

# Bandpass Filter

## HT-SYBP-675+



50Ω 500 to 850 MHz

### Features

- High power handling
- Small size
- Temperature stable

### Applications

- Military radio
- Lab use
- Television broadcast

### Electrical Specifications at 25°C

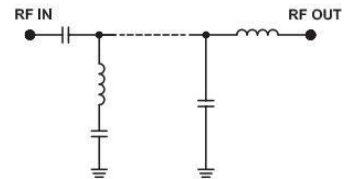
Parameter		F#	Frequency(MHz)	Min.	Typ.	Max.	Unit
Pass Band	Center Frequency	-	-	-	675	-	MHz
	Insertion Loss	F1-F2	500-850	-	1.8	2.8	dB
	VSWR	F1-F2	500-850	-	1.7	-	:1
Stop Band, Lower	Insertion Loss	DC-F3	DC-230	40	52	-	dB
		F3-F4	230-340	20	28	-	dB
		DC-F4	DC-340	-	16	-	:1
Stop Band, Upper	Insertion Loss	F5-F6	1275-1350	20	35	-	dB
		F6-F7	1350-4500	-	22	-	dB
		F5-F7	1275-4500	-	14	-	:1

### Typical Performance Data

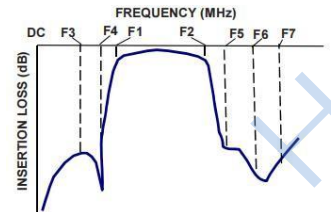
(TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +25°C)

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	82.87	327.07
100	75.08	258.89
230	52.50	58.98
340	29.70	19.33
360	20.76	14.03
430	3.11	1.82
500	1.65	1.38
675	1.15	1.28
850	1.35	1.27
1040	3.16	1.53
1165	20.33	10.76
1215	30.22	14.88
1275	35.67	17.20
1350	35.93	17.57
1400	36.24	16.63
2000	39.94	24.39
2700	29.98	90.27
3000	27.50	111.35
4000	22.71	17.93
4500	21.67	54.04

### Functional Schematic



### Typical Frequency Response



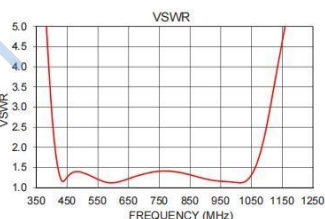
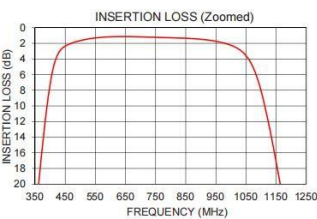
### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	4W max. at 25°C

\*Passband rating, derate linearly to 1.5 W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

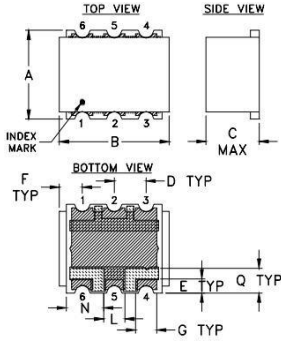
### Pin Connections

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

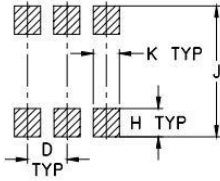


# Bandpass Filter



## Outline Drawing



## PC B L and Patter n



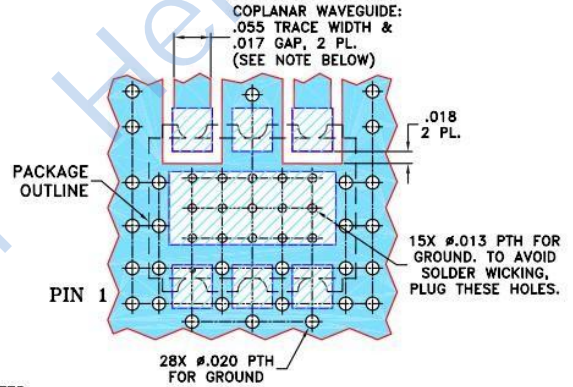
Suggested Layout  
Tolerance to be within  $\pm .002$

 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-1122+  
Suggested PCB Layout (PL-308)


## SUGGESTED MOUNTING CONFIGURATION FOR TT1423 CASE STYLE "06FL04" PIN CONNECTION



### 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