Cartridge Fuses

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 Φ5mm × 20mm 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.

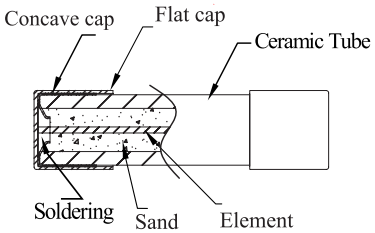
Features

- Miniature fuse with fast-acting, high breaking capacity
- Φ5mm × 20mm 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

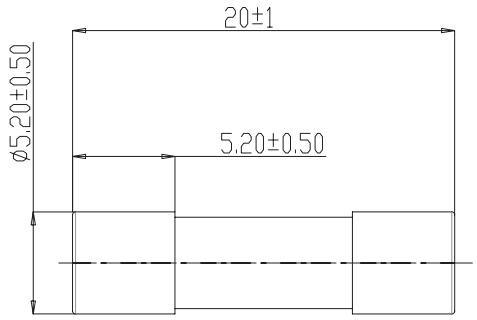
Specifications

Operating Temperature	: -55°C to 125°C
Storage Conditions	: +10°C to +60°C
Relative humidity	: ≤ 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 I²t (A²sec)	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	

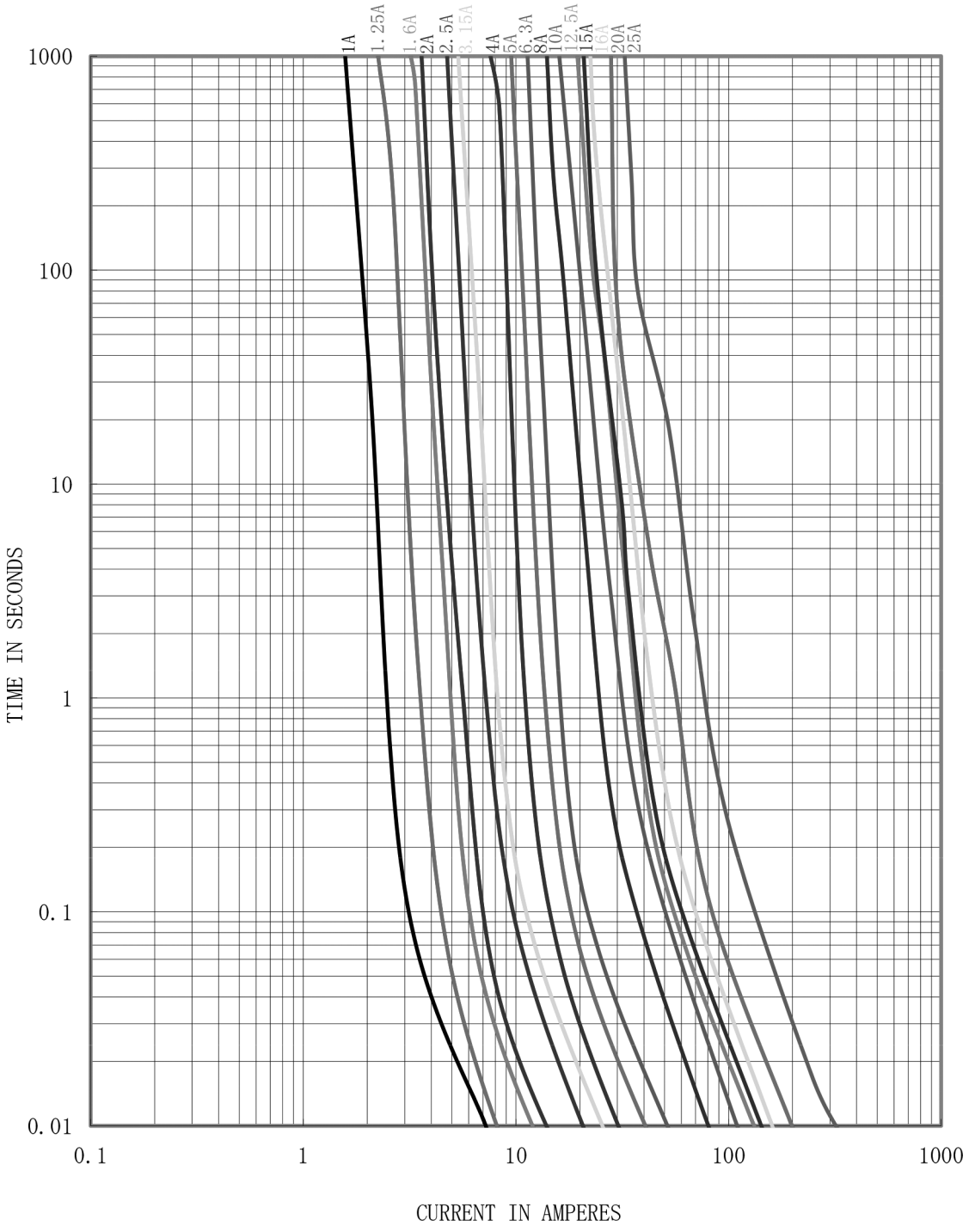
Notes: (1) Permissible continuous operating current is ≤100% at ambient temperature of 23°C (73.4°F)
(2) Typical pre-arcing I²t are measured at 10In current.

Electrical Specifications

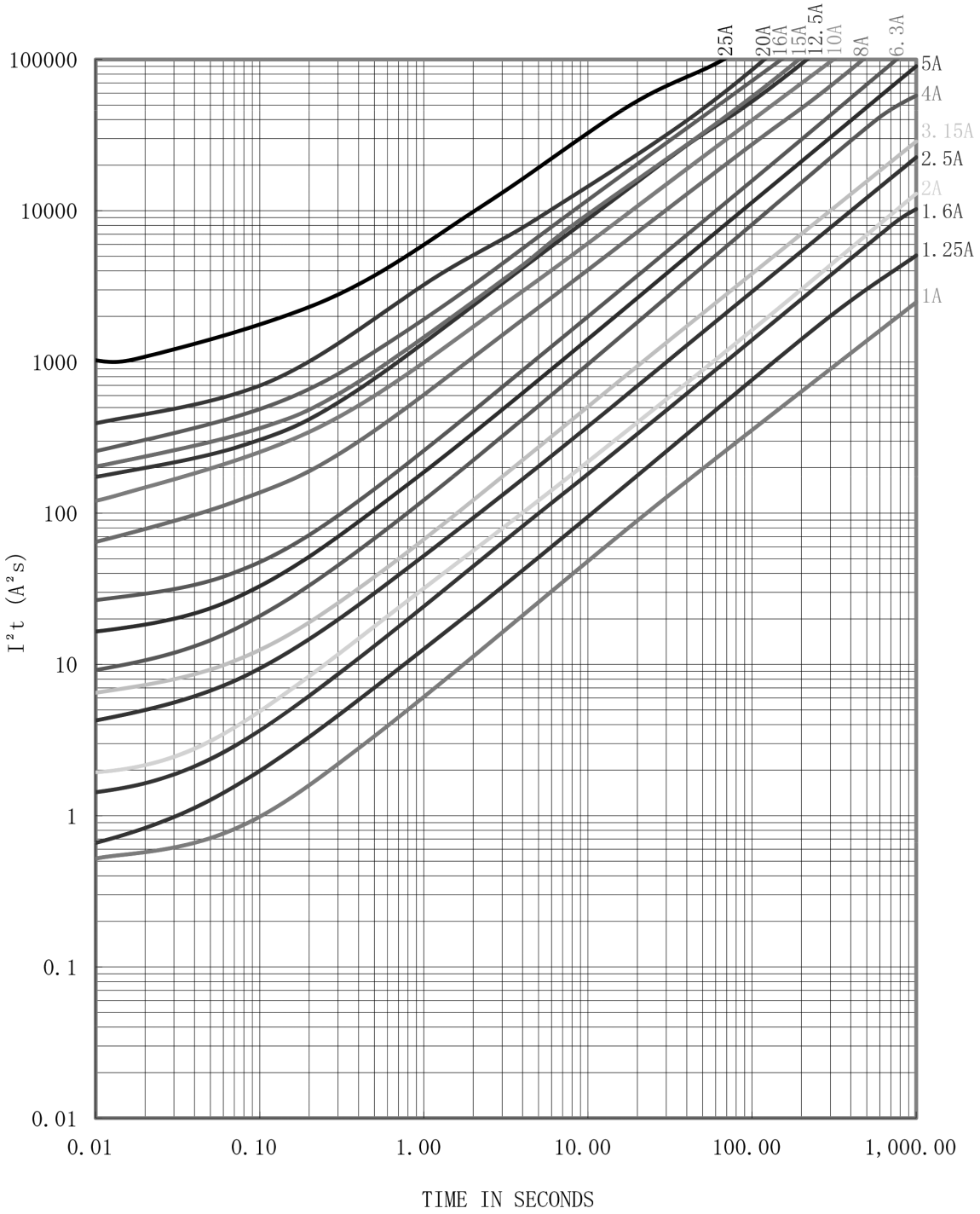
Time vs Current Characteristics Table
(measured with constant current power supply)

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

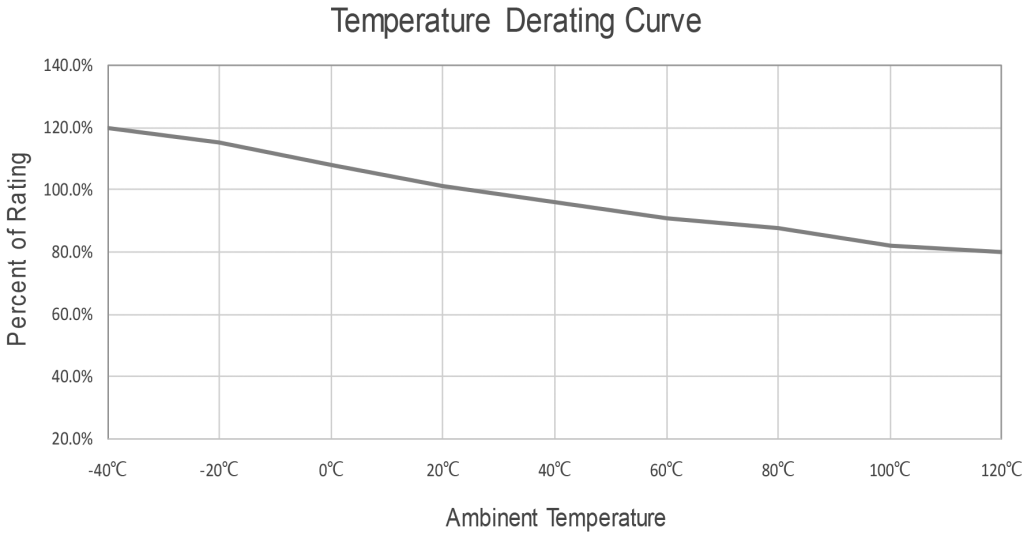
Average Time Current (I-T) Curves



I2T Curve


25A
20A
16A
15A
12.5A
10A
8A
6.3A
5A
4A
3.15A
2.5A
2A
1.6A
1.25A
1A
100000
10000
1000
100
10
1
0.1
0.01
I²t (A²s)
0.01
0.10
1.00
10.00
100.00
1,000.00
TIME IN SECONDS

Temperature Derating Curve



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

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