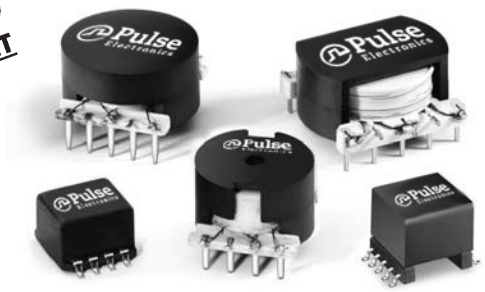
Inductors And Common Mode Chokes

For Use in ADSL POTS Low Pass Filters



- *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 +125°C

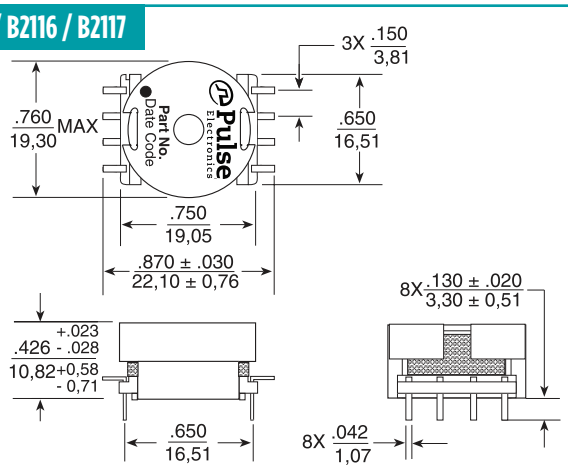
RoHS-5 Compliant Part No.	RoHS-6 Compliant Part No.	Inductance (each winding) (mH)	DC Resistance (each winding) (Ω MAX)	Isolation Volage (between windings) (Vrms)	Function	Mounting
B2005	**B2005NL**	9.0 ± 30%	0.60	1500	Common Mode Choke	THT
B2013[3]	**B20013NL**[3]	9.0 ± 30%	1.00	1500	Common Mode Choke	SMT
B2023	-	6.0 ± 5%	4.00	1500	Coupled Inductor for POTS Low Pass Filter	THT
B2024	-	4.0 ± 5%	3.00	1500	Coupled Inductor for POTS Low Pass Filter	THT
B2025	-	3.0 ± 5%	2.50	1500	Coupled Inductor for POTS Low Pass Filter	THT
B2026	-	10.0 ± 5%	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, 1.0Vrms, 0 mA (each winding). **3.** For Tape & Reel packaging, add the suffix "**T**" to this part number (B2013**T** or B2013NL**T**)

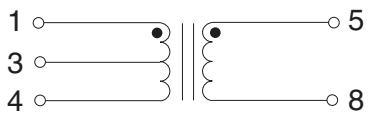
Notes: The B2005 and B2013 are common mode chokes that reduce common mode voltages in the low frequency range that may be caused by telephone ringing signals or by interference from radio transmitters in the ADSL frequency range. The chokes are also designed to accommodate DC currents up to 100mA.

Mechanical

B2024 / B2025 / B2113 / B2114 / B2116 / B2117



Schematic



Weight .....9.5 grams
Tray 30/tray

Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

USA 858 674 8100 Germany 49 7032 7806 0 Singapore 65 6287 8998 Shanghai 86 21 62787060 China 86 755 33966678 Taiwan 886 3 4356768

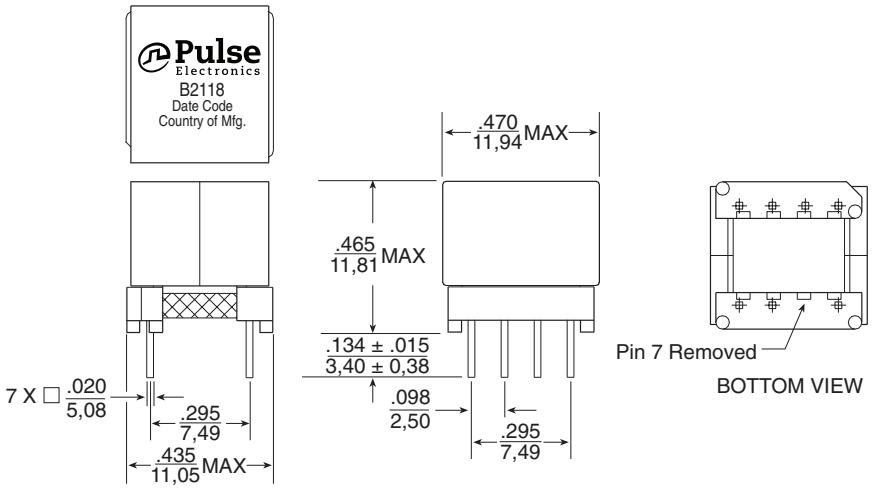
Inductors And Common Mode Chokes

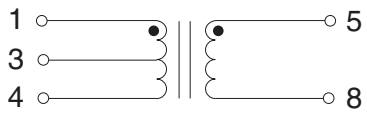
For Use in ADSL POTS Low Pass Filters

Mechanicals

Schematics

B2118



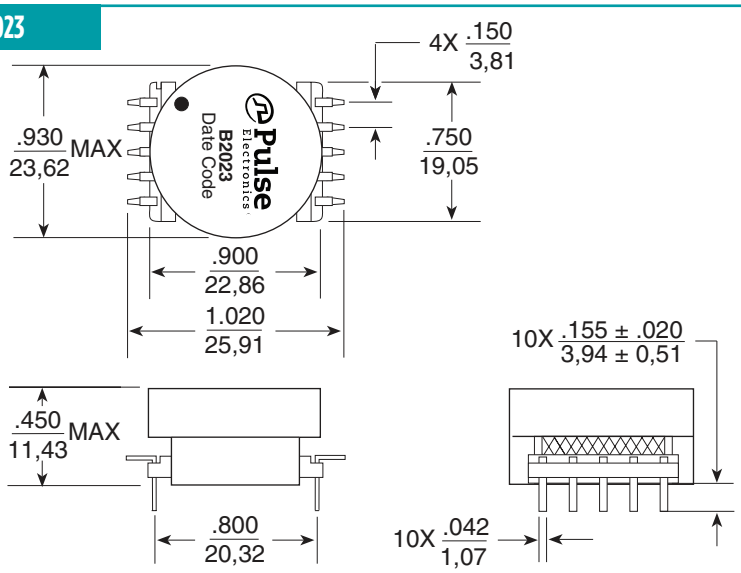


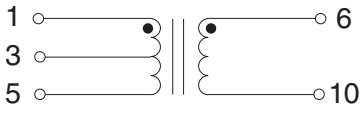
Weight .....3.6 grams
Tray 75/tray

Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

B2023



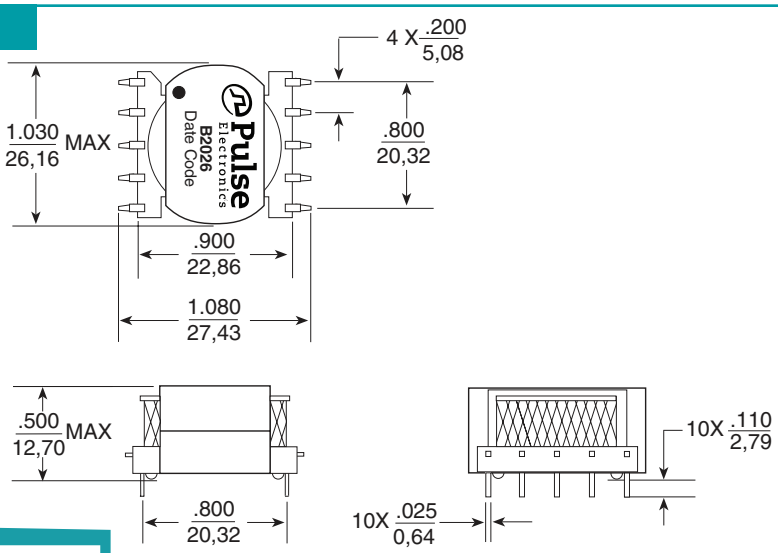


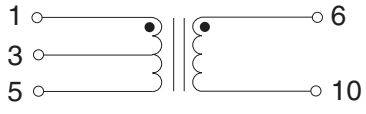
Weight .....15.0 grams
Tray 45/tray

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

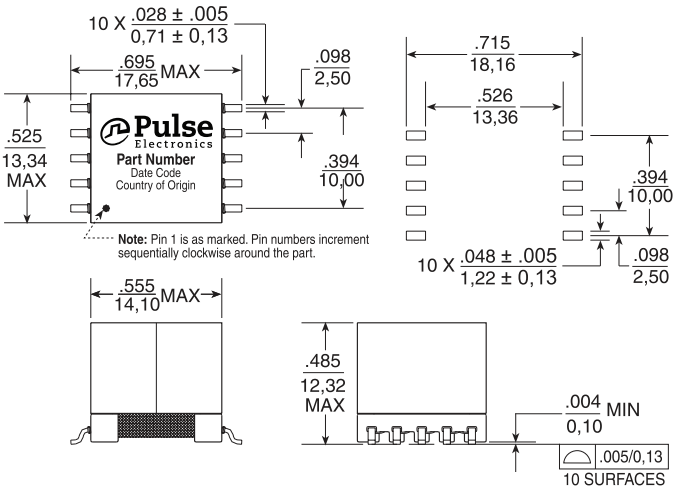
Inductors And Common Mode Chokes

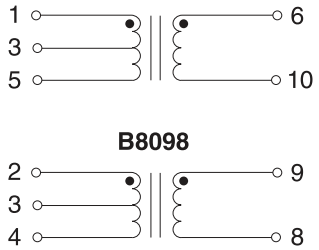
For Use in ADSL POTS Low Pass Filters

Mechanicals

Schematics

B2086 / B2086NL / B8098 / B8098NL

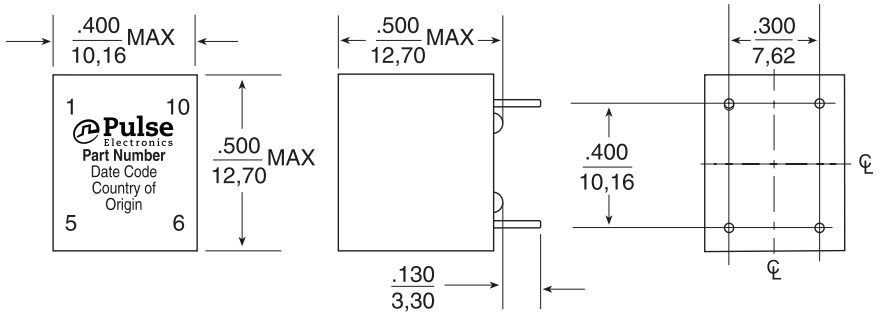


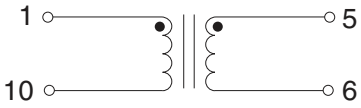


Weight .....6.2 grams
Tape & Reel 150/reel
Tray 60/tray
Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

B2005 / B2005NL

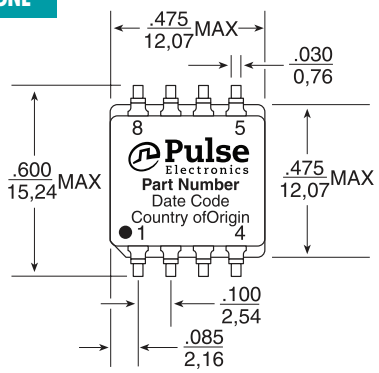


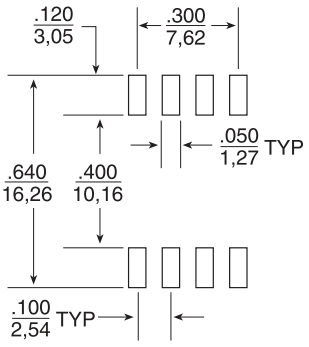


Weight .....3.7 grams
Tray 40/tray
Dimensions: Inches / mm

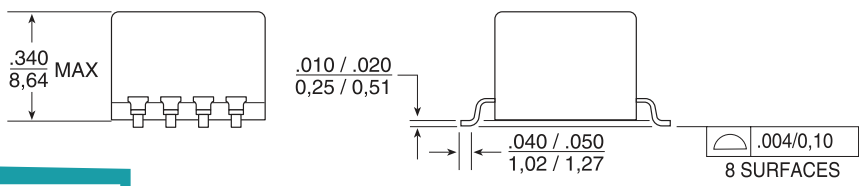
Unless otherwise specified, all tolerances are ± .010 / 0,25

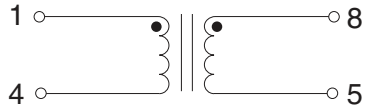
B2013 / B2013NL





SUGGESTED PAD LAYOUT





Weight .....2.5 grams
Tape & Reel 250/reel
Tray 40/tray
Dimensions: Inches / mm

Unless otherwise specified, all tolerances are ± .010 / 0,25

Inductors And Common Mode Chokes

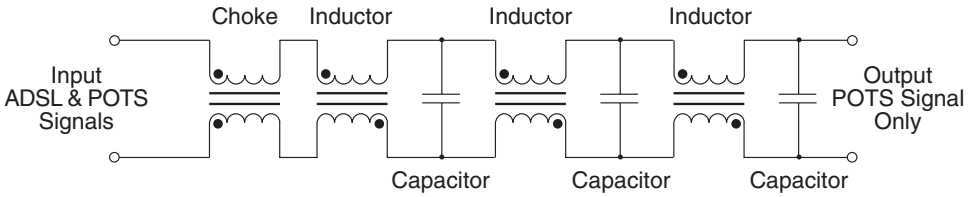
For Use in ADSL POTS Low Pass Filters

Performance Description

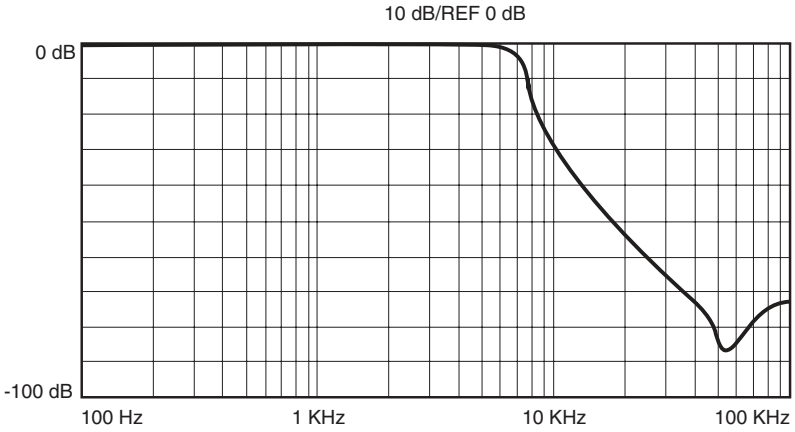
The series of coupled inductors shown on this data sheet are current and temperature, high self-resonant frequency, low ideal for use in Asymmetrical Digital Subscriber Line (ADSL) applications where a low pass filter is required to separate the voice frequencies from the data frequencies that are carried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

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



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