Surface Mount

Bandpass Filter

SXBP-202+

50Ω 198 to 206 MHz



Generic photo used for illustration purposes only
CASE STYLE: HF1317

The Big Deal

- Flat group delay, (0.6 ns typical)
- Narrow band, (3.96% fractional Bandwidth)
- High Wideband rejection, 40 dB from 290-2000 MHz
- Miniature shielded package

Product Overview

The SXBP-202+ is a flat group delay bandpass filter fabricated using SMT technology. Covering 202 MHz ± 4 MHz, these units offer good matching within the passband and high rejection. This unit uses a miniature high Q capacitors and wire welded inductors for high reliability. It has repeatable performance across production lots and consistent performance across temperature.

Key Features

Feature	Advantages
Flat group delay characteristics	This model has a group delay flatness of 0.6 ns typical which in reducing the signal distortion
High rejection (40 dB)	Achieving 40 dB rejection over the wide stopband range 290-2000 MHz will be used for suppressing harmonics.
Small size, 0.44" x 0.74" x 0.19"	The surface mount package enables the SXBP-202+ to be used in compact designs.

Notes
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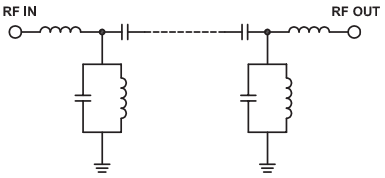
Features

- Flat group delay over passband, (0.6 ns typical)
- High rejection 40 dB
- Miniature shielded package
- Aqueous washable

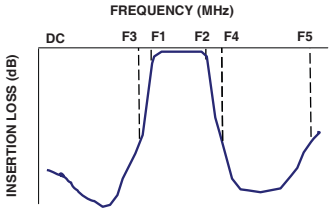
Applications

- Test equipments
- Receivers / transmitters
- Harmonic rejection
- Military

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

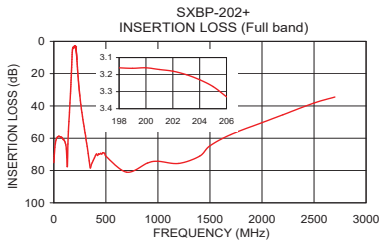
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	—	—	—	202	—	MHz
	Insertion Loss	F1-F2	198-206	—	3.4	5	dB
	VSWR	F1-F2	198-206	—	1.9	2.3	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-160	20	32	—	dB
	VSWR	DC-F3	DC-160	—	33	—	:1
Stop Band, Upper	Insertion Loss	F4-F5	250-2700	20	31	—	dB
	VSWR	F4-F5	250-2700	—	27	—	:1

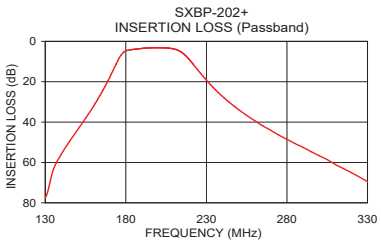
Maximum Ratings	
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.4W max.

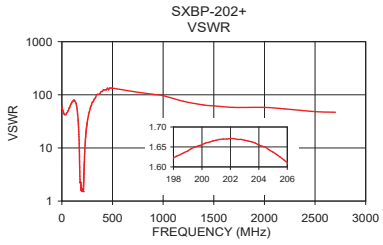
Permanent damage may occur if any of these limits are exceeded.

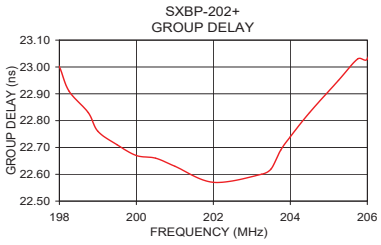
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	75.13	59.91	198.00	23.00
75	59.39	56.04	198.50	22.82
160	32.09	34.75	199.00	22.76
171	16.22	12.09	199.50	22.71
176	8.14	4.38	200.00	22.67
180	4.73	2.37	200.50	22.66
198	3.16	1.62	201.00	22.63
202	3.18	1.67	201.75	22.60
206	3.33	1.61	202.00	22.57
216	6.29	2.41	202.25	22.55
223	12.50	6.21	202.75	22.60
236	24.29	17.39	203.25	22.60
250	33.82	29.96	203.50	22.62
300	56.65	72.39	203.75	22.69
500	71.14	133.63	204.00	22.74
1000	74.29	96.51	204.50	22.83
1500	64.70	62.05	204.75	22.84
2000	50.37	57.91	205.00	22.86
2500	38.18	48.26	205.50	22.92
2700	34.48	46.96	206.00	23.03







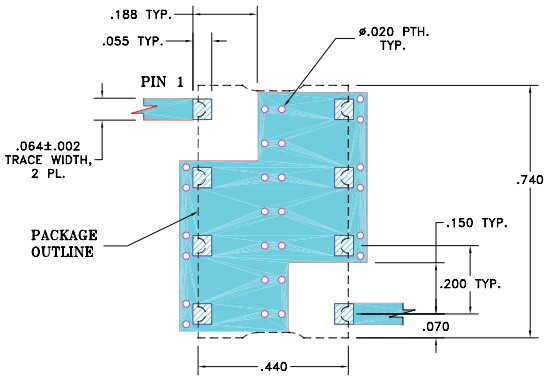


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Pad Connections

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

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



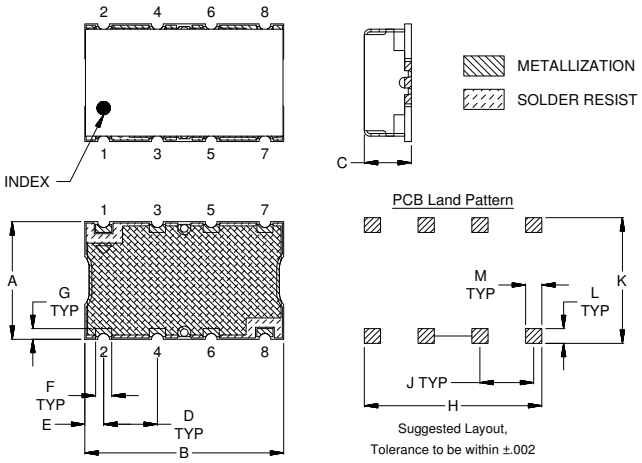
NOTE:

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
.440	**.740**	**.190**	**.200**	**.070**	**.060**
11.18	**18.80**	4.83	5.08	1.78	1.52

G	H	J	K	L	M	Wt.
.040	**.660**	**.200**	**.470**	**.055**	**.060**	grams
1.02	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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