Fast Acting SMD Fuses

multicomp PRO

RoHS Compliant

Description

brick fuse for the small size and good electrical performance, reliability and quality. The solder-free design provides excellent on-off and temperature cycling characteristics during use and also makes our brick fuses more heat and shock tolerant than typical brick fuses.

Applications

Used in notebook PC, telecom system, LCD/PDP TV, wireless goods, LCD monitor, white goods, LCD/PDP panel, game console, power supply, net working and other electronics products.

Features

- Rapid interruption of excessive current
- Compatible with reflow and wave soldering
- Ceramic body and silver plated copper terminal
- Excellent environmental integrity
- One time positive disconnect
- Lead-free and Halogen-free
- Designed to UL 248-14

Specifications

Operating Temperature	: -55°C to +125°C
Storage Conditions	: +10°C to +60°C
Relative Humidity	: ≤75% yearly average without dew, maximum 30 days at 95%
Vibration Resistance	: 24 cycles at 15 min. each 10-60Hz at 0.75mm amplitude 60-2000Hz at 10g acceleration

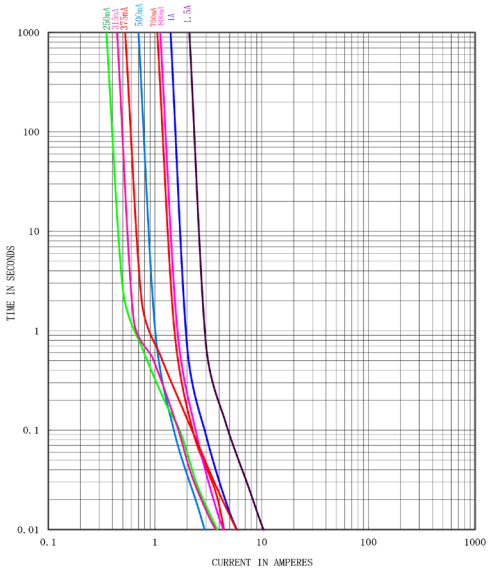
Electrical Characteristics

Time vs Current Characteristics Table

(measured with constant current power supply)

Time vs Current Characteristics		
Rated current	**100%**	**200%**
0.25A to 1.5A	>4h	<5s

Average Time Current (I-T) Curves



Newark.com/multicomp-pro
Farnell.com/multicomp-pro
sg.element14.com/b/multicomp-pro

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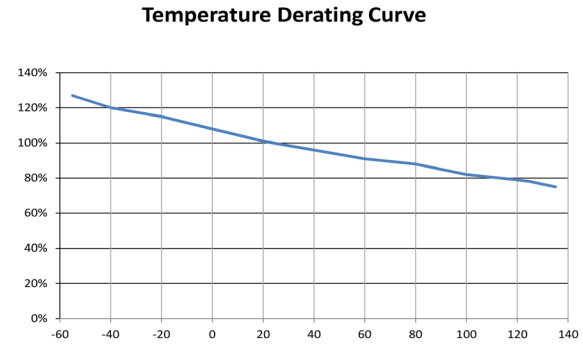
Electrical Characteristics at 25°C

Amp Code	Rated Current	Rated Voltage DC	Typical Voltage Drop (mV)	Breaking Capacity	Typical Melting I²T (A²s)	Typ. Cold Resistance (mΩ)
0250	0.25A	125V AC 125V DC	300	100A@125V AC 50A@125V DC	0.144	519.4~964.6
0315	0.315A		300		0.137	361.2~670.8
0375	0.375A		300		0.335	275.1~510.9
0500	0.5A		600		0.090	520.1~965.9
0750	0.75A		500		0.160	280.7~521.3
0800	0.8A		500		0.203	238.7~443.3
1100	1A		500		0.900	172.9~321.1
1150	1.5A		350		1.069	100.8~187.2

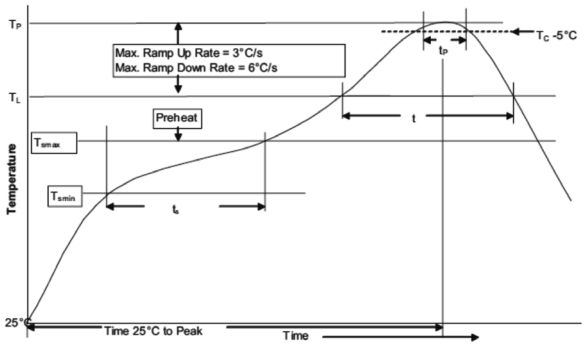
Note:
(1) Permissible continuous operating current is ≤100% at ambient temperature of 23°C (73.4°F).
(2) The current values used for calculating I^2T should be 8~10ms.
(3) The product without sand when the current is no more than 0.375A.

Temperature Re-rating Curve



Calculation for ideal fuse selection = $\frac{\text{Operating Current (A)}}{\text{Rating (\% 0.75)}}$

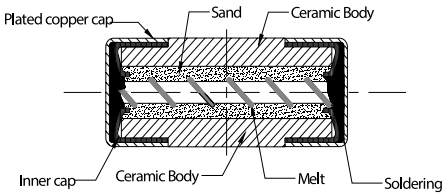
Soldering Parameters



1. Infrared Reflow:
   Temperature: 260°C
   Time: 30sec Max.
   Recommend reflow profile
2. Wave Soldering:
   Reservoir Temperature: 260°C
   Time in Reservoir: 10sec Max.

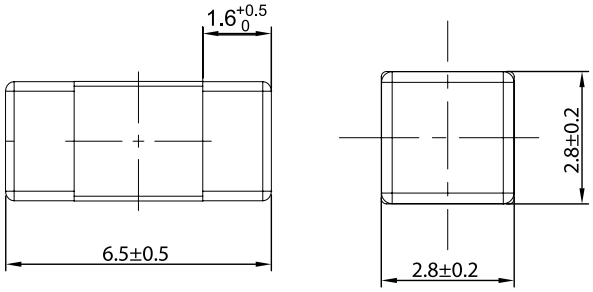
Profile Feature		Pb-Free Assembly
Average Ramp-UP Rate(Tsmax to Tp)		3°C/s Max.
Preheat	Temperature Min (Ts min)	150°C
	Temperature Max (Ts max)	200°C
	Time (Tsmin to Ts max)	60sec to 120sec
Liquidous temperature(TL) Time at liquidous(tL)		217°C 60 to 150S
Peak package body temperature (Tp)		260°C
Time (tP) within 5°C of the specified classification temperature (Tc)		30S
Average ramp-down rate (Tp to Tsmax)		6°C/s Max.
Time (25°C to Peak Temperature)		8 Minutes Max.

Mechanical Specifications

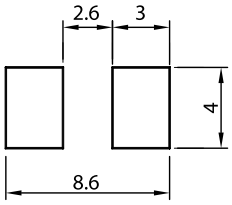


Diagram

Without Clip/Holder



Recommended Land Pattern

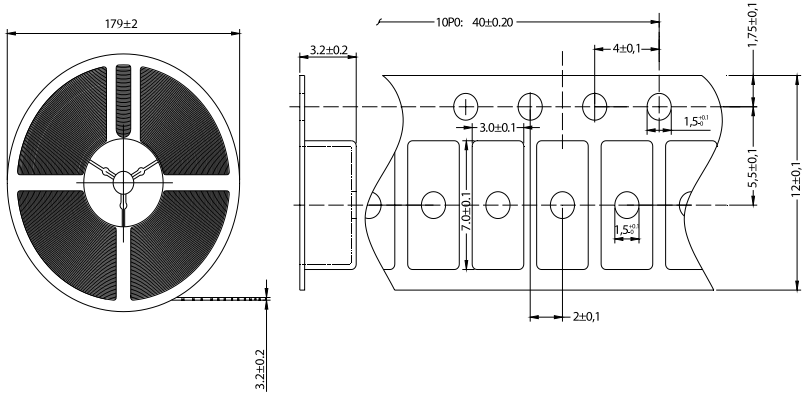


Dimensions : Millimetres

Material name and composition table

Part Name	Component	Volume
Cap	Silver plated copper cap	2
Inner cap	Nickel plating on copper cap	2
Tube body	Ceramic tube	1
Element	Alloy wire	1
Solder	Lead-free solder	-
Filler	Sand	-

Packing Information



Part Number Table

Description	Part Number
SMD Fuse without Clip/Holder, 2410, Fast Blow, 0.25A	MCCFB2410TFF/250
SMD Fuse without Clip/Holder, 2410, Fast Blow, 0.315A	MCCFB2410TFF/315
SMD Fuse with Clip/Holder, 2410, Fast Blow, 0.375A	MCCFB2410TFF/C/375
SMD Fuse without Clip/Holder, 2410, Fast Blow, 0.5A	MCCFB2410TFF/500
SMD Fuse with Clip/Holder, 2410, Fast Blow, 0.5A	MCCFB2410TFF/C/500
SMD Fuse without Clip/Holder, 2410, Fast Blow, 0.75A	MCCFB2410TFF/750
SMD Fuse without Clip/Holder, 2410, Fast Blow, 0.8A	MCCFB2410TFF/800
SMD Fuse without Clip/Holder, 2410, Fast Blow, 1A	MCCFB2410TFF/1
SMD Fuse with Clip/Holder, 2410, Fast Blow, 1A	MCCFB2410TFF/C/1
SMD Fuse with Clip/Holder, 2410, Fast Blow, 1.5A	MCCFB2410TFF/C/1.5
SMD Fuse without Clip/Holder, 2410, Fast Blow, 1.5A	MCCFB2410TFF/1.5

Dimensions : Millimetres