

0805L Series

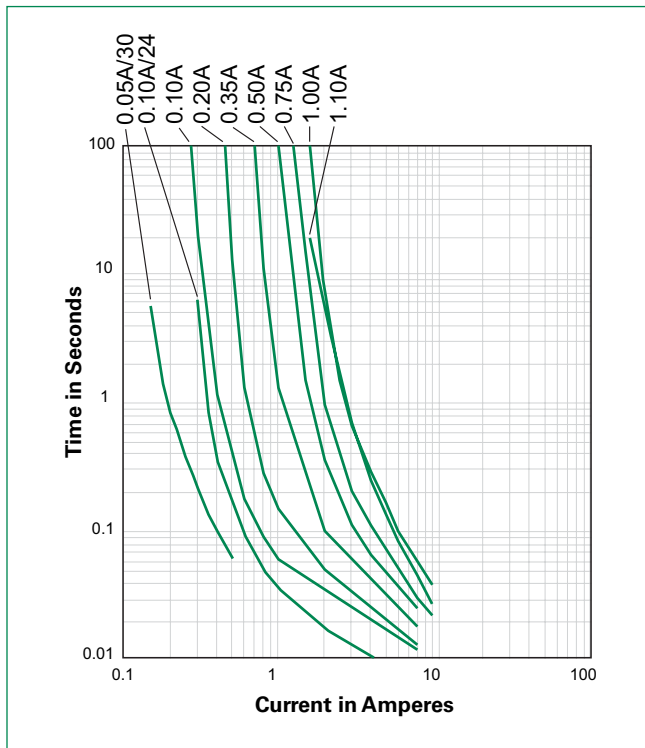
Surface Mount

Temperature Derating

Part Number	Ambient Operation Temperature								
	-40°C	-20°C	0°C	20°C	40°C	50°C	60°C	70°C	85°C
0805L005/30	0.077	0.069	0.061	0.050	0.042	0.038	0.033	0.028	0.021
0805L010	0.14	0.12	0.11	0.10	0.08	0.07	0.06	0.05	0.03
0805L010/24	0.14	0.12	0.11	0.10	0.08	0.07	0.06	0.05	0.03
0805L020	0.28	0.25	0.23	0.20	0.17	0.14	0.12	0.10	0.07
0805L035	0.47	0.44	0.39	0.35	0.30	0.27	0.24	0.20	0.14
0805L050	0.68	0.62	0.55	0.50	0.40	0.37	0.33	0.29	0.23
0805L075	1.00	0.90	0.79	0.75	0.63	0.57	0.53	0.41	0.34
0805L100	1.35	1.25	1.10	1.00	0.82	0.74	0.65	0.55	0.42
0805L110	1.45	1.35	1.20	1.10	0.92	0.84	0.75	0.65	0.52

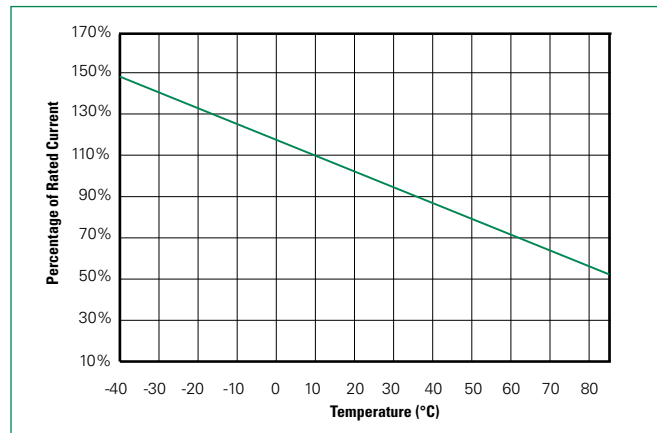
Notes: The temperature derating data is only for reference, please contact Littelfuse technical support for detail temperature derating information.

Average Time Current Curves



The average time current curves and Temperature Derating curve performance is affected by a number of variables, and these curves provided as guidance only. Customer must verify the performance in their application.

Temperature Derating Curve



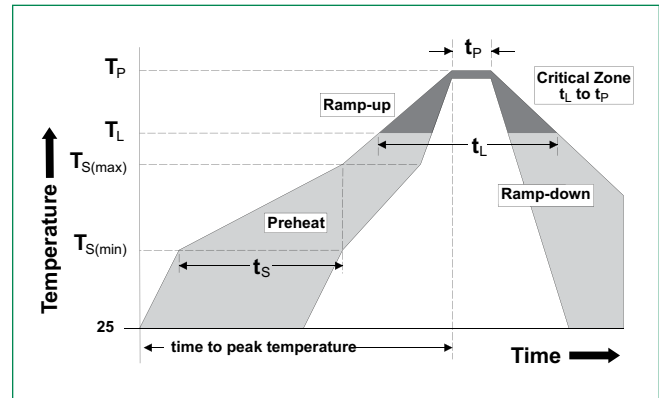
Note: Typical Temperature derating curve, refer to table for derating data

0805L Series

Surface Mount

Soldering Parameters

Profile Feature		Pb-Free Assembly
Average Ramp-Up Rate ($T_{S(max)}$ to T_p)		3°C/second max
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
Time Maintained Above:	Temperature (T_L)	217°C
	Temperature (t_l)	60 – 150 seconds
Peak / Classification Temperature (T_p)		260 ^{+0/-5} °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes Max.



- All temperature refer to topside of the package, measured on the package body surface
- If reflow temperature exceeds the recommended profile, devices may not meet the performance requirements
- Recommended reflow methods: IR, vapor phase oven, hot air oven, N₂ environment for lead
- Recommended maximum paste thickness is 0.25mm (0.010inch)
- Devices can be cleaned using standard industry methods and solvents
- Devices can be reworked using the standard industry practices

Physical Specifications

Terminal Material	Solder-Plated Copper (Solder Material: Matte Tin (Sn))
Lead Solderability	Meets EIA Specification RS186-9E, ANSI/J-STD-002, Category 3

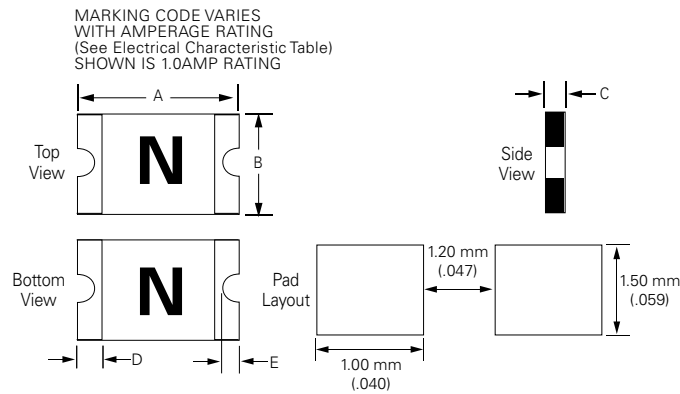
Environmental Specifications

Operating Temperature	-40°C to +85°C
Maximum Device Surface Temperature in Tripped State	125°C
Passive Aging	+85°C, 1000 hours -/+5% typical resistance change
Humidity Aging	+85°C, 85%, R.H., 1000 hours -/+5% typical resistance change
Thermal Shock	MIL-STD-202, Method 107 +85°C/-40°C 20 times -30% typical resistance change
Solvent Resistance	MIL-STD-202, Method 215 No change
Vibration	MIL-STD-883, Method 2007, Condition A No change
Moisture Sensitivity Level	Level 1, J-STD-020

0805L Series

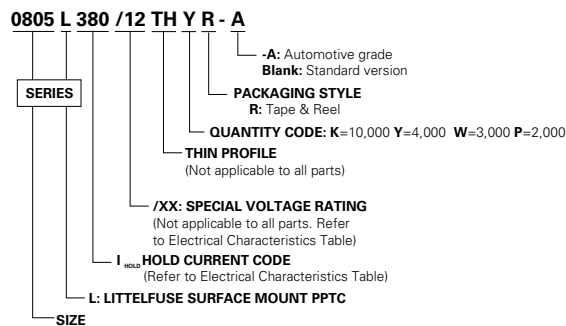
Surface Mount

Dimensions



Part Number	A		B				C		D				E							
	Inches		mm		Inches		mm		Inches		mm		Inches		mm		Inches		mm	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
0805L005/30	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.03	0.05	0.75	1.25	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45
0805L010	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.02	0.04	0.55	1.00	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45
0805L010/24	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.02	0.04	0.55	1.00	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45
0805L020	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.02	0.04	0.55	1.00	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45
0805L035	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.02	0.03	0.45	0.75	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45
0805L050	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.03	0.05	0.75	1.25	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45
0805L075	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.03	0.05	0.75	1.25	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45
0805L100	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.02	0.07	0.50	1.80	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45
0805L110	0.08	0.09	2.00	2.20	0.05	0.06	1.20	1.50	0.03	0.06	0.80	1.40	0.01	0.02	0.20	0.55	0.002	0.02	0.05	0.45

Part Ordering Number System



Packaging

Part Number	Ordering Number	Halogen Free	I _{hold} (A)	I _{hold} Code	Packaging Option	Quantity	Quantity & Packaging Codes
0805L005/30	0805L005/30YR	Yes	0.05	005	Tape and Reel	4000	YR
0805L010	0805L010YR	Yes	0.10	010	Tape and Reel	4000	YR
0805L010/24	0805L010/24YR	Yes	0.10	010	Tape and Reel	4,000	YR
0805L020	0805L020YR	Yes	0.20	020	Tape and Reel	4000	YR
0805L035	0805L035YR	Yes	0.35	035	Tape and Reel	4000	YR
0805L050	0805L050WR	Yes	0.50	050	Tape and Reel	3000	WR
0805L075	0805L075WR	Yes	0.75	075	Tape and Reel	3000	WR
0805L100	0805L100WR	Yes	1.00	100	Tape and Reel	3000	WR
0805L110	0805L110WR	Yes	1.10	110	Tape and Reel	3000	WR

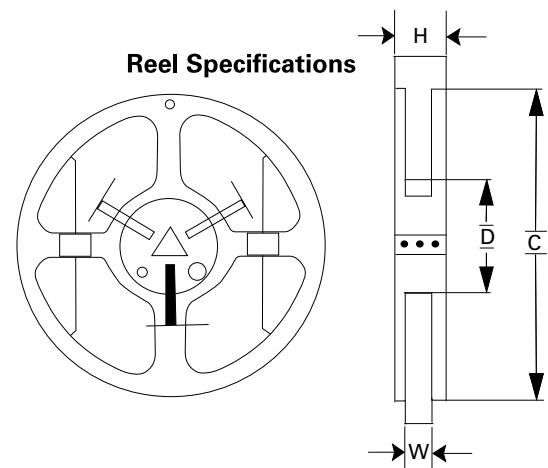
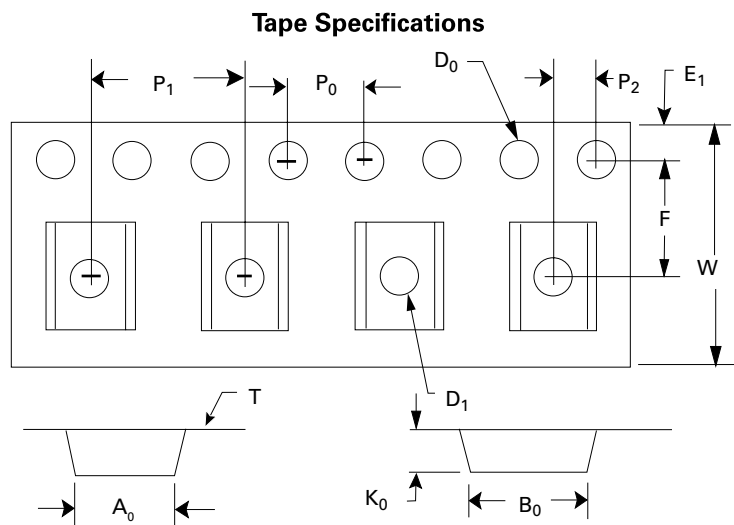
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Surface Mount

Tape and Reel Specifications

TAPE SPECIFICATIONS: EIA-481-1 (mm)			
	0805L010 0805L020 0805L035 0805L010/24	0805L050 0805L075 0805L100 0805L005/30	0805L110
W	8.00+/-0.10	8.00+/-0.30	8.00+/-0.30
F	3.50+/-0.05	3.50+/-0.05	3.50+/-0.05
E ₁	1.75+/-0.10	1.75+/-0.10	1.75+/-0.10
D ₀	1.55+/-0.05	1.55+/-0.05	1.55+/-0.05
D ₁	1.00 (min)	1.00+/-0.10	1.00+/-0.10
P ₀	4.00+/-0.08	4.00+/-0.10	4.00+/-0.10
P ₁	4.00+/-0.10	4.00+/-0.10	4.00+/-0.10
P ₂	2.00+/-0.05	2.00+/-0.05	2.00+/-0.05
A ₀	1.60+/-0.10	1.65+/-0.10	1.65+/-0.10
B ₀	2.30+/-0.10	2.35+/-0.10	2.35+/-0.10
T	0.25+/-0.10	0.20+/-0.10	0.25+/-0.10
K ₀	0.90+/-0.10	1.05+/-0.10	1.50+/-0.10
Leader min.	390	390	390
Trailer min.	160	160	160

REEL DIMENSIONS: EIA-481-1 (mm)	
C	Ø178+/-1.0
D	ø60.2+/-0.5
H	11.0+/-0.5
W	9.0+/-1.5



Warning

- Users shall independently assess the suitability of these devices for each of their applications
- Operation of these devices beyond the stated maximum ratings could result in damage to the devices and lead to electrical arcing and/or fire
- These devices are intended to protect against the effects of temporary over-current or over-temperature conditions and are not intended to perform as protective devices where such conditions are expected to be repetitive or prolonged in duration
- Exposure to silicon-based oils, solvents, electrolytes, acids, and similar materials can adversely affect the performance of these PPTC devices
- These devices undergo thermal expansion under fault conditions, and thus shall be provided with adequate space and be protected against mechanical stresses
- Circuits with inductance may generate a voltage (L di/dt) above the rated voltage of the PPTC device.

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