

# Surface Mount Low Pass Filter

## SCLF-1000+

50Ω DC to 1000 MHz

### Maximum Ratings

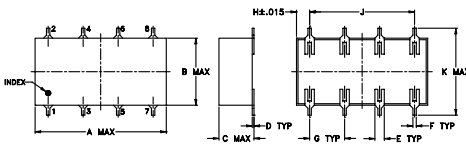
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.

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

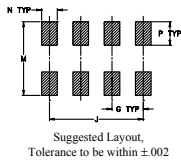
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern

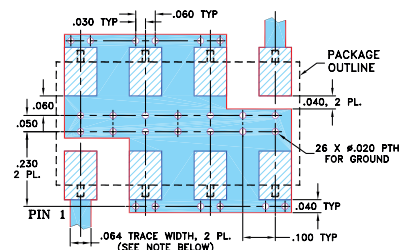


### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
0.75	0.38	0.28	0.01	0.05	0.02	0.2
19.05	9.65	7.11	0.25	1.27	0.51	5.08

H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

### Demo Board MCL P/N: TB-187+ Suggested PCB Layout (PL-049)



- NOTES:**
- TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .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

- wide selection of cut-off frequencies
- excellent rejection
- custom models available

### Applications

- defense communications
- receivers/transmitters
- harmonic rejection of VCOs



Generic photo used for illustration purposes only  
CASE STYLE: YY161

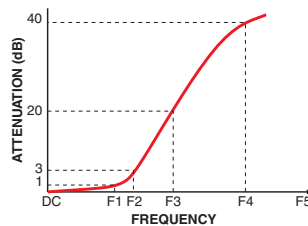
### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

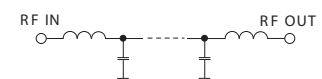
### Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-1000	—	—	1.0	dB
	Freq. Cut-Off	F2	1200	—	3.0	—	dB
	VSWR	DC-F1	DC-1000	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	1620-2100	20	—	—	dB
	VSWR	F4-F5	2100-2500	40	—	—	dB
		F3-F5	1620-2500	—	18	—	:1

### Typical Frequency Response

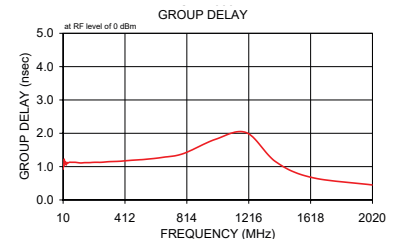
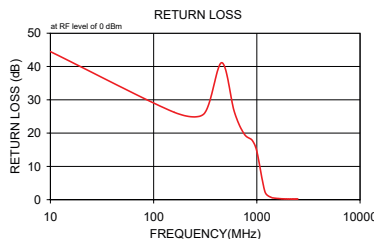
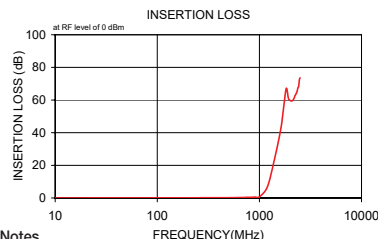


### Electrical Schematic



### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	$\sigma$			
10.00	0.00	0.00	44.50	10.00	0.90
158.80	0.10	0.00	26.20	12.00	1.10
307.50	0.20	0.00	25.80	14.00	1.00
456.30	0.20	0.00	41.20	17.20	1.20
605.00	0.30	0.00	26.40	20.70	1.10
753.80	0.40	0.00	19.80	24.70	1.20
902.50	0.50	0.00	17.80	29.60	1.10
1000.00	0.80	0.10	14.60	35.50	1.10
1200.00	7.00	1.50	2.30	42.50	1.10
1400.00	23.40	1.76	0.60	50.90	1.10
1444.00	27.10	1.78	0.50	61.00	1.10
1488.00	30.80	1.80	0.50	73.10	1.10
1532.00	34.50	1.90	0.40	87.60	1.10
1576.00	38.40	2.00	0.40	104.90	1.10
1620.00	42.40	2.30	0.40	125.70	1.10
1664.00	46.80	2.60	0.30	150.50	1.10
1751.20	58.50	4.40	0.30	180.30	1.10
1838.40	67.20	4.00	0.20	216.00	1.10
1925.60	60.90	1.90	0.20	258.70	1.10
2012.80	59.60	1.40	0.20	313.40	1.20
2106.00	59.60	1.30	0.20	375.50	1.20
2188.00	61.20	1.10	0.20	454.90	1.20
2227.00	62.60	1.40	0.20	544.90	1.20
2266.00	63.30	1.60	0.20	660.10	1.30
2305.00	64.30	1.50	0.20	790.70	1.40
2344.00	65.40	1.90	0.20	1000.00	1.80
2383.00	67.40	2.50	0.20	1200.00	2.00
2422.00	68.40	1.70	0.20	1390.20	1.20
2461.00	72.40	4.90	0.20	1620.00	0.70
2500.00	73.60	3.40	0.20	2017.50	0.50



### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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