SAW Filter 464.0MHz  Model: TB0459A  Part No: MP03703  Rev No: 1

A. MAXIMUM RATING:

1. Operating Temperature: -40°C ~ +85°C
2. Storage Temperature: -40°C ~ +85°C
3. Input Power Level: 10dBm

B. CHARACTERISTICS:

1. Ambient Temperature: 25°C
2. Optimal Source Impedance (Balanced): 200Ω
3. Optimal Load Impedance (Balanced): 200Ω

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fc MHz</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum Insertion Loss dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1dB Bandwidth MHz</td>
<td>5.45</td>
<td></td>
</tr>
<tr>
<td>3dB Bandwidth MHz</td>
<td>5.52</td>
<td></td>
</tr>
<tr>
<td>Passband Ripple (Fc ± 2.5MHz) dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amplitude Ripple at any 26.875kHz adjacent segment within 5MHz dB</td>
<td>-0.1 ±0.05 0.1</td>
<td></td>
</tr>
<tr>
<td>Amplitude Ripple at any 24.6875kHz adjacent segment within 5MHz dB</td>
<td>-0.1 ±0.05 0.1</td>
<td></td>
</tr>
<tr>
<td>Phase Linearity at any 26.875kHz adjacent segment within 5MHz Deg.</td>
<td>-1 ±0.46 1</td>
<td></td>
</tr>
<tr>
<td>Phase Linearity at any 24.6875kHz adjacent segment within 5MHz Deg.</td>
<td>-1 ±0.43 1</td>
<td></td>
</tr>
<tr>
<td>Attenuation: (Reference level from minimum insertion loss) dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fc ± 3MHz dB</td>
<td>8.9</td>
<td></td>
</tr>
<tr>
<td>Fc ± 3.5MHz dB</td>
<td>10 33</td>
<td></td>
</tr>
<tr>
<td>Fc ± 5MHz dB</td>
<td>36 42</td>
<td></td>
</tr>
<tr>
<td>376MHz ~ 459 MHz dB</td>
<td>32 36</td>
<td></td>
</tr>
<tr>
<td>469MHz ~ 552MHz dB</td>
<td>34 39</td>
<td></td>
</tr>
<tr>
<td>Temp Coefficient ppm/°C²</td>
<td>-0.036</td>
<td></td>
</tr>
</tbody>
</table>
C. MEASUREMENT CIRCUIT:

1. Single end 50Ω to Single end 50Ω

\[
\begin{align*}
L1 &= 14\,\text{nH} \\
C1 &= 19.5\,\text{pF} \\
L2 &= 18\,\text{nH} \\
C2 &= 19.5\,\text{pF}
\end{align*}
\]

2. Balanced 200 ohm to Balanced 200Ω

\[
\begin{align*}
L1 = L2 &= 12\,\text{nH} \\
C1 &= 8.2\,\text{pF} \\
L3 = L4 &= 15\,\text{nH} \\
C2 &= 8.2\,\text{pF}
\end{align*}
\]

D. PCB FOOTPRINT:
E. FREQUENCY CHARACTERISTICS:

1. S21 Response

![S21 Response Graph](image1)

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

2. Passband Ripple

![Passband Ripple Graph](image2)

Fig. 2. Horizontal: 0.8MHz/Div, Vertical: 1dB/Div
3. Group Delay ripple

Fig. 3. Horizontal: 0.8 MHz/Div, Vertical: 50nS/Div

4. Wideband Response

Fig. 4. Horizontal: 300kHz ~ 1GHz, Vertical: 10dB/Div
SAW Filter 464.0MHz
Part No: MP03703

Model: TB0459A
Rev No: 1

F. OUTLINE DRAWING:

J, L: Balanced Input
F, D: Balanced Output
A, B, C, I, H, G: To be Ground
Unit: mm
G. PACKING:

1. REEL DIMENSION

2. TAPE DIMENSION
H. RECOMMENDED REFLOW PROFILE:

![Graph showing reflow profile with time on the x-axis and temperature on the y-axis. The graph has a peak around 240°C at around 120 seconds.](image-url)