IF SAW Filter: 70MHz (BW = 9MHz) SMD 13.3 X 6.5mm  Model: TB0740A
Part No: MP01787  Rev No: 1

A. MAXIMUM RATING:

1. Operating Temperature: -20°C ~ +80°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>69.8</td>
<td>70.0</td>
</tr>
<tr>
<td>Minimum Insertion loss IL dB</td>
<td>-</td>
<td>10.6</td>
</tr>
<tr>
<td>1dB BW MHz</td>
<td>9.0</td>
<td>9.7</td>
</tr>
<tr>
<td>3dB BW MHz</td>
<td>9.5</td>
<td>10</td>
</tr>
<tr>
<td>35dB BW MHz</td>
<td>-</td>
<td>11.7</td>
</tr>
<tr>
<td>Passband Ripple (Fc ± 4MHz) dB</td>
<td>-</td>
<td>0.6</td>
</tr>
<tr>
<td>Group-Delay Ripple (Fc ± 4MHz) nsec</td>
<td>-</td>
<td>80</td>
</tr>
<tr>
<td>Attenuation (Reference to Minimum Insertion loss)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 ~ 63MHz dB</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>78 ~ 140MHz dB</td>
<td>40</td>
<td>45</td>
</tr>
<tr>
<td>Temp Coefficient ppm/K</td>
<td>-</td>
<td>-94</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: 50MHz)

![Graph of S21 Log Mag vs Frequency](image1)

**Fig1.** Horizontal: 5MHz/Div Vertical: 10dB/Div

2. Group-Delay Ripple: (span: 20MHz)

![Graph of Group-Delay Ripple vs Frequency](image2)

**Fig2.** Horizontal: 2MHz/Div Vertical: 500nsec/Div
3. S11 Smith Chart: (span: 50MHz)

![S11 Smith Chart](image)

4. S22 Smith Chart (span: 50MHz)

![S22 Smith Chart](image)
D. MEASUREMENT CIRCUIT:

![Measurement Circuit Diagram]

\[ \text{Zin and Zout are } 50 \, \Omega. \]
\[ L_1 = 220 \, \mu H, \quad L_2 = 150 \, \mu H \]

E. OUTLINE DRAWING:

![Outline Drawing]

Pin K: RF input
Pin E: RF output
Pin A, B, C, D, G, H, I, L, F, J: To be Ground
Unit: mm
IF SAW Filter: 70MHz (BW = 9MHz) SMD 13.3 X 6.5mm  Model: TB0740A
Part No: MP01787
Rev No: 1

F. PCB FOOTPRINT:
G. PACKING:

1. REEL DIMENSION

2. TAPE DIMENSION
H. RECOMMENDED REFLOW PROFILE:

![Graph showing reflow profile with temperature (Deg C) on the y-axis and time (Sec) on the x-axis. The temperature increases to around 280 Deg C and then decreases gradually.]