

# MAFL-010670-CB0AD0



## MoCA Band Pass Filter 350-3000 MHz

Rev. V1

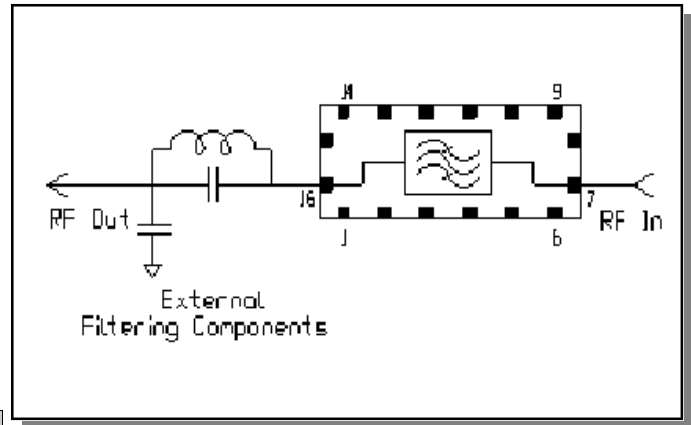
### Features

- ◆ 75 Ohm
- ◆ RoHS Compliant
- ◆ Surface mount
- ◆ Lead Free

### Description

M/A-Com's MAFL-010670-CB0AD0 is a low profile Band Pass Filter designed for use in CATV set-top box and cable modem applications.

### Block Diagram



### Pin Configuration

Function	Pin No.
RF Input	7
RF Output	16
Ground	1-6, 8-15

### Ordering Information

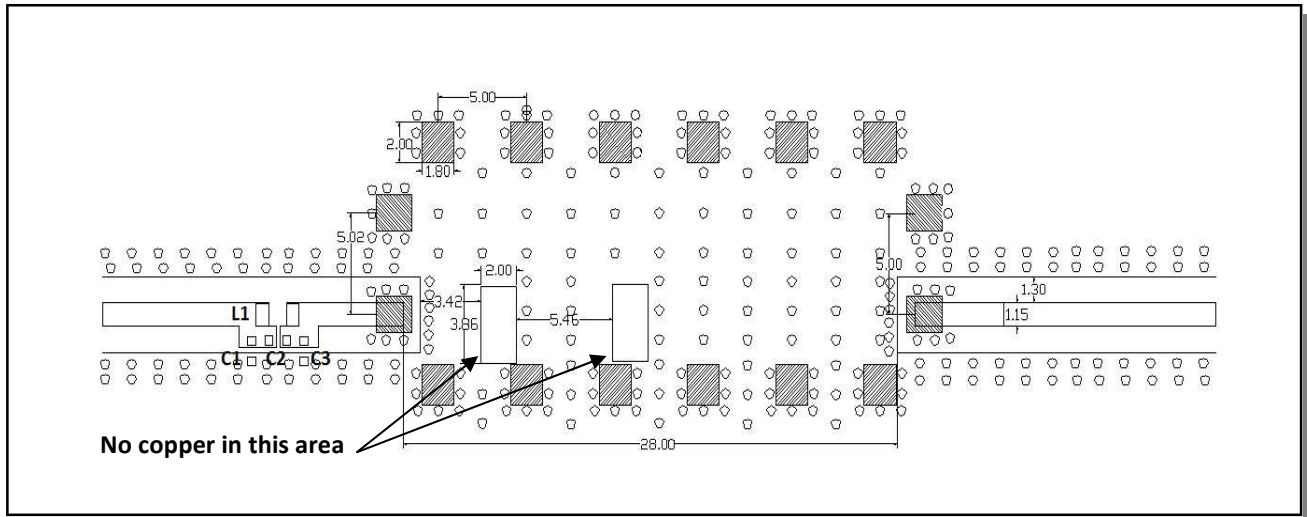
Part Number	Package
MAFL-010670-CB0AD0	900

### Electrical Specifications $T_A = 25^\circ\text{C}$ , Impedance all ports $75\Omega$

Parameter	Conditions	Units	Min	Typical	Max
Return Loss	650—875 MHz	dB	9.5	11	-
Insertion Loss	650—875MHz	dB	-	2	3
Rejection	350 - 560MHz	dB	37	40	-
Rejection	560 - 575MHz	dB	35	37	-
Rejection	950 - 960MHz	dB	40	42	-
Rejection	960 -1300MHz	dB	47	50	-
Rejection	1300 -1600MHz	dB	62 <sup>1</sup>	65 <sup>1</sup>	-
Rejection	1600 - 2620MHz	dB	47 <sup>1</sup>	50 <sup>1</sup>	-
Rejection	2636 - 3000MHz	dB	37	40	-

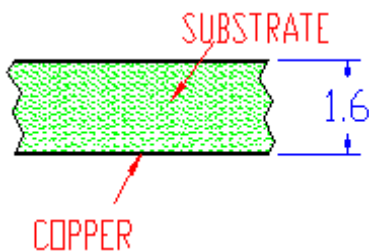
<sup>1</sup>Rejection level is inclusive of recommended external components  
Targets may be achieved when using the recommended application layout on page 2.

## Recommended external components layout



### Notes:

- 75 ohm Input and output track dimension = 1.15mm  
Gap dimension = 1.3mm on 1.6mm FR4 substrate
- It is not recommended to run tracks under the filter unless they are separated with ground plane.
- Ground should be 1.6mm below the base of the filter.
- RF shield should be kept a minimum of 8 mm above the filter.

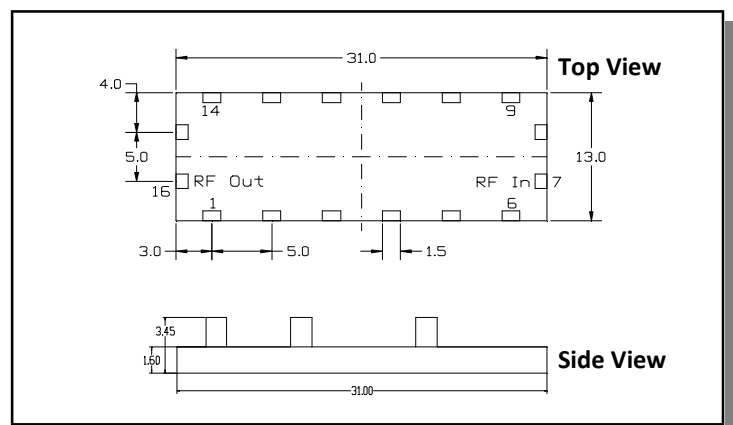


### Recommended Maximum Ratings

Parameter	Units	Min	Max
Input Power	mW		250
DC Current	mA		30
Operating Temperature Range	°C	-40	+85
Storage Temperature Range	°C	-40	+85

•Full temperature plots are available upon request.

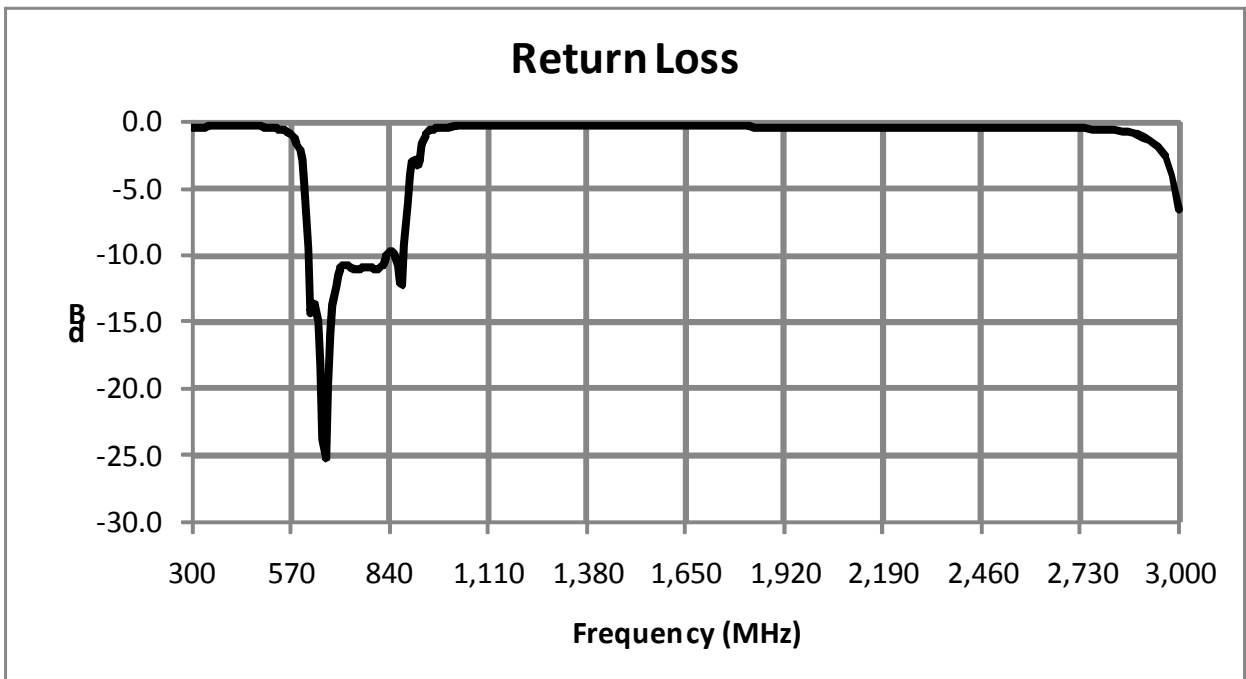
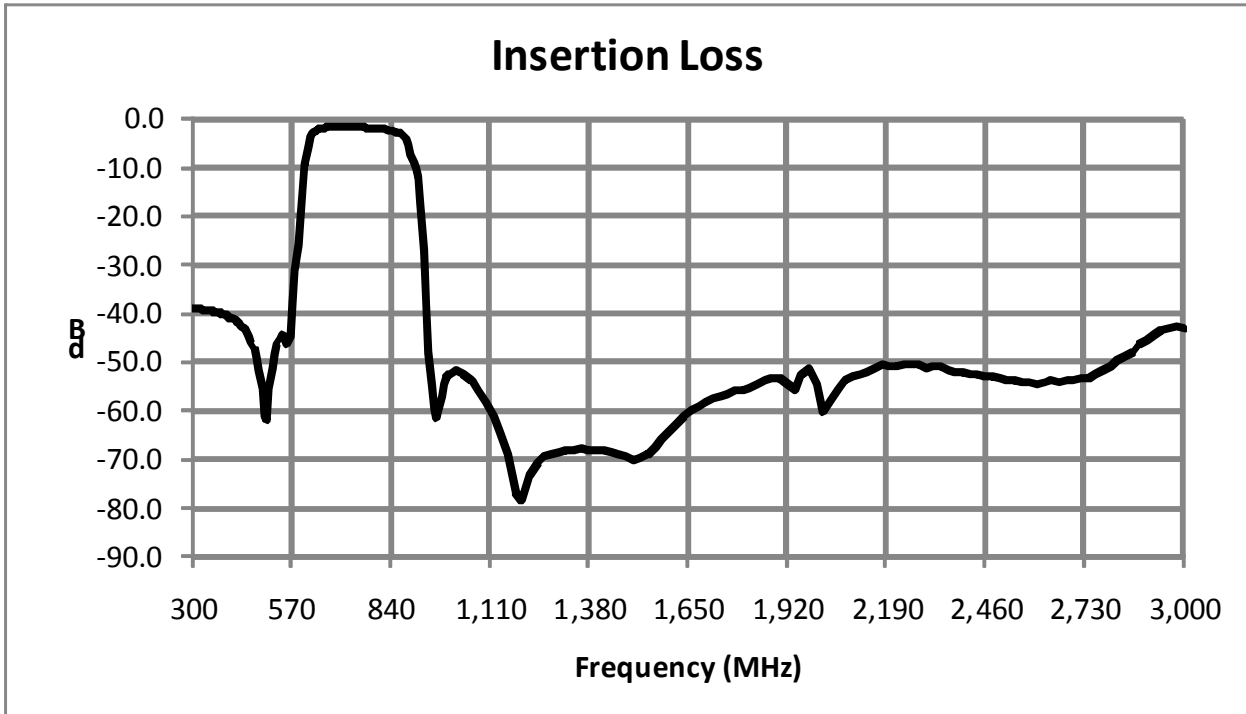
### Outline Drawing



External filtering components		
Description	Ref Des	Qty
CAP, SMT, 0402, 0.7pF, +/-0.25pF, 50V, COG	C1	1
CAP, SMT, 0402, 0.3pF, +/-0.1pF, 50V, COG	C2	1
Not Stuffed	C3	-
IND, SMT, 0805, 22nH, +/-5%, 500mA	L1	1

Recommended Supplier	Ref Des
muRata - GRM1555C1HR70BZ01D	C1
muRata - GRM1555C1HR30BA01D	C2
Coil Craft - 0805CS-220XJBC	L1

## Typical Performance (with external components)



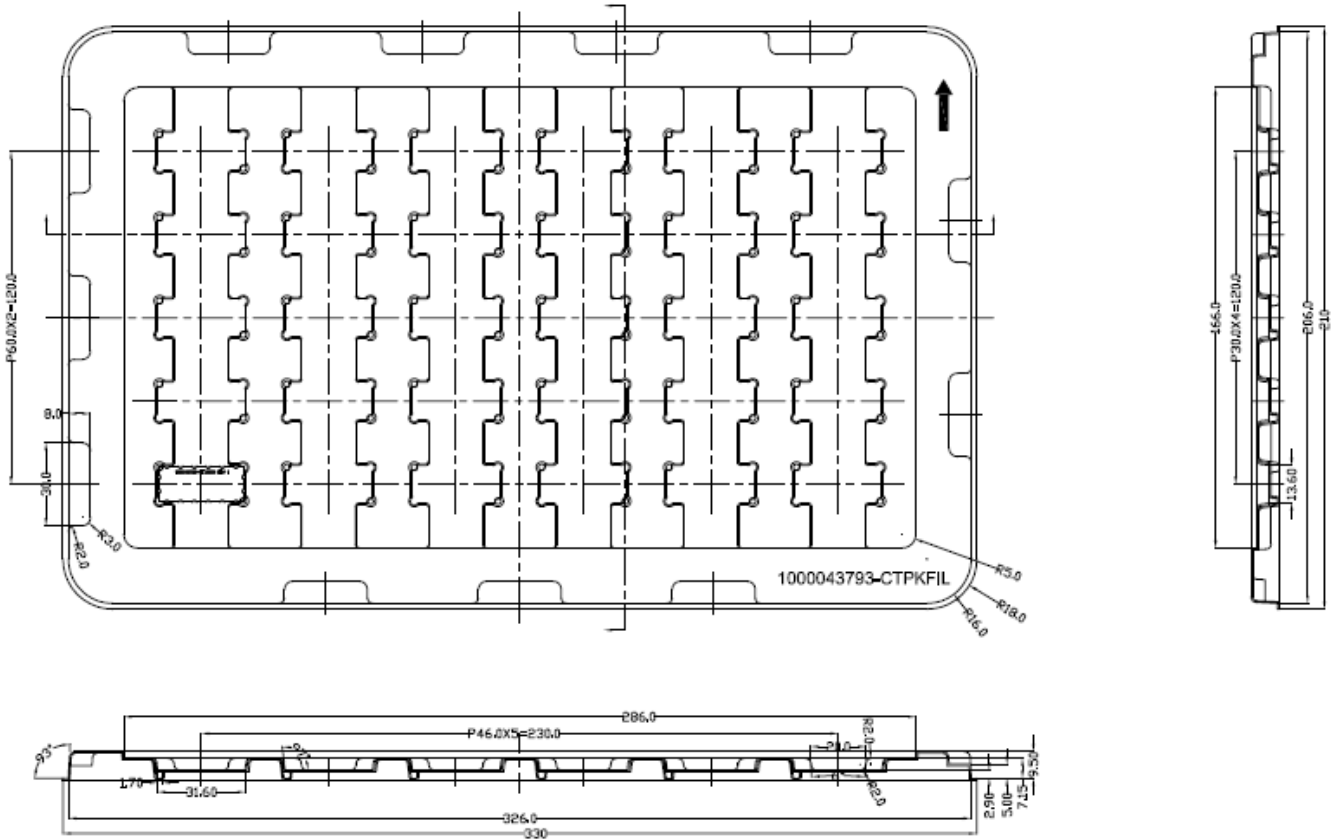
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**MoCA Band Pass Filter**  
**350-3000 MHz**

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## Packing



**ADVANCED:** Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.  
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