

# Low Pass Filter

# LFCN-5850+

50Ω DC to 5850 MHz

### Maximum Ratings

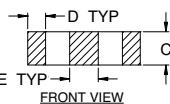
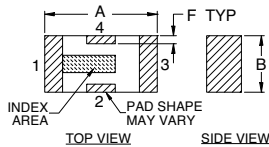
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8W at 25°C
DC Current Input to Output	0.5A max. at 25°C

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

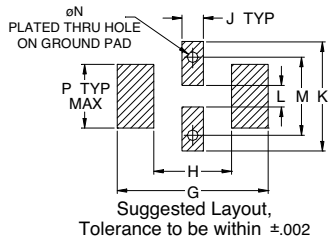
### Pin Connections

RF IN	1
RF OUT	3
GROUND	2, 4

### Outline Drawing



### PCB Land Pattern



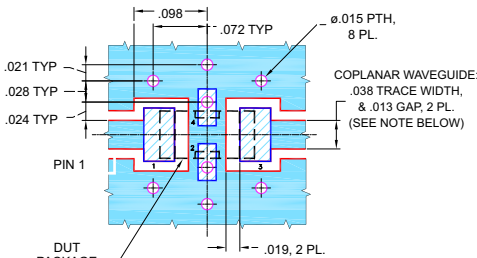
### Outline Dimensions (inch/mm)

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)



NOTES:  
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS R04350B 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

### Applications

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



CASE STYLE: FV1206

Model	Price	Qty.
LFCN-5850+	\$1.99	(10-49)
LFCN-5850D+	\$2.49	(10-49)

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

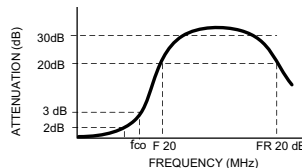
The +Suffix has been added in order to identify RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications.

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

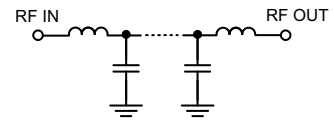
PASSBAND (MHz)	f <sub>co</sub> , MHz Nom.	STOP BAND (MHz) (loss, dB)			VSWR (:1)		NO. OF SECTIONS
		F 20 Min.	30 Typ.	FR 20 Typ.	Stopband Typ.	Passband Typ.	
DC - 5850	6540	7600	7100 - 9900	12500	17	1.3	7

1. For Applications requiring DC voltage to be applied to the Input or output, use LFCN-5850D+ (DC Resistance to ground is 100 Mohms min.)

### typical frequency response



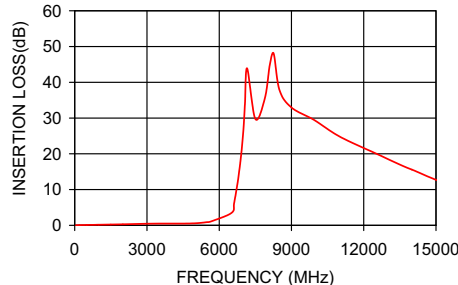
### schematic



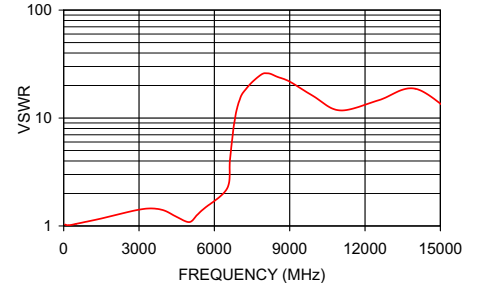
### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
40	0.03	1.04
500	0.10	1.05
2000	0.28	1.25
4000	0.50	1.39
5100	0.63	1.13
5850	1.21	1.55
6400	2.10	1.35
6540	4.07	2.62
6700	9.14	6.13
6900	19.10	12.09
7050	31.56	15.81
7100	40.23	16.41
7600	30.23	23.18
9900	29.70	16.11
10500	25.82	11.77
12500	20.25	14.38
15000	13.43	14.74

### LFCN-5850+ INSERTION LOSS



### LFCN-5850+ VSWR



P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661 For detailed performance specs & shopping online see Mini-Circuits web site

The Design Engineers Search Engine Provides ACTUAL Data Instantly From MINI-CIRCUITS At: [www.minicircuits.com](http://www.minicircuits.com)

IF/RF MICROWAVE COMPONENTS

REV. C  
M121640  
EDR-8033/2U  
LFCN-5850+  
URJ/RAV  
090223  
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