Surface Mount

Bandpass Filter

SXBP-1100+

50Ω 1000 to 1200 MHz



CASE STYLE: HF1139

The Big Deal

- Fast roll-off on the upper sideband
- Good Matching and low loss in the pass band
- Miniature shielded package

Product Overview

SXBP-1100+ is a wideband bandpass filter in a miniature shielded package covering 1000 to 1200 MHz. This is designed for asymmetric rejection applications such as super-heterodyne receivers. By having asymmetric band, faster roll-off at upper side band is achieved in a comparatively smaller package and lower pass band insertion loss. It has repeatable performance across lots and consistent performance across temperature

Key Features

Feature	Advantages
Fast roll-off on the upper side band	Wide bandwidth filter with fast-roll off on the upper side band, which increases selectivity on the adjacent channel.
Good matching and low loss in pass band	This filter has good matching and low loss in the pass band
Small size, 0.44" X 0.74" X 0.27"	The surface mount package enables the SXBP-1100+ to be used in compact designs.

Notes
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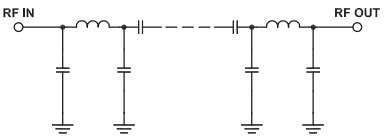
Features

- Fast roll-off on the upper side band
- Good matching in the pass band
- Miniature shielded package

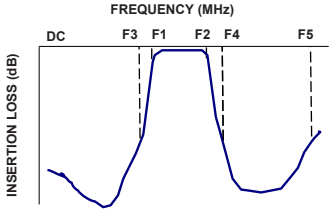
Applications

- Aviation and Aeronautical
- Aeronautical radio navigation
- Radar systems
- Navigation systems

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	-	-	-	1100	-	MHz
	Insertion Loss	F1-F2	1000-1200	-	1.0	2.0	dB
	VSWR	F1-F2	1000-1200	-	1.3	2.3	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-20	20.0	30.0	-	dB
	VSWR	DC-F3	DC-20	-	20.0	-	:1
Stop Band, Upper	Insertion Loss	F4-F5	1500-2200	20.0	29.0	-	dB
	VSWR	F4-F5	1500-2200	-	20.0	-	:1

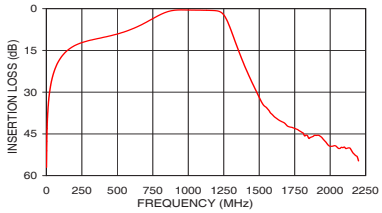
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	2 W max.

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

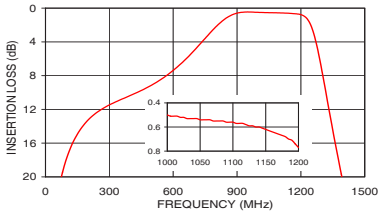
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	57.02	1737.18	1000	1.75
5	43.13	1737.18	1020	1.78
20	31.10	1737.18	1030	1.80
70	20.52	347.44	1040	1.81
150	14.93	91.43	1050	1.83
600	7.38	15.00	1060	1.86
750	3.59	5.83	1070	1.89
830	1.54	2.79	1080	1.92
880	0.76	1.76	1090	1.96
1000	0.50	1.26	1100	1.99
1100	0.56	1.25	1110	2.03
1200	0.77	1.20	1120	2.08
1235	1.46	1.90	1130	2.13
1265	3.43	3.87	1140	2.18
1300	7.58	9.58	1150	2.24
1360	15.82	26.33	1160	2.32
1400	20.90	36.20	1170	2.41
1500	31.84	51.10	1180	2.51
1750	43.02	69.49	1190	2.64
2200	54.70	78.97	1200	2.79

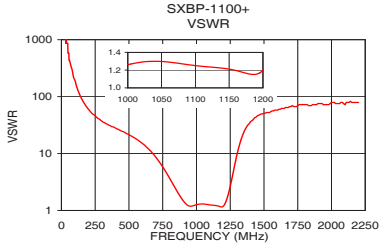
SXBP-1100+
INSERTION LOSS (Full band)



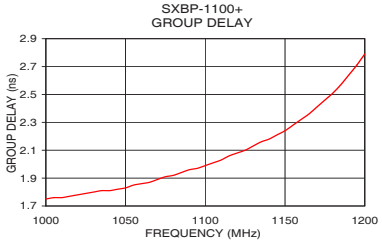
SXBP-1100+
INSERTION LOSS (Pass band)



SXBP-1100+
VSWR



SXBP-1100+
GROUP DELAY



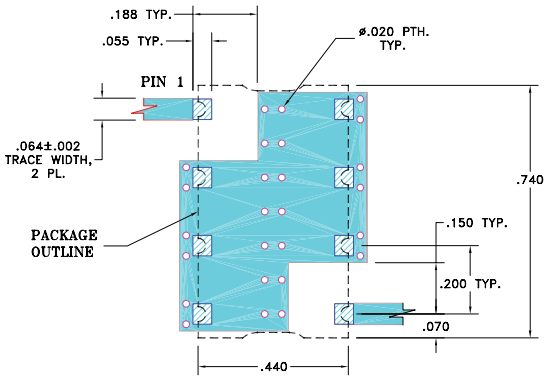
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Pad Connections

INPUT	1
OUTPUT	8
GROUND	2,3,4,5,6,7

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



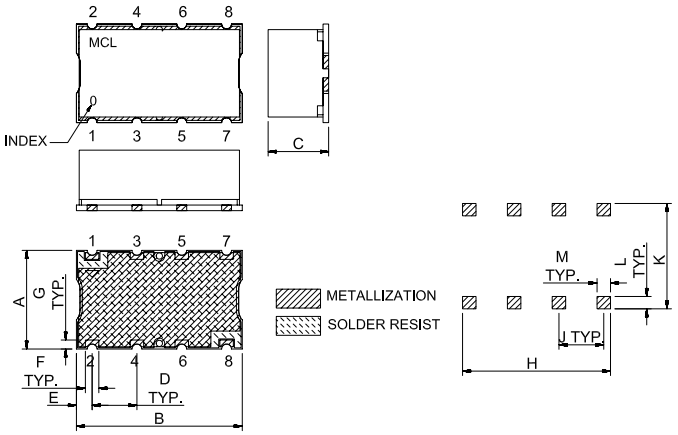
NOTE:

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

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