



Mini-Circuits

CERAMIC

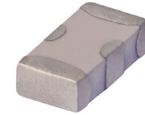
Low Pass Filter

LFCN-2000AT+

50Ω DC¹ to 2000 MHz

FEATURES

- Excellent power handling, 9W
- Small size
- 5 sections
- Temperature stable
- LTCC construction
- AEC-Q200 qualified component family



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

- Automotive

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

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Insertion Loss	DC-F1	DC-2000	—	1.5	dB
	Freq. Cut-Off	F2	2275	3.0	—	dB
	VSWR	DC-F1	DC-2000	1.3	—	:1
Stop Band	Rejection Loss	F3	3000	20	—	dB
		F4-F5	3100-3500	30	—	
		F6	4600	20	—	
	VSWR	F3-F6	3000-4650	20	—	:1

1. In Applications where DC isolation to ground is required, coupling capacitors are recommended to avoid DC leakage. Alternatively, if DC pass IN-OUT is required, Mini-Circuits' "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.

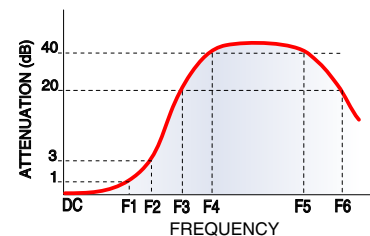
2. Electrical performance measured on TB-270 using LFCN-2000+

ABSOLUTE MAXIMUM RATINGS

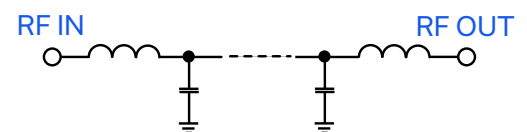
Parameter	Ratings
Operating Temperature	-40 to +105 °C
Storage Temperature	-40 to +105 °C
RF Power Input ³	9 W max. at +25°C

3. Passband rating, derate linearly to 4W at +105°C ambient.
Permanent damage may occur if any of these limits are exceeded.

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



Mini-Circuits

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REV. OR
NPO-005311
LFCN-2000AT+
MCL NY
250603

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PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: ZF

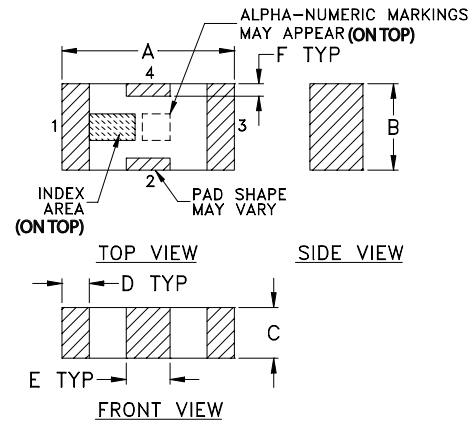
DEMO BOARD MCL P/N: TB-270
SUGGESTED PCB LAYOUT (PL-137)

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.

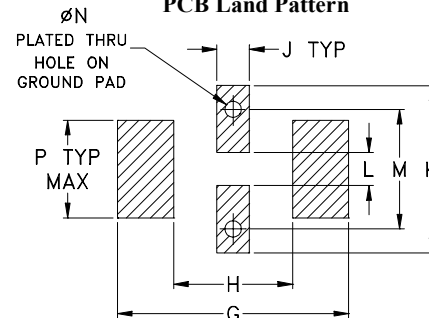
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

 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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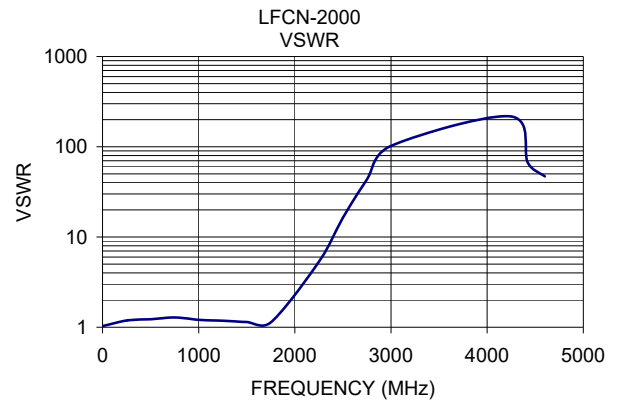
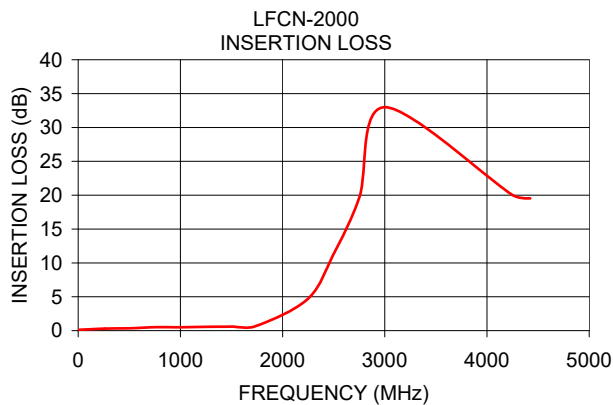
LFCN-2000AT+

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50Ω DC¹ to 2000 MHz

TYPICAL PERFORMANCE DATA AT 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10.00	0.14	1.04
258.75	0.30	1.19
507.50	0.35	1.23
756.25	0.51	1.28
1005.00	0.49	1.21
1253.75	0.56	1.18
1502.50	0.60	1.14
1751.25	0.74	1.13
2250.00	4.73	5.33
2500.00	11.34	16.41
2750.00	19.65	43.44
3000.00	32.99	102.19
4244.00	20.09	217.15
4422.00	19.52	66.82
4600.00	20.32	46.96



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

