

Vertical Plug-in Diplex Filter 5-42/54-1218MHz

Rev. V2

Features

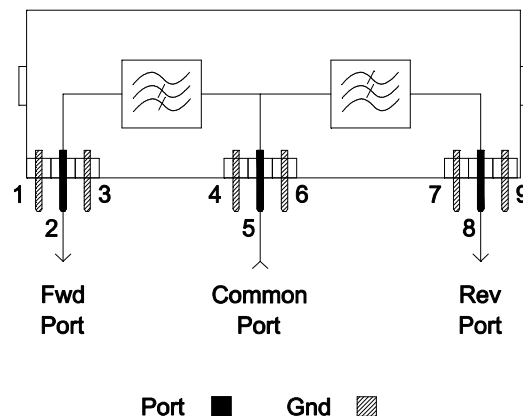
- Plug in Design
- Low Insertion Loss
- Excellent Cross over Isolation
- Excellent Return loss
- RoHS Compliant
- Lead-free

Description

MAFL-011059 is a high performance vertical plug-in diplex filter.

Designed specifically for the CATV infrastructure market.

Functional Schematic



Ordering Information

Part Number	Package
MAFL-011059	480

Pin Configuration

Pin No.	Function
1,3,4,6,7,9	Ground
2	Forward Path Port
5	Common Port
8	Reverse Path Port

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

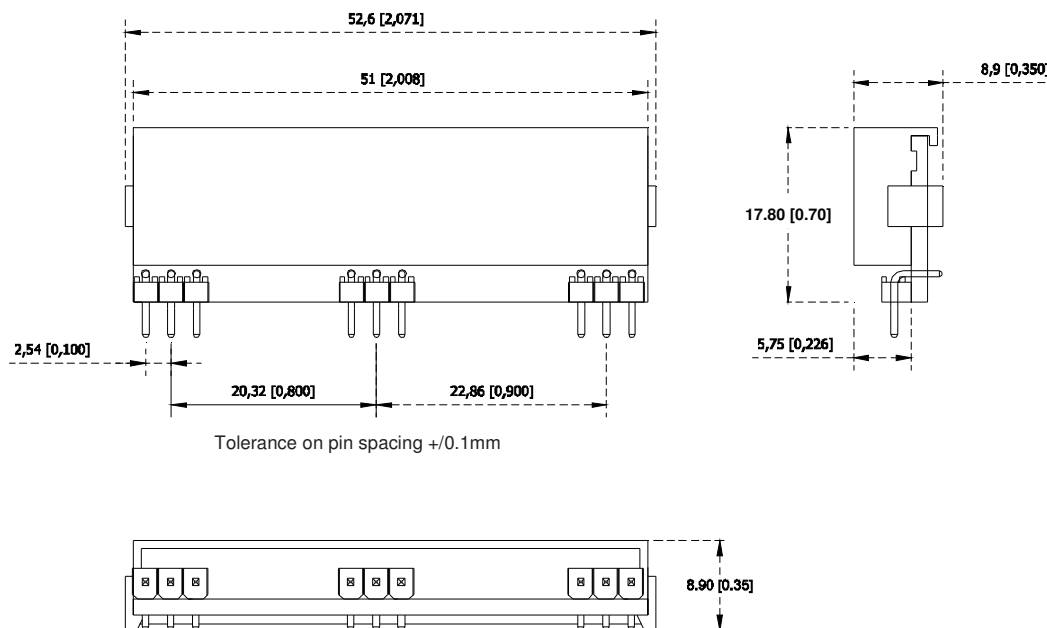
Parameter	Test Conditions	Units	Min.	Typ.	Max.
Insertion Loss	Reverse Path 5 - 42 MHz	dB	—	1.0	1.2
	Forward Path 54 - 1218 MHz			1.0	1.2
Isolation	5 - 42 MHz	dB	48	51	—
	43 - 53 MHz		37	39	
	54 - 600 MHz		48	51	
	600 - 1000 MHz		45	49	
	1000 - 1218 MHz		40	45	
Return Loss	Common Port 5 - 42 MHz	dB	20	22	—
	54 - 1218 MHz		20	22	
Group Delay	Reverse Path 39.0 - 40.5 MHz	ns	—	10	—
	40.5 - 42.0 MHz			16	
	Forward Path 55.25 - 58.83 MHz			16	
	61.25 - 64.83 MHz			10	
	67.25 - 70.83 MHz			6	

Recommended Maximum Ratings^{1,2}

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

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Outline Drawing



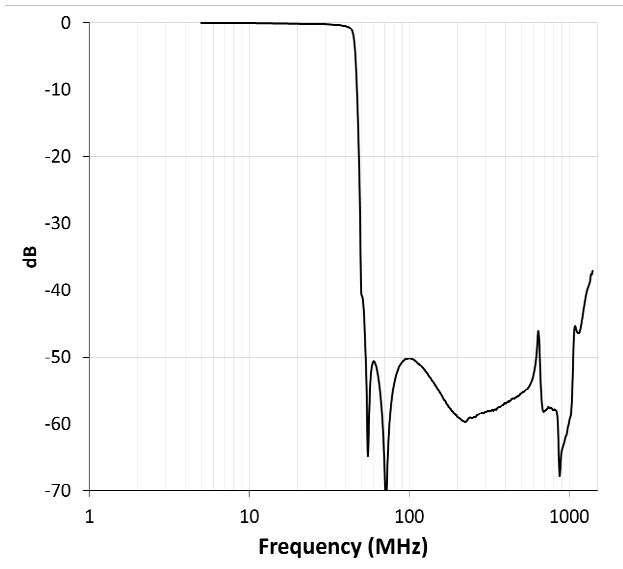
Dimensions in mm [inches] (Tolerance +/-0.3mm unless stated otherwise)

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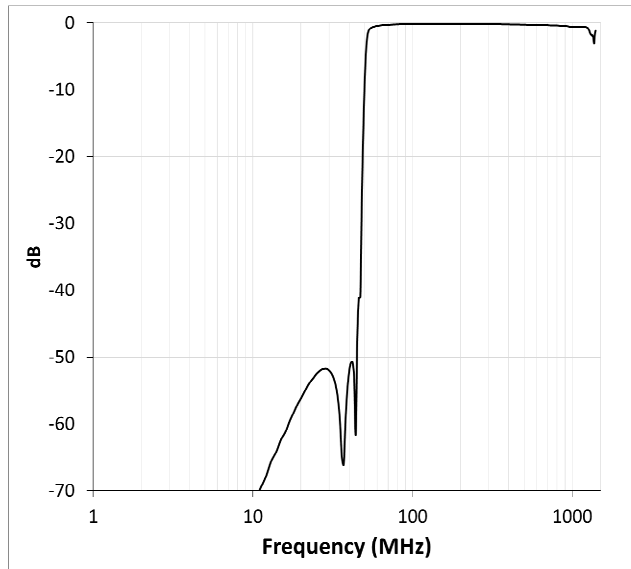
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Typical Performance Curves:

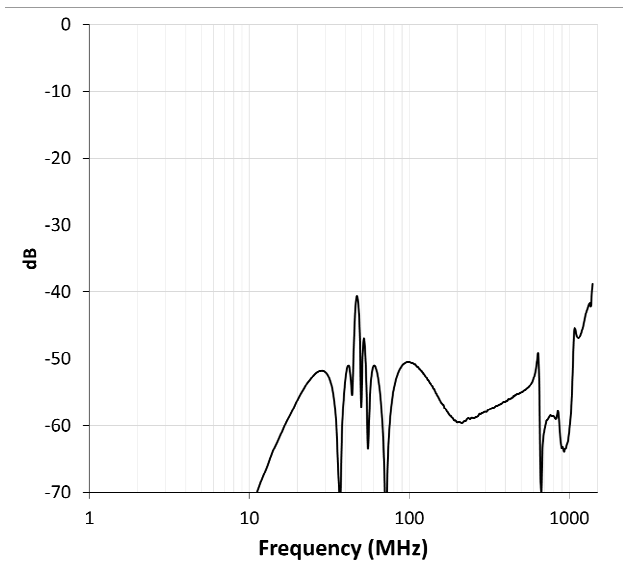
Low Pass Filter



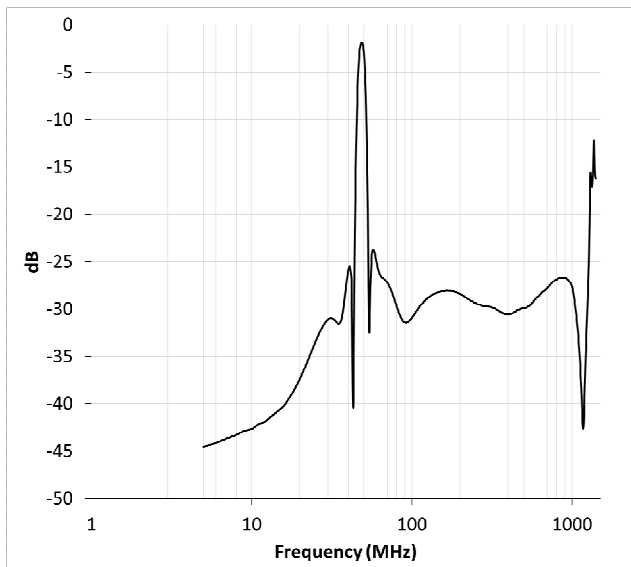
High Pass Filter



Common Port Return Loss



Isolation

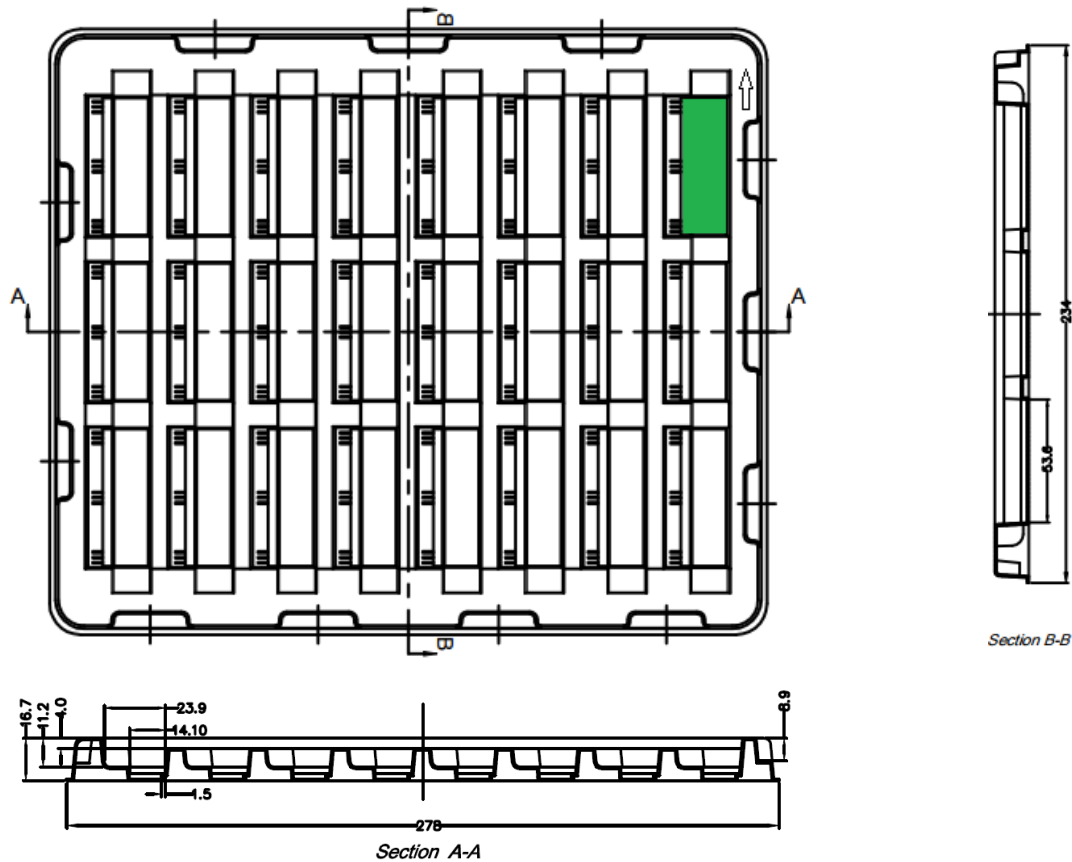


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Tray Information

Parameter	Units	Value
Min Order Qty	-	480
Tray Length	mm	278
Tray Width	mm	234
Tray Height	mm	16.7
Orientation	-	See below
Consecutive trays will be stacked alternately at 180°		



Dimensions are in millimetres.

Tolerance: ± 0.1 mm, except where specified.

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