Surface Mount

Bandpass Filter

SXBP-72+

50Ω 68 to 76 MHz

CASE STYLE: HF1139

The Big Deal

- Narrow bandwidth
- Wide stopband rejection
- Miniature shielded package

Product Overview

The SXBP-72+ is a 50Ω bandpass filter fabricated using SMT technology. This bandpass filter covers from 68-76 MHz. This filter is built with high Q capacitors and wire welded inductors for high reliability. This filter is developed for avionics and air traffic control. It has repeatable performance across lots and consistent performance across temperature.

Key Features

Feature	Advantages
Low insertion loss	Can be used in high performance applications such as avionics and air traffic control.
Good rejection	This enables the filter to attenuate spurious signals and reject harmonics for broad frequency band.
Shielded case	Reduced interference with and from the surrounding components.

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Applications

- Avionics and air traffic control
- Harmonic rejection
- IF sinal processing

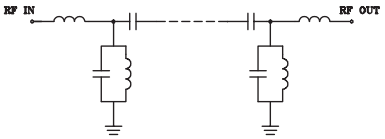
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	72	—	MHz
	Insertion Loss	F1-F2	68-76	—	3.3	5.5	dB
	VSWR	F1-F2	68-76	—	1.5	2.1	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-60	20	30	—	dB
	VSWR	DC-F3	DC-60	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	87-4000	20	27	—	dB
	VSWR	F4-F5	87-4000	—	20	—	:1

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

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

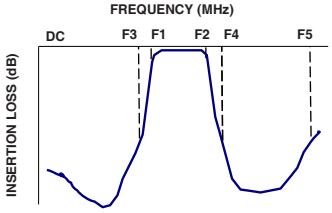
Functional Schematic



Typical Performance Data at 25°C

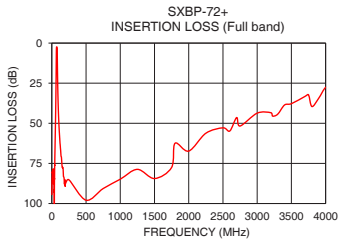
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	94.38	11.46	68.0	99.74
30	87.51	102.19	68.5	92.99
50	58.12	217.15	69.0	86.81
57	40.63	91.43	69.5	81.77
60	31.32	45.72	70.0	77.93
63	19.97	18.11	70.5	74.91
65	11.09	6.78	71.0	72.72
68	2.95	1.13	71.5	71.11
72	2.36	1.12	71.8	70.38
76	2.69	1.29	72.0	69.89
78	3.44	1.14	72.3	69.30
80	7.69	3.18	72.5	68.91
82	14.39	7.22	73.0	68.40
87	27.77	18.70	73.3	68.11
89	31.77	23.49	73.5	67.92
95	41.06	37.77	74.0	67.80
500	97.94	434.30	74.5	68.01
1000	84.85	289.53	75.0	68.52
2500	52.82	96.51	75.5	69.51
4000	27.66	37.77	76.0	71.45

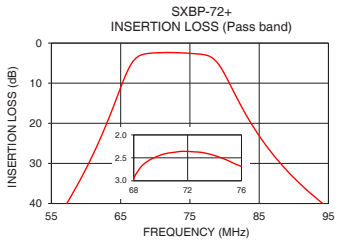
Typical Frequency Response

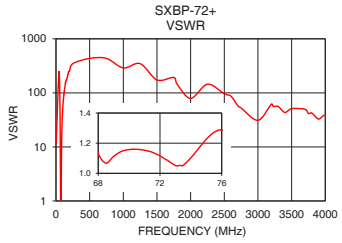


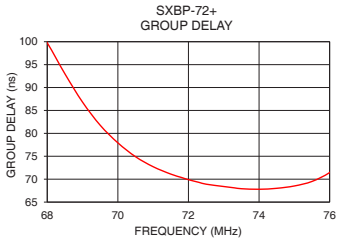
+RoHS Compliant

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









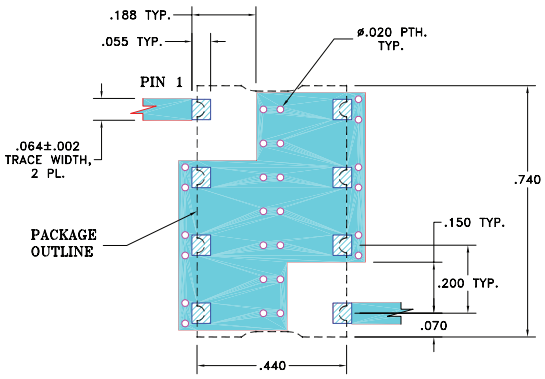
Notes

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

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



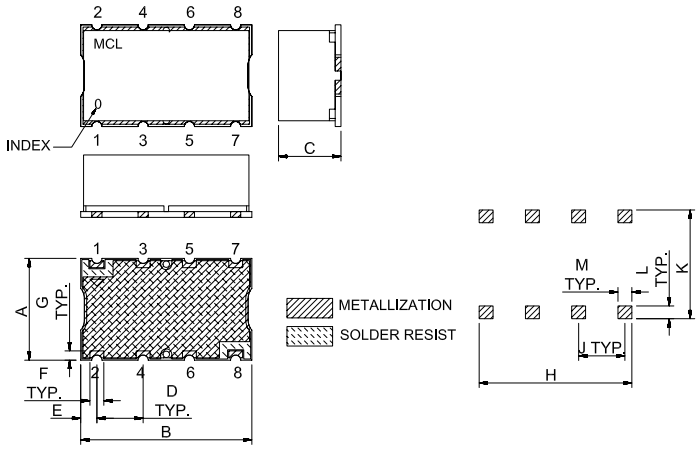
NOTE:

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