

CATV Diplex Filter  
50 - 870 / 975 - 1525 / 2000 - 3000MHz

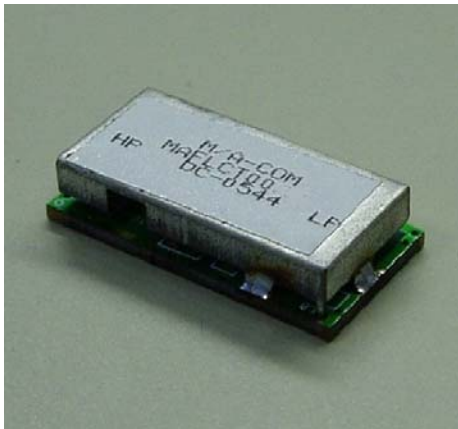
MAFL-007898-CD0AC0  
V1

## Features

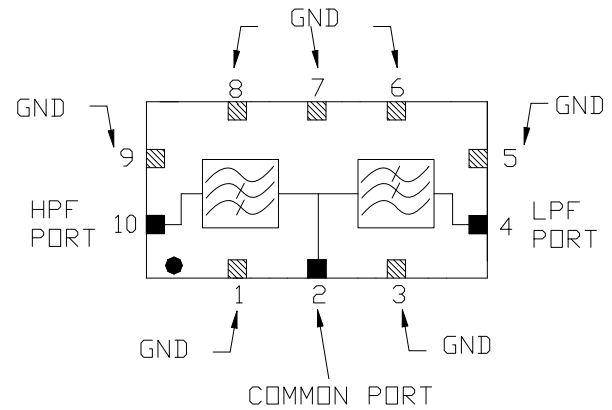
- 75 Ohm
- SMT unit
- RoHS\* Compliant

## Description

M/A-COM's MAFL-007898-CD0AC0 is a surface mount diplex filter unit designed for MoCA applications.



## Functional Schematic



## Pin Configuration

Function	Pin Number
Common Port	2
Low Pass Port	4
High Pass Port	10
Ground	1, 3, 5 - 9
Not connected	-

## Absolute Maximum Ratings <sup>1,2</sup>

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

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

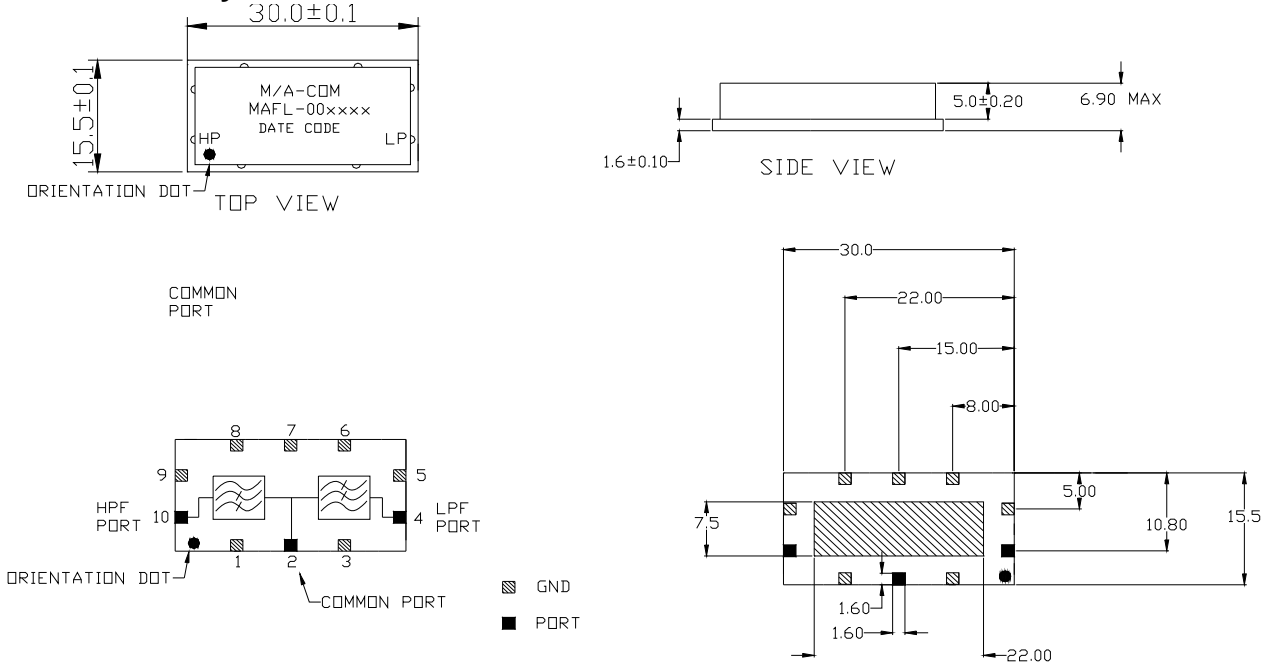
\* Restrictions on Hazardous Substances, European Union Directive 2002/95/EC.

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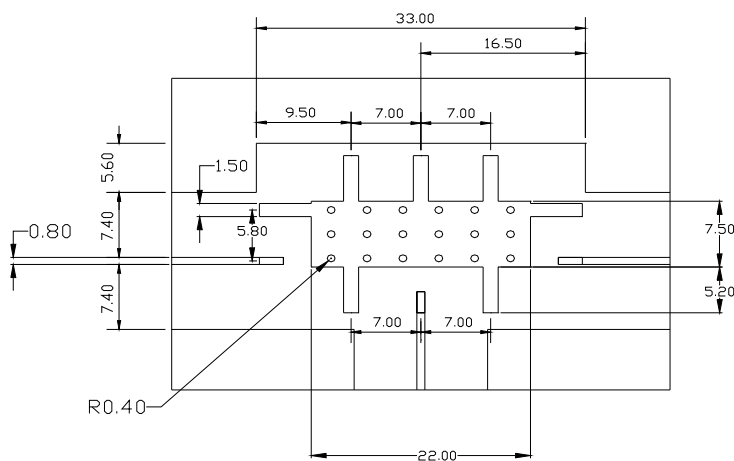
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## SM-172 Case Style



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

## Recommended PCB Configuration



**NOTE:** SUBSTRATE IS 1.6MM THICK FR4 WITH GND PATTERN UNDER UNIT ON TOP LAYER CONNECTED TO FULL GND PLANE ON BOTTOM LAYER

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

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Electrical Specifications:  $T_A = 25^\circ\text{C}$ ,  $Z_0 = 75\Omega$  <sup>1</sup>

Parameter	Test Conditions	Units	Min	Typ	Max
Frequency Range	50 - 870 / 975 - 1525 / 2000 - 3000	MHz			
Common to Low Insertion Loss	50 - 750MHz	dB		0.9	1.5
	750 - 870MHz	dB		1.8	2.5
Stopband Rejection	975 - 1025MHz	dB	35	42	-
	1025 - 1350MHz	dB	40	45	-
	1350 - 1525MHz	dB	37	42	-
	1790 - 2100MHz	dB	20	30	-
Common to High Insertion Loss	975 - 1525MHz	dB	-	1.2	2.5
	50 - 750MHz	dB	40	45	-
Stopband Rejection	750 - 870MHz	dB	34	40	-
	2000 - 3000MHz	dB	15	20	-
Low to High Isolation	50 - 750MHz	dB	40	45	-
	750 - 870MHz	dB	34	40	-
	975 - 1025MHz	dB	35	42	
	1025 - 1350MHz	dB	40	45	
	1350 - 1525MHz	dB	37	30	
Common Port Return Loss	50 - 300MHz	dB	13	15	-
	301 - 600MHz	dB	12	15	-
	601 - 870MHz	dB	10	15	-
	975 - 1525MHz	dB	10	14	-

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## Typical Performance Curves

