

# Surface Mount Bandpass Filter

## SXBP-70+

50Ω 63 to 77 MHz

### Maximum Ratings

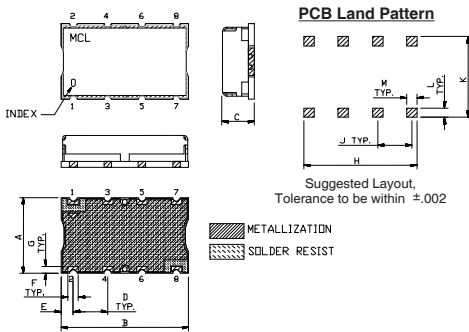
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max.

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

### Pin Connections

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

### Outline Drawing

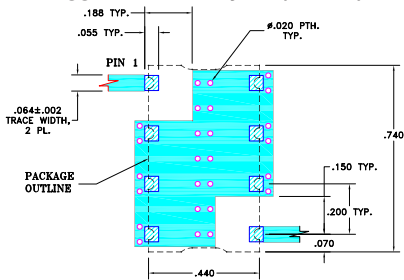


### Outline Dimensions (inch/mm)

A	B	C	D	E	F	
.44	.74	.27	.200	.07	.060	
11.18	18.80	6.86	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

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



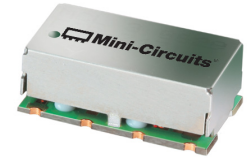
- NOTE:
- TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS: .025±.002". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### Features

- linear phase, up to ±3.5 deg typ @  $F_c \pm 7.5$  MHz
- good VSWR, 1.2:1 typ @ passband
- sharp insertion roll off
- shielded case
- aqueous washable

### Applications

- military hi-rel systems
- high rejection applications
- image rejection
- IF signal processing



Generic photo used for illustration purposes only  
CASE STYLE: HF1139

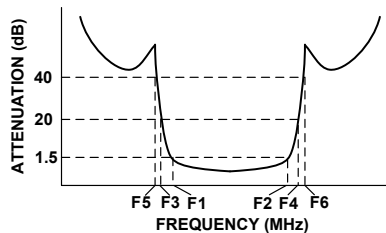
### +RoHS Compliant

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

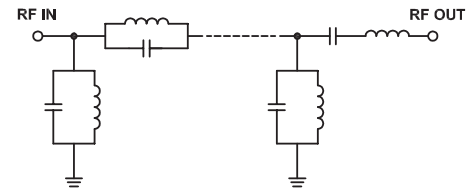
### Bandpass Filter Electrical Specifications ( $T_{AMB} = 25^\circ\text{C}$ )

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 1.5dB)	STOPBANDS (MHz)				MAXIMUM DEVIATION FROM LINEAR PHASE (deg.)	VSWR (:1)	
		Loss > 20dB	Loss > 40dB	Loss > 20dB	Loss > 40dB		Passband	Stopband
$F_c$	$F_1 - F_2$	$F_3$	$F_4$	$F_5$	$F_6$	$F_c \pm 7.5\text{MHz}$	Typ.	Max.
70	63 - 77	50	95	19	195 - 1000	±7	1.2	1.7

### Typical Frequency Response

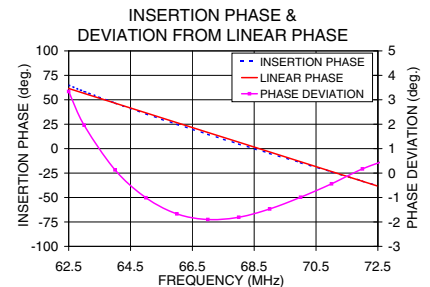
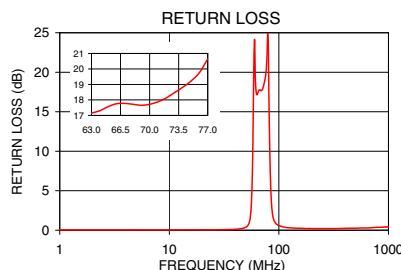


### Functional Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Deviation from Linear Phase (deg.)
	$\bar{x}$	$\sigma$			
0.5	87.62	2.80	0.04	62.5	3.34
19.0	45.25	0.29	0.06	63.0	1.96
50.0	29.54	0.83	0.38	64.0	0.13
54.0	18.44	0.24	1.12	65.0	-1.01
56.0	8.44	0.18	3.23	66.0	-1.67
57.0	5.06	0.14	6.08	67.0	-1.90
58.0	3.00	0.12	11.27	68.0	-1.81
60.0	1.55	0.09	24.15	69.0	-1.47
63.0	1.14	0.04	17.14	70.0	-0.99
70.0	0.95	0.03	17.72	71.0	-0.44
77.0	1.19	0.03	20.65	72.0	0.17
82.0	2.69	0.09	12.54	72.5	0.40
84.0	5.38	0.17	6.03	73.0	0.62
86.0	10.12	0.29	3.04	74.0	1.00
89.0	20.07	0.60	1.49	75.0	1.09
95.0	30.99	0.53	0.79	76.0	0.96
195.0	45.75	0.38	0.21	77.0	0.34
1000.0	57.28	0.68	0.44	77.5	-0.30



### Notes

- 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.
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