

# Volts-800VDC Amps- 50 to 80A Electric Vehicles Power Fuse

## 14CT8 Series

The Prosemi EV (Electric Vehicle) fuses are made of high strength ceramic tube and high purity melt, with unique arc extinction filling technology which is Prosemi's patent technology. The EV fuses are elaborately designed according to the actual driving status of EVs, with adherence to auto industry standards (JASO, D622/ISO8820). With high vibration durability, perfect transient current intermittent tolerance, eminent thermal shock resistance and favorable flame retardant ability, the Prosemi fuses will provide you protection whether the vehicle is traveling on a flat road or under a variety of harsh conditions.



### Features

- Excellent DC performance
- Stud-mount, optional for other installation
- Designed to: UL248-20
- Comply RoHS directive

### Applications

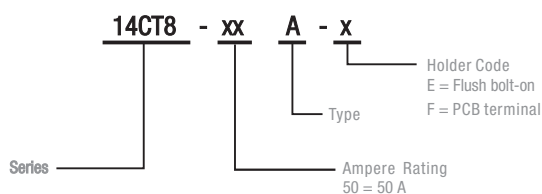
- DC drives Power Distribution Unit (PDU)
- Energy storage device
- Inverters
- EV&HEV Power Battery
- EV Charging module

### Specification

Ordering P/N	Rated Current (A)	Rated Voltage/ Interrupting rating	I <sup>2</sup> t (A <sup>2</sup> sec)	Power Loss@0.5In (W)
			Pre-arcing	
14CT8-50A-x	50	800Vdc/50000A	2000	1.6
14CT8-60A-x	60		3600	1.65
14CT8-70A-x	70		5800	1.8
14CT8-80A-x	80		12500	2

\* I<sup>2</sup>t is measured with 10In

### Part Numbering System



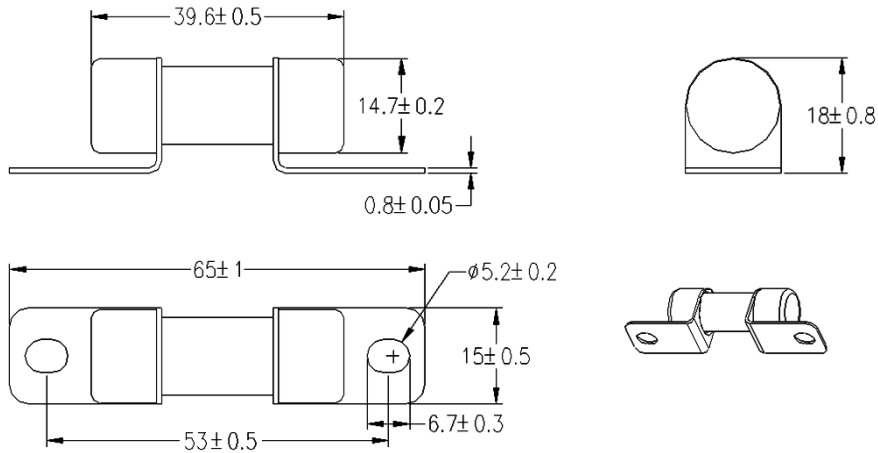
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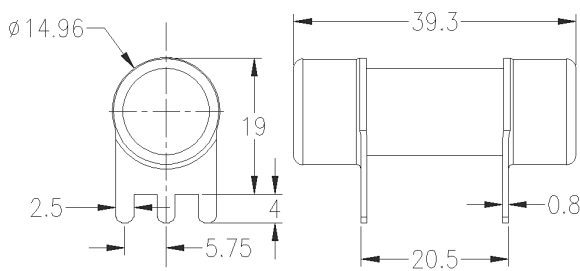
### Dimension

#### 14CT8-xxA-E

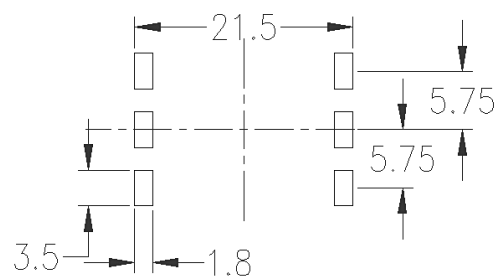


Note: recommend tightening torque is 4.5+/-1.0Nm.

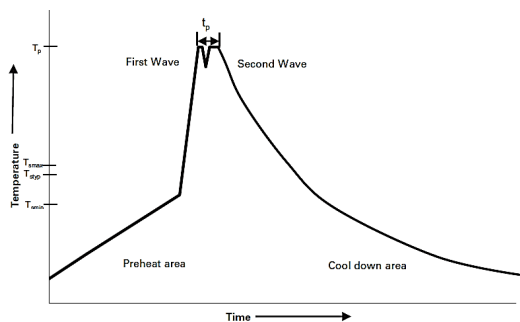
#### 14CT8-xxA-F



### Recommended Drilling Pattern



### Wave Soldering profile



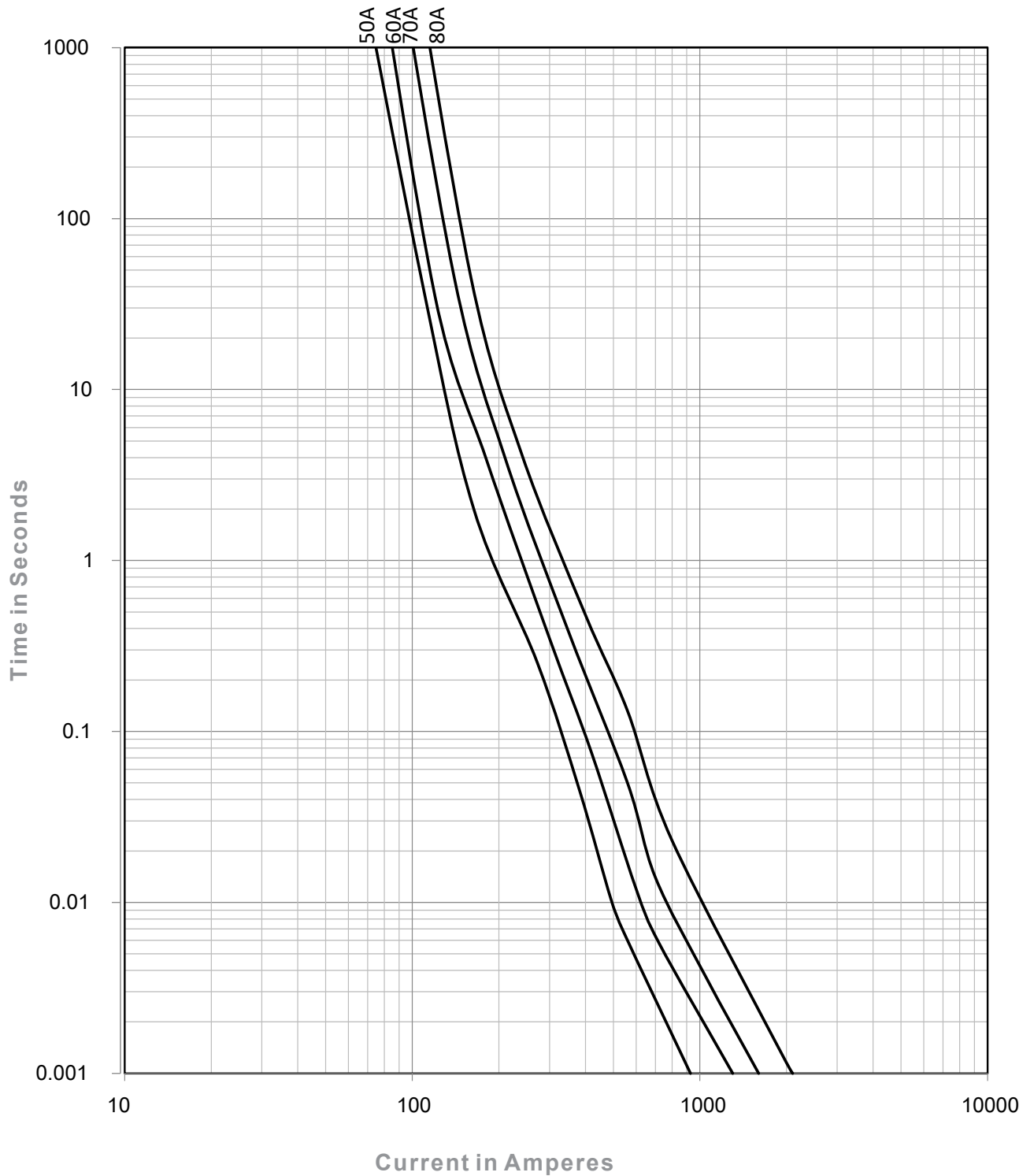
Profile Feature	Lead (Pb) Free Solder
Preheat	<ul style="list-style-type: none"> <li>Temperature min. (<math>T_{smin}</math>) 100°C</li> <li>Temperature typ. (<math>T_{styp}</math>) 120°C</li> <li>Temperature max. (<math>T_{smax}</math>) 130°C</li> <li>Time (<math>T_{smin}</math> to <math>T_{smax}</math>) (<math>t_s</math>) 70 seconds</li> </ul>
$\Delta$ preheat to max Temperature	150°C max.
Peak temperature ( $T_p$ )*	250°C – 260°C
Time at peak temperature ( $t_p$ )	10 seconds max 5 seconds max each wave
Ramp-down rate	-2 K/s min -3.5 K/s typ -5 K/s max
Time 25°C to 25°C	4 minutes

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Average Time Current Curves



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#### Transportation and Storage

During transportation and storage, should avoid water seepage and mechanical damage.

#### Conditions for operation in service

Where the following conditions apply, fuses complying with this standard are deemed capable of operating satisfactorily without further qualification.

- Normal temperature:  $-5^{\circ}\text{C}$  to  $40^{\circ}\text{C}$ ;
- The altitude of the site of installation of the fuses does not exceed 2 000 m above sea level;
- The air is clean and its relative humidity does not exceed 50% at the maximum temperature of  $40^{\circ}\text{C}$ ;
- Higher relative humidities are permitted at lower temperatures, e.g. 90 % at  $20^{\circ}\text{C}$ ;
- Under these conditions, moderate condensation may occasionally occur due to variation in temperature.

For operation condition other than above, please contact manufacturer.

#### Vibration

Meet UL248-20 Section 8.6.2.3 Vibration Test C requirement, can be use on Electrical Vehicle application;

#### Temperature Rerating Curve

Operating Temperature:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ , with proper rerating factor applied

