

# Surface Mount Low Pass Filter

# SCLF-135+ SCLF-135

50Ω DC to 135 MHz

## Maximum Ratings

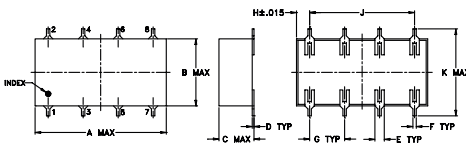
Operating Temperature	-40°C to 85°C
Storage Temperature	-55°C to 100°C
Power Input	0.5W max.

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

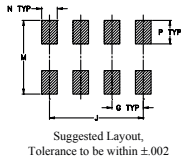
## Pin Connections

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

## Outline Drawing



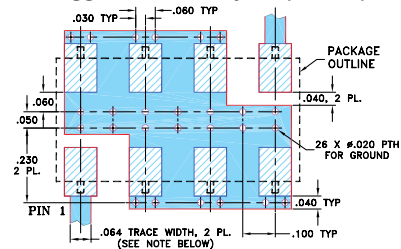
## PCB Land Pattern



## Outline Dimensions (inch/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:
- 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

## Electrical Specifications

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-135	—	—	1.0	dB
	Freq. Cut-Off	F2	155	—	3.0	—	dB
	VSWR	DC-F1	DC-135	—	1.7	—	:1
Stop Band	Rejection Loss	F3-F4	210-300	20	—	—	dB
		F4-F5	300-600	40	—	—	dB
	VSWR	F3-F5	210-600	—	18	—	:1

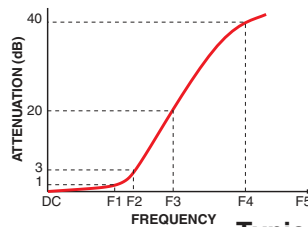


Generic photo used for illustration purposes only  
CASE STYLE: YY161

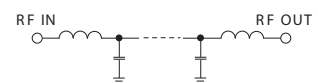
## +RoHS Compliant

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

## Typical Frequency Response

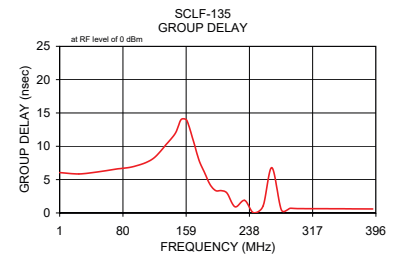
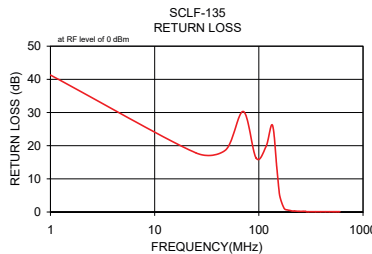


## Electrical Schematic



## Typical Performance Data

Frequency (MHz)	Insertion Loss (dB)		Return Loss (dB)	Frequency (MHz)	Group Delay (nsec)
	$\bar{x}$	$\sigma$			
1.00	0.03	0.10	41.30	1.00	6.05
25.00	0.18	0.10	17.80	25.00	5.85
48.00	0.22	0.10	18.70	48.00	6.15
71.00	0.25	0.10	30.30	71.00	6.57
94.00	0.45	0.10	16.30	94.00	6.98
117.00	0.57	0.10	19.70	117.00	8.09
135.00	0.87	0.10	26.20	135.00	10.40
149.00	1.42	0.10	13.10	145.00	11.86
155.00	2.54	0.20	7.40	149.00	12.96
160.00	4.29	0.40	4.40	152.00	13.89
175.00	12.53	0.70	1.10	155.00	14.12
189.00	20.35	0.80	0.60	160.00	13.84
196.00	23.89	0.80	0.50	168.00	10.81
203.00	27.23	0.80	0.40	175.00	7.92
210.00	30.34	0.90	0.30	182.00	6.03
220.00	34.51	0.90	0.30	189.00	4.24
243.00	43.15	1.10	0.20	196.00	3.35
266.00	50.60	1.10	0.20	203.00	3.35
278.00	54.30	2.20	0.20	210.00	2.98
289.00	58.28	3.60	0.10	220.00	0.92
300.00	60.35	2.80	0.10	232.00	1.88
350.00	69.91	4.30	0.10	243.00	0.04
392.00	72.49	2.50	0.10	255.00	1.02
434.00	69.22	3.40	0.10	266.00	6.80
475.00	67.52	1.50	0.10	278.00	0.42
517.00	67.56	2.10	0.10	289.00	0.70
538.00	65.57	1.80	0.10	300.00	0.65
559.00	67.78	3.00	0.10	350.00	0.63
580.00	65.80	2.40	0.10	371.00	0.61
600.00	65.48	2.60	0.10	392.00	0.60



## 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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