

CATV Duplex Filter 5 - 204 / 258 - 1218 MHz

Rev. V1

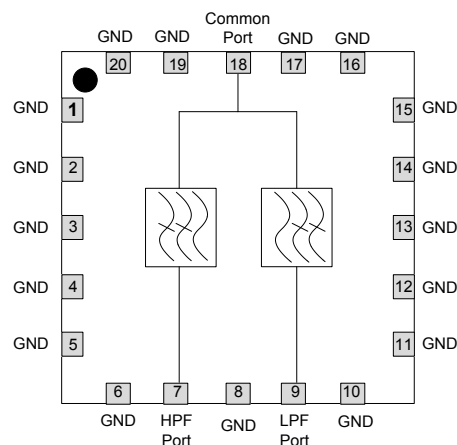
Features

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

Description

MAFL-011081 is a surface mount duplex 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.

CATV Diplex Filter

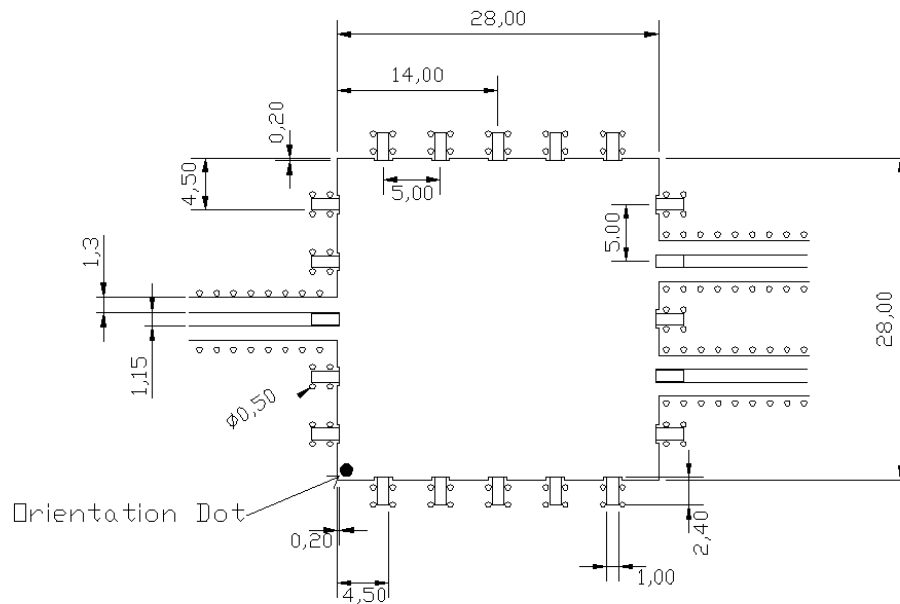
Rev. V1

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

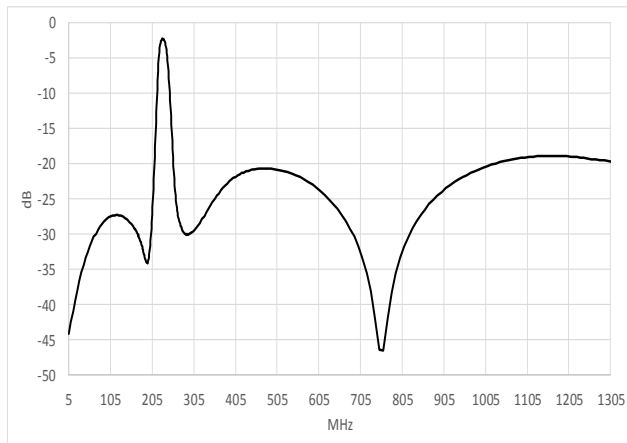


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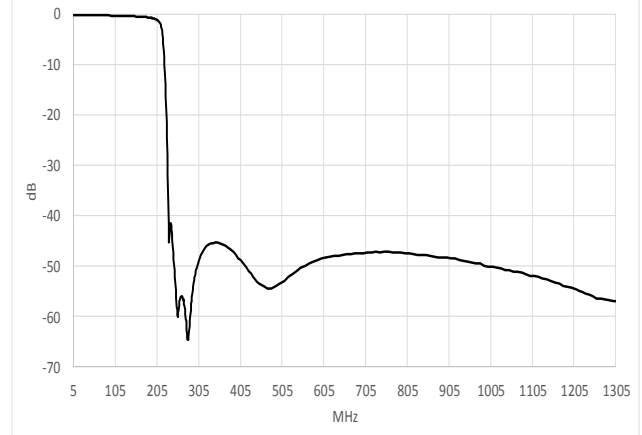
Rev. V1

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

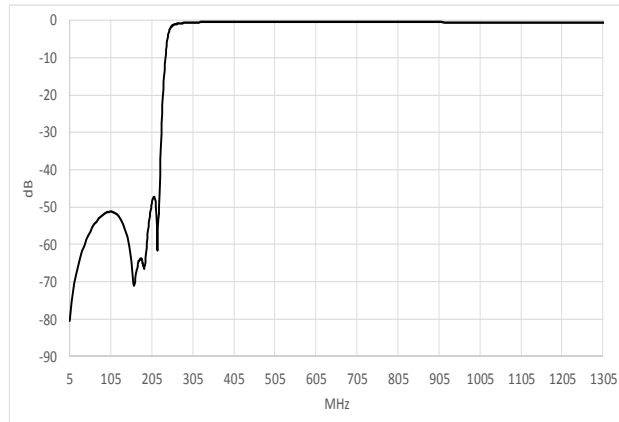
Input Port Return Loss



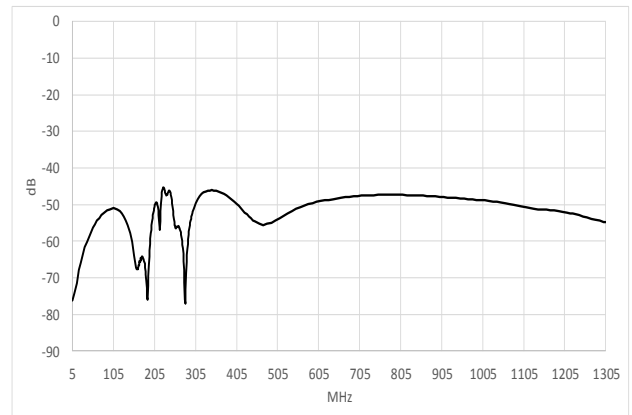
Low Pass Filter Performance



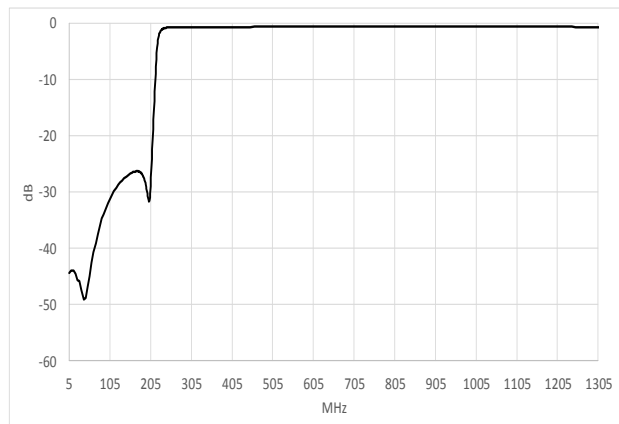
High Pass Filter Performance



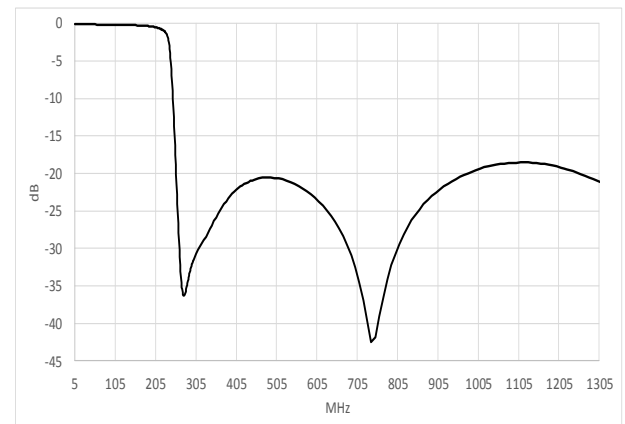
Filter Isolation



Low Pass port Return Loss

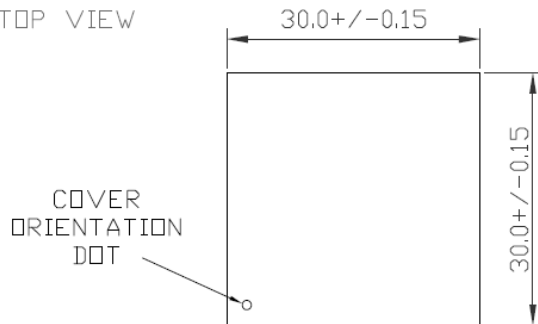


High Pass port Return Loss

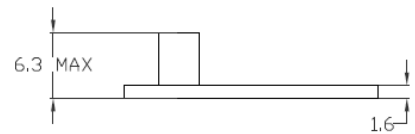


Outline Drawing

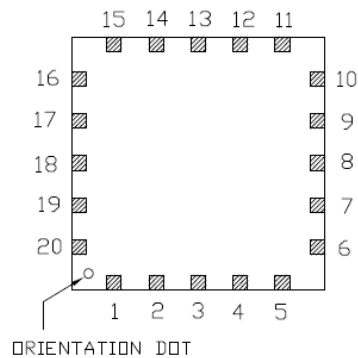
TOP VIEW



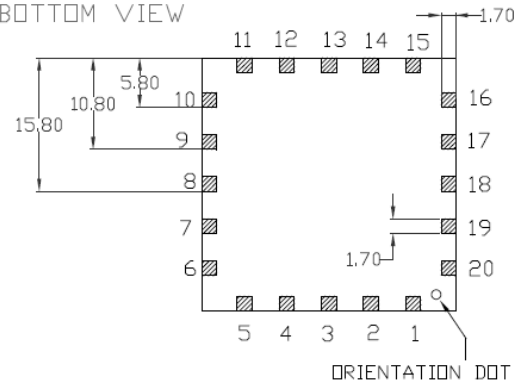
SIDE VIEW



PCB TOP VIEW



PCB BOTTOM VIEW

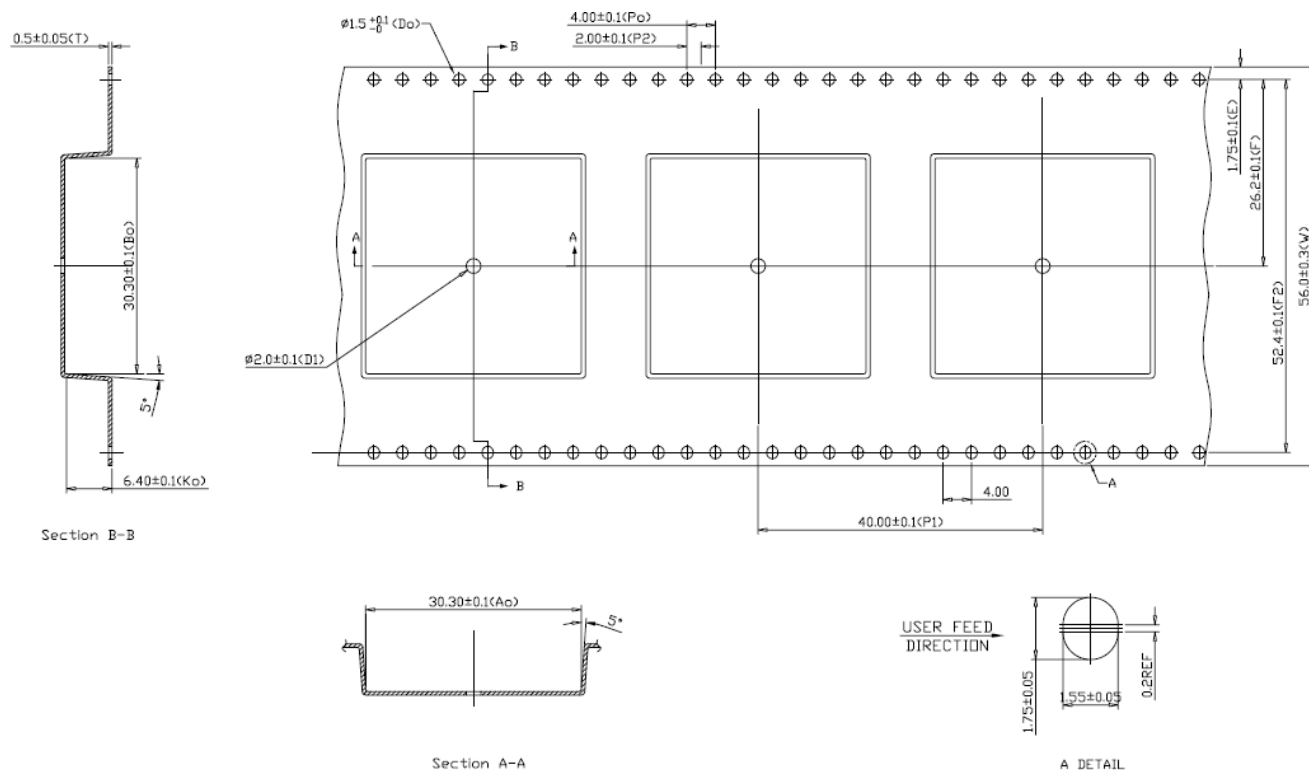


Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

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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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