

# Bandpass Filter

## Features

- High power handling
- Small size
- Temperature stable
- Excellent rejection

## Applications

- Military radio
- Lab use

## HT-SYBP-820+



50Ω 770 to 870 MHz

### Electrical Specifications at 25°C

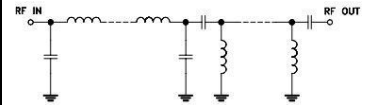
Parameter		F#	Frequency(MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	-	-	-	820	-	MHz
	Insertion Loss	F1-F2	770-870	-	1.8	2.5	dB
	VSWR	F1-F2	770-870	-	1.6	1.9	1
Stop Band, Lower	Insertion Loss	DC-F3	DC-450	20	30	-	dB
	VSWR	DC-F3	DC-450	-	15	-	:1
Stop Band, Upper	Insertion Loss	F4-F5	1420-2500	20	24	-	dB
	VSWR	F4-F5	1420-2500	-	20	-	:1

### Typical Performance Data

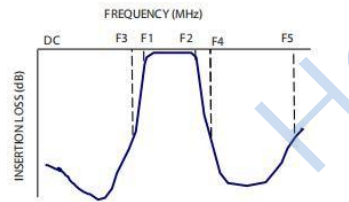
(TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +25°C)

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	75.30	10535.50
100	59.03	131.97
200	63.25	38.70
350	46.97	17.16
450	29.29	12.17
500	20.23	10.32
770	1.56	1.21
870	1.87	1.59
1000	5.96	5.96
1200	14.55	21.53
1420	24.19	26.98
1480	27.47	39.63
1680	45.49	46.53
2000	33.42	53.43
2500	25.64	49.80

### Functional Schematic



### Typical Frequency Response



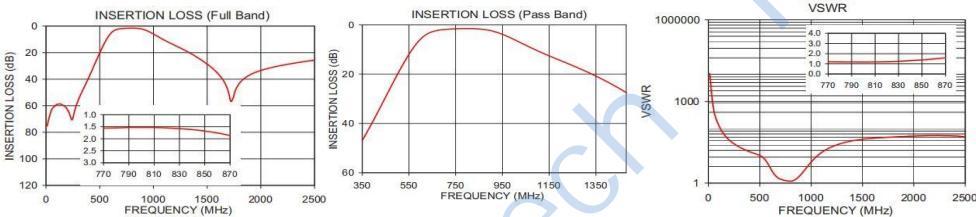
### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	7W max. at 25°C

\*Passband rating, derate linearly to 3W at 85°C ambient  
Permanent damage may occur if any of these limits are exceeded.

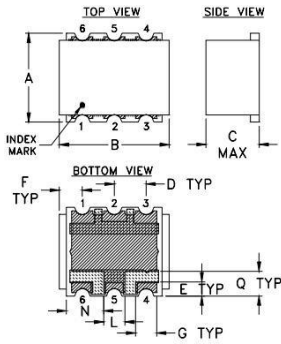
### Pin Connections

RF IN	4
RF OUT	6
GROUND	1,2,3,5

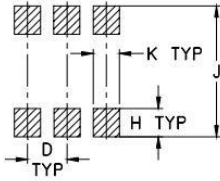


# Bandpass Filter

## Outline Drawing



## PC B L and Patter n

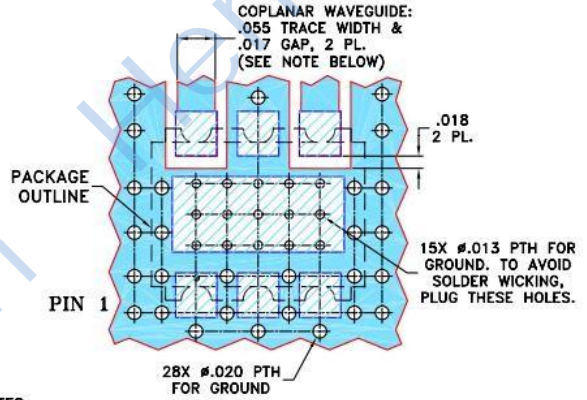


Suggested Layout  
Tolerance to be within  $\pm .002$

METALLIZATION  
 SOLDER RESIST

Outline Dimensions: Unit ( mm)					
A	6.35	B	7.87	C	3.81
D	2.29	E	1.02	F	1.65
G	1.52	H	1.65	J	7.62
K	1.52	L	1.52	N	2.67
Q	1.78	wt			0.50

Demo Board MCL P/N: TB-517+  
Suggested PCB Layout (PL-308)



### NOTES:

1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS R04350B WITH THICKNESS  $.030 \pm .002$ ; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH AND GAP 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