

Low Pass Filter

Features

- high rejection
- sharp insertion loss roll off
- excellent VSWR, 1.15:1 typ.@ passband
- aqueous washable

Applications

- satellite
- wireless communications
- receivers / transmitters

HT-RLP-30+



50Ω DC to 30 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-30 | 37 | 47-53 | 53-3000 | 1.15 | 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 | 0.50 | 0.01 | 24.98 | 0.5 | 16.64 |
| 25.0 | 0.86 | 0.01 | 25.36 | 1.0 | 16.66 |
| 30.0 | 1.08 | 0.01 | 24.46 | 3.0 | 16.92 |
| 36.0 | 1.85 | 0.05 | 22.30 | 5.0 | 16.88 |
| 37.0 | 2.62 | 0.14 | 17.45 | 6.0 | 16.86 |
| 39.0 | 4.17 | 0.33 | 7.75 | 9.0 | 17.18 |
| 40.0 | 6.92 | 0.45 | 6.00 | 10.0 | 17.34 |
| 42.0 | 12.41 | 0.68 | 2.51 | 12.0 | 17.65 |
| 45.0 | 23.23 | 0.76 | 1.47 | 13.0 | 17.93 |
| 47.0 | 30.50 | 0.84 | 1.21 | 15.0 | 18.49 |
| 53.0 | 50.90 | 1.81 | 0.84 | 18.0 | 19.49 |
| 100.0 | 52.85 | 0.47 | 0.25 | 21.0 | 20.94 |
| 500.0 | 85.89 | 4.68 | 0.07 | 23.0 | 21.98 |
| 1000.0 | 81.99 | 3.92 | 0.09 | 24.0 | 22.50 |
| 1400.0 | 76.06 | 1.88 | 0.20 | 25.0 | 23.31 |
| 2000.0 | 52.57 | 0.80 | 0.24 | 27.0 | 24.92 |
| 2600.0 | 53.56 | 0.54 | 0.48 | 28.0 | 26.15 |
| 3000.0 | 47.74 | 0.53 | 0.33 | 30.0 | 28.61 |

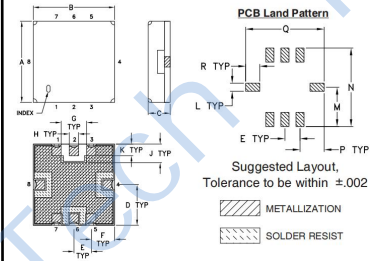
Pin Connections

RF IN 2

RF OUT 6

GROUND 1, 3, 4, 5, 7, 8

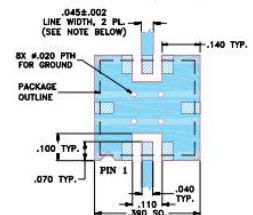
Outline Drawing



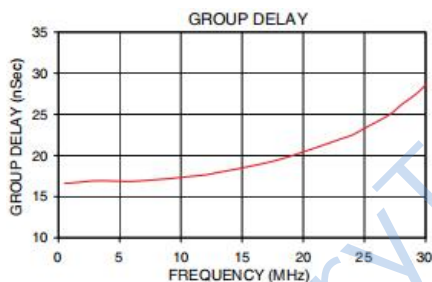
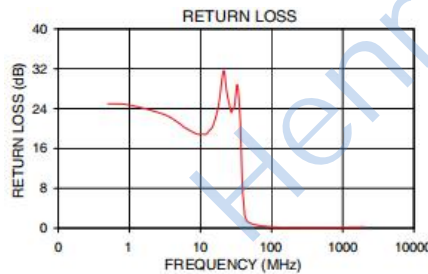
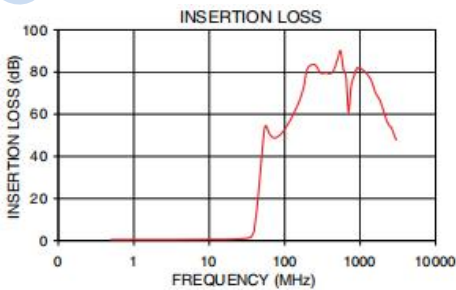
Outline Dimensions (inch/mm)

| | | | | | | | | |
|------|------|------|------|------|------|------|------|-------|
| 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 FB4 WITH DIELECTRIC THICKNESS .005" ± .005"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTHS 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

