828 Series
High Voltage Cartridge Fuses

Description

The 828 Series fuses are specifically designed and tested to the circuit protection needs of compact auto-electronics applications. This series is rated 1,000Vdc with remarkable interrupting rating.

Features and Benefits

- Available in Through-hole and Bolt Down version
- AEC-Q200 Qualified
- RoHS-compliant and lead-free

Applications

- On-Board Charger
- Power Distribution Unit

Web Resources

Download ECAD models, order samples, and find technical recources at www.littelfuse.com

Agency Approvals

Agency	Agency File Number	Ampere Range
c UL us	E10480	5A - 60A

Electrical Characteristics

Current Rating	% of Ampere Rating	Opening Time
5A - 60A	100%	4hrs, Min.
5A - 60A	135%	3600 seconds, Max.

Electrical Characteristics by Item

Amp Code	Amp Rating	Voltage Rating	Interrupting Rating	Nominal Cold Resistance (mOhm)	Nominal Melting I²t (A²sec)	Agency Approvals c UL us
005.	5A	1000Vdc	20KA@1000Vdc	40.5	39	x
010.	10A			14.9	243	x
015.	15A		10KA@1000Vdc	7.65	190	x
020.	20A			4.90	536	x
025.	25A			3.73	1190	x
030.	30A			2.90	1500	x
040.	40A			2.55	1950	x
050.	50A			1.90	3100	x
060.	60A			1.57	4800	x

Note: Unless otherwise stated, all specifications are referenced at room ambient temperature.

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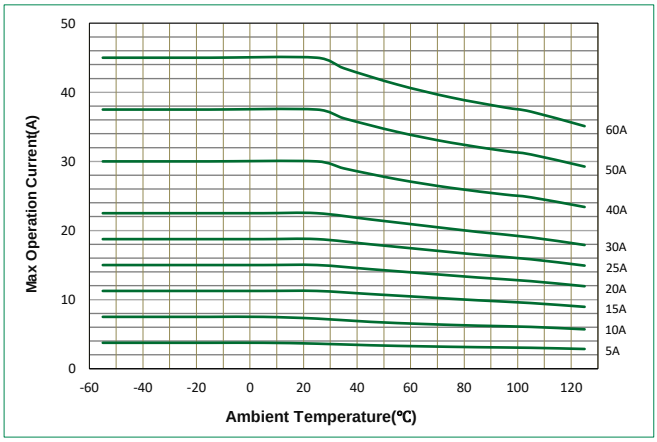
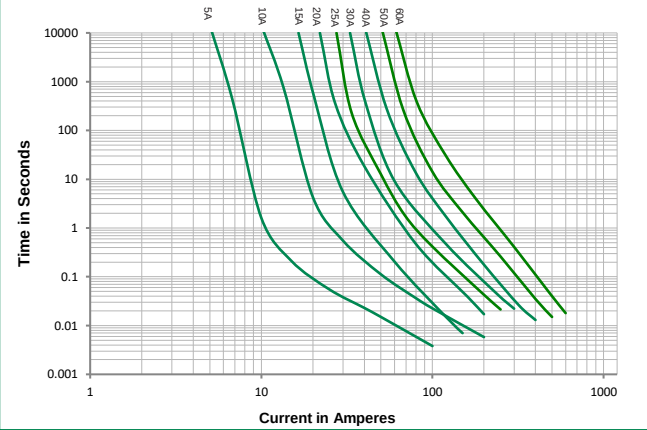
Max Operation Current



Average Time Current Curves

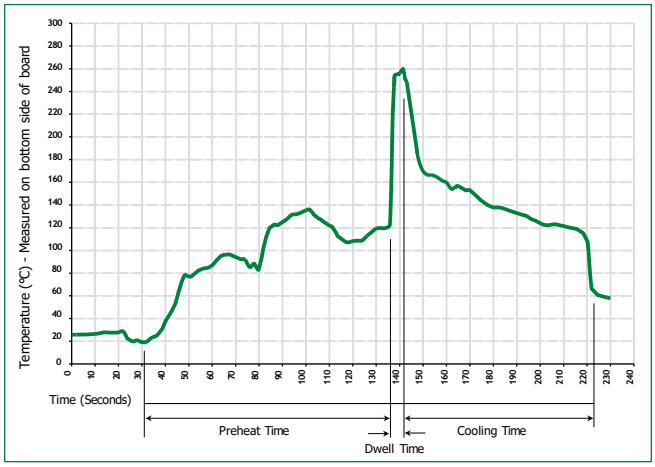


Note: Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Product Characteristics

Materials	Body: Glass fiber Cap: Tin plated copper alloy/Ni plated copper alloy
Mechanical Shock	MIL-STD-202 Method 213
Vibration	MIL-STD-202 Method 204
Thermal Shock	JESD22-A104
Solderability	JESD22-B102E Method 1
Resistance to Solder Heat	MIL-STD-202 Method 210
Operating Temperature	-55°C to 125°C
Product Marking	Brand logo, current and voltage ratings

Soldering Parameters-Wave Soldering



Wave Parameter	Lead-Free Recommendation
Preheat: (Depends on Flex Activation Temperature)	(Typical Industry Recommendation)
Temperature Minimum	100 °C
Temperature Maximum	150 °C
Preheat Time	60–180 seconds
Solder Pot Temperature	260 °C Maximum
Solder Dwell Time	2–5 seconds

Recommended Hand-Solder Parameters:
Solder Iron Temperature: 350 °C +/- 5 °C
Heating Time: 5 seconds max.
Note: These devices are not recommended for IR or Convection Reflow process.

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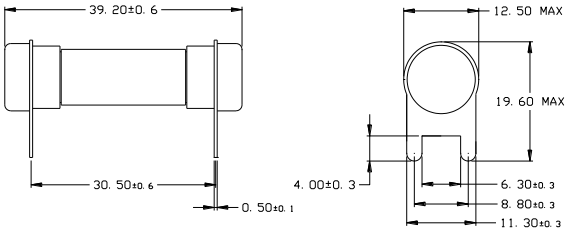
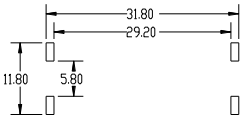
Dimensions (mm)

Through-hole

5A - 30A

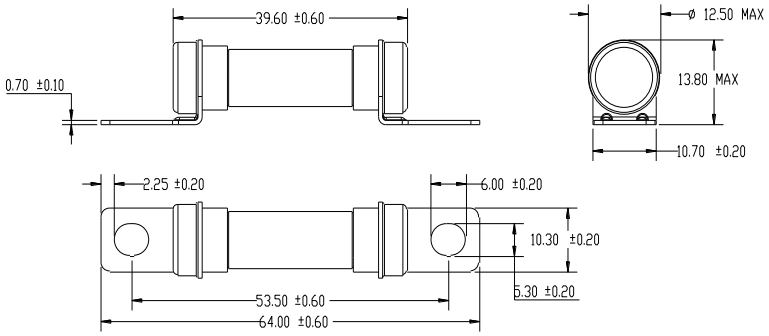


Recommended PCB layout

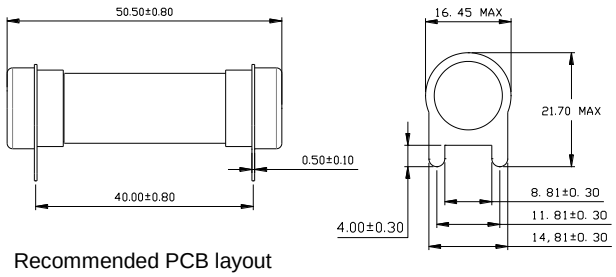


Bolt Down

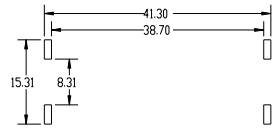
5A - 10A



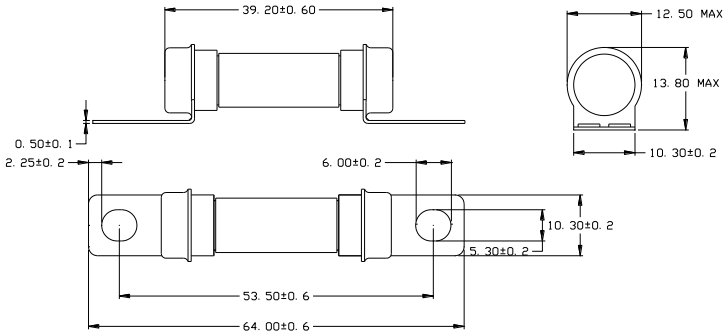
40A - 50A



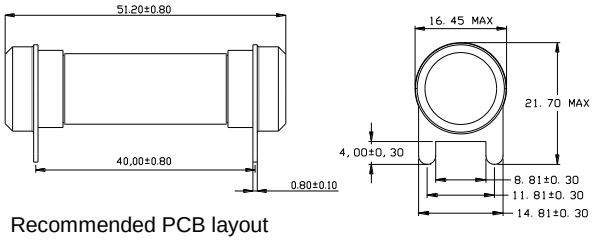
Recommended PCB layout



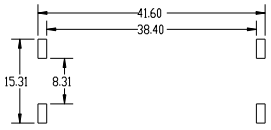
15A - 30A



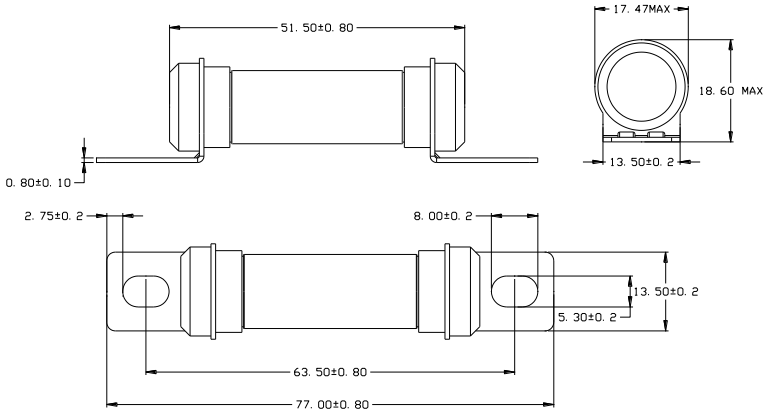
60A



Recommended PCB layout



40A - 60A



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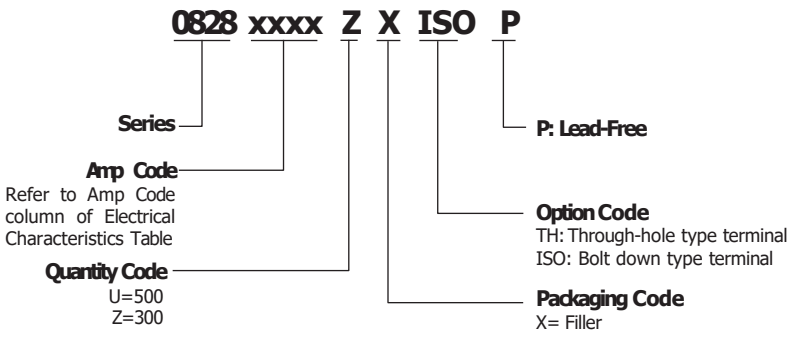
Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Reel Size
828 5A-30A Though Hole Version	NA	500	UXTH	N/A
828 40A-60A Though Hole Version	NA	300	ZXTH	N/A
828 5A-60A Bolt Down Version	NA	300	ZXISO	N/A

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