

# Low Pass Filter

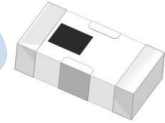
## Features

- 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-160+



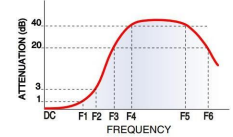
50Ω DC to 160 MHz

### Maximum Ratings

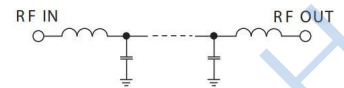
Operating Temperature	-55°C to 100°C
Storage Temperature	-55°C to 100°C
RF Power Input*	8W max. at 25°C

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

### Typical Frequency Response



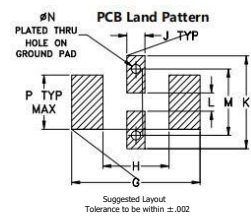
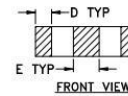
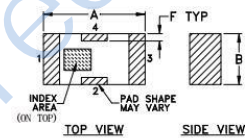
### Electrical Schematic



### Pin Connections

RF IN	1
RF OUT	3
GROUND	2,4

### Outline Drawing



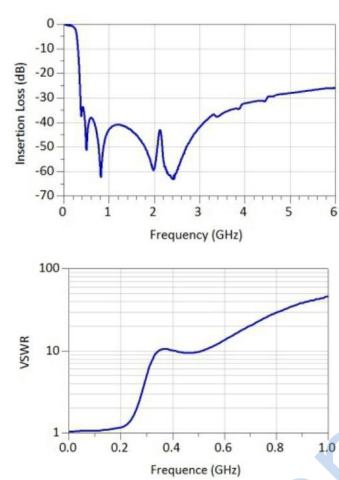
### Outline Dimensions: Unit (mm)

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

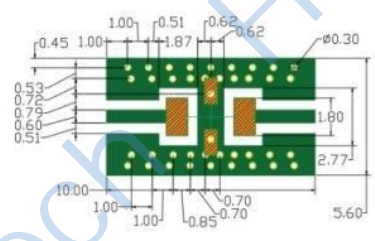
Parameter	F#	Frequency(MHz)	Min.	Typ.	Max.	Unit	
Pass Band	Insertion Loss	DC-F1	DC-160	-	-	1.0	dB
	Freq.Cut-Off	F2	270	-	3.0	-	dB
	VSWR	DC-F1	DC-160	-	1.2	-	:1
Stop Band	Rejection Loss	F3-F4	330-480	20	-	-	dB
		F4-F5	480-2700	-	40	-	dB
		F5-F6	2700-6100	-	20	-	dB
		F3-F6	330-6100	-	17	-	:1

Measured on Fenghua Characterization Test Board T-39.

Frequency (MHz)	Insertion Loss (dB)	VSWR (:1)
40	0.25	1.06
100	0.43	1.06
160	0.68	1.11
210	1.06	1.20
230	1.37	1.13
325	14.52	8.36
370	34.48	10.62
525	43.48	10.42
950	44.53	42.37
1700	47.20	61.79
2350	61.70	65.80
4500	29.67	71.94
6400	24.99	56.91
7500	22.12	18.86
9000	21.74	3.99



### Demo Board MCL P/N: T-39 Suggested PCB Layout (PL-137)



- 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