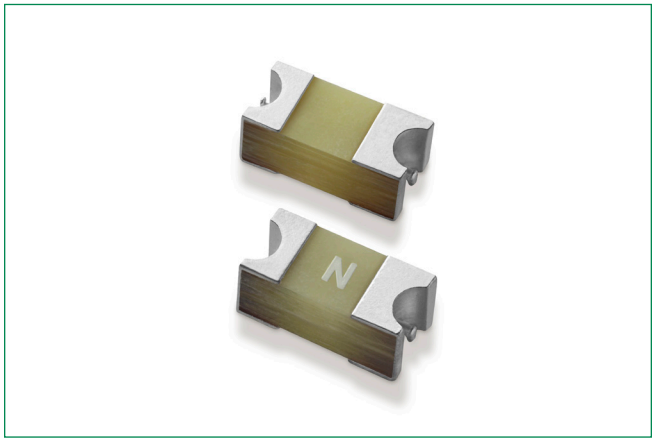
Surface Mount Fuses

Thin Film Fuse > 1206 High I^2t > 483 Series



Agency Approvals

Agency	Agency File Number	Ampere Range
cULus	E10480	0.375 A – 15 A

Electrical Characteristics

% of Ampere Rating	Opening Time
100%	4 Hours, Minimum
250%	5 Seconds, Maximum

Additional Information

Resources | Accessories | Samples

Description

The 483 series belongs to the family of high-energy SMD fuses, perfect for space constrained applications. It offers the standard Nano Fuse circuit protection capability with a very small 1206 foot print. This product is RoHS compliant, Halogen-Free and 100% Pb-Free with guaranteed operating temperature of up to 125 °C.

Features

- Very small 1206 footprint
- Fast-acting
- Pb-free, RoHS compliant and Halogen-free
- Wide operating temperature range of -55 °C to 125 °C

Benefits

- Single fuse solution for high current application
- Suitable for a wide variety of voltage requirements and applications

Applications

- LED lighting
- LCD/LED TVs
- Notebooks/PCs
- Gaming consoles
- Power supply units
- Telecom systems
- White goods
- Battery charging circuit protection

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Electrical Specifications

Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I²t (A² sec.)	Agency Approvals
						c UL us
0.375	0.375	75	50A @ 75VDC/VAC	0.530	0.027	x
0.500	0.500	75		0.380	0.065	x
0.750	0.750	75		0.235	0.150	x
1.00	001.	75		0.165	0.310	x
1.25	1.25	75		0.133	0.550	x
1.50	01.5	75		0.103	0.800	x
2.00	002.	75		0.073	2.000	x
2.50	02.5	65	50A @ 65VDC/VAC	0.061	2.500	x
3.00	003.	65		0.051	4.000	x
3.15	3.15	65		0.048	4.800	x
3.50	03.5	65	50A @ 65VDC 50A @ 50VAC	0.040	6.500	x
4.00	004.	65		0.036	8.500	x
5.00	005.	65	50A @ 65VDC 50A @ 32VAC	0.027	13.00	x
6.30	06.3	65		0.0078	5.000	x
7.00	007.	32	50A @ 32VDC/VAC	0.0071	6.100	x
8.00	008.	32		0.0057	10.00	x
10.0	010.	32		0.0045	16.00	x
12.0	012.	32		0.0040	25.00	x
15.0	015.	32		0.0030	41.00	x

Note: I²t values stated for 8 msec opening time.

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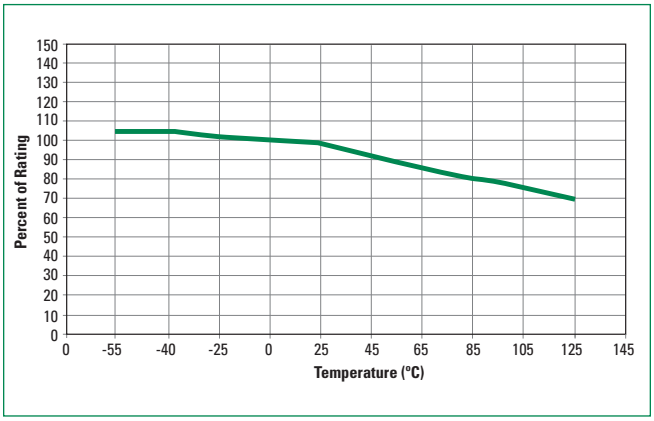
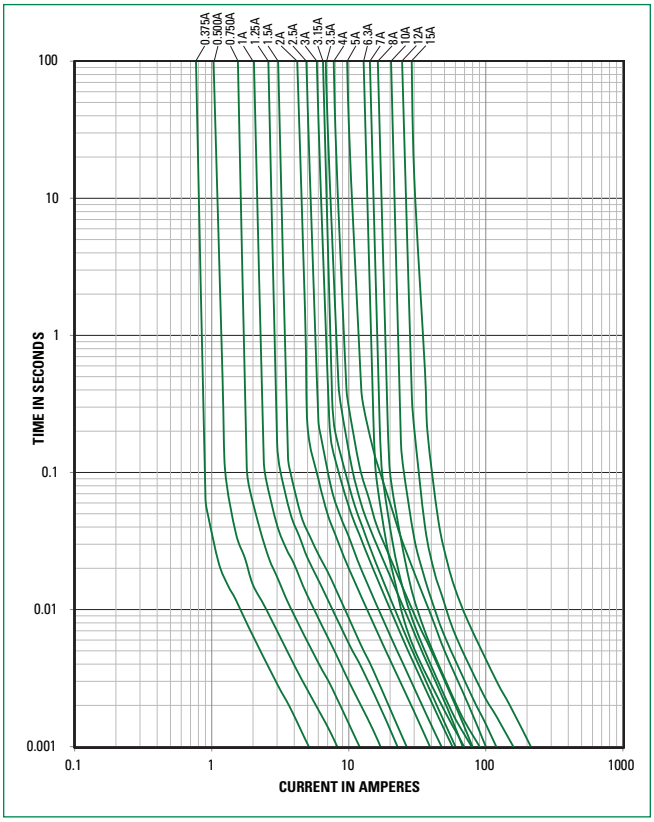
Temperature Re-rating Curve



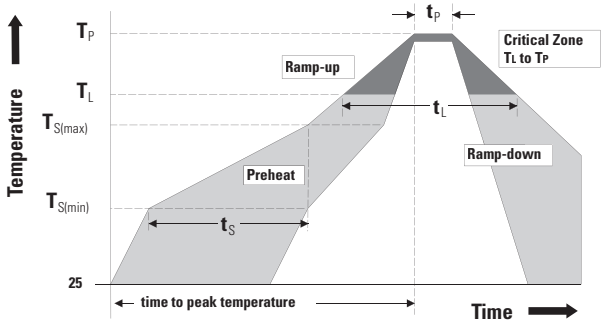
Note
Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

Average Time Current Curves



Soldering Perameters

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



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Product Characteristics

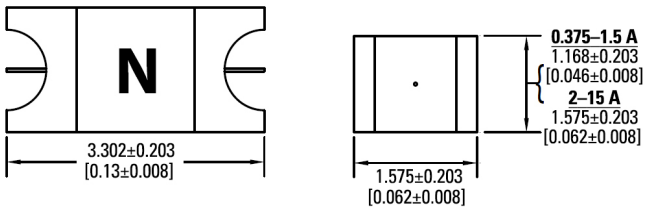
Materials	**Body:** Epoxy Resin **Terminations:** Cu/Ni/Sn (100% Pb-free)
Product Marking	Body: Current Rating
Operating Temperature	–55 °C to +125 °C
Solderability	MIL-STD-202
Thermal Shock	MIL-STD-202, Method 107, Test Condition B, 5 cycles, -65 °C to 125 °C, 15 minutes @ each extreme
Mechanical Shock	MIL-STD-202, Method 213B, Test Condition I: De-energized. 100G's peak amplitude, sawtooth wave 6 ms duration, 3 cycles XYZ+xyz = 18 shocks
Vibration	MIL-STD-202, Method 201: 0.03" amplitude, 10–55 Hz in 1 min. 2 hrs. each XYZ = 6 hrs
Moisture Resistance	MIL-STD-202, Method 106, 10 cycles Condition A
Salt Spray	MIL-STD-202, Method 101, Test Condition B (48 hrs)
Resistance to Soldering Heat	Method 210, Test Condition B (10 sec at 260 °C)

Part Numbering System

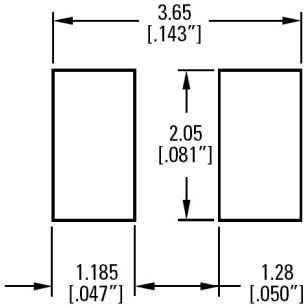
0483 002. D R

- **Series** — 0483
- **Amp Code** — 002. Refer to Electrical Specifications table
- **Quantity Code** — **D =** 1500 Pieces
- **Packaging Code** — **R =** Tape & Reel

Dimensions mm [inch]



Recommended Pad Layout



Part Marking System

Amp Code	Marking Code
0.375	**E**
0.500	**F**
0.750	**G**
001.	**H**
1.25	**J**
01.5	**K**
002.	**N**
02.5	**O**
003.	**P**
3.15	**B**
03.5	**C**
004.	**S**
005.	**T**
06.3	**U**
007.	**V**
008.	**Z**
010.	**10**
012.	**12**
015.	**15**

Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	Reel Size
8 mm Tape and Reel	EIA-481	1500	DR	N / A

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