SAW Filter 172.250MHz
Part No: MP07391
Rev No: 1

A. MAXIMUM RATINGS:

1. Operating Temperature: -40°C to 85°C
2. Storage Temperature: -40°C to 85°C
3. Input Power: 15dBm
4. DC Voltage: 5V

Electrostatic Sensitive Device

B. ELECTRICAL CHARACTERISTICS:

Ambient Temperature: 25°C

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency Fc MHz</td>
<td>-</td>
<td>172.25</td>
<td>-</td>
</tr>
<tr>
<td>Insertion Loss at Fc dB</td>
<td>-</td>
<td>6.0</td>
<td>7.4</td>
</tr>
<tr>
<td>Amplitude ripple variation (Fc ±100kHz) dB</td>
<td>-</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>Group Delay variation (Fc ±90kHz) nsec</td>
<td>-</td>
<td>340</td>
<td>500</td>
</tr>
<tr>
<td>In/Output VSWR (Fc ±90kHz)</td>
<td>-</td>
<td>2.6</td>
<td>-</td>
</tr>
<tr>
<td>Relative Attenuation dB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fc ±400kHz ~ Fc ±600kHz</td>
<td>15</td>
<td>21</td>
<td>-</td>
</tr>
<tr>
<td>Fc ±600kHz ~ Fc ±800kHz</td>
<td>30</td>
<td>33</td>
<td>-</td>
</tr>
<tr>
<td>Fc ±800kHz ~ Fc ±1.6MHz</td>
<td>30</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>Fc ±1.6kHz ~ Fc ±3.0MHz</td>
<td>35</td>
<td>38</td>
<td>-</td>
</tr>
<tr>
<td>Fc ±3.0MHz ~ Fc ±35.0MHz</td>
<td>35</td>
<td>38</td>
<td>-</td>
</tr>
<tr>
<td>10 ~ Fc-35MHz</td>
<td>45</td>
<td>60</td>
<td>-</td>
</tr>
<tr>
<td>Fc+35MHz ~ 2000MHz</td>
<td>45</td>
<td>60</td>
<td>-</td>
</tr>
<tr>
<td>Temperature Coefficient ppm/°C2</td>
<td></td>
<td>-0.036</td>
<td></td>
</tr>
<tr>
<td>Source Impedance (Differential) Ω</td>
<td>-</td>
<td>200/200</td>
<td>-</td>
</tr>
<tr>
<td>Load Impedance (Differential) Ω</td>
<td>-</td>
<td>200/200</td>
<td>-</td>
</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

1. Narrow band Response:

![Narrow band Response Diagram]

2. Pass Band Response and Group Delay Response:

![Pass Band Response and Group Delay Diagram]
3. Smith Chart:

![Smith Chart Diagram]

4. Wide Band Response:

![Wide Band Response Graph]
SAW Filter 172.250MHz
Model: TB1205A
Part No: MP07391
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D. MATCHING CIRCUIT:

\[ \begin{align*}
L1 &= L2 = 43nH, \quad L3 = L4 = 39nH, \quad C1 = 20pF, \quad C2 = 24pF
\end{align*} \]

E. OUTLINE DRAWING:

10: Input
1: Balanced Input or Ground
5: Output
6: Balanced Output or Ground
2, 3, 4, 7, 8, 9: 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:

1. Preheating shall be fixed at 150 ~ 180°C for 60 ~ 90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50 ~ 80 seconds and at 260°C +0/-5°C peak (20 ~ 40sec).
4. Time: 2 times.