

# Low Pass Filter

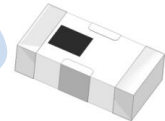
## Features

- 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-190+



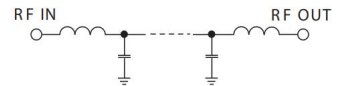
50Ω DC to 190 MHz

### Maximum Ratings

Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	10W max. at 25°C

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

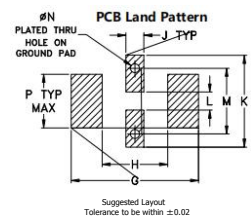
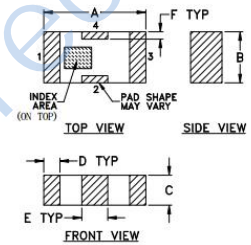
### Electrical Schematic



### Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

### Outline Drawing



### Outline Dimensions: Unit (mm)

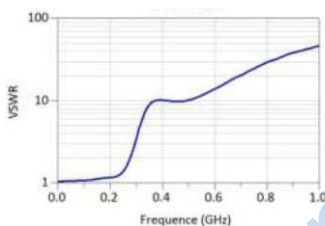
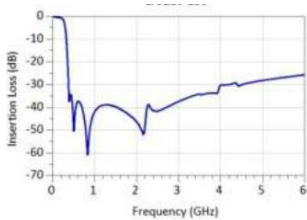
A	3.20	B	1.60	C	0.95
D	0.51	E	0.81	F	0.23
G	4.29	H	2.21	J	0.61
K	3.10	L	0.61	M	2.21
N	0.30	P	1.80	wt	0.02g

### Electrical Specifications at 25°C

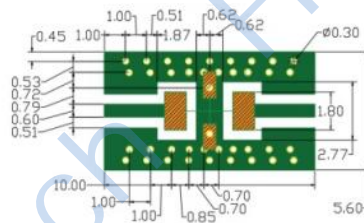
Parameter		Frequency(MHz)	Min.	Typ.	Max.	Unit
Pass Band	Insertion Loss	DC-190	-	-	1.0	dB
	Freq.Cut-Off	280	-	3.0	-	dB
	VSWR	DC-190	-	1.2	-	:1
Stop Band	Rejection Loss	400-510	20	-	-	dB
		510-2850	-	40	-	dB
	VSWR	2850-6550	-	20	-	dB
		400-6550	-	17	-	:1

### Typical Performance Data at 25°C

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
40	0.23	1.04
100	0.41	1.07
170	0.69	1.14
190	0.79	1.15
250	1.52	1.38
340	14.76	8.08
375	28.83	10.13
400	37.45	10.22
510	50.73	10.48
850	57.30	33.63
1500	39.82	64.43
2850	38.81	73.02
4550	29.83	63.79
6500	25.45	26.66
9000	17.61	4.07



### Suggested PCB Layout



- NOTES:**
1. COPLANAR WAVEGUIDE PARAMETERS ARE SHOWN FOR ROGERS RO4350 WITH THICKNESS .508" ± .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