

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

Rev. V1

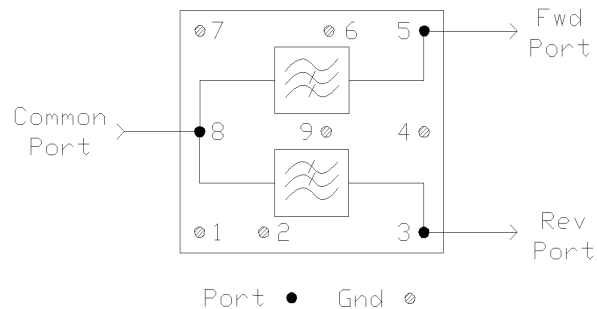
Features

- Plug in Design
- Low Insertion Loss
- Excellent Cross over Isolation
- Excellent Return loss
- RoHS compliant
- Lead Free

Description

MAFL-011047 is a high performance horizontal plug-in diplex filter designed specifically for the CATV infrastructure market.

Functional Schematic



Ordering Information

Part Number	Package
MAFL-011047	200pcs per Box

Pin Configuration

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

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

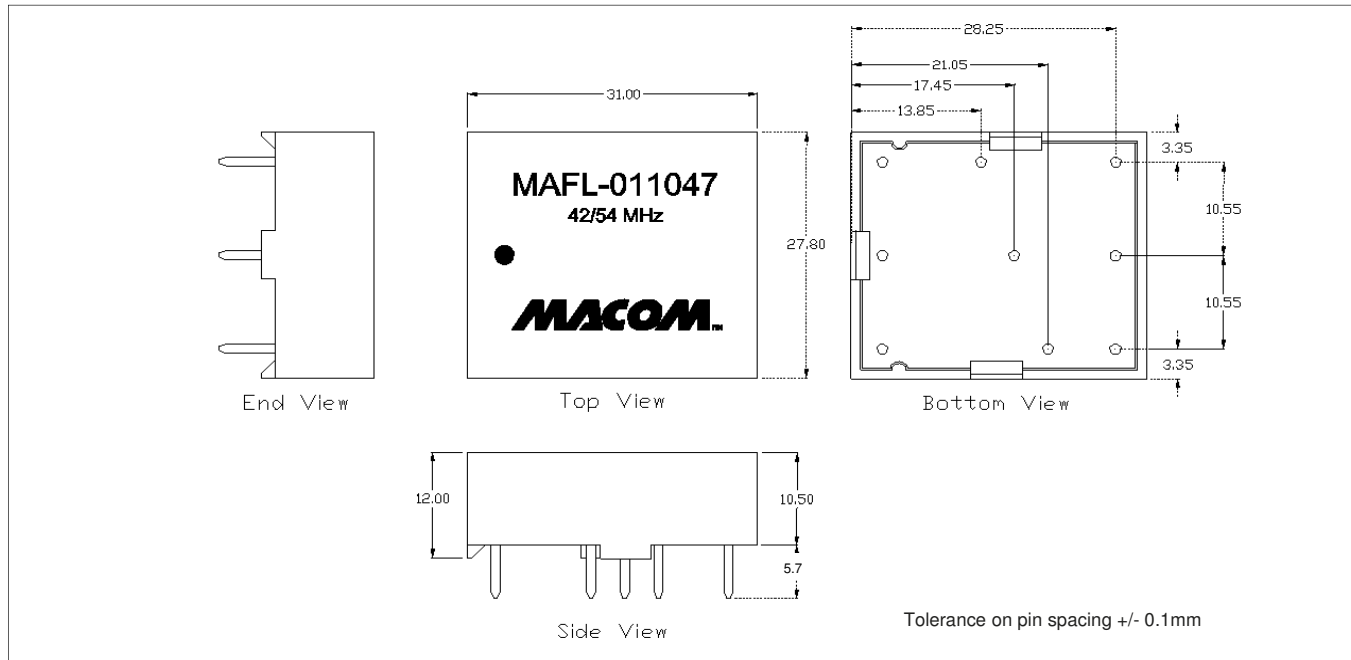
Parameter	Units	Min	Typ	Max
Insertion loss				
Reverse Path 5 - 42 MHz	dB	—	1.0	1.2
Forward Path 54 - 1218 MHz	dB	—	1.0	1.2
Isolation				
5 - 42 MHz	dB	48	51	—
42 - 54 MHz	dB	38	41	—
54 - 1002 MHz	dB	45	51	—
1002 - 1218 MHz	dB	40	45	—
Return Loss				
Common Port				
5 - 42 MHz	dB	22	24	—
54 - 750 MHz	dB	22	24	—
750 - 1218 MHz	dB	19	21	—
Group Delay				
Reverse Path				
39.0 - 40.5 MHz	nSec	—	10	—
40.5 - 42.0 MHz	nSec	—	17	—
Forward Path				
55.25 - 58.825 MHz	nSec	—	16.5	—
61.25 - 64.825 MHz	nSec	—	10	—
67.25 - 70.825 MHz	nSec	—	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.

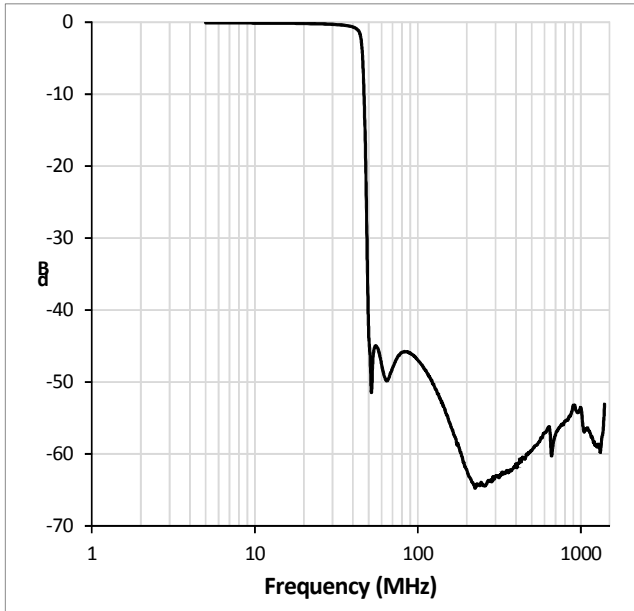
Outline Drawing



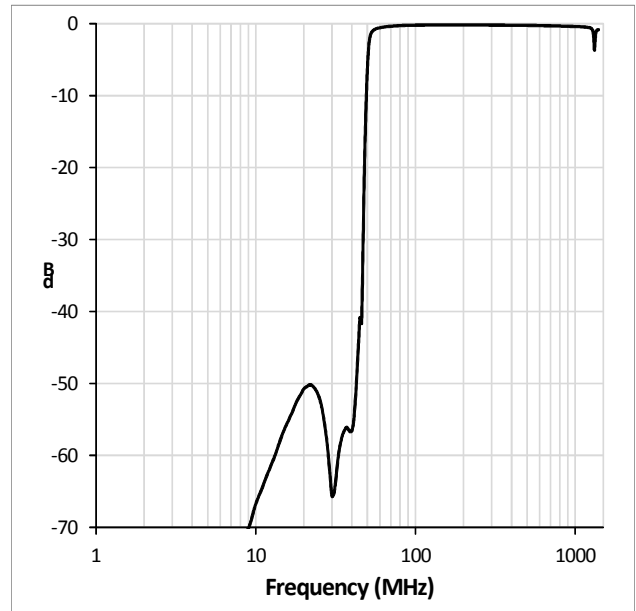
Dimensions in mm (Tolerance +/-0.3mm unless stated otherwise)

Typical Performance Curves:

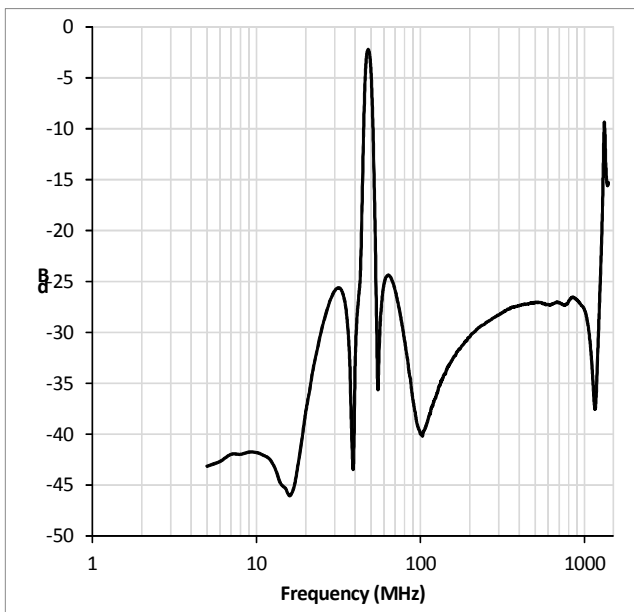
Low Pass Filter



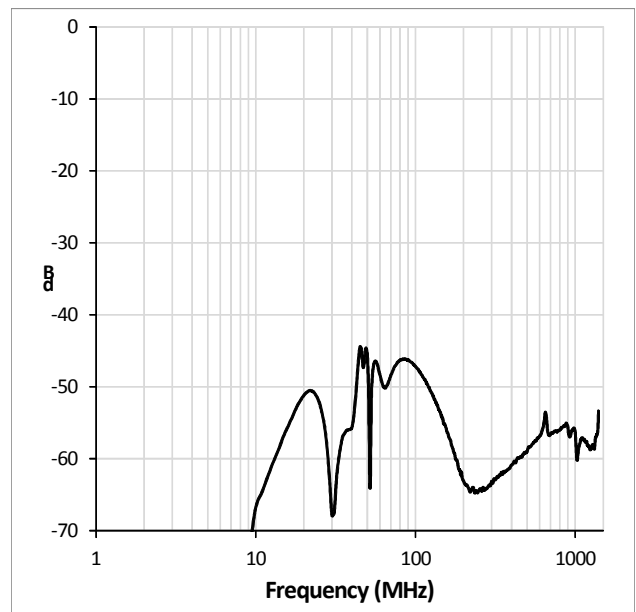
High Pass Filter



Common Port Return Loss



Isolation



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