

RoHS  **373 Series, TR5®, Fast-Acting Fuse**



### Agency Approvals

| Agency                                                                            | Agency File Number      | Ampere Range |
|-----------------------------------------------------------------------------------|-------------------------|--------------|
|  | File number:<br>E 67006 | 50mA - 6.3A  |
|  | Certification:<br>51378 | 50mA - 6.3A  |
|  | File number:<br>E67006  | 8A - 10A     |

### Electrical Characteristics

| % of Ampere Rating | Ampere Rating | Opening Time            |
|--------------------|---------------|-------------------------|
| 200%               | 50mA - 6.3A   | 5 Seconds, <b>Max.</b>  |
|                    | 8A - 10A      | 60 Seconds, <b>Max.</b> |

### Description

The TR5® 373 Series are fast-acting 250V rated fuses, that are designed in accordance to UL 248-14.

### Features

- Reduced PCB space requirements
- Direct solderable or plug-in versions
- Internationally approved
- Low internal resistance
- Shock safe casing
- Vibration resistant
- Halogen free
- Lead-free
- Available from 50mA to 10A

### Applications

- Battery Chargers
- Consumer Electronics
- Power supplies
- Industrial Controllers

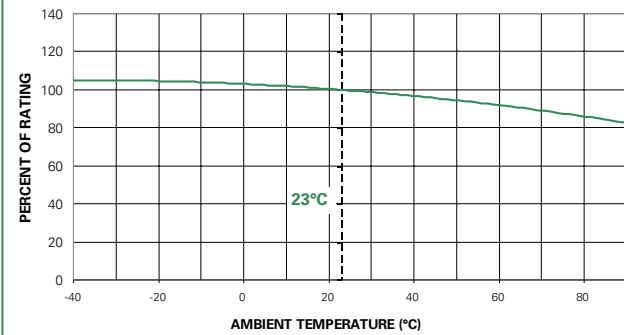
### Electrical Characteristics

| Amp Code | Rated Current       | Voltage Rating | Breaking Capacity                        | Voltage Drop<br>$1.0 \times I_N$<br>max. (mV) | Power Dissipation<br>$1.0 \times I_N$<br>max. (mW) | Melting Integral<br>$10 \times I_N$<br>max. (A²s) | Agency Approvals                                                                      |                                                                                       |                                                                                       |
|----------|---------------------|----------------|------------------------------------------|-----------------------------------------------|----------------------------------------------------|---------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|          |                     |                |                                          |                                               |                                                    |                                                   |  |  |  |
| 0050     | 50mA                | 250V           | 50A / 250 VAC<br>50-60 Hz<br>cos φ = 1.0 | 1400                                          | 70                                                 | 0.0001                                            | X                                                                                     | X                                                                                     |                                                                                       |
| 0063     | 63mA                | 250V           |                                          | 1300                                          | 85                                                 | 0.00023                                           | X                                                                                     | X                                                                                     |                                                                                       |
| 0080     | 80mA                | 250V           |                                          | 1200                                          | 100                                                | 0.00037                                           | X                                                                                     | X                                                                                     |                                                                                       |
| 0100     | 100mA               | 250V           |                                          | 1100                                          | 110                                                | 0.0013                                            | X                                                                                     | X                                                                                     |                                                                                       |
| 0125     | 125mA               | 250V           |                                          | 1000                                          | 125                                                | 0.0019                                            | X                                                                                     | X                                                                                     |                                                                                       |
| 0160     | 160mA               | 250V           |                                          | 950                                           | 155                                                | 0.004                                             | X                                                                                     | X                                                                                     |                                                                                       |
| 0200     | 200mA               | 250V           |                                          | 850                                           | 170                                                | 0.0065                                            | X                                                                                     | X                                                                                     |                                                                                       |
| 0250     | 250mA               | 250V           |                                          | 750                                           | 190                                                | 0.014                                             | X                                                                                     | X                                                                                     |                                                                                       |
| 0315     | 315mA               | 250V           |                                          | 650                                           | 205                                                | 0.032                                             | X                                                                                     | X                                                                                     |                                                                                       |
| 0400     | 400mA               | 250V           |                                          | 230                                           | 95                                                 | 0.016                                             | X                                                                                     | X                                                                                     |                                                                                       |
| 0500     | 500mA               | 250V           |                                          | 220                                           | 110                                                | 0.025                                             | X                                                                                     | X                                                                                     |                                                                                       |
| 0630     | 630mA               | 250V           |                                          | 210                                           | 135                                                | 0.045                                             | X                                                                                     | X                                                                                     |                                                                                       |
| 0800     | 800mA               | 250V           |                                          | 200                                           | 160                                                | 0.069                                             | X                                                                                     | X                                                                                     |                                                                                       |
| 1100     | 1.00A               | 250V           |                                          | 190                                           | 190                                                | 0.125                                             | X                                                                                     | X                                                                                     |                                                                                       |
| 1125     | 1.25A               | 250V           |                                          | 180                                           | 225                                                | 0.2                                               | X                                                                                     | X                                                                                     |                                                                                       |
| 1160     | 1.60A               | 250V           |                                          | 170                                           | 275                                                | 0.38                                              | X                                                                                     | X                                                                                     |                                                                                       |
| 1200     | 2.00A               | 250V           |                                          | 160                                           | 320                                                | 0.63                                              | X                                                                                     | X                                                                                     |                                                                                       |
| 1250     | 2.50A               | 250V           |                                          | 150                                           | 375                                                | 1.2                                               | X                                                                                     | X                                                                                     |                                                                                       |
| 1315     | 3.15A               | 250V           |                                          | 140                                           | 445                                                | 1.9                                               | X                                                                                     | X                                                                                     |                                                                                       |
| 1400     | 4.00A               | 250V           |                                          | 130                                           | 520                                                | 3.5                                               | X                                                                                     | X                                                                                     |                                                                                       |
| 1500     | 5.00A               | 250V           |                                          | 120                                           | 630                                                | 6.2                                               | X                                                                                     | X                                                                                     |                                                                                       |
| 1630     | 6.30A               | 250V           |                                          | 115                                           | 1000                                               | 9.1                                               | X                                                                                     | X                                                                                     |                                                                                       |
| 1800     | 8.00A <sup>1</sup>  | 250V           |                                          | 120                                           | 1600                                               | 30                                                |                                                                                       |                                                                                       | X                                                                                     |
| 2100     | 10.00A <sup>1</sup> | 250V           |                                          | 110                                           | 2000                                               | 55                                                |                                                                                       |                                                                                       | X                                                                                     |

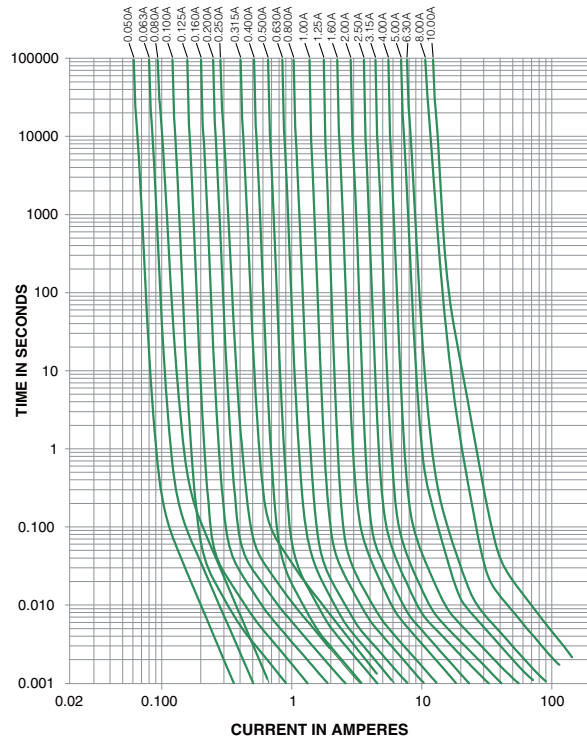
1. Conducting path cross-section minimum  $\geq 0.2\text{mm}^2$

Note: 1.00 means the number one with two decimal places. 1,000 means the number one thousand.

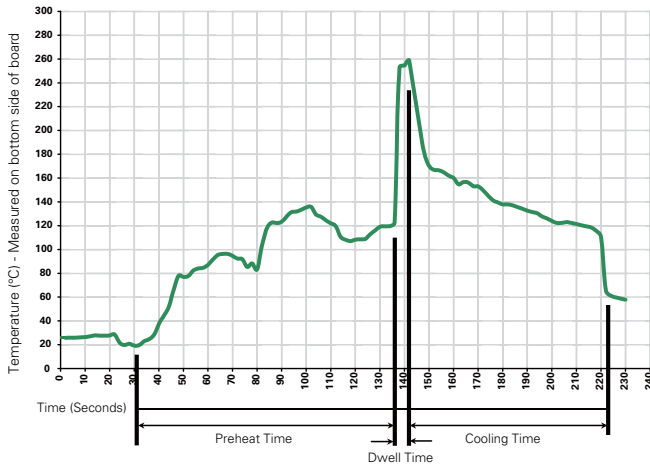
## Temperature Derating Curve



## Average Time Current Curves



## Soldering Parameters - Wave Soldering



### Recommended Process Parameters:

| Wave Parameter                                              | Lead-Free Recommendation          |
|-------------------------------------------------------------|-----------------------------------|
| <b>Preheat:</b><br>(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.

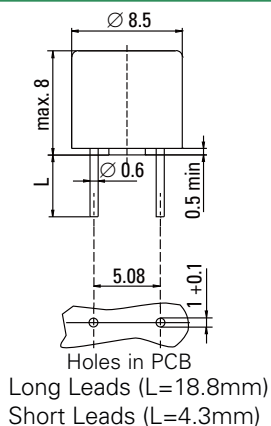
**Note: These devices are not recommended for IR or Convection Reflow process.**

### Product Characteristics

|                                  |                                                                                                |
|----------------------------------|------------------------------------------------------------------------------------------------|
| <b>Materials</b>                 | Base/Cap: Brown Thermoplastic<br>Polyamide PA 6.6, UL 94 V-0<br>Round Pins: Copper, Tin-plated |
| <b>Lead Pull Strength</b>        | 10 N (EN 60068-2-21)                                                                           |
| <b>Solderability</b>             | 260°C, ≤ 3s. (Wave)<br>350°C, ≤ 1s. (Soldering Iron)                                           |
| <b>Soldering Heat Resistance</b> | 260°C, 10s. (IEC 60068-2-20)<br>350°C, 3s. (Soldering Iron)                                    |

|                              |                                                                                                                      |
|------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <b>Operating Temperature</b> | -40°C to +85°C (consider de-rating)                                                                                  |
| <b>Climatic Category</b>     | -40°C/+85°C/21 days<br>(EN 60068-1,-2-1,-2-2,-2-78)                                                                  |
| <b>Stock Conditions</b>      | +10°C to +60°C<br>RH ≤ 75% yearly average, without dew, maximum value for 30 days-95%                                |
| <b>Vibration Resistance</b>  | 24 cycles at 15 min. each<br>(EN 60068-2-6)<br>10 - 60 Hz at 0.75 mm amplitude<br>60 - 2000 Hz at 10G's acceleration |

### Dimensions



### Part Numbering System

|                       |                                                                                                               |             |             |
|-----------------------|---------------------------------------------------------------------------------------------------------------|-------------|-------------|
|                       | <b>373</b>                                                                                                    | <b>xxxx</b> | <b>0000</b> |
| <b>Series</b>         |                                                                                                               |             |             |
| <b>Amp Code</b>       | Refer to Amp Code column of Electrical Characteristics Table                                                  |             |             |
| <b>Packaging Code</b> | 0000 Tape/Ammopack (1,000 pcs.)<br>0410 Short Leads - Bulk (1,000 pcs.)<br>0430 Short Leads - Bulk (200 pcs.) |             |             |

### Packaging

| Packaging Option  | Packaging Specification | Quantity | Quantity & Packaging Code | Taping Width |
|-------------------|-------------------------|----------|---------------------------|--------------|
| <b>373 Series</b> |                         |          |                           |              |
| Bulk              | N/A                     | 1,000    | MX                        | N/A          |
| Bulk              | N/A                     | 1,000    | MXE                       | N/A          |



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