THE DATASHEET OF

F0805B0R25FSTR

Accu-Guard® II

SMD Thin-Film Fuse

Accu-Guard® II is a version of Accu-Guard® fuses for a wider range of current and voltage ratings. Constructed on alumina substrates, Accu-Guard® II fuses display superior electrical, mechanical and environmental properties. Accu-Guard® II dimensions are standard 0402, 0603, 0805, 1206 and 0612 chip sizes, see page 2.

ELECTRICAL SPECIFICATIONS

Operating temperature: -55°C 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 is 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.

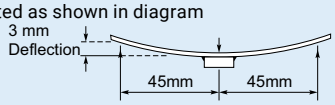
Interrupting rating: 50A.
Insulation resistance: >20MΩ guaranteed (after fusing at rated voltage).

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.

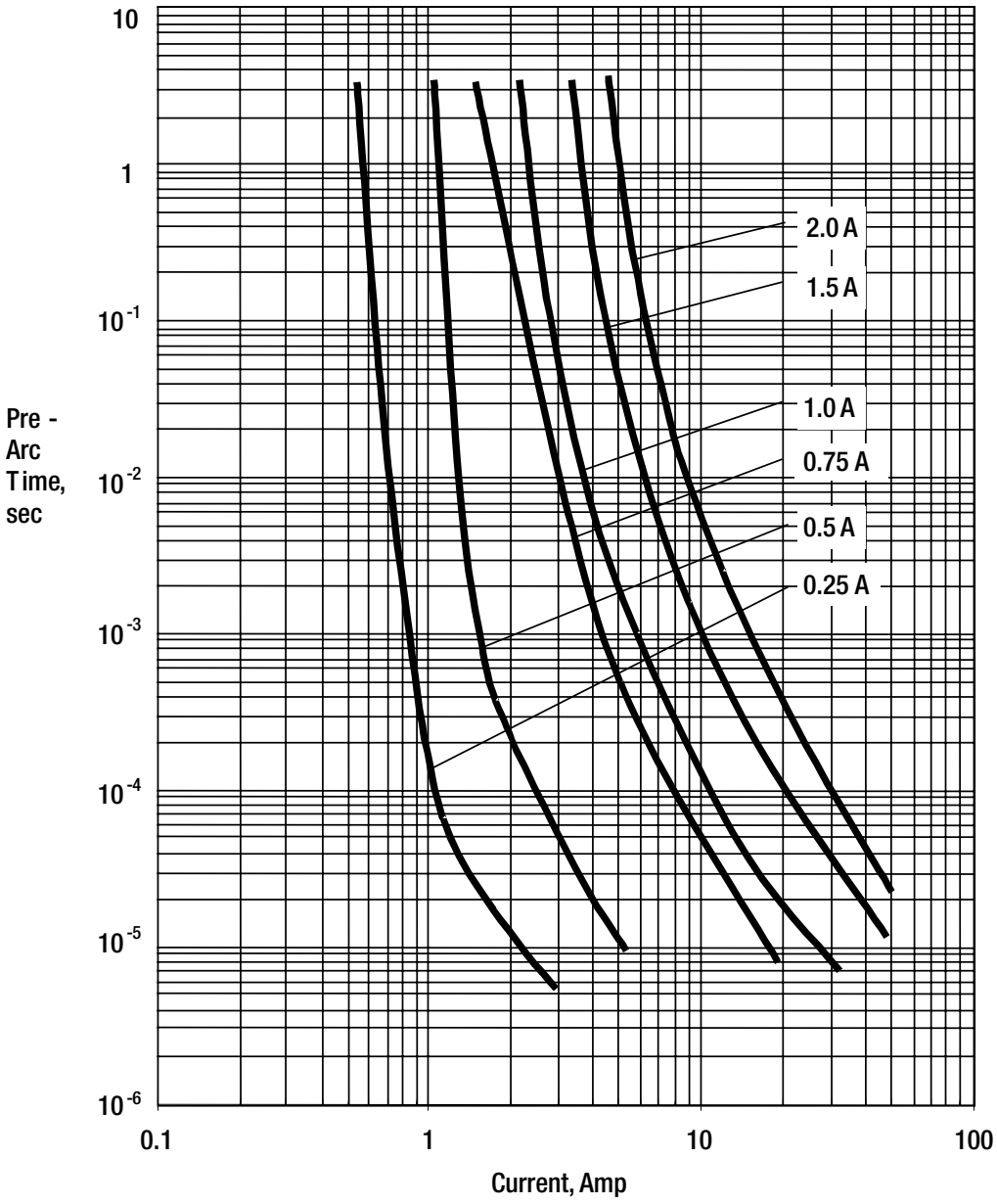
Type	Part Number	Current Rating A	Resistance 10% x I rated, 25°C Ω (max.)	Voltage Drop @1 x I rated, 25°C mV (max.)	Fusing Current (within 5 sec), 25°C A	Pre-Arc I^2t @ 50A A^2-sec	Rated Voltage V
F0402E	F0402E0R25FSTR	0.25	0.650	220	0.625	0.00005*	32
	F0402E0R50FSTR	0.50	0.250	180	1.25	0.0003	32
	F0402E0R75FSTR	0.75	0.200	180	1.875	0.003	32
	F0402E1R00FSTR	1.00	0.130	160	2.50	0.008	32
	F0402E1R50FSTR	1.50	0.060	140	3.75	0.03	32
	F0402E2R00FSTR	2.00	0.040	120	5.00	0.06	32
F0603E	F0603E0R25FSTR	0.25	0.650	220	0.625	0.00005*	32
	F0603E0R37FSTR	0.375	0.450	220	0.940	0.0001	32
	F0603E0R50FSTR	0.50	0.250	180	1.25	0.0003	32
	F0603E0R75FSTR	0.75	0.200	180	1.875	0.003	32
	F0603E1R00FSTR	1.00	0.130	160	2.50	0.008	32
	F0603E1R25FSTR	1.25	0.090	140	3.125	0.01	32
	F0603E1R50FSTR	1.50	0.060	140	3.75	0.03	32
	F0603E1R75FSTR	1.75	0.050	120	4.375	0.04	32
	F0603E2R00FSTR	2.00	0.040	120	5.00	0.06	32
	F0603E2R50FSTR	2.50	0.035	100	6.25	0.12	32
	F0603E3R00FSTR	3.00	0.030	100	7.50	0.25	32
F0805B	F0805B0R25FW/STR	0.25	0.750	280	0.50	0.00003*	63
	F0805B0R50FW/STR	0.50	0.350	280	1.00	0.0002	63
	F0805B0R75FW/STR	0.75	0.270	280	1.50	0.001	63
	F0805B1R00FW/STR	1.00	0.220	280	2.00	0.003	63
	F0805B1R25FW/STR	1.25	0.170	280	2.50	0.007	63
	F0805B1R50FW/STR	1.50	0.120	240	3.00	0.010	63
	F0805B2R00FW/STR	2.00	0.080	220	4.00	0.030	63
	F0805B2R50FW/STR	2.50	0.060	220	5.00	0.050	63
	F0805B3R00FW/STR	3.00	0.050	220	6.00	0.10	63
F1206B	F1206B0R25FW/STR	0.25	0.750	280	0.50	0.00003	63
	F1206B0R50FW/STR	0.50	0.350	280	1.00	0.0002	63
	F1206B1R00FW/STR	1.00	0.180	240	2.00	0.003	63
	F1206B1R50FW/STR	1.50	0.120	240	3.00	0.010	63
	F1206B2R00FW/STR	2.00	0.080	220	4.00	0.030	63
	F1206B3R00FW/STR	3.00	0.050	220	6.00	0.10	63
F0612D	F0612D4R00FWTR	4.00	0.040	260	10	0.10	32
	F0612D5R00FWTR	5.00	0.025	200	12.5	0.25	32

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

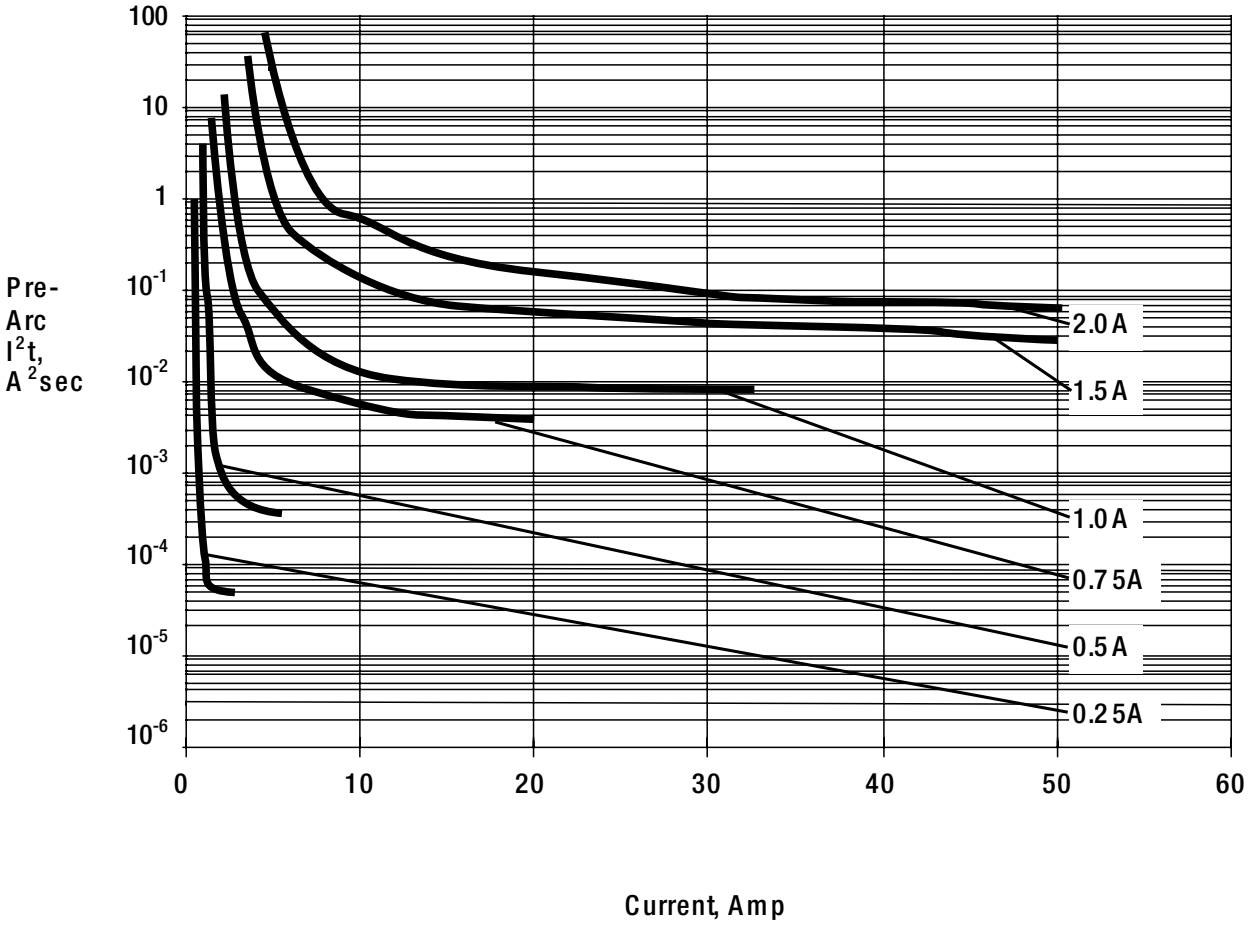
ENVIRONMENTAL CHARACTERISTICS

Test	Conditions	Required
Solderability	Components completely immersed in a solder bath at 235 ±5°C for 2 secs.	Terminations to be well tinned No visible damage
Leach Resistance	Completely immersed in a solder bath at 260 ±5°C for 60 secs	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° to +125°C.	No Visible damage ΔR/R<10%
Temperature Cycling	Components mounted to substrate. 50 cycles -55°C to +125°C.	No Visible damage ΔR/R<10%
Vibration	Components mounted to substrate. 50 cycles -55°C to +125°C.	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 hrs.	No visible damage ΔR/R<10%

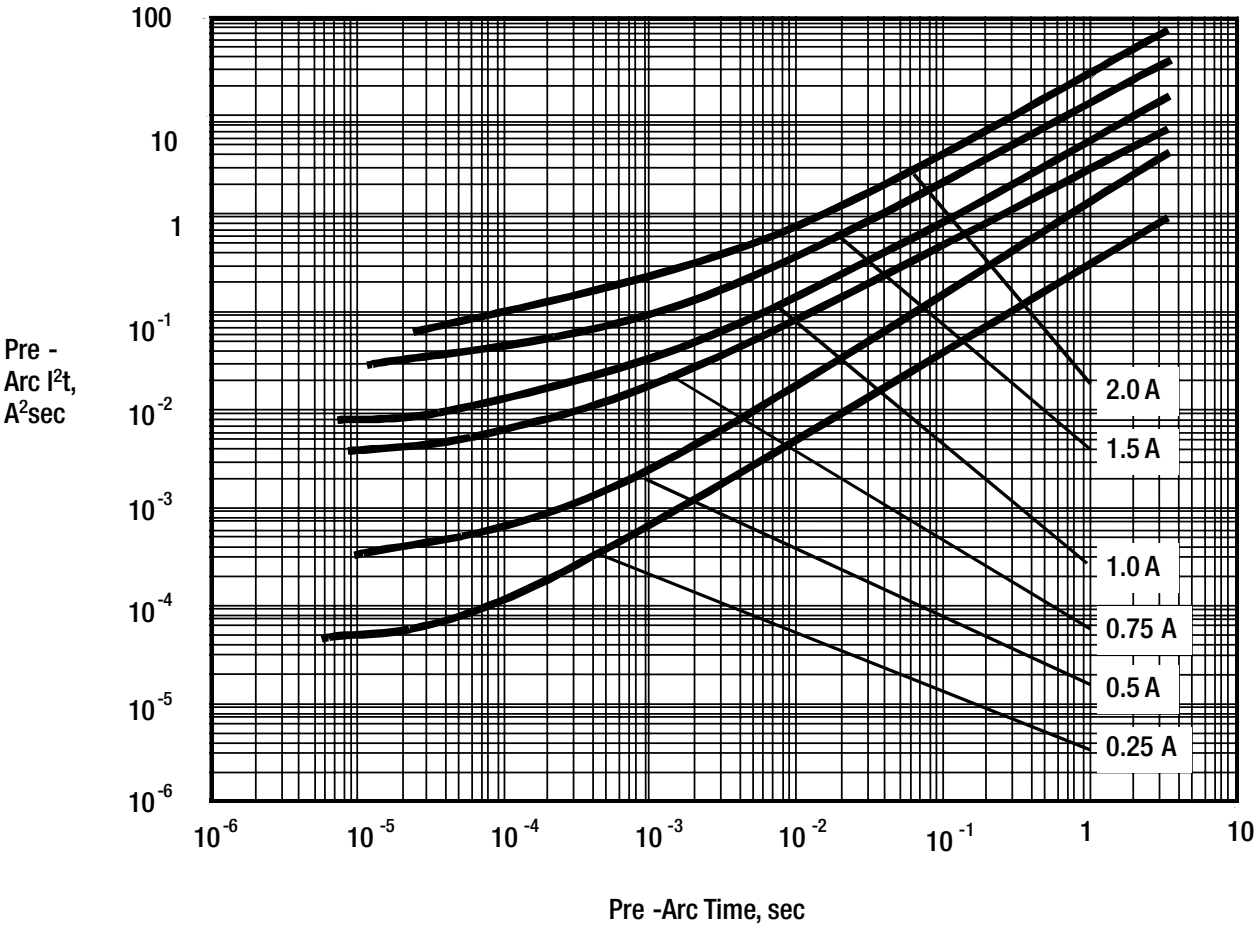
FUSE TIME – CURRENT CHARACTERISTICS FOR TYPE F0402E (TYPICAL)



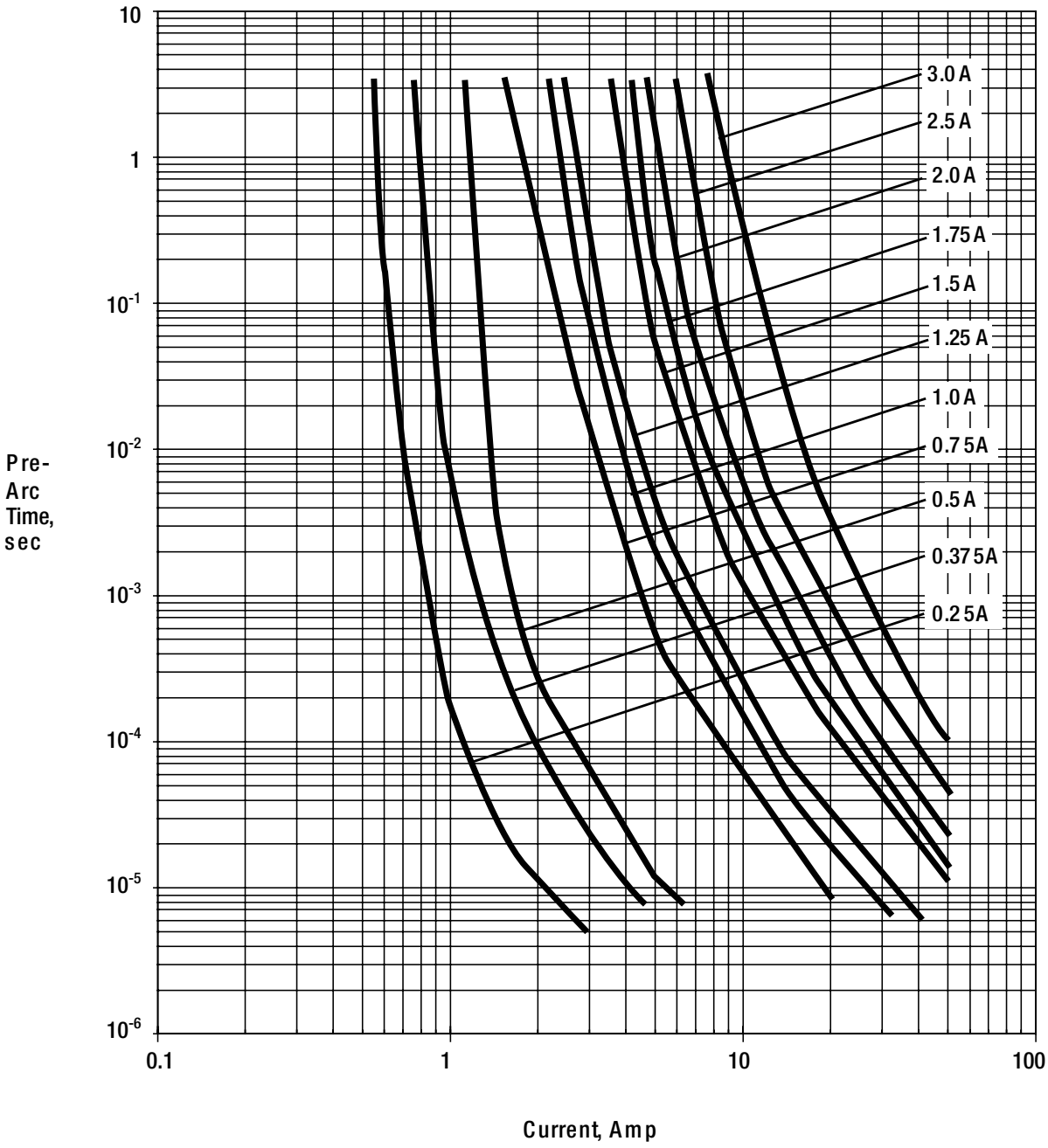
FUSE PRE-ARC JOULE INTEGRALS VS CURRENT FOR TYPE F0402E (TYPICAL)



FUSE PRE-ARC JOULE INTEGRALS VS PRE-ARC TIME FOR TYPE F0402E (TYPICAL)



FUSE TIME – CURRENT CHARACTERISTICS FOR TYPE F0603E (TYPICAL)



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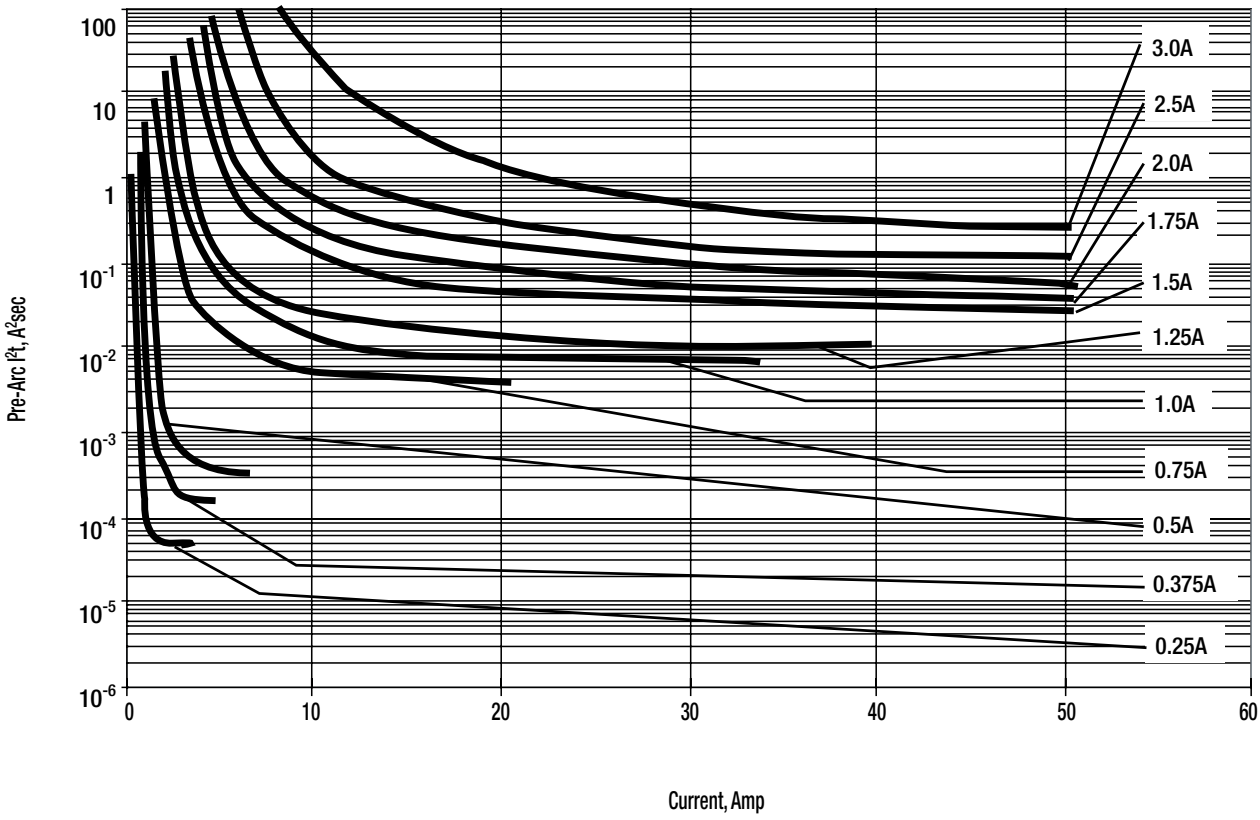

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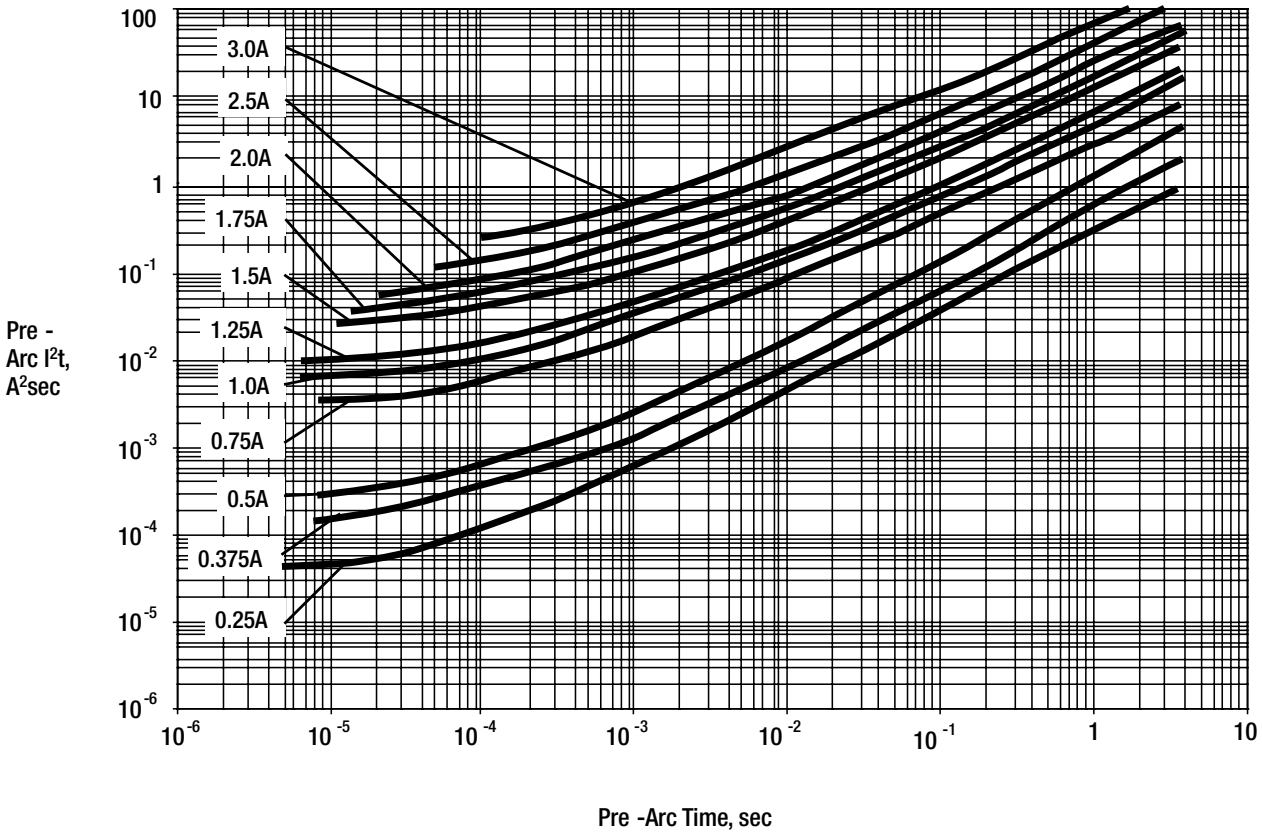
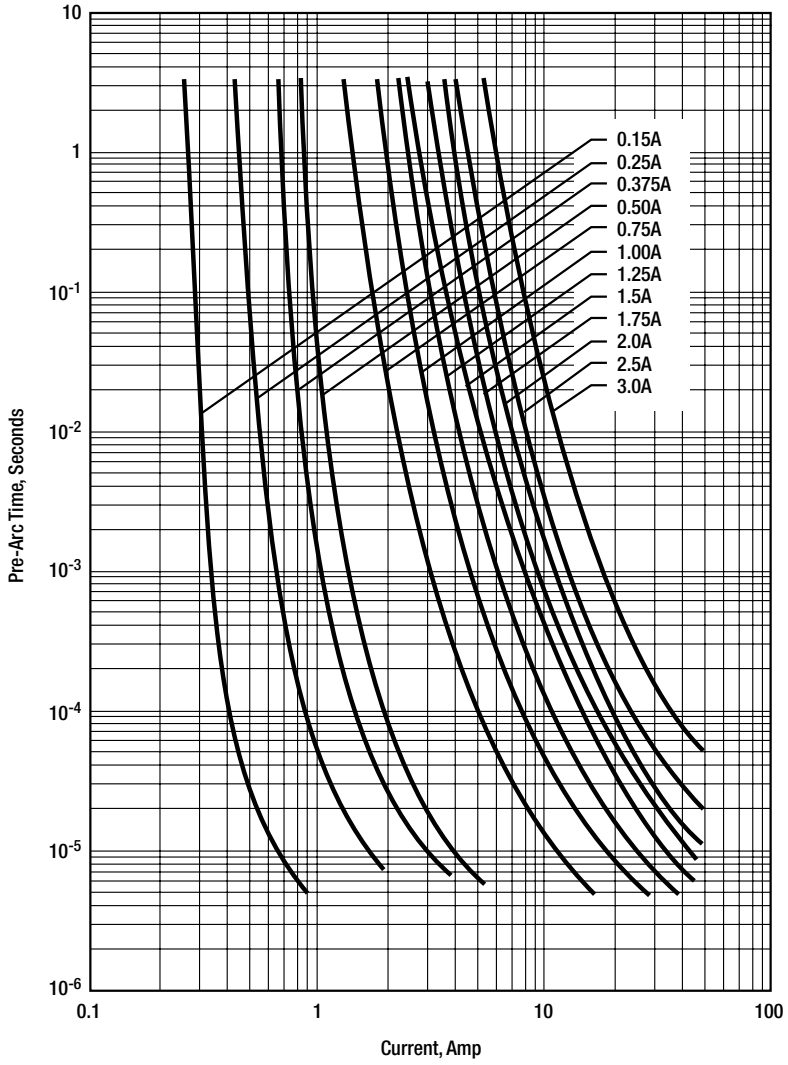
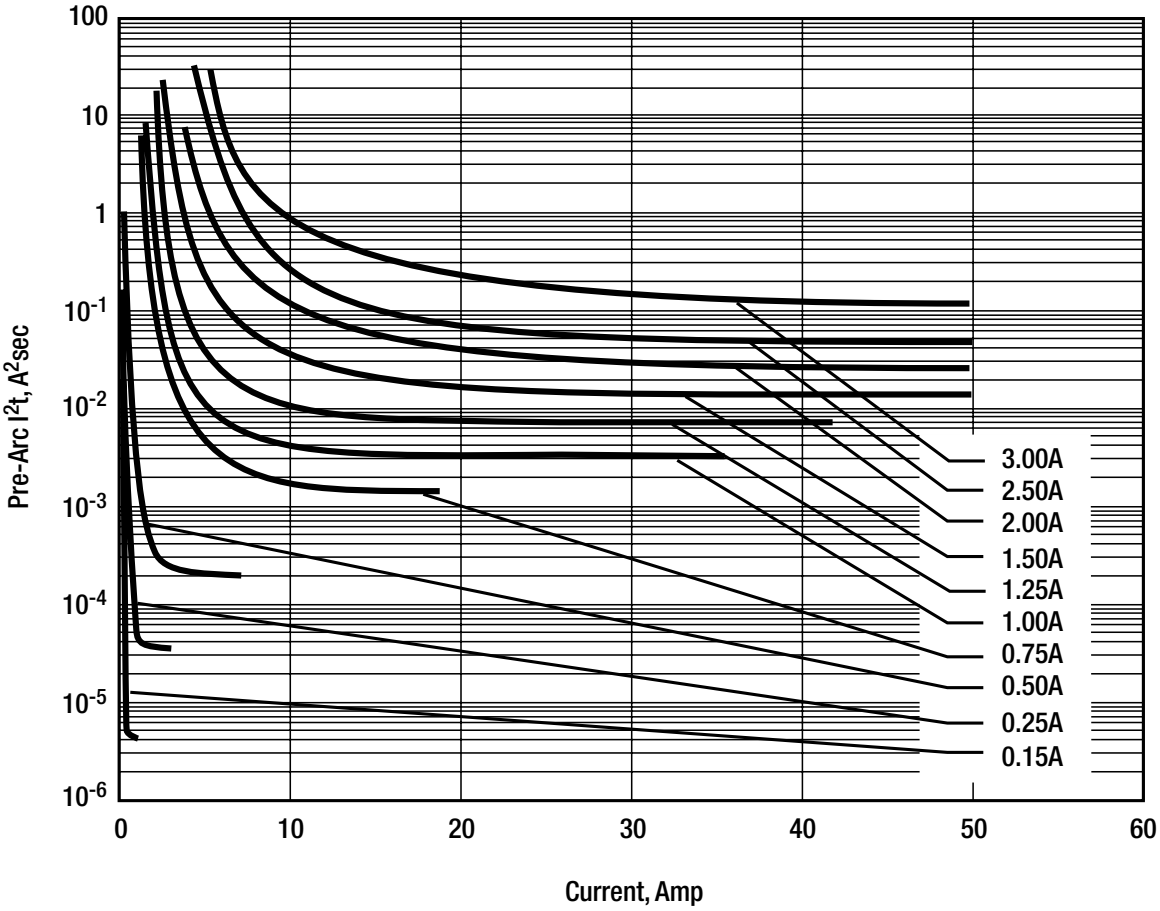


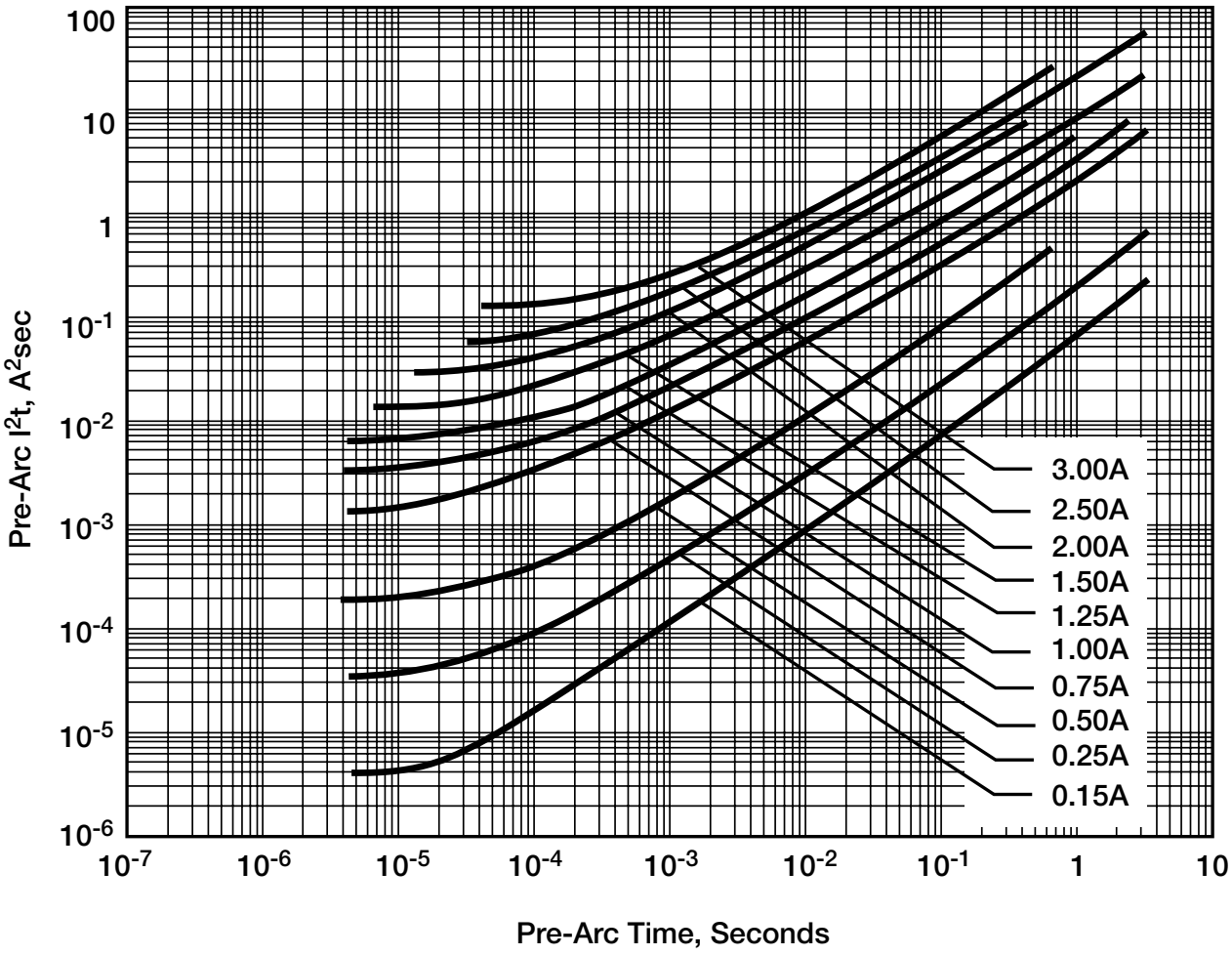
FUSE TIME - CURRENT CHARACTERISTICS FOR TYPES F0805B AND F1206B (TYPICAL)



FUSE PRE-ARC JOULE INTEGRALS VS. CURRENT TIME FOR TYPES F0805B AND F1206B (TYPICAL)

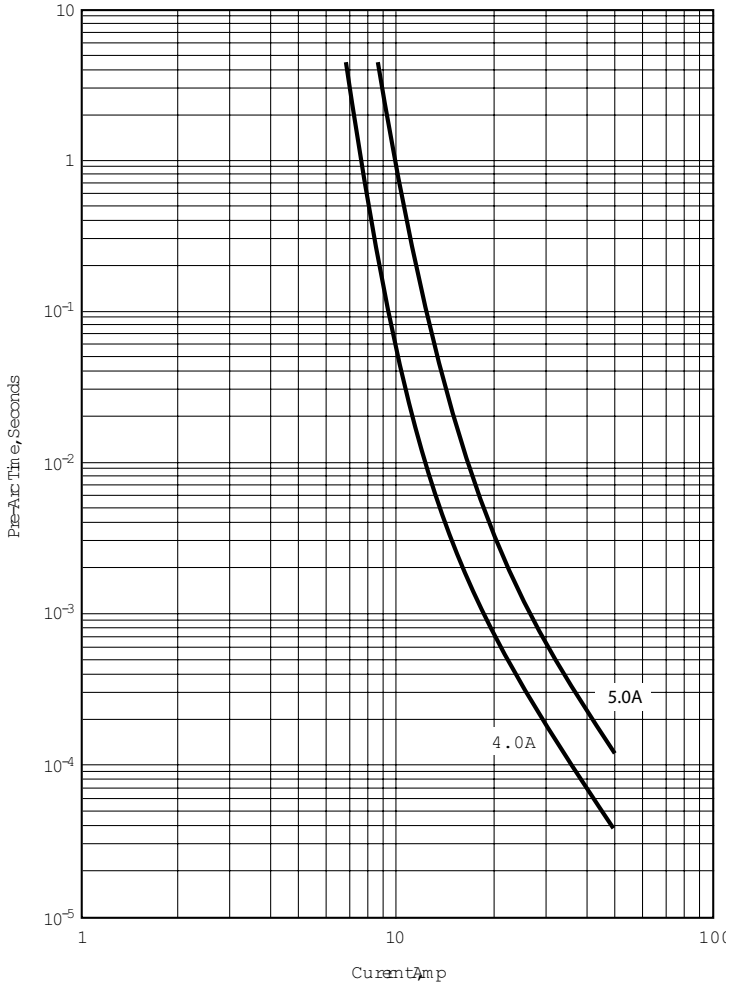


FUSE PRE-ARC JOULE INTEGRALS VS. PRE-ARC TIME FOR TYPES F0805B AND F1206B (TYPICAL)



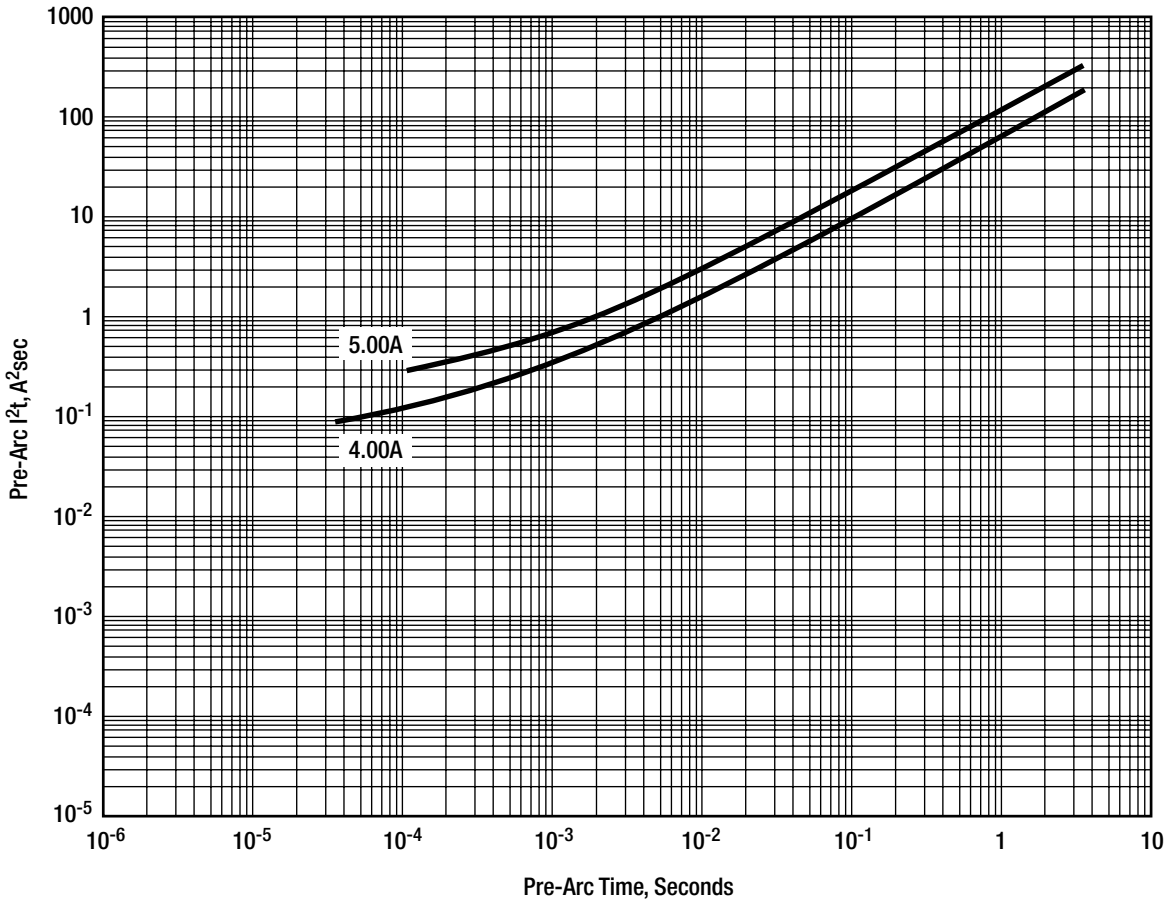
FUSE TIME - CURRENT CHARACTERISTICS FOR TYPE F0612D (TYPICAL)*

***Not recommended for new designs, please contact factory**



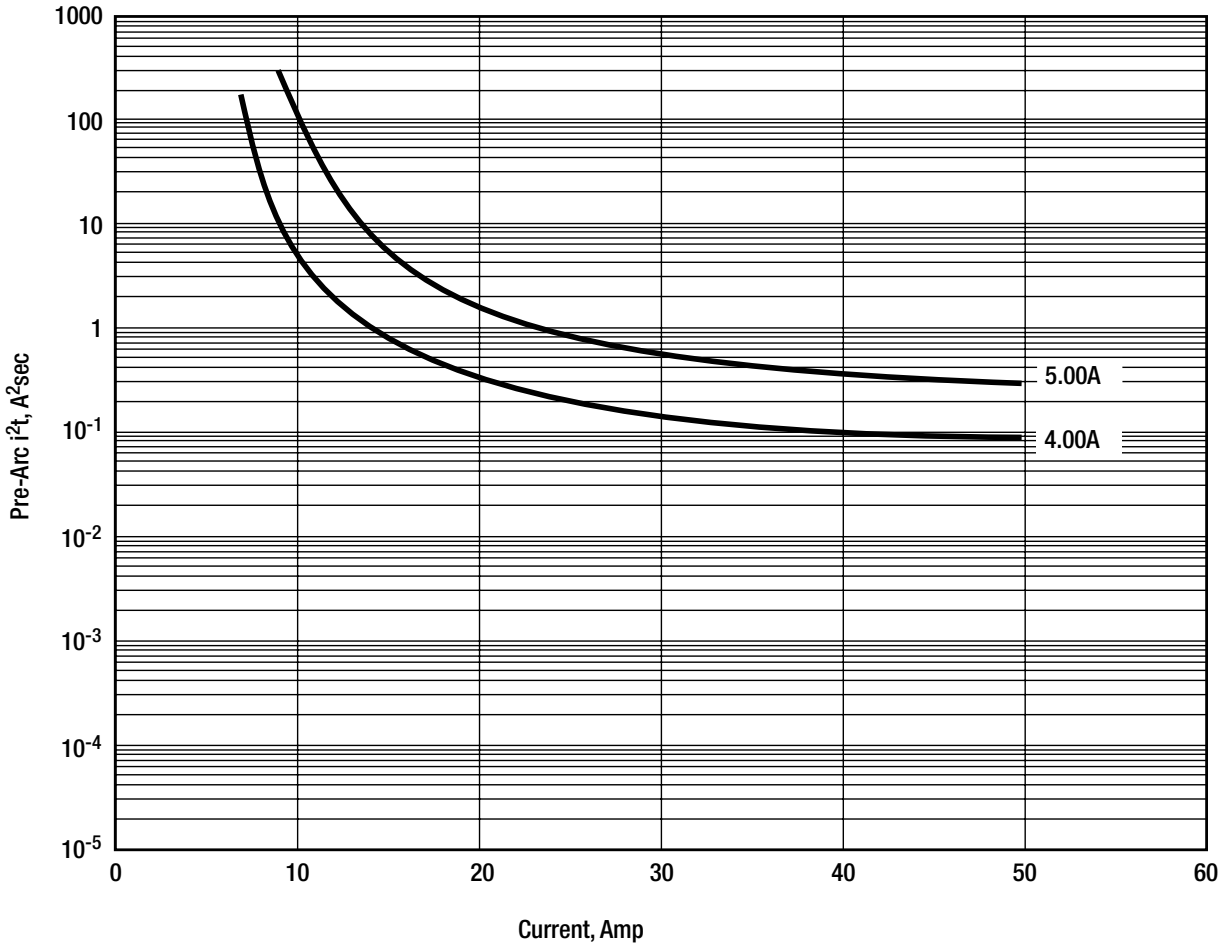
FUSE PRE-ARC JOULE INTEGRALS VS. PRE-ARC TIME FOR TYPE F0612D (TYPICAL)*

*Not recommended for new designs, please contact factory



FUSE PRE-ARC JOULE INTEGRALS VS. CURRENT FOR TYPE F0612D (TYPICAL)

***Not recommended for new designs, please contact factory**



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