MAFL-008195-CD0AC0

CATV Diplex Filter 50 - 870 / 950 - 1550 / 2000 - 3000 MHz

Features

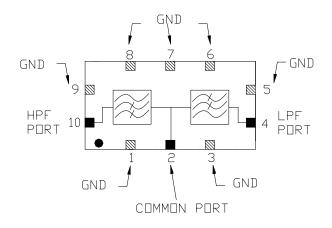
- 75 Ohm
- SMT unit
- RoHS Compliant

Description

M/A-COM's MAFL-008195-CD0AC0 is a surface mount diplex filter unit designed for MoCA applications.



Functional Schematic



Pin Configuration

| Function | Pin Number | | |
|----------------|-------------|--|--|
| Common Port | 2 | | |
| Low Pass Port | 4 | | |
| High Pass Port | 10 | | |
| Ground | 1, 3, 5 - 9 | | |
| 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.

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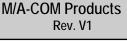
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MAFL-008195-CD0AC0



CATV Diplex Filter

50 - 870 / 950 - 1550 / 2000 - 3000 MHz

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SM-172 Case Style

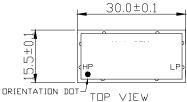
HPF

PDR

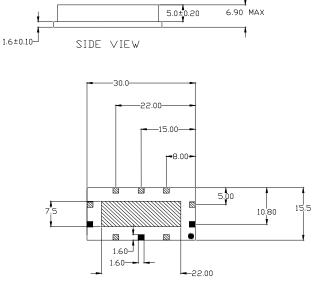
ORIENTATION DOT-

2

10







Recommended PCB Configuration

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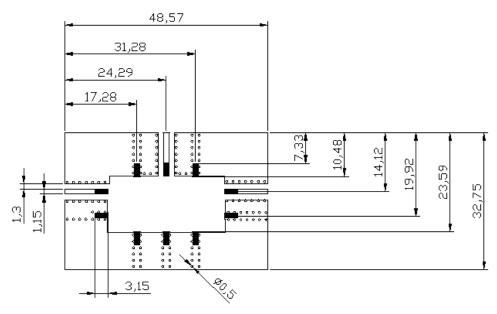
-COMMON PORT

LPF

PORT

🖾 GND

PDRT



NOTE: Substrate is 1.6mm thick FR4

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

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CATV Diplex Filter

50 - 870 / 950 - 1550 / 2000 - 3000 MHz

M/A-COM Products Rev. V1

Electrical Specifications: $T_A = 25^{\circ}C$, $Z_0 = 75\Omega^{-1}$

| Parameter | Test Conditions | Units | Min | Тур | Max |
|---------------------------------------|--|----------------------|----------------------|----------------------|-------------|
| Frequency Range | 50 - 870 / 950 - 1550 / 2000 - 3000 | MHz | | | |
| Common to Low Insertion Loss | 50 - 870MHz | dB | - | 1.5 | 2.5 |
| Common to Low Stop band Rejection | 950 - 975MHz 975 - 1055 MHz 1055 - 1550MHz 1790 - 2100MHz | dB dB dB dB | 30 35 40 20 | 37 40 45 30 | - - - |
| Common to High Stop band Rejection | 50 - 860MHz 860 - 870MHz | dB dB | 40 37.5 | 44 39 | - |
| Common to High Insertion Loss | 950 - 1125MHz 1125 - 1550MHz | dB dB | - | 2.0 1.0 | 2.75 2.0 |
| Common to High Stop band Rejection | 2000 - 3000MHz | dB | 17.5 | 22 | - |
| Common Port Return Loss | 50 - 300MHz 300 - 600MHz 600 - 870MHz 950 - 1400MHz | dB dB dB dB | 16 14 12 14 | 25 18 14 20 | |
| | 1400 - 1550MHz | dB | 10 | 12 | - |

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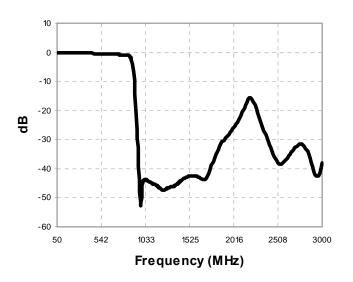
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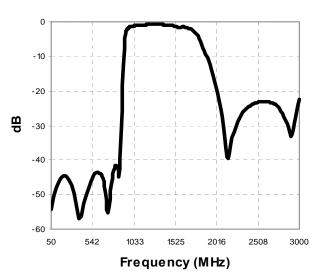
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Typical Performance Curves

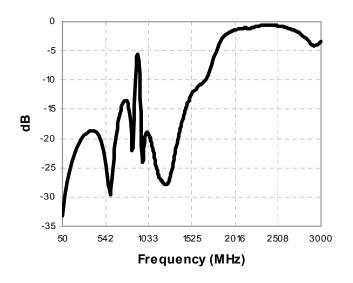
Common to Low Pass Filter



Common to High Pass Filter



Common Port Return Loss



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