

ANTREX Electronics

Electronic Components Sourcing Information

Product Reference Information

Part Number:	0415002.DRSP
Manufacturer:	Littelfuse Inc.
Package:	Please confirm with sales
Availability:	Please confirm with sales

Product Page:

<https://antrexco.com/product/details/littelfuse-inc/0415002-drsp.html>

Request a Quote:

[Submit RFQ for this part](#)



Scan for product page

Contact Information

Email: info@antrexco.com

WhatsApp: +86-186-8066-5326

Website: <https://antrexco.com>

Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

Note:

This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

Surface Mount Fuses

NANO²® > 277V > 15mm x 5mm Sq > Time Lag > 415 Series



Description

Littelfuse 415 Series is a 277VAC rated, surface mount fuse in a compact 15mm x 5mm square package. It has a high interrupting rating of 1500 A, needed for circuit protection on applications where high fault current is a possibility.

Features

- Surface mountable and comes in a small package size of 15 mm x 5 mm square
- Rated voltage at 277 VAC
- High interrupting rating of 1500 A at rated voltage
- Time Lag type designed to have relatively high melting I²t
- RoHS compliant and Halogen Free
- UL and IEC certifications

Benefits

- Small size
- High voltage

Application

- AC/DC power adapter
- Power supplies
- Lighting systems
- Industrial equipment
- White Goods

Agency Approvals

Agency	Agency File Number	Ampere Range
	E10480	1A - 6.3 A
	R 50598112	1A - 6.3 A
	NA	1A - 6.3 A
	NA	1A - 6.3 A
	NA	1A - 6.3 A

Electrical Characteristics

% of Ampere Rating	Opening Time at 25 °C
125%	1 Hour, Min.
200%	120 seconds, Max.
1000%	1 second, Max

Electrical Specifications

Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I ² t (A ² sec)*	Agency Approvals				
1.0	001.	277	1500A @ 277VAC 1500A @ 250VDC	0.400	3.6	X	X	X	X	X
1.25	1.25	277		0.267	4.5	X	X	X	X	X
2.0	002.	277		0.125	12.0	X	X	X	X	X
2.5	02.5	277		0.091	25.0	X	X	X	X	X
3.15	3.15	277	1500A @ 277VAC 1500A @ 125VDC	0.054	37.0	X	X	X	X	X
4.0	004.	277		0.040	60.0	X	X	X	X	X
5.0	005.	277		0.025	110.0	X	X	X	X	X
6.3	06.3	277		0.0168	200.0	X	X	X	X	X

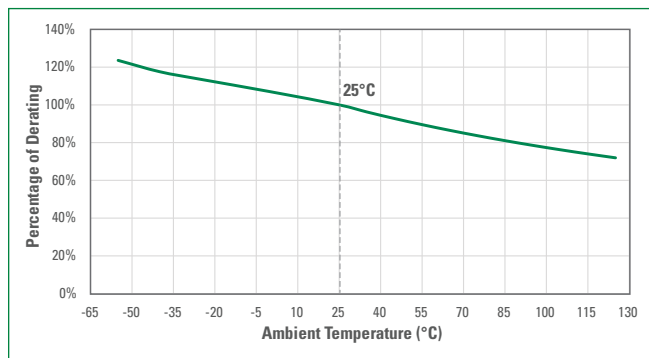
* Notes:

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_L)
3. Agency Approval Table key: X = Approved or Certified, P = Pending and Blank = Not Approved
4. If you have special electrical characteristic needs, contact Littelfuse Sales to learn more about application specific options

Surface Mount Fuses

NANO²® > 277V > 15mm x 5mm Sq > Time Lag > 415 Series

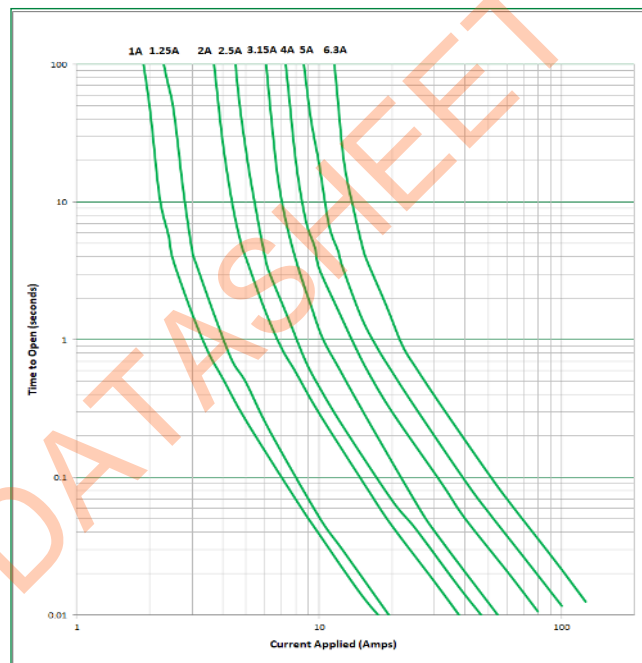
Temperature Re-rating Curve



Note:

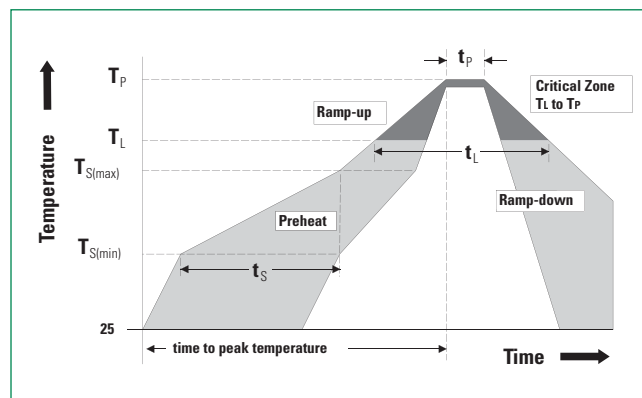
Rerating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Parameters—Reflow Soldering

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 secs
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



Surface Mount Fuses

NANO²® > 277V > 15mm x 5mm Sq > Time Lag > 415 Series

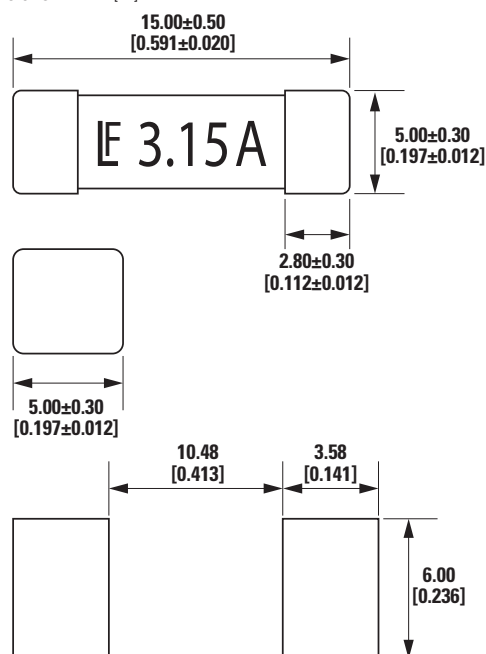
Product Characteristics

Materials	Body: Ceramic Cap: Silver plated Brass
Product Marking	Body: Brand Logo, Current Rating
Insulation Resistance (after Opening)	MIL-STD-202, Method 302, Test Condition A (10,000 ohms, Minimum)
Solderability	MIL-STD-202, Method 208
Resistance to Solder Heat	JEDEC J-STD-020
Mechanical Shock	MIL-STD-202, Method 213, Test Condition I (100 G's peak for 6 milliseconds)

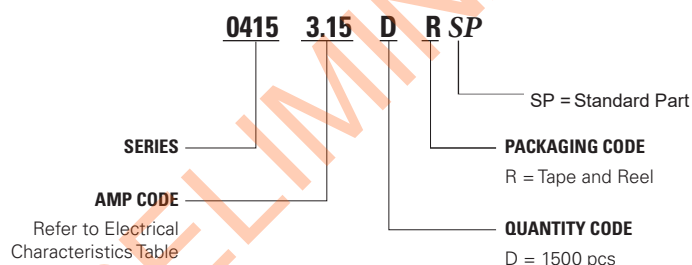
Operating Temperature	-55 °C to 125 °C with proper derating
Thermal Shock	MIL-STD-202, Method 107, Test Condition B (5 cycles -55°C to 125°C)
Vibration Test	MIL-STD-202, Method 201 (10 - 55Hz)
Moisture Sensitivity Level	J-STD-020, Level 1
Moisture Resistance	MIL-STD-202, Method 106, 10 cycles
Salt Spray	MIL-STD-202, Method 101: Test Condition B (48 hrs.)

Dimensions

All dimensions in mm [in]



Part Numbering System



Packaging

Recommended Pad Layout

Packaging Option	Form Factor	Packaging Specification	Quantity	Quantity and Packaging Code
24mm Tape and Reel	Surface Mount	EIA-RS 481-2 (IEC 60286-3)	1500	DR

Disclaimer Notice - Information furnished is believed to be accurate and reliable. However, users should independently evaluate the suitability of and test each product selected for their own applications. Littelfuse products are not designed for, and may not be used in, all applications. Read complete Disclaimer Notice at <http://www.littelfuse.com/disclaimer-electronics>.