

# Surface Mount Low Pass Filter

## SCLF-44+

50Ω DC to 44 MHz

### Maximum Ratings

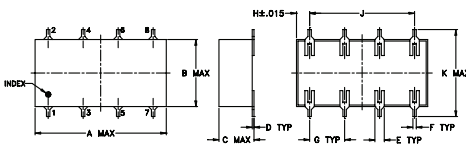
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W max.

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

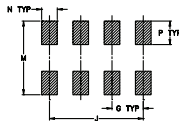
### Pin Connections

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

### Outline Drawing



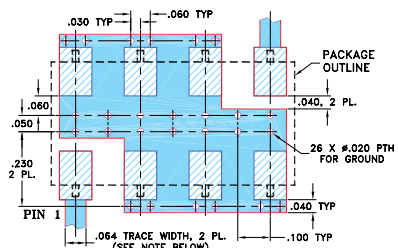
### PCB Land Pattern



### 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: 1. 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.  
2. 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

### Notes

- A. 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.  
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.  
C. 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)

### 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

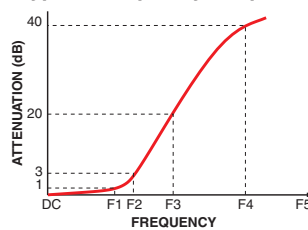
### +RoHS Compliant

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

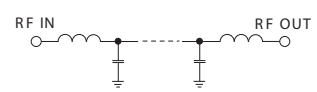
### Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-44	—	—	1.0	dB
	Freq. Cut-Off	F2	48.5	—	3.0	—	dB
	VSWR	DC-F1	DC-44	—	1.3	—	:1
Stop Band	Rejection Loss	F3-F4	59-65.5	20	—	—	dB
		F4-F5	65.5-420	40	—	—	dB
	VSWR	F3-F5	59-420	—	18	—	:1

### Typical Frequency Response



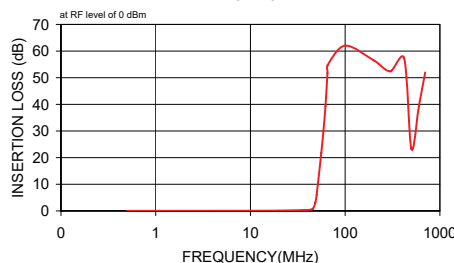
### Electrical Schematic



### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)
	$\bar{x}$	$\sigma$	
0.50	0.03	0.00	49.30
10.00	0.07	0.01	26.00
20.00	0.12	0.00	28.39
40.00	0.36	0.02	22.17
44.00	0.52	0.02	26.21
46.00	0.92	0.12	13.84
48.50	3.16	0.45	4.71
50.00	6.03	0.64	2.29
56.00	21.84	0.84	0.35
59.00	30.18	0.95	0.24
62.00	39.28	1.26	0.19
65.00	51.71	2.71	0.17
65.50	54.80	3.59	0.16
100.00	62.05	3.71	0.13
200.00	56.52	3.69	0.18
300.00	52.40	2.98	0.21
420.00	57.26	1.51	0.26
500.00	23.28	1.04	0.72
600.00	39.26	1.89	0.29
700.00	51.96	4.10	0.36
800.00	8.66	0.78	7.16

### INSERTION LOSS



### RETURN LOSS

