

L50QS SERIES HIGH-SPEED ROUND BODY FUSES

500 Vac/dc • 35-800 A • Traditional Round Body Bolted Style



Description

The L50QS Series is a next generation High-Speed Fuse for the protection of power semiconductor devices and is designed in the Traditional North American Bolted Style package.

L50QS Series High-Speed Fuses are extremely current limiting and are used to protect power converters, drives and control circuit applications. Designed with lower I²t performance characteristics, these fuses provide balanced performance to extend longevity while lowering potentially damaging heat energy to the devices being protected.

In addition L50QS Series fuses have been designed with a universal mounting option to meet customer requirements for installation into a variety of application configurations

Littelfuse POWR-SPEED™ products offer optimized circuit protection at the extremely fast speed required to protect modern day, sensitive, high-power semiconductor devices. Such products are commonly found in various industries including pulp and paper industries, cranes and heavy-lifting equipment, processing industries, wastewater treatment plants and large factories and MRO facilities.

Features

- Compliance with US and Canadian Requirements
- Traditional North American Bolted Style dimensions
- Class aR performance
- Direct bus-bar mount or stud mount design
- Halogen Free, RoHS and REACH Compliant

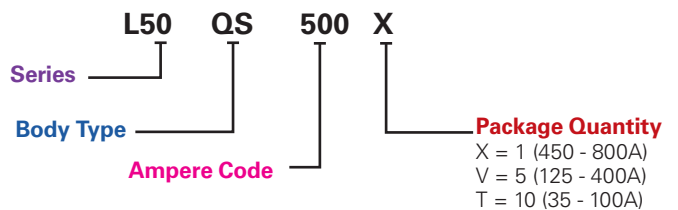
Applications

- Power Converters (Inverters, Rectifiers)
- Power Supplies
- UPS
- Variable Speed Drives
- Control Circuits
- Soft Starters

Specifications

| | |
|------------------------------|--|
| Voltage Rating | AC: 500V DC: 500V |
| Amperage Rating | 35 - 800 A |
| Interrupting Rating | AC: 200 kA DC: 50 kA |
| Time Constant | 10ms |
| Material | Body: Melamine Caps: Copper Alloy (Silver Plated) |
| Approvals | UL Recognized (E71611) c-UR-us (E71611) |
| Environmental | RoHS Compliant, REACH |
| Country of Origin | Mexico |
| Operating Temperature | -55C to +125C |
| Storage Temperature | Up to 35C with Relative Humidity <65% |

Part Numbering System



| SERIES | BODY TYPE | AMPERE CODE | PACKAGE QUANTITY | CATALOG NUMBER | ORDERING NUMBER |
|--------|-----------|-------------|------------------|----------------|-----------------|
| L50 | QS | 500 | 1 | L50QS500 | L50QS500.X |

Recommended Fuse Blocks

LSCR001 (35-200A)
LSCR002 (225-800A)



Web Resources

Download technical documents: littelfuse.com/L50QS

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Electrical Specifications

| CATALOG NUMBER | AMPERAGE RATING | VOLTAGE RATING | | INTERRUPT RATING | | MELTING (PRE-ARC) I ² T (A ² s) | TOTAL CLEARING I ² T (A ² s) | TOTAL CLEARING I ² T (A ² s) | WATTS LOSS AT 80% RATED CURRENT | WATTS LOSS AT 100% RATED CURRENT |
|----------------|-----------------|----------------|-----|------------------|------|---|--|--|---------------------------------|----------------------------------|
| | | AC | DC | AC | DC | | 200 kA @ 500 Vac | 50 kA @ 500 Vdc | (W) | (W) |
| | | | | | | | | | | |
| L50QS035 | 35 | 500 | 500 | 200kA | 50kA | 111 | 430 | 290 | 3 | 5 |
| L50QS040 | 40 | 500 | 500 | 200kA | 50kA | 137 | 530 | 363 | 3 | 9 |
| L50QS050 | 50 | 500 | 500 | 200kA | 50kA | 211 | 770 | 516 | 5 | 8 |
| L50QS060 | 60 | 500 | 500 | 200kA | 50kA | 269 | 1,500 | 881 | 5 | 9 |
| L50QS070 | 70 | 500 | 500 | 200kA | 50kA | 393 | 1,775 | 1,185 | 6 | 11 |
| L50QS080 | 80 | 500 | 500 | 200kA | 50kA | 616 | 3,550 | 1,720 | 6 | 11 |
| L50QS090 | 90 | 500 | 500 | 200kA | 50kA | 720 | 4,075 | 1,990 | 8 | 14 |
| L50QS100 | 100 | 500 | 500 | 200kA | 50kA | 905 | 4,577 | 2,313 | 9 | 17 |
| L50QS125 | 125 | 500 | 500 | 200kA | 50kA | 1,503 | 7,655 | 4,815 | 10 | 17 |
| L50QS150 | 150 | 500 | 500 | 200kA | 50kA | 2,382 | 11,100 | 7,190 | 12 | 21 |
| L50QS175 | 175 | 500 | 500 | 200kA | 50kA | 3,148 | 16,500 | 9,900 | 14 | 25 |
| L50QS200 | 200 | 500 | 500 | 200kA | 50kA | 4,102 | 18,233 | 11,567 | 17 | 32 |
| L50QS225 | 225 | 500 | 500 | 200kA | 50kA | 5,379 | 25,300 | 16,700 | 19 | 35 |
| L50QS250 | 250 | 500 | 500 | 200kA | 50kA | 7,094 | 31,350 | 22,500 | 20 | 37 |
| L50QS275 | 275 | 500 | 500 | 200kA | 50kA | 9,655 | 40,175 | 30,177 | 21 | 39 |
| L50QS300 | 300 | 500 | 500 | 200kA | 50kA | 11,240 | 53,800 | 36,150 | 25 | 46 |
| L50QS325 | 325 | 500 | 500 | 200kA | 50kA | 13,183 | 56,250 | 41,000 | 27 | 51 |
| L50QS350 | 350 | 500 | 500 | 200kA | 50kA | 14,246 | 68,850 | 44,800 | 30 | 61 |
| L50QS400 | 400 | 500 | 500 | 200kA | 50kA | 21,155 | 100,300 | 67,300 | 33 | 65 |
| L50QS450 | 450 | 500 | 500 | 200kA | 50kA | 26,425 | 121,000 | 84,650 | 35 | 63 |
| L50QS500 | 500 | 500 | 500 | 200kA | 50kA | 31,747 | 141,000 | 103,500 | 39 | 72 |
| L50QS600 | 600 | 500 | 500 | 200kA | 50kA | 43,922 | 193,500 | 128,000 | 49 | 92 |
| L50QS700 | 700 | 500 | 500 | 200kA | 50kA | 75,597 | 314,000 | 230,000 | 51 | 92 |
| L50QS800 | 800 | 500 | 500 | 200kA | 50kA | 92,717 | 393,500 | 280,000 | 63 | 117 |

L50QS SERIES HIGH-SPEED ROUND BODY FUSES

Ordering Information

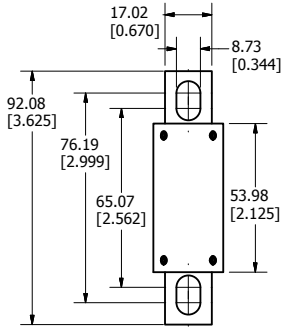
| SERIES | AMPERAGE RATING | AMPERE CODE | CATALOG NUMBER | ORDERING NUMBER | PACK QUANTITY | UPC |
|--------|-----------------|-------------|----------------|-----------------|---------------|-------------|
| L50QS | 35 | 035 | L50QS035 | L50QS035.T | 10 Pcs/ Box | 07945885991 |
| L50QS | 40 | 040 | L50QS040 | L50QS040.T | 10 Pcs/ Box | 07945885992 |
| L50QS | 50 | 050 | L50QS050 | L50QS050.T | 10 Pcs/ Box | 07945885993 |
| L50QS | 60 | 060 | L50QS060 | L50QS060.T | 10 Pcs/ Box | 07945885994 |
| L50QS | 70 | 070 | L50QS070 | L50QS070.T | 10 Pcs/ Box | 07945885995 |
| L50QS | 80 | 080 | L50QS080 | L50QS080.T | 10 Pcs/ Box | 07945885996 |
| L50QS | 90 | 090 | L50QS090 | L50QS090.T | 10 Pcs/ Box | 07945885997 |
| L50QS | 100 | 100 | L50QS100 | L50QS100.T | 10 Pcs/ Box | 07945885998 |
| L50QS | 125 | 125 | L50QS125 | L50QS125.V | 5 Pcs/ Box | 07945885999 |
| L50QS | 150 | 150 | L50QS150 | L50QS150.V | 5 Pcs/ Box | 07945886000 |
| L50QS | 175 | 175 | L50QS175 | L50QS175.V | 5 Pcs/ Box | 07945886001 |
| L50QS | 200 | 200 | L50QS200 | L50QS200.V | 5 Pcs/ Box | 07945886002 |
| L50QS | 225 | 225 | L50QS225 | L50QS225.V | 5 Pcs/ Box | 07945886003 |
| L50QS | 250 | 250 | L50QS250 | L50QS250.V | 5 Pcs/ Box | 07945886004 |
| L50QS | 275 | 275 | L50QS275 | L50QS275.V | 5 Pcs/ Box | 07945886005 |
| L50QS | 300 | 300 | L50QS300 | L50QS300.V | 5 Pcs/ Box | 07945886006 |
| L50QS | 325 | 325 | L50QS325 | L50QS325.V | 5 Pcs/ Box | 07945886011 |
| L50QS | 350 | 350 | L50QS350 | L50QS350.V | 5 Pcs/ Box | 07945886007 |
| L50QS | 400 | 400 | L50QS400 | L50QS400.V | 5 Pcs/ Box | 07945886008 |
| L50QS | 450 | 450 | L50QS450 | L50QS450.X | 1 Pc/ Box | 07945886009 |
| L50QS | 500 | 500 | L50QS500 | L50QS500.X | 1 Pc/ Box | 07945886010 |
| L50QS | 600 | 600 | L50QS600 | L50QS600.X | 1 Pc/ Box | 07945886012 |
| L50QS | 700 | 700 | L50QS700 | L50QS700.X | 1 Pc/ Box | 07945886013 |
| L50QS | 800 | 800 | L50QS800 | L50QS800.X | 1 Pc/ Box | 07945886014 |

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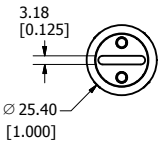
Dimensions

Millimeters [inches]

Document Number: OL-L50QS000

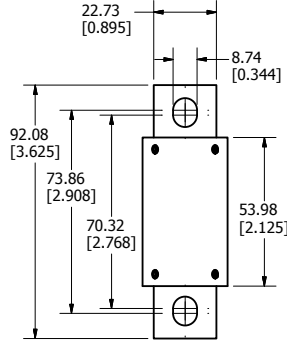


35-100A

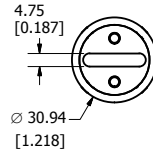


Stud Size: M8 (5/16")

Recommended Torque: 15 Nm (132.76 in-lb)

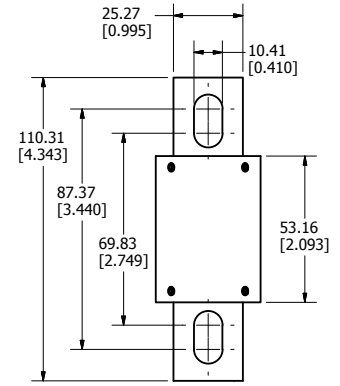


125-200A

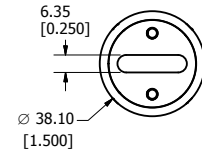


Stud Size: M8 (5/16")

Recommended Torque: 15 Nm (132.76 in-lb)

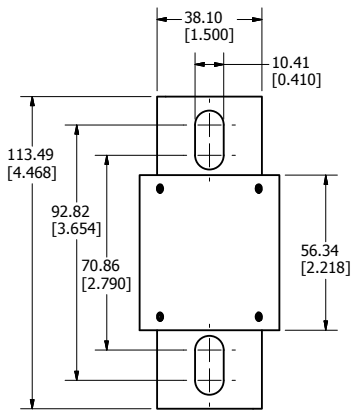


225-400A

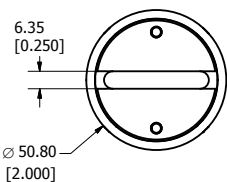


Stud Size: M8 (5/16")

Recommended Torque: 15 Nm (132.76 in-lb)

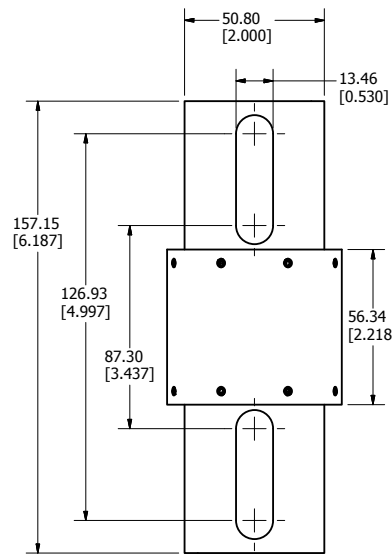


450-600A

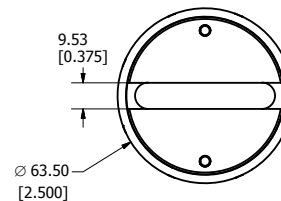


Stud Size: M8 (5/16")

Recommended Torque: 15 Nm (132.76 in-lb)



700-800A

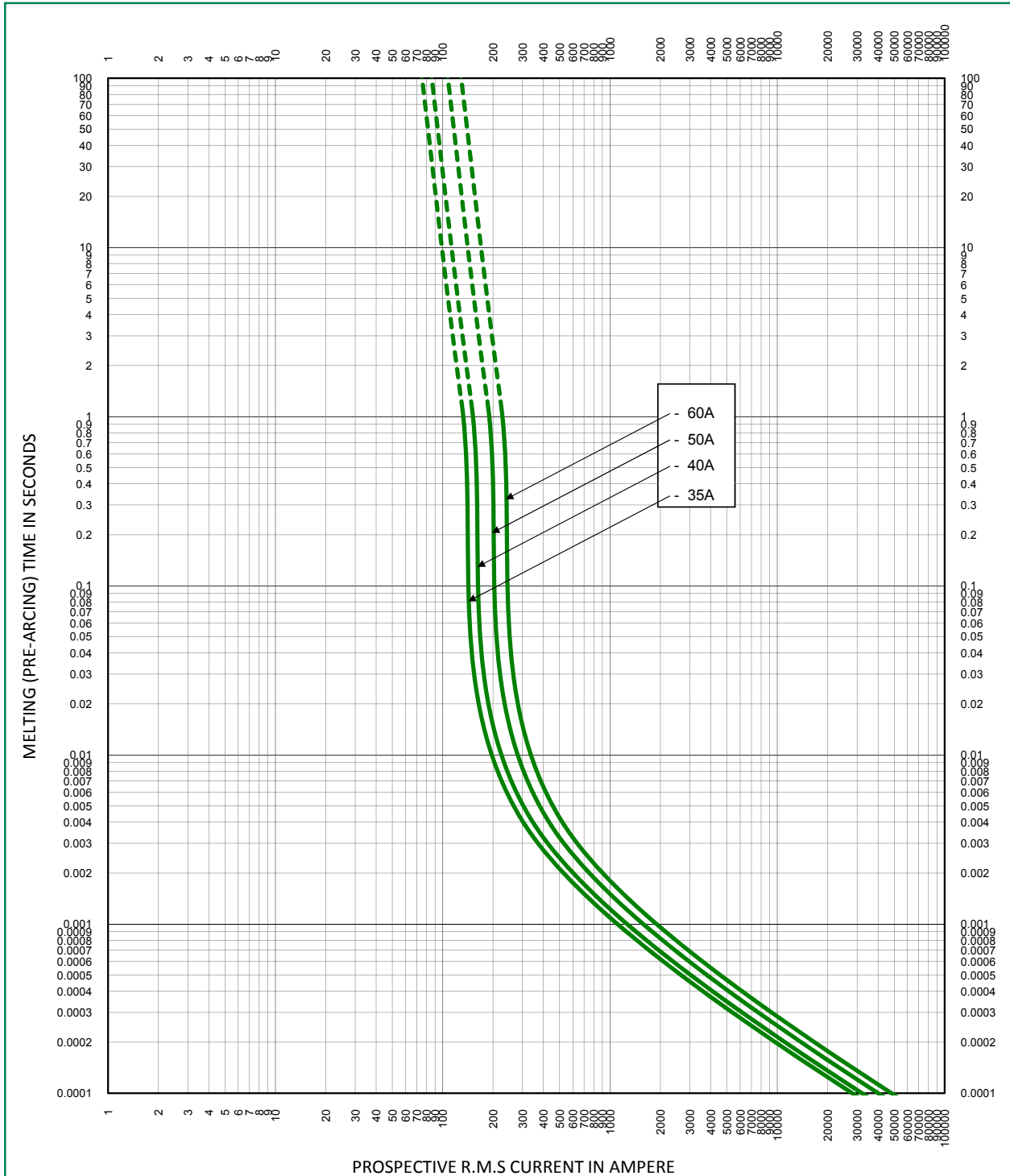


Stud Size: M12 (1/2")

Recommended Torque: 54 Nm (477.94 in-lb)

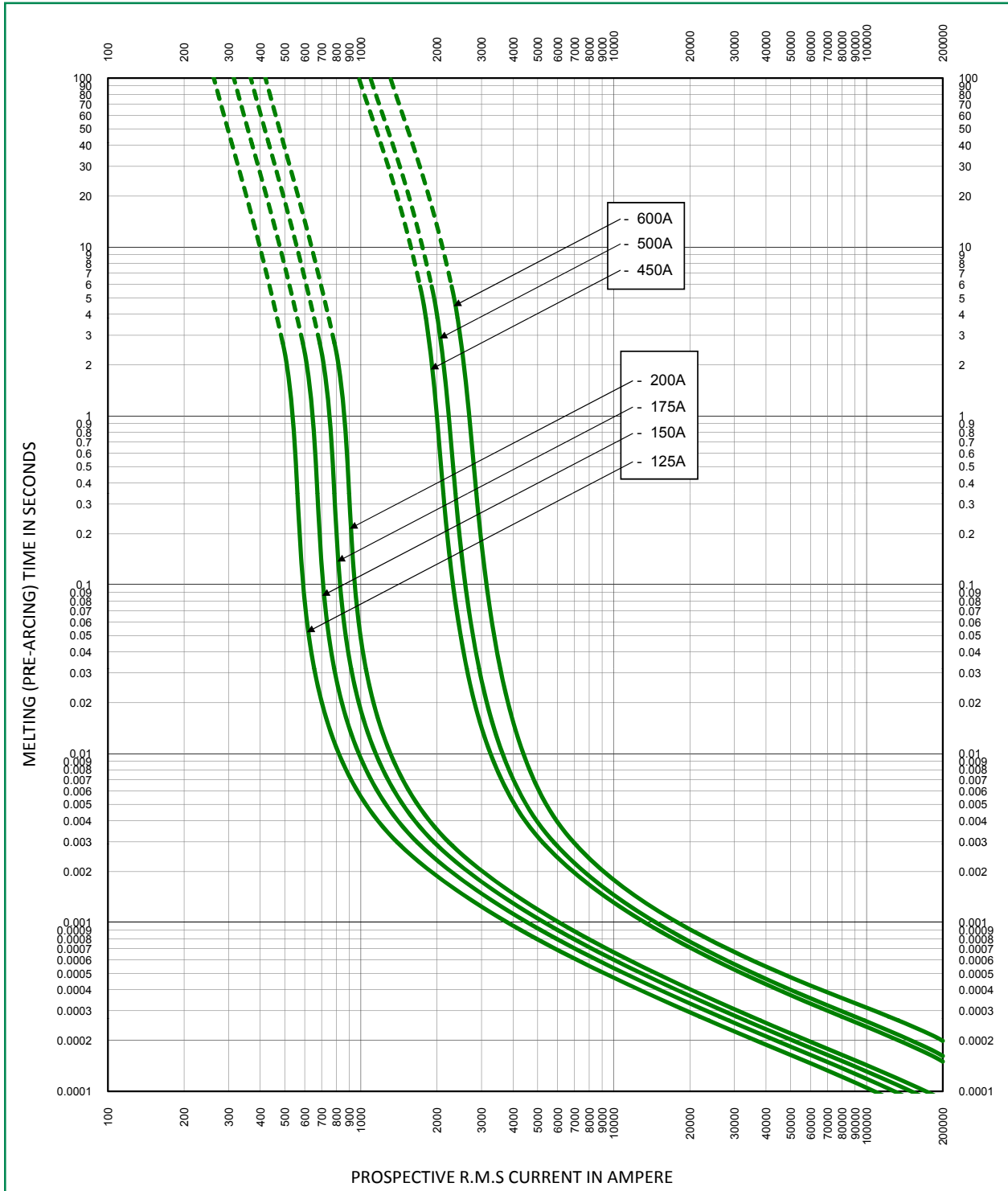
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Time Current Curve L50QS Series



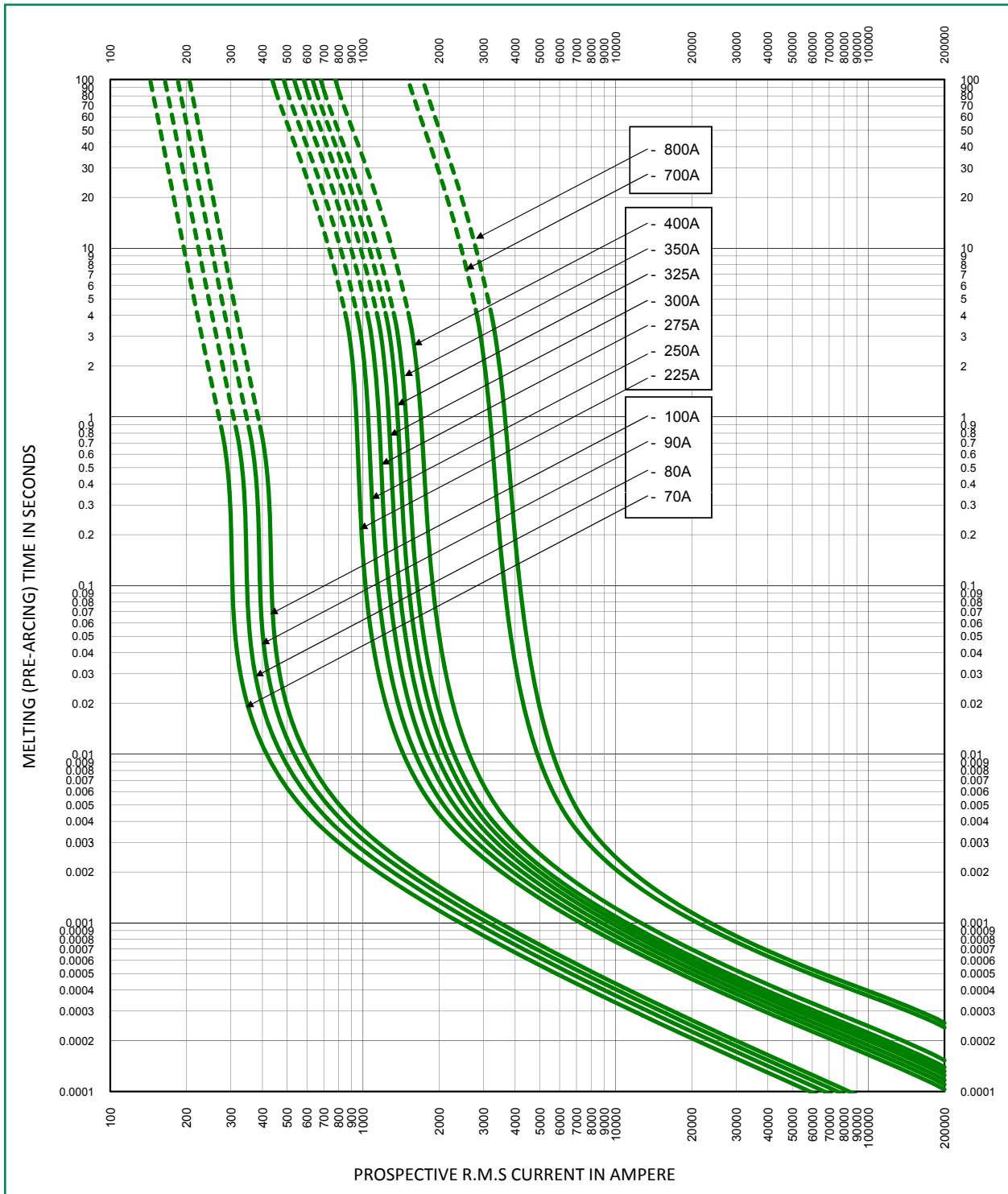
L50QS SERIES HIGH-SPEED ROUND BODY FUSES

Time Current Curve L50QS Series



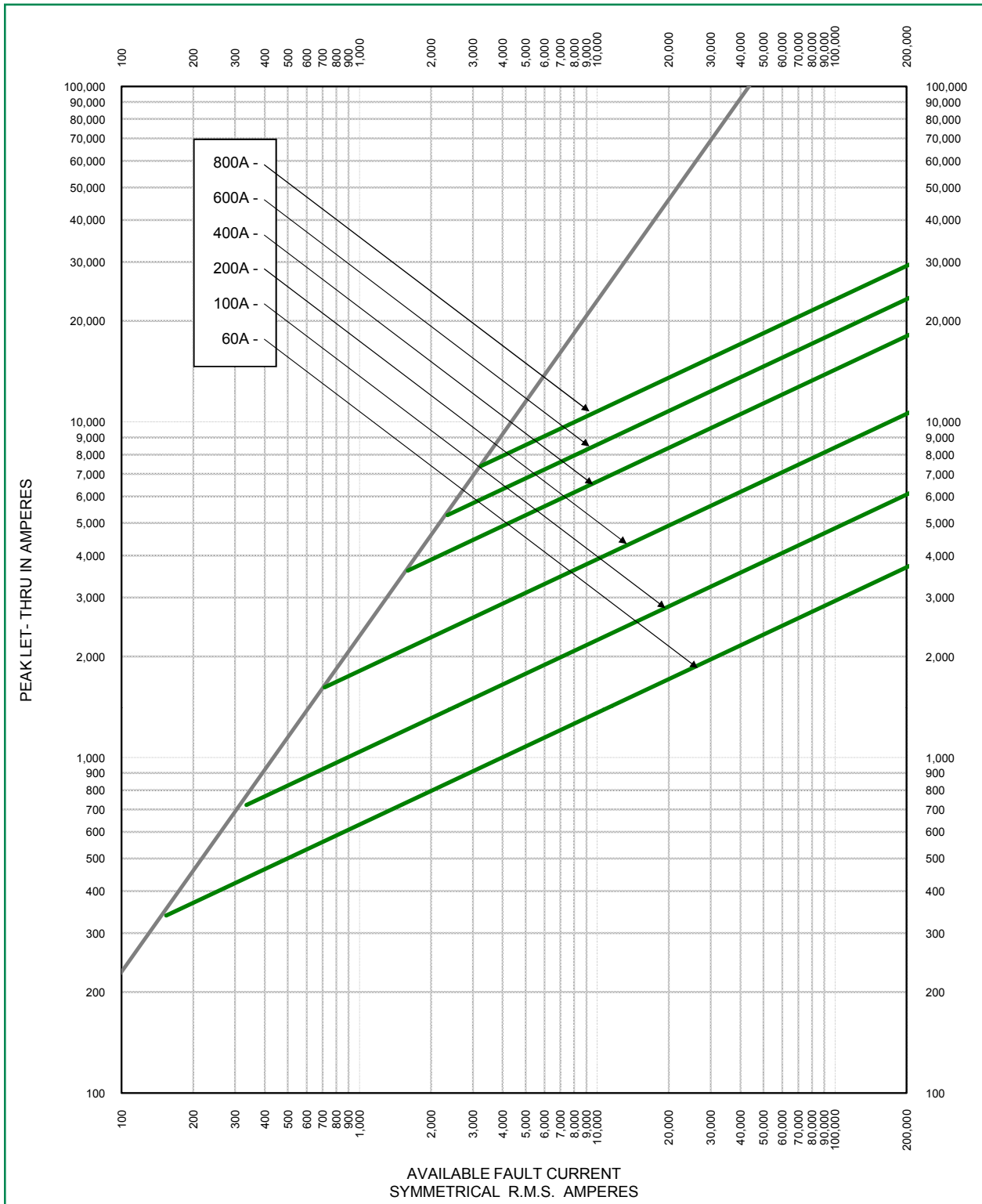
L50QS SERIES HIGH-SPEED ROUND BODY FUSES

Time Current Curve L50QS Series



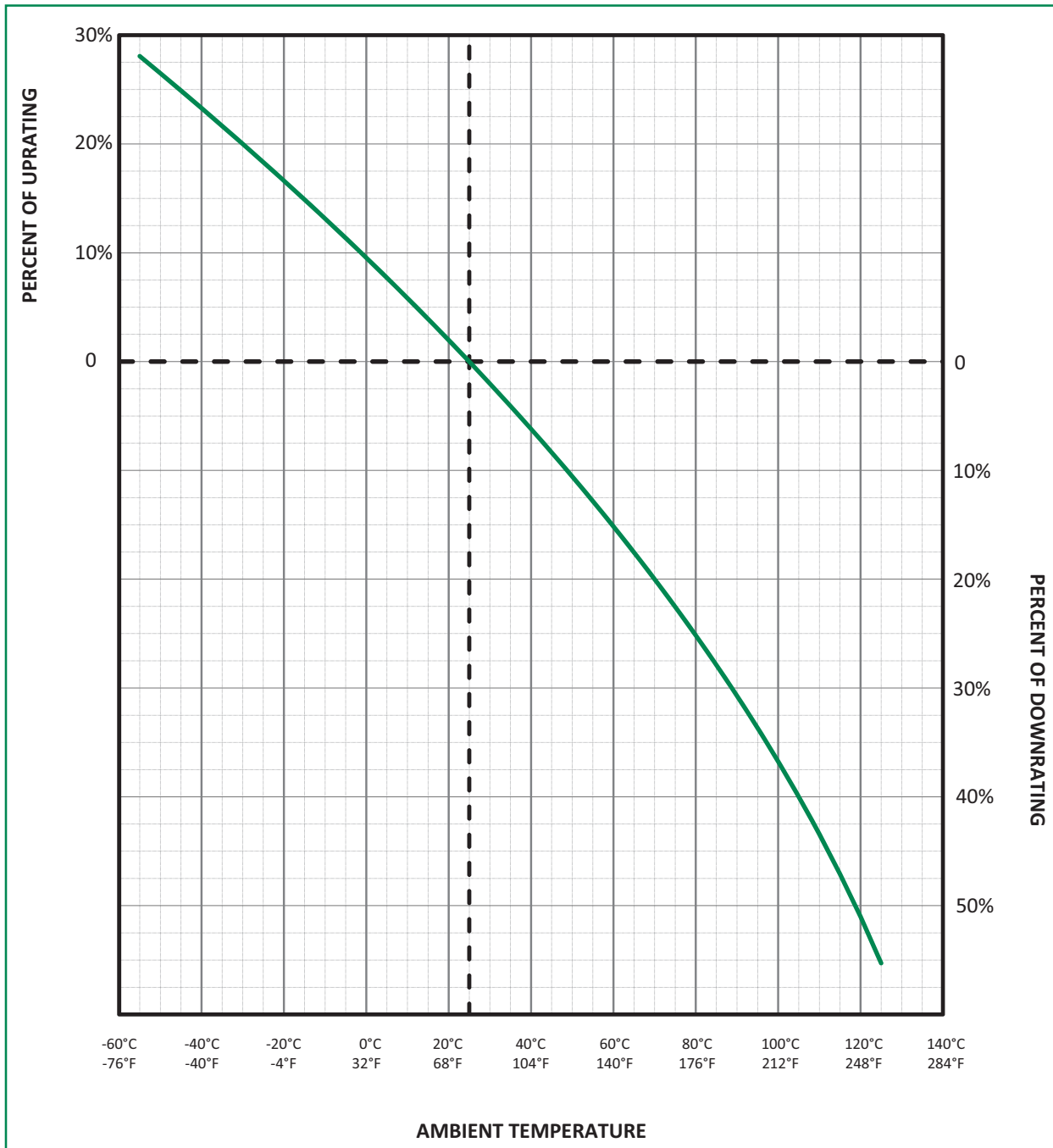
L50QS SERIES HIGH-SPEED ROUND BODY FUSES

Peak Let-Thru Curve L50QS Series



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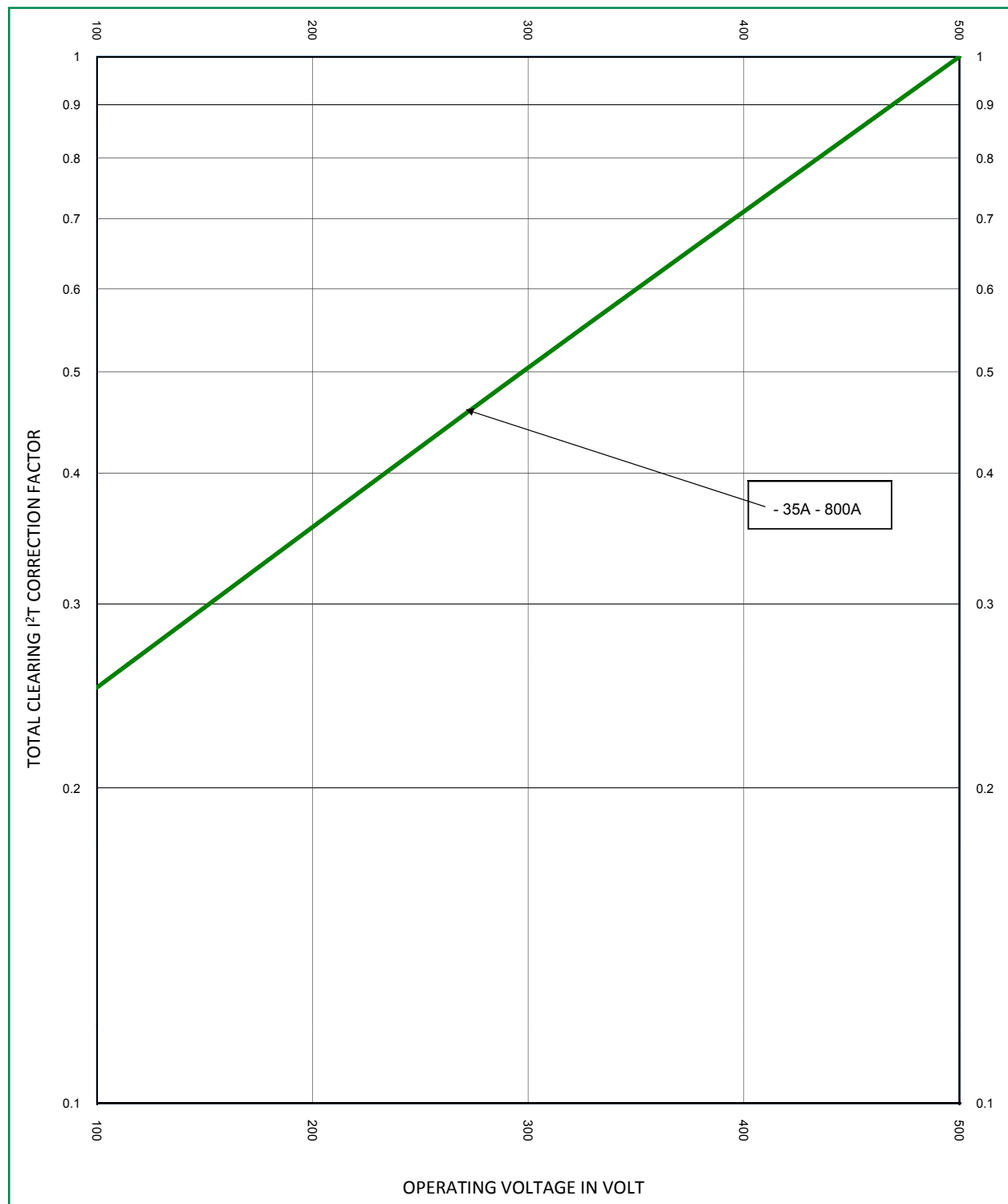
Temperature De-rating Curve (Temperature of Air Immediately Surrounding Fuse)
L50QS Series



L50QS SERIES HIGH-SPEED ROUND BODY FUSES

Total Clearing I²t Correction Factor Curve

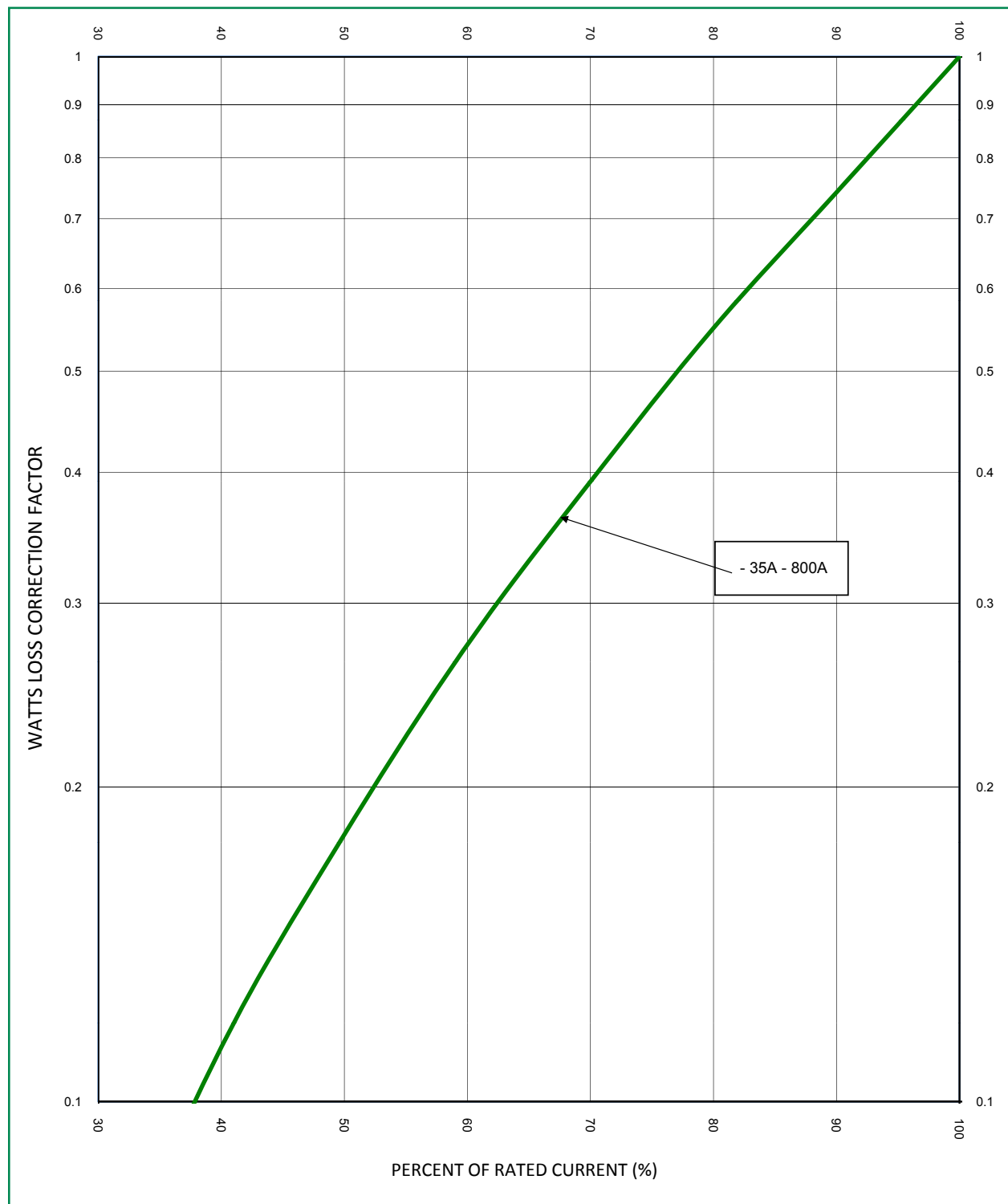
L50QS Series



L50QS SERIES HIGH-SPEED ROUND BODY FUSES

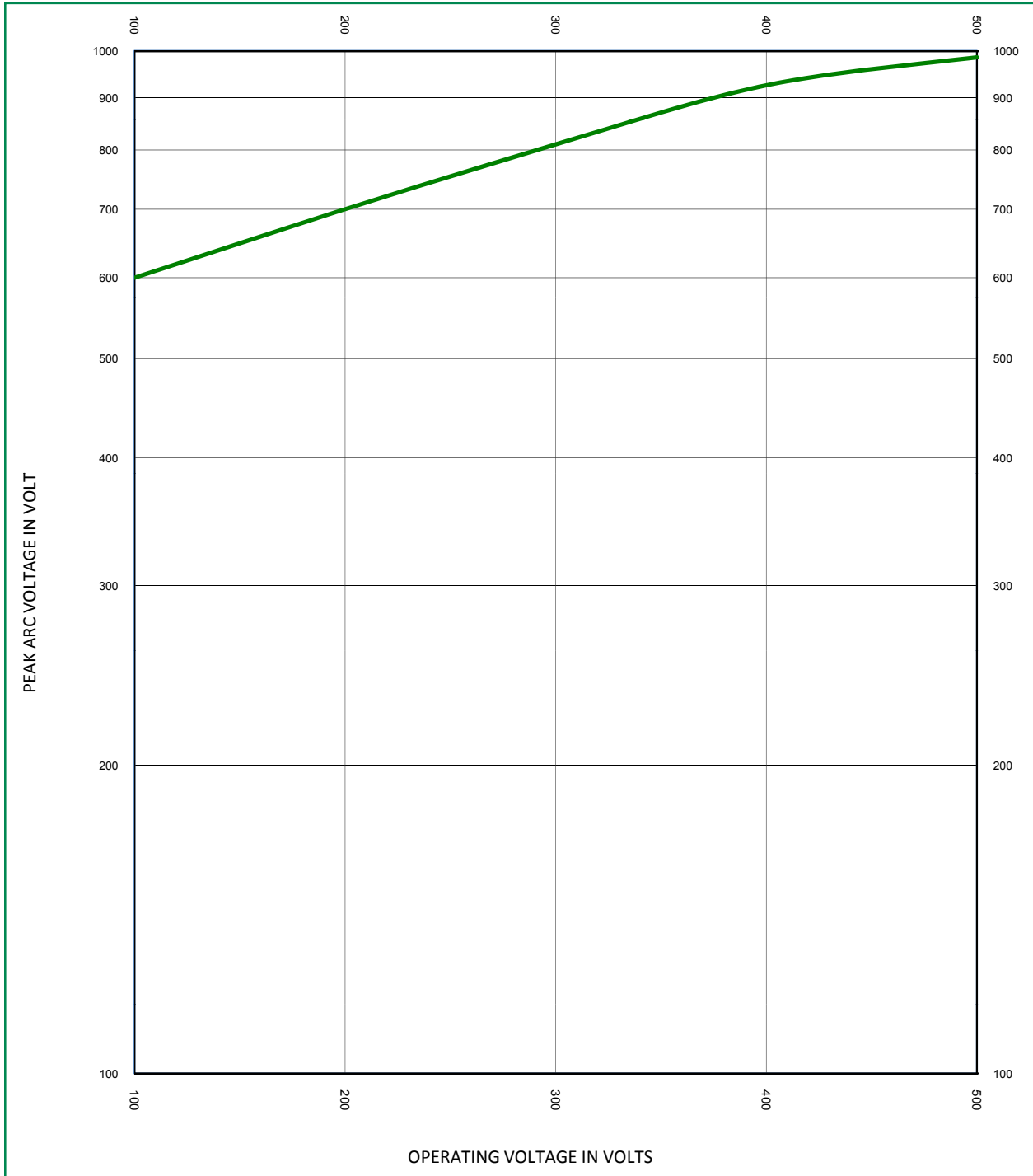
Watts Loss Correction Factor Curve

L50QS Series



L50QS SERIES HIGH-SPEED ROUND BODY FUSES

Peak Arc Voltage Curve L50QS Series



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