


# ⊕ Film Capacitors

**X2, X1, and Y2 Capacitors,**  
IEC 60384-14 ed. 4 /  
AMD1: Grade IIB



F340 RFI SERIES

**AEC-Q200 Qualified**  
X2 Capacitor,  
IEC 60384-14 ed. 4 /  
AMD1: Grade IIB



F339 X2

AC Filter Designed for  
**High Robustness** Under  
High Humidity (THB)



MKP1847H

AEC-Q200 DC-Link  
Capacitor for **High**  
**Robustness** Under  
High Humidity (THB)



MKP1848H

Snubber Capacitor for  
Direct IGBT Mounting With  
**Configurable Terminals**


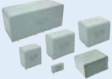





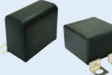

MKP386M





# FILM CAPACITORS

## Focus Products

| DC-Link Film Capacitors   |                       |                       |                     |                     |               |                         |                    |  |
|---|-----------------------|-----------------------|---------------------|---------------------|---------------|-------------------------|--------------------|--|
| Series  | Capacitance Min. (µF) | Capacitance Max. (µF) | DC Voltage Min. (V) | DC Voltage Max. (V) | ESR Min. (mΩ) | Ripple Current Max. (A) | Pitch              |  |
|  <b>MKP1848H</b> | 1                     | 80                    | 500                 | 1200                | 2             | 22.5                    | 27.5 mm to 52.5 mm | AEC-Q200 qualified, Vishay Automotive Grade DC-Link capacitor featuring high robustness under high humidity (85 °C, 85 % RH) for 1000 h at U <sub>NDC</sub>            |
|  <b>MKP1848</b>  | 1                     | 400                   | 450                 | 1200                | 1.3           | 54                      | 27.5 mm to 52.5 mm | AEC-Q200 qualified, Vishay Automotive Grade DC-Link capacitor  |
|  <b>MKP1848C</b> | 1                     | 500                   | 500                 | 1200                | 1.5           | 55                      | 27.5 mm to 52.5 mm | Industrial high-density economic pack  |
|  <b>MKP1848S</b> | 2                     | 100                   | 500                 | 1000                | 2             | 22                      | 27.5 mm to 52.5 mm | Slim (low building height) DC-Link capacitor   |
|  <b>MKP1849</b>  | 500                   | 500                   | 500                 | 900                 | 0.25          | 140                     | -                  | AEC-Q200 qualified, Vishay Automotive Grade, DC-Link modules for eMobility. For further information contact <a href="mailto:dc-film@vishay.com">dc-film@vishay.com</a> |

| Snubber Film Capacitors  |                       |                       |                      |                      |                   |                         |                      |   |
|--|-----------------------|-----------------------|----------------------|----------------------|-------------------|-------------------------|----------------------|---|
| Series   | Capacitance Min. (µF) | Capacitance Max. (µF) | DC Voltage Range (V) | AC Voltage Range (V) | dV/dt Max. (V/µs) | Terminal Configurations | Dimensions Max. (mm) |   |
|  <b>MKP386M</b>  | 0.047                 | 10                    | 700 to 2500          | 420 to 800           | 2500              | 8                       | 35 x 50 x 58         | Single metallized snubber capacitor for IGBT mounting |
|  <b>MMKP386</b> | 0.1                   | 4.7                   | 630 to 2500          | 220 to 900           | 5500              | 4                       | 30 x 46 x 44         | Double metallized snubber capacitor for IGBT mounting |


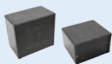



| AC Filter   |                       |                       |                     |                     |                         |                         |                    |   |
|---|-----------------------|-----------------------|---------------------|---------------------|-------------------------|-------------------------|--------------------|---|
| Series  | Capacitance Min. (µF) | Capacitance Max. (µF) | AC Voltage Min. (V) | AC Voltage Max. (V) | Ripple Current Min. (A) | Ripple Current Max. (A) | Pitch              |   |
|  <b>MKP1847H</b> | 1                     | 40                    | 250                 | 480                 | 2.5                     | 23                      | 27.5 mm to 52.5 mm | AC filter featuring segmented film technology with high robustness under high humidity (85 °C / 85 % RH) for 1000 h at U <sub>RAC</sub> |
|  <b>MKP1847C</b> | 1                     | 70                    | 250                 | 350                 | 2.5                     | 26                      | 27.5 mm to 52.5 mm | AC filter with robustness under high humidity (40 °C, 93 % RH) for 56 days at rated voltage   |




THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT [www.vishay.com/doc?91000](http://www.vishay.com/doc?91000)






# FILM CAPACITORS

## Focus Products

| RFI X and Y Film Capacitors  |                      |                       |                       |                        |              |                           |                    |   |
|--|----------------------|-----------------------|-----------------------|------------------------|--------------|---------------------------|--------------------|---|
| Series   | Rated AC Voltage (V) | Capacitance Min. (μF) | Capacitance Max. (μF) | Rated Temperature (°C) | Construction | Agency Approvals          | Pitch              |   |
|  <b>F339X2 305 V<sub>AC</sub></b>  | 305                  | 0.1                   | 4.7                   | 105                    | Mono         | IEC / EN / UL / CSA / CQC | 15 mm to 27.5 mm   | THB Vishay Automotive Grade X2 class capacitor; AEC-Q200 qualified; IEC 60384-14: 2013 / AMD1: 2016 Grade IIB; 85 °C, 85 % RH, 500 h at U <sub>RAC</sub> ; compliant with 85 °C, 85 % RH, 1000 h at 240 V <sub>AC</sub> |
|  <b>F340X2 305 V<sub>AC</sub></b>  | 305                  | 1                     | 20                    | 105                    | Mono         | IEC / EN / UL / CSA / CQC | 27.5 mm to 52.5 mm | THB interference suppression film capacitor class X2; IEC 60384-14: 2013 / AMD1: 2016 Grade IIIB; 85 °C, 85 % RH, 1000 h at U <sub>RAC</sub>  |
|  <b>F340Y2 305 V<sub>AC</sub></b>  | 305                  | 0.001                 | 1                     | 105                    | Series       | IEC / EN / UL / CSA / CQC | 7.5 mm to 37.5 mm  | THB Vishay Automotive Grade Y2 class capacitor; AEC-Q200 qualified; IEC 60384-14: 2013 / AMD1: 2016 Grade IIIB; 85 °C, 85 % RH, 1000 h at U <sub>RAC</sub>  |
|  <b>F340X1 480 V<sub>AC</sub></b> | 480                  | 0.22                  | 8.2                   | 105                    | Series       | IEC / EN / UL / CSA / CQC | 27.5 mm to 52.5 mm | THB interference suppression film capacitor class X1; IEC 60384-14: 2013 / AMD1: 2016 Grade IIIB; 85 °C, 85 % RH, 1000 h at U <sub>RAC</sub> ; maximum applicable AC voltage is 530 V <sub>AC</sub>                     |
|  <b>F1773X2</b>                    | 253                  | 0.01                  | 2.2                   | 100                    | Series       | IEC / EN / UL / CSA       |                    | Axial X2 capacitor for low building height applications   |

| AC and Pulse  |                       |                       |                      |                      |                  |                       |                   |   |
|---|-----------------------|-----------------------|----------------------|----------------------|------------------|-----------------------|-------------------|---|
| Series  | Capacitance Min. (μF) | Capacitance Max. (μF) | DC Voltage Range (V) | AC Voltage Range (V) | dV/dt max (V/μs) | Max. Temperature (°C) | Pitch             |   |
|  <b>MKP385</b>   | 0.00047               | 82                    | 160 to 2500          | 110 to 900           | 4000             | 110                   | 5 mm to 37.5 mm   | Single metallized AC and pulse capacitor                          |
|  <b>MKP383</b>   | 0.001                 | 4.7                   | 250 to 2500          | 125 to 900           | 20000            | 105                   | 7.5 mm to 27.5 mm | Double metallized AC and pulse capacitor                          |
|  <b>MKP1839HQ</b> | 0.1                   | 3.3                   | 630 to 1600          | 300 to 450           | 1000             | 85                    | -                 | Axial AC and pulse capacitor for low building height applications |

| General Purpose Film Capacitors  |                       |                       |                     |                     |                       |                  |  |  |
|--|-----------------------|-----------------------|---------------------|---------------------|-----------------------|------------------|--|--|
| Series   | Capacitance Min. (μF) | Capacitance Max. (μF) | DC Voltage Min. (V) | DC Voltage Max. (V) | Max. Temperature (°C) | Pitch            |  |  |
|  <b>MKT1820</b> | 0.001                 | 560                   | 63                  | 1000                | 125                   | 15 mm to 52.5 mm | AEC-Q200 qualified, Vishay Automotive Grade, featuring high temperature capabilities |  |
|  <b>MKT1813</b>  | 0.001                 | 22                    | 63                  | 1000                | 100                   | -                | Axial MKT capacitor for low building height applications                             |  |
|  <b>MKT370</b>  | 0.001                 | 1.5                   | 63                  | 630                 | 105                   | 5 mm             | AEC-Q200 qualified, Vishay Automotive Grade general-purpose capacitor                |  |

THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT [www.vishay.com/doc?91000](http://www.vishay.com/doc?91000)

# A Complete Portfolio of Film Capacitors for Power Applications

## Advantages of Vishay Film Capacitors

- High performance
- Robust design
- Customization possible

## For the Following Applications

- Onboard chargers
- 48 V boardnet
- Power converters
- RFI filters



High robustness against high humidity (up to 85 °C, 85 % RH, 1000 h at  $U_R$ ) portfolio capabilities



For high performance DC-Link applications, use our MKP1848 family for longer lifespan and better reliability



With our broad range of AEC-Q200 qualified standard components, Vishay is your “automotive driven” supplier

## Useful Links

- Film Capacitors Selector Guide [www.vishay.com/doc?49630](http://www.vishay.com/doc?49630)
- Parametric Search [www.vishay.com/capacitors/film](http://www.vishay.com/capacitors/film)

A **WORLD OF SOLUTIONS™**

**AEC-Q200 QUALIFIED**

**GREEN (5-2008)**

**HALOGEN FREE**