### A. MAXIMUM RATING:

1. Operating Temperature: -10°C ~ 50°C  
2. Storage Temperature: -40°C ~ +85°C  
3. Input Power Level: 10dBm  
4. Maximum DC Voltage: 10V

### B. CHARACTERISTICS:

Ambient Temperature: 25°C

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fc MHz</td>
<td>-</td>
<td>110</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Minimum Insertion loss IL dB</td>
<td>-</td>
<td>7.7</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>1 dB Bandwidth kHz</td>
<td>-</td>
<td>297</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3 dB Bandwidth kHz</td>
<td>200</td>
<td>450</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Group Delay Ripple (Fc ±100kHz) nsec</td>
<td>-</td>
<td>70</td>
<td>400</td>
<td>-</td>
</tr>
</tbody>
</table>

Relative Rejection (Reference to Minimum Insertion loss)

<table>
<thead>
<tr>
<th></th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fc ±1.0MHz dB</td>
<td>15</td>
<td>33</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Fc ±4.0MHz dB</td>
<td>35</td>
<td>53</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Temp Coefficient ppm/K2</td>
<td>-</td>
<td>-0.036</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

1. S21 Response

![Graph of S21 Log Mag 10.0068/ Ref -50.0046 (F2)]

Fig. 1: Horizontal: 1MHz / Div, Vertical: 10dB / Div

2. Passband Response and Group Delay Response

![Graph of S21 Log Mag 1.0000/ Ref -11.0000 (F2)]

Fig. 2: Horizontal: 0.1MHz / Div, Vertical 1: 1dB / Div, Vertical 2: 200nS / Div
D. OUTLINE DRAWING:

H: RF Input  
C: RF Output  
A, B, D, E, F, G, J, K: To be ground  
Unit: mm

E. MATCHING CIRCUIT:

L1 = 82nH, C1 = 8pF, L2 = 100nH, C2 = 8pF

F. PCB FOOTPRINT:
G. PACKING:

1. Reel Dimension

2. Tape Dimension
H. RECOMMENDED REFLOW PROFILE:

![Graph showing recommended reflow profile with temperature (°C) on the y-axis and time (Sec) on the x-axis. The graph peaks around 260°C for 180 seconds.]

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SAW Filter 110.0MHz
Model No: TB0681A
Part No: MP01327
Rev No: 2

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