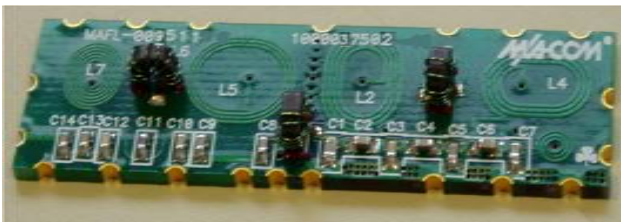


Features

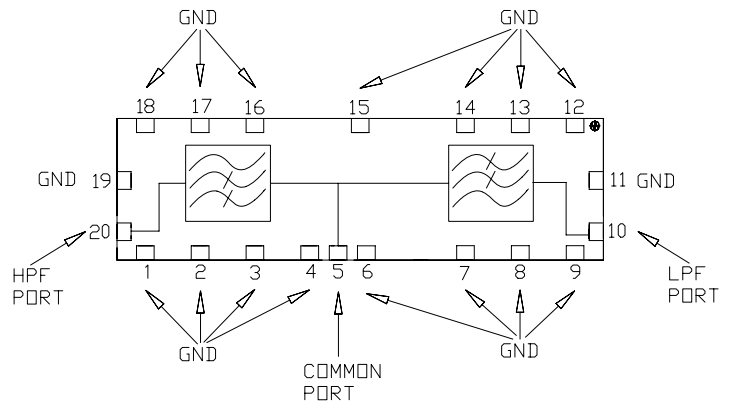
- 75 Ohm
- SMT unit
- Low Cost, Low Profile
- RoHS* Compliant

Description

M/A-COM's MAFL-009511-CD0A10 is a low cost, low profile diplex filter designed for use in CATV set-top-box, cable modem and D-PON applications.



Functional Schematic



Pin configuration

| Function | Pin Number |
|---------------|-----------------|
| Common Port | 5 |
| Low Pass Port | 10 |
| Output Port | 20 |
| Ground | 1-4, 6-9, 11-19 |
| 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 |

Ordering Information

| Part Number | Package |
|--------------------|---------|
| MAFL-009511-CD0A10 | 900 |

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.

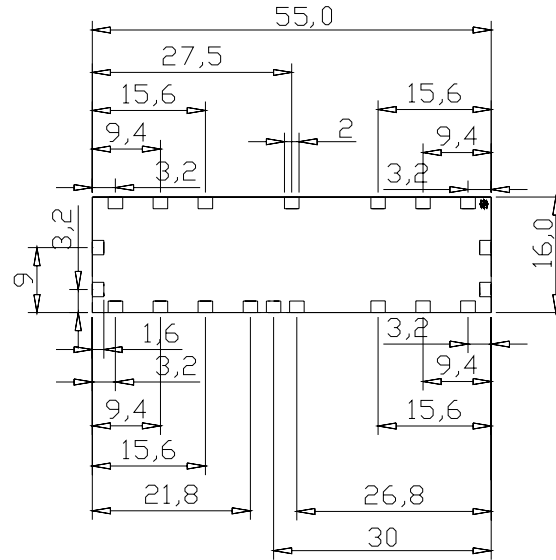
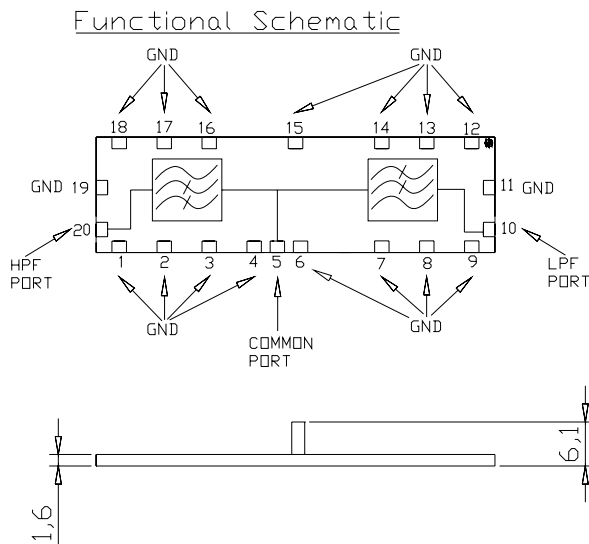
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SM-161 Case Style

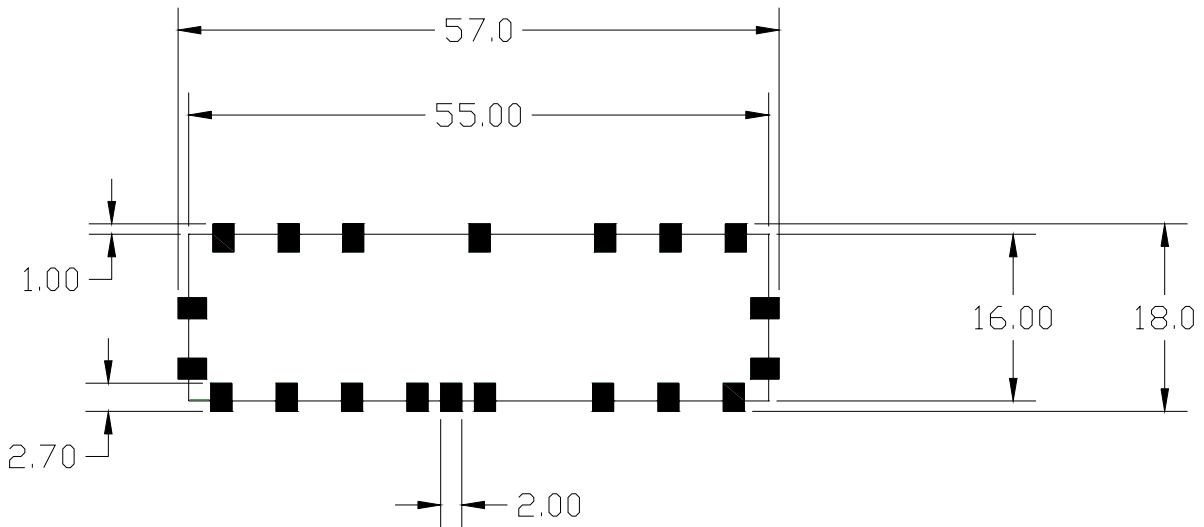
Sm-161 Case Style



Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

Maximum coplanarity specification of 0.1mm

Recommended PCB Configuration



Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

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MAFL-009511-CD0A10



CATV Diplex Filter
5 - 42 / 52 - 1000MHz

M/A-COM Products
Released, Rev. V2

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

| Parameter | Test Conditions | Units | Min | Typ | Max |
|-------------------|--------------------------|-------|-----|------|------|
| Frequency Range | 5 - 42MHz / 52 - 1000MHz | | | | |
| Insertion Loss | 5 - 42MHz | dB | - | -0.5 | -1.1 |
| Insertion Loss | 52 - 60MHz | dB | - | -1.1 | -1.3 |
| | 60 - 1000MHz | dB | - | -0.5 | -1.1 |
| Filter Isolation | 5 - 39.5MHz | dB | -55 | -62 | - |
| | 39.5 - 42MHz | dB | -48 | -55 | - |
| Filter Isolation | 52 - 60MHz | dB | -50 | -55 | - |
| | 60 - 500MHz | dB | -55 | -58 | - |
| | 500 - 860MHz | dB | -50 | -55 | - |
| | 860 - 1000MHz | dB | -45 | -50 | - |
| Input Return Loss | 5 - 42MHz | dB | -14 | -17 | - |
| Input Return Loss | 52 - 64MHz | dB | -10 | -14 | - |
| | 64 - 74MHz | dB | -12 | -16 | - |
| | 74 - 650MHz | dB | -15 | -20 | - |
| | 650 - 1000MHz | dB | -14 | -16 | - |

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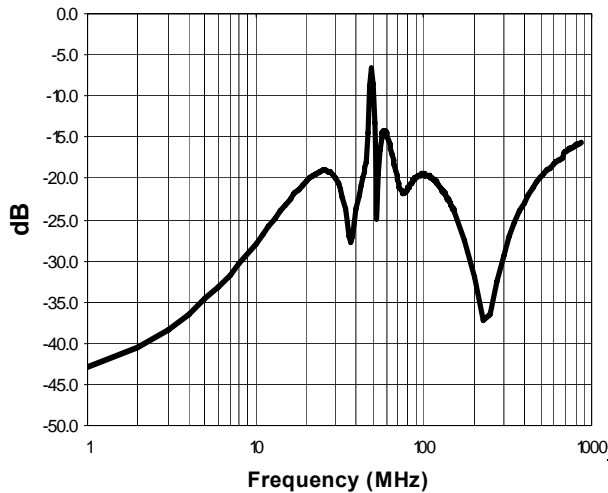
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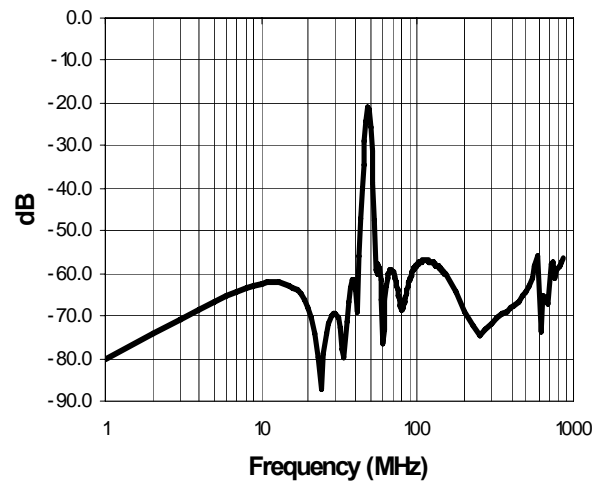
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Typical Performance Curves

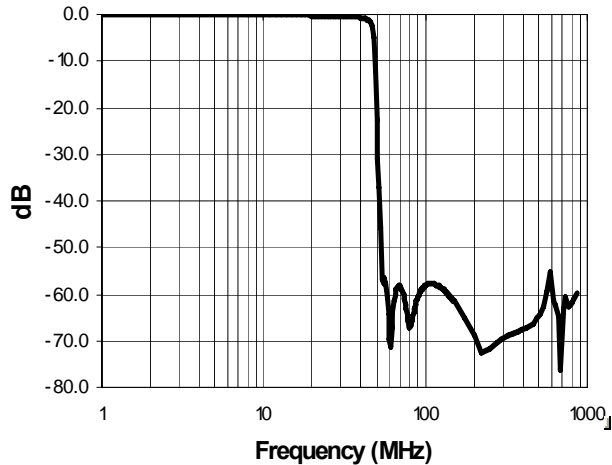
Input Return Loss



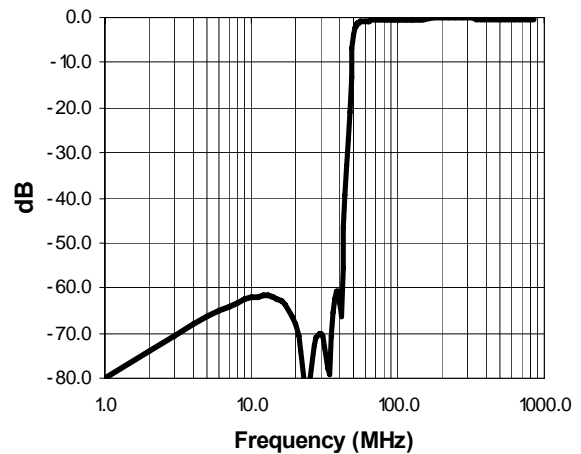
Filter Isolation



Low Pass Filter Insertion Loss



High Pass Filter Insertion Loss



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