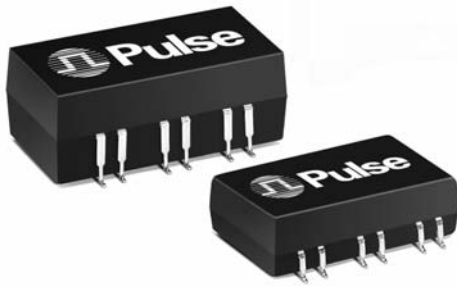


VDSL FILTER SOLUTIONS



- 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

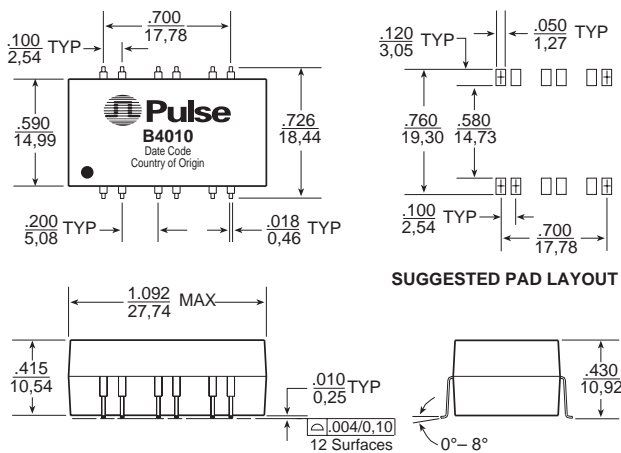
Part No.	Description	Application ⁵	Passband Frequency	Insertion Loss (MAX)	Return Loss (MIN)	Stopband Frequency	Attenuation (MIN)	Impedance		Package Type
								TX	RX	
B4010 ⁴	ISDN Splitter LPF	SH/LH	20 kHz to 120 kHz	0.4 dB	20 dB	800 kHz to 7.9 MHz	65 dB	150 Ω		BAB1
B4011 ^{1,2,6}	Bandpass Filter & Hybrid Xfrmr	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 ^{1,2,6}	Bandpass Filter & Hybrid Xfrmr	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 ³	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 ³	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 ³	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 ³	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 ³	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 ³	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.

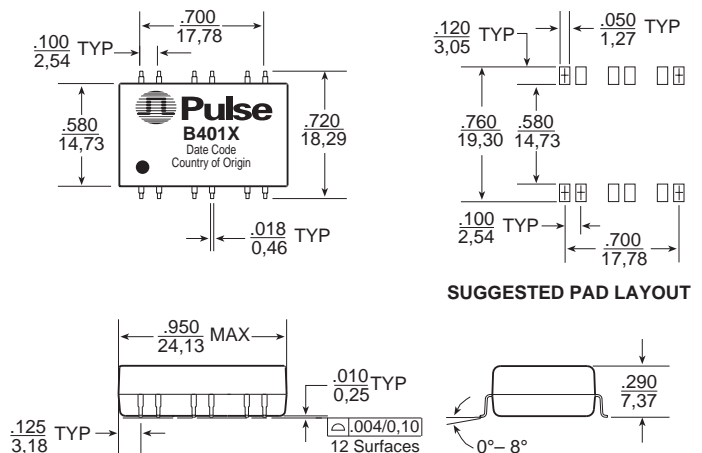
Mechanicals

BAB 1



Weight 8.5 grams
Tape & Reel200/reel
Tube15/tube
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.010}{0,25}$

BAB 2



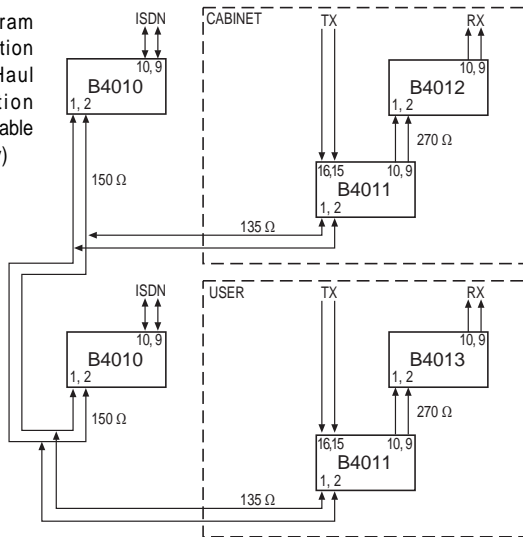
Weight 7.0 grams
Tape & Reel200/reel
Tube20/tube
Dimensions: $\frac{\text{Inches}}{\text{mm}}$
 Unless otherwise specified,
 all tolerances are $\pm \frac{.010}{0,25}$

VDSL FILTER SOLUTIONS

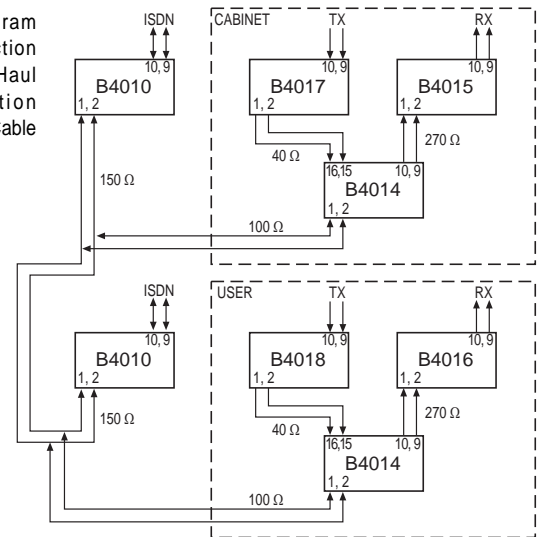


Application Notes

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



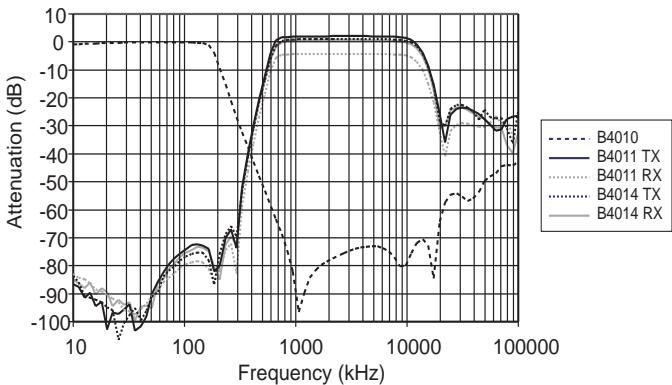
2. Block Diagram and Connection for Long Haul VDSL Solution over 100 Ω Cable (e.g. U.K.)



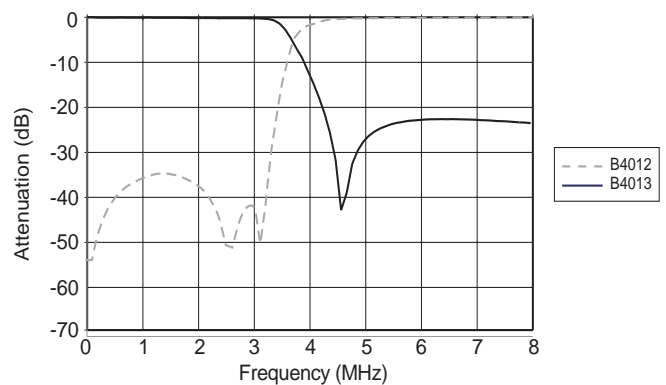
NOTE: Long Haul Solution over 135 Ω Cable is achieved by replacing B4014 in Application 2 with B4011

Frequency Response

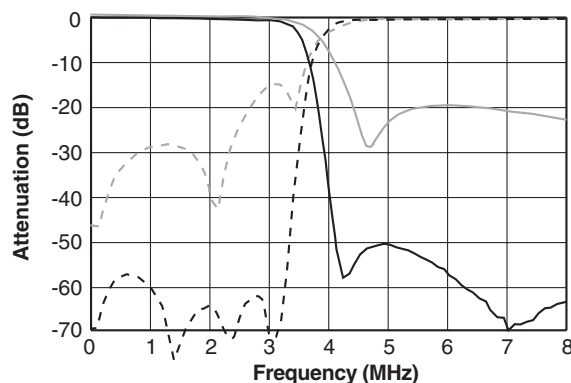
B4010/11/14 Frequency Response



B4012/13 Frequency Response



B4015/16/17/18 Frequency Response



For More Information :

UNITED STATES (Worldwide)	UNITED KINGDOM (Northern Europe)	FRANCE (Southern Europe)	SINGAPORE (Southern Asia)	TAIWAN, R.O.C. (Northern Asia)	HONG KONG (China/Hong Kong)	DISTRIBUTOR
12220 World Trade Drive San Diego, CA 92128 U.S.A. http://www.pulseeng.com TEL: 858 674 8100 FAX: 858 674 8262	1 & 2 Huxley Road The Surrey Research Park Guildford, Surrey GU2 5RE United Kingdom TEL: 44 1483 401700 FAX: 44 1483 401701	Zone Industrielle F-39270 Orgelet France TEL: 33 3 84 35 04 04 FAX: 33 3 84 25 46 41	150 Kampong Ampat #07-01/02 KA Centre Singapore 368324 TEL: 65 6287 8998 FAX: 65 6280 0080	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	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	

Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be products and/or registered trademarks of their respective owners.

Printed on recycled paper. ©2003, Pulse Engineering, Inc.

B931.A (11/03)