SAW Filter 113.0MHz  
Part No: MP05708  
Rev No: 1

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: 10dBm
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>113</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>13.0</td>
<td>14.5</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>2.8</td>
<td>3.8</td>
</tr>
<tr>
<td>Passband Ripple Fc ± 100kHz</td>
<td>MHz</td>
<td>-</td>
<td>0.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Group Delay Variation Fc ± 100kHz</td>
<td>nsec</td>
<td>-</td>
<td>40</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)

![Graph of wide band response with frequency range of 113.000000 MHz to 113.065 dB, showing response at 0.2MHz/Div and vertical scale of 10dB/Div.]

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

2. Pass band Response and Group Delay Response:

![Graph of pass band response and group delay with frequency range of 113.000000 MHz to 113.122 dB, showing response at 0.2MHz/Div and vertical scale of 1dB/Div, 200ns/Div.]

Fig. 2. Horizontal: 0.2MHz/Div, Vertical: 1dB/Div, Vertical: 200ns/Div
D. MATCHING CIRCUIT:

\[ L_{s2} = 390nH + 12nH \]
\[ L_{s3} = 390nH + 390nH \]
\[ C_{p1} = 47pF \]
\[ C_{p4} = 39pF \]

E. OUTLINE DRAWING:

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

Unit: mm

F. PCB FOOTPRINT:
G. PACKING:

1. Reel Dimension

2. Tape Dimension
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Part No: MP05708

H. RECOMMENDED REFLOW PROFILE: