

# L70S SERIES HIGH-SPEED FUSE

700 Vac • 650 Vdc • 10-800 A • Traditional Round Body Style



## Description

Littelfuse L70S Series High-Speed Fuses are designed to protect today's equipment and systems, and are manufactured with Littelfuse-developed technology that sets tomorrow's standards for accuracy, consistent quality, reliability, and predictable performance.

Littelfuse engineers have redefined High-Speed Fuse technology by using advanced metallurgical, polymer, and materials research, mathematical modeling, and computerized statistical analysis.

## Features/Benefits

- Extremely Current Limiting
- Low Watt Losses
- Controlled Transient Over-voltages
- UL Recognized

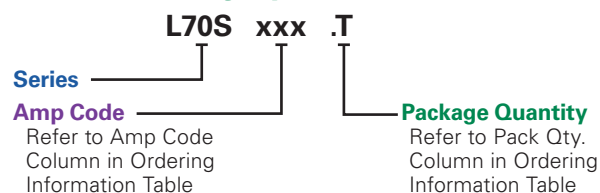
## Applications

- AC & DC Drives
- DC Common Bus Protection
- Power Converters
- UPS
- Soft-Starters

## Specifications

|                              |                                                                                                                                 |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Voltage Rating</b>        | 700 Vac<br>650 Vdc                                                                                                              |
| <b>Amperage Rating</b>       | 10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 80,<br>90, 100, 125, 150, 175, 200, 225, 250, 300,<br>350, 400, 450, 500, 600, 700, 800 |
| <b>Interrupting Rating</b>   | AC: 200 kAIC<br>DC: 20 kAIC                                                                                                     |
| <b>Material</b>              | Body: Melamine<br>Terminals: Copper (silver plated)                                                                             |
| <b>Mounting Type</b>         | Cylindrical (10 - 30 A)<br>Bolted Tags (35 - 800 A)                                                                             |
| <b>Operating Temperature</b> | -55° C to +125° C                                                                                                               |
| <b>Storage Temperature</b>   | Up to 35° C with relative humidity less than 65%                                                                                |
| <b>Approvals</b>             | UL Recognized (File: E71611)<br>CSA Recognized (File: LR29862)                                                                  |
| <b>Environmental</b>         | RoHS Compliant                                                                                                                  |
| <b>Country of Origin</b>     | Mexico                                                                                                                          |

## Part Numbering System



| SERIES | AMP | CATALOG NUMBER | ORDERING NUMBER |
|--------|-----|----------------|-----------------|
| L70S   | 10  | L70S010        | L70S010.T       |
| L70S   | 500 | L70S500        | L70S500.X       |

## Recommended Fuse Block

LSCR001 (35–100 A)  
LSCR002 (125–800 A)

## Web Resources

Download technical documents: [littelfuse.com/L70S](http://littelfuse.com/L70S)

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## Dimensions

| AMPERE RATING | FIGURE NO. | DIMENSIONS INCHES (mm) |            |            |            |           |           |           |         |         |
|---------------|------------|------------------------|------------|------------|------------|-----------|-----------|-----------|---------|---------|
|               |            | A                      | B          | C          | D          | E         | F         | G         | H       | J       |
| 10 – 30       | 1          | 2 (50.8)               | —          | ½ (12.7)   | ⅞ (14.3)   | —         | —         | —         | —       | —       |
| 31 – 60       | 2          | 2⅞ (73.0)              | 3⅞ (87.3)  | 3¾ (95.2)  | 4⅜ (111.1) | 1 (25.4)  | 4⅞ (17.1) | 1⅜ (8.7)  | ⅞ (3.2) | —       |
| 61 – 100      | 2          | 2⅞ (73.0)              | 3⅞ (90.5)  | 3⅞ (93.7)  | 4⅜ (111.1) | 1⅞ (31.0) | 2⅞ (22.9) | ⅞ (7.9)   | ⅜ (4.8) | —       |
| 101 – 200     | 2          | 2⅞ (72.2)              | 3⅞ (89.7)  | 4⅞ (105.6) | 5⅞ (129.4) | 1½ (38.1) | 1 (25.4)  | 1⅜ (10.3) | ¼ (6.4) | —       |
| 201 – 400     | 2          | 2⅞ (72.2)              | 3⅞ (89.7)  | 4⅞ (105.6) | 5⅞ (129.4) | 2 (50.8)  | 1½ (38.1) | 1⅜ (10.3) | ¼ (6.4) | —       |
| 401 – 600     | 2          | 2⅞ (72.2)              | 4⅞ (124.6) | 5¼ (133.4) | 7⅞ (180.2) | 2½ (63.5) | 2 (50.8)  | 1⅞ (13.5) | ⅜ (9.5) | —       |
| 601 – 800     | 3          | 3⅞ (84.1)              | 5⅞ (134.9) | 6⅞ (173.0) | —          | 2⅞ (73.0) | 2 (50.8)  | ⅞ (15.9)  | ⅜ (9.5) | ⅞ (7.9) |

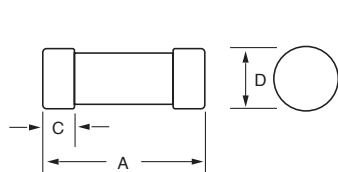


Figure 1

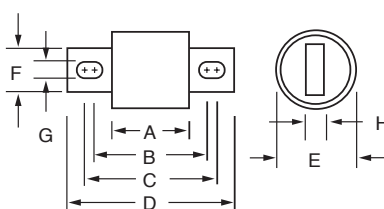


Figure 2

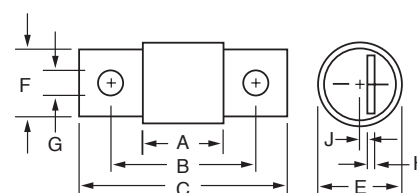


Figure 3

## Ordering Information

| SERIES | AMPERAGE RATING | AMP CODE | CATALOG NUMBER | ORDERING NUMBER | PACK QUANTITY | UPC         |
|--------|-----------------|----------|----------------|-----------------|---------------|-------------|
| L70S   | 10              | 010      | L70S010        | L70S010.T       | 10 Pcs/ Box   | 07945810161 |
| L70S   | 15              | 015      | L70S015        | L70S015.T       | 10 Pcs/ Box   | 07945810163 |
| L70S   | 20              | 020      | L70S020        | L70S020.T       | 10 Pcs/ Box   | 07945810164 |
| L70S   | 25              | 025      | L70S025        | L70S025.T       | 10 Pcs/ Box   | 07945810165 |
| L70S   | 30              | 030      | L70S030        | L70S030.T       | 10 Pcs/ Box   | 07945810166 |
| L70S   | 35              | 035      | L70S035        | L70S035.T       | 10 Pcs/ Box   | 07945810152 |
| L70S   | 40              | 040      | L70S040        | L70S040.T       | 10 Pcs/ Box   | 07945810167 |
| L70S   | 50              | 050      | L70S050        | L70S050.T       | 10 Pcs/ Box   | 07945810168 |
| L70S   | 60              | 060      | L70S060        | L70S060.T       | 10 Pcs/ Box   | 07945810169 |
| L70S   | 70              | 070      | L70S070        | L70S070.V       | 5 Pcs/ Box    | 07945810170 |
| L70S   | 80              | 080      | L70S080        | L70S080.V       | 5 Pcs/ Box    | 07945810171 |
| L70S   | 90              | 090      | L70S090        | L70S090.V       | 5 Pcs/ Box    | 07945810172 |
| L70S   | 100             | 100      | L70S100        | L70S100.V       | 5 Pcs/ Box    | 07945810173 |
| L70S   | 125             | 125      | L70S125        | L70S125.V       | 5 Pcs/ Box    | 07945810174 |
| L70S   | 150             | 150      | L70S150        | L70S150.V       | 5 Pcs/ Box    | 07945810175 |
| L70S   | 175             | 175      | L70S175        | L70S175.V       | 5 Pcs/ Box    | 07945810176 |
| L70S   | 200             | 200      | L70S200        | L70S200.V       | 5 Pcs/ Box    | 07945810177 |
| L70S   | 225             | 225      | L70S225        | L70S225.V       | 5 Pcs/ Box    | 07945810188 |
| L70S   | 250             | 250      | L70S250        | L70S250.V       | 5 Pcs/ Box    | 07945810178 |
| L70S   | 300             | 300      | L70S300        | L70S300.V       | 5 Pcs/ Box    | 07945810179 |
| L70S   | 350             | 350      | L70S350        | L70S350.V       | 5 Pcs/ Box    | 07945810180 |
| L70S   | 400             | 400      | L70S400        | L70S400.V       | 5 Pcs/ Box    | 07945810181 |
| L70S   | 450             | 450      | L70S450        | L70S450.X       | 1 Pc/ Box     | 07945810182 |
| L70S   | 500             | 500      | L70S500        | L70S500.X       | 1 Pc/ Box     | 07945810183 |
| L70S   | 600             | 600      | L70S600        | L70S600.X       | 1 Pc/ Box     | 07945810184 |
| L70S   | 700             | 700      | L70S700        | L70S700.X       | 1 Pc/ Box     | 07945810185 |
| L70S   | 800             | 800      | L70S800        | L70S800.X       | 1 Pc/ Box     | 07945810186 |

# L70S SERIES HIGH-SPEED FUSE

## Electrical Specifications

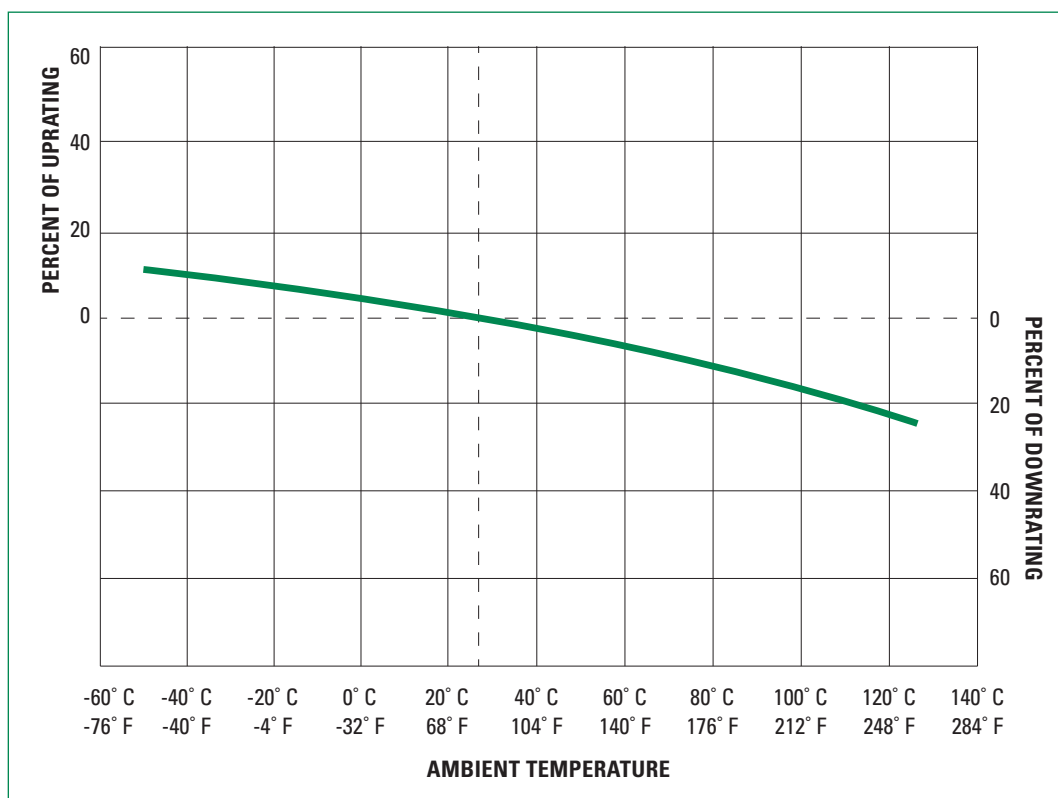
| CATALOG NUMBER | AMPERAGE RATING | VOLTAGE RATING |     | INTERRUPT RATING |      | MELTING (PRE-ARC) I <sup>2</sup> T (A <sup>2</sup> s) | TOTAL CLEARING I <sup>2</sup> T (A <sup>2</sup> s) | TOTAL CLEARING I <sup>2</sup> T (A <sup>2</sup> s) | TOTAL CLEARING I <sup>2</sup> T (A <sup>2</sup> s) | WATTS LOSS AT 100% RATED CURRENT | WATTS LOSS AT 80% RATED CURRENT |
|----------------|-----------------|----------------|-----|------------------|------|-------------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------------------------|----------------------------------|---------------------------------|
|                |                 | AC             | DC  | AC               | DC   |                                                       | 100 kA @ 700 Vac                                   | 200 kA @ 700 Vac                                   | 20 kA @ 650 Vdc                                    | (W)                              | (W)                             |
| L70S010        | 10              | 700            | 650 | 200kA            | 20kA | 21                                                    | 160                                                | 173                                                | 346                                                | 2                                | 1                               |
| L70S015        | 15              | 700            | 650 | 200kA            | 20kA | 34                                                    | 330                                                | 355                                                | 270                                                | 2                                | 2                               |
| L70S020        | 20              | 700            | 650 | 200kA            | 20kA | 48                                                    | 550                                                | 599                                                | 300                                                | 5                                | 2                               |
| L70S025        | 25              | 700            | 650 | 200kA            | 20kA | 62                                                    | 810                                                | 900                                                | 340                                                | 7                                | 4                               |
| L70S030        | 30              | 700            | 650 | 200kA            | 20kA | 77                                                    | 1,130                                              | 1,220                                              | 417                                                | 10                               | 5                               |
| L70S035        | 35              | 700            | 650 | 200kA            | 20kA | 110                                                   | 1,470                                              | 1,500                                              | 500                                                | 12                               | 6                               |
| L70S040        | 40              | 700            | 650 | 200kA            | 20kA | 150                                                   | 1,830                                              | 2,000                                              | 660                                                | 13                               | 7                               |
| L70S050        | 50              | 700            | 650 | 200kA            | 20kA | 250                                                   | 2,670                                              | 3,200                                              | 1,070                                              | 16                               | 9                               |
| L70S060        | 60              | 700            | 650 | 200kA            | 20kA | 380                                                   | 3,646                                              | 4,674                                              | 1,572                                              | 18                               | 9                               |
| L70S070        | 70              | 700            | 650 | 200kA            | 20kA | 545                                                   | 4,800                                              | 6,000                                              | 1,970                                              | 16                               | 9                               |
| L70S080        | 80              | 700            | 650 | 200kA            | 20kA | 745                                                   | 6,180                                              | 7,550                                              | 2,380                                              | 21                               | 11                              |
| L70S090        | 90              | 700            | 650 | 200kA            | 20kA | 990                                                   | 7,650                                              | 9,250                                              | 2,830                                              | 25                               | 13                              |
| L70S100        | 100             | 700            | 650 | 200kA            | 20kA | 1,266                                                 | 9,407                                              | 11,117                                             | 3,266                                              | 29                               | 14                              |
| L70S125        | 125             | 700            | 650 | 200kA            | 20kA | 2,150                                                 | 14,700                                             | 17,550                                             | 4,900                                              | 33                               | 17                              |
| L70S150        | 150             | 700            | 650 | 200kA            | 20kA | 3,280                                                 | 21,250                                             | 25,700                                             | 6,800                                              | 51                               | 24                              |
| L70S175        | 175             | 700            | 650 | 200kA            | 20kA | 4,700                                                 | 28,750                                             | 34,800                                             | 9,000                                              | 63                               | 28                              |
| L70S200        | 200             | 700            | 650 | 200kA            | 20kA | 6,411                                                 | 37,300                                             | 45,583                                             | 11,447                                             | 75                               | 33                              |
| L70S225        | 225             | 700            | 650 | 200kA            | 20kA | 8,000                                                 | 46,500                                             | 57,000                                             | 16,000                                             | 43                               | 24                              |
| L70S250        | 250             | 700            | 650 | 200kA            | 20kA | 9,900                                                 | 58,000                                             | 69,500                                             | 22,000                                             | 49                               | 27                              |
| L70S300        | 300             | 700            | 650 | 200kA            | 20kA | 14,000                                                | 83,000                                             | 97,700                                             | 37,500                                             | 60                               | 33                              |
| L70S350        | 350             | 700            | 650 | 200kA            | 20kA | 19,000                                                | 113,000                                            | 131,000                                            | 59,000                                             | 71                               | 36                              |
| L70S400        | 400             | 700            | 650 | 200kA            | 20kA | 24,373                                                | 147,290                                            | 169,000                                            | 87,875                                             | 107                              | 49                              |
| L70S450        | 450             | 700            | 650 | 200kA            | 20kA | 33,000                                                | 191,000                                            | 219,000                                            | 119,000                                            | 85                               | 47                              |
| L70S500        | 500             | 700            | 650 | 200kA            | 20kA | 44,200                                                | 240,000                                            | 275,000                                            | 155,000                                            | 92                               | 49                              |
| L70S600        | 600             | 700            | 650 | 200kA            | 20kA | 72,000                                                | 370,250                                            | 405,000                                            | 246,182                                            | 106                              | 56                              |
| L70S700        | 700             | 700            | 650 | 200kA            | 20kA | 110,000                                               | 526,000                                            | 573,000                                            | 255,000                                            | 128                              | 67                              |
| L70S800        | 800             | 700            | 650 | 200kA            | 20kA | 157,082                                               | 735,330                                            | 762,333                                            | 262,949                                            | 156                              | 78                              |

## L70S SERIES HIGH-SPEED FUSE

### Recommended Torque Values For Bus Bar Mounting

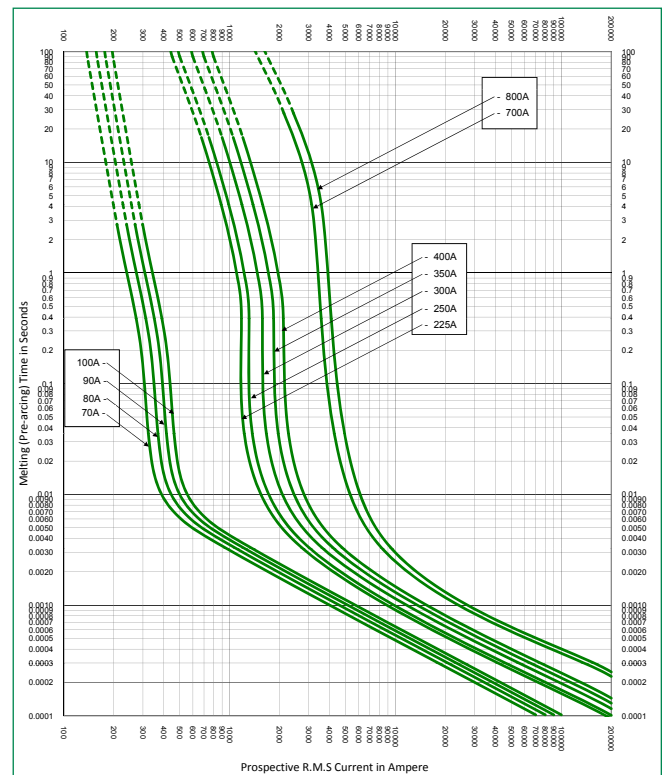
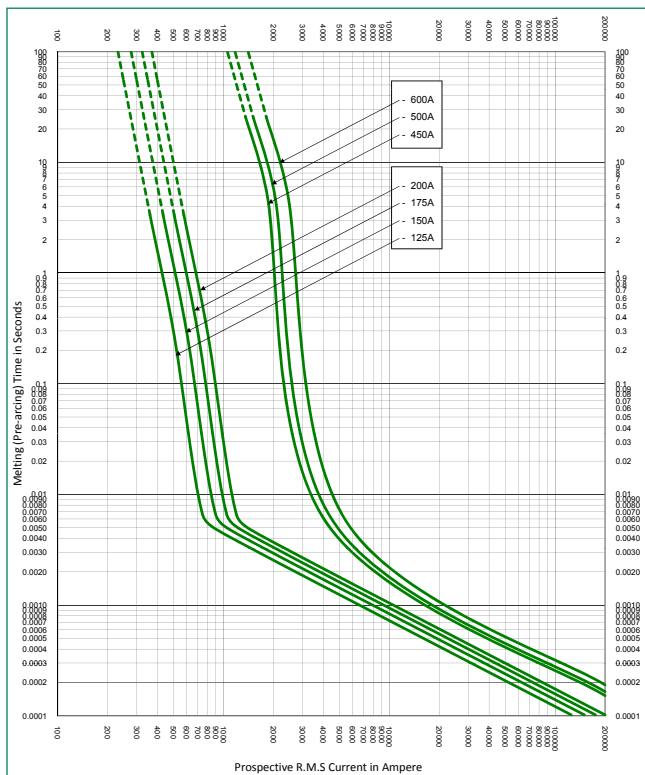
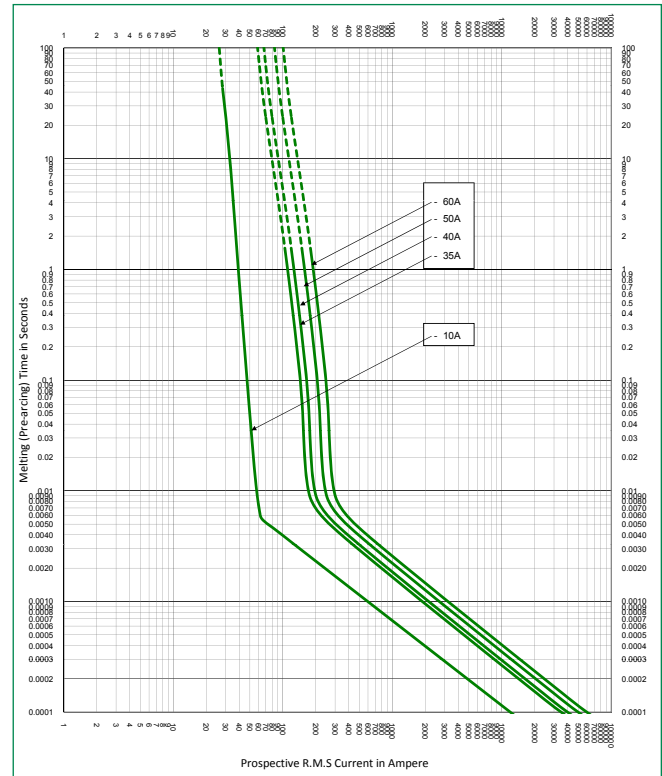
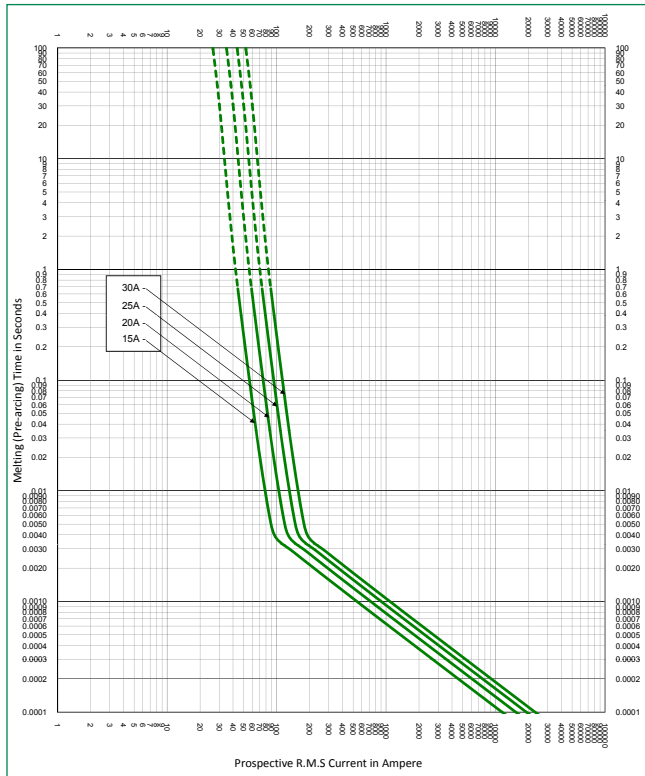
| RECOMMENDED TORQUE VALUES FOR BUS BAR MOUNTING FUSE |                               |                                 |
|-----------------------------------------------------|-------------------------------|---------------------------------|
| CATALOG NUMBER                                      | FUSE TORQUE—METRIC (STANDARD) | HARDWARE SIZE—METRIC (STANDARD) |
| L70S035                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S040                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S050                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S060                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S070                                             | 8 N m (70.81 in-lb)           | M6 (¼")                         |
| L70S080                                             | 8 N m (70.81 in-lb)           | M6 (¼")                         |
| L70S090                                             | 8 N m (70.81 in-lb)           | M6 (¼")                         |
| L70S100                                             | 8 N m (70.81 in-lb)           | M6 (¼")                         |
| L70S125                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S150                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S175                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S200                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S225                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S250                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S300                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S350                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S400                                             | 15 N m (132.76 in-lb)         | M8 (5/16")                      |
| L70S450                                             | 54 N m (477.94 in-lb)         | M12 (½")                        |
| L70S500                                             | 54 N m (477.94 in-lb)         | M12 (½")                        |
| L70S600                                             | 54 N m (477.94 in-lb)         | M12 (½")                        |
| L70S700                                             | 75 N m (663.81 in-lb)         | M14 (9/16")                     |
| L70S800                                             | 75 N m (663.81 in-lb)         | M14 (9/16")                     |

### Temperature De-rating Curve (Temperature of Air Immediately Surrounding Fuse)



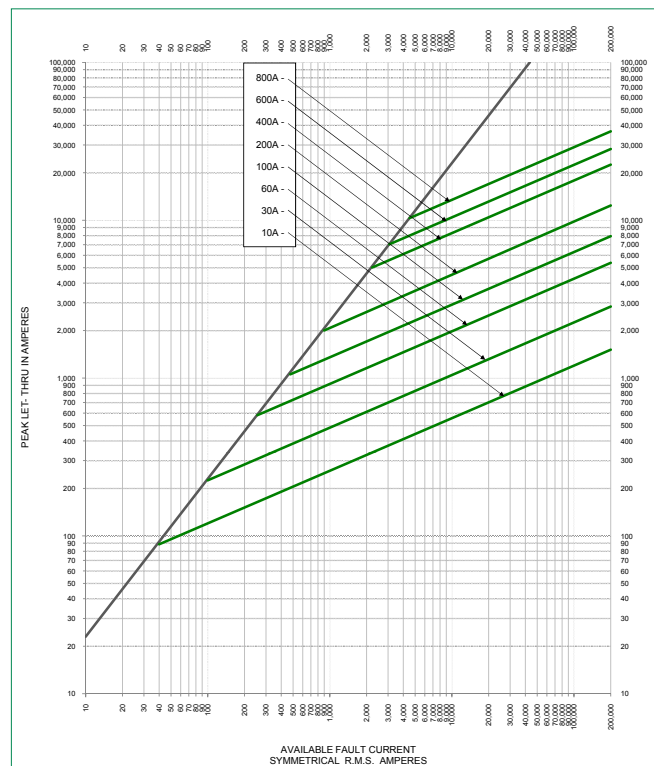
## L70S SERIES HIGH-SPEED FUSE

### Time Current Curves

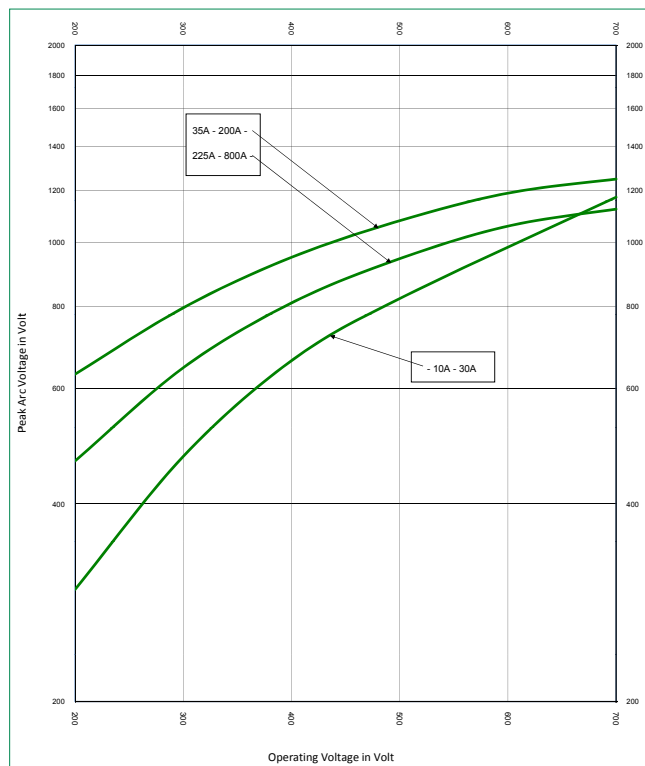


# L70S SERIES HIGH-SPEED FUSE

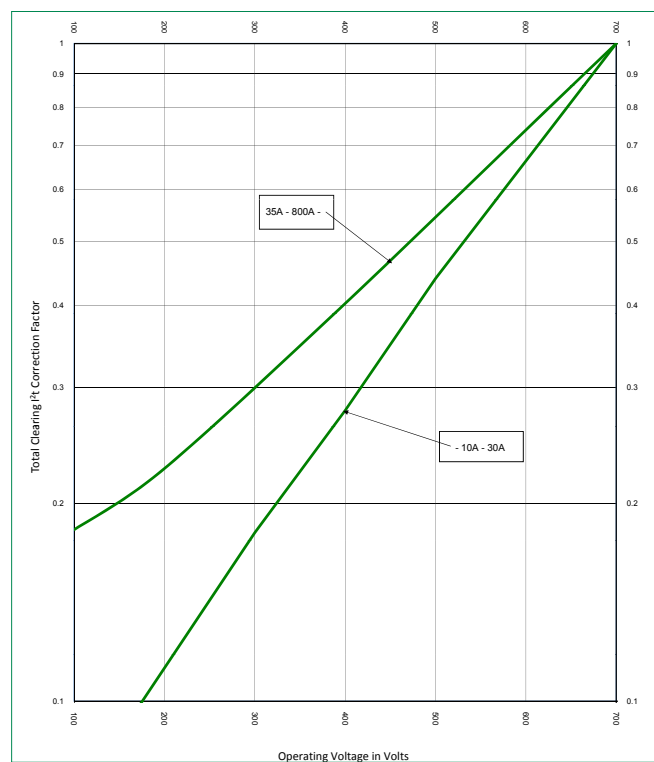
## Peak Let-Thru Curve



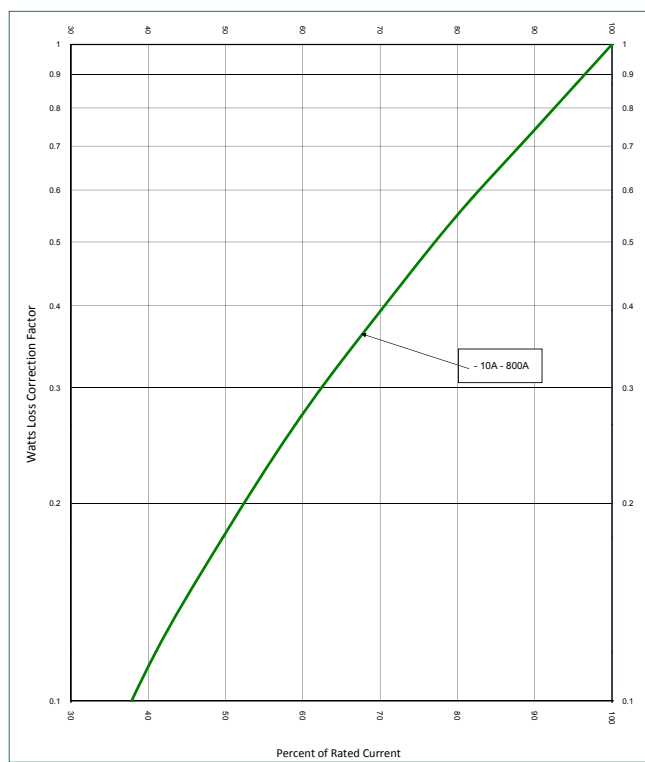
## Peak Arc Voltage Curve



## Total Clearing I<sup>2</sup>t Correction Factor Curve



## Watts Loss Correction Factor Curve



## L70S SERIES HIGH-SPEED FUSE

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Наши преимущества:

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

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- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.