



CERAMIC

Low Pass Filter

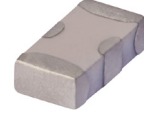
LFCN-190+

Mini-Circuits

50Ω DC¹ to 190 MHz

FEATURES

- Excellent power handling, 8W
- Small size
- 7 sections
- Temperature stable
- Hermetically sealed
- 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
- Lab use

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

Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Units	
Passband	Insertion Loss	DC-F1	DC-190	—	—	1.0	dB
	Freq. Cut-Off	F2	280	—	3.0	—	dB
	VSWR	DC-F1	DC-190	—	1.2	—	:1
Stop Band	Rejection Loss	F3-F4	400-510	20	—	—	—
		F4-F5	510-2850	—	40	—	dB
	VSWR	F5-F6	2850-6550	—	20	—	—
		F3-F6	400-6550	—	17	—	:1

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

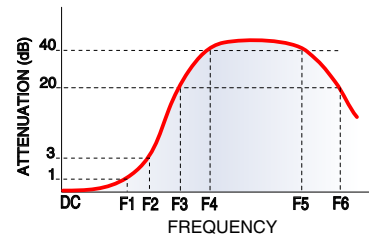
2. Measured on Mini-Circuits Characterization Test Board TB-270.

ABSOLUTE MAXIMUM RATINGS

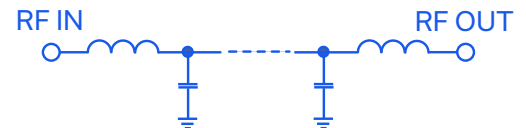
Parameter	Ratings
Operating temperature	-55°C to 100°C
Storage temperature	-55°C to 100°C
RF Power Input ³	8 W max. at 25°C

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. F
ECO-023234
LFCN-190+
MCL NY
241010





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PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: RA

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



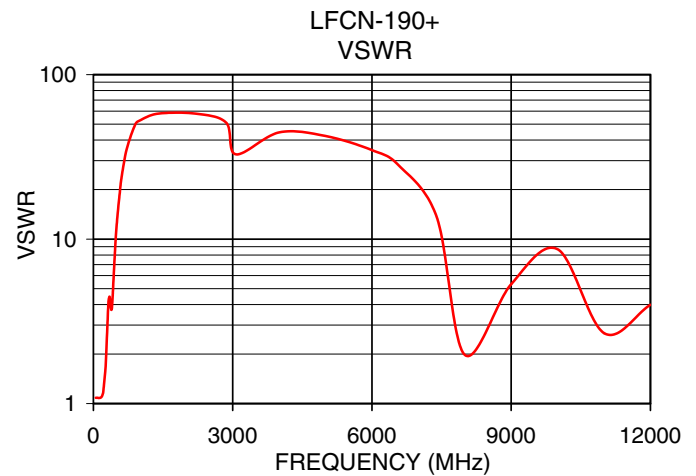
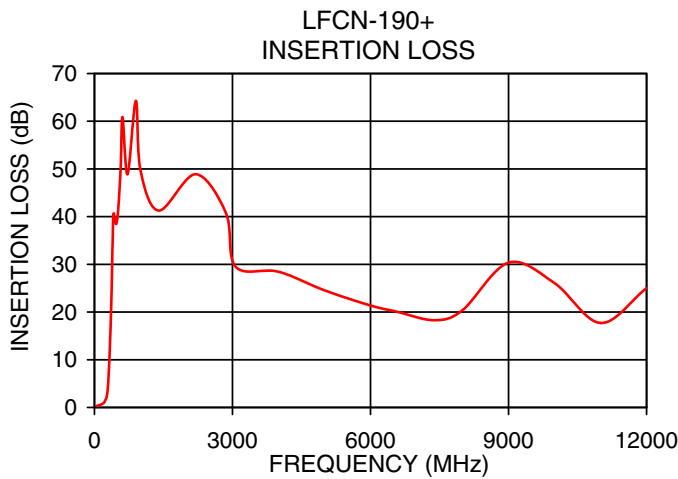
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TYPICAL PERFORMANCE DATA AT 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
40	0.27	1.09
100	0.47	1.08
170	0.73	1.09
190	0.85	1.12
250	1.66	1.46
280	3.17	2.13
310	6.90	3.47
340	13.56	4.48
375	25.53	3.86
400	36.91	3.86
510	40.53	12.89
850	58.06	46.96
1500	41.31	56.04
2850	41.87	49.64
6550	20.11	28.49
9000	30.37	5.31
12000	25.01	3.99



- 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

