MAFL-011081

CATV Diplex Filter
5 - 204 / 258 - 1218 MHz

Rev. V1

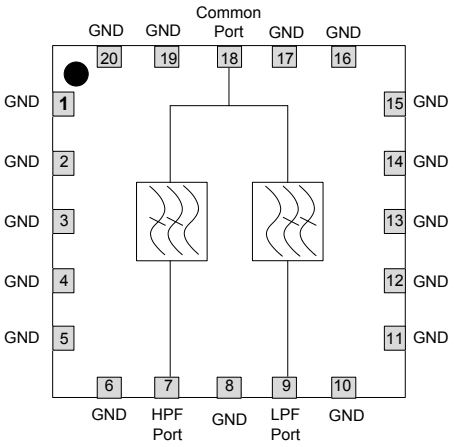
Features

- 75 Ω
- Surface MT 30x30 mm device
- RoHS Compliant and Pb free

Description

MAFL-011081 is a surface mount diplex filter unit designed for CATV applications, DVT and DBS applications.

Functional Schematic



Ordering Information[1,2]

Part #	Package
MAFL-011081	bulk
MAFL-011081-SB1	Sample Board

1. Reference Application Note M513 for reel size information.
2. All sample boards include x loose parts.

Pin Configuration[3]

Pin #	Function
1 - 6, 8, 10-17, 19, 20	Ground
7	High Pass Port
9	Low Pass Port
18	Common Port

3. MACOM recommends connecting unused package pins to ground.

Electrical Specifications: T_A = 25°C, Z_0 = 75 Ω

Parameter	Test Conditions Frequency (MHz)	Units	Min.	Typ.	Max.
Insertion Loss	5 - 204 258 - 1218	dB	—	0.5 0.5	1.6 1.6
Filter Rejection	5 - 204 258 - 1218	dB	43 43	50 50	—
Filter Return Loss (all ports)	5 - 204 258 - 1218	dB	17 16	19 18	—

* Restrictions on Hazardous Substances, European Union Directive 2011/65/EU.

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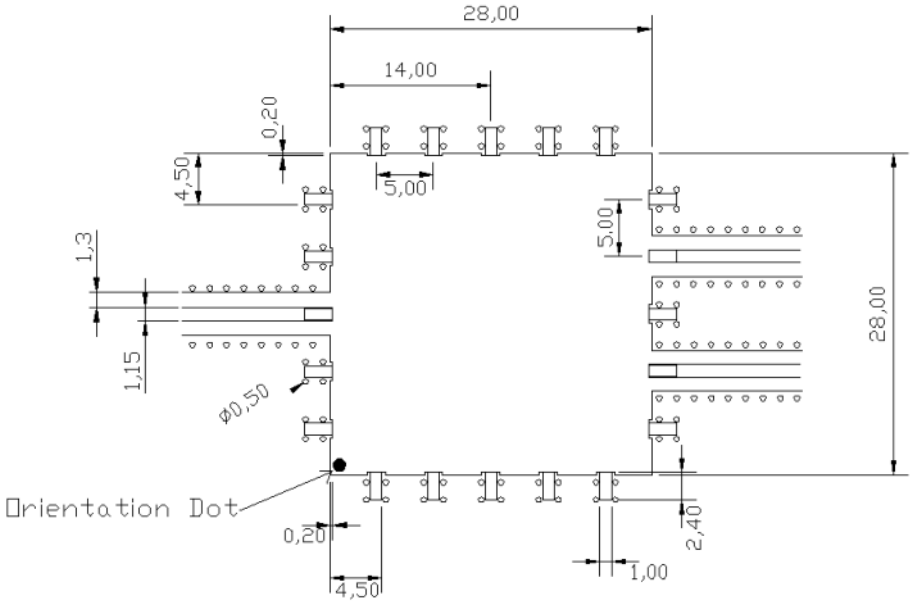
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Absolute Maximum Ratings[4,5]

Parameter	Value
RF Power	250 mW
DC Current	30 mA
Operating Temperature	-40ºC to +85ºC
Storage Temperature	-40ºC to +85ºC

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

Recommended PCB Configuration



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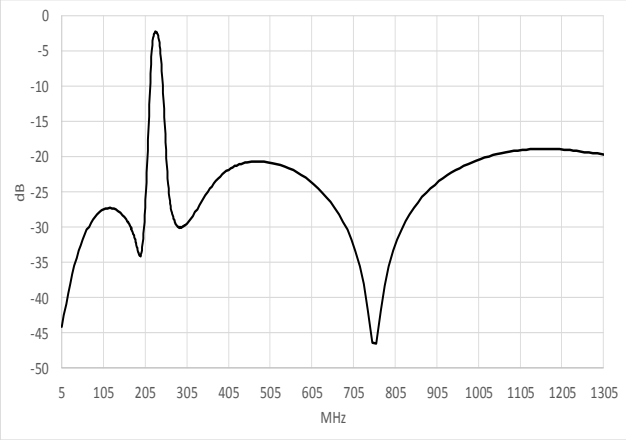
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CATV Diplex Filter
5 - 204 / 258 - 1218 MHz

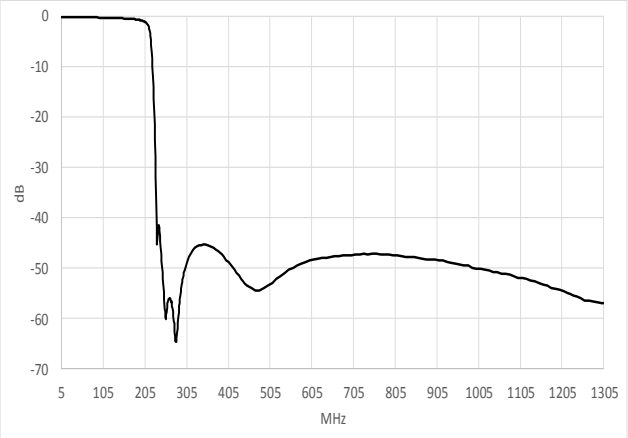
Rev. V1

Typical Performance Curves T_A = 25°C, Z_0 = 75 Ω

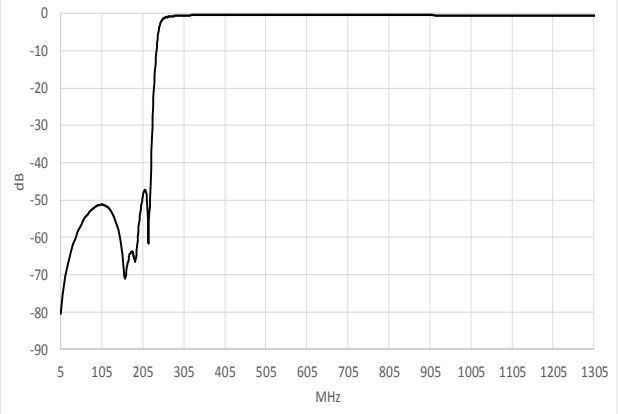
Input Port Return Loss



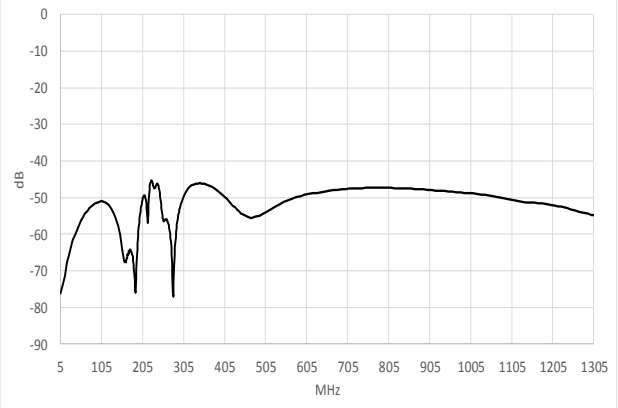
Low Pass Filter Performance



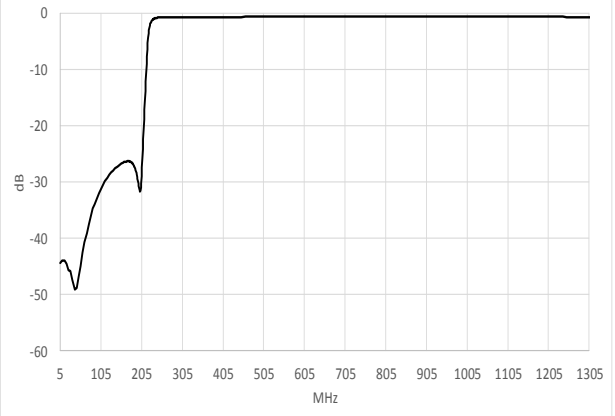
High Pass Filter Performance



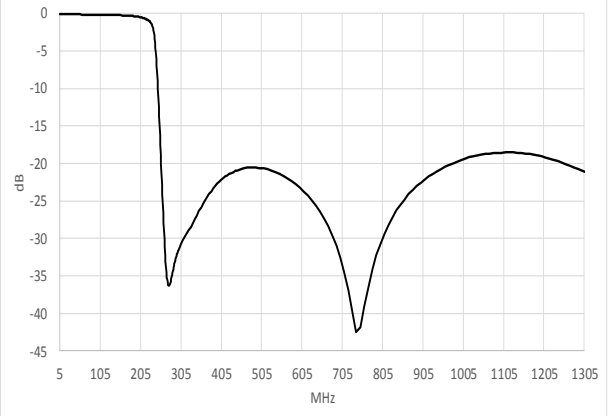
Filter Isolation



Low Pass port Return Loss



High Pass port Return Loss

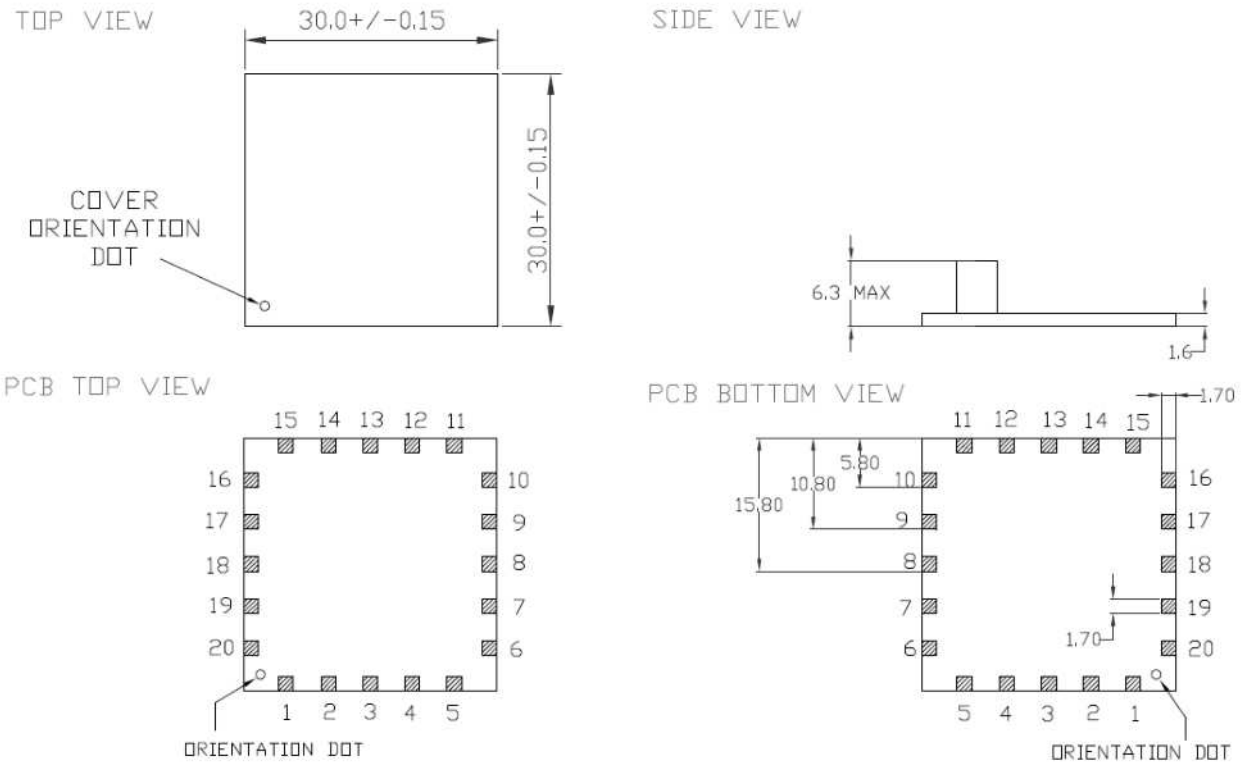


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Outline Drawing



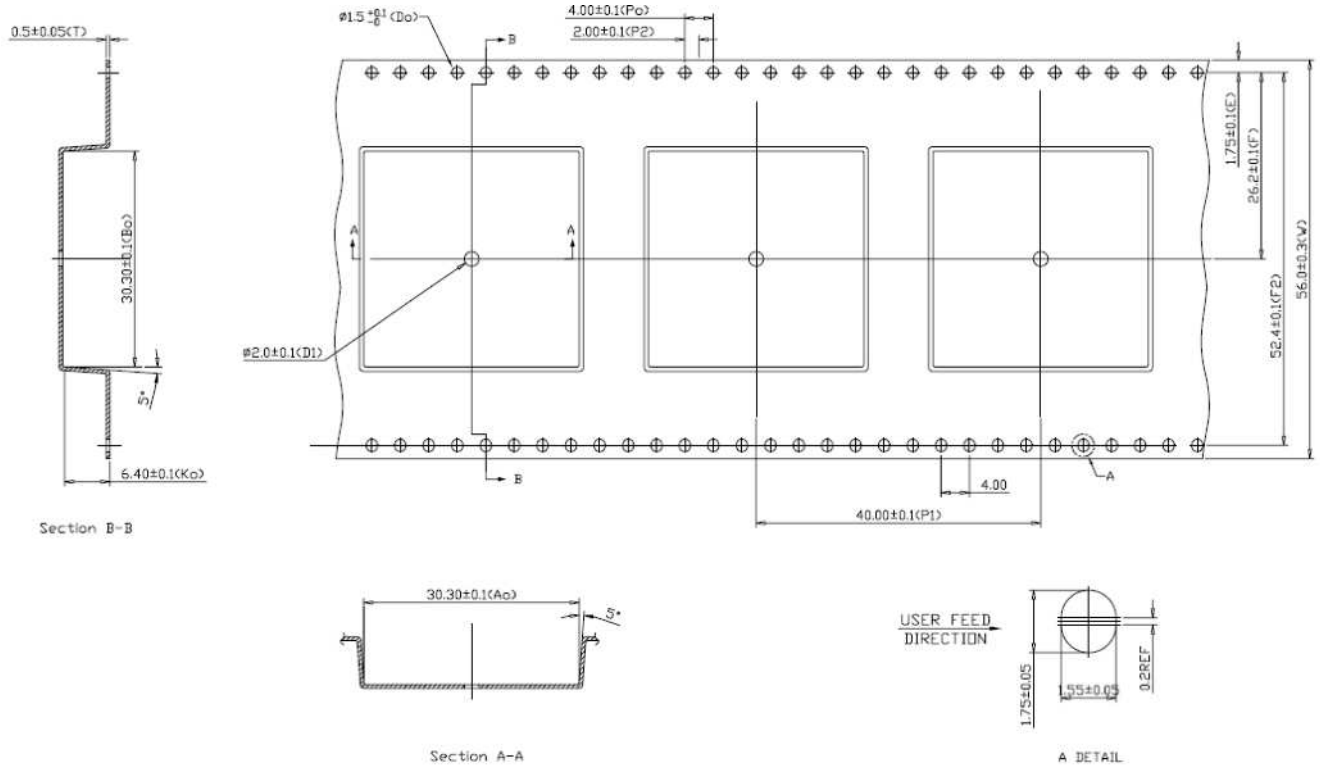
Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

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Tape & Reel Information



Dimensions

Parameter	Units	Value
Qty per reel	—	200
Reel Size	mm	330
Tape Width	mm	56.00
Pitch	mm	40.00
Ao	mm	30.3
Bo	mm	30.3
Ko	mm	6.4
Orientation	—	F30
Reference Application Note ANI-019 for orientation		

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