Surface Mount

Bandpass Filter

SXBP-45-75+

75Ω 5 to 85 MHz

CASE STYLE: HF1139

The Big Deal

- High Q
- Low VSWR
- Good rejection, 30dB Typ.
- Miniature shielded package

Product Overview

SXBP-45-75+ is a 75Ω bandpass filter in a shielded package fabricated using SMT technology. This bandpass filter covers from 5 to 85 MHz. This filter offers low insertion loss, low VSWR and very good rejection.

Key Features

Feature	Advantages
Low VSWR	This model is used in digital television and test and measurement systems.
30 dB Typ rejection up to 3GHz	This enables the filter to attenuate spurious signals and reject harmonics for broad frequency band
Miniature package	The small surface mount package enables the SXBP-45-75+ to use in compact design

Surface Mount

Bandpass Filter

SXBP-45-75+

75Ω 5 to 85 MHz

CASE STYLE: HF1139

Features

- High Q
- Low VSWR
- Good rejection, 30dB Typ.
- Miniature shielded package

Applications

- Digital Television
- CATV applications
- Test and measurement

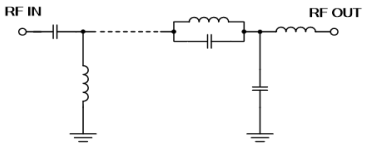
Electrical Specifications at 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	45	—	MHz
	Insertion Loss	F1-F2	5-85	—	1.4	2.2	dB
	VSWR	F1-F2	5-85	—	1.2	1.92	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-1	28	36	—	dB
	VSWR	DC-F3	DC-1	—	20	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	116-3000	30	39	—	dB
	VSWR	F4-F5	116-3000	—	20	—	:1

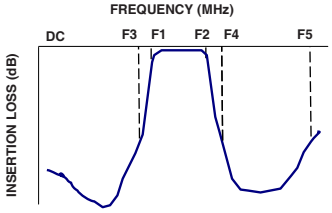
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W

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

Functional Schematic



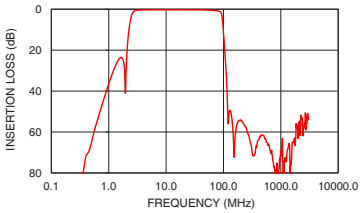
Typical Frequency Response



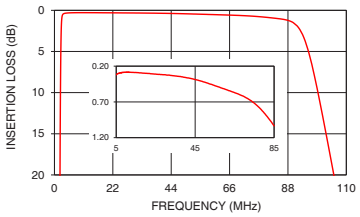
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
0.30	80.53	681.04	5	68.51
1.00	36.50	157.71	6	47.64
1.20	30.28	105.30	8	28.99
2.05	24.20	34.36	9	24.29
2.10	19.34	30.07	10	21.00
2.50	3.04	3.97	15	13.68
2.55	2.38	3.24	20	10.94
5.00	0.32	1.10	25	9.81
45.00	0.39	1.04	30	9.30
85.00	1.03	1.16	35	9.12
92.00	2.11	1.69	40	9.12
94.00	3.32	2.53	45	9.27
106.00	21.23	14.18	50	9.50
112.00	32.32	16.61	55	9.87
116.00	41.47	17.48	60	10.39
500.00	61.65	1.71	65	11.13
1000.00	71.90	12.73	70	12.14
1750.00	64.94	5.03	75	13.52
2250.00	51.74	10.33	80	15.46
3000.00	53.20	3.42	85	18.90

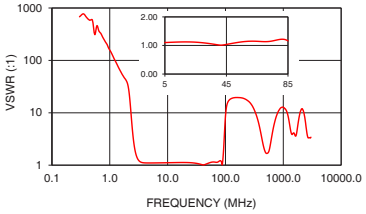
SXBP-45-75+
INSERTION LOSS (Full band)



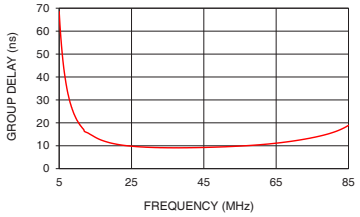
SXBP-45-75+
INSERTION LOSS (Pass band)



SXBP-45-75+
VSWR



SXBP-45-75+
GROUP DELAY



+RoHS Compliant

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

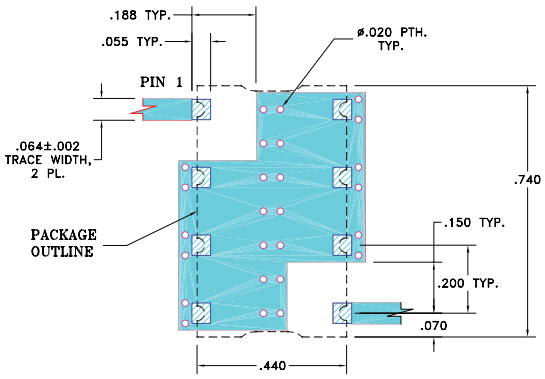
Notes

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-683+
Suggested PCB Layout (PL-281)



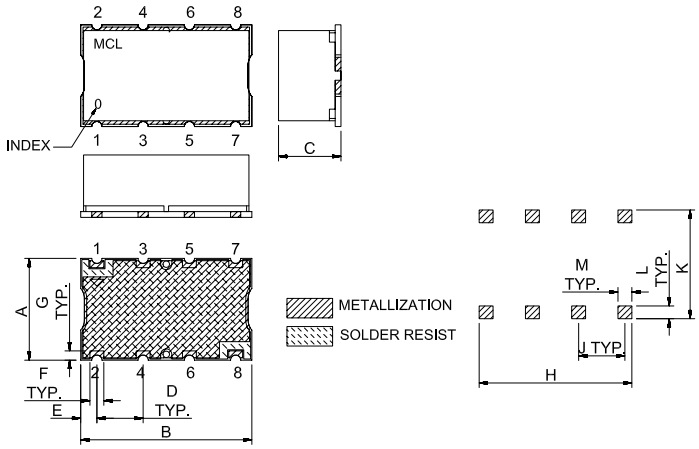
NOTE:

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