SAW Filter 91.850MHz
Part No: MP05503

A. MAXIMUM RATING:

1. Operating temperature range: -30°C to 85°C
2. Storage temperature range: -40°C to 85°C
3. Input Power Level: 10dBm
4. Maximum DC Voltage: 10V

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>-</td>
<td>91.85</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>23.5</td>
<td>26.0</td>
</tr>
<tr>
<td>1dB Bandwidth</td>
<td>MHz</td>
<td>50</td>
<td>57</td>
<td>-</td>
</tr>
<tr>
<td>40dB Bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>65</td>
<td>75</td>
</tr>
<tr>
<td>Passband Ripple Fc ± 25MHz</td>
<td>dB</td>
<td>-</td>
<td>0.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Absolute group Delay</td>
<td>us</td>
<td>-</td>
<td>0.8</td>
<td>-</td>
</tr>
<tr>
<td>Group Delay variation Fc ± 25MHz</td>
<td>ns</td>
<td>-</td>
<td>30</td>
<td>-</td>
</tr>
<tr>
<td>Attenuation (Reference level from minimum Insertion loss)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DC ~ 51.5MHz</td>
<td>dB</td>
<td>35</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>131.5MHz ~ 170MHz</td>
<td>dB</td>
<td>35</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>170MHz ~ 380MHz</td>
<td>dB</td>
<td>25</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>380MHz ~ 550MHz</td>
<td>dB</td>
<td>45</td>
<td>57</td>
<td>-</td>
</tr>
<tr>
<td>550MHz ~ 1000MHz</td>
<td>dB</td>
<td>45</td>
<td>57</td>
<td>-</td>
</tr>
<tr>
<td>Temperature Coefficient</td>
<td>ppm/°C</td>
<td>-</td>
<td>-94</td>
<td>-</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>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

1. Narrow band Response:

![Graph 1](image1)

Fig. 1: Horizontal: 15MHz / Div, Vertical: 10Db / Div

2. Pass band Response and Group Delay Response:

![Graph 2](image2)

Fig. 2: Horizontal: 10MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div
3. Wide band Response:

![Wide band Response Graph]

Fig 3: Horizontal: 100MHz / Div, Vertical: 10dB / Div

4. Smith Chart

![Smith Chart Graph]
SAW Filter 91.850MHz  Model: TB1107A  Part No: MP05503  Rev No: 1

D. MATCHING CIRCUIT:

```
input  
50 Ω
        L1 = 56nH  C1 = 9pF  L2 = 68nH  C2 = 9pF
        L
A,B,C,D     G,H,I,J
output  
50 Ω
```

E. OUTLINE DRAWING:

```
K: Input
L: Input Ground
E: Output
F: Output Ground
A, B, C, D, G, H, I, J: Ground
Unit: mm
```

F. PCB FOOTPRINT:

```
Unit: mm
```

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G. PACKING:

1. Reel Dimension (Please refer to FR-75D10 for packing quantity)

2. Tape Dimension

Direction of feed
H. RECOMMENDED REFLOW PROFILE:

![Graph showing temperature over time for SAW Filter 91.850MHz]