

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 RoHS compliant 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_{max} current, +85°C to +125°C with derated current

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

PCB washing Only pure water or alcohol recommended

Part number ¹	L ±20% ² (μH)	Q min ³	DCR max (Ohms)	SRF min (MHz)	I _{sat} ⁴ (mA)	I _{max} (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:

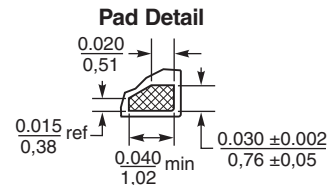
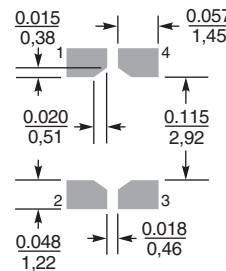
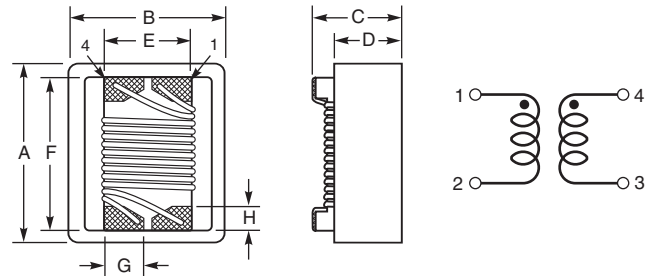
T = RoHS tin-silver-copper (95.5/4/0.5) or

S = non-RoHS tin-lead (63/37).

Testing: Z = COTS

H = Screening per Coilcraft CP-SA-10001

- Per winding. Tested at 100 kHz, 0.1 Vrms, 0 Adc.
 - Q measured at 1 MHz.
 - DC current at which the inductance drops 10% (typ) from its value without current.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.



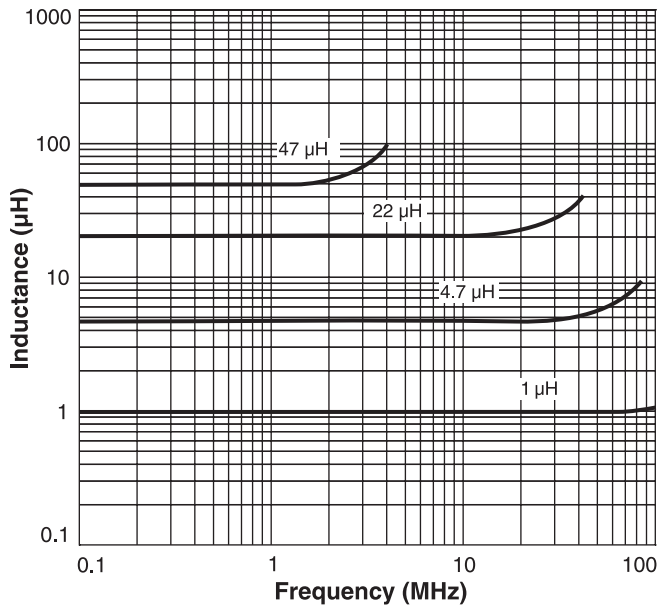
Suggested Land Pattern

A	B	C	D	E	F	G	H
max	max	max	ref	ref	ref	min	
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

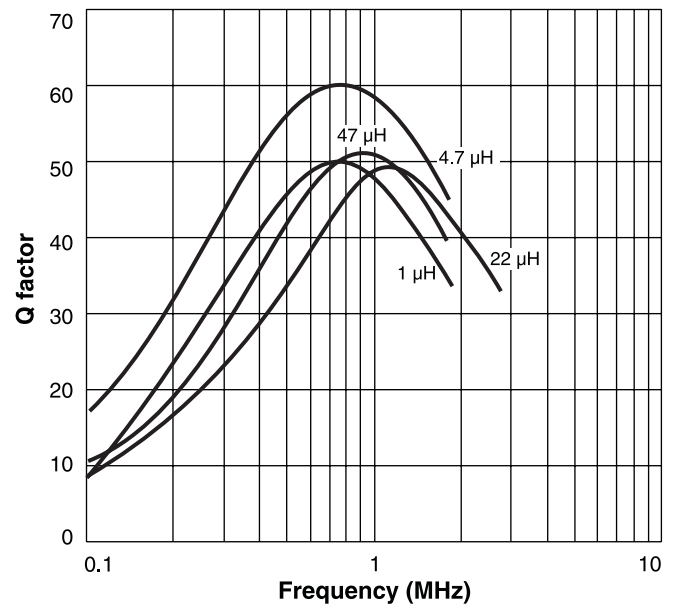
Note: Termination dimensions are before optional solder application. For maximum termination dimensions including solder, add 0.006 in / 0,15 mm.

ST450PHD Coupled Inductors

Typical L vs Frequency



Typical Q vs Frequency



Imax Derating

