

CATV Diplex Filter 5 - 65 MHz / 88 - 1000 MHz

Rev. V4

Features

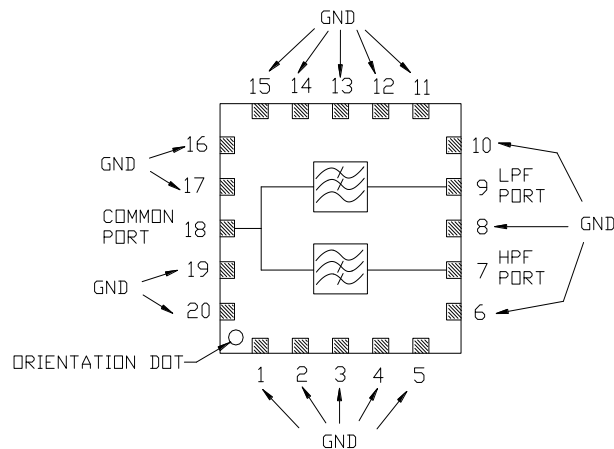
- 75 Ohm
- SMT unit
- RoHS Compliant and lead free

Description

MAFL-007988-CD0550 is a low cost, non hermetically sealed surface mount diplex filter unit designed for CATV, DTV and DBS applications.



Functional Schematic



Ordering Information

| Part Number | Package |
|--------------------|---------------------|
| MAFL-007988-CD0550 | 50 Piece Reel |
| MAFL-007988-CD05TB | Customer Test Board |

Pin Configuration

| Pin Number | Function |
|-----------------------|----------------|
| 1-6, 8, 10-17, 19, 20 | Ground |
| 7 | High Pass Port |
| 9 | Low Pass Port |
| 18 | Common Port |

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

| Parameter | Test Conditions | Units | Min. | Typ. | Max. |
|----------------|-----------------|-------|------|------|------|
| Insertion Loss | 5 - 65 MHz | dB | — | 0.5 | 1.0 |
| | 88 - 1000 MHz | | | 0.5 | 1.2 |
| Return Loss | 5 - 65 MHz | dB | 17 | 20 | — |
| | 55 - 1000 MHz | | 17 | 20 | |
| Rejection | 5 - 65 MHz | dB | 45 | 50 | — |
| | 88 - 1000 MHz | | 45 | 50 | |
| Isolation | 5 - 65 MHz | dB | 45 | 50 | — |
| | 88 - 1000 MHz | | 45 | 50 | |

Absolute Maximum Ratings^{1,2}

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

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

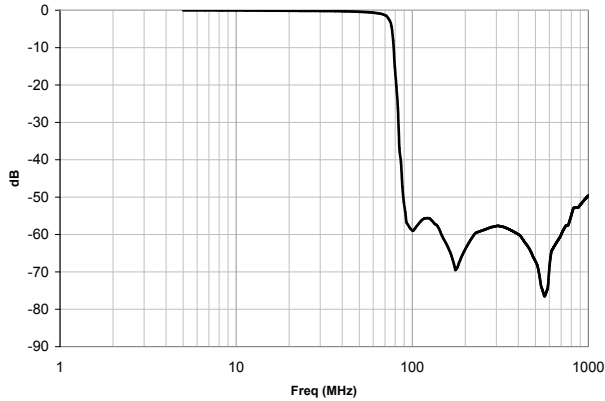
MACOM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit www.macom.com for additional data sheets and product information.

CATV Diplex Filter 5 - 65 MHz / 88 - 1000 MHz

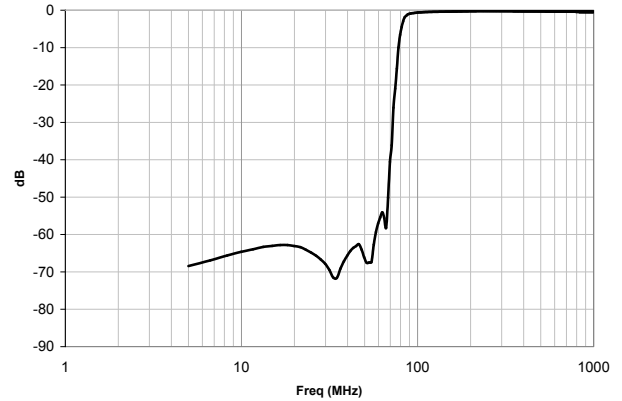
Rev. V4

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

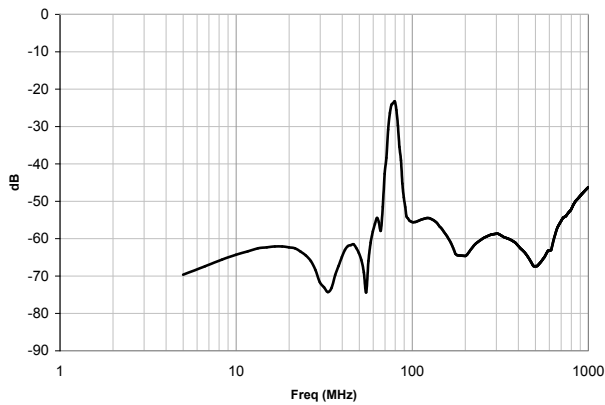
Low Pass Filter Insertion Loss



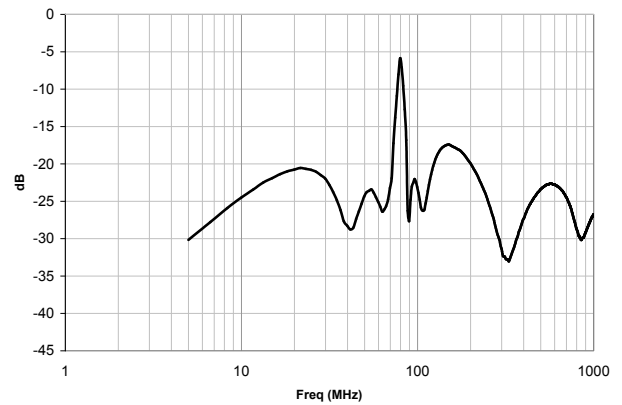
High Pass Filter Insertion Loss



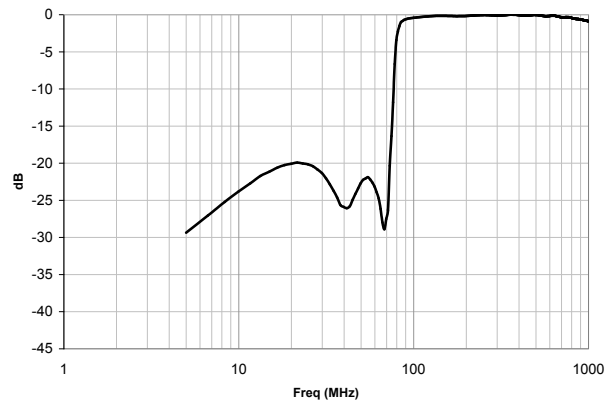
Low Side to High Side Isolation



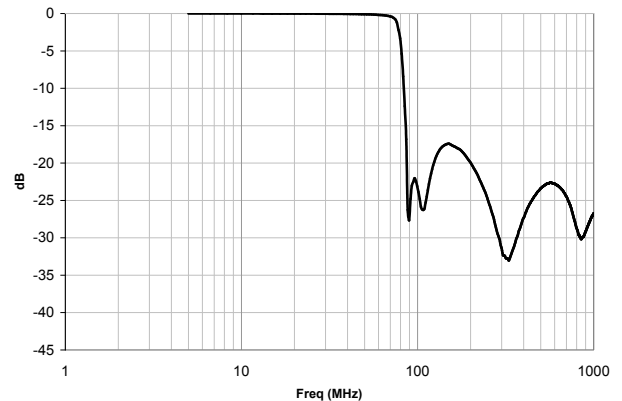
Input Port Return Loss



Low Pass Port Return Loss



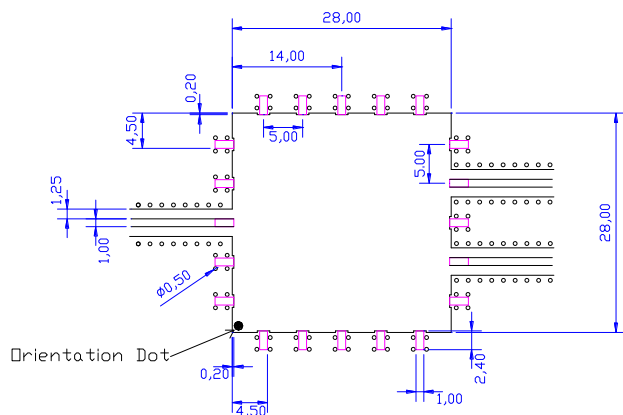
High Pass Port Return Loss



CATV Diplex Filter 5 - 65 MHz / 88 - 1000 MHz

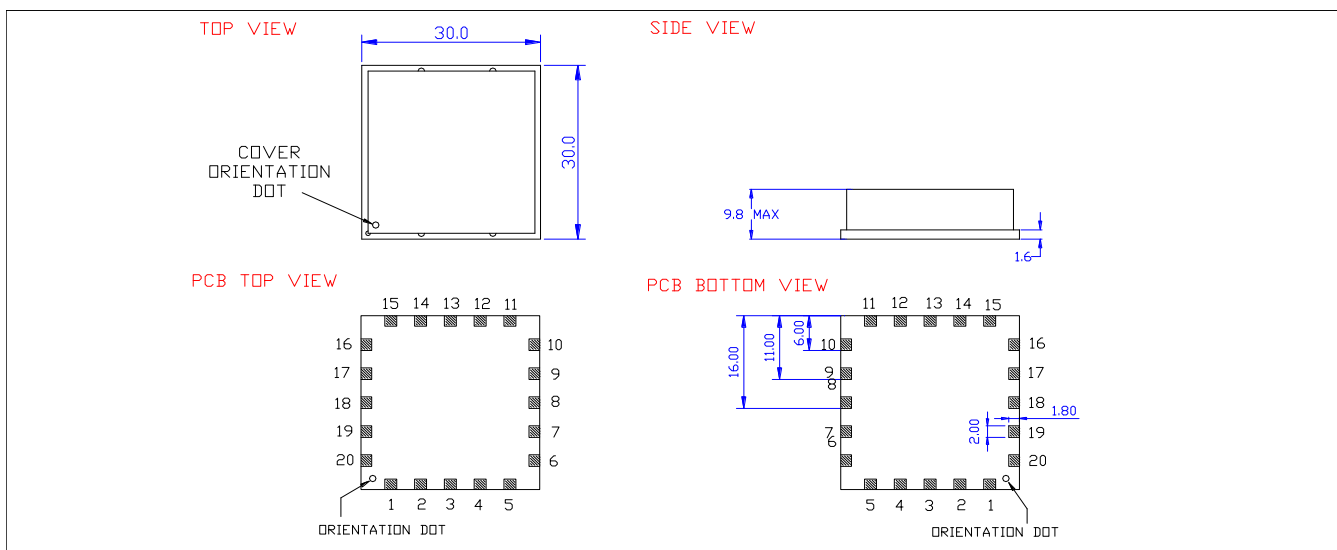
Rev. V4

Recommended PCB Configuration



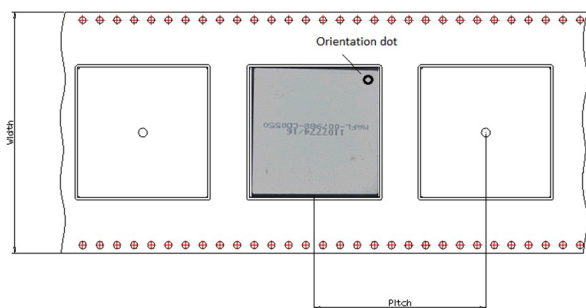
Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

SM-85 Case Style



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

Carrier Tape Orientation



Tape & Reel Information

| Parameter | Units | Value |
|--|-------|-------|
| Qty per reel | pcs | 50 |
| Reel size | mm | 330 |
| Tape Width | mm | 56 |
| Pitch | mm | 40 |
| Orientation | - | F20 |
| Reference Application Note ANI-019 for orientation | | |

MACOM Technology Solutions Inc. All rights reserved.

Information in this document is provided in connection with MACOM 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 estoppel 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.