443E Series Fuse

NANO²® > 250V > Slo-Blo® Fuse

Description

The 443E Series is a Nano²®, 250 V fuse. It is a surface mount Universal Modular Fuse (UMF) that complies with IEC 60127-4. It is RoHS-compliant and fully compatible with lead-free solder alloy and higher temperature profiles associated with lead-free assembly.

Features & Benefits

- 250 VAC/VDC voltage rating with 200 A interrupting rating
- Slo-Blo® Fuse
- RoHS-compliant
- Fully compatible with leadfree solder alloys and higher temperature profiles associated with lead-free assembly
- Avoids nuisance opening due to high inrush and surge current inherent in the system
- Suits high voltage applications requiring high interrupting current

Applications

- AC/DC power adaptor
- Telecom equipment system power
- Portable system built-in AC/DC converter

Additional Information

Resources | Accessories | Samples

Agency Approvals

Agency	Agency File Number	Ampere Range
UL	E242325	1.25A
VDE	40046623	1.25A
CQC	CQC17012176681	1.25A
cULus	E10480	1.25A
CE	-	1.25A

Electrical Characteristics

% of Ampere Rating	Ampere Rating	Opening Time at 25°C
100%	1.25 A	4 hours Minimum
200%	1.25 A	120 secs Maximum

Electrical Specifications by Item

Ampere Rating (A)	Amp Code	Max. Voltage Rating (V)	Interrupting Rating (AC/DC)	Nominal Cold Resistance [1] (Ohms)	Nominal Melting I²t (A²Sec.) [2]	Nominal Voltage Drop (mV)	Nominal Power Dissipation at Rated Current (W)	Agency Approval [3]				
								UL	VDE	CQC	cULus	CE
1.25	1.25	250	200A @ 250VAC/ 200A @ 250VDC	0.100	3.97	165	0.456	x	x	x	x	x

Note:
1. Nominal Cold Resistance measured at less than 10% of rated current at 23° C.
2. Nominal Melting I²t is measured at 10 the Ampere Rating (I_n)
3. Agency Approval Table key: X = Approved or Certified, P = Pending and Blank = Not Approved
4. Have special electrical characteristic needs? Contact Littelfuse to learn more about application specific options

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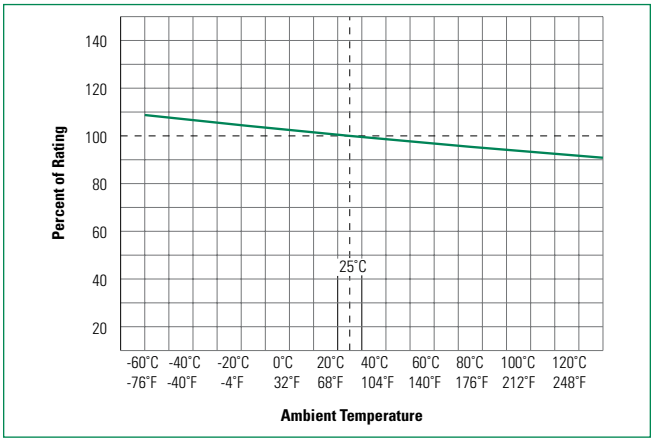
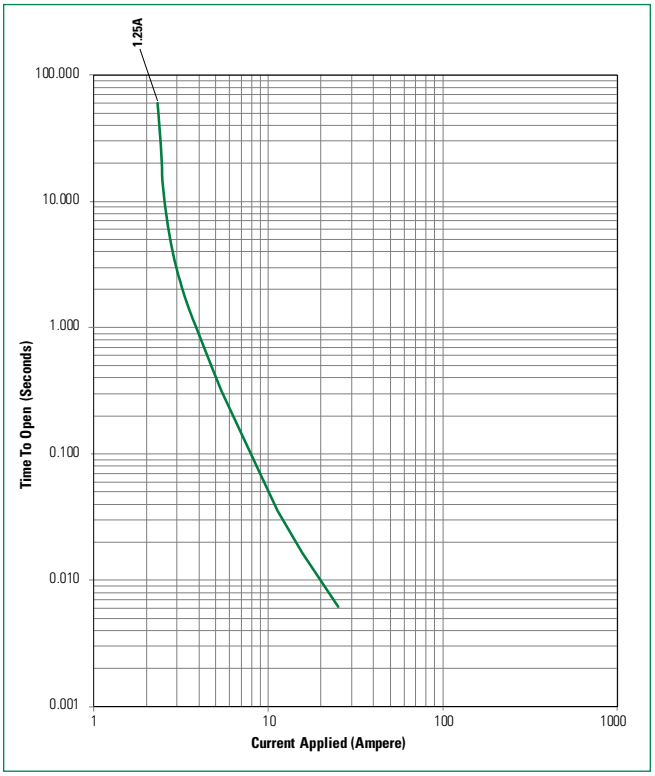
Temperature Re-rating Curve



Note:
Re-rating depicted in this curve is in addition to the standard re-rating of 25% for continuous operation.

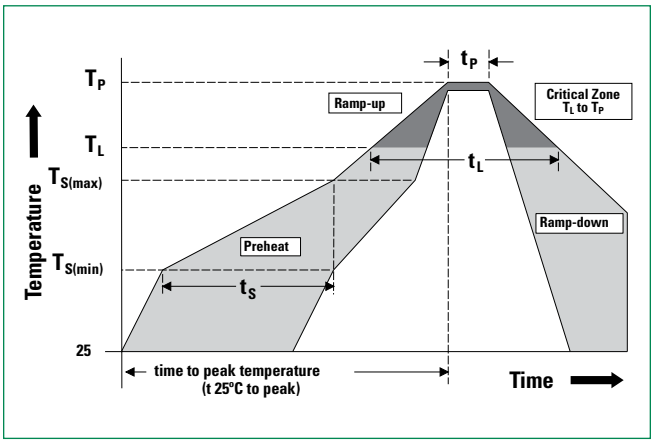
Average Time Current Curves



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 seconds
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)		$260^{+0/-5}$° C
Time within 5°C of actual peak Temperature (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 Peak Temperature, 3 seconds max.



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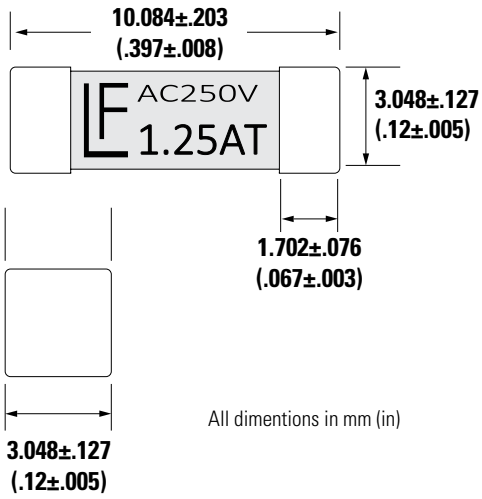
Product Characteristics

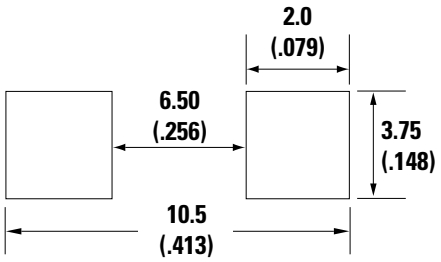
Materials	**Body:** Ceramic **Cap:** Silver Plated Brass
Product Marking	Voltage rating, Ampere rating, T-Characteristic, "T" and Brand
Temperature Humidity Bias	MIL-STD-202, Method 103, (85° C, 85%RH with 10% hold current)
Solderability	MIL-STD-202, Method 208 (95% coverage)
Resistance to Soldering Heat	MIL-STD-202, Method 210
Pulse Test	IEC 60127-1; 9.5 (25° C +/-5° C, pulse 100% rated current)
Terminal Strength Test	MIL-STD-202, Method 211, Test Condition A (5N force to the side for 60sec)
Endurance Test	IEC 60127-1; 9.4 (25° C +/-5° C, 100% rated current for 1 hour, stop current for 15 mins. 100 cycles. Test for voltage drop to determine maximum power disipation)
Operating Temperature	–55° C to 125° C
Temperature Cycling	JESDD22 - A104 (-40° C to 125° C)
High Frequency Vibration	MIL-STD-202, Method 204 (55Hz – 2Hz, 10G)
Low Temperature Storage	MIL-STD-202, Method 108 (-40° C for 1000 hours)
High Temperature Storage	MIL-STD-202, Method 108 (125° C for 1000 hours)
Mechanical Shock	MIL-STD-202, Method 213, (50 G's peak for 11 milliseconds, halfsine waveform/10 – 55 Hz)
High Temperature Operating Life Test	JESD 22 - A108 (125° C rated current at any voltage </= to rated voltage); 1000H duration

Dimensions

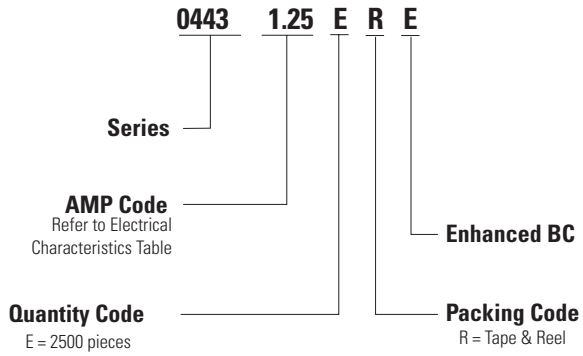


All dimentions in mm (in)

Recommended Pad Layout



Part Numbering System



Packaging

Packaging Option	Form Factor	Packaging Specification	Quantity	Quantity & Packaging Code
24mm Tape and Reel	Surface Mount	EIA-RS 481-2 (IEC 60286-3)	2500	ERE

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