



Mini-Circuits®

CERAMIC

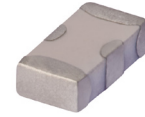
Low Pass Filter

LFCN-1500AT+

50Ω DC¹ to 1500 MHz

FEATURES

- Excellent power handling, 10 W
- 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	DC-1500	—	1.0	dB
	Freq. Cut-Off	F2	1825	3.0	—	dB
	VSWR	DC-F1	DC-1500	1.2	—	:1
Stop Band	Rejection Loss	F3	2100	20	—	dB
		F4-F5	2150-6600	—	30	
		F6	6800	20	—	
		VSWR	F3-F6	2100-6800	20	

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.

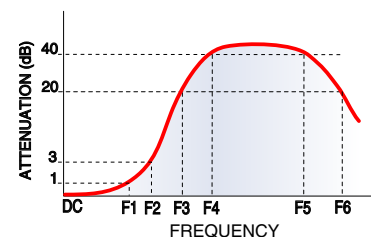
2. Electrical performance measured on TB-270 using LFCN-1500+

ABSOLUTE MAXIMUM RATINGS

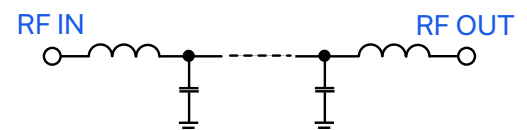
Parameter	Ratings
Operating temperature	-40 to +105 °C
Storage temperature	-40 to +105 °C
RF Power Input ³	10 W max. at +25°C

3. Passband rating, derate linearly to 3.5 W 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
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MCL NY
250603

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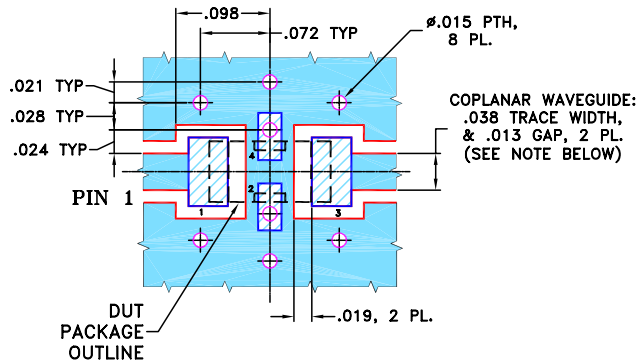
50Ω DC¹ to 1500 MHz

PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: XH

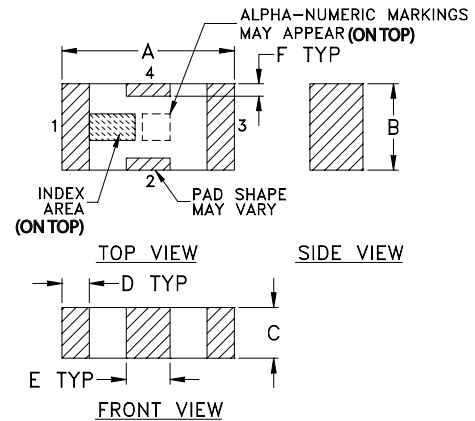
DEMO BOARD MCL P/N: TB-270
SUGGESTED PCB LAYOUT (PL-137)



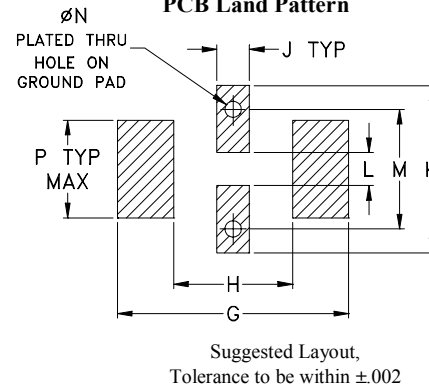
NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015".
COPPER: 1/2 OZ. EACH SIDE.
FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

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



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



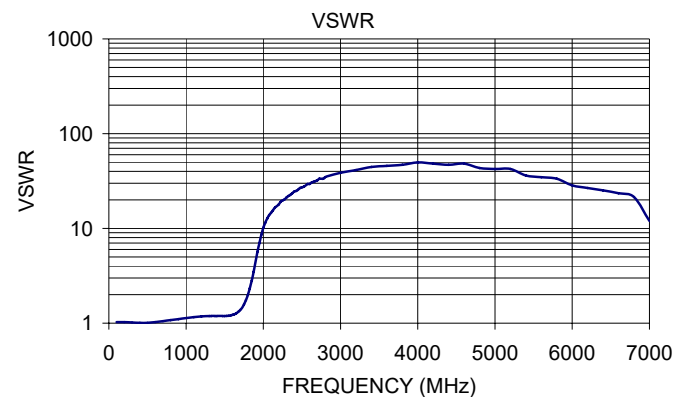
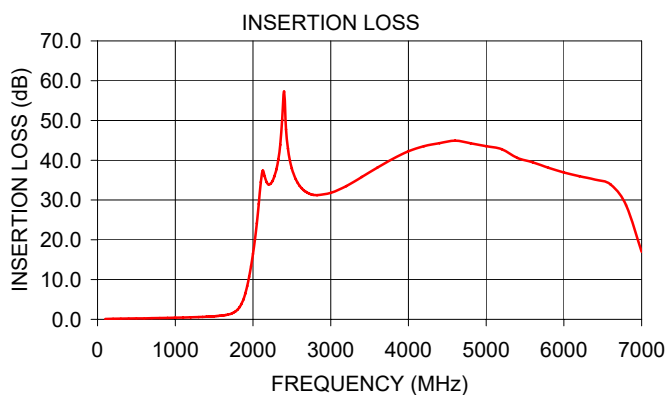
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TYPICAL PERFORMANCE DATA AT +25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
100.00	0.09	1.03
1000.00	0.41	1.13
1500.00	0.77	1.19
1700.00	1.31	1.38
1825.00	2.99	2.33
2000.00	16.47	10.13
2100.00	34.49	14.62
2150.00	35.94	16.56
2500.00	37.94	27.16
3000.00	31.80	38.61
4000.00	42.25	49.64
5000.00	43.54	42.38
6000.00	36.93	28.49
6800.00	28.71	21.46
7000.00	16.97	12.01



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

