

# Low Pass Filter

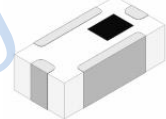
## Features

- excellent power handling
- small size
- 7 sections
- temperature stable
- LTCC construction, and has good moisture resistance, corrosion resistance, high reliability.

## Applications

- harmonic rejection
- VHF/UHF transmitters/receivers
- Base Station of Mobile Communication, lab use.

## HT-LFCN-113+



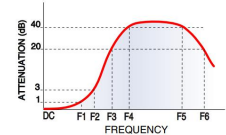
**50Ω DC to 1100 MHz**

### Maximum Ratings

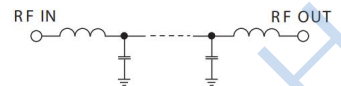
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8W max. at 25°C

\* Passband rating, derate linearly to 3W at 100°C ambient.  
Permanent damage may occur if any of these limits are exceeded.

### Typical Frequency Response



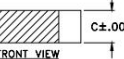
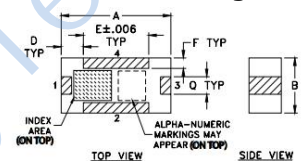
### Electrical Schematic



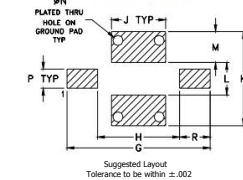
### Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

### Outline Drawing



### PCB Land Pattern



### Outline Dimensions: Unit (mm)

A	3.20	B	1.60	C	0.94
D	0.66	E	1.91	F	0.30
G	4.62	H	2.64	J	1.75
K	3.02	L	1.04	M	0.99
N	0.33	P	0.61	Q	0.51
R	0.99	wt			0.020g

### Electrical Specifications at 25°C

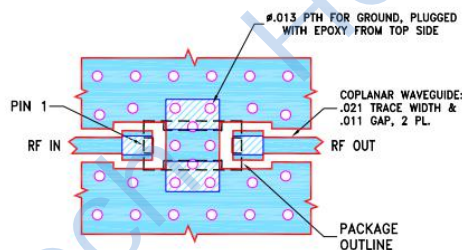
Parameter	F#	Frequency(MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-10800	-	1.3	2.0	dB
	Freq.Cut-Off	F2	11610	-	3.0	-	dB
	VSWR	DC-F1	DC-10800	-	1.6	-	:1
Stop Band	Rejection Loss	F3	14000	20	-	-	dB
	VSWR	F4-F5	14500-20000	-	35	-	dB
		F3-F6	14500-20000	-	20	-	:1

### Typical Performance Data

(TEST CONDITIONS: INPUT POWER = 0dBm @Temperature = +25°C)

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
10	0.11	1.01
1000	0.27	1.32
1210	0.32	1.39
1410	0.37	1.47
2010	0.50	1.64
3200	0.47	1.59
3800	0.35	1.18
4200	0.35	1.18
5000	0.60	1.61
6260	0.80	1.77
8450	0.97	1.74
1005	0.97	1.74
11060	1.57	1.87
13290	30.98	27.77
15410	38.04	78.16
18650	49.07	66.83
20000	35.74	71.79

### Demo Board MCL P/N: T-11 Suggested PCB Layout (PL-137)



#### NOTES:

1. TRACE WIDTH & GAP PARAMETERS ARE SHOWN FOR ROGERS RO4350B WITH DIELECTRIC THICKNESS .010±.001. 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.

