

High Power Surface Mount Fuse

CM2822H Series (High Inrush, 2822 Size)



Features:

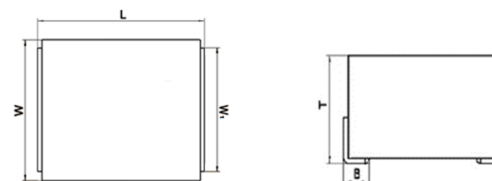
- High safety with ceramic body and special arc-extinguishing filler
- High interrupting current ratings for high power protection
- Single small case size for current rating from 20A to 125A
- High reliability for long time operation

Clearing Time Characteristics:

% of current rating	Clearing time at 25°C	
	Min.	Max.
100%	4 hours	-
250%	-	60 seconds

Shape and Dimensions:











Unit	Inch	mm
L	0.287 ± 0.012	7.3 ± 0.3
W	0.228 ± 0.008	5.8 ± 0.2
W ₁	0.201 ± 0.008	5.1 ± 0.2
T	0.165 ± 0.008	4.2 ± 0.2
B	0.051 ± 0.012	1.3 ± 0.3



Applications:

- Server systems
- Routers & switches
- Telecom DC/DC power
- Drones
- Power tools
- Battery & BMS

Ordering Information:

Part Number	Current Rating (A)	Voltage Rating (V DC)	Interrupting Rating	Nominal DCR (mΩ) ¹	Nominal I ² t (A ² s) ²	Marking ⁴
CM2822H20A0T	20	125	300A @125V DC 1,000A @ 75V DC ³ 1,500A @ 48V DC ³	2.10	120	
CM2822H30A0T	30			1.35	270	
CM2822H40A0T	40			1.05	400	
CM2822H50A0T	50			0.85	600	
CM2822H60A0T	60	75	1,000A @ 75V DC ³ 1,500A @ 48V DC ³	0.74	900	
CM2822H70A0T	70			0.61	1,400	
CM2822H80A0T	80			0.53	2,000	
CM2822H90A0T	90			0.48	2,400	
CM2822H100AT	100			0.44	3,600	
CM2822H125AT	125			0.38	6,000	

1. Measured at ≤10% rated current and 25 °C ambient.

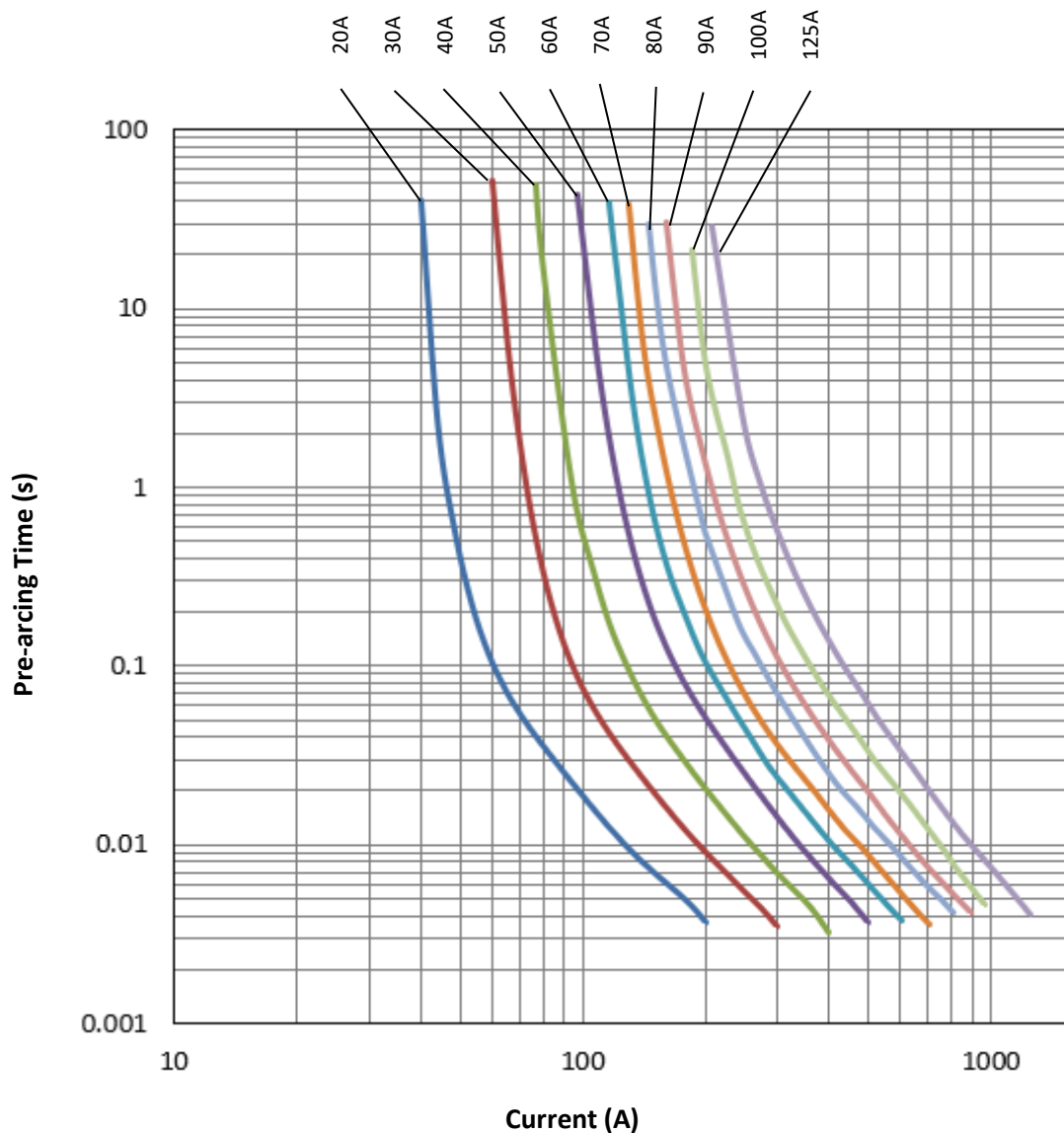
2. Melting I²t at 1000% of current rating.

3. Time constant of interrupting test less than 0.1ms.

4. Laser marking character code.

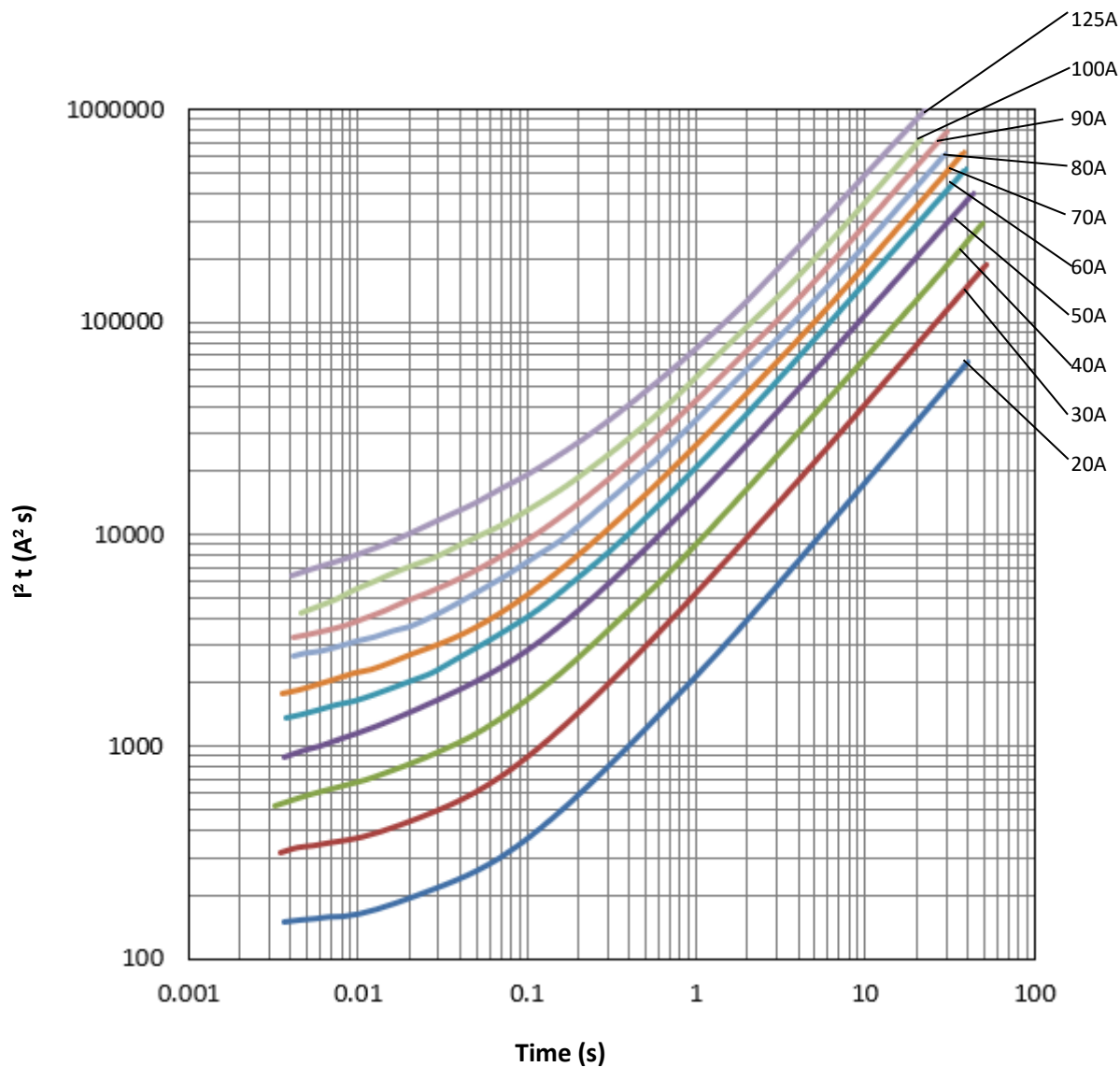
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Average Pre-arcing Time Curves:



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Average I^2t vs. t Curves:

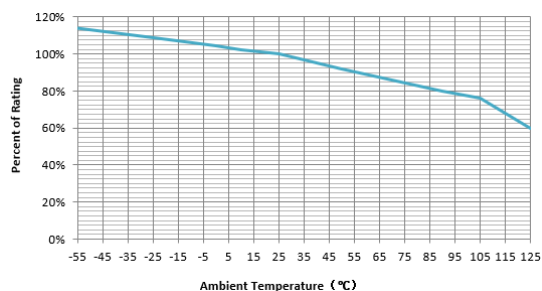


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Temperature De-rating:

The ambient temperature affects the current carrying capacity of fuses. When a fuse is operating at a temperature higher than 25°C, the fuse shall be “de-rated” according to the de-rating curve.



Operating Temperature Range:

- 55°C ~+125°C (with de-rating)

Product Identification:

CM 2822 H 60A0 T

(1) (2) (3) (4) (5)

(1) **Series Code:** CMH Series

(2) **Size Code:** L x W (inch), the first two digits - L (length), the last two digits - W (width)

(3) **Characteristic Code:** H - High Inrush

(4) **Current Rating Code:** 60A0 - 60A

(5) **Package Code:** T - Tape & Reel, B - Bulk

Marking:

Top Line:  AEM Logo; **CMH:** Series Code

Bottom Line: Current Rating Code

Agency Approval:

- Recognized Under the Components Program of Underwriters Laboratories.
- Certification #: UL-E507943

Reliability Tests:

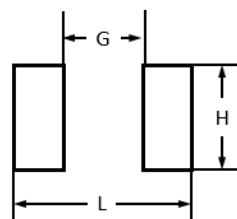
No.	Item	Condition	Criteria
1	Bend	2 mm bend	DCR change within ±20%, no mechanical damage
2	Solderability	245°C, 5 seconds	New solder coverage ≥95%
3	Soldering Heat Resistance	260°C, 10 seconds	DCR change within ±20%, new solder coverage 75% minimum, no mechanical damage
4	Terminal Strength	Gradually apply 1.8 kg force to the bottom of the part for 60 seconds	DCR change within ±20%, no mechanical damage
5	Life	80% rated current, 2000 hours, ambient temperature +20°C to +30°C	Voltage drop change within ±20%
6	Thermal Shock	-65°C to +125°C, 100 cycles	DCR change within ±20%, no mechanical damage
7	Mechanical Vibration	5 – 3000 Hz, 0.4 inch double amplitude or 30 G peak	DCR change within ±20%, no mechanical damage
8	Mechanical Shock	1500 G, 0.5 milliseconds, half-sine shocks	DCR change within ±20%, no mechanical damage
9	Salt Spray	5% salt solution, 48 hours exposure	DCR change within ±20%, no excessive corrosion
10	Moisture Resistance	10 cycles	DCR change within ±20%, no excessive corrosion

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Recommended Land Pattern:

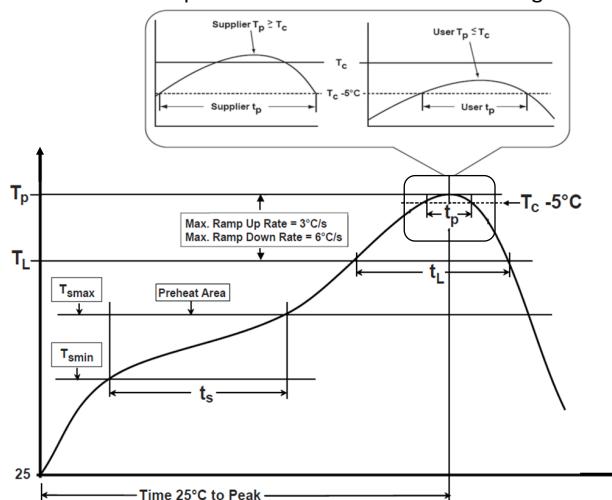
Chip Size	2822	Unit
L	0.386 (9.8)	Inch (mm)
G	0.173 (4.4)	Inch (mm)
H	0.228 (5.8)	Inch (mm)



Recommended Temperature Profile:

Profile Feature	Pb-Free Assembly
Preheat/Soak	
Temperature Min (T_{smin})	150°C
Temperature Max (T_{smax})	200°C
Time (t_s) from (T_{smin} to T_{smax})	60~120 seconds
Ramp-up rate (T_L to T_p)	3°C/second max.
Liquidous temperature (T_L)	217°C
Time (t_L) maintained above 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 *
Ramp-down rate (T_p to T_L)	6°C/second max.
Time 25°C to peak temperature	8 minutes max.
* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum	

* Recommended Temperature Profile for Reflow Soldering



Recommended conditions for hand soldering:

1. Appropriate temperature (max.) of soldering iron tip/soldering time (max.): 280°C / 10 s or 350°C / 3 s
2. Using hot air rework station with tip that can melt the solder on both terminations at the same time is strongly recommended. Do not directly contact the chip termination with the tip of soldering iron.

Storage:

1. The maximum ambient temperature shall not exceed 35°C . Storage temperatures higher than 35°C could result in the deformation of packaging materials.
2. The maximum relative humidity recommended for storage is 75%. High humidity with high temperature can accelerate the oxidation of the solder plating on the termination and reduce the solderability of the components.
3. The products shall not be stored in areas where harmful gases containing sulfur or chlorine are present.
4. MSL=1

Packaging:

Chip Size	Parts on 13 inch (330 mm) Reel
2822	1,000

Disclaimer

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