

# Coupled Inductors for Critical Applications ST450PHD



- Coupled inductors optimized for xDSL filtering applications
- Can be used as a common mode choke, 1:1 transformer or in SEPIC applications

**Core material** Ferrite

**Terminations** Gold over nickel over moly-manganese. Other terminations available at additional cost.

**Weight** 0.30 – 0.36 g

**Ambient temperature** –40°C to +85°C with I<sub>max</sub> current

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

**Storage temperature** Component: –55°C to +125°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** 600/7" reel; 2200/13" reel Plastic tape: 12 mm wide, 0.25 mm thick, 8 mm pocket spacing, 3.9 mm pocket depth

Part number <sup>1</sup>	L ±20% <sup>2</sup> (μH)	Q min <sup>3</sup>	DCR max (Ohms)	SRF min (MHz)	I <sub>sat</sub> <sup>4</sup> (mA)	I <sub>max</sub> (mA)
ST450PHD102ML_	1.0	38	0.20	285	2400	2100
ST450PHD222ML_	2.2	29	0.33	175	1500	1200
ST450PHD472ML_	4.7	43	0.41	102	1500	1000
ST450PHD103ML_	10	35	0.74	74	800	780
ST450PHD153ML_	15	37	0.96	65	700	710
ST450PHD223ML_	22	38	1.84	54	500	530
ST450PHD393ML_	39	39	2.60	5.7	450	420
ST450PHD473ML_	47	40	2.66	4.8	400	390

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

**ST450PHD473MLZ**

**Termination:** L = Silver-palladium-platinum-glass frit terminations

Special order:

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

S = Tin-lead (63/37).

**Testing:** Z = Unscreened

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

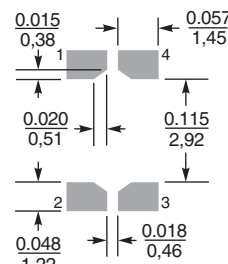
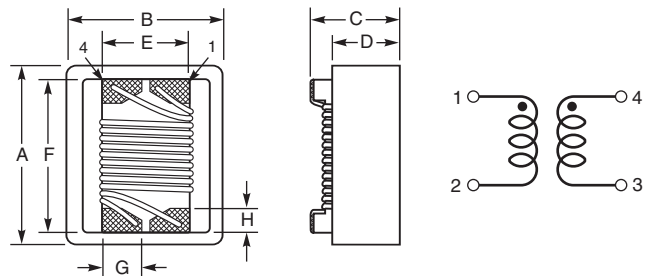
2. Per winding. Tested at 100 kHz, 0.1 Vrms, 0 Adc.

3. Q measured at 1 MHz.

4. DC current at 25°C that causes the inductance to drop 10% (typ) from its value without current.

5. Electrical specifications at 25°C.

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



**Suggested  
Land Pattern**

A	B	C	D	E	F	G	H
max	max	max	ref	ref	ref	min	H
0.231	0.196	0.150	0.107	0.100	0.178	0.04	0.03 inches
5,87	4,98	3,81	2,72	2,54	4,52	1,02	0,76 mm

Note: Termination dimensions are before optional solder application.  
For maximum termination dimensions including solder, add 0.006 in / 0,15 mm.

**Coilcraft CPS**  
CRITICAL PRODUCTS & SERVICES

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

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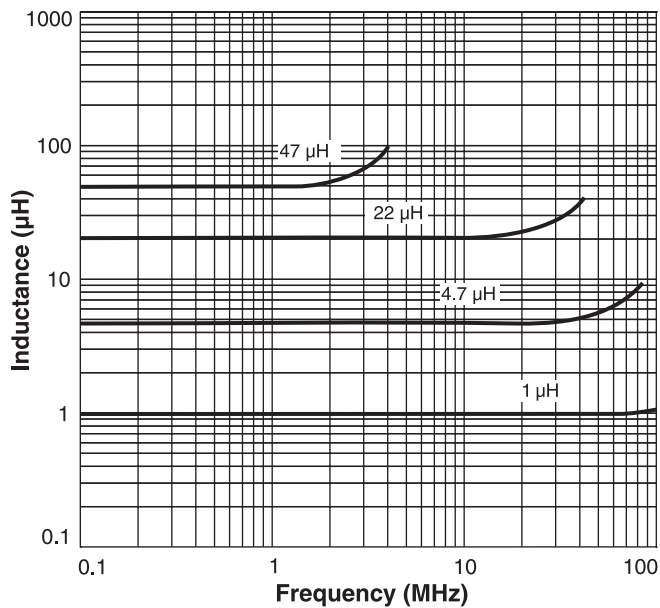
Fax 847-639-1508  
Email cps@coilcraft.com  
www.coilcraft-cps.com

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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.

# ST450PHD Coupled Inductors

## Typical L vs Frequency



## Typical Q vs Frequency

