

# Surface Mount Low Pass Filter

# SCLF-550+ SCLF-550

50Ω DC to 550 MHz

## Maximum Ratings

Operating Temperature -40°C to 85°C

Storage Temperature -55°C to 100°C

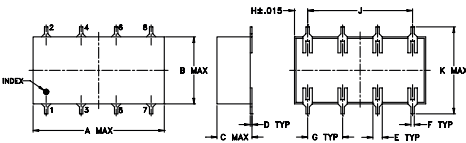
Power Input 0.5W max.

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

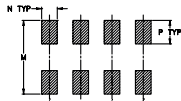
## Pin Connections

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

## Outline Drawing



## PCB Land Pattern



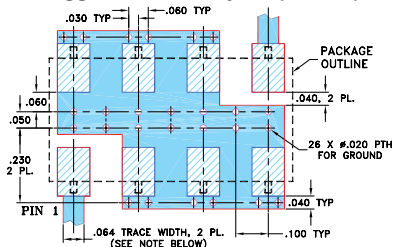
Suggested Layout,  
Tolerance to be within ±.002

## 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.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

## 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**

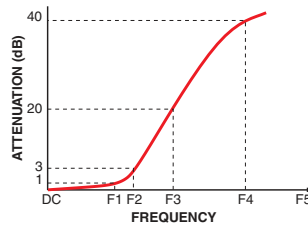
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

## Electrical Specifications

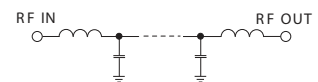
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-550	—	—	1.0	dB
	Freq. Cut-Off	F2	605	—	3.0	—	dB
	VSWR	DC-F1	DC-550	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	800-1050	20	—	—	dB
		F4-F5	1050-2000*	40	—	—	dB
	VSWR	F3-F5	800-2000	—	18	—	:1

\* Loss > 35 dB

## Typical Frequency Response

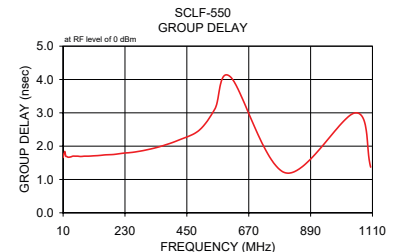


## Electrical Schematic



## Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	$\sigma$			
10.00	0.03	0.00	48.70	10.00	1.66
84.40	0.08	0.00	32.94	11.85	1.74
158.80	0.13	0.00	25.63	13.97	1.78
233.10	0.20	0.01	21.50	16.35	1.84
307.50	0.25	0.01	21.08	19.44	1.70
381.90	0.29	0.01	30.87	22.93	1.69
456.30	0.44	0.02	19.57	27.05	1.67
550.00	0.70	0.02	20.04	31.90	1.67
605.00	2.21	0.29	7.56	37.63	1.68
660.00	9.74	0.62	1.40	44.38	1.70
688.00	14.38	0.63	0.82	52.35	1.70
716.00	18.81	0.64	0.59	61.74	1.70
744.00	23.02	0.63	0.48	72.83	1.69
772.00	27.05	0.64	0.41	85.90	1.70
800.00	30.94	0.66	0.37	100.21	1.70
828.00	34.76	0.71	0.33	118.20	1.71
872.40	40.79	0.84	0.28	137.89	1.72
916.80	47.07	1.09	0.24	162.64	1.74
961.20	54.10	1.62	0.23	189.73	1.75
1005.60	63.67	3.21	0.20	223.79	1.79
1050.00	72.37	1.21	0.18	261.07	1.82
1100.00	68.33	2.87	0.18	307.93	1.89
1212.50	66.09	1.64	0.16	359.23	2.00
1325.00	71.09	2.35	0.14	423.71	2.19
1437.50	80.39	4.11	0.13	494.29	2.48
1550.00	73.52	3.11	0.13	550.00	3.12
1662.50	66.16	1.26	0.15	605.00	4.08
1775.00	63.13	0.38	0.15	800.00	1.20



## 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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