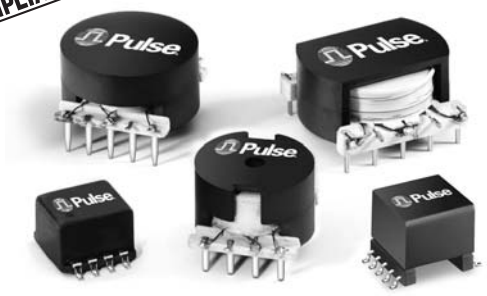
# INDUCTORS AND COMMON MODE CHOKES

## For Use in ADSL POTS Low Pass Filters

Pulse® A TECHNITROL COMPANY

RoHS COMPLIANT




- Excellent longitudinal balance
- Inductors also available in surface mount packages
- Customized inductance values available
- Inductance is stable within ±10% with DC current from 0 to 100mA

**Electrical Specifications @ 25°C — Operating Temperature -40°C to 85°C**

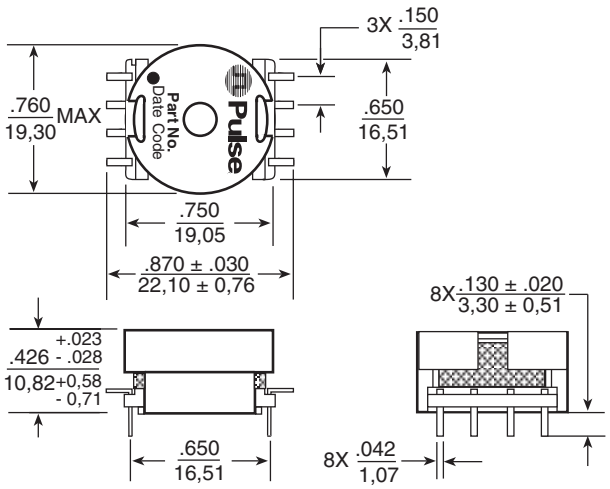
| RoHS-5 Compliant Part No. | RoHS-6 Compliant Part No. | Inductance (each winding) (mH) | DC Resistance (each winding) (Ω MAX) | Isolation Voltage (between windings) (Vrms) | Function | Mounting |
|---|---|---|---|---|---|---|
| **B2005** | **B2005NL** | 9.0 ±30% [1] | 0.60 | 1500 | Common Mode Choke | THT |
| **B2013** [3] | **B2013NL** [3] | 9.0 ±30% [1] | 1.00 | 1500 | Common Mode Choke | SMT |
| **B2023** | – | 6.0 ±5% [2] | 4.00 | 1500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B2024** | – | 4.0 ±5% [2] | 3.00 | 1500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B2025** | – | 3.0 ±5% [2] | 2.50 | 1500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B2026** | – | 10.0 ±5% [2] | 4.50 | 1500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B2086** [3] | **B2086NL** [3] | 4.0 ±10% | 3.60 | 1250 | Coupled Inductor for POTS Low Pass Filter | SMT |
| **B2113** | – | 2.25 ±10% | 2.25 | 500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B2114** | – | 1.425 ±10% | 2.25 | 500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B2116** | – | 1.65 ±10% | 2.25 | 500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B2117** | – | 1.35 ±10% | 2.25 | 500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B2118** | – | 0.8 ±10% | 2.00 | 500 | Coupled Inductor for POTS Low Pass Filter | THT |
| **B8098** [3] | **B8098NL** [3] | 4.0 ±10% | 3.60 | 1250 | Coupled Inductor for POTS Low Pass Filter | SMT |

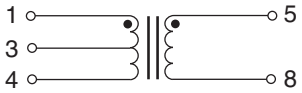
**1.** 100kHz, 20mVrms. **2.** 1.0kHz, 1.0mVrms, 0 mA to 100 mA (each winding). **3.** For Tape & Reel packaging, add the suffix **"T"** to this part number (B2013**T** or B2013NL**T**)
**NOTE:** The B2005 and B2013 are common mode chokes that reduce common mode voltages in the low frequency range that may be caused by telephone ringing signals or by interference from radio transmitters in the ADSL frequency range. The chokes are also designed to accommodate DC currents up to 100mA.

## Mechanical

## Schematic

**B2024/B2025/B2113/B2114/B2116/B2117**




**Weight** . . . . . .9.5 grams
**Tray** . . . . . .30/tray
**Dimensions:** Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25

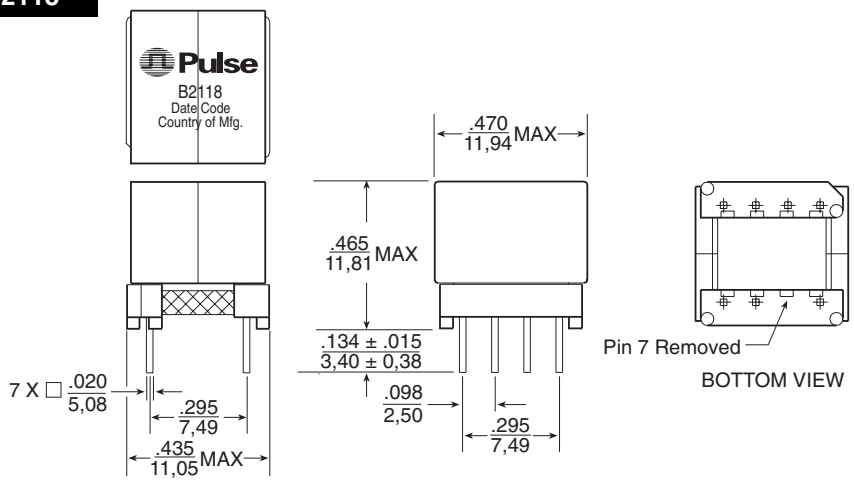
# INDUCTORS AND COMMON MODE CHOKES
## For Use in ADSL POTS Low Pass Filters

Pulse® A TECHNITROL COMPANY

### Mechanicals

### Schematics

## B2118

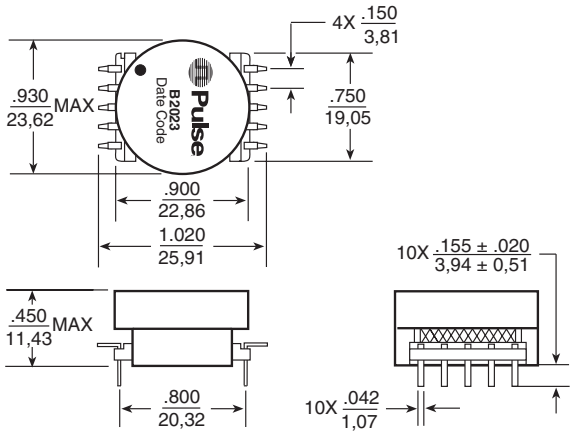


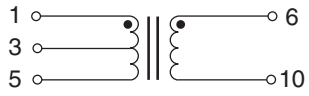




**Weight** . . . . . .3.6 grams
**Tray** . . . . . .75/tray
**Dimensions:** Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25

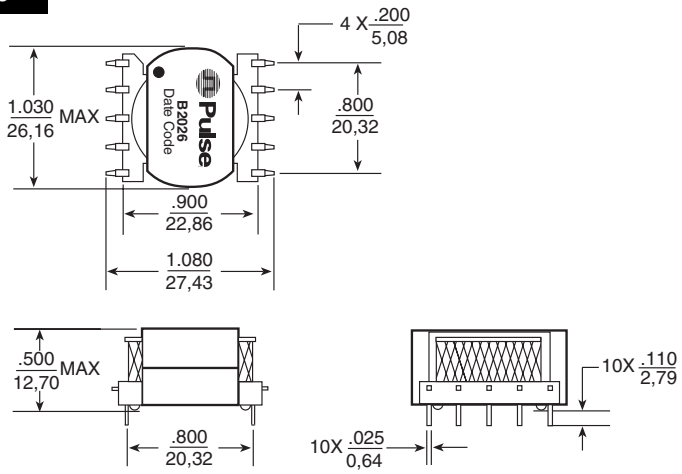
## B2023

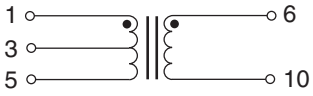



**Weight** . . . . . .15.0 grams
**Tray** . . . . . .45/tray
**Dimensions:** Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25

## B2026




**Weight** . . . . . .17.5 grams
**Tray** . . . . . .25/tray
**Dimensions:** Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25

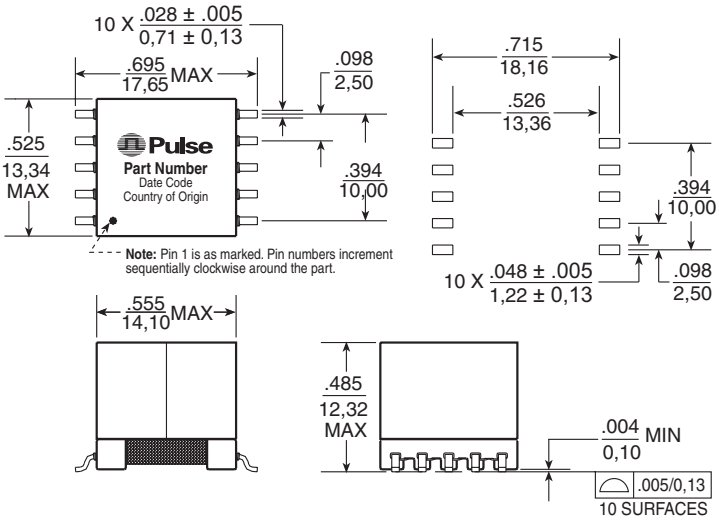
# INDUCTORS AND COMMON MODE CHOKES
## For Use in ADSL POTS Low Pass Filters

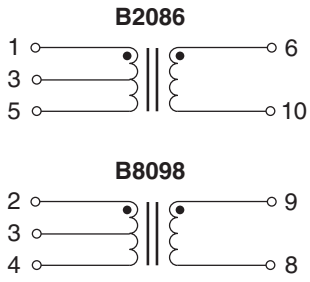
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### Mechanicals

### Schematics

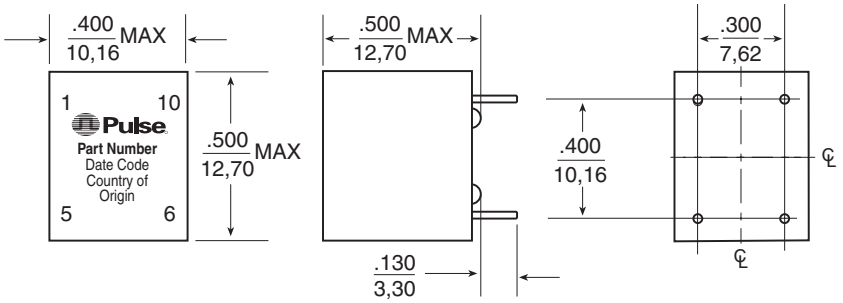
## B2086 / B2086NL / B8098 / B8098NL

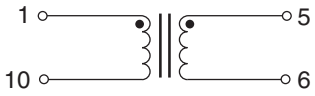



**Weight** . . . . . .6.2 grams
**Tape & Reel** . . . . . .150/reel
**Tray** . . . . . .60/tray
**Dimensions:** Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25

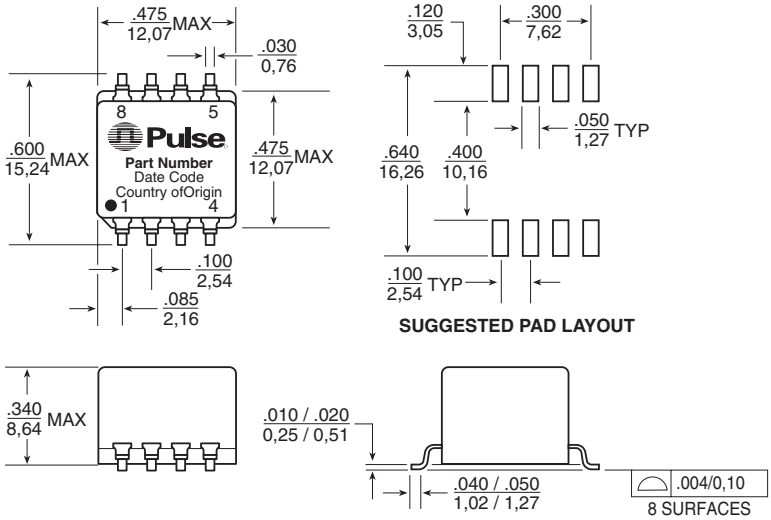
## B2005 / B2005NL

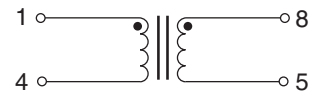



**Weight** . . . . . .3.7 grams
**Tube** . . . . . .40/tube
**Dimensions:** Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25

## B2013 / B2013NL




**Weight** . . . . . .2.5 grams
**Tape & Reel** . . . . . .250/reel
**Tube** . . . . . .40/tube
**Dimensions:** Inches / mm
Unless otherwise specified, all tolerances are ± .010 / 0,25

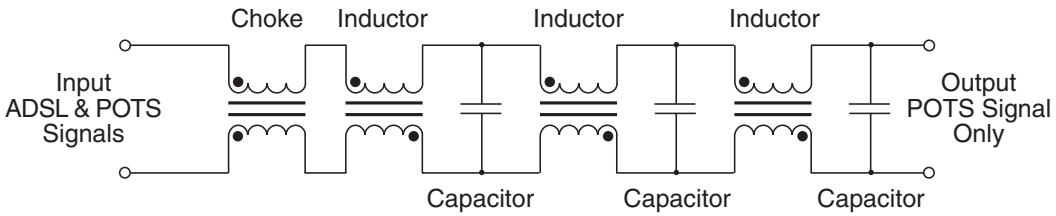
# INDUCTORS AND COMMON MODE CHOKES
## For Use in ADSL POTS Low Pass Filters

## Performance Description

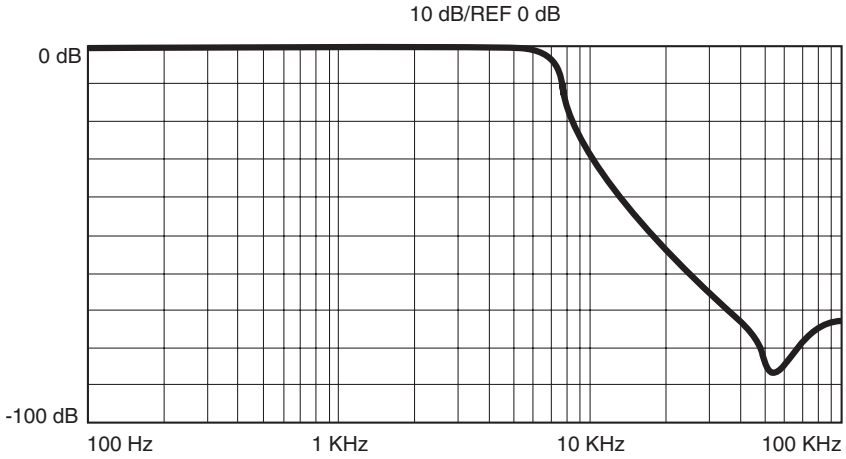
The series of coupled inductors shown on this data sheet arecurrent and temperature, high self-resonant frequency, low ideal for use in Asymmetrical Digital Subscriber Line (ADSL)coupling capacitance, and excellent balance.
applications where a low pass filter is required to separate the The common mode chokes were developed to reduce common voice frequencies from the data frequencies that are carried on an mode voltages in the low frequency range that is used for voice ADSL line. In spite of their small footprint and low profile, these transmission. The chokes are also designed to accommodate DC coupled inductors provide excellent electrical currents up to 100 mA.
performance. They have stable inductance with varying DC

## Application Circuit

The following schematic depicts a typical LC filter that incorporates the use of a common mode choke in addition to the LC network. As shown in the frequency response graph below, at low frequencies, the amplitude of the output signal is roughly equal to the amplitude of the input signal. At higher frequencies the amplitude of the output decreases. Thus, the network passes low frequency voice signals with only a small degree of attenuation, while it suppresses high frequency signals and acts as a low pass filter.




## Frequency Response




## For More Information:


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