



CERAMIC

Low Pass Filter

LFCN-80

Mini-Circuits

50Ω DC¹ to 80 MHz

FEATURES

- Excellent power handling, 8.5W
- Small size
- 7 sections
- Temperature stable
- LTCC construction
- Protected by U.S Patent 6,943,646



Generic photo used for illustration purposes only

CASE STYLE: FV1206

+RoHS Compliant
 The +Suffix identifies RoHS Compliance.
 See our website for methodologies and qualifications

APPLICATIONS

- Harmonic rejection
- VHF/UHF transmitters/receivers

ELECTRICAL SPECIFICATIONS^{1,2} AT 25°C

Parameter		F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Insertion Loss	DC-F1	DC-80	—	—	1.0	dB
	Freq. Cut-Off	F2	145	—	3.0	—	dB
	VSWR	DC-F1	DC-80	—	1.2	—	:1
Stop Band	Rejection Loss	F3	200	20	—	—	—
		F4-F5	225-1550	—	40	—	dB
	VSWR	F6	4500	—	20	—	—
		F3-F6	200-4500	—	20	—	:1

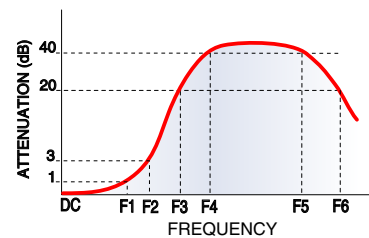
1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required.
 2. Measured on Mini-Circuits Characterization Test Board TB-270.

MAXIMUM RATINGS

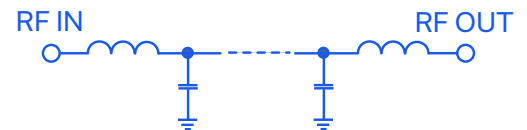
Parameter	Ratings
Operating temperature	-55°C to 100°C
Storage temperature	-55°C to 100°C
RF Power Input ³	8.5 W max. at 25°C

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. L
 ECO-023234
 LFCN-80
 MCL NY
 241010





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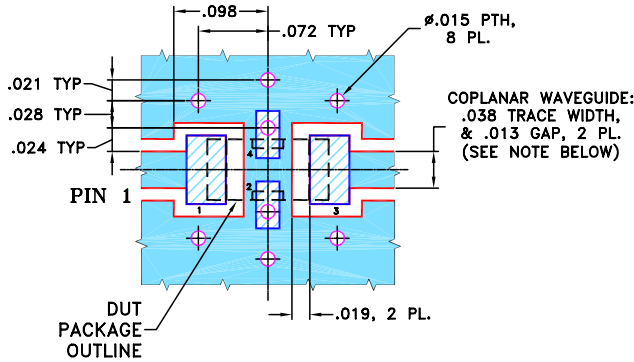
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PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: MR

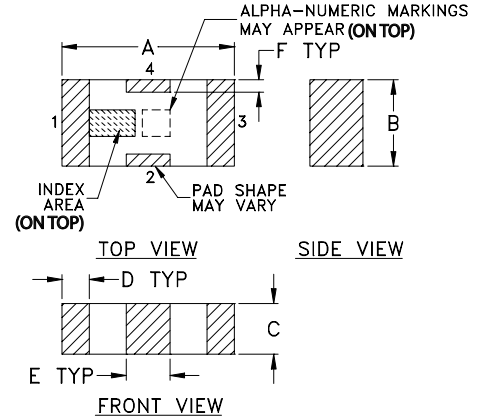
DEMO BOARD MCL P/N: TB-270
SUGGESTED PCB LAYOUT (PL-137)



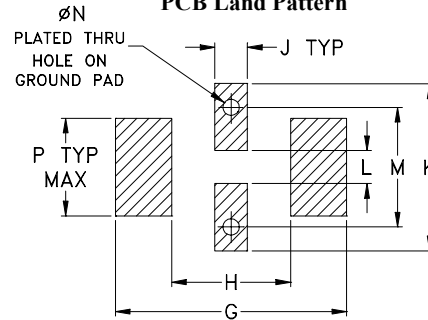
- NOTES:**
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015".
COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
- DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

OUTLINE DRAWING



PCB Land Pattern



Suggested Layout,
Tolerance to be within ±.002

OUTLINE DIMENSIONS (Inches 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

TAPE & REEL INFORMATION: F71



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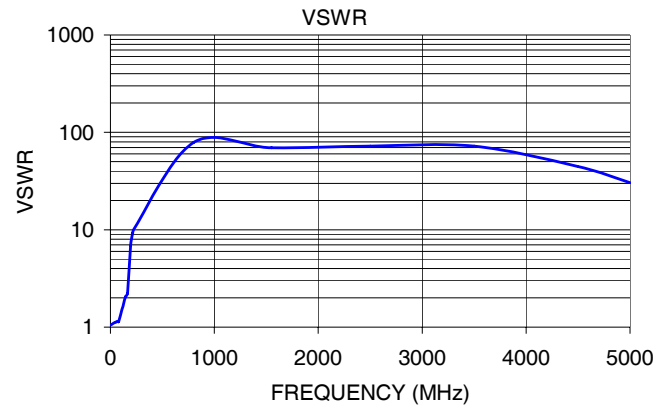
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TYPICAL PERFORMANCE DATA AT 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1.00	0.22	1.05
50.00	0.55	1.12
70.00	0.71	1.14
80.00	0.80	1.14
145.00	2.99	2.04
165.00	5.76	2.22
195.00	32.37	6.86
215.00	40.63	9.23
230.00	42.19	10.31
800.00	46.02	78.97
1550.00	43.17	69.49
2500.00	32.98	72.39
3500.00	30.05	72.39
4500.00	25.72	44.55
5000.00	24.34	30.49



- 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/terms/viewterm.html

