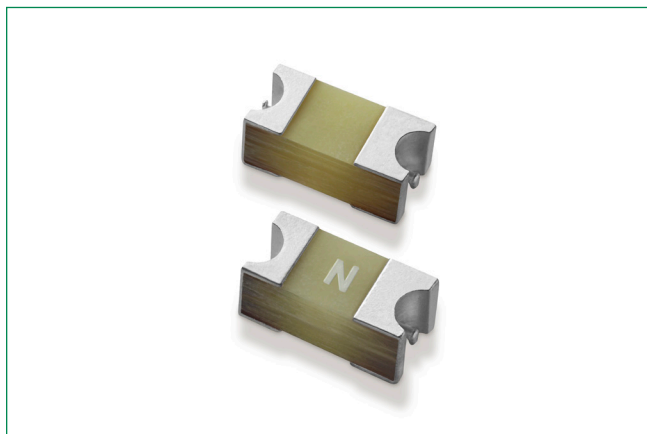


# Surface Mount Fuses

## Thin Film Fuse > 1206 High I<sup>2</sup>t > 483 Series



### 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

### Agency Approvals

Agency	Agency File Number	Ampere Range
c UL US	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

# Surface Mount Fuses

## Thin Film Fuse > 1206 High I<sup>2</sup>t > 483 Series

### Electrical Specifications

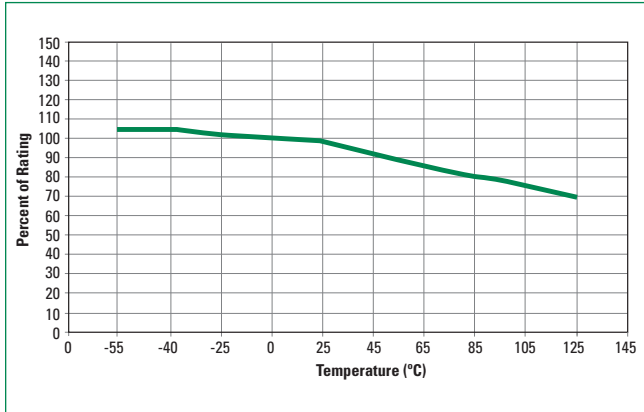
Ampere Rating (A)	Amp Code	Max Voltage Rating (V)	Interrupting Rating	Nominal Cold Resistance (Ohms)	Nominal Melting I <sup>2</sup> t (A <sup>2</sup> sec.)	Agency Approvals
						
0.375	0.375	75	50A @ 75VDC/VAC	0.530	0.027	x
0.500	0.500	75		0.380	0.065	x
0.750	0.750	75		0.235	0.150	x
1.00	001.	75		0.165	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: I<sup>2</sup>t values stated for 8 msec opening time.

# Surface Mount Fuses

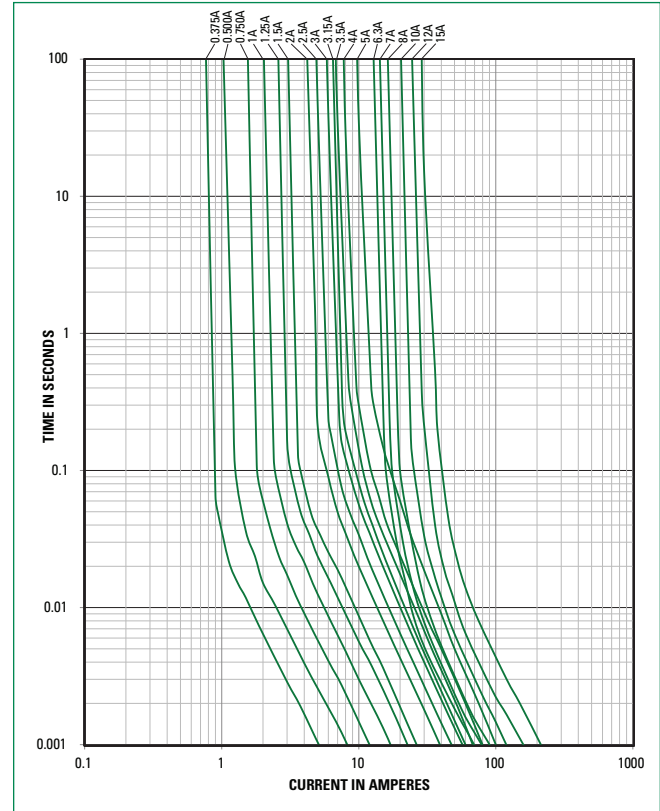
## Thin Film Fuse > 1206 High I<sup>2</sup>t > 483 Series

### Temperature Re-rating Curve



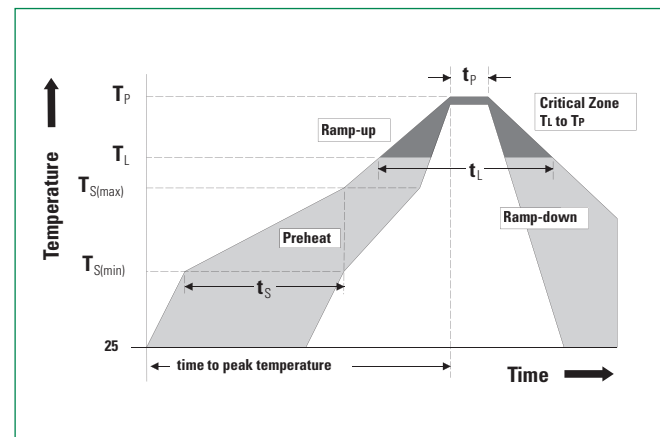
**Note**  
Derating depicted in this curve is in addition to the standard derating of 25% for continuous operation.

### Average Time Current Curves



### Soldering Parameters

<b>Reflow Condition</b>		Pb – Free assembly
<b>Pre Heat</b>	- Temperature Min ( $T_{s(min)}$ )	150 °C
	- Temperature Max ( $T_{s(max)}$ )	200 °C
	- Time (Min to Max) ( $t_s$ )	60–180 secs
<b>Average ramp up rate (Liquidus Temp (<math>T_L</math>) to peak)</b>		5 °C/second max.
<b><math>T_{s(max)}</math> to <math>T_L</math> - Ramp-up Rate</b>		5 °C/second max.
<b>Reflow</b>	- Temperature ( $T_L$ ) (Liquidus)	217 °C
	- Temperature ( $t_L$ )	60–150 secs
<b>Peak Temperature (<math>T_p</math>)</b>		260+0/-5 °C
<b>Time within 5 °C of actual peak Temperature (<math>t_p</math>)</b>		20–40 seconds
<b>Ramp-down Rate</b>		5 °C / second max.
<b>Time 25 °C to peak Temperature (<math>T_p</math>)</b>		8 minutes max.
<b>Do not exceed</b>		260 °C



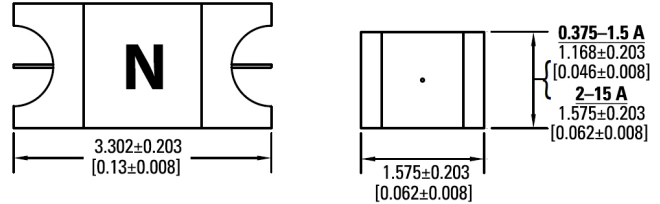
# Surface Mount Fuses

## Thin Film Fuse > 1206 High I<sup>2</sup>t > 483 Series

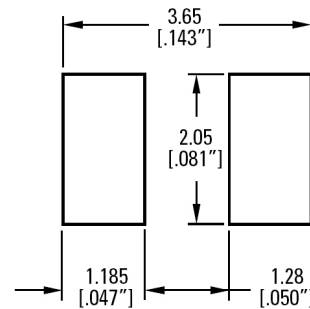
### Product Characteristics

<b>Materials</b>	<b>Body:</b> Epoxy Resin <b>Terminations:</b> Cu/Ni/Sn (100% Pb-free)
<b>Product Marking</b>	Body: Current Rating
<b>Operating Temperature</b>	-55 °C to +125 °C
<b>Solderability</b>	MIL-STD-202
<b>Thermal Shock</b>	MIL-STD-202, Method 107, Test Condition B, 5 cycles, -65 °C to 125 °C, 15 minutes @ each extreme
<b>Mechanical Shock</b>	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
<b>Vibration</b>	MIL-STD-202, Method 201: 0.03" amplitude, 10-55 Hz in 1 min. 2 hrs. each XYZ = 6 hrs
<b>Moisture Resistance</b>	MIL-STD-202, Method 106, 10 cycles Condition A
<b>Salt Spray</b>	MIL-STD-202, Method 101, Test Condition B (48 hrs)
<b>Resistance to Soldering Heat</b>	Method 210, Test Condition B (10 sec at 260 °C)

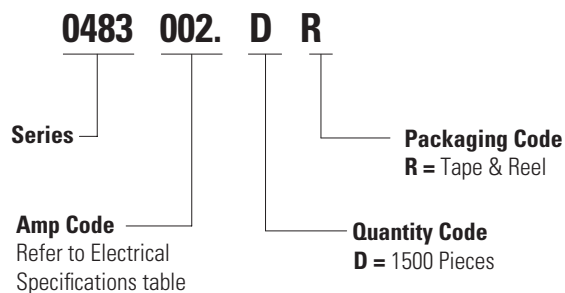
### Dimensions mm [inch]



#### Recommended Pad Layout



### Part Numbering System



### 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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