SAW Filter 918.60MHz
Part No: MP07320

Model: TA1628A
Rev No: 1

A. MAXIMUM RATING:

1. Input Power Level: 15dBm
2. DC Voltage: 6V
3. Operating Temperature: -30°C to +85°C
4. Storage Temperature: -40°C to +85°C

Electrostatic Sensitive Device

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>918.6</td>
<td>-</td>
</tr>
<tr>
<td>3dB BW</td>
<td>MHz</td>
<td>-</td>
<td>5.0</td>
<td>-</td>
</tr>
<tr>
<td>Minimum insertion loss IL (min)</td>
<td>dB</td>
<td>-</td>
<td>2.7</td>
<td>4.2</td>
</tr>
<tr>
<td>Incl. loss of matching elements</td>
<td>dB</td>
<td>-</td>
<td>2.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Excl. loss in matching elements</td>
<td>dB</td>
<td>-</td>
<td>2.5</td>
<td>4.0</td>
</tr>
<tr>
<td>Passband (relative to IL min)</td>
<td>dB</td>
<td>-</td>
<td>1.2</td>
<td>3.0</td>
</tr>
<tr>
<td>916.70 ~ 920.50MHz</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attenuation (relative to IL min)</td>
<td>dB</td>
<td>45</td>
<td>52</td>
<td>-</td>
</tr>
<tr>
<td>10.000 ~ 710.00MHz</td>
<td>dB</td>
<td>35</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>710.00 ~ 850.00MHz</td>
<td>dB</td>
<td>20</td>
<td>27</td>
<td>-</td>
</tr>
<tr>
<td>850.00 ~ 910.00MHz</td>
<td>dB</td>
<td>10</td>
<td>15</td>
<td>-</td>
</tr>
<tr>
<td>910.00 ~ 914.00MHz</td>
<td>dB</td>
<td>5</td>
<td>12</td>
<td>-</td>
</tr>
<tr>
<td>914.00 ~ 915.00MHz</td>
<td>dB</td>
<td>5</td>
<td>19</td>
<td>-</td>
</tr>
<tr>
<td>923.00 ~ 930.00MHz</td>
<td>dB</td>
<td>17</td>
<td>29</td>
<td>-</td>
</tr>
<tr>
<td>930.00 ~ 960.00MHz</td>
<td>dB</td>
<td>28</td>
<td>35</td>
<td>-</td>
</tr>
<tr>
<td>960.00 ~ 1000.00MHz</td>
<td>dB</td>
<td>30</td>
<td>41</td>
<td>-</td>
</tr>
<tr>
<td>Turnover To</td>
<td>Deg.C</td>
<td>-</td>
<td>70</td>
<td>-</td>
</tr>
<tr>
<td>Temperature coefficient (TCf)</td>
<td>ppm/c*2</td>
<td>-</td>
<td>0.047</td>
<td>-</td>
</tr>
<tr>
<td>Impedance at Fc, Input Z_{IN} = R_{IN} // C_{IN} Z_{S}</td>
<td>Ω</td>
<td>62Ω // 1.35pF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance at Fc, Output Z_{OUT} = R_{OUT} // C_{OUT} Z_{L}</td>
<td>Ω</td>
<td>58Ω // 1.44pF</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1: The matching circuit is real by actual passive components.
0805 Colllcraft 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:
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1 850.0000000 MHz -42.555 dB
2 710.0000000 MHz -54.183 dB
3 10.0000000 MHz -19.063 dB
4 1.000000000 GHz -43.866 dB
>5 2.500000000 GHz -56.217 dB

Log Mag 10.00dB/ Ref -50.00dB [F2]
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Smith Chart S11:

Smith Chart S22:
D. MEASUREMENT CIRCUIT:

The matching circuit is real by actual passive components.

![Matching Circuit Diagram]

L1: 10nH, L2: 8.2nH, L3: 8.2nH, L4: 10nH
L1+L2=18.2nH, L3+L4=18.2nH
C1: 4.7pF, C2: 4.0pF

E. OUTLINE DRAWING:

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

2. Tape Dimension

DIMENSION = mm

Direction of Feed
H. RECOMMENDED REFLOW PROFILE: