505 Series, Lead-free 3AB, Fast-Acting Fuse

Agency Approvals

Agency	Agency File Number	Ampere Range
c UL us	Recognised File: E10480	10A - 30A
	813483	10A - 12A
CE		10A - 30A

Description

A 500VAC/VDC rated ceramic fuse with remarkable interrupting rating in a compact 6.3 x 32mm package, which is well suited for circuit protection in high energy applications.

Features

- In accordance with underwriter's Laboratories Standard UL 248-14
- Available in cartridge and axial lead form and with various lead forming dimensions.
- RoHS compliant and Lead-free
- Superior Interrupting rating of 20,000 Amperes
- Compact form factor of 6.3 x 32mm

Applications

- Uninterruptible Power Supplies (UPS)
- 3 Phase Power Supplies

Electrical Characteristics for Series

% of Ampere Rating	Ampere Rating	Opening Time
150%	10 - 30	30 minutes, Maximum
200%		30 minutes, Maximum
300%		10 sec., Maximum

Electrical Characteristics Specifications by Item

Amp Code	Amp Rating (A)	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I^2T (A^2Sec.)	Agency Approvals		
						c UL us		CE
010.	10	450	20kA@450VAC 1000A@250VDC	0.0167	91	X	X	X
012.	12	450		0.0117	192	X	X	X
016.	16	500	50kA@500VAC 20kA@500VDC	0.0073	51	X		X
020.	20	500	30kA@500VAC 20kA@500VDC	0.0056	101	X		X
025.	25	500		0.0048	145	X		X
030.	30	500		0.0038	203	X		X

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Specifications are subject to change without notice.
Please refer to www.littelfuse.com/series/505.html for current information.

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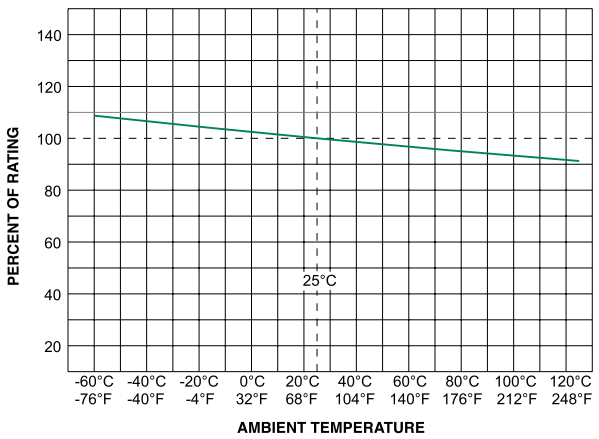
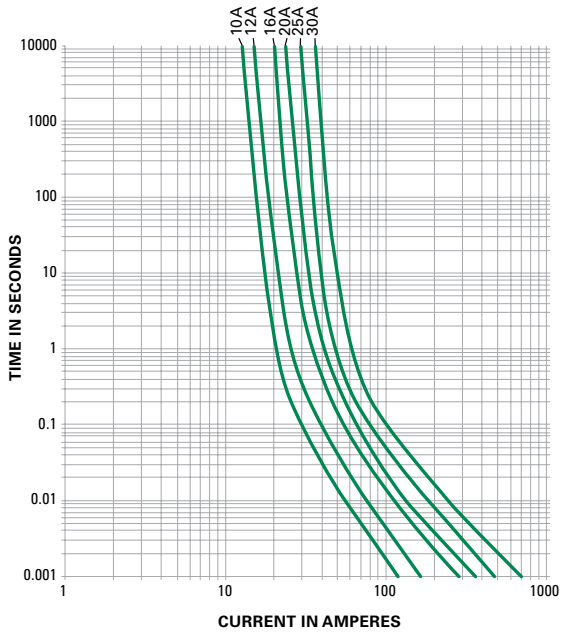
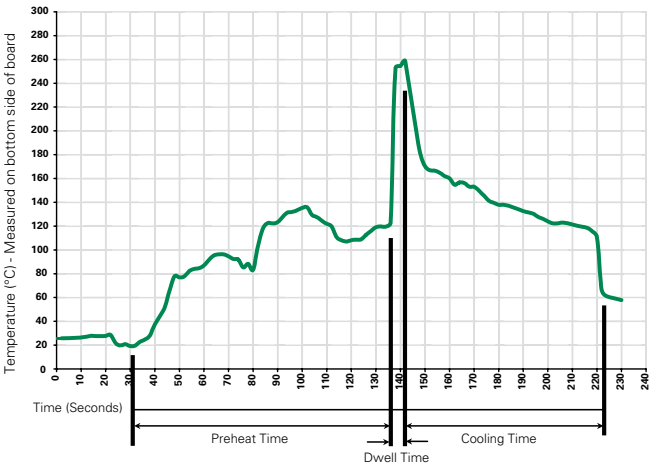
Temperature Rerating Curve



Average Time Current Curves



Soldering Parameters - Wave Soldering



Recommended Process Parameters:

Wave Parameter	Lead-Free Recommendation
Preheat: (Depends on Flux 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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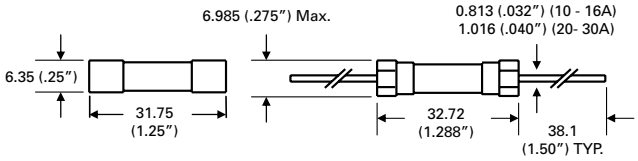
Product Characteristics

Material	Body: Ceramic Cap: Nickel–plated brass Leads: Tin–plated Copper
Terminal Strength	MIL-STD-202G, Method 211A, Test Condition A
Solderability	Reference IEC 60127 Second Edition 2003-01 Annex A
Product Marking	Cap 1: Brand logo, current and voltage rating Cap 2: Series and agency approval markings
Packaging	Available in Bulk (M=1000 pcs/pkg)

Operating Temperature	–55°C to +125°C
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B: (5 cycles –65°C to +125°C)
Vibration	MIL-STD-202G, Method 201A
Humidity	MIL-STD-202G, Method 103B, Test Condition A. high RH (95%) and elevated temperature (40°C) for 240 hours
Salt Spray	MIL-STD-202G, Method 101D, Test Condition B

Dimensions

505 000P Series 505 000EP Series



All Dimensions in mm

Part Numbering System

0505 xxxx M X E P

Series

Amp Code
Refer to Amp Code column of Electrical Characteristics Table

Quantity Code
M = 1000

Packaging Code
X = Filler

Option Codes
E : Axial Leaded
Others : special options. Please call Littelfuse for detail.

Lead-Free

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Reel Size
505 Series				
Bulk	N/A	1000	MX	N/A
Bulk	N/A	1000	MXE	N/A

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