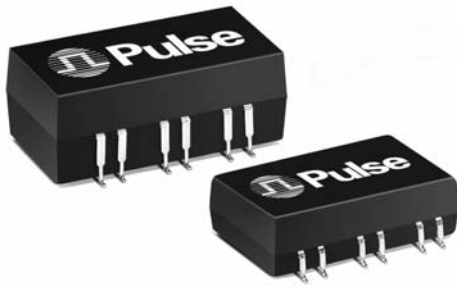


# VDSL FILTER SOLUTIONS



- ⊕ Set of filter modules and hybrid transformers for VDSL
- ⊕ Designed for Long Haul and Short Haul solutions
- ⊕ Matched to Infineon Technologies VDSL solution
- ⊕ FSAN VDSL frequency band: 900 kHz to 8 MHz
- ⊕ Isolation Voltage: 1500 Vrms

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

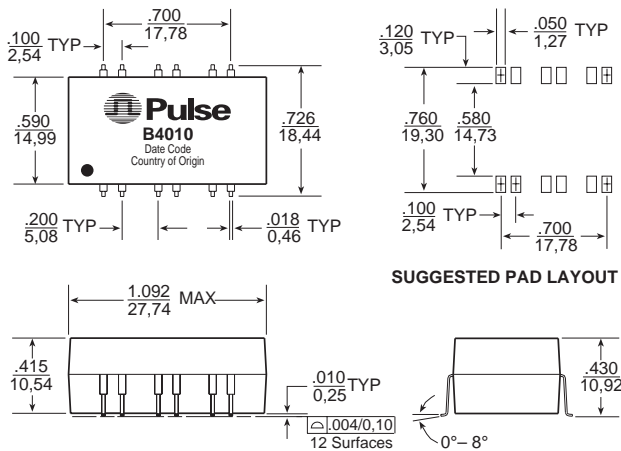
Part No.	Description	Application <sup>5</sup>	Passband Frequency	Insertion Loss (MAX)	Return Loss (MIN)	Stopband Frequency	Attenuation (MIN)	Impedance		Package Type
								TX	RX	
B4010 <sup>4</sup>	ISDN Splitter LPF	SH/LH	20 kHz to 120 kHz	0.4 dB	20 dB	800 kHz to 7.9 MHz	65 dB	150 Ω		BAB1
B4011 <sup>1,2,6</sup>	Bandpass Filter & Hybrid Xfmr	135 Ω Cable	900 kHz to 7.9 MHz	0.5 dB	10 dB	20 kHz to 150 kHz	60 dB	40 Ω	270 Ω	BAB2
B4014 <sup>1,2,6</sup>	Bandpass Filter & Hybrid Xfmr	100 Ω Cable	900 kHz to 7.9 MHz	0.5 dB	10 dB	20 kHz to 150 kHz	60 dB	40 Ω	270 Ω	BAB2
B4012 <sup>3</sup>	Receive HPF	SH	4.5 MHz to 7.9 MHz	0.8 dB	12 dB	900 kHz to 3.0 MHz	30 dB	—	270 Ω	BAB2
B4013 <sup>3</sup>	Receive LPF	SH	900 kHz to 3.3 MHz	0.8 dB	12 dB	4.5 MHz to 7.9 MHz	20 dB	—	270 Ω	BAB2
B4015 <sup>3</sup>	Receive HPF - high performance	LH	4.5 MHz to 7.9 MHz	0.8 dB	12 dB	900 kHz to 3.0 MHz	50 dB	—	270 Ω	BAB2
B4016 <sup>3</sup>	Receive LPF - high performance	LH	900 kHz to 3.0 MHz	1.2 dB	12 dB	4.5 MHz to 7.9 MHz	50 dB	—	270 Ω	BAB2
B4017 <sup>3</sup>	Transmit LPF	LH	900 kHz to 3.0 MHz	0.8 dB	10 dB	4.5 MHz to 7.9 MHz	15 dB	40 Ω	—	BAB2
B4018 <sup>3</sup>	Transmit HPF	LH	4.5 MHz to 7.9 MHz	0.8 dB	10 dB	900 kHz to 3.0 MHz	10 dB	40 Ω	—	BAB2

### NOTES:

1. Transhybrid loss of B4011 and B4014 is 15 dB, measured with 135 Ω and 100 Ω line impedance respectively.
2. B4011 and B4014 have an additional stopband at 18 MHz to 40 MHz with attenuation of 15 dB.
3. Return loss for B4012-B4018 applies to the stopband, not just the passband.
4. B4010 is designed for loop current of up to 130 mA dc current.
5. Application specifies Short Haul (SH) or Long Haul (LH) where appropriate.
6. B4011 and B4014 provide 1500 Vrms Isolation Voltage.

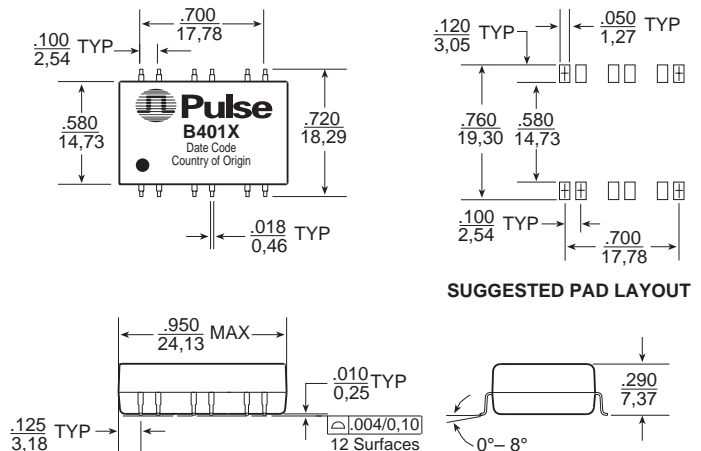
## Mechanicals

### BAB 1



**Weight** .....8.5 grams  
**Tape & Reel** ..... .200/reel  
**Tube** ..... .15/tube  
**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified,  
 all tolerances are  $\pm \frac{.010}{0,25}$

### BAB 2



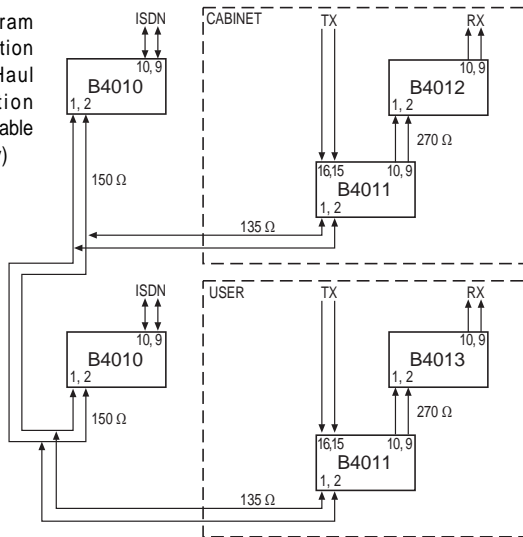
**Weight** .....7.0 grams  
**Tape & Reel** ..... .200/reel  
**Tube** ..... .20/tube  
**Dimensions:**  $\frac{\text{Inches}}{\text{mm}}$   
 Unless otherwise specified,  
 all tolerances are  $\pm \frac{.010}{0,25}$

# VDSL FILTER SOLUTIONS

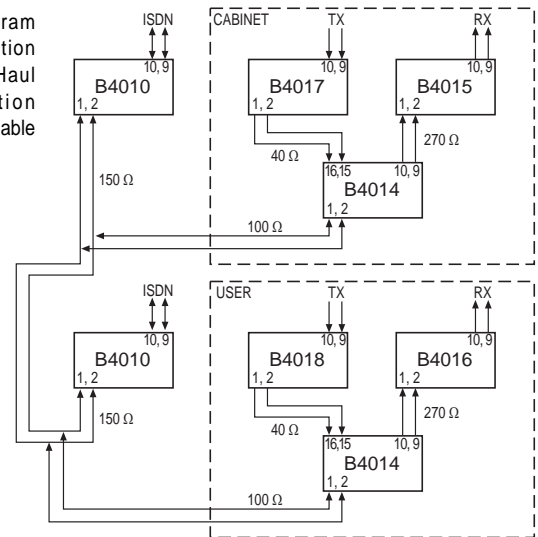


## Application Notes

1. Block Diagram and Connection for Short Haul VDSL Solution over 135  $\Omega$  Cable (e.g. Germany)



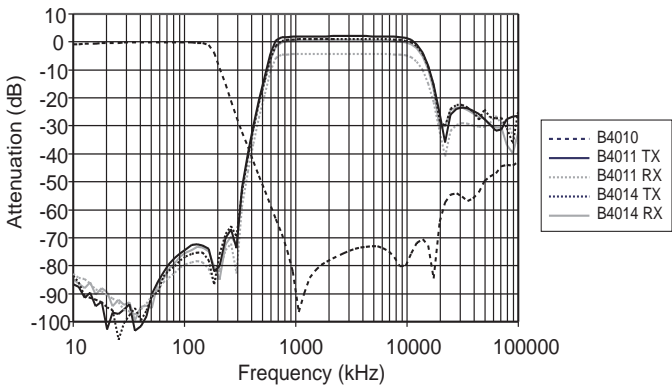
2. Block Diagram and Connection for Long Haul VDSL Solution over 100  $\Omega$  Cable (e.g. U.K.)



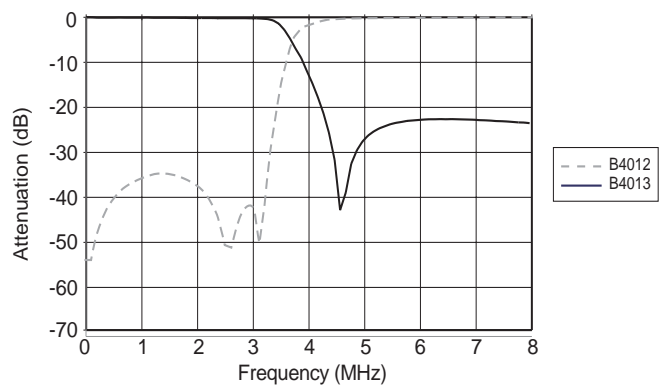
NOTE: Long Haul Solution over 135  $\Omega$  Cable is achieved by replacing B4014 in Application 2 with B4011

## Frequency Response

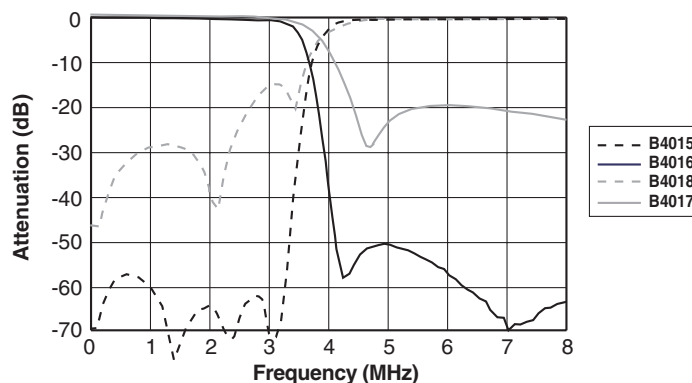
B4010/11/14 Frequency Response



B4012/13 Frequency Response



B4015/16/17/18 Frequency Response



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