

CATV Diplex Filter 5 - 42 / 54 - 1100MHz

MAFLCT0068
V3P

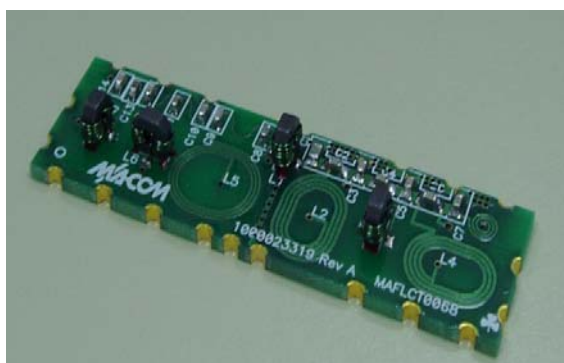
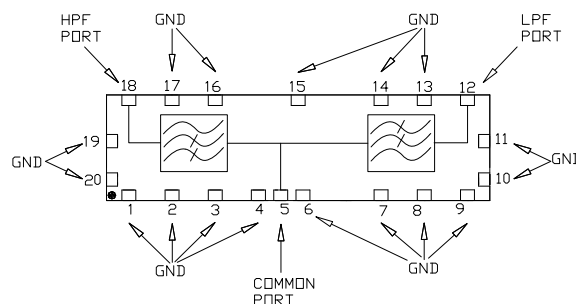
Features

- 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-top-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	12
High Pass Port	18
Ground	1-4, 6-11, 13-17, 19,20
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

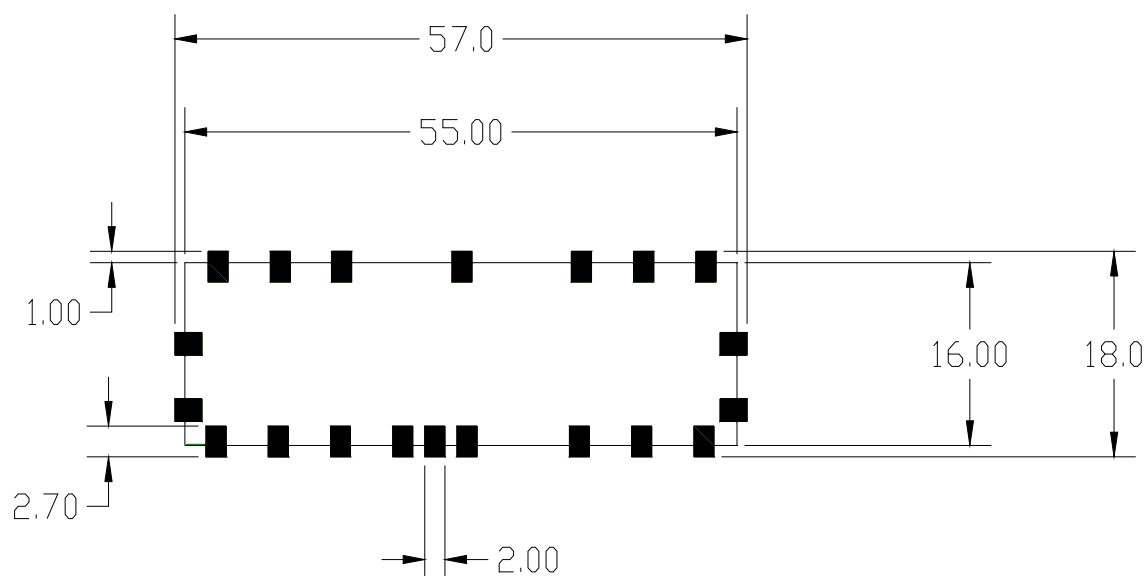
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM does not recommend sustained operation near these survivability limits.

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

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[illegible]

Recommended PCB Configuration



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

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

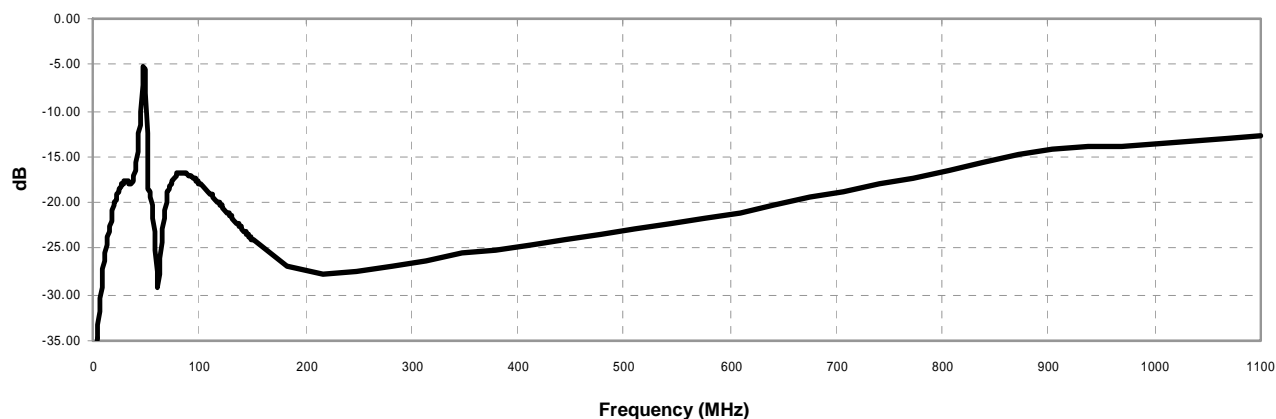
Parameter	Test Conditions	Units	Min	Typ	Max
Frequency Range:	5 - 42MHz / 54 - 1100MHz				
Low Pass Filter Insertion Loss:	5 - 36MHz	dB			-1.1
	36 - 42MHz	dB			-1.2
High Pass Filter Insertion Loss:	54 - 56.5MHz	dB			-1.3
	56.5 - 1100MHz	dB			-1.2
Filter Isolation:	5 - 36MHz	dB	-55		
	36 - 42MHz	dB	-53		
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

CATV Diplex Filter
5 - 42 / 54 - 1100MHz

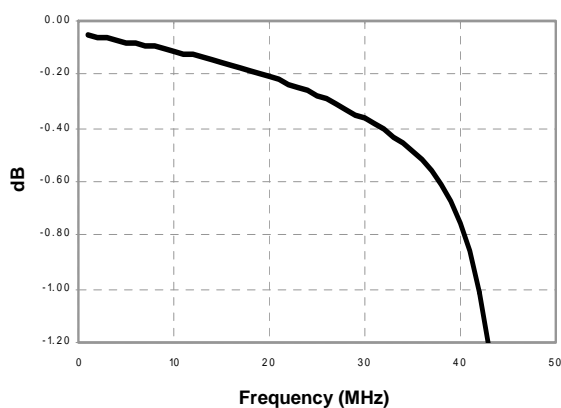
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Typical Performance Curves

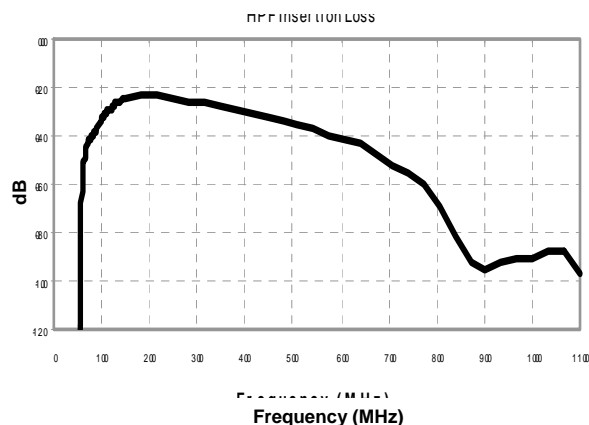
Input Return Loss



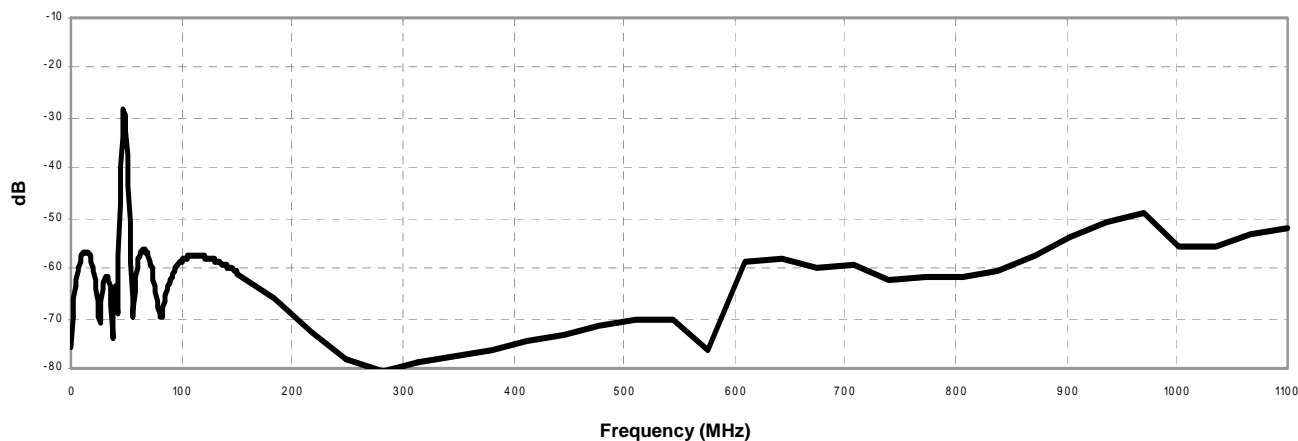
Low Pass Filter Insertion loss



High Pass Filter Insertion loss



Filter Insertion Loss



ADVANCED: Data Sheets contain information regarding a product M/A-COM Technology Solutions is considering for development. Performance is based on target specifications, simulated results, and/or prototype measurements. Commitment to develop is not guaranteed.

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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