SAW Resonator 868.350MHz  
Model: TC0144A
Part No: MA05545
REV. NO.: 2

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 Fr</td>
<td>MHz</td>
<td>868.150</td>
<td>868.350</td>
<td>868.550</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>1.3</td>
<td>2.5</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>1.21</td>
<td>-</td>
</tr>
<tr>
<td>Motional inductance L1</td>
<td>H</td>
<td>-</td>
<td>27.66</td>
<td>-</td>
</tr>
<tr>
<td>Motional resistance R1</td>
<td>Ohm</td>
<td>-</td>
<td>17.92</td>
<td>-</td>
</tr>
<tr>
<td>Parallel capacitance Co</td>
<td>pF</td>
<td>-</td>
<td>2.51</td>
<td>-</td>
</tr>
<tr>
<td>Temp.coeff. ppm/c*2</td>
<td></td>
<td>0.032</td>
<td>-</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 SMD</td>
<td></td>
<td>5X5X1.4mm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D. OUTLINE DRAWING:
SAW Resonator 868.350MHz  
Part No: MA05545  

E. EQUIVALENT CIRCUIT:  
One-Port Resonator:

```
Source Impedance: 50Ω #2
CD
Load Impedance: 50Ω #6
R1 C1 L1
```

F. FREQUENCY CHARACTERISTICS:

```
Resonator 868.35MHz Frequency Characteristics (S21)

<table>
<thead>
<tr>
<th>Frequency (Center Frequency 868.35MHz Span 3MHz)</th>
<th>dB</th>
</tr>
</thead>
<tbody>
<tr>
<td>866.85 867.35 867.85 868.35 868.85 869.35 869.85</td>
<td></td>
</tr>
</tbody>
</table>
```

G. TEST CIRCUIT:

```
Network analyzer

From 50Ω Network Analyzer  50Ω  2  SAW Resonator  6  50Ω  To 50Ω Network Analyzer
```

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TC0144A v2
H. PACKING:

1. REEL DIMENSION

2. TAPE DIMENSION