SAW Filter 156.250MHz  
Part No: MP07285  
Model: TB1193A  
Rev No: 1

A. MAXIMUM RATING:

Electrostatic Sensitive Device

1. Operating Temperature: -40°C to 85°C
2. Storage Temperature: -40°C to 85°C
3. Input Power: 10dBm
4. DC Voltage: 5V

B. ELECTRICAL CHARACTERISTICS:

Ambient Temperature: 25°C

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min.</td>
</tr>
<tr>
<td>Center frequency Fc MHz</td>
<td>156.15</td>
</tr>
<tr>
<td>Insertion Loss at Fo dB</td>
<td>-</td>
</tr>
<tr>
<td>1dB Bandwidth MHz</td>
<td>0.18</td>
</tr>
<tr>
<td>Amplitude ripple variation (Fo ± 90kHz) dB</td>
<td>-</td>
</tr>
<tr>
<td>Group Delay variation (Fo ± 90kHz) nsec</td>
<td>-</td>
</tr>
<tr>
<td>Relative Attenuation dB</td>
<td></td>
</tr>
<tr>
<td>Fc ± 500kHz ~ Fc ± 600kHz</td>
<td>12</td>
</tr>
<tr>
<td>Fc ± 600kHz ~ Fc ± 800kHz</td>
<td>20</td>
</tr>
<tr>
<td>Fc ± 800kHz ~ Fc ± 3.0MHz</td>
<td>25</td>
</tr>
<tr>
<td>Fc ± 3.0MHz ~ Fc ± 7.0MHz</td>
<td>35</td>
</tr>
<tr>
<td>Fc ± 7.0MHz ~ Fc ± 30.0MHz</td>
<td>40</td>
</tr>
<tr>
<td>Temperature Coefficient ppm/°C²</td>
<td>-0.036</td>
</tr>
<tr>
<td>Source Impedance Ω</td>
<td>-</td>
</tr>
<tr>
<td>Load Impedance Ω</td>
<td>-</td>
</tr>
</tbody>
</table>
C. FREQUENCY CHARACTERISTICS:

1. Wide Band Response:

![Wide Band Response Graph]

2. Pass Band Response and Group Time Delay Response:

![Pass Band Response Graph]
3. Smith Chart:

D. MATCHING CIRCUIT:

L1 = 270 nH +27nH  
L2 = 270 nH +27nH  
C1 = 30pF  
C2 = 30pF
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E. OUTLINE DRAWING:

![Outline Drawing]

J: RF Input
L: RF Input Ground
D: RF Output
F: RF Output Ground
A, B, C, G, H, I: Ground
Unit: mm

F. PCB FOOTPRINT:

![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 +/−5°C peak (20 ~ 40 sec).
4. Time: 2 times.