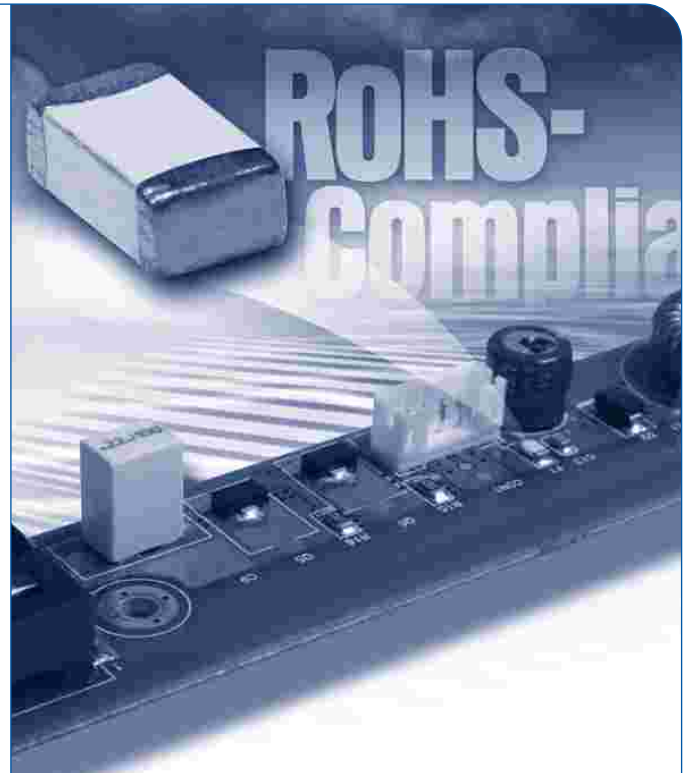


# Slow Blow Fuses

RoHS-compliant Slow Blow Fuses feature industry standard 1206 chip sizes, high reliability and strong arc suppression characteristics. The fuse's monolithic, multilayer design helps provide some of the highest current ratings available in the 1206 footprint and enhances high temperature performance in a wide range of circuit protection designs. Designed for DC power applications of up to 63V<sub>DC</sub> such as protection of power supplies, capacitor filter banks, LCD backlight inverters, electric motors and portable electronics.



## Benefits

- Time delayed design prevents nuisance openings in pulsed and high inrush current applications
- Small size with high current ratings
- Strong arc suppression characteristics

## Features

- RoHS compliant
- Monolithic multilayer design
- High temperature performance
- -55°C to +125°C operating temperature range

## Applications

- |                        |                             |                   |
|------------------------|-----------------------------|-------------------|
| • Small motors systems | • Power over Ethernet (POE) | • Computer drives |
| • Portable electronics | • Test Equipment            | • Displays        |
| • Input power ports    | • POL Converter Protection  | • Printers        |

**Table FS1 - Clear Time Characteristics for Slow Blow Fuses**

% of Current Rating	Clear time at 25°C	
100%	4 hours (min.)	
200%	1 second (min.)	120 seconds (max.)
300%	0.1 second (min.)	3 seconds (max.)
800%	0.002 second (min.)	0.05 seconds (max.)

**Table FS2 - Interrupt Ratings for Slow Blow Fuses**

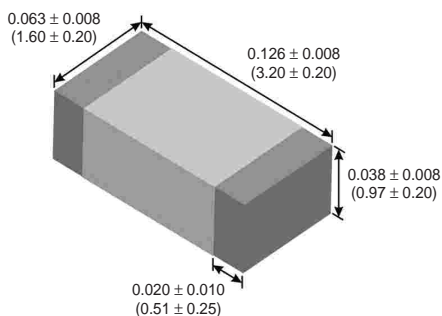
**Interrupt Ratings:**

1A – 5.5A	50A @ rated voltage
6A – 8.0A	60A @ rated voltage

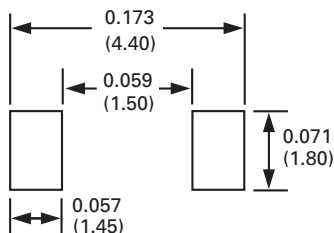
**Table FS3 - Typical Electrical Characteristics, Dimensions and Recommended Pad Layout for Slow Blow Fuses**

**1206 (3216mm) Slow Blow Fuses**

**Shape and Dimensions**  
Inch (mm)



**Recommended Pad layout**  
Inch (mm)



Part Number	Typical Electrical Characteristics*			Voltage (V <sub>DC</sub> )
	Rated Current (A)	Nominal Cold DCR (Ω)*	Nominal I <sup>2</sup> t (A <sup>2</sup> sec) <sup>†</sup>	
1206SFS100F/63	1.0	0.360	0.11	63
1206SFS125F/63	1.25	0.200	0.22	
1206SFS150F/63	1.5	0.150	0.23	
1206SFS200F/63	2.0	0.082	0.63	
1206SFS250F/32	2.5	0.070	0.90	32
1206SFS300F/32	3.0	0.032	1.20	
1206SFS350F/32	3.5	0.028	1.60	
1206SFS400F/32	4.0	0.024	2.20	
1206SFS450F/32	4.5	0.020	3.60	24
1206SFS500F/32	5.0	0.016	5.30	
1206SFS550F/24	5.5	0.014	6.40	
1206SFS600F/24	6.0	0.011	8.50	
1206SFS700F/24	7.0	0.010	10.00	24
1206SFS800F/24	8.0	0.009	16.90	

\* Measured at 10% of rated current and 25°C  
<sup>†</sup> Melting I<sup>2</sup>t at 0.001 sec clear time

**Table FS4 - Environmental and Material Specifications for Slow Blow Fuses**

**Environmental Specifications**

Operating Temperature	-55°C to +125°C
Mechanical Vibration	Withstands 5-3000 Hz at 30 Gs when evaluated per Method 204 of MIL-STD-202
Mechanical Shock	Withstands 1500 Gs, 0.5 millisecond half-sine pulses when evaluated per Method 213 of MIL-STD-202
Thermal Shock	Withstands 100 cycles from -65°C to +125°C when evaluated per Method 107 of MIL-STD-202
Resistance to Soldering Heat	Withstands 60 seconds at +260°C when evaluated per Method 210 of MIL-STD-202
Solderability	Meets 95% minimum coverage requirement when evaluated per Method 208 of MIL-STD-202
Moisture Resistance	Withstands 10 cycles when evaluated per Method 106 of MIL-STD-202
Salt Spray	Withstands 48-hour exposure when evaluated per Method 101 of MIL-STD-202

**Material Specifications**

Construction Body Material	Ceramic
Termination Material	Silver, Nickel, Tin
Fuse Element	Silver
Terminal Strength: Hanging test	1.5kg, 30 seconds

Figure FS1 - Thermal Derating Current

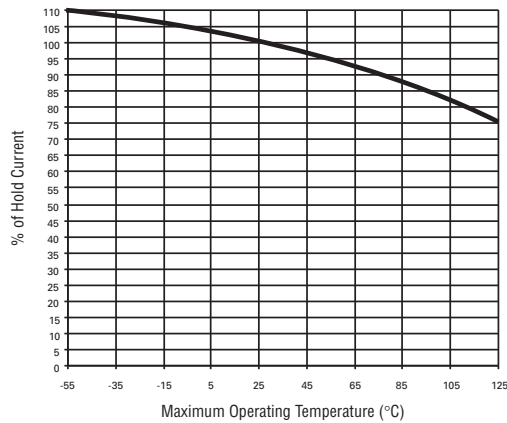


Table FS5 - Electrical and Packaging Specifications for Slow Blow Fuses

Electrical Specifications

Insulation Resistance after Opening: 20,000Ω minimum @ rated voltage. Fuse clearing under low voltage conditions may result in lower post-clearing insulation values. Under normal fault conditions Raychem fuses provide sufficient insulation resistance for circuit protection.

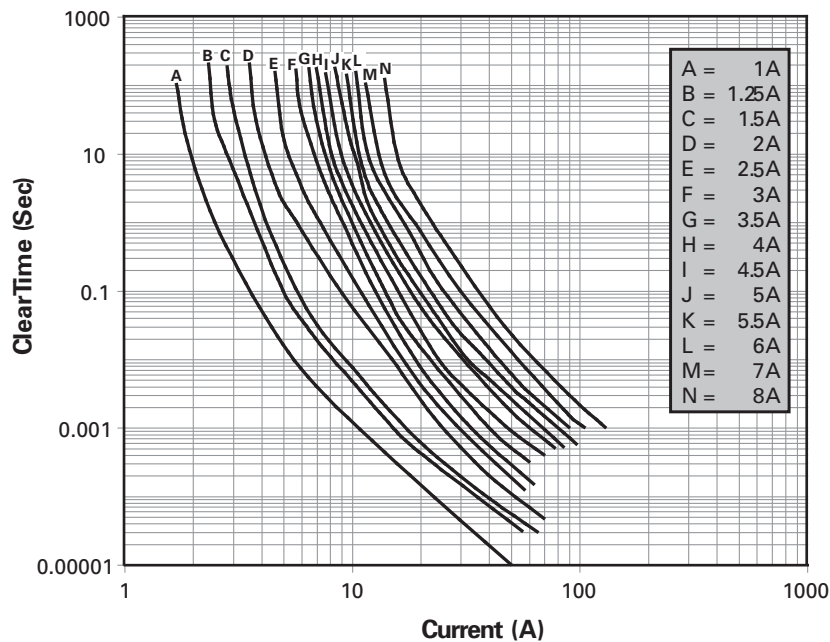
Current Carrying Capacity: Withstands 100% rated current at +25°C ambient for 4 hours when evaluated per MIL-PRF-23419

Packaging Specifications

Chip Size	Parts on 7-inch (178 mm) Reel
1206 (3216)	3,000

Figures FS2-FS3 - Family Average Clear Time

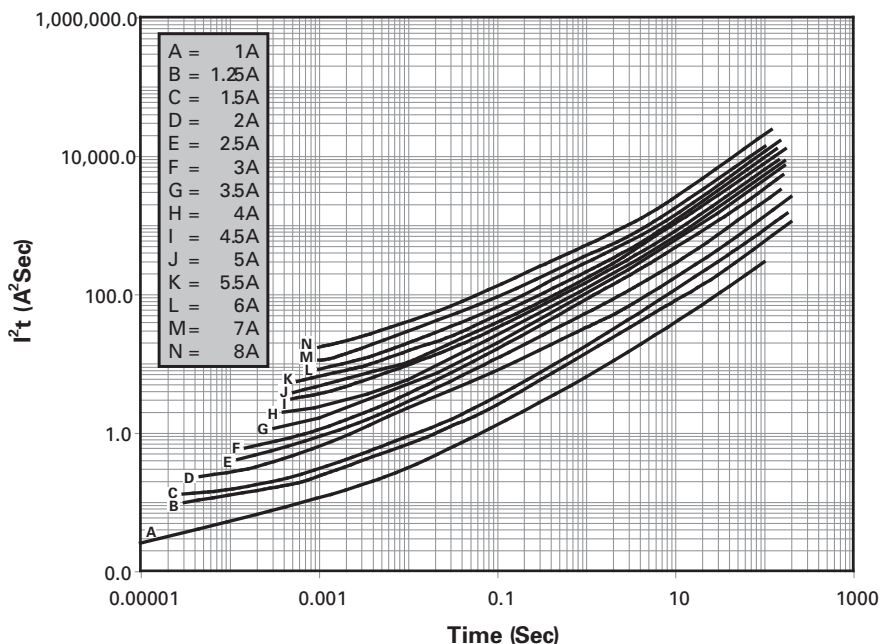
Figure FS2 - Average Clear Time



Figures FS2-FS3 - Family Average Clear Time

... Cont'd

Figure FS3 - I<sup>2</sup>T vs. Clear Time

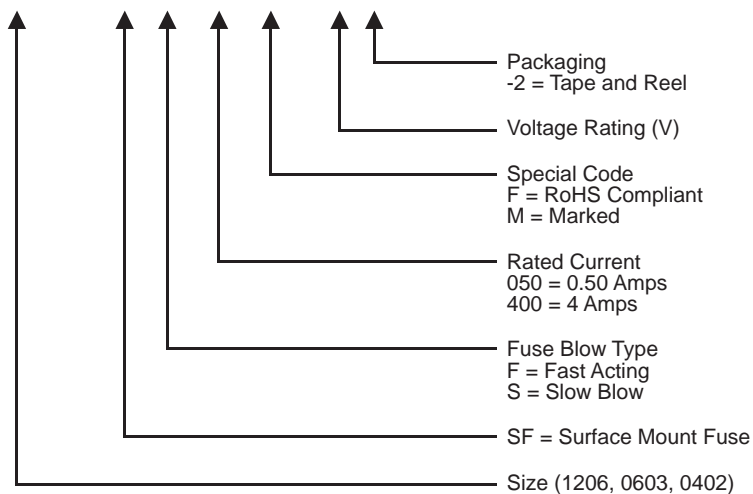


Agency Approvals for Slow Blow Fuses

UL File # E197536

Part Numbering System for Slow Blow Fuses

1206SFS400F/24-2



**WARNING:**

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