

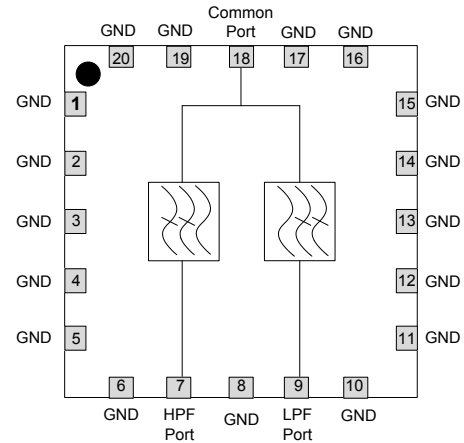
Features

- 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 Configuration³

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: $T_A = 25^\circ\text{C}$, $Z_0 = 75 \Omega$

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

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

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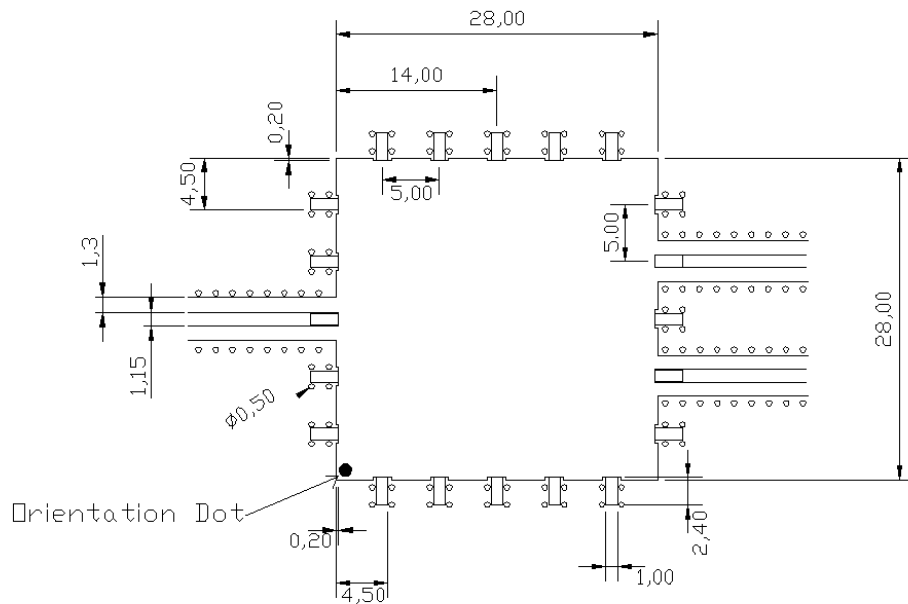
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Absolute Maximum Ratings^{4,5}

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

- 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

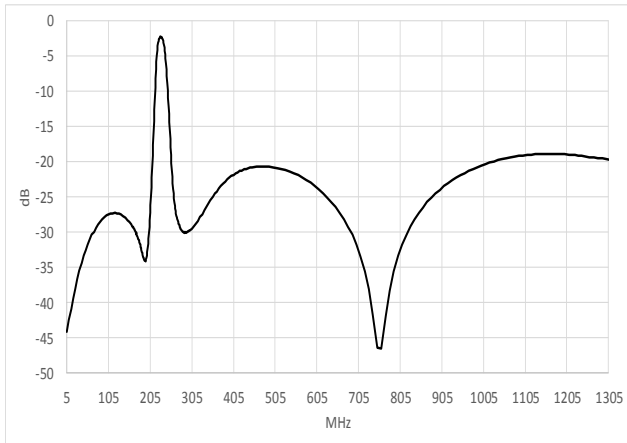


CATV Diplex Filter 5 - 204 / 258 - 1218 MHz

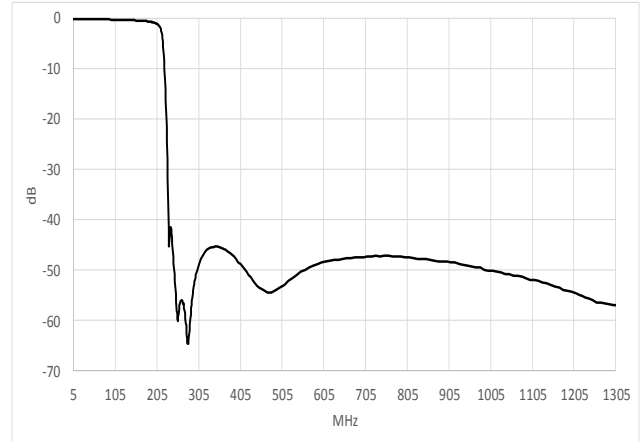
Rev. V1

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

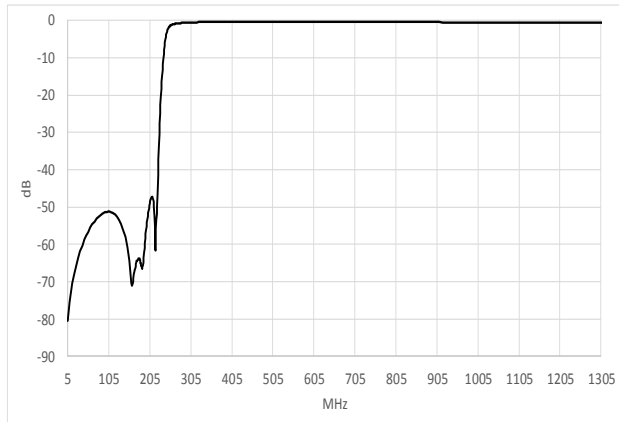
Input Port Return Loss



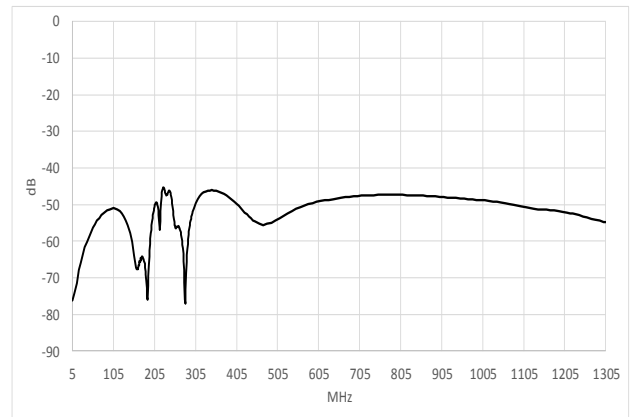
Low Pass Filter Performance



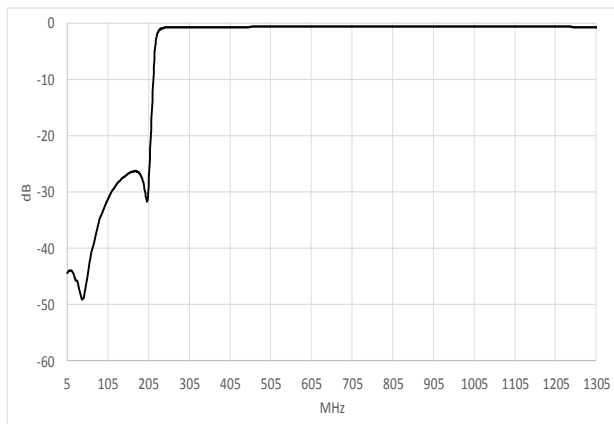
High Pass Filter Performance



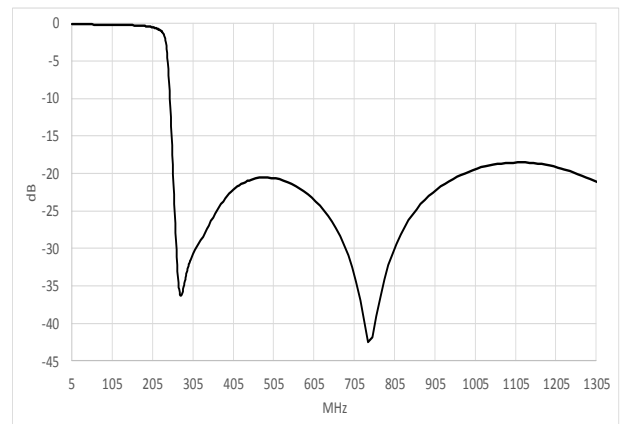
Filter Isolation



Low Pass port Return Loss



High Pass port Return Loss



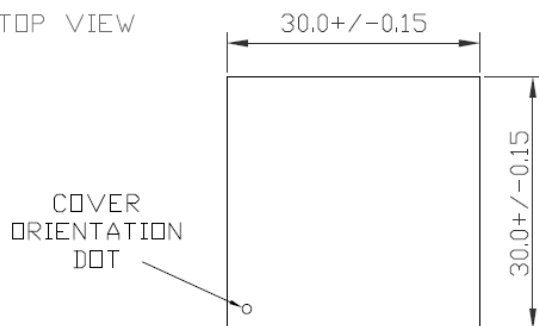
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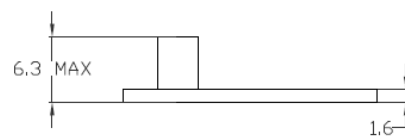
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Outline Drawing

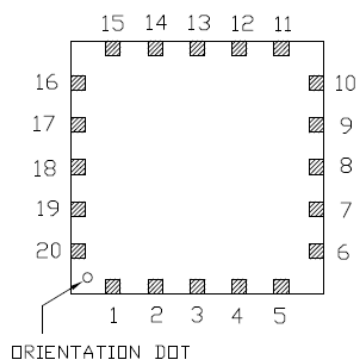
TOP VIEW



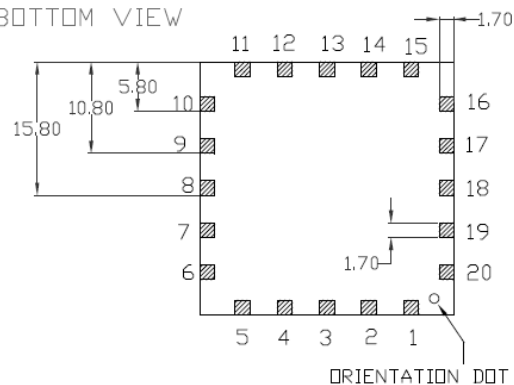
SIDE VIEW



PCB TOP VIEW

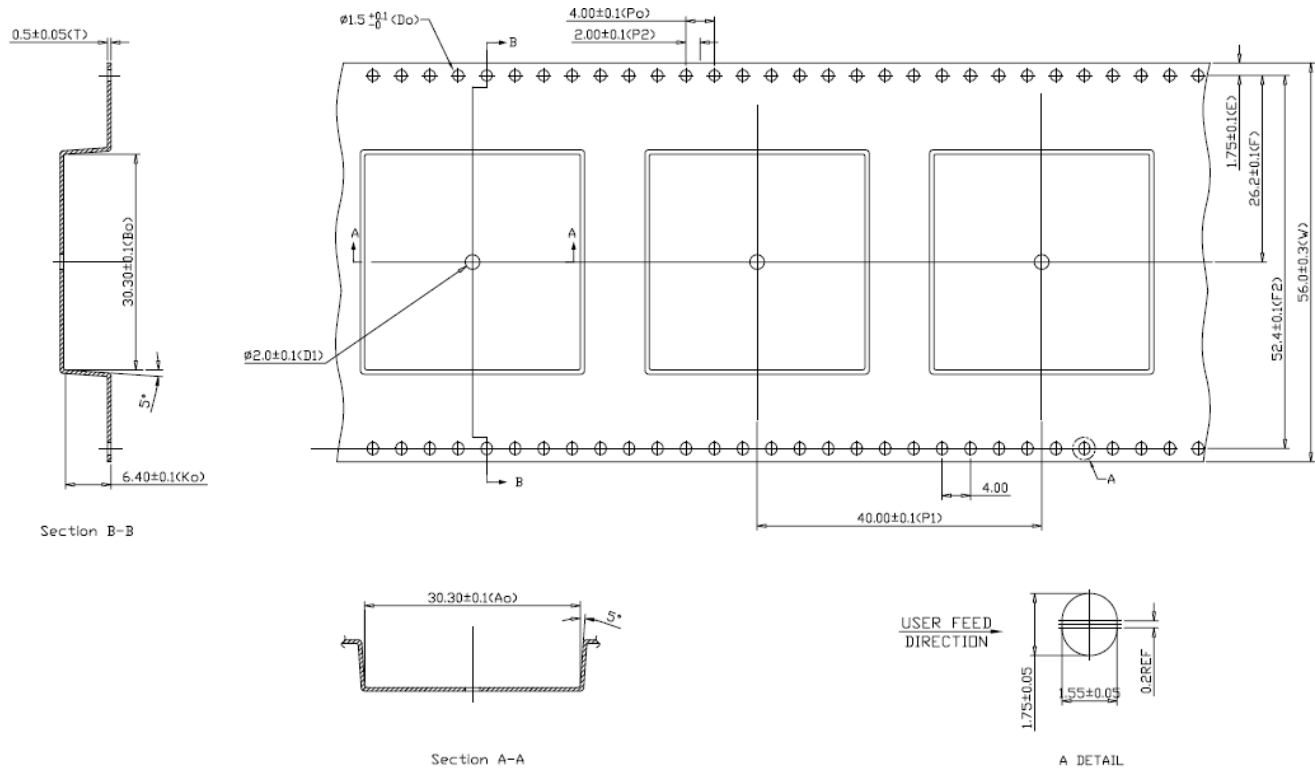


PCB BOTTOM VIEW



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

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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