SAW Filter 60.0MHz

Part No: MA07308

Model: TB0224A

A. MAXIMUM RATING:

1. Input Power Level: 10 dBm
2. Operating Temperature: -40°C to 85°C
3. Storage Temperature: -40°C to 85°C

B. ELECTRICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Type.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency, Fc</td>
<td>MHz</td>
<td>-</td>
<td>60.2</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Minimum Insertion Loss, IL</td>
<td>dB</td>
<td>-</td>
<td>9.8</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Amplitude Ripple (58.26~61.74MHz), AR</td>
<td>MHz</td>
<td>-</td>
<td>0.8</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td>Group delay ripple (58~72MHz), GDR</td>
<td>ns</td>
<td>-</td>
<td>110</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Phase Linearity, PL</td>
<td>deg</td>
<td>3</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1dB Bandwidth</td>
<td>MHz</td>
<td>4.35</td>
<td>5.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3dB Bandwidth</td>
<td>MHz</td>
<td>5</td>
<td>6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Relative attenuation (relative to min. IL)

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Type.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 MHz ~ 52 MHz</td>
<td>dB</td>
<td>40</td>
<td>47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>68MHz ~ 110 MHz</td>
<td>dB</td>
<td>37</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature coefficient of frequency</td>
<td>ppm/°C</td>
<td>-94</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

C. MEASUREMENT CIRCUIT:

Input L1=220nH, C1=15pF
Output L2=180nH, C2=22pF
D. FREQUENCY CHARACTERISTICS:

**Fig-1 S21 Response**
- Horizontal: 2 MHz/Div.
- Vertical: 10dB/Div.
- Vertical: 100ns/Div.

**Fig-2**
- Horizontal: 1MHz/Div.
- Vertical: 1dB/Div.
- Vertical: 100ns/Div.
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E. OUTLINE DRAWING:

F. PCB FOOTPRINT