

# Ceramic Low Pass Filter

50Ω DC to 5500 MHz

## LFCN-5500D+



CASE STYLE: FV1206  
PRICE: \$2.49 ea. QTY (20)

### +RoHS Compliant

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

Available Tape and Reel at no extra cost  
Reel Size: 7" Devices/Reel: 20, 50, 100, 200, 500, 1000, 3000

### Maximum Ratings

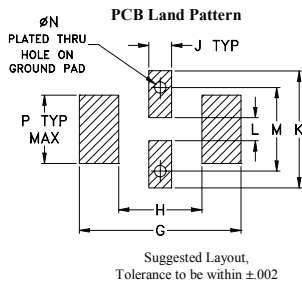
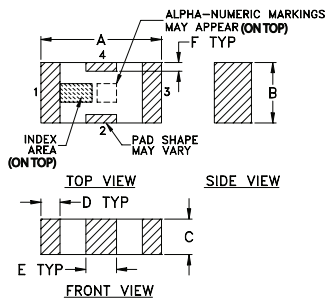
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8W max. at 25°C
Max. DC Voltage at pins 1 & 3	25 VDC
DC Current Input to Output	0.5A max. at 25°C

\* Passband rating, derate linearly to 3W 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



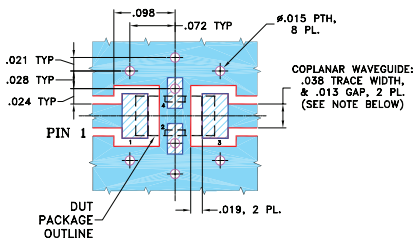
### Outline Dimensions (Inch)

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, 8W
- small size
- 7 sections
- temperature stable
- hermetically sealed
- LTCC construction
- protected by U.S. Patent 6,943,646

### Applications

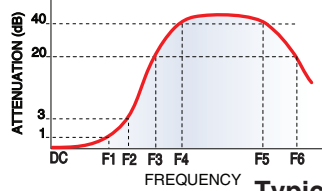
- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

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

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-5500	—	—	2.0	dB
	Freq. Cut-Off	F2	6200	—	3.0	—	dB
	VSWR	DC-F1	DC-5500	—	1.3	—	:1
Stop Band	Rejection Loss	F3	7200	20	—	—	dB
		F4-F5	6770-9500	—	30	—	dB
		F5-F6	9500-12100	—	20	—	dB
VSWR	F3-F6	7200-12100	—	17	—	:1	

1. DC Resistance to ground is 100 Mohms min.  
2. Measured on Mini-Circuits Characterization Test Board TB-270.

### Typical Frequency Response



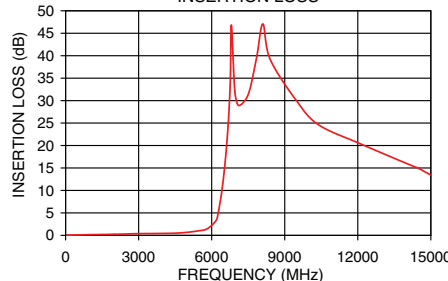
### Electrical Schematic



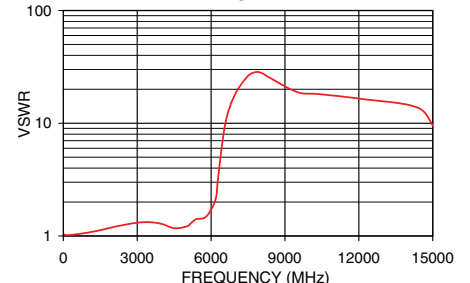
### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (-1)
40	0.02	1.04
500	0.09	1.03
1500	0.20	1.11
3000	0.38	1.36
4800	0.56	1.16
5500	1.09	1.53
6000	1.88	1.32
6200	3.68	1.79
6350	7.44	3.91
6550	16.23	9.63
6700	26.76	13.81
6770	35.64	15.53
7200	28.62	23.49
9500	29.85	19.54
10500	24.08	18.30
12100	20.36	17.22
15000	14.53	9.38

### LFCN-5500D+ INSERTION LOSS



### LFCN-5500D+ VSWR



Notes: A. Dimensions are in inches unless otherwise specified. Dimensions are to be held unless otherwise specified. B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuits' 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)

