

# Ceramic Low Pass Filter

# LFCN-490+ LFCN-490

50Ω DC to 490 MHz



## Maximum Ratings

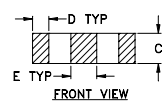
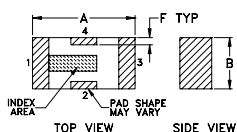
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8.5W max. at 25°C

\* Passband rating, derate linearly to 3.5W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

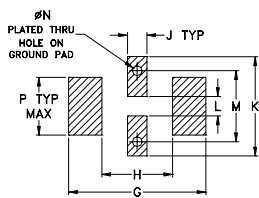
## Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

## Outline Drawing



### PCB Land Pattern



Suggested Layout, Tolerance to be within ±.002

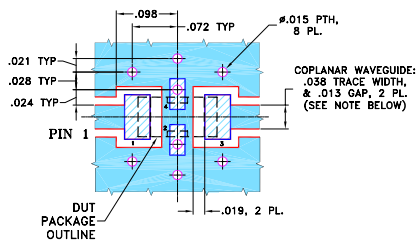
## Outline Dimensions (inch)

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, 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-490+	\$2.99	(10-49)
LFCN-490	\$2.99	(10-49)

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

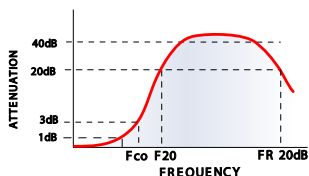
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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

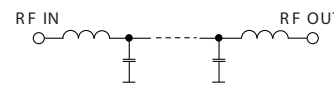
PASSBAND (MHz) (loss < 1.2 dB)	f <sub>co</sub> , MHz Nom. (loss 3 dB)	STOP BAND (MHz) (loss, dB)			VSWR (:1)		NO. OF SECTIONS
		F 20	40	FR 20	Stopband	Passband	
Max.	Typ.	Min.	Typ.	Typ.	Typ.	Typ.	
DC-490	650	800	880-2500	6000	20	1.2	7

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

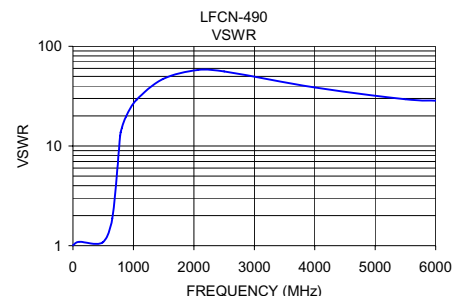
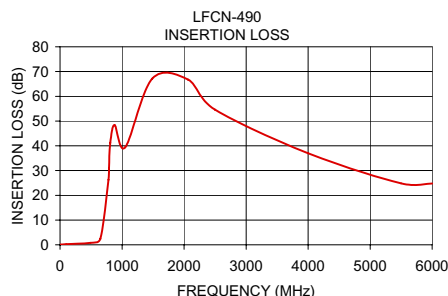


## electrical schematic



## Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.05	1.01
100.00	0.25	1.09
490.00	0.82	1.08
650.00	2.45	1.88
780.00	26.27	12.71
790.00	30.75	13.70
810.00	41.27	15.26
880.00	48.37	19.76
1050.00	39.38	28.96
1485.00	67.14	46.96
2065.00	66.75	57.91
2500.00	54.57	56.04
4000.00	36.98	38.61
5500.00	24.86	29.46
6000.00	24.74	28.49



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

IF/RF MICROWAVE COMPONENTS

REV. G  
M121640  
LFCN-490  
EDR-6588/4  
RVN/AD/CP/AM  
090218