

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-158+



50Ω DC to 158 MHz

Low Pass Filter Electrical Specifications

| PASSBAND (MHz) (loss < 2 dB) | fco (MHz) Nom. (loss 3 dB) | STOPBAND (MHz) | | VSWR (:1) | |
|--|--------------------------------------|-------------------|----------------|------------------|------------------|
| | | (loss > 20 dB) | (loss > 40 dB) | Passband Typ. | Stopband Typ. |
| DC-158 | 172 | 220-255 | 255-1000 | 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. | |

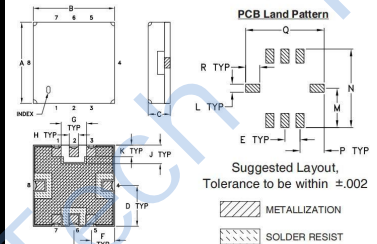
Typical Performance Data

| Frequency (MHz) | Insertion Loss (dB) | | Return Loss (dB) | Frequency (MHz) | Group Delay (nsec) |
|--------------------|------------------------|----------|---------------------|--------------------|-----------------------|
| | \bar{x} | σ | | | |
| 0.5 | 0.08 | 0.01 | 40.86 | 2 | 4.20 |
| 50 | 0.27 | 0.01 | 33.49 | 5 | 4.17 |
| 80 | 0.40 | 0.01 | 28.44 | 10 | 4.09 |
| 100 | 0.51 | 0.00 | 24.32 | 20 | 4.18 |
| 158 | 1.20 | 0.03 | 24.69 | 30 | 4.16 |
| 163 | 1.53 | 0.08 | 16.30 | 40 | 4.22 |
| 172 | 3.11 | 0.22 | 7.30 | 50 | 4.25 |
| 176 | 4.51 | 0.29 | 4.90 | 60 | 4.40 |
| 178 | 5.38 | 0.33 | 4.02 | 70 | 4.47 |
| 187 | 10.29 | 0.38 | 1.80 | 80 | 4.61 |
| 200 | 18.28 | 0.36 | 0.91 | 90 | 4.82 |
| 220 | 30.15 | 0.35 | 0.59 | 100 | 5.14 |
| 252 | 49.89 | 0.55 | 0.42 | 110 | 5.32 |
| 255 | 52.12 | 0.66 | 0.42 | 120 | 5.77 |
| 400 | 81.37 | 4.89 | 0.22 | 135 | 6.78 |
| 600 | 77.30 | 5.44 | 0.16 | 145 | 7.62 |
| 800 | 73.42 | 3.94 | 0.13 | 158 | 9.76 |
| 1000 | 71.29 | 4.00 | 0.16 | 160 | 10.19 |

Pin Connections

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

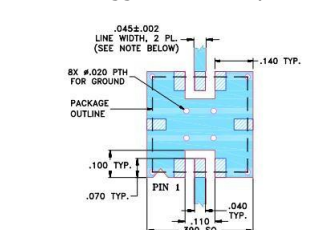
Outline Drawing



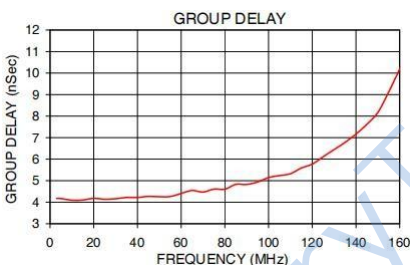
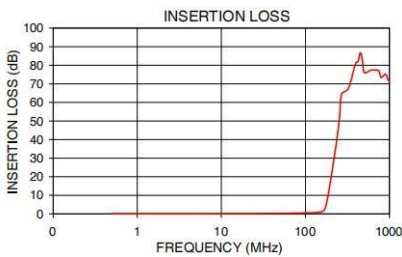
Outline Dimensions (inch/mm)

| | | | | | | | | |
|------|------|------|------|------|------|------|------|-------|
| 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 .0025" ± .0002"; 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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Functional Schematic

