SAW Resonator: 868.950MHz  
Model: TC0322A  
Part No: MP06477  
Rev No: 1

A. FEATURES:

1. 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:

1. Reference Temperature $T_A = 25°C$

<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 $F_c$</td>
<td>MHz</td>
<td>868.85</td>
<td>868.95</td>
<td>869.05</td>
</tr>
<tr>
<td>Insertion Loss $IL$</td>
<td>dB</td>
<td>-</td>
<td>1.25</td>
<td>2.5</td>
</tr>
<tr>
<td>Unload quality factor $QU$</td>
<td>ppm / yr</td>
<td>-</td>
<td>9800</td>
<td>-</td>
</tr>
<tr>
<td>Ageing of $F_c$</td>
<td>ppm / yr</td>
<td>-</td>
<td>-</td>
<td>±10</td>
</tr>
<tr>
<td>Motional capacitance $C_1$</td>
<td>fF</td>
<td>-</td>
<td>0.98</td>
<td>-</td>
</tr>
<tr>
<td>Motional inductance $L_1$</td>
<td>μH</td>
<td>-</td>
<td>35.93</td>
<td>-</td>
</tr>
<tr>
<td>Motional resistance $R_1$</td>
<td>Ohm</td>
<td>-</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>Parallel capacitance $C_0$</td>
<td>pF</td>
<td>-</td>
<td>2.16</td>
<td>-</td>
</tr>
<tr>
<td>Frequency Temperature coefficient (TCf)</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>SMD 3 x 3 x 1.1mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Temperature dependence of $F_c$: $F_c (T_A) = F_c (T_O) (1+TCf(T_A-T_O)^2)$
D. EQUIVIRENT CIRCUIT:

One-Port Resonator:

![Equivalent Circuit Diagram](image)

E. OUTLINE DRAWING:

![Outline Drawing](image)

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

Unit: mm
F. FREQUENCY CHARACTERISTICS:
G. TEST CIRCUIT:

Network analyzer

From 50Ω Network Analyzer 50Ω SAW Resonator 50Ω To 50Ω Network Analyzer

A, C, D, F

H. LAND PATTERN:
I. PACKING:

1. Reel Dimension

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2. Tape Dimension
J. RECOMMENDED REFLOW PROFILE:

![Reflow Profile Graph]

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