

Accu-Guard® II Low Current



Miniature 0603 Size Thin-Film Fuses



ACCU-GUARD® TECHNOLOGY

The new F0603G Accu-Guard® II low current fuses is based on thin-film technology which allows precise control of the component electrical and physical characteristics that is not possible with standard fuse technologies. The Accu-Guard II Low Current series encompasses the lowest current ratings in a 0603 package and features LGA terminations.

FEATURES

- Accurate current rating
- Fast acting
- Standard 0603 chip size
- Color coded
- Taped and reeled
- RoHS compliant
- UL Approval: E141069

APPLICATIONS

- Cellular Telephones
- Two-Way Radios
- Computers
- Battery Chargers
- Rechargeable Battery Packs
- Hard Disk Drives
- PDA's
- LCD Screens
- Digital and Video Cameras
- Instrumentation

ELECTRICAL SPECIFICATIONS

Operating temperature: -55°C to +125°C

Current carrying capacity:

- 55°C to -11°C 107% of rating
- 10°C to +60°C 100% of rating
- +61°C to +100°C 85% of rating
- +101°C to +125°C 80% of rating

Rated voltage: 32V

Post-fusing resistance: >1MΩ

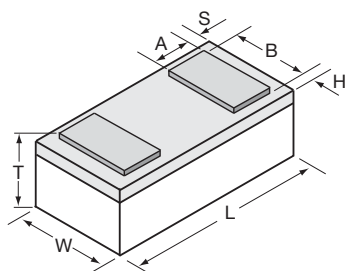
TERMINATION

Nickel/Solder coating compatible with automatic soldering technologies: reflow wave soldering, vapor phase and manual.

ELECTRICAL PARAMETERS

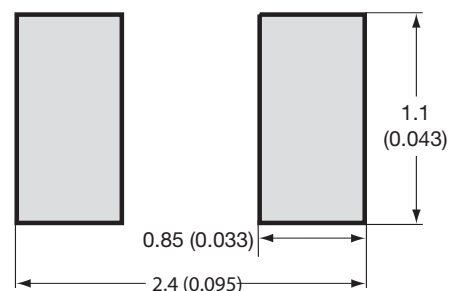
Part Number	Current Rating A	Resistance @0.1 x I _{RATED} Ω (max.)	Voltage Drop @I _{RATED} mV (max.)	Fusing Current (within 5 sec) A	Pre-Arc I ² t @10xI _{RATED} A ² -sec (typ)	Color Code
F0603G0R05FNTR	0.050	3.4	250	0.125	2 x 10 ⁻⁶	Blue
F0603G0R06FNTR	0.062	2.5	280	0.155	2 x 10 ⁻⁶	Yellow
F0603G0R07FNTR	0.075	2.0	280	0.1875	4 x 10 ⁻⁶	Brown
F0603G0R10FNTR	0.100	2.4	300	0.250	7 x 10 ⁻⁶	Red
F0603G0R12FNTR	0.125	1.6	250	0.312	1 x 10 ⁻⁵	White
F0603G0R15FNTR	0.150	1.2	220	0.375	2 x 10 ⁻⁵	Green
F0603G0R20FNTR	0.200	0.8	210	0.500	4 x 10 ⁻⁵	Pink

RECOMMEND PAD LAYOUT millimeters (inches)



L	1.6±0.1 (0.063±0.004)
W	0.81±0.1 (0.063±0.004)
T	0.61±0.1 (0.063±0.004)
A	0.23±0.05 (0.063±0.002)
B	0.66±0.05 (0.063±0.002)
S, H	0.10±0.05 (0.063±0.002)

RECOMMEND PAD LAYOUT millimeters (inches)

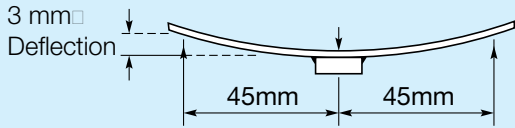


Accu-Guard® II Low Current

Miniature 0603 Size Thin-Film Fuses



ENVIRONMENTAL CHARACTERISTICS

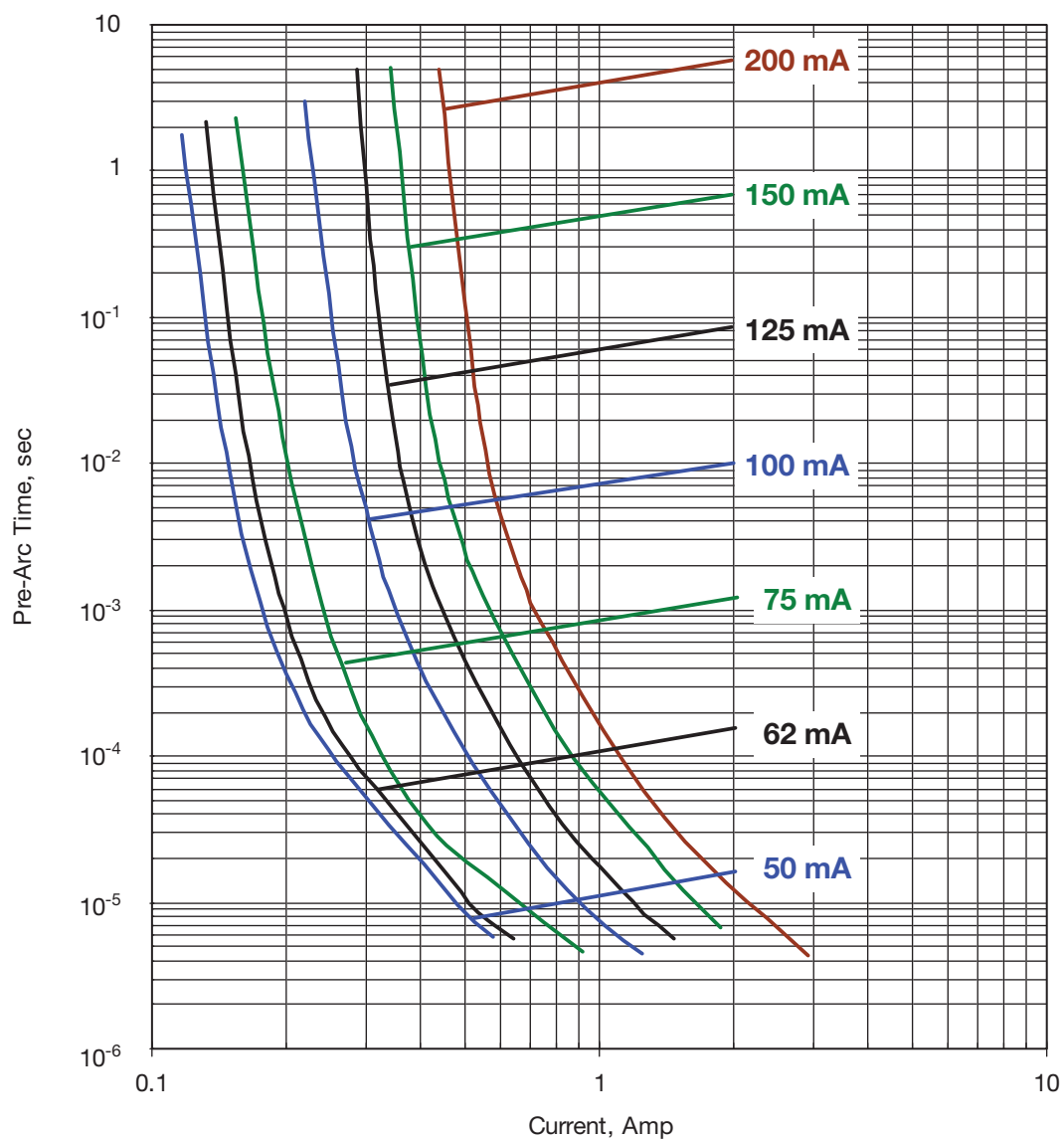
Test	Conditions	Requirement
Solderability	Components completely immersed in a solder bath at $245 \pm 5^{\circ}\text{C}$ for 3 secs.	Total area of imperfections in solder coating up to 5% of the land surface area
Leach Resistance	Components completely immersed in a solder bath at $255 \pm 5^{\circ}\text{C}$ for 60 secs.	Dissolution of termination $\leq 15\%$ of the land surface area
Storage	12 months minimum with components stored in "as received" packaging.	Good solderability
Shear	Components mounted to a substrate. Increasing shearing force applied parallel to the substrate till destruction.	Destruction at 5N force minimum
Temperature Cycling	Components mounted to a flexible substrate (e.g. FR - 4). 1000 cycles -55°C to $+125^{\circ}\text{C}$.	No Visible damage $\Delta R/R < 10\%$
Bend	Tested as shown in diagram 	No visible damage $\Delta R/R < 10\%$

Accu-Guard® II Low Current



Miniature 0603 Size Thin-Film Fuses

FUSE TIME – CURRENT CHARACTERISTICS

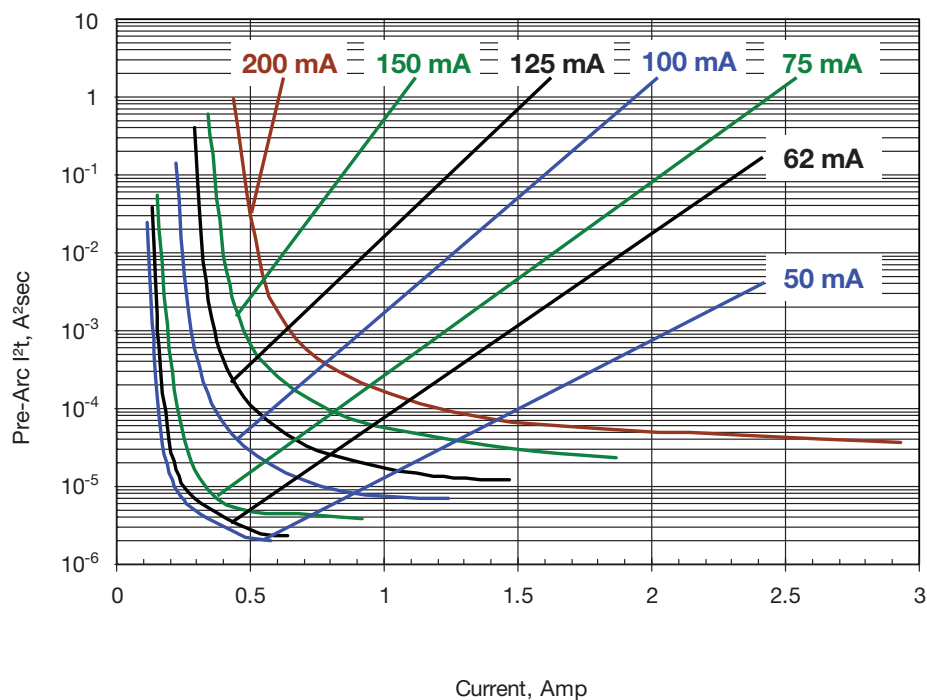


Accu-Guard® II Low Current



Miniature 0603 Size Thin-Film Fuses

FUSE PRE-ARC JOULE INTEGRALS VS CURRENT



FUSE PRE-ARC JOULE INTEGRALS VS PRE-ARC TIME

