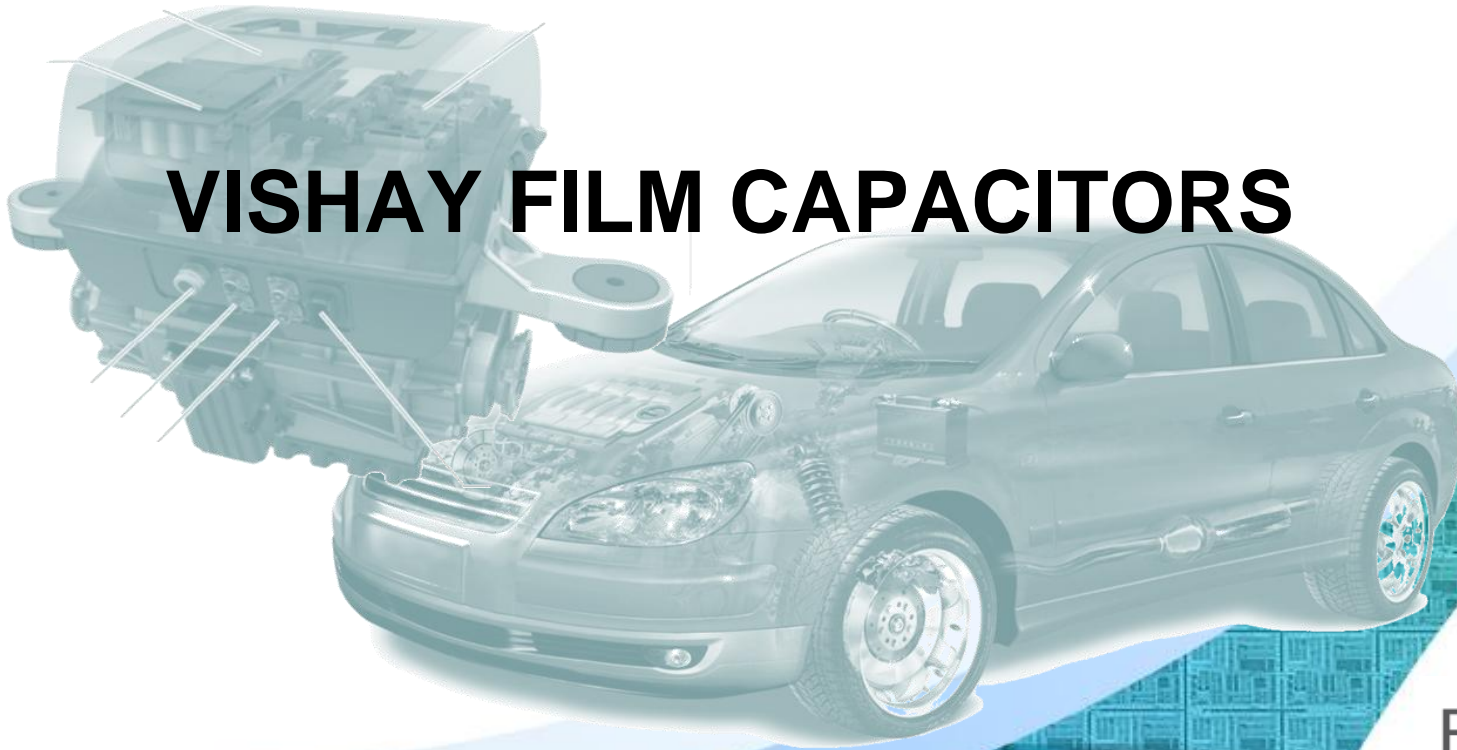




One of the World's Largest Manufacturers of  
**Discrete Semiconductors and Passive Components**

## *Automotive Portfolio*



# VISHAY FILM CAPACITORS

Build **Vishay**  
into your **Design**

Helder Carneiro  
Vishay Film Capacitors  
Product Marketing

# MKP 1848 DC-Link

## APPLICATIONS

High performance DC filtering applications

## FEATURES

AEC-Q200 qualified – Automotive Grade  
RoHS-compliant product

## RATED CAPACITANCE

1  $\mu$ F to 400  $\mu$ F

## CAPACITANCE TOLERANCE

$\pm$  5%

## RANGE

$U_{NDC}$		450V	700V	800V	900V	1100v	1200V
C ( $\mu$ F)	Min.	1	1	1	1	1	1
	Max.	400	320	240	200	140	120
Dimensions (w x h x l mm)	Min.	9.0 x 19.0 x 32.0				11.0 x 21.0 x 32.0	
	Max.	130.0 x 65.0 x 57.5					

## DC VOLTAGE RATINGS

$U_{NDC}$ @ 85°C	450V	700V	800V	900V	1100v	1200V
$U_{OPDC}$ @ 70°C	500V	800V	900V	1100v	1350v	1500V
$U_{OPDC}$ @ 105°C	300V	500V	570V	650v	800v	850V

## RATED TEMPERATURE

85°C

## MAXIMUM PERMISSIBLE CASE TEMPERATURE

105°C, observing voltage derating

AUTOMOTIVE  
GRADE



RoHS  
COMPLIANT

## KEY FEATURES:

- HIGH PERFORMANCE DC FILTER
- LOW ESR
- HIGH PEAK CURRENT CAPABILITIES
- HIGH RMS CURRENT CAPABILITIES
- OPERATING TEMPERATURE UP TO 105°C
- MKP1848T (TAB TERMINAL), UNDER DEVELOPMENT

## APPLICATIONS

- HEV/EV: I.E. POWER TRAIN AND OBC

# MKP 1848S Slim DC-Link



## KEY FEATURES:

- LOW PROFILE– SLIM VERSION
- HIGH PERFORMANCE DC FILTER
- HIGH PEAK CURRENT CAPABILITIES
- HIGH RMS CURRENT CAPABILITIES
- OPERATING TEMPERATURE UP TO 105°C

## APPLICATIONS:

- HYBRID ELECTRICAL VEHICLES: I.E. ON BOARD CHARGERS
- POWER SUPPLIES: I.E EV CHARGERS

## APPLICATIONS

High performance DC filtering applications

## FEATURES

Low Profile: 12/15/24 (mm) height  
 Reduced Self Inductance (<1nH per mm lead pitch)  
 Low ESR  
 Halogen-free according to IEC 61249-2-21 definition

## RATED CAPACITANCE

2 µF to 100 µF

## CAPACITANCE TOLERANCE

± 5%

## RANGE

U <sub>NDC</sub>		500V	700V	1000V
C (µF)	Min.	5	3	2
	Max.	100	50	30
Dimensions (w x h x l mm)	Min.	24.0 x 12.0 x 31.5	24.0 x 12.0 x 31.5	27.0 x 12.0 x 31.5
	Max.	70.0 x 24.0 x 52.5	70.0 x 24.0 x 52.5	50.0 x 24.0 x 57.5

## DC VOLTAGE RATINGS

U <sub>NDC</sub> @ 85°C	500V	700V	1000V
U <sub>OPDC</sub> @ 70°C	600V	800V	1200V
U <sub>OPDC</sub> @ 105°C	350V	500V	750V

## RATED TEMPERATURE

85°C

## MAXIMUM PERMISSIBLE CASE TEMPERATURE

105°C, observing voltage derating



**RoHS**  
 COMPLIANT  
 HALOGEN  
**FREE**



# MKT 1820



## FEATURES:

- AEC-Q200 APPROVED – AUTOMOTIVE GRADE
- MAXIMUM APPLICATION TEMPERATURE: 125°C
- MAXIMUM OPERATING TEMPERATURE FOR LIMITED TIME: 150°C
- RANGE EXTENSION UNDER PROGRESS UP TO 560µF
- SLIM LINE UNDER DEVELOPMENT (MKT1820S)

## APPLICATIONS

- PIEZO INJECTORS
- FUEL INJECTION SYSTEMS
- ELECTRICAL POWER STEERING
- AUTOMOTIVE MOTOR DRIVES
- INTEGRATED STARTER GENERATOR (MKT1820S)

## APPLICATIONS

Blocking, bypassing, filtering, timing, coupling and decoupling circuits, interference suppression in low voltage applications. High temperature operations.

Automotive applications

## REFERENCE STANDARDS

IEC 60384-2

## RATED VOLTAGE

63 VDC, 100 VDC, 250 VDC, 400 VDC, 630 VDC, 1000 VDC

## AC RATED VOLTAGE

40 VAC, 63 VAC, 160 VAC, 200 VAC, 220 VAC

## FEATURES

10 mm to 27.5mm lead pitch

## RATED CAPACITANCE

E12 series 1000 pF to 15 µF

## CAPACITANCE TOLERANCE

± 20%, ± 10%, ± 5%

## RANGE

$U_N$		63 V	100 V	250 V
C (µF)	Min.	0.22	0.068	0.022
	Max.	15	15	4.7
Dimensions (w x h x l mm)	Min.	3.5 x 8.0 x 13.0		
	Max.	8.5 x 16.5 x 26.5	11.5 x 20.5 x 31.5	13.5 x 23.5 x 31.5
$U_N$		400 V	630 V	1000 V
C (µF)	Min.	0.01	0.001	0.001
	Max.	4.7	1	0.47
Dimensions (w x h x l mm)	Min.	3.5 x 8.0 x 13.0		
	Max.	18.0 x 28.0 x 31.5	15.0 x 24.5 x 31.5	20.0 x 35.0 x 31.5

## MAXIMUM PERMISSIBLE CASE TEMPERATURE

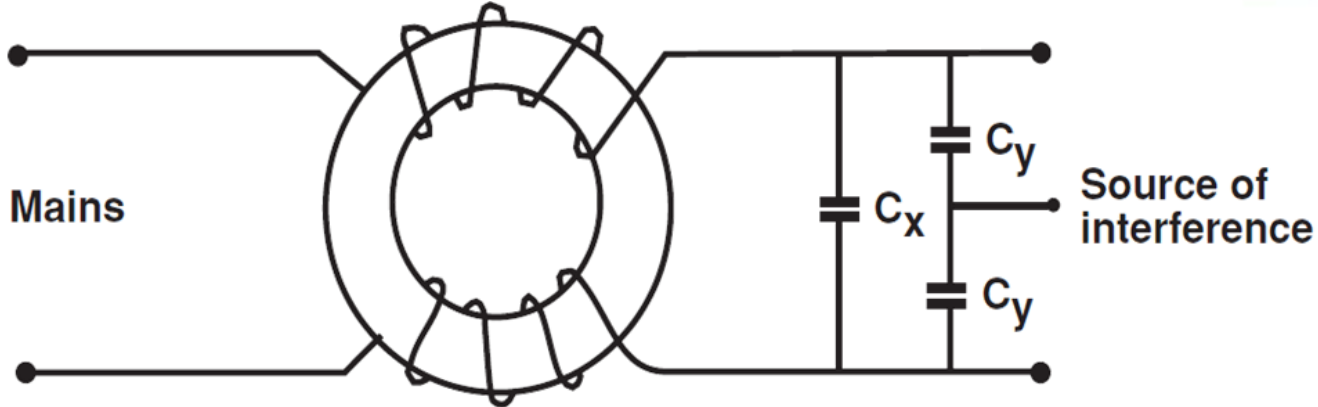
150 °C at 0.3 UR for maximum 200 h



**RoHS**  
COMPLIANT



# Automotive Grade RFI Capacitors



X-CLASS (ACROSS THE LINE): FAILURE CAN NOT LEAD TO DANGER OF ELECTRIC SHOCK

Y-CLASS (LINE BYPASS): FAILURE CAN LEAD TO DANGER OF ELECTRIC SHOCK

AUTOMOTIVE GRADE



RoHS COMPLIANT

<p><b>Metallized Polypropylene Film</b></p>	<p><b>Metallized Polyester Film</b></p>	<p><b>Metallized Polypropylene Film</b></p>	<p><b>Metallized Polypropylene Film</b></p>
<p>±5%, ±10% and ±20%</p>	<p>±10% and ±20%</p>	<p>±5%, ±10% and ±20%</p>	<p>±5%, ±10% and ±20%</p>
<p>310Vac</p>	<p>310Vac</p>	<p>440Vac</p>	<p>300 Vac</p>
<p>0.01µF – 1µF</p>	<p>0.01µF – 2.2µF</p>	<p>0.01µF – 1µF</p>	<p>0.001µF – 0.47µF</p>





VISHAY INTERTECHNOLOGY, INC.



One of the World's Largest Manufacturers of Discrete Semiconductors and Passive Components

★ Worldwide Headquarters  
 ★ Operational and Regional Headquarters (includes Sales)  
 ★ Regional Headquarters (includes Sales)  
 ▼ Sales and Manufacturing  
 ▼ Sales  
 ▼ Manufacturing  
 ▼ Rep Areas (W, E)



built on innovation