

## Film Capacitors for Power Electronics



### KEY BENEFITS

- High CV product (1  $\mu\text{F}$  up to 400  $\mu\text{F}$ ; 450 V up to 1200 V)
- Long lifetime (100 000 h at  $U_{\text{NDC}}$  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](mailto:dc-film@vishay.com)



# FILM CAPACITORS

## MKP1848 DC-Link



Capacitors - Film Capacitors for Power Electronics

### APPLICATIONS

High-performance DC filtering applications

### REFERENCE STANDARDS

IEC 61071  
IEC 60068

### FEATURES

AEC-Q200 qualified – Automotive Grade

### RATED CAPACITANCE

1  $\mu\text{F}$  to 400  $\mu\text{F}$

### CAPACITANCE TOLERANCE

$\pm 5\%$

### MAXIMUM APPLICABLE PEAK TO PEAK RIPPLE VOLTAGE

$0.2 \times U_{\text{NDC}}$

### SELF INDUCTANCE (Ls)

$< 1 \text{ nH}$  per mm of lead spacing

### RATED TEMPERATURE

85  $^{\circ}\text{C}$

### MAXIMUM PERMISSIBLE CASE TEMPERATURE

105  $^{\circ}\text{C}$ , observing voltage derating

### LIFETIME EXPECTANCY

Useful lifetime:  $> 100\,000 \text{ h}$  at  $U_{\text{NDC}}$  and 70  $^{\circ}\text{C}$

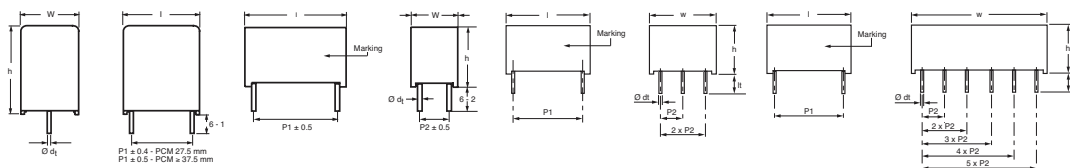
FIT:  $< 10 \times 10^{-9}/\text{h}$  (10 per  $10^9$  component hours) at  $0.5 \times U_{\text{NDC}}$ , 40  $^{\circ}\text{C}$

### 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 ( $\mu\text{F}$ )																																
		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
<b>450 <math>V_{\text{NDC}}</math> at 85 <math>^{\circ}\text{C}</math></b> 500 $V_{\text{OPDC}}$ at 70 $^{\circ}\text{C}$ 300 $V_{\text{OPDC}}$ at 105 $^{\circ}\text{C}$	27.5																																	
	37.5																																	
	52.5																					6p*								12p*				
<b>700 <math>V_{\text{NDC}}</math> at 85 <math>^{\circ}\text{C}</math></b> 800 $V_{\text{OPDC}}$ at 70 $^{\circ}\text{C}$ 500 $V_{\text{OPDC}}$ at 105 $^{\circ}\text{C}$	27.5																																	
	37.5																																	
	52.5																					6p*								12p*				
<b>800 <math>V_{\text{NDC}}</math> at 85 <math>^{\circ}\text{C}</math></b> 900 $V_{\text{OPDC}}$ at 70 $^{\circ}\text{C}$ 570 $V_{\text{OPDC}}$ at 105 $^{\circ}\text{C}$	27.5																																	
	37.5																																	
	52.5																					6p*								12p*				
<b>900 <math>V_{\text{NDC}}</math> at 85 <math>^{\circ}\text{C}</math></b> 1100 $V_{\text{OPDC}}$ at 70 $^{\circ}\text{C}$ 650 $V_{\text{OPDC}}$ at 105 $^{\circ}\text{C}$	27.5																																	
	37.5																																	
	52.5																					6p*								12p*				
<b>1100 <math>V_{\text{NDC}}</math> at 85 <math>^{\circ}\text{C}</math></b> 1350 $V_{\text{OPDC}}$ at 70 $^{\circ}\text{C}$ 800 $V_{\text{OPDC}}$ at 105 $^{\circ}\text{C}$	27.5																																	
	37.5																																	
	52.5																					6p*								6p*	12p*			
<b>1200 <math>V_{\text{NDC}}</math> at 85 <math>^{\circ}\text{C}</math></b> 1500 $V_{\text{OPDC}}$ at 70 $^{\circ}\text{C}$ 850 $V_{\text{OPDC}}$ at 105 $^{\circ}\text{C}$	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



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[>>Vishay\(威世\)](#)

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