

CATV Diplex Filter 5 - 42 / 54 - 1000MHz



MAFL-007654-CD0A10 V1P

MACCM

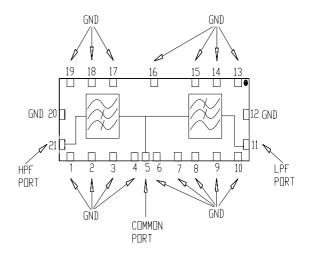
Features

- 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.

 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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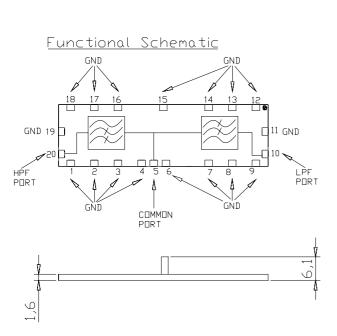


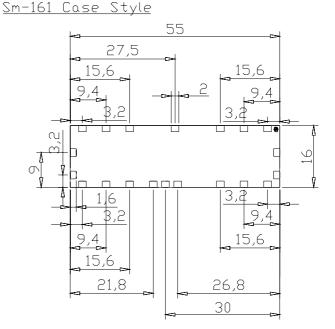
RoHS Compliant

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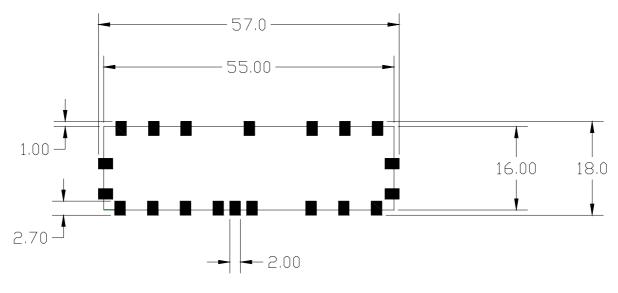
SM-161 Case Style





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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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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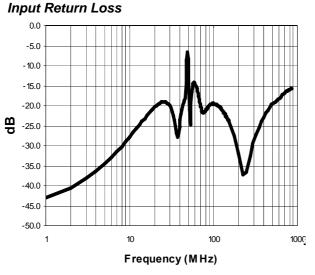


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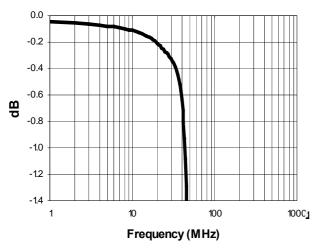
RoHS Compliant

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Typical Performance Curves

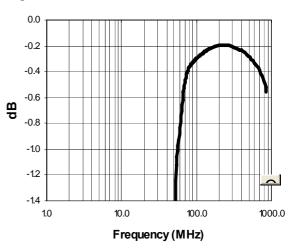


Low Pass Filter Insertion Loss



Filter Isolation 0.0 -10.0 -20.0 -30.0 -40.0 B -50.0 -60.0 -70.0 -80.0 -90.0 10 100 1000 1 Frequency (MHz)

High Pass Filter Insertion Loss



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