SAW Filter: 70.0MHz  
Part No: MP05276  
Model: TB1027A  
Rev No: 1

A. MAXIMUM RATING:

Electrostatic Sensitive Device

1. Input Power Level: +20dBm
2. Operating Temperature: -30°C to +80°C
3. Storage Temperature: -40°C to +85°C

B. ELECTRICAL CHARACTERISTICS:

Reference Temperature Ta = 25°C

<table>
<thead>
<tr>
<th>Parameters</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>69.8</td>
<td>70</td>
<td>70.2</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>9.6</td>
<td>12.0</td>
</tr>
<tr>
<td>1dB Bandwidth</td>
<td>MHz</td>
<td>3.4</td>
<td>3.9</td>
<td>-</td>
</tr>
<tr>
<td>3dB Bandwidth</td>
<td>MHz</td>
<td>4.0</td>
<td>4.6</td>
<td>-</td>
</tr>
<tr>
<td>40dB Bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>7.6</td>
<td>8.2</td>
</tr>
<tr>
<td>Relative Attenuation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 to 62MHz</td>
<td>dB</td>
<td>40</td>
<td>51</td>
<td>-</td>
</tr>
<tr>
<td>78 to 140MHz</td>
<td>dB</td>
<td>40</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td>Amplitude ripple within Fc ± 1.5MHz</td>
<td>dB</td>
<td>-</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Group Delay ripple within Fc ± 1.5MHz</td>
<td>nsec</td>
<td>-</td>
<td>100</td>
<td>220</td>
</tr>
<tr>
<td>Substrate Material</td>
<td>-</td>
<td>-</td>
<td>YZ-LN</td>
<td>-</td>
</tr>
<tr>
<td>Temperature Coefficient of frequency</td>
<td>ppm/°C</td>
<td>-</td>
<td>-94</td>
<td>-</td>
</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

1. Frequency Response

![Frequency Response Graph]

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

2. Passband response and Group Delay Variation

![Passband Response Graph]

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

\[\text{Zin} = 200 \text{ ohm} \quad \text{Zout} = 200 \text{ ohm}\]

\[L1 = L2 = 82 \quad L3 = 270 \text{nH} \quad C1 = 27 \text{pF} \quad C2 = C3 = 56 \text{pF}\]

**E. OUTLINE DRAWING:**

- **Laser Marking**

K: RF input
L: RF Input ground
E: RF output
F: RF balance output or to be ground
A, B, C, D, G, H, I, J: Ground
Unit: mm
F. PACKING:

1. Reel Dimension

2. Tape Dimension
G. RECOMMENDED REFLOW PROFILE:

![Graph showing recommended reflow profile with temperature (Deg C) on the y-axis and time (Sec) on the x-axis.]}