

POWR-SPEED® Fuse

L60QS Series High-Speed Cylindrical

Semiconductor Fuses • 600 V Ac/Dc • Class aR - 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)

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Specifications

Voltage Rating	600 V Ac/600 V Dc
Amperage Rating	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 and PCB 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
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 I²T (A²S)	TOTAL CLEARING I²T (A²S) 200 KA @ 600 V AC	TOTAL CLEARING I²T (A²S) 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

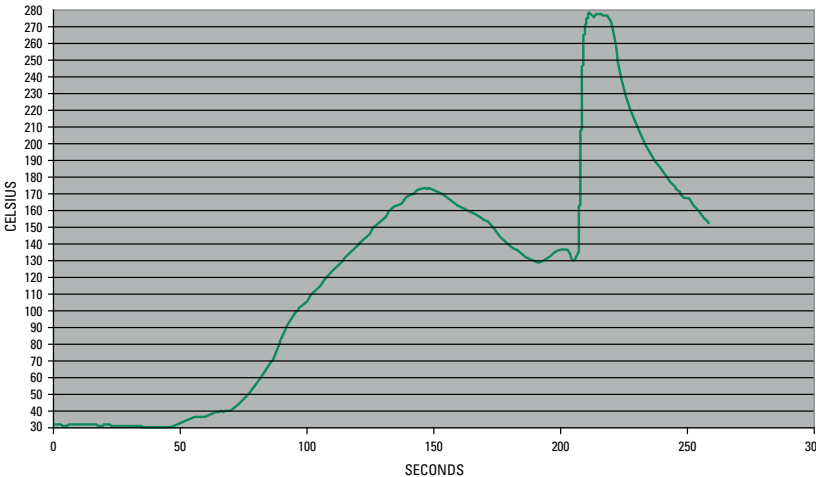
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Recommended Process Parameters

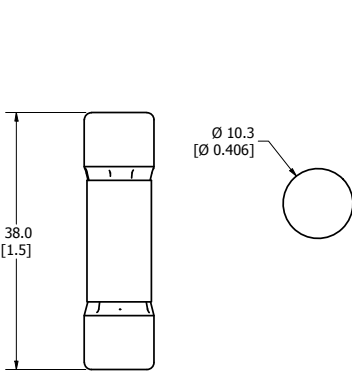
WAVE PARAMETER	LEAD FREE RECOMMENDATION
Preheat:	(Typical industry recommendation)
Temperature minimum:	130 °C
Temperature maximum:	—
Pre-heat time	75 seconds maximum
Solder pot temperature	280 °C maximum
Solder dwell time	270 °C for 8 seconds maximum
Complete cycle time	250 seconds maximum

Soldering Parameters

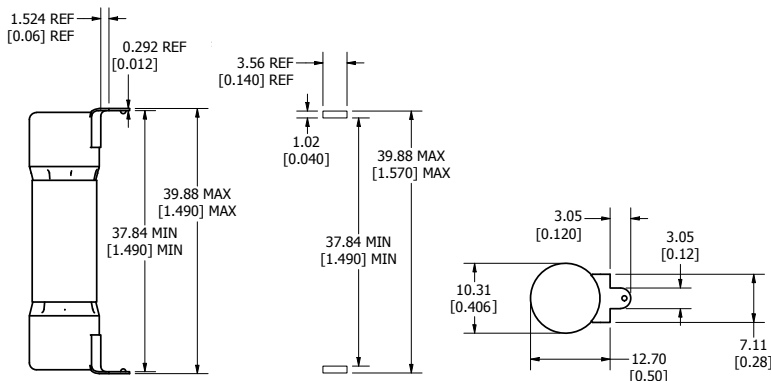


Dimensions in Millimeters (Inches)

FERRULE VERSION



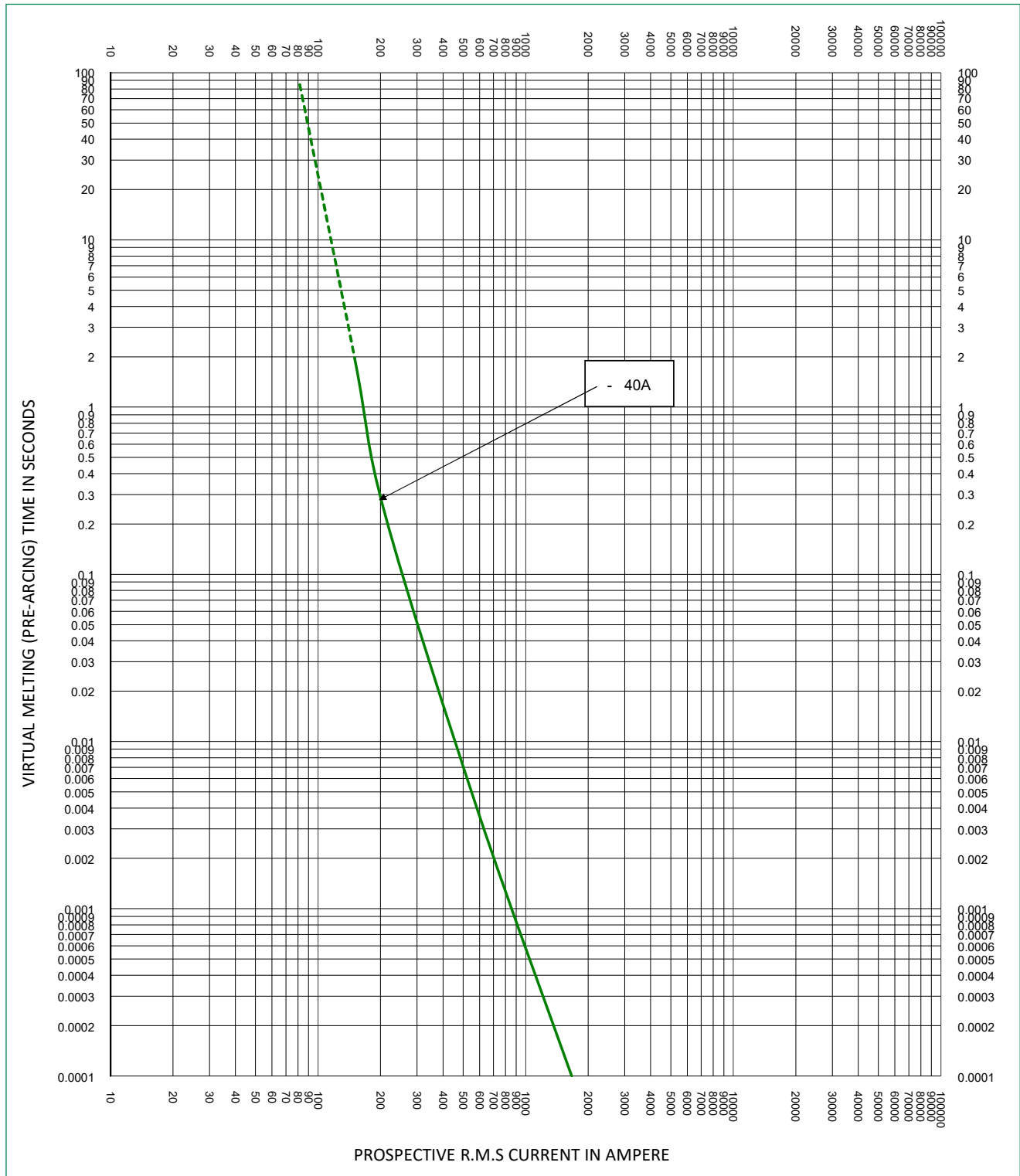
PCB VERSION



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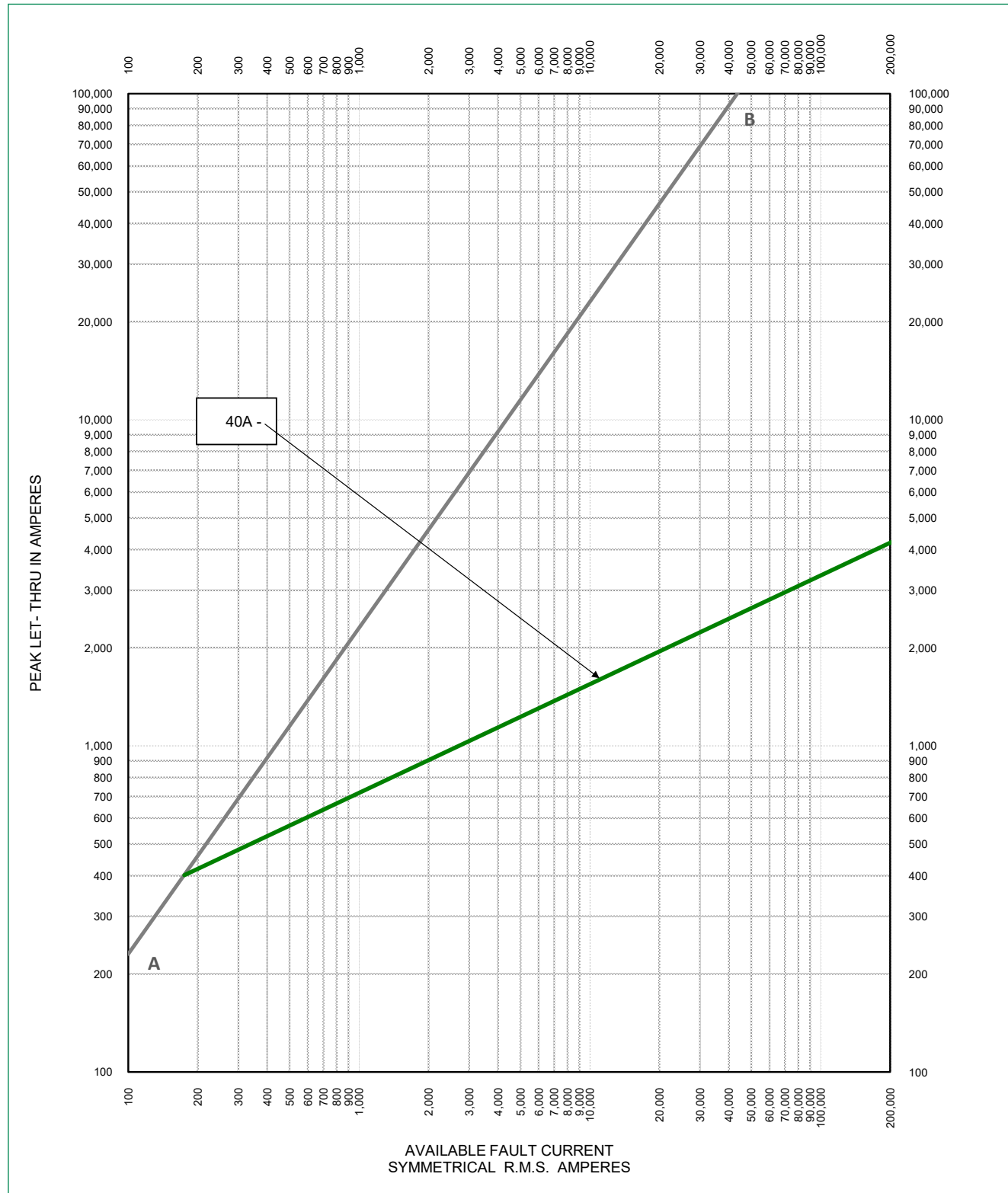
Time Current Curve (40 A)



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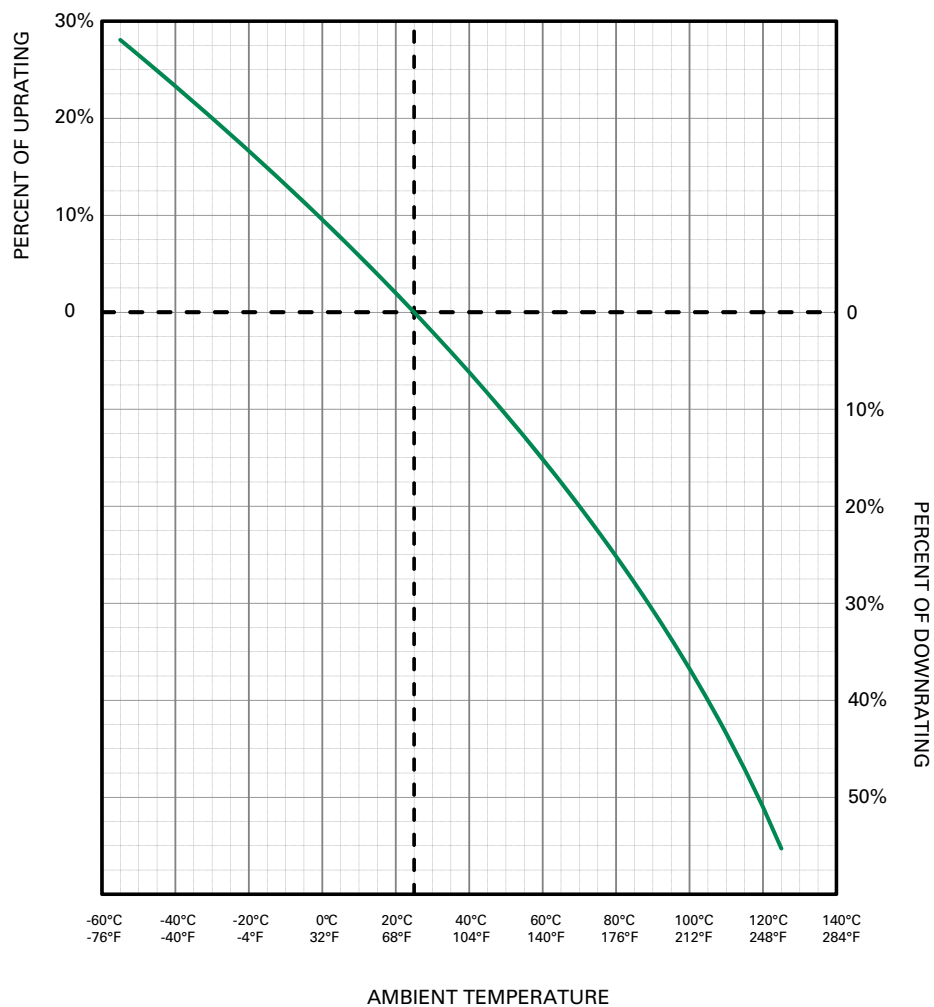
Peak Let-Through Curve



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



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