

242 Series

Barrier Fuse



Description

The 242 Series fuse is designed for barrier circuits in intrinsic safety applications relating to Hazardous Locations. Ranging from 40mA to 250mA, the 242 Series provides overcurrent protection solutions to fit many Hazardous Location barrier applications.

Features

- High interrupting rating suitable for intrinsic safety protection of hazardous locations equipment.
- Available in both axial lead and surface mount.
- RoHS compliant and Halogen-free.

Applications

- Intrinsic safety electrical equipment; Electrical connections and components; Test equipment
- Barriers providing intrinsically safe outputs to Hazardous Locations

Web Resources



Download ECAD models, order samples, and find technical resources at www.littelfuse.com

Agency Approvals

Agency	Agency File Number	Ampere Range
	E10480	0.040A - 0.250A

Electrical Characteristics

% of Ampere Rating	Opening Time
100%	4 hours, Minimum
300%	10 seconds, Maximum
1000%	0.002 seconds, Maximum

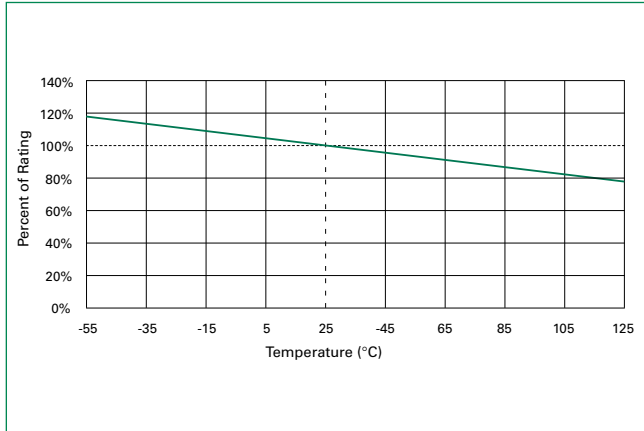
Electrical Characteristics

Ampere Rating (A)	Amp Code	Body Color Coding	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I ² t (A ² Sec.)	Agency Approvals
0.040	.040	Gold	4000A @ 250VAC/VDC	16.48	0.000078	x
0.050	.050	Red		11.34	0.000103	x
0.080	.080	Green		8.19	0.000214	x
0.100	.100	Blue		3.60	0.000977	x
0.125	.125	Orange		3.78	0.001026	x
0.160	.160	Violet		3.00	0.00157	x
0.200	.200	Brown		2.68	0.0025	x
0.250	.250	Black		1.6	0.00579	x

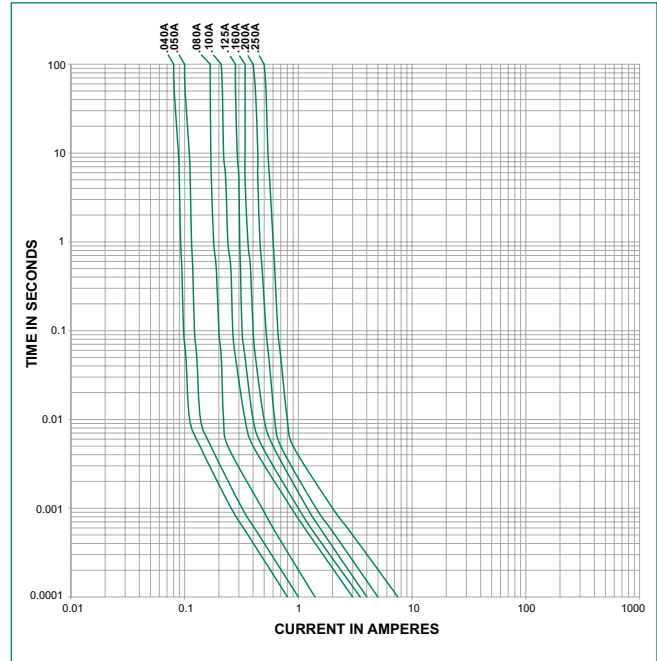
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Temperature De-Rating Curve

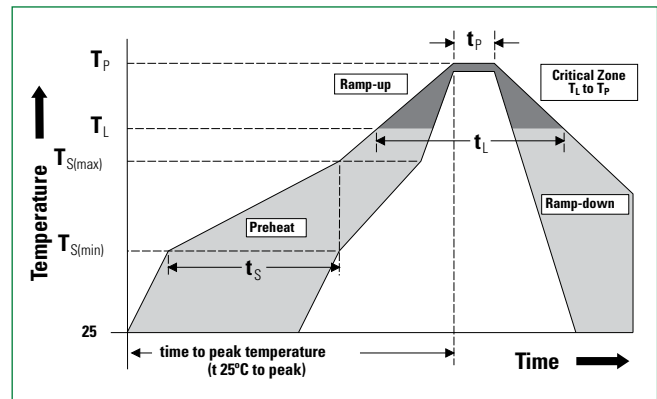


Average Time Current Curves



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 ^{+0/-5} °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.

Material Information

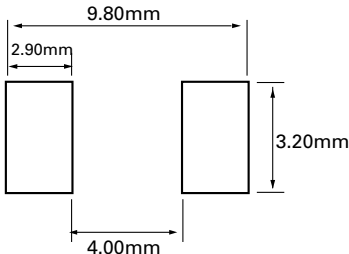
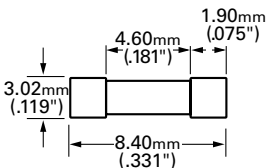
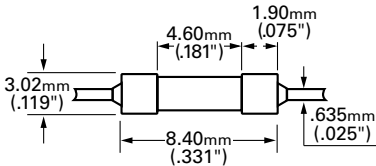
Body	Ceramic
Leads	Tin-Plated Copper
Endcaps	Silver-Plated Brass

Product Characteristics

Operating Temperature	-40°C to 125°C (Consider re-rating)
Thermal Shock	Withstands 5 cycles of - 55°C to 125°C
Vibration	Per MIL-STD-202 Method 201
Insulation Resistance (After Opening)	Greater than 10,000 ohms.

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Dimensions



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

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