Surface Mount

Bandpass Filter

BPF-F1250+

50Ω 1050 to 1450 MHz



CASE STYLE: HP1156

The Big Deal

- Broad bandwidth
- Low passband IL and VSWR
- Fast roll-off skirts
- Shielded package

Product Overview

BPF-F1250+ is a 50Ω bandpass filter in a shielded package fabricated using SMT technology. This filter offers low insertion loss in the passband for use in L-band application.

Key Features

Feature	Advantages
Low insertion loss	This filter incorporates high Q components that enables low loss in the passband.
Low VSWR	This filter offers good passband return loss that enables perfect matching in the passband.
Fast roll-off skirts	This filter designed using transmission zeros that enables fast roll-off skirts near the passband edges.
Shielded package	Reduced interference 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

Surface Mount

Bandpass Filter

BPF-F1250+

50Ω 1050 to 1450 MHz



CASE STYLE: HP1156

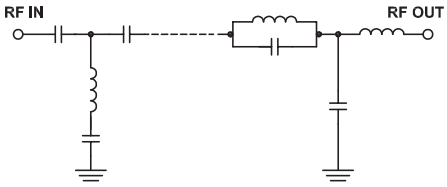
Features

- Broad bandwidth
- Low passband IL & VSWR
- Fast roll-off skirts
- Shielded package

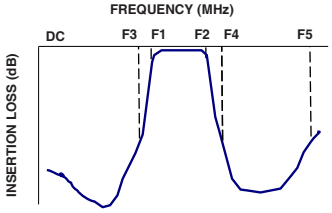
Applications

- Broad band
- L-band
- Test and Measurements

Functional Schematic



Typical Frequency Response



+RoHS Compliant

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

Electrical Specifications at 25°C

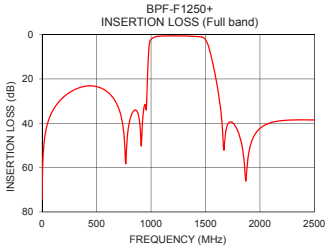
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	1250	—	MHz
	Insertion Loss	F1-F2	1050-1450	—	0.8	2.0	dB
	VSWR	F1-F2	1050-1450	—	1.35	1.65	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-960	—	20	—	dB
	VSWR	DC-F3	DC-960	—	10	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	1640-2500	20	30	—	dB
	VSWR	F4-F5	1640-2500	—	10	—	:1

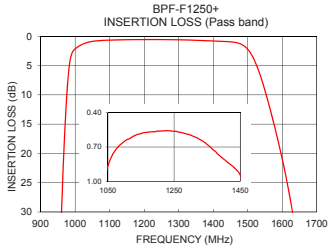
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1.5 W

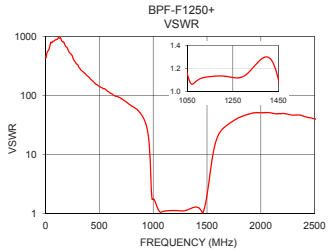
Permanent damage may occur if any of these limits are exceeded.

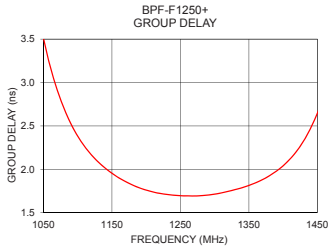
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	74.41	438.05	1050	3.51
50	40.11	795.34	1070	2.92
150	30.53	847.74	1090	2.53
430	23.10	181.77	1110	2.26
760	51.07	75.57	1130	2.08
840	34.43	59.77	1150	1.95
960	30.51	17.75	1170	1.86
965	22.78	13.99	1190	1.79
975	10.77	6.13	1210	1.74
990	3.00	1.77	1230	1.71
1050	0.86	1.15	1250	1.70
1250	0.56	1.12	1270	1.69
1450	0.94	1.10	1300	1.71
1510	3.04	2.72	1330	1.77
1550	9.29	8.90	1350	1.82
1600	21.01	20.45	1380	1.93
1630	30.15	25.31	1400	2.04
1640	34.10	26.67	1410	2.12
2000	42.29	51.17	1430	2.33
2500	38.50	40.27	1450	2.65









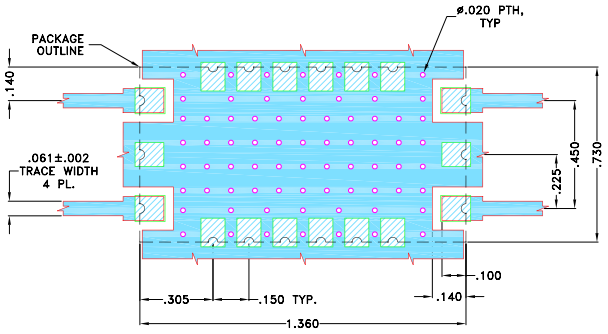
Notes

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

Pad Connections

INPUT	18
OUTPUT	9
GROUND	1,3,4,5,6,7,8,10,12,13,14,15,16,17
NO CONNECTION	2,11

Demo Board MCL P/N: TB-695+
Suggested PCB Layout (PL-418)

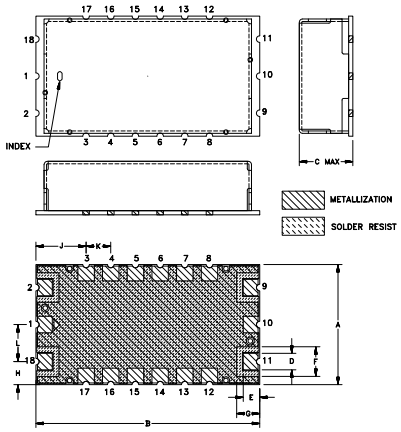


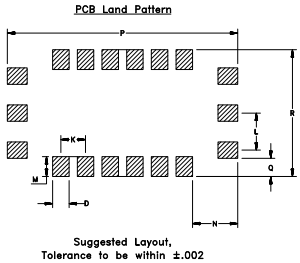
NOTES:
1. TRACE WIDTH IS SHOWN FOR OAK-602, WITH DIELECTRIC THICKNESS .022"±.0015". COPPER: 1/2 Oz. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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
.730	**1.360**	**.350**	**.100**	**.100**	**.180**	**.140**	**.140**	**.305**
18.54	34.54	8.89	2.54	2.54	4.57	3.56	3.56	7.75

K	L	M	N	P	Q	R	Wt.
.150	**.225**	**.120**	**.275**	**1.400**	**.110**	**.770**	grams
3.81	5.72	3.05	6.99	35.56	2.79	19.56	6.0

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