Ceramic

Low Pass Filter

LFCN-190+

50Ω DC[1] to 190 MHz

CASE STYLE: FV1206

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

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

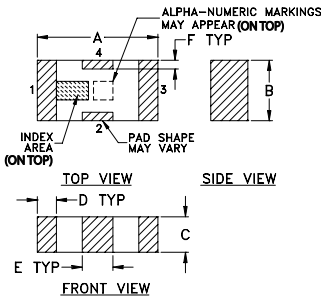
+RoHS Compliant

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

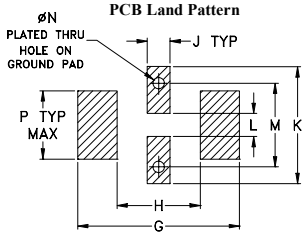
Available Tape and Reel at no extra cost

Reel Size	Devices/Reel
7"	20, 50, 100, 200, 500,1000, 3000

Outline Drawing



PCB Land Pattern



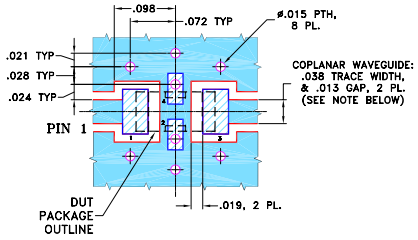
Suggested Layout,
Tolerance to be within ±.002

Outline Dimensions (inch / mm)

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)



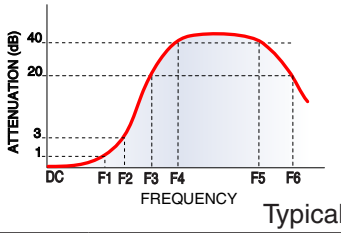
NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Electrical Specifications[1,2] at 25°C

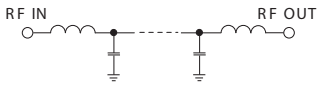
Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-190	—	—	1.0	dB
	Freq. Cut-Off	F2	280	—	3.0	—	dB
	VSWR	DC-F1	DC-190	—	1.2	—	:1
Stop Band	Rejection Loss	F3-F4	400-510	20	—	—	dB
		F4-F5	510-2850	—	40	—	dB
		F5-F6	2850-6550	—	20	—	dB
	VSWR	F3-F6	400-6550	—	17	—	:1

(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-270.

Typical Frequency Response



Electrical Schematic

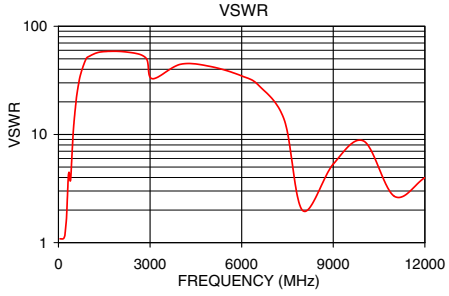


Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
40	0.27	1.09
100	0.47	1.08
170	0.73	1.09
190	0.85	1.12
250	1.66	1.46
280	3.17	2.13
310	6.90	3.47
340	13.56	4.48
375	25.53	3.86
400	36.91	3.86
510	40.53	12.89
850	58.06	46.96
1500	41.31	56.04
2850	41.87	49.64
6550	20.11	28.49
9000	30.37	5.31
12000	25.01	3.99

LFCN-190+
INSERTION LOSS

LFCN-190+
VSWR



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