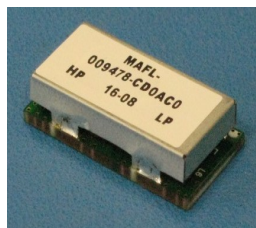


## Features

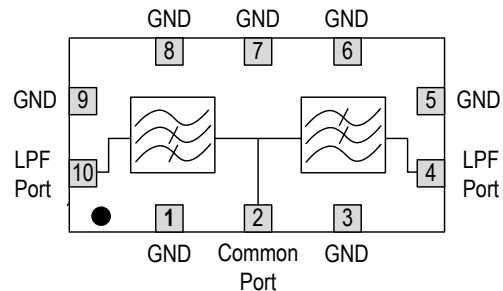
- 75  $\Omega$
- Surface Mount Technology
- RoHS\* Compliant

## Description

The MAFL-009478-CD0AC0 is a surface mount diplex filter unit designed for MoCA applications.



## Functional Schematic



## Pin Configuration

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

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

Parameter	Test Conditions Frequency (MHz)	Units	Min	Typ	Max
Common to Low - Insertion Loss	50 - 870	dB	—	1.5	2.5
Common to Low - Stop band Rejection	950 - 975	dB	30	37	—
	975 - 1055		35	40	
	1055 - 1550		40	45	
	1790 - 2100		20	30	
Common to High - Stop band Rejection	50 - 860	dB	40.0	44.0	—
	860 - 870		37.5	39.0	
Common to High - Insertion Loss	950 - 1125	dB	—	2.0	2.75
	1125 - 1550		—	1.0	2.0
Common to High - Stop band Rejection	2000 - 3000	dB	17.5	22.0	—
Common Port - Return Loss	50 - 300	dB	16	25	—
	300 - 600		14	18	
	600 - 870		12	14	
	950 - 1400		14	20	
	1400 - 1550		10	12	

\* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

## Ordering Information

Part Number	Package
MAFL-009478-CD0AC0	200 piece reel

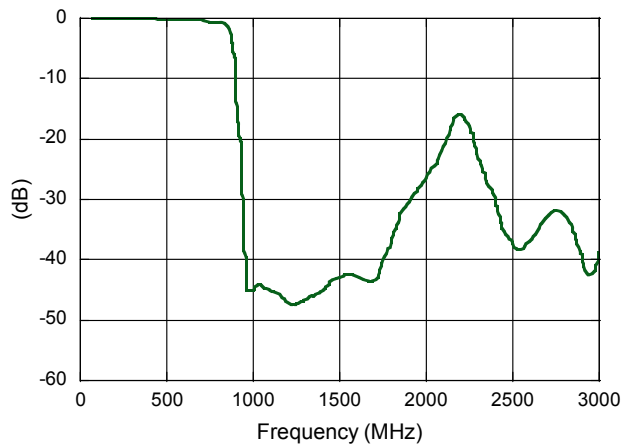
## Absolute Maximum Ratings<sup>1,2</sup>

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

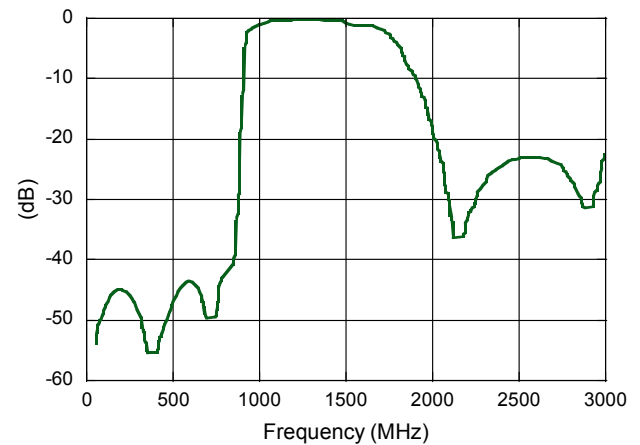
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

## Typical Performance Curves

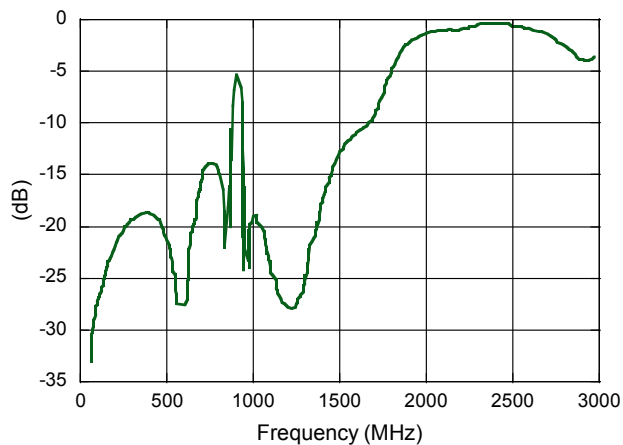
**Common to Low Pass Filter**



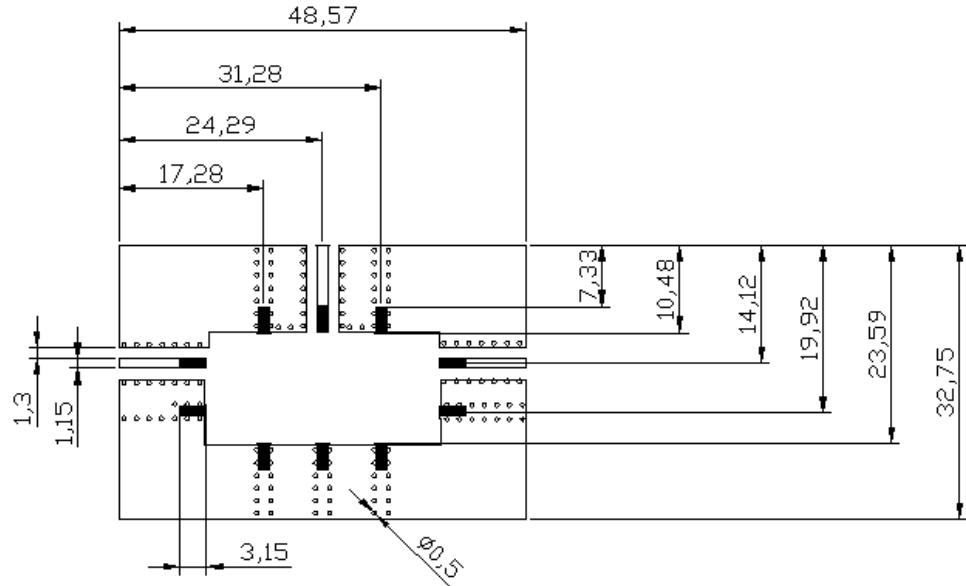
**Common to High Pass Filter**



**Common Port Return Loss**

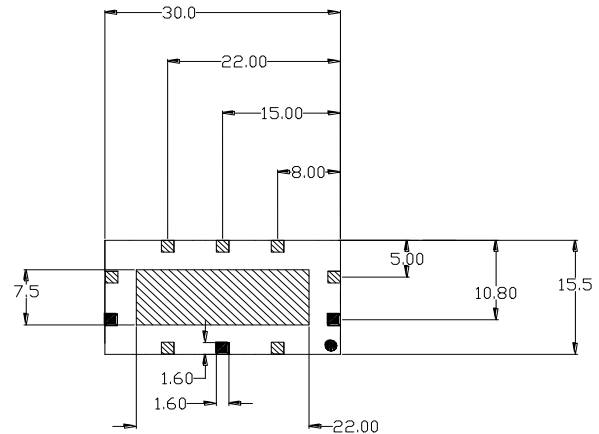
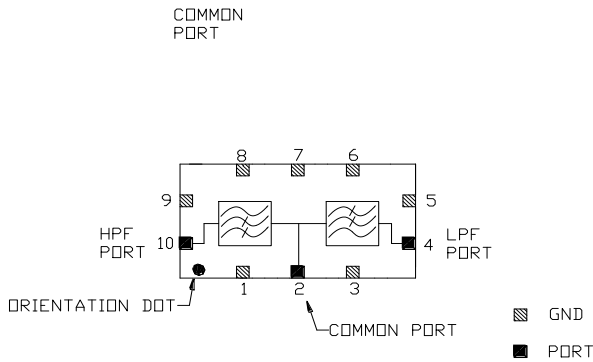
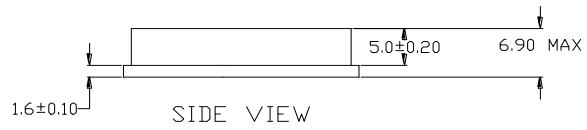
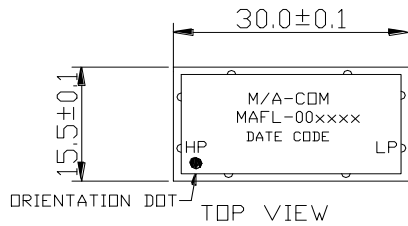


## Recommended PCB Configuration



Substrate is 1.6 mm thick FR4

## SM-172 Case Style



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

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.