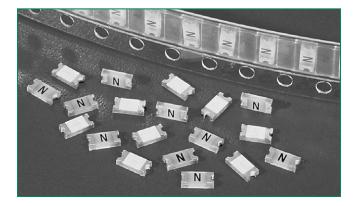


433 Series Fuse







Agency Approvals

Αę	gency	Agency File Number Ampere Range	
® .	<i>[</i>]	E10480	125mA - 5A
	⊕	LR29862	125mA - 5A

Electrical Characteristics for Series

% of Ampere Rating	OpeningTime at 25°C
100%	4 hours, Minimum
200%	5 sec., Maximum
300%	0.2 sec., Maximum

Description

The 433 series fast-acting surface mount fuse series is a small (1206 size) thin-film device designed for secondary protection of circuits used in space constrained applications such as hand-held portable electronic devices.

For RoHS compliant and lead-free design, please refer to the Littelfuse 466 series thin film fuse. For new designs of 7 amp please refer to Littelfuse 429 series thin film fuse.

Features

- The SlimLine 1206 fuse is an extremely small, low profile design (1206 chip size) utilizing thin-film technology to achieve precise control of electrical characteristics.
- The lower height profile produces a flat surface for
- improved performance in pick-and-place operations and an alternate solution for height critical application.
- · Mounting pad and electrical specification are identical to the popular 429 Series specifications.

Applications

Secondary protection for space constrained applications such as:

- Cell phones
- Battery packs
- Digital cameras
- DVD players
- · Hard disk drives.

Electrical Specifications by Item

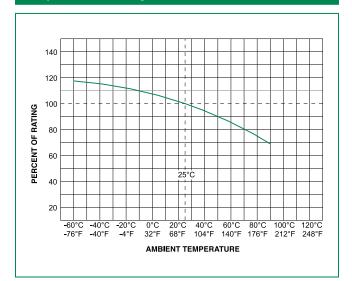
Ampere	Amp	Max	Interrupting	Nominal Cold	Nominal	Agency Approvals	
Rating (A)	Code	Voltage Rating (V)	Rating	Resistance (Ohms)	Melting I²t (A²sec)	<i>.</i> R.	⊕ ®
0.125	.125	125	50A @125 V AC/DC	3.45000	0.00040	X	Х
0.200	.200	125		0.93800	0.00055	X	X
0.250	.250	125	30A @ 123 V AC/DC	0.62500	0.00100	X	Х
0.375	.375	125		0.37500	0.00280	X	Х
0.50	.500	63	50A @63 V AC/DC	0.24050	0.00600	X	X
0.60	.600	63		0.21000	0.01310	X	X
0.75	.750	63		0.13700	0.01700	X	X
0.80	.800	63		0.12250	0.03050	X	Х
1.00	001.	63		0.09950	0.03500	X	X
1.25	1.25	63		0.07475	0.06500	X	X
1.50	01.5	63		0.06250	0.12500	X	Х
1.75	1.75	63		0.05000	0.15000	X	Х
2.00	02.0	63		0.03975	0.23000	X	Х
2.50	02.5	32	50A @32 V AC/DC	0.03065	0.50000	X	Х
3.00	03.0	32	30A @32 V AC/DC	0.02625	0.70000	X	X
4.00	04.0	24	50A @24 V AC/DC	0.01400	1.0240	X	Х
5.00	05.0	24	30A @24 V AC/DC	0.01100	1.6000	X	х

¹ Measured at 10% of rated current 25°C

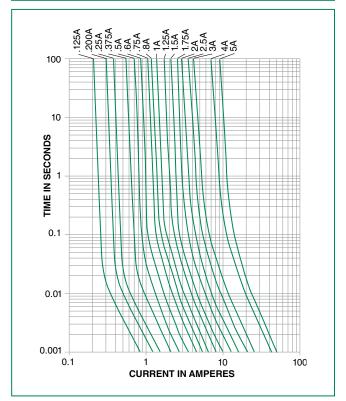
^{2.} Measured at rated voltage



Temperature Rerating Curve

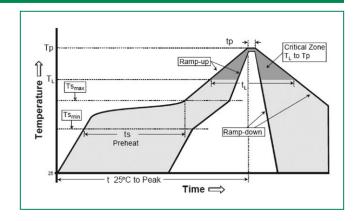


Average Time Current Curves



Soldering Parameters - Wave 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 seconds	
PeakTemperature (T _P) 250 ^{+0/-5} °C		250+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 exc	ceed	260°C	



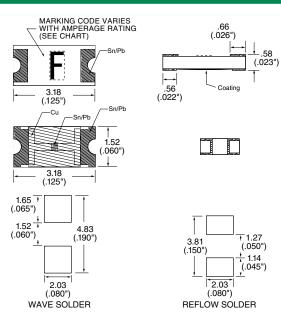


Product Characteristics

Materials	Body: Epoxy Substrate Terminations: 95% Tin / 5% Lead over Nickel over Copper Element Cover Coat: Conformal Coating		
Operating Temperature	– 55°C to 90°C. Consult temperature rerating curve chart.		
Thermal Shock	Withstands 5 cycles of – 55°C to 125°C		

Humidity	MIL-STD-202F Method 103B Condition D	
Vibration	Per MIL-STD-202F, Method 201A	
Insulation Resistance (After Opening)	Greater than 10,000 ohms.	
Resistance to Soldering Heat	Withstands 60 seconds above 200°C and up to 260°C, maximum	

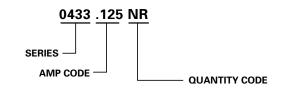
Dimensions



Part Marking System

Amp Code	Marking Code
.125	В
.200	С
.250	D
.375	E
.500	F
.600	.6
.750	G
.800	.8
001.	Н
1.25	J
01.5	К
1.75	L
002.	N
02.5	0
003.	Р
03.5	R
004.	S
005.	Т

Part Numbering System



Packaging

Packaging Option	Packaging Specification	Quantity	Quantity & Packaging Code	
Tape & Reel – 8mm tape	EIA RS-481-1 (IEC 286, part 3)	5000	NR	