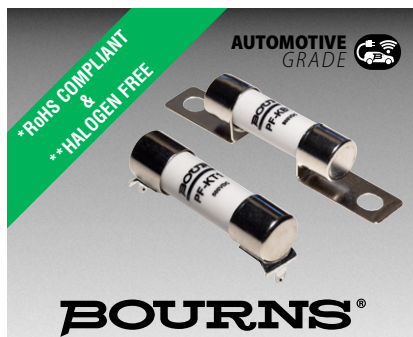




POWrFuse™ PF-K Series Features

- Designed for protection of high voltage accessory circuits in Electric Vehicles (EVs) and Hybrid Electric Vehicles (HEVs)
- 15-50 A ratings available
- 10 kA @ 275 VAC interrupting rating
- ISO 8820-8 compliant
- Available in bolt or PCB mounting options
- RoHS compliant* and halogen free**



PF-K Series – EV Power Fuses

Clearing Time Characteristics for Series

% of Current Rating	Clearing Time at 25 °C	
	Minimum	Maximum
110 %	4 hours	—
135 %	150 seconds	3600 seconds
150 %	10 seconds	1000 seconds
200 %	500 milliseconds	100 seconds
300 %	100 milliseconds	15 seconds
500 %	50 milliseconds	1 second

Additional Information

Click these links for more information:



Environmental Characteristics

Operating Temperature... -55 °C to +125 °C

Electrical Characteristics

Model	Rated Current (A)	Nominal Resistance (Ω) ^{***}	Rated Voltage	Interrupting Rating	Nominal I²t (A²s) ^{****}	Max. Voltage Drop (mV)
PF-KB1-15	15	0.0067	275 VAC 500 VDC	10 kA @ 275 VAC 20 kA @ 500 VDC 10 kA @ 450 VDC	1153	200
PF-KT1-15						
PF-KB1-30	30	0.0024			3024	
PF-KT1-30						
PF-KB1-40	40	0.0017			7253	
PF-KT1-40						
PF-KB1-50	50	0.0012			9203	
PF-KT1-50						

*** Resistance value measured with ≤10 % rated current at 25 °C ambient.

**** Nominal I²t value measured at 20 kA / 500 VDC.

BOURNS®

Americas: Tel: +1 951-781-5500 • Email: americus@bourns.com

Mexico: Tel: +52-614-478-0400 • Email: mexicus@bourns.com

Asia: Tel: +886-2-2562-4117 • Email: asiacus@bourns.com

EMEA: Tel: +36 88 885 877 • Email: eurocus@bourns.com

www.bourns.com



WARNING
Cancer and Reproductive Harm
www.P65Warnings.ca.gov

* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

"POWrFuse" is a trademark of Bourns, Inc.

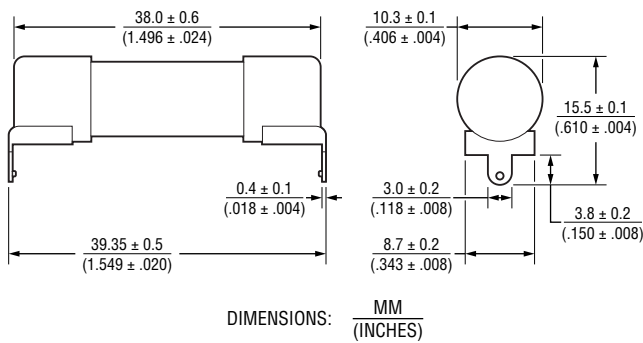
Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at www.bourns.com/docs/legal/disclaimer.pdf.

PF-K Series – EV Power Fuses

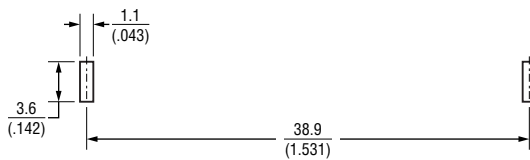
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Product Dimensions

PCB Mounting/T1



Recommended Drilling Pattern



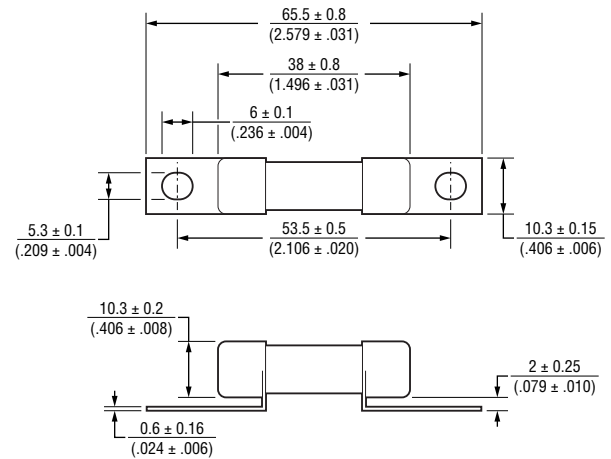
Wave Soldering Recommendations (for PCB Mounting)

Profile Feature	Pb-Free Assembly
Preheat: Temperature Max. Temperature Min.	150 °C 100 °C
Solder Pot Temperature	280 °C max.
Solder Dwell Time	8 seconds max.

Hand Soldering Recommendations (for PCB Mounting)

Soldering Iron Temperature	Heating Time
350 °C $\pm$ 5 °C	40 sec. max.

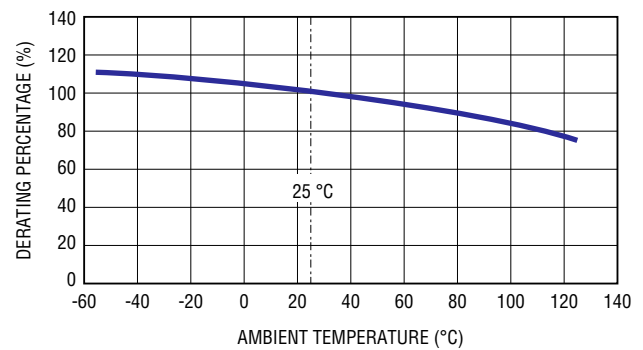
Bolt Mounting/B1



Recommended Mounting Torque and Bolt Sizes

Mounting Torque	Bolt Size
4.5 $\pm$ 1 Nm	M5

Current Rating Thermal Derating Curve



How to Order

PF - K B1 - 30

POWrrFuse™ _____

Product Designator _____

Series Name _____

Mounting Type _____

B1 = Bolt Mounting, Type 1

T1 = PCB Mounting, Type 1

Rated Current _____

15 - 50 = 15 A - 50 A

Specifications are subject to change without notice.

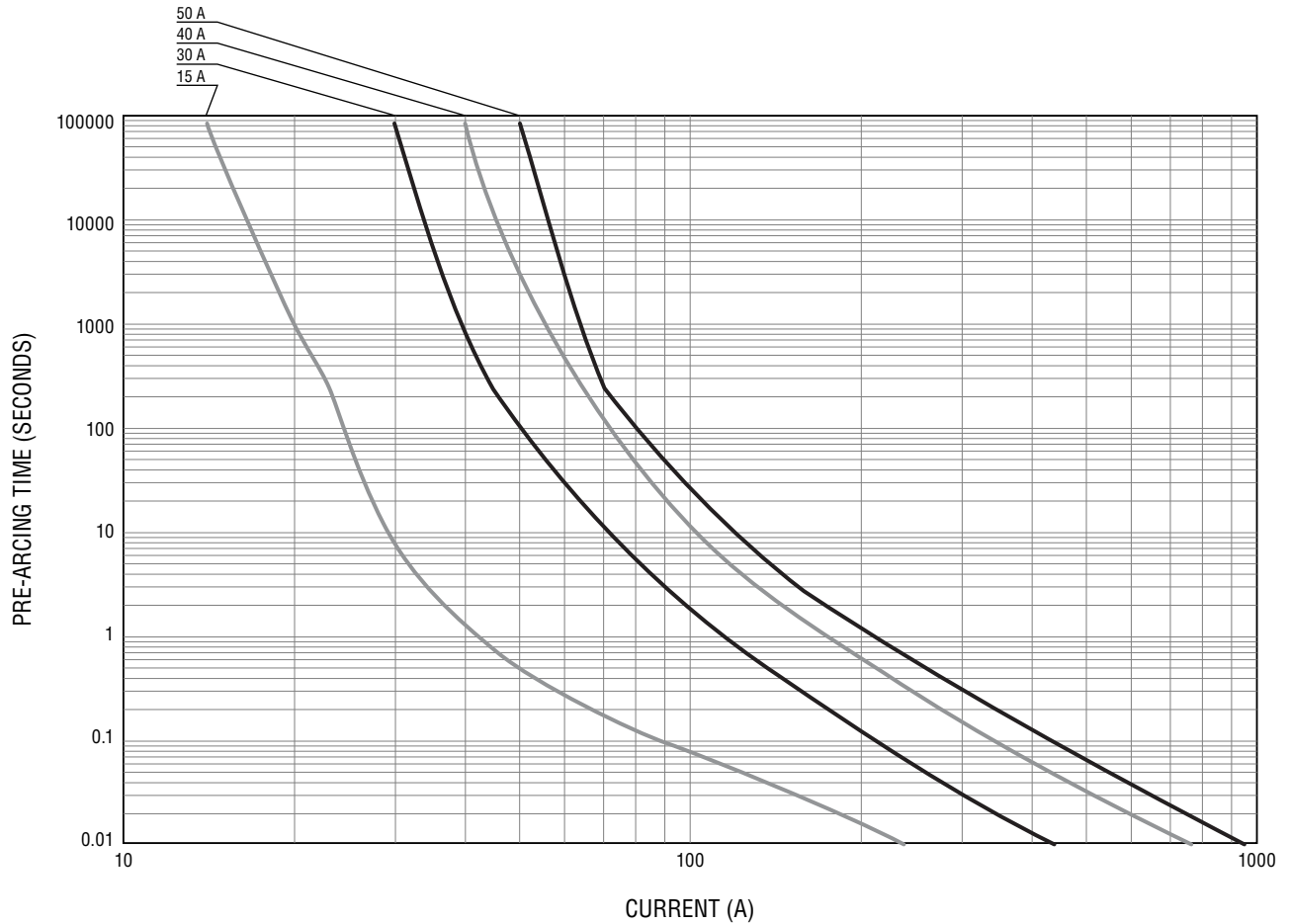
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PF-K Series – EV Power Fuses

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Average Pre-Arcing Time vs. Current Curves



Typical Part Marking

Model	Note	Ink Color	Marking
PF-KB1-15	15	Black	
PF-KB1-30	30		
PF-KB1-40	40		
PF-KB1-50	50		
PF-KT1-15	15	Black	
PF-KT1-30	30		
PF-KT1-40	40		
PF-KT1-50	50		

Packaging

Model	Quantity
PF-KT1	50 pcs. / box
PF-KB1	40 pcs. / box

REV. 06/25

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Users should verify actual device performance in their specific applications.

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