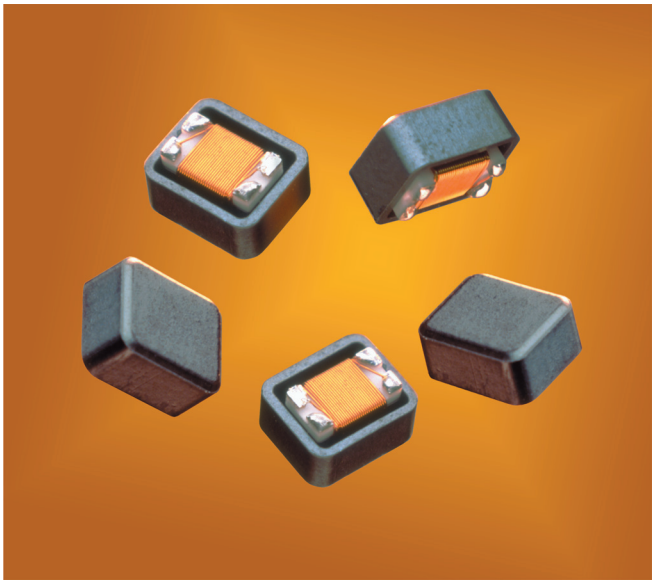
# Coupled Inductors for Critical Applications ST450PHD



- 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 Imax 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) | Isat[4] (mA) | Imax (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 |

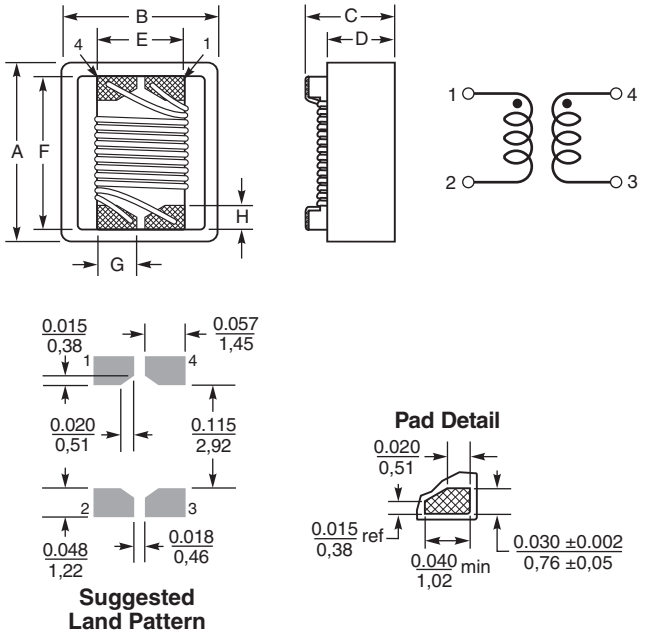
1. When ordering, please specify **termination** and **testing** codes:

   **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
2. Per winding. Tested at 100 kHz, 0.1 Vrms, 0 Adc.
3. Q measured at 1 MHz.
4. DC current at which the inductance drops 10% (typ) from its value without current.
5. Electrical specifications at 25°C.

Refer to Doc 362 “Soldering Surface Mount Components” before soldering.




| A max | B max | C max | D ref | E ref | F ref | G 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.

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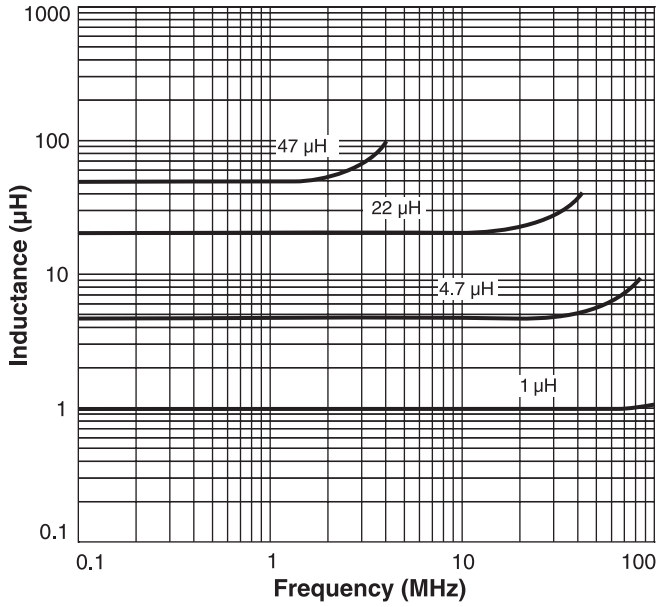
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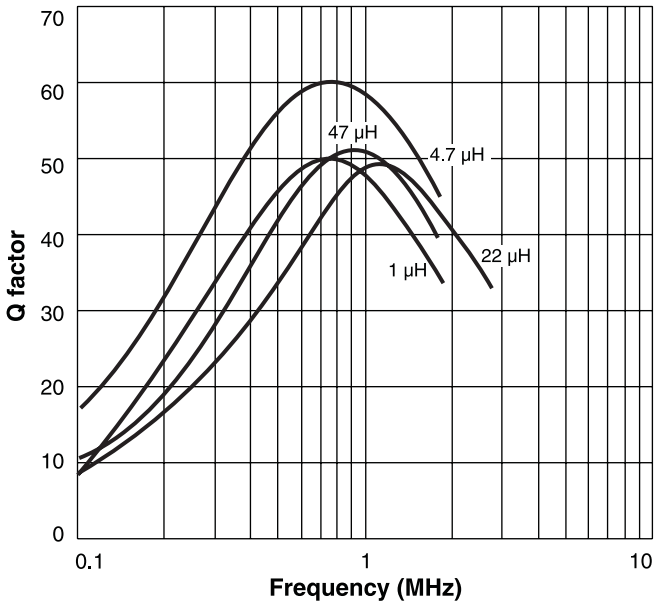
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# ST450PHD Coupled Inductors

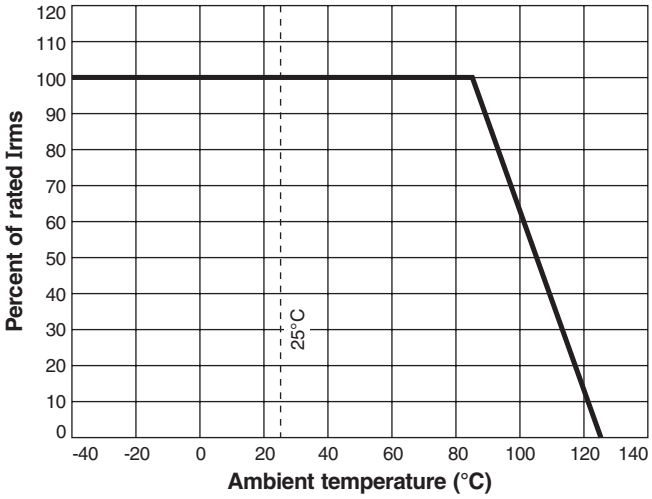
## Typical L vs Frequency




## Typical Q vs Frequency




## Imax Derating






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