

# MAFL-009272-CD0AC0



## CATV Diplex Filter 5 - 1002 / 1125 - 1675 MHz

Rev. V6

### Features

- 75 Ohm
- SMT unit
- RoHS Compliant

### Description

- M/A-COM's MAFL-009272-CD0AC0 is a surface mount diplex filter unit designed for MoCA applications.

### Ordering Information

| Part Number        | Package        |
|--------------------|----------------|
| MAFL-009272-CD0AC0 | 200 Piece Reel |

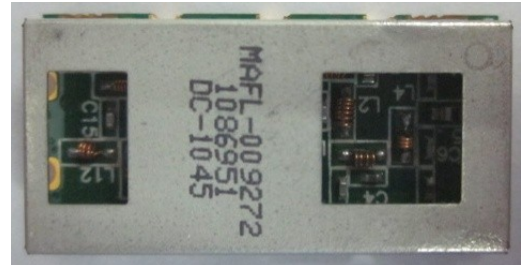
### Pin Configuration

| Function       | Pin Number  |
|----------------|-------------|
| Common Port    | 2           |
| Low Pass Port  | 10          |
| High Pass Port | 4           |
| Ground         | 1, 3, 5 - 9 |
| Not connected  | -           |

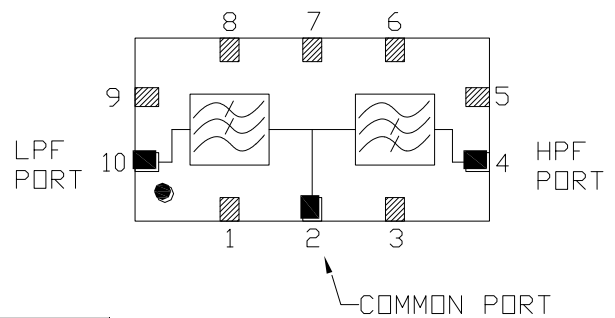
### Electrical Specifications: $T_A = 25^\circ\text{C}$ , $Z_0 = 75\Omega$

| Parameter                            | Units | Min | Typ  | Max  |
|--------------------------------------|-------|-----|------|------|
| <b>Common to Low</b>                 |       |     |      |      |
| Insertion Loss                       |       |     |      |      |
| 5 - 42 MHz                           | dB    | -   | 0.05 | 0.25 |
| 42 - 860 MHz                         | dB    | -   | 0.6  | 1.0  |
| 860 - 1002 MHz                       | dB    | -   | 1.5  | 1.7  |
| <b>Rejection</b>                     |       |     |      |      |
| 1130 - 1550 MHz                      | dB    | 37  | 40   | -    |
| 1550 - 1675 MHz                      | dB    | 36  | 40   | -    |
| <b>Common to High</b>                |       |     |      |      |
| Insertion Loss                       |       |     |      |      |
| 1125 - 1675 MHz                      | dB    | -   | 1.7  | 2.0  |
| <b>Rejection</b>                     |       |     |      |      |
| 5 - 1002 MHz                         | dB    | 37  | 40   | -    |
| 2250 - 2400 MHz                      | dB    | 30  | 33   | -    |
| 2400 - 2600 MHz                      | dB    | 18  | 20   | -    |
| 2600 - 3000 MHz                      | dB    | 10  | 12   | -    |
| <b>Common Port Return Loss</b>       |       |     |      |      |
| 5 - 600 MHz                          | dB    | 12  | 16   | -    |
| 600 - 950 MHz                        | dB    | 11  | 12   | -    |
| 950 - 1002 MHz                       | dB    | 12  | 13   | -    |
| 1125 - 1200 MHz                      | dB    | 12  | 13   | -    |
| 1200 - 1550 MHz                      | dB    | 11  | 12   | -    |
| 1550 - 1675 MHz                      | dB    | 9.5 | 11   | -    |
| <b>Common port voltage transient</b> |       |     |      |      |
|                                      | V     | -   | -    | 200  |

### Product Image



### Functional Schematic



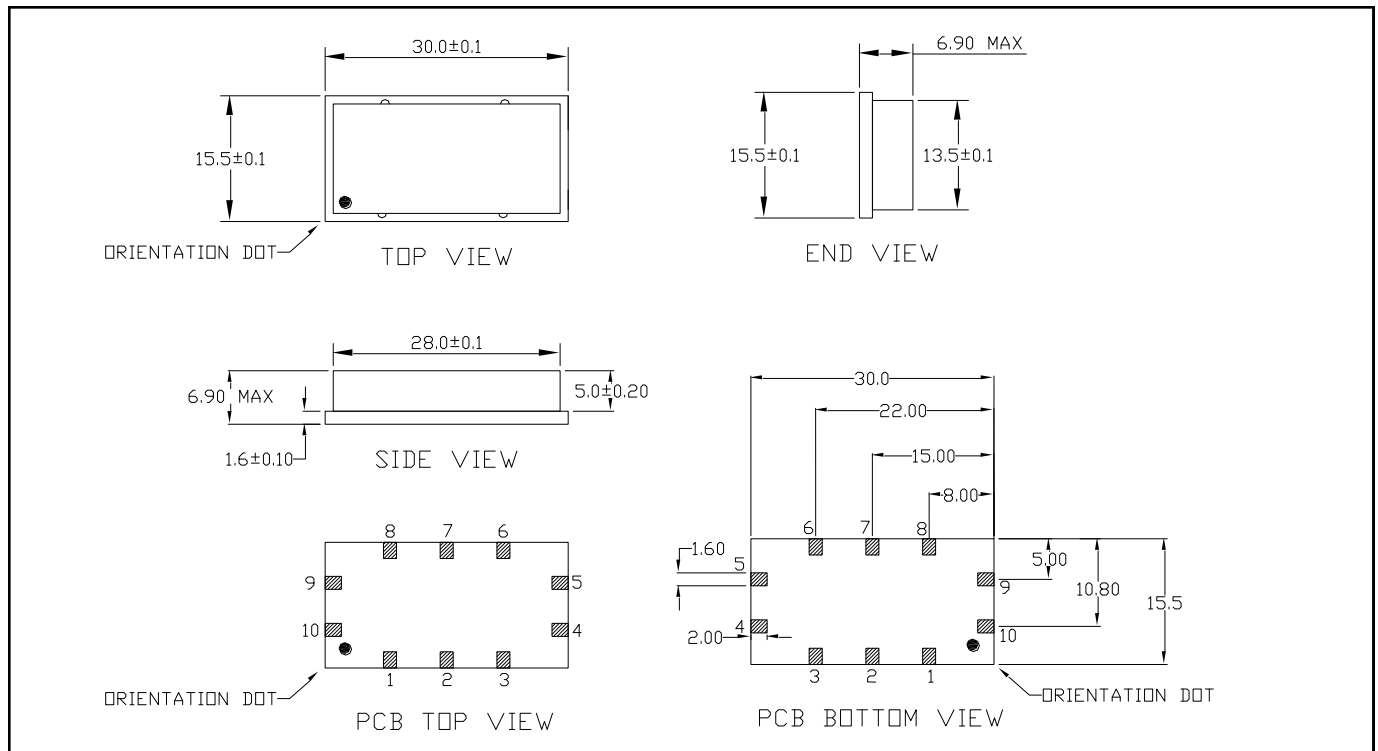
### Absolute Maximum Ratings

| Parameter             | Absolute Maximum |
|-----------------------|------------------|
| Storage Temperature   | -40°C to +85°C   |
| Operating Temperature | -40°C to +85°C   |
| DC Current            | 30mA             |
| RF Power              | 250mW            |

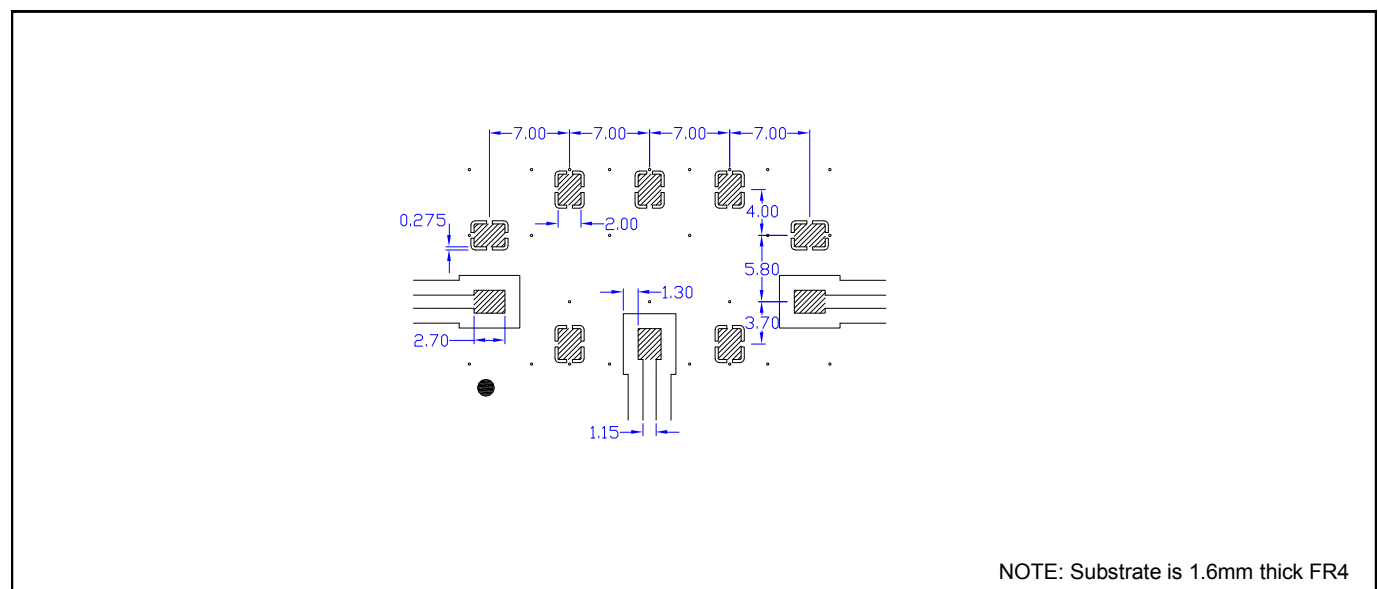
## CATV Diplex Filter 5 - 1002 / 1125 - 1675 MHz

Rev. V6

### Outline Drawing: SM-172



### Recommended PCB Configuration



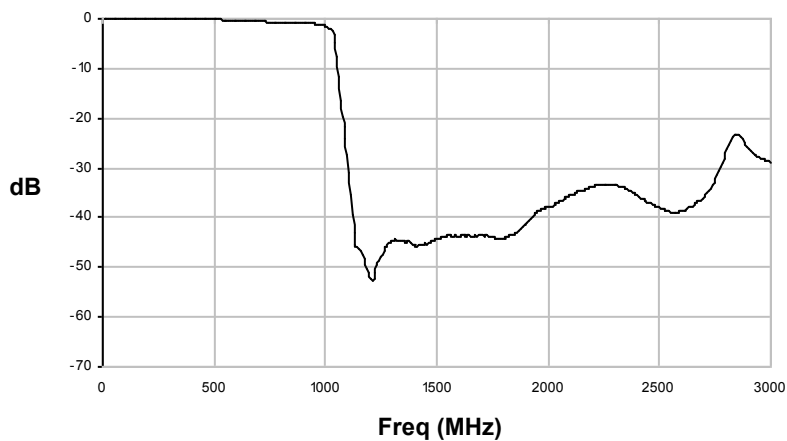
Dimensions in mm. Tolerance:  $.x \pm 0.1$ ,  $.xx \pm 0.05$  unless otherwise noted

## CATV Diplex Filter 5 - 1002 / 1125 - 1675 MHz

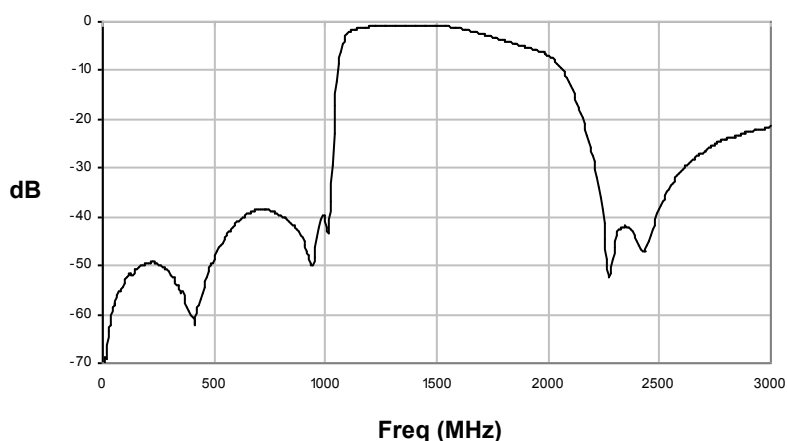
Rev. V6

### Typical Performance Curves at +25°C

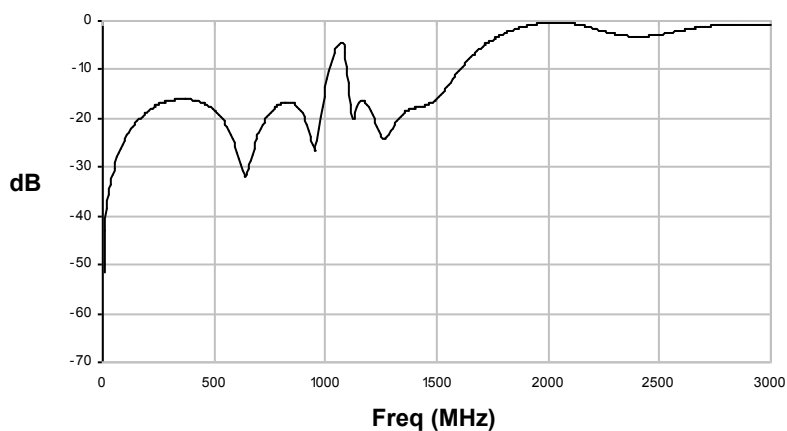
Common to Low pass



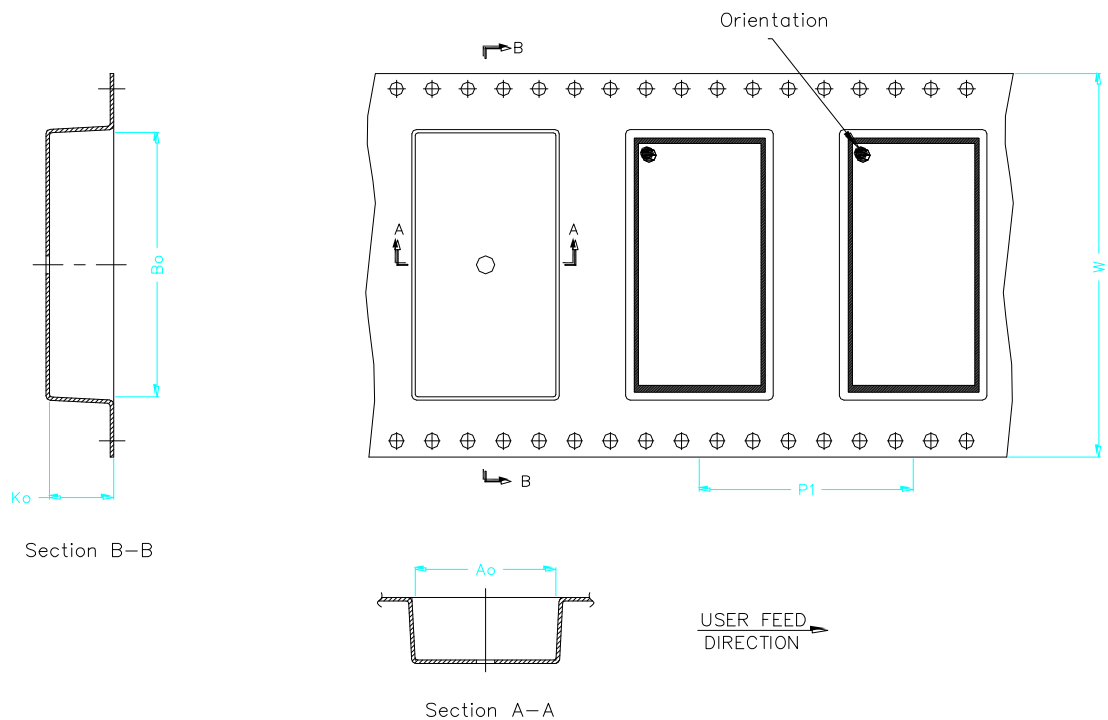
Common to High pass



Common Port Return Loss



Tape Specification



| Item | Dimension         |
|------|-------------------|
| Ao   | 15.80mm +/- 0.1mm |
| Bo   | 30.30mm +/- 0.1mm |
| Ko   | 7.20mm +/- 0.1mm  |
| W    | 44.00mm +/- 0.3mm |
| P1   | 24.00mm +/- 0.1mm |

M/A-COM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with M/A-COM Technology Solutions Inc ("MACOM") products. These materials are provided by MACOM as a service to its customers and may be used for informational purposes only. Except as provided in MACOM's Terms and Conditions of Sale for such products or in any separate agreement related to this document, MACOM assumes no liability whatsoever. MACOM assumes no responsibility for errors or omissions in these materials. MACOM may make changes to specifications and product descriptions at any time, without notice. MACOM makes no commitment to update the information and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to its specifications and product descriptions. No license, express or implied, by estoppels or otherwise, to any intellectual property rights is granted by this document.

THESE MATERIALS ARE PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, RELATING TO SALE AND/OR USE OF MACOM PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, CONSEQUENTIAL OR INCIDENTAL DAMAGES, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT. MACOM FURTHER DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. MACOM SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS, WHICH MAY RESULT FROM THE USE OF THESE MATERIALS.

MACOM products are not intended for use in medical, lifesaving or life sustaining applications. MACOM customers using or selling MACOM products for use in such applications do so at their own risk and agree to fully indemnify MACOM for any damages resulting from such improper use or sale.