

Ceramic

# Low Pass Filter

50Ω DC<sup>(1)</sup> to 320 MHz

LFCN-320+



Generic photo used for illustration purposes only

CASE STYLE: FV1206

+RoHS Compliant

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

Available Tape and Reel  
at no extra cost  
Reel Size Devices/Reel  
7" 20, 50, 100, 200, 500, 1000, 3000

## Maximum Ratings

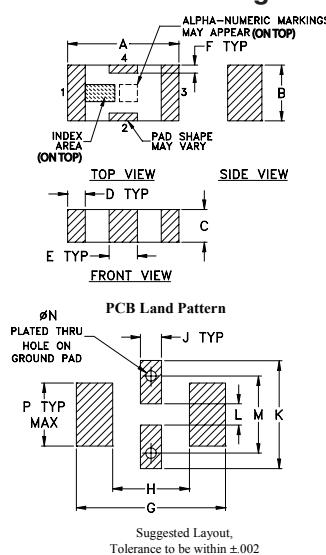
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8.5W max. at 25°C

\* Passband rating, 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)

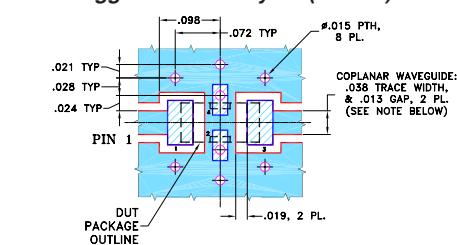
A	B	C	D	E	F	G
.126	.063	.037	.020	.032	.009	.169

H	J	K	L	M	N	P	wt
.087	.024	.122	.024	.087	.012	.071	grams

## 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

## 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

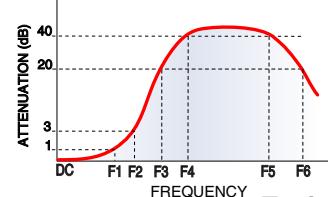
## Electrical Specifications<sup>(1,2)</sup> at 25°C

	Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-320	—	—	1.0	dB
	Freq. Cut-Off	F2	460	—	3.0	—	dB
	VSWR	DC-F1	DC-320	—	1.2	—	:1
Stop Band	Rejection Loss	F3	560	20	—	—	dB
		F4-F5	640-2500	—	40	—	dB
		F6	5300	—	20	—	dB
	VSWR	F3-F6	560-5300	—	20	—	:1

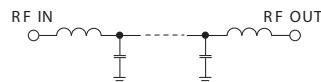
(1) In Applications where DC isolation to ground is required, coupling capacitors are recommended to avoid DC leakage. Alternatively, if DC pass IN-OUT is required, Mini-Circuits "D" suffix version of this model will support DC IN-OUT, and provide >100 MΩ isolation to ground.

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

## Typical Frequency Response

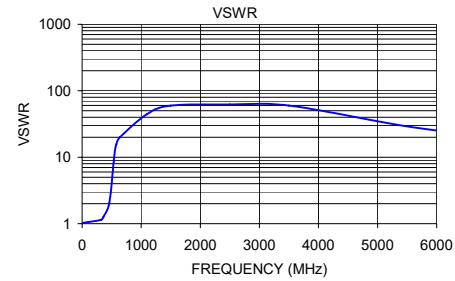


## Electrical Schematic



## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.09	1.02
100.00	0.30	1.06
320.00	0.78	1.14
360.00	0.99	1.26
460.00	2.60	2.03
535.00	15.40	8.90
560.00	27.43	13.29
580.00	40.10	15.53
640.00	48.87	19.98
1100.00	46.62	44.55
1500.00	48.50	59.91
2500.00	53.58	62.05
3500.00	40.54	59.91
5300.00	25.47	31.03
6000.00	24.68	25.19



## 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-Circuits' 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)

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