

MoCA Low Pass Filter 5 - 1550 MHz

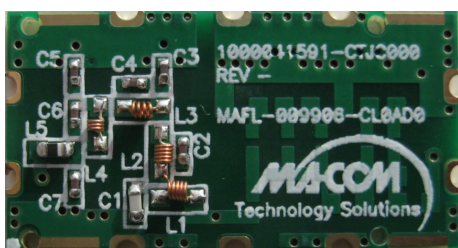
Rev. V4

Features

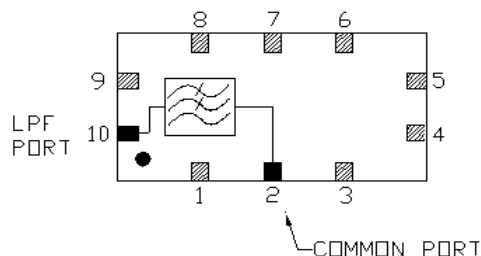
- 75 Ω
- Surface Mount Package
- RoHS* Compliant & Lead Free
- MoCA Application

Description

The MAFL-009906-CL0AD0 is a surface mount low pass filter unit designed for MoCA applications.



Functional Schematic



Pin Configuration

Pin #	Function
1, 3 - 9	Ground
2	Common Port (Input)
10	Low Pass Port (Output)

Electrical Specifications: Freq. = 5 - 1550 MHz, $Z_0 = 75 \Omega$, $T_A = 25^\circ\text{C}$

Parameter	Freq. Test Conditions (MHz)	Units	Min.	Typ.	Max.
Insertion Loss (Common to Low)	5 - 42 MHz	dB	—	0.05	0.15
	42 - 860 MHz			0.6	0.8
	860 - 1002 MHz			1.5	1.7
Rejection (Common to Low)	1130 - 1550 MHz	dB	30	32	—
Return Loss (Common Port)	5 - 600 MHz	dB	13	15	—
	600 - 950 MHz		11	13	
	950 - 1002 MHz		12	14	
Voltage Transient (Common Port)	5 - 1550	V	—	—	200

Ordering Information

Parameter	Package
MAFL-009906-CL0AD0	500 piece reel

Absolute Maximum Ratings^{1,2}

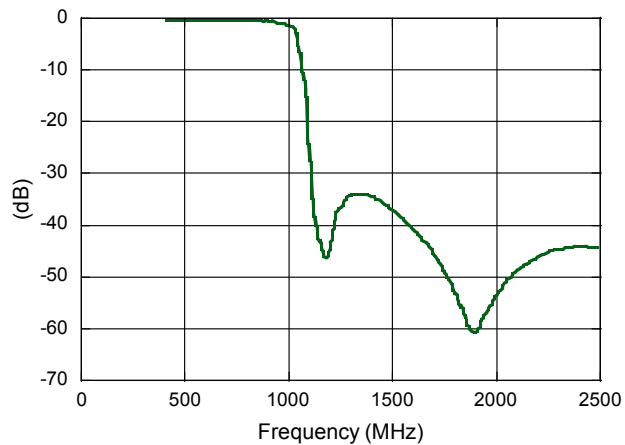
Parameter	Absolute Maximum
RF Power	250 mW
DC Current	30 mA
Transient Voltage	200 V
Operating & Storage Temperature	-40°C to +85°C

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.

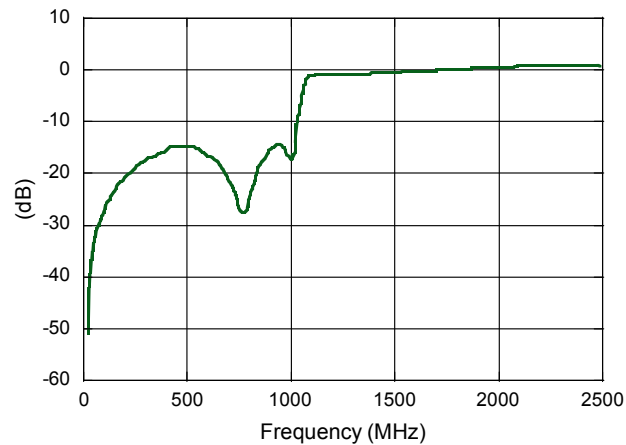
* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

Typical Performance Curves

Low Pass Insertion Loss

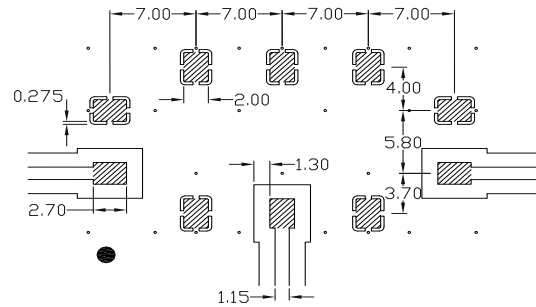
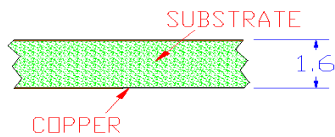


Common Port Return Loss



PCB Finish Specification

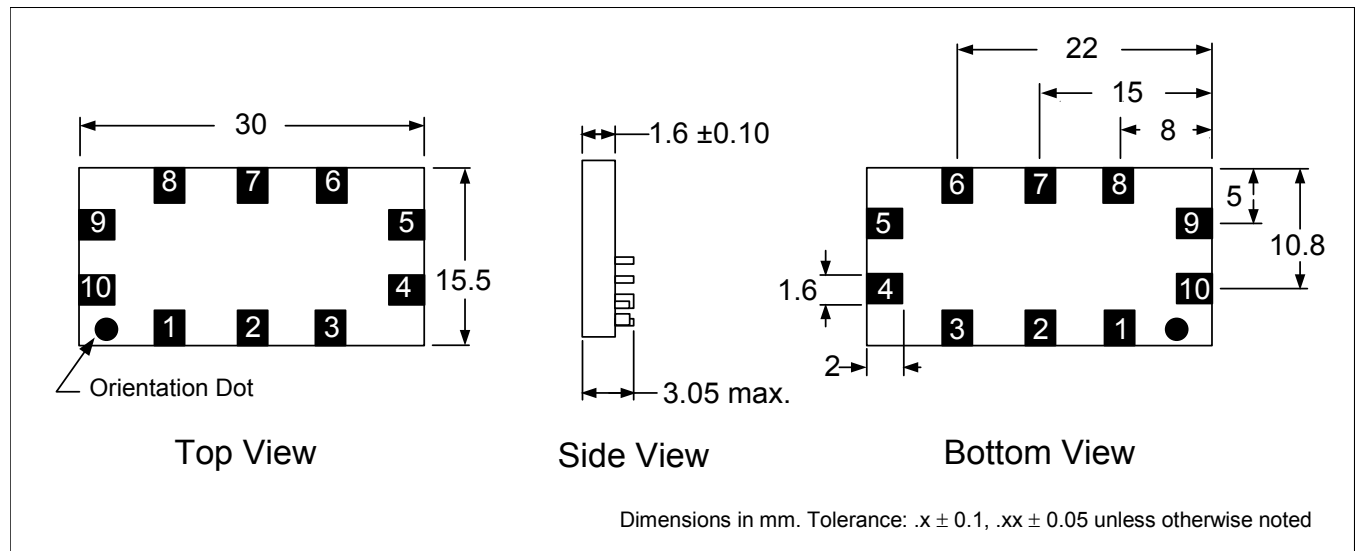
- Track dimension = 1.15 mm
- Gap dimension = 1.3 mm
- Ground should be 1.6 mm below the base of the filter
- RF shield should be kept a minimum of 6 mm above the filter



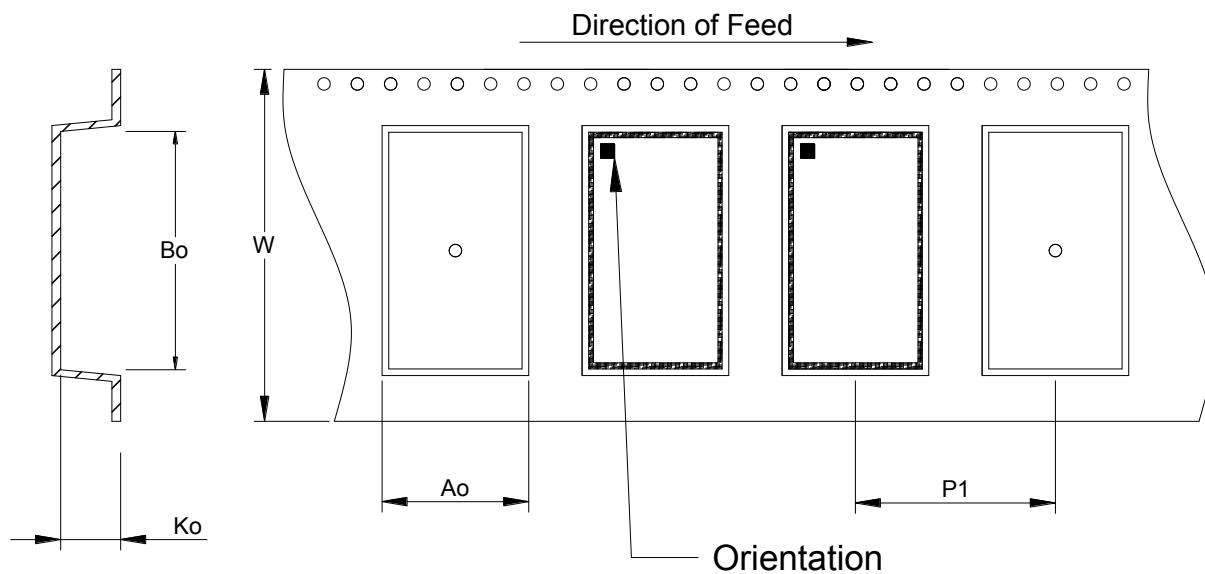
Electroless Nickel/ Immersion Gold 0.05 - 0.1 μ M
Gold over 3 - 5 μ M Nickel

Dimensions in mm. Tolerance: .x \pm 0.1, .xx \pm 0.05 unless otherwise noted

Recommended PCB Configuration



Packaging



Dimensions

Item	Dimension
Ao	15.80 mm +/- 0.1 mm
Bo	30.30 mm +/- 0.1 mm
Ko	3.40 mm +/- 0.1 mm
W	44.00 mm +/- 0.3 mm
P1	24.00 mm +/- 0.1 mm

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