

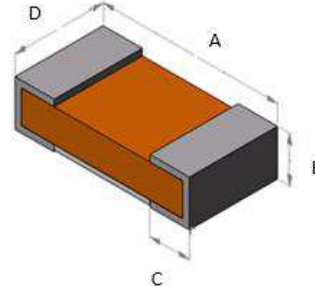
Thin Film Surface Mount Fuse Very Fast Acting

PRODUCT: 0603TSFV Family

DOCUMENT: SCD28828
REV LETTER: A
REV DATE: AUGUST 12, 2014
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Specification Status: Released

Termination Material: Copper, Ni, Tin
Fuse Element: Copper/Tin alloy
Body Material: Fiberglass/Epoxy
Operating Temperature:
-55°C to +90°C (with de-rating)



Clear Time Characteristics

% of current rating	Clear time at 25°C	
	Min.	Max.
100%	4 hours	/
200%	/	5 sec
300%	/	0.2 sec

Dimensions

	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	0.010	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 ² t (A ² s) ²
0603TSFV050FM/65-2		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		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		2.50		35	0.0210	0.1500
0603TSFV300FM/35-2		3.00		35	0.0176	0.3500
0603TSFV350FM/35-2		3.50		35	0.0148	0.4400
0603TSFV400FM/35-2		4.00		35	0.0125	0.6000
0603TSFV500FM/35-2		5.00		35	0.0095	1.0000

¹ Measured at ≤10% of rated current and 25°C ambient

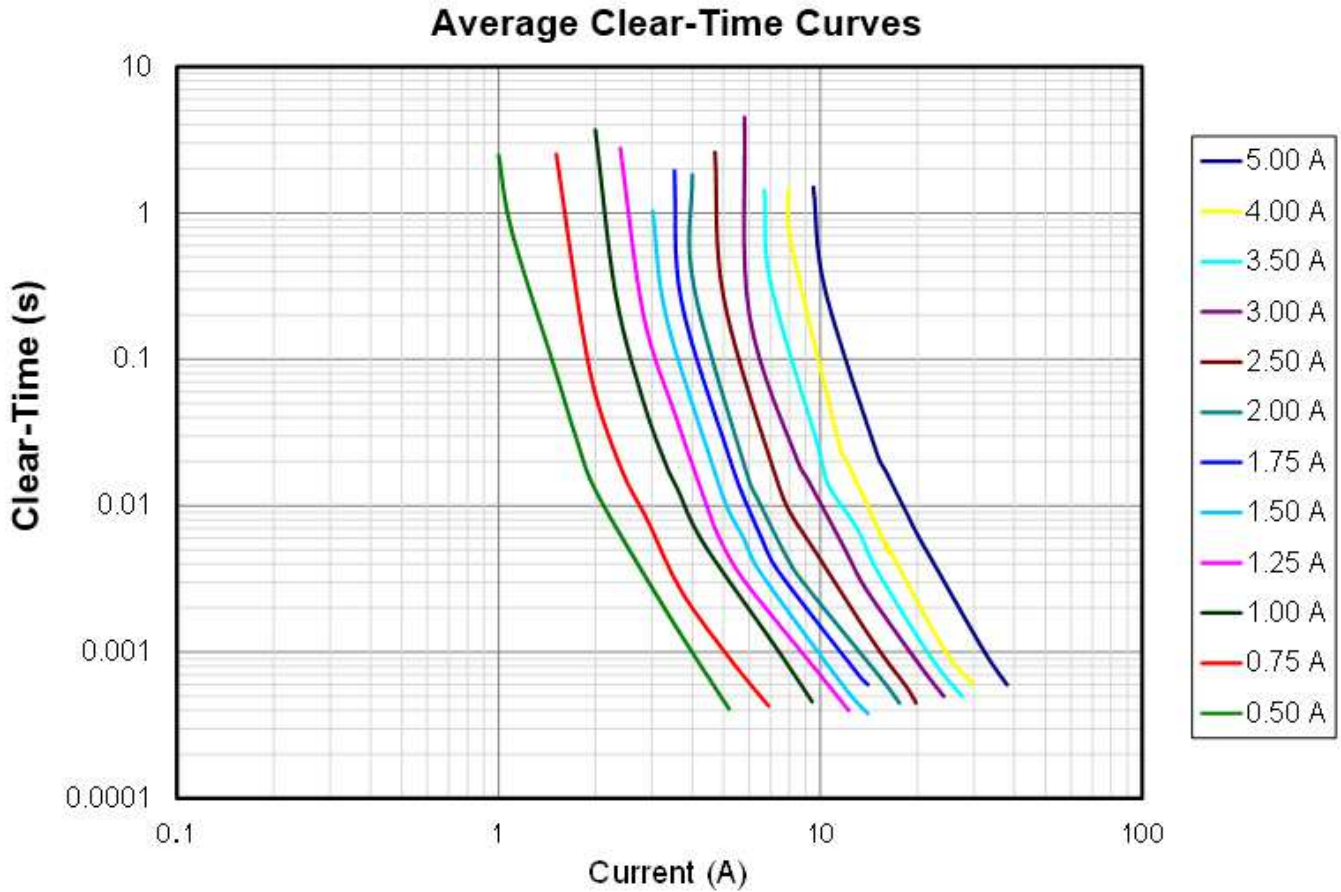
² Melting I²t at 1 ms.

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Average Clear-Time Curves for 0603 Devices



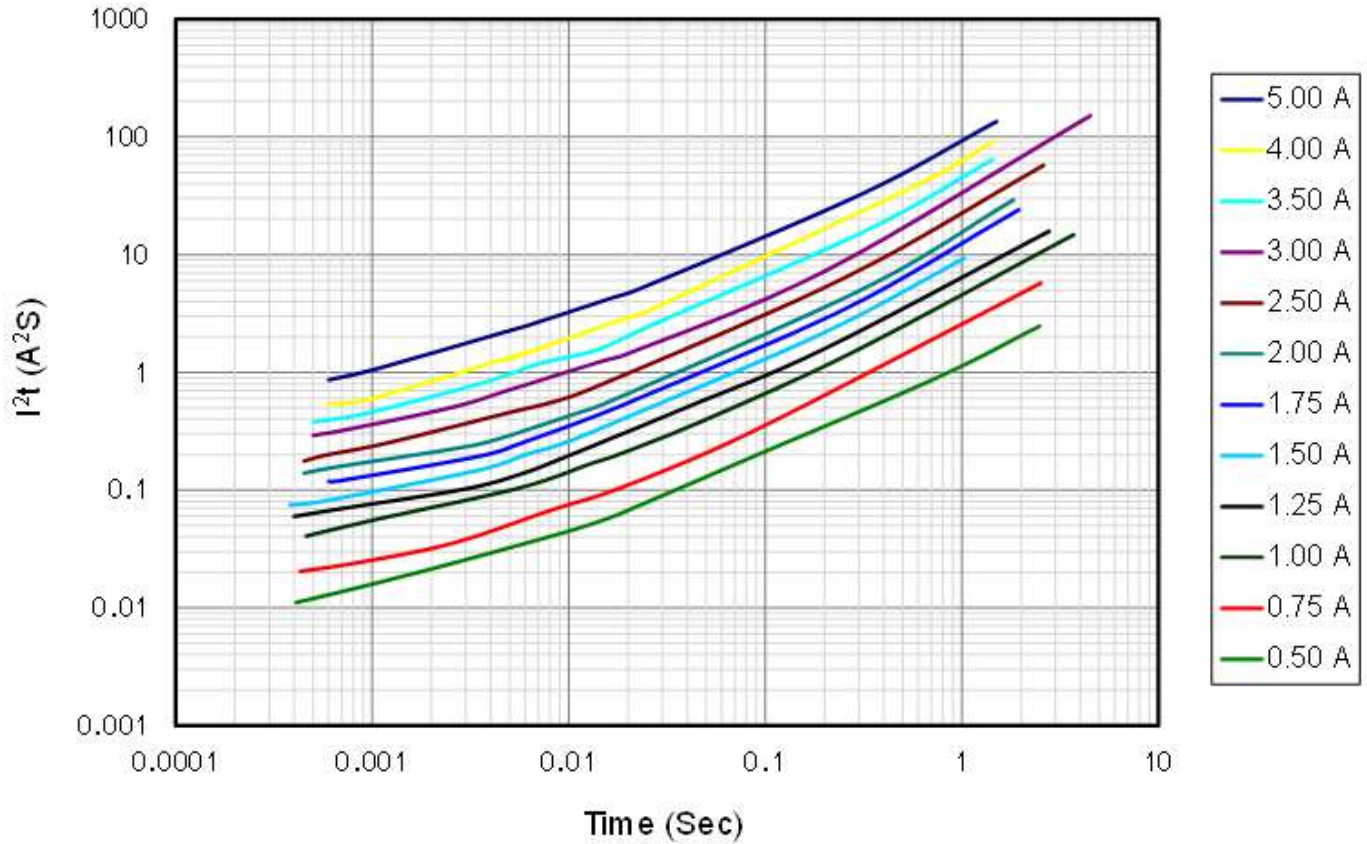
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I²t Curves for 0603 Devices

Average I²t vs. t Curves



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Product Characteristics for 0603 Devices

No.	Test item	Requirement	Test condition
1	Bending	≤1A: 10% DCR change max. >1A: 20% DCR change max.	2mm
2	Solderability	95% coverage min.	One dip at 255°C for 5 seconds
3	Thermal shock	DCR change within ±10% No mechanical damage	100 cycles between -55°C and +125°C
4	Moisture resistance	DCR change within ±10% No excessive corrosion	10 cycles
5	Salt spray	DCR change within ≤ ±10% No excessive corrosion	5% salt solution, 48 hour exposure
6	Mechanical vibration	DCR change within ≤ ±10% No mechanical damage	0.4" D.A. or 30G between 5 and 3000 Hz
7	Mechanical shock	DCR change within ≤ ±10% No mechanical damage	1500G, 0.5 ms, half sine shocks
8	Life	Change of voltage drop within ±10%, no open circuit	75% rated current, 2000 hours, ambient temperature +20°C to 30°C

Part Naming for 0603 Devices

0603 T SF V 100 FM / 65 -2
(1) (2) (3) (4) (5) (6) (7) (8)

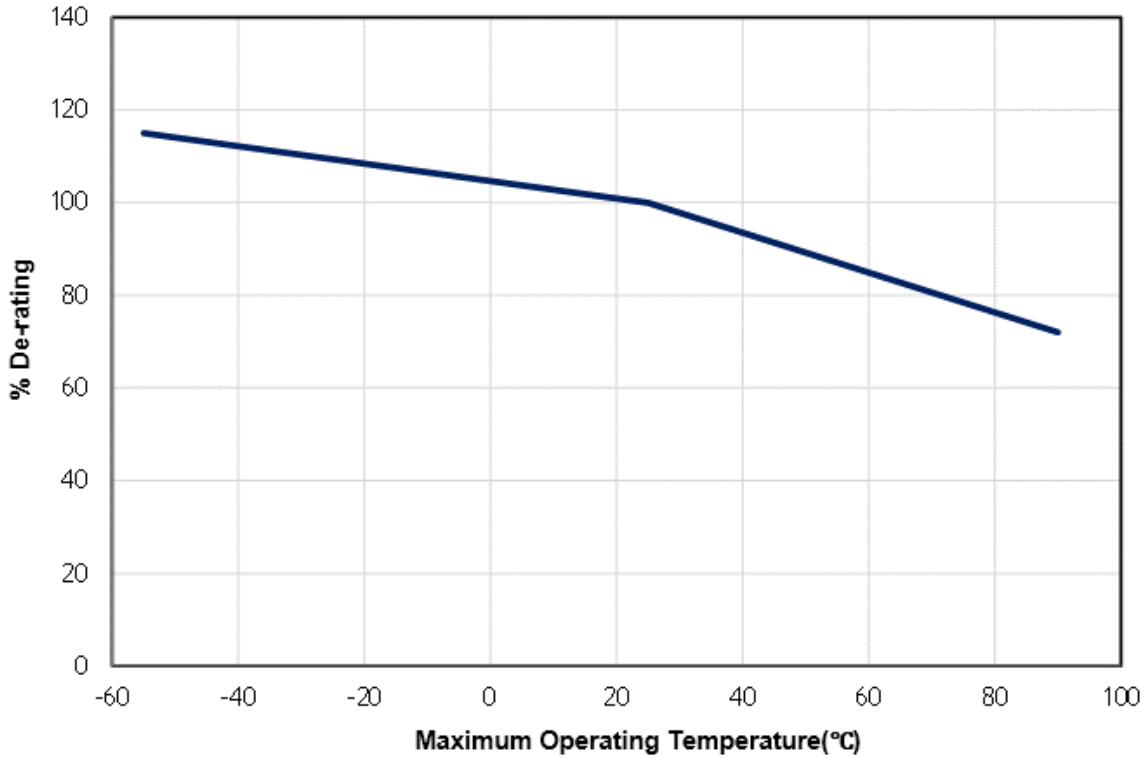
- (1) **Size:** 0603
- (2) **Series code:** Thin film
- (3) **SF:** Surface Mount Fuse
- (4) **Fuse Blow Fuse:** V = Very fast-acting
- (5) **Rated Current:** 100 = 1.0A
- (6) **Special code:**
F = RoHS Complaint
M = Marked Part
- (7) **Typical Voltage Rating:**
65 = 65Vdc
- (8) **Packaging:**
-2 = Tape and Reel

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Temperature De-rating Curve for 0603 Devices



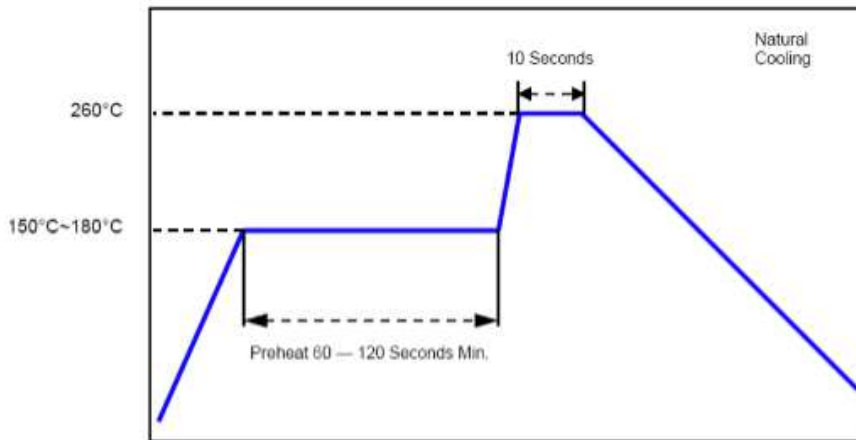
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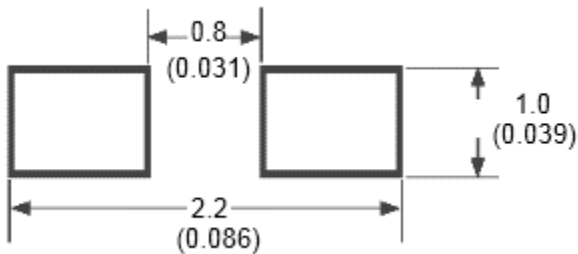
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Solder Reflow Recommendation for 0603 Devices

Profile Feature	
Average ramp up rate	3°C/second max.
Preheat	
• Temperature min.	150°C
• Temperature max.	180°C
• Time	60 – 120 Seconds
Peak/Classification temperature (Tp)	260°C Max.
Time of actual peak temperature	
Time	10 Seconds
Ramp down rate	Natural Cooling



Recommended Pad Layout for 0603 Devices mm (inch)





308 Constitution Drive
Menlo Park, CA USA
www.circuitprotection.com

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Agency Recognition:
Precedence:
Effectivity:

UL E197536
This specification takes precedence over documents referenced herein.
Reference documents shall be the issue in effect on the date of invitation for bid.

Materials Information

ROHS Compliant

Directive 2002/95/EC
Compliant

ELV Compliant

Directive 2000/53/EC
Compliant

Pb-Free



Halogen Free*



* Halogen Free refers to: Br≤900ppm, Cl≤900ppm, Br+Cl≤1500ppm