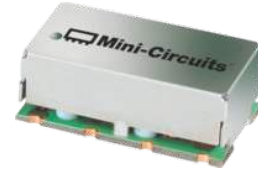


# Surface Mount Bandpass Filter

## SXBP-375+

50Ω      330 to 420 MHz



Generic photo used for illustration purposes only  
CASE STYLE: HF1139

### The Big Deal

- Flat group delay, 2ns typ.
- High rejection, 50 dB typ.
- Fast roll-off
- Miniature shielded package

### Product Overview

The SXBP-375+ is a bandpass filter fabricated using SMT technology. Covering 375 MHz  $\pm$  45 MHz, these units offer good matching within the passband and high rejection. This unit uses 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
Fast Rejection Roll-off	This enables the filter to reject adjacent channels with increased selectivity.
More than 40dB rejection upto 1300 MHz	This enables the filter to attenuate spurious signals and reject harmonics for a broad frequency band.
Flat group delay 2ns, typ.	This model has group delay variation of less than 2nsec which helps in reducing the signal distortion .
Small size, 0.44" x 0.74" x 0.27"	The surface mount package enables the SXBP-375+ to be used in compact designs.

#### Notes

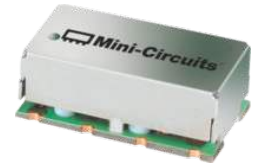
- A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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](http://www.minicircuits.com/MCLStore/terms.jsp)



# Bandpass Filter

50Ω 330 to 420 MHz

## SXBP-375+



Generic photo used for illustration purposes only  
CASE STYLE: HF1139

### Features

- Flat group delay over passband
- High rejection, 50 dB typ.
- Shielded case
- Aqueous washable

### Applications

- Radio link
- Receivers / Transmitters
- Harmonic rejection
- Military

### Electrical Specifications at 25°C

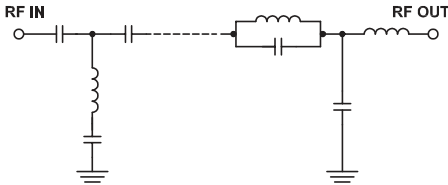
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center frequency	-	-	375	-	MHz	
	Insertion Loss	F1-F2	330 - 420	-	0.8	1.6	dB
	VSWR	F1-F2	330 - 420	-	1.2	1.8	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC - 170	40	50	-	dB
Stop Band, Upper	Insertion Loss	F4-F5	580 - 1300	40	50	-	dB

### Maximum Ratings

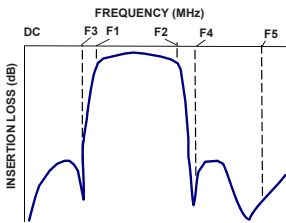
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	1 W max.

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

### Functional Schematic



### Typical Frequency Response

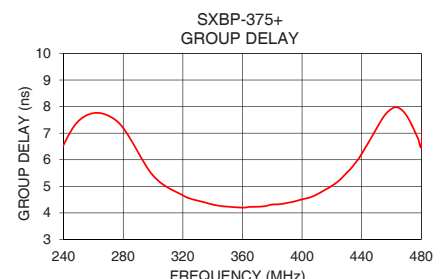
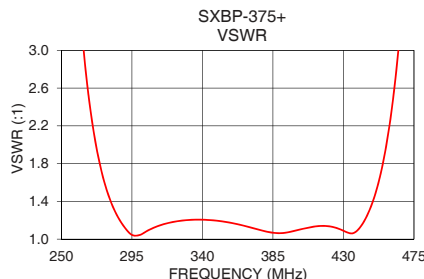
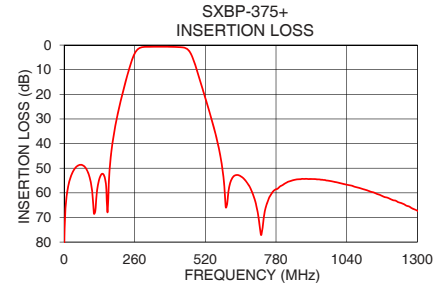
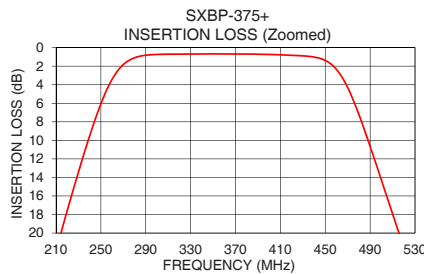


### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	80.44	267.26	330	4.46
50	49.02	386.04	335	4.39
100	56.75	334.07	340	4.31
170	47.56	129.64	345	4.26
195	29.28	77.56	350	4.24
215	19.74	46.09	355	4.22
260	3.42	3.85	360	4.20
330	0.69	1.20	365	4.23
350	0.68	1.19	370	4.23
375	0.69	1.10	375	4.25
400	0.74	1.09	380	4.32
420	0.82	1.14	383	4.31
466	3.39	3.17	385	4.33
516	20.12	23.65	390	4.37
544	30.58	30.65	395	4.43
580	48.21	34.14	400	4.51
800	57.09	38.44	405	4.58
1000	55.65	51.25	410	4.69
1200	62.47	58.69	415	4.85
1300	67.26	57.15	420	5.02

### +RoHS Compliant

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



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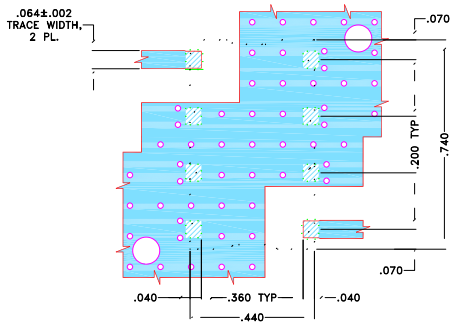


## Pad Connections

INPUT	1
OUTPUT	8
GROUND	2,3,4,5,6,7

**Demo Board MCL P/N: TB-SXBP-375+**  
**Suggested PCB Layout (PL-449)**

**SUGGESTED MOUNTING CONFIGURATION FOR**  
**HF1139 CASE STYLE "08FL01" PIN CODE**

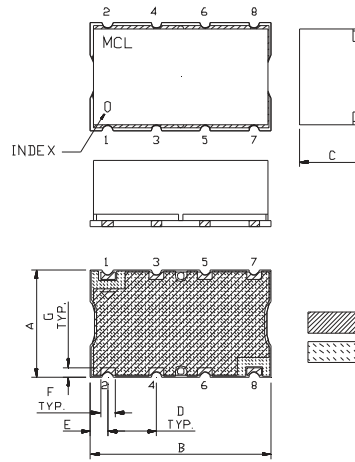


### NOTES:

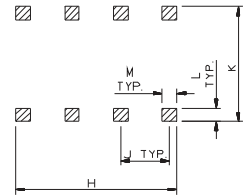
- TRACE WIDTH IS SHOWN FOR ROGERS WITH DIELECTRIC THICKNESS  $.030 \pm .002$ ". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

## Outline Drawing



## PCB Land Pattern



## Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.44	.74	.27	.200	.07	.060	.040
11.18	18.80	6.86	5.08	1.78	1.52	1.02
H	J	K	L	M	wt	
.660	.200	.470	.055	.060	grams	
16.76	5.08	11.94	1.40	1.52	3.0	

*Note: Please refer to case style drawing for details*

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