



MAFLCT0068 V3P

CATV Diplex Filter 5 - 42 / 54 - 1100MHz

Features

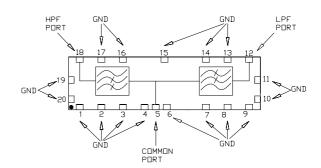
- 75 Ohm
- SMT unit
- Low Cost, Low Profile
- RoHS* Compliant

Description

M/A-COM's MAFLCT0068 is a low cost, low profile diplex filter designed for use in CATV set-topbox and cable modem applications.

Technology used in this design is patent pending.

Functional Schematic





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.

Pin Configuration

Function	Pin Number		
Common Port	5		
Low Pass Port	12		
High Pass Port	18		
Ground	1-4, 6-11, 13-17, 19,20		
Not connected	-		

^{*} Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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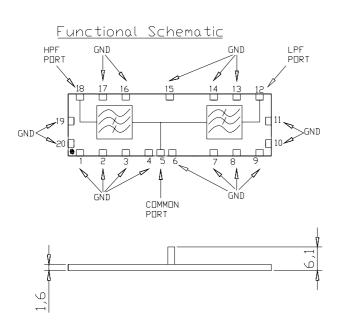


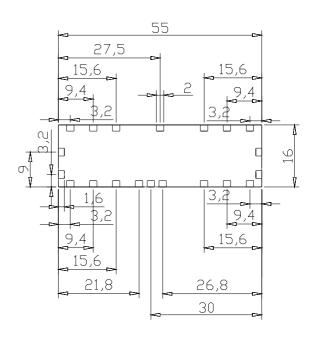


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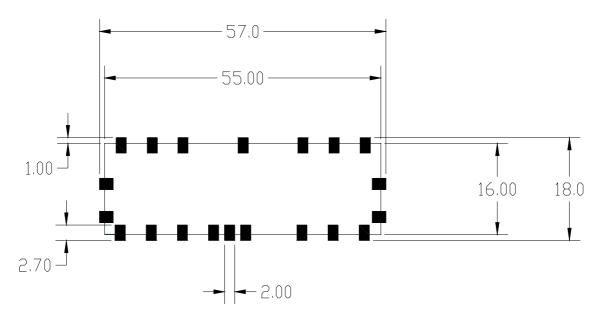
SM-161 Case Style





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: $T_A = 25$ °C, $Z_0 = 75\Omega$

Parameter	Test Conditions	Units	Min	Тур	Max
Frequency Range:	5 - 42MHz / 54 - 1100MHz				
Low Pass Filter Insertion Loss:	5 - 36MHz	dB			-1.1
insertion Loss.	36 - 42MHz	dB			-1.2
High Pass Filter Insertion Loss:	54 - 56.5MHz	dB			-1.3
	56.5 - 1100MHz	dB			-1.2
Filter Isolation:	5 - 36MHz	dB	-55		
	36 - 42MHz	dB	-53		
Filter Isolation:	54 - 60MHz	dB	-53		
	60 - 200MHz	dB	-55		
	200 - 860MHz	dB	-50		
	860 - 1100MHz	dB	-45		
Input Return Loss:	5 - 42MHz	dB	-12		
Input Return Loss:	54 - 860MHz	dB	-12		
	860 - 1100MHz	dB	-10		
Input Port Voltage Transient		V			200

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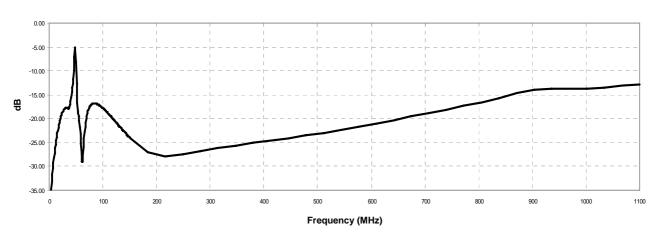


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Typical Performance Curves

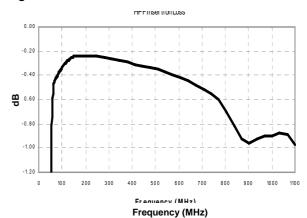
Input Return Loss



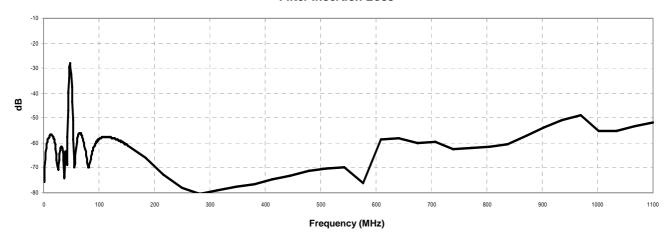
Low Pass Filter Insertion loss

-0.20 -0.40 -0.80 -1.20 0 5 10 15 20 25 30 35 40 45 50 Frequency (MHz)

High Pass Filter Insertion loss



Filter Insertion Loss



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