SAW Filter Low-Loss 70.0MHz  
Model: TB0202A  
Part No: MA05603  
Rev No: 5

A. MAXIMUM RATING:  
Electrostatic Sensitive Device

1. Input Power Level: 10dBm  
2. Operating Temperature: -40°C to +85°C  
3. Storage Temperature: -40°C to +85°C  
4. Moisture Sensitivity Level: Level1 (MSL1)

B. ELECTRICAL CHARACTERISTICS:

Ambient Temperature: 25°C

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fc</td>
<td>MHz</td>
<td>-</td>
<td>70</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>14.5</td>
<td>16.5</td>
<td></td>
</tr>
<tr>
<td>1dB Bandwidth</td>
<td>MHz</td>
<td>18.7</td>
<td>19.48</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3dB Bandwidth</td>
<td>dB</td>
<td>-</td>
<td>20.3</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>40dB Bandwidth</td>
<td>MHz</td>
<td>20.8</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passband ripple Fc ±8.2MHz</td>
<td>dB</td>
<td>-</td>
<td>0.45</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>Group Delay ripple Fc ±8.2MHz</td>
<td>nS</td>
<td>25</td>
<td>60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Absolute Delay</td>
<td>μS</td>
<td>-</td>
<td>0.9</td>
<td>-</td>
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</table>

Attenuation Reference level from Min IL)

<table>
<thead>
<tr>
<th></th>
<th>Unit</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 MHz ~ 57.75MHz</td>
<td>dB</td>
<td>40</td>
<td>45</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>82.75 MHz ~105MHz</td>
<td>dB</td>
<td>40</td>
<td>45</td>
<td>-</td>
<td></td>
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<tr>
<td>Temperature Coefficient</td>
<td>ppm/°C</td>
<td>-</td>
<td>-86</td>
<td>-</td>
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</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

Bandwidth at −1.0 dB

Bandwidth at −3.0 dB

Bandwidth at −40 dB

Relative Attenuation
SAW Filter Low-Loss 70.0MHz
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Ripple Variation Fo±8.2MHz

Group Delay Variation Fo±8.2MHz

Smith Chart

VSWR

TB0202A v5
SAW Filter Low-Loss 70.0MHz

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D. MEASUREMENT CIRCUIT:

![Circuit Diagram]

L1 = 120nH, L2 = 120nH, C1 = 24pF, C2 = 47pF

E. OUTLINE DRAWING:

![Outline Drawing]

L: RF input
E: RF output
Others: To be Ground
Unit: mm

F. PCB FOOTPRINT:

![Footprint Diagram]

Unit: mm
G. PACKING:

1. Reel Dimension

2. Tape Dimension

Direction of feed
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. Time: 2 times.