



Mini-Circuits®

CERAMIC

Low Pass Filter

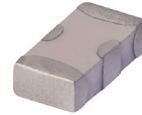
50Ω

DC¹ to 2200 MHz

LFCN-2250AT+

FEATURES

- Excellent power handling, 10W
- Small size
- 7 sections
- Temperature stable
- LTCC construction
- Protected by U.S Patent 6,943,646
- 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	—	—	1.2	dB
	Freq. Cut-Off	F2*	—	3.0	—	dB
	VSWR	DC-F1	—	1.2	—	:1
Stop Band	Rejection Loss	F3	20	—	—	dB
		F4-F5	—	30	—	
		F6	—	20	—	
	VSWR	F3-F6	—	20	—	:1

1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required. 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-2250+

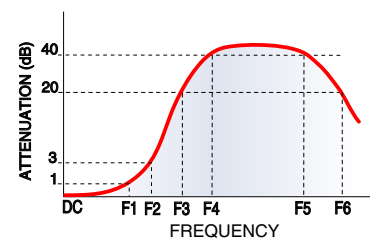
* Typically, a ±5% frequency deviation from the stated value may occur on a unit-to-unit basis.

ABSOLUTE MAXIMUM RATINGS

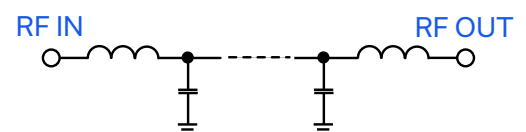
Parameter	Ratings
Operating temperature	-40 to +105 °C
Storage temperature	-40 to +105 °C
RF Power Input ³	10 W max. at +25°C

3. Passband rating, derate linearly to 3.5W at +105°C ambient.
Permanent damage may occur if any of these limits are exceeded.

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. OR
NPO-005311
LFCN-2250AT+
MCL NY
250603





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PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: MV

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

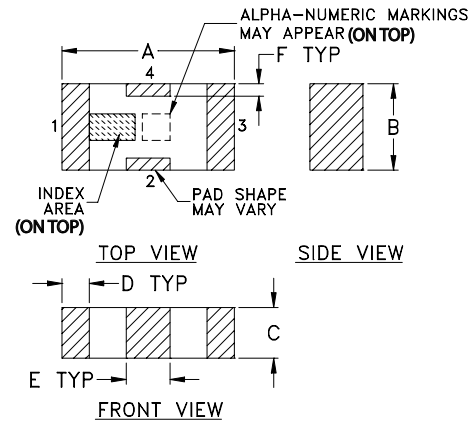


NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015".
COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

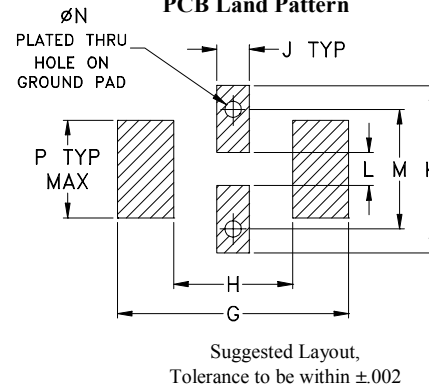
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

- 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



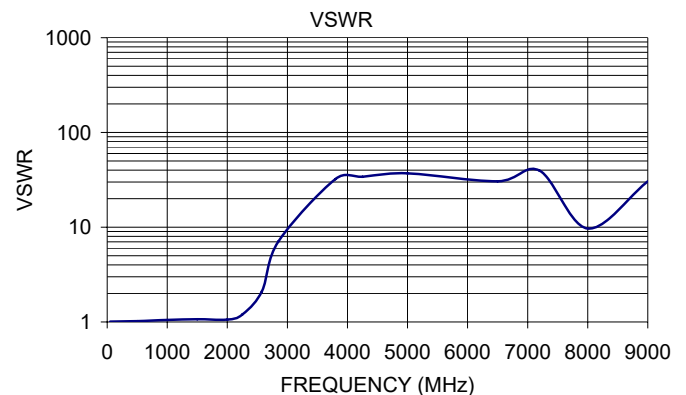
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TYPICAL PERFORMANCE DATA AT +25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50.00	0.06	1.01
500.00	0.11	1.02
1000.00	0.15	1.05
1500.00	0.33	1.07
2000.00	0.51	1.06
2250.00	0.82	1.20
2575.00	2.84	2.10
2850.00	24.55	7.08
3800.00	48.40	32.18
4250.00	37.39	34.07
5000.00	33.16	36.97
6500.00	37.38	30.49
7200.00	30.64	39.49
8000.00	7.60	9.69
9000.00	14.79	30.49



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

