

Surface Mount Low Pass Filter

SCLF-30+

50Ω DC to 30 MHz

Maximum Ratings

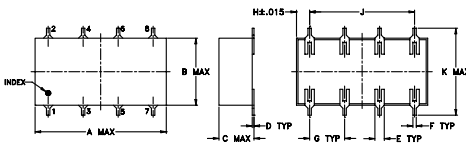
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.

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

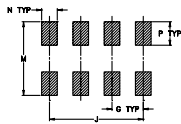
Pin Connections

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

Outline Drawing



PCB Land Pattern

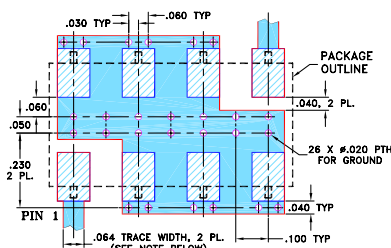


Suggested Layout,
Tolerance to be within ±.002

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

Features

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

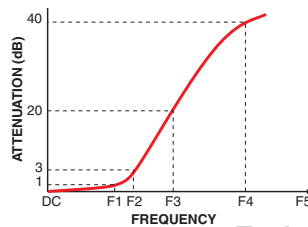
Applications

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

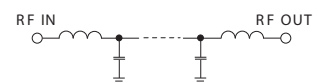
Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-30	—	—	1.0	dB
	Freq. Cut-Off	F2	35	—	3.0	—	dB
	VSWR	DC-F1	DC-30	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	47-61	20	—	—	dB
		F4-F5	61-200	40	—	—	dB
	VSWR	F3-F5	47-200	—	18	—	:1

Typical Frequency Response

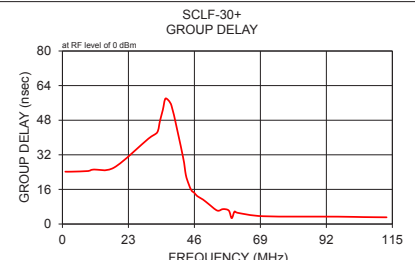
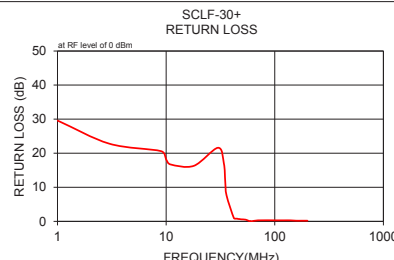
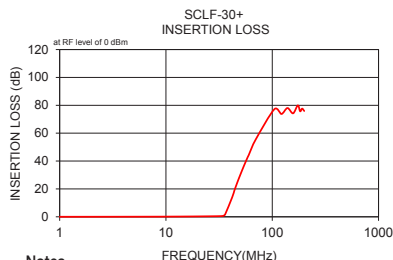


Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)	Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	\bar{x}	σ		
1.00	0.04	0.10	1.00	24.20
3.00	0.07	0.10	3.00	24.20
9.00	0.13	0.10	9.00	24.50
10.00	0.15	0.10	10.00	25.00
11.00	0.17	0.10	11.00	25.20
18.00	0.27	0.10	18.00	26.10
30.00	0.45	0.10	30.00	39.50
34.00	0.59	0.10	33.00	42.30
35.00	0.90	0.20	34.00	47.70
36.00	1.64	0.50	35.00	52.80
42.00	14.01	1.80	36.00	58.10
44.00	18.75	1.70	38.00	54.80
45.00	20.87	1.70	42.00	31.20
46.00	22.85	1.60	43.00	22.80
47.00	24.78	1.60	44.00	18.50
49.00	28.37	1.50	45.00	15.50
54.00	36.33	1.40	46.00	14.40
58.00	41.83	1.10	47.00	12.90
59.00	43.10	1.10	49.00	11.30
60.00	44.18	1.10	51.00	9.20
61.00	45.51	0.90	54.00	6.20
70.00	55.55	1.50	56.00	6.90
105.00	77.30	9.90	58.00	6.20
122.00	73.76	4.40	59.00	2.70
139.00	78.03	9.10	60.00	5.80
157.00	74.23	4.80	61.00	5.20
174.00	79.94	4.80	70.00	3.60
183.00	75.66	3.00	96.00	3.40
191.00	77.64	7.00	105.00	3.20
200.00	75.91	6.00	113.00	3.10



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



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REV. F
M151107
SCLF-30+
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CASE STYLE: YY161

+RoHS Compliant

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