

# Ceramic Low Pass Filter

50Ω DC to 120 MHz

## LFCN-120+ LFCN-120



### 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
DC Current Input to Output	0.5A max. at 25°C

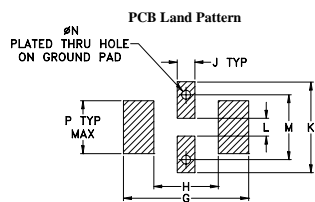
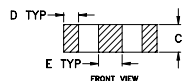
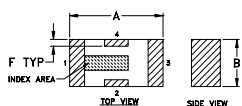
\* Passband rating, derate linearly to 3.5W at 100°C ambient.

### Pin Connections

RF IN	1**
RF OUT	3**
GROUND	2,4

\*\* RF IN & RF OUT can be interchanged

### Outline Drawing

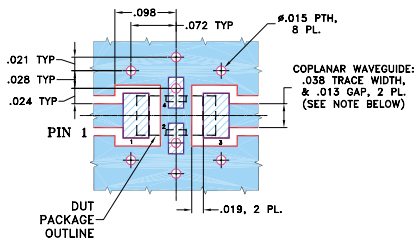


Suggested Layout, Tolerance to be within ±.002

### Outline Dimensions (inch)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	wt
.126	.063	.037	.020	.032	.009	.169	.087	.024	.122	.024	.087	.012	.071	grams
3.20	1.60	0.94	0.51	0.81	0.23	4.29	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, 8.5W
- small size
- 7 sections
- temperature stable
- protected by U.S. Patent 6,943,646

### Applications

- harmonic rejection
- VHF/UHF transmitters/receivers
- RF suppression for DC lines on PCB
- anti-aliasing for A/D converter

CASE STYLE: FV1206

Model	Price	Qty.
LFCN-120+	\$3.99	(10-49)
LFCN-120	\$3.99	(10-49)
LFCN-120D+	\$4.49	(10-49)
LFCN-120D	\$4.49	(10-49)

+ RoHS compliant in accordance with EU Directive (2002/95/EC)

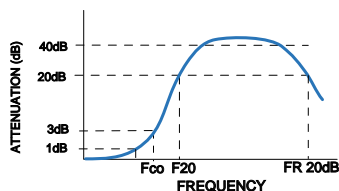
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Electrical Specifications<sup>1</sup> (T<sub>AMB</sub>=25°C)

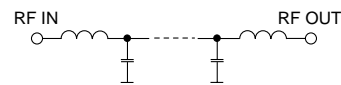
PASSBAND (MHz) (loss < 1 dB)	f <sub>co</sub> , MHz Nom. (loss 3 dB)	STOP BAND (MHz) (loss, dB)			VSWR (:1)		NO. OF SECTIONS
		F 20	40	FR 20	Stopband	Passband	
Max.	Typ.	Min.	Typ.	Typ.	Typ.	Typ.	
DC-120	195	280	300-1850	4750	20	1.2	7

1. For applications requiring DC voltage to be applied to the Input or output, use LFCN-120D (DC Resistance to ground is 100 Mohms min.)

### typical frequency response



### electrical schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.17	1.04
51.00	0.42	1.06
100.00	0.70	1.12
150.00	1.18	1.11
180.00	1.94	1.44
200.00	3.47	1.93
250.00	18.52	4.06
260.00	24.46	4.16
500.00	46.74	4.95
1050.00	62.21	96.51
1750.00	42.50	57.91
2550.00	28.22	26.74
3550.00	25.32	29.46
4050.00	22.87	35.46
4750.00	22.07	18.11

