

# Ceramic Low Pass Filter

50Ω DC to 850 MHz

## LFCN-900D+



### Maximum Ratings

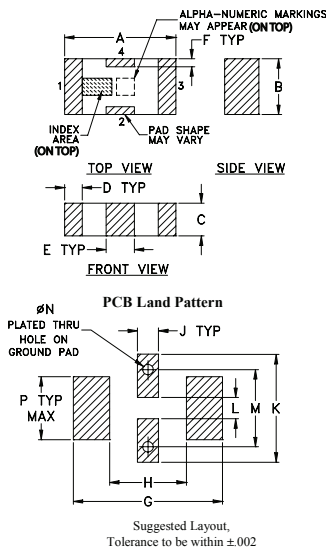
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max. at 25°C
Max. DC Voltage at pins 1&3	25 VDC
DC Current Input to Output	0.5A max. at 25°C

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

### Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

### Outline Drawing



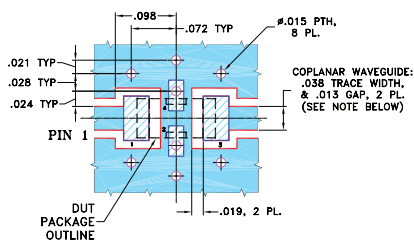
### Outline Dimensions (inch/mm)

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

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



- NOTES:
- 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.
  - 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

#### Notes

- 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.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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-Circuit's website at [www.minicircuits.com/MCLStore/terms.jsp](http://www.minicircuits.com/MCLStore/terms.jsp)

### Features

- excellent power handling, 10W
- small size
- 7 sections
- temperature stable
- LTCC construction
- rejection in stopband, 45-50 dB typ.
- protected by U.S Patent 6,943,646

### Applications

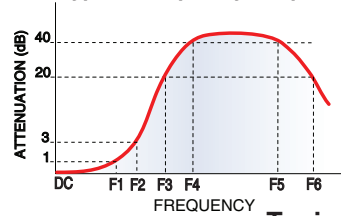
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

### Electrical Specifications<sup>1,2</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-850	—	—	1.3	dB
	Freq. Cut-Off	F2	1075	—	3.0	—	dB
	VSWR	DC-F1	DC-850	—	1.2	—	:1
Stop Band	Rejection Loss	F3	1275	20	—	—	dB
		F4-F5	1350-4850	—	30	—	dB
	VSWR	F6	5100	—	20	—	dB
		F3-F6	1275-5100	—	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



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.04	1.01
150.00	0.19	1.09
500.00	0.41	1.20
850.00	0.86	1.22
950.00	1.22	1.26
1000.00	1.52	1.22
1075.00	2.54	1.18
1100.00	3.44	1.50
1150.00	7.61	2.74
1200.00	15.27	4.03
1250.00	23.41	5.02
1600.00	49.71	19.32
2800.00	49.80	30.49
6000.00	16.27	19.98
7000.00	19.30	17.05
8000.00	16.47	33.42

