

Ceramic Low Pass Filter

50Ω DC to 3400 MHz

LFCN-3400D-1+



CASE STYLE: FV1206

Maximum Ratings

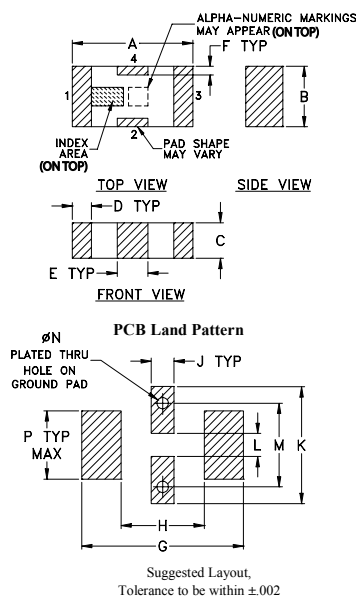
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8W max. at 25°C
Max. DC Voltage at pins 1 & 3	25 VDC
DC Current Input to Output	0.5A max. at 25°C

* Passband rating, derate linearly to 3W 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

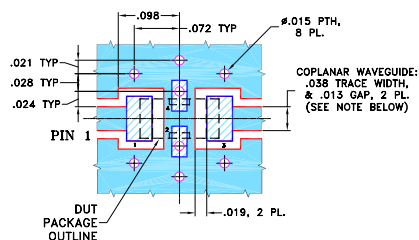
Outline Drawing



Outline Dimensions (inch)

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

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

Features

- excellent power handling, 8W
- small size
- 5 sections
- temperature stable
- hermetically sealed
- LTCC construction
- protected by U.S. Patent 6,943,646

Applications

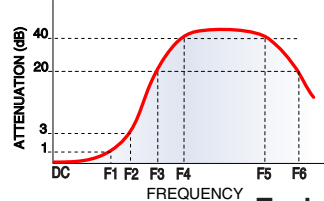
- harmonic rejection
- point to point
- transmitters/receivers

Electrical Specifications¹ at 25°C

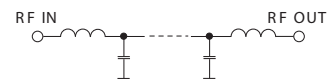
Parameter	F#	Frequency (MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-F1	DC-3400	—	—	1.5 dB
	Freq. Cut-Off	F2	3950	—	3.0	dB
	VSWR	DC-F1	DC-3400	—	1.2	:1
Stop Band	Rejection Loss	F3-F4	4300-4600	20	—	dB
		F4-F5	4600-7800	—	25	dB
		F5-F6	7800-8300	—	20	dB
	VSWR	F3-F6	4300-8300	—	17	:1

1. DC Resistance to ground is 100 Mohms min.

Typical Frequency Response



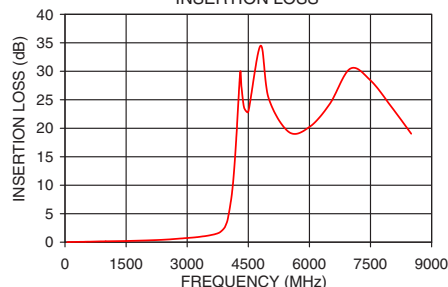
Electrical Schematic



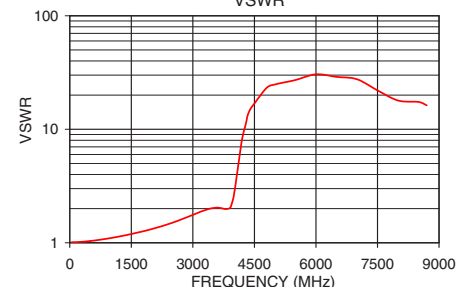
Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
40	0.01	1.01
100	0.03	1.01
500	0.08	1.04
1000	0.15	1.10
2000	0.31	1.32
3000	0.73	1.76
3400	1.03	1.99
3800	1.73	1.98
3950	3.04	2.21
4050	6.01	3.38
4150	12.50	6.26
4300	29.75	11.53
4600	25.02	19.32
5050	23.78	26.33
6500	24.27	28.96
7800	25.25	19.32
8300	21.39	18.11

LFCN-3400D-1+ INSERTION LOSS



LFCN-3400D-1+ VSWR



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