One-Port SAW Resonator 315.0MHz
Part No: MA07074

A. FEATURES:

1-Port Resonator

B. MAXIMUM RATING:

1. Power Dissipation: 0dBm
2. DC voltage: 12 V.
3. Storage Temperature: -40°C to 85°C
4. Operating Temperature: -40°C to 85°C

C. ELECTRICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Unit</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fc</td>
<td>MHz</td>
<td>314.850</td>
<td>315</td>
<td>315.150</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Unloaded Quality factor</td>
<td>-</td>
<td></td>
<td>12000</td>
<td>-</td>
</tr>
<tr>
<td>Motional capacitance C1</td>
<td>fF</td>
<td>-</td>
<td>3.53</td>
<td>-</td>
</tr>
<tr>
<td>Motional inductance L1</td>
<td>μH</td>
<td>-</td>
<td>72.3</td>
<td>-</td>
</tr>
<tr>
<td>Motional resistance R1</td>
<td>Ohm</td>
<td>-</td>
<td>11.8</td>
<td>25</td>
</tr>
<tr>
<td>Parallel capacitance Co</td>
<td>pF</td>
<td>-</td>
<td>4.8</td>
<td>-</td>
</tr>
<tr>
<td>Temp. coeff.</td>
<td>ppm/c*2</td>
<td>-</td>
<td>0.032</td>
<td>-</td>
</tr>
<tr>
<td>Turnover To</td>
<td>deg. C</td>
<td>35</td>
<td>-</td>
<td>65</td>
</tr>
<tr>
<td>Package size</td>
<td></td>
<td></td>
<td></td>
<td>F-11</td>
</tr>
</tbody>
</table>
D. OUTLINE DRAWING:

![Outline Drawing]

E. EQUIVIRENT CIRCUIT:

1-Port Resonator:

```
Source Impedance: 50Ω

#1: C0

Load Impedance: 50Ω

R1  C1  L1
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TC0166A v2
One-Port SAW Resonator 315.0MHz  
Part No: MA07074  
Model: TC0166A  
Rev No: 2

F. FREQUENCY CHARACTERISTICS:

G. TEST CIRCUIT:

Network analyzer

From 50Ω Network Analyzer

To 50Ω Network Analyzer