

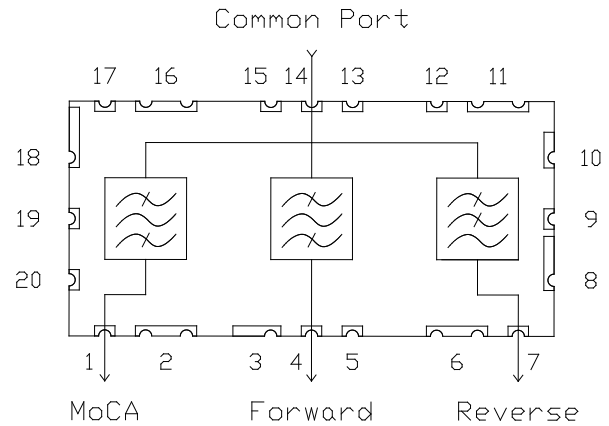
## Features

- 75 Ohm
- SMT unit
- RoHS\* Compliant

## Description

The MAFL-011018 is a low profile, surface mount filter with 3 transmission paths allowing full triplexer operation. The CATV reverse and forward bands are provided along with a further band meeting the MoCA specification. This filter is specifically designed for CATV and MoCA applications.

## Functional Schematic



## Ordering Information

Part Number	Package
MAFL-011018	200 piece reel
MAFL-011018-Tray	480 piece tray

## Pin Configuration

Pin Number	Function
1	MoCA Port
4	Forward Port
7	Reverse Port
14	Common Port
2, 3, 5, 6, 8-13, 15-20	Ground

\* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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

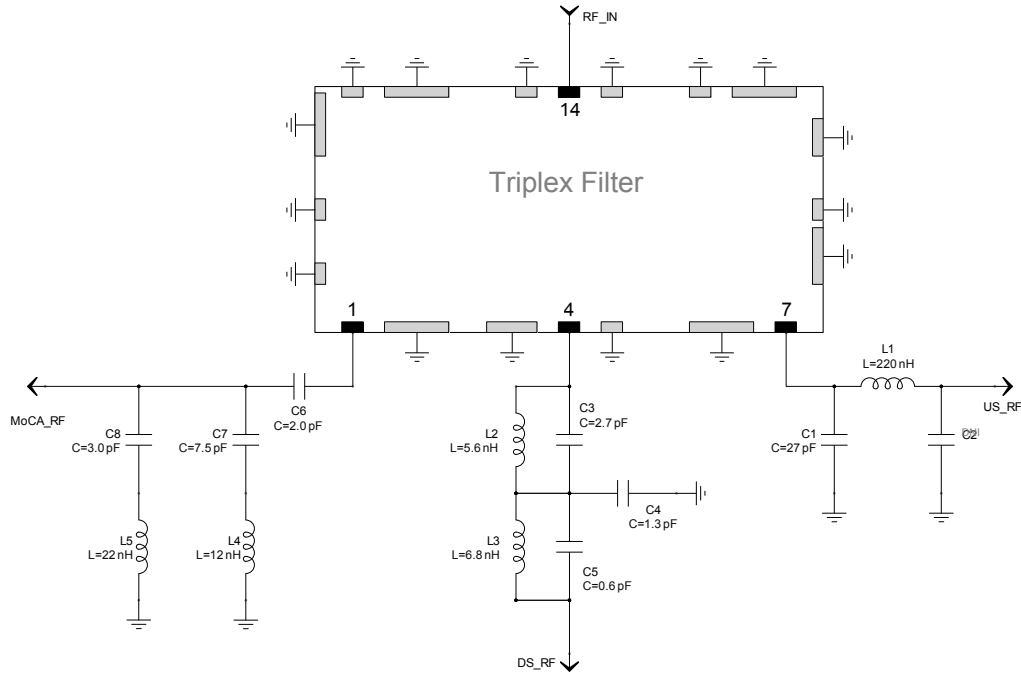
Parameter	Test Frequency (MHz)	Units	Min.	Typ.	Max.
Reverse Path Insertion Loss	5 - 42	dB	—	1.2	1.5
Reverse Path Rejection	54 - 126 126 - 1002 1125 - 1675 1675 - 3000	dB	62 64 60 30	65 70 64 50	—
Forward Path Insertion Loss	54 - 88 88 - 860 860 - 1002	dB	—	1.50 0.75 2.75	2.00 1.50 2.75
Forward Path Rejection	5 - 42 1125 - 1675 1675 - 3000	dB	50 43 20	52 45 30	—
MoCA Path Insertion Loss	1125 - 1150 1150 - 1650 1650 - 1675	dB	—	2.8 2.5 2.5	3.0 2.7 3.0
MoCA Path Rejection	5 - 1002 2300 - 3000	dB	49 25	55 35	—
Input Return Loss	5 - 42 54 - 860 860 - 1002 1125 - 1675	dB	16 16 12 12	18 18 16 16	—
Isolation - Forward to Reverse	5 - 38 38 - 42 54 - 1002	dB	55 50 60	58 52 65	—
Isolation Forward to MoCA	5 - 42 54 - 126 126 - 1002 1125 - 1675	dB	49 49 49 43	70 70 53 50	—

## Recommended Maximum Ratings

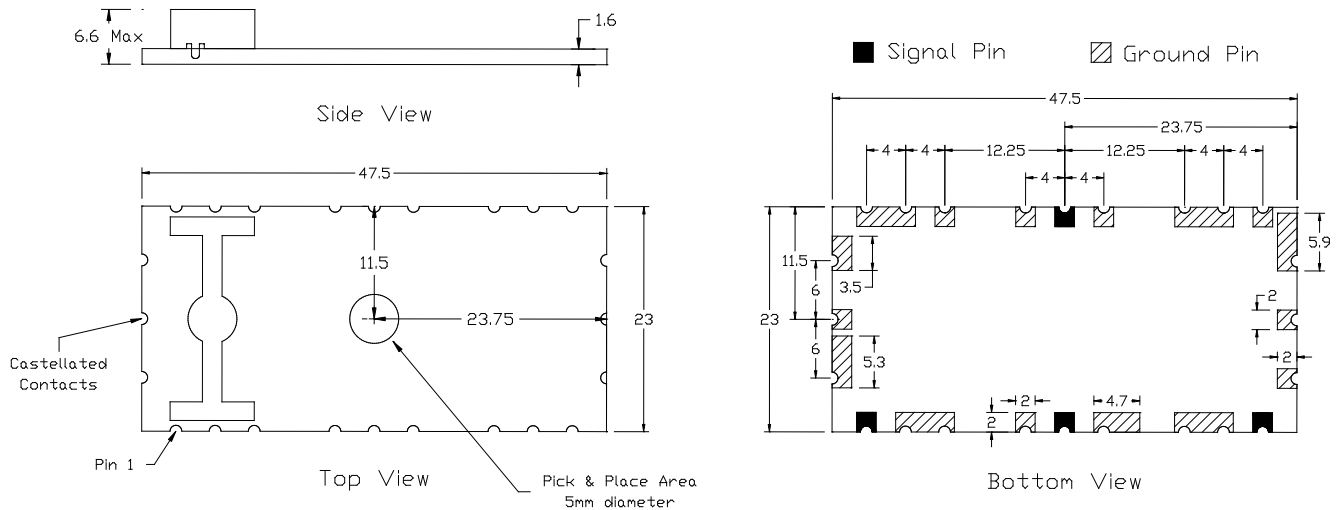
Parameter	Absolute maximum
RF Power	250 mW
DC Current	30 mA
Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C



## Application Schematic



## Outline Dimensions



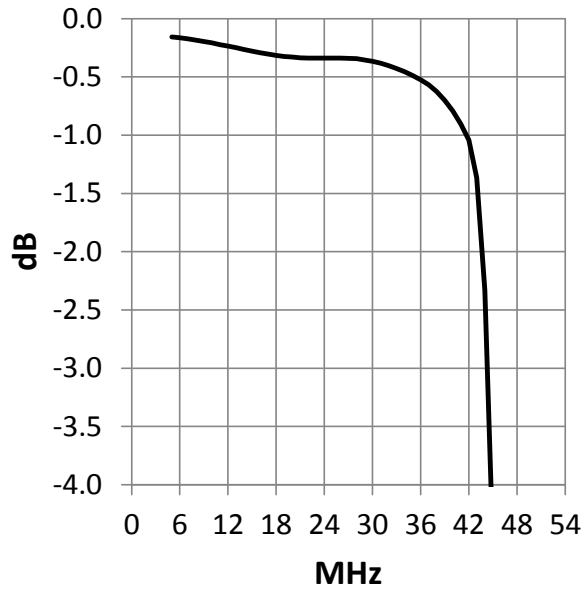
Dimensions are in millimetres.

Tolerance:  $\pm 0.1$  mm, except where specified.

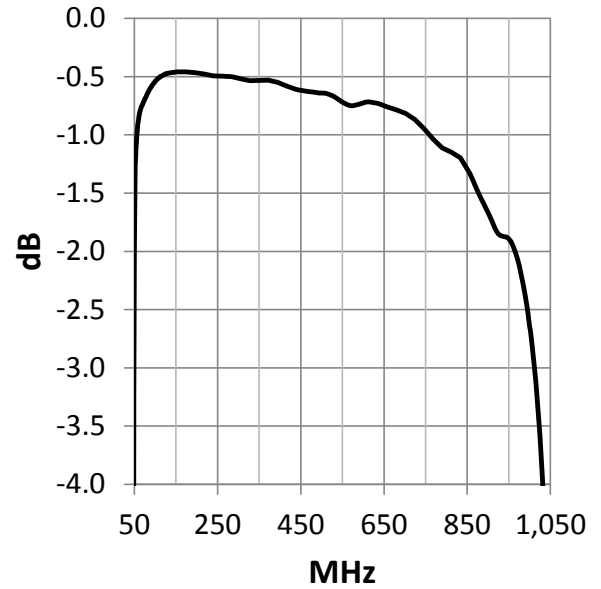
The maximum allowable coplanarity measurement between PCB and customer board surface is 0.15mm.

## Typical Performance Curves

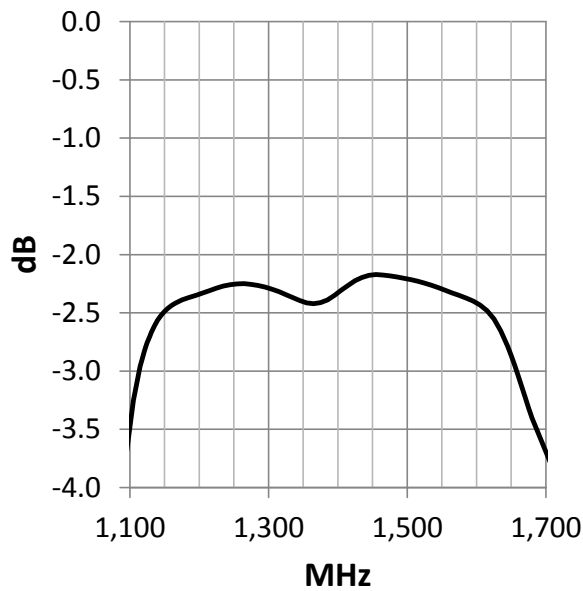
*Reverse Insertion Loss*



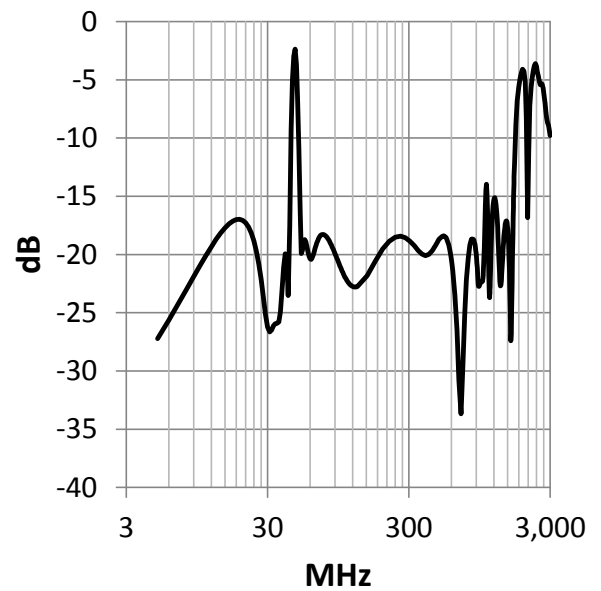
*Forward Insertion Loss*



*MoCA Insertion Loss*

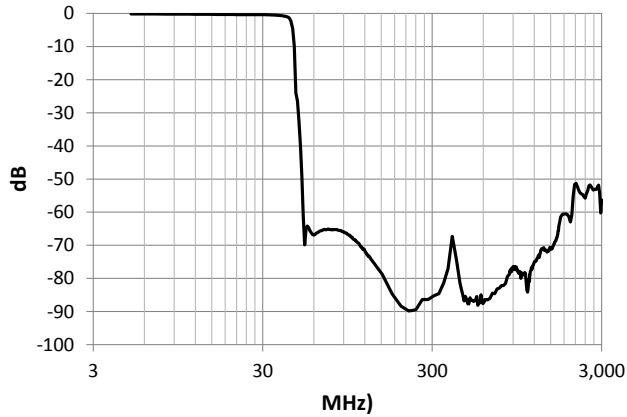


*Common Port Return Loss*

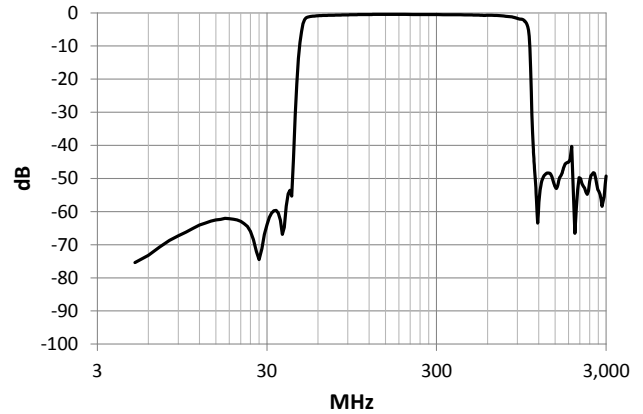


## Typical Performance Curves

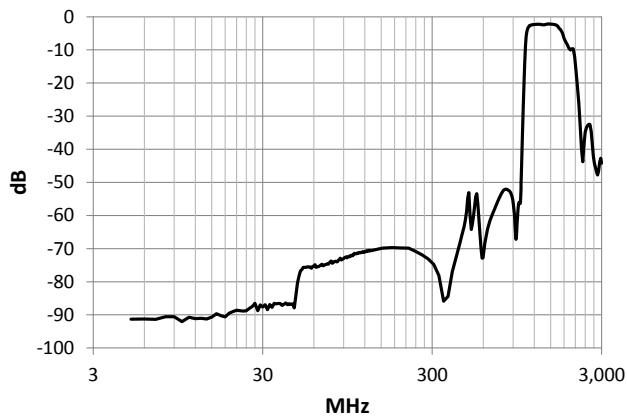
**Reverse Path**



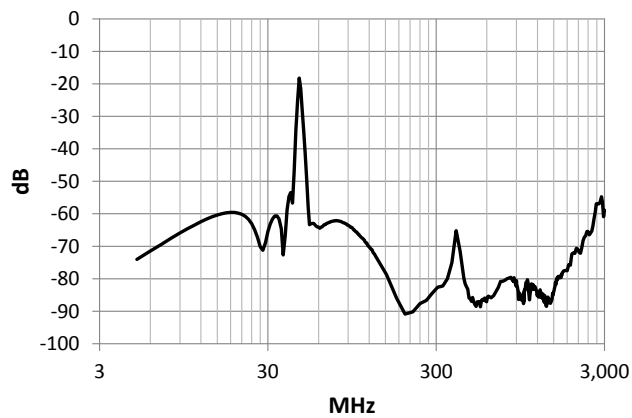
**Forward Path**



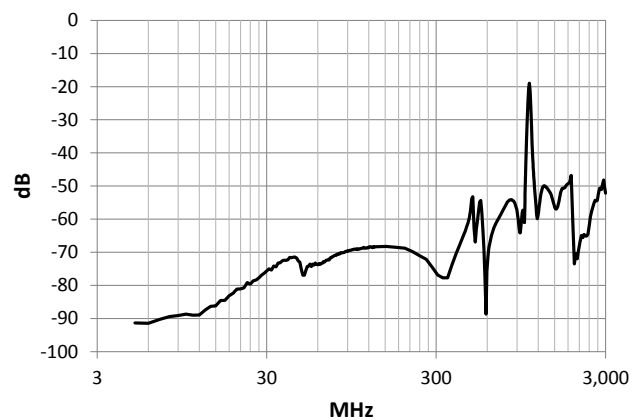
**MoCA Path**



**Reverse to Forward Isolation**

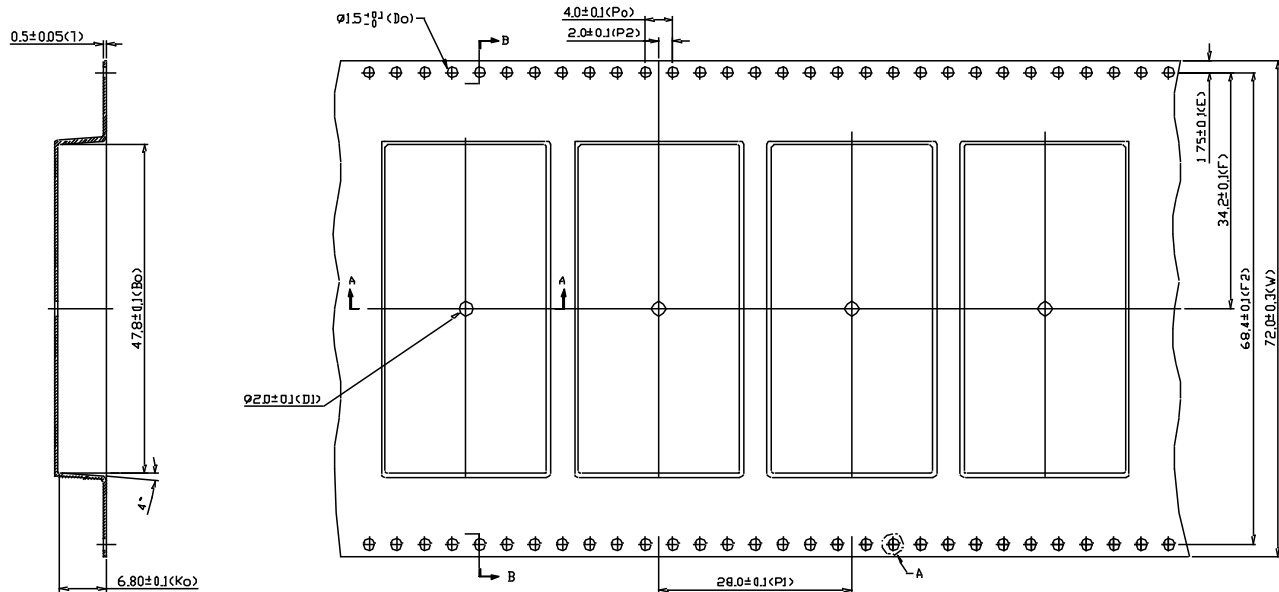


**Forward to MoCA Isolation**

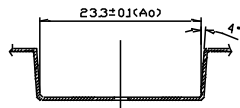


## Tape & Reel Information

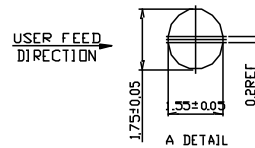
Parameter	Units	Value
Qty per reel	-	200
Reel Size	mm	330
Tape Width	mm	72.0
Pitch	mm	28.0
Ao	mm	23.3
Bo	mm	47.8
Ko	mm	6.8
Orientation	-	F54
Reference Application Note ANI-019 for orientation		



Section B-B



Section A-A



Dimensions are in millimetres.

Tolerance: .x ± 0.1 mm, except where specified.

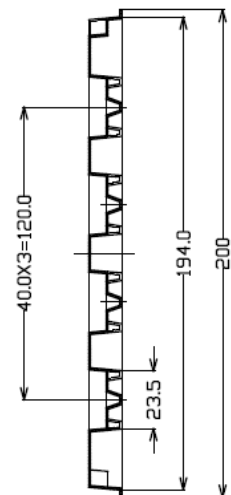
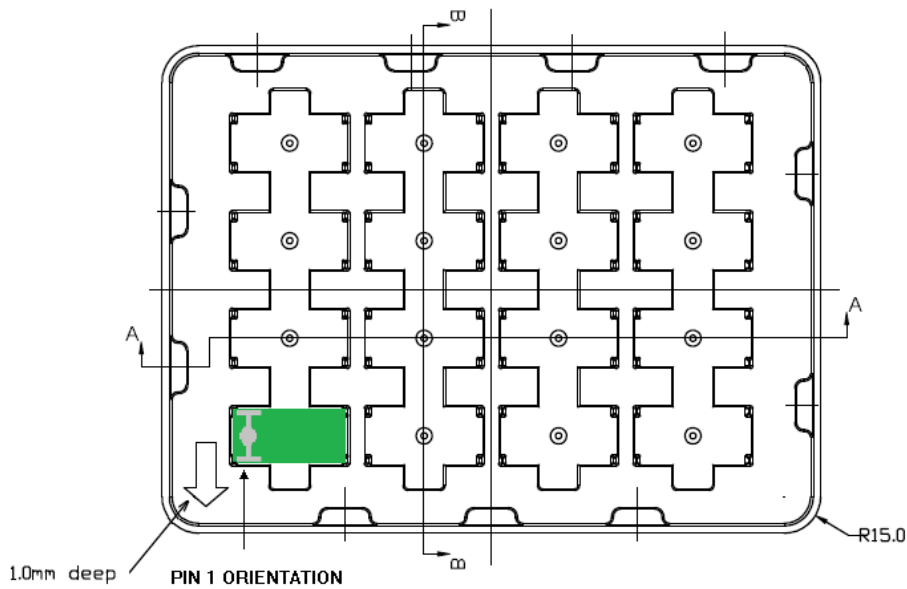
7

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.

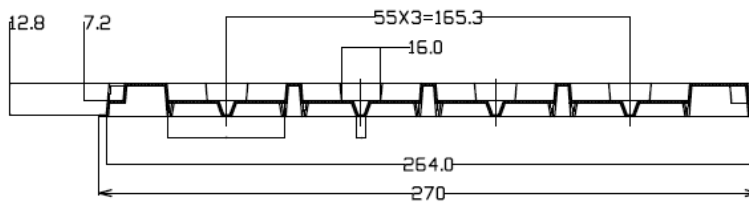
For further information and support please visit:  
<https://www.macom.com/support>

## Tray Information

Parameter	Units	Value
Min Order Qty	-	480
Tray Length	mm	270
Tray Width	mm	200
Height	mm	20.8
Ao	mm	35
Bo	mm	50
Ko	mm	14.4
Orientation	-	See below
Consecutive trays will be stacked alternately at 180°		



Section B-B



Section A-A

Dimensions are in millimetres.

Tolerance:  $.x \pm 0.1$  mm, except where specified.



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.