SAW Filter 1161.0MHz  
Model: TA1414A  
Part No: MP03794  
Rev No: 1

A. MAXIMUM RATING:

Electrostatic Sensitive Device (ESD)

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

B. ELECTRICAL CHARACTERISTICS:

1. Terminating source impedance (single ended): \( Z_S = 50 \Omega \)
2. Terminating load impedance (single ended): \( Z_L = 50 \Omega \)

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Frequency ( F_c )</td>
<td>MHz</td>
<td>-</td>
<td>1161</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss (1144 ~ 1178MHz)</td>
<td>dB</td>
<td>-</td>
<td>2.9</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>Amplitude Variation (1144 ~ 1178MHz)</td>
<td>dB</td>
<td>-</td>
<td>0.8</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Amplitude Variation over 3MHz</td>
<td>dB</td>
<td>-</td>
<td>0.3</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>VSWR (1144 ~ 1178MHz)</td>
<td>-</td>
<td>2</td>
<td>2.4</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Group Delay Variation over 3MHz</td>
<td>ns</td>
<td>-</td>
<td>4.5</td>
<td>20</td>
<td>-</td>
</tr>
<tr>
<td>Attenuation (reference level from 0dB)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC ~ 1123MHz</td>
<td>dB</td>
<td>30</td>
<td>47</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1197 ~ 1223MHz</td>
<td>dB</td>
<td>6</td>
<td>20</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>1223 ~ 2000MHz</td>
<td>dB</td>
<td>30</td>
<td>44</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Temperature Coefficient of Frequency</td>
<td>ppm/°C</td>
<td>-</td>
<td>-36</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
C. OUTLINE DRAWING:

D. MEASUREMENT CIRCUIT:

HP Network analyzer

E. PCB FOOTPRINT:
F. FREQUENCY CHARACTERISTICS:

![Frequency Characteristics Graph]

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**Part No:** MP03794  
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Reflection Functions

S11

![S11 Reflection Function Graph]

S22

![S22 Reflection Function Graph]
G. PACKING:

1. Reel Dimension

2. Tape Dimension
H. RECOMMENDED REFLOW PROFILE:

1. Preheating shall be fixed at 150 ~ 180°C for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50 ~ 80 seconds and at 245 ~ 260°C peak (min 10sec).
4. Time: 2 times.