

# Surface Mount Low Pass Filter

## SCLF-225+

50Ω DC to 225 MHz

### Maximum Ratings

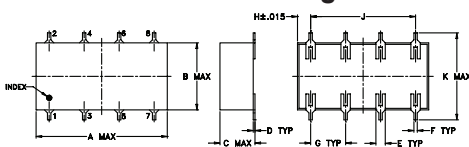
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.

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

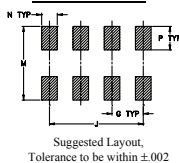
### Pin Connections

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

### Outline Drawing



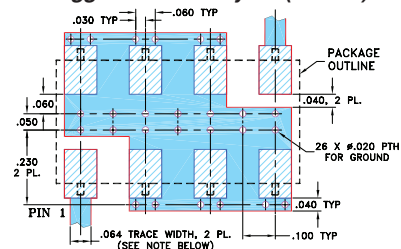
### PCB Land Pattern



### 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:**
- 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.
  - BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
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### 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

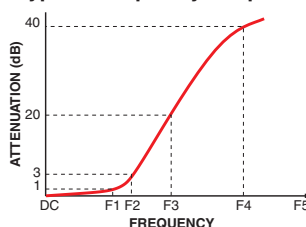
### +RoHS Compliant

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

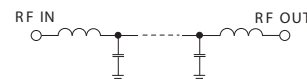
### Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-225	—	—	1.0	dB
	Freq. Cut-Off	F2	250	—	3.0	—	dB
	VSWR	DC-F1	DC-225	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	340-440	20	—	—	dB
		F4-F5	440-1200	40	—	—	dB
	VSWR	F3-F5	340-1200	—	18	—	:1

### Typical Frequency Response

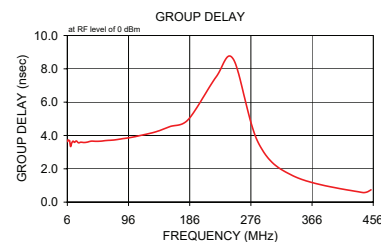
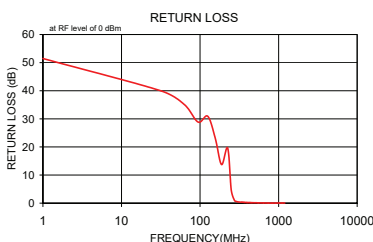


### Electrical Schematic



### Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	$\sigma$			
1.00	0.02	0.00	51.46	6.00	3.63
32.10	0.09	0.00	39.91	6.94	3.72
63.30	0.13	0.00	35.05	8.02	3.69
94.40	0.18	0.01	28.86	9.28	3.69
125.50	0.24	0.01	30.90	10.73	3.34
156.60	0.34	0.01	22.98	12.40	3.54
187.80	0.63	0.03	13.73	14.34	3.66
225.00	0.85	0.05	19.61	16.58	3.59
250.00	4.47	0.90	4.58	19.17	3.67
275.00	13.44	1.06	0.95	22.40	3.56
288.00	18.01	1.02	0.63	25.90	3.60
301.00	22.28	0.98	0.49	30.25	3.58
314.00	26.30	0.97	0.42	34.98	3.60
327.00	30.03	0.97	0.37	40.86	3.66
340.00	33.46	0.98	0.34	47.25	3.65
353.00	36.62	1.01	0.31	55.20	3.66
370.40	40.58	1.05	0.27	63.82	3.70
387.80	44.45	1.13	0.24	74.56	3.73
405.20	48.13	1.21	0.22	86.20	3.80
422.60	51.39	1.27	0.21	100.71	3.89
440.00	54.18	1.31	0.19	113.44	4.00
457.00	56.71	1.41	0.17	136.03	4.22
549.90	64.60	1.52	0.12	157.28	4.54
642.80	65.09	1.93	0.08	183.74	4.95
735.60	62.97	1.53	0.05	225.00	7.52
828.50	61.45	1.33	0.03	250.00	8.59



### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
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[www.minicircuits.com](http://www.minicircuits.com) P.O. Box 350166, Brooklyn, NY 11235-0003 (718) 934-4500 sales@minicircuits.com

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