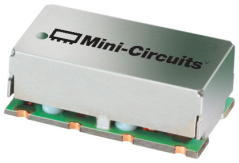
Surface Mount

Bandpass Filter

SXBP-70W+

50Ω 50 to 90 MHz



Generic photo used for illustration purposes only
CASE STYLE: HF1139

The Big Deal

- Very low insertion loss, 0.5dB typical
- Good VSWR, 1.3:1 typical
- Flat group delay response, 2 ns typical
- Miniature shielded package

Product Overview

SXBP-70W+ is a 50Ω bandpass filter in a shielded package fabricated using SMT technology. This bandpass filter covers from 50 to 90 MHz. This filter build with high Q capacitors and wire welded inductors for high reliability. This filter has sharper cut-off and well suited for IF signal processing applications.

Key Features

Feature	Advantages
Very low insertion loss, 0.5 dB typical	Can be used in telecommunication and broadband wireless application.
Good rejection	This enables the filter attenuate spurious signals and reject harmonics for broad frequency band.
Shielded package	The small surface mount package enables the SXBP-70W+ to be used in compact design

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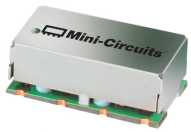
50Ω 50 to 90 MHz

SXBP-70W+



Generic photo used for illustration purposes only

CASE STYLE: HF1139

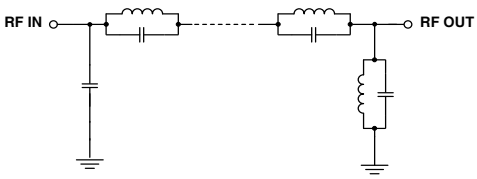
Features

- IF Frequency
- Very low insertion loss, 0.5 dB typical
- Flat group delay response, 2 ns typical
- Miniature shielded package

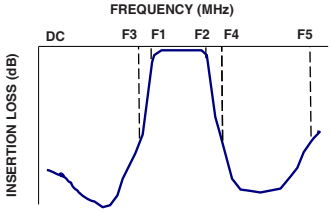
Applications

- Satellite base station
- IF signal processing
- Military hi-rel systems
- Harmonic rejection

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

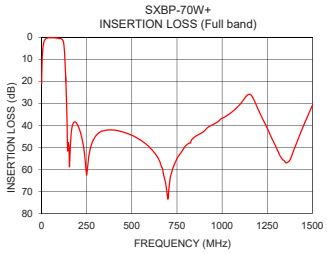
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	70	—	MHz
	Insertion Loss	F1-F2	50-90	—	0.5	1.0	dB
	VSWR	F1-F2	50-90	—	1.3	1.7	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-2	10	14	—	dB
	VSWR	DC-F3	DC-2	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	137-1500	20	23	—	dB
	VSWR	F4-F5	137-1500	—	20	—	:1

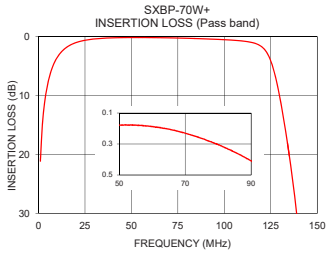
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W

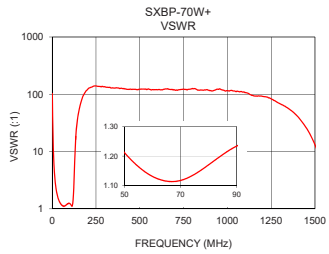
Permanent damage may occur if any of these limits are exceeded.

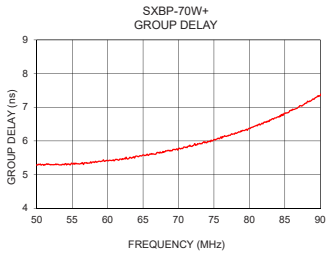
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	21.14	103.07	50	5.29
2	15.26	61.74	52	5.30
3	11.91	38.00	54	5.32
4	9.63	25.35	56	5.31
5	7.95	18.09	58	5.38
6	6.65	13.62	60	5.41
11	3.11	5.43	62	5.44
50	0.18	1.21	64	5.55
70	0.23	1.12	66	5.61
90	0.41	1.23	68	5.68
100	0.54	1.24	70	5.77
124	3.38	2.57	72	5.86
130	10.52	8.60	74	5.95
135	20.24	18.34	76	6.12
137	24.88	22.39	78	6.24
139	30.16	26.24	80	6.38
140	33.15	28.19	82	6.54
500	44.54	122.40	84	6.71
1250	41.34	83.38	86	6.90
1500	30.88	13.12	90	7.35









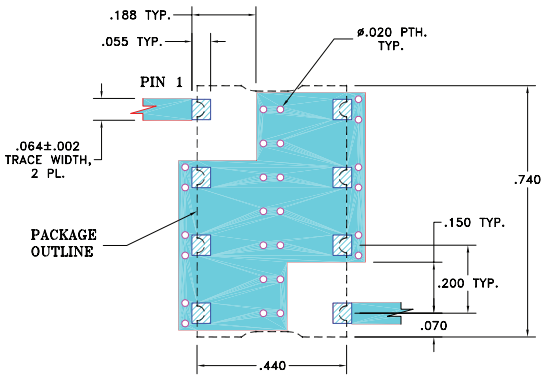
Notes

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

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



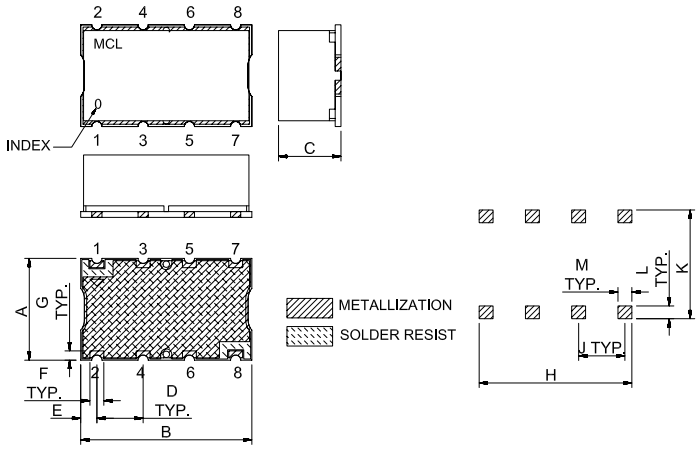
NOTE:

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 SOLDER MASK

Outline Drawing



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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SXBP-70W+