

# Low Pass Filter

## DC to 3800 MHz

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8W at 25°C
DC Current Input to Output	0.5A max. at 25°C

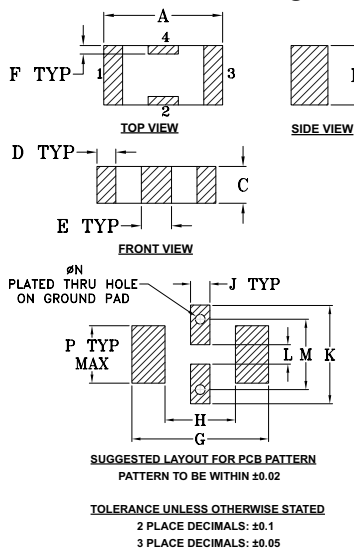
\*Passband rating, derate linearly to 3 W at 100°C ambient

### Pin Connections

RF IN	1**
RF OUT	3**
GROUND	2, 4

\*\*RF IN & RF OUT can be interchanged

### Outline Drawing



### Outline Dimensions (inch/mm)

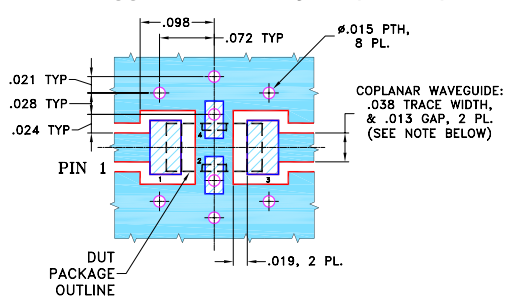
A	B	C	D	E	F	G
.126	.063	.037	.020	.032	.009	.169
3.20	1.60	0.94	0.51	0.81	0.23	4.29

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

### Demo Board MCL P/N: TB-270

### Suggested PCB Layout (PL-137)



**NOTE:** 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
- 7 sections
- temperature stable
- protected by US Patent 6,943,646

### Application

- harmonic rejection
- VHF/UHF transmitters/receivers
- lab use

CASE STYLE: FV1206

Model	Price	Qty.
LFCN-3800+	\$2.99	(10-49)
LFCN-3800	\$2.99	(10-49)
LFCN-3800D+	\$3.49	(10-49)
LFCN-3800D	\$3.49	(10-49)

**+ RoHS compliant in accordance with EU Directive (2002/95/EC)**

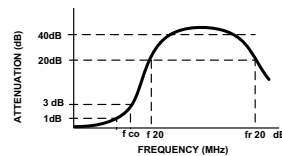
The + suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

### Low Pass Filter Electrical Specifications (T<sub>AMB</sub> = 25°C)

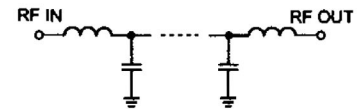
MODEL NO.	PASSBAND (MHz) (loss < 1.5 dB) Max.	f <sub>co</sub> , MHz Nom. (loss 3 dB) Typ.	STOP BAND (MHz) (loss, dB)			VSWR (:1)		NO. OF SECTIONS
			f 20 Min.	30 Typ.	fr 20 Typ.	Stopband Typ.	Passband Typ.	
LFCN-3800(+)	DC-3900	4850	6000	5700-8300	13000	17	1.3	7

1. For Applications requiring DC voltage to be applied to the Input or output, use LFCN-3800D (DC Resistance to ground is 100 Mohms min.)

typical frequency response

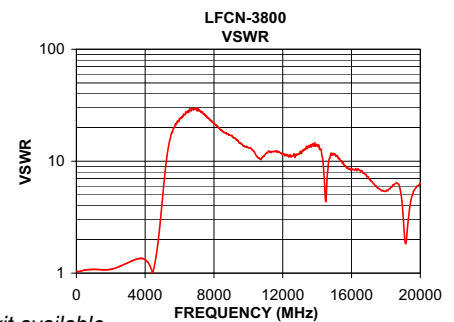
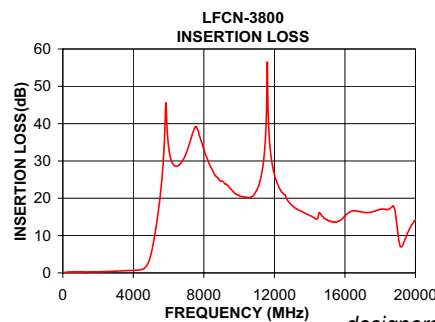


schematic



### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
40	0.06	1.03
1550	0.27	1.07
3060	0.48	1.25
3900	0.66	1.34
4510	0.95	1.11
4760	1.93	1.95
4850	2.76	2.60
4930	3.84	3.48
5120	7.65	7.05
5380	15.30	14.15
5700	30.21	20.22
6000	33.71	23.49
8300	29.24	19.76
13000	18.04	12.09
20000	14.19	6.35



designers kit available

Kit No.	No. of Units in Kit	Description	Price \$ per Kit
K5-LFCN+	65	5 of each: LFCN-2000,-2250,-2400,-2500,-2600,-2750,-2850,-3000,-3800,-4400,-5000,-6000,-6700 (RoHS compliant)	129.95