SAW Filter 153.60MHz  
Part No: MP04982  
Model: TB1090A  
Rev No: 2

A. MAXIMUM RATING:

1. Operating temperature range: -10°C to 80°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level: 10dBm
4. Maximum DC Voltage: 10V

Electrostatic Sensitive Device

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>153.6</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>21.8</td>
<td>23.5</td>
</tr>
<tr>
<td>-3dB bandwidth</td>
<td>MHz</td>
<td>80</td>
<td>85</td>
<td>-</td>
</tr>
<tr>
<td>Passband Ripple Fc ± 36MHz</td>
<td>dB</td>
<td>-</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Group Delay Variation Fc ± 36MHz</td>
<td>ns</td>
<td>-</td>
<td>21</td>
<td>-</td>
</tr>
<tr>
<td>Absolute Group Delay at Fc</td>
<td>ns</td>
<td>-</td>
<td>513</td>
<td>-</td>
</tr>
<tr>
<td>Attenuation (Reference level from minimum Insertion loss)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC ~ 93MHz</td>
<td>dB</td>
<td>32</td>
<td>38</td>
<td>-</td>
</tr>
<tr>
<td>213MHz ~ 400MHz</td>
<td>dB</td>
<td>32</td>
<td>39</td>
<td>-</td>
</tr>
<tr>
<td>Temperature Coefficient</td>
<td>ppm/°C</td>
<td>-</td>
<td>-72</td>
<td>-</td>
</tr>
<tr>
<td>Source Impedance</td>
<td>Ohm</td>
<td>-</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>Load Impedance</td>
<td>Ohm</td>
<td>-</td>
<td>50</td>
<td>-</td>
</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

1. Narrow band Response: (span 200MHz)

![Graph of Narrow band Response](image1)

Fig. 1. Horizontal: 20MHz / Div, Vertical: 10Db / Div

2. Pass band Response and Group Time Delay Response: (span 120MHz)

![Graph of Pass band Response](image2)

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

Fig. 3. Horizontal: 39MHz / Div, Vertical: 10dB / Div

4. Smith Chart
**SAW Filter 153.60MHz**  
**Model:** TB1090A  
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**D. MATCHING CIRCUIT:**

L1 = 39nH  
C1 = 8pF  
L2 = 39nH  
C2 = 8pF

**E. OUTLINE DRAWING:**

- J: RF input  
- K: RF input ground  
- D: RF output  
- E: RF output ground  
- A, B, C, F, G, H: Ground  

Unit: mm

**F. PCB FOOTPRINT:**


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**TB1090A v1**
G. PACKING:

1. Reel dimension

(Please refer to FR-75D10 for packing quantity)

2. Tape Dimension

Direction of feed
H. RECOMMENDED REFLOW PROFILE:

![Graph showing the recommended reflow profile](image-url)