

RoHS  
Compliant



## Description

These series fast-acting fuse with high breaking capacity for use with printed circuit boards is used in a large variety of applications. This  $\Phi 5\text{mm} \times 20\text{mm}$  device is constructed of a ceramic tube with electro-plated brass end caps. This series with 420V/AC DC rating and 300 Ampere breaking, and 500V DC rating and 400 Ampere breaking, and 600V AC rating and 100 Ampere breaking, offers excellent quality and is 100% tested for cold resistance and precise length.

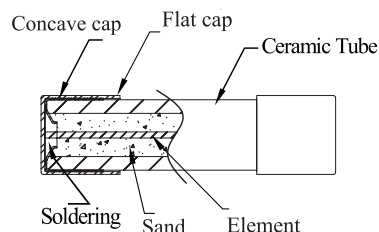
## Features

- Miniature fuse with fast-acting, high breaking capacity
- $\Phi 5\text{mm} \times 20\text{mm}$  physical dimensions
- Ceramic tube, encapsulated design with nickel - plated brass end caps
- Protection against harmful over-currents in primary and secondary applications.
- Designed compliant to UL248-14 IEC60127-7

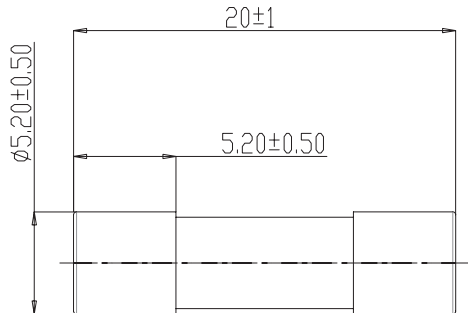
## Specifications

Operating Temperature	: -55°C to 125°C
Storage Conditions	: +10°C to +60°C
Relative humidity	: $\leq 75\%$ yearly average without dew, maximum 30 days at 95%
Vibration Resistance	: 24 cycles at 15 min. each (60068-6) 10-60Hz at 0.75mm amplitude 60-2000Hz at 10g acceleration

## Mechanical Specifications



## Dimensions



Dimensions : Millimetres

## Electrical characteristics

Electrical Characteristics at 25°C					
Amp Code	Rated Current	Max. Voltage	Typical Cold Resistance (mΩ)	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec)	Breaking Capacity
MP013381	6.3A	500V DC 600V AC	21.5	24.6	300A@420V AC / DC 400A@ 500V DC 100A@ 600V AC
MP013382	8A		13.5	64.6	
MP013383	10A		9.4	130	
MP013384	16		6.6	258	
MP013385	20		5.3	392	
MP013386	25		3.36	1031	

Notes: (1) Permissible continuous operating current is ≤100% at ambient temperature of 23°C (73.4°F)  
 (2) Typical pre-arcing I<sup>2</sup>t are measured at 10I<sub>n</sub> current.

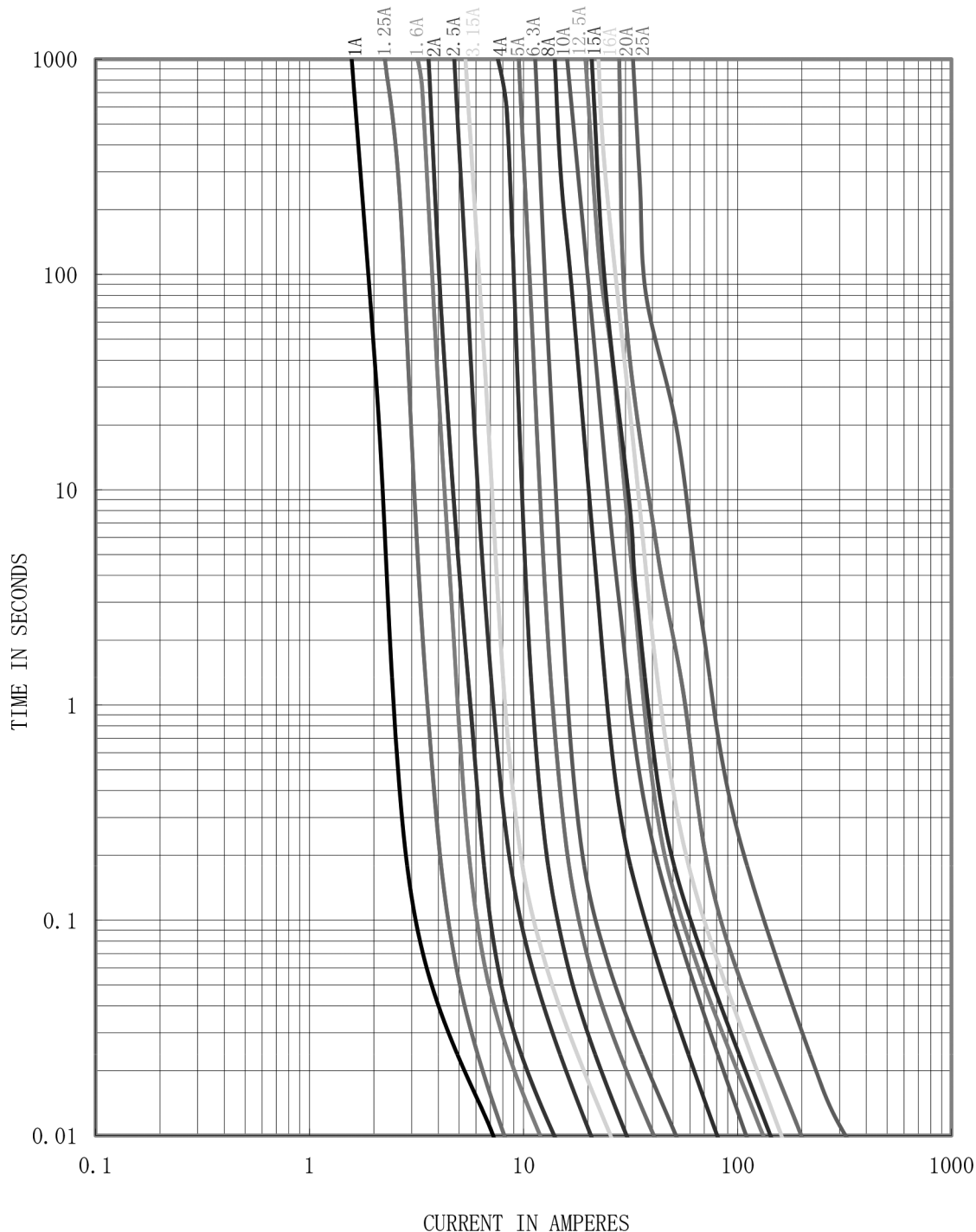
## Electrical Specifications

### Time vs Current Characteristics Table

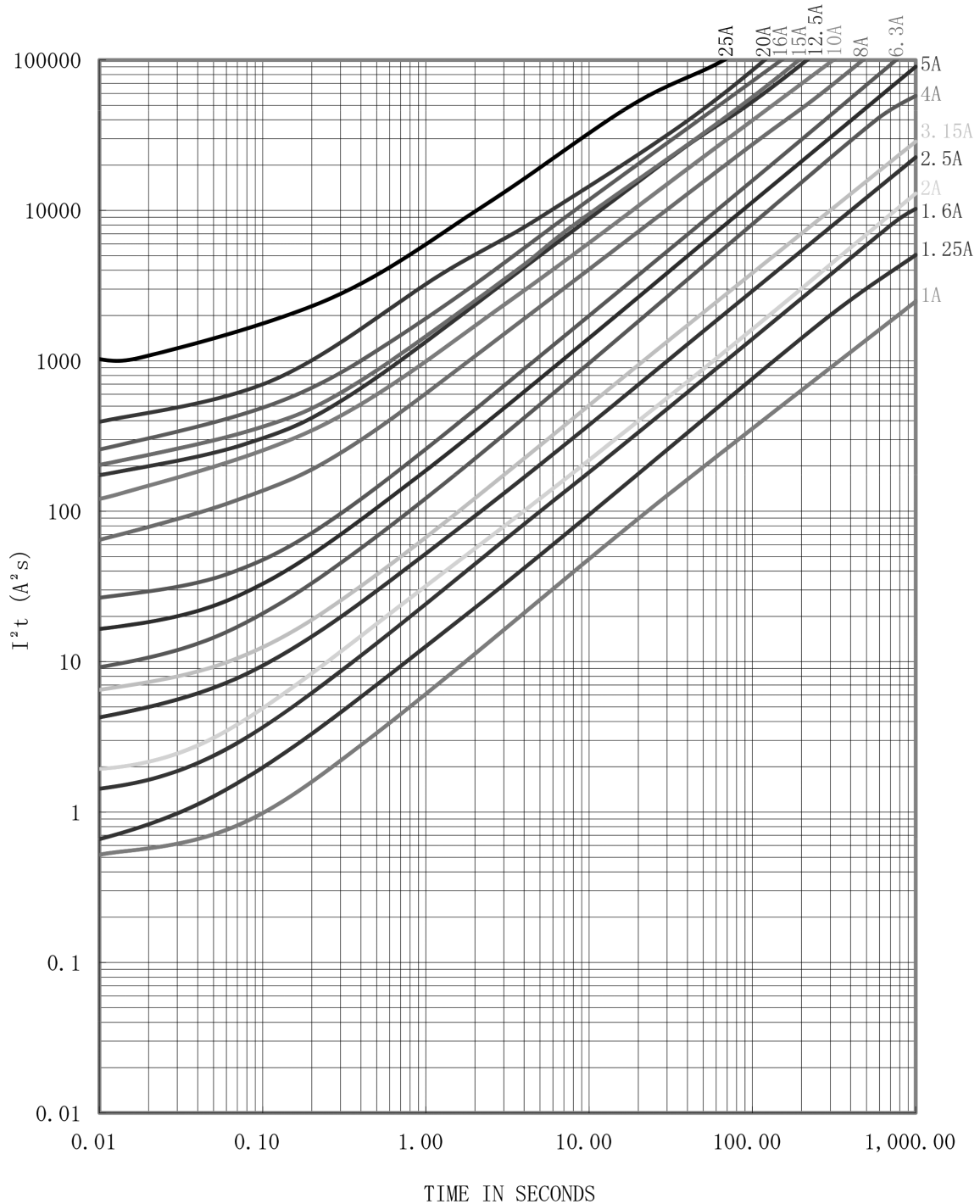
(measured with constant current power supply)

Rated Current	100 %	210 %	275 %	400 %	1000 %
1A~25A	>1h	<30 min	40ms - 20s	10ms - 1s	≤30ms

## Average Time Current (I-T) Curves

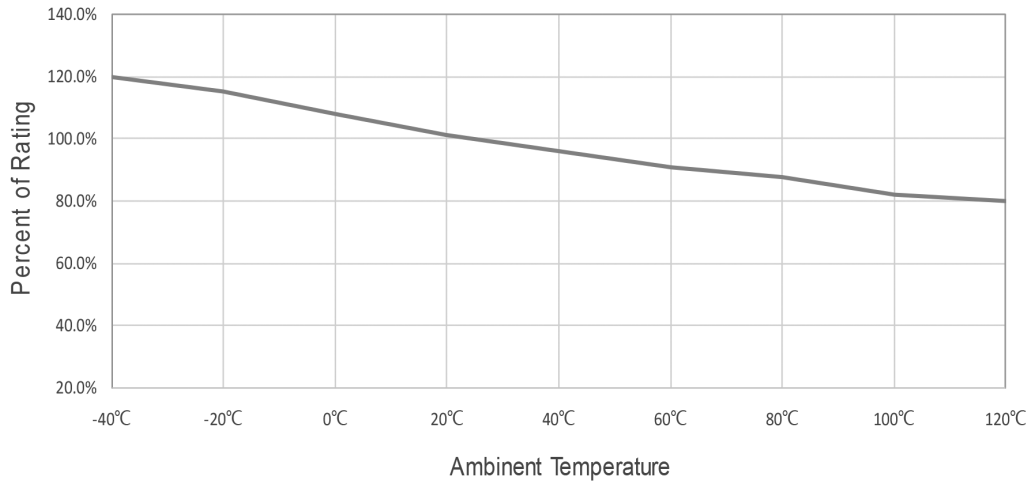


### I<sup>2</sup>T Curve



## Temperature Derating Curve

Temperature Derating Curve



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

## Part Number Table

Description	Part Number
Cartridge Fuse, 6.3A, 600V AC/500V DC	MP013381
Cartridge Fuse, 8A, 600V AC/500V DC	MP013382
Cartridge Fuse, 10A, 600V AC/500V DC	MP013383
Cartridge Fuse, 16A, 600V AC/500V DC	MP013384
Cartridge Fuse, 20A, 600V AC/500V DC	MP013385
Cartridge Fuse, 25A, 600V AC/500V DC	MP013386

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