



Mini-Circuits®

CERAMIC

Low Pass Filter

LFCN-1700+

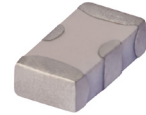
50Ω DC¹ to 1700 MHz

FEATURES

- Excellent power handling, 10W
- Small size
- 7 sections
- Temperature stable
- LTCC construction
- Protected by U.S Patent 6,943,646

APPLICATIONS

- Harmonic rejection
- VHF/UHF transmitters/receivers
- Lab use



Generic photo used for illustration purposes only

CASE STYLE: FV1206

+RoHS Compliant

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

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

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Units
Passband	Insertion Loss	DC-F1	DC-1700	—	1.2	dB
	Freq. Cut-Off	F2	2050	3.0	—	dB
	VSWR	DC-F1	DC-1700	1.2	—	:1
Stop Band	Rejection Loss	F3	2375	—	—	dB
		F4-F5	2500-6500	30	—	
	VSWR	F6	7000	20	—	:1
		F3-F6	2375-7000	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.

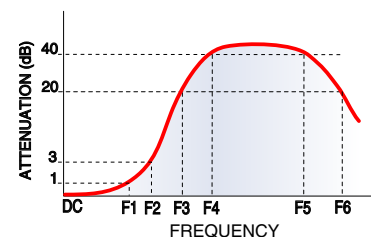
2. Measured on Mini-Circuits Characterization Test Board TB-270.

ABSOLUTE MAXIMUM RATINGS

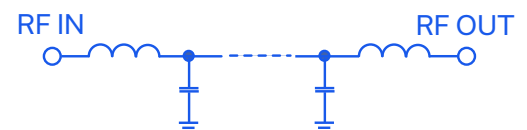
Parameter	Ratings
Operating temperature	-55°C to 100°C
Storage temperature	-55°C to 100°C
RF Power Input ³	10 W max. at 25°C

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



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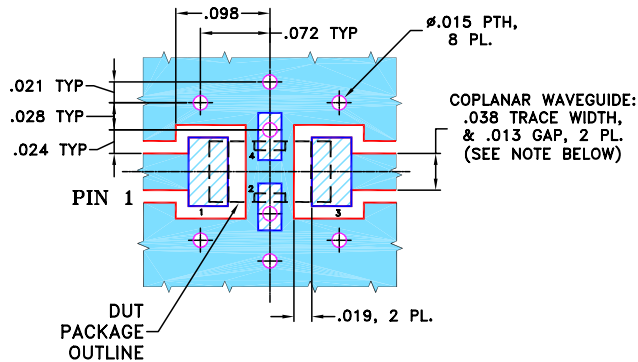
LFCN-1700+

PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: ZT

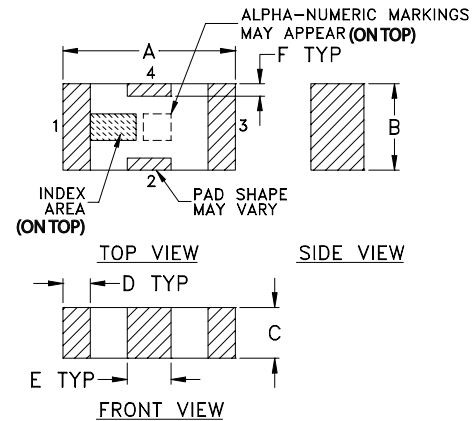
DEMO BOARD MCL P/N: TB-270
SUGGESTED PCB LAYOUT (PL-137)



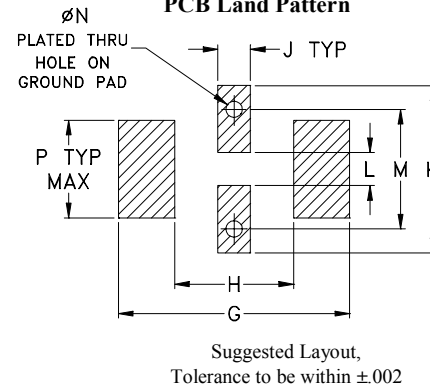
NOTES: 1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015".
 COPPER: 1/2 OZ. EACH SIDE.
 FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

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



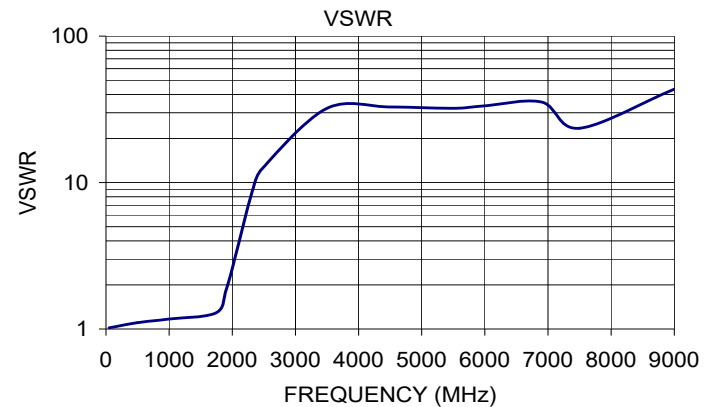
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TYPICAL PERFORMANCE DATA AT 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
50.00	0.13	1.02
500.00	0.20	1.10
1000.00	0.36	1.17
1740.00	0.97	1.29
1900.00	1.85	1.83
2025.00	4.02	2.84
2325.00	35.00	8.99
2500.00	45.69	12.80
3500.00	50.96	32.18
4500.00	45.13	32.79
5500.00	41.41	32.18
6000.00	44.06	33.42
6900.00	22.52	35.46
7500.00	12.82	23.49
9000.00	16.93	43.44



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/terms/viewterm.html



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