Surface Mount  
Frequency Mixer  

Level 7 (LO Power +7 dBm)  0.5 to 500 MHz

**Maximum Ratings**
- Operating Temperature: -40°C to 85°C
- Storage Temperature: -55°C to 100°C
- RF Power: 50mW
- IF Current: 40mA

Permanent damage may occur if any of these limits are exceeded. These electrical ratings are not intended for continuous normal operation.

**Pin Connections**
- LO: 6
- RF: 3
- GROUND: 1, 4, 5

**Features**
- Low conversion loss, 5.0 dB typ.
- Excellent L-R isolation, 55 dB typ.
- Excellent IP3, 15 dBm typ.
- Low profile package
- Aqueous washable
- Protected by US patent 6,133,525

**Applications**
- VHF/UHF

**Electrical Specifications**

<table>
<thead>
<tr>
<th>FREQUENCY (MHz)</th>
<th>CONVERSION LOSS (dB)</th>
<th>LO-RF ISOLATION (dB)</th>
<th>LO-IF ISOLATION (dB)</th>
<th>IP3 at center band (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO/RF</td>
<td>IF</td>
<td>Mid-Band Max.</td>
<td>L</td>
<td>M</td>
</tr>
<tr>
<td>0.5-500</td>
<td>DC-500</td>
<td>5.0</td>
<td>0.10</td>
<td>6.5</td>
</tr>
</tbody>
</table>

1 dB COMP.: +1 dBm typ.

**Notes**
A. Performance and quality attributes and conditions not expressly stated in this specification document are intended to be excluded and do not form a part of this specification document.
B. Electrical specifications and performance data contained in this specification document are based on Mini-Circuit’s applicable established test performance criteria and measurement instructions.
C. The parts covered by this specification document are subject to Mini-Circuits standard limited warranty and terms and conditions (collectively, “Standard Terms”); Purchasers of this part are entitled to the rights and benefits contained therein. For a full statement of the Standard Terms and the exclusive rights and remedies thereunder, please visit Mini-Circuits’ website at www.minicircuits.com/MCLStore/terms.jsp
Performance Charts

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Performance Charts

- **ADE-1**

  **CONVERSION LOSS**

  - At IF Freq of 30 MHz

  - LO=+4 dBm
  - LO=+7 dBm
  - LO=+10 dBm

  ![Conversion Loss Chart](chart1.png)

  **L-R ISOLATION**

  - LO=+4 dBm
  - LO=+7 dBm
  - LO=+10 dBm

  ![L-R Isolation Chart](chart2.png)

  **L-I ISOLATION**

  - LO=+4 dBm
  - LO=+7 dBm
  - LO=+10 dBm

  ![L-I Isolation Chart](chart3.png)

  **RF VSWR**

  - LO=+4 dBm
  - LO=+7 dBm
  - LO=+10 dBm

  ![RF VSWR Chart](chart4.png)

  **LO VSWR**

  - LO=+4 dBm
  - LO=+7 dBm
  - LO=+10 dBm

  ![LO VSWR Chart](chart5.png)

  **IF VSWR**

  - LO=+4 dBm
  - LO=+7 dBm
  - LO=+10 dBm

  ![IF VSWR Chart](chart6.png)