

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:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Environmental Characteristics

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

Electrical Characteristics

Model	Rated Current (A)	Nominal Resistance (Ω)***	Rated Voltage	Interrupting Rating	Nominal I^2t (A^2s)****	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^2t value measured at 20 kA / 1000 VDC.

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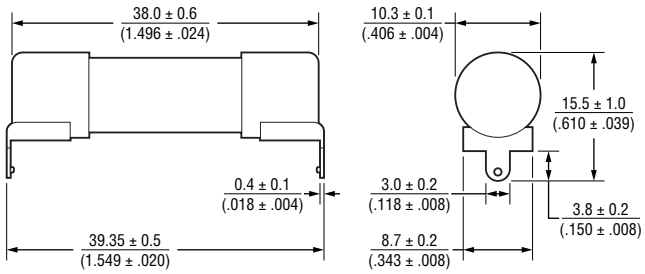
CALIFORNIA WARNING: Can expose you to lead, a carcinogen and reproductive toxicant.
See www.P65Warnings.ca.gov

* 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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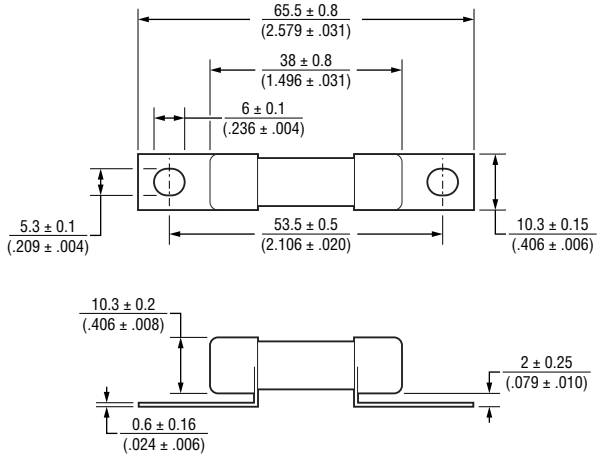
Product Dimensions

PCB Mounting/T1

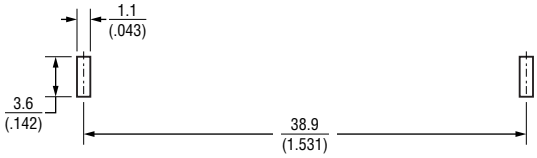


DIMENSIONS: MM / (INCHES)

Bolt Mounting/B1



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.

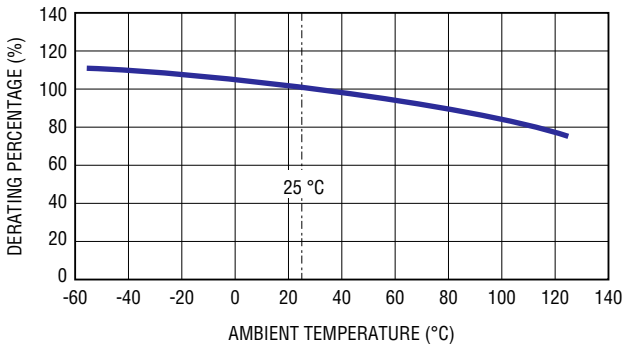
Hand Soldering Recommendations (for PCB Mounting)

Soldering Iron Temperature	Heating Time
350 °C ± 5 °C	40 sec. max.

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

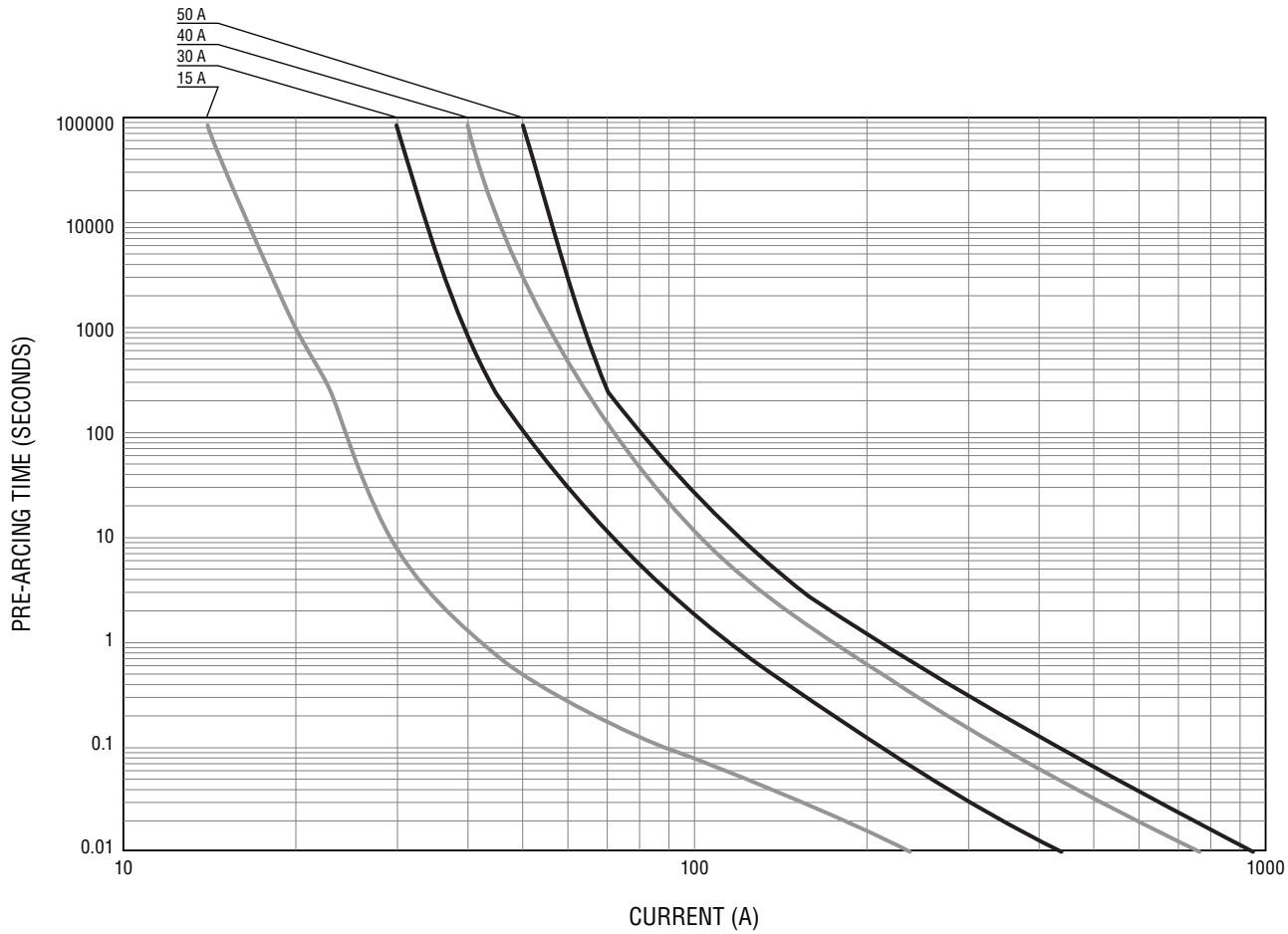
Mounting Type
B1 = Bolt Mounting, Type 1
T1 = PCB Mounting, Type 1

Rated Current
15 - 50 = 15 A - 50 A

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Average Pre-Arcing Time vs. Current Curves



Typical Part Marking

Model	Note	Ink Color	Marking
PF-KB1-15	15	Black	BOURNS® PF-KB1 (Note) A 500VDC IR: 20,000A 500VDC
PF-KB1-30	30		
PF-KB1-40	40		
PF-KB1-50	50		
PF-KT1-15	15	Black	BOURNS® PF-KT1 (Note) A 500VDC IR: 20,000A 500VDC
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. 10/25

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