

Ceramic Low Pass Filter

50Ω DC⁽¹⁾ to 8400 MHz

LFCN-8400+



CASE STYLE: FV1206-4
PRICE: \$1.99 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 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

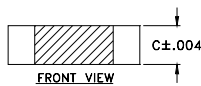
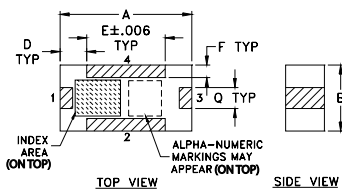
* Passband rating, derate linearly to 3W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

Pin Connections

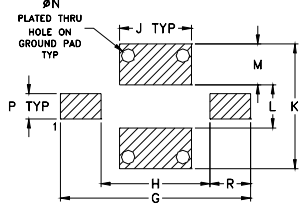
RF IN	1
RF OUT	3
GROUND	2,4

Product Marking: AG

Outline Drawing



PCB Land Pattern



Suggested Layout, Tolerance to be within ±0.02

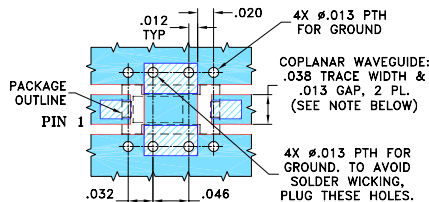
Outline Dimensions (inch)

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-518

Suggested PCB Layout (PL-305)



NOTE: 1. TRACE WIDTH IS SHOWN FOR ROGERS RO4350B 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 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

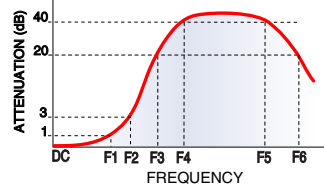
Electrical Specifications^(1,2) at 25°C

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

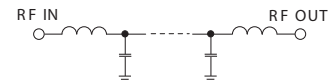
(1) In Application where DC voltage is present at either input or output ports, coupling capacitors are required.

(2) Measured on Mini-Circuits Characterization Test Board TB-518.

Typical Frequency Response

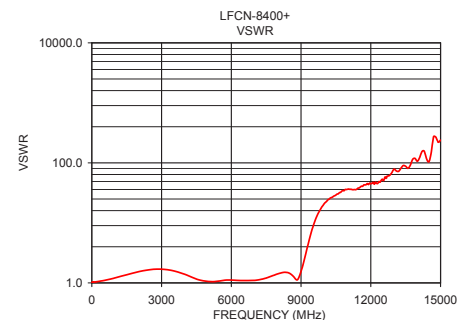
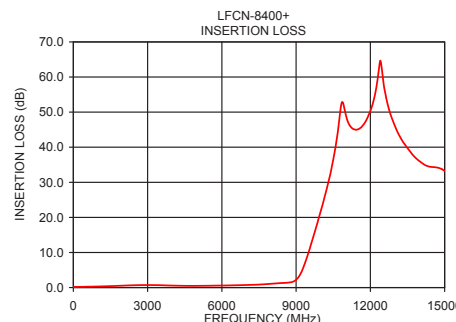


Electrical Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10.00	0.14	1.02
50.00	0.17	1.03
100.00	0.18	1.03
500.00	0.23	1.09
1000.00	0.31	1.21
5200.00	0.50	1.05
7000.00	0.73	1.10
8000.00	1.08	1.41
9000.00	2.21	1.56
10000.00	21.91	20.99
11000.00	49.41	36.32
12000.00	50.31	44.88
13000.00	45.91	78.66
14000.00	35.94	106.50
15000.00	33.24	239.10



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

