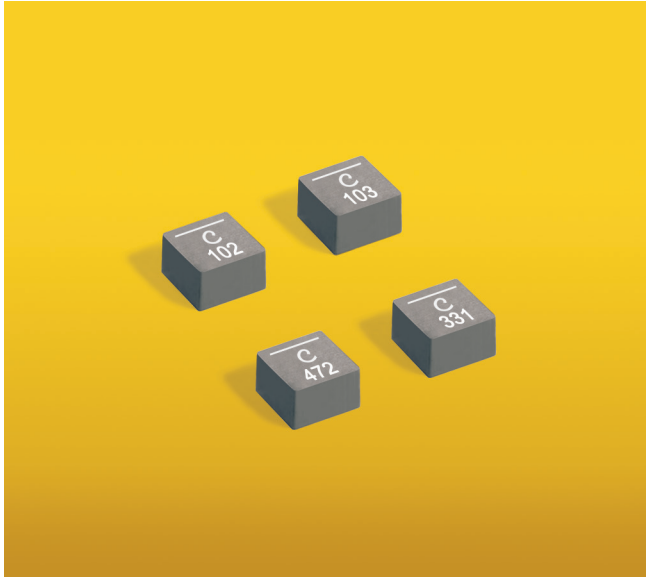


NEW!

High Reliability Power Inductors ST449PYA



- High current and very low DCR
- Soft saturation makes them ideal for VRM/VRD applications.

Core material Composite

Terminations Tin-silver (96.5/3.5) over copper.

Weight 0.26 – 0.28 g

Ambient temperature –40°C to +125°C with Irms current

Maximum part temperature +165°C (ambient + temp rise).

Storage temperature Component: –55°C to +165°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)

Enhanced crush-resistant packaging 500 per 7" reel;
Plastic tape: 12 mm wide, 0.23 mm thick, 8 mm pocket spacing,
3.25 mm pocket depth

Part number ¹	Inductance ² ±20% (µH)	DCR (mOhms) ³		SRF (MHz) ⁴		Isat ⁵ (A)	Irms (A) ⁶	
		typ	max	min	typ		20°C rise	40°C rise
ST449PYA221MLZ	0.22	2.96	3.26	169	211	21.0	10.5	12.9
ST449PYA361MLZ	0.36	3.86	4.25	148	185	15.8	9.5	12.6
ST449PYA501MLZ	0.50	4.77	5.25	96	120	13.4	8.3	11.6
ST449PYA681MLZ	0.68	6.39	7.03	91	114	12.4	7.4	10.5
ST449PYA102MLZ	1.0	8.89	9.78	72	90	9.7	5.6	7.4
ST449PYA152MLZ	1.5	15.1	16.6	49	61	7.4	5.1	6.6
ST449PYA222MLZ	2.2	20.1	22.1	42	53	6.1	4.4	5.9
ST449PYA332MLZ	3.3	26.1	28.6	34	43	5.9	3.8	5.0
ST449PYA472MLZ	4.7	40.1	44.1	29	36	4.6	2.9	3.8
ST449PYA682MLZ	6.8	67.4	74.1	23	29	3.6	2.3	2.9

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

ST449PYA682MLZ

Termination: L = Tin-silver (96.5/3.5) over copper.

Special order: S = Tin-lead (63/37).

Screening: Z = Unscreened

Y = Unscreened (SLDC Option A)

W = Unscreened (SLDC Option B)

H = Coilcraft CP-SA-10001 Group A

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

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

- Screening performed to the document's latest revision.

- Custom testing also available.

- Country of origin restrictions available; prefix option G.

2. Inductance tested at 100 kHz, 0.1 Vrms, 0 Adc.

3. DCR measured on a micro-ohmmeter.

4. SRF measured using Agilent/HP 4395A or equivalent.

5. DC current at which the inductance drops the specified amount from its value without current.

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.

7. Electrical specifications at 25°C.

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

Irms Testing

Irms testing was performed on a 0.060" thick pcb with 4 oz. copper traces optimized to minimize additional temperature rise.

Temperature rise is highly dependent on many factors including pcb land pattern, trace size, and proximity to other components. Therefore temperature rise should be verified in application conditions.

Coilcraft CPS
CRITICAL PRODUCTS & SERVICES

1102 Silver Lake Road
Cary, IL 60013
Phone 800-981-0363

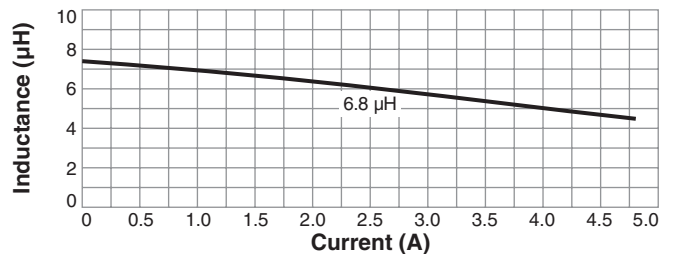
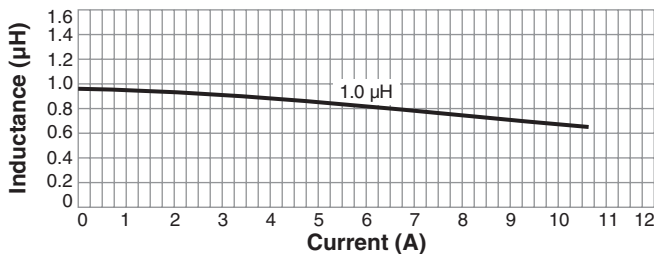
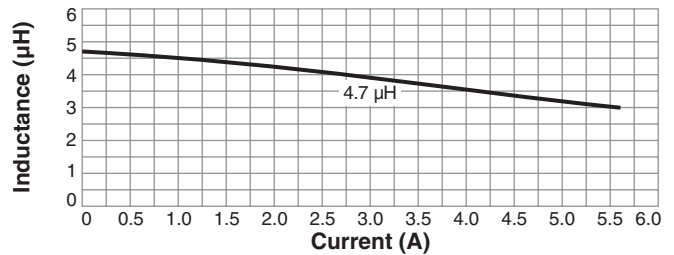
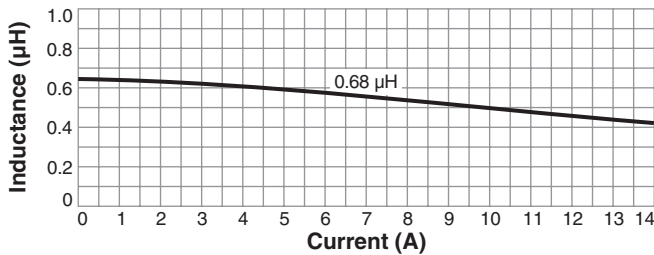
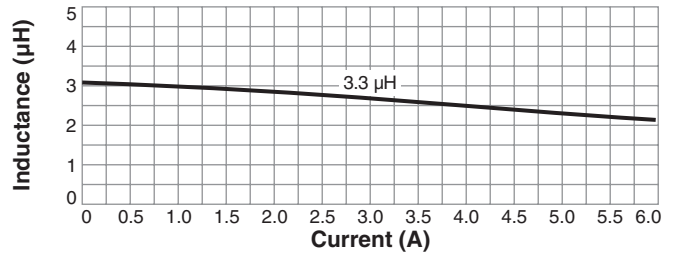
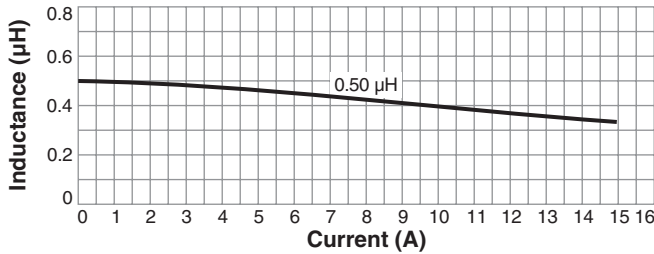
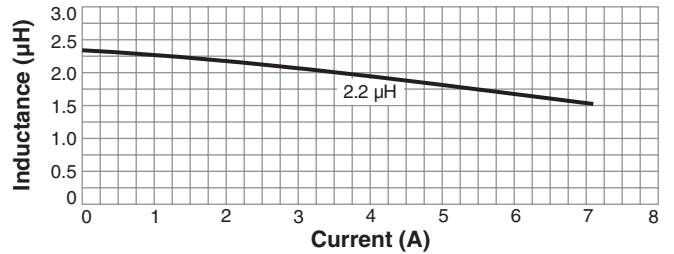
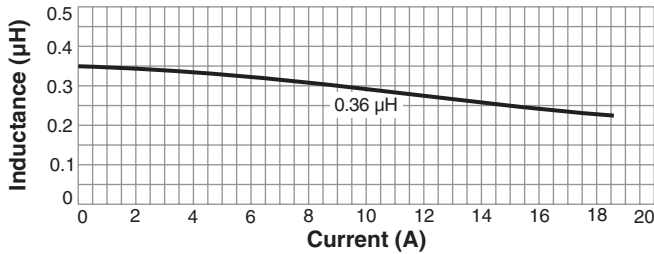
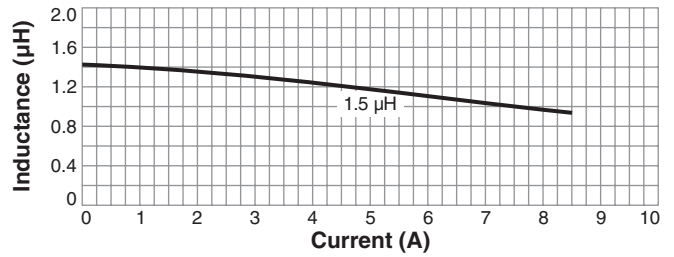
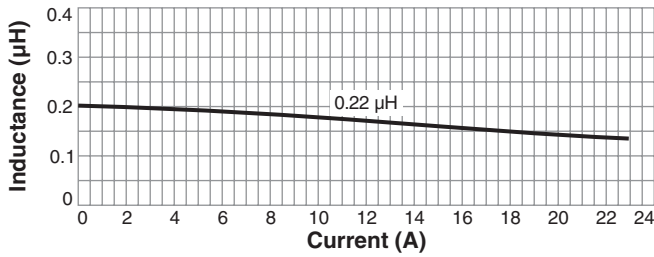
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Email cps@coilcraft.com
www.coilcraft-cps.com

Document ST802-1 Revised 08/01/23

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.

ST449PYA Series

L vs Current



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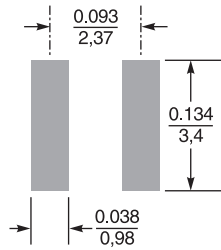
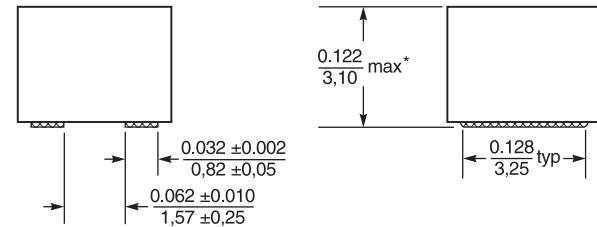
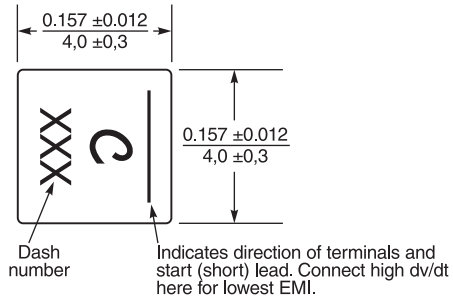
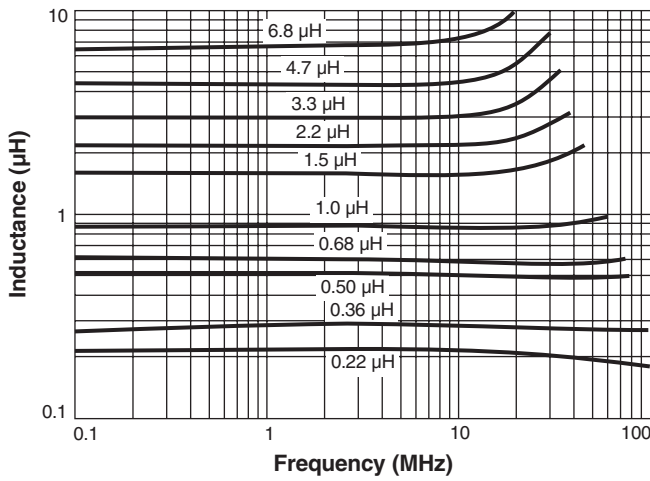
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Document ST802-2 Revised 08/01/23

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ST449PYA Series

L vs Frequency



Suggested Land Pattern

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

* For optional tin-lead and tin-silver-copper terminations, dimensions are for the mounted part. Dimensions before mounting can be an additional 0.008 inch / 0,2 mm.