

Broadband CATV Diplexer 5 - 65 / 108 - 1002 MHz

Rev. V2

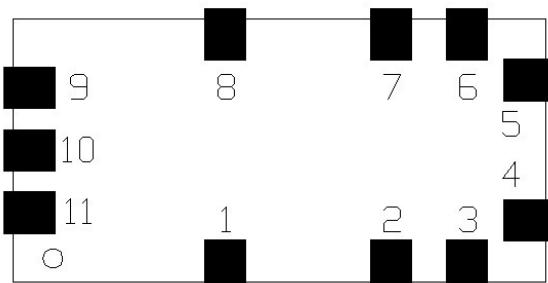
Features

- 75 Ohm
- SMT unit
- RoHS compliant
- Excellent temperature stability
- Excellent repeatability

Description

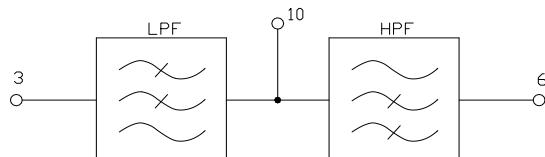
MACOM's MAFL-011025 is a low cost, SMT diplex filter designed for CATV, CPE, STB, cable modem and set top box applications.

Pin Configuration



Function	Pin number
Ground	1, 2, 4, 5, 7, 8, 9, 11
Low pass port	3
High pass port	6
Common	10

Schematic



Recommended Maximum Ratings

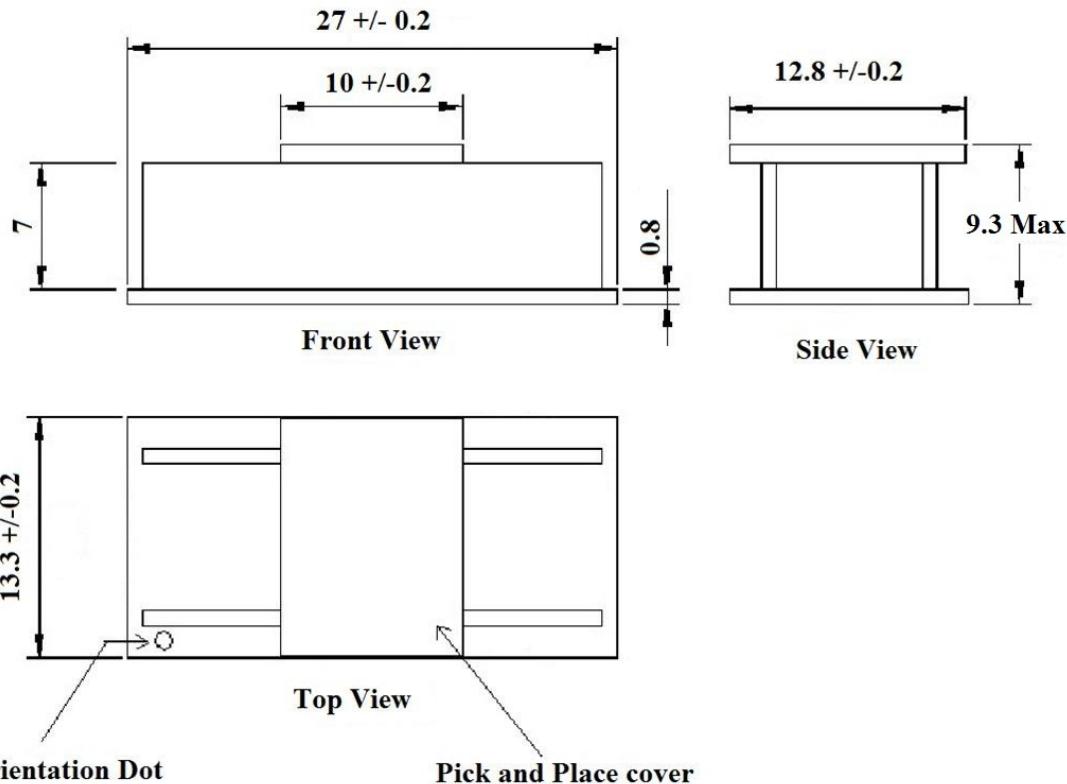
Parameter	Absolute maximum
RF power	250 mW
DC current	30 mA
Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C

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

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Filter Dimensions

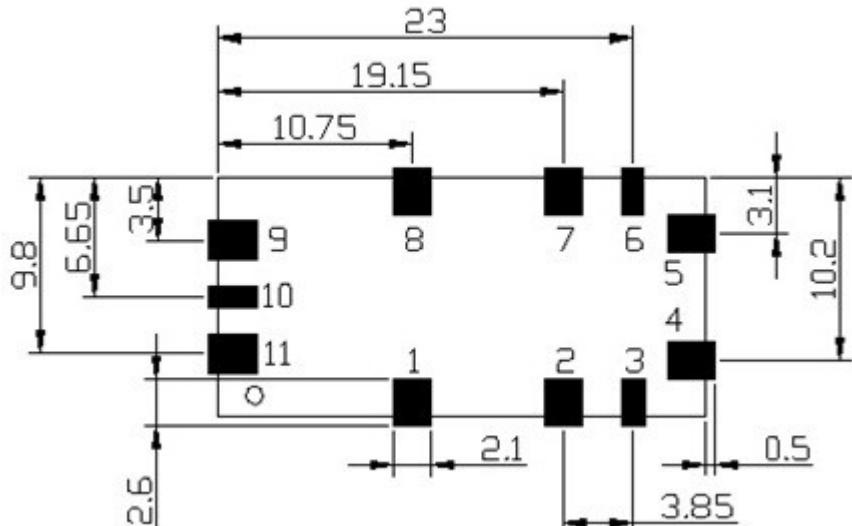


Dimensions are millimeters.

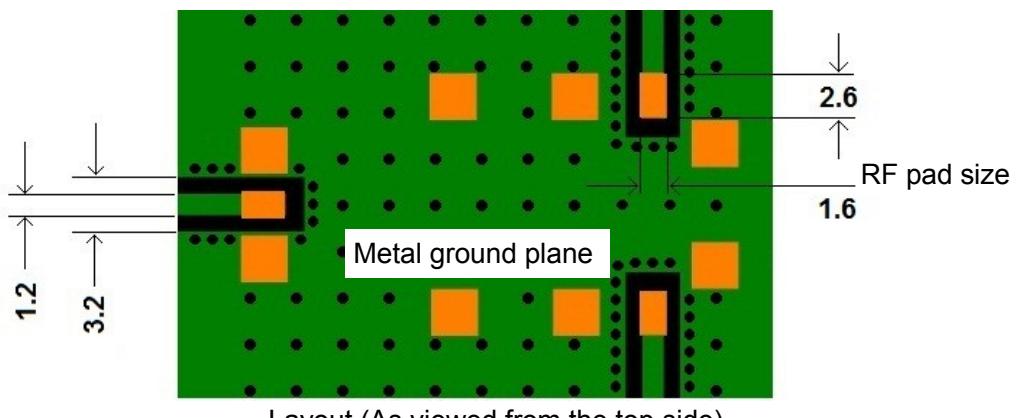
Tolerance: $\pm 0.2\text{mm}$

PCB Pad Finish: ENIG

Recommended application PCB



Footprint (As viewed from the top side)



Layout (As viewed from the top side)

Dimensions are millimeters.

Tolerance: $.x \pm 0.1$, $.xx \pm 0.05$, except where specified.

Layout notes:

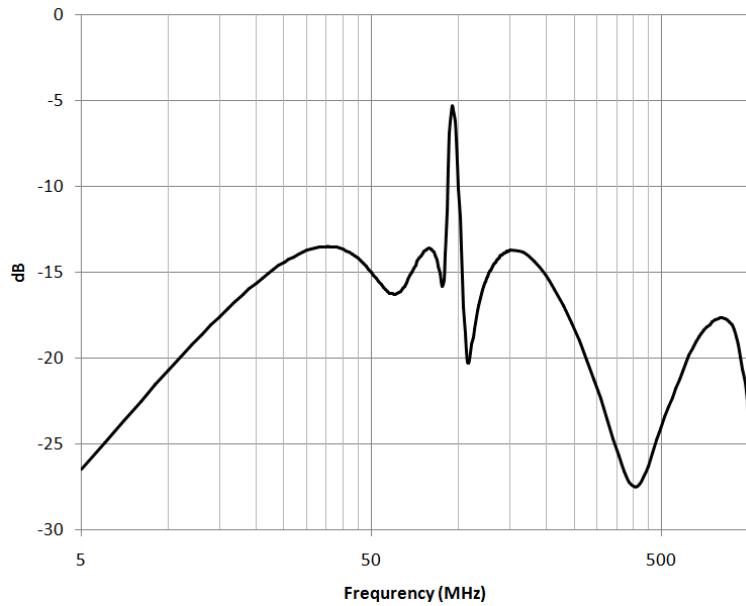
- Track dimension = 1.2mm
- Gap dimension = 1.0mm
- It is not recommended to run RF tracks under the filter unless they are greater than 1.6mm below the base of the filter.
- RF shield should be kept a minimum of 20mm above the filter.
- The filter substrate is 0.8mm thick FR-4 material. A metal ground is required on the top layer of the Application PCB directly underneath the filter. This metal ground plane of the application PCB is connected to the ground plane on the bottom of the filter substrate and forms a 75Ω co-planar wave guide for the input and output RF transmission lines.

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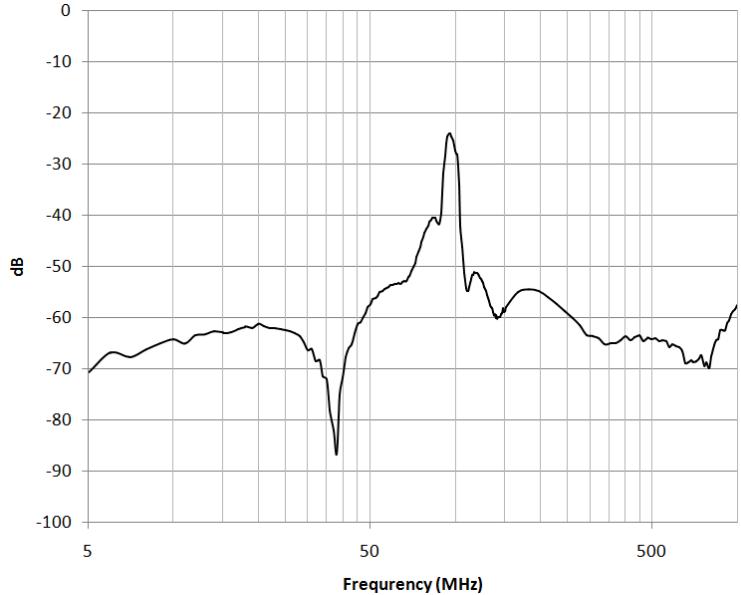
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Typical performance: $T_A = 25^\circ\text{C}$, $Z_0 = 75\Omega$

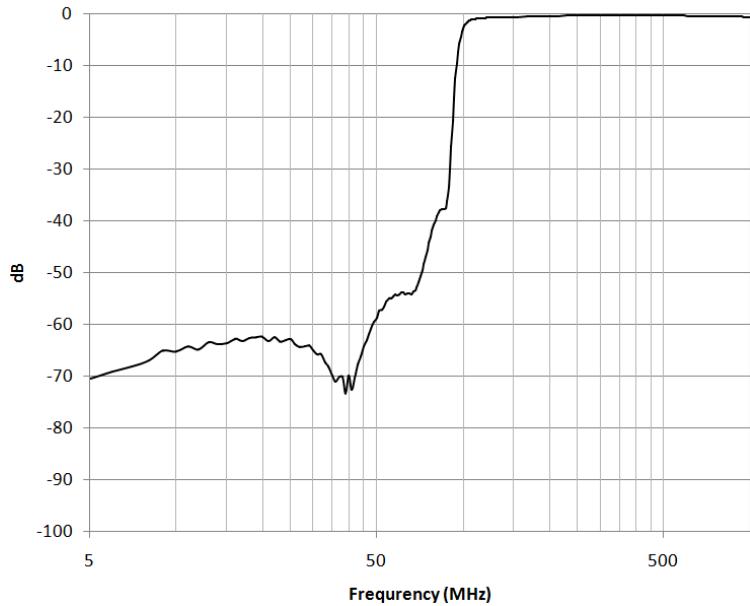
Input return loss



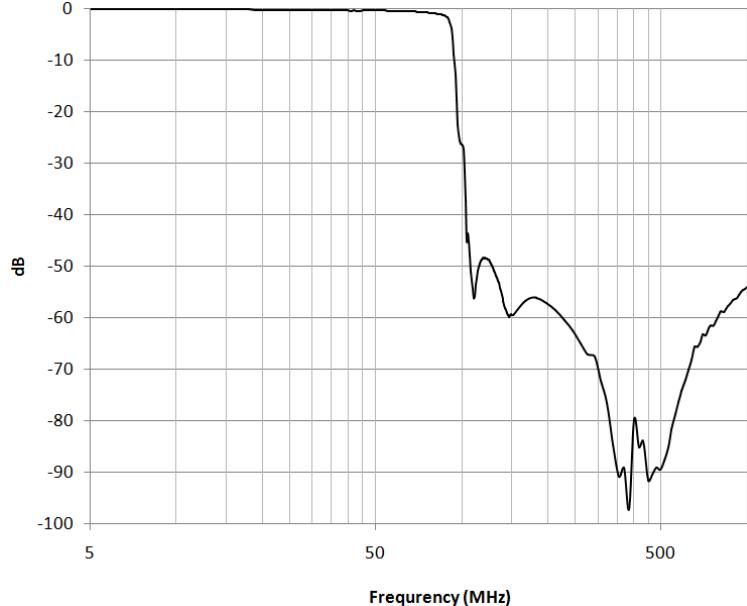
Isolation



High pass filter insertion loss



Low pass filter insertion loss



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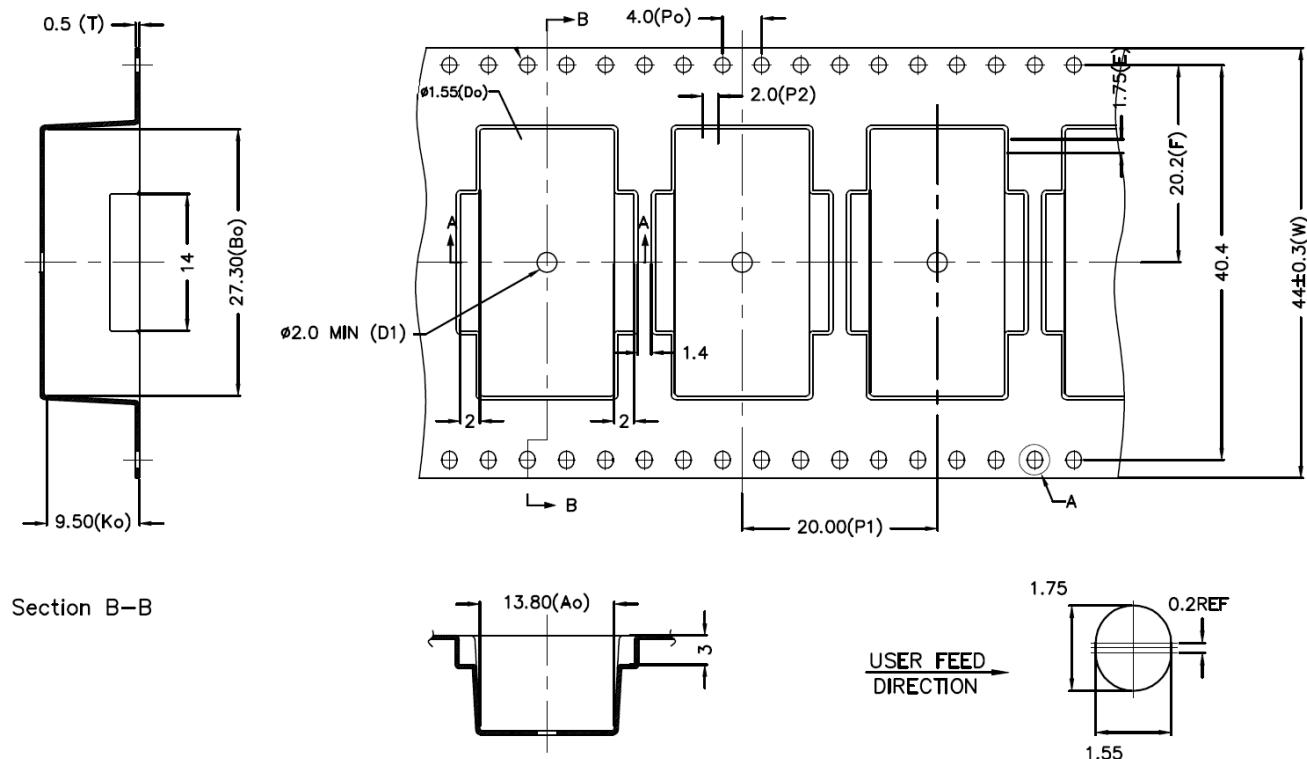
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Tape & Reel Information

Parameter	Units	Value
Qty per reel	-	200
Reel Size	mm	330
Tape Width	mm	44.00
Pitch	mm	20.00
Ao	mm	13.80
Bo	mm	27.30
Ko	mm	9.50
Orientation	-	F30
Reference Application Note ANI-019 for orientation		

Ordering Information

Part Number	Package
MAFL-011025	Tape & Reel



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