Surface Mount

Bandpass Filter

BPF-A60+

50Ω 55 to 65 MHz



CASE STYLE: HQ1157

The Big Deal

- Low frequency 16.67% BW
- Fast roll-off
- High rejection, 40 dB from 80-900 MHz
- Miniature shielded package

Product Overview

The BPF-A60+ is a band pass filter in a shielded package (size of 0.365" x 1.360" x .35") fabricated using SMT technology. Covering 60 MHz ± 5 MHz bandwidth, 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. In addition it has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Low frequency and fractional Bandwidth 16.67%	Fast-roll-of, this will attenuate frequency closer to the passband with good rejection value of > 20 dB.
More than 40 dB rejection up to 900 MHz	This enables the filter to attenuate spurious signals and reject harmonics for a broadband of frequency.
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

Surface Mount

Bandpass Filter

BPF-A60+

50Ω 55 to 65 MHz



CASE STYLE: HQ1157

Features

- Fast roll-off
- High rejection, 36 dB typical
- Good VSWR 1.2:1 typical in passband
- Miniature shielded case
- Aqueous washable

Applications

- Test equipments
- Harmonic rejection
- Transmitters / receivers

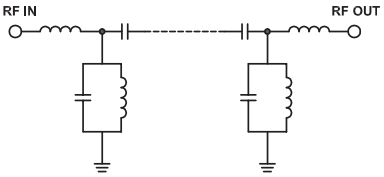
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	60	—	MHz
	Insertion Loss	F1-F2	55-65	—	3.4	4.5	dB
	VSWR	F1-F2	55-65	—	1.5	2.2	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-50	20	36	—	dB
	VSWR	DC-F3	DC-50	—	21	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	75-900	20	34	—	dB
	VSWR	F4-F5	75-900	—	30	—	:1

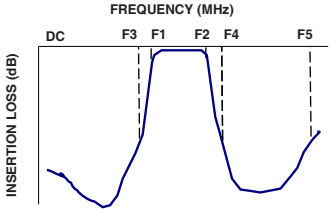
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	320mW

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

Functional Schematic



Typical Frequency Response

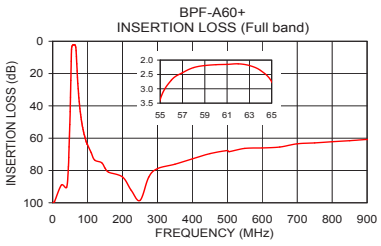


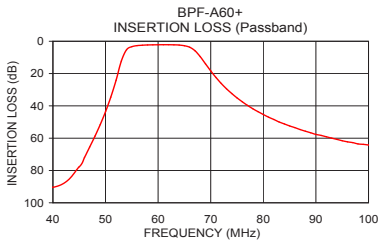
Typical Performance Data at 25°C

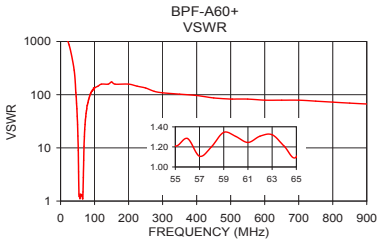
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1.0	99.79	1737.18	55.00	158.01
45.0	77.72	108.58	55.50	161.16
47.0	65.39	69.49	56.00	164.30
50.0	43.58	27.16	56.50	161.67
51.0	34.62	16.72	57.00	159.04
52.0	24.18	8.99	57.50	148.86
53.0	12.32	3.53	58.00	138.67
54.0	5.20	1.36	58.50	131.43
55.0	3.37	1.21	59.00	124.19
60.0	2.16	1.30	59.50	119.63
65.0	2.75	1.10	60.00	115.07
66.0	3.69	1.48	60.50	112.54
67.0	5.83	2.77	61.00	110.00
69.0	13.96	10.69	61.50	108.88
72.0	26.12	27.59	62.00	107.76
75.0	35.06	44.55	63.00	108.14
100.0	64.23	133.63	63.50	109.25
250.0	98.54	133.63	64.00	110.35
500.0	67.64	82.73	64.50	110.76
900.0	60.77	66.82	65.00	111.17

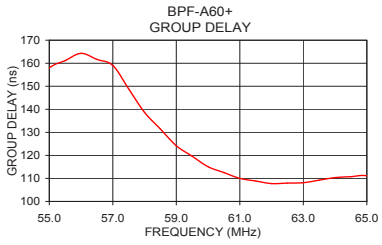
+RoHS Compliant

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









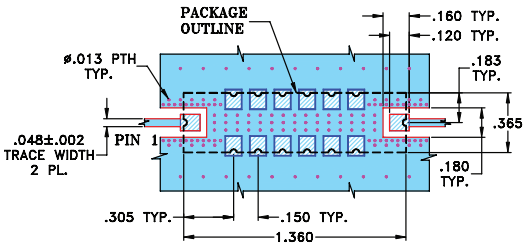
Notes

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	1
OUTPUT	8
GROUND	2,3,4,5,6,7,9,10,11,12,13,14

Demo Board MCL P/N: TB-363+
Suggested PCB Layout (PL-227)



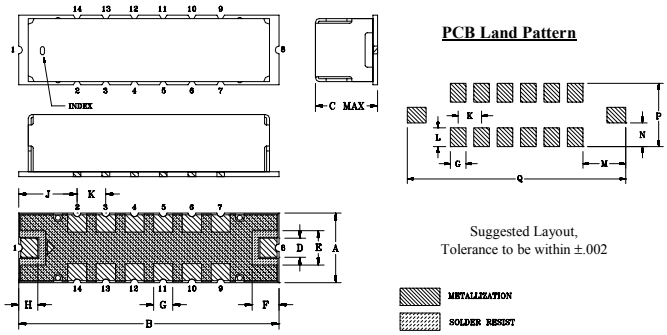
NOTE:

1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025"±.002". 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
.365	1.360	.35	.100	.180	.140	.100	.100
9.27	34.54	8.89	2.54	4.57	3.56	2.54	2.54

J	K	L	M	N	P	Q	wt
.305	.150	.120	.275	.152	.405	1.400	grams
7.75	3.81	3.05	6.99	3.86	10.29	35.56	4.0

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