



1812DPS Coupled Inductors for xDSL



- Coupled inductor 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_{rms} current, +85°C to +125°C with derated current

Storage temperature Component: –40°C to +125°C. Packaging: –40°C to +80°C

Resistance to soldering heat Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

Temperature Coefficient of Inductance (TCL) +200 to +700 ppm/°C

Moisture Sensitivity Level (MSL) 1 (unlimited floor life at <30°C / 85% relative humidity)

Failures in Time (FIT) / Mean Time Between Failures (MTBF)

38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

Packaging 500/7" reel; 2000/13" 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) | Irms ⁵ (mA) |
|--------------------------|--------------------------------|-----------------------|----------------------|---------------------|---------------------------|---------------------------|
| 1812DPS-102ML_ | 1.0 | 38 | 0.20 | 285 | 2400 | 2100 |
| 1812DPS-222ML_ | 2.2 | 29 | 0.33 | 175 | 1500 | 1200 |
| 1812DPS-472ML_ | 4.7 | 43 | 0.41 | 102 | 1500 | 1000 |
| 1812DPS-103ML_ | 10 | 35 | 0.74 | 74 | 800 | 780 |
| 1812DPS-153ML_ | 15 | 37 | 0.96 | 65 | 700 | 710 |
| 1812DPS-223ML_ | 22 | 38 | 1.84 | 54 | 500 | 530 |
| 1812DPS-393ML_ | 39 | 39 | 2.60 | 5.7 | 450 | 420 |
| 1812DPS-473ML_ | 47 | 40 | 2.66 | 4.8 | 400 | 390 |

- When ordering, please specify **termination** and **packaging** codes:

1812DPS-473ML $\begin{matrix} \downarrow \\ \text{L} \\ \downarrow \\ \text{C} \end{matrix}$

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).

Packaging: C = 7" machine-ready reel. EIA-481 embossed plastic tape (600 parts per full reel).

B = Less than full reel. In tape, but not machine ready.
To have a leader and trailer added (\$25 charge), use code letter C instead.

D = 13" machine-ready reel. EIA-481 embossed plastic tape (2200 parts per full reel).

- 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.
 - Current that causes a 40°C temperature rise from 25°C ambient.
 - Electrical specifications at 25°C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

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Specifications subject to change without notice.
Please check our website for latest information.

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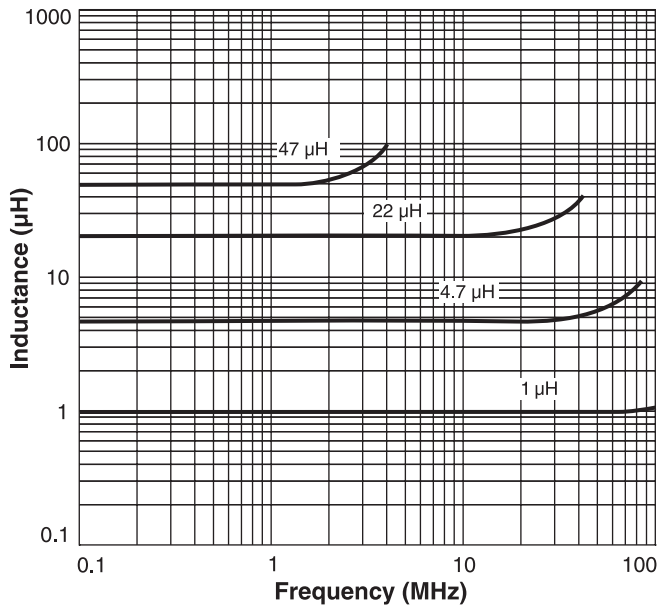
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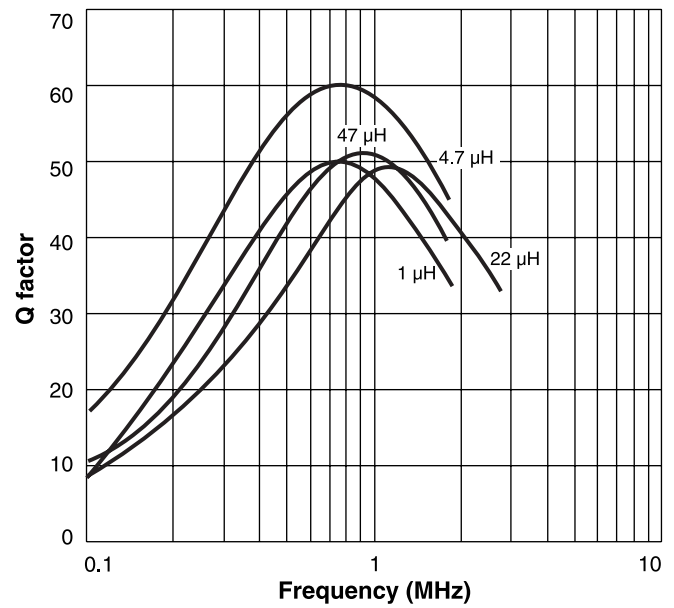


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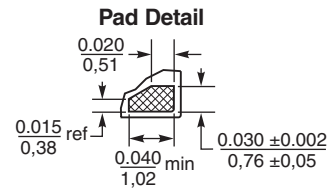
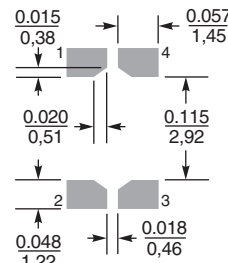
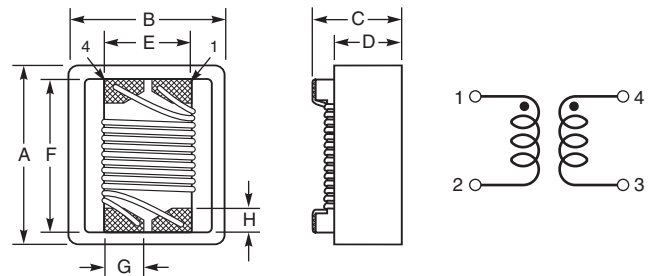
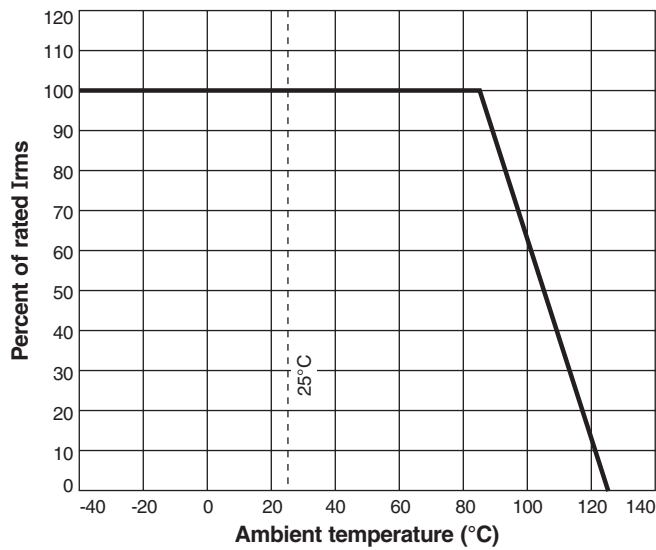
Typical L vs Frequency



Typical Q vs Frequency



Irms Derating



| 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 |



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