

# Ceramic Low Pass Filter

50Ω DC to 6000 MHz

## LFCN-6000+ LFCN-6000



### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	9W max. at 25°C
DC Current Input to Output	0.5A max. at 25°C

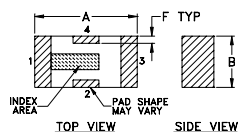
\* Passband rating, derate linearly to 3W at 100°C ambient.

### Pin Connections

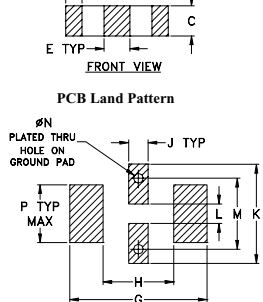
RF IN	1**
RF OUT	3**
GROUND	2,4

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

### Outline Drawing



### PCB Land Pattern

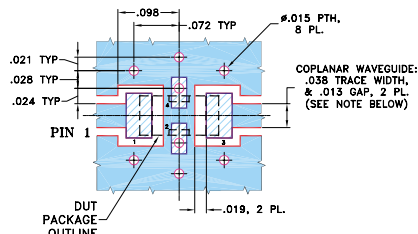


Suggested Layout, Tolerance to be within ±.002

### 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, 9W
- small size
- 7 sections
- temperature stable
- protected by U.S. Patent 6,943,646

### Applications

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

CASE STYLE: FV1206

Model	Price	Qty.
LFCN-6000+	\$1.99	(10-49)
LFCN-6000	\$1.99	(10-49)
LFCN-6000D+	\$2.49	(10-49)
LFCN-6000D	\$2.49	(10-49)

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

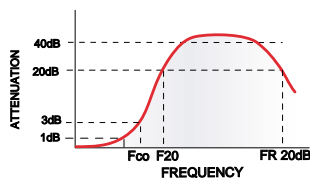
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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

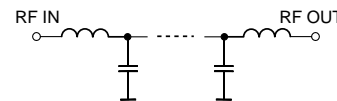
PASSBAND (MHz) (loss < 1.2 dB)	f <sub>co</sub> , MHz Nom. (loss 3 dB)	STOP BAND (MHz) (loss, dB)			VSWR (:1)		NO. OF SECTIONS
		F 20	30	FR 20	Stopband	Passband	
Max.	Typ.	Min.	Typ.	Typ.	Typ.	Typ.	
DC-6000	6800	8500	8700-10500	18000	20	1.3	7

1. For applications requiring DC voltage to be applied to the Input or output, use LFCN-6000D (DC Resistance to ground is 100 Mohms min.)

### typical frequency response

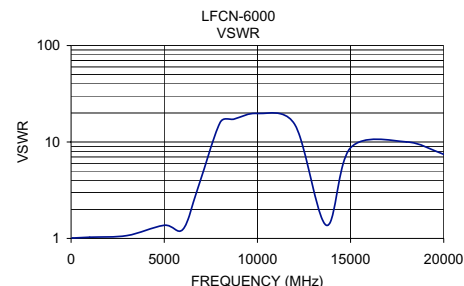
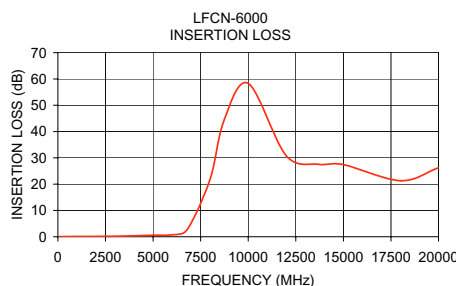


### electrical schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50.00	0.10	1.01
100.00	0.02	1.01
1000.00	0.10	1.03
3000.00	0.19	1.07
5000.00	0.57	1.37
6000.00	0.75	1.24
6800.00	2.80	3.31
8000.00	21.90	15.96
8720.00	44.10	17.22
10000.00	58.33	19.76
12000.00	30.77	15.26
13700.00	27.55	1.37
15000.00	27.44	8.72
18000.00	21.31	10.02
20000.00	26.23	7.44



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RF/IF MICROWAVE COMPONENTS

REV. F  
M104900  
LFCN-6000  
EDR-6491/1  
AD/RS/CP/AM  
070724