

### 688 Series Lead-Free, 6x25mm Fuse



#### Agency Approvals

| Agency | Agency File Number | Ampere Range |
|--------|--------------------|--------------|
|        | T 5025 7715 0001   | 30A          |
|        | E10480             | 30A          |

#### Electrical Characteristics for Series

| % of Ampere Rating | Ampere Rating | Opening Time            |
|--------------------|---------------|-------------------------|
| 100%               | 30A           | 4 Hours, <b>Min.</b>    |
| 200%               |               | 120 Second, <b>Max.</b> |

#### Description

A 70Vdc rated ceramic fuse with remarkable interrupting and surge withstanding rating in a compact 6x25mm package, which is well suited for circuit protection in 48Vdc telecom applications.

#### Features

- In accordance with Underwriter's Laboratories Standard UL 248-14
- Compact (6X25mm) form factor with cartridge and axial-lead package options
- Lead-free, RoHS compliant and Halogen-free
- Remarkable breaking capacity (interrupting rating) 2500A@70Vdc
- Surge withstanding capability 1.2/50 -8/20us 20kV/10kA

#### Applications

- SPD and PDU in Telecom Datacenter
- BTS (Base Transceiver Station)

#### Electrical Characteristic Specifications by Item

| Amp Code | Amp Rating | Voltage Rating | Interrupting Rating | Surge Rating                   | Nominal Cold Resistance (Ohms) | Nominal Melting I <sup>2</sup> t Under 10I <sub>n</sub> (A <sup>2</sup> sec) | Agency Approvals |   |
|----------|------------|----------------|---------------------|--------------------------------|--------------------------------|--|------------------|---|
|          |            |                |                     |                                |                                |  | TUV              |   |
| 030.     | 30         | 70Vdc          | 2500A @ 70Vdc       | 1.2/50<br>-8/20us<br>20kV/10kA | 2.1                            | 4200   | x                | x |

#### Additional Information



Datasheet

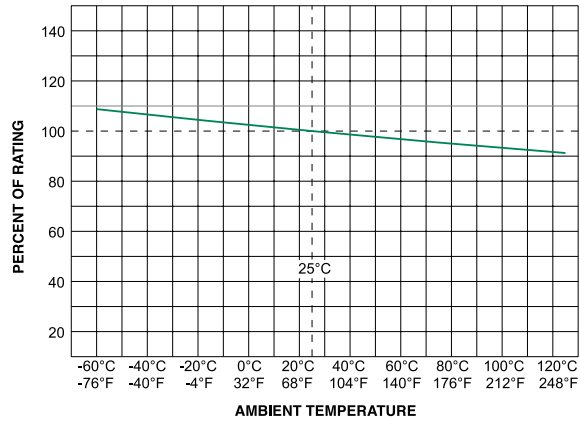


Resources

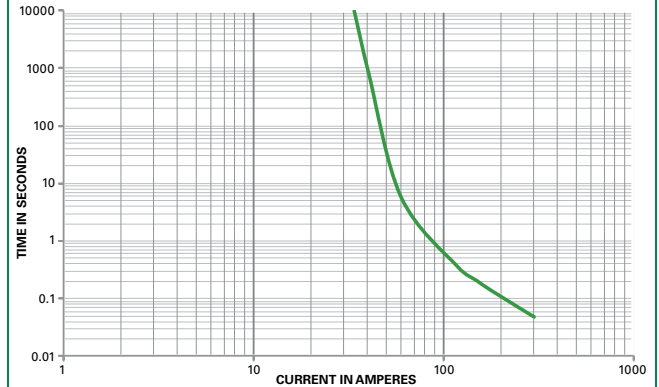


Samples

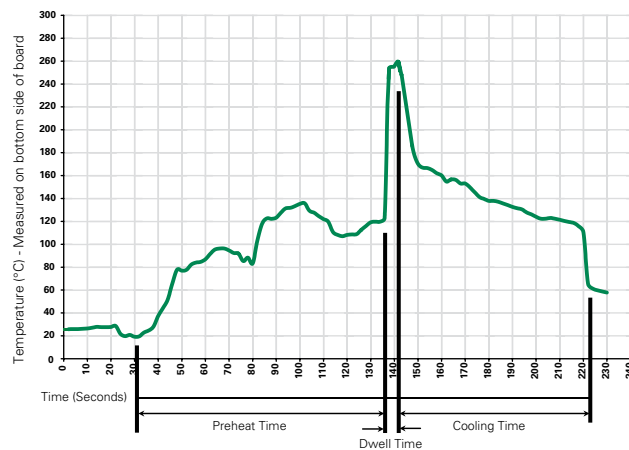
### Temperature Derating Curve



### Average Time Current Curves



### Soldering Parameters - Wave Soldering



#### Recommended Process Parameters:

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

#### Recommended Hand-Solder Parameters:

Solder Iron Temperature: 350° C +/- 5°C  
Heating Time: 5 seconds max.

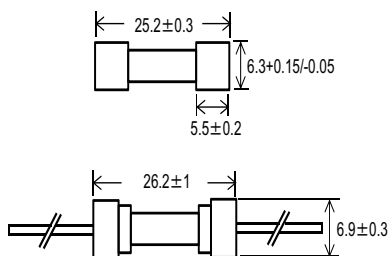
**Note:** These devices are not recommended for IR or Convection Reflow process.

### Product Characteristics

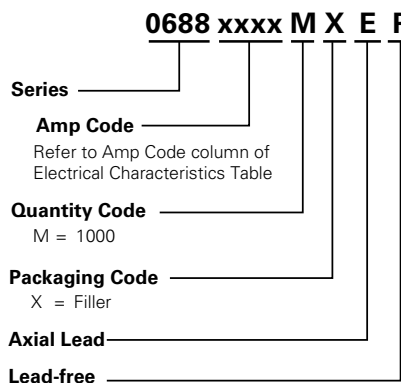
|                          |   |
|--------------------------|---|
| <b>Materials</b>         | Body : Ceramic<br>Cap : Tin-plated Copper<br>Leads: Tin-plated Copper |
| <b>Terminal Strength</b> | MIL-STD-202G, Method 211A, Test Condition A                           |
| <b>Solderability</b>     | Reference IEC 60127 Second Edition 2003-01 Annex A                    |
| <b>Product Marking</b>   | Brand logo, current and voltage ratings, agency approval marks        |
| <b>Packaging</b>         | Available in Bulk and Ammo packaging (M=100 pcs/pkg)                  |

|                               |   |
|-------------------------------|---|
| <b>Operating Temperature:</b> | -55°C to 125°C.   |
| <b>Thermal Shock:</b>         | MIL-STD-202G, Method 107G, Test Condition B   |
| <b>Vibration</b>              | MIL-STD-202G, Method 201A   |
| <b>Humidity</b>               | MIL-STD-202G, Method 103B, Test Condition A: High RH (95%) and elevated temp (40°C) for 240 hours |
| <b>Salt Spray</b>             | MIL-STD-202G, Method 101E, Test Condition B   |

### Dimensions



### Part Numbering System



### Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|--------------|
| <b>688 Series</b> |                         |          |                           |              |
| Ammo              | N/A                     | 1000     | MAT4P                     | N/A          |
| Bulk              | N/A                     | 1000     | MX                        | N/A          |