



## 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:



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### Environmental Characteristics

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

### Electrical Characteristics

Model	Rated Current (A)	Nominal Resistance (Ω) <sup>***</sup>	Rated Voltage	Interrupting Rating	Nominal I <sup>2</sup> t (A <sup>2</sup> s) <sup>****</sup>	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						

<sup>\*\*\*</sup> Resistance value measured with ≤10 % rated current at 25 °C ambient.

<sup>\*\*\*\*</sup> Nominal I<sup>2</sup>t value measured at 20 kA / 500 VDC.



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\* 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.

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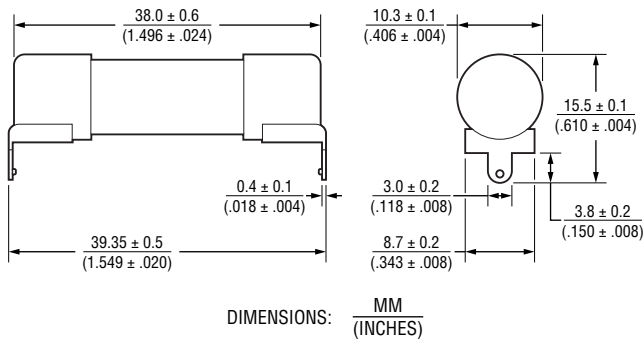
**WARNING**  
**Cancer and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

# PF-K Series – EV Power Fuses

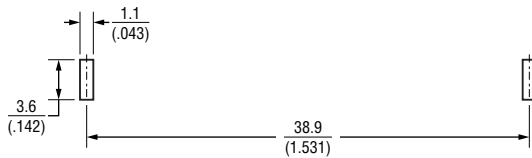
**BOURNS®**

## Product Dimensions

### PCB Mounting/T1



### Recommended Drilling Pattern



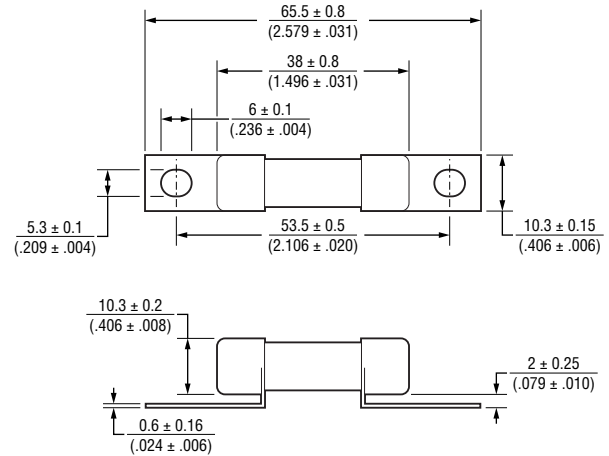
### Wave Soldering Recommendations (for PCB Mounting)

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.

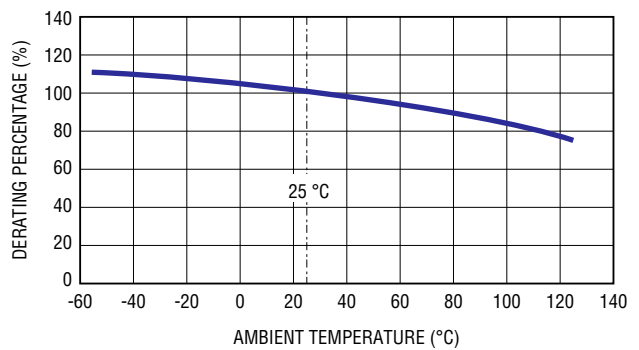
### Bolt Mounting/B1



### 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

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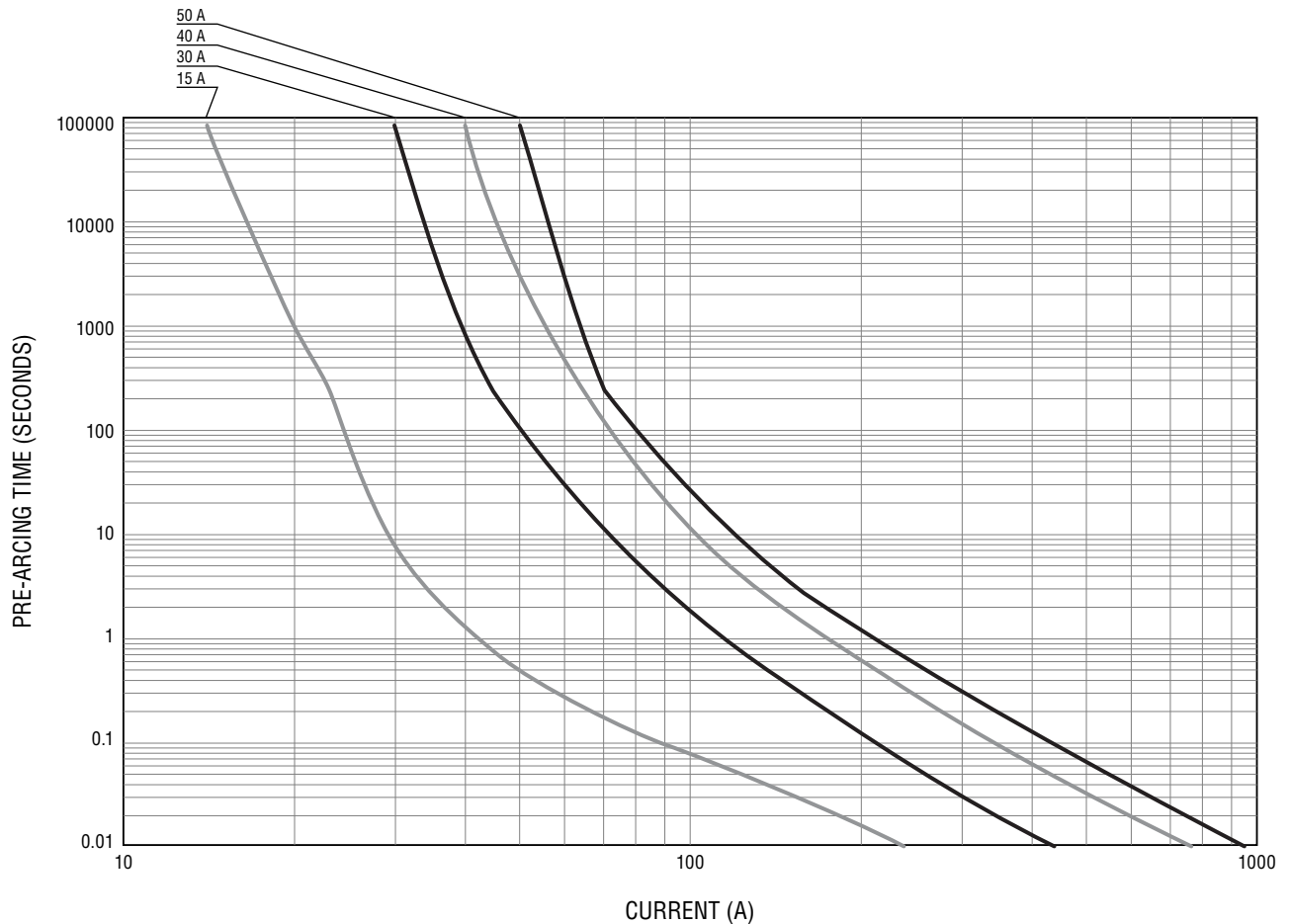
Users should verify actual device performance in their specific applications.

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# PF-K Series – EV Power Fuses



## 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. 05/22

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