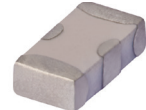


# Ceramic Low Pass Filter

50Ω

DC to 400 MHz

LFCN-400D+



Generic photo used for illustration purposes only  
CASE STYLE: FV1206

## Maximum Ratings

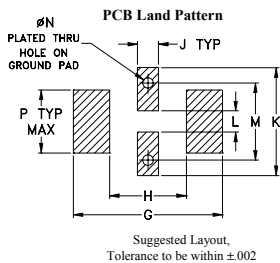
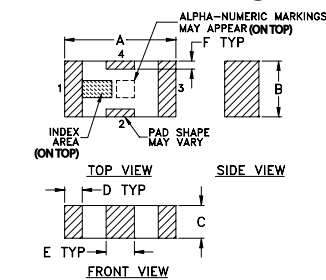
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8.5W max. at 25°C
Max. DC Voltage at pins 1&3	25 VDC
DC Current Input to Output	0.5A max. at 25°C

\* 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

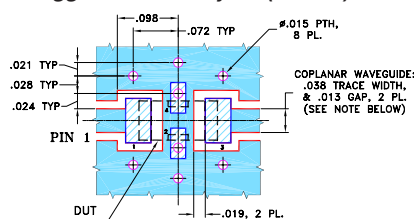
## Outline Drawing



## Outline Dimensions (inch)

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: 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

## 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)

## Features

- excellent power handling, 8.5W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S. Patent 6,943,646

## Applications

- harmonic rejection
- VHF/UHF transmitters/receivers

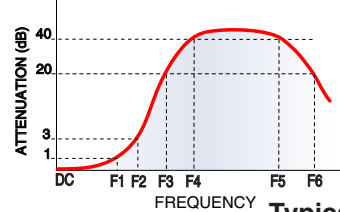
## Electrical Specifications<sup>1,2</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-400	—	1.0	dB
	Freq. Cut-Off	F2	560	3.0	—	dB
	VSWR	DC-F1	DC-400	1.2	—	:1
Stop Band	Rejection Loss	F3	700	20	—	dB
	F4-F5	720-3000	—	30	—	dB
	F6	5500	—	20	—	dB
VSWR	F3-F6	700-5500	—	20	—	:1

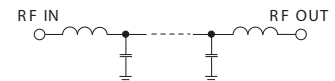
(1) DC Resistance to ground is 100 Mohms min.

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

## Typical Frequency Response

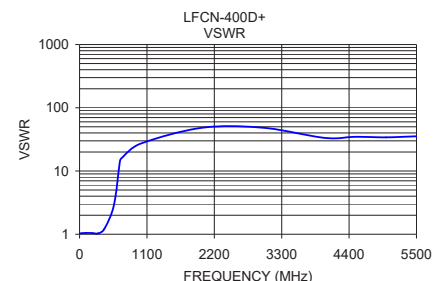
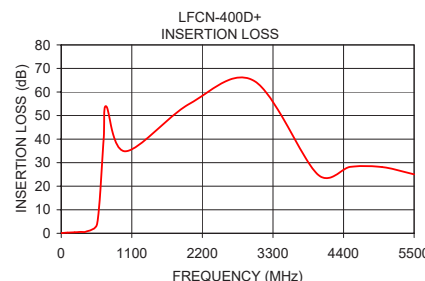


## Electrical Schematic



## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.11	1.03
100.00	0.28	1.05
210.00	0.43	1.04
300.00	0.58	1.03
400.00	0.86	1.19
560.00	4.02	2.85
660.00	39.58	14.38
700.00	53.94	16.41
1000.00	34.84	27.16
2000.00	55.00	48.26
3000.00	64.81	48.26
4000.00	24.93	33.42
4500.00	28.21	34.75
5000.00	28.12	34.07
5500.00	25.03	35.46



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