## SAW Filter 130.340MHz

**Model:** TB1114A  
**Part No:** MP05743  
**Rev. No:** 1

### A. MAXIMUM RATING:

- **Electrostatic Sensitive Device**
- 1. Operating temperature range: -30°C to 65°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>130.34</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>13.8</td>
<td>16.0</td>
</tr>
<tr>
<td>1dB Band Width</td>
<td>MHz</td>
<td>27.0</td>
<td>29.4</td>
<td></td>
</tr>
<tr>
<td>Amplitude Ripple Fc ± 12.5MHz</td>
<td>dB</td>
<td>-</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Group Delay Fc ± 12.5MHz</td>
<td>ns</td>
<td>-</td>
<td>50</td>
<td>80</td>
</tr>
<tr>
<td>Absolute Group Delay at Fc</td>
<td>ns</td>
<td>-</td>
<td>1270</td>
<td>-</td>
</tr>
<tr>
<td>Attenuation (Reference level from typical Insertion loss)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC ~ 104MHz</td>
<td>dB</td>
<td>40</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>153MHz ~ 800MHz</td>
<td>dB</td>
<td>40</td>
<td>46</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>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 showing narrow band response with horizontal scale of 20MHz/Div and vertical scale of 10dB/Div.]

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

2. Pass band Response and Group Time Delay Response:

![Graph showing pass band response and group time delay with horizontal scale of 4MHz/Div and vertical scales of 1dB/Div and 100ns/Div.]

Fig. 2. Horizontal: 4MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div
3. Smith Chart

![Smith Chart Image]

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

4. Wide band Response:

![Wide band Response Image]

Fig. 2. Horizontal: 4MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div
D. MATCHING CIRCUIT:

![Circuit Diagram]

L1 = 68nH  C1 = 15pF  L2 = 56nH  C2 = 20pF

E. OUTLINE DRAWING:

![Outline Drawing]

K: Input  
L: Input Ground  
E: Output  
F: Output Ground  
A, B, C, D, G, H, I, J: Ground  
Unit: mm

F. PCB FOOTPRINT:

![PCB Footprint]

Unit: mm
G. PACKING: (Please refer to FR-75D10 for packing quantity)

1. Reel Dimension

2. Tape Dimension
H. RECOMMENDED REFLOW PROFILE: