

# POWR-SPEED® Fuse

## L50QS SERIES HIGH-SPEED ROUND-BODY

Semiconductor Fuse • 500 V Ac/Dc • Class aR • 35-800 A

UL<sup>®</sup> US CE RoHS REACH HF



### Description

The L50QS series is a next-generation high-speed fuse with optimized circuit protection for the safeguarding of sensitive, high-power semiconductor devices. These products are found in various sectors including pulp, paper and processing industries, cranes and heavy-lifting equipment, wastewater treatment plants, large factories and MRO facilities.

These POWR-SPEED fuses are extremely current limiting and are designed with lower energy let-through ( $I^2t$ ) characteristics, to provide balanced performance and extend longevity while lowering potentially equipment-damaging heat energy.

They are designed in the traditional North American bolted-style package and include a universal mounting option to meet customer requirements for a variety of application installation configurations.

### Features & Benefits

FEATURES	BENEFITS
<b>High ac interrupting rating</b>	Delivers fast and reliable short circuit protection
<b>Extremely current limiting</b>	Prevents overheating and thermal breakdown protecting sensitive components from damage. Ensures device operates within its specified parameters and optimizes power usage while reducing energy waste creating reliability and longevity
<b>Low energy let-through (<math>I^2t</math>)</b>	Offers balanced performance to extend longevity while lowering potentially equipment-damaging heat energy
<b>Class aR performance</b>	Provides short-circuit protection and safely breaks high-fault currents to prevent damage to system
<b>Traditional North American bolted-style dimensions</b>	Supports easy installation in a variety of applications
<b>Direct busbar or stud mount design</b>	Creates installation flexibility
<b>Compliant with various requirements</b>	Supports global market applications and streamlines inventory

### Applications

- Power converters (inverters, rectifiers)
- Power supplies
- Uninterruptable power supply (UPS)
- Variable speed drives
- Control circuits
- Soft starters

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### Specifications

<b>Voltage Rating</b>	500 V Ac/500 V Dc
<b>Amperage Rating</b>	35 - 800 A
<b>Interrupting Rating</b>	200 kA (Ac)/50 kA (Dc)
<b>Time Constant</b>	10 ms
<b>Operating Temperature</b>	-55 °C to +125 °C (-67 °F to +257 °F)
<b>Storage Temperature</b>	Up to 35 °C (95 °F) with relative humidity <65%
<b>Material</b>	Body: Melamine Caps: Copper Alloy (Silver Plated)
<b>Applicable Standards</b>	UL 248-13
<b>Environmental</b>	RoHS Compliant, REACH, Halogen Free
<b>Country of Origin</b>	Mexico

### Certification & Compliance

<b>cURus</b>	cURus Recognized (File: E71611)
<b>CE</b>	EU_DOC-L50QS_200923
<b>RoHS</b>	RoHS 2 Directive 2011/65/EU/ Directive (EU) 2015/863
<b>REACH</b>	Regulation (EC) 1907/2006
<b>Halogen Free</b>	Yes

### Recommended Accessories

**Fuse block:** LSCR series

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### 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)		WATTS LOSS AT 80% RATED CURRENT (W)	WATTS LOSS AT 100% RATED CURRENT (W)
		AC	DC	AC	DC		200 kA @ 500 Vac	50 kA @ 500 Vdc		
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
L50QS125-100	125	500	500	200kA	50kA	1,816	20,340	8,829	11	20
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

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### Ordering Information

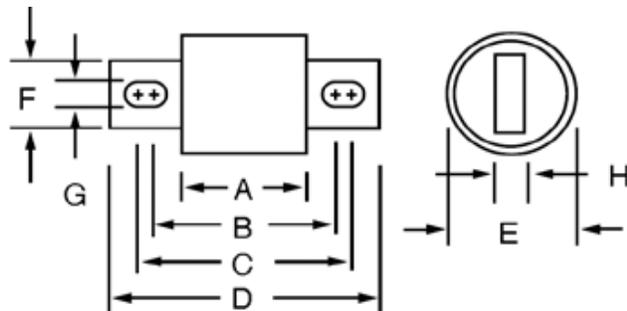
SERIES	AMPERAGE RATING	CATALOG NUMBER	ORDERING NUMBER	PACK QUANTITY	UPC
L50QS	35	L50QS035	L50QS035.T	10 Pcs/ Box	07945885991
L50QS	40	L50QS040	L50QS040.T	10 Pcs/ Box	07945885992
L50QS	50	L50QS050	L50QS050.T	10 Pcs/ Box	07945885993
L50QS	60	L50QS060	L50QS060.T	10 Pcs/ Box	07945885994
L50QS	70	L50QS070	L50QS070.T	10 Pcs/ Box	07945885995
L50QS	80	L50QS080	L50QS080.T	10 Pcs/ Box	07945885996
L50QS	90	L50QS090	L50QS090.T	10 Pcs/ Box	07945885997
L50QS	100	L50QS100	L50QS100.T	10 Pcs/ Box	07945885998
L50QS	125	L50QS125	L50QS125.V	5 Pcs/ Box	07945885999
L50QS-100	125	L50QS125-100	L50QS125.TX100	10 Pcs/ Box	07945863733
L50QS	150	L50QS150	L50QS150.V	5 Pcs/ Box	07945886000
L50QS	175	L50QS175	L50QS175.V	5 Pcs/ Box	07945886001
L50QS	200	L50QS200	L50QS200.V	5 Pcs/ Box	07945886002
L50QS	225	L50QS225	L50QS225.V	5 Pcs/ Box	07945886003
L50QS	250	L50QS250	L50QS250.V	5 Pcs/ Box	07945886004
L50QS	275	L50QS275	L50QS275.V	5 Pcs/ Box	07945886005
L50QS	300	L50QS300	L50QS300.V	5 Pcs/ Box	07945886006
L50QS	325	L50QS325	L50QS325.V	5 Pcs/ Box	07945886011
L50QS	350	L50QS350	L50QS350.V	5 Pcs/ Box	07945886007
L50QS	400	L50QS400	L50QS400.V	5 Pcs/ Box	07945886008
L50QS	450	L50QS450	L50QS450.X	1 Pc/ Box	07945886009
L50QS	500	L50QS500	L50QS500.X	1 Pc/ Box	07945886010
L50QS	600	L50QS600	L50QS600.X	1 Pc/ Box	07945886012
L50QS	700	L50QS700	L50QS700.X	1 Pc/ Box	07945886013
L50QS	800	L50QS800	L50QS800.X	1 Pc/ Box	07945886014

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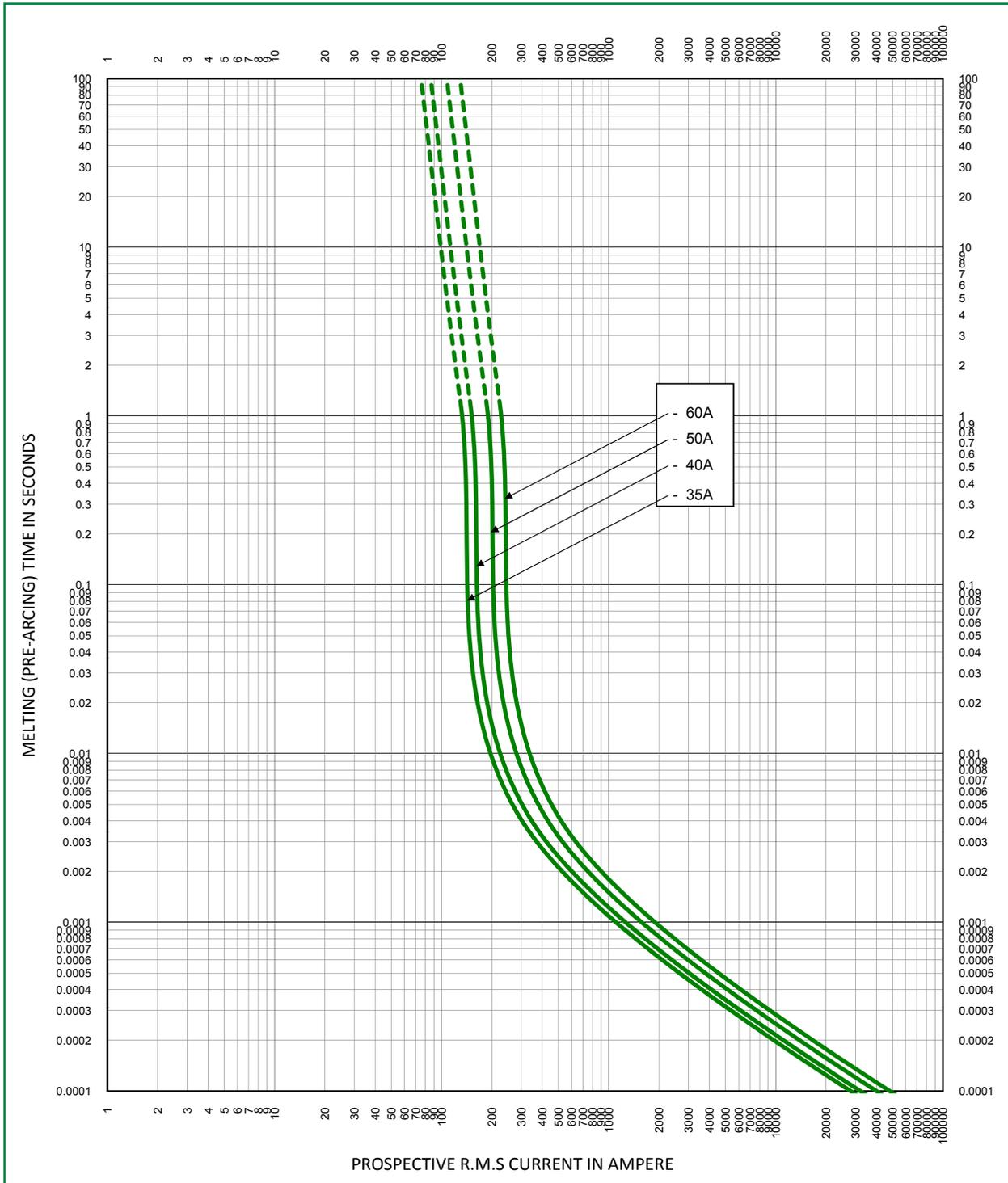
### Dimensions

AMPERES	DIMENSIONS INCHES (MM)								STUD SIZE	RECOMMENDED TORQUE
	A	B	C	D	E	F	G	H		
35-100 A	2.125 (53.98)	2.562 (65.07)	2.999 (76.19)	3.625 (92.08)	1.000 (25.4)	0.670 (17.02)	0.344 (8.73)	0.125 (3.18)	5/16" M8	132.76 in-lb 15 Nm
125 A-100	2.125 (53.98)	2.562 (65.07)	2.999 (76.19)	3.625 (92.08)	1.000 (25.4)	0.670 (17.02)	0.344 (8.73)	0.125 (3.18)	5/16" M8	132.76 in-lb 15 Nm
125-200 A	2.125 (53.98)	2.768 (70.32)	2.908 (73.86)	3.625 (92.08)	1.218 (30.94)	0.895 (22.73)	0.344 (8.74)	0.187 (4.75)	5/16" M8	132.76 in-lb 15 Nm
225-400 A	2.093 (53.16)	2.749 (69.83)	3.440 (87.37)	4.343 (110.31)	1.500 (38.10)	0.995 (25.27)	0.410 (10.41)	0.250 (6.35)	5/16" M8	132.76 in-lb 15 Nm
450-600 A	2.218 (56.34)	2.790 (70.86)	3.654 (92.82)	4.468 (113.49)	2.000 (50.80)	1.500 (38.1)	0.410 (10.41)	0.250 (6.35)	5/16" M8	132.76 in-lb 15 Nm
700-800 A	2.218 (56.34)	3.437 (87.30)	4.997 (126.93)	6.187 (157.15)	2.500 (63.5)	2.000 (50.80)	0.530 (13.46)	0.375 (9.53)	1/2" M12	477.94 in-lb 54 Nm



### Time Current Curve

#### L50QS Series

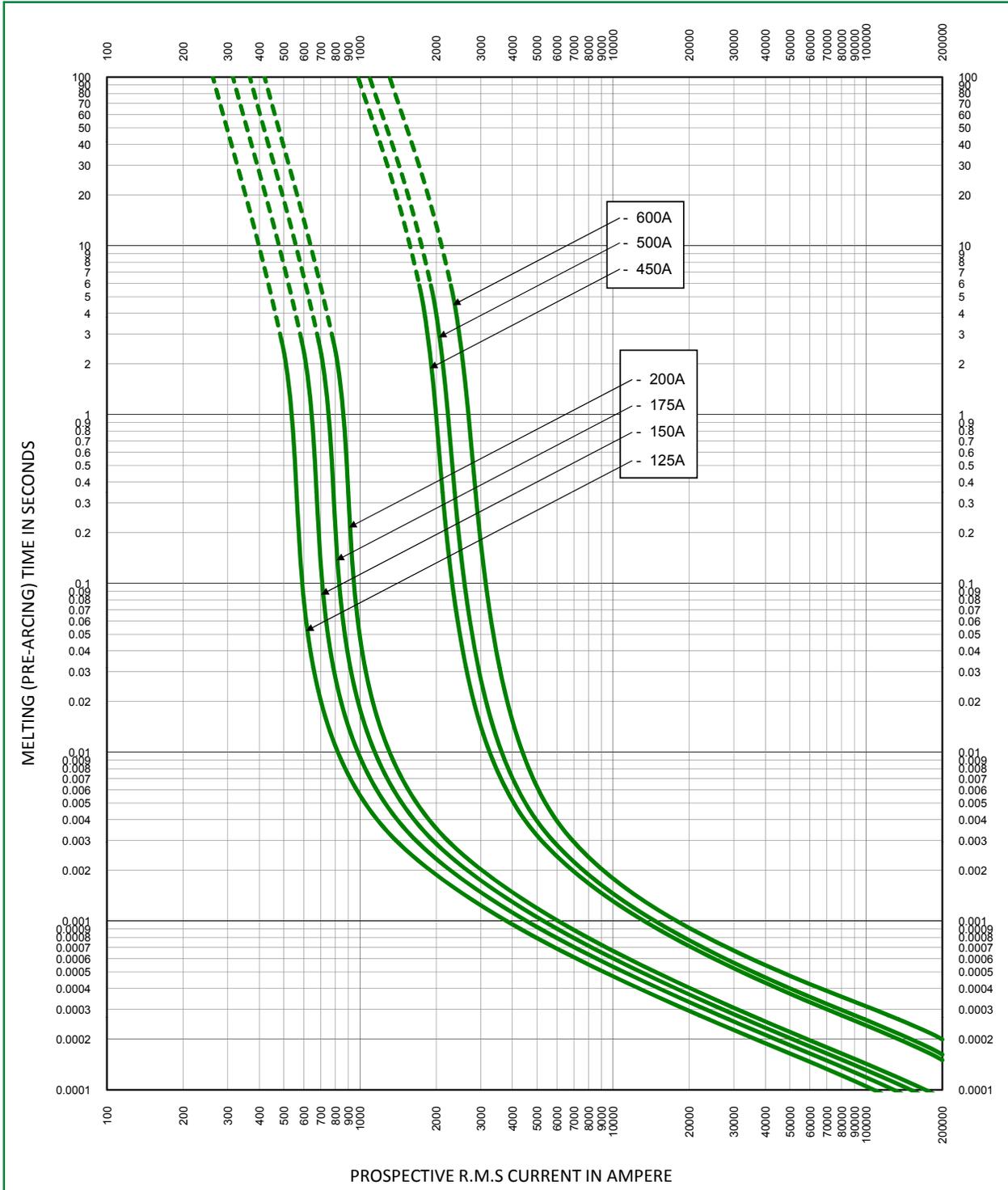


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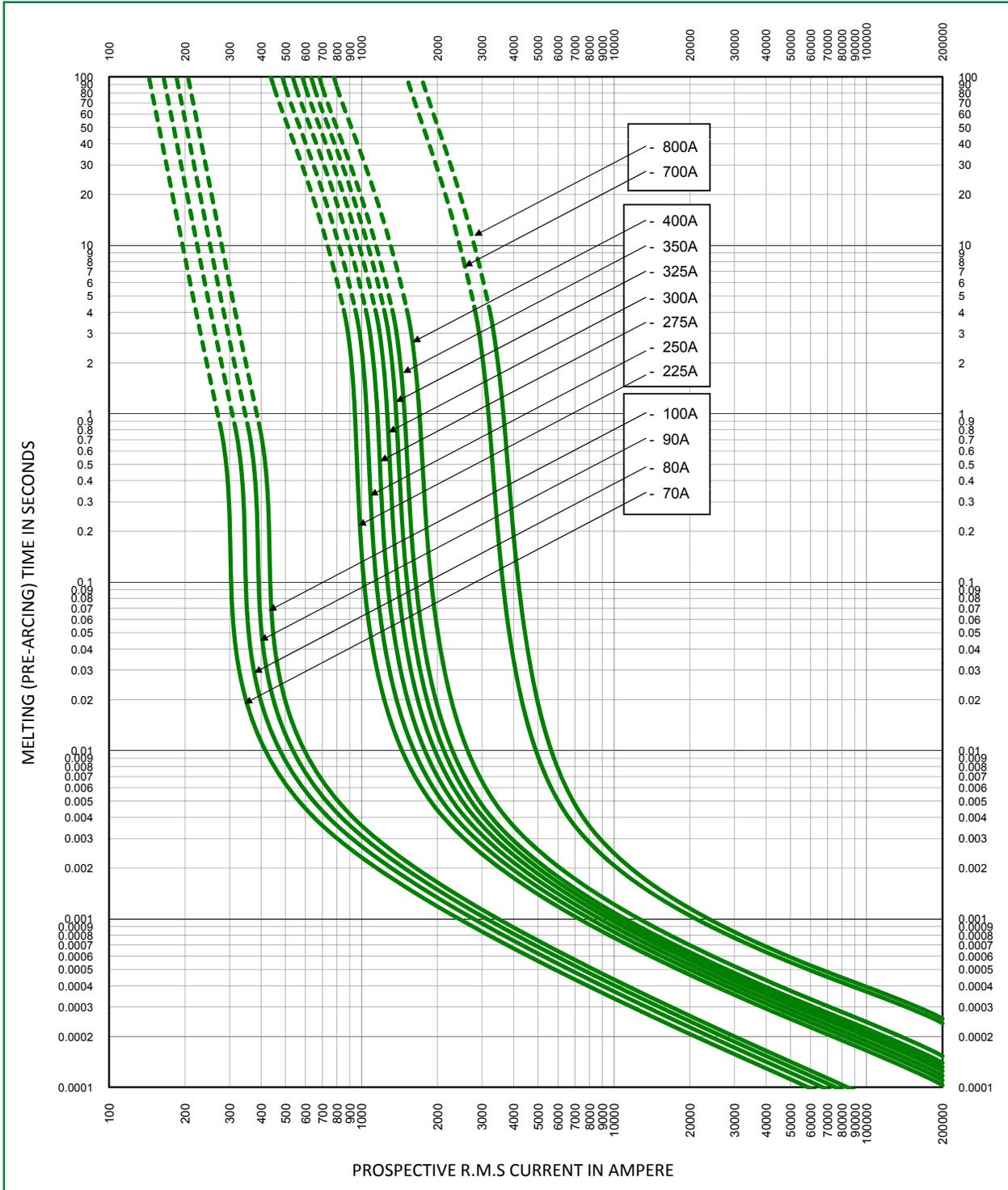


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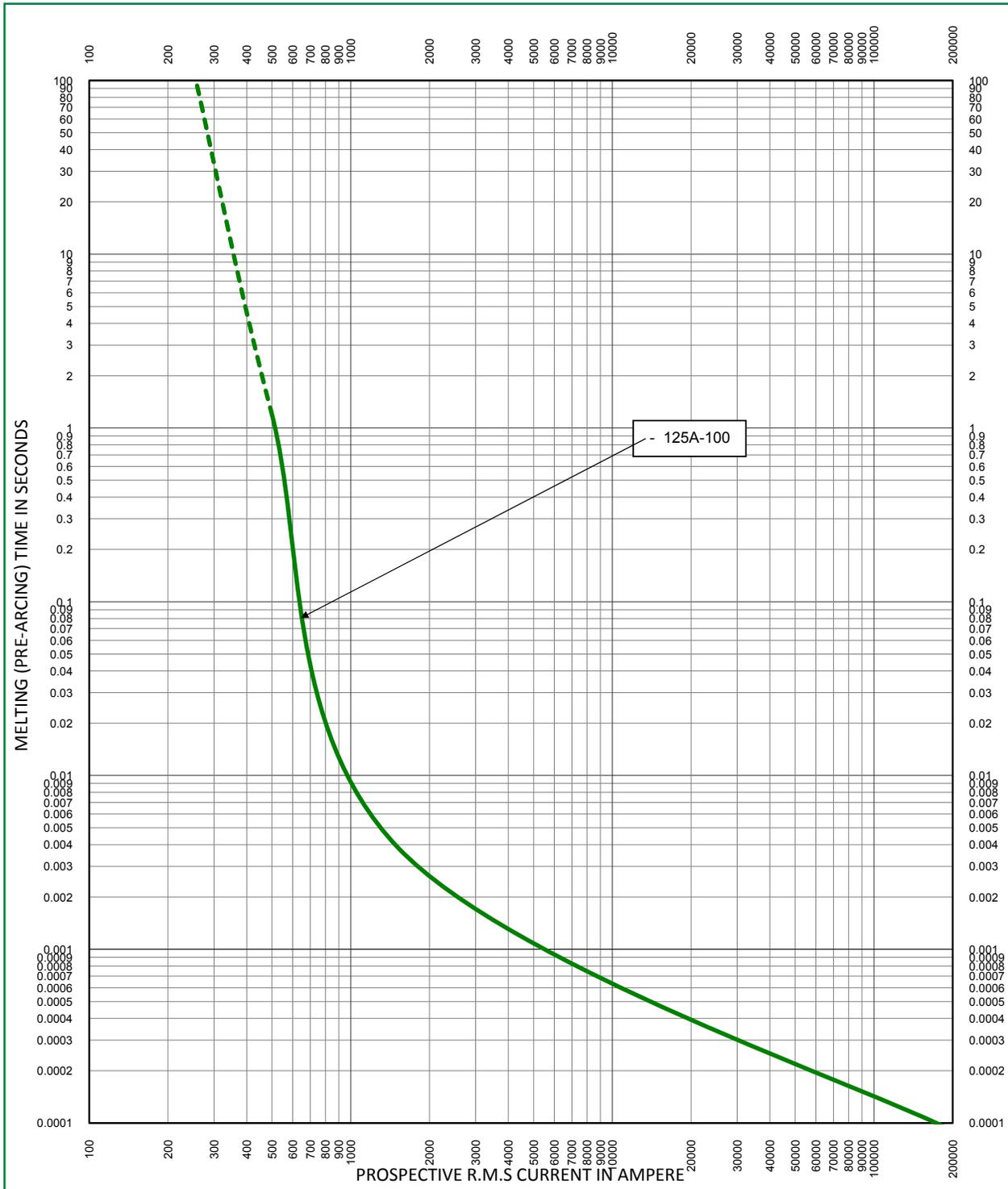


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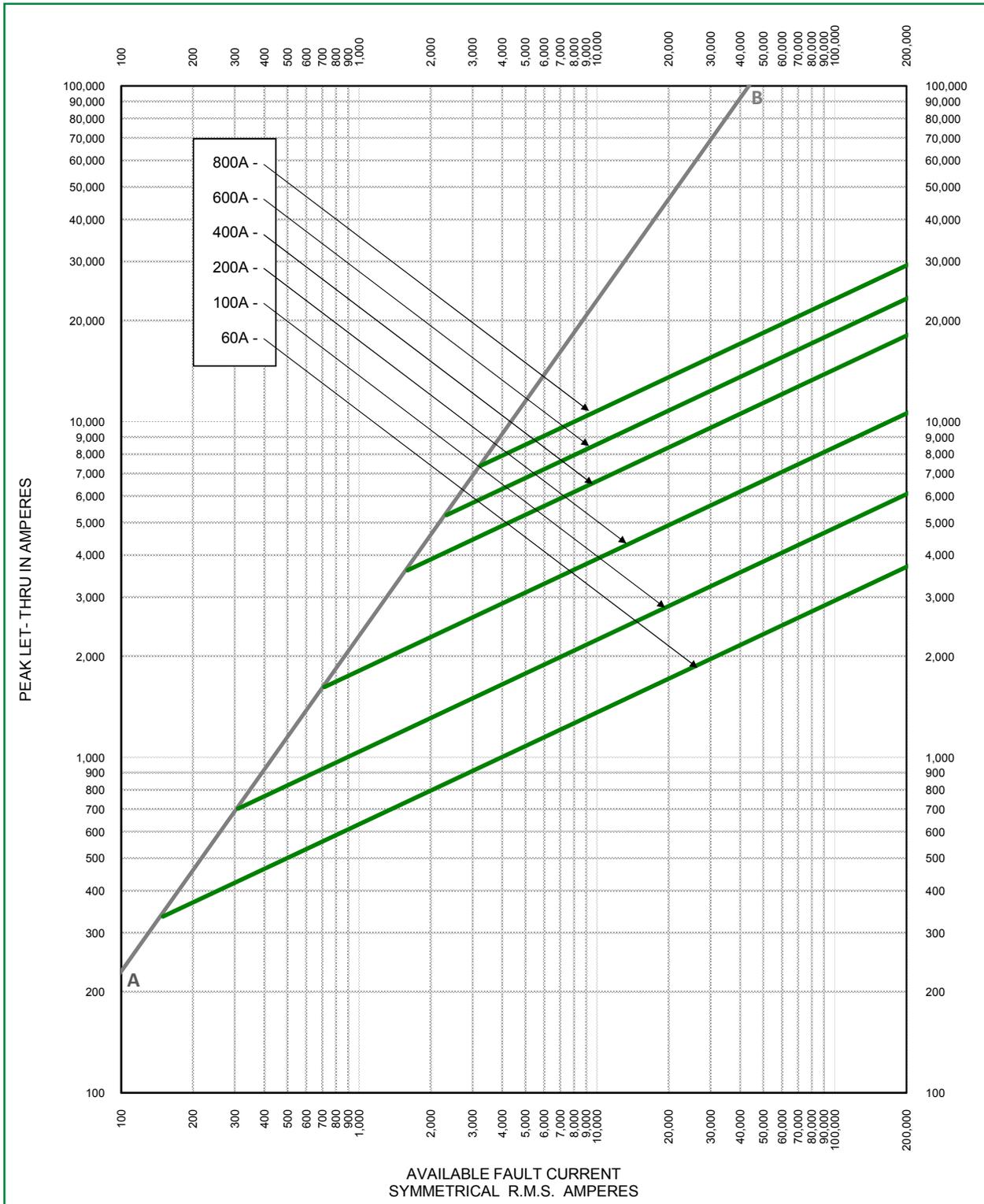


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### Peak Let-Thru Curve

#### L50QS Series

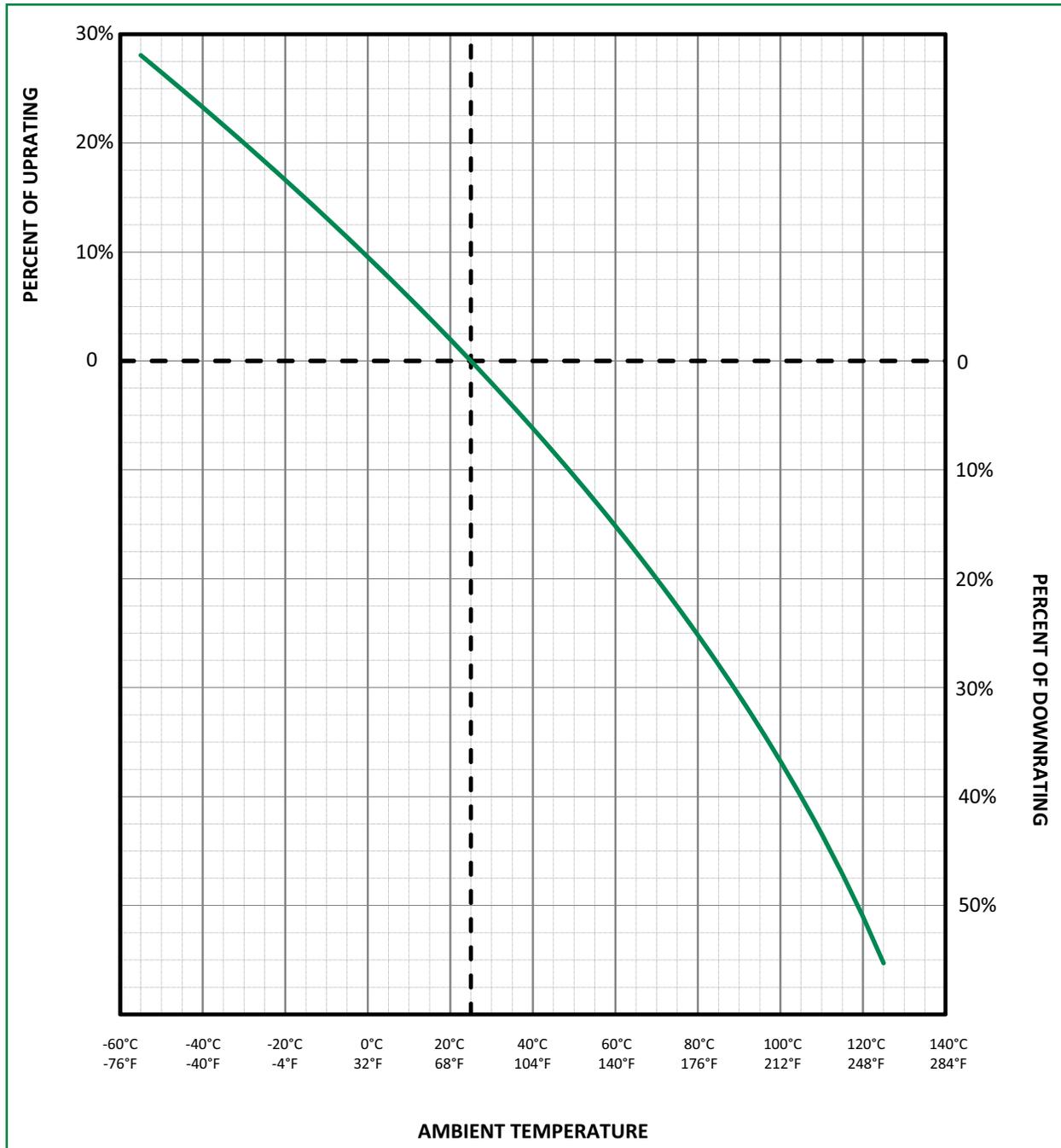


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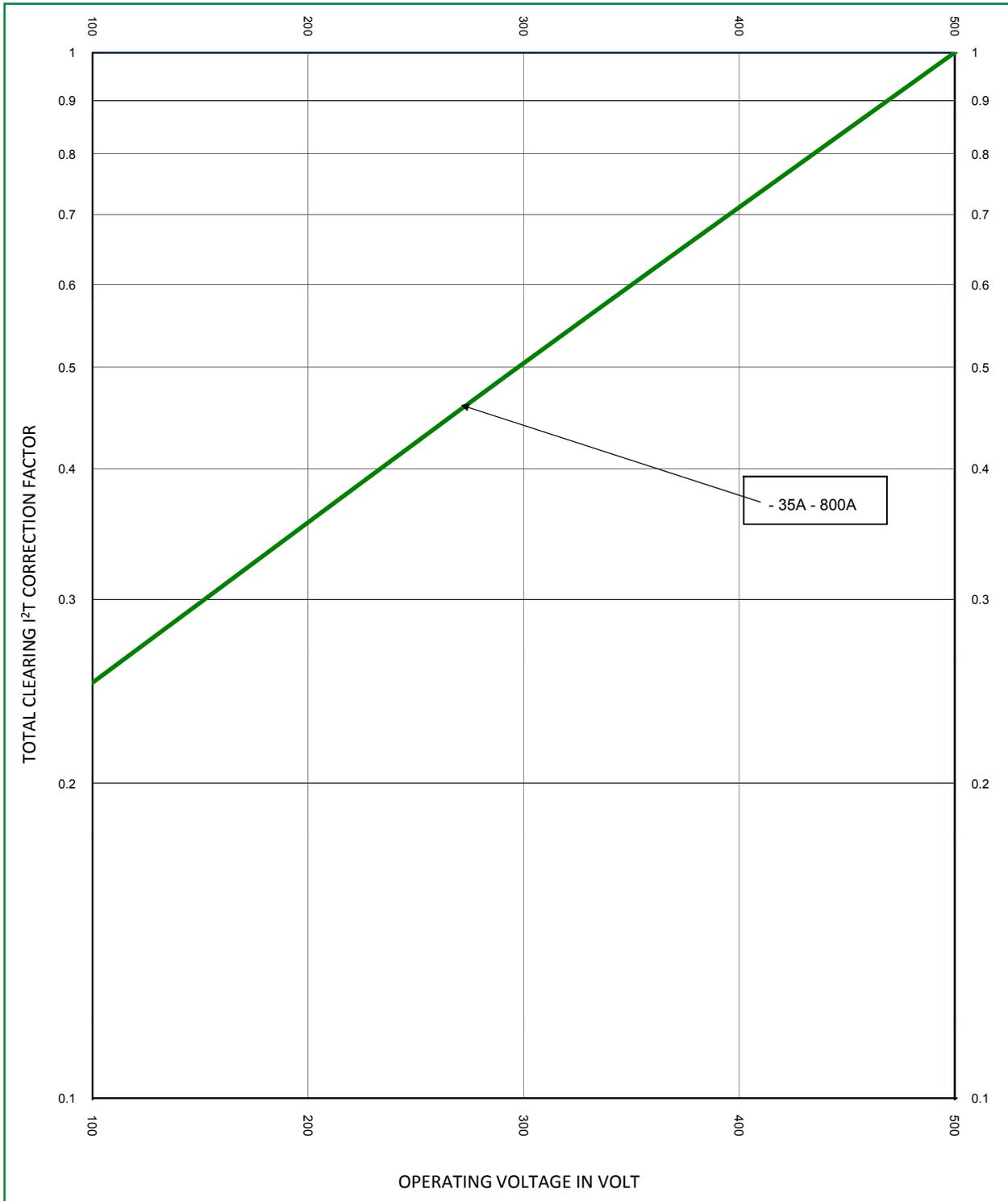
### Temperature De-rating Curve (Temperature of Air Immediately Surrounding Fuse)

L50QS Series



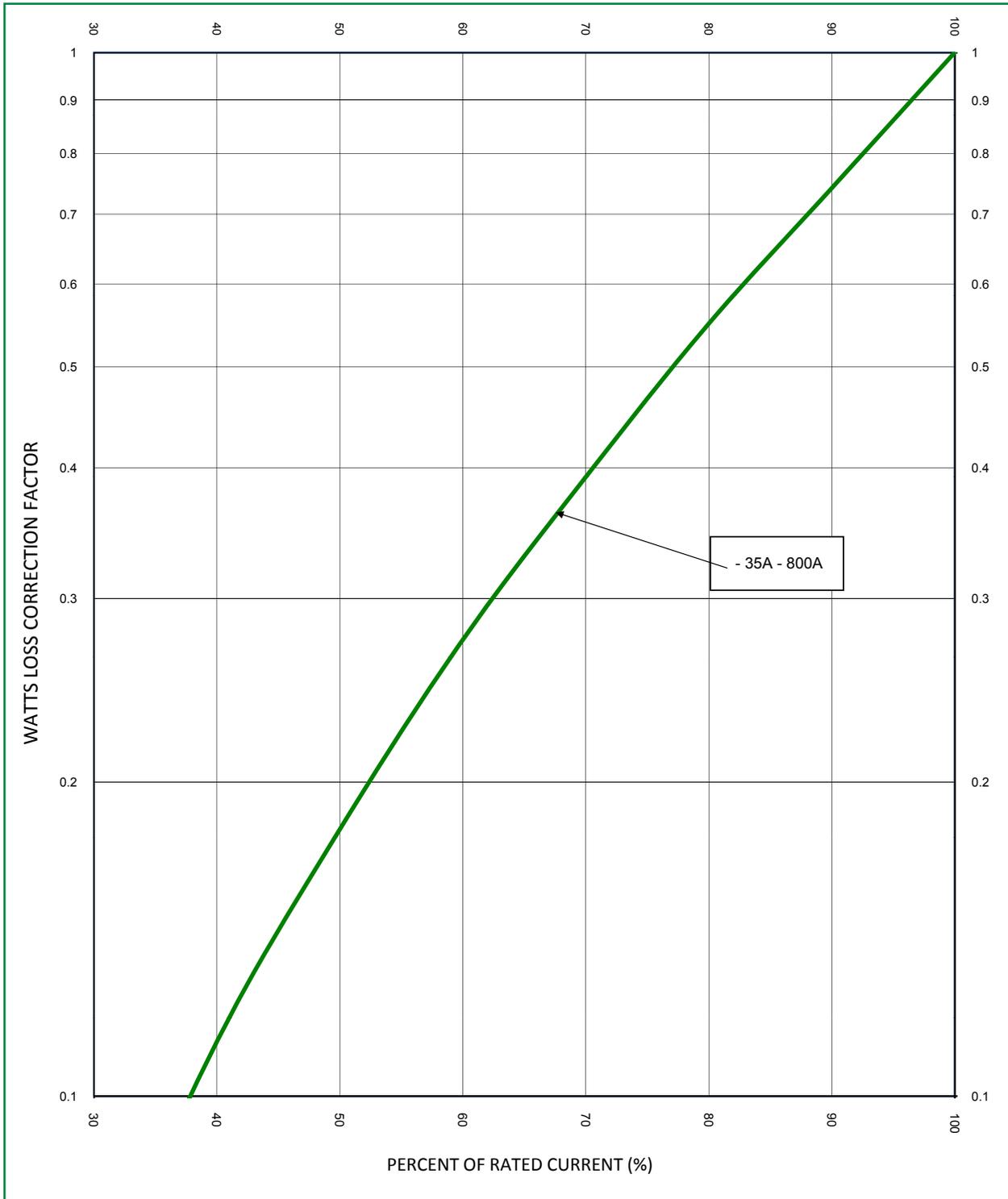
## Total Clearing I<sup>2</sup>t Correction Factor Curve

L50QS Series

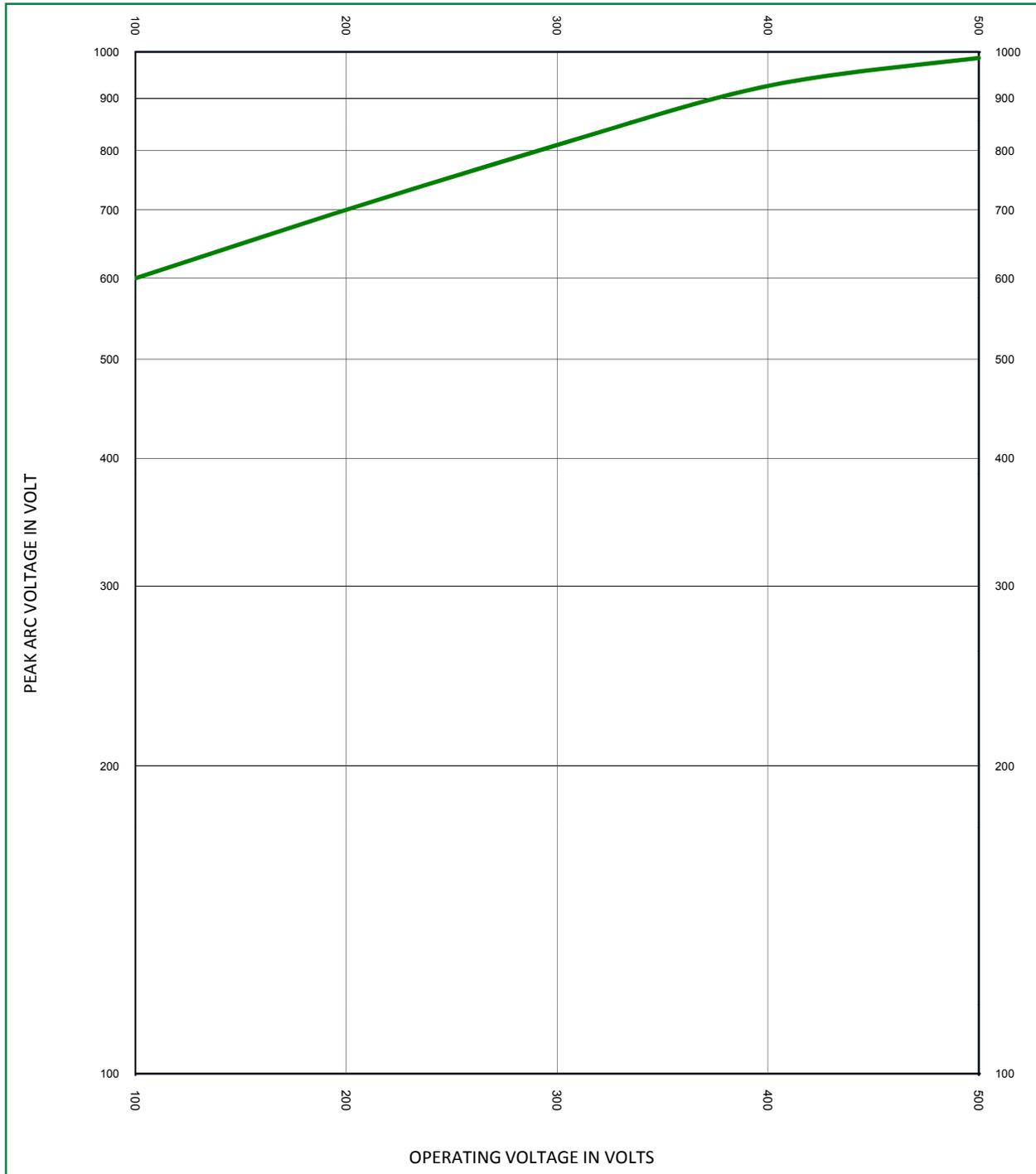


## Watts Loss Correction Factor Curve

L50QS Series



**Peak Arc Voltage Curve**  
L50QS Series



For additional product information, contact Littelfuse Technical Support at 1-800-TEC-FUSE or [Techline@Littelfuse.com](mailto:Techline@Littelfuse.com).  
 Note: High-speed fuses are designed for fixed installations. They are not intended for use in moving vehicle applications.

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