SAW Filter 240.0MHz  
Model: TB0391A  
Part No: MP03312  
Rev No: 2

A. MAXIMUM RATING:

Electrostatic Sensitive Device (ESD)

1. Input Power Level: 10dBm
2. DC Voltage: 10V
3. Operating Temperature: -40°C to +85°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitive Level: Level 1 (MSL1)

B. ELECTRICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Parameters Description</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>239.5</td>
<td>240.0</td>
<td>240.5</td>
</tr>
<tr>
<td>Minimum Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>9.4</td>
<td>14</td>
</tr>
<tr>
<td>1dB Bandwidth</td>
<td>MHz</td>
<td>5.0</td>
<td>5.5</td>
<td>-</td>
</tr>
<tr>
<td>3dB Bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>6.8</td>
<td>7.2</td>
</tr>
<tr>
<td>40dB Bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>10.4</td>
<td>13.0</td>
</tr>
<tr>
<td>Group Delay Ripple (237.5 ~ 242.5MHz)</td>
<td>nsec</td>
<td>-</td>
<td>50</td>
<td>200</td>
</tr>
<tr>
<td>Amplitude Ripple (237.5 ~ 242.5MHz)</td>
<td>dB</td>
<td>-</td>
<td>0.8</td>
<td>1.0</td>
</tr>
<tr>
<td>Phase Linearity (237.5 ~ 242.5MHz)</td>
<td>rms</td>
<td>-</td>
<td>3.0</td>
<td>-</td>
</tr>
<tr>
<td>Attenuation (Reference level from Minimum IL)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
10 ~ 233MHz | dB | 45 | 50 | - |
| 247 ~ 470MHz | dB | 45 | 48 | - |
C. PCB FOOTPRINT:

D. OUTLINE DRAWING:

J: Unbalanced Input
D: Unbalanced Output
A, B, C, F, G, H, I, L: To be ground
Unit: mm

E. MEASUREMENT CIRCUIT:

L1=22nH  L2=22nH  C1=100pF
F. FREQUENCY CHARACTERISTICS:
SAW Filter 240.0MHz
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![Graph of SAW Filter 240.0MHz](image)
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 260°C +0/-5°C peak (20 ~ 40 sec).
4. Repeats: Twice maximum