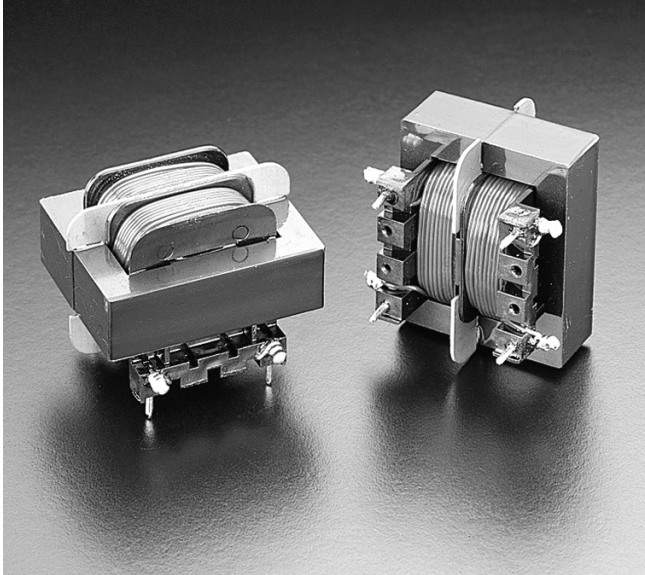




# Combination Line Filter Chokes

## 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 impedance <sup>1</sup> max (kOhms)	Common mode inductance <sup>1</sup> typ (mH)	Differential mode inductance typ (μH)	Irms <sup>2</sup> (A)	DCR max <sup>3</sup> (Ohms)	Isolation <sup>4</sup> (Vrms)
P3717-AL	597 @ 0.18 MHz	25.0	1000	3.0	0.30	1500
Q4007-AL	277 @ 0.66 MHz	4.5	150	5.0	0.06	1500
Q4018-AL	43.3 @ 1.2 MHz	1.5	35	10	0.02	1500

1. Inductance measured at 15.75 kHz, 1.0 Vrms, 0 Adc.
2. Current that causes a 40°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings.
3. DCR is specified per winding.
4. Isolation (hipot) measured for one minute.
4. Electrical specifications at 25°C.

**Core material** Ferrite

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

**Weight** 100 – 113 g

**Ambient temperature** –40°C to +85°C

**Storage temperature** Component: –40°C to +85°C.

Tray packaging: –40°C to +80°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

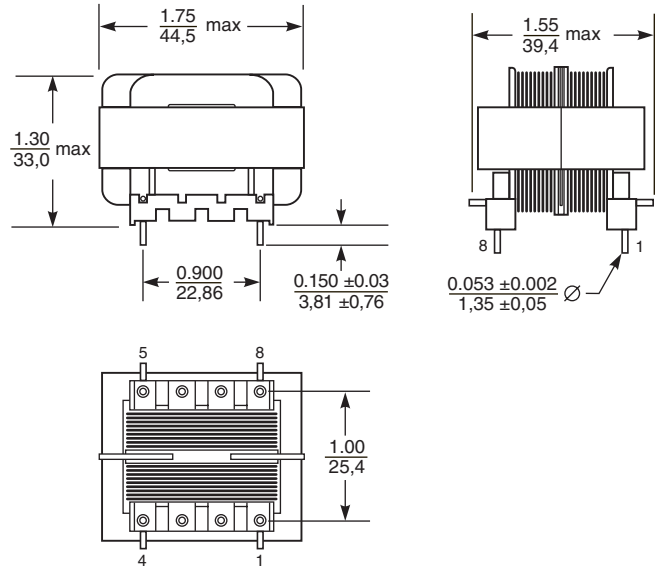
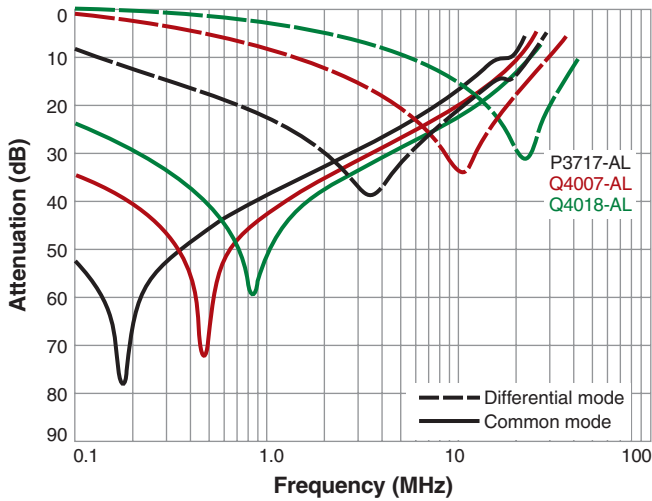
**Packaging** 30 per tray (after 5/09); 16 per tray (prior to 6/09)

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

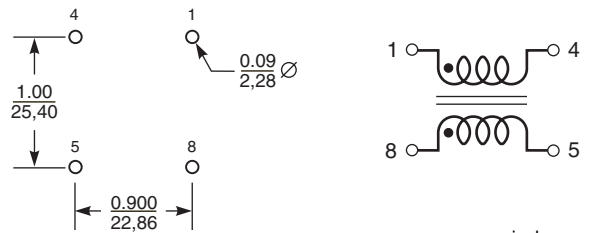
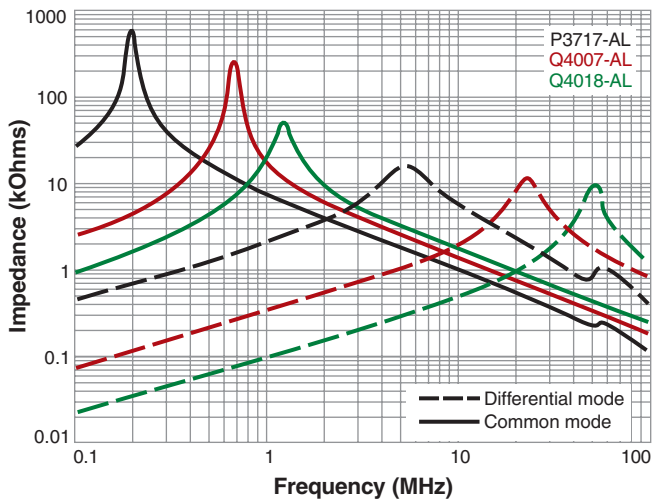


# Combination Line Filter Chokes

## Typical Attenuation (Ref: 50 Ohms)



## Typical Impedance



**Recommended PC Board Layout**

Dimensions are in inches/mm



**US** +1-847-639-6400 sales@coilcraft.com  
**UK** +44-1236-730595 sales@coilcraft-europe.com  
**Taiwan** +886-2-2264 3646 sales@coilcraft.com.tw  
**China** +86-21-6218 8074 sales@coilcraft.com.cn  
**Singapore** + 65-6484 8412 sales@coilcraft.com.sg

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