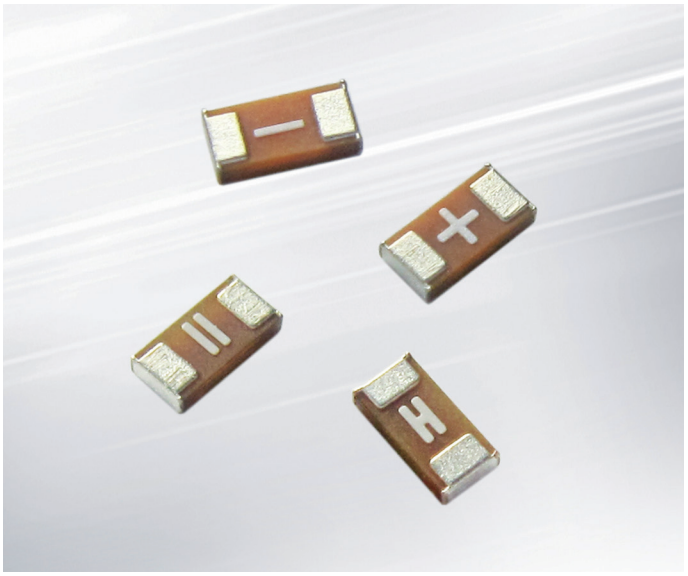
SURFACE-MOUNT FUSES

0603 Thin Film Very Fast-Acting Chip Fuses

Littelfuse®
Expertise Applied | Answers Delivered

Very fast-acting fuses help provide overcurrent protection for systems using DC power sources up to 65V_{DC}. The fuses' thin film design helps provide fast fusing under low overload current and low DCR (Direct Current Resistance).

These RoHS-compliant, surface-mount devices offer strong arc suppression characteristics and facilitate the development of more reliable, high-performance consumer electronics, such as notebook computers and tablets, digital cameras, memory cards, toys, Bluetooth earphones and other portable electronics devices.



BENEFITS

- Very fast acting at 200% and 300% overloads
- Inrush current withstand capability at high overloads
- Thin body for space-limited applications
- Fiberglass enforced epoxy fuse body
- Copper termination with nickel and tin plating
- RoHS compliant and lead-free materials

FEATURES

- Lead-free materials and RoHS compliant
- Halogen free
  (refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm)
- Fiberglass enforces epoxy fuse body design
- Low DCR
- -55°C to +90°C operating temperature range

APPLICATIONS

- Notebook computers and tablets
- Digital cameras
- Memory cards
- Toys
- Bluetooth earphones
- Portable electronics devices

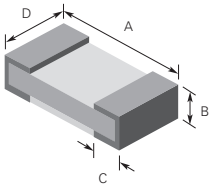
Table FV1 — Clear Time Characteristics

% of Rated Current	Clear Time at 25°C	
100%	4 hrs (min)	—
200%	—	5 s (max)
300%	—	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	1.500	1.700	0.200	0.400	0.260	0.460	0.710	0.910
in	(0.059)	(0.067)	(0.008)	(0.016)	(0.01)	(0.018)	(0.028)	(0.036)

Part Number	Marking Code	Rated Current (A)	Interrupt Rating	Voltage Rating (V_{DC})	Nominal Cold DC Resistance (DCR) (Ω)[1]	Nominal I^2t (A^2s)[2]
0603TSFV050FM/65-2	I	0.50	50A@35V DC/AC 13A@65V DC	65	0.185	0.0150
0603TSFV075FM/65-2	—	0.75		65	0.112	0.0250
0603TSFV100FM/65-2	+	1.00		65	0.069	0.0300
0603TSFV125FM/65-2	×	1.25	35A@35V DC/AC 13A@65V DC	65	0.048	0.0520
0603TSFV150FM/65-2	II	1.50		65	0.037	0.0770
0603TSFV175FM/35-2	=	1.75	35A@35V DC/AC 50A@24V DC/AC	35	0.031	0.1000
0603TSFV200FM/35-2	±	2.00		35	0.0260	0.1200
0603TSFV250FM/35-2	H	2.50		35	0.0210	0.1500
0603TSFV300FM/35-2	III	3.00		35	0.0176	0.3500
0603TSFV350FM/35-2	HH	3.50		35	0.0148	0.4400
0603TSFV400FM/35-2	□	4.00		35	0.0125	1.6000
0603TSFV500FM/35-2	○	5.00		35	0.0095	1.0000

[1] Measured at ≤10% of rated current and 25°C ambient.
[2] Melting I^2t at 1 ms.

Figures FV1-FV2 — Family Performance Curves

Figure FV1

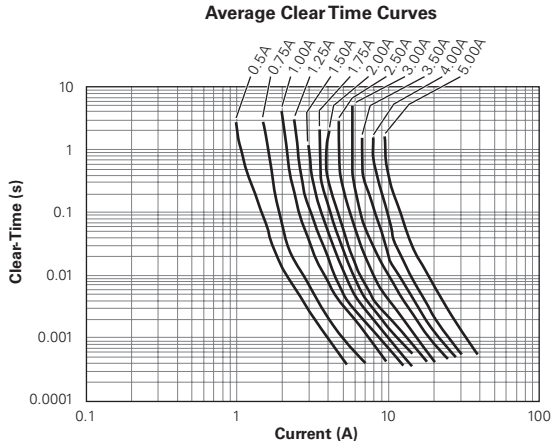


Figure FV2