

# Surface Mount Low Pass Filter

## SCLF-8+

50Ω DC to 8 MHz

### Maximum Ratings

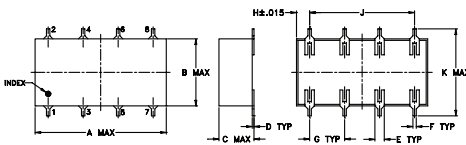
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.

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

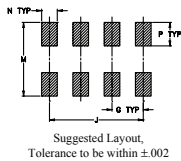
### Pin Connections

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

### Outline Drawing



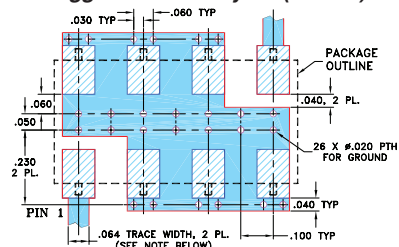
### PCB Land Pattern



### Outline Dimensions (inch)

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

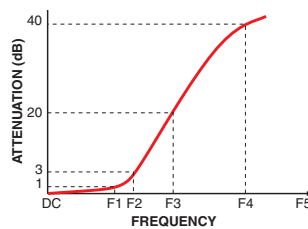
### +RoHS Compliant

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-8	—	—	1.0	dB
	Freq. Cut-Off	F2	9.2	—	3.0	—	dB
	VSWR	DC-F1	DC-8	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	12.5-16.5	20	—	—	dB
		F4-F5	16.5-200	40	—	—	dB
	VSWR	F3-F5	12.5-200	—	18	—	:1

### Typical Frequency Response

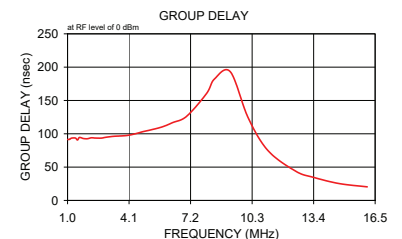
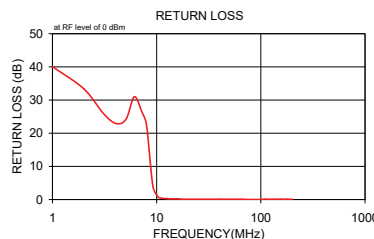
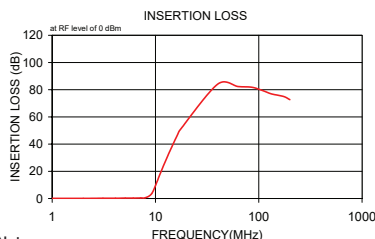


### Electrical Schematic



### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	$\sigma$		
1.00	0.10	0.00	1.00	91.50
2.00	0.10	0.00	1.10	91.70
3.10	0.20	0.00	1.20	93.50
4.10	0.20	0.00	1.40	93.60
5.10	0.30	0.00	1.50	90.70
6.10	0.30	0.00	1.60	94.50
7.20	0.40	0.00	1.80	92.90
8.00	0.60	0.10	2.00	92.60
9.20	3.60	0.70	2.20	94.00
10.40	12.70	1.10	2.40	93.60
10.80	15.90	1.10	2.70	93.50
11.20	18.90	1.10	2.90	94.60
11.70	22.40	1.10	3.30	96.10
12.10	25.00	1.10	3.60	96.70
12.50	27.50	1.00	4.00	97.50
12.90	29.90	1.00	4.40	99.90
13.60	33.90	1.00	4.80	103.20
14.30	37.50	1.00	5.20	105.90
15.10	41.40	1.00	5.80	110.60
15.80	44.50	1.00	6.30	116.80
16.50	47.50	1.00	7.00	126.30
17.20	50.20	0.90	8.00	160.20
40.10	84.10	6.10	8.40	182.20
62.90	82.30	3.00	9.20	193.10
85.80	81.80	3.90	10.10	124.10
108.60	79.40	2.00	11.10	74.80
131.50	77.00	1.90	12.50	43.80
154.30	75.90	2.00	13.40	34.60
177.20	74.80	1.50	14.70	25.30
200.00	72.70	1.10	16.10	20.40



### 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.
- The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)



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