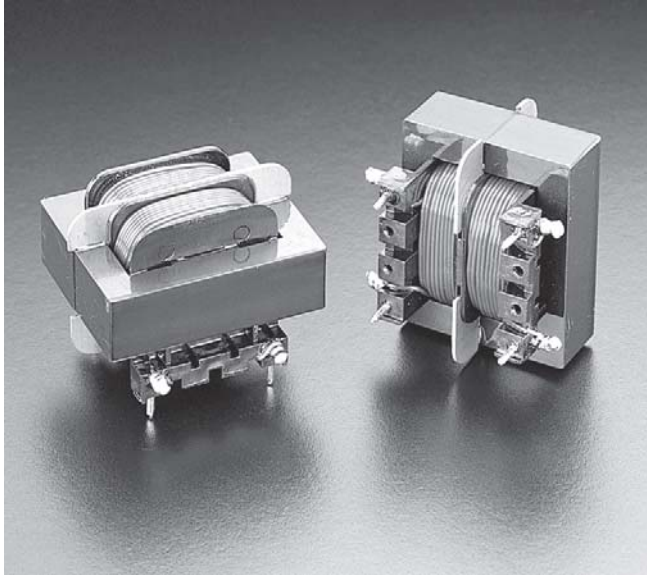




# Combination Line Filter Choke

## Common and Differential Mode



This series of chokes is intended for use in AC line filters for switching power supplies. They combine common and differential mode filtering in a single component.

By using these parts, designers can eliminate two extra filter chokes compared to a standard common mode choke. The unique combination of special windings and materials provides much better filtering performance than either a common mode choke or a single winding inductor alone.

The differential filtering frequency response is designed to provide filtering at higher frequencies while still allowing the AC line power to pass through without loss. This characteristic is demonstrated in the Differential Mode Attenuation curves.

Part number	Common mode L typ (mH)	Differential mode L typ ( $\mu$ H)	DCR max (Ohms)	Isolation (Vrms)	Current rating (A)
P3717-AL	25.0	1000	0.30	1500	3
Q4007-AL	4.5	150	0.06	1500	5
Q4018-AL	1.5	35	0.02	1500	10

1. Operating temperature range  $-40^{\circ}$  to  $+85^{\circ}$ C.
  2. Electrical specifications at  $25^{\circ}$ C.
- Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Core material** Ferrite

**Terminations** RoHS compliant tin-silver over tin over copper.

**Weight** 100 – 113 g

**Ambient temperature**  $-40^{\circ}$ C to  $+85^{\circ}$ C

**Storage temperature** Component:  $-55^{\circ}$ C to  $+85^{\circ}$ C.  
Packaging:  $-40^{\circ}$ C to  $+80^{\circ}$ C

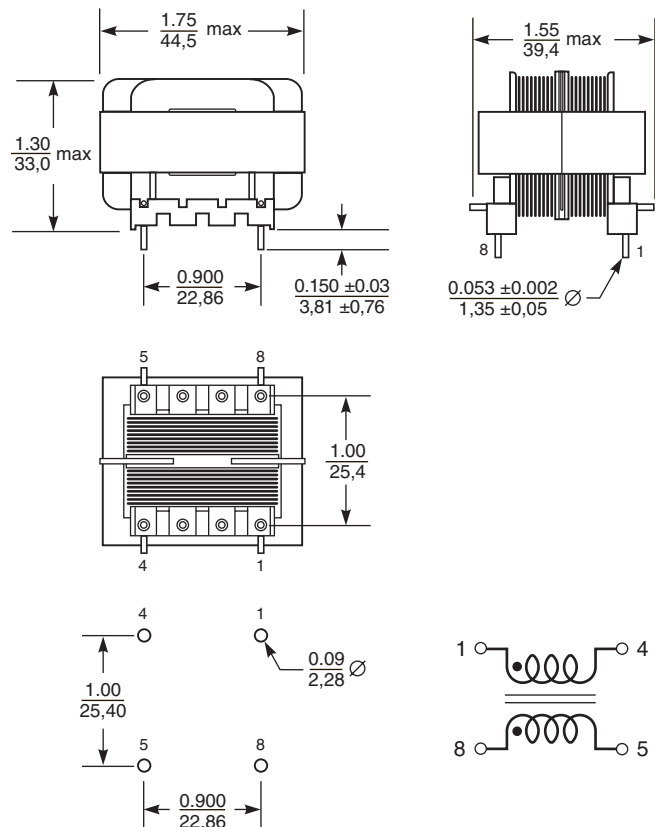
**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at  $<30^{\circ}$ C / 85% relative humidity)

**Mean Time Between Failures (MTBF)** 26,315,789 hours

**Failures in Time (FIT)** 38 failures in one billion hours

**Packaging** 30 per tray (after 5/09); 16 per tray (prior to 6/09)

**PCB washing** Only pure water or alcohol recommended



**Recommended  
PC Board Layout**

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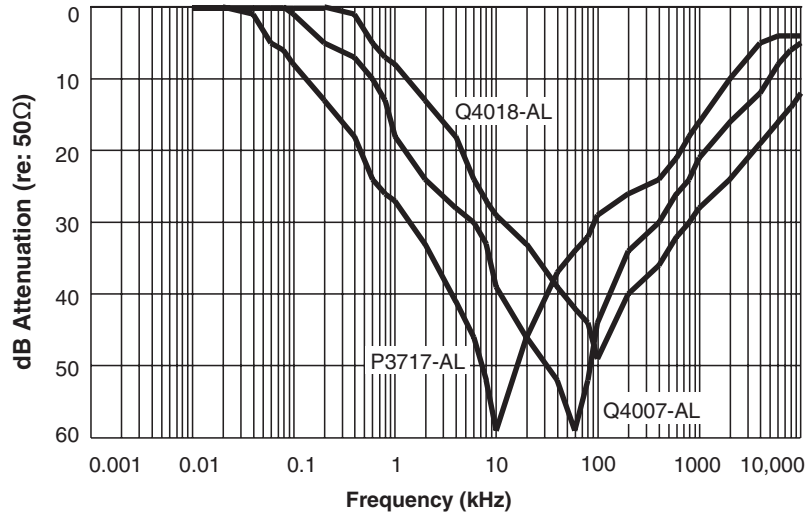
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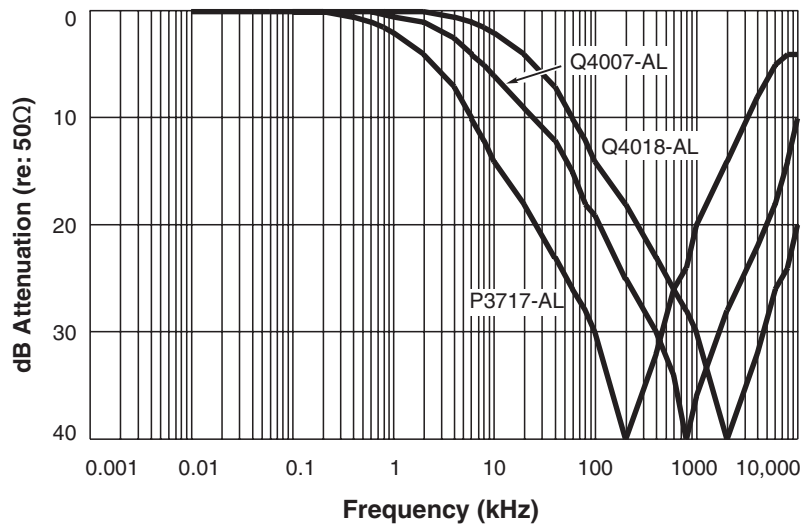


# Combination Line Filter Choke

## Common Mode Attenuation Typical Response



## Differential Mode Attenuation Typical Response



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