

# Surface Mount Low Pass Filter

## SCLF-95+

50Ω DC to 95 MHz

### Maximum Ratings

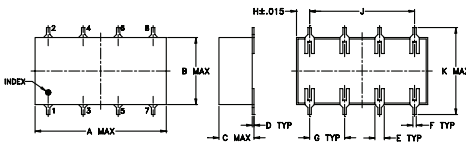
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W max.

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

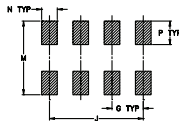
### Pin Connections

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

### Outline Drawing



### PCB Land Pattern



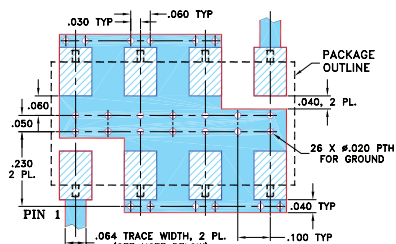
### Outline Dimensions (inch)

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

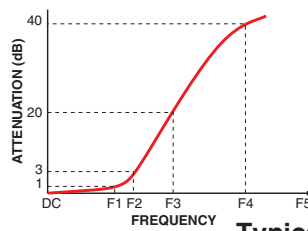
### Applications

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

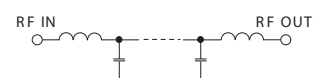
### Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-95	—	—	1.0	dB
	Freq. Cut-Off	F2	108	—	3.0	—	dB
	VSWR	DC-F1	DC-95	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	146-189	20	—	—	dB
		F4-F5	189-400	40	—	—	dB
	VSWR	F3-F5	146-400	—	18	—	:1

### Typical Frequency Response



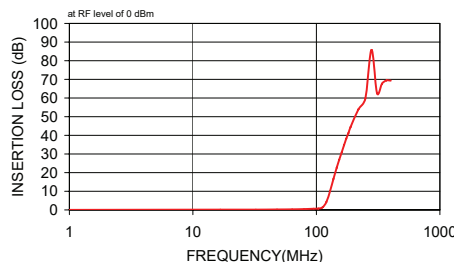
### Electrical Schematic



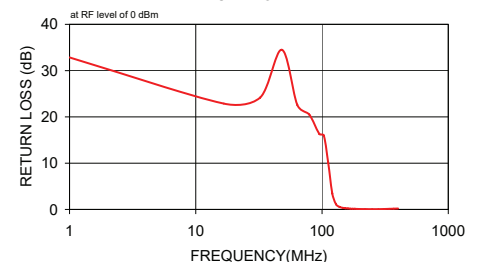
### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)
1.00	0.02	32.85
16.67	0.15	22.87
32.33	0.16	24.17
48.00	0.24	34.50
63.67	0.30	22.61
79.33	0.43	20.49
95.00	0.63	16.33
103.50	0.73	15.93
112.00	1.35	10.08
120.50	4.24	3.43
129.00	10.08	1.11
137.50	16.62	0.55
146.00	22.59	0.35
153.17	26.97	0.25
160.33	30.88	0.23
167.50	34.71	0.17
174.67	38.25	0.14
181.83	41.21	0.15
189.00	44.42	0.10
219.14	54.00	0.08
249.29	59.74	0.06
279.43	85.82	0.05
309.57	62.58	0.09
339.71	67.70	0.13
369.86	69.44	0.16
400.00	69.32	0.19

### SCLF-95 INSERTION LOSS



### SCLF-95 RETURN LOSS



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