

# HOME PHONE NETWORKING BANDPASS FILTER



- For use with Broadcom's® iLine 10™ Chipset (BCM4100 and BCM4210)
- Includes isolation and EMI filtering
- Designed to withstand 235°C peak infrared reflow temperature
- B6019 is designed with a 2 kV, 1000 pf capacitor

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

Part Number	Insertion Loss @ 4.75 to 9.25 MHz		Attenuation (MIN)			Return Loss @ 4.75 to 9.25 MHz (MIN)	Common to Differential Mode Rejection @ 200 kHz to 22 MHz	Isolation Voltage <sup>1</sup> (Vrms)
	(MIN)	(MAX)	1.1 MHz	22 MHz	54 MHz			
B6019	1.0 dB	2.0 dB	60 dB	35 dB	50 dB	12 dB	40 dB	1500
B6020								
BX6031								

NOTE: Input Impedance data is provided on the back of this page.

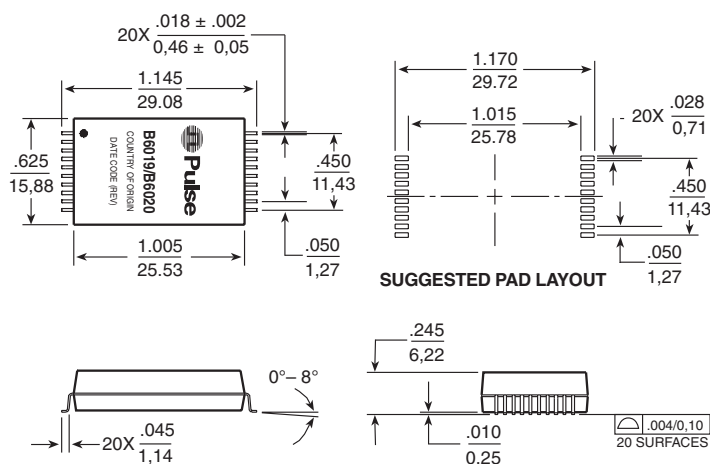
## Test Conditions

Part Number	Insertion Loss		Attenuation		Return Loss		Common to Differential Mode Rejection		Isolation Voltage <sup>1</sup>
	Input	Output	Input	Output	Input	Output	Input	Output	
B6019	(1-3)	(20-18)	(1-3)	(20-18)	(20-18)	(1-3)	(1-3)	(20-18)	(1-3-5-7) shorted to (18-20) shorted
B6020									
BX6031	(1-2)	(8-9)	(1-2)	(8-9)	(8-9)	(1-2)	(1-2)	(8-9)	(1-2-15-16) shorted to (8-9-10) shorted

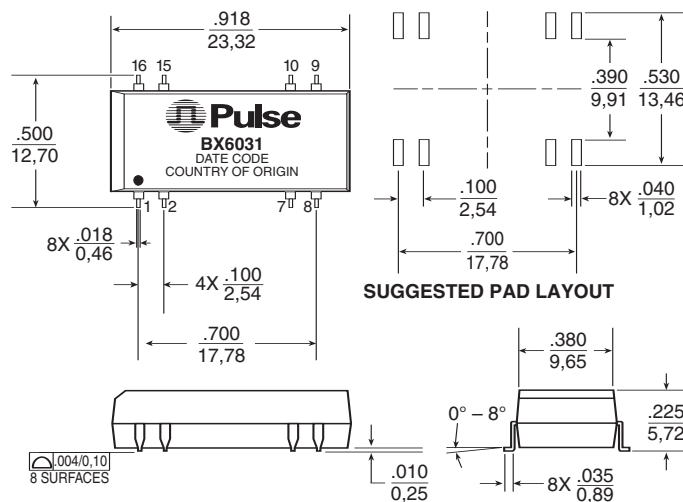
NOTES: Filters are shipped in trays, unless Tape & Reel packaging is specified. Please add the suffix "T" (ex: B6019T) for Tape & Reel orders.  
<sup>1</sup>Compliance with FCC Part 68 metallic and longitudinal voltage surge is provided by an external Teccor P3100SB sidactor across tip and ring.

## Mechanicals

### B6019/B6020



### BX6031



	B6019/B6020	BX6031
Weight	4.5 grams	2.5 grams
Tape & Reel	250/reel	250/reel
Tube	30/tray	20/tray

Dimensions: Inches  
mm

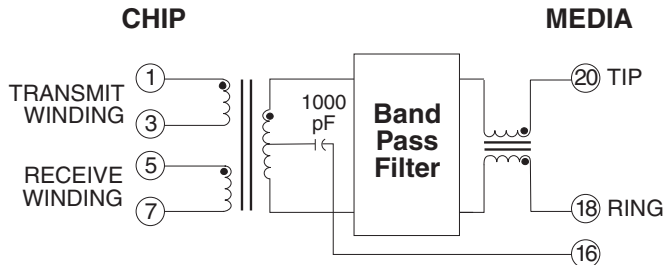
Unless otherwise specified, all tolerances are ± .010 / 0.25

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## Schematics

**B6019**

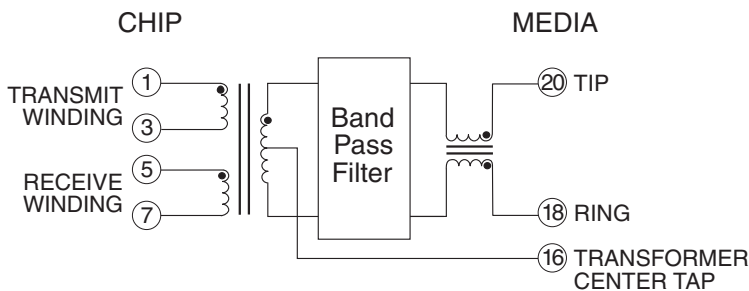
URNS RATIO: (20-18):(1-3)=1:0.667  
(20-18):(5-7)=1:2



**NOTE:** Input impedance is measured across pins 18 to 20 with a 44.2 Ω load across pins 1 and 3.

**B6020**

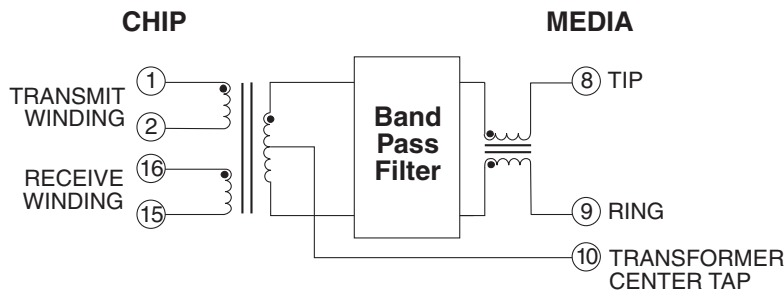
URNS RATIO: (20-18):(1-3)=1:0.667  
(20-18):(5-7)=1:2



**NOTE:** Input impedance is measured across pins 18 to 20 with a 44.2 Ω load across pins 1 and 3.

**BX6031**

URNS RATIO: (8-9):(1-2)=1:0.667  
(8-9):(16-15)=1:2



**NOTE:** Input impedance is measured across pins 9 to 8 with a 44.2 Ω load across pins 1 and 2.

### Input Impedance

Frequency Range (kHz)	Minimum Impedance (Ω)
0 < f <= 0.285	1 M
0.285 < f <= 2.85	100 K
2.85 < f <= 28.5	10 K
28.5 < f <= 95	4.0 K
95 < f <= 190	2.0 K
190 < f <= 285	1.4 K
285 < f <= 380	1.0 K
380 < f <= 475	850
475 < f <= 570	700
570 < f <= 665	600
665 < f <= 760	525
760 < f <= 855	450
855 < f <= 950	400
950 < f <= 1000	350
1000 < f <= 1400	175
1400 < f <= 2300	100
2300 < f <= 2850	50
2850 < f <= 3085	25
3085 < f <= 4750	10
9250 < f <= 13125	10
13125 < f <= 14175	25
14175 < f <= 16800	50
16800 < f <= 21000	100
21000 < f <= 30000	50

### 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: 65 287 8998  
FAX: 65 280 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)**

19/F, China United Plaza  
1008 Tai Nan West Street  
Cheung Sha Wan, Kowloon  
Hong Kong, China  
TEL: 852 2788 6588  
FAX: 852 2776 1055

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