Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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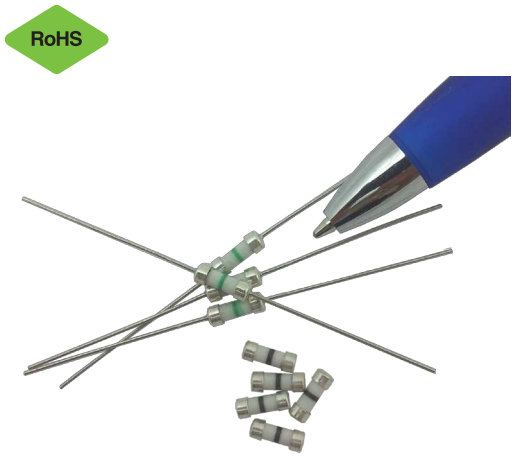
C308F

Ferrule and axial lead 3 x 8.4 mm fast-acting, ceramic tube fuses for barrier applications



Product description

A compact 3x8.4mm size provides a spacesaving alternative to conventional fuse solutions with high interrupting rating for primary and secondary circuit protection up to 250 volts AC or DC and 250mA. Ceramic tube construction.

- Meets Standards (EN60079-11) for hazardous applications
- 3x8.4mm physical size
- Fast-acting, high breaking capacity of 4000 amps
- Ceramic tube, silver-plated brass endcap construction
- Optional axial leads (tinned copper axial leads construction)
- RoHS compliant

Agency information

- cURus Recognition file number: E19180, Guide JDYX2/JDYX8

Applications

- Hazardous environments
- Oil drilling and refineries
- Intrinsically safe barriers

Packaging

- Specify part number and packaging suffix.
- Package suffixes:

Ferrule

- -TR (500 fuses on tape and reel)
- -TR1 (1000 fuses on tape and reel)

Axial leaded

- TR1 (axial leaded version, 1500 fuses on tape and reel)

Ordering

- Specify part number and packaging suffix (e.g., C308F-V-160mA-TR1)

Product specifications

Part number		Voltage rating Vac/dc	Color coding	Interrupting rating @ 250 Vac/dc (amps)*	Typical DC cold resistance (Ω)**	Typical melting I²T***	Agency Information cURus
Ferrule	**Axial lead**						
C308F40mA	C308F-V-40mA	250	Grey	4000	14.2	0.00006	X
C308F50mA	C308F-V-50mA		Red		9.40	0.00010	X
C308F80mA	C308F-V-80mA		Green		5.10	0.00018	X
C308F100mA	C308F-V-100mA		Yellow		2.87	0.00087	X
C308F125mA	C308F-V-125mA		Orange		2.20	0.00134	X
C308F160mA	C308F-V-160mA		Violet		2.05	0.00166	X
C308F200mA	C308F-V-200mA		Brown		1.01	0.00237	X
C308F250mA	C308F-V-250mA		Black		0.71	0.00530	X

* AC Interrupting Rating (4000A, PF = 0.4); DC Interrupting Rating measured at rated voltage, time constant 4 microseconds, battery source.
** DC Cold Resistance (Measured at ≤10% of rated current).
*** Typical I2t measured at 10In.

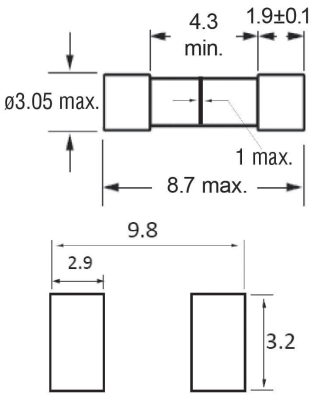
Electrical characteristics

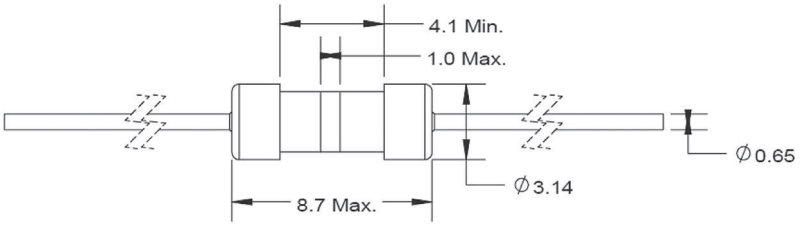
Amp Rating	% of Amp Rating	Opening Time
40mA~250mA	110%	4 Hours, min
	300%	10 Seconds, max
	1000%	0.002 Seconds, max

Environmental data

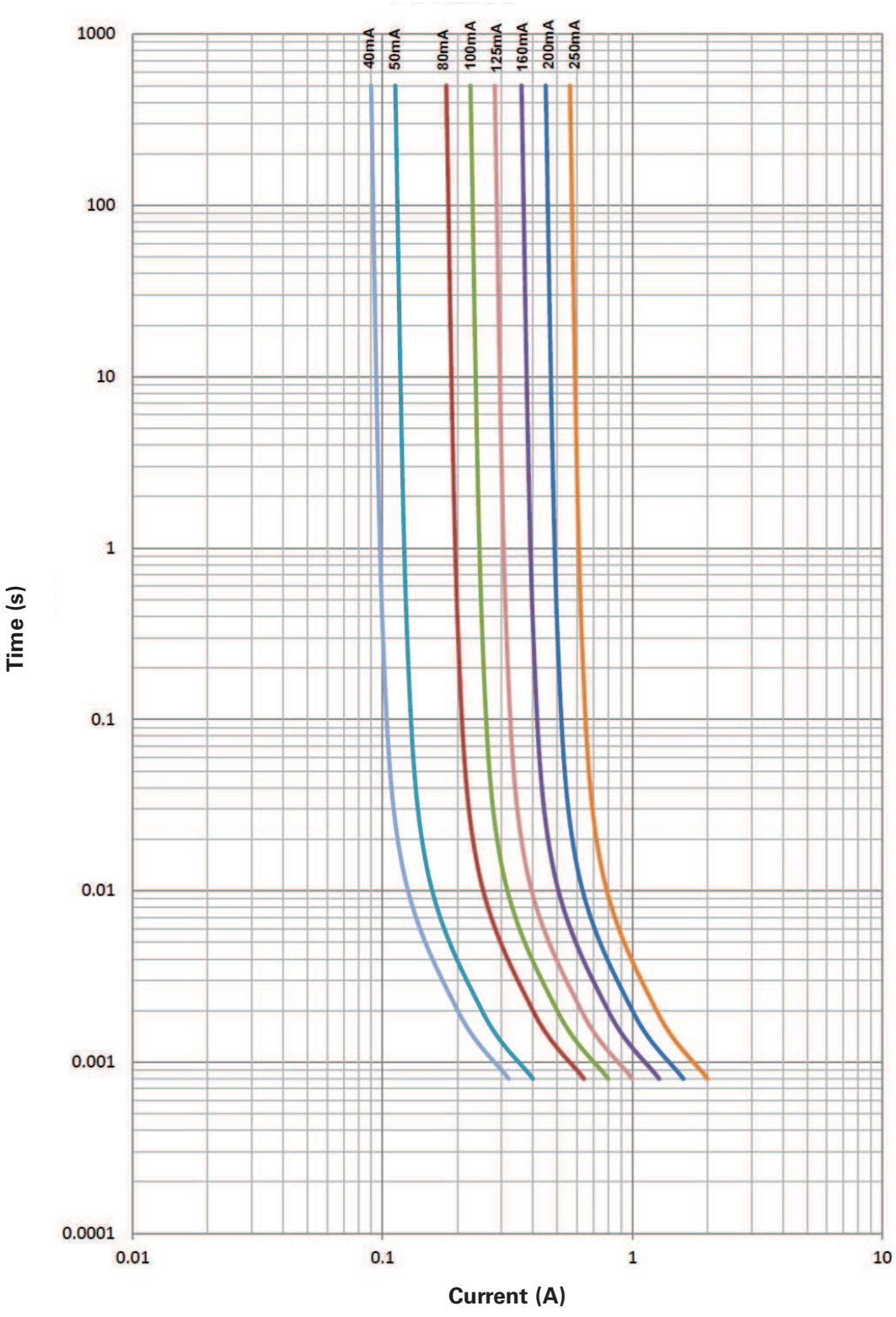
- Thermal Shock: MIL-STD-202G, Method 107G (Test Condition 5 cycles -55°C to 125°C)
- Resistance to Solder Heat: MIL-STD-202G Method 210F
- Vibration: MIL-STD-202G, Method 201A (10~55Hz) Condition A, "-V" axial leaded version IEC60068-2-6
- Solderability: J-STD-002C, Test Method C1, "-V" axial leaded version IEC60127-2/A3.3
- Component Life Reliability: 125°C, 500h

Dimensions–mm





Average time-current curves



Surface mounting soldering parameters

- Reflow solder: JEDEC J-STD-202D T_c = 250°C. T_p = 30s
- Wave and manual solder is not recommended

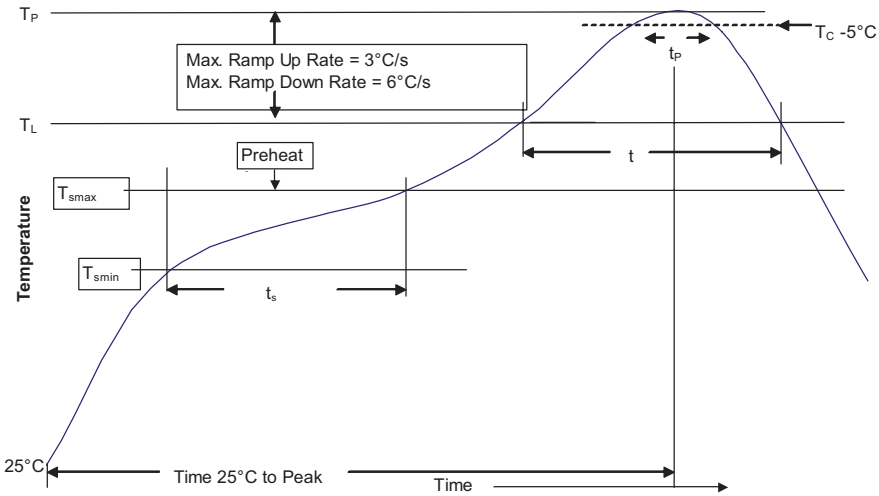


Table 1 - Standard SnPb Solder (T_C)

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

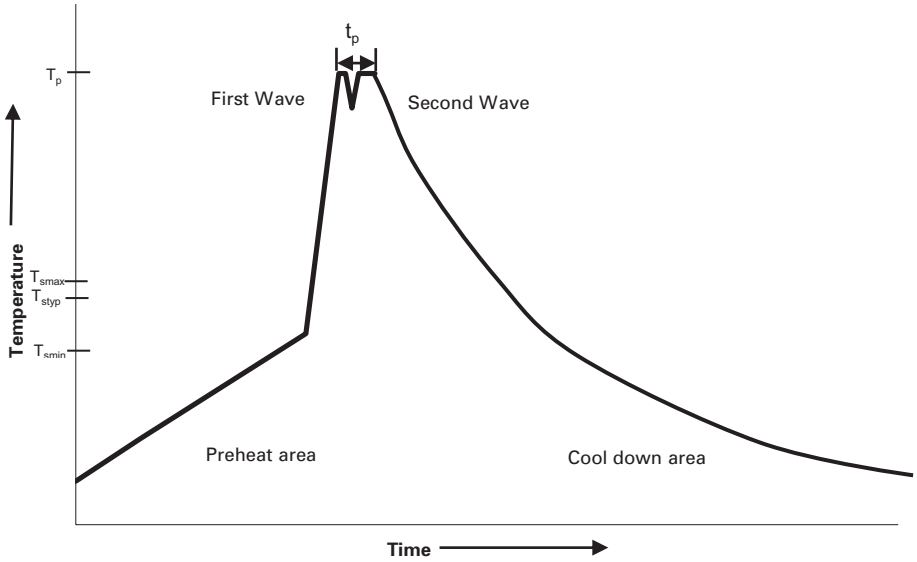
Reference JDEC J-STD-020D

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.

Through hole wave solder profile

Reflow soldering not recommended



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.

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