

Ceramic Low Pass Filter

50Ω DC⁽¹⁾ to 120 MHz

LFCN-120+



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

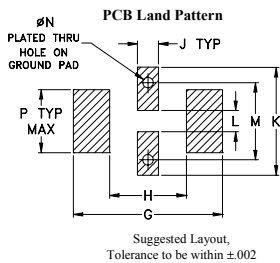
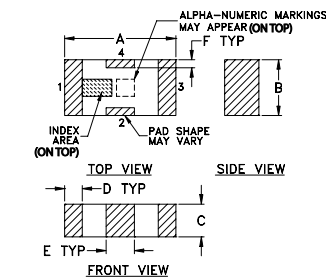
* Passband rating, derate linearly to 3.5W at 100°C ambient. Permanent damage may occur if any of these limits are exceeded.

Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

Product Marking: BS

Outline Drawing

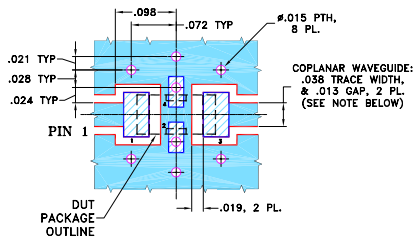


Outline Dimensions (inch)

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.

Notes

A. 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.
 B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit's 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

Features

- excellent power handling, 8.5W
- small size
- 7 sections
- temperature stable
- LTCC construction
- protected by U.S. Patent 6,943,646

Applications

- harmonic rejection
- VHF/UHF transmitters/receivers

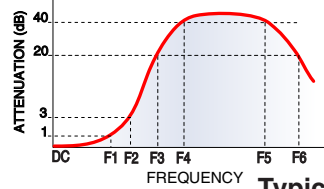
Electrical Specifications^(1,2) at 25°C

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-120	—	—	1.0	dB
	Freq. Cut-Off	F2	195	—	3.0	—	dB
	VSWR	DC-F1	DC-120	—	1.2	—	:1
Stop Band	Rejection Loss	F3	280	20	—	—	dB
		F4-F5	300-1850	—	40	—	dB
		F6	4750	—	20	—	dB
	VSWR	F3-F6	280-4750	—	20	—	: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-270.

Typical Frequency Response



Electrical Schematic



Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.13	1.04
100.00	0.68	1.10
120.00	0.83	1.08
135.00	0.96	1.08
195.00	2.89	1.73
270.00	32.22	4.45
280.00	41.07	4.55
285.00	44.02	4.61
300.00	47.56	4.86
920.00	65.79	78.97
1100.00	54.38	78.97
1850.00	48.59	78.97
2000.00	44.58	75.53
4000.00	27.36	62.05
4750.00	25.27	48.26

