

Surface Mount Bandpass Filter

BPF-BD1800+

50Ω 1600 to 2000 MHz

The Big Deal

- Wide bandwidth
- Rejection upto $2x F_c$
- Miniature shielded package



Generic photo used for illustration purposes only
CASE STYLE: TV2849

Product Overview

The BPF-BD1800+ is a 50Ω bandpass filter fabricated using SMT technology. This bandpass filter covers from 1600-2000 MHz. This filter is built with high Q capacitors and air-coil inductors for superior performance. It has repeatable performance across lots and consistent performance across temperature.

Key Features

Feature	Advantages
Low insertion loss	Can be used in high performance applications such as radio astronomy.
Good rejection	Rejection upto $2x F_c$. This enables the filter to attenuate spurious signals and reject harmonics for broad frequency band.
Shielded case	Reduced interference with and from the surrounding components.

Notes

- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



www.minicircuits.com P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

Surface Mount Bandpass Filter

BPF-BD1800+

50Ω 1600 to 2000 MHz



Generic photo used for illustration purposes only
CASE STYLE: TV2849

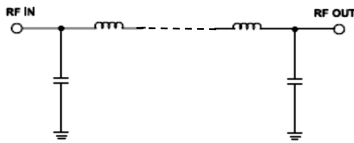
Features

- Wide bandwidth
- Rejection upto $2 \times F_c$
- Miniature shielded package

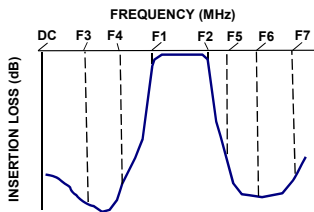
Applications

- Radio telescope applications
- Public cellular networks
- International mobile telecommunication
- Weather instruments / Radar / Satellite
- Transmitters / Receivers
- Harmonic rejection / Industrial applications

Functional Schematic



Typical Frequency Response



Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center Frequency	—	—	1800	—	MHz	
	Insertion Loss	F1-F2	1600 - 2000	—	1.7	3.0	dB
	VSWR	F1-F2	1600 - 2000	—	1.67	2.0	:1
Stop Band, Lower	Rejection	DC-F3	DC - 1000	50	60	—	dB
		F3-F4	1000 - 1400	20	25	—	dB
Stop Band, Upper	Rejection	F5-F6	2200 - 2400	20	25	—	dB
		F6-F7	2400 - 4000	35	45	—	dB

Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1 W

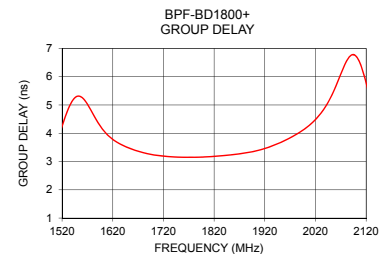
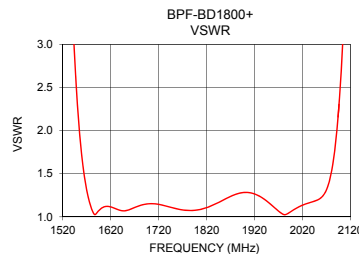
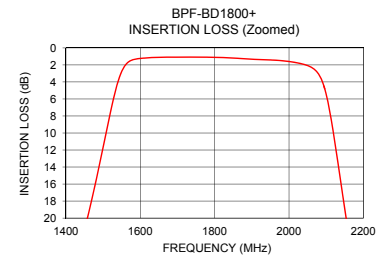
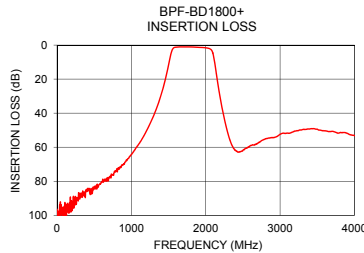
Permanent damage may occur if any of these limits are exceeded.

Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	101.08	191.20	1600	4.14
100	104.21	979.89	1620	3.78
300	88.33	669.45	1640	3.57
500	83.33	261.65	1660	3.42
1000	64.18	88.70	1680	3.31
1400	29.23	43.77	1700	3.24
1454	20.64	30.71	1720	3.19
1546	3.19	2.72	1740	3.16
1600	1.24	1.10	1760	3.15
1800	1.11	1.08	1780	3.15
2000	1.60	1.08	1800	3.16
2080	3.11	1.51	1820	3.18
2154	20.10	12.18	1840	3.21
2194	30.78	19.54	1860	3.25
2200	32.26	20.48	1880	3.30
2400	62.00	39.98	1900	3.36
3000	52.47	47.46	1920	3.46
3300	49.70	47.44	1940	3.59
3500	49.42	46.39	1960	3.75
4000	53.22	50.64	2000	4.17

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications



Notes

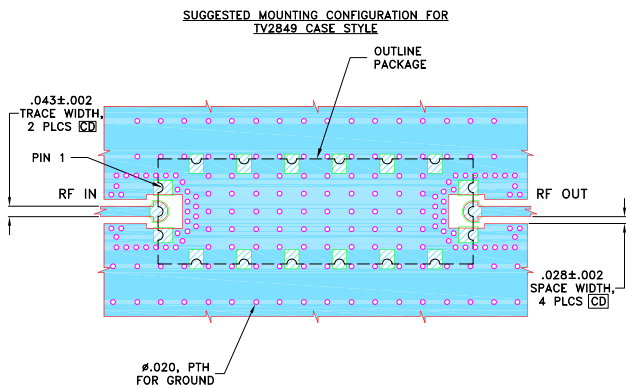
- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



Pad Connections

INPUT	2
OUTPUT	11
GROUND	1, 3-10, 12-18

Demo Board MCL P/N: TB-1108+ Suggested PCB Layout (PL-640)

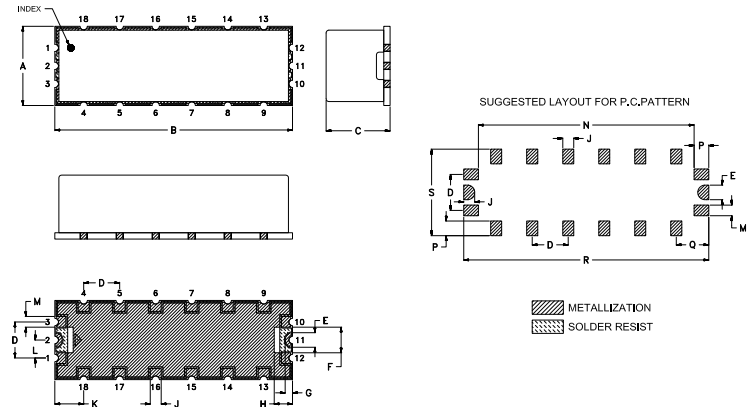


NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS (RO4350B) WITH DIELECTRIC THICKNESS .020"±.0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

Outline Drawing



Outline Dimensions (inch / mm)

A	B	C	D	E	F	G	H	J	K
.433	1.299	.350	.197	.079	.140	.040	.100	.060	.157
11.00	33.00	8.89	5.00	2.02	3.56	1.02	2.54	1.52	4.00
L	M	N	P	Q	R	S	Wt.		
.098	.058	1.179	.080	.177	1.339	.473	grams		
2.50	1.48	29.95	2.03	4.51	34.02	12.02	4		

Note: Please refer to case style drawing for details

Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Mini-Circuits:](#)

[BPF-BD1800+](#)