

# CATV Diplex Filter 5 - 42 / 54 - 900 MHz



MAFL-008098-CD0550

MACCM

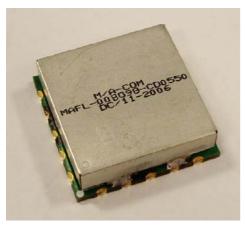
## V1

### Features

- 75 Ohm
- Surface Mount
- RoHS\* Compliant
- RoHS version of MAFLES0083
- Technology used in this product is patent pending

#### Description

M/A-COM's MAFL-008098-CD0550 is a low cost, non hermetically sealed Diplex Filter unit designed for CATV applications.



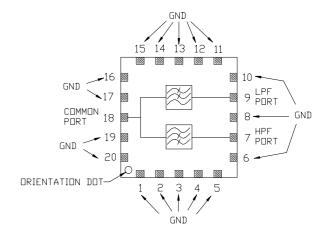
## Absolute Maximum Ratings <sup>1,2</sup>

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.

 M/A-COM does not recommend sustained operation near these survivability limits.

## **Functional Schematic**



# **Pin Configuration**

Function	Pin Number			
Common Port	18			
Low Pass Port	9			
High Pass Port	7			
Ground	1-6, 8, 10-17, 19, 20			
Not connected	-			

# **Ordering Information**

Part Number	Package		
MAFL-008098-CD0550	50 Piece Reel		
MAFL-008098-CD05TB	Customer Test Board		

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

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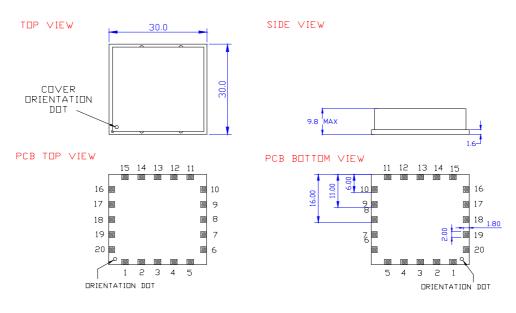
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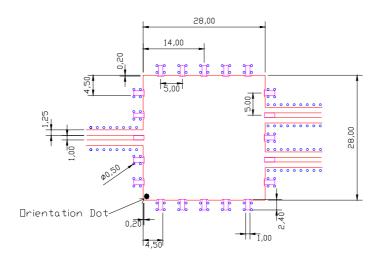
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### SM-85 Case Style



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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<sup>2</sup> 

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Electronics



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

Parameter	Test Conditions		Units	Min.	Тур.	Max.
Frequency Range Low Pass Cutoff Low Pass Reject High Pass Cutoff	5 – 900 42 54 54	MHz MHz MHz MHz	MHz MHz MHz	- - -	- - -	- - -
Insertion Loss Pass Band Pass Band	5 – 42 54 – 900	MHz MHz	dB dB	-	0.5 0.5	1.2 1.1
Insertion Loss Flatness	5 – 42	MHz	dB	-	-	0.5
Isolation Stop Band Stop Band	5 – 42 54 – 900	MHz MHz	dB dB	45 45	50 50	- -
Return Loss Input Port	5 – 42 54 – 900	MHz MHz	dB dB	18 18	21 21	-
Return Loss Low Pass Port Return Loss High Pass Port	5 – 42 54 – 900	MHz MHz	dB dB	18 18	21 21	-

## **Additional Specifications**

Group Delay (nSec)

38.5 – 42 MHz ≤ 20ns

54 – 57.5 MHz ≤ 20ns

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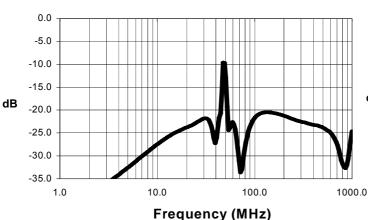
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## **Typical Performance**

#### Input Return Loss

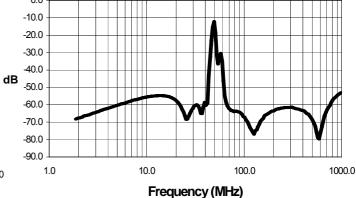


# 0.0 -10.0

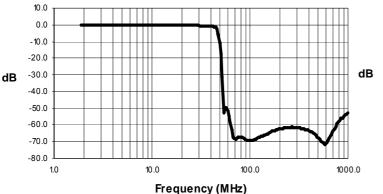
**RoHS** 

Compliant

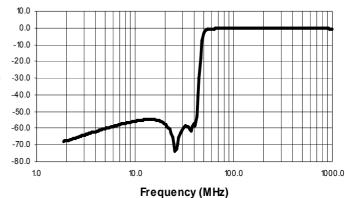
Filter Isolation



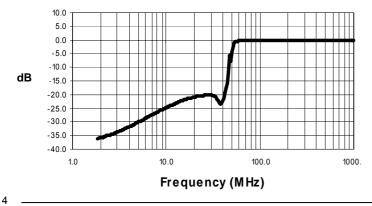
#### Low Pass Filter Insertion Loss



#### High Pass Filter Insertion Loss

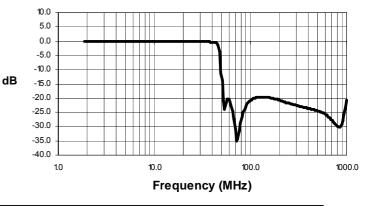


#### Low Pass Filter Output Return Loss



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**High Pass Filter Output Return Loss** 



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