

Film Capacitors for Power Electronics



KEY BENEFITS

- High CV product (1 μ F up to 400 μ F; 450 V up to 1200 V)
- Long lifetime (100 000 h at U_{NDC} and 70 °C)
- High ripple current capabilities up to 54 A
- Operating temperature up to 105 °C
- Slim version available

APPLICATIONS

- Renewable energy sources: solar, wind, and waves power
- HEV/EV: powertrain and on-board chargers
- Power supplies: UPS, battery chargers
- Motor drives: pumps, forklifts
- Others: welding equipment

RESOURCES

- Datasheet: MKP1848 DC-Link - <http://www.vishay.com/doc?28164>
- For technical questions contact dc-film@vishay.com



APPLICATIONS

High-performance DC filtering applications

REFERENCE STANDARDS

IEC 61071
IEC 60068

FEATURES

AEC-Q200 qualified – Automotive Grade

RATED CAPACITANCE

1 μ F to 400 μ F

CAPACITANCE TOLERANCE

$\pm 5\%$

MAXIMUM APPLICABLE PEAK TO PEAK RIPPLE VOLTAGE

$0.2 \times U_{NDC}$

SELF INDUCTANCE (Ls)

< 1 nH per mm of lead spacing

RATED TEMPERATURE

85 °C

MAXIMUM PERMISSIBLE CASE TEMPERATURE

105 °C, observing voltage derating

LIFETIME EXPECTANCY

Useful lifetime: > 100 000 h at U_{NDC} and 70 °C

FIT: < 10×10^{-9} /h (10 per 10^9 component hours) at $0.5 \times U_{NDC}$, 40 °C

RANGE

Pitch (mm):	27.5	37.5	52.5
Dimensions (w x h x l) mm:	(9.0 x 19.0 x 32.0) - (20.0 x 35.0 x 32.0)	(18.5 x 35.5 x 43.0) - (30.0 x 45.0 x 42.0)	(25.0 x 45.0 x 57.5) - (45.0 x 45.0 x 57.5)

	Pitch (mm)	C (μ F)																																							
		1	2	3	4	5	6	7	8	9	10	12	15	20	22	25	30	35	40	50	55	60	65	70	75	80	90	95	100	120	140	160	200	240	320	400					
450 V_{NDC} at 85 °C 500 V _{OPDC} at 70 °C 300 V _{OPDC} at 105 °C	27.5	█																																							
	37.5																																								
	52.5																																							6p*	12p*
700 V_{NDC} at 85 °C 800 V _{OPDC} at 70 °C 500 V _{OPDC} at 105 °C	27.5	█																																							
	37.5																																								
	52.5																																							6p*	12p*
800 V_{NDC} at 85 °C 900 V _{OPDC} at 70 °C 570 V _{OPDC} at 105 °C	27.5	█																																							
	37.5																																								
	52.5																																							6p*	12p*
900 V_{NDC} at 85 °C 1100 V _{OPDC} at 70 °C 650 V _{OPDC} at 105 °C	27.5	█																																							
	37.5																																								
	52.5																																							6p*	12p*
1100 V_{NDC} at 85 °C 1350 V _{OPDC} at 70 °C 800 V _{OPDC} at 105 °C	27.5	█																																							
	37.5																																								
	52.5																																							6p*	6p*
1200 V_{NDC} at 85 °C 1500 V _{OPDC} at 70 °C 850 V _{OPDC} at 105 °C	27.5	█																																							
	37.5																																								
	52.5																																							6p*	12p*

6p* – 6 pin version; Dimensions: (70.0 x 65.0 x 57.5) mm; 12p* – 12 pin version; Dimensions: (130.0 x 65.0 x 57.5) mm

