SAW Filter 857.0MHz  
Model: TB0904A  
Part No: MP06149  
Rev No: 4

A. MAXIMUM RATING:

1. Operating temperature range: -30°C to 75°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level: 10dBm
4. Maximum DC Voltage: 10V

B. CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Item</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>-</td>
<td>857</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>13.6</td>
<td>15.0</td>
</tr>
<tr>
<td>-1dB bandwidth</td>
<td>MHz</td>
<td>66</td>
<td>76</td>
<td>-</td>
</tr>
<tr>
<td>Passband Ripple Fc ± 30MHz</td>
<td>dB</td>
<td>-</td>
<td>0.5</td>
<td>1.0</td>
</tr>
<tr>
<td>Attenuation:(Reference level from Min IL)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10MHz ~ 715MHz</td>
<td>dB</td>
<td>40</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>715MHz ~ 788MHz</td>
<td>dB</td>
<td>40</td>
<td>47</td>
<td>-</td>
</tr>
<tr>
<td>788MHz ~ 798MHz</td>
<td>dB</td>
<td>20</td>
<td>38</td>
<td>-</td>
</tr>
<tr>
<td>798MHz ~ 809MHz</td>
<td>dB</td>
<td>15</td>
<td>38</td>
<td>-</td>
</tr>
<tr>
<td>925MHz ~ 990MHz</td>
<td>dB</td>
<td>33</td>
<td>37</td>
<td>-</td>
</tr>
<tr>
<td>990MHz ~ 1200MHz</td>
<td>dB</td>
<td>40</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td>Temperature Coefficient</td>
<td>ppm/°C</td>
<td>-</td>
<td>-94</td>
<td>--</td>
</tr>
<tr>
<td>Source Impedance</td>
<td>Ω</td>
<td>-</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>Load Impedance</td>
<td>Ω</td>
<td>-</td>
<td>50</td>
<td>-</td>
</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

1. Wide band Response: (span 300MHz)

![Wide band Response Graph](graph1)

Fig. 1: Horizontal: 30MHz / Div, Vertical: 10dB / Div

2. Pass band Response and Group Time Delay response:

![Pass band and Group Time Delay Graph](graph2)

Fig. 2: Horizontal: 10MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div
3. Wide band Response:

![Graph showing wide band response with frequency and decibel readings]

**Fig. 3:** Horizontal: 100MHz / Div, Vertical: 10dB / Div

**D. MATCHING CIRCUIT:**

![Diagram of matching circuit with labeled components]

- L1 = 3nH, C1 = 3.5pF, L2 = 5.6nH, C1 = 4pF
E. OUTLINE DRAWING:

3: Input
2: Input ground
7: Output
6: Output ground
1, 4, 5, 8: Ground
Unit: mm

F. PCB FOOTPRINT:
G. PACKING:

1. Reel Dimension

![Reel Dimension Diagram]

2. Tape Dimension

![Tape Dimension Diagram]
H. RECOMMENDED REFLOW PROFILE:

![Reflow Profile Graph](image-url)