A. MAXIMUM RATING:

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

B. CHARACTERISTICS:

Ambient Temperature: 25°C

<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>168</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>12.5</td>
<td>14.0</td>
</tr>
<tr>
<td>-1.5dB bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>1.0</td>
<td>-</td>
</tr>
<tr>
<td>-35dB bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>3.0</td>
<td>4.0</td>
</tr>
<tr>
<td>Passband Ripple Fc ± 100kHz</td>
<td>MHz</td>
<td>-</td>
<td>0.2</td>
<td>1.0</td>
</tr>
<tr>
<td>Group Delay Variation Fc ± 100kHz</td>
<td>nsec</td>
<td>-</td>
<td>60</td>
<td>150</td>
</tr>
<tr>
<td>Absolute Delay</td>
<td>usec</td>
<td>-</td>
<td>0.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Temp. Coefficient</td>
<td>ppm/°C2</td>
<td>-</td>
<td>-0.036</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 50MHz)

![Wide band Response graph]

Fig 1: Horizontal: 5MHz / Div, Vertical: 10Db / Div

2. Pass band Response and Group Delay Response:

![Pass band Response and Group Delay graph]

Fig 2: Horizontal: 0.2MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div
SAW Filter 168.0MHz  
Model: TB0891A  
Part No: MP05338  
Rev No: 2

D. MATCHING CIRCUIT:

![Circuit Diagram]

**LS2** = 180nH + 24nH, **LS3** = 150nH + 8.2nH, **CP1** = 39pF, **CP4** = 33pF

E. OUTLINE DRAWING:

![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:

![Footprint Diagram]
G. PACKING:

1. Reel Dimension (Please refer to FR-75D10 for packing quantity)

2. Tape Dimension
H. RECOMMENDED REFLOW PROFILE:

![Reflow Profile Graph]

- **Time (Sec)**: X-axis
- **Temp (Deg C)**: Y-axis

Graph shows a recommended reflow profile for the SAW Filter 168.0MHz Model: TB0891A Part No: MP05338 Rev No: 2.