XDSL Splitter Filter Module

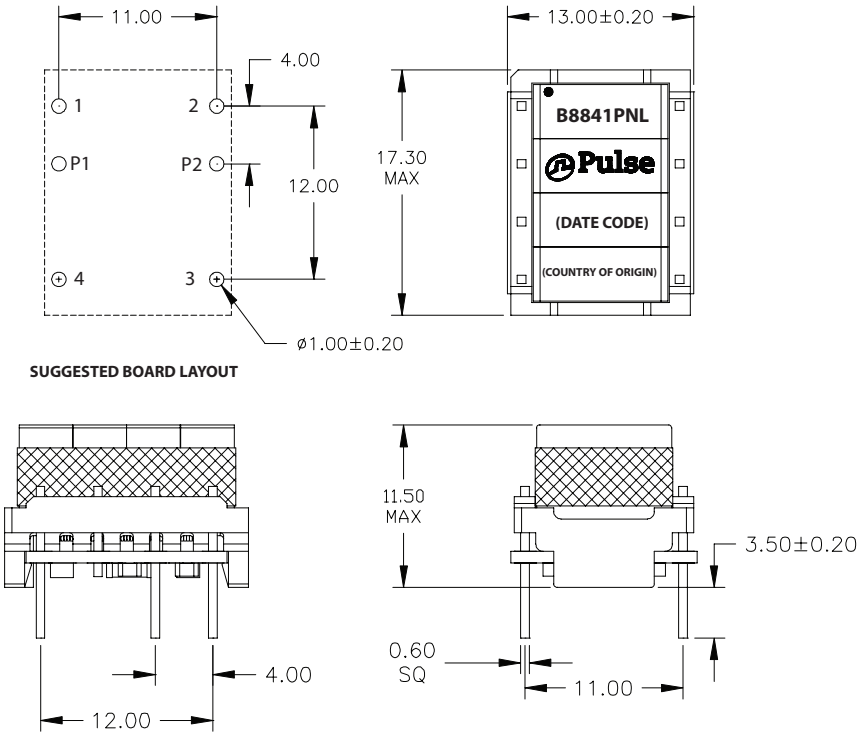
B8841 PNL SmartER series

- *POTS CO Splitter for ETSI 600 ohm ADSL to VDSL2 applications*
  POTS CO Splitter for China YD/T 1187-2006 ADSL 600 ohms
- *LPF Matched to 600 ohm impedance*
- *Variation of standard SmartER Series part B8841NL to ease implementation of surge compliant designs*
- *Compliant with Broadband Forum TR-127 standard for VDSL2 applications*
- *Patented technology US7598837, US7598839, CN1667763, EP1644943, TW1316724, CA2531599*

Electrical Specifications @ 25°C		
PARAMETER	**FREQUENCY**	
POTS Impedance	200 Hz to 4 kHz	600 Ω
POTS Insertion Loss	@ 1 kHz	0.3 dB MAX
POTS Insertion Loss Distortion	200 Hz to 4 kHz	0.3 dB MAX
POTS Return Loss	300 Hz to 500 Hz / 2.0 kHz to 3.4 kHz	14 B MIN
	500 Hz to 2.0 kHz	18 dB MIN
Metering Pulse Insertion Loss	12 kHz and 16 kHz	3 dB MAX
Group Delay	200 kHz and 16 kHz	150 uS MAX (Typical 65 uS)
Longitudinal Balance	50 Hz to 600 Hz / 3.4 kHz to 30 kHz	40 dB MIN
	600 Hz to 3.4 kHz / 30 kHz to 1.1 MHz	46 dB MIN
	1.1 MHz to 30 MHz	30 dB MIN
xDSL Insertion Loss	30 kHz to 30 MHz	55 dB MIN
Tip to Ring Capacitance		20 nF MIN 115 nF MAX
Tip to Ring insulation resistance		5 MΩ MIN
DC Current		100 mA MAX
Total DC Resistance		25 Ω MAX

Mechanical

B8841PNL

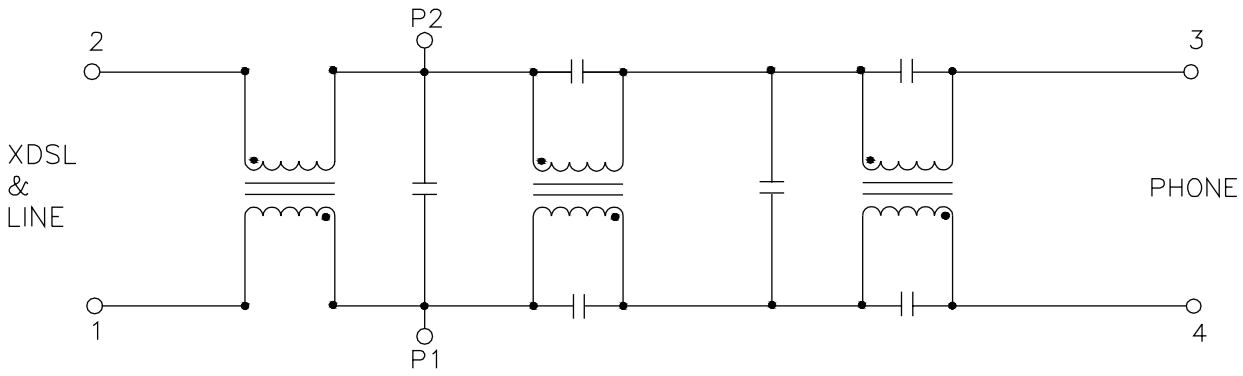


Weight .....5.5 grams
Tray 80/tray

Dimensions: Inches / mm

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

Schematic



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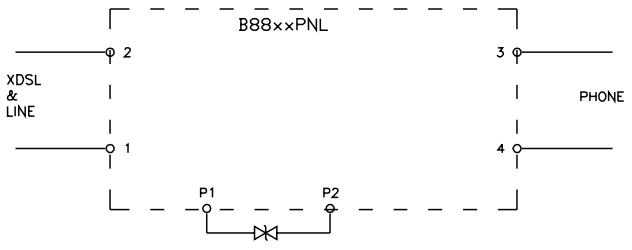
Application

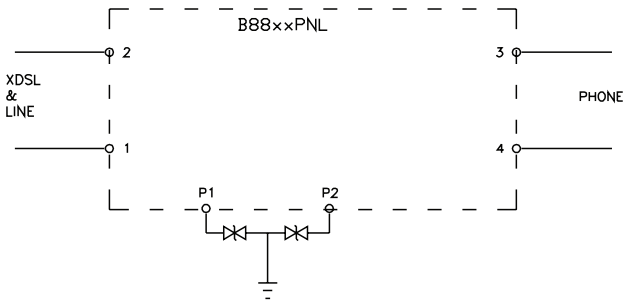
B88xxPNL splitter modules are designed so that pins P1 and P2 which are behind the first inductor, are accessible for addition of an overvoltage protector (OVP) to protect the remaining components of the filter (especially the tip- ring capacitors) from excessive surge voltages. The advantages of placing the OVP at pins P1, P2 rather than in the front of the filter (pins 1, 2) are (a) for VDSL applications the first inductor shields the high frequency signals from the effect of the capacitance or capacitance imbalance of the VOP and (b) the extra inductor between primary and secondary protection circuits during surge events. Application circuit A can be used to protect against differential (transverse) surge; Application circuit B protects against differential and common mode (longitudinal) surges. Which of these is required will depend on the details of the system such as ground terminations during surge testing and the effect of other protection devices in the system. Typically OVPs with breakover voltages of 360V would be used but the value can be chosen to suit the application. It's recommended that the breakover voltage should not exceed 500V in order to guarantee protection of the filter components.

Application Circuit

Application Circuit A



Application Circuit B



For More Information

Pulse Worldwide Headquarters
12220 World Trade Drive
San Diego, CA
92128
U.S.A.

Tel: 858 674 8100
Fax: 858 674 8262

Pulse Europe
Zeppelinstrasse 1
D-71083 Herrenberg
Germany

Tel: 49 7032 78060
Fax: 49 7032 7806 135

Pulse China Headquarters
B402, Shenzhen Academy of Aerospace Technol-
ogy Bldg.
10th Kejinan Road
High-Tech Zone
Nanshan District
Shenzen, PR China
518057
Tel: 86 755 33966678
Fax: 86 755 33966700

Pulse North China
Room 2704/2705
Super Ocean Finance
Ctr.
2067 Yan An Road
West
Shanghai 200336
China

Tel: 86 21 62787060
Fax: 86 2162786973

Pulse South Asia
135 Joo Seng Road
#03-02
PM Industrial Bldg.
Singapore 368363

Tel: 65 6287 8998
Fax: 65 6287 8998

Pulse North Asia
3F, No. 198
Zhongyuan Road
Zhongli City
Taoyuan County 320
Taiwan R. O. C.
Tel: 886 3 4356768
Fax: 886 3 4356823 (Pulse)
Fax: 886 3 4356820 (FRE)