SAW Filter 473.40 MHz
Part No: MA05402

Model: TB0160A
REV NO.: 3

A. MAXIMUM RATING:
1. Input Power Level: 10 dBm
2. Operating Temperature: -40°C to 70°C
3. Storage Temperature: -40°C to 70°C

B. ELECTRICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Type.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center frequency, Fc</td>
<td>MHz</td>
<td>-</td>
<td>473.4</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Insertion Loss, IL</td>
<td>dB</td>
<td>-</td>
<td>9.7</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Passband width, BW3</td>
<td>MHz</td>
<td>-</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amplitude Ripple (462MHz~483.75MHz)</td>
<td>dB</td>
<td>-</td>
<td>0.68</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>Group delay ripple (462MHz~483.75MHz)</td>
<td>nS</td>
<td>-</td>
<td>45</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Triple transit suppression</td>
<td>dB</td>
<td>-</td>
<td>40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Attenuation:(Reference level from Min IL)

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Min.</th>
<th>Type.</th>
<th>Max.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>275 to 440 MHz</td>
<td>dB</td>
<td>40</td>
<td>55</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>440 to 452.6 MHz</td>
<td>dB</td>
<td>45</td>
<td>47</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>498 to 675 MHz</td>
<td>dB</td>
<td>40</td>
<td>41</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

C. MEASUREMENT CIRCUIT:
1) For 50 ohm Unbalanced Input and Output

![Circuit Diagram]

\[ L1=5.6\text{mH} \quad L2=10\text{nH} \quad C1=10\text{pF} \quad C2=12\text{pF} \]

2) For 200 ohm Balanced Input and Output
SAW Filter 473.40 MHz
Part No: MA05402

Model: TB0160A
REV NO.: 3

C1 = C2 = 15pF
C3 = C4 = 12pF
L1 = 15nH
L2 = 15nH
D. FREQUENCY CHARACTERISTICS:

1) Wide band of response:

![Wide Band Response Graph]

Fig-1 S21 Response  Horizontal: 20MHz/Div. Vertical: 10dB/Div

2) Passband of response:

![Passband Response Graph]
SAW Filter 473.40 MHz

Model: TB0160A

Part No: MA05402
REV NO.: 3

Fig-2 Group Delay and Ripple, Horizontal: 4MHz/Div. Vertical: 1 dB/Div Vertical: 100nS/Div
SAW Filter 473.40 MHz  
Model: TB0160A  
Part No: MA05402  
REV NO.: 3

E. OUTLINE DRAWING:

Pin C : Unbalanced Input or Balanced Input  
Pin D : Unbalanced Input Ground or Balanced Input  
Pin I : Unbalanced Output or Balanced Output  
Pin J : Unbalanced Output Ground or Balanced Output  
Pin A, B, E, F, G, H, K, L : To be Ground  

Unit: mm
F. PACKING:

1. REEL DIMENSION

![Reel Dimension Diagram]

2. TAPE DIMENSION

![Tape Dimension Diagram]