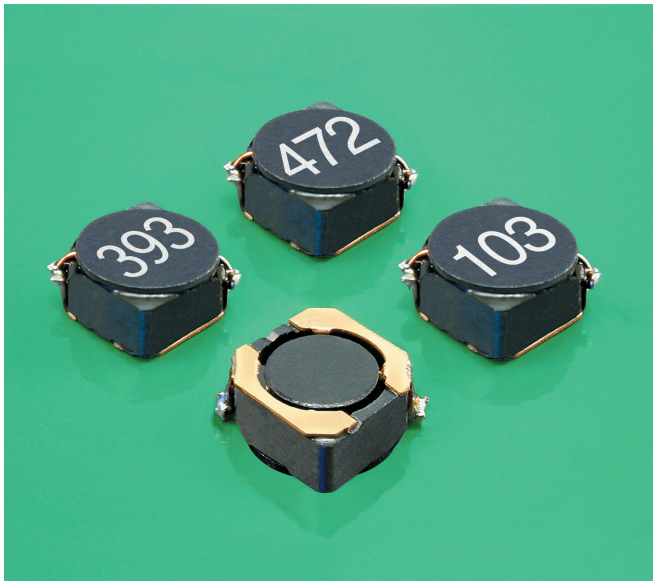
Power Inductor for Critical Applications ST511PNA



- 6.1 × 6.1 mm footprint; 3.2 mm high shielded inductors
- Low DCR and excellent current handling

Core material Ferrite

Terminations Gold over nickel over phos bronze. Other terminations available at additional cost.

Weight 0.33 – 0.38 g

Ambient temperature –40°C to +85°C with (40°C rise) Irms current.

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

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 500/7″ reel; Plastic tape: 16 mm wide, 0.3 mm thick, 12 mm pocket spacing, 3.1 mm pocket depth

Part number[1]	Inductance[2] ±20% (µH)	DCR max (Ohms)	SRF typ[3] (MHz)	Isat (A)[4] 10% drop	20% drop	30% drop	Irms (A)[5] 20°C rise	40°C rise
ST511PNA472MLZ	4.7	0.056	65.0	2.18	2.60	2.84	2.30	3.10
ST511PNA562MLZ	5.6	0.060	60.0	2.10	2.50	2.74	2.20	2.95
ST511PNA682MLZ	6.8	0.065	47.0	1.80	2.12	2.30	2.10	2.80
ST511PNA822MLZ	8.2	0.070	45.0	1.78	2.06	2.22	2.00	2.65
ST511PNA103MLZ	10	0.085	39.0	1.36	1.64	1.84	1.90	2.50
ST511PNA123MLZ	12	0.110	33.0	1.30	1.54	1.70	1.75	2.35
ST511PNA153MLZ	15	0.135	27.0	1.16	1.42	1.56	1.65	2.20
ST511PNA183MLZ	18	0.160	24.0	1.04	1.22	1.36	1.55	2.05
ST511PNA223MLZ	22	0.190	21.0	0.97	1.12	1.22	1.45	1.90
ST511PNA273MLZ	27	0.235	19.0	0.91	1.08	1.18	1.30	1.75
ST511PNA333MLZ	33	0.310	18.0	0.81	0.96	1.10	1.20	1.60
ST511PNA393MLZ	39	0.345	17.0	0.79	0.92	0.99	1.10	1.45
ST511PNA473MLZ	47	0.380	16.0	0.72	0.86	0.93	0.95	1.30
ST511PNA563MLZ	56	0.430	14.0	0.61	0.72	0.79	0.85	1.15
ST511PNA683MLZ	68	0.580	12.0	0.55	0.63	0.69	0.73	1.00
ST511PNA823MLZ	82	0.640	10.0	0.53	0.62	0.67	0.60	0.85
ST511PNA104MLZ	100	0.820	9.0	0.45	0.54	0.59	0.50	0.69

1. When ordering, please specify **termination** and **screening** codes:

ST511PNA104MLZ

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).

Screening: **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 tested at 100 kHz, 0.1 Vrms, 0 Adc using an Agilent/HP 4263B LCR meter or equivalent.
3. SRF measured using Agilent/HP 4191A 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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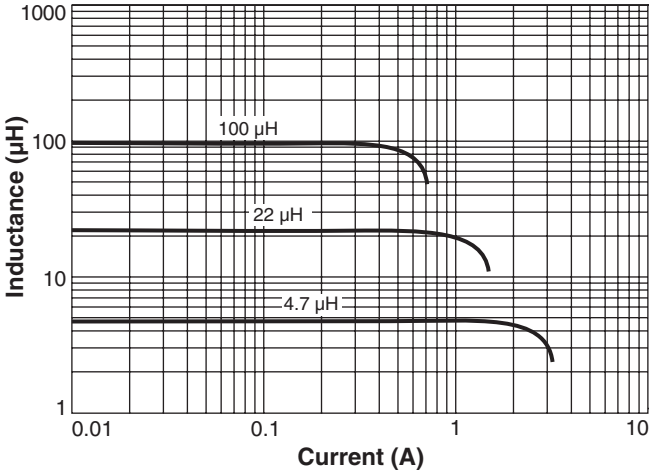
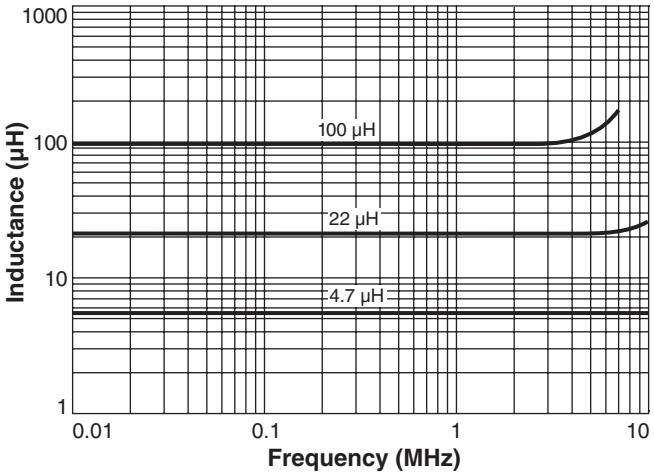
Document ST641-1 Revised 05/03/23

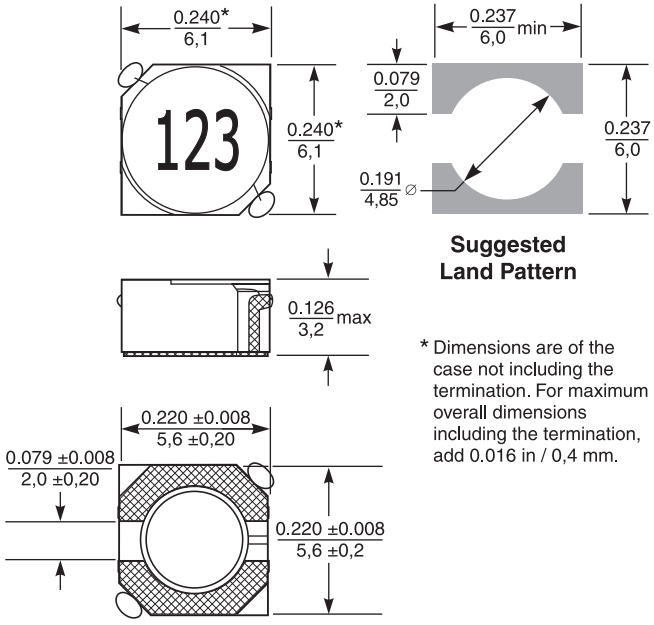
Power Inductors – ST511PNA

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 0.016 in / 0,4 mm.

Dimensions are in inches / mm

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Document ST641-2 Revised 05/03/23