

CATV Diplex Filter
5 - 42 / 54 - 1100MHz

MAFLCT0068
V3P

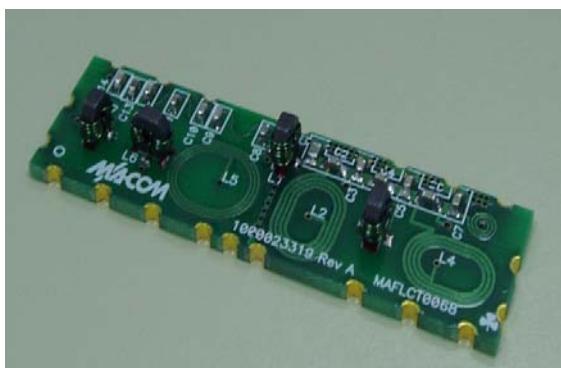
Features

- 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.



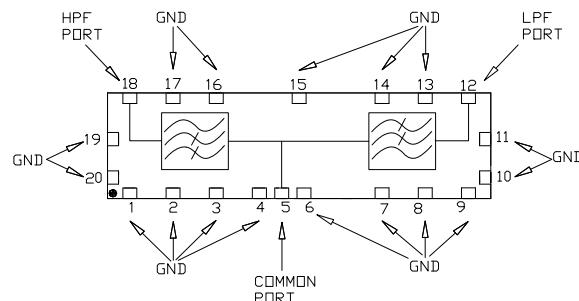
Absolute Maximum Ratings^{1,2}

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.

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	-

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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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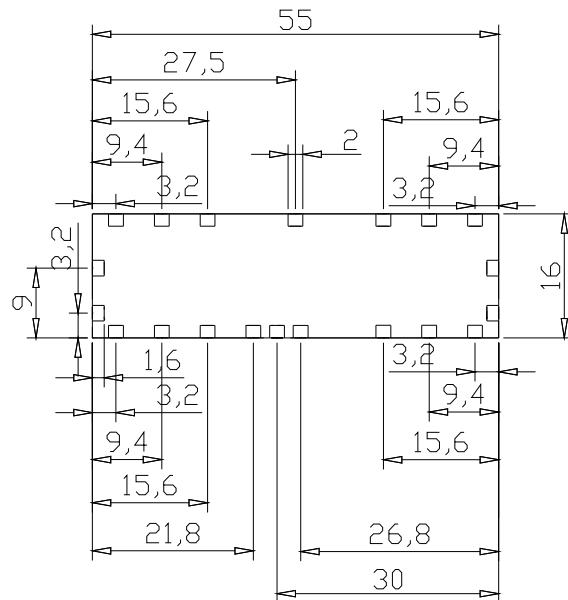
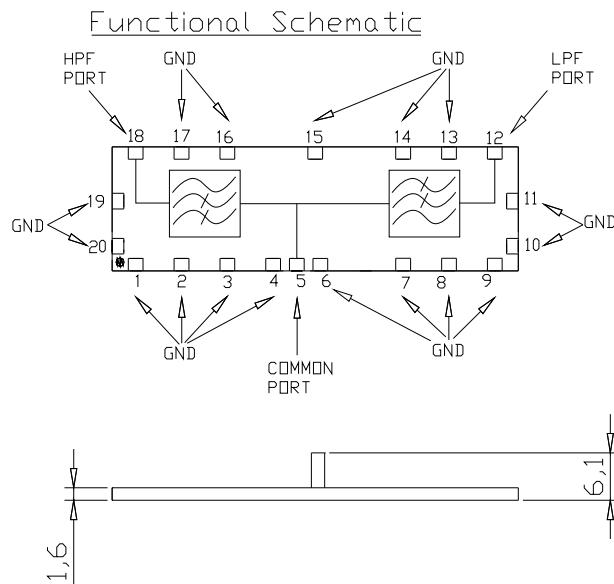
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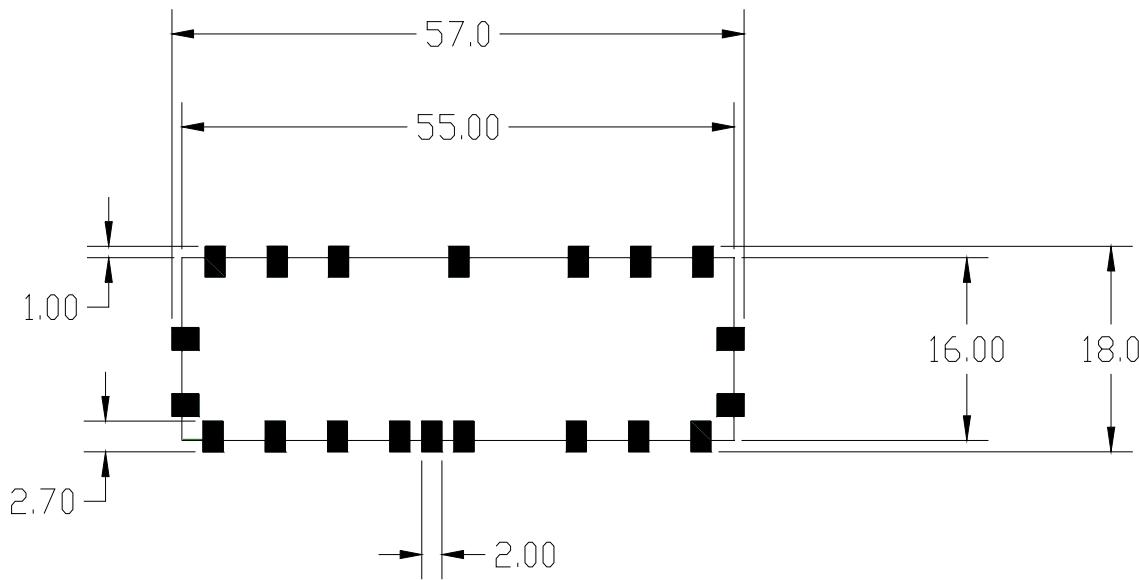
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SM-161 Case Style



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

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

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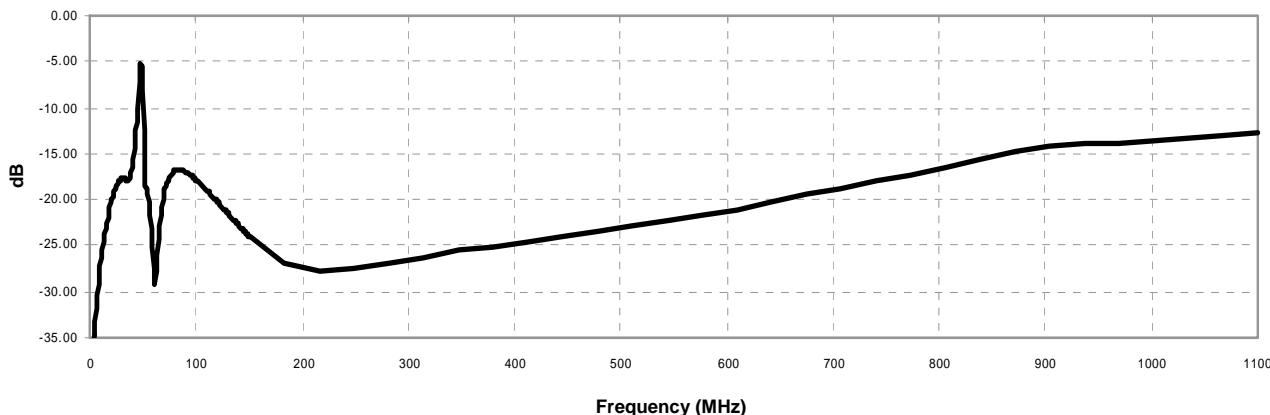
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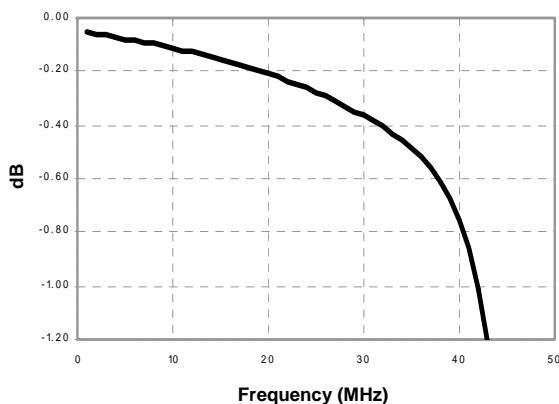
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Typical Performance Curves

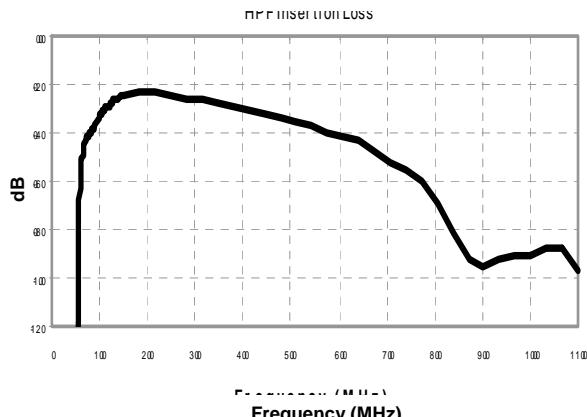
Input Return Loss



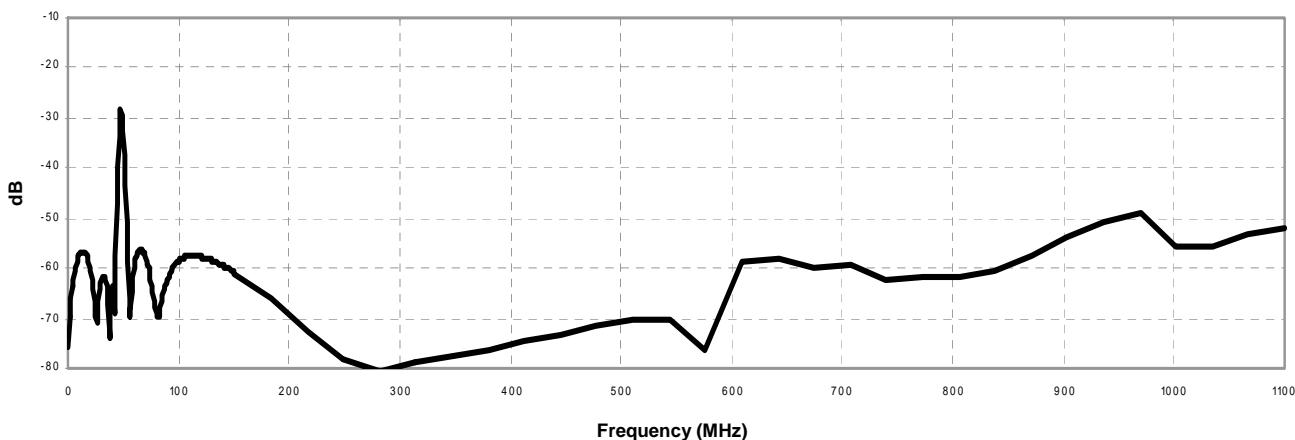
Low Pass Filter Insertion loss



High Pass Filter Insertion loss



Filter Insertion Loss



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