

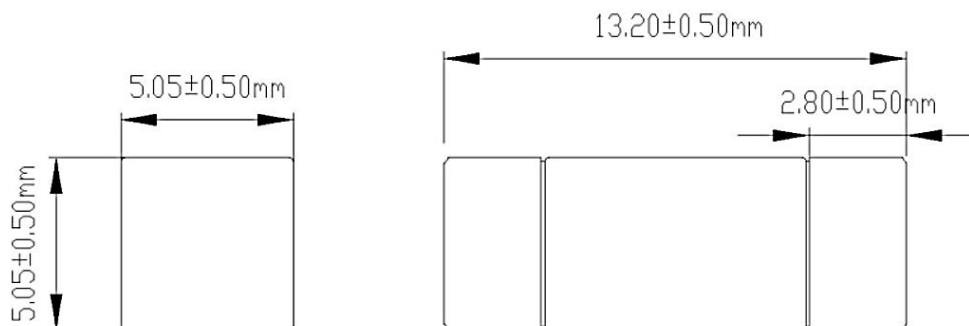
## F18 SMD Fuse



### Features

- Reliable clearing of DC fault currents
- High cycling performance
- Low watt losses
- 13.0x5.0x5.0mm physical size
- Breaking capacity to 200A
- Ceramic square body, silver plated cap construction

### Dimensions (mm)



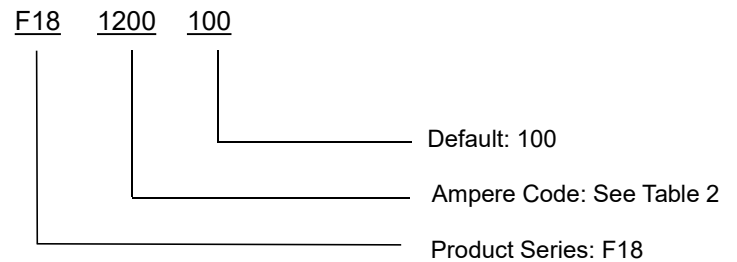
### Description

Adler F18 series SMD fuses are specially engineered and tested to provide best-in-class protection performance in protecting high power battery charging and managing systems of Electrical Vehicles and Hybrid Electrical Vehicles, up to 600 VDC / 350VAC in ratings from 1A to 7.5A.

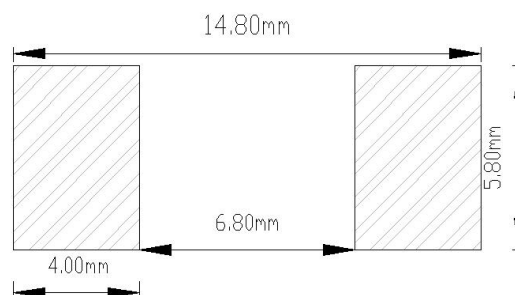
### Agency Information

- Designed to UL 248-1
- Manufactured under IATF 16949 quality system
- RoHS and REACH Compliant

### Part Numbering System



### Recommended Pad Layout



Recommend Stencil thickness is 0.15mm.



Electrical Specifications

Table 2

Size (mm)	Part Number	Rated Current	Ampere Code	Rated Voltage	Breaking Capacity	Alpha Mark	I <sup>2</sup> t (A <sup>2</sup> sec)	Watt Loss (W)
					Self-test		Pre-arcing	1.0In
13.0x5.0	F181100100	1A	1100	600VDC 400VDC 350VAC	100A@600VDC 200A@400VDC 100A@350VAC	1	0.5	0.335
	F181125100	1.25A	1125			1.25	0.95	0.406
	F181160100	1.6A	1160			1.6	2.3	0.368
	F181200100	2A	1200			2	4.1	0.510
	F181250100	2.5A	1250			2.5	2.6	0.435
	F181315100	3.15A	1315	3.15	3	0.520		
	F181400100	4A	1400	500VDC 400VDC	100A@500VDC 200A@400VDC	4	5.5	0.700
	F181500100	5A	1500	350VAC	100A@350VAC	5	11.5	0.775
	F181600100	6A	1600	400VDC	200A@400VDC	6	15	0.930
	F181750100	7.5A	1750	350VAC	100A@350VAC	7.5	25	1.238

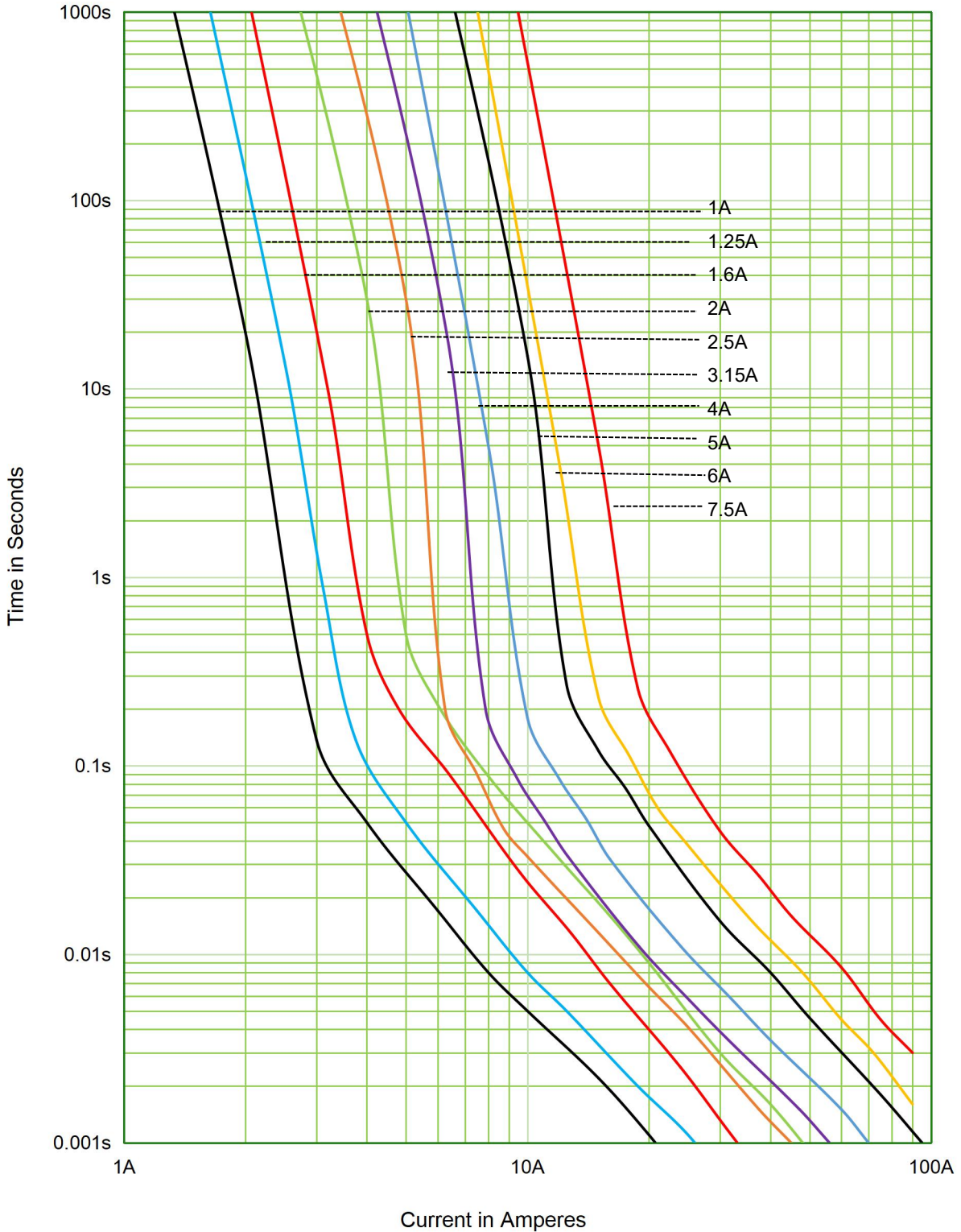
1. AC Interrupting Rating (measured at designated voltage, 100% power factor); DC Interrupting Rating (measured at designated voltage, time constant of less than 50 microseconds, battery source)
2. Typical Pre-arcing I<sup>2</sup>t are measured at 10In Current, DC battery bank.

TIME VS CURRENT CHARACTERISTIC

Rated Current	100%	200%
1 - 7.5A	>1H	<120 s

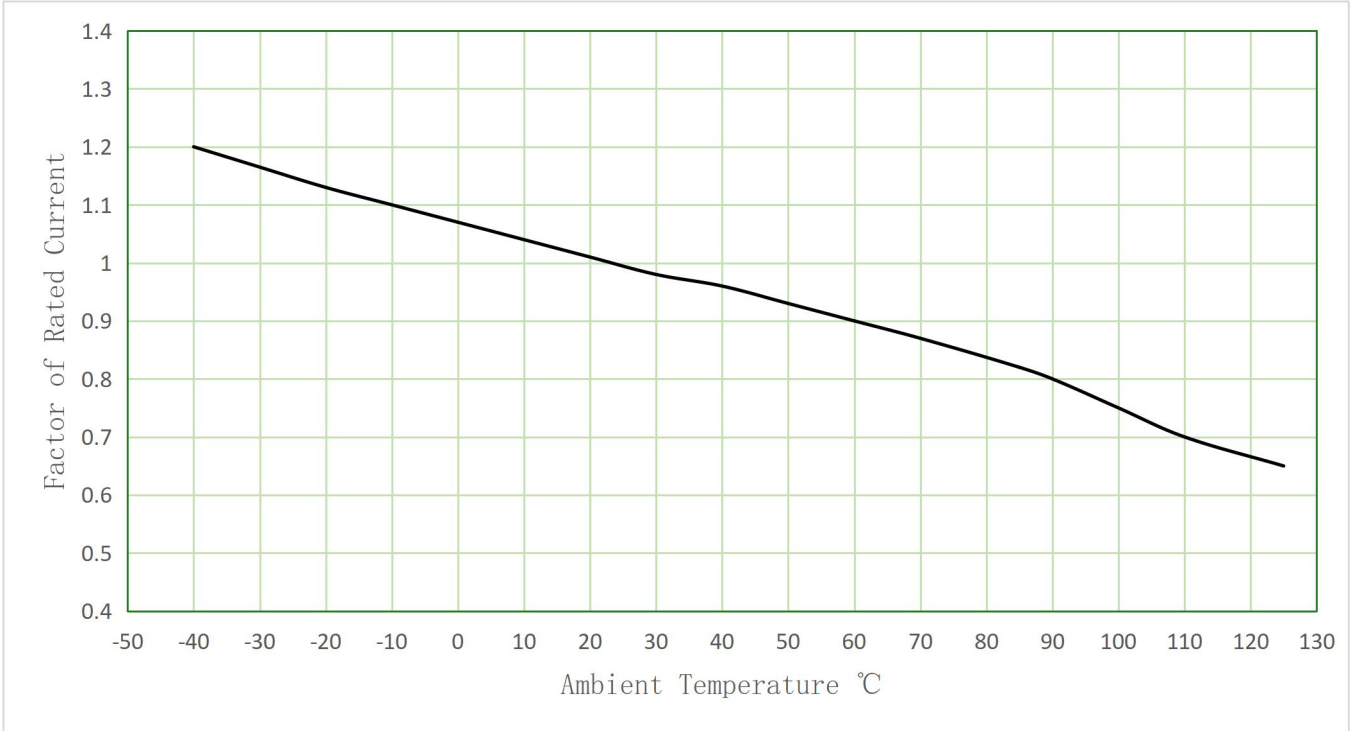
**TIME CURRENT CURVE**

F18xxxx100



## TEMPERATURE DERATING CURVE

- Normal Operating Temperature:  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ .
- Operating Temperature:  $-40^{\circ}\text{C}$  to  $125^{\circ}\text{C}$  with proper correction factor applied.
- Chart of correction factor.



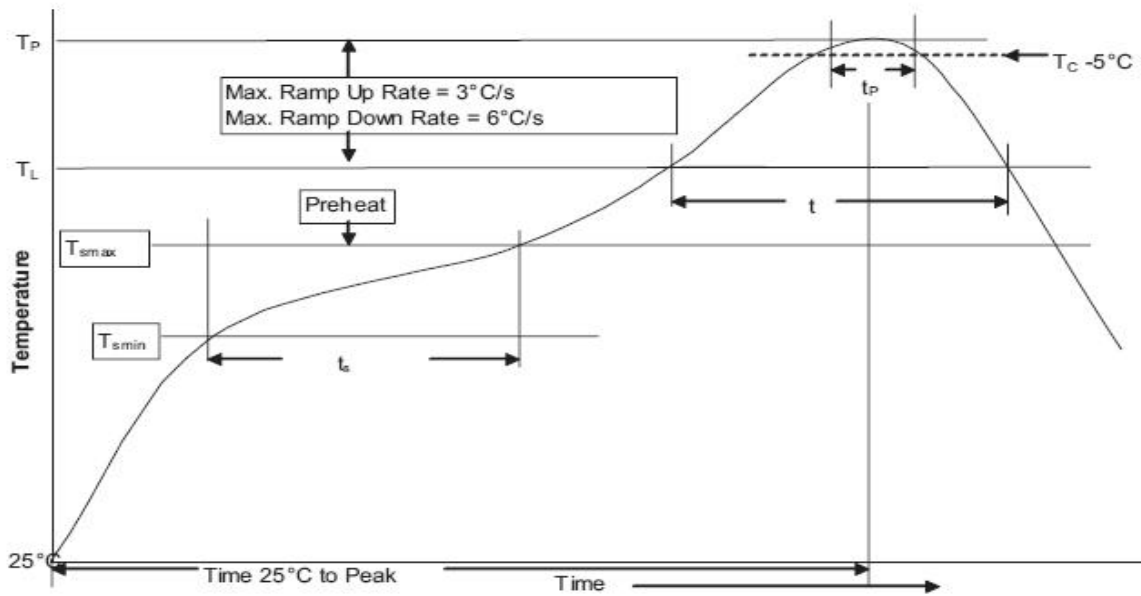
## Soldering Characteristics

### Reflow Soldering

- Temperature:  $260^{\circ}\text{C}$
- Time: 30 Seconds Maximum

### Manual Soldering (not recommended)

- Temperature:  $350^{\circ}\text{C}$
- Time: 5 Seconds Maximum



Profile Feature		Lead (Pb) free solder
Preheat and soak	• Temperature min. ( $T_{smin}$ )	150°C
	• Temperature max. ( $T_{smax}$ )	200°C
	• Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ )	60 - 120 Seconds
Average ramp up rate $T_{smax}$ to $T_p$		3°C / Second Max.
Liquidous temperature ( $T_L$ )		217°C
Time at liquidous ( $t_L$ )		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
Average ramp-down rate ( $T_P$ to $T_{smax}$ )		6°C / Second Max.
Time (25°C to Peak Temperature)		8 Minutes Max.

## PACKAGING INFORMATION

Part No	Inner box				Outer box					
	L (mm)	W (mm)	H (mm)	Qty (pcs)	Qty boxes / outer box	Net Weight (kg)	Gross Weight (kg)	L (mm)	W (mm)	H (mm)
F18xxxx100	-	-	-	1000	-	-	-	-	-	-

## Web Resources

Download the latest technical documents: [www.adlerelectric.com](http://www.adlerelectric.com). Specifications are subject to change without notice.