

Interference Suppression Polypropylene Film Capacitors



RoHS
COMPLIANT

KEY BENEFITS

- Compact design
- Rated capacitance from 1 nF to 40 µF
- Rated AC voltage of 310 V
- Operating temperatures up to 110 °C
- IEC, EN, UL, CSA and CQC safety standards
- DC voltage range up to 800 V_{DC} at + 85 °C

APPLICATIONS

- Across-the-line filtering X2 applications
- Automotive
- Power supplies
- Photovoltaic inverters
- EMI filters
- LCD screens
- White goods

RESOURCES

- Datasheet: F339M X2 - <http://www.vishay.com/doc?28166>
- For technical questions contact RFI@vishay.com



RFI FILM CAPACITORS

F339M X2



FEATURES

7.5 mm to 52.5 mm lead pitch available
loose in box taped on ammpack or reel

REFERENCE STANDARDS

IEC 60384-14 ed-3
EN 60384-14
IEC 60065 requires pass. flamm.
class B
CSA-E384-14, UL60384-14
CQC

RATED CAPACITANCE

E12 series 0.001 μF to 40 μF

CAPACITANCE TOLERANCE

$\pm 20\%$, $\pm 10\%$, $\pm 5\%$

RATED VOLTAGE

AC 310 V, 50 Hz to 60 Hz

PERMISSIBLE VOLTAGE

For $C \leq 10 \mu\text{F}$ permissible DC voltage:
800 V_{DC} at 85 °C
630 V_{DC} at 110 °C

For $C > 10 \mu\text{F}$ permissible DC voltage:

575 V_{DC} at 85 °C

450 V_{DC} at 110 °C

MAXIMUM OPERATION TEMPERATURE

105 °C

RANGE

PITCH (mm)		7.5	10	15	22.5
C (μF)	Min.	0.001	0.001	0.01	0.12
	Max.	0.47	0.15	0.68	3.3
Dimensions (w x h x l x mm)	Min.	4.0 x 9.0 x 10.0	4.0 x 10.0 x 12.5	5.0 x 11.0 x 17.5	6.0 x 15.0 x 26.0
	Max.	10.0 x 18.5 x 17.5	6.0 x 12.0 x 12.5	11.0 x 18.5 x 18.0	18.0 x 29.5 x 26.5

PITCH (mm)		27.5	37.5	52.5
C (μF)	Min.	0.39	3.3	20
	Max.	6.8	20	40
Dimensions (w x h x l x mm)	Min.	9.0 x 19.0 x 31.5	21.5 x 22.5 x 41.5	25.0 x 45.0 x 57.5
	Max.	20.0 x 35.0 x 31.5	30.0 x 45.0 x 42.0	35.0 x 50.0 x 57.5

SPECIFIC REFERENCE DATA

DESCRIPTION	VALUE	
	at 1 kHz	at 10 kHz
Tangent of loss angle:		
$C < 470 \text{ nF}$	$\leq 10 \times 10^{-4}$	$\leq 20 \times 10^{-4}$
$470 \text{ nF} \leq C \leq 1 \mu\text{F}$	$\leq 20 \times 10^{-4}$	$\leq 70 \times 10^{-4}$
$1 \mu\text{F} \leq C \leq 20 \mu\text{F}$	$\leq 30 \times 10^{-4}$	—
$C > 20 \mu\text{F}$	$\leq 40 \times 10^{-4}$	—
Rated voltage pulse slope $(dU/dt)_R$ at 435 V_{DC}		
Pitch = 7.5 mm	600 V/ μs	
Pitch = 10 mm and 7.5 mm (bent back)	600 V/ μs	
Pitch = 15 mm and 7.5 mm (bent back)	400 V/ μs	
Pitch = 22.5 mm	150 V/ μs	
Pitch ≥ 27.5 mm	100 V/ μs	
Withstanding (DC) voltage (cut off current 10 mA); rise times $\leq 1000 \text{ V/s}$:		
$C \leq 1 \mu\text{F}$	2200 V; 1 min.	
$1 \mu\text{F} < C \leq 10 \mu\text{F}$	2200 V; 1 min.	
$C > 10 \mu\text{F}$	2200 V; 1 min.	
Withstanding (AC) voltage between leads and case	2120 V; 1 min.	

