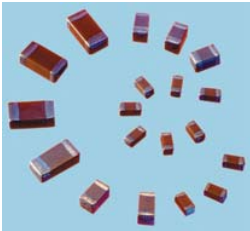


Fast Acting Fuse

SMD Thin Film

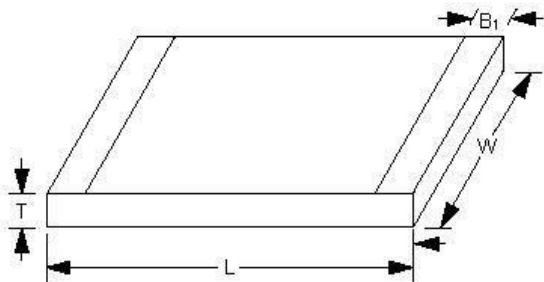


Features:

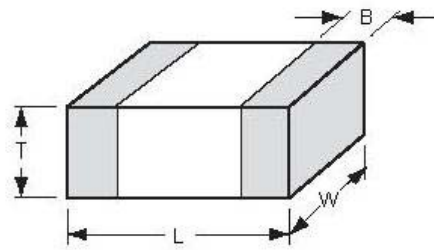
- Accurate current rating.
- Fast acting.
- Small-standard 0402, 0603, 0805, 1206 and 0612 chip sizes.
- Taped and reeled.
- Completely compatible with all soldering systems used for SMT.
- Lead free series (F0402E, F0603E).

Dimensions:

F0805B and F1206B



F0402E and F0603E



Standard Sizes:

| | F0402E | F0603E | F0805B | F1206B |
|----------|------------------------------|------------------------------|------------------------------|------------------------------|
| L | 1.00 ±0.10 (0.039 ±0.004) | 1.60 ±0.10 (0.063 ±0.004) | 2.10 ±0.20 (0.083 ±0.008) | 3.10 ±0.20 (0.122 ±0.008) |
| W | 0.55 ±0.07 (0.022 ±0.003) | 0.81 ±0.10 (0.032 ±0.004) | 1.27 ±0.10 (0.050 ±0.004) | 1.60 ±0.10 (0.063 ±0.004) |
| T | 0.40 ±0.10 (0.016 ±0.004) | 0.63 ±0.10 (0.025 ±0.004) | 0.90 ±0.20 (0.035 ±0.008) | 1.20 ±0.20 (0.047 ±0.008) |
| B | 0.20 ±0.10 (0.008 ±0.004) | 0.35 ±0.15 (0.014 ±0.006) | 0.30 ±0.15 (0.012 ±0.006) | 0.43 ±0.25 (0.017 ±0.010) |

Dimensions : Millimetres (Inches)



Fast Acting Fuse

SMD Thin Film



Specifications

Electrical Specifications

Operating Temperature : -55 to +125°C.

Current Carrying Capacity : For F0402E and F0603E: At -55°C, 107% of rating
At -25°C, 100% of rating
At +125°C, 80% of rating.

For F1206B and F0805B: At -55°C, 107% of rating
At +25°C, 100% of rating
At +85°C, 93% of rating
At +125°C, 90% of rating.

For F0805B 2.50A and 3.00A: At +85°C, 90% of rating
At +125°C, 90% of rating.

For F0612D : At -55°C, 107% of rating
At +25°C, 100% of rating
At +85°C, 80% of rating
At +125°C, 75% of rating.

Interrupting Rating : 50A.

Insulation Resistance : > 20MΩ guaranteed (after fusing at rated voltage).

Applications:

- Cellular Telephones.
- Two-way Radios.
- Computers.
- Battery Chargers.
- Rechargeable Battery Packs.
- Hard Disk Drives.
- PDA's.
- LCD Screens.
- SCSI Interface.
- Digital Cameras.
- Video Cameras.



Fast Acting Fuse

SMD Thin Film



Specification Table

| Type | Current Rating (A) | Resistance 10% x I Rated, 25°C Ω (Maximum) | Voltage Drop@1 x I Rated, 25°C mV (Maximum) | Fusing Current (within 5 second), 25°C (A) | Pre-Arc I ² t @ 50A A ² -second | Rated Voltage (V) | Part Number | | |
|--------|--------------------|--|---|--|---|-------------------|----------------|----------------|----------------|
| F0402E | 0.25 | 0.650 | 220 | 0.625 | 0.00005* | 32 | F0402E0R25FSTR | | |
| | 0.50 | 0.250 | 180 | 1.250 | 0.00030 | | F0402E0R50FSTR | | |
| | 0.75 | 0.200 | | 1.875 | 0.00300 | | F0402E0R75FSTR | | |
| | 1.00 | 0.130 | 160 | 2.500 | 0.00800 | | F0402E1R00FSTR | | |
| | 1.50 | 0.060 | 140 | 3.750 | 0.03000 | | F0402E1R50FSTR | | |
| | 2.00 | 0.040 | 120 | 5.000 | 0.06000 | | F0402E2R00FSTR | | |
| F0603E | 0.25 | 0.650 | 220 | 0.625 | 0.00005* | | 32 | F0603E0R25FSTR | |
| | 0.50 | 0.250 | 180 | 1.250 | 0.00030 | | | F0603E0R50FSTR | |
| | 0.75 | 0.200 | | 1.875 | 0.00300 | | | F0603E0R75FSTR | |
| | 1.00 | 0.130 | 160 | 2.500 | 0.00800 | | | F0603E1R00FSTR | |
| | 1.25 | 0.090 | 140 | 3.125 | 0.01000 | | | F0603E1R25FSTR | |
| | 1.50 | 0.060 | | 3.750 | 0.03000 | | | F0603E1R50FSTR | |
| | 2.00 | 0.040 | 120 | 5.000 | 0.06000 | F0603E2R00FSTR | | | |
| F0612D | 4.00 | 0.040 | 260 | 10.000 | 0.10000 | 63 | | F0612D4R00FSTR | |
| | 5.00 | 0.025 | 200 | 12.500 | 0.25000 | | | F0612D5R00FSTR | |
| F0805B | 0.25 | 0.750 | 280 | 0.500 | 0.00003* | | | 63 | F0805B0R25FSTR |
| | 0.50 | 0.350 | | 1.000 | 0.00020 | | | | F0805B0R50FSTR |
| | 0.75 | 0.270 | | 1.500 | 0.00100 | | | | F0805B0R75FSTR |
| | 1.00 | 0.220 | | 2.000 | 0.00300 | | F0805B1R00FSTR | | |
| | 1.25 | 0.170 | 240 | 2.500 | 0.00700 | | F0805B1R25FSTR | | |
| | 1.50 | 0.120 | | 3.000 | 0.01000 | | F0805B1R50FSTR | | |
| | 2.00 | 0.080 | 220 | 4.000 | 0.03000 | | F0805B2R00FSTR | | |
| | 2.50 | 0.060 | | 5.000 | 0.05000 | | F0805B2R50FSTR | | |
| | 3.00 | 0.050 | | 6.000 | 0.10000 | | F0805B3R00FSTR | | |
| F1206B | 0.50 | 0.350 | 280 | 1.000 | 0.00020 | | 63 | | F1206B0R50FSTR |
| | 1.00 | 0.180 | 240 | 2.000 | 0.00300 | F1206B1R00FSTR | | | |
| | 1.50 | 0.120 | | 3.000 | 0.01000 | F1206B1R50FSTR | | | |
| | 2.00 | 0.080 | 220 | 4.000 | 0.03000 | F1206B2R00FSTR | | | |
| | 3.00 | 0.050 | | 6.000 | 0.10000 | F1206B3R00FSTR | | | |

*Current is limited to less than 50A at 32V due to internal fuse resistance.

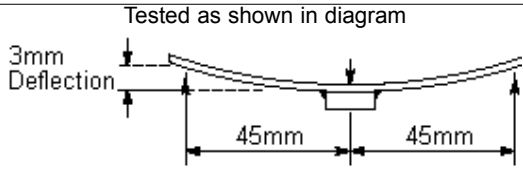


Fast Acting Fuse

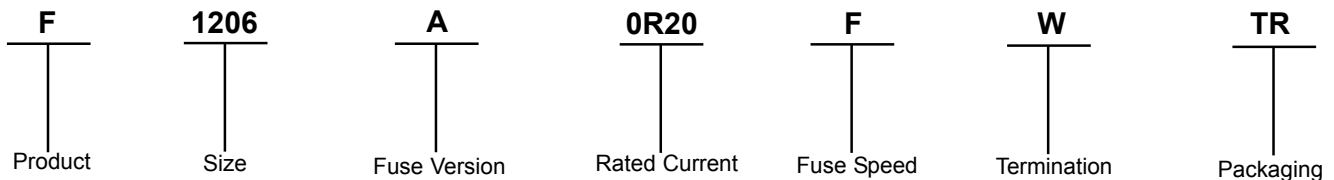
SMD Thin Film



Environmental Characteristics

| Test | Conditions | Requirement |
|-----------------------------|---|---|
| Solderability | Components completely immersed in a solder bath at 235 ±5°C for 2 seconds. | Terminations to be well tinned No visible damage |
| Leach Resistance | Completely immersed in a solder bath at 260 ±5°C for 60 seconds. | Dissolution of termination ≤ 25% of area ΔR/R < 10% |
| Storage | 12 months minimum with components stored in "as received" packaging. | Good solderability |
| Shear | Components mounted to a substrate. A force of 5N applied normal to the line joining the terminations and in a line parallel to the substrate. | No visible damage |
| Rapid Change of Temperature | Components mounted to a substrate. 50 cycles -55°C to +125°C. | No visible damage ΔR/R < 10% |
| Vibration | Per Mil-Std-202F Method 201A and Method 204D Condition D. | No visible damage ΔR/R < 10% |
| Bend | Tested as shown in diagram  | No visible damage ΔR/R < 10% |
| Load Life F0805B, F1206B | 25°C, Rated current, 20,000 hours. | No visible damage ΔR/R < 10% |

Part Number Explanation



- Product** : Fuse.
- Size** : See table for standard sizes.
- Fuse Version** : A = Accu-Guard®, B = Accu-Guard® ||, C = Accu-Guard® || 0603, D = Accu-Guard® || 0612 and E = Accu-Guard® || 0402, 0603.
- Rated Current** : Current expressed in Amps, letter R denotes decimal point. Example: 0.20A = 0R20 and 1.75A = 1R75.
- Fuse Speed** : F = Fast.
- Termination** : S = Nickel/Lead-free solder coated (Sn 100).
- Packaging** : TR = Tape and reel.

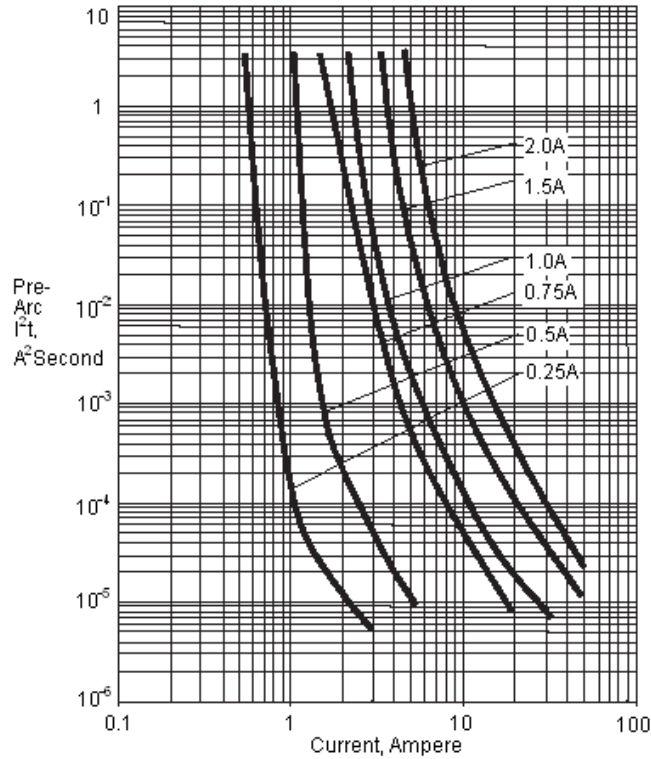


Fast Acting Fuse

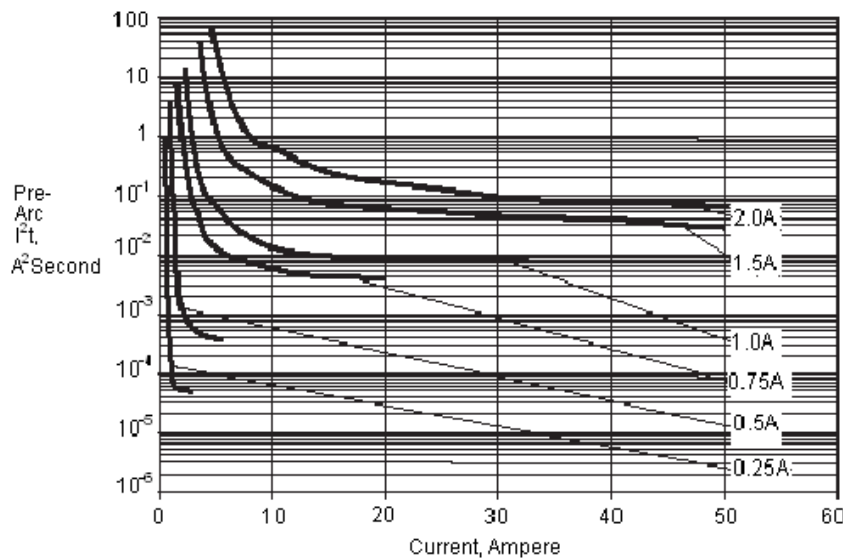
SMD Thin Film



Fuse Time - Current Characteristics For Type F0402E (Typical)



Fuse Pre-Arc Joule Integrals vs Current For Type F0402E (Typical)

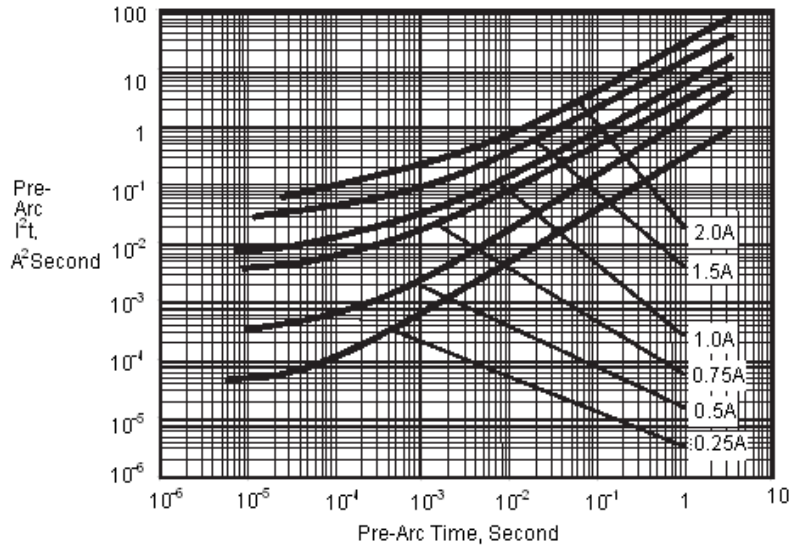


Fast Acting Fuse

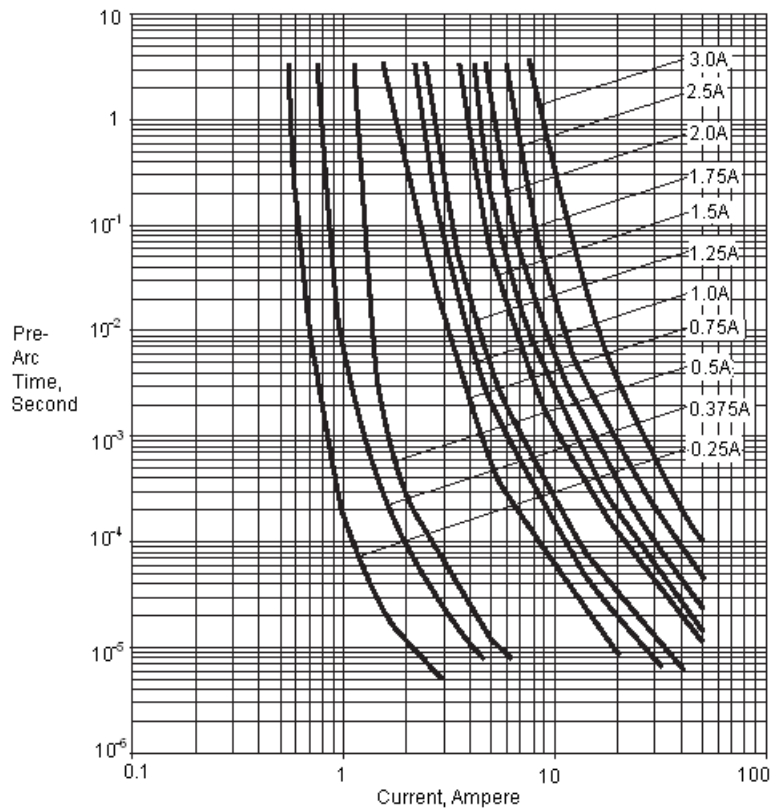
SMD Thin Film



Fuse Pre-Arc Joule Integrals vs Pre-Arc Time For Type F0402E (Typical)



Fuse Time - Current Characteristics For Type F0603E (Typical)

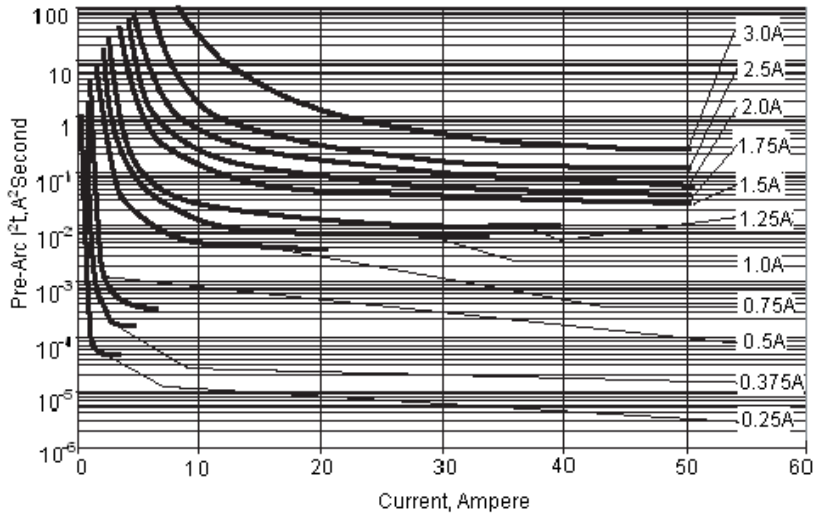


Fast Acting Fuse

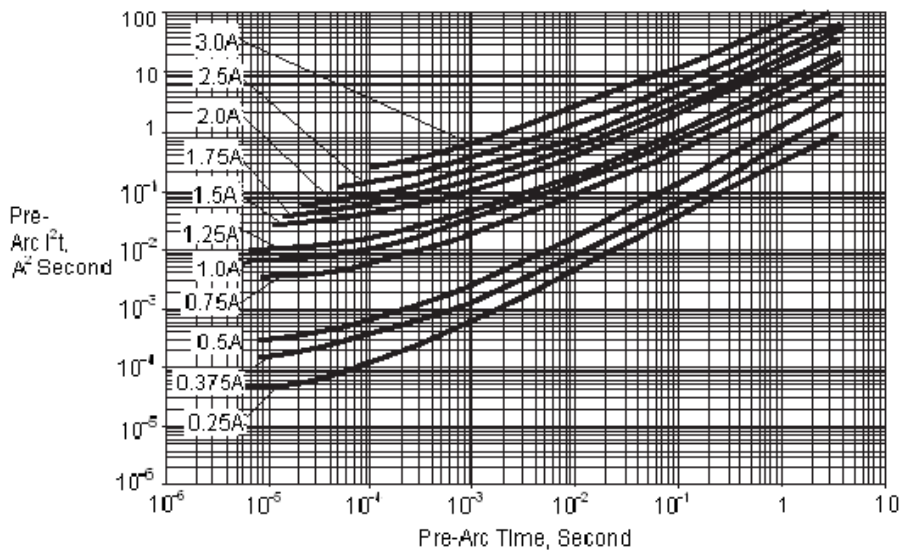
SMD Thin Film



Fuse Pre-Arc Joule Integrals vs Current For Type F0603E (Typical)



Fuse Pre-Arc Joule Integrals vs Pre-Arc Time For Type F0603E (Typical)

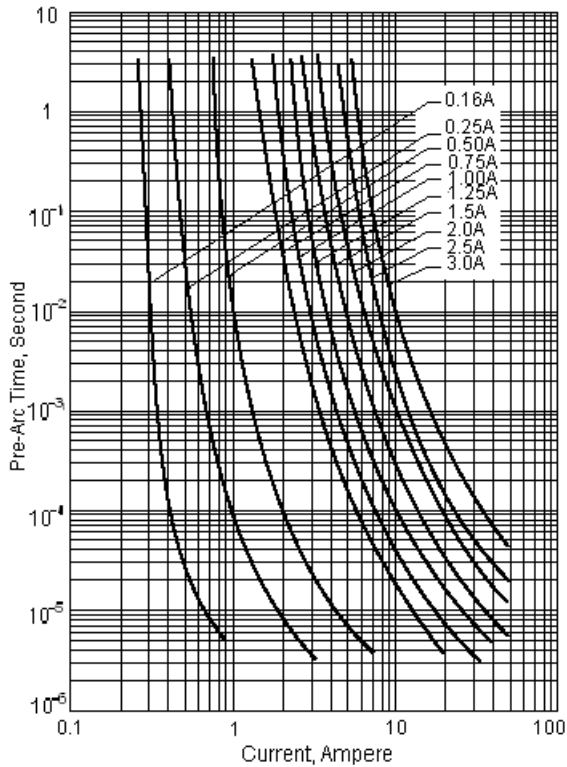


Fast Acting Fuse

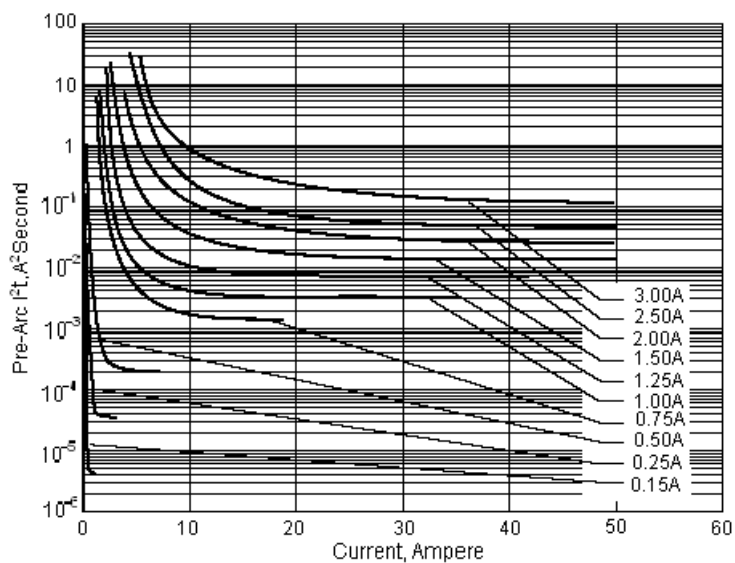
SMD Thin Film



Fuse Time - Current Characteristics For Types F0805B and F1206B (Typical)



Fuse Pre-Arc Joule Integrals vs Current Time For Types F0805B and F1206B (Typical)

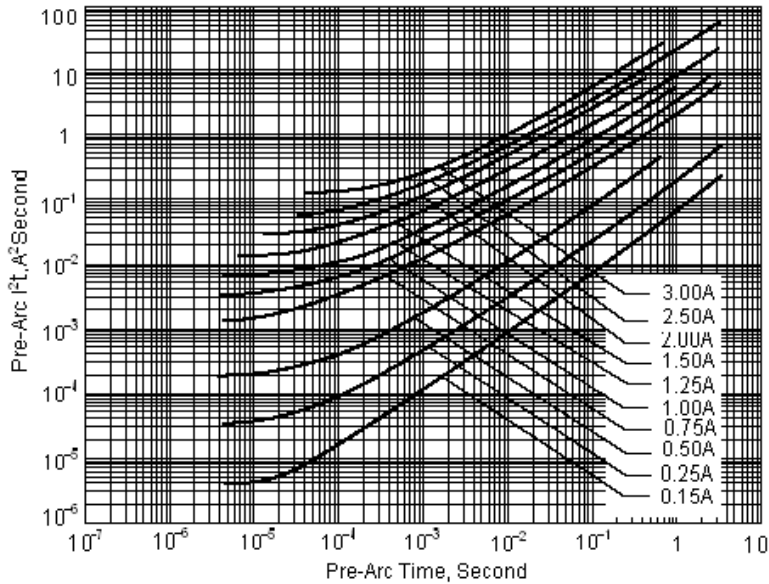


Fast Acting Fuse

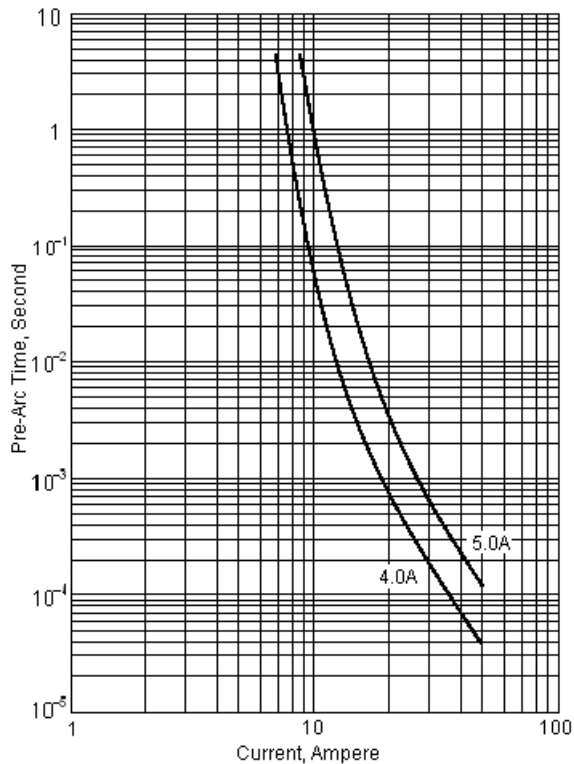
SMD Thin Film



Fuse Pre-Arc Joule Integrals vs Pre-Arc Time For Types F0805B and F1206B (Typical)



Fuse Time - Current Characteristics For Types F0612D (Typical)

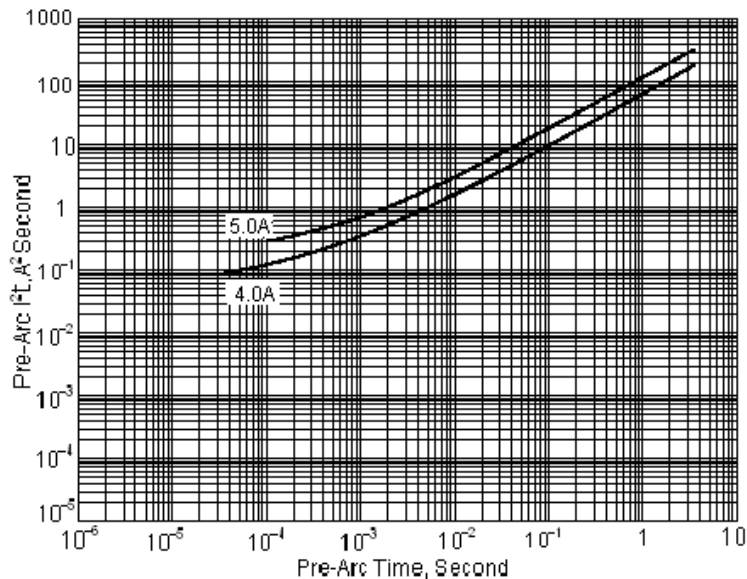


Fast Acting Fuse

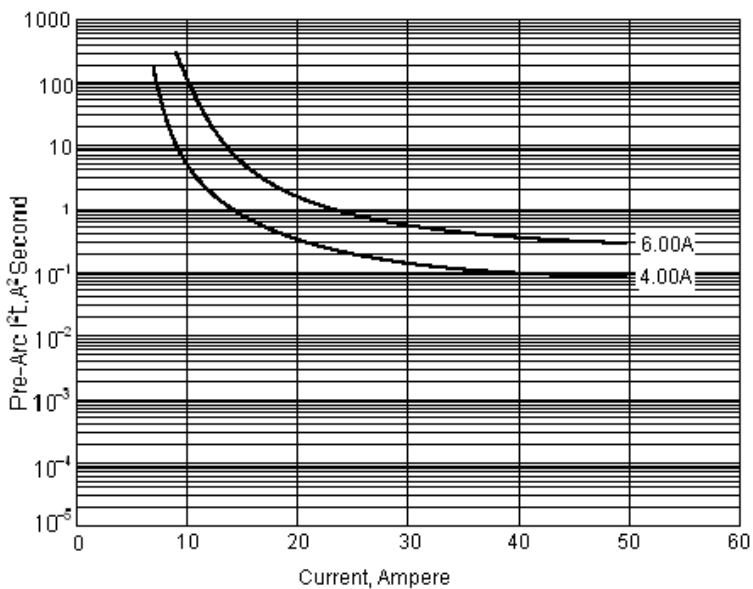
SMD Thin Film



Fuse Pre-Arc Joule Integrals vs Pre-Arc Time For Types F0612D (Typical)



Fuse Pre-Arc Joule Integrals vs Current For Types F0612D (Typical)



Fast Acting Fuse SMD Thin Film



Notes:

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| | | | |
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