

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.

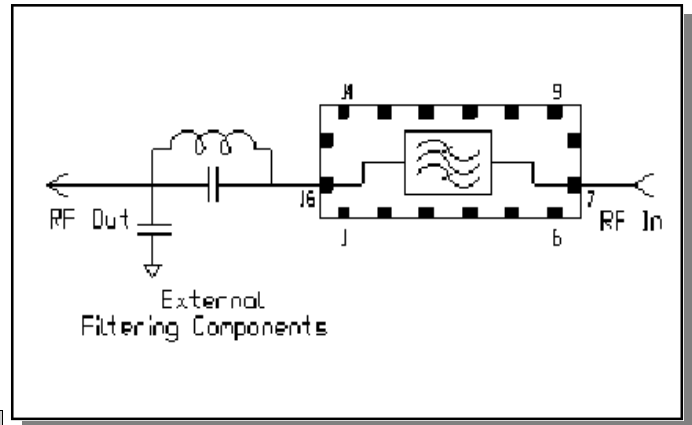
Pin Configuration

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

Ordering Information

Part Number	Package
MAFL-010670-CB0AD0	900

Block Diagram



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

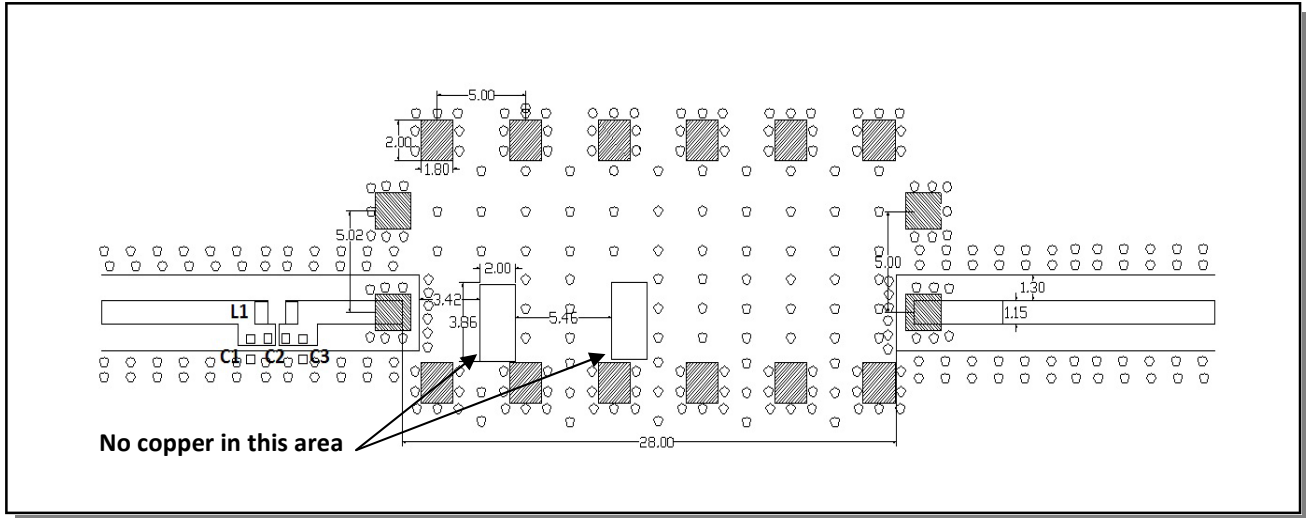
Parameter	Conditions	Units	Min	Typical	Max
Return Loss	650—875 MHz	dB	9.5	11	-
Insertion Loss	650—875MHz	dB	-	2	3
Rejection	350 - 560MHz	dB	37	40	-
Rejection	560- 575MHz	dB	35	37	-
Rejection	950 - 960MHz	dB	40	42	-
Rejection	960 -1300MHz	dB	47	50	-
Rejection	1300 -1600MHz	dB	62 ¹	65 ¹	-
Rejection	1600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

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

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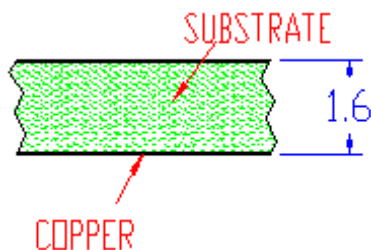
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Recommended external components layout

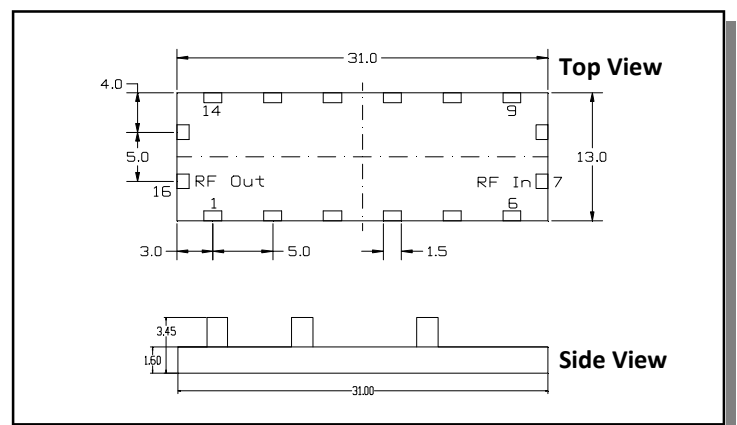


Notes:

- 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.



Outline Drawing



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.

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

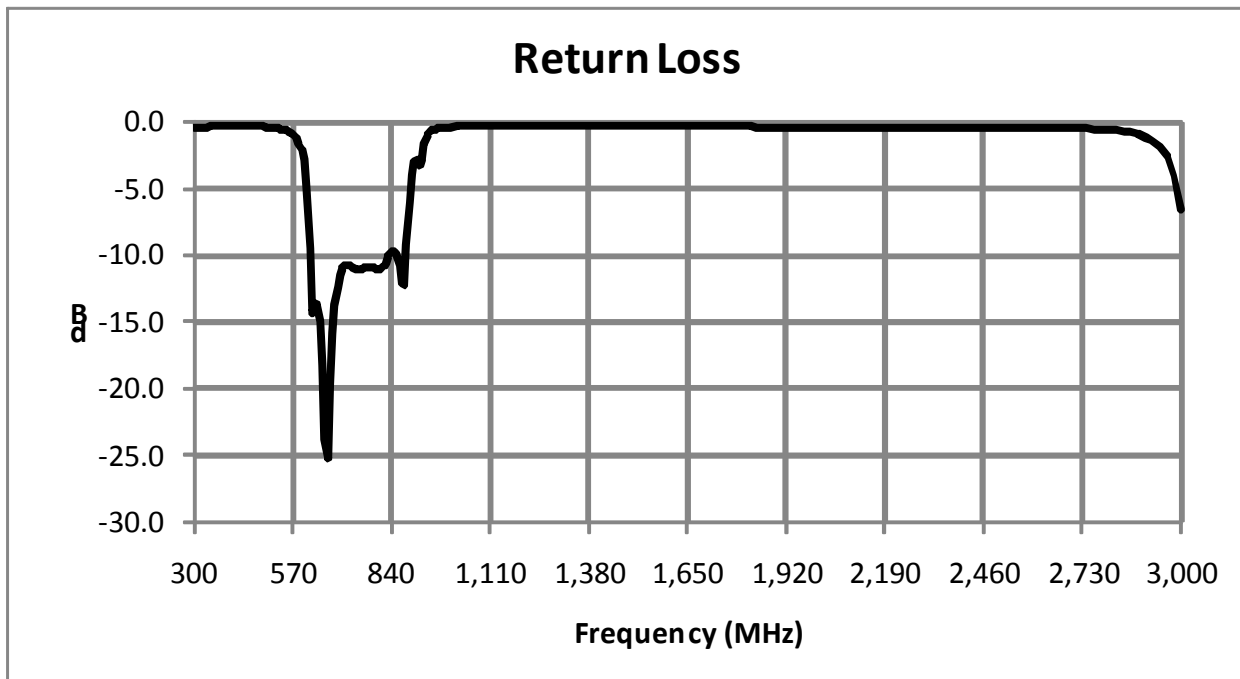
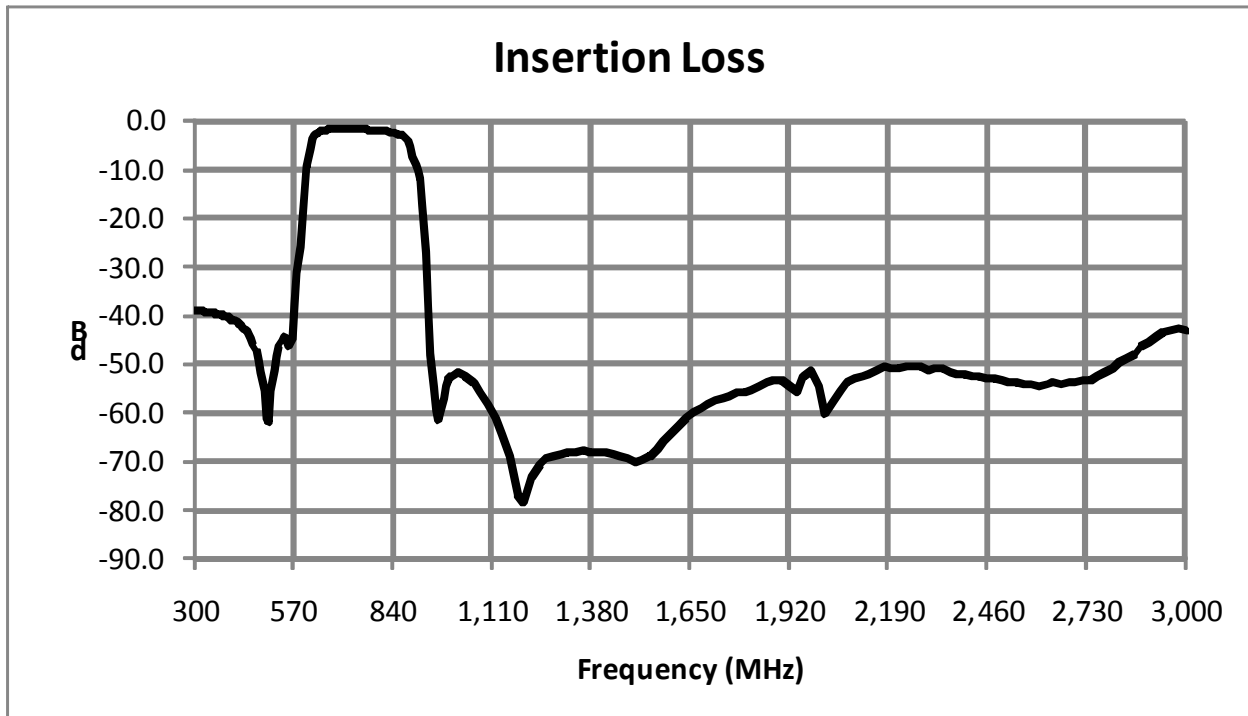
Recommended Supplier	Ref Des
muRata - GRM1555C1HR70BZ01D	C1
muRata - GRM1555C1HR30BA01D	C2
Coil Craft - 0805CS-220XJBC	L1

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PRELIMINARY: Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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Typical Performance
(with external components)



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Packing

