

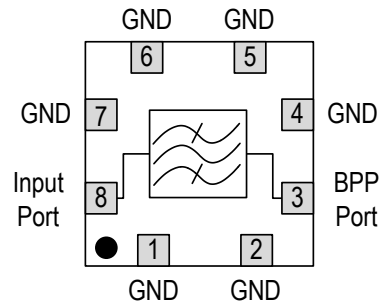
Features

- 75 Ω
- Surface Mount Technology
- RoHS* Compliant & Lead-Free

Description

The MAFL-010412-CL0AD0 is a surface mount low pass filter unit designed for MoCA applications.

Functional Schematic



Pin Configuration

Pin #	Function	Pin #	Function
1, 2, 4 - 7	Ground	8	Input Port
3	Low Pass Port		

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

Parameter	Test Conditions Frequency (MHz)	Units	Min	Typ	Max
Insertion Loss	5 - 42	dB	—	0.05	0.15
	42 - 860			0.5	0.8
	860 - 1002			1.5	1.7
Rejection	1130 - 1550	dB	35	37	—
Input Port Return Loss	5 - 600	dB	13	16	—
	600 - 950		11	14	
	950 - 1002		12	14	
Common Port Voltage Transient	—	V	—	—	200

Ordering Information

Part Number	Package
MAFL-010412-CL0AD0	500 piece reel

Absolute Maximum Ratings^{1,2}

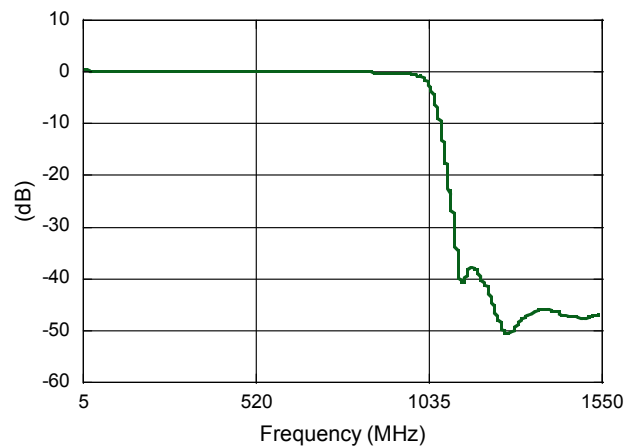
Parameter	Absolute Maximum
RF Power	250 mW
DC Current	200 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-55°C to +125°C

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.

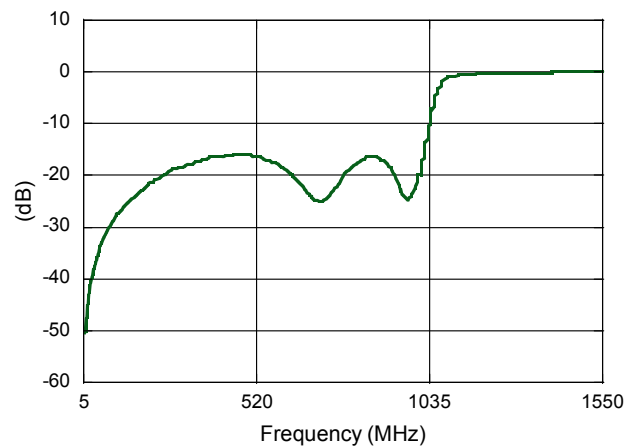
¹ * Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

Typical Performance Curves

Insertion Loss

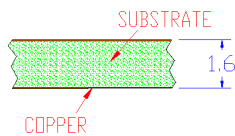


Return Loss

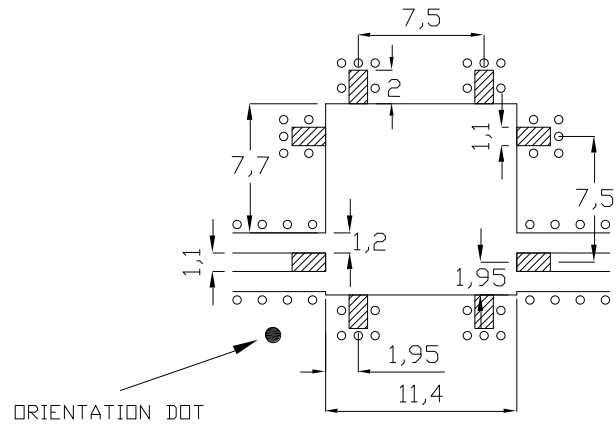


Recommended PCB Configuration

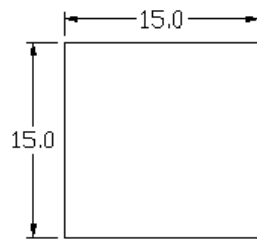
- Track dimension = 1.1 mm
- Gap dimension = 1.2 mm
- It is not recommended to run tracks under the filter unless they are greater than 1.6 mm below the base.
- Ground should be 1.6 mm below the base of the filter
- Area directly under the filter should be free from copper
- RF shield should be kept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



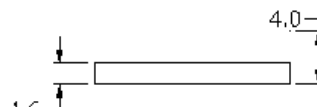
Dimensions in mm. Tolerance: $.x \pm 0.1$, unless otherwise specified



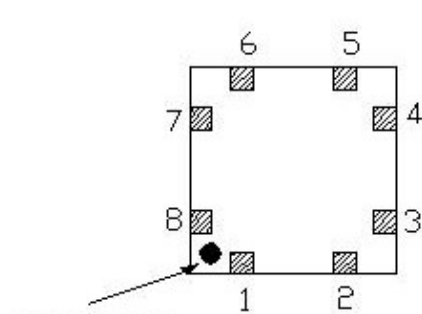
Component Dimensions (SM-173)



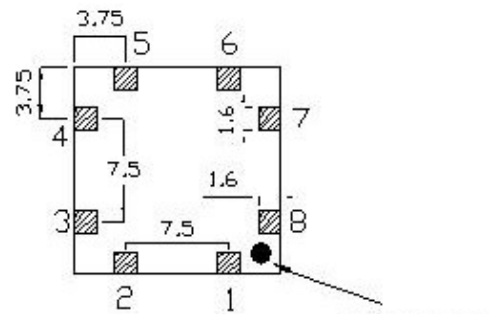
Top view



Front view

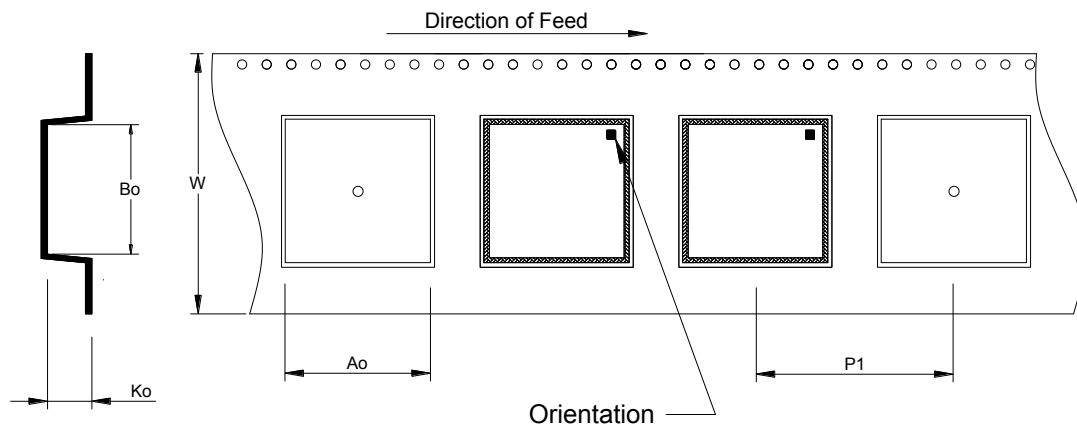


PCB TOP VIEW



PCB BOTTOM VIEW

Tape & Reel Information



Parameter	Units	Value
Reel Size	mm	330
Tape Width	mm	32.00
Pitch	mm	20.00
Ao	mm	15.30
Bo	mm	15.30
Ko	mm	3.70
Orientation	-	F20
Reference Application Note ANI-019 for orientation		

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