

## Features

- Surface Mount
- 75 Ohm
- RoHS\* Compliant
- Pb Free
- MoCA Application

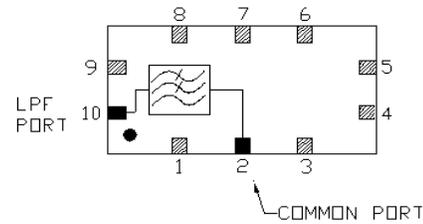
## Description

M/A-COM Technology Solutions' MAFL-009906-CL0AD0 is a surface mount Low Pass Filter unit designed for MoCA applications.

## Product Image



## Functional Schematic



## Electrical Specifications: Z0 = 75Ω, TA = 25°C

| Parameter                            | Units                          | Min | Typ  | Max  |
|--------------------------------------|--------------------------------|-----|------|------|
| <b>Common to Low</b>                 |                                |     |      |      |
| Insertion Loss                       | 5 - 42 MHz                     | -   | 0.05 | 0.15 |
|                                      | 42 - 860 MHz                   | -   | 0.6  | 0.8  |
|                                      | 860 - 1002 MHz                 | -   | 1.5  | 1.7  |
| Rejection                            | 1130 - 1550 MHz                | 30  | 32   | -    |
|                                      | <b>Common Port Return Loss</b> |     |      |      |
| 5 - 600 MHz                          | dB                             | 13  | 15   | -    |
| 600 - 950 MHz                        | dB                             | 11  | 13   | -    |
| 950 - 1002 MHz                       | dB                             | 12  | 14   | -    |
| <b>Common port voltage transient</b> | V                              | -   | -    | 200  |

## Recommended Maximum Ratings

| Parameter             | Value            |
|-----------------------|------------------|
| Storage Temperature   | -40C to +85°C    |
| Operating Temperature | 40C to +85°C     |
| DC Current            | 30mA             |
| RF Power              | +23.9dBm( 250mW) |
| Transient Voltage     | 200V             |

## Pin Configuration

| Function               | Pin Number   |
|------------------------|--------------|
| Common Port (Input)    | 2            |
| Low Pass Port (Output) | 10           |
| Ground                 | 1 - 5, 6 - 9 |
| Not connected          | -            |

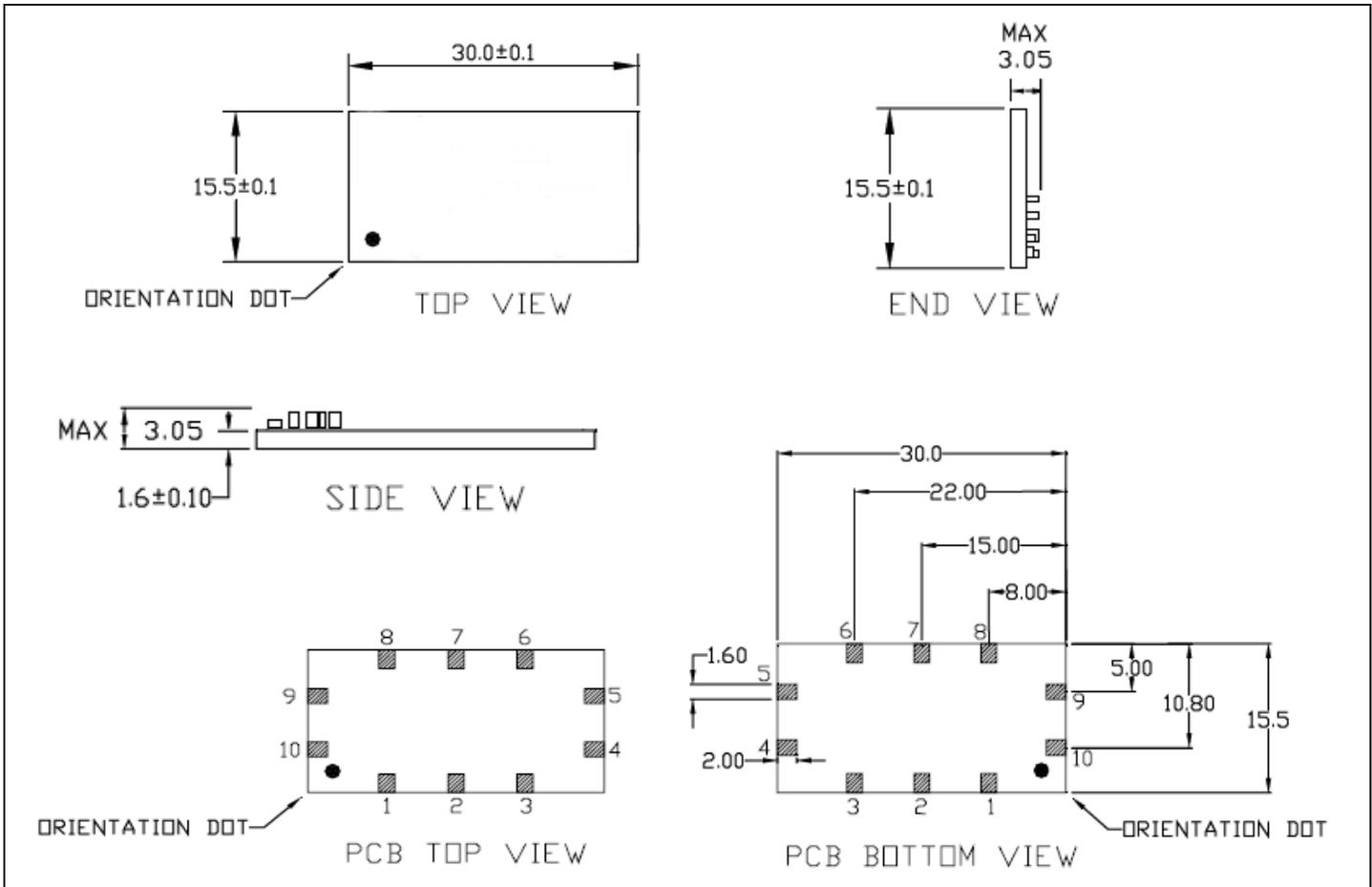
\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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**PRELIMINARY:** Data Sheets contain information regarding a product M/A-COM Technology Solutions has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

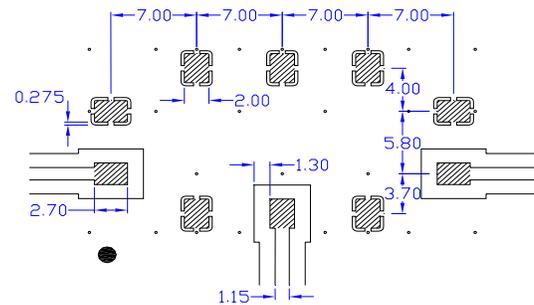
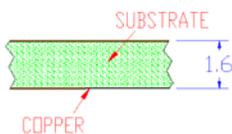
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## Recommended PCB Configuration



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



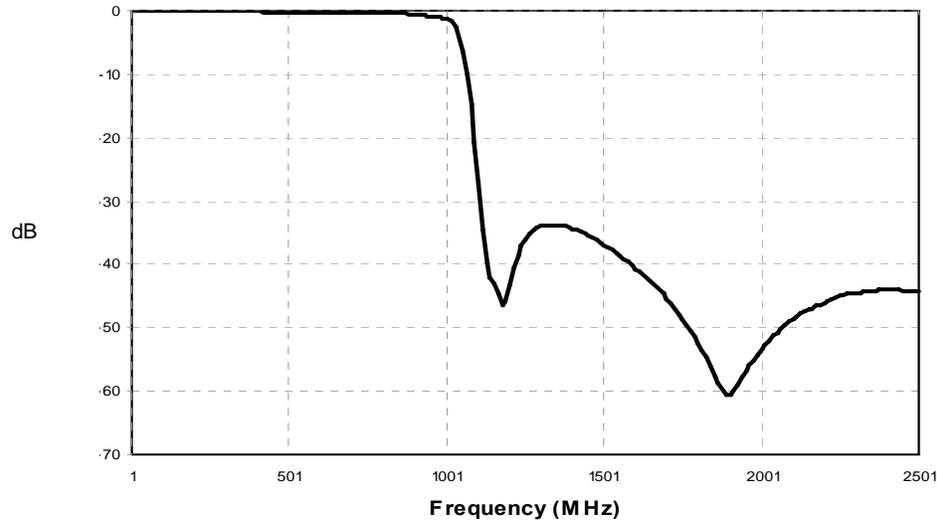
### PCB Finish Specification

Electroless Nickel/ Immersion Gold 0.05-0.1µm Gold over 3-5µm Nickel

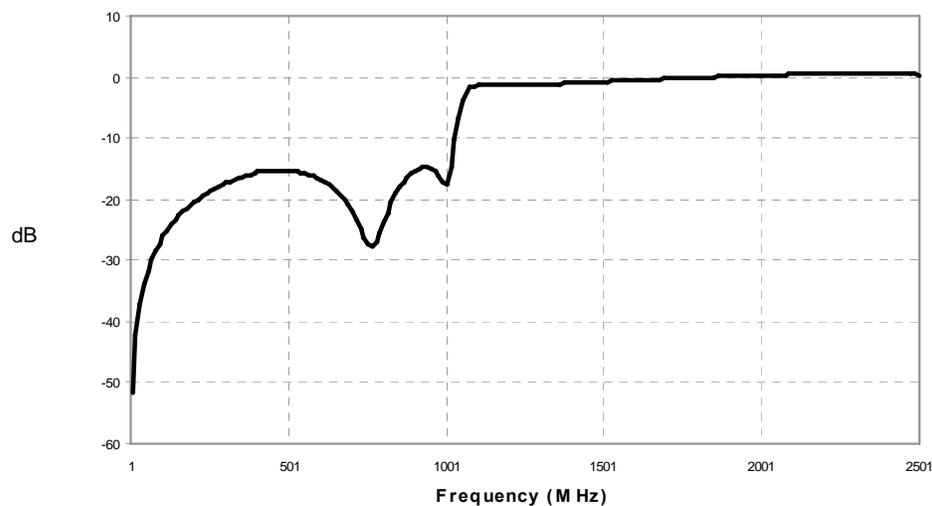
Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05 unless otherwise noted

Typical Performance Curves  $Z_0 = 75\Omega$ ,  $T_A = 25^\circ\text{C}$

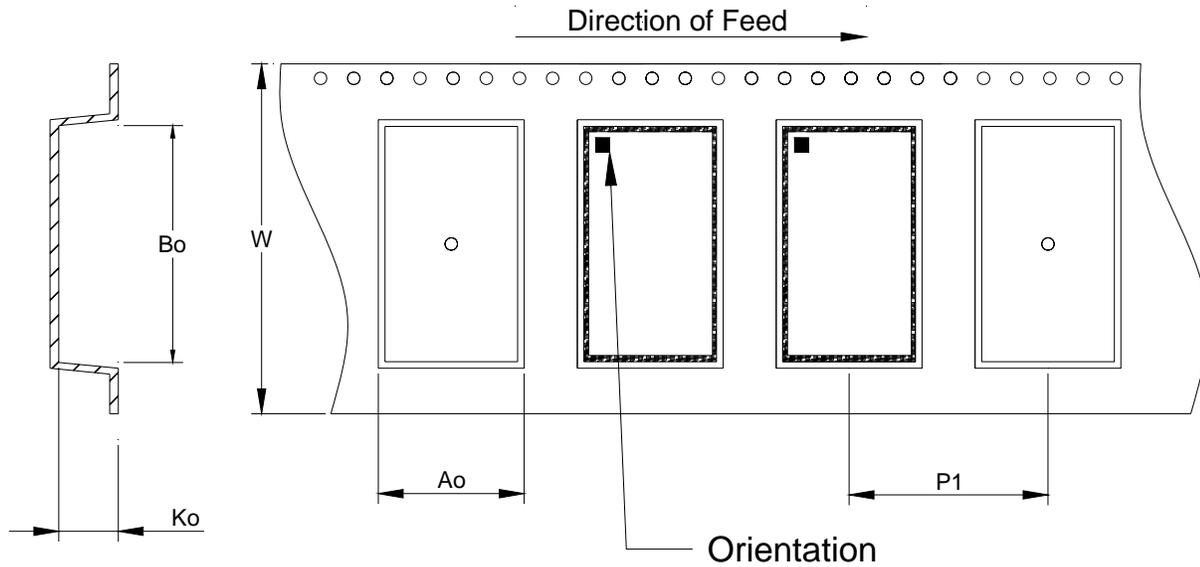
### Low Pass Insertion Loss



### Common Port Return Loss



## Packaging



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

## Ordering Information

| Part Number        | Package        |
|--------------------|----------------|
| MAFL-009906-CLOAD0 | 200 Piece Reel |