

POWR-SPEED® Fuse

L60QS Series High-Speed Cylindrical

Semiconductor Fuses • 600 V Ac/Dc • Class aR - 5-40 A

IEC cULus CE RoHS REACH HF



Description

The Littelfuse QS series of High-speed Semiconductor Fuses is designed to safeguard power semiconductor devices. These cylindrical-shaped, 10x38 mm fuses with higher current ratings, are fast-acting and extremely current limiting. They provide balanced performance and reliable short-circuit protection to extend product longevity while lowering potentially damaging heat energy to the device being protected.

Features & Benefits

FEATURES	BENEFITS
High ac and dc interrupting rating	Provides fast and reliable short circuit protection
Fast acting	Responds quickly to a range of fault currents to safeguard device
Excellent cycling capability to handle on/off switching	Increases product reliability and longevity
Compact case size with common dimensions	Saves space and can be used in a variety of applications
Compliant with UL and IEC standards	Supports global market applications and streamlines inventory

Applications

- Ac-dc power converters
- Control circuits
- EV charging stations
- Power distribution units (PDUs)
- Power supplies
- Variable speed drives
- Uninterruptible power supply (UPS)

POWR-SPEED® Fuse

L60QS Series High-Speed Cylindrical

Specifications

Voltage Rating	600 V Ac/600 V Dc
Amperage Rating	5 - 40 A
Interrupting Rating	200 kA (Ac), 100 kA (Dc)
Minimum Breaking Capacity	400%
Operating Characteristics	Fast-acting, partial range (aR)
Time Constant	≤ 10 ms
Operating Temperature Range	-55 °C to +125 °C (-67 °F to +257 °F)
Materials	Body – Melamine End caps – Copper alloy
Applicable Standards	UL 248-13, IEC 60269-4
Mounting	Cartridge, PCB mount and Bolt-mount
Country of Origin	Mexico

Certification & Compliance

cURus	cURus Recognized (File: E71611)
CE	Declaration of Conformity (File: EU_DOC-L60QS_240108)
RoHS	RoHS 2 Directive 2011/65/EU; Directive (EU) 2015/863
REACH	Regulation (EC) No 1907/2006
Halogen Free	Yes

Ordering Information (Ferrule Version)

AMPERE RATING	CATALOG NUMBER	PRODUCT MARKING	PACKING QUANTITY	ORDERING NUMBER	UPC CODE
5	L60QS005	L60QS 5A	10	L60QS005.T	07945837049
6	L60QS006	L60QS 6A	10	L60QS006.T	07945837050
8	L60QS008	L60QS 8A	10	L60QS008.T	07945837051
10	L60QS010	L60QS10A	10	L60QS010.T	07945837052
12	L60QS012	L60QS 12A	10	L60QS012.T	07945837054
15	L60QS015	L60QS 15A	10	L60QS015.T	07945837056
20	L60QS020	L60QS 20A	10	L60QS020.T	07945837057
25	L60QS025	L60QS 25A	10	L60QS025.T	07945837060
30	L60QS030	L60QS 30A	10	L60QS030.T	07945837061
35	L60QS035	L60QS 35A	10	L60QS035.T	07945837062
40	L60QS040	L60QS 40A	10	L60QS040.T	07945837064

POWR-SPEED® Fuse

L60QS Series High-Speed Cylindrical

Ordering Information (PCB Version)

AMPERE RATING	CATALOG NUMBER	PRODUCT MARKING	PACKING QUANTITY	ORDERING NUMBER	UPC CODE
5	L60QS005R	L60QS 5A-R	100	L60QS005.HXR	07945837067
6	L60QS006R	L60QS 6A-R	100	L60QS006.HXR	07945837069
8	L60QS008R	L60QS 8A-R	100	L60QS008.HXR	07945837070
10	L60QS010R	L60QS10A-R	100	L60QS010.HXR	07945837085
12	L60QS012R	L60QS 12A-R	100	L60QS012.HXR	07945837094
15	L60QS015R	L60QS 15A-R	100	L60QS015.HXR	07945837097
20	L60QS020R	L60QS 20A-R	100	L60QS020.HXR	07945837099
25	L60QS025R	L60QS 25A-R	100	L60QS025.HXR	07945837100
30	L60QS030R	L60QS 30A-R	100	L60QS030.HXR	07945837101
35	L60QS035R	L60QS 35A-R	100	L60QS035.HXR	07945837102
40	L60QS040R	L60QS 40A-R	100	L60QS040.HXR	07945837103

Ordering Information (Bolt-Mount Version)

AMPERE RATING	CATALOG NUMBER	PRODUCT MARKING	PACKING QUANTITY	ORDERING NUMBER	UPC CODE
5	L60QS005BD	L60QS 5A-BD	10	L60QS005.TXBD	07945837104
6	L60QS006BD	L60QS 6A-BD	10	L60QS006.TXBD	07945837105
8	L60QS008BD	L60QS 8A-BD	10	L60QS008.TXBD	07945837106
10	L60QS010BD	L60QS10A-BD	10	L60QS010.TXBD	07945837107
12	L60QS012BD	L60QS 12A-BD	10	L60QS012.TXBD	07945837108
15	L60QS015BD	L60QS 15A-BD	10	L60QS015.TXBD	07945837109
20	L60QS020BD	L60QS 20A-BD	10	L60QS020.TXBD	07945837110
25	L60QS025BD	L60QS 25A-BD	10	L60QS025.TXBD	07945837111
30	L60QS030BD	L60QS 30A-BD	10	L60QS030.TXBD	07945837112
35	L60QS035BD	L60QS 35A-BD	10	L60QS035.TXBD	07945837113
40	L60QS040BD	L60QS 40A-BD	10	L60QS040.TXBD	07945837114

Electrical Specifications

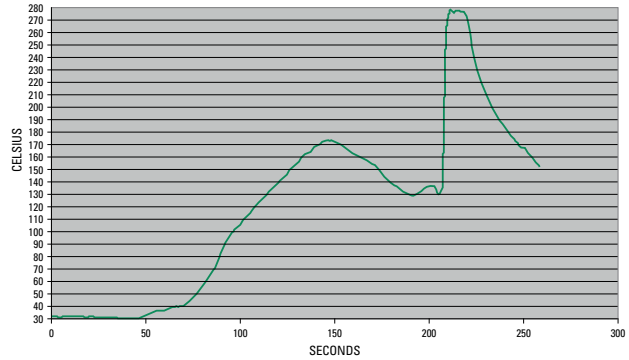
AMPERAGE RATING	VOLTAGE RATING		INTERRUPTING RATING		WATTS LOSS AT 100% RATED CURRENT (W)	AVERAGE MELTING I ² T (A ² S)	TOTAL CLEARING I ² T (A ² S) 200 KA @ 600 V AC	TOTAL CLEARING I ² T (A ² S) 100 KA @ 600 V DC
	AC	DC	AC	DC				
5	600	600	200 kA	100 kA	0.8	5	64	60
6	600	600	200 kA	100 kA	0.8	5	64	60
8	600	600	200 kA	100 kA	1.3	6	70	110
10	600	600	200 kA	100 kA	1.9	9	85	120
12	600	600	200 kA	100 kA	2.1	15	145	150
15	600	600	200 kA	100 kA	3.1	20	160	190
20	600	600	200 kA	100 kA	5.1	34	141	130
25	600	600	200 kA	100 kA	-	85	378	320
30	600	600	200 kA	100 kA	5.3	133	816	630
35	600	600	200 kA	100 kA	6.3	198	1226	660
40	600	600	200 kA	100 kA	6.9	277	1242	1080

POWR-SPEED® Fuse

L60QS Series High-Speed Cylindrical

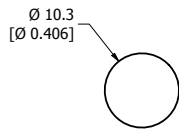
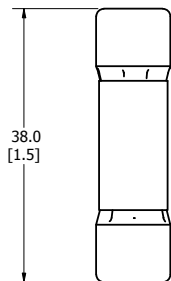
Recommended Process and Soldering Parameters

WAVE PARAMETER	LEAD FREE RECOMMENDATION
Preheat:	(Typical industry recommendation)
Temperature minimum:	130 °C
Temperature maximum:	—
Pre-heat time	75 seconds maximum
Solder pot temperature	280 °C maximum
Solder dwell time	270 °C for 8 seconds maximum
Complete cycle time	250 seconds maximum

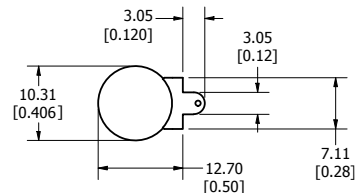
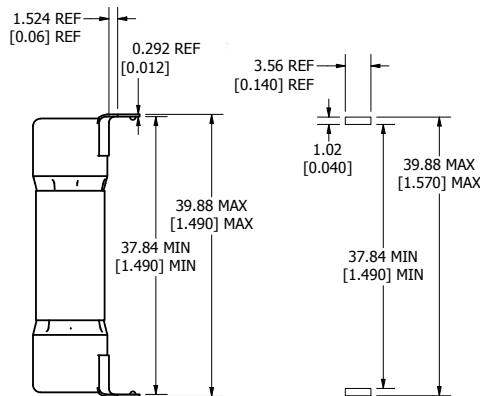


Dimensions in Millimeters [Inches]

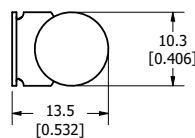
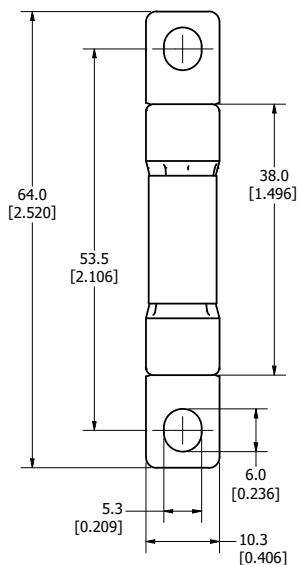
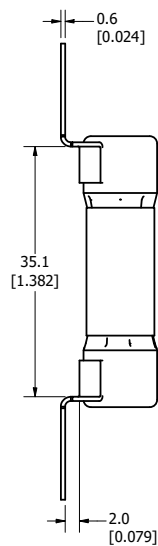
FERRULE VERSION



PCB VERSION



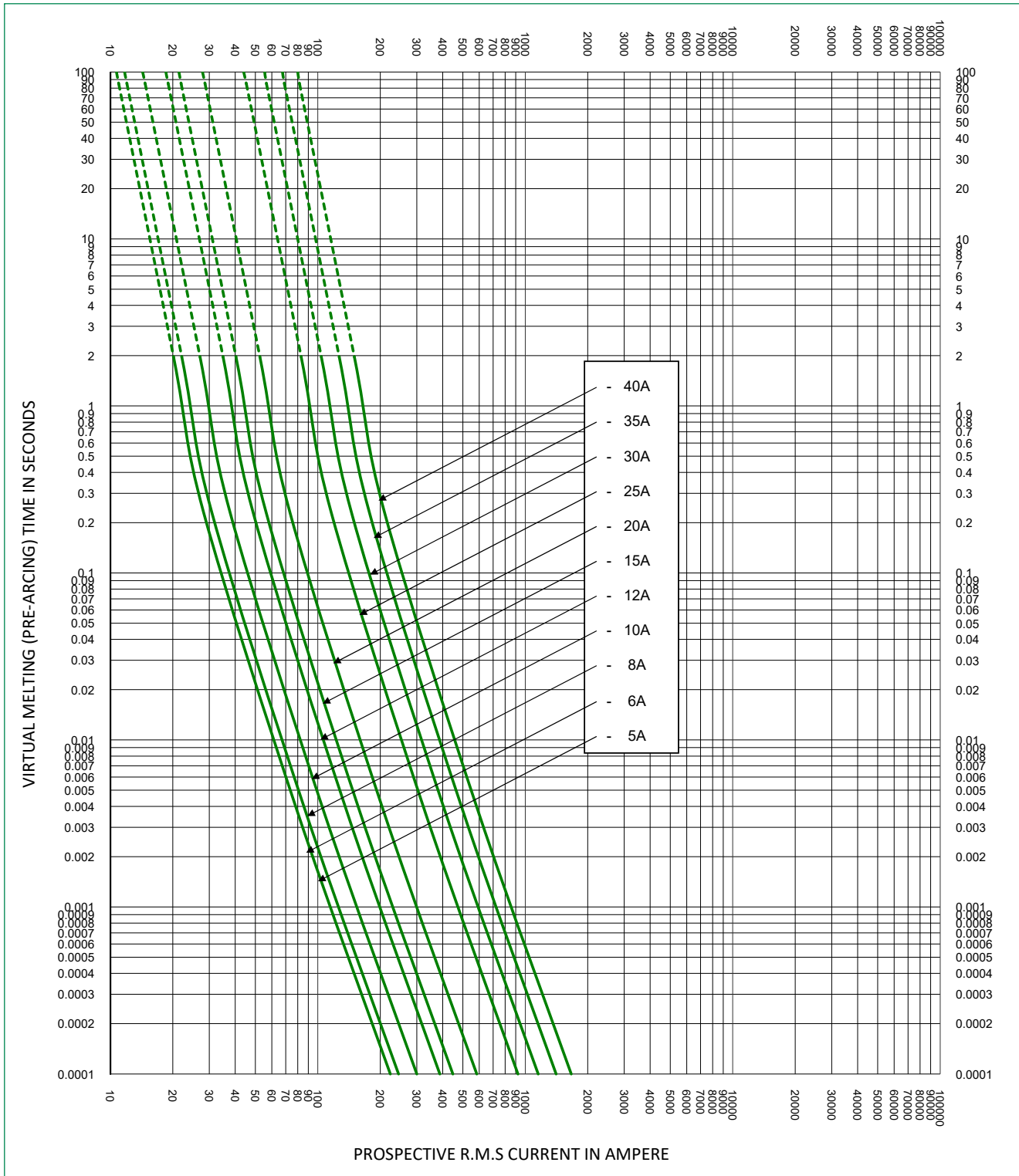
BOLT-MOUNT VERSION



POWR-SPEED® Fuse

L60QS Series High-Speed Cylindrical

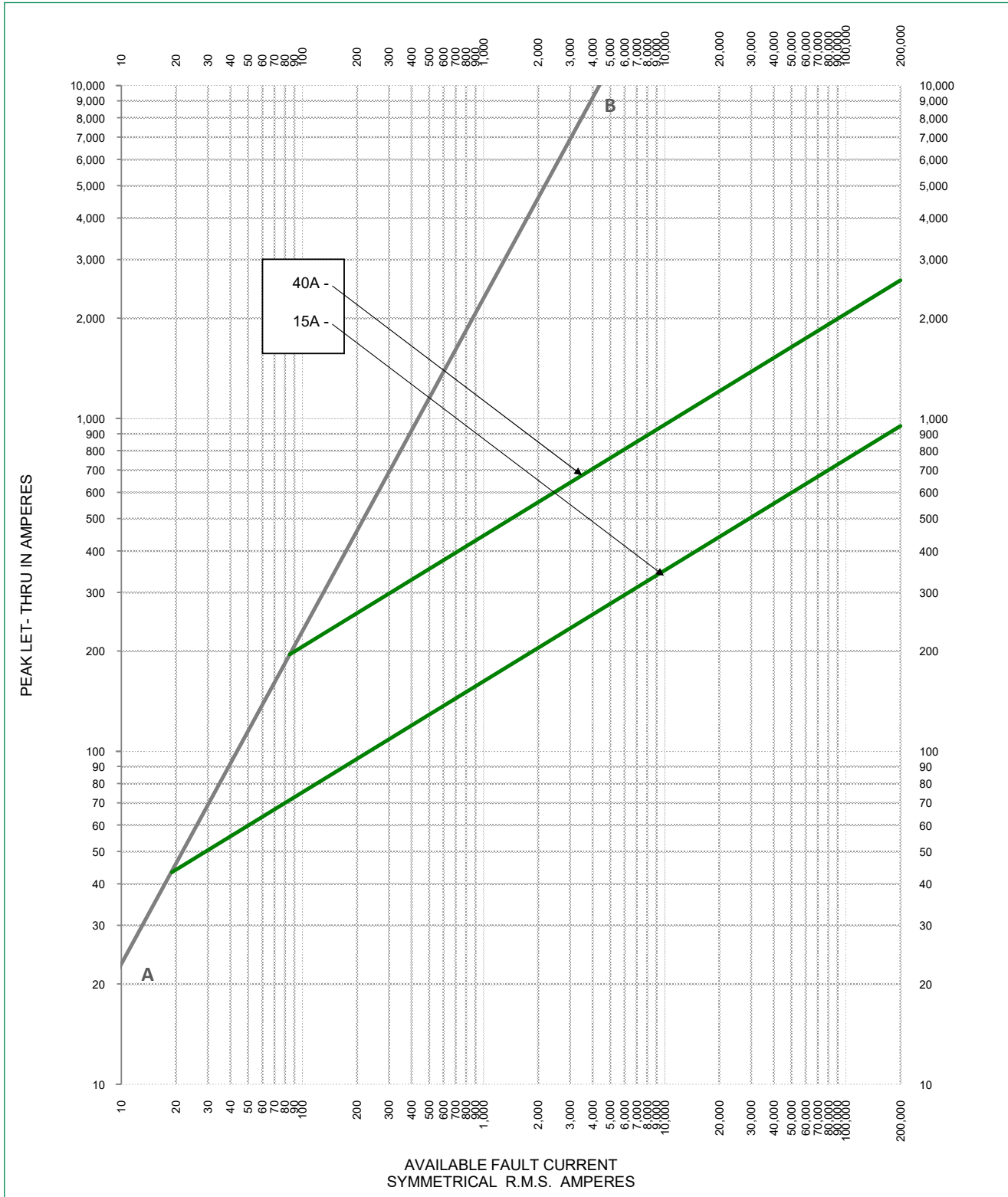
Time Current Curve (5-40 A)



POWR-SPEED® Fuse

L60QS Series High-Speed Cylindrical

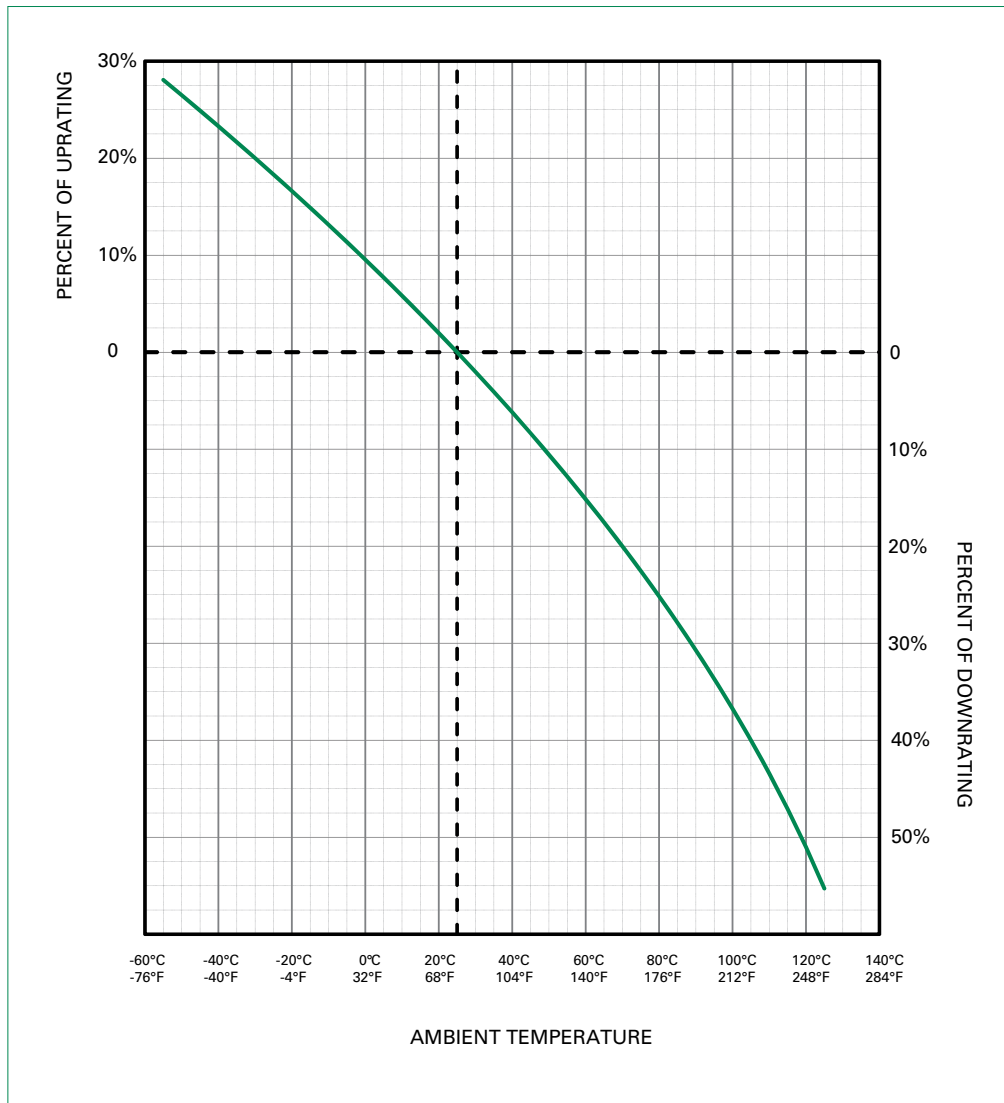
Peak Let-Through Curve



POWR-SPEED® Fuse

L60QS Series High-Speed Cylindrical

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



For additional product information, contact Littelfuse Technical Support at 1-800-TEC-FUSE or Techline@Littelfuse.com.

Note: High-speed fuses are designed for fixed installations. They are not intended for use in moving vehicle applications.

Disclaimer Notice – Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at www.littelfuse.com/product-disclaimer.