Features
- 75 Ohm
- SMT unit
- RoHS* Compliant

Description
- M/A-COM Technology Solutions MAFL-009217-CD0AC0 is a surface mount diplex filter unit designed for MoCA applications.

Product Image

Recommended Maximum Ratings

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

1. Exceeding any one or combination of these limits may cause permanent damage to this device.
2. M/A-COM Technology Solutions does not recommend sustained operation near these survivability limits.

Pin Configuration

<table>
<thead>
<tr>
<th>Function</th>
<th>Pin Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Port</td>
<td>2</td>
</tr>
<tr>
<td>Low Pass Port</td>
<td>10</td>
</tr>
<tr>
<td>High Pass Port</td>
<td>4</td>
</tr>
<tr>
<td>Ground</td>
<td>1, 3, 5 - 9</td>
</tr>
<tr>
<td>Not connected</td>
<td>-</td>
</tr>
</tbody>
</table>

CATV Diplex Filter
5 - 864 / 1128 - 1525 MHz

Outline Drawing: SM-172

Recommended PCB Configuration

Dimensions in mm. Tolerance: \( x \pm 0.1, xx \pm 0.05 \) unless otherwise noted

NOTE: Substrate is 1.6mm thick FR4
**Electrical Specifications:  \( T_A = 25^\circ C, Z_0 = 75\Omega \)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Min</th>
<th>Typ</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Insertion Loss</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common to Low</td>
<td>dB</td>
<td>-</td>
<td>0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>5 - 750 MHz</td>
<td>dB</td>
<td>-</td>
<td>1.0</td>
<td>1.5</td>
</tr>
<tr>
<td>750 to 864 MHz</td>
<td>dB</td>
<td>30</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td><strong>Rejection</strong></td>
<td>dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>977 to 1023 MHz</td>
<td>dB</td>
<td>30</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>1128 to 1525 MHz</td>
<td>dB</td>
<td>37</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td><strong>Common to High</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Insertion Loss</strong></td>
<td>dB</td>
<td>-</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>1128 to 1525 MHz</td>
<td>dB</td>
<td>40</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td><strong>Rejection</strong></td>
<td>dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 - 750 MHz</td>
<td>dB</td>
<td>40</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td>750 to 864 MHz</td>
<td>dB</td>
<td>37</td>
<td>45</td>
<td>-</td>
</tr>
<tr>
<td>977 to 1023 MHz</td>
<td>dB</td>
<td>30</td>
<td>43</td>
<td>-</td>
</tr>
<tr>
<td>2300 to 2400 MHz</td>
<td>dB</td>
<td>30</td>
<td>34</td>
<td>-</td>
</tr>
<tr>
<td>2400 to 3000 MHz</td>
<td>dB</td>
<td>20</td>
<td>25</td>
<td>-</td>
</tr>
<tr>
<td><strong>Common Port Return Loss</strong></td>
<td>dB</td>
<td>12</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>5 to 864 MHz</td>
<td>dB</td>
<td>12</td>
<td>18</td>
<td>-</td>
</tr>
<tr>
<td><strong>Common Port Voltage Transient</strong></td>
<td>V</td>
<td>-</td>
<td></td>
<td>200</td>
</tr>
</tbody>
</table>
Typical Performance Curves at +25°C

Common to Low pass

Common to High pass

Common Port Return Loss
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