

# Surface Mount Low Pass Filter

## SCLF-25+

50Ω DC to 25 MHz

### Maximum Ratings

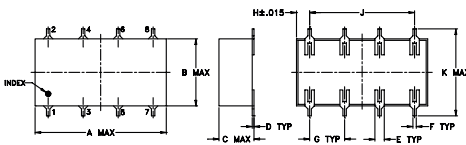
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.

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

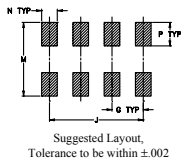
### Pin Connections

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

### Outline Drawing



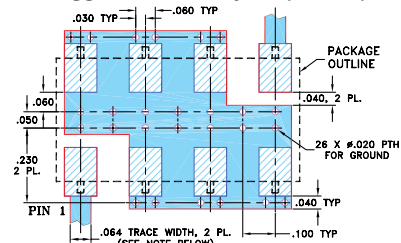
### PCB Land Pattern



### 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

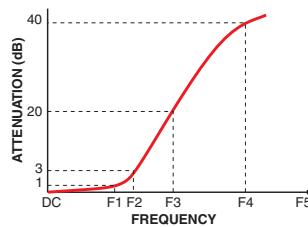
### +RoHS Compliant

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

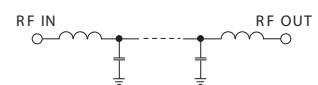
### Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-25	—	—	1.0	dB
	Freq. Cut-Off	F2	28	—	3.0	—	dB
	VSWR	DC-F1	DC-25	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	36-47	20	—	—	dB
		F4-F5	47-200	40	—	—	dB
	VSWR	F3-F5	36-200	—	18	—	:1

### Typical Frequency Response

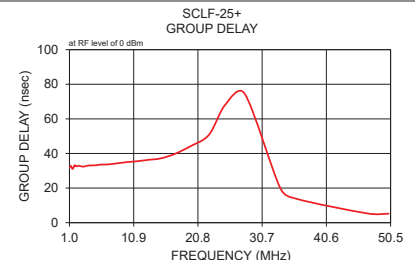
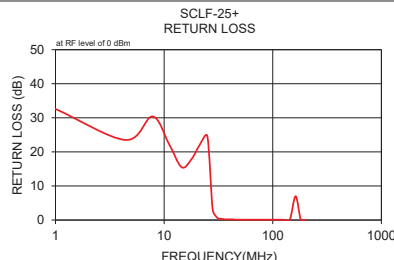
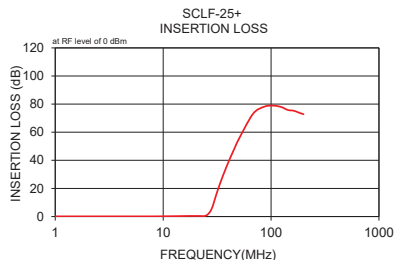


### Electrical Schematic



### 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	32.60	32.00
4.40	0.10	0.00	23.50	32.90
7.80	0.10	0.00	30.40	32.10
11.10	0.20	0.00	22.30	31.10
14.50	0.30	0.10	15.50	33.20
17.90	0.40	0.10	17.90	32.60
21.30	0.40	0.00	22.10	32.80
25.00	0.70	0.10	24.60	32.80
28.00	5.10	0.50	3.00	32.40
31.00	15.40	1.00	0.60	32.60
32.00	18.60	1.00	0.40	33.00
33.00	21.60	1.00	0.40	33.10
34.00	24.40	1.00	0.30	33.20
35.00	27.00	1.00	0.30	33.60
36.00	29.50	1.00	0.20	33.60
37.00	31.80	1.00	0.20	34.00
39.00	36.20	1.00	0.20	34.50
41.00	40.20	0.90	0.20	35.10
43.00	43.80	0.90	0.20	35.50
45.00	47.20	0.90	0.10	36.30
47.00	50.40	0.80	0.10	37.10
49.00	53.50	0.90	0.10	39.70
67.90	73.00	1.10	0.10	44.10
86.80	78.20	2.50	0.10	50.80
105.60	78.90	2.40	0.10	68.10
124.50	77.90	2.40	0.10	74.60
143.40	75.80	0.90	0.10	20.00
162.30	75.30	1.00	7.00	13.80
181.10	73.90	0.60	0.10	5.30
200.00	72.80	0.70	0.10	5.20



### 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)

