

# Surface Mount Low Pass Filter

## SCLF-4.7+ SCLF-4.7

50Ω DC to 4.7 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

### Features

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

### Applications

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



CASE STYLE: YY161  
PRICE: \$8.95 ea. QTY (1-9)

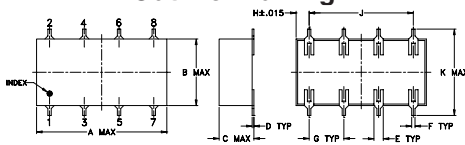
**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

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

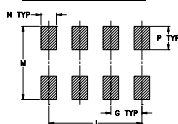
### Low Pass Filter Electrical Specifications

PASSBAND (MHz)	fco, (MHz) Nom.	STOPBAND (MHz)		VSWR (:1)	
		(loss > 20 dB)	(loss > 40 dB)	Pass band Typ.	Stop band Typ.
DC-4.7 (loss < 1 dB)	5.6 (loss 3 dB)	6.6-7.4	7.4-600	1.25	18

### Outline Drawing



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

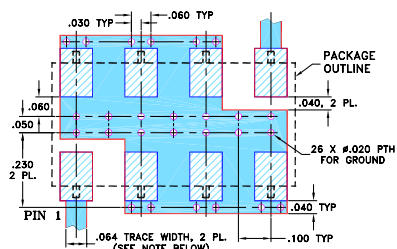
### Outline Dimensions (inch/mm)

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

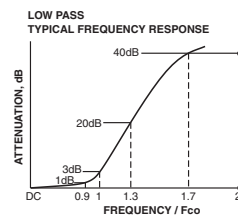
H	J	K	M	N	P	wt
0.075	0.6	0.45	0.47	0.1	0.15	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.60

### Demo Board MCL P/N: TB-187+ Suggested PCB Layout (PL-049)

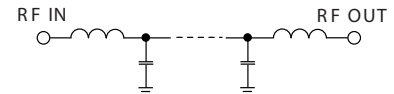


- NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.  
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.  
■ DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)  
■ DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### typical frequency response



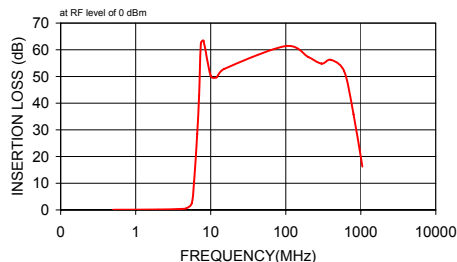
### Electrical Schematic



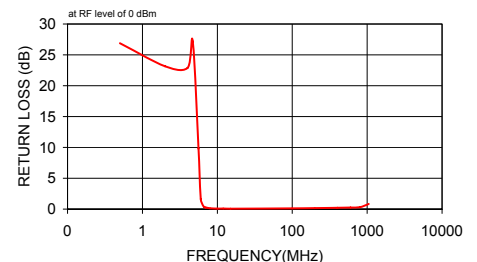
### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)
	$\bar{x}$	$\sigma$	
0.50	0.07	0.00	26.88
2.00	0.16	0.01	23.15
4.00	0.38	0.01	22.89
4.70	0.57	0.02	27.17
5.60	2.54	0.37	9.80
6.00	10.57	1.11	1.63
6.60	28.45	1.46	0.38
7.00	42.69	2.38	0.26
7.40	62.47	2.58	0.20
8.00	63.37	3.10	0.14
10.00	50.20	0.51	0.08
12.00	49.67	0.33	0.10
15.00	52.78	0.29	0.06
100.00	61.38	0.45	0.12
200.00	57.29	0.68	0.17
300.00	54.82	0.58	0.19
400.00	56.25	0.90	0.21
600.00	52.00	0.91	0.25
800.00	35.84	0.62	0.31
1050.00	16.25	0.74	0.84

### SCLF-4.7 INSERTION LOSS



### SCLF-4.7 RETURN LOSS



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Notes: 1. Performance and quality attributes and conditions not expressly stated in this specification sheet are intended to be excluded and do not form a part of this specification sheet. 2. Electrical specifications and performance data contained herein are based on Mini-Circuit's applicable established test performance criteria and measurement instructions. 3. The parts covered by this specification sheet 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).

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