

Surface Mount Low Pass Filter

SCLF-27+

50Ω DC to 27 MHz

Maximum Ratings

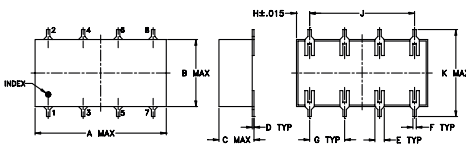
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W max.

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

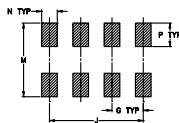
Pin Connections

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

Outline Drawing



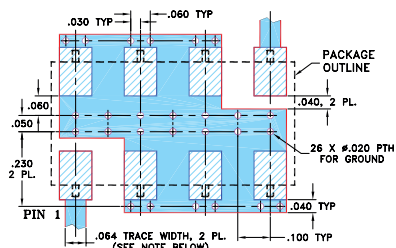
PCB Land Pattern



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-Circuits' applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits' 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-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

Features

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

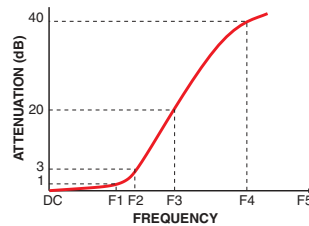
Applications

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

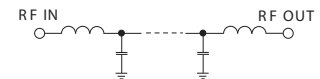
Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-27	—	—	1.0	dB
	Freq. Cut-Off	F2	30	—	3.0	—	dB
	VSWR	DC-F1	DC-27	—	1.3	—	:1
Stop Band	Rejection Loss	F3-F4	36-41	20	—	—	dB
		F4-F5	41-480	40	—	—	dB
	VSWR	F3-F5	36-480	—	18	—	:1

Typical Frequency Response



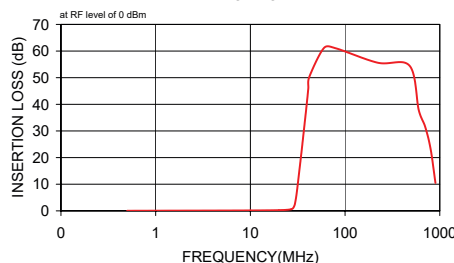
Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)
	\bar{x}	σ	
0.50	0.03	0.00	46.41
10.00	0.15	0.00	39.95
20.00	0.27	0.01	24.98
27.00	0.62	0.02	30.13
29.00	1.75	0.09	8.55
30.00	3.87	0.16	3.96
31.00	7.25	0.19	1.80
34.20	20.29	0.19	0.34
36.00	27.33	0.19	0.22
39.50	40.62	0.28	0.14
40.90	46.01	0.35	0.13
42.00	50.35	0.42	0.12
60.00	61.20	0.53	0.09
80.00	61.03	0.47	0.09
220.00	55.63	0.51	0.17
480.00	54.46	0.77	0.33
600.00	37.81	0.43	0.28
700.00	31.66	0.36	0.27
800.00	23.28	0.43	0.34
900.00	10.48	0.79	1.63

INSERTION LOSS



RETURN LOSS

