

# Bandpass Filter

## Features

- High rejection
- Good VSWR, 1.2:1 typ @ passband
- Shielded case
- Aqueous washable

## Applications

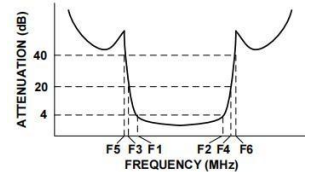
- Military
- Lab
- Harmonic rejection
- Transmitters/receivers

## HT-BPF-B48+

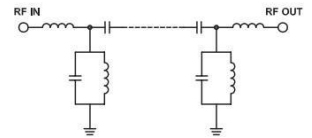


50Ω 47 to 49 MHz

### Typical Frequency Response



### Functional Schematic



### Pin Connections

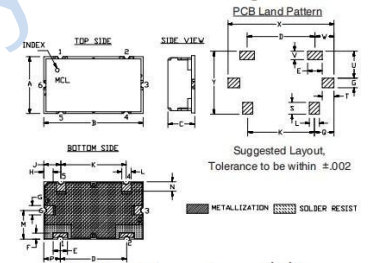
INPUT	1
OUTPUT	2
GROUND	3, 4, 5, 6

### Maximum Ratings

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	0.15W max.

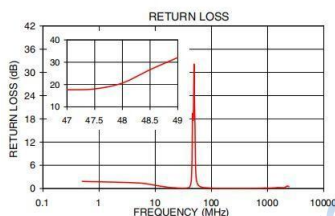
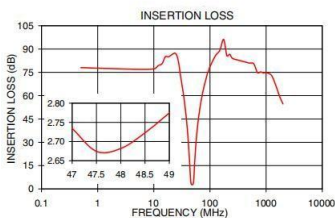
Permanent damage may occur if any of these limits are exceeded.

### Outline Drawing

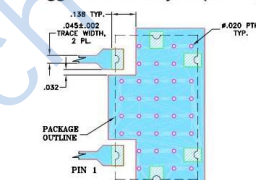


CENTER FREQ. (MHz)	PASSBAND (MHz) (Loss < 4dB)	STOPBAND (MHz)				VSWR(:1)		
		(Loss > 20dB)		(Loss > 40dB)		Passband Typ.	Passband Max.	Stopband Typ.
Fc	F1 - F2	F3	F4	F5	F6			
48	47-49	41	56	37	64-2400	1.2	1.5	20

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	α	σ			
0.5	78.03	4.46	1.85	46.00	167.71
37.0	49.10	0.39	0.12	46.25	161.42
41.0	30.99	0.52	0.47	46.50	154.52
44.0	12.42	0.63	2.64	47.00	142.38
45.0	6.45	0.44	6.93	47.25	137.66
46.0	3.43	0.15	19.20	47.50	134.06
47.0	2.73	0.03	17.62	47.75	131.25
47.5	2.67	0.02	18.05	48.00	129.14
48.0	2.68	0.02	20.70	48.25	127.37
48.5	2.72	0.03	26.66	48.50	126.62
49.0	2.77	0.03	32.10	48.75	126.57
51.0	4.54	0.37	15.56	49.00	127.40
52.0	9.10	0.73	6.47	49.25	129.07
53.0	14.81	0.76	3.42	49.50	132.10
56.0	28.44	0.55	1.32	49.75	136.34
64.0	48.44	0.36	0.45	50.00	142.10
500.0	80.99	0.23	0.03	50.25	148.26
2400.0	47.70	0.53	0.47	50.50	154.45



### Demo Board MCL P/N: TB-400+ Suggested PCB Layout (PL-247)



- NOTES:
1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS "JUST FLOOR" COPPER 1/2 OF EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  2. BOTTOM SIDE OF THE PCB IS CONTIGUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMDs (SOLDER MASK OVER BARE COPPER)
  - DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	S	T	U	V	WT	Y	
A	11.99																					
B		20.98																				
C			5.59																			
D				14																		
E					3																	
F						1.19																
G							1.98															
H								1.92														
J									3.61													
K										5.99												
L											5.99											
M												5.99										
N													4.11									
P														4.11								
Q															4.11							
R																4.11						
S																	5.51					
T																		5.51				
U																			5.51			
V																				22		
WT																					13	
Y																						13