# Low Pass Filter

DC<sup>(1)</sup> to 95 MHz 50Q

### **Maximum Ratings**

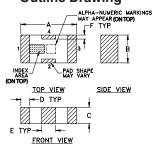
Operating Temperature	-55°C to 100°C		
Storage Temperature	-55°C to 100°C		
RF Power Input*	8.5W max. at 25°C		

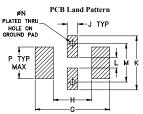
<sup>\*</sup> Passband rating, derate linearly to 3.5W at 100°C ambient Permanent damage may occur if any of these limits are exceeded.

### Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

### Outline Drawing



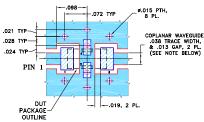


Suggested Layout, Tolerance to be within ±.002

### Outline Dimensions (inch)

	G .169 4.29	F .009 0.23	E .032 0.81	.020 0.51	C .037 0.94	B .063 1.60	A .126 3.20
wt	Р	N	M	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)



COPLANAR WAYEGUIDE PARAMETERS ARE SHOWN FOR ROGERS ROA\$50B WITH THICKNESS .020" ± .0015". COPPER: 1/2 02. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH & GAP MAY NEED TO BE MODIFIED.

DENOTES DESCRIPTION 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

#### **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

### **LFCN-95+**



+RoHS Compliant

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

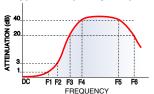


### Electrical Specifications(1,2) at 25°C

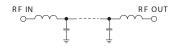
Pa	rameter	F#	Frequency (MHz)	Min.	Тур.	Max.	Unit
	Insertion Loss	DC-F1	DC-95	_	_	1.0	dB
Pass Band	Freq. Cut-Off	F2	165	_	3.0	_	dB
	VSWR	DC-F1	DC-95	_	1.2	_	:1
		F3	240	20	_	_	dB
Stop Band	Rejection Loss	F4-F5	255-1600	_	40	_	dB
Stop Band		F6	4500	_	20	_	dB
	VSWR	F3-F6	240-4500	_	20	_	:1

- (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.

### **Typical Frequency Response**



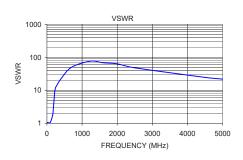
#### **Electrical Schematic**



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)		
40.00				
10.00	0.30	1.06		
95.00	0.83	1.07		
165.00	2.56	1.79		
180.00	4.08	2.58		
220.00	17.29	8.75		
240.00	30.37	11.55		
250.00	36.66	12.43		
410.00	55.58	23.11		
700.00	53.60	50.04		
1235.00	44.98	76.58		
1600.00	39.94	68.40		
2000.00	33.54	63.70		
2500.00	27.39	48.12		
4500.00	20.96	24.63		
5000.00	19.57	21.89		





- 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

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