SAW Filter 545.0MHz  
Model: TB0749A  
Part No: MP03905  
Rev No: 1

A. MAXIMUM RATING:

1. Operating Temperature: -20°C ~ +75°C  
2. Storage Temperature: -40°C ~ +85°C  
3. Input power: 10dBm

B. CHARACTERISTICS:

Ambient Temperature: 25°C

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
<td>Typ.</td>
</tr>
<tr>
<td>Center frequency Fc MHz</td>
<td>-</td>
<td>545.0</td>
</tr>
<tr>
<td>Minimum Insertion loss IL dB</td>
<td>-</td>
<td>13.2</td>
</tr>
<tr>
<td>Amplitude Ripple (530 ~ 560MHz) dB</td>
<td>-</td>
<td>0.5</td>
</tr>
<tr>
<td>Group Delay Variation (530 ~ 560MHz) ns</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Absolute group delay (530 ~ 560MHz) ns</td>
<td>-</td>
<td>300</td>
</tr>
<tr>
<td>Attenuation (Reference level from 0dB)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 ~ 450MHz dB</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>476 ~ 506MHz dB</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>506 ~ 518MHz dB</td>
<td>45</td>
<td>60</td>
</tr>
<tr>
<td>620 ~ 638MHz dB</td>
<td>45</td>
<td>68</td>
</tr>
<tr>
<td>717 ~ 1000MHz dB</td>
<td>50</td>
<td>72</td>
</tr>
<tr>
<td>1000 ~ 1500MHz dB</td>
<td>40</td>
<td>63</td>
</tr>
<tr>
<td>Temp Coefficient ppm/K</td>
<td>-</td>
<td>-23</td>
</tr>
</tbody>
</table>

Matching:

1. The input of the filter will be matched to 50Ω  
2. The output of the filter will be matched to 50Ω
C. FREQUENCY CHARACTERISTICS:

1. S21 Response: (span 200MHz)

![Graph of S21 Response (span 200MHz)]

2. S21 Response: (span 1.5GHz)

![Graph of S21 Response (span 1.5GHz)]
3. Passband of Response: (span: 50MHz)

![Passband Graph]

4. S11 Smith Chart: (span 200MHz)

![S11 Smith Chart]

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5. S22 Smith Chart: (span 200MHz)

![Smith Chart Image]

D. TEST CIRCUIT:

```
Zin

L1  C1  SAW Filter  L2  C2  Zout

Z_{IN} and Z_{OUT} are 50Ω
L1 = 12nH, C1 = 10pF, L2 = 10nH, C2 = 10pF
```
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E. OUTLINE DRAWING:

C: RF input
G: RF output
H, D: Case Ground
A, B, E, F: Ground
Unit: mm
F. PACKING:

1. REEL DIMENSION

2. TAPE DIMENSION
G. RECOMMENDED REFLOW PROFILE: