



CERAMIC

# Low Pass Filter

## LFCN-2600D+

Mini-Circuits

50Ω DC to 2600 MHz

### FEATURES

- Excellent power handling, 10W
- Small size
- 7 sections
- Temperature stable
- LTCC construction
- Protected by U.S. Patent 6,943,646



Generic photo used for illustration purposes only

CASE STYLE: FV1206

### APPLICATIONS

- Harmonic rejection
- VHF/UHF transmitters/receivers
- Lab use

#### +RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

### ELECTRICAL SPECIFICATIONS<sup>1,2</sup> AT 25°C

| Parameter | F#             | Frequency (MHz) | Min.      | Typ. | Max. | Units |    |
|-----------|----------------|-----------------|-----------|------|------|-------|----|
| Passband  | Insertion Loss | DC-F1           | DC-2600   | —    | —    | 1.2   | dB |
|           | Freq. Cut-Off  | F2              | 3025      | —    | 3.0  | —     | dB |
|           | VSWR           | DC-F1           | DC-2600   | —    | 1.2  | —     | :1 |
| Stop Band | Rejection Loss | F3              | 3750      | 20   | —    | —     | dB |
|           |                | F4-F5           | 3900-6600 | —    | 30   | —     |    |
|           | VSWR           | F6              | 8400      | —    | 20   | —     | :1 |
|           |                | F3-F6           | 3750-8400 | —    | 20   | —     |    |

1. DC Resistance to ground is 100 Mohms min.

2. Measured on Mini-Circuits Characterization Test Board TB-270.

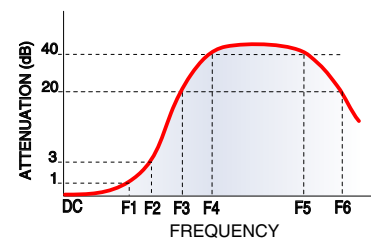
### MAXIMUM RATINGS

| Parameter                   | Ratings           |
|-----------------------------|-------------------|
| Operating temperature       | -55°C to 100°C    |
| Storage temperature         | -55°C to 100°C    |
| RF Power Input <sup>3</sup> | 10 W max. at 25°C |
| Max. DC Voltage at pins 1&3 | 25 VDC            |
| DC Current Input to Output  | 0.5A max. at 25°C |

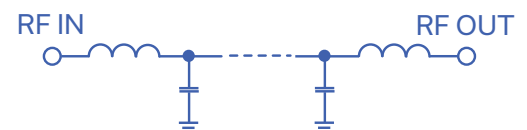
3. Derate linearly to 3.5W at 100°C ambient.

Permanent damage may occur if any of these limits are exceeded.

### TYPICAL FREQUENCY RESPONSE



### FUNCTIONAL SCHEMATIC



REV. K  
ECO-011761  
LFCN-2600D+  
AD/CP/AM  
220128



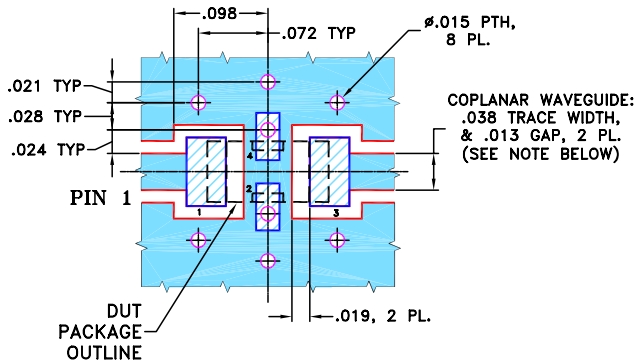


### PIN CONNECTIONS

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

PRODUCT MARKING: N/A

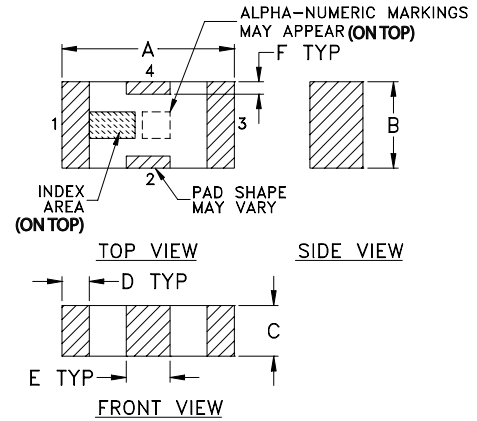
DEMO BOARD MCL P/N: TB-270  
SUGGESTED PCB LAYOUT (PL-137)



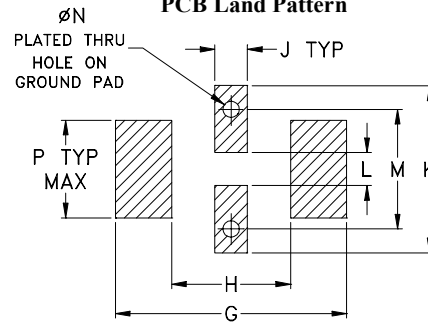
- NOTES:**
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
  2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

### OUTLINE DRAWING



### PCB Land Pattern



Suggested Layout,  
Tolerance to be within ±.002

### OUTLINE DIMENSIONS (Inches mm)

| A    | B    | C    | D    | E    | F    | G    |       |
|------|------|------|------|------|------|------|-------|
| .126 | .063 | .037 | .020 | .032 | .009 | .169 |       |
| 3.20 | 1.60 | 0.94 | 0.51 | 0.81 | 0.23 | 4.29 |       |
| H    | J    | K    | L    | M    | N    | P    | wt    |
| .087 | .024 | .122 | .024 | .087 | .012 | .071 | grams |
| 2.21 | 0.61 | 3.10 | 0.61 | 2.21 | 0.30 | 1.80 | .020  |

TAPE & REEL INFORMATION: F71



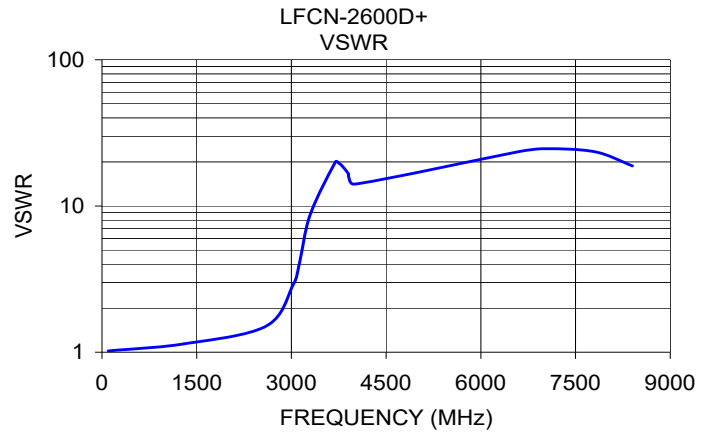
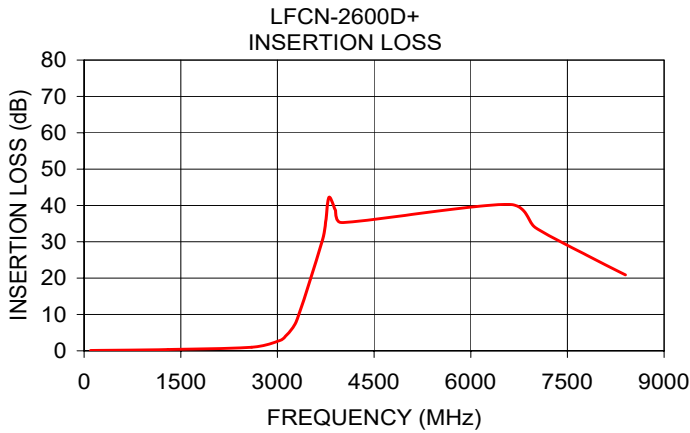
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# Low Pass Filter

## LFCN-2600D+

### TYPICAL PERFORMANCE DATA AT 25°C

| Frequency (MHz) | Insertion Loss (dB) | VSWR (:1) |
|-----------------|---------------------|-----------|
| 100.00          | 0.09                | 1.02      |
| 1300.00         | 0.35                | 1.14      |
| 2600.00         | 1.00                | 1.51      |
| 3025.00         | 2.75                | 2.88      |
| 3125.00         | 4.05                | 4.01      |
| 3300.00         | 8.39                | 8.78      |
| 3700.00         | 30.55               | 20.11     |
| 3750.00         | 35.82               | 19.66     |
| 3800.00         | 42.25               | 18.86     |
| 3900.00         | 38.68               | 16.67     |
| 4000.00         | 35.30               | 14.09     |
| 6600.00         | 40.27               | 23.50     |
| 7000.00         | 33.94               | 24.63     |
| 7800.00         | 26.30               | 23.53     |
| 8400.00         | 20.91               | 18.78     |



#### NOTES

- 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-Circuits 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](http://www.minicircuits.com/MCLStore/terms.jsp)

