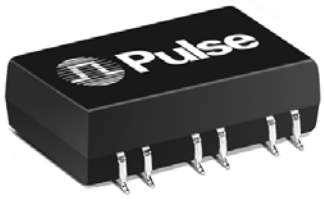
# VDSL FILTER SOLUTIONS



- Set of filter modules and hybrid transformers for VDSL
- Digital phone applications
- Matched to Infineon Technologies VDSL solution
- VDSL frequency band: 900 kHz to 8 MHz
- Small size splitter low pass filter: B4031

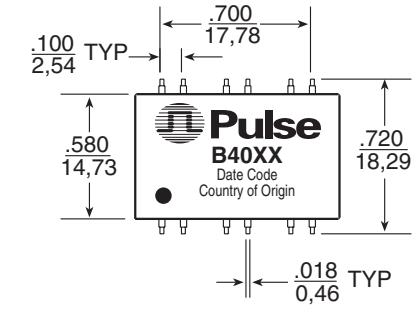
**Electrical Specifications @ 25°C — Operating Temperature -40°C to +85°C**

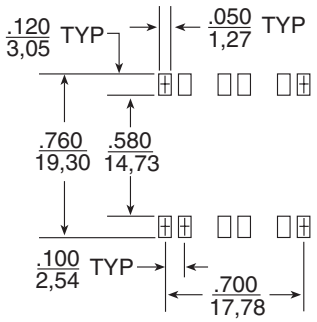
| Part No. | Description | Passband Frequency | Insertion Loss (MAX) | Return Loss (MIN) | Stopband Frequency | Attenuation (MIN) | Impedance TX | Impedance RX |
|---|---|---|---|---|---|---|---|---|
| **B4015** | Receive HPF - high performance | 4.5 MHz to 7.9 MHz | 0.8 dB | 12 dB | 900 kHz to 3.0 MHz | 50 dB | — | 270 Ω |
| **B4016** | Receive LPF - high performance | 900 kHz to 3.0 MHz | 1.2 dB | 12 dB | 4.5 MHz to 7.9 MHz | 50 dB | — | 270 Ω |
| **B4017** | Transmit LPF | 900 kHz to 3.0 MHz | 0.8 dB | 10 dB | 4.5 MHz to 7.9 MHz | 15 dB | 40 Ω | — |
| **B4018** | Transmit HPF | 4.5 MHz to 7.9 MHz | 0.8 dB | 10 dB | 900 kHz to 3.0 MHz | 10 dB | 40 Ω | — |
| **B4032** | Bandpass filter and hybrid transformer | 1.0 MHz to 7.9 MHz | 0.8 dB | 10 dB | 10 kHz to 100 kHz | 70 dB | 40 Ω | 270 Ω |
| | | 950 kHz to 1.0 MHz | 1.5 dB | 8 dB | 100 kHz to 500 kHz | 55 dB | 40 Ω | 270 Ω |
| | | | | | 600 kHz to 700 kHz | 15 dB | 40 Ω | 270 Ω |
| | | | | | 20 MHz to 40 MHz | 15 dB | 40 Ω | 270 Ω |
| **B4031** | Splitter LPF | 10 kHz to 600 kHz | 0.8 dB | 12 dB | 900 kHz to 1.0 MHz | 20 dB | 150 Ω | 150 Ω |
| | | 600 kHz to 630 kHz | 1.5 dB | 10 dB | 1.0 MHz to 1.2 MHz | 40 dB | | |
| | | | | | 1.2 MHz to 10 MHz | 65 dB | | |

**NOTES:**
1. Transhybrid loss for **B4032** is typically 15 dB, in the 1.0 to 7.9 MHz band and for 120 Ω line impedance.
2. **B4032** provides 1500 Vrms isolation voltage between pins 1, 2 and pins 9, 10, 15, 16. Common mode pins 7, 8 may be decoupled to ground through a 2 kV capacitor to maintain isolation.
3. Return loss for **B4015-B4018** applies to the stopband, not just the passband.
4. **B4031** is designed to carry loop current of up to 130 mA dc.
5. All units use package BAB 2.

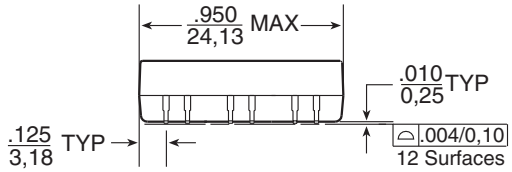
## Mechanical

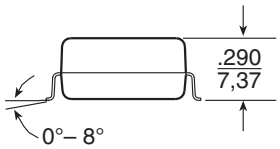
### BAB 2




**SUGGESTED PAD LAYOUT**




**Weight** . . . . . .7.0 grams
**Tape & Reel** . . . . . .200/reel
**Tube** . . . . . .20/tube

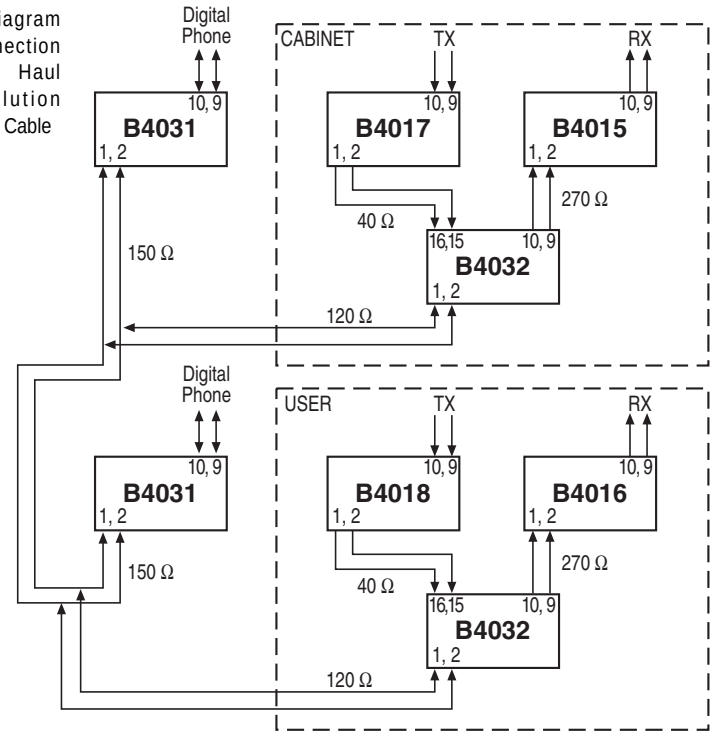
**Dimensions:** Inches / mm

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

# VDSL FILTER SOLUTIONS

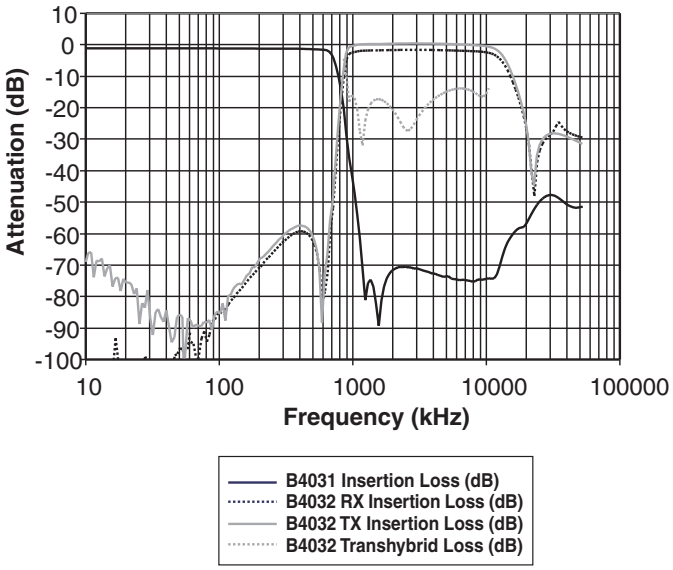
## Application Notes

Block Diagram and Connection for Long Haul VDSL Solution over 120 Ω Cable



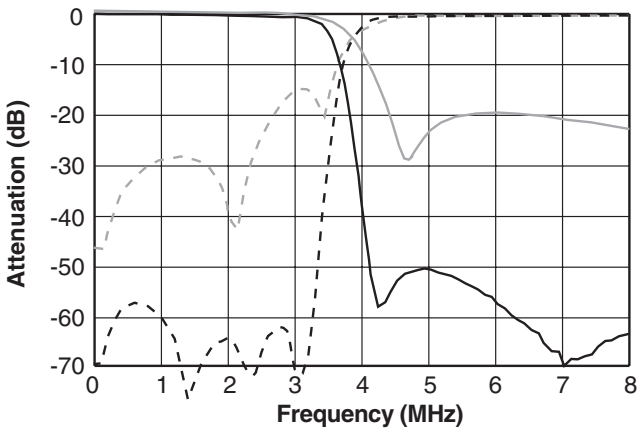

## Frequency Response

B4031/32 Insertion Loss




B4031 Insertion Loss (dB)
B4032 RX Insertion Loss (dB)
B4032 TX Insertion Loss (dB)
B4032 Transhybrid Loss (dB)

B4015/16/17/18 Frequency Response




B4015
B4016
B4018
B4017

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