

# 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

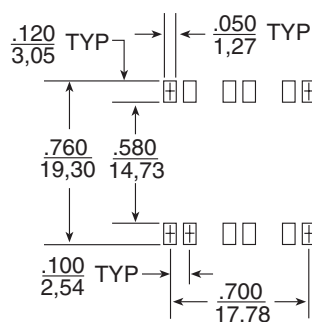
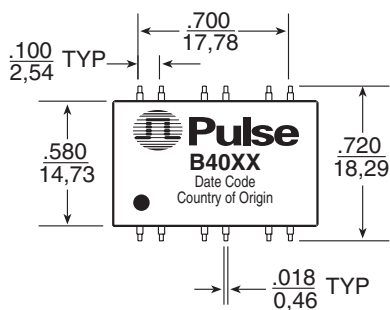
Part No.	Description	Passband Frequency	Insertion Loss (MAX)	Return Loss (MIN)	Stopband Frequency	Attenuation (MIN)	Impedance	
							TX	RX
B4015	Receive HPF - high performance	4.5 MHz to 7.9 MHz	0.8 dB	12 dB	900 kHz to 3.0 MHz	50 dB	—	270 Ω
B4016	Receive LPF - high performance	900 kHz to 3.0 MHz	1.2 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

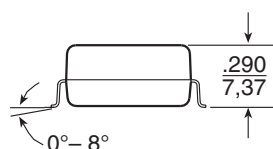
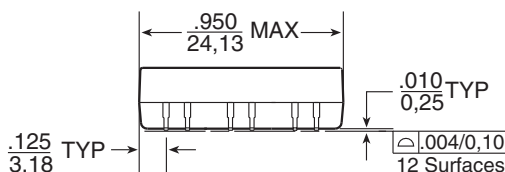


Weight . . . . . 7.0 grams  
Tape & Reel . . . . . .200/reel  
Tube . . . . . .20/tube

Dimensions:  $\frac{\text{Inches}}{\text{mm}}$

Unless otherwise specified,  
all tolerances are  $\pm \frac{.010}{0,25}$

### SUGGESTED PAD LAYOUT

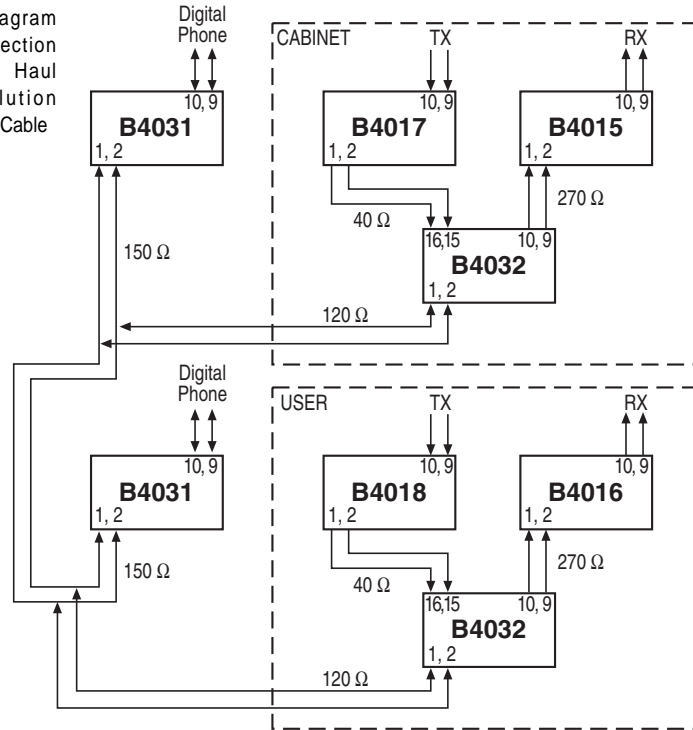


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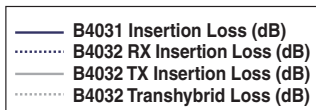
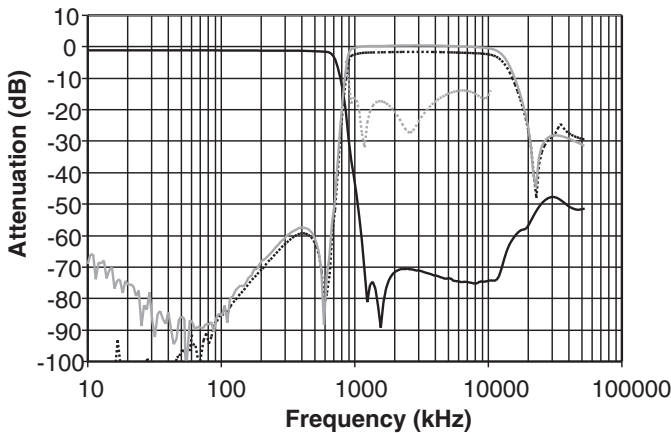
## Application Notes

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

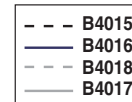
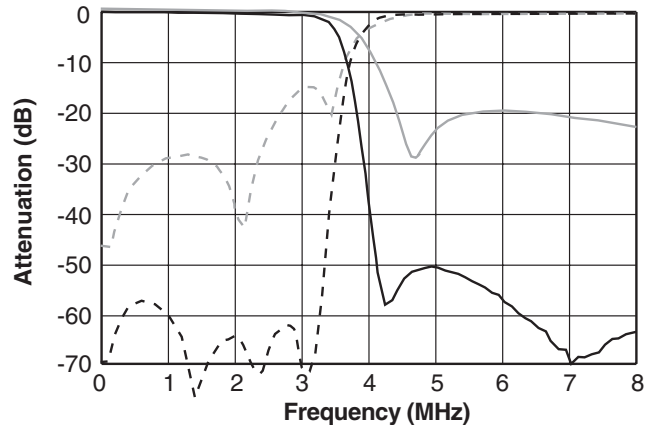


## Frequency Response

B4031/32 Insertion Loss



B4015/16/17/18 Frequency Response



## For More Information :

### UNITED STATES (Worldwide)

12220 World Trade Drive  
San Diego, CA 92128  
U.S.A.  
<http://www.pulseeng.com>  
TEL: 858 674 8100  
FAX: 858 674 8262

### UNITED KINGDOM (Northern Europe)

1 & 2 Huxley Road  
The Surrey Research Park  
Guildford, Surrey GU2 5RE  
United Kingdom  
TEL: 44 1483 401700  
FAX: 44 1483 401701

### FRANCE (Southern Europe)

Zone Industrielle  
F-39270  
Orgelet  
France  
TEL: 33 3 84 35 04 04  
FAX: 33 3 84 25 46 41

### SINGAPORE (Southern Asia)

150 Kampong Ampat  
#07-01/02  
KA Centre  
Singapore 368324  
TEL: 65 6287 8998  
FAX: 65 6280 0080

### TAIWAN, R.O.C. (Northern Asia)

3F-4, No. 81, Sec. 1  
HsinTai Wu Road  
Hsi-Chih, Taipei Hsien  
Taiwan, R.O.C.  
Tel: 886 2 2698 0228  
FAX: 886 2 2698 0948

### HONG KONG (China/Hong Kong)

9/F, Phase 2, Tai Sang  
Shatin Warehouse Centre  
6 Wong Chuk Yeung Street  
Fotan, Shatin, Hong Kong  
TEL: 852 2788 6588  
FAX: 852 2776 1055

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