

# RoHS Compliant



**CATV Diplex Filter** 5 - 42 / 54 - 1000MHz MAFL-007654-CD0A10 V<sub>1</sub>P

#### **Features**

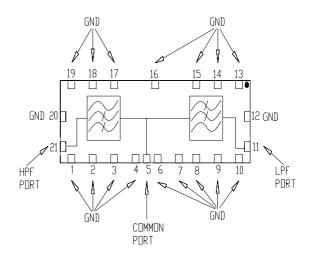
- 75 Ohm
- SMT unit
- Low Cost. Low Profile
- RoHS\* Compliant

#### **Description**

M/A-COM's MAFL-007654-CD0A10 is a low cost, low profile diplex filter designed for use in CATV settop-box and cable modem applications.

Technology used in this design is patent pending.

## **Functional Schematic**





## Pin Configuration

Function	Pin Number		
Common Port	5		
Low Pass Port	11		
Output Port	21		
Ground	1-4, 6-10, 12-20		
Not connected	-		

## Absolute Maximum Ratings 1,2

Parameter	Absolute Maximum		
RF Power	250mW		
DC Current	30mA		
Operating Temperature	-40°C to +85°C		
Storage Temperature	-40°C to +85°C		

- 1. Exceeding any one or combination of these limits may cause permanent damage to this device.
- 2. M/A-COM does not recommend sustained operation near these survivability limits.

This ADVANCE Data Sheet contains information regarding a product M/A-COM is considering for development. Performance is based on simulated results or target specifications. Commitment to produce in volume is not guaranteed.

\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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- **Europe** Tel: 44.1908.574.200 / Fax: 44.1908.574.300
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M/A-COM Inc. and its affiliates reserve the right to make changes to the

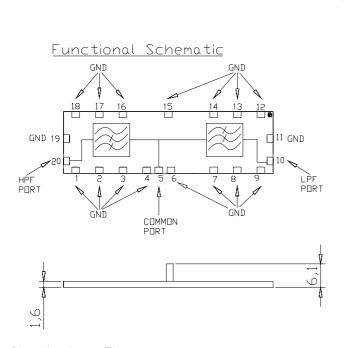


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#### SM-161 Case Style

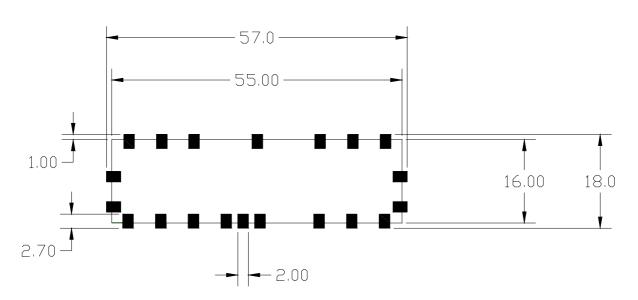


Sm-161 Case Style 27,5 15,6 1,6 3,2 9,4 9,4 15,6 15,6 21,8

26,8 30

Dimensions in mm. Tolerance:  $.x \pm 0.1$ ,  $.xx \pm 0.05$ 

#### **Recommended PCB Configuration**



Dimensions in mm. Tolerance:  $.x \pm 0.1$ ,  $.xx \pm 0.05$ 

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Electrical Specifications:  $T_A = 25^{\circ}C$ ,  $Z_0 = 75\Omega^{1}$ 

Parameter	Test Conditions	Units	Min	Тур	Max
Frequency Range	5 - 42MHz / 54 - 1000MHz				
Insertion Loss	5 - 42MHz	dB	-	-0.5	-1.1
Insertion Loss	54 - 60MHz 60 - 1000MHz	dB dB	-	-1.1 -0.5	-1.3 -1.1
Filter Isolation	5 - 39.5MHz 39.5 - 42MHz	dB dB	-55 -48	-62 -55	-
Filter Isolation	54 - 60MHz 60 - 500MHz 500 - 860MHz 860 - 1000MHz	dB dB db dB	-53 -55 -50 -45	-55 -58 -55 -50	- - -
Input Return Loss	5 - 42MHz	dB	-14	-17	-
Input Return Loss	54 - 64MHz 64 - 74MHz 74 - 650MHz 650 - 1000MHz	dB dB dB dB	-10 -12 -15 -14	-14 16 20 16	- - - -

Note: Performance is target specifications based on a sample batch of 33 units.

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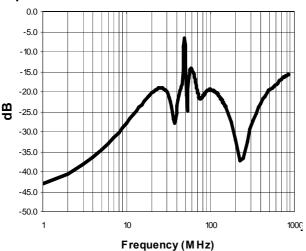
# RoHS



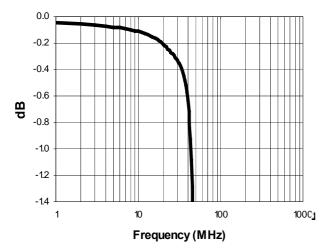
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### **Typical Performance Curves**

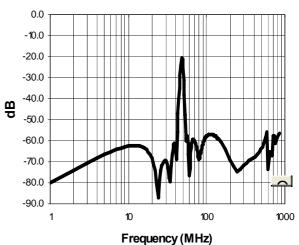
#### Input Return Loss



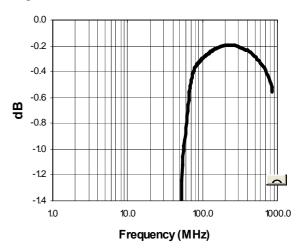
#### Low Pass Filter Insertion Loss



#### Filter Isolation



#### High Pass Filter Insertion Loss



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