

# Ceramic Low Pass Filter

**NEW!**  
**LFCN-490**

DC to 490 MHz



**BLUE CELL™**

CASE STYLE: FV1206

## 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

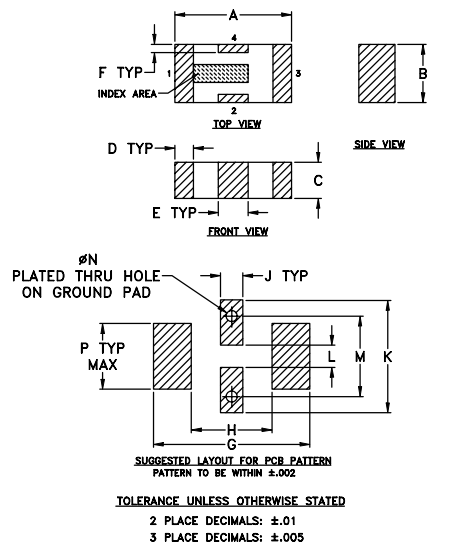
\*Passband rating, derate linearly to 3.5W at 100°C ambient.

## Pin Connections

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

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

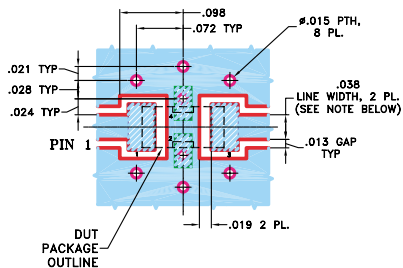
## Outline Drawing



## Outline Dimensions (inch)

A	B	C	D	E	F	G	H
.126	.063	.039	.020	.032	.009	.169	.087
3.20	1.60	0.99	0.51	0.81	0.23	4.29	2.21
J	K	L	M	N	P	wt.	
.024	.122	.024	.087	.012	.071	grams	
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)**



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350 WITH DIELECTRIC THICKNESS .020" ± .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
- DENOTES COPPER LAND PATTERN FREE OF SOLDERMASK

## Features

- excellent power handling, 8.5W
- small size
- 7 sections
- temperature stable
- patent pending

## Applications

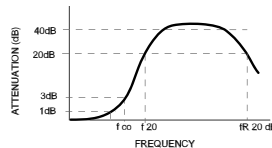
- harmonic rejection
- VHF/UHF transmitters/receivers
- RF suppression for DC lines on PCB
- anti-aliasing for A/D converter

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

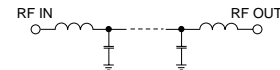
MODEL NO.	PASSBAND (MHz) (loss < 1 dB) Max.	f <sub>co</sub> , MHz Nom. (loss 3 dB) Typ.	STOP BAND (MHz) (loss, dB)			VSWR (:1)		NO. OF SECTIONS
			f 20 Min.	40 Typ.	f <sub>r</sub> 20 Typ.	Stopband Typ.	Passband Typ.	
LFCN-490	DC-490	650	780	880-2500	6000	20	1.2	7

1. For Applications requiring DC voltage to be applied to the Input or output, use LFCN-490D (DC Resistance to ground is 100 Mohms min.)

## typical frequency response

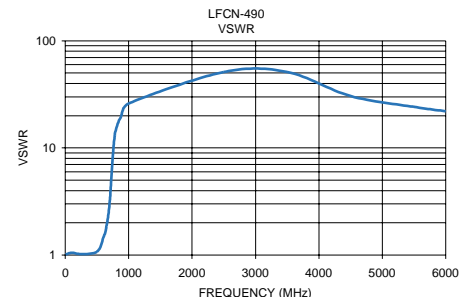
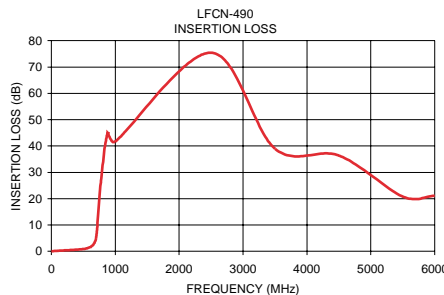


## schematic



## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.05	1.01
100.00	0.22	1.05
250.00	0.39	1.02
500.00	0.86	1.07
600.00	1.52	1.45
650.00	2.37	1.85
700.00	5.08	3.10
780.00	27.49	12.99
880.00	44.92	19.76
1000.00	41.68	25.94
2500.00	75.47	51.10
3500.00	38.94	51.10
4500.00	36.38	30.49
5500.00	20.80	24.14
6000.00	21.07	22.00



designers kit available

Kit No.	No. of Units in Kit	Description	Price \$ per Kit
K1-LFCN	35	5 of each: LFCN-225, -320, -400, -490, -530, -575, -630	99.95

**Mini-Circuits®**

INTERNET <http://www.minicircuits.com>  
P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-832600 • Fax 44-1252-837010

Mini-Circuits ISO 9001 & ISO 14001 Certified

REV. B  
M96263  
LFCN-490  
EDR-6588/4  
RVN/AD/CP  
050113