



LUMPED LC SURFACE MOUNT

# Bandpass Filter

## SXBP-75+

50Ω 62 to 88 MHz

### KEY FEATURES

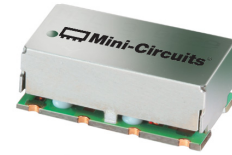
- Low insertion loss, 1.6dB typ.
- Good Return loss, 15dB typ.
- Passband Flatness 0.5dB typ.
- Miniature shielded package.

### APPLICATIONS

- Harmonic Rejection.
- Test Equipment.
- Transmitters / Receivers.

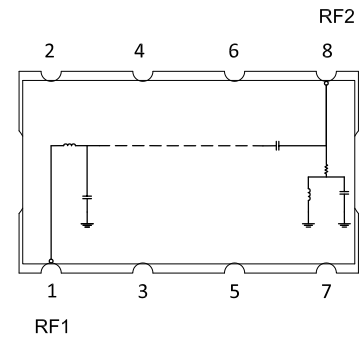
### PRODUCT OVERVIEW

The SXBP-75+ is a 50Ω bandpass filter in a shielded package fabricated using SMT technology. This bandpass filter covers from 62 to 88MHz. This filter has high Q capacitors and inductors to achieve a low insertion loss. It has repeatable performance across production lots and consistent performance across temperature.



Generic photo used for illustration purposes only

### FUNCTIONAL DIAGRAM



### ELECTRICAL SPECIFICATIONS<sup>1</sup> AT +25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Insertion Loss	F1-F2	—	1.6	2.5	dB
	Return Loss	F1-F2	10	15	—	dB
Stop Band, Lower	Rejection	DC-F3	40	49	—	dB
		F3-F4	30	37	—	dB
Stop Band, Upper	Rejection	F5-F6	30	38	—	dB
		F6-F7	40	52	—	dB
		F7-F8	—	40	—	dB

1. Tested in Evaluation Board P/N TB-SXBP-75+.

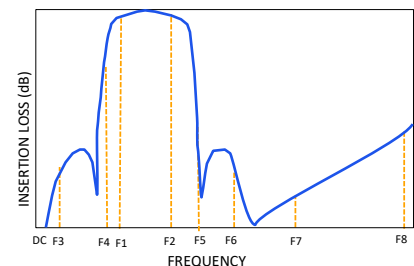
### ABSOLUTE MAXIMUM RATINGS<sup>2</sup>

Parameter	Ratings
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C
Input Power <sup>3</sup>	0.25 W Max.

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

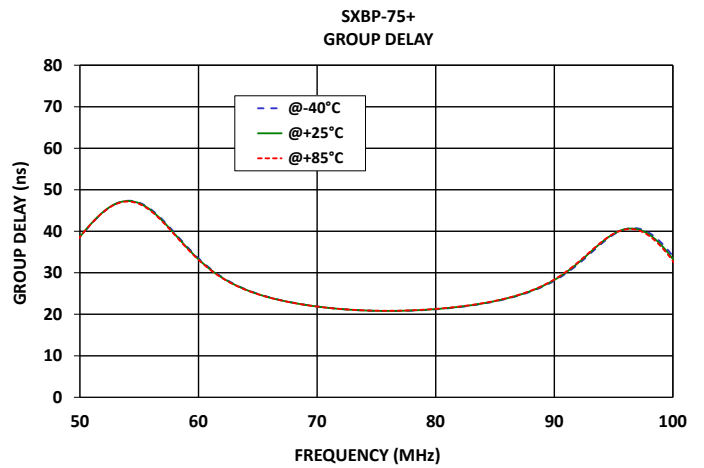
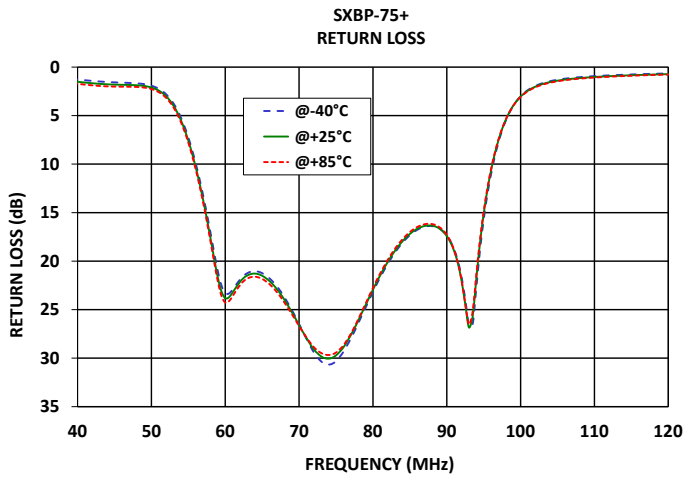
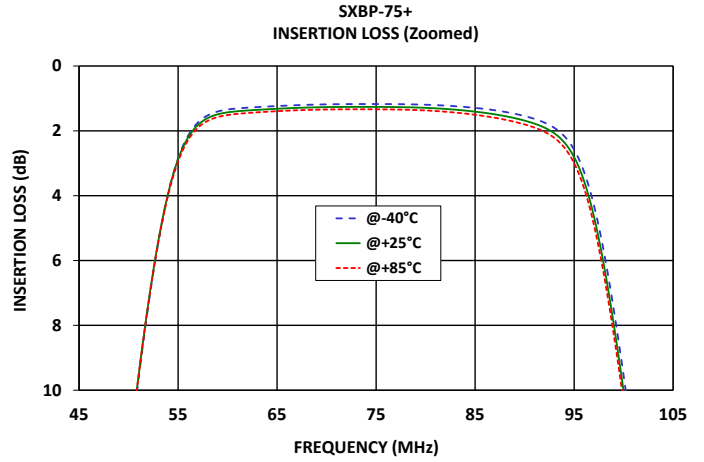
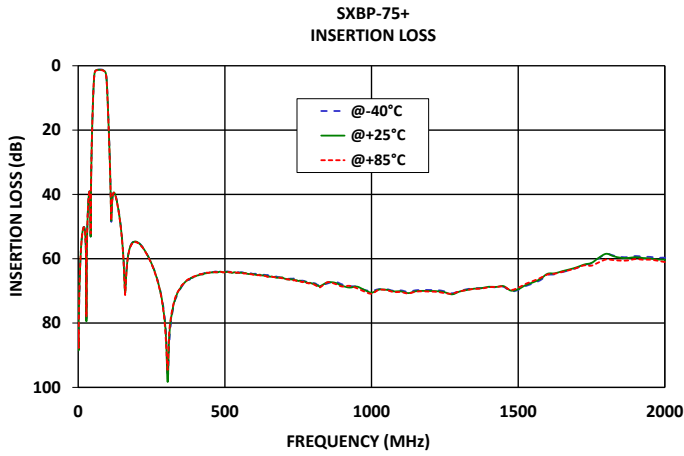
3. Power rating applies only to signals within the passband.

### TYPICAL FREQUENCY RESPONSE AT +25°C





### TYPICAL PERFORMANCE GRAPHS





### FUNCTIONAL DIAGRAM

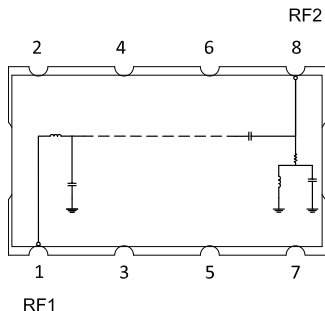


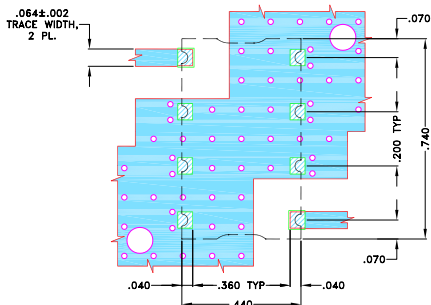
Figure 1. SXBP-75+ Functional Diagram

### PAD DESCRIPTION

Function	Pad Number	Description
RF1 <sup>(2)</sup>	1	Connects to RF Input Port
RF2 <sup>(2)</sup>	8	Connects to RF Output Port
GROUND	2,3,4,5,6,7	Connects to Ground on PCB, (See drawing PL-449)
NC	—	No connection, not used internally. See drawing PL-449 for connection to PCB

### SUGGESTED PCB LAYOUT (PL-449)

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



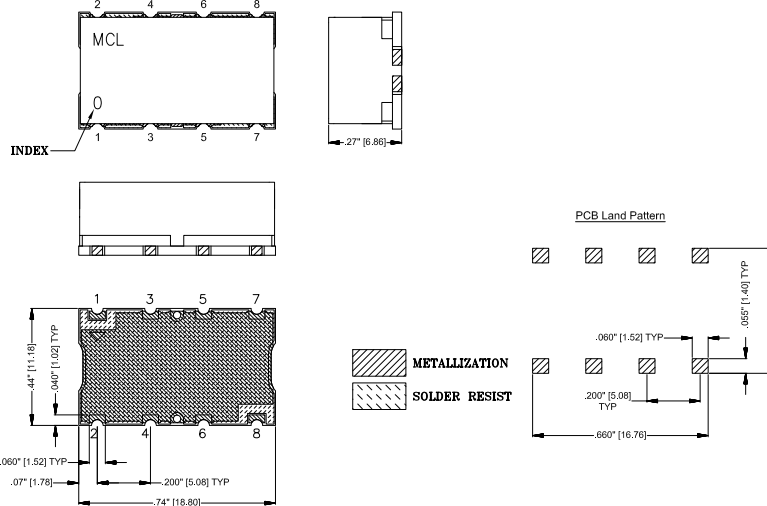
NOTES:

- TRACE WIDTH IS SHOWN FOR ROGERS WITH DIELECTRIC THICKNESS .030±.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

Figure 2. Suggested PCB Layout PL-449

### CASE STYLE DRAWING



Unit weight: 3.0grams

Dimensions are in inches (mm). Tolerances: 2 Pl. ±.015'; 3 Pl. ±.01'

### PRODUCT MARKING\*: SXBP-75

\*Marking may contain other features or characters for internal lot control.



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## SXBP-75+

Mini-Circuits

50Ω 62 to 88 MHz

ADDITIONAL DETAILED INFORMATION IS AVAILABLE ON OUR DASH BOARD.

[CLICK HERE](#)

Performance Data and Graphs	Data
	Graphs
	S-Parameter (S2P Files) Data Set (.zip file) De-embedded to device pads
Case Style	HF1139 Lead Finish: Gold over Nickel Plate.
RoHS Status	Compliant
Tape and Reel	TR-F5
Suggested Layout for PCB Design	PL-449
Evaluation Board	TB-SXBP-75+
	Gerber File
Environmental Rating	ENV02T1

### 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-Circuits' applicable established test performance criteria and measurement instructions.
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