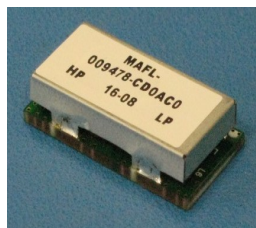


Features

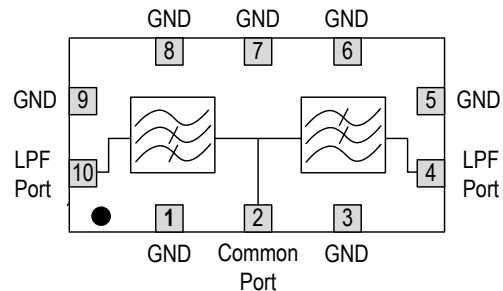
- 75 Ω
- Surface Mount Technology
- RoHS* Compliant

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	
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.

CATV Diplex Filter
50 - 870 / 950 - 1550 / 2000 - 3000 MHz

Rev. V2

Ordering Information

Part Number	Package
MAFL-009478-CD0AC0	200 piece reel

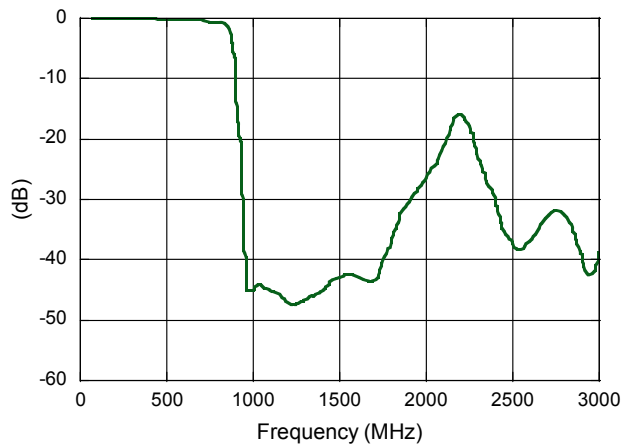
Absolute Maximum Ratings^{1,2}

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

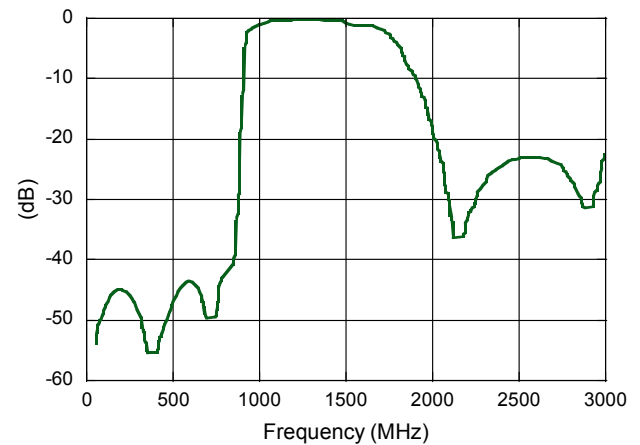
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Typical Performance Curves

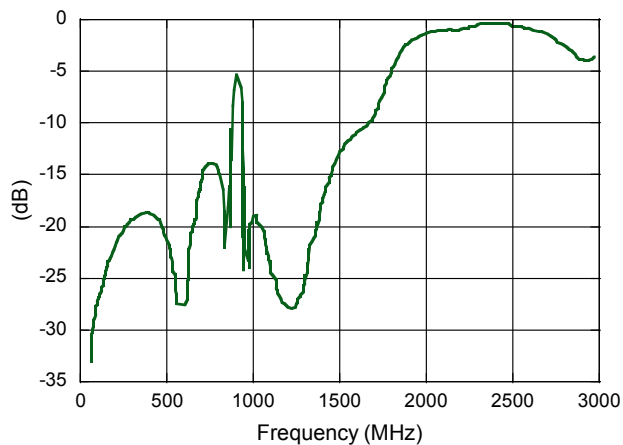
Common to Low Pass Filter



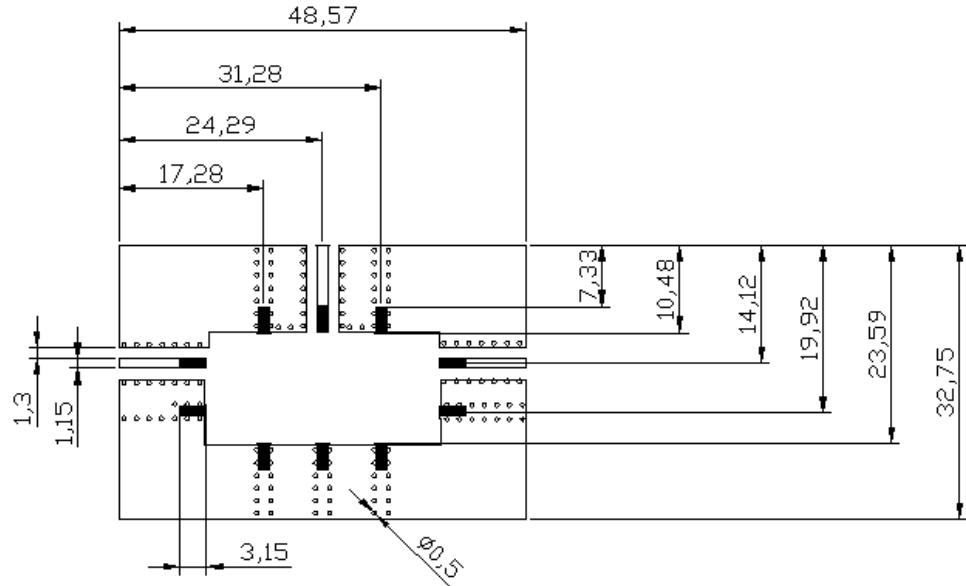
Common to High Pass Filter



Common Port Return Loss

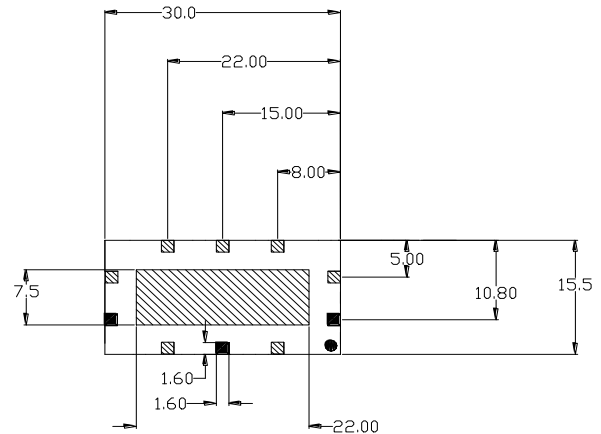
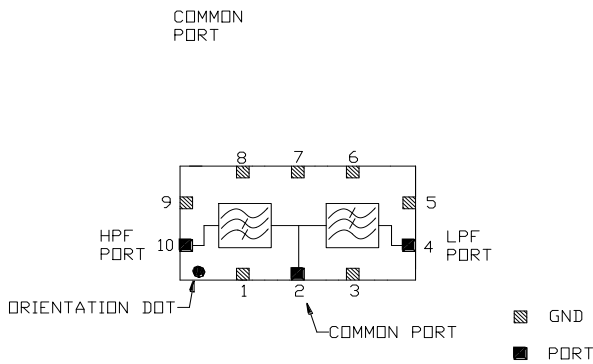
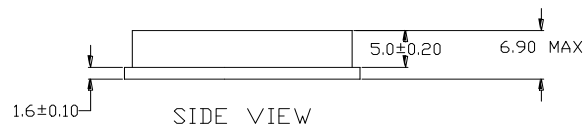
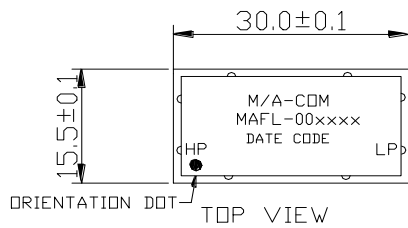


Recommended PCB Configuration



Substrate is 1.6 mm thick FR4

SM-172 Case Style



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

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