

Surface Mount Bandpass Filter

SXBP-29+

50Ω 24 to 35 MHz

The Big Deal

- Low insertion loss (0.9dB typical)
- Wide stopband rejection, 40 dB
- Good VSWR, 1.4:1 typical
- Miniature shielded package



CASE STYLE: HF1139

Product Overview

The SXBP-29+ is a bandpass filter fabricated using SMT technology. The SXBP-29+ offer good matching within the passband and it has more than 40 dB rejection up to 1600 MHz. 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
Wide bandpass filter	This provides low signal distortion for broadband RF/IF application.
More than 40dB rejection up to 1600MHz	This enables the filter to attenuate spurious signals and reject harmonics for a broad band of frequency.
Small size of 0.44" x 0.74" x .27"	The surface mount package enables the SXBP-29+ to be used in compact designs.



For detailed performance specs
& shopping online see web site

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine  Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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.

Bandpass Filter

SXBP-29+

50Ω 24 to 35 MHz



CASE STYLE: HF1139
PRICE: \$15.95 ea. QTY (1-9)

Features

- Good VSWR, 1.4:1 typical over passband
- High rejection, 40 dB
- Shielded case
- Aqueous washable

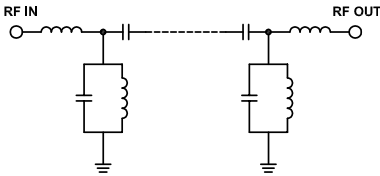
Electrical Specifications at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Center Frequency	—	—	29	—	MHz	
	Insertion Loss	F1-F2	24-35	—	0.9	1.5	dB
	VSWR	F1-F2	24-35	—	1.4	1.7	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-17	20	32	—	dB
	VSWR	DC-F3	DC-17	—	50	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	48-1600	20	30	—	dB
	VSWR	F4-F5	48-1600	—	26	—	:1

Applications

- Test equipments
- Transmitters / Receivers
- Harmonic Rejection
- Military

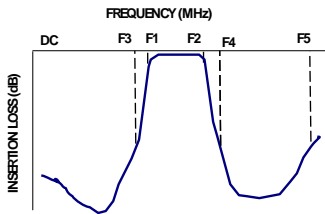
Functional Schematic



Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.25W max.

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

Typical Frequency Response

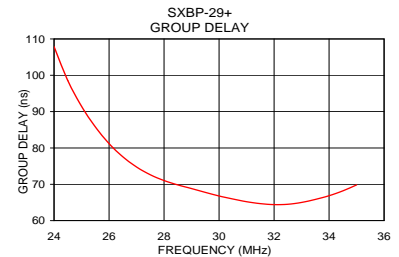
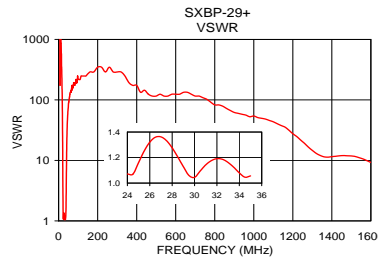
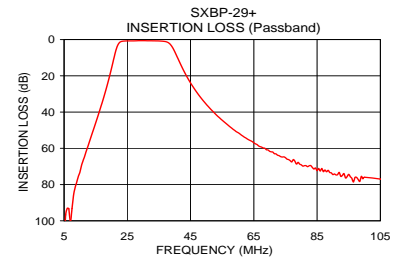
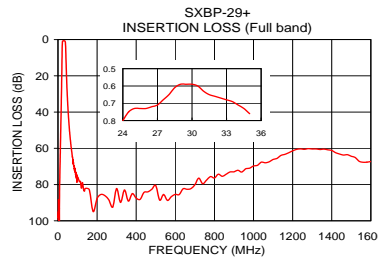


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
0.5	96.97	1737.18	24.0	107.88
1.0	98.14	1737.18	25.0	91.46
14.0	51.13	579.06	25.5	85.82
17.0	34.96	217.15	26.0	81.19
21.0	8.57	12.18	26.5	77.58
22.0	2.94	3.20	27.0	74.75
24.0	0.80	1.07	27.5	72.62
27.0	0.71	1.36	28.0	71.04
29.0	0.59	1.13	28.5	69.83
35.0	0.76	1.06	29.0	68.83
39.0	3.54	3.29	29.5	67.78
40.0	6.67	6.71	30.0	66.78
42.0	14.22	19.98	30.5	65.96
48.0	31.54	66.82	31.0	65.21
58.0	48.84	124.09	31.5	64.69
100.0	75.99	217.15	32.0	64.42
300.0	82.17	289.53	33.0	65.02
800.0	76.39	82.73	33.5	65.84
1200.0	61.41	27.59	34.0	66.86
1600.0	67.26	9.23	35.0	69.83

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.



Mini-Circuits®
ISO 9001 ISO 14001 AS 9100 CERTIFIED

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 The Design Engineers Search Engine Provides ACTUAL Data Instantly at minicircuits.com

IF/RF MICROWAVE COMPONENTS

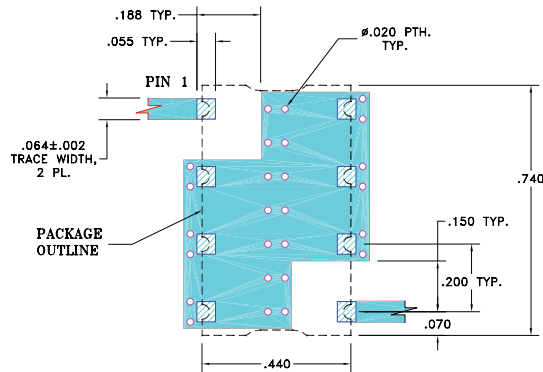
For detailed performance specs & shopping online see web site

Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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

Demo Board MCL P/N: TB-368 Suggested PCB Layout (PL-230)

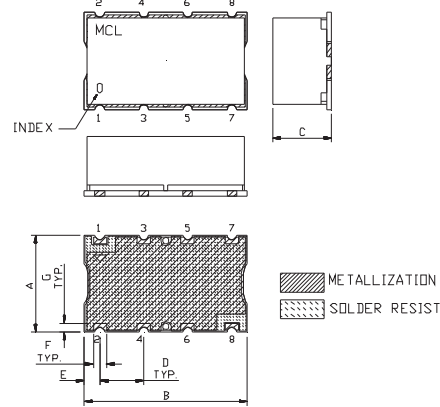


NOTE:

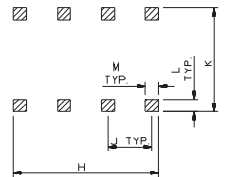
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025" ± .002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
- BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

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

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	