

# Ceramic Low Pass Filter

50Ω DC<sup>(1)</sup> to 2750 MHz

LFCN-2750+



CASE STYLE: FV1206

## Maximum Ratings

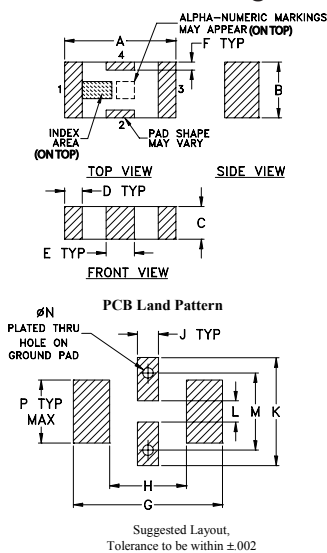
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max. at 25°C

\* 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)

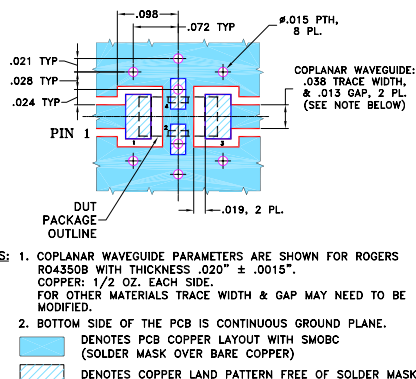
A	B	C	D	E	F	G
.126	.063	.037	.020	.032	.009	.169
3.20	1.60	0.94	0.51	0.81	0.23	4.29

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

## Features

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

## Applications

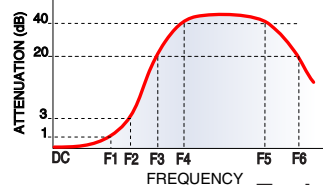
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

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

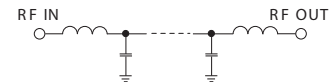
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-2750	—	—	1.0	dB
	Freq. Cut-Off	F2	3150	—	3.0	—	dB
	VSWR	DC-F1	DC-2750	—	1.2	—	:1
Stop Band	Rejection Loss	F3	4000	20	—	—	dB
		F4-F5	4100-6800	—	30	—	dB
		F6	8400	—	20	—	dB
	VSWR	F3-F6	4000-8400	—	20	—	:1

- (1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required. Alternatively, if DC pass IN-OUT is required, Mini-Circuits' "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.  
(2) Measured on Mini-Circuits Characterization Test Board TB-270.

## Typical Frequency Response

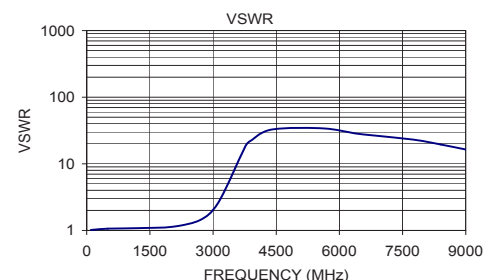


## Electrical Schematic



## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.08	1.02
500.00	0.18	1.04
1300.00	0.33	1.10
2100.00	0.51	1.25
2750.00	0.86	1.35
3150.00	2.97	2.69
3775.00	24.29	75.53
3900.00	30.94	72.39
4400.00	44.62	41.37
5600.00	36.47	56.04
6400.00	34.65	43.44
6800.00	30.90	33.42
7800.00	24.29	24.48
8400.00	20.96	22.29
9000.00	17.89	18.30



## 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)

