SAW Filter 192.0MHz  
Part No: MP07097  
Rev No: 1

A. MAXIMUM RATING:

1. Operating temperature range: -30°C to 85°C  
2. Storage temperature range: -40°C to 85°C  
3. Input Power Level: 10dBm  
4. Maximum DC Voltage: 0V

B. CHARACTERISTICS:

Ambient Temperature: 25°C

<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>192</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss IL</td>
<td>dB</td>
<td>-</td>
<td>16.5</td>
<td>17.5</td>
</tr>
<tr>
<td>1.2dB Bandwidth</td>
<td>MHz</td>
<td>60</td>
<td>64</td>
<td>-</td>
</tr>
<tr>
<td>Passband Ripple Fc ± 30MHz</td>
<td>dB</td>
<td>-</td>
<td>0.7</td>
<td>1.2</td>
</tr>
<tr>
<td>Absolute group Delay</td>
<td>us</td>
<td>-</td>
<td>0.4</td>
<td>-</td>
</tr>
<tr>
<td>Group Delay variation Fc ± 30MHz</td>
<td>ns</td>
<td>-</td>
<td>40</td>
<td>60</td>
</tr>
<tr>
<td>Attenuation (Reference level from minimum Insertion loss)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10MHz ~ 135.5MHz</td>
<td>dB</td>
<td>40</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td>135.5MHz ~ 145.5MHz</td>
<td>dB</td>
<td>35</td>
<td>44</td>
<td>-</td>
</tr>
<tr>
<td>238.5MHz ~ 248.5MHz</td>
<td>dB</td>
<td>35</td>
<td>42</td>
<td>-</td>
</tr>
<tr>
<td>248.5MHz ~ 450MHz</td>
<td>dB</td>
<td>40</td>
<td>42</td>
<td>-</td>
</tr>
<tr>
<td>450MHz ~ 770MHz</td>
<td>dB</td>
<td>35</td>
<td>43</td>
<td>-</td>
</tr>
<tr>
<td>770MHz ~ 1000MHz</td>
<td>dB</td>
<td>40</td>
<td>60</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:

![Graph of Narrow Band Response]

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

2. Pass band Response and Group Delay Response:

![Graph of Pass Band Response and Group Delay Response]

**Fig. 2.** Horizontal: 8MHz / Div, Vertical: 1dB / Div, Vertical: 100ns / Div
3. Smith Chart:

![Smith Chart Image]

4. Wide band Response:

![Wide band Response Image]

Fig. 4. Horizontal: 100MHz / Div, Vertical: 10dB / Div
D. MATCHING CIRCUIT:

\[
\begin{align*}
L_1 &= 39\text{nH},
L_2 &= 43\text{nH},
C_1 &= 12\text{pF},
C_2 &= 12\text{pF}
\end{align*}
\]

E. OUTLINE DRAWING:

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

Unit: mm

F. PCB FOOTPRINT:
G. PACKING:

1. Reel Dimension (Please refer to FR-75D10 for packing quantity)

2. Tape Dimension
H. RECOMMENDED REFLOW PROFILE: