

# Low Pass Filter

## SALF-78

50Ω DC to 78 MHz



CASE STYLE: YY101

### 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

### Features

- 7-section elliptic function
- excellent rejection

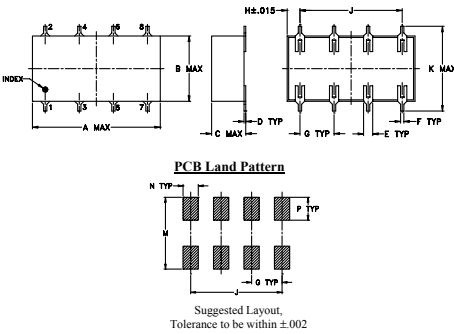
### Applications

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

### Low Pass Filter Electrical Specifications

PASSBAND (MHz)	f <sub>co</sub> , (MHz) Nom.	STOPBAND (MHz)		VSWR (:1)	
	(loss < 3 dB) Typ.	(loss > 20 dB) Min.	(loss > 40 dB) Min.	Pass band typ.	Stop band typ.
DC-78	93	120-136	136-550	1.3	18

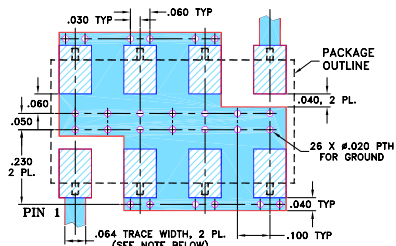
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G
.75	.38	.20	.010	.050	.020	.200
19.05	9.65	5.08	0.25	1.27	0.51	5.08
H	J	K	M	N	P	wt
.075	.600	.450	.470	.100	.150	grams
1.91	15.24	11.43	11.94	2.54	3.81	1.6

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

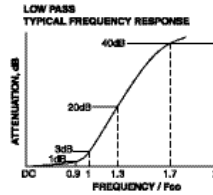


- NOTES:
1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
  2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
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### Notes

- 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)

### typical frequency response



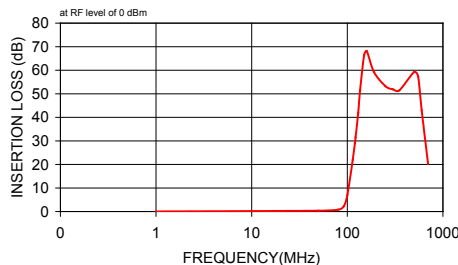
### Electrical Schematic



### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)
	$\bar{x}$	$\sigma$	
1.00	0.04	0.01	42.90
50.00	0.33	0.01	24.26
80.00	0.77	0.03	17.79
92.00	2.28	0.12	8.01
100.00	6.90	0.30	2.87
114.00	21.99	0.42	0.67
120.00	29.06	0.48	0.47
122.00	31.44	0.51	0.42
130.00	41.87	0.78	0.31
136.00	51.54	1.40	0.25
150.00	66.41	3.36	0.18
160.00	68.12	2.07	0.14
190.00	59.27	0.50	0.12
250.00	53.27	0.32	0.12
300.00	51.89	0.33	0.14
350.00	51.47	0.35	0.15
500.00	59.23	1.06	0.18
550.00	57.42	1.70	0.19
600.00	42.90	0.84	0.20
700.00	20.29	1.10	0.74

SALF-78  
INSERTION LOSS



SALF-78  
RETURN LOSS

