SAW Filter 37.8MHz  
Model: TB1045A  
Part No: MP05516  
Rev No: 1

A. MAXIMUM RATING:

- Electrostatic Sensitive Device
- 1. Operating temperature range: -10°C to 60°C
- 2. Storage temperature range: -40°C to 80°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>37.8</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>18.5</td>
<td>20.0</td>
</tr>
<tr>
<td>1dB Band Width</td>
<td>MHz</td>
<td>-</td>
<td>5.8</td>
<td>-</td>
</tr>
<tr>
<td>40dB Band Width</td>
<td>MHz</td>
<td>-</td>
<td>9.3</td>
<td>10.5</td>
</tr>
<tr>
<td>Amplitude Ripple Fc ± 2.5MHz</td>
<td>dB</td>
<td>-</td>
<td>0.6</td>
<td>1.0</td>
</tr>
<tr>
<td>Attenuation (Reference level from typical Insertion loss)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fc ± 10.5MHz ~ Fc ± 14MHz</td>
<td>dB</td>
<td>40</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>Fc ± 14MHz ~ Fc ± 20MHz</td>
<td>dB</td>
<td>45</td>
<td>50</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. Wide band Response: (span 60MHz)

Fig. 1. Horizontal: 5MHz / Div, Vertical: 10dB / Div

2. Pass band Response and Group Time Delay response:

Fig. 2. Horizontal: 1.0MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div
**SAW Filter 37.8MHz**
**Model: TB1045A**
**Part No: MP05516**
**Rev No: 1**

**D. MATCHING CIRCUIT:**

![Circuit Diagram]

L1 = 680nH, L2 = 82nH, C1 = 4.7pF, C2 = 4.7pF

**E. OUTLINE DRAWING:**

![Outline Drawing]

1: Input
10: Input Ground
6: Output
5: Output Ground
2, 3, 4, 7, 8, 9: Ground
Unit: mm

**F. PCB FOOTPRINT:**

![PCB Footprint]
G. PACKING:

1. Reel Dimension

![Reel Dimension Diagram]

2. Tape Dimension

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