

Agency Approvals

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c **SU**<sup>°</sup>us

% of Ampere Rating

100%

250%

# 443LC Series Fuse



Agency File Number

E10480

Ampere Range

0.500A - 5.00A

**Opening Time** 

4 hours, Minimum

120 seconds, Maximum

## Description

The 443LC Series 280V Nano<sup>2</sup> Fuse is a small square surface mount fuse that is designed to enable compliance with the RoHS directive. This product is fully compatible with lead-free solder alloy and higher temperature profiles associated with lead-free assembly.

#### Features

- 280VAC voltage rating
- Slo-Blo<sup>®</sup> Fuse
- Available 0.50A 5.00A
- RoHS Compliant and halogen-free
- Fully compatible with lead-free solder alloys and higher temperature profiles associated with lead-free assembly

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 UL Recognized to UL/ CSA/NMX 248-1 and UL/ CSA/NMX 248-14

# Applications

- AC/DC power adaptor
- Telecom equipment system power
- Portable system built-in
  AC/DC converter
- High voltage DC/DC converter
- Lighting System
- LED Lighting

# **Additional Information**

Datasheet





### **Electrical Specifications by Item**

**Electrical Characteristics for Series** 

Ampere Rating		Мах	Interrupting	Nominal Cold	Nominal Melting	Nominal	Agency Approvals
(A)	Amp Code	Voltage Rating (V)	Rating	Resistance (Ohms)	• I	Voltage Drop (mV)	c 🔁 us
0.50	.500	280	50A @280VAC	0.600	1.61	448	x
0.75	.750	280		0.275	3.025	285	x
1	001.	280		0.180	10.17	234	X
1.50	01.5	280		0.100	14.72	196	x
2	002.	280		0.052	18.06	154	X
2.50	02.5	280		0.035	18.13	139	х
3	003.	280		0.028	51.44	113	X
3.50	03.5	280		0.019	53.14	98	x
4	004.	280		0.016	122.50	81	x
5	005.	280		0.0115	180.60	80	x

Notes:

1. Cold resistance measured at less than 10% of rated current at 23°C.

2. Agency Approval Table Key: X=Approved or Certified, P=Pending and Blank=Not Approved

3. Have special electrical characteristic needs? Contact Littelfuse to learn more about application specific options.



### **Temperature Re-rating Curve**



Note:

1. Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.



# **Soldering Parameters**

Reflow Condition		Pb – Free assembly	
	- Temperature Min (T <sub>s(min)</sub> )		150°C
Pre Heat	- Temperature Max (T <sub>s(max)</sub> )		200°C
	- Time (Min to Max) (t <sub>s</sub> )		60 - 180 secs
Average ramp up rate (Liquidus Temp $(T_L)$ to peak		5°C/second max.	
T <sub>S(max)</sub> to T <sub>L</sub> - Ramp-up Rate		5°C/second max.	
Reflow	- Temperature (T <sub>L</sub> ) (Liquidus)		217°C
	- Temperature (t <sub>L</sub> )		60 – 150 seconds
Peak Temperature (T <sub>P</sub> )		260+0/-5 °C	
Time within 5°C of actual peak Temperature (t <sub>p</sub> )		20 – 40 seconds	
Ramp-down Rate		5°C/second max.	
Time 25°C to peak Temperature (T <sub>P</sub> )		8 minutes max.	
Do not exceed		260°C	
Wave Soldering Parameters 260°C Peak Ten			rature, 3 seconds ma>





#### **Product Characteristics**

Materials	Body: Ceramic Cap: Silver Plated Brass		
Product Marking	Body: Brand Logo, Current Rating Rated Voltage, T - C Characteristic "T"		
Insulation Resistance (after Opening)	MIL-STD-202, Method 302, Test Condition A (10,000 ohms, Minimum)		
Solderability	MIL-STD-202, Method 208		
Resistance to Soldering Heat	MIL-STD-202, Method 210, Test Condition B (10 sec at 260°C)		
<b>Moisture Sensitivity Level</b>	Level 1 J-STD-020		
PCB Recommendation for Thermal Management	Min. copper layer thickness = 100um Min. copper trace width = 10mm Alternate methods of thermal management may be used. In such cases, under normal operations, the maximum temperature of the fuse body should not exceed 80°C in a 25°C ambient environment.		

Operating Temperature	-55°C to 125°C with proper derating		
	MIL-STD-202, Method 107,		
Thermal Shock	Test Condition B (5 cycles -65°C		
	to +125°C)		
Vibration	MIL-STD-202, Method 201		
VIDration	(10-55 Hz)		
Malatana Daslatanas	MIL-STD-202, Method 106,		
Moisture Resistance	High Humidity (90-98%RH), Heat (65°C)		
Calt Crement	MIL-STD-202, Method 101,		
Salt Spray	Test Condition B		
	MIL-STD-202, Method 213,		
Mechanical Shock	Test Condition I (100 G's peak for		
	6 milliseconds)		

# Dimensions



# Part Numbering System



#### Example:

1.5amp product is 0443 01.5 D R LC (0.5amp product shown above).

Packaging					
Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code		
24mm Tape and Reel	EIA-RS 481-2 (IEC 286, part 3)	1500	DR		

3.43

(.135")

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