

# Power Battery Packs Protection High I<sup>2</sup>t 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 I<sup>2</sup>t 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



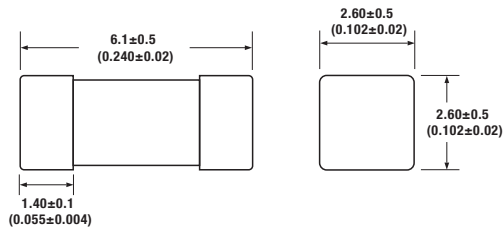
Part Number	Ampere Rating (A)	Voltage Rating (Vdc)	Interrupting Rating	Typical Cold Resistance (Ohms)	Typical Melting I <sup>2</sup> t (A <sup>2</sup> Sec)	Typical Voltage Drop (V)
2410BP-20A	20	72	72V@500A	0.0024	215	0.063
2410BP-25A	25	72	72V@500A	0.0018	421	0.056
2410BP-30A	30	72	72V@500A	0.0012	910	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 I<sup>2</sup>t measured at 10In Current.
- Typical Voltage Drop measured at rated current after temperature has stabilized.

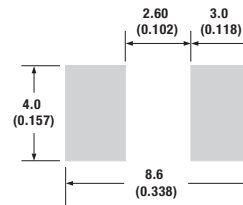
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## Dimension

Unit: mm/inch



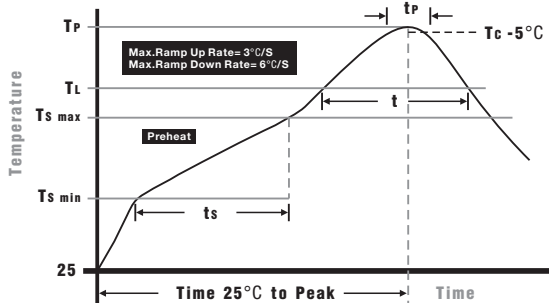
Pad layout



## Packaging

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

## Soldering Parameters

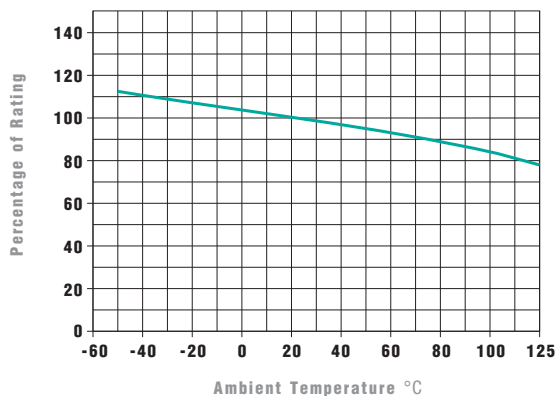


**Wave Soldering:** 260°C, 10 seconds max.  
**Infrared Reflow:** 260°C, 30 seconds max.

## IR Reflow Profile

<b>Preheat Heat</b>	
Temperature min (T <sub>smin</sub> )	150°C
Temperature max (T <sub>smax</sub> )	200°C
Time (T <sub>smin</sub> to T <sub>smax</sub> ) (t <sub>s</sub> )	60 - 120 seconds
Average ramp-up rate (T <sub>smax</sub> to T <sub>p</sub> )	3°C/second max.
<b>Liquidous temperature (T<sub>L</sub>)</b>	
Time at liquidous (t <sub>L</sub> )	60 - 150 seconds
<b>Peak temperature (T<sub>p</sub>)</b>	
Peak temperature (T <sub>p</sub> )	260+0/-5°C
<b>Time within 5°C of actual peak Temperature (t<sub>p</sub>)</b>	
Time within 5°C of actual peak Temperature (t <sub>p</sub> )	10 - 30 seconds
Average ramp-down rate (T <sub>p</sub> to T <sub>smax</sub> )	6°C/second max.
<b>Time 25 °C to peak temperature</b>	
Time 25 °C to peak temperature	8 minutes max.

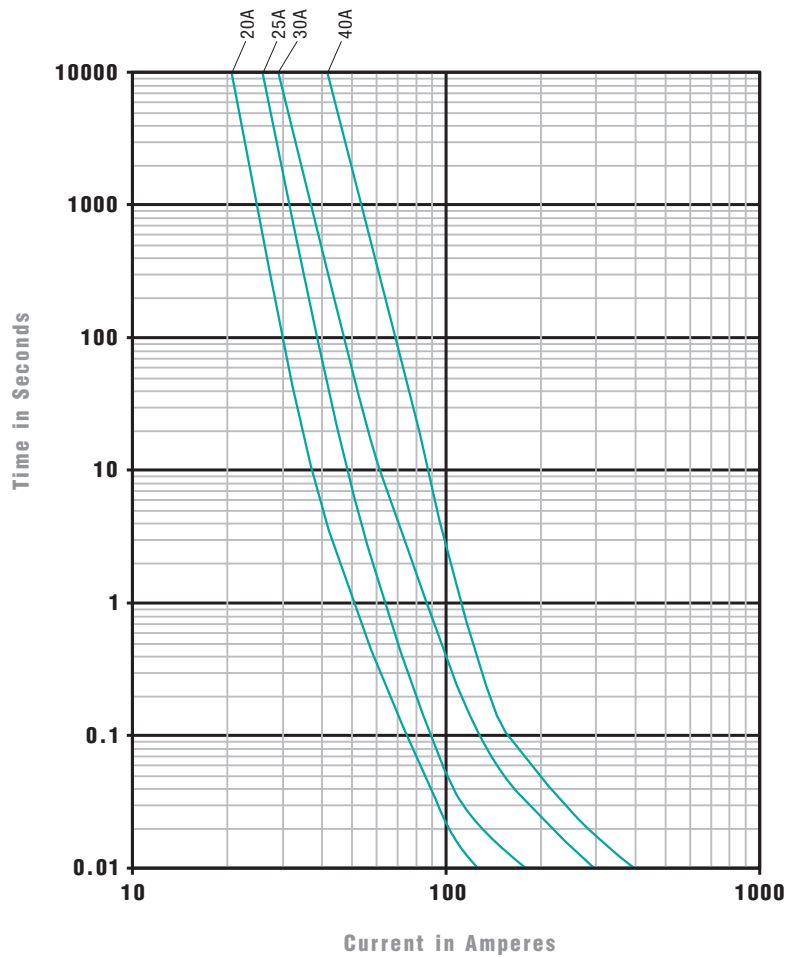
## Temperature Derating Curve



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

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## Average Time Current Curves



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