MAFL-011081

CATV Diplex Filter
5 - 204 / 258 - 1218 MHz

Features
- 75 Ω
- Surface MT 30x30 mm device
- RoHS Compliant and Pb free

Description
MAFL-011081 is a surface mount diplex filter unit designed for CATV applications, DVT and DBS applications.

Ordering Information1,2

<table>
<thead>
<tr>
<th>Part #</th>
<th>Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAFL-011081</td>
<td>bulk</td>
</tr>
<tr>
<td>MAFL-011081-SB1</td>
<td>Sample Board</td>
</tr>
</tbody>
</table>

1. Reference Application Note M513 for reel size information.
2. All sample boards include x loose parts.

Electrical Specifications: $T_A = 25^\circ C$, $Z_0 = 75 \Omega$

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test Conditions Frequency (MHz)</th>
<th>Units</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
</table>
| Insertion Loss             | 5 - 204  
258 - 1218                | dB    | —    | 0.5  | 1.6  |
| Filter Rejection           | 5 - 204  
258 - 1218                | dB    | 43   | 50   | —    |
| Filter Return Loss (all ports) | 5 - 204  
258 - 1218                | dB    | 17   | 19   | —    |

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DC-0017617
Absolute Maximum Ratings\textsuperscript{4,5}

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Power</td>
<td>250 mW</td>
</tr>
<tr>
<td>DC Current</td>
<td>30 mA</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40°C to +85°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>-40°C to +85°C</td>
</tr>
</tbody>
</table>

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

Recommended PCB Configuration
CATV Diplexer Filter
5 - 204 / 258 - 1218 MHz

Typical Performance Curves $T_A = 25^\circ C$, $Z_0 = 75 \Omega$

**Input Port Return Loss**

**Low Pass Filter Performance**

**High Pass Filter Performance**

**Filter Isolation**

**Low Pass port Return Loss**

**High Pass port Return Loss**

PRELIMINARY: Data Sheets contain information regarding a product MACOM has under development. Performance is based on engineering tests. Specifications are typical. Mechanical outline has been fixed. Engineering samples and/or test data may be available. Commitment to produce in volume is not guaranteed.

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Outline Drawing

Dimensions in mm. Tolerance: .x ± 0.1, .xx ± 0.05
CATV Diplex Filter

5 - 204 / 258 - 1218 MHz

Tape & Reel Information

Dimensions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qty per reel</td>
<td>—</td>
<td>200</td>
</tr>
<tr>
<td>Reel Size</td>
<td>mm</td>
<td>330</td>
</tr>
<tr>
<td>Tape Width</td>
<td>mm</td>
<td>56.00</td>
</tr>
<tr>
<td>Pitch</td>
<td>mm</td>
<td>40.00</td>
</tr>
<tr>
<td>Ao</td>
<td>mm</td>
<td>30.3</td>
</tr>
<tr>
<td>Bo</td>
<td>mm</td>
<td>30.3</td>
</tr>
<tr>
<td>Ko</td>
<td>mm</td>
<td>6.4</td>
</tr>
<tr>
<td>Orientation</td>
<td>—</td>
<td>F30</td>
</tr>
</tbody>
</table>

Reference Application Note ANI-019 for orientation

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