418.0 MHz SAW Resonator
Model: TC0117A
Part No: MA05649

A. FEATURES:

1. 1-Port Resonator.

B. MAXIMUM RATING:

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

C. ELECTRICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Units</th>
<th>Minimum</th>
<th>Typical</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency  ( F_r )</td>
<td>MHz</td>
<td>417.925</td>
<td>418</td>
<td>418.075</td>
</tr>
<tr>
<td>Insertion Loss  ( I_L )</td>
<td>dB</td>
<td>0.9</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Motional capacitance ( C_1 )</td>
<td>fF</td>
<td>-</td>
<td>2.19</td>
<td>-</td>
</tr>
<tr>
<td>Motional inductance ( L_1 )</td>
<td>µH</td>
<td>-</td>
<td>66.11</td>
<td>-</td>
</tr>
<tr>
<td>Motional resistance ( R_1 )</td>
<td>Ohm</td>
<td>-</td>
<td>12.68</td>
<td>-</td>
</tr>
<tr>
<td>Parallel capacitance ( C_0 )</td>
<td>pF</td>
<td>-</td>
<td>3.65</td>
<td>-</td>
</tr>
<tr>
<td>Temp.coeff. ppm/c*2</td>
<td></td>
<td>-</td>
<td>0.032</td>
<td>-</td>
</tr>
<tr>
<td>Turnover To deg.C</td>
<td></td>
<td>20</td>
<td>-</td>
<td>50</td>
</tr>
<tr>
<td>Package size</td>
<td></td>
<td>SMD 5X5X1.4mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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D. OUTLINE DRAWING:

E. EQUIVALENT CIRCUIT:

One-Port Resonator:
418.0 MHz SAW Resonator  
Model: TC0117A  
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REV NO.: 1

F. FREQUENCY CHARACTERISTICS:

![Graph](image)

G. TEST CIRCUIT:

Network analyzer

From 50Ω Network Analyzer  
To 50Ω Network Analyzer

50Ω  SAW Resonator  50Ω
418.0 MHz SAW Resonator

Model: TC0117A
Part No: MA05649

H. PACKING:
1. REEL DIMENSION

2. TAPE DIMENSION