CERAMIC

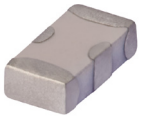
Low Pass Filter

LFCN-2290+

50Ω DC[1] to 2290 MHz

FEATURES

- Excellent Power Handling, 10 W
- Small Size
- 7 Sections
- Temperature Stable
- 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-2290		0.9	1.5	dB
	Freq. Cut-Off	F2	2590		3.0		dB
	VSWR	DC-F1	DC-2290		1.3		:1
Stopband	Rejection Loss	F3-F5	3110-8000	20	29		dB
		F4-F5	3500-8000	26	40		
	VSWR	F3-F5	3110-8000		25		:1

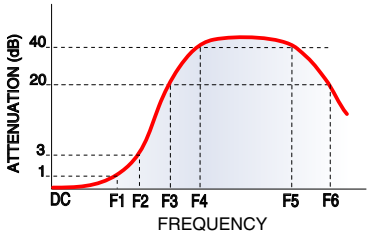
1. In Application where DC voltage is present at either input or output ports, coupling capacitors are required.
2. Measured on Mini-Circuits Characterization Test Board TB-LFCN-2290+.

ABSOLUTE MAXIMUM RATINGS

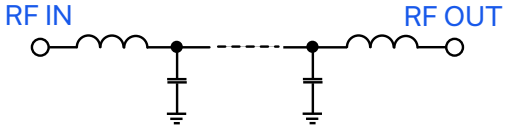
Parameter	Ratings
Operating Temperature	-55°C to +100°C
Storage Temperature	-55°C to +100°C
RF Power Input[3]	10 W max. at +25°C

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

TYPICAL FREQUENCY RESPONSE



FUNCTIONAL SCHEMATIC



REV. A
ECO-011696
LFCN-2290+
MCL NY
250729

CERAMIC

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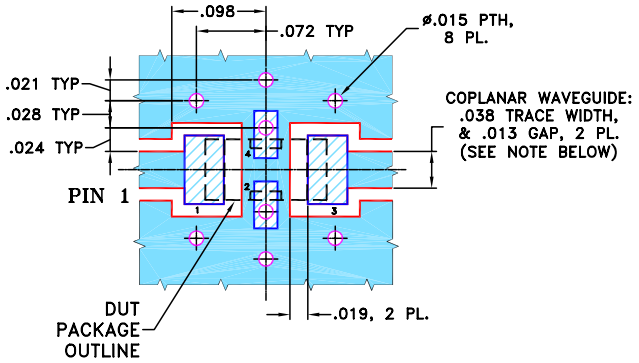
PIN CONNECTIONS

RF IN	1
RF OUT	3
GROUND	2,4

PRODUCT MARKING: GU

DEMO BOARD MCL P/N: TB-LFCN-2290+

SUGGESTED PCB LAYOUT (PL-137)

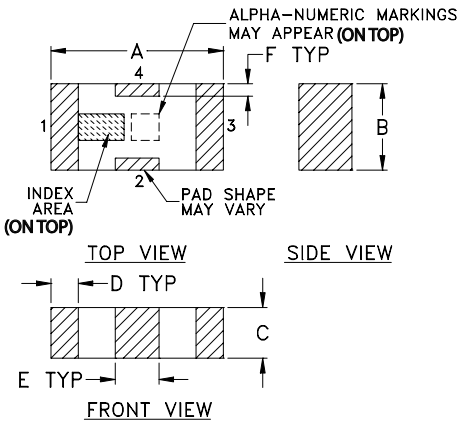


NOTES:
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH THICKNESS .020" ± .0015". COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.
2. BOTTOM SIDE OF THE PCB IS CONTINUOUS GROUND PLANE.

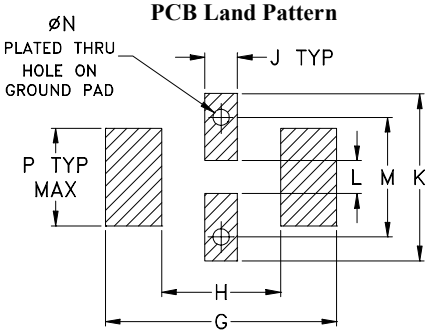
DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)

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

CERAMIC

Low Pass Filter

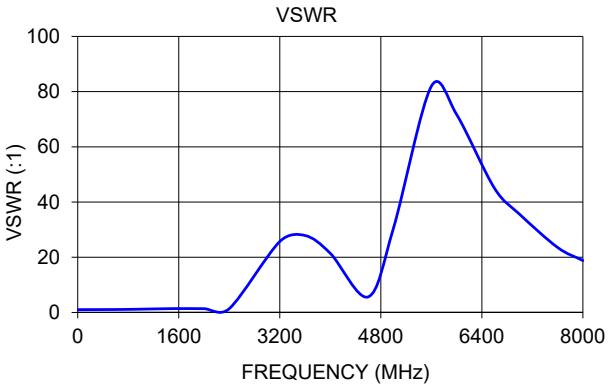
LFCN-2290+

50Ω DC[1] to 2290 MHz

TYPICAL PERFORMANCE DATA AT +25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
1	0.10	1.02
10	0.14	1.01
100	0.22	1.03
500	0.31	1.06
900	0.39	1.15
2000	0.82	1.37
2400	1.30	1.38
2600	3.56	2.74
3200	28.72	25.70
3600	55.21	27.88
4600	52.08	5.64
5000	49.40	30.52
6000	40.18	71.73
6600	36.50	45.00
7000	33.88	35.53
7600	33.99	23.55
8000	33.69	18.81





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