

Horizontal Plug-in Diplex Filter 5-204/258-1218MHz

Rev. V2

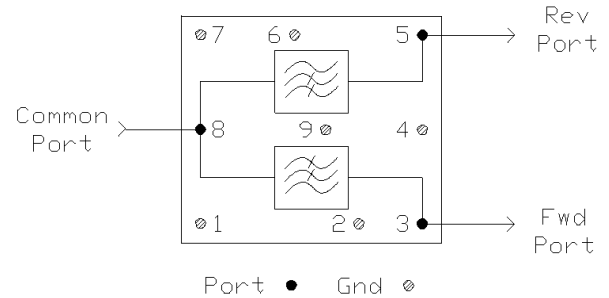
Features

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

Description

MACOM's MAFL-011054 is a high performance horizontal plug-in diplex filter designed specifically for the CATV infrastructure market.

Functional Schematic



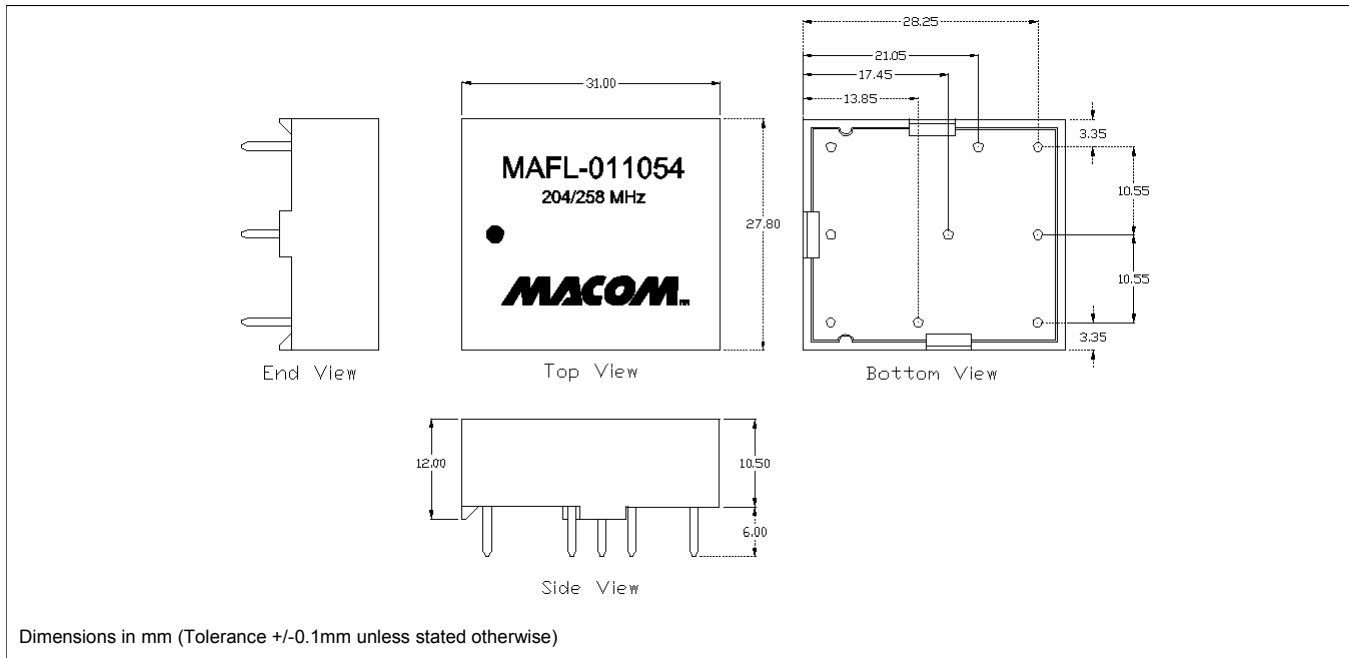
Ordering Information

| Part Number | Package |
|-------------|----------------|
| MAFL-011054 | 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 | | | | |
| 5-204 MHz | dB | — | 1.0 | 1.2 |
| 258-1218 MHz | dB | — | 1.0 | 1.2 |
| Isolation | | | | |
| 5-204 MHz | dB | 48 | 51 | — |
| 204-258 MHz | dB | 38 | 41 | — |
| 258-600 MHz | dB | 48 | 51 | — |
| 600-1002 MHz | dB | 45 | 49 | — |
| 1002-1218 MHz | dB | 40 | 45 | — |
| Return loss Common Port | | | | |
| 5-204 MHz | dB | 22 | 24 | — |
| 258-750 MHz | dB | 22 | 24 | — |
| 750-1218 MHz | dB | 19 | 21 | — |
| Group Delay | | | | |
| Forward Path | | | | |
| 259.2625 - 262.85 MHz | nSec | — | 10.0 | — |
| 265.2625 - 268.85 MHz | nSec | — | 8.0 | — |
| 271.2625 - 274.85 MHz | nSec | — | 6.0 | — |
| Reverse Path | | | | |
| 201.0 - 202.5 MHz | nSec | — | 8.0 | — |
| 202.5 - 204.0 MHz | nSec | — | 10.0 | — |

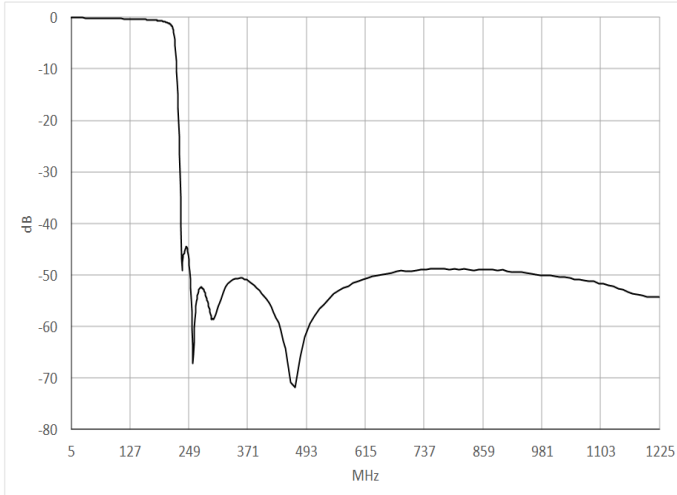
Recommended Maximum Ratings^{1,2}

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

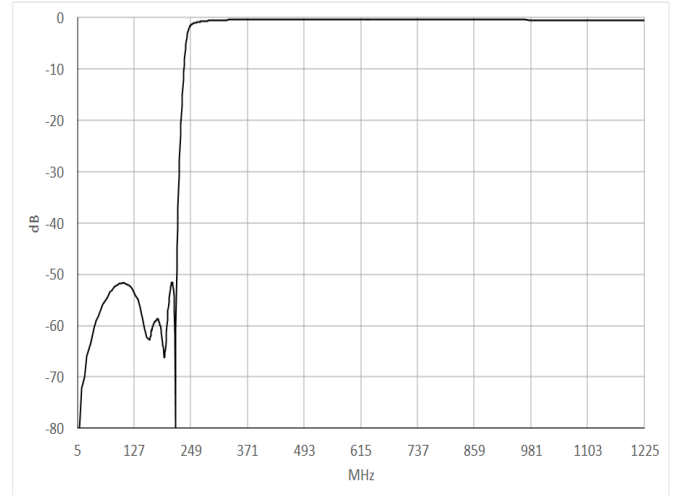
1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. MACOM does not recommend sustained operation near these survivability limits.

Typical Performance Curves:

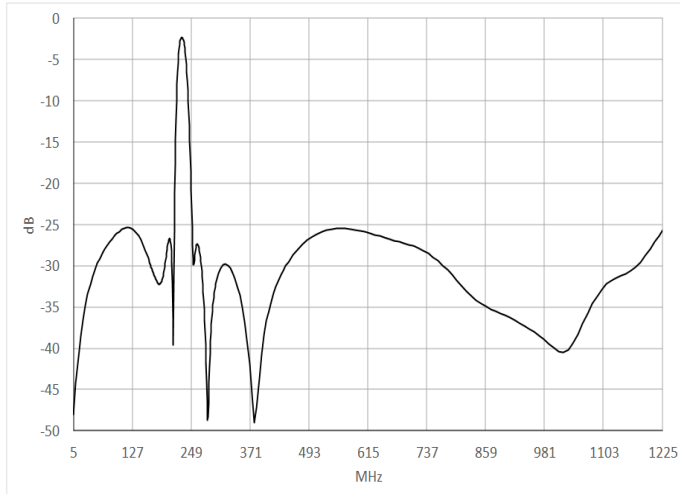
Low Pass Filter



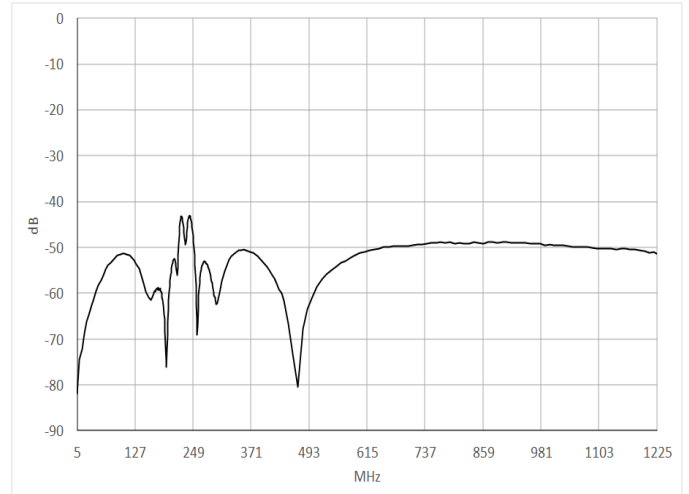
High Pass Filter



Common Port Return Loss



Isolation



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