Power Electronic : DC Voltage rated

PCT : Polyester
PCP : Polypropylene

Polypropylene and polyester power capacitors housed in aluminium cases offering the maximum size options. Suited to applications such as high frequency filtering, thyristor commutation, energy storage in SMPS and inverter circuits.

Full text description

The PCT (polyester) and PCP (polypropylene) ranges have been developed to meet the needs of circuit designers working in the field of power electronics who require capacitors with low loss, good environmental capability, flexibility of design and easy mounting.

The devices are ideal for applications such as thyristor commutation, high frequency filtering, energy storage in switch mode power supplies and inverter circuits.

The PCT/PCP ranges are housed in aluminium cans with screw terminals or flying leads. Base mounting studs are available if required and most values are available with alternative aspect ratios (the ratio of diameter to length) to suit individual applications. Thus the circuit designer is provided with the maximum number of choices in order to optimise his designs.

Technical details

Capacitance range	Polypropylene : 5μF - 300μF Polyester : 5μF - 500μF See size chart for details
Tolerance	±10% standard. Others by request
Dissipation factor	Polypropylene ≤ 0.001 @ 1KHz & 20±3°C Polyester ≤ 0.008 @ 1KHz & 20±3°C
Insulation resistance	≥ 10^4MΩ-μF @ rated voltage and 20±3°C
Rated voltage	Polypropylene : 160V, 250V, 400V & 700V dc Polyester : 63V, 100V, 160V, 250V 400V & 700Vdc
Pulse performance	See table. Ratings assume linear change to / from rated voltage

Temperature range	-40 to +85°C
Environmental category	40/85/21 to EN60068 - 1 (IEC68 - 1)
Proof voltage test	1.5 x rated voltage for 30s. Not to be repeated.
RMS current rating	Dependant upon several factors, including rated voltage, waveform and heat sinking but typically 50 - 100A. Contact our Technical Department for further advice

Size chart : Power Electronic : **PCT & PCP**

LETTER	DIA (±0.5)	L (±1)
A	50	70
B	63.5	70
C	76	70
D	50	110
E	63.5	110
F	76	110
G	50	145
H	63.5	145
I	76	145

	PCP : Polypropylene				PCT : Polyester					
CAP (µF)	160	250	400	700	63	100	160	250	400	700
5			A	A						A
10			A	B, D					A	B, D
15		A	B, D	B, D					A	C, E, G
20		A	B, D	C, E, G				A	B, D	E, G
25	A	B, D	C, E, G	E				A	B, D	F, H
30	A	B, D	C, E, G	E				A	D	F, H
40	A	D	E	F, H				B, D	C, E, G	H
50	B, D	C, E, G	F, H	F			A	B, D	E	I
60	B, D	E	F	I			A	D	F, H	I
70	B, D	E	F				A	C, E, G	F, H	
80	B, D	F, H	I				A	C, E, G	F, H	
90	D	F, H	I			A	B, D	E	F	
100	C, E, G	F	I			A	B, D	E	I	
125	E, G	I			A	B, D	B, D	F, H	I	
150	E, H	I			A	B, D	B, D	I		
175	F, H	I			B, D	B, D	C, E, G	I		
200	F, H				B, D	C, D	C, E, G	I		
250	I				B, D	C, G	E			
300	I				C, D	C, E, G	E			
400					C, E	F, H	F, H			
500					E	F, H	I			

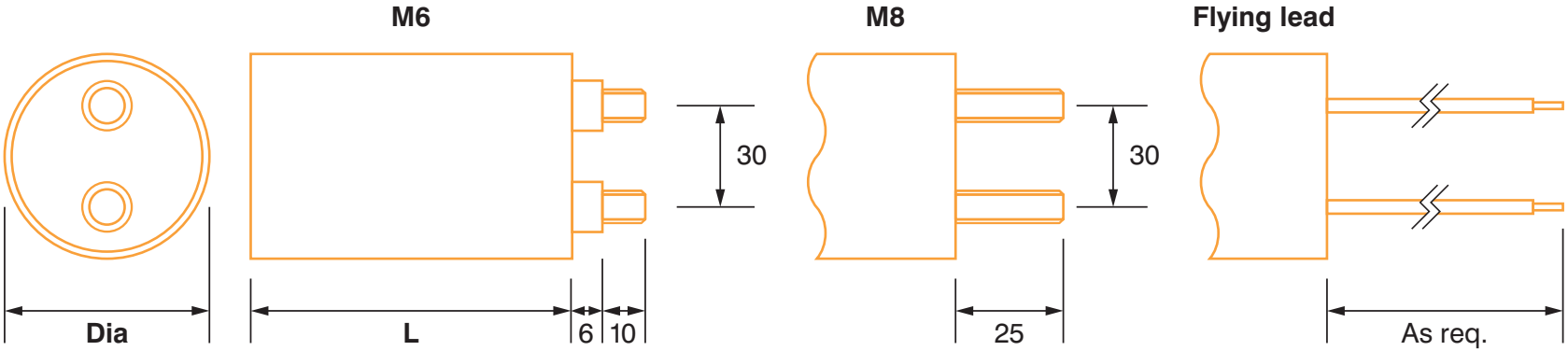
Pulse performance

Case letter	Rated voltage (Vdc) 63V ▲	100V ▲	160V ▲	160V ●	250V ▲	250V ●	400V ▲	400V ●	630V ▲	630V ●
A, B, C, D, E, F	2	2.6	3	10	5	15	7	20	11	30
G, H, I	1.5	2	2.5	7.5	4	12	5	15	7.5	22

▲ Polyester ● Polypropylene

Maximum rates of change of Voltage dV/dt (V/μS)
Figures quoted in the chart above assume linear charge/discharge to / from rated voltage.
When applied voltage (V_A) is less than the rated voltage (V_R) the rating may be increased by a factor V_R/V_A.

Outline dimensions



Outline dimensions in mm ±0.3

Ordering details

PCT 50µ K 250V -D/8/S

Type	Cap Value in µF	Tolerance	Rated Voltage dc	Options:
T = Polyester P = Polypropylene		M=±20% K=±10% J=±5% G=±2%† F=±1%†		First digit - size code Second digit - terminals 8 = M8, 6= m6 F = flying lead Third digit-S = Base stud (M8 x 10)

Note: when specifying flying leads, the type of lead (size, braid or PVC etc) should be fully stated

Contact details

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