

# POWR-SPEED® Fuse

## L60QS Series High-Speed Cylindrical

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

IEC c  us CE  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
<b>High ac and dc interrupting rating</b>	Provides fast and reliable short circuit protection
<b>Fast acting</b>	Responds quickly to a range of fault currents to safeguard device
<b>Excellent cycling capability to handle on/off switching</b>	Increases product reliability and longevity
<b>Compact case size with common dimensions</b>	Saves space and can be used in a variety of applications
<b>Compliant with UL and IEC standards</b>	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)

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### Specifications

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

### Certification & Compliance

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

### Ordering Information (Ferrule Version)

AMPERE RATING	CATALOG NUMBER	PRODUCT MARKING	PACKING QUANTITY	ORDERING NUMBER	UPC CODE
40	L60QS040	L60QS 40A	10	L60QS040.T	07945837064

### Ordering Information (PCB Version)

AMPERE RATING	CATALOG NUMBER	PRODUCT MARKING	PACKING QUANTITY	ORDERING NUMBER	UPC CODE
40	L60QS040R	L60QS 40A-R	100	L60QS040.HXR	07945837103

### Electrical Specifications

AMPERAGE RATING	VOLTAGE RATING		INTERRUPTING RATING		WATTS LOSS AT 100 % RATED CURRENT (W)	AVERAGE MELTING I <sup>2</sup> T (A <sup>2</sup> S)	TOTAL CLEARING I <sup>2</sup> T (A <sup>2</sup> S) 200 KA @ 600 V AC	TOTAL CLEARING I <sup>2</sup> T (A <sup>2</sup> S) 100 KA @ 600 V DC	NOMINAL COLD RESISTANCE (OHMS)
	AC	DC	AC	DC					
40	600	600	200 kA	100 kA	6	277	1770	1080	0.0025

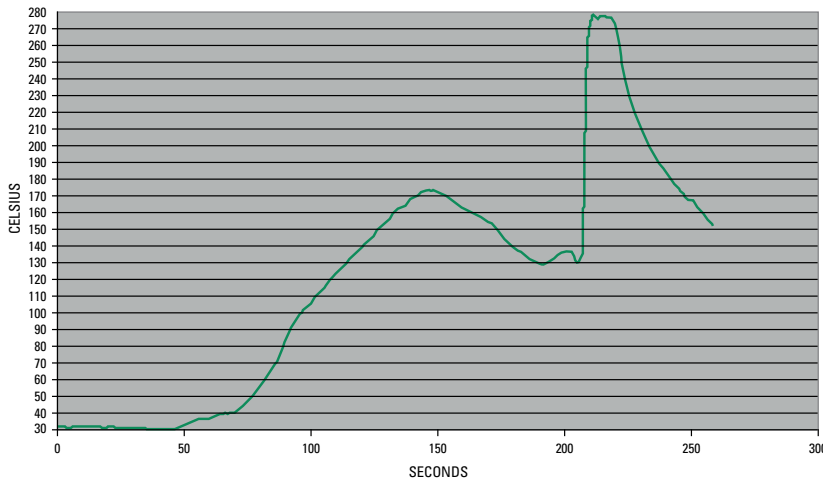
# POWR-SPEED® Fuse

## L60QS Series High-Speed Cylindrical

### Recommended Process Parameters

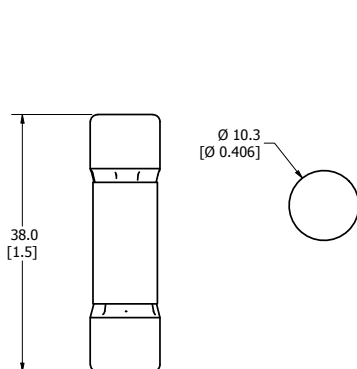
WAVE PARAMETER	LEAD FREE RECOMMENDATION
Preheat:	(Typical industry recommendation)
Temperature minimum:	130 °C
Temperature maximum:	–
Pre-heat time	75 seconds maximum
Solder pot temperature	280 °C maximum
Solder dwell time	270 °C for 8 seconds maximum
Complete cycle time	250 seconds maximum

### Soldering Parameters

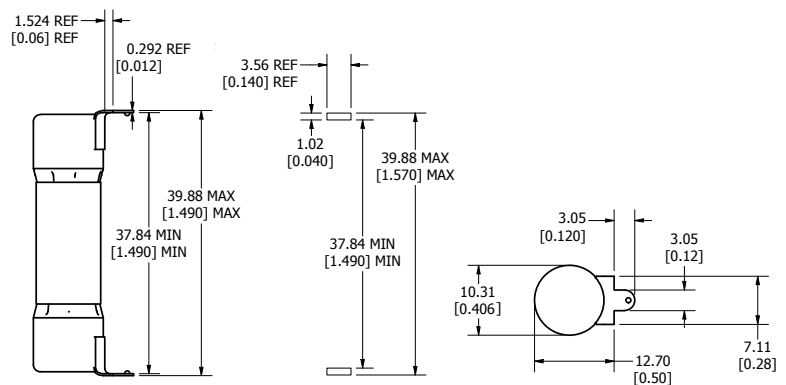


### Dimensions in Millimeters (Inches)

FERRULE VERSION



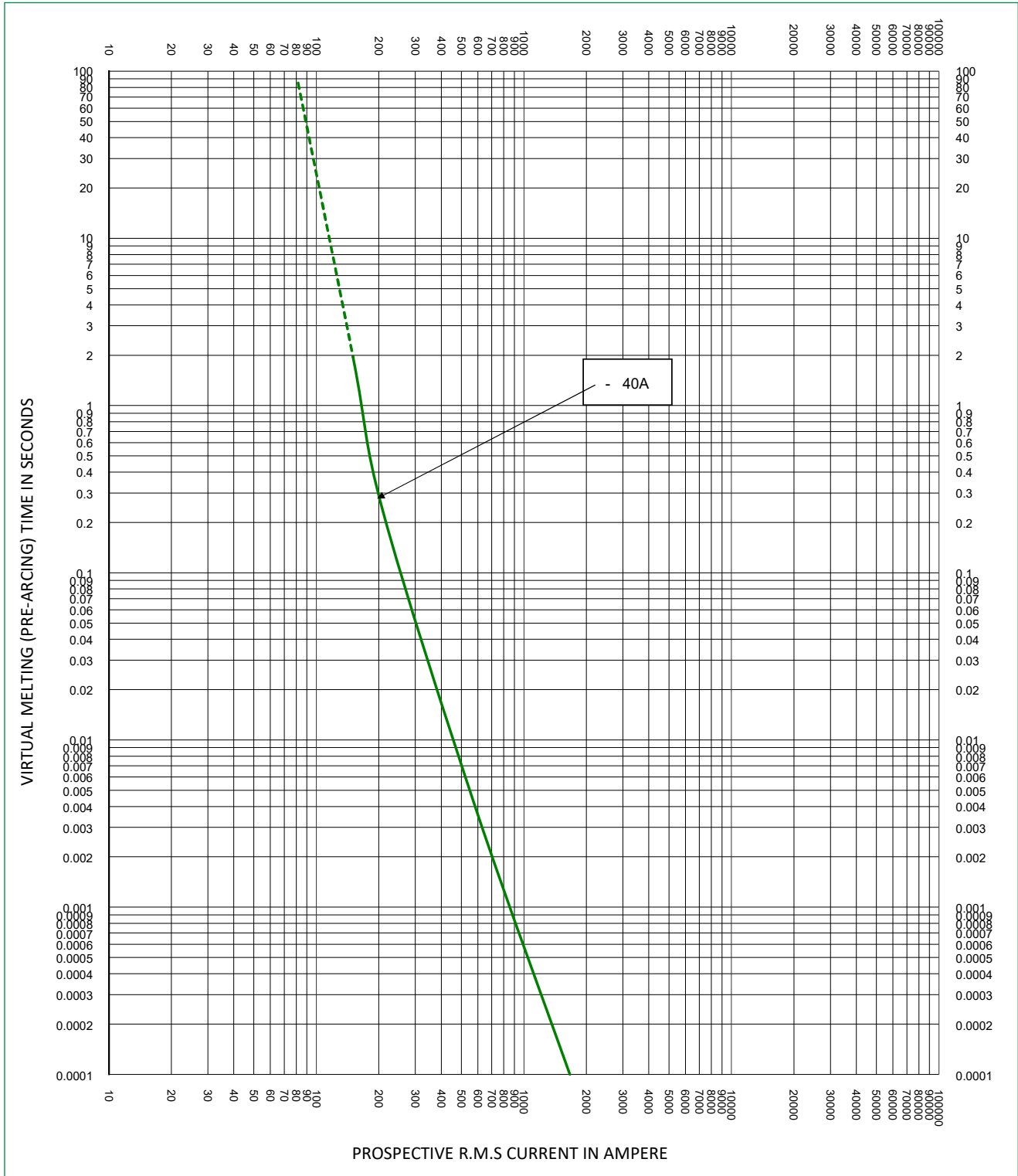
PCB VERSION



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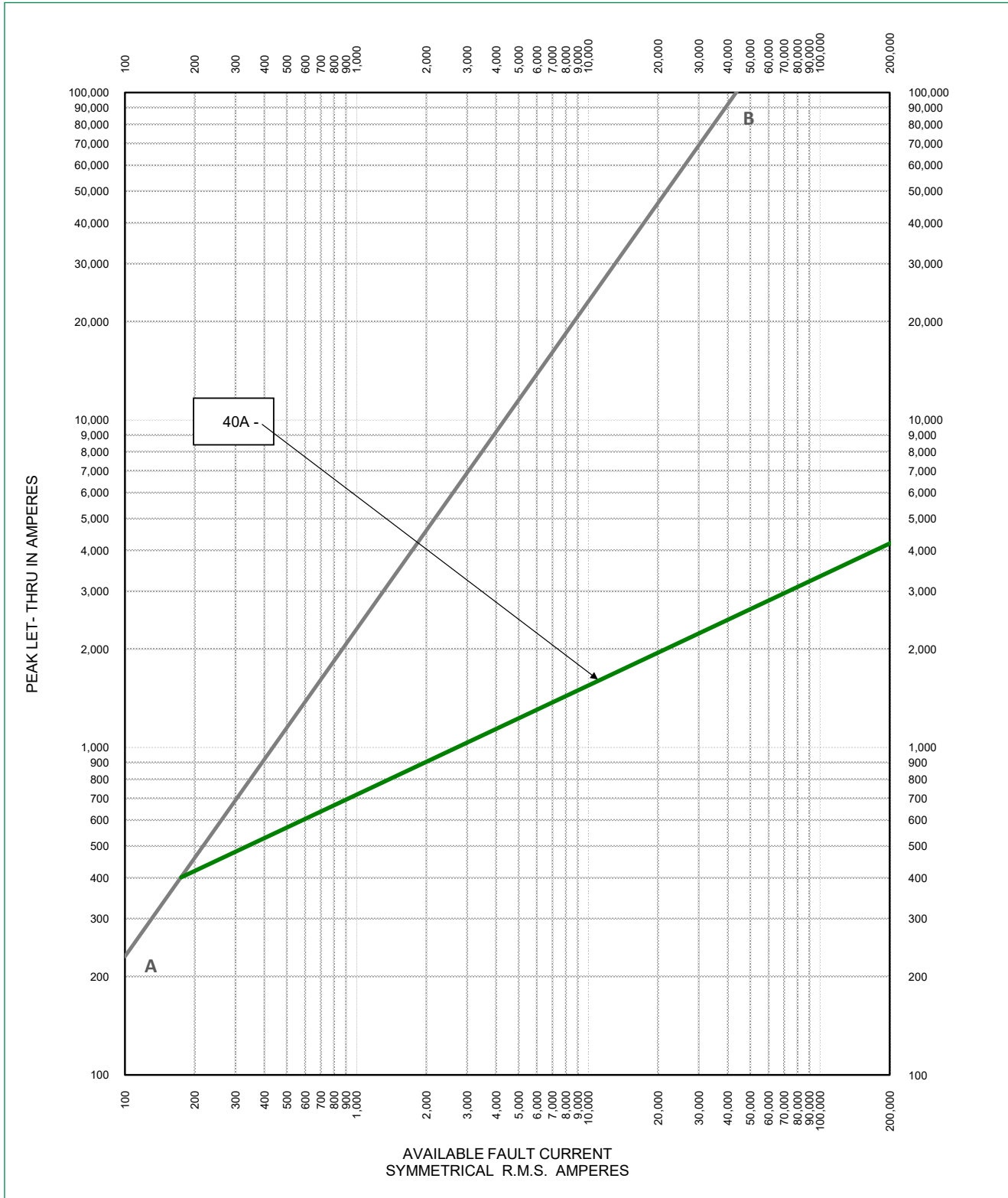
### Time Current Curve (40 A)



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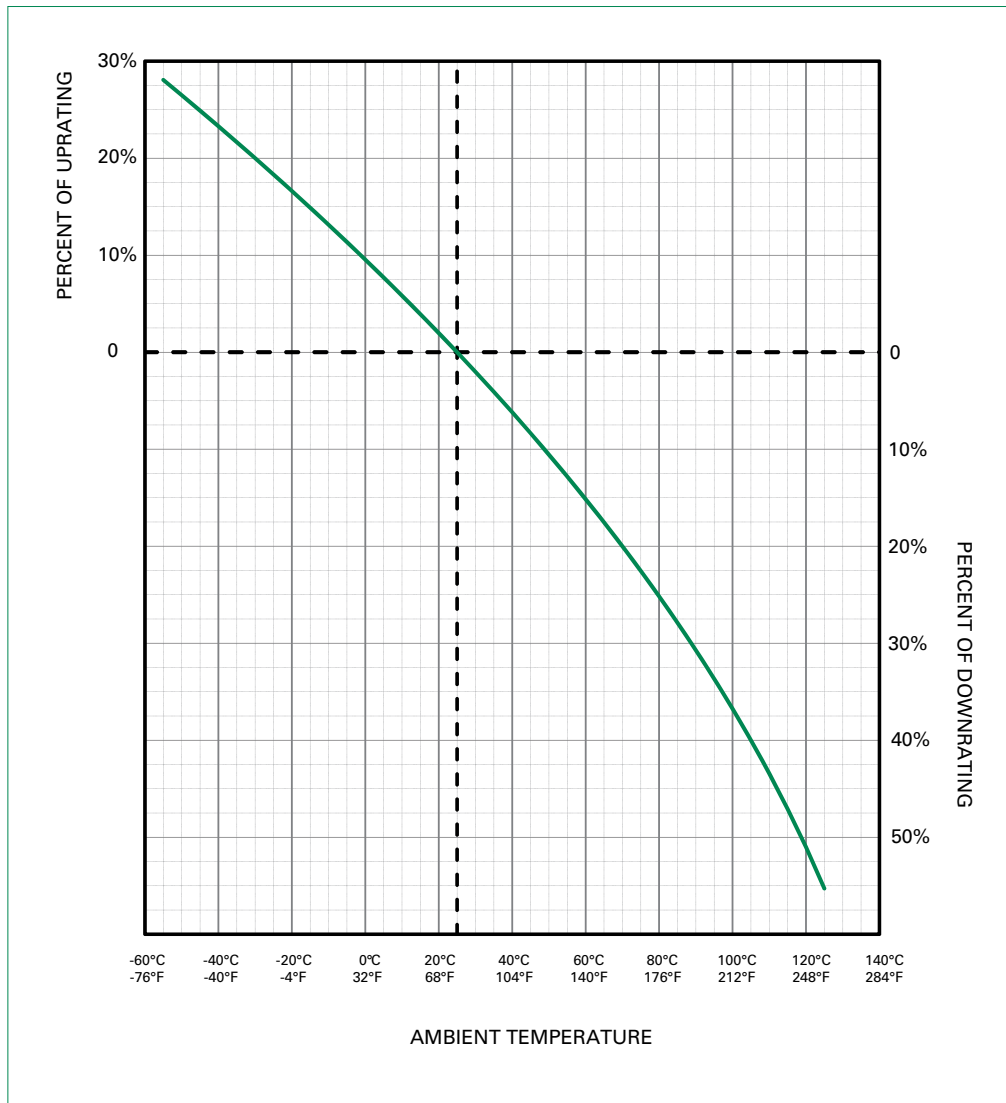
### Peak Let-Through Curve



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



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