

# MAFL-010639-CB0AD0



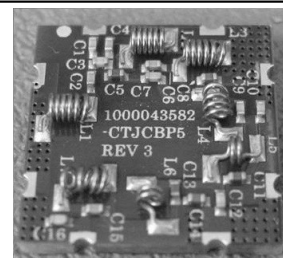
**MoCA Band Pass Filter**  
500 - 3000 MHz

Rev. V6

## Features

- Surface Mount
- 75 Ohm
- RoHS\* Compliant
- Pb Free
- MoCA Application

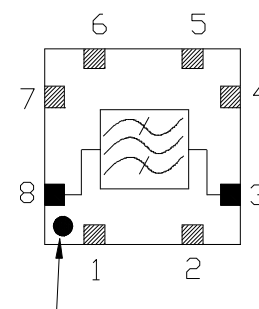
## Product Image



## Description

M/A-COM Technology Solutions' MAFL-010639-CB0AD0 is a surface mount Band Pass Filter unit designed for MoCA applications.

## Functional Schematic



ORIENTATION DOT

**Electrical Specifications:  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$ ,  $P_{in} = 0\text{dBm}$**

| Parameter  | Units | Min  | Typ  | Max  |
|--|-------|------|------|------|
| <b>Common to MoCA / MoCA to Common Rejection</b> |       |      |      |      |
| 500 - 565 MHz                                    | dB    | -35  | -38  | -    |
| 565 - 575 MHz                                    | dB    | -30  | -32  | -    |
| 950 - 960 MHz                                    | dB    | -32  | -36  | -    |
| 960 - 1220 MHz                                   | dB    | -34  | -40  | -    |
| 1220-2000 MHz                                    | dB    | -37  | -42  | -    |
| 2000 - 2500 MHz                                  | dB    | -35  | -40  | -    |
| 2600 - 3000 MHz                                  | dB    | -30  | -33  | -    |
| <b>Insertion Loss</b>                            |       |      |      |      |
| 650 - 875 MHz                                    | dB    | -    | -2.0 | -3.0 |
| <b>Common Port Return Loss</b>                   |       |      |      |      |
| 650 - 875 MHz                                    | dB    | -9.5 | -10  | -    |

## Recommended Maximum Ratings

| Parameter             | Value            |
|-----------------------|------------------|
| Storage Temperature   | -40C to +85°C    |
| Operating Temperature | -40C to +85°C    |
| DC Current            | 30mA             |
| RF Power              | +23.9dBm (250mW) |
| Transient Voltage     | 200V             |

## Pin Configuration

| Function            | Pin Number   |
|---------------------|--------------|
| Common Port (Input) | 8            |
| MoCA Port (Output)  | 3            |
| Ground              | 1 - 2, 4 - 7 |
| Not connected       | -            |

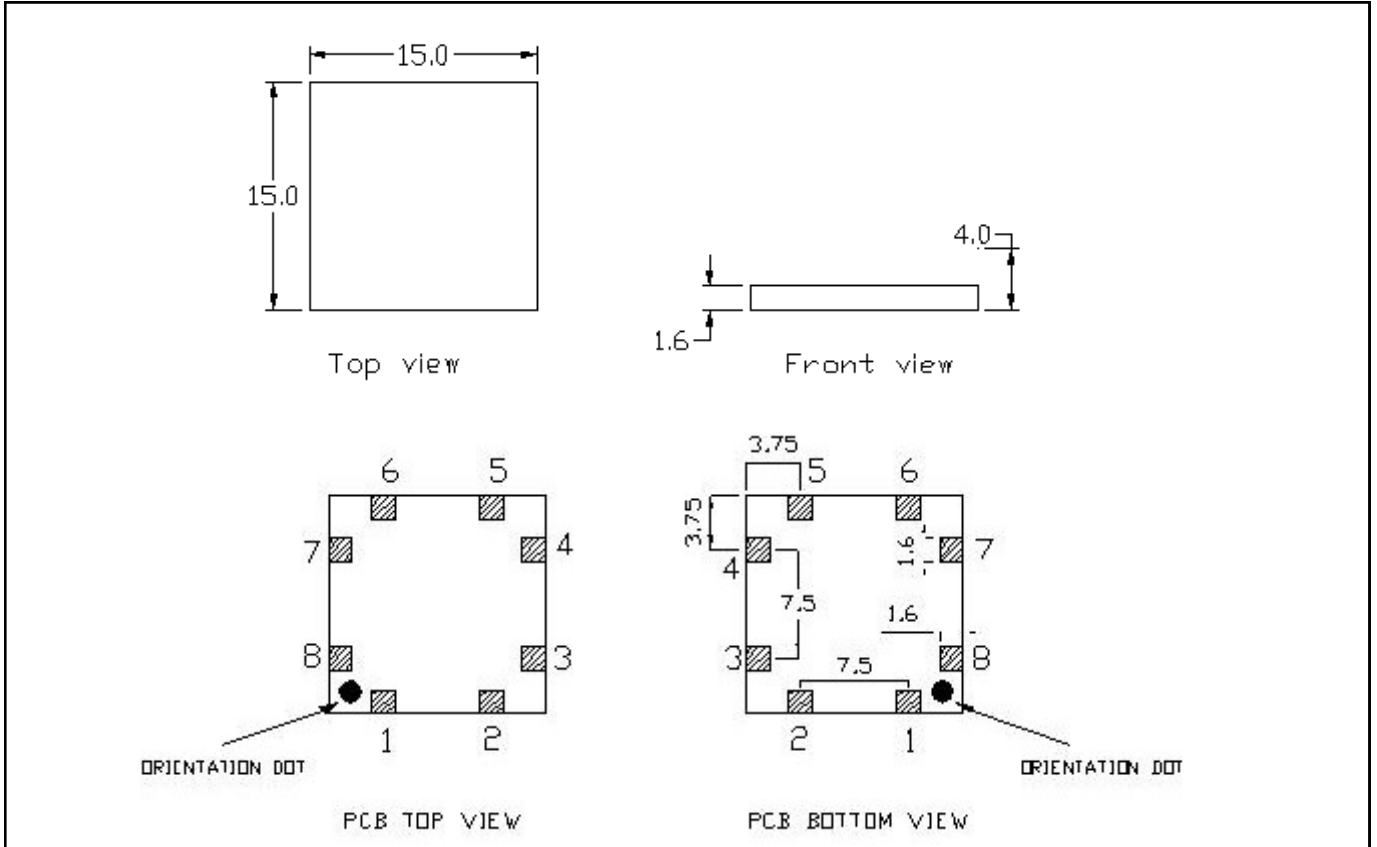
- Restrictions on Hazardous Substances, European Union Directive 2002/95/EC
- Full temperature plots are available on request.

1

M/A-COM 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](http://www.macom.com) for additional data sheets and product information.

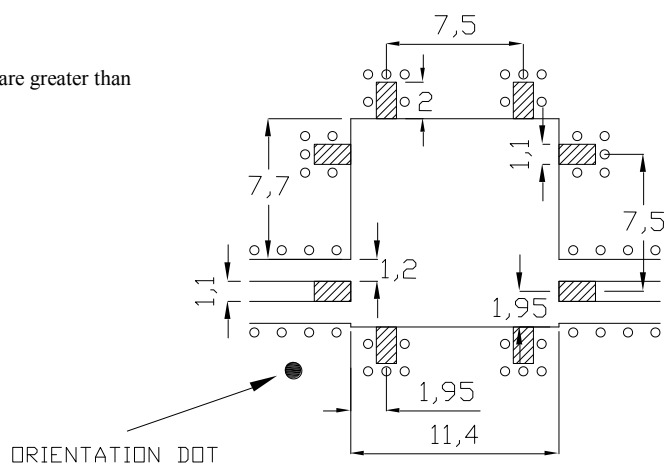
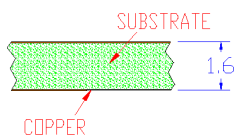
For further information and support please visit:  
<https://www.macom.com/support>

Outline Drawing:



Recommended PCB Configuration

- Track dimension = 1.1mm
- Gap dimension = 1.2mm
- It is not recommended to run tracks under the filter unless they are greater than 1.6mm below the base.
- Ground should be 1.6mm below the base of the filter
- Area directly under the filter should be free from copper
- RF shield should be kept a minimum of 6mm above the filter

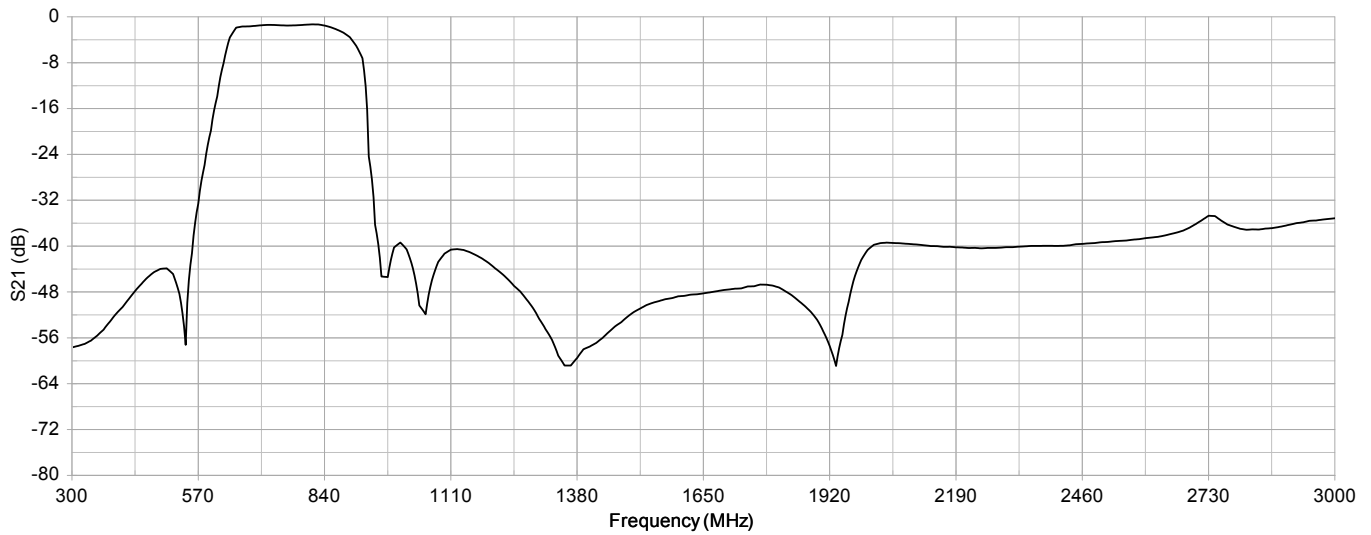


1. Dimensions in mm.
2. Tolerance:  $\pm 0.1$ mm unless otherwise noted.
3. Model number and lot code printed on reel.
4. Plating finish: ENIG on both sides, 0.05 to 0.1  $\mu$ m gold over 3 to 6  $\mu$ m nickel

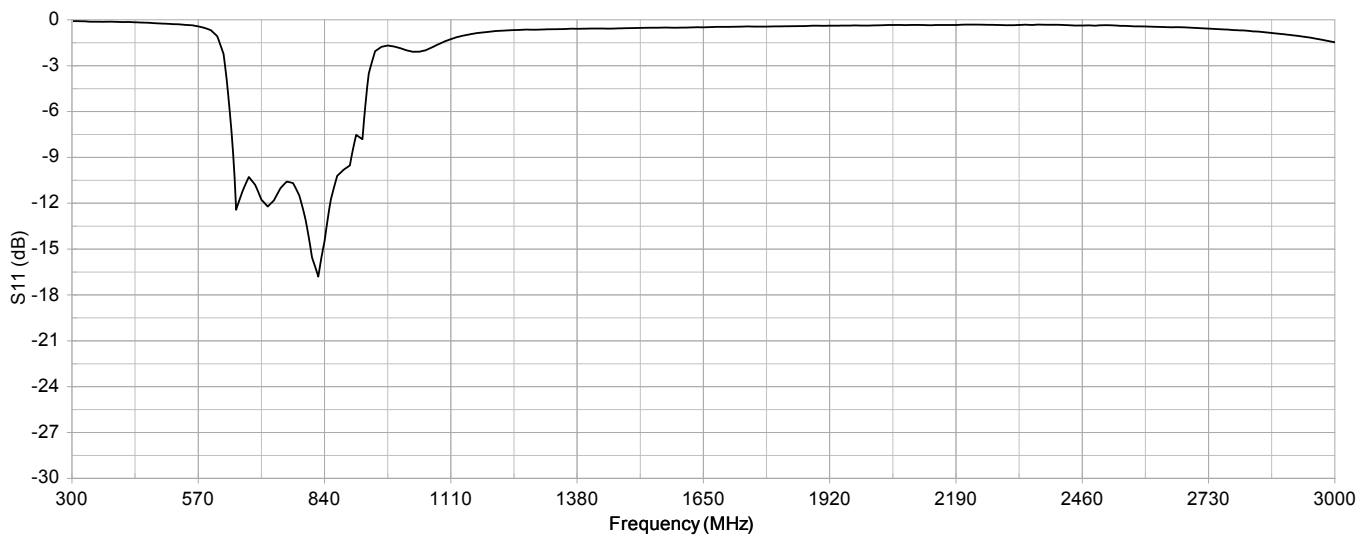
MACOM Technology Solutions Inc. (MACOM) and its affiliates reserve the right to make changes to the product(s) or information contained herein without notice. Visit [www.macom.com](http://www.macom.com) for additional data sheets and product information.

## Typical Performance Curves at +25°C

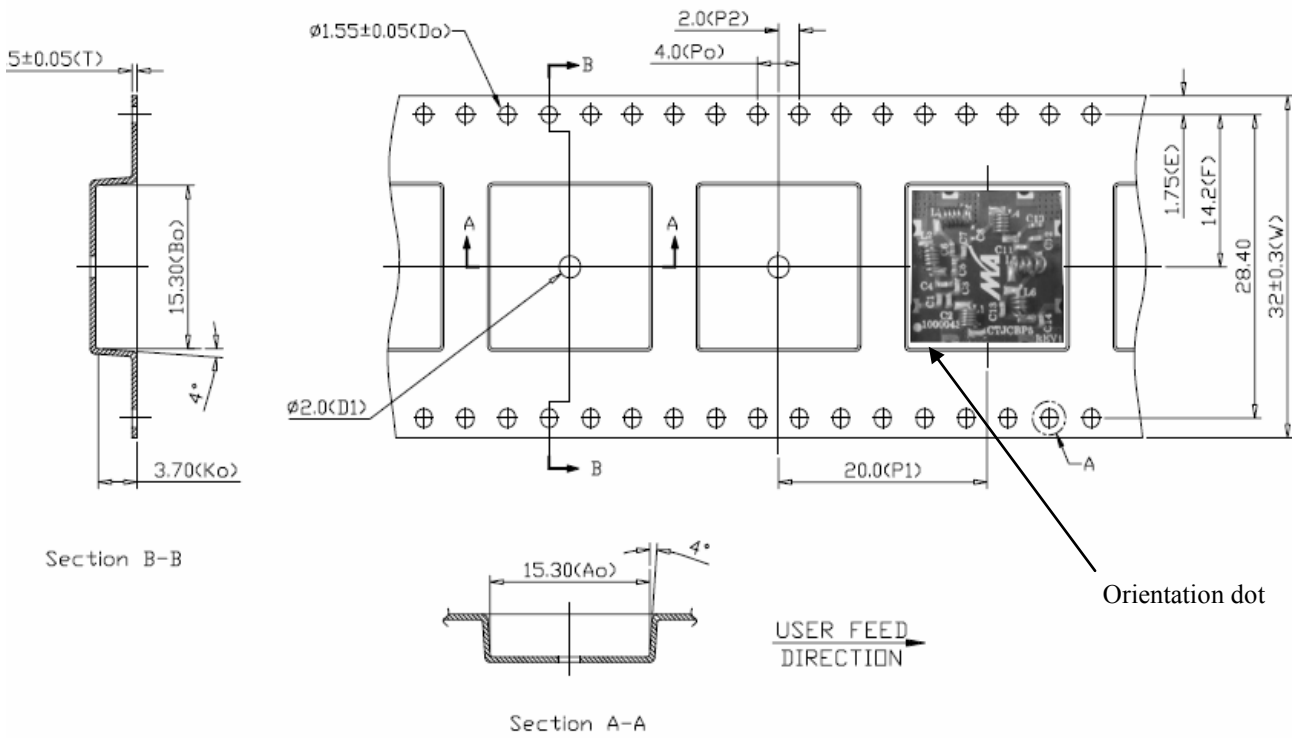
### Insertion Loss



### Common Port Return Loss



## Tape & Reel Information



| Parameter               | Units | Value |
|-------------------------|-------|-------|
| Qty per reel            | -     | 500   |
| Reel size               | mm    | 330   |
| Tape width (W)          | mm    | 32.0  |
| Pitch (P <sub>1</sub> ) | mm    | 20.0  |
| A <sub>0</sub>          | mm    | 15.3  |
| B <sub>0</sub>          | mm    | 15.3  |
| K <sub>0</sub>          | mm    | 3.70  |

## Ordering Information

| Part Number        | Description               |
|--------------------|---------------------------|
| MAFL-010639-CB0AD0 | Tape & Reel               |
| MAFL-010639-CB0ATB | Customer Evaluation Board |

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.