

Power Inductor for Critical Applications ST480PNA



- 5.1 × 5.1 mm footprint; 3.1 mm high shielded inductors
- Low DCR and excellent current handling

Core material Ferrite

Terminations Matte tin over nickel over copper. Other terminations available at additional cost.

Weight 0.20 – 0.24 g

Ambient temperature –40°C to +85°C with Irms current

Maximum part temperature +125°C (ambient + temp rise)

Storage temperature Component: –55°C to +125°C.
Tape and reel packaging: –40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Packaging 600/7" reel Plastic tape: 12 mm wide, 0.35 mm thick, 8 mm pocket spacing, 3.25 mm pocket depth

Part number ¹	Inductance ² ±20% (µH)	DCR max (Ohms)	SRF typ ³ (MHz)	Isat (A) ⁴			Irms (A) ⁵	
				10% drop	20% drop	30% drop	20°C rise	40°C rise
ST480PNA222ML_	2.2	0.020	65.0	1.76	2.08	2.30	2.00	3.30
ST480PNA332ML_	3.3	0.028	60.0	1.33	1.58	1.73	1.60	2.90
ST480PNA472ML_	4.7	0.038	52.0	1.08	1.32	1.42	1.40	2.50
ST480PNA562ML_	5.6	0.042	50.0	1.00	1.20	1.30	1.30	2.30
ST480PNA682ML_	6.8	0.050	45.0	0.98	1.14	1.24	1.20	2.16
ST480PNA822ML_	8.2	0.058	42.0	0.90	1.04	1.18	1.10	2.00
ST480PNA103ML_	10	0.070	40.0	0.85	0.98	1.13	1.00	1.90
ST480PNA123ML_	12	0.080	36.0	0.72	0.85	0.94	0.97	1.60
ST480PNA153ML_	15	0.100	32.0	0.67	0.78	0.86	0.94	1.50
ST480PNA183ML_	18	0.120	26.0	0.61	0.72	0.79	0.89	1.40
ST480PNA223ML_	22	0.145	23.0	0.54	0.64	0.70	0.87	1.30
ST480PNA273ML_	27	0.161	19.0	0.48	0.56	0.62	0.85	1.20
ST480PNA333ML_	33	0.200	18.0	0.44	0.52	0.58	0.80	1.10
ST480PNA393ML_	39	0.215	16.0	0.42	0.50	0.55	0.74	1.00
ST480PNA473ML_	47	0.270	15.0	0.38	0.46	0.51	0.71	0.95
ST480PNA563ML_	56	0.280	14.0	0.34	0.42	0.47	0.70	0.90
ST480PNA683ML_	68	0.368	12.0	0.31	0.38	0.42	0.66	0.85
ST480PNA823ML_	82	0.420	11.5	0.27	0.32	0.35	0.62	0.80
ST480PNA104ML_	100	0.580	11.0	0.26	0.30	0.33	0.55	0.69
ST480PNA124ML_	120	0.610	10.5	0.23	0.27	0.30	0.51	0.62
ST480PNA154ML_	150	0.820	10.0	0.21	0.26	0.28	0.47	0.58
ST480PNA184ML_	180	1.00	9.0	0.19	0.23	0.25	0.43	0.54
ST480PNA224ML_	220	1.10	8.0	0.18	0.21	0.23	0.39	0.50
ST480PNA274ML_	270	1.43	7.5	0.15	0.18	0.20	0.35	0.45
ST480PNA334ML_	330	1.58	6.8	0.13	0.17	0.19	0.32	0.42
ST480PNA394ML_	390	1.80	5.4	0.12	0.15	0.16	0.30	0.38

1. Please specify **termination** and **screening** codes:

ST480PNA-394KLZ

Termination: L = Gold over nickel over phos bronze.

Special order:

T = Tin-silver-copper (95.5/4/0.5) or

S = Tin-lead (63/37).

Testing:

Z = Unscreened

Y = Unscreened (SLDC Option A)

W = Unscreened (SLDC Option B)

H = Group A screening per Coilcraft CP-SA-10001

G = Coilcraft CP-SA-10001 Group A (SLDC Option A)

D = Coilcraft CP-SA-10001 Group A (SLDC Option B)

All screening performed to the document's latest revision

Custom screening also available

2. Inductance measured at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.

3. SRF measured using an Agilent/HP 8753D or equivalent.

4. DC current at 25°C that causes the specified inductance drop from its value without current.

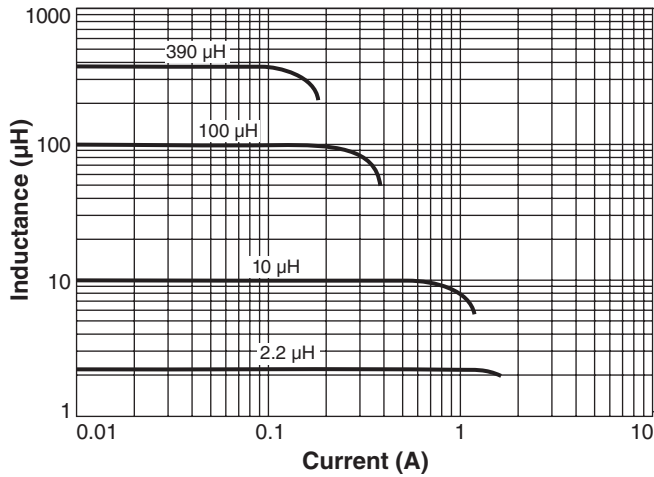
5. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.

6. Electrical specifications at 25°C.

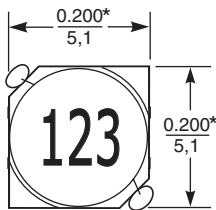
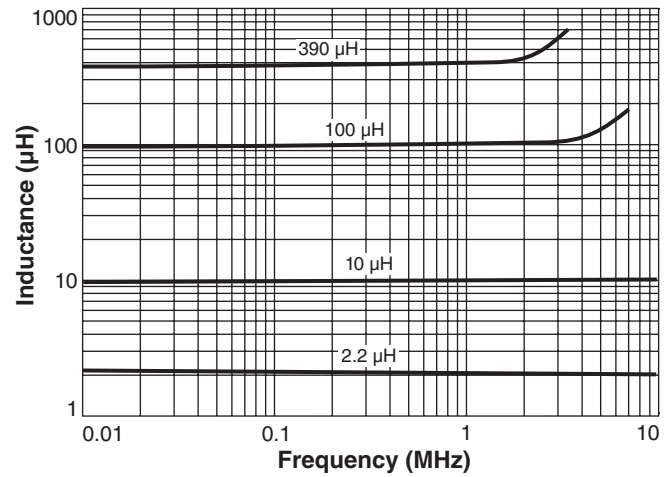
Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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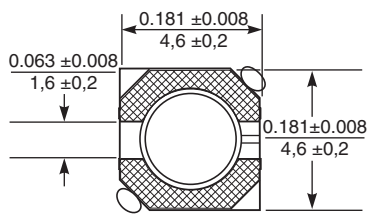
Typical L vs Current



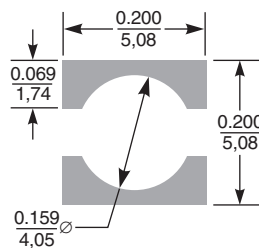
Typical L vs Frequency



*Dimensions are of the case not including the termination. For maximum overall dimensions including the termination, add 0.035 in / 0.9.



Suggested Land Pattern



Dimensions are in inches / mm



CRITICAL PRODUCTS & SERVICES

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