阅读申明

1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描叙上的差异，建议读者做出适当判断。
4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.

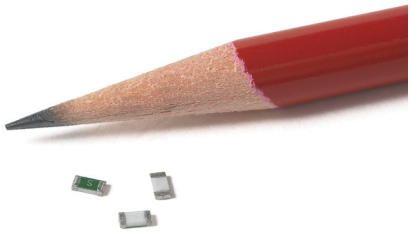
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader’ s learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.

3. All product information provided on the website refer to solutions from manufacturers’ technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.

4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with “Datasheets”.

CC12H

High I²t Chip fuses



Product description

- High I²t
- High inrush withstand capability
- AEC-Q200 qualified: (750 mA to 20 A)
- Excellent temperature and cycling characteristics
- 1206 (3216 metric) compact design utilizes less board space
- Compatible with solder reflow and wave solder
- Halogen free, lead free, RoHS compliant

Applications

Secondary circuit protection

- Laptop, notebook, netbook
- Tablets, e-readers
- Flat panel displays
- High definition television (HDTV)
- LCD/LED backlighting
- Computers and peripherals
- Gaming console systems
- Handheld/portable equipment
- Mobile device chargers

Automotive

- Central body control module
- Heating ventilation and air conditioning controllers (HVAC)
- Doors, window lift and seat control
- Digital instrument cluster
- In-vehicle infotainment (IVI) and navigation
- Electric pumps, motor control and auxiliaries
- Powertrain control module (PCU)/Engine Control unit (ECU)
- Transmission Control Unit (TCU)

Agency information

- cURus Recognition: File E19180, Guide JDYX2/JDYX8
- AEC-Q200 qualified (750 mA to 20 A)

Ordering

- Use ordering number (see page 6 for details)

Packaging suffixes

- -TR (3000 parts per 7" diameter reel, tape width 8 mm)

Electrical characteristics

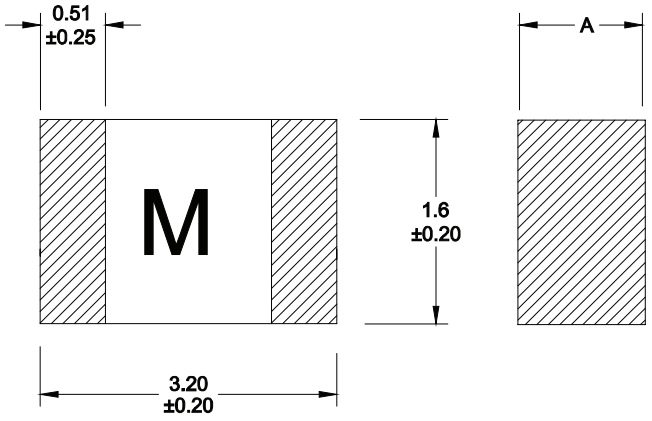
Amp Rating	% of Amp Rating	Opening Time
250 mA – 30 A	100%	4 hours minimum
1 A – 3 A	200%	1.0 s – 60 s
25 A – 30 A	200%	120 s max
1 A – 5 A	250%	5.0 s max
1 A – 5 A	300%	0.1 s – 3.0 s
250 mA – 750 mA	350%	5 s max
6 A – 20 A	350%	5 s max
250 mA – 500 mA	1000%	0.01 ms – 1.0 ms
750 mA – 30 A	1000%	0.2 ms – 20 ms

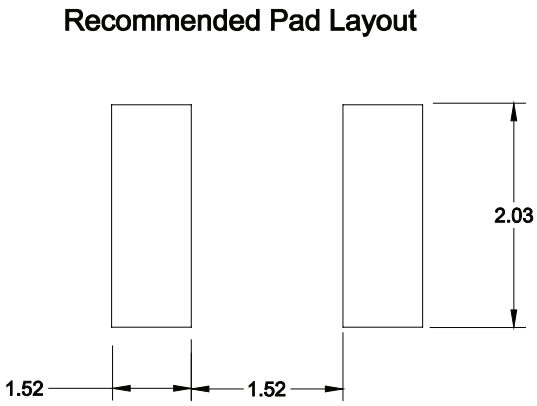
Product specifications

Part Number	Current rating (A)	Voltage rating (V_{DC})	Interrupting rating[1] (A)	Typical DC cold resistance[2] (mΩ)	Typical pre-arcing[3] I²t (A^2s)	Typical voltage drop (mV)	Part marking
CC12H250mA	0.25	63	50	3500	0.00038	1400	.25
CC12H375mA	0.375	63	50	1750	0.00077	730	A
CC12H500mA	0.5	63	50	980	0.0019	700	.5
CC12H750mA	0.75	63	50	800	0.15	700	E
CC12H1A	1	63	50	470	0.18	490	H
CC12H1.5A	1.5	63	50	218	0.4	355	K
CC12H2A	2	63	50	133	1.1	305	N
CC12H2.5A	2.5	63	50	79	1.7	240	O
CC12H3A	3	63	50	49	2.2	185	P
CC12H3.5A	3.5	63	50	37	2.7	180	R
CC12H4A	4	63	50	33	3.2	169	S
CC12H4.5A	4.5	32	100	28	4.2	160	X
CC12H5A	5	32	100	23	6	140	T
CC12H6A	6	32	100	15.5	12	150	F
CC12H7A	7	32	100	11.5	18	130	J
CC12H8A	8	32	100	7.3	18	110	V
CC12H10A	10	32	100	6.5	30	90	U
CC12H12A	12	32	100	4.7	45	90	W
CC12H15A	15	32	100	3	33	90	Y
CC12H20A	20	32	100	2	80	90	Q
CC12H25A	25	32	200	3	60	90	L
CC12H30A	30	32	200	2.1	100	90	Z

1. DC interrupting rating measured at rated voltage, time constant of less than 50 microseconds, battery source.
2. Typical DC cold resistance measured at <10% of rated current.
3. Typical pre-arcing I²t value is measured at 10In rated current.

Dimensions–mm

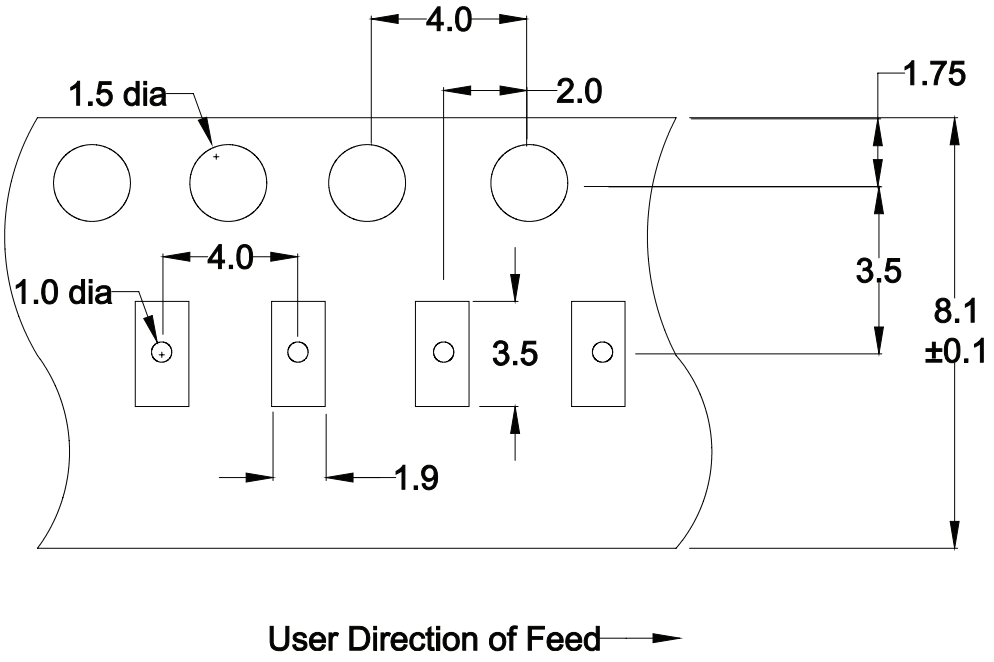




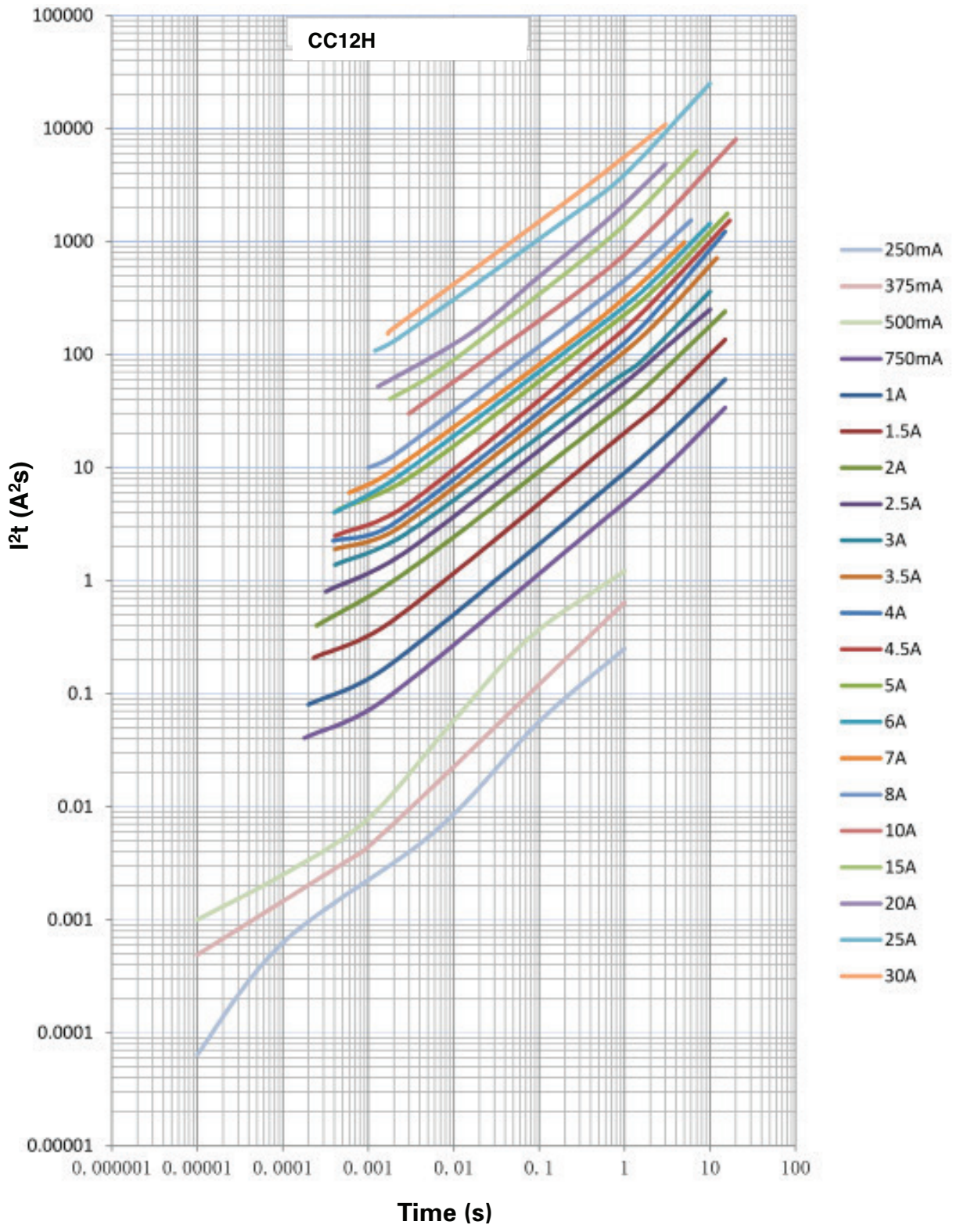
Dimension A	
250 mA to 500 mA	750 mA to 30 A
0.89 +0.20/-0.15	0.65 +0.20/-0.15

Packaging information- mm

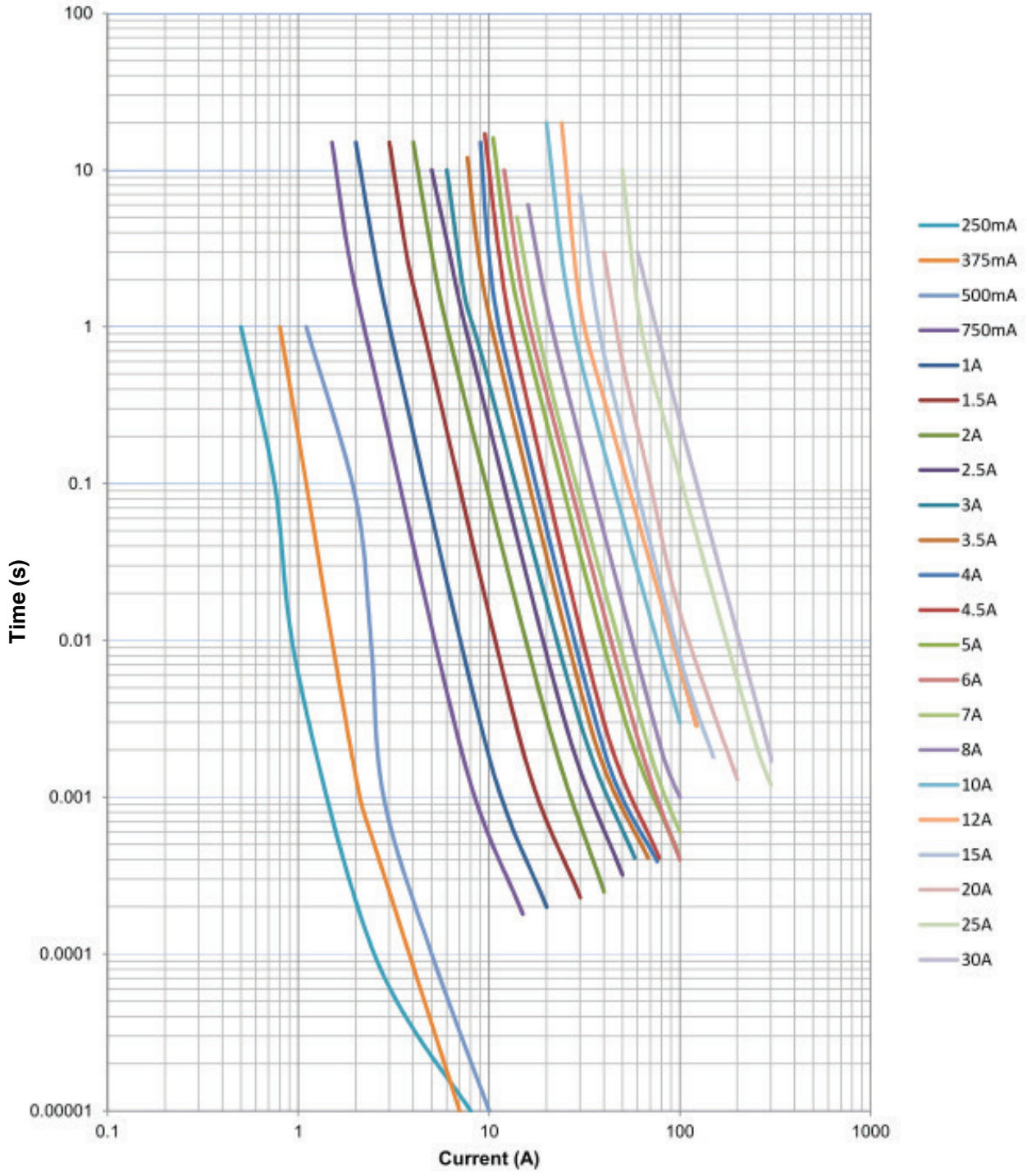
Supplied in tape and reel packaging, 3000 parts per 7" diameter reel.



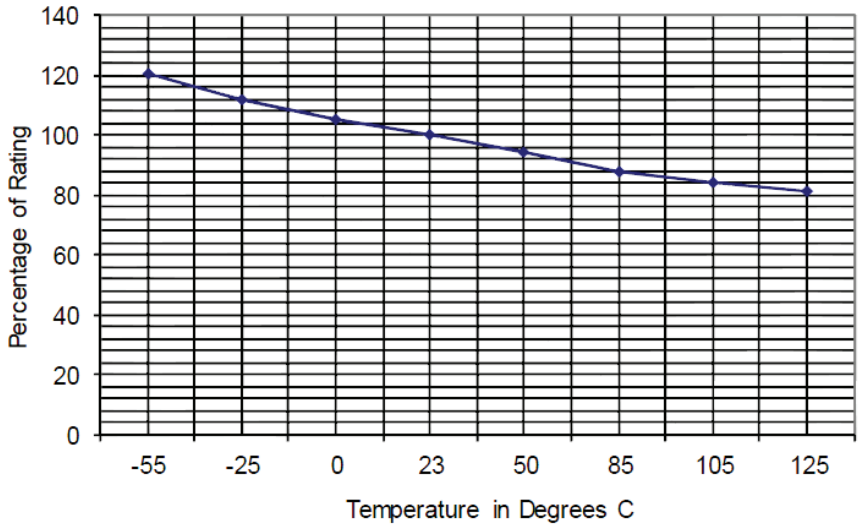
I²t vs. time curve



Time vs. current curve



Temperature derating curve



Environmental data

Operating temperature: -55 °C to +125 °C (with derating); (20 A- 30 A) -40 °C to +85 °C (with derating)
Thermal shock: MIL- STD- 202G, Method 107, (300 cycles -55 °C to +125 °C)
Vibration: MIL-STD- 202G, Method 204, (20 g's for 20 minutes, 12 cycles in each of 3 orientations, 10- 2000 Hz)
Humidity: MIL- STD- 202G, Method 103, (+85 °C, 85% relative humidty, 1000 hours 10% of operating power
Mechanical shock: MIL-STD- 202G, Method 213, Condition C

Ordering codes

The ordering code is the part number replacing the "." with a "-" plus adding the packaging suffix.

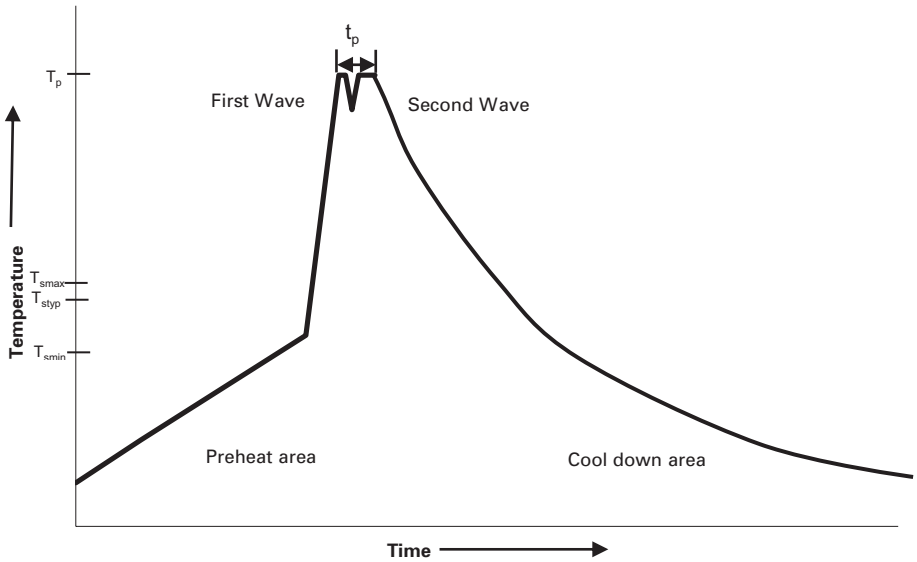
Packaging suffix

• -TR (3000 parts on a 7" reel, tape width 8 mm).

	Ordering code
Part Number	**-TR option**
CC12H250mA	CC12H250mA-TR
CC12H375mA	CC12H375mA-TR
CC12H500mA	CC12H500mA-TR
CC12H750mA	CC12H750mA-TR
CC12H1A	CC12H1A-TR
CC12H1.5A	CC12H1-5A-TR
CC12H2A	CC12H2A-TR
CC12H2.5A	CC12H2-5A-TR
CC12H3A	CC12H3A-TR
CC12H3.5A	CC12H3-5A-TR

	Ordering code
Part Number	**-TR option**
CC12H4A	CC12H4A-TR
CC12H4.5A	CC12H4-5A-TR
CC12H5A	CC12H5A-TR
CC12H6A	CC12H6A-TR
CC12H7A	CC12H7A-TR
CC12H8A	CC12H8A-TR
CC12H10A	CC12H10A-TR
CC12H12A	CC12H12A-TR
CC12H15A	CC12H15A-TR
CC12H20A	CC12H20A-TR
CC12H25A	CC12H25A-TR
CC12H30A	CC12H30A-TR

Wave solder profile



Reference EN 61760-1:2006

Profile Feature		Standard SnPb Solder	Lead (Pb) Free Solder
Preheat	• Temperature min. (T_{smin})	100°C	100°C
	• Temperature typ. (T_{styp})	120°C	120°C
	• Temperature max. (T_{smax})	130°C	130°C
	• Time (T_{smin} to T_{smax}) (t_s)	70 seconds	70 seconds
Δ preheat to max Temperature		150°C max.	150°C max.
Peak temperature (Tp)*		235°C – 260°C	250°C – 260°C
Time at peak temperature (t_p)		10 seconds max 5 seconds max each wave	10 seconds max 5 seconds max each wave
Ramp-down rate		~ 2 K/s min ~3.5 K/s typ ~5 K/s max	~ 2 K/s min ~3.5 K/s typ ~5 K/s max
Time 25°C to 25°C		4 minutes	4 minutes

Manual solder

350°C, 4-5 seconds. (by soldering iron), generally manual, hand soldering is not recommended.

Solder reflow profile

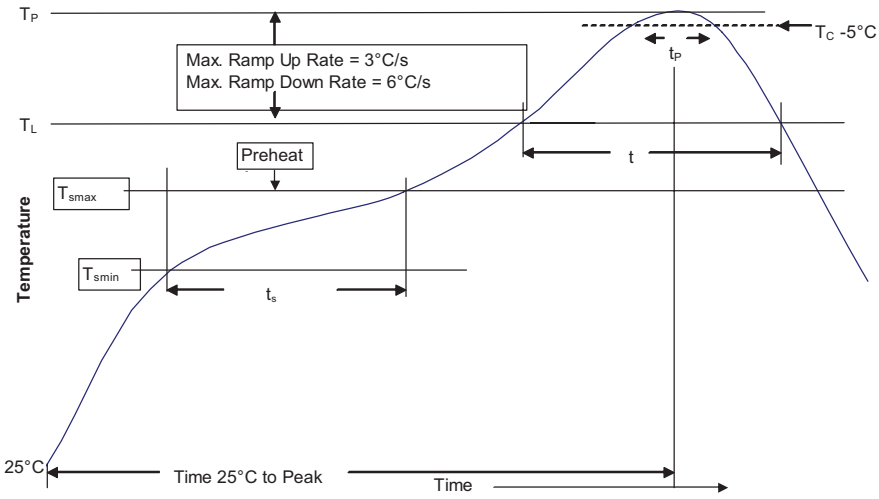


Table 1 - Standard SnPb Solder (T_C)

Package Thickness	Volume mm3 <350	Volume mm3 ≥350
<2.5mm)	235°C	220°C
≥2.5mm	220°C	220°C

Table 2 - Lead (Pb) Free Solder (T_C)

Package Thickness	Volume mm³ <350	Volume mm³ 350 - 2000	Volume mm³ >2000
<1.6mm	260°C	260°C	260°C
1.6 – 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Reference JDEC J-STD-020D

Profile Feature		Standard SnPb Solder	Lead (Pb) Free Solder
Preheat and Soak	• Temperature min. (T_{smin})	100°C	150°C
	• Temperature max. (T_{smax})	150°C	200°C
	• Time (T_{smin} to T_{smax}) (t_s)	60-120 Seconds	60-120 Seconds
Average ramp up rate T_{smax} to T_p		3°C/ Second Max.	3°C/ Second Max.
Liquidous temperature (T_L) Time at liquidous (t_L)		183°C 60-150 Seconds	217°C 60-150 Seconds
Peak package body temperature (T_P)*		Table 1	Table 2
Time (t_p)** within 5 °C of the specified classification temperature (T_C)		20 Seconds**	30 Seconds**
Average ramp-down rate (T_p to T_{smax})		6°C/ Second Max.	6°C/ Second Max.
Time 25°C to Peak Temperature		6 Minutes Max.	8 Minutes Max.

* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.
** Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.

Eaton
Electronics Division
1000 Eaton Boulevard
Cleveland, OH 44122
United States
www.eaton.com/elx

Printed in USA
Publication No. 4309 BU-MC16040
April 2016

Powering Business Worldwide