

### 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 I <sup>2</sup> t (A <sup>2</sup> s)****	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 I<sup>2</sup>t value measured at 20 kA / 1000 VDC.



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**CALIFORNIA WARNING:** Can expose you to lead, a carcinogen and reproductive toxicant.

See [www.P65Warnings.ca.gov](http://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.

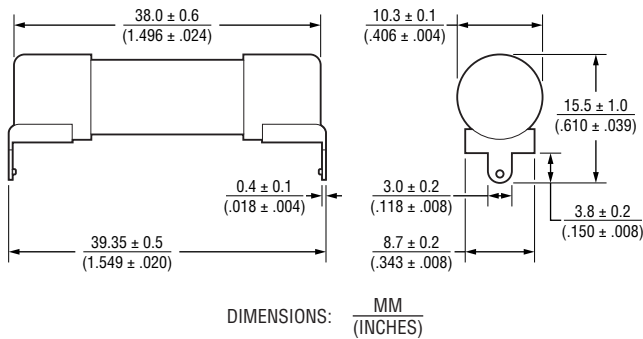
Specifications are subject to change without notice. Users should verify actual device performance in their specific applications. The products described herein and this document are subject to specific legal disclaimers as set forth on the last page of this document, and at [www.bourns.com/docs/legal/disclaimer.pdf](http://www.bourns.com/docs/legal/disclaimer.p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

# PF-K Series – EV Power Fuses

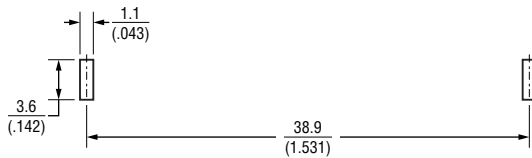


## Product Dimensions

### PCB Mounting/T1



### Recommended Drilling Pattern



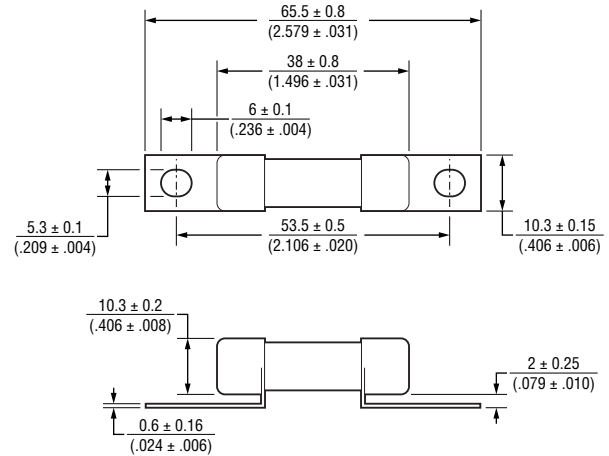
### Wave Soldering Recommendations (for PCB Mounting)

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 ± 5 °C	40 sec. max.

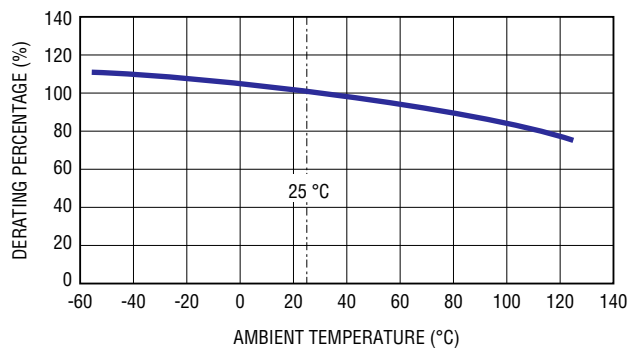
### Bolt Mounting/B1



### Recommended Mounting Torque and Bolt Sizes

Mounting Torque	Bolt Size
4.5 ± 1 Nm	M5

### Current Rating Thermal Derating Curve



### How to Order

PF - K B1 - 30

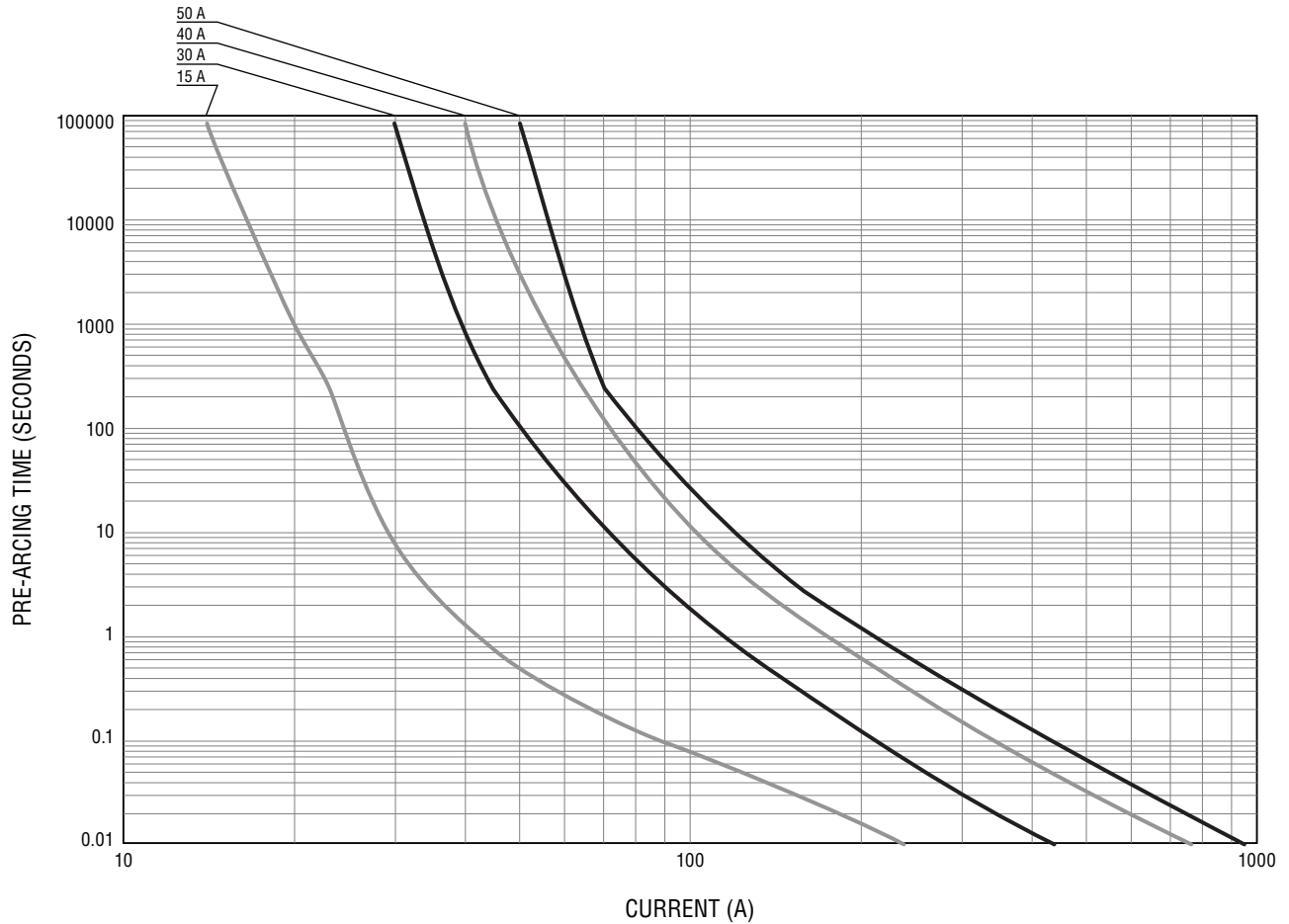
POWrfuse™ \_\_\_\_\_  
 Product Designator \_\_\_\_\_  
 Series Name \_\_\_\_\_  
 Mounting Type \_\_\_\_\_  
 B1 = Bolt Mounting, Type 1  
 T1 = PCB Mounting, Type 1  
 Rated Current \_\_\_\_\_  
 15 - 50 = 15 A - 50 A

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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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

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