

# ⊕ 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)



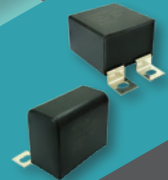
MKP1847H

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



MKP1848H

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









MKP386M

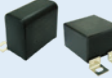





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# FILM CAPACITORS

## 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>MKP1848Se</b>	1	86	500	1200	4	28	27.5 mm to 52.5 mm	Slim (low building height) ,AEC-Q200 qualified, Vishay Automotive Grade DC-Link capacitor, high robustness under high humidity (60 °C, 93 % RH) for 56 days at UNDC
 <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


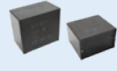




AC Filter								
Series	Capacitance Min. (µF)	Capacitance Max. (µF)	AC Voltage Min. (V)	AC Voltage Max. (V)	Ripple Current Min. (A)	Ripple Current Max. (A)	Pitch	
 <b>MKP1847H</b>	1	40	250	480	2.5	23	27.5 mm to 52.5 mm	AC filter featuring segmented film technology with high robustness under high humidity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




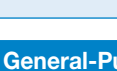



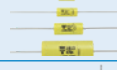
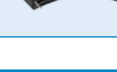
# FILM CAPACITORS

## Focus Products

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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> . Maximum permissible temperature 125 °C for limited time								
 <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; Vishay Automotive Grade; AEC-Q200 qualified, 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								
 <b>F339X1</b>	480	0.001	1	110	Series	IEC / EN / UL / CSA	10 mm to 27.5 mm	
THB interference suppression film capacitor class X1; Vishay Automotive Grade; AEC-Q200 qualified for 15 mm to 22.5 mm pitch, THB 85 °C, 85 % RH, 500 h at 400 V								

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. Mono and internal serial construction								
 <b>MKP385e</b>	0.001	15	400 to 2500	200 to 900	2900	125	15 mm to 52.5 mm	
AEC-Q200 qualified, Vishay Automotive Grade AC and Pulse Capacitor, high robustness under high humidity, THB Grade IIIA – 60 °C / 93 % RH / 56 days at rated voltage, mono and internal serial construction, customization on request								
 <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	10 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							



# 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 boardnets
- Power converters
- RFI filters

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



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)

**AEC-Q200  
QUALIFIED**

**GREEN  
(5-2008)**

**HALOGEN  
FREE**