

SURFACE-MOUNT FUSES

0603 Very Fast-Acting Chip Fuses



Very fast-acting chip fuses help provide overcurrent protection for systems using DC power sources up to 32V_{DC}. 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 facilitate the development of more reliable, high-performance consumer electronics such as laptops, multimedia devices, cell phones and other portable electronics.



BENEFITS

- Very fast acting at 200% and 300% overloads
- Inrush current withstand capability at high overloads
- Thin body for space-limited applications
- Glass ceramic monolithic structure
- Silver fusing element and silver termination with nickel and tin plating
- RoHS compliant and lead-free materials
- Symmetrical design with marking on both sides (optional)

FEATURES

- Lead-free materials 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

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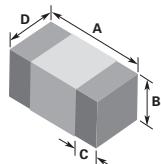
Table FV1 — Clear Time Characteristics

| % of Rated Current | Clear Time at 25°C | |
|--------------------|--------------------|-------------|
| 100% | 4 hrs (min) | — |
| 200% | 0.01 s (min) | 5 s (max) |
| 300% | 0.001 s (min) | 0.2 s (max) |

Table FV2 — Typical Electrical Characteristics and Dimensions

0603 (1608 mm) Very Fast-Acting Chip Fuses

Shape and Dimensions
mm (in)

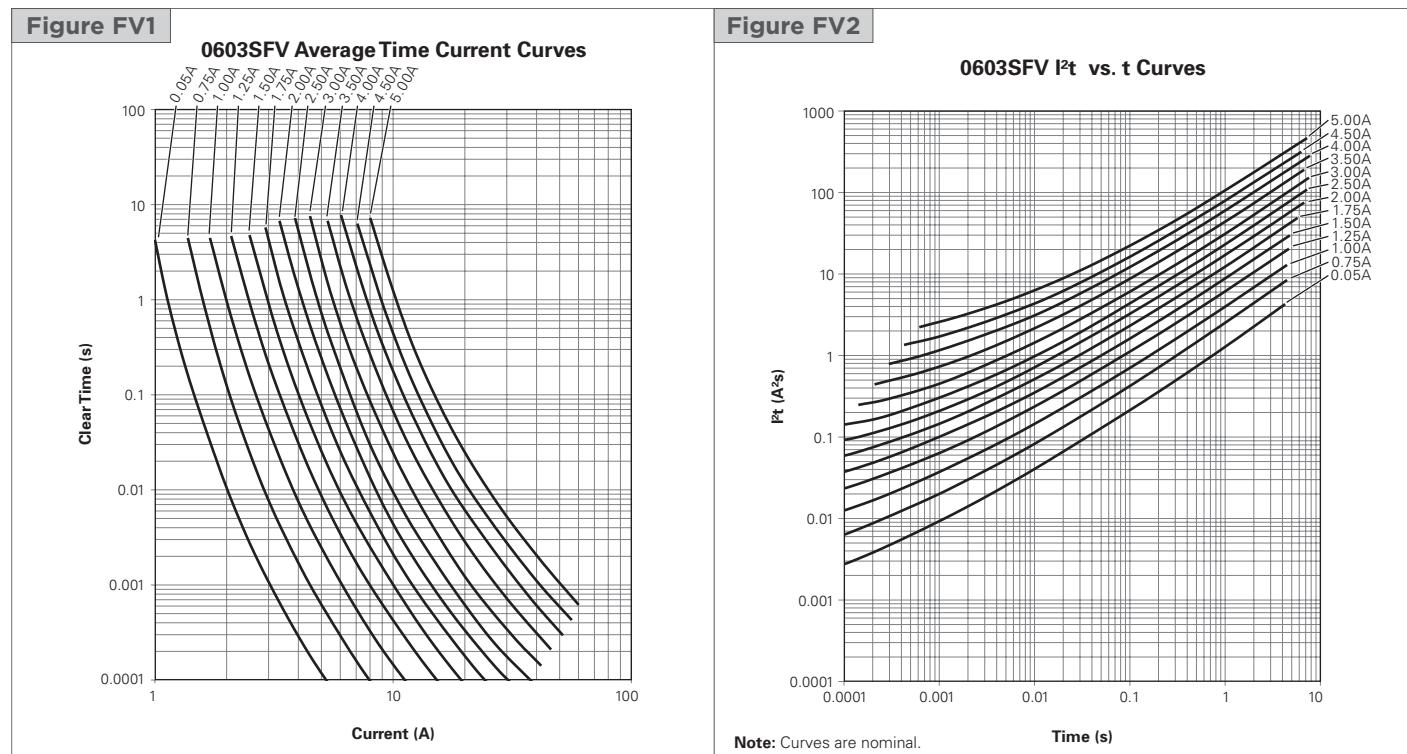


| | A | | B | | C | | D | |
|----|---------|---------|---------|---------|---------|---------|---------|---------|
| | Min | Max | Min | Max | Min | Max | Min | Max |
| mm | 1.45 | 1.75 | 0.22 | 0.48 | 0.21 | 0.51 | 0.65 | 0.95 |
| in | (0.057) | (0.069) | (0.009) | (0.019) | (0.008) | (0.020) | (0.025) | (0.037) |

| Part Number | Typical Electrical Characteristics | | | Max Interrupt Ratings | |
|------------------|------------------------------------|-----------------------|-------------------------------------|----------------------------|-------------|
| | Rated Current (A) | Nominal Cold DCR (Ω)* | Nominal I^2t (A ² sec) | Voltage (V _{DC}) | Current (A) |
| 0603SFV050F/32-2 | 0.5 | 0.860 | 0.0093 | 32 | 50 |
| 0603SFV075F/32-2 | 0.8 | 0.450 | 0.0191 | 32 | 50 |
| 0603SFV100F/32-2 | 1.0 | 0.280 | 0.0360 | 32 | 50 |
| 0603SFV125F/32-2 | 1.3 | 0.205 | 0.0630 | 32 | 35 |
| 0603SFV150F/32-2 | 1.5 | 0.143 | 0.0950 | 32 | 35 |
| 0603SFV175F/32-2 | 1.8 | 0.095 | 0.1400 | 32 | 35 |
| 0603SFV200F/32-2 | 2.0 | 0.073 | 0.2100 | 32 | 35 |
| 0603SFV250F/32-2 | 2.5 | 0.046 | 0.3000 | 32 | 35 |
| 0603SFV300F/32-2 | 3.0 | 0.039 | 0.4600 | 32 | 35 |
| 0603SFV350F/32-2 | 3.5 | 0.028 | 0.7300 | 32 | 35 |
| 0603SFV400F/32-2 | 4.0 | 0.023 | 1.1500 | 32 | 35 |
| 0603SFV450F/32-2 | 4.5 | 0.019 | 1.6800 | 32 | 35 |
| 0603SFV500F/32-2 | 5.0 | 0.015 | 2.6200 | 32 | 35 |

* Measured at 10% of rated current and 25°C.

Figures FV1-FV2 — Family Performance Curves



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