

# SURFACE-MOUNT FUSES

## Fast-Acting Chip Fuses

Fast-acting chip fuses help provide overcurrent protection for systems using DC power sources up to 63V<sub>DC</sub>. The fuse's monolithic, multilayer design helps provide the highest hold current in the smallest footprint, reduce diffusion-related aging, improve product reliability and resilience, and enhance high-temperature performance in a wide range of circuit designs.

These RoHS-compliant surface-mount devices offer strong arc suppression characteristics and help facilitate the development of more reliable, high-performance consumer electronics such as laptops, multimedia devices, cell phones and other portable electronics.



### BENEFITS

- Small size with high current ratings
- Temperature stability
- High reliability and resilience
- Strong arc suppression characteristics

### FEATURES

- Lead-free and RoHS compliant
- Halogen free  
(refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm)
- Monolithic, multilayer design
- High-temperature performance
- -55°C to +125°C operating temperature range

### APPLICATIONS

- Laptops
- Digital cameras
- Cell phones
- Printers
- DVD players
- Portable electronics
- Game systems
- LCD monitors
- Scanners

# Surface Mount Fuses

## Fast-Acting Chip Fuses

### Table FF1 – Clear Time Characteristics

% of Rated Current	Clear Time at 25°C
100%	4 hrs (min)
250%	5 s (max)
400%	0.05 s (max)

### Table FF2 – Typical Electrical Characteristics, Dimensions and Recommended Pad Layout

#### 0402 (1005mm) Fast-Acting Chip Fuses

Shape and Dimensions  
in (mm)



Recommended Pad Layout  
in (mm)



#### 0603 (1608mm) Fast-Acting Chip Fuses

Shape and Dimensions  
in (mm)



Recommended Pad Layout  
in (mm)



#### 1206 (3216mm) Fast-Acting Chip Fuses

Shape and Dimensions  
in (mm)



Recommended Pad Layout  
in (mm)



Part Number	Typical Electrical Characteristics			Max Interrupt Ratings	
	Rated Current (A)	Nominal Cold DCR (Ω)*	Nominal I <sup>2</sup> t (A <sup>2</sup> sec) <sup>†</sup>	Voltage (V <sub>DC</sub> )	Current (A)
0402SFF100F/24	1.00	0.120	0.0170	24	35
0402SFF150F/24	1.50	0.056	0.0490	24	35
0402SFF200F/24	2.00	0.035	0.0700	24	35
0402SFF300F/24	3.00	0.021	0.1250	24	35
0402SFF400F/24	4.00	0.014	0.2250	24	35

Part Number	Typical Electrical Characteristics			Max Interrupt Ratings	
	Rated Current (A)	Nominal Cold DCR (Ω)*	Nominal I <sup>2</sup> t (A <sup>2</sup> sec) <sup>†</sup>	Voltage (V <sub>DC</sub> )	Current (A)
0603SFF050F/32	0.50	0.485	0.0029	63	35
0603SFF075F/32	0.75	0.254	0.0064	63	35
0603SFF100F/32	1.00	0.147	0.0160	63	35
0603SFF150F/32	1.50	0.059	0.0300	63	35
0603SFF200F/32	2.00	0.044	0.0600	32	35
0603SFF250F/32	2.50	0.032	0.1150	32	35
0603SFF300F/32	3.00	0.025	0.1900	32	35
0603SFF350F/32	3.50	0.024	0.2950	32	35
0603SFF400F/32	4.00	0.018	0.4000	32	35
0603SFF500F/32	5.00	0.013	0.7000	32	35
0603SFF600F/24	6.00	0.010	1.1250	24	35

Part Number	Typical Electrical Characteristics			Max Interrupt Ratings	
	Rated Current (A)	Nominal Cold DCR (Ω)*	Nominal I <sup>2</sup> t (A <sup>2</sup> sec) <sup>†</sup>	Voltage (V <sub>DC</sub> )	Current (A)
1206SFF050F/63	0.50	0.730	0.0021	63	50
1206SFF075F/63	0.75	0.513	0.0052	63	50
1206SFF100F/63	1.00	0.220	0.0120	63	50
1206SFF150F/63	1.50	0.120	0.0250	63	50
1206SFF175F/63	1.75	0.100	0.0450	63	50
1206SFF200F/63	2.00	0.050	0.0700	63	50
1206SFF250F/32	2.50	0.035	0.1400	32	50
1206SFF300F/32	3.00	0.031	0.2200	32	50
1206SFF400F/32	4.00	0.022	0.3800	32	45
1206SFF500F/32	5.00	0.015	0.6000	32	45
1206SFF600F/32	6.00	0.013	1.0000	32	50
1206SFF700F/32	7.00	0.011	1.7500	32	50
1206SFF800F/32	8.00	0.008	2.5000	32	50
1206SFF600F/24	6.00	0.013	1.0000	24	45
1206SFF700F/24	7.00	0.011	1.7500	24	45
1206SFF800F/24	8.00	0.008	2.5000	24	45

\* Measured at ≤10% of rated current and 25°C ambient temperature.

† Melting I<sup>2</sup>t at 0.001 sec clear time.

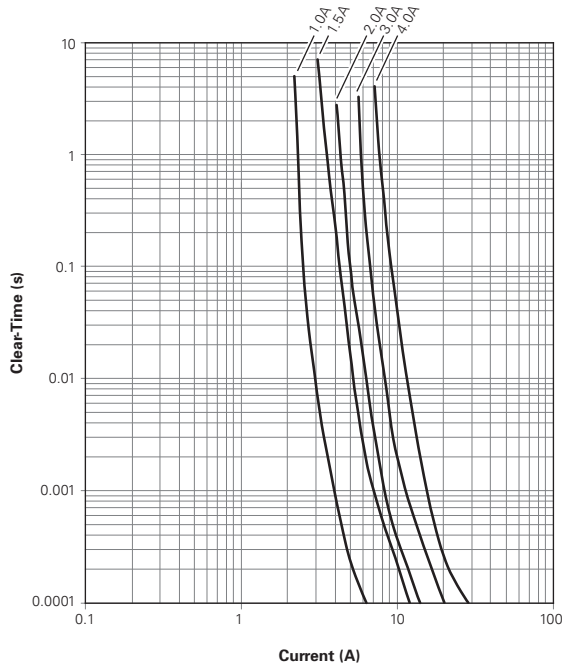
# Surface Mount Fuses

## Fast-Acting Chip Fuses

### Figures FF1-FF6 — Family Performance Curves

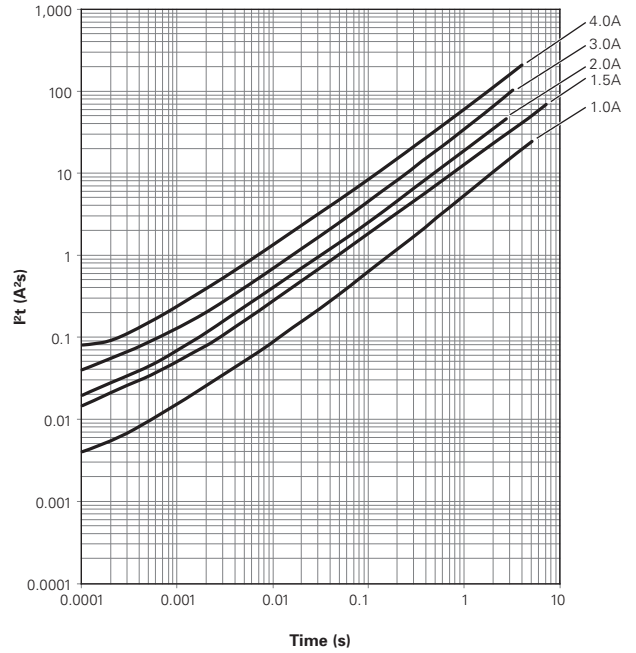
**Figure FF1**

**0402SFF Average Time Current Curves**



**Figure FF2**

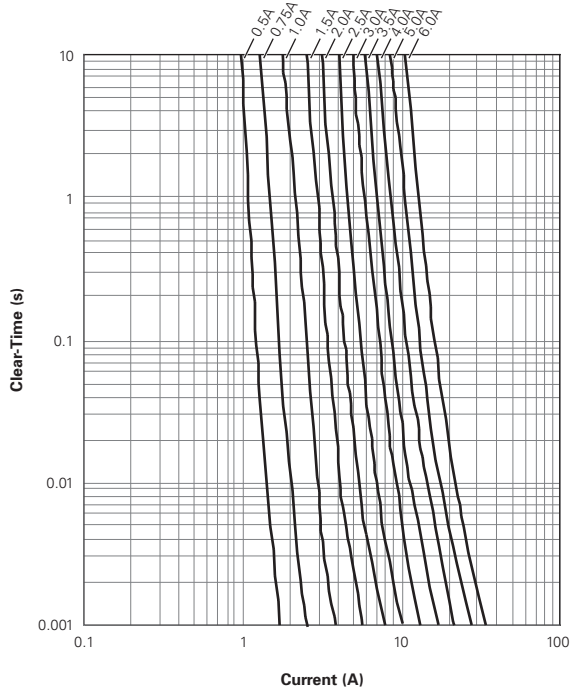
**0402SFF I<sup>2</sup>t vs. t Curves**



Note: Curves are nominal.

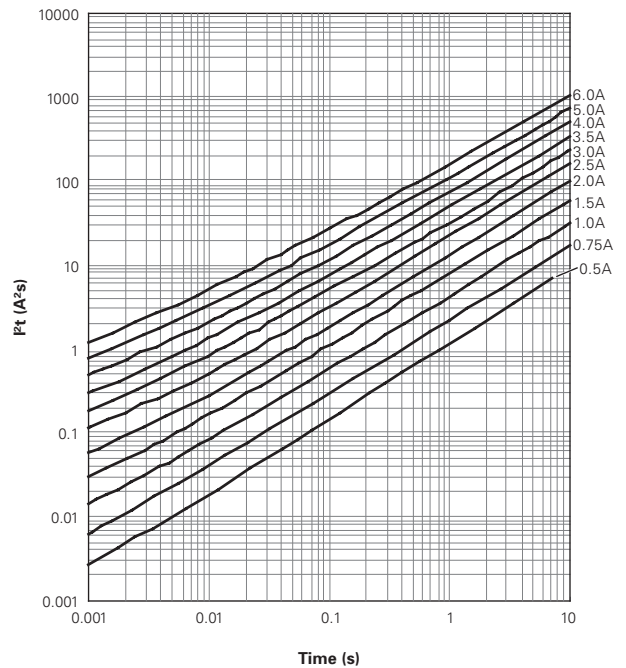
**Figure FF3**

**0603SFF Average Time Current Curves**



**Figure FF4**

**0603SFF I<sup>2</sup>t vs. t Curves**



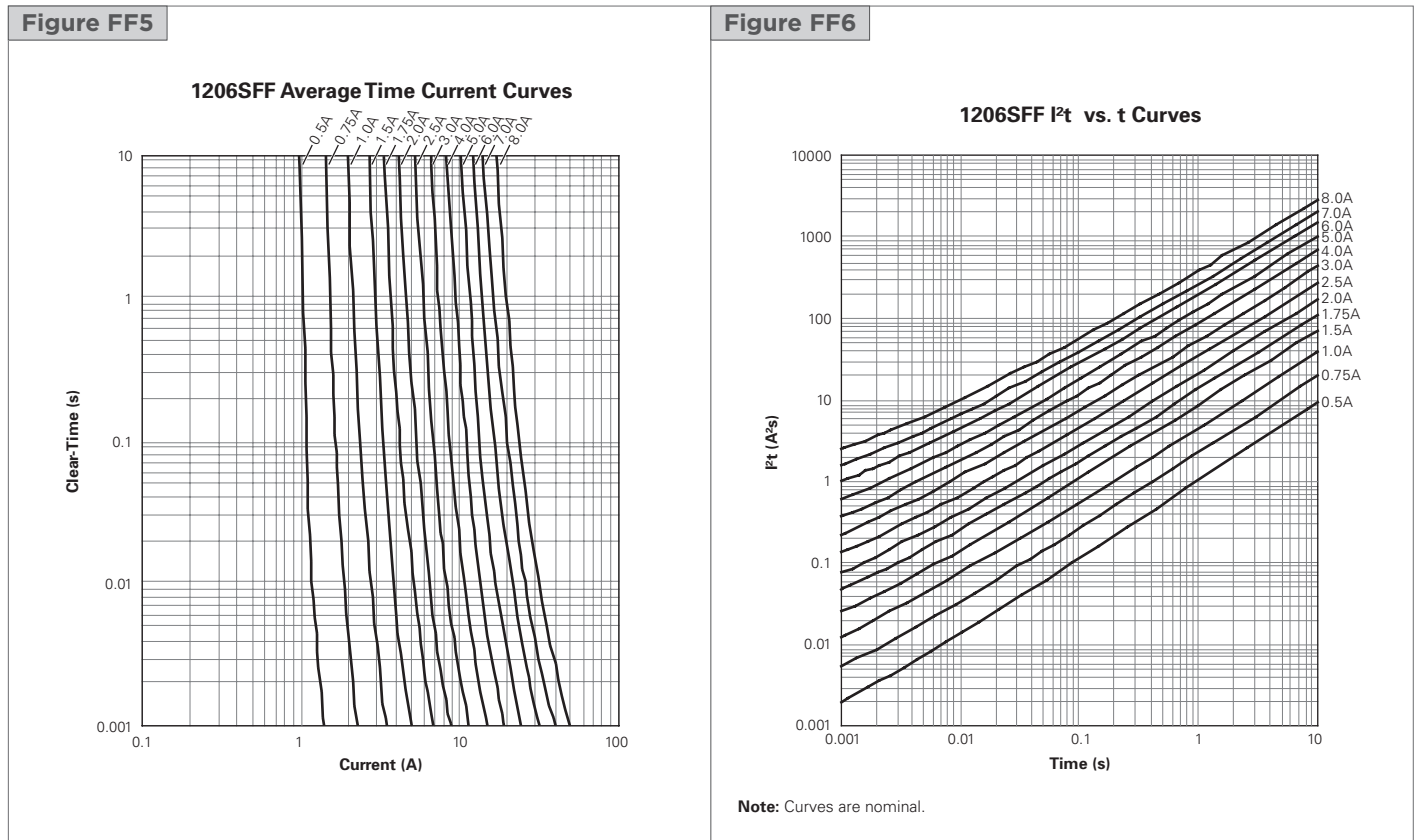
Note: Curves are nominal.

# Surface Mount Fuses

## Fast-Acting Chip Fuses

### Figures FF1-FF6 — Family Performance Curves

(Cont'd)



### Notice:

Littelfuse products are not designed for, and shall not be used for, any purpose (including, without limitation, automotive, military, aerospace, medical, life-saving, life-sustaining or nuclear facility applications, devices intended for surgical implant into the body, or any other application in which the failure or lack of desired operation of the product may result in personal injury, death, or property damage) other than those expressly set forth in applicable Littelfuse product documentation. Warranties granted by Littelfuse shall be deemed void for products used for any purpose not expressly set forth in applicable Littelfuse documentation. Littelfuse shall not be liable for any claims or damages arising out of products used in applications not expressly intended by Littelfuse as set forth in applicable Littelfuse documentation. The sale and use of Littelfuse products is subject to Littelfuse Terms and Conditions of Sale, unless otherwise agreed by Littelfuse.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Surface Mount Fuses](#) category:*

*Click to view products by [Littelfuse](#) manufacturer:*

Other Similar products are found below :

[FHC20402ADTP](#) [NFVC6125S0R50TRF](#) [SFT-125MA](#) [TF16SN2.00TTD](#) [FCC16501ABTP](#) [FCC16102ABTP](#) [FHC16322ADTP](#) [0308.250UR](#)  
[0308.375UR](#) [0308.750UR](#) [0308001.UR](#) [030801.5UR](#) [F0603G0R03FNTR](#) [SKY87604-12](#) [SKY87604-11](#) [SKY87604-13](#) [R451003.L](#)  
[R451.500L](#) [R451001.L](#) [3-103-119](#) [3-103-123](#) [ABB-A 25A 500V](#) [SGB401](#) [SGB075](#) [0154002.DRL](#) [0154008.DRL](#) [0154.500DRL](#)  
[189140.1,25](#) [189140.0,4](#) [189140.0,63](#) [189140.0,25](#) [0402FA-R200](#) [0402SFF150F/24-2](#) [0435.250KRHFS](#) [0468003.WR](#) [0494001.NRHF](#)  
[0494002.NRHF](#) [0494003.NRHF](#) [049402.5NRHF](#) [049403.5NRHF](#) [0494.250NRHF](#) [0494.375NRHF](#) [0494.500NRHF](#) [CF06V3T1R60](#)  
[CF06V3T2R50](#) [06H1300D](#) [JFC0603-1200FS](#) [CP06V3T2R0](#) [06F-0200L1](#) [06F-0500L1](#)