

# Surface Mount Low Pass Filter

## SCLF-36+

50Ω DC to 36 MHz

### Maximum Ratings

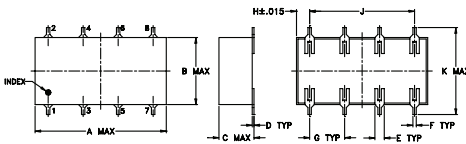
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
RF Power Input	0.5W max.

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

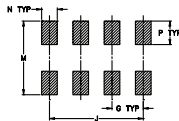
### Pin Connections

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

### Outline Drawing



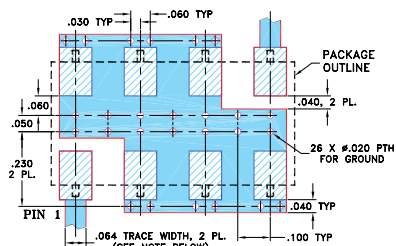
### PCB Land Pattern



### 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-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](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

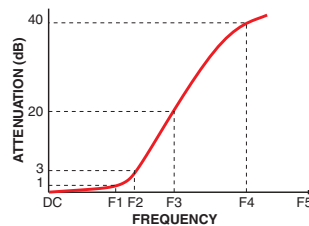
### +RoHS Compliant

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

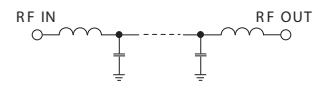
### Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-36	—	—	1.0	dB
	Freq. Cut-Off	F2	40	—	3.0	—	dB
	VSWR	DC-F1	DC-36	—	1.3	—	:1
Stop Band	Rejection Loss	F3-F4	50-57	20	—	—	dB
		F4-F5	57-390	40	—	—	dB
	VSWR	F3-F5	50-390	—	18	—	:1

### Typical Frequency Response



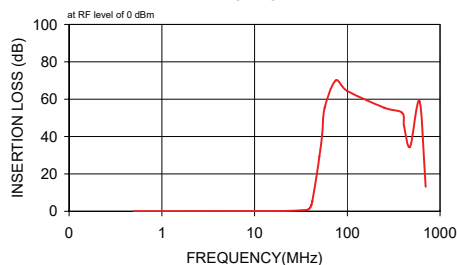
### Electrical Schematic



### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)
	$\bar{x}$	$\sigma$	
0.5	0.04	0.01	44.37
10.0	0.12	0.01	23.43
21.0	0.19	0.00	37.01
36.0	0.69	0.02	30.06
38.0	1.01	0.09	20.37
40.0	2.15	0.43	9.08
41.0	3.46	0.75	5.67
42.0	5.43	1.10	3.42
47.0	20.04	1.73	0.51
50.0	29.32	1.89	0.31
53.5	40.73	2.28	0.22
57.0	55.47	3.70	0.17
75.0	70.03	1.62	0.10
100.0	64.38	1.98	0.13
250.0	55.42	0.41	0.19
390.0	52.74	0.39	0.23
410.0	45.55	0.30	0.26
475.0	34.55	0.53	0.32
600.0	58.90	4.73	0.40
700.0	13.15	4.92	5.40

### INSERTION LOSS



### RETURN LOSS

