AMP-TRAP®–Form 101

A70QS

SEMICONDUCTOR PROTECTION FUSES

A70QS Amp-trap® Semiconductor Protection fuses were developed in response to the need for improved overall performance of 700 volt semiconductor fuses for new equipment requirements. A70QS fuses have lower I^2t for better protection, longer life when subjected to cyclic loading, plus lower watts loss. A70QS is the best choice to protect dynamic solid state equipment such as motor drives, UPS, etc.

Features/Benefits

- **Very Low I^2t** for improved protection of equipment
- **Superior cycling ability** for long, reliable life on high cyclic loading
- **Low watts loss** for cooler operation
- **700V AC/DC rating** gives greater design versatility
- **Ultra compact sizes** allow down-sizing of existing equipment

Ratings

- **AC:** 35-800A 700VAC, 200kA I.R.
- **DC:** 35-800A 700VDC, 100kA I.R. L/R = 10ms

Approvals

- UL Recognized Component, AC/DC
- AC: Guide No. JFHR2
- DC: Tested to UL Standard 198L Parameters (35-800A)
- CSA Certified File LR 12636

HIGHLIGHTS:

- 700V AC/DC Rated
- Very Low I^2t
- Low Watts Loss
- Superior Cycling Ability

APPLICATIONS:

- Protection of 700V or less motor drives, UPS, inverters, etc.

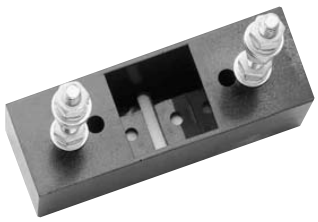
Catalog Numbering System

	A	70	QS	150	- 4
Amp-trap® Fuse	**A**				
Rated Volts - 700		**70**			
Style			**QS**		
Amperes*				**150**	
Mounting Types* Blades, bolt-in					**4,4K**

* For ampere ratings and types not listed, consult the factory.

Single Pole Fuse Blocks for A70QS Fuses

FUSE AMPERE RATING	FUSE BLOCK CATALOG NUMBER
35-200	P243C
225-600	P266A
700-800	15C 375



A70QS

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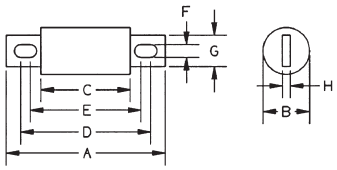
Standard Fuse Ampere Ratings, Catalog Numbers

AMPERE RATING	CATALOG NUMBER	AMPERE RATING	CATALOG NUMBER	AMPERE RATING	CATALOG NUMBER	AMPERE RATING	CATALOG NUMBER
35	A70QS35-4	100	A70QS100-4	200	A70QS200-4	450	A70QS450-4K
40	A70QS40-4	125	A70QS125-4	200	A70QS200-4K	500	A70QS500-4
50	A70QS50-4	125	A70QS125-4K	250	A70QS250-4	500	A70QS500-4K
60	A70QS60-4	150	A70QS150-4	300	A70QS300-4	600	A70QS600-4
70	A70QS70-4	150	A70QS150-4K	350	A70QS350-4	600	A70QS600-4K
80	A70QS80-4	175	A70QS175-4	400	A70QS400-4	700	A70QS700-4
90	A70QS90-4	175	A70QS175-4K	450	A70QS450-4	800	A70QS800-4



For ampere ratings and styles not listed, call Technical Services. (including indicators)

Dimensions

CATALOG NUMBER	MOUNTING TYPE	DIMENSIONS - INCHES (mm)							
		A	B	C	D	E	F	G	H
A70QS35 to 100	4	4.38 (111)	1.00 (25.4)	2.88 (73.0)	3.69 (93.6)	3.50 (88.9)	0.31 (7.9)	0.75 (19.0)	0.13 (3.2)
A70QS125 to 200	4	4.38 (111)	1.22 (31.0)	2.88 (73.0)	3.69 (93.6)	3.56 (90.5)	0.31 (7.9)	1.00 (25.4)	0.19 (4.8)
A70QS125 to 200	4K	5.09 (129)	1.22 (31.0)	2.88 (73.0)	4.19 (106)	3.50 (88.0)	0.41 (10.3)	1.00 (25.4)	0.19 (4.8)
A70QS225 to 400	4	5.09 (129)	1.50 (38.1)	2.84 (72.2)	4.16 (106)	3.53 (89.7)	0.40 (10.3)	1.50 (38.1)	0.25 (6.4)
A70QS450 to 600	4	5.09 (129)	2.00 (50.8)	2.84 (72.2)	4.16 (106)	3.53 (89.7)	0.41 (10.3)	1.50 (38.1)	0.25 (6.4)
A70QS450 to 600	4K	7.09 (180)	2.00 (50.8)	2.84 (72.2)	6.16 (156)	3.53 (89.7)	0.53 (13.5)	1.50 (38.1)	0.25 (6.4)
A70QS700 to 800	4	7.09 (180)	2.50 (63.5)	2.84 (72.2)	5.28 (134)	4.91 (125)	0.53 (13.5)	2.00 (50.8)	0.38 (9.5)

I^2t Data – 700 Volts AC, 200kA

FUSE AMPERE RATING	I^2t DATA		
	MELTING	CLEARING AT 700V AC	
		1 FUSE (FIG. A)	2 FUSES IN SERIES (FIG. B)
	($A^2s \times 10^3$)	($A^2s \times 10^3$)	($A^2s \times 10^3$)
35	0.13	0.47	0.27
40	0.16	0.58	0.33
50	0.24	0.86	0.49
60	0.32	1.2	0.69
70	0.50	1.8	1.0
80	0.65	2.3	1.3
90	0.83	3.0	1.7
100	1.0	3.6	2.1
125	2.1	6.9	4.0
150	3.3	11	6.3
175	4.2	14	8.0
200	5.9	19	11
225	9.0	30	17
250	12.6	42	24
300	16.7	55	32
350	21.5	72	41
400	29.7	99	57
450	36.7	125	72
500	47.1	160	92
600	65.2	222	127
700	103.6	332	190
800	135.3	433	248

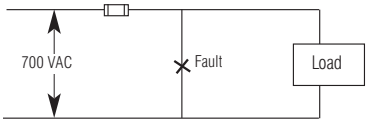


Fig. A

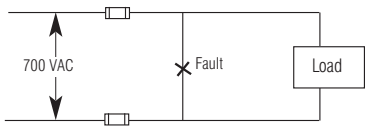
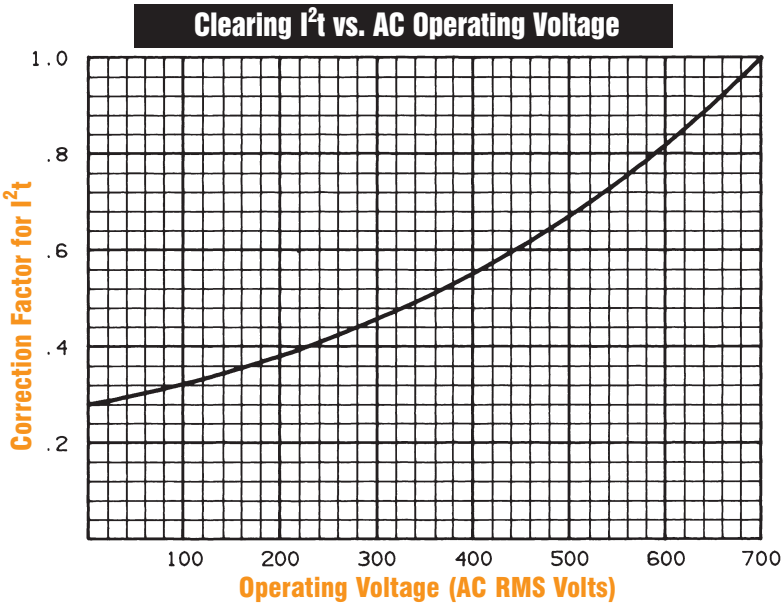


Fig. B



A70QS

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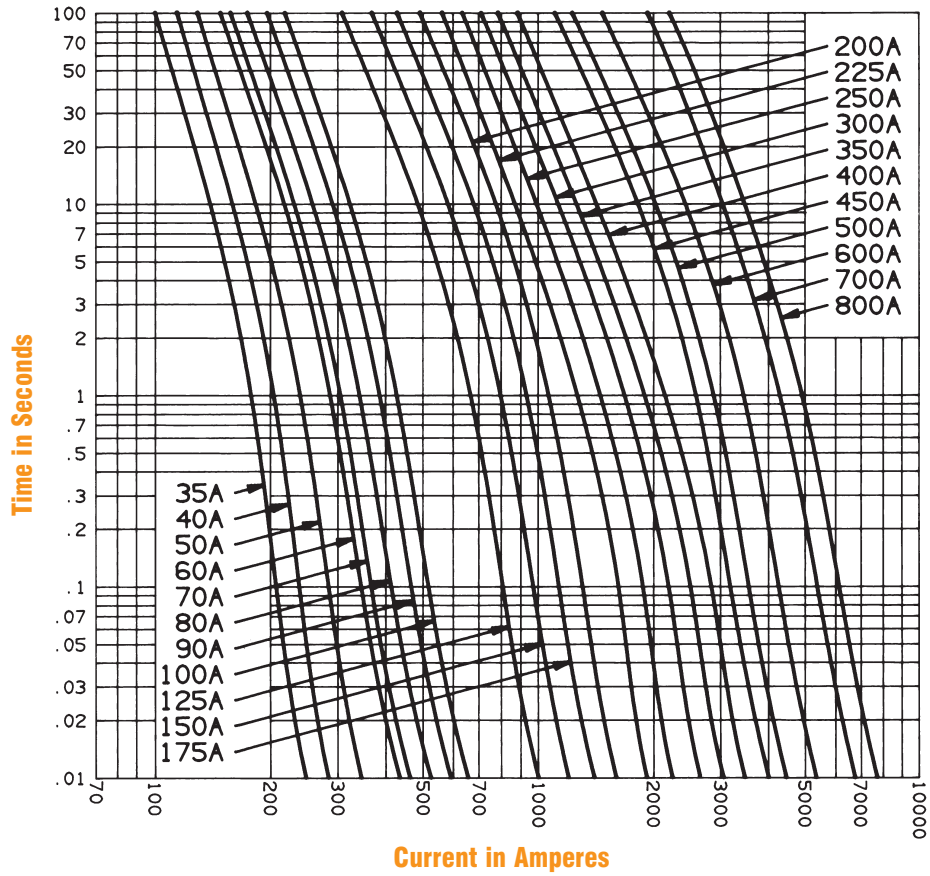
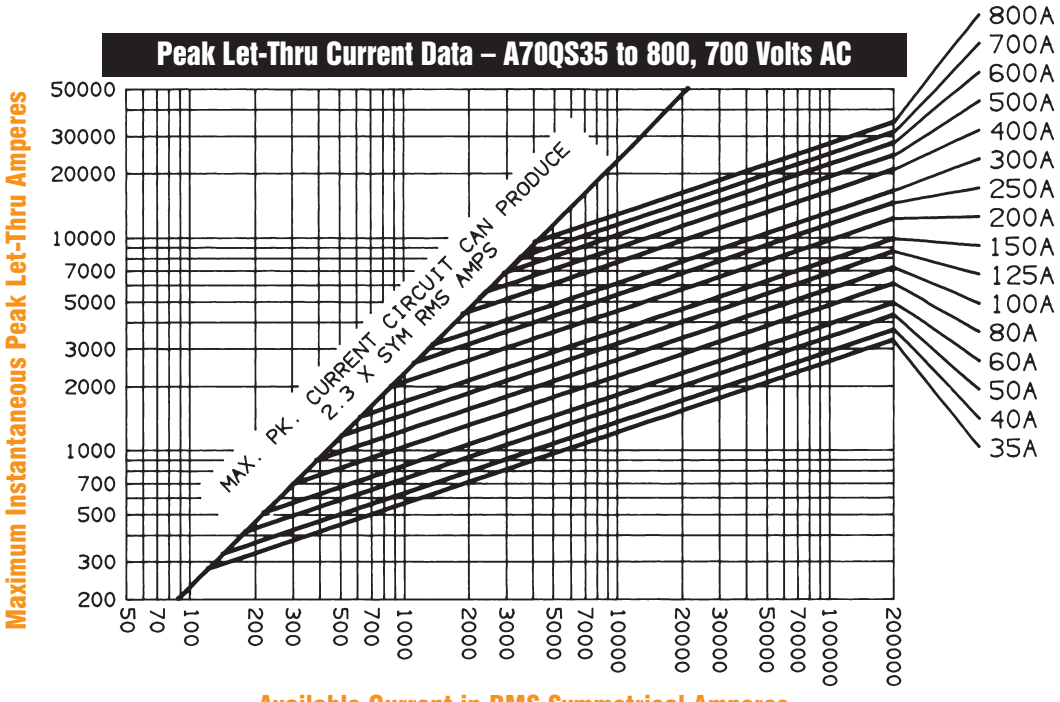
A70QS35 to 800

Melting Time – Current Data, 700V Fuses



Peak Let-Thru Current Data – A70QS35 to 800, 700 Volts AC



A70QS

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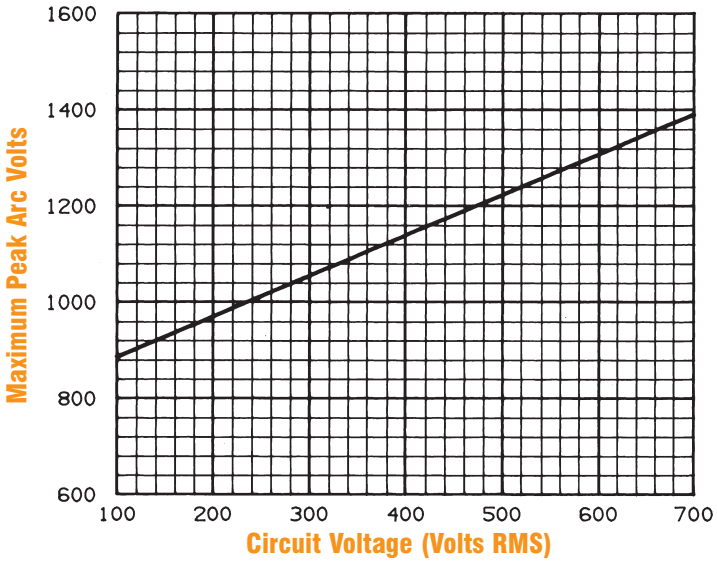
Clearing I^2t at 700V DC, 100kA, L/R = 10 ms

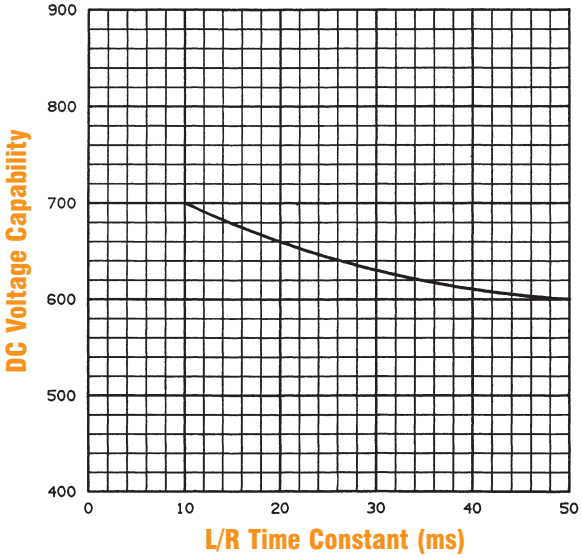
AMPERE RATING	CLEARING I^2t (A^2sx10^3)
35	0.25
40	0.35
50	0.60
70	1.3
80	1.8
90	2.4
100	3.1
125	5.3
150	8.1
175	12
200	16
225	21.5
250	27.5
300	42
350	63
400	85
450	115
500	150
600	201
700	325
800	450



Watts Loss at Rated Current

AMPERE RATING	WATTS LOSS (w)	AMPERE RATING	WATTS LOSS (w)
35	6.2	200	41
40	7.5	225	37
50	9.8	250	42
60	12	300	53
70	15	350	64
80	18	400	75
90	20	450	78
100	24	500	92
125	22	600	116
150	29	700	125
175	35	800	143

DC Voltage Capability vs. Time Constant



Watts Loss vs. % Rated Current