SAW Filter 70.0MHz  Model: TB1001A
Part No: MP04031  Rev No: 1

A. MAXIMUM RATING:

1. Operating temperature range: -10°C to 70°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level: 10dBm
4. Maximum DC Voltage: 10V

Electrostatic Sensitive Device

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>69.97</td>
<td>70.00</td>
<td>70.03</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>17.0</td>
<td>20.0</td>
</tr>
<tr>
<td>1dB Bandwidth</td>
<td>MHz</td>
<td>1.25</td>
<td>1.40</td>
<td>-</td>
</tr>
<tr>
<td>3dB Bandwidth</td>
<td>MHz</td>
<td>1.4</td>
<td>1.62</td>
<td>-</td>
</tr>
<tr>
<td>40dB Bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>2.56</td>
<td>2.66</td>
</tr>
<tr>
<td>Relative Attenuation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 to 68.3MHz</td>
<td>dB</td>
<td>40</td>
<td>50</td>
<td>-</td>
</tr>
<tr>
<td>71.7 to 140MHz</td>
<td>dB</td>
<td>40</td>
<td>45</td>
<td>-</td>
</tr>
<tr>
<td>Amplitude ripple within Fc ± 0.5MHz</td>
<td>dB</td>
<td>-</td>
<td>0.60</td>
<td>1.0</td>
</tr>
<tr>
<td>Phase Linearity within Fc ± 0.5MHz</td>
<td>°ms</td>
<td>-</td>
<td>1.0</td>
<td>2.00</td>
</tr>
<tr>
<td>Absolute Delay</td>
<td>usec</td>
<td>-</td>
<td>2.6</td>
<td>-</td>
</tr>
<tr>
<td>Substrate Material</td>
<td>-</td>
<td>-</td>
<td>Quartz</td>
<td>-</td>
</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

1. Wide band Response: (span 20MHz)

![Wide band Response Diagram]

Fig. 1. Horizontal: 2MHz/Div, Vertical: 10dB/Div

2. Pass band Response and Group Time Delay response:

![Pass band Response and Group Time Delay Diagram]

Fig. 2. Horizontal: 0.5MHz/Div, Vertical: 1dB/Div, Vertical: 200ns/Div
D. MATCHING CIRCUIT:

\[ L_1 = 560nH, \; L_2 = 470nH+68nH, \; C_1 = 82pF \]

E. OUTLINE DRAWING:

K: Input
A: Input Ground
E: Output
F: Output Ground
B, C, D, G, H, J: Ground
Unit: mm
SAW Filter 70.0MHz
Part No: MP04031

F. PCB FOOTPRINT:
G. PACKING:

1. Reel Dimension

![Reel Dimension Diagram]

2. Tape Dimension

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