SAW Filter 480.0MHz Model: TB0400A
Part No: MA09805 Rev No: 2

A. MAXIMUM RATING:

Electrostatic Sensitive Device (ESD)

1. Input Power Level: 10dBm
2. DC Voltage: 10 V
3. Operating Temperature: -10°C to +60°C
4. Storage Temperature: -40°C to +85°C
5. Moisture Sensitive Level: Level 1 (MSL1)

B. ELECTRICAL CHARACTERISTICS:

Ambient Temperature: 23°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>480</td>
<td>-</td>
</tr>
<tr>
<td>Minimum Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>13.0</td>
<td>22.0</td>
</tr>
<tr>
<td>3dB Bandwidth</td>
<td>MHz</td>
<td>9.0</td>
<td>12.1</td>
<td>-</td>
</tr>
<tr>
<td>35dB Bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>20.0</td>
<td>22.0</td>
</tr>
<tr>
<td>Amplitude Ripple (476.4 ~ 483.6MHz)</td>
<td>dB</td>
<td>-</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Group Delay Variation (475.5 ~ 484.5MHz)</td>
<td>nsec</td>
<td>-</td>
<td>19</td>
<td>50</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>
<tr>
<td>Temperature Coefficient</td>
<td>ppm/°C</td>
<td>-</td>
<td>-23</td>
<td>-</td>
</tr>
<tr>
<td>Substrate Material</td>
<td>-</td>
<td>-</td>
<td>LiTaO3</td>
<td>-</td>
</tr>
</tbody>
</table>
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**C. MEASUREMENT CIRCUIT:**

![Circuit Diagram]

\[ L1 = 10\text{nH}, \ C1 = 56\text{pF} \]

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**D. OUTLINE DRAWING:**

![Outline Drawing]

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

Unit: \( \text{mm} \)

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**E. PCB FOOTPRINT:**

![PCB Footprint]

Unit: \( \text{mm} \)
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F. FREQUENCY CHARACTERISTICS:
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

![Reflow Profile Diagram]