

Low Pass Filter

Features

- high rejection
- sharp insertion loss roll off
- excellent VSWR, 1.1:1 typ. @ passband
- aqueous washable

Applications

- wireless communications
- receivers / transmitters

HT-RLP-120+



50Ω DC to 120 MHz

Low Pass Filter Electrical Specifications

| PASSBAND (MHz) (loss < 2 dB) | f _{co} (MHz) Nom. (loss 3 dB) | STOPBAND (MHz) | | VSWR (:1) | |
|--|--|-------------------|----------------|------------------|------------------|
| | | (loss > 20 dB) | (loss > 40 dB) | Passband Typ. | Stopband Typ. |
| DC-120 | 132 | 170-205 | 205-1000 | 1.1 | 20 |

Maximum Ratings

| | |
|--|----------------|
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 0.5W max. |
| *Permanent damage may occur if any of these limits are exceeded. | |

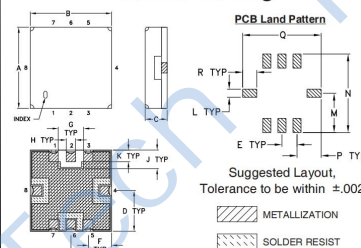
Typical Performance Data

| Frequency (MHz) | Insertion Loss (dB) | | Return Loss (dB) | Frequency (MHz) | Group Delay (nsec) |
|--------------------|------------------------|----------|---------------------|--------------------|-----------------------|
| | \bar{x} | σ | | | |
| 0.5 | 0.20 | 0.07 | 29.54 | 2.0 | 6.07 |
| 50.0 | 0.41 | 0.07 | 32.03 | 5.0 | 5.81 |
| 80.0 | 0.65 | 0.07 | 22.39 | 10.0 | 5.80 |
| 100.0 | 0.82 | 0.07 | 36.60 | 20.0 | 5.89 |
| 120.0 | 1.27 | 0.08 | 27.95 | 25.0 | 5.85 |
| 128.0 | 1.98 | 0.11 | 12.31 | 45.0 | 6.25 |
| 132.0 | 2.99 | 0.19 | 7.34 | 50.0 | 6.32 |
| 135.0 | 4.25 | 0.27 | 4.91 | 55.0 | 6.35 |
| 142.0 | 8.65 | 0.38 | 2.09 | 60.0 | 6.53 |
| 150.0 | 14.69 | 0.40 | 1.10 | 65.0 | 6.67 |
| 160.0 | 22.03 | 0.40 | 0.74 | 70.0 | 6.73 |
| 170.0 | 28.86 | 0.40 | 0.60 | 75.0 | 7.05 |
| 180.0 | 35.38 | 0.43 | 0.49 | 80.0 | 7.24 |
| 205.0 | 52.34 | 0.80 | 0.39 | 90.0 | 7.92 |
| 300.0 | 64.61 | 0.74 | 0.20 | 100.0 | 8.66 |
| 500.0 | 69.37 | 2.02 | 0.12 | 110.0 | 9.97 |
| 800.0 | 78.88 | 8.13 | 0.13 | 120.0 | 12.56 |
| 1000.0 | 75.79 | 5.98 | 0.17 | 125.0 | 14.78 |

Pin Connections

| | |
|--------|------------------|
| RF IN | 2 |
| RF OUT | 6 |
| GROUND | 1, 3, 4, 5, 7, 8 |

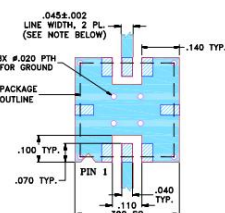
Outline Drawing



Outline Dimensions (inch/mm)

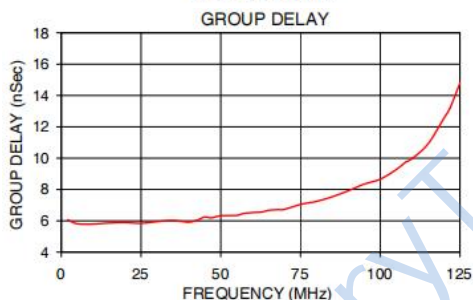
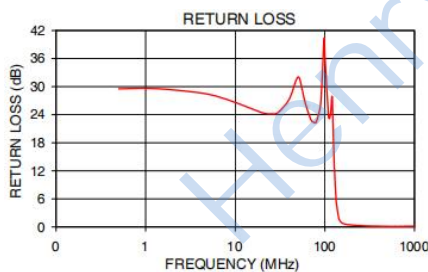
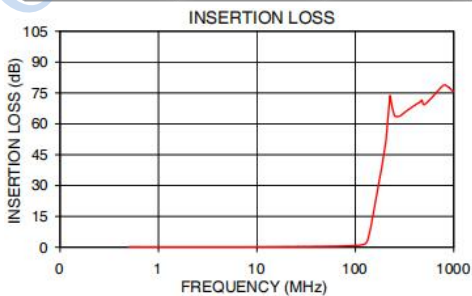
| | | | | | | | | |
|------|------|------|------|------|------|------|------|-------|
| A | B | C | D | E | F | G | H | J |
| .350 | .350 | .100 | .175 | .075 | .100 | .110 | .040 | .080 |
| 8.89 | 8.89 | 2.54 | 4.45 | 1.91 | 2.54 | 2.79 | 1.02 | 2.03 |
| K | L | M | N | P | Q | R | | wt. |
| .050 | .040 | .195 | .390 | .120 | .390 | .070 | | grams |
| 1.27 | 1.02 | 4.95 | 9.91 | 3.05 | 9.91 | 1.78 | | 0.25 |

Suggested PCB Layout



NOTES:

1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .025" ± .005"; 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



Functional Schematic

