

Power Battery Packs Protection High I²t Fuses

Descriptions

- Design for power battery packs overload and short circuit protection Surface mount design to save space
- Ceramic Square body with Silver plated end cap
- Designed to UL248-1
- Fully compatible with lead-free solder and high temperature profile associated with lead-free assembly



Electrical Characteristics

| Amp Rating | % of Amp Rating | Opening Time |
|------------|-----------------|--------------|
| 20~40A | 100% | 4 Hours Min. |
| | 200% | < 60 Seconds |

Features

- High I²t surface mount fuses
- Compatible with reflow and wave solder
- Excellent environmental integrity
- High reliability and resilience
- RoHS compliant and Halogen Free
- Wide operating temperature range
- Strong arc suppression characteristics

Applications

- Power battery protection
- Test equipment Power supplies
- Game systems Industrial equipment
- Telecom system

Specifications



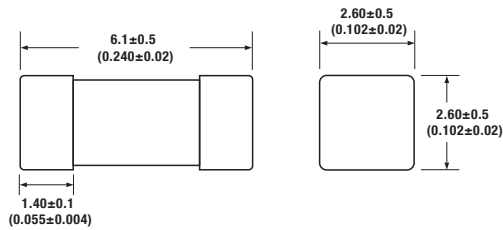
| Part Number | Ampere Rating (A) | Voltage Rating (Vdc) | Interrupting Rating | Typical Cold Resistance (Ohms) | Typical Melting I ² t (A ² Sec) | Typical Voltage Drop (V) |
|-------------|-------------------|----------------------|---------------------|--------------------------------|---|--------------------------|
| 2410BP-20A | 20 | 72 | 72V@500A | 0.0024 | 215 | 0.063 |
| 2410BP-25A | 25 | 72 | 72V@500A | 0.0018 | 421 | 0.056 |
| 2410BP-30A | 30 | 72 | 72V@500A | 0.0012 | 910 | 0.052 |
| 2410BP-40A | 40 | 63 | 63V@500A | 0.0009 | 1605 | 0.051 |

- DC Interrupting Rating - Measured at designated voltage, time constant < 50 microseconds.
- DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C.
- Typical Melting I²t measured at 10In Current.
- Typical Voltage Drop measured at rated current after temperature has stabilized.

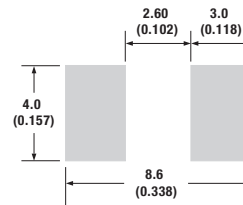
Power Battery Packs Protection High I²t Fuses

Dimension

Unit: mm/inch



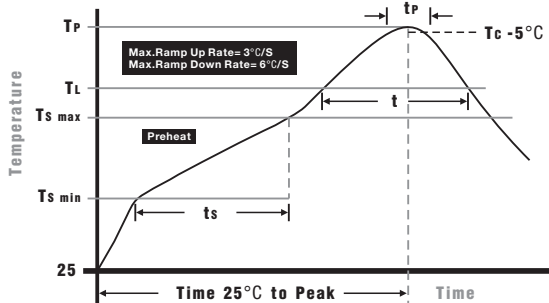
Pad layout



Packaging

- Quantity: 1,000pcs
- 12mm wide tape on 178mm(7 inch) diameter reel -specification EIA Standard 481.

Soldering Parameters

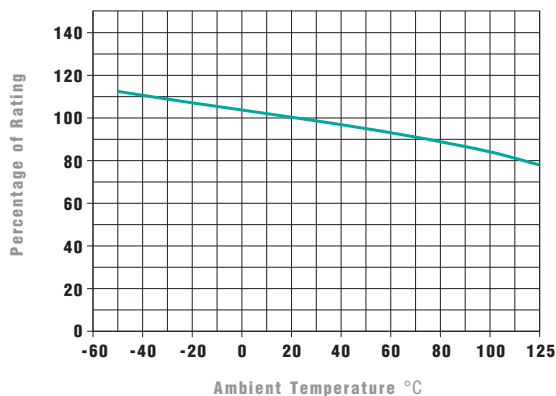


Wave Soldering: 260°C, 10 seconds max.
Infrared Reflow: 260°C, 30 seconds max.

IR Reflow Profile

| | |
|--|------------------|
| Preheat Heat | |
| Temperature min (T _{smin}) | 150°C |
| Temperature max (T _{smax}) | 200°C |
| Time (T _{smin} to T _{smax}) (t _s) | 60 - 120 seconds |
| Average ramp-up rate (T _{smax} to T _p) | 3°C/second max. |
| Liquidous temperature (T_L) | |
| Time at liquidous (t _L) | 60 - 150 seconds |
| Peak temperature (T_p) | |
| Time within 5°C of actual peak Temperature (t _p) | 10 - 30 seconds |
| Average ramp-down rate (T _p to T _{smax}) | 6°C/second max. |
| Time 25 °C to peak temperature | 8 minutes max. |

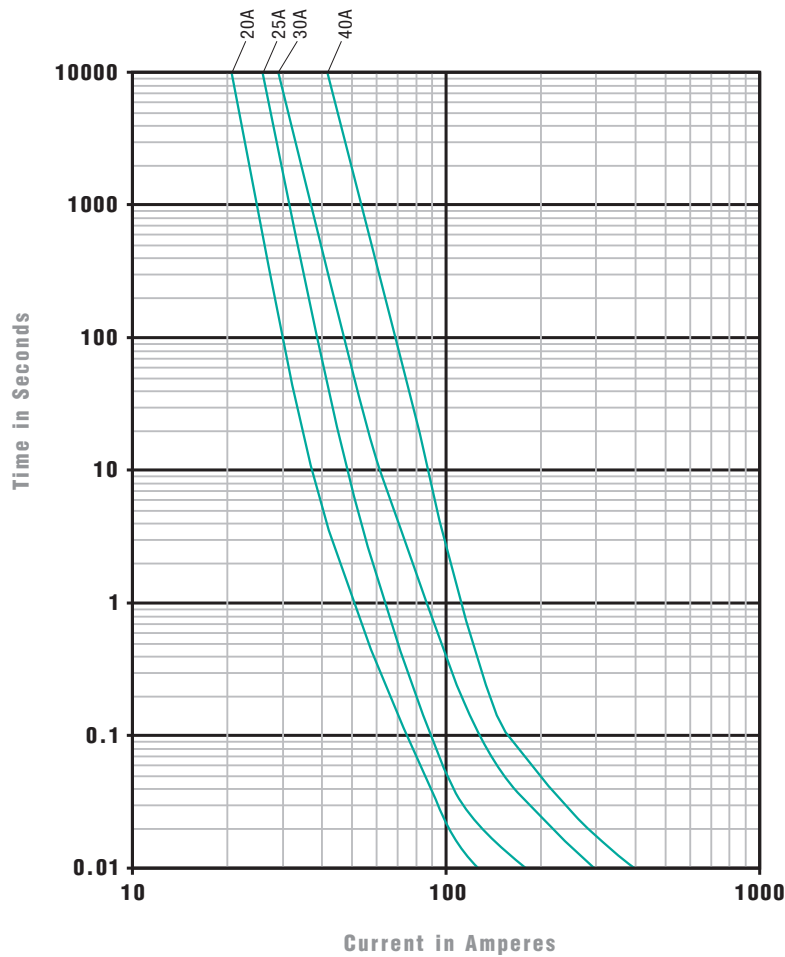
Temperature Derating Curve



- Normal Operating Temperature: 25°C± 2
- Operating Temperature: -55 to 125°C

Power Battery Packs Protection High I²t Fuses

Average Time Current Curves



© 2018 PROSEMI Inc. All Rights Reserved.
Specifications and features are subject to change without notice.

The PROSEMI logo, and all other PROSEMI trademarks are the property of PROSEMI Inc. All other trademarks are the property of their respective owners.

Rev.20190132C1.0