THE DATASHEET OF

SF-1206SA250W-2

Features

- Slow blow fusing speed
- EIA 1206 (3216 metric) footprint
- AEC-Q200 compliant*
- UL 248-14 listed
- RoHS compliant** and halogen free***

SF-1206SA-W Series - Automotive Grade Slow Blow SMD Fuses

Clearing Time Characteristics for Series

% of Current Rating	Clearing Time @ 25 °C	
	Min.	Max.
100 %	4 hours	—
250 %	—	5 seconds

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES

Electrical Characteristics

Model	Rated Current (A)	Resistance (Ω) Typ.*****	Rated Voltage	Interrupting Rating	Typical I^2t (A^2s) ******	Certifications cUL: E198545
SF-1206SA150W-2	1.5	0.05	110 VDC	50 A @ 110 VDC	0.37	✓
SF-1206SA160W-2	1.6	0.043			0.52	✓
SF-1206SA200W-2	2	0.032			0.88	✓
SF-1206SA250W-2	2.5	0.028	65 VDC	50 A @ 65 VDC	1.1	✓
SF-1206SA300W-2	3	0.0224			1.9	✓
SF-1206SA315W-2	3.15	0.0203			2.2	✓
SF-1206SA350W-2	3.5	0.018			2.6	✓
SF-1206SA400W-2	4	0.0161			3.3	✓
SF-1206SA500W-2	5	0.0129	32 VDC	50 A @ 32 VDC	5.4	✓
SF-1206SA630W-2	6.3	0.01			8.9	✓
SF-1206SA700W-2	7	0.0094			10.4	✓
SF-1206SA800W-2	8	0.0084			13.5	✓
SF-1206SA1000W-2	10	0.005			11.2	✓
SF-1206SA1200W-2	12	0.0041			15	✓
SF-1206SA1500W-2	15	0.0035			24.5	✓

***** Resistance value measured with ≤10 % rated current at 25 °C ambient. Tolerance ± 25 %.
****** Melting I^2t calculated at 0.001 second pre-arcing time.

WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

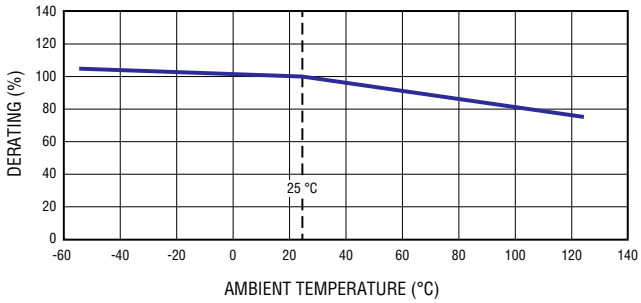
* Meets Bourns' internal AEC-Q200 equivalent test plan.
** RoHS Directive 2015/863, Mar 31, 2015 and Annex.
*** Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

Environmental Characteristics

Operating Temperature	-55 °C to + 125 °C
Storage Conditions	
Temperature	+5 °C to +35 °C
Humidity	40 % to 75 %
Moisture Sensitivity Level	1
ESD Classification[1]	Class 6

[1]per AEC-Q200-2, HBM

Current Rating Thermal Derating Curve



Typical Part Marking

Represents total content. Layout may vary.
Markings in blue color.

Rated Current	Part Marking
1.5 A	G
1.6 A	T
2 A	I
2.5 A	J
3 A	K
3.15 A	V
3.5 A	L
4 A	M

Rated Current	Part Marking
5 A	N
6.3 A	O
7 A	P
8 A	R
10 A	Q
12 A	X
15 A	Y

How to Order

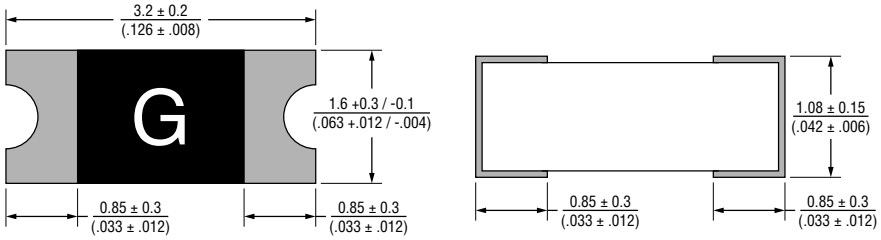
SF - 1206 S A 150 W - 2

- SinglFuse™ Product Designator
- SMD Footprint
  1206 = EIA 1206 (3216 metric)
- Fuse Blow Type
  S = Slow Blow
- Automotive Grade
- Rated Current
  150 ~ 1500 = 1.5 A ~ 15 A
- Structure Type
  W = Wire Core
- Packaging Type
  - 2 = Tape & Reel

Packaging

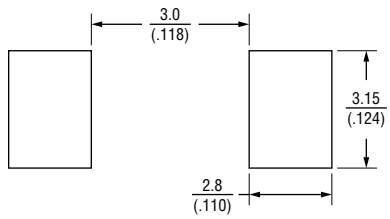
Reel Dimension	7-inch Tape and Reel
Specification	EIA 481-2
Quantity	3,500 pieces
Packaging Code	-2

Product Dimensions



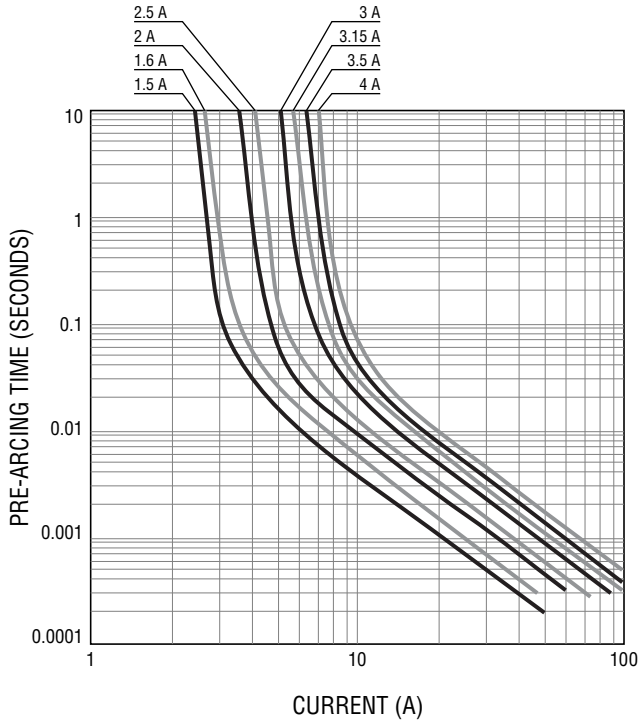
DIMENSIONS: MM / (INCHES)

Recommended Pad Layout

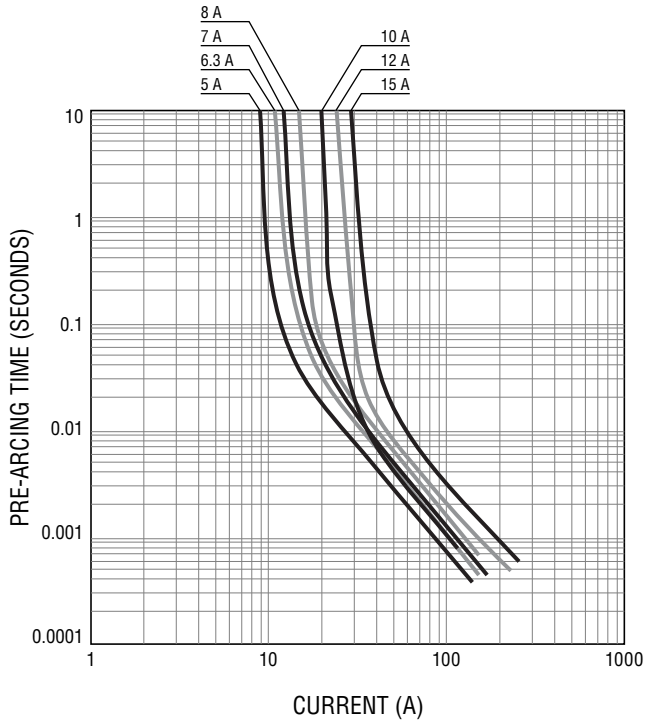


DIMENSIONS: MM / (INCHES)

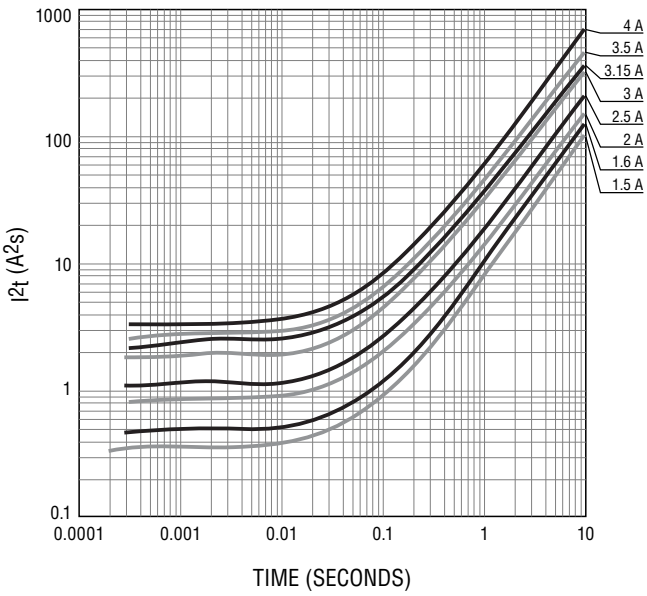
Average Pre-Arcing Time vs. Current Curves (1.5 - 4 A)



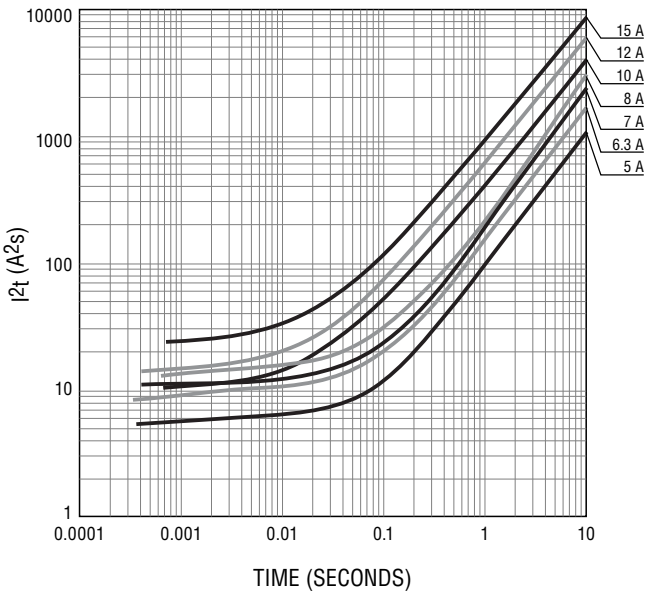
Average Pre-Arcing Time vs. Current Curves (5 - 15 A)



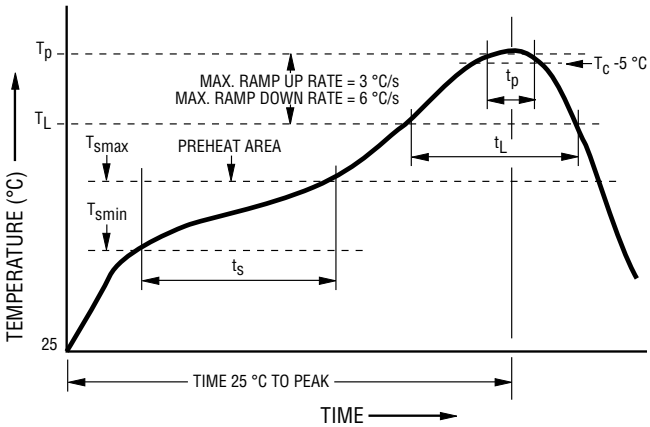
Average I^2t vs. t Curves (1.5 - 4 A)



Average I^2t vs. t Curves (5 - 15 A)



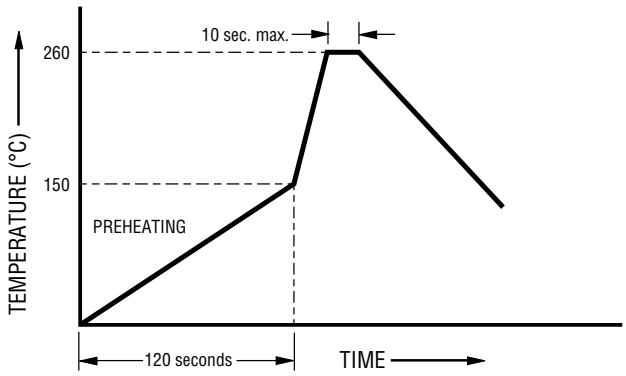
Solder Reflow Recommendations



Profile Feature	Pb-Free Assembly
Preheat / Soak: Temperature Min. (T_{smin}) Temperature Max. (T_{smax}) Time (t_s) from (T_{smin} to T_{smax})	 150 °C 200 °C 60~120 seconds
Ramp Up Rate (T_L to T_p)	3 °C / second max.
Liquidous Temperature (T_L) Time (t_L) maintained above T_L	217 °C 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 (Tp) is defined as a supplier minimum and a user maximum.

Solder Wave Recommendations



Reliability Tests

Test Items	Reference Standard
Visual Inspection	MIL-STD-883 Method 2009
High Temperature Storage	MIL-STD-202 Method 108
Low Temperature Storage	IEC 60068-2-1
Temperature Cycling	JESD22 Method JA-104
Biased Humidity	MIL-STD-202 Method 103
High Temperature Operating Life	MIL-STD-202 Method 108
Physical Dimension	JESD22 Method JB-100
Mechanical Vibration	MIL-STD-202 Method 204
Mechanical Shock	MIL-STD-202 Method 213
Resistance to Soldering Heat	MIL-STD-202 Method 210
Salt Spray	MIL-STD-202 Method 101
Solderability	MIL-STD-202 Method 208
Terminal Strength	AEC-Q200-006
Board Flex	AEC-Q200-005
Electrical Characterization	Bourns Specification

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