Surface Mount Fuses Datasheet

443E Series Fuse NANO^{2®} > 250V > Slo-Blo[®] Fuse

RoHS (cec)



Additional Information





Samples

Resources

Accessories

Agency Approvals

Agency	Agency File Number	Ampere Range
(h)	E242325	1.25A
DVE	40046623	1.25A
000	CQC17012176681	1.25A
c RU °us	E10480	1.25A
Œ	-	1.25A

Description

The 443E Series is a Nano^{2®}, 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

Applications

- AC/DC power adaptor
- Telecom equipment system power

- Avoids nuisance opening due to high inrush and surge current inherent in the system
- Suits high voltage applications requiring high interrupting current
- Portable system built-in AC/ DC converter

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	Amp	Max. Voltage	Interrupting	Nominal Cold	minal Cold Nominal Nominal Nominal P		Nominal Power		Ager	ncy Appr	oval ³	
(A)	Code	Rating (V)	(AC/DC)	(Ohms)	(A ² Sec.) ²	Drop (mV)	Rated Current (W)	(H)		(ec)	c 🌮 us	Œ
1.25	1.25	250	200A @ 250VAC/ 200A @ 250VDC	0.100	3.97	165	0.456	х	х	х	х	х

Note:

Nominal Cold Resistance measured at less than 10% of rated current at 23° C.
Nominal Melting I^st is measured at 10 the Ampere Rating (I_n)
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



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

Average Time Current Curves



Reflow Condition			Pb – free assembly		
	- Tem	perature Min (T _{s(min)})	150° C		
Pre Heat	- Terr	perature Max (T _{s(max)})	200° C		
	- Tim	e (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 -	5° C/second max.				
Deflere	- Terr	perature (T _L) (Liquidus)	217° C		
nellow	- Terr	perature (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.					

Soldering Parameters



443E Series Fuse NANO^{2®} > 2<u>50V > Slo-Blo[®] Fuse</u>

Product Characteristics

Materials	Body: Ceramic
Product Marking	Voltage rating, Ampere rating,
Temperature Humidity Bias	MIL-STD-202, Method 103, (85° C. 85% RH with 10% hold current)
Solderability	MILSTD-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</th



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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