

# Ceramic Low Pass Filter

50Ω DC<sup>(1)</sup> to 8400 MHz

## LFCN-8400+



Generic photo used for illustration purposes only  
CASE STYLE: FV1206-4

**+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	Devices/Reel
7"	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

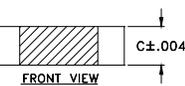
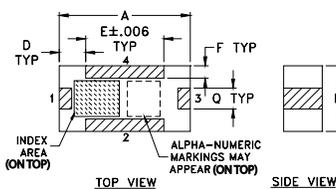
\* Passband rating, derate linearly to 3W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

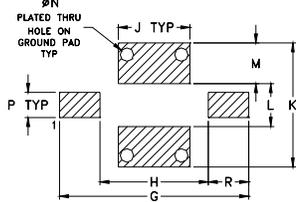
RF IN	1
RF OUT	3
GROUND	2,4

### Product Marking: AG

### Outline Drawing



### PCB Land Pattern

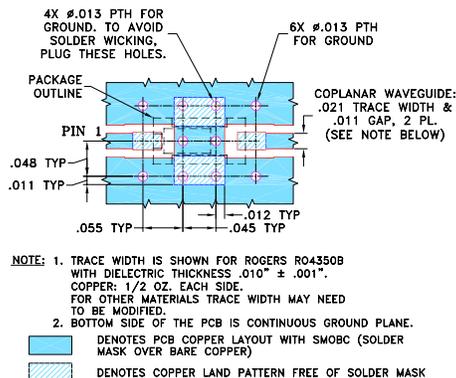


Suggested Layout,  
Tolerance to be within ±.002

### Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J
.126	.063	.037	.026	.075	.012	.182	.104	.069
3.20	1.60	0.94	0.66	1.91	0.30	4.62	2.64	1.75
K	L	M	N	P	Q	R	wt	
.119	.041	.039	.013	.024	.020	.039	grams	
3.02	1.04	0.99	0.33	0.61	0.51	0.99	.020	

### Demo Board MCL P/N: TB-618+ Suggested PCB Layout (PL-363)



### 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

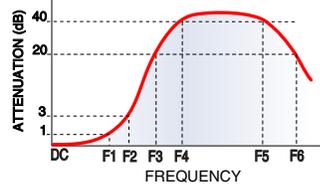
### Electrical Specifications<sup>(1,2)</sup> at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-8400	—	—	1.6	dB
	Freq. Cut-Off	F2	9100	—	3.0	—	dB
	VSWR	DC-F1	DC-8400	—	1.6	—	:1
Stop Band	Rejection Loss	F3	10300	20	—	—	dB
	VSWR	F4-F5	10300-15000	—	30	—	dB
		F3-F6	10300-15000	—	17	—	:1

(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

(2) Measured on Mini-Circuits Characterization Test Board TB-618+.

### Typical Frequency Response

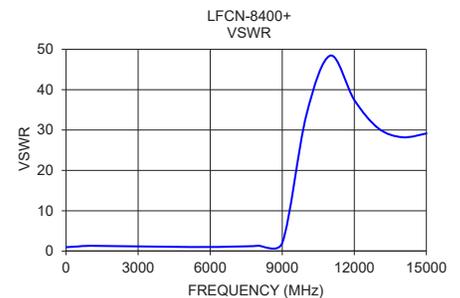
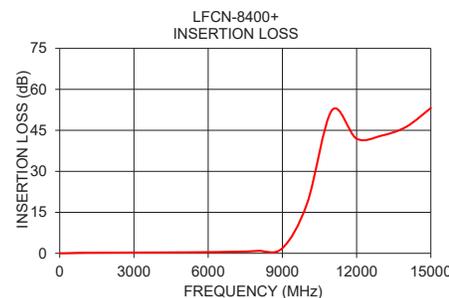


### Electrical Schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.07	1.01
50	0.03	1.01
100	0.03	1.03
500	0.11	1.17
1000	0.21	1.34
5200	0.38	1.03
7000	0.58	1.15
8000	0.89	1.34
9000	1.89	2.08
10000	18.30	33.66
11000	52.31	48.44
12000	41.95	37.44
13000	43.04	30.42
14000	46.26	28.21
15000	53.19	29.16



### Notes

- Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
- Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's applicable established test performance criteria and measurement instructions.
- 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)

