

Surface Mount Low Pass Filter

SCLF-135+ SCLF-135

50Ω DC to 135 MHz

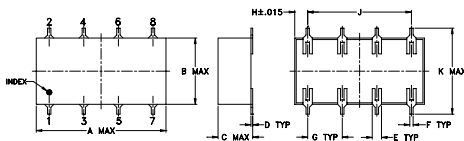
Maximum Ratings

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

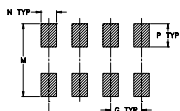
Pin Connections

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

Outline Drawing



PCB Land Pattern

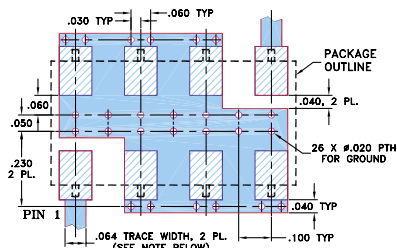


Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch/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: 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.
- 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

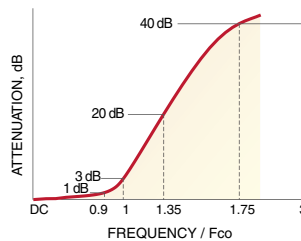
Applications

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

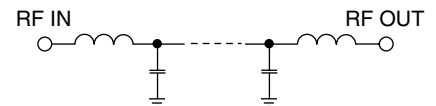
Low Pass Filter Electrical Specifications

| PASSBAND (MHz) | f _{co} , (MHz) Nom. | STOPBAND (MHz) | | VSWR (:1) | |
|----------------|------------------------------|----------------|----------------|----------------|----------------|
| | | (loss > 20 dB) | (loss > 40 dB) | Pass band Typ. | Stop band Typ. |
| DC-135 | 155 | 210-300 | 300-600 | 1.7 | 18 |

typical frequency response

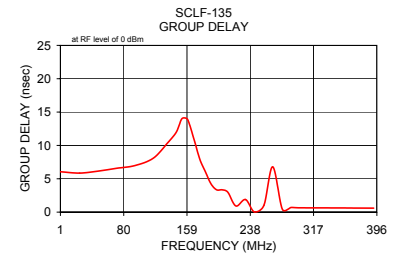
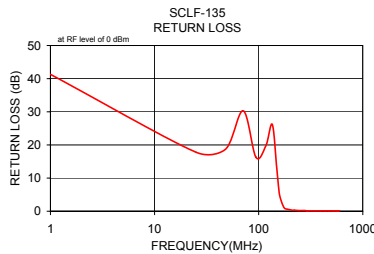


Electrical Schematic



Typical Performance Data

| Frequency (MHz) | Insertion Loss (dB) | | Return Loss (dB) | Frequency (MHz) | Group Delay (nsec) |
|-----------------|---------------------|----------|------------------|-----------------|--------------------|
| | \bar{x} | σ | | | |
| 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 |



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site



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RF/IF MICROWAVE COMPONENTS

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