

High Power Surface Mount Fuse

CM2840H Series

Promotion (coming soon)



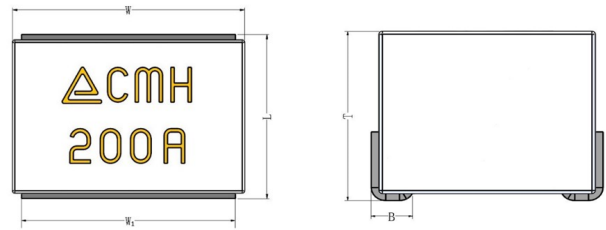
Features:

- Ceramic body with superior arc-suppression material as filler
- No interconnection issue with one unit of fuse link and termination
- The most compact design of at 2840 case size in surface mount type of high current fuse up to 200A
- Low DC resistance (DCR) – Minimizes excessive power loss
- High interrupting ratings – for excellent inrush current capability
- Halogen free, RoHS compliant and 100% lead-free

Clearing Time Characteristics:

% of Current Rating	Clearing Time at 25°C
100%	4 hours (min)
250%	60 seconds (max)

Shape and Dimensions:



Unit	Inch	mm
L	0.287 ± 0.012	7.3 ± 0.3
W	0.406 ± 0.008	10.3 ± 0.2
W1	0.374 ± 0.008	9.5 ± 0.2
T	0.228 ± 0.008	5.8 ± 0.2
B	0.047 ± 0.012	1.2 ± 0.3

Applications:

- Server Systems
- Routers and switches
- Telecom DC/DC Power
- Drones
- Power tools
- Battery and BMS

Agency Approval:

Pending

Ordering Information:

Part Number	Current Rating (A)	Voltage Rating (Vdc)	Interrupting Rating	Nominal DCR (mΩ) ¹	Nominal I ² t (A ² s) ²	Marking ³
CM2840H150AT	150	75	1,500A @ 75VDC	0.29	16000	△CMH 150A
CM2840H200AT	200			0.20	28000	△CMH 200A

1. Measured at ≤10% rated current and 25 °C ambient.
2. Measured at 1000% of current rating.
3. Laser marking character code.

Operating Temperature Range:

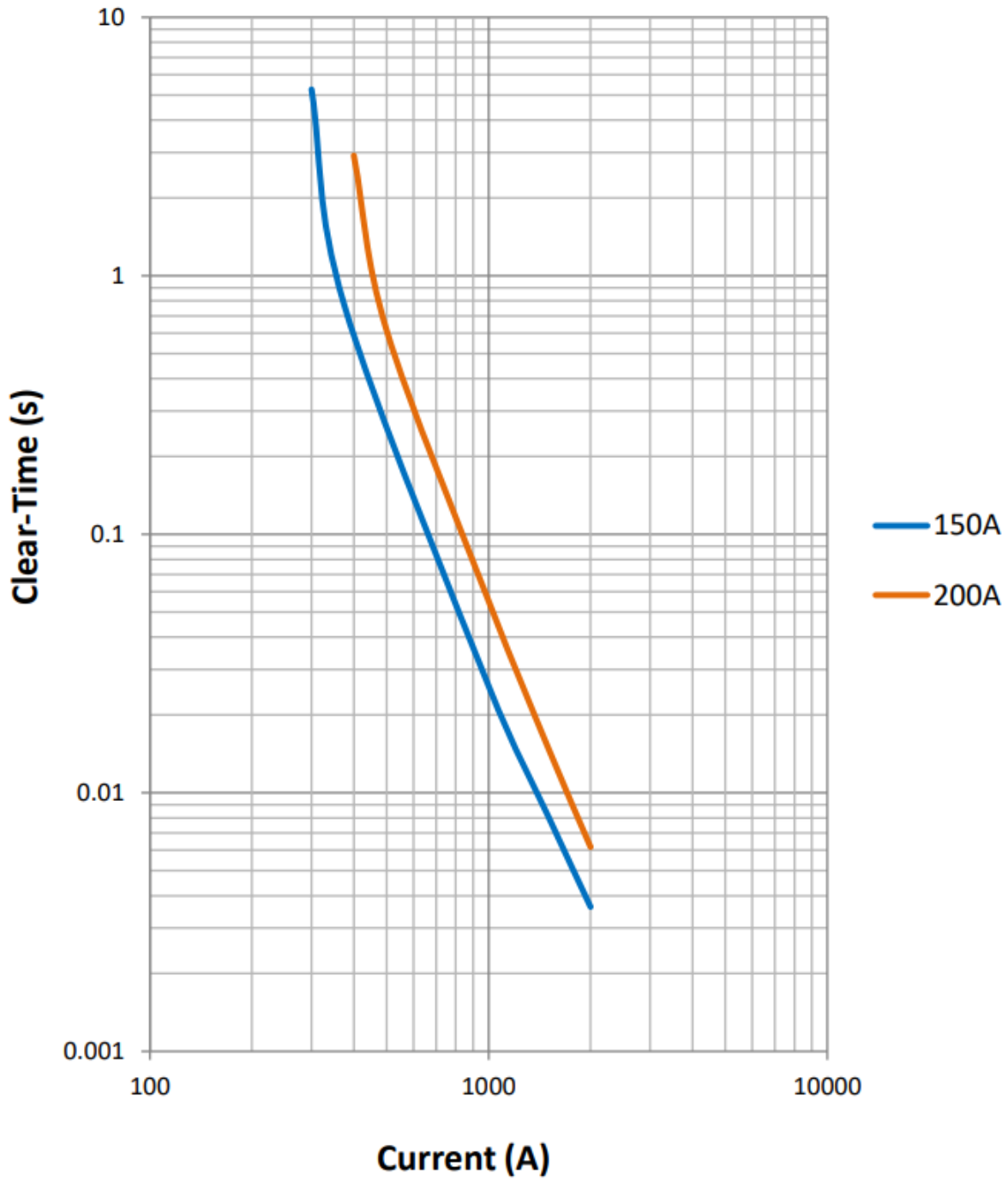
-55°C ~ +125°C (with de-rating)

Packaging:

Chip Size	Parts on 13 inch(330mm)Reel
2840	600Pcs

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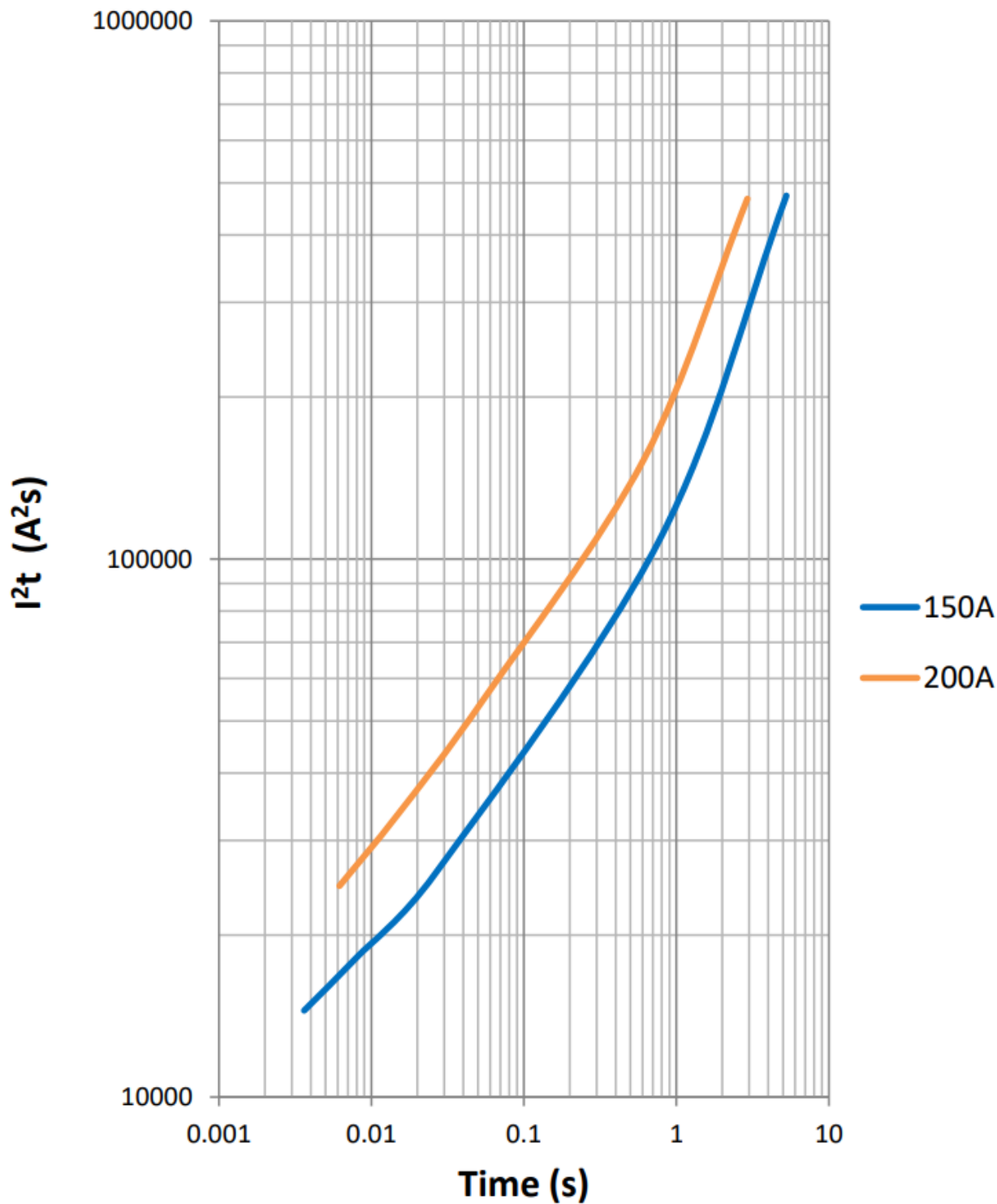
Clearing Time vs. Current Curves:



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Average I^2t vs. t Curves:



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Product Identification:

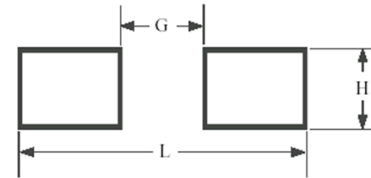
CM 2840 H 200A T

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

- (1) **Product Code:** CM-Commercial Molding Fuse
- (2) **Size code: L x W (inch):** the first two digits - L (length), the last two digits - W (width)
- (3) **Series code:** H
- (4) **Current rating code:** e.g. 200A: 200A

Recommended Land Pattern:

Chip Size	2840
L Inch (mm)	0.386 (9.8)
G Inch (mm)	0.173 (4.4)
H Inch (mm)	0.472 (12.0)



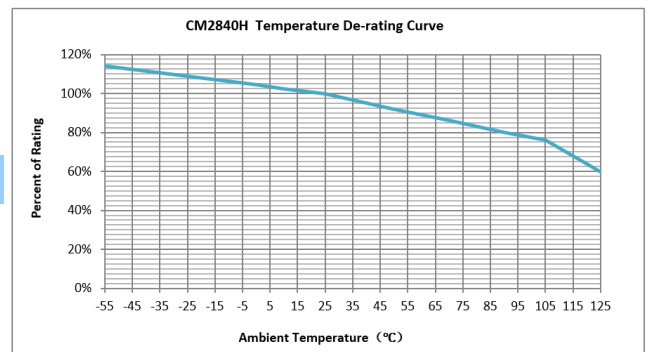
Reliability Tests:

No.	Item	Test Condition	Criteria
1	Bend	2 mm bend	DCR change within $\pm 20\%$, no mechanical damage
2	Solderability	245°C for 5 seconds	New solder coverage 95% minimum
3	Soldering Heat Resistance	260°C, 10 seconds	DCR change within $\pm 20\%$, 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 $\pm 20\%$, no mechanical damage
5	Life	80% rated current, 2000 hours, ambient temperature from +20°C to 30°C	Voltage drop change within $\pm 20\%$
6	Thermal Shock	-65°C to + 125°C, 100 cycles	DCR change within $\pm 20\%$, no mechanical damage
7	Mechanical Vibration	5-3000Hz, 0.4 inch double amplitude or 30G peak	DCR change within $\pm 20\%$, no mechanical damage
8	Mechanical Shock	1500 G, 0.5 milliseconds, half-sine shocks	DCR change within $\pm 20\%$, no mechanical damage
9	Salt Spray	5% salt solution, 48 hour exposure	DCR change within $\pm 20\%$, no mechanical damage
10	Moisture Resistance	10 cycles	DCR change within $\pm 20\%$, no mechanical damage

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.

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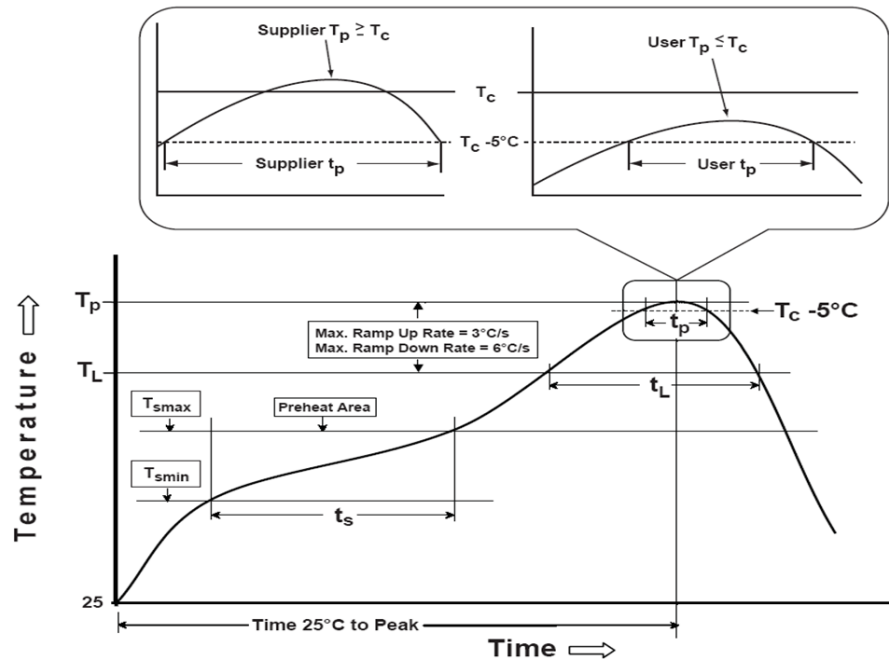


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Recommended Temperature Profile for Reflow Soldering:

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 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

Disclaimer

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