

Shielded Power Inductor ST251PHJ



- Smallest power inductor – only 0.71 mm high, 1.14 x 0.635 mm footprint
- Handles current up to 2800 mAmps

Core material Composite

Core and winding loss See www.coilcraft.com/coreloss

Weight 1.3 – 1.8 mg

Terminations RoHS compliant matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.

Ambient temperature –40°C to +125°C.

Maximum part temperature +140°C (ambient + temp rise). [Derating](#).

Storage temperature Component: –55°C to +140°C.
Tape and reel packaging: –55°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 2000 per 7" reel Paper tape: 8 mm wide, 0.68 mm thick, 2 mm pocket spacing

Part number ¹	Inductance ² ±20% (nH)	DCR (mOhms) ³		SRF min ⁴ (MHz)	Isat (mA) ⁵			Irms (mA) ⁶	
		typ	max		10% drop	20% drop	30% drop	20°C rise	40°C rise
ST251PHJ18NMR_	18	45	55	2800	2000	2500	2600	1400	2000
ST251PHJ36NMR_	36	40	50	2100	1500	2400	2800	1400	2000
ST251PHJ60NMR_	60	50	60	1700	1300	1900	2100	1200	1600
ST251PHJ101MR_	100	65	75	1800	1000	1500	1900	1100	1500
ST251PHJ181MR_	180	110	125	1000	700	880	1100	900	1200
ST251PHJ271MR_	270	205	230	750	450	650	740	700	910
ST251PHJ391MR_	390	490	540	650	380	510	550	450	570
ST251PHJ561MR_	560	490	540	520	300	440	490	410	530
ST251PHJ721MR_	720	650	700	470	280	400	450	370	470
ST251PHJ102MR_	1000	970	1030	390	270	350	380	310	400

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

ST251PHJ102MRZ

Termination: R = Matte tin over nickel over silver-platinum glass frit

P = Tin-lead (63/37) over tin over nickel over silver-platinum-glass frit.

Q = Tin-silver-copper (95.5/4/0.5) over tin over nickel over silver-platinum-glass frit.

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 7.9 MHz, 0.1 Vrms using a Coilcraft SMD-F test fixture and Coilcraft-provided correlation pieces with an Agilent/HP 4286 impedance analyzer.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using an Agilent/HP 8753D network analyzer and a Coilcraft SMD-D test fixture.

5. DC current at 25°C that causes the specified inductance drop from its value without current. [Click for temperature derating information](#).

6. Current that causes the specified temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information](#).

7. Electrical specifications at 25°C.

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



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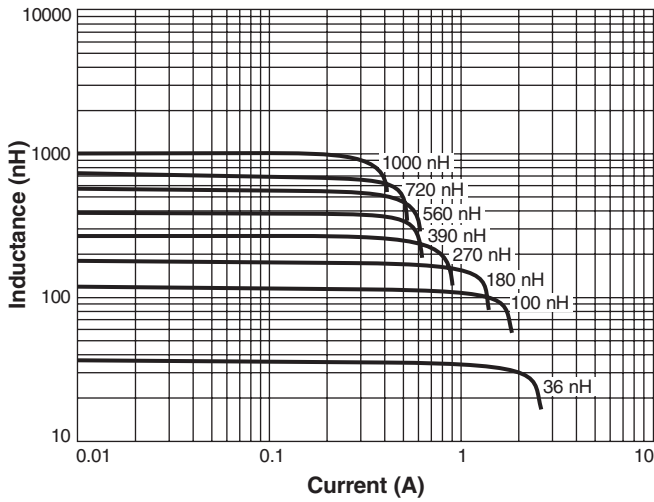
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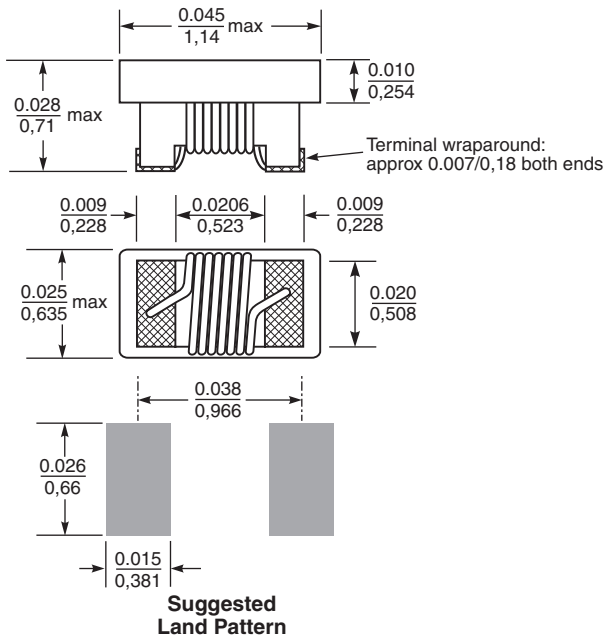
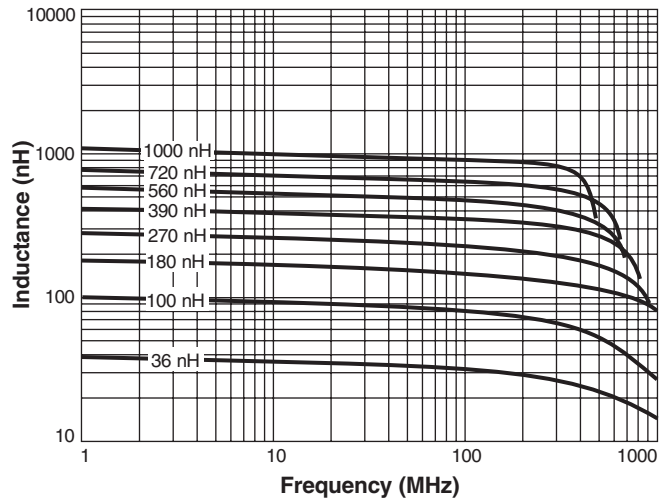
This product may not be used in medical or high risk applications without prior Coilcraft approval. Specifications subject to change without notice. Please check our web site for latest information.

ST251PHJ Series

Typical L vs Current



Typical L vs Frequency



Dimensions are in $\frac{\text{inches}}{\text{mm}}$

Note: Dimensions are before optional solder application. For maximum height dimensions including solder, add 0.006 in / 0.152 mm.

