

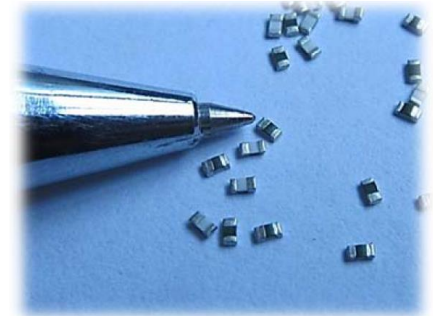


ADVANCED SURGETECH MATERIALS
0402 Fast Acting SMD Fuses
04 100 Series



Description

04 100 Series Chip fuses set the industry standard for performance, reliability and quality. The solder-free design provides excellent on-off and temperature cycling characteristics and also makes our chip fuses more heat and shock tolerant than typical subminiature fuses



Electrical Characteristics

Rated Current	1.0In	2.5In	3.0In
1A~5A	4 hour minimum	5 sec	
200mA~750mA	4 hour minimum		5sec

Features

- Fast acting for excessive current
- Compatible with reflow and wave solder
- Ceramic and glass construction
- Excellent environmental integrity
- One time positive disconnect
- Lead Free and Halogen free material

SPECIFICATIONS

Product Code	Current Rating	Voltage Rating DC	Interrupting Rating*	Resistance (ohms)** Typ.	Typical Melt I ² t *** DC (A ² s)
04 100.0.2	200mA	32V	35A	1.75	0.0006
04 100.0.25	250mA	32V	35A	1.50	0.0010
04 100.0.315	315mA	32V	35A	1.00	0.0014
04 100.0.375	375mA	32V	35A	0.78	0.0018
04 100.0.5	500mA	32V	35A	0.50	0.0043
04 100.0.75	750mA	32V	35A	0.22	0.011
04 100.1	1A	32V	35A	0.13	0.04
04 100.1.5	1.5A	32V	35A	0.078	0.06
04 100.2	2A	32V	35A	0.040	0.13
04 100.2.5	2.5A	32V	35A	0.024	0.20
04 100.3	3A	32V	35A	0.018	0.33
04 100.3.5	3.5A	32V	35A	0.014	0.45
04 100.4	4A	32V	35A	0.011	0.60
04 100.5****	5A	32V	35A	0.0095	0.90

*. DC Interrupting Rating (Measured at rated voltage, time constant of less than 50 microseconds, battery source);

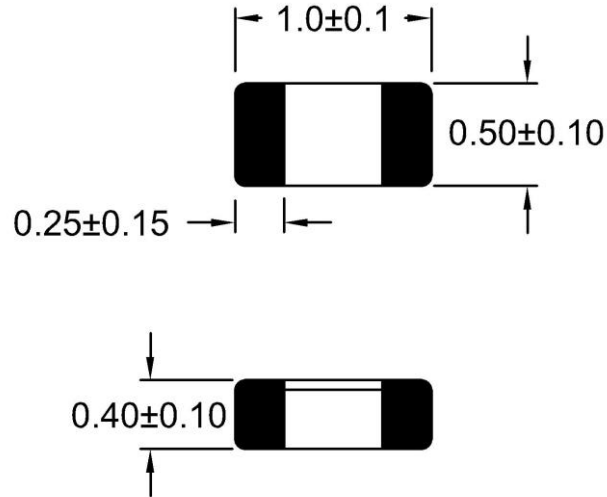
** . DC Cold Resistance are measured at <10% of rated current in ambient temperature of 25 degrees;

*** . Typical Melting I²t (Measured with a battery bank at rated DC voltage, Measured at 1ms open time, time constant of calibrated circuit less than 50 microseconds).

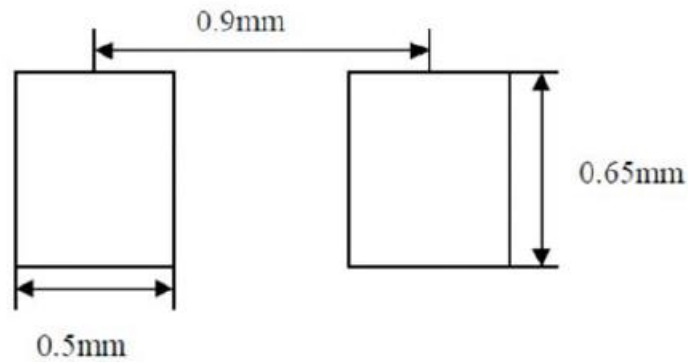
**** . UL Approval is pending for 5A.

Dimension

Drawing not to scale (Unit: mm)



Recommended land pattern



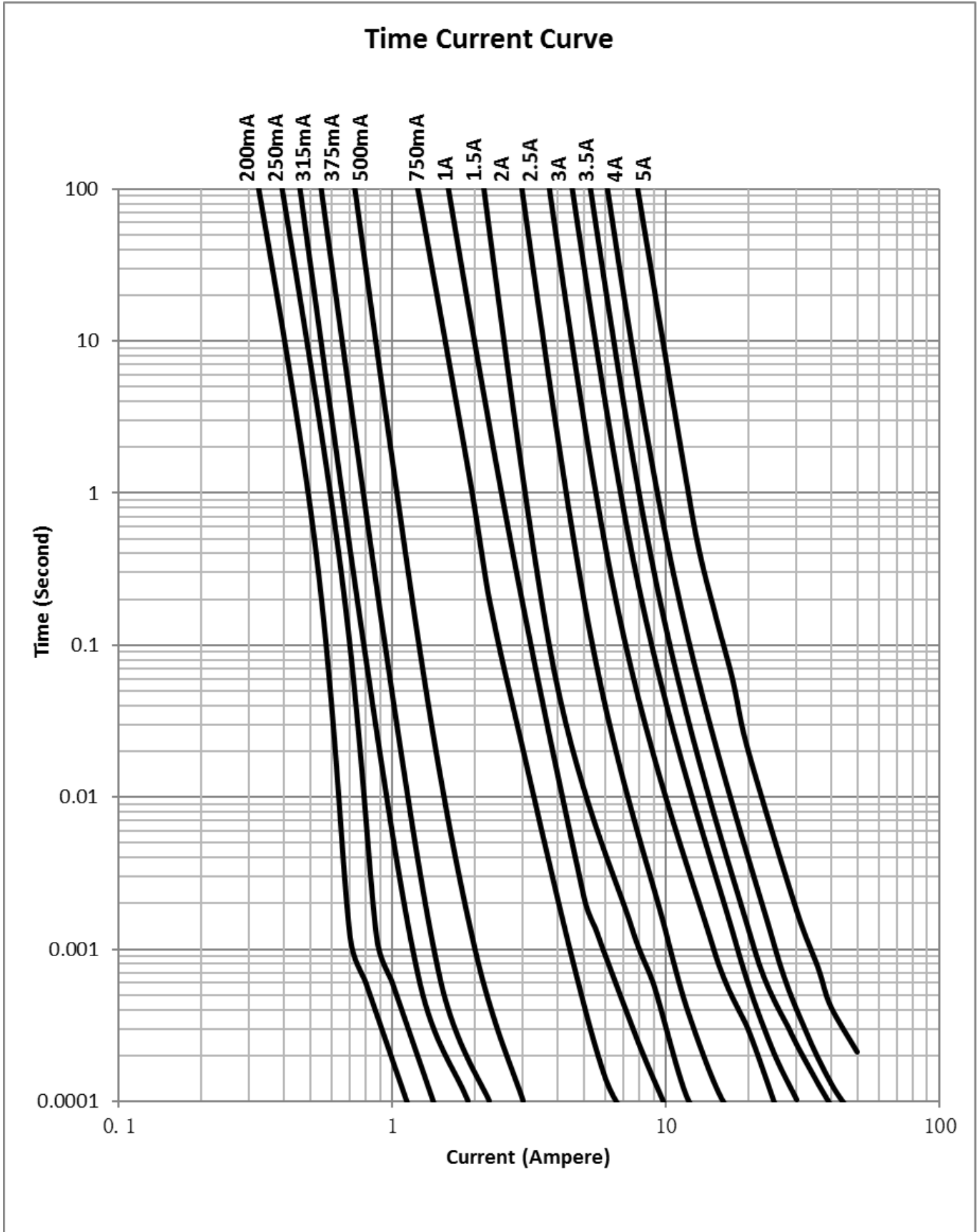
Note: Print solder in thickness of 0.08mm to 0.10mm

注: 锡膏印刷厚度 0.08 毫米到 0.10 毫米



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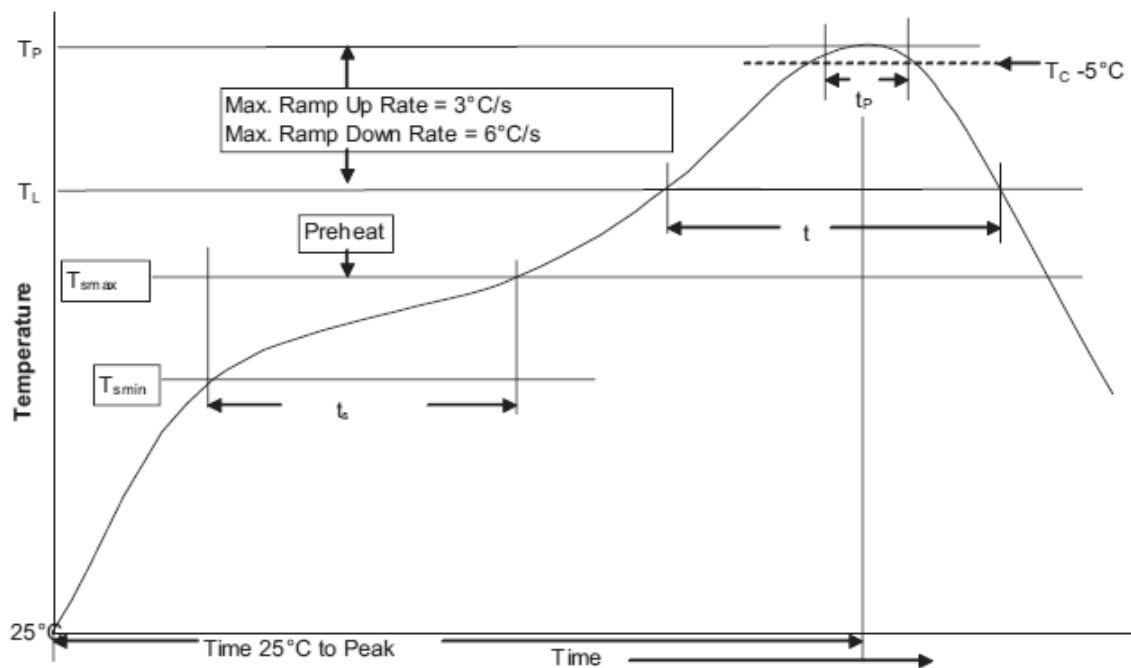
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Soldering method

- Wave solder
 - Reservoir temperature: 260°C
 - Time in reservoir: 10 seconds maximum
- Infrared reflow
 - Temperature: 260°C
 - Time: 30 seconds maximum

Solder reflow profile



Profile Feature		Lead(Pb) free solder
Preheat and soak	• Temperature min.(T _{smin})	150°C
	• Temperature max. (T _{smax})	200°C
	• Time (T _{smin} to T _{smax}) (ts)	60 - 120 Seconds
Average ramp up rate T _{smax} to T _p		3°C / Second Max.
Liquidous temperature (T _L)		217°C
Time at liquidous (t _L)		60 - 150 Seconds
Peak package body temperature (T _P)		260°C
Time (t _P) within 5°C of the specified classification temperature (T _C)		30 Seconds
Average ramp-down rate (T _P to T _{smax})		6°C / Second Max.
Time (25°C to Peak Temperature)		8 Minutes Max.



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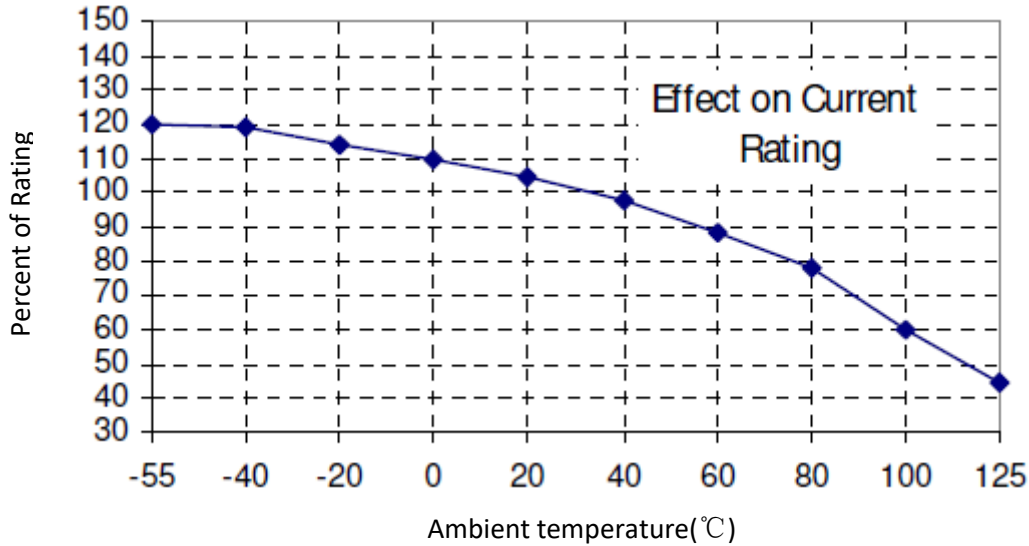
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Temperature Derating Curve

Normal ambient temperature: 23+/-3°C

Operating temperature: -55 ~ 125°C, with proper correction factor applied



Package

10000 fuses on 8mm tape-and-reel on a 7 inch (178mm) reel per EIA Standard 481.

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