MAFL-011077

CATV Diplex Filter
5 - 85 / 102 - 1218 MHz

Rev. V2

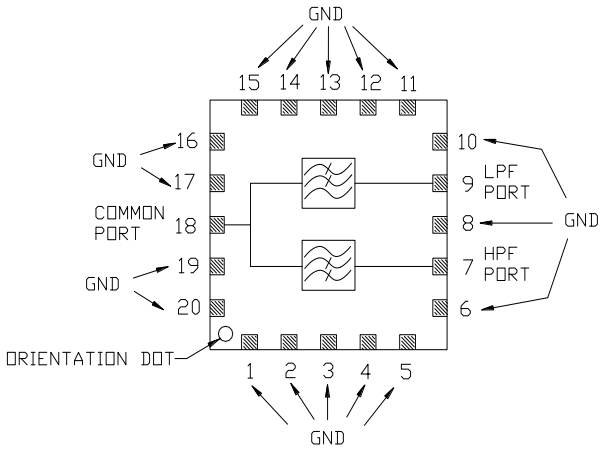
Features

- 75 Ω
- Surface Mount Technology
- RoHS* Compliant

Description

The MAFL-011077 is a surface mount diplex filter designed for the CATV applications, DTV, and DBS applications.

Functional Schematic



Ordering Information[1,2]

Part Number	Package
MAFL-011077-PPR	200 piece reel
MAFL-011077-SMBPPR	Sample Board

1. Reference Application Note M513 for reel size information.
2. All sample boards include 3 loose parts.

Pin Configuration[3]

Pin Number	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: +25°C, Z_0 = 75 Ω

Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion loss	5 - 85 MHz 102 - 105 MHz 105 - 1218 MHz	dB	—	1.0 1.4 1.0	1.24 1.6 1.2
Filter Isolation	5 - 85 MHz 85 - 102 MHz 102 - 1002 MHz 1002 - 1218 MHz	dB	48 26 43 43	55 28 50 50	—
Filter Return Loss (all ports)	5 - 85 MHz 102 - 750 MHz 750 - 1218 MHz	dB	22 22 21	24 24 24	—
Group Delay	83.5 - 85.0 MHz 82.0 - 83.5 MHz 109.275 - 112.855 MHz 115.275 - 118.855 MHz 121.2625 - 124.843 MHz	ns	—	8 6 10 8 6	—

* Restrictions on Hazardous Substances, compliant to current RoHS EU directive.

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Absolute Maximum Ratings[4,5]

Parameter	Absolute Maximum
RF Power	1000 mW
DC Current	30 mA
Operating Temperature	-40°C to +85°C
Storage Temperature	-20°C to +125°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.

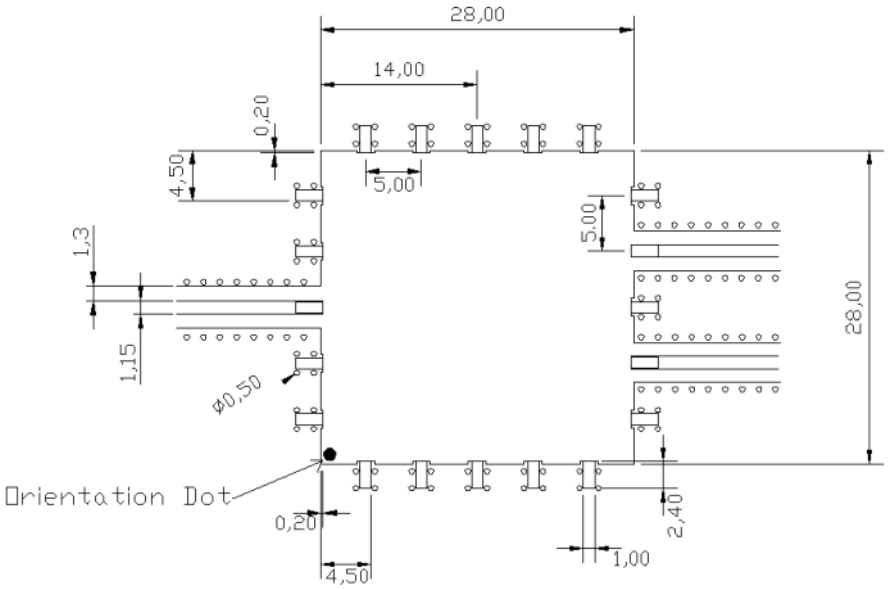
Handling Procedures

Please observe the following precautions to avoid damage:

Static Sensitivity

These electronic devices are sensitive to electrostatic discharge (ESD) and can be damaged by static electricity. Proper ESD control techniques should be used when handling these devices.

Recommended PCB Configuration



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

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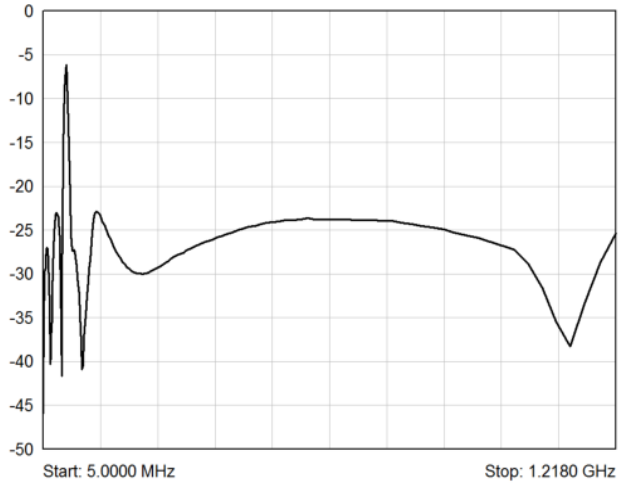
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5 - 85 / 102 - 1218 MHz

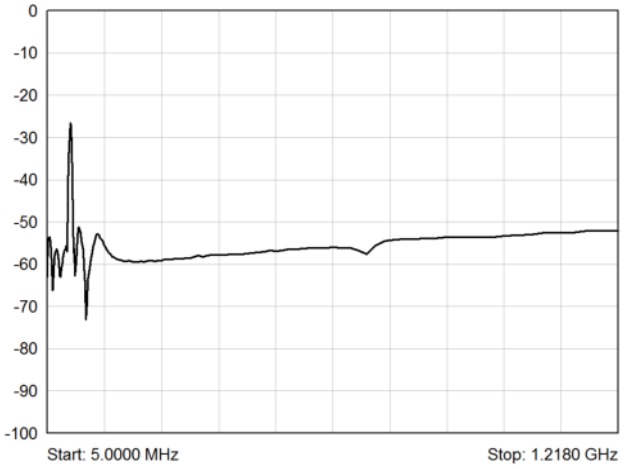
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Typical Performance Curves

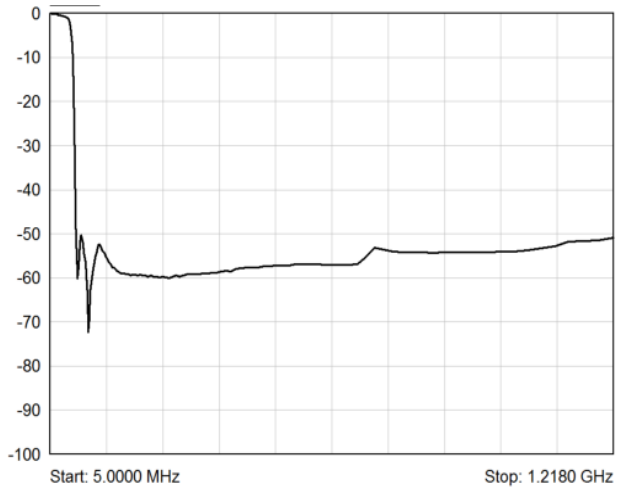
Return Loss



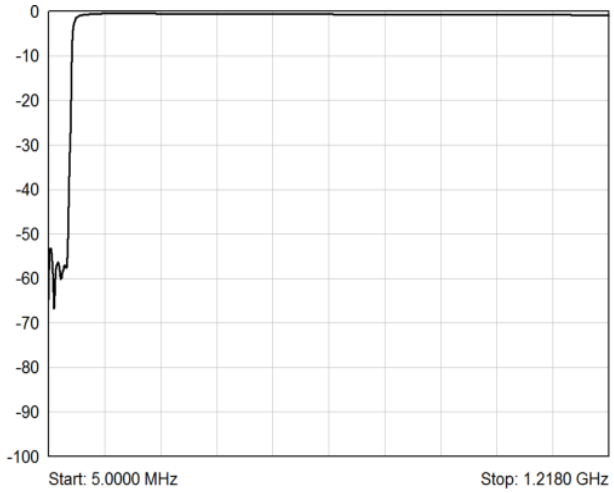
Isolation



Low Pass Filter



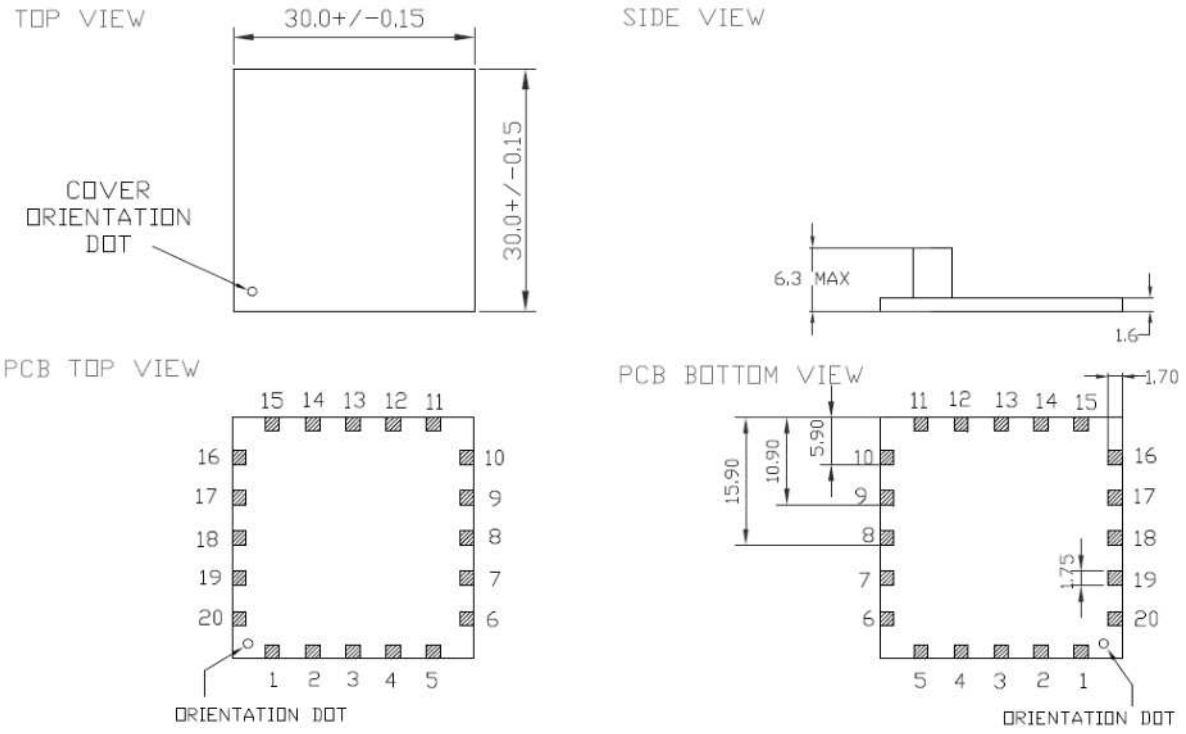
High Pass Filter



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Outline Drawing

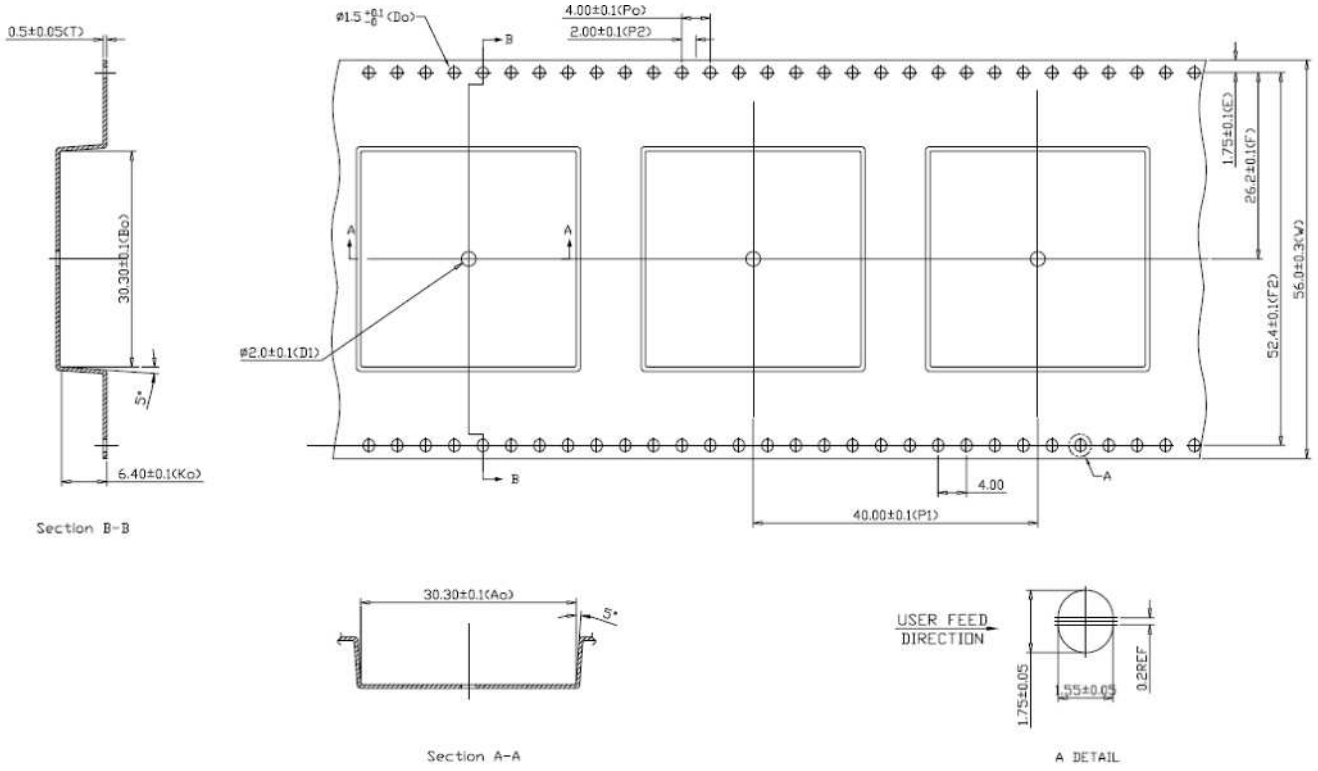


Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05

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Tape & Reel Orientation



Tape & Reel Information

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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