

# Ceramic Low Pass Filter

## LFCN-291-1PM+

50Ω DC to 290 MHz



### Maximum Ratings

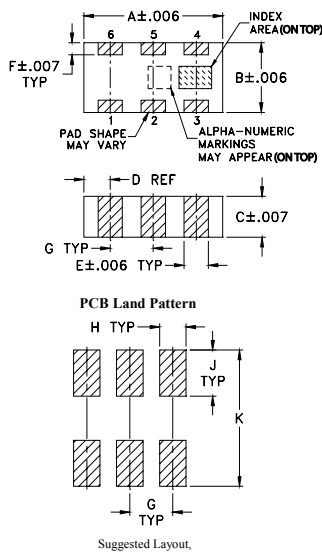
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8.5W max. at 25°C

\* 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	1,6
RF OUT	3,4
GROUND	2,5

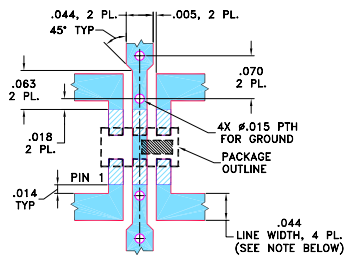
### Outline Drawing



### Outline Dimensions (inch/mm)

A	B	C	D	E	F
.126	.063	.035	.024	.022	.011
3.20	1.60	0.89	0.61	0.56	0.28
G	H	J	K		wt
.039	.024	.042	.123		grams
0.99	0.61	1.07	3.12		.020

### Demo Board MCL P/N: TB-255+ Suggested PCB Layout (PL-131)



NOTES: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS 0.020" ± 0.0015"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH 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

- very good power handling, 8.5W
- small size
- balanced input-balanced output
- temperature stable
- LTCC construction
- differential 8th order Butterworth with common mode rejection

### Applications

- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use
- used with PMC-Sierra's PM8910/11/12/13

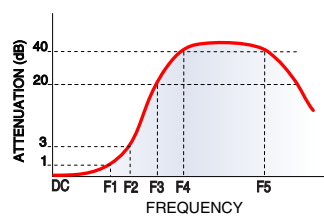
### Electrical Specifications<sup>(1,2)</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	—	2.0	3.5	dB
	Freq. Cut-Off	F2	—	3.0	—	dB
	VSWR	DC-F1	—	1.22	—	:1
Stop Band	Rejection Loss	F3	20	—	—	dB
	VSWR	F4-F5	37	45	—	dB
		F3-F5	—	20	—	:1

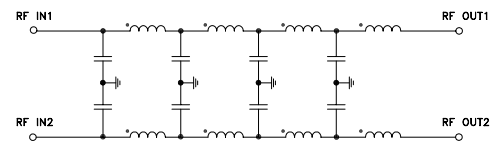
(1) Measured on Mini-Circuits Characterization Test Board TB-255+.

(2) Measured differentially both at input and output (100Ω across input and output)

### Typical Frequency Response



### Electrical Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
0.30	0.24	1.05
0.50	0.25	1.05
1.00	0.25	1.05
10.00	0.26	1.05
30.00	0.33	1.10
50.00	0.41	1.16
110.00	0.67	1.28
200.00	1.02	1.22
300.00	1.92	1.28
400.00	14.52	13.92
500.00	34.17	50.62
700.00	44.41	86.59
1005.00	46.95	97.99
1525.00	69.63	96.37
2000.00	44.75	96.93

