

Surface Mount Bandpass Filter

SXBP-70+

50Ω 63 to 77 MHz

Maximum Ratings

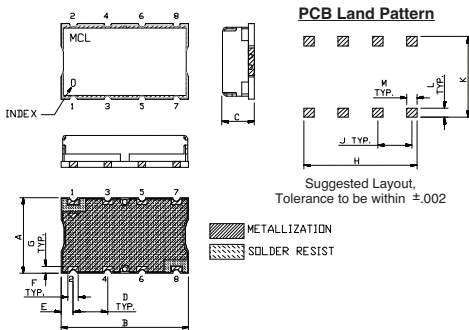
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W Max.

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

Pin Connections

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

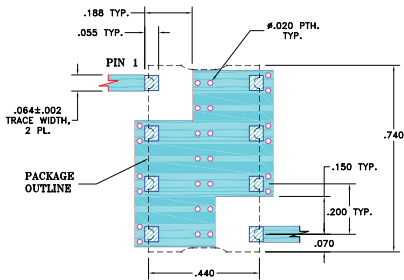
Outline Drawing



Outline Dimensions (inch/mm)

	A	B	C	D	E	F
	11.18	18.80	6.86	5.08	1.78	1.52
	G	H	J	K	L	M
	1.02	16.76	5.08	11.94	1.40	1.52
						wt. grams
						3.0

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

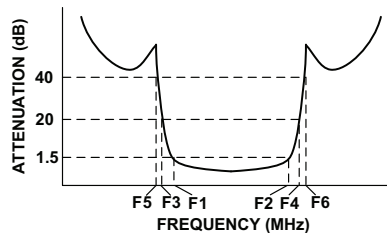
Applications

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

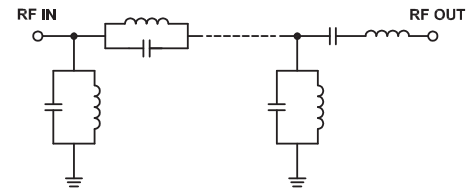
Bandpass Filter Electrical Specifications ($T_{AMB} = 25^\circ\text{C}$)

CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 1.5dB)	STOPBANDS (MHz)				MAXIMUM DEVIATION FROM LINEAR PHASE (deg.)	VSWR (:1)	
		Loss > 20dB		Loss > 40dB			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.	Typ.
70	63 - 77	50	95	19	195 - 1000	±7	1.2 1.7	20

Typical Frequency Response

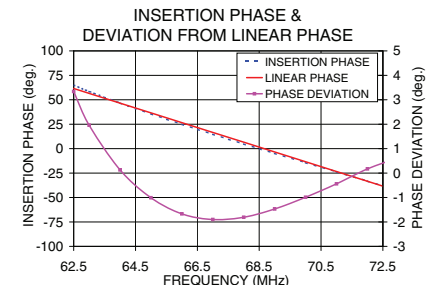
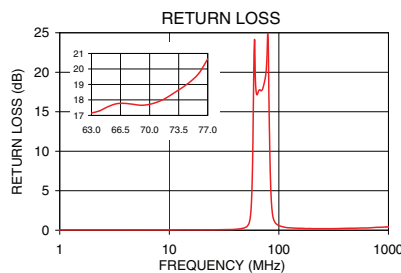
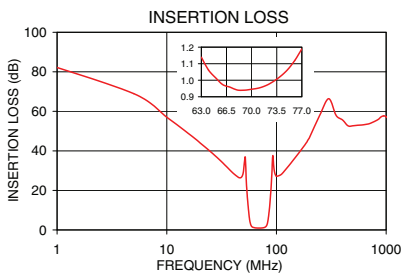


Functional Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Deviation from Linear Phase (deg.)
	\bar{x}	σ			
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



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