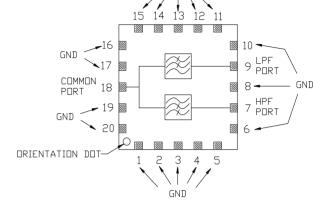
CATV Diplex Filter 5 - 85 / 102 - 1218 MHz

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.



GND

Ordering Information^{1,2}

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

Electrical Specifications: +25°C, $Z_0 = 75 \Omega$

1. Reference Application Note M513 for reel size information.

2. All sample boards include 3 loose parts.

Pin Configuration³

Functional Schematic

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.

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

 MACOM does not recommend sustained operation near these survivability limits.

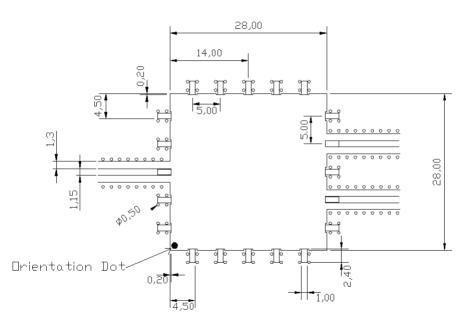
Handling Procedures

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



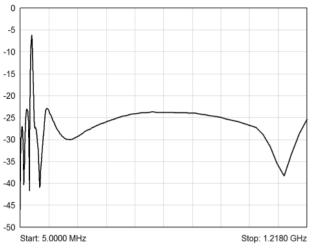
Dimensions in mm. Tolerance: $.x \pm 0.1$, $.xx \pm 0.05$

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CATV Diplex Filter 5 - 85 / 102 - 1218 MHz

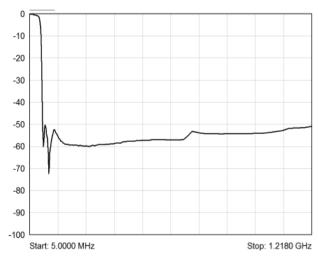
Typical Performance Curves

Return Loss

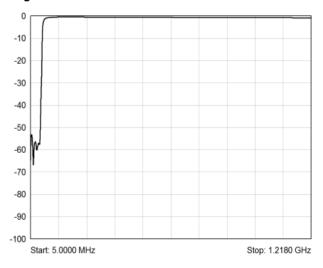


Isolation

Low Pass Filter



High Pass Filter





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Dimensions in mm. Tolerance: $x \pm 0.1$, $xx \pm 0.05$



TOP VIEW 30.0+/-0.15 SIDE VIEW 30.0+/-0.15 COVER DRIENTATION DDT 6,3 MAX 1.6-PCB TOP VIEW PCB BOTTOM VIEW -1.70 11 12 13 14 15 15 14 13 12 11 12 EA. 10 10 10.90 ŭ 16 16 10 10 15,90 9 17 9 17 8 8 18 18 19 7 7 🛛 19 20 🜌 20 6 6 🜌 Q 2 22 12 277 100 120 120 1 12 272 5 3 4 5 1 5 4 3 2 1 DRIENTATION DOT DRIENTATION DOT

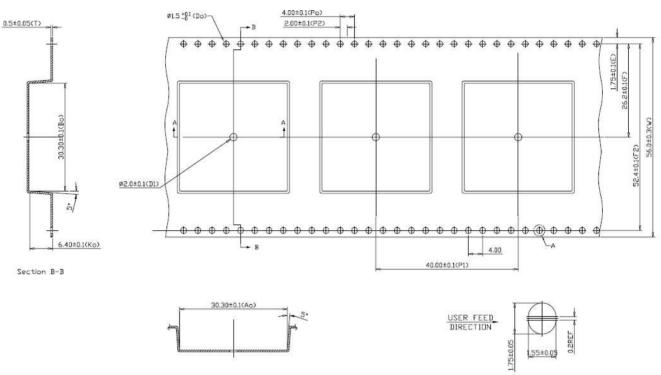
Outline Drawing



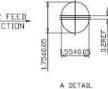
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CATV Diplex Filter 5 - 85 / 102 - 1218 MHz

Tape & Reel Orientation



Section A-A



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
Во	mm	30.3
Ко	mm	6.4
Orientation	-	F30
Reference Application Note ANI-019 for orientation		

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