SAW Filter 315.0MHz  
Model: TA1564A  
Part No: MP05190 AEC-Q200 level 1  
Rev No: 2

A. MAXIMUM RATING:

   Electrostatic Sensitive Device

1. Input Power Level: 10dBm
2. DC Voltage: 6V
3. Operating Temperature: -40°C to +95°C
4. Storage Temperature: -40°C to +95°C

B. ELECTRICAL CHARACTERISTICS:

<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>315</td>
<td>-</td>
</tr>
<tr>
<td>3dB BW</td>
<td>kHz</td>
<td>-</td>
<td>560</td>
<td>-</td>
</tr>
<tr>
<td>Minimum insertion loss IL (min)</td>
<td>dB</td>
<td>-</td>
<td>2.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Include. loss of matching elements (Q = 71)*1)</td>
<td>dB</td>
<td>-</td>
<td>2.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Exclude loss in matching elements *2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passband (relative to IL min)*1)</td>
<td>dB</td>
<td>-</td>
<td>1.1</td>
<td>3.5</td>
</tr>
<tr>
<td>314.82 ~ 315.18MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attenuation (relative to IL min)</td>
<td>dB</td>
<td>42</td>
<td>49</td>
<td>-</td>
</tr>
<tr>
<td>10.000 ~ 294.50MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>294.50 ~ 304.50MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>304.50 ~ 312.80MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>312.80 ~ 313.20MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>313.20 ~ 314.00MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>315.90 ~ 323.00MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>323.00 ~ 335.00MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>335.00 ~ 600.00MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>600.00 ~ 1000.00MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000.0 ~ 2500.0MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance at Fc, Input *1) Z_{IN} = R_{IN} // C_{IN} Z_S</td>
<td>Ω</td>
<td>181Ω / 1.38pF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance at Fc, Output *1) Z_{OUT} = R_{OUT} // C_{OUT} Z_L</td>
<td>Ω</td>
<td>190Ω / 1.30pF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1): The matching circuit is real by actual passive components.
0805 Coilcraft CS series chip conductor is used for inductor.
0402 muRata GRM series is used for capacitor.

*2): The matching circuit is ideal by simulation.
C. FREQUENCY CHARACTERISTICS:

![Frequency Characteristics Graph]

**SAW Filter 315.0MHz**  
**Part No:** MP05190 AEC-Q200 level 1  
**Model:** TA1564A  
**Rev No:** 2

**SAW Filter 315.0MHz**  
**Model:** TA1564A

**Part No:** MP05190 AEC-Q200 level 1  
**Rev No:** 2

**C. FREQUENCY CHARACTERISTICS:**

![Frequency Characteristics Graph]

**TA1564A v2**

---

**TA1564A v2**
SAW Filter 315.0MHz
Part No: MP05190 AEC-Q200 level 1
Model: TA1564A
Rev No: 2

Smith Chart S11

Smith Chart S22

Tel: +44 1460 256 100
Fax: +44 1460 256 101
www.golledge.com
Golledge Electronics Ltd
Eaglewood Park, Ilminster
Somerset, TA19 9DQ, UK
D. MEASUREMENT CIRCUIT:

The matching circuit is real by actual passive components.

\[
\begin{align*}
\text{L1} &= 120\text{nH} & \text{L2} &= 120\text{nH} \\
50\Omega & & 50\Omega \\
& & \\
C1 &= 3.3\text{pF} \\
\end{align*}
\]

E. OUTLINE DRAWING:

A: Input (recommended) or Input ground
B: Input ground (recommended) or Input
D: Output (recommended) or Output ground
E: Output ground (recommended) or Output
C, F: Ground

Unit: mm

*3) The recommended pin configuration offers better suppression of electrical crosstalk.

F. PCB FOOTPRINT:
G. PACKING:

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

![Diagram of Reel Dimensions]

2. Tape Dimension

![Diagram of Tape Dimensions]
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 245~260°C peak (min. 10sec).
4. Time: 2 times.

![Pb Free IR Reflow Profile Diagram]