A. MAXIMUM RATING:

1. Operating temperature range: -40°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>276.5</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>11.4</td>
<td>12.0</td>
</tr>
<tr>
<td>-1dB bandwidth</td>
<td>MHz</td>
<td>40</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td>-3dB bandwidth</td>
<td>MHz</td>
<td>-</td>
<td>47</td>
<td>-</td>
</tr>
<tr>
<td>Passband Ripple Fc ± 20MHz</td>
<td>dB</td>
<td>-</td>
<td>0.7</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Attenuation: (Reference level from Min IL)

<table>
<thead>
<tr>
<th>Range</th>
<th>dB</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC ~ 236MHz</td>
<td>40</td>
<td>54</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>316MHz ~ 500MHz</td>
<td>40</td>
<td>49</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>500MHz ~ 1000MHz</td>
<td>40</td>
<td>55</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Fc -30MHz</td>
<td>30</td>
<td>50</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Fc +30MHz</td>
<td>30</td>
<td>45</td>
<td>-</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: (span 300MHz)

![Graph showing narrow band response](image1)

Fig. 1: Horizontal: 30MHz / Div, Vertical: 10Db / Div

2. Pass band Response and Group Time Delay response:

![Graph showing pass band response and group time delay](image2)

Fig. 2: Horizontal: 10MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div
3. Smith Chart:

![Smith Chart Image]

4. Wide band Response:

![Wide band Response Image]

Fig. 4: Horizontal: 90MHz / Div, Vertical: 10dB / Div
D. MATCHING CIRCUIT:

\[
L_1 = L_2 = 18\text{nH} \quad L_3 = 18\text{nH} \quad C_1 = 8\text{pF} \quad C_2 = 27\text{pF}
\]

E. OUTLINE DRAWING:

- J: RF input
- K: RF balance input or to be ground
- D: RF output
- E: RF output ground
- A, B, C, F, G, H: Ground

Unit: mm
F. PCB FOOTPRINT:

![PCB Footprint Diagram]

- Dimensions: 7.8 x 5.8
- [10X] indicates a multiplier factor of 10
- Key dimensions: 1.4, 0.47, 2.23, 2.54

SAW Filter 276.50MHz
Model: TB1106A
Part No: MP04572
Rev No: 1
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 the recommended reflow profile for the SAW Filter 276.50MHz Model: TB1106A Part No: MP04572 Rev No: 1.](image)

The graph illustrates the recommended temperature profile over time for the reflow process. The x-axis represents time in seconds, ranging from 0 to 360 seconds, and the y-axis represents temperature in degrees Celsius, ranging from 20°C to 280°C. The profile shows a specific heating and cooling schedule designed to ensure proper soldering and reflow of the SAW Filter 276.50MHz component.