

Low Pass Filter

SCLF-700+

50Ω DC to 700 MHz

Maximum Ratings

Operating Temperature -40°C to 85°C

Storage Temperature	-55°C to 100°C
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Power Input	0.5W max.
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Permanent damage may occur if any of these limits are exceeded

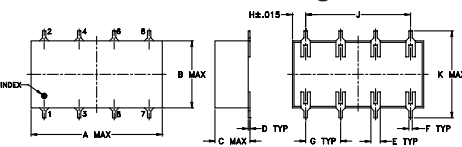
Pin Connections

INPUT 1

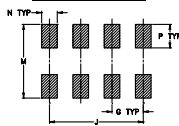
OUTPUT 8

GROUND 2.3.4.5.6.7

Outline Drawing



PCB Land Pattern



Suggested Layout,
Tolerance to be within $\pm .002$

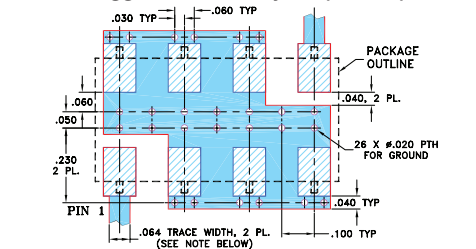
Outline Dimensions (inch)

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:

1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .030" $\pm$.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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	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

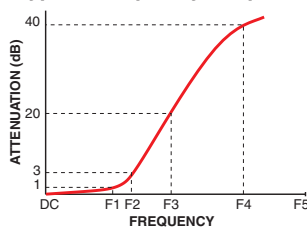
Applications

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

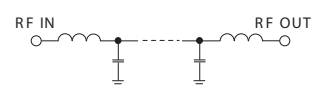
Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-700	—	—	1.0	dB
	Freq. Cut-Off	F2	770	—	3.0	—	dB
	VSWR	DC-F1	DC-700	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	1000-1300	20	—	—	dB
		F4-F5	1300-2000	40	—	—	dB
	VSWR	F3-F5	1000-2000	—	18	—	:1

Typical Frequency Response

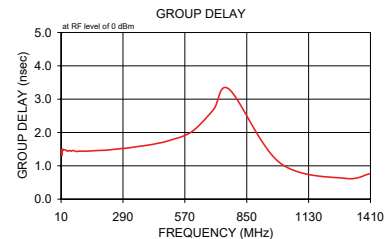
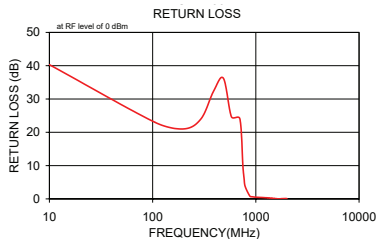
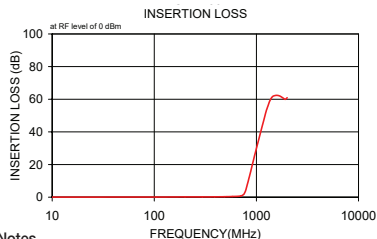


Electrical Schematic



Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	σ			
10.00	0.03	0.00	40.31	10.00	1.49
105.00	0.10	0.01	23.01	11.85	1.48
200.00	0.15	0.01	21.02	14.13	1.32
295.00	0.18	0.02	24.09	16.66	1.50
390.00	0.21	0.01	32.41	19.87	1.48
485.00	0.28	0.01	36.21	23.44	1.48
580.00	0.41	0.02	24.66	27.95	1.48
700.00	0.71	0.08	24.05	32.97	1.46
750.00	1.69	0.48	9.65	39.32	1.44
770.00	2.84	0.73	6.00	46.38	1.46
790.00	4.60	0.94	3.68	55.31	1.44
874.00	15.12	1.04	0.85	65.24	1.46
916.00	20.37	0.95	0.65	77.80	1.43
958.00	25.26	0.87	0.56	91.76	1.44
1000.00	29.87	0.81	0.51	109.43	1.44
1042.00	34.21	0.77	0.49	129.07	1.44
1093.60	39.27	0.71	0.45	153.93	1.45
1145.20	44.02	0.69	0.42	181.56	1.46
1196.80	48.51	0.67	0.39	216.52	1.47
1248.40	52.85	0.79	0.35	255.38	1.50
1300.00	56.02	0.93	0.32	304.56	1.53
1350.00	58.93	1.15	0.27	359.23	1.58
1431.30	61.47	1.39	0.20	428.40	1.65
1512.50	62.21	1.27	0.13	505.29	1.77
1593.80	62.37	1.17	0.06	602.59	2.03
1675.00	62.10	1.10	0.01	700.00	2.69
1756.30	61.44	0.94	0.06	770.00	3.30
1837.50	60.59	0.85	0.09	1000.00	1.09
1918.80	59.96	0.75	0.10	1300.00	0.62
2000.00	60.93	0.73	0.11	1406.29	0.76



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.

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