Ceramic Low Pass Filter

500

DC to 320 MHz

Maximum Ratings

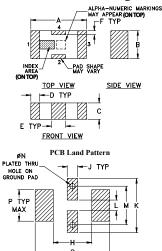
0				
Operating Temperature	-55°C to 100°C			
Storage Temperature	-55°C to 100°C			
RF Power Input*	8.5W max. at 25°C			
Max. DC Voltage at pins 1&3	25 VDC			
DC Current Input to Output	0.5A max. at 25°C			
* Derate linearly to 3.5W at 100°C ambient.				

Permanent damage may occur if any of these limits are exceeded.

Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

Outline Drawing

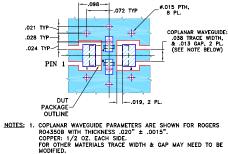


Suggested Layout Tolerance to be within ±.002

Outline Dimensions (inch)

	G	F	E	D	С	В	Α
	.169	.009	.032	.020	.037	.063	.126
	4.29	0.23	0.81	0.51	0.94	1.60	3.20
wt	P	N	Μ	L	K	J	н
grams	.071	.012	.087	.024	.122	.024	.087
.020	1.80	0.30	2.21	0.61	3.10	0.61	2.21

Demo Board MCL P/N: TB-270 Suggested PCB Layout (PL-137)



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

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 mendes thereunder, please visit Mini-Circuit's website at www.minicircuits.com/MCLStore/terms.jsp

Features

- excellent power handling, 8.5W
- 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 web site for RoHS Compliance methodologies and qualifications

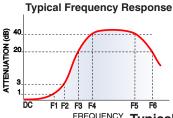


Electrical Specifications^{1,2} at 25°C

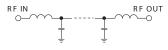
Parameter		F#	Frequency (MHz)	Min.	Тур.	Max.	Unit
	Insertion Loss	DC-F1	DC-320	—	_	1.0	dB
Pass Band	Freq. Cut-Off	F2	460	—	3.0	_	dB
	VSWR	DC-F1	DC-320	—	1.2	_	:1
		F3	610	20	_	_	dB
Cton Dand	Rejection Loss	F4-F5	640-2500	—	30	_	dB
Stop Band		F6	5300	—	20	_	dB
	VSWR	F3-F6	580-5300	—	20	_	:1

(1) DC Resistance to ground is 100 Mohms min.

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



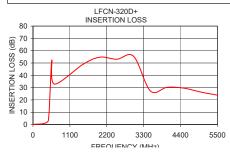
Electrical Schematic

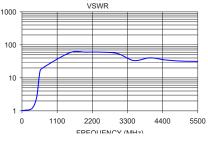


Typical Performance Data at 25°C

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
100.00 0.29 1.05 320.00 0.81 1.20 460.00 3.65 2.59 560.00 51.87 15.13 640.00 32.82 19.76 1500.00 49.10 57.91 2000.00 54.73 59.91 2500.00 53.07 59.91 3000.00 55.47 54.29 3500.00 27.30 33.42 4000.00 29.58 34.75 5000.00 26.42 32.18	1.00	0.11	1.03
320.00 0.81 1.20 460.00 3.65 2.59 560.00 51.87 15.13 640.00 32.82 19.76 1500.00 49.10 57.91 2000.00 54.73 59.91 2500.00 53.07 59.91 3000.00 55.47 54.29 3500.00 27.30 33.42 4000.00 30.27 40.41 4500.00 29.58 34.75 5000.00 26.42 32.18			
560.00 51.87 15.13 640.00 32.82 19.76 1500.00 49.10 57.91 2000.00 54.73 59.91 2500.00 53.07 59.91 3000.00 55.47 54.29 3500.00 27.30 33.42 4000.00 29.58 34.75 5000.00 26.42 32.18			
640.00 32.82 19.76 1500.00 49.10 57.91 2000.00 54.73 59.91 2500.00 53.07 59.91 3000.00 55.47 54.29 3500.00 27.30 33.42 4000.00 29.58 34.75 5000.00 26.42 32.18	460.00	3.65	2.59
1500.00 49.10 57.91 2000.00 54.73 59.91 2500.00 53.07 59.91 3000.00 55.47 54.29 3500.00 27.30 33.42 4000.00 30.27 40.41 4500.00 29.58 34.75 5000.00 26.42 32.18	560.00	51.87	15.13
2000.00 54.73 59.91 2500.00 53.07 59.91 3000.00 55.47 54.29 3500.00 27.30 33.42 4000.00 30.27 40.41 4500.00 29.58 34.75 5000.00 26.42 32.18	640.00	32.82	19.76
2500.00 53.07 59.91 3000.00 55.47 54.29 3500.00 27.30 33.42 4000.00 30.27 40.41 4500.00 29.58 34.75 5000.00 26.42 32.18	1500.00	49.10	57.91
3000.00 55.47 54.29 3500.00 27.30 33.42 4000.00 30.27 40.41 4500.00 29.58 34.75 5000.00 26.42 32.18	2000.00	54.73	59.91
3500.00 27.30 33.42 4000.00 30.27 40.41 4500.00 29.58 34.75 5000.00 26.42 32.18	2500.00	53.07	59.91
4000.0030.2740.414500.0029.5834.755000.0026.4232.18	3000.00	55.47	54.29
4500.0029.5834.755000.0026.4232.18	3500.00	27.30	33.42
5000.00 26.42 32.18	4000.00	30.27	40.41
	4500.00	29.58	34.75
5500.00 23.89 31.60	5000.00	26.42	32.18
	5500.00	23.89	31.60

VSWR





REV. M M151107 LFCN-320D+ EDR-6588/2

RVN/AD/AM 150817

LFCN-320D+

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