Cartridge Fuses

RoHS Compliant

Description

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

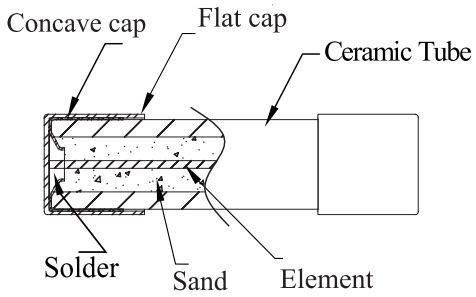
Features

- Miniature fuse with fast-acting, high breaking capacity
- 5mm × 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

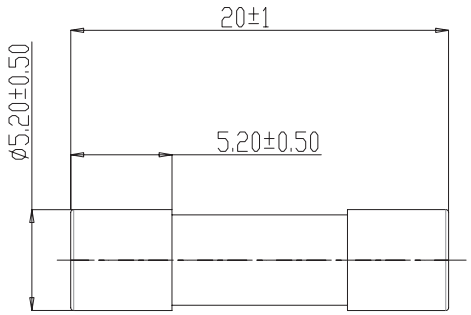
Specifications

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

Construction And Mechanical Characteristics



Dimensions



Dimensions : Millimetres

Electrical Specifications

Time vs Current Characteristics Table

(measured with constant current power supply)

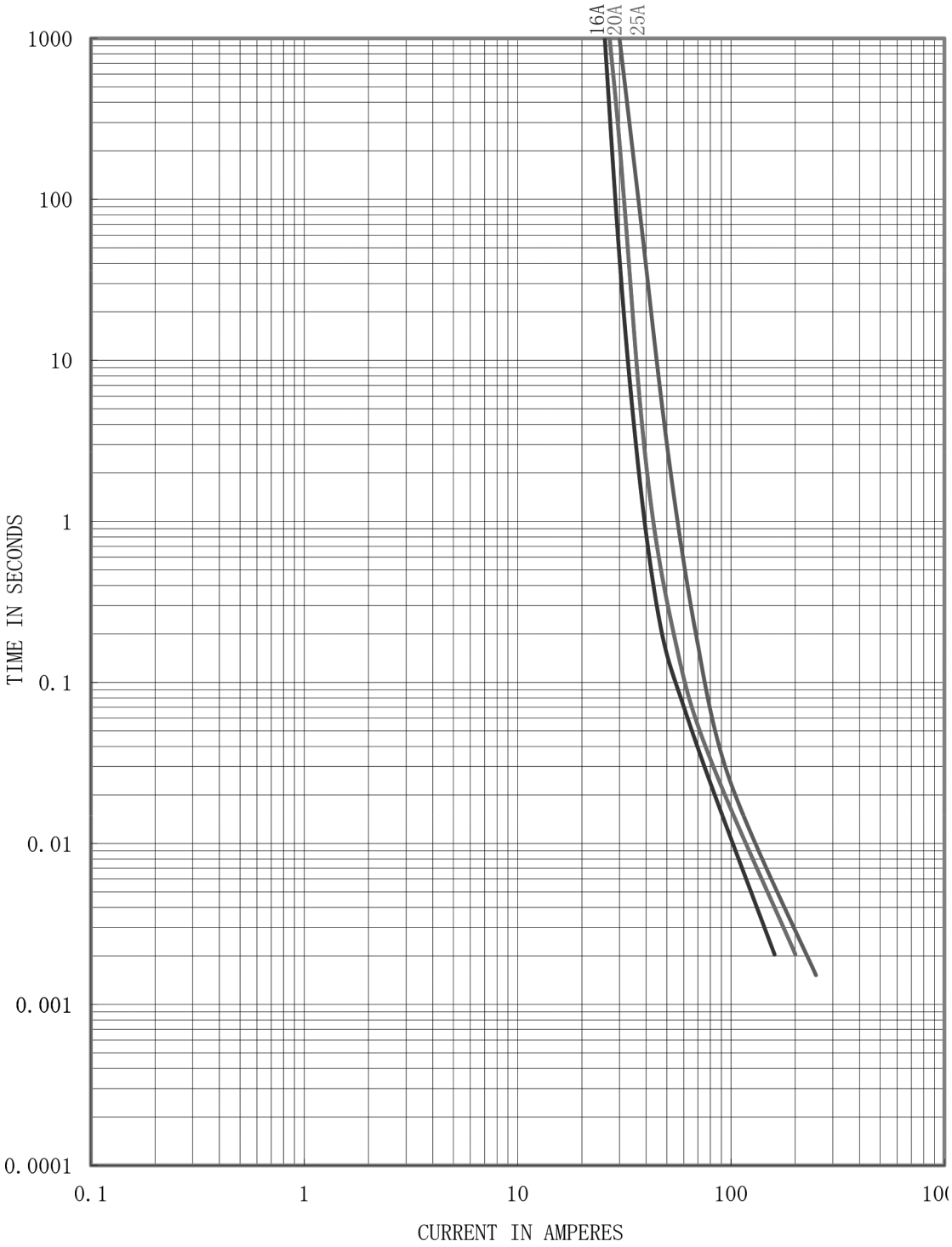
Rated Current	100 %	210%	275	400	1000%
16A~25A	>1h	<30 min	40ms - 20s	10ms - 1s	≤30ms

Electrical characteristics

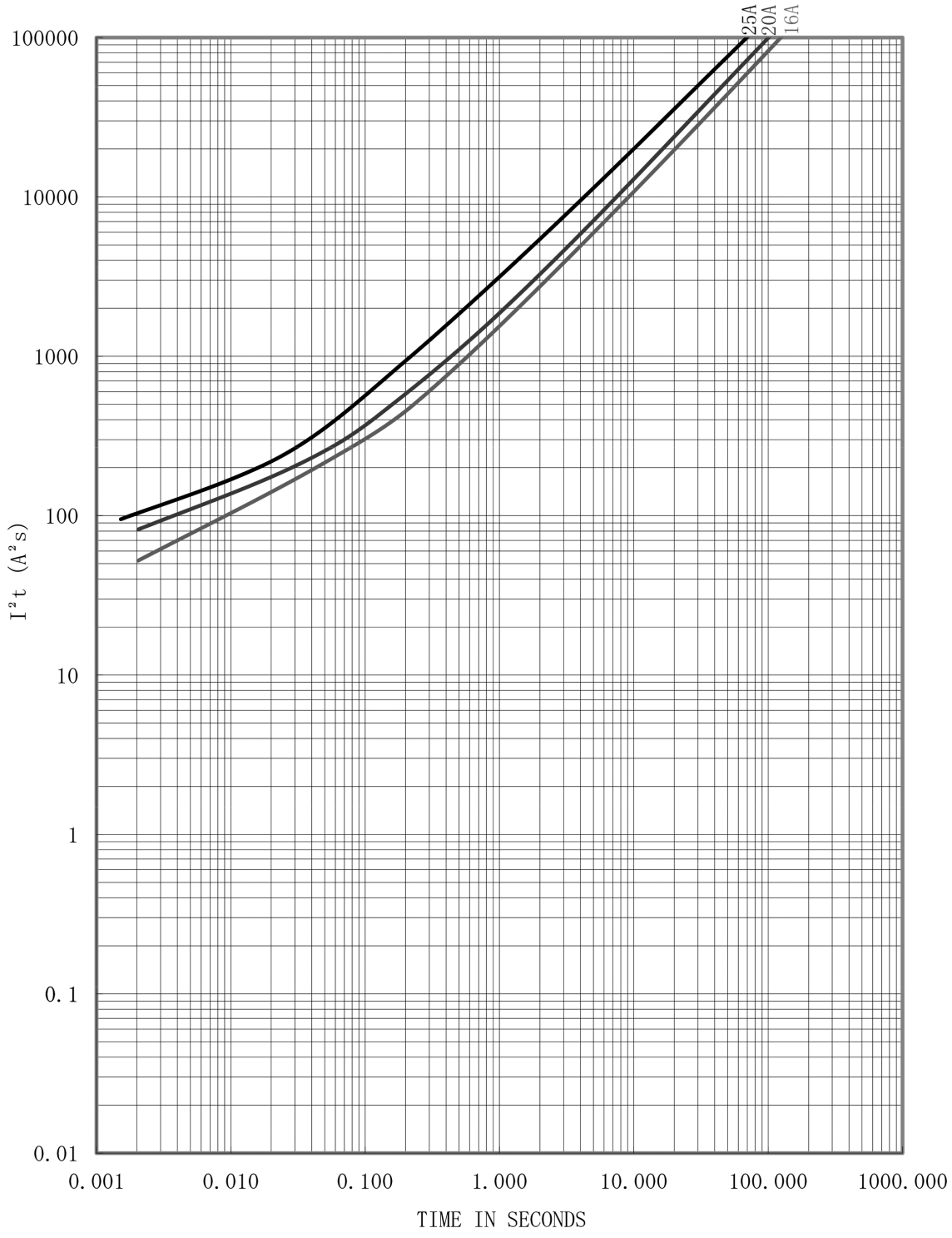
Electrical Characteristics at 25°C						
Amp Code	Rated Current	Rated Voltage	Voltage drop Max. (mV)	Nominal Melting I^2t (A^2sec)	Typical Cold Resistance (mΩ)	Breaking Capacity
MP013388	16A	500V DC 600V AC	250	52	5.91	100A @ 600V AC 400A @ 500V D
MP013389	20A			82	4.79	
MP013390	25A			95	3.36	

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

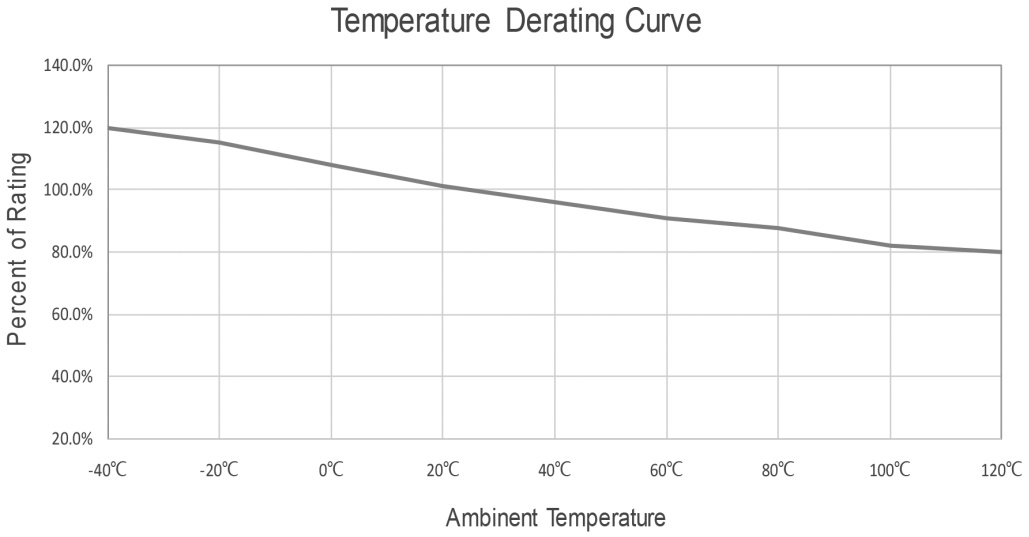
Average Time Current (I-T) Curves



I2T Curves


25A
20A
16A
100000
10000
1000
100
10
1
0.1
0.01
I²t (A²s)
0.001
0.010
0.100
1.000
10.000
100.000
1000.000
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, 16A, 600V AC/500V DC	MP013388
Cartridge Fuse, 20A, 600V AC/500V DC	MP013389
Cartridge Fuse, 25A, 600V AC/500V DC	MP013390