

Power Battery Packs Protection High I²t Fuses

2410BP Series

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	0.0023	210	0.060.
2410BP-25A	25	72	72V@500A	0.0017	400	0.055
2410BP-30A	30	72	72V@500A	0.0012	900	0.050
2410BP-40A	40	63	63V@500A	0.0009	1600	0.050

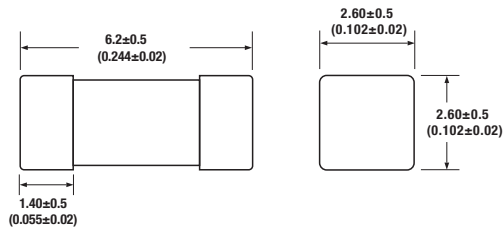
- DC Interrupting Rating - Measured at designated voltage, time constant < 50 microseconds.
- DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25°C.
- Typical Melting I²t measured at 10In Current.
- Typical Voltage Drop measured at rated current after temperature has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

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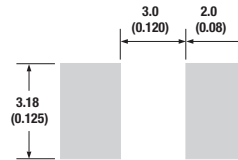
2410BP Series

Dimension

Unit: mm/inch



Pad layout

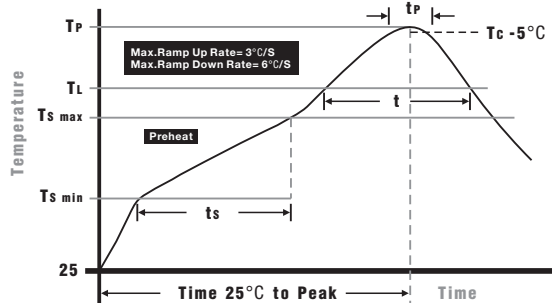


Note: Minimum copper layer thickness = 100um.
Recommend solder thickness is 0.15mm.

Packaging

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

Soldering Parameters

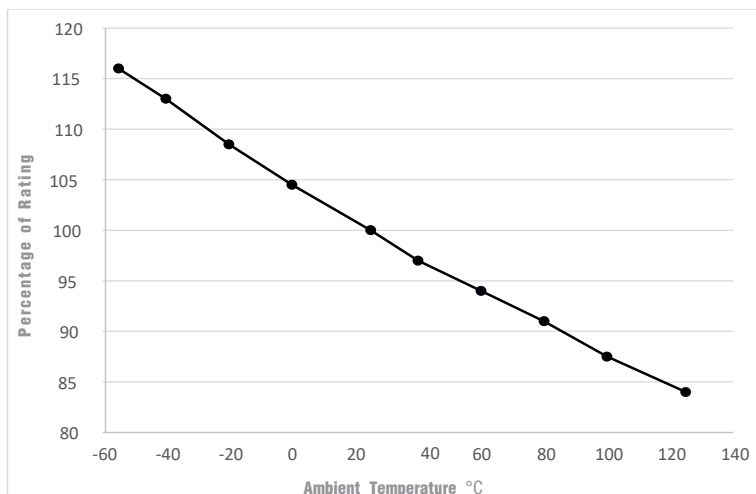


Wave Soldering: 260°C, 10 seconds max.
Infrared Reflow: 260°C, 30 seconds max.

IR Reflow Profile

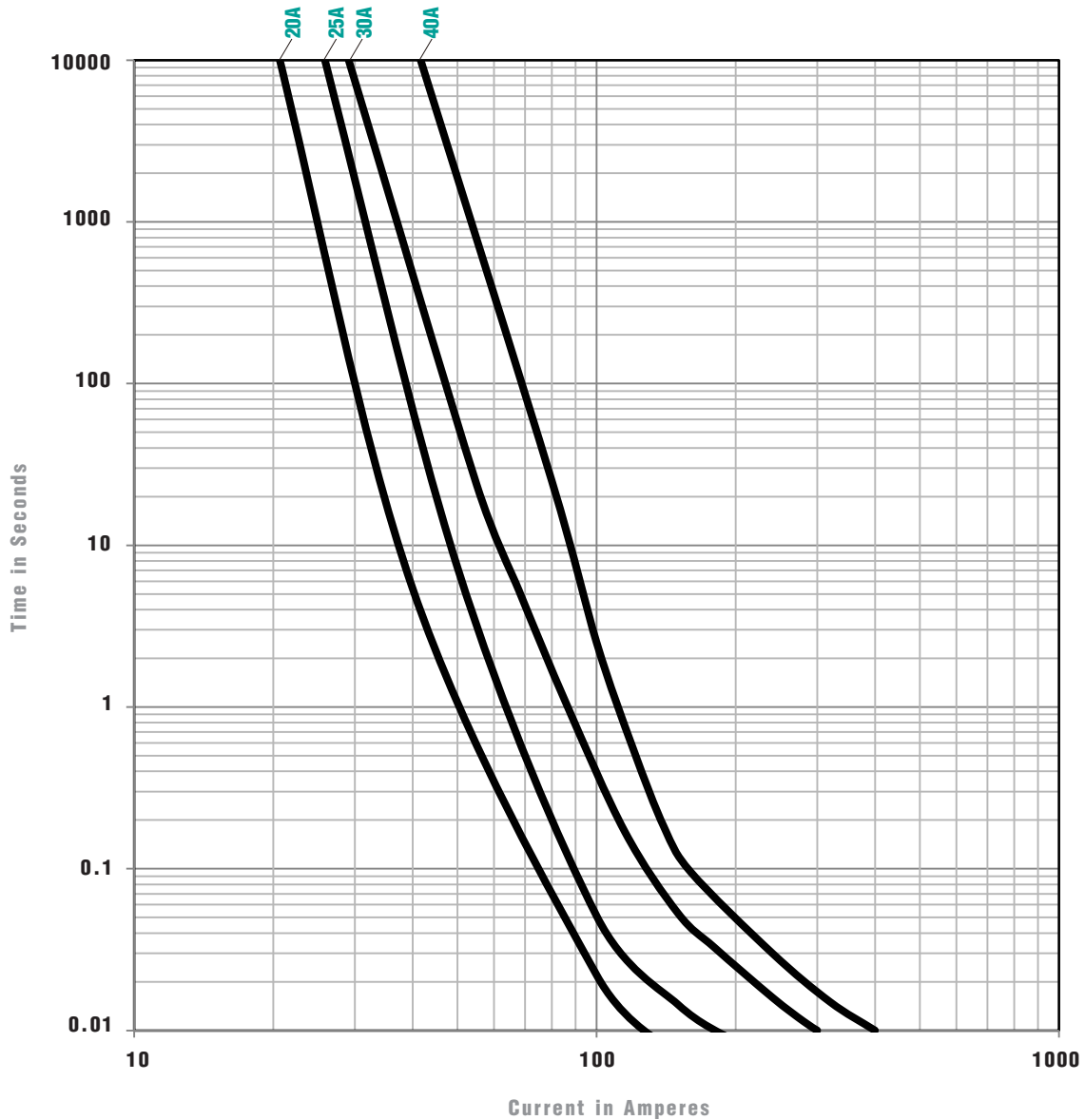
Preheat Heat	
Temperature min (T _{min})	150°C
Temperature max (T _{max})	200°C
Time (T _{min} to T _{max}) (t _s)	60 - 120 seconds
Average ramp-up rate (T _{max} to T _p)	3°C/second max.
Liquidous temperature (T_L)	
Time at liquidous (t _L)	60 - 150 seconds
Peak temperature (T_p)	
Time within 5°C of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

Temperature Derating Curve



- Normal Operating Temperature: 25 °C ± 2 °C
- Operating Temperature: -55 °C to 125 °C with proper correction factor applied. Chart of correction factor
- Storage Temperature: -55 °C to 125 °C

Average Time Current Curves



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