

RoHS **Pb** **505 Series, Lead-free 3AB, Fast-Acting Fuse**



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

Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|-------------------------|--------------|
| | Recognised File: E10480 | 10A - 30A |
| | 813483 | 10A - 12A |
| | | 10A - 30A |

Electrical Characteristics for Series

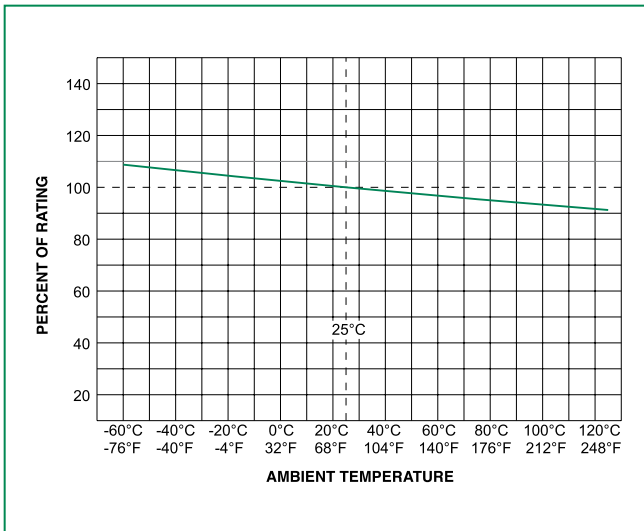
| % of Ampere Rating | Ampere Rating | Opening Time |
|--------------------|---------------|---------------------|
| 150% | 10 - 30 | 30 minutes, Maximum |
| 200% | | 30 minutes, Maximum |
| 300% | | 10 sec., Maximum |

Electrical Characteristics Specifications by Item

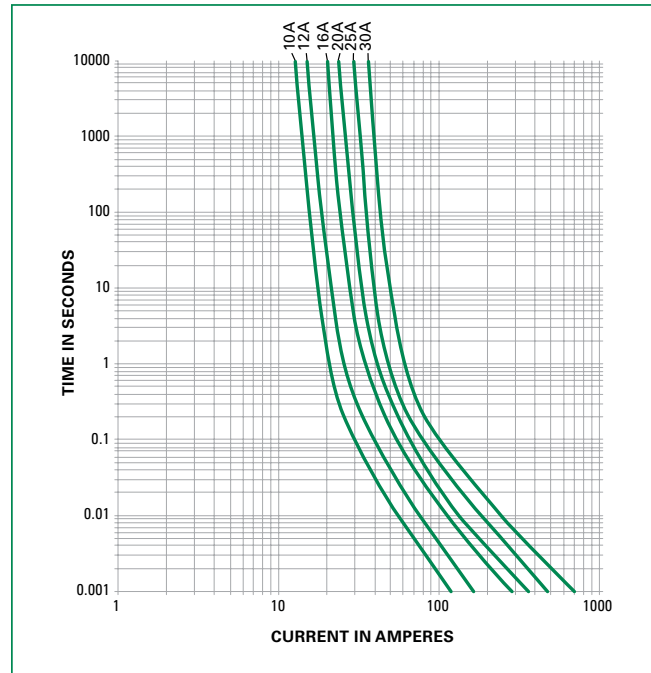
| Amp Code | Amp Rating (A) | Max Voltage Rating (V) | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I ² T (A ² Sec.) | Agency Approvals | | |
|----------|----------------|------------------------|-----------------------------|--------------------------------|--|------------------|---|---|
| | | | | | | | | |
| 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 |

505 Series

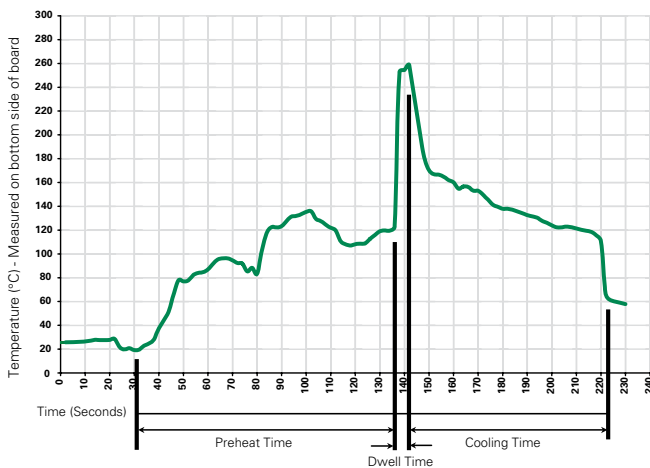
Temperature Derating Curve



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.

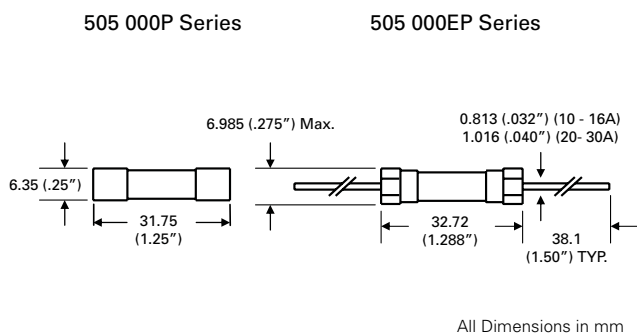
Note: These devices are not recommended for IR or Convection Reflow process.

Product Characteristics

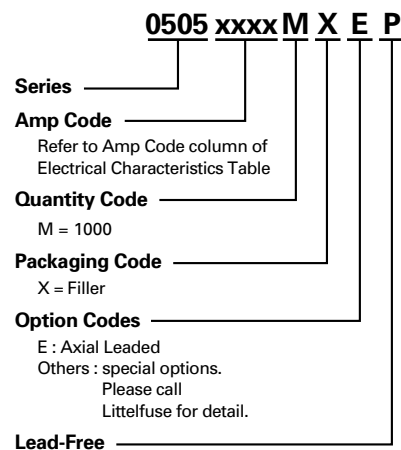
| | |
|--------------------------|---|
| Material | Body: Ceramic Cap: Nickel-plated brass Leads: Tin-plated Copper |
| Terminal Strength | MIL-STD-202G, Method 211A, Test Condition A |
| Solderability | Reference IEC 60127 Second Edition 2003-01 Annex A |
| Product Marking | Cap 1: Brand logo, current 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



Part Numbering System



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 |

505 Series