

Accu-Guard® II Low Current



Miniature 0402 Size Thin-Film Fuses

The new F0402G Accu-Guard® series of 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 Low Current series encompasses the lowest current ratings in a compact 0402 package and features LGA terminations.

ELECTRICAL SPECIFICATIONS

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

Current carrying capacity:

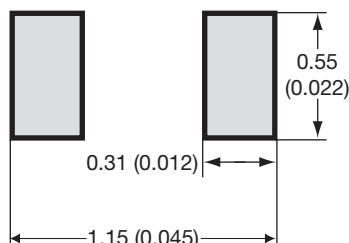
- 55°C to -11°C 107% of rating
- 10°C to +60°C 100% of rating
- +61°C to +100°C 85% of rating
- +101°C to +125°C 80% of rating

Rated voltage: 32V

Post-fusing resistance: >1MΩ

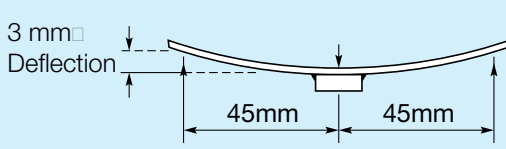
RECOMMEND PAD LAYOUT

millimeters (inches)



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
F0402G0R05FNTR	0.050	3.4	250	0.125	2 x 10 ⁻⁶	Blue
F0402G0R06FNTR	0.062	2.5	280	0.155	2 x 10 ⁻⁶	Yellow
F0402G0R07FNTR	0.075	2.0	280	0.1875	4 x 10 ⁻⁶	Brown
F0402G0R10FNTR	0.100	2.4	300	0.250	7 x 10 ⁻⁶	Red
F0402G0R12FNTR	0.125	1.6	250	0.312	1 x 10 ⁻⁵	White
F0402G0R15FNTR	0.150	1.2	220	0.375	2 x 10 ⁻⁵	Green
F0402G0R20FNTR	0.200	0.8	210	0.500	4 x 10 ⁻⁵	Pink

ENVIRONMENTAL CHARACTERISTICS

Test	Conditions	Requirement
Solderability	Components completely immersed in a solder bath at 245 ±5°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 ±5°C for 60 secs.	Dissolution of termination ≤ 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°C.	No Visible damage ΔR/R < 10%
Bend	Tested as shown in diagram 	No visible damage ΔR/R < 10%

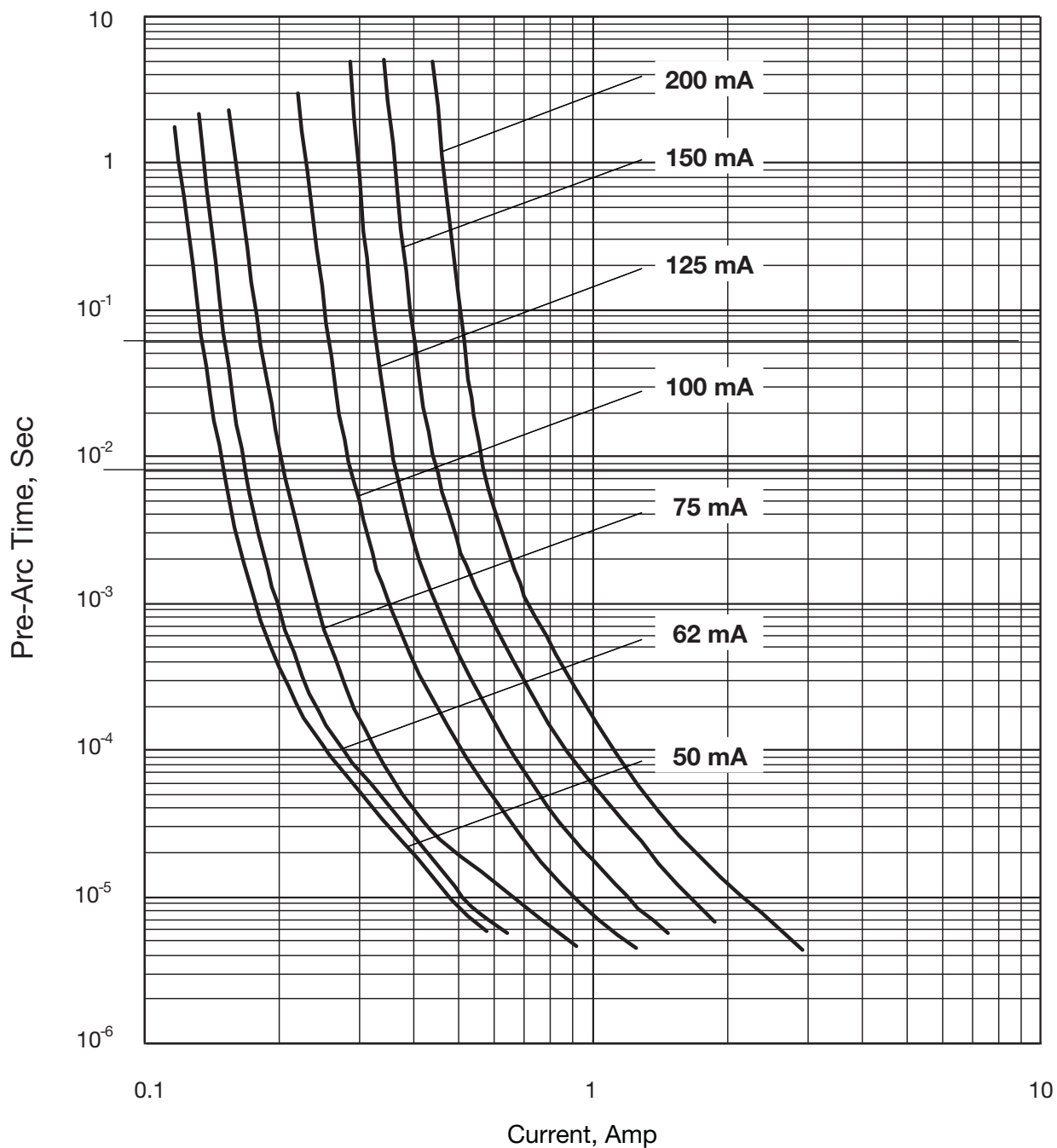


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FUSE TIME - CURRENT CHARACTERISTICS

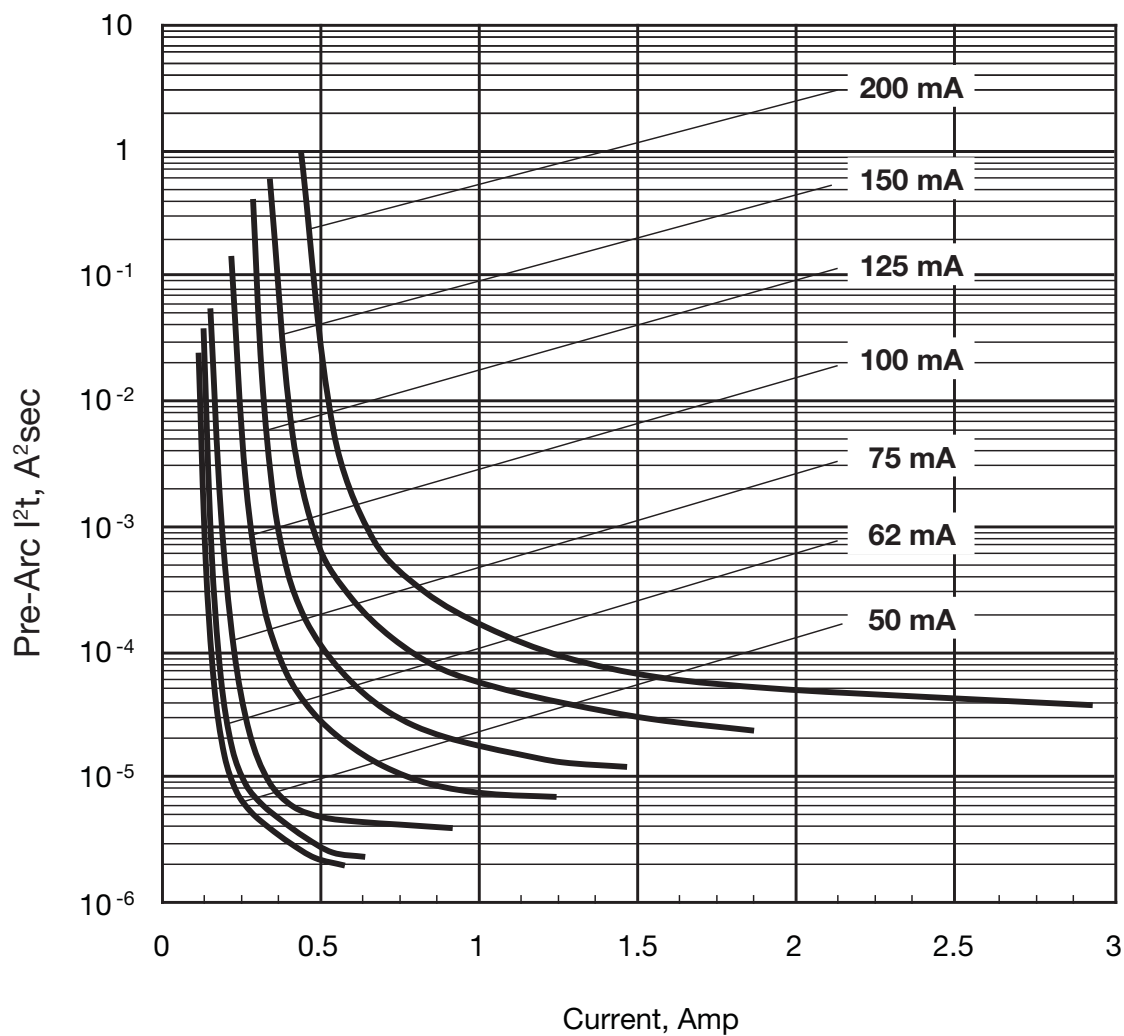


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FUSE PRE-ARC JOULE INTEGRALS VS CURRENT



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FUSE PRE-ARC JOULE INTEGRALS VS PRE-ARC TIME

