

Coaxial Bandpass Filter

SBP-20R5+

50Ω 20 to 21 MHz



Generic photo used for illustration purposes only
CASE STYLE: FF99

The Big Deal

- Flat group delay over passband
- Narrow bandwidth
- Good VSWR (1.3:1 typical)

Product Overview

SBP-20R5+ is a 50Ω bandpass filter in a connectorized package. This bandpass filter covers from 20 to 21 MHz, these units offer good matching within the passband and high rejection. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. It has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Flat group delay over passband	The model has flat group delay over passband which ensures that the signal distortion is very less.
Good VSWR, 1.3:1 typical over passband	This provides well matched input and output ports.
Connectorized package	Connectorized package is easy to interface with other devices and well suited for test setups.

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



Coaxial Bandpass Filter

SBP-20R5+

50Ω 20 to 21 MHz



Generic photo used for illustration purposes only
CASE STYLE: FF99

Connectors SMA Model SBP-20R5+

Features

- Flat group delay over passband
- Good VSWR, 1.3:1 typical in passband
- High rejection (40dB from 40-380 MHz)
- Insertion loss 2.2 dB typ.

Applications

- Transmitters / Receivers - IF stage
- Harmonic rejection
- Test equipment
- Military

Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	-	-	20.5	-	MHz
	Insertion Loss	F1-F2	20 - 21	2.2	3.0	dB
	VSWR	F1-F2	20 - 21	1.3	1.6	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 15.8	40	48	dB
		F3-F4	15.8 - 17	20	30	dB
	VSWR	DC-F4	DC - 17	-	20	:1
Stop Band, Upper	Insertion Loss	F5-F6	27 - 40	20	25	dB
		F6-F7	40 - 380	40	45	dB
	VSWR	F5-F7	27 - 380	-	20	:1

Maximum Ratings

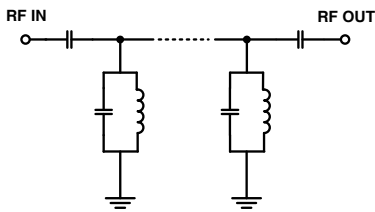
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5 W max.

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

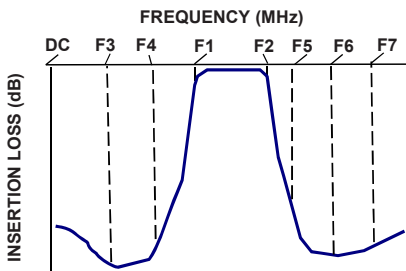
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (ns)
1.0	100.84	3224.22	19.6	336.55
10.0	102.29	1135.46	19.7	320.97
15.0	57.41	199.02	19.8	304.62
15.8	49.61	135.91	19.9	289.27
17.0	36.09	66.20	20.0	275.82
17.4	30.88	48.88	20.1	264.52
17.7	26.63	37.27	20.2	255.09
18.1	20.39	23.56	20.3	247.28
19.2	3.25	1.73	20.4	240.62
20.0	1.81	1.28	20.5	234.94
20.5	1.56	1.11	20.6	229.95
21.0	1.45	1.10	20.7	225.44
23.4	3.41	2.74	20.8	221.52
27.0	25.71	77.96	20.9	217.91
29.0	32.02	127.95	21.0	214.72
40.0	45.92	249.28	21.1	211.84
45.0	48.67	289.77	21.2	209.26
100.0	68.46	220.37	21.3	206.99
200.0	56.18	123.90	21.4	205.01
380.0	50.88	76.78	21.5	203.38

Functional Schematic

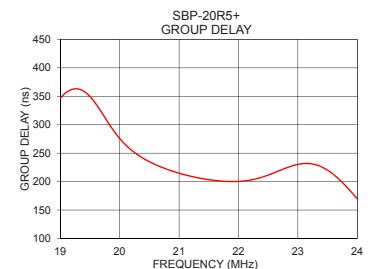
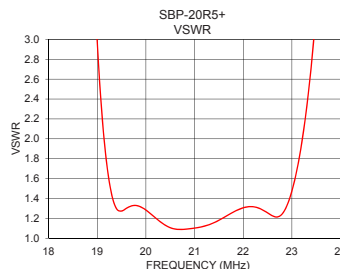
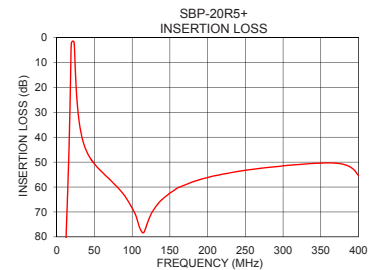
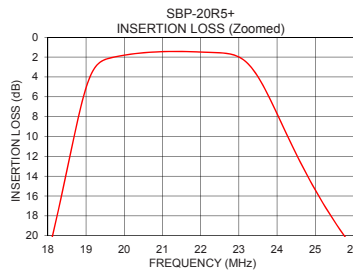


Typical Frequency Response



+RoHS Compliant

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



Notes

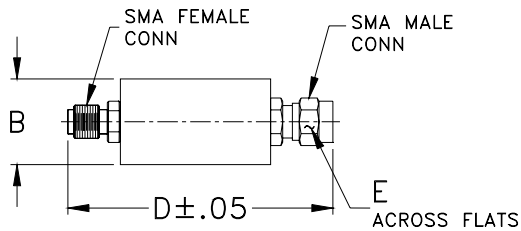
- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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



Coaxial Connections

PORT - 1	SMA-Male
PORT - 2	SMA-Female

Outline Drawing



Outline Dimensions (inch / mm)

B	D	E	Wt.
.70	1.98	.312	grams
17.78	50.29	7.92	42.0

Note: Please refer to case style drawing for details

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

