CERAMIC

Low Pass Filter

LFCN-490+

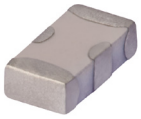
50Ω DC[1] to 490 MHz

FEATURES

- Excellent power handling, 8.5 W
- Small size
- 7 sections
- Temperature stable
- LTCC construction
- Protected by U.S Patent 6,943,646

APPLICATIONS

- Harmonic rejection
- VHF/UHF transmitters/receivers



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-490	—	—	1.2	dB
	Freq. Cut-Off	F2	650	—	3.0	—	dB
	VSWR	DC-F1	DC-490	—	1.2	—	:1
Stopband	Rejection Loss	F3	800	20	—	—	dB
		F4-F5	880-2500	—	40	—	
		F6	6000	—	20	—	
	VSWR	F3-F6	800-6000	—	20	—	:1

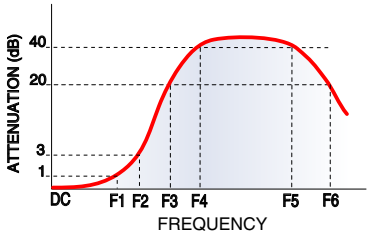
1. In Applications where DC isolation to ground is required, coupling capacitors are recommended to avoid DC leakage. Alternatively, if DC pass IN-OUT is required, Mini-Circuits' "D" suffix version of this model will support DC IN-OUT, and provide >100 MOhm isolation to ground.
2. Measured on Mini-Circuits Characterization Test Board TB-LFCN-490+.

ABSOLUTE MAXIMUM RATINGS

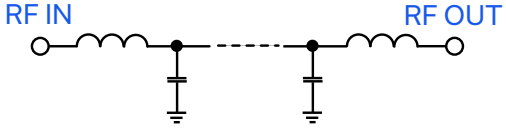
Parameter	Ratings
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input[3]	8.5 W max. at +25°C

3. Passband rating, derate linearly to 3.5 W at +100°C ambient.
Permanent damage may occur if any of these limits are exceeded.

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. N
ECO-026186
LFCN-490+
MCL NY
250710

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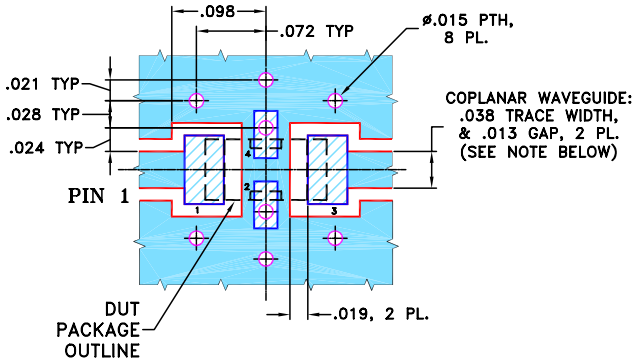
PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: ZE

DEMO BOARD MCL P/N: TB-LFCN-490+

SUGGESTED PCB LAYOUT (PL-137)

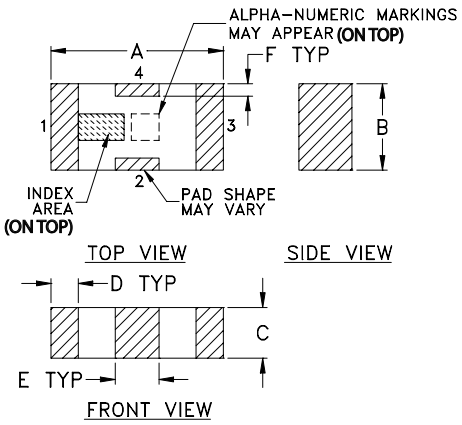


NOTES:
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

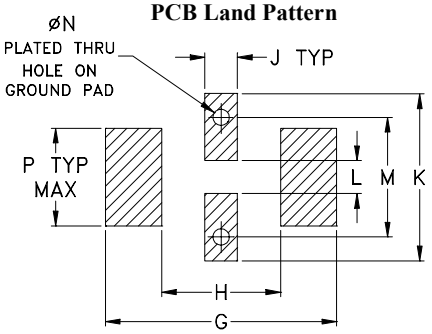
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

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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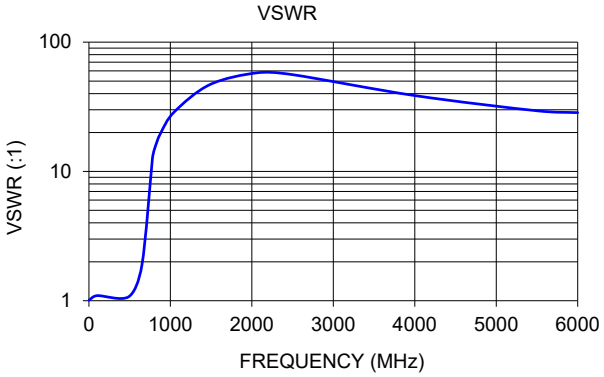
TYPICAL PERFORMANCE DATA AT +25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1	0.05	1.01
100	0.25	1.09
490	0.82	1.08
650	2.45	1.88
780	26.27	12.71
790	30.75	13.70
810	41.27	15.26
880	48.37	19.76
1050	39.38	28.96
1485	67.14	46.96
2065	66.75	57.91
2500	54.57	56.04
4000	36.98	38.61
5500	24.86	29.46
6000	24.74	28.49



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