Low Pass Filter

DC to 1575 MHz 50Q

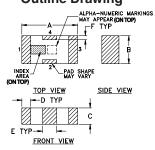
Maximum Ratings

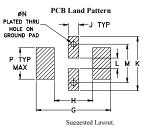
| 9 | |
|-----------------------------|-------------------|
| Operating Temperature | -55°C to 100°C |
| Storage Temperature | -55°C to 100°C |
| RF Power Input* | 10W max. at 25°C |
| Max. DC Voltage at pins 1&3 | 25 VDC |
| DC Current Input to Output | 0.5A max. at 25°C |

Pin Connections

| RF IN | 1_ |
|--------|-----|
| RF OUT | 3 |
| GROUND | 2,4 |

Outline Drawing



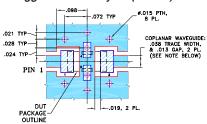


Outline Dimensions (inch)

Tolerance to be within ±.002

| | G | F | Ε | D | С | В | Α |
|-------|------|------|------|------|------|------|------|
| | .169 | .009 | .032 | .020 | .037 | .063 | .126 |
| | 4.29 | 0.23 | 0.81 | 0.51 | 0.94 | 1.60 | 3.20 |
| | | | | | | | |
| wt | Р | N | M | L | K | J | Н |
| grams | .071 | .012 | .087 | .024 | .122 | .024 | .087 |
| .020 | 1.80 | 0.30 | 2.21 | 0.61 | 3.10 | 0.61 | 2.21 |

Demo Board MCL P/N: TB-270 Suggested PCB Layout (PL-137)



COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS ROJA550B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP 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

- · excellent power handling, 10W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S. Patent 6,943,646

Applications

- harmonic rejection
- VHF/UHF transmitters/receivers

Value (40) 20. 3. 3. 1.

Electrical Specifications^{1,2} at 25°C

| Pa | rameter | F# | Frequency (MHz) | Min. | Тур. | Max. | Unit |
|-----------|----------------|-------|-----------------|------|------|------|------|
| | Insertion Loss | DC-F1 | DC-1575 | _ | _ | 1.0 | dB |
| Pass Band | Freq. Cut-Off | F2 | 1825 | _ | 3.0 | _ | dB |
| | VSWR | DC-F1 | DC-1575 | _ | 1.2 | _ | :1 |
| | | F3 | 2275 | 20 | _ | _ | dB |
| Stop Band | Rejection Loss | F4-F5 | 2325-6800 | _ | 40 | _ | dB |
| Stop Band | | F6 | 7100 | _ | 20 | _ | dB |
| | VSWR | F3-F6 | 2275-7100 | _ | 20 | _ | :1 |

- 1. DC Resistance to ground is 100 Mohms min.
- 2. Measured on Mini-Circuits Characterization Test Board TB-270. Typical Frequency Response

Electrical Schematic

LFCN-1575D+

Generic photo used for illustration purposes only

CASE STYLE: FV1206

+RoHS Compliant The +Suffix identifies RoHS Compliance. See our web site

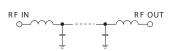
Available Tape and Reel at no extra cost

20, 50, 100, 200, 500,1000, 3000

Devices/Reel

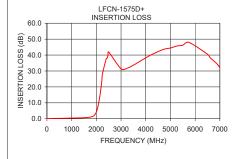
for RoHS Compliance methodologies and qualifications

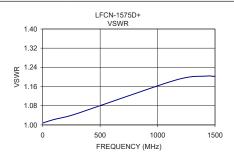
Reel Size



| DC F1 F2 | F3 F4 | F5 | F6 | | | | |
|----------|-----------|----|-------|----------|------|---------|------|
| | FREQUENCY | Ty | pical | Performa | ance | Data at | 25°C |

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) | |
|--------------------|------------------------|--------------|--|
| 1.00 | 0.03 | 1.01 | |
| 1000.00 | 0.38 | 1.16 | |
| 1500.00 | 0.64 | 1.20 | |
| 1575.00 | 0.71 | 1.21 | |
| 1700.00 | 0.90 | 1.25 | |
| 1725.00 | 0.95 | 1.26 | |
| 1850.00 | 1.47 | 1.50 | |
| 1900.00 | 1.94 | 1.74 | |
| 1950.00 | 2.76 | 2.19 | |
| 2000.00 | 4.23 | 3.00 | |
| 2100.00 | 10.27 | 6.51 | |
| 2200.00 | 20.83 | 11.17 | |
| 3000.00 | 31.36 | 20.45 | |
| 5000.00 | 44.43 | 35.46 | |
| 7250.00 | 26.27 | 17.75 | |





- A. 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.

 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.

 C. The parts covered by this specification document are subject to Mini-Circuit's standard limited warranty and terms and conditions (collectively, "Standard Terms"); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits' website at www.minicircuits.com/MCLStore/terms.jsp

^{*} Derate linearly to 3.5W at 100°C ambient.
Permanent damage may occur if any of these limits are exceeded.