SAW Resonator: 1000.0MHz  
Model: TC0528A  
Part No: MP02638  
Rev No: 2

A. FEATURES:

Electrostatic Sensitive Device

One - Port Resonator

B. MAXIMUM RATING:

1. Input Power Level: 10dBm
2. DC voltage: 3V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C

C. ELECTRICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Unit</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fr</td>
<td>MHz</td>
<td>999.875</td>
<td>1000.000</td>
<td>1000.125</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>1.30</td>
<td>2.0</td>
</tr>
<tr>
<td>Equivalent Elements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motional capacitance C1</td>
<td>fF</td>
<td>-</td>
<td>1.66</td>
<td>-</td>
</tr>
<tr>
<td>Motional inductance L1</td>
<td>μH</td>
<td>-</td>
<td>15.3</td>
<td>-</td>
</tr>
<tr>
<td>Motional resistance R1</td>
<td>Ohm</td>
<td>-</td>
<td>10.7</td>
<td>-</td>
</tr>
<tr>
<td>Parallel capacitance Co</td>
<td>pF</td>
<td>-</td>
<td>2.75</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>-</td>
<td>25</td>
<td>-</td>
</tr>
<tr>
<td>Package size</td>
<td></td>
<td>SMD 3.0 X 3.0 X 1.4mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
D. EQUIVALENT CIRCUIT:

One-Port Resonator:

Source Impedance

\[ \text{Load Impedance} \]

\[ 50\Omega \]

\[ 50\Omega \]

\[ R1 \]
\[ C1 \]
\[ L1 \]

E. OUTLINE DRAWING:

Pin B: Input or Output; Pin E: Output or Input
Pin A, C, D, F: Ground

Unit: mm
F. FREQUENCY CHARACTERISTICS:

![Frequency Characteristics Graph]

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G. TEST CIRCUIT:

Network analyzer

H. LAND PATTERN:
I. PACKING:

1. Reel Dimension (Please refer to FR-75D10 for packing quantity)

![Reel Dimension Diagram]

2. Tape Dimension

![Tape Dimension Diagram]
SAW Resonator: 1000.0MHz  
Part No: MP02638  

J. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150 ~ 180°C for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50 ~ 80 seconds and at 245 ~ 260°C peak (min. 10 sec).
   Time: 2 times.