 = 80µF 0206 = 20µF 0505 = 5.0µF etc.	Capacitance Tolerances K = ±10%	Terminal Code -- = Standard



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ELECTRICAL CHARACTERISTICS

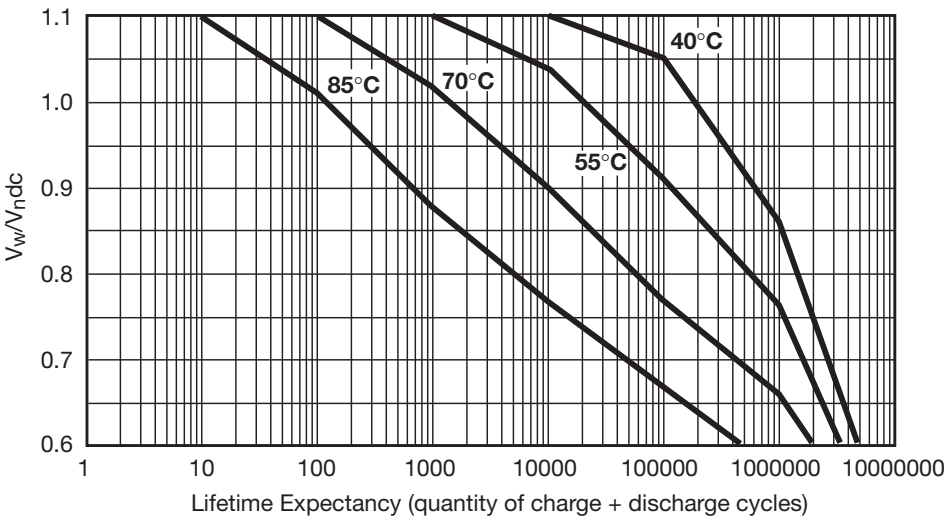
Operating temperature:	-55°C to +85°C
Storage temperature:	-55°C to +85°C
Capacitance range:	5µF to 80µF other values on request
Capacitance tolerance:	±10%
Nominal charging voltage:	1kV to 1.7kV higher voltage on request
Test voltage between terminals:	@ 25°C: 1.2 x U _{Ndc} during 10s
Test voltage between terminals and earth:	@ 25°C: 2 U _{Ndc} during 1 min (type test)
Dielectric	Polypropylene

RATINGS AND PART NUMBER REFERENCE

Part Number	Capacitance (µF)	Max diameter mm (in)	I peak max (A)	Irms max (A)	R _s (mΩ)	R _{th} (°C/W)	Typical Weight (g)
U_{ch} = 1000V (Voltage Code L)							
FDV16L0806K--	80	50 (1.969)	2500	12	6	15.9	170
FDV16L0606K--	60	44 (1.732)	2000	12	7.7	17.5	135
FDV16L0406K--	40	37 (1.457)	1300	10	11	18.2	95
FDV16L0206K--	20	28 (1.102)	650	5	21.1	17.3	55
U_{ch} = 1400V (Voltage Code Q)							
FDV16Q0506K--	50	51 (2.008)	2100	12	7.1	16	170
FDV16Q0306K--	30	41 (1.614)	1250	11.5	11.2	17.3	135
FDV16Q0206K--	20	35 (1.378)	800	7.5	16.3	18.4	95
FDV16Q0106K--	10	27 (1.063)	400	3.5	31.5	17.3	55
U_{ch} = 1700V (Voltage Code S)							
FDV16S0356K--	35	51 (2.008)	1750	12	8.3	16	170
FDV16S0256K--	25	44 (1.732)	1250	12	11	17.2	135
FDV16S0156K--	15	35 (1.378)	750	7.5	18	18.5	95
FDV16S0056K--	5	24 (0.945)	250	2.5	51.9	15.9	55

DISCHARGE

LIFETIME EXPECTANCY vs VOLTAGE AND HOT SPOT TEMPERATURE



V_w : operating or working charge voltage

