

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

Rev. V1

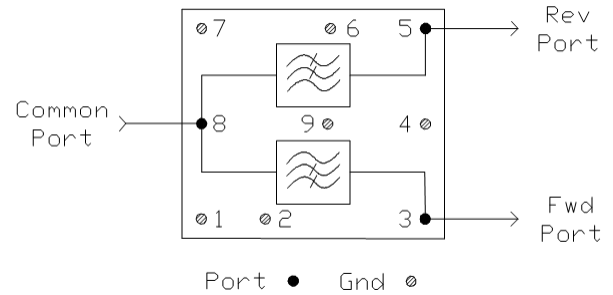
### Features

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

### Description

MACOM's MAFL-011048 is a high performance horizontal plug-in diplex filter designed specifically for the CATV infrastructure market.

### Functional Schematic



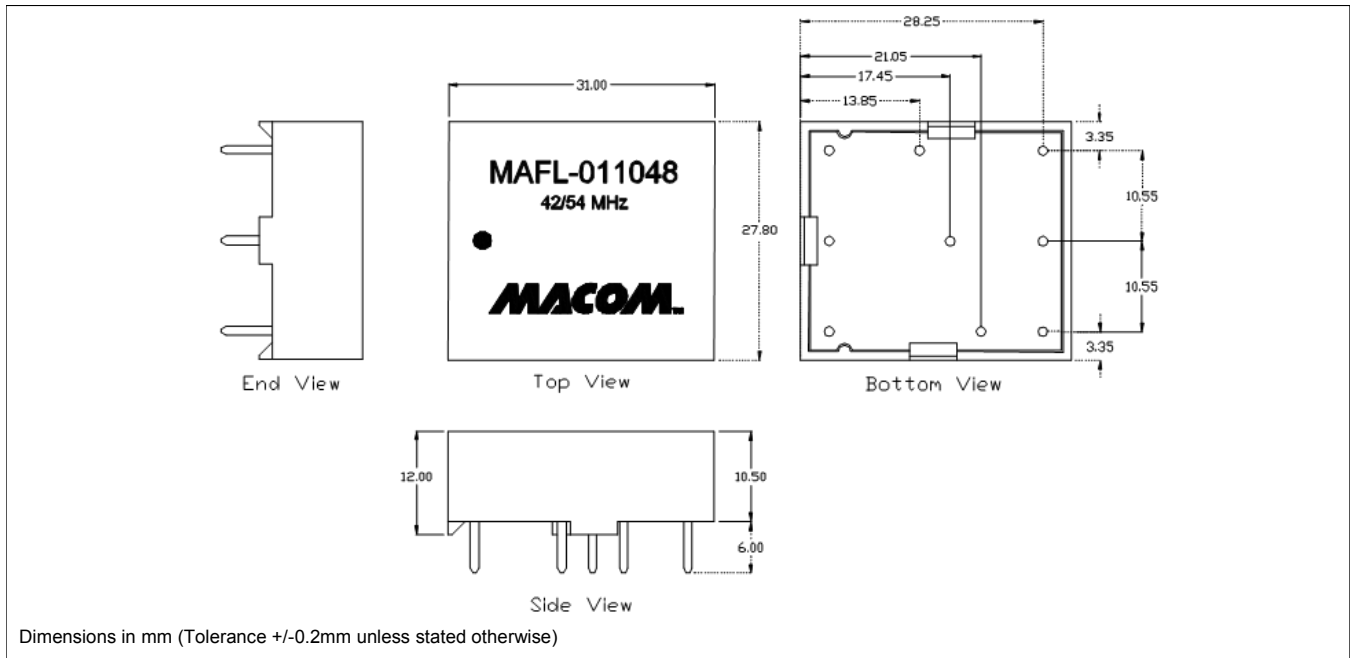
### Ordering Information

Part Number	Package
MAFL-011048	200pcs per Box

### Pin Configuration

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

### Outline Drawing



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

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<sup>1,2</sup>

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

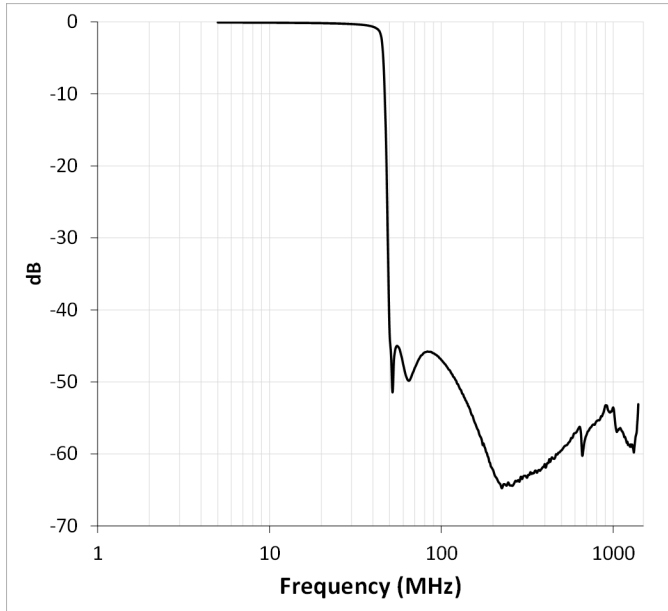
- Exceeding any one or combination of these limits may cause permanent damage to this device.
- MACOM does not recommend sustained operation near these survivability limits

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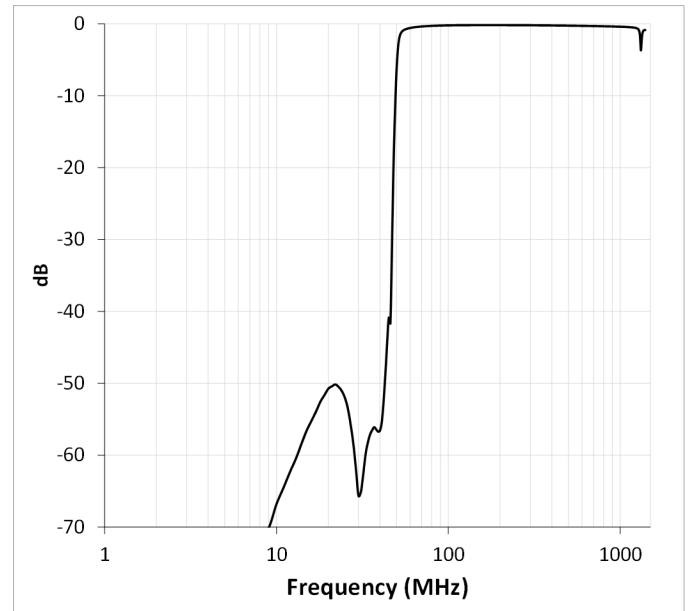
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### Typical Performance Curves:

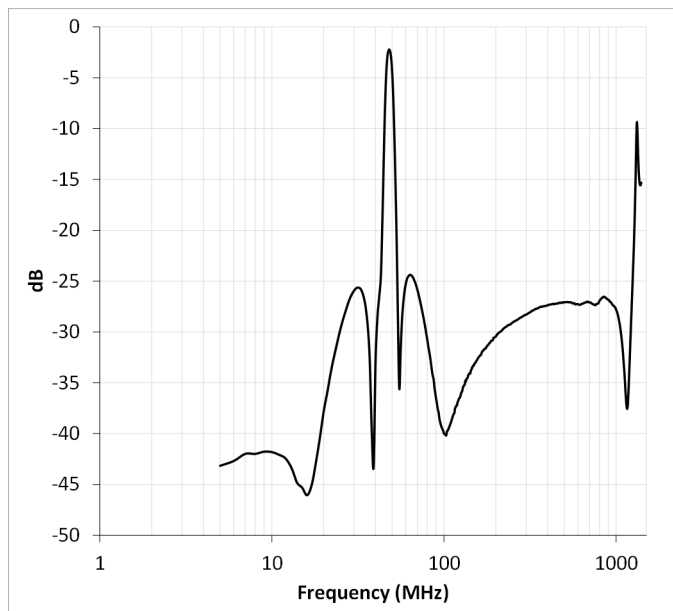
#### Low Pass Filter



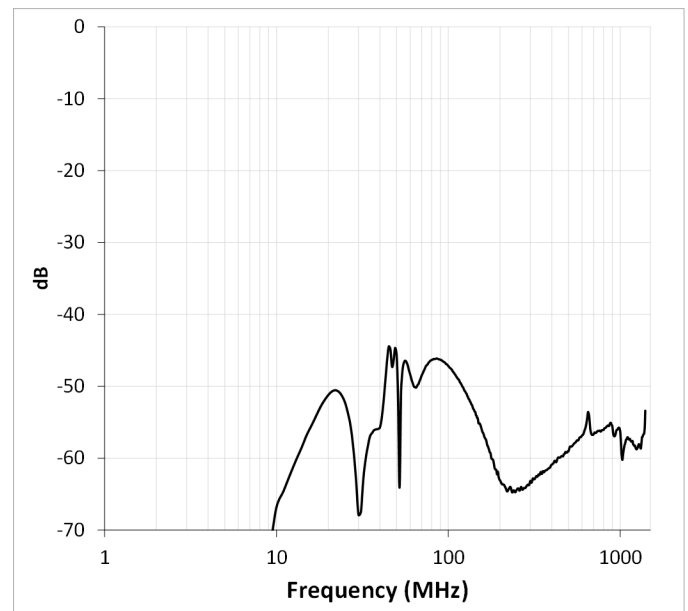
#### High Pass Filter



#### Common Port Return Loss



#### Isolation



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