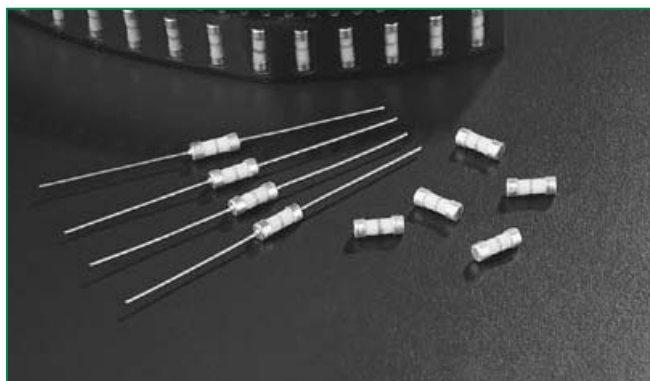


### RoHS Barrier Network Fuse 242 Series



#### Description

The 242 Series hazardous area barrier network fuse offers a range of fuses designed to enable greater safety operating electronic equipment within potentially explosive environments.


#### Features

- Meets Barrier Network Standards (EN50020) for hazardous applications.
- High interrupting rating. Meets the 1500A minimum.
- Available in both axial lead and surface mount.

#### Applications

- Type i protected electrical equipment; Electrical connections and components, Test equipment


#### Agency Approvals

| Agency  | Agency File Number   | Ampere Range    |
|---|--|-----------------|
|  | Recognized under the components program of Underwriters Laboratories (JDYX2-10480) | 0.050 - 0.250 A |

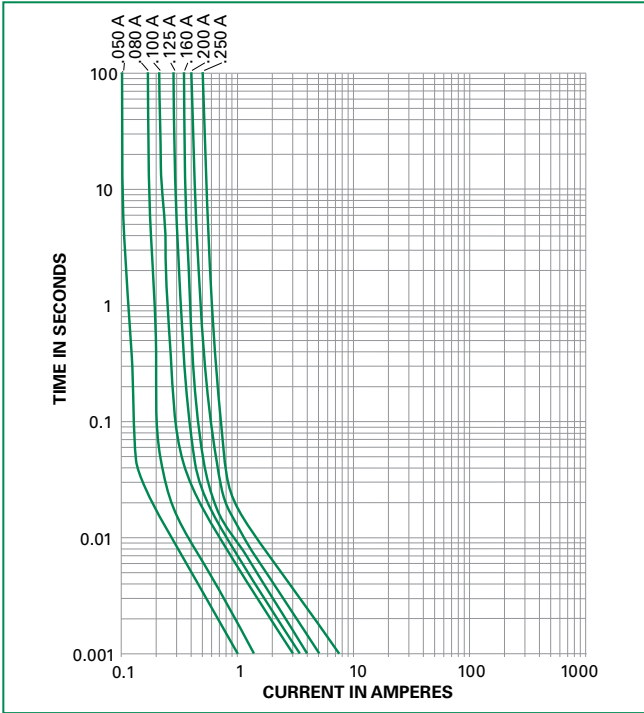
#### Electrical Characteristics

| % of Ampere Rating | Opening Time           |
|--------------------|------------------------|
| 110%               | 4 hours, Minimum       |
| 300%               | 10 seconds, Maximum    |
| 1000%              | 0.002 seconds, Maximum |

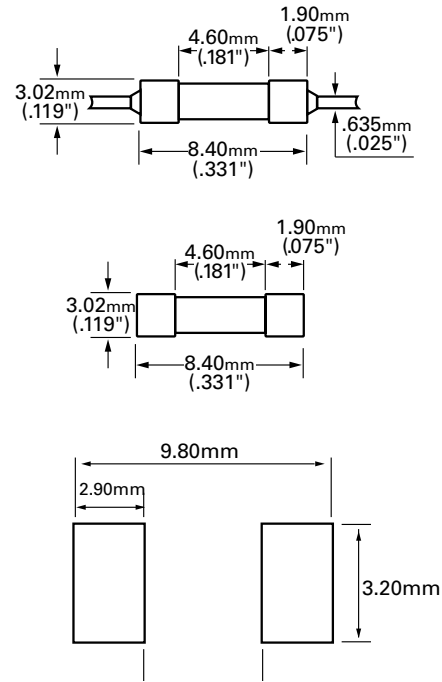
#### Electrical Characteristics

| Ampere Rating (A) | Amp Code | Body Color Coding | Interrupting Rating | Nominal Cold Resistance (Ohms) | Nominal Melting I <sup>2</sup> t (A <sup>2</sup> Sec.) | Agency Approvals<br> |
|-------------------|----------|-------------------|---------------------|--------------------------------|--|---|
| 0.050             | .050     | Red               | 4000A @ 250VAC/VDC  | 11.34                          | 0.000103   | x   |
| 0.080             | .080     | Green             |                     | 8.19                           | 0.000214   | x   |
| 0.100             | .100     | Blue              |                     | 3.60                           | 0.000977   | x   |
| 0.160             | .160     | Violet            |                     | 3.00                           | 0.00157  | x   |
| 0.200             | .200     | Brown             |                     | 2.68                           | 0.0038   | x   |
| 0.250             | .250     | Black             |                     | 1.6                            | 0.00579  | x   |

### Average Time Current Curves

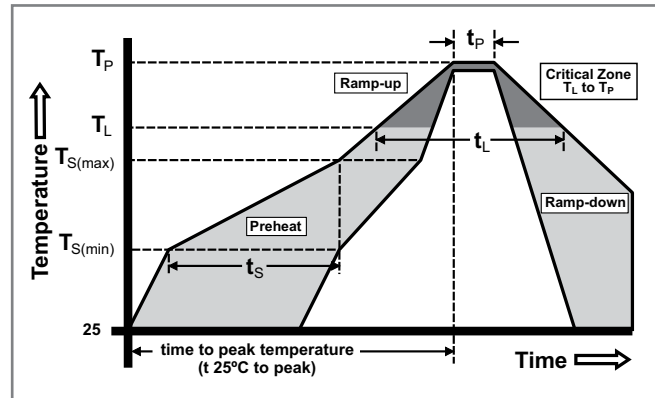


### Dimensions



### Soldering Parameters

|  |                                    |                  |
|--|------------------------------------|------------------|
| Reflow Condition                                       | Pb – Free assembly                 |                  |
| Pre Heat   | - Temperature Min ( $T_{s(min)}$ ) | 150°C            |
|  | - Temperature Max ( $T_{s(max)}$ ) | 200°C            |
|  | - Time (min to max) ( $t_s$ )      | 60 – 180 secs    |
| Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak) | 5°C/second max                     |                  |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate                   | 5°C/second max                     |                  |
| Reflow   | - Temperature ( $T_L$ ) (Liquidus) | 217°C            |
|  | - Temperature ( $t_L$ )            | 60 – 150 seconds |
| Peak Temperature ( $T_p$ )                             | 250 <sup>+0/-5</sup> °C            |                  |
| Time within 5°C of actual peak Temp. ( $t_p$ )         | 20 – 40 seconds                    |                  |
| Ramp-down Rate   | 5°C/second max                     |                  |
| Time 25°C to peak Temperature ( $T_p$ )                | 8 minutes Max.                     |                  |
| Do not exceed  | 260°C                              |                  |



|                |                        |
|----------------|------------------------|
| Wave Soldering | 260°C, 10 seconds max. |
|----------------|------------------------|

### Product Characteristics

|                                       |  |
|---------------------------------------|--|
| Operating Temperature                 | -40°C to 125°C.                        |
| Thermal Shock                         | Withstands 5 cycles of - 55°C to 125°C |
| Vibration                             | Per MIL-STD-202F                       |
| Insulation Resistance (After Opening) | Greater than 10,000 ohms.              |

### Part Numbering System

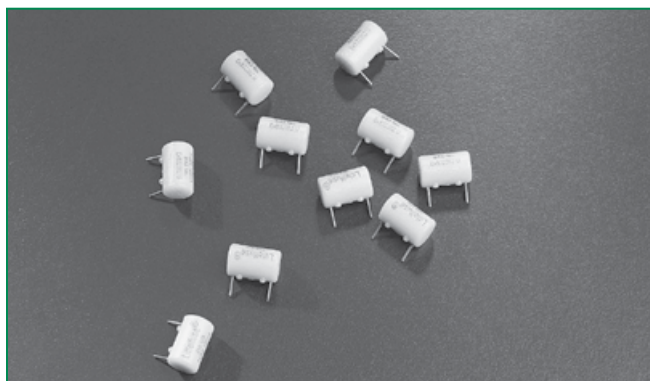
**0242.050UAT1**

**SERIES** ————

**AMP CODE** ————  
 Refer to Amp Code column in the Electrical Specifications table.

**QUANTITY & PACKAGING CODE** ————  
 HAT1 = 100 pcs, Axial Leaded, Ammo Pack T1 Tape  
 UAT1 = 500 pcs, Axial Leaded, Ammo Pack T1 Tape  
 UR = 500 pcs, Surface Mount, Tape & Reel

### RoHS Safe-T-Plus Fuse 259 Series



#### Description

The Safe-T-Plus 259 Series offers a range of encapsulated fuses designed to enable greater safety operating electronic equipment within potentially explosive environments. Originally designed to serve the needs of gas plants, petrochemical and processing industries, these fuses are certified for use within intrinsically safe apparatus (CENELEC EN50014 to 039 and IEC 60079-11).

The encapsulation material is Polyamide 6 at a minimum depth of 1mm (3mm typically) and has a CTI (Comparative Tracking Index) of greater than 175. The leads are separated by a minimum clearance and creepage distance of 9 mm and hence are suitable for use in intrinsically safe apparatus for voltage not exceeding 125V rms (190V peak).

#### Agency Approvals

| Agency  | Agency File Number | Ampere Range |
|---------|--------------------|--------------|
| Baseefa | Baseef02ATEX0071U  | .062A - 1.0A |

#### Electrical Characteristics

| % of Ampere Rating | Opening Time       |
|--------------------|--------------------|
| 100%               | 4 hours, Minimum   |
| 200%               | 5 seconds, Maximum |

#### Features

- Hermetically sealed
- .062A - 5A range options
- Designed to operate within environments where there is danger of gas explosion from faulty circuits
- Meets certification for use within intrinsically safe apparatus for applications such as gas plants, petrochemical and processing industries

#### Applications

- Testing, measuring or processing electronic and electrical equipment

#### Electrical Characteristics

| Ampere Rating (A) | Amp Code | Interrupting Rating             | Nominal Cold Resistance (Ohms) | Nominal Melting I <sup>2</sup> t (A <sup>2</sup> Sec.) | Nom Voltage Drop (mV) | Agency Approvals |
|-------------------|----------|---------------------------------|--------------------------------|--|-----------------------|------------------|
|                   |          |                                 |                                |  |                       | Baseefa          |
| 0.062             | .062     | 50A @ 125 VAC<br>300A @ 125 VDC | 8.1                            | 0.00016  | 2.10                  | x                |
| 0.125             | .125     |                                 | 2.4                            | 0.0012   | 1.30                  | x                |
| 0.250             | .250     |                                 | 0.87                           | 0.0095   | 0.83                  | x                |
| 0.375             | .375     |                                 | 0.46                           | 0.025  | 0.81                  | x                |
| 0.500             | .500     |                                 | 0.32                           | 0.0598   | 0.78                  | x                |
| 0.750             | .750     |                                 | 0.19                           | 0.153  | 0.23                  | x                |
| 1.00              | 001      |                                 | 0.14                           | 0.256  | 0.24                  | x                |
| 3.15              | 003      |                                 | 0.0295                         | 1.27   | 0.131                 |                  |
| 5                 | 005      |                                 | 0.0158                         | 4.14   | 0.110                 |                  |

Schedule of limitations.

- 1) The fuse must be so mounted that creepage and clearance distances aren't impaired in any way.
- 2) When used in intrinsically safe apparatus it will be necessary to determine a surface temperature classification for the fuse.
- 3) Max surface temp rise at 170% rated current £750mA=40°C, 1A=45°C, 3A=63°C and 5A=114°C.

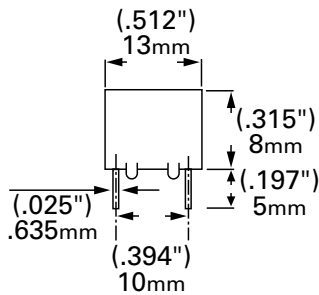
### Product Characteristics

|  |  |
|--|--|
| <b>Operating Temperature</b>                 | - 55°C to 90°C.                        |
| <b>Thermal Shock</b>                         | Withstands 5 cycles of - 55°C to 125°C |
| <b>Vibration</b>                             | Per MIL-STD-202F                       |
| <b>Insulation Resistance (After Opening)</b> | Greater than 10,000 ohms.              |

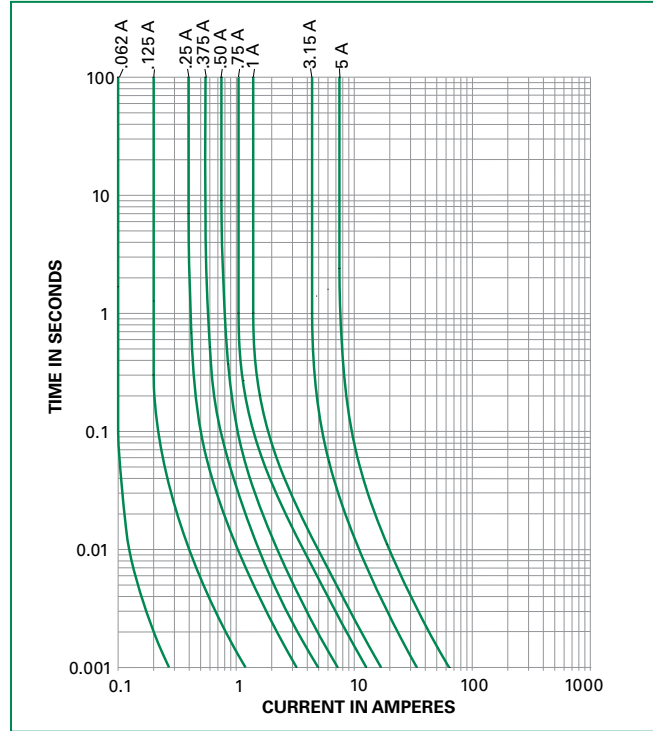
### Soldering Parameters

|                       |                        |
|-----------------------|------------------------|
| <b>Wave Soldering</b> | 260°C, 10 seconds max. |
|-----------------------|------------------------|

### Dimensions



### Average Time Current Curves



### Part Numbering System

**0259.062M**

**SERIES**

**AMP Code**

The dot is positioned before the Packaging Suffix with whole ratings and within the numbering sequence for fractional ratings. Refer to Amp Code column in the Electrical Specifications table.

**PACKAGING Code**

M = Bulk pack, 1000 pcs  
 T = Bulk pack, 200 pcs

**Example:**

1 amp product is  
 0259**001**.M  
 (.062 amp product shown).

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[0242.080UR](#) [0242.050UAT1](#) [0259.250M](#) [0259.375M](#) [0242.200UAT1](#) [0242.080UAT1](#) [0242.160UAT1](#) [0259001.M](#)  
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[0259003.M](#) [0242.125UR](#) [0259005.M](#) [0259005.T](#)