

## Features

- High rejection, 31 dB typical
- Sharp insertion loss roll-off
- Miniature shielded case
- Aqueous washable

## Applications

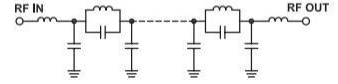
- Defence communications
- Transmitters / receivers
- Harmonic rejection

## HT-LPF-B500+

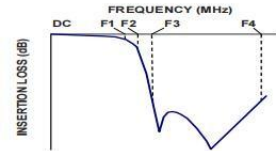


50Ω DC to 500 MHz

### Functional Schematic



### Typical Frequency Response



Parameter		F#	Frequency(MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-500	-	1.2	2	dB
	Freq. Cut-Off	F2	515	-	3	-	dB
	VSWR	DC-F1	DC-500	-	1.3	1.7	1
Stop Band	Rejection Loss VSWR	F3-F4	585-4500	20	31	-	dB
		F3-F4	585-4500	-	24	-	1

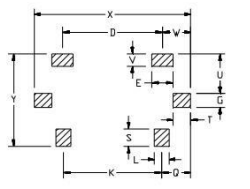
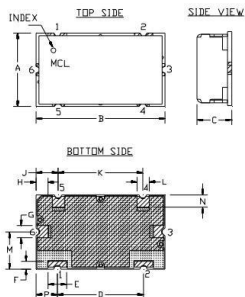
Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)	Frequency (MHz)	Group Delay (nsec)
1	0.03	1.01	1	2.52
5	0.04	1.01	5	2.19
50	0.11	1.02	10	2.10
150	0.21	1.08	50	2.04
250	0.32	1.15	150	2.13
400	0.54	1.17	200	2.22
500	1.22	1.31	250	2.35
515	2.40	2.21	275	2.46
530	7.00	6.49	300	2.56
550	16.46	16.72	325	2.72
570	25.75	23.18	350	2.88
585	32.17	26.33	375	3.09
750	47.41	45.72	400	3.37
1000	53.88	57.91	410	3.52
1500	72.66	57.91	430	3.91
2000	63.00	59.91	450	4.42
2500	53.46	62.05	470	5.15
3000	47.81	52.65	480	5.68
4000	41.29	36.97	490	6.47
4500	34.78	32.18	500	7.75

Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input*	1.25 W max.
Permanent damage may occur if any of these limits are exceeded.	

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

## Outline Drawing

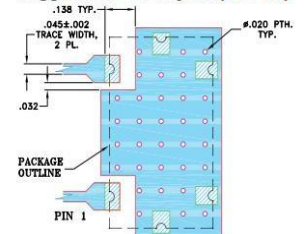
## PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±0.02

A	11.99	B	20.98	C	5.59
D	14.00	E	3.00	F	1.19
G	1.98	H	1.93	J	3.61
K	13.79	L	1.98	M	5.99
N	2.01	P	3.51	Q	4.11
S	2.49	T	2.44	U	5.51
V	1.70	W	3.99	X	22.00
WT	6.0		Y	13.00	

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



- NOTES:
- 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 SOLDERMASK

# Low Pass Filter

